



Directional valves → Mechanically operated

Series AP

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Brochure



Directional valves → Mechanically operated

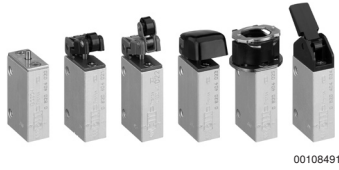
Series AP

	2/2-way valve, Series AP ► Qn= 350 l/min ► pipe connection ► compressed air connection output: G 1/8	3
	3/2-way valve, Series AP ► Qn= 250 l/min ► pipe connection ► compressed air connection output: G 1/8	7
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	3/2-way valve, Series AP ► Qn= 190 l/min ► pipe connection ► compressed air connection output: M5	16
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Directional valves → Mechanically operated

2/2-way valve, Series AP

► Qn= 350 l/min ► pipe connection ► compressed air connection output: G 1/8



Version	Poppet valve
Working pressure min./max.	0 bar / 10 bar
Ambient temperature min./max.	-30 °C / +80 °C
Medium temperature min./max.	-30 °C / +80 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³

Materials:

Housing	Aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.

	Control element	Compressed air connection		Qn	Material: Actuating control	Weight	Note	Part No.
		Input	Output					
				[l/min]		[kg]		
	Plunger	G 1/8	G 1/8	350	Brass	0.065	Fig. 1	0820404020
	Roller	G 1/8	G 1/8	350	Polyoxymethylene	0.075	Fig. 2	0820404021
	Roller lever, one-way trip	G 1/8	G 1/8	350	Polyoxymethylene; Polyamide	0.075	Fig. 3	0820404022
	Push button	G 1/8	G 1/8	350	Polyamide	0.075	Fig. 4	0820404023
	Lever	G 1/8	G 1/8	350	Polyamide	0.065	Fig. 5	0820404024
	panel installation	G 1/8	G 1/8	350	Polyamide	0.1	Fig. 6; 1)	0820404025

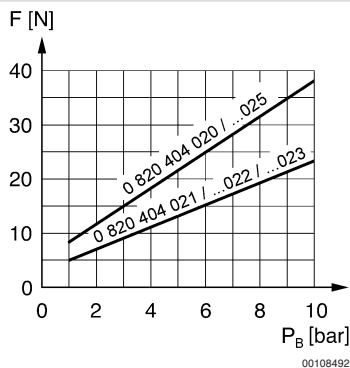
1) Please order control button separately.
Nominal flow Qn at 6 bar and Δp = 1 bar

Directional valves → Mechanically operated

2/2-way valve, Series AP

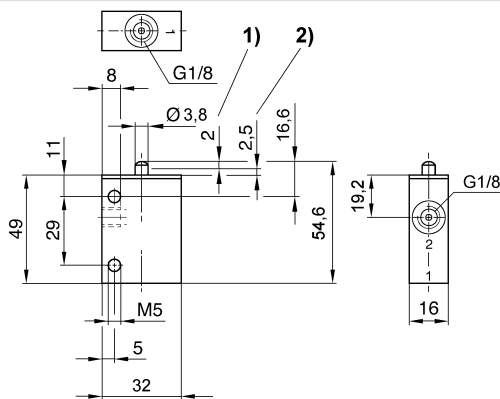
► Qn= 350 l/min ► pipe connection ► compressed air connection output: G 1/8

operating force



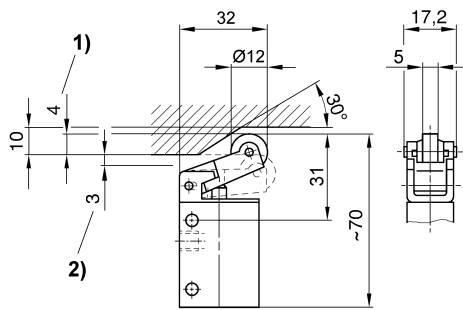
F = actuating force
 P_B = Working pressure

Dimensions, Fig. 1



1) actuating stroke
 2) overstroke
 Dimensions of basic valve apply to all types of actuation.

