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LDM shut-off valves with hand wheel





UV 226 (Ex) UV 236 (Ex)

Shut-off valves DN 15 to 400, PN 16, 25 and 40 with hand wheel

Description

Shut-off valves series UV 2x6 are hand-wheel valves that excel with unique features suitable for a long-time no maintenance service. If bellows is used, it ensures a hermetic tightness to environment and in addition it is added with a safety packing made of graphite. Valves with graphite packing are equipped with back seat. The most advantageous feature is low linear forces when opening or closing the valve which does not change during the life-time. Thanks to a yoke design, the valve can be easily insulated and its hand wheel can be operated even at high temperatures of process medium. The hand wheel is non-rising which enables the valves application in unaccessible places. The visible indicator ensures an easy identification of the valve position. The valves UV 2x6 acc. to ČSN EN 13709 (10/2003). The valves UV 2x6 Ex meet the requirements II 1/2G IIB acc. to ČSN-EN 13 463-1.

Application

The valves are especially designed for applications in warm-water and steam circuits in power plants, heating plants, heatexchanging stations, heat transferring stations and common heating applications. Thanks to a great scale of available valve sizes, the valve is suitable for a tight closing (shutting down) of main branches, by-passes, extracting and sampling pipelines. The used materials enable the valves to be installed also in air-conditioning, refrigerating and other special applications.

Process media

The valves UV 2x6 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. The valves UV 2x6 (Ex) can be also used for industrial and heating gases and flammable liquids.

To ensure a long-life of a valve seat, the producer recommends to pipe a strainer in front of the valve into pipeline or ensure in any other way that process medium does not contain abrasive particles or impurities.

Installation

The valves can be installed in any position, except execution V and B. The valves of execution V and B must be installed only in horizontal position to the vertical axis of the spindle. It is recommended to ensure enough space for hand wheel operating. The flow direction is indicated by the arrows on the valve body. The alternate flow direction through the valve is permissible, except execution V and B.

Detailed informations are given in the instruction for installation and service which is standard part of delivery.

Technical data

Series	UV 226 (Ex)	UV 236 (Ex)
Execution	Shut-off valve, straight-through	
Nominal size range	DN 15 to 400	
Nominal pressure	PN 16, 25 and 40	
Body material	Cast steel 1.0619 (GP240GH)	Stainless steel 1.4581 (GX5CrNiMoNb19-11-12)
Plug material (DIN W.Nr. / ČSN)	1.4021 / 17 022.6	1.4571 / 17 348.4
Operating temperature range	-10 to +400°C	
Connection	Type B1 (raised-faced flange) acc. to ČSN-EN 1092-1 (4/2002) Face to face dimensions comply with ČSN EN 558-1 (3/1997), section 1	
Type of plug	Disc; pressure-balanced plug with pilot system; control	
Flow characteristic	On-Off, linear	
Leakage rate	Acc. to ČSN EN 12266-1 (11/2003) - leakage rate class A	
Packing	Bellows with safety graphite packing or graphite packing	

- 1) The valves can be also used for temperatures from -60°C in the choice of suitable material with the agreement with the manufacturer.
- 2) The valves are tested with water commonly. In case of demand for air test it must be specified in the valve specification number.

Dimensions and weights for the type UV 2x6 (Ex)

