

# MGZ / MBZ / MB / WA

Screwed plug valves / Instrumentation

thread size from ¼" up to 2"



## Design Features

### Design Characteristics

- available with female and male threads
- free of cavities
- maintenance free - self lubricating
- vacuum tight
- fugitive emission resp. clean air act certified (TA - Luft 2002 approval)
- Directive 2014/68/EU
- FDA conformity

Standard connections:

- tapered Whitworth pipe thread DIN 2999
- Whitworth pipe thread DIN ISO 228
- NPT pipe thread ANSI B 1.20.1
- BSP British standard pipe thread
- Ermeto EO progressive ring screwing
- Swagelok and Gyrolok tube fitting

# 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

### Materials Type MGZ

- Stainless Steel 1.4408, ASTM A351 CF8M
- other materials on request

### Materials Type MBZ/MB

- Special Materials Titan, Nickel, Monel, Tantal, Alloy...

### Materials Type WA

- Stainless Steel 1.4408, ASTM A351 CF8M

## Sealing Systems

Standard sealing for all major applications;

T<sub>max</sub> 230°C

### Type STD

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Firesafe sealing (API 607) with graphite packing for additional stem sealing; T<sub>max</sub> 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; T<sub>max</sub> 280°C

### Type FSN

[read more \[...\]](#)

Firesafe safety sealing (API 607) for fluctuating temperatures

with 3x graphite packing (live loaded disc springs) for additional

stem sealing; T<sub>max</sub> 280°C

### Type FSN-SL

[read more \[...\]](#)

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

T<sub>max</sub> 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; T<sub>max</sub> 230°C