Dimensions, Fig. 2

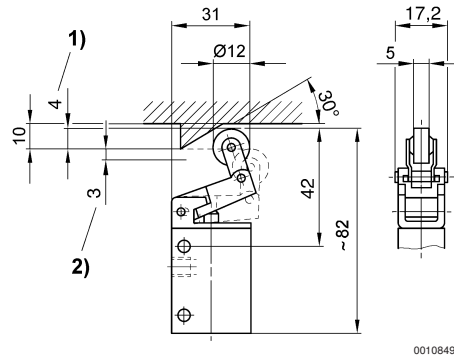


1) actuating stroke
 2) overstroke

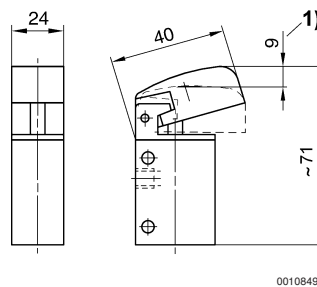
Directional valves → Mechanically operated

2/2-way valve, Series AP

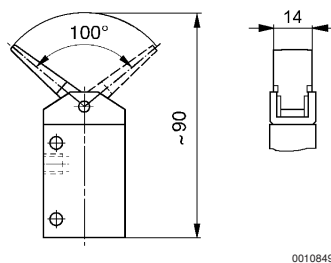
► Qn= 350 l/min ► pipe connection ► compressed air connection output: G 1/8

Dimensions, Fig. 3

- 1) actuating stroke
2) overstroke

Dimensions, Fig. 4

- 1) actuating stroke

Dimensions, Fig. 5

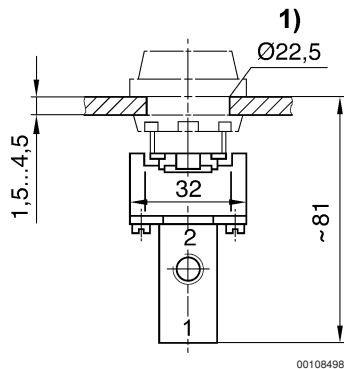
actuating torque: 6 Ncm

Directional valves → Mechanically operated

2/2-way valve, Series AP

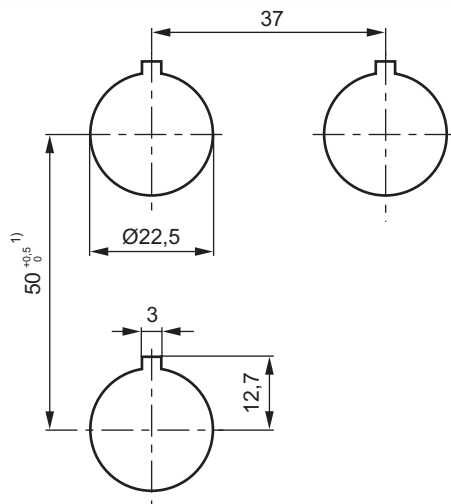
► Qn= 350 l/min ► pipe connection ► compressed air connection output: G 1/8

Dimensions, Fig. 6



1) cut-out in the front plate

Dimensions, cut-out in the front plate



1) for version with label base (1820148009) 55 mm distance

Directional valves → Mechanically operated

3/2-way valve, Series AP

► Qn= 250 l/min ► pipe connection ► compressed air connection output: G 1/8



00108507

Version	Poppet valve
Working pressure min./max.	0 bar / 10 bar
Ambient temperature min./max.	-30 °C / +80 °C
Medium temperature min./max.	-30 °C / +80 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³

Materials:

Housing

Aluminum

Seals

Acrylonitrile Butadiene Rubber

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.

	Control element	Compressed air connection			Qn 1 → 2	Qn 2 → 3	Weight	Note	Part No.
		Input	Output	Exhaust	[l/min]	[l/min]	[kg]		
	Plunger	G 1/8	G 1/8	G 1/8	250	150	0.07	Fig. 1	0820402101
	Roller	G 1/8	G 1/8	G 1/8	250	150	0.08	Fig. 2	0820402102
	Roller lever, one-way trip	G 1/8	G 1/8	G 1/8	250	150	0.085	Fig. 3	0820402103
	Push button	G 1/8	G 1/8	G 1/8	250	150	0.085	Fig. 4	0820402104
	Lever	G 1/8	G 1/8	G 1/8	250	150	0.075	Fig. 5	0820402105
	panel installation	G 1/8	G 1/8	G 1/8	250	150	0.09	1); Fig. 6	0820402106

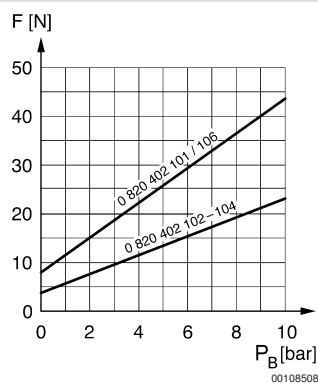
1) Please order control button separately.
Nominal flow Qn at 6 bar and Δp = 1 bar

