

Our valve technology experts are at your service when you are choosing the right valve solutions for your needs!



### Vexve - Inspired by your flow

Vexve is the world's leading supplier of valve solutions for heating and cooling needs in cities and industry. From the widest range of valves in the district energy industry, you can choose the right product for your mission-critical applications. Our valve and control products together with hydraulic control solutions are used in district energy networks, power plants, and heating and cooling systems of all sizes of buildings.

Our goal is always to be one step ahead of our customers' needs and exceed their expectations every day by serving them well. We are constantly developing new, smart, and energy-efficient valve solutions and services that are based on a strong understanding of our customers' needs and desire to deliver high-quality products. Together we create innovative and efficient energy infrastructures that support the sustainable development of a low carbon future.

Vexve is part of Vexve Armatury Group, which is the leading European provider of valve solutions for the energy sector. New trunnion mounted valves are designed and manufactured in cooperation within Vexve Armatury Group Oy.

## Our extensive sales and distribution network covers more than 30 countries





## Complete range of trunnion mounted ball valves

The new trunnion mounted valves are designed for above-ground and underground installations to operate reliably even in the most demanding conditions. The range includes full bore and reduced bore valves in DN sizes 150–1200 with welded or flanged ends up to pressure class PN40. Valves can be operated with various actuator types. Our valves are specifically designed for the district heating and cooling applications needs.



### High-performance

The design of the new trunnion mounted ball valves ensures lower operating torque which means that the valves are easy and light to operate. With Vexve's trunnion mounted ball valves, you can minimize your pressure losses and achieve savings by reducing your pumping costs. The valves are optimized to be used in the highest district heating and cooling pressures.



### Maintenance-free

Vexve's valves are manufactured from high-quality materials which ensures the durability of the valves. The valves are designed to last the entire life cycle of the pipeline. They are equipped with an integrated drain valve which allows draining of the valve body to check the tightness of the valve, even when the pipeline is pressurized.



### Reliable and safe

Vexve's trunnion mounted ball valves have a leakage rate A and bi-directional tightness. The valves have several quality certificates and are tested in accordance with the district energy sector's requirements. Blow-out safe stem construction ensures the safe operation of the valve.



### Fast deliveries

We optimize and measure our supply chain efficiency through delivery reliability, delivery capability, and customer satisfaction. Our highly automized production, efficient order-to-delivery process and high stock levels ensure fast deliveries globally throughout the year. We are constantly developing our facilities to make production even more efficient.





# High-performance trunnion mounted ball valves

### Trunnion mounted design

In the trunnion mounted ball valve design, the sealing rings are floating and the ball is fixed. The ball and the stem are attached to each other on both sides of the ball, which provides more support, especially as the ball size increases. When the pressure increases, the sealing rings are pressed against the ball. The spring is used to create a pre-pressure on the seal, which is used to achieve total tightness of the valve.

## Double block and bleed functionality

The double block and bleed functionality allows draining of the valve body to check the tightness of the valve, even when the pipeline is pressurized. The draining of the valve body is possible to do in both valve positions — open or closed.

Checking the tightness of the valve with double block and bleed functionality can be done as follows\*. The medium flows through the valve when the valve is in the open position. The seats ensure that the valve is tight. Testing the tightness of the valve can be done by closing the valve and draining the accumulated medium from the ball cavity. After the ball cavity is empty, you can check that the valve is tight by noticing that the flow from the draining valve stops.

## Fully welded construction and high-quality materials

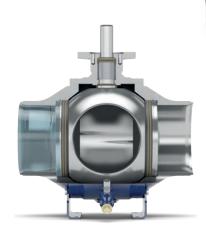
The fully welded construction of the trunnion mounted ball valves increases district heating lines' lifetime as it eliminates the risk of leakage and air ingress. The valve stem is sealed with multiple O-rings, which guarantees that the stem construction is tight and the valve is maintenance-free. The trunnion mounted ball valves are suitable for many different applications and withstand varying water quality. The face-to-face lengths of the valves are standardized, which guarantees space-saving installation of the valves. Valves can be installed in any position and have four lifting lugs, which makes the moving and turning of the valve easier even in the locations where the space is limited.

