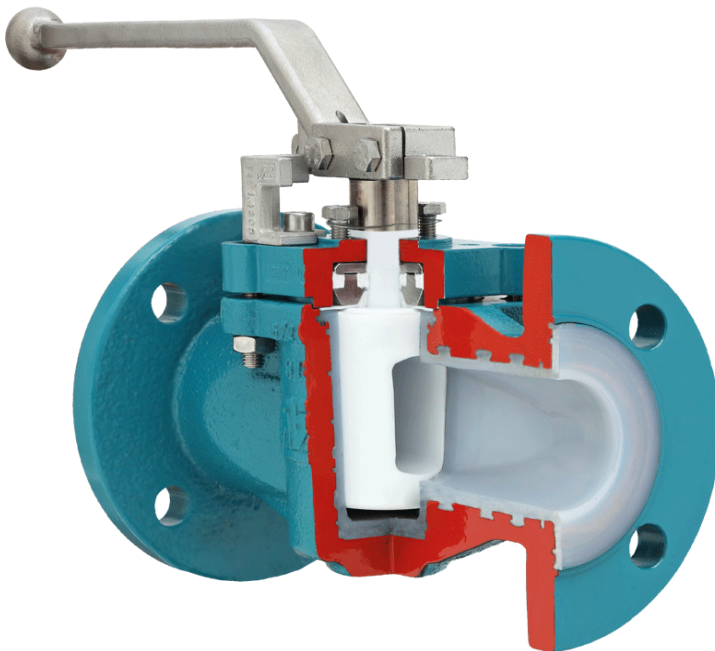




## ISO-STANDARD A CA

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°C, vacuum tight



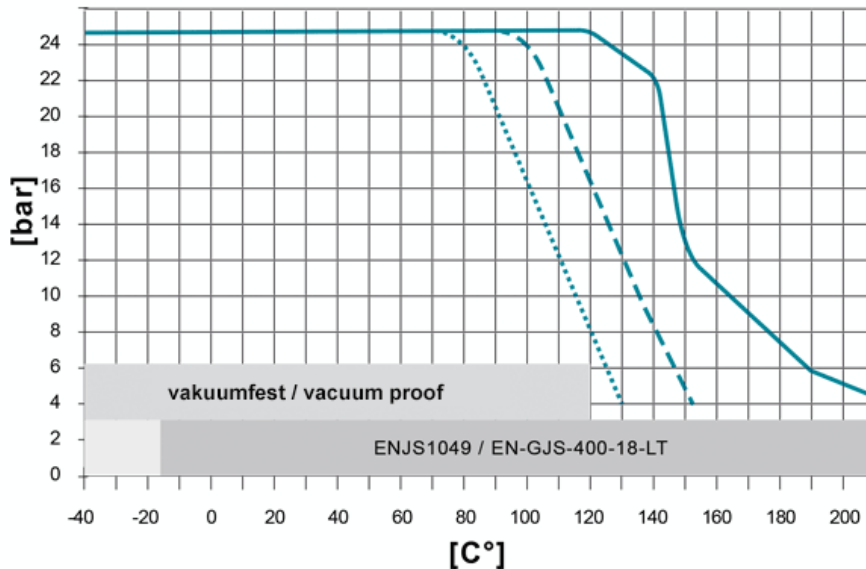
## Design Features

### 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)
- Directive 2014/68/EU
- FDA conformity

## PT-Diagramm

General Pressure-Temperature-Diagram



Body	Plug	Tmax
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

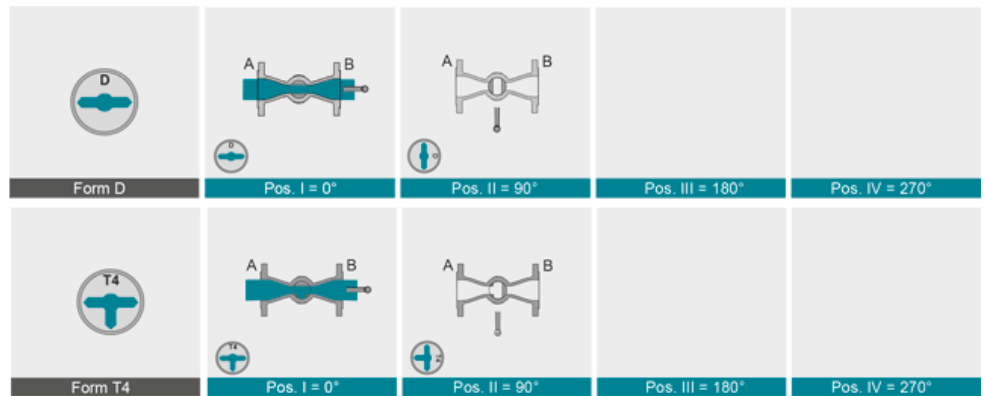
with PTFE packing for additional stem sealing; T<sub>max</sub> 230°C

