

PEGLER

Valve technology



VSH XPress FullFlow®



EN

technical manual



integrated
piping systems

welcome to Aalberts integrated piping systems

Aalberts Integrated Piping Systems develops and produces connectors, metal and plastic pipes, valves, and fastening technology for the distribution and control of liquids and gases. Our technologies enable customers to work quickly and reliably in a simple and efficient way. These bespoke systems are applicable for key vertical markets as residential, commercial, industrial, and Utilities, and are designed and developed by our team of in-house engineers. This complete piping and valve solution combined with our services are available through different channels.

**At Aalberts Integrated Piping Systems, we have just one objective:
we help our customers to get the job done.**

don't just buy
products,
buy solutions

piping technology

connection technology

global footprint with a local presence

we operate from 30 locations in 14 countries

As the amalgamation of some of the world's most trusted manufacturers, we have a long-established, market leading presence in different key vertical markets. We operate from 30 locations in 14 countries and offer the most innovative and technically advanced product portfolios.

Our in-house engineers are constantly engaged in product development and innovations and we are the only business in the piping & valve industry **that offers its customers a complete integrated piping solution, each and every time.**

our end markets

technology leadership in selected end markets

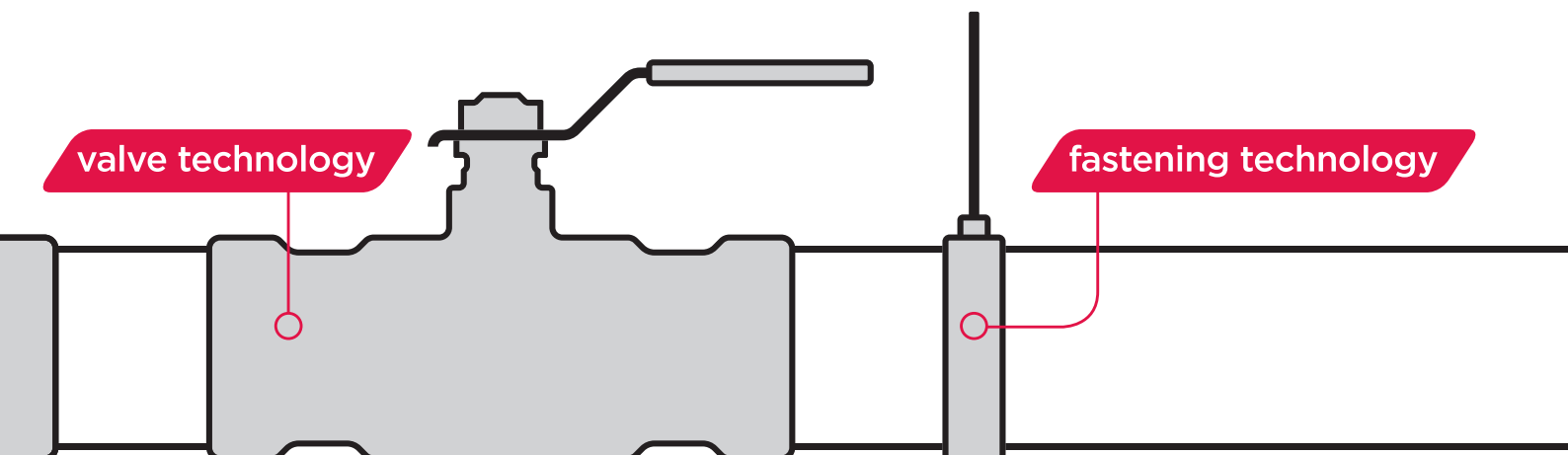
Aalberts Integrated Piping Systems develops and produces connectors, metal and plastic pipes, valves, and fastening technology for the distribution and control of liquids and gases. Our technologies are easy to specify and maintain, and enable our customers to work quickly and reliably in a simple and efficient way. These bespoke systems are applicable for residential construction, non-residential construction, industrial use, fire protection and shipbuilding, and are designed and developed by our team of in-house engineers. This complete piping and valve solution is available through different channels.

As the first choice for customers maintaining existing piping and valve systems, or a complete installation for a new building, we can also help in the pre-build design phase. We work with experts to design the perfect tailor-made, integrated piping system for any new build projects. So whether the task is project conception, installation, or on-going maintenance, we are the **ONLY** company that truly delivers a complete product & service offering. Our know-how, our can-do, and our relentless innovation come as standard. **So don't just buy products. Buy solutions.**

our technologies

Aalberts Integrated Piping Systems consists of 4 core Technologies:

- valve technology. We offer valve solutions for industrial, residential and commercial areas and we produce from several locations in the globe. Our valves are highly trusted and respected, the comprehensive range of products offers superior quality throughout, and excellent value for money. The valves brands Apollo and Pegler are well known in their markets
- connection technology offers the broadest selection of fittings in the market, with a wide range of products. Our range is suitable for numerous applications and media for key verticals like commercial, industrial and residential. The connection brand VSH is very well known in many markets
- piping technology
- fastening technology



Pegler

Pegler provides the best solutions for integrated piping systems. This term encompasses a range of product lines for connection technology and valve technology which, together with our engineering service, offer the ultimate solution for top-quality total piping systems.

Our aim is to support you in the best way possible.

Don't just buy products, buy solutions

the strength of 'local sales organisation'

- the perfect solution for every project
- smart, fast and efficient installation
- Aalberts Integrated Piping Systems Engineering Service
- valuable advice from the drawing board to delivery
- a very wide product range, including fittings
- a 10-year system warranty
- all products are now BIM

The piping systems stand out due to their high and consistent quality, and quick and simple installation and maintenance. Pegler offers the widest, most comprehensive range of reliable press, compression, groove and push systems – including fittings for thick-walled and thin-walled metal and plastic tubes.

Aalberts Integrated Piping Systems Engineering Service

Pegler is a fully customer-focused sales and service organisation with experts who are committed to product development, service and customer support every single day. This means that from day one at the digital drawing board, you will receive professional advice on customised total solutions while being able to rely on optimum availability and reliable support both during and after delivery. Our engineers have access to all Aalberts Integrated Piping Systems products and can therefore always find the best solution which is fully customised to your needs.

Pegler is well known and respected as one of the leading manufacturers of advanced plumbing, heating and engineering products in the world. It's a reputation earned through a total dedication to quality, innovation and customer service that's been the hallmark of the company since it was established in the 1890's (originally trading as Pegler Ltd and Yorkshire Fittings Ltd).

Our success has been derived from a commitment to a philosophy based on quality, service, investment, competitiveness and innovation. Energy and water conservation is very much at the forefront of our product development.

Pegler's unique Integrated Piping System brings together valves, fittings and pipes in one complete pipe-work system, with an emphasis on delivering heat free jointing. IPS combines the best elements of modern connection and valve technology, with international quality approvals and cost effective solutions for every project.

As a business partner to some of the world's best known plumbing and heating suppliers, our unrivalled list of market leading product brands include Yorkshire integral solder ring fittings, Pegler Terrier radiator valves, VSH Tectite push-fit fittings, VSH PowerPress products, VSH Shurjoint solutions, the VSH XPress press-fit system, Pegler Valves, Prestex general brassware, Endex entfeed and Kuterlite compression fittings.



contents

Aalberts integrated piping systems	2
Pegler	4
valves and tools	9
introduction	10
VSH XPress FullFlow galvanised	12 - 17
VSH XPress FullFlow stainless	18 - 23
tools and accessories	24
technical support information	25
applications	26
corrosion	27
installation	28
flushing and pressure testing	28
service and maintenance	28
faq	29
installation guidelines	29
additional technical information	31



VSH XPress FullFlow®

valves

by Pegler

VSH XPress FullFlow ball valve

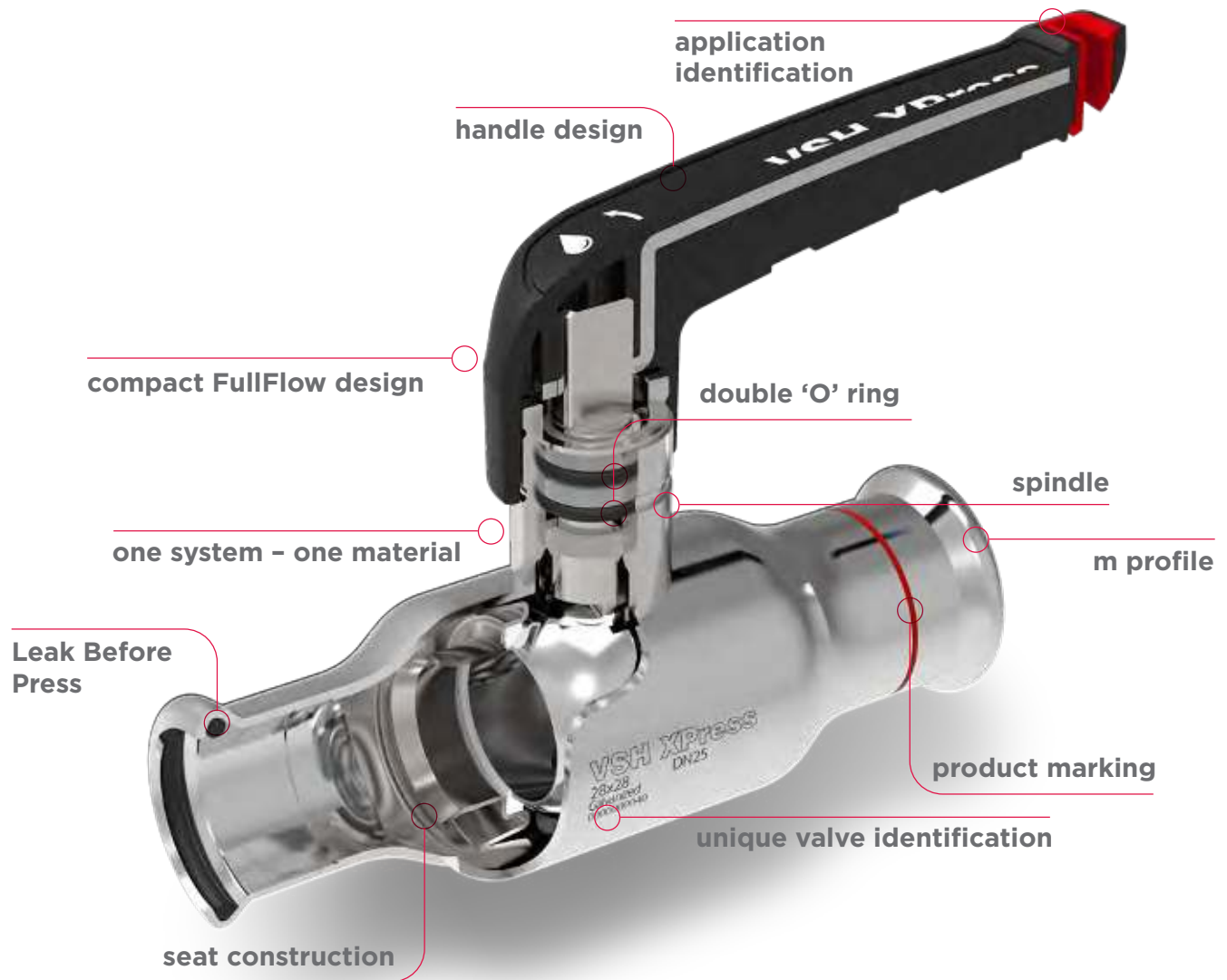
Introducing a ball valve design to complement the VSH XPress system.

