

DATASHEET

More valve in less space



"H+ Effect" - high availability

100% manufactured in the region. Assembly and distribution on site



"H+ Method" - modular design

Reduced assembly and repair times due to optimised design



Durability - high number of switches

Mature manufacturing process and 100% EOL in-house testing



Wide temperature & pressure ranges

Wide range of media and ambient temperatures as well as large pressure ranges



Small, light and easy to service

Low vibration and easy installation in confined spaces

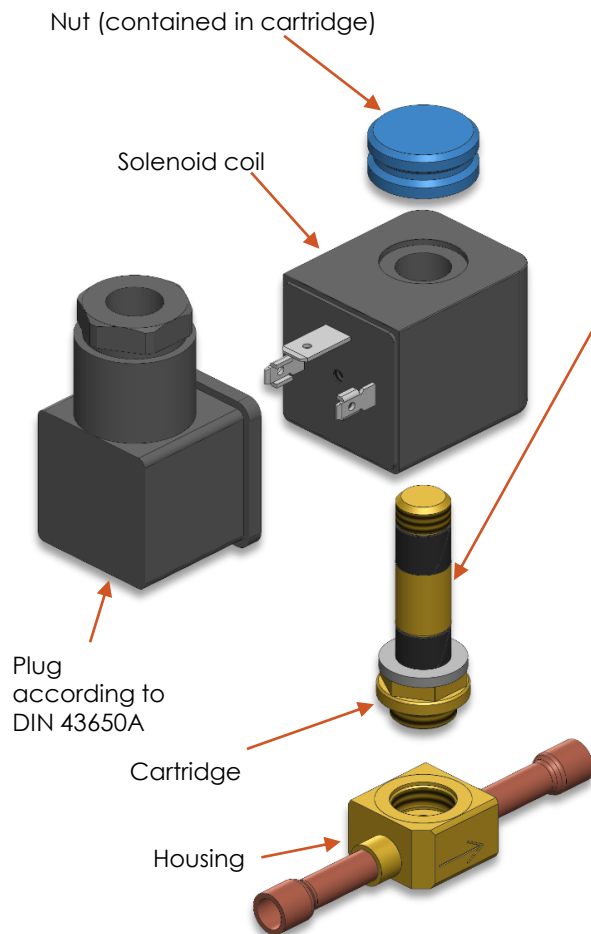


Low noise

Quiet gear changes, thus low noise emissions

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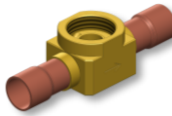


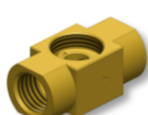
Structure of the valve



Different variants and sizes

- NO (Normally Open)
- NC (Normally Closed)
- Various minimum opening pressures
- Sizes 10, 15, 20, 30, 40

Various connection types

- Soldering tube
 
- Flared tube
 
- O-ring connection (external thread)
 
- Internal thread
 

General technical data

Media data

Permissible mediums	Released for CFC, HCFC, HFC, HFO/HFO blends
Medium temperature	-70° to +150°C

Product properties

Lifetime	up to 50 million switching operations ¹⁾
Valve Materials	Stainless steel, brass, PTFE seal, EPDM and/or FKM O-Rings

