

For single and double operated actuators
Manual override with and without detent
Simple design of soft seal spool
Easily interchangeable solenoid
Maintenance-free
All valves available with Ex protected coils (ATEX or other international approvals)



Technical features

Medium:
Compressed air, filtered, lubricated or non-lubricated
Operation:
Indirect solenoid operated T-spool valves
Port size:
G 1/4, G 1/2

Operating pressure:
max. 10 bar (145 psi)(see table)
Flow direction:
Fixed
Mounting:
Optional, preferably with solenoid on top
Orifice:
6 and 12 mm

Fluid/Ambient temperature:
-10 ... +60°C(+14 ... +140°F)
-20°C (-4°F) upon request
Depending on solenoid system
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

Materials:
Housing: aluminium anodized
Pilot flange: plastic (POM)
Seals: NBR

Technical data

3/2 way

Symbol	Port size	Operating pressure (bar)		Flow (l/min)	Switching time (ms)	Manual override with/without detent	Weight without Solenoid (kg)	Dimension No.	Model *1)
		min.	max.						
	G 1/4	1	10	1200	35	-	0,4	1	8020766
	G 1/4	1	10	1200	35	without	0,4	1	8020767
	G 1/2	1,5	10	3000	35	without	0,7	1	8020867
	G 1/4	1	10	1200	35	with	0,4	1	8020765
	G 1/2	1,5	10	3000	35	with	0,7	1	8020865

5/2 way

Symbol	Port size	Operating pressure (bar)		Flow (l/min)	Switching time (ms)	Manual override with/without detent	Weight without Solenoid (kg)	Dimension No.	Model *1)
		min.	max.						
	G 1/4	1	10	1200	35	-	0,55	2	2636066
	G 1/4	1	10	1200	35	without	0,55	3	2636067
	G 1/2	2	10	3000	40	with	0,83	4	2637065
	G 1/4	1	10	1200	30	with	0,90	5	2636265
	G 1/2	2	10	3000	35	with	1,30	6	2637265

*1) When ordering, please indicate solenoid, voltage and current (frequency).

Solenoid operators

	Power consumption		Rated current		Ex-Protection (ATEX-Category)	Protection class *7)	Temperature Ambient/ Fluid (°C)	Electrical connection	Weight (kg)	Dimension No.	Circuit diagram No.	Model
	24 V d.c. (W)	230 V a.c. (VA)	24 V d.c. (mA)	230 V a.c. (mA)								
	2,7	-	113	-	-	IP 65 with connector *5)	-25 ... +60 Fluid: max. 80	Connector DIN EN 175301-803 Form A *6)	0,15	1	1	0242
	-	4,2	-	-	-	IP 65 with connector *5)	-25 ... +60 Fluid: max. 80	Connector DIN EN 175301-803 Form A *6)	0,16	1	1	0245
	2,7	-	331	-	II3G II3D	Ex nA II T4 Ex tD A22 IP65 T90°C	-20 ... +60	Connector DIN EN 175301-803 Form A included in delivery	0,16	1	1	3215
	3,6	-	150	-	II2G II2D	Ex m II T4 Ex tD A21 IP66 T 110°C *1)	-20 ... +70	Cable 3 m	0,4	5	4	0298 *8)
	-	4,6	-	18	II2G II2D	Ex m II T4 Ex tD A21 IP66 T 110°C *1)	-20 ... +70	Cable 3 m	0,4	5	7	0299 *8)
	3,9	-	162	-	II2G II2D	Ex e mb IIC T4/T6 Gb Ex tb IIIC T 130°C Db IP66 *2), *10)	-40 ... +55 T6 -40 ... +80 T4	M20 x 1,5 *6)	0,5	6	4	4210 *8)
	-	5,3	-	23	II2G II2D	Ex e mb IIC T4/T6 Gb Ex tb IIIC T 130°C Db IP66 *2), *10)	-40 ... +55 T6 -40 ... +80 T4 -40 ... +80	M20 x 1,5 *6)	0,5	6	7	4211 *8)
	3,9	-	162	-	II2G II2D	Ex d mb IIC T4/T6 Gb Ex e mb IIC T4/T6 Gb Ex tb IIIC T130°C Db	-40 ... +55 T6 -40 ... +80 T4 -40 ... +80	1/2-14 NPT *6)	0,8	7	20	4610 *8)
	-	5,3	-	23	II2G II2D	Ex d mb IIC T4/T6 Gb Ex e mb IIC T4/T6 Gb Ex tb IIIC T130°C Db	-40 ... +55 T6 -40 ... +80 T4 -40 ... +80	1/2-14 NPT *6)	0,8	7	21	4611 *8)
	3,9	-	162	-	II2G II2D	Ex d mb IIC T4/T6 Gb Ex e mb IIC T4/T6 Gb Ex tb IIIC T130°C Db	-40 ... +55 T6 -40 ... +80 T4 -40 ... +80	M20 x 1,5 *6)	0,8	7	20	4612 *8)
	-	5,3	-	23	II2G II2D	Ex d mb IIC T4/T6 Gb Ex e mb IIC T4/T6 Gb Ex tb IIIC T130°C Db	-40 ... +55 T6 -40 ... +80 T4 -40 ... +80	M20 x 1,5 *6)	0,8	7	21	4613 *8)
	5,5	-	-	228	-	XP/DIP, Div. 1 u. 2 Cl. I, Gr. A-D Cl. II, Gr. E-G Cl. III, T3 (160°C) *4) NEMA 4, 4X, 6, 6P, 7, 9	-20 ... +60	Flying leads 450 mm	0,5	8	1	3722
	-	5,9	-	26	-	XP/DIP, Div. 1 u. 2 Cl. I, Gr. A-D Cl. II, Gr. E-G Cl. III, T3 (160°C) *4) NEMA 4, 4X, 6, 6P, 7, 9	-20 ... +60	Flying leads 450 mm	0,5	8	5	3723

