aalberts integrated piping systems

VSH Shurjoint

EN technical manual

contents

Aalberts integrated piping systems

don’t just buy products, buy solutions.

piping technology

we are Aalberts integrated piping systems

Aalberts integrated piping systems engineers the most advanced integrated piping systems for the distribution and control of liquids and gases for key verticals, like industrial, utilities, commercial and residential. We offer fully integrated piping systems in valve, connection, fastening and piping technology. We work hand-in-hand with our customers to create the perfect integrated piping system, that meets their requirements. Our piping systems are easy to specify, install, control and maintain, saving important preparation and installation time. We meet the highest quality and industry standards needed in the selected verticals. We are the only business that truly offers its customers a single sourced and complete integrated piping solution, each and every time.
Don't just buy products, buy solutions.

our mission

With our integrated piping systems, supported by our unique Digital Design Service, we ensure that you will always get the best and easiest solution for the installation of an integrated piping system. From the moment that your plan is designed, you can get advice on complete and tailored solutions.
With our Revit Plug-in you have digital access to the complete product offering within Aalberts integrated piping systems. This information is always accessible and up to date, allowing the design of an optimal and economically attractive installation that will meet all your demands. So whether the task is project conception, installation, or on-going maintenance, we are the company that truly delivers a complete system and service offering. Our know-how, our can-do attitude, and our relentless innovation come as standard. We will sweat the small stuff in our quest to find the perfect solutions, even if we have to invent them.
This is how we deliver excellence.

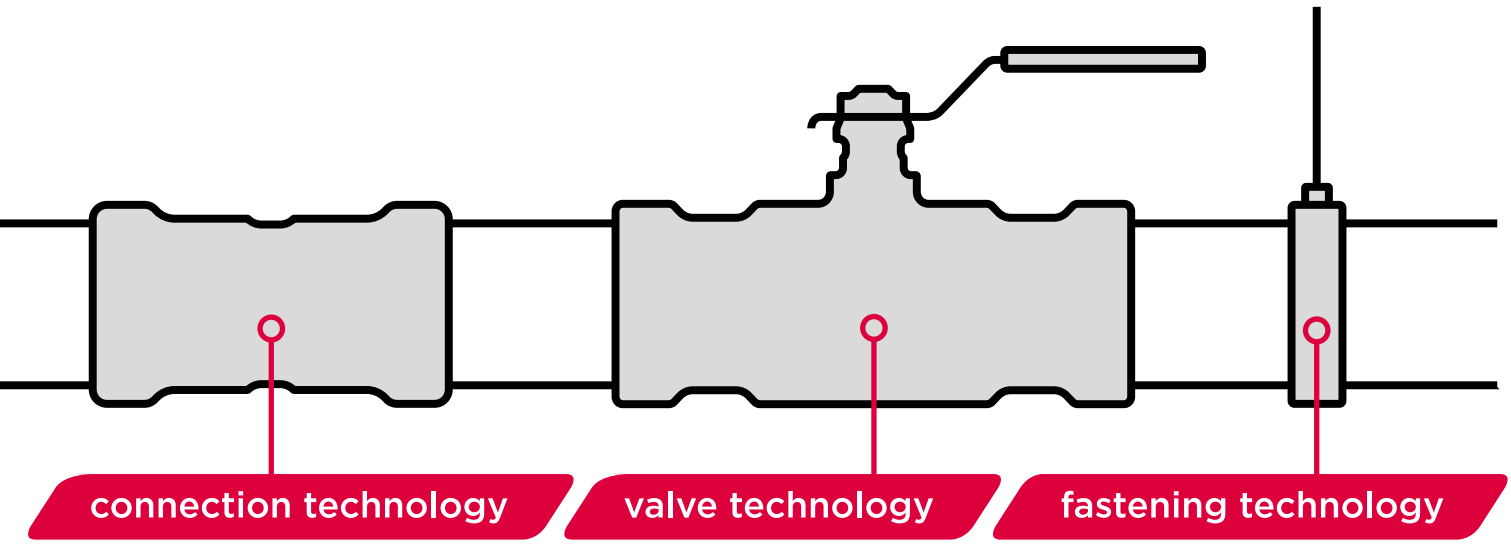
our way of working

We operate from various regions around the globe: America, EMEA and APAC. As we have multiple locations in many countries, we are always close to our customers. More than 3500 mission critical employees are persistent to offer the best integrated piping system. We work on our products, solutions and services every day. No matter how big the opportunity is, when we say we've got this, we won't let go until there is nothing left to learn. We improve ourselves by exchanging knowledge and experience to stay ahead of our competitors.
Good is never good enough.

With our sustainable spirit we contribute to circularity every single day. This belief is strongly linked to the way we do business. Rethink, reduce and recycle. We are entrepreneurial and take ownership in everything we do. We are convinced that self-development and diversity is essential.
The Aalberts way, winning with people.

the strength of Aalberts integrated piping systems

- the perfect solution for every project
- smart, fast and efficient installation
- valuable advice from the drawing board to delivery
- a very wide product range



For more information about Aalberts integrated piping systems, go to www.aalberts-ips.eu

Aalberts integrated piping systems connect: our systems are easy to combine with each other

Aalberts integrated piping systems is the combination of different companies with a strong legacy in their markets. The individual brands are well-known and each represents a long history. Together they offer the best integrated piping system for now and in the future.

our product lines

We offer product ranges that:

- connect seamlessly
- are available in dimensions from 6 mm up to 104" (DN2600)
- can be used for thick-walled pipe and thin-walled metal or plastic tube
- have press, compression, groove and push connections
- can be expanded with valves and accessories
- are BIM ready

Connection technology

VSH

VSH has been supplying quality products for 90 years and delivers piping systems and fittings throughout the world. In the 1970's VSH brought the well-known VSH Super compression fitting on the market which is still a best-seller, followed by the VSH XPress pressfitting, a technology that makes it possible to realize a connection even faster and more reliable.

Shurjoint

The history of Shurjoint dates back to 1974, when the founders produced their first grooved couplings. These first couplings were produced from malleable iron, the casting material of choice at this time. Shurjoint is recognized as a world leader in the design and manufacture of mechanical piping components.

Valve technology

Apollo

Apollo Valves has been supplying the commercial and industrial valve markets since 1928. The valves, with their signature yellow handles, are designed and manufactured in their state-of-the-art facilities in the Carolinas, USA. Apollo's vertical manufacturing integration assures better quality control, better cost control, and the shortest delivery lead times possible for their range of ball valves, automation products, safety relief valves, backflow preventers and plumbing/heating products.

VSH PowerPress®

material	carbon steel
suitable for	thick-walled steel
connection	press / DW-profile
dimensions	½" - 2" (DN15 – DN50)

VSH SudoPress

material	carbon steel / stainless steel / copper
suitable for	carbon steel / stainless steel / copper
connection	press / V-profile
dimensions	12 – 108 mm (DN10 – DN100)

VSH XPress

material	carbon steel / stainless steel / copper / cunifer
suitable for	carbon steel / stainless steel / copper / cunifer
connection	press / M-profile

VSH Shurjoint

material	ductile iron / stainless steel
suitable for	thick-walled steel / stainless steel / HDPE
connection	groove
dimensions	½" - 104" (DN15 – DN2600)

VSH Super

material	brass
suitable for	carbon steel / stainless steel / copper / plastic
connection	compression
dimensions	6 – 54 mm (DN4 – DN50)

VSH SmartPress

material	stainless steel
suitable for	stainless steel (schedule 5S/10S)
connection	press / V-profile (ASP)
dimensions	½" - 2" (DN15 – DN50)

Apollo Valves

material	brass / bronze / carbon steel / stainless steel
suitable for	steel / carbon steel / stainless steel / copper
connection	threaded / press / push / flange
dimensions	DN15 – DN300

Apollo ProFlow

material	brass / ductile iron
suitable for	carbon steel / stainless steel / copper / plastic
connection	threaded / press / flange
dimensions	DN15 – DN300

Seppelfricke

material	brass
suitable for	steel / carbon steel / stainless steel / copper
connection	press (V & M profile) / threaded
dimensions	10 – 54 mm (DN8 – DN50)

VSH MultiPress

material	PPSU / brass
suitable for	plastic
connection	press / U & TH profile
dimensions	14 – 63 mm (DN10 – DN50)

VSH UltraLine

material	PPSU / brass / PVDF
suitable for	plastic
connection	sliding sleeve
dimensions	14 – 32 mm (DN10 – DN25)

VSH Tectite

material	copper / brass / stainless steel
suitable for	copper / carbon steel / stainless steel
connection	push
dimensions	10 – 54 mm (DN8 – DN50)

VSH Shurjoint

VSH Shurjoint is recognised as a world-leading solution for grooved piping systems. With a wide range of high-quality grooved components and expertise in innovative mechanical piping system solutions, Aalberts integrated piping systems offers more value in the HVAC, sanitary and industrial markets. Reliable connections, easy installation and safety are our top priorities.

VSH Shurjoint products have been used in numerous piping applications: heating, cooling, compressed air, sanitary and sprinkler systems and form seamless transitions to other existing product ranges of Aalberts integrated piping systems. A complete piping system from Aalberts integrated piping systems will prevent compatibility issues with different manufacturers. One supplier for all your piping systems.

the advantages of VSH Shurjoint

- up to 70% reduction in installation time compared to welding
- improved job site safety, no welding required
- systems for steel, stainless steel, ductile iron, copper, PVC and PE piping
- wide range of high quality products
- sizes from ½" to 104"
- technical support with 3D design modelling, cost comparisons and thermal movement analysis
- BIM ready
- improve job site schedules, finish on-time, on-budget
- seamless transition to other Aalberts integrated piping systems

VSH Shurjoint

technical data

applications

potable water installations

When the special E-pw gaskets are used in the standard VSH Shurjoint couplings, these are suitable for potable water applications with the appropriate stainless steel pipes. The E-pw gaskets have various international approvals.

gasket:	EPDM* (grade E-pw)
operating temperature:	0°C to +82°C
max. temperature:	+110°C (short-term)

heating installations

VSH Shurjoint couplings and fittings for steel or stainless steel pipes.

gasket:	EPDM (grade E)
operating temperature:	-34°C to +110°C
max. temperature:	+110 °C (short-term)

For heating systems where temperatures can rise above 65°C, it is recommended to use VSH Shurjoint EHC lubricant.
VSH Shurjoint EHC (high consistency silicone) lubricant is designed to provide better sealing under extremely hot or cold conditions.

cooling water installations

VSH Shurjoint couplings and fittings for steel or stainless steel pipes.

gasket:	EPDM (grade E)
operating temperature:	-34°C to +110°C
max. temperature:	+110°C (short-term)

compressed air installations

VSH Shurjoint couplings and fittings for steel or stainless steel pipes.

VSH Shurjoint galvanised steel fittings for galvanised steel pipes can be used for compressed air under the following condition: NBR gaskets (grade T) must be used if the compressed air contains oil vapour. EPDM (grade E) gaskets can be used for oil-free compressed air.

water content:	max. 880 mg/m^3, class 3, ISO 8573 part 1
oil content:	max. 25 mg/m^3, class 5, ISO 8573 part 1

class	water content [mg/m^3]	oil content [mg/m^3]	gasket
1	3	0.01	EPDM/NBR
2	120	0.1	EPDM/NBR
3	880	1	EPDM/NBR
4	6000	5	EPDM/NBR
5	7800	25	EPDM/NBR
6	9400	>25	FKM/NBR

compressed air and iso classification - o-ring to be used

sprinkler installations

VSH Shurjoint couplings and fittings for steel or stainless steel pipes, with VdS, FM, UL, ULc or LPCB approval.

gasket:	EPDM (grade Lube-E)
operating temperature:	-34°C to +65°C
max. temperature:	+65°C (short-term)

Aalberts integrated piping systems has a product range specifically designed for the fire protection market. For more information about VSH Shurjoint in sprinkler installations, please consult the technical manual 'VSH Fire Protection'. This manual can be downloaded from our website
www.aalberts-ips.eu/downloads

* ethylene propylene diene monomer

dry pipe or freezer systems

For dry lines for fire protection and freezer applications, Aalberts integrated piping systems recommends the use of GapSeal gaskets (grade E). The GapSeal gasket seals the space between the pipes or the gasket cavity. This prevents remaining liquid from entering the cavities and freezing when the temperature drops below 0˚C. Rigid couplings are preferred for dry pipe, freezer and vacuum applications. Reducing couplings are not recommended for these applications.

gasket:	EPDM (grade E)
operating temperature:	-34°C to +110°C
max. temperature:	+110°C (short-term)

note: Do not use standard VSH Shurjoint lubricant for dry pipe or freezer applications. Instead, use an oil-free silicone lubricant.

industrial installations

VSH Shurjoint products can be used in many industrial applications, such as:

- abrasive (raw, scouring) media, slurry lines
- water treatment
- chemical lines
- tunnel boring lines
- sea water reverse osmosis
- irrigation

vacuum installations

VSH Shurjoint standard gaskets can be used under vacuum conditions up to 0.34 bar (absolute) pressure. These are designed to provide a tight seal, for example when a system is drained. In continuous applications where an (absolute) pressure of less than 0.34 bar is required, it is recommended to use GapSeal or EP gaskets in combination with rigid couplings. Contact Aalberts integrated piping systems for specific recommendations.

fittings and couplings

The VSH Shurjoint range consists of grooved fittings and couplings. The fittings and pipes are connected to each other by the couplings using a 'key and groove' connection with the key of the coupling fitting into the groove of the fitting or pipe. The couplings are assembled with bolts and nuts. VSH Shurjoint couplings and fittings are available in ductile iron, steel and stainless steel; the couplings and fittings are finished with an orange, red, or black coating or are galvanised.

approvals

VSH Shurjoint production facilities are certified to ISO 9001. Products are designed to conform and meet or exceed all applicable domestic and international standards and are listed, approved and/or certified by various approval bodies and registration authorities. VSH Shurjoint is also active in industry and environmental organisations.

Approvals	
	ANSI American National Standards Institute
	ANSI/AWWA American Water Works Association C606 (latest edition)
	ASTM American Society of Testing and Materials F 1476–01 Couplings, F 1548–01 Fittings, F 1155 Shipbuilding
	CNBOP-PIB Scientific and Research Centre for Fire Protection - National Research Institute
	CSA Canadian Standards Association B-242
	FM Factory Mutual Research Corp. - Approved for Fire Protection Services
	IAPMO R&T IAPMO Research and Testing, Inc.
	LLOYD Lloyd's Register Quality Assurance ISO 9001:2008
	LPCB Loss Prevention Certification Board LPS-1219
	NFPA National Fire Protection Association NFPA 13
	NSF NSF/ANSI 61 Drinking Water System Components - Health Effects NSF/ANSI 372 Drinking Water System Components - Lead Content
	UL Underwriter's Laboratories, Inc. - UL213
	ULC Underwriter's Laboratories of Canada
	TSUS Technický a Skúýobný Ústav Stavebný, n. o.
	VdS VdS Schadenverhütung

rigid and flexible couplings

Rigid couplings are used in applications where a rigid joint is desired, similar to that of a traditional flanged, welded, and/or threaded connection. To be considered rigid, a coupling allows less than one degree of deflection or angular movement.

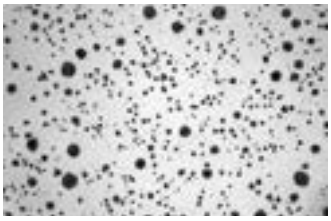
Flexible couplings are designed to accommodate axial displacement, rotation and angular deflections. Flexible couplings can be used in applications with curved pipe sections, for alignment, and/or when systems are exposed to external forces outside normal static conditions, such as seismic events, or where vibration and/or noise damping are a concern.

materials

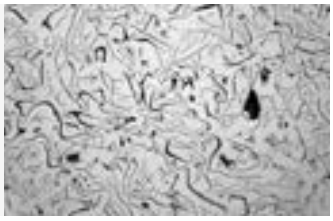
ductile Iron

Ductile iron is an ideal material for VSH Shurjoint components because it provides the same or greater strength than forged or cast steel pipe materials, such as forged steel flanges – ASTM A105, steel valves – ASTM A216 WCB, forged steel pipe – ASTM A53 grade B, etc. Most VSH Shurjoint parts are made of ductile iron and comply with ASTM A536 grade 65-45-12.

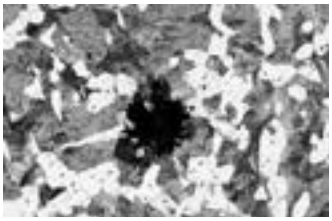
Ductile iron was invented in the late 1940s. Ductile iron has superior strength, which is achieved by the crystallisation of graphite in the form of nodules. The result is ductile iron with tensile and yield strength properties equal to or greater than some steel castings. This superior strength combined with ductile iron's excellent castability helps to reduce the weight and cost of many components. These advantages mean that many components previously made of grey iron, malleable iron or cast steel have been converted to ductile iron over the past 60 years.



ductile Iron
Superior tensile strength with good castability



grey iron
Excellent castability but brittle and not as strong



malleable Iron
Stronger than grey iron but poor castability

International specifications for ductile iron equivalent to ASTM A536 grade 65-45-12:

- SAE J434: D4512
- EN1563: EN-GJS-450-10 or EN-GJS-450-15
- JIS G5502: FCD450-10
- SABS 936/937: SG42

specifications for ductile iron, ASTM A536, grade 65-45-12 (UNS F33100)	
chemical composition*	
carbon	3 – 3.9%
silicon	2.5 – 3%
manganese	0.1 – 0.4%
phosphorus	<0.07%
sulphur	<0.02%
magnesium	0.03 – 0.05%
chromium	<0.1%
physical properties	
tensile strength	448 MPa
yield strength	310 MPa
elongation at fracture	12%

* Reference only as chemical requirements are not specified in ASTM A536.

stainless steel

VSH Shurjoint stainless steel couplings and fittings are available in AISI 304 and AISI 316 grades. The choice between these two variants depends on the application and customer requirements.

wrought fittings

Shurjoint wrought grooved fittings are available from 10″ (DN250) to 42″ (DN1050) in various types. The fittings are made of carbon steel pipe according to ASTM A234 grade WPB or equivalent quality, or assembled with welded grooved connections made of carbon steel pipe. C-E dimensions meet ANSI B16.9

bolts and nuts

steel

VSH Shurjoint carriage bolts with oval necks comply with ASTM A449 or ASTM A183 grade 2, and nuts for heavy duty use comply with ASTM A563 grade B. Both are available with UNC thread or ISO metric thread. The carriage bolts and nuts are electrogalvanised. Hot-dip galvanized bolts and nuts are also available upon request.

specifications for hardened and tempered bolts*, ASTM A449	
chemical composition	
carbon	0.28 - 0.55%
manganese	>0.60%
phosphorus	<0.040%
sulphur	<0.050%
physical properties	
tensile strength	825 MPa
yield strength	635 MPa
elongation at fracture	14%

* Same as grade 8.8 bolts according to ISO 898.

specifications for steel carriage bolts, ASTM A183, grade 2	
chemical composition	
carbon	>0.3%
phosphorus	<0.05%
sulphur	<0.06%
physical properties	
tensile strength	760 MPa
yield strength	550 MPa
elongation at fracture	12%

specifications for alloy steel nuts for heavy-duty use, ASTM A563, grade B	
chemical composition (bolts)	
carbon	<0.55%
phosphorus	<0.12%
sulphur	<0.15%
physical properties	
hardness	B69 (C32 Rockwell)

stainless steel

VSH Shurjoint stainless steel couplings are supplied as standard with stainless steel carriage bolts and nuts, type AISI 316. Type AISI 304 bolts and nuts are also available. The carriage bolts and nuts are coated with molybdenum disulphide (MoS_2) to prevent corrosion and cold welding.

specifications for stainless steel bolts, ASTM A193, grade B8 (AISI 304)	
chemical composition	
carbon	<0.08%
manganese	<2%
phosphorus	<0.045%
sulphur	<0.030%
silicon	<1%
chromium	18 – 20%
nickel	8 – 10.5%
physical properties	
tensile strength	515 MPa
yield strength	205 MPa
elongation at fracture	30%

specifications for stainless steel bolts, ASTM A193, grade B8M (AISI 316)	
chemical composition	
carbon	<0.08%
manganese	<2%
phosphorus	<0.045%
sulphur	<0.030%
silicon	<1%
chromium	16 – 18%
nickel	10 – 14%
molybdenium	2 – 3%
physical properties	
tensile strength	515 MPa
yield strength	205 MPa
elongation at fracture	30%

	socket size	
bolt size	**[mm]**	**[inch]**
M10	17	
M12	19	
M16	24	
M20	30	
5/16"		9/16
3/8"		11/16
1/2"		7/8
5/8"		11/16
3/4"		1 1/4
7/8"		1 7/16
1"		1 5/8
1 1/8"		1 13/16

coupling bolt dimensions

pipe size		[mm]	coupling type 7705	7707/7707N	Z05	M07	Z07/Z07N	7706	XH70-EP
1"	(DN25)	33.7	M10 x 45	M10 x 55	-		-	-	-
1¼"	(DN32)	42.4	M10 x 55	M12 x 75	M10 x 55		M10 x 55	M10 x 55	-
1½"	(DN40)	48.3	M10 x 55	M12 x 60	M10 x 55		M10 x 55	-	-
2"	(DN50)	60.3	M10 x 55	M12 x 75	M10 x 70	M12 x 97	M10 x 70	M10 x 55	⅝ x 2¾
2½"	(DN50)	73	M10 x 55	M12 x 75	M10 x 70		M10 x 70	M10 x 55	⅝ x 2¾
2½"	(DN65)	76.1	M10 x 55	M12 x 75	M10 x 70	M12 x 97	M10 x 70	M10 x 55	-
3"	(DN80)	88.9	M12 x 75	M12 x 75	M10 x 70	M12 x 97	M12 x 75	M12 x 75	⅝ x 2¾
4"	(DN80)	108	M12 x 75	-	M10 x 70		-	-	-
4"	(DN100)	114.3	M12 x 75	M16 x 90	M10 x 70	M12 x 97	M12 x 75	M12 x 75	¾ x 4¾
5"	(DN125)	133	M16 x 90	-	M12 x 75		-	-	-
5"	(DN125)	139.7	M16 x 90	M16 x 90	M12 x 75	M16 x 102	M16 x 90	M16 x 90	-
5"	(DN125)	141.3	M16 x 90	M16 x 90	M12 x 75		M16 x 90	M16 x 90	-
6"	(DN125)	159	M16 x 90	-	M12 x 75		M16 x 90	-	-
6"	(DN125)	165.1	M16 x 90	M20 x 120	M12 x 75		M16 x 90	M16 x 90	-
6"	(DN150)	168.3	M16 x 90	M20 x 120	M12 x 75	M16 x 102	M16 x 90	M16 x 90	⅞ x 5½
8"	(DN200)	219.1	M16 x 90 M20 x 120 (7705H)	M20 x 120	M16 x 135	M20 x 120	M20 x 120	M20 x 120	1 x 5½
10"	(DN250)	273	M20 x 120	⅞ x 6½	-		⅞ x 6½	-	1 x 5½
12"	(DN300)	323.9	⅞ x 6½	⅞ x 6½	-		⅞ x 6½	-	1 x 5½
14"	(DN350)	355.6	-	⅞ x 6½	-		⅞ x 5½	-	-
16"	(DN400)	406.4	-	1 x 6½	-		⅞ x 5½	-	-
18"	(DN450)	457.2	-	1 x 6½	-		⅞ x 5½	-	-
20"	(DN500)	508	-	1 x 6½	-		1 x 5½	-	-
22"	(DN550)	558.8	-	1⅛ x 6½	-		1 x 5½	-	-
24"	(DN600)	609.2	-	1⅛ x 6½	-			-	-
26"	(DN650)	660.4	-	⅞ x 9⅝	-			-	-
28"	(DN700)	711.2	-	⅞ x 4	-			-	-
30"	(DN750)	762	-	⅞ x 4	-			-	-
32"	(DN800)	812.8	-	⅞ x 4	-			-	-
34"	(DN850)	863.6	-	⅞ x 4	-			-	-
36"	(DN900)	914.4	-	⅞ x 4	-			-	-
40"	(DN1000)	1,016	-	1 x 3½	-			-	-
42"	(DN1050)	1,066.8	-	1 x 3½	-			-	-

pipe size		[mm]	coupling type 7721/7722	SS7/SS7X	SS8	SS8X	SS1200	S35	79
1"	(DN25)	33.7	-	-	5/16 x 1½	⅜ x 2⅛	⅜ x 2⅛	-	½ x 2⅜
1¼"	(DN32)	42.4	-	⅜ x 2⅛	5/16 x 1½	⅜ x 2⅛	⅜ x 2⅛	-	
1½"	(DN40)	48.3	-	⅜ x 2⅛	5/16 x 1½	⅜ x 2⅛	⅜ x 2⅛	-	½ x 2⅜
2"	(DN50)	60.3	M10 x 55	⅜ x 2⅛	⅜ x 2⅛	⅜ x 2⅛	½ x 3	⅜ x 2⅛	⅝ x 3½
2½"	(DN50)	73	M12 x 75	⅜ x 2⅛	⅜ x 2⅛	⅜ x 2⅛	-	-	⅝ x 3½
2½"	(DN65)	76.1	M12 x 75	⅜ x 2⅛	⅜ x 2⅛	-	½ x 3	-	-
3"	(DN80)	88.9	M12 x 75	⅜ x 2⅛	⅜ x 2⅛	½ x 3	½ x 3	½ x 3	¾ x 4¾
4"	(DN100)	114.3	M12 x 75	½ x 3	½ x 3	½ x 3	⅝ x 3½	½ x 3	¾ x 4¾
5"	(DN125)	139.7	M16 x 90	½ x 3	½ x 3	-	-	-	-
5"	(DN125)	141.3	M16 x 90	½ x 3	½ x 3	⅝ x 3½	-	-	⅞ x 6½
6"	(DN125)	165.1	M16 x 135	½ x 3	½ x 3	⅝ x 3½	-	⅝ x 3½	-
6"	(DN150)	168.3	M16 x 135	½ x 3	½ x 3	⅝ x 3½	⅝ x 3½	⅝ x 3½	⅞ x 6½
8"	(DN200)	219.1	M20 x 120	⅝ x 3½	⅝ x 3½	¾ x 4¾	⅞ x 5⅛	¾ x 4¾	¾ x 4¾
10"	(DN250)	273	-	⅞ x 6½	-	-	-	¾ x 4¾	⅞ x 6½
12"	(DN300)	323.9	-	⅞ x 6½	-	-	-	¾ x 4¾	1 x 6½
14"	(DN350)	355.6	-	⅞ x 6½	-	-	-	-	1 x 6½
16"	(DN400)	406.4	-	⅝ x 3½	-	-	-	-	1 x 6½
18"	(DN450)	457.2	-	⅝ x 3½	-	-	-	-	-
20"	(DN500)	508	-	¾ x 4¾	-	-	-	-	-
22"	(DN550)	558.8	-	¾ x 4¾	-	-	-	-	-
24"	(DN600)	609.2	-	¾ x 4¾	-	-	-	-	-

gaskets

material	grade	colour code	recommendations for use	temperature range
EPDM	E	 green stripe	suitable for cold and hot water (up to +110°C). Also suitable for applications with acidic water, chlorinated water, deionised water, seawater and wastewater, dilute acids, oil-free air and many chemicals. Not recommended for petroleum oils, mineral oils, solvents or aromatic hydrocarbons	-34°C to +110°C
EPDM	E-pw	 double green stripe	special composition for cold potable water (+30°C) and hot potable water applications (+82°C). The compound is UL classified according to NSF/ANSI 61 and NSF/ANSI 372.	0°C to +82°C
EPDM	EHW	 green and red stripe	suitable for cold and hot water (up to +121°C). Approved according to NSF/ANSI 61 and NSF/ANSI 372 for potable water applications up to 82°C. suitable for applications with acidic water, chlorinated water, deionised water, seawater and wastewater, dilute acids, oil-free air and many chemicals. 'EHM' grade is only available for VSH Shurjoint M07 Quick Fit Couplings. Not recommended for petroleum oils, mineral oils, solvents or aromatic hydrocarbons.	-34 bis 121°C

Warning! EPDM gaskets for water applications are not recommended for steam applications. Failure to select the proper gasket and compound may result in joint leakage or failure, resulting in personal injury and/or property damage. Gaskets should never be exposed to temperatures outside their rated range.

Over the past 50 years there has been a lot of progress in the field of synthetic elastomers, allowing us to offer a wide range of gasket materials for a wide variety of applications. For gaskets, VSH Shurjoint uses the best materials developed to meet or exceed industry standards such as ASTM D2000, AWWA C606, NSF61, IAPMO, etc. We're always researching, developing and testing to further improve the quality of this material and develop new, superior solutions for our fast-changing industry. Selecting the proper gasket for the intended application requires careful consideration of many factors to ensure maximum gasket life. These factors include temperature, media type and concentration, and continuity of service. The colour coding of the gaskets helps to quickly and easily identify the material type.

gasket materials

EPDM

EPDM is recognised as the most water resistant rubber available today. EPDM is suitable for cold and hot water up to 110˚C, wastewater, acidic water, deionised water and seawater. EPDM is not to be used with petroleum based oils and fuels, hydrocarbon solvents or aromatic hydrocarbons.

Grade ‘E’ EPDM is a compound according to ASTM D2000 designation 2CA615A25B24F17Z. Peroxide curing and post curing give a higher crosslink density, which provides higher resistance to ageing than required in AWWA C606.

Grade ‘E-pw’ can be used for potable water and food processing applications and is UL classified according to NSF/ANSI 61 and NSF/ANSI 372 for cold potable water (+30°C) and hot potable water applications (+82°C). Please note the national potable water approvals.

Note: EPDM materials used in domestic water applications with high concentrations of chlorine and/or chloramine should be subjected to resistance testing, as not all materials will be suitable.

NBR*, BUNA-N and Nitrile

All these are names for the same copolymer of butadiene and acrylonitrile (ACN), which is inherently resistant to hydraulic fluids, lubricating oils, transmission fluids and other non-polar petroleum based products and water below 65°C. NBR is less resistant to hot water.

*Nitrile butadiene rubber

material	grade	colour code	recommendations for use	temperature range
NBR	T	 orange stripe	suitable for petroleum oils, mineral oils, vegetable oils, non-aromatic hydrocarbons, many acids and water (+65°C).	-29°C to +82°C

NBR (grade T) rubber is compounded based on ASTM D2000 designation 5BG615A14B24Z and exceeds the requirements of AWWA C606. Grade T is a general purpose compound with a medium acronitrile (ACN) level.

silicone (VMQ*)

VSH Shurjoint silicone gaskets (grade L) are stable at high temperatures and flexible at low temperatures. Recommended for use with dry heat and air without hydrocarbons up to 177ºC. Silicone compounds are used in many food and medical applications because they do not impart odour or taste. Not recommended for hot water or steam applications.

material	grade	colour code	recommendations for use	temperature range
silicone	L	 red gasket	suitable for dry, hot air without hydrocarbons and some high temperature chemical applications. May also be used for fire protection dry systems.	-34°C to +177°C

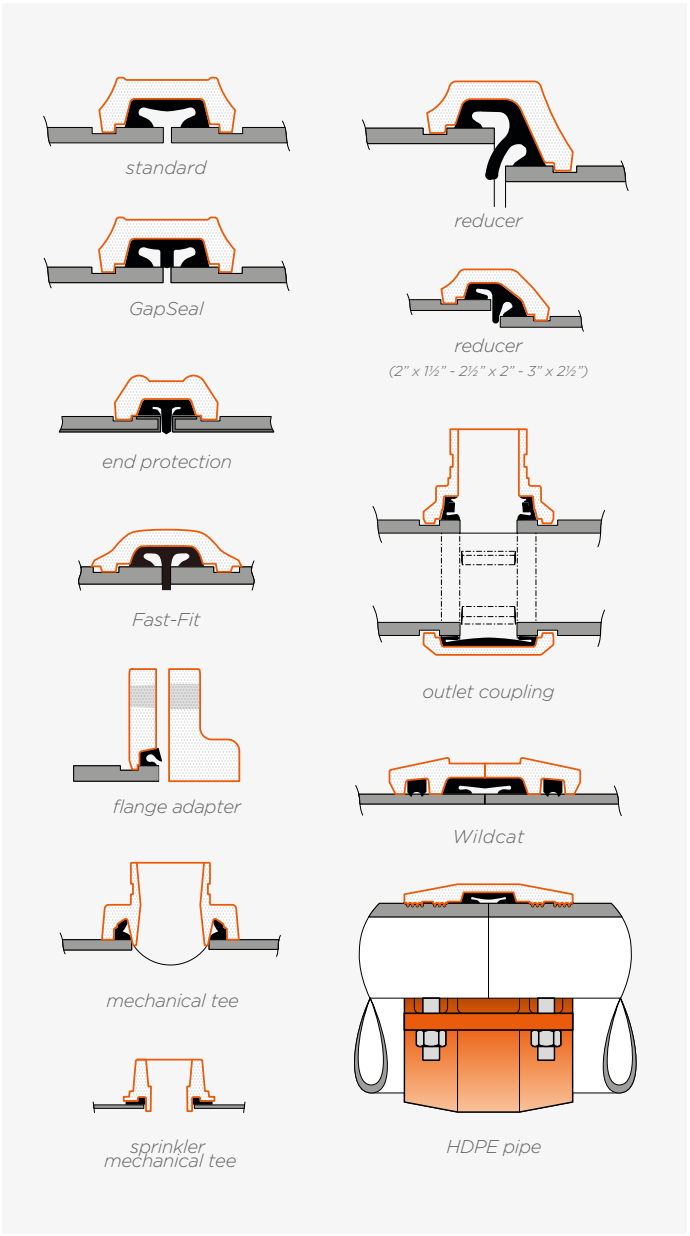
fluoroelastomer (FKM)

FKM is a high fluorine carbon compound that provides excellent resistance to aggressive chemical and ozone action with thermal stability up to 149°C. Fluoroelastomer gaskets (grade O) are recommended for use with oils, petrol, hydraulic fluids, hydrocarbon solvents and various fuels outside the application parameters of high quality T/NBR compounds. Not recommended for steam applications.

material	grade	colour code	recommendations for use	temperature range
fluoro-elasto-mer	O	 blue stripe	suitable for many oxidising acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons.	-7°C to +149°C

*Vinyl methyl silicone

gasket types



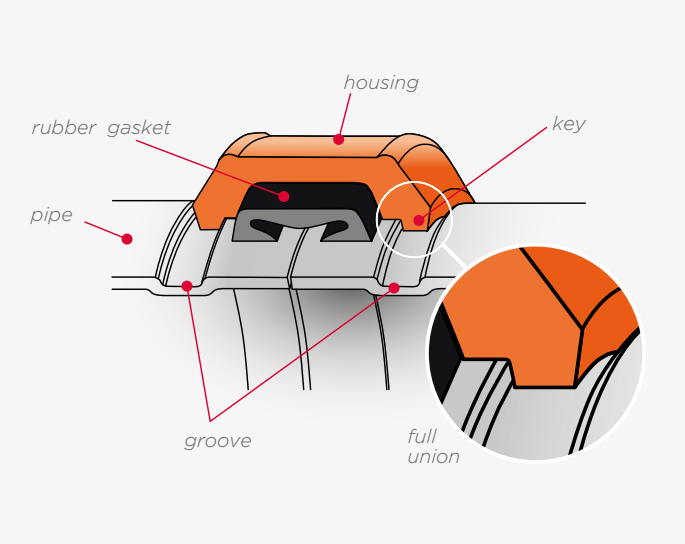
For optimum performance, it is important that the correct gasket is used. Grooved couplings use various types: standard, GapSeal, EP (End Protection) and FF (Fast-Fit). GapSeal gaskets are compatible with standard couplings and are interchangeable. Other special types are not compatible with standard or GapSeal gaskets. Always use the correct type of gasket!

lubricant

VSH Shurjoint lubricant is recommended for gasket fitting to avoid pinching of the gasket. Apply a thin coat to the outside of the gasket, gasket lips and/or housing interior. VSH Shurjoint lubricant is certified to NSF/ANSI 61.

installation preparation

pipe preparation

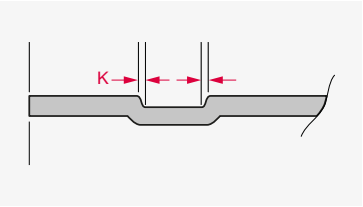


grooving pipes

In order to use VSH Shurjoint couplings, a rolled or cut groove (see page 20) must be made on the ends of the pipes to be connected. The engagement of the housing key in the groove is essential to achieve a secure and leak-tight joint. It is important that the grooves are made properly to ensure optimal joint performance.

nominal pipe size

VSH Shurjoint couplings and fittings can be identified by the nominal pipe diameter [DN] in millimetres or size in inches. Always check the actual outside diameter [OD] of the pipes and fittings to be connected. In some markets, pipes with different outside diameters have the same nominal size.

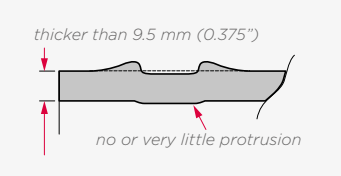


rolled groove profile

The rolled groove profile must be made as accurately as possible. To achieve optimum joint performance, the 'K' dimension should be as small as possible. When making a rolled groove, the machine operator must adjust the contact force of the upper roll set to achieve the best possible groove profile.

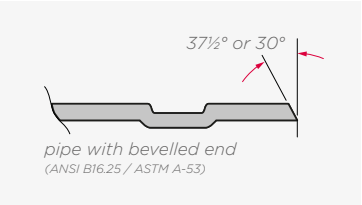
suitable pipe wall thickness

Rolled grooves are generally made on steel or stainless steel pipes with a wall thickness of 9.5 mm or less, depending on the type of roll grooving machine and the roll set used. Different roll sets are required to process different pipe diameters and wall thicknesses. Contact the roll grooving machine manufacturer for additional information.



pipe with very large wall thickness

When attempting to roll groove pipes thicker than 9.5 mm, the metal may deform and rise up on both sides of the groove instead of radially deforming and protruding into the inside of the pipe.
The additional pushed-up metal may lead to a leaky joint. In such case, you should grind off the additional metal to obtain a flat and smooth gasket seating surface. An anti-corrosion coating must be applied to the ground surface. Aalberts integrated piping systems strongly recommend that you make cut grooves on pipes with very large wall thickness, or that you use the VSH Shurjoint Ring-Joint system.



pipe with plain end and pipe with weld bevel

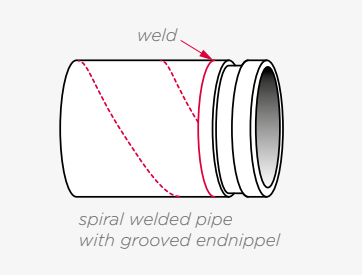
Although pipes with plain ends are preferred, pipes with bevelled ends can be used if the wall thickness is 9.5 mm or less and the bevel is 37½ ±2½° or 30° as specified in ANSI B16.25 or ASTM A-53 respectively.

grinding off weld beads

Depending on the specific pipe and manufacturer, weld beads may be present on the surface (inside and outside) of the pipe. Weld beads on the ends of the pipe must always be ground off because they can cause shuddering of the roll grooving machine, resulting in inaccurate grooves.

hot-dip galvanised pipes

A galvanised pipe is acceptable as long as the gasket seating surface('A', drawing p. 53) is smooth and free from imperfections that could affect the gasket seal. When grinding off weld beads or imperfections on the gasket seating surface, work carefully to avoid grinding away too much material.



spiral welded pipe with grooved endnippel

spiral welded pipe
Spiral welded pipe may be used as long as the weld beads are removed from the gasket seating surface. It is also acceptable and recommended to weld a grooved end nipple to the pipe end (see illustration). When grinding off weld beads or imperfections on the gasket seating surface, work carefully to avoid grinding away too much material.

check pipe outside diameter
Check that the pipe has the correct outside diameter and wall thickness for the intended use. While VSH Shurjoint fittings can normally be identified by the nominal size, always check the actual OD of the pipe and fittings to be connected, as in some markets it is customary to use the same nominal size to refer to pipes with different ODs.

Example: The nominal size DN65 (2½") refers to a pipe OD of 73 mm according to ANSI (IPS) and to a pipe OD of 76.1 mm according to EN, AS, BS, DIN (ISO), JIS or KS pipe standards.

EN - European standard (metric)
ISO - ISO standard (metric)
BS - British standard (metric)
DIN - German standard (metric)
IPS - United States standard (Inch)

VSH Shurjoint couplings and fittings are available for both 73 and 76.1 mm.

equivalent pipe sizes

pipe size		actual OD [mm]	actual OD [inch]
½"	(DN 15)	21.3	0.84
¾"	(DN 20)	26.7	1.05
1"	(DN 25)	33.7	1.315
1¼"	(DN 32)	42.4	1.66
1½"	(DN 40)	48.3	1.9
2"	(DN 50)	60.3	2.375
2½"	(DN 65)	73	2.875
3 OD		76.1	3
3"	(DN 80)	88.9	3.5
3½"	(DN 80)	101.6	4
4¼ OD		108	4.25
4"	(DN 100)	114.3	4.5
5"		141.3	5.563
5¼ OD		133	5.25
5½ OD	(DN 125)	139.7	5.5
6¼ OD		159	6.25
6½ OD		165.1	6.5
6"	(DN 150)	168.3	6.625
8"	(DN 200)	219.1	8.625
10"	(DN 250)	273	10.75
12"	(DN 300)	323.9	12.75
14"	(DN 350)	355.6	14
16"	(DN 400)	406.4	16
18"	(DN 450)	457.2	18
20"	(DN 500)	508	20
22"	(DN 550)	558.8	22
24"	(DN 600)	609.6	24
28"	(DN 700)	711.2	28
30"	(DN 750)	762	30
32"	(DN 800)	812.8	32
36"	(DN 900)	914.4	36
40"	(DN 1.000)	1016	40
42"	(DN 1.050)	1066.8	42

VSH Shurjoint couplings are available up to DN2600/104"

on which pipe can a rolled or cut groove be made?
In order to use VSH Shurjoint grooved couplings, a rolled or cut groove must be made on the pipe ends to be connected. The groove dimensions and configurations may vary depending on several factors, including pipe material, wall thickness and desired working pressure. Roll grooving is the most common practice and can be performed in the shop, in the field or at the job site. Cut grooving, on the other hand, is primarily performed in the factory or shop because as cut grooving machines are not as common or portable as roll grooving machines.

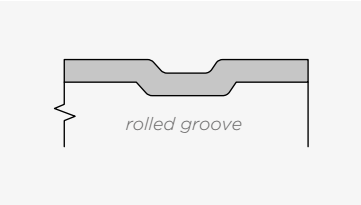
All rolled and cut grooves must meet the specifications and requirements of ANSI/AWWA C606 (latest edition) and ISO/FDIS 6182-12. For other pipe sizes not specified in ANSI/AWWA C606 (latest edition) or ISO/FDIS 6182-12, refer to the respective groove specifications in this manual. When grooving pipes, it is preferable to use plain-end pipes, although in some cases the use of bevelled pipes is acceptable providing that the wall thickness is equal to or less than 9.5 mm and the bevel is 37½° ± 2½° (ANSI B16.25).

When using thin-walled stainless steel pipes, make sure that the ends of the pipes are not pressed in as a result of using a pipecutter. This deformation can lead to an incomplete rolled groove and reduced tensile strength of the joint

rolled groove and cut groove applications

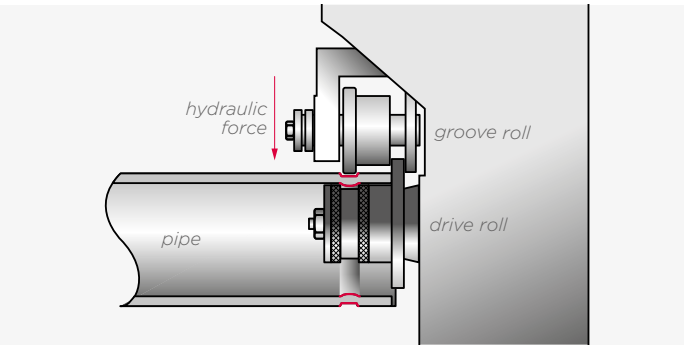
pipe material	rolled groove	cut groove
steel	standard wall (ANSI B36.10) schedule 40 (10" or less), 30, 20, 10, 7, 5, BS1387 normal and light, JIS SGP	schedule 80, 40. 30 BS1387 normal and heavy, JIS SGP
stainless steel	schedule 40S, 20S, 10S, 5S	schedule 80S, 40S

applying rolled grooves



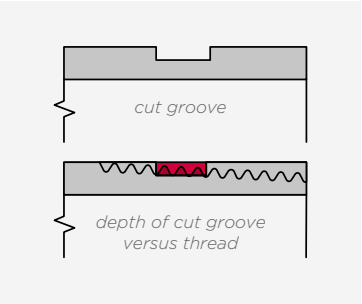
Roll grooving was first used with light or thin wall pipes, which had insufficient wall thickness for cut grooving. Today roll grooving is commonly used on pipes with a maximum wall thickness of 9.5 mm and sizes up to 42" (DN1050). This depends on the type of roll groove machine used and the roll sets.

Roll grooving radially deforms the pipe material. As roll grooving does not remove any material from the pipe, the integrity of the pipe remains intact when properly grooved. The indentation of the groove is also visible on the inside of the pipe. This edge has a low height and runs smoothly to the inlet and outlet of the pipe. The effect of this edge on the flow resistance and/or pressure is therefore negligible. Roll grooving is limited to pipes with a hardness of HB180 or less.



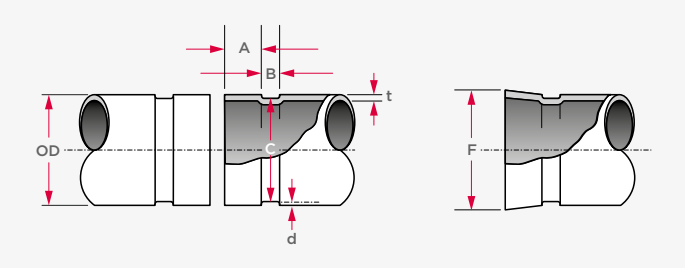
During the roll grooving process, the end of the pipe is placed between a roll set. The roll set is pressed against the pipe and then the pipe is rotated. This creates a groove that is recessed on the outside and protrudes on the inside. Rolled grooves can be made on steel and stainless steel pipes. It is important to use the correct equipment and roll sets for the pipe material being grooved. Different materials may require the use of different roll sets. This is the case, for example, with stainless steel and heavy steel pipes (9.5 mm thick). Consult the instructions for the grooving machine or roll set or the operation manual, or contact Aalberts integrated piping systems for more information.

applying cut grooves



The cut grooving process removes material from the pipe OD to form a groove. Cut grooving is therefore intended for standard wall pipes (ANSI B36.10) or pipes with larger wall thickness. Most pipes suitable for thread cutting can also be used for groove cutting. This is because the depth of a cut groove is usually less than that of a standard thread. Please refer to the minimum wall thickness shown in the published standard cut groove specifications. Unlike roll grooving, cut grooving cuts a groove in the pipe wall. This removes material, so no rim is formed on the inside of the pipe. Cut grooves are often made on piping system components such as bends, tees, valves, etc. Groove cutting is also better on coated or cement coated pipes, as these can be damaged by roll grooving.

groove dimensions



standard roll and groove dimensions

VSH Shurjoint couplings and fittings can be identified by the nominal pipe size in inches or outside diameter in millimetres.

gasket seating surface (A)
The outside of the gasket seating surface must be free of deep scratches, projections, rolling marks and other harmful surface defects such as loose paint, galvanising residue, soiling, chips, grease and corrosion.

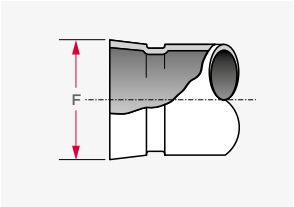
groove width (B)
The groove width is measured between vertical flanks of the groove side walls and is determined by the width of the upper roll as it is pressed into the pipe. Visually check the groove of the pipe to see if the groove has clearly defined edges in which the coupling key can grip properly. If the groove shape looks very rounded or has little or no vertical side walls, it must be replaced because this could lead to reduced product performance or damage to the joint.

groove diameter (C)
The groove diameters are average values. The groove must have uniform depth around the entire circumference of the pipe.

minimum wall thickness (t)
't' is the minimum allowable wall thickness for roll grooving.

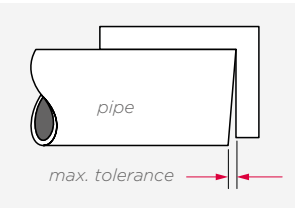
groove depth (d)
The values listed in the tables are for reference only.

flare diameter (F)



Pipe ends can be flared by the roll grooving process. This increase in diameter must remain within the specified tolerances when measured at the outer end of the pipe.

trimming pipe ends (OD) square



The maximum allowable tolerances for square ends are:
0.8 mm for 3½" (DN90) and smaller
1.2 mm for 4" through 6" (DN100-150)
1.6 mm for 8" (DN200) and larger.

For a complete overview of all relevant rolled and cut groove dimensions, please contact Aalberts integrated piping systems.

roll groove specifications

pipe			dimension specifications						
	outside Ø (OD)				groove Ø (C)				
pipe size	actual dimension [mm]	tolerance [mm]	gasket seating surface (A) ±0.76 [mm]	gasket width (B) ±0.76 [mm]	actual dimension [mm]	tolerance [mm]	groove depth (d) (ref.) [mm]	min. permitted wall thickness (t) [mm]	flare dimension (F) max. diameter [mm]
1" (DN 25)	33.7	+0.41/-0.68	15.88	7.14	30.23	0/-0.38	1.7	1.8	36.3
1¼" (DN 32)	42.4	+0.5/-0.60	15.88	7.14	38.99	0/-0.38	1.7	1.8	45.0
1½" (DN 40)	48.3	+0.44/-0.52	15.88	7.14	45.09	0/-0.38	1.6	1.8	51.1
2" (DN 50)	60.3	±0.61	15.88	8.74	57.15	0/-0.38	1.6	1.8	63.0
2½"	73	±0.74	15.88	8.74	69.09	0/-0.46	1.98	2.3	75.7
2½" (DN 65)	76.1	±0.76	15.88	8.74	72.26	0/-0.46	1.93	2.3	78.7
3" (DN 80)	88.9	+0.89/-0.79	15.88	8.74	84.94	0/-0.46	1.98	2.3	91.4
3½"	101.6	+1.02/-0.79	15.88	8.74	97.38	0/-0.51	2.11	2.3	104.1
4" (DN 100)	108	+1.07/-0.79	15.88	8.74	103.73	0/-0.51	2.11	2.3	110.5
4" (DN 100)	114.3	+1.14/-0.79	15.88	8.74	110.08	0/-0.51	2.11	2.3	116.8
4¼ OD	133.9	+1.32/-0.79	15.88	8.74	129.13	0/-0.51	1.93	2.9	135.9
5¼ OD	139.7	+1.40/-0.79	15.88	8.74	135.48	0/-0.56	2.11	2.9	142.2
5" (DN 125)	141.3	+1.42/-0.79	15.88	8.74	137.03	0/-0.56	2.13	2.9	143.8
6¼ OD	159	+1.60/-0.79	15.88	8.74	154.50	0/-0.56	2.2	2.9	161.3
6½ OD	165.1	+1.60/-0.79	15.88	8.74	160.90	0/-0.56	2.16	2.9	167.6
6" (DN 150)	168.3	+1.60/-0.79	15.88	8.74	163.96	0/-0.56	2.16	2.9	170.9
8" (DN 200)	219.1	+1.60/-0.79	19.05	11.91	214.40	0/-0.64	2.34	2.9	223.5
10" (DN 250)	273	+1.60/-0.79	19.05	11.91	268.28	0/-0.69	2.39	3.6	277.4
12" (DN 300)	323.9	+1.60/-0.79	19.05	11.91	318.29	0/-0.76	2.77	4	328.2
14" (DN 350)	355.6	+1.60/-0.79	23.83	11.91	350.04	0/-0.76	2.77	3.96	358.1
16" (DN 400)	406.4	+1.60/-0.79	23.83	11.91	400.84	0/-0.76	2.77	4.19	408.9
18" (DN 450)	457.2	+1.60/-0.79	23.83	11.91	451.64	0/-0.76	2.77	4.19	461.3
20" (DN 500)	508	+1.60/-0.79	23.83	11.91	502.44	0/-0.76	2.77	4.78	512.1
22" (DN 550)	558.8	+1.60/-0.79	23.83	11.91	550.06	0/-0.76	4.37	4.78	563.9
24" (DN 600)	609.6	+1.60/-0.79	23.83	12.7	600.86	0/-0.76	4.37	5.54	614.7

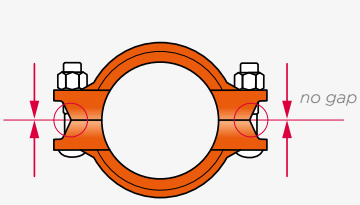
1. pipe outside diameter: the maximum allowable tolerance on the squareness of the saw cut is 0.76 mm for sizes up to 3½", 1.14 mm for sizes from 4" through 6", and 1.52 mm for sizes 8" and larger.
2. the gasket seating surface (A) must be free of scratches, soiling, corrosion, etc. that prevent proper sealing.
3. (C) dimensions are average values. The groove must have uniform depth around the entire pipe circumference. Use a Shurjoint groove measuring tape or sliding caliper to check the groove diameter.
4. dimension (t) is the minimum allowable wall thickness for roll grooving.
5. dimension (d) is for reference only. The groove depth is determined by the groove diameter (C).
6. flare diameter: pipe ends can be flared during the roll grooving process. This increase in diameter must remain within the specified tolerances when measured at the outer end of the pipe.

bolts and nuts installation and torques

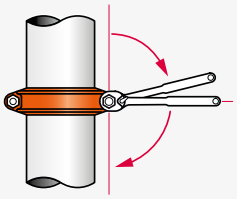
helpful information for proper installation

For some coupling types, it is necessary that the bolt pads make metal-to-metal contact for correct installation. For other coupling types, a specific torque is required with a uniform gap between the bolt pads. The icons and information below will help to identify those items to ensure correct installation. Read and follow all installation instructions from page 59 for the component being installed.

metal-to-metal contact: Tighten the bolts and nuts until the bolt pads make metal-to-metal contact. After metal-to-metal contact is achieved, tighten the nuts by another quarter or half turn to make sure the bolts and nuts are snug and secure. The use of a torque wrench is not required. Excessive torque may lead to bolt or joint failure.



metal-to-metal contact

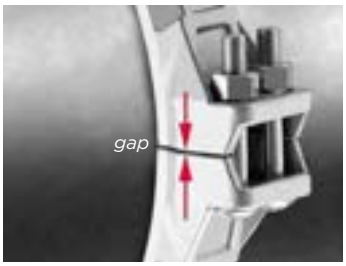


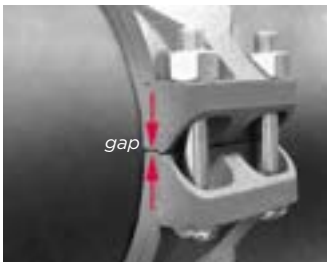
after metal-to-metal contact, tighten another quarter or half turn

If there are any gaps between the bolt pads after installation, check the following points before dismounting and remounting the coupling:

- the coupling, pipe and/or fitting being connected are the correct size.
- the coupling edges are fully engaged in the grooves of the pipes and/or components.
- the gasket is not pinched.
- the grooves conform to the applicable groove dimension specifications.
- the pipe end flare is within the specification tolerance.

torque required! The bolts and nuts must always be tightened to the required torque using a torque wrench. Normally there will a gap visible between the bolt pads after the bolts and nuts are fully tightened. The couplings that require torque tightening of the bolts and nuts are the 2" through 4" couplings of model XH-1000 and all sizes of the XH-70EP, SS-7X and type 79 couplings.





recommended torques

Always use factory supplied bolts and nuts for installation of VSH Shurjoint couplings. The generally recommended torque ranges for common sizes of steel bolts are shown on the following page. Never exceed the recommended torque range by more than 25%, as excessive torque can lead to joint failure, personal injury and/or property damage. Always depressurise and drain the piping system before attempting disassembly, adjustment or removal of any piping component. Follow the installation instructions for correct installation of all VSH Shurjoint components.

always use a torque wrench

torque specifications

bolt size		torque range	
metric	imperial	[lbs-ft]	[Nm]
M8	5⁄16" - 18"	15 - 25	20 - 34
M10	3⁄8" - 16"	30 - 40	40 - 55
M12	1⁄2" - 13"	90 - 105	120 - 140
M16	5⁄8" - 11"	100 - 130	135 - 175
M20	3⁄4" - 10"	150 - 200	200 - 270
M22	7⁄8" - 9"	180 - 220	240 - 300
M24	1" - 8"	200 - 225	270 - 305
M29	1 1⁄8" - 7"	250 - 300	340 - 400
M32	1 1⁄4" - 7"	375 - 500	510 - 680

for stainless steel bolts, the torque must be reduced by 20%.

installation instructions

When installing VSH Shurjoint always make sure to take care in using protective gear on the building site. Always wear at minimum safety shoes, a safety helmet and safety glasses when installing VSH Shurjoint.

general installation steps for grooved couplings

The step-by-step procedure for installation of grooved couplings is described below. If specific installation steps or requirements are applicable for specific models, you can find them in the corresponding sections.

