Product catalogue

Edition 4



LK Valves

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LK Valves – The company

Business concept

LK Valves focuses on development, manufacturing and sales of valves, strainers and actuators for the marine industry. The main product groups are developed manufactured by LK Valves. Trading products allow us to serve you as a single source supplier.

An essential part for us is to be close to our customers, not only geographically but close to your development. Our experience shows that the closer we work together the better the result becomes.

Markets

LK Valves delivers valves, strainers and actuators to customers all around the globe. The Scandinavian markets are served through sales offices in Norway and head quarter in Sweden. The head office is also handling all export areas except Asia which is handled from our sales office in Singapore.

History

LK Valves started its activities in Norway in the mid eighties. Since then the company has grown in the Scandinavian and international market. Well known names like BGV, Halla Hydro, PR Armatur are now an integrated part of LK Valves.

However the world of valves and fluids are not new to LK Valves, we are a part of the business group Lagerstedt & Krantz, a family company that has been working with valves and flow systems since 1933.

Production and stock keeping

In-house production offers flexibility and possibilities to tailor-make valves, strainers and actuators to meet your specific needs. Modern testing equipment documents the performance before the product leaves LK Valves.

A modern ware house in Helsingborg, Sweden hosts a comprehensive range of valves, strainers and actuators. The position of Helsingborg gives us a unique possibility to access harbours, airports and road network; all resulting in cost efficient and quick deliveries.

Development

Quality is one of the corner stone's in our business concept; development and technical support are some of the others. With the right knowledge and right equipment we believe LK Valves is the best partner whether you need technical support or are in process of developing new products where tailor-made valves are a part.

Documentation

We all know the importance to keep all documentation up to date and easy accessible. LK Valves offers its customers a web portal for easy and efficient handling of all kind of documents regarding the products.

You will be able to download all information needed as material certificates, class certificates, test and delivery certificates etc, and of course all other relevant information relating to your order or product.

Contact us

Sweden and export markets

LK Valves AB
Garnisonsgatan 19
SE-254 66 Helsingborg
Sweden

Telephone: +46 (0)42 38 38 70
Fax: +46 (0)42 38 38 75
E-mail: sales@lkvalves.com

Norway

LK Valves AB
NO-6953 Leirvik i Sogn
Norway

Telephone: +47 (0)57 78 90 00
Fax: +47 (0)57 78 83 77
E-mail: leirvik@lkvalves.com

Singapore

LK Valves Asia Pte Ltd
3 International Business Park
#03-16 Nordic European Centre
Singapore 609927

Phone: +65 6561 2601
Fax: +65 6561 2602
E-mail: singapore@lkvalves.com

www.lkvalves.com

Terms and definitions

Inspections certificate issued by LK Valves follows the international standard EN 10204.

2.1 Non-specific inspection

Inspection carried out by the manufacturer in accordance with his own procedures to assess whether products defined by the same products specification and made by the same manufacturing process, are in compliance with the requirements of the order or not.

The products inspected are not necessarily the products actually supplied.

2.2 Specific inspection

Inspection carried out, before delivery, according to the product specification, on the products to be supplied or on test units of which the products supplied are part, in order to verify that these products are in compliance with the requirements of the order.

2.3 Manufacturer

Organization that manufactures the respective products according to the requirements of the order and to the properties specified in the referenced product specification.

2.4 Intermediary

Organization which is supplied with products by the manufacturers and which then in turn supplies them without further processing or after processing without changing the properties specified in the purchase order and referenced product specification.

2.5 Product specification

Complete detailed technical requirements relevant for the order, stated in written form e.g. referenced regulations, standards and other specifications.

3. Inspection documents based on non-specific inspection

3.1 Declaration of compliance with the order "type 2.1"

Document in which the manufacturer declares that the products supplied are in compliance with the requirements of the order, without inclusion of test results.

3.2 Test report "type 2.2"

Document in which the manufacturer declares that the products supplied are in compliance with the requirements of the order and in which he supplies test result based on non-specific inspection.

4. Inspection documents based on specific inspection

4.1 Inspection certificate 3.1 "type 3.1"

Document issued by the manufacturer in which he declares that the products supplied are in compliance with the requirements of the order and in which he supplies test result.

The test unit and the tests to be carried out are defined by the product specification, the official regulation and corresponding rules and/or the order.

The document is validated by the manufacturer´s authorized inspection representative, independent of the manufacturing department.

It shall be permissible for the manufacturer to transfer on to the inspection certificate 3.1 relevant test results obtained by specific inspection on primary or incoming products he uses, provided that the manufacturer operates traceability procedures and can provide the corresponding inspection documents required.

4.2 Inspection certificate 3.2 "type 3.2"

Document prepared by both the manufacture´s authorized inspection representative, independent of the manufacturing department and either the purchaser´s authorized inspection representative or the inspector designated by the official regulations and in which they declare that the products supplied are in compliance the requirements of the order and in which test results are supplied.

It shall be permissible for the manufacturer to transfer on to the inspection certificate 3.2 relevant test results obtained by specific inspection or primary or incoming products he uses, provided that the manufacturer operates traceability procedures and can provide the corresponding inspection documents required.

5. Validation and transmission of inspection documents

The inspection documents shall be validated by the responsible person(s) (name and position).

The retention and transmission of documents shall be either in electronic data or paper form.

Table A.1 – Summary of inspection documents

EN 10204 Reference	Designation of the document type		Document Validated by
	English version	Document content	
Type 2.1	Declaration of compliance with the order	Statement of Compliance with The order	The manufacturer
Type 2.2	Test report	Statement of Compliance with The order, with Indication of Result of non-Specific Inspection	The manufacturer
Type 3.1	Inspection certificate 3.1	Statement of Compliance with The order, with indication of results of specific inspection	The manufacturer´s authorized inspection representative independent of the manufacturing department
Type 3.2	Inspection certificate 3.2	Statement of compliance with the order, with indication of results of specific inspection	The manufacturer´s authorized inspection representative independent of the manufacturing department and either the purchaser´s authorized inspection representative or the inspector designated by the official regulations

LK Valves has introduced a customer portal that allows the customer to log in to get the most current information regarding certificates and approvals. From here you will be able to download all the relevant information for your specific orders. Please access our website www.lkvalves.com and apply for access.

Orgalime S 2000

General conditions for the supply of mechanical, electrical and electronic products, Brussels, August 2000.

Preamble

1. These General Conditions shall apply when the parties agree in writing or otherwise thereto. When the General Conditions apply to a specific contract, modifications of or deviations from them must be agreed in writing. The object(s) to be supplied under these General Conditions is (are) hereinafter referred to as the Product. Wherever these General Conditions use the term in writing, this shall mean by document signed by the parties, or by letter, fax, electronic mail and by such other means as are agreed by the parties.

Product information

2. All information and data contained in general product documentation and price lists, whether in electronic or any other form, are binding only to the extent that they are by reference expressly included in the contract.

Drawings and descriptions

3. All drawings and technical documents relating to the Product or its manufacture submitted by one party to the other, prior or subsequent to the formation of the contract, shall remain the property of the submitting party. Drawings, technical documents or other technical information received by one party shall not, without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to a third party.

4. The Supplier shall, not later than at the date of delivery, provide free of charge information and drawings which are necessary to permit the Purchaser to erect, commission, operate and maintain the Product. Such information and drawings shall be supplied in the number of copies agreed upon or at least one copy of each. The Supplier shall not be obliged to provide manufacturing drawings for the Product or for spare parts.

Acceptance tests

5. Acceptance tests provided for in the contract shall, unless otherwise agreed, be carried out at the place of manufacture during normal working hours. If the contract does not specify the technical requirements, the tests shall be carried out in accordance with general practice in the appropriate branch of industry concerned in the country of manufacture.

6. The Supplier shall notify the Purchaser in writing of the acceptance tests in sufficient time to permit the Purchaser to be represented at the tests. If the Purchaser is not represented, the test rep ort shall be sent to the Purchaser and shall be accepted as accurate.

7. If the acceptance tests show the Product not to be in accordance with the contract, the Supplier shall without delay remedy any deficiencies in order to ensure that the Product complies with the contract. New tests shall then be carried out at the Purchaser's request, unless the deficiency was insignificant.

8. The Supplier shall hear all costs for acceptance tests carried out at the place of manufacture. The Purchaser shall however bear all travelling and living expenses for his representatives in connection with such tests.

Delivery, passing of risk

9. Any agreed trade term shall be construed in accordance with the INCOTERMS in force at the formation of the contract. If no trade term is specifically agreed, the delivery shall be Ex works (EXW). If, in the case of delivery Ex works, the Supplier, at the reqtiest of the Purchaser, undertakes to send the Product to its destination, the risk will pass not later than when the Product is handed over to the first carrier. Partial shipments shall be permitted unless otherwise agreed.

Time for delivery, delay

10. If the parties, instead of specifying the date for delivery, have specified a period of time on the expiry of which delivery shall take place, such period shall start to run as soon as the contract is entered into, all official formalities have been completed, payments due at the formation of the contract have been made, any agreed securities have been given and any other preconditions have been fulfilled.

11. If the Supplier anticipates that he will not be able to deliver the Product at the time for delivery, he shall forthwith notify the Purchaser thereof in writing, stating the reason, and, if possible, the time when delivery can be expected. If the Supp-

lier fails to give such notice, the Purchaser shall be entitled to compensation for any additional costs which he incurs and which he could have avoided bad he received such notice.

12. If delay in delivery is caused by any of the circumstances mentioned in Clause 39 or by an act or omission on the part of the Purchaser, including suspension under Clauses 20 or 42, the time for delivery shall be extended by a period which is reasonable having regard to all the circumstances in the case. This provision applies regardless of whether the reason for the delay occurs before or after the agreed time for delivery.

13. If the Product is not delivered at the time for delivery (as defined in Clauses 10 and 12), the Purchaser is entitled to liquidated damages from the date on which delivery should have taken place. The liquidated damages shall be payable at a rate of 0.5 per cent of the purchase price for each completed week of delay. The liquidated damages shall not exceed 7.5 per cent of the purchase price. If only part of the Product is delayed, the liquidated damages shall be calculated on that part of the purchase price which is attributable to such part of the Product as cannot in consequence of the delay be used as intended by the parties. The liquidated damages become due at the Purchaser's demand in writing but not before delivery has been completed or the contract is terminated under Clause 14. The Purchaser shall forfeit his right to liquidated damages if he has not lodged a claim in writing for such damages within six months after the time when delivery should have taken place.

14. If the delay in delivery is such that the Purchaser is entitled to maximum liquidated damages under Clause 13 and if the Product is still not delivered, the Purchaser may in writing demand delivery within a final reasonable period which shall not be less than one week. If the Supplier does not deliver within such final period and this is not due to any circumstance for which the Purchaser is responsible, then the Purchaser may by notice in writing to the Supplier terminate the contract in respect of such part of the Product as cannot in consequence of the Supplier's failure to deliver be used as intended by the parties. If the Purchaser terminates the contract he shall be entitled to compensation for the loss he has suffered as a result of the Supplier's delay. The total compensation, including the liquidated damages which are payable under Clause 13, shall not exceed 15 per cent of that part of the purchase price which is attributable to the part of the Product in respect of which the contract is terminated. The Purchaser shall also have the right to terminate the contract by notice in writing to the Supplier, if it is clear from the circumstances that there will occur a delay in delivery which, under Clause 13 would entitle the Purchaser to maximum liquidated damages. In case of termination on this ground, the Purchaser shall be entitled to maximum liquidated damages and compensation under the third paragraph of this Clause 14.

15. Liquidated damages under Clause 13 and termination of the contract with limited compensation under Clause 14 are the only remedies available to the Purchaser in case of delay on the part of the Supplier. All other claims against the Supplier based on such delay shall be excluded, except where the Supplier has been guilty of gross negligence. In these General Conditions gross negligence shall mean an act or omission implying either a failure to ray due regard to serious consequences, which a conscientious supplier would normally foresee as likely to ensue, or a deliberate disregard of the consequences of such act or omission.

16. If the Purchaser anticipates that he will be unable to accept delivery of the Product at the delivery time, he shall forthwith notify the Supplier in writing thereof, stating the reason and, if possible, the time when he will be able to accept delivery. If the Purchaser fails to accept delivery at the delivery time, he shall nevertheless ray any part of the purchase price which becomes due on delivery, as if delivery bad taken place. The Supplier shall arrange for storage of the Product at the risk and expense of the Purchaser. The Supplier shall also, if the Purchaser so requires, insure the Product at the Purchaser's expense.

17. Unless the Purchaser's failure to accept delivery is due to any such circumstance as mentioned in Clause 39, the Supplier may by notice in writing require the Purchaser to accept delivery within a final reasonable period. If, for any reason for which the Supplier is not responsible, the Purchaser fails to accept delivery within such period, the Supplier may by notice in writing terminate the contract in whole or in part. The Supplier shall then be entitled to compensation for the loss he has suffered by reason of the Purchaser's default. The compensation shall not exceed that part of the purchase price which is attributable to that part of the Product in respect of which the contract is terminated.

Payment

18. Unless otherwise agreed, the purchase price shall be paid with one third at the formation of the contract and one third when the Supplier notifies the Purchaser that the Product, or the essential part of it, is ready for delivery. Final payment shall be made when the Product is delivered. Payments shall be made within 30 days of the date of the invoice.

19. Whatever the means of payment used, payment shall not be deemed to have been effected before the Supplier's account has been fully and irrevocably credited.

20. If the Purchaser fails to ray by the stipulated date, the Supplier shall be entitled to interest from the day on which payment was due. The rate of interest shall be as agreed between the parties. If the parties fail to agree on the rate of interest, it shall be 8 percentage points above the rate of the main refinancing facility of the European Central Bank in force on the due date of payment. In case of late payment the Supplier may, after having notified the Purchaser in writing, suspend his performance of the contract until he receives payment. If the Purchaser has not raid the amount due within three months the Supplier shall be entitled to terminate the contract by notice in writing to the Purchaser and to claim compensation for the loss he has incurred. The compensation shall not exceed the agreed purchase price.

Retention of title

21. The Product shall remain the property of the Supplier until raid for in full to the extent that such retention of title is valid under the applicable law. The Purchaser shall at the request of the Supplier assist him in taking any measures necessary to protect the Supplier's title to the Product in the country concerned. The retention of title stall not affect the passing of risk under Clause 9.

Liability for defects

22. Pursuant to the provisions of Clauses 23-37 inclusive, the Supplier shall remedy any defect or nonconformity (hereinafter termed defect(s)) resulting from faulty design, materials or workmanship.

23. The Supplier's liability is limited to defects which appear within a period of one year from delivery. If the daily use of the Product exceeds that which is agreed, this period stall be reduced proportionately.

24. When a defect in a part of the Product has been remedied, the Supplier shall be liable for defects in the repaired or replaced part under the same terms and conditions as those applicable to the original Product for a period of one year. For the remaining parts of the Product the period mentioned in Clause 23 shall be extended only by a period equal to the period during which the Product has been out of operation as a result of the defect.

25. The Purchaser shall without undue delay notify the Supplier in writing of any defect which appears. Such notice shall under no circumstance be given later than two weeks after the expiry of the period given in Clause 23. The notice shall contain a description of the defect. If the Purchaser fails to notify the Supplier in writing of a defect within the time limits set forth in the first paragraph of this Clause, he loses his right to have the defect remedied. Where the defect is such that it may cause damage, the Purchaser shall immediately inform the Supplier in writing. The Purchaser shall bear the risk of damage resulting from his failure so to notify.

26. On receipt of the notice under Clause 25 the Supplier shall remedy the defect without undue delay and at his own cost as stipulated in Clauses 22-37 inclusive. Repair shall be carried out at the place where the Product is located unless the Supplier deems it appropriate that the defective part or the Product is returned to him for rep air or replacement. The Supplier is obliged to carry out dismantling and reinstallation of the part if this requires special knowledge. If such special knowledge is not required, the Supplier has fulfilled his obligations in respect of the defect when he delivers to the Purchaser a duly repaired or replaced part.

27. If the Purchaser has given such notice as mentioned in Clause 25 and no defect is found for which the Supplier is liable, the Supplier shall be entitled to compensation for the costs he has incurred as a result of the notice.

28. The Purchaser shall at his own expense arrange for any dismantling and reassembly of equipment other than the Product, to the extent that this is necessary to remedy the defect.

29. Unless otherwise agreed, necessary transport of the Product and/or parts thereof to and from the Supplier in connection with the remedying of defects for which the Supplier is liable shall be at the risk and expense of the Supplier. The Purchaser shall follow the Supplier's instructions regarding such transport.

30. Unless otherwise agreed, the Purchaser stall bear any additional costs which the Supplier incurs for repair, dismantling, installation and transport as a result of the Product being located in a place other than the destination stated in the contract or - if no destination is stated - the place of delivery.

31. Defective parts which have been replaced shall be made available to the Supplier and shall be his property.

32. If, within a reasonable time, the Supplier does not fulfil his obligations under Clause 26, the Purchaser may by notice in writing fix a final time for completion of the Supplier's obligations. If the Supplier fails to fulfil his obligations within such final time, the Purchaser may himself undertake or employ a third party to undertake necessary remedial works at the risk and expense of the Supplier. Where successful remedial work s have been undertaken by the Purchaser or a third party, reimbursement by the Supplier of reasonable costs incurred by the Purchaser stall be in full settlement of the Supplier's liabilities for the said defect.

33. Where the defect has not been successfully remedied, as stipulated under Clause 32, a) the Purchaser is entitled to a reduction of the purchase price in proportion to the reduced value of the Product, provided that under no circumstance shall such reduction exceed IS per cent of the purchase price, or b) where the defect is so substantial as to significantly deprive the Purchaser of the benefit of the contract, the Purchaser may terminate the contract by notice in writing to the Supplier. The Purchaser is then entitled to compensation for the loss he has suffered up to a maximum of 15 per cent of the purchase price.

34. The Supplier is not liable for defects arising out of materials provided, or a design stipulated or specified by the Purchaser.

35. The Supplier is liable only for defects which appear under the conditions of operation provided for in the contract and under proper use of the Product. The Supplier's liability does not cover defects which are caused by faulty maintenance, incorrect erection or faulty rep air by the Purchaser, or by alterations carried out without the Supplier's consent in writing. Finally the Supplier's liability does not cover normal wear and tear or deterioration.

36. Notwithstanding the provisions of Clauses 22-35 the Supplier shall not be liable for defects in any part of the Product for more than two years from the beginning of the period given in Clause 23.

37. Save as stipulated in Clauses 22-36, the Supplier shall not be liable for defects. This applies to any loss the defect may cause including loss of production, loss of profit and other indirect loss. This limitation of the Supplier's liability shall not apply if he has been guilty of gross negligence as defined in Clause 15.

Allocation of liability for damage caused by the product

38. The Supplier shall not be liable for any damage to property caused by the Product after it has been delivered and whilst it is in the possession of the Purchaser. Nor shall the Supplier be liable for any damage to products manufactured by the Purchaser, or to products of which the Purchaser's products form a part. If the Supplier incurs liability towards any third party for such damage to property as described in the preceding paragraph, the Purchaser shall indemnify, defend and hold the Supplier harmless. If a claim for damage as described in this Clause is lodged by a third party against one of the parties, the latter party shall forthwith inform the other party thereof in writing. The Supplier and the Purchaser shall be mutually obliged to let themselves be summoned to the court or arbitral tribunal examining claims for damages lodged against one of them on the basis of damage allegedly caused by the Product. The limitation of the Supplier's liability in the first paragraph of this Clause shall not apply where the Supplier has been guilty of gross negligence as defined in Clause 15.

Force majeure

39. Either party shall be entitled to suspend performance of his obligations under the contract to the extent that such performance is impeded or made unreasonably onerous by any of the following circumstances: industrial disputes and any other circumstance beyond the control of the parties such as fire, war, extensive military mobilization,

insurrection, requisition, seizure, embargo, restrictions in the use of power and defects or delays in deliveries by sub-contractors caused by any such circumstance referred to in this Clause. A circumstance referred to in this Clause whether occurring prior to or after the formation of the contract shall give a right to suspension only if its effect on the performance of the contract could not be foreseen at the time of the formation of the contract.

40. The party claiming to be affected by Force Majeure shall notify the other party in writing without delay on the intervention and on the cessation of such circumstance. If Force Majeure prevents the Purchaser from fulfilling his obligations, he shall compensate the Supplier for expenses incurred in securing and protecting the Product.

41. Regardless of what might otherwise follow from these General Conditions, either party shall be entitled to terminate the contract by notice in writing to the other party if performance of the contract is suspended under Clause 39 for more than six months.

Anticipated non-performance

42. Notwithstanding other provisions in these General Conditions regarding suspension, each party shall be entitled to suspend the performance of his obligations under the contract, where it is clear from the circumstances that the other party will not be able to perform his obligations. A party suspending his performance of the contract shall forthwith notify the other party thereof in writing.

Consequential losses

43. Save as otherwise stated in these General Conditions there shall be no liability for either party towards the other party for loss of production, loss of profit, loss of use, loss of contracts or for any other consequential or indirect loss whatsoever.

Disputes and applicable law

44. All disputes arising out of or in connection with the contract shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said rules.

45. The contract shall be governed by the substantive law of the Supplier's country.

This is an Orgalime publication. Orgalime groups the central trade federations of the mechanical, electrical, e1ectronic and metalworking industries in 23 European countries and provides liaison between these organisations in the legal, technical and economic fields. *All rights reserved* *CJ Editeur responsable : Adrian Harris, Secretary General ORGALIME "Diamant" building, Boulevard A. Reyers 80, B - 1030 Bruxelles Tel: (32) 2 706 82 35 - Fax: (32) 27068250 - c-mail: secretariat@orga1ime.org*

This is an offprint from Orgalime S 2000.

Incoterms 2000

Incoterms 2000, refers to the set of trade terms that came into force on the 1st of January 2000, devised and published by International Chamber of Commerce (ICC). The use of trade terms aims at clarifying the following aspects of the agreement between buyer and seller:

- The specific time that the cargo is to be delivered
- The specific location where the cargo is to be delivered
- The responsibility to cover costs associated with transport, custom duty fee and custom clearance
- The responsibility of risks and the need to sign protecting insurance

The name Incoterms refers to International Commerce Terms and consist of 13 different terms divided into four groups:

Origin Terms

EXW - Ex-Works, named place where shipment is available to the buyer, not loaded.

International Carriage NOT Paid by Seller

FCA - Free Carrier, unloaded at the seller's dock OR a named place where shipment is available to the international carrier or agent, not loaded.

FAS - Free Alongside Ship, named ocean port of shipment. Used for ocean transport only.

FOB - Free On Board vessel, named ocean port of shipment. This term is used for ocean shipments only where it is important that the goods pass the ship's rail.

International Carriage Paid by the Seller

CFR - Cost and Freight, Named ocean port of destination. Used for ocean transport only.

CIF - Cost, Insurance and Freight, named ocean port of destination. Used for ocean transport only.

CPT - Carriage Paid To, named place or port of destination.

CIP - Carriage and Insurance Paid To, named place or port of destination.

Arrival At Stated Destination

DAF - Delivered At Frontier, named place of destination, by land, not unloaded.

DES - Delivered Ex-Ship, named port of destination, not unloaded. Used for ocean transport only.

DEQ - Delivered Ex-Quay, named port of destination, unloaded, not cleared. Used for ocean transport only.

DDU - Delivered Duty Unpaid, named place of destination, not unloaded, not cleared. This term is used for any mode of transportation.

DDP - Delivered Duty Paid, named place of destination, not unloaded, cleared. This term is used for any mode of transportation.

The following table gives a simplified breakdown of the responsibility of the costs:

SERVICE	EXW Ex-Works WhoPays	FCA Free Carrier WhoPays	FAS Free Alongside Ship WhoPays	FOB Free On-Board Vessel WhoPays	CFR Cost & Freight WhoPays	CIF Cost Insurance & Freight WhoPays	CPT Carriage Paid to WhoPays
Warehouse storage at point of origin	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Warehouse labor at point of origin	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Export packing	Seller	Seller	Seller	Seller	Seller	Seller	Seller
Loading at point of origin	Buyer	Seller	Seller	Seller	Seller	Seller	Seller
Inland freight	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller
Port receiving charges	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller
Forwarders fee	Buyer	Buyer	Seller	Seller	Seller	Seller	Seller
Loading on ocean carrier	Buyer	Buyer	Buyer	Seller	Seller	Seller	Seller
Ocean/Air freight charges	Buyer	Buyer	Buyer	Buyer	Seller	Seller	Seller
Charges at foreign Port/ Airport	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Seller
Customs, Duties & Taxes abroad	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer
Delivery charges to final destination	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer	Buyer

SERVICE	CIP Carriage & Insurance Paid To WhoPays	DAF Delivery At Frontier WhoPays	DES Delivered Ex-Ship WhoPays	DEQ Delivered Ex-Quay, Duty Unpaid WhoPays	DDU Delivered Duty Unpaid WhoPays	DDP Delivered Duty Paid WhoPays
Warehouse storage at point of origin	Seller	Seller	Seller	Seller	Seller	Seller
Warehouse labor at point of origin	Seller	Seller	Seller	Seller	Seller	Seller
Export packing	Seller	Seller	Seller	Seller	Seller	Seller
Loading at point of origin	Seller	Seller	Seller	Seller	Seller	Seller
Inland freight	Seller	Seller	Seller	Seller	Seller	Seller
Port receiving charges	Seller	Seller	Seller	Seller	Seller	Seller
Forwarders fee	Seller	Seller	Seller	Seller	Seller	Seller
Loading on ocean carrier	Seller	Seller	Seller	Seller	Seller	Seller
Ocean/Air freight charges	Seller	Seller	Seller	Seller	Seller	Seller
Charges at foreign Port/Airport	Seller	Seller	Buyer	Seller	Seller	Seller
Customs, Duties & Taxes abroad	Buyer	Buyer	Buyer	Buyer	Buyer	Seller
Delivery charges to final destination	Buyer	Buyer	Buyer	Buyer	Seller	Seller

For the latest version of Incoterms and a more indepth description please visit Internation Chamber of Commerce at www.iccwbo.org

This is an offprint from Incoterms 2000.

Certificates

DET NORSKE VERITAS

MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 98-SKM-AQ-492

This is to certify that

LK Valves AB

at

HELSINGBORG, SWEDEN

has been found to conform to the Management System Standard:

ISO 9001:2008

This Certificate is valid for:

Design, manufacture and sales of valves

Initial Certification date:
1998-03-04

This Certificate is valid until:
2012-04-30

The audit has been performed under the supervision of:
Hans Hallberg
Lead Auditor

SWEDAC ACKREDITERING
1053
ISO/IEC 17021

Place and date:
Stockholm, 2009-04-29

for the Accredited Unit:
DNV CERTIFICATION AB, SWEDEN

Ewa Ahlinder
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

DET NORSKE VERITAS, BOX 6046, 171 06 SOLNA, SWEDEN. TEL: +46 8 587 940 00 FAX: +46 8 651 70 43

DET NORSKE VERITAS

MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 57987-2009-AQ-RGC-RvA

This is to certify that

Changzhou LK Valves Co., Ltd.

No. 167, East East Road, Building 13, Changzhou, P.R. China

has been found to conform to the Management System Standard:

ISO 9001:2008

This Certificate is valid for the following product or service ranges:

Manufacture of Valves & Accessories for Marine Industry

Initial Certification date:
July 22nd, 2009

This Certificate is valid until:
July 22nd, 2012

The audit has been performed under the supervision of
Wu Yu
Lead Auditor

RvA MGMT. SYS. C 024

Place and date:
Shanghai, August 3rd, 2009

for the Accredited Unit:
DNV CERTIFICATION B.V., THE NETHERLANDS

Chen Yi
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

DET NORSKE VERITAS CERTIFICATION B.V. Zwolseweg 1, 2994 LB Barendrecht, The Netherlands, TEL: +31 10 2922 688 - www.dnv.com / www.dnv.nl

DET NORSKE VERITAS
MANUFACTURING SURVEY ARRANGEMENT

MSA NO. R-2041
The MSA consists of 4 pages

Between
LK Valves AB
HELSINGBORG, Sweden

and
Det Norske Veritas AS
DNV MALMÖ OFFICE

Extent
This Manufacturing Survey Arrangement (MSA) is applicable to agreed valve types
subject to testing and inspection for conformance with the requirements of DNV Classification Rules, as stated herein.

The MSA implies that the Manufacturer is authorised to perform the testing and inspection without the attendance of the Surveyor and to prepare the certificates which will be validated by DNV.

Validity
The MSA is valid until 2011-12-31
The MSA will, however, be invalid if the Manufacturer's Quality System Certificate issued by DNV has expired or is cancelled.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million.In the provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

DET NORSKE VERITAS
TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. P-13095
This Certificate consists of 4 pages

This is to certify that the
Globe Valve
with type designation(s)
462002, 462102 , 467002, 467102 , 901002, 901102, 902002, 902102, 921002, 921102

Holder of Certificate
LK Valves AB
BROMMA, Sweden

is found to comply with
Det Norske Veritas' Rules for Classification of Ships
Det Norske Veritas' Standards for Certification 2.9 No. 5-794.40

Application

Temperature range:	See cert.
Max. working press.:	See cert.
Sizes:	See cert.

Place and date
Høvik, 2009-08-17
for DET NORSKE VERITAS AS
Helge Drange
Head of Section

Local Office
DNV Malmö

This Certificate is valid until
2013-12-31
Øyvind Skåra
Surveyor

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million.In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

MARINE DIVISION
17 bis Place des Reflets - La Défense 2
92400 Courbevoie - France
Tel. 33 1 42 91 52 91
Fax. 33 1 42 91 28 94
www.veristar.com

BUREAU VERITAS

Certificate number: 01592/G1 BV
File number : ACM 145/1935/001
Product code : 2221I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

TYPE APPROVAL CERTIFICATE

as per Bureau Veritas Classification Rules

This certificate is issued to

LK Valves AB
HELSINGBORG - SWEDEN

for the type of product

EMERGENCY SHUT OFF VALVES, QUICK CLOSING VALVES

Quick Closing Valves LK types N° 901 and N° 902

Regulations and standards :
BUREAU VERITAS Rules for the Classification of Steel Ships

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of the Regulations and standards mentioned above.

This certificate is valid until : 21 Jul 2010

At Paris la Défense, on : 21 Jul 2005

For BUREAU VERITAS,
By order of the Secretary

J.BENOIT

Approval office

BUREAU VERITAS SURVEYORS AT PARIS 1828 INTERNATIONAL REGISTER PARIS

Local office : BV GOTHENBURG

BUREAU VERITAS SURVEYORS AT PARIS 1828 INTERNATIONAL REGISTER GOTHENBURG

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine Division. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

Type Approval Certificate

Germanischer Lloyd

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No.	**32 638 - 06 HH**
Company	**LK Valves AB** **Garnisonsgatan 19** **254 66 Helsingborg, SWEDEN**
Product Description	**Quick Closing Valve**
Type	**Straight Type No. 901002 / Angle Type No 901102** **Straight Type No. 902002 (Bellow sealing)**
Environmental Category	**None**
Technical Data / Range of Application	**TECHNICAL DATA:** **Materials:** **Body / Bonnet** — **Nodular Cast Iron, Forged Carbon and Stainless Steel Gun Metal / Bronze** **Spindle, Disc, Seat** — **X5CrNi1810, AISI 304 / X20Cr13, AISI 420** **Spindle sealing** — **FPM, 1.4571, AISI 316Ti (Bellow sealing)** **Actuator** — **Pneumatic, Hydraulik and Mechanical** **Size range** — **DN 15 - 250 type 90 1002/901102** **DN 20 - 150 type 90 2002** **Nominal pressure** — **PN 16 (up to DN 150) / PN 10** **Temperature range** — **0°C up to 150°C (FPM sealing)** **up to 300°C (Bellow sealing)** **RANGE OF APPLICATION:** **The quick closing valves of type 901002, 901102 and 902002 are type approved for the use on storage tanks and in piping systems according to the Rules of Germanischer Lloyd, Chapter 2, Machinery Installations, Sec.11.**
Test Standard	**Regulations for the Performance of Type Tests, Part 6 - Test Requirements for Mechanical Components and Equipment, Edition 1998**
Documents	**Test report no.: 0945-05 issued by Pac Consult , Vibration test** **Drawings: 75500-Material Specification, 75440- Straight type PN 16, 75441-Angle Type PN 16, 75318-Straight type DN200, 75326-Straight type DN250, 17732873A type 902002, 75000 Release Cylinder**
Remarks	**Valves included in pipe class I and II are subject to final inspection by a GL surveyor in manufacturers work shop.**
Valid until	**2011-07-19**
Page	**1 of 1**
File No.	**II.A.16**

Type Approval Symbol GL

Hamburg, 2006-08-18

Germanischer Lloyd Günter Hölzer Hagen Markus

This certificate is issued on the basis of "Guidelines for the Performance of Type Approvals Part 1, Procedure".

Lloyd's Register

Type Approval Certificate Extension

This is to certify that Certificate No. 92/00135(E4) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	LK Valves AB Garnisonsgatan 49 254 66 Helsingborg Sweden	
PLACES OF PRODUCTION	LK Valves AB Garnisonsgatan 49 254 66 Helsingborg Sweden	Changzhou LK Valves Co Ltd East Avenue 111, Building 13 213025 Changzhou Jiangsu Province Peoples' Republic of China
DESCRIPTION	Spring loaded quick-closing valves of straight or angled construction. Remote control by hydraulic, pneumatic or mechanical operation. Local operation by hand or melting ring.	
TYPE	Quick Closing Valves Bellow Sealed Quick Closing Valves	
APPLICATION	Marine, offshore and industrial applications	
SPECIFIED STANDARDS	Lloyd's Register's Rules and Regulations for the Classification of Ships	

Certificate No.	92/00135(E5)
Issue Date	25 March 2010
Expiry Date	29 September 2013
Sheet	1 of 2

P. F. Moysey
London Design Support Services
Lloyd's Register EMEA

Lloyd's Register EMEA
71 Fenchurch Street, London EC3M 4BS

Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

ABS
FOUNDED 1862

CERTIFICATE NUMBER
05-LD120375/1-PDA

DATE
18 May 2010

ABS TECHNICAL OFFICE
London Engineering Department

CERTIFICATE OF
DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of

LK VALVES AB - HELSINGBORG

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate. It will remain valid as noted below or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT:	Valve
MODEL:	Remote Controlled Quick Closing Valve, Straight/ Angle type; Bellow Sealed, Remote Controlled Quick Closing Valve, Straight/ Angle type; Globe valve, Straight/ Angle type; Bellow Sealed, Globe valve, Straight/ Angle type; Self Closing valve, Straight/ Angle type
ABS RULE:	2010 ABS Steel Vessel Rules 1-1-4/7.7, 4-6-2/5.11, 4-6-4/ 13.5.3, 4-6-4/13.7.2, 4-6-7 3.5.5, 4-6-7/5.3.3
OTHER STANDARD	Face to Face Dimension as per ISO 5752 Basic Series 1, Flange ISO 7005;

AMERICAN BUREAU OF SHIPPING

Mohammed K.M. Abbas
Engineering Type Approval Co-ordinator

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

ABZ5801101

FOUNDED 1862 ABS

CERTIFICATE NUMBER
05-LD120375/1-DUP

DATE
18 May 2010

ABS TECHNICAL OFFICE
London Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of

CHANGZHOU LK VALVES CO LTD - JIANGSU

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate. It will remain valid as noted below or until the Rules or specifications used in the assessment are revised (whichever occurs first).

PRODUCT:	Valve
MODEL:	Remote Controlled Quick Closing Valve, Straight/ Angle type; Bellow Sealed, Remote Controlled Quick Closing Valve, Straight/ Angle type; Globe valve, Straight/ Angle type; Bellow Sealed, Globe valve, Straight/ Angle type; Self Closing valve, Straight/ Angle type
ABS RULE:	2010 ABS Steel Vessel Rules 1-1-4/7.7, 4-6-2/5.11, 4-6-4/ 13.5.3, 4-6-4/13.7.2, 4-6-7 3.5.5, 4-6-7/5.3.3
OTHER STANDARD	Face to Face Dimension as per ISO 5752 Basic Series 1, Flange ISO 7005;

AMERICAN BUREAU OF SHIPPING

Mohammed K.M. Abbas
Engineering Type Approval Co-ordinator

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

AB258(01/10)

ABS TYPE APPROVAL PROGRAM

CERTIFICATE NUMBER GB 649237-X

PLANT LOCATION HELSINGBORG, SWEDEN

ABS OFFICE GOTHENBURG, SWEDEN

CERTIFICATE OF Manufacturing Assessment

This is to Certify that a representative of this Bureau did, at the request of

LK-VALVES AB

Attend their facilities at the location noted above, in order to carry out an audit of their facilities and associated quality assurance and quality control procedures. The facility is considered capable of consistently manufacturing;

Remote controlled quick-closing valve system.

in compliance with their ABS Product Design Assessment Certificates and the designated standards defined therein. The product listed on their current Product Design Assessment Certificates are eligible to be placed on this Bureau's *List of Type Approved Products,* subject to annual facility audits by a representative of this Bureau, and renewal of this Certificate after five (5) years.

ISSUE DATE 19-Oct-05 EXPIRATION DATE 18-Oct-10

SURVEYOR'S SIGNATURE Andreas Odenman

FIRST ANNUAL ENDORSEMENT Date: 10 Jan 2007

SECOND ANNUAL ENDORSEMENT Date: 10-Dec-2007

THIRD ANNUAL ENDORSEMENT Date: 15-Oct-2008

FOURTH ANNUAL ENDORSEMENT Date: 02-Dec-2009

AB257 (03-04)

Note: This certificate evidences compliance with one or more of the Rules, Guides, standards, or other criteria of American Bureau of Shipping; or a statutory, industrial, or manufacturer's standard, and is issued solely for the use of the Bureau, its committees, its clients, or other authorized entities. This certificate is governed by the terms and conditions on the reverse side hereof.



ABS

TYPE APPROVAL PROGRAM

CERTIFICATE NUMBER NX1781924-X1

PLANT LOCATION Changzhou, P.R.China

ABS OFFICE Nantong, P.R.China

CERTIFICATE OF

Manufacturing Assessment

This is to Certify that a representative of this Bureau did, at the request of

Changzhou LK Valves Co., Ltd.

Attend their facilities at the location noted above, in order to carry out an audit of their facilities and associated quality assurance and quality control procedures. The facility is considered capable of consistently manufacturing;

Remote Controlled Quick-Closing Valve System

in compliance with their ABS Product Design Assessment Certificates and the designated standards defined therein. The product listed on their current Product Design Assessment Certificates are eligible to be placed on this Bureau's *List of Type Approved Products*, subject to annual facility audits by a representative of this Bureau, and renewal of this Certificate after five (5) years.

ISSUE DATE 2-Feb-10 EXPIRATION DATE 1-Feb-15

SURVEYOR'S SIGNATURE H. Lu

FIRST ANNUAL ENDORSEMENT Date:

SECOND ANNUAL ENDORSEMENT Date:

THIRD ANNUAL ENDORSEMENT Date:

FOURTH ANNUAL ENDORSEMENT Date:

AB257 (03-04)

Note: This certificate evidences compliance with one or more of the Rules, Guides, standards, or other criteria of American Bureau of Shipping; or a statutory, industrial, or manufacturer's standard, and is issued solely for the use of the Bureau, its committees, its clients, or other authorized entities. This certificate is governed by the terms and conditions on the reverse side hereof.

Key for type of valve designation

LK valves have a six digit number which designates the type of valve. These numbers are given in top right corner of the product data sheet. Key for build up this type of valve designation is defined below.

The first four digits designate type of valve.

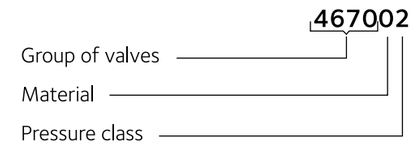
The fifth digit designates material in body and bonnet – according to the list below.

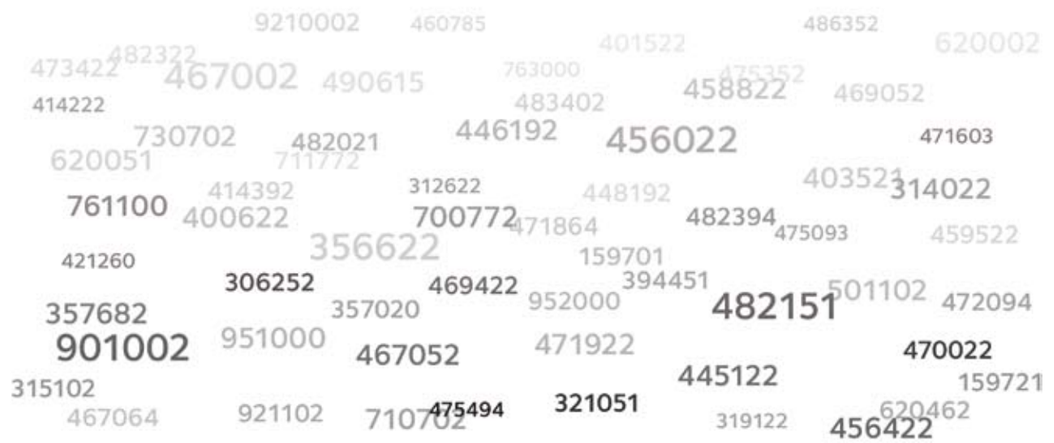
0 = Nodular cast iron
1 = Brass
2 = Gunmetal (LG 2)
3 = Bronze (G 1)
4 = Tinbronze (90/10)
5 = Cast iron
6 = Carbon steel
7 = Other materials (e.g. aluminiumbronze)
8 = Stainless steel (AISI 304)
9 = Stainless steel (AISI 316)

The sixth digit designates the pressure class according to the list below.

0 = Max. 6 bar
1 = 6,1-10 bar
2 = 10,1-16 bar
3 = 16,1-25 bar
4 = 25,1-40 bar
5 = Above 40 bar

Example





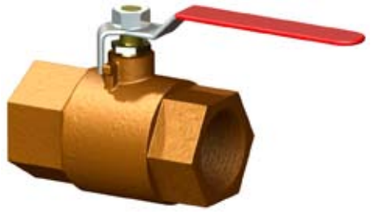
Ball valve
443024

Description

Valve with female threaded ends.
Full bore.

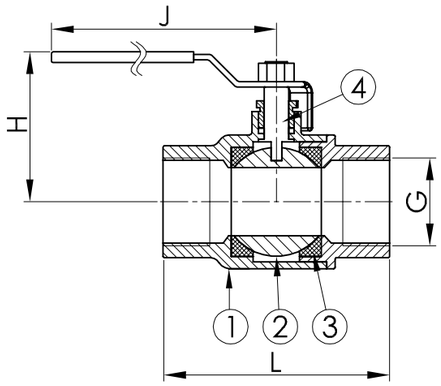
Application

Liquids, steam and gases that do not attack the integral material.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Ball	Brass CW617N (Ms 58) chrome-plated
3	Seat ring	PTFE
4	Stem	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)
	Up to 120°C
8-100	32



DN	G (BSP)	Pressure rating	L	H	J	Kg
8	G 1/4”	PN 32	51	47,5	85	0,2
10	G 3/8”	PN 32	51	47,5	85	0,2
15	G 1/2”	PN 32	62	45	85	0,3
20	G 3/4”	PN 32	70	57,5	104	0,4
25	G 1”	PN 32	85	57,5	104	0,6
32	G 1 1/4”	PN 32	99	75	122	1
40	G 1 1/2”	PN 32	110	77,5	122	1,3
50	G 2”	PN 32	134	93	153	2,4
65	G 2 1/2”	PN 32	142	119,5	200	3,5
80	G 3”	PN 32	178	134	280	6
100	G 4”	PN 32	210	153,5	280	9

All measurements in mm. Weights are approximations.

Ball valve
442095

Description

Full bore. Two piece.

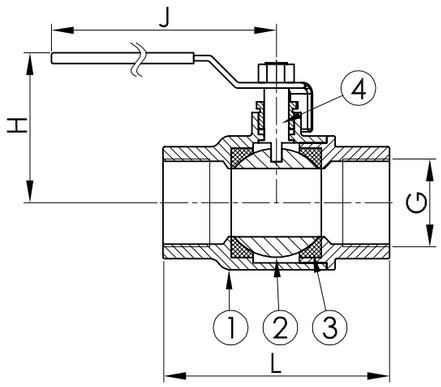
Application

Liquids, steam and gases that do not attack the integral material.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Ball (relief hole)	Stainless steel 1.4408 (AISI 316)
3	Seat	PTFE
4	Stem	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
8-40	63	40	20	5
50-80	40	24	12	3



DN	G (BSP)	Pressure rating	L	H	J	Kg
8	G 1/4”	PN 63	55,3	57	106	0,3
10	G 3/8”	PN 63	55,3	57	106	0,3
15	G 1/2”	PN 63	64,7	60	106	0,3
20	G 3/4”	PN 63	73,4	68	124	0,5
25	G 1”	PN 63	84,8	77	153	0,8
32	G 1 1/4”	PN 63	99,5	82	153	1,2
40	G 1 1/2”	PN 63	112,7	98	194	1,8
50	G 2”	PN 40	129	105	194	2,8
65	G 2 1/2”	PN 40	170	145	258	6,8
80	G 3”	PN 40	192	155	258	9,8

All measurements in mm. Weights are approximations.

Ball valve
440094

Description

Full bore. Three piece bolted.
Top flange according to ISO 5211.

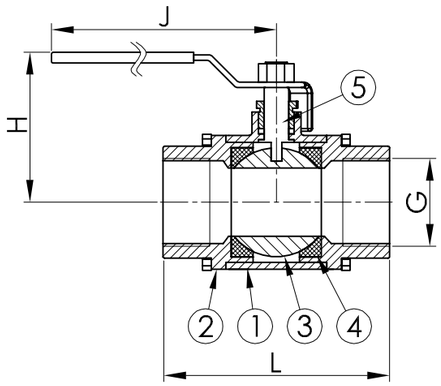


Application

Liquids, steam and gases that do not attack the integral material.

No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Cap	Stainless steel 1.4408 (AISI 316)
3	Ball (relief hole)	Stainless steel 1.4408 (AISI 316)
4	Seat	PTFE
5	Stem (anti-static)	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
1/4”-1 1/2”	63	40	20	5
2”-4”	40	24	12	3



DN	G (BSP)	Pressure rating	L	H	J	ISO 5211	Kg
8	G 1/4”	PN 40	50	55	108	F04	0,4
10	G 3/8”	PN 40	60	55	108	F04	0,4
15	G 1/2”	PN 40	75	64	121	F04	0,7
20	G 3/4”	PN 40	80	70	121	F04	0,8
25	G 1”	PN 40	90	75	155	F04	1,1
32	G 1 1/4”	PN 40	110	83	155	F04	1,8
40	G 1 1/2”	PN 40	120	98	192	F05	2,5
50	G 2”	PN 40	140	105	192	F05	3,7
65	G 2 1/2”	PN 40	185	148	257	F07	8,1
80	G 3”	PN 40	205	155	257	F07	11
100	G 4”	PN 40	240	183	285	F10	18

All measurements in mm. Weights are approximations.

Revision 1

Ball valve
440064

Description

Full bore. Three piece bolted.
Top flange according to ISO 5211.

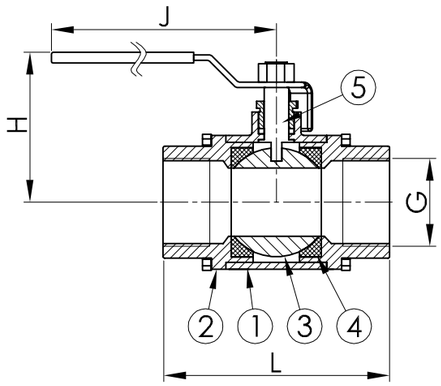


Application

Liquids, steam and gases that do not attack the integral material.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Cap	Cast steel 1.0619 (WCB)
3	Ball (relief hole)	Stainless steel 1.4408 (AISI 316)
4	Seat	PTFE
5	Stem (anti-static)	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
1/4”-1 1/2”	63	40	20	5
2”-4”	40	24	12	3



DN	G (BSP)	Pressure rating	L	H	J	ISO 5211	Kg
8	G 1/4”	PN 40	50	55	108	F04	0,4
10	G 3/8”	PN 40	60	55	108	F04	0,4
15	G 1/2”	PN 40	75	64	121	F04	0,7
20	G 3/4”	PN 40	80	70	121	F04	0,8
25	G 1”	PN 40	90	75	155	F04	1,1
32	G 1 1/4”	PN 40	110	83	155	F04	1,8
40	G 1 1/2”	PN 40	120	98	192	F05	2,5
50	G 2”	PN 40	140	105	192	F05	3,6
65	G 2 1/2”	PN 40	185	148	257	F07	8,1
80	G 3”	PN 40	205	155	257	F07	11
100	G 4”	PN 40	240	183	285	F10	18

All measurements in mm. Weights are approximations.

Revision 1

Ball valve
443013

Description

Valve with female threaded ends.
Full bore.

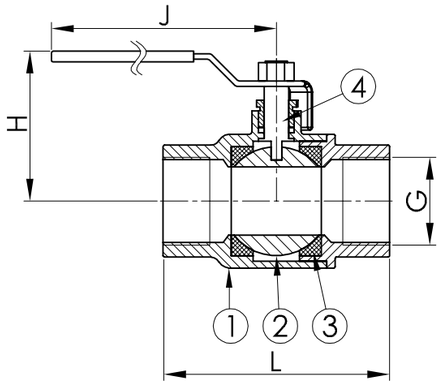


Application

Water, steam, oil, compressed air and gases that do not attack the integral material.

No.	Part	Material
1	Body	Brass CW617N (Ms 58) Nickel-plated
2	Ball	Hard chrome
3	Seat ring	PTFE
4	Stem	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)	
	-20 to +120°C	-30 to +150°C
8-32	25	
40-75		25



DN	G (BSP)	Pressure rating	L	H	J	Kg
8	G 1/4”	PN 25	36	37	73	0,1
10	G 3/8”	PN 25	36	37	73	0,1
15	G 1/2”	PN 25	45	42	83	0,1
20	G 3/4”	PN 25	52	46	83	0,1
25	G 1”	PN 25	63	55	90	0,4
32	G 1 1/4”	PN 25	72	66	110	0,6
40	G 1 1/2”	PN 25	84	68	110	0,8
50	G 2”	PN 25	99	82	130	1,3
65	G 2 1/2”	PN 25	116	117	200	2,4
75	G 3”	PN 25	134	133	270	3,9

All measurements in mm. Weights are approximations.

Three way ball valve
448095

Description

Reduced bore.
One piece ball and stem.



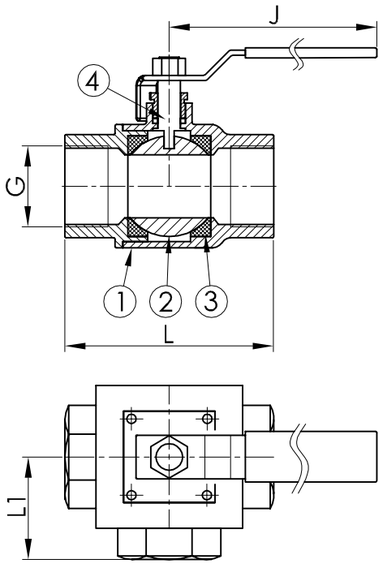
Application

Liquids, steam and gases that do not attack the integral material.

No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Ball (relief hole)	Stainless steel 1.4408 (AISI 316)
3	Seat	PTFE
4	Stem	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
8-40	63	40	20	4
50	40	24	12	3

Port / Type	1	2	3	4
L	1 2 3	1 2 3	1 2 3	1 2 3
T	1 2 3	1 2 3	1 2 3	1 2 3



DN	G (BSP)	Pressure rating	L	L1	J	Kg
8	G 1/4”	PN 63	77,8	38,9	147	0,9
10	G 3/8”	PN 63	77,8	38,9	147	0,9
15	G 1/2”	PN 63	77,8	38,9	147	0,8
20	G 3/4”	PN 63	85,5	42,8	191	1,4
25	G 1”	PN 63	106,1	53,1	191	1,9
32	G 1 1/4”	PN 63	123,1	61,6	230	3,1
40	G 1 1/2”	PN 63	131,2	65,6	245	4,5
50	G 2”	PN 63	159,4	79,7	245	7,5

All measurements in mm. Weights are approximations.

Ball valve
445122

Description

Face to face dimensions according to EN 558, series 14/15.
Flanges according to PN 16, drilled.
Full bore.

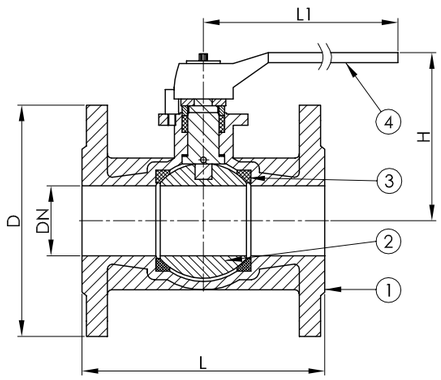


Application

Liquids, steam and gases that do not attack the integral material.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Ball	Brass CW617N (Ms 58) Hard chrome
3	Ball seat	PTFE/Graphite
4	Handle	Steel 1.0114 (St37)

DN	Max. working pressure (bar)
	-10 to +90°C
20-200	16



DN	Connection	Pressure rating	L	L1	D	H	Kg
20	PN 16	PN 16	120	130	105	85	2,7
25	PN 16	PN 16	125	170	115	95	3,6
32	PN 16	PN 16	130	170	140	100	4,8
40	PN 16	PN 16	140	220	150	118	6,2
50	PN 16	PN 16	150	220	165	125	9
65	PN 16	PN 16	170	284	185	152	12
80	PN 16	PN 16	180	284	200	166	16
100	PN 16	PN 16	190	360	220	180	20
125	PN 16	PN 16	200	447	250	225	28
150	PN 16	PN 16	210	560	285	242	39
200	PN 16	PN 16	400	1000	340	320	93

All measurements in mm. Flanges according to ISO 7005-2. Weights are approximations.

Ball valve
445192

Description

Full bore. Two piece heavy duty valve.
Face to face according to EN 558, series 27.

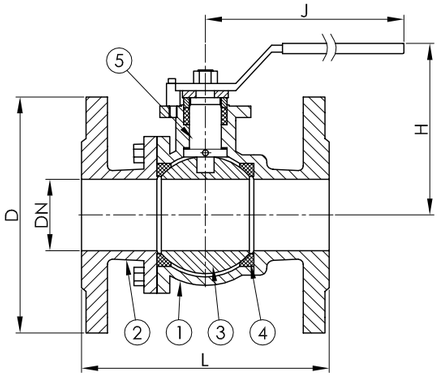


Application

Liquids, steam and gases that do not attack the integral material.

No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Cap	Stainless steel 1.4408 (AISI 316)
3	Ball (relief hole)	Stainless steel 1.4408 (AISI 316)
4	Seat	PTFE
5	Stem	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
15-100	16	10	5	2



DN	Connection	Pressure rating	L	D	H	J	Kg
15	PN 16	PN 16	115	95	86	165	2,3
20	PN 16	PN 16	120	105	92	165	3,1
25	PN 16	PN 16	125	115	106	176	4,3
32	PN 16	PN 16	130	140	114	215	6,0
40	PN 16	PN 16	140	150	116	215	7,0
50	PN 16	PN 16	150	165	136	278	9,7
65	PN 16	PN 16	170	185	150	278	14
80	PN 16	PN 16	180	200	185	375	21
100	PN 16	PN 16	190	220	200	375	27

All measurements in mm. Flanges according to EN 1092-1. Weights are approximations.

Ball valve
445194

Description

Full bore. Two piece heavy duty valve.
Face to face according to EN 558, series 27.

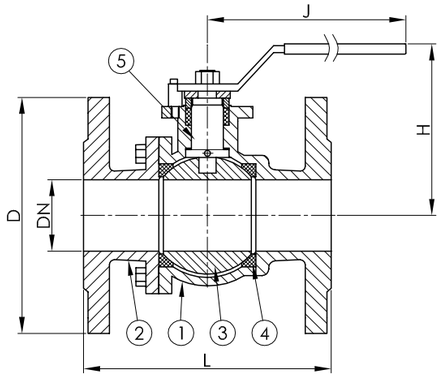
Application

Liquids, steam and gases that do not attack the integral material.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Cap	Stainless steel 1.4408 (AISI 316)
3	Ball (relief hole)	Stainless steel 1.4408 (AISI 316)
4	Seat	PTFE
5	Stem (anti-static)	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
15-100	40	24	12	3



DN	Connection	Pressure rating	L	D	H	J	Kg
15	PN 16	PN 40	115	95	86	165	2,3
20	PN 16	PN 40	120	105	92	165	3,1
25	PN 16	PN 40	125	115	106	176	4,3
32	PN 16	PN 40	130	140	114	215	6,0
40	PN 16	PN 40	140	150	116	215	7,0
50	PN 16	PN 40	150	165	136	278	11
65	PN 16	PN 40	170	185	150	278	15
80	PN 16	PN 40	180	200	185	375	22
100	PN 16	PN 40	190	235	200	375	30

All measurements in mm. Flanges according to EN 1092-1. Weights are approximations.

Ball valve
445162

Description

Full bore. Two piece heavy duty valve.
Face to face according to EN 558, series 27.

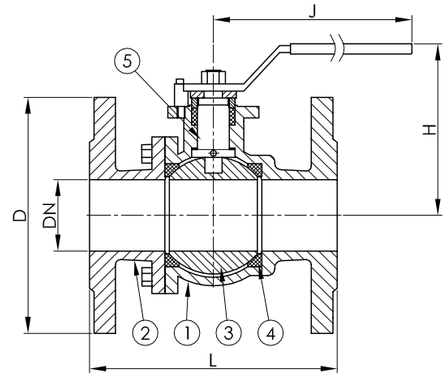
Application

Liquids, steam and gases that do not attack the integral material.



No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Cap	Cast steel 1.0619 (WCB)
3	Ball (relief hole)	Stainless steel 1.4408 (AISI 316)
4	Seat	PTFE
5	Stem	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
15-100	16	10	5	2



DN	Connection	Pressure rating	L	D	H	J	Kg
15	PN 16	PN 16	115	95	86	165	2,3
20	PN 16	PN 16	120	105	92	165	3,1
25	PN 16	PN 16	125	115	106	176	4,3
32	PN 16	PN 16	130	140	114	215	6,0
40	PN 16	PN 16	140	150	116	215	7,0
50	PN 16	PN 16	150	165	136	278	9,7
65	PN 16	PN 16	170	185	150	278	14
80	PN 16	PN 16	180	200	185	375	21
100	PN 16	PN 16	190	220	200	375	27

All measurements in mm. Flanges according to EN 1092-1. Weights are approximations.

Ball valve
445102

Description

Face to face dimensions according to EN 558, series 14/15.
Flanges according to PN 16, drilled.
Full bore.

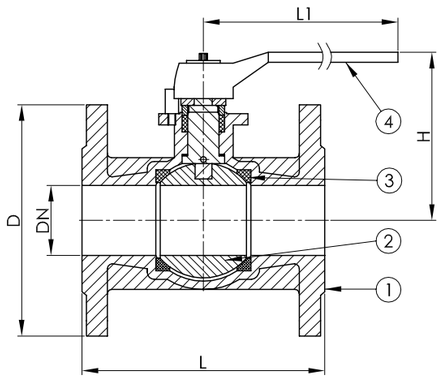


Application

Liquids, steam and gases that do not attack the integral material.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Ball	Stainless steel 1.4301 (AISI 304)
3	Ball seat	PTFE/Graphite
4	Handle	Steel 1.0114 (St37)

DN	Max. working pressure (bar)
	-10 to +90°C
20-200	16



DN	Connection	Pressure rating	L	L1	D	H	Kg
20	PN 16	PN 16	120	130	105	85	2,7
25	PN 16	PN 16	125	170	115	95	3,6
32	PN 16	PN 16	130	170	140	100	4,8
40	PN 16	PN 16	140	220	150	118	6,2
50	PN 16	PN 16	150	220	165	125	9
65	PN 16	PN 16	170	284	185	152	12
80	PN 16	PN 16	180	284	200	166	16
100	PN 16	PN 16	190	360	220	180	20
125	PN 16	PN 16	200	447	250	225	28
150	PN 16	PN 16	210	560	285	242	39
200	PN 16	PN 16	400	1000	340	320	93

All measurements in mm. Flanges according to ISO 7005-2. Weights are approximations.

Ball valve
445152

Description

Face to face dimensions according to EN 558, series 14/15.
Flanges according to PN 16, drilled.
Full bore.



Application

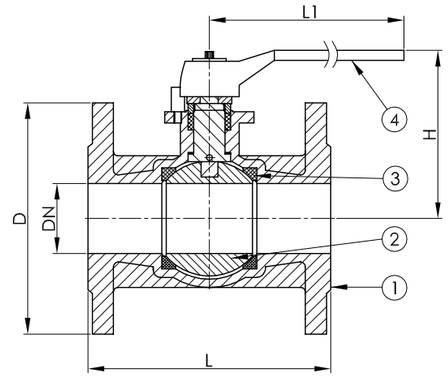
Liquids, steam and gases that do not attack the integral material.

Variants

Ball and stem of AISI 316.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Ball	Brass CW617N (Ms 58) Hard chrome
3	Ball seat	PTFE/Graphite
4	Handle	Steel 1.0114 (St37)

DN	Max. working pressure (bar)
	-10 to +90°C
20-200	16



DN	Connection	Pressure rating	L	L1	D	H	Kg
20	PN 16	PN 16	120	130	105	85	2,7
25	PN 16	PN 16	125	170	115	95	3,6
32	PN 16	PN 16	130	170	140	100	4,8
40	PN 16	PN 16	140	220	150	118	6,2
50	PN 16	PN 16	150	220	165	125	9
65	PN 16	PN 16	170	284	185	152	12
80	PN 16	PN 16	180	284	200	166	16
100	PN 16	PN 16	190	360	220	180	20
125	PN 16	PN 16	200	447	250	225	28
150	PN 16	PN 16	210	560	285	242	39
200	PN 16	PN 16	400	1000	340	320	93

All measurements in mm. Flanges according to ISO 7005-2. Weights are approximations.

Ball valve
440194

Description

Full bore. Three piece bolted.
Top flange according to ISO 5211.
Face to face dimensions according to EN 558, series 1.

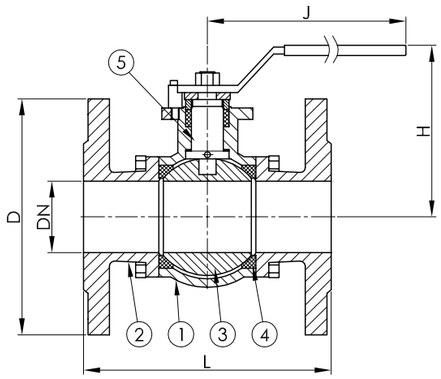


Application

Liquids, steam and gases that do not attack the integral material.

No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Cap	Stainless steel 1.4408 (AISI 316)
3	Ball (relief hole)	Stainless steel 1.4408 (AISI 316)
4	Seat	PTFE
5	Stem (anti-static)	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
15-100	40	24	12	3



DN	Pressure rating	L	D	H	J	ISO 5211	Kg
15	PN 40	130	95	78	138	F04	2,2
20	PN 40	150	105	84	138	F04	2,9
25	PN 40	160	115	89	168	F04	3,7
32	PN 40	180	140	97	168	F04	5,6
40	PN 40	200	150	114	230	F05	7,3
50	PN 40	230	165	121	230	F05	9,3
65	PN 40	290	185	178	290	F07	16
80	PN 40	310	200	185	290	F07	21
100	PN 40	350	235	183	285	F10	36

All measurements in mm. Flanges according to EN 1092-1. Weights are approximations.

Ball valve
440164

Description

Full bore. Three piece bolted.
Top flange according to ISO 5211.
Face to face dimensions according to EN 558, series 1.

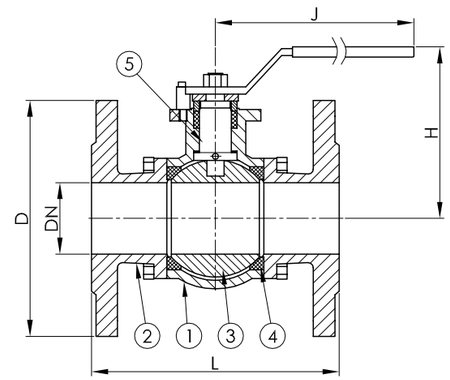


Application

Liquids, steam and gases that do not attack the integral material.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Cap	Cast steel 1.0619 (WCB)
3	Ball (relief hole)	Stainless steel 1.4408 (AISI 316)
4	Seat	PTFE
5	Stem (anti-static)	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
15-100	40	24	12	3



DN	Pressure rating	L	D	H	J	ISO 5211	Kg
15	PN 40	130	95	78	138	F04	2,2
20	PN 40	150	105	84	138	F04	2,9
25	PN 40	160	115	89	168	F04	3,7
32	PN 40	180	140	97	168	F04	5,6
40	PN 40	200	150	114	230	F05	7,3
50	PN 40	230	165	121	230	F05	9,3
65	PN 40	290	185	178	290	F07	16
80	PN 40	310	200	185	290	F07	21
100	PN 40	350	235	183	285	F10	36

All measurements in mm. Flanges according to EN 1092-1. Weights are approximations.

Ball valve
446192

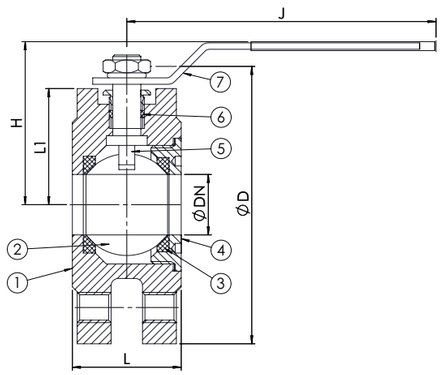
Description

Full bore.
Top flange according to ISO 5211.
Design according to EN 12516.

Application

Liquids, steam and gases that do not attack the integral material.





No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Ball (relief hole)	Stainless steel 1.4401 (AISI 316)
3	Seat	PTFE
4	Cap	Stainless steel 1.4408 (AISI 316)
5	Stem (anti-static)	Stainless steel 1.4401 (AISI 316)
6	Stem packing	PTFE
7	Handle	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
15-100	16	10	5	2

DN	Connection	Pressure rating	L	L1	D	H	J	ISO 5211	Kg
15	PN 16	PN 16	34,5	34	95	73	150	F03	1,3
20	PN 16	PN 16	38,5	39	105	80,5	150	F03	1,8
25	PN 16	PN 16	44,5	45,5	115	89	155	F04	2,3
32	PN 16	PN 16	54	51,3	140	97,5	173	F05	3,6
40	PN 16	PN 16	62	57	150	104,5	215	F05	4,5
50	PN 16	PN 16	80	62	165	112	215	F05	6,7
65	PN 16	PN 16	104	84,5	185	148	262	F07	11
80	PN 16	PN 16	118	90,6	200	150	262	F07	14
100	PN 16	PN 16	148,4	108	220	181,5	500	F07	23

All measurements in mm. Flanges according to EN 1092-1. Weights are approximations.

Ball valve
446152

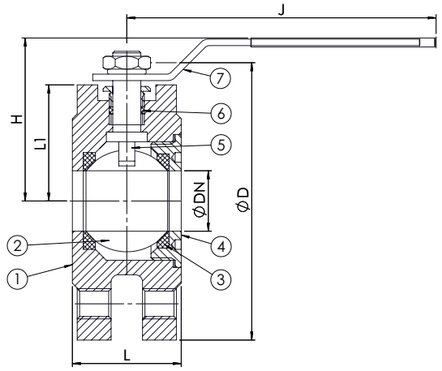
Description

Full bore.
Flanges drilled according to PN 16.

Application

Liquids, steam and gases that do not attack the integral material.





No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Ball	Brass CW617N (Ms 58)
3	Ball Seat	PTFE/Graphite
4	Cap	(DN 20-50) Brass CW617N (Ms 58) (DN 65-100) Cast iron EN-JL1040 (GG25)
5	Stem	Brass CW617N (Ms 58)
6	Stem packing	PTFE
7	Handle	Steel 1.0114 (St37)

DN	Max. working pressure (bar)
	-10 to +100°C
20-100	16

DN	Connection	Pressure rating	L	L1	D	H	J	Kg
20	PN 16	PN 16	40	61	105	85	130	0,8
25	PN 16	PN 16	50	69	115	95	170	1,3
32	PN 16	PN 16	55	73	140	100	170	1,9
40	PN 16	PN 16	65	88	150	118	220	2,4
50	PN 16	PN 16	80	96	165	125	220	3,1
65	PN 16	PN 16	100	120	185	152	284	5,2
80	PN 16	PN 16	120	136	200	166	284	8,5
100	PN 16	PN 16	130	150	220	180	360	12

All measurements in mm. Weights are approximations.

Three way ball valve
448192

Description

Full bore.
One piece ball and stem.

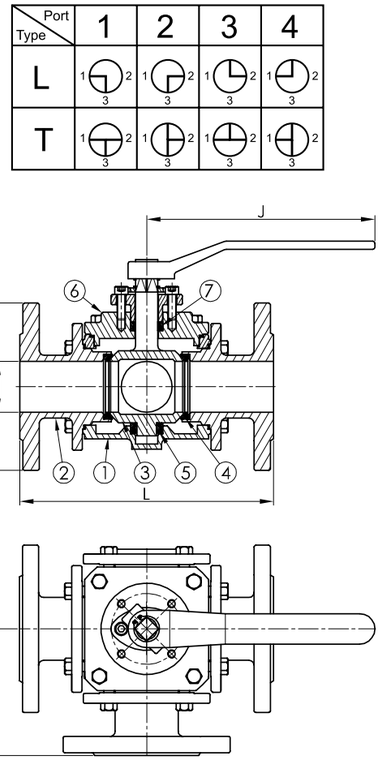
Application

Liquids, steam and gases that do not attack the integral material.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Cap	Stainless steel 1.4408 (AISI 316)
3	Ball	Stainless steel 1.4408 (AISI 316)
4	Seat	PTFE
5	Stem bearing	PTFE
6	Top cap	Stainless steel 1.4408 (AISI 316)
7	Stem packing	PTFE

DN	Max. working pressure (bar)			
	38°C	100°C	150°C	180°C
25-100	16	10	5	2



DN	Connection	Pressure rating	L	L1	D	J	Kg
25	PN 16	PN 16	225	112,5	115	170	13
32	PN 16	PN 16	242	121	150	170	15
40	PN 16	PN 16	250	125	165	225	22
50	PN 16	PN 16	285	142,5	185	225	32
80	PN 16	PN 16	297	148,5	200	330	42
100	PN 16	PN 16	339	169,5	220	330	62

All measurements in mm. Flanges according to EN 1092-1. Weights are approximations.

Revision 1

Globe valve
456022

Description

Screw-down stop valve. Secured bonnet. Metal sealing.

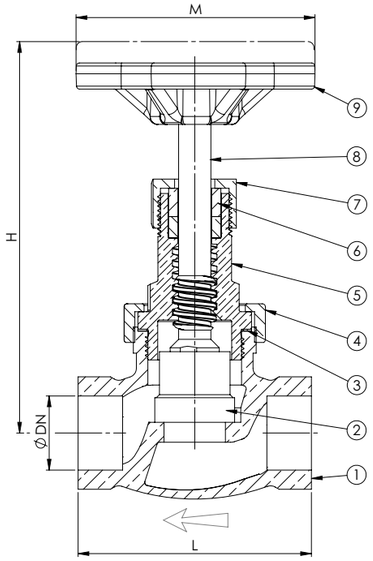
Application

Water, saturated steam, oil and other non aggressive liquids. For warm sea water it is recommended to use a stem of zinkfree bronze, CuSn6.

Variants

SDNR disc. Regulating disc.





No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	(DN 8-50) Bronze CC493K (RG7) (DN 65-80) Bronze CC491K (RG5)
3	Sealing	PTFE
4	Locking nut	Bronze CC491K (RG5)
5	Bonnet	(DN 8-32) Bronze CC493K (RG7) (DN 40-80) Bronze CC491K (RG5)
6	Gland	Brass CW614N (Ms 58)
7	Gland nut	Brass CW614N (Ms 58)
8	Stem	Special brass CW710R (SoMs59)
9	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	Up to 120°C	225°C (steam up to 180°C)
8-80	16	10

DN	Connection (BSP)	Pressure rating	L	H	M	Kg
8	G 1/4”	PN 16	60	95	60	0,4
10	G 3/8”	PN 16	60	95	60	0,5
15	G 1/2”	PN 16	65	95	60	0,5
20	G 3/4”	PN 16	75	110	80	0,7
25	G 1”	PN 16	90	115	80	1,2
32	G 1 1/4”	PN 16	105	135	90	1,6
40	G 1 1/2”	PN 16	120	145	100	2,3
50	G 2”	PN 16	145	165	120	3,4
65	G 2 1/2”	PN 16	170	230	160	7
80	G 3”	PN 16	200	250	200	12

All measurements in mm. Weights are approximations.

Revision 1

Globe valve
456622

Description

Screw-down stop valve. Secured bonnet. PTFE sealing.

Application

Water, saturated steam, oil and other non aggressive liquids. For warm sea water it is recommended to use a stem of zinkfree bronze, CuSn6.

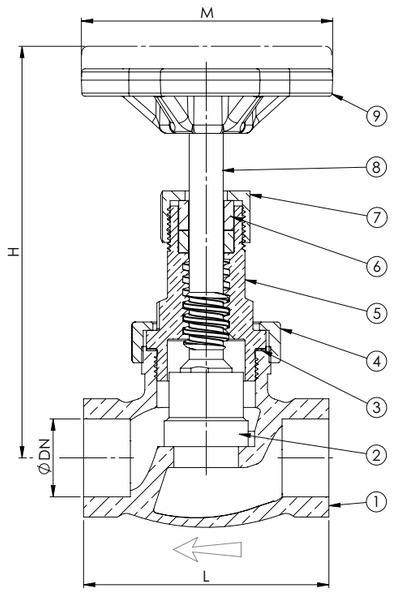
Variants

SDNR disc.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	Bronze CC491K (RG5)
3	Sealing	PTFE
4	Locking nut	Bronze CC491K (RG5)
5	Bonnet	(DN 15-32) Bronze CC493K (RG7) (DN 40-80) Bronze CC491K (RG5)
6	Gland	Brass CW614N (Ms 58)
7	Gland nut	Brass CW614N (Ms 58)
8	Stem	Special brass CW710R (SoMs59)
9	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)		
	Up to 100°C	140°C	180°C
15-50	32	25	16



DN	Connection (BSP)	Pressure rating	L	H	M	Kv-value	Kg
15	G 1/2”	PN 16	75	95	60	4	0,5
20	G 3/4”	PN 16	90	110	80	7	0,7
25	G 1”	PN 16	105	115	80	10	1,2
32	G 1 1/4”	PN 16	115	135	90	15	1,6
40	G 1 1/2”	PN 16	130	145	100	23	2,3
50	G 2”	PN 16	160	165	120	33	3,4

All measurements in mm. Weights are approximations.