Environment and installation

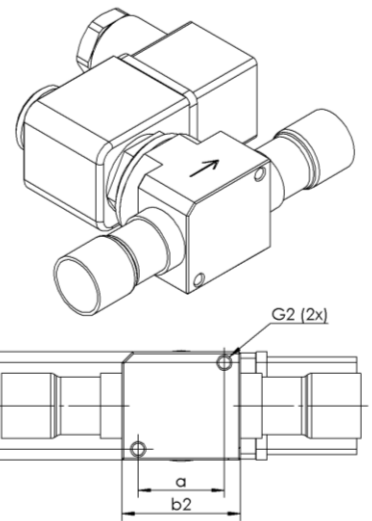
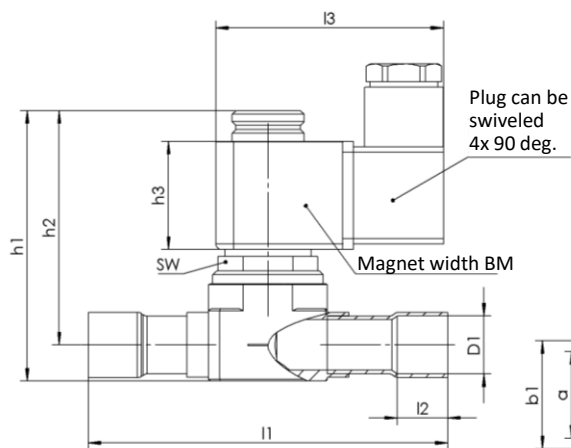
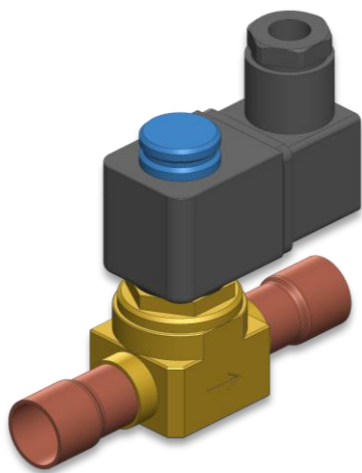
Ambient temperature	-40° to +70°C
Mounting position	arbitrary
Solder joint	The copper tubes are soldered into the brass housing with silver solder (melting range 640-680°)
Tightness to environment	He-leakage rate < 1.0x10 ⁻⁶ mbar x l/s tested according to DIN 1779 B6

1) May vary depending on medium

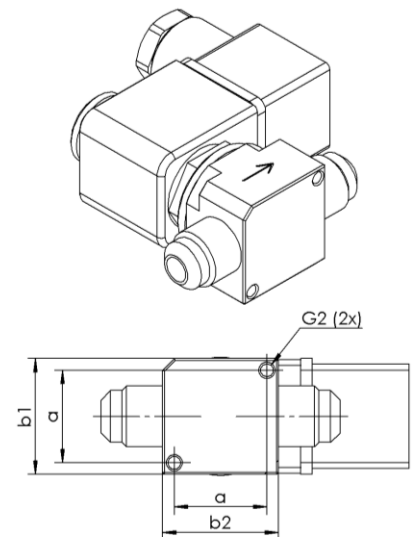
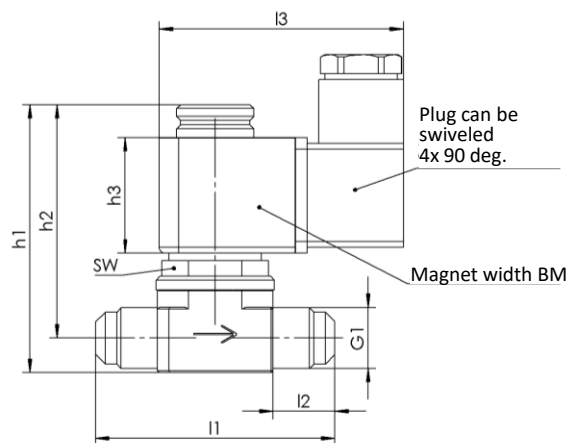
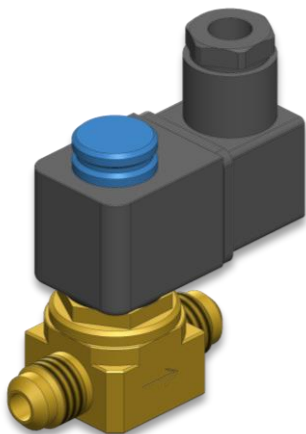
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Technical drawings

Soldering tube (LR)



