

TYPE F-3 ISO - STANDARD

Threeway-Plugvalve vertical / horizontal
DN 15 - 500 / PN 10 - 40
NPS ½" - 20" / class 150 - 300



F-3-S
vertical

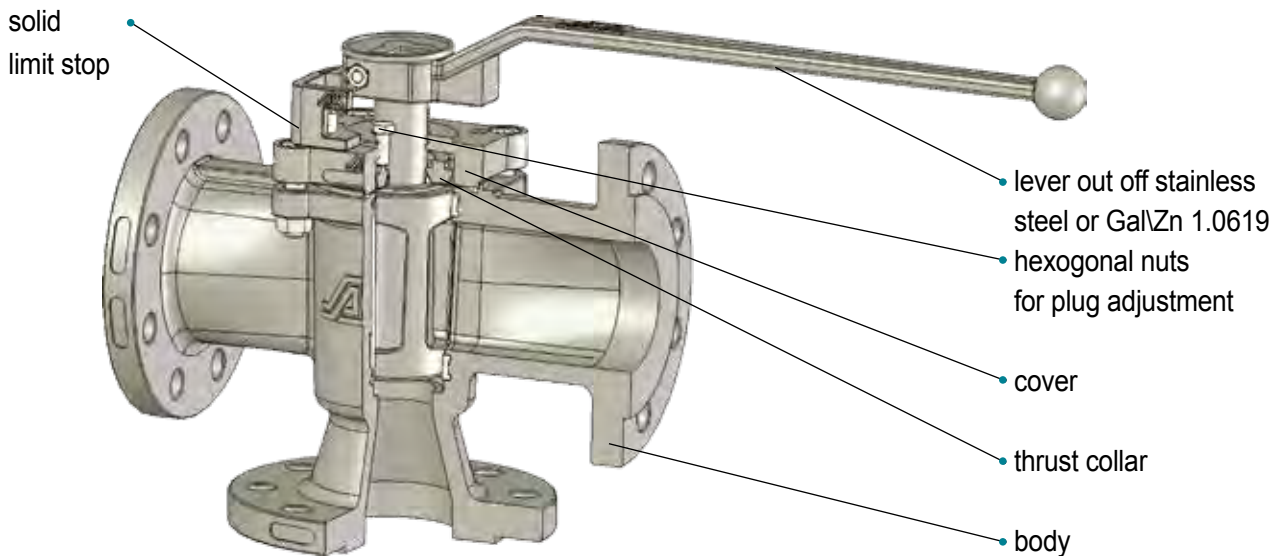
F-3-W
horizontal

1.2

- free of cavities
- maintenance free - self lubricating
- mounting-flange for actuators acc. to DIN ISO 5211
- easy accessible adjustment of the plug
- vacuum tight
- TA - Luft 2002 approval
- Firesafe - Design API 607 / ISO 10497 (outside)
- DVGW - approval

TYPE F-3 ISO - STANDARD

Design characteristics



The plugvalve type **F-3-ISO-STANDARD** is the consequent development of our type **F-3 STANDARD**. The main advantages are:

- strong mounting flange for actuators acc. to DIN ISO 5211
- patented full cardanic dihedron coupling
- improved shaft and cover sealing including V-diaphragm, delta thrust and PTFE cover sealing ring
- safety spindle packing to prevent fugitive emission of aggressive and toxic media

The special pros of the AZ-Plug valves with PTFE sleeve are also given at the F-3-ISO-STANDARD.

- maintenance free & self lubricating
- easy accessible adjustment of the plug
- excellence tight characteristics also at vacuum or high handling pressurers

Nearly all applications pour threeway-plugvalves can be solved with the AZ-Threeway-Plugvalve type F-3-S with a vertical outlet. Only in rarely exceptional cases it must be applied the type F-3-W with horizontal outlets.

Our suggestion: when possible at all, a type F-3-S with vertical outlet is to be applied.
The PTFE sleeve will thank it to you with a supremely long economic life-time.