Directional valves → Mechanically operated

3/2-way valve, Series AP

► Qn= 250 l/min ► pipe connection ► compressed air connection output: G 1/8

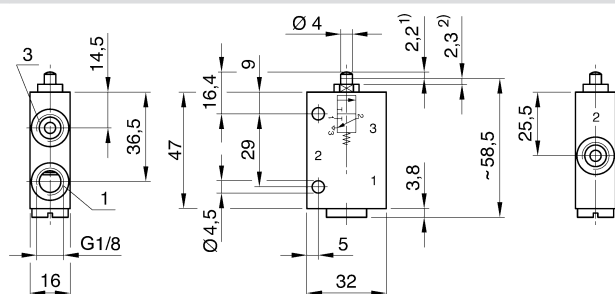
operating force



F = actuating force

 P_B = Working pressure

Dimensions, Fig. 1, Basic valve

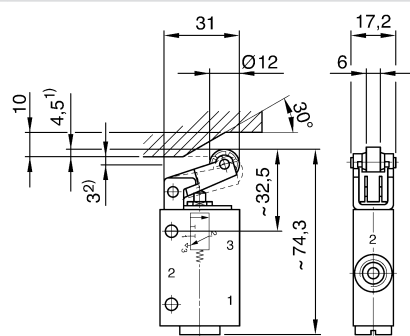


1) actuating stroke

2) overstroke

Dimensions of basic valve apply to all types of actuation.

Dimensions, Fig. 2



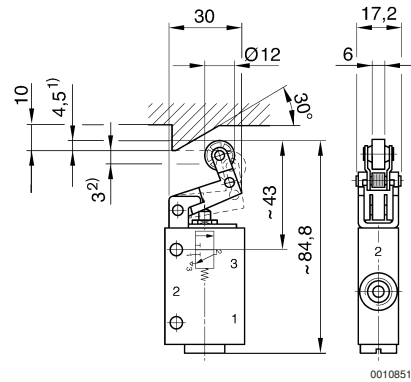
1) actuating stroke

2) overstroke

Directional valves → Mechanically operated

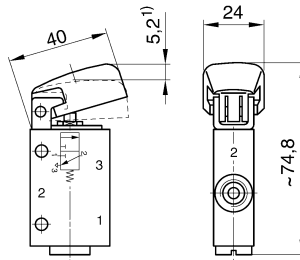
3/2-way valve, Series AP

► Qn= 250 l/min ► pipe connection ► compressed air connection output: G 1/8

Dimensions, Fig. 3

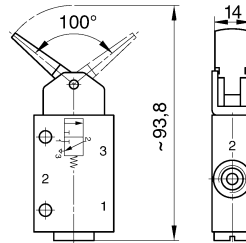
00108511

- 1) actuating stroke
2) overstroke

Dimensions, Fig. 4

00108512

- 1) actuating stroke

Dimensions, Fig. 5

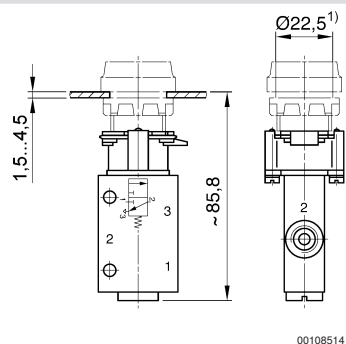
00108513

Directional valves → Mechanically operated

3/2-way valve, Series AP

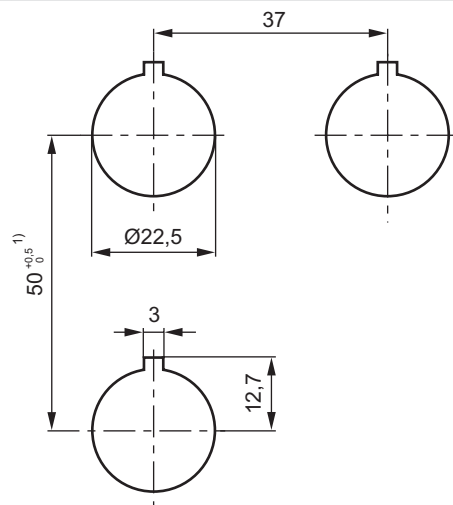
► Qn= 250 l/min ► pipe connection ► compressed air connection output: G 1/8

Dimensions, Fig. 6



1) cut-out in the front plate

Dimensions, cut-out in the front plate

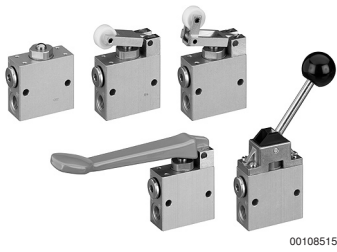


1) for version with label base (1820148009) 55 mm distance

Directional valves → Mechanically operated

3/2-way valve, Series AP

► Qn= 550 l/min ► pipe connection ► compressed air connection output: G 1/4



Version
 Working pressure min./max.
 Ambient temperature min./max.
 Medium temperature min./max.
 Medium
 Max. particle size
 Oil content of compressed air

Poppet valve
 0 bar / 10 bar
 -30 °C / +80 °C
 -30 °C / +80 °C
 Compressed air
 5 µm
 0 mg/m³ - 5 mg/m³

Materials:

Housing

Aluminum

Seals

Acrylonitrile Butadiene Rubber

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.

