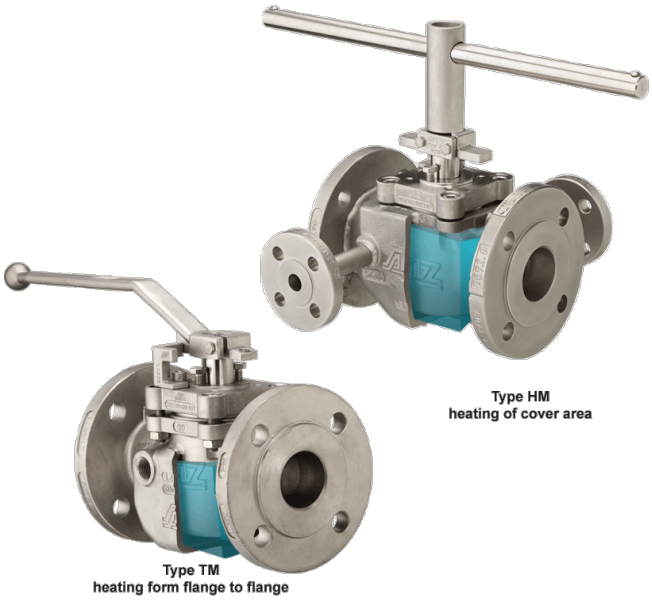
TM / HM

Plug valve with casted heating jacket

DIN-EN: DN 15 – 600 / PN 10 – 100
ASME: NPS ½“ – 24“ / class 150 – 600
PT range: -30 < T < 230/280°C, vacuum 10-8 mbar



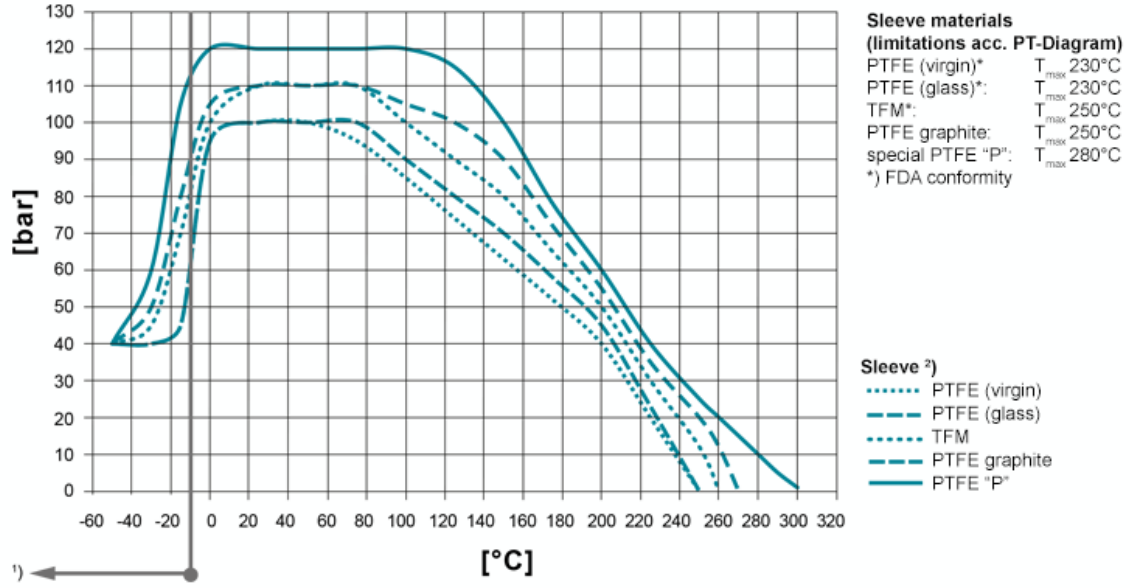
Design Features

Design Characteristics

- Heating from flange to flange
- heating of cover area (type HM)
- solid casted heating jacket
- solid casted connections for heating medium
- several heating jacket connections available (e. g. female threads / flanges / weld ends)
- available with drain connection for condensate (optional)
- oversize design (optional)
- available for almost all valve types (e. g. plug valves with weld ends, sample valves, fully lined valves, sight glasses etc.)

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

Sealnig Systems

Standard sealing for all major applications;
Tmax 230°C

Type STD

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

Type FS

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

Type CA

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

Type FSN

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

Type FSN-SL

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

Type CASN

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

Type CASN-SL

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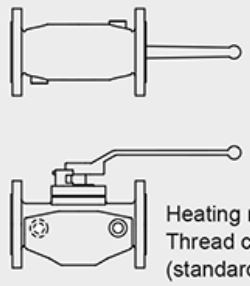
Connection Version

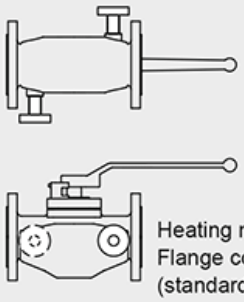
Standard connection version, other on request

