F-2 ISO-STANDARD FS

Two way plug valve with ISO top flange, with Firesafe sealing System FS

DIN-EN: DN 15 – 600 / PN 10 – 40
ASME: NPS ½“ – 24“ / class 150 – 300
PT range: -30 < T < 230/280°C, vacuum 10-8 mbar

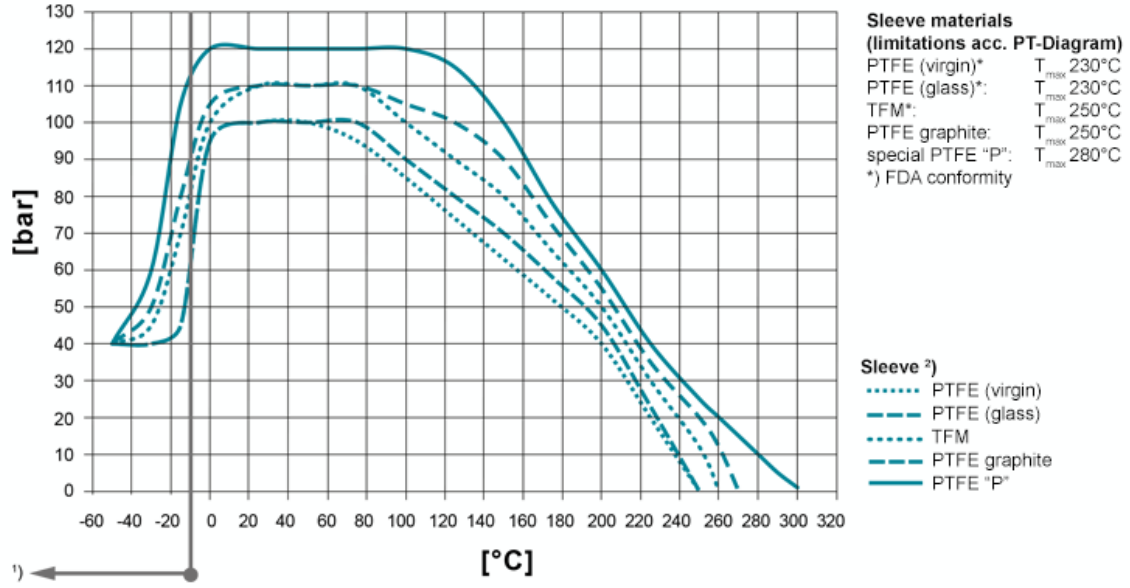
Design Features

Design Characteristics

- free of cavities
- maintenance free – self lubricating
- mounting-flange for actuators acc. to DIN ISO 5211
- easy accessible adjustment of the plug, even with mounted actuator
- vacuum tight
- fugitive emmission resp. clean air act certified (TA-Luft 2002 approval)
- Directive 2014/68/EU
- Firesafe design API 607 ISO 10497
- FDA conformity

PT-Diagram

General Pressure-Temperature-Diagram



Operating temperatures < -30°C and > 220 °C have to be checked and approved by AZ according to the operating conditions.

Besides the P/T value of the sleeve the limitations of the valve bodies also have to be considered. Please refer to the EN 12516-1 resp. ASME B16.34 in order to choose a proper pressure rating (PN/class). The shown values refer to austenitic stainless steel 1.4408 (A351 Gr. CF8M).

1) For operating temperatures below -10°C low temperature / austenitic steels are required.
2) Sleeve: There are different sleeve materials / compounds available.