	Control element	Compressed air connection			Qn	Material: Actuating control	Weight	Note	Part No.
		Input	Output	Exhaust					
					[l/min]		[kg]		
	Plunger	G 1/4	G 1/4	G 1/4	550	Steel	0.165	Fig. 1	0820400001
	Roller	G 1/4	G 1/4	G 1/4	550	Polyoxymethylene	0.265	Fig. 2	0820400002
	Roller lever, one-way trip	G 1/4	G 1/4	G 1/4	550	Polyoxymethylene; Steel	0.28	Fig. 3	0820400003
	Push button	G 1/4	G 1/4	G 1/4	550	Aluminum	0.29	Fig. 4	0820400004
	Lever	G 1/4	G 1/4	G 1/4	550	Steel; Polyamide	0.27	Fig. 5	0820400005
	Pedal	G 1/4	G 1/4	G 1/4	550	Aluminum	1.2	Fig. 6	0820400006
	Pedal, with detent	G 1/4	G 1/4	G 1/4	550	Aluminum	1.22	Fig. 7	0820400008

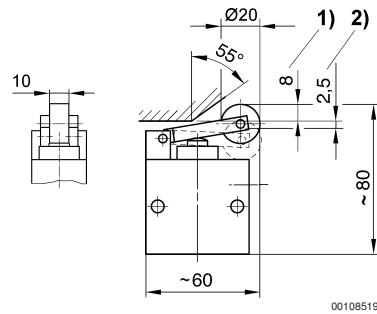
Nominal flow Qn at 6 bar and Δp = 1 bar

Directional valves → Mechanically operated

3/2-way valve, Series AP

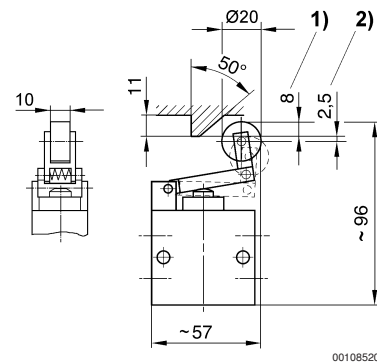
► $Q_n = 550 \text{ l/min}$ ► pipe connection ► compressed air connection output: G 1/4

