

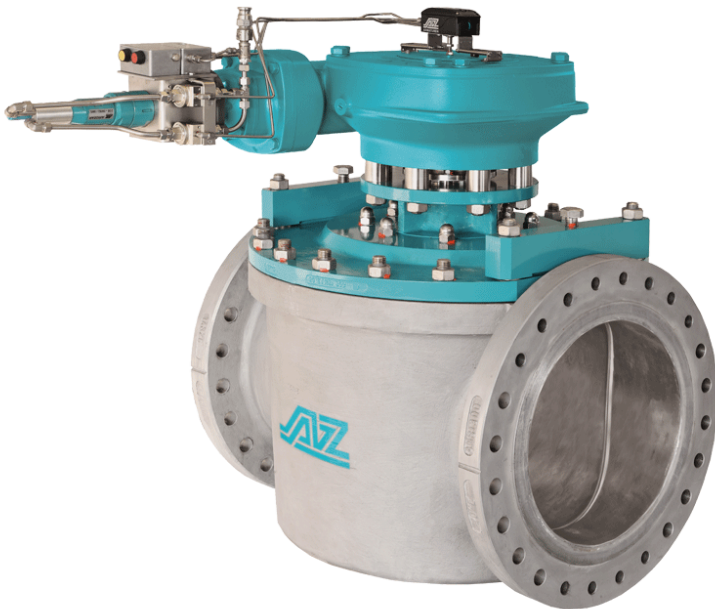
ISO EXTRA

Plug valve with full bore design

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

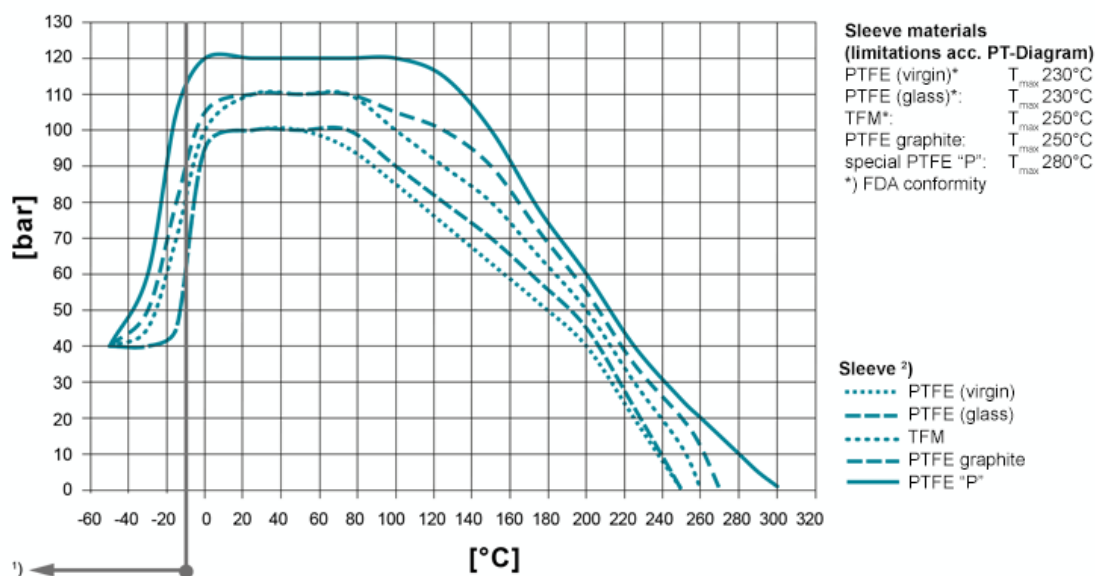
Design Characteristics

- full bore
- free of cavities
- maintenance free - self lubricating
- easy accessible adjustment of the plug, even with mounted actuator
- pressure drop minimized

- piggable design available
- suitable for abrasive fluids
- vacuum tight
- fugitive emission resp. clean air act certified (TA - Luft 2002 approval)
- PED 97/23/EG
- fire safe 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

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

Sealing Systems

Standard sealing for all major applications;
T_{max} 230°C

Type STD

Firesafe sealing (API 607) with graphite packing for additional stem sealing; T_{max} 230°C

