

HDS

High-Pressure plug valve

DIN: 15 - 500 / PN 100 - 160

ASME: NPS ½" - 20" / class 600 - 900

PT range: $-30 < T < 230/280^{\circ}\text{C}$, vacuum 10-8 mbar



Design Features

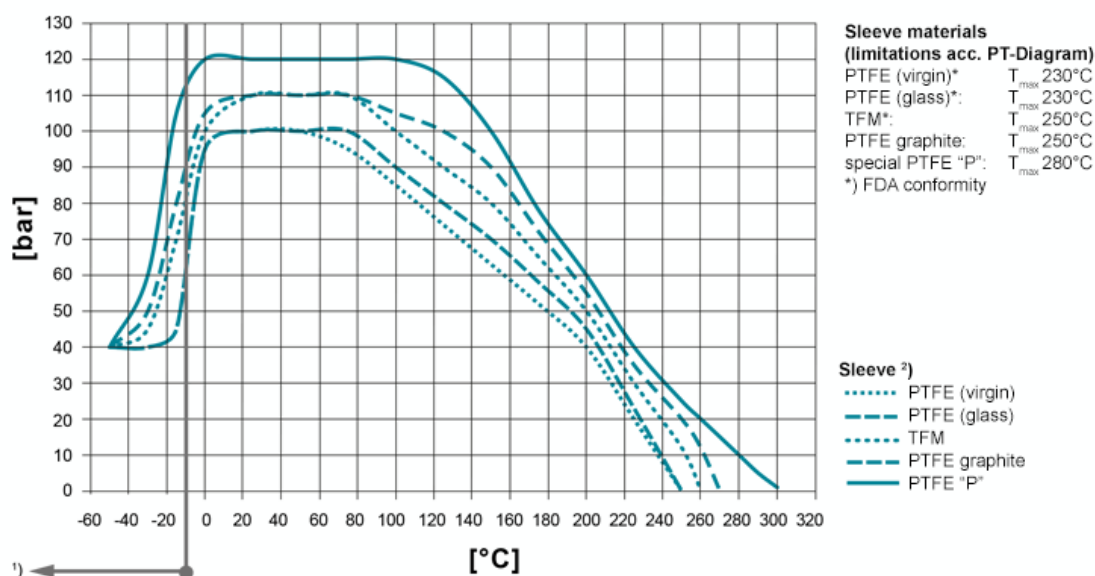
Design Characteristics

- High pressure safety sealing with stuffingbox packing
- type "HDS-GL" with trunnion mounted plug
- free of cavities
- maintenance free - self lubricating
- readjustment of plug and stuffing box possible
- 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.

Bei der Auswahl des Dichtbuchsen-Materials sind auch die Einsatzgrenzen gemäß EN12516-1 bzw. ASME B16.34 für die jeweiligen Druckstufen zu beachten (PN/class). Die eingezeichneten Werte beziehen sich auf austenitischen Edelstahlguß 1.4408.

- 1) Für den Einsatz unter -10°C Betriebstemperatur sind tieftemperatur- bzw. austenitische Stähle erforderlich.
- 2) Buchse: Es stehen unterschiedliche Dichtbuchsen-Materialien zur Verfügung.

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

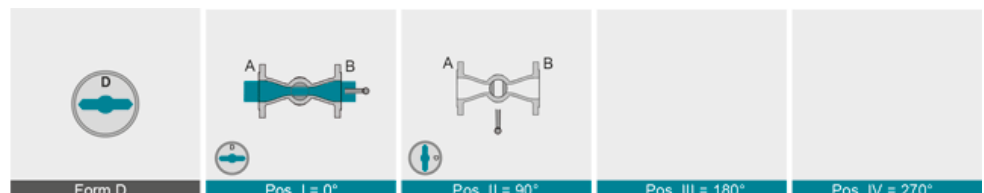
- Alloy
- Monel
- Nickel
- Zirconium
- Titan
- Tantal
- other materials on request