Dimensions, Fig. 2



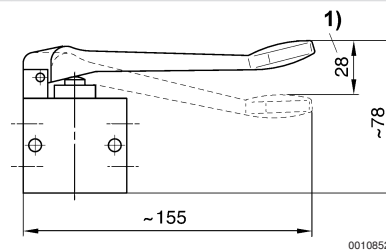
- 1) actuating stroke
2) overstroke

Dimensions, Fig. 3



- 1) actuating stroke
2) overstroke

Dimensions, Fig. 4



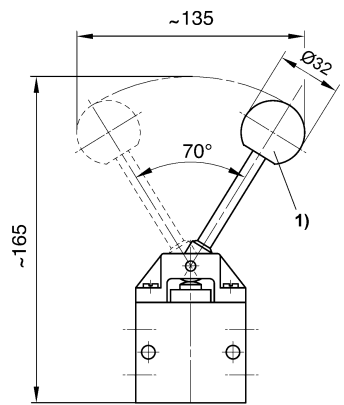
- 1) actuating stroke

Directional valves → Mechanically operated

3/2-way valve, Series AP

► Qn= 550 l/min ► pipe connection ► compressed air connection output: G 1/4

Dimensions, Fig. 5

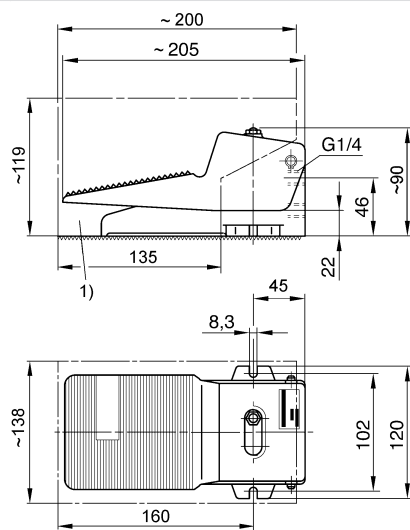


00108522

actuating torque: 40 Ncm

1) Ball

Dimensions, Fig. 6



00108523

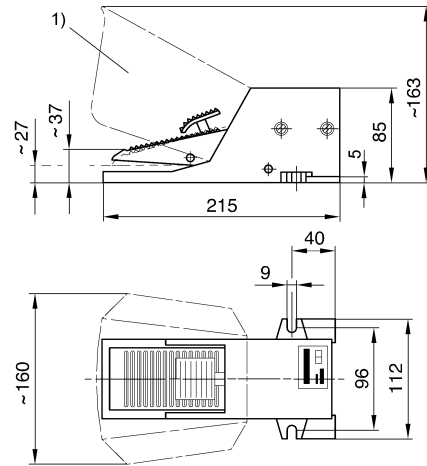
1) optional protective cover, part number 1828104001

Directional valves → Mechanically operated

3/2-way valve, Series AP

► Qn= 550 l/min ► pipe connection ► compressed air connection output: G 1/4

Dimensions, Fig. 7



00108524

1) optional protective cover, part number 1828104002

Directional valves → Mechanically operated

3/2-way valve, Series AP

► Qn= 190 l/min ► pipe connection ► compressed air connection output: M5



00108499

Version	Poppet valve
Working pressure min./max.	0 bar / 10 bar
Ambient temperature min./max.	-30 °C / +80 °C
Medium temperature min./max.	-30 °C / +80 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³
Materials:	
Housing	Aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks
■ The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
■ The oil content of air pressure must remain constant during the life cycle.
■ Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.

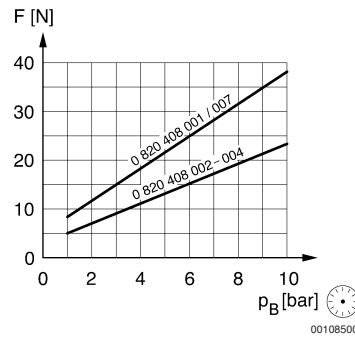
	Control element	Compressed air connection		Qn	Qn	Weight	Note	Part No.
		Input	Output	1 → 2	2 → 3			
				[l/min]	[l/min]			
	Plunger	M5	M5	190	150	0.036	Fig. 1	0820408001
	Roller	M5	M5	190	150	0.05	Fig. 2	0820408002
	Roller lever, one-way trip	M5	M5	190	150	0.055	Fig. 3	0820408003
	Push button	M5	M5	190	150	0.05	Fig. 4	0820408004
	Lever	M5	M5	190	150	0.042	Fig. 5	0820408005
	panel installation	M5	M5	190	150	0.068	1); Fig. 6	0820408007

1) Please order control button separately.
Nominal flow Qn at 6 bar and Δp = 1 bar

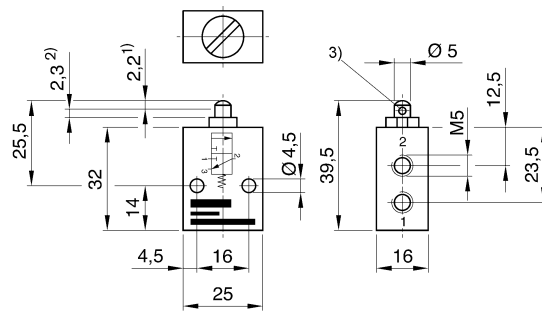
Directional valves → Mechanically operated

3/2-way valve, Series AP

► Qn= 190 l/min ► pipe connection ► compressed air connection output: M5

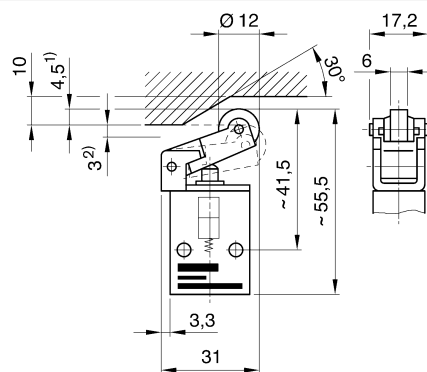
operating force

F = actuating force
 p_B = Working pressure

Dimensions, Fig. 1, Basic valve

- 1) actuating stroke
- 2) overstroke
- 3) Exhaust

Dimensions of basic valve apply to all types of actuation.