Globe valve
456122

Description

Screw-down stop valve. Secured bonnet. Metal sealing.

Application

Water, saturated steam, oil and other non aggressive liquids. For warm sea water it is recommended to use a stem of zinkfree bronze, CuSn6.

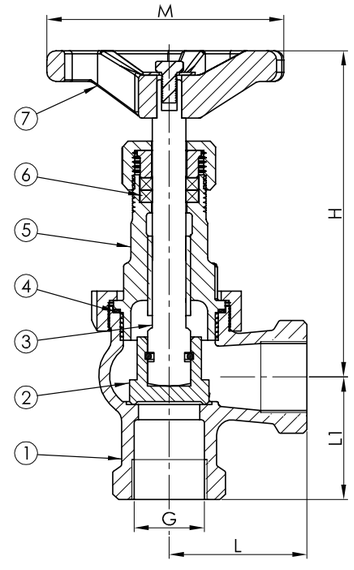
Variants

SDNR disc, regulating disc.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	(DN 8-50) Bronze CC493K (RG7) (DN 65-80) Bronze CC491K (RG5)
3	Stem	Special brass CW710R (SoMs59)
4	Sealing	PTFE
5	Bonnet	(DN 8-32) Bronze CC493K (RG7) (DN 40-80) Bronze CC491K (RG5)
6	Gland	Brass CW614N (Ms 58)
7	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	up to 120°C	225°C (steam up to 180°C)
8-80	16	10



DN	G (BSP)	Pressure rating	L	L1	H	M	Kg
8	G 1/4”	PN 16	35	30	86	60	0,4
10	G 3/8”	PN 16	35	30	86	60	0,5
15	G 1/2”	PN 16	40	35	86	60	0,5
20	G 3/4”	PN 16	45	40	100	80	0,7
25	G 1”	PN 16	50	45	105	80	1,1
32	G 1 1/4”	PN 16	55	50	120	90	1,6
40	G 1 1/2”	PN 16	65	55	135	100	2,0
50	G 2”	PN 16	75	65	150	120	3,5
65	G 2 1/2”	PN 16	90	75	230	160	7,6
80	G 3”	PN 16	110	90	250	200	12

All measurements in mm. Weights are approximations.

Globe valve
314222

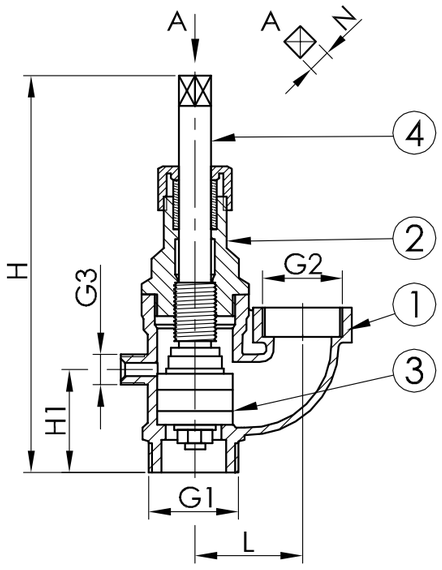
Description

In closed posistion the downwards flow is drained. The valve must be either fully opened or fully closed.

No.	Part	Material
1	Body	(DN 40-50) Bronze CC491K (RG5)
2	Bonnet	(DN 20-32) Bronze CC493K (RG7) (DN 40-50) Bronze CC491K (RG5)
3	Disc ring	PTFE/Leather
4	Stem	Special brass CW710R (SoMs59)

DN	Max. working pressure (bar)
	Up to 30°C
20-50	16





DN	Pressure rating	G1 (BSP)	G2	G3	L	H	H1	N	Kg
20	PN 16	G 3/4”	G 1/4”	3/8”	38	150	38	9	0,6
25	PN 16	G 1”	G 1”	3/8”	45	170	42	10	0,9
32	PN 16	G 1 1/4”	G 1 1/4”	3/8”	55	195	54	11	1,4
40	PN 16	G 1 1/2”	G 1 1/2”	3/8”	60	250	60	12	2,3
50	PN 16	G 2”	G 2”	3/8”	80	255	68	12	3,2

All measurements in mm. Weights are approximations.

Revision 1

Three way valve
401921

Description

Flow direction according to the arrows on the valve body.

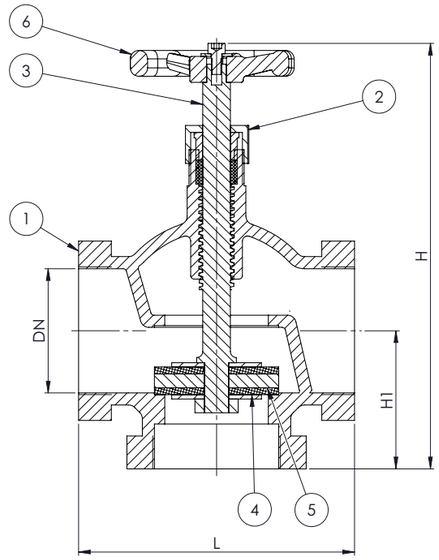
Application

Water, steam and oil.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Gland nut	Brass CW614N (Ms 58)
3	Stem	Special brass CW710R (SoMs59)
4	Disc ring	PTFE
5	Disc	Special brass CW710R (SoMs59)
6	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	Up to 100°C	185°C
15-65	10	8,5





DN	Connection (BSP)	Pressure rating	L	H	H1	Kg
15	G 1/2”	PN 10	65	128	33	0,6
20	G 3/4”	PN 10	76	140	40	0,7
25	G 1”	PN 10	80	147	42	0,8
32	G 1 1/4”	PN 10	90	163	48	1,3
40	G 1 1/2”	PN 10	102	184	54	1,7
50	G 2”	PN 10	136	213	68	3,3
65	G 2 1/2”	PN 10	136	270	80	5,7

All measurements in mm. Weights are approximations.

Revision 1

Globe valve
456094

Description

Screw-down globe valve. Straight type with female screwed ends. Screwed and secured bonnet. Metal sealing.

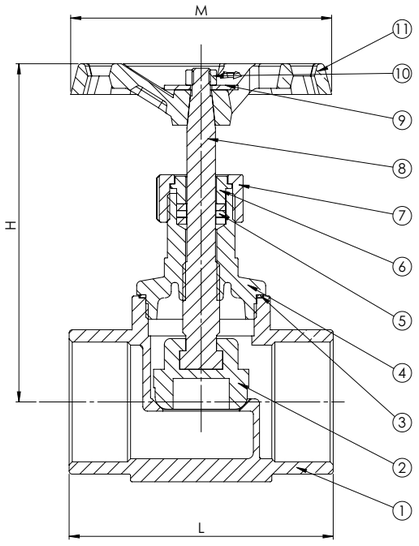
Application

Liquids that do not attack the integral material.

Variants

SDNR disc.





No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Disc	Stainless steel 1.4436 (AISI 316)
3	Sealing	PTFE
4	Bonnet	Stainless steel 1.4408 (AISI 316)
5	Stem packing	PTFE
6	Gland	Stainless steel 1.4301 (AISI 304)
7	Gland nut	Stainless steel 1.4301 (AISI 304)
8	Stem	Stainless steel 1.4436 (AISI 316)
9	Washer	Aluminum (1050)
10	Nut	Stainless steel 1.4301 (AISI 304)
11	Handwheel	Nodular cast iron EN-JS1030 (GGG40)

DN	Max. working pressure (bar)
	-20 to +200°C
8-50	40

DN	Connection (BSP)	Pressure rating	L	H	M	Kg
8	G 1/4”	PN 40	63	103	62	0,6
10	G 3/8”	PN 40	63	103	62	0,6
15	G 1/2”	PN 40	63	103	62	0,6
20	G 3/4”	PN 40	70	103	62	0,6
25	G 1”	PN 40	77	109	75	0,8
32	G 1 1/4”	PN 40	87	124	85	1,2
40	G 1/ 1/2”	PN 40	100	130	85	1,4
50	G 2”	PN 40	110	143	95	2,1

All measurements in mm. Weights are approximations.

Globe valve
466794

Description

Y-type globe valve with secured bonnet.

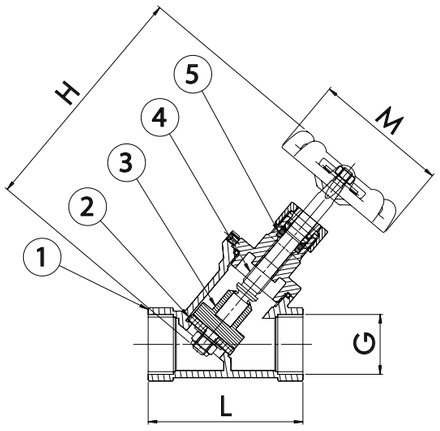
Application

Liquids, steam and gases that do not attack the integral material.

Variants

SDNR disc.





No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Seat	PTFE
3	Disc	Stainless steel 1.4401 (AISI 316)
4	Stem	Stainless steel 1.4401 (AISI 316)
5	Packing	PTFE

DN	Max. working pressure (bar)
	-20 to +200°C
8-50	40

DN	G (BSP)	Pressure rating	L	H	M	Kg
8	G 1/4”	PN 40	57	99	62	0,4
10	G 3/8”	PN 40	57	99	62	0,4
15	G 1/2”	PN 40	61	111	62	0,5
20	G 3/4”	PN 40	70	120	62	0,6
25	G 1”	PN 40	86	133	75	0,9
32	G 1 1/4”	PN 40	100	149	85	1,4
40	G 1 1/2”	PN 40	111	164	85	1,5
50	G 2”	PN 40	138	183	95	3

All measurements in mm. Weights are approximations.

Globe valve
467094

Description

Face to face dimensions according to EN 558, series 1.
Flanges according to PN 40, drilled (DN 200-300 PN 25).

Application

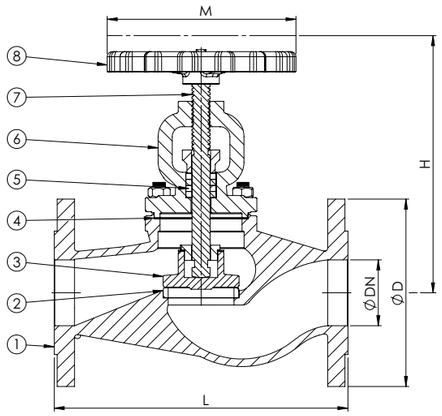
Liquids, steam and gases that do not attack the integral material.

Variants

SDNR disc, regulating disc, PTFE-sealing.

No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Seat	Stainless steel 1.4401 (AISI 316)
3	Disc	Stainless steel 1.4401 (AISI 316)
4	Gasket	Graphite
5	Gland packing	Graphite
6	Bonnet	Stainless steel 1.4408 (AISI 316)
7	Stem	Stainless steel 1.4401 (AISI 316)
8	Handwheel	Cast iron EN-JL1040 (GG25)





DN	Max. working pressure (bar)
	up to 120°C
15-150	40
200	16
250	10
300	6

DN	Connection	Pressure rating	D	L	H	M	Kg
15	PN 40	PN 40	95	130	165	120	4,2
20	PN 40	PN 40	105	150	165	120	4,5
25	PN 40	PN 40	115	160	180	140	5,6
32	PN 40	PN 40	140	180	180	140	7
40	PN 40	PN 40	150	200	215	160	11
50	PN 40	PN 40	165	230	230	160	13
65	PN 40	PN 40	185	290	245	180	19
80	PN 40	PN 40	200	310	295	200	25
100	PN 40	PN 40	235	350	325	225	35
125	PN 40	PN 40	270	400	360	250	58
150	PN 40	PN 40	300	480	425	300	80
200	PN 25	PN 16	360	600	505	400	150
250	PN 25	PN 10	425	730	625	520	230
300	PN 25	PN 6	485	850	690	520	335

All measurements in mm. Flanges according to EN 1092-1/B. Weights are approximations.

Revision 1

Globe valve
467064

Description

Face to face dimensions according to EN 558, series 1.
Flanges according to PN 40, drilled (DN 200-300 PN 25).

Application

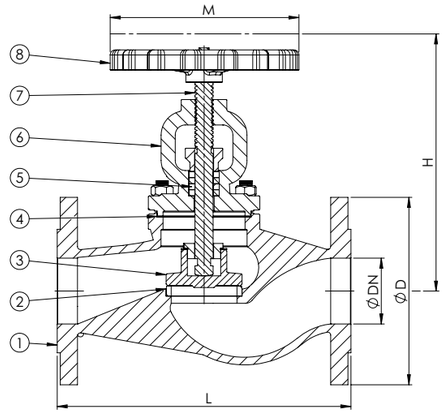
Liquids, steam and gases that do not attack the integral material.

Variants

SDNR disc, regulating disc.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Seat	Stainless steel 1.4301 (AISI 304)
3	Disc	(DN 15-65) Stainless steel 1.4301 (AISI 304) (DN 80-200) Cast steel 1.0619 (WCB)
4	Gasket	Graphite
5	Gland packing	Graphite
6	Bonnet	Cast steel 1.0619 (WCB)
7	Stem	Stainless steel 1.4301 (AISI 304)
8	Handwheel	Cast iron EN-JL1040 (GG25)





DN	Max. working pressure (bar)
	up to 120°C
15-150	40
200	16
250	10
300	6

DN	Connection	Pressure rating	D	L	H	M	Kg
15	PN 40	PN 40	95	130	165	120	4,2
20	PN 40	PN 40	105	150	165	120	4,5
25	PN 40	PN 40	115	160	180	140	5,6
32	PN 40	PN 40	140	180	180	140	7,0
40	PN 40	PN 40	150	200	215	160	11
50	PN 40	PN 40	165	230	230	160	13
65	PN 40	PN 40	185	290	245	180	19
80	PN 40	PN 40	200	310	295	200	25
100	PN 40	PN 40	235	350	325	225	35
125	PN 40	PN 40	270	400	360	250	58
150	PN 40	PN 40	300	480	425	300	80
200	PN 25	PN 16	360	600	505	400	150
250	PN 25	PN 10	425	730	625	520	230
300	PN 25	PN 6	485	850	690	520	335

All measurements in mm. Flanges according to EN 1092-1/B. Weights are approximations.

Revision 1

Globe valve
467002

Description

Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 200-500 PN 10).

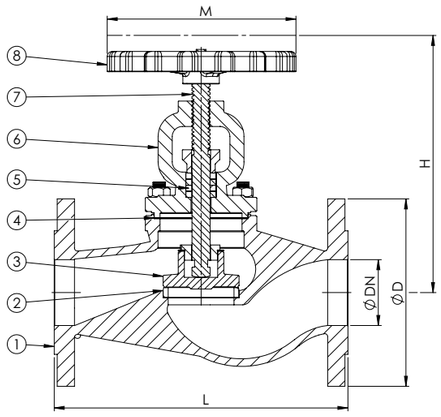
Application

Liquids, steam and gases that do not attack the integral material.

Variants

SDNR disc, regulating disc, stainless steel trim.





No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Seat	Bronze CC491K (RG5)
3	Disc	(DN15-65) Bronze CC491K (RG5) (DN80-250) Nodular cast iron EN-JS1030 (GGG40)
4	Gasket	Graphite
5	Gland packing	Graphite
6	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
7	Stem	Special brass CW710R (SoMs59)
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-150	16	10
200-250	10	6

DN	Connection	Pressure rating	L	D	H	M	Kg
15	PN 16	PN 16	130	95	177	120	3,5
20	PN 16	PN 16	150	105	179	120	4
25	PN 16	PN 16	160	115	198	120	5
32	PN 16	PN 16	180	140	198	120	6,8
40	PN 16	PN 16	200	150	221	140	9,3
50	PN 16	PN 16	230	165	224	140	12
65	PN 16	PN 16	290	185	267	140	18
80	PN 16	PN 16	310	200	292	160	25
100	PN 16	PN 16	350	220	325	160	35
125	PN 16	PN 16	400	250	370	200	55
150	PN 16	PN 16	480	285	420	200	77
200	PN 10	PN 10	600	340	643	400	145
250	PN 10	PN 10	730	395	780	400	243

All measurements in mm. Flanges according to EN 1092-2. Weights are approximations.

Globe valve
467052

Description

Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 200-500 PN 10).

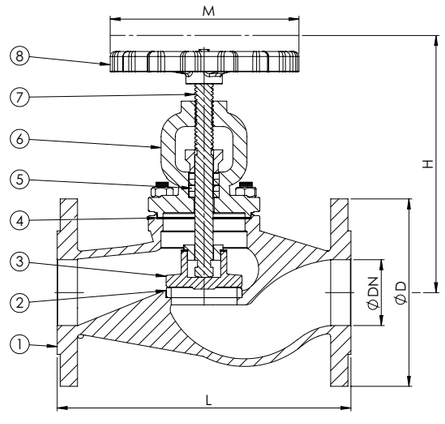
Application

Liquids, steam and gases that do not attack the integral material.

Variants

SDNR disc, regulating disc, stainless steel trim.





No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Seat	Bronze CC491K (RG5)
3	Disc	(DN15-65) Bronze CC491K (RG5) (DN80-200) Cast iron EN-JL1040 (GG25)
4	Gasket	Graphite
5	Gland packing	Graphite
6	Bonnet	Cast iron EN-JL1040 (GG25)
7	Stem	Special brass CW710R (SoMs59)
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-150	16	10
200-250	10	6

DN	Connection	Pressure rating	L	D	H	M	Kg
15	PN 16	PN 16	130	95	177	120	3,5
20	PN 16	PN 16	150	105	179	120	4
25	PN 16	PN 16	160	115	198	120	5
32	PN 16	PN 16	180	140	198	120	6,8
40	PN 16	PN 16	200	150	221	140	9,3
50	PN 16	PN 16	230	165	224	140	12
65	PN 16	PN 16	290	185	267	140	18
80	PN 16	PN 16	310	200	292	160	25
100	PN 16	PN 16	350	220	325	160	35
125	PN 16	PN 16	400	250	370	200	55
150	PN 16	PN 16	480	285	420	200	77
200	PN 10	PN 10	600	340	643	400	145
250	PN 10	PN 10	730	395	780	400	243

All measurements in mm. Flanges according to EN 1092-2. Weights are approximations.

Globe valve
467194

Description

Face to face dimensions according to EN 558, series 8.
Flanges according to PN 40, drilled (DN 200-300 PN 25).

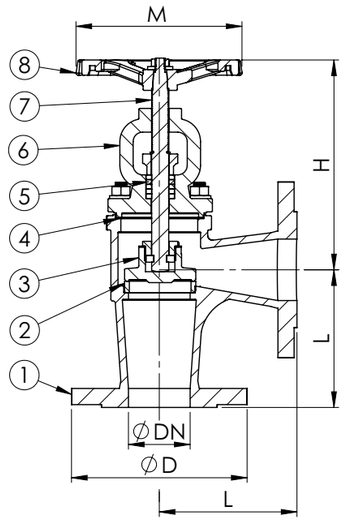
Application

Liquids and steam that do not attack the integral material.

Variants

SDNR disc, regulating disc, PTFE-sealing.





No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Seat	Stainless steel 1.4401 (AISI 316)
3	Disc	Stainless steel 1.4401 (AISI 316)
4	Gasket	Graphite
5	Gland packing	Graphite
6	Bonnet	Stainless steel 1.4408 (AISI 316)
7	Stem	Stainless steel 1.4401 (AISI 316)
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	up to 120°C
15-150	40
200	16
250	10
300	6

DN	Connection	Pressure rating	D	L	H	M	Kg
15	PN 40	PN 40	95	90	165	120	4,2
20	PN 40	PN 40	105	95	165	120	5
25	PN 40	PN 40	115	100	180	140	6
32	PN 40	PN 40	140	105	180	140	8
40	PN 40	PN 40	150	115	215	160	10
50	PN 40	PN 40	165	125	230	160	13
65	PN 40	PN 40	185	145	245	180	18
80	PN 40	PN 40	200	155	295	200	24
100	PN 40	PN 40	235	175	325	225	38
125	PN 40	PN 40	270	200	360	250	50
150	PN 40	PN 40	300	225	425	300	70
200	PN 25	PN 16	360	275	505	400	107
250	PN 25	PN 10	425	325	625	520	170
300	PN 25	PN 6	485	375	690	520	230

All measurements in mm. Flanges according to EN 1092-1/B. Weights are approximations.

Revision 1

Globe valve
467164

Description

Face to face dimensions according to EN 558, series 8.
Flanges according to PN 40, drilled (DN 200-300 PN 25).

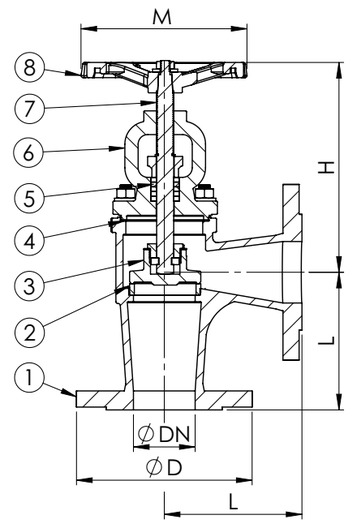
Application

Liquids and steam that do not attack the integral material.

Variants

SDNR disc, regulating disc.





No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Seat	Stainless steel 1.4301 (AISI 304)
3	Disc	(DN 15-65) Stainless steel 1.4021 (AISI 420) (DN 80-200) Cast steel 1.0619 (WCB)
4	Gasket	Graphite
5	Gland packing	Graphite
6	Bonnet	Cast steel 1.0619 (WCB)
7	Stem	Stainless steel 1.4021 (AISI 420)
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	up to 120°C
15-150	40
200	16
250	10
300	6

DN	Connection	Pressure rating	D	L	H	M	Kg
15	PN 40	PN 40	95	90	155	120	4,2
20	PN 40	PN 40	105	95	155	120	5,0
25	PN 40	PN 40	115	100	170	140	6,0
32	PN 40	PN 40	140	105	175	140	8,0
40	PN 40	PN 40	150	115	195	160	10
50	PN 40	PN 40	165	125	205	160	13
65	PN 40	PN 40	185	145	225	180	18
80	PN 40	PN 40	200	155	250	200	24
100	PN 40	PN 40	235	175	305	225	38
125	PN 40	PN 40	270	200	315	250	50
150	PN 40	PN 40	300	225	380	300	70
200	PN 25	PN 16	360	325	470	520	170
250	PN 25	PN 10	425	375	550	520	230
300	PN 25	PN 6	485	375	550	520	230

All measurements in mm. Flanges according to EN 1092-1/B. Weights are approximations.

Revision 1

Globe valve
467102

Description

Face to face dimensions according to EN 558, series 8.
Flanges according to PN 16, drilled (DN 200-300 PN 10).

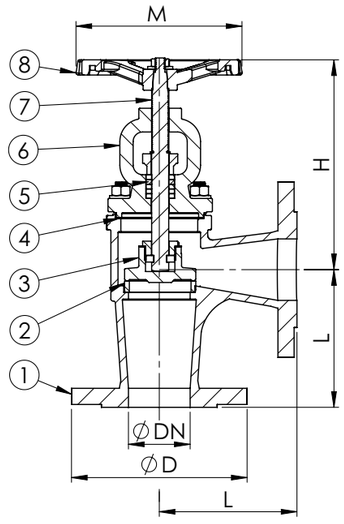
Application

Liquids and steam that do not attack the integral material.

Variants

SDNR disc, regulating disc, stainless steel trim.





No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Seat	Bronze CC491K (RG5)
3	Disc	(DN15-65) Bronze CC491K (RG5) (DN80-200) Nodular cast iron EN-JS1030 (GGG40)
4	Gasket	Graphite
5	Gland packing	Graphite
6	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
7	Stem	Special brass CW710R (SoMs59)
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-150	16	10
200-250	10	6

DN	Connection	Pressure rating	L	D	H	M	Kg
15	PN 16	PN 16	90	95	173	120	3,9
20	PN 16	PN 16	95	105	173	120	4,5
25	PN 16	PN 16	100	115	189	120	5,5
32	PN 16	PN 16	105	140	190	120	6,6
40	PN 16	PN 16	115	150	225	140	9,1
50	PN 16	PN 16	125	165	218	140	12
65	PN 16	PN 16	145	185	246	140	17
80	PN 16	PN 16	155	200	274	160	23
100	PN 16	PN 16	175	220	303	160	32
125	PN 16	PN 16	200	250	310	200	46
150	PN 16	PN 16	225	285	360	200	67
200	PN 10	PN 10	275	340	488	400	126
250	PN 10	PN 10	325	395	550	400	184

All measurements in mm. Flanges according to EN 1092-2. Weights are approximations.

Revision 1

Globe valve
456322

Description

Screw-down stop valve. Secured bonnet. Metal sealing.

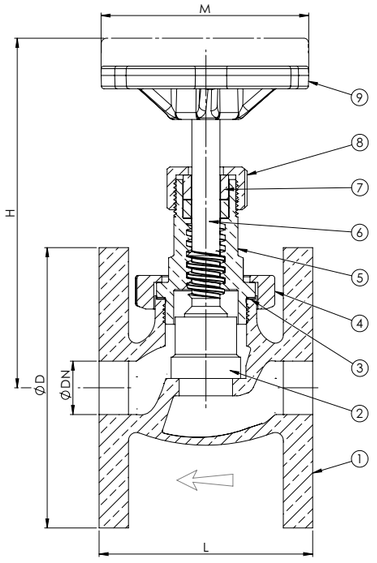
Application

Water, saturated steam, oil and other non aggressive liquids. For warm sea water it is recommended to use a stem of zinkfree bronze, CuSn6.

Variants

SDNR disc. Regulating disc.





No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	Bronze CC491K (RG5)
3	Sealing	PTFE
4	Lock nut	Bronze CC491K (RG5)
5	Bonnet	Bronze CC491K (RG5)
6	Stem	Special brass CW710R (SoMs59)
7	Gland	Brass CW614N (Ms 58)
8	Gland nut	Brass CW614N (Ms 58)
9	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	up to 120°C	225°C (steam up to 180 °C)
8-80	16	10

DN	Connection	Pressure rating	L	D	H	M	Kg
10	PN 16	PN 16	70	90	95	60	1,4
15	PN 16	PN 16	70	95	95	60	1,8
20	PN 16	PN 16	80	105	110	80	2,1
25	PN 16	PN 16	90	115	115	80	2,6
32	PN 16	PN 16	105	140	135	90	4,2
40	PN 16	PN 16	120	150	145	100	5,2
50	PN 16	PN 16	140	165	165	120	7,5
65	PN 16	PN 16	180	185	230	160	11
80	PN 16	PN 16	200	200	250	200	15
100	PN 16	PN 16	230	220	260	200	21

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Revision 1

Globe valve
456422

Description

Face to face dimensions according to EN 558, series 14.
Flanges according to PN 16, drilled (DN 200 PN 10).

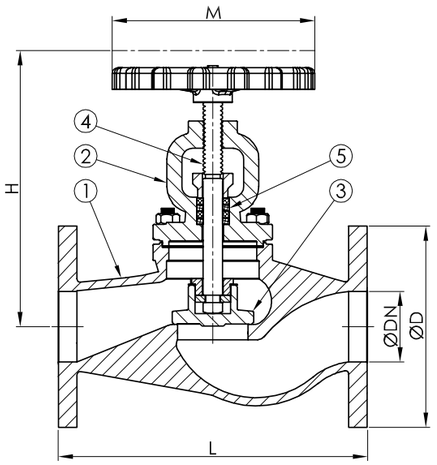
Application

Liquids, steam and gases that do not attack the integral material.

Variants

SDNR disc, regulating disc.





No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Bonnet	Bronze CC491K (RG5)
3	Disc	(DN 15-50) Bronze CC493K (RG7) (DN 65-200) Bronze CC491K (RG5)
4	Stem	Special brass CW710R (SoMs59)
5	Sealing	NBR bonded aramide

DN	Max. working pressure (bar)	
	Up to 120°C	Up to 200°C (steam 180°C)
15-150	16	13
200	10	8

DN	Connection	Pressure rating	L	D	H	M	Kg
15	PN 16	PN 16	120	95	166	100	4,3
20	PN 16	PN 16	120	105	178	100	5
25	PN 16	PN 16	140	115	200	100	6
32	PN 16	PN 16	150	140	215	120	8,7
40	PN 16	PN 16	155	150	235	160	10
50	PN 16	PN 16	180	165	250	160	13
65	PN 16	PN 16	200	185	300	160	23
80	PN 16	PN 16	240	200	305	200	32
100	PN 16	PN 16	270	220	335	250	43
125	PN 16	PN 16	320	250	390	250	62
150	PN 16	PN 16	370	285	435	315	88
200	PN 10	PN 10	500	340	620	315	136

All measurements in mm. Flanges according to DIN 86021. Weights are approximations.

Revision 1

Globe valve
458822

Description

Screw-down stop valve. Bolted bonnet. Metal sealing.

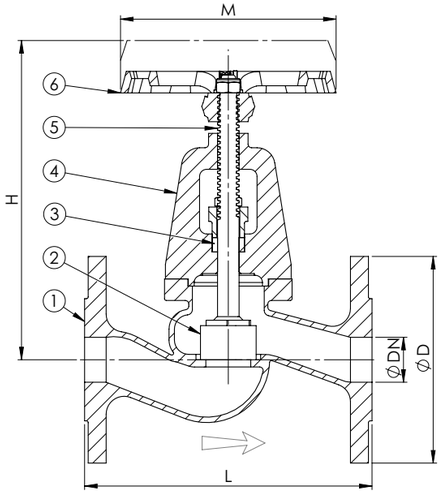
Application

Water, saturated steam, oil and other non aggressive liquids. For warm sea water it is recommended to use a stem of zinkfree bronze, CuSn6.

Variants

SDNR disc. Regulating disc.





No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	(DN 15-32) Special brass CW710R (SoMs59) (DN 40-500) Bronze CC491K (RG5)
3	Gasket	Rubber/PTFE fiber composite
4	Bonnet	Bronze CC491K (RG5)
5	Stem	Special brass CW710R (SoMs59)
6	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	up to 120°C	225°C (steam up to 180°C)
15-125	16	10
150-200	10	6
250-300	6	4
350-500	4	2

DN	Connection	Pressure rating	L	D	H	M	Kg
15	PN 16	PN 16	130	95	180	100	5
20	PN 16	PN 16	150	105	200	100	5,5
25	PN 16	PN 16	160	115	310	100	6
32	PN 16	PN 16	180	140	220	125	8
40	PN 16	PN 16	200	150	250	160	10
50	PN 16	PN 16	230	165	250	160	12
65	PN 16	PN 16	290	185	315	200	17
80	PN 16	PN 16	310	200	335	200	23
100	PN 16	PN 16	350	220	375	250	30
125	PN 16	PN 16	400	250	420	250	50

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Revision 1

DN	Connection	Pressure rating	L	D	H	M	Kg
150	PN 10	PN 10	480	285	460	315	65
200	PN 10	PN 10	600	340	550	400	110
250	PN 10	PN 6	730	395	670	400	165
300	PN 10	PN 6	850	445	750	400	295
350	PN 10	PN 4	980	505	850	500	480
400	PN 10	PN 4	1100	565	910	500	510
450	PN 10	PN 4	1200	615	970	500	1150
500	PN 10	PN 4	1250	670	1095	500	1300

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Globe valve
458922

Description

Screw-down stop valve. Bolted bonnet. Metal sealing.

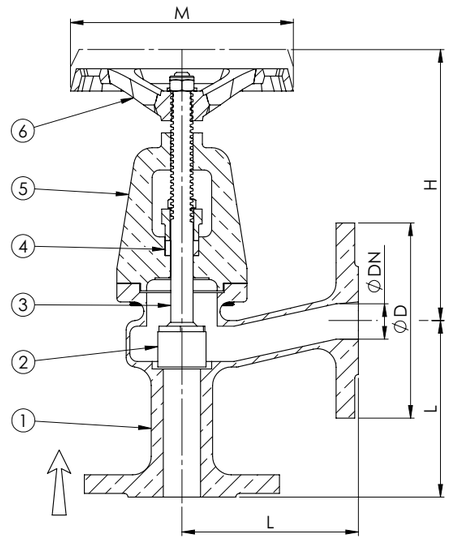
Application

Water, saturated steam, oil and other non aggressive liquids. For warm sea water it is recommended to use a stem of zinkfree bronze, CuSn6.

Variants

SDNR disc. Regulating disc.





No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	(DN 15-32) Special brass CW710R (SoMs59) (DN 40-500) Bronze CC491K (RG5)
3	Stem	Special brass CW710R (SoMs59)
4	Gasket	Rubber/PTFE fiber composite
5	Bonnet	Bronze CC491K (RG5)
6	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	up to 120°C	225°C (steam up to 180°C)
15-125	16	10
150-200	10	6
250-300	6	4
350-500	4	2

DN	Connection	Pressure rating	D	L	H	M	Kg
15	PN 16	PN 16	95	90	160	100	3,8
20	PN 16	PN 16	105	95	170	100	4
25	PN 16	PN 16	115	100	170	100	5
32	PN 16	PN 16	140	105	190	125	7

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

DN	Connection	Pressure rating	D	L	H	M	Kg
40	PN 16	PN 16	150	115	210	160	9
50	PN 16	PN 16	165	125	220	160	11
65	PN 16	PN 16	185	145	260	200	16
80	PN 16	PN 16	200	155	280	200	20
100	PN 16	PN 16	220	175	300	250	25
125	PN 16	PN 16	250	200	340	250	40
150	PN 10	PN 10	285	225	360	315	50
200	PN 10	PN 10	340	275	440	400	95
250	PN 10	PN 6	395	325	550	400	155
300	PN 10	PN 6	445	375	620	400	225
350	PN 10	PN 4	505	425	720	500	360
400	PN 10	PN 4	565	475	750	500	400
450	PN 10	PN 4	615	500	925	500	650
500	PN 10	PN 4	670	575	950	500	800

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Globe valve
459522

Description

Screw-down stop valve. Secured bonnet. Metal sealing.

Application

Water, saturated steam, oil and other non aggressive liquids. For warm sea water it is recommended to use a stem of zinkfree bronze, CuSn6.

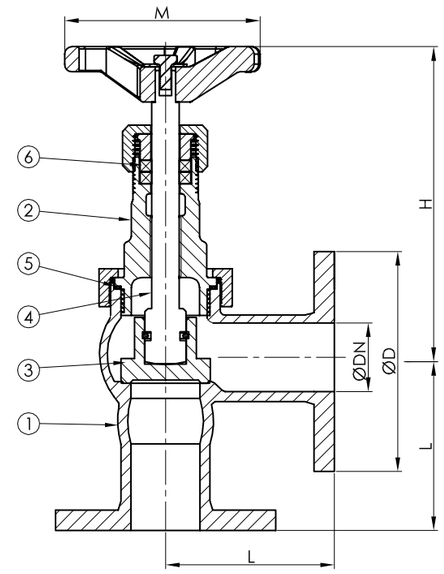
Variants

SDNR disc.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Bonnet	Bronze CC491K (RG5)
3	Disc	Bronze CC491K (RG5)
4	Stem	Special brass CW710R (SoMs59)
5	Sealing	PTFE
6	Gland	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)	
	up to 120°C	225°C (steam up to 180°C)
10-80	16	10



DN	Connection	Pressure rating	L	D	H	M	Kg
10	16	16	65	90	86	60	1,4
15	16	16	65	95	86	60	1,8
20	16	16	70	105	100	80	2,1
25	16	16	75	115	105	80	2,6
32	16	16	90	140	120	90	4,2
40	16	16	100	150	135	100	5,2
50	16	16	105	165	150	120	7,5
65	16	16	115	185	210	160	11
80	16	16	125	200	230	200	15

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Revision 1

Overboard valve
454022

Description

Overboard valve with adjustable counter pressure.
Face to face according to EN 558, series 1.

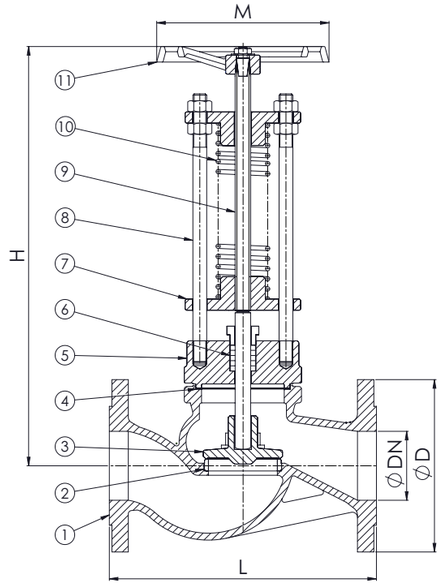
Variants

Regulating disc.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Seat	Bronze CC491K (RG5)
3	Disc	Bronze CC491K (RG5)
4	Bonnet gasket	Graphite
5	Bonnet	Bronze CC491K (RG5)
6	Gland packing	Graphite
7	Bridge	Bronze CC491K (RG5)
8	Columns	Stainless steel 1.4301 (AISI 304)
9	Stem	Special brass CW710R (SoMs59)
10	Spring	Spring steel SH
11	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	up to 120°C
15-125	16
150-200	10
250-300	6
350-500	4





DN	Connection	Pressure rating	L	D	H	M	Kg
15	PN 16	PN 16	130	95	251	120	4
20	PN 16	PN 16	150	105	251	120	5
25	PN 16	PN 16	160	115	265	140	6
32	PN 16	PN 16	180	140	280	140	8
40	PN 16	PN 16	200	150	350	160	11

All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations.

Revision 1

DN	Connection	Pressure rating	L	D	H	M	Kg
50	PN 16	PN 16	230	165	373	160	13
65	PN 16	PN 16	290	185	400	180	18
80	PN 16	PN 16	310	200	490	200	27
100	PN 16	PN 16	350	220	522	225	42
125	PN 16	PN 16	400	250	618	250	70
150	PN 10	PN 10	480	285	750	300	115
200	PN 10	PN 10	600	340	810	400	165
250	PN 10	PN 6	730	395	950	520	290
300	PN 10	PN 6	850	445	1007	520	380
350	PN 10	PN 4	980	505	1000	640	550
400	PN 10	PN 4	1100	565	1105	640	700
450	PN 10	PN 4	1200	615	1200	640	980
500	PN 10	PN 4	1250	670	1260	640	1200

All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations.

Overboard valve
454002

Description

Overboard valve with adjustable counter pressure.
Face to face according to EN 558, series 1.

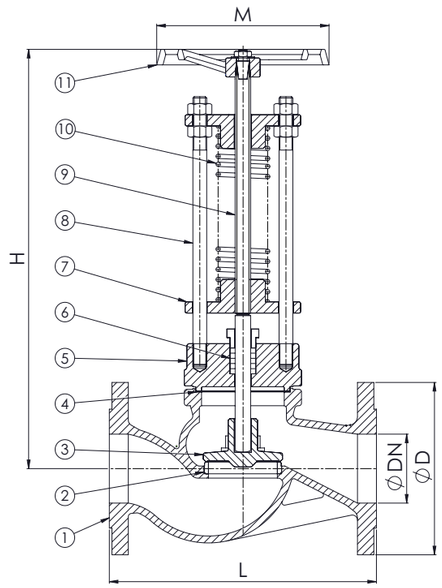
Variants

Regulating disc.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Seat	Bronze CC491K (RG5)
3	Disc	(≤ DN 65) Bronze CC491K (RG5) (≥ DN 80) Nodular cast iron EN-JS1025 (GGG40.3)
3	Disc nut	Bronze CC491K (RG5)
4	Bonnet gasket	Graphite
5	Bonnet	Nodular cast iron EN-JS1025 (GGG40.3)
6	Gland packing	Graphite
7	Bridge	Nodular cast iron EN-JS1025 (GGG40.3)
8	Columns	Stainless steel 1.4021 (AISI 420)
9	Stem	Special brass CW710R (SoMs59)
10	Spring	Spring steel SH
11	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-125	16	10
150-200	10	6
250-300	6	4
350-500	4	2





DN	Connection	Pressure rating	L	D	H	M	Kg
15	PN 16	PN 16	130	95	251	120	4
20	PN 16	PN 16	150	105	251	120	4,5
25	PN 16	PN 16	160	115	265	140	5
32	PN 16	PN 16	180	140	280	140	8
40	PN 16	PN 16	200	150	350	160	12

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Revision 1

DN	Connection	Pressure rating	L	D	H	M	Kg
50	PN 16	PN 16	230	165	373	160	13
65	PN 16	PN 16	290	185	400	180	18
80	PN 16	PN 16	310	200	490	200	24
100	PN 16	PN 16	350	220	522	225	37
125	PN 16	PN 16	400	250	618	250	58
150	PN 10	PN 10	480	285	750	300	85
200	PN 10	PN 10	600	340	810	400	142
250	PN 10	PN 6	730	395	950	520	180
300	PN 10	PN 6	850	445	1007	520	360
350	PN 10	PN 4	980	505	1000	640	530
400	PN 10	PN 4	1100	565	1105	640	680
450	PN 10	PN 4	1200	615	1200	640	950
500	PN 10	PN 4	1250	670	1260	640	1150

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Overboard valve
454122

Description

Overboard valve with adjustable counter pressure.
Face to face according to EN 558, series 1.

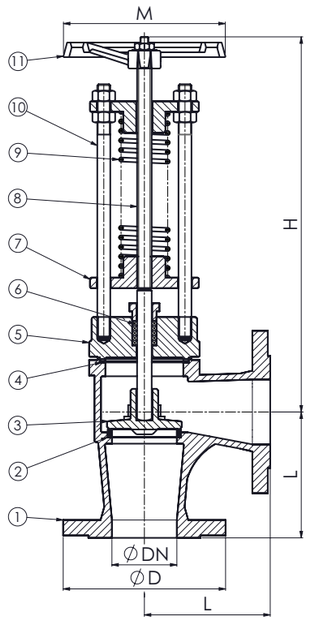
Variants

Regulating disc.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Seat	Bronze CC491K (RG5)
3	Disc	Bronze CC491K (RG5)
4	Bonnet gasket	Graphite
5	Bonnet	Bronze CC491K (RG5)
6	Gland packing	Graphite
7	Bridge	Bronze CC491K (RG5)
8	Stem	Special brass CW710R (SoMs59)
9	Spring	Spring steel SH
10	Columns	Stainless steel 1.4301 (AISI 304)
11	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	up to 120°C
15-125	16
150-200	10
250-300	6
350-500	4





DN	Connection	Pressure rating	L	D	H	M	Kg
15	PN 16	PN 16	95	95	245	120	4
20	PN 16	PN 16	95	105	245	120	5
25	PN 16	PN 16	100	115	253	140	6
32	PN 16	PN 16	105	140	274	140	7
40	PN 16	PN 16	115	150	346	160	11
50	PN 16	PN 16	125	165	360	160	14
65	PN 16	PN 16	145	185	381	180	18
80	PN 16	PN 16	155	200	462	200	24
100	PN 16	PN 16	175	220	500	225	38
125	PN 16	PN 16	200	250	565	250	60
150	PN 10	PN 10	225	285	684	300	79
200	PN 10	PN 10	275	340	715	400	140
250	PN 10	PN 6	325	395	810	520	240
300	PN 10	PN 6	375	445	850	520	330
350	PN 10	PN 4	425	505	900	640	450
400	PN 10	PN 4	475	565	930	640	480
450	PN 10	PN 4	500	615	1000	640	750
500	PN 10	PN 4	515	670	1100	640	900

All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations.

3

Overboard valve
454102

Description

Overboard valve with adjustable counter pressure.
Face to face according to EN 558, series 1.

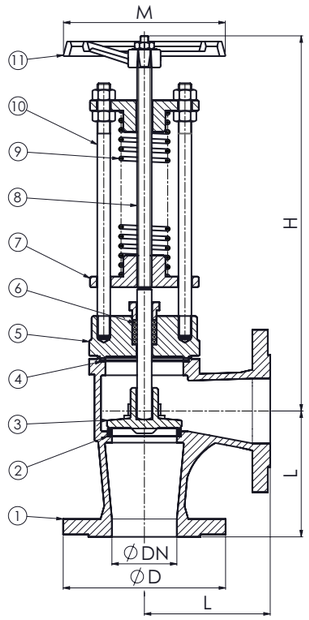
Variants

Regulating disc.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Seat	Bronze CC491K (RG5)
3	Disc	(≤ DN 65) Bronze CC491K (RG5) (≥ DN 80) Nodular cast iron EN-JS1025 (GGG40.3)
4	Bonnet gasket	Graphite
5	Bonnet	Nodular cast iron EN-JS1025 (GGG40.3)
6	Gland packing	Graphite
7	Bridge	Nodular cast iron EN-JS1025 (GGG40.3)
8	Stem	Special brass CW710R (SoMs59)
9	Spring	Spring steel SH
10	Columns	Stainless steel 1.4021 (AISI 420)
11	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-125	16	10
150-200	10	6
250-300	6	4
350-500	4	2





DN	Connection	Pressure rating	L	D	H	M	Kg
15	PN 16	PN 16	95	95	245	120	4
20	PN 16	PN 16	95	105	245	120	4,2
25	PN 16	PN 16	100	115	253	140	5
32	PN 16	PN 16	105	140	274	140	7
40	PN 16	PN 16	115	150	346	160	10
50	PN 16	PN 16	125	165	360	160	13
65	PN 16	PN 16	145	185	381	180	17
80	PN 16	PN 16	155	200	462	200	23
100	PN 16	PN 16	175	220	500	225	35
125	PN 16	PN 16	200	250	565	250	55
150	PN 10	PN 10	225	285	684	300	72
200	PN 10	PN 10	275	340	715	400	112
250	PN 10	PN 6	325	395	810	520	230
300	PN 10	PN 6	375	445	850	520	320
350	PN 10	PN 4	425	505	900	640	430
400	PN 10	PN 4	475	565	930	640	450
450	PN 10	PN 4	500	615	1000	640	720
500	PN 10	PN 4	515	670	1100	640	850

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Butterfly valve
700772

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
DN 40-400 – Multiflange (PN 10/PN 16/ANSI 150).
DN 450-800 – PN 10.

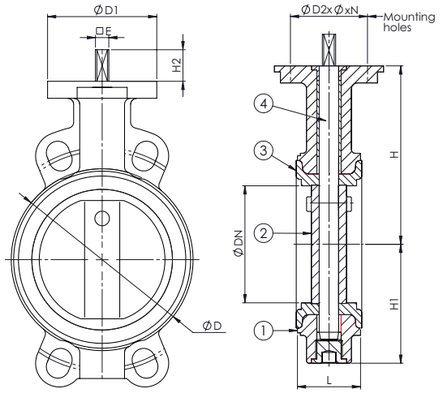
Application

Liquids, air and gases that do not attack the integral material.

Options

With gear, lever, actuator.





No.	Part	Material
1	Body	Aluminiumbronze CC333G (AB2)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-150	16
200-800	10

DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	Multiflange	PN 16	33	72	90	70x9x4	113	61	25	11	3
50	Multiflange	PN 16	43	90	90	70x9x4	118	67	25	11	3
65	Multiflange	PN 16	46	105	90	70x9x4	126	74	25	11	3,5
80	Multiflange	PN 16	46	124	90	70x9x4	133	82	25	11	4
100	Multiflange	PN 16	52	150	90	70x9x4	147	100	25	11	5
125	Multiflange	PN 16	56	182	90	70x9x4	160	112	28	14	7
150	Multiflange	PN 16	56	210	90	70x9x4	180	134	28	14	10
200	Multiflange	PN 10	60	265	90	70x9x4	204	159	28	17	14
250	Multiflange	PN 10	68	315	125	102x12x4	245	195	30	22	20
300	Multiflange	PN 10	78	371	125	102x12x4	270	220	30	22	30
350	Multiflange	PN 10	78	434	150	125x14x4	315	282	29	27	43
400	Multiflange	PN 10	102	488	150	125x14x4	350	307	29	27	70
450	PN 10	PN 10	114	532	175	140x18x4	375	352	38	36	110
500	PN 10	PN 10	127	585	175	140x18x4	415	387	38	36	138
600	PN 10	PN 10	154	685	210	165x22x4	465	452	48	46	190
700	PN 10	PN 10	165	805	210	165x22x4	555	502	110	Ø70*	246
800	PN 10	PN 10	190	910	300	254x18x8	620	557	120	Ø80*	364

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Revision 1

Butterfly valve
701772

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
DN 40-400 – Multiflange (PN 10/PN 16/ANSI 150).
DN 450-800 – PN 10.

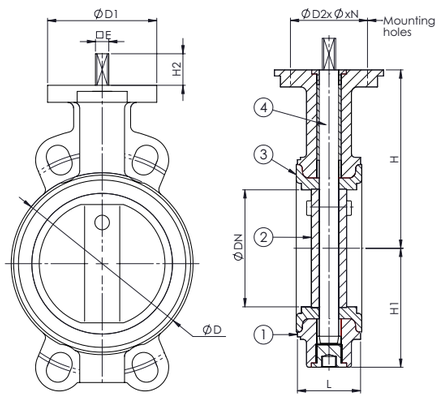
Application

Liquids, air and gases that do not attack the integral material.

Options

With gear, lever, actuator.





No.	Part	Material
1	Body	Aluminiumbronze CC333G (AB2)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	EPDM
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 120°C
40-150	16
200-800	10

DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	Multiflange	PN 16	33	72	90	70x9x4	113	61	25	11	3
50	Multiflange	PN 16	43	90	90	70x9x4	118	67	25	11	3
65	Multiflange	PN 16	46	105	90	70x9x4	126	74	25	11	3,5
80	Multiflange	PN 16	46	124	90	70x9x4	133	82	25	11	4
100	Multiflange	PN 16	52	150	90	70x9x4	147	100	25	11	5
125	Multiflange	PN 16	56	182	90	70x9x4	160	112	28	14	7
150	Multiflange	PN 16	56	210	90	70x9x4	180	134	28	14	10
200	Multiflange	PN 10	60	265	90	70x9x4	204	159	28	17	14
250	Multiflange	PN 10	68	315	125	102x12x4	245	195	30	22	20
300	Multiflange	PN 10	78	371	125	102x12x4	270	220	30	22	30
350	Multiflange	PN 10	78	434	150	125x14x4	315	282	29	27	43
400	Multiflange	PN 10	102	488	150	125x14x4	350	307	29	27	70
450	PN 10	PN 10	114	532	175	140x18x4	375	352	38	36	110
500	PN 10	PN 10	127	585	175	140x18x4	415	387	38	36	138
600	PN 10	PN 10	154	685	210	165x22x4	465	452	48	46	190
700	PN 10	PN 10	165	805	210	165x22x4	555	502	110	Ø70*	246
800	PN 10	PN 10	190	910	300	254x18x8	620	557	120	Ø80*	364

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Revision 1

Butterfly valve
700792

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
DN 40-400 – Multiflange (PN 10/PN 16/ANSI 150).
DN 450-800 – PN 10.

Application

Liquids, air and gases that do not attack the integral material.

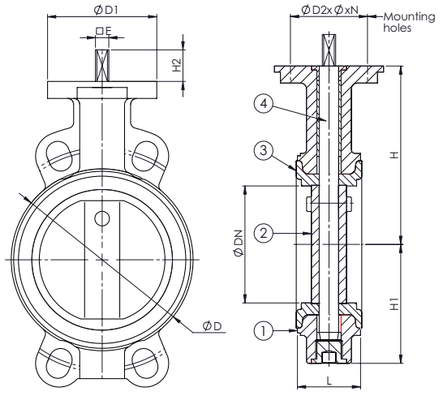
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	Multiflange	PN 16	33	72	90	70x9x4	113	61	25	11	3
50	Multiflange	PN 16	43	90	90	70x9x4	118	67	25	11	3
65	Multiflange	PN 16	46	105	90	70x9x4	126	74	25	11	3,5
80	Multiflange	PN 16	46	124	90	70x9x4	133	82	25	11	4
100	Multiflange	PN 16	52	150	90	70x9x4	147	100	25	11	5
125	Multiflange	PN 16	56	182	90	70x9x4	160	112	28	14	7
150	Multiflange	PN 16	56	210	90	70x9x4	180	134	28	14	10
200	Multiflange	PN 10	60	265	90	70x9x4	204	159	28	17	14
250	Multiflange	PN 10	68	315	125	102x12x4	245	195	30	22	20
300	Multiflange	PN 10	78	371	125	102x12x4	270	220	30	22	30
350	Multiflange	PN 10	78	434	150	125x14x4	315	282	29	27	43
400	Multiflange	PN 10	102	488	150	125x14x4	350	307	29	27	70
450	PN 10	PN 10	114	532	175	140x18x4	375	352	38	36	110
500	PN 10	PN 10	127	585	175	140x18x4	415	387	38	36	138
600	PN 10	PN 10	154	685	210	165x22x4	465	452	48	46	190
700	PN 10	PN 10	165	805	210	165x22x4	555	502	110	Ø70*	246
800	PN 10	PN 10	190	910	300	254x18x8	620	557	120	Ø80*	362

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Revision 1

Butterfly valve
700702

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
DN 40-400 – Multiflange (PN 10/PN 16/ANSI 150).
DN 450-800 – PN 10.

Application

Liquids, air and gases that do not attack the integral material.

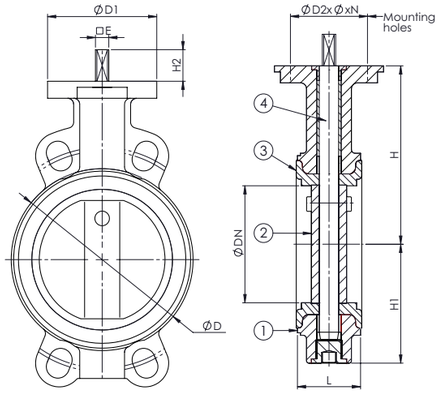
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	Multiflange	PN 16	33	72	90	70x9x4	113	61	25	11	3
50	Multiflange	PN 16	43	90	90	70x9x4	118	67	25	11	3
65	Multiflange	PN 16	46	105	90	70x9x4	126	74	25	11	3,5
80	Multiflange	PN 16	46	124	90	70x9x4	133	82	25	11	4
100	Multiflange	PN 16	52	150	90	70x9x4	147	100	25	11	5
125	Multiflange	PN 16	56	182	90	70x9x4	160	112	28	14	7
150	Multiflange	PN 16	56	210	90	70x9x4	180	134	28	14	10
200	Multiflange	PN 10	60	265	90	70x9x4	204	159	28	17	14
250	Multiflange	PN 10	68	315	125	102x12x4	245	195	30	22	20
300	Multiflange	PN 10	78	371	125	102x12x4	270	220	30	22	30
350	Multiflange	PN 10	78	434	150	125x14x4	315	282	29	27	43
400	Multiflange	PN 10	102	488	150	125x14x4	350	307	29	27	70
450	PN 10	PN 10	114	532	175	140x18x4	375	352	38	36	110
500	PN 10	PN 10	127	585	175	140x18x4	415	387	38	36	138
600	PN 10	PN 10	154	685	210	165x22x4	465	452	48	46	190
700	PN 10	PN 10	165	805	210	165x22x4	555	502	110	Ø70*	246
800	PN 10	PN 10	190	910	300	254x18x8	620	557	120	Ø80*	362

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Revision 1

Butterfly valve
700703

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 25..

Application

Liquids, air and gases that do not attack the integral material.

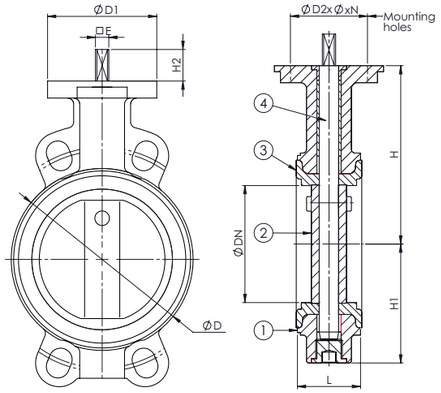
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-400	25



DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	PN25	PN 25	33	72	90	70x9x4	113	61	25	11	3
50	PN25	PN 25	43	90	90	70x9x4	118	67	25	11	3
65	PN25	PN 25	46	105	90	70x9x4	126	74	25	11	3,5
80	PN25	PN 25	46	124	90	70x9x4	133	82	25	11	4
100	PN25	PN 25	52	150	90	70x9x4	147	100	25	11	5
125	PN25	PN 25	56	182	90	70x9x4	160	112	28	14	7
150	PN25	PN 25	56	210	90	70x9x4	180	134	28	14	10
200	PN25	PN 25	60	265	90	70x9x4	204	159	28	17	14
250	PN25	PN 25	68	315	125	102x12x4	245	195	30	22	20
300	PN25	PN 25	78	371	125	102x12x4	270	220	30	22	30
350	PN25	PN 25	78	434	150	125x14x4	315	282	29	27	43
400	PN25	PN 25	102	488	150	125x14x4	350	307	29	27	70

All measurements in mm. Weights are approximations.

Revision 1

Butterfly valve
701702

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
DN 40-400 – Multiflange (PN 10/PN 16/ANSI 150).
DN 450-800 – PN 10.

Application

Liquids, air and gases that do not attack the integral material.

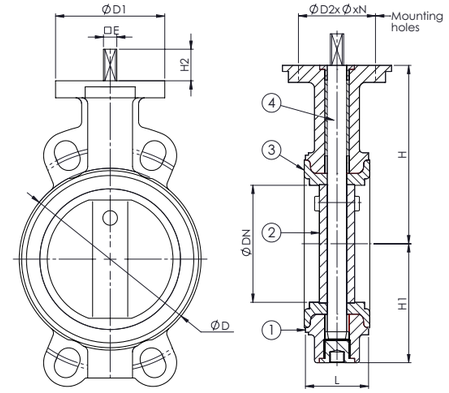
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	EPDM
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 120°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	Multiflange	PN 16	33	72	90	70x9x4	113	61	25	11	3
50	Multiflange	PN 16	43	90	90	70x9x4	118	67	25	11	3
65	Multiflange	PN 16	46	105	90	70x9x4	126	74	25	11	3,5
80	Multiflange	PN 16	46	124	90	70x9x4	133	82	25	11	4
100	Multiflange	PN 16	52	150	90	70x9x4	147	100	25	11	5
125	Multiflange	PN 16	56	182	90	70x9x4	160	112	28	14	7
150	Multiflange	PN 16	56	210	90	70x9x4	180	134	28	14	10
200	Multiflange	PN 10	60	265	90	70x9x4	204	159	28	17	14
250	Multiflange	PN 10	68	315	125	102x12x4	245	195	30	22	20
300	Multiflange	PN 10	78	371	125	102x12x4	270	220	30	22	30
350	Multiflange	PN 10	78	434	150	125x14x4	315	282	29	27	43
400	Multiflange	PN 10	102	488	150	125x14x4	350	307	29	27	70
450	PN 10	PN 10	114	532	175	140x18x4	375	352	38	36	110
500	PN 10	PN 10	127	585	175	140x18x4	415	387	38	36	138
600	PN 10	PN 10	154	685	210	165x22x4	465	452	48	46	190
700	PN 10	PN 10	165	805	210	165x22x4	555	502	110	Ø70*	246
800	PN 10	PN 10	190	910	300	254x18x8	620	557	120	Ø80*	362

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Revision 1

Butterfly valve 701703

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 25.

Application

Liquids, air and gases that do not attack the integral material.

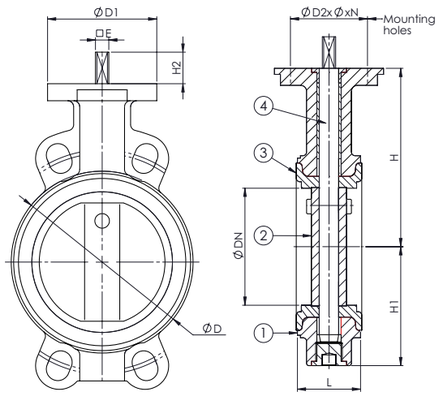
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	EPDM
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 120°C
40-400	25



DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	PN 25	PN 25	33	72	90	70x9x4	113	61	25	11	3
50	PN 25	PN 25	43	90	90	70x9x4	118	67	25	11	3
65	PN 25	PN 25	46	105	90	70x9x4	126	74	25	11	3,5
80	PN 25	PN 25	46	124	90	70x9x4	133	82	25	11	4
100	PN 25	PN 25	52	150	90	70x9x4	147	100	25	11	5
125	PN 25	PN 25	56	182	90	70x9x4	160	112	28	14	7
150	PN 25	PN 25	56	210	90	70x9x4	180	134	28	14	10
200	PN 25	PN 25	60	265	90	70x9x4	204	159	28	17	14
250	PN 25	PN 25	68	315	125	102x12x4	245	195	30	22	20
300	PN 25	PN 25	78	371	125	102x12x4	270	220	30	22	30
350	PN 25	PN 25	78	434	150	125x14x4	315	282	29	27	43
400	PN 25	PN 25	102	488	150	125x14x4	350	307	29	27	70

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Butterfly valve 700902

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
DN 40-400 – Multiflange (PN 10/PN 16/ANSI 150).
DN 450-800 – PN 10.

Application

Liquids, air and gases that do not attack the integral material.

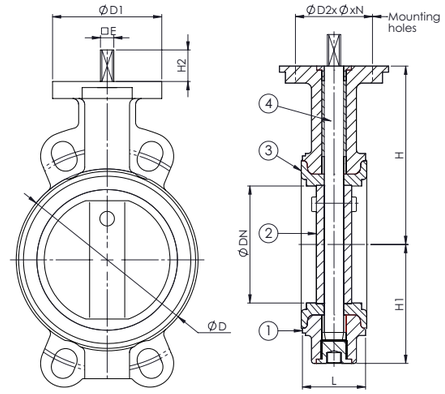
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	Multiflange	PN 16	33	72	90	70x9x4	113	61	25	11	3
50	Multiflange	PN 16	43	90	90	70x9x4	118	67	25	11	3
65	Multiflange	PN 16	46	105	90	70x9x4	126	74	25	11	3,5
80	Multiflange	PN 16	46	124	90	70x9x4	133	82	25	11	4
100	Multiflange	PN 16	52	150	90	70x9x4	147	100	25	11	5
125	Multiflange	PN 16	56	182	90	70x9x4	160	112	28	14	7
150	Multiflange	PN 16	56	210	90	70x9x4	180	134	28	14	10
200	Multiflange	PN 10	60	265	90	70x9x4	204	159	28	17	14
250	Multiflange	PN 10	68	315	125	102x12x4	245	195	30	22	20
300	Multiflange	PN 10	78	371	125	102x12x4	270	220	30	22	30
350	Multiflange	PN 10	78	434	150	125x14x4	315	282	29	27	43
400	Multiflange	PN 10	102	488	150	125x14x4	350	307	29	27	70
450	PN 10	PN 10	114	532	175	140x18x4	375	352	38	36	110
500	PN 10	PN 10	127	585	175	140x18x4	415	387	38	36	138
600	PN 10	PN 10	154	685	210	165x22x4	465	452	48	46	190
700	PN 10	PN 10	165	805	210	165x22x4	555	502	110	Ø70*	246
800	PN 10	PN 10	190	910	300	254x18x8	620	557	120	Ø80*	362

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Butterfly valve 700903

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 25.

Application

Liquids, air and gases that do not attack the integral material.

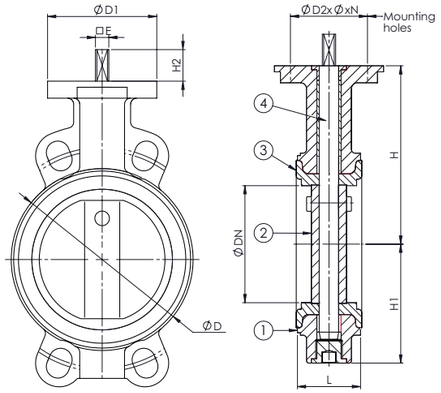
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-400	25



DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	PN 25	PN 25	33	72	90	70x9x4	113	61	25	11	3
50	PN 25	PN 25	43	90	90	70x9x4	118	67	25	11	3
65	PN 25	PN 25	46	105	90	70x9x4	126	74	25	11	3,5
80	PN 25	PN 25	46	124	90	70x9x4	133	82	25	11	4
100	PN 25	PN 25	52	150	90	70x9x4	147	100	25	11	5
125	PN 25	PN 25	56	182	90	70x9x4	160	112	28	14	7
150	PN 25	PN 25	56	210	90	70x9x4	180	134	28	14	10
200	PN 25	PN 25	60	265	90	70x9x4	204	159	28	17	14
250	PN 25	PN 25	68	315	125	102x12x4	245	195	30	22	20
300	PN 25	PN 25	78	371	125	102x12x4	270	220	30	22	30
350	PN 25	PN 25	78	434	150	125x14x4	315	282	29	27	43
400	PN 25	PN 25	102	488	150	125x14x4	350	307	29	27	70

All measurements in mm. Weights are approximations.

Butterfly valve 701902

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
DN 40-400 – Multiflange (PN 10/PN 16/ANSI 150).
DN 450-800 – PN 10.

Application

Liquids, air and gases that do not attack the integral material.

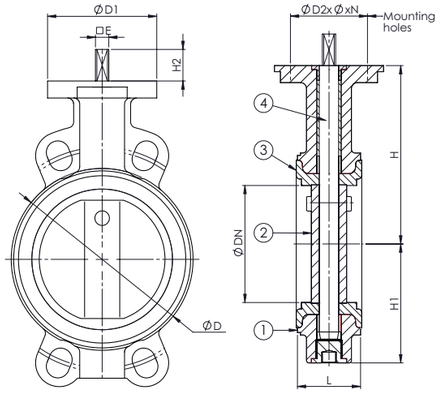
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Sealing	EPDM
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 120°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	Multiflange	PN 16	33	72	90	70x9x4	113	61	25	11	3
50	Multiflange	PN 16	43	90	90	70x9x4	118	67	25	11	3
65	Multiflange	PN 16	46	105	90	70x9x4	126	74	25	11	3,5
80	Multiflange	PN 16	46	124	90	70x9x4	133	82	25	11	4
100	Multiflange	PN 16	52	150	90	70x9x4	147	100	25	11	5
125	Multiflange	PN 16	56	182	90	70x9x4	160	112	28	14	7
150	Multiflange	PN 16	56	210	90	70x9x4	180	134	28	14	10
200	Multiflange	PN 10	60	265	90	70x9x4	204	159	28	17	14
250	Multiflange	PN 10	68	315	125	102x12x4	245	195	30	22	20
300	Multiflange	PN 10	78	371	125	102x12x4	270	220	30	22	30
350	Multiflange	PN 10	78	434	150	125x14x4	315	282	29	27	43
400	Multiflange	PN 10	102	488	150	125x14x4	350	307	29	27	70
450	PN 10	PN 10	114	532	175	140x18x4	375	352	38	36	110
500	PN 10	PN 10	127	585	175	140x18x4	415	387	38	36	138
600	PN 10	PN 10	154	685	210	165x22x4	465	452	48	46	190
700	PN 10	PN 10	165	805	210	165x22x4	555	502	110	Ø70*	246
800	PN 10	PN 10	190	910	300	254x18x8	620	557	120	Ø80*	362

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Butterfly valve
701903

Description

Wafer type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 25.

Application

Liquids, air and gases that do not attack the integral material.

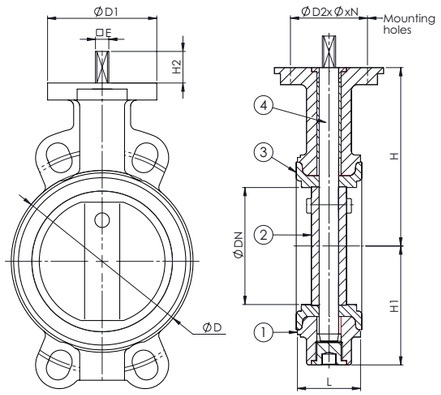
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Sealing	EPDM
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 120°C
40-400	25



DN	Connection	Pressure rating	L	D	D1	D2xØxN	H	H1	H2	#E	Kg
40	PN 25	PN25	33	72	90	70x9x4	113	61	25	11	3
50	PN 25	PN25	43	90	90	70x9x4	118	67	25	11	3
65	PN 25	PN25	46	105	90	70x9x4	126	74	25	11	3,5
80	PN 25	PN25	46	124	90	70x9x4	133	82	25	11	4
100	PN 25	PN25	52	150	90	70x9x4	147	100	25	11	5
125	PN 25	PN25	56	182	90	70x9x4	160	112	28	14	7
150	PN 25	PN25	56	210	90	70x9x4	180	134	28	14	10
200	PN 25	PN25	60	265	90	70x9x4	204	159	28	17	14
250	PN 25	PN25	68	315	125	102x12x4	245	195	30	22	20
300	PN 25	PN25	78	371	125	102x12x4	270	220	30	22	30
350	PN 25	PN25	78	434	150	125x14x4	315	282	29	27	43
400	PN 25	PN25	102	488	150	125x14x4	350	307	29	27	70

All measurements in mm. Weights are approximations.

Butterfly valve
710772

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 16 (DN 200-800 PN 10).

Application

Liquids, air and gases that do not attack the integral material.

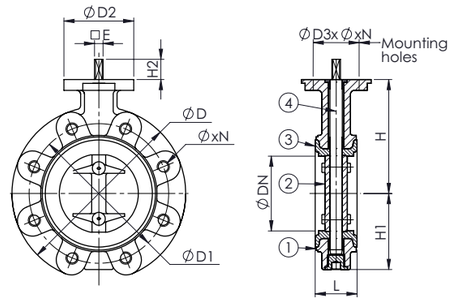
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Aluminiumbronze CC333G (AB2)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 16	PN 16	33	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 16	PN 16	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 16	PN 16	46	185	145	90	70x9x4	126	74	25	11	M16x4	5
80	PN 16	PN 16	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 16	PN 16	52	224	180	90	70x9x4	147	100	25	11	M16x8	9
125	PN 16	PN 16	56	254	210	90	70x9x4	160	112	28	14	M16x8	11
150	PN 16	PN 16	56	285	240	90	70x9x4	180	134	28	14	M20x8	13
200	PN 10	PN 10	60	337	295	90	70x9x4	204	159	28	17	M20x8	19
250	PN 10	PN 10	68	405	350	125	102x12x4	245	195	30	22	M20x12	30
300	PN 10	PN 10	78	472	400	125	102x12x4	270	220	30	22	M20x12	46
350	PN 10	PN 10	78	520	460	150	125x14x4	315	282	29	27	M20x16	58
400	PN 10	PN 10	102	597	515	150	125x14x4	350	307	29	27	M24x16	97
450	PN 10	PN 10	114	640	565	175	140x18x4	375	352	38	36	M24x20	120
500	PN 10	PN 10	127	710	620	175	140x18x4	415	387	38	36	M24x20	162
600	PN 10	PN 10	154	780	725	210	165x22x4	465	452	48	46	M27x20	211
700	PN 10	PN 10	165	910	840	210	165x22x4	555	485	110	Ø70*	M27x24	289
800	PN 10	PN 10	190	1020	950	300	254x18x8	620	555	120	Ø80*	M30x24	400

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Butterfly valve
711772

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 16 (DN 200-800 PN 10).



Application

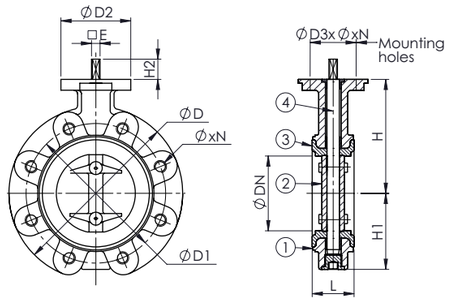
Liquids, air and gases that do not attack the integral material.

Options

With gear, lever, actuator.

No.	Part	Material
1	Body	Aluminiumbronze CC333G (AB2)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	EPDM
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 120°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 16	PN 16	33	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 16	PN 16	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 16	PN 16	46	185	145	90	70x9x4	126	74	25	11	M16x4	5
80	PN 16	PN 16	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 16	PN 16	52	224	180	90	70x9x4	147	100	25	11	M16x8	9
125	PN 16	PN 16	56	254	210	90	70x9x4	160	112	28	14	M16x8	11
150	PN 16	PN 16	56	285	240	90	70x9x4	180	134	28	14	M20x8	13
200	PN 10	PN 10	60	337	295	90	70x9x4	204	159	28	17	M20x8	19
250	PN 10	PN 10	68	405	350	125	102x12x4	245	195	30	22	M20x12	30
300	PN 10	PN 10	78	472	400	125	102x12x4	270	220	30	22	M20x12	46
350	PN 10	PN 10	78	520	460	150	125x14x4	315	282	29	27	M20x16	58
400	PN 10	PN 10	102	597	515	150	125x14x4	350	307	29	27	M24x16	97
450	PN 10	PN 10	114	640	565	175	140x18x4	375	352	38	36	M24x20	120
500	PN 10	PN 10	127	710	620	175	140x18x4	415	387	38	36	M24x20	162
600	PN 10	PN 10	154	780	725	210	165x22x4	465	452	48	46	M27x20	211
700	PN 10	PN 10	165	910	840	210	165x22x4	555	485	110	Ø70*	M27x24	289
800	PN 10	PN 10	190	1020	950	300	254x18x8	620	555	120	Ø80*	M30x24	400

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Butterfly valve
710792

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 16 (DN 200-800 PN 10).



Application

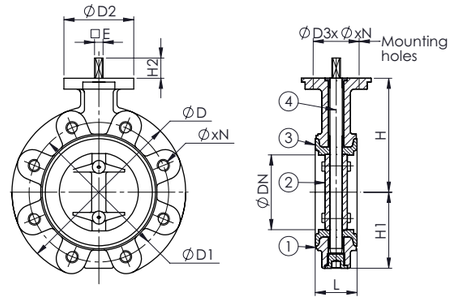
Liquids, air and gases that do not attack the integral material.

Options

With gear, lever, actuator.