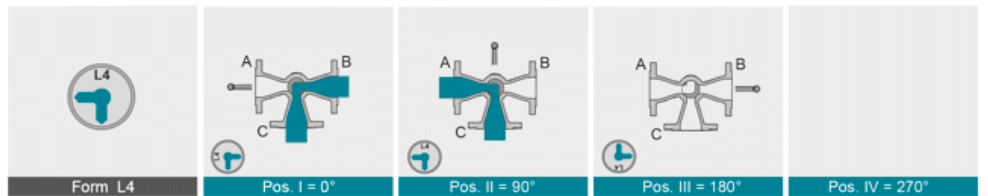
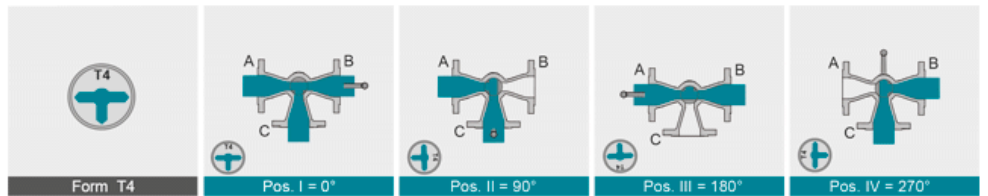
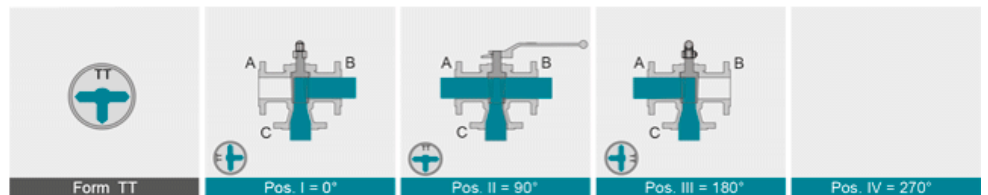
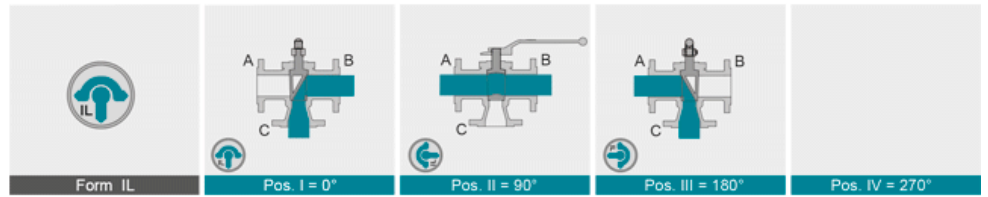
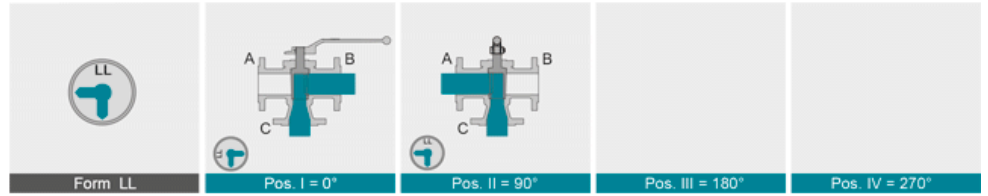
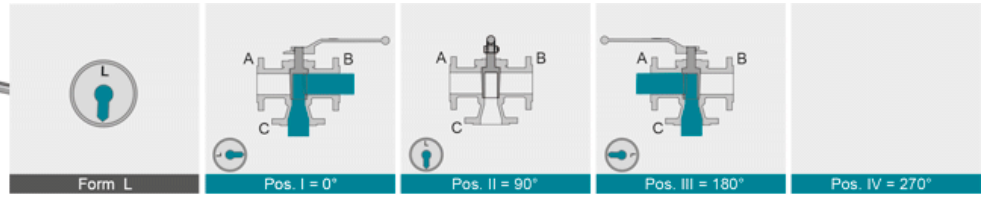
## Type CA

