

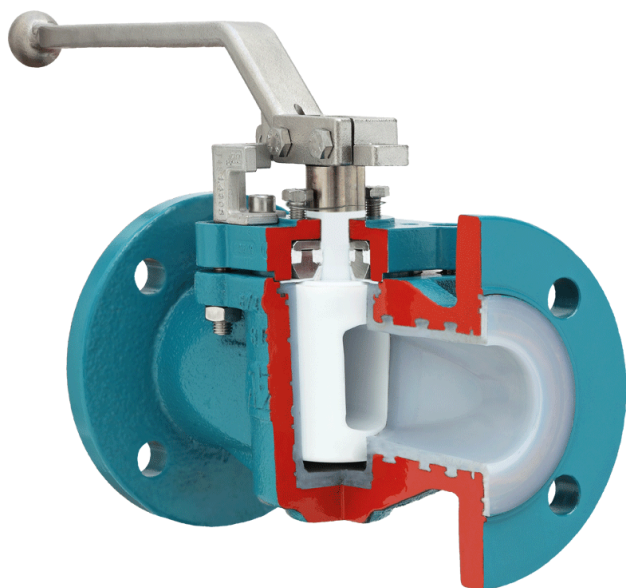
ISO-STANDARD A CA

Plug valve with chemical-resistant, vacuum-proof lining, with ISO top flange, sealing system
Type CA

DIN-EN: DN 15 – 600 / PN 10 – 40

ASME: NPS ½" – 24" / class 150 – 300

PT range: $-30 < T < 210^{\circ}\text{C}$, vacuum $10^{-8} >$ mbar



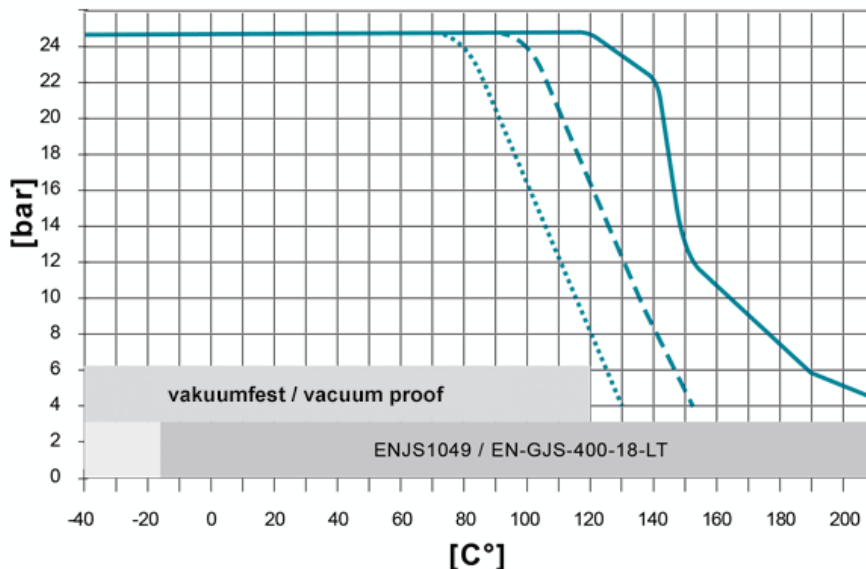
Design Features

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
- with chemical resistant lining – thickness min. 3 mm vacuum tight
- fugitive emission resp. clean air act certified (TA – Luft 2002 approval)
- PED 97/23/EG
- FDA conformity

PT-Diagramm

General Pressure-Temperature-Diagram



Body	Lining materials		Tmax
	Plug		
PFA	PTFE		210°C
PFA/FEP	PFA		150°C
PFA	Special material		210°C
PFA cond.	PFA conductive		125°C

Standard lining materials::
PFA (body) and PTFE (plug)

Lining materials Body / Plug	
—	PFA or FEP / PTFE
- - -	PFA / PFA
.....	PFA / FEP

The specified values depend on the respective application (medium). Operating temperatures under -20°C only with body material 1.4408 or low-temperature steel. High pressure resistance / temperature resistance on request, e.g. PN 40.

Sleeve: There are different sleeve materials / compounds available.