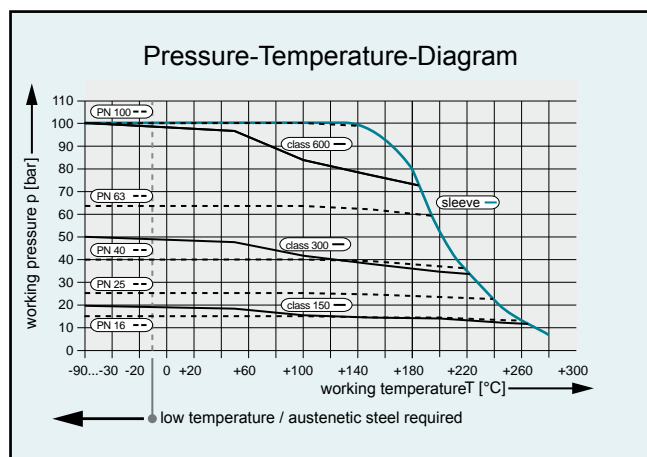
Materials

Standard body materials

- Ductile Iron EN-GJS-400-18 / (GGG 40.3) ASTM A395
- Carbon Steel 1.0619 (GS-C 25) / ASTM A216 WCB
- Stainless Steel 1.4408 / ASTM A351 CF8M

Special body materials

- Hastelloy B / C
- Inconel
- Monel
- Nickel
- Zirconium
- Titanium
- Tantalum



Operating temperature < -30°C and > 220 °C need to be approved by AZ confirming their operating conditions.

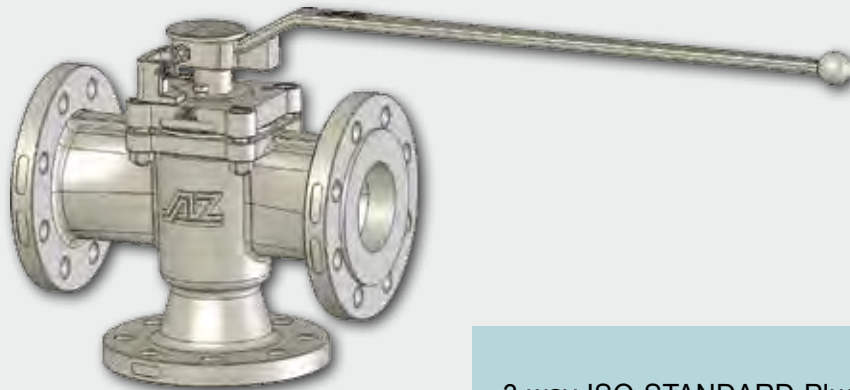
Other materials on request.

On enquiry / order: please state material for body and plug.

TYPE F-3 ISO - STANDARD

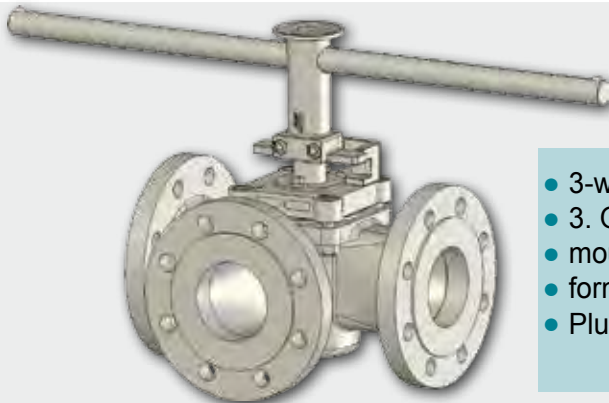
Explanations

F-3-S-ISO-STD-DN80-PN40-LL



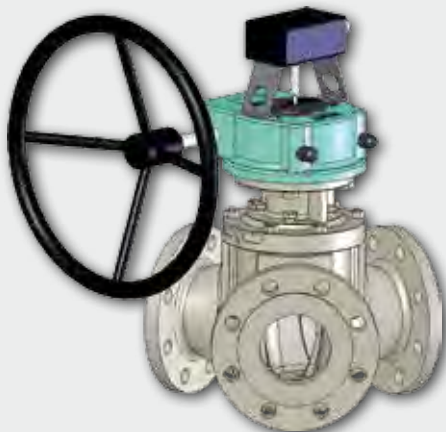
- 3-way-ISO-STANDARD-Plugvalve
- 3. outlet vertical
- mounting-flange for actuators acc. to DIN ISO 5211
- form of the plug LL