Materials

Standard body materials
- Carbon Steel 1.0619, ASTM A216 WCB
- Stainless Steel 1.4408, ASTM A351 CF8M
- Stainless Steel 1.4308, ASTM A351 CF8
- Unalloyed stainless steel casting (low Temp.) 1.1138, LCC/LCB/A352

Standard plug materials
- Stainless Steel 1.4408, ASTM A351 CF8M
- Stainless Steel 1.4308, ASTM A351 CF8

Special materials
- Ductile cast iron ENJS 1049, ASTM Gr 60-40-18 / A395
- Alloy
- Monel

- Nickel
- Zirconium
- Titan
- Tantal
- other materials on request

Sealing Systems

Firesafe sealing (API 607) with graphite packing for additional stem sealing; Tmax 230°C

Type FS

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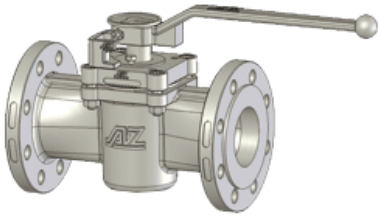
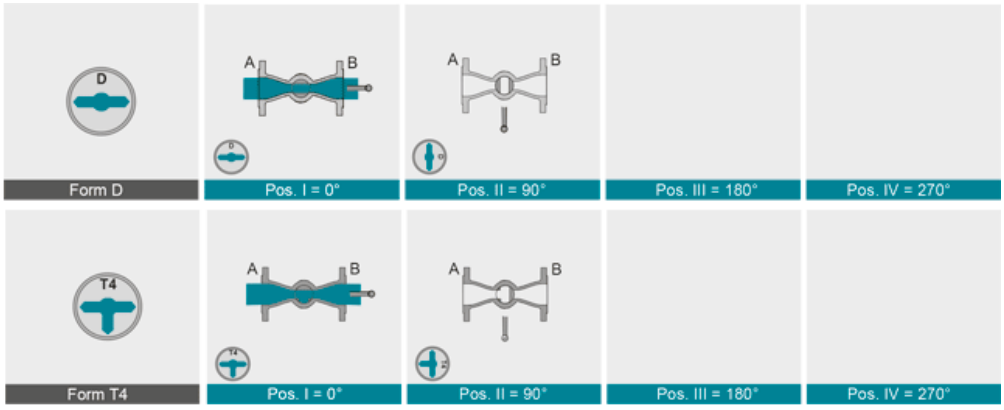
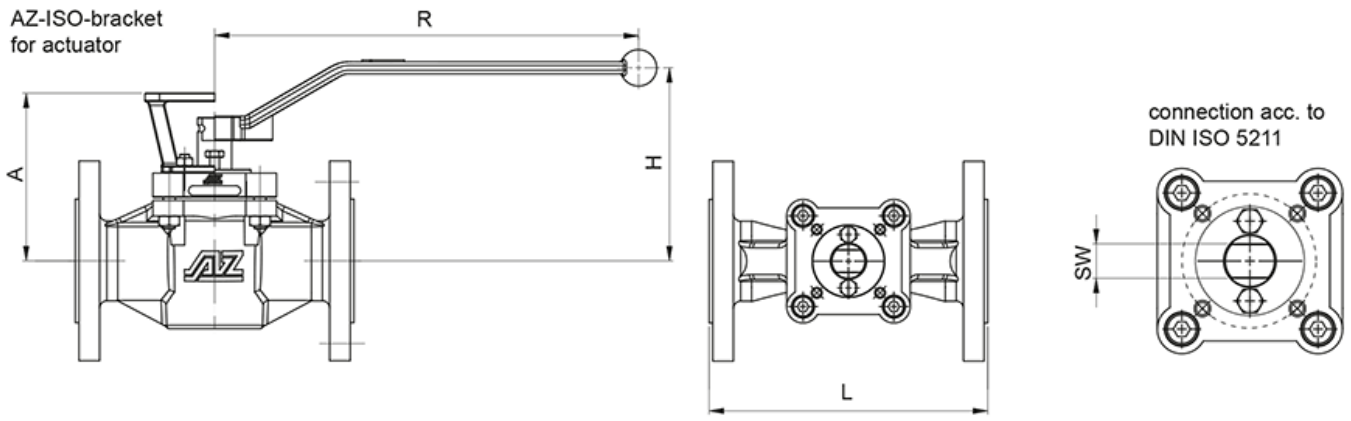
Port Forms