1. inspect pipe ends

Ensure that the pipe is of the correct outside diameter and that rolled or cut grooves have been made correctly, according to instructions on pages 18-20. For optimum sealing, the outside of the gasket seating surface must be free of scratches, projections, rolling marks and other harmful defects such as loose paint, galvanising residue, soiling, chips, grease and corrosion.

2. check gasket

Check that the gasket supplied is correct for the intended use. The colour code indicates the gasket grade. For gasket details and selection, please check pages 16-16.

3. lubricate gasket

To enable easy fitting and avoid pinching the gasket in the coupling, apply a thin coat of VSH Shurjoint lubricant to the gasket lips and the outside of the gasket. Other compatible lubricants may be used as long as they are not harmful to the gasket.

4. fit gasket

Fit the gasket on one end of the pipe so that the pipe end is visible. The gasket should never extend beyond the end of the pipe.

5. bring pipe ends together

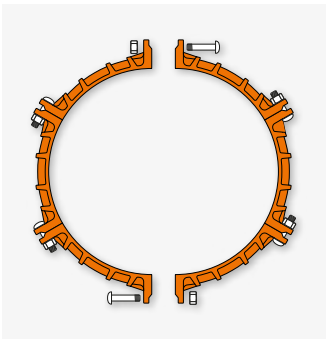
Bring the pipe ends to be joined together and align them. Slide the gasket over the ends and centre it between the grooves of both pipes. The gasket should never be positioned over the grooves of the pipes, once joined.

6. install coupling

For 'swing-over' installation, loosely fit one bolt and nut on one side of the coupling. For standard installation, start with the two housings fully separated.

7. install coupling housings

For 'swing-over' installation, place one of the coupling housings over the bottom of the gasket and swing the other coupling housing into position over the top of the gasket. For standard installation, fit the coupling housings over the gasket one at a time. In both cases make sure the coupling edges are fully engaged in the grooves.



large diameter couplings:
Couplings larger than 24" consist of multiple segments. To prepare for installation, assemble the segments loosely into two or three equal groups, depending on the size. Fit these assemblies over the gasket in the same manner as described above.

8. fit bolt and nut

For 'swing-over' installation, insert the remaining bolt and turn the nut hand tight. For standard installation, insert both bolts and turn the nuts hand tight. Make sure that the oval neck of the bolt is entirely countersunk in the bolt hole of the housing.

9. tighten nuts

metal-to-metal contact

Tighten the nuts alternately and equally until the bolt pads meet and make metal-to-metal contact. Tighten the nuts by another quarter to half turn to make sure the bolts and nuts are snug and secure. The use of a torque wrench is not required.

torque required!

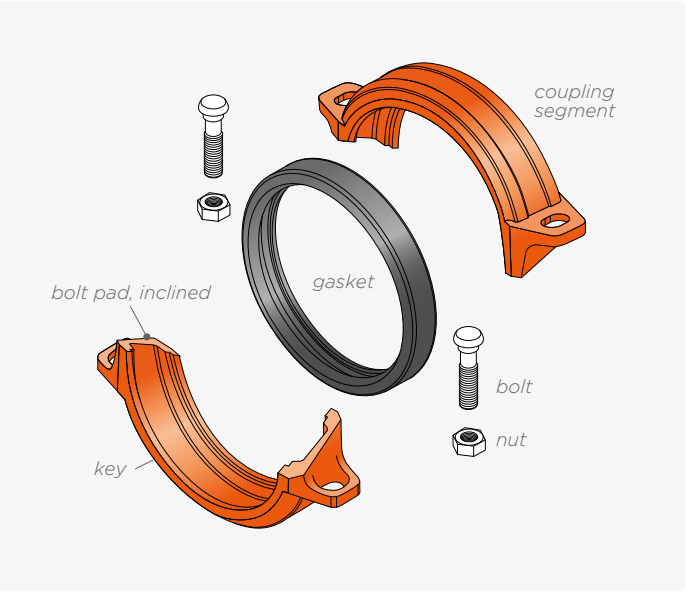
Turn with a torque wrench to the required torque. Normally there will a gap visible between the bolt pads after the bolts and nuts are fully tightened. The gap must be equal on both sides of the coupling.

NOTE:

1. If the bolts and nuts are not tightened evenly, the gasket may be pinched and leaks may occur.
2. Excessive tightening of nuts may cause bolt or joint failure.

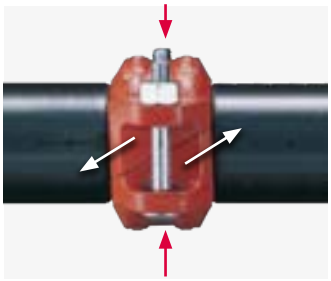
Note: Excessive torque may cause seizing of stainless steel bolts and nuts. Use an anti-seize lubricant such as Loctite C5-A to lessen this problem with stainless steel bolts and nuts. The use of silicon bronze nuts is also a good option to avoid seizing. Contact Aalberts integrated piping systems for more information.

installation instructions rigid couplings Z05, Z07 and Z07N with inclined bolt pads



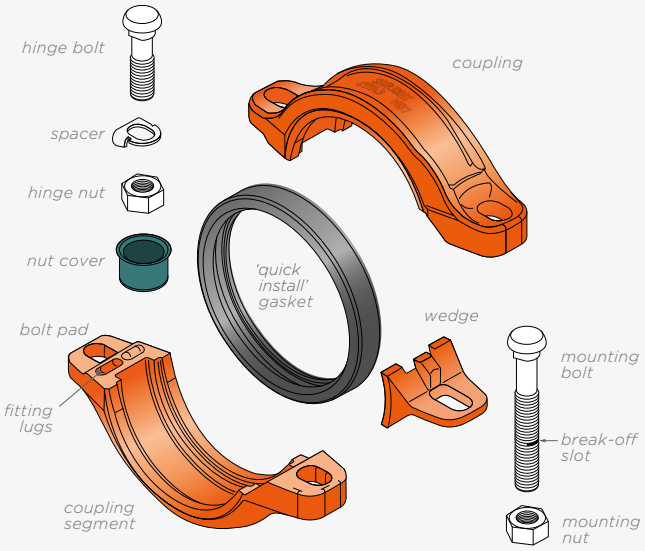
see preparatory steps **1 to 8** on page 24

9. **Tighten the nuts alternately and equally** until the bolt pads meet and make metal-to-metal contact. Tighten the nuts by another quarter to half turn to make sure the bolts and nuts are snug and secure. It is not necessary to use a torque wrench.



Note: When the coupling bolts are tightened, the inclined bolt pads slide in opposite directions. This allows the coupling edges to grip the pipe firmly while at the same time pushing the grooves out against the coupling edges. The bolt pads must always make metal-to-metal contact.

installation instructions rigid quick coupling M07 straight bolt pads



WARNING!
Do not disassemble the coupling!

NOTE:
The gasket does not need to be removed from the coupling for lubrication, since the outside of the gasket is lubricated in the factory.

1. Do not disassemble the coupling!

The M07 quick coupling is designed so that disassembly is not necessary prior to installation. The coupling can be placed directly on the grooved pipe end or fitting.

2. inspect pipe ends

Ensure that the pipe is of the correct outer diameter and that rolled or cut grooves have been made correctly, according to instructions on pages 18-20. For optimum sealing, the outside of the gasket seating surface must be free of scratches, projections, rolling marks and other harmful defects such as loose paint, galvanising residue, soiling, chips, grease and corrosion.

3. check gasket

Check that the gasket supplied is suitable for the intended use. The colour code indicates the gasket grade.

4. lubricate gasket:

To enable smooth fitting of the pipe, apply a thin coat of VSH Shurjoint lubricant to the gasket lips. Other suitable lubricants may be used provided they do not damage the gasket.

5. install coupling:

Install the coupling on the grooved pipe end or fitting. Make sure that the centreline of the gasket is aligned with the centreline of the fitting and press the coupling evenly until the gasket is positioned over the grooved end. Then install the other pipe end in the coupling. The gasket has a central lip which stops the coupling when correctly positioned. Visually check that the keys of the coupling are aligned with the grooves.

NOTE:
You can rotate the coupling to make sure that the gasket is properly seated on the pipe end.

6. tighten nut evenly

Tighten the uncovered nut until the coupling parts and wedge make metal-to-metal contact.

Deep sockets are required for installation. Recommended torques for setting impact wrenches are given in the table on the next page.

WARNING!

- During initial installation, it is only necessary to tighten the nut of the installation bolt. Do not remove the hinge bolt cover! See also the dismounting instructions for further information.
- Tightening the nut beyond the point where the coupling parts make metal-to-metal contact may result in failure of the connection, personal injury or property damage.

1. When using an impact wrench, you do not get the physical torque feedback you would expect from a ratchet wrench. This makes it important to be able to estimate the capacity of the impact wrench to avoid damage to the bolts and/or coupling. The installer should use a visual inspection of the bolt pad area as a guide for metal-to-metal contact and socket rotation as a complete assembly.
2. Larger mounting bolts may require a higher torque to obtain metal-to-metal contact. Be sure to use an impact wrench that can reach the required torque. We recommend the use of a medium torque impact wrench for installing M07 couplings in sizes DN50 (2″) to DN150 (6″). For M07 couplings in size DN200 (8″), we recommend the use of a high torque impact wrench.
   Choosing the correct tool will also extend battery life. If a medium torque impact wrench is used when installing the DN200 (8″) coupling, a small gap may remain between the coupling parts and the wedge. An opening of 1.5 mm (1/16″) is allowed in these cases. Performing installation tests with different types of impact wrenches can help you choose the best wrench for your installation needs. Always refer to the manufacturer's instructions for the correct use of the impact wrench you are using.

dimensions and suggested torques

	bolt size		socket size	
coupling size	**metric**	**imperial**	**[inch]**	**[mm]**
2″ (DN50), 2½″ (DN65) 3″ (DN80) 4″ (DN100)	M12	½″ - 13″	⅞	19
5″ (DN125) 6″ (DN150)	M16	⅝″- 11″	1 1/16	24
8″ (DN200)	M20	¾″ - 10″	1¼	30

bolt size		torque	
metric	**imperial**	**[lbs-ft]**	**[Nm]**
M12	½″ - 13″	90 – 105	120 – 140
M16	⅝″ - 11″	100 – 130	135 – 175
M20	¾″ - 10″	150 – 200	200 – 270

7. break-off bolt for insulated systems

The installation bolt has a premachined slot. This allows the user to shorten the bolt, using pliers. The bolt can be easily shortened by bending the bolt back and forth several times. The shortened bolt makes insulation easy. This reduces the risk of the bolt sticking through the insulation material.

dismantling instructions rigid quick coupling M07

WARNING!
Make sure that there is no pressure in the piping system and that it is completely drained before dismounting, adjusting or removing couplings or pipes.

NOTE:
There are two different methods for dismounting and remounting M07 couplings

method 1

1. loosen the installation bolt

Only loosen the installation bolt until there are 2 to 3 threads visible above the nut.

Note: If the bolt is removed completely during disassembly, re-install the bolt and nut until 2 to 3 threads are visible above the nut.

2. spread the coupling parts

Pull the top and bottom halves of the coupling apart to release the coupling key from the groove. Then remove the pipe or fitting from one side of the coupling.

3. remove coupling

Pull the top and bottom halves of the coupling apart and remove them from the fixed pipe or fitting. (If the installation bolt is shortened, in most cases the coupling can be removed if the nut remains screwed 1 to 2 turns onto the thread. For DN100 (4") the entire bolt will have to be removed if it has been shortened.)

method 2

1. loosen the installation bolt

Only loosen the installation bolt until there are 2–3 threads visible above the nut. The bolt and nut do not have to be removed completely, as they hold the coupling parts and the wedge together.

2. remove nut cover

Remove the plastic cover from the nut.
If necessary, use a screwdriver or similar tool.

3. remove the hinge bolt

Loosen the nut and remove the hinge bolt.

4. swing over housing

Swing the bottom part of the coupling 180° and lift the top part of the coupling and the wedge of the gasket.

5. remove pipe or fitting
Remove the grooved pipe/fittings from the gasket.

re-installation instructions rigid quick coupling M07

NOTE:
Inspect the gasket for damage and wear and replace if necessary. If the coupling has been in use for a long time before dismounting, it is advisable to replace the gasket. Before refitting, lubricate the inner and outer surfaces of the gasket with a lubricant suitable for the intended application.

After dismantling, the coupling can be reinstalled. Proceed as follows for this:

1. fit the gasket:

Press the gasket onto the grooved pipe end until the central lip touches the end of the pipe.

2. fit opposite pipe:

Bring the pipe together and align it with the opposite pipe. Push this pipe into the gasket until it touches the central lip. The gasket must not be in contact with the grooves in the pipes/fittings.

3. assemble the coupling:

First fit the installation bolt through the coupling parts and wedge, with 2 to 3 threads visible above the nut.

4. install the coupling parts:

For 'swing-over' installation, place one of the coupling parts over the top side of the gasket and press the wedge against the top coupling part. Swing the other coupling part over the bottom of the gasket and position it. Make sure that the keys of the coupling are aligned with the grooves.

5. fit the hinge bolt:

Install the hinge bolt and tighten the nut hand tight. Make sure that the oval neck of the bolt head is inserted into the coupling part.

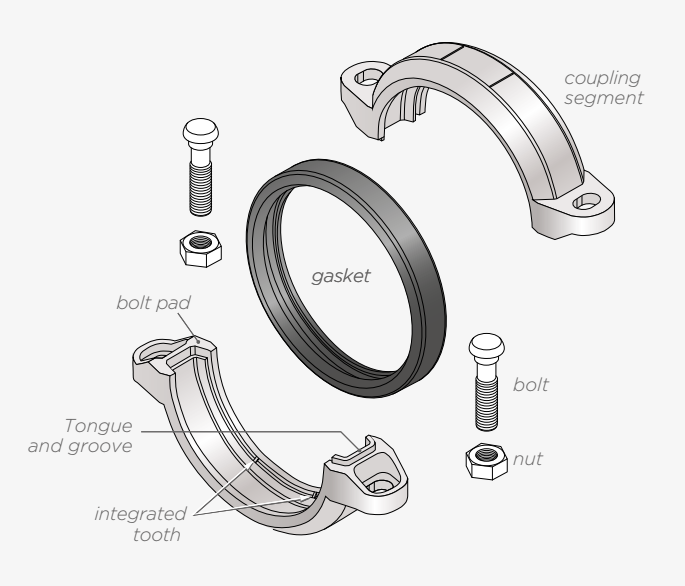
6. tighten the nuts:

Tighten the nuts, starting with the installation bolt and alternating with the hinge bolt until the coupling parts and the wedge make metal-to-metal contact. See page 27 for correct torques.

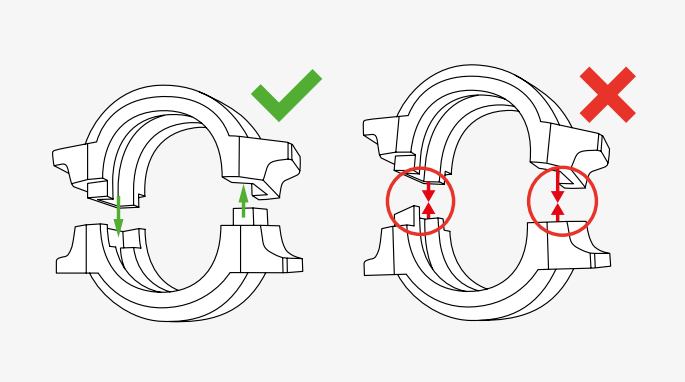
7. refit the nut cover:

Fit the plastic cover on the nut of the short hinge bolt.

installation instructions SS7 and SS7X rigid couplings with tongue and groove bolt pads



see preparatory steps **1 to 8** on page 24



tongue and groove design.
Certain VSH Shurjoint models (such as SS7 and SS7X) have a tongue and groove design. The couplings must therefore always be installed with the tongue and groove mated properly. Attempting to install these couplings tongue to tongue or groove to groove will result in damage to the joints, property damage or serious injury.

9. **tighten the nuts of model SS7.** The bolts and nuts must always be fitted so that the bolt pads of the coupling make metal to metal contact.

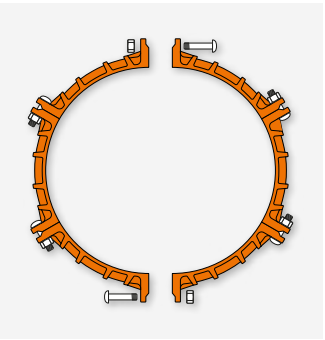
tighten the nuts of model SS7X. The bolts must be tightened to the required torque as indicated in the table hereafter.

required torques for VSH Shurjoint SS7X bolts

pipe outside diameter		required torque	
pipe size	[mm]	[lbs-ft]	[Nm]
10" (DN 250)	267.4	105 - 175	145 - 235
10" (DN 250)	273	105 - 175	145 - 235
12" (DN 300)	318.5	105 - 175	145 - 235
12" (DN 300)	323.9	105 - 175	145 - 235
14" (DN 350)	355.6	105 - 175	145 - 235
16" (DN 400)	406.4	50 - 75	68 - 100
18" (DN 450)	457.2	50 - 75	68 - 100
20" (DN 500)	508	65 - 150	85 - 200
22" (DN 550)	558.8	65 - 150	85 - 200
24" (DN 600)	609.6	65 - 150	85 - 200

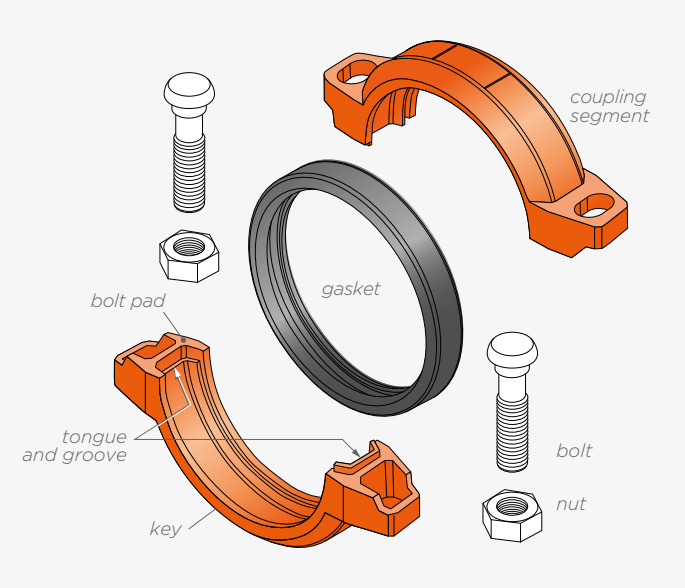
If the gaps between the bolt pads are larger than ⅛'' (3.2 mm), check the following after disassembling and reassembling the coupling:

- the coupling, pipe and/or fitting being connected are the correct size.
- the coupling keys are fully engaged in the grooves of the pipes and/or components.
- the gasket is not pinched.
- the grooves conform to the applicable groove specifications.
- the pipe end flare diameter is within the specification tolerance.

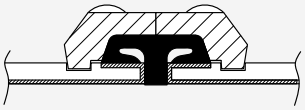


large diameter couplings:
couplings over 14" consist of three to four housing segments. To prepare installation, preassemble the segments loosely into two or three equal assemblies depending on sizes. Install those assemblies over the gasket in the same manner as described above.

installation instructions extra heavy rigid coupling XH70EP



see preparatory steps **1 to 8** on page 24



With model XH70EP, use the VSH Shurjoint EP gasket supplied by the factory.

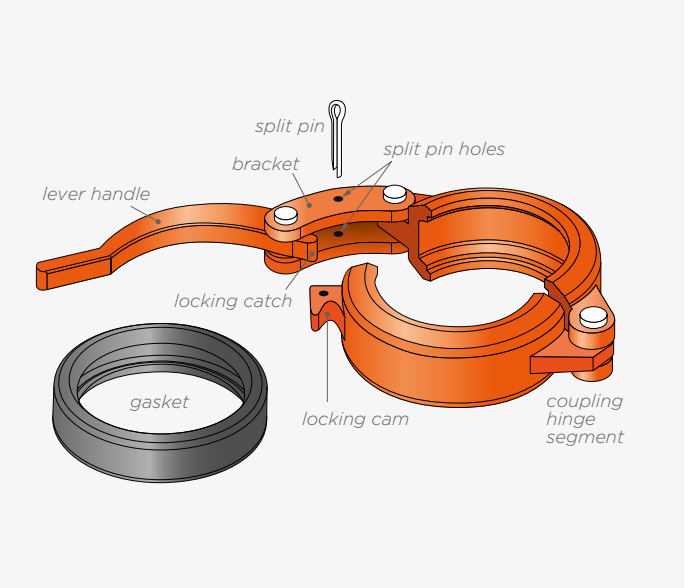
WARNING!
The VSH Shurjoint Model XH70EP coupling has a tongue and groove design. The coupling must therefore always be installed with the tongue and groove mated properly.30

9. **tighten the nuts**
The bolts must be tightened to the required torque (see the table below).

required torques for VSH Shurjoint EX70EP bolts

pipe outside diameter		required torque	
[inch]	[mm]	[lbs-ft]	[Nm]
2 - 3	60.3 - 88.9	100 - 130	135 - 175
4	114.3	150 - 200	200 - 270
6	168.3	180 - 220	240 - 300
8 - 12	219.1 - 323.9	200 - 225	270 - 305

installation instructions hinged lever coupling G28

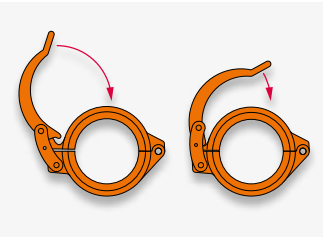


see preparatory steps **1 to 6** on page 24

7. **attach housing**

Open the hinged coupling and fit it around the gasket so that the coupling edges are fully engaged in the grooves.

8. **fit housing**



Press the housing segments tightly together and hook the tip of the locking handle into the locking tab of the bottom housing segment.

9. **close handle**

Firmly close the handle until it touches the back of the housing.

Note: If the handle is difficult to open or close, a length of steel pipe (see illustration) can provide additional leverage to avoid potential injury, such as pinched fingers.

10. insert split pin

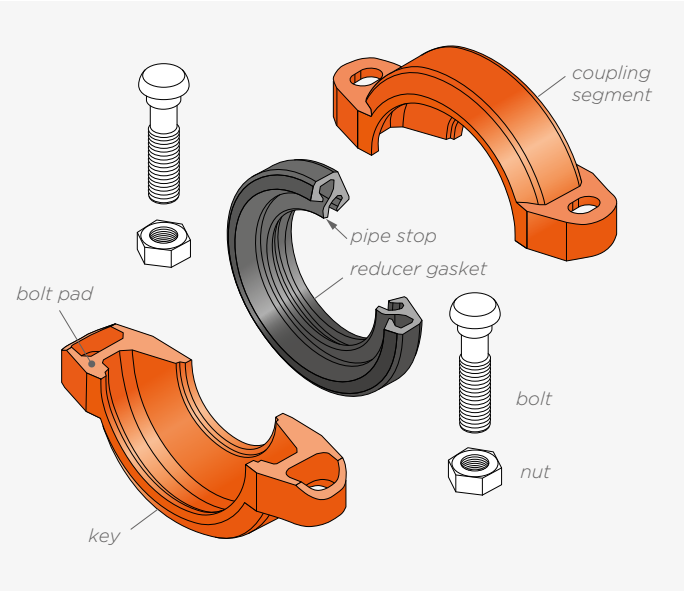
Fit the split pin through the hole on the bracket of the lever handle to prevent accidental opening of the coupling.

disassembly

1. **Remove split pin:** Remove the split pin by hand or with the aid of pliers.
2. **Raise lever handle:** Raise the lever handle to open the coupling. If necessary, use a screwdriver or similar tool for initial leverage.

NOTE:
During dismounting of the hinged coupling, the pipe can move unexpectedly.

installation instructions reducing coupling 7706



see preparatory steps 1 to 3 on page 24

When installing reducing couplings, always make sure to fit the gasket on the larger pipe first. All other installation steps will remain as described.

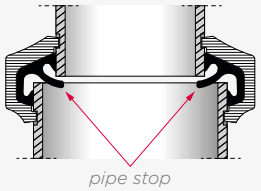
4. fit the gasket on the larger pipe first

Fit the larger opening of the gasket over the larger pipe end and align the two pipes to be coupled. Insert the smaller pipe into the gasket. A slight twisting motion of the pipe will make assembly easier. The gasket must not extend beyond the end of the pipe or beyond the grooves of both pipes.

5. fit smaller pipe

Bring the two pipes together and align the ends to be joined. Insert the smaller pipe into the gasket. A slight twisting motion of the pipe will make assembly easier. The gasket must not extend beyond the end of the pipe or beyond the grooves of both pipes.

NOTE:
Reducing couplings (such as model 7706) must not be used with an end cap, as the end cap may be sucked into the pipe when draining the system.

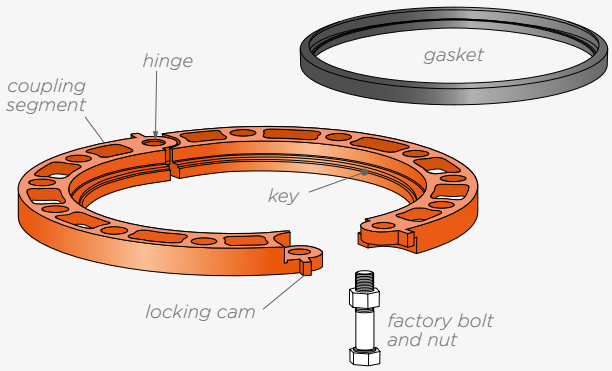


Note: A metal washer is not required to prevent the smaller pipe from sliding into the larger pipe. The built-in pipe stopper (or pipe holder) in the gasket prevents the smaller pipe from sliding. However, the smaller pipe must be carefully pushed in until the coupling is in place and installation is complete.

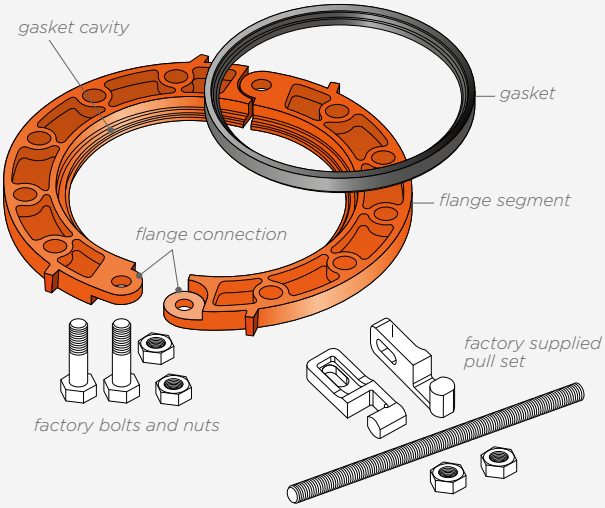
see steps **6 to 8** on page 24

9. **tighten nuts alternately and equally** until the bolt pads meet and make metal-to-metal contact. Tighten the nuts by another quarter to half turn to make sure the bolts and nuts are snug and secure. The use of a torque wrench is not required.

installation instructions grooved flange adapters SJ-7041, 7041N, 7043 and SS41S



hinged flange adapter (2-12")



two-segment flange adapter (14-24")

VSH Shurjoint flange adapters are in accordance with PN10/16, but are also available as ANSI grade 125/150 and grade 300.

1ª. installing hinged flange segments (2-12")

Fully open the hinged flange segments. Fit the flange segments around the groove of the pipe end and pull the segments together until the holes are aligned.

pull together flange segments
Use a wrench, C-clamp or other similar tool to draw the closure tabs together until the bolt holes are aligned.

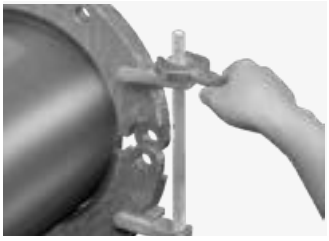
insert bolt
Insert the bolt through the coupling hole and make sure that the flange is fully engaged in the pipe groove.

1ᵇ. installing two-part flange segments (14-24")

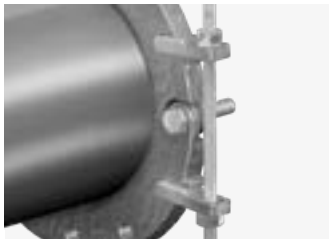
Fit the half flange segment on the pipe, making sure that the edge of the segment is engaged in the groove.

insert bolt
Fit the other half flange segment and insert the bolts through the coupling holes in the flange joints and make sure that they are fully engaged in the pipe groove.

Note: Shurjoint 7041N 14-24" flange adapters are provided with mounting bolts for use in joining the segments. Use of any bolts other than those supplied by the factory with the flange adapter could result in leaks or joint damage.



pull together flange segments
If it is difficult to align the holes in the flange joint, use the factory supplied puller kit to draw the closure tabs together until the mating holes are aligned.



insert bolt
Insert the bolt through the coupling hole and make sure that the flange is fully engaged in the pipe groove.

2. check gasket grade and lubricate

Check the colour code of the gasket and check that the gasket supplied is suitable for the intended use. Then apply a thin coat of VSH Shurjoint lubricant to the entire gasket surface.

3. fit gasket

Place the gasket in the gasket cavity between the outside of the pipe and the flange recess. Ensure that the bottom of the gasket (the side with marking strip) is against the bottom of the gasket cavity.

4ª. coupling adjoining flange (2-12")

Insert the long bolt of the assembled flange from step 3, into an opposing hole in the mating flange. Insert a commercial bolt through the hinge hole and hand tighten the nuts of each.

4ᵇ. coupling adjoining flange (14-24")

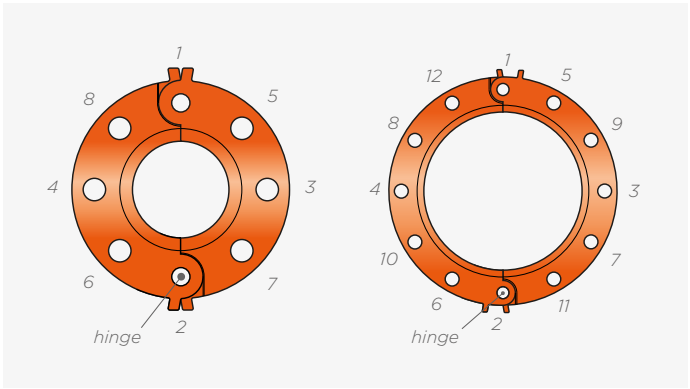
Align the adjoining flange face to face with the flange adapter and insert the two factory supplied bolts through the mating holes in the opposing flange. Hand tighten the nuts to hold the flange in place.

5. fitting bolts and nuts

Fit the remaining commercial flange bolts and turn the nuts hand tight. All the bolts shall be inserted from one direction.

6. tighten nuts

Tighten the nuts alternately in diagonally opposite pairs until the flange faces make metal-to-metal contact. It is important to make flange faces contact parallel.



required bolt torque

The following tables provides the standard torque values for proper installation of VSH Shurjoint flange adapters. Use a torque wrench so that all the nuts are tightened equally with a same torque value.

These torque values provide a range and bolts are required to be tightened to a torque within this range. The maximum torque value does not have to be reached, as VSH Shurjoint flange adapters are sealed with elastic (rubber) gaskets. These flange adapters have a much lower torque than usual for metal gaskets.

required torques

bolts SJ-7041 (ANSI grade 125/150) and SS41

pipe size	bolt size		required torque	
[inch]	[inch]	no.	[lbs-ft]	[Nm]
2	⅝	4	110–140	149–190
2½	⅝	4	110–140	149–190
3	⅝	4	110–140	149–190
4	⅝	8	110–140	149–190
5	¾	8	220–250	298–339
6	¾	8	220–250	298–339
8	¾	8	220–250	298–339
10	⅞	12	320-400	434-542
12	⅞	12	320-400	434-542
14	1	12	360-520	488-705
16	1	16	360-520	488-705
18	1⅛	16	450-725	610-982
20	1⅛	20	450-725	610-982
24	1¼	20	620-1000	841-1356

bolts SJ-7041 (PN10/16)

pipe size	bolt size		required torque	
[inch]		no.	[lbs-ft]	[Nm]
50	M16	4	110–140	149–190
65	M16	4	110–140	149–190
80	M16	8	110–140	149–190
100	M16	8	110–140	149–190
125	M20	8	220–250	298–339
150	M20	8	220–250	298–339
200	M20	12	220–250	298–339
250	M24	12	320-400	434-542
300	M24	12	320-400	434-542
350	M24	16	320-400	434-542
400	M27	16	360-520	488-705
450	M27	20	360-520	488-705
500	M30	20	450-725	610-982
600	M33	20	620-1000	841-1356

bolts 7043 (ANSI grade 300)

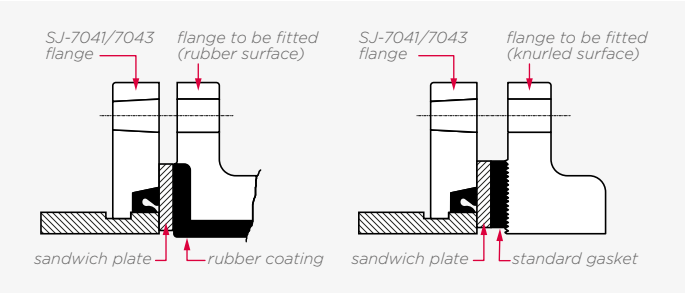
pipe size	bolt size		required torque	
[inch]	[inch]	No.	[lbs-ft]	[Nm]
2	⅝	8	110–140	149–190
2½	¾	8	220–250	298–339
3	¾	8	220–250	298–339
4	¾	8	220–250	298–339
5	¾	8	220–250	298–339
6	¾	12	220–250	298–339
8	⅞	12	320-400	434-542
10	1	16	360-520	488-705
12	1⅛	16	450-725	610-982

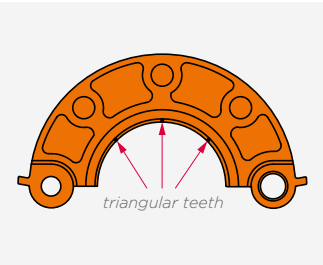
installing sandwich plate on flange adapter (model SJ-7041 and 7043)

Take the following into account during installation:

1. The flange adapters (models SJ-7041 and 7043) require a hard flat surface for effective sealing.

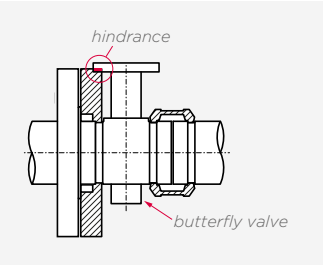
Some surfaces of adjoining flanges are not suitable for direct sealing. This is the case with the ribbed flange surface of some valves or with the rubber coated flange surface of wafer valves. In this case a sandwich plate (model 49) must be used.





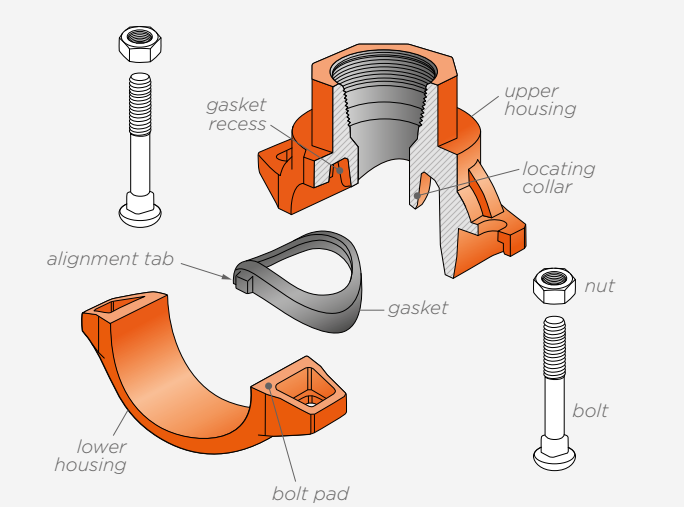
2. The flange adapter (model SJ-7041 and 7043) has small triangular teeth in the adapter edge. These engage in the groove to prevent the pipe from rotating. The teeth should be ground off when mating to a rubber-coated flange.

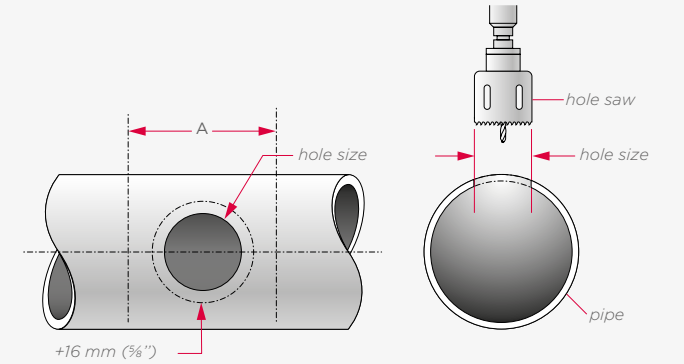
3. The flange adapters (models SJ-7041 and 7043) must not be used as anchor points for draw rods. For example, to anchor a connection that cannot resist tensile force.



4. When installing a flange adapter (model SJ-7041 or 7043) against a butterfly valve or ball valve, make sure that the outside diameter of the flange adapter does not interfere with the valve actuator or the mounting surface of the actuator. When using two model 7041 flange adapters to mate pipe, or wafer / lug valves, the hinge point locations must be staggered 90° to each other, a model 49 sandwich plate must be used where appropriate, and flange adapter segment housings must remain parallel during nut tightening sequence.

installation instructions mechanical tees





mechanical tee system

The hole-cut method of pipe preparation is required when installing mechanical tees, saddle-let and crosses. This method requires sawing a hole of a specified size on the centreline of the pipe. Always use the correct size as stated in this manual.

NOTE:

The hole must be neatly cut and have a smooth edge. Never use a torch for cutting a hole, as this could prevent proper sealing.

1. saw hole

Determine the location for the hole on the pipe. Use the correct holesaw size as stated in table on the next page.

2. deburring and cleaning

Clean the pipe surface within 16 mm around the hole where the gasket is to be fitted. This area must be inspected to ensure a clean, smooth surface, free of any scratches or projections that could affect gasket sealing. The area inside the dimension [A] must also be inspected and must be free of soiling, galvanising residue and any imperfections that could affect the seating or installation of the fitting.

hole sizes and [A] surface specifications for mechanical tees

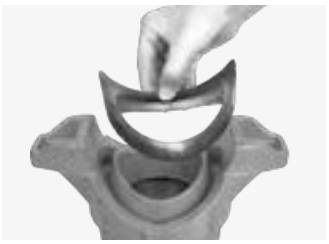
mechanical tees pipe x branch		hole dimensions				surface [A] preparation	
		hole saw		max. allowed diameter			
[inch]	[DN]	[inch]	[mm]	[inch]	[mm]	[inch]	[mm]
2 x ½	50 x 15	1½	38	1⅝	41	3½	89
2 x ¾	50 x 20	1½	38	1⅝	41	3½	89
2 x 1	50 x 25	1½	38	1⅝	41	3½	89
2 x 1¼	50 x 32	1¾*	45	1⅞*	47	4	102
2 x 1½	50 x 40	1¾*	45	1⅞*	47	4	102
2½ x ½	65 x 15	1½	38	1⅝	41	3½	89
2½ x ¾	65 x 20	1½	38	1⅝	41	3½	89
2½ x 1	65 x 25	1½	38	1⅝	41	3½	89
2½ x 1¼	65 x 32	2	51	2⅛	54	4	102
2½ x 1½	65 x 40	2	51	2⅛	54	4	102
3 x ½	80 x 15	1½	38	1⅝	41	3½	89
3 x ¾	80 x 20	1½	38	1⅝	41	3½	89
3 x 1	80 x 25	1½	38	1⅝	41	3½	89
3 x 1¼	80 x 32	2	51	2⅛	54	4	102
3 x 1½	80 x 40	2	51	2⅛	54	4	102
3 x 2	80 x 50	2½	64	2⅛	67	4½	114
4 x ½	100 x 15	1½	38	1⅝	41	3½	89
4 x ¾	100 x 20	1½	38	1⅝	41	3½	89
4 x 1	100 x 25	1½	38	1⅝	41	3½	89
4 x 1¼	100 x 32	2	51	2⅛	54	4	102
4 x 1½	100 x 40	2	51	2⅛	54	4	102
4 x 2	100 x 50	2½	64	2⅝	67	4½	114
4 x 2½	100 x 65	2¾	70	2⅞	73	4¾	121
4 x 3	100 x 80	3½	89	3⅝	92	5½	140
5 x 2	125 x 50	2½	64	2⅝	67	4½	114
5 x 2½	125 x 65	2¾	70	2⅞	73	4¾	121
6 x 1¼	150 x 32	2	51	2⅛	54	4	102
6 x 1½	150 x 40	2	51	2⅛	54	4	102
6 x 2	150 x 50	2½	64	2⅝	67	4½	114
6 x 2½	150 x 65	2¾	70	2⅞	73	4¾	121
6 x 3	150 x 80	3½	89	3⅝	92	5½	140
6 x 4	150 x 100	4½	114	4⅝	118	6½	165
8 x 2	200 x 50	2¾*	70	2⅞*	73	4¾	121
8 x 2½	200 x 65	2¾	70	2⅞	73	4¾	121
8 x 3	200 x 80	3½	89	3⅝	92	5½	140
8 x 4	200 x 100	4½	114	4⅝	118	6½	165

* Important: Pay special attention to the hole saw size and the maximum allowed diameter for these sizes. Any deviation can lead to joint damage.

3. check gasket grade and lubricate

Check the colour code and make sure it is suitable for the intended use. Then apply a thin coat of VSH Shurjoint lubricant to the sealing lip of the gasket. The gasket supplied as standard is grade E (EPDM – green stripe), suitable for water applications.

4. fit gasket



Insert the gasket into the gasket cavity of the housing. The alignment tabs on the side of the gasket must fit properly into the recesses.

5. installation preparation

Fit the coupling housings loosely. Leave out one nut and bolt to allow for ‘swing-over’ installation.

6. fitting top housing

Fit the top housing on the pipe so that the locating collar clicks firmly into the hole. Then fit the lower housing from the opposite side of the pipe.

7. fit bolt and nut

Fit the remaining bolt and turn the nut hand tight. Make sure that the oval neck of the bolt is entirely countersunk in the bolt hole of the housing.

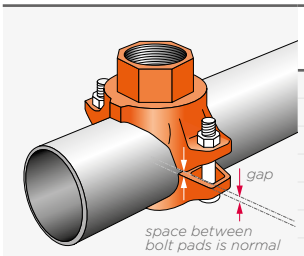
8. check locating collar

Check again to ensure the locating collar is properly positioned in the hole. This may be checked by rocking the upper housing in the hole. Also make sure that the oval necks of the bolts are fully engaged in the bolt holes of the housing.

9. tighten nuts

Tighten the nuts alternately and evenly until the housing inner diameter makes metal-to-metal contact with the pipe. Some clearance between the bolt pads is acceptable, but it must be identical on both sides. Tighten the nuts with a torque wrench using the values from the table below.

dimensions and torques for mechanical tees 7721 and 7722, M21 and M22



nominal size	bolt size [inch]	bolt size No.	required torque [lbs-ft]	required torque [Nm]
2" (DN 50)	⅜	2	30	40
2½" (DN 65)	½	2	50	68
3" (DN 80)	½	2	50	68
4" (DN 100)	½	2	50	68
5" (DN 125)	⅝	2	50	68
6" (DN 150)	⅝	2	50	68
8" (DN 200)	¾	2	50	68

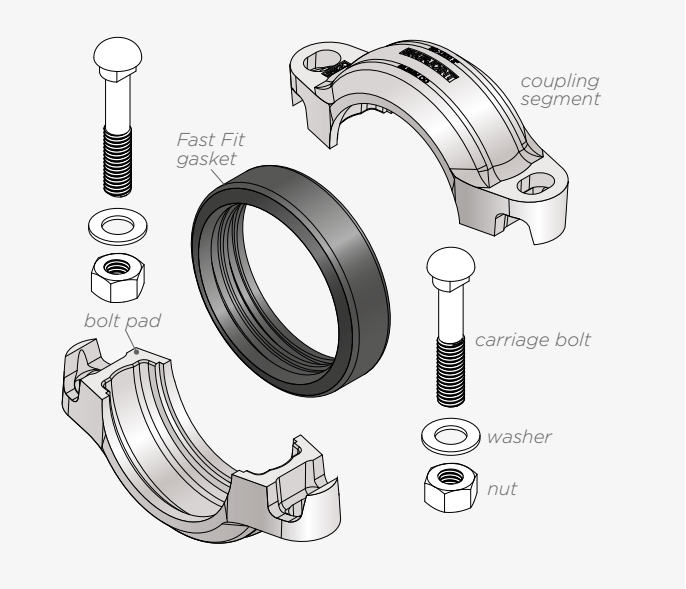
Note: Do not exceed the above torque values by more than 25% as this may result in damage to bolts and/or connections.

dimensions and equivalent lengths of mechanical tees

outlet size	equivalent length 7721/M21 [ft]	7721/M21 [m]	7722/M22 [ft]	7722/M22 [m]
1" (DN 25)	3	0.9	3	0.9
1¼" (DN 32)	6	1.8	6	1.8
1½" (DN 40)	8	2.4	8*	2.4
2" (DN 50)	9	2.7	9	2.7
2½" (DN 65)	15	4.6	15	4.6
3" (DN 80)	16	4.9	16	4.9
4" (DN 100)	17	5.2	17	5.2

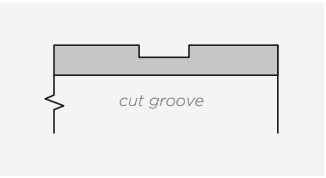
number of feet and metres of steel branch pipe (Schedule 40) with a Hazen-Williams coefficient of friction of 120. * The equivalent length of 7721/M21 with 1½" outlet and key pipe size of 2" or 2½" is 13 feet (4 metres)

installation instructions flexible stainless steel coupling SS-1200



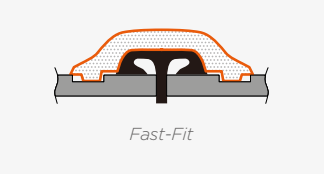
The VSH Shurjoint Model SS-1200 is designed for high pressure applications including reverse osmosis and desalination systems. The coupling is supplied as standard with a special VSH Shurjoint Fast-Fit gasket, type 316 carriage bolts, washers and silicon bronze nuts. The SS-1200 working pressures are exclusively based on use with cut groove pipe ends.

1. cut grooves on pipe ends



Make cut grooves on the ends of the pipes to be connected. The specified working pressures are not valid when using pipe ends with rolled grooves.

2. check gasket



Always use the special VSH Shurjoint Fast-Fit gasket. The specified working pressures are not valid when using a standard gasket in the SS-1200 coupling.

Use of a lubricant is usually not required. If a lubricant is used, make sure to use the VSH Shurjoint lubricant or another compatible approved lubricant for potable water use.

3. fit gasket on pipe ends

Insert one pipe end into the Fast-Fit gasket and insert the other pipe end to be connected into the other side of the gasket. The Fast-Fit gasket design allows the pipe ends to be inserted directly into the gasket without stretching it.

4. install coupling housings

Fit the coupling housings over the gasket and make sure that the coupling edge is engaged in the grooves.

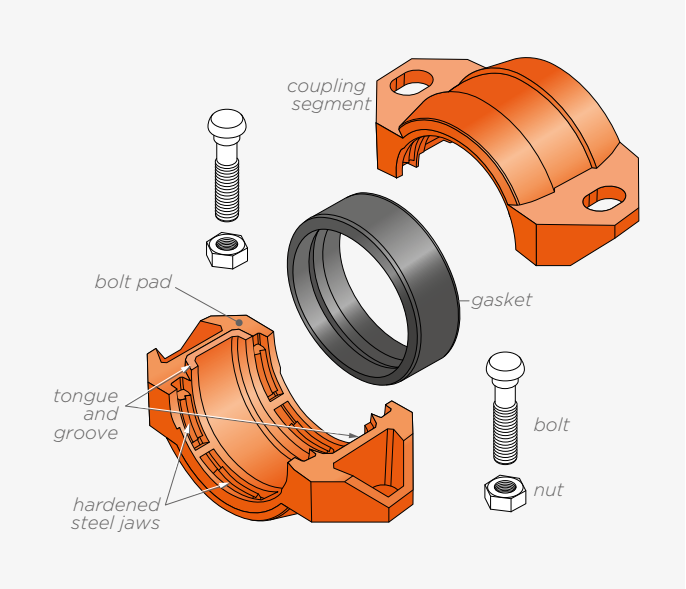
5. fit bolt and nut

Insert the factory supplied bolt through the bolt pads. Place the washer over the bolt and fit the silicon bronze nut (hand tight) on the bolt. The use of other bolts and nuts may lead to joint damage or thread corrosion.

6. tighten nuts

Tighten the nuts alternately and equally until the bolt pads meet and make metal-to-metal contact.Tighten the nuts by another quarter to half turn to make sure the bolts and nuts are snug and secure. The use of a torque wrench is not required.

installation instructions 79 'Wildcat' coupling for plain-end steel pipes



The VSH Shurjoint 79 Wildcat plain-end coupling is designed to connect smooth steel pipes or steel pipes with a weld bevel. There is no need to groove the pipes. The model 79 Wildcat coupling is recommended for use on steel pipes with hardness less than HB150, but is not recommended for stainless steel, plastic, HDPE, cast iron or other brittle pipes.

1. marking

Use a marker pen or other marking tool and measuring tape to mark each pipe end 25.4 mm from the end. This is used as a reference point when centering the gasket. We recommend making a minimum of 4 marks equally spaced around the pipe.

Make a second mark (according to the values in the table on page 40). This mark will be used for visual inspection to check that the pipe is inserted properly into the coupling. Make these markings parallel to the markings applied as reference points for centering the gasket.

2. check gasket

Check the colour code of the gasket and the suitability for the intended use. The gasket supplied as standard is grade E (EPDM, green stripe code), suitable for water applications. For gasket details and selection, please check pages 16-16.

3. lubricate gasket

To enable smooth fitting of the pipe and avoid pinching the gasket in the coupling, apply a thin coat of VSH Shurjoint lubricant to the sealing lips and outside of the gasket.

Other suitable lubricants may be used provided they do not damage the gasket. In systems, subject to extreme hot or cold temperatures, the use of VSH Shurjoint EHC silicone lube is recommended.

NOTE:
Do not use EPDM gaskets for hydrocarbons or petroleum applications, as this can lead to leaks or damage to connections.

4. fit gasket

Place a gasket over the pipe ends and centre the gasket between the first set of inner markings. The pipe ends must always be in contact with each other.

5. install housings

Fit the housings over the gasket, ensuring that the gasket remains centred between the first set of inner marks and are properly centered between the second set of outer marks. Also make sure that the tongue and groove fit together correctly.

6. fit bolts and nuts

Fit the bolts and turn the nuts hand tight. Make sure that the oval neck of the bolt is entirely countersunk in the bolt hole of the housing.

7. tighten nuts

Tighten the nuts alternately and equally using a torque wrench until the required torque value is achieved. Insufficient torque can lead to pipe separation, which can cause injuries and/or property damage. See the table below for the required torque values.

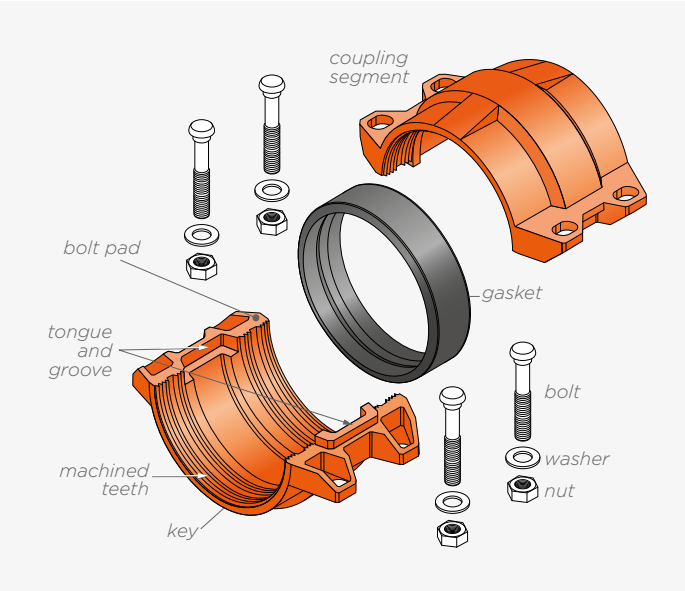
Note: Wear gloves while working to avoid injuries from the sharp teeth.