### Spring-loaded ball seats

The valve range has spring-loaded ball seats that guarantee total tightness for the valves in high and low pressures. The trunnion mounted ball valves can be pressurized from both flow directions and are designed to withstand changing pressures. Thanks to the spring-loaded ball seats, the valve tolerates thermal expansion and axial loads.

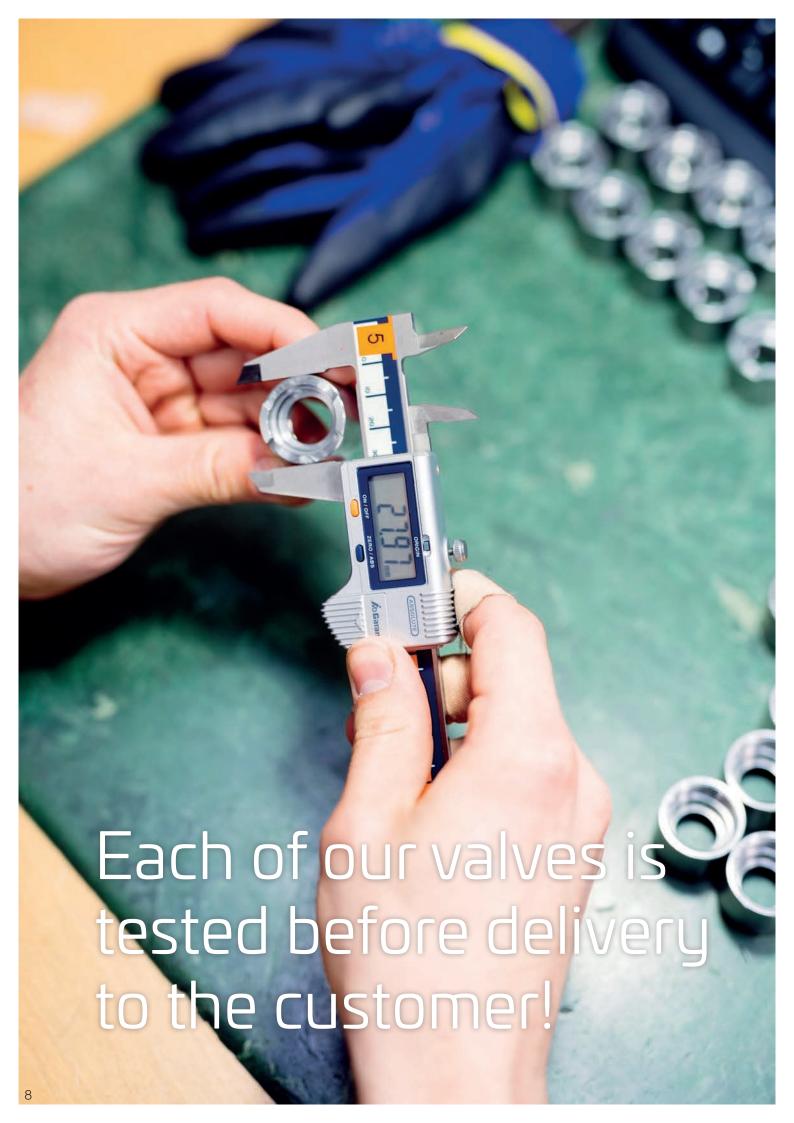






<sup>\*</sup>Double block and bleed functionality





### Superior quality

Automated and modern production, precise quality control and our extensively certified operations ensure that our valve solutions meet the strictest quality criteria.

Our valves, certified in accordance with the Pressure Equipment Directive (PED), have been production tested in accordance with the EN 12266-1 standard with various media, pressures and test times.

Our valves are designed to fulfill the strict requirements of EN 488 and EHP003 standards set for district heating.

### General standards and certificates

- · ISO 9001

  Quality management system
- · ISO 14001

  Environmental management system
- · ISO 26000 Social responsibility
- ISO 3834-2
   Welding quality specifications
- · ISO 5817 Class B Welding Quality Assurance
- · ISO 9606-1 (287) and ISO 14732 (1418) Requirements for welders
- · ISO 9712 and ISO 17637

  Assurance of weldings and other visual quality
- EN 19
   Marking of valves
- · PED (2014/68/EU, Module H) Pressure Equipment Directive
- · EHP003 and EN 488
  Underground district heating valves

### Other quality assurance

· EN 10204

Quality assurance of purchasing materials

These standards guarantee to our customers that the valves they use are specifically suited for demanding underground conditions and will operate reliably over the whole lifetime of the network.