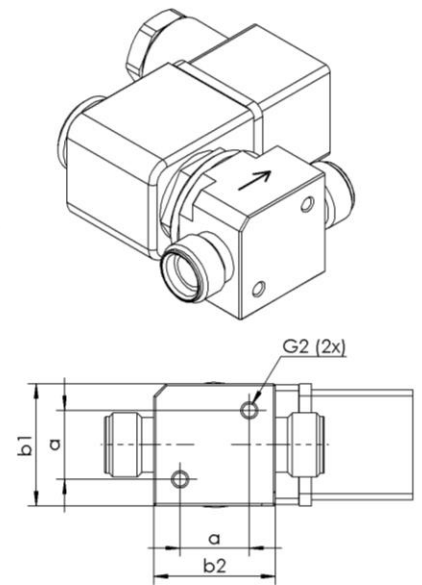
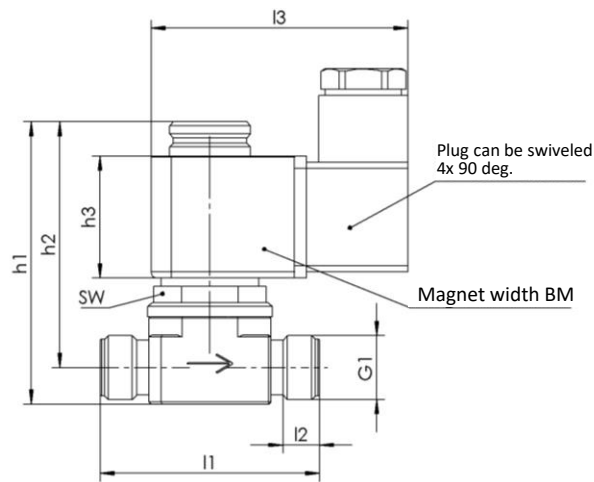
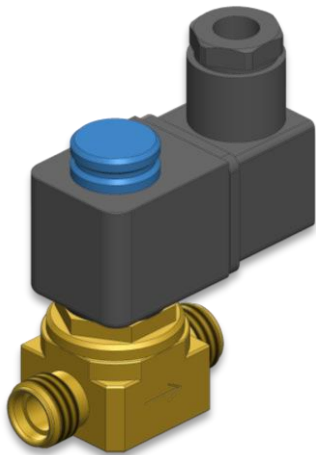
Flared tube (BR)



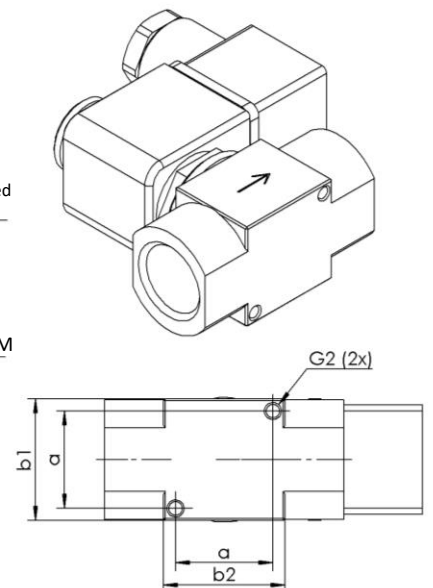
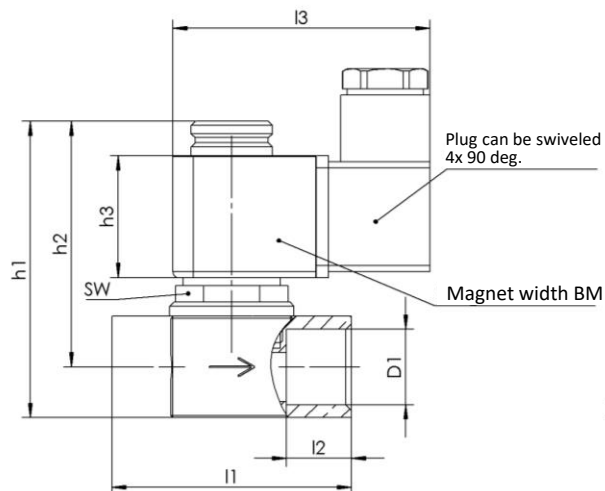
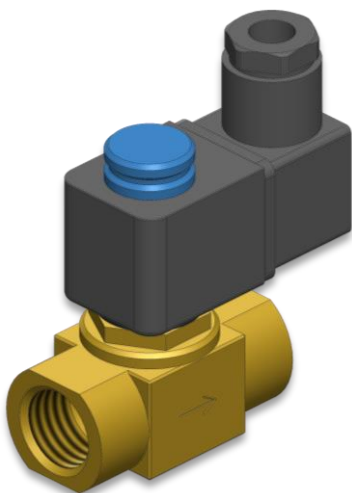
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Technical drawings

O-ring connection (male thread) (OR)