79 'Wildcat' dimensions, centering markings and minimum required torques

	centering mark		coupling bolts			
					required torque	
pipe size	[inch]	[mm]	no.	bolt size [inch]	[lbs-ft]	[Nm]
1" (DN 25)	1.5	40	2	½ x 2⅜	110	150
1½" (DN 40)	1.5	40	2	½ x 2⅜	110	150
2" (DN 50)	1.75	45	2	⅝ x 3½	150	200
2½" (DN 65)	1.75	45	2	⅝ x 3½	150	200
3" (DN 80)	1.75	45	2	¾ x 4¾	200	270
4" (DN 100)	2	50	2	¾ x 4¾	200	270
5" (DN 125)	2	50	2	⅞ x 6½	250	340
6" (DN 150)	2.25	55	2	⅞ x 6½	250	340
8" (DN 200)	2.5	65	4	¾ x 4¾	200	270
10" (DN 250)	2.5	65	4	⅞ x 6½	300	400
12" (DN 300)	2.5	65	4	1 x 6½	350	470
14" (DN 350)	2.75	70	4	1 x 6½	350	470
16" (DN 400)	2.75	70	4	1 x 6½	350	470

NOTE:
1. If the bolts and nuts are not tightened evenly, the gasket may be pinched and leaks may occur.
2. Excessive tightening of nuts may cause bolt or joint failure.

installation instructions H305 coupling for plain-end HDPE pipes



The VSH Shurjoint HDPE series of pipe components are designed to provide a fast and easy way to join HDPE (high density polyethylene) pipes. These components are designed to join HDPE pipes and fittings in accordance with ASTM D2447, D3035 or F714 (metric sizes according to ISO 161/1, DIN 8074 and AS 8074), at ambient temperatures with wall thickness from SDR 32.5 to 7.3. This method eliminates the need of electro fusion welding and provides the versatility to quickly modify the system. VSH Shurjoint HDPE pipe components are suitable for the same pressure as the HDPE pipe with which they are used.

Working pressure: As the physical strength of the VSH Shurjoint HDPE coupling joint is much greater than that of the HDPE pipe, the working pressure is determined by the working pressure of the HDPE pipe, which varies depending on piping system, wall thickness and operating temperature.

HDPE pipe

The following tables show the allowed dimension tolerances of HDPE pipes with SDR 20 at 21°C.

pipe dimensions and tolerances

imperial (ANSI/NPS)

pipe size [inch]	outside diameter [mm]	tolerance [mm]	max. ovality [mm]
2	60.3	±0.406	±1.016
3	88.9	±0.406	±1.016
4	114.3	±0.508	±1.016
6	141.3	±0.635	±1.27
8	168.3	±0.762	±1.27
10	219.1	±0.99	±1.905
12	273	±1.219	±1.905
12	323.9	±1.448	±1.905
14	355.6	±1.6	±1.905
16	406.4	±1.83	±1.905
18	457	±2.06	±1.905
20	508	±2.29	±1.905

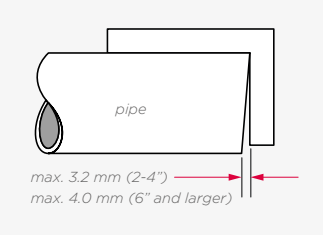
metric (EN and others)

min. outside diameter [mm]	max. outside diameter* [mm]	min. outside diameter [mm]	max. outside diameter* [mm]
50	50.5	225	226.4
63	63.6	250	252.3
75	75.7	280	281.7
90	90.9	315	317.9
110	111	355	357.2
160	161.5	400	402.4
180	181.7	450	452.7
200	201.8	500	504

* Tolerances at ambient temperatures for pipe with SDR of 20 or less.

Note: VSH Shurjoint HDPE couplings are not intended for use with pipes made of PVC or other plastics.

1. square cut the pipe



The maximum allowed tolerances are 3.2 mm for pipe sizes 2" through 4" and 4 mm for 6" and larger pipe sizes. Clean the pipe over a length of 26 mm from the end and make sure it is free of indentations, projections, scratches and other harmful surface defects such as soiling, chips, grease, etc.

2. marking

Use a marker pen or other marking tool and a measuring tape to mark the pipe ends (in accordance with the dimensions in the table on page 42). This marking will be used as reference for centering the gasket during installation. We recommend a minimum of 4 marks equally spaced around the pipe.

Apply a second marking (according to the dimensions in the column 'centering markings on coupling' in the table below). This marking will be used for visual inspection to make sure the pipe is inserted correctly in the coupling. Make these markings parallel to the markings applied as reference points for centering the gasket.

H305 dimensions, centering marking and minimum required torque

metric sizes

pipe size [mm]	centering reference points for gasket [mm]	centering reference points for coupling [mm]
50	22	53
63	22	53
75	22	53
90	22	53
110	22	56
160	25	59
180	25	59
200	26	64
225	26	64
250	26	67
280	26	67
315	26	67
355	37	129
400	37	129
450	37	129
500	37	131

IPS sizes

pipe size		centering reference points for gasket		centering reference points for coupling	
[inch]	[mm]	[inch]	[mm]	[inch]	[mm]
2	50	7/8	22	2 5/16	58
3	80	7/8	22	2 5/16	58
4	100	7/8	22	3	75
6	150	1	25	3	75
8	200	1 1/16	26	3 1/16	77
10	250	1 1/16	26	3 1/4	83
12	300	1 1/16	26	3 9/16	90
14	350	1 7/16	36	5 1/8	129
16	400	1 7/16	36	5 1/8	129
18	450	1 7/16	36	5 1/8	129
20	500	1 5/8	40	5 1/8	129

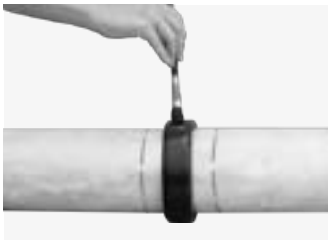
3. check gasket

Check the colour code of the gasket and that it is the correct one for the intended use. The gasket supplied as standard is grade E (EPDM, green stripe code), suitable for water applications.

4. fit gasket

Place the gasket over the pipe ends and centre the gasket between the first set of marks. The pipe ends must always be in contact with each other.

5. lubricate gasket



Lubricate the outside of the gasket with a silicone lubricant, such as VSH Shurjoint EHC lubricant. Corn oil, soybean oil, glycerine and silicones can also be used on HDPE piping systems.

WARNING!
Do not use VSH Shurjoint standard lubricant, which is designed for use with steel pipes. Do not use hydrocarbon based oils, grease or soap based solutions, as this could lead joint failure.

6. install housings

Place the housings over the gasket, ensuring that they remain centred between the first set of marks. Ensure that the housings remain centred between the second set of marks and that the tongue and groove fit together correctly.

Note: Wear gloves while working to avoid injuries from the sharp machined teeth.

WARNING!
The VSH Shurjoint H305 coupling has a tongue and groove design. The coupling must therefore always be installed so that tongue and groove mate properly.
(See illustration on page 30)

7. fit bolts and nuts

Fit a washer on the end of each bolt. Thread a nut onto each bolt and tighten the nuts by hand. Make sure that the oval neck of the bolt is entirely countersunk in the bolt hole of the housing.

8. tighten nuts

Tighten the nuts alternately and equally until the bolt pads meet and make metal-to-metal contact. Repeated alternate tightening will reduce the torque considerably. Tighten the nuts by another quarter to half turn to make sure the bolts and nuts are snug and secure. The use of a torque wrench is not required.

large diameter HDPE couplings

The 14" (355.6 mm) and larger model H305 HDPE couplings have hex bolts, washers and nuts that must be tightened according to special instructions. Refer to the following steps for the proper tightening sequence.

9. fit bolts and washers

Fit a hex bolt and a washer on each end of a bolt hole in the housings. Make sure the head of each hex bolt and washer is properly seated in housing recess.

10. fit nuts

Thread a nut onto the end of each hex bolt until the washer makes contact with the coupling housing.

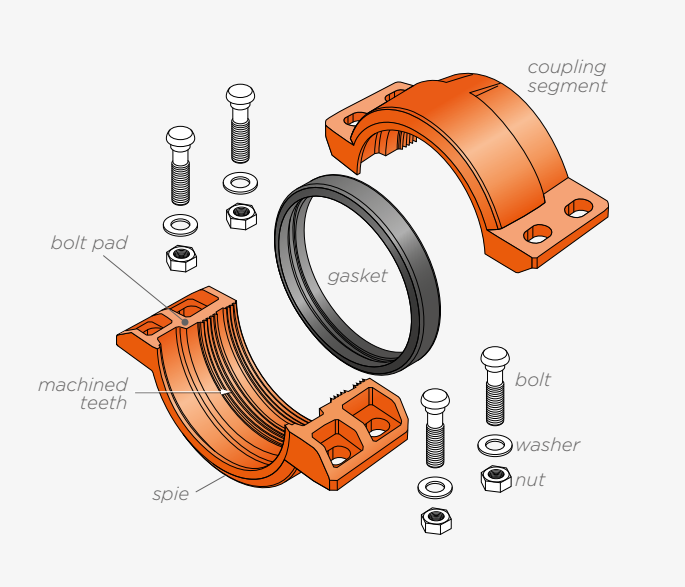
11. tighten nuts

Tighten the nuts alternately and equally until the bolt pads meet and make metal-to-metal contact. Tighten the nuts by another quarter to half turn to make sure the bolts and nuts are snug and secure. Check that the washers are correctly seated in the bolt pads recesses of the coupling housings.

NOTE:

1. If the bolts and nuts are not tightened evenly, the gasket may be pinched and leaks may occur.
2. Excessive tightening of nuts may cause bolt or joint failure.

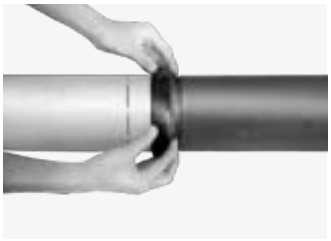
installation instructions H307 transition coupling for connecting a plain-end HDPE pipe to grooved steel pipe



The VSH Shurjoint H307 transition coupling provides a direct **transition from an HDPE pipe to a steel pipe** of the same nominal diameter. The Model H307 transition coupling must be installed with the machined teeth side on the HDPE pipe and the side with the key on the grooved steel pipe.

Follow the installation instructions below for the HDPE side (see page 40) or grooved steel pipes (see page 24).

1. fit gasket



Place a gasket over the pipe ends and centre it between the marking on the HDPE pipe and the groove of the steel pipe. The pipe ends are preferably to be butted against each other or with a controlled space (see note).

Note: The maximum allowed space between HDPE pipe and the steel pipe is 6.3 mm with pipe sizes 2” to 4”, and 7.9 mm with pipes 6” or larger.

2. lubricate gasket

Lubricate the outside of the gasket with a silicone lubricant.

WARNING!
Do not use VSH Shurjoint standard lubricant, which is designed for use with steel pipes. Do not use hydrocarbon based oils, grease or soap based solutions, as this could lead joint failure.

In order to avoid injuries from the sharp machined teeth, wear gloves when handling

3. install housings

PLace the housings over the gasket, ensuring that the gasket remains centred between the marks made on the HDPE pipe and the groove of the steel pipe.

H307 ISO metric sizes

nominal size [mm]	mark location from HDPE pipe end [mm]
63	50
75	50
90	50
110	50
160	50
200	53
250	64
315	64

4. fit bolts and nuts

Insert the bolts and install a washer on each bolt end. Thread a nut onto each bolt and tighten the nuts by hand. Make sure that the oval neck of the bolt engages in the bolt hole of the housing.

5. tighten nuts

Tighten the nuts alternately and equally until the bolt pads meet and make metal-to-metal contact. Repeated alternate tightening will reduce the torque considerably. Tighten the nuts by another quarter to half turn to make sure the bolts and nuts are snug and secure. The use of a torque wrench is not required.

NOTE:

1. If the bolts and nuts are not tightened evenly, the gasket may be pinched and leaks may occur.
2. Excessive tightening of nuts may cause bolt or joint failure.

installation instructions H312 HDPE flange adapter

The VSH Shurjoint Model H312 HDPE flange adapter provides a direct transition from HDPE pipe to PN10/16 or ANSI grade 125/150 flanges. Pay particular attention to the following installation steps when installing the HDPE flange adapter.

1. install housing

Fit the flange housings with the machined teeth onto the HDPE pipe end. The gasket cavity must point towards the pipe end. Insert the drawbolts into the flange adapter housings. Install a washer onto the end of each bolt. Thread a nut loosely onto the end of each drawbolt.

2. flange face flush

The end of the HDPE pipe must be flush with the flange face. Check with a ruler or other straight edged tool. If the pipe end and flange face are not flush, correct this.

3. tighten drawbolts

Tighten the drawbolts and nuts alternately and equally until the housing bolt pads meet and make metal-to-metal contact. Repeated alternate tightening will reduce the torque considerably.

4. Fit gasket

Fit the gasket in the gasket cavity between the outside of the pipe and the flange recess. Make sure that the bottom of the gasket (the marking side) is seated against the bottom of the flange recess.

5. fit to adjoining flange

Bring the adjoining flange face to face with the model H312 flange.

6. add bolts and nuts

Add flange bolts and apply nuts hand tight. All the bolts shall be inserted from the same direction. Make sure that the oval neck of the bolt engages the bolt hole of the housing.

7. tighten nuts

Tighten all nuts evenly as with a regular flange assembly, until faces contact firmly. Apply the recommended flange joint torque evenly to all the bolts. See table below for the required torque.

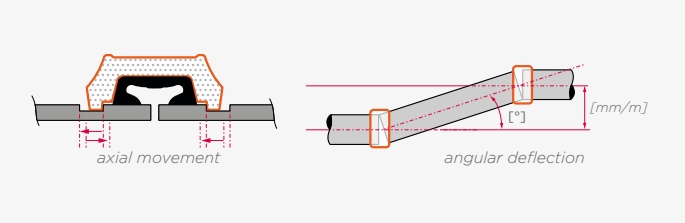
VSH Shurjoint H312 required torques

pipe size [inch]	bolt size [inch]	no.	required torque [lbs-ft]	[Nm]
3	⅝	2	110 - 140	149 - 190
4	⅝	2	110 - 140	149 - 190
6	⅝	2	110 - 140	149 - 190
8	¾	2	220 - 250	298 - 339
10	¾	4	220 - 250	298 - 339
12	¾	4	220 - 250	298 - 339

general technical information

axial movement and angular deflection

Grooved couplings become less flexible as the pipe size increases. Couplings larger than 18" (450 mm) allow only very limited angular deflection. The following table provides design data regarding the allowed axial movement and angular deflection of flexible couplings.



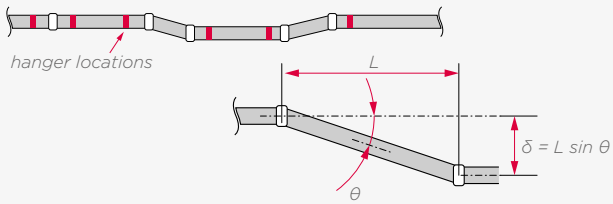
axial movement and angular deflection for rolled groove and cut groove flexible couplings 7705, 7707 and 7707N

			rolled groove			cut groove		
			axial movement	angular deflection		axial movement	angular deflection	
size		[mm]	[mm]	[°]	[mm]/[m]	[mm/m]	[°]	[mm]/[m]
1"	(DN25)	33.4	0 - 0.8	1.37	24	0 - 1.6	2.74	48
1¼"	(DN32)	42.2	0 - 0.8	1.09	19	0 - 1.6	2.17	38
1½"	(DN40)	48.3	0 - 0.8	0.95	17	0 - 1.6	1.90	33
2"	(DN50)	60.3	0 - 0.8	0.76	14	0 - 1.6	1.52	27
2½"	(DN50)	73	0 - 0.8	0.63	11	0 - 1.6	1.26	22
2½"	(DN65)	76.1	0 - 0.8	0.60	1	0 - 1.6	1.20	21
3"	(DN80)	88.9	0 - 0.8	0.52	9	0 - 1.6	1.03	18
4"	(DN80)	101.6	0 - 0.8	0.45	8	0 - 1.6	0.90	16
4"	(DN100)	108	0 - 2.4	1.27	23	0 - 4.8	2.54	45
5"	(DN125)	114.3	0 - 2.4	1.20	21	0 - 4.8	2.40	42
5"	(DN125)	139.7	0 - 2.4	0.98	17	0 - 4.8	1.97	35
5"	(DN125)	141.3	0 - 2.4	0.97	17	0 - 4.8	1.95	35
6"	(DN125)	159	0 - 2.4	0.86	15	0 - 4.8	1.73	30
6"	(DN125)	165.1	0 - 2.4	0.83	15	0 - 4.8	1.67	30
6"	(DN150)	168.3	0 - 2.4	0.82	14	0 - 4.8	1.63	29
8"	(DN200)	219.1	0 - 2.4	0.63	11	0 - 4.8	1.26	23
10"	(DN250)	273	0 - 2.4	0.5	9	0 - 4.8	1.01	18
12"	(DN300)	323.9	0 - 2.4	0.42	8	0 - 4.8	0.85	15
14"	(DN350)	355.6	0 - 2.4	0.39	7	0 - 4.8	0.77	14
16"	(DN400)	406.4	0 - 2.4	0.34	6	0 - 4.8	0.68	12
18"	(DN450)	457.2	0 - 2.4	0.30	5	0 - 4.8	0.60	11
20"	(DN500)	508	0 - 2.4	0.27	5	0 - 4.8	0.54	10
22"	(DN550)	558.8	0 - 2.4	0.25	4	0 - 4.8	0.49	9
24"	(DN600)	609.6	0 - 2.4	0.23	4	0 - 4.8	0.45	8
26"	(DN650)	660.4	0 - 2.4	0.21	4	0 - 4.8	0.42	7

* Note: The safety factor for design purposes is already included in the values in the above table.

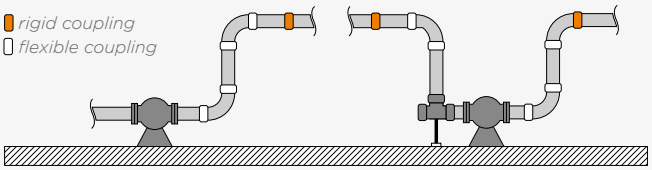
accommodating pipe alignment

If the alignment of a straight length of pipe has to be adjusted on site (see illustration), this can be done using two flexible couplings. The table opposite shows the angular deflection [θ].



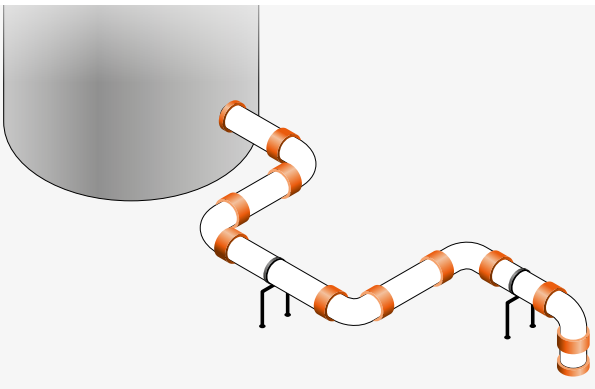
absorption of vibration and noise

When a pump operates with frequent starts and stops, the piping system is affected by the noise and vibration of the equipment. The entire system may develop strong vibration as a result of frequent start-stop cycling. This is also called resonance. VSH Shurjoint flexible couplings will help reduce such vibration and noise. The system should always be properly designed with steel angle sway braces to protect the system from large sways.



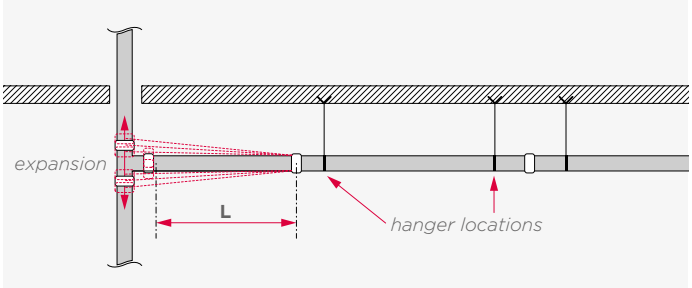
absorption of distortion

A setup as shown below allows ground settlement or movement around a tank or reservoir to be effectively absorbed, avoiding damage to the tank, reservoir and/or the piping system.



compensation of displacement

As shown in the illustration, each branch connection to the free riser will be subjected to serious shearing forces as pressure thrusts or thermal movement increases. You can solve this issue by using two flexible couplings.

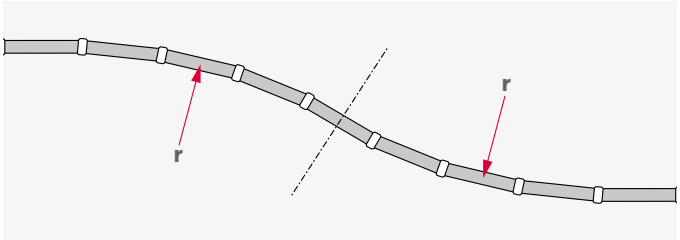


bending pipe sections

With VSH Shurjoint flexible couplings you can design a slowly curved layout for a system along a curved tunnel, winding road or curved building.

$$R = \frac{L}{2 \times \sin(\theta/2)}$$

(where: R = radius of curvature, L = pipe length, and θ = maximum allowed angular deflection of a coupling)



Example: If model 7705 DN100 (4") couplings are used for the installation (see diagram), the maximum allowed angular deflection [θ] of the coupling is 1.2°. A pipe length [L] of 3 metres gives a radius [R] of 144.2 metres.

absorption of thermal stress

Thermal stress is caused by changes in temperature, resulting in either expansion or contraction. With the use of VSH Shurjoint flexible couplings you can design your system to accommodate such movement without the need for costly expansion joints. The thermal expansion or contraction [μ] is determined by the length of the pipe [L] and the temperature difference (ΔT).

$$\mu = \alpha \times L \times \Delta T$$

thermal expansion [mm]

temperature difference ΔT [K]	pipe length l [m]						
	1	3	6	10	20	30	40
1	0.012	0.04	0.08	0.12	0.24	0.36	0.48
5	0.06	0.18	0.36	0.6	1.2	1.8	2.4
10	0.12	0.36	0.72	1.2	2.4	3.6	4.8
20	0.24	0.71	1.42	2.4	4.8	7.2	9.6
30	0.36	1.09	2.18	3.6	7.2	11	15
40	0.48	1.42	2.84	4.8	9.6	14	20
50	0.6	1.8	3.6	6	12	18	24
60	0.72	2.18	4.36	7.2	14	22	29
70	0.84	2.51	5.02	8.4	17	25	34
80	0.96	2.89	5.78	9.6	19	29	39

As the linear expansion coefficient of steel (α) is 1.2 x 10^{-5}, you can use the table above to determine the thermal expansion. Example:

- pipe size: DN100 (4")
- max. pipe end separation [E]: 2.4 mm
- pipe length [l]: 3000 mm
- temperature difference (ΔT) : 40 K (+5°C to +45°C)
- α = 1.2 x 10^{-5}/K

$$\mu = \alpha \times l \times \Delta T = 1.2 \times 10\text{-}5/K \times 3000\ mm \times 40\ K = 1.44\ mm$$

The thermal expansion of a 3 metre length of pipe [μ] is within the permitted value (max. pipe end separation) of a flexible coupling. In other words, if you fit a coupling for each pipe length of 3 metres, the coupling will accommodate the expected thermal expansion or contraction with a 40 K temperature change. When calculating the required number of couplings [N] for an anchored system, you should observe a clearance of N x E x ½ as a safety factor.

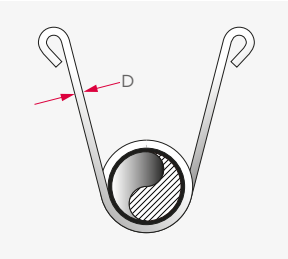
Whether it is thermal expansion, contraction, or a combination of the two, the system must be provided with suitable fixed and sliding support points. Where and when larger thermal movement is anticipated, you should use supplementary expansion joint(s).

anchoring, suspension and supporting

VSH Shurjoint grooved couplings are designed to resist axial forces 4 to 5 times greater than the nominal working pressure, but the allowed bending stress is lower than with steel pipes. The joint can be damaged if the angular deflection is greater than the allowed angle as stated in the table on page 47. System designers should provide fixing-point anchors (main and intermediate) and correct spacing between the sliding supports to protect the system against unexpected large angular displacements. These illustrations are examples only, and are not intended to be used for all installations as conditions and requirements vary from job to job. Reliance on general data or information contained herein shall be at the user's sole risk and without obligation to VSH Shurjoint.

The supports must be designed to be able support five times the weight of the water-filled pipe plus 250 lb (115 kg) at each pipe support point (NFPA 13 9.1.1.1.). The following illustrations are examples of acceptable hanger types and sizes per NFPA 13.

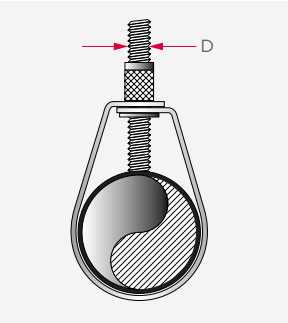
U-bracket dimensions



U-bracket

pipe size	dimension D	
[inch]	[inch]	[DN]
< 4	5⁄16″	7.9
2½″ - 6″	⅜″	9.5
8″	½″	12.7

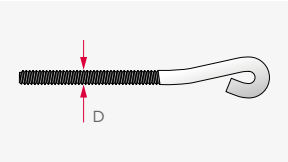
threaded rod dimensions



bracket with adjustable ring, clamping on pipe

pipe size	dimension D	
[inch]	[inch]	[DN]
< 4	⅜″	9.5
5″ - 8″	½″	12.7
10″ - 12″	⅝	15.9

eye rod dimensions



pipe size	dimension D	
[inch]	[inch]	[DN]
< 4	⅜″	9.5
5 - 6	½″	12.7
10 - 12	¾″	15.1

support for straight pipes

Both flexible and rigid couplings can be used to connect straight pipes. When rigid couplings are used, the same hanger spacing as for other piping methods can be used. You can refer to the hanger spacing standards of ANSI B31.1 Power Piping Code, B31.9 Building Services Piping Code, NFPA 13 Sprinkler Systems, or the Mechanical Equipment Construction Guide (Japan). See the following table.

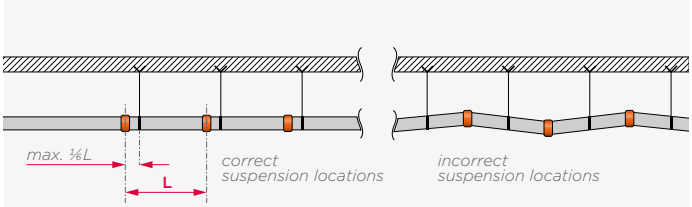
recommended max. distance between supports (steel pipe)

pipe size			water application [m]				gas or air application [m]		
		[mm]	1)	2)	3)	4)	1)	2)	3)
1″	(DN25)	33.4	2.1	2.7	3.7	2	2.7	3	3.7
1¼″	(DN32)	42.2	2.1	3.4	3.7	2	2.7	3.7	3.7
1½″	(DN40)	48.3	2.1	3.7	4.6	2	2.7	4	4.6
2″	(DN50)	60.3	3	4	4.6	2	4	4.6	4.6
2½″	(DN65)	76.1	3.4	4.6	4.6	2	4.3	5.2	4.6
3″	(DN80)	88.9	3.7	4.9	4.6	2	4.6	5.8	4.6
4″	(DN100)	108	4.3	5.5	4.6	2	5.2	6.4	4.6
5″	(DN125)	114.3	4.9	6.1	4.6	2	6.1	7.3	4.6
6″	(DN150)	168.3	5.2	6.4	4.6	3	6.4	7.9	4.6
8″	(DN200)	219.1	5.8	7	4.6	3	7.3	8.8	4.6
10″	(DN250)	273	5.8	7.6	4.6	3	7.3	10.1	4.6
12″	(DN300)	323.9	7	7.9	4.6	3	9.1	11	4.6
14″	(DN350)	355.6	7	7.9	4.6		9.1	11.3	4.6
16″	(DN400)	406.4	8.2	7.9	4.6		10.7	12.2	4.6
18″	(DN450)	457.2	8.2	8.2	4.6		10.7	13.1	4.6
20″	(DN500)	508	9.1	8.2	4.6		11.9	14	4.6
24″	(DN600)	609.6	9.8	7.9	4.6		12.8	15.2	4.6

1) ANSI B31.1 Power Piping Code
2) ANSI B31.9 Building Services Piping Code
3) NFPA 13 Sprinkler Systems
4) Japanese Ministry of Land and Transport: Mechanical Equipment Construction Guide

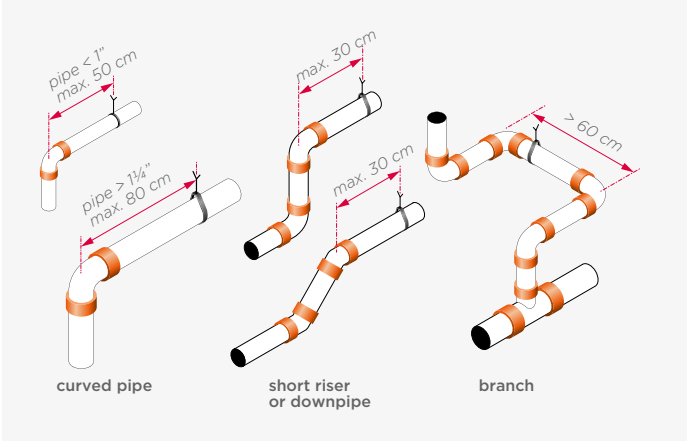
support locations on straight pipes where flexible couplings are used

When flexible couplings are used on straight pipes, the support points must be located as close to each coupling as possible or within a distance of less than 1/6 the span.



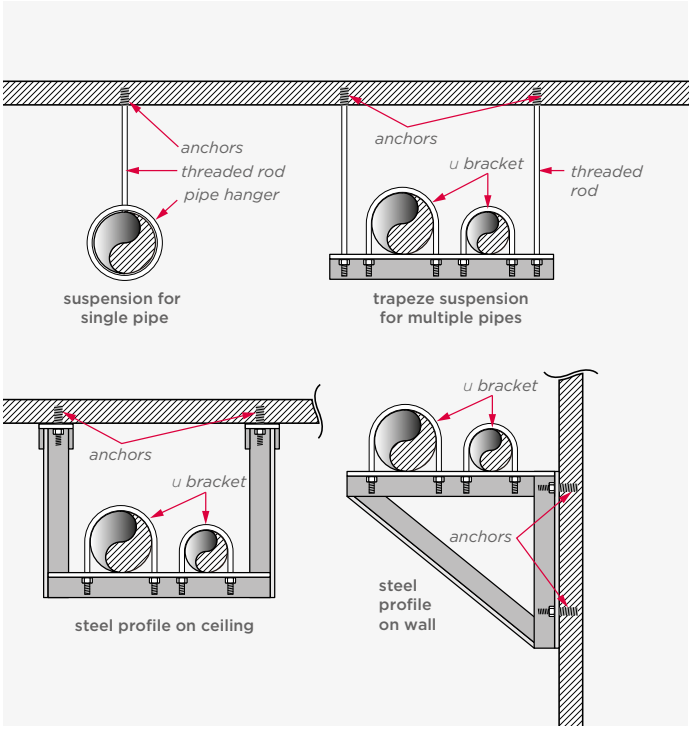
support locations for bends and branch lines

Additional support points must be provided for bends and branch lines, or on short risers or downpipes.

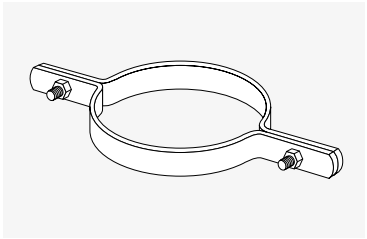


typical suspension and support designs

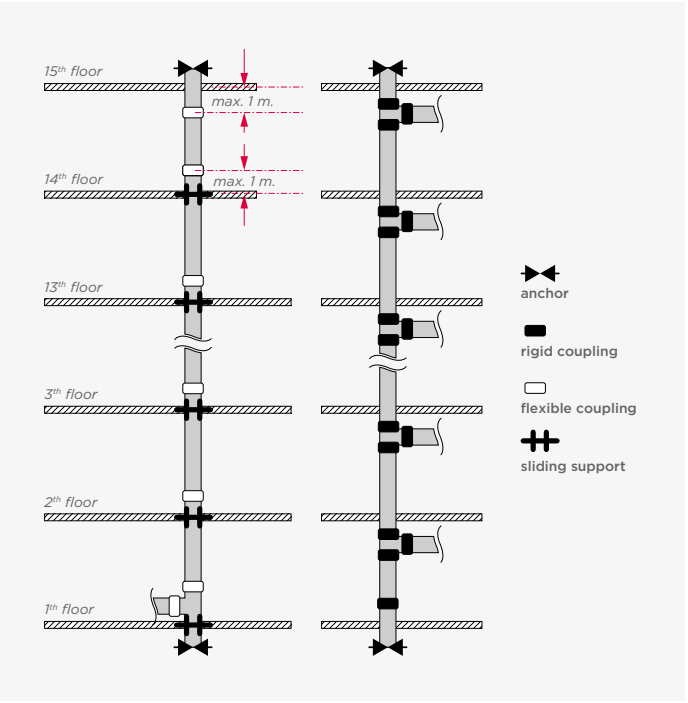
Pipes must be adequately suspended by rod hangers or on installation profiles directly attached to the building structure to restrict the movement of the piping. Hangers and associated parts shall be made of steel. The maximum distance between supports must not exceed that specified in the table on page 49.



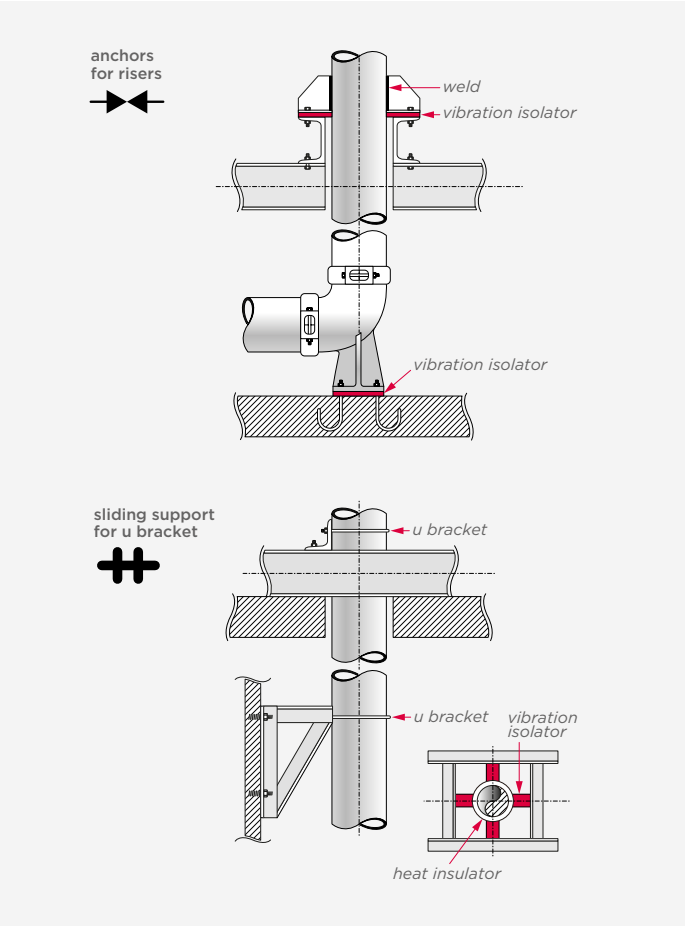
support for risers



In multi-storey buildings, risers must be anchored at the lowest and highest level and secured to each storey with sliding supports to prevent lateral movement. If the riser is supported at the floor penetration, the number of fastening points may be reduced to one per three storeys. Both flexible and rigid couplings can be used with risers as long as proper anchoring and support are provided.



- Anchors must be strong enough to hold the weight of water-filled pipes and withstand pressure forces.
- Sliding supports must prevent lateral movement of the system.



working pressure tables

VSH Shurjoint couplings on steel and/or stainless steel pipes

The following tables show the maximum working pressure of VSH Shurjoint couplings and flange adapters used on both steel and stainless steel pipes. VSH Shurjoint ductile iron couplings can be used in non-corrosive environments in combination with stainless steel pipes because only the gasket comes in contact with the media, not the coupling housing.

For more information on the maximum allowed working pressure for the different combinations, please consult our website.

operating pressure [bar] for ductile iron couplings on steel pipes with rolled grooves

pipe size				nominal wall thickness			coupling type							
							7705	7707	Z05	Z07	7706	G28	SJ-7041	7043
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
1"	(DN 25)	33.7	1.315	5	1.7	0.065	20	35	-	-	-	-	-	-
				10	2.80	0.109	28	52	-	-	-	-	-	-
				STD	3.4	0.13	35	69	-	-	-	-	-	-
1¼"	(DN 32)	42.4	1.66	5	1.65	0.07	20	35	17	28	-	-	-	-
				10	2.77	0.11	28	52	28	42	-	-	-	-
				STD	3.56	0.14	35	69	35	52	-	-	-	-
1½"	(DN 40)	48.3	1.9	5	1.65	0.07	20	35	17	28	20	NR	-	-
				10	2.77	0.11	28	52	28	42	24	20	-	-
				STD	3.68	0.15	35	69	35	52	35	20	-	-
2"	(DN 50)	60.3	2.375	5	1.65	0.07	20	35	17	28	20	NR	NR	NR
				10	2.77	0.11	28	52	28	42	24	20	17	35
				STD	3.91	0.15	35	69	35	52	35	20	20	52
2½"		73	2.875	5	2.11	0.08	20	35	17	28	20	NR	NR	NR
				10	3.05	0.12	28	42	28	42	24	20	17	35
				STD	5.16	0.2	35	69	35	52	35	20	20	52
2½"	(DN 65)	76.1	3	5	2.11	0.08	20	35	17	28	20	NR	NR	-
				10	3.05	0.12	28	42	28	42	24	20	17	-
				STD	5.16	0.2	35	69	35	52	35	20	20	-
3"	(DN 80)	88.9	3.5	5	2.11	0.08	20	35	17	28	20	NR	NR	NR
				10	3.05	0.12	28	42	28	42	24	20	17	35
				STD	5.49	0.22	35	69	35	52	35	20	20	52
4"		108	4.252	5	2.11	0.08	20	-	-	-	-	-	-	-
				10	3.05	0.12	28	-	-	-	-	-	-	-
				STD	5.74	0.23	35	-	-	-	-	-	-	-
4"	(DN 100)	114.3	4.5	5	2.11	0.08	20	28	14	28	17	NR	NR	NR
				10	3.05	0.12	28	42	28	42	20	20	17	35
				STD	6.02	0.24	35	69	35	52	35	20	20	52
5"	(DN 125)	133	5.236	5	2.77	0.11	17	-	-	-	-	-	-	-
				10	3.4	0.13	24	-	-	-	-	-	-	-
				STD	6.55	0.26	31	-	-	-	-	-	-	-
5"	(DN 125)	139.7	5.5	5	2.77	0.11	17	24	12	24	17	NR	NR	-
				10	3.4	0.13	24	35	20	35	20	20	17	-
				STD	6.55	0.26	31	69	24	52	28	20	20	-
5"	(DN 125)	141.3	5.563	5	2.77	0.11	17	24	12	24	17	NR	NR	NR
				10	3.4	0.13	24	35	20	35	20	20	17	31
				STD	6.55	0.26	31	69	24	52	28	20	20	52
6"		159	6.26	5	2.77	0.11	17	-	-	-	-	-	-	-
				10	3.4	0.13	24	-	-	-	-	-	-	-
				STD	7.11	0.28	31	-	-	-	-	-	-	-
6"		165.1	6.5	5	2.77	0.11	17	20	12	20	12	NR	NR	-
				10	3.4	0.13	24	31	20	28	20	20	17	-
				STD	7.11	0.28	31	69	24	48	28	20	20	-
6"	(DN 150)	168.3	6.625	5	2.77	0.11	17	20	12	20	12	NR	NR	NR
				10	3.4	0.13	24	31	20	28	20	20	17	31
				STD	7.11	0.28	31	69	24	48	28	20	20	52
8"	(DN 200)	219.1	8.625	5	2.77	0.11	14	17	10	17	12	NR	NR	NR
				10	3.76	0.15	17	24	20	24	20	17	14	20
				STD	8.18	0.32	20	55	24	42	28	20	20	52

operating pressure [bar] for ductile iron couplings on steel pipes with rolled grooves

pipe size				nominal wall thickness			coupling type							
							7705	7707	Z05	Z07	7706	G28	SJ-7041	7043
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
10”	(DN 250)	273	10.75	5	3.4	0.13	12	14	-	14	-	NR	NR	NR
				10	4.19	0.17	14	20	-	20	-	17	14	20
				STD	9.27	0.37	20	55	-	35	-	20	20	52
12”	(DN 300)	323.9	12.75	5	4.06	0.16	12	14	-	10	-	-	NR	NR
				10	4.57	0.18	14	20	-	17	-	-	14	17
				STD	9.53	0.38	20	55	-	28	-	-	20	52
14”	(DN 350)	355.6	14	10	6.35	0.25	-	-	-	-	-	-	14	-
				LW	7.92	0.31	-	17	-	24	-	-	-	-
				STD	9.53	0.38	-	20	-	24	-	-	20	-
16”	(DN 400)	406.4	16	10	6.35	0.25	-	-	-	-	-	-	12	-
				LW	7.92	0.31	-	17	-	24	-	-	-	-
				STD	9.53	0.38	-	20	-	24	-	-	20	-
18”	(DN 450)	457.2	18	10	6.35	0.25	-	-	-	-	-	-	12	-
				LW	7.92	0.31	-	17	-	24	-	-	-	-
				STD	9.53	0.38	-	20	-	24	-	-	20	-
20”	(DN 500)	508	20	10	6.35	0.25	-	-	-	-	-	-	10	-
				LW	7.92	0.31	-	17	-	24	-	-	-	-
				STD	9.53	0.38	-	20	-	24	-	-	20	-
22”	(DN 550)	558.8	22	10	6.35	0.25	-	-	-	-	-	-	-	-
				LW	7.92	0.31	-	17	-	-	-	-	-	-
				STD	9.53	0.38	-	20	-	-	-	-	-	-
24”	(DN 600)	609.6	24	10	6.35	0.25	-	-	-	-	-	-	10	-
				LW	7.92	0.31	-	17	-	16	-	-	-	-
				STD	9.53	0.38	-	20	-	24	-	-	20	-

operating pressure [bar] for ductile iron couplings on steel pipes with cut grooves

pipe size				nominal wall thickness			coupling type							
							7705	7707	Z05	Z07	7706	G28	SJ-7041	7043
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
1”	(DN25)	33.7	1.315	STD	3.4	0.13	42	69	-	-	-	-	-	-
				XS	4.55	0.18	42	69	-	-	-	-	-	-
1¼”	(DN32)	42.4	1.66	STD	3.56	0.14	42	69	42	52	-	-	-	-
				XS	4.85	0.19	42	69	42	52	-	-	-	-
1½”	(DN40)	48.3	1.9	STD	3.68	0.15	42	69	42	52	35	20	-	-
				XS	5.08	0.2	42	69	42	52	35	20	-	-
2”	(DN50)	60.3	2.375	STD	3.91	0.15	42	69	42	52	35	20	20	52
				XS	5.54	0.22	42	69	42	52	35	20	20	52
2½”		73	2.875	STD	5.16	0.2	42	69	42	52	35	20	20	52
				XS	7.01	0.28	42	69	42	52	35	20	20	52
2½”	(DN65)	76.1	3	STD	5.16	0.2	42	69	42	52	35	20	20	-
				XS	7.01	0.28	42	69	42	52	35	20	20	-
3”	(DN80)	88.9	3.5	STD	5.49	0.22	42	69	42	52	35	20	20	52
				XS	7.62	0.3	42	69	42	52	35	20	20	52
4”		108	4.252	STD	5.74	0.23	42	-	-	-	-	-	-	-
				XS	8.08	0.32	42	-	-	-	-	-	-	-
4”	(DN100)	114.3	4.5	STD	6.02	0.24	42	69	42	52	35	20	20	52
				XS	8.56	0.34	42	69	42	52	35	20	20	52
5”		133	5.236	STD	6.02	0.24	31	-	-	-	-	-	-	-
				XS	8.56	0.34	31	-	-	-	-	-	-	-
5”	(DN125)	139.7	5.5	STD	6.55	0.26	31	69	31	52	28	20	20	-
				XS	9.53	0.38	31	69	31	52	28	20	20	-
5”		141.3	5.563	STD	6.55	0.26	31	69	31	52	28	20	20	52
				XS	9.53	0.38	31	69	31	52	28	20	20	52
6”		159	6.26	STD	7.11	0.28	31	-	-	-	-	-	-	-
				XS	10.97	0.43	31	-	-	-	-	-	-	-
6”	(DN150)	165.1	6.5	STD	7.11	0.28	31	69	31	48	28	20	20	-
				XS	10.97	0.43	31	69	31	48	28	20	20	-

operating pressure [bar] for ductile iron couplings on steel pipes with cut grooves

pipe size				nominal wall thickness			coupling type							
							7705	7707	Z05	Z07	7706	G28	SJ-7041	7043
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
6”	(DN 150)	168.3	6.625	STD	7.11	0.28	31	69	31	48	28	20	20	52
				XS	10.97	0.43	31	69	31	48	28	20	20	52
8”	(DN 200)	219.1	8.625	STD	8.18	0.32	31	55	31	42	28	20	20	52
				XS	12.7	0.5	31	55	31	42	28	20	20	52
10”	(DN 250)	273	10.75	STD	9.27	0.37	24	55	-	35	-	20	20	52
				XS	12.7	0.5	24	55	-	35	-	20	20	52
12”	(DN 300)	323.9	12.75	STD	9.27	0.37	24	55	-	28	-	-	20	52
				XS	12.7	0.5	24	55	-	28	-	-	20	52
14”	(DN 350)	355.6	14	STD	9.27	0.37	-	20	-	-	-	-	20	-
				XS	12.7	0.5	-	20	-	-	-	-	20	-
16”	(DN 400)	406.4	16	STD	9.27	0.37	-	20	-	-	-	-	20	-
				XS	12.7	0.5	-	20	-	-	-	-	20	-
18”	(DN 450)	457.2	18	STD	9.27	0.37	-	20	-	-	-	-	20	-
				XS	12.7	0.5	-	20	-	-	-	-	20	-
20”	(DN 500)	508	20	STD	9.27	0.37	-	20	-	-	-	-	20	-
				XS	12.7	0.5	-	20	-	-	-	-	20	-
22”	(DN 550)	558.8	22	STD	9.27	0.37	-	20	-	-	-	-	20	-
				XS	12.7	0.5	-	20	-	-	-	-	20	-
24”	(DN 600)	609.6	24	STD	9.27	0.37	-	20	-	-	-	-	20	-
				XS	12.7	0.5	-	20	-	-	-	-	20	-

working pressure [bar] / [psi] for stainless steel couplings on stainless steel pipes with rolled grooves

pipe size				nominal wall thickness			coupling type									
							SS-8		SS-8X		SS-7		SS-7X		SS-28	
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	psi	[bar]	psi	[bar]	psi	[bar]	psi	[bar]	[psi]
1”	(DN 25)	33.7	1.315	5	1.7	0.065	16	225	22	325	-	-	-	-	-	-
				10	2.8	0.109	24	350	35	500	-	-	-	-	-	-
				40	3.4	0.133	35	500	52	750	-	-	-	-	-	-
1¼”	(DN 32)	42.4	1.66	5	1.7	0.065	16	225	22	325	14	200	-	-	-	-
				10	2.8	0.109	24	350	35	500	20	300	-	-	-	-
				40	3.6	0.14	35	500	52	750	42	600	-	-	-	-
1½”	(DN 40)	48.3	1.9	5	1.7	0.065	16	225	22	325	14	200	-	-	14	200
				10	2.8	0.109	24	350	35	500	20	300	-	-	20	300
				40	3.7	0.145	35	500	52	750	42	600	-	-	20	300
2”	(DN 50)	60.3	2.375	5	1.7	0.065	16	225	22	325	14	200	-	-	14	200
				10	2.8	0.109	24	350	35	500	20	300	-	-	20	300
				40	3.9	0.154	35	500	52	750	42	600	-	-	20	300
2½”		73	2.875	5	2.1	0.083	16	225	22	325	14	200	-	-	14	200
				10	3	0.12	24	350	35	500	20	300	-	-	20	300
				40	5.2	0.203	35	500	52	750	42	600	-	-	20	300
2½”	(DN 65)	76.1	3	5	2.1	0.083	16	225	22	325	14	200	-	-	14	200
				10	3	0.12	24	350	35	500	20	300	-	-	20	300
				40	5.2	0.203	35	500	52	750	42	600	-	-	20	300
3”	(DN 80)	88.9	3.5	5	2.1	0.083	16	225	22	325	14	200	-	-	14	200
				10	3	0.12	24	350	35	500	20	300	-	-	20	300
				40	5.5	0.216	35	500	52	750	42	600	-	-	20	300
4”	(DN 100)	114.3	4.5	5	2.1	0.083	14	200	17	250	14	200	-	-	14	200
				10	3	0.12	20	300	28	400	20	300	-	-	20	300
				40	6	0.237	22	325	52	750	42	600	-	-	20	300
5”	(DN 125)	139.7	5.5	5	2.8	0.109	9	125	9	125	14	200	-	-	9	125
				10	3.4	0.134	14	200	14	200	20	300	-	-	14	200
				40	6.6	0.258	14	200	20	300	42	600	-	-	14	200
5”	(DN 125)	141.3	5.563	5	2.8	0.109	9	125	9	125	14	200	-	-	9	125
				10	3.4	0.134	14	200	14	200	20	300	-	-	14	200
				40	6.6	0.258	14	200	20	300	42	600	-	-	14	200

working pressure [bar] / [psi] for stainless steel couplings on stainless steel pipes with rolled grooves

pipe size				nominal wall thickness			coupling type									
							SS-8		SS-8X		SS-7		SS-7X		SS-28	
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	psi	[bar]	psi	[bar]	psi	[bar]	psi	[bar]	[psi]
6”	(DN 150)	168.3	6.625	5	2.8	0.109	9	125	9	125	14	200	-	-	9	125
				10	3.4	0.134	14	200	14	200	20	300	-	-	14	200
				40	7.1	0.28	14	200	20	300	42	600	-	-	14	200
8”	(DN 200)	219.1	8.625	5	2.8	0.109	9	125	9	125	14	200	-	-	-	-
				10	3.8	0.148	14	200	9	125	20	300	-	-	-	-
				40	8.2	0.322	14	200	20	300	42	600	-	-	-	-
10”	(DN 250)	273	10.75	5	3.4	0.134	-	-	-	-	-	-	14	200	-	-
				10	4.2	0.165	-	-	-	-	-	-	20	300	-	-
				40	9.3	0.365	-	-	-	-	-	-	42	600	-	-
12”	(DN 300)	323.9	12.75	5	4	0.156	-	-	-	-	-	-	14	200	-	-
				10	4.6	0.18	-	-	-	-	-	-	20	300	-	-
				40	9.5	0.375	-	-	-	-	-	-	42	600	-	-
14”	(DN 350)	355.6	14	5	4	0.156	-	-	-	-	-	-	14	200	-	-
				10	4.8	0.188	-	-	-	-	-	-	20	300	-	-
				40	9.5	0.375	-	-	-	-	-	-	28	400	-	-
16”	(DN 400)	406.4	16	5	4.2	0.165	-	-	-	-	-	-	14	200	-	-
				10	4.8	0.188	-	-	-	-	-	-	20	300	-	-
				40	9.5	0.375	-	-	-	-	-	-	28	400	-	-
18”	(DN 450)	457.2	18	5	4.2	0.165	-	-	-	-	-	-	14	200	-	-
				10	4.8	0.188	-	-	-	-	-	-	20	300	-	-
				40	9.5	0.375	-	-	-	-	-	-	24	350	-	-
20”	(DN 500)	508	20	5	4.8	0.188	-	-	-	-	-	-	14	200	-	-
				10	5.5	0.218	-	-	-	-	-	-	20	300	-	-
				40	9.5	0.375	-	-	-	-	-	-	24	350	-	-
22”	(DN 550)	558.8	22	5	5.5	0.218	-	-	-	-	-	-	14	200	-	-
				10	6.4	0.25	-	-	-	-	-	-	20	300	-	-
				40	9.5	0.375	-	-	-	-	-	-	20	300	-	-
24”	(DN 600)	609.6	24	5	5.5	0.218	-	-	-	-	-	-	14	200	-	-
				10	6.4	0.25	-	-	-	-	-	-	20	300	-	-
				40	9.5	0.375	-	-	-	-	-	-	20	300	-	-

working pressure in [bar] / [psi] for ductile iron couplings on stainless steel pipes with rolled grooves

pipe size				nominal wall thickness			coupling type							
							7705	7707	Z05	Z07	7706	G28	SJ-7041	7043
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
1”	(DN25)	33.7	1.315	5	1.7	0.065	17	22	-	-	-	-	-	-
				10	2.8	0.109	20	31	-	-	-	-	-	-
				40	3.4	0.133	31	48	-	-	-	-	-	-
1¼”	(DN32)	42.4	1.66	5	1.7	0.065	17	22	17	20	-	-	-	-
				10	2.8	0.109	20	31	20	35	-	-	-	-
				40	3.6	0.14	31	48	31	48	-	-	-	-
1½”	(DN40)	48.3	1.9	5	1.7	0.065	17	22	17	20	17	NR	-	-
				10	2.8	0.109	20	31	20	35	20	20	-	-
				40	3.7	0.145	31	48	31	48	24	20	-	-
2”	(DN50)	60.3	2.375	5	1.7	0.065	17	22	17	20	17	NR	12	NR
				10	2.8	0.109	20	31	20	35	20	20	19	NR
				40	3.9	0.154	31	48	31	48	24	20	19	28
2½”		73	2.875	5	2.1	0.083	17	22	17	20	17	NR	12	NR
				10	3	0.12	20	31	20	35	20	20	19	NR
				40	5.2	0.203	31	48	31	48	24	20	19	28
2½”	(DN65)	76.1	3	5	2.1	0.083	17	22	17	20	17	NR	12	NR
				10	3	0.12	20	31	20	35	20	20	19	NR
				40	5.2	0.203	31	48	31	48	24	20	19	28
3”	(DN80)	88.9	3.5	5	2.1	0.083	17	22	17	20	17	NR	12	NR
				10	3	0.12	20	31	20	35	20	20	19	NR
				40	5.5	0.216	31	48	31	48	24	20	19	28

working pressure in [bar] / [psi] for ductile iron couplings on stainless steel pipes with rolled grooves