1



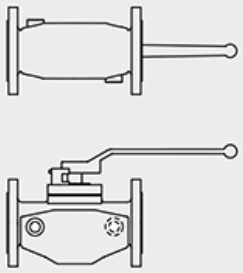
Heating medium:
Thread connection
(standard design)

1A

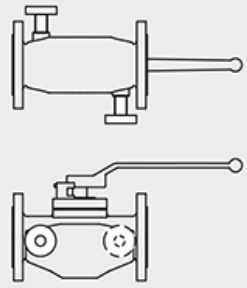


Heating medium:
Flange connection
(standard design)

2



2A



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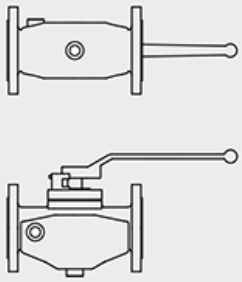

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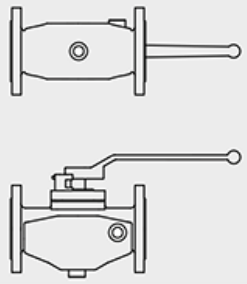

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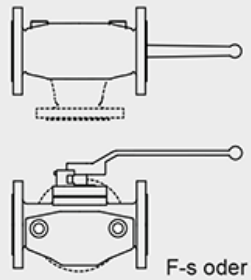
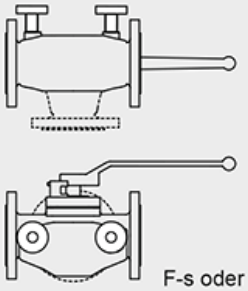


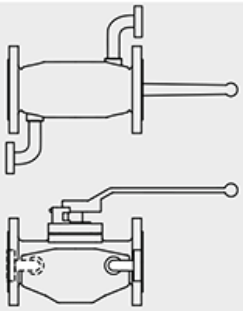
F-s oder F-3-W

5A



F-s oder F-3-W

6



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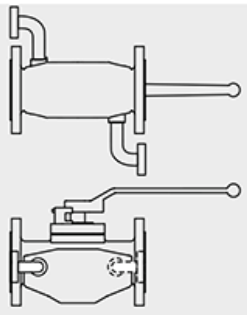

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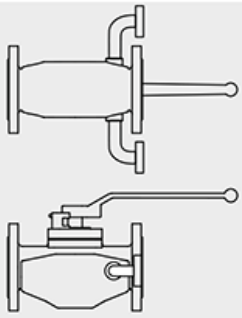

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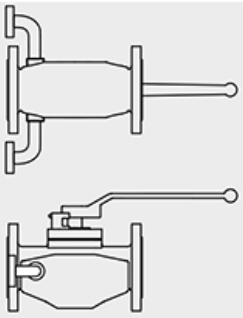

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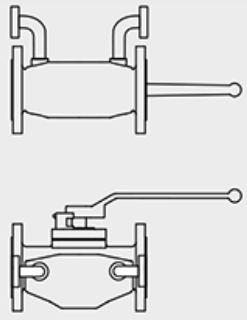

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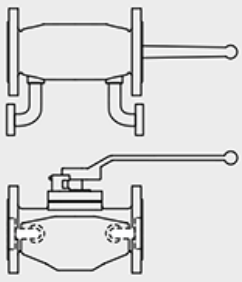
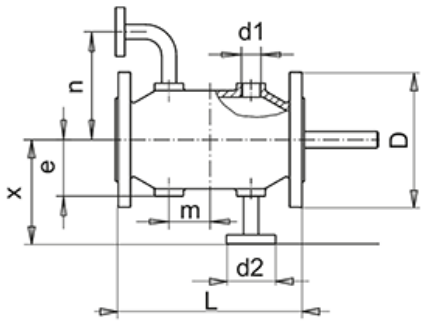


Dimensions



"n" min $= \left(\frac{ØD + Ød2}{2}\right) + 5$ [mm]