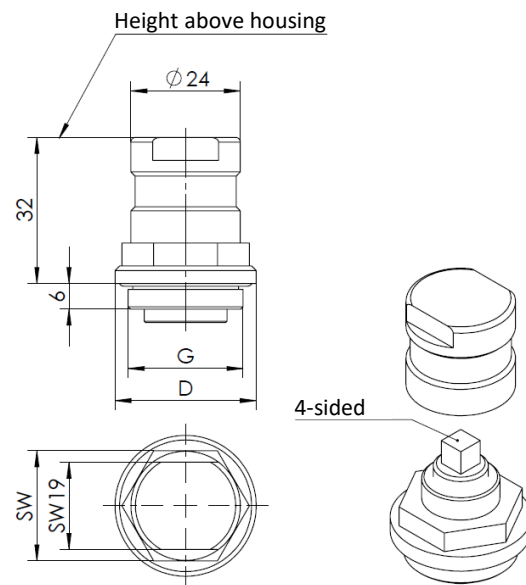
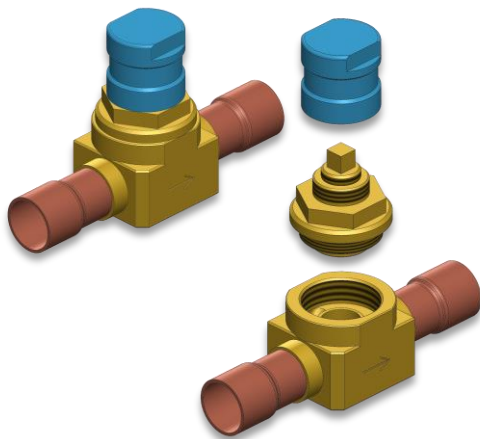
Internal thread (IG)



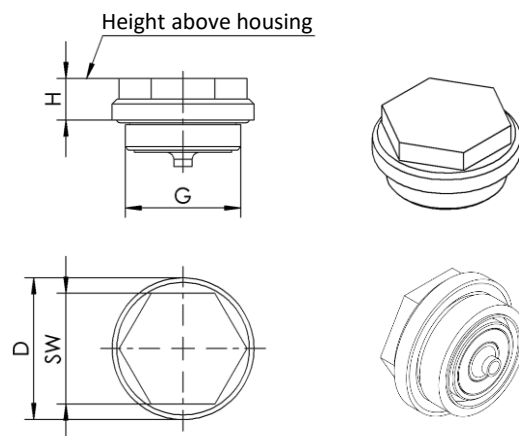
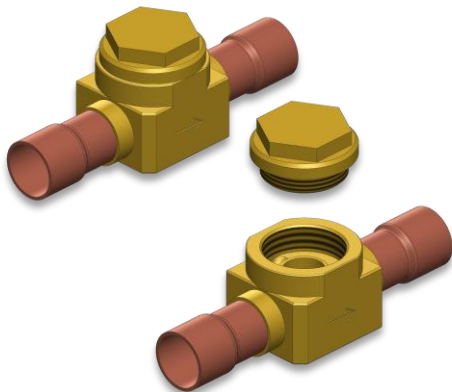
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Technical drawings

Manual shut-off valve



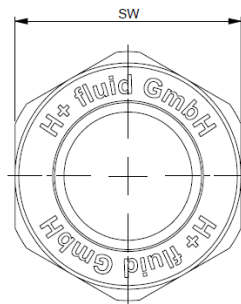
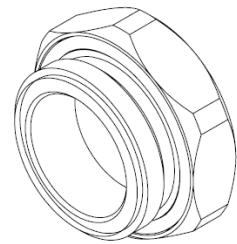
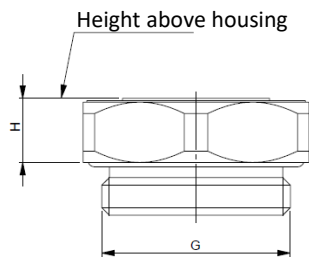
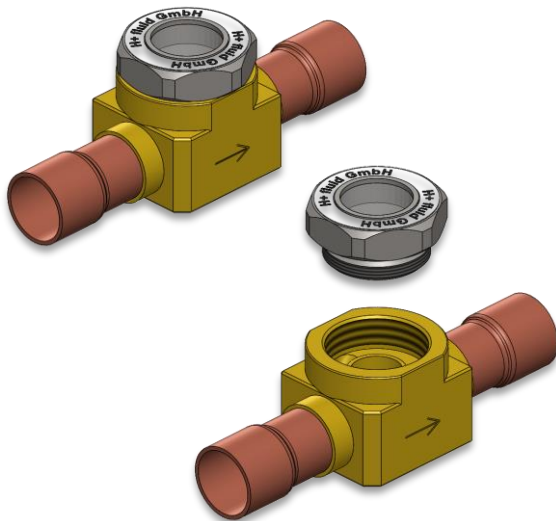
Check valve