Dimensions, Fig. 2

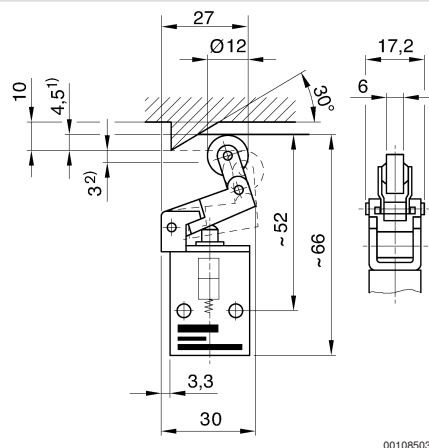
- 1) actuating stroke
- 2) overstroke

Directional valves → Mechanically operated

3/2-way valve, Series AP

► Qn= 190 l/min ► pipe connection ► compressed air connection output: M5

Dimensions, Fig. 3

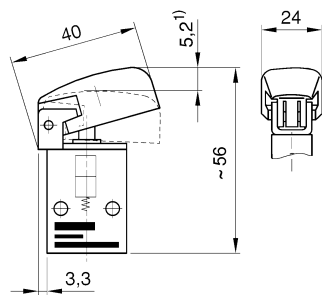


00108503

1) actuating stroke

2) overstroke

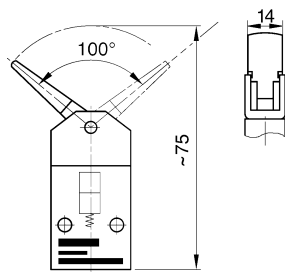
Dimensions, Fig. 4



00108504

1) actuating stroke

Dimensions, Fig. 5



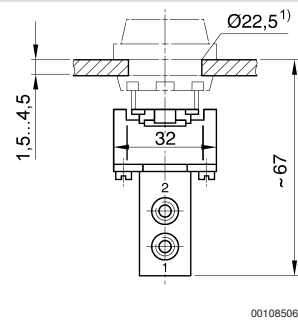
00108505

actuating torque: 5 Ncm

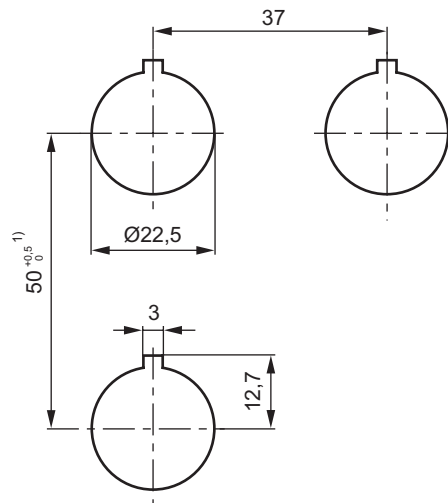
Directional valves → Mechanically operated

3/2-way valve, Series AP

► Qn= 190 l/min ► pipe connection ► compressed air connection output: M5

Dimensions, Fig. 6

1) cut-out in the front plate

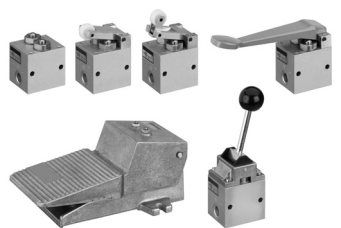
Dimensions, cut-out in the front plate

1) for version with label base (1820148009) 55 mm distance

Directional valves → Mechanically operated

4/2-way valve, Series AP

► Qn= 550 l/min ► pipe connection ► compressed air connection output: G 1/4



00108525

Version	Poppet valve
Working pressure min./max.	0 bar / 10 bar
Ambient temperature min./max.	-30 °C / +80 °C
Medium temperature min./max.	-30 °C / +80 °C
Medium	Compressed air
Max. particle size	5 µm
Oil content of compressed air	0 mg/m³ - 5 mg/m³

Materials:	
Housing	Aluminum
Seals	Acrylonitrile Butadiene Rubber

Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of air pressure must remain constant during the life cycle.
- Use only the approved oils from Bosch Rexroth, see chapter „Technical information“.

