

## 3-way ball valve, article 441-VA with lever

**Diameter G 1/4" up to G 2"**

**3-way ball valve threaded ends with standardized interface** according to ISO 5211 for direct mounting of pneumatic or electrical actuators. Designed for general, industrial use. Stainless steel ball with reduced bore, optionally with L-bore or T-bore. Shaft seal consisting of multilayer PTFE V-rings, preloaded and self-adjusting by belleville washers and additional FKM O-ring.

Suitable for neutral, gaseous and liquid media (no steam) considering material resistance stainless steel 1.4408.

- three-sided with female thread according to ISO EN 228
- 100% sealing on all sides due to 4 PTFE ball seals

NOTE: Freezing of the medium in the ball valve must be avoided in any case.



	TÜV TA-Luft certified
	Antistatik-design ATEX 94/9/EC
	0036
	Ambient -20° C ... +60° C
	Medium -34° C ... +200° C

- Design standard DIN EN 12516-1
- Housing strength DIN EN 12516-2
- Design pressure PN 68
- Marking EN 19, MSS SP-25
- Inspection / test DIN EN 12266 P10 / P11 / P12

### Operating-variants:

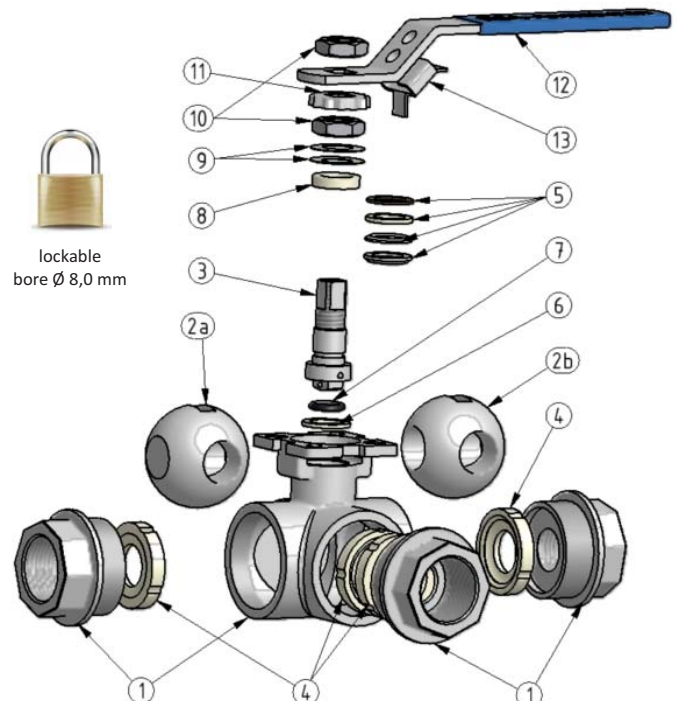
Pneumatic actuator



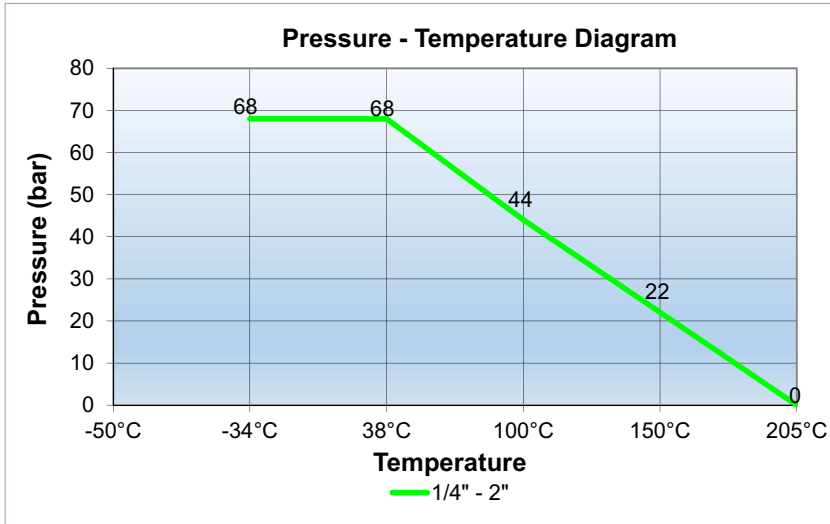
Electrical actuator



Pos.	Description	Material
1	Body	Stainless steel 1.4408
	Threaded ends	Stainless steel 1.4408
2a	Ball L-bore	Stainless steel 1.4408
2b	Ball T-bore	Stainless steel 1.4408
3	Stem	Stainless steel 1.4401
4	Ball seal	4x PTFE-profile shells reinforced
5	Packing set	PTFE
6	Slide ring	PTFE
7	Stem seal	VITON O-Ring
8	Thrust ring	Stainless steel 1.4401
9	Belleville washers	Stainless steel 1.4301
10	Stem nut	Stainless steel 1.4571
11	Safety cap	Stainless steel 1.4301
12	Lever	Stainless steel 1.4301
	Lever coating	PVC, blue
13	Lever lock	Stainless steel 1.4301

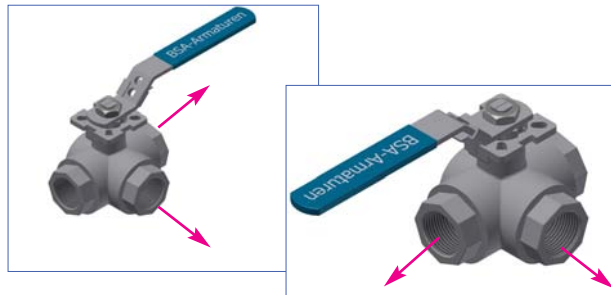


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with lever  
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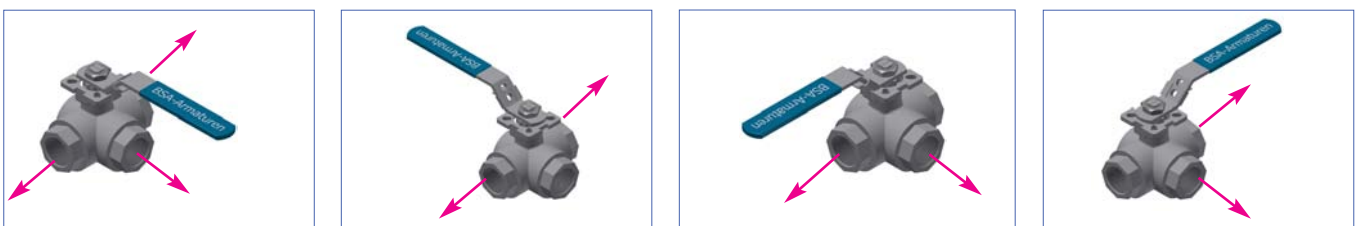


**possible switching paths 3-way ball valves**

3-way ball valve, article 441-VA with L-ball bore		
	switch-path 1	switch-path 2
basic position		
switch position 90°		
direction of rotation	right	left



