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SHUT-OFF VALVES WITH HAND WHEEL

UV 2x6 and UV 2x7



UV 226 (Ex)
UV 236 (Ex)

shut-off valve, straight-through

UV 227 (Ex)
UV 237 (Ex)

Shut-off valve, straight-through,
with hard metal overlay seat
and spiral-wound cover gasket

Shut-off valves series UV 200 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 valve seat surface of valves UV 2x7 (Ex) is made with hard metal overlay due to increased service life. Between the valve body and cover the spiral-wound gasket is used.

The valves **UV 200 Ex** meet the requirements II 1/2G IIC TX Ga/Gb dle ČSN EN ISO 80079-36 (9/2016) a ČSN EN 1127-1 ed.2 (1/2012).

Application

The valves are especially designed for applications in chemical and petrochemical processing industries, warm water and steam circuits in power plants, heating plants, heatexchange 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, bypasses, extracting and sampling pipelines. The used materials enable the valves to be installed also in airconditioning, refrigerating and other special applications.

Process media

The valves **UV 200** 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 200 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.



UV 226 (Ex) UV 236 (Ex)

Shut-off valves
with hand wheel

DN 15 to 400
PN 16, 25 and 40

Technical data		
Series	UV 226 (Ex)	UV 236 (Ex)
Execution	Shut-off valve, straight-through	
Nominal size range	DN 15 až 400	
Nominal pressure	PN 16, 25 a 40	
Body material	Cast steel 1.0619 (GP240GH)	Stainless steel 1.4581 (GX5CrNiMoNb19-11-2)
Plug material (DIN W.Nr. / ČSN)	1.4021 / 17 022.6	1.4571 / 17 348.4
Operating temperature range ¹⁾	-10 to +400°C	
Connection	Type B1 (raised-faced flange) acc. to ČSN EN 1092-1 (11/2018)	
Face to face dimensions	According to ČSN EN 558 (09/2017), section 1	
Type of plug	Disc, pressure-balanced plug with pilot system, control	
Flow characteristic	On-Off; linear	
Leakage rate ²⁾	Acc. to ČSN EN 12266-1 (11/2012) - leakage rate class A	
Packing	Bellows with safety graphite packing, graphite packing, PTFE (GORE DP)	

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)

DN	PN 16						PN 25						PN 40											
	D ₁ mm	D ₂ mm	D ₃ mm	d mm	n	a mm	D ₁ mm	D ₂ mm	D ₃ mm	d mm	n	a mm	D ₁ mm	D ₂ mm	D ₃ mm	d mm	n	a mm						
15	95	65	45	14	4	16	Same as PN 40						95	65	45	14	4	16						
20	105	75	58			18							18	105	75			58	18					
25	115	85	68			18							18	115	85			68	18					
32	140	100	78			18							18	140	100			78	18					
40	150	110	88	18	4 ¹⁾	20							165	125	102	18	8	20	185	145	122	22	22	
50	165	125	102			24							24	165	125			102	24	24				
65	185	145	122			24							26	185	145			122	26	26				
80	200	160	138			28							28	200	160			138	26	26				
100	220	180	158	22	8	28							300	250	218	30	12	30	270	220	188	33	12	34
125	250	210	188										32	32	250			210	188	32	32			
150	285	240	212										36	36	285			240	212	36	36			
200	340	295	268										40	40	340			295	268	40	40			
250	405	355	320	26	12	26	425	370	335	30	12	32	450	385	345	33	12	38						
300	460	410	378	26	12	28	485	430	395	30	16	34	515	450	410	33	16	42						
400	580	525	490	30	16	32	620	550	505	36	16	40	660	585	535	39	16	50						

DN	PN 16, PN 25, PN 40							
	H mm	L mm	V ^{R,S,B)} mm	V ^{V)} mm	K mm	f mm	m kg	
15	6	130	189	120	2	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	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	300	2	2	44	
125	40	400	523	350			77	
150	40	480	523	553			350	113
200	50	600	505	721			350	240
250	75	730	663	945	350	410		
300	75	850	713	994	350	610		
400	100	1100	855	1166	350	1240		