Dimensions



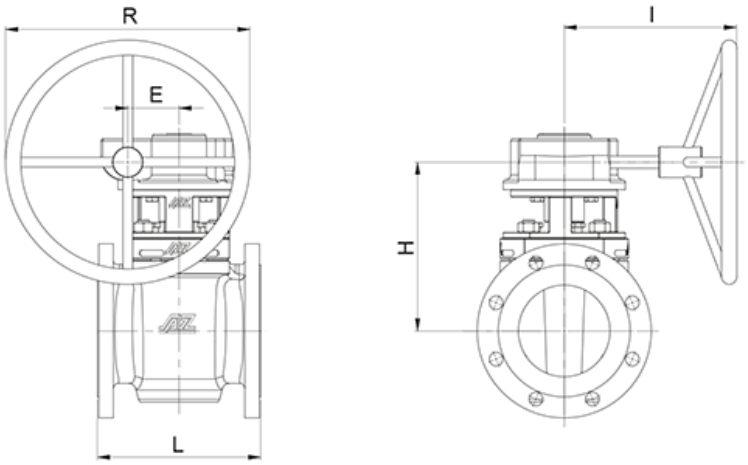
DIN EN 1092-1 / 558-1

DN	PN	L	øD	bracket / lever A	bracket / lever H	bracket / lever R	DIN flange	dihe-dron	torque* [Nm]	weight [kg]	K_{VS}-value [m³/h]	C_V-value [US.gal/min]
15	10-40	130	95	88	103	200	F05	11	30	3,8	12	14
20	10-40	150	105	88	103	200	F05	11	30	4,3	13	15
25	10-40	160	115	94	109	200	F05	11	30	4,9	25	29
32	10-40	180	140	102	117	320	F07	14	70	8,6	46	53
40	10-40	200	150	109	124	320	F07	14	80	9,6	85	98
50	10-40	230	165	139	159	420	F07	19	120	13,9	160	185
65	10-16 25-40	290	185	158	165	600	F10	22	200	19,3	262	302
80	10-40	310	200	158	165	600	F10	22	200	21,4	275	317
80S	10-40	310	200	173	180	600	F12	22	300	24,6	417	482
100	10-16 25-40	350	220 235	158	165	600	F10	22	200	24,6	197	228
100S	10-16 25-40	350	220 235	173	180	600	F12	22	300	28,9	582	673

ASME B 16.5 / 16.10

NPS	class	L	øD	bracket / lever A	bracket / lever H	bracket / lever R	DIN flange	dihe-dron	torque* [Nm]	weight [kg]	K_{VS}-value [m³/h]	C_V-value [US.gal/min]
½“	150	108	90	88	103	200	F05	11	30	2,7	14	16
	300	140	95							3,8	13	15
¾“	150	117	100	88	103	200	F05	11	30	3,2	13	16
	300	152	115							4,3	13	15
1“	150	127	110	94	109	200	F05	11	30	3,5	24	28
	300	165	125							4,9	26	31
1¼“	150	140	115	102	117	320	F07	14	70	5,4	46	53
	300	178	135							8,6		
1½“	150	165	125	109	124	320	F07	14	80	7	78	90
	300	190	155							9,6	79	92
2“	150	178	150	139	159	420	F07	19	120	11,8	145	167
	300	216	165							13,9	156	180
2½“	150	190	180	158	165	600	F10	22	200	15,5	236	273
	300	241	190							19,3		
3“	150	203	190	158	165	600	F10	22	200	18,2	225	260
	300	282	210							21,4	228	264
4“	150	229	230	158	165	600	F10	22	200	20,3	169	195
	300	305	255							24,6	198	229
4“S	150	229	230	173	180	600	F12	22	300	24,6	523	604
	300	305	255							28,9	542	627