F-3-W-ISO-STD-DN80-PN40-L4



- 3-way-ISO-STANDARD-Plugvalve
- 3. Outlet horizontal
- mounting-flange for actuators acc. to DIN ISO 5211
- form of the plug L4
- Plug-stem-extension for isolated piping

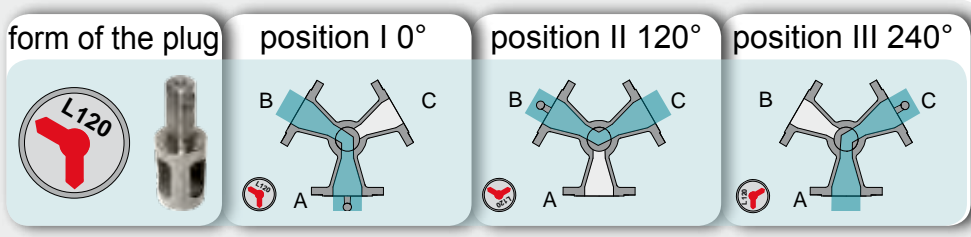
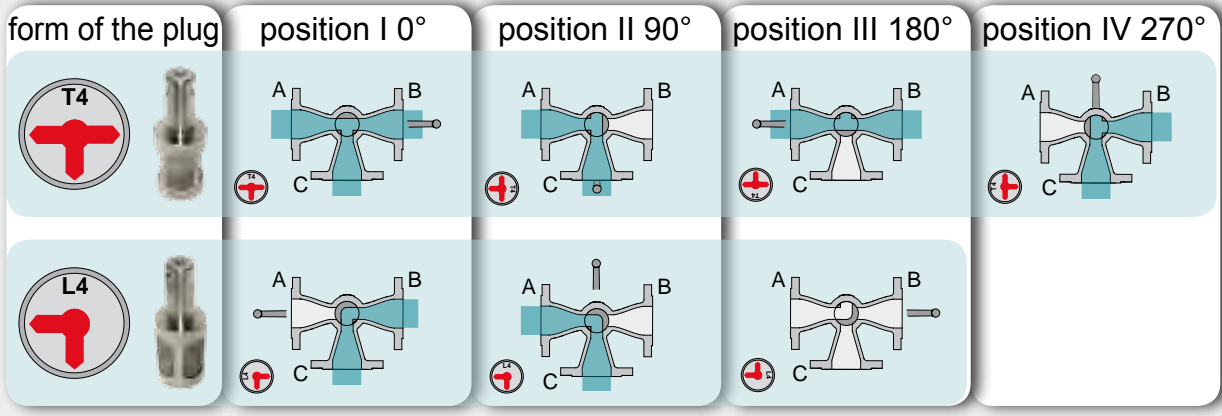
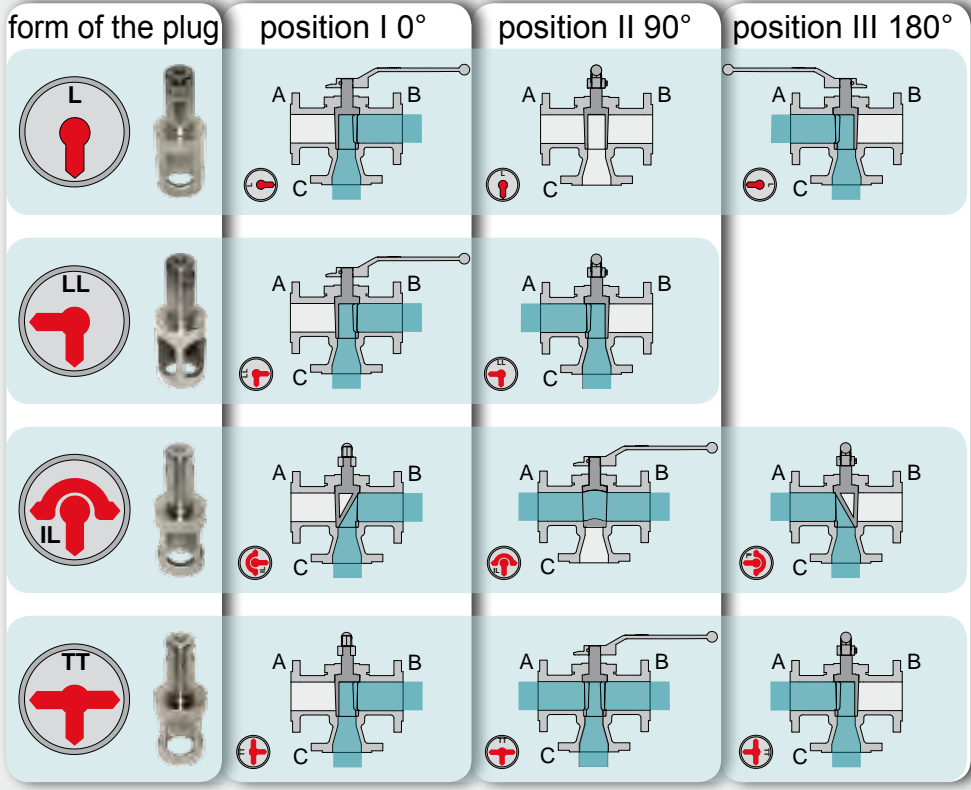
F-3-120-ISO-STD-DN80-PN40-L120