As a responsible company, we also operate in accordance with the social responsibility standard ISO 26000 and our business is certified with quality management system certificate ISO 9001: 2015 and environmental management system certificate ISO 14001: 2015.

### **Testing**

- EN12266-1, leakage rate A (bubble tight)
- P10
  Valve body strength
- P11Valve body tightness
- P12
   Valve closing tightness

### Design standards

- · ISO EN 13445 Strength requirements for valves
- EN 1983
   Industrial valves: steel ball valves, structural specifications
- EN 12627 and EN 253+A2
   Industrial valves shapes of welding ends
- · EN 1092-1:2018
  Flanges and flange connections
- · ISO EN 5211:2017 Actuator mounts
- EN 12570
   Industrial valves, operating parts sizing method
- · EN 12982 series 63
  Standardized face-to-face lengths for welding ends
- EN 558 series 12
   Standardized face-to-face lengths for flanged ends



150/TR series, welding / welding, EN (DIN), DN 150-1200, full bore

DN 150-400 Steel, P355QH (1.0571) / P355NL1 (1.0566) Body

DN 450-1200 Steel, P355QH (1.0571) / P355NH (1.0565)

DN 150-1200 Steel + stainless plating, ASTM A350 LF2 Ball

DN 150-1200 PTFE+C Ball seal

Stem DN 150-1200 Stainless steel, X17CrNi16-2 (1.4057)

Stem seal DN 150-1200 FPM

DN 150-1200 Valves are available with manual gear or Operation

with an electric or hydraulic actuator

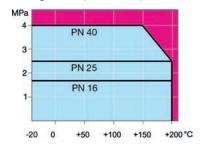
Structural length EN 12982 (63-series)

DN 150-1200 are equipped with lifting lugs, mounting Equipment

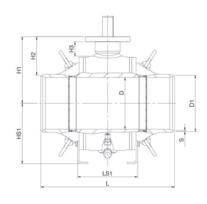
stand, drain valve



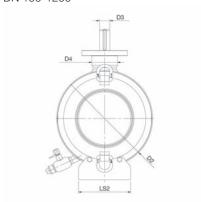
Operation conditions 0 °C - +200 °C Below 0 °C contact manufacturer Lowest allowed ambient temperature -20 °C Leakage rate A (EN 12266-1)



### DN 150-1200



DN 150-1200



### Not for steam

DN	PN	Product no.	D	D1	D2	D3	D4	H1	H2	НЗ	HS1	L	LS1	LS2	S	kg
150	25	150150/TR	150	168.3	315.0	40.0	98.0	234	150	57	200	457	229	160	4,5	124.0
200	25	150200/TR	201	219.1	368.0	40.0	98.0	260	150	56	235	521	234	200	5	162.0
250	25	150250/TR	250	273.0	440.0	50.0	110.0	302	166	62	280	559	250	200	5	249.0
300	25	150300/TR	300	323.9	510.0	50.0	110.0	337	175	62	314	635	290	200	5,6	367.0
350	25	150350/TR	340	355.6	590.0	70.0	135.0	400	222	80	360	762	348	260	6,3	602.0
400	25	150400/TR	385	406.4	640.0	70.0	135.0	425	221	80	390	838	362	260	7,1	722.0
450	25	150450/TR	436	457.0	740.0	75.0	180.0	490	262	86	530	914	456	400	6,3	997.0
500	25	150500/TR	487	508.0	822.0	90.0	200.0	537	283	88	580	991	472	420	6,3	1273.0
600	25	150600/TR	589	610.0	980.0	98.0	200.0	616	311	88	660	1143	524	450	7,1	2074.0
700	25	150700/TR	684	711.0	1125.0	98.0	230.0	722	366	111	700	1346	572	450	8	3144.0
800	25	150800/TR	779	813.0	1290.0	120.0	270.0	833	426	138	840	1524	700	600	8,8	4783.0
900	25	150900/TR	874	914.0	1440.0	120.0	270.0	908	451	138	900	1727	770	600	10	6195.0
1000	25	1501000/TR	976	1016.0	1600.0	135.0	290.0	1010	502	156	970	1870	876	750	11	8695.0
1200	25	1501200/TR	1166	1220.0	1910.0	140.0	300.0	1165	555	156	1120	2216	1000	900	12,5	14242.0