Standard voltages 24 V d.c., 230 V a.c., other voltages on request.
Design according to VDE 0580, EN 50014/50028. 100% duty cycle.

*1) EG-Type-Examination-Certificate KEMA 02 ATEX 1347X

*2) EG-Type-Examination-Certificate KEMA 98 ATEX 4452 X

*3) EG-Type-Examination-Certificate PTB 02 ATEX 2085 X

*4) CSA-LR 57643-6, FM Approval

*5) Required connector: type 0570275

*6) Connector cable gland not supplied, see table »Accessories«

*7) IP-Protection class according to EN60529

*8) Suitable for outdoor installation

*10) IEC Ex Certificate of Conformity

Attention:

The protection class for coil series 46xx is determined by the choice of cable gland.

Example: if an ATEX-certified cable gland is used that has Ex d type of protection, the solenoid will have the protection class Ex dmb; if a cable gland with Ex e type of protection is used, the solenoid will have protection class Ex emb.

Accessories

Cable gland
Protection class Ex e,
Ex d (ATEX),
Nickel plated brass



Silencer *1)



Exhaust guard *2)



Connector, form A



Page 7 Thread	Cable Ø	Material	Protection class (ATEX)	Model	Page 7	Page 7	
M 20x1,5	5,0...8,0 mm	Nickel plated brass	II2GD Ex e	0588819	M/S2 (G1/4)	0613422 (G1/4)	0570275
M 20x1,5	10...14 mm	Nickel plated brass	II2GD Ex d	0588851	M/S4 (G1/2)	0613423 (G1/2)	
1/2-14-NPT	7,5...11,9 mm	Nickel plated brass	II2GD Ex d	0588925			

*1) For indoors use only

*2) For outdoors use

Dimensions

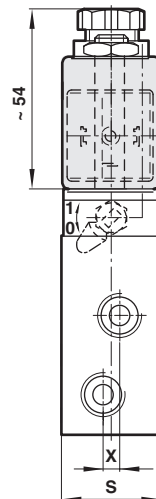
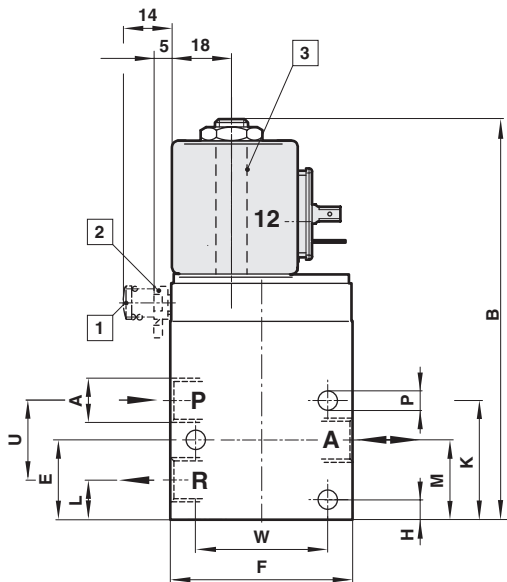
Valves

