


**UNIVERSAL Valves G1/8 - G1/4**

- UNIVERSAL Modular System: possibility to create a lot of different valves with short number of basis elements
- Control: manual, mechanical, pneumatic, electric
- Traditional UNIVER spool system: fluctuating seals of special compound to reduce friction and prevent sticking
- High flow rate, high cycle life, suitable for vacuum application
- Modular sub-bases



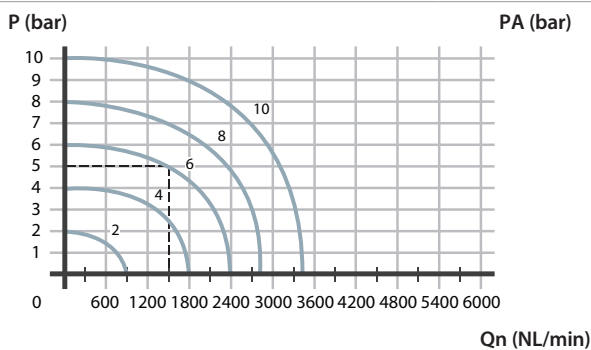
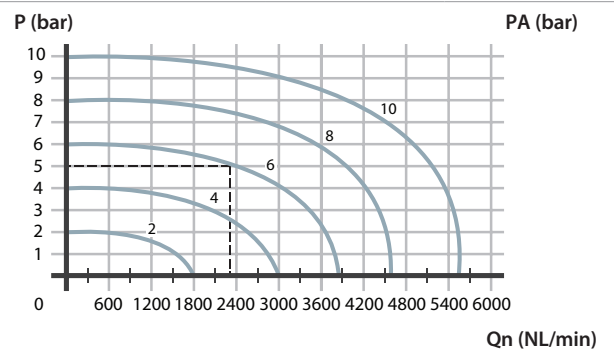
|                            |                                                           |
|----------------------------|-----------------------------------------------------------|
| Fluid                      | 50 µm filtered air, with or without lubrication           |
| Ambient temperature        | -10 ÷ +50 °C                                              |
| Fluid temperature          | max +50 °C                                                |
| Commutation system         | spool                                                     |
| Ways/Positions             | 3/2 NC, 3/2 NO, 3/2 NC-NO, 5/2, 5/3                       |
| Pressure                   | max 10 bar                                                |
| Control                    | indirect electro-pneumatic, pneumatic, manual, mechanical |
| Return                     | pneumatic spring, mechanical spring                       |
| Connections                | G1/8 G1/4                                                 |
| Nominal Ø mm               | 6,5 8,5                                                   |
| Nominal flow rate (NL/min) | 890 1480                                                  |
| Valve body                 | G1/8 = die-cast zamak<br>G1/4 = aluminium                 |
| Seals                      | nitrile rubber                                            |
| Actuators                  | technopolymer/aluminium                                   |
| Spool                      | aluminium                                                 |
| Sub-base                   | zamak                                                     |
| Electropilot               | AA                                                        |
| Coil                       | U1                                                        |
| Power consumption          | 3,5 W (DC) - 5 VA (AC)                                    |
| Connector                  | AM 5110                                                   |
| Voltage                    | 12 V DC - 24 V DC - 24 V AC - 110 V AC - 230 V AC         |
| Manual override            | impulse screw - 2 positions                               |


**Reference standard**

II 2G Ex h IIC T5 Gb



II 2D Ex h IIIC T100°C Db


**FLOW RATE CHARACTERISTICS**
**G1/8**

**G1/4**


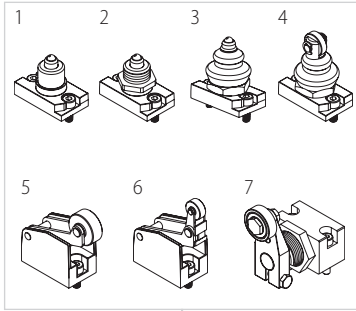
PA (bar) = apply pressure

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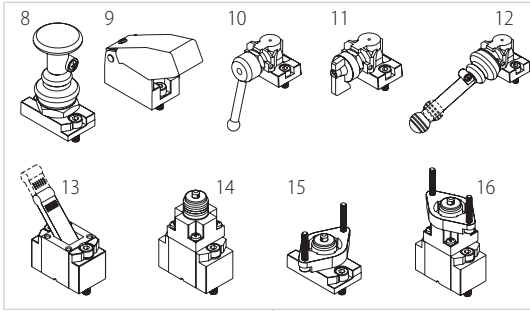
Qn (NL/min) = Flow rate

MODULAR SYSTEM UNIVERSAL SERIES

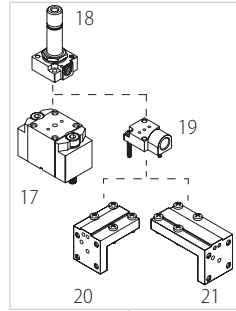
MECHANICAL



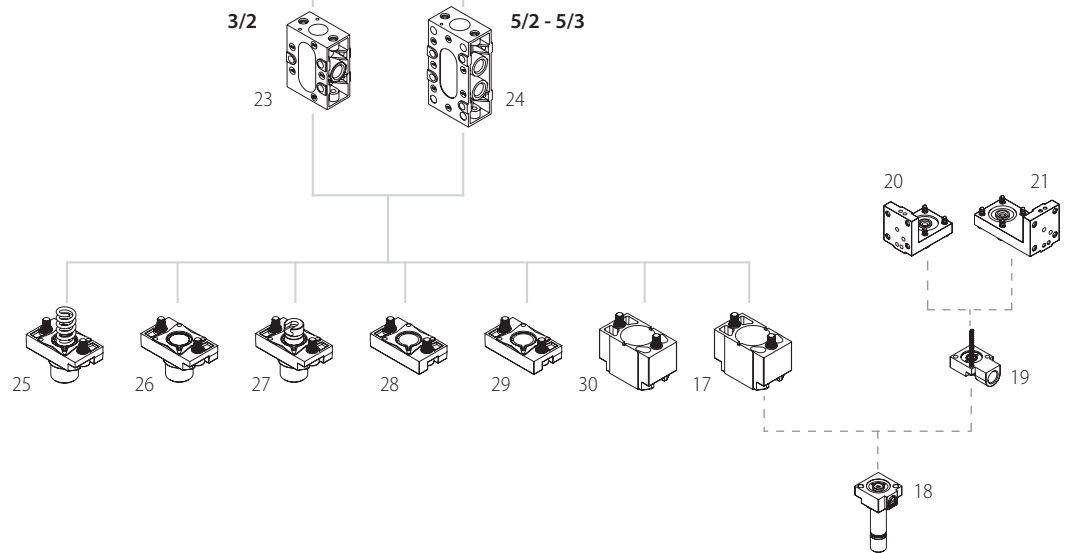
MANUAL



ELECTRICAL



PNEUMATIC



MECHANICAL CONTROL

1. Ball push
2. Ball push for screw panel mounting
3. Ball push with dust protection
4. Roller with dust protection
5. Roller lever
6. One-way roller lever
7. Two-way side roller lever

MANUAL OVERRIDE

8. Push-pull
9. Push button
10. Rotating lever
11. Selector
12. 90° short/Long lever
13. Short/Long lever
14. Threaded indirect oration
15. Panel direct oforation
16. Panel indirect oforation

ELECTRICAL CONTROL

17. Electrical amplified
18. U1 electropilot
19. Plate for external pilot supply
20. Angle plate for "H" solenoid option
21. Angle plate for "P" solenoid option"

CONTROL PNEUMATIC

22. Pneumatic amplified

BODY

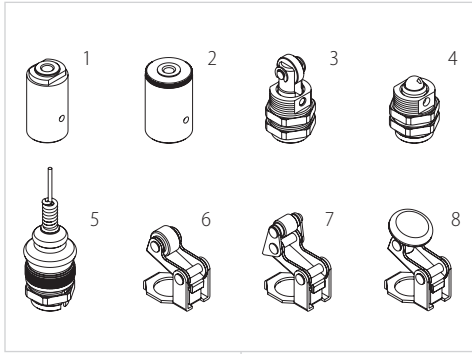
23. Body 3/2
24. Body 5/2

RETURN

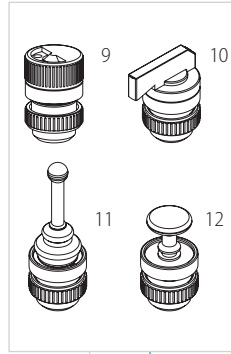
25. Mechanical spring
26. Pneumatic unamplified (differential)
27. Bottom plate - 2/3 positions
28. Bottom plate
29. Pneumatic spring
30. Pneumatic amplified

MODULAR SYSTEM ACTUATORS/BUTTONS

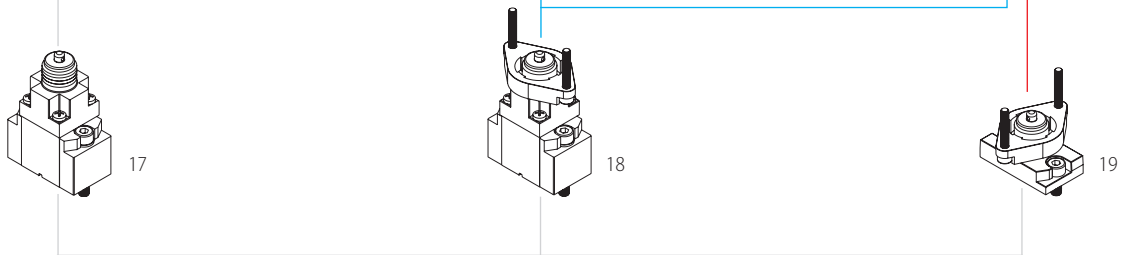
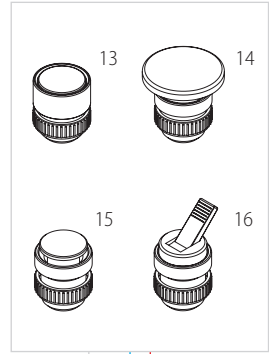
PNEUMATIC/MACHANICAL