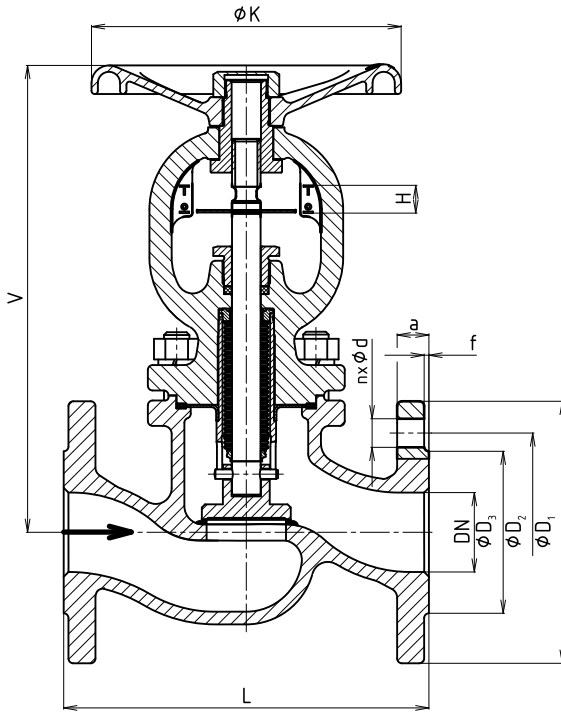
¹⁾ regarding the previous standards in force, we can optionally make an execution with No. of connection bolts corresponding to ČSN-EN 1092-1

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

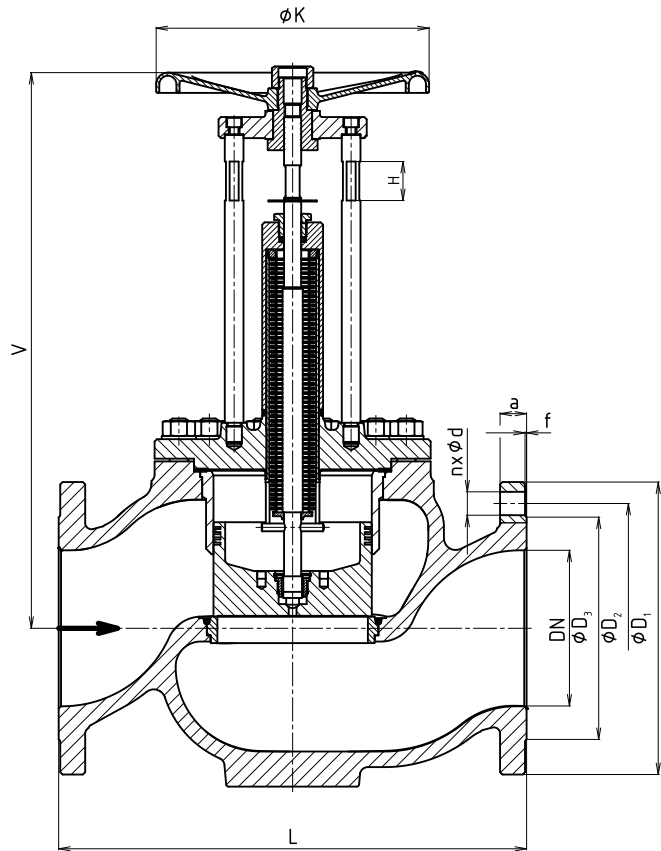
DN	Shut-off		Control		Δp _{max} [MPa]
	Kvs [m ³ /h]	z	Kvs [m ³ /h]	z	
15	4.3	4.4	4.0	5.1	4.00
20	7.0	5.2	6.6	5.9	4.00
25	11.0	5.2	10.0	6.2	4.00
32	17.5	5.5	16.0	6.5	4.00
40	27.0	5.6	24.0	7.1	4.00
50	47.0	4.5	39.0	6.6	4.00
65	68.0	6.2	56.0	9.1	4.00
80	116.0	4.9	80.0	10.2	4.00
100	162.0	6.1	140.0	8.2	4.00
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	350.0	6.6	4.00
200	570.0	7.9	540.0	8.8	4.00
250	800.0	9.8	800.0	9.8	4.00
300	1100.0	10.7	1000.0	13.0	4.00
400	1700.0	14.2	1800.0	12.6	4.00

Δp_{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.