Dimensions shown in mm

Projection/First angle



1



- 1 Manual override without detent
- 2 Manual override with detent
- 3 Solenoid 4 x 90° turnable

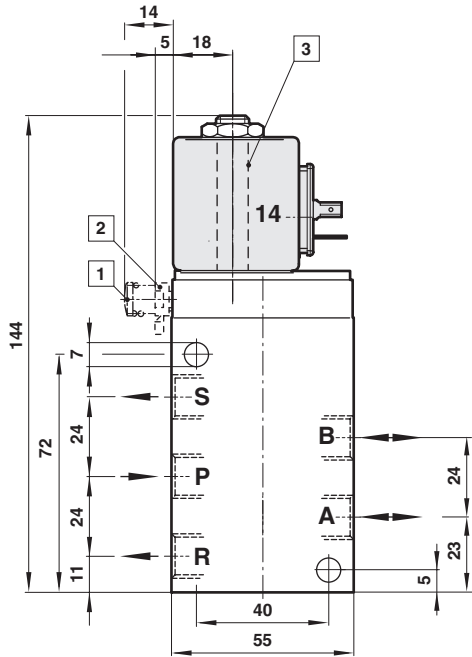
A	B	E	F	H	K	L	M	P	S	T	U	W	X	Model
G1/4	120	24,5	55	7,5	34,5	11	23	5,5	30	18,5	24	41	5	8020766
G1/4	127	24,5	55	7,5	34,5	11	23	5,5	30	18,5	24	41	5	8020767
G1/4	127	24,5	55	7,5	34,5	11	23	5,5	30	18,5	24	41	5	8020765
G1/2	157	77,5	65	31,5	-	29	50	7	35	23,5	33	46	-	8020867
G1/2	148	77,5	65	31,5	-	29	50	7	35	23,5	33	46	-	8020865

