

## VS 100, VS 110, VS 120, VS 200

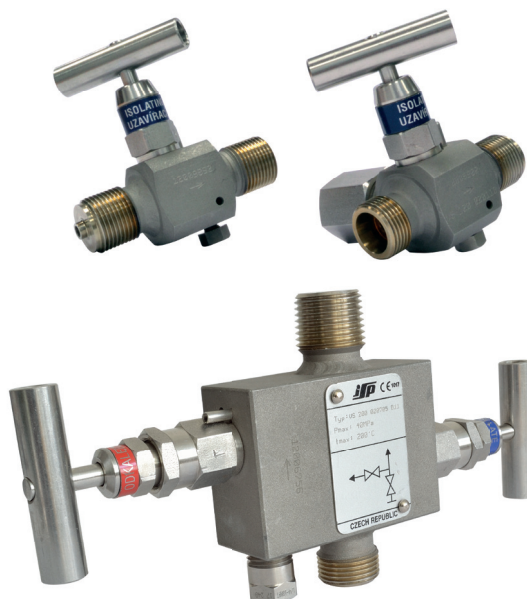
### Isolating Vent Valve

### Isolating Valve

### Testing Vent Valve

### Two Valve Manifold

- Operating pressure up to 42 MPa.
- Operating temperature up to 500 °C.
- Material stainless steel 1.4541.
- Sealing component selection from different material: Graphite, PTFE, PEEK, Viton, EPDM.
- Gland packing adjuster.
- Seat diameter 4 mm.
- EC Type Examination Certificate acc. to Directive PED 97/23/EC.



#### Application

Isolating valves are used to shut off the supply of pressured medium to the pressure sensor. In addition, the valve type with a small deaeration valve (VS 100, VS 120) allows discharge of mud or deaeration of the impulse piping. VS 120 valve, thanks to the side screwing, allows connection of other equipment to pressure medium. Individual types of the valves are designed for direct installation on a pressure sensor or for installation between the impulse piping.

The two valve manifold VS 200 is used to shut off the supply of pressured medium to the pressure sensor, allows discharge of mud or deaeration of the impulse piping and possibly serves to connect other equipment to pressure medium. The manifold is designed for direct installation on a pressure sensor or for installation between the impulse piping.

#### Description

All parts of the valve is made of stainless steel (1.4541) except the sealing ball and spindle gland. As a sealing element of the valve is used a ball, embedded into the valve spindle face and closing the through seat with diameter 4 mm. Material of the sealing ball is optional; it could be made of quenched stainless steel (1.4125), ceramics ( $\text{Si}_3\text{N}_4$ ) or plastic (PTFE 325). The valve spindle of the standard version is sealed using an FPM (Viton) or EPDM O-ring; in both cases with two Teflon supporting rings. In case of valves with gland packing adjuster it is possible to choose the sealing material PTFE, Graphite or PEEK. The wide range of dimensions of the input and output screwing allows installation of the valve into a welded on piece, on a sleeve with a transition connection, into a sensor screwing or connection of the impulse piping using a welding on nipple, welding on plow or single cutting ring for piping diameters 8, 10 mm, or double cutting ring for piping diameters 12 or 14 mm.

