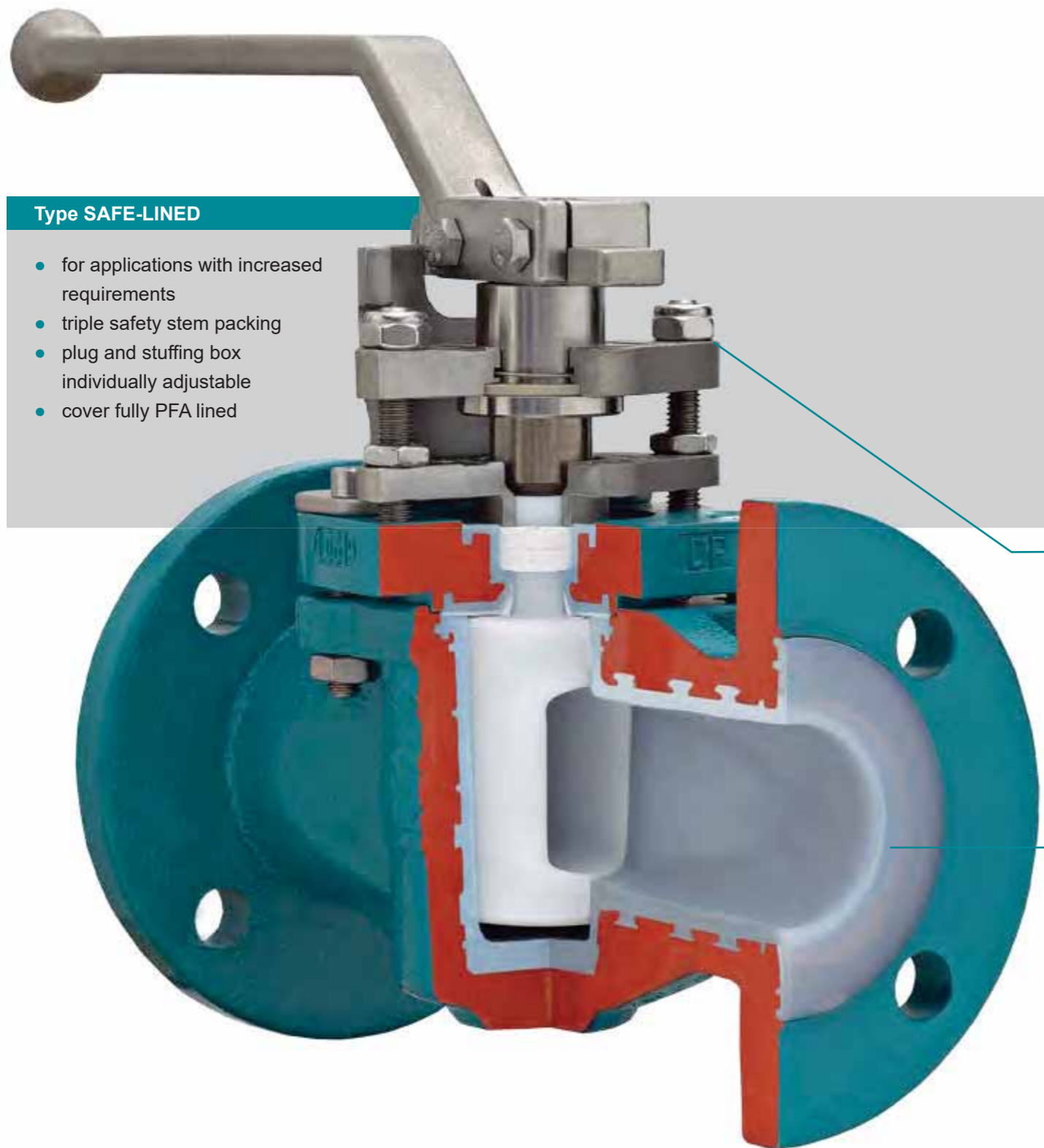


AZ lined plug valves, free of cavities suitable for toxic and aggressive chemicals

Type SAFE-LINED

- for applications with increased requirements
- triple safety stem packing
- plug and stuffing box individually adjustable
- cover fully PFA lined



adjustable

- permanent accessibility guaranteed
- adjustable also with mounted actuator / gearbox
- adjustable even under extreme operating conditions