Dimensions shown in mm

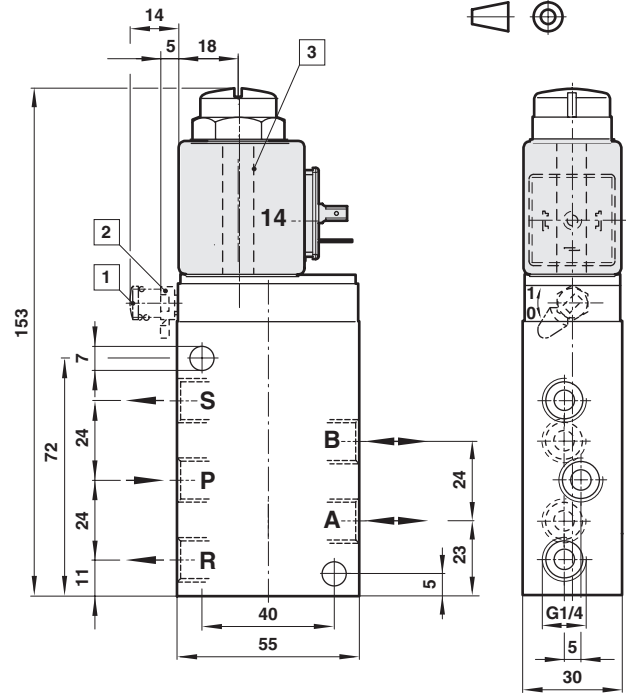
Projection/First angle



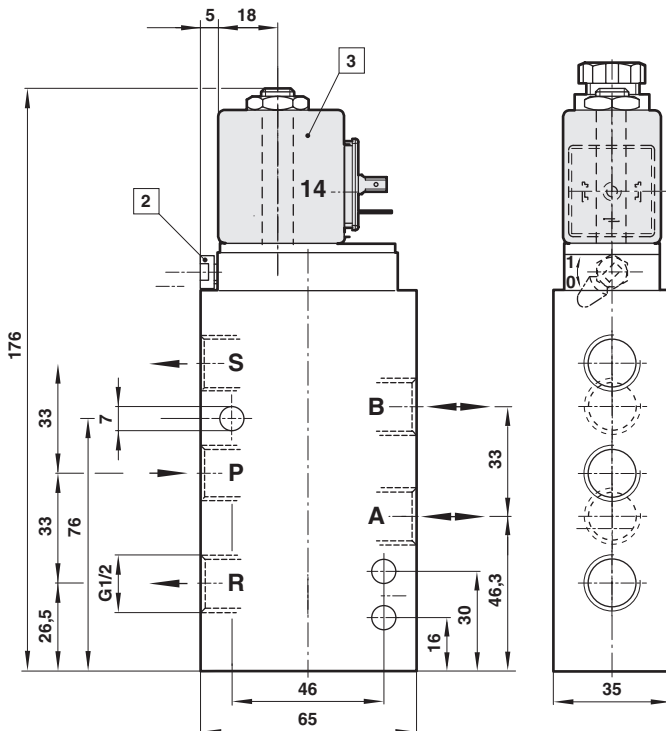
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3



4



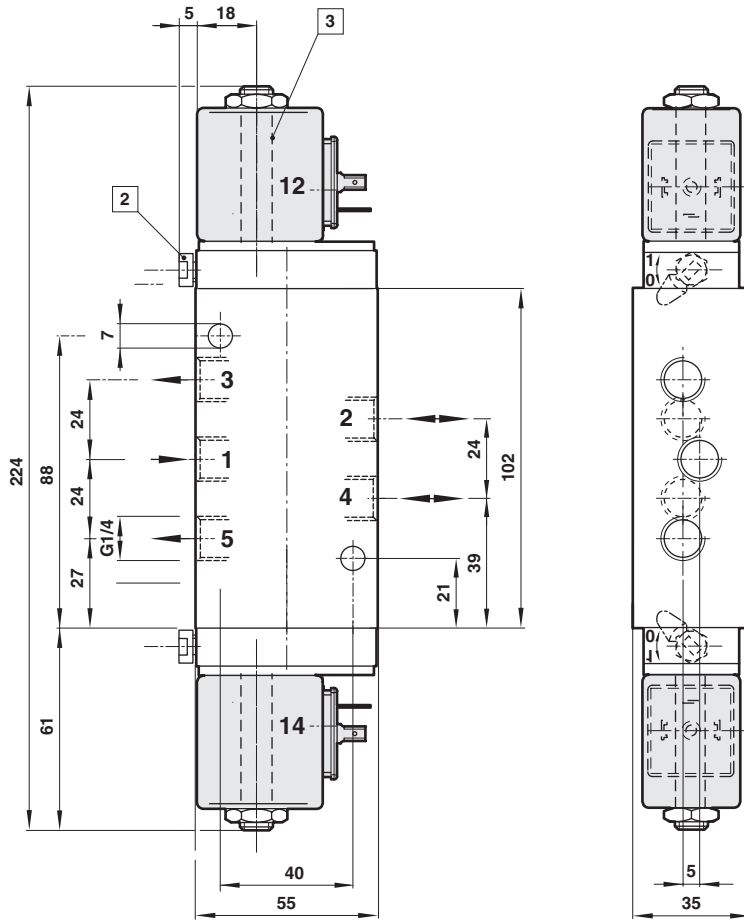
- 1 Manual override without detent
- 2 Manual override with detent
- 3 Solenoid 4 x 90° turnable