Type FS

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

Type CA

Firesafe safety sealing (API 607) for fluctuating temperatures with 3x graphite packing (adjustable) for additional stem sealing; T_{max} 280°C

Type FSN

Firesafe safety sealing (API 607) for fluctuating temperatures with 3x graphite packing (live loaded disc springs) for additional stem sealing; T_{max} 280°C

Type FSN-SL

Chemical safety sealing for fluctuating temperatures with 3x PTFE packing (adjustment) for additional stem sealing; T_{max} 230°C

Type CASN

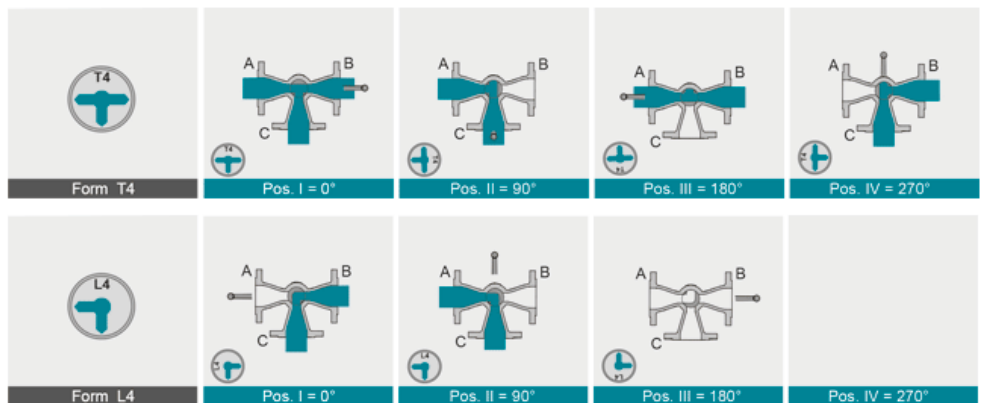
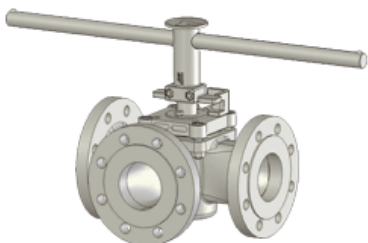
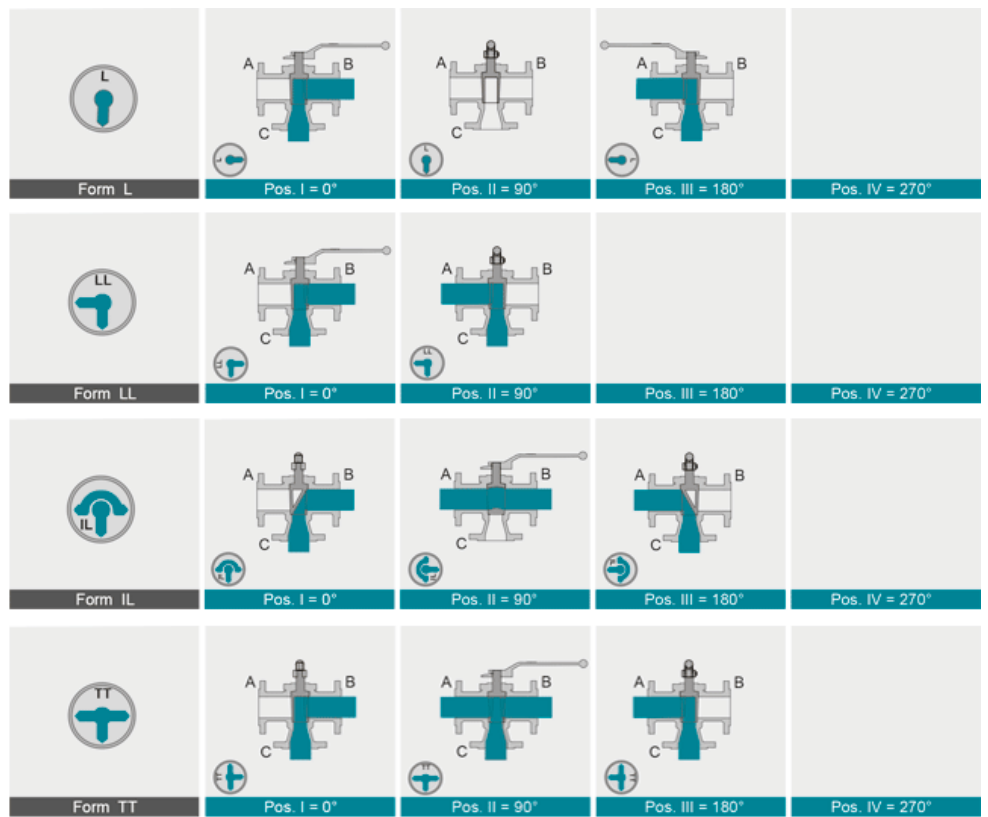
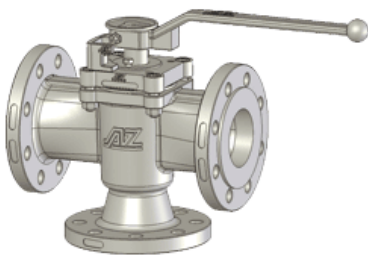
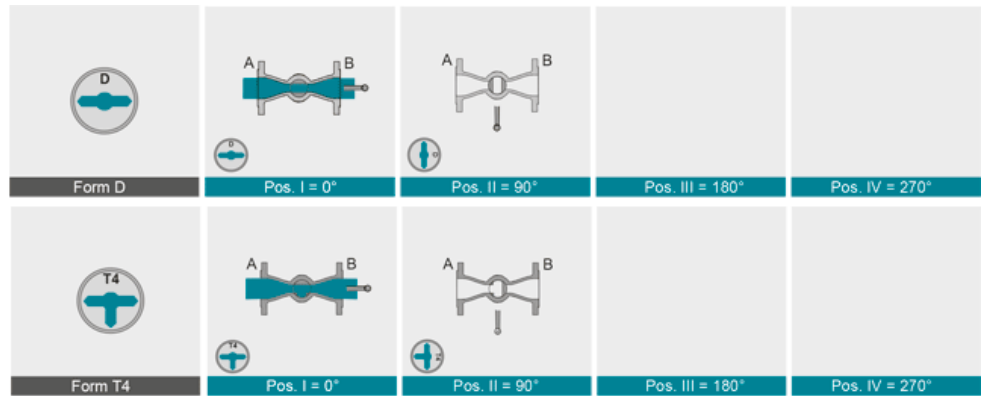
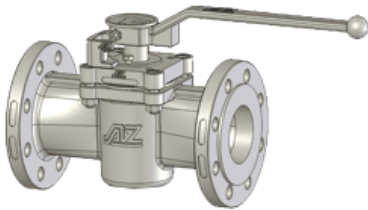
Chemical safety sealing for fluctuation temperatures with 3x PTFE packing (live loaded disc springs) for additional stem sealing; T_{max} 230°C