154/TR series, welding / welding, EN (DIN), DN 150-1200, full bore

DN 150-400 Steel, P355QH (1.0571) / P355NL1 (1.0566) Body

DN 450-1200 Steel, P355QH (1.0571) / P355NH (1.0565)

DN 150-1200 Steel + stainless plating, ASTM A350 LF2 Ball

DN 150-1200 PTFE+C Ball seal

Stem DN 150-1200 Stainless steel, X17CrNi16-2 (1.4057)

Stem seal DN 150-1200 FPM

DN 150-900 Valve is equipped with manual gear Operation

DN 1000-1200 Valves are available with manual gear or

with an electric or hydraulic actuator

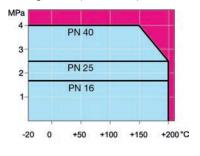
Structural length EN 12982 (63-series)

DN 150-1200 are equipped with lifting lugs, mounting Equipment

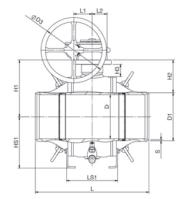
stand, drain valve



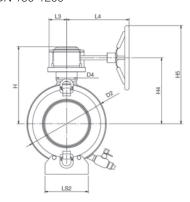
Operation conditions 0 °C - +200 °C Below 0 °C contact manufacturer Lowest allowed ambient temperature -20 °C Leakage rate A (EN 12266-1)



### DN 150-1200



### DN 150-1200



### Not for steam

DN	PN	Product no.	D	D1	D2	D3	D4	Н	H1	H2	НЗ	H4	H5	HS1	L	L1	L2	L3	L4	LS1	LS2	S	kg
150	25	154150/TR	150	168.3	315.0	300.0	98.0	331	234	150	57	279	429	200	457	84	69	81	289	229	160	4,5	141.0
200	25	154200/TR	201	219.1	368.0	300.0	98.0	357	260	150	56	305	455	235	521	84	69	81	289	234	200	5	179.0
250	25	154250/TR	250	273.0	440.0	500.0	110.0	420	302	166	62	351	601	280	559	118	108	125	363	250	200	5	274.0
300	25	154300/TR	300	323.9	510.0	500.0	110.0	455	337	175	62	386	636	314	635	118	108	125	363	290	200	5,6	392.0
350	25	154350/TR	340	355.6	590.0	500.0	135.0	528	400	222	80	455	705	360	762	138	133	141	440	348	260	6,3	642.0
400	25	154400/TR	385	406.4	640.0	500.0	135.0	553	425	222	80	480	730	390	838	138	133	141	440	362	260	7,1	763.0
450	25	154450/TR	436	457.0	740.0	500.0	180.0	625	490	262	86	554	804	390	914	180	167	188	471	456	400	6,3	1057.0
500	25	154500/TR	487	508.0	822.0	500.0	200.0	672	537	283	88	601	851	580	991	180	167	188	471	472	420	6,3	1333.0
600	25	154600/TR	589	610.0	980.0	700.0	200.0	805	616	311	88	701	1051	660	1143	253	222	255	593	524	450	7,1	2145.0
700	25	154700/TR	684	711.0	1125.0	700.0	230.0	910	722	366	111	807	1157	700	1346	253	222	255	593	572	450	8	3340.0
800	25	154800/TR	779	813.0	1290.0	700.0	270.0	1021	833	426	138	918	1268	840	1524	253	222	255	593	700	600	8,8	4978.0
900	25	154900/TR	874	914.0	1440.0	700.0	270.0	1096	908	451	138	993	1343	900	1727	253	222	255	593	770	600	10	6391.0
1000	25	1541000/TR	976	1016.0	1600.0	700.0	290.0	1273	1010	502	156	1148	1498	970	1870	291	306	306	757	876	750	11	9047.0
1200	25	1541200/TR	1166	1220.0	1910.0	700.0	300.0	1428	1165	555	156	1303	1653	1120	2216	292	306	306	763	1000	900	12,5	14610.0