pipe size				nominal wall thickness			coupling type							
							7705	7707	Z05	Z07	7706	G28	SJ-7041	7043
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
4”	(DN100)	114.3	4.5	5	2.1	0.083	14	17	14	17	14	NR	12	NR
				10	3	0.12	20	28	20	28	17	12	19	NR
				40	6	0.237	31	48	31	48	20	20	19	20
5”	(DN125)	139.7	5.5	5	2.8	0.109	NR	NR	NR	NR	NR	NR	12	NR
				10	3.4	0.134	14	20	14	20	17	10	14	NR
				40	6.6	0.258	20	42	20	42	20	17	19	17
5”		141.3	5.563	5	2.8	0.109	NR	NR	NR	NR	NR	NR	12	NR
				10	3.4	0.134	14	20	14	20	17	10	14	NR
				40	6.6	0.258	20	42	20	42	20	17	19	17
6”	(DN150)	168.3	6.625	5	2.8	0.109	NR	NR	NR	NR	NR	NR	9	NR
				10	3.4	0.134	9	14	9	14	12	10	14	NR
				40	7.1	0.28	20	35	20	35	20	17	17	14
8”	(DN200)	219.1	8.625	5	2.8	0.109	NR	NR	NR	NR	NR	NR	NR	NR
				10	3.8	0.148	7	10	7	10	12	NR	NR	NR
				40	8.2	0.322	20	31	20	28	20	14	14	10
10”	(DN250)	273	10.75	5	3.4	0.134	NR	NR	-	NR	-	NR	NR	NR
				10	4.2	0.165	NR	9	-	7	-	NR	NR	NR
				40	9.3	0.365	14	28	-	20	-	14	14	10
12”	(DN300)	323.9	12.75	5	4	0.156	NR	NR	-	NR	-	-	NR	NR
				10	4.6	0.18	NR	9	-	7	-	-	NR	NR
				40	9.5	0.375	14	28	-	17	-	-	14	10
14”	(DN350)	355.6	14	5	4	0.156	-	-	-	-	-	-	NR	-
				10	4.8	0.188	-	-	-	-	-	-	NR	-
				40	9.5	0.375	-	-	-	-	-	-	9	-
16”	(DN400)	406.4	16	5	4.2	0.165	-	-	-	-	-	-	NR	-
				10	4.8	0.188	-	-	-	-	-	-	NR	-
				40	9.5	0.375	-	-	-	-	-	-	9	-
18”	(DN450)	457.2	18	5	4.2	0.165	-	-	-	-	-	-	NR	-
				10	4.8	0.188	-	-	-	-	-	-	NR	-
				40	9.5	0.375	-	-	-	-	-	-	9	-
20”	(DN500)	508	20	5	4.8	0.188	-	-	-	-	-	-	NR	-
				10	5.5	0.218	-	-	-	-	-	-	NR	-
				40	9.5	0.375	-	-	-	-	-	-	7	-
24”	(DN600)	609.6	24	5	5.5	0.218	-	-	-	-	-	-	NR	-
				10	6.4	0.25	-	-	-	-	-	-	NR	-
				40	9.5	0.375	-	-	-	-	-	-	7	-

working pressure in [bar] / [psi] for stainless steel couplings on stainless steel pipes with cut grooves

pipe size				nominal wall thickness			coupling type					
							SS-8	SS-8X	SS-7	SS-7X	SS-28	SS-1200
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
1”	(DN25)	33.7	1.315	40S	3.4	0.13	35	52	-	-	-	83
				80S	4.55	0.18	-	-	-	-	-	83
1¼”	(DN32)	42.4	1.66	40S	3.56	0.14	35	52	42	-	-	83
				80S	4.85	0.19	-	-	-	-	-	83
1½”	(DN40)	48.3	1.9	40S	3.68	0.15	35	52	42	-	20	83
				80S	5.08	0.2	-	-	-	-	-	83
2”	(DN50)	60.3	2.375	40S	3.91	0.15	35	52	42	-	20	83
				80S	5.54	0.22	-	-	-	-	-	83
2½”		73	2.875	40S	5.16	0.2	35	52	42	-	20	83
				80S	7.01	0.28	-	-	-	-	-	83
2½”	(DN65)	76.1	3	40S	5.16	0.2	35	52	42	-	20	83
				80S	7.01	0.28	-	-	-	-	-	83
3”	(DN80)	88.9	3.5	40S	5.49	0.22	35	52	42	-	20	83
				80S	7.62	0.3	-	-	-	-	-	83
4”	(DN100)	114.3	4.5	40S	6.02	0.24	22	52	42	-	20	83
				80S	8.56	0.34	-	-	-	-	-	83

working pressure in [bar] / [psi] for stainless steel couplings on stainless steel pipes with cut grooves

pipe size				nominal wall thickness			coupling type					
							SS-8	SS-8X	SS-7	SS-7X	SS-28	SS-1200
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
5”	(DN125)	139.7	5.5	40S	6.55	0.26	14	52	42	-	14	-
				80S	9.53	0.38	-	-	-	-	-	-
5”		141.3	5.563	40S	6.55	0.26	14	52	42	-	14	-
				80S	9.53	0.38	-	-	-	-	-	-
6”	(DN150)	168.3	6.625	40S	7.11	0.28	14	20	42	-	14	-
				80S	10.97	0.43	-	-	-	-	-	-
8”	(DN200)	219.1	8.625	40S	8.18	0.32	14	20	42	-	-	-
				80S	12.7	0.5	-	-	-	-	-	-
10”	(DN250)	273	10.75	40S	9.27	0.37	-	-	-	42	-	-
				80S	12.7	0.5	-	-	-	-	-	-
12”	(DN300)	323.9	12.75	40S	9.27	0.37	-	-	-	42	-	-
				80S	12.7	0.5	-	-	-	-	-	-
14”	(DN350)	355.6	14	40S	9.27	0.37	-	-	-	28	-	-
				80S	12.7	0.5	-	-	-	-	-	-
16”	(DN400)	406.4	16	40S	9.27	0.37	-	-	-	28	-	-
				80S	12.7	0.5	-	-	-	-	-	-
18”	(DN450)	457.2	18	40S	9.27	0.37	-	-	-	24	-	-
				80S	12.7	0.5	-	-	-	-	-	-
20”	(DN500)	508	20	40S	9.27	0.37	-	-	-	24	-	-
				80S	12.7	0.5	-	-	-	-	-	-
22”	(DN550)	558.8	22	40S	9.27	0.37	-	-	-	20	-	-
				80S	12.7	0.5	-	-	-	-	-	-
24”	(DN600)	609.6	24	40S	9.27	0.37	-	-	-	20	-	-
				80S	12.7	0.5	-	-	-	-	-	-

working pressure in [bar] / [psi] for ductile iron couplings on stainless steel pipes with cut grooves

pipe size				nominal wall thickness			coupling type							
							7705	7707	Z05	Z07	7706	G28	SJ-7041	7043
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
1”	(DN25)	33.7	1.315	40S	3.4	0.13	42	52	-	-	-	-	-	-
				80S	4.55	0.18	42	52	-	-	-	-	-	-
1¼”	(DN32)	42.4	1.66	40S	3.56	0.14	42	52	42	52	-	-	-	-
				80S	4.85	0.19	42	52	42	52	-	-	-	-
1½”	(DN40)	48.3	1.9	40S	3.68	0.15	42	52	42	52	35	20	-	-
				80S	5.08	0.2	42	52	42	52	35	20	-	-
2”	(DN50)	60.3	2.375	40S	3.91	0.15	42	52	42	52	35	20	20	28
				80S	5.54	0.22	42	52	42	52	35	20	20	28
2½”		73	2.875	40S	5.16	0.2	42	52	42	52	35	20	20	28
				80S	7.01	0.28	42	52	42	52	35	20	20	28
2½”	(DN65)	76.1	3	40S	5.16	0.2	42	52	42	52	35	20	20	28
				80S	7.01	0.28	42	52	42	52	35	20	20	28
3”	(DN80)	88.9	3.5	40S	5.49	0.22	42	52	42	52	35	20	20	28
				80S	7.62	0.3	42	52	42	52	35	20	20	28
4”	(DN100)	114.3	4.5	40S	6.02	0.24	42	52	42	52	35	20	20	20
				80S	8.56	0.34	42	52	42	52	35	20	20	20
5”	(DN125)	139.7	5.5	40S	6.55	0.26	31	52	31	52	28	20	20	20
				80S	9.53	0.38	31	52	31	52	28	20	20	20
5”		141.3	5.563	40S	6.55	0.26	31	52	31	52	28	20	20	20
				80S	9.53	0.38	31	52	31	52	28	20	20	20
6”	(DN150)	168.3	6.625	40S	7.11	0.28	31	52	31	48	28	20	20	20
				80S	10.97	0.43	31	52	31	48	28	20	20	20
8”	(DN200)	219.1	8.625	40S	8.18	0.32	31	42	31	42	28	20	20	17
				80S	12.7	0.5	31	42	31	42	28	20	20	17
10”	(DN250)	273	10.75	40S	9.27	0.37	24	42	-	35	-	20	20	17
				80S	12.7	0.5	24	42	-	35	-	20	20	17
12”	(DN300)	323.9	12.75	40S	9.27	0.37	24	42	-	28	-	-	20	17
				80S	12.7	0.5	24	42	-	28	-	-	20	17

working pressure in [bar] / [psi] for ductile iron couplings on stainless steel pipes with cut grooves

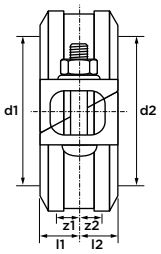
pipe size				nominal wall thickness			coupling type							
							7705	7707	Z05	Z07	7706	G28	SJ-7041	7043
		[mm]	[inch]	schedule	[mm]	[inch]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
14”	(DN350)	355.6	14	40S	9.27	0.37	-	-	-	NR	-	-	17	-
				80S	12.7	0.5	-	-	-	NR	-	-	17	-
16”	(DN400)	406.4	16	40S	9.27	0.37	-	-	-	NR	-	-	17	-
				80S	12.7	0.5	-	-	-	NR	-	-	17	-
18”	(DN450)	457.2	18”	40S	9.27	0.37	-	-	-	NR	-	-	17	-
				80S	12.7	0.5	-	-	-	NR	-	-	17	-
20”	(DN500)	508	20	40S	9.27	0.37	-	-	-	NR	-	-	17	-
				80S	12.7	0.5	-	-	-	NR	-	-	17	-
22”	(DN550)	558.8	22	40S	9.27	0.37	-	-	-	-	-	-	-	-
				80S	12.7	0.5	-	-	-	-	-	-	-	-
24”	(DN600)	609.6	24	40S	9.27	0.37	-	-	-	NR	-	-	17	-
				80S	12.7	0.5	-	-	-	NR	-	-	17	-

warranty

Contact Aalberts integrated piping systems for the most recent warranty conditions that apply to VSH Shurjoint.

VSH Shurjoint couplings

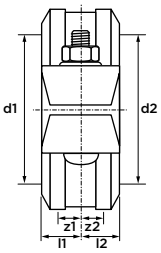
Z05 rigid coupling
(with E gasket)



dimension	article no. painted orange	max. pressure* [bar]	tensile strength* [kN]	l1/l2	z1/z2
42.4 (DN32)	10Z050012E01	35	4.89	23	0.6
48.3 (DN40)	10Z050015E01	35	6.41	23	0.6
60.3 (DN50)	10Z050020E01	35	9.99	24	0.9
73	10Z050025E01	35	14.64	24	0.9
76.1 (DN65)	10Z050029E01	35	15.91	24	0.9
88.9 (DN80)	10Z050030E01	35	21.71	24	0.9
108	10Z050040E01	35	32.05	27	2
114.3 (DN100)	10Z050045E01	35	35.89	27	2
133	10Z050050E01	24	33.33	27	2
139.7 (DN125)	10Z050052E01	24	36.77	27	2
141.3	10Z050055E01	24	37.62	27	2
159	10Z050060E01	24	47.63	27	2
165.1	10Z050062E01	24	51.35	27	2
168.3 (DN150)	10Z050065E01	24	53.36	27	2
219.1 (DN200)	10Z050085E01	24	90.44	32	2.4
	article no. galvanized				
42.4 (DN32)	10Z050012E03	35	4.89	23	0.6
48.3 (DN40)	10Z050015E03	35	6.41	23	0.6
60.3 (DN50)	10Z050020E03	35	9.99	24	0.9
73	10Z050025E03	35	14.64	24	0.9
76.1 (DN65)	10Z050029E03	35	15.91	24	0.9
88.9 (DN80)	10Z050030E03	35	21.71	24	0.9
108	10Z050040E03	35	32.05	27	2
114.3 (DN100)	10Z050045E03	35	35.89	27	2
133	10Z050050E03	24	33.33	27	2
139.7 (DN125)	10Z050052E03	24	36.77	27	2
141.3	10Z050055E03	24	37.62	27	2
159	10Z050060E03	24	47.63	27	2
165.1	10Z050062E03	24	51.35	27	2
168.3 (DN150)	10Z050065E03	24	53.36	27	2
219.1 (DN200)	10Z050085E03	24	90.44	32	2.4

* maximum operating pressure and tensile strength depend on the used pipe material and wall thickness

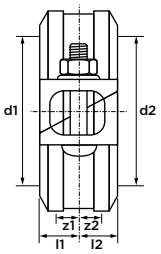
M07 rigid quick install coupling
(with EHM gasket)



dimension	article no. painted orange	max. pressure* [bar]	tensile strength* [kN]	l1/l2	z1/z2
60.3 (DN50)	10M070020E01	52	14.84	24	2.7
76.1 (DN65)	10M070029E01	52	23.64	25.5	2.6
88.9 (DN80)	10M070030E01	52	32.26	24	2.6
114.3 (DN100)	10M070045E01	52	53.33	27	2.1
139.7 (DN125)	10M070052E01	52	79.66	27	2.4
168.3 (DN150)	10M070065E01	48	106.73	27	2.1
219.1 (DN200)	10M070085E01	42	158.27	32	2.4
	article no. galvanized				
60.3 (DN50)	10M070020E03	52	14.84	24	2.7
76.1 (DN65)	10M070029E03	52	23.64	25.5	2.6
88.9 (DN80)	10M070030E03	52	32.26	24	2.6
114.3 (DN100)	10M070045E03	52	53.33	27	2.1
139.7 (DN125)	10M070052E03	52	79.66	27	2.4
168.3 (DN150)	10M070065E03	48	106.73	27	2.1
219.1 (DN200)	10M070085E03	42	158.27	32	2.4

* maximum operating pressure and tensile strength depend on the used pipe material and wall thickness

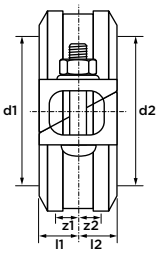
Z07 heavy duty rigid coupling
(with E gasket)



dimension	article no. painted orange	max. pressure* [bar]	tensile strength* [kN]	l1/l2	z1/z2
42.4 (DN32)	10Z070012E01	52	7.27	24	0.6
48.3 (DN40)	10Z070015E01	52	9.52	24	0.6
60.3 (DN50)	10Z070020E01	52	14.84	24	0.9
73	10Z070025E01	52	21.75	24	0.9
76.1 (DN65)	10Z070029E01	52	23.64	24	0.9
88.9 (DN80)	10Z070030E01	52	32.26	24	0.9
114.3 (DN100)	10Z070045E01	52	53.33	27	2
139.7 (DN125)	10Z070052E01	52	79.66	27	2
141.3	10Z070055E01	52	81.5	27	2
165.1	10Z070062E01	48	102.71	27	2
168.3 (DN150)	10Z070065E01	48	106.73	27	2
219.1 (DN200)	10Z070085E01	42	158.27	32	2.4
273 (DN250)	10Z0700A1001	35	204.77	33	1.6
323.9 (DN300)	10Z0700A3001	28	230.59	33	1.6
	article no. galvanized				
42.4 (DN32)	10Z070012E03	52	7.27	24	0.6
48.3 (DN40)	10Z070015E03	52	9.52	24	0.6
60.3 (DN50)	10Z070020E03	52	14.84	24	0.9
73	10Z070025E03	52	21.75	24	0.9
76.1 (DN65)	10Z070029E03	52	23.64	24	0.9
88.9 (DN80)	10Z070030E03	52	32.26	24	0.9
114.3 (DN100)	10Z070045E03	52	53.33	27	2
139.7 (DN125)	10Z070052E03	52	79.66	27	2
141.3	10Z070055E03	52	81.5	27	2
165.1	10Z070062E03	48	102.71	27	2
168.3 (DN150)	10Z070065E03	48	106.73	27	2
219.1 (DN200)	10Z070085E03	42	158.27	32	2.4
273 (DN250)	10Z0700A1003	35	204.77	33	1.6
323.9 (DN300)	10Z0700A3003	28	230.59	33	1.6

* maximum operating pressure and tensile strength depend on the used pipe material and wall thickness

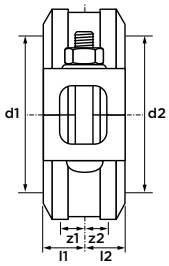
Z07N heavy duty rigid coupling
(with E gasket)



dimension	article no. painted orange	max. pressure* [bar]	tensile strength* [kN]	l1/l2	z1/z2
355.6 (DN350)	1Z07N00A4001	17	168.75	38	1.6
406.4 (DN400)	1Z07N00A6001	17	220.41	38	1.6
457.2 (DN450)	1Z07N00A8001	17	278.95	40	1.6
508 (DN500)	1Z07N00B0001	17	344.39	38	1.6
609.6 (DN600)	1Z07N00B4001	17	495.92	38	1.6
	article no. galvanized				
355.6 (DN350)	1Z07N00A4003	17	168.75	38	1.6
406.4 (DN400)	1Z07N00A6003	17	220.41	38	1.6
457.2 (DN450)	1Z07N00A8003	17	278.95	40	1.6
508 (DN500)	1Z07N00B0003	17	344.39	38	1.6
609.6 (DN600)	1Z07N00B4003	17	495.92	38	1.6

* maximum operating pressure and tensile strength depend on the used pipe material and wall thickness

7705 flexible coupling
(with E gasket)

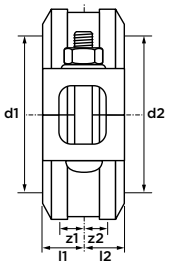


dimension	article no. painted orange	max. pressure* [bar]	tensile strength* [kN]	l1/l2	z1/z2
33.7 (DN25)	177050010E01	35	3.12	23	0.8
42.4 (DN32)	177050012E01	35	4.94	23	0.8
48.3 (DN40)	177050015E01	35	6.41	23	0.8
60.3 (DN50)	177050020E01	35	9.99	24	0.8
73	177050025E01	35	14.64	24	0.8
76.1 (DN65)	177050029E01	35	15.91	24	0.8
88.9 (DN80)	177050030E01	35	21.71	24	0.8
101.6	177050035E01	35	28.36	24	0.8
108	177050040E01	35	32.05	26	1.6
114.3 (DN100)	177050045E01	35	35.89	26	1.6
133	177050050E01	31	43.05	26	1.6
139.7 (DN125)	177050052E01	31	47.49	26	1.6
141.3	177050055E01	31	48.59	26	1.6
159	177050060E01	31	61.52	26	1.6
165.1	177050062E01	31	66.33	27	1.6
168.3 (DN150)	177050065E01	31	68.93	27	1.6
219.1 (DN200)	177050085E01	20	75.37	31	1.6
219.1 (DN200)**	177050085E92	31	116.82	31	1.6
273 (DN250)	1770500A1001	20	117.01	33	1.6
323.9 (DN300)	1770500A3001	20	164.71	33	1.6
	article no. galvanized				
33.7 (DN25)	177050010E03	35	3.12	23	0.8
42.4 (DN32)	177050012E03	35	4.94	23	0.8
48.3 (DN40)	177050015E03	35	6.41	23	0.8
60.3 (DN50)	177050020E03	35	9.99	24	0.8
73	177050025E03	35	14.64	24	0.8
76.1 (DN65)	177050029E03	35	15.91	24	0.8
88.9 (DN80)	177050030E03	35	21.71	24	0.8
101.6	177050035E03	35	28.36	24	0.8
108	177050040E03	35	32.05	26	1.6
114.3 (DN100)	177050045E03	35	35.89	26	1.6
133	177050050E03	31	43.05	26	1.6
139.7 (DN125)	177050052E03	31	47.49	26	1.6
141.3	177050055E03	31	48.59	26	1.6
159	177050060E03	31	61.52	26	1.6
165.1	177050062E03	31	66.33	27	1.6
168.3 (DN150)	177050065E03	31	68.93	27	1.6
219.1 (DN200)	177050085E03	20	75.37	31	1.6
219.1 (DN200)	177050085E91	31	116.82	31	1.6
273 (DN250)	1770500A1003	20	117.01	33	1.6
323.9 (DN300)	1770500A3003	20	164.71	33	1.6

• see table on page 47 for design data on axial displacement and angular deflection.

* maximum operating pressure and tensile strength depend on the used pipe material and wall thickness
** DN200 7705H coupling approved according to VDS, cULus and FM

7707 heavy duty flexible coupling
(with E gasket)

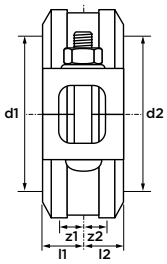


dimension	article no. painted orange	max. pressure* [bar]	tensile strength* [kN]	l1/l2	z1/z2
33.7 (DN25)	177070010E01	69	6.15	23	0.8
42.4 (DN32)	177070012E01	69	9.64	23	0.8
48.3 (DN40)	177070015E01	69	12.64	23	0.8
60.3 (DN50)	177070020E01	69	19.69	23	0.8
73	177070025E01	69	28.86	24	0.8
76.1 (DN65)	177070029E01	69	31.37	24	0.8
88.9 (DN80)	177070030E01	69	42.81	24	0.8
114.3 (DN100)	177070045E01	69	70.76	26	1.6
139.7 (DN125)	177070052E01	69	105.71	27	1.6
141.3	177070055E01	69	108.14	27	1.6
165.1	177070062E01	69	147.64	27	1.6
168.3 (DN150)	177070065E01	69	153.42	27	1.6
219.1 (DN200)	177070085E01	55	207.26	31	1.6
273 (DN250)	1770700A1001	55	321.78	33	1.6
323.9 (DN300)	1770700A3001	55	452.95	33	1.6
	article no. galvanized				
33.7 (DN25)	177070010E03	69	6.15	23	0.8
42.4 (DN32)	177070012E03	69	9.64	23	0.8
48.3 (DN40)	177070015E03	69	12.64	23	0.8
60.3 (DN50)	177070020E03	69	19.69	23	0.8
73	177070025E03	69	28.86	24	0.8
76.1 (DN65)	177070029E03	69	31.37	24	0.8
88.9 (DN80)	177070030E03	69	42.81	24	0.8
114.3 (DN100)	177070045E03	69	70.76	26	1.6
139.7 (DN125)	177070052E03	69	105.71	27	1.6
141.3	177070055E03	69	108.14	27	1.6
165.1	177070062E03	69	147.64	27	1.6
168.3 (DN150)	177070065E03	69	153.42	27	1.6
219.1 (DN200)	177070085E03	55	207.26	31	1.6
273 (DN250)	1770700A1003	55	321.78	33	1.6
323.9 (DN300)	1770700A3003	55	452.95	33	1.6

• see table on page 47 for design data on axial displacement and angular deflection.

* maximum operating pressure and tensile strength depend on the used pipe material and wall thickness

7707N flexible coupling
(with E gasket)

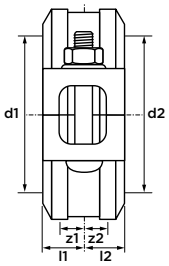


dimension		article no. painted orange	max. pressure* [bar]	tensile strength* [kN]	l1/l2	z1/z2	bolts [No.]
355.6	(DN350)	1770N00A4001	20	198.53	38	1.6	2
406.4	(DN400)	1770N00A6001	20	259.3	38	1.6	2
457.2	(DN450)	1770N00A8001	20	327.89	40	1.6	2
508	(DN500)	1770N00B0001	20	405.16	40	1.6	2
558.8	(DN550)	1770N00B2001	20	490.6	40	1.6	2
609.6	(DN600)	1770N00B4001	20	584.2	40	1.6	2
660.4	(DN650)	1770N00B6001	20	684.72	63	1.6	4
		article no. galvanized					
355.6	(DN350)	1770N00A4003	20	198.53	38	1.6	2
406.4	(DN400)	1770N00A6003	20	259.3	38	1.6	2
457.2	(DN450)	1770N00A8003	20	327.89	40	1.6	2
508	(DN500)	1770N00B0003	20	405.16	40	1.6	2
558.8	(DN550)	1770N00B2003	20	490.6	40	1.6	2
609.6	(DN600)	1770N00B4003	20	584.2	40	1.6	2
660.4	(DN650)	1770N00B6003	20	684.72	63	1.6	4

• see table on page 47 for design data on axial displacement and angular deflection

* maximum operating pressure and tensile strength depend on the used pipe material and wall thickness

7707L flexible coupling for large diameter tubes
(with E gasket)

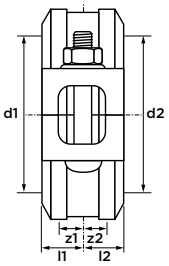


dimension		article no. painted orange	max. pressure* [bar]	tensile strength* [kN]	l1/l2	z1/z2	bolts [No.]
711.2	(DN700)	1770700B8001	12	476.47	63	3.2	12
762	(DN750)	1770700C0001	12	546.97	63	3.2	12
812.8	(DN800)	1770700C2001	12	622.33	63	3.2	12
863.6	(DN850)	1770700C4001	12	702.55	63	3.2	12
914.4	(DN900)	1770700C6001	12	787.63	63	3.2	12
1016	(DN1000)	1770700D0001	12	972.39	63	3.2	16
1066.8	(DN1050)	1770700D2001	12	1072.05	63	3.2	16
		article no. galvanized					
711.2	(DN700)	1770700B8003	12	476.47	63	3.2	12
762	(DN750)	1770700C0003	12	546.97	63	3.2	12
812.8	(DN800)	1770700C2003	12	622.33	63	3.2	12
863.6	(DN850)	1770700C4003	12	702.55	63	3.2	12
914.4	(DN900)	1770700C6003	12	787.63	63	3.2	12
1016	(DN1000)	1770700D0003	12	972.39	63	3.2	16
1066.8	(DN1050)	1770700D2003	12	1072.05	63	3.2	16

• see table on page 47 for design data on axial displacement and angular deflection

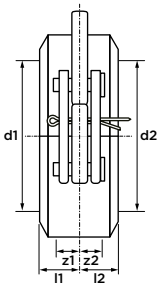
* maximum operating pressure and tensile strength depend on the used pipe material and wall thickness

XH70EP heavy duty rigid coupling
(with E gasket)



dimension		article no. painted black	l1/l2	z1/z2
60.3	(DN50)	1XH700020005	24	3.1
73		1XH700025005	24	3.1
88.9	(DN80)	1XH700030005	25	3.1
114.3	(DN100)	1XH700045005	27	3.2
168.3	(DN150)	1XH700065005	28	4
219.1	(DN200)	1XH700085005	35	3.7
273	(DN250)	1XH7000A1005	37	4.3
323.9	(DN300)	1XH7000A3005	37	4.3

G28 hinged lever coupling
(with E gasket)



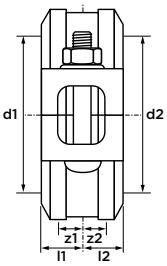
dimension		article no. painted orange	max. pressure* [bar]	tensile strength* [kN]	l1/l2	z1/z2
42.4	(DN32)	10G280012007	20	-	24	0.8
48.3	(DN40)	10G280015007	20	3.66	24	0.8
60.3	(DN50)	10G280020007	20	5.71	24	0.8
73		10G280025007	20	8.37	24	0.8
76.1	(DN65)	10G280029007	20	9.09	24	0.8
88.9	(DN80)	10G280030007	20	12.41	24	0.8
114.3	(DN100)	10G280045007	20	20.51	26	1.6
139.7	(DN125)	10G280052007	20	30.64	26	1.6
141.3		10G280055007	20	31.35	26	1.6
165.1		10G280062007	20	42.8	26	1.6
168.3	(DN150)	10G280065007	20	44.47	26	1.6
219.1	(DN200)	10G280085007	20	75.37	31	1.6
273	(DN250)	10G2800A1007	20	117.01	33	1.6
		article no. galvanized				
42.4	(DN32)	10G280012003	20	-	24	0.8
48.3	(DN40)	10G280015003	20	3.66	24	0.8
60.3	(DN50)	10G280020003	20	5.71	24	0.8
73		10G280025003	20	8.37	24	0.8
76.1	(DN65)	10G280029003	20	9.09	24	0.8
88.9	(DN80)	10G280030003	20	12.41	24	0.8
114.3	(DN100)	10G280045003	20	20.51	26	1.6
139.7	(DN125)	10G280052003	20	30.64	26	1.6
141.3		10G280055003	20	31.35	26	1.6
165.1		10G280062003	20	42.8	26	1.6
168.3	(DN150)	10G280065003	20	44.47	26	1.6
219.1	(DN200)	10G280085003	20	75.37	31	1.6
273	(DN250)	10G2800A1003	20	117.01	33	1.6

• see table on page 47 for design data on axial displacement and angular deflection.

* maximum operating pressure and tensile strength depend on the used pipe material and wall thickness

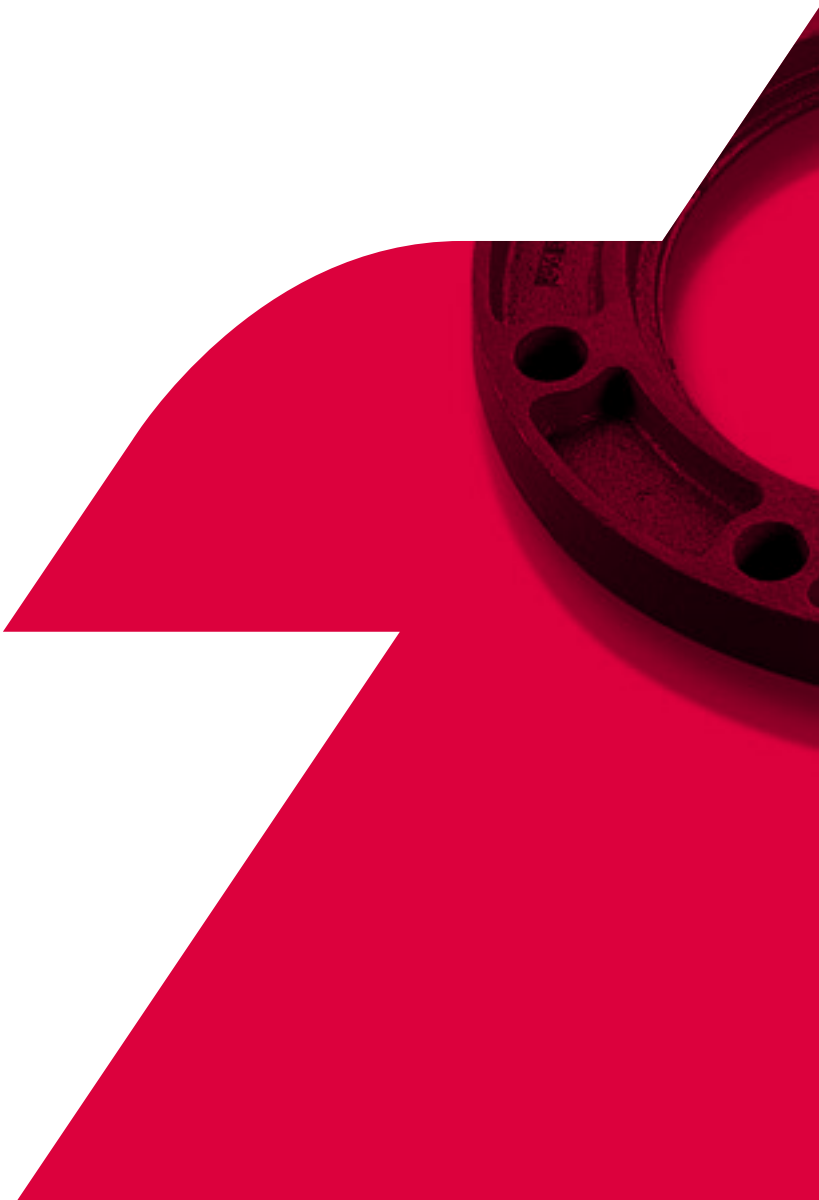
7706 flexible reduced coupling

(with E gasket)



dimension	article no. painted red	max. pressure* [bar]	tensile strength* [kN]	l1/ l2	z1	z2
48.3 x 42.4 (DN40 x DN32)	177061512E02	35	6.23	23	0.8	0.8
60.3 x 48.4 (DN50 x DN40)	177062015E02	35	9.7	24	0.8	0.8
73 x 60.3	177062520E02	35	14.22	24	0.8	0.8
76.1 x 60.3 (DN65 x DN50)	177062920E02	35	15.46	24	0.8	0.8
76.1 x 73	177062925E02	35	15.46	24	0.8	0.8
88.9 x 60.3 (DN80 x DN50)	177063020E02	35	21.09	24	0.8	0.8
88.9 x 73	177063025E02	35	21.09	24	0.8	0.8
88.9 x 76.1 (DN80 x DN65)	177063029E02	35	21.09	24	0.8	0.8
114.3 x 60.3 (DN100 x DN50)	177064520E02	35	34.87	25	1.6	0.8
114.3 x 73	177064525E02	35	34.87	25	1.6	0.8
114.3 x 76.1 (DN100 x DN65)	177064529E02	35	34.87	25	1.6	0.8
114.3 x 88.9 (DN100 x DN80)	177064530E02	35	34.87	26	1.6	0.8
139.7 x 114.3 (DN125 x DN100)	177065245E02	28	42.90	26	1.6	1.6
141.3 x 114.3	177065545E02	28	43.88	26	1.6	1.6
165.1 x 88.9	177066230E02	28	59.91	26	1.6	0.8
165.1 x 114.3 (DN150 x DN100)	177066245E02	28	59.91	26	1.6	1.6
168.3 x 88.9	177066530E02	28	62.26	26	1.6	1.6
168.3 x 114.3 (DN150 x DN100)	177066545E02	28	62.26	26	1.6	1.6
168.3 x 165.1	177066562E02	28	42.80	27	1.6	1.6
219.1 x 165.1	177068562E02	28	105.51	28	1.6	1.6
219.1 x 168.3 (DN200 x DN150)	177068565E02	28	105.51	27	1.6	1.6
	article no. galvanized					
48.3 x 42.4 (DN40 x DN32)	177061512E03	35	6.23	23	0.8	0.8
60.3 x 48.4 (DN50 x DN40)	177062015E03	35	9.7	24	0.8	0.8
73 x 60.3	177062520E03	35	14.22	24	0.8	0.8
76.1 x 60.3 (DN65 x DN50)	177062920E03	35	15.46	24	0.8	0.8
76.1 x 73	177062925E03	35	15.46	24	0.8	0.8
88.9 x 60.3 (DN80 x DN50)	177063020E03	35	21.09	24	0.8	0.8
88.9 x 73	177063025E03	35	21.09	24	0.8	0.8
88.9 x 76.1 (DN80 x DN65)	177063029E03	35	21.09	24	0.8	0.8
114.3 x 60.3 (DN100 x DN50)	177064520E03	35	34.87	25	1.6	0.8
114.3 x 73	177064525E03	35	34.87	25	1.6	0.8
114.3 x 76.1 (DN100 x DN65)	177064529E03	35	34.87	25	1.6	0.8
114.3 x 88.9 (DN100 x DN80)	177064530E03	35	34.87	26	1.6	0.8
139.7 x 114.3 (DN125 x DN100)	177065245E03	28	42.90	26	1.6	1.6
141.3 x 114.3	177065545E03	28	43.88	26	1.6	1.6
165.1 x 88.9	177066230E03	28	59.91	26	1.6	0.8
165.1 x 114.3 (DN150 x DN100)	177066245E03	28	59.91	26	1.6	1.6
168.3 x 88.9	177066530E03	28	62.26	26	1.6	1.6
168.3 x 114.3 (DN150 x DN100)	177066545E03	28	62.26	26	1.6	1.6
168.3 x 165.1	177066562E03	28	42.80	27	1.6	1.6
219.1 x 165.1	177068562E03	28	105.51	28	1.6	1.6
219.1 x 168.3 (DN200 x DN150)	177068565E03	28	105.51	27	1.6	1.6

* maximum operating pressure and tensile strength depend on the used pipe material and wall thickness

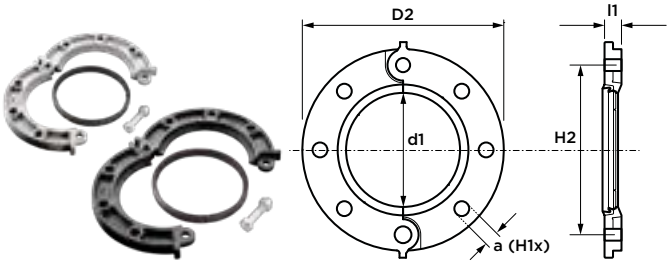


VSH Shurjoint

flange adapters

SJ-7041 flange adapter - PN10/PN16

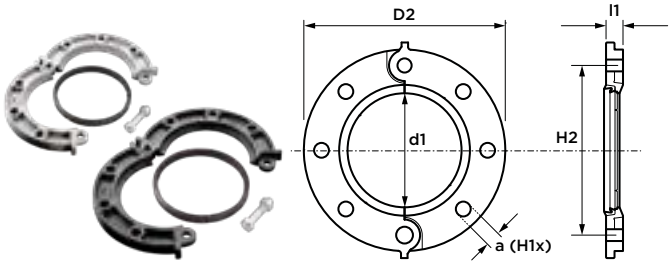
(DN50-300 hinged. DN350-600 two segments. with E gasket)



dimension		article no. painted black	PN	max. pressure [bar]	tensile strength [kN]	l1	D2	H1	H2	a
60.3	(DN50)	1041B0020010	10/16	20	4.6	22	165	4	125	M16
76.1	(DN65)	1041B0029010	10/16	20	7.3	22	185	4	145	M16
88.9	(DN80)	1041B0030010	10/16	20	9.9	24	200	8	160	M16
114.3	(DN100)	1041B0045010	10/16	20	16.4	24	220	8	180	M16
139.7	(DN125)	1041B0052010	10/16	20	24.5	25	250	8	210	M16
165.1		1041B0062010	10/16	20	34.2	24	285	8	240	M20
168.3	(DN150)	1041A0065010	10/16	20	35.6	24	285	8	240	M20
219.1	(DN200)	1041B0085010	16	20	60.3	29	340	12	295	M20
273	(DN250)	1041B00A1010	16	20	93.6	30	405	12	355	M24
323.9	(DN300)	1041B00A3010	16	20	131.8	32	460	12	410	M24
355.6	(DN350)	1041B00A4010	16	20	198.5	36	520	16	470	M24
406.4	(DN400)	1041B00A6010	16	20	259.3	38	580	16	525	M27
457.2	(DN450)	1041B00A8010	16	20	328.2	40	640	20	585	M27
508	(DN500)	1041B00B0010	16	20	405.2	43	715	20	650	M30
609.6	(DN600)	1041B00B4010	16	20	583.4	48	840	20	770	M33
		article no. galvanized								
60.3	(DN50)	1041B0020006	10/16	20	4.6	22	165	4	125	M16
76.1	(DN65)	1041B0029006	10/16	20	7.3	22	185	4	145	M16
88.9	(DN80)	1041B0030006	10/16	20	9.9	24	200	8	160	M16
114.3	(DN100)	1041B0045006	10/16	20	16.4	24	220	8	180	M16
139.7	(DN125)	1041B0052006	10/16	20	24.5	25	250	8	210	M16
165.1		1041B0062006	10/16	20	34.2	24	285	8	240	M20
168.3	(DN150)	1041A0065006	10/16	20	35.6	24	285	8	240	M20
219.1	(DN200)	1041B0085006	16	20	60.3	29	340	12	295	M20
273	(DN250)	1041B00A1006	16	20	93.6	30	405	12	355	M24
323.9	(DN300)	1041B00A3006	16	20	131.8	32	460	12	410	M24
355.6	(DN350)	1041B00A4003	16	20	198.5	36	520	16	470	M24
406.4	(DN400)	1041B00A6003	16	20	259.3	38	580	16	525	M27
457.2	(DN450)	1041B00A8003	16	20	328.2	40	640	20	585	M27
508	(DN500)	1041B00B0003	16	20	405.2	43	715	20	650	M30
609.6	(DN600)	1041B00B4003	16	20	583.4	48	840	20	770	M33

SJ-7041 flange adapter - ANSI class 125/150

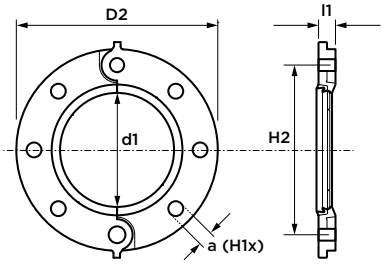
(2-12" hinged, 14-24" two segments, with E gasket)



dimension		article no. painted black	max. pressure [bar]	tensile strength [kN]	l1	D2	H1	H2	a
60.3	(DN50)	1041A0020011	20	5.71	22	152	4	121	⅝"
73		1041A0025011	20	8.37	22	178	4	140	⅝"
88.9	(DN80)	1041A0030011	20	12.41	24	191	4	152	⅝"
114.3	(DN100)	1041A0045011	20	20.51	24	229	8	191	⅝"
141.3		1041A0055011	20	31.35	25	254	8	216	¾"
168.3	(DN150)	1041A0065011	20	44.47	25	279	8	241	¾"
219.1	(DN200)	1041A0085011	20	75.37	29	343	8	298	¾"
273	(DN250)	1041A00A1011	20	117.01	30	406	12	362	⅞"
323.9	(DN300)	1041A00A3011	20	164.71	32	483	12	432	⅞"
355.6	(DN350)	1041A00A4011	20	198.5	36	533	12	476	1"
406.4	(DN400)	1041A00A6011	20	259.3	36	597	16	540	1"
457.2	(DN450)	1041A00A8011	20	328.2	40	635	16	578	1⅛"
508	(DN500)	1041A00B0011	20	405.2	44	699	20	635	1⅛"
609.6	(DN600)	1041A00B4011	20	583.4	48	813	20	749	1¼"
		article no. galvanized							
60.3	(DN50)	1041A0020003	20	5.71	22	152	4	121	⅝"
73		1041A0025003	20	8.37	22	178	4	140	⅝"
88.9	(DN80)	1041A0030003	20	12.41	24	191	4	152	⅝"
114.3	(DN100)	1041A0045003	20	20.51	24	229	8	191	⅝"
141.3		1041A0055003	20	31.35	25	254	8	216	¾"
168.3	(DN150)	1041A0065003	20	44.47	25	279	8	241	¾"
219.1	(DN200)	1041A0085003	20	75.37	29	343	8	298	¾"
273	(DN250)	1041A00A1003	20	117.01	30	406	12	362	⅞"
323.9	(DN300)	1041A00A3003	20	164.71	32	483	12	432	⅞"
355.6	(DN350)	1041A00A4003	20	198.5	36	533	12	476	1"
406.4	(DN400)	1041A00A6003	20	259.3	36	597	16	540	1"
457.2	(DN450)	1041A00A8003	20	328.2	40	635	16	578	1⅛"
508	(DN500)	1041A00B0003	20	405.2	44	699	20	635	1⅛"
609.6	(DN600)	1041A00B4003	20	583.4	48	813	20	749	1¼"

7043 flange adapter - ANSI class 300

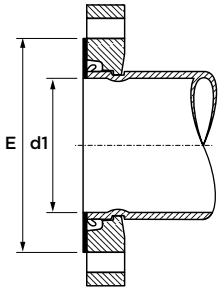
(2-12" hinged, with E gasket)



dimension	article no. painted black	max. pressure [bar]	tensile strength [kN]	l1	D2	H1	H2	a
60.3 (DN50)	1043A0020001	52	14.84	24	165	8	127	5/8"
73	1043A0025001	52	21.75	27	191	8	149	3/4"
88.9 (DN80)	1043A0030001	52	32.26	30	210	8	168	3/4"
114.3 (DN100)	1043A0045001	52	53.33	33	254	8	202	3/4"
141.3	1043A0055001	52	81.5	37	279	8	235	3/4"
168.3 (DN150)	1043A0065001	52	115.62	38	318	12	270	3/4"
219.1 (DN200)	1043A0085001	52	195.96	41	381	12	330	7/8"
273 (DN250)	1043A00A1001	52	304.23	48	449	16	387	1"
323.9 (DN300)	1043A00A3001	52	428.25	49	521	16	451	1 1/8"
	article no. galvanized							
60.3 (DN50)	1043A0020003	52	14.84	24	165	8	127	5/8"
73	1043A0025003	52	21.75	27	191	8	149	3/4"
88.9 (DN80)	1043A0030003	52	32.26	30	210	8	168	3/4"
114.3 (DN100)	1043A0045003	52	53.33	33	254	8	202	3/4"
141.3	1043A0055003	52	81.5	37	279	8	235	3/4"
168.3 (DN150)	1043A0065003	52	115.62	38	318	12	270	3/4"
219.1 (DN200)	1043A0085003	52	195.96	41	381	12	330	7/8"
273 (DN250)	1043A00A1003	52	304.23	48	449	16	387	1"
323.9 (DN300)	1043A00A3003	52	428.25	49	521	16	451	1 1/8"

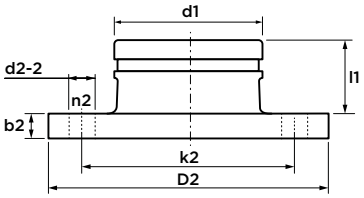
49 sandwich plate

(steel, zinc plated)



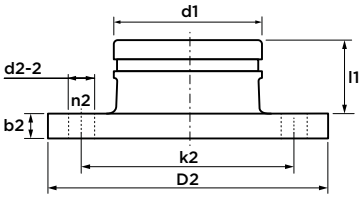
dimension	article no.	E	d1
DN50	S00490020	95	54
DN65	S00490025	118	67
DN80	S00490030	130	81
DN100	S00490045	158	105
DN125	S00490055	188	128
DN150	S00490065	216	155
DN200	S00490085	271	205
DN250	S004900A1	326	258
DN300	S004900A3	381	305
DN350	S004900A4	442	342
DN400	S004900A6	506	392
DN450	S004900A8	540	443
DN500	S004900B0	597	494
DN600	S004900B4	708	596

7170 flange adapter
(PN10/PN16)



dimension	article no. painted orange	PN	l1	D2	n2	k2	b2	d2-2
273 (DN250)	1170E00A1001	PN10	101	395	22	350	26	M20
	1170B00A1001	PN16	101	405	26	355	26	M24
323.9 (DN300)	1170E00A3001	PN10	177	445	22	400	26	M20
	1170B00A3001	PN16	175	460	26	410	28	M24
355.6 (DN350)	1W17E00A4001	PN10	101	505	22	460	26	M20
	1W17B00A4001	PN16	97	520	26	470	30	M24
406.4 (DN400)	1W17E00A6001	PN10	101	565	26	515	26	M24
	1W17B00A6001	PN16	95	580	30	525	32	M27
457.2 (DN450)	1W17E00A8001	PN10	112	615	26	565	28	M24
	1W17B00A8001	PN16	100	640	30	585	40	M27
508 (DN500)	1W17E00B0001	PN10	117	670	26	620	28	M24
	1W17B00B0001	PN16	101	715	33	650	44	M30
609.6 (DN600)	1W17E00B4001	PN10	118	780	30	725	34	M27
	1W17B00B4001	PN16	98	840	36	770	54	M33
	article no. galvanized							
273 (DN250)	1170E00A1003	PN10	101	395	22	350	26	M20
	1170B00A1003	PN16	101	405	26	355	26	M24
323.9 (DN300)	1170E00A3003	PN10	177	445	22	400	26	M20
	1170B00A3003	PN16	175	460	26	410	28	M24
355.6 (DN350)	1W17E00A4003	PN10	101	505	22	460	26	M20
	1W17B00A4003	PN16	97	520	26	470	30	M24
406.4 (DN400)	1W17E00A6003	PN10	101	565	26	515	26	M24
	1W17B00A6003	PN16	95	580	30	525	32	M27
457.2 (DN450)	1W17E00A8003	PN10	112	615	26	565	28	M24
	1W17B00A8003	PN16	100	640	30	585	40	M27
508 (DN500)	1W17E00B0003	PN10	117	670	26	620	28	M24
	1W17B00B0003	PN16	101	715	33	650	44	M30
609.6 (DN600)	1W17E00B4003	PN10	118	780	30	725	34	M27
	1W17B00B4003	PN16	98	840	36	770	54	M33

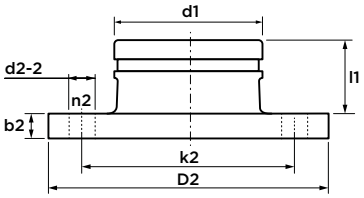
7170 flange adapter
(ANSI class 125/150)



dimension	article no. painted orange	l1	D2	n2	k2	b2	d2-2
273 (DN250)	1170A00A1001	97	406	12	362	30	1"
323.9 (DN300)	1170A00A3001	95	483	12	432	32	1"
355.6 (DN350)	1170A00A4001	92	533	12	476	35	1⅛"
406.4 (DN400)	1170A00A6001	90	597	16	540	37	1⅛"
457.2 (DN450)	1170A00A8001	100	635	16	578	40	1¼"
508 (DN500)	1170A00B0001	102	699	20	635	43	1¼"
609.6 (DN600)	1170A00B4001	104	814	20	749	48	1⅜"
	article no. galvanized						
273 (DN250)	1170A00A1003	97	406	12	362	30	1"
323.9 (DN300)	1170A00A3003	95	483	12	432	32	1"
355.6 (DN350)	1170A00A4003	92	533	12	476	35	1⅛"
406.4 (DN400)	1170A00A6003	09	597	16	540	37	1⅛"
457.2 (DN450)	1170A00A8003	100	635	16	578	40	1¼"
508 (DN500)	1170A00B0003	102	699	20	635	43	1¼"
609.6 (DN600)	1170A00B4003	104	814	20	749	48	1⅜"

7180 universal flange adapter

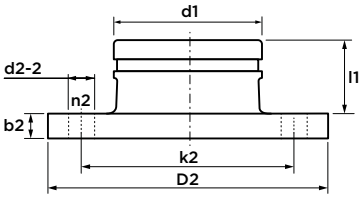
(PN 10/16, ANSI class 125/150, BS10E)



dimension	article no. painted orange	l1	D2	n2	k2	b2	d2-2
60.3 (DN50)	171800020001	48	165	4	114-125	16	M16
73	171800025001	60	185	4	127-145	16	M16
76.1 (DN65)	171800029001	60	185	4	127-145	16	M16
88.9 (DN80)	171800030001	59	200	8	146-160	16	M16
114.3 (DN100)	171800045001	59	225	8	175-191	16	M16
139.7 (DN125)	171800052001	59	254	8	210-216	16	M20
141.3	171800055001	53	254	8	210-216	22	M20
165.1	171800062001	59	272	8	235-241	16	M20
168.3 (DN150)	171800065001	59	272	8	240-241	16	M20
219.1 (DN200)	171800085001	80	343	12	290-298	22	M20
	article no. galvanized						
60.3 (DN50)	171800020003	48	165	4	114-125	16	M16
73	171800025003	60	185	4	127-145	16	M16
76.1 (DN65)	171800029003	60	185	4	127-145	16	M16
88.9 (DN80)	171800030003	59	200	8	146-160	16	M16
114.3 (DN100)	171800045003	59	225	8	175-191	16	M16
139.7 (DN125)	171800052003	59	254	8	210-216	16	M20
141.3	171800055003	53	254	8	210-216	22	M20
165.1	171800062003	59	272	8	235-241	16	M20
168.3 (DN150)	171800065003	59	272	8	240-241	16	M20
219.1 (DN200)	171800085003	80	343	12	290-298	22	M20

7181 universal reducing flange adapter

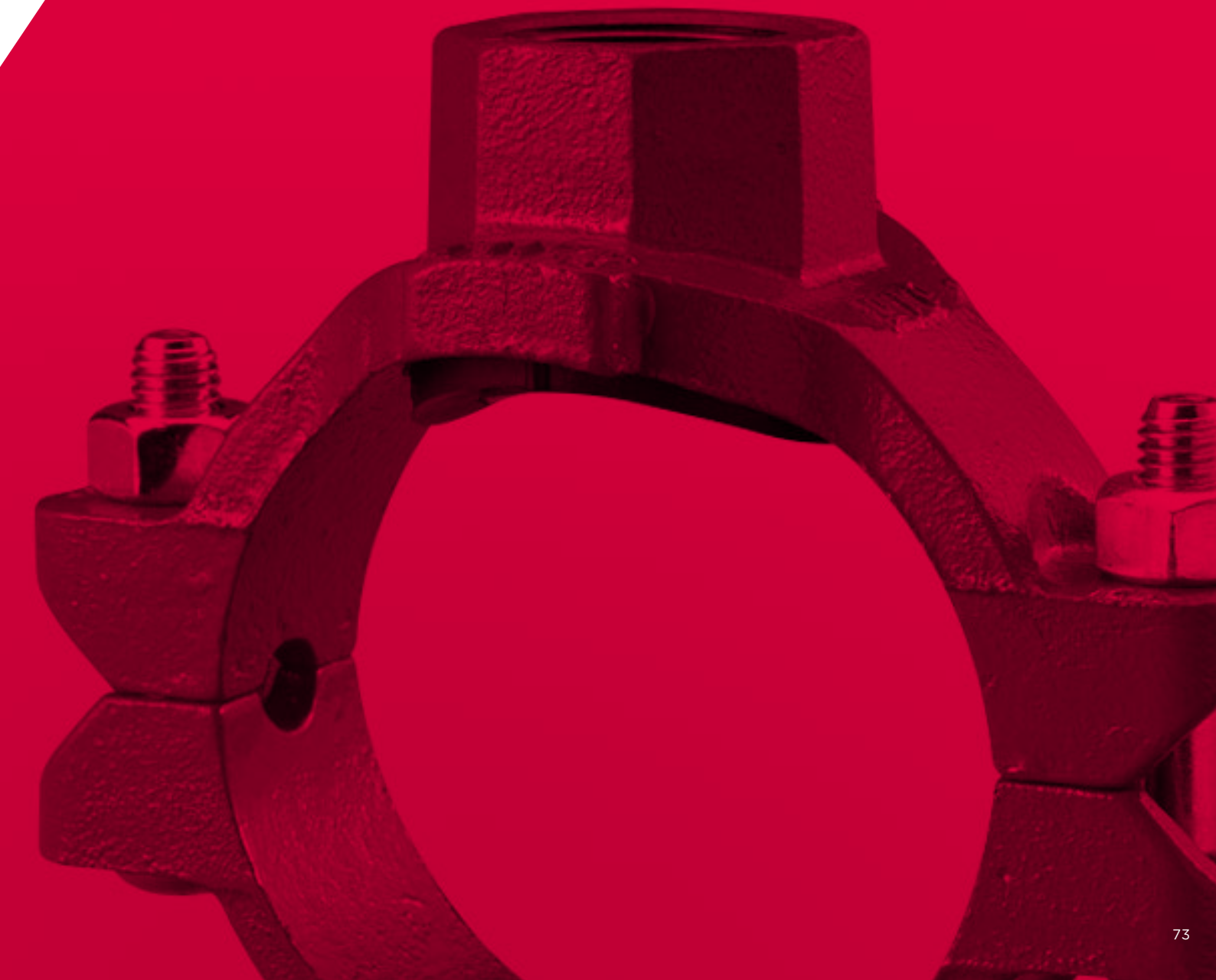
(PN 10/16, ANSI class 125/150, BS10E)



dimension	article no. painted orange	l1	D2	n2	k2	b2	d2-2
88.9 x 60.3 (DN80 x 50)	171813020001	59	208	8	150-160	16	M16
114.3 x 73	171814525001	60	226	8	175-191	16	M16
114.3 x 76.1 (DN100 x 65)	171814529001	60	226	8	175-191	16	M16
114.3 x 88.9 (DN100 x 80)	171814530001	59	226	8	175-191	16	M16
168.3 x 114.3 (DN150 x 100)	171816545001	51	291	8	240-241	24	M20
	article no. galvanized						
88.9 x 60.3 (DN80 x 50)	171813020003	59	208	8	150-160	16	M16
114.3 x 73	171814525003	60	226	8	175-191	16	M16
114.3 x 76.1 (DN100 x 65)	171814529003	60	226	8	175-191	16	M16
114.3 x 88.9 (DN100 x 80)	171814530003	59	226	8	175-191	16	M16
168.3 x 114.3 (DN150 x 100)	171816545003	51	291	8	240-241	24	M20

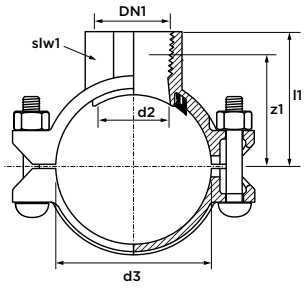
VSH Shurjoint

mechanical tees



7721 mechanical tee

(ISO 7-1 female thread, with E gasket)

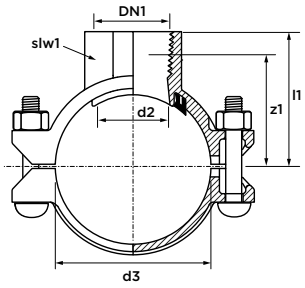


dimension	article no. painted red	max. pressure [bar]	l1	z1	DN1	d2*	d3	slw1
60.3 x Rc½	177212005E02	20	64	50	21.3	38	60.3	30
60.3 x Rc¾	177212007E02	20	64	50	26.9	38	60.3	36
60.3 x Rc1	177212010E02	20	68	51	33.7	38	60.3	44
60.3 x Rc1¼	177212012E02	20	71	53	42.4	45	60.3	55
60.3 x Rc1½	177212015E02	20	71	53	48.3	45	60.3	60
76.1 x Rc½	177212505E02	20	71	57	21.3	38	76.1	30
76.1 x Rc¾	177212507E02	20	73	59	26.9	38	76.1	36
76.1 x Rc1	177212510E02	20	75	58	33.7	38	76.1	44
76.1 x Rc1¼	177212512E02	20	79	61	42.4	45	76.1	55
76.1 x Rc1½	177212515E02	20	79	61	48.3	45	76.1	60
88.9 x Rc½	177213005E02	20	81	63	21.3	38	88.9	30
88.9 x Rc¾	177213007E02	20	78	62	26.9	38	88.9	36
88.9 x Rc1	177213010E02	20	81	64	33.7	38	88.9	44
88.9 x Rc1¼	177213012E02	20	89	71	42.4	45	88.9	55
88.9 x Rc1½	177213015E02	20	89	71	48.3	45	88.9	60
88.9 x Rc2	177213020E02	20	91	72	60.3	64	88.9	73
114.3 x Rc½	177214505E02	20	94	76	21.3	38	114.3	30
114.3 x Rc¾	177214507E02	20	91	75	26.9	38	114.3	36
114.3 x Rc1	177214510E02	20	94	77	33.7	38	114.3	44
114.3 x Rc1¼	177214512E02	20	99	81	42.4	45	114.3	55
114.3 x Rc1½	177214515E02	20	99	81	48.3	45	114.3	60
114.3 x Rc2	177214520E02	20	105	86	60.3	64	114.3	73
114.3 x Rc2½	177214525E02	20	111	82	76.1	70	114.3	89
114.3 x Rc3	177214530E02	20	112	82	88.9	89	114.3	107
139.7 x Rc2	177215520E02	20	124	105	60.3	64	139.7	73
139.7 x Rc2½	177215525E02	20	127	99	76.1	70	139.7	89
168.3 x Rc½	177216505E02	20	126	114	21.3	51	168.3	30
168.3 x Rc1	177216510E02	20	127	110	33.7	51	168.3	44
168.3 x Rc1¼	177216512E02	20	127	109	42.4	45	168.3	55
168.3 x Rc1½	177216515E02	20	127	109	48.3	45	168.3	60
168.3 x Rc2	177216520E02	20	132	113	60.3	64	168.3	72
168.3 x Rc2½	177216525E02	20	140	111	76.1	70	168.3	88
168.3 x Rc3	177216530E02	20	140	110	88.9	89	168.3	108
219.1 x Rc½	177218505E02	20	148	135	21.3	70	219.1	30
219.1 x Rc1	177218510E02	20	152	135	33.7	70	219.1	44
219.1 x Rc1¼	177218512E02	20	152	135	42.4	70	219.1	55
219.1 x Rc1½	177218515E02	20	152	135	48.3	70	219.1	60
219.1 x Rc2	177218520E02	20	166	135	60.3	64	219.1	73
219.1 x Rc2½	177218525E02	20	166	137	76.1	70	219.1	89
219.1 x Rc3	177218530E02	20	166	136	88.9	89	219.1	107

* see table on page 37 for hole cut specifications and installation instructions.