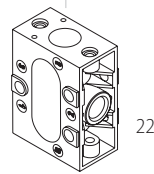
MANUAL



MANUAL

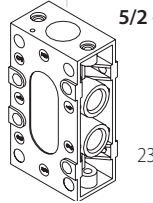


3/2



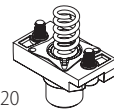
22

5/2 - 5/3

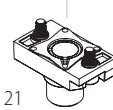


23

20



21



**PNEUMATIC/MACHANICAL ACTUATORS**

1. Pneumatic actuators
2. Pneumatic actuators amplified
3. Roller operator 1 position
4. Ball operator 1 position
5. Operator with omni-directional antenna 1 position
6. Roller lever operator 1 position
7. Articulated roller lever operator 1 position
8. Key operator 1 position

**MANUAL PUSH**

9. Rotating selector
10. Rotating lever selector
11. Omni-directional lever
12. Push pull actuators
13. Recessed button
14. Head button
15. Button
16. Lever operator

**OVERRIDE**

17. Threaded indirect operation
18. Indirect operation for panel mounting
19. Direct operation for panel mounting

**RETURN**

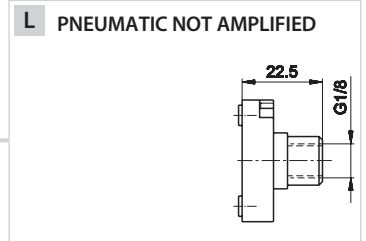
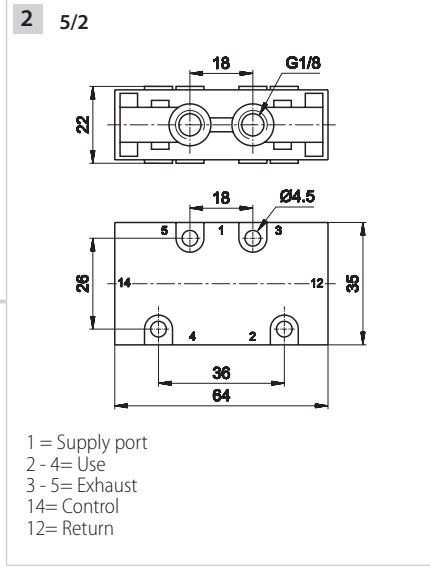
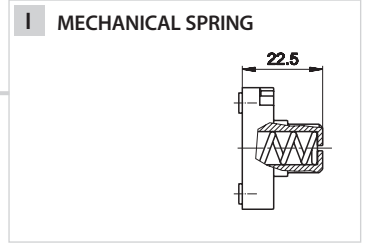
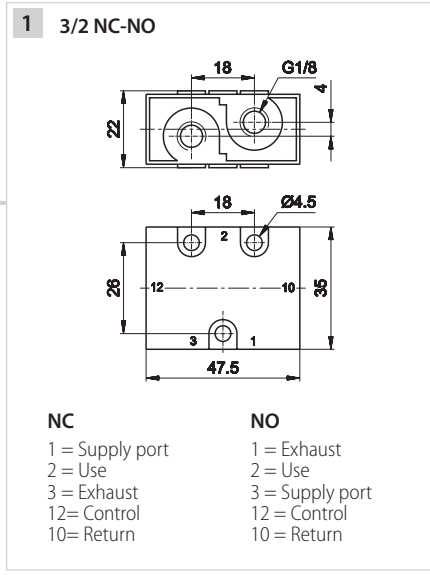
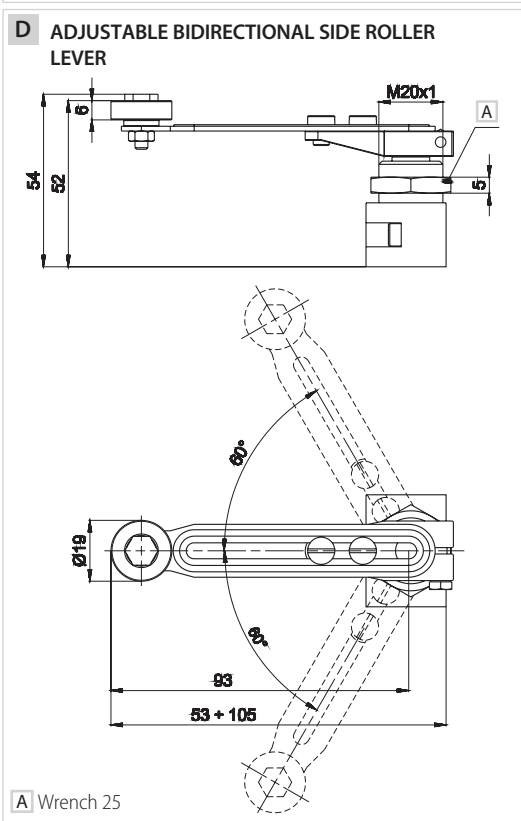
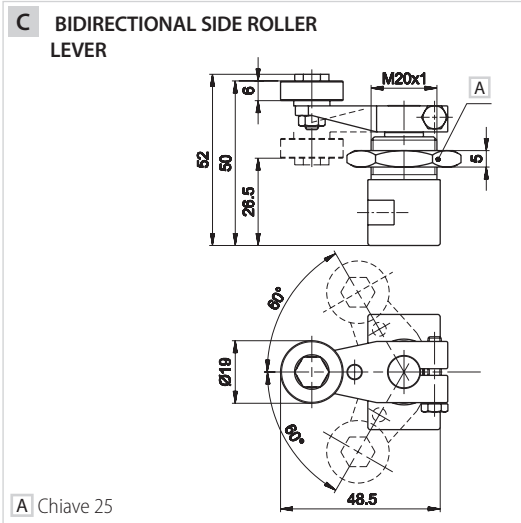
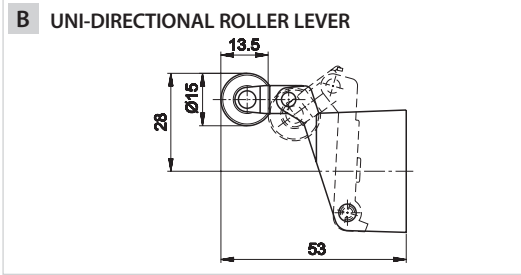
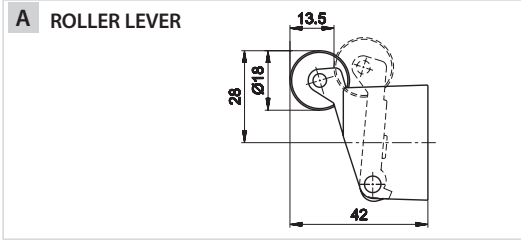
20. Mechanical spring
21. Pneumatic not amplified

**BODY**

22. 3/2 Body
23. 5/2 Body

**VALVES WITH DIRECT MECHANICAL OPERATION**

|         |      |        |
|---------|------|--------|
| CONTROL | BODY | RETURN |
|---------|------|--------|



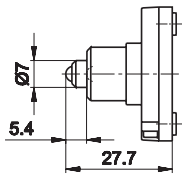
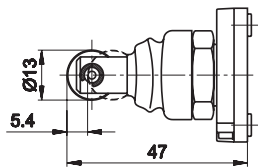
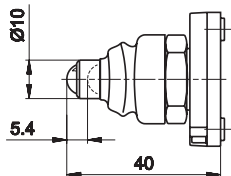
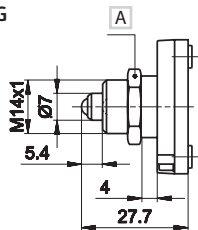
## VALVES WITH DIRECT MECHANICAL OPERATION

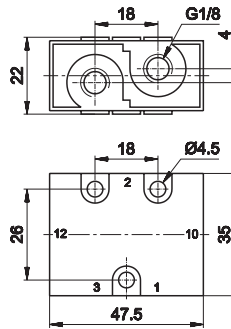
CONTROL

BODY

RETURN

1/8

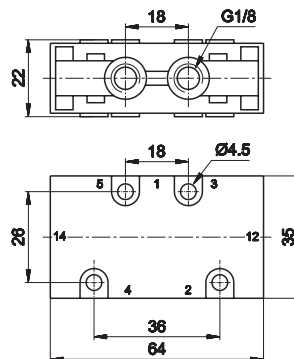
**E** BALL-PUSH

**F** ROLLER WITH DUST PROTECTION

**G** BALL-PUSH WITH DUST PROTECTION

**H** BALL-PUSH FOR SCREW  
PANEL MOUNTING

**A** Wrench 18

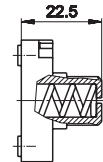
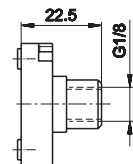
**1** 3/2 NC-NO