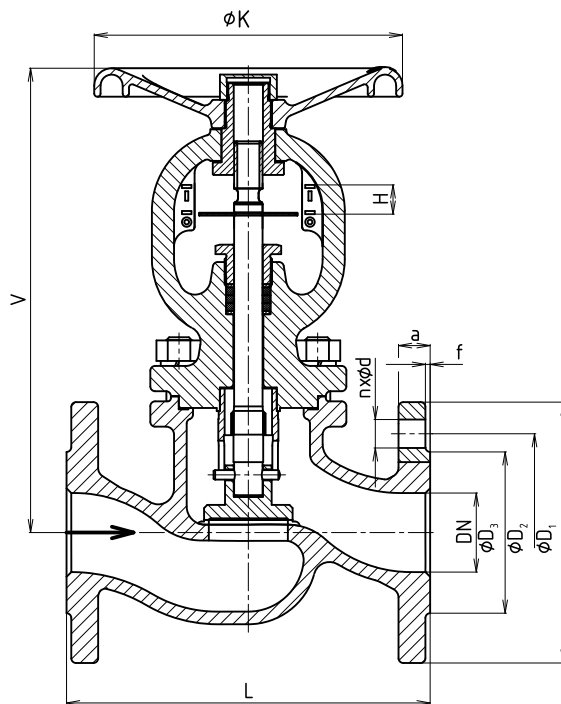
UV 2x6 R



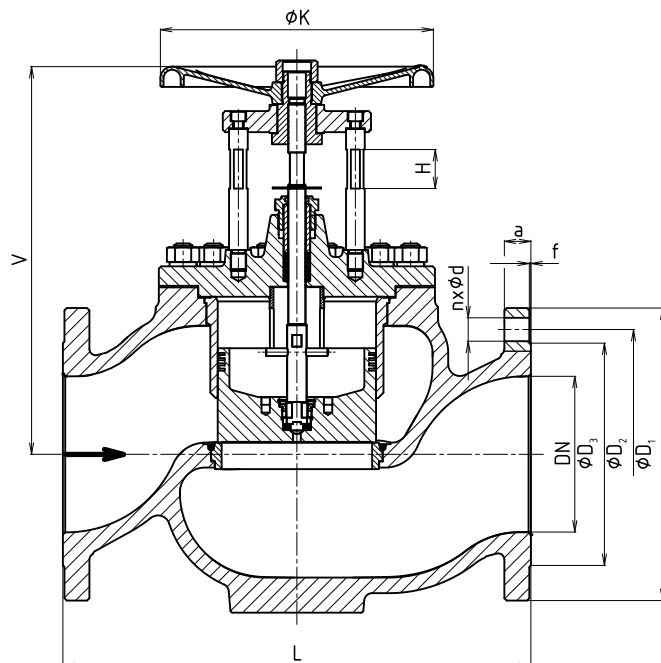
UV 2x6 V



UV 2x6 S



UV 2x6 B



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

		XX	XXX	X X X	XX	/	XXX	-	XXX	XX
1. Valve	Shutt-of 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⁾ Only for DN 15 to 150 ²⁾ Only for DN 150 to 400	Bellows with safety graphite packing ¹⁾			R						
	Graphite packing ¹⁾			S						
	PTFE (GORE DP) ¹⁾			G						
	Pressure balanced plug / bellows with safety graphite packing ²⁾			V						
	Pressure balanced plug / graphite packing ²⁾			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 ³⁾ For R and V execution only	Cast steel 1.0619 / Cast steel 1.0619									1
	Stainless steel 1.4581 / Cast steel 1.0619 ³⁾									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	PTFE (GORE DP)								260	
	Bellows, graphite								400	
8. Nominal size DN	DN 15 to 400									XXX
9. Execution ⁴⁾ Only execution R and S; DN15-150	Normal									
	Non - explosive									Ex
	Oxygen execution									Ox
	Air test									G
	With control plug ⁴⁾									R

Ordering example: UV226 R11 40/400-050REx

Optionally body / bonnet materials acc. to ASTM (non-standard)

Material number	Grade	Standard	Code (in a valve spec.nr.)	Temperature range
A216	WCB	ASTM A216	4	-29 to 400 °C
A217	C5	ASTM A217	5	-29 to 400 °C
A351	CF8	ASTM A351	6	-60 to 400 °C
A351	CF8M	ASTM A351	B	-60 to 400 °C
A352	LCB	ASTM A352	7	-46 to 345 °C

Maximal permissible pressure values of ASTM materials acc. to EN 12516-1.