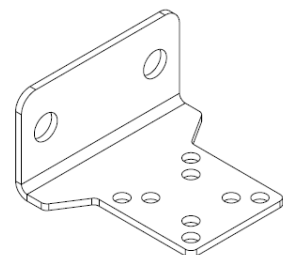
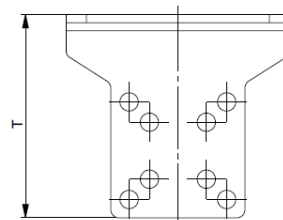
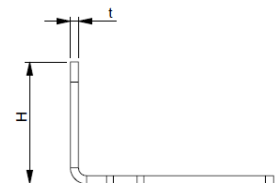
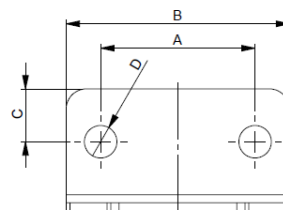
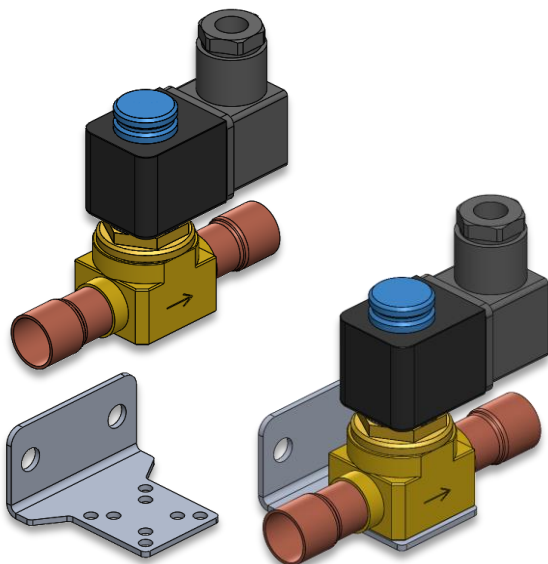
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Technical drawings

Sight Glass



Mounting Bracket



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Housing

GE – Housing

Housing material: Brass (Ms) or Aluminium (Al), Solder tube: Copper (Cu)