## Port Forms

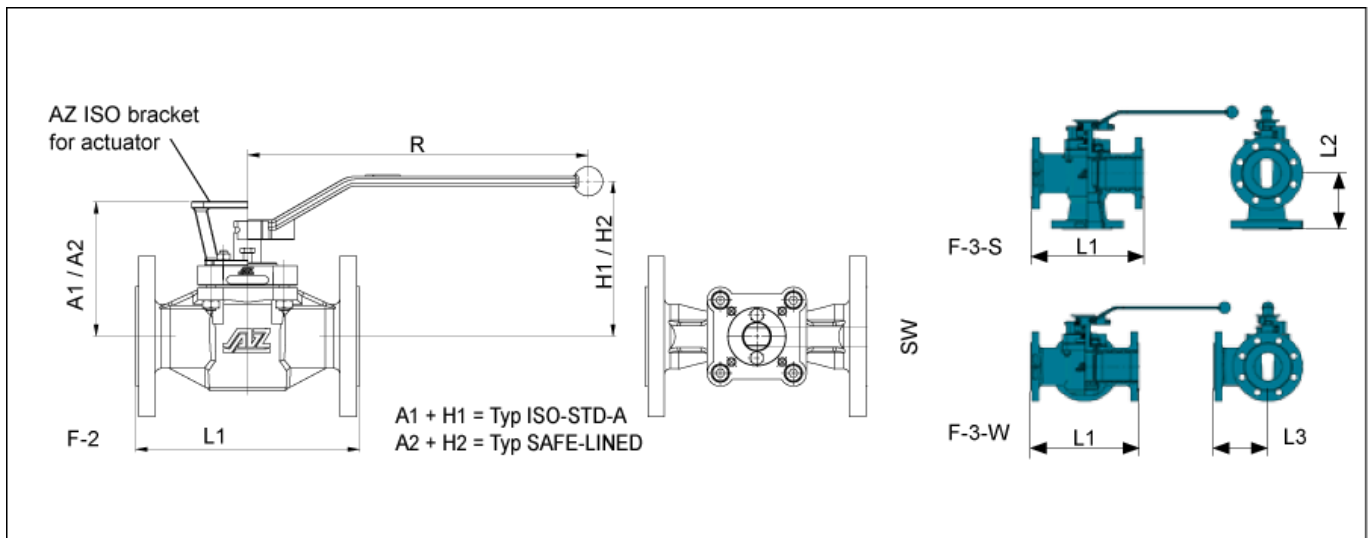


AZ plug valves are fitted with cast, rust proof position indicators  
 The position indicator is securely welded to the plug to prevent it from working loose.





## Dimensions



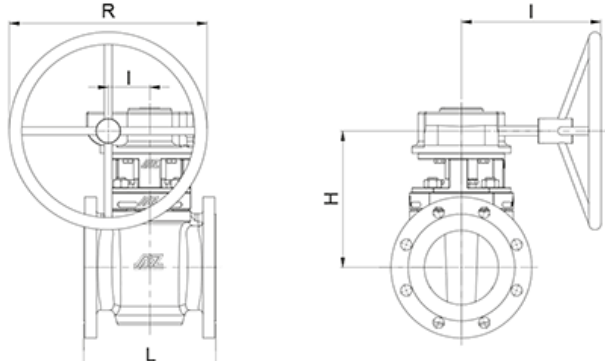
	DN	PN	L1 [mm]	L2 [mm]	L3 [mm]	A [mm]	H1 [mm]	H2 [mm]	R1 [mm]	H1 [mm]	DIN-ISO bracket	SW [mm]	torque.* [Nm]	weight [kg]	K <sub>v</sub> value [m <sup>3</sup> /h]	C <sub>v</sub> value [US.gal/min]
	15	10-40	130	*	*	88	98	**	200	**	F05	11	40/--	3,8	7,1	8,2
	20	10-40	150	75	75	88	98	**	200	**	F05	11	40/--	4,0	5,8	6,7
	25	10-40	160	80	80	94	110	**	200	**	F07	14	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 25-40	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 25-40	350	175	175	158	170	**	600	**	F10	22	400/260	30	203	203
ASME B 16.5 / 16.10																
	NPS		L1 [mm]	L2 [mm]	L3 [mm]	A [mm]	H1 [mm]	H2 [mm]	R1 [mm]	H1 [mm]	DIN-ISO bracket	SW [mm]	torque.* [Nm]	weight [kg]	K <sub>v</sub> value [m <sup>3</sup> /h]	C <sub>v</sub> value [US.gal/min]
	½	150	108	**	**	88	110	**	200	**	F05	11	40/--	2,7	7,7	9,0
		300	140	**	**	88	110	**	200	**	F05	11	40/--	3,8	6,4	7,4
	¾	150	117	64	64	88	110	**	200	**	F05	11	40/--	3,2	6,4	7,4
		300	152	83	83	88	110	**	200	**	F05	11	40/--	4,3	6,4	7,4
	1	150	127	**	**	94	110	**	200	**	F05	11	90/60	3,5	35	41
		300	165	**	**	94	110	**	200	**	F05	14	90/60	6,0	35	41
	1¼	150	140	89	89	102			320		F07	14	90/60	7,5	56	65
		300	178	**	**	102			320		F07	14	90/60	8,5	56	65
	1½	150	165	**	**	109	124	**	320	**	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	140	162
	2½	150	190	**	**	158			600		F10	22	400/260	16	197	228
		300	241	**	**	158			600		F10	22	400/260	19	197	228
	3	150	203	**	**	158	170	**	600	**	F10	22	400/260	18	271	314
		300	282	**	**	158	170	**	600	**	F10	22	400/260	23	271	314
	4	150	229	154	**	158	170	**	600	**	F10	22	400/260	26	223	223
		300	305	**	**	158	170	**	600	**	F10	22	400/260	31	223	223