Maximal permissible pressure values acc. to ČSN EN 12516-1 [Mpa]

Material	PN	Temperature [°C]									
		RT ¹⁾	50	100	150	200	250	300	350	375	400
Cast steel 1.0619	16	16	16	15	14.2	13.4	12.3	11.1	10.4	10	9.6
	25	25	25	23.4	22.2	21	19.2	147.4	16.2	15.6	15
	40	40	40	37.4	35.5	33.6	30.7	27.8	25.9	25	24
Alloy steel 1.7357	16	16	16	16	16	16	16	16	14.9	14.4	13.57
	25	25	25	25	25	25	25	25	23.3	22.4	21.3
	40	40	40	40	40	40	40	40	37.3	35.9	34.1
Stainless steel 1.4581	16	16	16	16	15.5	14.3	13.7	13	12.3	12	11.7
	25	25	25	25	24.2	22.4	21.4	20.3	19.3	18.7	18.2
	40	40	40	40	38.6	35.8	34.2	32.5	30.8	30	29.1

¹⁾ -10°C to 50°C



UV 227 (Ex) UV 237 (Ex)

Shut-off valves
with hand wheel,
hard metal overlay

DN 15 to 400
PN 16, 25 a 40

Technical data		
Series	UV 227 (Ex)	UV 237 (Ex)
Execution	Shut-off valve, straight-through, with hard metal overlay seat and spiral-wound cover gasket	
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 (GX5CrNiMoNb19-11-2)
Plug material (DIN W.Nr. / ČSN)	1.4021 / 17 022.6	1.4571 / 17 348.4
Operating temperature range ¹⁾	-10 to +400°C	
Connection	Type B1 (raised-faced flange) acc. to ČSN EN 1092-1 (11/2018)	
Face to face dimensions	According to ČSN EN 558 (09/2017), section 1	
Type of plug	Disc, pressure-balanced plug with pilot system, control	
Flow characteristic	On-Off; linear	
Leakage rate ²⁾	Acc. to ČSN EN 12266-1 (11/2012) - leakage rate class A	
Packing	Bellows with safety graphite packing, graphite packing, PTFE (GORE DP)	

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 2x7 (Ex)

DN	PN 16						PN 25						PN 40					
	D ₁ mm	D ₂ mm	D ₃ mm	d mm	n	a mm	D ₁ mm	D ₂ mm	D ₃ mm	d mm	n	a mm	D ₁ mm	D ₂ mm	D ₃ mm	d mm	n	a mm
15	95	65	45	14	4	16	As for 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⁾	20							165	125	102	18	8	20
50	165	125	102			22							165	125	102			22
65	185	145	122			24							185	145	122			24
80	200	160	138			24							200	160	138			24
100	220	180	158	22	8	26							235	190	162	22	8	26
125	250	210	188			28							270	220	188			26
150	285	240	212			30							300	250	218			26
200	340	295	268			32							375	320	285			30
250	405	355	320	26	12	26	425	370	335	30	12	32	450	385	345	33	12	38
300	460	410	378	26	12	28	485	430	395	30	16	34	515	450	410	33	16	42
400	580	525	490	30	16	32	620	550	505	36	16	40	660	585	535	39	16	50

DN	PN 16, PN 25, PN 40							
	H mm	L mm	V ^{R,S,B)} mm	V ^{V)} mm	K mm	f mm	m kg	
15	6	130	195	125	2	2	4.3	
20	6	150	195	125			5.1	
25	6	160	195	125			5.8	
32	10	180	225	150			9.5	
40	10	200	225	150	3	3	9.8	
50	16.5	230	305	200			17.5	
65	16.5	290	305	200			20.5	
80	25	310	385	300			34	
100	25	350	385	300			44	
125	40	400	530	400			77	
150	40	480	530	565			400	113
200	50	600	510	721			400	240
250	75	730	670	945	400	410		
300	75	850	720	994	400	610		
400	100	1100	860	1166	400	1240		