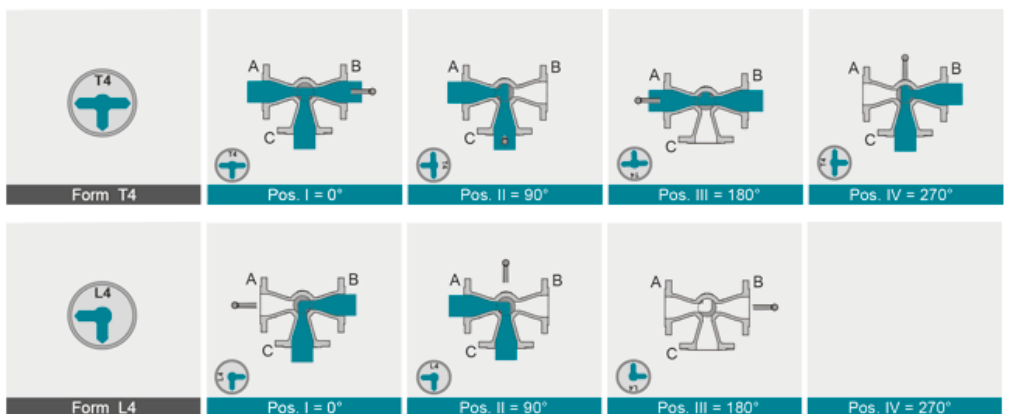
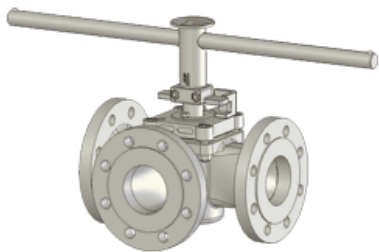
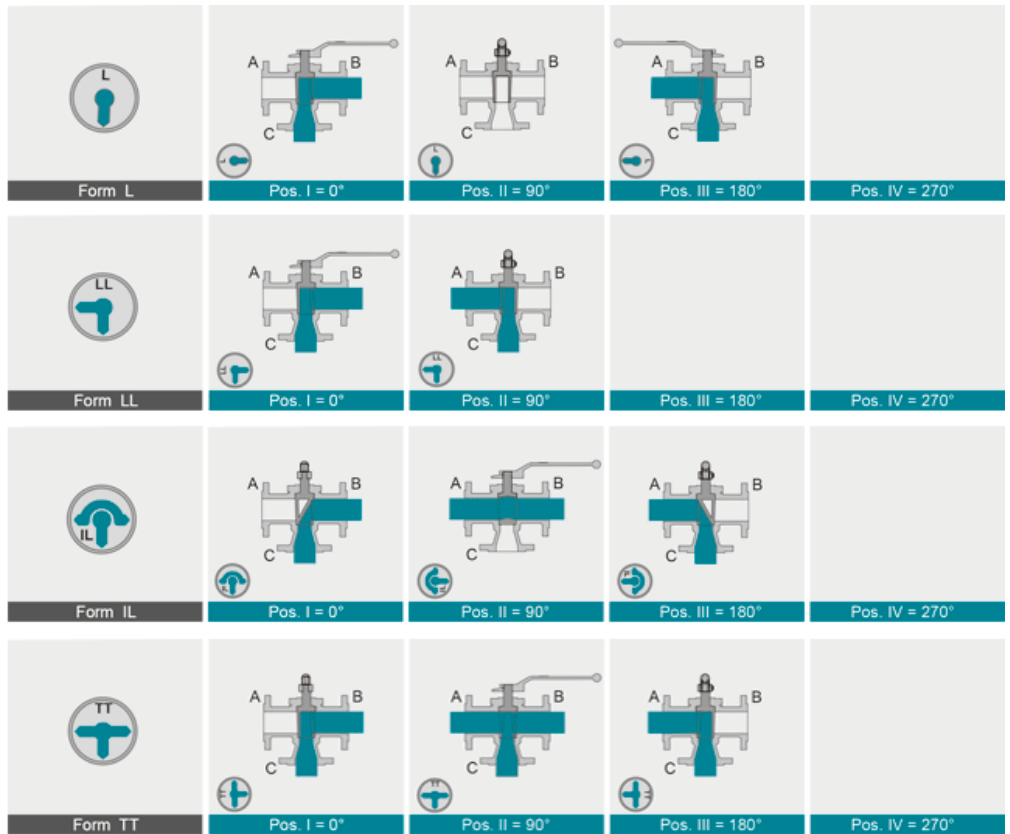
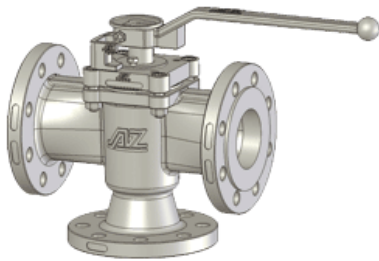
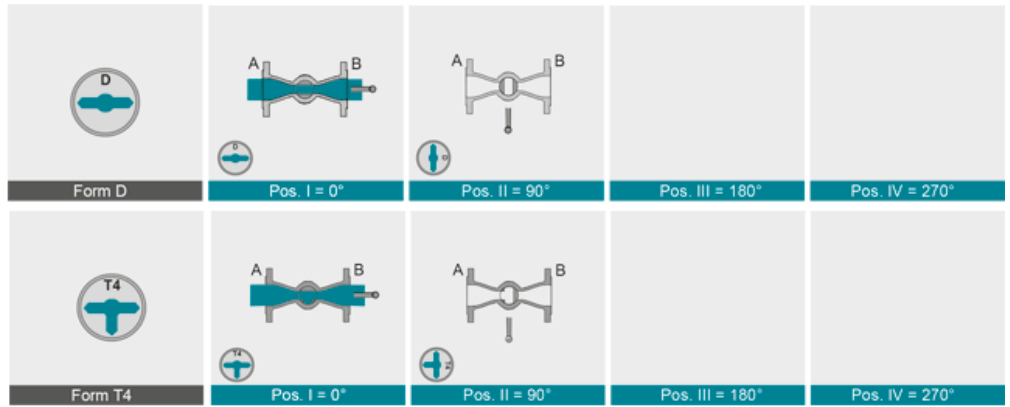
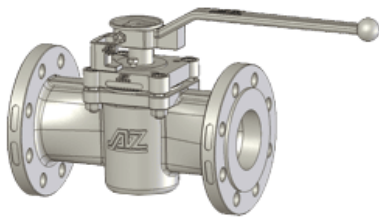
### Type CASN-SL