* inclusive 100% safety factor for actuators



DIN EN 1092-1 / 588-1

DN	PN	L	E	gear (Pro-Gear) R	H	I	Typ	DIN flange	dihe-dron	torque* [Nm]	weight [kg]	K_{VS}-value [m³/h]	C_V-value [US.gal/min]
125	10-16 25-40	325	84	400	277	290	Q1500-S	F16	36	900	67 71	865	1000
150	10-16 25-40	350	84	400	277	290	Q1500-S	F16	36	900	77 79	875	1011
200	10-16 25 40	400	96,5	600	320	350	Q3000-S	F16	36	1200	108 119	1770	2047
250	10 16 25 40	450	117,5	600	328	465	Q5000-S	F16	36	1500	177 235	2788	3223
300	10 16 25 40	500	117,5	600	366	465	Q5000-S	F16	36	2600	230 249	2618	3027
350	10 16 25 40	550	137,5	600	460	465	Q6500-S	F25	46	5500	395 468	5070	5861
400	10 16 25 40	600	137,5	600	460	465	Q6500-S	F25	46	5500	411 525	4694	5426
450	10 16 25 40	650	180	600	485	520	Q12000-S	F30	55	6400	611 730	8065	9323
500	10 16 25 40	700	180	600	510	520	Q12000-S	F30	55	7500	655 744	10260	11862
600	10 16 25 40	800	180	600	510	520	Q12000-S	F30	55	7500	681 863	7980	9226