Type CASN-SL

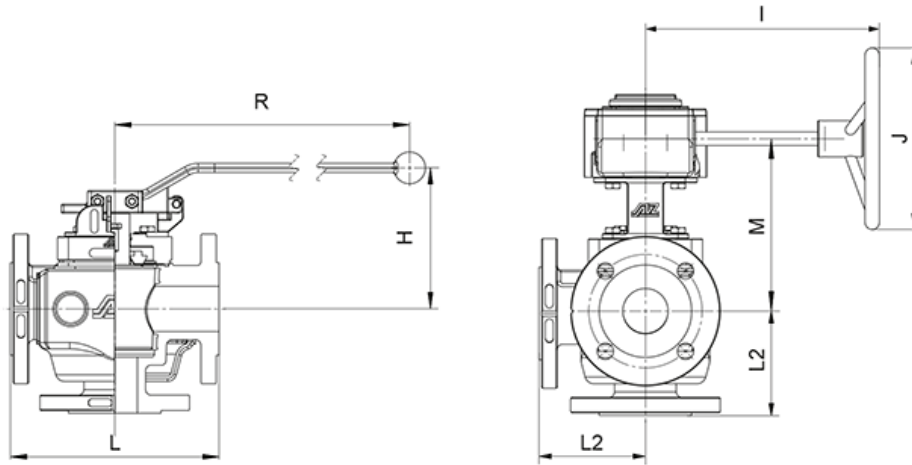
Port Forms



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.