Materials

Standard body materials

- Ductile cast iron ENJS 1049, ASTM Gr 60-40-18 / A395

Standard plug materials

- Stainless Steel 1.4308, ASTM A351 CF8
- Ductile cast iron ENJS 1049, ASTM Gr 60-40-18 / A395

Special materials

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

Lining materials

- Body: PFA, PFA-conductive, FEP
- Plug: PTFE, PFA, PFA-conductive, FEP

Sealing Systems

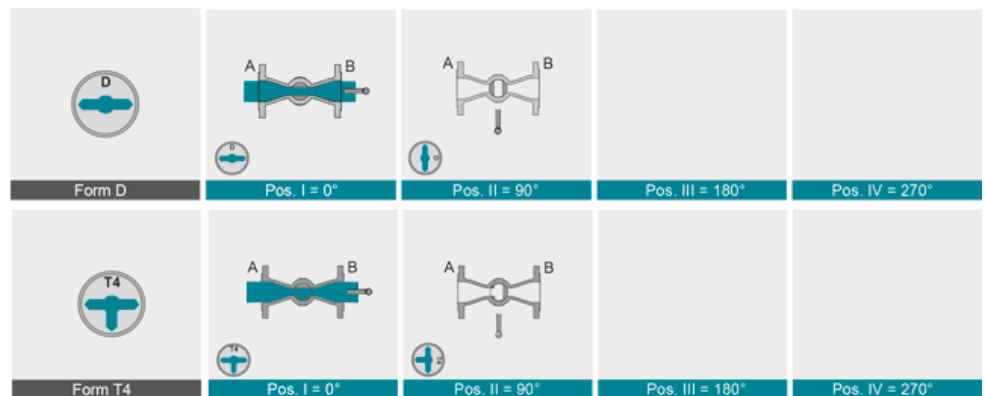
Chemical sealing to prevent fugitive emission of aggressive and toxic media with PTFE packing for additional stem sealing; T_{max} 230°C

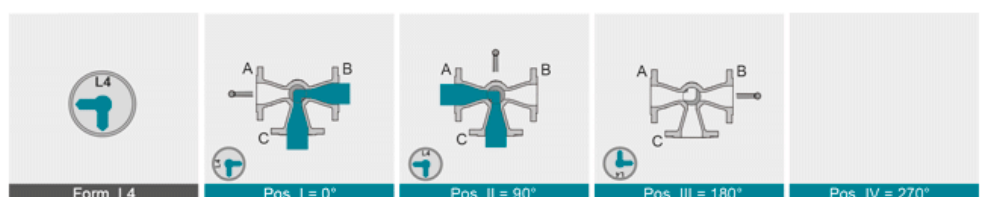
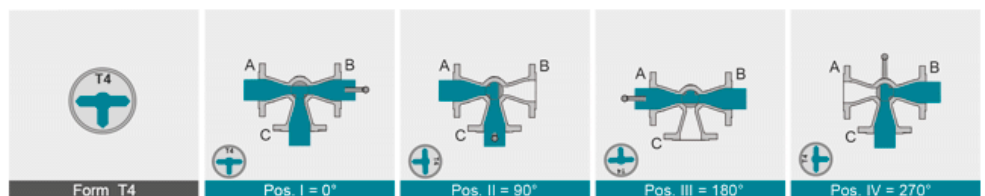
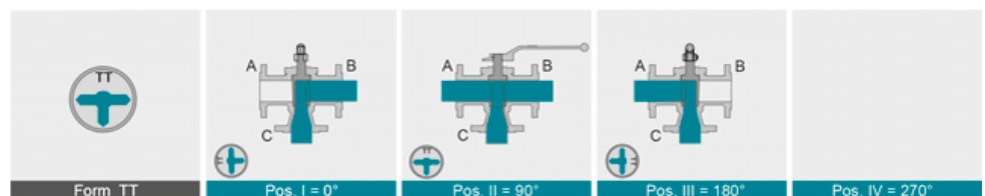
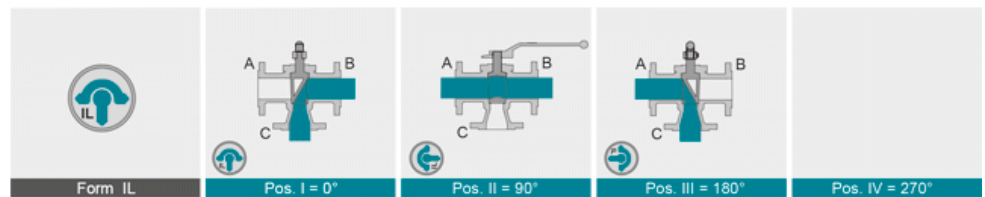
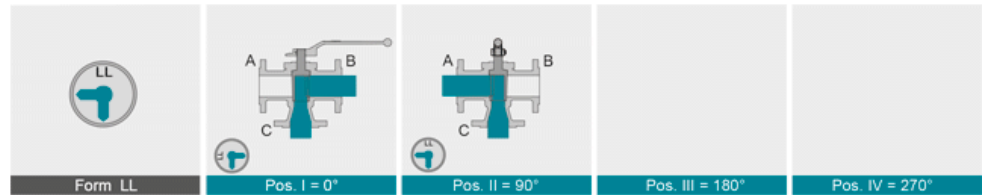
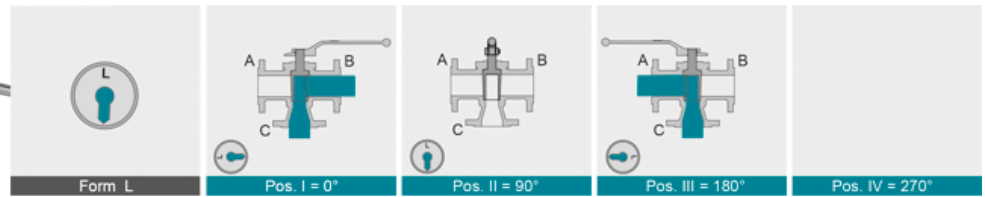
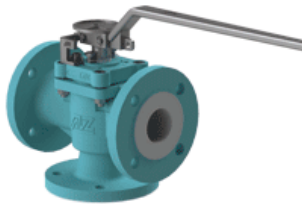
Type CA