A streamline design that introduces a full bore valve within a streamline fitting.

One step further ...it's a valve within a fitting

the advantages of the VSH FullFlow ball valve

- one system - one material - less risk
- streamline full flow design
- connection technology integrated
- unique valve identification
- patented technology for Aalberts IPS



zero voltage

galvanised and stainless steel

anti-blowout stem



minimise risk of galvanic corrosion



XPress x Swivel

XPress x Press

XPress x Thread



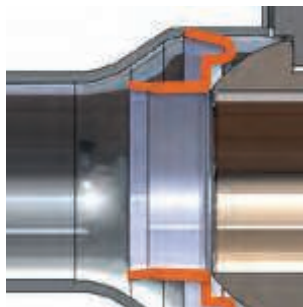
galvanised

- tube, fittings and valves constructed of similar metals provide zero voltage differential, minimising galvanic corrosion
- galvanised zinc coating protects against internal and external corrosion
- galvanised steel is suitable for HVAC applications

stainless

- tube, fittings and valves constructed of similar metals provide zero voltage differential, minimising galvanic corrosion
- high quality 316 stainless steel is suitable for potable water and hygienic applications
- stainless steel provides high resistance to corrosion

full bore design



insulation



- modern design technology has changed the design envelope for ball valves
- unique slim full flow valve body
- body produced in one piece minimising the risk of leaks
- light weight for the ease of handling on site
- extended spindle variant allows for thicker insulation. Non-rotating spindle guide allows insulation to be sealed around handle
- streamlined body aids insulation fitting, removing air cavities and preventing condensation build-up
- aesthetic design

product marking



stem seal construction



unique identification



XPR10100 Ball valve PN16

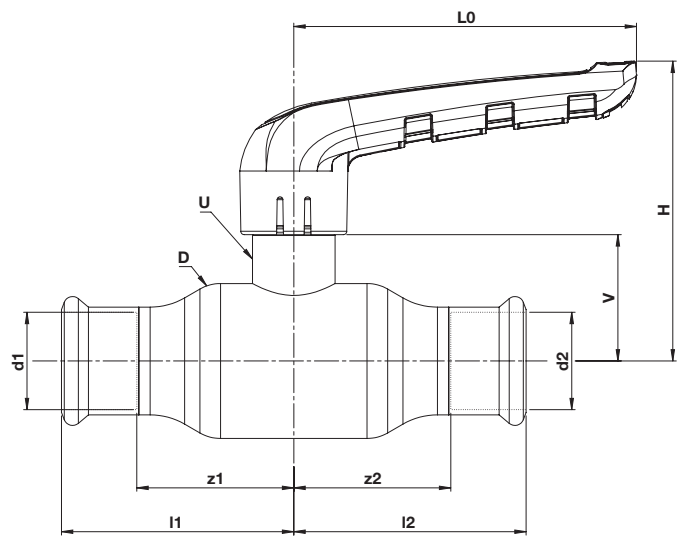


specification

- compact fullflow design
- galvanised steel
- Leak Before Press
- patented seat construction
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN markings: in accordance with EN13828

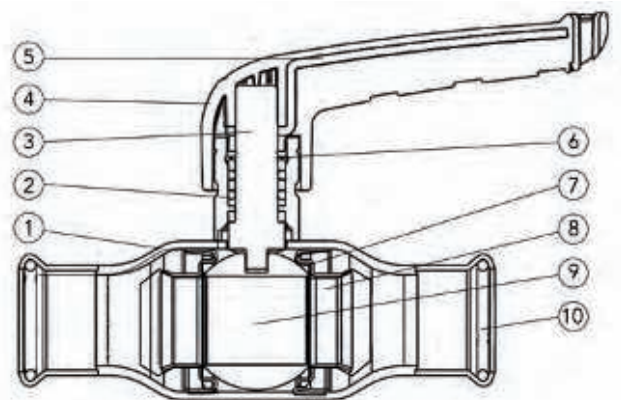
Connection	Code	Total (kg)	Kv
15 x 15	1010000100	0.17	13
18 x 18	1015000100	0.21	21.1
22 x 22	1020000100	0.21	37.1
28 x 28	1025000100	0.55	65.5
35 x 35	1032000100	0.86	90.7
42 x 42	1040000100	1.39	141.5
54 x 54	1050000100	2.32	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
15 x 15	16	-35	135	232	-31	275
18 x 18	16	-35	135	232	-31	275
22 x 22	16	-35	135	232	-31	275
28 x 28	16	-35	135	232	-31	275
35 x 35	16	-35	135	232	-31	275
42 x 42	16	-35	135	232	-31	275
54 x 54	16	-35	135	232	-31	275



Connection	l1/l2	d1/d2	z1/z2	H	L0	V	U	D
15 x 15	47	15	27	64	75	26	18	26
18 x 18	52	18	32	66	75	28	18	30
22 x 22	61	22	40	68	75	31	18	38
28 x 28	68	28	45	87	100	37	24	45
35 x 35	81	35	55	93	100	43	24	57
42 x 42	99	42	70	106	119	47	28	68
54 x 54	113	54	79	114	119	55	28	85

Nr	Component	Material
1	Valve housing	Galvanised steel - P2135GH
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



* Conditioned water, such as decalcinated/softened water, partially and completely desalinated water, distilled water, water with glycol. The content of water-soluble chloride ions may not exceed 250 mg/l. For Galvanised steel piping water content may be in accordance with compressed air quality class 3 according to DIN ISO 8573-1 (corresponds to a water content of 880 mg/m³) should not be exceeded. At higher Water content is a risk of corrosion
 ** Valves may not be used for dry compressed air or compressed air that contains a maximum of 25 mgm³ synthetic oil
 VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0.85 bar (0.15 bar absolute).

XPR10101 Ball valve PN16

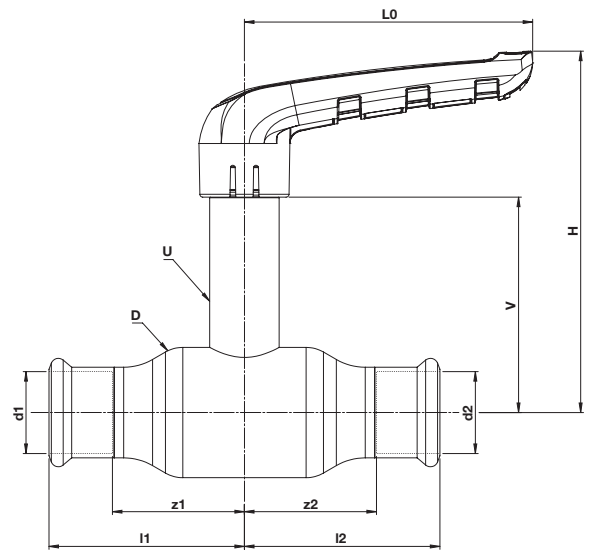


specification

- compact fullflow design
- galvanised steel
- Leak Before Press
- patented seat construction
- extended spindle
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN markings: in accordance with EN13828

Connection	Code	Total (kg)	Kv
15 x 15	1010000101	0.25	13
18 x 18	1015000101	0.29	21.1
22 x 22	1020000101	0.30	37.1
28 x 28	1025000101	0.68	65.5
35 x 35	1032000101	0.99	90.7
42 x 42	1040000101	1.62	141.5
54 x 54	1050000101	2.55	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
15 x 15	16	-35	135	232	-31	275
18 x 18	16	-35	135	232	-31	275
22 x 22	16	-35	135	232	-31	275
28 x 28	16	-35	135	232	-31	275
35 x 35	16	-35	135	232	-31	275
42 x 42	16	-35	135	232	-31	275
54 x 54	16	-35	135	232	-31	275



Connection	l1/l2	d1/d2	z1/z2	H	L0	V	U	D
15 x 15	47	15	27	106	75	68	18	26
18 x 18	52	18	32	108	75	70	18	30
22 x 22	61	22	40	111	75	73	18	38
28 x 28	68	28	45	125	100	74	24	45
35 x 35	81	35	55	131	100	80	24	57
42 x 42	99	42	70	156	119	98	28	68
54 x 54	113	54	79	165	119	106	28	85

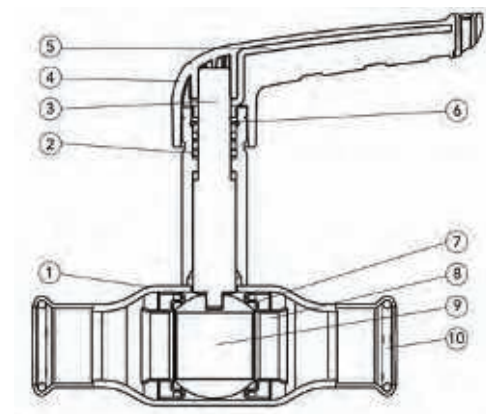
Nr	Component	Material
1	Valve housing	Galvanised steel - P2135GH
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



* Conditioned water, such as decalcinated/softened water, partially and completely desalinated water, distilled water, water with glycol. The content of water-soluble chloride ions may not exceed 250 mg/l. For Galvanised steel piping water content may be in accordance with compressed air quality class 3 according to DIN ISO 8573-1 (corresponds to a water content of 880 mg/m³) should not be exceeded. At higher Water content is a risk of corrosion

** Valves may not be used for dry compressed air or compressed air that contains a maximum of 25 mgm³ synthetic oil

VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0,85 bar (0,15 bar absolute).



