

# SW / BW

## Plug valves with weld ends

DIN-EN: DN 10 – 500 / PN 10 – 100

ASME: NPS 3/8" – 24" / class 150 – 600

PT range: -30 < T < 230/280°C, vacuum 10-8 mbar



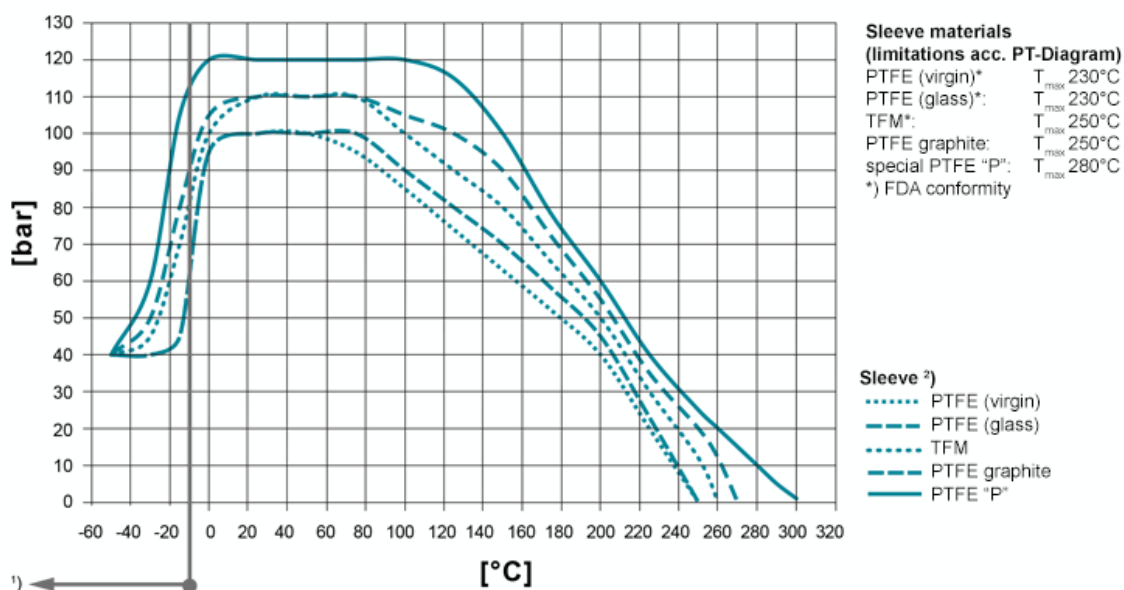
## Design Features

### Design Characteristics

- available with butt weld and socket weld ends
- 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
- vacuum tight
- fugitive emission resp. clean air act certified (TA – Luft 2002 approval)
- Directive 2014/68/EU
- fire safe design API 607 / ISO 10497
- FDA conformity

## PT-Diagram

General Pressure-Temperature-Diagram



**Operating temperatures  $< -30^{\circ}\text{C}$  and  $> 220^{\circ}\text{C}$  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  $-10^{\circ}\text{C}$  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;  
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<sub>max</sub> 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