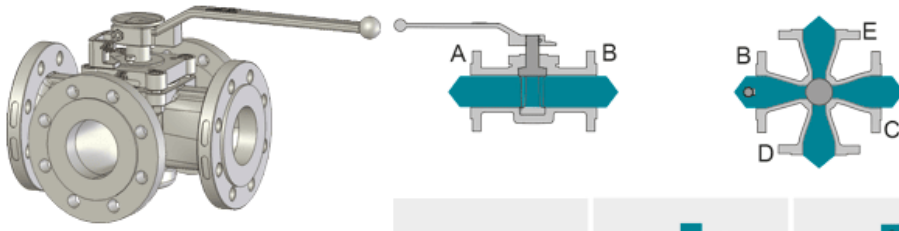
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## Port Forms

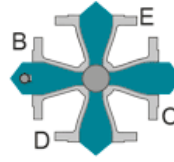
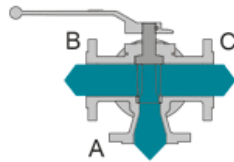
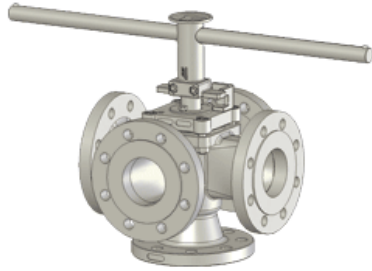
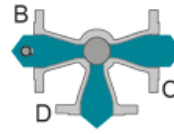
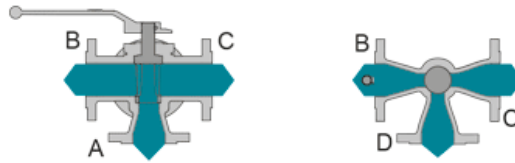
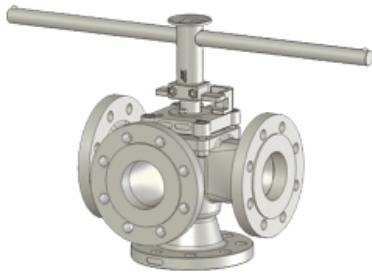


AZ plug valves are fitted with cast, rust proof position indicators. The position indicator is securely welded to the lever to prevent it from working loose.





<p>Form L4</p>	<p>Pos. I = 0°</p>	<p>Pos. II = 90°</p>	<p>Pos. III = 180°</p>	<p>Pos. IV = 270°</p>
<p>Form T4</p>	<p>Pos. I = 0°</p>	<p>Pos. II = 90°</p>	<p>Pos. III = 180°</p>	<p>Pos. IV = 270°</p>
<p>Form LL4</p>	<p>Pos. I = 0°</p>	<p>Pos. II = 90°</p>		