No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 16	PN 16	33	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 16	PN 16	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 16	PN 16	46	185	145	90	70x9x4	126	74	25	11	M16x4	5
80	PN 16	PN 16	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 16	PN 16	52	224	180	90	70x9x4	147	100	25	11	M16x8	9
125	PN 16	PN 16	56	254	210	90	70x9x4	160	112	28	14	M16x8	11
150	PN 16	PN 16	56	285	240	90	70x9x4	180	134	28	14	M20x8	13
200	PN 10	PN 10	60	337	295	90	70x9x4	204	159	28	17	M20x8	19
250	PN 10	PN 10	68	405	350	125	102x12x4	245	195	30	22	M20x12	30
300	PN 10	PN 10	78	472	400	125	102x12x4	270	220	30	22	M20x12	46
350	PN 10	PN 10	78	520	460	150	125x14x4	315	282	29	27	M20x16	58
400	PN 10	PN 10	102	597	515	150	125x14x4	350	307	29	27	M24x16	97
450	PN 10	PN 10	114	640	565	175	140x18x4	375	352	38	36	M24x20	120
500	PN 10	PN 10	127	710	620	175	140x18x4	415	387	38	36	M24x20	162
600	PN 10	PN 10	154	780	725	210	165x22x4	465	452	48	46	M27x20	211
700	PN 10	PN 10	165	910	840	210	165x22x4	555	485	110	Ø70*	M27x24	289
800	PN 10	PN 10	190	1020	950	300	254x18x8	620	555	120	Ø80*	M30x24	400

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Butterfly valve
710702

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 16 (DN 200-800 PN 10).

Application

Liquids, air and gases that do not attack the integral material.

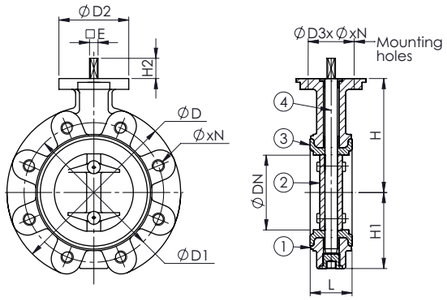
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 16	PN 16	33	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 16	PN 16	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 16	PN 16	46	185	145	90	70x9x4	126	74	25	11	M16x4	5
80	PN 16	PN 16	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 16	PN 16	52	224	180	90	70x9x4	147	100	25	11	M16x8	9
125	PN 16	PN 16	56	254	210	90	70x9x4	160	112	28	14	M16x8	11
150	PN 16	PN 16	56	285	240	90	70x9x4	180	134	28	14	M20x8	13
200	PN 10	PN 10	60	337	295	90	70x9x4	204	159	28	17	M20x8	19
250	PN 10	PN 10	68	405	350	125	102x12x4	245	195	30	22	M20x12	30
300	PN 10	PN 10	78	472	400	125	102x12x4	270	220	30	22	M20x12	46
350	PN 10	PN 10	78	520	460	150	125x14x4	315	282	29	27	M20x16	58
400	PN 10	PN 10	102	597	515	150	125x14x4	350	307	29	27	M24x16	97
450	PN 10	PN 10	114	640	565	175	140x18x4	375	352	38	36	M24x20	120
500	PN 10	PN 10	127	710	620	175	140x18x4	415	387	38	36	M24x20	162
600	PN 10	PN 10	154	780	725	210	165x22x4	465	452	48	46	M27x20	211
700	PN 10	PN 10	165	910	840	210	165x22x4	555	485	110	Ø70*	M27x24	289
800	PN 10	PN 10	190	1020	950	300	254x18x8	620	555	120	Ø80*	M30x24	400

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Butterfly valve
710703

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 25.

Application

Liquids, air and gases that do not attack the integral material.

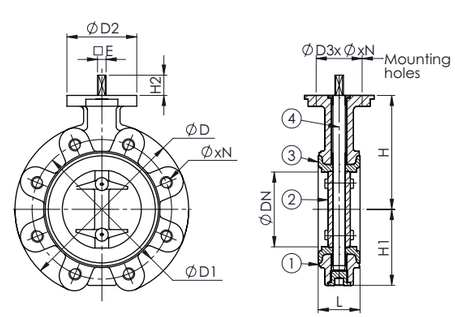
Options

With gear, lever, actuator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-400	25



DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 25	PN 25	33	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 25	PN 25	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 25	PN 25	46	185	145	90	70x9x4	126	74	25	11	M16x8	5
80	PN 25	PN 25	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 25	PN 25	52	224	190	90	70x9x4	147	100	25	11	M20x8	9
125	PN 25	PN 25	56	254	220	90	70x9x4	160	112	28	14	M24x8	11
150	PN 25	PN 25	56	294	250	90	70x9x4	180	134	28	14	M24x8	13
200	PN 25	PN 25	60	350	310	90	70x9x4	204	159	28	17	M24x12	19
250	PN 25	PN 25	68	425	370	125	102x12x4	245	195	30	22	M27x12	30
300	PN 25	PN 25	78	472	430	125	102x12x4	270	220	30	22	M27x16	46
350	PN 25	PN 25	78	550	490	150	125x14x4	315	282	29	27	M30x16	58
400	PN 25	PN 25	102	597	550	150	125x14x4	350	307	29	27	M33x16	97

All measurements in mm. Weights are approximations.

Butterfly valve
711702

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 16 (DN 200-800 PN 10).



Application

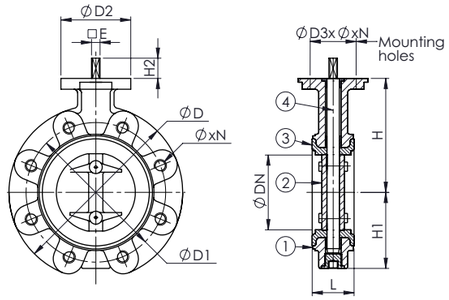
Liquids, air and gases that do not attack the integral material.

Options

With gear, lever, actuator.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	EPDM
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 120°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 16	PN 16	33	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 16	PN 16	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 16	PN 16	46	185	145	90	70x9x4	126	74	25	11	M16x4	5
80	PN 16	PN 16	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 16	PN 16	52	224	180	90	70x9x4	147	100	25	11	M16x8	9
125	PN 16	PN 16	56	254	210	90	70x9x4	160	112	28	14	M16x8	11
150	PN 16	PN 16	56	285	240	90	70x9x4	180	134	28	14	M20x8	13
200	PN 10	PN 10	60	337	295	90	70x9x4	204	159	28	17	M20x8	19
250	PN 10	PN 10	68	405	350	125	102x12x4	245	195	30	22	M20x12	30
300	PN 10	PN 10	78	472	400	125	102x12x4	270	220	30	22	M20x12	46
350	PN 10	PN 10	78	520	460	150	125x14x4	315	282	29	27	M20x16	58
400	PN 10	PN 10	102	597	515	150	125x14x4	350	307	29	27	M24x16	97
450	PN 10	PN 10	114	640	565	175	140x18x4	375	352	38	36	M24x20	120
500	PN 10	PN 10	127	710	620	175	140x18x4	415	387	38	36	M24x20	162
600	PN 10	PN 10	154	780	725	210	165x22x4	465	452	48	46	M27x20	211
700	PN 10	PN 10	165	910	840	210	165x22x4	555	485	110	Ø70*	M27x24	289
800	PN 10	PN 10	190	1020	950	300	254x18x8	620	555	120	Ø80*	M30x24	400

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Butterfly valve
711703

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 25.



Application

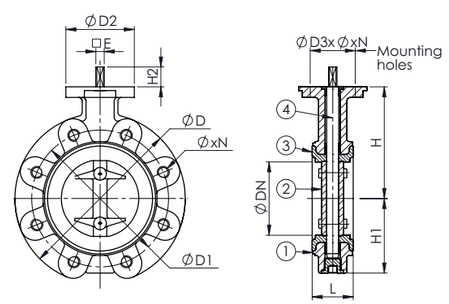
Liquids, air and gases that do not attack the integral material.

Options

With gear, lever, actuator.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	EPDM
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 120°C
40-400	25



DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 25	PN 25	33	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 25	PN 25	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 25	PN 25	46	185	145	90	70x9x4	126	74	25	11	M16x8	5
80	PN 25	PN 25	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 25	PN 25	52	224	190	90	70x9x4	147	100	25	11	M20x8	9
125	PN 25	PN 25	56	254	220	90	70x9x4	160	112	28	14	M24x8	11
150	PN 25	PN 25	56	294	250	90	70x9x4	180	134	28	14	M24x8	13
200	PN 25	PN 25	60	350	310	90	70x9x4	204	159	28	17	M24x12	19
250	PN 25	PN 25	68	425	370	125	102x12x4	245	195	30	22	M27x12	30
300	PN 25	PN 25	78	472	430	125	102x12x4	270	220	30	22	M27x16	46
350	PN 25	PN 25	78	550	490	150	125x14x4	315	282	29	27	M30x16	58
400	PN 25	PN 25	102	597	550	150	125x14x4	350	307	29	27	M33x16	97

All measurements in mm. Weights are approximations.

Butterfly valve 710902

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 16 (DN 200-800 PN 10).



Application

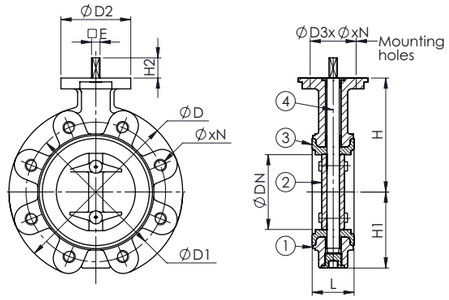
Liquids, air and gases that do not attack the integral material.

Options

With gear, lever, actuator.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-150	16
200-800	10



DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 16	PN 16	36	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 16	PN 16	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 16	PN 16	46	185	145	90	70x9x4	126	74	25	11	M16x4	5
80	PN 16	PN 16	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 16	PN 16	52	224	180	90	70x9x4	147	100	25	11	M16x8	9
125	PN 16	PN 16	56	254	210	90	70x9x4	160	112	28	14	M16x8	11
150	PN 16	PN 16	56	285	240	90	70x9x4	180	134	28	14	M20x8	13
200	PN 10	PN 10	60	337	295	90	70x9x4	204	159	28	17	M20x8	19
250	PN 10	PN 10	68	405	350	125	102x12x4	245	195	30	22	M20x12	30
300	PN 10	PN 10	78	472	400	125	102x12x4	270	220	30	22	M20x12	46
350	PN 10	PN 10	78	520	460	150	125x14x4	315	282	29	27	M20x16	58
400	PN 10	PN 10	102	597	515	150	125x14x4	350	307	29	27	M24x16	97
450	PN 10	PN 10	114	640	565	175	140x18x4	375	352	38	36	M24x20	120
500	PN 10	PN 10	127	710	620	175	140x18x4	415	387	38	36	M24x20	162
600	PN 10	PN 10	154	780	725	210	165x22x4	465	452	48	46	M27x20	211
700	PN 10	PN 10	165	910	840	210	165x22x4	555	485	110	Ø70*	M27x24	289
800	PN 10	PN 10	190	1020	950	300	254x18x8	620	555	120	Ø80*	M30x24	400

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Butterfly valve 710903

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 25.



Application

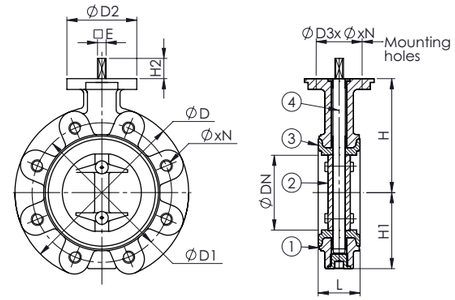
Liquids, air and gases that do not attack the integral material.

Options

With gear, lever, actuator.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Stainless steel 1.4408 (AISI316)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-400	25



DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 25	PN 25	33	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 25	PN 25	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 25	PN 25	46	185	145	90	70x9x4	126	74	25	11	M16x8	5
80	PN 25	PN 25	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 25	PN 25	52	224	190	90	70x9x4	147	100	25	11	M20x8	9
125	PN 25	PN 25	56	254	220	90	70x9x4	160	112	28	14	M24x8	11
150	PN 25	PN 25	56	294	250	90	70x9x4	180	134	28	14	M24x8	13
200	PN 25	PN 25	60	350	310	90	70x9x4	204	159	28	17	M24x12	19
250	PN 25	PN 25	68	425	370	125	102x12x4	245	195	30	22	M27x12	30
300	PN 25	PN 25	78	472	430	125	102x12x4	270	220	30	22	M27x16	46
350	PN 25	PN 25	78	550	490	150	125x14x4	315	282	29	27	M30x16	58
400	PN 25	PN 25	102	597	550	150	125x14x4	350	307	29	27	M33x16	97

All measurements in mm. Weights are approximations.

Butterfly valve
711902

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 16 (DN 200-800 PN 10).

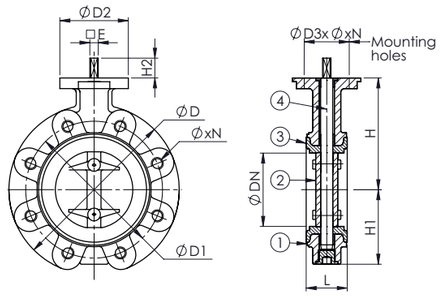
Application

Liquids, air and gases that do not attack the integral material.

Options

With gear, lever, actuator.





No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Sealing	EPDM
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 120°C
40-150	16
200-800	10

DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 16	PN 16	33	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 16	PN 16	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 16	PN 16	46	185	145	90	70x9x4	126	74	25	11	M16x4	5
80	PN 16	PN 16	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 16	PN 16	52	224	180	90	70x9x4	147	100	25	11	M16x8	9
125	PN 16	PN 16	56	254	210	90	70x9x4	160	112	28	14	M16x8	11
150	PN 16	PN 16	56	285	240	90	70x9x4	180	134	28	14	M20x8	13
200	PN 10	PN 10	60	337	295	90	70x9x4	204	159	28	17	M20x8	19
250	PN 10	PN 10	68	405	350	125	102x12x4	245	195	30	22	M20x12	30
300	PN 10	PN 10	78	472	400	125	102x12x4	270	220	30	22	M20x12	46
350	PN 10	PN 10	78	520	460	150	125x14x4	315	282	29	27	M20x16	58
400	PN 10	PN 10	102	597	515	150	125x14x4	350	307	29	27	M24x16	97
450	PN 10	PN 10	114	640	565	175	140x18x4	375	352	38	36	M24x20	120
500	PN 10	PN 10	127	710	620	175	140x18x4	415	387	38	36	M24x20	162
600	PN 10	PN 10	154	780	725	210	165x22x4	465	452	48	46	M27x20	211
700	PN 10	PN 10	165	910	840	210	165x22x4	555	485	110	Ø70*	M27x24	289
800	PN 10	PN 10	190	1020	950	300	254x18x8	620	555	120	Ø80*	M30x24	400

*All measurements in mm. Weights are approximations. *Shaft with keyway.*

Butterfly valve
711903

Description

Lug type.
Face to face dimensions according to EN 558, series 20.
Top flange according to ISO 5211.
For flanges according to PN 25.

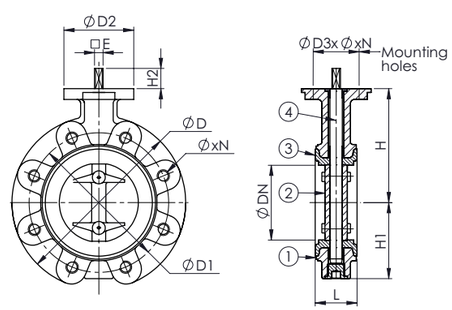
Application

Liquids, air and gases that do not attack the integral material.

Options

With gear, lever, actuator.





No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Sealing	EPDM
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 120°C
40-400	25

DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 25	PN 25	33	150	110	90	70x9x4	113	61	25	11	M16x4	4
50	PN 25	PN 25	43	165	125	90	70x9x4	118	67	25	11	M16x4	4
65	PN 25	PN 25	46	185	145	90	70x9x4	126	74	25	11	M16x8	5
80	PN 25	PN 25	46	195	160	90	70x9x4	133	82	25	11	M16x8	6
100	PN 25	PN 25	52	224	190	90	70x9x4	147	100	25	11	M20x8	9
125	PN 25	PN 25	56	254	220	90	70x9x4	160	112	28	14	M24x8	11
150	PN 25	PN 25	56	294	250	90	70x9x4	180	134	28	14	M24x8	13
200	PN 25	PN 25	60	350	310	90	70x9x4	204	159	28	17	M24x12	19
250	PN 25	PN 25	68	425	370	125	102x12x4	245	195	30	22	M27x12	30
300	PN 25	PN 25	78	472	430	125	102x12x4	270	220	30	22	M27x16	46
350	PN 25	PN 25	78	550	490	150	125x14x4	315	282	29	27	M30x16	58
400	PN 25	PN 25	102	597	550	150	125x14x4	350	307	29	27	M33x16	97

All measurements in mm. Weights are approximations.

Butterfly valve
730702

Description

Double flanged.
Face to face dimensions according to EN 558, series 5 short (DN 700-800 EN 558, series 13).
Top flange according to ISO 5211.
For flanges according to PN 16 (DN 200-800 PN 10).

Application

Liquids, air and gases that do not attack the integral material.

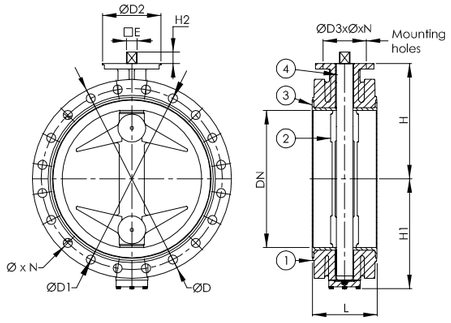
Variants

Other materials on request.

Options

With gear, lever, actuator.





No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-150	16
200-800	10

DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 16	PN 16	106	150	110	90	70x9x4	113	61	25	11	18x4	4
50	PN 16	PN 16	108	165	125	90	70x9x4	118	67	25	11	18x4	7
65	PN 16	PN 16	112	185	145	90	70x9x4	126	74	25	11	18x4	9
80	PN 16	PN 16	114	200	160	90	70x9x4	133	82	25	11	18x8	10
100	PN 16	PN 16	127	228	180	90	70x9x4	147	100	25	11	18x8	14
125	PN 16	PN 16	140	254	210	90	70x9x4	160	112	28	14	18x8	17
150	PN 16	PN 16	140	285	240	90	70x9x4	180	134	28	14	18x8	21
200	PN 10	PN 10	152	343	295	90	70x9x4	204	172	28	17	22x8	32
250	PN 10	PN 10	165	405	350	125	102x11x4	245	203	30	22	22x12	47
300	PN 10	PN 10	178	445	400	125	102x11x4	270	223	30	22	22x12	51

*All measurements in mm. Flanges according to ISO 7005. Weights are approximations. *Shaft with keyway.*

DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
350	PN 10	PN 10	190	505	460	150	125x14x4	315	282	29	27	22x16	80
400	PN 10	PN 10	216	565	515	150	125x14x4	350	307	29	27	26x16	101
450	PN 10	PN 10	222	615	565	175	140x18x4	375	352	38	36	26x20	123
500	PN 10	PN 10	229	670	620	175	140x18x4	415	387	38	36	26x20	170
600	PN 10	PN 10	267	780	725	210	165x22x4	465	452	48	46	30x20	231
700	PN 10	PN 10	292	895	840	210	165x22x4	555	495	110	Ø70*	30x24	350
800	PN 10	PN 10	318	1015	950	300	254x18x8	620	550	120	Ø80*	33x24	440

*All measurements in mm. Flanges according to ISO 7005. Weights are approximations. *Shaft with keyway.*

Butterfly valve 730703

Description

Double flanged.
Face to face dimensions according to EN 558, series 5 short.
Top flange according to ISO 5211.
For flanges according to PN 25.

Application

Liquids, air and gases that do not attack the integral material.

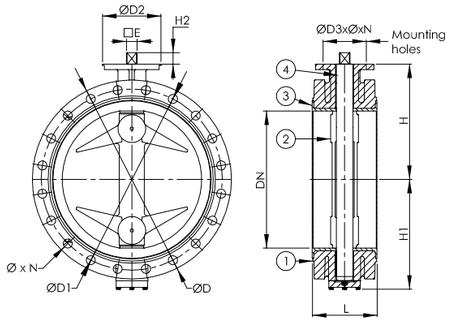
Variants

Other materials on request.

Options

With gear, lever, actuator.





No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Sealing	NBR
4	Stem	Stainless steel 1.4122

DN	Max. working pressure (bar)
	Up to 80°C
40-400	25

DN	Connection	Pressure rating	L	D	D1	D2	D3xØxN	H	H1	H2	#E	ØxN	Kg
40	PN 25	PN 25	106	150	110	90	70x9x4	113	61	25	11	18x4	4
50	PN 25	PN 25	108	165	125	90	70x9x4	118	67	25	11	18x4	7
65	PN 25	PN 25	112	185	145	90	70x9x4	126	74	25	11	18x8	9
80	PN 25	PN 25	114	200	160	90	70x9x4	133	82	25	11	18x8	10
100	PN 25	PN 25	127	228	190	90	70x9x4	147	100	25	11	22x8	14
125	PN 25	PN 25	140	254	220	90	70x9x4	160	112	28	14	26x8	17
150	PN 25	PN 25	140	285	250	90	70x9x4	180	134	28	14	26x8	21
200	PN 25	PN 25	152	343	310	90	70x9x4	204	172	28	17	26x12	32
250	PN 25	PN 25	165	405	370	125	102x11x4	245	203	30	22	30x12	47
300	PN 25	PN 25	178	445	430	125	102x11x4	270	223	30	22	30x16	51
350	PN 25	PN 25	190	555	490	150	125x14x4	315	282	29	27	33x16	80
400	PN 25	PN 25	216	613	550	150	125x14x4	350	307	29	27	36x16	101

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

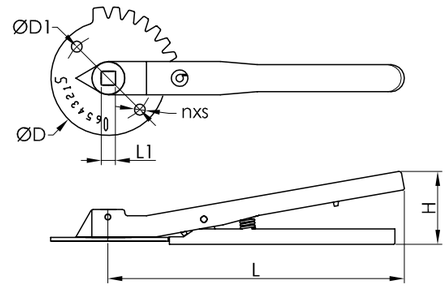
Lever

Description

Hand lever for butterfly valves.



No.	Part	Material
1	Lever	Nodular cast iron EN-JS1030 (GGG40)



DN	L	L1	D	D1	H	n x s	Lever type
40	232	11	90	70	57,5	2x9	HL 2.1-11
50	232	11	90	70	57,5	2x9	HL 2.1-11
65	232	11	90	70	57,5	2x9	HL 2.1-11
80	232	11	90	70	57,5	2x9	HL 2.1-11
100	232	11	90	70	57,5	2x9	HL 2.1-11
125	329	14	90	70	69	4x9	HL 2.2-14
150	329	14	90	70	69	2x9	HL 2.2-14
200	329	17	90	70	69	2x9	HL 2.2-17
250	400	22	125	102	80,5	2x11	HL 2.3-22
300	400	22	125	102	80,5	2x11	HL 2.3-22

All measurements in mm. Weights are approximations.

Gear box

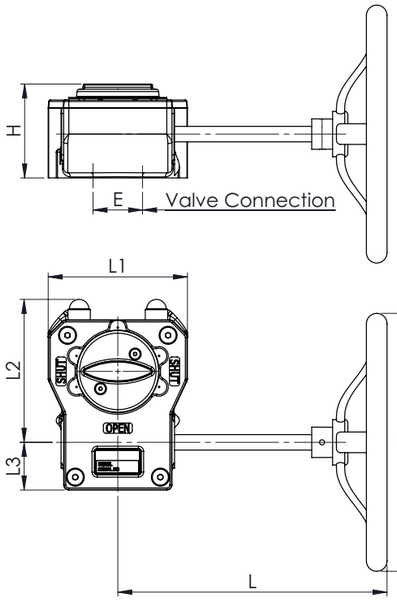
Description

Manual gear box for butterfly valves.

- IP 68 sealing
- -5° to +95° turn
- -25°C to +110°C temperature range

Part	Material
Gear box	Cast iron EN-JL1040 (GG25)





Max output torque (Nm)	Max input torque (Nm)	L	L1	L2	L3	H	E (inner/outer pcd)	M	Kg
200	16,8	149	84	89,2	24	64	50 (F05) / 70 (F07)	160	2
400	31,3	210	112	107,5	29	74,8	70 (F07) / 102 (F10)	200	3,9
800	60	261	135	141,3	46,3	90,5	102 (F10) / 140 (F14)	250	7,7
1500	123	288	156	167	39	97	102 (F10) / 140 (F14)	300	11
2000	131	339	180	188	47,5	100	125 (F12) / 165 (F16)	500	16
4000	185	410	282	277,5	48,5	128	165 (F16) / 254 (F25)	500	32
6500	95	440	282	277,5	48,5	128	165 (F16) / 254 (F25)	500	38
12000	168,5	475	376	336	60	135	254 (F25) / 298 (F30)	500	57
16000	120	553	376	336	60	135	254 (F25) / 298 (F30)	600	63
24000	140	570	510	453,5	82,5	188,5	254 (F25) / 406 (F40)	600	192
32000	140	570	510	453,5	82,5	188,5	254 (F25) / 406 (F40)	600	192
50000	150	742	612	538,5	105	262,5	406 (F40) / 483 (F48)	700	352
70000	185	742	612	538,5	105	262,5	406 (F40) / 483 (F48)	700	352

All measurements in mm. Valve connection according to ISO 5211. Weights are approximations.

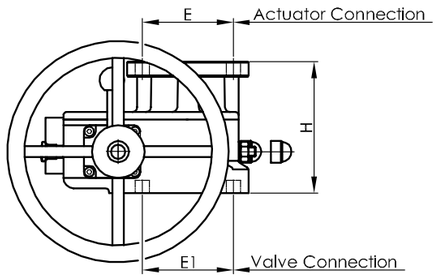
Emergency gear box

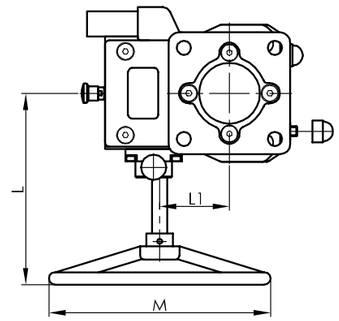
Description

Emergency gear box for actuated butterfly valves.

Part	Material
Emergency gear box	Cast iron EN-JL1040 (GG25)







Max output torque (Nm)	Max input torque (Nm)	E (inner/outer pcd)	E1 (inner/outer pcd)	L	L1	H	M	Kg
350	31,3	70 (F07) / 125 (F12)	70 (F07) / 102 (F10)	190	52,5	122	200	6
700	50,0	102 (F10) / 140 (F14)	70 (F07) / 125 (F12)	238	68,8	130	300	16
1600	125,0	125 (F12) / 165 (F16)	125 (F12) / 140 (F14)	315	84	156	500	25
3000	155	165 (F16) / 254 (F25)	165 (F16) / 254 (F25)	375	132,5	201	600	50
5000	85,0	254 (F25) / 298 (F30)	165 (F16) / 254 (F25)	525	132,5	204	700	56

All measurements in mm. Actuator and valve connection according to ISO 5211. Weights are approximations.

Gate valve
400622

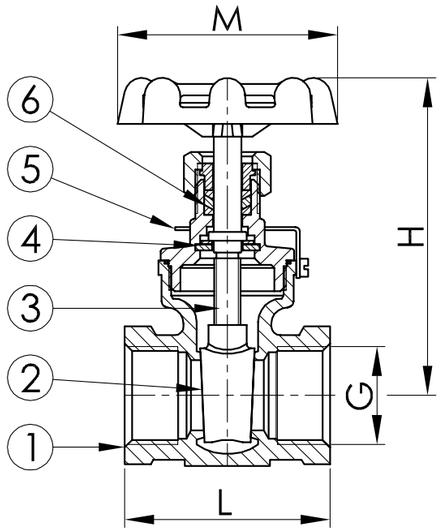
Description

Gate valve with female threaded ends and secured bonnet.
For liquids, steam and gases that do not attack the integral material.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Wedge	Bronze CC491K (RG5)
3	Stem	Special brass CW710R (SoMs59)
4	Bonnet	Bronze CC491K (RG5)
5	Securing plate	Galvanized steel
6	Bonnet sealing	Rubber/PTFE fiber composite

DN	Max. working pressure (bar)		
	up to 120°C	150°C	225°C (steam up to 180°C)
15-80	16	10	6



DN	Connection (BSP)	Pressure rating	L	H	M	Kg
15	G 1/2”	PN 16	55	85	60	0,4
20	G 3/4”	PN 16	60	105	70	0,5
25	G 1”	PN 16	68	115	70	0,8
32	G 1 1/4”	PN 16	76	130	80	1,1
40	G 1 1/2”	PN 16	80	150	90	1,6
50	G 2”	PN 16	93	180	110	2,4
65	G 2 1/2”	PN 16	110	220	150	3,9
80	G 3”	PN 16	120	250	160	5,8

All measurements in mm. Weights are approximations.

Revision 1

Gate valve
400694

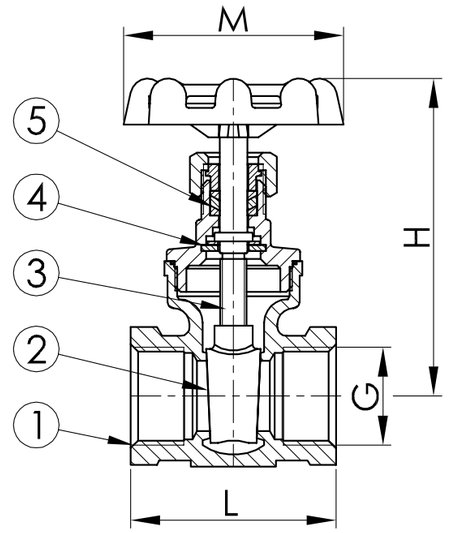
Description

For liquid applications rating PN 40.
For gas and steam applications rating PN 6.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Disc	Stainless steel 1.4401 (AISI 316)
3	Stem	Stainless steel 1.4401 (AISI 316)
4	C-snap ring	Stainless steel 1.4301 (AISI 304)
5	Packing	PTFE

DN	Max. working pressure (bar)
	-20 to +200°C
15-80	40



DN	G (BSP)	Pressure rating	L	H	M	Kg
15	G 1/2”	PN 40	57	100	62	0,4
20	G 3/4”	PN 40	61	100	62	0,5
25	G 1”	PN 40	69	123	75	0,7
32	G 1 1/4”	PN 40	79	135	75	1,1
40	G 1 1/2”	PN 40	82	150	95	1,5
50	G 2”	PN 40	95	170	95	2,1
65	G 2 1/2”	PN 40	116	260	120	4,6
80	G 3”	PN 40	131	295	120	7

All measurements in mm. Weights are approximations.

Revision 1

Gate valve
400822

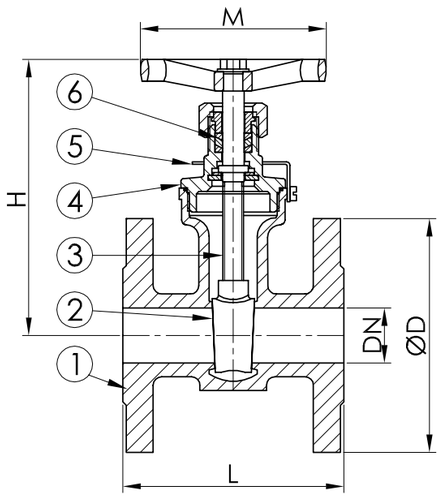
Description

Gate valve with flanged ends and secured bonnet.
For liquids, steam and gases that do not attack the integral material.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Wedge	Bronze CC491K (RG5)
3	Stem	Special brass CW710R (SoMs59)
4	Bonnet	Bronze CC491K (RG5)
5	Securing plate	Galvanized steel
6	Bonnet sealing	Rubber/PTFE fiber composite

DN	Max. working pressure (bar)		
	up to 120°C	150°C	225°C (steam up to 180°C)
15-100	16	10	6





DN	Connection	Pressure rating	L	D	H	M	Kg
15	PN 16	PN 16	80	95	85	60	1,4
20	PN 16	PN 16	75	105	100	60	1,8
25	PN 16	PN 16	80	115	115	80	2,3
32	PN 16	PN 16	90	140	130	80	3,6
40	PN 16	PN 16	100	150	150	80	4,6
50	PN 16	PN 16	110	165	180	100	6,4
65	PN 16	PN 16	130	185	215	140	9,4
80	PN 16	PN 16	150	200	250	160	12
100	PN 16	PN 16	160	220	315	160	19

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Revision 1

Gate valve
401422

Description

Face to face dimensions according to EN 558, series 14.
Flanges according to PN 16, drilled (DN 125-300 PN 10).

Application

Water, steam and oil.
For warm sea water it is recommended to use the execution with a stem of zincfree bronze CuSn6.

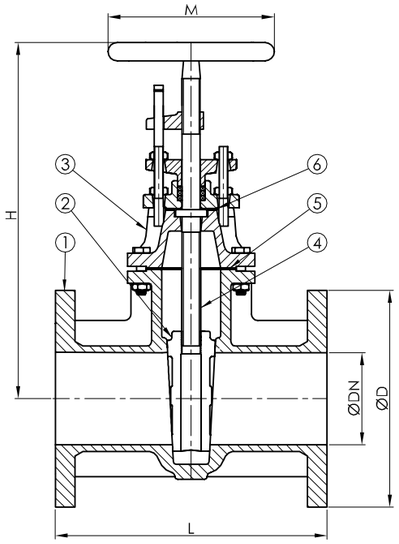
Variants

Drain plug.
Other materials on request.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Wedge	Bronze CC491K (RG5)
3	Bonnet	Bronze CC491K (RG5)
4	Stem	Special brass CW710R (SoMs59)
5	Body sealing	NBR bonded aramide
6	Bonnet sealing	NBR bonded aramide

DN	Max. working pressure (bar)	
	up to 120°C	225°C (steam up to 180°C)
25-100	16	10
125-150	10	6
200-250	6	4
300	4	2





DN	Connection	Pressure rating	L	D	H	M	Kg
25	PN 16	PN 16	125	115	170	120	5,5
32	PN 16	PN 16	130	140	185	120	7,8
40	PN 16	PN 16	140	150	240	120	11
50	PN 16	PN 16	150	165	255	120	12
65	PN 16	PN 16	170	185	295	160	17
80	PN 16	PN 16	180	200	315	160	21
100	PN 16	PN 16	190	220	345	160	28
125	PN 10	PN 10	200	250	400	200	36
150	PN 10	PN 10	210	285	430	200	46
200	PN 10	PN 6	230	340	530	250	62
250	PN 10	PN 6	250	395	635	250	96
300	PN 10	PN 4	270	445	725	250	140

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Revision 1

Gate valve
401522

Description

Face to face dimensions according to EN 558, series 14.
Flanges according to PN 16, drilled (DN 200-600 PN 10).

Application

Water, steam and oil.
For warm sea water it is recommended to use the execution with a stem of zincfree bronze CuSn6.

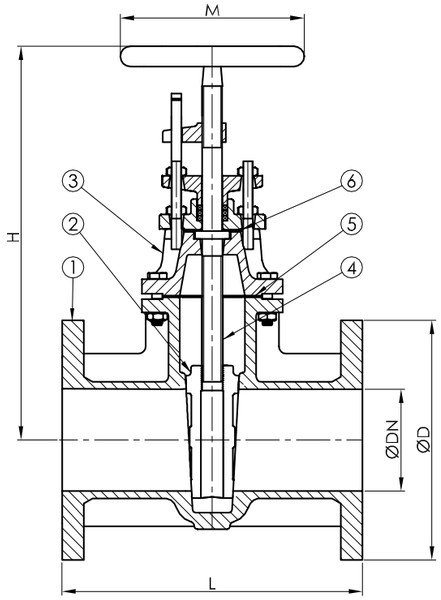
Variants

Drain plug.
Other materials on request.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Wedge	Bronze CC491K (RG5)
3	Bonnet	Bronze CC491K (RG5)
4	Stem	Special brass CW710R (SoMs59)
5	Body sealing	NBR bonded aramide
6	Bonnet sealing	NBR bonded aramide

DN	Max. working pressure (bar)	
	up to 120°C	225°C (steam up to 180°C)
40-150	16	10
200	10	6
250	6	4
300	4	2,5
350-600	2,5	1,5





DN	Connection	Pressure rating	L	D	H	M	Kg
40	PN 16	PN 16	140	150	280	120	9,6
50	PN 16	PN 16	150	165	280	120	10
65	PN 16	PN 16	170	185	330	160	15
80	PN 16	PN 16	180	200	360	160	22
100	PN 16	PN 16	190	220	410	200	31
125	PN 16	PN 16	200	250	450	200	37

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Revision 1

DN	Connection	Pressure rating	L	D	H	M	Kg
150	PN 16	PN 16	210	285	530	200	49
200	PN 10	PN 10	230	340	630	200	79
250	PN 10	PN 6	250	395	720	250	108
300	PN 10	PN 4	270	445	820	315	187
350	PN 10	PN 2,5	290	505	910	400	238
400	PN 10	PN 2,5	310	565	1100	500	370
450	PN 10	PN 2,5	330	615	1260	500	460
500	PN 10	PN 2,5	350	670	1350	500	635
600	PN 10	PN 2,5	390	780	1550	500	830

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Gate valve
621792

Description

Face to face dimensions according to EN 558, series 14.
Flanges according to PN 16 drilled (DN 200-700 PN 10).

Application

Liquids, steam and gases that do not attack the integral material.

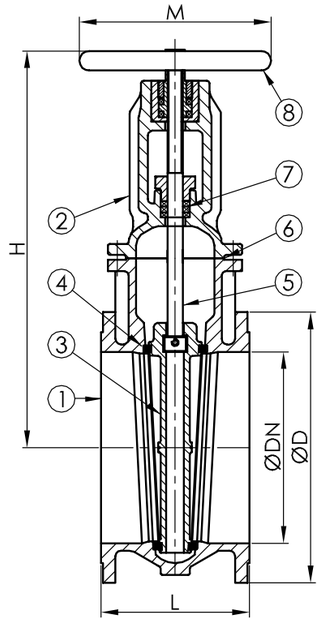
Variants

Flexible disc etc.

No.	Part	Material
1	Body	Stainless steel 1.4401 (AISI 316)
2	Bonnet	Stainless steel 1.4401 (AISI 316)
3	Wedge	Stainless steel 1.4401 (AISI 316)
4	Seat	Stainless steel 1.4401 (AISI 316)
5	Stem	Stainless steel 1.4401 (AISI 316)
6	Bonnet gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-150	16
175-300	10
350-500	6
600-700	4





DN	Connection	Pressure rating	L	D	H	M	Kg
40	PN 16	PN 16	140	150	410	180	18
50	PN 16	PN 16	150	165	470	180	19
65	PN 16	PN 16	170	185	560	225	25
80	PN 16	PN 16	180	200	580	225	32

All measurements in mm. Flanges according to EN 1092-1/B. Weights are approximations.

Revision 1

DN	Connection	Pressure rating	L	D	H	M	Kg
100	PN 16	PN 16	190	220	690	280	40
125	PN 16	PN 16	200	250	790	320	55
150	PN 16	PN 16	210	285	895	320	68
200	PN 10	PN 10	230	340	1030	360	113
250	PN 10	PN 10	250	395	1220	400	139
300	PN 10	PN 10	270	445	1405	500	220
350	PN 10	PN 6	290	505	1595	500	282
400	PN 10	PN 6	310	565	1810	640	347
450	PN 10	PN 6	330	615	2000	640	443
500	PN 10	PN 6	350	670	2195	720	532
600	PN 10	PN 4	390	780	2575	720	740
700	PN 10	PN 4	430	895	3000	800	870

All measurements in mm. Flanges according to EN 1092-1/B. Weights are approximations.

Gate valve
620764

Description

Face to face dimensions according to EN 558, series 15.
Flanges according to PN 40 drilled (DN 200-1000 PN 25).

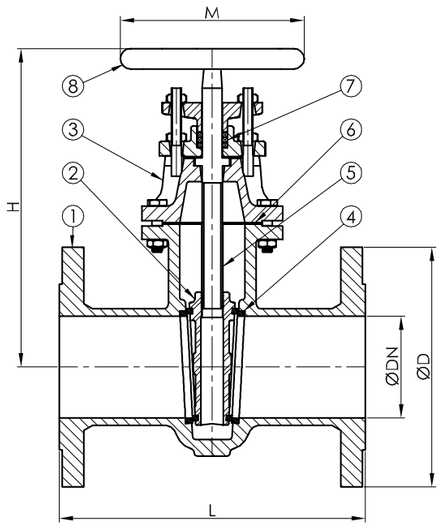
Application

Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Wedge	Cast steel 1.0619 (WCB)
3	Bonnet	Cast steel 1.0619 (WCB)
4	Seat	Stainless steel 1.4301 (AISI 304)
5	Stem	Stainless steel 1.4021 (AISI 420)
6	Bonnet gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Hand wheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-600	25
700-1000	16





DN	Connection	Pressure rating	L	D	H	M	Kg
40	PN 40	PN 25	240	150	245	200	16
50	PN 40	PN 25	250	165	250	200	18
65	PN 40	PN 25	270	185	285	250	22
80	PN 40	PN 25	280	200	295	250	29
100	PN 40	PN 25	300	235	315	315	33
125	PN 40	PN 25	325	270	400	315	53
150	PN 40	PN 25	350	300	420	315	66
200	PN 25	PN 25	400	360	520	400	107
250	PN 25	PN 25	450	425	615	500	180
300	PN 25	PN 25	500	485	695	500	260

All measurements in mm. Flanges according to EN 1092-B. Weights are approximations.

Revision 1

DN	Connection	Pressure rating	L	D	H	M	Kg
350	PN 25	PN 25	550	555	870	500	360
400	PN 25	PN 25	600	620	940	630	480
450	PN 25	PN 25	650	675	1066	630	640
500	PN 25	PN 25	700	730	1180	800	860
600	PN 25	PN 25	800	845	1275	800	1166
700	PN 25	PN 16	900	960	1535	800	1460
800	PN 25	PN 16	1000	1085	1690	800	2530
900	PN 25	PN 16	1100	1185	1925	1000	3740
1000	PN 25	PN 16	1200	1320	2160	1000	4950

All measurements in mm. Flanges according to EN 1092-B. Weights are approximations.

Gate valve
620062

Description

Face to face dimension according to EN 558, series 14.
Flanges according to PN 16, drilled (DN 200-700 PN 10).

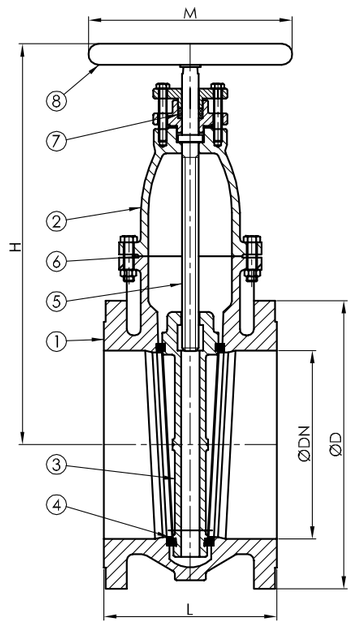
Application

Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Bonnet	Cast steel 1.0619 (WCB)
3	Disc	Cast steel 1.0619 (WCB)
4	Seat	Stainless steel 1.4301 (AISI 304)
5	Stem	Stainless steel 1.4021 (AISI 420)
6	Gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-150	16
200-300	10
350-500	6
600-700	4





DN	Connection	Pressure rating	L	D	H	M	Kg
40	PN 16	PN 16	140	150	230	140	15
50	PN 16	PN 16	150	165	235	140	17
65	PN 16	PN 16	170	185	260	160	20
80	PN 16	PN 16	180	200	285	160	27
100	PN 16	PN 16	190	220	320	200	34
125	PN 16	PN 16	200	250	395	200	50
150	PN 16	PN 16	210	285	435	200	60
200	PN 10	PN 10	230	340	555	250	100
250	PN 10	PN 10	250	395	645	315	165
300	PN 10	PN 10	270	445	770	315	220
350	PN 10	PN 6	290	505	850	400	290
400	PN 10	PN 6	310	565	925	400	370
450	PN 10	PN 6	330	615	940	400	495
500	PN 10	PN 6	350	670	1120	500	580
600	PN 10	PN 4	390	780	1300	500	715
700	PN 10	PN 4	430	895	1500	630	900

All measurements in mm. Flanges according to EN 1092-1/B. Weights are approximations.

5

Gate valve
620002

Description

Face to face dimension according to EN 558, series 14.
Flanges according to PN 16, drilled (DN 200-700 PN 10).

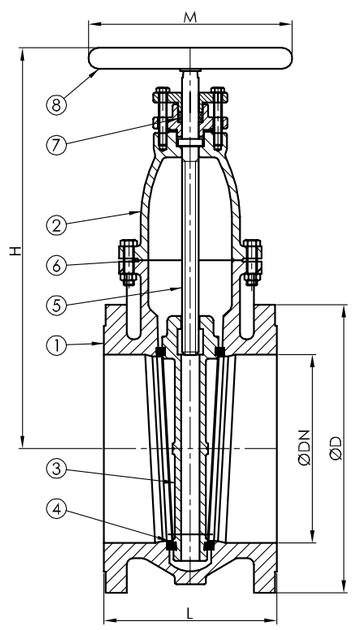
Application

Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Bonnet	Nodular cast iron EN-JS1025 (GGG40.3)
3	Disc	Nodular cast iron EN-JS1025 (GGG40.3)
4	Seat	Bronze CC491K (RG5)
5	Stem	Brass CW614N (Ms 58)
6	Gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-150	16
200-300	10
350-500	6
600-700	4





DN	Connection	Pressure rating	L	D	H	M	Kg
40	PN 16	PN 16	140	150	230	140	11
50	PN 16	PN 16	150	165	235	140	13
65	PN 16	PN 16	170	185	260	160	17
80	PN 16	PN 16	180	200	285	160	20
100	PN 16	PN 16	190	220	320	200	28
125	PN 16	PN 16	200	250	395	200	40
150	PN 16	PN 16	210	285	435	200	50
200	PN 10	PN 10	230	340	555	250	85
250	PN 10	PN 10	250	395	645	315	135
300	PN 10	PN 10	270	445	770	315	180
350	PN 10	PN 6	290	505	850	400	225
400	PN 10	PN 6	310	565	925	400	295
450	PN 10	PN 6	330	615	940	400	350
500	PN 10	PN 6	350	670	1120	500	530
600	PN 10	PN 4	390	780	1300	500	640
700	PN 10	PN 4	430	895	1500	630	820

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Gate valve
620051

Description

Face to face dimension according to EN 558, series 14.
Flanges according to PN 10, drilled.

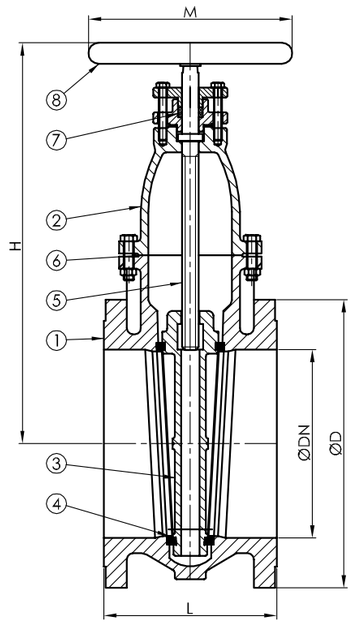
Application

Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Disc	Cast iron EN-JL1040 (GG25)
4	Seat	Bronze CC491K (RG5)
5	Stem	Brass CW614N (Ms 58)
6	Gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-150	10
200-300	6
350-500	4
600-700	2,5





DN	Connection	Pressure rating	L	D	H	M	Kg
40	PN 10	PN 10	140	150	230	140	11
50	PN 10	PN 10	150	165	235	140	13
65	PN 10	PN 10	170	185	260	160	17
80	PN 10	PN 10	180	200	285	160	20
100	PN 10	PN 10	190	220	320	200	28
125	PN 10	PN 10	200	250	395	200	40
150	PN 10	PN 10	210	285	435	200	50
200	PN 10	PN 6	230	340	555	250	85
250	PN 10	PN 6	250	395	645	315	135
300	PN 10	PN 6	270	445	770	315	180
350	PN 10	PN 4	290	505	850	400	225
400	PN 10	PN 4	310	565	925	400	295
450	PN 10	PN 4	330	615	940	400	350
500	PN 10	PN 4	350	670	1120	500	530
600	PN 10	PN 2,5	390	780	1300	500	640
700	PN 10	PN 2,5	430	895	1500	630	820

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Gate valve
620462

Description

Face to face dimensions according to EN 558, series 14.
Flanges according to PN 16 drilled (DN 200-700 PN 10).

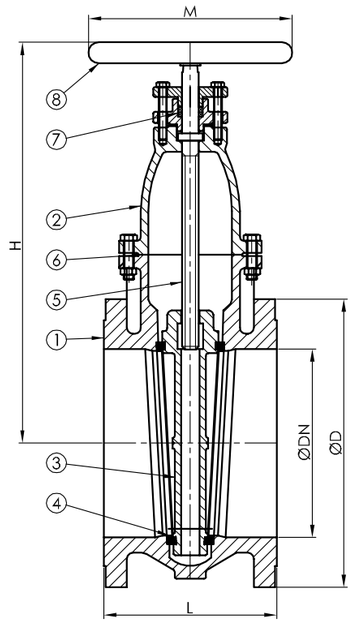
Application

Liquids and gases.
Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Bonnet	Cast steel 1.0619 (WCB)
3	Wedge	Cast steel 1.0619 (WCB)
4	Seat	Stainless steel 1.4301 (AISI 304)
5	Stem	Stainless steel 1.4021 (AISI 420)
6	Bonnet gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-150	16
175-300	10
350-500	6
600-700	4





DN	Connection	Pressure rating	L	H	D	M	Kg
40	PN 16	PN 16	140	230	150	140	15
50	PN 16	PN 16	150	235	165	140	17
65	PN 16	PN 16	170	260	185	160	20
80	PN 16	PN 16	180	285	200	160	27
100	PN 16	PN 16	190	320	220	200	34
125	PN 16	PN 16	200	395	250	200	50
150	PN 16	PN 16	210	435	285	200	60
200	PN 10	PN 10	230	555	340	250	100
250	PN 10	PN 10	250	645	395	315	165
300	PN 10	PN 10	270	770	445	315	220
350	PN 10	PN 6	290	850	505	400	290
400	PN 10	PN 6	310	925	565	400	370
450	PN 10	PN 6	330	940	615	400	495
500	PN 10	PN 6	350	1120	670	500	580
600	PN 10	PN 4	390	1300	780	500	715
700	PN 10	PN 4	430	1500	895	630	900

All measurements in mm. EN 1092-1/B. Weights are approximations.

5

Gate valve
620402

Description

Face to face dimensions according to EN 558, series 14.
Flanges according to PN 16, drilled (DN 200-700 PN 10).

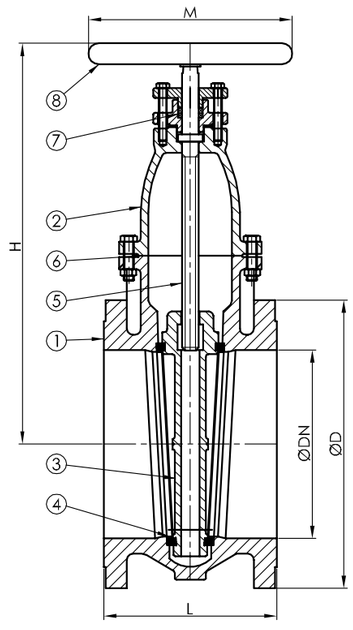
Application

Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Bonnet	Nodular cast iron EN-JS1025 (GGG40.3)
3	Wedge	Nodular cast iron EN-JS1025 (GGG40.3)
4	Seat	Stainless steel 1.4301 (AISI 304)
5	Stem	Stainless steel 1.4021 (AISI 420)
6	Bonnet gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-150	16
175-300	10
350-500	6
600-700	4





DN	Connection	Pressure rating	L	H	D	M	Kg
40	PN 16	PN 16	140	230	150	140	11
50	PN 16	PN 16	150	235	165	140	13
65	PN 16	PN 16	170	260	185	160	17
80	PN 16	PN 16	180	285	200	160	20
100	PN 16	PN 16	190	320	220	200	28
125	PN 16	PN 16	200	395	250	200	40
150	PN 16	PN 16	210	435	285	200	50
200	PN 10	PN 10	230	555	340	250	85
250	PN 10	PN 10	250	645	395	315	135
300	PN 10	PN 10	270	770	445	315	180
350	PN 10	PN 6	290	850	505	400	225
400	PN 10	PN 6	310	925	565	400	295
450	PN 10	PN 6	330	940	615	400	350
500	PN 10	PN 6	350	1120	670	500	530
600	PN 10	PN 4	390	1300	780	500	640
700	PN 10	PN 4	430	1500	895	630	820

All measurements in mm. Flanges 1092-2/B. Weights are approximations.

Gate valve
620451

Description

Face to face dimensions according to EN 558, series 14.
Flanges according to PN 10, drilled.

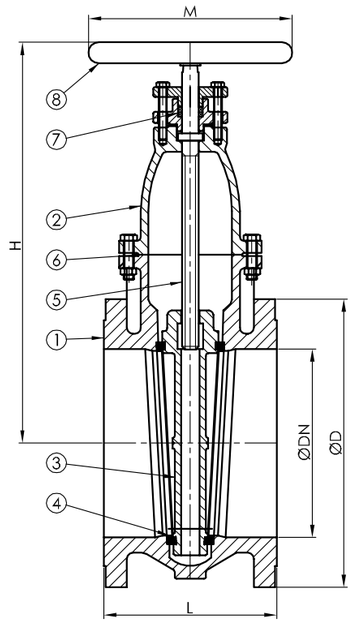
Application

Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Wedge	Cast iron EN-JL1040 (GG25)
4	Seat	Stainless steel 1.4301 (AISI 304)
5	Stem	Stainless steel 1.4021 (AISI 420)
6	Bonnet gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-150	10
175-300	6
350-500	4
600-700	2,5





DN	Connection	Pressure rating	L	D	H	M	Kg
40	PN 10	PN 10	140	150	230	140	11
50	PN 10	PN 10	150	165	235	140	13
65	PN 10	PN 10	170	185	260	160	17
80	PN 10	PN 10	180	200	285	160	20
100	PN 10	PN 10	190	220	320	200	28
125	PN 10	PN 10	200	250	395	200	40
150	PN 10	PN 10	210	285	435	200	50
200	PN 10	PN 6	230	340	555	250	85
250	PN 10	PN 6	250	395	645	315	135
300	PN 10	PN 6	270	445	770	315	180
350	PN 10	PN 4	290	505	850	400	225
400	PN 10	PN 4	310	565	925	400	295
450	PN 10	PN 4	330	615	940	400	350
500	PN 10	PN 4	350	670	1120	500	530
600	PN 10	PN 2,5	390	780	1300	500	640
700	PN 10	PN 2,5	430	895	1500	630	820

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Gate valve
620162

Description

Face to face dimension according to EN 558, series 14.
Flanges according to PN 16, drilled (DN 200-700 PN 10).
With indicator.

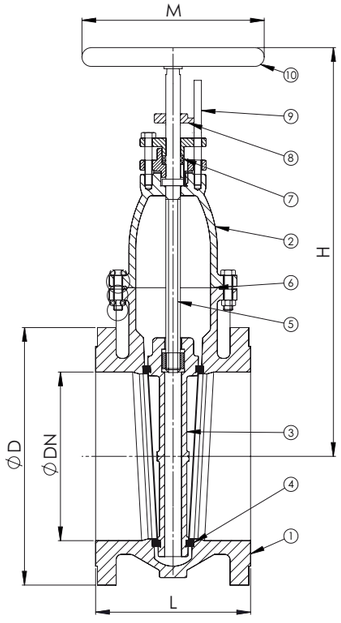
Application

Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Bonnet	Cast steel 1.0619 (WCB)
3	Disc	Cast steel 1.0619 (WCB)
4	Disc ring	Bronze CC491K (RG5)
5	Stem	Brass CW614N (Ms 58)
6	Gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Indicator	Bronze CC491K (RG5)
9	Indicator pin	Steel 1.0037 (St37)
10	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-150	16
200-300	10
350-500	6
600-700	4





DN	Connection	Pressure rating	L	D	H	M	Kg
40	PN 16	PN 16	140	150	265	140	15
50	PN 16	PN 16	150	165	270	140	17
65	PN 16	PN 16	170	185	295	160	20
80	PN 16	PN 16	180	200	325	160	27
100	PN 16	PN 16	190	220	365	200	34
125	PN 16	PN 16	200	250	440	200	50
150	PN 16	PN 16	210	285	490	200	60
200	PN 10	PN 10	230	340	610	250	100
250	PN 10	PN 10	250	395	730	315	165
300	PN 10	PN 10	270	445	870	315	220
350	PN 10	PN 6	290	505	950	400	290
400	PN 10	PN 6	310	565	1045	400	370
450	PN 10	PN 6	330	615	1100	400	495
500	PN 10	PN 6	350	670	1250	500	580
600	PN 10	PN 4	390	780	1475	500	715
700	PN 10	PN 4	430	895	1650	630	900

All measurements in mm. Flanges according to EN 1091-1/B. Weights are approximations.

5

Gate valve
620102

Description

Face to face dimension according to EN 558, series 14.
Flanges according to PN 16, drilled (DN 200-700 PN 10).
With indicator.

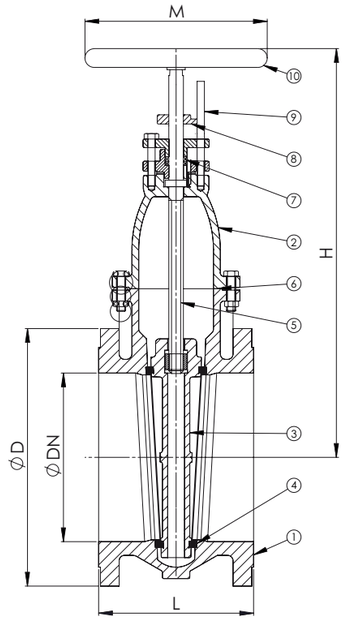
Application

Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Bonnet	Nodular cast iron EN-JS1025 (GGG40.3)
3	Disc	Nodular cast iron EN-JS1025 (GGG40.3)
4	Disc ring	Bronze CC491K (RG5)
5	Stem	Brass CW614N (Ms 58)
6	Gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Indicator	Bronze CC491K (RG5)
9	Indicator pin	Steel 1.0037 (St37)
10	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-150	16
200-300	10
350-500	6
600-700	4





DN	Connection	Pressure rating	L	D	H	M	Kg
40	PN 16	PN 16	140	150	265	140	11
50	PN 16	PN 16	150	165	270	140	13
65	PN 16	PN 16	170	185	295	160	17
80	PN 16	PN 16	180	200	325	160	20
100	PN 16	PN 16	190	220	365	200	28
125	PN 16	PN 16	200	250	440	200	40
150	PN 16	PN 16	210	285	490	200	50
200	PN 10	PN 10	230	340	610	250	85
250	PN 10	PN 10	250	395	730	315	135
300	PN 10	PN 10	270	445	870	315	180
350	PN 10	PN 6	290	505	950	400	225
400	PN 10	PN 6	310	565	1045	400	295
450	PN 10	PN 6	330	615	1100	400	350
500	PN 10	PN 6	350	670	1250	500	530
600	PN 10	PN 4	390	780	1475	500	640
700	PN 10	PN 4	430	895	1650	630	820

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

5

Gate valve
620151

Description

Face to face dimension according to EN 558, series 14.
Flanges according to PN 10, drilled.
With indicator.

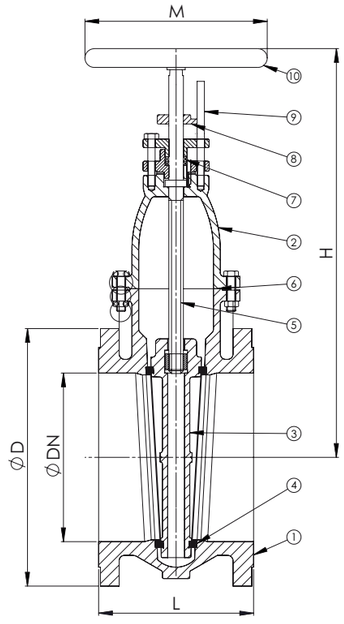
Application

Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Disc	Cast iron EN-JL1040 (GG25)
4	Disc ring	Bronze CC491K (RG5)
5	Stem	Brass CW614N (Ms 58)
6	Gasket	NBR bonded aramide
7	Gland packing	PTFE
8	Indicator	Bronze CC491K (RG5)
9	Indicator pin	Steel 1.0037 (St37)
10	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	120°C
40-150	10
200-300	6
350-500	4
600-700	2,5





DN	Connection	Pressure rating	L	D	H	M	Kg
40	PN 10	PN 10	140	150	265	140	11
50	PN 10	PN 10	150	165	270	140	13
65	PN 10	PN 10	170	185	295	160	17
80	PN 10	PN 10	180	200	325	160	20
100	PN 10	PN 10	190	220	365	200	28
125	PN 10	PN 10	200	250	440	200	40
150	PN 10	PN 10	210	285	490	200	50
200	PN 10	PN 6	230	340	610	250	85
250	PN 10	PN 6	250	395	730	315	135
300	PN 10	PN 6	270	445	870	315	180
350	PN 10	PN 4	290	505	950	400	225
400	PN 10	PN 4	310	565	1045	400	295
450	PN 10	PN 4	330	615	1100	400	350
500	PN 10	PN 4	350	670	1250	500	530
600	PN 10	PN 2,5	390	780	1475	500	640
700	PN 10	PN 2,5	430	895	1650	630	820

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Fire valve
356622

Description

Straight type with bolted bonnet. Soft disc sealing.

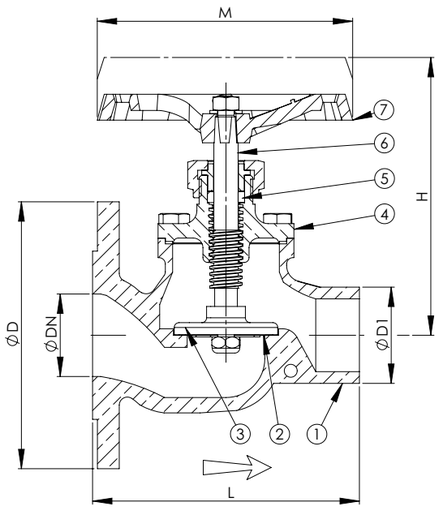
Application

Water. Max. temperature 80°C.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc ring	NBR
3	Disc	Special brass CW710R (SoMs59)
4	Bonnet	Bronze CC491K (RG5)
5	Gasket	NBR bonded aramide
6	Stem	Special brass CW710R (SoMs59)
7	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	Up to 80°C
40-65	16



DN	Connection	Pressure rating	L	D	D1	H	M	Kg
40	PN 16	PN 16	150	150	G 1 1/2”	160	140	5
50	PN 16	PN 16	167	150	G 2”	175	140	6
50	PN 16	PN 16	167	165	G 2”	175	140	6,5
50	PN 16	PN 16	167	185	G 2”	175	140	7
65	PN 16	PN 16	200	185	G 2 1/2”	205	160	11

All measurements in mm. Flanges according to EN 1092-3.Weights are approximations.

Fire valve
356722

Description

Angle type with bolted bonnet. Soft disc sealing.

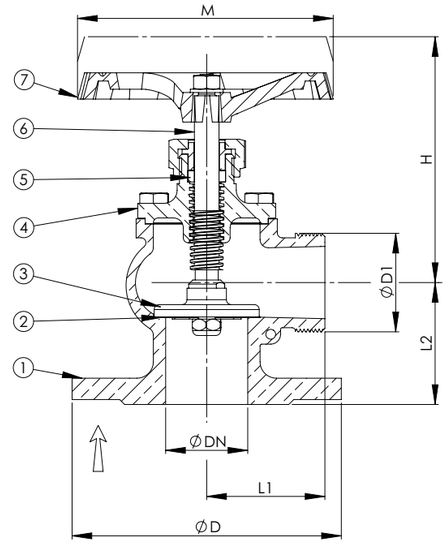
Application

Water. Max. temperature 80°C.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc ring	NBR
3	Disc	Special brass CW710R (SoMs59)
4	Bonnet	Bronze CC491K (RG5)
5	Gasket	NBR bonded aramide
6	Stem	Special brass CW710R (SoMs59)
7	Handwheel	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	Up to 80°C
40-65	16



DN	Connection	Pressure rating	L1	L2	D	D1 (BSP)	H	M	Kg
40	PN 16	PN 16	65	70	150	G 1 1/2”	150	140	4,3
50	PN 16	PN 16	73	75	150	G 2”	150	140	4,8
50	PN 16	PN 16	73	75	165	G 2”	150	140	5,3
50	PN 16	PN 16	73	75	185	G 2”	150	140	5,8
65	PN 16	PN 16	95	90	185	G 2 1/2”	165	160	9,5

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Landing valve
471922

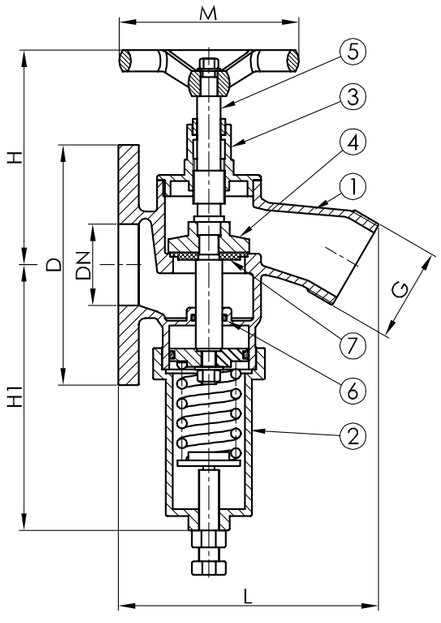
Application

For fore fighting. Reasure a constant outlet pressure by oscilliate inlet pressure.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Bonnet	Bronze CC491K (RG5)
3	Bonnet	Bronze CC493K (RG7)
4	Disc	Special brass CW710R (SoMs59)
5	Stem	Special brass CW710R (SoMs59)
6	O-ring	NBR
7	Disc sealing	NBR

DN	Inlet pressure up to (bar)	Outlet pressure adjustable (bar)
65	16	3,0-13





DN	Connection	Pressure rating	G (BSP)	L	D	H	H1	M	Kg
65	PN 16	PN 16	G 2 1/2”	250	185	170	292	140	13

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Revision 1

Storz coupling

Description

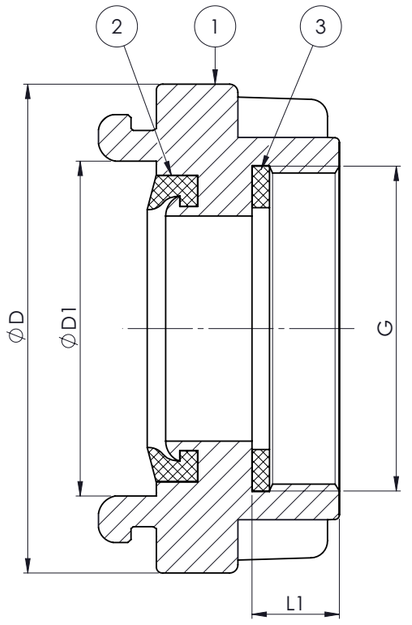
Quick coupling for fire hydrant valves.
Adaptor with female thread.
German standard.

Variants

- Brass
- Aluminium



No.	Part	Material
1	Coupling	Bronze CC491K (RG5)
2	Sealing	NBR
3	Sealing	NBR



Type	G	L1	D	D1	Kg
D-25	G 1”	17	55	31	0,2
C-52	G 1”	17	98	66	0,7
C-52	G 1 1/4”	17	98	66	0,7
C-52	G 1 1/2”	19	98	66	0,7
C-52	G 2”	19	98	66	0,6
C-52	G 2 1/2”	21	98	66	0,8
65	G 2”	19	118	81	1
65	G 2 1/2”	21	118	81	1
B-75	G 2 1/2”	21	126	89	1,1
100	G 4”	23	155	115	1,8
A-110	G 4”	23	182	133	3,2

All measurements in mm. Weights are approximations.

Revision 1

Storz Blank cap

Description

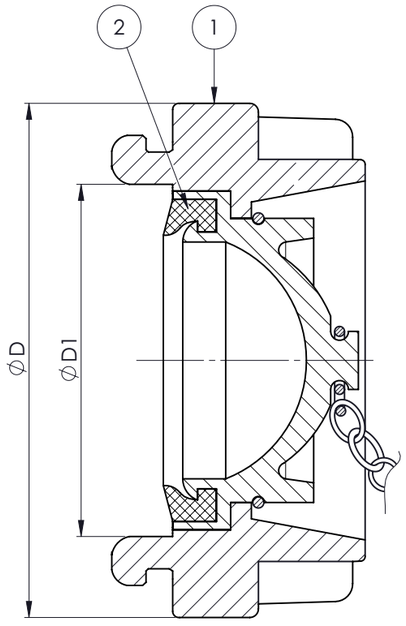
Blank cap for Storz coupling.
German standard.

Variants

- Brass
- Aluminium



No.	Part	Material
1	Coupling	Bronze CC491K (RG5)
2	Sealing	NBR



Type	D	D1	Kg
D-25	55	31	0,3
C-52	98	66	0,8
65	118	81	1,1
B-75	126	89	1,3
100	155	115	2,1
A-110	182	133	3

All measurements in mm. Weights are approximations.

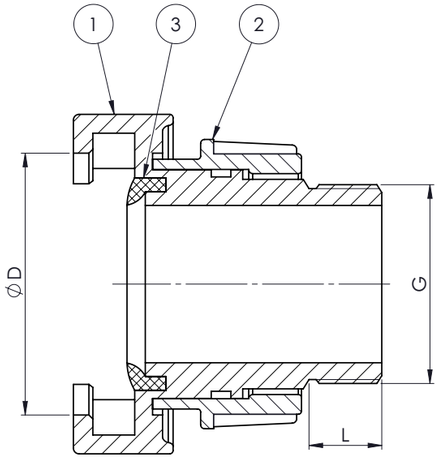
NOR coupling

Description

Quick coupling for fire valves.
Adaptor with locking ring, male thread.
Norweigan standard.



No.	Part	Material
1	Coupling	Bronze CC491K (RG5)
2	Locking ring	Bronze CC491K (RG5)
3	Sealing	NBR



DN	G	L	Type	D	Kg
40	G 1”	18	3	50	0,6
40	G 1 1/2”	20	3	50	0,6
40	G 2”	20	3	50	0,6
50	G 1 1/2”	20	2	66	0,9
50	G 2”	20	2	66	0,9
65	G 1 1/2”	20	1	83	1,1
65	G 2”	20	1	83	1,1
65	G 2 1/2”	22	1	83	1,1

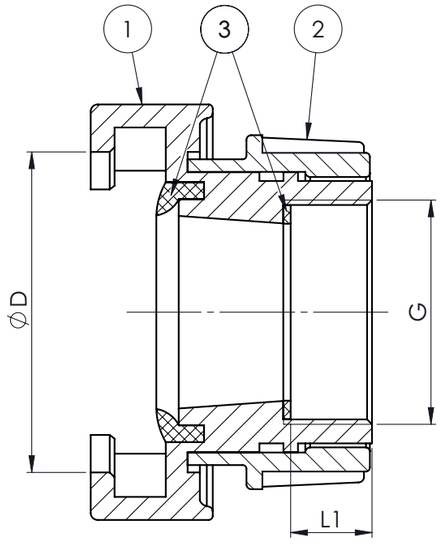
All measurements in mm. Weights are approximations.

NOR coupling

Description

Quick coupling for fire valves.
Adaptor with locking ring, female thread.
Norweigan standard.

No.	Part	Material
1	Coupling	Bronze CC491K (RG5)
2	Locking ring	Bronze CC491K (RG5)
3	Sealing	NBR



DN	G	L1	Type	D	Kg
40	G 1”	17	3	50	0,6
40	G 1 1/2”	19	3	50	0,6
40	G 2”	19	3	50	0,6
50	G 1 1/2”	19	2	66	0,9
50	G 2”	19	2	66	0,9
65	G 1 1/2”	19	1	83	1,1
65	G 2”	19	1	83	1,1
65	G 2 1/2”	21	1	83	1,1

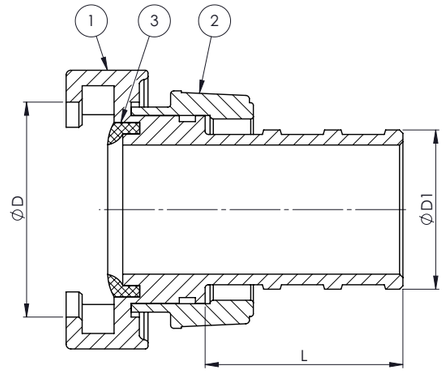
All measurements in mm. Weights are approximations.

NOR coupling

Description

NOR delivery hose coupling.
Norweigan standard.

No.	Part	Material
1	Coupling	Bronze CC491K (RG5)
2	Locking ring	Bronze CC491K (RG5)
3	Sealing	NBR



DN	L	Type	D	D1	Kg
40	60	3	50	38	0,6
50	60	2	66	38	0,9
50	60	2	66	52	0,9
65	60	1	83	38	1,1
65	60	1	83	52	1,1
65	60	1	83	64	1,1

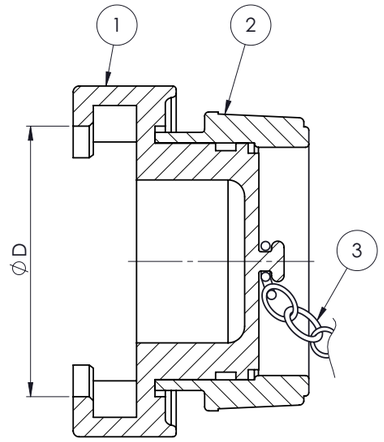
All measurements in mm. Weights are approximations.

NOR Blank cap

Description

Blank cap for NOR coupling.
Norweigan standard.

No.	Part	Material
1	Coupling	Bronze CC491K (RG5)
2	Locking ring	Bronze CC491K (RG5)
3	Chain	Brass CW607N (Ms 58)



DN	Tyoe	D	Kg
40	3	50	0,6
50	2	66	0,9
65	1	83	1,1

All measurements in mm. Weights are approximations.

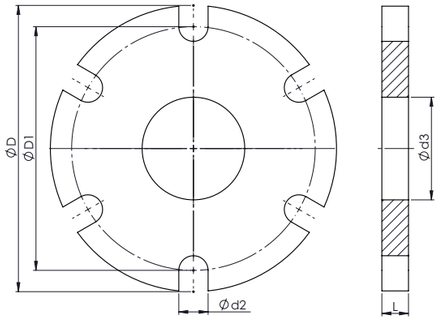
Discharge flanges
354262

Description

Type 00. Flange for internationally unified connection
Marpol DIN 86285. For disposal of oil residues.

