

3-way ball valve, article 445-MS with electrical actuator Diameter G 3/8" up to G 2"

3-ball valve threaded ends, full bore and with standardized interface according to ISO 5211 for direct mounting of pneumatic or electrical actuators. Designed for general, industrial use. The nickel-plated brass ball is optionally available with **L-bore** or **T-bore**. Suitable for neutral gaseous and liquid media (no steam) considering material resistance brass CW 617N.

- **three sides female thread according to ISO 228**
- **body outside nickel-plated**
- **all sides 100% tight closing by the use of 4 PTFE-ball seals**

Note: The freezing of the medium in the ball valve must be avoided in any case.



	Ambient	-15° C ... +60° C
	Medium	-20° C ... +160° C

Operating-variants:

Lever

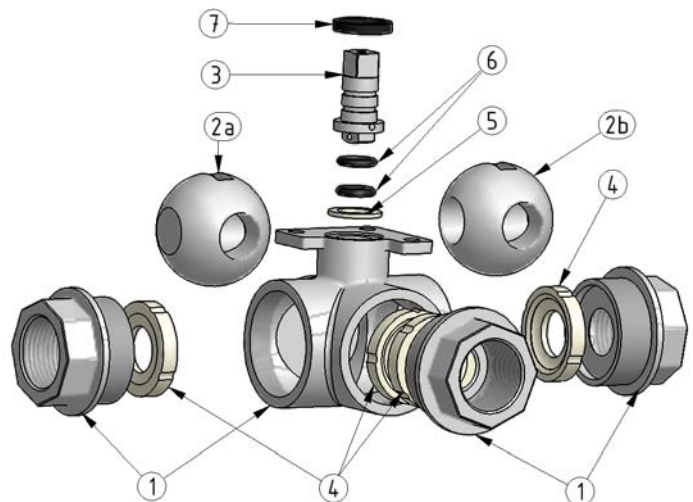


pneumatic Actuator



- Design Standard DIN EN 12516-1
- Housing strength DIN EN 12516-2
- Design pressure PN 30 / PN 16 / PN 10 (depending on nominal diameter)
- Identification EN 19, MSS SP-25
- Inspection / test DIN EN 12266 P10 / P11 / P12

Pos.	Description	Material
1	Body	Brass CW 617N nickel-plated
	threaded ends	Brass CW 617N nickel-plated
2a	Ball L-bore	Brass CW 614N chrome-plated
2b	Ball T-bore	Brass CW 614N chrome-plated
3	Stem	Brass CW 614N
4	Ball seal	4x PTFE-profile shells
5	Washer	PTFE
6	Seal	2x O-ring VITON
7	Washer	Polyamide PA6



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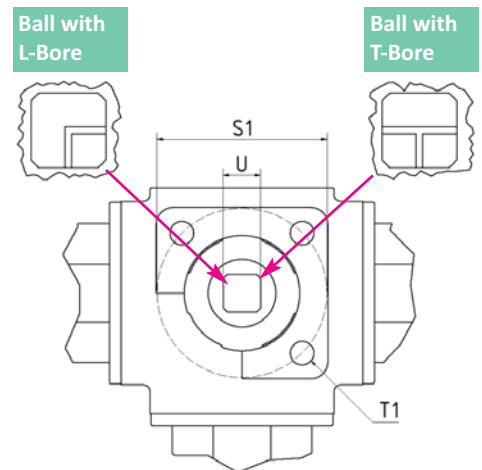
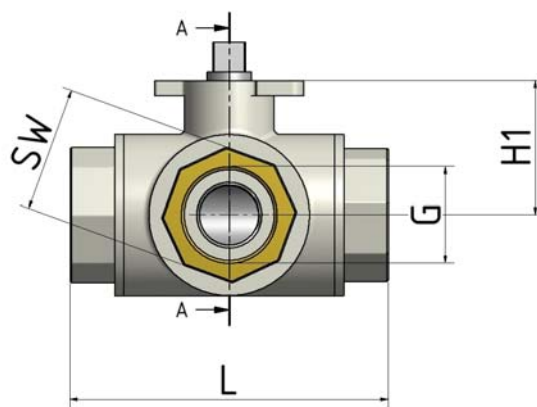
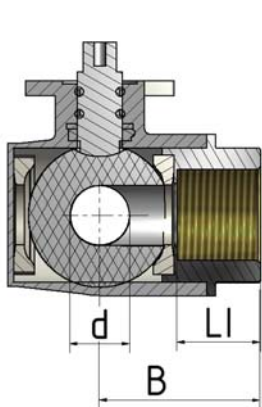
Ball valve and electric actuator, each with standardized interface according to ISO 5211, enable direct, backlash-free assembly.