- 3-way-ISO-STANDARD-Plugvalve
- 120° horizontal outlets
- mounting-flange for actuators acc. to DIN ISO 5211
- form of the plug L120°
- gear with steering wheel and position indicator
- full round explanation see prospectus 1.4

TYPE F-3 ISO - STANDARD

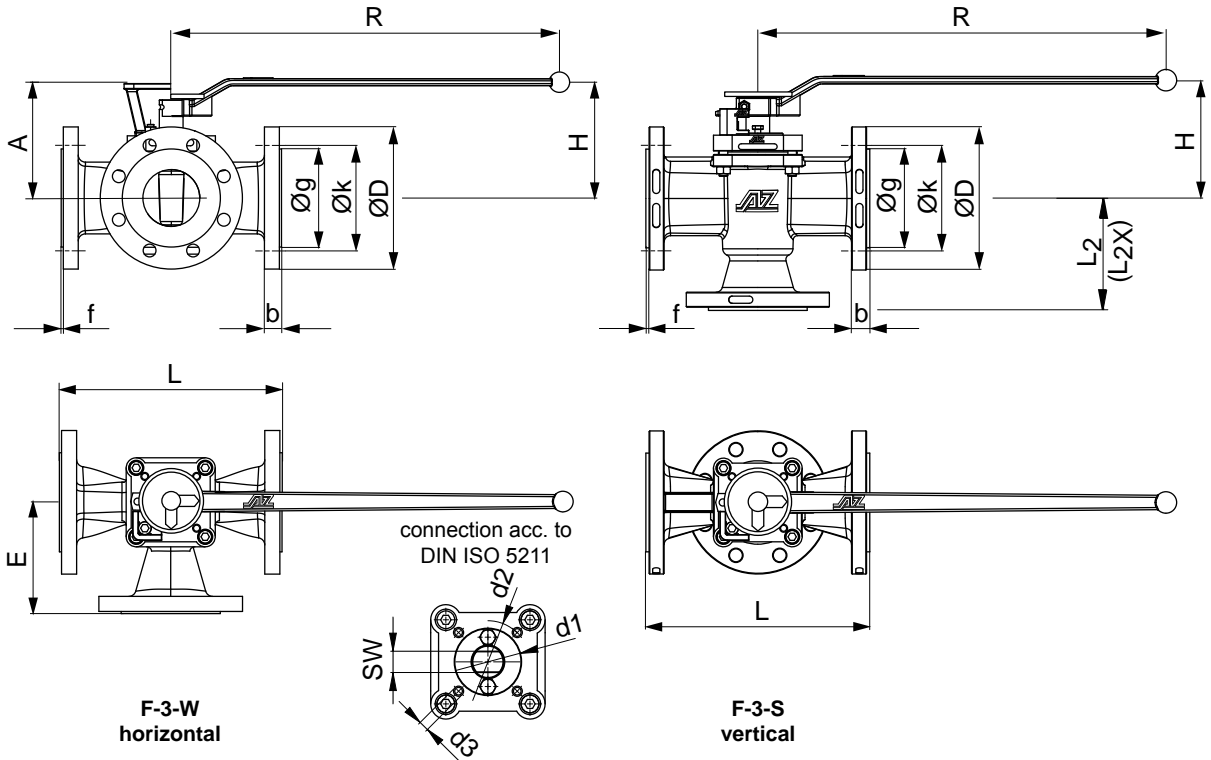
Forms of the plug and switch positions



AZ-Plugvalves will be fitted with casted and rustless position indicators. The position indicators are welded with the plugs securely of torsion and loosing.

