

- > **Port size: 1/4" ... 1/2"**  
(ISO G/NPT)
- > **Main application:**  
single and double operated actuators
- > **TÜV-approval based on type examination**  
DIN EN 161, DIN 3394 and IEC 61 508
- > **Valves for safety systems multi-channel up to SIL 3**
- > **Crossover-free switching**
- > **Suited for outdoor use under critical environment conditions**



### Technical features

#### Medium:

Filtered, non-lubricated and dried compressed air, instrument air, nitrogen and other non-flammable neutral, dry fluids

#### Operation:

Direct pneumatic actuated spool valves

#### Operating pressure:

0 ... 8 bar (0 ... 116 psi)

#### Pilot pressure:

2,5 ... 8 bar (36 ... 116 psi)  
(≥ operating pressure)  
at temperatures below -10°C (+14°F)

3 ... 8 bar (43 ... 116 psi)

(≥ operating pressure)

#### Port size:

G 1/4, 1/4 NPT, G 1/2, 1/2 NPT

#### Orifice:

6 mm, 8 mm

#### Ambient/Media temperature:

Special NBR:  
-40°C ... +65°C (-40° ... +149°F)

HNBR:

-25°C ... +80°C (-13° ... +176°F)

Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

#### Materials:

Body: Aluminium 3.0615 with surface treatment for rough environmental conditions (condensate test with alternating temperatures in sulphuric environment, salt spray test with different sodium chloride solutions, tested in ammonia environment), brass 2.0401 (Ms 58), stainless steel 1.4404 (316 L)  
Seals: special NBR or HNBR

3/2 and 5/2 way valves with seals special NBR-40 ... +65°C (-40 ... +149°F) \*1)

Housing: aluminium anodized

Symbol	Port size	Function	Actuation/return	Operating pressure (bar)	Pilot pressure (bar)	Flow (l/min)	Test cert IEC 61508 *2)	Weight (kg)	Dimension No.	Model
	G 1/4	3/2	Air/spring	0...8	2,5 ... 8	1300	X	0,4	1	9713538
	1/4 NPT	3/2	Air/spring	0...8	2,5 ... 8	1300	X	0,4	1	9713548
	G 1/2	3/2	Air/spring	0...8	2,5 ... 8	2600		0,5	2	9713558
	1/2 NPT	3/2	Air/spring	0...8	2,5 ... 8	2600		0,5	2	9713568
	G 1/4	5/2	Air/spring	0...8	2,5 ... 8	1300	X	0,5	3	9710538
	1/4 NPT	5/2	Air/spring	0...8	2,5 ... 8	1300	X	0,5	3	9710548
	G 1/2	5/2	Air/spring	0...8	2,5 ... 8	2600		0,6	5	9710558
	1/2 NPT	5/2	Air/spring	0...8	2,5 ... 8	2600		0,6	5	9710568
	G 1/4	5/2	Air/air	0...8	2,5 ... 8	1300		0,5	4	9711538
	1/4 NPT	5/2	Air/air	0...8	2,5 ... 8	1300		0,5	4	9711548

Housing: brass

Symbol	Port size	Function	Actuation/return	Operating pressure (bar)	Pilot pressure (bar)	Flow (l/min)	Test cert IEC 61508 *2)	Weight (kg)	Dimension No.	Model
	G 1/4	3/2	Air/spring	0...8	2,5 ... 8	1300	X	1,3	1	9713638
	1/4 NPT	3/2	Air/spring	0...8	2,5 ... 8	1300	X	1,3	1	9713648
	G 1/2	3/2	Air/spring	0...8	2,5 ... 8	2600		1,4	2	9713658
	1/2 NPT	3/2	Air/spring	0...8	2,5 ... 8	2600		1,4	2	9713668
	G 1/4	5/2	Air/spring	0...8	2,5 ... 8	1300	X	1,4	3	9710638
	1/4 NPT	5/2	Air/spring	0...8	2,5 ... 8	1300	X	1,4	3	9710648
	G 1/2	5/2	Air/spring	0...8	2,5 ... 8	2600		1,6	5	9710658
	1/2 NPT	5/2	Air/spring	0...8	2,5 ... 8	2600		1,6	5	9710668
	G 1/4	5/2	Air/air	0...8	2,5 ... 8	1300		1,4	4	9711638
	1/4 NPT	5/2	Air/air	0...8	2,5 ... 8	1300		1,4	4	9711648

