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LDM Shut-off valves
UV 526

UV 526

Shut-off valves
DN 10 to 65
PN 63, 100 and 160

Description

Shut-off valves UV526 are single-seated globe valves designed for shutting off flow of a media. The valves could be optionally equipped with shaped plug for rough control in case of demand. The valve seat surface is made with hard metal overlay due to increased service life. The conical shape of the seat in combination with the spherical shape of the plug ensures a high tightness of the closure. The valves UV526 are designed to be actuated with hand wheel or with multi-turn electric actuators and they are available with welded or flanged connection with a sealing surface based on a customer demand.

Application

The valves are especially designed for applications in power generation and chemical processing industries. Maximal permissible pressure values depending on choosen material and max. process media temperature are shown on the pg. 7. The maximum operating temperature depends on the material execution.

Process media

The valves UV526 are suitable for shutting off water, water vapour and other liquids and gases which are compatible with used materials of the valve body and internal materials.

Installation

The valves with hand wheel can be installed in any position. The valve with electric actuator can be installed in any position except position when the actuator is under the valve body. It is necessary to ensure enough of space for handling. The flow direction is arbitrary except execution with control plug. In case of control plug the flow direction has to be under the plug. It is suitable to insulate the pipeline around the valve but it is prohibited to insulate the valve itself (especially yoke).

Technical data

Series	UV 526										
Execution	Shut-off (Control) valve, single-seated, straight-through, two-way										
Nominal size	DN 10 to 65										
Nominal pressure	PN 63, 100, 160										
Body material (ČSN; DIN W. Nr.)	11416	12020	15128	1.0460	1.4571	1.4903	1.5415	1.7335	1.7380	1.7383	1.4541
Operating temperature (from -10°C) to	400°C	350°C	550°C	450°C	600°C	600°C	500°C	550°C	575°C	575°C	600°C
Seat material	Body mat. + hard metal overlay Stellite 6										
Plug material	1.4923 + hard metal Real 096										
Yoke material	1.0619 (-10 až 400°C)						1.7357 (-10 až 600°C)				
Weld ends connection	Acc. to ČSN EN 12627 (9/2000), DIN 3229-1; DIN 2559 list1, ČSN 131075 (03/1991),										
Flange ends connection	Acc. to ČSN EN 1092-1 (7/2014)										
Available types of flanges	Type B1 (raised-face flange); type B2 (plain flange), type C (tongue flange); type D (flange with groove); type E (male flange); typ F (female flange)										
Flow characteristic	On-Off; linear										
Leakage rate	Acc. to ČSN EN 12266-1 (11/2003) - leakage rate class A										
Packing	Graphite										

Dimensions and weights of UV 526 with weld ends

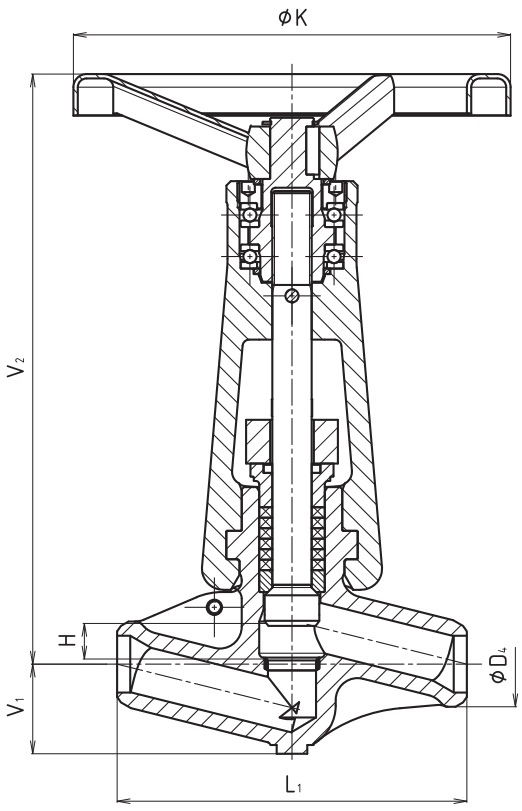
DN	H	L_1	V_1	V_2	V_3	$D_{4\,max}$	K	D_5	D_6	D_7	D_8	a_p	n_p	d_p	m_1
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm		mm	kg
10	12	150	30	255	211	26	200	125	102	70	20	12	8	11	4.0
15															
20	16	160	41	270	226	39									5.7
25															
32	22	210	60	348	295	54	250								12
40															
50	36	250	80	446	381	83	400	175	140	100	30	16	8	17	22
65															