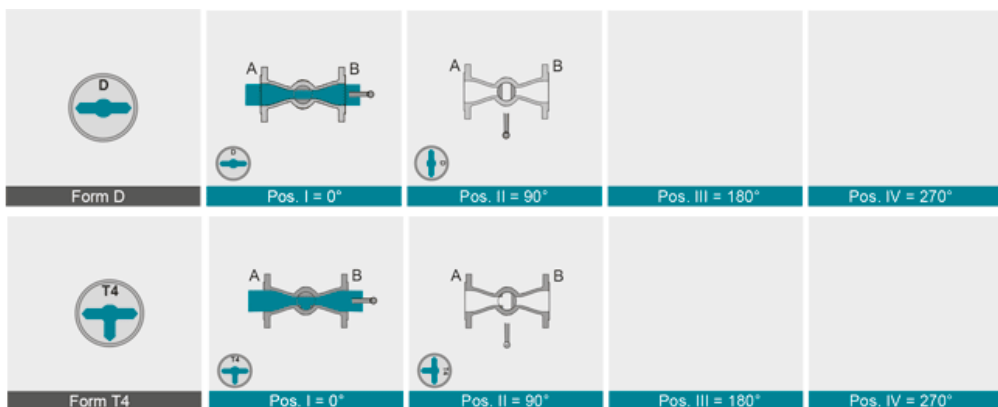
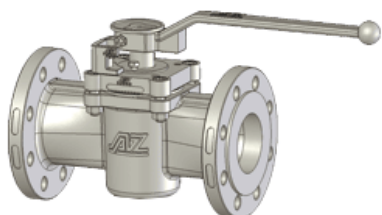
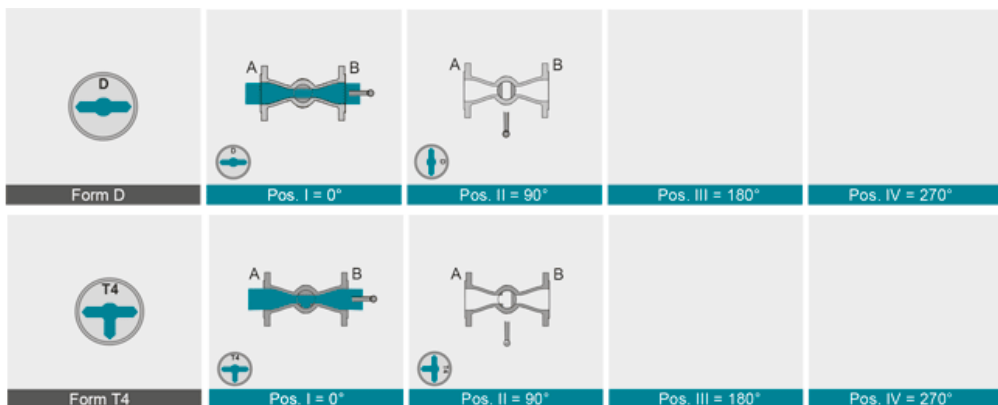
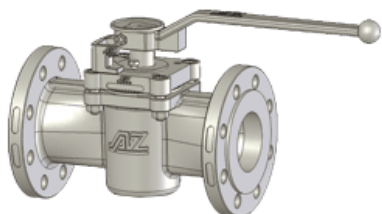
### Type CASN-SL