Size	Housing No.	Connection type	Material	Pipe- Ø D1 [mm]	G1	Kv ²⁾ [m³/h]	l1 [mm]	l2 [mm]	b1 [mm]	b2 [mm]	a [mm]	G2	M ³⁾ [g]	For Magnet-Ø10		For Magnet-Ø15										
														h1 [mm]	h2 [mm]	h1 [mm]	h2 [mm]									
10	1001	LR	Ms/Cu	6		0,28	78	7	19	19	14	M3	38	59,5	55,5	-	-									
	1004 ⁴⁾												37,5													
	1002												53,5													
	1005 ⁴⁾												51,5													
15	1001	LR	Ms	6		0,37	78	6	22	22	14	M4	63	63	56,5	-	-									
	1002												69													
20	1001	BR	Ms	6	7/16"-20UNF	0,30	57	7	30	30	24	M4	105,5	65,5	58,5	79	72									
	1002			10	5/8"-18UNF	1,00	62	8,5					141	69,5	60,5	83	74									
	1003			12	3/4"-16UNF	1,35	66	10					167	72	62	85,5	75,5									
	1004			16	7/8"-14UNF	1,80	70	11					204	75	63	88,5	76,5									
	1005	OR	Ms	10	5/8"-18UNF	1,05	54	9	17	17	17	M4	130	69,5	60,5	83	74									
	1025 ⁴⁾		Ms/Cu										132,5													
	1006		Ms										12					3/4"-16UNF	1,40	58	12	151	72	62	85,5	75,5
	1007		Ms										16					7/8"-14UNF	1,75	66	15	187	74,5	63	88	76,5
	1008	IG	Ms	22	1 1/16"-14UNF	1,92	74	19	24	24	24	M4	268	77,5	64	91	77,5									
	1009												G1/4"	0,80	59	12	189	68	58	81,5	71,5					
	1026												G3/8"	1,85	59	14	135	72,5	61	86	74,5					
	1010	LR	Ms/Cu	16		2,00	59	14	30	30	24	M4	190	73	60,5	86,5	74									
	1011												6	0,28	78	7	30	99	65	60	78,5	73,5				
	1021 ⁴⁾												10	1,24	88	11	31	98	69	62	72,5	75,5				
	1022 ⁴⁾												12	1,60	94	12	30	140,5	71	63	84,5	76,5				
	1013												12	1,60	94	12	30	138,6	71	63	84,5	76,5				
	1023 ⁴⁾												16	2,00	100	14	30	164,5	75	65	88,5	78,5				
	1014												16	2,00	100	14	30	164,5	75	65	88,5	78,5				
	1024 ⁴⁾	22	2,70	110	16	30	199	81	68	94,5	81,5															
1015	LR	Al	12		1,40	62	16	30	30	24	M4	42,5	72	62	85,5	75,5										
1018												5)	65,5	85	65	98,5	78,5									
1016												-	47	75	65	88,5	78,5									
1017	LR	Ms/Cu	16		3,15	14	14	40	40	30	M4	287	-	-	100	90										
1001												22	3,60	120	16	40	40	30	M4	338	-	-	104	91		
1002												28	4,00	18	18	40	40	30	M4	419	-	-	110	94		
40	1001	LR	Ms	28		8,75	140	22	55	55	42	M8	784	-	-	120	104									
	1002												35	9,50	140	22	55	55	42	M8	1024	-	-	123	103	
	1003												42	10,00	140	22	55	55	42	M8	1120	-	-	123	105	

2) The Kv value corresponds to the water flow through a valve (in m³/h) at a pressure difference of 1 bar according to DIN EN 60534-2-3 at full stroke

3) Weight of housing - total weight of valve can be determined by summing the article weights used (housing + cartridge + solenoid + plug)

4) Housing brass forging

5) M16x1.0 for sight glass centered in underside

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Cartridges

KA – Cartridges

Size	Cartridge-No.	NO / NC ⁶⁾	Power supply	Min. opening pressure [bar]	Max. opening pressure [bar] ⁷⁾	Magnet-Inner-Ø [mm]	SW [mm]	M [g]	Tightening torque ⁸⁾ [Nm]			
10	101	NC	AC + DC	0,00	45	10	14	36	10-15			
	102	NC	AC + DC	0,05				37,5				
	103	NO	DC	0,05				36				
15	101	NC	AC + DC	0,10				45	10	18	41	15-20
	102	NO	DC	9)							40	
	103										40	
20	101	NC	AC + DC	0,05	45	10	24				74,5	25-30
	102	NC	DC	0,05							74,5	
	103	NC	DC	0,10							128,5	
	104	NO	DC	0,05				73,5				
	105	NO	DC	0,10				124,5				
110 ¹⁰⁾	NC	AC + DC	0	10				120				
30	101	NC	AC + DC	0,10	45	15	36	243	55-60			
	102	NO	DC	0,10				241,5				
40	101	NC	DC	0,20				45	15	32	405	55-65
	102	NO	DC	0,20							397	

KA – Manual shut-off valve

Size	Cartridge-No.	G	Max. opening pressure [bar]	D [mm]	L [mm]	E [mm]	SW [mm]	Tightening torque ⁸⁾ [Nm]
20	106	M25x1,0	45	30,7	32	6	24	25-30
30	103	M34x1,0		40,0	35,2		36	

KA – Check valve

Size	Cartridge-No.	G	Max. opening pressure [bar]	Min. opening pressure [bar]	D [mm]	H [mm]	SW [mm]	Tightening torque ⁸⁾ [Nm]
20	108	M25x1,0	45	0,20	30,7	9	24	25-30

KA – Sight Glass

Size	Schauglas-Nr.	G	Max. operation pressure [bar]	H [mm]	SW [mm]	Tightening torque ⁸⁾ [Nm]
20	111	M25x1,0	45	8,5	30	25-30

Sealing Materials

As standard, our cartridges are delivered with the sealing material **EPDM**

Alternative sealing materials can also be supplied as an option. Please change the order code when placing your order as follows:

Cartridge-No.	Sealing Material
1XX	EPDM
2XX	FKM

We will advise you on choosing the right sealing material.