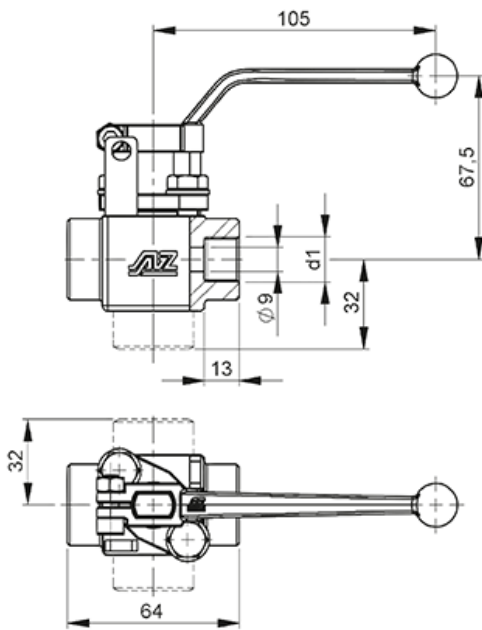


<p>Form L</p>	<p>Pos. I = 0°</p>	<p>Pos. II = 90°</p>	<p>Pos. III = 180°</p>	<p>Pos. IV = 270°</p>
<p>Form LL</p>	<p>Pos. I = 0°</p>	<p>Pos. II = 90°</p>	<p>Pos. III = 180°</p>	<p>Pos. IV = 270°</p>
<p>Form IL</p>	<p>Pos. I = 0°</p>	<p>Pos. II = 90°</p>	<p>Pos. III = 180°</p>	<p>Pos. IV = 270°</p>
<p>Form T</p>	<p>Pos. I = 0°</p>	<p>Pos. II = 90°</p>	<p>Pos. III = 180°</p>	<p>Pos. IV = 270°</p>
<p>Form TT</p>	<p>Pos. I = 0°</p>	<p>Pos. II = 90°</p>	<p>Pos. III = 180°</p>	<p>Pos. IV = 270°</p>

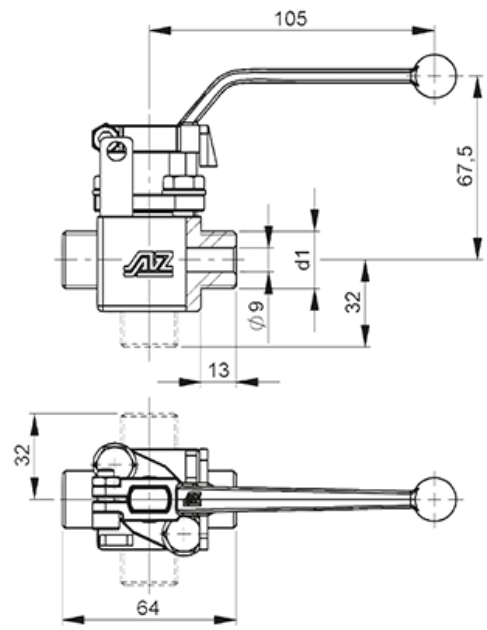
## Dimensions

MG / MGZ / MBZ / MB	Connection		MGZ	MBZ/MB	WA
	NPT Pipe thread ANSI B 1.20.1	female		1/4" - 3/4"	1/4" - 1"
male			1/4" - 3/4"	1/4" - 1"	
Tapered Whitworth Pipe Thread	female		Rp 1/4" - Rp 3/4"	Rp 1/4" - Rp 1"	
	male		R 1/4" - R 3/4"	R 1/4" - R 3/4"	
Witworth Pipe Thread DIN ISO 228	female		G 1/4" - G 3/4"	G 1/4" - G 1"	
	male		G 1/4" - G 3/4"	G 1/4" - G 1"	G 1/4"
BSP British Standard Pipe Thread	female		R 1/4" - R 3/4"	R 1/4" - R 1"	
	male		R 1/4" - R 3/4"	R 1/4" - R 1"	
ERMETO EO Progressive Pipe Thread	light **		10-15 mm M16x1,5-M22x1,5)	6-22 mm (M12x1,5-M30x1,5)	
	heavy **		10-14 mm (M18x1,5-M22x1,5)	6-14 mm (M14x1,5-M22x1,5)	
GYROLOG Tube Fitting	metric pipe **		pipe AD 10-14 mm	pipe AD 3-25 mm	
	ANSI pipe **		pipe AD 3/8" - 1/2"	pipe AD 1/15"-1"	
SWAGELOK Tube Fitting	metric pipe **		pipe AD 10-14 mm	pipe AD 3-25 mm	
	ANSI pipe **		pipe AD 3/8" - 1/2"	pipe AD 1/15"-1"	