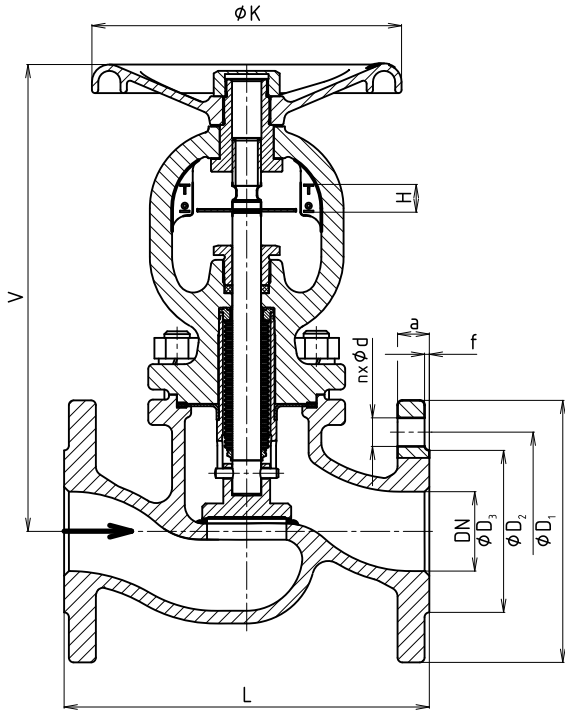
¹⁾ regarding the previous standards in force, we can optionally make an execution with No. of connection bolts corresponding to ČSN-EN 1092-1

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

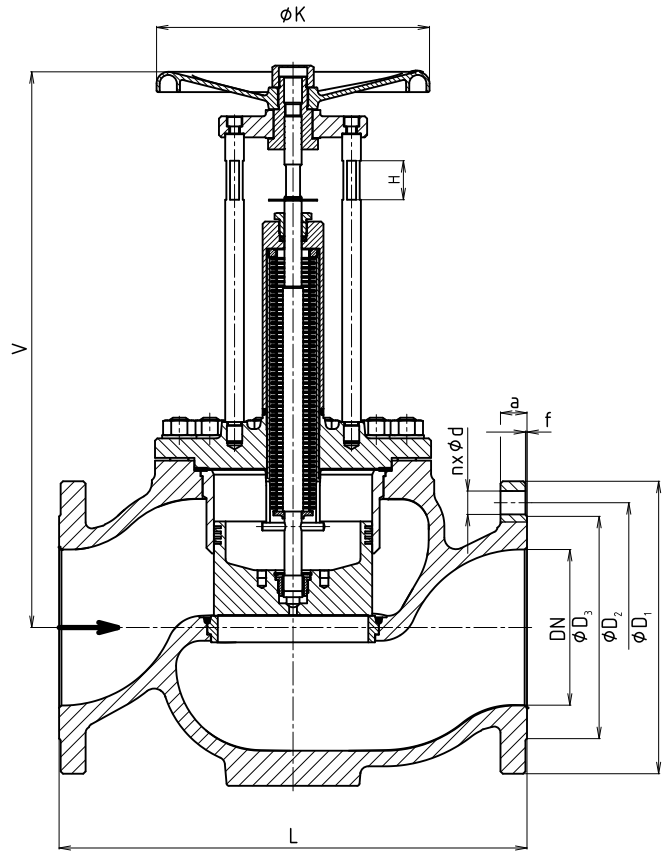
DN	Shut-off		Control		Δp_{max} [MPa]
	Kvs [m ³ /h]	z	Kvs [m ³ /h]	z	
15	4.3	4.4	4.0	5.1	4.00
20	7.0	5.2	6.6	5.9	4.00
25	11.0	5.2	10.0	6.2	4.00
32	17.5	5.5	16.0	6.5	4.00
40	27.0	5.6	24.0	7.1	4.00
50	47.0	4.5	39.0	6.6	4.00
65	68.0	6.2	56.0	9.1	4.00
80	116.0	4.9	80.0	10.2	4.00
100	162.0	6.1	140.0	8.2	4.00
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	350.0	6.6	4.00
200	570.0	7.9	540.0	8.8	4.00
250	800.0	9.8	800.0	9.8	4.00
300	1100.0	10.7	1000.0	13.0	4.00
400	1700.0	14.2	1800.0	12.6	4.00

Δp_{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.