Dimensions shown in mm

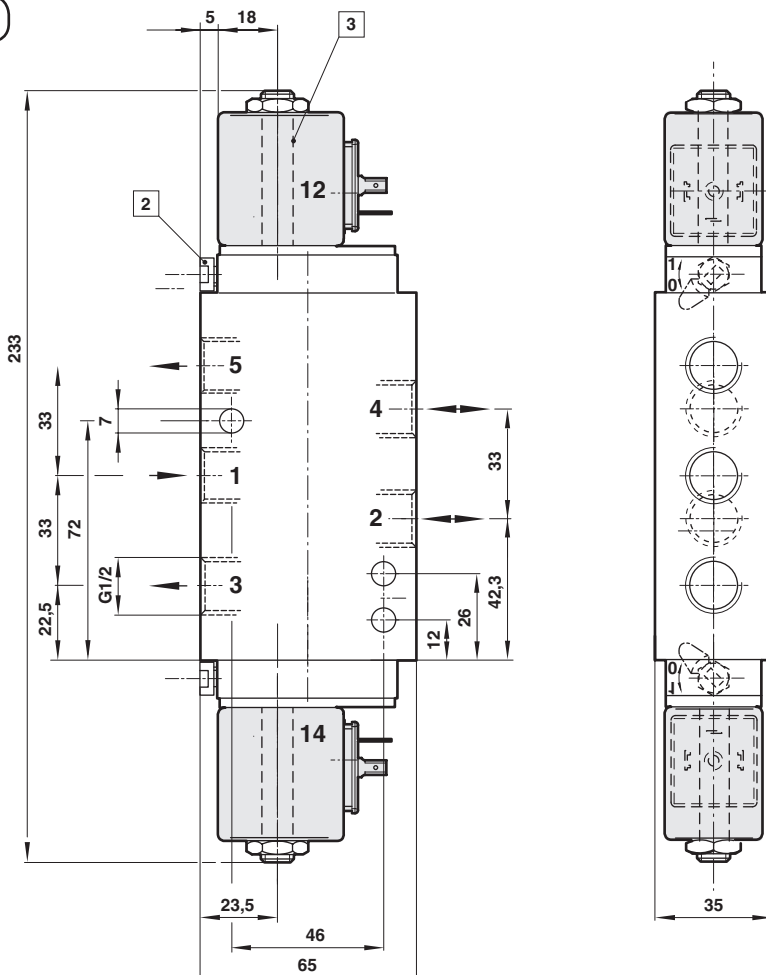
Projection/First angle



5



6



- 2 Manual override with detent
- 3 Solenoid 4 x 90° turnable

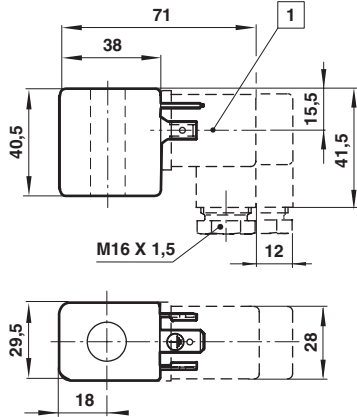
**Dimensions
Solenoid operators**

Dimensions shown in mm

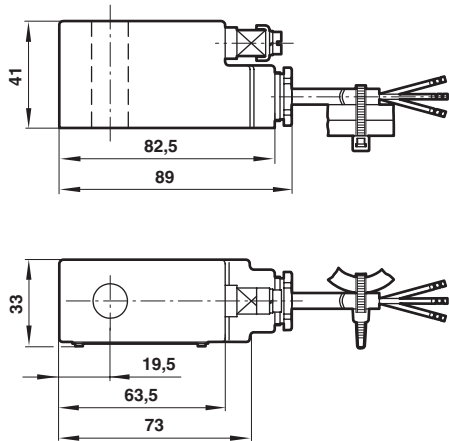
Projection/First angle



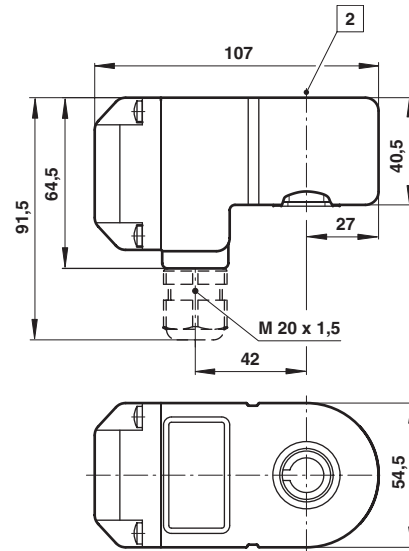
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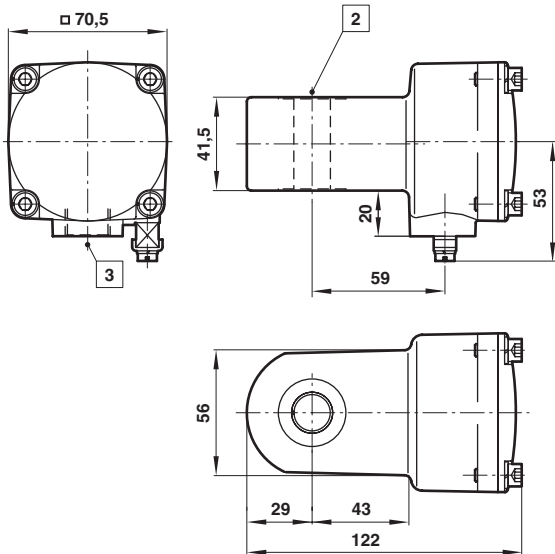
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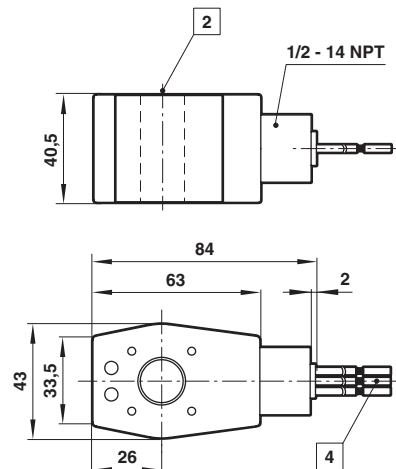
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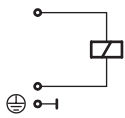
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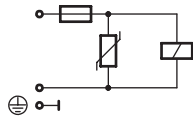
- 1 Connector can be indexed by 4x90°
- 2 Ø 16 or 13 (with spacer tube)
- 3 M20 x 1,5 or 1/2 - 14 NPT
- 4 Flying leads AWG 18 (450 mm long)

Circuit diagrams

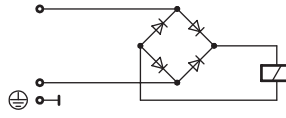
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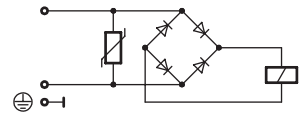