7721 mechanical tee

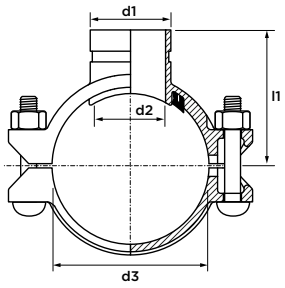
(ISO 7-1 female thread, with E gasket)



dimension	article no. galvanized	max. pressure [bar]	l1	z1	DN1	d2*	d3	slw1
60.3 x Rc½	177212005E04	20	64	50	21.3	38	60.3	30
60.3 x Rc¾	177212007E04	20	64	50	26.9	38	60.3	36
60.3 x Rc1	177212010E04	20	68	51	33.7	38	60.3	44
60.3 x Rc1¼	177212012E04	20	71	53	42.4	45	60.3	55
60.3 x Rc1½	177212015E04	20	71	53	48.3	45	60.3	60
76.1 x Rc½	177212505E04	20	71	57	21.3	38	76.1	30
76.1 x Rc¾	177212507E04	20	73	59	26.9	38	76.1	36
76.1 x Rc1	177212510E04	20	75	58	33.7	38	76.1	44
76.1 x Rc1¼	177212512E04	20	79	61	42.4	45	76.1	55
76.1 x Rc1½	177212515E04	20	79	61	48.3	45	76.1	60
88.9 x Rc½	177213005E04	20	81	63	21.3	38	88.9	30
88.9 x Rc¾	177213007E04	20	78	62	26.9	38	88.9	36
88.9 x Rc1	177213010E04	20	81	64	33.7	38	88.9	44
88.9 x Rc1¼	177213012E04	20	89	71	42.4	45	88.9	55
88.9 x Rc1½	177213015E04	20	89	71	48.3	45	88.9	60
88.9 x Rc2	177213020E04	20	91	72	60.3	64	88.9	73
114.3 x Rc½	177214505E04	20	94	76	21.3	38	114.3	30
114.3 x Rc¾	177214507E04	20	91	75	26.9	38	114.3	36
114.3 x Rc1	177214510E04	20	94	77	33.7	38	114.3	44
114.3 x Rc1¼	177214512E04	20	99	81	42.4	45	114.3	55
114.3 x Rc1½	177214515E04	20	99	81	48.3	45	114.3	60
114.3 x Rc2	177214520E04	20	105	86	60.3	64	114.3	73
114.3 x Rc2½	177214525E04	20	111	82	76.1	70	114.3	89
114.3 x Rc3	177214530E04	20	112	82	88.9	89	114.3	107
139.7 x Rc2	177215520E04	20	124	105	60.3	64	139.7	73
139.7 x Rc2½	177215525E04	20	127	99	76.1	70	139.7	89
168.3 x Rc½	177216505E04	20	126	114	21.3	51	168.3	30
168.3 x Rc1	177216510E04	20	127	110	33.7	51	168.3	44
168.3 x Rc1¼	177216512E04	20	127	109	42.4	45	168.3	55
168.3 x Rc1½	177216515E04	20	127	109	48.3	45	168.3	60
168.3 x Rc2	177216520E04	20	132	113	60.3	64	168.3	72
168.3 x Rc2½	177216525E04	20	140	111	76.1	70	168.3	88
168.3 x Rc3	177216530E04	20	140	110	88.9	89	168.3	108
219.1 x Rc½	177218505E04	20	148	135	21.3	70	219.1	30
219.1 x Rc1	177218510E04	20	152	135	33.7	70	219.1	44
219.1 x Rc1¼	177218512E04	20	152	135	42.4	70	219.1	55
219.1 x Rc1½	177218515E04	20	152	135	48.3	70	219.1	60
219.1 x Rc2	177218520E04	20	166	135	60.3	64	219.1	73
219.1 x Rc2½	177218525E04	20	166	137	76.1	70	219.1	89
219.1 x Rc3	177218530E04	20	166	136	88.9	89	219.1	107

* see table on page 37 for hole cut specifications and installation instructions.

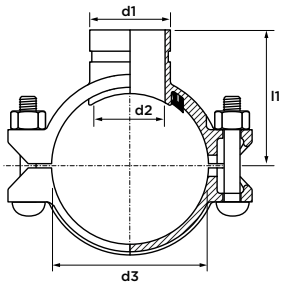
7722 mechanical tee
(grooved end outlet, with E gasket)



dimension	article no. painted red	max. pressure [bar]	l1/z1	d1	d2	d3
60.3 x 42.4	177222012E02	20	71	42.4	45	60.3
60.3 x 48.3	177222015E02	20	71	48.3	45	60.3
76.1 x 42.4	177222512E02	20	79	42.4	45	76.1
76.1 x 48.3	177222515E02	20	79	48.3	45	76.1
88.9 x 33.7	177223010E02	20	84	33.7	38	88.9
88.9 x 42.4	177223012E02	20	89	42.4	45	88.9
88.9 x 48.3	177223015E02	20	89	48.3	45	88.9
88.9 x 60.3	177223020E02	20	91	60.3	64	88.9
114.3 x 33.7	177224510E02	20	94	33.7	38	114.3
114.3 x 42.4	177224512E02	20	99	42.4	45	114.3
114.3 x 48.3	177224515E02	20	99	48.3	45	114.3
114.3 x 60.3	177224520E02	20	105	60.3	64	114.3
114.3 x 73	177224525E02	20	111	73	70	114.3
114.3 x 76.1	177224529E02	20	111	76.1	70	114.3
114.3 x 88.9	177224530E02	20	112	88.9	89	114.3
139.7 x 60.3	177225520E02	20	124	60.3	64	139.7
139.7 x 73	177225525E02	20	127	73	70	139.7
139.7 x 76.1	177225529E02	20	127	76.1	70	139.7
168.3 x 42.4	177226512E02	20	127	42.4	45	168.3
168.3 x 48.3	177226515E02	20	127	48.3	45	168.3
168.3 x 60.3	177226520E02	20	132	60.3	64	168.3
168.3 x 73	177226525E02	20	140	73	70	168.3
168.3 x 76.1	177226529E02	20	140	76.1	70	168.3
168.3 x 88.9	177226530E02	20	140	88.9	89	168.3
168.3 x 114.3	177226545E02	20	140	114.3	114	168.3
219.1 x 60.3	177228520E02	20	166	60.3	64	219.1
219.1 x 73	177228525E02	20	166	73	70	219.1
219.1 x 76.1	177228529E02	20	166	76.1	70	219.1
219.1 x 88.9	177228530E02	20	166	88.9	89	219.1
219.1 x 114.3	177228545E02	20	166	114.3	114	219.1

* see table on page 37 for hole cut specifications and installation instructions.

7722 mechanical tee
(grooved end outlet, with E gasket)



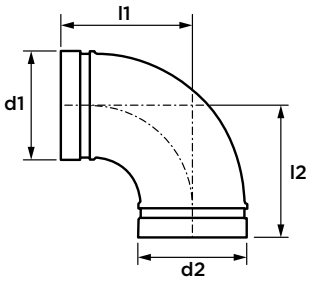
dimension	article no. galvanized	max. pressure [bar]	l1/z1	d1	d2	d3
60.3 x 42.4	177222012E03	20	71	42.4	45	60.3
60.3 x 48.3	177222015E03	20	71	48.3	45	60.3
76.1 x 42.4	177222512E03	20	79	42.4	45	76.1
76.1 x 48.3	177222515E03	20	79	48.3	45	76.1
88.9 x 33.7	177223010E03	20	84	33.7	38	88.9
88.9 x 42.4	177223012E03	20	89	42.4	45	88.9
88.9 x 48.3	177223015E03	20	89	48.3	45	88.9
88.9 x 60.3	177223020E03	20	91	60.3	64	88.9
114.3 x 33.7	177224510E03	20	94	33.7	38	114.3
114.3 x 42.4	177224512E03	20	99	42.4	45	114.3
114.3 x 48.3	177224515E03	20	99	48.3	45	114.3
114.3 x 60.3	177224520E03	20	105	60.3	64	114.3
114.3 x 73	177224525E03	20	111	73	70	114.3
114.3 x 76.1	177224529E03	20	111	76.1	70	114.3
114.3 x 88.9	177224530E03	20	112	88.9	89	114.3
139.7 x 60.3	177225520E03	20	124	60.3	64	139.7
139.7 x 73	177225525E03	20	127	73	70	139.7
139.7 x 76.1	177225529E03	20	127	76.1	70	139.7
168.3 x 42.4	177226512E03	20	127	42.4	45	168.3
168.3 x 48.3	177226515E03	20	127	48.3	45	168.3
168.3 x 60.3	177226520E03	20	132	60.3	64	168.3
168.3 x 73	177226525E03	20	140	73	70	168.3
168.3 x 76.1	177226529E03	20	140	76.1	70	168.3
168.3 x 88.9	177226530E03	20	140	88.9	89	168.3
168.3 x 114.3	177226545E03	20	140	114.3	114	168.3
219.1 x 60.3	177228520E03	20	166	60.3	64	219.1
219.1 x 73	177228525E03	20	166	73	70	219.1
219.1 x 76.1	177228529E03	20	166	76.1	70	219.1
219.1 x 88.9	177228530E03	20	166	88.9	89	219.1
219.1 x 114.3	177228545E03	20	166	114.3	114	219.1

* see table on page 37 for hole cut specifications and installation instructions.

VSH Shurjoint

grooved fittings

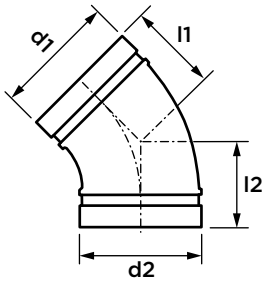
7110 bend 90°
(2 x groove)



dimension	article no. painted orange	l1/l2
33.7 (DN25)	171100010001	57
42.4 (DN32)	171100012001	70
48.3 (DN40)	171100015001	70
60.3 (DN50)	171100020001	83
73	171100025001	95
76.1 (DN65)	171100029001	95
88.9 (DN80)	171100030001	108
108	171100040001	127
114.3 (DN100)	171100045001	127
139.7 (DN125)	171100052001	140
141.3	171100055001	140
159	171100060001	165
165.1	171100062001	165
168.3 (DN150)	171100065001	165
219.1 (DN200)	171100085001	197
273 (DN250)	1711000A1001	229
323.9 (DN300)	1711000A3001	254
355.6 (DN350)	1711000A4001	280
406.4 (DN400)	1711000A6001	305

	article no. galvanized	
33.7 (DN25)	171100010003	57
42.4 (DN32)	171100012003	70
48.3 (DN40)	171100015003	70
60.3 (DN50)	171100020003	83
73	171100025003	95
76.1 (DN65)	171100029003	95
88.9 (DN80)	171100030003	108
108	171100040003	127
114.3 (DN100)	171100045003	127
139.7 (DN125)	171100052003	140
141.3	171100055003	140
159	171100060003	165
165.1	171100062003	165
168.3 (DN150)	171100065003	165
219.1 (DN200)	171100085003	197
273 (DN250)	1711000A1003	229
323.9 (DN300)	1711000A3003	254
355.6 (DN350)	1711000A4003	280
406.4 (DN400)	1711000A6003	305

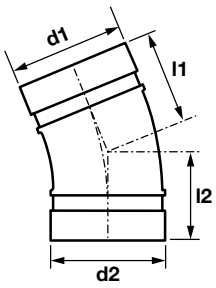
7111 bend 45°
(2 x groove)



dimension	article no. painted orange	l1/l2
33.7 (DN25)	171110010001	45
42.4 (DN32)	171110012001	45
48.3 (DN40)	171110015001	45
60.3 (DN50)	171110020001	51
73	171110025001	57
76.1 (DN65)	171110029001	57
88.9 (DN80)	171110030001	57
108	171110040001	76
114.3 (DN100)	171110045001	76
139.7 (DN125)	171110052001	83
141.3	171110055001	83
159	171110060001	89
165.1	171110062001	89
168.3 (DN150)	171110065001	89
219.1 (DN200)	171110085001	108
273 (DN250)	1711100A1001	121
323.9 (DN300)	1711100A3001	133
355.6 (DN350)	1711100A4001	152
406.4 (DN400)	1711100A6001	184

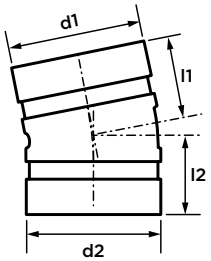
	article no. galvanized	
33.7 (DN25)	171110010003	45
42.4 (DN32)	171110012003	45
48.3 (DN40)	171110015003	45
60.3 (DN50)	171110020003	51
73	171110025003	57
76.1 (DN65)	171110029003	57
88.9 (DN80)	171110030003	57
108	171110040003	76
114.3 (DN100)	171110045003	76
139.7 (DN125)	171110052003	83
141.3	171110055003	83
159	171110060003	89
165.1	171110062003	89
168.3 (DN150)	171110065003	89
219.1 (DN200)	171110085003	108
273 (DN250)	1711100A1003	121
323.9 (DN300)	1711100A3003	133
355.6 (DN350)	1711100A4003	152
406.4 (DN400)	1711100A6003	184

7112 bend 22.5°
(2 x groove)



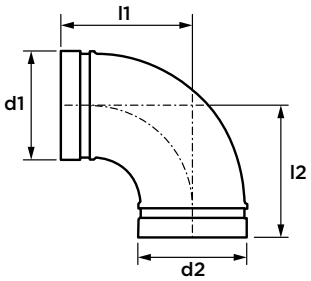
dimension	article no. painted orange	l1/l2
42.4 (DN32)	171120012001	45
48.3 (DN40)	171120015004	45
60.3 (DN50)	171120020004	48
73	171120025004	51
76.1 (DN65)	171120029004	51
88.9 (DN80)	171120030004	57
114.3 (DN100)	171120045004	73
165.1	171120062004	79
168.3 (DN150)	171120065004	79
219.1 (DN200)	171120085004	98
273 (DN250)	1711200A1001	111
323.9 (DN300)	1711200A3001	124
	article no. galvanized	
42.4 (DN32)	171120012003	45
48.3 (DN40)	171120015006	45
60.3 (DN50)	171120020006	48
73	171120025006	51
76.1 (DN65)	171120029006	51
88.9 (DN80)	171120030006	57
114.3 (DN100)	171120045006	73
165.1	171120062006	79
168.3 (DN150)	171120065006	79
219.1 (DN200)	171120085006	98
273 (DN250)	1711200A1003	111
323.9 (DN300)	1711200A3003	124

7113 bend 11.25°
(2 x groove)



dimension	article no. painted orange	l1/l2
42.4 (DN32)	171130012001	35
48.3 (DN40)	171130015001	35
60.3 (DN50)	171130020001	35
73	171130025001	38
76.1 (DN65)	171130029001	38
88.9 (DN80)	171130030001	38
114.3 (DN100)	171130045001	45
139.7 (DN125)	171130052001	51
141.3	171130055001	51
165.1	171130062001	51
168.3 (DN150)	171130065001	51
219.1 (DN200)	171130085001	51
273 (DN250)	1711300A1001	54
323.9 (DN300)	1711300A3001	57
	article no. galvanized	
42.4 (DN32)	171130012003	35
48.3 (DN40)	171130015003	35
60.3 (DN50)	171130020003	35
73	171130025003	38
76.1 (DN65)	171130029003	38
88.9 (DN80)	171130030003	38
114.3 (DN100)	171130045003	45
139.7 (DN125)	171130052003	51
141.3	171130055003	51
165.1	171130062003	51
168.3 (DN150)	171130065003	51
219.1 (DN200)	171130085003	51
273 (DN250)	1711300A1003	54
323.9 (DN300)	1711300A3003	57

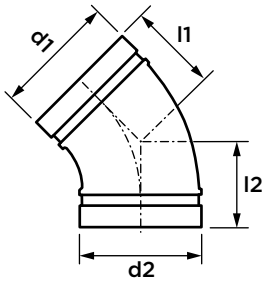
7110LR bend 1.5D 90°
(2 x groove)



dimension	article no. painted orange	l1/l2
60.3 (DN50)	1110L0020001	111
73	1110L0025001	127
76.1 (DN65)	1110L0029001	127
88.9 (DN80)	1110L0030001	149
114.3 (DN100)	1110L0045001	191
139.7 (DN125)	1110L0052001	241
141.3	1110L0055001	241
165.1	1110L0062001	273
168.3 (DN150)	1110L0065001	273
219.1 (DN200)	1110L0085001	362
273 (DN250)	1110L00A1001	438
323.9 (DN300)	1110L00A3001	521

dimension	article no. galvanized	l1/l2
60.3 (DN50)	1110L0020003	111
73	1110L0025003	127
76.1 (DN65)	1110L0029003	127
88.9 (DN80)	1110L0030003	149
114.3 (DN100)	1110L0045003	191
139.7 (DN125)	1110L0052003	241
141.3	1110L0055003	241
165.1	1110L0062003	273
168.3 (DN150)	1110L0065003	273
219.1 (DN200)	1110L0085003	362
273 (DN250)	1110L00A1003	438
323.9 (DN300)	1110L00A3003	521

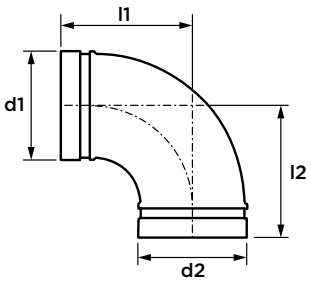
7111LR bend 1.5D 45°
(2 x groove)



dimension	article no. painted orange	l1/l2
60.3 (DN50)	1111L0020001	70
73	1111L0025001	76
76.1 (DN65)	1111L0029001	76
88.9 (DN80)	1111L0030001	86
114.3 (DN100)	1111L0045001	102
139.7 (DN125)	1111L0052001	127
141.3	1111L0055001	127
165.1	1111L0062001	140
168.3 (DN150)	1111L0065001	140
219.1 (DN200)	1111L0085001	184
273 (DN250)	1111L00A1001	216
323.9 (DN300)	1111L00A3001	254

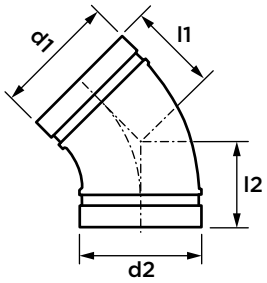
dimension	article no. galvanized	l1/l2
60.3 (DN50)	1111L0020003	70
73	1111L0025003	76
76.1 (DN65)	1111L0029003	76
88.9 (DN80)	1111L0030003	86
114.3 (DN100)	1111L0045003	102
139.7 (DN125)	1111L0052003	127
141.3	1111L0055003	127
165.1	1111L0062003	140
168.3 (DN150)	1111L0065003	140
219.1 (DN200)	1111L0085003	184
273 (DN250)	1111L00A1003	216
323.9 (DN300)	1111L00A3003	254

W110LR bend 90° (wrought)
(2 x groove)



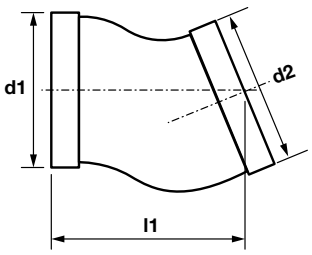
dimension		article no. painted orange	l1/l2
273	(DN250)	1W10L00A1001	381
323.9	(DN300)	1W10L00A3001	457
355.6	(DN350)	1W10L00A4001	533
406.4	(DN400)	1W10L00A6001	610
457.2	(DN450)	1W10L00A8001	686
508	(DN500)	1W10L00B0001	762
609.6	(DN600)	1W10L00B4001	914
		article no. galvanized	
273	(DN250)	1W10L00A1003	381
323.9	(DN300)	1W10L00A3003	457
355.6	(DN350)	1W10L00A4003	533
406.4	(DN400)	1W10L00A6003	610
457.2	(DN450)	1W10L00A8003	686
508	(DN500)	1W10L00B0003	762
609.6	(DN600)	1W10L00B4003	914

W111LR bend 45° (wrought)
(2 x groove)



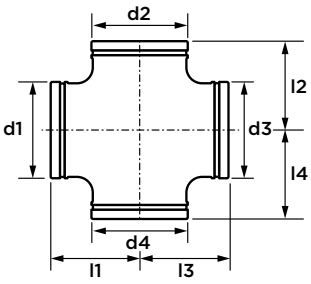
dimension		article no. painted orange	l1/l2
273	(DN250)	1W11L00A1001	159
323.9	(DN300)	1W11L00A3001	190
355.6	(DN350)	1W11L00A4001	222
406.4	(DN400)	1W11L00A6001	254
457.2	(DN450)	1W11L00A8001	285
508	(DN500)	1W11L00B0001	318
609.6	(DN600)	1W11L00B4001	381
		article no. galvanized	
273	(DN250)	1W11L00A1003	159
323.9	(DN300)	1W11L00A3003	190
355.6	(DN350)	1W11L00A4003	222
406.4	(DN400)	1W11L00A6003	254
457.2	(DN450)	1W11L00A8003	285
508	(DN500)	1W11L00B0003	318
609.6	(DN600)	1W11L00B4003	381

7112G goose neck bend 22.5°
(2 x groove)



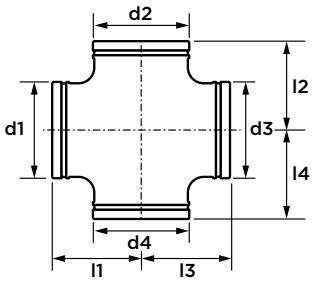
dimension	article no. painted orange	l1
48.3 (DN40)	171120015001	95
60.3 (DN50)	171120020001	95
73	171120025001	102
76.1 (DN65)	171120029001	102
88.9 (DN80)	171120030001	114
114.3 (DN100)	171120045001	127
139.7 (DN125)	171120052001	127
141.3	171120055001	127
165.1	171120062001	159
168.3 (DN150)	171120065001	159
219.1 (DN200)	171120085001	197
	article no. galvanized	
48.3 (DN40)	171120015003	95
60.3 (DN50)	171120020003	95
73	171120025003	102
76.1 (DN65)	171120029003	102
88.9 (DN80)	171120030003	114
114.3 (DN100)	171120045003	127
139.7 (DN125)	171120052003	127
141.3	171120055003	127
165.1	171120062003	159
168.3 (DN150)	171120065003	159
219.1 (DN200)	171120085003	197

7135 cross
(4 x groove)



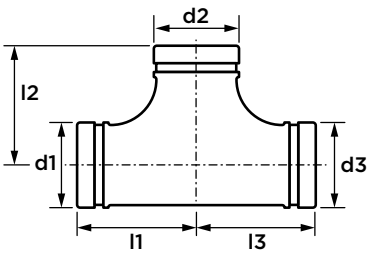
dimension	article no. painted orange	l1/l2/l3/l4
33.7 (DN25)	171350010001	57
42.4 (DN32)	171350012001	70
48.3 (DN40)	171350015001	70
60.3 (DN50)	171350020001	83
73	171350025001	95
76.1 (DN65)	171350029001	95
88.9 (DN80)	171350030001	108
114.3 (DN100)	171350045001	127
139.7 (DN125)	171350052001	140
141.3	171350055001	140
165.1	171350062001	165
168.3 (DN150)	171350065001	165
219.1 (DN200)	171350085001	197
	article no. galvanized	
33.7 (DN25)	171350010003	57
42.4 (DN32)	171350012003	70
48.3 (DN40)	171350015003	70
60.3 (DN50)	171350020003	83
73	171350025003	95
76.1 (DN65)	171350029003	95
88.9 (DN80)	171350030003	108
114.3 (DN100)	171350045003	127
139.7 (DN125)	171350052003	140
141.3	171350055003	140
165.1	171350062003	165
168.3 (DN150)	171350065003	165
219.1 (DN200)	171350085003	197

W135 cross (wrought)
(4 x groove)



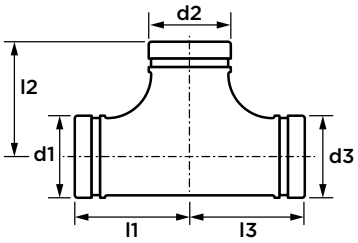
dimension	article no. painted orange	l1/l2/l3/l4
355.6 (DN350)	1W13500A4001	279
406.4 (DN400)	1W13500A6001	305
457.2 (DN450)	1W13500A8001	343
508 (DN500)	1W13500B0001	381
609.6 (DN600)	1W13500B4001	432
	article no. galvanized	
355.6 (DN350)	1W13500A4003	279
406.4 (DN400)	1W13500A6003	305
457.2 (DN450)	1W13500A8003	343
508 (DN500)	1W13500B0003	381
609.6 (DN600)	1W13500B4003	432

7120 tee
(3 x groove)



dimension		article no. painted orange	l1/l2/l3
33.7	(DN25)	171200010001	57
42.4	(DN32)	171200012001	70
48.3	(DN40)	171200015001	70
60.3	(DN50)	171200020001	83
73		171200025001	95
76.1	(DN65)	171200029001	95
88.9	(DN80)	171200030001	108
108		171200040001	127
114.3	(DN100)	171200045001	127
133		171200050001	140
139.7	(DN125)	171200052001	140
141.3		171200055001	140
159		171200060001	165
165.1		171200062001	165
168.3	(DN150)	171200065001	165
219.1	(DN200)	171200085001	197
273	(DN250)	1712000A1001	229
323.9	(DN300)	1712000A3001	254
355.6	(DN350)	1712000A4001	280
		article no. galvanized	
33.7	(DN25)	171200010003	57
42.4	(DN32)	171200012003	70
48.3	(DN40)	171200015003	70
60.3	(DN50)	171200025003	83
73		171200020003	95
76.1	(DN65)	171200029003	95
88.9	(DN80)	171200030003	108
108		171200040003	127
114.3	(DN100)	171200045003	127
133		171200050003	140
139.7	(DN125)	171200052003	140
141.3		171200055003	140
159		171200060003	165
165.1		171200062003	165
168.3	(DN150)	171200065003	165
219.1	(DN200)	171200085003	197
273	(DN250)	1712000A1003	229
323.9	(DN300)	1712000A3003	254
355.6	(DN350)	1712000A4003	280

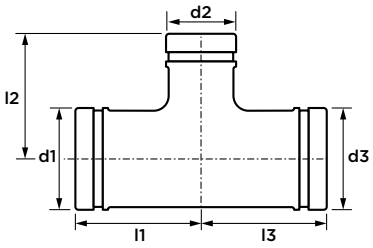
W120 tee (wrought)
(3 x groove)



dimension		article no. painted orange	l1/l2	z1/z2
355.6	(DN350)	1W12000A4001	279	279
406.4	(DN400)	1W12000A6001	305	305
457.2	(DN450)	1W12000A8001	343	343
508	(DN500)	1W12000B0001	381	381
609.6	(DN600)	1W12000B4001	432	432
		article no. galvanized		
355.6	(DN350)	1W12000A4003	279	279
406.4	(DN400)	1W12000A6003	305	305
457.2	(DN450)	1W12000A8003	343	343
508	(DN500)	1W12000B0003	381	381
609.6	(DN600)	1W12000B4003	432	432

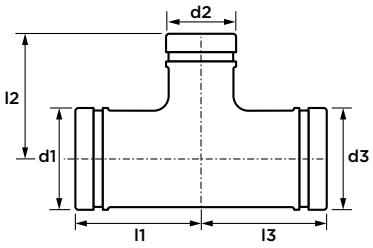
7121 tee reduced

(3 x groove)



dimension	article no. painted orange	l1/l2/l3
60.3 x 33.7 x 60.3	171212010001	83
60.3 x 42.4 x 60.3	171212012001	83
60.3 x 48.3 x 60.3	171212015001	83
73 x 33.7 x 73	171212510001	95
73 x 42.4 x 73	171212512001	95
73 x 48.3 x 73	171212515001	95
73 x 60.3 x 73	171212520001	95
76.1 x 33.7 x 76.1	171212910001	95
76.1 x 42.4 x 76.1	171212912001	95
76.1 x 48.3 x 76.1	171212915001	95
76.1 x 60.3 x 76.1	171212920001	95
88.9 x 33.7 x 88.9	171213010001	108
88.9 x 42.4 x 88.9	171213012001	108
88.9 x 48.3 x 88.9	171213015001	108
88.9 x 60.3 x 88.9	171213020001	108
88.9 x 73 x 88.9	171213025001	108
88.9 x 76.1 x 88.9	171213029001	108
114.3 x 33.7 x 114.3	171214510001	127
114.3 x 42.4 x 114.3	171214512001	127
114.3 x 48.3 x 114.3	171214515001	127
114.3 x 60.3 x 114.3	171214520001	127
114 x 73.3 x 114.3	171214525001	127
114.3 x 76.1 x 114.3	171214529001	127
114.3 x 88.9 x 114.3	171214530001	127
139.7 x 60.3 x 139.7	171215220001	140
139.7 x 73 x 139.7	171215225001	140
139.7 x 76.1 x 139.7	171215229001	140
139.7 x 88.9 x 139.7	171215230001	140
139.7 x 114.3 x 139.7	171215245001	140
141.3 x 60.3 x 141.3	171215520001	140
141.3 x 73 x 141.3	171215525001	140
141.3 x 76.1 x 141.3	171215529001	140
141.3 x 88.9 x 141.3	171215530001	140
141.3 x 114.3 x 141.3	171215545001	140
165.1 x 60.3 x 165.1	171216220001	165
165.1 x 76.1 x 165.1	171216229001	165
165.1 x 88.9 x 165.1	171216230001	165
165.1 x 114.3 x 165.1	171216245001	165
165.1 x 139.7 x 165.1	171216252001	165
168.3 x 60.3 x 168.3	171216520001	165
168.3 x 73 x 168.3	171216525001	165
168.3 x 76.1 x 168.3	171216529001	165
168.3 x 88.9 x 168.3	171216530001	165
168.3 x 114.3 x 168.3	171216545001	165
168.3 x 139.7 x 168.3	171216552001	165
219.1 x 60.3 x 219.1	171218520001	197
219.1 x 73 x 219.1	171218525001	197
219.1 x 76.1 x 219.1	171218529001	197
219.1 x 88.9 x 219.1	171218530001	197
219.1 x 114.3 x 219.1	171218545001	197
219.1 x 165.1 x 219.1	171218562001	197
219.1 x 168.3 x 219.1	171218565001	197
273 x 60.3 x 273	17121A120001	229
273 x 88.9 x 273	17121A130001	229
273 x 114.3 x 273	17121A145001	229
273 x 165.1 x 273	17121A162001	229
273 x 168.3 x 273	17121A165001	229
273 x 219.1 x 273	17121A185001	229
323.9 x 88.9 x 323.9	17121A330001	254
323.9 x 114.3 x 323.9	17121A345001	254
323.9 x 165.1 x 323.9	17121A362001	254
323.9 x 168.3 x 323.9	17121A365001	254
323.9 x 219.1 x 323.9	17121A385001	254
323.9 x 273 x 323.9	17121A3A1001	254

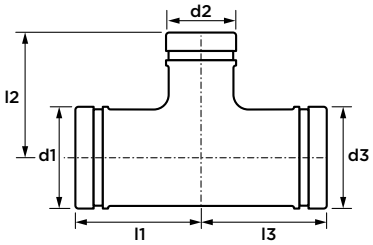
7121 tee reduced
(3 x groove)



dimension	article no. galvanized	l1/l2/l3
60.3 x 33.7 x 60.3	171212010003	83
60.3 x 42.4 x 60.3	171212012003	83
60.3 x 48.3 x 60.3	171212015003	83
73 x 33.7 x 73	171212510003	95
73 x 42.4 x 73	171212512003	95
73 x 48.3 x 73	171212515003	95
73 x 60.3 x 73	171212520003	95
76.1 x 33.7 x 76.1	171212910003	95
76.1 x 42.4 x 76.1	171212912003	95
76.1 x 48.3 x 76.1	171212915003	95
76.1 x 60.3 x 76.1	171212920003	95
88.9 x 33.7 x 88.9	171213010003	108
88.9 x 42.4 x 88.9	171213012003	108
88.9 x 48.3 x 88.9	171213015003	108
88.9 x 60.3 x 88.9	171213020003	108
88.9 x 73 x 88.9	171213025003	108
88.9 x 76.1 x 88.9	171213029003	108
114.3 x 33.7 x 114.3	171214510003	127
114.3 x 42.4 x 114.3	171214512003	127
114.3 x 48.3 x 114.3	171214515003	127
114.3 x 60.3 x 114.3	171214520003	127
114 x 73.3 x 114.3	171214525003	127
114.3 x 76.1 x 114.3	171214529003	127
114.3 x 88.9 x 114.3	171214530003	127
139.7 x 60.3 x 139.7	171215220003	140
139.7 x 73 x 139.7	171215225003	140
139.7 x 76.1 x 139.7	171215229003	140
139.7 x 88.9 x 139.7	171215230003	140
139.7 x 114.3 x 139.7	171215245003	140
141.3 x 60.3 x 141.3	171215520003	140
141.3 x 73 x 141.3	171215525003	140
141.3 x 76.1 x 141.3	171215529003	140
141.3 x 88.9 x 141.3	171215530003	140
141.3 x 114.3 x 141.3	171215545003	140
165.1 x 60.3 x 165.1	171216220003	165
165.1 x 76.1 x 165.1	171216229003	165
165.1 x 88.9 x 165.1	171216230003	165
165.1 x 114.3 x 165.1	171216245003	165
165.1 x 139.7 x 165.1	171216252003	165
168.3 x 60.3 x 168.3	171216520003	165
168.3 x 73 x 168.3	171216525003	165
168.3 x 76.1 x 168.3	171216529003	165
168.3 x 88.9 x 168.3	171216530003	165
168.3 x 114.3 x 168.3	171216545003	165
168.3 x 139.7 x 168.3	171216552003	165
219.1 x 60.3 x 219.1	171218520003	197
219.1 x 73 x 219.1	171218525003	197
219.1 x 76.1 x 219.1	171218529003	197

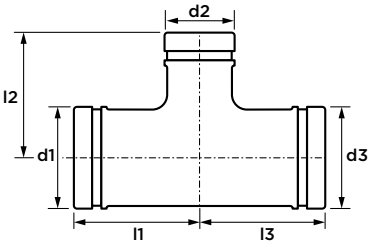
dimension	article no. galvanized	l1/l2/l3
219.1 x 88.9 x 219.1	171218530003	197
219.1 x 114.3 x 219.1	171218545003	197
219.1 x 165.1 x 219.1	171218562003	197
219.1 x 168.3 x 219.1	171218565003	197
273 x 60.3 x 273	17121A120003	229
273 x 88.9 x 273	17121A130003	229
273 x 114.3 x 273	17121A145003	229
273 x 165.1 x 273	17121A162003	229
273 x 168.3 x 273	17121A165003	229
273 x 219.1 x 273	17121A185003	229
323.9 x 88.9 x 323.9	17121A330003	254
323.9 x 114.3 x 323.9	17121A345003	254
324 x 165.1 x 324	17121A362003	254
324 x 168.3 x 324	17121A365003	254
324 x 219.1 x 324	17121A385003	254
324 x 273 x 324	17121A3A1003	254

W121 tee reduced (wrought)
(3 x groove)



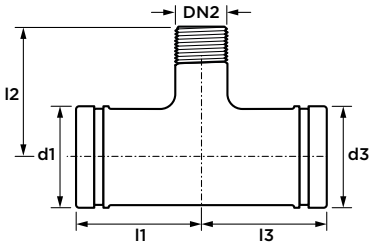
dimension	article no. painted orange	l1/l3	l2
355.6 x 168.3 x 355.6	1W121A465001	279	238
355.6 x 219.1 x 355.6	1W121A485001	279	248
355.6 x 273 x 355.6	1W121A4A1001	279	257
355.6 x 323.9 x 355.6	1W121A4A3001	279	270
406.4 x 168.3 x 406.4	1W121A665001	305	264
406.4 x 219.1 x 406.4	1W121A685001	305	273
406.4 x 273 x 406.4	1W121A6A1001	305	283
406.4 x 323.9 x 406.4	1W121A6A3001	305	295
406.4 x 355.6 x 406.4	1W121A6A4001	305	305
457.2 x 168.3 x 457.2	1W121A865001	343	289
457.2 x 219.1 x 457.2	1W121A885001	343	298
457.2 x 273 x 457.2	1W121A8A1001	343	308
457.2 x 323.9 x 457.2	1W121A8A3001	343	321
457.2 x 355.6 x 457.2	1W121A8A4001	343	330
457.2 x 406.4 x 457.2	1W121A8A6001	343	330
508 x 168.3 x 508	1W121B065001	381	314
508 x 219.1 x 508	1W121B085001	381	324
508 x 273 x 508	1W121B0A1001	381	333
508 x 323.9 x 508	1W121B0A3001	381	346
508 x 355.6 x 508	1W121B0A4001	381	356
508 x 406.4 x 508	1W121B0A6001	381	356
508 x 457.2 x 508	1W121B0A8001	381	368
609.6 x 168.3 x 609.6	1W121B465001	432	365
609.6 x 219.1 x 609.6	1W121B485001	432	375
609.6 x 273 x 609.6	1W121B4A1001	432	384
609.6 x 323.9 x 609.6	1W121B4A3001	432	397
609.6 x 355.6 x 609.6	1W121B4A4001	432	406
609.6 x 406.4 x 609.6	1W121B4A6001	432	406
609.6 x 457.2 x 609.6	1W121B4A8001	432	419
609.6 x 508 x 609.6	1W121B4B0001	432	432

W121 tee reduced (wrought)
(3 x groove)



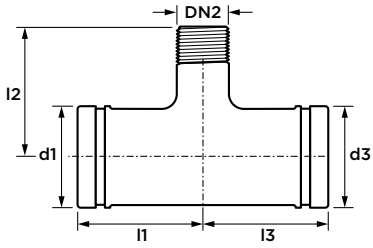
dimension	article no. galvanized	l1/l3	l2
355.6 x 168.3 x 355.6	1W121A465003	279	238
355.6 x 219.1 x 355.6	1W121A485003	279	248
355.6 x 273 x 355.6	1W121A4A1003	279	257
355.6 x 323.9 x 355.6	1W121A4A3003	279	270
406.4 x 168.3 x 406.4	1W121A665003	305	264
406.4 x 219.1 x 406.4	1W121A685003	305	273
406.4 x 273 x 406.4	1W121A6A1003	305	283
406.4 x 323.9 x 406.4	1W121A6A3003	305	295
406.4 x 355.6 x 406.4	1W121A6A4003	305	305
457.2 x 168.3 x 457.2	1W121A865003	343	289
457.2 x 219.1 x 457.2	1W121A885003	343	298
457.2 x 273 x 457.2	1W121A8A1003	343	308
457.2 x 323.9 x 457.2	1W121A8A3003	343	321
457.2 x 355.6 x 457.2	1W121A8A4003	343	330
457.2 x 406.4 x 457.2	1W121A8A6003	343	330
508 x 168.3 x 508	1W121B065003	381	314
508 x 219.1 x 508	1W121B085003	381	324
508 x 273 x 508	1W121B0A1003	381	333
508 x 323.9 x 508	1W121B0A3003	381	346
508 x 355.6 x 508	1W121B0A4003	381	356
508 x 406.4 x 508	1W121B0A6003	381	356
508 x 457.2 x 508	1W121B0A8003	381	368
609.6 x 168.3 x 609.6	1W121B465003	432	365
609.6 x 219.1 x 609.6	1W121B485003	432	375
609.6 x 273 x 609.6	1W121B4A1003	432	384
609.6 x 323.9 x 609.6	1W121B4A3003	432	397
609.6 x 355.6 x 609.6	1W121B4A4003	432	406
609.6 x 406.4 x 609.6	1W121B4A6003	432	406
609.6 x 457.2 x 609.6	1W121B4A8003	432	419
609.6 x 508 x 609.6	1W121B4B0003	432	432

7121M tee branch male
(groove x ISO7 male thread x groove)



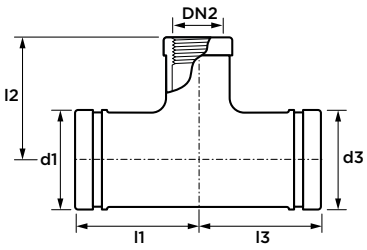
dimension	article no. painted orange	l1//l3	l2
60.3 x R1 x 60.3	1121M2010008	83	64
60.3 x R1¼ x 60.3	1121M2012008	83	61
60.3 x R1½ x 60.3	1121M2015008	83	61
76.1 x R1 x 76.1	1121M2910008	95	76
76.1 x R1¼ x 76.1	1121M2912008	95	73
76.1 x R1½ x 76.1	1121M2915008	95	73
76.1 x R2 x 76.1	1121M2920008	95	69
88.9 x R1 x 88.9	1121M3010008	108	89
88.9 x R1¼ x 88.9	1121M3012008	108	86
88.9 x R1½ x 88.9	1121M3015008	108	86
88.9 x R2 x 88.9	1121M3020008	108	82
88.9 x R2½ x 88.9	1121M3025008	108	78
114.3 x R1 x 114.3	1121M4510008	127	108
114.3 x R1¼ x 114.3	1121M4512008	127	105
114.3 x R1½ x 114.3	1121M4515008	127	105
114.3 x R2 x 114.3	1121M4520008	127	101
114.3 x R2½ x 114.3	1121M4525008	127	97
114.3 x R3 x 114.3	1121M4530008	127	93
139.7 x R2 x 139.7	1121M5220008	140	114
139.7 x R2½ x 139.7	1121M5225008	140	110
139.7 x R3 x 139.7	1121M5230008	140	106
139.7 x R4 x 139.7	1121M5245008	140	100
165.1 x R2 x 165.1	1121M6220008	165	139
165.1 x R2½ x 165.1	1121M6225008	165	135
165.1 x R3 x 165.1	1121M6230008	165	131
165.1 x R4 x 165.1	1121M6245008	165	125
168.3 x R2 x 168.3	1121M6520008	165	139
168.3 x R2½ x 168.3	1121M6525008	165	135
168.3 x R3 x 168.3	1121M6530008	165	131
168.3 x R4 x 168.3	1121M6545008	165	125
219.1 x R2 x 219.1	1121M8520008	197	171
219.1 x R2½ x 219.1	1121M8525008	197	167
219.1 x R3 x 219.1	1121M8530008	197	163
219.1 x R4 x 219.1	1121M8545008	197	157

7121M tee branch male
(groove x ISO7 male thread x groove)



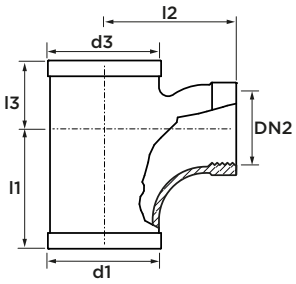
dimension	article no. galvanized	l1/l3	l2
60.3 x R1 x 60.3	1121M2010004	83	64
60.3 x R1¼ x 60.3	1121M2012004	83	61
60.3 x R1½ x 60.3	1121M2015004	83	61
76.1 x R1 x 76.1	1121M2910004	95	76
76.1 x R1¼ x 76.1	1121M2912004	95	73
76.1 x R1½ x 76.1	1121M2915004	95	73
76.1 x R2 x 76.1	1121M2920004	95	69
88.9 x R1 x 88.9	1121M3010004	108	89
88.9 x R1¼ x 88.9	1121M3012004	108	86
88.9 x R1½ x 88.9	1121M3015004	108	86
88.9 x R2 x 88.9	1121M3020004	108	82
88.9 x R2½ x 88.9	1121M3025004	108	78
114.3 x R1 x 114.3	1121M4510004	127	108
114.3 x R1¼ x 114.3	1121M4512004	127	105
114.3 x R1½ x 114.3	1121M4515004	127	105
114.3 x R2 x 114.3	1121M4520004	127	101
114.3 x R2½ x 114.3	1121M4525004	127	97
114.3 x R3 x 114.3	1121M4530004	127	93
139.7 x R2 x 139.7	1121M5220004	140	114
139.7 x R2½ x 139.7	1121M5225004	140	110
139.7 x R3 x 139.7	1121M5230004	140	106
139.7 x R4 x 139.7	1121M5245004	140	100
165.1 x R2 x 165.1	1121M6220004	165	139
165.1 x R2½ x 165.1	1121M6225004	165	135
165.1 x R3 x 165.1	1121M6230004	165	131
165.1 x R4 x 165.1	1121M6245004	165	125
168.3 x R2 x 168.3	1121M6520004	165	139
168.3 x R2½ x 168.3	1121M6525004	165	135
168.3 x R3 x 168.3	1121M6530004	165	131
168.3 x R4 x 168.3	1121M6545004	165	125
219.1 x R2 x 219.1	1121M8520004	197	171
219.1 x R2½ x 219.1	1121M8525004	197	167
219.1 x R3 x 219.1	1121M8530004	197	163
219.1 x R4 x 219.1	1121M8545004	197	157

7121F tee branch female
(groove x female thread x groove)



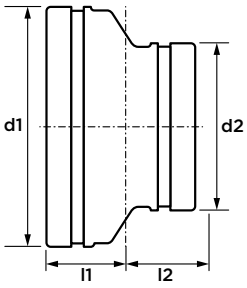
dimension	article no. painted orange	l1//l3	l2
60.3 x Rp1½ x 60.3	1121F2015013	83	72
76.1 x Rp1 x 76.1	1121F2910013	95	80
76.1 x Rp1¼ x 76.1	1121F2912013	95	78
76.1 x Rp1½ x 76.1	1121F2915013	95	77
76.1 x Rp2 x 76.1	1121F2920013	95	75
88.9 x Rp½ x 88.9	1121F3005013	108	97
88.9 x Rp ¾ x 88.9	1121F3007013	108	95
88.9 x Rp1 x 88.9	1121F3010013	108	93
88.9 x Rp1¼ x 88.9	1121F3012013	108	91
88.9 x Rp1½ x 88.9	1121F3015013	108	90
88.9 x Rp2 x 88.9	1121F3020013	108	88
88.9 x Rp2½ x 88.9	1121F3029013	108	85
114.3 x Rp1½ x 114.3	1121F4515013	127	109
114.3 x Rp2 x 114.3	1121F4520013	127	107
114.3 x Rp2½ x 114.3	1121F4529013	127	104
139.7 x Rp2 x 139.7	1121F5220013	140	120
165.1 x Rp2 x 165.1	1121F6220013	165	145
168.3 x Rp2 x 168.3	1121F6520013	165	145
	article no. galvanized		
60.3 x Rp1½ x 60.3	1121F2015014	83	72
76.1 x Rp1 x 76.1	1121F2910014	95	80
76.1 x Rp1¼ x 76.1	1121F2912014	95	78
76.1 x Rp1½ x 76.1	1121F2915014	95	77
76.1 x Rp2 x 76.1	1121F2920014	95	75
88.9 x Rp½ x 88.9	1121F3005014	108	97
88.9 x Rp ¾ x 88.9	1121F3007014	108	95
88.9 x Rp1 x 88.9	1121F3010014	108	93
88.9 x Rp1¼ x 88.9	1121F3012014	108	91
88.9 x Rp1½ x 88.9	1121F3015014	108	90
88.9 x Rp2 x 88.9	1121F3020014	108	88
88.9 x Rp2½ x 88.9	1121F3029014	108	85
114.3 x Rp1½ x 114.3	1121F4515014	127	109
114.3 x Rp2 x 114.3	1121F4520014	127	107
114.3 x Rp2½ x 114.3	1121F4529014	127	104
139.7 x Rp2 x 139.7	1121F5220014	140	120
165.1 x Rp2 x 165.1	1121F6220014	165	145
168.3 x Rp2 x 168.3	1121F6520014	165	145

7133 pitcher tee
(3 x groove)



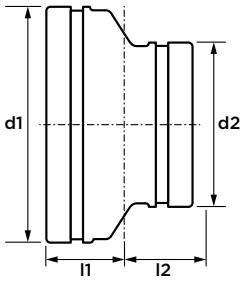
dimension	article no.	l1/z1	l2	z2	l3/z3	d2
88.9 x Rp2½	171333029007	121	121	98	69	Rp2½
114.3 x Rc2½	171334529004	121	133	110	69	Rp2½

7150 reducer
(2 x groove)



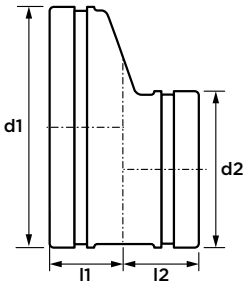
dimension	article no. painted orange	l1/l2
42.4 x 33.7	171501210001	32
48.3 x 33.7	171501510001	32
48.3 x 42.4	171501512001	32
60.3 x 33.7	171502010001	32
60.3 x 42.4	171502012001	32
60.3 x 48.3	171502015001	32
73 x 42.4	171502512001	32
73 x 60.3	171502520001	32
73 x 48.3	171502515001	32
76.1 x 42.4	171502912001	32
76.1 x 60.3	171502920001	32
76.1 x 48.3	171502915001	32
88.9 x 42.4	171503012001	32
88.9 x 48.3	171503015001	32
88.9 x 60.3	171503020001	32
88.9 x 73	171503025001	32
88.9 x 76.1	171503029001	32
114.3 x 48.3	171504515001	38
114.3 x 60.3	171504520001	38
114.3 x 73	171504525001	38
114.3 x 76.1	171504529001	38
114.3 x 88.9	171504530001	38
139.7 x 88.9	171505230001	45
139.7 x 114.3	171505245001	45
141.3 x 88.9	171505530001	45
141.3 x 114.3	171505545001	45
165.1 x 60.3	171506220001	51
165.1 x 76.1	171506229001	51
165.1 x 88.9	171506230001	51
165.1 x 114.3	171506245001	51
165.1 x 139.7	171506252001	51
168.3 x 60.3	171506520001	51
168.3 x 73	171506525001	51
168.3 x 76.1	171506529001	51
168.3 x 88.9	171506530001	51
168.3 x 114.3	171506545001	51
168.3 x 139.7	171506552001	51
168.3 x 141.3	171506555001	51
219.1 x 88.9	171508530001	64
219.1 x 114.3	171508545001	64
219.1 x 165.1	171508562001	64
219.1 x 168.3	171508565001	64
273 x 114.3	17150A145001	76
273 x 141.3	17150A155001	76
273 x 165.1	17150A162001	76
273 x 168.3	17150A165001	76
273 x 219.1	17150A185001	76
323.9 x 168.3	17150A365001	79
323.9 x 219.1	17150A385001	79
323.9 x 273	17150A3A1001	79