Modern design and compact construction characterize this series of electric part-turn actuators. The simple but robust and reliable design guarantees high availability in daily industrial use. The actuators are maintenance-free and completely pre-wired internally. The self-locking gear with high-performance grease filling guarantees a long service life. The unit is delivered ready for connection, adjusted and tested.

Depending on the process requirements, there are two versions to choose from:

- a) OPEN / CLOSED operation class A according to EN 15714-2
- b) Jog mode or positioning operation, class B (S4 - 30%, motor power up to 120 starts per hour at peak load) according to EN 15714-2.

Further information on the electric drives can be found in the individual data sheets.



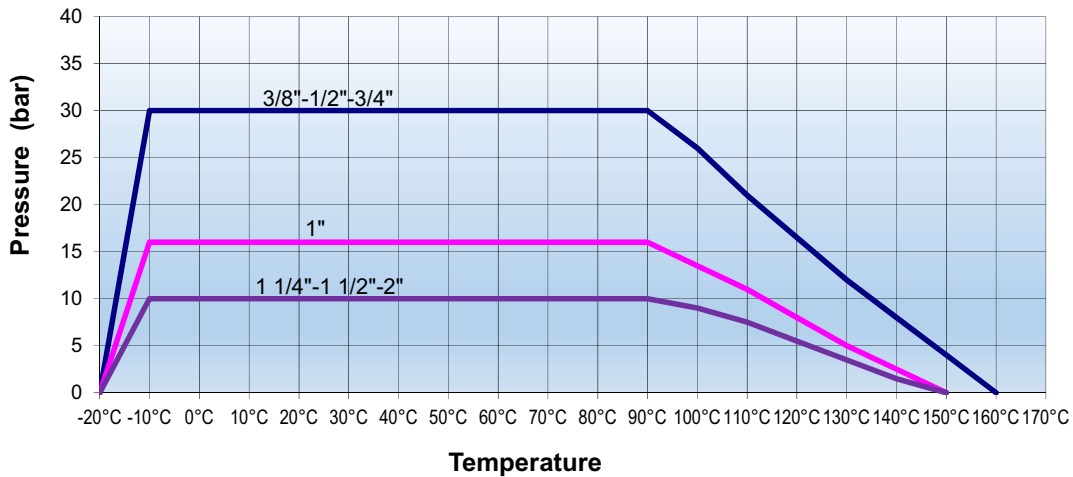
Diameter	L (mm)	LI (mm)	H1 (mm)	SW (mm)	d (mm)	B (mm)	S1	U (mm)	T1 Ø (mm)	Pressure rating max (bar)	Weight (kg)
G 3/8"	67,0	11,4	30,5	22	11	33,5	F03	9	3 x 6	30	0,52
G 1/2"	77,0	15,0	32,5	27	15	38,5	F03	9	3 x 6	30	0,65
G 3/4"	87,0	16,3	41,5	32	20	43,5	F05	11	3 x 7	30	1,10
G 1"	105,0	19,1	47,0	41	25	52,5	F05	11	3 x 7	16	1,83
G 1 1/4"	122,5	21,4	59,5	50	32	61,2	F05	11	3 x 7	10	2,75
G 1 1/2"	138,5	21,4	74,0	55	40	69,2	F07	14	3 x 9	10	4,57
G 2"	166,0	25,7	85,0	70	50	83,0	F07	14	3 x 9	10	8,37

Diameter	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Ball bore Ø	11,0	15,0	20,0	25,0	32,0	40,0	50,0
KV-Value	3,0	3,9	7,9	13,0	20,7	36,7	54,0

445-MS-AQL-AQ_2021_ENG_Rev.0

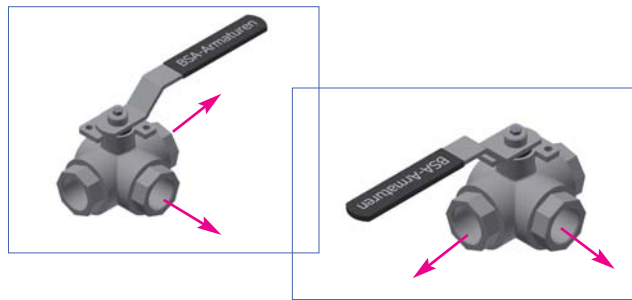
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Pressure-Temperature Diagram

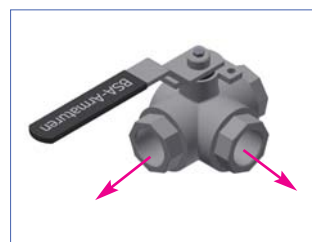
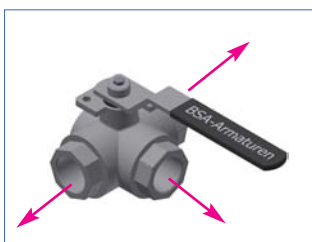


possible switching paths 3-way ball valves

3-way ball valve, article 445-MS with L-ball bore		
	switch-path 1	switch-path 2
basic position		
switch position 90°		
direction of rotation	right	left