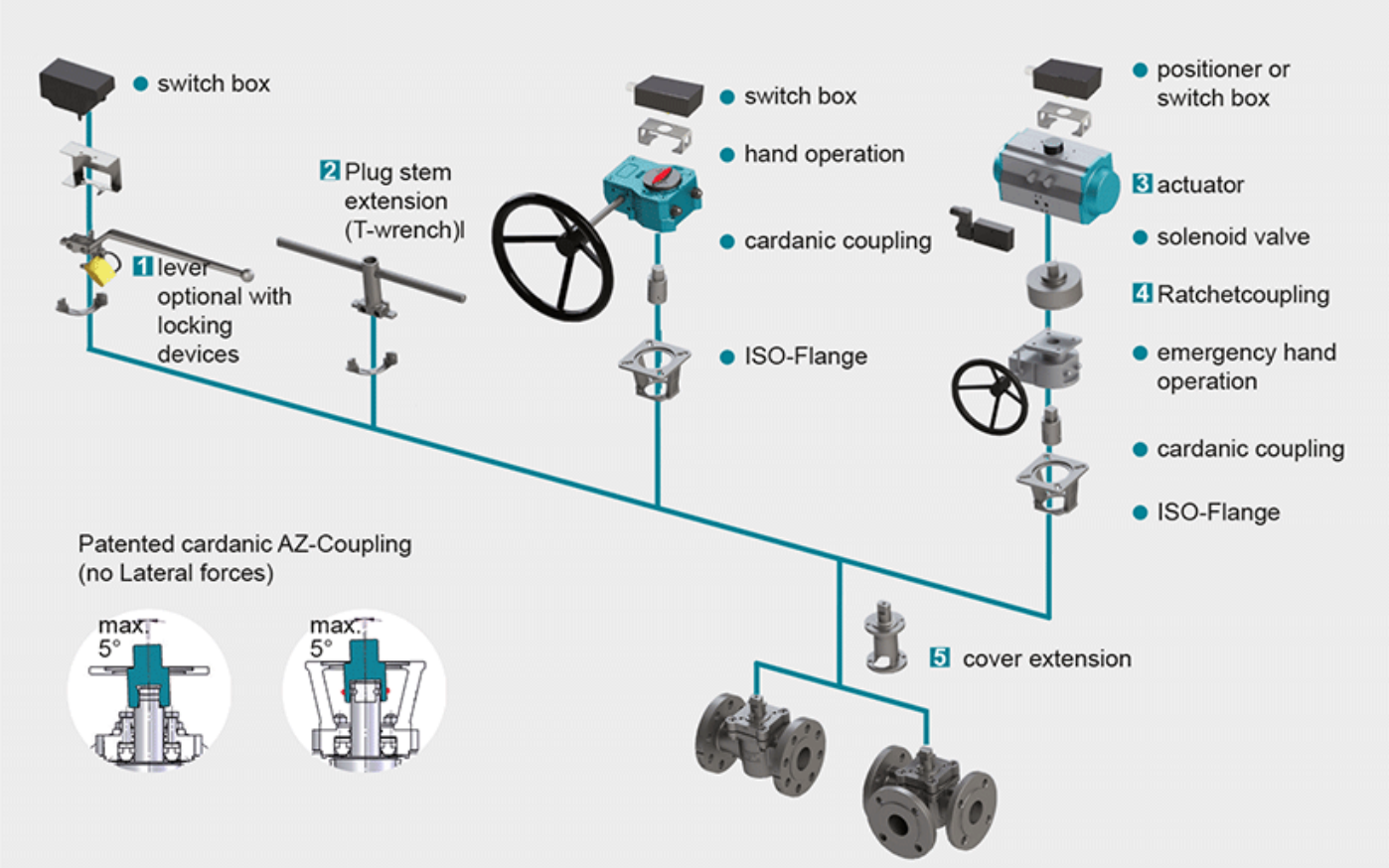
ASME B 16.5 / 16.10

NPS	class	L	E	gear (Pro-Gear) R	H	I	Typ	DIN flange	dihe-dron	torque* [Nm]	weight [kg]	K_{VS}-value [m³/h]	C_V-value [US.gal/min]
5“	150 300	254 325	84	400	277	290	Q1500-S	F16	27	900	55 71		
6“	150 300	267 403	84	400	277	290	Q1500-S	F16	27	900	60 70	738 775	853 896
8“	150 300	292 419	96,5	600	320	350	Q3000-S	F16	36	1200	94 125	1517 1978	1754 2286
10“	150 300	330 457	117,5	600	328	465	Q5000-S	F16	36	1500	127 160	2239 2382	2589 2754
12“	150 300	356 502	117,5	600	366	465	Q5000-S	F16	36	2600	153 170	1904 1925	2202 2225
14“	150 300	686 762	137,5	600	460	465	Q6500-S	F25	46	5500	180 210	2448 2394	2830 2768
16“	150 300	600	137,5	600	460	465	Q6500-S	F25	46	5500	246 305	5131 4618	5932 5339
18“	150 300	864 914	180	600	485	520	Q12000-S	F30	55	6400	627 763	9135	10561
20“	150 300	914 991	180	600	510	520	Q12000-S	F30	55	7500	698 860	11728 11841	13559 13689
24“	150 300	1067 1143	180	600	510	520	Q12000-S	F30	55	7500	825 1070	9863 9509	11402 10993

* inclusive 100% safety factor for actuators

For geometric reasons, threads are used in the flange bores in a few cases

Actuation



1 Locking Devices
Pilot valve combinations, pad lock eyelets, linear key conception, indexing plunger arrestor.
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2 Plug stem extension
Solid construction in stainless steel with T-wrench, Standard extension 100 mm or 150 mm, non standard lengths are available on request
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3 Actuators
Actuators for mounting-flange acc. to DIN ISO 5211
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NEW: Pneumatic actuator AIR GEAR for plug valves with high torque ≥150.000 Nm
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4 Ratched coupling
To usw on multiport valves with standard 90° actuator for bigger switchpositions than 90°
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5 Cover extension
Solid construction in stainless steel, Standard extension 100 mm or 150 mm high, non standard lengths are available on request . Hexagonal bolts on adjustment ring freely accessible. Note: Don't use with sealing

FSN/FSN-SL and CASN/CASN-SL
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