6) NO (Normally Open) | NC (Normally Closed)

7) Higher operating pressures on request

8) Tightening torque for mounting the cartridge in the housing

9) Min. opening pressures on request

10) Direct operated, with O-ring seal, preferably as water valve

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Solenoid coils and plugs

MA – Solenoid coils (Properties: Duty cycle 100%)

Magnet-No.	AC/DC	Voltage	Power	Magnet-Inner- ϕ [mm]	BM [mm]	h3 [mm]	I3 [mm]	M [g]
00	without Magnet							
10	DC	12 V	6 W	10	29,5	30	64	102
11	DC	24 V	6 W					98
12	DC	24 V	9 W					100
13	AC	12 V	5 VA					100
14	AC	24 V	9 VA					100
15	AC	110 V	5 VA					98
16	AC	230 V	5 VA					100
17	AC	230 V	8 VA					96
18	AC	230 V	6 VA					100
19	DC	200 V	6 W					100
20	DC	230 V	6 W	29,6	30,5	66	113	
50	DC	12 V	10 W	15	41	40	76	268
51	DC	24 V	10 W					274
52	AC	24 V	10 VA					264
53	AC	110 V	10 VA					264
54	AC	230 V	10 VA					270
55	DC	230 V	10 W					254

SK - Plug according to DIN 43650A (Cable Gland PG9, Protection Class IP65)

Plug-No.	Version	max. Voltage	Nominal Current	Temperature Range	Flammability Rating	M [g]
0	Without plug					
1	Standard plug (without circuitry)	250 V AC – 300V DC	10 A	-40°C ... +100°C	UL 94 HB	22
2	Plug with diode (protection against overvoltage peak)	250 V AC – 300V DC	10 A	-40°C ... +100°C	UL 94 HB	23
3	Plug with full-bridge rectifier and VDR suppressor (varistor)	230 V AC	4 A	-40°C ... +80°C	UL 94 HB	27
4	Plug with full-bridge rectifier, VDR suppressor (varistor) and LED indicator	24 V AC	1 A	-20°C ... +80°C	UL 94 HB	27
5	Plug with full-bridge rectifier, VDR suppressor (varistor) and LED indicator	230 V AC	1 A	-20°C ... +80°C	UL 94 HB	30
6	Plug with full-bridge rectifier and VDR suppressor (varistor)	24 V AC	1 A	-40°C ... +80°C	UL 94 HB	30
7	Plug with full-bridge rectifier and VDR suppressor (varistor)	230 V AC	1 A	-40°C ... +80°C	UL 94 HB	30
8	Standard plug (without circuitry)	250 V AC	10 A	-40°C ... +100°C	UL 94 V0	29

Mounting Bracket

Art-No.	Fits with valve size	T [mm]	H [mm]	B [mm]	A [mm]	C [mm]	D [mm]	t [mm]
XX-1021	10, 15, 20	50	30	55	38	13	8	2

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Order code

Order code

VE	-	XX	-	XXXX	-	XXX	-	XX	-	X
		Size		Housing- No..		Cartridge- No.		Magnet-No.		Plug-No.

✓ Spare part orders:

Simply place a "GE" in front of the housing number, a "KA" in front of the cartridge, a "MA" in front of the solenoid, or "SK" in front of the connector (e.g. GE20-1001, KA20-101, MA-10, or SK-1).

✓ Our valves are supplied **unassembled** as standard.

A professional assembly is available on separate request. Please contact our sales department for this.

✓ Disclaimer:

All values given are based on our experience and are only indicative values for guidance. The product specifications as well as expressly agreed performance characteristics/application purposes do not release the customer from the obligation to test and validate the suitability for the intended use of the products himself.



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