**NC**

 1 = Supply port  
 2 = Use  
 3 = Exhaust  
 12 = Control  
 10 = Return

**NO**

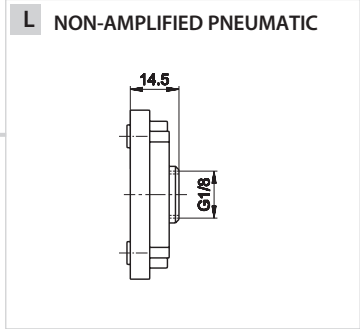
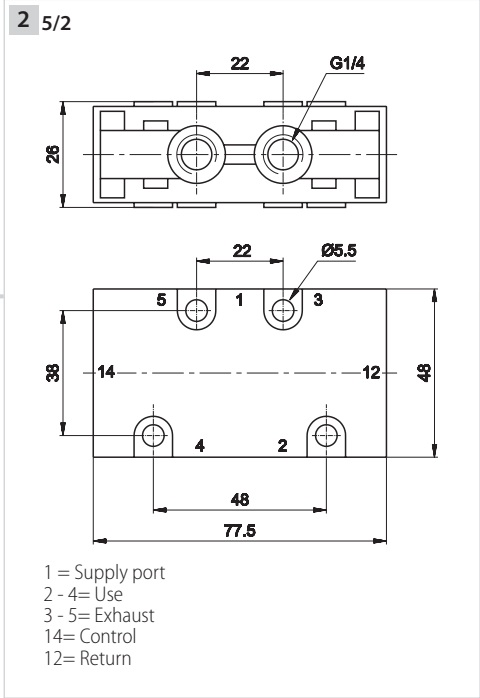
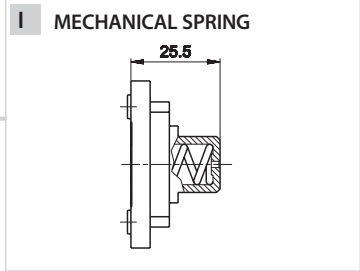
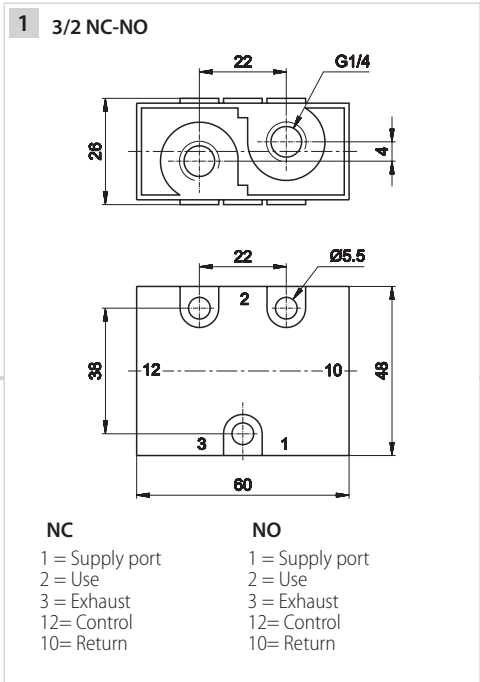
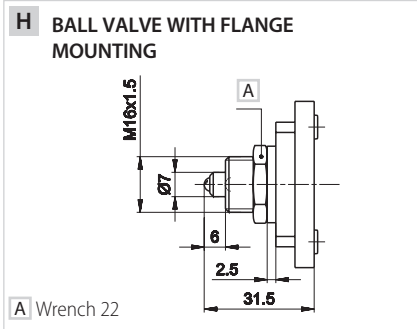
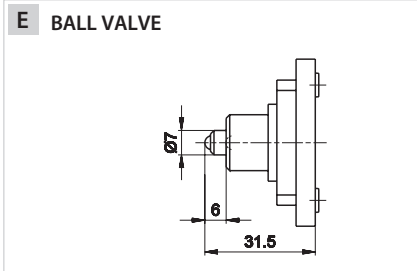
 1 = Exhaust  
 2 = Use  
 3 = Supply port  
 12 = Control  
 10 = Return

**2** 5/2

 1 = Supply port  
 2 - 4 = Use  
 3 - 5 = Exhaust  
 14 = Control  
 12 = Return


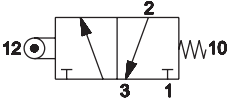
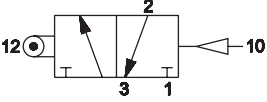

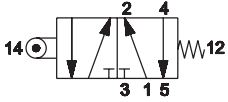
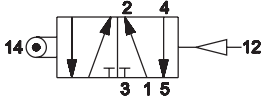

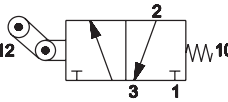
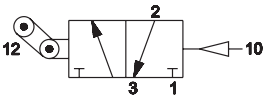

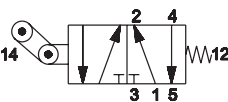
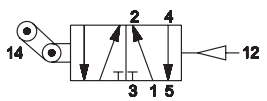

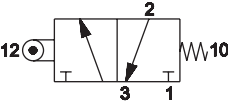

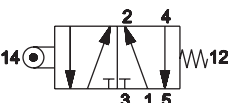
**I** MECHANICAL SPRING

**L** PNEUMATIC NOT AMPLIFIED


VALVES WITH DIRECT MECHANICAL OPERATION

| CONTROL | BODY | RETURN |
|---------|------|--------|
|---------|------|--------|


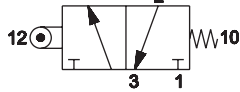

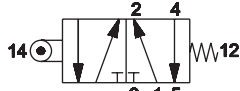

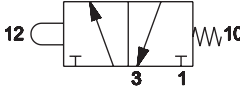
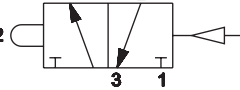

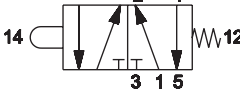
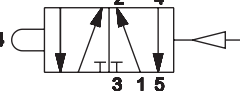

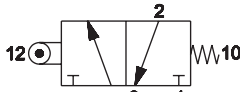
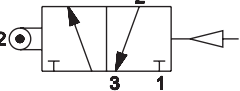

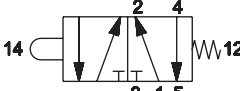
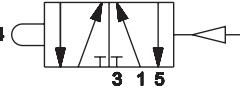


## VALVES WITH DIRECT MECHANICAL OPERATION

|                                                                                    | Code           | Way            | Thread | Return                     | Flow rate<br>(NI/min) | Ø<br>mm | Weight<br>kg | Force<br>N | Composition |      |        | tot. L<br>mm |                                                                                       |
|------------------------------------------------------------------------------------|----------------|----------------|--------|----------------------------|-----------------------|---------|--------------|------------|-------------|------|--------|--------------|---------------------------------------------------------------------------------------|
|                                                                                    |                |                |        |                            |                       |         |              |            | Control     | Body | Return |              |                                                                                       |
| <b>ROLLER LEVER</b>                                                                |                |                |        |                            |                       |         |              |            |             |      |        |              |                                                                                       |
|    | <b>CL-100A</b> | 3/2<br>NC - NO | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,21         | 23         | A           | 1    | I      | 112          |    |
|                                                                                    | <b>CL-100P</b> | 3/2<br>NC - NO | G1/8   | pneumatic<br>not amplified | 890                   | 6,5     | 0,21         | 6          | A           | 1    | L      | 112          |    |
|    | <b>CM-400A</b> | 5/2            | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,25         | 23         | A           | 2    | I      | 129          |    |
|                                                                                    | <b>CM-400P</b> | 5/2            | G1/8   | pneumatic<br>not amplified | 890                   | 6,5     | 0,25         | 6          | A           | 2    | L      | 129          |    |
| <b>ONE-WAY ROLLER LEVER</b>                                                        |                |                |        |                            |                       |         |              |            |             |      |        |              |                                                                                       |
|   | <b>CL-101A</b> | 3/2<br>NC - NO | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,22         | 18         | B           | 1    | I      | 123          |   |
|                                                                                    | <b>CL-101P</b> | 3/2<br>NC - NO | G1/8   | pneumatic<br>not amplified | 890                   | 6,5     | 0,22         | 6          | B           | 1    | L      | 123          |  |
|  | <b>CM-401A</b> | 5/2            | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,26         | 18         | B           | 2    | I      | 139,5        |  |
|                                                                                    | <b>CM-401P</b> | 5/2            | G1/8   | pneumatic<br>not amplified | 890                   | 6,5     | 0,26         | 6          | B           | 2    | L      | 139,5        |  |
| <b>TWO-WAY SIDE ROLLER LEVER</b>                                                   |                |                |        |                            |                       |         |              |            |             |      |        |              |                                                                                       |
|  | <b>CL-106A</b> | 3/2<br>NC - NO | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,30         | 25         | C           | 1    | I      | 118,5        |  |
|  | <b>CM-406A</b> | 5/2            | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,34         | 25         | C           | 2    | I      | 135          |  |