TYPE F-3 ISO - STANDARD

Dimensions DN 15 - 100S NPS ½" - 4"S acc. to DIN / ASME



F-3-W
horizontal

F-3-S
vertical

	DN	PN	L	øD	flange bore			øg	b	f	L ₂ /E	L ₂ X	bracket / lever			flange DIN ISO 5211			dihedron	torque [Nm]*	weight [kg]**	K _v -value [m ³ /h]**	C _v -value [US.gal/min]**	
					øk	No.	ø						Type	d1	d2	d3								
DIN EN 1092/1 / 588-1	15	10-40	130	95	65	4	14	45	16	2	65	***	88	103	200	F05	35	50	M6	11	30	4	10	11,7
	20	10-40	150	100	75	4	14	58	18	2	75	***	88	103	200	F05	35	50	M6	11	30	5	6	7
	25	10-40	160	115	85	4	14	68	18	2	80	***	94	109	200	F05	35	50	M6	11	30	6	8	9
	25X	10-40	160	115	85	4	14	68	18	2	80	***	102	117	320	F07	55	70	M8	14	70	8,5	18	21
	32	10-40	180	140	100	4	18	78	18	2	90	***	102	117	320	F07	55	70	M8	14	70	10,5	28	32
	40	10-40	200	150	110	4	18	88	18	3	100	***	109	124	320	F07	55	70	M8	14	80	17	55	64
	50	10-40	230	165	125	4	18	102	20	3	115	***	139	159	420	F07	55	70	M8	19	120	20	89	103
	65	10-40	290	185	145	4/8	18	122	22	3	145	***	158	165	600	F10	70	102	M10	22	200	26	99	115
	80	10-40	310	200	160	8	18	138	24	3	155	***	158	165	600	F10	70	102	M10	22	200	28	164	190
	100	10-16 25-40	350 350	220 235	180 190	8 8	18 22	158 162	24 24	3 3	175	***	158	165	600	F10	70	102	M10	22	200	27	104	120
100S	10-16 25-40	350 350	220 235	180 190	8 8	18 22	158 162	20 24	3 3	175	***	173	180	600	F10	70	102	M10	22	200	32	104	120	
ASME B 16.5 / 16.10	½"	150	108	90	60,3	4	15,7	34,9	11,2	54	70	***	88	103	200	F05	35	50	M6	11	30	3,5	10	11,7
		300	140	95	66,7		15,7	14,2	2	70	4													
	¾"	150	117	100	69,9	4	15,7	42,9	12,7	59	73	***	88	103	200	F05	35	50	M6	11	30	3,4	6	7
		300	152	115	82,5		15,7	15,7	2	76	5													
	1"	150	127	110	79,4	4	15,7	50,8	14,2	64	89	***	94	109	200	F05	35	50	M6	11	30	4,3	8	9
		300	165	125	88,9		15,7	17,5	2	83	6													
	1½"	150	165	125	88,9	4	15,7	73,0	17,5	82,5	105	***	102	124	320	F07	55	70	M8	14	80	7,9	28	32
		300	190	155	114,3		15,7	20,6	2	95	10,5													
	2"	150	178	150	120,7	4	19,1	92,1	19,1	89	114	***	139	159	420	F07	55	70	M8	19	120	12,3	55	64
		300	216	165	127,0		19,1	22,3	2	108	17													
	2½"	150	290	180	139,7	4	19,1	104,8	22	145	***	158	165	600	F10	70	102	M10	22	200	20	99	115	
		300	300	190	152,4		19,1	23,9	2	102	20													
	3"	150	282	210	168,3	8	22,3	127,0	28,4	142	***	158	165	600	F10	70	102	M10	22	200	26	99	115	
300		216	165	127,0	19,1		22,3	2	108	26														
4"	150	228	230	190,5	8	19,1	157,2	24,3	152,5	***	158	165	600	F10	70	102	M10	22	200	22	104	120		
	300	305	255	200,0		19,1	32,2	2	171,5	27														
4"S	150	228	230	190,5	8	19,1	157,2	24,3	152,5	***	158	180	600	F10	70	102	M10	22	200	28	104	120		
	300	305	255	200,0		19,1	32,2	2	171,5	32														