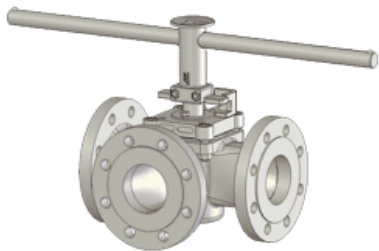
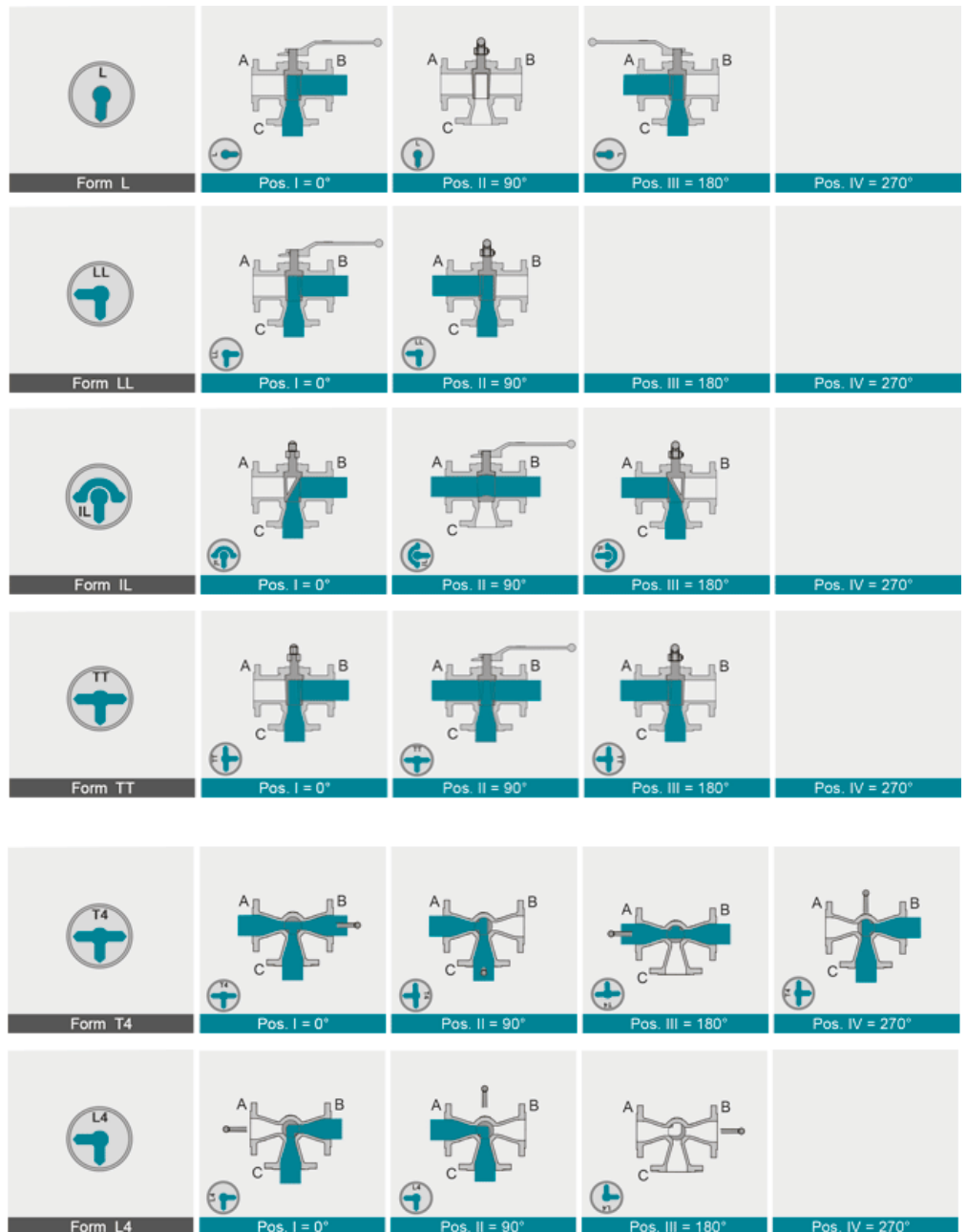
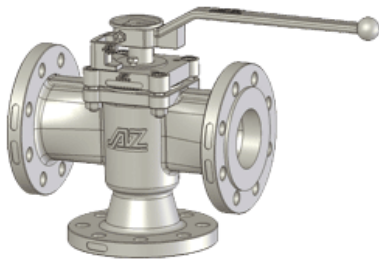
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## Port Forms