To get 3/2 NO version, supply the valve from port 3

**VALVES WITH DIRECT MECHANICAL OPERATION**

|                                                                                    | Code            | Way            | Thread | Return                     | Flow rate<br>(NI/min) | Ø<br>mm | Weight<br>kg | Force<br>N | Composition |      |        | tot. L<br>mm |                                                                                       |
|------------------------------------------------------------------------------------|-----------------|----------------|--------|----------------------------|-----------------------|---------|--------------|------------|-------------|------|--------|--------------|---------------------------------------------------------------------------------------|
|                                                                                    |                 |                |        |                            |                       |         |              |            | Control     | Body | Return |              |                                                                                       |
| <b>TWO-WAY ADJUSTABLE ROLLER LEVER</b>                                             |                 |                |        |                            |                       |         |              |            |             |      |        |              |                                                                                       |
|    | <b>CL-106AL</b> | 3/2<br>NC - NO | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,30         | 25         | D           | 1    | I      | 123÷175      |    |
|    | <b>CM-406AL</b> | 5/2            | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,34         | 25         | D           | 2    | I      | 139,5÷191,5  |    |
| <b>BALL-PUSH</b>                                                                   |                 |                |        |                            |                       |         |              |            |             |      |        |              |                                                                                       |
|   | <b>CL-102A</b>  | 3/2<br>NC - NO | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,19         | 64         | E           | 1    | I      | 97,7         |    |
|                                                                                    | <b>CL-9102A</b> | 3/2<br>NC - NO | G1/4   | mechanical<br>spring       | 1480                  | 8,5     | 0,26         | 68         | E           | 1    | I      | 117          |                                                                                       |
|                                                                                    | <b>CL-102P</b>  | 3/2<br>NC - NO | G1/8   | pneumatic not<br>amplified | 890                   | 6,5     | 0,19         | 25         | E           | 1    | L      | 97,7         |   |
|                                                                                    | <b>CL-9102P</b> | 3/2<br>NC - NO | G1/4   | pneumatic not<br>amplified | 1480                  | 8,5     | 0,26         | 26         | E           | 1    | L      | 106          |                                                                                       |
|  | <b>CM-402A</b>  | 5/2            | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,23         | 64         | E           | 2    | I      | 114,2        |  |
|                                                                                    | <b>CM-9402A</b> | 5/2            | G1/4   | mechanical<br>spring       | 1480                  | 8,5     | 0,28         | 68         | E           | 2    | I      | 134,5        |                                                                                       |
|                                                                                    | <b>CM-402P</b>  | 5/2            | G1/8   | pneumatic not<br>amplified | 890                   | 6,5     | 0,23         | 25         | E           | 2    | L      | 114,2        |  |
|                                                                                    | <b>CM-9402P</b> | 5/2            | G1/4   | pneumatic not<br>amplified | 1480                  | 8,5     | 0,28         | 26         | E           | 2    | L      | 123,5        |                                                                                       |
| <b>WITH ROLLER NEEDLE AND DUST COVER</b>                                           |                 |                |        |                            |                       |         |              |            |             |      |        |              |                                                                                       |
|  | <b>CL-105A</b>  | 3/2<br>NC - NO | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,19         | 64         | F           | 1    | I      | 117          |  |
|                                                                                    | <b>CL-105P</b>  | 3/2<br>NC - NO | G1/8   | pneumatic not<br>amplified | 890                   | 6,5     | 0,18         | 25         | F           | 1    | L      | 117          |  |
|  | <b>CM-405A</b>  | 5/2            | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,23         | 68         | F           | 2    | I      | 133,5        |  |
|                                                                                    | <b>CM-405P</b>  | 5/2            | G1/8   | pneumatic not<br>amplified | 890                   | 6,5     | 0,22         | 26         | F           | 2    | L      | 133,5        |  |

To get 3/2 NO version, supply the valve from port 3

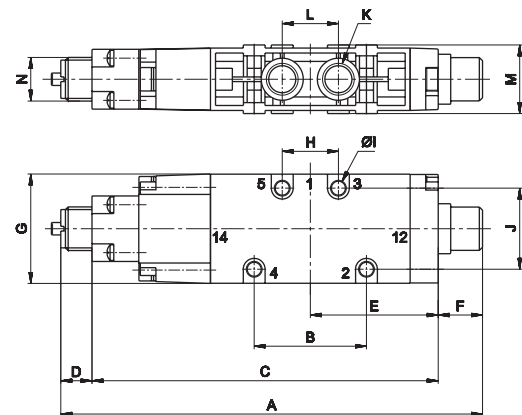
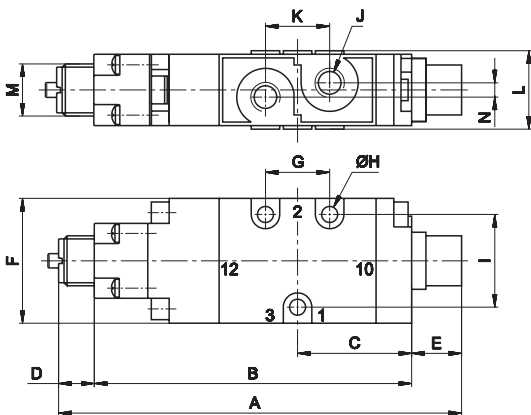
## VALVES WITH DIRECT MECHANICAL OPERATION

|                                       | Code     | Way            | Thread | Return                     | Flow rate<br>(NI/min) | Ø<br>mm | Weight<br>kg | Force<br>N | Composition |      |        | tot. L<br>mm |  |
|---------------------------------------|----------|----------------|--------|----------------------------|-----------------------|---------|--------------|------------|-------------|------|--------|--------------|--|
|                                       |          |                |        |                            |                       |         |              |            | Control     | Body | Return |              |  |
| <b>ROLLER WITH DUST PROTECTION</b>    |          |                |        |                            |                       |         |              |            |             |      |        |              |  |
|                                       | CL-104A  | 3/2<br>NC - NO | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,19         | 64         | G           | 1    | I      | 110          |  |
|                                       | CL-104P  | 3/2<br>NC - NO | G1/8   | pneumatic not<br>amplified | 890                   | 6,5     | 0,18         | 25         | G           | 1    | L      | 110          |  |
|                                       | CM-404A  | 5/2            | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,23         | 68         | G           | 2    | I      | 126,5        |  |
|                                       | CM-404P  | 5/2            | G1/8   | pneumatic not<br>amplified | 890                   | 6,5     | 0,22         | 26         | G           | 2    | L      | 126,5        |  |
| <b>BALL-PUSH WITH DUST PROTECTION</b> |          |                |        |                            |                       |         |              |            |             |      |        |              |  |
|                                       | CL-103A  | 3/2<br>NC - NO | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,19         | 64         | H           | 1    | I      | 97,7         |  |
|                                       | CL-9103A | 3/2<br>NC - NO | G1/4   | mechanical<br>spring       | 1480                  | 8,5     | 0,26         | 68         | H           | 1    | I      | 117          |  |
|                                       | CL-103P  | 3/2<br>NC - NO | G1/8   | pneumatic not<br>amplified | 890                   | 6,5     | 0,18         | 25         | H           | 1    | L      | 97,7         |  |
|                                       | CL-9103P | 3/2<br>NC - NO | G1/4   | pneumatic not<br>amplified | 1480                  | 8,5     | 0,24         | 26         | H           | 1    | L      | 106          |  |
|                                       | CM-403A  | 5/2            | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,23         | 68         | H           | 2    | I      | 114,2        |  |
|                                       | CM-9403A | 5/2            | G1/4   | mechanical<br>spring       | 1480                  | 8,5     | 0,28         | 68         | H           | 2    | I      | 134,5        |  |
|                                       | CM-403P  | 5/2            | G1/8   | pneumatic not<br>amplified | 890                   | 6,5     | 0,22         | 25         | H           | 2    | L      | 114,2        |  |
|                                       | CM-9403P | 5/2            | G1/4   | pneumatic not<br>amplified | 1480                  | 8,5     | 0,26         | 26         | H           | 2    | L      | 123,5        |  |

To get 3/2 NO version, supply the valve from port 3

**VALVES WITH INDIRECT MECHANICAL OPERATOR FOR PNEUMATIC AND MECHANICAL ACTUATORS**

|                                  | Code     | Way    | Thread | Return                  | Pressure<br>bar | Flow rate<br>(NI/min) | Ø<br>mm | Weight<br>kg | Force<br>N |  |
|----------------------------------|----------|--------|--------|-------------------------|-----------------|-----------------------|---------|--------------|------------|--|
| <b>PUNTALE A SFERA</b>           |          |        |        |                         |                 |                       |         |              |            |  |
|                                  | CL-110A  | 3/2 NC | G 1/8  | mechanical spring       | 2,5÷10          | 890                   | 6,5     | 0,19         | 11         |  |
|                                  | CL-9110A | 3/2 NC | G 1/4  | mechanical spring       | 2÷10            | 1480                  | 8,5     | 0,26         | 11         |  |
|                                  | CL-110P  | 3/2 NC | G 1/8  | pneumatic not amplified | 1÷10            | 890                   | 6,5     | 0,18         | 11         |  |
|                                  | CL-9110P | 3/2 NC | G 1/4  | pneumatic not amplified | 1÷10            | 1480                  | 8,5     | 0,24         | 11         |  |
|                                  | CM-410A  | 5/2    | G 1/8  | mechanical spring       | 3÷10            | 890                   | 6,5     | 0,23         | 11         |  |
|                                  | CM-9410A | 5/2    | G 1/4  | mechanical spring       | 2÷10            | 1480                  | 8,5     | 0,28         | 11         |  |
|                                  | CM-410P  | 5/2    | G 1/8  | pneumatic not amplified | 1,2÷10          | 890                   | 6,5     | 0,22         | 11         |  |
|                                  | CM-9410P | 5/2    | G 1/4  | pneumatic not amplified | 1,2÷10          | 1480                  | 8,5     | 0,26         | 11         |  |
| <b>PUNTALE A SFERA SENSIBILE</b> |          |        |        |                         |                 |                       |         |              |            |  |
|                                  | CL-111A  | 3/2 NC | G 1/8  | mechanical spring       | 2,5÷10          | 890                   | 6,5     | 0,19         | 3          |  |
|                                  | CL-9111A | 3/2 NC | G 1/4  | mechanical spring       | 2÷10            | 1480                  | 8,5     | 0,26         | 3          |  |
|                                  | CL-111P  | 3/2 NC | G 1/8  | pneumatic not amplified | 1÷10            | 890                   | 6,5     | 0,18         | 3          |  |
|                                  | CL-9111P | 3/2 NC | G 1/4  | pneumatic not amplified | 1÷10            | 1480                  | 8,5     | 0,24         | 3          |  |
|                                  | CM-411A  | 5/2    | G 1/8  | mechanical spring       | 3÷10            | 890                   | 6,5     | 0,23         | 3          |  |
|                                  | CM-9411A | 5/2    | G 1/4  | mechanical spring       | 2÷10            | 1480                  | 8,5     | 0,28         | 3          |  |
|                                  | CM-411P  | 5/2    | G 1/8  | pneumatic not amplified | 1,2÷10          | 890                   | 6,5     | 0,22         | 3          |  |
|                                  | CM-9411P | 5/2    | G 1/4  | pneumatic not amplified | 1,2÷10          | 1480                  | 8,5     | 0,26         | 3          |  |