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Type	Description		
• VS 100	One-way vent valve		
◦ VS 110	One-way valve		
• VS 120	Testing one-way vent valve		
Code	Version of inlet thread		
• 01	Male thread M20x1.5 manometric		
• 02	Male thread M20x1.5 with tapered seat		
◦ 04	Male thread M16x1.5 with tapered seat (only for cutting ring, diameter of 8 mm)		
◦ 05	Male thread M20x1.5L (left)		
◦ 06	Male thread G1/2" manometric		
◦ 07	Male thread 1/2"-14 NPT		
◦ 08	Male thread 1/4"-18 NPT		
◦ 11	Female thread 1/4"-18 NPT		
◦ 12	Female thread 1/2"-14 NPT		
◦ 13	Male thread M18x1.5 with tapered seat (only for cutting ring, diameter of 10 mm)		
◦ 22	Double cutting ring for piping dia. 12 mm, cap nut with silver-plated thread, material AISI 316		
◦ 24	Double cutting ring for piping dia. 14 mm, cap nut with silver-plated thread, material AISI 316		
99	Other		
Code	Version of outlet thread		
• 01	Male thread M20x1.5 manometric		
• 02	Male thread M20x1.5 with tapered seat		
◦ 04	Male thread M16x1.5 with tapered seat (only for cutting ring, diameter of 8 mm)		
• 05	Male thread M20x1.5L (left)		
◦ 06	Male thread G1/2" manometric		
◦ 07	Male thread 1/2"-14 NPT		
◦ 08	Male thread 1/4"-18 NPT		
◦ 11	Female thread 1/4"-18 NPT		
◦ 12	Female thread 1/2"-14 NPT		
◦ 13	Male thread M18x1.5 with tapered seat (only for cutting ring, diameter of 10 mm)		
◦ 22	Double cutting ring for piping dia. 12 mm, cap nut with silver-plated thread, material AISI 316		
◦ 24	Double cutting ring for piping dia. 14 mm, cap nut with silver-plated thread, material AISI 316		
99	Other		
Code	Sealing valve spindle material / application		
• 0	O-ring / EPDM - pmax 40 MPa, for ammoniac, for air up to 95 °C (not suitable for DEMI water!)		
• 1	O-ring / Viton - pmax 40 MPa, for water and DEMI water up to 100 °C, for air up to 200 °C		
◦ 5	Gland / PTFE - pmax 42 MPa, Tmax=200 °C		
◦ 6	Gland / Graphite - pmax 30 MPa, Tmax=500 °C		
7	Gland / PEEK - pmax 42 MPa, Tmax=260 °C		
9	Other		
Code	Sealing ball material		
• 0	Stainless steel 1.4125 up to 400 °C		
◦ 3	Ceramic Si3N4 up to 500 °C		
◦ 5	Plastic PTFE 325 up to 200 °C (not for sealing valve spindle Graphite and PEEK)		
9	Other		
OPTIONAL ACCESSORIES ONLY FOR VS 120			
Code	Version of side thread		
◦ B01	Male thread M20x1.5 manometric		
◦ B02	Male thread M20x1.5 with tapered seat		
◦ B04	Male thread M16x1.5 with tapered seat (only for cutting ring, diameter of 8 mm)		
• B05	Male thread M20x1.5L (left)		
◦ B06	Male thread G1/2" manometric		
◦ B07	Male thread 1/2"-14 NPT		
◦ B08	Male thread 1/4"-18 NPT		
• B10	Male thread M20x1.5 cylindrical (without neck for centring seal)		
◦ B11	Female thread 1/4"-18 NPT		
◦ B12	Female thread 1/2"-14 NPT		
◦ B13	Male thread M18x1.5 with tapered seat (only for cutting ring, diameter of 10 mm)		
◦ B22	Double cutting ring for piping dia. 12 mm, cap nut with silver-plated thread, material AISI 316		
◦ B24	Double cutting ring for piping dia. 14 mm, cap nut with silver-plated thread, material AISI 316		
B99	Other		
OPTIONAL ACCESSORIES			
Code	Reducing connection	Material	Only for thread codes
• P1	M20x1,5L / M20x1,5	Carbon steel 1.0715	(B) 01; 05; 10
• P2	M20x1,5L / M20x1,5	Stainless steel 1.4301	(B) 01; 05; 10
• P3	M20x1,5L / G1/2"	Carbon steel 1.0715	(B) 05; 06
• P4	M20x1,5L / G1/2"	Stainless steel 1.4021	(B) 05; 06
P9	Other		
Code	Blinding nut and plug	Material	Only for thread codes
• M01	Nut M20x1.5	Stainless steel 1.4541	(B) 01; 10
• M05	Nut M20x1.5L	Stainless steel 1.4541	(B) 05
◦ M06	Nut G1/2"	Stainless steel 1.4541	(B) 06
◦ M11	Plug 1/4"-18 NPT	Stainless steel 1.4541	(B) 11
M99	Other		