m_1 - approximate weight with weld ends

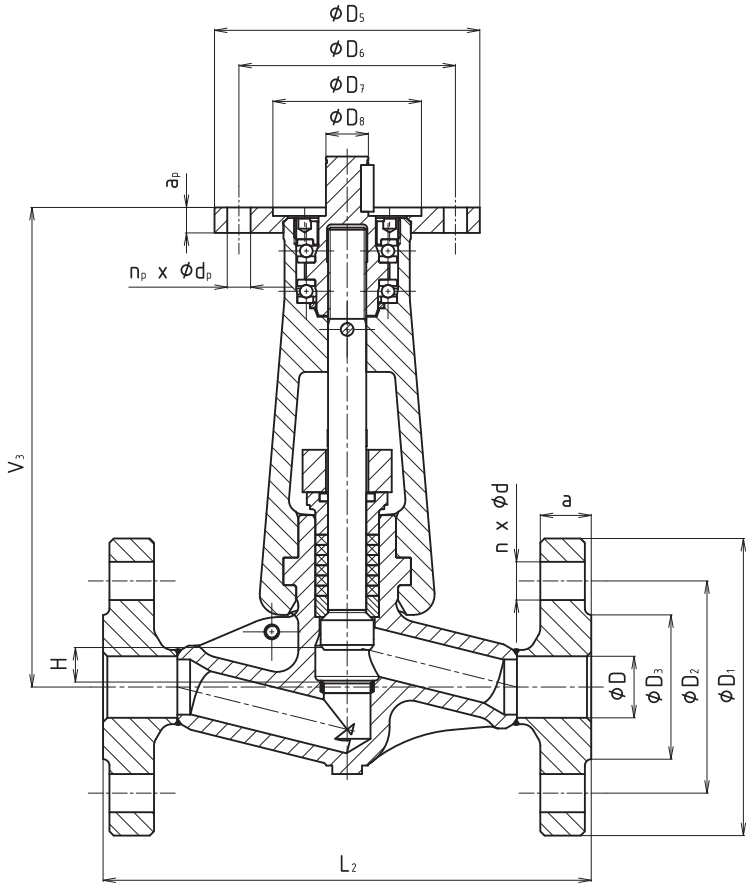
Dimensions and weights of UV 526 with flanges

	PN63							PN100							PN160							PN63-160	
DN	D	D_1	D_2	D_3	a	d	n	D	D_1	D_2	D_3	a	d	n	D	D_1	D_2	D_3	a	d	n	L_2	m_2
	mm	mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	mm		mm	kg
10	13	100	70	40	20	14	4	13	100	70	40	20	14	4	13	100	70	40	20	14	4	210	5.5
15	17	105	75	45				17	105	75	45				17	105	75	45					5.7
20	22	130	90	58	22	18		22	130	90	58	22	18		---	---	---	---	---	---	---	230	9.5
25	29	140	100	68	24			29	140	100	68	24			29	140	100	68	24	18	4		10
32	37	155	110	78		22		37	155	110	78		22		---	---	---	---	---	---	---	260	18
40	43	170	125	88	26			43	170	125	88	26			43	170	125	88	28	22	4		19
50	54	180	135	102				54	195	145	102	28	26		54	195	145	102	30	26		300	32
65	69	205	160	122			8	69	220	170	122	30		8	69	220	170	122	34		8	340	36