**3/2 NC**
**5/2**


|             | A     | B   | C  | D  | E    | F  | G  | H   | I  | J    | K  | L  | M     | N |
|-------------|-------|-----|----|----|------|----|----|-----|----|------|----|----|-------|---|
| <b>G1/8</b> | 116   | 92  | 32 | 10 | 14   | 35 | 18 | 4,5 | 26 | G1/8 | 18 | 22 | M14x1 | 4 |
| <b>G1/4</b> | 136,5 | 112 | 41 | 10 | 14,5 | 48 | 22 | 5,5 | 38 | G1/4 | 22 | 26 | M14x1 | 4 |

 1 = Supply port  
 2 = Use  
 3 = Exhaust

 12 = Control  
 10 = Return

|             | A   | B  | C     | D  | E    | F    | G  | H  | I   | J  | K    | L  | M  | N     |
|-------------|-----|----|-------|----|------|------|----|----|-----|----|------|----|----|-------|
| <b>G1/8</b> | 135 | 36 | 111   | 10 | 41   | 14   | 35 | 18 | 4,5 | 26 | G1/8 | 18 | 22 | M14x1 |
| <b>G1/4</b> | 154 | 48 | 129,5 | 10 | 49,7 | 14,5 | 48 | 22 | 5,5 | 38 | G1/4 | 22 | 26 | M14x1 |

 1 = Supply port  
 2 = Use  
 3 = Exhaust

 12 = Control  
 10 = Return

**VALVES WITH INDIRECT MECHANICAL OPERATOR FOR PNEUMATIC AND MECHANICAL ACTUATORS**
**PNEUMATIC AND MECHANICAL ACTUATORS**

|  |                |                                                                                                    |  |
|--|----------------|----------------------------------------------------------------------------------------------------|--|
|  | <b>AI-3550</b> | Pneumatic operator                                                                                 |  |
|  | <b>AI-3551</b> | Amplified pneumatic operator                                                                       |  |
|  | <b>AI-3560</b> | Roller operator 1 position                                                                         |  |
|  | <b>AI-3562</b> | Ball-push operator 1 position                                                                      |  |
|  | <b>AI-3563</b> | Operator with omni-directional antenna 1 position                                                  |  |
|  | <b>AI-3570</b> | Roller lever operator 1 position                                                                   |  |
|  | <b>AI-3571</b> | Articulated roller operator 1 position<br>Complete actuation with stroke 2,5 mm, max stroke 4,7 mm |  |
|  | <b>AI-3572</b> | Key operator 1 position                                                                            |  |

**MANUAL ACTUATORS**

|  |                 |         |                                       |  |
|--|-----------------|---------|---------------------------------------|--|
|  | <b>AI-3511</b>  | ■ BLACK | Recessed button                       |  |
|  | <b>AI-3512</b>  | ■ RED   |                                       |  |
|  | <b>AI-3513</b>  | ■ GREEN |                                       |  |
|  | <b>AI-3514</b>  | ■ RED   | Head button                           |  |
|  | <b>AI-3516</b>  | ■ BLACK |                                       |  |
|  | <b>AI-3514D</b> | ■ RED   |                                       |  |
|  | <b>AI-3516D</b> | ■ BLACK | Button                                |  |
|  | <b>AI-3515</b>  | ■ GREEN |                                       |  |
|  | <b>AI-3517</b>  | ■ RED   |                                       |  |
|  | <b>AI-3519</b>  | ■ BLACK | Accident prevention rotating selector |  |
|  | <b>AI-3520</b>  | ■ BLACK |                                       |  |
|  | <b>AI-3521</b>  | ■ BLACK |                                       |  |
|  | <b>AI-3522</b>  | ■ BLACK | Rotating lever selector               |  |
|  | <b>AI-3523</b>  | ■ BLACK |                                       |  |
|  | <b>AI-3524</b>  | ■ BLACK | Lever operator                        |  |
|  | <b>AI-3525</b>  | ■ BLACK | Omni - directional operator           |  |
|  | <b>AI-3526</b>  | ■ BLACK | Push-pull operator                    |  |

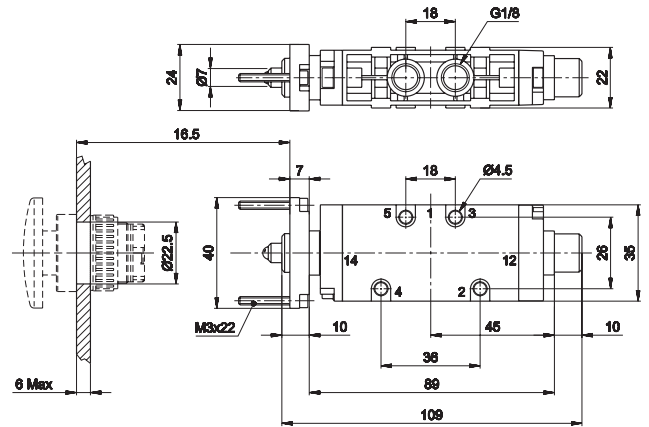
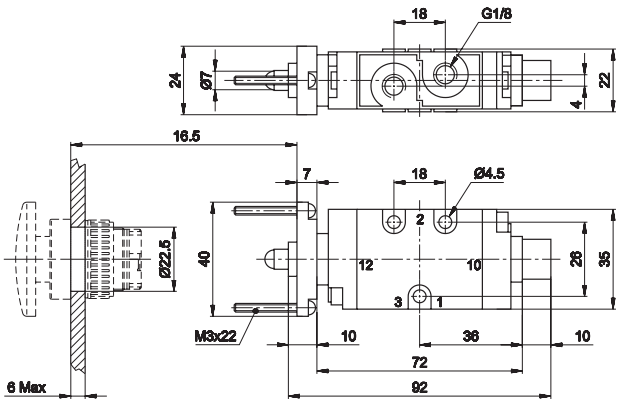
To get 3/2 NO version, supply the valve from port 3

DIRECT-ACTING VALVES FOR PANEL-MOUNTED ACTUATORS

|  | Code    | Way       | Thread | Return                  | Pressure bar | Flow rate (NI/min) | Ø mm | Weight kg | Force N |  |
|--|---------|-----------|--------|-------------------------|--------------|--------------------|------|-----------|---------|--|
|  | CL-112A | 3/2 NC-NO | G1/8   | mechanical spring       | 0 ÷ 10       | 890                | 6,5  | 0,19      | 64      |  |
|  | CL-112P | 3/2 NC-NO | G1/8   | pneumatic not amplified | 0 ÷ 10       | 890                | 6,5  | 0,18      | 25      |  |
|  | CM-412A | 5/2       | G1/8   | mechanical spring       | 0 ÷ 10       | 890                | 6,5  | 0,23      | 64      |  |
|  | CM-412P | 5/2       | G1/8   | pneumatic not amplified | 0 ÷ 10       | 890                | 6,5  | 0,22      | 25      |  |

3/2 NC-NO

5/2



- NC**  
 1 = Supply port  
 2 = Use  
 3 = Exhaust  
 12 = Control  
 10 = Return


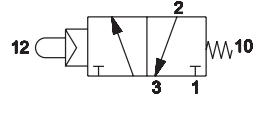
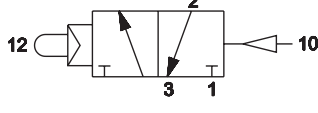

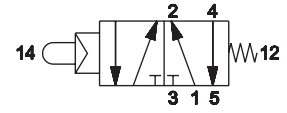
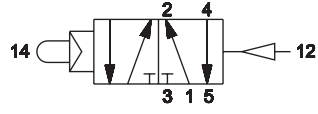
- NO**  
 1 = Exhaust  
 2 = Use  
 3 = Supply port  
 12 = Control  
 10 = Return

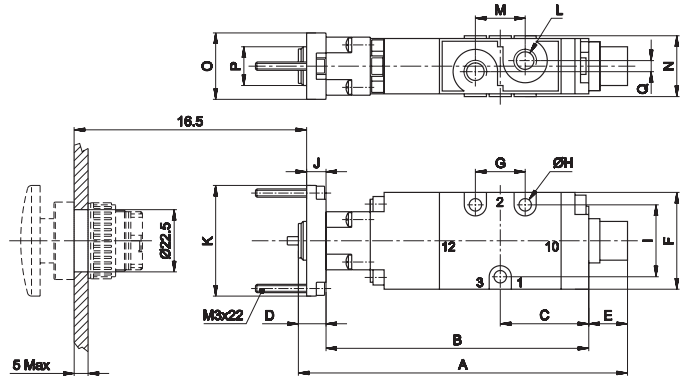
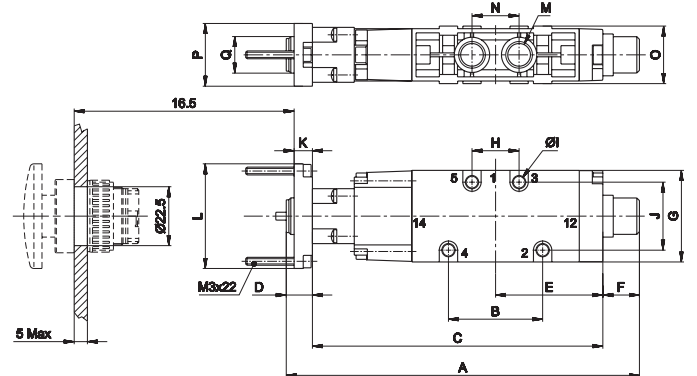
- 1 = Supply port  
 2 - 4 = Use  
 3 - 5 = Exhaust  
 14 = Control  
 12 = Return