* inclusive 100% safety factor for actuators

** F-3-S valid for L, LL form of the plug *** on request

Order Example: F-3-S-ISO-STANDARD-DN50-PN40-L4-Pos.I+II-1.4408

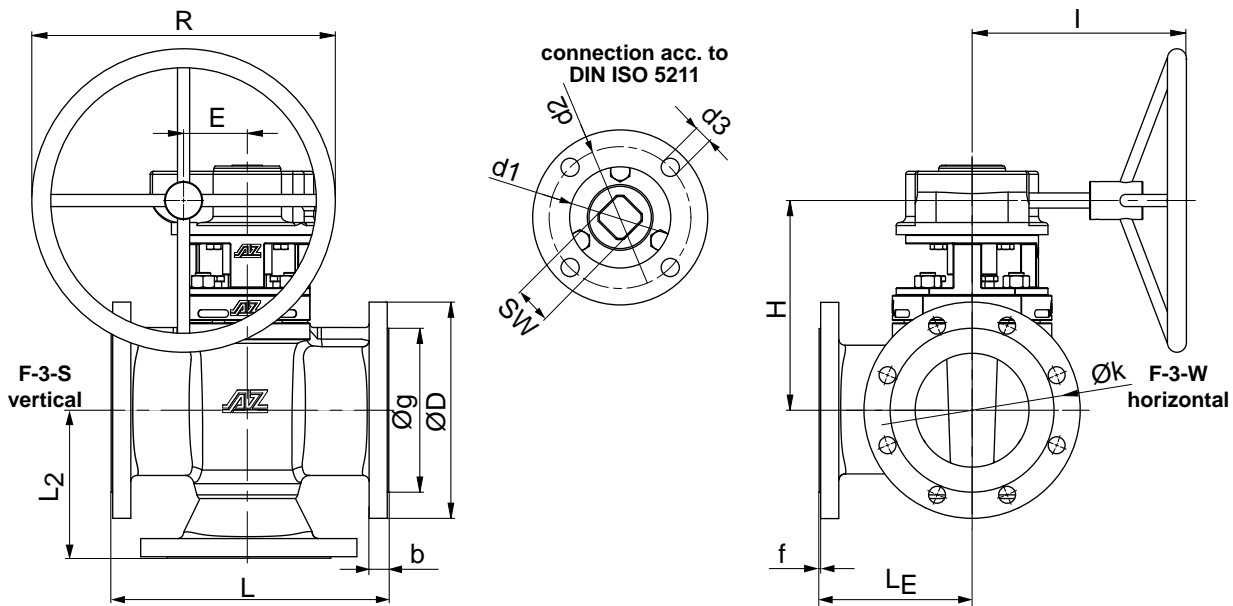
F = flange, 3 = three-way, S = vertical, ISO-STANDARD = Type,