XPR11000 Ball valve PN16



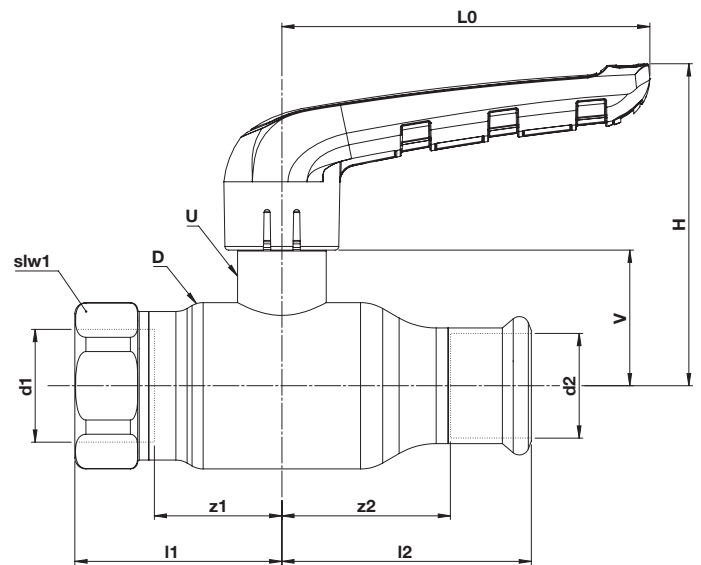
galvanised

specification

- compact fullflow design
- galvanised steel
- Leak Before Press
- patented seat construction
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN markings: in accordance with EN13828

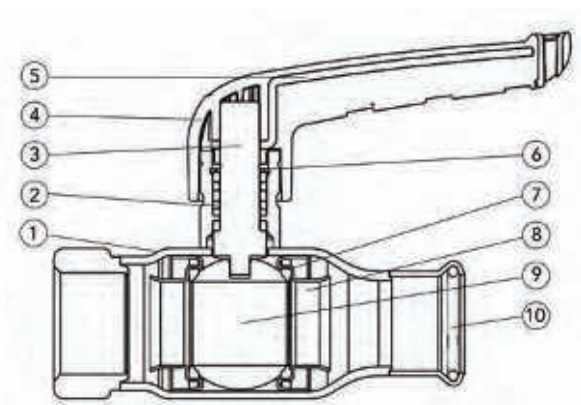
Connection	Code	Total (kg)	Kv
½" x 15	1010001010	0.19	13
¾" x 18	1015001010	0.25	21.1
¾" x 22	1020001000	0.30	37.1
1" x 28	1025001000	0.61	65.5
1 ¼" x 35	1032001000	0.97	90.7
1 ½" x 42	1040001000	1.53	141.5
2" x 54	1050001000	2.62	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
½" x 15	16	-35	135	232	-31	275
¾" x 18	16	-35	135	232	-31	275
¾" x 22	16	-35	135	232	-31	275
1" x 28	16	-35	135	232	-31	275
1 ¼" x 35	16	-35	135	232	-31	275
1 ½" x 42	16	-35	135	232	-31	275
2" x 54	16	-35	135	232	-31	275



Connection	I1	I2	d1	d2	z1	z2	H	L0	V	U	D	slw1
½" x 15	38	47	G½"	15	27	28	64	75	26	18	26	27
¾" x 18	43	52	G¾"	18	32	32	66	75	28	18	30	32
¾" x 22	52	61	G¾"	22	36	40	68	75	31	18	38	36
1" x 28	56	68	G1"	28	37	45	87	100	37	24	45	41
1 ¼" x 35	67	81	G1 ¼"	35	46	55	93	100	43	24	57	50
1 ½" x 42	78	99	G1 ½"	42	57	69	106	119	47	28	68	56
2" x 54	96	113	G2"	54	69	79	114	119	55	28	85	69

Nr	Component	Material
1	Valve housing	Galvanised steel - P2135GH
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



* Conditioned water, such as decalcinated/softened water, partially and completely desalinated water, distilled water, water with glycol. The content of water-soluble chloride ions may not exceed 250 mg/l. For Galvanised steel piping water content may be in accordance with compressed air quality class 3 according to DIN ISO 8573-1 (corresponds to a water content of 880mg/m³) should not be exceeded. At higher Water content is a risk of corrosion

** Valves may not be used for dry compressed air or compressed air that contains a maximum of 25 mgm³ synthetic oil

VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0,85 bar (0,15 bar absolute).

XPR11001 Ball valve PN16

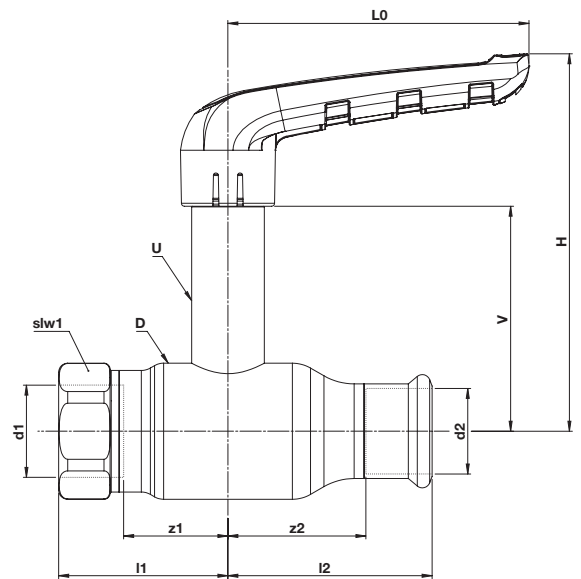


specification

- compact fullflow design
- galvanised steel
- Leak Before Press
- patented seat construction
- slimline extended spindle
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN markings: in accordance with EN13828

Connection	Code	Total (kg)	Kv
½" x 15	1010001011	0.28	13
¾" x 18	1015001011	0.33	21.1
¾" x 22	1020001001	0.38	37.1
1" x 28	1025001001	0.74	65.5
1 ¼" x 35	1032001001	1.11	90.7
1 ½" x 42	1040001001	1.75	141.5
2" x 54	1050001001	2.84	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
½" x 15	16	-35	135	232	-31	275
¾" x 18	16	-35	135	232	-31	275
¾" x 22	16	-35	135	232	-31	275
1" x 28	16	-35	135	232	-31	275
1 ¼" x 35	16	-35	135	232	-31	275
1 ½" x 42	16	-35	135	232	-31	275
2" x 54	16	-35	135	232	-31	275



Connection	l1	l2	d1	d2	z1	z2	H	L0	V	U	D	slw1
½" x 15	38	47	G½"	15	27	28	106	75	68	18	26	27
¾" x 18	43	52	G¾"	18	32	32	108	75	70	18	30	32
¾" x 22	52	61	G¾"	22	36	40	111	75	73	18	38	36
1" x 28	56	68	G1"	28	37	45	125	100	74	24	45	41
1 ¼" x 35	67	81	G1 ¼"	35	46	55	131	100	80	24	57	50
1 ½" x 42	78	99	G1 ½"	42	57	69	156	119	98	28	68	56
2" x 54	96	113	G2"	54	69	79	165	119	106	28	85	69

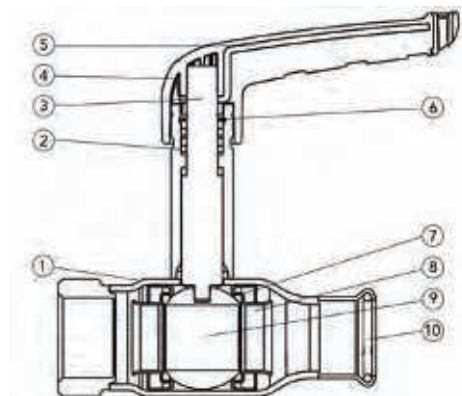
Nr	Component	Material
1	Valve housing	Galvanised steel - P2135GH
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



* Conditioned water, such as decalcinated/softened water, partially and completely desalinated water, distilled water, water with glycol. The content of water-soluble chloride ions may not exceed 250 mg/l. For Galvanised steel piping water content may be in accordance with compressed air quality class 3 according to DIN ISO 8573-1 (corresponds to a water content of 880 mg/m³) should not be exceeded. At higher Water content is a risk of corrosion

** Valves may not be used for dry compressed air or compressed air that contains a maximum of 25 mgm³ synthetic oil

VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0.85 bar (0.15 bar absolute).



XPR11400 Ball valve PN16

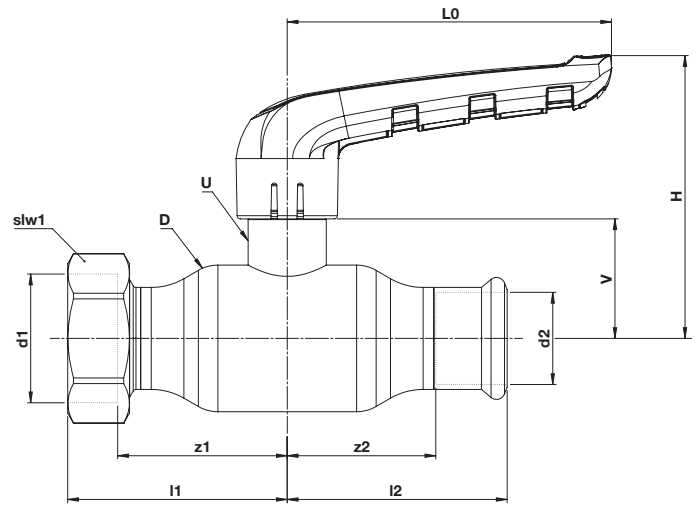


specification

- compact fullflow design
- galvanised steel
- Leak Before Press
- patented seat construction
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN markings: in accordance with EN13828

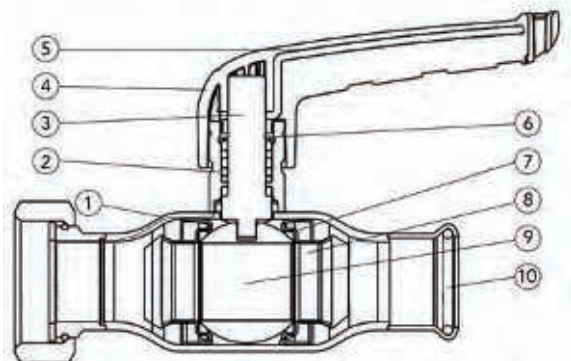
Connection	Code	Total (kg)	Kv
½" x 15	1010001410	0.22	13
¾" x 18	1015001400	0.26	21.1
¾" x 22	1020001410	0.28	37.1
1 ¼" x 28	1025001400	0.65	65.5
1 ½" x 35	1032001400	0.97	90.7
1 ¾" x 42	1040001400	1.51	141.5
2 ¼" x 54	1050001400	2.57	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
½" x 15	16	-35	135	232	-31	275
¾" x 18	16	-35	135	232	-31	275
¾" x 22	16	-35	135	232	-31	275
1 ¼" x 28	16	-35	135	232	-31	275
1 ½" x 35	16	-35	135	232	-31	275
1 ¾" x 42	16	-35	135	232	-31	275
2 ¼" x 54	16	-35	135	232	-31	275



Connection	I1	I2	d1	d2	z1	z2	H	L0	V	U	D	slw1
½" x 15	59	47	G½"	15	49	28	64	75	26	18	26	27
¾" x 18	53	52	G¾"	18	44	32	66	75	28	18	30	32
¾" x 22	72	61	G¾"	22	62	41	68	75	31	18	38	32
1 ¼" x 28	67	68	G1 ¼"	28	55	46	87	100	37	24	45	46
1 ½" x 35	79	81	G1 ½"	35	67	56	93	100	43	24	57	52
1 ¾" x 42	92	99	G1 ¾"	42	81	70	106	119	47	28	68	58
2 ¼" x 54	106	113	G2 ¼"	54	93	79	114	119	55	28	85	72

Nr	Component	Material
1	Valve housing	Galvanised steel - P2135GH
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



* Conditioned water, such as decalcinated/softened water, partially and completely desalinated water, distilled water, water with glycol. The content of water-soluble chloride ions may not exceed 250 mg/l. For Galvanised steel piping water content may be in accordance with compressed air quality class 3 according to DIN ISO 8573-1 (corresponds to a water content of 800mg/m³) should not be exceeded. At higher Water content is a risk of corrosion

** Valves may not be used for dry compressed air or compressed air that contains a maximum of 25 mgm³ synthetic oil

VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0,85 bar (0,15 bar absolute).