	PN 16						PN 25						PN 40					
DN	D ₁	D ₂	D ₃	d	n	a	D ₁	D ₂	D ₃	d	n	a	D ₁	D ₂	D ₃	d	n	a
	mm	mm	mm	mm		mm	mm	mm	mm			mm	mm	mm	mm			mm
15	95	65	45	14	4	16	Same as PN 40						95	65	45	14	4	16
20	105	75	58			18							105	75	58			18
25	115	85	68			18							115	85	68			18
32	140	100	78			18							140	100	78			18
40	150	110	88	18	4 ¹⁾	18							150	110	88	18	8	18
50	165	125	102			20							165	125	102			20
65	185	145	122			22							185	145	122			22
80	200	160	138			24							200	160	138			24
100	220	180	158	22	8	24							235	190	162	22	8	24
125	250	210	188			26							270	220	188			26
150 ^{R, S, B)}	285	240	212			28							300	250	218			28
150 ^{V)}	285	240	212			28							300	250	218			28
200	340	295	268	26	12	24	360	310	278	26	12	30	375	320	285	30	12	34
250	405	355	320			26	425	370	335	30		32	450	385	345	33		38
300	460	410	378			28	485	430	395			16	34	515	450		410	39
400	580	525	490	30	16	32	620	550	505	36	40		660	585	535	39	16	

¹⁾ regarding the previous standards in force, we can optionally make an execution with No. of connection bolts corresponding to ČSN-EN 1092-1

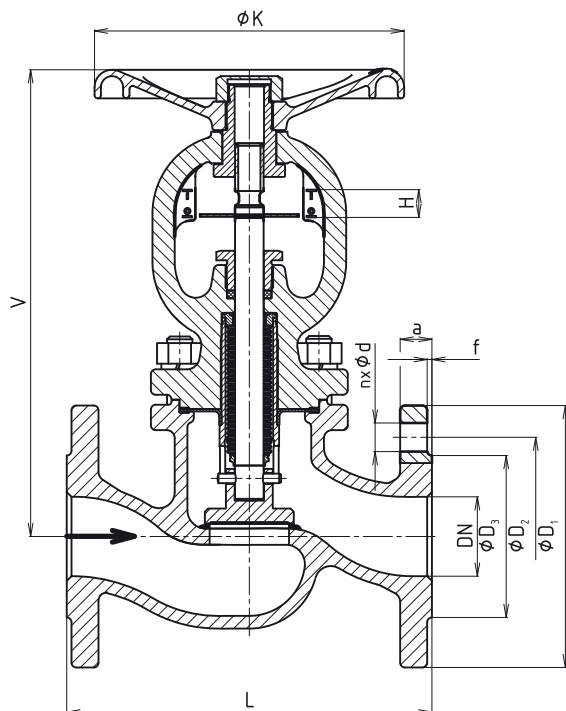
PN 16, PN 25, PN 40						
DN	H	L	V	K	f	m
	mm	mm	mm	mm	mm	kg
15	6	130	189	120	2	4.3
20	6	150	189	120		5.1
25	6	160	189	120		5.8
32	10	180	220	160		9.5
40	10	200	220	160	3	9.8
50	16.5	230	295	195		17.5
65	16.5	290	295	195		20.5
80	25	310	368	280		34
100	25	350	368	350	2	44
125	40	400	523	350		77
150 ^{R, S, B)}	40	480	523	350		110
150 ^{V)}	40	480	558	350		113
200	50	600	505	350	2	240
250	75	730	663	350		410
300	75	850	713	350		610
400	100	1100	855	350		1240

Values of Kvs, differential pressure and pressure loss coefficient ζ (zeta)