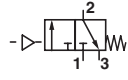
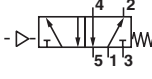
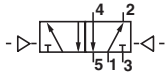
Housing: stainless steel

Symbol	Port size	Function	Actuation/return	Operating pressure (bar)	Pilot pressure (bar)	Flow (l/min)	Test cert IEC 61508 *2)	Weight (kg)	Dimension No.	Model
	G 1/4	3/2	Air/spring	0...8	2,5 ... 8	1300	X	1,3	1	9713738
	1/4 NPT	3/2	Air/spring	0...8	2,5 ... 8	1300	X	1,3	1	9713748
	G 1/2	3/2	Air/spring	0...8	2,5 ... 8	2600		1,4	2	9713758
	1/2 NPT	3/2	Air/spring	0...8	2,5 ... 8	2600		1,4	2	9713768
	G 1/4	5/2	Air/spring	0...8	2,5 ... 8	1300	X	1,4	3	9710738
	1/4 NPT	5/2	Air/spring	0...8	2,5 ... 8	1300	X	1,4	3	9710748
	G 1/2	5/2	Air/spring	0...8	2,5 ... 8	2600		1,6	5	9710758
	1/2 NPT	5/2	Air/spring	0...8	2,5 ... 8	2600		1,6	5	9710768
	G 1/4	5/2	Air/air	0...8	2,5 ... 8	1300		1,4	4	9711738
	1/4 NPT	5/2	Air/air	0...8	2,5 ... 8	1300		1,4	4	9711748

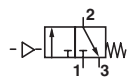
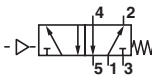
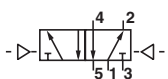
\*1) For operation in plants according to IEC 61511/61508 -40 ... +40°C see test certificate (on request)

\*2) The details of the TÜV-Examination of Suitability must be observed

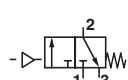
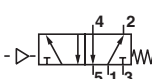
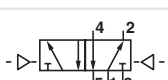
**Valves with seals HNBR -25 ... +80°C (-13 ... 176°F) \*1)**
**Housing: aluminium anodized**

Symbol	Port size	Function	Actuation/return	Operating pressure (bar)	Pilot pressure (bar)	Flow (l/min)	Test cert IEC 61508 *2)	Weight (kg)	Dimension No.	Model
	G 1/4	3/2	Air/spring	0...8	2,5 ... 8	1300	X	0,4	1	9713238
	1/4 NPT	3/2	Air/spring	0...8	2,5 ... 8	1300	X	0,4	1	9713248
	G 1/2	3/2	Air/spring	0...8	2,5 ... 8	2600	X	0,5	2	9713258
	1/2 NPT	3/2	Air/spring	0...8	2,5 ... 8	2600	X	0,5	2	9713268
	G 1/4	5/2	Air/spring	0...8	2,5 ... 8	1300	X	0,5	3	9710238
	1/4 NPT	5/2	Air/spring	0...8	2,5 ... 8	1300	X	0,5	3	9710248
	G 1/2	5/2	Air/spring	0...8	2,5 ... 8	2600	X	0,6	5	9710258
	1/2 NPT	5/2	Air/spring	0...8	2,5 ... 8	2600	X	0,6	5	9710268
	G 1/4	5/2	Air/air	0...8	2,5 ... 8	1300		0,5	4	9711238
	1/4 NPT	5/2	Air/air	0...8	2,5 ... 8	1300		0,5	4	9711248