m_2 - approximate weight with flanges



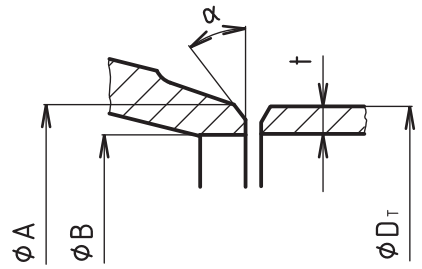
Weld ends execution with hand wheel



Flanged execution with adjustment for electric actuator

Examples of weld ends connecting dimensions

DN	ČSN EN 12627					DIN 3229-1; DIN 2559 list 1					ČSN 131075				
	Pipe size		Weld end dimension			Pipe size		Weld end dimension			Pipe size		Weld end dimension		
	D_T	t	A	B	α	D_T	t	A	B	α	D_T	t	A	B	α
	mm	mm	mm	mm	[°]	mm	mm	mm	mm	[°]	mm	mm	mm	mm	[°]
10	17.2	2	18	13	37.5	17.2	2	18	13	0	14.2	2	18	10	0
	---	---	---	---	---	---	---	---	---	---	14.2	2.5	18	9	0
15	21.3	2	22	17	37.5	21.3	2	22	17	0	21.3	2.6	22	16	0
	---	---	---	---	---	---	---	---	---	---	21.3	2.9	22	16	35
20	26.9	2.3	28	22	37.5	---	---	---	---	---	26.9	2.6	28	22	0
	---	---	---	---	---	---	---	---	---	---	26.9	3.6	28	20	35
25	33.7	2.6	35	29	37.5	33.7	2.6	35	29	0	33.7	2.6	35	29	0
	33.7	2.9	35	28	37.5	33.7	3.2	35	27	30	33.7	2.9	35	28	35
	33.7	4	35	26	37.5	---	---	---	---	---	33.7	4	35	26	35
32	42.4	2.6	44	37	37.5	---	---	---	---	---	42.4	3.6	44	35	35
	42.4	3.6	44	35	37.5	---	---	---	---	---	42.4	4.5	44	33	35
40	48.3	2.9	50	43	37.5	48.3	2.6	50	43	0	48.3	2.9	50	43	35
	48.3	3.6	50	41	37.5	48.3	3.6	50	41	30	48.3	3.6	50	41	35
	48.3	5	50	38	37.5	---	---	---	---	---	48.3	5	50	38	35
50	60.3	3.2	62	54	37.5	60.3	3.2	62	54	30	60.3	3.2	62	54	35
	60.3	4.5	62	51	37.5	60.3	4	62	52	30	60.3	4.5	62	51	35
	60.3	6.3	62	48	37.5	---	---	---	---	---	60.3	6.3	62	48	35
65	76.1	3.6	77	69	37.5	76.1	3.6	77	69	30	76.1	3.6	77	69	35
	76.1	5	77	66	37.5	76.1	5.6	77	65	30	76.1	5	77	66	35
	76.1	7	77	62	37.5	---	---	---	---	---	76.1	7	77	62	35



Other shapes of weld ends are possible based on demand.

Values of Kvs and pressure loss coefficient ζ (zeta)

DN	∅ B	Loss coefficient of shut-off valve ζ (zeta)	Kvs value of shut-off valve [m^3/hod]	Kvs value of control valve [m^3/hod]
10	10	6,74	1,54	1,53
15	16	6,72	3,95	3,37
20	22	7,20	7,21	5,76
25	26	8,33	9,36	7,02
32	30	7,90	12,8	11,1
40	41	18,6	15,6	14,1
50	52	13,5	29,4	22,5
65	66	35,1	29,4	22,5

Valve complete specification No. for ordering UV 526

		XX	XXX	XXX	XXXX	XX	XXX	/	XXX	-	XXX
1. Valve	Shut-off valve	UV									
2. Series	Shut-off globe valve, forged		526								
3. Type of actuating	Electric actuator			EXX							
	Hand wheel			RXX							
4. Connection	Flanges with raised faces, type B1				1						
	Female flange, type F				2						
	Flanges with plain faces, type B2				3						
	Welded				4						
	Male flange, type E				5						
	Tongue flange, type C				6						
	Flange with groove, type D				7						
	Other				9						
5. Body material	Cast steel 11416 (-10 to 400 °C)				A						
	Cast steel 12020 (-10 to 350 °C)				B						
	Alloy steel 15128 (-10 to 550 °C)				C						
	Cast steel 1.0460 (-10 to 450 °C)				D						
	Stainless steel 1.4571 (-10 to 600 °C)				E						
	Stainless steel 1.4903 (-10 to 600 °C)				F						
	Alloy steel 1.5415 (-10 to 500 °C)				G						
	Alloy steel 1.7335 (-10 to 550 °C)				H						
	Alloy steel 1.7380 (-10 to 575 °C)				I						
	Alloy steel 1.7383 (-10 to 575 °C)				J						
	Stainless steel 1.4541 (-10 to 600 °C)				K						
	Other				9						
6. Packing	Graphite				5						
7. Execution	Standard				0						
8. Plug type	Shut-off					0					
	Control					1					
9. Accessories	Without					0					
10. Nominal pressure	PN 63						063				
	PN 100						100				
	PN 160						160				
11. Operating temperature °C	Acc. to operating conditions							/	XXX		
12. Nominal diameter	DN									-	XXX