153/25/TR series, PN 25, flange / flange, DN 150-900, full bore

Body DN 150-400 Steel, P355QH (1.0571) / P355NL1 (1.0566)

DN 450-900 Steel, P355QH (1.0571) / P355NH (1.0565)

Ball DN 150-900 Steel + stainless plating, ASTM A350 LF2

+Ni

Ball seal DN 150-900 PTFE+C

Stem DN 150-900 Stainless steel, X17CrNi16-2 (1.4057)

Stem seal DN 150-900 FPM

Operation DN 150-900 Valves are available with manual gear or with

an electric or hydraulic actuator

Flanges EN 1092-1

Available PN 25

Structural length EN 558 (12-series)

Equipment DN 150-900 are equipped with lifting lugs, mounting

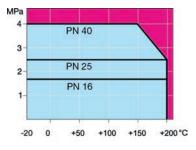
stand, drain valve



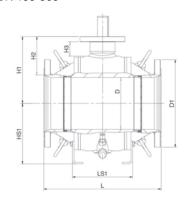
### Operation conditions

0 °C - +200 °C Below 0 °C contact manufacturer Lowest allowed ambient temperature -20 °C

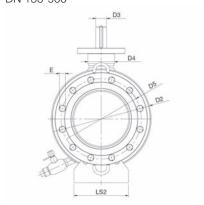
Leakage rate A (EN 12266-1)



#### DN 150-900



#### DN 150-900



### Not for steam

DN	PN	Product no.	D	D1	D2	D3	D4	D5	Ε	H1	H2	НЗ	HS1	L	LS1	LS2	kg
150	25	153150/25/TR	150	300.0	315.0	40.0	98.0	250.0	26	234	137	57	200	394	227	160	136.0
200	25	153200/25/TR	201	360.0	368.0	40.0	98.0	310.0	26	260	150	56	235	457	234	200	183.0
250	25	153250/25/TR	250	425.0	440.0	50.0	110.0	370.0	30	302	166	62	280	533	250	200	281.0
300	25	153300/25/TR	300	485.0	510.0	50.0	110.0	430.0	30	337	175	62	314	610	290	200	410.0
350	25	153350/25/TR	340	555.0	590.0	70.0	135.0	490.0	33	400	222	80	360	686	348	260	657.0
400	25	153400/25/TR	385	620.0	640.0	70.0	135.0	550.0	36	425	221	80	390	762	362	260	803.0
450	25	153450/25/TR	436	670.0	740.0	75.0	180.0	600.0	36	490	260	86	530	864	456	400	1085.0
500	25	153500/25/TR	487	730.0	822.0	90.0	200.0	660.0	36	537	283	88	580	914	472	420	1375.0
600	25	153600/25/TR	589	845.0	980.0	98.0	200.0	770.0	39	616	311	88	660	1065	524	450	2191.0
700	25	153700/25/TR	684	960.0	1125.0	98.0	230.0	875.0	42	722	366	111	700	1245	572	450	3285.0
800	25	153800/25/TR	779	1085.0	1290.0	120.0	270.0	990.0	48	833	426	138	840	1372	700	600	4954.0
900	25	153900/25/TR	874	1185.0	1440.0	120.0	270.0	1090.0	48	908	451	138	900	1524	770	600	6334.0

154xx1/25/TR series, PN 25, flange / flange, DN 150-900, full bore

DN 150-400 Steel, P355QH (1.0571) / P355NL1 (1.0566) Body

DN 450-900 Steel, P355QH (1.0571) / P355NH (1.0565)

DN 150-900 Steel + stainless plating, ASTM A350 LF2 Ball

+Ni

DN 150-900 PTFE+C Ball seal

Stem DN 150-900 Stainless steel, X17CrNi16-2 (1.4057)

Stem seal DN 150-900 FPM

DN 150-900 Valve is equipped with manual gear Operation

Flanges EN 1092-1 Available PN 25

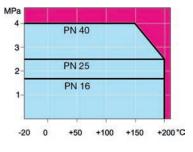
Structural length EN 558 (12-series)

DN 150-900 are equipped with lifting lugs, mounting Equipment

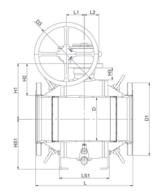
stand, drain valve



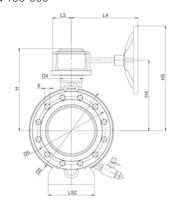
Operation conditions 0 °C - +200 °C Below 0 °C contact manufacturer Lowest allowed ambient temperature -20 °C Leakage rate A (EN 12266-1)