Type MGZ  
with female thread

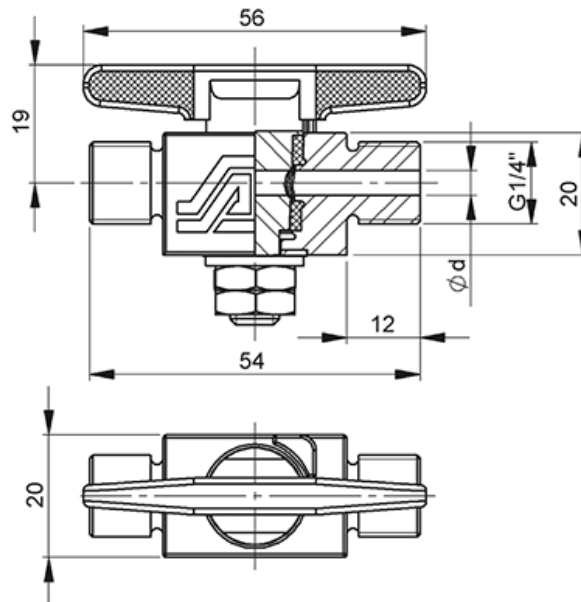


Type MGZ  
with male thread



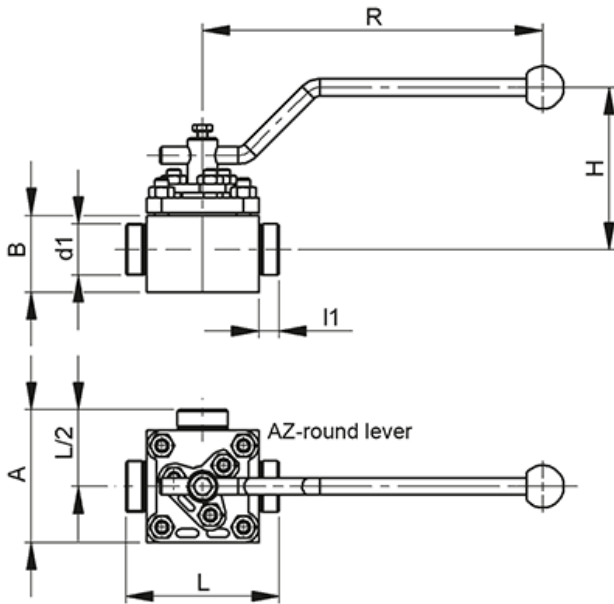
All sizes same dimensions (R $\frac{1}{4}$ " - R $\frac{1}{2}$ " )

Type WA with male thread  
 $\phi d = 4$  or  $6$  mm

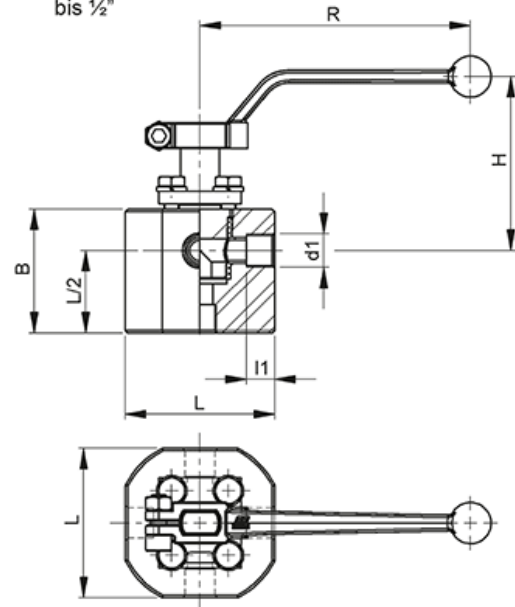




Type MB (M-3-W)  
with male thread  
von 3/4" bis 1"