MANUAL ACTUATORS

|  |           |         |                 |  |
|--|-----------|---------|-----------------|--|
|  | AI-3511Q  | ■ BLACK | Recessed button |  |
|  | AI-3512Q  | ■ RED   |                 |  |
|  | AI-3513Q  | ■ GREEN |                 |  |
|  | AI-3514Q  | ■ RED   | Head button     |  |
|  | AI-3516Q  | ■ BLACK |                 |  |
|  | AI-3514QD | ■ RED   |                 |  |
|  | AI-3516QD | ■ BLACK |                 |  |
|  | AI-3515Q  | ■ GREEN | Button          |  |
|  | AI-3517Q  | ■ RED   |                 |  |
|  | AI-3519Q  | ■ BLACK |                 |  |
|  | AI-3524Q  | ■ BLACK | Lever operator  |  |

**VALVOLE AD AZIONAMENTO INDIRETTO PER ATTUATORI DA QUADRO**

|                                                                                   | Code            | Way    | Thread | Return                     | Pressure bar | Flow rate (NI/min) | Ø mm | Weight kg | Force N |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------|--------|--------|----------------------------|--------------|--------------------|------|-----------|---------|-------------------------------------------------------------------------------------|
|  | <b>CL-113A</b>  | 3/2 NC | G 1/8  | molla meccanica            | 2,5÷10       | 890                | 6,5  | 0,20      | 11      |  |
|                                                                                   | <b>CL-9113A</b> | 3/2 NC | G 1/4  | molla meccanica            | 2÷10         | 1480               | 8,5  | 0,27      | 11      |                                                                                     |
|                                                                                   | <b>CL-113P</b>  | 3/2 NC | G 1/8  | pneumatico non amplificato | 1÷10         | 890                | 6,5  | 0,19      | 11      |  |
|                                                                                   | <b>CL-9113P</b> | 3/2 NC | G 1/4  | pneumatico non amplificato | 1÷10         | 1480               | 8,5  | 0,26      | 11      |                                                                                     |
|  | <b>CM-413A</b>  | 5/2    | G 1/8  | molla meccanica            | 3÷10         | 890                | 6,5  | 0,24      | 11      |  |
|                                                                                   | <b>CM-9413A</b> | 5/2    | G 1/4  | molla meccanica            | 2÷10         | 1480               | 8,5  | 0,25      | 11      |                                                                                     |
|                                                                                   | <b>CL-413P</b>  | 5/2    | G 1/8  | pneumatico non amplificato | 1,2÷10       | 890                | 6,5  | 0,23      | 11      |  |
|                                                                                   | <b>CL-9413P</b> | 5/2    | G 1/4  | pneumatico non amplificato | 1,2÷10       | 1480               | 8,5  | 0,28      | 11      |                                                                                     |

**3/2 NC**

**5/2**


|             | A     | B   | C  | D  | E    | F  | G  | H   | I  | J | K  | L    | M  | N  | O  | P     | Q |
|-------------|-------|-----|----|----|------|----|----|-----|----|---|----|------|----|----|----|-------|---|
| <b>G1/8</b> | 116   | 92  | 32 | 10 | 14   | 35 | 18 | 4,5 | 26 | 7 | 40 | G1/8 | 18 | 22 | 24 | M14x1 | 4 |
| <b>G1/4</b> | 136,5 | 112 | 41 | 10 | 14,5 | 48 | 22 | 5,5 | 38 | 7 | 40 | G1/4 | 22 | 26 | 24 | M14x1 | 4 |

|             | A   | B  | C     | D  | E    | F    | G  | H  | I   | J  | K | L  | M    | N  | O  | P  | Q     |
|-------------|-----|----|-------|----|------|------|----|----|-----|----|---|----|------|----|----|----|-------|
| <b>G1/8</b> | 135 | 36 | 111   | 10 | 41   | 14   | 35 | 18 | 4,5 | 22 | 7 | 40 | G1/8 | 18 | 22 | 24 | M14x1 |
| <b>G1/4</b> | 154 | 48 | 129,5 | 10 | 49,7 | 14,5 | 48 | 22 | 5,5 | 26 | 7 | 40 | G1/4 | 22 | 26 | 24 | M14x1 |

1 = Supply port  
2 = Use  
3 = Exhaust  
12 = Control  
10 = Return

1 = Supply port  
2 = Use  
3 = Exhaust  
12 = Control  
10 = Return

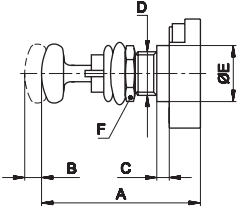
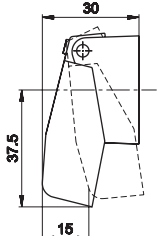
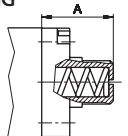
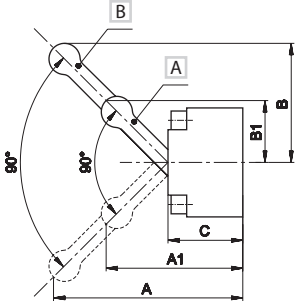
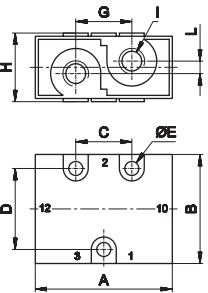
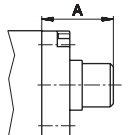
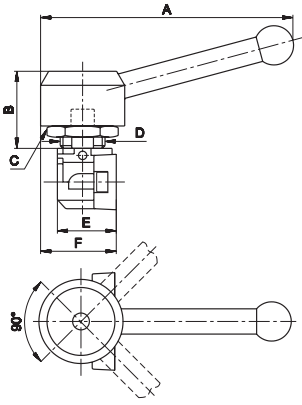
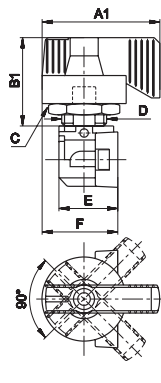
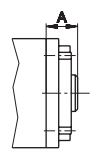
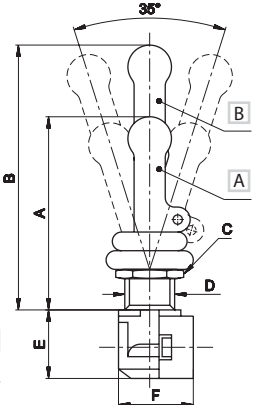
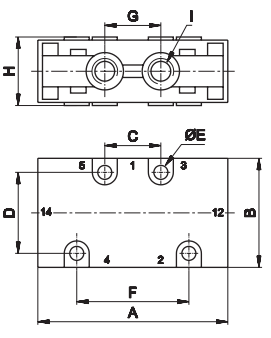
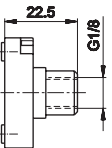
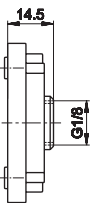
**MANUAL ACTUATORS**

|                                                                                     |                  |         |                                       |                                                                                     |
|-------------------------------------------------------------------------------------|------------------|---------|---------------------------------------|-------------------------------------------------------------------------------------|
|  | <b>AI-3511Q</b>  | ■ BLACK | Recessed button                       |  |
|                                                                                     | <b>AI-3512Q</b>  | ■ RED   |                                       |                                                                                     |
|                                                                                     | <b>AI-3513Q</b>  | ■ GREEN |                                       |                                                                                     |
|  | <b>AI-3514Q</b>  | ■ RED   | Head button                           |  |
|                                                                                     | <b>AI-3516Q</b>  | ■ BLACK |                                       |                                                                                     |
|                                                                                     | <b>AI-3514QD</b> | ■ RED   |                                       |                                                                                     |
|  | <b>AI-3515Q</b>  | ■ GREEN | Button                                |  |
|                                                                                     | <b>AI-3517Q</b>  | ■ RED   |                                       |                                                                                     |
|                                                                                     | <b>AI-3519Q</b>  | ■ BLACK |                                       |                                                                                     |
|  | <b>AI-3520Q</b>  | ■ BLACK | Accident prevention rotating selector |  |
|                                                                                     | <b>AI-3521Q</b>  | ■ BLACK |                                       |                                                                                     |


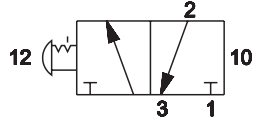

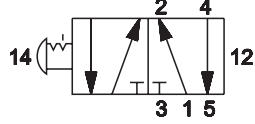

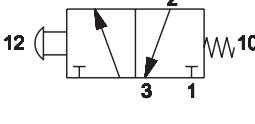

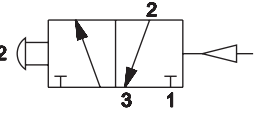

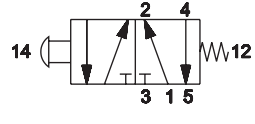
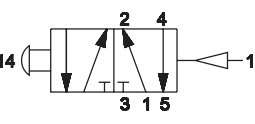
**MANUAL ACTUATORS**

|                                                                                     |                 |         |                           |                                                                                       |
|-------------------------------------------------------------------------------------|-----------------|---------|---------------------------|---------------------------------------------------------------------------------------|
|  | <b>AI-3522Q</b> | ■ BLACK | Rotating lever selector   |  |
|                                                                                     | <b>AI-3523Q</b> | ■ BLACK |                           |                                                                                       |
|  | <b>AI-3524Q</b> | ■ BLACK | Lever operator            |  |
|                                                                                     | <b>AI-3525Q</b> | ■ BLACK |                           |                                                                                       |
|  | <b>AI-3525Q</b> | ■ BLACK | Omni-directional operator |  |
|                                                                                     | <b>AI-3526Q</b> | ■ BLACK |                           |                                                                                       |
|  | <b>AI-3526Q</b> | ■ BLACK | Push-pull operator        |  |
|                                                                                     |                 |         |                           |                                                                                       |