3-way ball valve, article 445-MS with T-ball bore								
	switch-path 1	switch-path 2	switch-path 3	switch-path 4	switch-path 5	switch-path 6	switch-path 7	switch-path 8
basic position								
switch position 90°								
direction of rotation	right	left	right	left	right	left	right	left

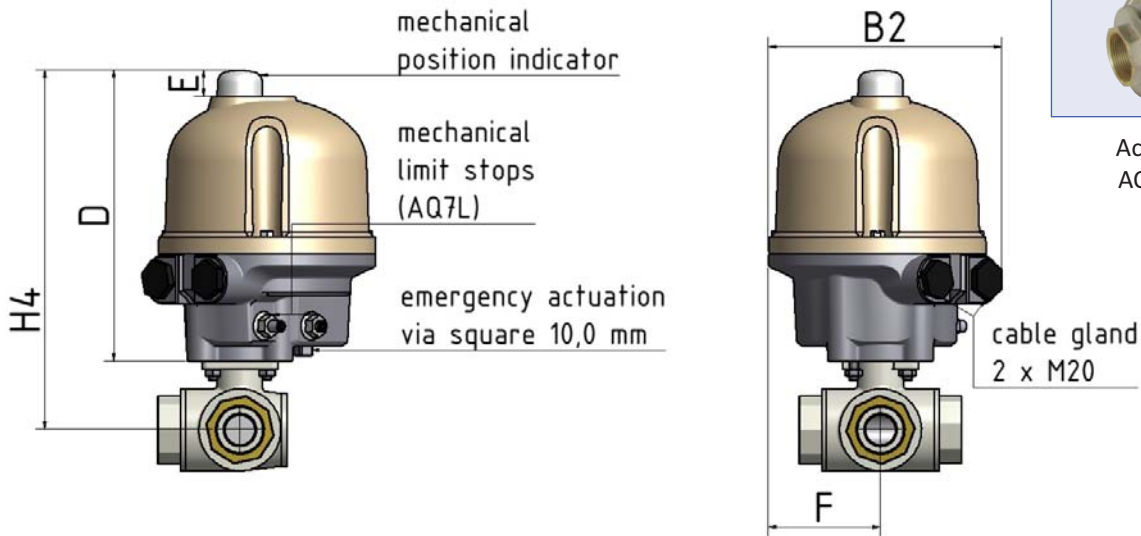


445-MS-AQL-AQ_2021_ENG_Rev. 0

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Actuator size
AQ1L - AQ7L



Ball valve 445-MS				Actuator design up to 10,0 bar					
Diameter G	Article-No.: L-Bore	Article-No.: T-Bore	Voltage	H4 (mm)	D (mm)	B2 (mm)	E (mm)	F (mm)	Weight (kg)
G 3/8"	193.3748.0.62	193.3750.0.62		205,5	175,0	150,0	17,5	89,5	3,02
	AQ1L	171.8093.1L.13	171.8093.1L.13						
	171.8092.1L.13	171.8092.1L.13	24 V						
G 1/2"	193.3748.0.63	193.3750.0.63		207,5	175,0	150,0	17,5	89,5	3,15
	AQ1L	171.8093.1L.13	171.8093.1L.13						
	171.8092.1L.13	171.8092.1L.13	24 V						
G 3/4"	193.3748.0.65	193.3750.0.65		216,5	175,0	150,0	17,5	89,5	3,60
	AQ3L	171.8093.3L.15	171.8093.3L.15						
	171.8092.3L.15	171.8092.3L.15	24 V						
G 1"	193.3747.0.67	193.3749.0.67		222,0	175,0	150,0	17,5	89,5	4,33
	AQ3L	171.8093.3L.15	171.8093.3L.15						
	171.8092.3L.15	171.8092.3L.15	24 V						
G 1 1/4"	193.3747.0.68	193.3749.0.68		234,5	175,0	150,0	17,5	89,5	5,25
	AQ3L	171.8093.3L.15	171.8093.3L.15						
	171.8092.3L.15	171.8092.3L.15	24 V						
G 1 1/2"	193.3747.0.69	193.3749.0.69		249,0	175,0	150,0	17,5	89,5	8,07
	AQ7L	171.8093.7L.15	171.8093.7L.15						
	171.8092.7L.15	171.8092.7L.15	24 V						
G 2"	193.3747.0.70	193.3749.0.70		260,0	175,0	150,0	17,5	89,5	11,87
	AQ7L	171.8093.7L.15	171.8093.7L.15						
	171.8092.7L.15	171.8092.7L.15	24 V						

445-MS-AQL-AQ_2021_ENG_Rev. 0