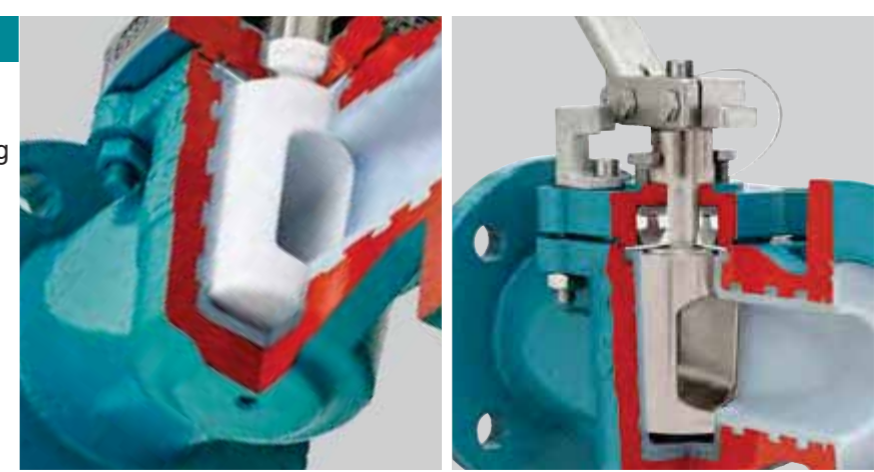
multi-way

- large range of plug types for horizontal and vertical 3-way lined plug valves



safe lining

- chemically resistant
- minimum 3mm FEP/PFA lining
- anchorage of lining in body
- vacuum-capable
- weep holes for early leakage detection
- plug made of special materials (option)



other types

Type ISO-STANDARD-A

- lined plug valve with chemical sealing
- suitable for general applications



Type ISO-AB2000

- lined plug valve with exchangeable PTFE sleeve
- easy exchange



Standard materials

- Body: Carbon Steel 1.0619, ASTM A216 WCB
- Plug: Stainless Steel 1.4308, ASTM A341 CF8

Additional equipment

- two-way plug with flushing device
- heating jacket (full or partial jacket design)



Type ISO-STANDARD-A / SAFE-LINED

Lined plug valve

- full safety to operator and environment
- 100% tightness to atmosphere

DN 15 - 300 / PN 16 - 40
NPS ½ - 12 / class 150 - 300

Range of application:
-10 < T < 125/150/210°C
vacuum-capable

Design characteristics

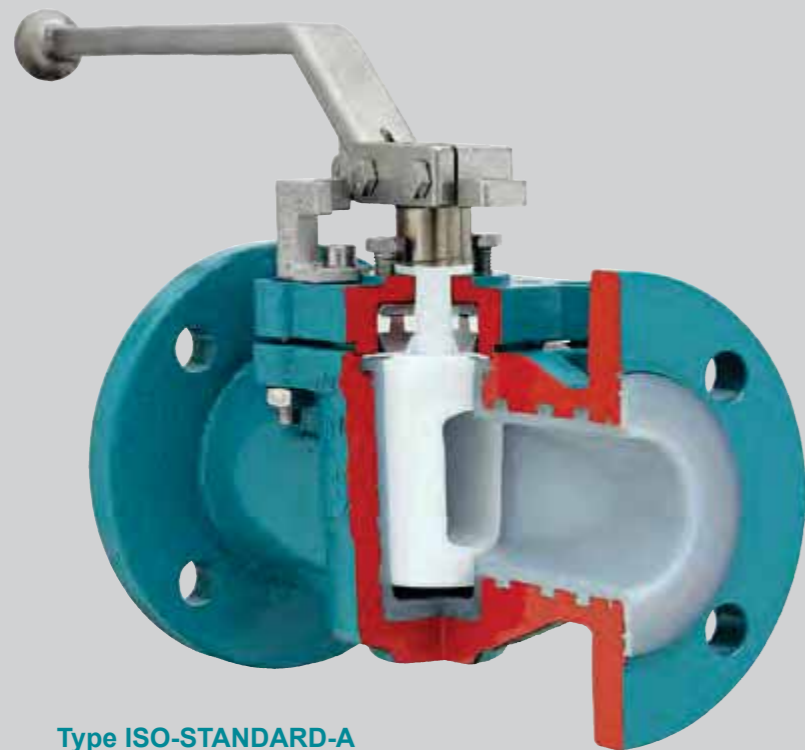
- chemical-resistance
- free of cavities
- easy accessible adjustment of the plug
- low emission rate according TA-Luft & EPA 21
- mounting-flange for actuators acc. to ISO 5211
- two-way plugs up to DN 100 with PTFE lining, two-way plugs >DN 100 and all multiway plugs only with FEP or PFA lining
- plug lining
 - two-way plugs:
 - ≤DN100 = PTFE
 - >DN100 = FEP or PFA
 - multi-way plugs FEP or PFA
- all plug types also in special materials available