No.	Part	Material
1	Discharge flange	Steel 1.0037 (St37)





DN	Pressure rating	L	D	D1	d2	d3	Kg
40	PN 6	20	215	183	22	49,0	4,9
50	PN 6	20	215	183	22	61,1	4,8
65	PN 6	20	215	183	22	77,1	4,5
80	PN 6	20	215	183	22	90,3	4,2
100	PN 6	20	215	183	22	115,9	3,6
125	PN 6	20	215	183	22	141,6	2,8

All measurements in mm. Weights are approximations.

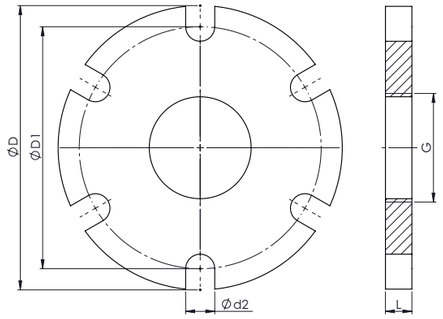
Discharge flanges
354262

Description

Type 01. Flange for internationally unified connection Marpol DIN 86285. For disposal of oil residues.

No.	Part	Material
1	Discharge flange	Steel 1.0037 (St37)





DN	G	Pressure rating	L	D	D1	d2	Kg
50	G 2”	PN 6	20	215	183	22	4,8
65	G 2 1/2”	PN 6	20	215	183	22	4,5
80	G 3”	PN 6	20	215	183	22	4,2
100	G 4”	PN 6	20	215	183	22	3,6
125	G 5”	PN 6	20	215	183	22	2,8

All measurements in mm. Weights are approximations.

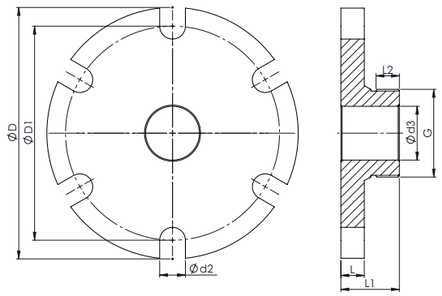
Discharge flanges
354262

Description

Type 02. Flange for internationally unified connection Marpol DIN 86285. For disposal of oil residues.

No.	Part	Material
1	Discharge flange	Steel 1.0037 (St37)





DN	G	Pressure rating	L	L1	L2	D	D1	d2	d3	Kg
50	G 2”	PN 6	20	50	20	215	183	22	46	5,9

All measurements in mm. Weights are approximations.

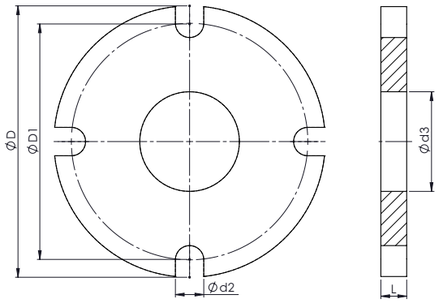
Discharge flanges
356262

Description

Type 00. Flange for international discharge connection, Marpol DIN 86282. For sewage systems on ships.

No.	Part	Material
1	Discharge flange	Steel 1.0037 (St37)





DN	Pressure rating	L	D	D1	d2	d3	Kg
32	PN 6	16	210	170	18	43,1	4
40	PN 6	16	210	170	18	49	3,9
50	PN 6	16	210	170	18	61,1	3,8
65	PN 6	16	210	170	18	77,1	3,6
80	PN 6	16	210	170	18	90,3	3,3
100	PN 6	16	210	170	18	115,9	2,9

All measurements in mm. Weights are approximations.

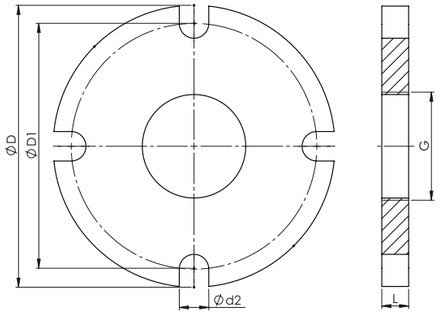
Discharge flanges
356262

Description

Type 01. Flange for international discharge connection, Marpol DIN 86282. For sewage systems on ships.

No.	Part	Material
1	Discharge flange	Steel 1.0037 (St37)





DN	G	Pressure rating	L	D	D1	d2	Kg
40	G 1 1/2”	PN 6	16	210	170	18	3,9
50	G 2”	PN 6	16	210	170	18	3,8
65	G 2 1/2”	PN 6	16	210	170	18	3,6
80	G 3”	PN 6	16	210	170	18	3,3
100	G 4”	PN 6	16	210	170	18	2,9

All measurements in mm. Weights are approximations.

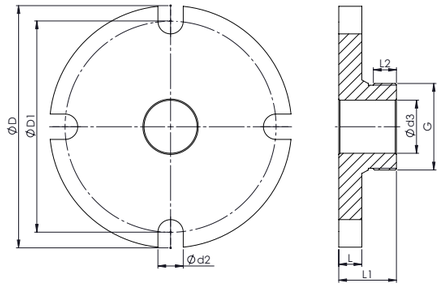
Discharge flanges
356262

Description

Type 02. Flange for international discharge connection, Marpol DIN 86282. For sewage systems on ships.

No.	Part	Material
1	Discharge flange	Steel 1.0037 (St37)





DN	G	Pressure rating	L	L1	L2	D	D1	d2	d3	Kg
50	G 2”	PN 6	16	50	20	210	170	18	46	4,2

All measurements in mm. Weights are approximations.

Quick closing valve
901062

Description

Release by either hydraulic fluid, pneumatic signal or manually. Integrated fire release safety.
Face to face according to EN 558, series 1.

Application

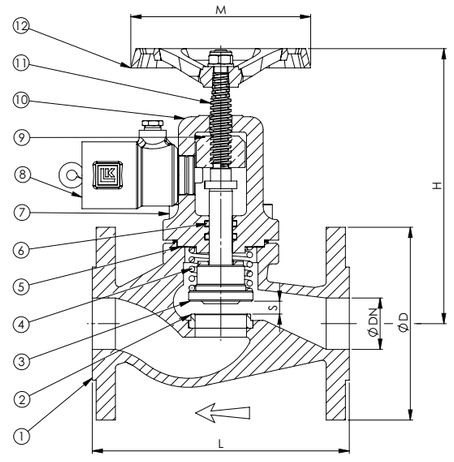
Quick closing applications in accordance with type approvals.

Options

Microswitch for indication of position.

No.	Part	Material
1	Body	Cast carbon steel 1.6220 (GS-C25)
2	Seat ring	Stainless steel 1.4301 (AISI 304)
3	Disc	Stainless steel 1.4301 (AISI 304)
4	Spring, Release unit	Spring steel SH (1084 ASTM A713)
5	Gasket	NBR bonded aramide
6	O-ring	FPM (Viton)
7	Screw MC6S	8.8 FZB
8	Release cylinder	Brass CW614N (Ms 58)
9	Setting nut	Brass CW617N (Ms 58)
10	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
11	Stem	Stainless steel 1.4301 (AISI 304)
12	Handwheel	Cast iron EN-JL1040 (GG25)





DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-150	16	10

DN	Connection	Pressure rating	L	D	H	S	M	Kg
15	PN 16	PN 16	130	95	176	7,5	120	5,3
20	PN 16	PN 16	150	105	178	7,5	120	5,9
25	PN 16	PN 16	160	115	188	8	120	7,3
32	PN 16	PN 16	180	140	192	8	120	8,8
40	PN 16	PN 16	200	150	202	10	140	11
50	PN 16	PN 16	230	165	224	12,5	140	15
65	PN 16	PN 16	290	185	253	16,5	140	22
80	PN 16	PN 16	310	200	253	20	160	28
100	PN 16	PN 16	350	220	298	25	160	52
125	PN 16	PN 16	400	250	338	32	200	64
150	PN 16	PN 16	480	285	410	37,5	200	77

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

Quick closing valve 901002

Description

Release by either hydraulic fluid, pneumatic signal or manually. Integrated fire release safety.
Face to face according to EN 558, series 1.

Application

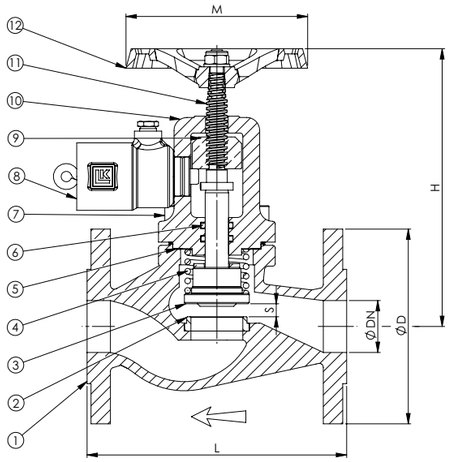
Quick closing applications in accordance with type approvals.

Options

Available flange drilling: ANSI 150. Microswitch for indication of position. Other materials on request. For JIS standard see product 501002.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Seat ring	Stainless steel 1.4301 (AISI 304)
3	Disc	Stainless steel 1.4301 (AISI 304)
4	Spring, release unit	Spring steel SH (1084 ASTM A713)
5	Gasket	NBR bonded aramide
6	O-ring	FPM (Viton)
7	Screw MC6S	8.8 FZB
8	Release cylinder	Brass CW614N (Ms 58)
9	Setting nut	Brass CW617N (Ms 58)
10	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
11	Stem	Stainless steel 1.4301 (AISI 304)
12	Handwheel	Cast iron EN-JL1040 (GG25)



DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-150	16	10
200-250	10	6

DN	Connection	Pressure rating	L	D	H	S	M	Kg
15	PN 16	PN 16	130	95	176	7,5	120	5,2
20	PN 16	PN 16	150	105	178	7,5	120	5,9
25	PN 16	PN 16	160	115	188	8	120	6,8
32	PN 16	PN 16	180	140	192	8	120	8,4
40	PN 16	PN 16	200	150	202	10	140	10
50	PN 16	PN 16	230	165	224	12,5	140	14

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

DN	Connection	Pressure rating	L	D	H	S	M	Kg
65	PN 16	PN 16	290	185	253	16,5	140	19
80	PN 16	PN 16	310	200	253	20	160	26
100	PN 16	PN 16	350	220	298	25	160	46
125	PN 16	PN 16	400	250	338	32	200	54
150	PN 16	PN 16	480	285	410	37,5	200	72
200	PN 10	PN 10	600	340	575	50	400	150
250	PN 10	PN 10	730	405	615	63	400	230

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

Quick closing valve 501002

Description

Release by either hydraulic fluid, pneumatic signal or manually. Integrated fire release safety.
Face to face according to JIS F7305.

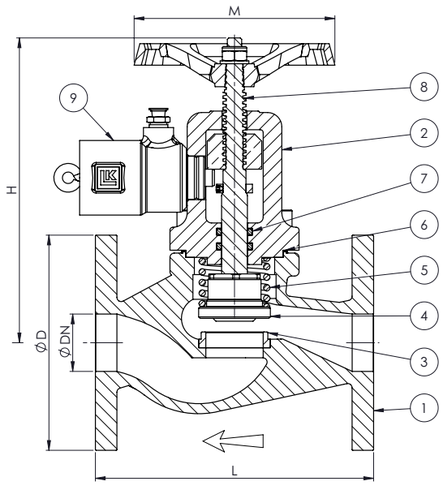
Variants

Quick closing applications in accordance with type approvals.

Options

Microswitch for indication of posistion. Other dimensions and materials on request.





No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
3	Seat ring	Stainless steel 1.4301 (AISI 304)
4	Disc	Stainless steel 1.4301 (AISI 304)
5	Spring	Spring steel SH (1084 ASTM A713)
6	Gasket	NBR bonded aramide
7	O-ring	FPM (Viton)
8	Stem	Stainless steel 1.4301 (AISI 304)
9	Release cylinder	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
25-125	16	10

DN	Connection	Pressure rating	L	D	H	M	Kg
25	JIS 5K	PN 16	120	95	193	120	4,7
32	JIS 5K	PN 16	140	115	194	120	5,3
40	JIS 5K	PN 16	160	120	218	140	7,8
50	JIS 5K	PN 16	210	130	221	140	9,4
65	JIS 5K	PN 16	250	155	258	140	14
80	JIS 5K	PN 16	280	180	278	160	20
100	JIS 5K	PN 16	340	200	304	160	29
125	JIS 5K	PN 16	410	235	353	200	41

All measurements in mm. Flange thickness according to JIS B2220. Weights are approximations.

Revision 1

Quick closing valve 901162

Description

Release by either hydraulic fluid, pneumatic signal or manually. Integrated fire release safety.
Face to face according to EN 558, series 8.

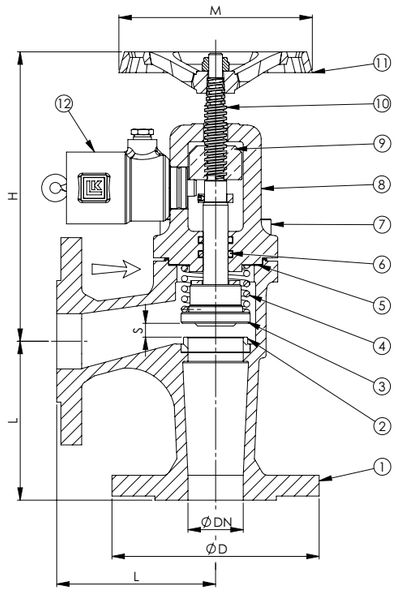
Application

Quick closing application in in accordance with type approvals.

Options

Microswitch for indication of position.





No.	Part	Material
1	Body	Cast carbon steel 1.6220 (GS-C25)
2	Seat ring	Stainless steel 1.4301 (AISI 304)
3	Disc	Stainless steel 1.4301 (AISI 304)
4	Spring, Release unit	Spring steel SH (1084 ASTM A713)
5	Gasket	NBR bonded aramide
6	O-ring	FPM (Viton)
7	Screw MC6S	8.8 FZB
8	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
9	Setting nut	Brass CW617N (Ms 58)
10	Stem	Stainless steel 1.4301 (AISI 304)
11	Handwheel	Cast iron EN-JL1040 (GG25)
12	Release cylinder	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-150	16	10

DN	Connection	Pressure rating	L	D	H	S	M	Kg
15	PN 16	PN 16	90	95	169	7,5	120	5,1
20	PN 16	PN 16	95	105	170	7,5	120	5,8
25	PN 16	PN 16	100	115	179	8	120	6,9
32	PN 16	PN 16	105	140	186	8	120	8,6
40	PN 16	PN 16	115	150	205	10	140	10
50	PN 16	PN 16	125	165	204	12,5	140	16
65	PN 16	PN 16	145	185	233	16,5	140	22
80	PN 16	PN 16	155	200	252	20	160	27
100	PN 16	PN 16	175	220	278	25	160	45
125	PN 16	PN 16	200	250	295	32	200	54
150	PN 16	PN 16	225	285	335	37,5	200	69

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

Revision 1

Quick closing valve
901102

Description

Release by either hydraulic fluid, pneumatic signal or manually. Integrated fire release safety.
Face to face according to EN 558, series 8.

Application

Quick closing application in in accordance with type approvals.

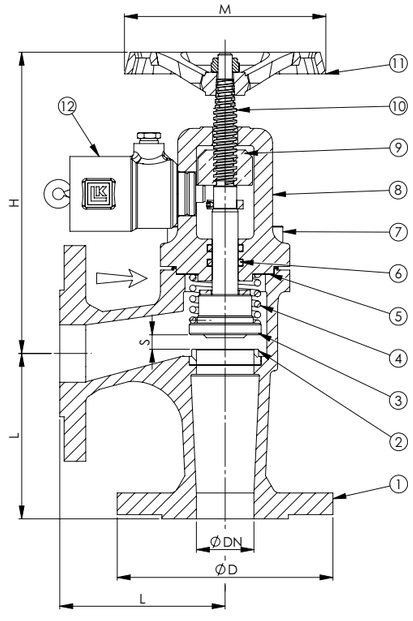
Options

Available flange drilling: ANSI 150. Microswitch for indication of position. Other materials on request. For JIS standard see product 501102.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Seat ring	Stainless steel 1.4301 (AISI 304)
3	Disc	Stainless steel 1.4301 (AISI 304)
4	Spring, release unit	Spring steel SH (1084 ASTM A713)
5	Gasket	NBR bonded aramide
6	O-ring	FPM (Viton)
7	Screw MC6S	8.8 FZB
8	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
9	Setting nut	Brass CW617N (Ms 58)
10	Stem	Stainless steel 1.4301 (AISI 304)
11	Handwheel	Cast iron EN-JL1040 (GG25)
12	Release cylinder	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-150	16	10
200-250	10	6



DN	Connection	Pressure rating	L	D	H	S	M	Kg
15	PN 16	PN 16	90	95	169	7,5	120	5
20	PN 16	PN 16	95	105	170	7,5	120	5,6
25	PN 16	PN 16	100	115	179	8	120	6,4
32	PN 16	PN 16	105	140	186	8	120	8,3
40	PN 16	PN 16	115	150	205	10	140	9,9
50	PN 16	PN 16	125	165	204	12,5	140	14
65	PN 16	PN 16	145	185	233	16,5	140	18
80	PN 16	PN 16	155	200	252	20	160	25
100	PN 16	PN 16	175	220	278	25	160	41
125	PN 16	PN 16	200	250	295	32	200	47
150	PN 16	PN 16	225	285	335	37,5	200	63
200	PN 10	PN 10	275	340	458	50	400	150
250	PN 10	PN 10	325	405	463	63	400	230

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

7

Quick closing valve 501102

Description

Release by either hydraulic fluid, pneumatic signal or manually. Integrated fire release safety.
Face to face according to JIS F7306.

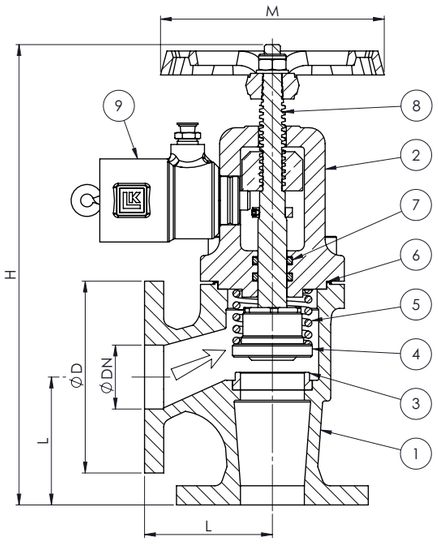
Variants

Quick closing applications in accordance with type approvals.

Options

Microswitch for indication of posistion. Other dimensions and materials on request.





No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
3	Seat ring	Stainless steel 1.4301 (AISI 304)
4	Disc	Stainless steel 1.4301 (AISI 304)
5	Spring	Spring steel SH (1084 ASTM A713)
6	Gasket	NBR bonded aramide
7	O-ring	FPM (Viton)
8	Stem	Stainless steel 1.4301 (AISI 304)
9	Release cylinder	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
25-125	16	10

DN	Connection	Pressure rating	L	D	H	M	Kg
25	JIS 5K	PN 16	65	95	182	120	4,8
32	JIS 5K	PN 16	80	115	185	120	5,3
40	JIS 5K	PN 16	80	120	213	140	7,7
50	JIS 5K	PN 16	100	130	208	140	9
65	JIS 5K	PN 16	115	155	239	140	12
80	JIS 5K	PN 16	130	180	251	160	17
100	JIS 5K	PN 16	150	200	278	160	26
125	JIS 5K	PN 16	170	235	298	200	38

All measurements in mm. Flange thickness according to JIS B2220. Weights are approximations.

Pneumatic control station 1-10 951000

Description

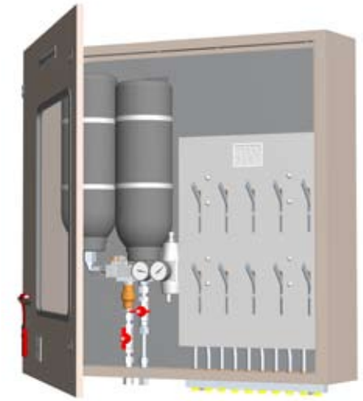
Cabinet for pneumatic actuating of quick closing valves.

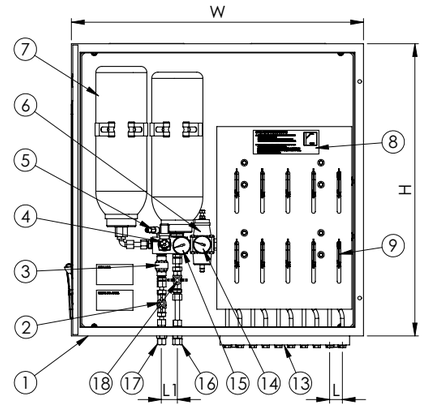
Variants

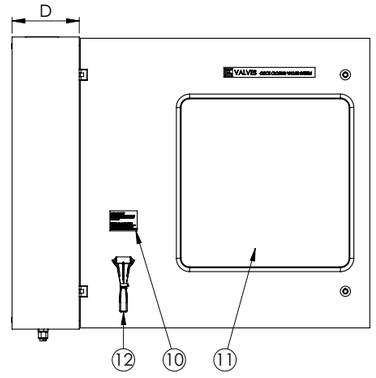
- Larger air vessel
- Cabinet: stainless steel 1.4301 (AISI 304)
- Control by solenoid valves
- Fittings for steel on copper piping
- Custom colours upon request
- Pneumatic control station for low pressure system

Options

- Customized signboards
- Additional pressure switch on low pressure side
- Electrical indication of closed/open valves







No.	Part
1	Cabinet of painted mild steel
2	Inlet valve
3	Check valve
4	Pressure switch, 30 bar high pressure side
5	Safety valve
6	Pressure regulator with filter
7	Air vessel
8	Operating instruction
9	Control device
10	Emergency instruction
11	Breakable window
12	Hammer
13	Coupling manifold, outlet
14	Low pressure gauge
15	High pressure gauge
16	Pipe fitting, drain 12mm
17	Pipe fitting, inlet 12mm
18	Drain valve

Type	Control handles	Air vessels	B	H	L (c/c)	L1 (c/c)	D	Kg
PCS-1V5	1	1x5 litre	600	800	35	43	200	40
PCS-2V5	2	1x5 litre	600	800	35	43	200	40
PCS-3V5	3	1x5 litre	600	800	35	43	200	40
PCS-4V5	4	1x5 litre	600	800	35	43	200	40
PCS-5V5	5	1x5 litre	600	800	35	43	200	40
PCS-6V5	6	1x5 litre	600	800	35	43	200	40
PCS-7V5	7	1x5 litre	600	800	35	43	200	40
PCS-8V5	8	1x5 litre	600	800	35	43	200	40
PCS-9V5	9	1x5 litre	600	800	35	43	200	40
PCS-10V5	10	1x5 litre	600	800	35	43	200	40
PCS-1V10	1	2x5 litre	800	800	35	43	200	50
PCS-2V10	2	2x5 litre	800	800	35	43	200	50
PCS-3V10	3	2x5 litre	800	800	35	43	200	50
PCS-4V10	4	2x5 litre	800	800	35	43	200	50
PCS-5V10	5	2x5 litre	800	800	35	43	200	50
PCS-6V10	6	2x5 litre	800	800	35	43	200	50
PCS-7V10	7	2x5 litre	800	800	35	43	200	50
PCS-8V10	8	2x5 litre	800	800	35	43	200	50
PCS-9V10	9	2x5 litre	800	800	35	43	200	50
PCS-10V10	10	2x5 litre	800	800	35	43	200	50
PCS-1V15	1	3x5 litre	800	800	35	43	300	60
PCS-2V15	2	3x5 litre	800	800	35	43	300	60
PCS-3V15	3	3x5 litre	800	800	35	43	300	60
PCS-4V15	4	3x5 litre	800	800	35	43	300	60
PCS-5V15	5	3x5 litre	800	800	35	43	300	60
PCS-6V15	6	3x5 litre	800	800	35	43	300	60
PCS-7V15	7	3x5 litre	800	800	35	43	300	60
PCS-8V15	8	3x5 litre	800	800	35	43	300	60
PCS-9V15	9	3x5 litre	800	800	35	43	300	60
PCS-10V15	10	3x5 litre	800	800	35	43	300	60

All measurements in mm. Weights are approximations.

GC 1-3 Hydraulic control station 952000

Description

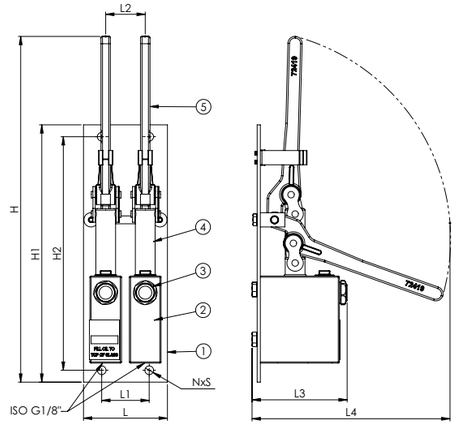
Hydraulic actuating of quick closing valves.

Options

- Mounting in steel- or stainless steel cabinet
- Fittings for steel or copper piping

No.	Part
1	Plate
2	Housing
3	Oil level glass
4	Piston
5	Lever





	L	L1	L2	L3	L4	H	H1	H2	NxS	Oil volume	Kg
GC-1	60		50	120	261	432	325	295	2x11	26,5 cm3	3
GC-2	106	60	50	120	261	432	325	295	4x11	2x26,5 cm3	5,5
GC-3	156	110	50	120	261	432	325	295	4x11	3x26,5 cm3	8,2

All measurements in mm. Weights are approximations.

GC 1-6 Hydraulic control station 952010

Descriptipon

Hydraulic actuating of quick closing valves. Mounted in steel cabinet.

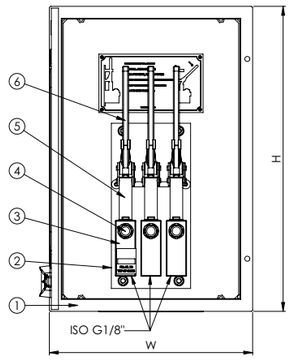
Variants

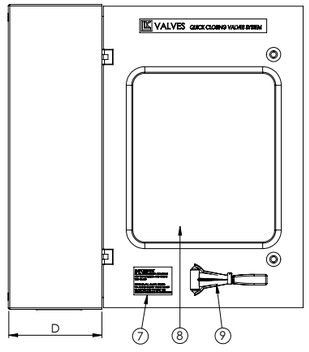
- Cabinet: stainless steel 1.4301 (AISI 304)
- Fittings for steel or copper piping
- Custom colours upon request

Options

Customized signboards.







No.	Part
1	Cabinet of painted mild steel (RAL 7035)
2	Plate
3	Housing
4	Oil level glas
5	Piston
6	Lever
7	Emergency instructions
8	Breakable window
9	Hammer

	H	W	D	Oil volume	Kg
GC-1	600	400	200	26,5 cm³	16
GC-2	600	400	200	2x26,5 cm³	19
GC-3	600	400	200	3x26,5 cm³	21
GC-4	600	400	200	4x26,5 cm³	24
GC-5	600	600	200	5x26,5 cm³	29
GC-6	600	600	200	6x26,5 cm³	32

All measurements in mm. Weights are approximations.

LED indication (Valve monitoring system)

Description

Valve monitoring system

LK Valves offers a complete valve monitoring solution as an option to our pneumatic or hydraulic control station. One Valve Monitoring System (VMS) can handle up to 160 signals from external micro switches or inductive indicators. The system has a built in UPS and an alarm indicating low air pressure, loss of electric power plus 2 optional alarms. Everything is built on modules maximizing flexibility. This flexibility allows us to build a system exactly to your needs. Any system requirements can be met. The system is equipped with potential free contacts for relay of signals. The VMS can be mounted inside any of our control station cabinets or externally in a separate cabinet.

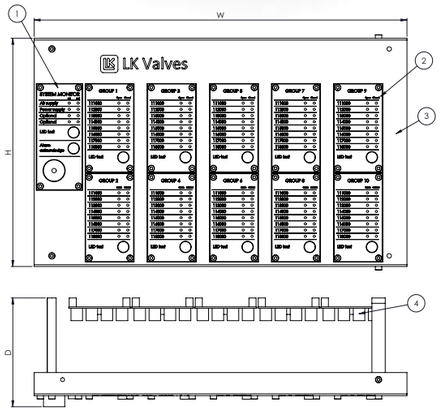


System monitor

This module handles up to 4 different signals with ok or fail indication. As standard the system indicates low air supply pressure and loss of electric power.

Valve monitor

Each module can handle 16 external signals indicating open and closed positions. A standard control cabinet can contain up to 10 valve monitor modules.



Connections

Signal input connections accept up to 2,5 mm² cable.

Power supply

115-230V AC

No.	Part
1	System monitor
2	Valve monitor
3	Control panel
4	Input connections





Type	H	W	D
LED Panel	257	420	122,5

All measurements in mm. Weights are approximations.

Distribution block

Description

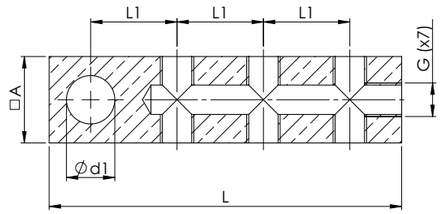
For distribution of maximum six lines.



Option

Stainless steel 1.4301 (AISI 304).

Part	Material
Distribution block	Steel 1.0037 (St37)



L	L1	A	d1	G	Kg
102	25	25	14	G 1/8”	0,5

All measurements in mm. Weights are approximations.

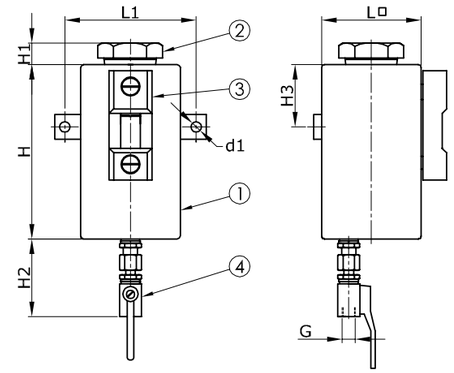
GC Header tank

Description

Header tank for application where hydraulic control station is located below a quick closing valve.



No.	Part	Material
1	Housing	Steel 1.0038 (St37)
2	Filling cover	Brass CW614N (Ms 58)
3	Level gauge	Plastic
4	Stop cock	Brass CW607N (Ms 58) Nickel-plated



L	L1	d1	H	H1	H2	H3	G	Kg
100	128	11	183	15	38	62,5	G 3/8”	4

All measurements in mm. Weights are approximations.

Flushing valve
314022

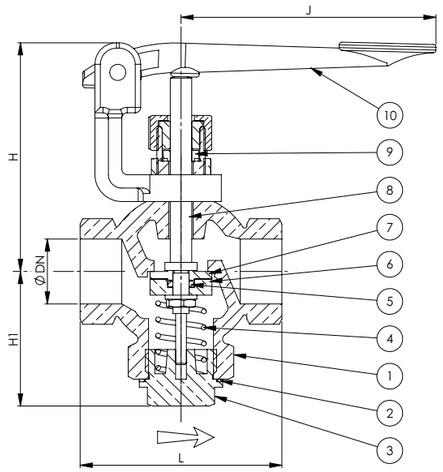
Description

Self closing flushing valve. Straight with female screwed ends.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Sealing	NBR bonded aramide
3	Lower part	Bronze CC491K (RG5)
4	Spring	Stainless steel 1.4301 (AISI 304)
5	O-ring	NBR
6	Disc	Special brass CW710R (SoMs59)
7	Disc ring	PTFE
8	Stem	Special brass CW710R (SoMs59)
9	Gasket	NBR
10	Lever	Bronze CC491K (RG5)

DN	Max. working pressure (bar)
	up to 80°C
15-50	16



DN	Connection (BSP)	Pressure rating	L	H	H1	J	Kg
DN 15	G 1/2”	PN 16	65	84	44	83	0,8
DN 20	G 3/4”	PN 16	76	87	51	83	1
DN 25	G 1”	PN 16	80	89	53	83	1,2
DN 32	G 1 1/4”	PN 16	90	107	60	155	2,2
DN 40	G 1 1/2”	PN 16	102	119	69	155	2,8
DN 50	G 2”	PN 16	136	135	85	155	4,5

All measurements in mm. Weights are approximations.

Drain valve
357321

Description

Push button drain valve.

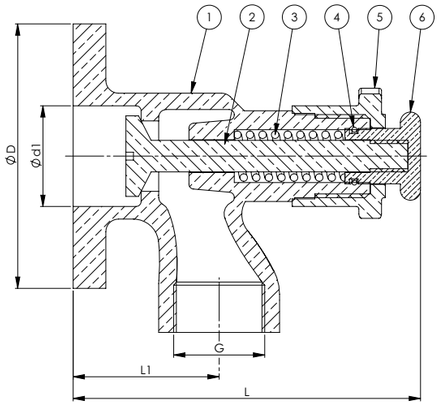
Application

Liquids that do not attack the integral material.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Stem	Special brass CW710R (SoMs59)
3	Compression spring	Tin bronze CW452K (CuSn6)
4	O-ring	NBR
5	Stop	Bronze CC491K (RG5)
6	Push button	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)
	Up to 80°C
20-25	10



DN	Connection	Pressure rating	G (BSP)	L	L1	D	d1	Kg
20	PN 10	PN 10	1”	145	60	105	40	2,2
25	PN 10	PN 10	1”	145	60	115	40	2,4

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Drain valve
357682

Description

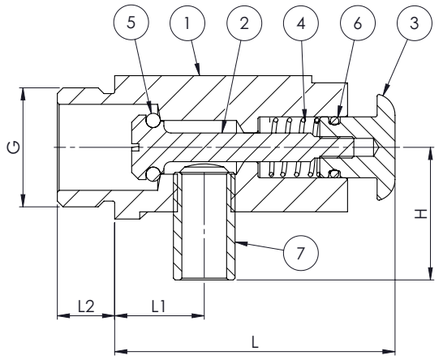
Push button drain valve.

Application

Liquids that do not attack the integral material.



No.	Part	Material
1	Body	Stainless steel 1.4301 (AISI 304)
2	Stem	Stainless steel 1.4301 (AISI 304)
3	Knob	Stainless steel 1.4301 (AISI 304)
4	Spring	Stainless steel 1.4310 (AISI 301)
5	O-ring	NBR
6	O-ring	NBR
7	Drain Pipe	Stainless steel 1.4436 (AISI 316)



DN	Max. working pressure (bar)
	up to 80°C
15-32	16

DN	G (BSP)	Pressure rating	L	L1	L2	H	Kg
15	G 1/2 ”	PN 16	73,5	25	15	29,5	0,3
20	G 3/4”	PN 16	73,6	25	15	31	0,4
25	G 1”	PN 16	78	25	16	39	0,7
32	G 1 1/4”	PN 16	79	25	16	45	1,1

All measurements in mm. Weights are approximations.

Self closing valve
921002

Description

Lever operated self closing valve with spring return.
Face to face according to ISO 5752 basic series 1.

Application

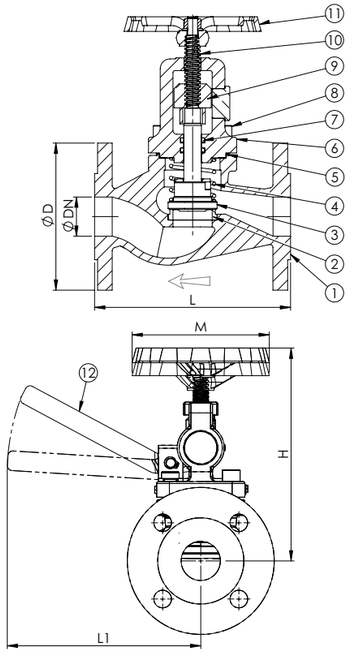
Drain valve for fluids that do not attack the integral material.

Options

Available flange drilling: ANSI 150. Other flange standards and materials on request. For JIS standard se product 521002.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Seat ring	Stainless steel 1.4301 (AISI 304)
3	Disc	Stainless steel 1.4301 (AISI 304)
4	Spring	Spring steel SH (1084 ASTM A713)
5	Gasket	NBR bonded aramide
6	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
7	O-ring	FPM (Viton)
8	Screw	8.8 FZB
9	Setting nut	Brass CW617N (Ms 58)
10	Stem	Stainless steel 1.4301 (AISI 304)
11	Handwheel	Cast iron EN-JL1040 (GG25)
12	Lever	Stainless steel 1.4301 (AISI 304)



DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-80	16	10

DN	Connection	Pressure rating	L	L1	D	H	M	Kg
15	PN 16	PN 16	130	166	95	176	120	4,3
20	PN 16	PN 16	150	166	105	178	120	5
25	PN 16	PN 16	160	168	115	188	120	5,8
32	PN 16	PN 16	180	168	140	192	120	7,4
40	PN 16	PN 16	200	201	150	202	140	10
50	PN 16	PN 16	230	204	165	224	140	12
65	PN 16	PN 16	290	278	185	253	140	17
80	PN 16	PN 16	310	285	200	253	160	24

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

Self closing valve
521002

Description

Lever operated self closing valve with spring return.
Face to face according to JIS F7305.

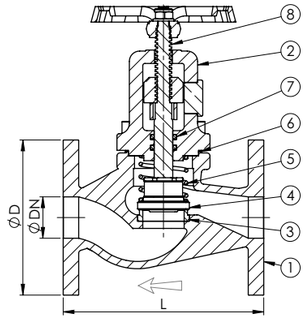
Application

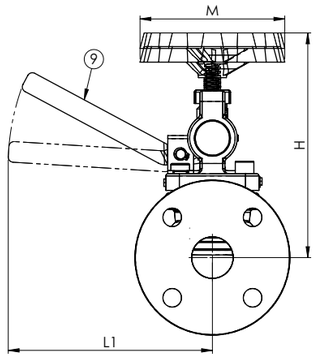
Drain valve for fluids that do not attack the integral material.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
3	Seat ring	Stainless steel 1.4301 (AISI 304)
4	Disc	Stainless steel 1.4301 (AISI 304)
5	Spring	Spring steel SH (1084 ASTM A713)
6	Gasket	NBR bonded aramide
7	O-ring	FPM (Viton)
8	Stem	Stainless steel 1.4301 (AISI 304)
9	Lever	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
25-80	16	10







DN	Connection	Pressure rating	L	L1	D	H	M	Kg
25	JIS 5K	PN 16	120	168	95	193	120	4
32	JIS 5K	PN 16	140	168	115	194	120	4,4
40	JIS 5K	PN 16	160	201	120	218	140	7,3
50	JIS 5K	PN 16	210	204	130	221	140	8,8
65	JIS 5K	PN 16	250	278	155	258	140	14
80	JIS 5K	PN 16	280	285	180	278	160	20

All measurements in mm. Flange thickness according to JIS B2220. Weights are approximations.

Self closing valve
921102

Description

Lever maneovered self closing valve with spring return.
Face to face according to ISO 5752 basic series 8.

Application

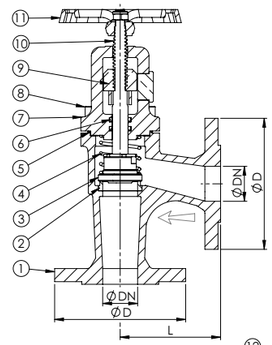
Drain valve for fluids that do not attack the integral material.

Options

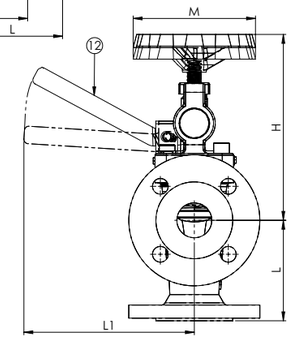
Available flange drilling: ANSI 150. Other flange standards and materials on request. For JIS standard see product 521102.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Seat ring	Stainless steel 1.4301 (AISI 304)
3	Disc	Stainless steel 1.4301 (AISI 304)
4	Spring	Spring steel SH (1084 ASTM A713)
5	Gasket	NBR bonded aramide
6	O-ring	FPM (Viton)
7	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
8	Bolt	8.8 FZB
9	Setting nut	Brass CW617N (Ms 58)
10	Stem	Stainless steel 1.4301 (AISI 304)
11	Handwheel	Cast iron EN-JL1040 (GG25)
12	Lever	Stainless steel 1.4301 (AISI 304)



DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-80	16	10



DN	Connection	Pressure rating	L	L1	D	H	M	Kg
DN 15	PN 16	PN 16	90	166	95	169	120	4,3
DN 20	PN 16	PN 16	95	166	105	170	120	5
DN 25	PN 16	PN 16	100	168	115	179	120	5,8
DN 32	PN 16	PN 16	105	168	140	186	120	7,4
DN 40	PN 16	PN 16	115	201	150	205	140	10
DN 50	PN 16	PN 16	125	204	165	204	140	12
DN 65	PN 16	PN 16	145	278	185	233	140	17
DN 80	PN 16	PN 16	155	285	200	252	160	22

All measurements in mm. Flange standard according to ISO 7005. Weights are approximations.

Revision 1

Self closing valve
521102

Description

Lever operated self closing valve with spring return.
Face to face according to JIS F7306.

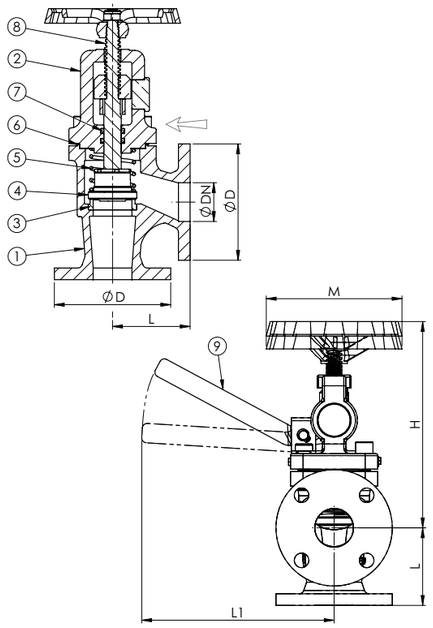
Application

Drain valve for fluids that do not attack the integral material.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Bonnet	Nodular cast iron EN-JS1030 (GGG40)
3	Seat ring	Stainless steel 1.4301 (AISI 304)
4	Disc	Stainless steel 1.4301 (AISI 304)
5	Spring	Spring steel SH (1084 ASTM A713)
6	Gasket	NBR bonded aramide
7	O-ring	FPM (Viton)
8	Stem	Stainless steel 1.4301 (AISI 304)
9	Lever	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
25-80	16	10





DN	Connection	Pressure rating	L	L1	D	H	M	Kg
25	JIS 5K	PN 16	65	168	95	182	120	4,2
32	JIS 5K	PN 16	80	168	115	185	120	5,1
40	JIS 5K	PN 16	80	201	120	213	140	7,0
50	JIS 5K	PN 16	100	204	130	208	140	8,2
65	JIS 5K	PN 16	115	278	155	239	140	13
80	JIS 5K	PN 16	130	285	180	251	160	16

All measurements in mm. Flange thickness according to JIS B2220. Weights are approximations.

Self closing valve
358052

Description

Face to face according to EN 558, series 1.

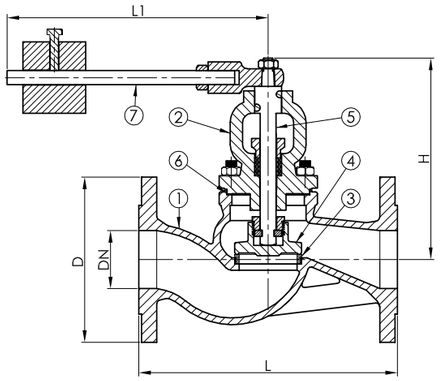
Application

Water, oil and other liquids that do not attack the integral material.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Seats	Stainless steel 1.4301 (AISI 304)
4	Disc	Stainless steel 1.4021 (AISI 420)
5	Stem	Stainless steel 1.4021 (AISI 420)
6	Bonnet gasket, gland packing	Graphite
7	Lever and counter weight	Steel 1.0038 (St37)

DN	Max. working pressure (bar)
	120°C
15-100	16





DN	Pressure rating	L	L1	D	H	Kg
15	PN 16	130	242	95	159	5
20	PN 16	150	242	105	159	6
25	PN 16	160	242	115	166	7
32	PN 16	180	242	140	166	8
40	PN 16	200	292	150	207	13
50	PN 16	230	292	165	220	15
65	PN 16	290	292	185	226	23
80	PN 16	310	292	200	267	30
100	PN 16	350	292	220	275	40

All measurements in mm. Flanges according to EN 1092/B. Weights are approximations.

Self closing valve
358152

Description

Face to face according to EN 558, series 8.

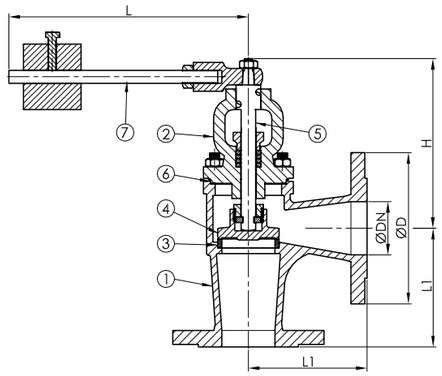
Application

Water, oil and other liquids that do not attack the integral material.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Seats	Stainless steel 1.4301 (AISI 304)
4	Disc	Stainless steel 1.4021 (AISI 420)
5	Stem	Stainless steel 1.4021 (AISI 420)
6	Bonnet gasket, gland packing	Graphite
7	Lever and counter weight	Steel 1.0038 (St37)

DN	Max. working pressure (bar)
	120°C
15-100	16





DN	Pressure rating	L	L1	D	H	Kg
15	PN 16	242	90	95	153	5
20	PN 16	242	95	105	153	5,5
25	PN 16	242	100	115	153	7
32	PN 16	242	105	140	158	8
40	PN 16	292	115	150	203	13
50	PN 16	292	125	165	208	15
65	PN 16	292	145	185	208	23
80	PN 16	292	155	200	240	30
100	PN 16	292	175	220	260	40

All measurements in mm. Flanges according to EN 1092/B. Weights are approximations.

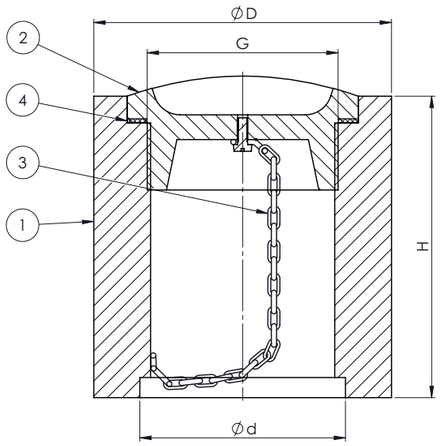
Sound tube
480060

Description

For filling and sounding.

No.	Part	Material
1	Body	Steel 1.0037 (St37)
2	Plug screw	Bronze CC491K (RG5)
3	Chain	Zincplated steel
4	Gasket ring	NBR





DN	D	d	G	H	Kg
32	70	43,4	1 1/4”	90	2
40	76,1	49,3	1 1/2”	90	2,2
50	88,9	61,4	2”	90	2,9
65	108	77,4	2 1/2”	90	3,9
80	127	90,3	3”	90	5,4
100	152,4	115,5	4”	90	7,5

All measurements in mm. Weights are approximations.

Diaphragm valve
469052

Description

Female threaded connections.

Application

For seawater, freshwater, air and oil.

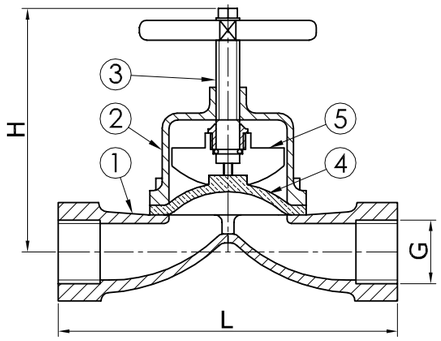
Variants

Other materials on request.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Stem	Stainless steel 1.4301 (AISI 304)
4	Diaphragm	NBR
5	Disc	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	-10 to +50°C
8-50	16
65-80	10



DN	G (BSP)	Pressure rating	L	H	Kg
8	G 1/4”	PN 16	50	72	0,2
15	G 1/2”	PN 16	66	98	0,8
20	G 3/4”	PN 16	86	110	1,2
25	G 1”	PN 16	108	123	2
32	G 1 1/4”	PN 16	122	149	3,1
40	G 1 1/2”	PN 16	142	166	4
50	G 2”	PN 16	167	188	6
65	G 2 1/2”	PN 16	225	224	9,8
80	G 3”	PN 16	276	256	17

All measurements in mm. Weights are approximations.

Diaphragm valve
469452

Description

Female threaded connections.

Application

For seawater, freshwater, air and oil.

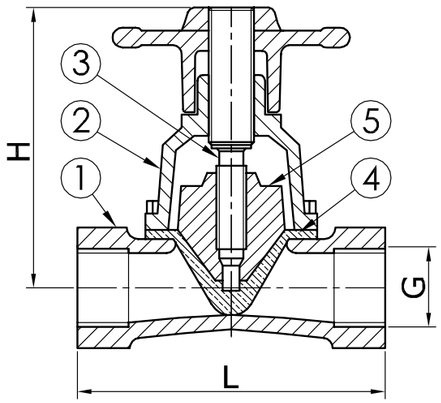
Variants

Other materials on request.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Stem	Stainless steel 1.4301 (AISI 304)
4	Diaphragm	NBR
5	Disc	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	-20 to +100°C
25	16
50	16



DN	G (BSP)	Pressure rating	L	H	Kg
25	G 1”	PN 16	108	150	1,5
50	G 2”	PN 16	168	194	5,1

All measurements in mm. Weights are approximations.

Diaphragm valve
469422

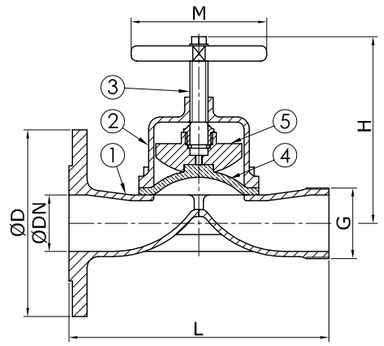
Description

Flange mounted valve with male threaded connection for fire fighting and deck washing.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Bonnet	Bronze CC491K (RG5)
3	Stem	Special brass CW710R (SoMs59)
4	Diaphragm	EPDM
5	Disc	Bronze CC491K (RG5)

DN	Max. working pressure (bar)
	-10 to +120°C
50-65	10



DN	G (BSP)	Pressure rating	L	D	H	M	Kg
50	G 2”	PN 10	228	165	183	140	10
65	G 2 ½”	PN 10	285	185	200	140	15

All measurements in mm. Weights are approximations.

Diaphragm valve
469252

Description

Face to face according to EN 558, series 1.

Application

For seawater, freshwater, air and oil.

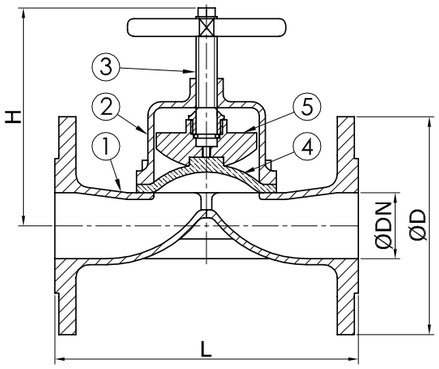
Variants

Other materials and lining on request.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Stem	Stainless steel 1.4301 (AISI 304)
4	Diaphragm	NBR
5	Disc	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	-10 to +50°C
15-50	16
65-150	10
200-250	7



DN	Connection	Pressure rating	D	L	H	Kg
15	PN 16	PN 16	95	130	107	2,2
20	PN 16	PN 16	105	150	107	2,9
25	PN 16	PN 16	115	160	115	4,7
32	PN 16	PN 16	140	180	140	6,4
40	PN 16	PN 16	150	200	158	7,6
50	PN 16	PN 16	165	230	174	10
65	PN 10	PN 10	185	290	210	17
80	PN 10	PN 10	200	310	240	23
100	PN 10	PN 10	220	350	295	32
125	PN 10	PN 10	250	400	385	50
150	PN 10	PN 10	285	480	425	74
200	PN 10	PN 7	340	600	497	174

All measurements in mm. Flanges according to ISO 7005-2. Weights are approximations.

Diaphragm valve
469652

Description

Face to face according to EN 558, series 1.

Application

For seawater, freshwater, air and oil.

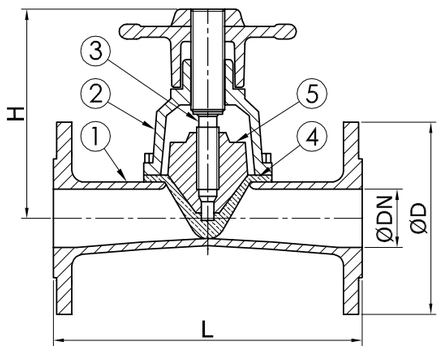
Variants

Other materials and lining on request.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Stem	Stainless steel 1.4301 (AISI 304)
4	Diaphragm	NBR
5	Disc	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)
	-10 to +50°C
25-100	10
125-150	6
200	3,5



DN	Connection	Pressure rating	D	L	H	Kg
25	PN 10	PN 10	115	160	150	4,4
40	PN 10	PN 10	150	200	150	6,3
50	PN 10	PN 10	165	230	194	10
65	PN 10	PN 10	185	290	270	16
80	PN 10	PN 10	200	310	270	27
100	PN 10	PN 10	220	350	300	34
125	PN 10	PN 6	250	400	420	52
150	PN 10	PN 6	285	480	420	69
200	PN 10	PN 3,5	340	600	453	136

All measurements in mm. Flanges according to ISO 7005-2. Weights are approximations.

Strainer
482322

Description

Y-strainer.
Mesh size 1 mm.

Application

Filtration of liquids, steam and gases that do not attack the integral material.

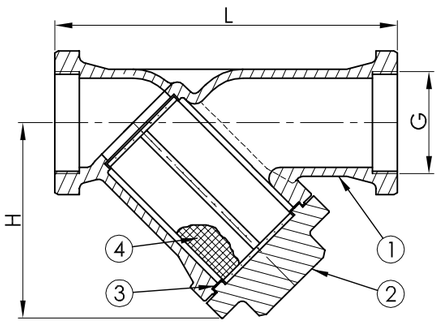
Variants

Other mesh sizes on request.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Threaded cap	Brass CW614N (Ms 58)
3	Gasket	NBR bonded aramide
4	Strainer	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)
	120°C
1/2" -3"	16



DN	G (BSP)	Pressure rating	L	H	Kg
15	G 1/2"	PN 16	60	35	0,2
20	G 3/4"	PN 16	68	42	0,3
25	G 1"	PN 16	76	55	0,7
32	G 1 1/4"	PN 16	90	63	1,5
40	G 1 1/2"	PN 16	105	77	1,5
50	G 2"	PN 16	125	91	4

All measurements in mm. Weights are approximations.

Strainer, Y-type
482394

Description

Y-strainer.
Mesh size 1 mm.

Application

Liquids that do not attack the integral material.

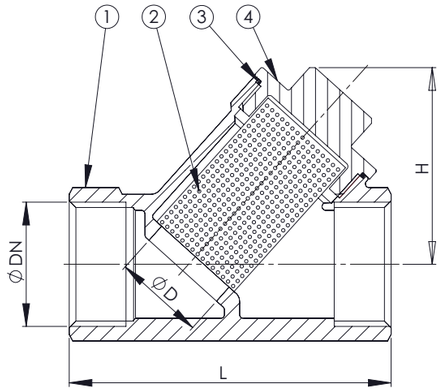
Variants

Other mesh sizes on request.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Screen	Stainless steel 1.4301 (AISI 304)
3	Gasket	PTFE
4	Cap	Stainless steel 1.4408 (AISI 316)

DN	Max. working pressure (bar)
	-20°C to +200°C
8-50	40



DN	Connection (BSP)	Pressure rating	L	D	H	Kg
8	G 1/4”	PN 40	65	11,5	37	0,3
10	G 3/8”	PN 40	65	11,5	37	0,3
15	G 1/2”	PN 40	65	11,5	37	0,2
20	G 3/4”	PN 40	75	17,4	44	0,3
25	G 1”	PN 40	90	22,5	50,5	0,6
32	G 1 1/4”	PN 40	110	30	56,5	1
40	G 1 1/2”	PN 40	120	34	65	1,3
50	G 2”	PN 40	150	44	76	2

All measurements in mm. Weights are approximations.

Mud box
482021

Description

Mud box, straight with PN 10 drilled flange ends.
Face to face according to DIN 87151-1.
Mesh-size:

- DN 40-65 5x5 mm
- DN 80-500 8x8 mm

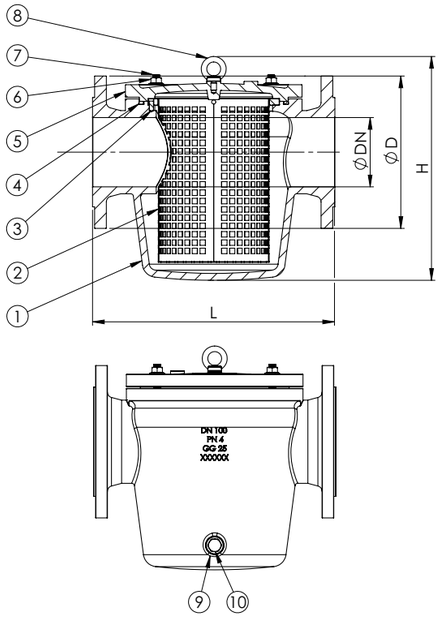
Variants

Other strainer materials and mesh-sizes.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Strainer	Stainless steel 1.4401 (AISI 316)
3	Pin	A2
4	O-ring	NBR
5	Bonnet	Bronze CC491K (RG5)
6	Flange nut	A2
7	Stud bolt	A2
8	Lifting eye bolt	A2
9	Washer	(DN 80-150) A2
10	Plug G 1/2”	(DN 80-150) Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)
	up to 120°C
25-450	4
500-700	2,5



DN	Connection	Pressure rating	D	L	H	Kg
25	PN 10	PN 4	115	160	180	6
32	PN 10	PN 4	140	200	210	10
40	PN 10	PN 4	150	200	210	12
50	PN 10	PN 4	165	230	225	12
65	PN 10	PN 4	185	290	265	23
80	PN 10	PN 4	200	310	300	28
100	PN 10	PN 4	220	350	340	39
125	PN 10	PN 4	250	400	415	63
150	PN 10	PN 4	285	480	465	84
200	PN 10	PN 4	340	600	575	155

*All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations. * Available with other face to face dimensions.*

DN	Connection	Pressure rating	D	L	H	Kg
250	PN 10	PN 4	395	600	620	175
300	PN 10	PN 4	445	600*	660	235
350	PN 10	PN 4	505	610*	740	300
400	PN 10	PN 4	565	740	900	350
450	PN 10	PN 4	615	1000	1000	480
500	PN 10	PN 2,5	670	1100	1100	555
600	PN 10	PN 2,5	780	1100	1100	820
700	PN 10	PN 2,5	895	1250	1150	1000

*All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations. * Available with other face to face dimensions.*

Mud box
482051

Description

Mud box, straight with PN 10 drilled flange ends.
Face to face according to DIN 87151-1.
Mesh-size:

- DN 40-65 5x5 mm
- DN 80-150 8x8 mm

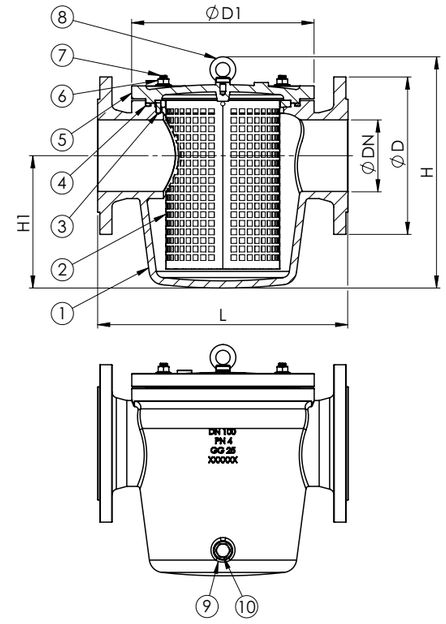


Variants

Other strainer materials and mesh-sizes.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Strainer element	Stainless steel 1.4432 (AISI 316L)
3	Pin	Stainless steel 1.4432 (AISI 316L)
4	O-ring	NBR
5	Bonnet	Cast iron EN-JL1040 (GG25)
6	Flange nut	8.8 FZB
7	Stud bolt	8.8 FZB
8	Lifting eye bolt	8.8 FZB
9	Washer	(DN 80-150) Copper
10	Plug	(DN 80-150) Brass CW614N (Ms 58)

DN	Max. working pressure (bar)
	up to 80°C
40-150	4



DN	Connection	Pressure rating	L	D	D1	H	H1	Height for lifting strainer element	Kv-value	Kg
40	PN 10	PN 4	200	150	130	191	95	255	42	10
50	PN 10	PN 4	230	165	160	214	106	291	64	15
65	PN 10	PN 4	290	185	197	252	134	362	104	22
80	PN 10	PN 4	310	200	215	282	156	421	160	26
100	PN 10	PN 4	350	220	255	323	185	498	240	37
125	PN 10	PN 4	400	250	293	394	229	683	360	51
150	PN 10	PN 4	480	285	340	447	268	712	520	68

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

Mud box, with support feet
482051

Description

Mud box, straight with PN 10 drilled flange ends.
Face to face according to DIN 87151-1.
Mesh-size 8x8 mm. With support feet.

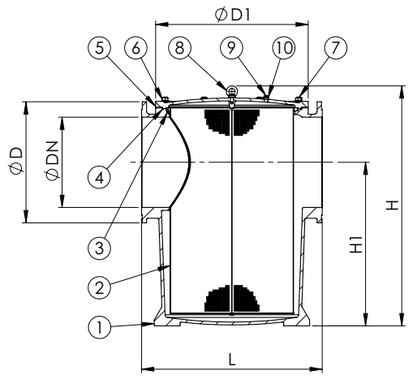
Variants

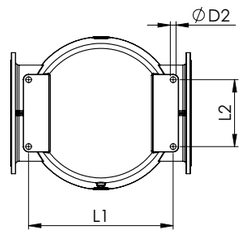
Other strainer materials and mesh-sizes.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Strainer element	Stainless steel 1.4432 (AISI 316L)
3	Pin	Stainless steel 1.4432 (AISI 316L)
4	O-ring	NBR
5	Bonnet	Cast iron EN-JL1040 (GG25)
6	Flange nut	8.8 FZB
7	Stud bolt	8.8 FZB
8	Lifting eye bolt	8.8 FZB
9	Washer	Copper
10	Plug	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)
	up to 80°C
200-300	4





DN	Connection	Pressure rating	L	L1	L2	D	D1	D2	H	H1	Height for lifting strainer element	Kv-value	Kg
200	PN 10	PN 4	600	410	180	340	430	26	563	335	901	960	133
250	PN 10	PN 4	600	480	215	395	505	26	609	353	984	1530	165
300	PN 10	PN 4	600	480	215	445	505	26	664	383	1091	2170	179

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

Mud box DN 350-750
482051

Description

Mud box, straight with PN 10 drilled flange ends.
Face to face according to DIN 87151-1.
Mesh-size 8x8 mm.

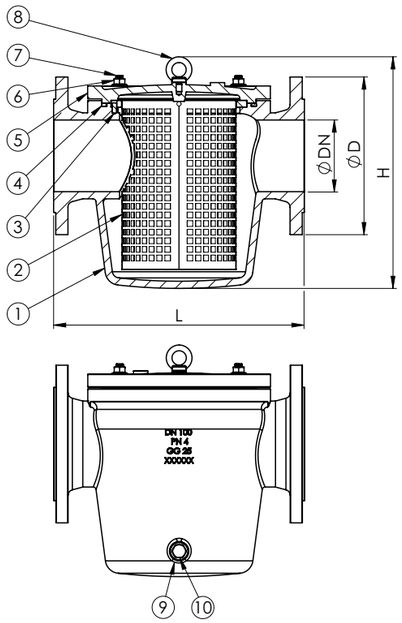
Variants

Other strainer materials.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Strainer element	Stainless steel 1.4401 (AISI 316)
3	Pin	Stainless steel 1.4401 (AISI 316)
4	O-ring	NBR
5	Bonnet	Cast iron EN-JL1040 (GG25)
6	Flange nut	Steel
7	Stud bolt	Steel
8	Lifting eye bolt	Steel
9	Washer	Copper
10	Plug	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)
	up to 80°C
350-450	4
500-750	2,5



DN	Connection	Pressure rating	L	D	H	Kg
350	PN 10	PN 4	610*	505	740	300
400	PN 10	PN 4	740	565	900	430
450	PN 10	PN 4	1000	615	1000	480
500	PN 10	PN 2,5	1100	670	1100	555
600	PN 10	PN 2,5	1100	780	1100	820
700	PN 10	PN 2,5	1250	895	1150	1000
750	PN 10	PN 2,5	1350	965	1200	1200

*All measurements in mm. Flanges according to EN 1092/B. Weights are approximations. * Available with other FTF dimensions.*

Mud box
482121

Description

Mud box, angle with PN 10 drilled flange ends.
Face to face according to DIN 87151.
Mesh-size:

- DN 40-65 5x5mm
- DN 80-300 8x8 mm

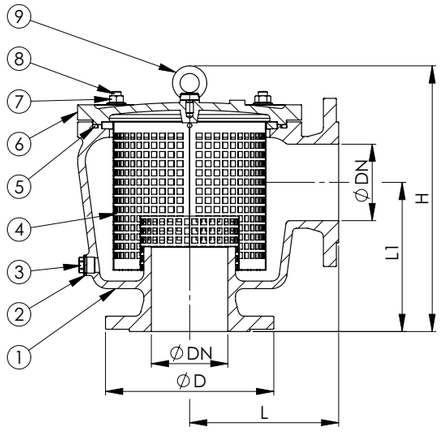
Variants

Other strainer materials and mesh-sizes.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Washer	(DN 80-150) A2
3	Plug G1/2”	(DN 80-150) Stainless steel 1.4301 (AISI 304)
4	Strainer element	Stainless steel 1.4401 (AISI 316)
5	O-ring	NBR
6	Bonnet	Bronze CC491K (RG5)
7	Flange nut	A2
8	Stud bolt	A2
9	Lifting eye bolt	A2

DN	Max. working pressure (bar)
	up to 120°C
25-450	4
500-600	2,5



DN	Connection	Pressure rating	D	L	L1	H	Kg
25	PN 10	PN 4	115	100	100	200	7
32	PN 10	PN 4	140	105	105	250	11
40	PN 10	PN 4	150	125	125	250	13
50	PN 10	PN 4	165	135	135	260	18
65	PN 10	PN 4	185	150	150	275	22
80	PN 10	PN 4	200	175	175	350	31
100	PN 10	PN 4	220	195	195	365	46
125	PN 10	PN 4	250	220	220	425	62
150	PN 10	PN 4	285	270	270	480	89
200	PN 10	PN 4	340	300	300	550	133
250	PN 10	PN 4	395	390	390	665	163

All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations.

DN	Connection	Pressure rating	D	L	L1	H	Kg
300	PN 10	PN 4	445	450	450	795	175
350	PN 10	PN 4	505	400	400	735	230
400	PN 10	PN 4	565	420	520	950	320
450	PN 10	PN 4	615	625	625	1050	460
500	PN 10	PN 2,5	670	675	675	1070	700
600	PN 10	PN 2,5	780	620	720	1225	950

All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations.

10

Mud box
482151

Description

Mud box, angle with PN 10 drilled flange ends.
Face to face according to DIN 87151.
Mesh-size:

- DN 40-65 5x5mm
- DN 80-300 8x8 mm

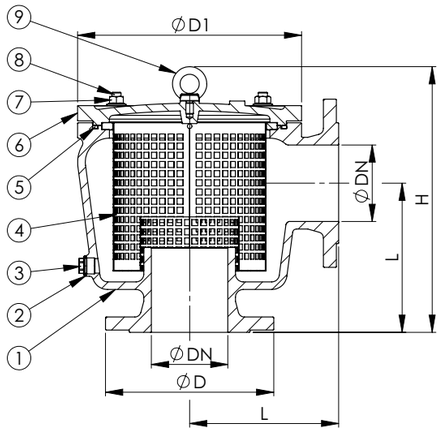
Variants

Other strainer materials and mesh-sizes.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Washer	(DN 80-150) Copper
3	Plug G1/2”	(DN 80-150) Brass CW614N (Ms 58)
4	Strainer elemnet	Stainless steel 1.4432 (AISI 316L)
5	O-ring	NBR
6	Bonnet	Cast iron EN-JL1040 (GG25)
7	Flange nut	8.8 FZB
8	Stud bolt	8.8 FZB
9	Lifting eye bolt	8.8 FZB

DN	Max. working pressure (bar)
	up to 80°C
40-300	4



DN	Connection	Pressure rating	L	D	D1	H	Height for lifting strainer element	Kg
40	PN 10	PN 4	125	150	160	228	272	13
50	PN 10	PN 4	135	165	197	244	300	18
65	PN 10	PN 4	150	185	215	268	343	22
80	PN 10	PN 4	175	200	255	301	406	30
100	PN 10	PN 4	198	220	293	347	470	42
125	PN 10	PN 4	220	250	340	387	543	56
150	PN 10	PN 4	270	285	430	471	661	91
200	PN 10	PN 4	300	340	505	531	771	133
250	PN 10	PN 4	390	395	505	646	996	166
300	PN 10	PN 4	450	445	620	736	1168	252

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

Mud box DN 350-600
482151

Description

Mud box, angle with PN 10 drilled flange ends.
Face to face according to DIN 87151.
Mesh-size 8x8 mm.

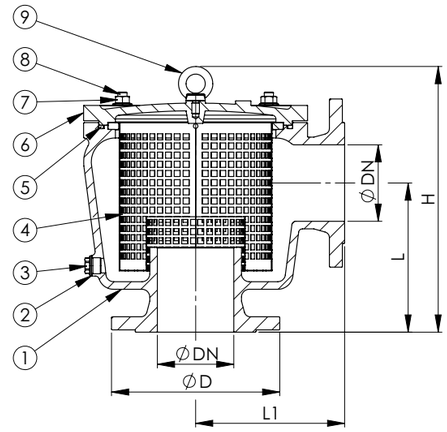
Variants

Other strainer materials.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Washer	(DN 80-150) Copper
3	Plug G1/2”	(DN 80-150) Brass CW614N (Ms 58)
4	Strainer element	Stainless steel 1.4401 (AISI 316)
5	O-ring	NBR
6	Bonnet	Cast iron EN-JL1040 (GG25)
7	Flange nut	Steel
8	Stud bolt	Steel
9	Lifting eye bolt	Steel

DN	Max. working pressure (bar)
	up to 80°C
350-450	4
500-600	2,5



DN	Connection	Pressure rating	L	L1	D	H	Kg
350	PN 10	PN 4	400	400	505	735	230
400	PN 10	PN 4	420	520	565	950	320
450	PN 10	PN 4	625	625	615	1050	460
500	PN 10	PN 2,5	550	550	670	1070	700
600	PN 10	PN 2,5	620	720	780	1225	950

All measurements in mm. Flanges according to EN 1092/B. Weights are approximations.

Strainer for mud box

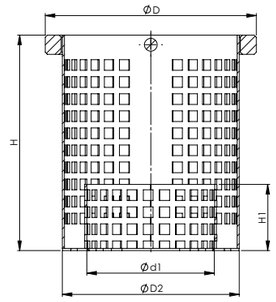
Description

Material: Stainless steel 1.4432 (AISI 316L)
For mud box 482051 and 482151. Mesh-size: DN 40-65, 5x5 mm, DN 80-500, 8x8 mm.

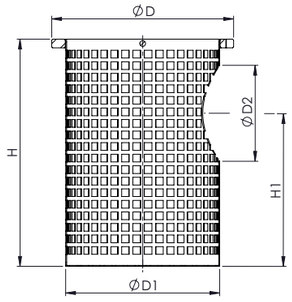


Variants

Other mesh-size.



485021 (straight)



485121 (angle)

DN	D	D1	D2	H	H1
40	75	59	40	120	80
50	99	83	50	136	87
65	134	107	65	170	112,5
80	151	122	80	200	134
100	189	160	100	236	159
125	229	200	125	290	198,5
150	270	240	150	340	236
200	342	311	200	428,5	291,5
250	420	389	250	520,5	358,5
300	420	389	300	635,5	448,5

All measurements in mm. Weights are approximations.

DN	D	D2	d1	H	H1
40	99	83	58	101	30
50	134	107	68	114	40
65	151	122	85	134	50
80	189	160	102	164	60
100	229	200	126	194	70
125	270	240	151	229	80
150	342	311	176	278,5	90
200	420	389	230	332	100
250	420	389	280	442	110
300	526	485	334	527	120

All measurements in mm. Weights are approximations.

Revision 1

Strainer
483422

Description

Y-type strainer.
Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 200-500 PN 10).
Mesh size 1 mm.



Application

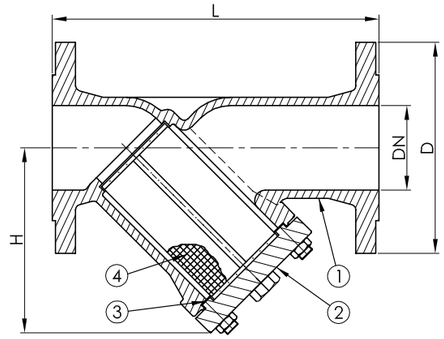
Filtration of liquids, steam and gases that do not attack the integral material.

Variants

Other mesh sizes on request.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Cover	Bronze CC491K (RG5)
3	Gasket	Graphite
4	Strainer	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-150	16	12
200-500	10	8



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 16	PN 16	130	75	95	3
20	PN 16	PN 16	150	75	105	3,5
25	PN 16	PN 16	160	90	115	4,5
32	PN 16	PN 16	180	90	140	5,5
40	PN 16	PN 16	200	110	150	8
50	PN 16	PN 16	230	120	165	9,5
65	PN 16	PN 16	290	140	185	15
80	PN 16	PN 16	310	170	200	21
100	PN 16	PN 16	350	220	220	27
125	PN 16	PN 16	400	260	250	49
150	PN 16	PN 16	480	300	285	76
200	PN 10	PN 10	600	360	340	135
250	PN 10	PN 10	730	440	395	192
300	PN 10	PN 10	850	525	445	274
350	PN 10	PN 10	980	625	505	330
400	PN 10	PN 10	1100	680	565	480
450	PN 10	PN 10	1200	730	615	520
500	PN 10	PN 10	1250	985	670	750

All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations.