• ... Ex stock version

◦ .. Marked version can be dispatched up to 5 working days

Code	Nipples, cones and cutting rings	Only for thread codes
• V12 ..	Nipple for welding dia. 12 (dia. 14)/dia. 8 mm with cap nut M20x1.5	(B) 01
• V14 ..	Nipple for welding dia. 14/dia. 8 mm with cap nut M20x1.5	(B) 01
• K12 ..	Cone for welding dia. 12/dia. 8 mm with cap nut M20x1.5	(B) 02
• K14 ..	Cone for welding dia. 14/dia. 8 mm with cap nut M20x1.5	(B) 02
• Z08 ..	Cutting ring for piping dia. 8 mm (±0.06 mm) with cap nut M16x1.5	(B) 04
• Z10 ..	Cutting ring for piping dia. 10 mm (±0.07 mm) with cap nut M18x1.5	(B) 13
Code	Nipple or cone material	Cutting ring material
• 1	Carbon steel 1.0570	—
• 2	Structural alloy steel 1.7715	—
• 4	Stainless steel 1.4541	—
• 5	—	Stainless steel 1.4571
• 9	Other	—
Code	Material of nut for nipples or cones	Material of nut for cutting ring
• 0	Galvanized carbon steel 1.0715	Galvanized carbon steel 1.0715
• 3	Stainless steel 1.4301	Stainless steel 1.4301
• 5	—	Stainless steel 1.4571, silver-plated thread (not for Z10)
• 9	Other	—
Code	Sealing (not for cones and cutting rings)	
• CU	flat sealing, dia. 17/6.5 - 2 mm, copper	
• AL	flat sealing, dia. 17/6.5 - 2 mm, aluminium	
• OC	comb sealing, diameter. 17/6, 5 - 3,5 mm material stainless steel 1.4541	
Code	Supplements	
• GR	G-Rapid plus paste (50 g) against thread seizure and for easy installation	(not for oxygen)
• LU	Lukosan M11 paste (50 g) for lubricating of O-rings, threads and for oxygen application	
• TT	Liquid teflon paste for high temperatures and for valves reassembling	
• KL	Control valve handle for high temperatures	
• Q1	Material certificate of manifold body according to EN 10204, 3.1	
• TZ	Pressure test	
◦ RRT	Hand pipe cutter for pipe diameters from 1/4" to 1 1/2" (delivery of replacement cutter wheels consult with supplier)	
◦ RPO	Hand end deburrer for pipe diameters from 1/8" to 1 5/8" (delivery of replacement blades consult with supplier)	
◦ RO6	Hand pipe bender with indication of the bending angle, for pipe diameter 6 mm	
◦ RO12	Hand pipe bender with indication of the bending angle, for pipe diameter 12 mm	
Code	Special version	
PL	Adjustment of valve handle for sealing	
KY	Degrease version for oxygen	(not for Graphite)
<b>Example of order: VS 100 0101 10 V1210(2x) CU(2x)</b>		

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Type	Description		
• VS 200	Two valve manifold		
Code	Version of inlet thread		
• 01	Male thread M20x1.5 manometric		
• 02	Male thread M20x1.5 with tapered seat		
◦ 04	Male thread M16x1.5 with tapered seat (only for cutting ring, diameter of 8 mm)		
◦ 05	Male thread M20x1.5L (left)		
◦ 06	Male thread G1/2" manometric		
◦ 07	Male thread 1/2"-14 NPT		
◦ 08	Male thread 1/4"-18 NPT		
◦ 11	Female thread 1/4"-18 NPT		
◦ 12	Female thread 1/2"-14 NPT		
◦ 13	Male thread M18x1.5 with tapered seat (only for cutting ring, diameter of 10 mm)		
◦ 22	Double cutting ring for piping dia. 12 mm, cap nut with silver-plated thread, material AISI 316		
◦ 24	Double cutting ring for piping dia. 14 mm, cap nut with silver-plated thread, material AISI 316		
99	Other		
Code	Version of outlet thread		
• 01	Male thread M20x1.5 manometric		
• 02	Male thread M20x1.5 with tapered seat		
◦ 04	Male thread M16x1.5 with tapered seat (only for cutting ring, diameter of 8 mm)		
• 05	Male thread M20x1.5L (left)		
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◦ 11	Female thread 1/4"-18 NPT		
◦ 12	Female thread 1/2"-14 NPT		
◦ 13	Male thread M18x1.5 with tapered seat (only for cutting ring, diameter of 10 mm)		
◦ 22	Double cutting ring for piping dia. 12 mm, cap nut with silver-plated thread, material AISI 316		
◦ 24	Double cutting ring for piping dia. 14 mm, cap nut with silver-plated thread, material AISI 316		
99	Other		
Code	Sealing valve spindle material / application		
• 0	O-ring / EPDM - pmax 40 MPa, for ammoniac, for air up to 95 °C (not suitable for DEMI water!)		
• 1	O-ring / Viton - pmax 40 MPa, for water and DEMI water up to 100 °C, for air up to 200 °C		
◦ 5	Gland / PTFE - pmax 42 MPa, Tmax=200 °C		
◦ 6	Gland / Graphite - pmax 30 MPa, Tmax=500 °C		
7	Gland / PEEK - pmax 42 MPa, Tmax=260 °C		
9	Other		
Code	Sealing ball material		
• 0	Stainless steel 1.4125 up to 400 °C		
◦ 3	Ceramic Si3N4 up to 500 °C		
◦ 5	Plastic PTFE 325 up to 200 °C (not for sealing valve spindle Graphite and PEEK)		
9	Other		
Code	Version of side thread		
◦ B01	Male thread M20x1.5 manometric		
◦ B02	Male thread M20x1.5 with tapered seat		
◦ B04	Male thread M16x1.5 with tapered seat (only for cutting ring, diameter of 8 mm)		
• B05	Male thread M20x1.5L (left)		
◦ B06	Male thread G1/2" manometric		
◦ B07	Male thread 1/2"-14 NPT		
◦ B08	Male thread 1/4"-18 NPT		
• B10	Male thread M20x1.5 cylindrical (without neck for centring seal)		
◦ B11	Female thread 1/4"-18 NPT		
◦ B12	Female thread 1/2"-14 NPT		
◦ B13	Male thread M18x1.5 with tapered seat (only for cutting ring, diameter of 10 mm)		
◦ B22	Double cutting ring for piping dia. 12 mm, cap nut with silver-plated thread, material AISI 316		
◦ B24	Double cutting ring for piping dia. 14 mm, cap nut with silver-plated thread, material AISI 316		
B99	Other		
OPTIONAL ACCESSORIES			
Code	Reducing connection	Material	Only for thread codes
• P1	M20x1,5L / M20x1,5	Carbon steel 1.0715	(B) 01; 05; 10
• P2	M20x1,5L / M20x1,5	Stainless steel 1.4301	(B) 01; 05; 10
• P3	M20x1,5L / G1/2"	Carbon steel 1.0715	(B) 05; 06
• P4	M20x1,5L / G1/2"	Stainless steel 1.4021	(B) 05; 06
P9	Other		
Code	Blinding nut and plug	Material	Only for thread codes
• M01	Nut M20x1.5	Stainless steel 1.4541	(B) 01; 10
• M05	Nut M20x1.5L	Stainless steel 1.4541	(B) 05
◦ M06	Nut G1/2"	Stainless steel 1.4541	(B) 06
◦ M11	Plug 1/4"-18 NPT	Stainless steel 1.4541	(B) 11
M99	Other		
Code	Nipples, cones and cutting rings	Only for thread codes	
• V12 ..	Nipple for welding dia. 12 (dia. 14)/dia. 8 mm with cap nut M20x1.5	(B) 01	
• V14 ..	Nipple for welding dia. 14/dia. 8 mm with cap nut M20x1.5	(B) 01	
• K12 ..	Cone for welding dia. 12/dia. 8 mm with cap nut M20x1.5	(B) 02	
• K14 ..	Cone for welding dia. 14/dia. 8 mm with cap nut M20x1.5	(B) 02	
• Z08 ..	Cutting ring for piping dia. 8 mm (±0.06 mm) with cap nut M16x1.5	(B) 04	
• Z10 ..	Cutting ring for piping dia. 10 mm (±0.07 mm) with cap nut M18x1.5	(B) 13	