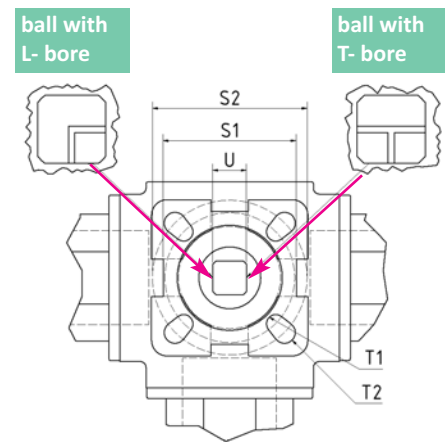
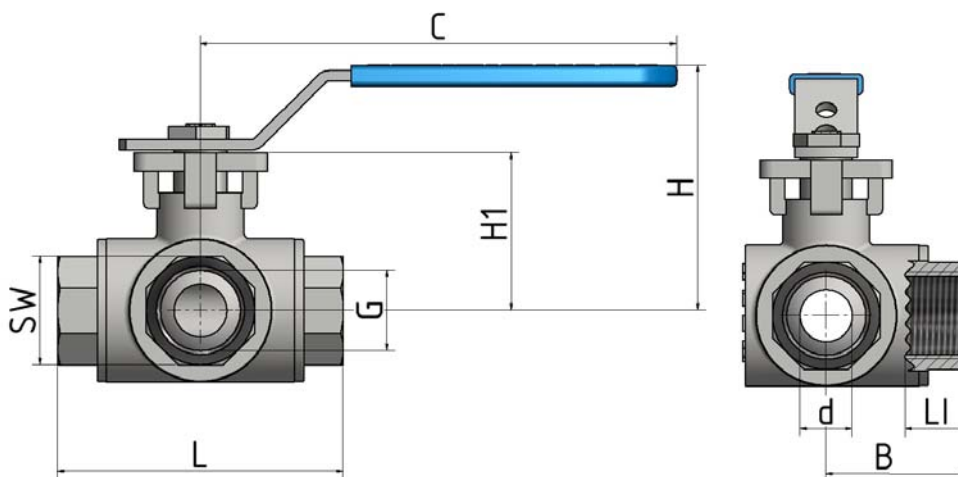
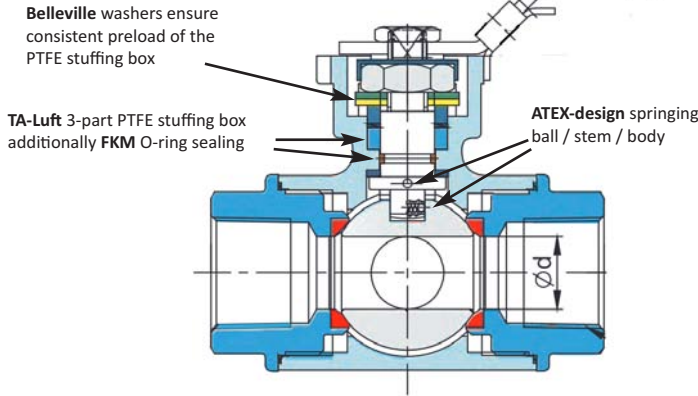
3-way ball valve, article 441-VA with T-ball bore								
	switch-path 1	switch-path 2	switch-path 3	switch-path 4	switch-path 5	switch-path 6	switch-path 7	switch-path 8
basic position								
switch position 90°								
direction of rotation	right	left	right	left	right	left	right	left



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### 3-way ball valve, article 441-VA with lever

Diameter G 1/4" up to G 2"



Diameter	Article-Numbers															Pressure rating max. (bar)	Weight (kg)
	441-VA/L L-bore	441-VA/T T-bore	L (mm)	LI (mm)	H (mm)	H1 (mm)	C (mm)	SW (mm)	d (mm)	B (mm)	S1/S2	U (mm)	T1 (mm)	T2 (mm)			
G 1/4"	215.3911.6.61	215.3995.6.61	79	13,8	70	42,0	147,0	27	11	39,5	F03/F04	9	4x6	4x6	68	0,92	
G 3/8"	215.3911.6.62	215.3995.6.62	79	14,2	70	42,0	147,0	27	11	39,5	F03/F04	9	4x6	4x6	68	0,80	
G 1/2"	215.3911.6.63	215.3995.6.63	79	14,5	70	42,0	147,0	27	11	39,5	F03/F04	9	4x6	4x6	68	0,84	
G 3/4"	215.3911.6.65	215.3995.6.65	88	16,7	77	49,0	147,0	34	15	44,0	F03/F05	9	4x6	4x7	68	1,07	
G 1"	215.3911.6.67	215.3995.6.67	108	20,5	87	59,5	176,5	41	20	54,0	F04/F05	11	4x6	4x7	68	1,92	
G 1 1/4"	215.3911.6.68	215.3995.6.68	124	21,8	93	63,0	176,5	50	25	62,0	F04/F07	11	4x6	4x9	68	3,01	
G 1 1/2"	215.3911.6.69	215.3995.6.69	135	23,5	103	73,5	215,0	56	32	67,5	F05/F07	14	4x7	4x9	68	4,20	
G 2"	215.3911.6.71	215.3995.6.71	164	30,0	113	82,8	215,0	70	40	82,0	F05/F07	14	4x7	4x9	68	7,02	

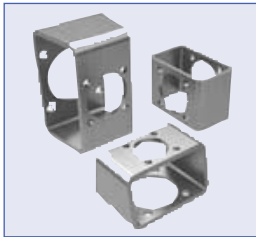
Diameter	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
$\varnothing$	11,0	11,0	11,0	15,0	20,0	25,0	32,0	40,0
KV	2,8	3,0	3,3	3,9	7,9	13,0	20,7	36,7