Revision 1

Strainer
483494

Description

Y-type strainer.
Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 200-500 PN 10).
Mesh size 1 mm.



Application

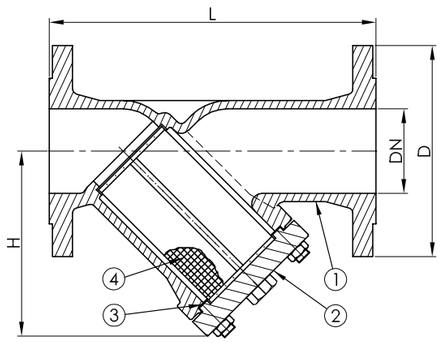
Filtration of liquids, steam and gases that do not attack the integral material.

Variants

Other mesh sizes on request.

No.	Part	Material
1	Body	Stainless steel 1.4401 (AISI 316)
2	Cover	Stainless steel 1.4401 (AISI 316)
3	Gasket	Graphite
4	Strainer	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)
	200°C
15-150	40
200-500	25



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 40	PN 40	130	75	95	3
20	PN 40	PN 40	150	75	105	3,5
25	PN 40	PN 40	160	90	115	4,5
32	PN 40	PN 40	180	90	140	5,5
40	PN 40	PN 40	200	110	150	8
50	PN 40	PN 40	230	120	165	9,5
65	PN 40	PN 40	290	140	185	15
80	PN 40	PN 40	310	170	200	21
100	PN 40	PN 40	350	220	235	27
125	PN 40	PN 40	400	260	270	49
150	PN 40	PN 40	480	300	300	76
200	PN 25	PN 25	600	360	360	135
250	PN 25	PN 25	730	440	425	192
300	PN 25	PN 25	850	525	485	274
350	PN 25	PN 25	980	625	555	330
400	PN 25	PN 25	1100	680	620	480
450	PN 25	PN 25	1200	730	675	520
500	PN 25	PN 25	1250	985	730	750

All measurements in mm. Flanges according to EN 1092/B. Weights are approximations.

Revision 1

Strainer
483464

Description

Y-type strainer.
Face to face dimensions according to EN 558, series 1.
Flanges according to PN 40, drilled (DN 200-500 PN 25).
Mesh size 1 mm.



Application

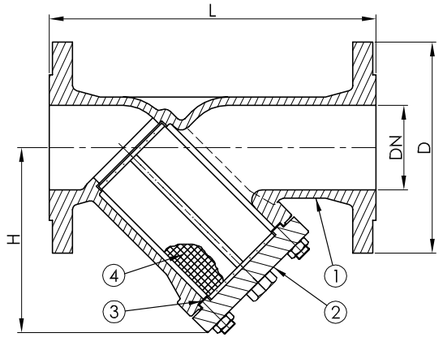
Filtration of liquids, steam and gases that do not attack the integral material.

Variants

Other mesh sizes on request.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Cover	Cast steel 1.0619 (WCB)
3	Gasket	Graphite
4	Strainer	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)
	200°C
15-150	40
200-500	25



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 40	PN 40	130	75	95	3
20	PN 40	PN 40	150	75	105	3,5
25	PN 40	PN 40	160	90	115	4,5
32	PN 40	PN 40	180	90	140	5,5
40	PN 40	PN 40	200	110	150	8
50	PN 40	PN 40	230	120	165	9,5
65	PN 40	PN 40	290	140	185	15
80	PN 40	PN 40	310	170	200	21
100	PN 40	PN 40	350	220	235	27
125	PN 40	PN 40	400	260	270	49
150	PN 40	PN 40	480	300	300	76
200	PN 25	PN 25	600	360	360	135
250	PN 25	PN 25	730	440	425	192
300	PN 25	PN 25	850	525	485	274
350	PN 25	PN 25	980	625	555	330
400	PN 25	PN 25	1100	680	620	480
450	PN 25	PN 25	1200	730	675	520
500	PN 25	PN 25	1250	985	730	750

All measurements in mm. Flanges according to EN 1092/B. Weights are approximations.

Revision 1

Strainer
483402

Description

Y-type strainer.
Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 200-500 PN 10).
Mesh size 1 mm.



Application

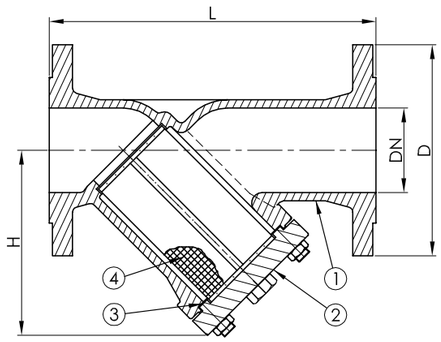
Filtration of liquids, steam and gases that do not attack the integral material.

Variants

Other mesh sizes on request.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Cover	Nodular cast iron EN-JS1025 (GGG40.3)
3	Gasket	Graphite
4	Strainer	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)
	120°C
15-500	16



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 16	PN 16	130	75	95	3
20	PN 16	PN 16	150	75	105	3,5
25	PN 16	PN 16	160	90	115	4,5
32	PN 16	PN 16	180	90	140	5,5
40	PN 16	PN 16	200	110	150	8
50	PN 16	PN 16	230	120	165	9,5
65	PN 16	PN 16	290	140	185	15
80	PN 16	PN 16	310	170	200	21
100	PN 16	PN 16	350	220	220	27
125	PN 16	PN 16	400	260	250	49
150	PN 16	PN 16	480	300	285	76
200	PN 10	PN 10	600	360	340	135
250	PN 10	PN 10	730	440	395	192
300	PN 10	PN 10	850	525	445	274
350	PN 10	PN 10	980	625	505	330
400	PN 10	PN 10	1100	680	565	480
450	PN 10	PN 10	1200	730	615	520
500	PN 10	PN 10	1250	985	670	750

All measurements in mm. Flanges according to EN 1092/B. Weights are approximations.

Strainer
483452

Description

Y-type strainer.
Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 200-500 PN 10).
Mesh size 1 mm.



Application

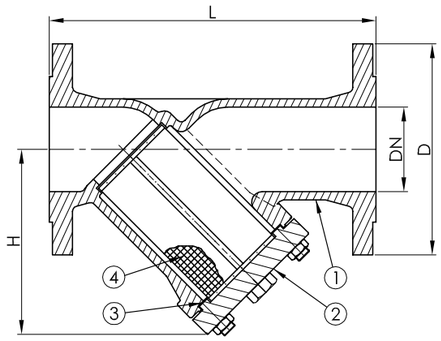
Filtration of liquids, steam and gases that do not attack the integral material.

Variants

Other mesh sizes on request.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Cover	Cast iron EN-JL1040 (GG25)
3	Gasket	Graphite
4	Strainer	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)
	up to 120°C
15-150	16
200-500	10



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 16	PN 16	130	75	95	3
20	PN 16	PN 16	150	75	105	3,5
25	PN 16	PN 16	160	90	115	4,5
32	PN 16	PN 16	180	90	140	5,5
40	PN 16	PN 16	200	110	150	8
50	PN 16	PN 16	230	120	165	9,5
65	PN 16	PN 16	290	140	185	15
80	PN 16	PN 16	310	170	200	21
100	PN 16	PN 16	350	220	220	27
125	PN 16	PN 16	400	260	250	49
150	PN 16	PN 16	480	300	285	76
200	PN 10	PN 10	600	360	340	135
250	PN 10	PN 10	730	440	395	192
300	PN 10	PN 10	850	525	445	274
350	PN 10	PN 10	980	625	505	330
400	PN 10	PN 10	1100	680	565	480
450	PN 10	PN 10	1200	730	615	520
500	PN 10	PN 10	1250	985	670	750

All measurements in mm. Flanges according to EN 1092/B. Weights are approximations.

Duplex strainer
483851

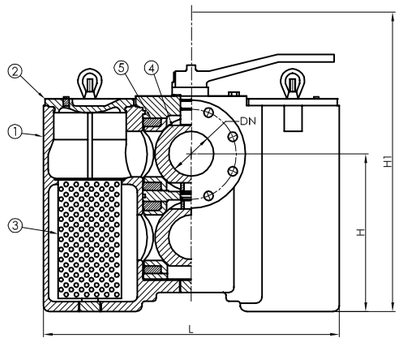
Variants

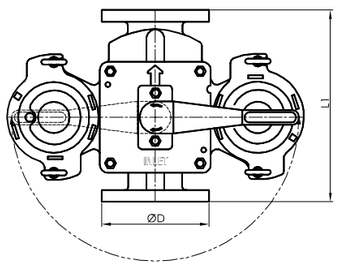
Available as threaded (BSP) type.
Other dimensions on request.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Cover	Cast iron EN-JL1040 (GG25)
3	Strainer basket	Stainless steel 1.4571 (AISI 316Ti)
4	Diverter ball	Stainless steel 1.4401 (AISI 316)
5	Seal	PTFE
6	Seat	PTFE

DN	Max. working pressure (bar)
	up to 66°C
20-100	13,8







DN	Connection	Pressure rating	L	L1	D	H	H1	Kg
25	PN 10	PN 10	268	175	115	127	340	19
40	PN 10	PN 10	330	238	150	173	432	41
50	PN 10	PN 10	441	270	165	213	552	76
65	PN 10	PN 10	441	273	185	213	552	83
80	PN 10	PN 10	578	343	200	226	673	129
100	PN 10	PN 10	629	406	220	337	838	177

All measurements in mm. Weights are approximations.

Swing check valve
304422

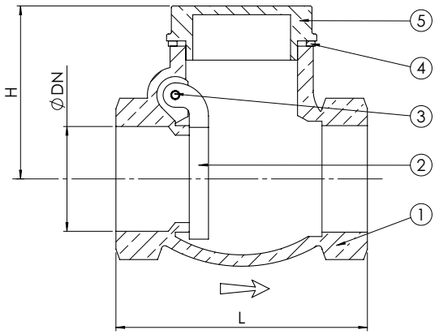
Application

Liquids that do not attack the integral material.
Also for installation in vertical pipelines.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	Brass CW617N (Ms 58)
3	Shaft	Brass CW614N (Ms 58)
4	Gasket	(DN 10-DN 25) NBR (DN 32-DN 100) PTFE
5	Cap	(DN 10-DN 15) Brass CW614N (Ms 58) (DN 20-DN 100) Brass CW617N (Ms 58)

DN	Max. working pressure (bar)
	Up to 95°C
10-100	16





DN	Connection (BSP)	Pressure rating	L	H	Kg
10	G 3/8”	PN 16	49	31	0,2
15	G 1/2”	PN 16	55	36	0,2
20	G 3/4”	PN 16	62	43	0,3
25	G 1”	PN 16	72	49	0,5
32	G 1 1/4”	PN 16	82	57	0,7
40	G 1/ 1/2”	PN 16	90	63	0,8
50	G 2”	PN 16	105	69	1,3
65	G 2 1/2”	PN 16	125	82	2
80	G 3”	PN 16	144	91	3
100	G 4”	PN 16	176	123	5

All measurements in mm. Weights are approximations.

Swing check valve
304221

Description

Swing check valve with soft disc sealing, PTFE. Female screwed ends and screwed cover.

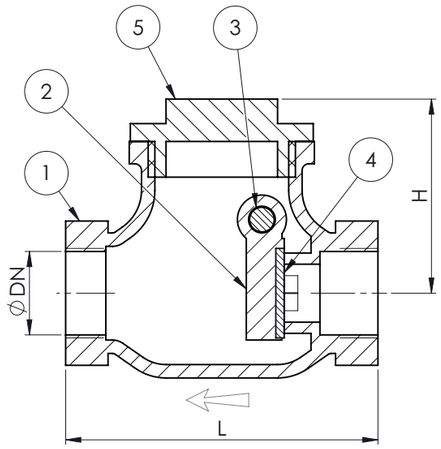
Application

Water and air. Also for installation in vertical pipe lines.
Upwards flow only.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	Bronze CC491K (RG5)
3	Pin	Brass CW614N (Ms 58)
4	Disc sealing	PTFE
5	Cover	Bronze CC491K (RG5)

DN	Max. working pressure (bar)	
	up to 100°C	100°C-190°C
15-80	8	6



DN	Connection (BSP)	Pressure rating	L	H	Kv	Kg
15	G 1/2”	PN 8	70	45	7	0,6
20	G 3/4”	PN 8	80	50	13	0,7
25	G 1”	PN 8	95	65	20	1,1
32	G 1 1/4”	PN 8	110	70	32	1,6
40	G 1 1/2”	PN 8	125	75	52	2,1
50	G 2”	PN 8	145	90	85	3,4
65	G 2 1/2”	PN 8	170	105	140	6
80	G 3”	PN 8	205	115	250	7,6

All measurements in mm. Weights are approximations.

Swing check valve
304294

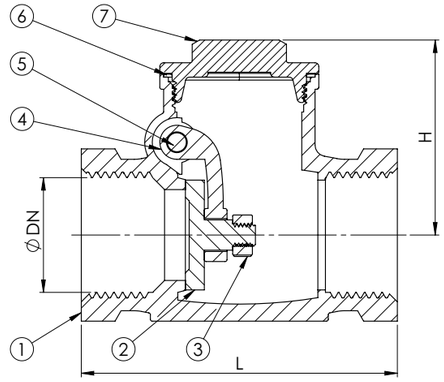
Application

Liquids that do not attack the integral material.
Also for installation in vertical pipelines.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Disc nut	A2
4	Rod	Stainless steel 1.4408 (AISI 316)
5	Pin	Stainless steel 1.4301 (AISI 304)
6	Gasket	PTFE
7	Cap	Stainless steel 1.4408 (AISI 316)

DN	Max. working pressure (bar)
	-20 to +200°C
1/2”-3”	40



DN	Connection (BSP)	Pressure rating	L	H	Kg
15	G 1/2”	PN 40	60	42	0,3
20	G 3/4”	PN 40	78	46	0,5
25	G 1”	PN 40	84	49	0,7
32	G 1 1/4”	PN 40	94	54	0,9
40	G 1 1/2”	PN 40	104	59	1,2
50	G 2”	PN 40	122	67	1,8
65	G 2 1/2”	PN 40	153	105	3,5
80	G 3”	PN 40	175	125	5

All measurements in mm. Weights are approximations.

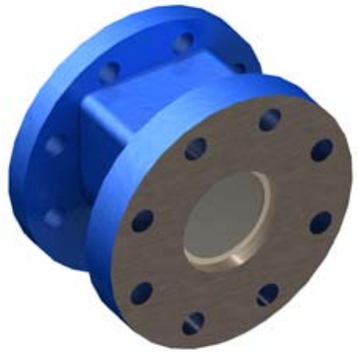
Swing check valve
305852

Description

Flanged swing check valve for liquids, steam and gases that do not attack the integral material. With low resistance and tight closing at low pressure. For horizontal and vertical (upwards flow) installation.

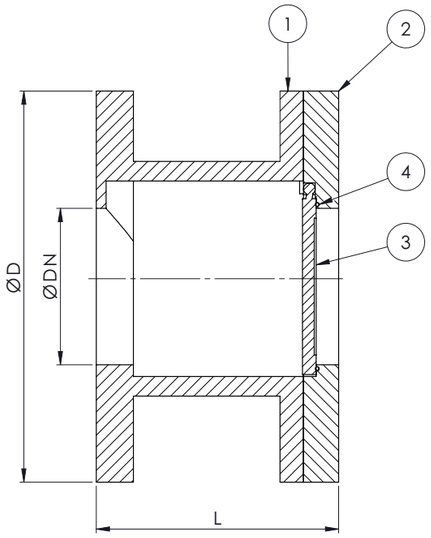
Options

Other O-ring materials, see table.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Body	Cast iron EN-JL1040 (GG25)
3	Clapper	Stainless steel 1.4301 (AISI 304)
4	O-ring	NBR

Temperature range for o-ring materials:	
NBR	-40°C to +100°C
FKM	-30°C to +200°C
PTFE	-50°C to +220°C



DN	Connection	Pressure rating	L	D	Kg
15	PN 16	PN 16	65	95	2,1
20	PN 16	PN 16	65	105	2,5
25	PN 16	PN 16	70	115	3
32	PN 16	PN 16	75	140	5
40	PN 16	PN 16	80	150	6
50	PN 16	PN 16	85	165	7
65	PN 16	PN 16	105	185	9
80	PN 16	PN 16	125	200	11
100	PN 16	PN 16	145	220	16
125	PN 16	PN 16	170	250	21
150	PN 16	PN 16	200	285	29
200	PN 10	PN 10	255	340	44
250	PN 10	PN 10	310	395	64
300	PN 10	PN 10	360	445	79

All measurements in mm. Weights are approximations.

Revision 1

Swing check valve
370222

Description

Face to face dimensions according to EN 558, series 48. Flanges according to PN 16, drilled (DN 200-400 PN 10).

Application

Water, oil, steam, etc.

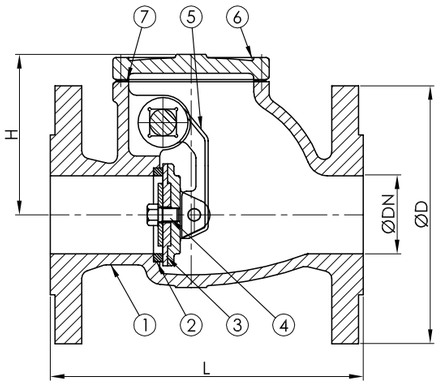
Variants

Lever and counterweight.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Body seat	Bronze CC491K (RG5)
3	Disc sealing	NBR
4	Stem	Bronze CC491K (RG5)
5	Disc, hinge arm	Bronze CC491K (RG5)
6	Cover	Bronze CC491K (RG5)
7	Bonnet gasket	NBR bonded aramide

DN	Max. working pressure (bar)
	-10 to 120°C
32-150	16
200-400	10



DN	Connection	Pressure rating	L	H	D	Kg
32	PN 16	PN 16	180	95	140	9
40	PN 16	PN 16	180	95	150	9
50	PN 16	PN 16	200	100	165	13
65	PN 16	PN 16	240	115	185	16
80	PN 16	PN 16	260	135	200	24
100	PN 16	PN 16	300	145	220	27
125	PN 16	PN 16	350	160	250	42
150	PN 16	PN 16	400	180	285	58
200	PN 10	PN 10	500	270	340	118
250	PN 10	PN 10	600	320	395	170
300	PN 10	PN 10	700	350	445	260
350	PN 10	PN 10	800	435	505	370
400	PN 10	PN 10	900	475	565	520

All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations.

Revision 1

Swing check valve
370262

Description

Face to face dimensions according to EN 558, series 48.
Flanges according to PN 16 drilled (DN 200-400 PN 10).



Application

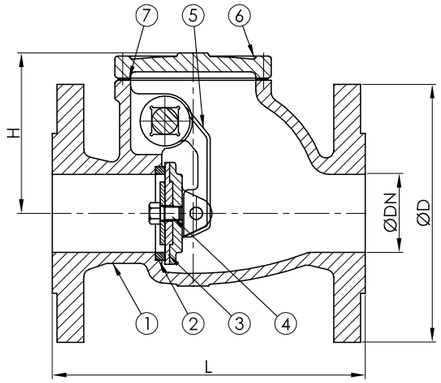
Water, oil and steam.
Also for installation in vertical pipelines.

Variants

Lever and counterweight.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Body seat	Stainless steel 1.4301 (AISI 304)
3	Disc sealing	NBR
4	Stem	Stainless steel 1.4021 (AISI 420)
5	Disc, hinge arm	Cast steel 1.0619 (WCB)
6	Cover	Cast steel 1.0619 (WCB)
7	Bonnet gasket	NBR bonded aramide

DN	Max. working pressure (bar)
	-10 to 120°C
32-150	16
200-400	10



DN	Connection	Pressure rating	L	H	D	Kg
32	PN 16	PN 16	180	95	140	10
40	PN 16	PN 16	180	95	150	10
50	PN 16	PN 16	200	100	165	12
65	PN 16	PN 16	240	115	185	17
80	PN 16	PN 16	260	135	200	23
100	PN 16	PN 16	300	145	220	29
125	PN 16	PN 16	350	160	250	46
150	PN 16	PN 16	400	180	285	60
200	PN 10	PN 10	500	270	340	123
250	PN 10	PN 10	600	320	395	182
300	PN 10	PN 10	700	350	445	275
350	PN 10	PN 10	800	435	505	395
400	PN 10	PN 10	900	475	565	555

All measurements in mm. Flanges according to EN 1092-1/B. Weights are approximations.

Swing check valve
370202

Description

Face to face dimensions according to EN 558, series 48.
Flanges according to PN 16 drilled (DN 200-400 PN 10).



Application

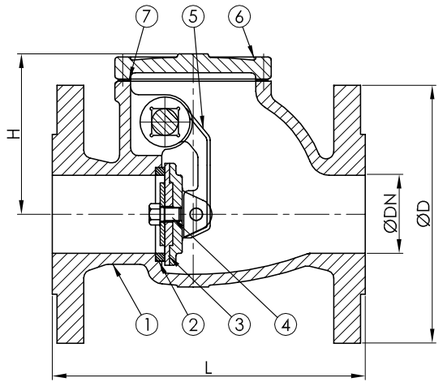
Water, oil, steam, etc.

Variants

Lever and counterweight.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Body seat	Stainless steel 1.4301 (AISI 304)
3	Disc sealing	NBR
4	Stem	Stainless steel 1.4021 (AISI 420)
5	Disc, hinge arm	Nodular cast iron EN-JS1025 (GGG40.3)
6	Cover	Nodular cast iron EN-JS1025 (GGG40.3)
7	Bonnet gasket	NBR bonded aramide

DN	Max. working pressure (bar)
	-10 to 120°C
32-150	16
200-400	10



DN	Connection	Pressure rating	L	H	D	Kg
32	PN 16	PN 16	180	95	140	8
40	PN 16	PN 16	180	95	150	8
50	PN 16	PN 16	200	100	165	10
65	PN 16	PN 16	240	115	185	15
80	PN 16	PN 16	260	135	200	21
100	PN 16	PN 16	300	145	220	26
125	PN 16	PN 16	350	160	250	42
150	PN 16	PN 16	400	180	285	55
200	PN 10	PN 10	500	270	340	112
250	PN 10	PN 10	600	320	395	165
300	PN 10	PN 10	700	350	445	250
350	PN 10	PN 10	800	435	505	360
400	PN 10	PN 10	900	475	565	505

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Swing check valve
370252

Description

Face to face dimensions according to EN 558, series 48.
Flanges according to PN 16 drilled (DN 200-400 PN 10).

Application

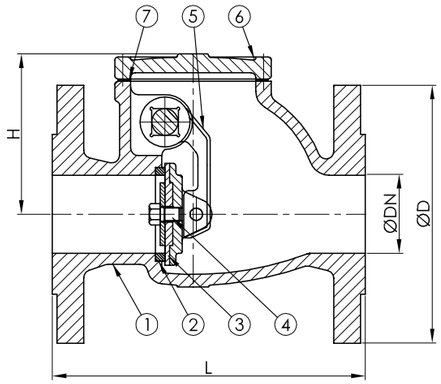
Water, oil, steam, etc.

Variants

Lever and counterweight.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Body seat	Stainless steel 1.4301 (AISI 304)
3	Disc sealing	NBR
4	Stem	Stainless steel 1.4021 (AISI 420)
5	Disc, hinge arm	Nodular cast iron EN-JS1025 (GGG40.3)
6	Cover	Cast iron EN-JL1040 (GG25)
7	Bonnet gasket	NBR bonded aramide



DN	Max. working pressure (bar)
	-10 to 120°C
32-150	16
200-400	10

DN	Connection	Pressure rating	L	H	D	Kg
32	PN 16	PN 16	180	95	140	8
40	PN 16	PN 16	180	95	150	8
50	PN 16	PN 16	200	100	165	10
65	PN 16	PN 16	240	115	185	15
80	PN 16	PN 16	260	135	200	21
100	PN 16	PN 16	300	145	220	26
125	PN 16	PN 16	350	160	250	42
150	PN 16	PN 16	400	180	285	55
200	PN 10	PN 10	500	270	340	112
250	PN 10	PN 10	600	320	395	165
300	PN 10	PN 10	700	350	445	250
350	PN 10	PN 10	800	435	505	360
400	PN 10	PN 10	900	475	565	505

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Revision 1

Swing check valve
305072

Description

For installation between flanges according to PN 16 (DN 250-500 PN 10).

Application

Liquids, steam and gases that do not attack the integral material.

Variants

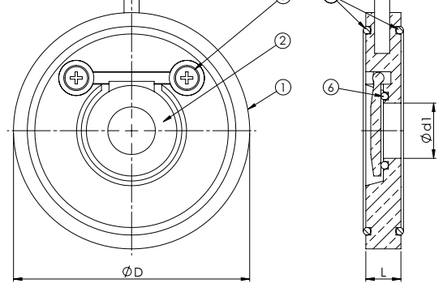
Other o-ring materials on request: FKM, PTFE, EPDM.



No.	Part	Material
1	Body	Aluminiumbronze CC333G (AB2)
2	Disc	Aluminiumbronze CC333G (AB2)
3	Bolt	Stainless steel 1.4436 (AISI 316)
4	Eyebolt	8.8 FZB
5	O-ring	See Temperature range
6	O-ring	See Temperature range

Temperature range	
NBR	-40˚C up to +95˚C
EPDM	-30˚C up to +140˚C
PTFE/FKM	-50˚C up to +180˚C

DN	Max. working pressure (bar)
	Up to 80°C
50-200	16
250-500	10



DN	Pressure rating	Connection	L	D	d1	Kg
50	PN 16	PN 16	14	109	33	0,9
65	PN 16	PN 16	14	129	41	1,2
80	PN 16	PN 16	14	144	54	1,5
100	PN 16	PN 16	18	164	71	2,5
125	PN 16	PN 16	18	194	92	3,3
150	PN 16	PN 16	20	220	112	4,7
200	PN 16	PN 16	22	275	155	7,8
250	PN 10	PN 10	26	330	201	13
300	PN 10	PN 10	32	380	240	19
350	PN 10	PN 10	38	440	270	34
400	PN 10	PN 10	44	493	311	46
450	PN 10	PN 10	50	543	361	63
500	PN 10	PN 10	56	598	405	88

All measurements in mm. Weights are approximations.

Revision 1

Swing check valve
305092

Description

For installation between flanges according to PN 16 (DN 250-500 PN 10).

Application

Liquids, steam and gases that do not attack the integral material.

Variants

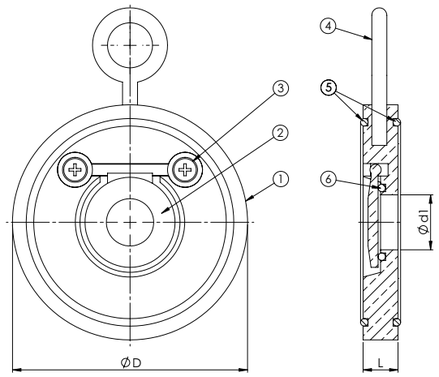
Other o-ring materials on request: FKM, PTFE, EPDM.

No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Disc	Stainless steel 1.4408 (AISI 316)
3	Bolt	Stainless steel 1.4401 (AISI 316)
4	Eyebolt	8.8 FZB
5	O-ring	NBR
6	O-ring	NBR

Temperature range	
NBR	-40˚C up to +95˚C
EPDM	-30˚C up to +140˚C
PTFE/FKM	-50˚C up to +180˚C

DN	Max. working pressure (bar)
	Up to 80°C
50-200	16
250-500	10





DN	Connection	Pressure rating	L	D	d1	Kg
50	PN 16	PN 16	14	109	32	0,9
65	PN 16	PN 16	14	128	40	1,2
80	PN 16	PN 16	14	145	54	1,5
100	PN 16	PN 16	18	164	70	2,5
125	PN 16	PN 16	18	195	92	3,3
150	PN 16	PN 16	20	221	112	4,7
200	PN 16	PN 16	22	275	154	7,8
250	PN 10	PN 10	26	330	200	13
300	PN 10	PN 10	32	380	240	20
350	PN 10	PN 10	38	440	270	32
400	PN 10	PN 10	44	490	310	48
450	PN 10	PN 10	50	540	360	63
500	PN 10	PN 10	56	595	405	88

All measurements in mm. Weights are approximations.

Revision 1

Swing check valve
305432

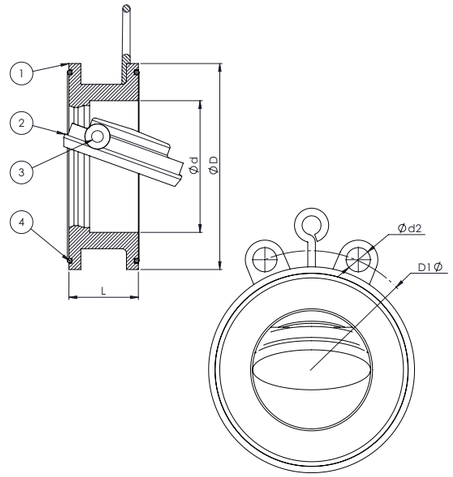
Application

Liquids that do not attack the integral material.

No.	Part	Material
1	Body	Bronze CC482K (RG10)
2	Disc	Aluminium bronze CC333G (AB2)
3	Shaft	Aluminium bronze CC333G (AB2)
4	O-ring	NBR

DN	Max. working pressure (bar)
	Up to 100°C
15-150	16
200-500	10





DN	Connection	Pressure rating	L	D	D1	d	d2	Kg
50	PN 16	PN 16	43	105	125	50	18	1,8
65	PN 16	PN 16	46	125	145	65	18	2,5
80	PN 16	PN 16	46	135	160	80	18	3
100	PN 16	PN 16	52	155	180	100	18	4,5
125	PN 16	PN 16	56	185	210	125	18	6,5
150	PN 16	PN 16	56	215	240	150	22	9
200	PN 10	PN 10	60	270	295	200	23	14
250	PN 10	PN 10	68	320	350	250	23	22
300	PN 10	PN 10	78	373	400	298	23	32
350	PN 10	PN 10	78	434	460	350	23	49
400	PN 10	PN 10	102	486	515	400	28	68
450	PN 10	PN 10	114	530	565	454	28	87
500	PN 10	PN 10	127	585	620	506	28	112

All measurements in mm. Weights are approximations.

Revision 1

Check valve
470022

Description

Check valve, non closeable. Straight type with female screwed ends. Screwed bonnet, metal sealing and spring. For horizontal and vertical (upwards flow) installation.

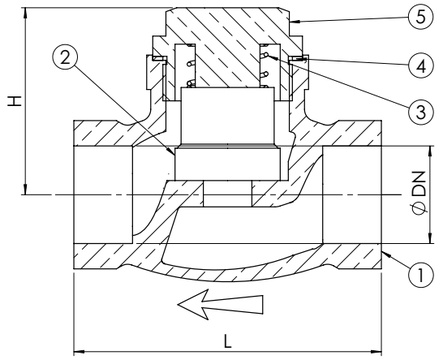
Application

Liquids, steam and gases that do not attack the integral material.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	(DN 10-50) Bronze CC493K (RG7) (DN 65-80) Bronze CC491K (RG5)
3	Spring	Stainless steel 1.4571 (AISI 316Ti)
4	Sealing	PTFE
5	Blind plug	(DN 10-32) Special brass CW710R (SoMs59) (DN 40-80) Bronze CC491K (RG5)

DN	Max. working pressure (bar)	
	up to 120°C	225°C (steam up to 180°C)
10-80	16	10



DN	Connection (BSP)	Pressure rating	L	H	Kg
10	G 3/8”	PN 16	60	40	0,3
15	G 1/2”	PN 16	65	40	0,4
20	G 3/4”	PN 16	75	50	0,5
25	G 1”	PN 16	90	50	0,9
32	G 1 1/4”	PN 16	105	60	1,3
40	G 1 1/2”	PN 16	120	65	1,9
50	G 2”	PN 16	145	75	3
65	G 2 1/2”	PN 16	170	90	5,8
80	G 3”	PN 16	200	100	7,3

All measurements in mm. Weights are approximations.

Check valve
320022

Description

Check valve with female screwed ends. For installation in vertical lines (upwards flow).

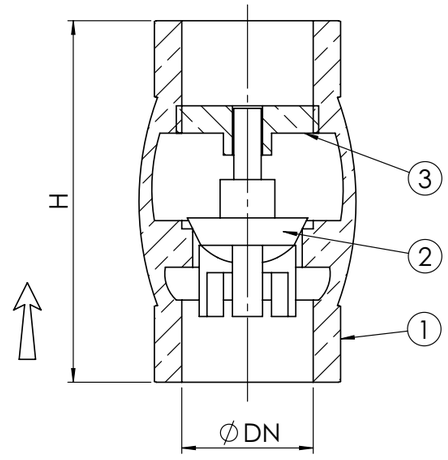
Application

Liquids, steam and gases that do not attack the integral material.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	Bronze CC491K (RG5)
3	Nut	Brass CW607N (Ms 58)

DN	Max. working pressure (bar)	
	up to 120°C	185°C
10-50	16	10



DN	Connection (BSP)	Pressure rating	H	Kg
10	G 3/8”	PN 16	50	0,1
15	G 1/2”	PN 16	60	0,2
20	G 3/4”	PN 16	70	0,4
25	G 1”	PN 16	80	0,6
32	G 1 1/4”	PN 16	90	0,9
40	G 1 1/2”	PN 16	100	1,3
50	G 2”	PN 16	110	2

All measurements in mm. Weights are approximations.

Check valve
471594

Description

Y-type check valve.

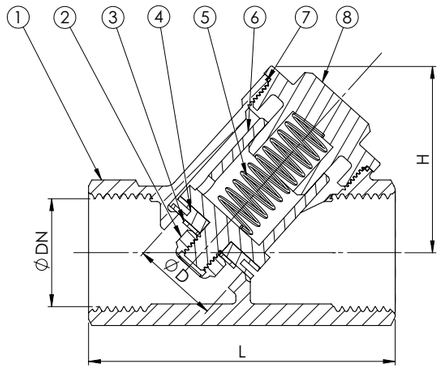
Application

Liquids and steam that do not attack the integral material.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Nut	A2
3	Washer	Stainless steel 1.4301 (AISI 304)
4	Disc	PTFE
5	Spring	Stainless steel 1.4301 (AISI 304)
6	Piston	Stainless steel 1.4408 (AISI 316)
7	Gasket	PTFE
8	Cap	Stainless steel 1.4408 (AISI 316)

DN	Max. working pressure (bar)
	-20 to +200°C
8-50	40



DN	Connection (BSP)	Pressure rating	L	D	H	Kg
8	G 1/4”	PN 40	65	11,5	37	0,3
10	G 3/8”	PN 40	65	11,5	37	0,3
15	G 1/2”	PN 40	65	11,5	37	0,2
20	G 3/4”	PN 40	75	17	44	0,3
25	G 1”	PN 40	90	22,5	50,5	0,7
32	G 1 1/4”	PN 40	110	30	56,5	1
40	G 1 1/2”	PN 40	120	34	65	1,4
50	G 2”	PN 40	150	44	76	2,3

All measurements in mm. Weights are approximations.

Check valve
472094

Description

Face to face dimensions according to EN 558, series 1.
Flanges according to PN 40, drilled.

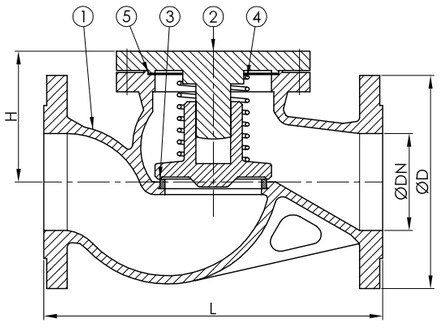
Application

Liquids and steam that do not attack the integral material.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Bonnet	Stainless steel 1.4408 (AISI 316)
3	Seats	Stainless steel 1.4401 (AISI 316)
4	Spring	Stainless steel 1.4401 (AISI 316)
5	Bonnet gasket	Graphite

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-100	40	33
125	33	21
150	21	14
200	14	9
250	9	6



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 40	PN 40	130	70	95	3,5
20	PN 40	PN 40	150	70	105	4
25	PN 40	PN 40	160	75	115	4,5
32	PN 40	PN 40	180	80	140	5,5
40	PN 40	PN 40	200	90	150	7,5
50	PN 40	PN 40	230	100	165	11
65	PN 40	PN 40	290	110	185	17
80	PN 40	PN 40	310	130	200	24
100	PN 40	PN 40	350	150	235	34
125	PN 40	PN 40	400	170	270	52
150	PN 40	PN 40	480	190	300	88
200	PN 40	PN 16	600	210	450	140
250	PN 40	PN 10	730	230	515	220

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Check valve
472064

Description

Face to face dimensions according to EN 558, series 1.
Flanges according to PN 40, drilled (DN 200-250 PN 25).



Application

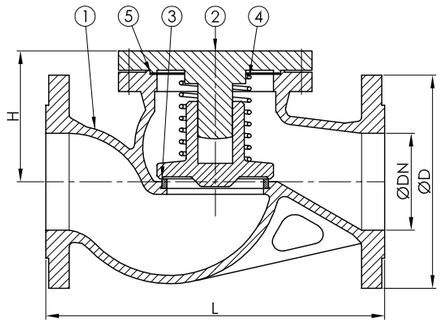
Liquids and steam that do not attack the integral material.

Variants

RG5 trim.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Bonnet	Cast steel 1.0619 (WCB)
3	Seats	Stainless steel 1.4301 (AISI 304)
4	Spring	Stainless steel 1.4310 (AISI 301)
5	Bonnet gasket	Graphite

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-100	40	33
125	33	21
150	21	14
200	14	9
250	9	6



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 40	PN 40	130	70	95	3,5
20	PN 40	PN 40	150	70	105	4
25	PN 40	PN 40	160	75	115	4,5
32	PN 40	PN 40	180	80	140	5,5
40	PN 40	PN 40	200	90	150	7,5
50	PN 40	PN 40	230	100	165	11
65	PN 40	PN 40	290	110	185	17
80	PN 40	PN 40	310	130	200	24
100	PN 40	PN 40	350	150	235	34
125	PN 40	PN 40	400	170	270	52
150	PN 40	PN 40	480	190	300	88
200	PN 25	PN 16	600	210	425	140
250	PN 25	PN 10	730	230	485	220

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Revision 1

Check valve
472002

Description

Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 200-250 PN 10).



Application

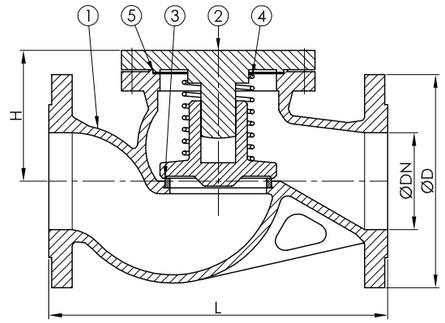
Liquids and steam that do not attack the integral material.

Variants

Stainless steel trim.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Bonnet	Nodular cast iron EN-JS1025 (GGG40.3)
3	Seats	Bronze CC491K (RG5)
4	Spring	Stainless steel 1.4310 (AISI 301)
5	Bonnet gasket	Graphite

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-125	16	10
150-200	10	6
250	6	4



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 16	PN 16	130	70	95	3
20	PN 16	PN 16	150	70	105	3,5
25	PN 16	PN 16	160	75	115	4
32	PN 16	PN 16	180	80	140	5
40	PN 16	PN 16	200	90	150	7
50	PN 16	PN 16	230	100	165	10
65	PN 16	PN 16	290	110	185	15
80	PN 16	PN 16	310	130	200	22
100	PN 16	PN 16	350	150	220	31
125	PN 16	PN 16	400	170	250	47
150	PN 16	PN 10	480	190	285	80
200	PN 10	PN 10	600	210	340	125
250	PN 10	PN 6	730	230	395	200

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Revision 1

Check valve
472052

Description

Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 200-250 PN 10).

Application

Liquids and steam that do not attack the integral material.

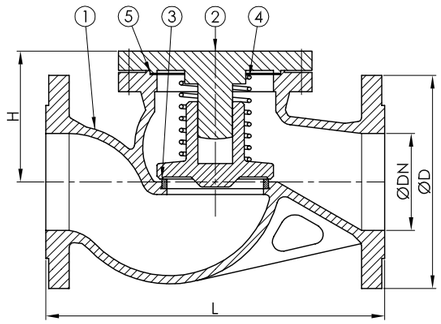
Variants

Stainless steel trim.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Seats	Bronze CC491K (RG5)
4	Spring	Stainless steel 1.4310 (AISI 301)
5	Bonnet gasket	Graphite

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-125	16	10
150-200	10	6
250	6	4



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 16	PN 16	130	70	95	3
20	PN 16	PN 16	150	70	105	3,5
25	PN 16	PN 16	160	75	115	4
32	PN 16	PN 16	180	80	140	5
40	PN 16	PN 16	200	90	150	7
50	PN 16	PN 16	230	100	165	10
65	PN 16	PN 16	290	110	185	15
80	PN 16	PN 16	310	130	200	22
100	PN 16	PN 16	350	150	220	31
125	PN 16	PN 16	400	170	250	47
150	PN 16	PN 10	480	190	285	80
200	PN 10	PN 10	600	210	340	125
250	PN 10	PN 6	730	230	395	200

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Check valve
473894

Description

Wafer type valve.

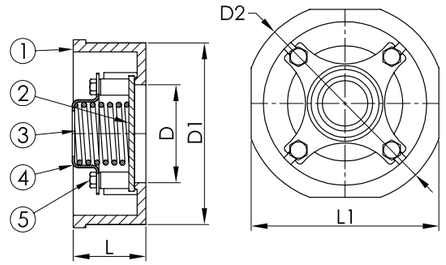
Application

Liquids, steam and gases that do not attack the integral material.
Face to face according to DIN 3202-K4.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Disc	Stainless steel 1.4401 (AISI 316)
3	Spring	Stainless steel 1.4401 (AISI 316)
4	Cap	Stainless steel 1.4401 (AISI 316)
5	Screw	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)
	-20 to +200°C
15-100	40



DN	Pressure rating	L	L1	D	D1	D2	Kg
15	PN 40	16	45	15	45	53	0,1
20	PN 40	19	55	20	55	63	0,2
25	PN 40	22	65	25	65	73	0,3
32	PN 40	28	79	32	79	84	0,5
40	PN 40	32	89	38	89	94	0,7
50	PN 40	40	99	50	99	107	1,1
65	PN 40	46	118	62	118	126	1,6
80	PN 40	50	134	76,5	134	144	1,8
100	PN 40	60	154	96	154	164	3,3

All measurements in mm. Weights are approximations.

Duo check valve
306252

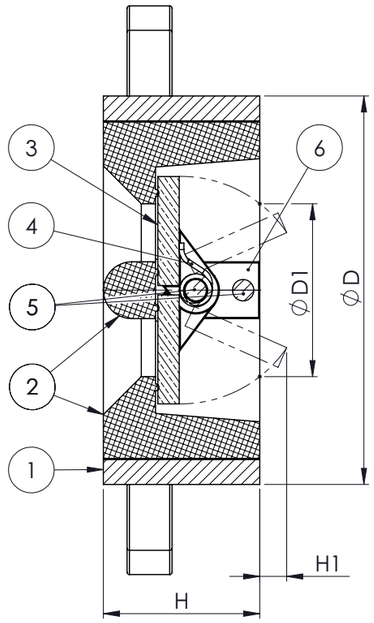
Description

Duo disc check valve. Wafer type.

Multiflange

- JIS-5/10
- ANSI-150
- PN-6/10/18
- BS-E/D





No.	Part	Material
1	Body	(DN 40-65) Nodular cast iron EN-JS1030 (GGG40) (DN 80-300) Cast iron EN-JL1040 (GG25)
2	Seat	NBR
3	Disc	Aluminiumbronze CC333G (AB2)
4	Spring	Inconel
5	Shaft	Monel
6	Clips	Aluminiumbronze CC333G (AB2)

DN	Max. working pressure (bar)
	Up to 80°C
40-300	16

DN	Connection	Pressure rating	D	D1	H	H1	Kv m3/h	Kg
40	Multiflange	PN 16	82	43	33	8	77	1,2
50	Multiflange	PN 16	96	49	43	10	77	1,8
65	Multiflange	PN 16	112	64	46	14	77	2,5
80	Multiflange	PN 16	127	70	64	11	128	3,8
100	Multiflange	PN 16	154	91	64	21	256	4,9
125	Multiflange	PN 16	186	125	70	38	684	7,9
150	Multiflange	PN 16	207	148	76	47	684	10
200	Multiflange	PN 16	266	200	89	64	1453	19
250	Multiflange	PN 16	325	240	114	78	2564	31
300	Multiflange	PN 16	380	300	114	103	3419	38

All measurements in mm. Weights are approximations.

Duo check valve
315102

Description

Double disc check valve. Wafer type.
Face to face according to EN 558, series 16.

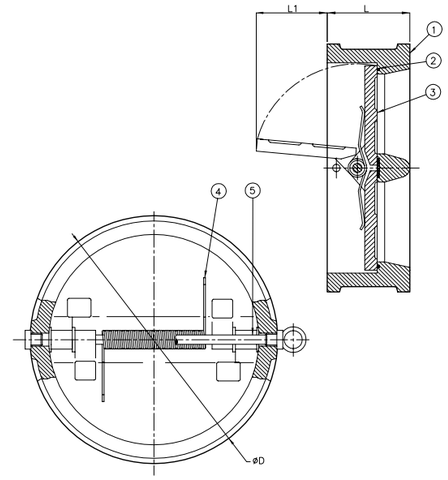
Variants

Other spring-, shaft- and seatmaterials. Also available in other rating and flangestandards.
For other dimensions please contact LK Valves AB.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Seat	NBR
3	Disc	Aluminiumbronze CC333G (AB2)
4	Spring	Inconel
5	Shaft	Monel

DN	Max. working pressure (bar)
	-10 to +80°C
350-600	10



DN	Connection	Pressure rating	L	L1	D	Kv m3/h	Kg
350	PN 10	PN 10	127	108	440	4573	55
400	PN 10	PN 10	140	137	490	6325	70
450	PN 10	PN 10	152	152	540	8547	100
500	PN 10	PN 10	152	175	595	11111	120
600	PN 10	PN 10	178	222	695	20513	180

All measurements in mm. Weights are approximations.

Check valve
473422

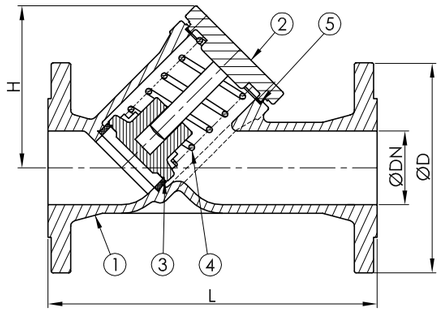
Description

Y-type check valve.
Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 150-500 PN 10).

Application

Liquids that do not attack the integral material.





No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Cover	Bronze CC491K (RG5)
3	Seats	Bronze CC491K (RG5)
4	Spring	Stainless steel 1.4310 (AISI 301)
5	Bonnet gasket	Graphite

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-125	16	10
150-200	10	6
250-300	6	4
350-500	4	2

DN	Connection	Pressure rating	L	H	D	Kg
15	PN 16	PN 16	130	75	95	3
20	PN 16	PN 16	150	75	105	3,5
25	PN 16	PN 16	160	90	115	4,5
32	PN 16	PN 16	180	90	140	5,5
40	PN 16	PN 16	200	110	150	8
50	PN 16	PN 16	230	120	165	9,5
65	PN 16	PN 16	290	140	185	15
80	PN 16	PN 16	310	170	200	21
100	PN 16	PN 16	350	220	220	27
125	PN 16	PN 16	400	260	250	49
150	PN 10	PN 10	480	300	285	76
200	PN 10	PN 10	600	360	340	135
250	PN 10	PN 6	730	440	395	192
300	PN 10	PN 6	850	525	445	274
350	PN 10	PN 4	980	625	505	330
400	PN 10	PN 4	1100	680	565	480
450	PN 10	PN 4	1200	730	615	520
500	PN 10	PN 4	1250	985	670	750

All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations.

Check valve
473494

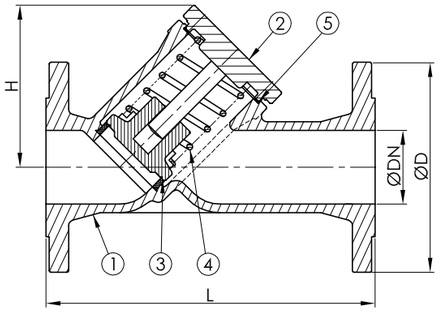
Description

Y-type check valve.
Face to face dimensions according to EN 558, series 1.
Flanges according to PN 40, drilled (DN 200 PN 16, DN 250-300 PN 10).

Application

Liquids and steam that do not attack the integral material.





No.	Part	Material
1	Body	Stainless steel 1.4401 (AISI 316)
2	Cover	Stainless steel 1.4401 (AISI 316)
3	Seats	Stainless steel 1.4401 (AISI 316)
4	Spring	Stainless steel 1.4401 (AISI 316)
5	Bonnet gasket	Graphite

DN	Max. working pressure (bar)
	up to 120°C
15-150	40
200	16
250	10
300	6

DN	Connection	Pressure rating	L	H	D	Kg
15	PN 40	PN 40	130	75	95	3
20	PN 40	PN 40	150	75	105	3,5
25	PN 40	PN 40	160	90	115	4,5
32	PN 40	PN 40	180	90	140	5,5
40	PN 40	PN 40	200	110	150	8
50	PN 40	PN 40	230	120	165	9,5
65	PN 40	PN 40	290	140	185	15
80	PN 40	PN 40	310	170	200	21
100	PN 40	PN 40	350	220	235	27
125	PN 40	PN 40	400	260	270	49
150	PN 40	PN 40	480	300	300	76
200	PN 16	PN 16	600	360	340	135
250	PN 10	PN 10	730	440	395	192
300	PN 10	PN 6	850	525	445	274

All measurements in mm. Flanges according to EN 1092-1/B. Weights are approximations.

Check valve
473464

Description

Y-type check valve.
Face to face dimensions according to EN 558, series 1.
Flanges according to PN 40, drilled (DN 200 PN 16, DN 250-300 PN 10).



Application

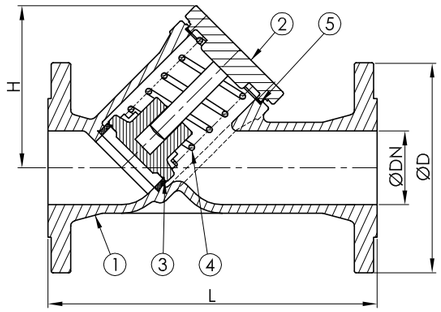
Liquids that do not attack the integral material.

Variants

RG5 trim.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Cover	Cast steel 1.0619 (WCB)
3	Seats	Stainless steel 1.4301 (AISI 304)
4	Spring	Stainless steel 1.4310 (AISI 301)
5	Bonnet gasket	Graphite

DN	Max. working pressure (bar)
	up to 120°C
15-150	40
200	16
250	10
300	6



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 40	PN 40	130	75	95	3
20	PN 40	PN 40	150	75	105	3,5
25	PN 40	PN 40	160	90	115	4,5
32	PN 40	PN 40	180	90	140	5,5
40	PN 40	PN 40	200	110	150	8
50	PN 40	PN 40	230	120	165	9,5
65	PN 40	PN 40	290	140	185	15
80	PN 40	PN 40	310	170	200	21
100	PN 40	PN 40	350	220	235	27
125	PN 40	PN 40	400	260	270	49
150	PN 40	PN 40	480	300	300	76
200	PN 16	PN 16	600	360	340	135
250	PN 10	PN 10	730	440	395	192
300	PN 10	PN 6	850	525	445	274

All measurements in mm. Flanges according to EN 1092-1/B. Weights are approximations.

Revision 1

Check valve
473402

Description

Y-type check valve.
Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 150-500 PN 10).



Application

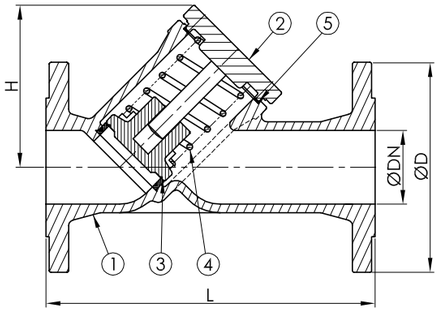
Liquids that do not attack the integral material.

Variants

Stainless steel trim.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Cover	Nodular cast iron EN-JS1025 (GGG40.3)
3	Seats	Bronze CC491K (RG5)
4	Spring	Stainless steel 1.4310 (AISI 301)
5	Bonnet gasket	Graphite

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-125	16	10
150-200	10	6
250-300	6	4
350-500	4	2



DN	Connection	Pressure rating	L	H	D	Kg
15	PN 16	PN 16	130	75	95	3
20	PN 16	PN 16	150	75	105	3,5
25	PN 16	PN 16	160	90	115	4,5
32	PN 16	PN 16	180	90	140	5,5
40	PN 16	PN 16	200	110	150	8
50	PN 16	PN 16	230	120	165	9,5
65	PN 16	PN 16	290	140	185	15
80	PN 16	PN 16	310	170	200	21
100	PN 16	PN 16	350	220	220	27
125	PN 16	PN 16	400	260	250	49
150	PN 10	PN 10	480	300	285	76
200	PN 10	PN 10	600	360	340	135
250	PN 10	PN 6	730	440	395	192
300	PN 10	PN 6	850	525	445	274
350	PN 10	PN 4	980	625	505	330
400	PN 10	PN 4	1100	680	565	480
450	PN 10	PN 4	1200	730	615	520
500	PN 10	PN 4	1250	985	670	750

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Revision 1

Check valve
473452

Description

Y-type check valve.
Face to face dimensions according to EN 558, series 1.
Flanges according to PN 16, drilled (DN 150-500 PN 10).

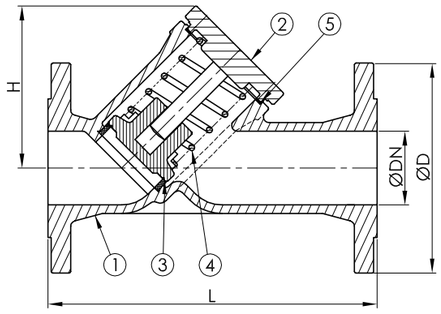
Application

Liquids that do not attack the integral material.

Variants

Stainless steel trim.





No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Cover	Cast iron EN-JL1040 (GG25)
3	Seats	Bronze CC491K (RG5)
4	Spring	Stainless steel 1.4310 (AISI 301)
5	Bonnet gasket	Graphite

DN	Max. working pressure (bar)	
	up to 120°C	180°C
15-125	16	10
150-200	10	6
250-300	6	4
350-500	4	2

DN	Connection	Pressure rating	L	H	D	Kg
15	PN 16	PN 16	130	75	95	3
20	PN 16	PN 16	150	75	105	3,5
25	PN 16	PN 16	160	90	115	4,5
32	PN 16	PN 16	180	90	140	5,5
40	PN 16	PN 16	200	110	150	8
50	PN 16	PN 16	230	120	165	9,5
65	PN 16	PN 16	290	140	185	15
80	PN 16	PN 16	310	170	200	21
100	PN 16	PN 16	350	220	220	27
125	PN 16	PN 16	400	260	250	49
150	PN 10	PN 10	480	300	285	76
200	PN 10	PN 10	600	360	340	135
250	PN 10	PN 6	730	440	395	192
300	PN 10	PN 6	850	525	445	274
350	PN 10	PN 4	980	625	505	330
400	PN 10	PN 4	1100	680	565	480
450	PN 10	PN 4	1200	730	615	520
500	PN 10	PN 4	1250	985	670	750

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Revision 1

Foot valve
321022

Description

Mesh-size:

- DN 15-300: 5x5
- DN 350-500: 8x8

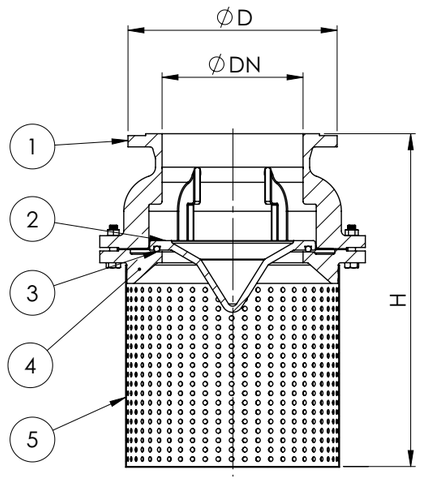
Application

Liquids that do not attack the integral material.

Variants

Other strainer materials and mesh-sizes upon request.





No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Disc	Bronze CC491K (RG5)
3	Disc ring	EPDM
4	Bonnet	Bronze CC491K (RG5)
5	Basket	Galvanized steel

DN	Max. working pressure (bar)
	90°C
40-150	16
200-300	10
350-500	4

DN	Connection	Pressure rating	D	H	Kg
40	PN 16	PN 16	150	230	7
50	PN 16	PN 16	165	230	8
65	PN 16	PN 16	185	280	10
80	PN 16	PN 16	200	300	14
100	PN 16	PN 16	220	315	21
125	PN 16	PN 16	250	400	26
150	PN 16	PN 16	285	505	44
200	PN 10	PN 10	340	530	72
250	PN 10	PN 10	395	620	100
300	PN 10	PN 10	445	700	160
350	PN 10	PN 4	505	800	190
400	PN 10	PN 4	565	860	210
500	PN 10	PN 4	670	945	275

All measurements in mm. Flanges according to EN 1092-3/B. Weights are approximations.

Revision 1

Foot valve
321001

Description

Mesh-size:

- DN 15-300: 5x5
- DN 350-500: 8x8

Application

Liquids that do not attack the integral material.

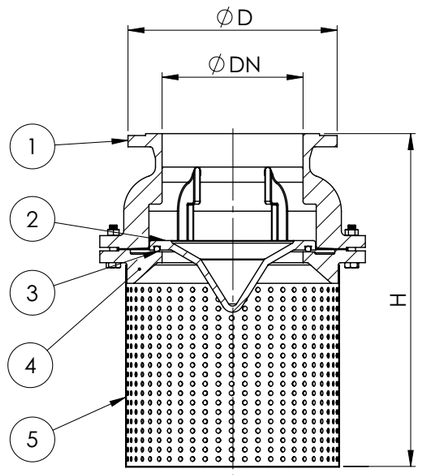
Variants

Other strainer materials and mesh-sizes upon request.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Disc	Nodular cast iron EN-JS1025 (GGG40.3)
3	Disc ring	EPDM
4	Bonnet	Nodular cast iron EN-JS1025 (GGG40.3)
5	Basket	Galvanized steel

DN	Max. working pressure (bar)
	90°C
15-150	10
200-300	6
350-500	4



DN	Connection	Pressure rating	D	H	Kg
40	PN 16	PN 10	150	230	7
50	PN 16	PN 10	165	230	8
65	PN 16	PN 10	185	280	10
80	PN 16	PN 10	200	300	14
100	PN 16	PN 10	220	315	21
125	PN 16	PN 10	250	400	26
150	PN 16	PN 6	285	505	44
200	PN 10	PN 6	340	530	72
250	PN 10	PN 6	395	620	100
300	PN 10	PN 6	445	700	160
350	PN 10	PN 4	505	800	190
400	PN 10	PN 4	565	860	210
500	PN 10	PN 4	670	945	275

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Revision 1

Foot valve
321051

Description

Mesh-size:

- DN 15-300: 5x5
- DN 350-500: 8x8

Application

Liquids that do not attack the integral material.

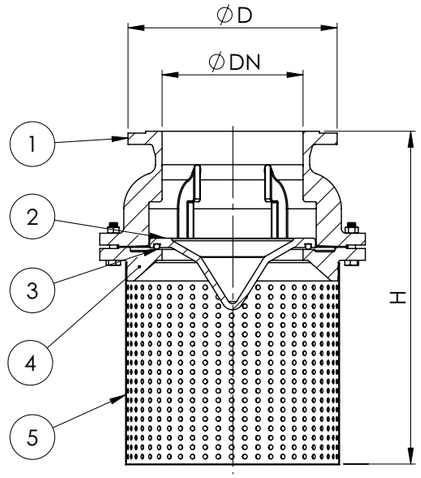
Variants

Other strainer materials and mesh-sizes upon request.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Disc	Cast iron EN-JL1040 (GG25)
3	Disc ring	EPDM
4	Bonnet	Cast iron EN-JL1040 (GG25)
5	Basket	Galvanized steel

DN	Max. working pressure (bar)
	90°C
15-150	10
200-300	6
350-500	4



DN	Connection	Pressure rating	D	H	Kg
40	PN 16	PN 10	150	230	7
50	PN 16	PN 10	165	230	8
65	PN 16	PN 10	185	280	10
80	PN 16	PN 10	200	300	14
100	PN 16	PN 10	220	315	21
125	PN 16	PN 10	250	400	26
150	PN 16	PN 10	285	505	44
200	PN 10	PN 6	340	530	72
250	PN 10	PN 6	395	620	100
300	PN 10	PN 6	445	700	160
350	PN 10	PN 4	505	800	190
400	PN 10	PN 4	565	860	210
500	PN 10	PN 4	670	945	275

All measurements in mm. Flanges according to EN 1092-2/B. Weights are approximations.

Revision 1

Storm valve
159721

Description

Face to face according to EN 558 series 48.

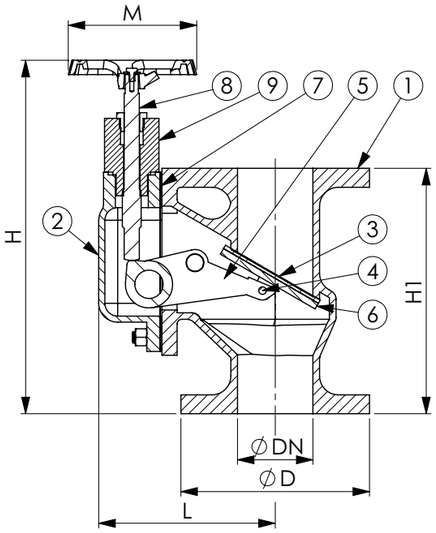
Application

Discharge of sewage water. For vertical installation.

Option

With indicator.





No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Bonnet	Bronze CC491K (RG5)
3	Sealing	NBR
4	Pin	Stainless steel 1.4401 (AISI 316)
5	Lever	Bronze CC491K (RG5)
6	Disc	Bronze CC491K (RG5)
7	Gasket	NBR
8	Stem	Brass CW614N (Ms 58)
9	Stem nut	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)
	-10 to +60°C
50-200	4

DN	Connection	Pressure rating	L	H	H1	D	M	Kg
50	PN 10	PN 4	137	280	200	165	140	15
65	PN 10	PN 4	148	340	240	185	140	21
80	PN 10	PN 4	174	360	260	200	140	27
100	PN 10	PN 4	195	445	300	220	140	37
125	PN 10	PN 4	216	485	350	250	160	50
150	PN 10	PN 4	242	550	400	285	160	71
200	PN 10	PN 4	310	620	500	340	160	116

All measurements in mm. DIN flanges according to EN 1092-3/A (DIN 2501). Weights are approximations.

Revision 1

Storm valve
159761

Description

Face to face according to EN 558 series 48.

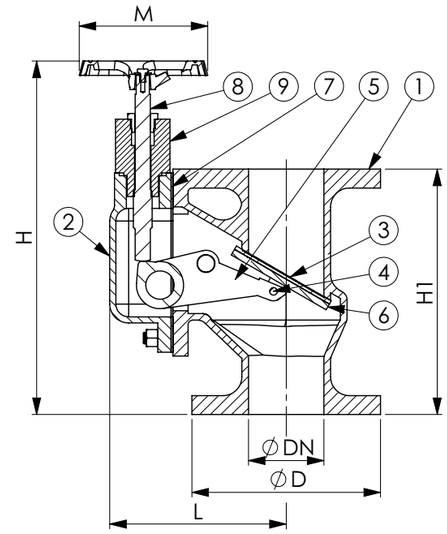
Application

Discharge of sewage water. For vertical installation.

Option

With indicator.





No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Bonnet	Cast steel 1.0619 (WCB)
3	Sealing	NBR
4	Pin	Stainless steel 1.4401 (AISI 316)
5	Lever	Cast steel 1.0619 (WCB)
6	Disc	Bronze CC491K (RG5)
7	Gasket	NBR
8	Stem	Brass CW614N (Ms 58)
9	Stem nut	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)
	-10 to +60°C
50-300	4

DN	Connection	Pressure rating	L	H	H1	D	M	Kg
50	PN 10	PN 4	137	280	200	165	140	15
65	PN 10	PN 4	148	340	240	185	140	21
80	PN 10	PN 4	174	360	260	200	140	27
100	PN 10	PN 4	195	410	300	220	140	37
125	PN 10	PN 4	216	485	350	250	160	50
150	PN 10	PN 4	242	520	400	285	160	71
200	PN 10	PN 4	310	620	500	340	160	116
250	PN 10	PN 4	400	750	600	395	200	190
300	PN 10	PN 4	400	900	700	445	200	300

All measurements in mm. DIN flanges according to EN 1092/A (DIN 2501). Weights are approximations.

Revision 1

Storm valve
159701

Description

Face to face according to EN 558 series 48.

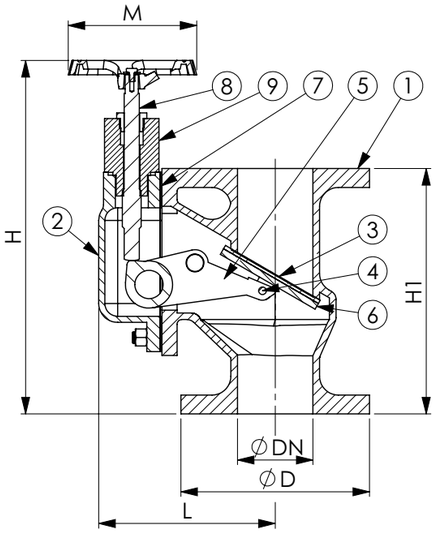
Application

Discharge of sewage water. For vertical installation.

Option

With indicator.





No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Bonnet	Nodular cast iron EN-JS1025 (GGG40.3)
3	Sealing	NBR
4	Pin	Stainless steel 1.4401 (AISI 316)
5	Lever	Nodular cast iron EN-JS1025 (GGG40.3)
6	Disc	Bronze CC491K (RG5)
7	Gasket	NBR
8	Stem	Brass CW614N (Ms 58)
9	Stem nut	Brass CW614N (Ms 58)

DN	Max. working pressure (bar)
	-10 to +60°C
50-300	4

DN	Connection	Pressure rating	L	H	H1	D	M	Kg
50	PN 10	PN 4	137	280	200	165	140	15
65	PN 10	PN 4	148	340	240	185	140	21
80	PN 10	PN 4	174	360	260	200	140	27
100	PN 10	PN 4	195	410	300	220	140	37
125	PN 10	PN 4	216	485	350	250	160	50
150	PN 10	PN 4	242	520	400	285	160	71
200	PN 10	PN 4	310	620	500	340	160	116
250	PN 10	PN 4	400	750	600	395	200	190
300	PN 10	PN 4	400	900	700	445	200	300

All measurements in mm. DIN flanges according to EN 1092/A (DIN 2501). Weights are approximations.

Revision 1

Storm valve
159121

Description

Face to face according to DIN HNA Sr6.

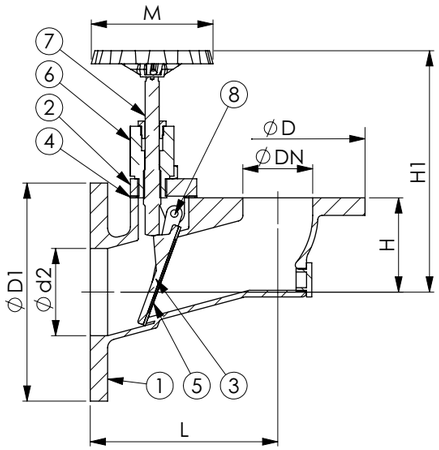
Application

Discharge of sewage water.

Option

With indicator.





No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Bonnet	Bronze CC491K (RG5)
3	Disc	Bronze CC491K (RG5)
4	Gasket	NBR
5	Sealing	NBR
6	Stem nut	Brass CW614N (Ms 58)
7	Stem	Brass CW614N (Ms 58)
8	Pin	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)
	-10 to +60°C
50-200	4

DN	Connection	Pressure rating	L	D	D1	d2	H	H1	M	Kg
50	PN 10	PN 4	180	165	200	68	90	260	140	15
65	PN 10	PN 4	200	185	220	85	100	270	140	21
80	PN 10	PN 4	215	200	250	100	108	290	140	27
100	PN 10	PN 4	250	220	285	130	130	305	140	37
125	PN 10	PN 4	290	250	315	158	152	330	160	50
150	PN 10	PN 4	330	285	340	190	176	350	160	71
200	PN 10	PN 4	425	340	395	240	200	350	160	83

All measurements in mm. DIN flanges according to EN 1092-3/A (DIN 2501). Weights are approximations.

Revision 1

Storm valve
159161

Description

Face to face according to DIN HNA Sr6.

Application

Discharge of sewage water.

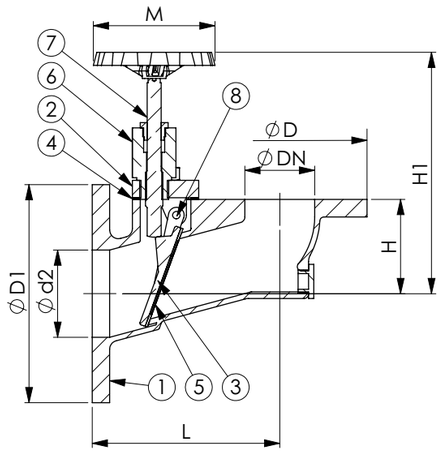
Option

With indicator.



No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Bonnet	Cast steel 1.0619 (WCB)
3	Disc	Bronze CC491K (RG5)
4	Gasket	NBR
5	Sealing	NBR
6	Stem nut	Brass CW614N (Ms 58)
7	Stem	Brass CW614N (Ms 58)
8	Pin	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)
	-10 to +60°C
50-300	4



DN	Connection	Pressure rating	L	D	D1	d2	H	H1	M	Kg
50	PN 10	PN 4	180	165	200	68	90	260	140	13
65	PN 10	PN 4	200	185	220	85	100	270	140	15
80	PN 10	PN 4	215	200	250	100	108	290	140	21
100	PN 10	PN 4	250	220	285	130	130	305	140	26
125	PN 10	PN 4	290	250	315	158	152	330	160	37
150	PN 10	PN 4	330	285	340	190	176	350	160	45
200	PN 10	PN 4	425	340	395	240	200	350	160	74
250	PN 10	PN 4	630	395	445	305	370	720	305	150
300	PN 10	PN 4	650	445	565	400	370	720	400	250

All measurements in mm. DIN flanges according to EN 1092/A (DIN 2501). Weights are approximations.

Storm valve
159101

Description

Face to face according to DIN HNA Sr6.

Application

Discharge of sewage water.

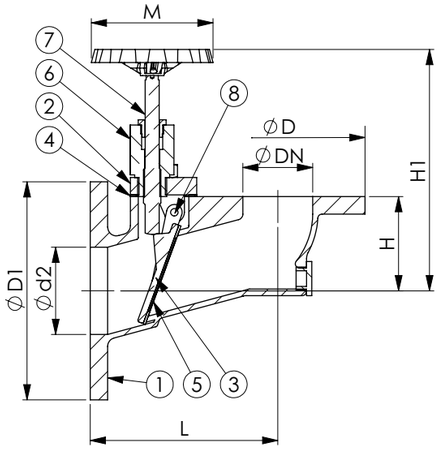
Option

With indicator.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1025 (GGG40.3)
2	Bonnet	Nodular cast iron EN-JS1025 (GGG40.3)
3	Disc	Bronze CC491K (RG5)
4	Gasket	NBR
5	Sealing	NBR
6	Stem nut	Brass CW614N (Ms 58)
7	Stem	Brass CW614N (Ms 58)
8	Pin	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)
	-10 to +60°C
50-300	4



DN	Connection	Pressure rating	L	D	D1	d2	H	H1	M	Kg
50	PN 10	PN 4	180	165	200	68	90	260	140	13
65	PN 10	PN 4	200	185	220	85	100	270	140	15
80	PN 10	PN 4	215	200	250	100	108	290	140	21
100	PN 10	PN 4	250	220	285	130	130	305	140	26
125	PN 10	PN 4	290	250	315	158	152	330	160	37
150	PN 10	PN 4	330	285	340	190	176	350	160	45
200	PN 10	PN 4	425	340	395	240	200	350	160	74
250	PN 10	PN 4	630	395	445	305	370	720	305	150
300	PN 10	PN 4	650	445	565	400	370	720	400	250

All measurements in mm. DIN flanges according to EN 1092/A (DIN 2501). Weights are approximations.

Gland cock
403521

Application

Liquids, steam and gases that do not attack the integral material.

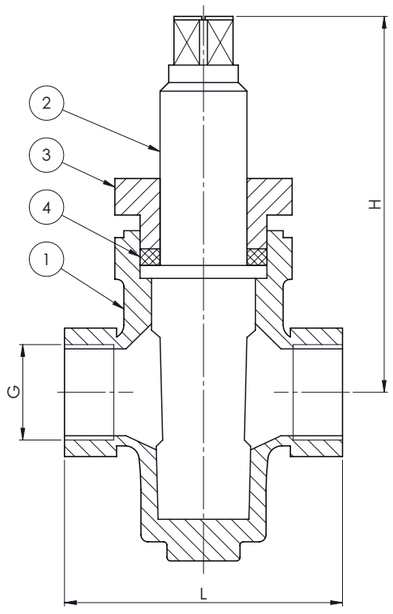
Option

Special sealing material for compressed air, oil and high fluid liquids.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Plug	Bronze CC491K (RG5)
3	Gland	Bronze CC491K (RG5)
4	Sealing	Cotton

DN	Max. working pressure (bar)
	Up to 120°C
10-80	10



DN	G (BSP)	Pressure rating	L	H	Kg
10	G 3/8”	PN 10	45	60	0,5
15	G 1/2”	PN 10	55	68	0,5
20	G 3/4”	PN 10	65	77	0,8
25	G 1”	PN 10	80	90	1,2
32	G 1 1/4”	PN 10	90	100	1,8
40	G 1 1/2”	PN 10	100	110	2,6
50	G 2”	PN 10	120	127	3,8
65	G 2 1/2”	PN 10	140	145	6,5
80	G 3”	PN 10	165	165	11

All measurements in mm. Weights are approximations.