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

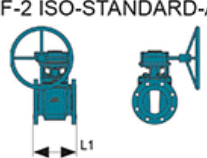
\*) Maximum breakaway torque  $M_{d_{breakaway}} [Nm]$  for F-2 and F-3-S ISO standard A depending on material combinations (PFA+PFA / PFA+PT-FE). All data incl. 100% safety factor Breakaway torques for valves - types F-4 and F-3-W on request

\*\*) on request

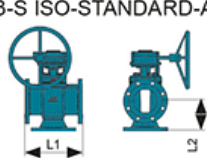
Due to geometric reasons partly threaded holes in flange drilling



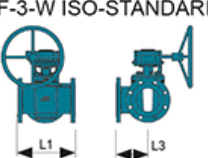
F-2 ISO-STANDARD-A



F-3-S ISO-STANDARD-A



F-3-W ISO-STANDARD-A



	DIN EN 10921 / 588-1																
	DN	PN	L1	L2	L3	E	R	H	I	Gear	ISO 5211 flange	dihe-dron	torque* [Nm]	weight [kg]	K <sub>vs</sub> -value [m <sup>3</sup> /h]	C <sub>v</sub> -value [US.gal/min]	
ASME B 16.5 / 16.10	100S	10-16	350	**	**	84	400	230	290	Q1500-S	F16	36	600/350	32	447	517	
		25-40	325	**	**	84	400	260	290	Q1500-S	F16	36	1200/900	32	358	414	
	125	10-16	350	200	200	84	400	265	290	Q1500-S	F16	36	1200/900	74	822	951	
		25-40	400	**	**	96,5	600	320	350	Q2000-S	F16	36	2600/--	85	1727	1997	
	150	10-16	450	**	**	117,5	600	352	465	Q5000-S	F16	36	3200/--	119	2052	2373	
		25-40	500	**	**	117,5	600	340	465	Q5000-S	F16	36	3200/--	131	1707	1973	
	200	10-16	300	254	154	84	500	230	328	Q1500-S	F16	27	600/350	27	492	569	
		25-40	325	**	**	84	500	260	363	Q1500-S	F16	27	1200/900	32	394	455	
	250	10-16	300	267	**	118	500	265	363	Q1500-S	F16	27	1200/900	61	904	1046	
		25-40	403	**	**	118	500	320	440	Q2000-S	F16	36	2600/--	66	1900	2197	
	300	10-16	300	292	**	138	500	320	440	Q2000-S	F16	36	2600/--	77	2257	2610	
		25-40	419	**	**	138	500	340	440	Q5000-S	F16	36	3900/--	103	1877	2170	
350	10-16	300	330	**	138	500	352	440	Q5000-S	F16	36	3200/--	138	2257	2610		
	25-40	457	**	**	138	500	340	440	Q5000-S	F16	36	3900/--	140	1877	2170		
400	10-16	150	356	**	138	500	340	440	Q5000-S	F16	36	3900/--	168	1877	2170		
	25-40	502	*	*	138	500	340	440	Q5000-S	F16	36	3900/--	187	1877	2170		

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

\*\*) on request

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