## MANUALLY OPERATED VALVES


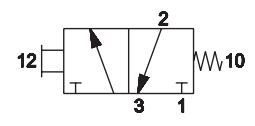

| CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      | BODY |      | RETURN  |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|---------|---------|---------|---------|---------|----|------|---------|---------|---------|------|------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---------|---------|-----------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|----|----|--------|------|----|---------|------|------|-----|----|----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|
| <b>A PUSH-PULL</b>  <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>G1/8</td> <td>51</td> <td>5,4</td> <td>4</td> <td>M14x1</td> <td>16 18</td> </tr> <tr> <td>G1/4</td> <td>52,5</td> <td>6</td> <td>2,5</td> <td>M16x1,5</td> <td>22 22</td> </tr> </tbody> </table>                                                                                  |      | A    | B    | C       | D       | E       | F       | G1/8    | 51 | 5,4  | 4       | M14x1   | 16 18   | G1/4 | 52,5 | 6       | 2,5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | M16x1,5 | 22 22 | <b>B BUTTON</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |    | <b>F MECHANICAL SPRING</b>  <table border="1"> <thead> <tr> <th>A</th> </tr> </thead> <tbody> <tr> <td>G1/8</td> <td>22,5</td> </tr> <tr> <td>G1/4</td> <td>25,5</td> </tr> </tbody> </table> | A  | G1/8    | 22,5    | G1/4                                                                                                | 25,5 |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | B    | C    | D    | E       | F       |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 51   | 5,4  | 4    | M14x1   | 16 18   |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 52,5 | 6    | 2,5  | M16x1,5 | 22 22   |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 22,5 |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 25,5 |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| <b>C LONG/SHORT LEVER</b>  <table border="1"> <thead> <tr> <th>A</th> <th>A1</th> <th>B</th> <th>B1</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>G1/8</td> <td>56</td> <td>42</td> <td>38,5</td> <td>24 22,5</td> </tr> <tr> <td>G1/4</td> <td>58,5</td> <td>32</td> <td>26</td> <td></td> </tr> </tbody> </table>                                                                                                                    |      | A    | A1   | B       | B1      | C       | G1/8    | 56      | 42 | 38,5 | 24 22,5 | G1/4    | 58,5    | 32   | 26   |         | <b>1 3/2 NC-NO</b>  <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>G</th> <th>H</th> <th>I</th> <th>L</th> </tr> </thead> <tbody> <tr> <td>G1/8</td> <td>47,5</td> <td>35</td> <td>18</td> <td>26</td> <td>4,5</td> <td>18</td> <td>22</td> <td>G1/8 4</td> </tr> <tr> <td>G1/4</td> <td>60</td> <td>48</td> <td>22</td> <td>38</td> <td>5,5</td> <td>22</td> <td>26</td> <td>G1/4 4</td> </tr> </tbody> </table> <p> <b>NC</b><br/>                     1 = Supply port<br/>                     2 = Use<br/>                     3 = Exhaust<br/>                     12 = Control<br/>                     10 = Return                 </p> <p> <b>NO</b><br/>                     1 = Supply port<br/>                     2 = Use<br/>                     3 = Exhaust<br/>                     12 = Control<br/>                     10 = Return                 </p> |         | A     | B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | C  | D                                                                                                                                                                                                                                                                                | E  | G       | H       | I                                                                                                   | L    | G1/8                                                                                                                                                                                                                                                                                         | 47,5 | 35   | 18   | 26   | 4,5  | 18 | 22 | G1/8 4 | G1/4 | 60 | 48      | 22   | 38   | 5,5 | 22 | 26 | G1/4 4 | <b>G 2/3 POSITION</b>  <table border="1"> <thead> <tr> <th>A</th> </tr> </thead> <tbody> <tr> <td>G1/8</td> <td>22,5</td> </tr> <tr> <td>G1/4</td> <td>25,5</td> </tr> </tbody> </table> | A  | G1/8    | 22,5                                                                                                                                                                                                                                                                                                                                                                                                                                            | G1/4 | 25,5 |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A1   | B    | B1   | C       |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 56   | 42   | 38,5 | 24 22,5 |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 58,5 | 32   | 26   |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | B    | C    | D    | E       | G       | H       | I       | L       |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 47,5 | 35   | 18   | 26      | 4,5     | 18      | 22      | G1/8 4  |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 60   | 48   | 22   | 38      | 5,5     | 22      | 26      | G1/4 4  |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 22,5 |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 25,5 |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| <b>D ROTATING LEVER</b>  <table border="1"> <thead> <tr> <th>A</th> <th>A1</th> <th>B</th> <th>B1</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>G1/8</td> <td>89</td> <td>42</td> <td>32</td> <td>29</td> <td>22</td> <td>M16x1,5</td> <td>22 27</td> </tr> <tr> <td>G1/4</td> <td>89</td> <td>42</td> <td>32</td> <td>29</td> <td>24</td> <td>M18x1,5</td> <td>25 27,5</td> </tr> </tbody> </table> |      | A    | A1   | B       | B1      | C       | D       | E       | F  | G1/8 | 89      | 42      | 32      | 29   | 22   | M16x1,5 | 22 27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | G1/4    | 89    | 42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 32 | 29                                                                                                                                                                                                                                                                               | 24 | M18x1,5 | 25 27,5 | <b>SELECTOR</b>  |      | <b>H BOTTOM PLATE WITHOUT SPRING</b>  <table border="1"> <thead> <tr> <th>A</th> </tr> </thead> <tbody> <tr> <td>G1/8</td> <td>22,5</td> </tr> <tr> <td>G1/4</td> <td>25,5</td> </tr> </tbody> </table> | A    | G1/8 | 22,5 | G1/4 | 25,5 |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A1   | B    | B1   | C       | D       | E       | F       |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 89   | 42   | 32   | 29      | 22      | M16x1,5 | 22 27   |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 89   | 42   | 32   | 29      | 24      | M18x1,5 | 25 27,5 |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |      |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 22,5 |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 25,5 |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| <b>E 90° LEVER</b>  <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> </tr> </thead> <tbody> <tr> <td>G1/8</td> <td>62</td> <td>85</td> <td>22</td> <td>M16x1,5</td> <td>21,5 22</td> </tr> <tr> <td>G1/4</td> <td>90</td> <td>110</td> <td>24</td> <td>M18x1,5</td> <td>29 25</td> </tr> </tbody> </table>                                                                             |      | A    | B    | C       | D       | E       | F       | G1/8    | 62 | 85   | 22      | M16x1,5 | 21,5 22 | G1/4 | 90   | 110     | 24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | M18x1,5 | 29 25 | <b>2 5/2 - 5/3</b>  <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> <th>G</th> <th>H</th> <th>I</th> </tr> </thead> <tbody> <tr> <td>G1/8</td> <td>64</td> <td>35</td> <td>18</td> <td>26</td> <td>4,5</td> <td>36</td> <td>18</td> <td>22 G1/8</td> </tr> <tr> <td>G1/4</td> <td>77,5</td> <td>48</td> <td>22</td> <td>38</td> <td>5,5</td> <td>48</td> <td>22</td> <td>26 G1/4</td> </tr> </tbody> </table> <p>                     1 = Supply port<br/>                     2 - 4 = Use<br/>                     3 - 5 = Exhaust<br/>                     14 = Control<br/>                     12 = Return                 </p> |    | A                                                                                                                                                                                                                                                                                | B  | C       | D       | E                                                                                                   | F    | G                                                                                                                                                                                                                                                                                            | H    | I    | G1/8 | 64   | 35   | 18 | 26 | 4,5    | 36   | 18 | 22 G1/8 | G1/4 | 77,5 | 48  | 22 | 38 | 5,5    | 48                                                                                                                                                                                                                                                                          | 22 | 26 G1/4 | <b>I PNEUMATIC NOT AMPLIFIED</b>  <table border="1"> <thead> <tr> <th>G1/8</th> </tr> </thead> <tbody> <tr> <td>22,5</td> </tr> </tbody> </table><br> <table border="1"> <thead> <tr> <th>G1/4</th> </tr> </thead> <tbody> <tr> <td>14,5</td> </tr> </tbody> </table> | G1/8 | 22,5 | G1/4 | 14,5 |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | B    | C    | D    | E       | F       |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 62   | 85   | 22   | M16x1,5 | 21,5 22 |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 90   | 110  | 24   | M18x1,5 | 29 25   |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | B    | C    | D    | E       | F       | G       | H       | I       |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 64   | 35   | 18   | 26      | 4,5     | 36      | 18      | 22 G1/8 |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 77,5 | 48   | 22   | 38      | 5,5     | 48      | 22      | 26 G1/4 |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| 22,5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| G1/4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |
| 14,5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |      |      |         |         |         |         |         |    |      |         |         |         |      |      |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |                                                                                                                                                                                                                                                                                  |    |         |         |                                                                                                     |      |                                                                                                                                                                                                                                                                                              |      |      |      |      |      |    |    |        |      |    |         |      |      |     |    |    |        |                                                                                                                                                                                                                                                                             |    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |      |      |      |      |