Port Forms

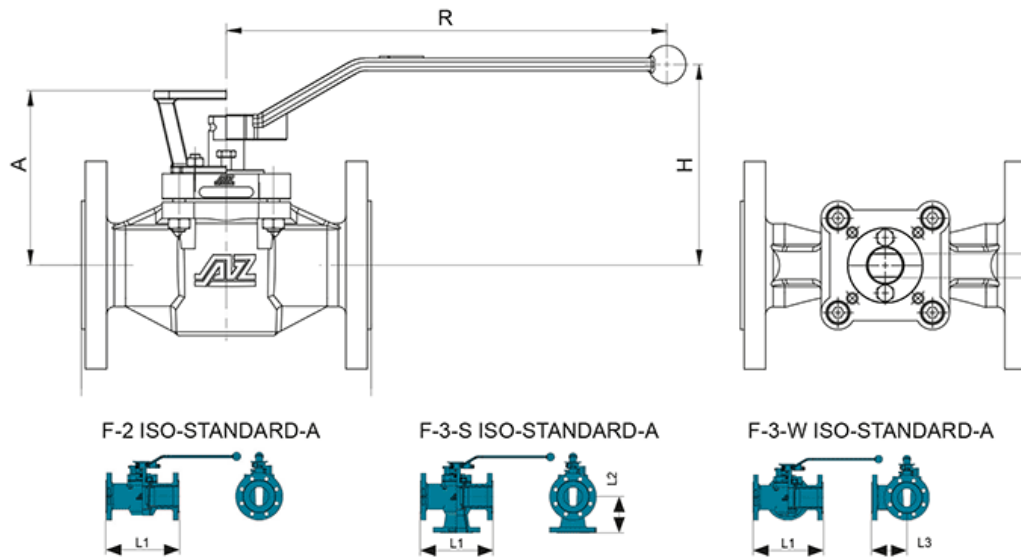


AZ plug valves are fitted with cast, rust proof position indicators
The position indicator is securely welded to the plug to prevent it from working loose.