Options

- higher operating pressure
- heating jacket
- flushing device
- FDA compliant
- painting
- oil and grease-free assembling
- oversize design
- other materials

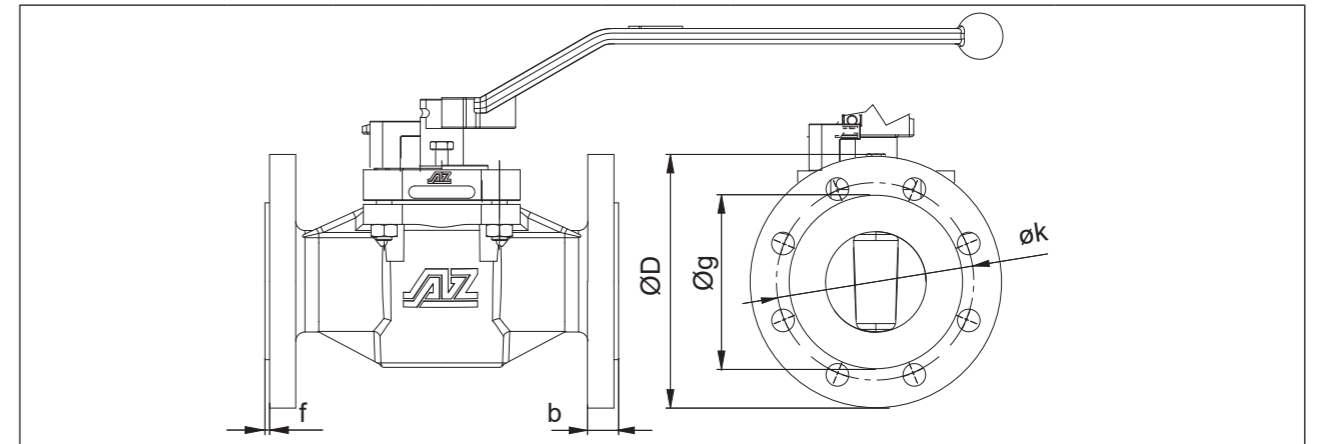
Type SAFE-LINED

- triple safety sealing system
- cover fully PFA lined



Type ISO-STANDARD-A

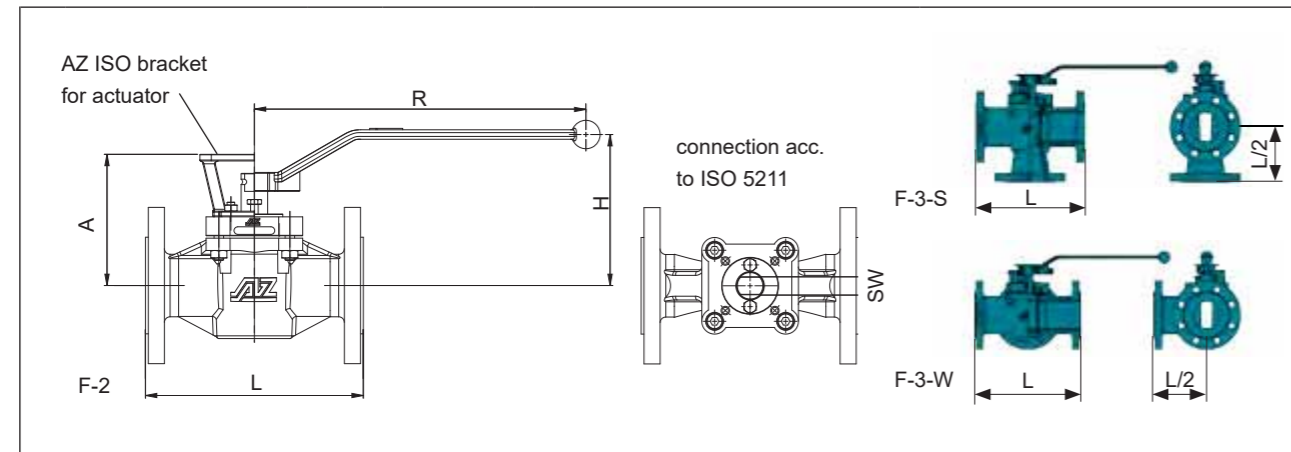
Flange bore acc. EN / ASME



DN	PN	øD [mm]	flange bore [mm]			ø [mm]	b [mm]	f [mm]	NPS	Class	øD [mm]	flange bore [mm]			øg [mm]	b [mm]	f [mm]
			øk	no.	ø							øk	no.	ø			
15	10-40	95	65	4	14	45	16	2									
20	10-40	105	75	4	14	58	18	2	½	150	90	60,3	4	15,7	34,9	10,0	2
25	10-40	115	85	4	14	68	18	2		300	95	66,7			14,7		
32	10-40	140	100	4	18	78	18	2	¾	150	100	69,9	4	15,7	42,9	10,9	2
40	10-40	150	110	4	18	88	18	3		300	115	82,5	4	19,1	16,3		
50	10-40	165	125	4	18	102	20	3	1	150	110	79,4	4	15,7	50,8	11,6	2
65	10-16	185	145	4/8	18	122	18	3		300	125	88,9	4	19,1	17,9		
80	25-40	185	145	8	18	122	22	3	1¼	150	115	88,9	4	15,7	63,5	13,2	2
	10-16	185	145	8	18	122	22	3		300	135	98,4	4	19,1	19,5		
	25-40	185	145	8	18	122	22	3	1½	150	125	98,4	4	15,7	73,0	14,7	2