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

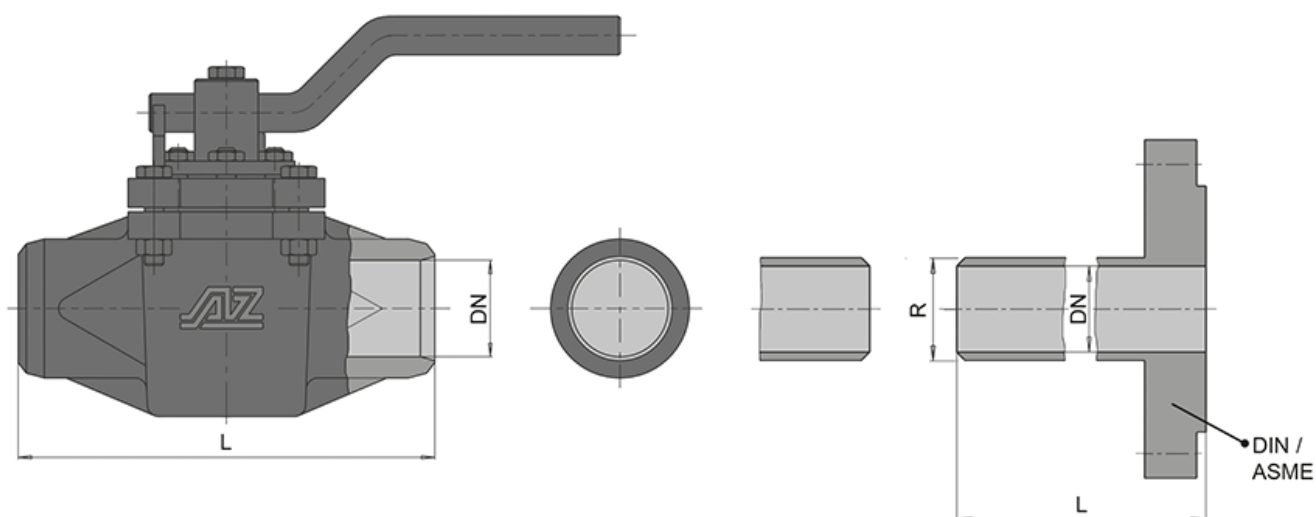




others on request

## Technische Daten

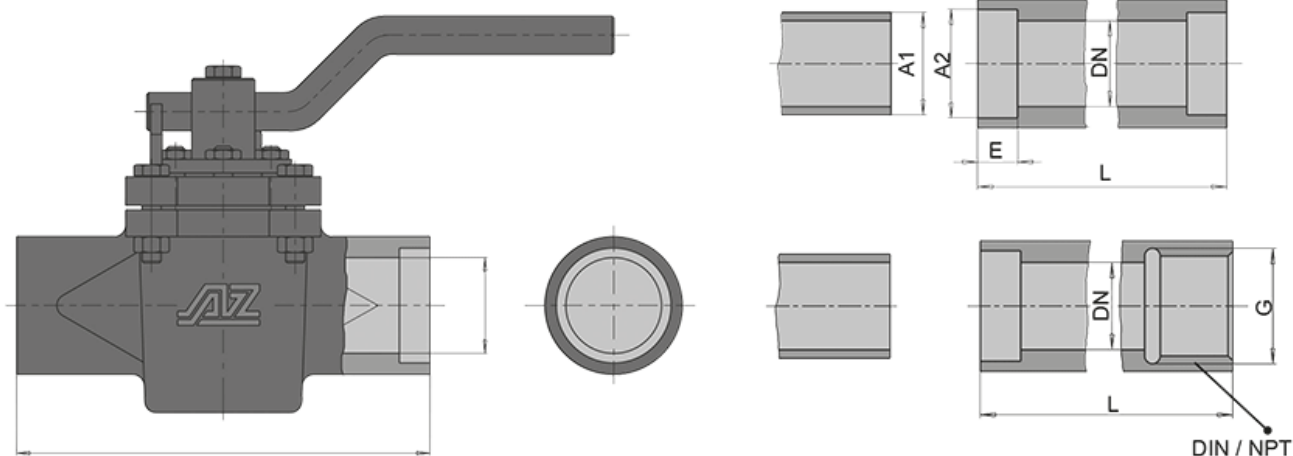
Typ BW



Buttwelding Ends

DIN	DN	ANSI	DIN	L*	ANSI	DIN	R*	ANSI
10		3/8"	165		130	18		18
15		1/2"	165		140	22		22
20		3/4"	165		152	28		28
25		1"	165		165	35		35
32		1 1/4"	180		178	44		44
40		1 1/2"	200		190	50		50
50		2"	230		216	62		62
65		2 1/2"	290		241	77		77
80		3"	310		283	91		91
100		4"	350		305	117		117
125		5"	325		381	144		144
150		6"	432		403	172		172
200		8"	508		419	223		223
250		10"	450		450	278		278
300		12"	500		500	329		329
350		14"	550		550	362		362
400		16"	600		600	413		413
450		18"	650		650	464		464
500		20"	700		700	516		516