Dimensions



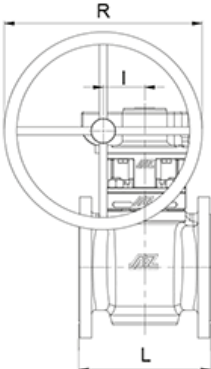
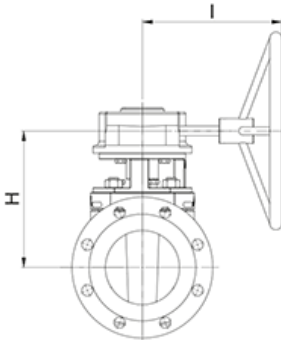
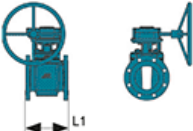
	DN	PN	L1	L2	L3	A	H	R	ISO 5211 flange	dihedron [mm]	torque* [Nm]	weight [kg]	K _{vs} -value [m³/h]	C _v -value [US.gal/min]
DIN EN 1092/1 / 558-1	15	10-40	130	*	*	88	98	200	F05	11	40/--	3,8	7,1	8,2
	20	10-40	150	75	75	88	98	200	F05	11	40/--	4,0	5,8	6,7
	25	10-40	160	80	80	94	110	200	F07	11	90/60	6,5	32	37
	32	10-40	180	90	90	102	117	320	F07	14	90/60	7,5	51	59
	40	10-40	200	100	100	109	124	320	F07	14	160/80	10	79	92
	50	10-40	230	115	115	139	160	420	F07	19	250/120	12	127	147
	65	10-16	290	*	*	158	170	600	F10	22	400/260	20	179	207
	80	10-40	310	155	155	158	170	600	F10	22	400/260	20	246	285
	100	10-16	350	175	175	158	170	600	F10	22	400/260	30	203	203
		25-40												
	NPS		L1	L2	L3	A	H	R	ISO 5211 flange	dihedron [mm]	torque* [Nm]	weight [kg]	K _{vs} -value [m³/h]	C _v -value [US.gal/min]
ASME B 16.5 / 16.10	½"	150	108	**	**	88	110	200	F05	11	40/--	2,7	7,7	9,0
		300	140	**	**							3,8		
	¾"	150	117	64	64	88	110	200	F05	11	40/--	3,2	6,4	7,4
		300	152	83	83							4,3		
	1"	150	127	**	**	94	110	200	F05	11	90/60	3,5	35	41
		300	165	**	**							6,0		
	1¼"	150	140	89	89	102		320	F07	14	90/60	7,5	56	65
		300	178	**	**							8,5		
	1½"	150	165	**	**	109	124	320	F07	14	160/80	9	87	101
		300	190	**	**							10		
	2"	150	178	**	**	139	160	420	F07	19	250/120	13	140	162
		300	216	**	**							16		
	2½"	150	190	**	**	158		600	F10	22	400/260	16	197	228
		300	241	**	**							19		
	3"	150	203	**	**	158	170	600	F10	22	400/260	18	271	314
		300	282	**	**							23		
	4"	150	229	154	**	158	170	600	F10	22	400/260	26	223	223
		300	305	**	**							31		

ISO flange instructions, weights and Kvs values for straight-way valves

*) Maximum breakaway torque MD_{breakaway [Nm]} for F2 and F3S ISO STANDARD A depending on material combinations (PFA+PFA / PFA+PTFE).

All data incl. 100% safety factor. Breakaway torques for valves - tapes F-4 and F3W on request

**) on request

 																	
F-2 ISO-STANDARD-A   F-3-S ISO-STANDARD-A   F-3-W ISO-STANDARD-A  																	
DIN EN 1092/1 / 588-1	DN	PN	L1	L2	L3	E	R	H	I	Gear	ISO 5211 flange	dihe-dron	torque* [Nm]	weight [kg]	K _v -value [m³/h]	C _v -value [US.gal/min]	
	100S	10-16	350	**	**	84	400	230	290	Q1500-S	F16	36	600/350	32	447	517	
		25-40												32			
	125	10-16	325	**	**	84	400	260	290	Q1500-S	F16	36	1200/900	74	358	414	
		25-40												78			
	150	10-16	350	200	200	84	400	265	290	Q1500-S	F16	36	1200/900	85	822	951	
		25-40												87			
	200	10-16	400	**	**	96,5	600	320	350	Q2000-S	F16	36	2600/--	119	1727	1997	
		25 40												131			
	250	10 16	450	**	**	117,5	600	352	465	Q5000-S	F16	36	3200/--	195	2052	2373	
		25 40												259			
	300	10 16	500	**	**	117,5	600	340	465	Q5000-S	F16	36	3200/--	253	1707	1973	
		25 40												274			
ASME B 16.5 / 16.10	NPS	Class	L1	L2	L3	E	R	H	I	Gear	ISO 5211 flange	dihe-dron	torque* [Nm]	weight [kg]	K _v -value [m³/h]	C _v -value [US.gal/min]	
	4"S	150	254	154	154	84	500	230	328	Q1500-S	F16	27	600/350	27	492	569	
		300	325	**	**									32			
	5"	150	254	**	**	118	500	260	363	Q1500-S	F16	27	1200/900	61	394	455	
		300	325	**	**									78			
	6"	150	267	**	**	118	500	265	363	Q1500-S	F16	27	1200/900	66	904	1046	
		300	403	**	**									77			
	8"	150	292	**	**	138	500	320	440	Q2000-S	F16	36	2600/--	103	1900	2197	
		300	419	**	**									138			
	10"	150	330	**	**	138	500	352	440	Q5000-S	F16	36	3200/--	140	2257	2610	
		300	457	**	**									176			
	12"	150	356	**	**	138	500	340	440	Q5000-S	F16	36	3900/--	168	1877	2170	
		300	502	*	*									187			