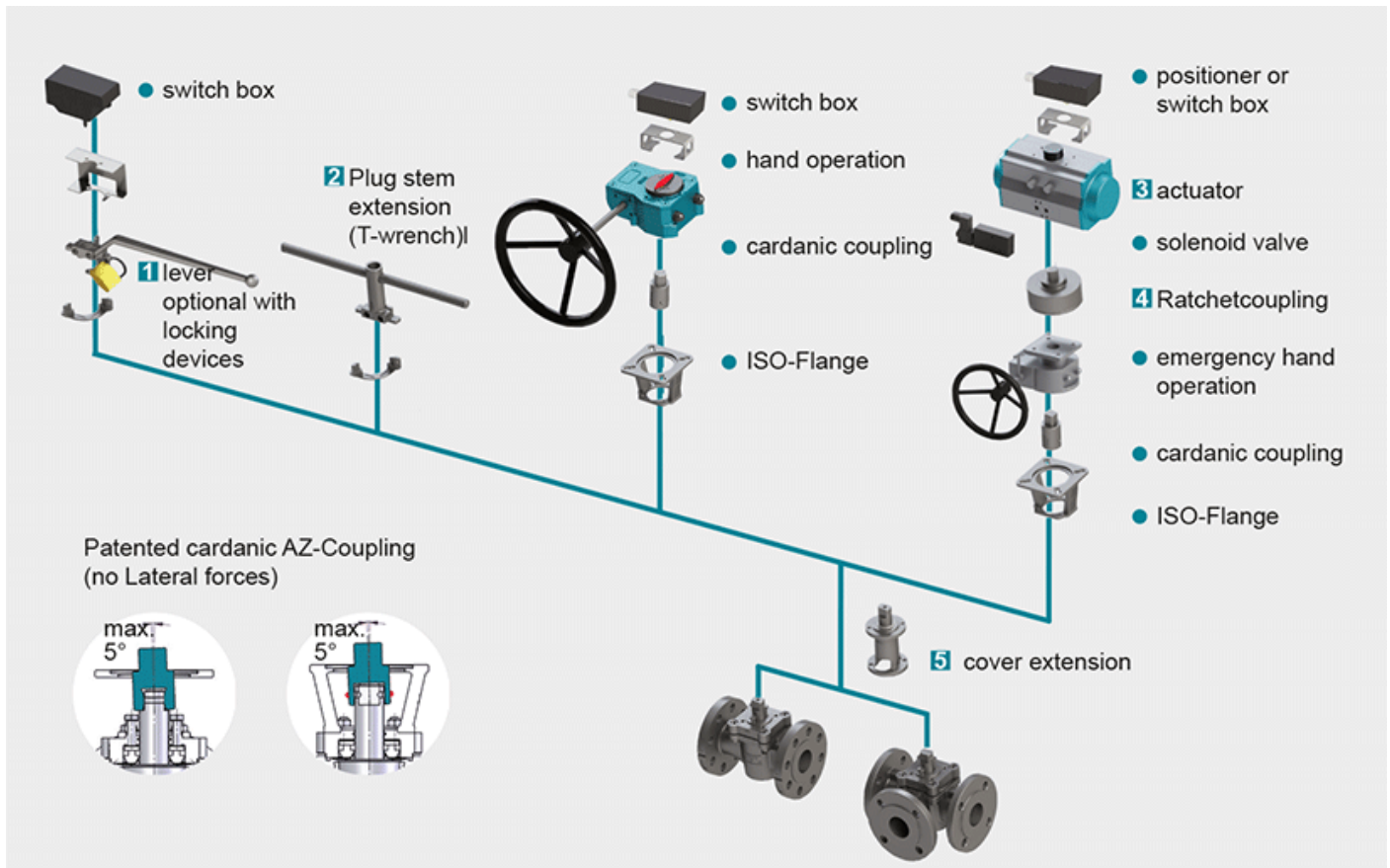


Type MBZ (M-5)  
with female thread  
bis 1/2"



MBZ / MB	d1	l1	L	L2	h	B	A	R (MBT)	R (MB)	H	external pipe dimension $\phi$	ERMETO	SWAGELOG	GYROLOK
	[ $\phi$ mm]											[ $\phi$ mm]	[ $\phi$ mm]	[ $\phi$ mm]
1/4"	13/10*	64/58*	32	16	32	48	105	100	67,5	-	-	-	-	
3/8"	13/10*	64/58*	32	16	32	48	105	100	67,5	-	-	-	-	
1/2"	13	64/80*	32/40*	16/22,5*	32	48/62,5*	105/200*	100/210*	67,5/110	L 6-8 / S 6**	3 - 6	3 - 6		
3/4"	13	80	40	22,5	45	62,5	200	210	110	L 10-12 / S 8-10**	8 - 12	8 - 12		
1"	13	80	40	22,5	45	62,5	200	210	110	L 15-22 / S 14-20**	14 - 16	14 - 16		

## 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  $\geq 150.000$  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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