7150 reducer
(2 x groove)



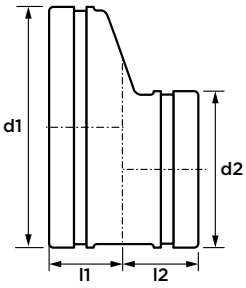
dimension	article no. galvanized	l1/l2
42.4 x 33.7	171501210003	32
48.3 x 33.7	171501510003	32
48.3 x 42.4	171501512003	32
60.3 x 33.7	171502010003	32
60.3 x 42.4	171502012003	32
60.3 x 48.3	171502015003	32
73 x 42.4	171502512003	32
73 x 60.3	171502520003	32
73 x 48.3	171502515003	32
76.1 x 42.4	171502912003	32
76.1 x 60.3	171502920003	32
76.1 x 48.3	171502915003	32
88.9 x 42.4	171503012003	32
88.9 x 48.3	171503015003	32
88.9 x 60.3	171503020003	32
88.9 x 73	171503025003	32
88.9 x 76.1	171503029003	32
114.3 x 48.3	171504515003	38
114.3 x 60.3	171504520003	38
114.3 x 73	171504525003	38
114.3 x 76.1	171504529003	38
114.3 x 88.9	171504530003	38
139.7 x 88.9	171505230003	45
139.7 x 114.3	171505245003	45
141.3 x 88.9	171505530003	45
141.3 x 114.3	171505545003	45
165.1 x 60.3	171506220003	51
165.1 x 76.1	171506229003	51
165.1 x 88.9	171506230003	51
165.1 x 114.3	171506245003	51
165.1 x 139.7	171506252003	51
168.3 x 60.3	171506520003	51
168.3 x 73	171506525003	51
168.3 x 76.1	171506529003	51
168.3 x 88.9	171506530003	51
168.3 x 114.3	171506545003	51
168.3 x 139.7	171506552003	51
168.3 x 141.3	171506555003	51
219.1 x 88.9	171508530003	64
219.1 x 114.3	171508545003	64
219.1 x 165.1	171508562003	64
219.1 x 168.3	171508565003	64
273 x 114.3	17150A145003	76
273 x 141.3	17150A155003	76
273 x 165.1	17150A162003	76
273 x 168.3	17150A165003	76
273 x 219.1	17150A185003	76
323.9 x 168.3	17150A365003	79
323.9 x 219.1	17150A385003	79
323.9 x 273	17150A3A1003	79

7151 reducer (eccentric)
(2 x groove)



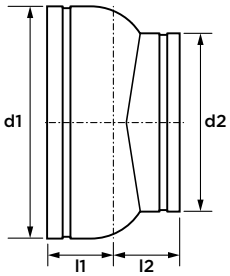
dimension	article no. painted orange	l1/l2
73 x 60.3	171512520001	45
76.1 x 60.3	171512920001	45
88.9 x 60.3	171513020001	45
88.9 x 73	171513025001	45
88.9 x 76.1	171513029001	45
114.3 x 60.3	171514520001	51
114.3 x 73	171514525001	51
114.3 x 76.1	171514529001	51
114.3 x 88.9	171514530001	51
139.7 x 88.9	171515230001	51
139.7 x 114.3	171515245001	51
165.1 x 60.3	171516220001	51
165.1 x 88.9	171516230001	51
165.1 x 114.3	171516245001	51
165.1 x 139.7	171516252001	51
168.3 x 60.3	171516520001	51
168.3 x 88.9	171516530001	51
168.3 x 114.3	171516545001	51
168.3 x 139.7	171516552001	51
219.1 x 114.3	171518545001	64
219.1 x 165.1	171518562001	64
219.1 x 168.3	171518565001	64
273 x 114.3	17151A145001	76
273 x 165.1	17151A162001	76
273 x 168.3	17151A165001	76
273 x 219.1	17151A185001	76
323.9 x 219.1	17151A385001	89
323.9 x 273	17151A3A1001	89

7151 reducer (eccentric)
(2 x groove)



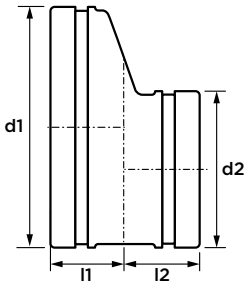
dimension	article no. galvanized	l1/l2
73 x 60.3	171512520003	45
76.1 x 60.3	171512920003	45
88.9 x 60.3	171513020003	45
88.9 x 73	171513025003	45
88.9 x 76.1	171513029003	45
114.3 x 60.3	171514520003	51
114.3 x 73	171514525003	51
114.3 x 76.1	171514529003	51
114.3 x 88.9	171514530003	51
139.7 x 88.9	171515230003	51
139.7 x 114.3	171515245003	51
165.1 x 60.3	171516220003	51
165.1 x 88.9	171516230003	51
165.1 x 114.3	171516245003	51
165.1 x 139.7	171516252003	51
168.3 x 60.3	171516520003	51
168.3 x 88.9	171516530003	51
168.3 x 114.3	171516545003	51
168.3 x 139.7	171516552003	51
219.1 x 114.3	171518545003	64
219.1 x 165.1	171518562003	64
219.1 x 168.3	171518565003	64
273 x 114.3	17151A145003	76
273 x 165.1	17151A162003	76
273 x 168.3	17151A165003	76
273 x 219.1	17151A185003	76
323.9 x 219.1	17151A385003	89
323.9 x 273	17151A3A1003	89

W150 reducer (wrought)
(2 x groove)



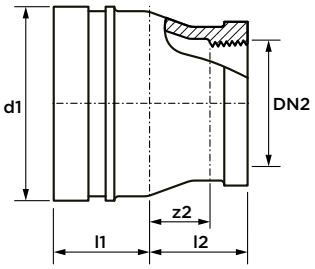
dimension	article no. painted orange	l1/l2
355.6 x 168.3	1W150A465001	165
355.6 x 219.1	1W150A485001	165
355.6 x 273	1W150A4A1001	165
355.6 x 323.9	1W150A4A3001	165
406.4 x 219.1	1W150A685001	178
406.4 x 273	1W150A6A1001	178
406.4 x 323.9	1W150A6A3001	178
406.4 x 355.6	1W150A6A4001	178
457.2 x 273	1W150A8A1001	191
457.2 x 323.9	1W150A8A3001	192
457.2 x 355.6	1W150A8A4001	193
457.2 x 406.4	1W150A8A6001	194
508 x 323.9	1W150B0A3001	254
508 x 355.6	1W150B0A4001	254
508 x 406.4	1W150B0A6001	254
508 x 457.2	1W150B0A8001	254
609.6 x 406.4	1W150B4A6001	254
609.6 x 457.2	1W150B4A8001	254
609.6 x 508	1W150B4B0001	254
	article no. galvanized	
355.6 x 168.3	1W150A465003	165
355.6 x 219.1	1W150A485003	165
355.6 x 273	1W150A4A1003	165
355.6 x 323.9	1W150A4A3003	165
406.4 x 219.1	1W150A685003	178
406.4 x 273	1W150A6A1003	178
406.4 x 323.9	1W150A6A3003	178
406.4 x 355.6	1W150A6A4003	178
457.2 x 273	1W150A8A1003	191
457.2 x 323.9	1W150A8A3003	192
457.2 x 355.6	1W150A8A4003	193
457.2 x 406.4	1W150A8A6003	194
508 x 323.9	1W150B0A3003	254
508 x 355.6	1W150B0A4003	254
508 x 406.4	1W150B0A6003	254
508 x 457.2	1W150B0A8003	254
609.6 x 406.4	1W150B4A6003	254
609.6 x 457.2	1W150B4A8003	254
609.6 x 508	1W150B4B0003	254

W151 reducer (eccentric, wrought)
(2 x groove)



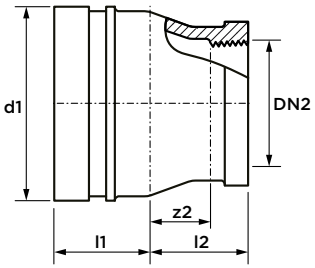
dimension	article no. painted orange	l1/l2
355.6 x 168.3	1W151A465001	165
355.6 x 219.1	1W151A485001	165
355.6 x 273	1W151A4A1001	165
355.6 x 323.9	1W151A4A3001	165
406.4 x 219.1	1W151A685001	178
406.4 x 273	1W151A6A1001	178
406.4 x 323.9	1W151A6A3001	178
406.4 x 355.6	1W151A6A4001	178
457.2 x 273	1W151A8A1001	191
457.2 x 323.9	1W151A8A3001	192
457.2 x 355.6	1W151A8A4001	193
457.2 x 406.4	1W151A8A6001	194
508 x 323.9	1W151B0A3001	254
508 x 355.6	1W151B0A4001	254
508 x 406.4	1W151B0A6001	254
508 x 457.2	1W151B0A8001	254
609.6 x 406.4	1W151B4A6001	254
609.6 x 457.2	1W151B4A8001	254
609.6 x 508	1W151B4B0001	254
	article no. galvanized	
355.6 x 168.3	1W151A465003	165
355.6 x 219.1	1W151A485003	165
355.6 x 273	1W151A4A1003	165
355.6 x 323.9	1W151A4A3003	165
406.4 x 219.1	1W151A685003	178
406.4 x 273	1W151A6A1003	178
406.4 x 323.9	1W151A6A3003	178
406.4 x 355.6	1W151A6A4003	178
457.2 x 273	1W151A8A1003	191
457.2 x 323.9	1W151A8A3003	192
457.2 x 355.6	1W151A8A4003	193
457.2 x 406.4	1W151A8A6003	194
508 x 323.9	1W151B0A3003	254
508 x 355.6	1W151B0A4003	254
508 x 406.4	1W151B0A6003	254
508 x 457.2	1W151B0A8003	254
609.6 x 406.4	1W151B4A6003	254
609.6 x 457.2	1W151B4A8003	254
609.6 x 508	1W151B4B0003	254

7150F adapter
(groove x female thread)



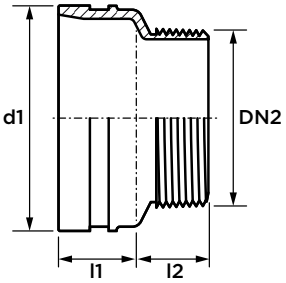
dimension	article no. painted orange	l1/l2	z2
48.3 x Rp1	1150F1510013	32	17
60.3 x Rp1	1150F2010013	32	17
60.3 x Rp1¼	1150F2012013	32	15
60.3 x Rp1½	1150F2015013	32	14
76.1 x Rp1	1150F2910013	32	17
76.1 x Rp1¼	1150F2912013	32	15
76.1 x Rp1½	1150F2915013	32	14
76.1 x Rp2	1150F2920013	32	12
88.9 x Rp1	1150F3010013	32	17
88.9 x Rp1¼	1150F3012013	32	15
88.9 x Rp1½	1150F3015013	32	14
88.9 x Rp2	1150F3020013	32	12
88.9 x Rp2½	1150F3025013	32	9
114.3 x Rp1¼	1150F4512013	38	21
114.3 x Rp1½	1150F4515013	38	20
114.3 x Rp2	1150F4520013	38	18
114.3 x Rp2½	1150F4525013	38	15
139.7 x Rp1½	1150F5215013	45	27
165.1 x Rp1½	1150F6215013	51	33
165.1 x Rp2	1150F6220013	51	31
165.1 x Rp2½	1150F6225013	51	28
165.1 x Rp4	1150F6245013	51	23
168.3 x Rp1½	1150F6515013	51	33
168.3 x Rp2	1150F6520013	51	31
168.3 x Rp2½	1150F6525013	51	28
168.3 x Rp4	1150F6545013	51	23

7150F adapter
(groove x female thread)



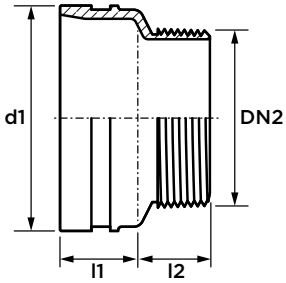
dimension	article no. galvanized	l1/l2	z2
48.3 x Rp1	1150F1510014	32	17
60.3 x Rp1	1150F2010014	32	17
60.3 x Rp1¼	1150F2012014	32	15
60.3 x Rp1½	1150F2015014	32	14
76.1 x Rp1	1150F2910014	32	17
76.1 x Rp1¼	1150F2912014	32	15
76.1 x Rp1½	1150F2915014	32	14
76.1 x Rp2	1150F2920014	32	12
88.9 x Rp1	1150F3010014	32	17
88.9 x Rp1¼	1150F3012014	32	15
88.9 x Rp1½	1150F3015014	32	14
88.9 x Rp2	1150F3020014	32	12
88.9 x Rp2½	1150F3025014	32	9
114.3 x Rp1¼	1150F4512014	38	21
114.3 x Rp1½	1150F4515014	38	20
114.3 x Rp2	1150F4520014	38	18
114.3 x Rp2½	1150F4525014	38	15
139.7 x Rp1½	1150F5215014	45	27
165.1 x Rp1½	1150F6215014	51	33
165.1 x Rp2	1150F6220014	51	31
165.1 x Rp2½	1150F6225014	51	28
165.1 x Rp4	1150F6245014	51	23
168.3 x Rp1½	1150F6515014	51	33
168.3 x Rp2	1150F6520014	51	31
168.3 x Rp2½	1150F6525014	51	28
168.3 x Rp4	1150F6545014	51	23

7150M adapter
(groove x male thread)



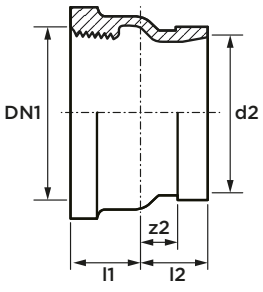
dimension	article no. painted orange	l1/l2
48.3 x R1	1150M1510007	32
60.3 x R1	1150M2010007	32
60.3 x R1¼	1150M2012007	32
60.3 x R1½	1150M2015007	32
76.1 x R1	1150M2910007	32
76.1 x R1¼	1150M2912007	32
76.1 x R1½	1150M2915007	32
76.1 x R2	1150M2920007	32
88.9 x R1	1150M3010007	32
88.9 x R1¼	1150M3012007	32
88.9 x R1½	1150M3015007	32
88.9 x R2	1150M3020007	32
88.9 x R2½	1150M3025007	32
114.3 x R1¼	1150M4512007	38
114.3 x R1½	1150M4515007	38
114.3 x R2	1150M4520007	38
114.3 x R2½	1150M4525007	38
139.7 x R1½	1150M5215007	45
165.1 x R1½	1150M6215007	51
165.1 x R2	1150M6220007	51
165.1 x R2½	1150M6225007	51
165.1 x R4	1150M6245007	51
168.3 x R1½	1150M6515007	51
168.3 x R2	1150M6520007	51
168.3 x R2½	1150M6525007	51
168.3 x R4	1150M6545007	51

7150M adapter
(groove x male thread)



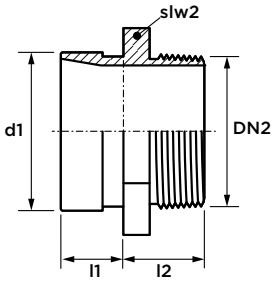
dimension	article no. galvanized	l1/l2
48.3 x R1	1150M1510004	32
60.3 x R1	1150M2010004	32
60.3 x R1¼	1150M2012004	32
60.3 x R1½	1150M2015004	32
76.1 x R1	1150M2910004	32
76.1 x R1¼	1150M2912004	32
76.1 x R1½	1150M2915004	32
76.1 x R2	1150M2920004	32
88.9 x R1	1150M3010004	32
88.9 x R1¼	1150M3012004	32
88.9 x R1½	1150M3015004	32
88.9 x R2	1150M3020004	32
88.9 x R2½	1150M3025004	32
114.3 x R1¼	1150M4512004	38
114.3 x R1½	1150M4515004	38
114.3 x R2	1150M4520004	38
114.3 x R2½	1150M4525004	38
139.7 x R1½	1150M5215004	45
165.1 x R1½	1150M6215004	51
165.1 x R2	1150M6220004	51
165.1 x R2½	1150M6225004	51
165.1 x R4	1150M6245004	51
168.3 x R1½	1150M6515004	51
168.3 x R2	1150M6520004	51
168.3 x R2½	1150M6525004	51
168.3 x R4	1150M6545004	51

54 adapter
(groove x female thread)



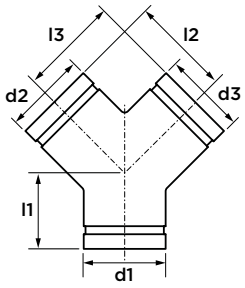
dimension	article no. painted orange	l1/l2	z2
48.3 x Rp1½	100541515006	30	12
60.3 x Rp2	100542020006	32	12
76.1 x Rp2½	100542929006	35	12
88.9 x Rp3	100543030006	35	10
114.3 x Rp4	100544545006	42	14
	article no. galvanized		
48.3 x Rp1½	100541515007	30	12
60.3 x Rp2	100542020007	32	12
76.1 x Rp2½	100542929007	35	12
88.9 x Rp3	100543030007	35	10
114.3 x Rp4	100544545007	42	14

55 adapter
(groove x male thread)



dimension	article no. painted orange	l1/l2	slw2
48.3 x R1½	100551515007	32	54
60.3 x R2	100552020007	32	64
76.1 x R2½	100552925007	38	80
88.9 x R3	100553030007	40	90
	article no. galvanized		
48.3 x R1½	100551515003	32	54
60.3 x R2	100552020003	32	64
76.1 x R2½	100552925003	38	80
88.9 x R3	100553030003	40	90

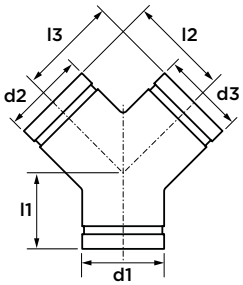
7137 true Y
(3 x groove)



dimension		article no. painted orange	l1	l2/l3
60.3	(DN50)	171370020001	83	70
73		171370025001	95	76
88.9	(DN80)	171370030001	108	83
114.3	(DN100)	171370045001	127	95
141.3		171370055001	140	102
168.3	(DN150)	171370065001	165	114
219.1	(DN200)	171370085001	197	152
273	(DN250)	1713700A1001	229	165
323.9	(DN300)	1713700A3001	254	178
		article no. galvanized		
60.3	(DN50)	171370020003	83	70
73		171370025003	95	76
88.9	(DN80)	171370030003	108	83
114.3	(DN100)	171370045003	127	95
141.3		171370055003	140	102
168.3	(DN150)	171370065003	165	114
219.1	(DN200)	171370085003	197	152
273	(DN250)	1713700A1003	229	165
323.9	(DN300)	1713700A3003	254	178

W137 true Y (wrought)

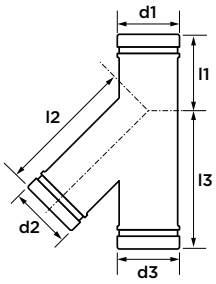
(3 x groove)



dimension		article no. painted orange	l1	l2/l3
355.6	(DN350)	1W13700A4001	191	279
406.4	(DN400)	1W13700A6001	203	305
457.2	(DN450)	1W13700A8001	216	343
508	(DN500)	1W13700B0001	229	381
609.6	(DN600)	1W13700B4001	254	432
		article no. galvanized		
355.6	(DN350)	1W13700A4003	191	279
406.4	(DN400)	1W13700A6003	203	305
457.2	(DN450)	1W13700A8003	216	343
508	(DN500)	1W13700B0003	229	381
609.6	(DN600)	1W13700B4003	254	432

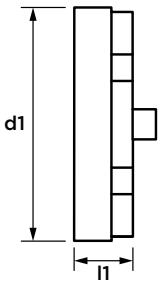
7130 tee 45° lateral

(3 x groove)



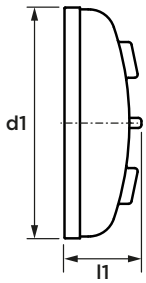
dimension		article no. painted orange	l1	l2/l3
60.3	(DN50)	171300020001	70	178
73		171300025001	76	197
76.1	(DN65)	171300029001	76	197
88.9	(DN80)	171300030001	83	216
114.3	(DN100)	171300045001	95	267
139.7	(DN125)	171300052001	102	318
141.3		171300055001	102	318
165.1		171300062001	114	356
168.3	(DN150)	171300065001	114	356
219.1	(DN200)	171300085001	152	457
273	(DN250)	1713000A1001	165	521
323.9	(DN300)	1713000A3001	178	584
		article no. galvanized		
60.3	(DN50)	171300020003	70	178
73		171300025003	76	197
76.1	(DN65)	171300029003	76	197
88.9	(DN80)	171300030003	83	216
114.3	(DN100)	171300045003	95	267
139.7	(DN125)	171300052003	102	318
141.3		171300055003	102	318
165.1		171300062003	114	356
168.3	(DN150)	171300065003	114	356
219.1	(DN200)	171300085003	152	457
273	(DN250)	1713000A1003	165	521
323.9	(DN300)	1713000A3003	178	584

7160 end cap
(groove)



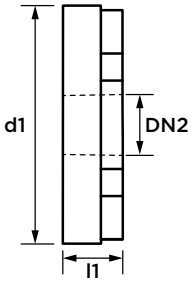
dimension		article no. painted red	l1
33.7	(DN25)	171600010002	22
42.4	(DN32)	171600012002	25
48.3	(DN40)	171600015002	25
60.3	(DN50)	171600020002	25
73		171600025002	25
76.1	(DN65)	171600029002	25
88.9	(DN80)	171600030002	25
108		171600040002	25
114.3	(DN100)	171600045002	25
133		171600050002	25
139.7	(DN125)	171600052002	25
141.3		171600055002	25
159		171600060002	25
165.1		171600062002	25
168.3	(DN150)	171600065002	25
219.1	(DN200)	171600085002	30
273	(DN250)	1716000A1002	30
323.9	(DN300)	1716000A3002	32
		article no. galvanized	
33.7	(DN25)	171600010003	22
42.4	(DN32)	171600012003	25
48.3	(DN40)	171600015003	25
60.3	(DN50)	171600020003	25
73		171600025003	25
76.1	(DN65)	171600029003	25
88.9	(DN80)	171600030003	25
108		171600040003	25
114.3	(DN100)	171600045003	25
133		171600050003	25
139.7	(DN125)	171600052003	25
141.3		171600055003	25
159		171600060003	25
165.1		171600062003	25
168.3	(DN150)	171600065003	25
219.1	(DN200)	171600085003	30
273	(DN250)	1716000A1003	30
323.9	(DN300)	1716000A3003	32

7160H domed end cap
(groove)



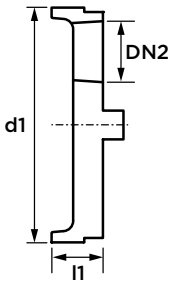
dimension		article no. painted orange	l1
273	(DN250)	1160H00A1001	76
323.9	(DN300)	1160H00A3001	76
355.6	(DN350)	1160H00A4001	102
406.4	(DN400)	1160H00A6001	102
457.2	(DN450)	1160H00A8001	127
508	(DN500)	1160H00B0001	152
609.6	(DN600)	1160H00B4001	152
		article no. galvanized	
273	(DN250)	1160H00A1003	76
323.9	(DN300)	1160H00A3003	76
355.6	(DN350)	1160H00A4003	102
406.4	(DN400)	1160H00A6003	102
457.2	(DN450)	1160H00A8003	127
508	(DN500)	1160H00B0003	152
609.6	(DN600)	1160H00B4003	152

7160C end cap with concentric drain
(groove x female thread)



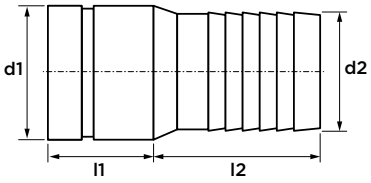
dimension	article no. painted red	l1	DN2
60.3 x Rp1	1160C2010002	24	Rp1
76.1 x Rp1	1160C2910002	24	Rp1
76.1 x Rp½	1160C2915002	24	Rp1½
88.9 x Rp1	1160C3010002	25	Rp1
88.9 x Rp2	1160C3020002	25	Rp2
114.3 x Rp1	1160C4510002	25	Rp1
114.3 x Rp2	1160C4520002	25	Rp2
139.7 x Rp2	1160C5220002	25	Rp2
165.1 x Rp2	1160C6220002	25	Rp2
168.3 x Rp2	1160C6520002	25	Rp2
219.1 x Rp2	1160C8520002	30	Rp2
	article no. galvanized		
60.3 x Rp1	1160C2010003	24	Rp1
76.1 x Rp1	1160C2910003	24	Rp1
76.1 x Rp½	1160C2915003	24	Rp1½
88.9 x Rp1	1160C3010003	25	Rp1
88.9 x Rp2	1160C3020003	25	Rp2
114.3 x Rp1	1160C4510003	25	Rp1
114.3 x Rp2	1160C4520003	25	Rp2
139.7 x Rp2	1160C5220003	25	Rp2
165.1 x Rp2	1160C6220003	25	Rp2
168.3 x Rp2	1160C6520003	25	Rp2
219.1 x Rp2	1160C8520003	30	Rp2

7160T end cap with eccentric drain
(groove x female thread)



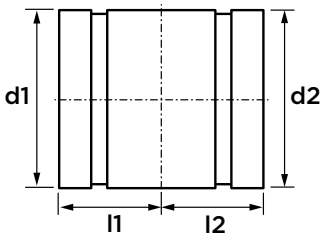
dimension	article no. painted red	l1	DN2
60.3 x Rc1	1160T2010002	24	Rc1
76.1 x Rc1	1160T2910002	24	Rc1
76.1 x Rc1¼	1160T2912002	24	Rc1¼
76.1 x Rc1½	1160T2915002	24	Rc1½
88.9 x Rc1	1160T3010002	25	Rc1
88.9 x Rc1¼	1160T3012002	25	Rc1¼
88.9 x Rc1½	1160T3015002	25	Rc1½
88.9 x Rc2	1160T3020002	25	Rc2
114.3 x Rc1	1160T4510002	25	Rc1
114.3 x Rc1¼	1160T4512002	25	Rc1¼
114.3 x Rc1½	1160T4515002	25	Rc1½
114.3 x Rc2	1160T4520002	25	Rc2
139.7 x Rc2	1160T5220002	25	Rc2
165.1 x Rc2	1160T6220002	25	Rc2
168.3 x Rc2	1160T6520002	25	Rc2
219.1 x Rc2	1160T8520002	30	Rc2
	article no. galvanized		
60.3 x Rc1	1160T2010004	24	Rc1
76.1 x Rc1	1160T2910004	24	Rc1
76.1 x Rc1¼	1160T2912004	24	Rc1¼
76.1 x Rc1½	1160T2915004	24	Rc1½
88.9 x Rc1	1160T3010004	25	Rc1
88.9 x Rc1¼	1160T3012004	25	Rc1¼
88.9 x Rc1½	1160T3015004	25	Rc1½
88.9 x Rc2	1160T3020004	25	Rc2
114.3 x Rc1	1160T4510004	25	Rc1
114.3 x Rc1¼	1160T4512004	25	Rc1¼
114.3 x Rc1½	1160T4515004	25	Rc1½
114.3 x Rc2	1160T4520004	25	Rc2
139.7 x Rc2	1160T5220004	25	Rc2
165.1 x Rc2	1160T6220004	25	Rc2
168.3 x Rc2	1160T6520004	25	Rc2
219.1 x Rc2	1160T8520002	30	Rc2

56 hose nipple
(groove x hose nipple connection)



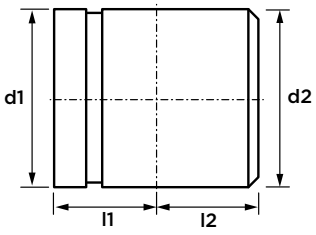
dimension	article no. without coating	l1/l2
33.7 x DN25	100560010001	42
48.3 x DN40	100560015001	51
60.3 x DN50	100560020001	59
73 x 73	100560025001	70
88.9 x DN80	100560030001	76
114.3 x DN100	100560045001	92
141.3 x 141.3	100560055001	124
168.3 x DN150	100560065001	140
219.1 x DN200	100560085001	159

57 nipple
(2 x groove)



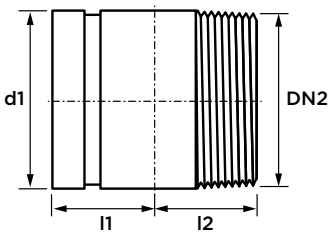
dimension		article no. without coating	l1/l2
42.4	(DN32)	100571240001	51
48.3	(DN40)	100571540001	51
60.3	(DN50)	100572040001	51
73		100572540001	51
76.1	(DN65)	100572940001	51
88.9	(DN80)	100573040001	51
114.3	(DN100)	100574560001	76
141.3		100575560001	76
165.1		100576260001	76
168.3	(DN150)	100576560001	76
219.1	(DN200)	100578560001	76
273	(DN250)	10057A180001	102
323.9	(DN300)	10057A380001	102

58 welding nipple
(groove x weld)



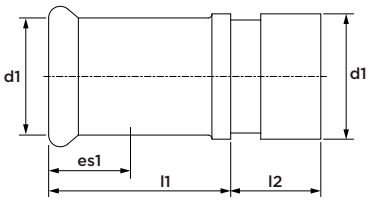
dimension	article no. without coating	l1/l2
33.7 x 33.7	100581040001	38
42.4 x 42.4	100581240001	51
48.3 x 48.3	100581540001	51
60.3 x 60.3	100582040001	51
73 x 73	100582540001	51
76.1 x 76.1	100582940001	51
88.9 x 88.9	100583040001	51
114.3 x 114.3	100584560001	76
141.3 x 141.3	100585560001	76
165.1 x 165.1	100586260001	76
168.3 x 168.3	100586560001	76
219.1 x 219.1	100588560001	76
273 x 273	10058A180001	102
323.9 x 323.9	10058A380001	102

59 adapter nipple
(groove x male thread)



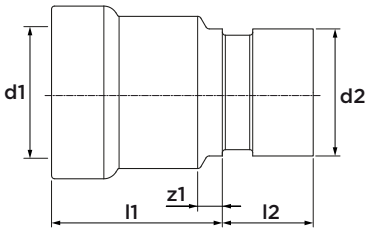
dimension	article no. without coating	l1	l2
33.7 x R1	100591040002	51	51
42.4 x R1¼	100591240002	51	51
48.3 x R1½	100591540002	51	51
60.3 x R2	100592040002	51	51
76.1 x R2½	100592940002	51	51
88.9 x R3	100593040002	51	51
114.3 x R4	100594560002	76	76

C1442 adapter to VSH XPress Carbon
(press x groove)



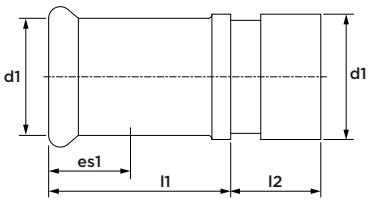
dimension	artikelnr.	l1	l2	es1
28 x 33.7	6241301	49	24	23
35 x 42.4	6241345	54	24	26
42 x 48.3	6241356	61	24	30
54 x 60.3	6241367	73	24	35
76.1 x 73	6341181	68	24	50
76.1 x 76.1	6340774	66	24	55
88.9 x 88.9	6340785	76	24	63
108 x 114	6340796	84	26	77

C9448 adapter to VSH PowerPress®
(press x groove)



dimension	artikelnr.	l1	l2	z1
1" x 33.7	PWR9401095	45	24	8
1 ¼" x 42.4	PWR9401106	58	24	9
1 ½" x 48.3	PWR9401117	58	24	9
2" x 60.3	PWR9401128	63	24	9

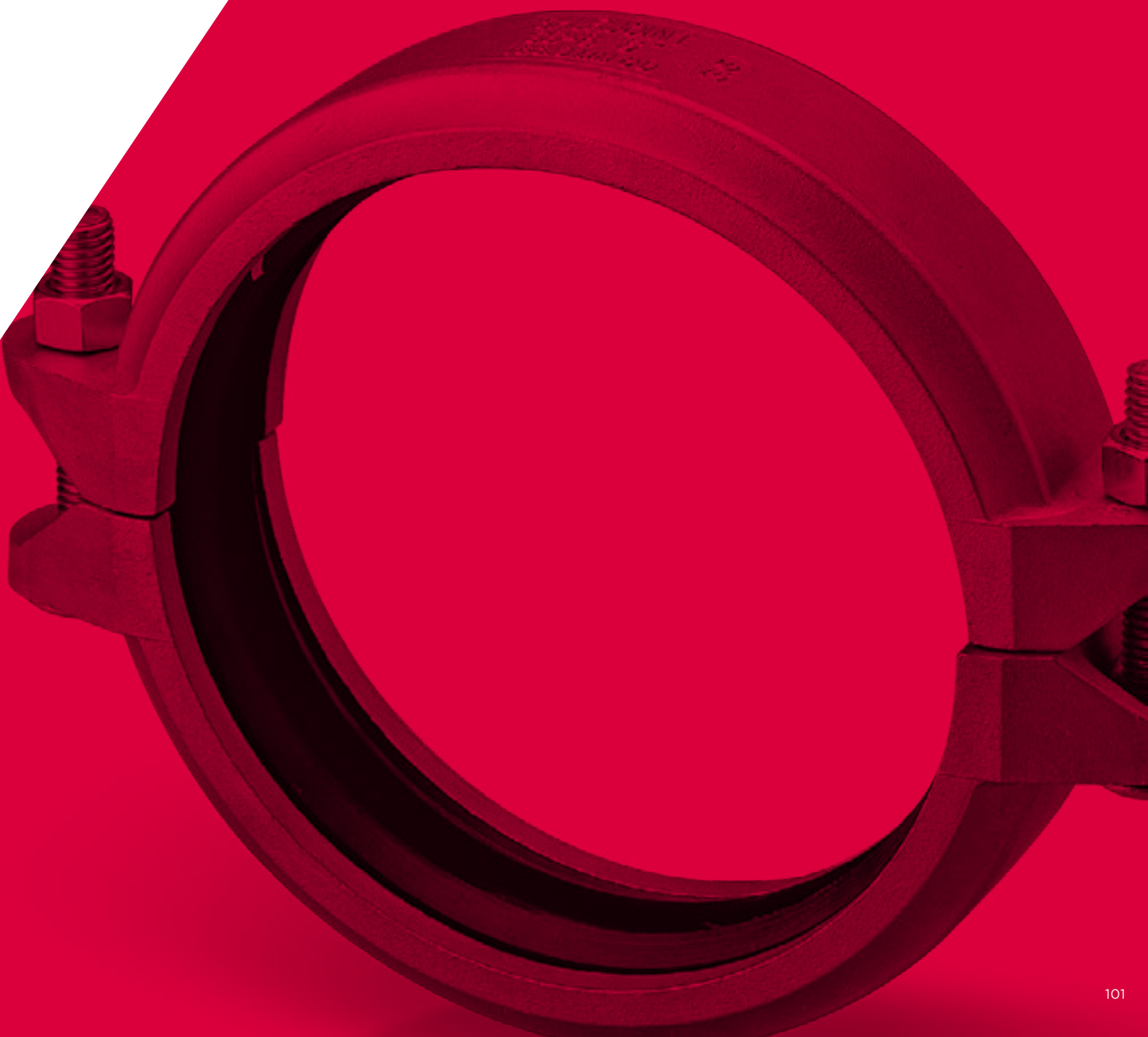
R2748 adapter to VSH XPress Stainless
(press x groove)



dimension	artikelnr.	l1	l2	es1
28 x Ø33.7	6198555	49	24	23
35 x Ø42.4	6198566	54	24	26
42 x Ø48.3	6198577	61	24	30
54 x Ø60.3	6198588	73	24	35
76.1 x Ø73	6198841	68	24	50
76.1 x Ø76.1	6193319	66	24	55
88.9 x Ø88.9	6193321	76	24	63
108 x Ø114	6193330	84	26	77

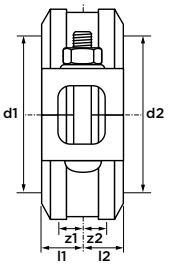
VSH Shurjoint

stainless steel couplings



SS7 rigid coupling

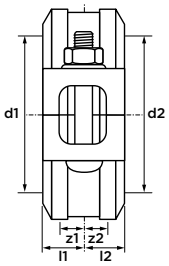
(tongue and groove design, with E gasket)



dimension	article no. AISI 304	l1/l2	z1/z2
42.4 (DN32)	1SS070012001	23	0.8
48.3 (DN40)	1SS070015001	23	0.8
60.3 (DN50)	1SS070020001	23	0.8
73	1SS070025001	23	0.8
76.1 (DN65)	1SS070029001	23	0.8
88.9 (DN80)	1SS070030001	23	0.8
114.3 (DN100)	1SS070045001	26	1.6
139.7 (DN125)	1SS070052001	26	1.6
141.3	1SS070055001	26	1.6
165.1	1SS070062001	27	1.6
168.3 (DN150)	1SS070065001	26	1.6
219.1 (DN200)	1SS070085001	31	1.6
	article no. AISI 316		
42.4 (DN32)	1SS070012002	23	0.8
48.3 (DN40)	1SS070015002	23	0.8
60.3 (DN50)	1SS070020002	23	0.8
73	1SS070025002	23	0.8
76.1 (DN65)	1SS070029002	23	0.8
88.9 (DN80)	1SS070030002	23	0.8
114.3 (DN100)	1SS070045002	26	1.6
139.7 (DN125)	1SS070052002	26	1.6
141.3	1SS070055002	26	1.6
165.1	1SS070062002	27	1.6
168.3 (DN150)	1SS070065002	26	1.6
219.1 (DN200)	1SS070085002	31	1.6

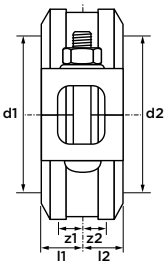
SS7X rigid coupling

(tongue and groove design, with E gasket)



dimension	article no. AISI 304	l1/l2	z1/z2
273 (DN250)	1SS7X00A1001	33	1.6
323.9 (DN300)	1SS7X00A3001	33	1.6
355.6 (DN350)	1SS7X00A4001	32	1.6
406.4 (DN400)	1SS7X00A6001	32	1.6
457.2 (DN450)	1SS7X00A8001	32	1.6
508 (DN500)	1SS7X00B0001	40	1.6
558.8 (DN550)	1SS7X00B2001	40	1.6
609.6 (DN600)	1SS7X00B4001	40	1.6
	article no. AISI 316		
273 (DN250)	1SS7X00A1002	33	1.6
323.9 (DN300)	1SS7X00A3002	33	1.6
355.6 (DN350)	1SS7X00A4002	32	1.6
406.4 (DN400)	1SS7X00A6002	32	1.6
457.2 (DN450)	1SS7X00A8002	32	1.6
508 (DN500)	1SS7X00B0002	40	1.6
558.8 (DN550)	1SS7X00B2002	40	1.6
609.6 (DN600)	1SS7X00B4002	40	1.6

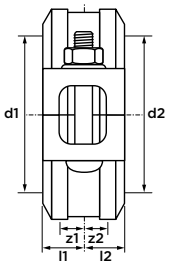
SS8 flexible coupling
(with E gasket)



dimension	article no. AISI 304	l1/l2	z1/z2
33.7 (DN25)	1SS080010 001	22	0.8
42.4 (DN32)	1SS080012001	22	0.8
48.3 (DN40)	1SS080015001	22	0.8
60.3 (DN50)	1SS080020001	22	0.8
73	1SS080025001	22	0.8
76.1 (DN65)	1SS080029001	22	0.8
88.9 (DN80)	1SS080030001	22	0.8
114.3 (DN100)	1SS080045001	25	1.6
139.7 (DN125)	1SS080052001	25	1.6
141.3	1SS080055001	25	1.6
165.1	1SS080062001	27	1.6
168.3 (DN150)	1SS080065001	27	1.6
219.1 (DN200)	1SS080085001	31	1.6
	article no. AISI 316		
33.7 (DN25)	1SS080010002	22	0.8
42.4 (DN32)	1SS080012002	22	0.8
48.3 (DN40)	1SS080015002	22	0.8
60.3 (DN50)	1SS080020002	22	0.8
73	1SS080025002	22	0.8
76.1 (DN65)	1SS080029002	22	0.8
88.9 (DN80)	1SS080030002	22	0.8
114.3 (DN100)	1SS080045002	25	1.6
139.7 (DN125)	1SS080052002	25	1.6
141.3	1SS080055002	25	1.6
165.1	1SS080062002	27	1.6
168.3 (DN150)	1SS080065002	27	1.6
219.1 (DN200)	1SS080085002	31	1.6

• see table on page 47 for design data on axial displacement and angular deflection.

SS8X heavy duty flexible coupling
(with E gasket)



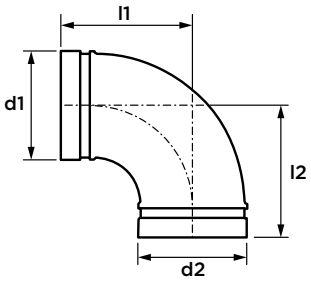
dimension	article no. AISI 304	l1/l2	z1/z2
33.7 (DN25)	1SS8X0010001	23	0.8
42.4 (DN32)	1SS8X0012001	23	0.8
48.3 (DN40)	1SS8X0015001	23	0.8
60.3 (DN50)	1SS8X0020001	24	0.8
73	1SS8X0025001	24	0.8
88.9 (DN80)	1SS8X0030001	24	0.8
114.3 (DN100)	1SS8X0045001	26	1.6
141.3	1SS8X0055001	27	1.6
168.3 (DN150)	1SS8X0065001	27	1.6
219.1 (DN200)	1SS8X0085001	31	1.6
	article no. AISI 316		
33.7 (DN25)	1SS8X0010002	23	0.8
42.4 (DN32)	1SS8X0012002	23	0.8
48.3 (DN40)	1SS8X0015002	23	0.8
60.3 (DN50)	1SS8X0020002	24	0.8
73	1SS8X0025002	24	0.8
88.9 (DN80)	1SS8X0030002	24	0.8
114.3 (DN100)	1SS8X0045002	26	1.6
141.3	1SS8X0055002	27	1.6
168.3 (DN150)	1SS8X0065002	27	1.6
219.1 (DN200)	1SS8X0085002	31	1.6

• see table on page 47 for design data on axial displacement and angular deflection.

VSH Shurjoint

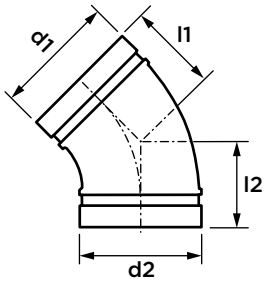
stainless steel fittings

SS10 bend 90°
(2 x groove)



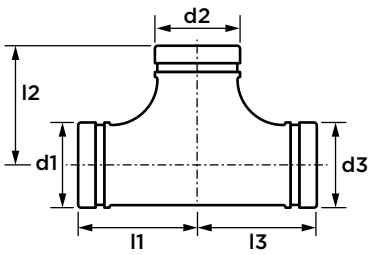
dimension		article no. AISI 304	l1/l2
33.7	(DN25)	1SS100010001	57
42.4	(DN32)	1SS100012001	70
48.3	(DN40)	1SS100015001	70
60.3	(DN50)	1SS100020001	83
73		1SS100025001	95
76.1	(DN65)	1SS100029001	95
88.9	(DN80)	1SS100030001	108
114.3	(DN100)	1SS100045001	127
139.7	(DN125)	1SS100052001	140
141.3		1SS100055001	140
165.1		1SS100062001	165
168.3	(DN150)	1SS100065001	165
219.1	(DN200)	1SS100085001	197
		article no. AISI 316	
33.7	(DN25)	1SS100010002	57
42.4	(DN32)	1SS100012002	70
48.3	(DN40)	1SS100015002	70
60.3	(DN50)	1SS100020002	83
73		1SS100025002	95
76.1	(DN65)	1SS100029002	95
88.9	(DN80)	1SS100030002	108
114.3	(DN100)	1SS100045002	127
139.7	(DN125)	1SS100052002	140
141.3		1SS100055002	140
165.1		1SS100062002	165
168.3	(DN150)	1SS100065002	165
219.1	(DN200)	1SS100085002	197

SS11 bend 45°
(2 x groove)



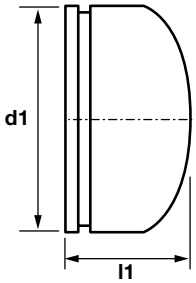
article no.		article no. AISI 304	l1/l2
33.7	(DN25)	1SS110010001	45
42.4	(DN32)	1SS110012001	45
48.3	(DN40)	1SS110015001	45
60.3	(DN50)	1SS110020001	51
73		1SS110025001	54
76.1	(DN65)	1SS110029001	57
88.9	(DN80)	1SS110030001	57
114.3	(DN100)	1SS110045001	76
139.7	(DN125)	1SS110052001	83
141.3		1SS110055001	83
165.1		1SS110062001	89
168.3	(DN150)	1SS110065001	89
219.1	(DN200)	1SS110085001	108
273	(DN250)	1SS1100A1001	159
		article no. AISI 316	
33.7	(DN25)	1SS110010002	45
42.4	(DN32)	1SS110012002	45
48.3	(DN40)	1SS110015002	45
60.3	(DN50)	1SS110020002	51
73		1SS110025002	54
76.1	(DN65)	1SS110029002	57
88.9	(DN80)	1SS110030002	57
114.3	(DN100)	1SS110045002	76
139.7	(DN125)	1SS110052002	83
141.3		1SS110055002	83
165.1		1SS110062002	89
168.3	(DN150)	1SS110065002	89
219.1	(DN200)	1SS110085002	108
273	(DN250)	1SS1100A1002	159

SS20 tee
(3 x groove)



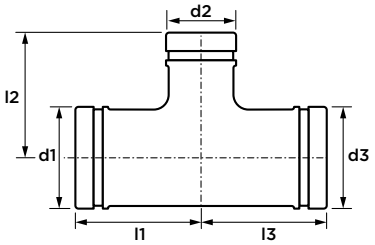
article no.		article no. AISI 304	l1/l3	l2
33.7	(DN25)	1SS200010001	57	57
42.4	(DN32)	1SS200012001	70	70
48.3	(DN40)	1SS200015001	70	70
60.3	(DN50)	1SS200020001	83	83
73		1SS200025001	95	95
76.1	(DN65)	1SS200029001	95	95
88.9	(DN80)	1SS200030001	108	108
114.3	(DN100)	1SS200045001	127	127
139.7	(DN125)	1SS200052001	140	140
141.3		1SS200055001	140	140
165.1		1SS200062001	165	165
168.3	(DN150)	1SS200065001	165	165
219.1	(DN200)	1SS200085001	197	197
		article no. AISI 316		
33.7	(DN25)	1S S200010002	57	57
42.4	(DN32)	1SS200012002	70	70
48.3	(DN40)	1SS200015002	70	70
60.3	(DN50)	1SS200020002	83	83
73		1SS200025002	95	95
76.1	(DN65)	1SS200029002	95	95
88.9	(DN80)	1SS200030002	108	108
114.3	(DN100)	1SS200045002	127	127
139.7	(DN125)	1SS200052002	140	140
141.3		1SS200055002	140	140
165.1		1SS200062002	165	165
168.3	(DN150)	1SS200065002	165	165
219.1	(DN200)	1SS200085002	197	197

SS60 end cap
(groove)



article no.		article no. AISI 304	l1
33.7	(DN25)	1SS600010001	24
42.4	(DN32)	1SS600012001	24
48.3	(DN40)	1SS600015001	24
60.3	(DN50)	1SS600020001	24
73		1SS600025001	45
76.1	(DN65)	1SS600029001	45
88.9	(DN80)	1SS600030001	51
114.3	(DN100)	1SS600045001	51
139.7	(DN125)	1SS600052001	60
141.3		1SS600055001	60
165.1		1SS600062001	76
168.3	(DN150)	1SS600065001	76
219.1	(DN200)	1SS600085001	90
273	(DN250)	1SS6000A1001	127
323.9	(DN300)	1SS6000A3001	145
		article no. AISI 316	
33.7	(DN25)	1SS600010002	24
42.4	(DN32)	1SS600012002	24
48.3	(DN40)	1SS600015002	24
60.3	(DN50)	1SS600020002	24
73		1SS600025002	45
76.1	(DN65)	1SS600029002	45
88.9	(DN80)	1SS600030002	51
114.3	(DN100)	1SS600045002	51
139.7	(DN125)	1SS600052002	60
141.3		1SS600055002	60
165.1		1SS600062002	76
168.3	(DN150)	1SS600065002	76
219.1	(DN200)	1SS600085002	90
273	(DN250)	1SS6000A1002	127
323.9	(DN300)	1SS6000A3002	145

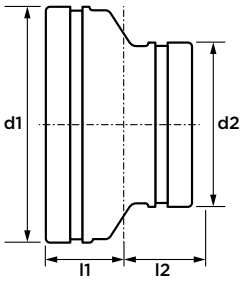
SS21 tee reduced
(3 x groove)



dimension	article no. AISI 304	l1/l2/l3
42.4 x 33.7 x 42.4	1SS211210001	70
48.3 x 33.7 x 48.3	1SS211510001	70
48.3 x 42.4 x 48.3	1SS211512001	70
60.3 x 33.7 x 60.3	1SS212010001	70
60.3 x 42.4 x 60.3	1SS212012001	70
60.3 x 48.3 x 60.3	1SS212015001	70
73 x 33.7 x 73	1SS212510001	95
73 x 42.4 x 73	1SS212512001	95
73 x 48.3 x 73	1SS212515001	95
73 x 60.3 x 73	1SS212520001	95
76.1 x 33.7 x 76.1	1SS212910001	95
76.1 x 42.4 x 76.1	1SS212912001	95
76.1 x 48.3 x 76.1	1SS212915001	95
76.1 x 60.3 x 76.1	1SS212920001	76
88.9 x 42.4 x 88.9	1SS213012001	108
88.9 x 48.3 x 88.9	1SS213015001	108
88.9 x 60.3 x 88.9	1SS213020001	108
88.9 x 73 x 88.9	1SS213025001	95
88.9 x 76.1 x 88.9	1SS213029001	95
114.3 x 60.3 x 114.3	1SS214520001	127
114 x 73.3 x 114.3	1SS214525001	114
114.3 x 76.1 x 114.3	1SS214529001	114
114.3 x 88.9 x 114.3	1SS214530001	114
139.7 x 114.3 x 139.7	1SS215245001	140
141.3 x 114.3 x 141.3	1SS215545001	140
165.1 x 114.3 x 165.1	1SS216245001	165
165.1 x 139.7 x 165.1	1SS216252001	165
168.3 x 88.9 x 168.3	1SS216530001	150
168.3 x 114.3 x 168.3	1SS216545001	165
219.1 x 114.3 x 219.1	1SS218545001	197
219.1 x 168.3 x 219.1	1SS218565001	197
273 x 168.3 x 273	1SS21A165001	229
273 x 219.1 x 273	1SS21A185001	229
323.9 x 219.1 x 323.9	1SS21A385001	254
323.9 x 273 x 323.9	1SS21A3A1001	254

dimension	article no. AISI 316	l1/l2/l3
42.4 x 33.7 x 42.4	1SS211210002	70
48.3 x 33.7 x 48.3	1SS211510002	70
48.3 x 42.4 x 48.3	1SS211512002	70
60.3 x 33.7 x 60.3	1SS212010002	70
60.3 x 42.4 x 60.3	1SS212012002	70
60.3 x 48.3 x 60.3	1SS212015002	70
73 x 33.7 x 73	1SS212510002	95
73 x 42.4 x 73	1SS212512002	95
73 x 48.3 x 73	1SS212515002	95
73 x 60.3 x 73	1SS212520002	95
76.1 x 33.7 x 76.1	1SS212910002	95
76.1 x 42.4 x 76.1	1SS212912002	95
76.1 x 48.3 x 76.1	1SS212915002	95
76.1 x 60.3 x 76.1	1SS212920002	76
88.9 x 42.4 x 88.9	1SS213012002	108
88.9 x 48.3 x 88.9	1SS213015002	108
88.9 x 60.3 x 88.9	1SS213020002	108
88.9 x 73 x 88.9	1SS213025002	95
88.9 x 76.1 x 88.9	1SS213029002	95
114.3 x 60.3 x 114.3	1SS214520002	127
114 x 73.3 x 114.3	1SS214525002	114
114.3 x 76.1 x 114.3	1SS214529002	114
114.3 x 88.9 x 114.3	1SS214530002	114
139.7 x 114.3 x 139.7	1SS215245002	140
141.3 x 114.3 x 141.3	1SS215545002	140
165.1 x 114.3 x 165.1	1SS216245002	165
165.1 x 139.7 x 165.1	1SS216252002	165
168.3 x 88.9 x 168.3	1SS216530002	150
168.3 x 114.3 x 168.3	1SS216545002	165
219.1 x 114.3 x 219.1	1SS218545002	197
219.1 x 168.3 x 219.1	1SS218565002	197
273 x 168.3 x 273	1SS21A165002	229
273 x 219.1 x 273	1SS21A185002	229
323.9 x 219.1 x 323.9	1SS21A385002	254
323.9 x 273 x 323.9	1SS21A3A1002	254