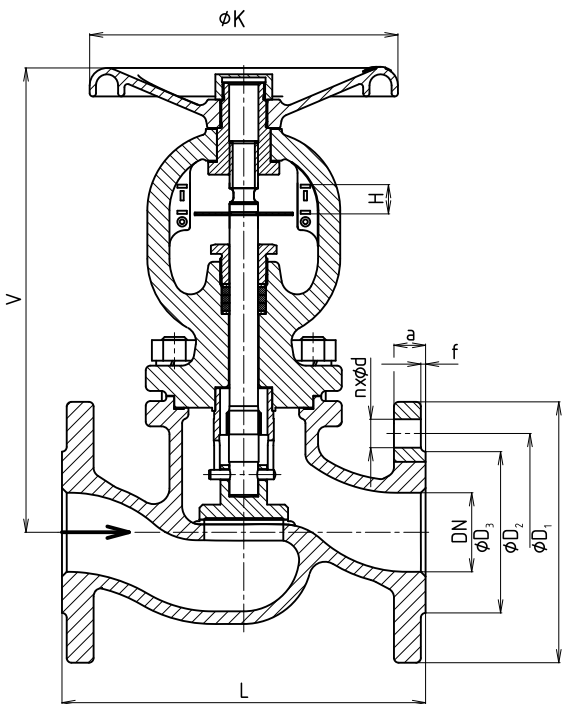
UV 2x7 R



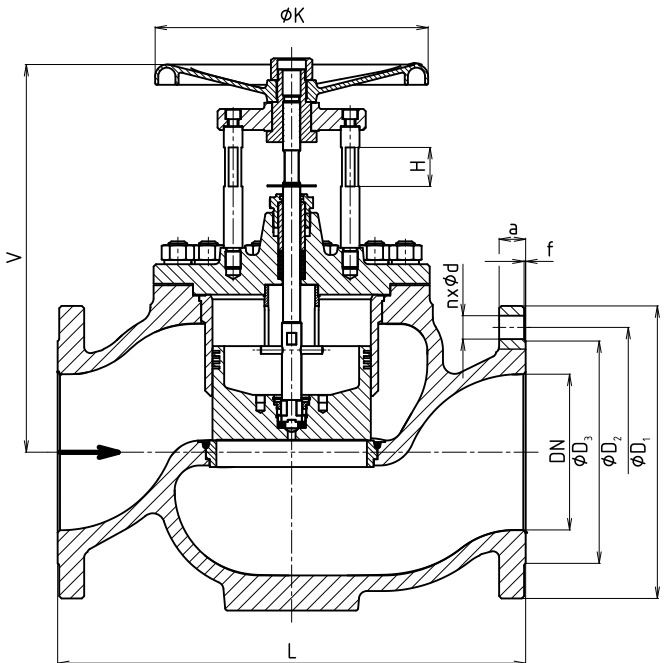
UV 2x7 V



UV 2x7 S



UV 2x7 B



Valve complete specification No. for ordering UV 2x7 (Ex)

		XX	XXX	XXXX	XX	/	XXX	-	XXX	XX
1. Valve	Shut-off valve	UV								
2. Series	Globe valve made of cast steel 1.0619		227							
	Globe valve made of stainless steel 1.4581		237							
3. Type of actuating / packing	Bellows with safety graphite packing ¹⁾			R						
	Graphite packing ¹⁾			S						
	PTFE (GORE DP) ¹⁾			G						
	¹⁾ For DN 15 to 150 only			V						
	²⁾ For DN 150 to 400 only			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	Cast steel 1.0619 / Cast steel 1.0619			1						
	³⁾ For R and V execution only			3						
	Stainless steel 1.4581 / Cast steel 1.0619 ³⁾			8						
	Stainless steel 1.4581 / Stainless steel 1.4581			9						
	Other material on request (e. g.: WN 1.7357, nickel alloys, etc.)			0						
6. Seat material plug / body	CrNiMoTi / CrNiMn - UV237 execution			1						
	13Cr / CrNiMn - UV227 execution			2						
	CrNiMoTi / Stellite 6 - UV237 execution			5						
	Stellite 6 / Stellite 6 - UV2x7 execution			8						
	13Cr / Stellite 6 - UV227 execution									
7. Nominal pressure PN	PN 16						16			
	PN 25						25			
	PN 40						40			
8. Max. oper. temp. °C	PTFE (GORE DP)							260		
	Bellows							400		
	Graphite							550		
9. Nominal size DN	DN 15 to 400								XXX	
10. Execution	Normal									Ex
	⁴⁾ Only execution R and S; DN 15 - 150									Ox
	Non - explosive									G
	Oxygen execution									R
	Air test									
	With control plug ⁴⁾									