	Control element	Compressed air connection			Qn [l/min]	Material: Actuating control	Weight [kg]	Note	Part No.
		Input	Output	Exhaust					
	Plunger	G 1/4	G 1/4	G 1/4	550	Steel	0.33	Fig. 1	0820401001
	Roller	G 1/4	G 1/4	G 1/4	550	Polyoxymethylene; Steel	0.5	Fig. 2	0820401002
	Roller lever, one-way trip	G 1/4	G 1/4	G 1/4	550	Polyoxymethylene; Steel	0.5	Fig. 3	0820401003
	Push button	G 1/4	G 1/4	G 1/4	550	Aluminum	0.52	Fig. 4	0820401004
	Lever	G 1/4	G 1/4	G 1/4	550	Steel; Polyamide	0.53	Fig. 5	0820401005
	Pedal	G 1/4	G 1/4	G 1/4	550	Aluminum	1.3	Fig. 6	0820401006
	Pedal, with detent	G 1/4	G 1/4	G 1/4	550	Aluminum	1.42	Fig. 7	0820401008

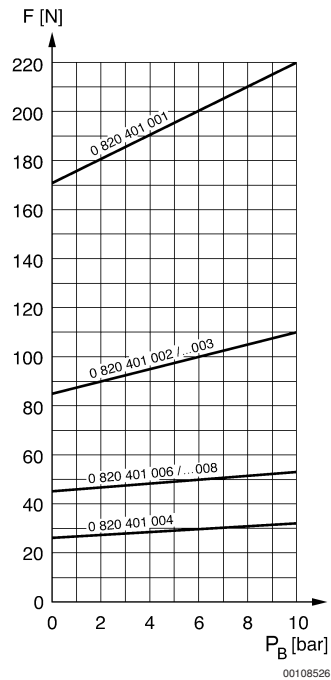
Nominal flow Qn at 6 bar and Δp = 1 bar

Directional valves → Mechanically operated

4/2-way valve, Series AP

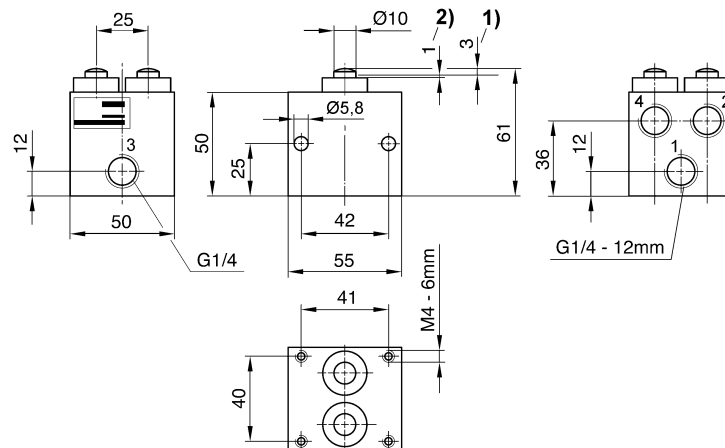
► Qn= 550 l/min ► pipe connection ► compressed air connection output: G 1/4

operating force



F = actuating force
 P_B = Working pressure

Dimensions, Fig. 1



- 1) actuating stroke
 2) overstroke

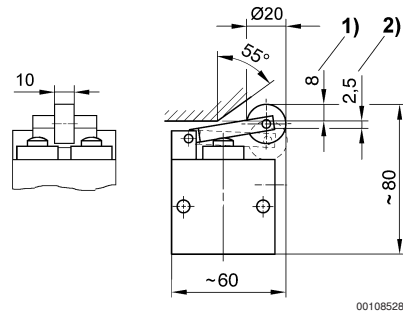
Dimensions of basic valve apply to all types of actuation.