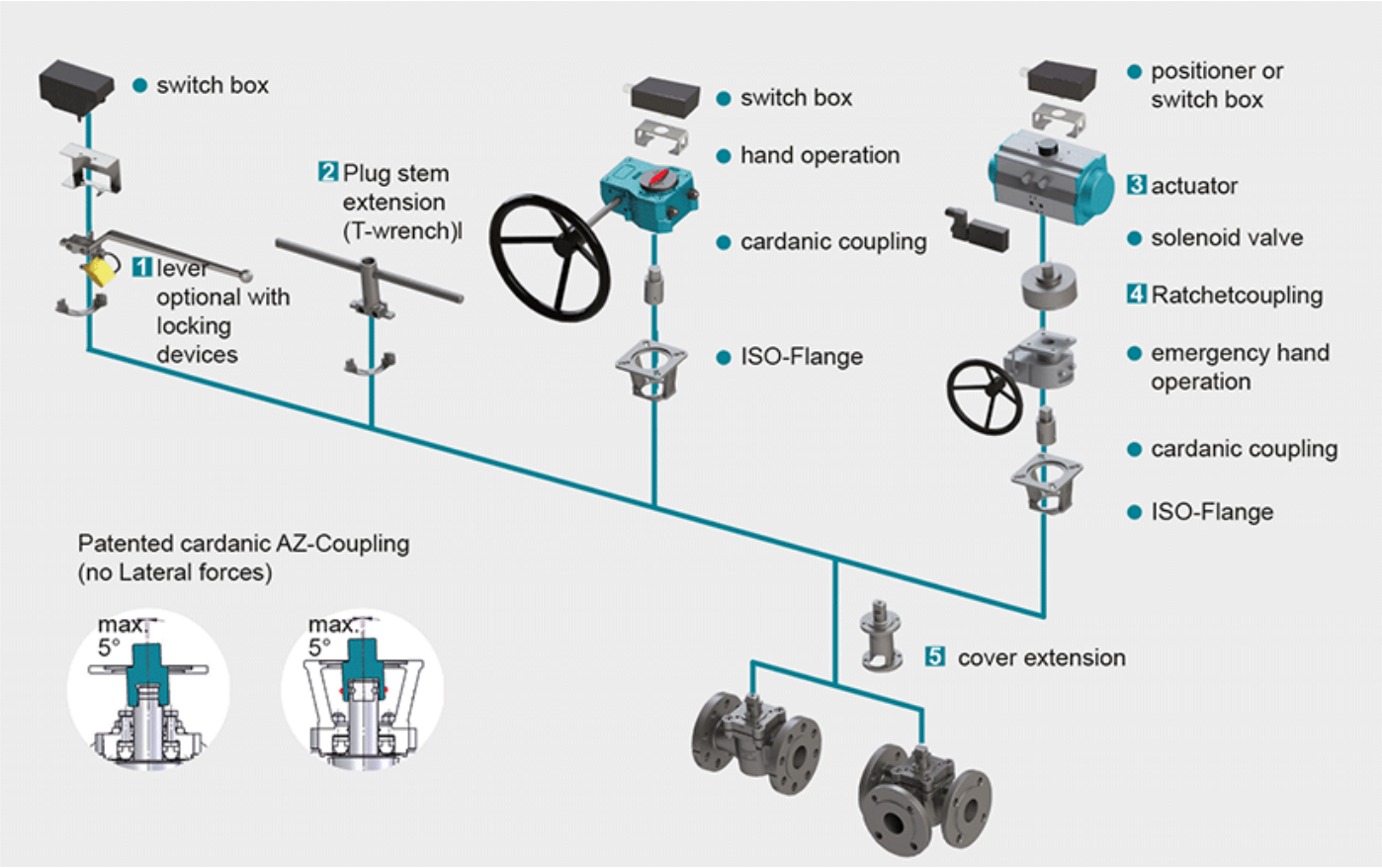
	DN	15	15E	20E	25 **	25E	32	40	50	65	80	100	100S	125	150	200	250	300
DIN	x	100	*	*	140	*	140	150	160	170	170	175	185	200	200	255	*	290
DIN	m	25	*	*	30	*	32,5	45	50	87,5	90	110	110	75	86	90	*	90
DIN	e	41	*	*	45	*	50	51	62	75	74	77	87,5	108	113	156	*	168
DIN	d1			G ⅜"				G ½"				G ¾"				G 1"		
DIN	d2									DN 15								
DIN	Oversize	40	40	40	50	50	50	65	80	80	100	150	150	150	200	250	*	350
DIN	L	**130** 200	**130** 200	**150** 200	**160** 230	**160** 230	**180** 230	**200** 290	**230** 310	**290** 310	**310** 350	**350**	**350**	**325** 350	**350** 400	**400** 450	*	**500** 550
ANSI 150 / ANSI 300	NPS	½"	¾"	1" **	1½"	2"	3"	4"	4"S	6"	8"	10"	12"	14"	16"	18"	20"	24"
ANSI 150 / ANSI 300	x	90	90	90	100	110	125	125	140	185	205	215	*	*	*	*	*	*
ANSI 150 / ANSI 300	m	0	0	15	30	35	40	45	40	50	45	65	*	*	*	*	*	*
ANSI 150 / ANSI 300	e	40	40	45	53	60	74	72	93	106	128	165	*	*	*	*	*	*
ANSI 150 / ANSI 300	d1		G ⅜"		G ½"			G ¾"						G 1"				
ANSI 150 / ANSI 300	d2									NPS ½"								
ANSI 150 / ANSI 300	Oversize	1½"	1½"	2"	3"	3"	4"	6"	6"	8"	10"	12"	*	*	*	*	*	*
ANSI 150	L Class 150	**108** 165	**117** 165	**127** 178	**165** 203	**178** 203	**203** 229	**229** 267	**229** 267	**267** 292	**292** 330	**330** 356						
ANSI 300	L Class 300	**140** 190	**152** 190	**165** 216	**190** 282	**216** 282	**282** 305	**305** 403	**305** 403	**403** 419	**419** 457	**457** 502	*	*	*	*	*	*

Oversize: For flange oversizes, specify the desired face-to-face length "L", the values in bold are standard face-to-face lengths.

* further nominal sizes on request

** jacket connection DIN / ANSI 10/18 mm below valve centre line

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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