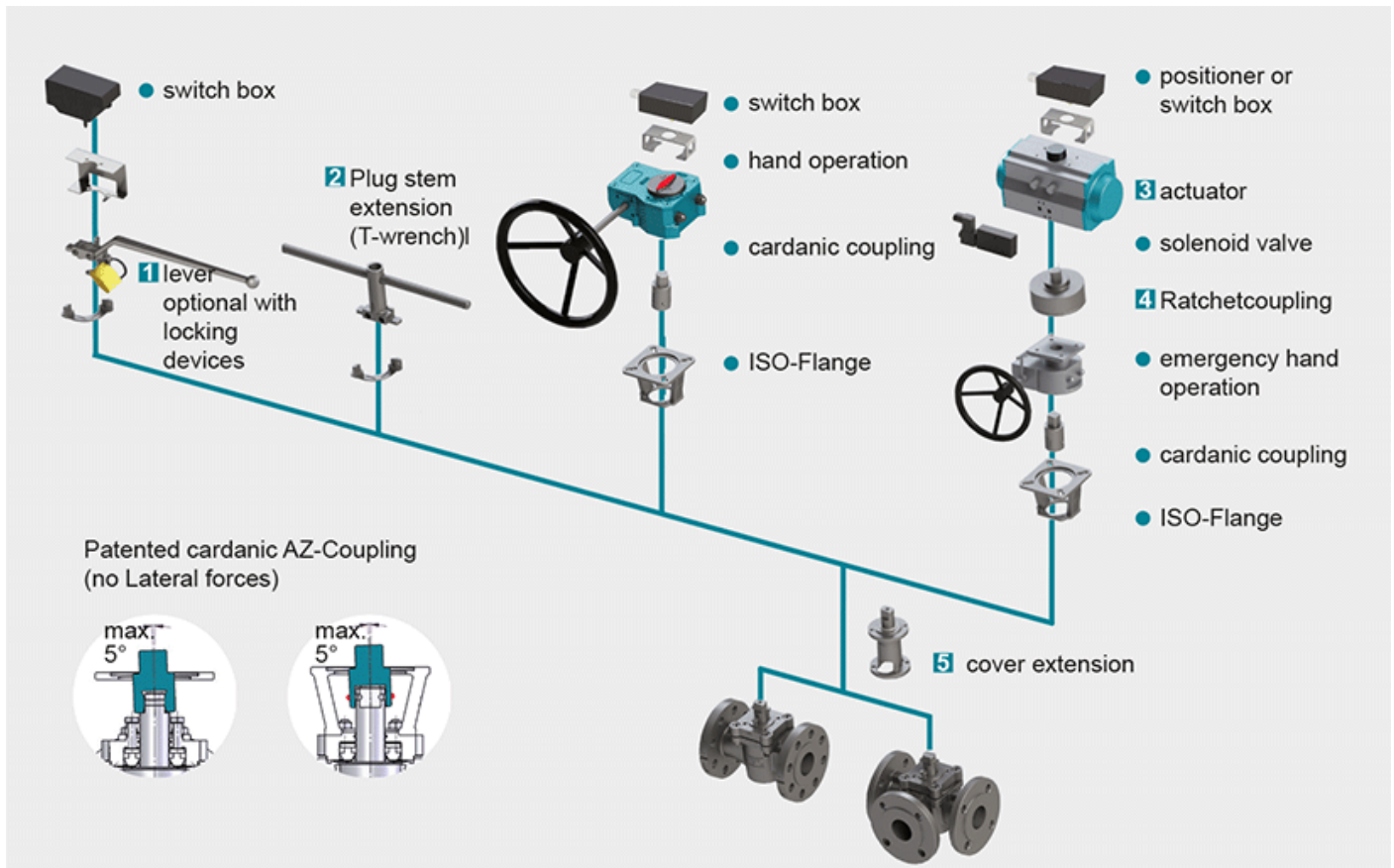
Typ SW



Socketwelding Ends

DN		L		A1		A2		E		G
DIN	ANSI	DIN	ANSI	mm	inch	mm	inch	mm	inch	DIN 2999
10	3/8"	165	130	17,1	0,675	17,25 <sup>+0,25</sup>	0,690 / 0,700	9,5	0,38	Rp3/8"
15	1/2"	165	140	21,3	0,840	21,71 <sup>+0,25</sup>	0,855 / 0,865	9,5	0,38	Rp1/2"
20	3/4"	165	152	26,7	1,050	27,05 <sup>+0,25</sup>	1,065 / 1,075	13	0,5	Rp3/4"
25	1"	165	165	33,4	1,315	33,78 <sup>+0,25</sup>	1,330 / 1,340	13	0,5	Rp1"
32	1 1/4"	180	178	42,2	1,660	42,54 <sup>+0,25</sup>	1,675 / 1,685	13	0,5	Rp1 1/4"
40	1 1/2"	200	190	48,3	1,900	48,64 <sup>+0,25</sup>	1,915 / 1,925	13	0,5	Rp1 1/2"
50	2"	230	216	60,3	2,375	61,11 <sup>+0,25</sup>	2,406 / 2,416	16	0,62	Rp2"
65	2 1/2"	290	241	73,0	2,875	73,87 <sup>+0,38</sup>	2,906 / 2,921	16	0,62	-
80	3"	310	283	88,9	3,500	89,86 <sup>+0,38</sup>	3,535 / 3,550	16	0,62	-
100	4"	350	305	114,3	4,500	115,53 <sup>+0,38</sup>	4,545 / 4,560	20	0,75	-

## 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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