**Housing: brass**

Symbol	Port size	Function	Actuation/return	Operating pressure (bar)	Pilot pressure (bar)	Flow (l/min)	Test cert IEC 61508 *2)	Weight (kg)	Dimension No.	Model
	G 1/4	3/2	Air/spring	0...8	2,5 ... 8	1300	X	1,3	1	9713338
	1/4 NPT	3/2	Air/spring	0...8	2,5 ... 8	1300	X	1,3	1	9713348
	G 1/2	3/2	Air/spring	0...8	2,5 ... 8	2600	X	1,4	2	9713358
	1/2 NPT	3/2	Air/spring	0...8	2,5 ... 8	2600	X	1,4	2	9713368
	G 1/4	5/2	Air/spring	0...8	2,5 ... 8	1300	X	1,4	3	9710338
	1/4 NPT	5/2	Air/spring	0...8	2,5 ... 8	1300	X	1,4	3	9710348
	G 1/2	5/2	Air/spring	0...8	2,5 ... 8	2600	X	1,6	5	9710358
	1/2 NPT	5/2	Air/spring	0...8	2,5 ... 8	2600	X	1,6	5	9710368
	G 1/4	5/2	Air/air	0...8	2,5 ... 8	1300		1,4	4	9711338
	1/4 NPT	5/2	Air/air	0...8	2,5 ... 8	1300		1,4	4	9711348

**Housing: stainless steel**

Symbol	Port size	Function	Actuation/return	Operating pressure (bar)	Pilot pressure (bar)	Flow (l/min)	Test cert IEC 61508 *2)	Weight (kg)	Dimension No.	Model
	G 1/4	3/2	Air/spring	0...8	2,5 ... 8	1300	X	1,3	1	9713438
	1/4 NPT	3/2	Air/spring	0...8	2,5 ... 8	1300	X	1,3	1	9713448
	G 1/2	3/2	Air/spring	0...8	2,5 ... 8	2600	X	1,4	2	9713458
	1/2 NPT	3/2	Air/spring	0...8	2,5 ... 8	2600	X	1,4	2	9713468
	G 1/4	5/2	Air/spring	0...8	2,5 ... 8	1300	X	1,4	3	9710438
	1/4 NPT	5/2	Air/spring	0...8	2,5 ... 8	1300	X	1,4	3	9710448
	G 1/2	5/2	Air/spring	0...8	2,5 ... 8	2600	X	1,6	5	9710458
	1/2 NPT	5/2	Air/spring	0...8	2,5 ... 8	2600	X	1,6	5	9710468
	G 1/4	5/2	Air/air	0...8	2,5 ... 8	1300		1,4	4	9711438
	1/4 NPT	5/2	Air/air	0...8	2,5 ... 8	1300		1,4	4	9711448

\*1) For operation in plants according to IEC 61511/61508 -40 ... +40°C see test certificate (on request)

\*2) The details of the TÜV-Examination of Suitability must be observed



Option selector

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Function	Substitute
5/2 way valve impuls	1
3/2 way valve with spring return	3
5/2 way valve with spring return	0
Materials: Housing/Seals	Substitute
Aluminium/HNBR (-25...+ 80°C)	2
Brass/HNBR (-25...+ 80°C)	3
Stainless steel/HNBR (-25...+ 80°C)	4
Aluminium/special NBR (-40...+ 65°C)	5
Brass/ special NBR (-40...+ 65°C)	6
Stainless steel/ special NBR (-40...+ 65°C)	7