	10-16	200	160	8	18	138	24	3		300	155	114,3	4	22,3	21,1		
	10-16	220	180	8	18	158	20	3	2	150	150	120,7	4	19,1	16,3		
	25-40	235	190	8	22	162	24	3		300	165	127,0	8	19,1	92,1	22,7	2
	10-16	250	210	8	18	188	22	3	2½	150	180	139,7	4	19,1	17,9		
	25-40	270	220	8	26	188	26	3		300	190	149,3	8	22,3	104,8	25,9	2
	10-16	285	240	8	22	212	22	3	3	150	190	152,4	4	19,1	19,5		
	25-40	300	250	8	26	218	28	3		300	210	168,3	8	22,3	29,0	29,0	2
	10-16	340	295	8/12	22	268	24	3	4	150	230	190,5	8	19,1	24,3	24,3	2
	25 40	360 375	310 320	12 26	30 278 285	30 34	3			300	255	200,0	8	22,3	157,2	32,2	2
	10 16	395 405	350 355	12	22 26	320	26	3	5	150	255	215,9	8	22,3	185,7	24,3	2
	25 40	425 450	370 385	12	30 33 335 345	32 38	3			300	280	235	8	22,3	35,4	35,4	2
	10 16	445 460	400 410	12	22 26	370 378	26 28	4	6	150	280	241,3	8	22,3	215,9	25,9	2
	25 40	485 515	430 450	16 30 33	395 410	34 42	4			300	320	269,9	12	22,3	37,0	37,0	2
									10	150	405	362	12	25,4	323,8	30,6	2
										300	445	387,4	16	28,4	48,1	48,1	2
									12	150	485	431,8	12	25,4	32,2	32,2	2
										300	520	450,8	16	31,7	51,3	51,3	2