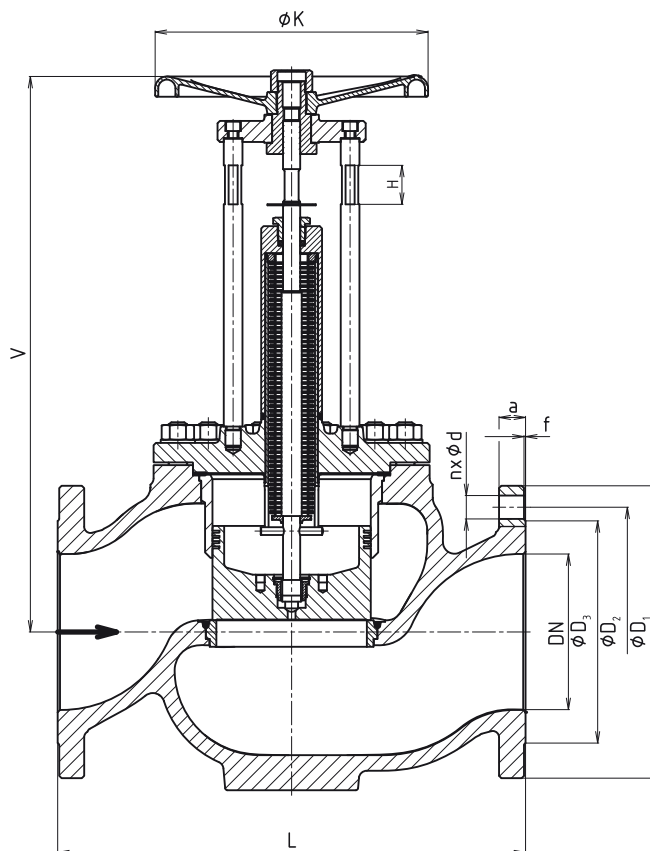
DN	Shut - off		Control		$\Delta p_{\max}$ [MPa]
	Kvs [m ³ /h]	ζ	Kvs [m ³ /h]	ζ	
15	4.3	4.4	4.0	5.1	4.00
20	7.0	5.2	6.6	5.9	4.00
25	11.0	5.2	10.0	6.2	4.00
32	17.5	5.5	16.0	6.5	4.00
40	27.0	5.6	24.0	7.1	4.00
50	47.0	4.5	39.0	6.6	4.00
65	68.0	6.2	56.0	9.1	4.00
80	116.0	4.9	80.0	10.2	4.00
100	162.0	6.1	140.0	8.2	4.00
125	250.0	6.2	184.0	11.5	4.00
150 UV 2x6 R,S	364.0	6.1	320.0	7.9	2.00
150 UV 2x6 B,V	364.0	6.1			4.00
200	570.0	7.9			4.00
250	800.0	9.8			4.00
300	1100.0	10.7			4.00
400	1700.0	14.2			4.00

$\Delta p_{\max}$ value is the valve max. differential pressure when open - close function is always guaranteed. In regard of service life of seat and plug, it is recommended so that permanent differential pressure at open valve would not exceed 1.6 MPa.