### DN 150-900



DN 150-900



Not for steam

DN PN	Product no.	D	D1	D2	D3	D4	D5	Е	Н	H1	H2	НЗ	H4	H5	HS1	L	L1	L2	L3	L4	LS1	LS2	kg
150 25	154151/25/TR	150	300.0	315.0	300.0	98.0	250.0	22	331	234	137	57	279	429	200	394	84	69	81	289	227	160	153.0
200 25	154201/25/TR	201	360.0	368.0	300.0	98.0	310.0	26	357	260	150	56	305	455	235	457	84	69	81	289	234	200	200.0
250 25	154251/25/TR	250	425.0	440.0	500.0	110.0	370.0	30	420	302	164	62	351	601	280	533	118	108	125	363	250	200	307.0
300 25	154301/25/TR	300	485.0	510.0	500.0	110.0	430.0	30	455	337	174	62	386	636	314	610	118	108	125	363	290	200	436.0
350 25	154351/25/TR	340	555.0	590.0	500.0	135.0	490.0	33	528	400	221	80	455	705	360	686	138	133	150	440	348	260	697.0
400 25	154401/25/TR	385	620.0	640.0	500.0	135.0	550.0	36	553	425	220	80	480	730	390	762	138	133	150	440	362	260	844.0
450 25	154451/25/TR	436	670.0	740.0	500.0	180.0	600.0	36	625	490	250	86	554	804	530	864	180	167	188	471	456	400	1145.0
500 25	154501/25/TR	487	730.0	822.0	500.0	200.0	660.0	36	672	537	277	88	601	851	580	914	180	167	188	471	472	420	1435.0
600 25	154601/25/TR	589	845.0	980.0	700.0	200.0	770.0	39	805	616	306	88	701	1051	660	1067	253	222	255	593	524	450	2262.0
700 25	154701/25/TR	684	960.0	1125.0	700.0	230.0	875.0	42	910	722	352	111	807	1157	700	1245	253	222	255	593	572	450	3481.0
800 25	154801/25/TR	779	1085.0	1290.0	700.0	270.0	990.0	48	1021	833	418	138	918	1268	840	1368	253	222	255	593	700	600	5150.0
900 25	154901/25/TR	874	1185.0	1440.0	700.0	270.0	1090.0	48	1096	908	438	138	993	1343	900	1524	253	222	255	593	770	600	6530.0
Also avails	able in PN 40 For	more	informa	tion cont	act our	custom	er senvic	0															

157/S/TR series, long stem ball valve, welding / welding, EN (DIN), DN 150-400, full bore

DN 150-400 Steel, P355QH (1.0571) / P355NL1 (1.0566) Body

Ball DN 150-400 Steel + stainless plating, ASTM A350 LF2

+Ni

DN 150-400 PTFE+C Ball seal

Stem DN 150-400 Stainless steel, X17CrNi16-2 (1.4057)

DN 150-400 FPM Stem seal

Operation DN 150-400 available with portable planet gear DN 150-400 Stainless steel, X5CrNi18-10 (1.4301) Top of stem

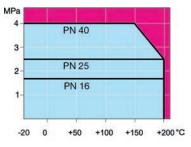
Structural length EN 12982 (63-series)

Equipment DN 150-400 are equipped with lifting lugs, mounting

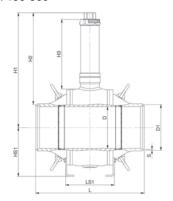
stand



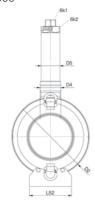
Operation conditions 0 °C - +200 °C Below 0 °C contact manufacturer Lowest allowed ambient temperature -20 °C Leakage rate A (EN 12266-1)