Sealing Systems

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

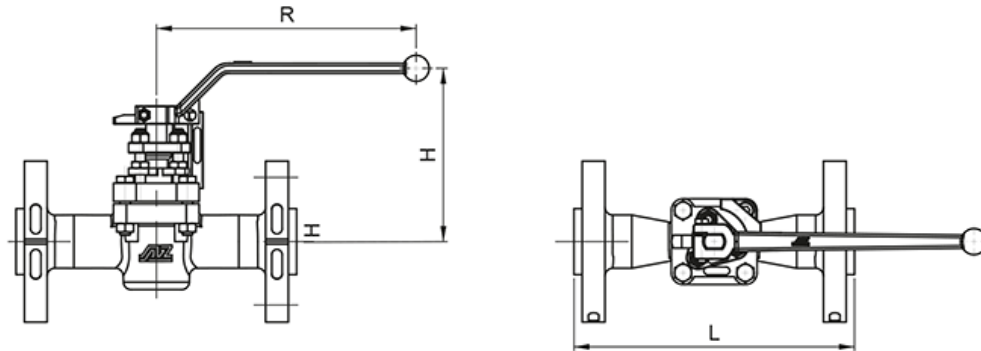
Type FSN

Port Forms

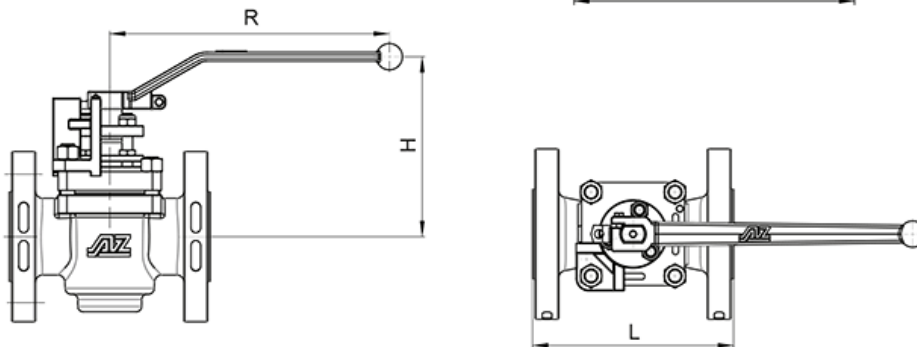


Dimensions

TYPE HDS
PN 100 / class 600



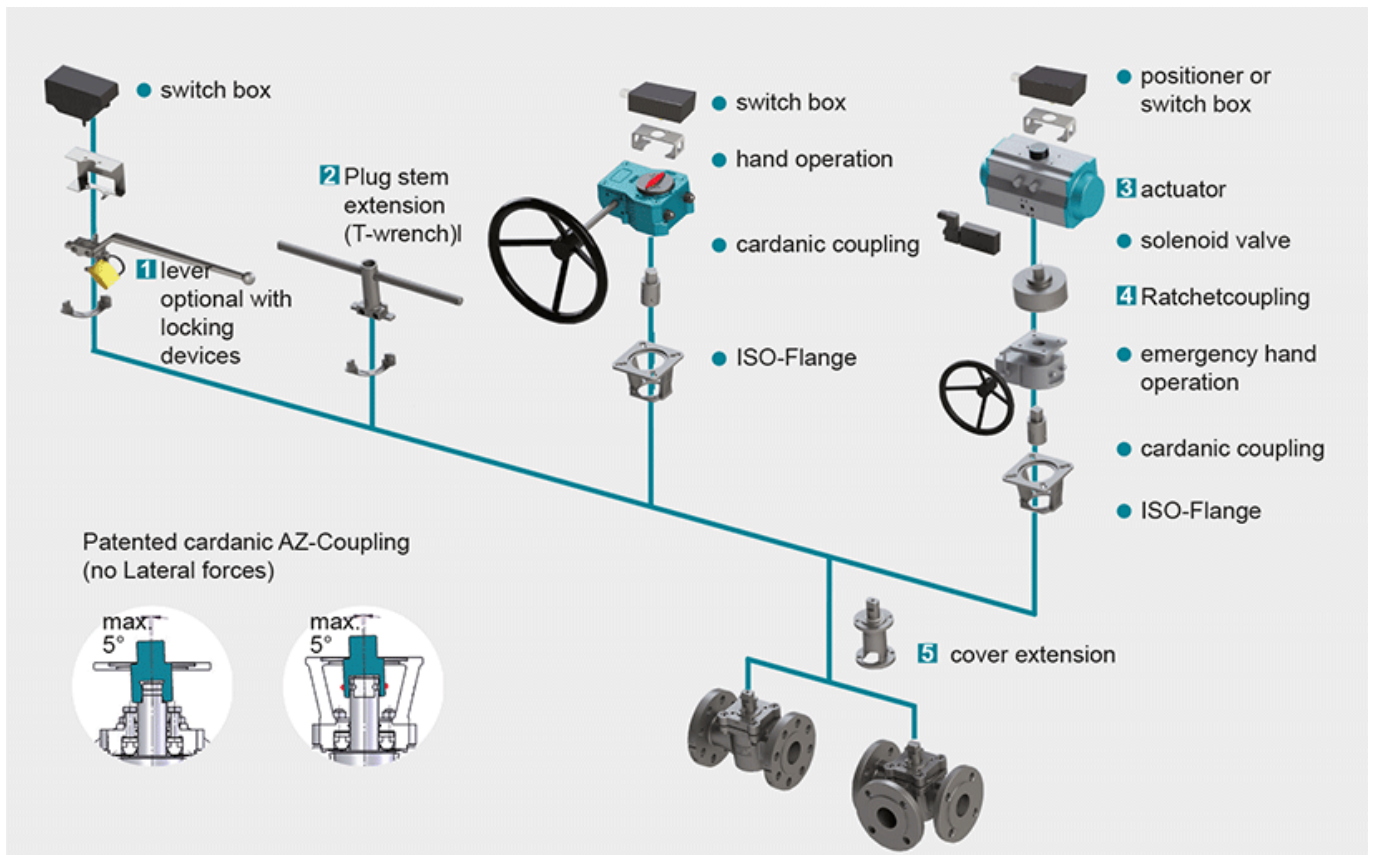
TYPE HDS-GL
PN 160 / class 900



DIN EN 1092-1 / 558-1	DN	PN	L	R	H	dihedron [mm]	torque* [Nm]	weight [Kg]	K_{vs} -value [m ³ /h]	C_v -value [US.gal/min]
	15E	100	210	200	125	11	45	5,6	12	14
	25E	100	230	200	135	11	90	10,1	25	29
	40	100	200	320	135	14	100	13,5	85	98
	50	100	230	420	195	17	180	25,0	126	146
	80	100	310/356	600	210	22	280	45,6	275	317
	100	100	350/432	600	210	22	380	56,0	197	228
ASME B 16.5 / 16.10	NPS	Class	L	R	H	dihedron [mm]	torque* [Nm]	weight [Kg]	K_{vs} -value [m ³ /h]	C_v -value [US.gal/min]
	½"E	600	165	200	125	11	45	4,2	13	16
	1"	600	216	200	135	11	45	10,0	26	31
	1½"	600	241	320	135	14	100	15,5	79	92