DN50 = size, PN40 = rating, L4 = form of the plug,

Pos.I+II = shiftable positions, 1.4408 = body material

TYPE F-3 ISO - STANDARD

Dimensions DN 125 - 500 NPS 5" - 20" acc. to DIN / ASME



	DN	PN	L	øD	flange bore			b	f	L ₂	L _E	E	gear (Pro-Gear)				flange DIN ISO 5211			SW	torque [Nm]**	weight [kg]**	K _v -value [m ³ /h]**	C _v -value [US.gal/min]**							
					øk	No.	ø						øg	Type	Type	d1	d2	d3													
DIN EN 10921 / 568-1	125	10-16	325	250	210	8	18	188	22	3	162	162	84	400	277	290	Q1500-S	F12	85	125	M12	36	900	73	284	329					
		25-40		270	220		26	188																			26				
	150	10-16	350	285	240	8	22	212	22	3	200	175	84	400	277	290	Q1500-S	F12	85	125	M12	36	900	85	304	353					
		25-40		300	250		26	218																			28				
	200	10-16	400	340	295	8/12	22	268	24	3	220	200	96,5	600	320	350	Q2000-S	F14	100	140	M16	36	1200	130	527	611					
		25-40		360	375		310	320																			12	26	30	278	285
	250	10-16	450	395	405	350	355	12	22	26	320	26	3	275	225	137,5	600	372	465	Q6500-S	F16	130	165	M20	46	1500	172	650	754		
		25-40		425	450	370	385	12	30	33	335	345	32	38																	
	300	10-16	500	445	460	400	410	12	22	26	370	378	26	28	4	325	250	137,5	600	392	465	Q6500-S	F16	130	165	M20	46	2600	182	1100	1276
		25-40		485	515	430	450	16	30	33	395	410	34	42																	
	350	10-16	381	505	520	460	470	12	22	26	430	438	26	30	4	***	***	137,5	600	460	465	Q6500-S	F25	200	254	M16	55	5500	225	1491	1729
		25-40		550	555	580	490	510	16	33	36	450	465	38	46																
400	10-16	406	565	580	515	525	16	26	30	482	490	26	32	4	***	***	137,5	600	460	465	Q6500-S	F25	200	254	M16	55	5500	330	2082	2415	
	25-40		600	620	660	550	585	16	36	39	505	535	40	50																	
450	10-16	650	615	640	565	585	20	26	30	532	550	28	36	4	***	***	180	600	485	520	Q12000-S	F25	200	254	M16	55	6400	***	***	***	
	25-40		670	685	600	610	20	36	39	555	560	46	57																		
500	10-16	700	670	715	620	650	20	26	33	585	610	28	38	4	***	***	180	600	510	520	Q12000-S	F25	200	254	M16	55	7500	***	***	***	
	25-40		730	755	660	670	20	36	42	615	615	48	57																		
ASME B 16.5 / 16.10	5"	150	254	255	215,9	8	22,4	185,7	23,9	2	178	127	84	400	277	290	Q1500-S	F12	85	125	M12	27	900	73	284	329					
		300	325	280	235		22,4	185,7																			35	2	163	162	
	6"	150	267	280	241,3	8	22,4	215,9	25,4	2	191	133	84	400	277	290	Q1500-S	F12	85	125	M12	27	900	74	304	353					
		300	403	320	269,9		12	216																			201				
	8"	150	292	345	298,5	8	22,4	269,9	28,4	2	228	146	96,5	600	320	350	Q2000-S	F14	100	140	M16	36	1200	105	527	611					
		300	419	380	330,2		12	25,4																			269,9	41,1	2	254	209
	10"	150	330	405	362	12	25,4	323,8	30,2	2	311	165	137,5	600	372	465	Q6500-S	F16	130	165	M20	46	1500	146	650	754					
		300	457	445	387,4		16	28,4																			323,8	47,7	2	228	228
	12"	150	356	485	431,8	12	25,4	381	31,8	2	349	178	137,5	600	392	465	Q6500-S	F16	130	165	M20	46	2600	184	1100	1276					
		300	502	520	450,8		16	31,7																			381	50,8	2	356	251
	14"	150	381/686	535	476,3	12	28,4	412,8	35,1	2	***	***	137,5	600	460	465	Q6500-S	F25	200	254	M16	55	5500	219	1491	1729					
		300	762	585	514,4		20	31,7																			412,8	53,8	2	***	***
	16"	150	406	595	539,8	16	28,4	469,9	36,6	2	***	***	137,5	600	460	465	Q6500-S	F25	200	254	M16	55	5500	279	2082	2415					
		300	600	650	571,5		20	35,0																			469,9	57,1	2	***	***
	18"	150	864	635	577,9	16	31,8	533,4	40	2	***	***	180	600	485	520	Q12000-S	F25	200	254	M16	55	6400	***	***	***					
		300	914	710	628,6		24	35,0																			533,4	60,8	2	***	***
	20"	150	914	700	635,0	20	31,8	584,2	43,3	2	***	***	180	600	510	520	Q12000-S	F25	200	254	M16	55	7500	***	***	***					
		300	991	775	685,8		24	35,0																			584,2	64	2	***	***

* inclusive 100% safety factor for actuators
** F-3-S valid for L, LL form of the plug *** on request

Order Example: F-3-W-ISO-STANDARD-DN200-PN40-L4-Pos.I+II-1.4408

F = flange, 3 = three-way, W = horizontal, ISO-STANDARD = Type,
DN200 = size, PN40 = rating, L4 = form of the plug,
Pos.I+II = shiftable positions, 1.4408 = body material



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