XPR11401 Ball valve PN16

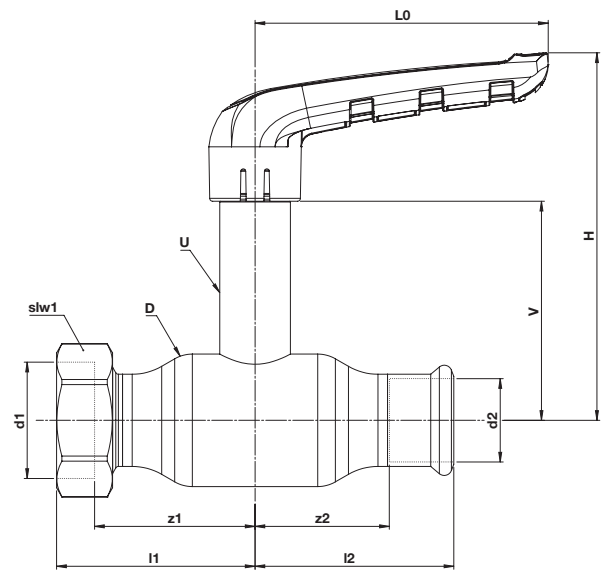


specification

- compact fullflow design
- galvanised steel
- Leak Before Press
- patented seat construction
- slimline extended spindle
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN markings: in accordance with EN13828

Connection	Code	Total (kg)	Kv
½" x 15	1010001411	0.30	13
¾" x 18	1015001401	0.35	21.1
¾" x 22	1020001411	0.36	37.1
1 ¼" x 28	1025001401	0.78	65.5
1 ½" x 35	1032001401	1.11	90.7
1 ¾" x 42	1040001401	1.73	141.5
2 ¼" x 54	1050001401	2.79	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
½" x 15	16	-35	135	232	-31	275
¾" x 18	16	-35	135	232	-31	275
¾" x 22	16	-35	135	232	-31	275
1 ¼" x 28	16	-35	135	232	-31	275
1 ½" x 35	16	-35	135	232	-31	275
1 ¾" x 42	16	-35	135	232	-31	275
2 ¼" x 54	16	-35	135	232	-31	275



Connection	l1	l2	d1	d2	z1	z2	H	L0	V	U	D	slw1
½" x 15	59	47	G½"	15	49	28	106	75	68	18	26	27
¾" x 18	53	52	G¾"	18	44	32	108	75	70	18	30	32
¾" x 22	72	61	G¾"	22	62	41	111	75	73	18	38	32
1 ¼" x 28	67	68	G1 ¼"	28	55	46	125	100	74	24	45	46
1 ½" x 35	79	81	G1 ½"	35	67	56	131	100	80	24	57	52
1 ¾" x 42	92	99	G1 ¾"	42	81	70	156	119	98	28	68	58
2 ¼" x 54	106	113	G2 ¼"	54	93	79	165	119	106	28	85	72

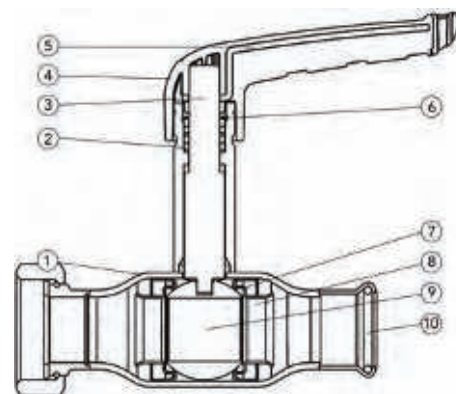
Nr	Component	Material
1	Valve housing	Galvanised steel - P2135GH
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



* Conditioned water, such as decalcinated/softened water, partially and completely desalinated water, distilled water, water with glycol. The content of water-soluble chloride ions may not exceed 250 mg/l. For Galvanised steel piping water content may be in accordance with compressed air quality class 3 according to DIN ISO 8573-1 (corresponds to a water content of 880 mg/m³) should not be exceeded. At higher Water content is a risk of corrosion

** Valves may not be used for dry compressed air or compressed air that contains a maximum of 25 mgm³ synthetic oil

VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0.85 bar (0.15 bar absolute).



XPR20100 Ball valve PN16

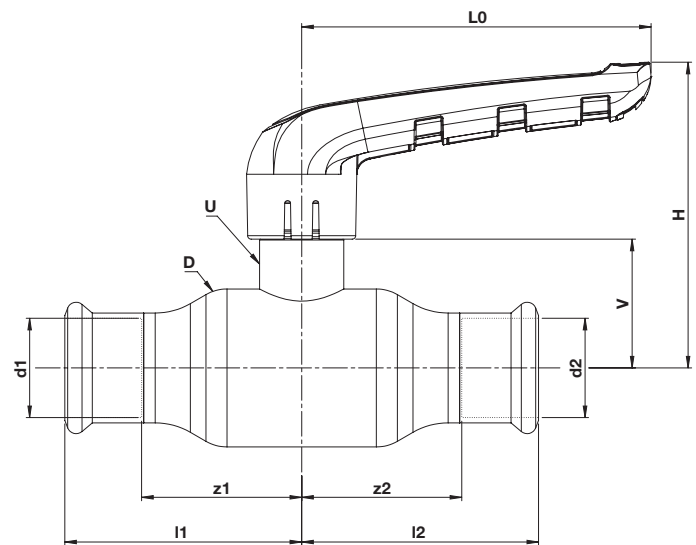


specification

- compact fullflow design
- stainless steel
- Leak Before Press
- patented seat construction
- suitable for drinking water
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN / PN markings: in accordance with EN13828

Connection	Code	Total (kg)	Kv
15 x 15	2010000100	0.17	13
18 x 18	2015000100	0.21	21.1
22 x 22	2020000100	0.21	37.1
28 x 28	2025000100	0.55	65.5
35 x 35	2032000100	0.86	90.7
42 x 42	2040000100	1.39	141.5
54 x 54	2050000100	2.32	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
15 x 15	16	-35	135	232	-31	275
18 x 18	16	-35	135	232	-31	275
22 x 22	16	-35	135	232	-31	275
28 x 28	16	-35	135	232	-31	275
35 x 35	16	-35	135	232	-31	275
42 x 42	16	-35	135	232	-31	275
54 x 54	16	-35	135	232	-31	275

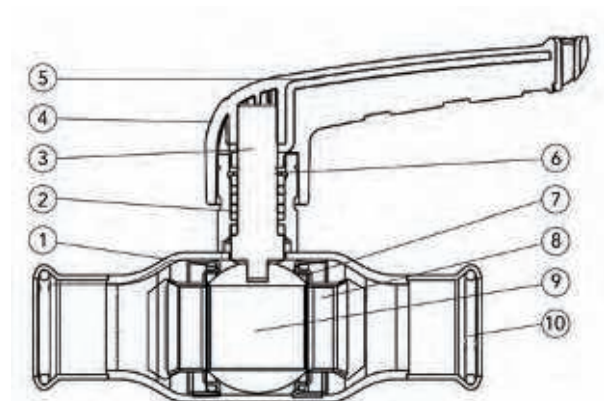


Connection	l1/l2	d1/d2	z1/z2	H	L0	V	U	D
15 x 15	47	15	27	64	75	26	18	26
18 x 18	52	18	32	66	75	28	18	30
22 x 22	61	22	40	68	75	31	18	38
28 x 28	68	28	45	87	100	37	24	45
35 x 35	81	35	55	93	100	43	24	57
42 x 42	99	42	70	106	119	47	28	68
54 x 54	113	54	79	114	119	55	28	85

Nr	Component	Material
1	Valve housing	Stainless steel
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



** Valves can be used for dry compressed air or compressed air that contains up to compressed air quality class 5 according to DIN ISO 8573-1 (corresponds to an oil content of 25 mg/m³). VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0.85 bar (0.15 bar absolute).



XPR20101 Ball valve PN16



stainless

specification

- compact fullflow design
- stainless steel
- Leak Before Press
- patented seat construction
- suitable for drinking water
- slimline extended spindle
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN / PN markings: in accordance with EN13828

Connection	Code	Total (kg)	Kv
15 x 15	2010000101	0.25	13
18 x 18	2015000101	0.29	21.1
22 x 22	2020000101	0.30	37.1
28 x 28	2025000101	0.68	65.5
35 x 35	2032000101	0.99	90.7
42 x 42	2040000101	1.62	141.5
54 x 54	2050000101	2.55	308.4

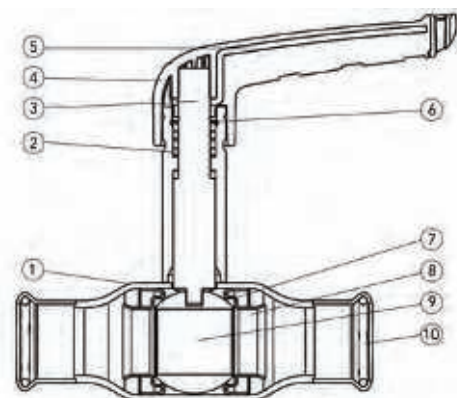
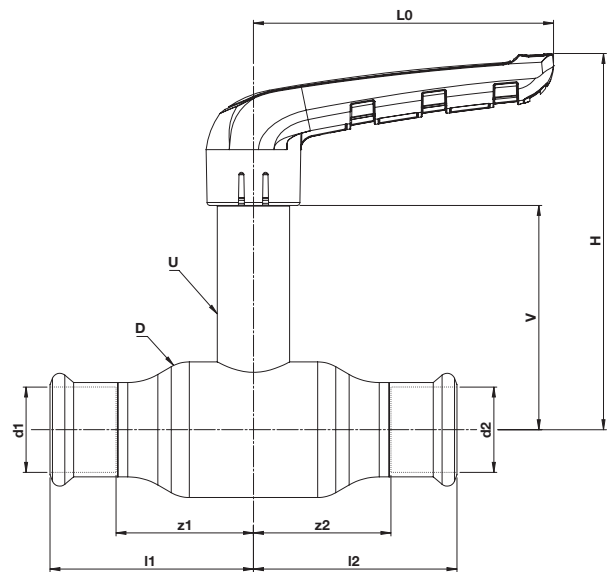
Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
15 x 15	16	-35	135	232	-31	275
18 x 18	16	-35	135	232	-31	275
22 x 22	16	-35	135	232	-31	275
28 x 28	16	-35	135	232	-31	275
35 x 35	16	-35	135	232	-31	275
42 x 42	16	-35	135	232	-31	275
54 x 54	16	-35	135	232	-31	275

Connection	l1/l2	d1/d2	z1/z2	H	LO	V	U	D
15 x 15	47	15	27	106	75	68	18	26
18 x 18	52	18	32	108	75	70	18	30
22 x 22	61	22	40	111	75	73	18	38
28 x 28	68	28	45	125	100	74	24	45
35 x 35	81	35	55	131	100	80	24	57
42 x 42	99	42	70	156	119	98	28	68
54 x 54	113	54	79	165	119	106	28	85

Nr	Component	Material
1	Valve housing	Stainless steel
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



** Valves can be used for dry compressed air or compressed air that contains up to compressed air quality class 5 according to DIN ISO 8573-1 (corresponds to an oil content of 25 mg/m³). VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0.85 bar (0.15 bar absolute).