Type F-2 ISO-STANDARD-A / SAFE-LINED

Technical information DN 15 - 100 / NPS ½ - 4



	EN 558													
	DN	PN	L [mm]	L/2 [mm]	A [mm]	H [mm]	R [mm]	ISO 5211 bracket	SW [mm]	torque.* [Nm]	weight [kg]	K _{vs} value [m³/h]	C _v value [US.gal/min]	
	15	10-40	130	*	88	98	200	F05	11	40/--	3,8	7	8	
	20	10-40	150	75	88	98	200	F05	11	40/--	4,0	6	7	
	25	10-40	160	80	94	110	320	F07	14	90/60	6,5	33	38	
	32	10-40	180	90	102	117	320	F07	14	90/60	7,5	51	59	
	40	10-40	200	100	109	124	320	F07	14	160/80	10	80	92	
	50	10-40	230	115	139	160	420	F07	19	250/120	12	127	147	
	65	10-16 25-40	290	*	158	170	600	F10	22	400/260	20	179	207	
	80	10-40	310	155	158	170	600	F10	22	400/260	20	247	285	
	100	10-16 25-40	350	175	158	170	600	F10	22	400/260	30	203	235	
	ASME B16.10													
	NPS	Class	L [mm]	L/2 [mm]	A [mm]	H [mm]	R [mm]	ISO 5211 bracket	SW [mm]	torque.* [Nm]	weight [kg]	K _{vs} value [m³/h]	C _v value [US.gal/min]	
	½	150	108	**	88	110	200	F05	11	40/--	2,7	8	9	
		300	140	**	88	110	200	F05	11	40/--	3,8	8	9	
	¾	150	117	64	88	110	200	F05	11	40/--	3,2	6	7	
		300	152	83	88	110	200	F05	11	40/--	4,3	7	8	
	1	150	127	**	94	110	200	F05	11	90/60	3,5	33	38	
		300	165	**	94	110	200	F05	14	90/60	6,0	35	40	
	1½	150	165	**	109	124	200	F07	14	160/80	9	87	101	
		300	190	**	109	124	320	F07	14	160/80	10	87	101	
	2	150	178	**	139	160	420	F07	19	250/120	13	140	162	
		300	216	**	139	160	420	F07	19	250/120	16	153	177	
	3	150	203	**	158	170	600	F10	22	400/260	18	259	299	
		300	282	**	158	170	600	F10	22	400/260	23	271	313	
	4	150	229	154	158	170	600	F10	22	400/260	26	209	242	
		300	305	**	158	170	600	F10	22	400/260	31	223	258	

ISO flange instructions, weights and K_{vs} values for straight-way valves

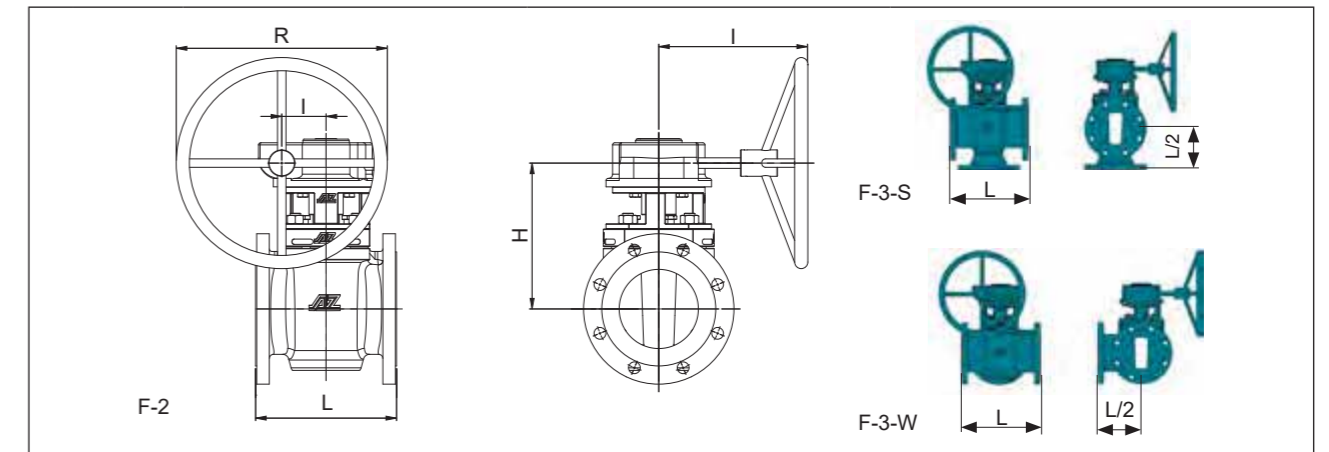
*) Maximum breakaway torque Md_{breakaway} [Nm] for F-2 and F-3-S depending on material combinations (PFA+PFA / PFA+ PTFE). All data incl. 100% safety factor. Breakaway torques for type F-3-W on request

***) on request

Some designs, sizes and/or configurations may be fitted with threaded flange holes.