Ordering code example:
UV526 R20 4B50 00 063/350-025, weld ends acc. to EN 12627-2-DN20, pipe size 26,9 x 2,3

Data for an actuator specification

The valves are designed to be actuated with multi-turn electric actuators of the following producers: Auma, Schiebel, ZPA Pečky or others. Actuator connection corresponds ČSN EN ISO 5210, see dimensional sketch on the pg. 3 on this data sheet.

Valves are adjusted with actuators so that in the closed position, i.e. when closing to the seat, the torque switch turns off. In the open position they are adjusted so that the position switch turns off (the torque switch for open position is adjusted as a safety switch to protect the valve against a damage only). Connecting flange of actuator is designed to allow rotation of the drive of 45°.

Assigning actuator to valve

DN	Stroke	rpm / stroke	Max. torque	Connection acc. to ČSN EN ISO 5210
	[mm]	[n]	[Nm]	
10 - 15	12	6	20	F10 / type B3
20 - 25	16	8	40	F10 / type B3
32 - 40	22	7,3	80	F10 / type B3
50 - 65	36	6	180	F14 / type B3

Recommended values of output speed (rpm)

DN	Shut-off valve (running time 10 - 20 sec.)	Shut-off valve with control plug (running time 40 - 60 sec.)
	[n/min.]	[n/min.]
10 - 15	18 - 36	6 - 9
20 - 25	24 - 48	8 - 12
32 - 40	22 - 44	7,5 - 11
50 - 65	18 - 36	6 - 9

Actuator marking in valve specification No.

Electric actuator Auma SA 07.2	E A A
Electric actuator Auma SAEx 07.2	E A B
Electric actuator Auma SAR 07.2	E A C
Electric actuator Auma SAREx 07.2	E A D
Electric actuator Auma SA 07.6	E A E
Electric actuator Auma SAEx 07.6	E A F
Electric actuator Auma SAR 07.6	E A G
Electric actuator Auma SAREx 07.6	E A H
Electric actuator Auma SA 10.2	E A I
Electric actuator Auma SAEx 10.2	E A L
Electric actuator Auma SAR 10.2	E A J
Electric actuator Auma SAREx 10.2	E A K
Electric actuator Auma SA(R,Ex) 14.2	E A M
Electric actuator Schiebel AB3	E Z A
Electric actuator Schiebel exAB3	E Z B
Electric actuator Schiebel rAB3	E Z C
Electric actuator Schiebel exrAB3	E Z D
Electric actuator Schiebel AB5	E Z E
Electric actuator Schiebel exAB5	E Z F
Electric actuator Schiebel rAB5	E Z G
Electric actuator Schiebel exrAB5	E Z H
Electric actuator Schiebel AB8	E Z I
Electric actuator Schiebel exAB8	E Z J
Electric actuator Schiebel rAB8	E Z K
Electric actuator Schiebel exrAB8	E Z L

Electric actuator SIPOS 2SA50	E T B
Electric actuator SIPOS 2SA55	E T C
Electric actuator SIPOS 2SA58 HiMod	E T C
Electric actuator Modact MON/MOP	E Y E
Electric actuator Modact MON/MOP Control	E Y F
Electric actuator Modact MONED/MOPED	E Y F
Electric actuator Modact MONJ	E Y E
Electric actuator Modact MONJ Control	E Y F
Electric actuator Modact MONEDJ	E Y F
Hand wheel for DN 10 - 25	R 2 0
Hand wheel for DN 32 - 40	R 2 5
Hand wheel for DN 50 - 65	R 4 0