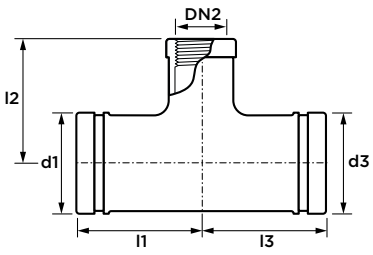
SS50 reducer
(2 x groove)



dimension	article no. AISI 304	l1/l2
42.4 x 33.7	1SS501210001	32
48.3 x 33.7	1SS501510001	32
48.3 x 42.4	1SS501512001	32
60.3 x 33.7	1SS502010001	32
60.3 x 42.4	1SS502012001	32
60.3 x 48.3	1SS502015001	32
73 x 33.7	1SS502510001	32
73 x 42.4	1SS502512001	32
73 x 48.3	1SS502515001	32
73 x 60.3	1SS502520001	32
76.1 x 33.7	1SS502910001	32
76.1 x 42.4	1SS502912001	32
76.1 x 48.3	1SS502915001	32
76.1 x 60.3	1SS502920001	32
88.9 x 42.4	1SS503012001	32
88.9 x 48.3	1SS503015001	32
88.9 x 60.3	1SS503020001	32
88.9 x 73	1SS503025001	44
88.9 x 76.1	1SS503029001	44
114.3 x 60.3	1SS504520001	51
114 x 73.3	1SS504525001	51
114.3 x 76.1	1SS504529001	51
114.3 x 88.9	1SS504530001	51
139.7 x 114.3	1SS505245001	44
141.3 x 114.3	1SS505545001	44
165.1 x 114.3	1SS506245001	51
165.1 x 139.7	1SS506252001	51
168.3 x 88.9	1SS506530001	51
168.3 x 114.3	1SS506545001	51
219.1 x 114.3	1SS508545001	63
219.1 x 168.3	1SS508565001	63
273 x 168.3	1SS50A165001	76
273 x 219.1	1SS50A185001	76
323.9 x 219.1	1SS50A385001	89
323.9 x 273	1SS50A3A1001	89

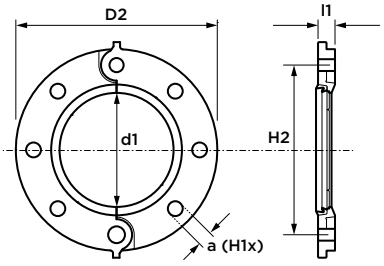
dimension	artikel nr. AISI 316	l1/l2
42.4 x 33.7	1SS501210002	32
48.3 x 33.7	1SS501510002	32
48.3 x 42.4	1SS501512002	32
60.3 x 33.7	1SS502010002	32
60.3 x 42.4	1SS502012002	32
60.3 x 48.3	1SS502015002	32
73 x 33.7	1SS502510002	32
73 x 42.4	1SS502512002	32
73 x 48.3	1SS502515002	32
73 x 60.3	1SS502520002	32
76.1 x 33.7	1SS502910002	32
76.1 x 42.4	1SS502912002	32
76.1 x 48.3	1SS502915002	32
76.1 x 60.3	1SS502920002	32
88.9 x 42.4	1SS503012002	32
88.9 x 48.3	1SS503015002	32
88.9 x 60.3	1SS503020002	32
88.9 x 73	1SS503025002	44
88.9 x 76.1	1SS503029002	44
114.3 x 60.3	1SS504520002	51
114 x 73.3	1SS504525002	51
114.3 x 76.1	1SS504529002	51
114.3 x 88.9	1SS504530002	51
139.7 x 114.3	1SS505245002	44
141.3 x 114.3	1SS505545002	44
165.1 x 114.3	1SS506245002	51
165.1 x 139.7	1SS506252002	51
168.3 x 88.9	1SS506530002	51
168.3 x 114.3	1SS506545002	51
219.1 x 114.3	1SS508545002	63
219.1 x 168.3	1SS508565002	63
273 x 168.3	1SS50A165002	76
273 x 219.1	1SS50A185002	76
323.9 x 219.1	1SS50A385002	89
323.9 x 273	1SS50A3A1002	89

SS21F tee reduced
(groove x female thread x groove)



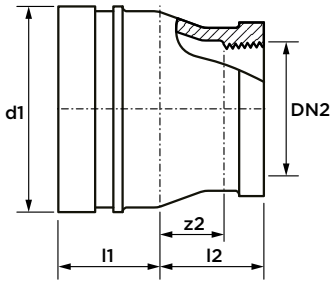
dimension	article no. AISI 304	l1/l3	l2
73 x Rp1½ x 73	1S21F2515004	76	76
73 x Rp2 x 73	1S21F2520004	76	76
76.1 x Rp1½ x 76.1	1S21F2915004	76	76
76.1 x Rp2 x 76.1	1S21F2920004	76	76
88.9 x Rp2 x 88.9	1S21F3020004	95	83
114.3 x Rp2 x 114.3	1S21F4520004	114	98
	article no. AISI 316		
73 x Rp1½ x 73	1S21F2515005	76	76
73 x Rp2 x 73	1S21F2520005	76	76
76.1 x Rp1½ x 76.1	1S21F2915005	76	76
76.1 x Rp2 x 76.1	1S21F2920005	76	76
88.9 x Rp2 x 88.9	1S21F3020005	95	83
114.3 x Rp2 x 114.3	1S21F4520005	114	98

SS41 flange adapter - ANSI class 125/150
(two segments, with E gasket)



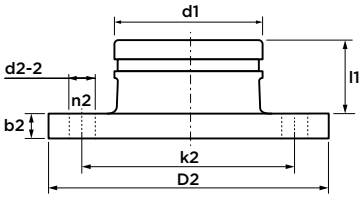
dimension	article no. AISI 304	l1	D2	H1	H2	a
60.3 (DN50)	1SS410020001	19	152	4	121	⅝"
73	1SS410025001	22	178	4	140	⅝"
88.9 (DN80)	1SS410030001	24	191	4	152	⅝"
114.3 (DN100)	1SS410045001	24	229	8	191	⅝"
168.3 (DN150)	1SS410065001	25	279	8	241	¾"
219.1 (DN200)	1SS410085001	29	343	8	298	¾"
	article no. AISI 316					
60.3 (DN50)	1SS410020002	19	152	4	121	⅝"
73	1SS410025002	22	178	4	140	⅝"
88.9 (DN80)	1SS410030002	24	191	4	152	⅝"
114.3 (DN100)	1SS410045002	24	229	8	191	⅝"
168.3 (DN150)	1SS410065002	25	279	8	241	¾"
219.1 (DN200)	1SS410085002	29	343	8	298	¾"

SS50F adapter
(groove x female thread)



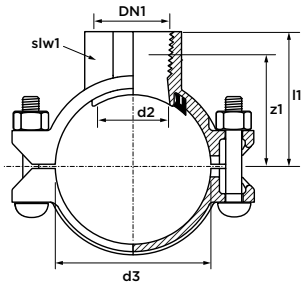
dimension	article no. AISI 304	l1/l2	z2
73 x Rp2	1S50F2520004	45	25
76.1 x Rp2	1S50F2920004	45	25
88.9 x Rp2	1S50F3020004	45	25
114.3 x Rp2	1S50F4520004	51	31
	article no. AISI 316		
73 x Rp2	1S50F2520005	45	25
76.1 x Rp2	1S50F2920005	45	25
88.9 x Rp2	1S50F3020005	45	25
114.3 x Rp2	1S50F4520005	51	31

SS80 universal flange adapter
(PN 10/16, ANSI class 125/150, BS10E)



dimension		article no. AISI 304	l1	D2	n2	k2	b2	d2-2
60.3	(DN50)	1SS800020001	48	165	4	114-125	16	M16
73		1SS800025001	60	185	4	127-145	16	M16
76.1	(DN65)	1SS800029001	60	185	4	127-145	16	M16
88.9	(DN80)	1SS800030001	59	200	8	146-160	16	M16
114.3	(DN100)	1SS800045001	59	225	8	175-191	16	M16
139.7	(DN125)	1SS800052001	59	254	8	210-216	16	M20
141.3		1SS800055001	59	254	8	210-216	22	M20
165.1		1SS800062001	59	272	8	235-241	16	M20
168.3	(DN150)	1SS800065001	59	272	8	240-241	16	M20
219.1	(DN200)	1SS800085001	80	343	16	290-298	22	M20
273	(DN250)	1SS8000A1001	70	406	12	350-362	30	M24
		article no. AISI 316						
60.3	(DN50)	1SS800020002	48	165	4	114-125	16	M16
73		1SS800025002	60	185	4	127-145	16	M16
76.1	(DN65)	1SS800029002	60	185	4	127-145	16	M16
88.9	(DN80)	1SS800030002	59	200	8	146-160	16	M16
114.3	(DN100)	1SS800045002	59	225	8	175-191	16	M16
139.7	(DN125)	1SS800052002	59	254	8	210-216	16	M20
141.3		1SS800055002	59	254	8	210-216	22	M20
165.1		1SS800062002	59	272	8	235-241	16	M20
168.3	(DN150)	1SS800065002	59	272	8	240-241	16	M20
219.1	(DN200)	1SS800085002	80	343	16	290-298	22	M20
273	(DN250)	1SS8000A1002	70	406	12	350-362	30	M24

SS723 mechanical tee
(female thread, with E gasket)



max.
pressure 20 bar/300 psi

dimension	article no. AISI 304	l1	z1	d2	slw1
42.4 x Rp½	1S7231205003	41	27	30	49
42.4 x Rp¾	1S7231207003	44	29	30	49
42.4 x Rp1	1S7231210003	51	34	30	49
48.3 x Rp½	1S7231505003	44	30	30	49
48.3 x Rp¾	1S7231507003	46	31	30	49
48.3 x Rp1	1S7231510003	53	36	30	49
60.3 x Rp½	1S7232005003	51	37	30	51
60.3 x Rp¾	1S7232007003	53	28	30	51
60.3 x Rp1	1S7232010003	60	43	30	51
	article no. AISI 316				
42.4 x Rp½	1S7231205004	41	27	30	49
42.4 x Rp¾	1S7231207004	44	29	30	49
42.4 x Rp1	1S7231210004	51	34	30	49
48.3 x Rp½	1S7231505004	44	30	30	49
48.3 x Rp¾	1S7231507004	46	31	30	49
48.3 x Rp1	1S7231510004	53	36	30	49
60.3 x Rp½	1S7232005004	51	37	30	51
60.3 x Rp¾	1S7232007004	53	28	30	51
60.3 x Rp1	1S7232010004	60	43	30	51

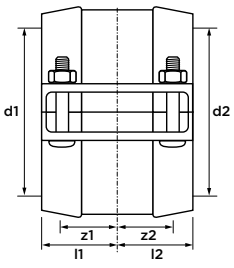
* See the table on page 37 for hole sizes, surface specifications and mounting instructions.

VSH Shurjoint

plain-end couplings

79 coupling Wildcat for steel pipe

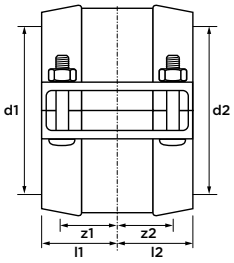
(2 x plain-end, with E gasket)



dimension		article no. painted orange	l1/l2	z1/z2
33.7	(DN25)	100790010001	39	0
48.3	(DN40)	100790015001	39	0
60.3	(DN50)	100790020E01	45	0
73		100790025E01	45	0
88.9	(DN80)	100790030E01	45	0
114.3	(DN100)	100790045E01	51	0
141.3		100790055E01	56	0
168.3	(DN150)	100790065001	56	0
219.1	(DN200)	100790085E01	64	0
273	(DN250)	1007900A1E01	64	0
323.9	(DN300)	1007900A3E01	64	0
355.6	(DN350)	1007900A4E01	67	0
406.4	(DN400)	1007900A6E01	67	0

H305 coupling for IPS sized HDPE-pipe

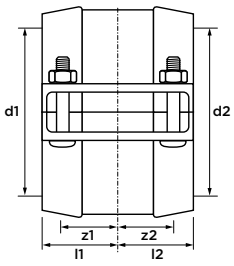
(2 x plain-end, with E gasket)



dimension	article no. painted orange	l1/l2	z1/z2
60.3	1H3050020001	58	0
88.9	1H3050030001	58	0
114.3	1H3050045001	73	0
141.3	1H3050055001	59	0
168.3	1H3050065001	75	0
219.1	1H3050085001	77	0
273	1H30500A1001	83	0
323.9	1H30500A3001	90	0
355.6	1H30500A4001	128	0
406.4	1H30500A6001	128	0
457.2	1H30500A8001	128	0
508	1H30500B0001	128	0

H305 coupling for ISO sized HDPE-pipe

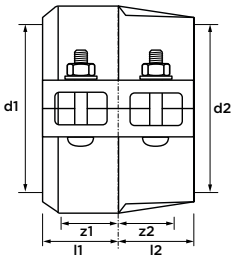
(2 x plain-end, with E gasket)



dimension	article no. painted orange	l1/l2	z1/z2
63	1H3050020E01	53	0
75	1H3050025E01	53	0
90	1H3050030E01	53	0
110	1H3050045E01	56	0
125	1H3050050E01	59	0
140	1H3050052E01	59	0
160	1H3050065E01	59	0
180	1H3050070E01	59	0
200	1H3050085E01	64	0
225	1H3050090E01	64	0
250	1H30500A1E01	67	0
280	1H30500A2E01	67	0
315	1H30500A3E01	67	0
355	1H30500A4E01	128	0
400	1H30500A6E01	128	0
450	1H30500A8E01	128	0

H307 transition coupling for IPS sized steel to HDPE-pipe

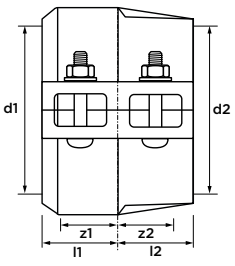
(groove x plain-end, with E gasket)



dimension	article no. painted orange	l1/l2	z1/z2
60.3	1H3070020001	40	0
88.9	1H3070030001	40	0
114.3	1H3070045001	48	0
168.3	1H3070065001	48	0
219.1	1H3070085001	54	0
273	1H30700A1001	64	0
323.9	1H30700A3001	64	0

H307 transition coupling for ISO sized steel to HDPE-pipe

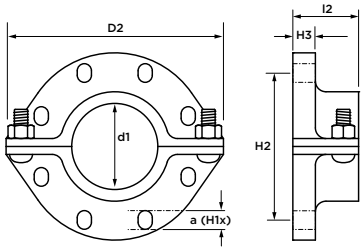
(groove x plain-end, with E gasket)



dimension	article no. painted orange	l1/l2	z1/z2
63 x 60.3	1H3070020E01	37	0
75 x 73	1H3070025E01	37	0
90 x 88.9	1H3070030E01	37	0
110 x 114.3	1H3070045E01	38	0
160 x 165.0	1H3070062E01	38	0
160 x 168.3	1H3070065E01	38	0
200 x 219.1	1H3070085E01	43	0
250 x 273	1H30700A1E01	49	0
315 x 323.9	1H30700A3E01	49	0

H312 flange adapter for IPS sized HDPE-pipe ANSI class 125/150

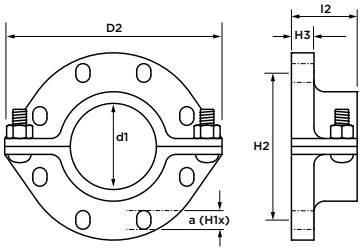
(flange x plain-end, with E gasket)



dimension	article no. painted orange	l2	D2	H1	H2	H3	a
88.9	1H3120030001	79	225	4	152	24	5/8
114.3	1H3120045001	79	260	8	191	24	5/8
168.3	1H3120065001	95	311	8	241	25	3/4
219.1	1H3120085001	87	375	8	298	29	3/4
273	1H31200A1001	108	533	12	362	30	7/8
323.9	1H31200A3001	108	610	12	432	32	7/8

H312 flange adapter PN10/16 for ISO sized HDPE-pipe

(flange x plain-end, with E gasket)



dimension	article no. painted orange	l2	D2	H1	H2	H3	a
63 x 60.3	1H3120020E01	79	197	4	125	18	M16
90 x 88.9	1H3120030E01	79	241	8	160	24	M16
110 x 114.3	1H3120045E01	79	260	8	180	24	M16
160 x 165.0	1H3120065E01	82	330	8	240	25	M20
200 x 219.1	1H3120085E01	108	400	12	295	29	M20
250 x 273	1H31200A1E01	108	533	12	355	30	M24
315 x 323.9	1H31200A3E01	108	587	12	410	32	M24

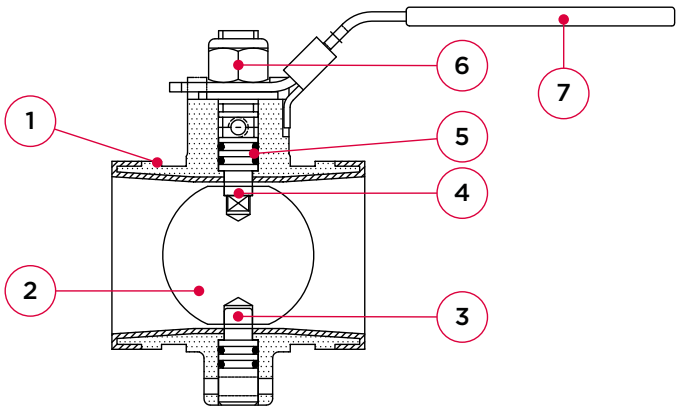
VSH Shurjoint

valves

SJ200 butterfly valve, low-profile
(2 x groove)

specifications

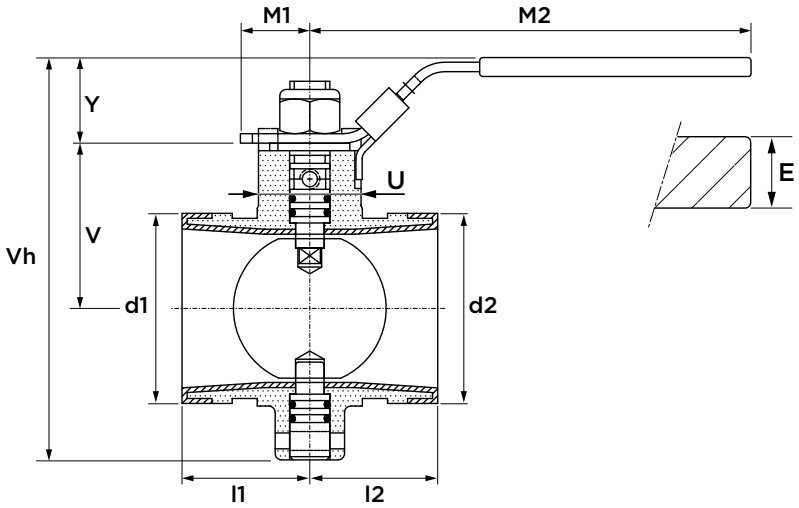
- maximum operating pressure 16 bar
- operating temperature -29 till 82°C
- with grooved end connections
- handle with tamper resistent locking device
- with handle turn lock
- designed for oil, gas, mining and many other applications
- fully rubber liner on the inside



nr.	component	material
1	body	ductile iron ASTM A536, grade 65-45-12
	finish	black epoxy coating
2	valve disc	stainless steel (CF8M 316)
	valve disc liner	NBR nitrile rubber
3	support shaft	stainless steel (416)
4	upper shaft	stainless steel (416)
5	stem o-rings	EPDM or Nitril
6	locknut	carbon steel
7	handle	carbon steel, with PVC grip

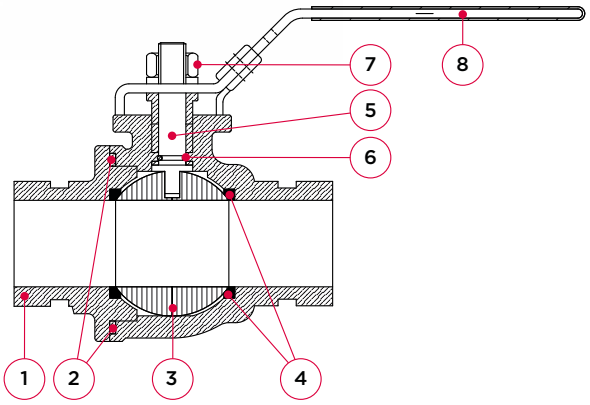
max. test pressure [bar]	body	seat
all dimensions	24	16

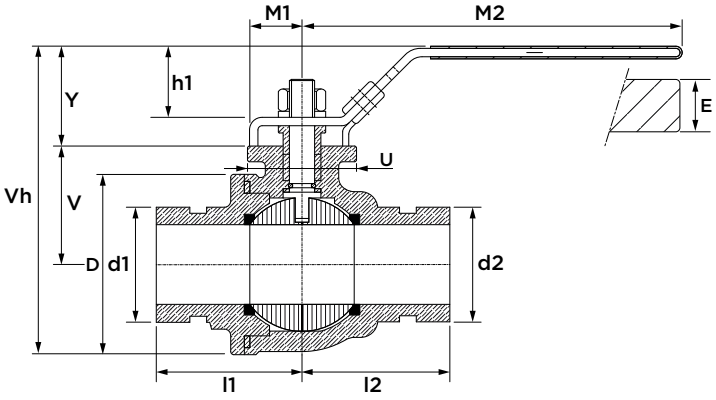
pressure equipment directive category	
all dimensions	SEP



dimension		article no.	weight [kg]	l1/l2	V	U [Ø]	Y	Vh	M1	M2	E
60.3	(DN50)	1V2000020002	0.9	41	53	33	26	127	22	140	6
73		1V2000025002	1.5	49	60	40	33	147	28	190	6
88.9	(DN80)	1V2000030002	1.9	49	68	40	33	163	28	190	6
114.3	(DN100)	1V2000045002	3.9	58	100	52	52	228	45	274	6
168.3	(DN150)	1V2000065002	10.1	74	130	64	52	297	45	274	6
219.1	(DN200)	1V2000085002	14.0	67	163.9	64	52	356	45	274	6

SJ500-L ball valve
(2 x groove)





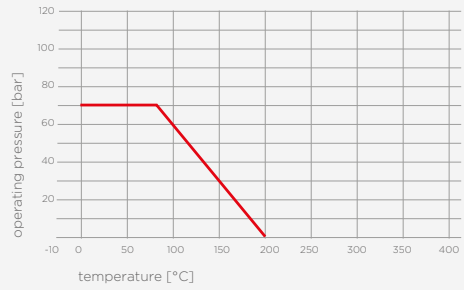
specifications

- maximum operating pressure
  DN40-80: 69 bar
  DN100-150: 56 bar
- operating temperature -7 till 177°C
- with grooved end connections
- handle with tamper resistent locking device
- with handle turn lock

nr.	component	material
1	body and bonnet	ductile iron ASTM A536, grade 65-45-12
	finish	black epoxy coating
2	gasket	R-PTFE
2	ball	stainless steel (304)
4	ball seat	PTFE
5	spindle	nickel-plated carbon steel or stainless steel (304)
6	spindle o-ring	EPDM
7	locknut	carbon steel
8	handle	carbon steel with PVC grip

max. test pressure [bar]	body	seat
DN40-80	104	69
DN100-150	84	56

pressure equipment directive category	
all dimensions	SEP



pressure-temperature range

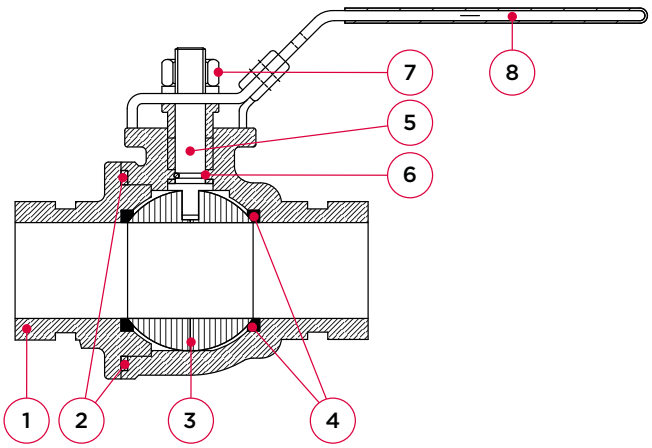
dimension	article no. carbon steel handle	weight [kg]	l1/l2	D	U [Ø]	Y	V	Vh	M1	M2	E
48.3 (DN40)	1V5000015001	1.8	65	71	42	34	44	133	22	178	6
60.3 (DN50)	1V5000020001	2.9	70	86	52	45	56	145	29	178	8
73	1V5000025001	4.4	80	103	52	45	64	161	29	256	8
76.1 (DN65)	1V5000029001	4.5	80	103	52	45	64	161	29	265	8
88.9 (DN80)	1V5000030001	7.8	84	130	68	67	80	161	42	265	10
114.3 (DN100)	1V5000045001	14.7	120	153	70	51	102	234	47	365	25
165.1	1V5000062001	40.3	129	252	140	77	165	368	47	600	25
168.3 (DN150)	1V5000065001	40.3	129	252	140	77	165	368	47	600	25

dimension	article no. stainless steel handle	weight [kg]	l1/l2	D	U [Ø]	Y	V	Vh	M1	M2	E
48.3 (DN40)	1V5000015002	1.8	65	71	42	34	44	133	22	178	6
60.3 (DN50)	1V5000020002	2.9	70	86	52	45	56	145	29	178	8
73	1V5000025002	4.4	80	103	52	45	64	161	29	256	8
76.1 (DN65)	1V5000029002	4.5	80	103	52	45	64	161	29	265	8
88.9 (DN80)	1V5000030002	7.8	84	130	68	67	80	161	42	265	10
114.3 (DN100)	1V5000045002	14.7	120	153	70	51	102	234	47	365	25
165.1	1V5000062002	40.3	129	252	140	77	165	368	47	600	25
168.3 (DN150)	1V5000065002	40.3	129	252	140	77	165	368	47	600	25

SJ600-L ball valve, stainless steel
(2 x groove)

specifications

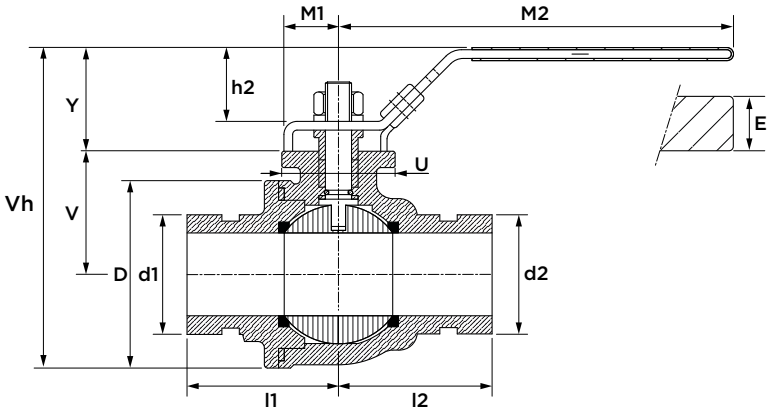
- maximum operating pressure 42 bar
- operating temperature 0 till 90°C
- with grooved end connections
- handle with tamper resistent locking device
- with handle turn lock
- ISO mounting holes



nr.	component	material
1	body and bonnet	stainless steel (316)
2	gasket	R-PTFE
3	ball	stainless steel (316)
4	ball seat	PTFE
5	spindle	stainless steel (316)
6	spindle o-ring	EPDM
7	locknut	stainless steel (304)
8	handle	stainless steel (304) with PVC grip

max. test pressure [bar]	body	seat
all dimensions	63	42

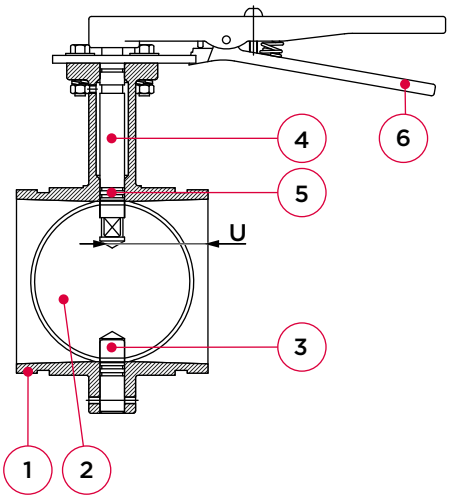
pressure equipment directive category	
all dimensions	SEP

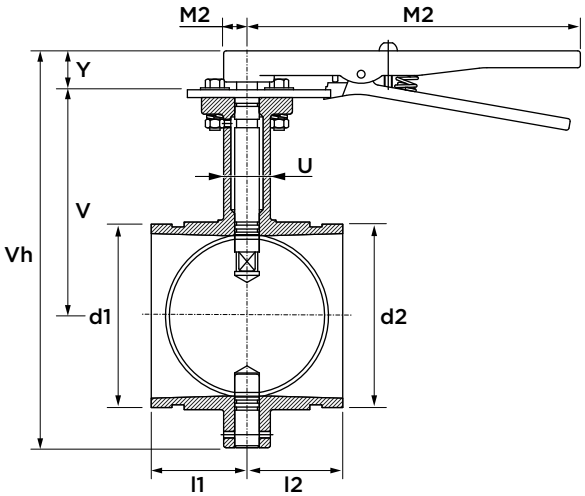


dimension	article no. SS 304	weight [kg]	l1/l2	U [Ø]	D	Y	V	h2	M1	M2	E
48.3 (DN40)	1V5000015001	3.0	70	52	80	43	56	30	37	193	8
60.3 (DN50)	1V5000020001	4.0	78	52	93	43	63	30	37	193	8
73	1V5000025001	7.0	90	68	120	55	81	38	54	250	10
76.1 (DN65)	1V5000029001	7.0	90	68	120	55	81	38	54	250	10
88.9 (DN80)	1V5000030001	9.4	107	68	141	55	90	38	54	250	10
114.3 (DN100)	1V5000045001	25.0	120	68	195	56	103	38	54	290	10

dimension	article no. AISI 316	weight [kg]	l1/l2	U [Ø]	D	Y	V	h2	M1	M2	E
48.3 (DN40)	1V5000015002	3.0	70	52	80	43	56	30	37	193	8
60.3 (DN50)	1V5000020002	4.0	78	52	93	43	63	30	37	193	8
73	1V5000025002	7.0	90	68	120	55	81	38	54	250	10
76.1 (DN65)	1V5000029002	7.0	90	68	120	55	81	38	54	250	10
88.9 (DN80)	1V5000030002	9.4	107	68	141	55	90	38	54	250	10
114.3 (DN100)	1V5000045002	25.0	120	68	195	56	103	38	54	290	10

SJ300N-L butterfly valve with lever handle
(2 x groove)





specifications

- maximum operating pressure 20 bar
- operating temperature 0 till 93°C
- valve disc with EPDM liner for water applications or NBR nitrile liner for oil apllications
- valve with dual-seal disc
- lever handle with 10 positions
- with grooved end connections
- with handle turn lock

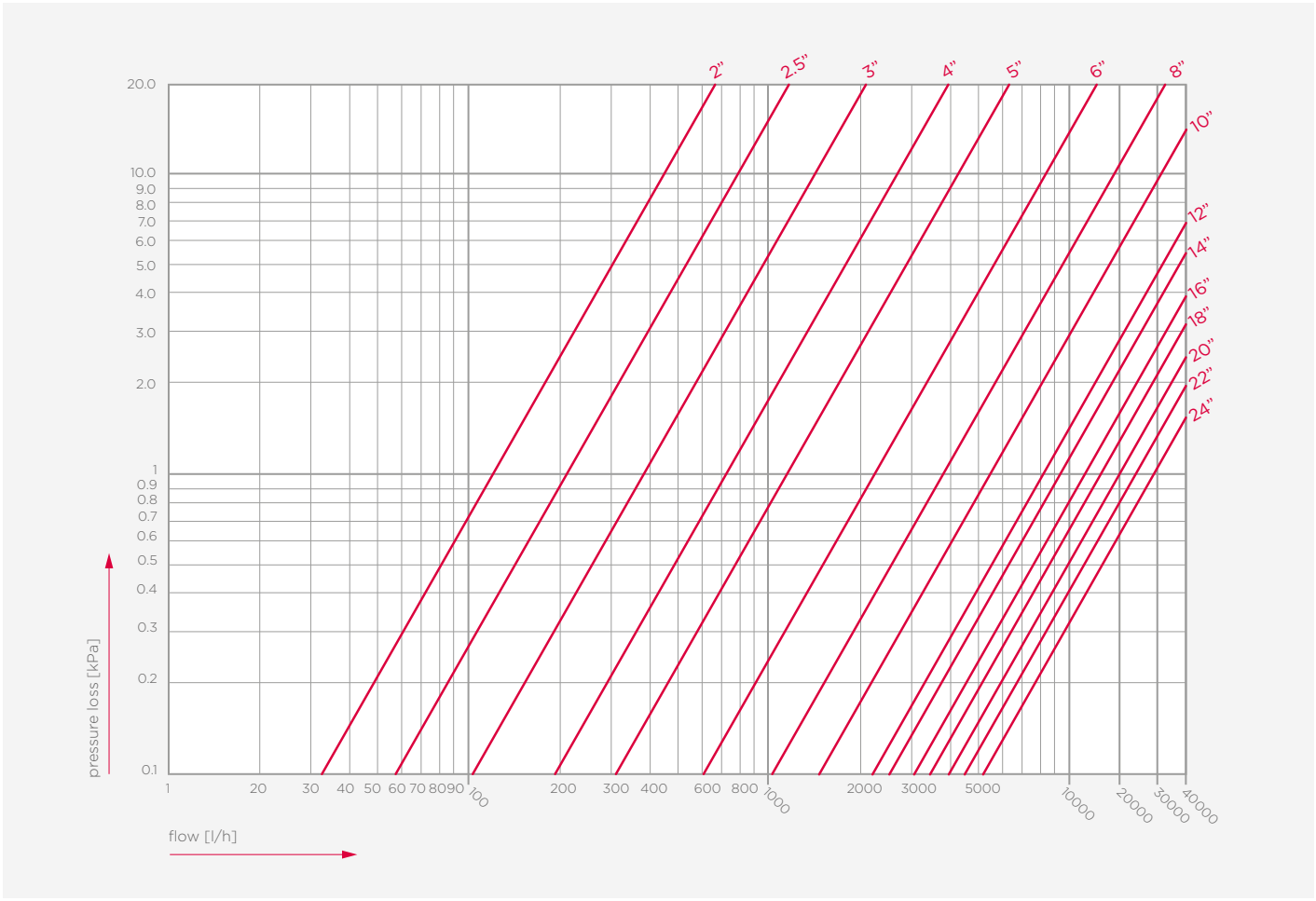
nr.	component	material
1	body	ductile iron ASTM A536, grade 65-45-12
	finish	black epoxy coating
2	valve disc	ductile iron
	valve disc liner	EPDM grade E*
3	support shaft	stainless steel (410)
4	upper shaft	stainless steel (410)
5	stem o-rings	EPDM
6	lever handle	ductile iron ASTM A536, grade 65-45-12
	finish	painted black

*option: NBR nitrile rubber

max. test pressure [bar]	body	seat
all dimensions	30	20

pressure equipment directive category	
all dimensions	SEP

dimension	article no.	weight [kg]	l1/l2	U [Ø]	Y	V	Vh	M1	M2
60.3 (DN50)	1V30N0020006	3.1	41	29	35	106	204	21	192
73	1V30N0025006	3.7	49	32	35	111	214	21	192
76.1 (DN65)	1V30N0029006	3.8	49	32	35	111	214	21	192
88.9 (DN80)	1V30N0030006	4.1	49	32	35	126	237	21	192
114.3 (DN100)	1V30N0045006	5.2	58	33	35	135	259	21	260
139.7 (DN125)	1V30N0052006	7.7	74	36	35	168	305	21	260
141.3	1V30N0055006	7.7	74	36	35	168	305	21	260
165.1	1V30N0062006	11.4	74	36	35	184	333	21	260
168.3 (DN150)	1V30N0065006	11.5	74	36	35	184	333	21	260
219.1 (DN200)	1V30N0085006	14.5	67	44	35	208	383	21	260
273 (DN250)	1V30N00A1006	27.0	80	48	35	235	440	21	356
323.9 (DN300)	1V30N00A3006	33.5	83	48	35	260	500	21	356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pressure loss [kPa]
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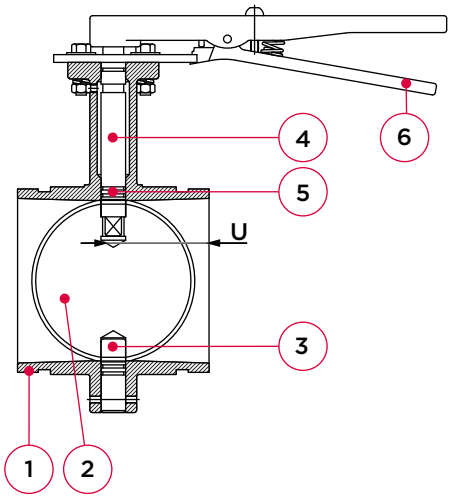
10000
20000
30000
40000
flow [l/h]

flow range

SJ400-L butterfly valve with lever handle, stainless steel
(2 x groove)

specifications

- maximum operating pressure 20 bar
- operating temperature 0 till 82°C
- lever handle with 10 positions
- valve disc with EPDM liner for water applications or NBR nitrile liner for oil apllications
- with grooved end connections
- with handle turn lock

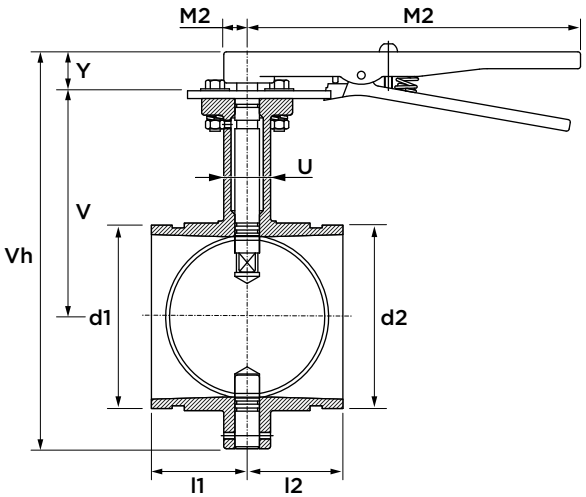


nr.	component	material
1	body	stainless steel (CF8M 316)
2	valve disc	stainless steel (CF8M 316)
	valve disc liner	EPDM grade E*
3	support shaft	stainless steel (410)
4	upper shaft	stainless steel (410)
5	stem o-rings	EPDM
6	lever handle	stainless steel (CF8M 316)

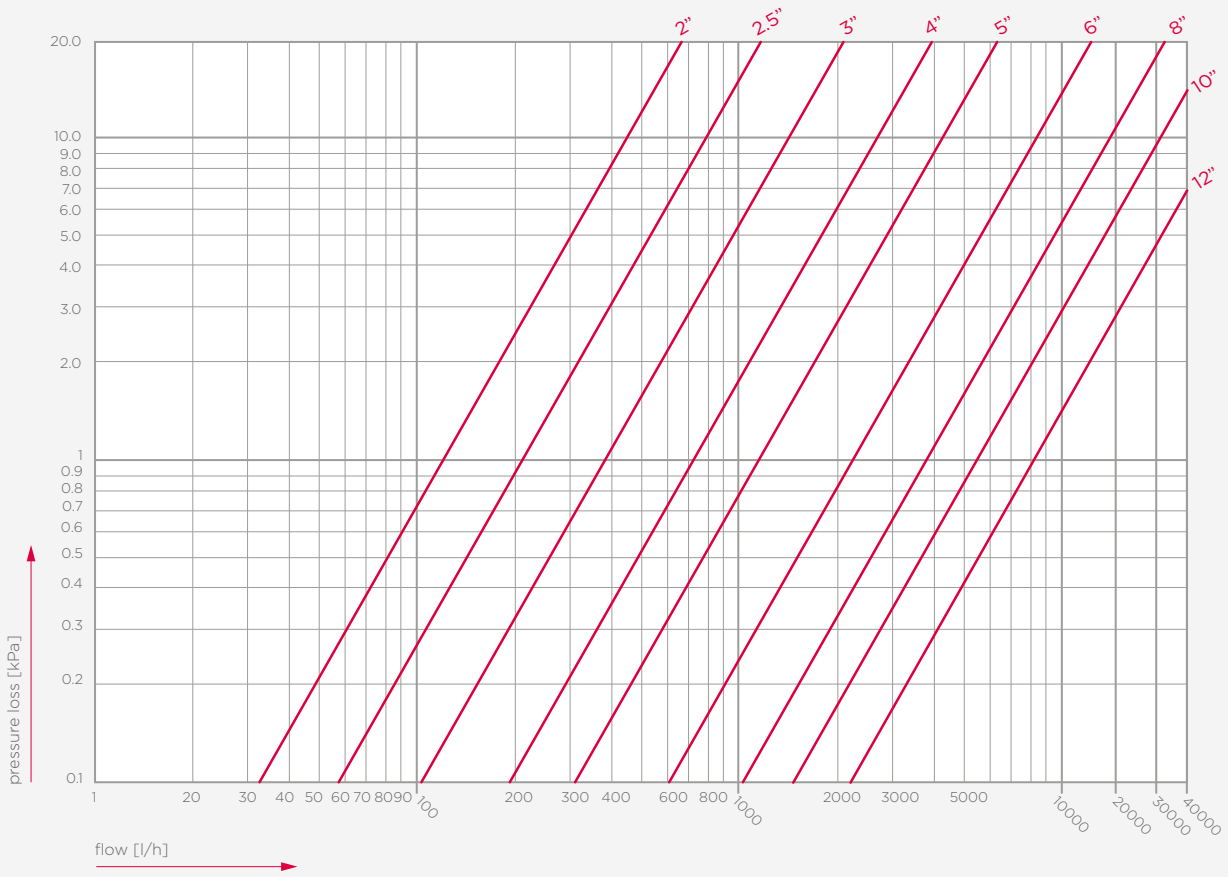
*option: NBR nitrile rubber

max. test pressure [bar]	body	seat
all dimensions	30	20

pressure equipment directive category	
all dimensions	SEP



dimension	article no.	weight [kg]	l1/l2	U [Ø]	Y	V	Vh	M1	M2
60.3 (DN50)	1V4000020003	2.3	41	29	35	106	204	21	192
73	1V4000025003	3.2	49	32	35	111	214	21	192
76.1 (DN65)	1V4000029003	3.2	49	32	35	111	214	21	192
88.9 (DN80)	1V4000030003	3.5	49	32	35	126	237	21	192
114.3 (DN100)	1V4000045003	5.0	58	36	35	135	259	21	252
165.1	1V4000062003	9.2	74	36	35	184	333	21	184
168.3 (DN150)	1V4000065003	9.2	74	36	35	184	333	21	184
219.1 (DN200)	1V4000085003	12.2	67	44	35	208	383	21	208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pressure loss [kPa]
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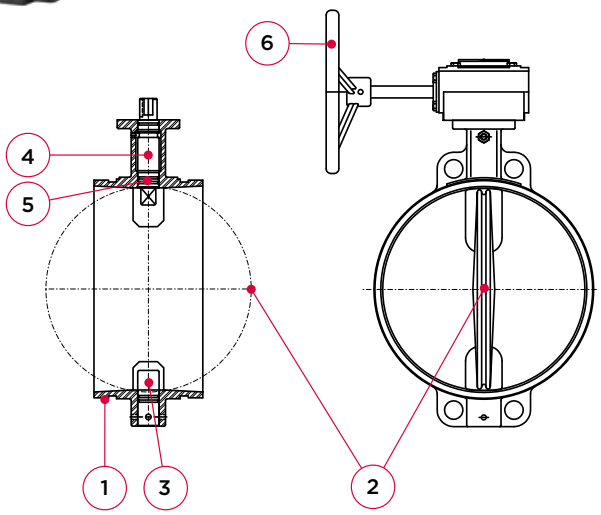
flow [l/h]

flow range

SJ300N-W butterfly valve with worm gear operator
(2 x groove)

specifications

- maximum operating pressure 20 bar
- operating temperature 0 till 93°C
- valve disc with EPDM liner for water applications or NBR nitrile liner for oil apllications
- with grooved end connections
- with delay mechanism for precise operation
- anti water hammer
- ISO 5211 mounting pad for power actuator

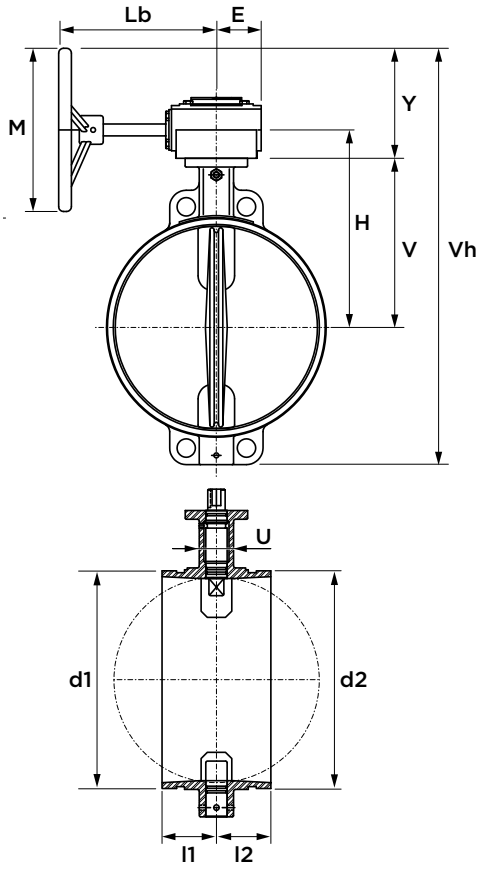


nr.	component	material
1	body	ductile iron ASTM A536, grade 65-45-12
	finish	black epoxy coating
2	valve disc	ductile iron
	valve disc liner	EPDM grade E*
3	support shaft	stainless steel (410)
4	upper shaft	stainless steel (410)
5	stem o-rings	EPDM
6	worm gear operator	ductile iron ASTM A536, grade 65-45-12
	finish	painted black

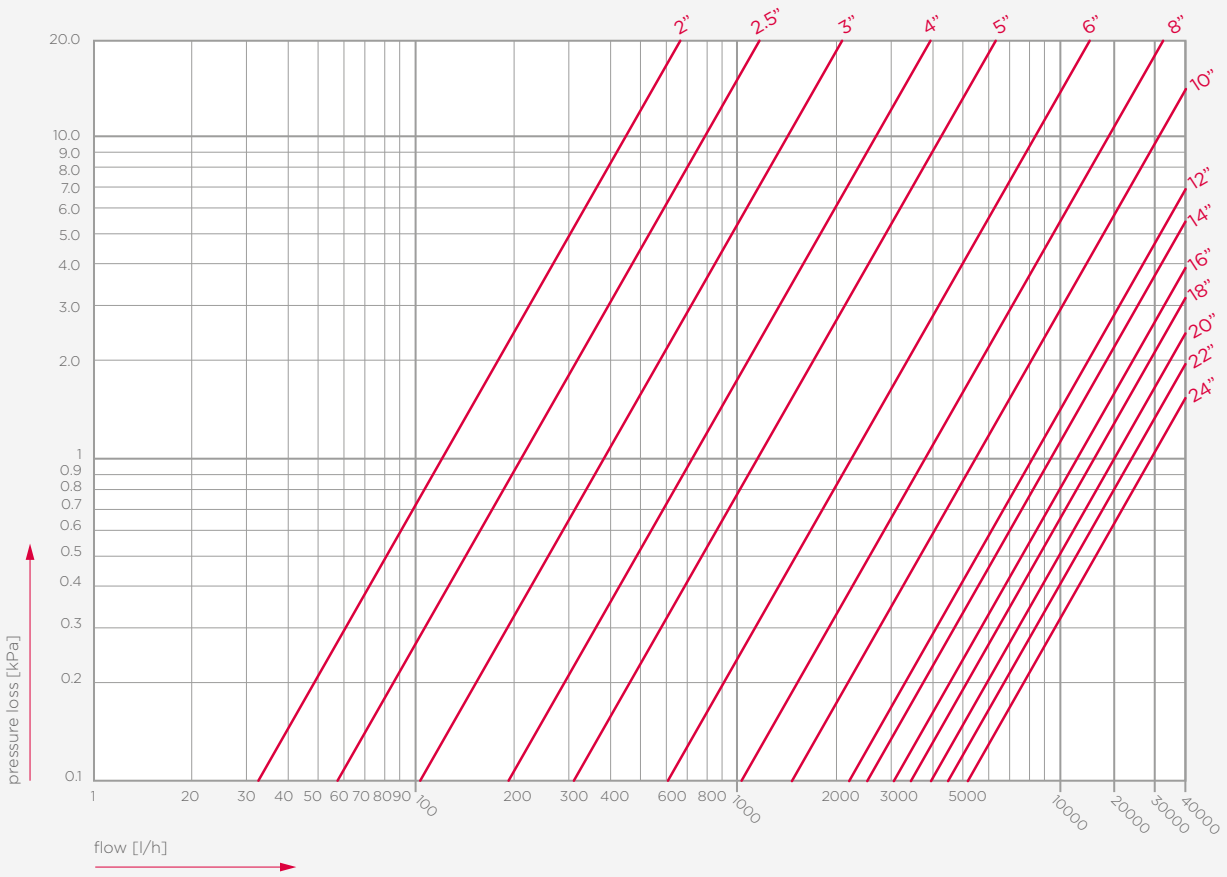
*option: NBR nitrile rubber

max. test pressure [bar]	body	seat
all dimensions	30	20

pressure equipment directive category	
all dimensions	SEP



dimension	article no.	weight [kg]	l1/l2	U [Ø]	Y	V	H	Vh	M	Lb	E
60.3 (DN50)	1V30N0020010	3.1	41	29	71	106	135	275	153	94	104
73	1V30N0025010	3.7	49	32	71	111	140	285	153	94	104
76.1 (DN65)	1V30N0029010	3.8	49	32	71	111	140	285	153	94	104
88.9 (DN80)	1V30N0030010	4.1	49	32	71	126	155	308	153	94	104
114.3 (DN100)	1V30N0045010	5.2	58	33	71	135	164	330	153	94	104
139.7 (DN125)	1V30N0052010	7.7	74	36	71	168	197	376	153	94	104
141.3	1V30N0055010	7.7	74	36	71	168	197	376	153	94	104
165.1	1V30N0062010	11.4	74	36	71	184	213	404	153	94	104
168.3 (DN150)	1V30N0065010	11.5	74	36	71	184	213	404	153	94	104
219.1 (DN200)	1V30N0085010	14.5	67	44	71	208	237	454	153	94	104
273 (DN250)	1V30N00A1010	27.0	80	48	75	235	269	538	198	134	114
323.9 (DN300)	1V30N00A3010	33.5	83	48	75	260	294	598	198	134	114
355.6 (DN350)	1V30N00A4010	59.0	89	56	101	276	315	692	306	135	186
406.4 (DN400)	1V30N00A6010	67.0	89	62	101	302	341	742	306	135	186
457.2 (DN450)	1V30N00A8010	85.0	102	70	101	350	389	825	306	135	186
508 (DN500)	1V30N00B0010	133.0	108	76	124	383	441	961	412	157	250
558.8 (DN550)	1V30N00B2010	147.0	118	83	124	427	485	1034	412	157	250
609.6 (DN600)	1V30N00B4010	160.0	127	83	124	453	511	1085	412	157	250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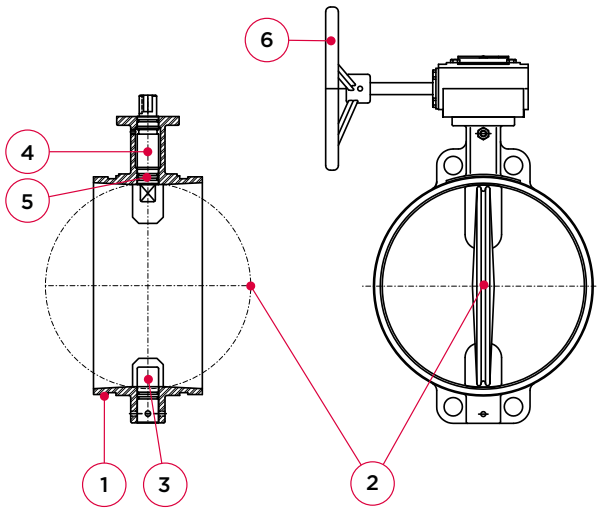
flow [l/h]

flow range

SJ400W butterfly valve with worm gear operator, stainless steel
(2 x groove)

specifications

- maximum operating pressure 20 bar
- operating temperature 0 till 82°C
- with grooved end connections
- valve disc with EPDM liner for water applications or NBR nitrile liner for oil apllications
- with delay mechanism for precise operation
- anti water hammer
- valve disc with dual EPDM (E-PW) seal, for cold and hot water appplications

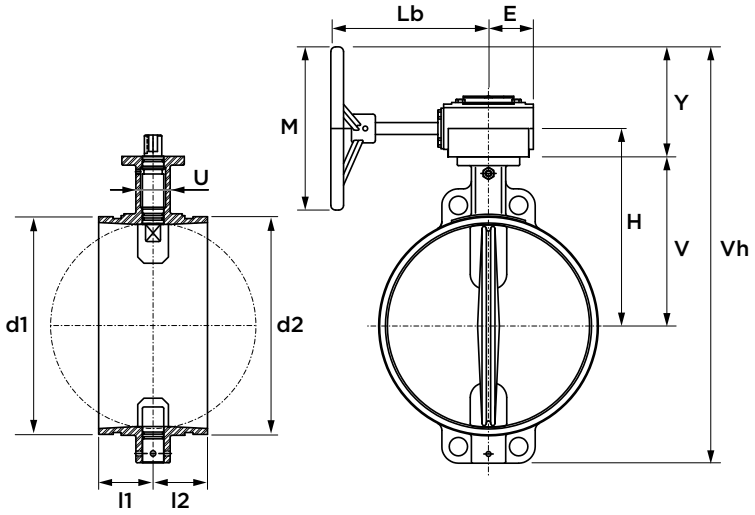


nr.	component	material
1	body	stainless steel (CF8M 316)
2	valve disc	stainless steel (CF8M 316)
	valve disc liner	EPDM grade E*
3	support shaft	stainless steel (410)
4	upper shaft	stainless steel (410)
5	stem o-rings	EPDM
6	worm gear operator	stainless steel (CF8M 316)