Type F-2 ISO-STANDARD-A / SAFE-LINED

Technical information DN 100S - 300 / NPS 5 - 12



	EN 558																	
	DN	PN	L [mm]	L/2 [mm]	E [mm]	R [mm]	H [mm]	I [mm]	gear	AZ bracket	SW [mm]	torque.* [Nm]	weight [kg]	K _{vs} value [m³/h]	C _v value [US.gal/min]			
	100S	10-16 25-40	350	**	84	500	230	290	Q1500-S	F16	36	600/350	32	447	517			
				**	84	500	260	290	Q1500-S	F16	36	1200/900	74	359	414			
	125	10-16 25-40	325	**	84	500	260	290	Q1500-S	F16	36	1200/900	78	359	414			
				**	84	500	265	290	Q1500-S	F16	36	1200/900	85	823	951			
	150	10-16 25-40	350	200	84	500	265	290	Q1500-S	F16	36	1200/900	87	823	951			
				**	96,5	500	320	350	Q3000-S	F16	36	2600/--	119	1728	1997			
	200	10-16 25 40	400	**	96,5	500	320	350	Q3000-S	F16	36	2600/--	131	1728	1997			
				**	117,5	500	352	465	Q5000-S	F16	36	3200/--	195	2053	2373			
	250	10 16 25 40	450	**	117,5	500	352	465	Q5000-S	F16	36	3200/--	259	2053	2373			
				**	117,5	500	340	465	Q5000-S	F16	36	3200/--	253	1707	1974			
	300	10 16 25 40	500	**	117,5	500	340	465	Q5000-S	F16	36	3200/--	274	1707	1974			
	ASME B16.10																	
	NPS	Class	L [mm]	L2 [mm]	E [mm]	R [mm]	H [mm]	I [mm]	gear	AZ bracket	SW [mm]	torque.* [Nm]	weight [kg]	K _{vs} value [m³/h]	C _v value [US.gal/min]			
	4"S	150	254	154	84	500	230	328	Q1500-S	F16	27	600/350	27	492	569			
		300	325	**	84	500	265	363	Q1500-S	F16	27	1200/900	32	508	587			
	6"	150	267	**	118	500	265	363	Q1500-S	F16	27	1200/900	66	789	912			
		300	403	**	118	500	265	363	Q1500-S	F16	27	1200/900	77	904	1045			
	8"	150	292	**	138	500	320	440	Q3000-S	F16	36	2600/--	103	1776	2053			
		300	419	**	138	500	320	440	Q3000-S	F16	36	2600/--	138	1900	2197			
	10"	150	330	**	138	500	352	440	Q5000-S	F16	36	3200/--	140	2257	2609			
		300	457	**	138	500	352	440	Q5000-S	F16	36	3200/--	176	2465	2850			
	12"	150	356	**	138	500	340	440	Q5000-S	F16	36	3900/--	168	1877	2170			
		300	502	*	138	500	340	440	Q5000-S	F16	36	3900/--	187	2134	2467			

ISO flange instructions, weights and K_{vs} values for straight-way valves

*) Maximum breakaway torque Md_{breakaway} [Nm] for F-2 and F-3-S depending on material combinations (PFA+PFA / PFA+ PTFE). All data incl. 100% safety factor. Breakaway torques for type F-3-W on request

***) on request

Some designs, sizes and/or configurations may be fitted with threaded flange holes.

Order example: F-2-SAFE-LINED-DN25-PN16-EN-GJS-400-18-PFA-PTFE

F = flange, 2 = two-way, SAFE-LINED = type, DN25 = nominal width, PN16 = nominal pressure, EM-GJS-400-18 = body material, PFA = body lining, PTFE = plug lining