Maximal permissible pressure values [MPa]

Material	PN	Temperature [°C]											
		100	150	200	250	300	350	400	450	500	550	575	600
Cast steel	63	6.3	6.3	6.3	5.55	4.82	4.13	3.58	---	---	---	---	---
11416	100	10.0	10.0	10.0	8.81	7.65	6.55	5.68	---	---	---	---	---
	160	16.0	16.0	16.0	14.1	12.2	10.5	9.09	---	---	---	---	---
Cast steel	63	6.3	5.82	5.51	5.04	4.56	4.09	---	---	---	---	---	---
12020	100	10.0	9.25	8.75	8.0	7.25	6.5	---	---	---	---	---	---
	160	16.0	14.8	14.0	12.8	11.6	10.4	---	---	---	---	---	---
Alloy steel	63	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.1	3.25	---	---
15128	100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	9.68	5.16	---	---
	160	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	15.5	8.25	---	---
Cast steel	63	5.85	5.55	5.25	4.8	4.35	4.05	3.75	2.07	---	---	---	---
1.0460	100	9.28	8.8	8.33	7.61	6.9	6.42	5.95	3.28	---	---	---	---
C22.8, P250GH	160	14.85	14.09	13.33	12.19	11.04	10.28	9.52	5.25	---	---	---	---
Stainless steel	63	5.67	5.25	4.92	4.63	4.33	4.18	4.03	3.97	3.51	3.1	2.98	2.66
1.4571	100	9.0	8.34	7.82	7.34	6.87	6.63	6.39	6.3	5.57	4.92	4.72	4.23
X6CrNiMoTi17-12-2	160	14.4	13.3	12.5	11.7	11.0	10.6	10.2	10.1	8.9	7.9	7.6	6.8
Stainless steel	63	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	4.98	3.81	2.82
1.4903	100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.9	6.05	4.47
X10CrMoVNb9-1	160	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	12.64	9.67	7.16
Alloy steel	63	6.29	5.96	5.5	5.12	4.35	4.09	3.84	3.71	2.87	---	---	---
1.5415	100	9.99	9.46	8.73	8.12	6.9	6.5	6.09	5.89	4.56	---	---	---
15Mo3, 16Mo3	160	16.0	15.1	14.0	13.0	11.0	10.4	9.7	9.4	7.3	---	---	---
Alloy steel	63	6.3	6.24	5.88	5.63	5.24	4.86	4.55	4.2	3.51	1.39	---	---
1.7335	100	10.0	9.9	9.34	8.93	8.32	7.71	7.22	6.67	5.57	2.21	---	---
13CrMo4-5	160	16.0	15.8	14.9	14.3	13.3	12.3	11.5	10.7	8.9	3.5	---	---
Alloy steel	63	6.3	6.24	6.06	5.76	5.33	5.0	4.55	4.2	3.51	1.93	1.35	---
1.7380	100	10.0	9.9	9.63	9.14	8.46	7.94	7.22	6.67	5.57	3.07	2.14	---
10CrMo9-10	160	16.0	15.8	15.4	14.6	13.5	12.7	11.5	10.7	8.9	4.9	3.4	---
Alloy steel	63	6.3	6.24	6.06	5.76	5.33	5.0	4.55	4.2	3.51	1.93	1.35	---
1.7383	100	10.0	9.9	9.63	9.14	8.46	7.94	7.22	6.67	5.57	3.07	2.14	---
11CrMo9-10	160	16.0	15.8	15.4	14.6	13.5	12.7	11.5	10.7	8.9	4.9	3.4	---
Stainless steel	63	5.25	4.92	4.63	4.33	4.06	3.88	3.73	3.64	3.51	2.94	2.89	2.44
1.4541	100	8.34	7.82	7.34	6.87	6.44	6.16	5.92	5.78	5.57	4.67	4.59	3.88
X6CrNiTi18-10	160	13.3	12.5	11.7	11.0	10.3	9.9	9.5	9.2	8.9	7.5	7.3	6.2

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