### DN 150-900



DN 150-900



Not for steam

DN	PN	Product no.	6K1	6K2	D	D1	D2	D4	D5	H1	H2	НЗ	HS1	L	LS1	LS2	S	kg
150	25	157150/S/TR	50	90	150	168.3	315.0	98.0	88.9	524	440	335	200	457	229	160	4,5	127.0
200	25	157200/S/TR	50	90	200	219.1	368.0	98.0	88.9	550	440	335	235	521	234	200	5,0	164.0
250	25	157250/S/TR	50	90	250	273.0	440.0	110.0	114.3	629	492	377	280	559	250	200	5,0	255.0
300	25	157300/S/TR	50	90	300	323.9	510.0	110.0	114.3	664	502	377	314	635	290	200	5,6	373.0
350	25	157350/S/TR	50	90	340	355.6	590.0	135.0	139.7	645	467	318	360	762	348	260	6,3	601.0
400	25	157400/S/TR	50	90	385	406.4	640.0	135.0	139.7	670	466	318	390	838	362	260	7,1	722.0

157/TR/HG series, long stem ball valve, welding / welding, EN (DIN), DN 150-900, full bore

DN 150-400 Steel, P355QH (1.0571) / P355NL1 (1.0566) Body

DN 450-900 Steel, P355QH (1.0571) / P355NH (1.0565)

DN 150-900 Steel + stainless plating, ASTM A350 LF2 Ball

DN 150-900 PTFE+C Ball seal

Stem DN 150-900 Stainless steel, X17CrNi16-2 (1.4057)

Stem seal DN 150-900 FPM

DN 150-900 Valves are available with angle gear, Operation

standard hexagon adapter 27 or 32 mm

DN 150-900 Stainless steel, X5CrNi18-10 (1.4301) Top of stem

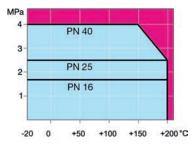
Structural length EN 12982 (63-series)

DN 150-900 are equipped with lifting lugs, mounting Equipment

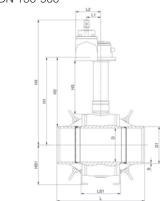
stand



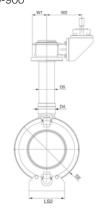
Operation conditions 0 °C - +200 °C Below 0 °C contact manufacturer Lowest allowed ambient temperature -20 °C Leakage rate A (EN 12266-1)



DN 150-900



DN 150-900



Not for steam

DN PN Product no.	D	D1	D2	D4	D5	H1	H2	НЗ	H4	HS1	L	L1	L2	LS1	LS2	S	W1	W2	kg
150 25 157150/TR/	HG 150	168.3	315.0	98.0	88.9	494	410	317	717	200	457	84	149	229	160	4,5	81	198	152.0
200 25 157200/TR/	HG 200	219.1	368.0	98.0	88.9	520	410	316	743	235	521	84	149	234	200	5,0	81	198	190.0
250 25 157250/TR/	HG 250	273.0	440.0	110.0	114.3	568	432	338	795	280	559	118	183	250	200	5,0	125	233	293.0
300 25 157300/TR/	HG 300	323.9	510.0	110.0	114.3	603	441	328	830	314	635	118	183	290	200	5,6	125	233	411.0
350 25 157350/TR/	HG 340	355.6	590.0	135.0	139.7	695	517	375	924	360	762	138	222	348	260	6,3	150	235	660.0
400 25 157400/TR/	HG 385	406.4	640.0	135.0	139.7	720	517	375	949	390	838	138	222	362	260	7,1	150	235	781.0
450 25 157450/TR/	HG 436	457.0	740.0	219.1		720	492	316	947	530	914	182	267	456	400	6,3	188	236	1120.0
500 25 157500/TR/	HG 487	508.0	822.0	244.5		761	507	312	987	580	991	175	267	472	420	6,3	188	236	1410.0
600 25 157600/TR/	HG 589	610.0	980.0	244.5		840	535	312	1083	660	1143	253	335	524	450	7,1	255	363	2220.0
700 25 157700/TR/	HG 684	711.0	1125.0	273.0		932	576	323	1175	700	1346	253	337	572	450	8,0	255	498	3390.0
800 25 157800/TR/	HG 779	813.0	1290.0	298.0		1045	638	350	1296	840	1524	253	362	700	600	8,8	255	420	5020.0
900 25 157900/TR/	HG 874	914.0	1440.0	298.0		1120	663	350	1371	750	1727	253	362	770	600	10	255	420	6450.0

# INSPIRED BY YOUR FLOW



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