XPR21000 Ball valve PN16

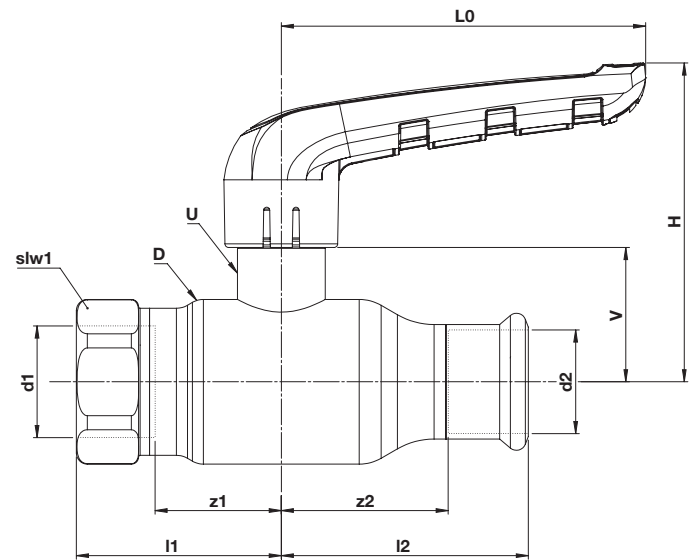


specification

- compact fullflow design
- stainless steel
- Leak Before Press
- patented seat construction
- suitable for drinking water
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN / PN markings: in accordance with EN13828

Connection	Code	Total (kg)	Kv
½" x 15	2010001010	0.19	13
¾" x 18	2015001010	0.25	21.1
¾" x 22	2020001000	0.30	37.1
1" x 28	2025001000	0.61	65.5
1 ¼" x 35	2032001000	0.97	90.7
1 ½" x 42	2040001000	1.53	141.5
2" x 54	2050001000	2.62	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
½" x 15	16	-35	135	232	-31	275
¾" x 18	16	-35	135	232	-31	275
¾" x 22	16	-35	135	232	-31	275
1" x 28	16	-35	135	232	-31	275
1 ¼" x 35	16	-35	135	232	-31	275
1 ½" x 42	16	-35	135	232	-31	275
2" x 54	16	-35	135	232	-31	275

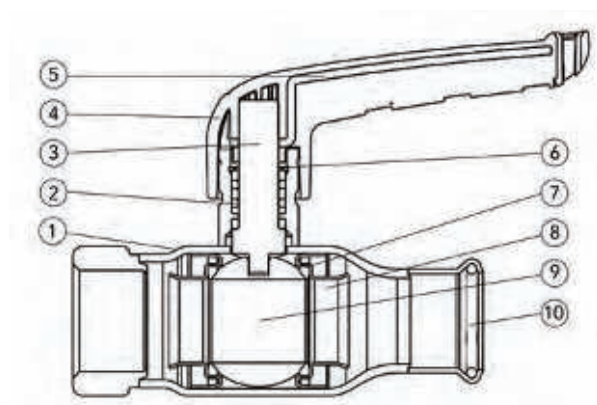


Connection	l1	l2	d1	d2	z1	z2	H	L0	V	U	D	slw1
½" x 15	38	47	G½"	15	27	28	64	75	26	18	26	27
¾" x 18	43	52	G¾"	18	32	32	66	75	28	18	30	32
¾" x 22	52	61	G¾"	22	36	40	68	75	31	18	38	36
1" x 28	56	68	G1"	28	37	45	87	100	37	24	45	41
1 ¼" x 35	67	81	G1 ¼"	35	46	55	93	100	43	24	57	50
1 ½" x 42	78	99	G1 ½"	42	57	69	106	119	47	28	68	56
2" x 54	96	113	G2"	54	69	79	114	119	55	28	85	69

Nr	Component	Material
1	Valve housing	Stainless steel
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



** Valves can be used for dry compressed air or compressed air that contains up to compressed air quality class 5 according to DIN ISO 8573-1 (corresponds to an oil content of 25 mg/m³). VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0,85 bar (0,15 bar absolute).



XPR21001 Ball valve PN16

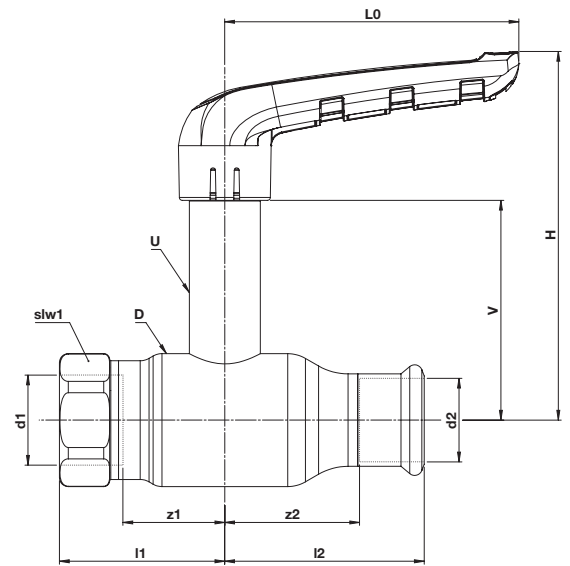


specification

- compact fullflow design
- stainless steel
- Leak Before Press
- patented seat construction
- suitable for drinking water
- slimline extended spindle
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN / PN markings: in accordance with EN13828

Connection	Code	Total (kg)	Kv
½" x 15	2010001011	0.28	13
¾" x 18	2015001011	0.33	21.1
¾" x 22	2020001001	0.38	37.1
1" x 28	2025001001	0.74	65.5
1 ¼" x 35	2032001001	1.11	90.7
1 ½" x 42	2040001001	1.75	141.5
2" x 54	2050001001	2.84	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
½" x 15	16	-35	135	232	-31	275
¾" x 18	16	-35	135	232	-31	275
¾" x 22	16	-35	135	232	-31	275
1" x 28	16	-35	135	232	-31	275
1 ¼" x 35	16	-35	135	232	-31	275
1 ½" x 42	16	-35	135	232	-31	275
2" x 54	16	-35	135	232	-31	275

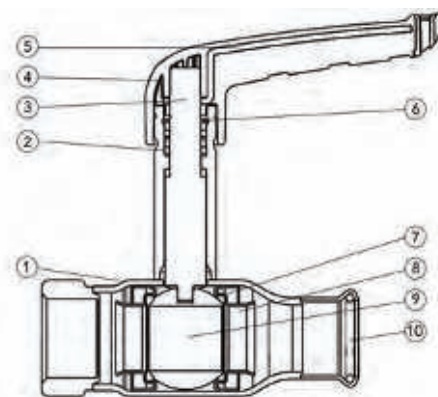


Connection	l1	l2	d1	d2	z1	z2	H	L0	V	U	D	slw1
½" x 15	38	47	G½"	15	27	28	106	75	68	18	26	27
¾" x 18	43	52	G¾"	18	32	32	108	75	70	18	30	32
¾" x 22	52	61	G¾"	22	36	40	111	75	73	18	38	36
1" x 28	56	68	G1"	28	37	45	125	100	74	24	45	41
1 ¼" x 35	67	81	G1 ¼"	35	46	55	131	100	80	24	57	50
1 ½" x 42	78	99	G1 ½"	42	57	69	156	119	98	28	68	56
2" x 54	96	113	G2"	54	69	79	165	119	106	28	85	69

Nr	Component	Material
1	Valve housing	Stainless steel
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



** Valves can be used for dry compressed air or compressed air that contains up to compressed air quality class 5 according to DIN ISO 8573-1 (corresponds to an oil content of 25 mg/m³). VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0,85 bar (0,15 bar absolute).



XPR21400 Ball valve PN16

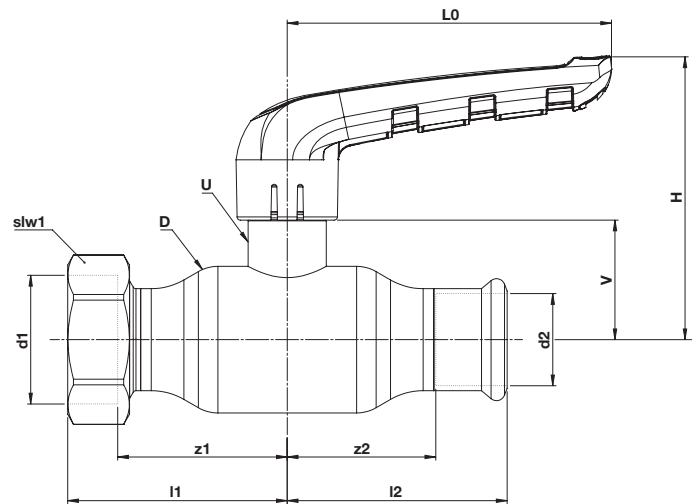


specification

- compact fullflow design
- stainless steel
- Leak Before Press
- patented seat construction
- suitable for drinking water
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN / PN markings: in accordance with EN13828

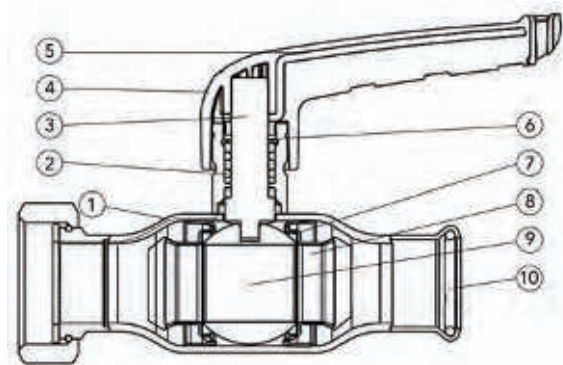
Connection	Code	Total (kg)	Kv
3/4" x 15	2010001410	0.22	13
3/4" x 18	2015001400	0.26	21.1
3/4" x 22	2020001410	0.28	37.1
1 1/4" x 28	2025001400	0.65	65.5
1 1/2" x 35	2032001400	0.97	90.7
1 1/4" x 42	2040001400	1.51	141.5
2 1/4" x 54	2050001400	2.57	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
3/4" x 15	16	-35	135	232	-31	275
3/4" x 18	16	-35	135	232	-31	275
3/4" x 22	16	-35	135	232	-31	275
1 1/4" x 28	16	-35	135	232	-31	275
1 1/2" x 35	16	-35	135	232	-31	275
1 1/4" x 42	16	-35	135	232	-31	275
2 1/4" x 54	16	-35	135	232	-31	275



Connection	I1	I2	d1	d2	z1	z2	H	L0	V	U	D	slw1
3/4" x 15	59	47	G1/2"	15	49	28	64	75	26	18	26	27
3/4" x 18	53	52	G3/4"	18	44	32	66	75	28	18	30	32
3/4" x 22	72	61	G3/4"	22	62	41	68	75	31	18	38	36
1 1/4" x 28	67	68	G1 1/4"	28	55	46	87	100	37	24	45	46
1 1/2" x 35	79	81	G1 1/2"	35	67	56	93	100	43	24	57	52
1 1/4" x 42	92	99	G1 3/4"	42	81	70	106	119	47	28	68	58
2 1/4" x 54	106	113	G2 1/4"	54	93	79	114	119	55	28	85	72

Nr	Component	Material
1	Valve housing	Stainless steel
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



** Valves can be used for dry compressed air or compressed air that contains up to compressed air quality class 5 according to DIN ISO 8573-1 (corresponds to an oil content of 25 mg/m³). VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0.85 bar (0.15 bar absolute).