Ordering example: UV227 R112 40/400-050REx

Optionally body / bonnet materials acc. to ASTM (non-standard)

Material number	Grade	Standard	Code (in a valve spec.nr.)	Temperature range
A216	WCB	ASTM A216	4	-29 to 400 °C
A217	C5	ASTM A217	5	-29 to 400 °C
A351	CF8	ASTM A351	6	-60 to 400 °C
A351	CF8M	ASTM A351	B	-60 to 400 °C
A352	LCB	ASTM A352	7	-46 to 345 °C

Maximal permissible pressure values acc. to ČSN EN 12516-1 [MPa]

Material	PN	Temperature [°C]															
		RT ¹⁾	50	100	150	200	250	300	350	375	400	425	450	475	500	525	550
Cast steel	16	16	16	15	14.2	13.4	12.3	11.1	10.4	10	9.6	8.3	5.9	-	-	-	-
	25	25	25	23.4	22.2	21	19.2	14.7	16.2	15.6	15	13	9.2	-	-	-	-
1.0619	40	40	40	37.4	35.5	33.6	30.7	27.8	25.9	25	24	20.8	14.7	-	-	-	-
	16	16	16	16	16	16	16	16	14.9	14.4	13.57	13.1	12.6	14.4	10	7.3	4.7
Alloy steel	25	25	25	25	25	25	25	25	23.3	22.4	21.3	20.4	19.7	22.4	15.6	11.5	7.3
	40	40	40	40	40	40	40	40	37.3	35.9	34.1	32.7	31.5	35.9	25	18.3	11.7
Stainless steel	16	16	16	16	15.5	14.3	13.7	13	12.3	12	11.7	11.4	11.2	12	10.5	-	-
	25	25	25	25	24.2	22.4	21.4	20.3	19.3	18.7	18.2	17.9	17.5	18.7	16.5	-	-
1.4581	40	40	40	40	38.6	35.8	34.2	32.5	30.8	30	29.1	28.6	28	30	26.3	-	-

¹⁾ -10°C to 50°C



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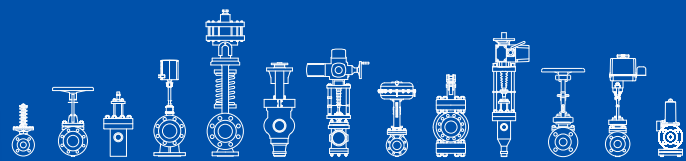
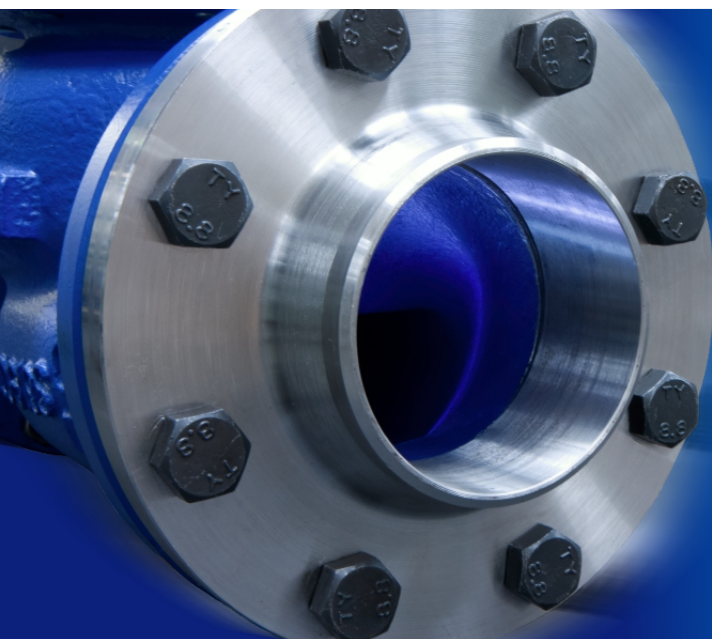
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