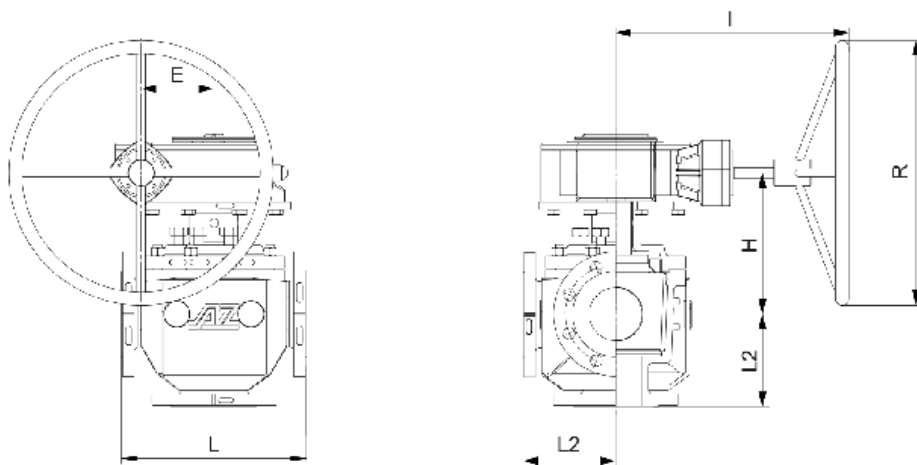


Dimensions

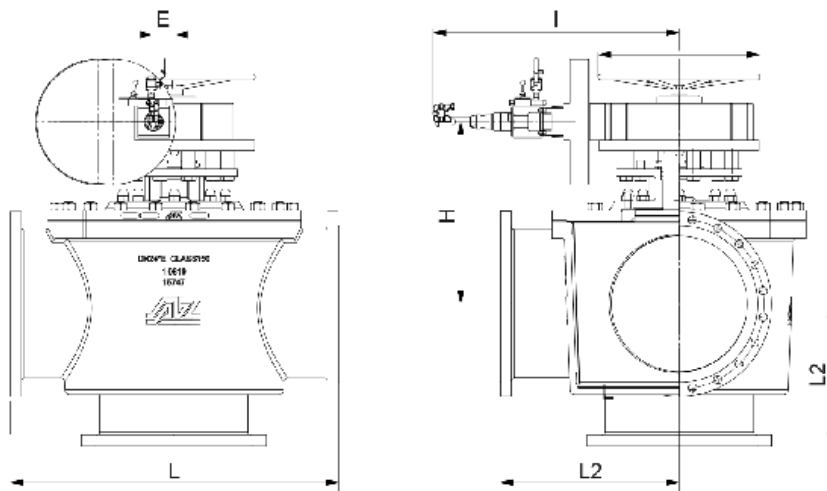


	DN	PN	L	L/2	R	H	gear/lever				Type	dihedron	torque [Nm]*	weight [kg]**	K _{vs} -value [m ³ /h]**	C _v -value [US.gal/min]**
							E	I	J	M						
DIN EN 1092-1 / 558-1	15	10-40	130	65	200	102,2							30		12	14
		64-100	210	105												
	20	10-40	150	75	200	102,2							30		13	15
		64-100	230	115												
	25	10-40	160	80	320	119							80		41	48
		64-100	230	115												
	32	10-40	180	90	420	137							140		67	77
		64-100	260	130												
	40	10-40	200	100	420	145	52,5	215	200	170	Q 400-S		160		98	113
		64-100	260	130												
50	10-40	230	115	585	150	52,5	240	300	195	Q 400-S		400		177	204	
	63 100	300	150													
65	10/16 25/40	290	145			68,75	265	400	243	Q 800-S		500		285	330	
	63															
80	10-40	310	155			68,75	365	400	248	Q 800-S		600		445	515	
	63															
ASME B 16.5 / 16.10	NPS	Class	L	L/2	R	H	gear/lever				Type	dihedron	torque [Nm]*	weight [kg]**	K _{vs} -value [m ³ /h]**	C _v -value [US.gal/min]**
	½"	150	108	65	200	102,5							30		12	14
		300	140													
	¾"	150	117	75	200	102,5							30		13	15
		300	152	115												
	1"	150	160	80	320	119							80		41	48
		300	230	115												
	1¼"	150	180	90	420	137							140		67	77
		300	260	130												
	1½"	150	200	100	420	145	52,5	215	200	170	Q 400-S		160		98	113
		300	260	130												
	2"	150	230	115	585	150	52,5	240	300	195	Q 400-S		400		177	204
		300	300	150												
	2½"	150	290	145			68,75	265	400	243	Q 800-S		500		285	330
		300														
	3"	150	310	155			68,75	265	400	243	Q 800-S		600		445	515
		300														