XPR21401 Ball valve PN16



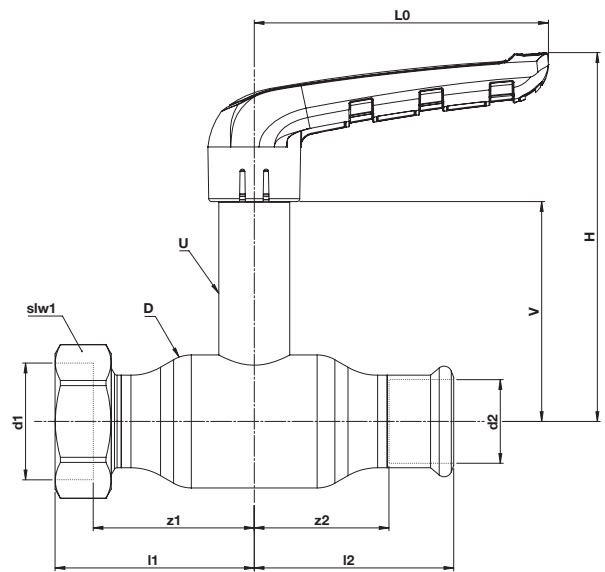
stainless

specification

- compact fullflow design
- stainless steel
- Leak Before Press
- patented seat construction
- suitable for drinking water
- slimline extended spindle
- application identifier
- double 'O' ring spindle seal
- unique valve identification
- metal reinforced handle
- DN / PN markings: in accordance with EN13828

Connection	Code	Total (kg)	Kv
3/4" x 15	2010001411	0.30	13
3/4" x 18	2015001401	0.35	21.1
3/4" x 22	2020001411	0.36	37.1
1 1/4" x 28	2025001401	0.78	65.5
1 1/2" x 35	2032001401	1.11	90.7
1 1/4" x 42	2040001401	1.73	141.5
2 1/4" x 54	2050001401	2.79	308.4

Connection	Metric			Imperial		
	Max Pressure (Bar)	Min Temp (°C)	Max Temp (°C)	Max Pressure (PSI)	Min Temp (°F)	Max Temp (°F)
3/4" x 15	16	-35	135	232	-31	275
3/4" x 18	16	-35	135	232	-31	275
3/4" x 22	16	-35	135	232	-31	275
1 1/4" x 28	16	-35	135	232	-31	275
1 1/2" x 35	16	-35	135	232	-31	275
1 1/4" x 42	16	-35	135	232	-31	275
2 1/4" x 54	16	-35	135	232	-31	275

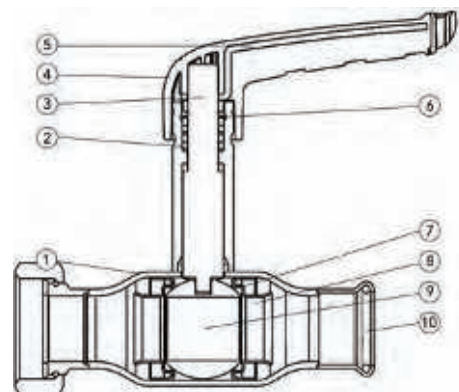


Connection	l1	l2	d1	d2	z1	z2	H	L0	V	U	D	slw1
3/4" x 15	59	47	G1/2"	15	49	28	106	75	68	18	26	27
3/4" x 18	53	52	G3/4"	18	44	32	108	75	70	18	30	32
3/4" x 22	72	61	G3/4"	22	62	41	111	75	73	18	38	36
1 1/4" x 28	67	68	G1 1/4"	28	55	46	125	100	74	24	45	46
1 1/2" x 35	79	81	G1 1/2"	35	67	56	131	100	80	24	57	52
1 1/4" x 42	92	99	G1 3/4"	42	81	70	156	119	98	28	68	58
2 1/4" x 54	106	113	G2 1/4"	54	93	79	165	119	106	28	85	72

Nr	Component	Material
1	Valve housing	Stainless steel
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



** Valves can be used for dry compressed air or compressed air that contains up to compressed air quality class 5 according to DIN ISO 8573-1 (corresponds to an oil content of 25 mg/m³). VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0.85 bar (0.15 bar absolute).



ACO102 Press tools Novopress



Article	Dimension	Article No.
ACO102 + battery 3,0Ah + charger + jaws 12-35 + case	12-35	39195
PB1	12	39191
PB1	15	39188
PB1	18	39189
PB1	22	39202
PB1	28	39205
PB1	35	39209

ECO203/ACO203(EL) Press tools Novopress




Article	Dimension	Article No.
ACO203 BT + battery x2 + charger + case	12-54	39070
ACO203 BT + jaws + battery x2 3,0Ah + charger + case	12-15-18-22-28-35	39075
ACO203XL BT + battery x2 3,0Ah + charger + case	12-108	39177

ECO203/ACO203(XL) Press tools Novopress



Article	Dimension	Article No.
Jaws PB2	12	39179
Jaws PB2	15	39180
Jaws PB2	18	39181
Jaws PB2	22	39182
Jaws PB2	28	39183
Jaws PB2	35	39184
Jaws PB2	35-42-54	39196
Jaws PB2	42	39186
Jaws PB2	54	39157
Jaws PB2	42-54	39041



VSH XPress FullFlow®
technical
support
information

applications

GENERAL

VSH XPress valves can be used for a wide range of purposes. The valves are well-suited to installation in water, heating, cooling and district heating installations in combination with media compatible with the materials the valves are made from, including O-rings and seals.

If you have any questions or are in doubt about anything, always contact us.

potable water installation

VSH XPress valve - stainless steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

In installations with VSH XPress stainless steel valves, the content of water-soluble chloride ions may not exceed 250 mg/l.

treated water*

VSH XPress valve - stainless steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

*Conditioned water, such as desalinated/softened water, partially and completely desalinated water, distilled water, water with glycol.

In installations with VSH XPress stainless steel valves, the content of water-soluble chloride ions may not exceed 250 mg/l.

heating installation

VSH XPress valve - stainless steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

VSH XPress valve - galvanised steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

In installations with VSH XPress stainless steel valves, the content of water-soluble chloride ions may not exceed 250 mg/l.

cooling water installations

VSH XPress valve - stainless steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

VSH XPress valve - galvanised steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

In installations with VSH XPress stainless steel valves, the content of water-soluble chloride ions may not exceed 250 mg/l.

compressed air installations

VSH XPress valve - stainless steel valves and VSH XPress galvanised steel valves can

be used for compressed air under the following conditions:

Water content: max. 880 mg/m³, class 3, ISO 8573 part 1

Oil content: max. 25 mg/m³, class 5, ISO 8573 part 1

Class	Water content (mg/m ³)	Oil content (mg/m ³)	O-ring
1	3	0.01	EPDM
2	120	0.1	EPDM
3	880	1	EPDM
4	6.000	5	EPDM
5	7.800	25	EPDM

VSH XPress valves may only be used for dry compressed air that contains a maximum of 25 mg/m³ synthetic oil.

VSH XPress valve - stainless steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

VSH XPress valve - galvanised steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

industrial installations

VSH XPress valve - stainless steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

VSH XPress valve - galvanised steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

In installations with VSH XPress stainless steel valves, the content of water-soluble chloride ions may not exceed 250 mg/l.

vacuum installations

VSH XPress valves in stainless and galvanised steel are well-suited for use in vacuum installations with a relative pressure down to 0.85 bar (0.15 bar absolute).

other installations

VSH XPress valve - stainless steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

VSH XPress valve - galvanised steel

O-rings:	EPDM (black)
Operating temperature:	-35°C to +135°C
Operating pressure:	Max. 16 bar

In installations with VSH XPress stainless steel valves, the content of water-soluble chloride ions may not exceed 250 mg/l.

VSH XPress valves can be used for a wide range of other purposes. It is always recommended that you contact us for advise in connection with use in applications other than those listed.

corrosion

VSH XPress valves can be used for the applications mentioned in the section "Applications". With any kind of use, there must be consideration for the choice of product in relation to the application, in order to prevent corrosion. Always look up information regarding any restrictions on the use of chemical additives.

VSH XPress valve - stainless steel

VSH XPress stainless steel valves are produced in acid resistant 316 stainless steel (in accordance with EN 1.4404), which is a material that does not react with ordinary domestic hot water. This means the valve is passive in relation to effects from and to the water, and the risk of corrosion is therefore eliminated in domestic hot water installations that are supplied in accordance with legislation. The chloride concentration of the water must be greater than 250 mg/L.

Under normal circumstances, there is no need to surface protect VSH XPress stainless steel valves, but it is important to be aware of chloride-rich environments and insulation, which could cause corrosion (see more in the "Insulation" section).

316 Stainless steel (in accordance with EN 1.4404) has a minimum PREN value of 23.1. The PREN value is an expression of corrosion resistance and is defined as the relationship between chrome, molybdenum and nitrogen in the finished material.

VSH XPress stainless steel valves can be used in combination with copper pipes, if the medium allows it. When used in combination with hot galvanised steel pipes, an insulation piece must be used on any direct transition between the hot galvanised pipe and the ball valve. This should be carried out with the help of a non-conductive material, eg plastic. The length of the insulation piece must correspond to the requirements in DIN1988 (min 50mm).

VSH XPress valve - galvanised steel

VSH XPress galvanised steel valves are made from the carbon steel P235GH, which is characterised by its low carbon content and has been used for many years for the manufacture of ball valves for the district heating industry. The valves are intended for use in installations that do not contain oxygen, ie. installations that can be defined as a closed circuit, without the continuous addition of oxygen.

The valve housing is made of carbon steel and as such not corrosion resistant. To avoid corrosion coming from outside, the valve will either have to be installed in dry surroundings or it must be protected by watertight insulation or other surface protection.

VSH XPress galvanised steel valves are surface treated with a thin layer of zinc, which ensures an attractive finish on visible installations. The zinc coating is susceptible to continuous moisture and must therefore always be protected against condensation, damp environments and bad weather. The valves must not be used for cooling installations that are not properly secured against surface condensation.

installation

All valves are supplied in single bags, as well as packed into boxes of varying amounts depending on the size of the valve. The packaging helps to protect the valve against impurities and it is therefore recommended that you keep the valve in the bag until use.

The valves are supplied in an open position in order to protect the valve against impurities and should remain so during installation. The valves can be mounted in all directions and there is no requirement regarding direction of flow. All valves should be function tested before commissioning the installation.

Always be aware of the length expansion of the individual pipe system. Ignoring this can result in damage to the valve and the entire installation. The expansion coefficient for the valves can be found under the section "Specifications".

Always observe the limits laid down for pressure and temperature for the individual valve and check there is agreement between the medium and the selected valve. If you have any questions or are in any doubt, please contact us.