Revision 1

Three way gland cock
404321

Description

Three way gland cock with female screwed ends.

Application

Liquids, steam and gases that do not attack the integral material.

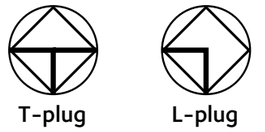
Option

Special sealing material for compressed air, oil and high fluid liquids.

Variants

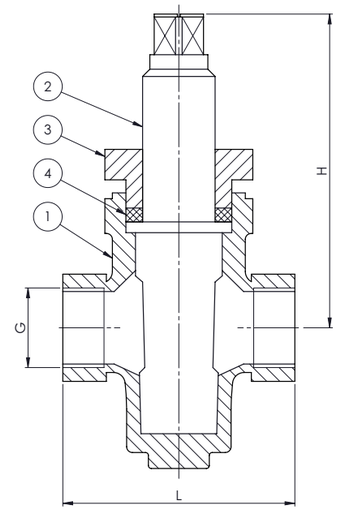
- T-plug
- L-plug
- O-ring sealing





No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Plug	Bronze CC491K (RG5)
3	Gland	Bronze CC491K (RG5)
4	Sealing	Cotton

DN	Max. working pressure (bar)
	Up to 120 °C
10-80	10



DN	G (BSP)	Pressure rating	L	H	Kg
10	G 3/8”	PN 10	45	60	0,3
15	G 1/2”	PN 10	55	68	0,6
20	G 3/4”	PN 10	65	77	0,8
25	G 1”	PN 10	80	90	1,4
32	G 1 1/4”	PN 10	90	100	2,2
40	G 1 1/2”	PN 10	110	120	3,6
50	G 2”	PN 10	135	138	5,1
65	G 2 1/2”	PN 10	150	150	8,5
80	G 3”	PN 10	175	175	13

All measurements in mm. Weights are approximations.

Revision 1

Three way gland cock
394521

Description

With T- or L-port.
Flanges according to PN 10, drilled.

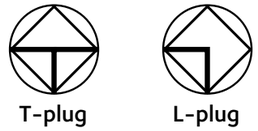
Application

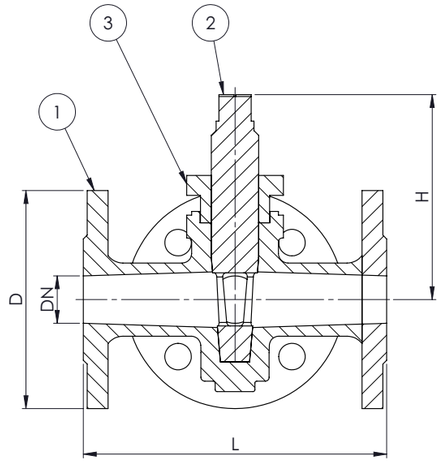
Water and oil.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Plug	Bronze CC491K (RG5)
3	Gland	Bronze CC491K (RG5)

DN	Max. working pressure (bar)
	Up to 120 °C
15-150	10







DN	Connection	Pressure rating	L	D	H	Kg
15	PN 10	PN 10	150	95	102	4,5
20	PN 10	PN 10	150	105	102	4,5
25	PN 10	PN 10	160	115	117	5
32	PN 10	PN 10	180	140	141	8
40	PN 10	PN 10	200	150	148	11
50	PN 10	PN 10	230	165	176	16
65	PN 10	PN 10	290	185	215	24
80	PN 10	PN 10	310	200	250	36
100	PN 10	PN 10	350	220	281	42
125	PN 10	PN 10	400	250	340	73
150	PN 10	PN 10	480	285	400	95

All measurements in mm. Flanges according to EN 1092-3. Weights are approximations.

Revision 1

Three way gland cock
394451

Description

Flanges according to PN 10, drilled.

Application

Water and oil.

Variant

With T- or L-port.

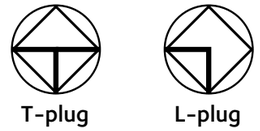
Option

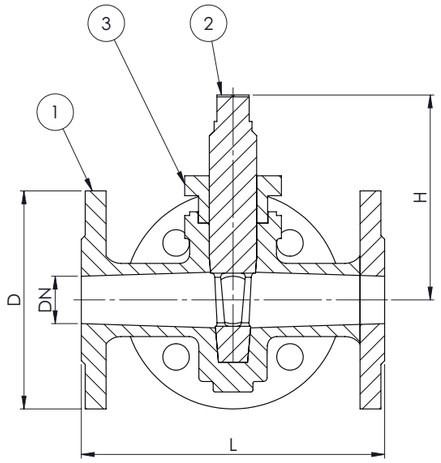
Plug in RG5.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Plug	Cast iron EN-JL1040 (GG25)
3	Gland	Cast iron EN-JL1040 (GG25)

DN	Max. working pressure (bar)	
	Up to 100°C	225°C
15-150	10	8







DN	Connection	Pressure rating	L	D	H	Kg
15	PN 10	PN 10	130	95	90	2,3
20	PN 10	PN 10	150	105	102	4,3
25	PN 10	PN 10	160	115	117	5
32	PN 10	PN 10	180	140	141	7,7
40	PN 10	PN 10	200	150	148	10
50	PN 10	PN 10	230	165	176	16
65	PN 10	PN 10	290	185	215	24
80	PN 10	PN 10	310	200	250	31
100	PN 10	PN 10	350	220	281	45
125	PN 10	PN 10	400	250	340	84
150	PN 10	PN 10	480	285	400	110

All measurements in mm. Flanges according to ISO 7005. Weights are approximations.

Revision 1

Sounding cock
357020

Description

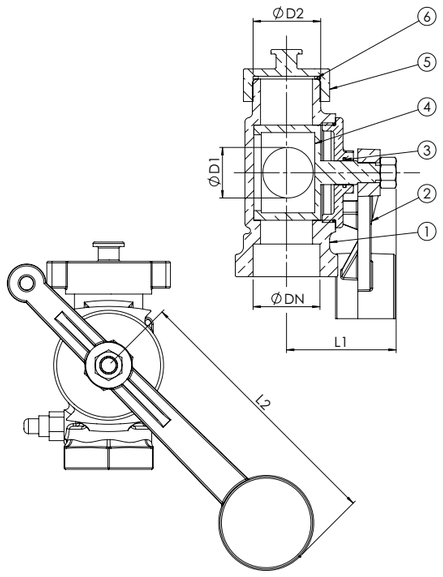
Self-closing cock for tank sounding. With vent valve.

Options

Footpedal.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Lever	Cast iron EN-JL1040 (GG25)
3	Sealing	NBR
4	Plug of cock	Bronze CC491K (RG5)
5	Cap	Bronze CC491K (RG5)
6	Bonnet packing	NBR





DN	Connection (BSP)	Pressure rating	L1	L2	D1	D2	Kg
32	G 1 1/4”	PN 2,5	80	175	35	G 1 1/2”	3,8
40	G 1 1/2”	PN 2,5	80	175	35	G 1 1/2”	3,5
50	G 2”	PN 2,5	80	175	35	G 1 1/2”	4,5
65	G 2 1/2”	PN 2,5	100	175	35	G 1 1/2”	5
80	G 3”	PN 2,5	100	175	35	G 1 1/2”	6

All measurements in mm. Weights are approximations.

Revision 1

Safety valve
474112

Description

Proportional safety valve.

Variants

Other materials on request.

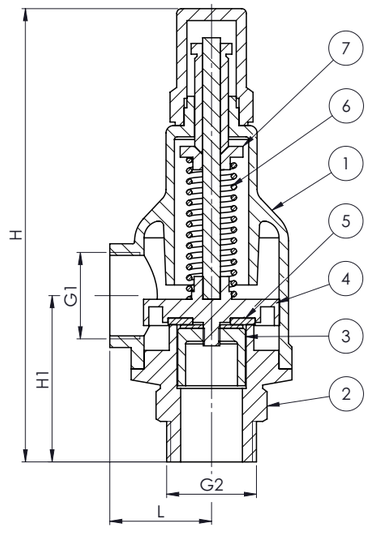
Options

Flange connection on inlet.

No.	Part	Material
1	Body	Brass CW617N (Ms 58)
2	Screwed seat	Brass CW617N (Ms 58)
3	Lead	Brass CW617N (Ms 58)
4	Coupling	Brass CW617N (Ms 58)
5	Sealing disc	PTFE
6	Spring	Stainless steel 1.4310 (AISI 301)
7	Spring press	Brass CW617N (Ms 58)

DN	Max. working pressure (bar)
	180°C
8-100	16





DN	G1/G2 (BSP)	Pressure rating	L	H	H1	Kg
8	1/4”	PN 16	30	129	43	0,5
10	3/8”	PN 16	30	129	43	0,5
15	1/2”	PN 16	32	140	52	0,7
20	3/4”	PN 16	35	158	61	1
25	1”	PN 16	38	181	72	1,4
32	1 1/4”	PN 16	44	212	80	2,2
40	1 1/2”	PN 16	55	247	91	3,5
50	2”	PN 16	70	315	110	5,8
65	2 1/2”	PN 16	75	349	125	6,9
80	3”	PN 16	90	415	136	9,4
100	4”	PN 16	105	483	163	26

All measurements in mm. Weights are approximations.

Revision 1

Safety valve
474192

Description

Proportional safety valve.

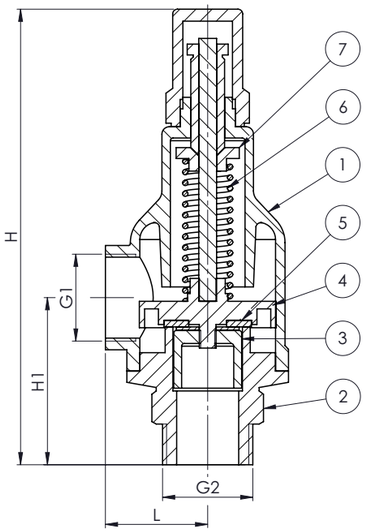
Variants

Other materials on request.

Options

Flange connection on inlet.





No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Screwed seat	Stainless steel 1.4408 (AISI 316)
3	Lead	Stainless steel 1.4408 (AISI 316)
4	Coupling	(DN 8-DN 25) Stainless steel 1.4401 (AISI 316) (DN 32-DN 100) Stainless steel 1.4408 (AISI 316)
5	Sealing disc	PTFE
6	Spring	Stainless steel 1.4310 (AISI 301)
7	Spring press	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)
	180°C
8-100	25

DN	G1/G2 (BSP)	Pressure rating	L	H	H1	Kg
8	1/4”	PN 25	30	129	43	0,5
10	3/8”	PN 25	30	129	43	0,5
15	1/2”	PN 25	32	140	52	0,6
20	3/4”	PN 25	35	158	61	0,8
25	1”	PN 25	38	181	72	1,2
32	1 1/4”	PN 25	44	212	80	1,8
40	1 1/2”	PN 25	55	247	91	3
50	2”	PN 25	70	315	110	5,3
65	2 1/2”	PN 25	75	349	125	6
80	3”	PN 25	90	415	136	8,7
100	4”	PN 25	105	483	163	24

All measurements in mm. Weights are approximations.

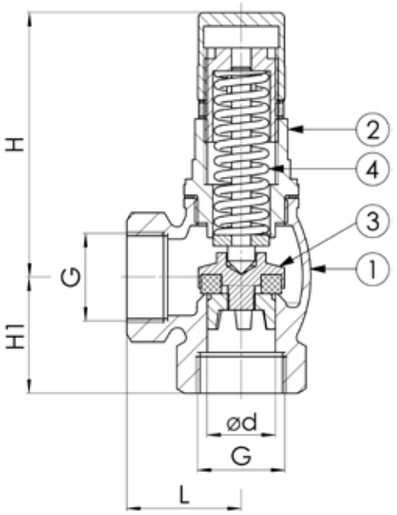
Safety valve
474312

Description

With female threaded connections.
Range of adjustment 0,2-20 bar.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Bonnet	Bronze CC491K (RG5)
3	Disc	Brass CW614N (Ms 58)
4	Pressure spring	Stainless steel 1.4310 (AISI 301)





G (BSP)	Pressure rating	L	d	H	H1	Kg
G 3/8”	PN 16	27	10	65	26	0,3
G 1/2”	PN 16	30	13	71	30	0,4
G 3/4”	PN 16	33	19	79	35	0,6
G 1”	PN 16	40	25	95	41	1
G 1 1/4”	PN 16	45	30	110	45	1,8
G 1 1/2”	PN 16	50	38	135	51	2,3
G 2”	PN 16	60	50	140	60	3,3

All measurements in mm. Weights are approximations.

Safety valve
475494

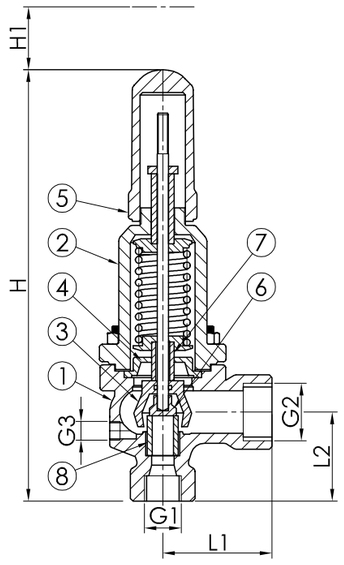
Description

Full lift safety valve with spring loading.
With female threaded ends.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Closed bell	Stainless steel 1.4408 (AISI 316)
3	Elevator	Stainless steel 1.4408 (AISI 316)
4	Lead	Stainless steel 1.4401 (AISI 316)
5	Hood	Stainless steel 1.4408 (AISI 316)
6	Plug	Stainless steel 1.4542
7	Separator	Stainless steel 1.4401 (AISI 316)
8	Seat	Stainless steel 1.4542

DN	Max. working pressure (bar)			
	120°C	200°C	300°C	400°C
DN 20 x 32 to DN 25 x 40	40	34	32	29



DN	G1/G2 (BSP)	Pressure rating	L1	L2	H	H1	Kg
20 x 32	3/4” x 1 1/4”	PN 40	80	65	320	112	5,2
25 x 40	1” x 1 1/2”	PN 40	85	80	370	129	7

All measurements in mm. Weights are approximations.

Safety valve
475464

Description

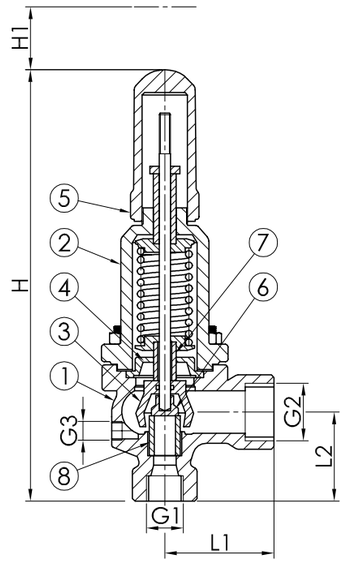
Full lift safety valve with spring loading.
With female threaded ends.



No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Closed bell	Nodular cast iron EN-JS1030 (GGG40)
3	Elevator	(DN 20 x 32) Stainless steel 1.4408 (AISI 316) (DN 25 x 40) Nodular cast iron EN-JS1030 (GGG40)
4	Lead	Stainless steel 1.4028 (AISI420)
5	Hood	Nodular cast iron EN-JS1030 (GGG40)
6	Plug	Stainless steel 1.4028 (AISI420)
7	Separator	Stainless steel 1.4028 (AISI420)
8	Seat	Stainless steel 1.4028 (AISI420)

DN	Max. working pressure (bar)			
	120°C	200°C	250°C	300°C
DN 20 x 32 to DN 25 x 40	40	35	32	28

DN	Max. working pressure (bar)		
	350°C	400°C	450°C
DN 20 x 32 to DN 25 x 40	24	21	20



DN	G1/G2 (BSP)	Pressure rating	L1	L2	H	H1	Kg
20 x 32	3/4” x 1 1/4”	PN 40	80	65	320	112	5,2
25 x 40	1” x 1 1/2”	PN 40	85	80	370	129	7

All measurements in mm. Weights are approximations.

Safety valve
475404

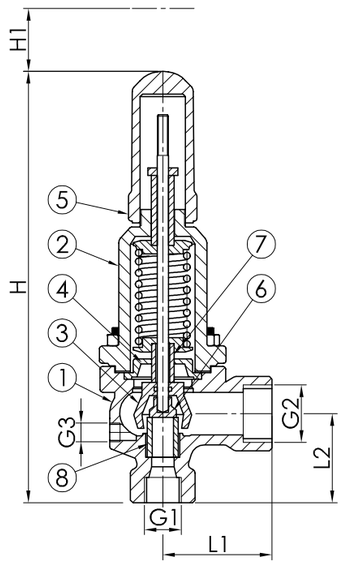
Description

Full lift safety valve with spring loading.
With female threaded ends.

No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Closed bell	Nodular cast iron EN-JS1030 (GGG40)
3	Elevator	(DN 20 x 32) Stainless steel 1.4408 (AISI 316) (DN 25 x 40) Nodular cast iron EN-JS1030 (GGG40)
4	Lead	Stainless steel 1.4028 (AISI420)
5	Hood	Nodular cast iron EN-JS1030 (GGG40)
6	Plug	Stainless steel 1.4028 (AISI420)
7	Separator	Stainless steel 1.4028 (AISI420)
8	Seat	Stainless steel 1.4028 (AISI420)

DN	Max. working pressure (bar)				
	120°C	200°C	250°C	300°C	350°C
DN 20 x 32 to DN 25 x 40	40	35	32	28	24





DN	G1 x G2 (BSP)	Pressure rating	L1	L2	H	H1	Kg
20 x 32	3/4” x 1 1/4”	PN 40	80	65	320	112	5,5
25 x 40	1” x 1 1/2”	PN 40	85	80	370	129	6,9

All measurements in mm. Weights are approximations.

Safety valve
475452

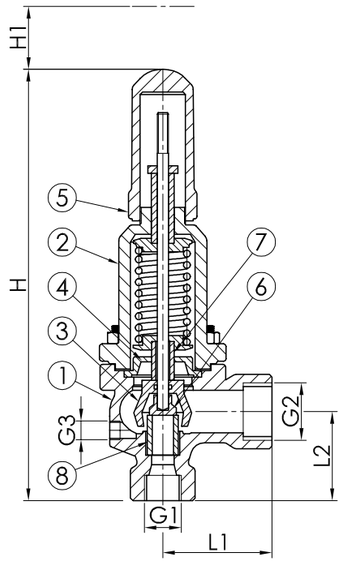
Description

Full lift safety valve with spring loading.
With female threaded ends.

No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Closed bell	Cast iron EN-JL1040 (GG25)
3	Elevator	(DN 20 x 32) Stainless steel 1.4408 (AISI 316) (DN 25 x 40) Nodular cast iron EN-JS1030 (GGG40)
4	Lead	Stainless steel 1.4028 (AISI420)
5	Hood	Nodular cast iron EN-JS1030 (GGG40)
6	Plug	Stainless steel 1.4028 (AISI420)
7	Separator	Stainless steel 1.4028 (AISI420)
8	Seat	Stainless steel 1.4028 (AISI420)

DN	Max. working pressure (bar)			
	120°C	200°C	250°C	300°C
DN 20 x 32 to DN 25 x 40	16	13	13	13





DN	G1 x G2 (BSP)	Pressure rating	L1	L2	H	H1	Kg
20 x 32	3/4” x 1 1/4”	PN 16	80	65	320	112	4,8
25 x 40	1” x 1 1/2”	PN 16	85	80	370	129	6,1

All measurements in mm. Weights are approximations.

Safety valve
474494

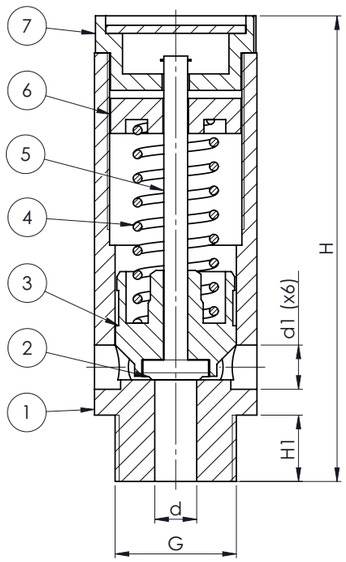
Description

Full lift safety valve.



No.	Part	Material
1	Body	Stainless steel 1.4401 (AISI 316)
2	Seal	FPM (Viton)
3	Plug	Stainless steel 1.4401 (AISI 316)
4	Spring	Stainless steel 1.4310 (AISI 301)
5	Stem	Stainless steel 1.4305 (AISI 303)
6	Spring press	Stainless steel 1.4305 (AISI 303)
7	Handwheel	Stainless steel 1.4305 (AISI 303)

DN	Max. working pressure (bar)
	150°C
10-25	36



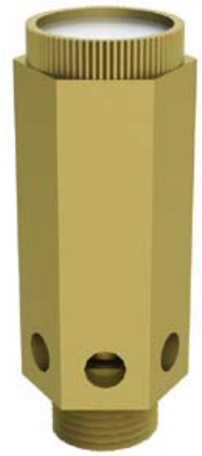
DN	G (BSP)	Pressure rating	H	H1	d	d1	Kg
10	G 3/8”	PN 40	73	9	8	6	0,2
15	G 1/2”	PN 40	89	12	9,75	9,5	0,5
20	G 3/4”	PN 40	113	15	13	11	0,8
25	G 1”	PN 40	116	18	13	11	0,9

All measurements in mm. Weights are approximations.

Safety valve
474413

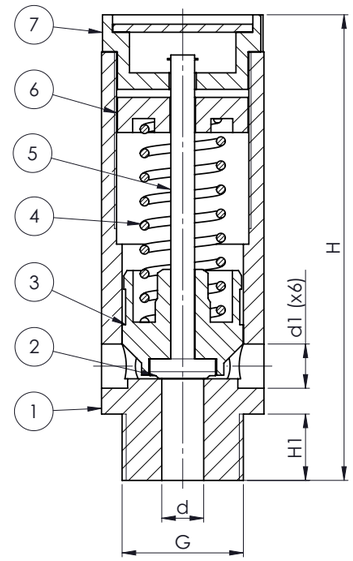
Description

Full lift safety valve.



No.	Part	Material
1	Body	Brass CW617N (Ms 58)
2	Seal	FPM (Viton)
3	Plug	Brass CW617N (Ms 58)
4	Spring	Stainless steel 1.4310 (AISI 301)
5	Stem	Stainless steel 1.4305 (AISI 303)
6	Spring press	Brass CW617N (Ms 58)
7	Handwheel	Brass CW617N (Ms 58)

DN	Max. working pressure (bar)
	150°C
10-25	36



DN	G (BSP)	Pressure rating	H	H1	d	d1	Kg
10	G 3/8”	PN 36	73	9	8	6	0,2
15	G 1/2”	PN 36	89	12	9,75	9,5	0,5
20	G 3/4”	PN 36	113	15	13	11	0,9
25	G 1”	PN 36	116	18	13	11	0,9

All measurements in mm. Weights are approximations.

Safety valve
475394

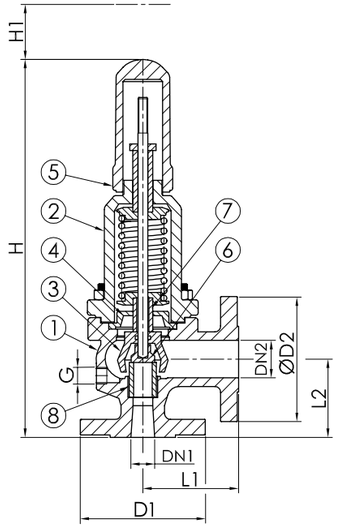
Description

Full lift safety valve with spring loading.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Closed bell	Stainless steel 1.4408 (AISI 316)
3	Elevator	Stainless steel 1.4408 (AISI 316)
4	Lead	Stainless steel 1.4401 (AISI 316)
5	Hood	Stainless steel 1.4408 (AISI 316)
6	Plug	Stainless steel 1.4542
7	Separator	Stainless steel 1.4401 (AISI 316)
8	Seat	Stainless steel 1.4542

DN	Max. working pressure (bar)			
	120°C	200°C	300°C	400°C
DN 20 x 32 to DN 200 x 300	40	34	32	29



DN	DN1 x DN2	Pressure rating	G	L1	L2	D1	D2	H	H1	Kg
20 x 32	DN 20 x 32	PN 40	1/4”	85	95	105	140	350	112	8,1
25 x 40	DN 25 x 40	PN 40	1/4”	95	105	115	150	395	129	10
32 x 50	DN 32 x 50	PN 40	1/4”	100	110	140	165	415	129	14
40 x 65	DN 40 x 65	PN 40	1/4”	115	130	150	185	500	148	20
50 x 80	DN 50 x 80	PN 40	1/4”	125	145	165	200	555	148	27
65 x 100	DN 65 x 100	PN 40	3/8”	140	150	185	220	660	191	39
80 x 125	DN 80 x 125	PN 40	3/8”	155	170	200	250	710	191	56
100 x 150	DN 100 x 150	PN 40	3/8”	175	180	220	285	810	191	83
125 x 200	DN 125 x 200	PN 40	1/2”	215	220	250	340	858	191	103
150 x 250	DN 150 x 250	PN 40	1/2”	225	245	285	395	1029	247	149
200 x 300	DN 200 x 300	PN 40	1/2”	265	290	340	445	1252	331	244

All measurements in mm. Flanges according to EN 1092. Weights are approximations.

Revision 1

Safety valve
475364

Description

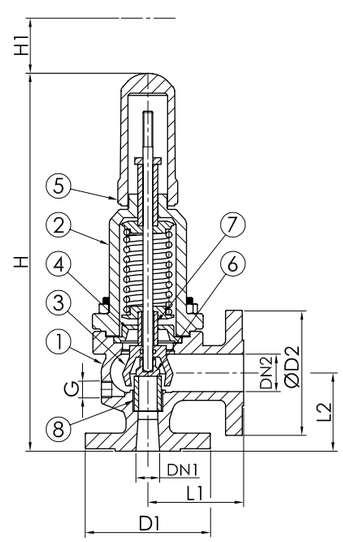
Full lift safety valve with spring loading.



No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Closed bell	Nodular cast iron EN-JS1030 (GGG40)
3	Elevator	(DN 20 x 32) Stainless steel 1.4408 (AISI 316) (DN 25 x 40 to DN 200 x 300) Nodular cast iron EN-JS1030 (GGG40)
4	Lead	Stainless steel 1.4028 (AISI420)
5	Hood	Nodular cast iron EN-JS1030 (GGG40)
6	Plug	Stainless steel 1.4028 (AISI420)
7	Separator	Stainless steel 1.4028 (AISI420)
8	Seat	Stainless steel 1.4028 (AISI420)

DN	Max. working pressure (bar)			
	120°C	200°C	250°C	300°C
DN 20 x 32 to DN 200 x 300	40	35	32	28

DN	Max. working pressure (bar)		
	350°C	400°C	450°C
DN 20 x 32 to DN 200 x 300	24	21	20



DN	DN1 x DN2	Pressure rating	G	L1	L2	D1	D2	H	H1	Kg
20 x 32	DN 20 x 32	PN 40	1/4”	85	95	105	140	350	112	8,1
25 x 40	DN 25 x 40	PN 40	1/4”	95	105	115	150	395	129	10
32 x 50	DN 32 x 50	PN 40	1/4”	100	110	140	165	415	129	14
40 x 65	DN 40 x 65	PN 40	1/4”	115	130	150	185	500	148	20
50 x 80	DN 50 x 80	PN 40	1/4”	125	145	165	200	555	148	27
65 x 100	DN 65 x 100	PN 40	3/8”	140	150	185	220	660	191	39
80 x 125	DN 80 x 125	PN 40	3/8”	155	170	200	250	710	191	56
100 x 150	DN 100 x 150	PN 40	3/8”	175	180	220	285	810	191	83
125 x 200	DN 125 x 200	PN 40	1/2”	215	220	250	340	858	191	103
150 x 250	DN 150 x 250	PN 40	1/2”	225	245	285	395	1029	247	149
200 x 300	DN 200 x 300	PN 40	1/2”	265	290	340	445	1252	331	244

All measurements in mm. Flanges according to EN 1092. Weights are approximations.

Revision 1

Safety valve
475304

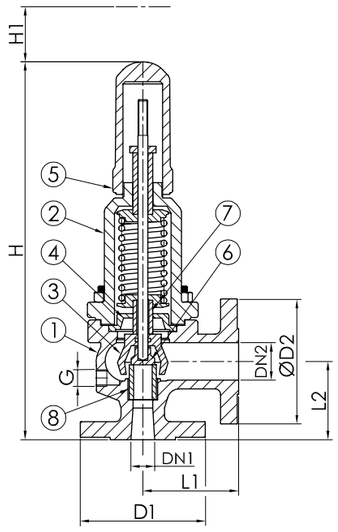
Description

Full lift safety valve with spring loading.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1030 (GGG40)
2	Closed bell	Nodular cast iron EN-JS1030 (GGG40)
3	Elevator	(DN 20 x 32) Stainless steel 1.4408 (AISI 316) (DN 25 x 40 to 200 x 300) Nodular cast iron EN-JS1030 (GGG40)
4	Lead	Stainless steel 1.4028 (AISI420)
5	Hood	Nodular cast iron EN-JS1030 (GGG40)
6	Plug	Stainless steel 1.4028 (AISI420)
7	Separator	Stainless steel 1.4028 (AISI420)
8	Seat	Stainless steel 1.4028 (AISI420)

DN	Max. working pressure (bar)				
	120°C	200°C	250°C	300°C	350°C
DN 20 x 32 to DN 200 x 300	40	35	32	28	24



DN	DN1 x DN2	Pressure rating	G	L1	L2	D1	D2	H	H1	Kg
20 x 32	DN 20 x 32	PN 40	1/4”	85	95	105	140	350	112	8,3
25 x 40	DN 25 x 40	PN 40	1/4”	95	105	115	150	395	129	9,9
32 x 50	DN 32 x 50	PN 40	1/4”	100	110	140	165	415	129	14
40 x 65	DN 40 x 65	PN 40	1/4”	115	130	150	185	500	148	21
50 x 80	DN 50 x 80	PN 40	1/4”	125	145	165	200	555	148	28
65 x 100	DN 65 x 100	PN 40	3/8”	140	150	185	220	660	191	41
80 x 125	DN 80 x 125	PN 40	3/8”	155	170	200	250	710	191	58
100 x 150	DN 100 x 150	PN 40	3/8”	175	180	220	285	810	191	85
125 x 200	DN 125 x 200	PN 40	1/2”	215	220	250	340	858	191	95
150 x 250	DN 150 x 250	PN 40	1/2”	225	245	285	395	1029	247	140
200 x 300	DN 200 x 300	PN 40	1/2”	265	290	340	445	1252	331	229

All measurements in mm. Flanges according to EN 1092. Weights are approximations.

Revision 1

Safety valve
475352

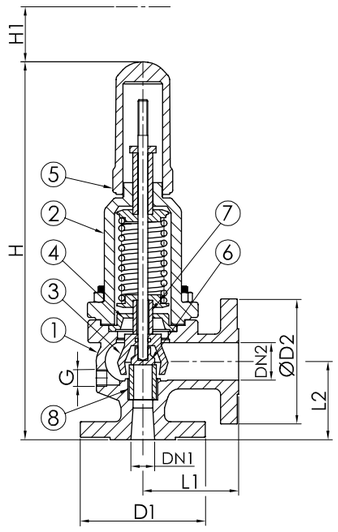
Description

Full lift safety valve with spring loading.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Closed bell	Cast iron EN-JL1040 (GG25)
3	Elevator	(DN 20 x 32) Stainless steel 1.4408 (AISI 316) (DN 25 x 40 to DN 200 x 300) Nodular cast iron EN-JS1030 (GGG40)
4	Lead	Stainless steel 1.4028 (AISI420)
5	Hood	Nodular cast iron EN-JS1030 (GGG40)
6	Plug	Stainless steel 1.4028 (AISI420)
7	Separator	Stainless steel 1.4028 (AISI420)
8	Seat	Stainless steel 1.4028 (AISI420)

DN	Max. working pressure (bar)			
	120°C	200°C	250°C	300°C
DN 20 x 32 to DN 200 x 300	16	13	13	13



DN	DN1 x DN2	Pressure rating	G	L1	L2	D1	D2	H	H1	Kg
20 x 32	DN 20 x 32	PN 16	1/4”	85	95	105	140	350	112	7,6
25 x 40	DN 25 x 40	PN 16	1/4”	95	105	115	150	395	129	9,1
32 x 50	DN 32 x 50	PN 16	1/4”	100	110	140	165	415	129	13
40 x 65	DN 40 x 65	PN 16	1/4”	115	130	150	185	500	148	19
50 x 80	DN 50 x 80	PN 16	1/4”	125	145	165	200	555	148	25
65 x 100	DN 65 x 100	PN 16	3/8”	140	150	185	220	660	191	38
80 x 125	DN 80 x 125	PN 16	3/8”	155	170	200	250	710	191	53
100 x 150	DN 100 x 150	PN 16	3/8”	175	180	220	285	810	191	78
125 x 200	DN 125 x 200	PN 16	1/2”	215	220	250	340	858	191	93
150 x 250	DN 150 x 250	PN 16	1/2”	225	245	285	395	1029	247	135
200 x 300	DN 200 x 300	PN 16	1/2”	265	290	340	445	1252	331	222

All measurements in mm. Flanges according to EN 1092. Weights are approximations.

Revision 1

Pressure reducing valve 471023

Application

Liquids, gases and steam that do not attack the integral material.

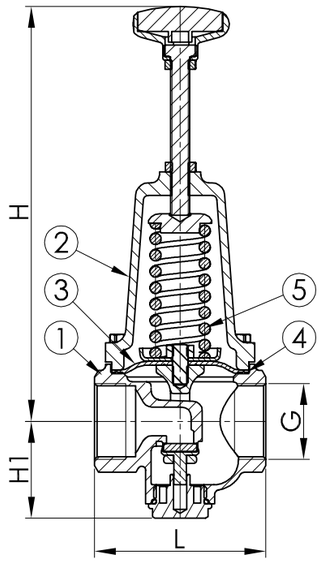
Variants

With gauge G 1/4″.
Other materials on request.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Bonnet	(DN 8-DN 25) Brass CW614N (Ms 58) (DN 32-DN 50) Cast iron EN-JL1040 (GG25)
3	Membrane	Reinforced CR
4	Sealing	NBR
5	Spring	Spring steel SH

DN	Tempera-ture °C	Working pressure (inlet pressure)	Outlet pressure - continuously variable	Highest reduction ratio
8-50	75	Max 25 bar	1,5-8 bar	10:1





DN	G (BSP)	Pressure rating	L	H	H1	Kv-value	Kg
8	1/4”	PN 25	70	110	48	0,5	1,2
10	3/8”	PN 25	70	110	48	0,6	1,3
15	1/2”	PN 25	85	120	48	1,2	1,7
20	3/4”	PN 25	85	120	48	1,3	1,7
25	1”	PN 25	95	155	55	1,6	2,7
32	1 1/4”	PN 25	104	200	61	4,2	6
40	1 1/2”	PN 25	108	200	61	4,5	6,1
50	2”	PN 25	147	260	64	7,2	9,8

All measurements in mm. Weights are approximations.

Revision 1

Pressure reducing valve 471024

Application

Liquids, gases and steam that do not attack the integral material.

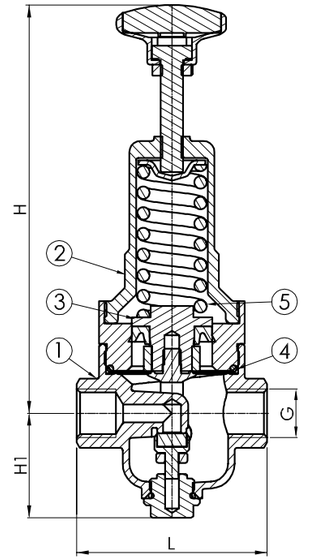
Variants

With gauge G 1/4″.
Other materials on request.

No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Bonnet	(DN 8 - 25) Brass CW614N (Ms 58) (DN 32 - 50) Cast iron EN-JL1040 (GG25)
3	Regulating piston	Brass CW611N (Ms 58)
4	Sealing	NBR
5	Spring	Spring steel SH (1084 ASTM A713)

DN	Tempera-ture °C	Working pressure (inlet pressure)	Outlet pressure - continuously variable	Highest reduction ratio
8-50	75	Max 40 bar	1,5-20 bar	6:1





DN	G (BSP)	Pressure rating	L	H	H1	Kv-value	Kg
8	1/4”	PN 40	70	130	48	0,5	1,2
10	3/8”	PN 40	70	130	48	0,6	1,3
15	1/2”	PN 40	85	140	48	1,2	1,7
20	3/4”	PN 40	85	140	48	1,3	1,7
25	1”	PN 40	95	185	55	1,6	2,7
32	1 1/4”	PN 40	104	230	61	4,2	6
40	1 1/2”	PN 40	108	230	61	4,5	6,1
50	2”	PN 40	147	295	64	7,2	9,8

All measurements in mm. Weights are approximations.

Revision 1

Pressure reducing valve
471894

Description

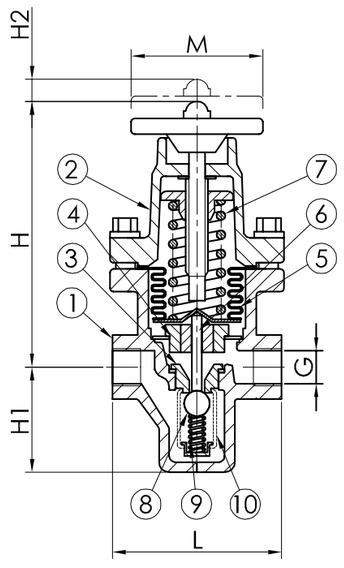
Direct action pressure reducing valve.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Cover	Aluminium EN AC-44200
3	Guide	Graphite PTFE
4	Seat	Stainless steel 1.4542
5	Bellow	Stainless steel 1.4571 (AISI 316Ti)
6	Axle	Stainless steel 1.4404 (AISI 316)
7	Spring	Chrome-silicon steel FDSiCr
8	Lock	Stainless steel 1.4034
9	Spring	Stainless steel 1.4404 (AISI 316)
10	Filter	Stainless steel 1.4404 (AISI 316)

DN	Max. working pressure (bar)
	230°C
15-25	17

DN	Maximum input pressure (bar)	Maximum reduction differential (bar)	Minimum reduced pressure (bar)
15	17	1:10	0,14
20	17	1:10	0,14
25	17	1:10	0,14



DN	G (BSP)	Pressure rating	L	H	H1	H2	M	Kv-value	Kg
15	1/2”	PN 40	85	150	57	25	75	1,5	2,3
20	3/4”	PN 40	95	150	57	25	75	2,5	2,4
25	1”	PN 40	105	150	57	25	75	3	2,6

All measurements in mm. Weights are approximations.

Pressure reducing valve
471864

Description

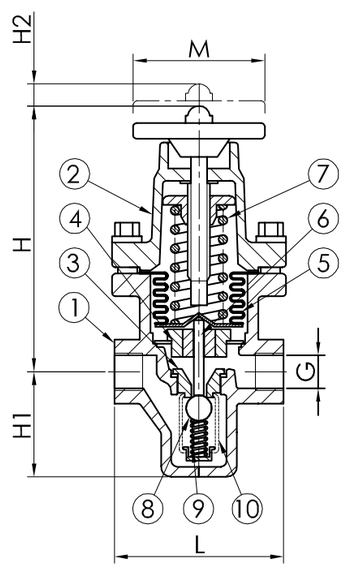
Direct action pressure reducing valve.



No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Cover	Aluminium EN AC-44200
3	Guide	Graphite PTFE
4	Seat	Stainless steel 1.4542
5	Bellow	Stainless steel 1.4571 (AISI 316Ti)
6	Axle	Stainless steel 1.4404 (AISI 316)
7	Spring	Chrome-silicon steel FDSiCr
8	Lock	Stainless steel 1.4034
9	Spring	Stainless steel 1.4404 (AISI 316)
10	Filter	Stainless steel 1.4404 (AISI 316)

DN	Max. working pressure (bar)
	230°C
15-25	17

DN	Maximum input pressure (bar)	Maximum reduction differential (bar)	Minimum reduced pressure (bar)
15	17	1:10	0,14
20	17	1:10	0,14
25	17	1:10	0,14



DN	G (BSP)	Pressure rating	L	H	H1	H2	M	Kv-value	Kg
15	1/2”	PN 40	85	150	57	25	75	1,5	2,1
20	3/4”	PN 40	95	150	57	25	75	2,5	2,2
25	1”	PN 40	105	150	57	25	75	3	2,3

All measurements in mm. Weights are approximations.

Pressure reducing valve
471803

Description

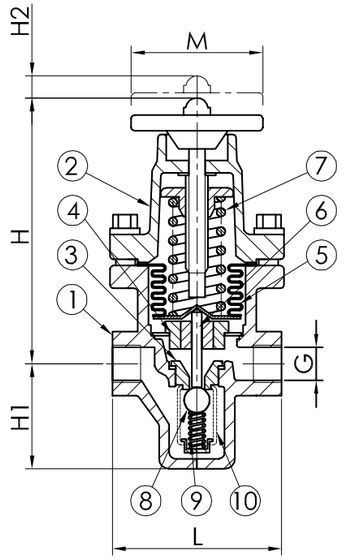
Direct action pressure reducing valve.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1020 (GGG40.3)
2	Cover	Aluminium EN AC-44200
3	Guide	Graphite PTFE
4	Seat	Stainless steel 1.4542
5	Bellow	Stainless steel 1.4571 (AISI 316Ti)
6	Axle	Stainless steel 1.4404 (AISI 316)
7	Spring	Chrome-silicon steel FDSiCr
8	Lock	Stainless steel 1.4034
9	Spring	Stainless steel 1.4404 (AISI 316)
10	Filter	Stainless steel 1.4404 (AISI 316)

DN	Max. working pressure (bar)
	210°C
15-25	17

DN	Maximum input pressure (bar)	Maximum reduction differential (bar)	Minimum reduced pressure (bar)
15	17	1:10	0,14
20	17	1:10	0,14
25	17	1:10	0,14



DN	G (BSP)	Pressure rating	L	H	H1	H2	M	Kv-value	Kg
15	1/2”	PN 25	85	150	57	25	75	1,5	2
20	3/4”	PN 25	95	150	57	25	75	2,5	2,1
25	1”	PN 25	105	150	57	25	75	3	2,2

All measurements in mm. Weights are approximations.

Pressure reducing valve
471522

Application

Liquids and gases that do not attack the integral material. Minimum pressure difference inlet pressure/outlet pressure: approximately 1 bar.

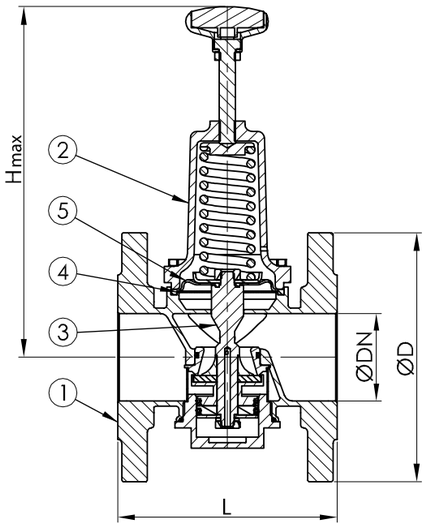
Variants

With gauge G 1/4″.
Other materials on request.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Bonnet	(DN 15-DN 32) Brass CW614N (Ms 58) (DN 40-DN 125) Cast iron EN-JL1040 (GG25)
3	Trim	Brass CW614N (Ms 58) / Stainless steel 1.4301 (AISI 304)
4	Sealing	NBR
5	Membrane	(DN 15-DN 65) NBR D(N 80-DN 125) SBR

DN	Tempera-ture °C	Working pressure (inlet pressure)	Outlet pressure - continuously variable
15-125	75	Max 16 bar	1,5-6 bar 3-10 bar 0,5-4 bar



DN	Connection	Pressure rating	L	D	H max	Kv-value	Kg
15	PN 25	PN 16	100	95	125	2,9	2
20	PN 25	PN 16	105	105	125	3,9	2,8
25	PN 25	PN 16	110	115	125	5,4	3,5
32	PN 25	PN 16	122	140	125	6,1	4,7
40	PN 25	PN 16	158	150	295	12	7,9
50	PN 25	PN 16	215	165	295	13	9,2
65	PN 25	PN 16	290	185	310	20	13
80	PN 25	PN 16	310	200	420	60	38
100	PN 16	PN 16	350	220	435	80	40
125	PN 25	PN 16	400	270	565	130	85

All measurements in mm. Weights are approximations.

Pressure reducing valve
471694

Description

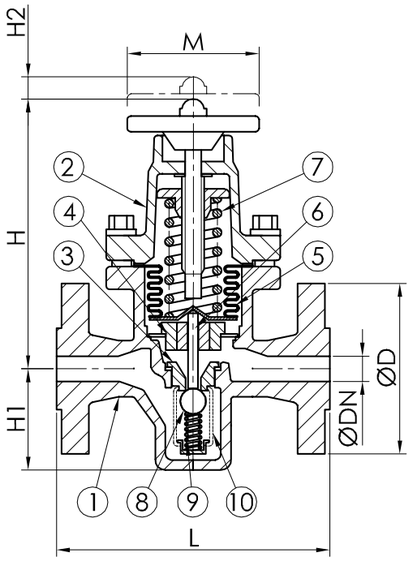
Direct action pressure reducing valve.



No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Cover	Aluminium EN AC-44200
3	Guide	Graphite PTFE
4	Seat	Stainless steel 1.4542
5	Bellow	Stainless steel 1.4571 (AISI 316Ti)
6	Axle	Stainless steel 1.4404 (AISI 316)
7	Spring	Chrome-silicon steel FDSiCr
8	Lock	Stainless steel 1.4034
9	Spring	Stainless steel 1.4404 (AISI 316)
10	Filter	Stainless steel 1.4404 (AISI 316)

DN	Max. working pressure (bar)
	230°C
15-25	17

DN	Maximum input pressure (bar)	Maximum reduction differential (bar)	Minimum reduced pressure (bar)
15	17	1:10	0,14
20	17	1:10	0,14
25	17	1:10	0,14



DN	Connection	Pressure rating	L	D	H	H1	H2	M	Kv-value	Kg
15	DN 15	PN 40	150	95	150	57	25	75	1,5	4
20	DN 20	PN 40	150	105	150	57	25	75	2,5	4,1
25	DN 25	PN 40	160	115	150	57	25	75	3	5,2

All measurements in mm. Flanges according to EN 1092. Weights are approximations.

Pressure reducing valve
471664

Description

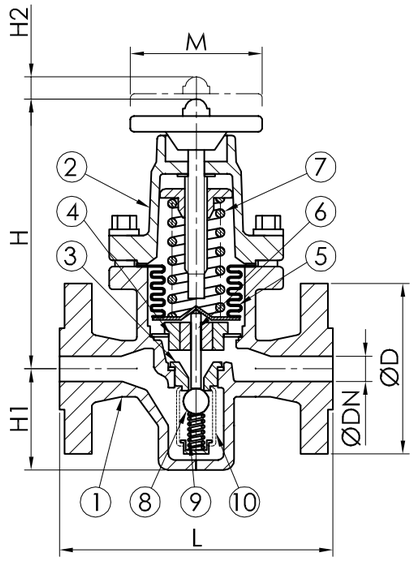
Direct action pressure reducing valve.



No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Cover	Aluminium EN AC-44200
3	Guide	Graphite PTFE
4	Seat	Stainless steel 1.4542
5	Bellow	Stainless steel 1.4571 (AISI 316Ti)
6	Axle	Stainless steel 1.4404 (AISI 316)
7	Spring	Chrome-silicon steel FDSiCr
8	Lock	Stainless steel 1.4034
9	Spring	Stainless steel 1.4404 (AISI 316)
10	Filter	Stainless steel 1.4404 (AISI 316)

DN	Max. working pressure (bar)
	230°C
15-25	17

DN	Maximum input pressure (bar)	Maximum reduction differential (bar)	Minimum reduced pressure (bar)
15	17	1:10	0,14
20	17	1:10	0,14
25	17	1:10	0,14



DN	Connection	Pressure rating	L	D	H	H1	H2	M	Kv-value	Kg
15	DN 15	PN 40	150	95	150	57	25	75	1,5	3,9
20	DN 20	PN 40	150	105	150	57	25	75	2,5	4
25	DN 25	PN 40	160	115	150	57	25	75	3	5,1

All measurements in mm. Flanges according to EN 1092. Weights are approximations.

Pressure reducing valve
471603

Description

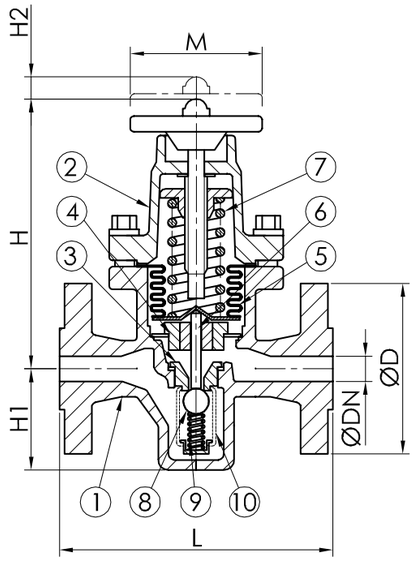
Direct action pressure reducing valve.



No.	Part	Material
1	Body	Nodular cast iron EN-JS1020 (GGG40.3)
2	Cover	Aluminium EN AC-44200
3	Guide	Graphite PTFE
4	Seat	Stainless steel 1.4542
5	Bellow	Stainless steel 1.4571 (AISI 316Ti)
6	Axle	Stainless steel 1.4404 (AISI 316)
7	Spring	Chrome-silicon steel FDSiCr
8	Lock	Stainless steel 1.4034
9	Spring	Stainless steel 1.4404 (AISI 316)
10	Filter	Stainless steel 1.4404 (AISI 316)

DN	Max. working pressure (bar)
	210°C
15-25	17

DN	Maximum input pressure (bar)	Maximum reduction differential (bar)	Minimum reduced pressure (bar)
15	17	1:10	0,14
20	17	1:10	0,14
25	17	1:10	0,14



DN	Connection	Pressure rating	L	D	H	H1	H2	M	Kv-value	Kg
15	DN 15	PN 25	150	95	150	57	25	75	1,5	3,6
20	DN 20	PN 25	150	105	150	57	25	75	2,5	3,7
25	DN 25	PN 25	160	115	150	57	25	75	3	4,7

All measurements in mm. Flanges according to EN 1092. Weights are approximations.

Vacuum valve
414191

Description

Air vent for heating- and cooling systems, where system pressure, temperature or media demand high performance from the air vent.
Aeromat, automatic float vent entirely made of stainless steel. The vent has a free-moving float and can be cleaned.

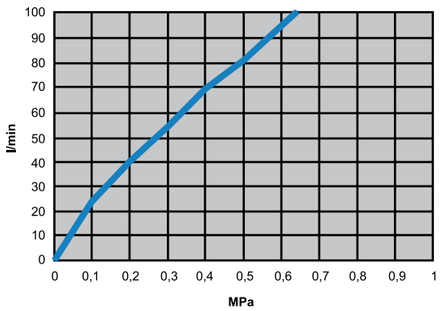
Variants

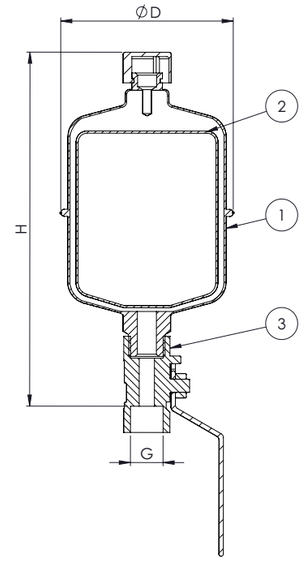
Stainless steel ball valve. Valve housing and ball in 1.4436.



No.	Part	Material
1	Body	Stainless steel 1.4301 (AISI 304)
2	Float	Stainless steel 1.4301 (AISI 304)
3	Ball valve	Brass CW617N (Ms 58), externally grit blasted and nickel plated. Chrome plated ball with PTFE sealings.

Max. working pressure (bar)
Up to 130°C
16
Glycol and ethanol mixture: max 50%.





G	Pressure rating	D	H	Kg
G 3/8”	PN 16	79	162	0,7

All measurements in mm. Weights are approximations.

Vacuum valve
414222

Description

Vacuum valve with male thread.

Application

The valve is designed to prevent vacuum in pressure vessels. Shall not be in direct contact with steam.

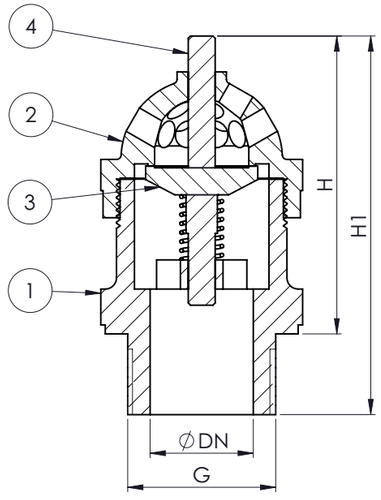
Variants

Other materials on request.



No.	Part	Material
1	Body	Bronze CC493K (RG7)
2	Bonnet	Bronze CC493K (RG7)
3	Disc	Bronze CC493K (RG7)
4	Push botton	Bronze CC493K (RG7)

DN	Max. working pressure (bar)	
	Up to 100°C	Up to 185°C
10-25	16	13,5



DN	G (BSP)	Pressure rating	H	A	Kg
10	R 3/8”	PN 16	52	41	0,1
15	R 1/2”	PN 16	63	51	0,1
20	R 3/4”	PN 16	76	62	0,2
25	R 1”	PN 16	84	66	0,4

All measurements in mm. Weights are approximations.

Vacuum valve
414212

Description

Vacuum valve with male thread.

Application

The valve is designed to prevent vacuum in pressure vessels. Shall not be in direct contact with steam.

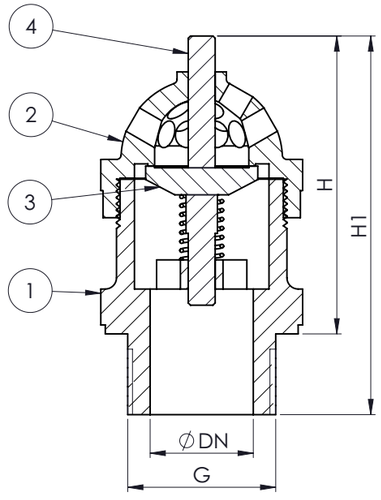
Variants

Other materials on request.



No.	Part	Material
1	Body	Brass CW611N (Ms 58)
2	Bonnet	Brass CW611N (Ms 58)
3	Disc	Brass CW611N (Ms 58)
4	Push button	Brass CW611N (Ms 58)

DN	Max. working pressure (bar)	
	Up to 100°C	Up to 185°C
10-25	16	13,5



DN	G (BSP)	Pressure rating	H	A	Kg
10	G 3/8”	PN 16	52	41	0,1
15	G 1/2”	PN 16	63	51	0,1
20	G 3/4”	PN 16	76	62	0,2
25	G 1”	PN 16	84	66	0,4

All measurements in mm. Weights are approximations.

Vacuum safety valve
414392

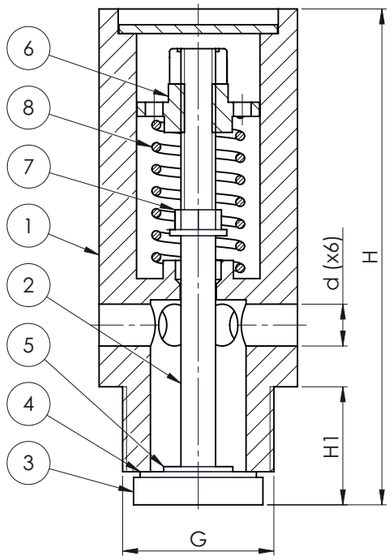
Description

Vacuum breaker safety valve.



No.	Part	Material
1	Body	Stainless steel 1.4401 (AISI 316)
2	Stem	Stainless steel 1.4305 (AISI 303)
3	Plug	Stainless steel 1.4401 (AISI 316)
4	Seal	FPM (Viton)
5	Washer	Stainless steel 1.4401 (AISI 316)
6	Spring press	Stainless steel 1.4305 (AISI 303)
7	Nut	Stainless steel 1.4401 (AISI 316)
8	Spring	Stainless steel 1.4310 (AISI 301)

DN	Max. working pressure (bar)	
	120°C	150°C
10-25	16	12



DN	G (BSP)	Pressure rating	d	H	H1	Kg
10	G 3/8”	PN 16	4,25	64	13	0,2
15	G 1/2”	PN 16	5,5	81	16,5	0,3
20	G 3/4”	PN 16	8	90	21	0,5
25	G 1”	PN 16	9,5	105	24	0,8

All measurements in mm. Weights are approximations.

Vacuum safety valve
414312

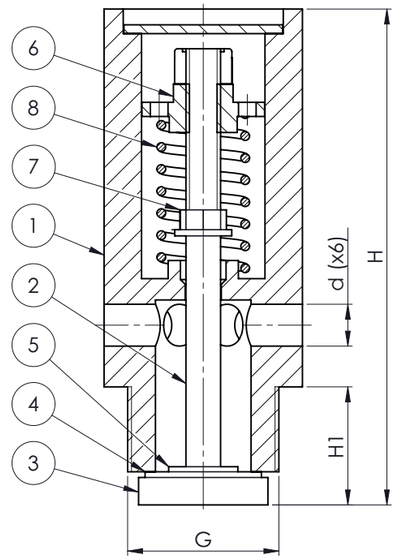
Description

Vacuum breaker safety valve.



No.	Part	Material
1	Body	Brass CW617N (Ms 58)
2	Stem	Stainless steel 1.4305 (AISI 303)
3	Plug	Brass CW617N (Ms 58)
4	Seal	FPM (Viton)
5	Washer	Stainless steel 1.4401 (AISI 316)
6	Spring press	Brass CW617N (Ms 58)
7	Nut	Stainless steel 1.4401 (AISI 316)
8	Spring	Stainless steel 1.4310 (AISI 301)

DN	Max. working pressure (bar)	
	120°C	150°C
10-25	16	12



DN	G (BSP)	Pressure rating	d	H	H1	Kg
10	G 3/8”	PN 16	4,25	64	13	0,2
15	G 1/2”	PN 16	5,5	81	16,5	0,4
20	G 3/4”	PN 16	8	90	21	0,5
25	G 1”	PN 16	9,5	105	24	0,8

All measurements in mm. Weights are approximations.

Sight glass
486352

Description

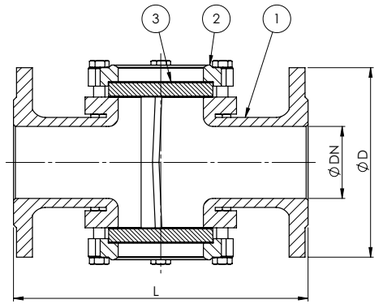
Sight glass with double temperated inspection glass.



No.	Part	Material
1	Body	Cast iron EN-JL1040 (GG25)
2	Bonnet	Cast iron EN-JL1040 (GG25)
3	Glass	Double temperated glass

DN	Max. working pressure (bar)			
	120°C	150°C	180°C	200°C
15-250	16	14,4	13,4	12,8

DN	Max. working pressure (bar)		
	230°C	250°C	320°C
15-250	11,8	11,2	9,6



DN	Connection	Pressure rating	L	D	Kg
15	PN 16	PN 16	135	95	3
20	PN 16	PN 16	150	105	4
25	PN 16	PN 16	160	115	4
32	PN 16	PN 16	180	140	6
40	PN 16	PN 16	200	150	7
50	PN 16	PN 16	230	165	9
65	PN 16	PN 16	290	185	17
80	PN 16	PN 16	310	200	18
100	PN 16	PN 16	350	220	23
125	PN 16	PN 16	400	250	50
150	PN 16	PN 16	480	285	63
200	PN 16	PN 16	600	340	120
250	PN 16	PN 16	730	405	160

All measurements in mm. DIN flanges according to EN 1092. Weights are approximations.

Pressure gauge valve
490515

Description

Pressure gauge valve for liquids and gases.

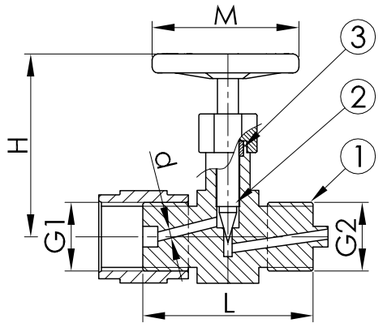
Variants

Other materials on request.



No.	Part	Material
1	Body	Brass CW614N (Ms 58)
2	Stem	Brass CW614N (Ms 58)
3	Packing	Graphite

DN	Max. working pressure (bar)
	Up to 185ºC
8-15	100



DN	Pressure rating	G1 (BSP)	G2 (BSP)	L	d	H	M	Kg
8	PN 100	G 1/4”	G 1/4”	50	3,5	95	65	0,3
10	PN 100	G 3/8”	G 3/8”	54	3,5	95	65	0,3
15	PN 100	G 1/2”	G 1/2”	64	3,5	95	65	0,4

All measurements in mm. Weights are approximations.

Pressure gauge valve
490615

Description

Pressure gauge valve for liquids and gases.
With test flange.

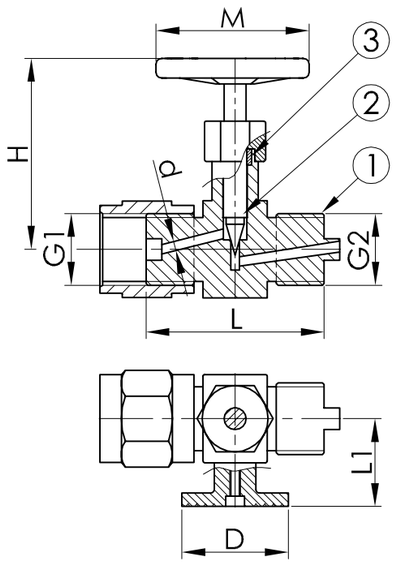
Variants

Other materials on request.

No.	Part	Material
1	Body	Brass CW614N (Ms 58)
2	Stem	Brass CW614N (Ms 58)
3	Packing	Graphite

DN	Max. working pressure (bar)
	Up to 185ºC
8-15	100





DN	Pressure rating	G1 (BSP)	G2 (BSP)	L	L1	D	d	H	M	Kg
8	PN 100	G 1/4”	G 1/4”	50	31	40	3,5	95	65	0,4
10	PN 100	G 3/8”	G 3/8”	54	31	40	3,5	95	65	0,4
15	PN 100	G 1/2”	G 1/2”	64	34	40	3,5	95	65	0,5

All measurements in mm. Weights are approximations.

Needle valve
460895

Description

Needle valve for oil, water, steam and air.

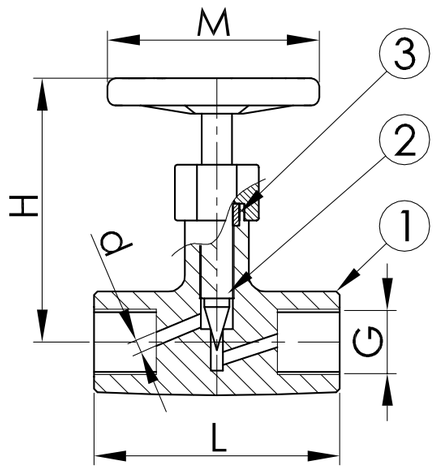
Variants

Available with locked gland nut and NPT-threads.

No.	Part	Material
1	Body	Stainless steel 1.4404 (AISI 316)
2	Stem	Stainless steel 1.4460
3	Packing	Graphite

DN	Max. working pressure (bar)			
	20°C	125°C	200°C	300°C
6-25	400	160	12	20





DN	Pressure rating	G (BSP)	L	d	H	M	Kv value	Kg
6	PN 400	G 1/8”	60	4	85	65	0,3	0,4
8	PN 400	G 1/4”	60	5	85	65	0,42	0,4
10	PN 400	G 3/8”	60	5	85	65	0,48	0,4
15	PN 400	G 1/2”	60	5	85	65	0,54	0,3
20	PN 400	G 3/4”	70	8	100	85	1,2	0,9
25	PN 400	G 1”	78	10	110	100	1,45	1,1

All measurements in mm. Weights are approximations.

Needle valve
460785

Description

Needle valve for oil, water, steam and air.

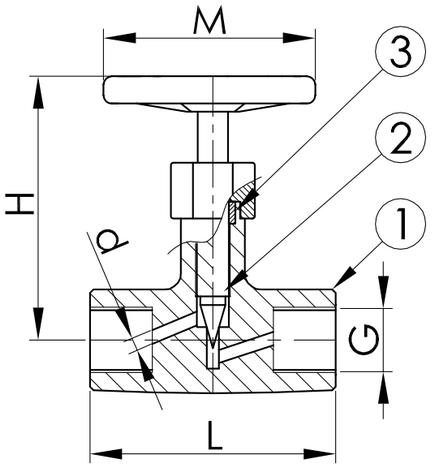
Variants

Available with locked gland nut and NPT-threads.



No.	Part	Material
1	Body	Stainless steel 1.4104 (AISI 430)
2	Stem	Stainless steel 1.4021 (AISI 420)
3	Packing	Graphite

DN	Max. working pressure (bar)			
	20°C	125°C	200°C	300°C
6-25	400	160	12	20



DN	Pressure rating	G (BSP)	L	d	H	M	Kv value	Kg
6	PN 400	G 1/8”	60	4	85	65	0,3	0,4
8	PN 400	G 1/4”	60	5	85	65	0,42	0,4
10	PN 400	G 3/8”	60	5	85	65	0,48	0,4
15	PN 400	G 1/2”	60	5	85	65	0,54	0,3
20	PN 400	G 3/4”	70	8	100	85	1,2	0,9
25	PN 400	G 1”	78	10	110	100	1,45	1,1

All measurements in mm. Weights are approximations.

Revision 1

Float valve
312622

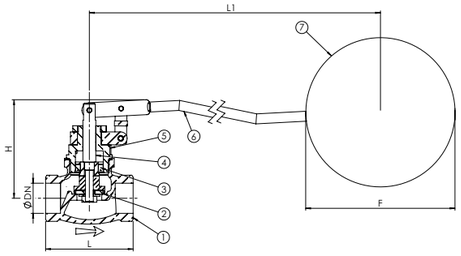
Description

Straight type float valve with female screwed ends.



Application

Water. Max. temperature 80°C.



No.	Part	Material
1	Body	Bronze CC491K (RG5)
2	Sealing	NBR
3	Gasket	NBR
4	Stem	Special brass CW710R (SoMs59)
5	Bonnet	Bronze CC491K (RG5)
6	Lever	Stainless steel 1.4401 (AISI 316)
7	Ball	Copper

DN	Max. working pressure (bar)
	Up to 80°C
15-25	12
32-50	7

DN	Connection (BSP)	Pressure rating	L	L1	H	F	Kv	Kg
15	G 1/2”	PN 12	65	450	82	125	3	1,1
20	G 3/4”	PN 12	75	565	87	150	5	1,5
25	G 1”	PN 12	90	565	105	150	8	2
32	G 1 1/4”	PN 7	105	600	116	175	13	2,6
40	G 1 1/2”	PN 7	120	615	135	200	21	4
50	G 2”	PN 7	145	675	150	200	32	5,2

All measurements in mm. Weights are approximations.

Revision 1

Float valve
312891

Application

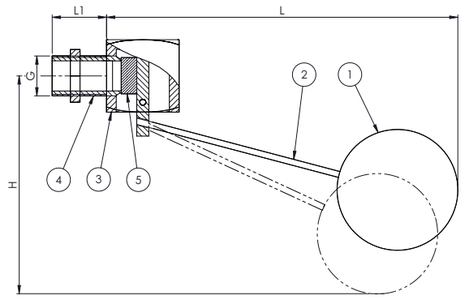
Liquids that do not attack the intergral material.

Variants

The valve can be supplied with larger floater for higher pressure.



No.	Part	Material
1	Ball float	Stainless steel 1.4401 (AISI 316)
2	Lever	Stainless steel 1.4401 (AISI 316)
3	Body	Stainless steel 1.4401 (AISI 316)
4	Coupling	Stainless steel 1.4401 (AISI 316)
5	Discring	Silicone rubber



DN	Max. working pressure (bar)		
	120°C	180°C	200°C
10-65	16	15	14

DN	G (BSP)	Pressure rating	Ball float diameter	L	L1	H	Kg
10	G 3/8”	PN 16	90	366	31	210	0,4
15	G 1/2”	PN 16	110	424	35	260	0,6
20	G 3/4”	PN 16	150	507	40	282	1,3
25	G 1”	PN 16	150	615	45	327	1,3
32	G 1 1/4”	PN 16	200	680	50	355	2,0
40	G 1 1/2”	PN 16	300	710	57	310	3,1
50	G 2”	PN 16	300	777	60	485	4,9
65	G 2 1/2”	PN 16	300	804	79	490	7,5

All measurements in mm. Weights are approximations.

Tank vent check valve
421060

Variants

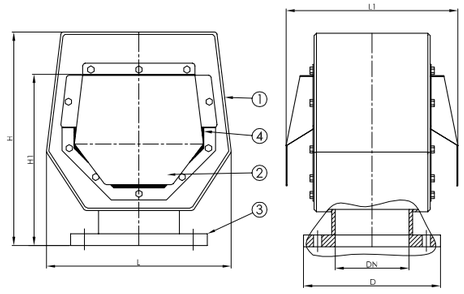
Other flange connections available.

Options

Screen options: flame, bug or rat screen.



No.	Part	Material
1	Body	Hot dip galvanized steel
2	Cover	Hot dip galvanized steel
3	Flange	Hot dip galvanized steel
4	Screen	Stainless steel 1.4432 (AISI 316L)



DN	Connection	L	L1	D	H	H1	Kg
40	PN 10	213	223	150	263	222	13
50	PN 10	213	223	165	263	222	14
65	PN 10	213	223	185	263	222	15
80	PN 10	270	257	200	310	255	20
100	PN 10	270	257	220	310	255	21
125	PN 10	302	304	250	335	280	28
150	PN 10	385	366	285	448	356	41
175	PN 10	430	411	315	477	392	53
200	PN 10	470	461	340	517	425	63
250	PN 10	590	536	395	660	530	97
300	PN 10	685	681	445	731	585	121
350	PN 10	885	766	505	887	700	175
400	PN 10	885	766	565	887	700	205

All measurements in mm. Weights are approximations.

Tank vent check valve
421160

Variants

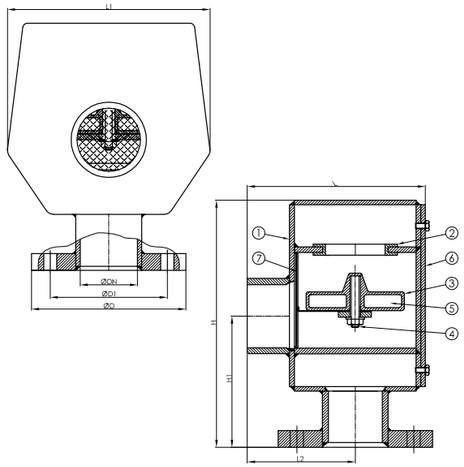
Other flange connections available.

Options

Screen options: flame, bug or rat screen.

No.	Part	Material
1	Body	Hot dip galvanized steel
2	Seal	Neoprene
3	Float cover	ABS
4	Guidingpin	Stainless steel 1.4401 (AISI 316)
5	Float disc	ABS
6	Cover	Hot dip galvanized steel
7	Flamescreen	Stainless steel 1.4401 (AISI 316)





DN	Connection	L	L1	L2	D	D1	H	H1	Kg
40	PN 10	209	213	128	150	110	263	126	15
50	PN 10	209	213	128	165	125	263	132	16
65	PN 10	209	213	128	185	145	263	139	17
80	PN 10	250	270	151	200	160	310	144	26
100	PN 10	250	270	151	220	180	310	156	28
125	PN 10	300	302	184	250	210	335	178	33
150	PN 10	335	385	198	285	240	448	215	50
175	PN 10	360	430	211	315	270	477	229	70
200	PN 10	410	470	231	340	295	517	247	71
250	PN 10	465	590	258	395	350	660	290	115
300	PN 10	530	685	296	445	400	731	341	166
350	PN 10	610	885	333	505	460	887	397	225
400	PN 10	610	885	333	565	515	887	422	250

All measurements in mm. Weights are approximations.

Tank vent check valve
421260

Variants

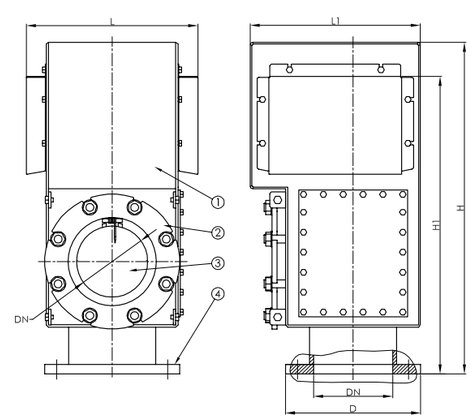
Other flange connections available.

Options

Screen options: flame, bug or rat screen.

No.	Part	Material
1	Body	Hot dip galvanized steel
2	Swing check valve flange	Hot dip galvanized steel
3	Swing check valve	Stainless steel 1.4432 (AISI 316L)
4	Flange	Hot dip galvanized steel





DN	Connection	L	L1	D	H	H1	Kg
125	PN 10	265	237	250	805	760	38
150	PN 10	335	302	285	820	760	62
175	PN 10	375	330	315	830	760	73
200	PN 10	435	432	340	835	760	95
250	PN 10	585	482	395	890	760	125

All measurements in mm. Weights are approximations.

Blind flange valve
475093

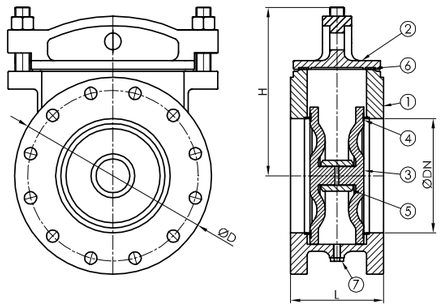
Variants

For bigger dimensions, please contact us for more details.