* 100% safety factor for actuators inclusive
 ** for two way plug valves, other on request
 *** on request



	DN	PN	L	L/2	E	R	gear		Type	dihedron [SW]	torque [Nm]*	weight [kg]**	K _{v5} -value [m ³ /h]**	C _v -value [US.gal/min]**
	H	I												
DIN EN 1092-1 / 558-1	100	10-16	350	175	137,5	600	270	365	Q 6500-S		1400		686	793
		25/40 63	350 430	215										
	150	10-16	480	240	137,5	600	315	365	Q 6500-S		4000		1500	1734
		25/40 63	480 550	275										
	200	10-16	600	300	180	700	355	520	Q 12000-S		5000		2975	3440
		25 40												
	250	10 16	730	365	180	700	385	520	Q 12000-S		7000		4731	5470
		25 40												
	300	10 16	850	425	252,5	700	460	600	Q 24000-S		19.500		7380	8532
		25 40												
350	10 16	980	490	252,5	700	495	600	Q 32000-S		25.000		10.422	12.049	
	25 40													
ASME B 16.5 / 16.10	NPS	Class	L	L/2	E	R	gear		Type	dihedron [SW]	torque [Nm]*	weight [kg]**	K _{v5} -value [m ³ /h]**	C _v -value [US.gal/min]**
	4"	150	350	175	137,5	600	270	365	Q 6500-S		1400		686	793
		300	430	215										
	6"	150	480	240	137,5	600	315	365	Q 6500-S		4000		1500	1734
		300	550	275										
	8"	150	600	300	180	700	355	520	Q 12000-S		5000		2975	3440
		300	650											
	10"	150	730	365	180	700	385	520	Q 12000-S		7000		4731	5470
		300	775											
	12"	150	850	425	252,5	700	460	600	Q 24000-S		19.500		7380	8532
		300												
	14"	150	980	490	252,5	700	495	600	Q 32000-S		25.000		10.422	12.049
		300												



	DIN EN 1092/1 / 558-1										torque [Nm]*	weight [kg]**	Kvs-value [m³/h]**	Cv-value [US.gal/min]**	
	DN	PN	L	L/2	E	R	gear H	I	Type	dihedron [SW]					
ASME B 16.5 / 16.10	400	10	16	1100	550	252,5	700	535	600	Q 32000-S	29.000	***	13.300	15.469	
		25	40												
	450	10	16	1200	600	252,5	700	620	600	Q 50000-S	31.000	***	16.982	19.633	
		25	40												
	500	10	16	1250	625	291,5	700	640	740	Q 50000-S	33.000	***	20.750	23.989	
		25	40												
	600	10	16	1450	725	***	***	***	***	***	***	***	30.450	35.203	
		25	40												
		NPS	Class	L	L/2	E	R	gear H	I	Type	dihedron [SW]	torque [Nm]*	weight [kg]**	Kvs-value [m³/h]**	Cv-value [US.gal/min]**
		16"	150	838	550	252,5	700	535	600	Q 32000-S	29.000	***	13.300	15.469	
		300													
	18"	150	1200	600	252,5	700	620	600	Q 50000-S	31.000	***	16.982	19.633		
		300													
	20"	150	991	625	291,5	700	640	740	Q 50000-S	33.000	***	20.750	23.989		
		300													
	24"	150	1450	725	**	**	**	**	**	**	***	***	30.450	35.203	
		300													