• ... Ex stock version

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## Valves VS 100, VS 110, VS 120 and Two Valve Manifolds VS 200

Code	Nipple or cone material	Cutting ring material
• 1	Carbon steel 1.0570	—
• 2	Structural alloy steel 1.7715	—
• 4	Stainless steel 1.4541	—
• 5	—	Stainless steel 1.4571
• 9	Other	—
Code	Material of nut for nipples or cones	Material of nut for cutting ring
• 0	Galvanized carbon steel 1.0715	Galvanized carbon steel 1.0715
• 3	Stainless steel 1.4301	Stainless steel 1.4301
• 5	—	Stainless steel 1.4571, silver-plated thread (not for Z10)
• 9	Other	—
Code	Sealing (not for cones and cutting rings)	
• CU	flat sealing, dia. 17/6.5 - 2 mm, copper	
• AL	flat sealing, dia. 17/6.5 - 2 mm, aluminium	
• OC	comb sealing, diameter. 17/6, 5 - 3,5 mm material stainless steel 1.4541	
Code	Supplements	
• GR	G-Rapid plus paste (50 g) against thread seizure and for easy installation (not for oxygen)	
• LU	Lukosan M11 paste (50 g) for lubricating of O-rings, threads and for oxygen application	
• TT	Liquid teflon paste for high temperatures and for valves reassembling	
• KL	Control valve handle for high temperatures	
• Q1	Material certificate of manifold body according to EN 10204, 3.1	
• TZ	Pressure test	
◦ RRT	Hand pipe cutter for pipe diameters from 1/4" to 1 1/2" (delivery of replacement cutter wheels consult with supplier)	
◦ RPO	Hand end deburrer for pipe diameters from 1/8" to 1 5/8" (delivery of replacement blades consult with supplier)	
◦ RO6	Hand pipe bender with indication of the bending angle, for pipe diameter 6 mm	
◦ RO12	Hand pipe bender with indication of the bending angle, for pipe diameter 12 mm	
Code	Special version	
PL	Adjustment of valve handle for sealing	
KY	Degrease version for oxygen (not for Graphite)	
Code	Fastening bolts for mounting manifold	
SR4	2 pcs of bolts M10x15 DIN 912, galvanized + 2 pcs washer 10.5, galvanized	
<b>Example of order: VS 200 0101 13 B01 P2 Z1450 CU</b>		

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