No.	Part	Material
1	Body	Stainless steel 1.4408 (AISI 316)
2	Top cover	Stainless steel 1.4408 (AISI 316)
3	Disc	Stainless steel 1.4401 (AISI 316)
4	Disc seal	PTFE
5	Tightening nut	Stainless steel 1.4401 (AISI 316)
6	Top cover seal	Glass fibre reinforced PTFE
7	Drain plug	Stainless steel 1.4401 (AISI 316)

DN	Max. working pressure (bar)
	-20°C to +200°C
50-300	25





DN	Connection	Pressure rating	L	D	H	Kg
50	PN 25	PN 25	154	165	173	20
65	PN 25	PN 25	154	185	185	22
80	PN 25	PN 25	154	200	194	29
100	PN 25	PN 25	162	235	235	33
125	PN 25	PN 25	162	270	245	42
150	PN 25	PN 25	162	300	265	49
200	PN 25	PN 25	162	360	300	66
250	PN 25	PN 25	200	425	330	87
300	PN 25	PN 25	200	485	360	112

All measurements in mm. Weights are approximations.

Blind flange valve
475063

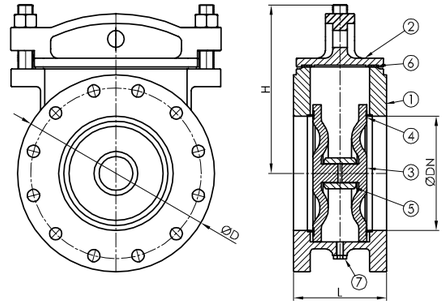
Variants

For bigger dimensions, please contact us for more details.

No.	Part	Material
1	Body	Cast steel 1.0619 (WCB)
2	Top cover	Cast steel 1.0619 (WCB)
3	Disc	Stainless steel 1.4301 (AISI 304)
4	Disc seal	PTFE
5	Tightening nut	Stainless steel 1.4301 (AISI 304)
6	Top cover seal	Glass fibre reinforced PTFE
7	Drain plug	Stainless steel 1.4301 (AISI 304)

DN	Max. working pressure (bar)
	-20°C to +200°C
50-300	25





DN	Connection	Pressure rating	L	D	H	Kg
50	PN 25	PN 25	154	165	173	20
65	PN 25	PN 25	154	185	185	22
80	PN 25	PN 25	154	200	194	29
100	PN 25	PN 25	162	235	235	33
125	PN 25	PN 25	162	270	245	42
150	PN 25	PN 25	162	300	265	49
200	PN 25	PN 25	162	360	300	66
250	PN 25	PN 25	200	425	330	87
300	PN 25	PN 25	200	485	360	112

All measurements in mm. Weights are approximations.

Ejector
319122

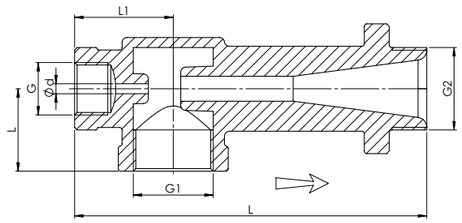
Description

Industrial ejector.



Part	Material
Body	Bronze CC491K (RG5)

DN	Min. working pressure (bar)	Max. working pressure (bar)
15-25	2	12,5



DN	Connection	Pressure rating	L	L1	L2	D	d1	Kg
15	G 1/2”	PN 12,5	144	40	34	G 1”	4	0,7
20	G 3/4”	PN 12,5	190	50	48	G 1 1/2”	6	1,4
25	G 1”	PN 12,5	203	58	59	G 2”	7,5	2,5

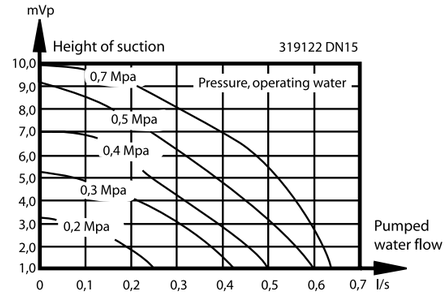
All measurements in mm. Weights are approximations.

Ejector - Table of flow capacity
319122

Mpa is pressure above atmosperic.
0,01 Mpa backpressure in the outlet.

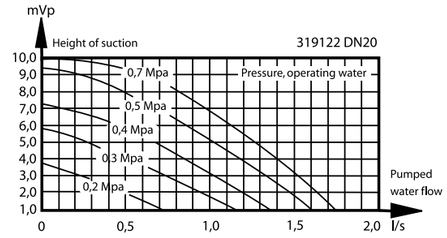
DN 15

Volume operation water	
Mpa	l/s
0,2	0,177
0,3	0,205
0,4	0,227
0,5	0,249
0,7	0,287



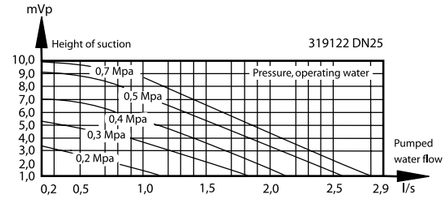
DN 20

Volume operation water	
Mpa	l/s
0,2	0,398
0,3	0,461
0,4	0,511
0,5	0,560
0,7	0,646



DN 25

Volume operation water	
Mpa	l/s
0,2	0,623
0,3	0,722
0,4	0,799
0,5	0,876
0,7	1,010



Pneumatic actuator, single acting
761100

Description

Pneumatic quarter turn actuator.
Body and end cap in aluminium, bolts in stainless steel AISI304.

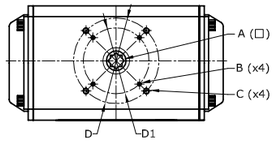
Option

Spring return.

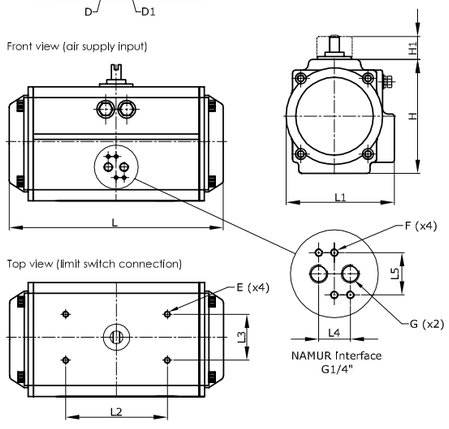
No.	Part	Material
1	Actuator	Aluminium



Bottom view (valve connection)



Front view (air supply input)



Top view (limit switch connection)

Model	A	B (x4)	C (x4)	D	D1	E/F (x4)	G (x2)	H	H1	L	L1	L2	L3	L4	L5	Kg
52SR	11	M5X8	M6x10	50 (F05)	36 (F03)	M5x8	G 1/4”	72	20	147	71,5	80	30	24	32	1,5
63SR	14	M6x10	M8x13	70 (F07)	50 (F05)	M5x8	G 1/4”	88	20	168	83	80	30	24	32	2,1
75SR	14	M6x10	M8x13	70 (F07)	50 (F05)	M5x8	G 1/4”	100	20	184	95	80	30	24	32	2,9
83SR	17	M6x10	M8x13	70 (F07)	50 (F05)	M5x8	G 1/4”	109	20	204	103	80	30	24	32	3,6
92SR	17	M6x10	M8x13	70 (F07)	50 (F05)	M5x8	G 1/4”	117	20	262	108,5	80	30	24	32	5,2
105SR	22	M8x13	M10x16	102 (F10)	70 (F07)	M5x8	G 1/4”	133	20	268	121,5	80	30	24	32	6,9
125SR	22	M8x13	M10x16	102 (F10)	70 (F07)	M5x8	G 1/4”	155	20	301	112	80	30	24	32	10
140SR	27	M10x16	M12x20	125 (F12)	102 (F10)	M5x8	G 1/4”	172	20	390	152	80	30	24	32	16

All measurements in mm. Weights are approximations.

Model	A	B (x4)	C (x4)	D	D1	E/F (x4)	G (x2)	H	H1	L	L1	L2	L3	L4	L5	Kg
160SR	27	M10x16	M12x20	125 (F12)	102 (F10)	M5x8	G 1/4”	197	20	458	174	80	30	24	32	24
190SR	36		M16x25	140 (F14)		M5x8	G 1/4”	230	30	525	206	130	30	24	32	35
210SR	36		M16x25	140 (F14)		M5x8	G 1/4”	255	30	532	226	130	30	24	32	55
240SR	46		M20x25	165 (F16)		M5x8	G 1/4”	289	30	602	260	130	30	24	32	80
270SR	46		M20x25	165 (F16)		M5x8	G 1/4”	326	30	722	294	130	30	24	32	118

All measurements in mm. Weights are approximations.

Output torque spring return pneumatic actuators (Nm)																			
Air pressure (bar)																		Springs output	
Model	Spring quantity	2,5		3		4		5		6		7		8					
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
5,7	5	5,7	3,8	7,6	5,7											6,2	4,3
	6	4,9	2,5	6,9	4,5	10,9	8,5									7,4	5,0
	7	4,0	1,3	6,0	3,3	9,8	7,3	14,0	10,4							8,6	5,9
	8			5,2	2,0	9,2	6,0	13,2	9,1	17,2	14,1					9,9	6,7
	9			4,3	0,8	8,3	4,8	12,3	7,9	16,3	12,8	20,3	16,8			11,1	7,6
	10					7,4	3,6	11,5	6,7	15,5	11,6	19,5	15,6			12,4	8,5
	11					6,6	2,3	10,6	5,4	14,6	10,4	18,6	14,3	22,6	18,3	13,6	9,3
	12							9,7	4,2	13,8	9,1	17,8	12,2	21,8	17,1	14,8	10,2
63SR	5	11,4	7,7	15,0	11,4	22,3	14,9									10,4	6,8
	6	10,1	5,7	13,6	9,3	20,9	16,6	28,3	23,9							12,5	8,2
	7	8,6	3,6	12,5	7,2	19,5	14,5	26,8	21,9							14,6	9,6
	8			10,9	5,1	18,2	12,4	25,5	19,8	32,8	27,0	40,1	34,3			16,7	10,9
	9					16,8	10,4	24,1	17,7	31,4	24,9	38,7	32,2			18,8	12,3
	10					1,4	8,2	22,8	15,6	30,0	22,8	37,3	30,1	44,7	37,4	20,9	13,7
	11							21,5	13,5	28,7	20,7	36,0	28,0	43,3	35,3	22,9	15,0
	12							20,0	11,4	27,3	18,6	34,6	25,9	41,9	33,3	25,0	16,4
75SR	5	14,5	10,6	19,4	15,5	29,5	25,7									14,5	10,5
	6	12,4	7,6	17,3	12,6	27,4	22,7	37,5	32,8							17,4	12,7
	7	10,4	4,8	15,2	9,7	25,3	19,9	35,4	29,9							20,3	14,8
	8			13,1	6,8	23,1	16,9	33,3	27,0	43,2	37,0	53,3	47,0			23,2	16,9
	9					21,0	14,1	31,2	24,1	41,1	34,1	51,2	44,2			26,1	19,0
	10					19,0	11,1	28,8	21,2	39,0	31,2	49,1	41,2	59,1	51,2	29,0	21,1
	11							27,0	18,3	37,0	28,3	47,0	38,4	57,0	48,4	31,9	23,2
	12							24,9	15,4	34,9	25,4	44,9	35,4	54,9	45,4	34,7	25,3

Output torque spring return pneumatic actuators (Nm)																	
Air pressure (bar)																Springs output	
Model	Spring quantity	2,5		3		4		5		6		7		8			
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
83SR	5	23,3	16,1	31,1	24,0	46,8	39,7									23,0	15,8
	6	20,1	11,5	28,0	19,3	43,7	35,1	59,4	50,7							27,6	19,0
	7	17,0	6,9	24,8	14,8	40,5	30,5	56,2	46,2							32,2	22,1
	8			21,7	10,1	37,4	25,8	53,1	41,5	68,8	57,2	84,5	72,9			36,8	25,3
	9					34,2	21,3	49,9	37,0	65,6	52,6	81,2	68,3			41,4	28,5
	10					31,0	16,6	46,7	32,3	62,4	48,0	78,1	63,7	93,8	79,3	46,0	31,6
	11							43,6	27,7	59,3	43,4	75,0	59,1	90,6	74,8	50,6	34,8
	12							40,4	23,2	56,1	38,9	71,7	54,5	87,4	70,2	55,2	38,0
92SR	5	33,1	22,0	44,2	33,2	66,8	55,9									34,4	23,3
	6	28,4	15,2	39,6	26,4	62,2	49,0	84,8	71,6							41,2	28,0
	7	23,8	8,2	34,9	19,4	57,5	42,1	80,2	64,7							48,1	32,7
	8			31,3	12,6	52,9	35,2	75,5	57,9	98,1	80,5	120,7	103,0			55,0	37,3
	9					48,2	28,4	70,9	51,0	93,5	73,6	116,0	96,1			61,9	42,0
	10					43,6	21,5	66,2	44,1	88,8	66,7	111,3	89,2	134,0	111,8	68,7	46,7
	11							61,5	37,2	54,1	59,9	106,6	82,4	129,2	105,0	75,6	51,4
	12							56,8	30,4	79,4	53,0	101,9	75,5	124,5	98,1	82,5	56,0
105SR	5	51,0	33,4	67,5	49,9	100,6	83,0									49,2	31,6
	6	44,7	23,5	61,1	40,0	94,2	73,2	127,3	106,2							59,1	38,0
	7	38,4	13,7	54,9	30,3	87,9	63,4	121,0	96,4							68,9	44,3
	8			48,5	20,4	81,6	53,5	114,7	86,5	147,7	119,6	180,8	152,7			78,7	50,6
	9					75,3	43,7	108,4	76,8	141,5	109,8	174,5	142,9			88,6	56,9
	10					68,9	33,4	102,0	66,5	135,1	99,6	168,2	132,6	201,2	165,7	98,4	63,3
	11							95,7	57,0	128,7	90,1	161,8	123,1	194,8	156,2	108,3	69,6
	12							89,4	47,5	122,5	80,6	155,5	113,6	188,6	146,7	118,1	75,9
125SR	5	73	47	98	72	148	122									79,0	52,0
	6	63	31	88	56	138	107	188	157							94,0	63,0
	7	52	15	77	40	127	90	178	141							110,0	73,0
	8			67	25	117	75	167	125	217	176	268	226			125,0	84,0
	9					107	59	157	109	207	159	257	210			141,0	94,0
	10					96	44	146	94	196	144	247	194	297	245	157,0	105,0
	11							136	78	186	128	236	178	286	228	173,0	115,0
	12							125	63	176	113	226	163	276	213	188,0	125,0
140SR	5	128	85	171	127	256	213									129,0	86,0
	6	111	59	154	102	239	187	325	273							155,2	103,0
	7	94	33	137	76	222	162	308	247							181,0	120,0
	8			120	50	205	136	291	221	376	307	462	392			206,0	137,0
	9					187	110	273	196	358	281	444	367			232,0	155,0
	10					170	84	256	169	341	255	427	340	512	426	258,0	172,0
	11							238	143	324	229	409	314	495	400	284,0	189,0
	12							221	118	307	203	392	289	478	374	310,0	206,0

Output torque spring return pneumatic actuators (Nm)																	
Air pressure (bar)																Springs output	
Model	Spring quantity	2,5		3		4		5		6		7		8			
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
160SR	5	193	124	259	191	392	324									208,0	140,0
	6	165	83	232	149	365	282	498	415							250,0	168,0
	7	137	41	203	107	336	240	469	373							292,0	196,0
	8			176	66	309	199	442	237	575	465	708	598			333,0	223,0
	9					280	157	413	290	546	423	679	556			375,0	251,0
	10					253	115	386	248	519	381	652	514	785	647	417,0	279,0
	11							358	207	491	340	624	473	757	606	458,0	307,0
	12							330	165	463	298	596	431	729	564	500,0	335,0
190SR	5	332	222	438	329	651	542									309,0	200,0
	6	292	161	398	267	611	480	824	693							371,0	240,0
	7	252	99	358	205	571	518	784	631							433,0	280,0
	8			318	143	531	356	744	569	957	782	1169	995			495,0	320,0
	9					491	295	704	507	917	720	1130	933			557,0	360,0
	10					451	233	664	446	877	658	1090	871	1302	1084	618,0	400,0
	11							624	384	837	597	1050	809	1263	1022	680,0	440,0
	12							584	322	797	535	1010	748	1223	960	742,0	480,0
210SR	5	390	285	523	418	789	684									380,0	275,0
	6	335	209	468	342	734	608	1000	874							456,0	330,0
	7	280	133	413	266	679	532	945	798							532,0	385,0
	8			358	190	624	456	890	722	1156	988	1422	1254			608,0	440,0
	9					569	380	835	646	1101	912	1367	1178			684,0	495,0
	10					514	304	780	570	1046	836	1312	1102	1578	1368	760,0	550,0
	11							725	494	991	760	1257	1026	1523	1292	836,0	605,0
	12							670	418	936	684	1202	950	1468	1216	912,0	660,0
240SR	5	552	409	744	600	1129	985									554,0	410,0
	6	470	297	662	489	1047	874	1432	1259							665,0	492,0
	7	388	187	580	379	964	764	1349	1149							775,0	575,0
	8			498	268	883	653	1267	1037	1652	1422	2037	1807			886,0	656,0
	9					800	542	1185	926	1569	1311	1954	1696			998,0	739,0
	10					718	431	1103	816	1488	1201	1872	1586	2257	1970	1108,0	821,0
	11							1021	705	1406	1090	1791	1474	2176	1859	1219,0	903,0
	12							939	594	1323	979	1708	1363	2093	1748	1330,0	985,0
270SR	5	903	675	1195	968	1779	1552									787,0	560,0
	6	790	519	1083	811	1667	1396	2252	1981							943,0	672,0
	7	679	361	972	654	1556	1238	2141	1823							1101,0	783,0
	8			860	497	1444	1081	2029	1666	2614	2252	3199	2836			1258,0	895,0
	9					1332	923	1917	1509	2502	2094	3087	2678			1416,0	1007,0
	10					1220	767	1805	1352	2390	1937	2974	2521	3560	3107	1572,0	1119,0
	11							1693	1194	2278	1779	2862	2364	3448	2949	1730,0	1231,0
	12							1582	1037	2167	1623	2751	2207	3336	2792	1887,0	1342,0

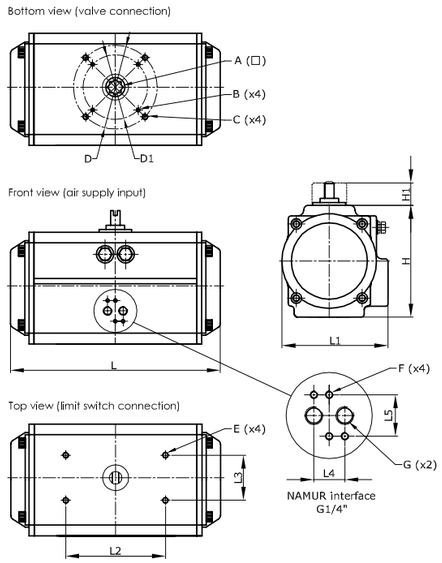
Pneumatic actuator, double acting
761000

Description

Pneumatic quarter turn actuator.
Body and end cap in aluminium, bolts in stainless steel AISI304.

No.	Part	Material
1	Actuator	Aluminium





Model	A	B (x4)	C (x4)	D	D1	E/F (x4)	G (x2)	H	H1	L	L1	L2	L3	L4	L5	Kg
52DA	11	M5X8	M6x10	50 (F05)	36 (F03)	M5x8	G 1/4”	72	20	147	71,5	80	30	24	32	1,4
63DA	14	M6x10	M8x13	70 (F07)	50 (F05)	M5x8	G 1/4”	88	20	168	83	80	30	24	32	2
75DA	14	M6x10	M8x13	70 (F07)	50 (F05)	M5x8	G 1/4”	100	20	184	95	80	30	24	32	2,7
83DA	17	M6x10	M8x13	70 (F07)	50 (F05)	M5x8	G 1/4”	109	20	204	103	80	30	24	32	3,1
92DA	17	M6x10	M8x13	70 (F07)	50 (F05)	M5x8	G 1/4”	117	20	262	108,5	80	30	24	32	4,6
105DA	22	M8x13	M10x16	102 (F10)	70 (F07)	M5x8	G 1/4”	133	20	268	121,5	80	30	24	32	6,8
125DA	22	M8x13	M10x16	102 (F10)	70 (F07)	M5x8	G 1/4”	155	20	301	112	80	30	24	32	8,9
140DA	27	M10x16	M12x20	125 (F12)	102 (F10)	M5x8	G 1/4”	172	20	390	152	80	30	24	32	13

All measurements in mm. Weights are approximations.

Revision 1

Model	A	B (x4)	C (x4)	D	D1	E/F (x4)	G (x2)	H	H1	L	L1	L2	L3	L4	L5	Kg
160DA	27	M10x16	M12x20	125 (F12)	102 (F10)	M5x8	G 1/4”	197	20	458	174	80	30	24	32	20
190DA	36		M16x25	140 (F14)		M5x8	G 1/4”	230	30	525	206	130	30	24	32	31
210DA	36		M16x25	140 (F14)		M5x8	G 1/4”	255	30	532	226	130	30	24	32	47
240DA	46		M20x25	165 (F16)		M5x8	G 1/4”	289	30	602	260	130	30	24	32	67
270DA	46		M20x25	165 (F16)		M5x8	G 1/4”	326	30	722	294	130	30	24	32	97

All measurements in mm. Weights are approximations.

Output torque double acting pneumatic actuators (Nm)										
Model	Air pressure (bar)									
	2	2,5	3	4	4,5	5	5,5	6	7	8
52DA	8,0	10,0	12,0	16,0	18,0	20,0	21,9	23,9	27,9	31,9
63DA	14,6	18,2	21,9	29,2	32,8	36,5	40,1	43,8	51,1	58,4
75DA	20,1	25,1	30,1	40,1	45,1	50,2	55,2	60,2	70,2	80,3
83DA	31,4	39,2	47,0	62,7	70,5	78,4	86,2	94,1	109,7	125,4
92DA	45,1	56,4	67,7	90,3	101,6	112,9	124,1	135,4	158,0	180,6
105DA	66,1	82,7	99,2	132,2	148,8	165,3	181,8	198,4	231,4	264,5
125DA	100,3	125,4	150,5	200,6	225,7	250,8	275,9	301,0	351,1	401,3
140DA	171,0	213,8	256,5	342,0	384,8	427,5	470,3	513,0	598,5	684,0
160DA	266,0	332,5	399,0	532,0	598,5	665,0	731,5	798,0	931,0	1064,0
190DA	425,6	532,0	638,4	851,2	957,6	1064,0	1170,4	1276,8	1489,6	1702,4
210DA	532,0	665,0	798,0	1064,0	1197,0	1330,0	1463,0	1596,0	1862,0	2128,0
240DA	769,5	961,9	1154,3	1539,0	1731,4	1923,8	2116,1	2308,5	2693,3	3078,0
270DA	1169,6	1462,1	1754,5	2339,3	2631,7	2924,1	3216,5	3508,9	4093,7	4678,6

Hydraulic and electric actuators
762000, 762100, 763000

Hydraulic actuators

LK Valves offers a wide range of hydraulic actuators for a number of applications fields, quarter turn or multi turns. Please contact us for more detailed information.

Variants

- Single actuating quarter turn actuators
- Double acting quarter turn actuators
- Multi turn actuators
- Linear actuators
- Power packs

Electric actuators

LK Valves offers a wide range of electric actuators for a number of applications fields, quarter turn or multi turns. Please contact us for more detailed information.





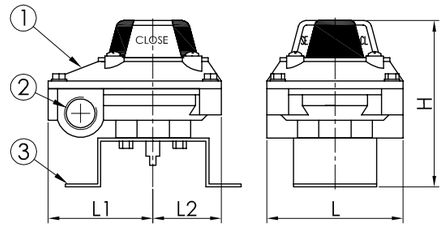
Limit switch box

Description

Visual indicator and limit switch box for pneumatic actuators (761000 and 761100).

No.	Part	Material
1	Box cover	Aluminium
2	Box body	Aluminium
3	Bracket	Carbon steel Polyester powder coated





L	L1	L2	H	Kg
110	79	53	153,5	1,4

All measurements in mm. Weights are approximations.

Solenoid valve

Description

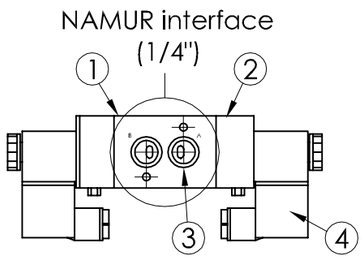
5/2 Solenoid valve with Namur interface. Direct fit to pneumatic actuators (761000 and 761100).

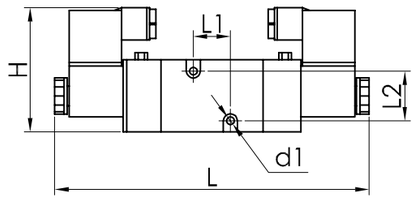
Variants

3/2 Solenoid valve with Namur interface.

No.	Part	Material
1	Valve body	Aluminium
2	Plunger	Plastic
3	O-ring	NBR
4	Junction box	Plastic







G	d1	L	L1	L2	L3	L4	H	Kg
1/4” (x3)	5,5	193	24	32	27	45	69	0,3

All measurements in mm. Weights are approximations.

Technical information

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Units table

SI-system

Quantity	Unit symbol	Name
Length	m	metre
Mass	kg	kilogram
Time	s	second
Temperature	K	kelvin
Luminous intensity	cd	candela
Area	m^2	square meter
Volume	m^3	cubic meter
Frequency	Hz (1/s)	hertz
Speed	m/s	
Acceleration	m/s^2	
Density	kg/m^3	
Pressure	Pa	pascal
Viscosity	m^2/s	
Energy	J	joule
Power	W	watt
Strength	N	newton

SI prefix

10n	Prefix	Symbol	Short scale	Long scale	Decimal
10^{24}	yotta	Y	Septillion	Quadrillion	1000000000000000000000000
10^{21}	zetta	Z	Sextillion	Trilliard	1000000000000000000000
10^{18}	exa	E	Quintillion	Trillion	1000000000000000000
10^{15}	peta	P	Quadrillion	Billiard	1000000000000000
10^{12}	tera	T	Trillion	Billion	1000000000000
10^{9}	giga	G	Billion	Milliard	1000000000
10^{6}	mega	M	Million		1000000
10^{3}	kilo	k	Thousand		1000
10^{2}	hecto	h	Hundred		100
10^{1}	deca	da	Ten		10
10^{-1}	deci	d	Tenth		0.1
10^{-2}	centi	c	Hundredth		0.01
10^{-3}	milli	m	Thousandth		0.001
10^{-6}	micro	µ	Millionth		0.000001
10^{-6}	nano	n	Billionth	Milliardth	0.000000001
10^{-12}	pico	p	Trillionth	Billionth	0.000000000001
10^{-15}	femto	f	Quadrillionth	Billiardth	0.000000000000001
10^{-18}	atto	a	Quintillionth	Trillionth	0.000000000000000001
10^{-21}	zepto	z	Sextillionth	Trilliardth	0.000000000000000000001
10^{-24}	yocto	y	Septillionth	Quadrillionth	0.000000000000000000000001

The long and short scales are two of several different large number naming systems used throughout the world.

Pressure

Bar	m vp	psi	MPa	mmHg	kp/cm²
1	10,20	14,50	0,1	750,06	0,020
0,098	1	1,42	0,01	73,556	0,1
0,06895	0,70307	1	0,0069	51,715	0,07031
10	101,972	145,038	1	7501,87	10,1972
0,0013	0,0136	0,0193	0,00013	1	0,0014
0,981	10	14,223	0,098	735,56	1

Volume

m³	in³	uk gallon	us gallon	GRT (register ton)
1	61024	219,97	264,17	0,3534
16,387µ	1	0,0036	0,0043	5,79µ
0,0045	277,42	1	1,201	0,0016
0,00378	231	0,832268	1	0,0013
2,83	172698	622,5	747,6	1

Mass

kg	lb	oz
1	2,2046	35,274
0,435359	1	16
0,0284	0,0625	1

Density

kg/m³	lb/in³
1	36,127µ
27680	1

Speed

m/s	km/h	mile/h	nautic mile/h (knots)
1	3,6	2,2369	1,9438
0,2778	1	0,62137	0,53996
0,44704	1,6093	1	0,86898
0,51444	1,852	1,1508	1

Energy

J	KWh	kpm	kcal
1	0,27778µ	0,10197	0,00024
3600000	1	0,37610µ	859,85
9,8066	2,7241µ	1	0,0023
4186,8	0,0012	426,94	1
1,3558	0,37662µ	0,13826	0,00032
1055,1	0,00029	107,59	0,252

Power

W	kpm/s	kcal/s	hp(M) (metric horsepower)	hp(I) (mechanical horsepower)
1	0,10197	0,00024	0,00136	0,001341
9,8066	1	0,0023	0,0133	0,01315
4186,8	426,94	1	5,6925	5,6146
735,5	75	0,17567	1	0,98632
745,7	76,04	0,17811	1,0139	1

Force

N	kp (kgf)	lbf (poundforce)
1	0,10197	0,22481
9,8066	1	2,2046
4,4482	0,45359	1

Torque

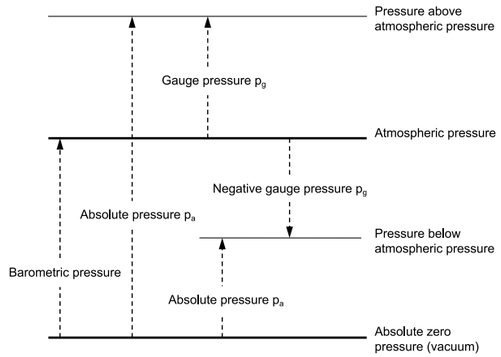
Nm	kpm	lbf*in
1	0,10197	8,85
9,8066	1	86,796
0,11299	0,0115	1

Pressure

Definition: Pressure is force F per unit area A.

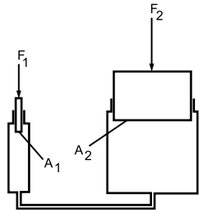
$$P = \frac{F}{A}$$

P= Pascal (Pa)
F= Newton (N)
A= Square meter (m^2)



Principal for hydraulic pressure

In an ideal fluid the pressure is equal in all points and all direction.

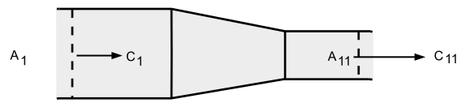


$$P = \frac{F1}{A1} = \frac{F2}{A2}$$

this gives

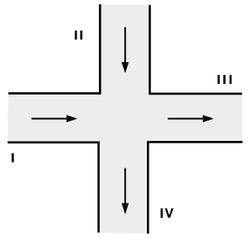
$$F2 = F1 \cdot \frac{A2}{A1}$$

Principal of continuity



In a incompressible fluid $Q = C_I \cdot A_I = C_{II} \cdot A_{II}$

Q= flow (m^3/s)
C= flow velocity (m/s)
A= cross section (m^2)



$Q_1+Q_2=Q_3+Q_4$

Bernoulli's equation

Total pressure = static pressure + dynamic pressure + height pressure = constant

Total pressure:

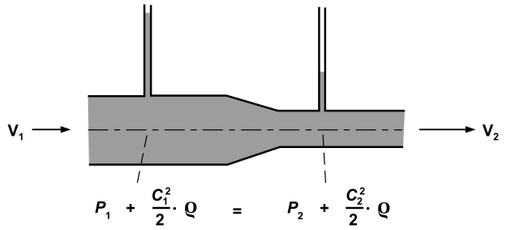
$$P + \frac{1}{2}\varrho C^2 + \varrho gh = \text{constant}$$

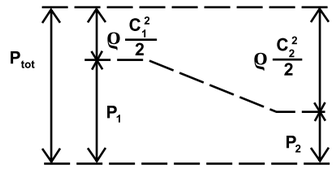
An increase in flow velocity and thus in dynamic pressure will lead to a decrease in static pressure.

P = static pressure (N/m^2)

ϱ = density of the fluid (kg/m^3)

C = flow velocity (m/s)

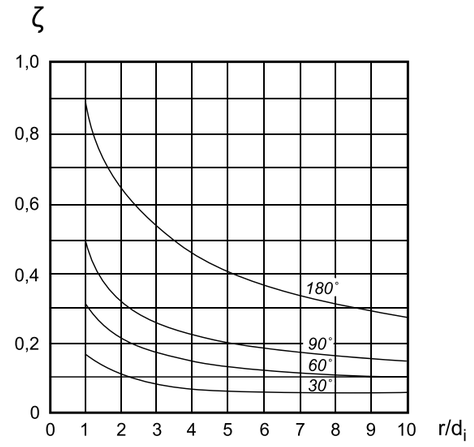




(NB! In this example h1=h2, horizontal)

Pressure loss

There are a number of causes for loss of pressure in a piping system e.g. bends or reducers.



Pressure loss in pipe bends

$$\Delta p = \zeta \cdot \frac{C^2}{2} \cdot \varrho$$

Δp = pressure loss (PA)

ζ = resistance coefficient

C = flow velocity

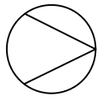
ϱ = density

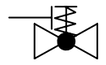
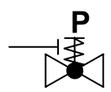
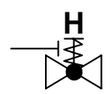
r = radius

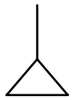
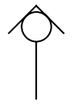
d_i = inner diameter

Description of symbols

Symbol	Description
	Butterfly valve
	Butterfly valve - Electric actuator
	Butterfly valve - Hydraulic actuator
	Butterfly valve - Pneumatic actuator
	Butterfly valve - Manual operated
	Screw down valve - non return (angle)
	Screw down valve - non return (straight)
	Globe valve - manual operated (angle)
	Globe valve - manual operated (straight)

Symbol	Description
	Airfilter
	Strainer
	Reducing valve
	Flowmeter
	Pump
	Gate valve - manual operated
	Gate valve - hydraulic actuator
	Ball valve - manual operated
	Ball valve/Three way valve - manual operated

Symbol	Description
	Quick closing valve - wire operated
	Quick closing valve - pneumatic operated
	Quick closing valve - hydraulic operated
	Check valve (straight)
	Check valve (angle)
	Swing check valve
	Self closing valve
	Needle valve/Flow control valve
	Reducer

Symbol	Description
	Heat exchanger
	Flow direction
	Sight glass
	Swan neck
	Suction strum
	Vent. valve
NC	Normally closed
NO	Normally open
	Remote sounding

Symbol	Description
	Manual sounding with cap (type A)
	Manual sounding - Short sounding pipe (type B)
	Manual sounding - Short sounding pipe (type C)
	Pipe going up
	Pipe going down
	Pipe going up & down
	Flexible pipe
TI	Temperature indicator
TT	Temperature transmitter

Symbol	Description
FI	Flow indicator
PI	Pressure indicator
PT XX	Pressure transmitter
LAL XX	Level alarm low
LAH XX	Level alarm high

Flowdata and capacities for valves

Capacity of valves

The capacity of a valve is indicated by its Kv-value. This indicates the flowrate through a fully open valve measured in m3/h with a pressure drop of 1 bar. The Kv-value is a calculated from the following formula:

$$K_V = \frac{q \cdot \sqrt{\varrho}}{\sqrt{\Delta p}}$$

K_v = Capacity value

q = Flowrate, m^3/h

$\Delta p = p_1 - p_2$ pressure drop through the valve, measured in bar

ϱ = density of the medium, kg/dm^3 (= 1 for water)

There is also a valve-coefficient which is based on the SI-system. This coefficient is designated Av.

$$A_V = \frac{q \cdot \sqrt{\varrho}}{\sqrt{\Delta p}}$$

Av = The valve coefficient m^3

q = Flowrate, m^3/h

Δp = Pressure drop Pa

ϱ = Density of the medium, kg/dm^3

Conversion to Kv is done by the following formula:

$$K_V = A_V \cdot 3{,}6 \cdot 10^4$$

Within the process industry, the American valve coefficient Cv is often used. This is based on American values.

$$C_V = \frac{q}{\sqrt{\Delta p}}$$

Cv = The valve coefficient

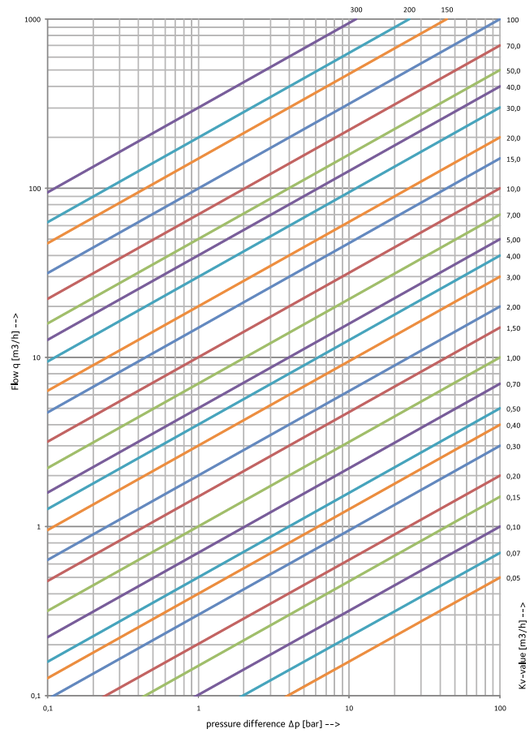
q = Flowrate, US gall/min

Δp = Pressure drop pounds per square inch (psi)

Conversion to Cv is done by the following formula:

$$C_V = 1{,}17 \cdot K_V$$

Diagram kv-value (water)



Calculating formulas for valve dimensioning

		Calculation of kv-value kv (m³/h)	Calculation of flowrate Q (m³/h) G (kg/h)	Calculation of pressure drop Δp (bar)
Liquids		$kv = Q \cdot \sqrt{\frac{\varrho}{\Delta p}}$	$Q = kv \cdot \sqrt{\frac{\Delta p}{\varrho}}$	$\Delta p = \varrho \cdot \left(\frac{Q}{kv}\right)^2$
Gases	Subcritical $p_2 > \frac{p_1}{2}$ $\Delta p < \frac{p_1}{2}$	$kv = \frac{Qn}{514} \cdot \sqrt{\frac{\varrho n \cdot T_1}{\Delta p \cdot p_2}}$	$Qn = 514 \cdot kv \cdot \sqrt{\frac{\Delta p \cdot p_2}{\varrho n \cdot T_1}}$	$\Delta p = \frac{\varrho n \cdot T_1 \cdot Qn^2}{p_2 \cdot (kv \cdot 514)^2}$
	Supercritical $p_2 > \frac{p_1}{2}$ $\Delta p < \frac{p_1}{2}$	$kv = \frac{Qn}{257 \cdot p_1} \cdot \sqrt{\varrho n \cdot T_1}$	$Qn = 257 \cdot kv \cdot p_1 \cdot \frac{1}{\sqrt{\varrho n \cdot T_1}}$	
Steam	Subcritical $p_2 > \frac{p_1}{2}$ $\Delta p < \frac{p_1}{2}$	$kv = \frac{G}{31,6} \cdot \sqrt{\frac{V_2}{\Delta p}}$	$G = 31,6 \cdot kv \cdot \sqrt{\frac{\Delta p}{V_2}}$	$\Delta p = \left(\frac{G}{kv}\right)^2 \cdot \frac{V_2}{1000}$
	Supercritical $p_2 > \frac{p_1}{2}$ $\Delta p < \frac{p_1}{2}$	$kv = \frac{G}{31,6} \cdot \sqrt{\frac{2 \cdot V^*}{p_1}}$	$G = 31,6 \cdot kv \cdot \sqrt{\frac{p_1}{2 \cdot V^*}}$	
Air 20°C, $\varrho \approx 1,29$ kg/m³	Subcritical	$kv = \frac{Qn}{\sqrt{\Delta p \cdot p_2 \cdot 26,4}}$	$Qn = 26,4 \cdot kv \cdot \sqrt{\Delta p \cdot p_2}$	$\Delta p = \left(\frac{Qn}{kv}\right)^2 \cdot \frac{1}{p_2 \cdot 699}$
	Supercritical	$kv = \frac{Qn}{p_1 \cdot 13,2}$	$Qn = kv \cdot p_1 \cdot 13,2$	

kv	m³/h	Capacity value for valve
Q	m³/h	Flowrate
Qn	m^3_n/h	Normal flow for gases (0°C 760 mm Hg)
p1	bar (abs)	Pressure before valve
p2	bar (abs)	Pressure after valve
Δp	bar	Pressure drop through valve
G	kg/h	Steamflow
ϱ	kg/dm³	Density for liquids
ϱn	kg/m³	Density for gases
t1	°C	Mediumtemperature before valve
T1	K	Absolute mediumtemperature before valve (273+t_1)
v2	m³/kg	Spec. volume (from steamtable) for condition p2 and t1
v*	m3/kg	Spec. volume (from steamtable) for condition p1 and t1

Kv-value indicates the flowrate of water through the valve (m³/h) with a pressure drop of 1 bar and a temperature between +5 and +30°C.

Saturated steam

Gauge pressure (overpressure)		Absolute pressure		Tempe-rature	Specific volume	Density	Specific enthalpy of			Specific entropy of steam
							Liquid	Evaporation	Steam	
- p_g -	- p_g -	- p_a -	- p_a -	- T -	- v_g -	- ϱ -	- h_l -	- h_e -	- h_s -	- s -
bar	kPa	bar	kPa	°C	m³/kg	kg/m³	kJ/kg	kJ/kg	kJ/kg	kJ/kgK
		0,008	0,80	3,8	160	0,00626	15,8	2493	2509	9,058
		0,02	2	17,5	67	0,0149	73,5	2460	2534	8,725
		0,05	5	32,9	28,2	0,0354	137,8	2424	2562	8,396
		0,1	10	45,8	14,7	0,0682	191,8	2393	2585	8,151
		0,2	20	60,1	7,65	0,131	251,5	2358	2610	7,909
		0,28	28	67,5	5,58	0,179	282,7	2340	2623	7,793
		0,35	35	72,7	4,53	0,221	304,3	2327	2632	7,717
		0,45	45	78,7	3,58	0,279	329,6	2312	2642	7,631
		0,55	55	83,7	2,96	0,338	350,6	2299	2650	7,562
		0,65	65	88	2,53	0,395	368,6	2288	2657	7,506
		0,75	75	91,8	2,22	0,45	384,5	2279	2663	7,457
		0,85	85	95,2	1,97	0,507	398,6	2270	2668	7,415
		0,95	95	98,2	1,78	0,563	411,5	2262	2673	7,377
0	0	1	100	99,6	1,69	0,59	417,5	2258	2675	7,36
0,0133	1,33	1,0133	101,33	100	1,67	0,598	419,1	2257	2676	7,355
0,1	10	1,1	110	102,3	1,55	0,646	428,8	2251	2680	7,328
0,3	30	1,3	130	107,1	1,33	0,755	449,2	2238	2687	7,271
0,5	50	1,5	150	111,4	1,16	0,863	467,1	2226	2698	7,223
0,7	70	1,7	170	115,2	1,03	0,97	483,2	2216	2699	7,181
0,9	90	1,9	190	118,6	0,929	1,08	497,8	2206	2704	7,144
1,2	120	2,2	220	123,3	0,81	1,23	517,6	2193	2711	7,095
1,6	160	2,6	260	128,7	0,693	1,44	540,9	2177	2718	7,039
1,8	180	2,8	280	131,2	0,646	1,55	551,4	2170	2722	7,014
2,2	220	3,2	320	135,8	0,57	1,75	570,9	2157	2728	6,969
2,6	260	3,6	360	139,9	0,51	1,96	588,5	2144	2733	6,93
3	300	4	400	143,1	0,462	2,16	604,7	2133	2738	6,894
3,4	340	4,4	440	147,1	0,423	2,36	619,6	2122	2742	6,862
3,8	380	4,8	480	150,3	0,389	2,57	633,5	2112	2746	6,833
4	400	5	500	151,8	0,375	2,67	640,1	2107	2748	6,819
4,5	450	5,5	550	155,5	0,342	2,92	655,8	2096	2752	6,787
5	500	6	600	158,8	0,315	3,175	670,4	2085	2756	6,758
5,5	550	6,5	650	162	0,292	3,425	684,1	2075	2759	6,73
6	600	7	700	165	0,273	3,66	697,1	2065	2762	6,705
6,5	650	7,5	750	167,8	0,255	3,915	709,3	2056	2765	6,682
7	700	8	800	170,4	0,24	4,16	720,9	2047	2768	6,66
7,5	750	8,5	850	172,9	0,229	4,41	732	2038	2770	6,639
8	800	9	900	175,4	0,215	4,65	742,6	2030	2772	6,619
8,5	850	9,5	950	177,7	0,204	4,9	752,8	2021	2774	6,601
9	900	10	1000	179,9	0,194	5,15	762,6	2014	2776	6,583

Gauge pressure (overpressure)		Absolute pressure		Tempe-rature	Specific volume	Density	Specific enthalpy of			Specific entropy of steam
							Liquid	Evaporation	Steam	
- p_g -	- p_g -	- p_a -	- p_a -	- T -	- v_g -	- ϱ -	- h_l -	- h_e -	- h_s -	- s -
9,5	950	10,5	1050	182	0,186	5,39	772	2006	2778	6,566
10,5	1050	11,5	1150	186	0,17	5,89	790	1991	2781	6,534
11,5	1150	12,5	1250	189,8	0,157	6,38	807	1977	2784	6,505
12	1200	13	1300	191,6	0,151	6,62	815	1971	2785	6,491
14	1400	15	1500	198,3	0,132	7,59	845	1945	2790	6,441
15	1500	16	1600	201,4	0,124	8,03	859	1933	2792	6,418
17	1700	18	1800	207,1	0,11	9,07	885	1910	2795	6,375
19	1900	20	2000	212,4	0,0995	10,01	909	1889	2797	6,337
20	2000	21	2100	214,9	0,0945	10,54	920	1878	2798	6,319
22	2200	23	2300	219,6	0,0868	11,52	942	1858	2800	6,285
23	2300	24	2400	221,8	0,0832	12,02	952	1849	2800	6,269
25	2500	26	2600	226	0,0769	13,01	972	1830	2801	6,239
26	2600	27	2700	228,1	0,074	13,52	981	1821	2802	6,224
28	2800	29	2900	232	0,0689	14,52	1000	1803	2802	6,197
29	2900	30	3000	233,8	0,0666	15	1008	1794	2802	6,184
31	3100	32	3200	237,4	0,0624	16,02	1025	1779	2802	6,158
33	3300	34	3400	240,9	0,0587	17,04	1042	1760	2802	6,134
35	3500	36	3600	244,2	0,0554	18,06	1058	1744	2802	6,112
37	3700	38	3800	247,3	0,0524	19,08	1073	1728	2801	6,09
39	3900	40	4000	250,3	0,0497	20,09	1087	1713	2800	6,069

Chemical symbols

Chemical symbols for significant elements

Element	Chemical symbol	Atomic number
Aluminum	Al	13
Antimony	Sb	51
Lead	Pb	82
Boron	B	5
Phosphorus	P	15
Gold	Au	79
Hydrogen	H	1
Iron	Fe	26
Calcium	Ca	20
Carbon	C	6
Chlorine	Cl	17
Cobalt	Co	27
Copper	Cu	29
Chrome	Cr	24
Mercury	Hg	80
Magnesium	Mg	12
Manganese	Mn	25
Molybdenum	Mo	42
Nickel	Ni	28
Nitrogen	N	7
Oxygen	O	8
Platinum	Pt	78
Selenium	Se	34
Silicon	Si	14
Zinc	Zn	30
Sulphur	S	16
Silver	Ag	47
Tin	Sn	50
Titanium	Ti	22
Uranium	U	92
Vanadium	V	23
Tungsten	W	74

Galvanic series in seawater

Galvanic series in seawater at 25 °C (77 °F)

Catodic

- Graphite
- Platinum
- Titanium
- INCONEL® alloy 625, 825
- Silver
- Stainless steel, type 316
- Stainless steel, type 304
- Stainless steel, type 410, 420
- Monel alloy 400
- INCONEL® alloy 600
- Nickel 200
- Copper alloy (Cu Ni 30)
- Copper alloy (Cu Zn15-35)
- INCONEL® alloy 600 (active)
- Nickel 200 (active)
- Copper alloy (Cu Zn 40)
- Copper
- Tin
- Aluminium bronze
- Stainless steel, type 316 (active)
- Stainless steel, type 304 (active)
- Stainless steel, type 410, 420 (active)
- Cast iron
- Low carbon steel
- Aluminium alloys
- Galvanized steel
- Zinc
- Magnesium alloys
- Magnesium

Anodic

NB! This list should only be used as generic indicative information.
“Active” indicates exposure to low velocity or poorly aerated water.

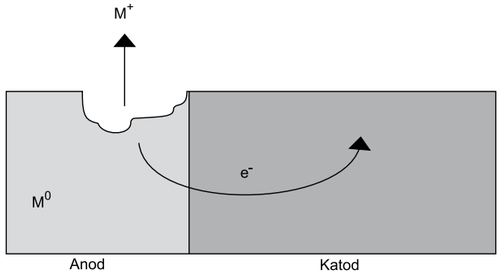
Corrosion information

Common varieties of corrosion

Corrosion is nature’s wasteful way of returning metals to their ores. The chemistry of corrosion emphasizes the basic corrosion reaction M0-> M+ electron, where M0 is the metal and M+ a positive ion of the metal. As long as the metal (M0) retains possession of its electrons, it retains its identity as a metal. When it loses possession of them by any means whatever, it has experienced corrosion. Physical forces sometimes join with chemical forces to cause failure. We now list the many common varieties of corrosion, which show up in many ways and forms and mostly overlap each other. The mechanism of corrosion resistance is attributed to the formation of a thin protective corrosion film on the metal surface.

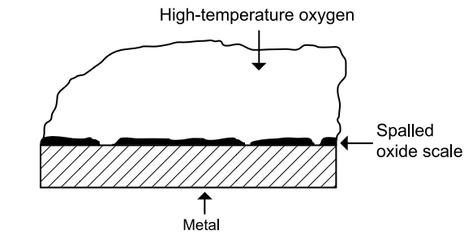
Galvanic corrosion

When two dissimilar metals are in contact and are exposed to a corrosive liquid or electrolyte, a galvanic cell is formed and the flow of current causes increased corrosion of the anodic number. The corrosion is usually localized near the point of contact. One method to minimize corrosion can be achieved by plating the dissimilar metals.



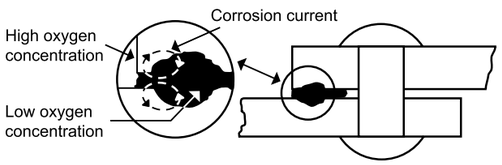
High-temperature corrosion

To predict the effect of high-temperature oxidation we need data on: (1) metal composition (2) atmosphere composition (3) temperature and (4) exposure time. So it’s not easy to tell what will happen in one case, from the results of another. But we do know that most light metals (those lighter than their oxides) form a non-protective oxide layer that gets thicker as time goes on. The layer forms, spalls and reforms. Other forms of high-temperature corrosion include sulfidation. carburization and decarburization.



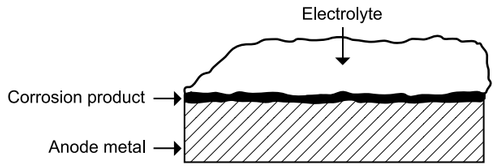
Crevice corrosion

You’ll recognize this condition by its presence in crevices. It sets up differences in solution concentration. The crevice, above, for example, hinders diffusion of oxygen. Results: High and low oxygen areas which are anodic, cause concentration cells. Metalion concentration cells, much like their oxygen counterparts, also strive to balance out concentration differences. Thus, when the solution over a metal contains more metal ions at one point than another, metal goes into solution where ion concentration is low. Crevice corrosion can be minimized by avoiding: accumulation of deposits on metal surfaces, sharp corners, gasket joints or other conditions favouring stagnate areas of solution.



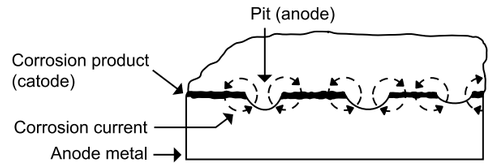
Uniform attack

Look for a general wasting away of the surface. You’ll find this condition all too common where metals are in contact with acids and other solvents. The corrosion product may form a protective layer on the metal, slowing down corrosion. Or, as in the case of direct chemical attack, the corroded material easily dissolves in the corrosive material. The problem can be solved by selecting a more corrosion resistant metal.



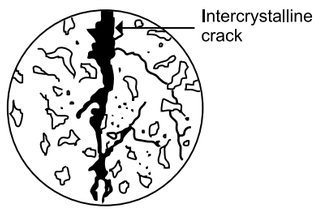
Pitting corrosion

When protective films or layers of corrosion product break down, we get localized corrosion-pitting. An anode forms where the film breaks, while the unbroken film or corrosion product acts as the cathode. Thus we've in effect, set up a closed electrical circuit. Some stainless steels in presence of chloride are susceptible to pitting attack. The breakdown occurs because of some inhomogenity in the metal surface or rough spots.



Intergranular corrosion

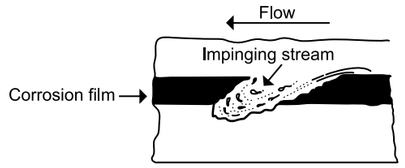
You may be faced with intergranular corrosion for a variety of reasons. But the result is almost the same - selective attack along the metal's grain boundaries, destruction of mechanical properties, intercrystalline cracking such as we picture in the photomicrograph beside. Austenitic stainless steels are subject to intergranular corrosion by many corrosives if not properly heat treated or exposed to the sensitizing temperatures of 800-1500°F. This condition can be eliminated by preannealing and quenching from 2000°F, by using low carbon (LC) stainless steels (C-O.D3 max) or stabilized types with CoIumbium or Titanium.



Erosion corrosion

Similar in their method of attack and net effects are impingement corrosion and cavitation corrosion. Here is how they do their damage:

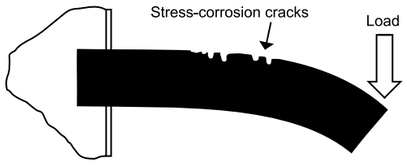
An impinging high velocity stream breaks through corrosion scale, dissolving the metal. The effect depends mainly on liquid speed. Excessive vibration or flexing on the metal can also have similar effects. Cavitation, a common form of corrosion in pumps and sometimes in valves, depends on the hammer-like effect produced by collapsing air bubbles. Bubbles break down when they pass through a pressure drop area.



Stress corrosion cracking

Team up high tensile stresses with a corrosive atmosphere and you're likely to be in for trouble. Here's how it develops:

Tensile stresses buildup at metal surface under static loading. Corrosive action concentrates stresses and causes them to exceed metal's yield point. Result shows up as a local failure. Under continued exposure, metal alternately corrodes and builds up high stress concentrations. Eventually the part may fail. Avoiding this failure can be achieved by early stress relief annealings, proper selection of alloys and design.



Corrosion fatigue

In much the same way that static stresses link up with corrosion to produce stress-corrosion cracking, cyclic loads work hand-in-hand with corrosion to cause corrosion fatigue. Metal failure takes place substantially below the fatigue limit for non corrosive condition.

Surprisingly enough, the combined deteriorating effect of these two bed brothers - corrosion and fatigue - is greater than the sum of their individual damages. So it pays to apply best possible corrosion protection when dealing with metals under alternating stresses.

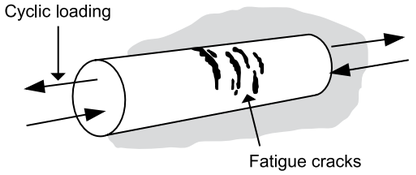


Table of metal materials

Stainless steel

Designation name	Designation number	Standard	Product form	Cross reference
X6Cr17	1.4016	EN 10088-2 EN 10088-3 EN 10151 EN 10250-4	rod, cold rolled strip, section, strip, bar, hot rolled strip, plate, forging, semi finished product	AISI Type 430 (US) Grade 1Cr17 (CN) SUS 430 (JP) SS2320 (SE)
X20Cr13	1.4021	EN 10088-2 EN 10088-3 EN 10151 EN 10250-4	rod, cold rolled strip, section, strip, bar, hot rolled strip, plate, forging, semi finished product	AISI Type 420 (US) Grade 2Cr13 (CN) SUS 420J1 (JP) SS2303 (SE)
X30Cr13	1.4028	EN 10088-2 EN 10088-3 EN 10151 EN 10250-4	rod, cold rolled strip, section, strip, bar, hot rolled strip, plate, forging, semi finished product	AISI Type 420 F (US) Grade 3Cr13 (CN) SUS 420J2 (JP) SS2304 (SE)
X46Cr13	1.4034	EN 10088-2 EN 10088-3	sheet, plate, rod, bar, wire	AISI Type 420 (US) SUS420J2 (JP) SS2304 (SE)
X14CrMoS17	1.4104	EN 10088-3	rod, bar, wire	AISI 430 F (US) SUS 430 F (JP) SS2383 (SE)
X5CrNi18-10	1.4301	EN 10088-2 EN 10088-3E N 10151 EN 10250-4	rod, cold rolled strip, section, strip, bar, hot rolled strip, plate, forging, semi finished product	AISI Type 304 / CF8 (US) Grade 06Cr19Ni10 (CN) SUS 304 (JP) SS2333 (SE)
X8CrNiS18-9	1.4305	EN 10088-2 EN 10088-3 EN 10250-4	semi finished product, rod, section, wire, bar, hot rolled plate, forging	AISI Type 303 (US) YCr18Ni9 (CN) SUS 303 (JP) SS2346 (SE)
GX5CrNi19-10	1.4308	EN 10213 EN 10283	castings, pressure purposes	AISI 304 / CF8 (US) 06Cr19Ni10 (CN) SCS13/SUS304 (JP) SS2333 (SE)
X10CrNi18-8	1.4310	EN 10088-2 EN 10088-3 EN 10151 EN 10263-5 EN 10270-3	springs, rod, semi finished product, section, cold rolled strip, drawn wire, bar	AISI Type 301 (US) Grade 1Cr17Ni7, 12Cr18Ni9 (CN) SUS 301(JP) SS2331(SE)
X5CrNiMo17-12-2	1.4401	EN 10088-2 EN 10088-3 EN 10250-4	semi finished product, rod, section, wire, bar, forging	AISI Type 316 (US) 0Cr17Ni14Mo2 (CN) SUS 316 (JP) SS2347 (SE)
X2CrNiMo17-12-2	1.4404	EN 10088-2 EN 10088-3 EN 10222-5 EN 10250-4	semi finished product, rod, section, wire, bar, hot rolled plate, forging	AISI Type 316L (US) 00Cr17Ni14Mo2 (CN) SUS 316L (JP) SS2348 (SE)
GX5CrNiMo19-11-2	1.4408	EN 10213 EN 10283	castings, pressure purposes	AISI 316 / CF8M (US) ZG07Cr19Ni11Mo3 (CN) SCS 14 (JP) SS2343 (SE)
X2CrNiMo17-12-3	1.4432	EN 10088-2 EN 10088-3 EN 10222-5	semi finished product, rod, section, wire, bar, hot rolled plate, forging	AISI Type 316L (US) 00Cr17Ni14Mo2 (CN) SUS 316L (JP) SS2353 (SE)
X2CrNiMo18-14-3	1.4435	EN 10088-2 EN 10088-3 EN 10222-5 EN 10250-4	semi finished product, rod, section, wire, bar, hot rolled plate, forging	AISI Type 316L (US) 00Cr17Ni14Mo2 (CN) SUS 316L (JP) SS2353 (SE)
X3CrNiMo17-13-3	1.4436	EN 10088-2 EN 10088-3 EN 10222-5 EN 10250-4	semi finished product, rod, section, wire, bar, hot rolled plate, forging	AISI 316 / CF8M (US) 0Cr17Ni12Mo2 (CN) SUS 316 (JP) SS2343 (SE)
X3CrNiMoN27-5-2	1.4460	EN 10088-3 EN 10250-4	semi finished product, rod, section, wire, bar, forging	UNS S31200 / Grade F50 (US) 03Cr25Ni6Mo2N (CN) SS2324 (SE)
X5CrNiCuNb16-4	1.4542	EN 10088-2 EN 10088-3 EN 10250-4	semi finished product, rod, section, wire, bar, hot rolled plate, forging	AISI 630 (US) SUS 630 (JP)
X6CrNiMoTi17-12-2	1.4571	EN 10088-2 EN 10088-3 EN 10222-5 EN 10250-4	semi finished product, rod, section, wire, bar, hot rolled plate, forging	AISI Type 316Ti (US) 0Cr18Ni12Mo2Ti (CN) SUS 316Ti (JP) SS2350 (SE)

Iron, nudular iron and steel

Designation name	Designation number	Standard	Product form	Cross reference
EN-GJL-250	EN-JL1040	EN1561	grey cast iron	No35 / No40 ASTM A480 (US) GG-25 (DE) FC25 (JP) Grade 250 (GB) SS0125 (SE)
EN-GJS-400-15	EN-JS1030	EN1563	nodular cast irons	60-40-18 (US) GGG-40 (DE) FCD400-15 (JP) Grade 400/12 (GB) SS0717-00 (SE)
EN-GJS-400-18	EN-JS1020	EN1563	nodular cast irons	60-40-18 (US) GGG-40.3 (DE) FCD400-18 (JP) Grade 400/18 (GB) SS0717-02 (SE)
EN-GJS-400-18-LT	EN-JS1025	EN1563	nodular cast irons	60-40-18 (US) GGG-40.3 (DE) FCD400-18L (JP) Grade 400/18 (GB) SS0717-02 (SE)
GP240GH	1.0619	EN 10213	steel castings	ASTM 216-WCB (US) GS-C25 (DE) Grade B (GB)

Designation name	Designation number	Standard	Product form	Cross reference
G20Mn5	1.6220	EN 10213 EN 10293	steel castings	Grade 70-40 (US) GS-C25 (DE) Class SC480 (JP) ZGD270-480 (CN) SS2172 (SE)
S235J0	1.0114	EN 10025	structural steels	St37-3U (DE) 40C (GB) Q235-C (CN)
S235JR	1.0038	EN 10025	structural steels	Grade D (US) RSt37-2 (DE) SS41 (JP) SS1312 (SE)

Copper alloys

Designation name	Designation number	Standard	Product form	Cross reference
CuAl10Fe2-C	CC331G	EN 1982	Copper cast alloy	UNSC95200 (US) AB1 (GB) SS5710 (SE)
CuAl10Fe5Ni5-C	CC333G	EN 1982	Copper cast alloy	UNSC95500 (US) AB2 (GB) SS5716 (SE)
CuSn5	CW451K	EN 1652 EN 12163	Copper alloys - strip, sheet, rounds, bar	UNS C51000 (US) PB102 (GB) C5102 (JP)
CuSn6	CW452K	EN 1652 EN 12163	Copper alloys - strip, sheet, rounds, bar	C51900 (US) PB103 (GB) C5191 (JP) SS5428 (SE)
CuSn8	CW453K	EN 1652 EN 12163	Copper alloys - strip, sheet, rounds, bar	UNS C52100 (US) PB104 (GB) C5212,C5210 (JP)
CuSn10	CC480K	EN 1982	Copper cast alloy	UNSC90700 (US) CT1 / PB4 (GB) Gbz10 (DE) SS5443 (SE)
CuSn10Zn2	CC482K	EN 1982	Copper cast alloy	UNSC90500 (US) G1 (GB) RG10 (DE) SS5458 (SE)
CuSn5PbZn5	CC491K	EN 1982	Copper cast alloy	UNSC83600 (US) LG2 (GB) RG5 (DE) SS5204 (SE)
CuSn7ZnPb	CC493K	EN 1982	Copper cast alloy	UNSC93100 (US) LG4 (GB) RG7 (DE) SS5444 (SE)

Designation name	Designation number	Standard	Product form	Cross reference
CuSn10Pb10	CC495K	EN 1982	Copper cast alloy	UNSC93700 (US) LB2 (GB) SS5640 (SE)
CuZn38Pb1	CW607N	EN 12164/A1 EN 12167	Copper alloys - bar, section	C37000 (US) CZ119 (GB) SS5165 (SE)
CuZn39Pb3	CW614N	EN 12164/A1 EN 12167	Copper alloys - bar, section	C36000 (US) CZ121 (GB) Ms58 (DE) SS5170 (SE)
CuZn40Pb2	CW617N	EN 12164/A1	Copper alloys - bar	C37800/38000 (US) CZ120/122 (GB) MS58 (DE) SS5168 (SE)
CuZn35Ni3Mn2AlPb	CW710R	EN 12163	Copper alloys - rod	CZ114 (GB) SoMs59 (DE)

Table of chemical resistance
Metals

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE
B = BOILING
C = HOT
Ta= ROOM TEMPERATURE

	CONCENTRATION	TEMPERATURE °C	AISI 304 1.4301-1.4308	AISI 316 1.4401-1.4408	CARBON STEEL	CAST IRON	BRASS
Acetaldehyde		Ta	E	E	P	P	—
Acetilene		+20	E	E	E	E	N
Acetic Acid	10%	+20	E	E	N	N	G
Acetic Acid	10%	B	G	N	N	N	N
Acetic Acid	20-80%	+20	E	G	N	N	N
Acetic Acid	80%	B	G	G	N	N	N
Acetic Acid (vapours)	30%	C	P	P	N	N	N
Acetic Anhydride		B	G	G	P	P	P
Acetic Ester	concentrated	+20	E	E	G	G	—
Acetic Solvents		Ta	E	E	E	G	—
Acetone		B	E	E	G	G	E
Acido Cresilico		+20	E	E	G	G	G
Acido Idrofluorosilicico		Ta	P	P	N	N	G
Acrylonitrile		Ta	E	E	E	E	—
Alcool Diacetone		Ta	E	E	E	E	—
Alum	10%	B	G	G	N	N	G
Alum	saturaded	B	P	G	N	N	—
Aluminium Chloride	25%	+20	N	P	N	N	N
Aluminium (Chloride)	25%	+20	N	P	N	N	—
Aluminium (Chloride)	25%	B	N	N	N	N	—
Aluminium (Fluoride)	5%	+20	N	P	N	N	—
Aluminium Sulfate		+20	G	G	N	N	—
Aluminium Sulfate		B	P	G	N	N	—
Aluminium Sulphate		Ta	G	E	P	P	P
Ammines		+20	E	E	E	E	—
Ammonia	concentrated	+20	E	E	G	G	E
Ammonia	acquarosa	Ta	E	E	E	E	N
Ammonia	gaseous	C	N	N	P	P	—
Ammonium Bicarbonate		Ta	G	G	P	P	—
Ammonium Carbonate		+20	G	G	G	G	—
Ammonium Carbonate		Ta	G	G	G	G	—
Ammonium Chloride	10%	+20	G	G	P	P	N
Ammonium Chloride	10%	+20	G	G	P	P	—
Ammonium Chloride	10%	B	P	G	N	N	—
Ammonium Disulphate		+20	E	E	P	P	—
Ammonium Hydroxide		C	E	E	G	G	—
Ammonium Hydroxide	concentrated	Ta	E	E	G	G	—
Ammonium Hydroxide		C	E	E	G	G	N
Ammonium Monophosphate		+20	E	E	N	N	—
Ammonium Monophosphate		+20	E	E	N	N	—
Ammonium Nitrate		+20	G	G	G	G	—
Ammonium Nitrate	saturaded	B	G	G	P	P	—
Ammonium Nitrate		+20	G	G	G	G	N
Ammonium Persulphate	5%	+20	G	G	N	N	—
Ammonium Phosphate		Ta	G	G	N	N	—
Ammonium Sulphate	5%	+20	P	G	P	P	—
Ammonium Sulphate	10%	B	N	P	N	N	—
Ammonium Sulphate	saturaded	B	N	P	N	N	—
Ammonium Sulphate		+20	P	G	P	P	N
Ammonium Trisulphate		+20	G	E	G	G	—
Amyl Acetate	concentrated	+20	G	G	G	G	—
Amyl Acetate		Ta	G	G	P	P	G
Amyl Alcohol	concentrated	+20	E	E	N	N	E
Aniline	3%	+20	E	E	G	G	P
Aniline	concentrated	+20	G	G	G	G	P
Aniline (dyes)		Ta	E	E	P	P	P
Animal Oil		Ta	E	E	E	E	—
Antimony Trichloride		+20	N	N	N	N	—
Antimony Trichloride		Ta	N	N	N	N	—
Apple Juice		Ta	G	G	N	N	N
Asphalt		Ta	E	E	G	G	E
Barium Cholide	saturaded	+20	P	G	P	P	P
Barium Cholide	water sol.	C	N	P	N	N	P
Barium Carbonate		Ta	G	G	G	G	E
BariumChloride	5%	+20	G	G	P	P	N
Barium Hydroxide		Ta	G	G	P	P	G

	CONCENTRATION	TEMPERATURE °C	AISI 304 1.4301-1.4308	AISI 316 1.4401-1.4408	CARBON STEEL	CAST IRON	BRASS
Barium Sulphate		+20	P	G	G	G	E
Barium Sulphate		+20	G	G	G	G	G
Barium Sulphate		Ta	G	G	P	P	E
Benzaldehyde		Ta	E	E	E	E	—
Benzoic Acid		+20	G	G	G	G	G
Benzol		C	G	G	G	G	E
Borax		+20	E	E	G	G	E
Boric Acid	5%	C	G	G	N	N	G
Brine		Ta	G	G	P	P	G
Bromine		+20	N	N	N	N	N
Butadiene		Ta	E	E	E	E	E
Butane		Ta	E	E	E	E	E
Butyric Acid	5%	+70	G	G	P	P	N
Butyl Alcohol		Ta	E	E	G	G	E
Butylene		Ta	E	E	E	E	—
Butyl Acetate		+20	G	G	E	E	—
Calcium Bisulphite		+20	P	G	N	N	G
Calcium Bisulphite		+20	P	G	N	N	G
Calcim Carbonate		+20	G	G	G	G	E
Calcium Carbonate		+20	G	G	G	G	E
Calcium Chloride		+20	P	G	P	P	N
Calcium Chloride	diluted	+20	P	G	P	P	N
Calcium Chloride	concentrated	+20	N	P	P	P	N
Calcium Chloride	concentrated	B	N	N	N	N	N
Calcium Hydroxide	5%	+20	G	G	G	G	G
Calcium Hydroxide	10%	B	G	G	N	N	G
Calcium Hydroxide	50%	B	N	G	N	N	G
Calcium Hypochlorite	2%	+20	P	P	N	N	N
Calcium Hydroxide		Ta	E	E	E	E	—
Calcium Hydroxide		+20	G	G	G	G	G
Calcium Hypochloride		+20	P	P	N	N	N
Calcium Sulphate		Ta	G	G	P	P	E
Calcium Sulphate	saturated	+20	G	G	G	G	—
Carbolic Acid		B	G	G	P	P	—
Carbonic Acid	saturated	+20	G	G	N	N	—
Carbon Dioxide		Ta	E	E	E	E	E
Carbon Disulphide		+20	G	G	G	G	G
Carbon Disulphide		Ta	G	G	G	N	E
Carbon Monoxide		B	E	E	E	E	—
Carbon Tetrachloride		+20	G	G	G	G	P
Carbon Tetrachloride		B	P	P	N	N	P
Carbon Tetrachloride	dry	Ta	E	E	G	G	P
Carbon Tetrachloride	wet	Ta	G	G	N	N	N
Caustic Soda	5%	+20	G	G	G	G	—
Caustic Soda	20%	B	E	E	G	G	—
Caustic Soda	50%	B	G	G	P	P	—
Caustic Soda	75%	B	P	P	N	N	—
Chlorinated Solvents	dry	Ta	G	G	P	P	—
Chloroacetic Acid		+20	N	N	N	N	N
Chlorobenzene	concentrated	+20	E	E	E	E	—
Chloroform		+20	E	E	E	E	E
Chlorous Acid		+20	N	N	N	N	N
Chlorosulfonic Acid	10%	+20	P	G	N	N	P
Chlorosulfonic Acid	concentrated	+20	G	G	N	N	P
Chromic Acid	5%	+20	G	G	G	G	N
Chromic Acid	50% com.	B	N	N	N	N	N
Citric Acid	5%	+20	E	E	N	N	P
Citric Acid	15%	B	G	G	N	N	P
Citric Acid	concentrated	B	N	G	N	N	P
Colophony		Ta	E	E	N	N	—
Coke-oven Gas		Ta	E	E	G	G	—
Copper Acetate		Ta	E	E	N	N	—
Copper Acetate	saturated	+20	G	G	N	N	—
Copper Chloride	19%	+20	P	G	P	G	N
Copper Chloride	1%	+20	P	G	N	N	—
Copper Chloride	5%	B	N	N	N	N	—

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	CONCENTRATION	TEMPERATURE °C	AISI 304 1.4301-1.4308	AISI 316 1.4401-1.4408	CARBON STEEL	CAST IRON	BRASS
Copper Nitrate	5%	+20	E	E	N	N	P
Copper Nitrate	5%	220	E	E	N	N	—
Copper Nitrate	50%	C	G	G	N	N	—
Copper Sulphate		+20	G	G	N	N	—
Copper Sulphate	saturated	B	G	G	N	N	N
Copper Sulphate		+20	G	G	N	N	N
Creosote		C	G	G	G	G	—
Creosote Oil		Ta	G	G	G	G	E
Cyclohexane		Ta	E	E	E	E	—
Dichloroethane		B	G	G	N	N	—
Diethylamine		Ta	E	E	E	E	—
Diethyl Ether		+20	E	E	E	G	—
Distilled Water		Ta	E	E	P	P	E
Epsom Salt		Ta	G	G	P	P	—
Ethane		Ta	G	G	G	G	E
Ethyl Acrylate		Ta	E	E	P	P	—
Ethyl Alcohol		B	G	G	G	G	E
Ethyl Acetate		Ta	G	G	G	G	E
Ethyl Chloride	dry	+20	E	E	E	E	—
Ethyl Chloride		+20	E	E	E	E	G
Ethylene Glycol		+20	E	E	E	E	G
Ethylene Oxide		Ta	G	G	G	G	E
Fatty Acids		B	G	G	P	P	N
Ferric Chloride	1%	+20	N	P	N	N	N
Ferric Chloride	5%	+20	N	N	N	N	N
Ferric Nitrate		Ta	P	P	N	N	N
Ferric Nitrate	5%	+20	G	G	N	N	N
Ferric Sulphate		+20	G	E	N	N	N
Ferric Sulphate	5%	B	G	G	N	N	N
Ferrous Chloride		Ta	N	N	N	N	N
Ferrous Sulphate	saturated	+20	G	G	N	N	N
Ferrous Sulphate	10%	+20	G	G	N	N	N
Fertilizers		Ta	G	G	G	G	—
Fish Oil		Ta	E	E	G	G	—
Fluorine	dry	+20	G	G	N	N	—
Formaldehyde		Cold	E	E	E	G	P
Formaldehyde		Hot	P	P	N	N	P
Formic Acid	5-50%	+20	G	G	N	N	N
Formic Acid	10-50%	B	N	N	N	N	N
Formic Acid	100%	+20	P	P	N	N	N
Formic Acid	100%	B	N	N	N	N	N
Freon	dry	Ta	E	E	E	E	E
Freon	wet	Ta	P	P	P	P	E
Fuel Oil		Ta	E	E	G	G	E
Furfuraldehyde		+20	G	G	G	G	E
Gallic Acid	5%	+70	G	G	N	N	—
Gas Chlorate	dry	+20	N	P	G	G	—
Gas Chlorate	wet	+100	N	N	N	N	—
Gaseous Methyl Chloride		+20	G	G	N	N	—
Gelatine		Ta	E	E	N	N	G
Glue		Ta	G	G	E	E	—
Glucose		Ta	G	G	G	G	E
Glycerol		+20	E	E	E	E	E
Glycols		Ta	G	G	G	G	—
Heptane		Ta	E	E	G	G	—
Hexane		Ta	G	G	G	G	—
Hexanol		Ta	E	E	E	E	—
Hydraulic Oil		Ta	E	E	E	E	—
Hydriodic Acid (iodidrico)	diluted	+20	N	N	N	N	—
Hydrocarbons		+20	E	E	E	E	E
Hydrobromic Acid		+20	N	N	N	N	N
Hydrocyanic Acid		+20	G	G	P	P	—
Hydrochloric Acid	1%	+20	N	P	N	N	N
Hydrochloric Acid	1%	B	N	N	N	N	N
Hydrochloric Acid	5%	+20	N	N	N	N	N
Hydrochloric Acid		+20	N	N	N	N	N