00108527

Directional valves → Mechanically operated

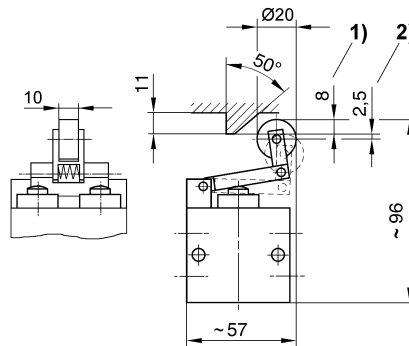
4/2-way valve, Series AP

► Qn= 550 l/min ► pipe connection ► compressed air connection output: G 1/4

Dimensions, Fig. 2

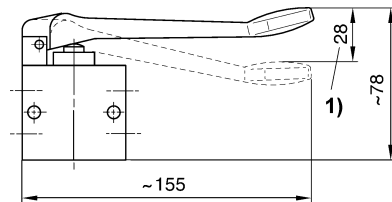
00108528

- 1) actuating stroke
2) overstroke

Dimensions, Fig. 3

00108529

- 1) actuating stroke
2) overstroke

Dimensions, Fig. 4

00108530

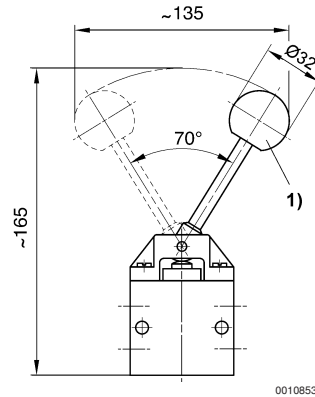
- 1) actuating stroke

Directional valves → Mechanically operated

4/2-way valve, Series AP

► Qn= 550 l/min ► pipe connection ► compressed air connection output: G 1/4

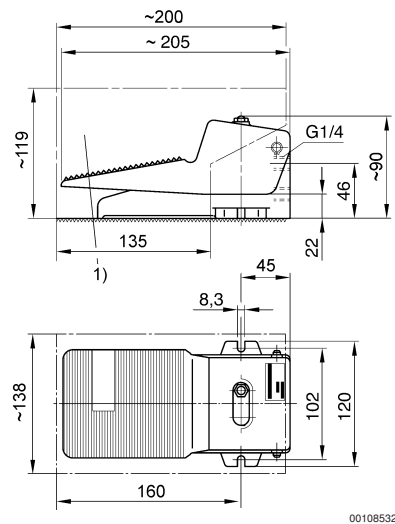
Dimensions, Fig. 5



actuating torque: 40 Ncm

1) Ball

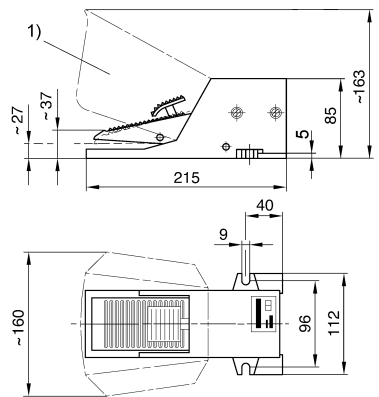
Dimensions, Fig. 6



1) optional protective cover, part number 1828104001

Directional valves → Mechanically operated**4/2-way valve, Series AP**

► Qn= 550 l/min ► pipe connection ► compressed air connection output: G 1/4

Dimensions, Fig. 7

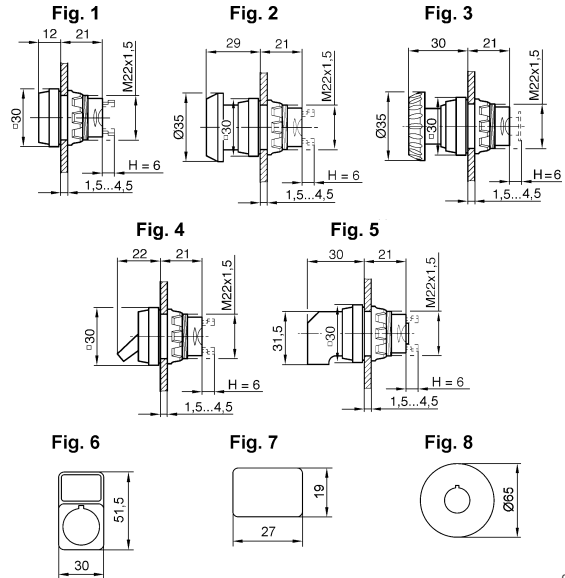
00134224

1) optional protective cover, part number 1828104002

Directional valves → Mechanically operated

Series AP
Accessories
Control element
► AP, ST


00132049



00131789

Part No.	Type	Color	Weight [kg]	Delivery quantity [Piece]	Note			
1827010461	Push button	Red	0.011	1	Fig. 1			
1827010462	Push button	Black	0.011	1	Fig. 1			
1827010463	Push button	Yellow	0.011	1	Fig. 1			
1827010464	Push button	Green	0.011	1	Fig. 1			
1827010466	Mushroom button	Red	0.024	1	Fig. 2			
1827010467	Mushroom button	Green	0.024	1	Fig. 2			
1827010468	Mushroom button	Yellow	0.024	1	Fig. 2			
1827010469	Mushroom button with detent and rotary release	Red	0.047	1	Fig. 3			
1827010471	Lever switch	Red	0.014	1	Fig. 4			
1827010472	Lever switch	White	0.014	1	Fig. 4			
1827010473	Rotary switch with two notched positions	Red	0.02	1	Fig. 5			
1827010474	Rotary switch with two notched positions	Black	0.02	1	Fig. 5			
1820148009	Label base	Black	0.003	20	Fig. 6			
1820148010	Name plates, angular	-	0.001	20	Fig. 7			
1820148011	Emergency OFF sign, round	Yellow	0.001	1	Fig. 8			
1820499000	Ring spanner	Yellow	0.026	1	-			
1820508001	Blanking plug	Black	0.007	10	-			
1823313004	Mounting nut M22x1,5	-	0.001	50	-			

for panel-mounted valves

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Subject to modifications.

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