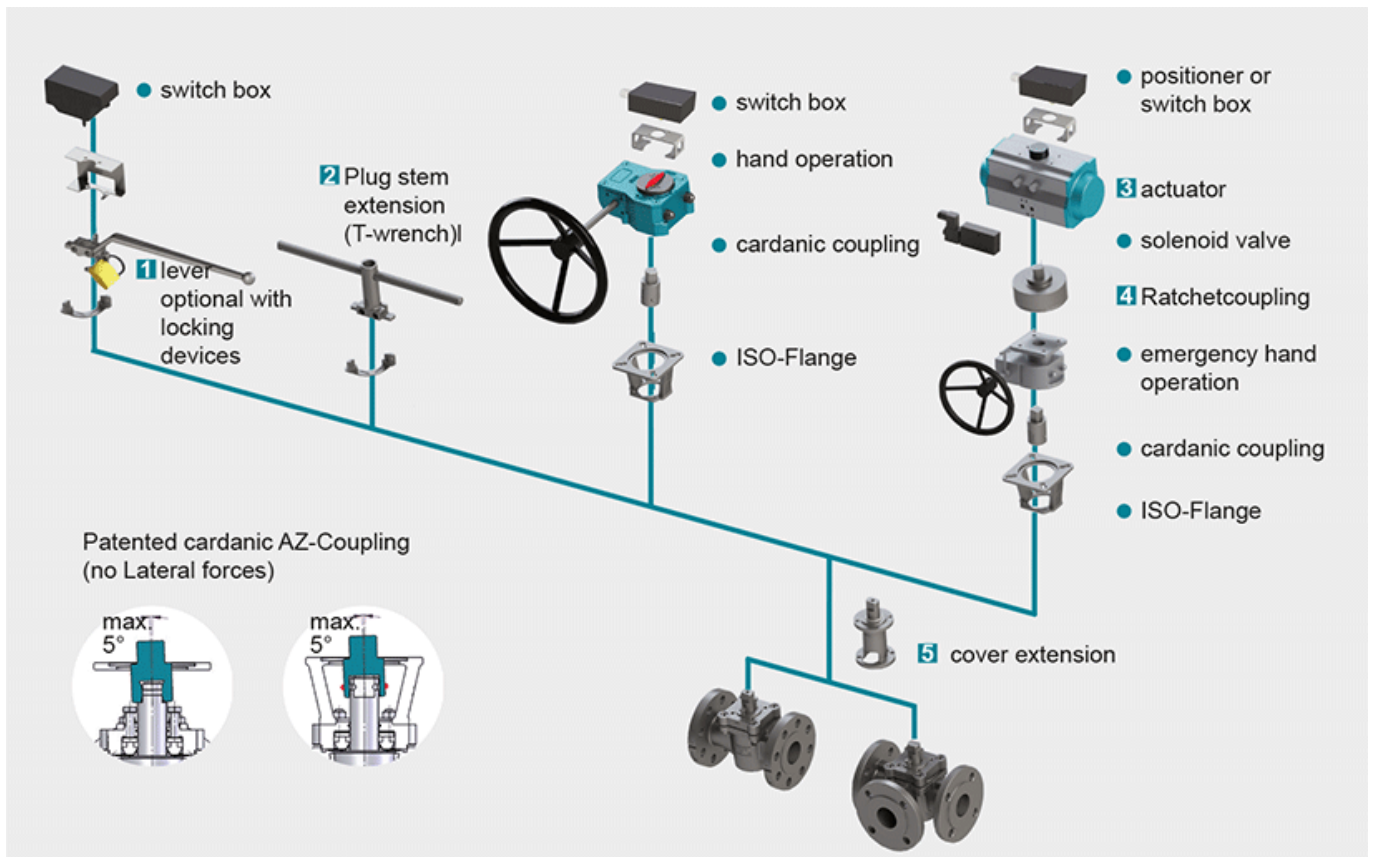
* inclusive 100% safety factor for actuators for two way plug valves, other on request

** for two way plug valves, other on request

*** on request

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.

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