	CONCENTRATION	TEMPERATURE °C	AISI 304 1.4301-1.4308	AISI 316 1.4401-1.4408	CARBON STEEL	CAST IRON	BRASS
Hydrofluoric Acid	concentrated	+20	N	N	N	N	N
Hydrofluoric Acid	dry	+20	P	P	P	P	N
Hydrofluoric Acid	wet	+20	N	N	N	N	N
Hydrofluoric Acid		+20	N	N	N	N	N
Hydrogen Gas	cold	Ta	E	E	G	G	—
Hydrogen Dioxide		+20	E	E	N	N	N
Hydrogen Dioxide		B	G	G	N	N	N
Illuminating Gas		Ta	E	E	E	E	—
Ink		Ta	E	E	N	N	—
Iodine	dry	+20	N	N	P	N	—
Iodine	wet	+20	N	N	N	N	—
Iodoform		+20	E	E	N	N	—
Isooctane		Ta	E	E	E	E	—
Isopropyl Ether		Ta	E	E	E	G	—
Isopropyl Alcohol		Ta	G	G	G	G	—
Julces		B	G	E	N	N	N
Ketone		Ta	E	E	E	E	—
Kerosene		Ta	E	E	G	G	—
Lactic Acid	1%	B	G	G	N	N	P
Lactic Acid	5%	+70	G	G	N	N	P
Lactic Acid	5%	B	N	G	N	N	P
Lactic Acid	5-10%	+20	G	E	N	N	P
Lactic Acid	10%	+70	P	G	N	N	P
Lactic Acid	10%	B	N	P	N	N	P
Lactic Acid	concentrated	B	N	N	N	N	P
Latex		+20	E	E	N	N	—
Latex Emulsions		Ta	E	E	G	G	—
Lead Acetate		+20	G	G	N	N	—
Lead Acetate		Ta	G	G	N	N	—
Lemon Juice		Ta	G	G	N	N	N
Linoleic Acid		Ta	E	E	G	G	—
Linseed Oil		Ta	G	G	E	E	G
Liquefied Gas (LPG)		Ta	G	G	G	G	—
Lithium		+150	E	E	G	G	—
Lubricating Oil		Ta	E	E	E	E	—
Lye		B	G	G	N	N	N
Lysol		+20	P	P	N	N	—
Magnesium Chloride	5%	+20	G	G	N	N	N
Magnesium Chloride	5%	C	N	N	N	N	N
Magnesium Chloride	10-30%	+20	P	G	N	N	N
Magnesium Chloride	saturated	+20	P	G	N	N	N
Magnesium Chloride	5%	+20	G	G	N	N	N
Magnesium Disulphate		Ta	E	E	G	G	—
Magnesium Hydroxide		C	E	E	G	G	G
Magnesium Oxide		+20	G	G	G	G	—
Magnesium Sulphate		+20	G	G	G	G	P
Magnesium Sulphate		+20	G	G	G	G	P
Maleic Acid		Ta	G	G	G	G	—
Malic Acid		C	G	G	N	N	—
Mercury		+150	P	P	G	G	N
Mercury		+500	N	N	N	N	N
Mercury Bichloride	2%	+20	N	N	N	N	N
Mercury Cyanide		+20	G	G	N	N	N
Mercury Cyanide		+20	G	G	N	N	—
Mercuric Chloride		Ta	N	P	N	N	—
Methane		Ta	G	G	G	G	E
Methyl Acetate		Ta	E	E	G	G	—
Methyl Alcohol		B	P	G	G	G	E
Methylacetone		Ta	E	E	G	G	—
Methylamine		Ta	E	E	G	G	—
Methyl Chloride		+20	G	G	N	N	G
Methylene Chloride		Ta	E	E	G	G	G
Methyl Formate		Ta	G	G	P	P	—
Milk		+20	E	E	N	N	G
Mineral Naphtha		+20	G	G	G	G	G
Mineral Oil		Ta	E	E	G	G	E

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Mineral Water		Ta	G	G	P	P	G
Mixed Acid-turpentine		+20	N	N	N	N	N
Muriatic Acid		+20	N	P	N	N	N
Naphthalene		Ta	G	G	E	E	—
Natural Gas		Ta	E	E	G	G	E
Neon		+20	G	G	G	G	—
Nickel Chloride		+20	P	G	N	N	P
Nichel Chloride		+20	P	G	N	N	P
Nichel Sulphate		C	P	G	N	N	P
Nickel Sulphate		C	P	G	N	N	P
Nickel Nitrate		Ta	G	G	N	N	—
Nicotinic Acid		Ta	E	E	G	G	—
Nitric Acid	5-50%	+20	E	E	N	N	N
Nitric Acid	10-50%	B	G	P	N	N	N
Nitric Acid	85%	+20	G	G	G	G	N
Nitric Acid	85%	C	G	P	N	N	N
Nitric Acid	concentrated	+20	G	G	G	G	N
Nitric Acid	concentrated	B	P	P	N	N	N
Nitric Acid	anhydrous	Ta	E	E	E	E	N
Nitrobenzene		Ta	G	G	G	G	—
Nitrogen		Ta	E	E	E	E	E
Nitrous Acid	5%	+20	G	G	N	N	—
Nitrous Gases		Ta	E	E	G	G	—
Nitrous Oxide		Ta	G	G	G	G	—
Oil		Ta	E	E	G	G	G
Oleic Acid	crude	+20	G	G	P	P	—
Oleum		Ta	G	G	G	G	—
Olive Oil		Ta	E	E	G	G	P
Oxalic Acid	5%	C	P	P	N	N	—
Oxalic Acid	10%	+20	G	G	P	P	—
Oxalic Acid		B	N	N	N	N	—
Oxalic Acid	saturated	+20	G	G	P	P	—
Oxalic Acid	saturated	B	N	N	N	N	—
Oxygen	cold		E	E	G	G	E
Oxygen		+250	G	G	G	G	—
Ozone	dry	Ta	E	E	P	P	—
Ozone	wet	Ta	E	E	E	E	—
Paint Varnish		Ta	E	E	P	P	—
Palm Oil		Ta	G	G	P	P	—
Palmitic Acid		+20	G	G	P	P	P
Paraformaldehyde		Ta	G	G	G	G	—
Paraffin Wax		Ta	E	E	E	E	E
Pentane		Ta	E	E	G	G	—
Perchloroethylene		Ta	E	E	G	G	P
Peroxide		Ta	G	G	N	N	N
Petrol		Ta	E	E	E	E	E
Petrol (Crude)		+20	E	E	P	P	E
Phenol		B	G	G	P	P	—
Phosphoric Acid	C.P. 1%	+20	G	G	N	N	N
Phosphoric Acid	5%	+20	G	G	N	N	N
Phosphoric Acid	10%	+20	P	G	N	N	N
Phosphoric Acid	20-45%	B	N	P	N	N	N
Phosphoric Acid	45-85%	+20	N	G	N	N	N
Phosphoric Acid	85%	B	N	N	N	N	N
Phthalic Acid		Ta	G	G	P	P	—
Phthalic Anhydride			E	E	P	P	—
Picric Acid	water sol.	+20	E	E	P	P	N
Potassium Bichromate		+20	G	G	P	P	—
Potassium Bisulphite		Ta	G	G	N	N	—
Potassium Bromide		+20	P	G	N	N	—
Potassium Bromide		+20	P	G	N	N	—
Potassium Carbonate	1%	+20	E	G	G	G	P
Potassium Carbonate	1%	+20	G	G	G	G	—
Potassium Chlorate		+20	G	G	G	G	—
Potassium Chloride	1-5%	+20	P	G	N	N	P
Potassium Chlorate		+20	G	G	G	G	N

	CONCENTRATION	TEMPERATURE °C	AISI 304 1.4301-1.4308	AISI 316 1.4401-1.4408	CARBON STEEL	CAST IRON	BRASS
Potassium Chloride	1-5%	+20	P	G	N	N	N
Potassium Chloride	1-5%	B	N	N	N	N	N
Potassium Cyanide		+20	G	G	G	G	N
Potassium Cyanide		+20	G	G	G	G	N
Potassium Dichromate		+20	G	G	P	P	N
Potassium Diphosphate		Ta	E	E	E	E	—
Potassium Disulphine	saturated	+20	G	G	P	P	G
Potassium Ferricyanide		Ta	G	G	P	P	N
Potassium Ferricyanide	5%	+20	G	G	P	P	N
Potassium Hydroxide	5%	+20	G	G	G	G	N
Potassium Hypochlorite		+20	N	P	N	N	—
Potassium Iodide	2%	Ta	G	G	P	P	—
Potassium Nitrate	1-5%	+20	G	G	G	G	G
Potassium Nitrate	1-5%	C	G	G	G	G	—
Potassium Permanganate		+20	E	E	E	E	—
Potassium Permanganate		+20	E	E	E	E	—
Potassium Sulphate	1-5%	+20	G	G	G	G	G
Potassium Sulphate	saturated	+20	G	G	P	P	—
Potassium Sulphate		+20	G	G	G	G	G
Potassium Sulphite		Ta	E	E	G	E	G
Propane		Ta	G	G	G	G	E
Propanol		Ta	E	E	G	G	—
Propylene Glycol		Ta	G	G	G	G	—
Propionic Acid		+20	G	G	N	N	—
Prussic Acid		+20	G	G	P	P	—
Pyrogallic Acid		+20	G	G	G	G	—
Pyroligneous Acid		+20	E	E	N	N	—
Quinine Bisulphate	dry	+20	G	G	N	N	—
Resins		Ta	E	E	P	P	—
Sal Ammoniac		+20	G	G	P	P	—
Salicylic Acid		+20	G	G	N	N	—
Sea Water		+20	G	G	N	N	P
Shellac		Ta	E	E	E	E	—
Silver Bromide		+20	P	G	N	N	—
Silver Chloride		+20	N	N	N	N	—
Silver Nitrate		+20	G	G	N	N	—
Silver Nitrate		+20	G	G	N	N	N
Sludge		Ta	E	E	G	G	—
Soap		+20	G	G	G	G	G
Sodium Acetate	wet	+20	G	G	P	P	—
Sodium Acetate		Ta	G	G	P	P	—
Sodium Bicarbonate		+20	G	G	P	P	P
Sodium Bicarbonate		+20	G	G	P	P	P
Sodium Bisulphite		Ta	E	E	N	N	G
Sodium Borate		Ta	G	G	P	P	—
Sodium Bromide		Ta	G	G	P	N	—
Sodium Carbonate	5%	+70	G	G	G	G	—
Sodium Carbonate		+20	G	G	G	G	N
Sodium Chlorate	10%	+20	G	G	P	P	—
Sodium Chloride	20%	+20	G	G	P	P	—
Sodium Chloride	saturated	B	P	G	N	N	—
Sodium Chlorate		+20	G	G	P	P	N
Sodium Chloride	5%	+20	G	G	P	P	P
Sodium Cyanide		+20	G	G	G	G	N
Sodium Cyanide		+20	G	G	G	G	—
Sodium Disulphate		+20	G	G	N	N	G
Sodium Disulphate		+20	G	G	N	N	—
Sodium Disulphite		+20	G	G	G	G	G
Sodium Disulphite		C	G	G	P	P	G
Sodium Fluoride		Ta	G	G	N	N	—
Sodium Fluoride	5%	+20	G	G	N	N	—
Sodium Hydroxide		+20	E	E	E	E	—
Sodium Hypochlorite		Ta	P	P	N	N	N
Sodium Hypochlorite		+20	G	G	N	N	N
Sodium Hypochlorate	5%	+20	N	P	N	N	N
Sodium Hyposulphite		+20	G	G	N	N	N

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Sodium Metaphosphate		Ta	E	E	G	G	N
Sodium Metasilicate	cold		E	E	P	P	—
Sodium Metasilicate		C	E	E	N	N	—
Sodium Nitrate		+20	E	E	G	G	—
Sodium Nitrate		Ta	G	G	G	G	P
Sodium Perborate		Ta	G	G	G	G	—
Sodium Peroxide		Ta	G	G	P	P	—
Sodium Phosphate		Ta	G	G	P	P	—
Sodium Silicate		Ta	G	G	G	G	G
Sodium Silicate		C	G	G	P	P	G
Sodium Silicate		Ta	G	G	G	G	—
Sodium Sulphate	saturated	+20	P	G	G	G	G
Sodium Sulphate		+20	P	G	G	G	G
Sodium Sulphite	10%	+65	P	G	G	G	G
Sodium Sulphite	10%	B	P	G	N	N	G
Sodium Sulphite	saturated	+20	G	G	G	G	G
Sodium Trisulphate	20%	+20	G	G	N	N	—
Sodium Thiosulphate		Ta	E	E	G	G	—
Soft Water		Ta	E	E	P	P	N
Solvent		Ta	E	E	G	G	E
Spirit Vinegar		+20	E	E	N	N	—
Starci		Ta	G	G	P	P	—
Stannic Chloride	5%	+20	N	P	N	N	—
Stannic Chloride	5%	B	N	N	N	N	—
Stannic Chloride	5%	+20	N	P	N	N	—
Stannous Chloride	saturated	+20	N	P	N	N	—
Stearic Acid		+20	G	E	P	P	P
Strontium Nitrate		+20	E	E	N	N	—
Styrene		Ta	E	E	E	E	—
Suds (Stearate)		Ta	E	E	E	G	—
Sugary Juices in general		+70	G	G	N	N	N
S Sulphur	dry and liquefied	+230	G	G	G	G	N
S Sulphur	wet and liquefied	+230	P	G	N	N	N
Sulphuric Anhydride	dry	Ta	E	E	G	G	G
Sulphuric Acid	dry	+20	E	E	E	E	—
Sulphuric Acid	wet	+20	P	G	P	P	—
Sulphuric Acid	5%	+20	P	G	N	N	N
Sulphuric Acid	5%	B	N	P	N	N	N
Sulphuric Acid	10%	+20	N	P	N	N	N
Sulphuric Acid	10%	B	N	N	N	N	N
Sulphuric Acid	50%	+20	N	N	N	N	N
Sulphuric Acid	50%	B	N	N	N	N	N
Sulphuric Acid	concentrated	+20	G	G	G	G	N
Sulphuric Acid	concentrated	B	N	N	N	N	N
Sulphuric Acid	fuming	+20	P	G	P	P	N
Sulphur Chloride		Ta	P	G	N	N	—
Sulphur Dioxide	dry	+250	G	G	G	G	E
Sulphur Dioxide	dry	+230	G	G	G	G	N
Sulphur Dioxide	wet	+20	P	G	N	N	N
Sulphurous Acid	saturated	+20	N	G	N	N	P
Syngas		Ta	G	G	G	G	—
Tannic Acid		+20	G	G	N	N	G
Tar		Ta	E	E	E	E	G
Tartaric Acid	10%	+20	E	E	N	N	P
Tartaric ACid	10%	C	P	G	N	N	P
Tetraethyl Lead		Ta	G	G	P	P	—
Titanium Tetrachloride	wet	+20	N	N	N	N	—
Tomato Juice		Ta	E	E	P	P	N
Toluene		Ta	E	E	E	E	E
Tributyl Phosphate		Ta	E	E	E	E	—
Trichloroethylene	dry	Ta	G	G	G	P	E
Trichloroacetic Acid		+20	N	N	N	N	P
Tung Oil		Ta	G	G	P	P	—
Turpentine		+20	E	E	E	E	G
Urea		Ta	G	G	P	P	—
Uric Acid	concentrated	+20	G	G	N	N	—

	CONCENTRATION	TEMPERATURE °C	AISI 304 1.4301-1.4308	AISI 316 1.4401-1.4408	CARBON STEEL	CAST IRON	BRASS
Varnish		+20	E	E	P	P	E
Varnish		C	G	G	N	N	E
Vaseline		Ta	G	G	P	P	—
Vinegar (vapors)		Ta	G	G	N	N	—
Viscose		Ta	G	G	G	G	—
Waste Water		+20	G	G	P	P	—
Wax		Ta	E	E	E	E	—
Wax Emulsions		Ta	E	E	E	E	—
Xylene	dry	Ta	E	E	G	G	—
Zinc Chloride	5%	+20	P	G	N	N	—
Zinc Chloride	5%	B	N	P	N	N	—
Zinc Chloride	5%	+20	P	G	N	P	N
Zinc Hydrosulphite		Ta	E	E	E	E	—
Zinc Sulphate	5%	+20	G	E	G	G	G
Zinc Sulphate	25%	B	P	G	N	N	G
Zinc Sulphate		Ta	G	G	N	N	N

Values in the table of chemical resistance should only be considered as overview guiding values. In critical applications it would therefore be well advised to get additional information from the supplier of the media.

Sealing materials

NAME	Composition	General application	Temperature limit		Other limits
			˚C	˚F	
EPDM	Ethylene Propylene Diene Monomer	Hot and cold water, Steam, Seawater, Brine, Esters, Ketones, Alkalis, Caustics	+120˚C -40˚C	+248˚F -49˚F	Not recommended for Gasoline, Oils, Fat, Hydrocarbons
NBR (BUNA N)	Nitrile butadiene rubber	Natural Gas, Gasoline Oils and Fat, Air, Water, Seawater, Hydrocarbons	+80˚C -20˚C	+176˚F 4˚F	Not recommended for Solvents, Benzene, Xylol
CR (Neoprene)	Polychloroprene	Water, Greases, Some oils, Diluted minerals acids, Alkalis	+100˚C -25˚C	+212˚F -13˚F	Not recommended for Concentrated acids, Esters, Ketones, Chlorinated, Aromatic and Nitro Hydrocarbons
CSM (Hypalon)	Chlorosulfonated Poluethylene	Mineral acids, Organic acids, Oxidising substances, Oils and Greases	+135˚C -30˚C	+275˚F -22˚F	Not recommended for Nitric acids, Steam, Ketones, Aromatic and Chlorinated Hydrocarbons
FPM (Viton)	Fluorocarbon Polymer	Mineral acids, Oils, chlorinated Hydrocarbons	+180˚C -20˚C	+356˚F -4˚F	Not recomended for Ketones Esters, Alkalis
PTFE (Teflon)	Polytetrafluoroethylene	Mineral Oils, Corrosion resistant, Esters, Ketones, Aromatic and Halogenated Hydrocarbons	+180˚C -40˚C	+356˚F -40˚F	Low wear resistance

The table is merely indicative. The customer is expected to make the final decision on the suitability of seat materials for their specific applications. Therefore LK Valves cannot in any way be held responsible for the elastomers used.

Table of chemical resistance
Sealing materials

E EXCELLENT
G GOOD
P POOR
N NOT RECOMMENDED
– =NO INFORMATION AVAILABLE

	EPDM	NBR	VITON	PTFE
Acetaldehyde	–	N	N	E
Acetal	–	–	–	E
Acetammide	E	G	G	E
Acetate Solvent	–	N	N	E
Acetilene	E	G	G	E
Acetic Acid 10-20%	E	E	E	E
Acetic Acid 50%	–	E	E	E
Acetic Acid 80%	E	G	G	E
Acetic Anhydride	–	N	N	E
Acetylene Chloride	–	N	E	E
Acetoacetato di Etile	–	N	N	E
Acetofenone	–	N	N	E
Acetone	E	N	N	E
Acetone 50% water	–	N	–	E
Acetonitrile	–	–	–	E
Acid Chloric 20%	–	N	N	E
Acid Laisileico	–	G	G	E
Acido Cresilico	–	N	E	E
Acrylonitrile	–	N	N	E
Adipic Acid	–	N	–	E
Air	E	E	E	E
Alumed Chrome	E	G	G	E
Alumed Potassium	E	G	G	E
Alumed Potassium Sulphate	E	–	–	E
Alumina	E	E	G	E
Aluminium Chloride	E	G	G	E
Aluminium Fluoride	E	G	G	E
Aluminium Hydroxide	E	G	G	E
Aluminium Nitrate	E	G	G	E
Aluminium Sulphate	E	G	G	E
Alum. (All. Potassium Sulphate)	–	E	–	E
Amyl Alcohol	E	–	–	E
Amyl Acetate	N	N	N	E
Ammonium Acetate	E	N	–	E
Ammonia (Anhydrous)	E	G	N	E
Ammonia (Gas)	–	G	N	E
Ammonium Chloride	E	G	G	E
Ammonium Sulphate	E	G	N	E
Ammonium Sulphite 50°C	–	E	–	E
Ammonium Sulphide	E	G	N	E
Ammonium Hydroxide	E	G	G	E
Ammonium Fluoride 25%	E	–	–	E
Ammonium Phosphate	E	G	G	E
Ammonium Metaphosphate	–	G	G	E
Ammonium Nitrate	E	G	N	E
Ammonium Oxalate	E	–	–	E
Ammonium Bicarbonate	E	–	–	E
Ammonium Bifluoride	E	–	–	E
Ammonium Carbonate	E	G	G	E
Amyl Chloride 77°C	–	N	E	–
Anhydrous Formic Acid	–	N	G	E
Aniline	N	N	E	E
Aqua Regia	–	N	E	E
Arsenic Acid	E	G	G	E
Artficial Gas	–	G	–	E
Asphalt	–	N	E	E

E EXCELLENT
G GOOD
P POOR
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	EPDM	NBR	VITON	PTFE
Barium Carbonate	E	–	–	E
Barium Chloride	E	G	G	E
Barium Hydroxide	E	G	G	E
Barium Nitrate	E	G	G	E
Barium Sulphate	E	G	G	E
Barium Sulphide	–	G	G	E
Beer	–	G	G	E
Benzaldehyde	–	N	N	E
Benzene, Benzol	–	N	N	E
Benzoic Acid	E	N	G	E
Benzykl Alcohol	–	N	E	E
Benzyl Chloride	–	N	–	E
Black Liquor	–	E	G	E
Borax	E	G	G	E
Boric Acid	E	G	G	E
Brine	G	E	–	E
Bromine Water	–	N	E	E
Butyl Acetate	–	–	–	E
Butyl Alcohol	E	N	E	E
Butyric Acid	N	N	–	E
Butyl Chloride	–	–	–	E
Butyl Phenol	–	–	–	E
Butyl Phthalate	–	N	–	E
Butter	–	E	–	E
Butadiene	–	E	E	E
Butane	E	N	E	E
Butylene	–	N	G	E
Calcium Bisulphite	E	G	G	E
Calcium Bicarbonate	–	–	–	E
Calcium Carbonate	E	G	G	E
Calcium Chlorate	–	G	G	E
Calcium Chloride	E	G	G	E
Calcium Disulphate	–	–	–	E
Calcium Fluoride	–	–	–	E
Calcium Hydroxide	E	G	G	E
Calcium Htpochlorite	E	N	G	E
Calcium Nitrate	E	G	G	E
Calcium Oxide 20°C	–	–	–	E
Calcium Sulphate	E	–	–	E
Cane Sugar Liquor	E	G	G	E
Carbolic Acid (phenol)	–	N	N	E
Carbonic Acid	E	G	G	E
Carbon Bisulphide	–	N	G	E
Carbon Dioxide	–	E	–	E
Carbon Monoxide	E	G	G	E
Castor Oil	E	G	G	E
Caustic Soda	E	P	–	E
Cellulose Acetate	E	N	N	E
Cellosolve	E	N	N	E
Cement	E	G	–	E
Cereal Syrup (Glucose)	–	G	G	E
Chloroacetic Acid	–	N	N	E
Chloroform	N	N	G	E
Chlorosulfonic Acid	–	–	–	E
Chlorine Dioxide	–	N	–	–
Chlorine Water	–	N	E	E

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	EPDM	NBR	VITON	PTFE
Chlorine Water	—	N	—	E
Chlorobenzene	N	N	G	E
Chromic Acid	—	G	E	E
Chromic Anhydride	—	G	E	E
Chrome Potassium Sulphate	—	G	—	E
Citric Acid	E	G	G	E
Coconut Oil	—	G	E	E
Coffee	E	N	E	E
Coke-oven Gas	E	N	G	E
Copper Acetate	—	—	N	E
Copper Chloride	E	G	G	E
Copper Nitrate	—	G	G	E
Copper Sulphate	E	G	G	E
Corn Oil	—	N	—	E
Cotton seeds Oil	—	G	E	E
Creosote	N	P	E	E
Cresol	—	N	N	E
Cromil Chloride	—	—	—	E
Crotonaldehyde	—	—	—	E
Crude Oil	—	G	E	E
Cyanoacetic Acid	—	—	—	E
Cyanogen Gas	E	—	—	E
Cyclohexane	N	G	G	E
Demineralized Water	E	G	G	E
Detergents	E	G	G	E
Dextrite	—	N	N	E
Dextrose	—	G	G	E
Diacetone	E	N	N	E
Diacetone Alcohol	—	N	—	E
Dibutylphthalate	—	—	G	E
Dichloroethane	—	N	E	E
Dichlorobenzene max 40°C	—	—	G	E
Dichloroethane	—	N	G	E
Dichloroethylene	—	N	G	E
Diethyl Ether	—	N	N	E
Diethyl Ether 40°C	—	G	N	E
Diethylcellosolve	—	—	—	E
Diethylamine max 40°C	—	N	—	E
Dimethyl	—	—	N	E
Dimethylphthalate	—	N	E	E
Dimethyl Ether	—	—	—	E
Dioxan	N	N	N	E
Diphenil (Dowtherms)	—	N	E	E
Disodium Phosphate 20°C	—	N	G	E
Distiller Water	E	G	G	E
Dry Sulphur Dioxide	—	N	N	E
Drilling Sludge	N	E	—	E
Drilling Sludge	N	E	—	E
Dry Sulphurized Hydrogen	E	—	N	E
Dry Sulphurized Hydrogen	E	—	N	E
Dyes	N	N	—	E
Dyes	N	N	—	E
Ethyl Acetate	N	N	N	E
Ethyl Acrylate	E	G	G	E
Ethyl Alcohol	E	P	E	E
Ethyl Chloride	—	G	G	E

	EPDM	NBR	VITON	PTFE
Ethyl Glycol	E	E	E	E
Ethylene Bromide	—	N	—	E
Ethylene Chloride	—	N	E	E
Ethylene Diamine	—	E	E	E
Ethylene Glycol	E	G	E	E
Ethylene Oxide	—	N	N	E
Epichlorohydrin	—	N	N	E
Fats	N	E	—	E
Fatty Acids	—	G	G	E
Ferric Chloride	E	G	G	E
Ferric Nitrate 10-50%	E	G	G	E
Ferric Sulphate	E	G	G	E
Feerous Cloride	E	G	—	E
Ferrous Sulphate	E	G	G	E
Fluorinated Hydrogen	—	G	G	E
Fluorine Gas	—	N	N	E
Fluorosilicic Acid	E	P	—	—
Formaldehyde 35-50%	E	N	N	E
Formic Acid 10-85%	E	N	G	E
Freon F 11-12	—	G	G	—
Freon F 22	—	N	N	—
Fuel Oil	N	G	E	E
Fuel for aircrafts (JP4 or JP5)	N	G	E	E
Furfural	—	N	N	E
Furfuraldehyde	—	N	N	E
Gallic Acid	E	—	G	E
Galvanizing Solution	E	G	G	E
Gaseous Bromine	N	N	—	E
Gaseous Oxygen	—	N	G	E
Gas Oil	—	G	G	E
Gelatine	—	G	G	E
Glucose	—	G	G	E
Glue	E	P	—	E
Glycerol	—	G	E	E
Glycols 60°C	—	E	E	E
Glycocic Acid	E	—	—	E
Green Liquor	E	G	—	E
Helium	G	G	—	E
Heptane	E	G	E	E
Hexane	N	G	E	E
Hexanol	—	G	E	E
Hydraulic Fluid	—	G	E	E
Hydrobromic Acid	—	N	G	E
Hydrocyanic Acid	E	G	G	E
Hydrochloric Acid max 50%	E	—	G	E
Hydrofluoric Acid max 70%	—	N	E	—
Hydrofluoric Acid 100%	—	N	—	—
Hydrogen Dioxide	E	N	E	E
Hydrogen Chloride	—	—	—	E
Hydrogen	E	G	G	E
Hydrogen Sulphide	—	N	N	E
Hydroquinone	E	N	G	E
Ink	E	—	—	—
Industrial Oils	—	—	—	E
Iodoform	—	N	E	E
Isobutyl-Methyl-Ketone	—	N	N	E

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	EPDM	NBR	VITON	PTFE
Isooctane	N	E	E	E
Isopropyl Alcohol	E	P	G	E
Isopropyl Ether	—	N	N	E
Juices	G	G	—	E
Kerose	—	G	E	E
Lactic Acid	—	N	G	E
Lard Oil	—	E	E	E
Lead Acetate	—	N	N	E
Lead Chloride max 20°C	—	—	G	E
Lead Sulphate	—	P	—	E
Leaded Petrol	—	G	G	E
Lemon Oil	G	P	—	E
Lime	E	N	—	E
Lime Sulphur	E	N	G	E
Linseed Oil	—	G	E	E
Liquid Chlorine	—	N	G	E
Liquid Soap	E	G	—	E
Lithium Bromine	E	G	G	E
Lubricating Oil	—	G	G	E
Maleic Acid	E	N	G	E
Malic Acid	—	G	G	E
Manganese Chloride max 20°C	—	G	G	E
Magnesium Carbonate	—	G	—	E
Magnesium Chloride	E	G	G	E
Magnesium Hydroxide	E	G	G	E
Magnesium Nitrate	E	G	—	E
Magnesium Oxide	G	G	—	E
Machine Oil	—	—	—	E
Magnesium Sulphate	E	G	—	E
Methane	E	G	E	E
Methanol	E	G	N	E
Methyl Acetate	P	N	N	E
Methyl Alcohol	E	G	N	E
Methyl Bromine	—	—	G	E
Methyl Chloride	—	N	G	E
Methyl Methacrylate	—	G	G	E
Methylene Chloride	N	N	N	E
Methylacetone	G	N	N	E
Methylcellosolve	—	P	N	E
Methyl-Ethyl-Ketone	—	N	N	E
Mercury	—	G	G	E
Mercuric Chloride	E	G	G	E
Mercuric Nitrate	E	—	—	E
Milk	—	G	G	E
Mineral Oil	—	G	G	E
Mineral Water	E	G	—	E
Mineral Naphtha (Combustible Oil)	N	G	E	E
Mixed Acids (°T max 32°C)	E	E	E	E
Molasses Monoclorobenzene	E	G	G	E
20°C	—	N	E	E
Motor Oil	—	G	G	E
n Butyl Mercaptan	—	—	—	E
Naphthalene	—	N	G	E
Ntural Gas	E	G	G	E
Nickel Ammonium Sulphate	—	—	—	E
Nickel Chloride	E	G	—	E

	EPDM	NBR	VITON	PTFE
Nickel Nitrate	—	G	G	E
Nickel Salt	—	G	—	E
Nickel Sulphate	E	G	G	E
Nicotine	—	—	—	E
Nicotinic Acid	E	—	—	E
Nitric Acic	N	N	G	E
Nitrobenzene 25°C	G	N	N	E
Nitrobenzene over 25°C	—	N	N	E
Nitrogen	E	G	—	E
Nitromenthane	—	N	—	E
Nitrous Oxide 40°C	—	N	P	E
Oleum	—	N	E	E
Oleic Acid	—	E	N	E
Oli Vegatali	E	G	G	E
Olive Oil	G	E	E	E
Oxalic Acid	E	E	G	E
Oxygen	E	P	G	E
Ozone	—	N	G	E
Paint Solvents	N	N	N	E
Palmitic Acid	—	G	G	E
Paraffin Wax	—	G	—	E
Perchloric Acid	—	N	G	E
Perchloroethylene	N	N	E	E
Persolfato di Ammonio	E	G	—	E
Petrol Oils (acid or refined oils)	—	G	G	E
Petrolutum (Vaseline)	—	—	—	E
Phenil Chloride (Chlorobenzene)	—	N	E	E
Phenylhydrazine	—	N	G	E
Phenol (Carbolic Acid)	—	N	E	—
Phosphate 50°C	—	—	—	E
Phosphoric Acid 10%	—	N	G	E
Phosphoric Acid 25/50%	—	N	G	E
Phosphoric Acid 50/80%	E	N	G	E
Phosphorous Oxychloride	—	—	—	E
Phosphorous Pentoxide 20°C	—	—	—	E
Phosphorous Pentoxide	—	N	N	E
Phthalic Acid	—	N	—	E
Phthalic Anhydride	—	N	G	E
Picric Acid	E	P	G	E
Pickling solution	N	—	—	E
Polyvinyl Acetate	E	—	—	E
Potassium Bicarbonate	—	G	G	E
Potassium Bichromate (30%)	—	N	N	E
Potassium Bromide	E	G	G	E
Potassium Carbonate 50%	—	G	G	E
Potassium Chlorate	E	G	G	E
Potassium Chloride	E	G	G	E
Potassium Chromate 30%	E	—	—	E
Potassium Cyanide 30%	E	G	G	E
Potassium Ferricyanide 30%	—	G	G	E
potassium Fluoride	—	G	G	E
Potassium Hydroxide	—	G	G	E
Potassium Hydroxide 5-30%	E	N	—	E
potassium Hydroxide 50-90%	E	G	N	E
PotassiumHypochlorite 30°C	—	N	G	E
Potassium Hypochlorite 90°C	—	N	—	E

Values in the table of chemical resistance should only be considered as overview guiding values. In critical applications it would therefore be well advised to get additional information from the supplier of the media.

E EXCELLENT G GOOD P POOR N NOT RECOMMENDED – =NO INFORMATION AVAILABLE	EPDM	NBR	VITON	PTFE
Potassium Iodide 70%	E	—	—	E
Potassium Nitrate 80%	E	G	G	E
Potassium Nitrate 1-5%	E	G	G	E
Potassium Oxalate 20%	—	—	—	E
Potassium Permanganate	E	N	P	E
Potassium Phosphate	—	E	E	E
Potassium Sulphate 10%	E	G	G	E
Potassium Sulphite	G	P	—	E
Potassium Sulphite	—	—	N	E
Propane	E	G	E	E
Propanol	—	G	G	E
Propylene Oxide	—	N	—	E
propylene Glycol	—	G	G	E
Pyridine	—	N	N	E
Pyrogallic Acid	—	P	P	E
Resins	—	—	G	E
Salicylic Acid	—	N	G	E
Salt Water	E	G	G	E
Sea Water	E	G	G	E
Sewage	G	G	G	E
Sewage	—	G	G	E
Silver Nitrate	E	G	G	E
Silicone Oil	—	G	G	E
Sodium Acetate	E	—	N	E
Sodium Bicarbonate	E	G	G	E
Sodium Bichromate	—	—	G	E
Sodium Bisulphite	E	G	G	E
Sodium Borate	—	G	G	E
Sodium Bromide	—	E	E	E
Sodium Carbonate	—	G	G	E
Sodium Chlorate	E	G	G	E
Sodium Chlorite	—	—	—	E
Sodium Chloride	E	G	G	E
Sodium Disulphate	—	G	G	E
Sodium Fluoride	E	—	—	—
Sodium Hydroxide (Caustic Soda)	E	P	—	E
Sodium Hypochlorite	E	N	G	E
Sodium Hypochlorite	E	G	G	E
Sodium Metaphosphate	—	G	G	E
Sodium Nitrate	E	P	N	E
Sodium Nitrite	—	—	—	E
Sodium Perborate 10%	—	G	G	E
Sodium Peroxide 10%	E	G	G	E
Sodium Phosphate	—	G	G	E
Sodium Silicate	E	G	G	E
Sodium Sulphate	E	G	G	E
Sodium Sulphite 10%	E	G	G	E
Sodium Sulphide 50%	E	G	G	E
Sodium Thiosulphate	E	G	G	E
Soft Water	E	E	—	E
Spirit Vinegar	—	N	G	E
Stannic Chloride	E	G	G	E
Stannous Chloride	E	G	G	E
Starci	G	G	—	E
Steam 130°C	E	N	N	E
Stearic Acid	—	G	—	E

E EXCELLENT G GOOD P POOR N NOT RECOMMENDED – =NO INFORMATION AVAILABLE	EPDM	NBR	VITON	PTFE
Suds	E	G	—	E
Sugarbeet Liquor	—	—	G	E
Sulphuric Acid 10-50%	E	P	E	E
Sulphuric Acid 60-70%	E	N	E	E
Sulphuric Acid 80-100%	—	N	E	E
Sulphurous Acid	—	N	G	E
Sulphamic Acid	E	—	—	E
Sulphur 20°C	—	N	N	E
Sulphur Chloride	—	N	G	E
Swimming pool Water	E	G	—	E
Tannic Acid	—	N	P	E
Tar	N	N	G	E
Tartaric Acid	—	G	G	E
Tetraphosphoric Acid	—	—	—	E
Tetrachydrofuran	—	N	N	E
Tetraethyl Lead	—	N	G	E
Thionyl Chloride	—	N	N	E
Toluene	N	N	G	E
Tomato Juice	—	G	G	E
Trichloroacetic Acid	—	N	G	E
Trisodium Phosphate	—	G	G	E
Tributyl Phosphate 30°C	—	N	N	E
Trichloroethylene	—	N	E	E
Transformer Oil	—	G	G	E
Turpentine	N	G	G	E
Unleaded Petrol	—	G	G	E
Urea	—	N	E	E
Various Esters	—	—	—	E
Various Ethers 40°C	—	G	N	E
Various Soaps	—	G	G	E
Various Ketones	—	N	N	E
Vaseline	—	P	P	E
Vegetable Oil	—	G	E	E
Vinyl Acetate	—	N	G	E
Wet Chlorine Gas	E	N	G	E
Wet Sulphurized hydrogen	E	N	E	E
Wet Sulphur Dioxide	E	G	N	E
White Liquor	E	N	G	E
Wine	—	G	G	E
Xylene, Xylol	—	N	G	E
Zinc Chloride	E	G	G	E
Zinc Nitrate	—	—	G	E
Zinc Sulphate 30%	E	G	G	E

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Flanges

DIN FLANGES

According to DIN 2501.
Blank cells are not standardized.

NPS (in)	DN	PN 6				PN 10			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
3/8”	10	75	50	4 × 11	35	90	60	4 × 14	40
1/2”	15	80	55	4 × 11	40	95	65	4 × 14	45
3/4”	20	90	65	4 × 11	50	105	75	4 × 14	58
1”	25	100	75	4 × 11	60	115	85	4 × 14	68
1 1/4”	32	120	90	4 × 14	70	140	100	4 × 18	78
1 1/2”	40	130	100	4 × 14	80	150	110	4 × 18	88
2”	50	140	110	4 × 14	90	165	125	4 × 18	102
2 1/2”	65	160	130	4 × 14	110	185	145	4 × 18	122
3”	80	190	150	4 × 18	128	200	160	8 × 18	138
4”	100	210	170	4 × 18	148	220	180	8 × 18	158
5”	125	240	200	8 × 18	178	250	210	8 × 18	188
6”	150	265	225	8 × 18	202	285	240	8 × 22	212
7”	175					315	270	8 × 22	242
8”	200	320	280	8 × 18	258	340	295	8 × 22	268
10”	250	375	335	12 × 18	312	395	350	12 × 22	320
12”	300	440	395	12 × 22	365	445	400	12 × 22	370
14”	350	490	445	12 × 22	415	505	460	16 × 22	430
16”	400	540	495	16 × 22	465	565	515	16 × 26	482
18”	450	595	550	16 × 22	520	615	565	20 × 26	532
20”	500	645	600	20 × 22	570	670	620	20 × 26	585
24”	600	755	705	20 × 26	670	780	725	20 × 30	685
28”	700	860	810	24 x 26	775	895	840	24 x 30	800
32”	800	975	920	24 x 30	880	1015	950	24 x 33	905
36”	900	1075	1020	24 x 30	980	1115	1050	28 x 33	1005
40”	1000	1175	1120	28 x 30	1080	1230	1160	28 x 36	1110
48”	1200	1405	1340	32 x 33	1295	1455	1380	32 x 39	1330
56”	1400	1630	1560	36 x 36	1510	1675	1590	36 x 42	1530
64”	1600	1830	1760	40 x 36	1710	1915	1820	40 x 48	1750
72”	1800	2045	1970	44 x 39	1920	2115	2020	44 x 48	1950
80”	2000	2265	2180	48 x 42	2125	2325	2230	48 x 48	2150

NPS (in)	DN	PN 16				PN 25			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
3/8”	10	90	60	4 × 14	40	90	60	4 × 14	40
1/2”	15	95	65	4 × 14	45	95	65	4 × 14	45
3/4”	20	105	75	4 × 14	58	105	75	4 × 14	58
1”	25	115	85	4 × 14	68	115	85	4 × 14	68
1 1/4”	32	140	100	4 × 18	78	140	100	4 × 18	78

NPS (in)	DN	PN 16				PN 25			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
1 1/2”	40	150	110	4 × 18	88	150	110	4 × 18	88
2”	50	165	125	4 × 18	102	165	125	4 × 18	102
2 1/2”	65	185	145	4 × 18	122	185	145	8 × 18	122
3”	80	200	160	8 × 18	138	200	160	8 × 18	133
4”	100	220	180	8 × 18	158	235	190	8 × 22	162
5”	125	250	210	8 × 18	188	270	220	8 × 26	188
6”	150	285	240	8 × 22	212	300	250	8 × 26	218
7”	175	315	270	8 × 22	242	330	280	12 × 26	248
8”	200	340	295	12 × 22	268	360	310	12 × 26	278
10”	250	405	355	12 × 26	320	425	370	12 × 30	335
12”	300	460	410	12 × 26	378	485	430	16 × 30	395
14”	350	520	470	16 × 26	438	555	490	16 × 33	450
16”	400	580	525	16 × 30	490	620	550	16 × 36	505
18”	450	640	585	20 × 30	550				
20”	500	715	650	20 × 33	610	730	660	20 × 36	615
24”	600	840	770	16 × 36	685	845	770	20 × 39	720
28”	700	910	840	24 x 36	800	960	875	24 x 42	820
32”	800	1025	950	24 x 39	905	1085	990	24 x 48	930
36”	900	1125	1050	28 x 39	1005	1185	1090	28 x 48	1030
40”	1000	1255	1170	28 x 42	1110	1320	1210	28 x 56	1140
48”	1200	1485	1390	32 x 48	1330	1530	1420	32 x 56	1350
56”	1400	1685	1590	36 x 48	1530	1755	1640	36 x 62	1560
64”	1600	1930	1820	40 x 56	1750	1975	1860	40 x 62	1780
72”	1800	2130	2020	44 x 56	1950	2195	2070	44 x 70	1985
80”	2000	2345	2230	48 x 62	2150	2425	2300	48 x 70	2210

NPS (in)	DN	PN 40				PN 64			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
3/8”	10	90	60	4 × 14	40	100	70	4 x 14	40
1/2”	15	95	65	4 × 14	45	105	75	4 x 14	45
3/4”	20	105	75	4 × 14	58				
1”	25	115	85	4 × 14	68	140	100	4 x 18	68
1 1/4”	32	140	100	4 × 18	78				
1 1/2”	40	150	110	4 × 18	88	170	125	4 x 22	88
2”	50	165	125	4 × 18	102	180	135	4 x 22	102
2 1/2”	65	185	145	8 × 18	122	205	160	8 x 22	122
3”	80	200	160	8 × 18	138	215	170	8 x 22	138
4”	100	235	190	8 × 22	162	250	200	8 x 26	162
5”	125	270	220	8 × 26	188	295	240	8 x 30	188
6”	150	300	250	8 × 26	218	345	280	8 x 33	218
7”	175	350	295	12 × 30	260	350	295	12 x 33	260
8”	200	375	320	12 × 30	285	415	345	12 x 36	285

NPS (in)	DN	PN 40				PN 64			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
10”	250	450	285	12 × 33	345	470	400	12 x 36	345
12”	300	515	450	16 × 33	410	530	460	16 x 36	410
14”	350	580	510	16 × 36	465	600	525	16 x 39	465
16”	400	660	585	16 × 39	535	670	585	16 x 42	535
18”	450	685	610	20 × 39	560	715	630	20 x 42	560
20”	500	755	670	20 × 42	615	800	705	20 x 48	615
24”	600	890	795	20 × 48	735	930	820	20 x 56	735
28”	700	995	900	24 x 48	840	1045	935	24 x 56	840
32”	800	1140	1030	24 x 56	960	1165	1050	24 x 62	960
36”	900	1250	1140	28 x 56	1070	1285	1170	28 x 62	1070
40”	1000	1360	1250	28 x 56	1180	1415	1290	28 x 70	1180
48”	1200	1575	1460	32 x 62	1380	1665	1530	32 x 78	1380
56”	1400	1795	1680	36 x 62	1600				
64”	1600	2025	1900	40 x 70	1815				

NPS (in)	DN	PN 100				PN 160			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
3/8”	10	100	70	4 x 14	40	100	70	4 x 14	40
1/2”	15	105	75	4 x 14	45	105	75	4 x 14	45
3/4”	20								
1”	25	140	100	4 x 18	68	140	100	4 x 18	68
1 1/4”	32								
1 1/2”	40	170	125	4 x 22	88	170	125	4 x 22	88
2”	50	195	145	4 x 26	102	195	145	4 x 26	102
2 1/2”	65	220	170	8 x 26	122	220	170	8 x 26	122
3”	80	230	180	8 x 26	138	230	180	8 x 26	138
4”	100	265	210	8 x 30	162	265	210	8 x 30	162
5”	125	315	250	8 x 33	188	315	250	8 x 33	188
6”	150	355	290	12 x 33	218	355	290	12 x 33	218
7”	175	385	320	12 x 33	260	390	320	12 x 36	260
8”	200	430	360	12 x 36	285	430	360	12 x 36	285
10”	250	505	430	12 x 39	345	515	430	12 x 42	345
12”	300	585	500	16 x 42	410	585	500	16 x 42	410
14”	350	655	560	16 x 48	465				
16”	400	715	620	16 x 48	535				
18”	450								
20”	500	870	760	20 x 56	615				
24”	600	990	875	20 x 62	735				
28”	700	1145	1020	24 x 70	840				

NPS (in)	DN	PN 250				PN 320			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
3/8”	10	125	85	4 x 18	40	125	85	4 x 18	40
1/2”	15	130	90	4 x 18	45	130	90	4 x 18	45
3/4”	20								
1”	25	150	105	4 x 22	68	160	115	4 x 22	68
1 1/4”	32								
1 1/2”	40	185	135	4 x 26	88	195	145	4 x 26	88
2”	50	200	150	8 x 26	102	210	160	8 x 26	102
2 1/2”	65	230	180	8 x 26	122	255	200	8 x 30	122
3”	80	255	200	8 x 30	138	275	220	8 x 30	138
4”	100	300	235	8 x 33	162	335	265	8 x 36	162
5”	125	340	275	12 x 33	188	380	310	12 x 36	188
6”	150	390	320	12 x 36	218	425	350	12 x 39	218
7”	175	430	355	12 x 39	260	485	400	16 x 42	260
8”	200	485	400	12 x 42	285	525	440	16 x 42	285
10”	250	585	490	16 x 48	345	640	550	16 x 52	345
12”	300	690	590	16 x 52	410				

ANSI FLANGES

According to ANSI B.16.5.

NPS (inch)	DN	ANSI CLASS 150			ANSI CLASS 300		
		D	Dh	n × s	D	Dh	n × s
1/2”	15	89	60	4 x 16	95	67	4 x 16
3/4”	20	98	70	4 x 16	117	83	4 x 19
1”	25	108	79	4 x 16	124	89	4 x 19
1 1/4”	32	117	89	4 x 16	133	98	4 x 19
1 1/2”	40	127	98	4 x 16	156	114	4 x 22
2”	50	152	121	4 x 19	165	127	8 x 19
2 1/2”	65	178	140	4 x 19	191	149	8 x 22
3”	80	191	152	4 x 19	210	168	8 x 22
4”	100	229	191	8 x 19	254	200	8 x 22
5”	125	254	216	8 x 22	279	235	8 x 22
6”	150	279	241	8 x 22	318	270	12 x 22
8”	200	343	298	8 x 22	381	330	12 x 25
10”	250	406	362	12 x 25	445	389	16 x 29
12”	300	483	432	12 x 25	521	415	16 x 32
14”	350	533	476	12 x 29	584	514	20 x 32
16”	400	597	540	16 x 29	648	571	20 x 35
18”	450	635	578	16 x 32	711	629	24 x 35
20”	500	698	635	20 x 32	774	686	24 x 35

NPS (inch)	DN	ANSI CLASS 150			ANSI CLASS 300		
		D	Dh	n × s	D	Dh	n × s
24”	600	813	749	20 x 35	914	812	20 x 41
28”	700	927	864	28 x 35	1035	940	28 x 45
32”	800	1060	978	28 x 41	1149	1054	28 x 51

Pressure		
ANSI CLASS	150	300
PN	20	50

JIS FLANGES

NPS (inch)	DN	JIS 5K			JIS 10K			JIS 16K		
		D	Dh	n × s	D	Dh	n × s	D	Dh	n × s
1/2”	15	80	55	4 x 11	95	65	4 x 14	95	65	4 x 14
3/4”	20	90	65	4 x 11	105	75	4 x 14	105	75	4 x 14
1”	25	95	75	4 x 12	125	90	4 x 19	125	90	4 x 19
1 1/4”	32	115	90	4 x 15	135	100	4 x 19	135	100	4 x 19
1 1/2”	40	120	95	4 x 15	140	105	4 x 19	140	105	4 x 19
2”	50	130	105	4 x 15	155	120	4 x 19	155	120	8 x 19
2 1/2”	65	155	130	4 x 15	175	140	4 x 19	175	140	8 x 19
3”	80	180	145	4 x 19	185	150	4 x 19	200	160	8 x 23
4”	100	200	165	8 x 19	210	175	8 x 19	225	185	8 x 23
5”	125	235	200	8 x 19	250	210	8 x 23	270	225	8 x 25
6”	150	265	230	8 x 19	280	240	8 x 23	305	260	12 x 25
8”	200	320	280	8 x 23	330	290	8 x 23	350	305	12 x 25
10”	250	385	345	12 x 23	400	355	12 x 25	430	380	12 x 27
12”	300	430	390	12 x 23	445	400	12 x 25	480	430	16 x 27
14”	350	480	435	12 x 25	490	445	12 x 25	540	480	16 x 33
16”	400	540	495	16 x 25	560	510	16 x 27	605	540	16 x 33
18”	450	605	555	16 x 25	620	565	16 x 27	675	605	20 x 33
20”	500	655	605	20 x 25	675	620	20 x 27	730	660	20 x 33
24”	600	770	715	20 x 27	795	730	20 x 33	845	770	24 x 39
28”	700	875	820	24 x 27	905	840	24 x 33	960	875	24 x 42
32”	800	995	930	24 x 33	1020	950	24 x 33	1085	990	24 x 48

BS FLANGES

According to BS 10:1962.

DN (mm)	NPS (in)	BS 10 Table D			BS 10 Table E		
		D (in)	Dh (in)	n x s (in)	D (in)	Dh (in)	n x s (in)
15	1/2	3 3/4	2 5/8	4 x 1/2	3 3/4	2 5/8	4 x 1/2
20	3/4	4	2 7/8	4 x 1/2	4	2 7/8	4 x 1/2
25	1	4 1/2	3 1/4	4 x 1/2	4 1/2	3 1/4	4 x 1/2
32	1 1/4	4 3/4	3 7/16	4 x 1/2	4 3/4	3 7/16	4 x 1/2
40	1 1/2	5 1/4	3 7/8	4 x 1/2	5 1/4	3 7/8	4 x 1/2
50	2	6	4 1/2	4 x 5/8	6	4 1/2	4 x 5/8
65	2 1/2	6 1/2	5	4 x 5/8	6 1/2	5	4 x 5/8
80	3	7 1/4	5 3/4	4 x 5/8	7 1/4	5 3/4	4 x 5/8
90	3 1/2	8	6 1/2	4 x 5/8	8	6 1/2	8 x 5/8
100	4	8 1/2	7	4 x 5/8	8 1/2	7	8 x 5/8
125	5	10	8 1/4	8 x 5/8	10	8 1/4	8 x 5/8
150	6	11	9 1/4	8 x 5/8	11	9 1/4	8 x 3/4
175	7	12	10 1/4	8 x 5/8	12	10 1/4	8 x 3/4
200	8	13 1/4	11 1/2	8 x 5/8	13 1/4	11 1/2	8 x 3/4
225	9	14 1/2	12 3/4	8 x 5/8	14 1/2	12 3/4	12 x 3/4
250	10	16	14	8 x 3/4	16	14	12 x 3/4
300	12	18	16	12 x 3/4	18	16	12 x 7/8
325	13	19 1/4	17 1/4	12 x 3/4	19 1/4	17 1/4	12 x 7/8
350	14	20 3/4	18 1/2	12 x 7/8	20 3/4	18 1/2	12 x 7/8
375	15	21 3/4	19 1/2	12 x 7/8	21 3/4	19 1/2	12 x 7/8
400	16	22 3/4	20 1/2	12 x 7/8	22 3/4	20 1/2	12 x 7/8
425	17	24	21 3/4	12 x 7/8	24	21 3/4	12 x 7/8
450	18	25 1/4	23	12 x 7/8	25 1/4	23	16 x 7/8
475	19	26 1/2	24	12 x 7/8	26 1/2	24	16 x 7/8
500	20	27 3/4	25 1/4	16 x 7/8	27 3/4	25 1/4	16 x 7/8
525	21	29	26 1/2	16 x 7/8	29	26 1/2	16 x 1
550	22	30	27 1/2	16 x 1	30	27 1/2	16 x 1
575	23	31	28 1/2	16 x 1	31	28 1/2	16 x 1
600	24	32 1/2	29 3/4	16 x 1	32 1/2	29 3/4	16 x 1 1/8

DN (mm)	NPS (in)	BS 10 Table F			BS 10 Table H		
		D (in)	Dh (in)	n x s (in)	D (in)	Dh (in)	n x s (in)
15	1/2	3 3/4	2 5/8	4 x 1/2	4 1/2	3 1/4	4 x 5/8
20	3/4	4	2 7/8	4 x 1/2	4 1/2	3 1/4	4 x 5/8
25	1	4 3/4	3 7/16	4 x 5/8	4 3/4	3 7/16	4 x 5/8
32	1 1/4	5 1/4	3 7/8	4 x 5/8	5 1/4	3 7/8	4 x 5/8
40	1 1/2	5 1/2	4 1/8	4 x 5/8	5 1/2	4 1/8	4 x 5/8
50	2	6 1/2	5	4 x 5/8	6 1/2	5	4 x 5/8

DN (mm)	NPS (in)	BS 10 Table F			BS 10 Table H		
		D (in)	Dh (in)	n x s (in)	D (in)	Dh (in)	n x s (in)
65	2 1/2	7 1/4	5 3/4	8 x 5/8	7 1/4	5 3/4	8 x 5/8
80	3	8	6 1/2	8 x 5/8	8	6 1/2	8 x 5/8
90	3 1/2	8 1/2	7	8 x 5/8	8 1/2	7	8 x 5/8
100	4	9	7 1/2	8 x 5/8	9	7 1/2	8 x 5/8
125	5	11	9 1/4	8 x 3/4	11	9 1/4	8 x 3/4
150	6	12	10 1/4	12 x 3/4	12	10 1/4	12 x 3/4
175	7	13 1/4	11 1/2	12 x 3/4	13 1/4	11 1/2	12 x 3/4
200	8	14 1/2	12 3/4	12 x 3/4	14 1/2	12 3/4	12 x 3/4
225	9	16	14	12 x 7/8	16	14	12 x 7/8
250	10	17	15	12 x 7/8	17	15	12 x 7/8
300	12	19 1/4	17 1/4	16 x 7/8	19 1/4	17 1/4	16 x 7/8
325	13	20 3/4	18 1/2	16 x 1	20 3/4	18 1/2	16 x 1
350	14	21 3/4	19 1/2	16 x 1	21 3/4	19 1/2	16 x 1
375	15	22 3/4	20 1/2	16 x 1	22 3/4	20 1/2	16 x 1
400	16	24	21 3/4	20 x 1	24	21 3/4	20 x 1
425	17	25 1/4	23	20 x 1	25 1/4	23	20 x 1
450	18	26 1/2	24	20 x 1 1/8	26 1/2	24	20 x 1 1/8
475	19	27 3/4	25 1/4	20 x 1 1/8	27 3/4	25 1/4	20 x 1 1/8
500	20	29	26 1/2	24 x 1 1/8	29	26 1/2	24 x 1 1/8
525	21	30	27 1/2	24 x 1 1/8	30	27 1/2	24 x 1 1/8
550	22	31	28 1/2	24 x 1 1/8	31	28 1/2	24 x 1 1/8
575	23	32 1/2	29 3/4	24 x 1 1/4	32 1/2	29 3/4	24 x 1 1/4
600	24	33 1/2	30 3/4	24 x 1 1/4	33 1/2	30 3/4	24 x 1 1/4

ISO FLANGES

According to ISO 7005-2.

NPS (in)	DN	PN 6				PN 10			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
3/8”	10	75	50	4 × 11	33	90	60	4 × 14	41
1/2”	15	50	55	4 × 11	38	95	65	4 × 14	46
3/4”	20	90	65	4 × 11	48	105	75	4 × 14	56
1”	25	100	75	4 × 11	58	115	85	4 × 14	65
1 1/4”	32	120	90	4 × 14	69	140	100	4 × 19	76
1 1/2”	40	130	100	4 × 14	78	150	110	4 × 19	84
2”	50	140	110	4 × 14	88	165	125	4 × 19	99
2 1/2”	65	160	130	4 × 14	108	185	145	4 × 19	118
3”	80	190	150	4 × 19	124	200	160	8 × 19	132
4”	100	210	170	4 × 18	144	220	180	8 × 19	156
5”	125	240	200	8 × 19	174	250	210	8 × 19	184

NPS (in)	DN	PN 6				PN 10			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
6”	150	265	225	8 × 19	199	285	240	8 × 23	211
8”	200	320	280	8 × 19	254	340	295	8 × 23	266
10”	250	375	335	12 × 19	309	395	350	12 × 23	319
12”	300	440	395	12 × 23	363	445	400	12 × 23	370
14”	350	490	445	12 × 23	413	505	460	16 × 23	429
16”	400	540	495	16 × 23	463	565	515	16 × 28	480
18”	450	595	550	16 × 23	518	615	565	20 × 28	530
20”	500	645	600	20 × 23	568	670	620	20 × 28	582
24”	600	755	705	20 × 26	667	780	725	20 × 31	682
28”	700	860	810	24 x 26	772	895	840	24 x 31	794
32”	800	975	920	24 x 31	878	1015	950	24 x 34	901
36”	900	1075	1020	24 x 31	978	1115	1050	28 x 34	1001
40”	1000	1175	1120	28 x 31	1078	1230	1160	28 x 37	1112
48”	1200	1405	1340	32 x 34	1295	1455	1380	32 x 40	1328
56”	1400	1630	1560	36 x 37	1510	1675	1590	36 x 43	1530
64”	1600	1830	1760	40 x 37	1710	1915	1820	40 x 49	1750
72”	1800	2045	1970	44 x 40	1918	2115	2020	44 x 49	1950
80”	2000	2265	2180	48 x 43	2125	2325	2230	48 x 49	2150

NPS (in)	DN	PN 16				PN 25			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
3/8”	10	90	60	4 × 14	41	90	60	4 × 14	41
1/2”	15	95	65	4 × 14	46	95	65	4 × 14	46
3/4”	20	105	75	4 × 14	56	105	75	4 × 14	56
1”	25	115	85	4 × 14	65	115	85	4 × 14	65
1 1/4”	32	140	100	4 × 19	76	140	100	4 × 19	76
1 1/2”	40	150	110	4 × 19	84	150	110	4 × 19	84
2”	50	165	125	4 × 19	99	165	125	4 × 19	99
2 1/2”	65	185	145	4 × 19	118	185	145	8 × 19	118
3”	80	200	160	8 × 19	132	200	160	8 × 19	132
4”	100	220	180	8 × 19	156	235	190	8 × 23	156
5”	125	250	210	8 × 19	184	270	220	8 × 28	184
6”	150	285	240	8 × 23	211	300	250	8 × 28	211
8”	200	340	295	12 × 23	266	360	310	12 × 28	274
10”	250	405	355	12 × 28	319	425	370	12 × 31	330
12”	300	460	410	12 × 28	370	485	430	16 × 31	389
14”	350	520	470	16 × 28	429	555	490	16 × 34	448
16”	400	580	525	16 × 31	480	620	550	16 × 37	503
18”	450	640	585	20 × 31	548	670	600	20 × 37	548
20”	500	715	650	20 × 34	609	730	660	20 × 37	609
24”	600	840	770	16 × 37	720	845	770	20 × 40	720
28”	700	910	840	24 x 37	794	960	875	24 x 43	820

NPS (in)	DN	PN 16				PN 25			
		D	Dh	n × s	Dt	D	Dh	n × s	Dt
32”	800	1025	950	24 x 40	901	1085	990	24 x 49	928
36”	900	1125	1050	28 x 40	1001	1185	1090	28 x 49	1028
40”	1000	1255	1170	28 x 43	1112	1320	1210	28 x 56	1140
48”	1200	1485	1390	32 x 49	1328	1530	1420	32 x 56	1350
56”	1400	1685	1590	36 x 49	1530	1755	1640	36 x 62	1560
64”	1600	1930	1820	40 x 56	1750	1975	1860	40 x 62	1780
72”	1800	2130	2020	44 x 56	1950	2195	2070	44 x 70	1985
80”	2000	2345	2230	48 x 62	2150	2425	2300	48 x 70	2210

NPS (in)	DN	PN 40			
		D	Dh	n × s	Dt
3/8”	10	90	60	4 × 14	41
1/2”	15	95	65	4 × 14	46
3/4”	20	105	75	4 × 14	56
1”	25	115	85	4 × 14	65
1 1/4”	32	140	100	4 × 19	76
1 1/2”	40	150	110	4 × 19	84
2”	50	165	125	4 × 19	99
2 1/2”	65	185	145	8 × 19	118
3”	80	200	160	8 × 19	132
4”	100	235	190	8 × 23	156
5”	125	270	220	8 × 28	184
6”	150	300	250	8 × 28	211
8”	200	375	320	12 × 31	284
10”	250	450	285	12 × 34	345
12”	300	515	450	16 × 34	409
14”	350	580	510	16 × 37	465
16”	400	660	585	16 × 40	535
18”	450	685	610	20 × 40	560
20”	500	755	670	20 × 43	615
24”	600	890	795	20 × 49	735

Pressure designations

Table for comparison of different pressure designations

The SI-designition is Pascal, Pa. Within the valve business the designation bar is commonly used.

1 bar = 100 kPa.

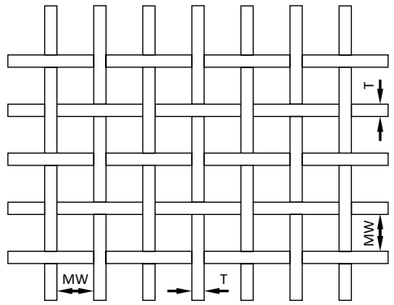
Bar	kp/cm2 at	mm vp	m vp	psi lssf/in2	Pa	kPa	mPa
		1			10	0,01	
0,006		60			600	0,6	
		100			1000	1	
		160			1600	1,6	
		250			2500	2,5	
		400			4000	4	
0,06		600		1	6000	6	
0,1		1000	1		10000	10	
		1600	1,6		16000	16	
		2500	2,5		25000	25	
		4000	4		40000	40	
0,6	0,6	6000	6	10	60000	60	
1,0	1,0	10000	10	15	100000	100	0,1
1,6	1,6		16	20		160	
2,5	2,5		25	30		250	
4	4		40	60		400	
6	6		60	100		600	
10	10		100	150		1000	1
16	16			200		1600	1,6
25	25			400		2500	2,5
40	40			600		4000	4
60	60			800		6000	6
100	100			1600			10
160	160			2000			16
250	250			3000			25
400	400			6000			40
600	600			10000			60
1000	1000			15000			100
1600	1600			20000			160
2500	2500			35000			250

ANSI pressure designation

Pressure and temperature table for ANSI valves

	Calculated pressure inbar (e)					
	ASME SA-105 (NGS277) ASTM A216 Grade WCB (NGS277) ASME SA-350 Grade LF2 (NGS293)					
Calculated temp. ºC	Class 150 (PN 20)	Class 300 (PN 50)	Class 600 (PN 100)	Class 900 (PN 150)	Class 1500 (PN 250)	Class 2500 (PN 420)
-29 to +38	19,6	51,1	102,2	153,2	255,3	425,5
50	19,2	50,1	100,2	150,2	250,4	417,3
100	17,7	46,4	92,8	139,1	231,9	386,5
150	15,8	45,2	90,5	135,7	226,1	376,9
200	14,0	43,8	87,6	131,5	219,1	365,2
250	12,1	41,7	83,4	125,2	208,6	347,7
300	10,2	38,7	77,5	116,2	193,7	322,8
350	8,4	37,0	73,9	110,9	184,8	308,0
375	7,4	36,5	72,9	109,4	182,3	303,9
400	6,5	34,5	69,0	103,5	172,5	287,5
425	5,6	28,8	57,5	86,3	143,8	239,6
450	4,7	20,0	40,1	60,1	100,2	166,9
475	3,7	13,5	27,1	40,6	67,7	112,9
500	2,8	8,8	17,6	26,4	44,0	73,3
525	1,9	5,2	10,4	15,5	25,9	43,2
540	1,3	3,3	6,5	9,8	16,3	27,2

Metal mesh



Measurment explanation

MESH no. = Number of meshes per inch (25.4 mm).

MW = Mesh width

T = Wire thickness

MW + T = 1 Split = 1 Nest

Table for weaves metal cloth

Regular single weaves stainless steel cloth

Mesh width (mm)	Mesh no. (25.4 mm)	Wire diameter (mm)	Through put in percentages (open area)
9.16	2.5	1.00	81 %
6.06	3.5	1.20	70 %
5.35	4	1.00	71 %
3.48	6	0.75	67 %
3.23	6	1.00	58 %
2.68	8	0.50	70 %
2.48	8	0.70	60 %
2.18	8	1.00	47 %
2.14	10	0.40	71 %
1.94	10	0.60	58 %
1.62	12	0.50	55 %
1.36	14	0.45	56 %
1.36	15	0.33	65 %
1.09	16	0.50	47 %
0.91	18	0.50	42 %
0.77	20	0.50	37 %
0.66	24	0.40	38 %
0.55	30	0.30	42 %
0.44	40	0.20	47 %
0.31	50	0.20	37 %
0.27	60	0.15	42 %
0.20	80	0.12	39 %
0.144	100	0.11	32 %
0.122	120	0.09	34 %
0.104	150	0.065	38 %

Threads

Metric threads

Size	Pitch (mm)	Major diameter (mm)	Minor diameter (mm)	Clearance hole ISO 273 (mm)	Tapping drill size (mm)
M5	0,8	5	4,134	5,5	4,2
M6	1	6	4,917	6,6	5
M8	1,25	8	6,647	9	6,8
M10	1,5	10	8,376	11	8,5
M12	1,75	12	10,106	13,5	10,2
M16	2	16	13,835	17,5	14
M20	2,5	20	17,294	22	17,5
M24	3	24	20,752	26	21
M30	3,5	30	26,211	33	26,5
M36	4	36	31,67	39	32
M42	4,5	42	37,129	45	37,5
M48	5	48	42,587	52	43
M56	5,5	56	50,046	62	50,5

Unified coarse thread (UNC)

Size	Pitch (mm)	Major diameter (mm)	Minor diameter (mm)	Clearance hole (mm)	Tapping drill size (mm)
1/4 - 20	1,27	6,35	4,976	7	5,1
5/16 - 18	1,411	7,938	6,411	9	6,6
3/8 - 16	1,588	9,525	7,805	11	8
7/16 - 14	1,814	11,112	9,149	12,5	9,4
1/2 - 13	1,954	12,7	10,584	14,5	10,8
9/16 - 12	2,117	14,288	11,996	16	12,2
5/8 - 11	2,309	15,875	13,376	18	13,5
3/4 - 10	2,54	19,05	16,299	21	16,5
7/8 - 9	2,822	22,225	19,169	25	19,5
1 - 8	3,175	25,4	21,963	28	22,25
1 1/8 - 7	3,629	28,575	24,648	32	25
1 1/4 - 7	3,629	31,75	27,823	35	28
1 3/8 - 6	4,233	34,925	30,343	38	30,75
1 1/2 - 6	4,233	38,1	33,518	42	34
1 3/4 - 5	5,08	44,45	38,951	49	39,5
2 - 4 1/2	5,644	50,8	44,689	56	45
2 1/4 - 4 1/2	5,644	57,15	51,039	62	51,5
2 1/2 - 4	6,35	63,5	56,627	69	57

National pipe thread tapered thread (NPT)

Size	Major diameter	Pitch
1/16”	0.3125 in (7.94 mm)	0.03704 in (0.94082 mm)
⅛”	0.405 in (10.29 mm)	0.03704 in (0.94082 mm)
¼”	0.540 in (13.72 mm)	0.05556 in (1.41122 mm)
3/8”	0.675 in (17.15 mm)	0.05556 in (1.41122 mm)
½”	0.840 in (21.34 mm)	0.07143 in (1.81432 mm)
¾”	1.050 in (26.67 mm)	0.07143 in (1.81432 mm)
1”	1.315 in (33.40 mm)	0.08696 in (2.20878 mm)
1¼”	1.660 in (42.16 mm)	0.08696 in (2.20878 mm)
1½”	1.900 in (48.26 mm)	0.08696 in (2.20878 mm)
2”	2.375 in (60.33 mm)	0.08696 in (2.20878 mm)
2½”	2.875 in (73.02 mm)	0.12500 in (3.175 mm)
3”	3.500 in (88.90 mm)	0.12500 in (3.175 mm)
4”	4.500 in (114.30 mm)	0.12500 in (3.175 mm)
5”	5.563 in (141.30 mm)	0.12500 in (3.175 mm)
6”	6.625 in (168.27 mm)	0.12500 in (3.175 mm)
10”	10.750 in (273.05 mm)	0.12500 in (3.175 mm)
12”	12.750 in (323.85 mm)	0.12500 in (3.175 mm)
14” OD	14 in (355.60 mm)	0.12500 in (3.175 mm)
16” OD	16 in (406.40 mm)	0.12500 in (3.175 mm)
18” OD	18 in (457.20 mm)	0.12500 in (3.175 mm)
20” OD	20 in (508.00 mm)	0.12500 in (3.175 mm)
24” OD	24 in (609.60 mm)	0.12500 in (3.175 mm)

Withworth pipe thread (BSP)

Size	Pitch (mm)	Major diameter (mm)	Minor diameter (mm)
G 1/8”	0,907	9,73	8,85
G 1/4”	1,337	13,16	11,89
G 3/8”	1,337	16,66	15,39
G 1/2”	1,814	20,95	19,17
G 5/8”	1,814	22,91	21,13
G 3/4”	1,814	26,44	24,66
G 7/8”	1,814	30,2	28,42
G 1”	2,309	33,25	30,93
G 1 1/8”	2,309	37,9	35,58
G 1 1/4”	2,309	41,91	39,59
G 1 3/8”	2,309	44,32	42
G 1 1/2”	2,309	47,8	45,48
G 1 3/4”	2,309	53,74	51,43
G 2”	2,309	59,61	57,29
G 2 1/4”	2,309	65,71	63,39
G 2 1/2”	2,309	75,18	72,86
G 2 3/4”	2,309	81,53	79,21
G 3”	2,309	87,88	85,56
G 3 1/4”	2,309	93,98	91,66
G 3 1/2”	2,309	100,33	98,01
G 3 3/4”	2,309	106,68	104,3
G 4”	2,309	113,03	110,71

Bolt torque

Bolt torque

Guideline values in Nm.

Thread size	8.8	10.9	12.9
M5	5,7	8,1	9,7
M6	9,8	14	17
M8	24	33	40
M10	47	65	79
M12	81	114	136
M16	197	277	333
M20	385	541	649
M24	665	935	1120
M30	1310	1840	2210
M36	2280	3210	3850

UNC	8.8	10.9	12.9
1/4 - 20	11	15	19
5/16 - 18	22	31	38
3/8 - 16	38	54	68
7/16 - 14	61	87	108
1/2 - 13	93	131	163
9/16 - 12	133	187	234
5/8 11	183	259	323
3/4 - 10	322	455	568
7/8 - 9	516	729	909
1 - 8	772	1090	1360
1 1/8 - 7	1090	1550	1930
1 1/4 - 7	1530	2160	2690
1 1/2 - 6	2650	3750	4680

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Contact us

Sweden and export markets

LK Valves AB
Garnisonsgatan 19
SE-254 66 Helsingborg
Sweden

Telephone: +46 (0)42 38 38 70
Fax: +46 (0)42 38 38 75
E-mail: sales@lkvalves.com

Norway

LK Valves AB
NO-6953 Leirvik i Sogn
Norway

Telephone: +47 (0)57 78 90 00
Fax: +47 (0)57 78 83 77
E-mail: leirvik@lkvalves.com

Singapore

LK Valves Asia Pte Ltd
3 International Business Park
#03-16 Nordic European Centre
Singapore 609927

Phone: +65 6561 2601
Fax: +65 6561 2602
E-mail: singapore@lkvalves.com

Your local distributor:

www.lkvalves.com

LK Valves