Port size	Substitute
G 1/4	3
1/4 NPT	4
G 1/2	5
1/2 NPT	6

Accessories

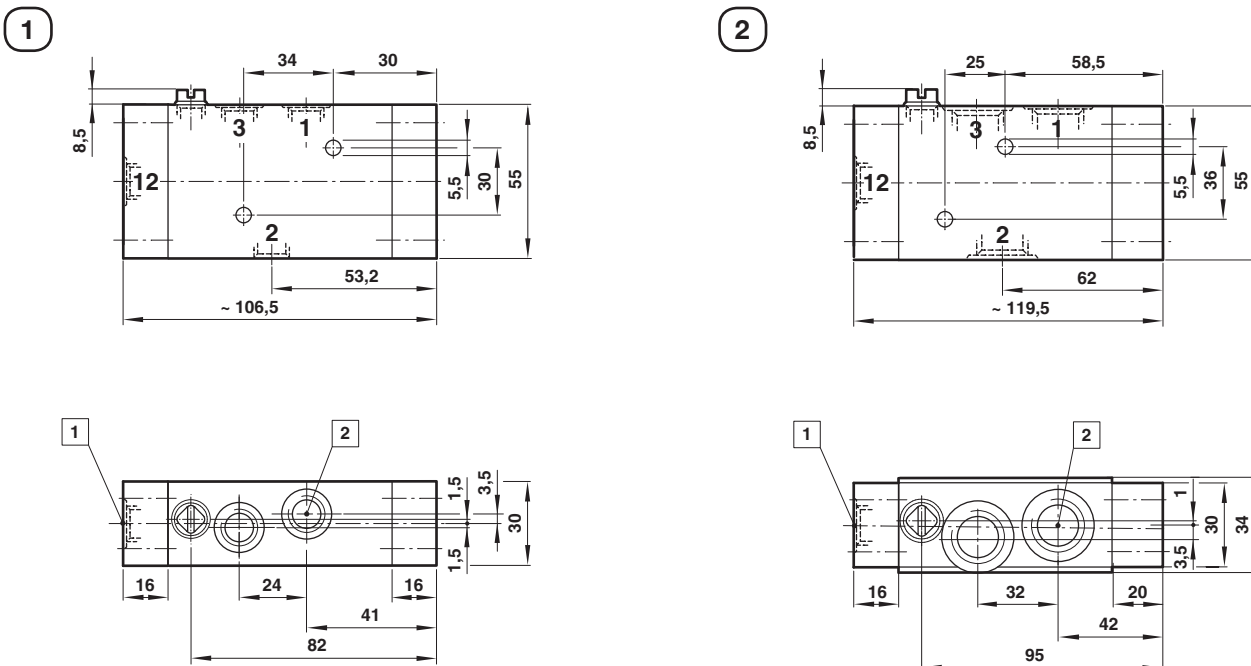
Silencer *1)	Silencer (stainless steel) *1)	Silencer (brass) *1)	Exhaust guard *2)
			
Page 6	Page 6	Page 6	Page 6
M/S2 (G1/4)	0014613 (G 1/4)	T40C2800 (G 1/4)	0613422 (G1/4, 1/4 NPT)
C/S2 (1/4 NPT)	0613678 (1/4 NPT)	MS002A (1/4 NPT)	0613423 (G1/2, 1/2 NPT)
M/S4 (G1/2)	0014813 (G 1/2)	T40C4800 (G 1/2)	
C/S4 (1/2 NPT)	0613679 (1/2 NPT)	MS004A (1/2 NPT)	

\*1) For indoors use only

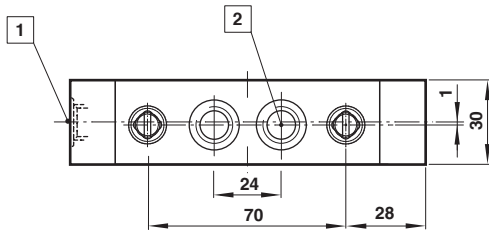
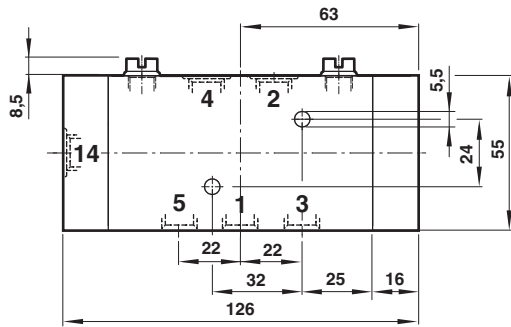
\*2) For outdoors use, opening pressure ~ 0,2 bar