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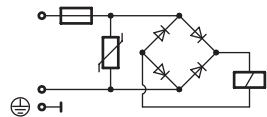
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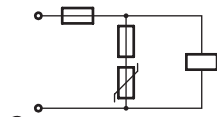
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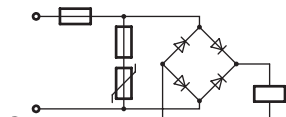
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20

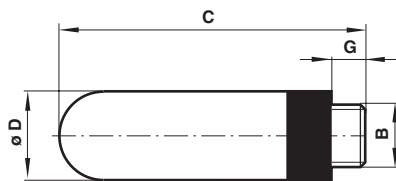


21



Silencer

Model: M/S2, M/S4

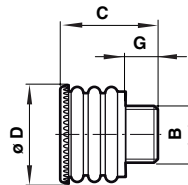


B	G	C	Ø D	Weight (g)	Model
G1/4	7	35,5	15,5	2,9	M/S2
G1/2	12	67	23	11,5	M/S4

Exhaust guard

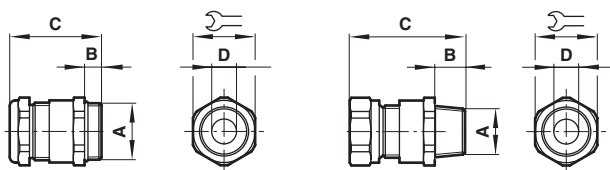
Model: 0613422, 061323

Dimensions shown in mm



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

Cable gland



0588925 only

A	B	C	Ø D	⌀	Model
M20 x 1,5	9	36	5 ... 8	22	0588819
M20 x 1,5	14	39	10 ... 14	24	0588851
1/2-14 NPT	15	58	7,5 ... 11,9	24	0588925

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**«.

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 NORGREN.

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 pneumatic 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.