After unpacking the product, all packaging should be properly disposed of in accordance with area guidelines and local legislation.

flushing and pressure testing

All pipe systems must be flushed through before commissioning so that any foreign bodies can be washed out. This reduces the risk of corrosion damage, hygiene problems and functional errors in the system. Domestic hot water installations must be flushed as soon as possible after installing the pipelines and after the pressure test. The cold and hot water pipelines should be flushed separately, intermittently and under pressure in accordance with EN 806, Part 4. Installation instructions and legislation regarding drinking water must be observed at all times.

Failure to flush the system can result in damage to the valve's gaskets when using the open/close function.

Always ensure that the system is fully ventilated and free of a harmful build-up of oxygen.

service and maintenance

The valves do not need extra service under normal conditions, but to guarantee the good working of the valves, opening and closing the valve regularly is highly recommended, depending on medium and use. The table below can be used as a guideline in relation to operation and maintenance. Pegler Yorkshire is not liable in any way for any consequences of failing to perform the function test, nor if these are not carried out according to the table below.

medium	interval for function testing
domestic hot water	twice annually
domestic hot water (hard water area)	4-6 times annually
heating	twice annually
refrigeration	twice annually
compressed air	once annually

It is possible to replace the O-ring in the stem if this has been slightly overloaded as a consequence of incorrect use.

faq

I can't shut off the valve - what do I do?

Try to slowly increase the torque until the handle begins to turn. The valve has a metal handle with a top mould of reinforced nylon and can thus resist high torques. Never use tools etc. in an attempt to shut off the valve.

The valve is closed and cannot be opened - what do I do?

First check whether you are turning it in the right direction. Follow the instructions on the handle. The valve is guided towards an open position by turning the handle clockwise; correspondingly, the valve is closed by turning the handle anticlockwise.

I want to use the valve as the end piece on an installation - is there anything I should be aware of?

If the valves are used as the end of an installation (either temporarily or permanently), it is always recommended that the closure is carried out with proper plugging. This reduces the risk of injury and damage to the materials.

It is dripping out of the top of the stem on the valve - is this due to incorrect use of the medium?

Always check that the medium, pressure and temperature of the installation match overall with the version of VSH XPress used. Should it be the case that these conditions do not match, it is possible to replace the O-rings in the stem so that a seal is again achieved.

It is possible to change to other types of O-ring in the valve so that the valve can be used for other purposes/ with other media?

No, it is only permitted to change O-rings to the same type and quality as the valve is manufactured with.

installation guidelines

Select the correct size of tube and fitting for the job. Ensure that both are clean, in good condition and free from damage and imperfections.

1. check the fitting

Keep all fittings in their bag prior to installation to ensure the lubrication does not dry out. Ensure the O-ring is seated correctly within the fitting socket.

2. cutting the tube square

It is essential to cut the tube square using a rotary tube cutter. Pegler Yorkshire recommends using a Rems Cento with the correct cutter wheel for the specific material being cut.



The tube must always be cut completely. Never partially cut and then broken as this could cause corrosion. Do not use hacksaw, oil cooled saws, abrasive wheels or flame cutting.

3. deburr and check the tube ends

Both the internal and external tube ends should be deburred then wiped clean of all swarf and debris to avoid damage to the O-ring upon tube insertion. Also check that the tube end is clean and free from damage such as scores, tape, labels or adhesive residue.



Acceptable methods of deburring include:
S120 - 15 to 54mm internal and external
S122 - 15 to 54mm external only but can re-round damage tube.

TC150 - 15 to 22mm external only, very good for Galvanised steel tube.

TC143 and TC147 internal only.

Use the S115 tube stripper for removing the plastic from plastic coated Galvanised steel tube.

If using plastic Galvanised steel tube the plastic coating must be removed from the socket depth of the fitting using the S115 stripping tool from the XPress accessories range.

5. marking the socket depth

Ensuring full socket depth is achieved is vital for the integrity of the joint. To check that the tube and fitting remains in the correct position throughout the pressing process you must mark the socket depth with a 'V-Tail' mark.



6. assemble the joint

Insert the tube into the fitting until it meets the tube stop, using the insertion depth mark as a visual guide.



Only when the tube reaches the tube stop should the pressing operation be commenced.

7. prepare the press-fit tool

Select the correct combination of press-tool, jaws, slings and adaptors for the joint being made.

Always refer to the manufacturer's instructions for detailed information on how to operate your press-tool safely.

Check that the press-tool and relevant jaws/slides have been maintained in accordance with their servicing/calibration schedule.

Make the tool safe by isolating it from the power supply. select the correct jaws/sling adaptor for the joint being made, checking that they are free from damage. Attach the jaws/sling adaptor to your press-tool, following the instruction for your particular press-tool, reconnect the power supply when ready.

8. Dri-slide lubricant

Use of S135 Dri-Slide lubricant is essential when jointing large sized fittings. The pressing profile groove of the sling jaws should be cleaned and lubricated after every 50 joints.

Dri-Slide should also be applied between the main sling arms and the moving segments; and along the pivot pins between the arms. Wipe clean any excess lubricant so that it does not



come into contact with the fitting O-ring.

Dri-Slide lubricant should never be used to lubricate the O-ring.

8. press the joint

Mount the jaws/sling jaws over the bead at the mouth of the fitting. With the tool fully supported and not hanging from the



pipework, and with your hands safely away from the joint, press the trigger or button to start the jointing cycle. When the jaws/sling jaws fully enclose the mouth of the fitting, the joint is complete. The jaw should

then be released from around the fitting.

Maintain a 90° angle between the tube and jaws at all times, this is to ensure the integrity of the joint as well as protect the operator from 'kickback'.



The pressing operation should only be carried out when the tube is adequately supported by brackets, not when the

tube is suspended in the fitting socket alone.

Allow press-fit jaws to be attached without hindrance.

9. check the joint

Inspect the finished joint making sure all is in order, when satisfied the joint has been made correctly mark the joint as complete.

The socket depth mark you made indicates that full socket depth has been maintained throughout the pressing cycle.

The fitting and pipe bear the witness marks from your jaws/sling jaws.

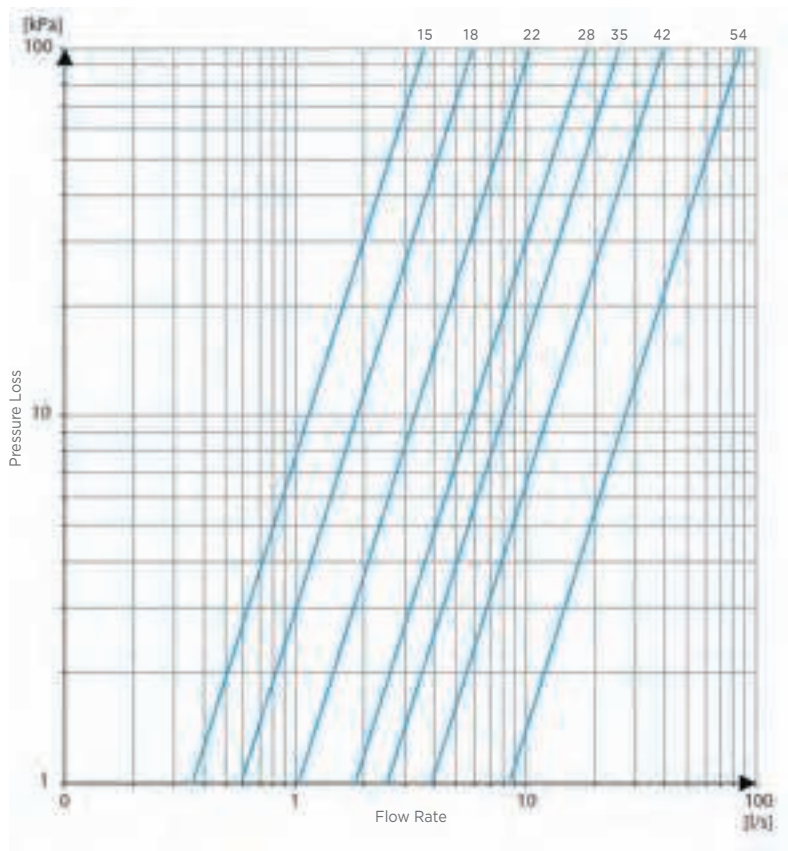
We recommend all systems are thoroughly pressure tested before hand over to end user.



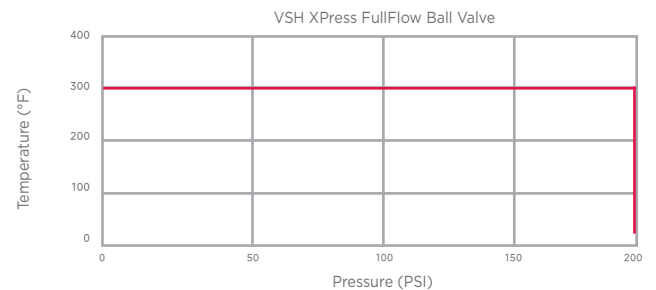
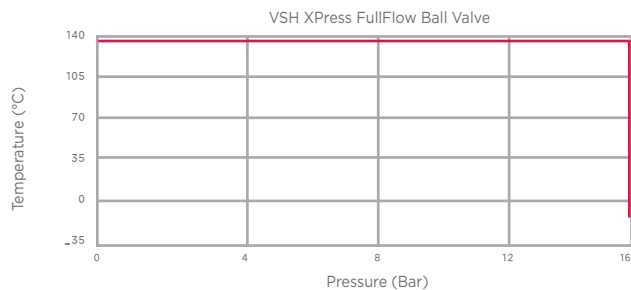
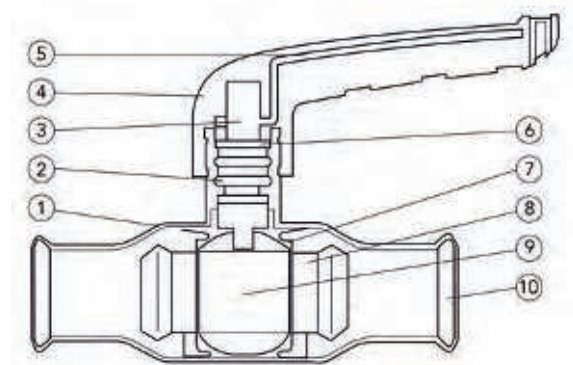
VSH XPress FullFlow®

additional
technical
information

VSH XPress FullFlow galvanised steel



Nr	Component	Material
1	Valve housing	Galvanised steel - P2135GH
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