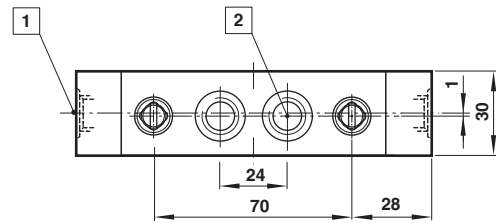
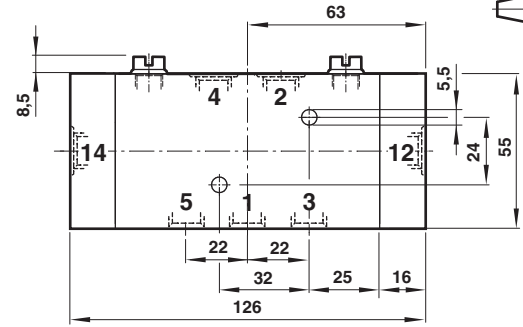
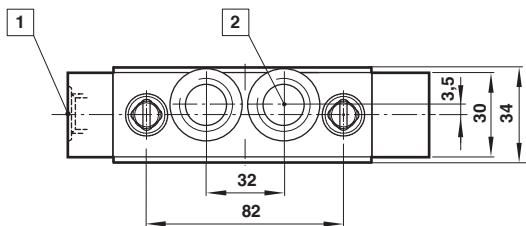
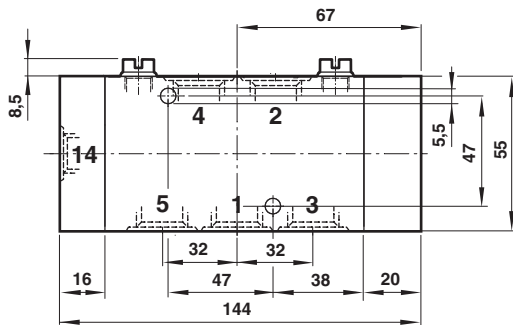
Dimensions

Dimensions in mm  
Projection/First angle



- 1 Pilot port G1/4 or 1/4 NPT
- 2 Port G1/4, 1/4 NPT, G1/2 or 1/2 NPT

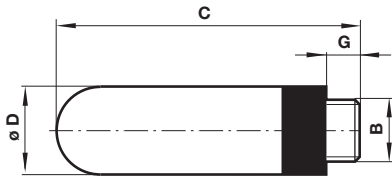
**3**

**4**

 Dimensions in mm  
Projection/First angle

**5**


- 1 Pilot port G1/4 or 1/4 NPT
- 2 Port G1/4, 1/4 NPT, G1/2 or 1/2 NPT

### Silencer

Model: M/S2, M/S4, C/S2, C/S4

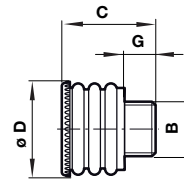


B	G	C	Ø D	Weight (g)	Model
G1/4	7	35,5	15,5	2,9	M/S2
1/4 NPT	7	35,5	15,5	2,9	C/S2
G1/2	12	67	23	11,5	M/S4
1/2 NPT	12	67	23	11,5	C/S4

### Exhaust guard

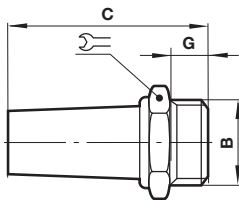
Model: 0613422, 0613423

Dimensions in mm  
Projection/First angle



B	Suitable for	G	C	Ø D	Weight (g)	Model
1/4"	G1/4, 1/4 NPT	10	26,5	21	5	0613422
1/2"	G1/2, 1/2 NPT	12	33,5	29	11	0613423

### Silencer (brass or stainless steel)



B	C	G	Symbol	Weight (g)	Model
G 1/4	33	8	17	18	T40C2800
1/4 NPT	35	8	9/16	18	MS002A
G 1/4	36	8	16	23	0014613 *1)
1/4 NPT	36	8	16	67	0613678 *1)
G 1/2	56	12	27	63	T40C4800
1/2 NPT	48	12	7/8	63	MS004A
G 1/2	49	12	24	81	0014813 *1)
1/2 NPT	49	12	24	235	0613679 *1)

\*1) stainless steel

### Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under

»**Technical features/data**«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI Precision Engineering, Norgren GmbH.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.