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

ISO flange instructions, weights and Kvs values for straight-way valves

*) Maximum breakaway torque MD breakaway [Nm] for F2 and F3S ISO STANDARD A depending on material combinations (PFA+PFA / PFA+PTFE). All data incl. 100% safety factor. Breakaway torques for valves – tapes F-4 and F3W on request

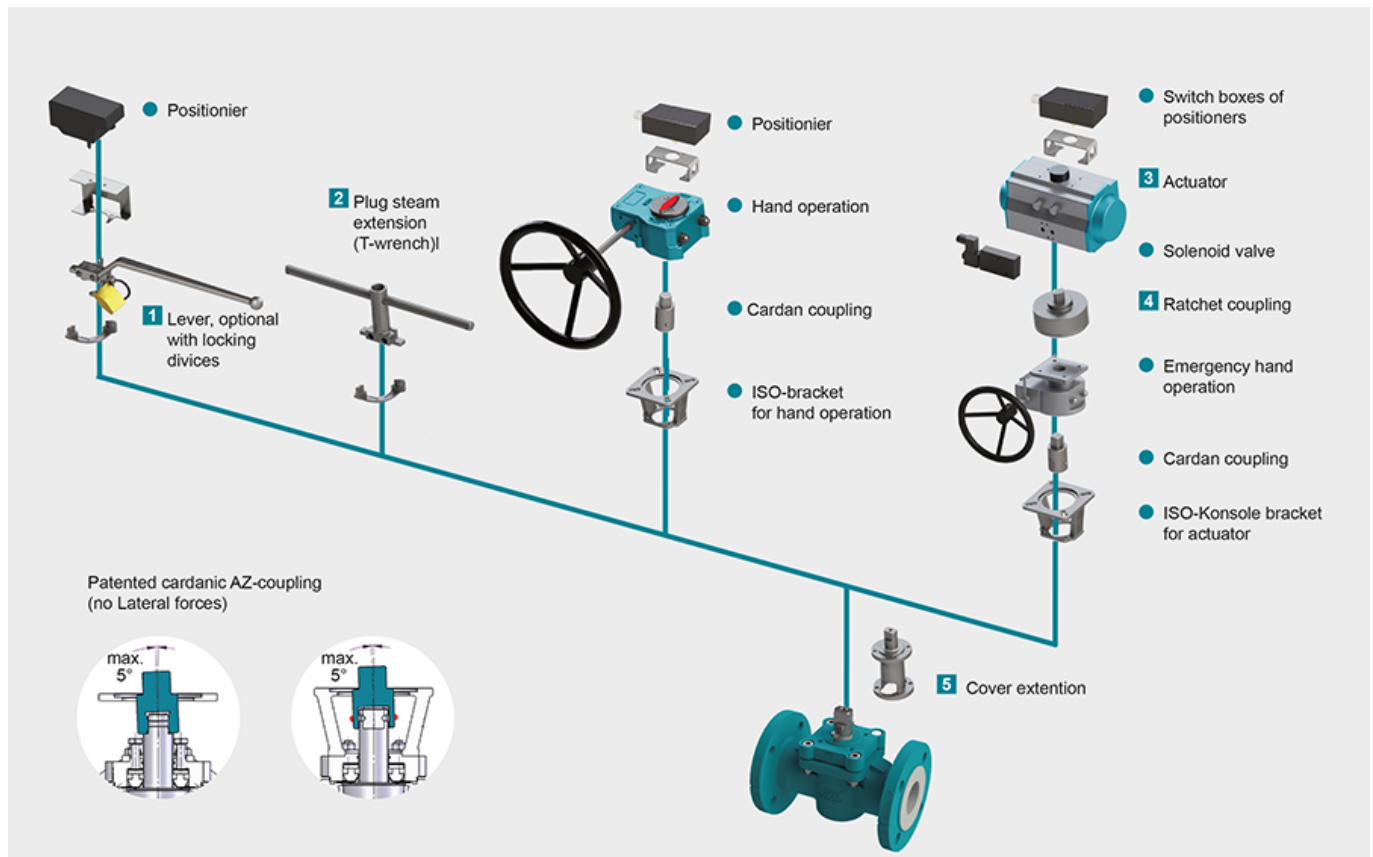
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Actuation



1 Locking Devices

Pilot valve combinations, pad lock eyelets, linear key conception, indexing plunger arrestor.

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

3 Actuators

Actuators for mounting-flange acc. to DIN ISO 5211

NEW: Pneumatic actuator AIR GEAR for plug valves with high torque =150.000 Nm

4 Ratched coupling

To usw on multiport valves with standard 90° actuator for bigger switchpositions than 90°

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