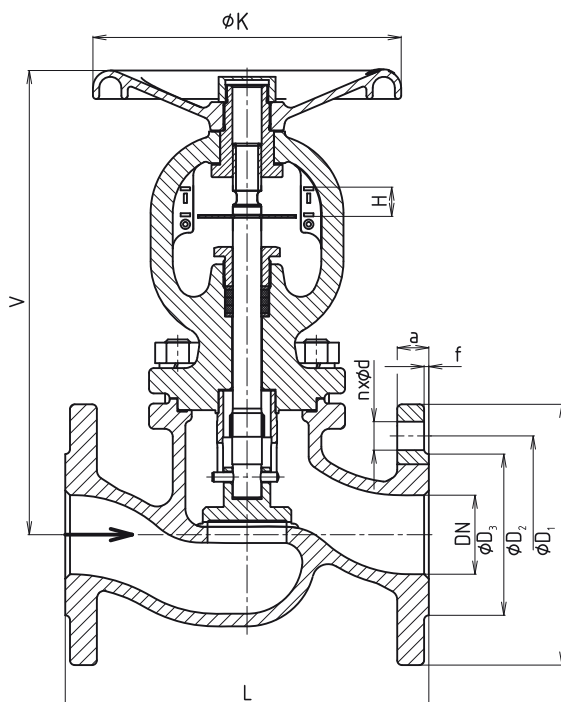
UV 2x6 R



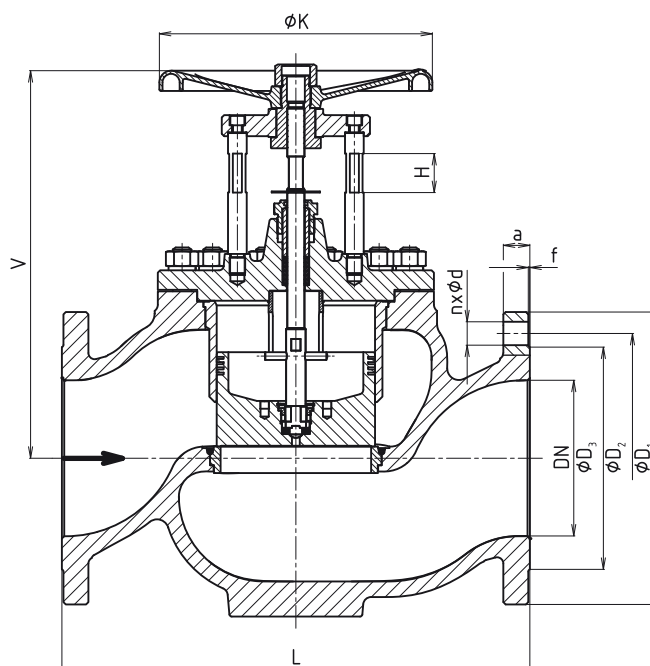
UV 2x6 V



UV 2x6 S



UV 2x6 B



Valve complete specification No. for ordering UV 2x6 (Ex)

		XX	XXX	XXX	XX	/	XXX	-	XXX	XX
1. Valve	Shut-off valve	UV								
2. Series	Globe valve made of cast steel 1.0619		226							
	Globe valve made of stainless steel 1.4581		236							
3. Type of actuating/packing ¹⁾ For DN 15 to 150 only ²⁾ For DN 150 to 200 only ³⁾ For DN 150 to 400 only	Bellows with safety graphite packing ¹⁾			R						
	Graphite packing ¹⁾			S						
	Pressure balanced plug / bellows with safety graphite packing ²⁾			V						
	Pressure balanced plug / graphite packing ³⁾			B						
4. Connection	Flanges with raised faces, type B1			1						
	Female flange, type F			2						
	Flange with groove, type D			3						
	Male flange, type E			7						
	Tongue flange, type C			8						
5. Body / bonnet material ⁴⁾ For R and V execution only	Cast steel 1.0619 / Cast steel 1.0619			1						
	Stainless steel 1.4581 / Cast steel 1.0619 ⁴⁾			3						
	Stainless steel 1.4581 / Stainless steel 1.4581			8						
	Other material on request (e.g.: WN 1.7357, nickel alloys, etc.)			9						
6. Nominal pressure	PN 16						16			
	PN 25						25			
	PN 40						40			
7. Max. operating temp. °C	400°C							400		
8. Nominal size	DN 15 to 400								XXX	
9. Execution ⁵⁾ Only execution R and S; DN15-150	Normal									
	Non - explosive									Ex
	Oxygen execution									Ox
	Air test									G
	With control plug ⁵⁾									R

Ordering example: UV 226 R11 40/400-50REx

Note: Other connection (female face, plain face, etc.) possible on special request.

Maximal permissible pressure values [MPa]

Material	PN	Temperature [°C]									
		RT ¹⁾	100	120	150	200	250	300	350	375	400
Cast steel 1.0619 (GP240GH)	16	1,56	1,36	1,32	1,27	1,14	1,04	0,94	0,88	0,86	0,84
	25	2,44	2,13	2,07	1,98	1,78	1,62	1,47	1,37	1,35	1,32
	40	3,90	3,41	3,31	3,17	2,84	2,60	2,35	2,19	2,16	2,11
Stainless steel 1.4581 (G17CrMo5-5)	16	1,59	1,44	1,39	1,33	1,25	1,17	1,10	1,06	1,05	1,02
	25	2,49	2,25	2,18	2,08	1,95	1,84	1,72	1,66	1,63	1,60
	40	3,98	3,6	3,49	3,33	3,13	2,94	2,75	2,65	2,61	2,56

¹⁾ -10°C to 50°C

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