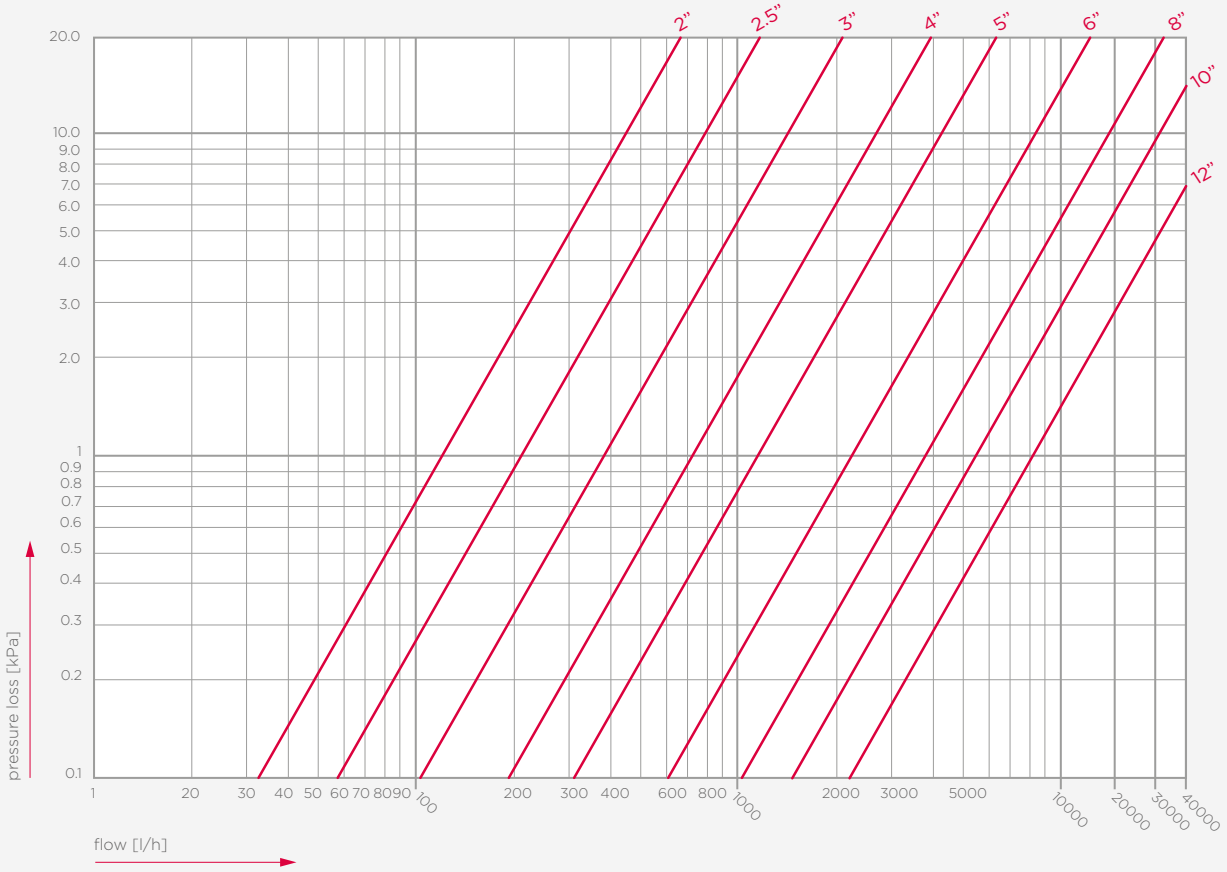
*option: NBR nitrile rubber

max. test pressure [bar]	body	seat
all dimensions	30	20

pressure equipment directive category	
all dimensions	SEP



dimension	article no.	weight [kg]	l1/l2	Y	V	H	Vh	M	Lb	E
60.3 (DN50)	1V4000020004	5.0	41	71	106	135	275	153	94	104
73	1V4000025004	5.9	49	71	111	140	285	153	94	104
76.1 (DN65)	1V4000029004	5.9	49	71	111	140	285	153	94	104
88.9 (DN80)	1V4000030004	5.7	49	71	126	155	308	153	94	104
114.3 (DN100)	1V4000045004	7.7	58	71	135	164	330	153	94	104
165.1	1V4000062004	11.9	74	71	184	213	404	153	94	104
168.3 (DN150)	1V4000065004	11.9	74	71	184	213	404	153	94	104
219.1 (DN200)	1V4000085004	14.8	67	71	208	237	454	153	94	104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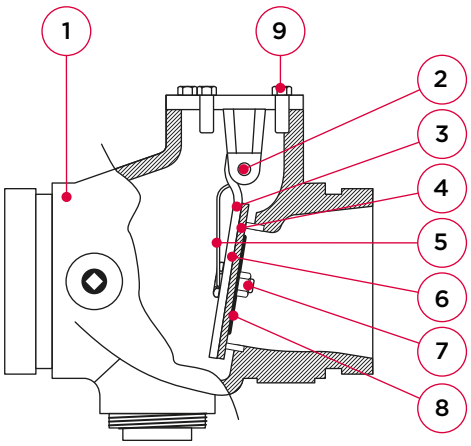
flow [l/h]

flow range

SJ900 swing check valve
(2 x groove)



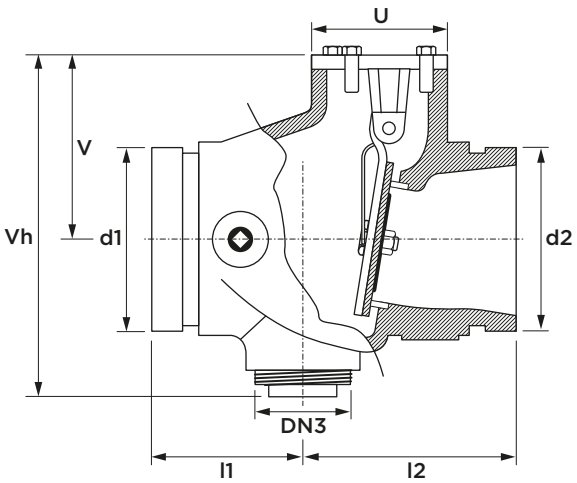
specifications

- maximum operating pressure 20 bar
- operating temperature -34°C till 110°C
- with grooved end connections
- large flow capabilty
- horizontal mount or vertical mount upward flow only

nr.	component	material
1	body and bonnet	ductile iron ASTM A536, grade 65-45-12
	finish	black epoxy coating
2	disc hinge pin	stainless steel (303)
3	valve disc	2½ - 4": stainless steel (304) 5 - 12": ductile iron
4	valve disc liner	EPDM
5	torsion spring	stainless steel (302)
6	disc	stainless steel (304)
7	bolt and locknut	stainless steel (304)
8	disc seat o-ring	bronze (C83600)
9	set screw	carbon steel

max. test pressure [bar]	body	seat
all dimensions	30	20

pressure equipment directive category	
all dimensions	SEP

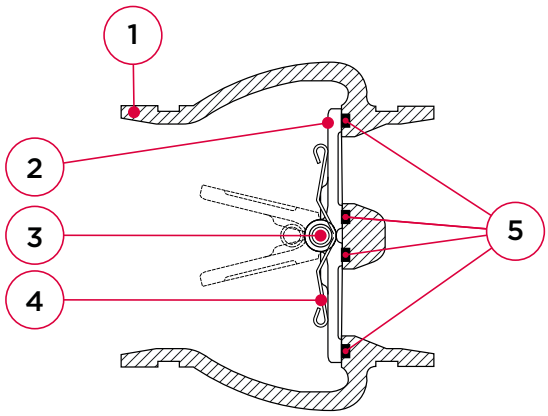


dimension	article no.	weight [kg]	l1	l2	U [Ø]	V	Vh	DN3
73	1V9000025001	4.9	88	102	73	95	159	Rc1¼
76.1 (DN65)	1V9000029001	4.9	88	102	73	95	159	Rc1¼
88.9 (DN80)	1V9000030001	4.9	76	102	73	95	159	Rc1¼
114.3 (DN100)	1V9000045001	8.3	89	127	80	117	197	Rc2
139.7 (DN125)	1V9000052001	23.5	136	194	93	178	292	Rc2
141.3	1V9000055001	23.5	136	194	93	178	292	Rc2
165.1	1V9000062001	23.5	127	178	114	178	292	Rc2
168.3 (DN150)	1V9000065001	23.5	127	178	114	178	292	Rc2
219.1 (DN200)	1V9000085001	45.3	111	254	151	217	357	Rc2
273 (DN250)	1V90000A1001	99.0	254	254	272	273	457	Rc2
323.9 (DN300)	1V90000A3001	155.6	305	305	312	327	544	Rc2

SJ915 dual disc swing check valve 2½" - 12"
(2 x groove)

specifications

- maximum operating pressure 20 bar
- operating temperature 0 till 90°C
- with grooved end connections
- horizontal mount with vertical positioned disc pin, vertical mount upward flow only

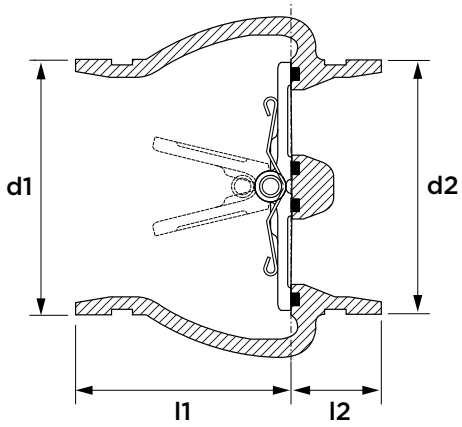


nr.	component	material
1	body	ductile iron ASTM A536, grade 65-45-12
	finish	black epoxy coating
2	valve disc	stainless steel (CF8M 316)
	valve disc liner	EPDM grade E*
3	disc hinge pin	stainless steel (304)
4	torsion springs	stainless steel (316)
5	seals	EPDM or nitrile

*option: NBR nitrile rubber

max. test pressure [bar]	body	seat
all dimensions	30	20

pressure equipment directive category	
all dimensions	SEP



dimension	article no.	weight [kg]	l1	l2
73	1V9150025001	2.3	84	41
76.1 (DN65)	1V9150029001	2.3	84	41
88.9 (DN80)	1V9150030001	2.5	95	40
114.3 (DN100)	1V9150045001	3.8	96	41
165.1	1V9150062001	7.3	109	43
168.3 (DN150)	1V9150065001	7.3	109	43
219.1 (DN200)	1V9150085001	12.4	102	49
273 (DN250)	1V91500A1001	20.7	149	50
323.9 (DN300)	1V91500A3001	28.3	152	56

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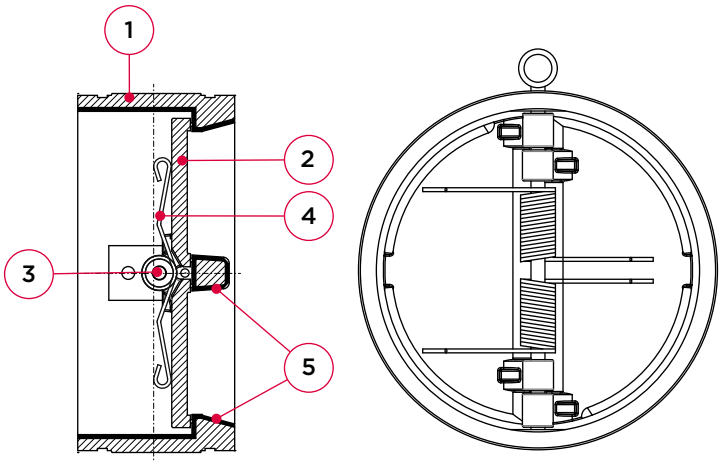
SJ915 dual disc swing check valve 14”-24”
(2 x groove)

specifications

- maximum operating pressure 20 bar
- operating temperature -34°C till 110°C
- with grooved end connections
- compact design
- horizontal mount with vertical positioned disc pin, vertical mount upward flow only

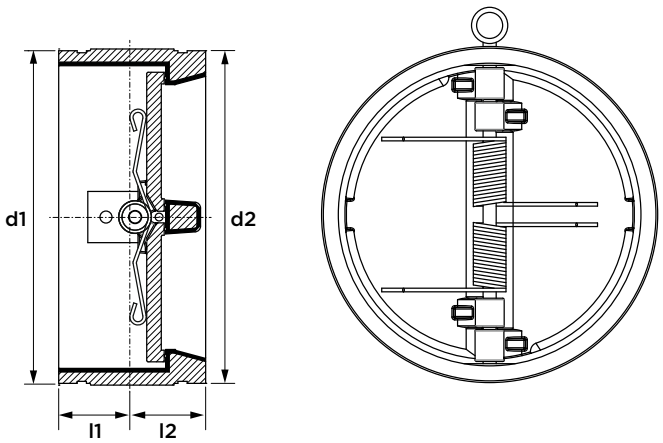


nr.	component	material
1	body	ductile iron ASTM A536, grade 65-45-12
	finish	black epoxy coating
	valve body liner	EPDM grade E*
2	valve disc	stainless steel (CF8M 316)
3	disc hinge pin	stainless steel (304)
4	torsion spring	stainless steel (304)
5	seals	EPDM or nitrile

*option: NBR nitrile rubber

max. test pressure [bar]	body	seat
all dimensions	30	20

pressure equipment directive category	
all dimensions	SEP

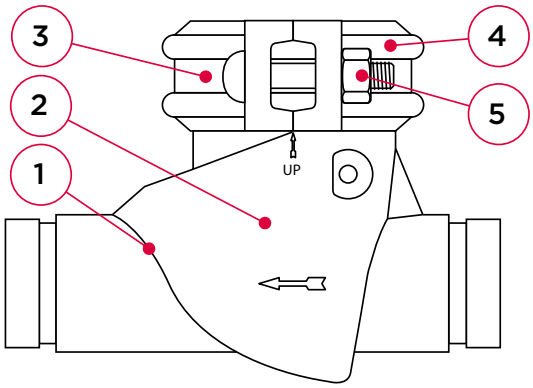


dimension	article no.	weight [kg]	l1/l2
355.6 (DN350)	1V91500A4001	38	91
406.4 (DN400)	1V91500A6001	56.3	92
457.2 (DN450)	1V91500A8001	67.5	100
508 (DN500)	1V91500B0001	96	108
609.6 (DN600)	1V91500B4001	138	123

SJ930 horizontal swing check valve
(2 x groove)

specifications

- maximum operating pressure
  DN50-65: 69 bar
  DN80-100: 42 bar
- operating temperature -29 till 82°C
- with grooved end connections
- horizontale mount only
- also suitable for mining and oilfield applications

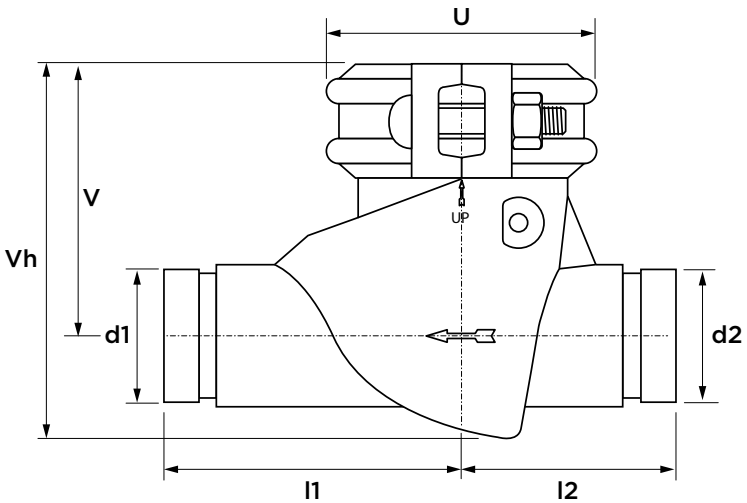


nr.	component	material
1	body and bonnet	ductile iron ASTM A536, grade 65-45-12
	finish	black powdercoating
2	valve disc	stainless steel (CF8M 316)
	valve disc liner	EPDM grade E*
3	coupling segments	ductile iron
4	gasket	nitrile grade 'T'
5	bolts and nuts	carbon steel

*option: NBR nitrile rubber

max. test pressure [bar]	body	seat
DN50-DN65	104	69
DN80-DN150	63	42

pressure equipment directive category	
all dimensions	SEP



dimension	article no.	weight [kg]	l1	l2	U [Ø]	V	Vh
60.3 (DN50)	1V9300020001	6.6	133	95	189	124	170
73	1V9300025001	10.4	133	101	222	130	189
88.9 (DN80)	1V9300030001	12.2	165	108	222	137	197
114.3 (DN100)	1V9300045001	17.3	168	137	240	163	236

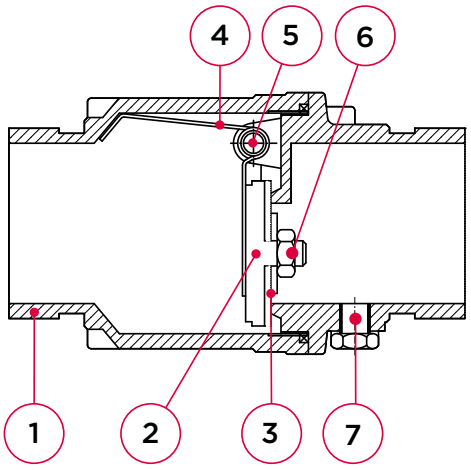
133

BH22C swing check valve, brass
(2 x groove)

specifications

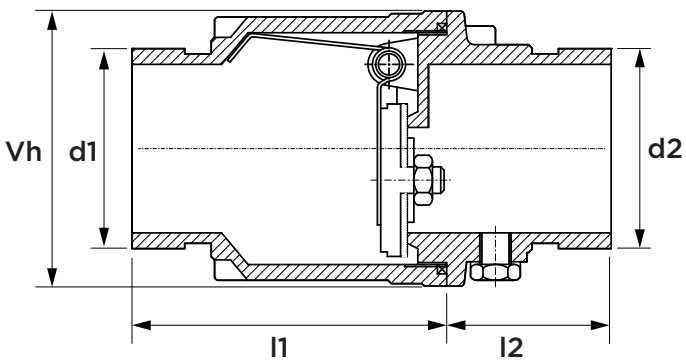
- maximum operating pressure 17 bar
- operating temperature 0 till 90°C
- with grooved end connections
- horizontal mount or vertical mount upward flow only

nr.	component	material
1	body and bonnet	brass (C85700)
2	valve disc	brass (C85700)
	valve disc liner	EPDM
3	disc ring	brass (C36000)
4	disc torsion spring	stainless steel (304)
5	disc hinge pin	brass (C36000)
6	bolt and locknut	brass (C36000)
7	plug	brass (C36000)



max. test pressure [bar]	body	seat
all dimensions	26	17

pressure equipment directive category	
all dimensions	SEP

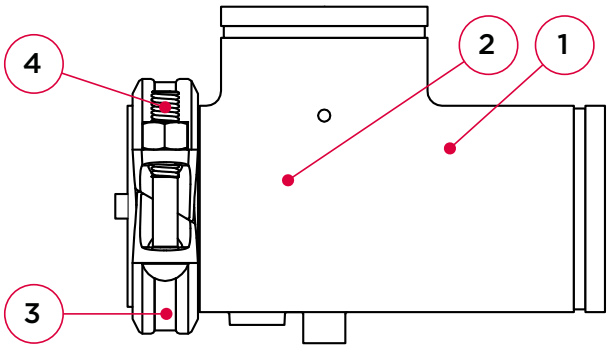


dimension	article no.	weight [kg]	l1/l2	Vh
60.3 (DN50)	1BH220020001	1.6	73	83
73	1BH220025001	3.1	83	107
88.9 (DN80)	1BH220030001	4.5	97	124
114.3 (DN100)	1BH220045001	5.4	101	142

725G suction diffuser
(2 x groove)

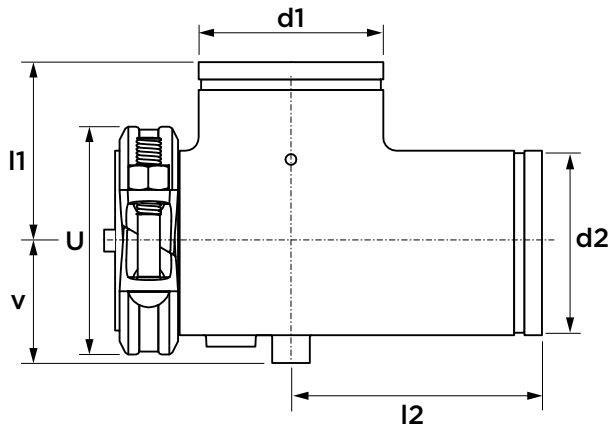
specifications

- maximum operating pressure 20 bar
- operating temperature -34° till 110°C
- with grooved end connections
- with mesh screen
- screen mesh available in different dimensions
- compact design
- reduces turbulence
- connection directly on pump inlet
- with drain plug

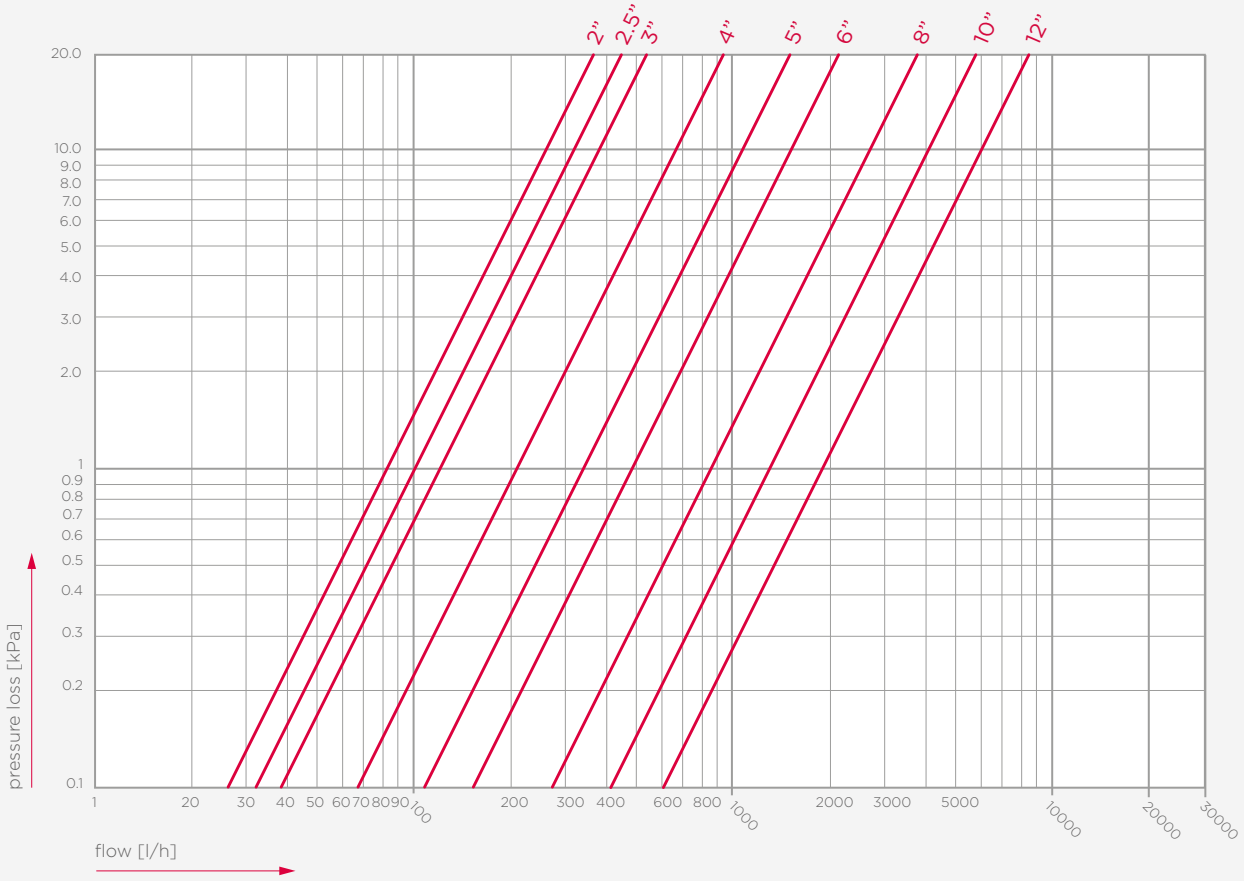


nr.	component	material
1	body, cap and coupling segments	ductile iron ASTM A536, grade 65-45-12
	finish	painted orange*
2	mesh screen	stainless steel (304)
3	coupling segments	ductile iron
	gasket	EPDM grade 'E'**
4	bolts and nuts	carbon steel

*option: black epoxy coating
**options: EPDM grade 'E-pw', nitrile grade 'T', Fluoroelastomer grade 'O' or Silicone grade 'L'



dimension		article no.	weight [kg]	l1	l2	U [Ø]	V
60.3	(DN50)	1V7252020E01	3.6	95	127	119	52
73		1V7252525E01	4	95	127	140	52
76.1	(DN65)	1V7252929E01	4	95	127	146	52
88.9	(DN80)	1V7253030E01	6	140	160	166	70
114.3	(DN100)	1V7254545E01	9.3	127	187	206	80
139.7	(DN125)	1V7255252E01	14.1	229	260	238	97
141.3		1V7255555E01	17.7	229	260	240	97
165.1		1V7256262E01	18.9	165	229	266	110
168.3	(DN150)	1V7256565E01	19.7	165	229	271	110
219.1	(DN200)	1V7258585E01	34.3	229	260	342	140
273	(DN250)	1V725A1A1E01	56	229	315	396	167
323.9	(DN300)	1V725A3A3001	76.4	254	392	452	194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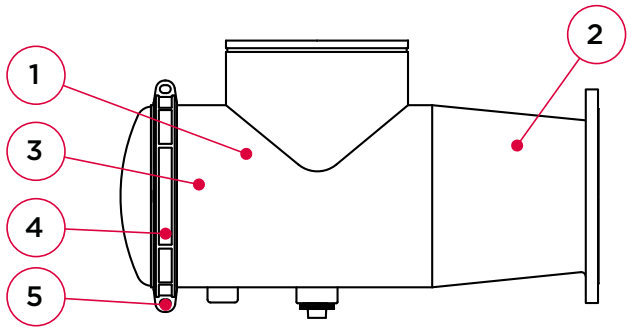
flow [l/h]

flow range

725F suction diffuser
(flange x groove)

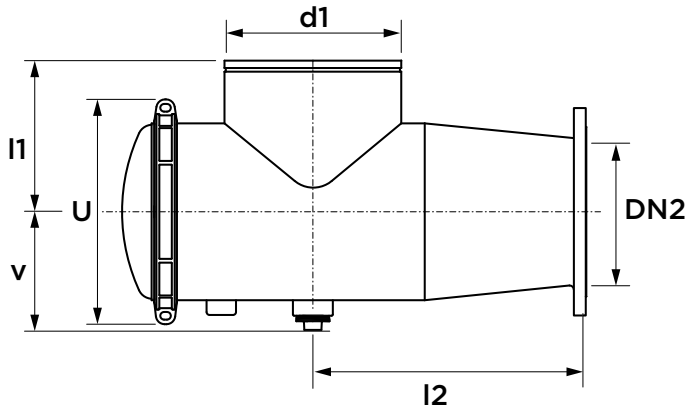
specifications

- maximum operating pressure 20 bar
- operating temperature -34° till 110°C
- with grooved end connections
- screen mesh available in different dimensions
- compact design
- reduces turbulence
- connection directly on pump inlet
- with drain plug



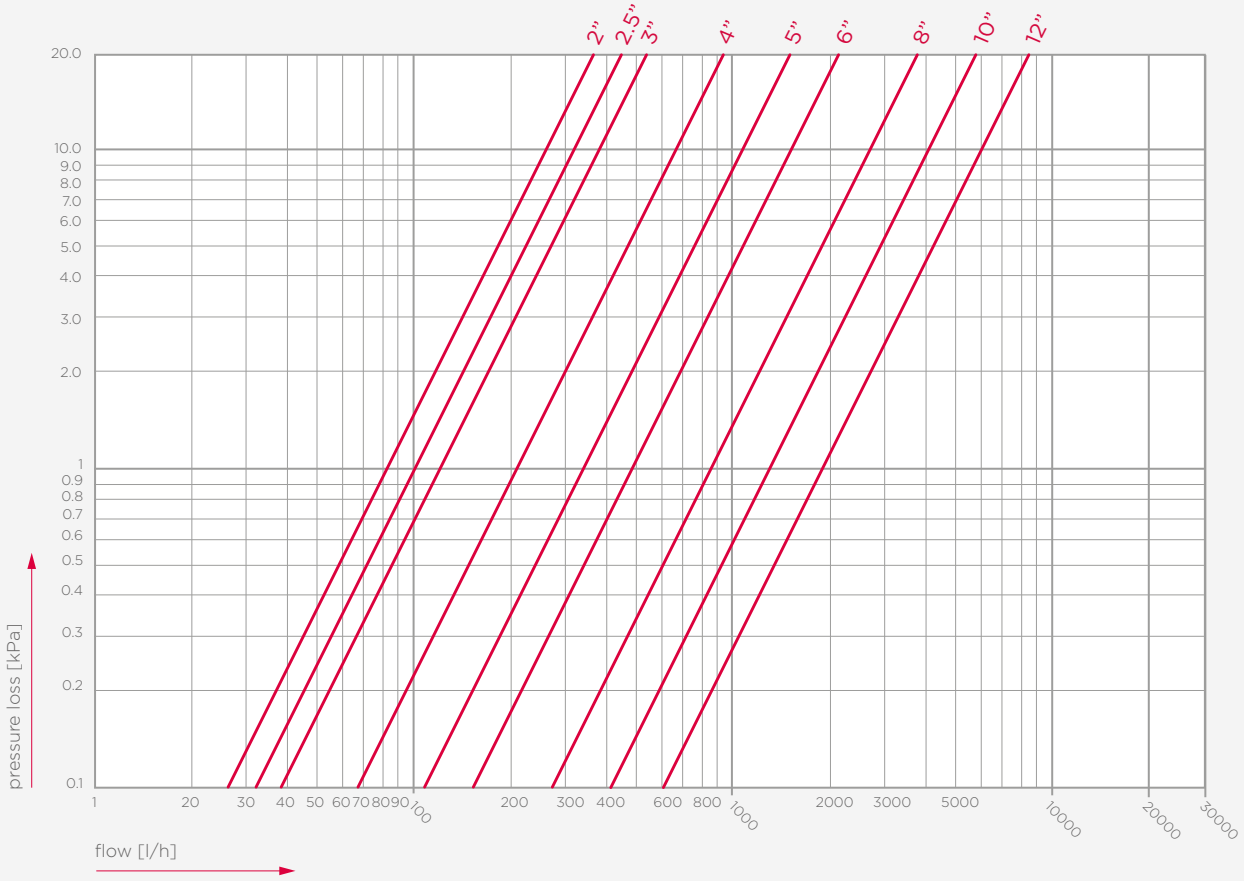
nr.	component	material
1	body, cap and coupling segments	ductile iron ASTM A536, grade 65-45-12
	finish	painted orange*
2	body cap	carbon steel ASTM A53 / A204.
3	screen	stainless steel (304)
4	coupling segments	ductile iron
	gasket	EPDM grade 'E'**
5	bolts and nuts	carbon steel

*option: black epoxy coating
**options: EPDM grade 'E-pw', nitrile grade 'T', Fluoroelastomer grade 'O' or Silicone grade 'L'



dimension	article no. PN10	weight [kg]	l1	l2	U [Ø]	V
355.6 x DN250	1V725A4A1010	191	356	546	508	228
355.6 x DN300	1V725A4A3010	202	356	546	508	228
355.6 x DN350	1V725A4A4010	232	406	597	508	228
406.4 x DN300	1V725A6A3010	232	419	597	660	354
406.4 x DN350	1V725A6A4010	242	419	597	660	354
406.4 x DN400	1V725A6A6010	312	445	660	660	354
457.2 x DN350	1V725A8A4010	306	445	635	617	279
457.2 x DN400	1V725A8A6010	317	445	635	617	279
457.2 x DN450	1V725A8A8010	406	508	800	617	279
508 x DN400	1V725B0A6010	392	508	800	711	304
508 x DN450	1V725B0A8010	406	508	800	711	304
508 x DN500	1V725B0B0010	543	597	838	711	304
609.6 x DN450	1V725B4A8010	553	521	825	776	354
609.6 x DN500	1V725B4B0010	571	521	825	776	354
609.6 x DN600	1V725B4B4010	679	606	990	776	354

dimension	article no. ANSI125/150	weight [kg]	l1	l2	U [Ø]	V
355.6 x DN250	1V725A4A1001	191	356	546	508	228
355.6 x DN300	1V725A4A3001	202	356	546	508	228
355.6 x DN350	1V725A4A4001	232	406	597	508	228
406.4 x DN300	1V725A6A3001	232	419	597	660	354
406.4 x DN350	1V725A6A4001	242	419	597	660	354
406.4 x DN400	1V725A6A6001	312	445	660	660	354
457.2 x DN350	1V725A8A4001	306	445	635	617	279
457.2 x DN400	1V725A8A6001	317	445	635	617	279
457.2 x DN450	1V725A8A8001	406	508	800	617	279
508 x DN400	1V725B0A6001	392	508	800	711	304
508 x DN450	1V725B0A8001	406	508	800	711	304
508 x DN500	1V725B0B0001	543	597	838	711	304
609.6 x DN450	1V725B4A8001	553	521	825	776	354
609.6 x DN500	1V725B4B0001	571	521	825	776	354
609.6 x DN600	1V725B4B4001	679	606	990	776	354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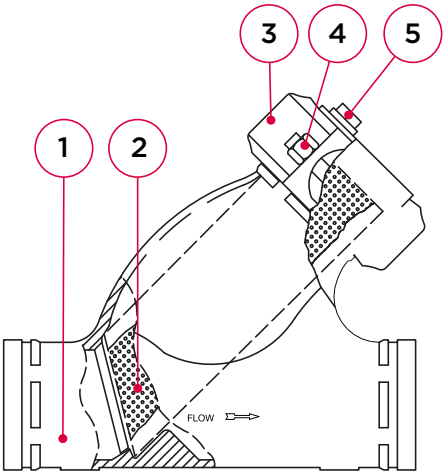
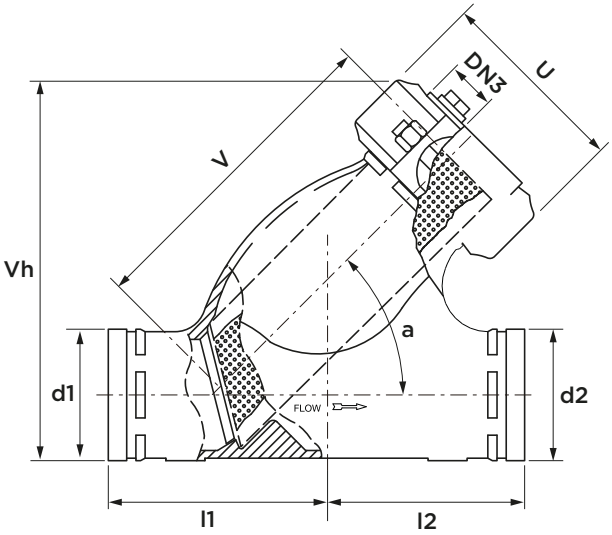
flow [l/h]

flow range

726 y-type filter
(2 x groove)





specifications

- maximum operating pressure
  DN50-150: 20 bar
  DN200: 16 bar
  DN250-750: 12 bar
- operating temperature -34°C till 110°C
- with grooved end connections
- with removable screen mesh, perforation dimensions: 2"-3": 1.6 mm - 4"-16": 3.2 mm
- with drain plug

nr.	component	material
1	body	ductile iron ASTM A536, grade 65-45-12
	finish	painted orange*
2	screen	stainless steel (304)
3	coupling segments	ductile iron
	gasket	EPDM grade 'E'**
4	bolts and nuts	carbon steel
5	plug	ductile iron

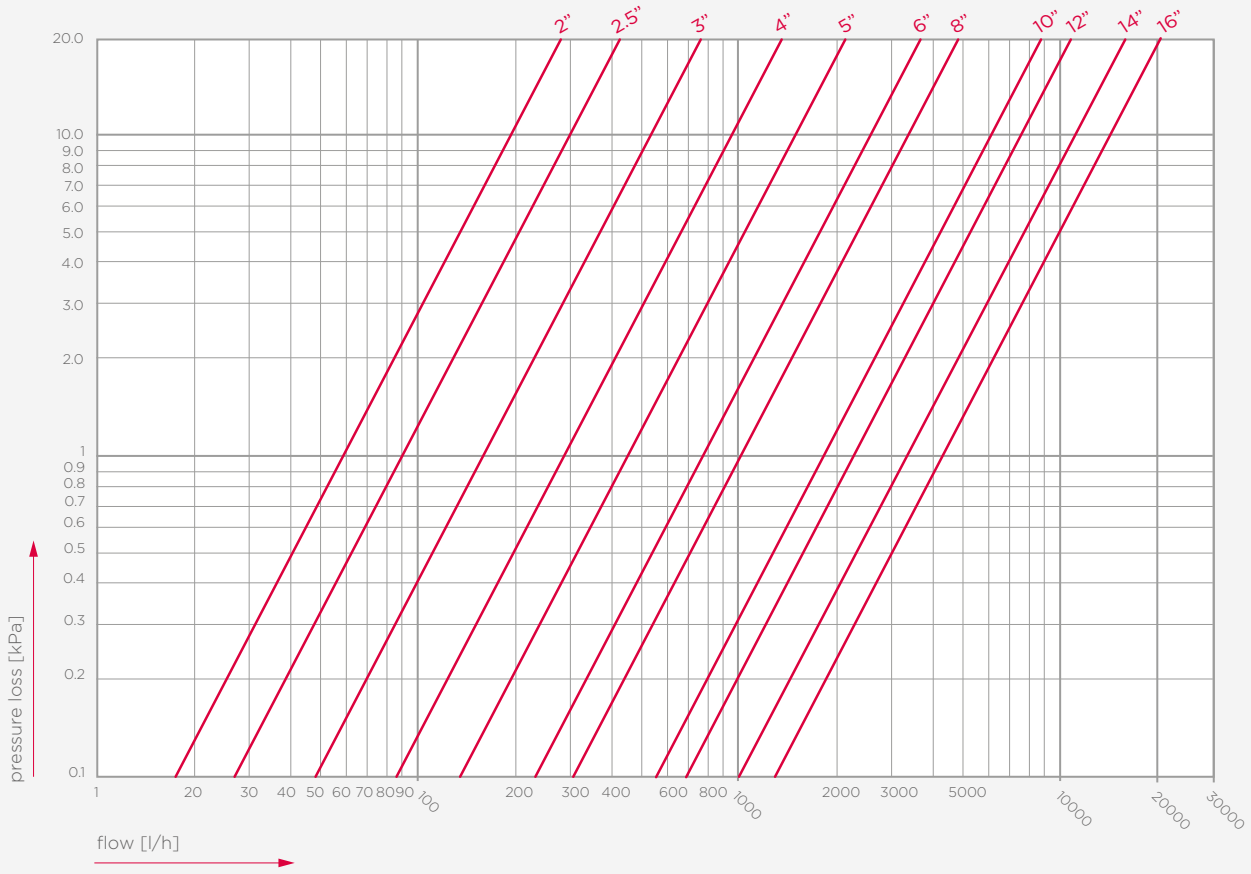
*options: painted red, galvanized or red epoxy coated
**options: EPDM grade 'E-pw', nitrile grade 'T', Fluoroelastomer grade 'O' or Silicone grade 'L'

max. test pressure [bar]	body	seat
all dimensions	30	20

pressure equipment directive category	
all dimensions	SEP

dimension	article no. painted orange	weight [kg]	l1/l2	U [Ø]	Vh	V	a [°]	DN3
60.3 (DN50)	1V7260020E01	4.2	124	119	181	180	45	DN15
73	1V7260025E01	6	137	140	199	192	45	DN15
76.1 (DN65)	1V7260029E01	6	137	146	199	192	45	DN15
88.9 (DN80)	1V7260030E01	7.6	150	166	221	207	45	DN25
114.3 (DN100)	1V7260045E01	12	181	206	269	268	45	DN25
139.7 (DN125)	1V7260052E01	22	210	238	330	315	45	DN25
141.3	1V7260055E01	22	210	240	330	315	45	DN25
165.1	1V7260062E01	29.5	235	266	357	353	45	DN25
168.3 (DN150)	1V7260065E01	29.7	235	271	357	353	45	DN25
219.1 (DN200)	1V7260085E01	55	305	342	454	455	45	DN40

dimension	article no. painted orange	weight [kg]	l1/l2	U [Ø]	Vh	V	a [°]	DN3
273 (DN250)	1V72600A1E01	83	343	396	522	521	45	DN40
323.9 (DN300)	1V72600A3E01	126	381	452	609	597	45	DN40
355.6 (DN350)	1V72600A4E01	190	508	508	760	749	45	DN32
406.4 (DN400)	1V72600A6001	225	534	660	777	737	45	DN32
457.2 (DN450)	1V72600A8001	375	616	617	851	801	45	DN50
508 (DN500)	1V72600B0001	480	683	711	991	931	45	DN50
558.8 (DN550)	1V72600B2001	670	764	720	1029	949	45	DN50
609.6 (DN600)	1V72600B4001	765	813	776	1067	967	45	DN50
660.4 (DN650)	1V72600B6001	1020	864	842	1194	1064	45	DN50
711.2 (DN700)	1V72600B8001	1370	915	914	1308	1168	45	DN50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flow [l/h]

flow range

SS726 y-type filter
(2 x groove)

specifications

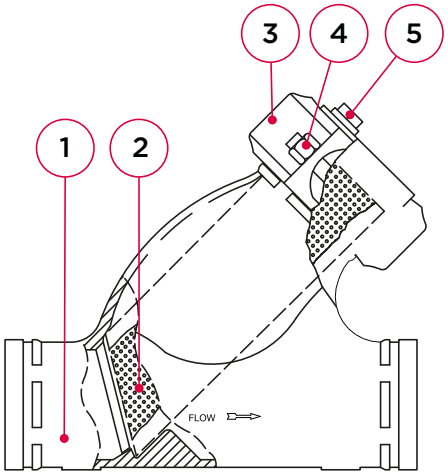
- maximum operating pressure 20 bar
- operating temperature 0 till 90°C
- with grooved end connections
- with removable screen mesh, perforation dimensions: 2"-3": 1.6 mm - 4"-16": 3.2 mm
- with drain plug

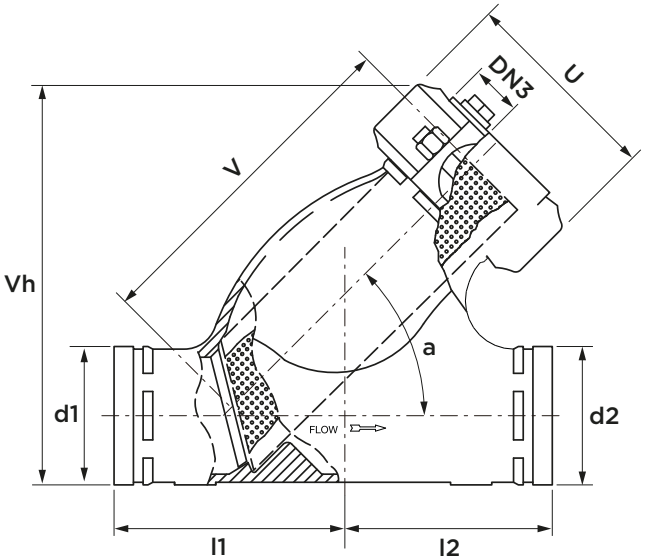
nr.	component	material
1	body	stainless steel (304 or 316)
2	screen	stainless steel (304 or 316)
3	coupling segments	stainless steel (304 or 316)
	gasket	EPDM grade 'E'*
4	bolts and nuts	stainless steel (316)
5	drain plug	stainless steel (304 or 316)

*options: EPDM grade 'E-pw', nitrile grade 'T', Fluoroelastomer grade 'O' or Silicone grade 'L'

max. test pressure [bar]	body	seat
all dimensions	30	20

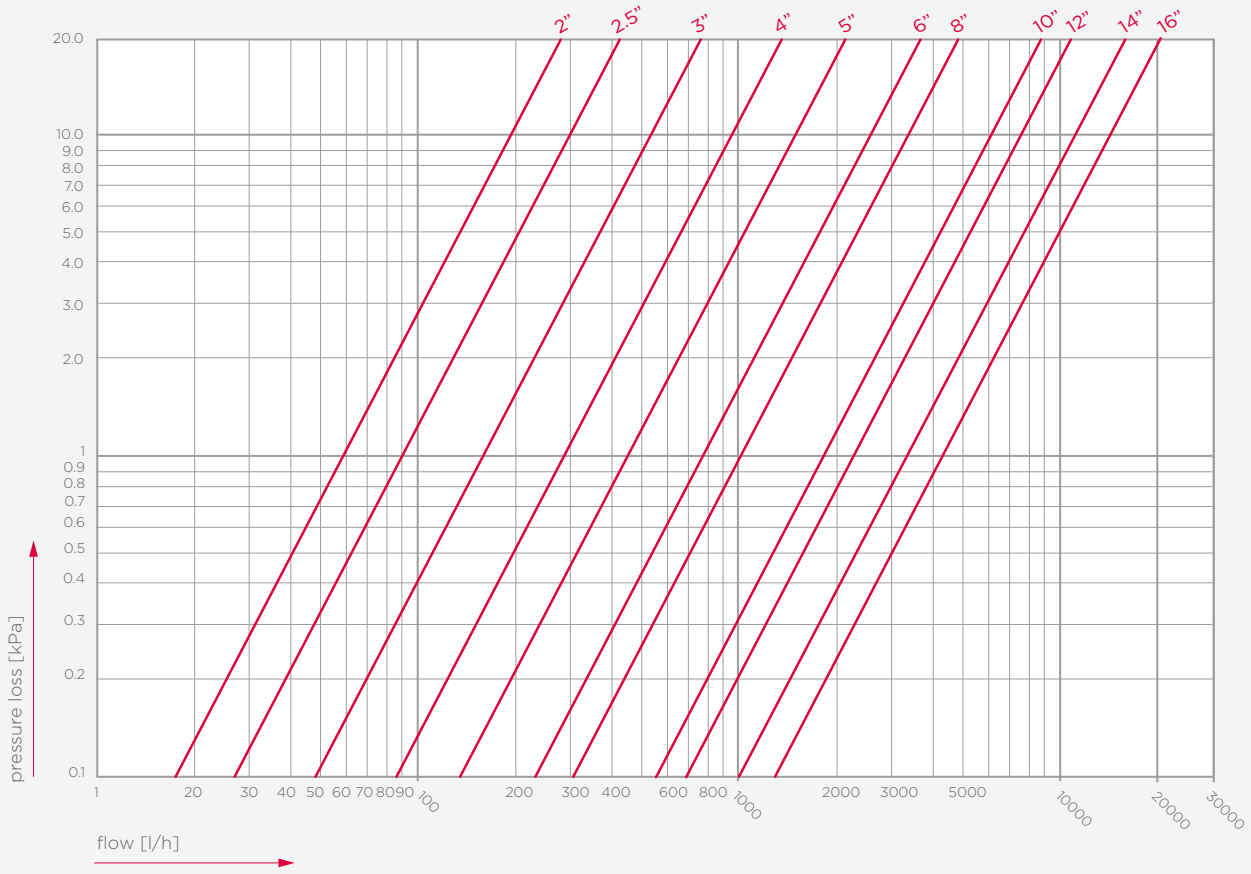
pressure equipment directive category	
all dimensions	SEP





dimension	article no. SS 304	weight [kg]	l1/l2	V	Vl	U [Ø]	DN3
73	1S7260025001	7.6	137	199	192	140	DN15
88.9 (DN80)	1S7260030001	9	150	221	207	166	DN15
114.3 (DN100)	1S7260045001	17.1	181	269	268	206	DN25
168.3 (DN150)	1S7260065001	39	235	357	353	271	DN25

dimension	article no. SS 316	weight [kg]	l1/l2	V	Vl	U [Ø]	DN3
73	1S7260025002	7.6	137	199	192	140	DN15
88.9 (DN80)	1S7260030002	9	150	221	207	166	DN15
114.3 (DN100)	1S7260045002	17.1	181	269	268	206	DN25
168.3 (DN150)	1S7260065002	39	235	357	353	271	DN25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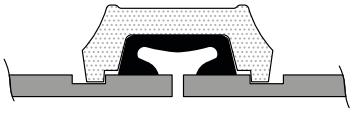
flow [l/h]

flow range

VSH Shurjoint

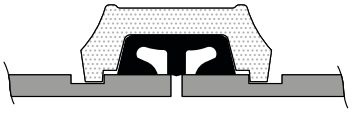
gaskets and accessoiries

gasket type C (standard)
(for couplings Z05, Z07, 7707, 7705)



dimension	article no.			
	EPDM (grade E)	nitrile (grade T)	silicone (grade L)	fluoro-elastomer (grade O)
33.7 (DN25)	SG05E0010	SG05T0010	SG05L0010	SG05V0010
42.4 (DN32)	SG05E0012	SG05T0012	SG05L0012	SG05V0012
48.3 (DN40)	SG05E0015	SG05T0015	SG05L0015	SG05V0015
60.3 (DN50)	SG05E0020	SG05T0020	SG05L0020	SG05V0020
73	SG05E0025	SG05T0025	SG05L0025	SG05V0025
76.1 (DN65)	SG05E0029	SG05T0029	SG05L0029	SG05V0029
88.9 (DN80)	SG05E0030	SG05T0030	SG05L0030	SG05V0030
101.6	SG05E0035	SG05T0035	SG05L0035	SG05V0035
108	SG05E0040	SG05T0040	SG05L0040	SG05V0040
114.3 (DN100)	SG05E0045	SG05T0045	SG05L0045	SG05V0045
133	SG05E0050	SG05T0050	SG05L0050	SG05V0050
139.7 (DN125)	SG05E0052	SG05T0052	SG05L0052	SG05V0052
141.3	SG05E0055	SG05T0055	SG05L0055	SG05V0055
159	SG05E0060	SG05T0060	SG05L0060	SG05V0060
165.1	SG05E0062	SG05T0062	SG05L0062	SG05V0062
168.3 (DN150)	SG05E0065	SG05T0065	SG05L0065	SG05V0065
219.1 (DN200)	SG05E0085	SG05T0085	SG05L0085	SG05V0085
273 (DN250)	SG05E00A1	SG05T00A1	SG05L00A1	SG05V00A1
323.9 (DN300)	SG05E00A3	SG05T00A3	SG05L00A3	SG05V00A3
355.6 (DN350)	SG05E00A4	SG05T00A4	SG05L00A4	SG05V00A4
406.4 (DN400)	SG05E00A6	SG05T00A6	SG05L00A6	SG05V00A6
457.2 (DN450)	SG05E00A8	SG05T00A8	SG05L00A8	SG05V00A8
508 (DN500)	SG05E00B0	SG05T00B0	SG05L00B0	SG05V00B0
558.8 (DN550)	SG05E00B2	SG05T00B2	SG05L00B2	SG05V00B2
609.6 (DN600)	SG05E00B4	SG05T00B4	SG05L00B4	SG05V00B4

gasket type ‘gap-seal’
(for couplings Z05, Z07, 7707, 7705)



dimension	article no.			
	EPDM (grade E)	nitrile (grade T)	silicone (grade L)	fluoro-elastomer (grade O)
33.7 (DN25)	SGGSE0010	SGGST0010	SGGSL0010	SGGSV0010
42.4 (DN32)	SGGSE0012	SGGST0012	SGGSL0012	SGGSV0012
48.3 (DN40)	SGGSE0015	SGGST0015	SGGSL0015	SGGSV0015
60.3 (DN50)	SGGSE0020	SGGST0020	SGGSL0020	SGGSV0020
73	SGGSE0025	SGGST0025	SGGSL0025	SGGSV0025
76.1 (DN65)	SGGSE0029	SGGST0029	SGGSL0029	SGGSV0029
88.9 (DN80)	SGGSE0030	SGGST0030	SGGSL0030	SGGSV0030
101.6	SGGSE0035	SGGST0035	SGGSL0035	SGGSV0035
108	SGGSE0040	SGGST0040	SGGSL0040	SGGSV0040
114.3 (DN100)	SGGSE0045	SGGST0045	SGGSL0045	SGGSV0045
133	SGGSE0050	SGGST0050	SGGSL0050	SGGSV0050
139.7 (DN125)	SGGSE0052	SGGST0052	SGGSL0052	SGGSV0052
141.3	SGGSE0055	SGGST0055	SGGSL0055	SGGSV0055
159	SGGSE0060	SGGST0060	SGGSL0060	SGGSV0060
165.1	SGGSE0062	SGGST0062	SGGSL0062	SGGSV0062
168.3 (DN150)	SGGSE0065	SGGST0065	SGGSL0065	SGGSV0065
219.1 (DN200)	SGGSE0085	SGGST0085	SGGSL0085	SGGSV0085
273 (DN250)	SGGSE00A1	SGGST00A1	SGGSL00A1	SGGSV00A1
323.9 (DN300)	SGGSE00A3	SGGST00A3	SGGSL00A3	SGGSV00A3
355.6 (DN350)	SGGSE00A4	SGGST00A4	SGGSL00A4	SGGSV00A4
406.4 (DN400)	SGGSE00A6	SGGST00A6	SGGSL00A6	SGGSV00A6
457.2 (DN450)	SGGSE00A8	SGGST00A8	SGGSL00A8	SGGSV00A8
508 (DN500)	SGGSE00B0	SGGST00B0	SGGSL00B0	SGGSV00B0
558.8 (DN550)	SGGSE00B2	SGGST00B2	SGGSL00B2	SGGSV00B2
609.6 (DN600)	SGGSE00B4	SGGST00B4	SGGSL00B4	SGGSV00B4

G223 lubricant

inhoud	article no.	description
450 g	SLB100000	standard lubricant
900 g	SLB200000	standard lubricant
270 g	SLB800000	EHC high temperature silicone lubricant

96 continuity clip
(for electrical conductivity)

dimension		article no.	description
33.7-88.9	(DN25-80)	S00960010	for couplings DN25-80
114.3-168.3	(DN100-150)	S00960045	for couplings DN100-150
219.1-323.9	(DN200-300)	S00960085	for couplings DN200-300

GR600 pipe tape

article no.	description
SGR600724	pipe tape ¾ - 24”

integrated piping systems

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more information?

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Would you like to make an appointment to meet an account manager in your region or receive advice and support from one of our experts?
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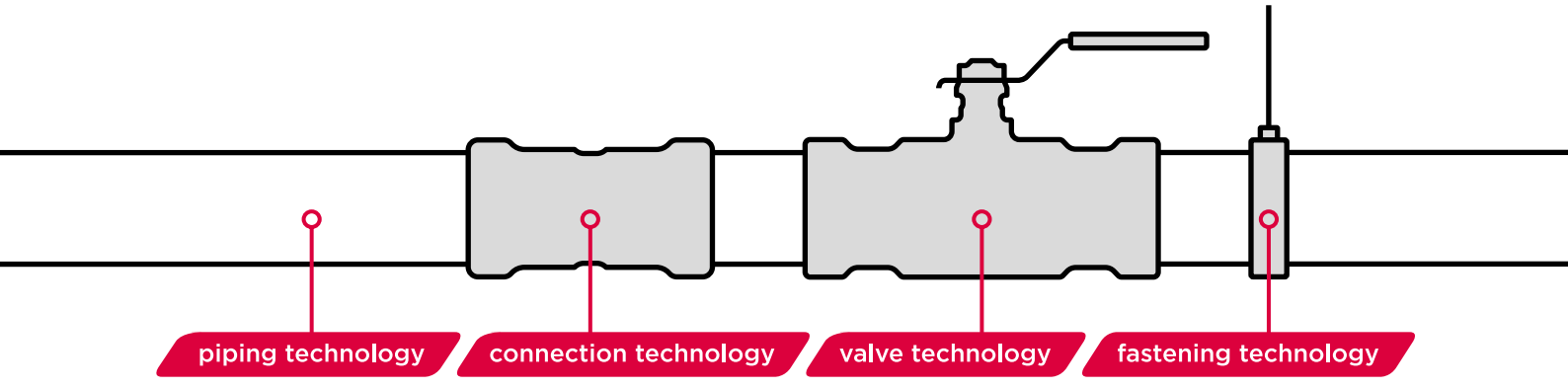

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