	2"	600	292	420	195	17	180	24,6	139	161
	3"	600	356	600	210	22	280	46,8	228	264
	4"	600	432	600	210	22	380	71,0	198	229
DIN EN 1092-1 / 558-1	DN	PN	L	R	H	dihedron [mm]	torque* [Nm]	weight [Kg]	K_{vs} -value [m ³ /h]	C_v -value [US.gal/min]
	15E	160	210	200	125	11	55	5,6	12	14
	25E	160	230	200	135	11	100	10,1	25	29
	40	160	200	320	135	14	120	13,5	85	98
	50	160	230/300	420	195	17	200	26,3	126	146
	80	160	282	600	210	22	300	47,9	275	317
	100	160	305	600	210	22	430	58,8	197	228
ASME B 16.5 / 16.10	NPS	Class	L	R	H	dihedron [mm]	torque.* [Nm]	weight [Kg]	K_{vs} -value [m ³ /h]	C_v -value [US.gal/min]
	½"E	900	216	200	125	11	55	4,2	13	16
	1"	900	254	200	135	11	55	10,0	26	31
	1½"	900	305	320	135	14	120	15,5	79	92
	2"	900	368	420	195	17	200	25,8	139	161
	3"	900	381	600	210	22	300	49,1	228	264
	4"	900	457	600	210	22	430	74,6	198	229

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