Specification clause

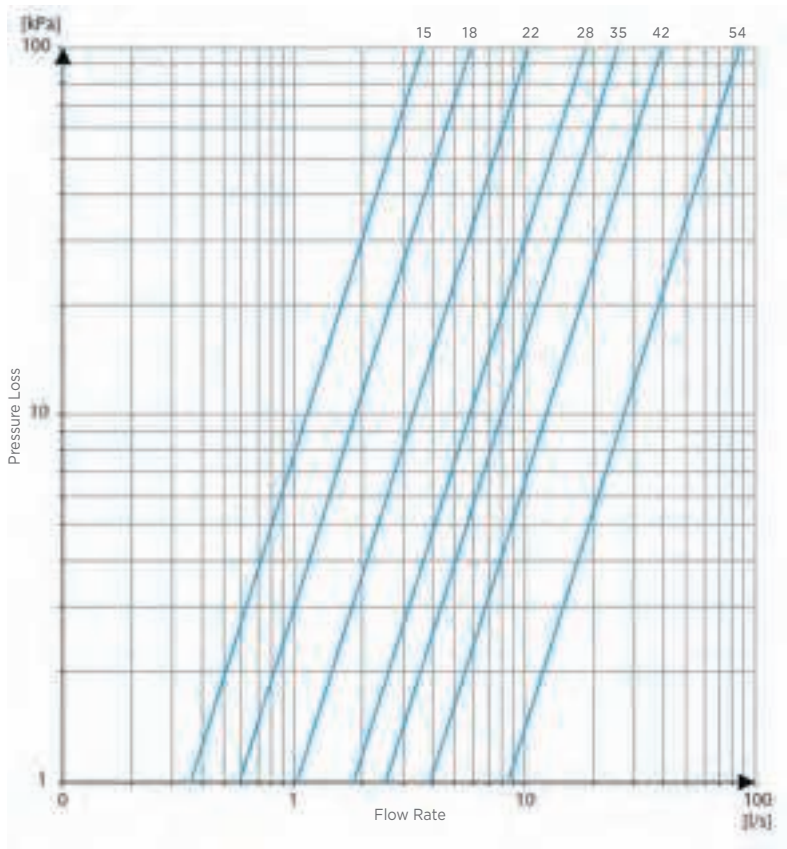
VSH XPress galvanised steel ball valve made of unalloyed, low-galvanised stainless steel E 195, material no. 1.0034 according to DIN EN 10305-3. With factory-fitted EPDM sealing O-ring (black) with LBP function (leak before pressed). Optionally with long spindle or short spindle. Available in the dimensions 15 to 54mm. With press connection, internal thread or swivel connection. For heating installations according to DIN EN 12828 and compressed air installations under consideration of DIN ISO 8573-1. Processing according to XPress processing guidelines. For connecting galvanised steel pipes according to DIN EN 10305-3.

approvals and certifications

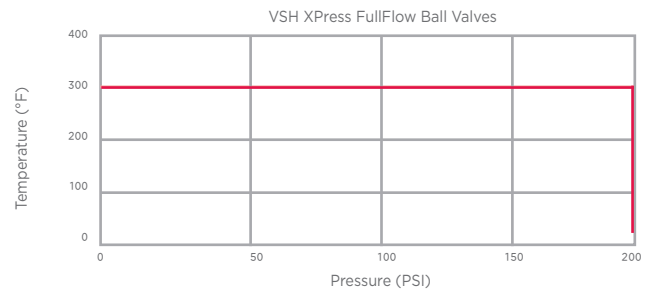
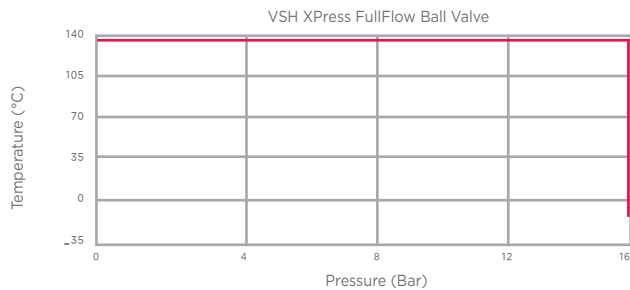
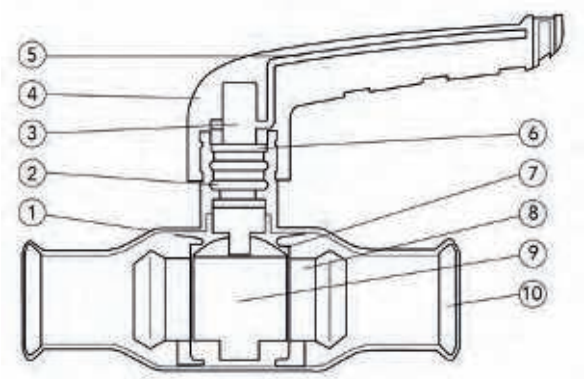
Material	DVGW	WRAS	KIWA NL	KIWA SE	ETA	SINTEF
galvanised	n/a	n/a	n/a	n/a	n/a	n/a

As a natural consequence of our continual striving for improvement, Pegler Yorkshire is certified with ISO 9001 and thus subject to audits and strict quality requirements.

VSH XPress FullFlow stainless steel



Nr	Component	Material
1	Valve housing	Stainless steel
2	'O' ring	Rubber - EPDM
3	Stem	Stainless steel
4	Handle	Fiberglass-reinforcement nylon
5	Metal reinforcement	Galvanised steel
6	Friction ring	Plastic - PTFE
7	Seal	Plastic - PTFE
8	Sprung support ring	Stainless steel
9	Ball	Brass
10	'O' ring	Rubber - EPDM



Specification clause

XPress stainless steel ball valve made of austenitic CR-NI-MO steel, material no. 1.4404 according to DIN EN 10088. With factory-fitted EPDM O-ring (black) with LBP function (leak before pressed), tested to DVGW Code of Practice W 270 and Elastomer Guideline of the UBA. Optionally with long spindle or short spindle. Available in the dimensions 15 to 54mm. With press connection, internal thread or swivel connection. Tested and approved according to DVGW worksheet W 534 for drinking water installations according to EN 806 and DIN 1988, approval number: DW-8511BR0536, and for heating installations according to DIN EN 12828 and compressed air installations under consideration of DIN ISO 8573-1. Processing according to XPress processing guidelines. For connecting stainless steel pipes according to DVGW worksheet GW 541.

approvals and certifications

Material	DVGW	WRAS	KIWA NL	KIWA SE	ETA	SINTEF
stainless	✓	✓	✓	✓	✓	✓

As a natural consequence of our continual striving for improvement, Pegler Yorkshire is certified with ISO 9001 and thus subject to audits and strict quality requirements.

markings according to EN13828

All VSH XPress valve bodies are laser marked with information on size, material and pressure. Furthermore a color coding indicates the class of material – galvanised steel (red) or stainless steel (green).

full bore valves

A valve is designated as full bore when the diameter of the bore of the ball of all parts of the valve is a given in the table below.

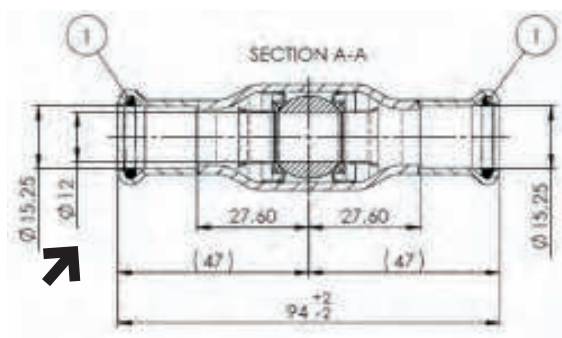
DN	8	10	15	20	25	32	40	50	65	80	100
minimum bore diameter (mm)	8	10	15	20	25	32	40	50	65	80	100

unique valve identification

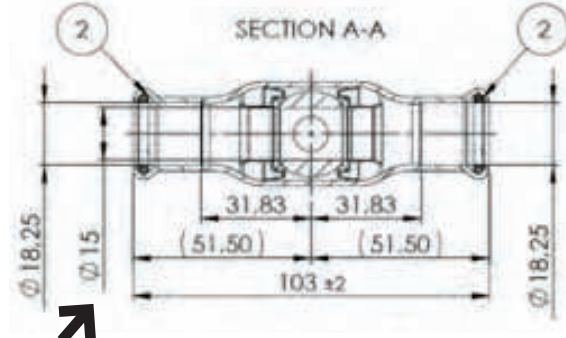
Each VSH XPress valve carry a unique laser mark identification with a unique data matrix code – and can trace:

- manufacturing times and processes
- quality / inspection periods
- 100% tests undertaken to completion
- distribution data

DN10 - 15MM press



DN15 - 18MM press

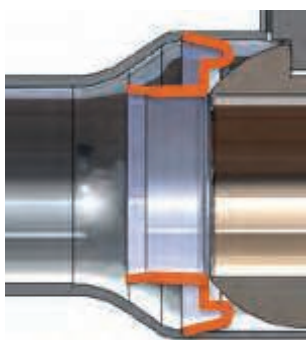


full bore design

- the result of an innovative seat and ball construction is an optimum flow path
- higher Kv values, even in a compact valve body, are delivered
- the flexibility of the seat housing channels the flow through the valve ensuring no debris or vortex build-up

spring adjusted seat support

- the new patented spring support seat design ensures an optimal seat compression for the operation of the ball, providing less wear on the sealing material which increases the lifetime of the valve
- the seat support is made so that the outer diameter is slightly bigger than the pipe
- combining this with the PTFE seat creates a reliable and robust sealing solution



T-min. -35°C,
T-max. 135°C,
short-term T-max. 150°C

Our fully integrated piping system incorporates a unique offering bringing together valves, fittings and pipes into one complete pipe-work system.

It combines the best world-class elements of modern connection and valve technology, incorporating press, push, groove, compression, capillary and threaded solutions for copper, steel, multi-layer and plastic pipes, with an emphasis on delivering heat free jointing.

head office

Aalberts Integrated Piping Systems Ltd

St. Catherine's avenue / Doncaster
South Yorkshire / DN4 8DF / England

tel: +44 (0) 1302 560 560

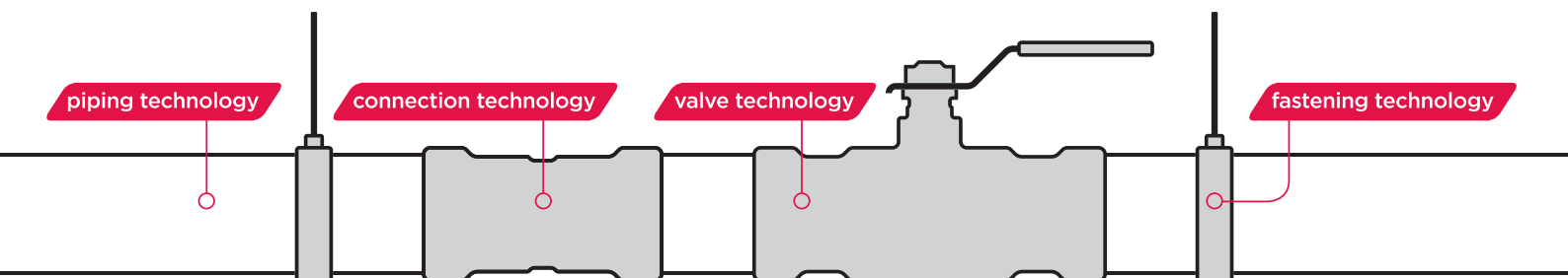
fax: +44 (0) 1302 560 203

email: info@pegler.co.uk

www.pegler.co.uk

All brand names and logo styles are registered trademarks. Maintaining a policy of continual product development, we reserve the right to change specifications, design and materials of products listed in this publication without prior notice.

Lit. Ref: 880173



Aalberts Integrated Piping Systems Ltd

St. Catherine's avenue / Doncaster
South Yorkshire / DN4 8DF / England
www.pegler.co.uk