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### 3-way ball valve, Article 441-VA, with optional accessories

Diameter G 1/4" up to G 2"

**optional accessories consoles / couplings / shaft extensions**



ISO 5211 consoles  
Steel zinc plated / stainless steel



couplings stainless steel  
Square / two-flat



shaft extension ISO 5211  
100 mm stainless steel



shaft extension T-handle  
100 mm stainless steel

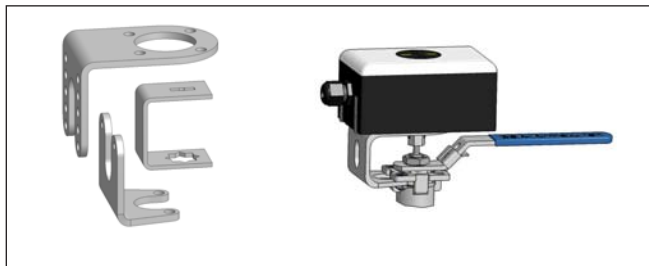
**optional accessories limit switch assembly with box or open mounted**

**limit switch box**  
2-fold Honeywell, ZM1



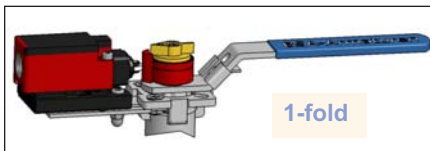
switching capacity	max. 5 A, 250 V AC
temperature range	-25° C up to +85° C
cable entry	M20 x 1,5
connection	clamp 2,5 mm <sup>2</sup>
body material	aluminium
console	stainless steel
order code:	179.8705HEZ

**mounting kit for switch boxes**  
incl. assembly and adjustment



diameter (ball valve)	order code:
1/4" ... 1/2"	327.8775.F04VMM
3/4" ... 1"	327.8775.F05VMM
1 1/4" ... 2"	327.8775.F07VMM
2 1/2" ... 4"	327.8775.F10VMM

**Bernstein-limit switches type I88-SU1Z RiW K**



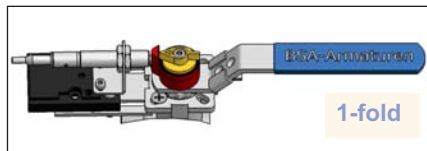
1-fold



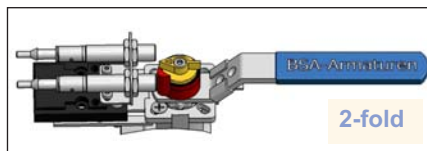
2-fold

switching capacity	max. 10 A, 250V AC
temperature range	-30° C up to +80° C
cable entry	M20 x 1,5
connection	clamp 2,5 mm <sup>2</sup>
body material	PA 6 self-extinguishing
order code:	1-fold: 208.8716HKE 2-fold: 208.8716HKZ

**IFM proximity switches type IF5297**



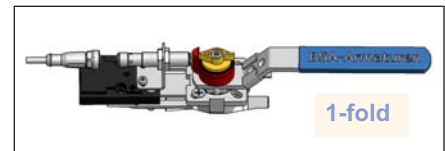
1-fold



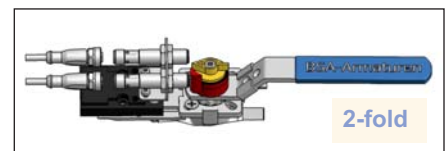
2-fold

operating voltage	10 ... 55 V DC
current consumpt.	< 15 mA (24 V)
temperature range	-25° C up to +80° C
body material	<b>brass with LED</b>
mounting bracketed	stainless steel / plastic
order code:	1-fold: 302.8770HEE 2-fold: 302.8770HEZ

**IFM proximity switches type IFS209**



1-fold



2-fold

operating voltage	10 ... 30 V DC
current consumpt.	< 12 mA (24 V)
temperature range	-25° C up to +70° C
body material	<b>brass with LED</b>
mounting bracketed	stainless steel / plastic
order code:	1-fold: 302.8771HEE 2-fold: 302.8771HEZ

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