## MANUALLY OPERATED VALVES

|                                                                                    | Code     | Way            | Thread | Return                     | Flow rate<br>(NI/min) | Ø<br>mm | Weight<br>kg | Force<br>N | Composition |      |        | tot. L<br>mm |                                                                                       |                                                                                                                                                                                        |
|------------------------------------------------------------------------------------|----------|----------------|--------|----------------------------|-----------------------|---------|--------------|------------|-------------|------|--------|--------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                    |          |                |        |                            |                       |         |              |            | Control     | Body | Return |              |                                                                                       |                                                                                                                                                                                        |
| <b>PUSH-PULL</b>                                                                   |          |                |        |                            |                       |         |              |            |             |      |        |              |                                                                                       |                                                                                                                                                                                        |
|    | CL-120   | 3/2<br>NC - NO | G1/8   | push-pull                  | 890                   | 6,5     | 0,19         | 25         | A           | 1    | H      | 108,5        |    |                                                                                                                                                                                        |
|                                                                                    | CL-9120  | 3/2<br>NC - NO | G1/4   | push-pull                  | 1480                  | 8,5     | 0,26         | 26         | A           | 1    | H      | 127          |                                                                                       |                                                                                                                                                                                        |
|    | CM-420   | 5/2            | G1/8   | push-pull                  | 890                   | 6,5     | 0,22         | 25         | A           | 2    | H      | 125          |    |                                                                                                                                                                                        |
|                                                                                    | CM-9420  | 5/2            | G1/4   | push-pull                  | 1480                  | 8,5     | 0,26         | 26         | A           | 2    | H      | 144,5        |                                                                                       |                                                                                                                                                                                        |
|   | CL-120A  | 3/2<br>NC - NO | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,19         | 25         | A           | 1    | F      | 121          |    | <br>■ YELLOW<br>CP-911G<br><br>■ RED<br>CP-911R<br><br>■ BLACK<br>CP-911N<br><br>■ GREEN<br>CP-911V |
|                                                                                    | CL-9120A | 3/2<br>NC - NO | G1/4   | mechanical<br>spring       | 1480                  | 8,5     | 0,26         | 26         | A           | 1    | F      | 138          |                                                                                       |                                                                                                                                                                                        |
|                                                                                    | CL-120P  | 3/2<br>NC - NO | G1/8   | pneumatic<br>not amplified | 890                   | 6,5     | 0,18         | 25         | A           | 1    | I      | 121          |   |                                                                                                                                                                                        |
|                                                                                    | CL-9120P | 3/2<br>NC - NO | G1/4   | pneumatic<br>not amplified | 1480                  | 8,5     | 0,24         | 26         | A           | 1    | I      | 127          |                                                                                       |                                                                                                                                                                                        |
|  | CM-420A  | 5/2            | G1/8   | mechanical<br>spring       | 890                   | 6,5     | 0,22         | 25         | A           | 2    | F      | 137,5        |  |                                                                                                                                                                                        |
|                                                                                    | CM-9420A | 5/2            | G1/4   | mechanical<br>spring       | 1480                  | 8,5     | 0,26         | 26         | A           | 2    | F      | 155,5        |                                                                                       |                                                                                                                                                                                        |
|                                                                                    | CM-420P  | 5/2            | G1/8   | pneumatic<br>not amplified | 890                   | 6,5     | 0,21         | 25         | A           | 2    | I      | 137,5        |  |                                                                                                                                                                                        |
|                                                                                    | CM-9420P | 5/2            | G1/4   | pneumatic<br>not amplified | 1480                  | 8,5     | 0,24         | 26         | A           | 2    | I      | 144,5        |                                                                                       |                                                                                                                                                                                        |

valves are supplied without operator button

## BUTTON

|                                                                                    |         |                |      |                      |     |     |      |    |   |   |   |       |                                                                                       |                     |
|------------------------------------------------------------------------------------|---------|----------------|------|----------------------|-----|-----|------|----|---|---|---|-------|---------------------------------------------------------------------------------------|---------------------|
|  | CL-126A | 3/2<br>NC - NO | G1/8 | mechanical<br>spring | 890 | 6,5 | 0,20 | 15 | B | 1 | F | 100   |  | STANDARD<br>■ ROSSO |
|  | CM-426A | 5/2            | G1/8 | mechanical<br>spring | 890 | 6,5 | 0,23 | 15 | B | 2 | F | 116,5 |                                                                                       |                     |


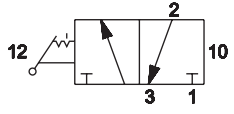

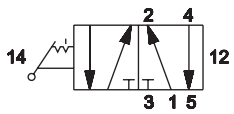
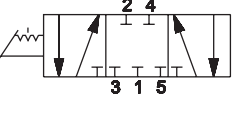

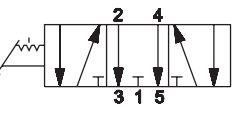
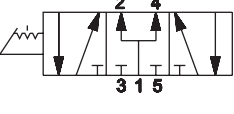
To get 3/2 NO version, supply the valve from port 3

**MANUALLY OPERATED VALVES**

|                    | Code     | Way            | Thread | Return               | Flow rate<br>(NI/min) | Ø<br>mm | Weight<br>kg | Force<br>N | Composition |      |        | tot. L<br>mm | Diagram | Notes                                                               |
|--------------------|----------|----------------|--------|----------------------|-----------------------|---------|--------------|------------|-------------|------|--------|--------------|---------|---------------------------------------------------------------------|
|                    |          |                |        |                      |                       |         |              |            | Control     | Body | Return |              |         |                                                                     |
| <b>LONG LEVER</b>  |          |                |        |                      |                       |         |              |            |             |      |        |              |         |                                                                     |
|                    | CL-118R  | 3/2<br>NC - NO | G1/8   | mechanical<br>spring | 890                   | 6,5     | 0,17         | 10         | C           | 1    | F      | 126          |         | LONG LEVER<br>STANDARD<br>■ RED                                     |
|                    | CL-9118R | 3/2<br>NC - NO | G1/4   | mechanical<br>spring | 1480                  | 8,5     | 0,23         | 11         | C           | 1    | F      | 144          |         |                                                                     |
|                    | CL-121R  | 3/2<br>NC - NO | G1/8   | lever                | 890                   | 6,5     | 0,16         | 10         | C           | 1    | G      | 126          |         |                                                                     |
|                    | CL-9121R | 3/2<br>NC - NO | G1/4   | lever                | 1480                  | 8,5     | 0,22         | 11         | C           | 1    | G      | 144          |         |                                                                     |
|                    | CM-418R  | 5/2            | G1/8   | mechanical<br>spring | 890                   | 6,5     | 0,21         | 10         | C           | 2    | F      | 142,5        |         | LONG LEVER<br>UPON<br>REQUEST<br>■ YELLOW<br>■ BLACK                |
|                    | CM-9418R | 5/2            | G1/4   | mechanical<br>spring | 1480                  | 8,5     | 0,25         | 11         | C           | 2    | F      | 161,5        |         |                                                                     |
|                    | CM-421R  | 5/2            | G1/8   | lever                | 890                   | 6,5     | 0,20         | 10         | C           | 2    | G      | 142,5        |         |                                                                     |
|                    | CM-9421R | 5/2            | G1/4   | lever                | 1480                  | 8,5     | 0,24         | 11         | C           | 2    | G      | 161,5        |         |                                                                     |
| <b>SHORT LEVER</b> |          |                |        |                      |                       |         |              |            |             |      |        |              |         |                                                                     |
|                    | CL-119R  | 3/2<br>NC - NO | G1/8   | mechanical<br>spring | 890                   | 6,5     | 0,17         | 20         | C           | 1    | F      | 112          |         | SHORT<br>LEVER<br>STANDARD<br>■ RED                                 |
|                    | CL-122R  | 3/2<br>NC - NO | G1/8   | lever                | 890                   | 6,5     | 0,16         | 20         | C           | 1    | G      | 112          |         |                                                                     |
|                    | CM-419R  | 5/2            | G1/8   | mechanical<br>spring | 890                   | 6,5     | 0,21         | 20         | C           | 2    | F      | 128,5        |         | SHORT<br>LEVER<br>UPON<br>REQUEST<br>■ YELLOW<br>■ BLACK<br>■ GREEN |
|                    | CM-422R  | 5/2            | G1/8   | lever                | 890                   | 6,5     | 0,20         | 20         | C           | 2    | G      | 128,5        |         |                                                                     |

To get 3/2 NO version, supply the valve from port 3

**VALVOLE AD AZIONAMENTO MANUALE**

|                                                                                    | Code            | Way         | Thread | Return         | Flow rate<br>(Nl/min) | Ø<br>mm | Weight<br>kg | Force<br>N | Composition |      |        | tot. L<br>mm |                                                                                       |
|------------------------------------------------------------------------------------|-----------------|-------------|--------|----------------|-----------------------|---------|--------------|------------|-------------|------|--------|--------------|---------------------------------------------------------------------------------------|
|                                                                                    |                 |             |        |                |                       |         |              |            | Control     | Body | Return |              |                                                                                       |
| <b>ROTATING LEVER</b>                                                              |                 |             |        |                |                       |         |              |            |             |      |        |              |                                                                                       |
|    | <b>CL-130</b>   | 3/2         | G1/8   | rotating lever | 890                   | 6,5     | 0,22         | 27         | D           | 1    | G      | 97           |    |
|                                                                                    | <b>CL-9130</b>  | 3/2         | G1/4   | rotating lever | 1480                  | 8,5     | 0,25         | 29         | D           | 1    | G      | 113          |                                                                                       |
|    | <b>CM-430</b>   | 5/2         | G1/8   | rotating lever | 890                   | 6,5     | 0,25         | 27         | D           | 2    | G      | 113,5        |    |
|                                                                                    | <b>CM-9430</b>  | 5/2         | G1/4   | rotating lever | 1480                  | 8,5     | 0,27         | 29         | D           | 2    | G      | 130,5        |                                                                                       |
|                                                                                    | <b>CM-430E</b>  | 5/3<br>C.C. | G1/8   | rotating lever | 890                   | 6,5     | 0,25         | 27         | D           | 2    | G      | 113,5        |    |
|                                                                                    | <b>CM-9430E</b> | 5/3<br>C.C. | G1/4   | rotating lever | 1480                  | 8,5     | 0,27         | 29         | D           | 2    | G      | 130,5        |                                                                                       |
|  | <b>CM-435E</b>  | 5/3<br>O.C. | G1/8   | rotating lever | 890                   | 6,5     | 0,24         | 27         | D           | 2    | G      | 113,5        |  |
|                                                                                    | <b>CM-9435E</b> | 5/3<br>O.C. | G1/4   | rotating lever | 1480                  | 8,5     | 0,26         | 29         | D           | 2    | G      | 130,5        |                                                                                       |
|                                                                                    | <b>CM-440E</b>  | 5/3<br>P.C. | G1/8   | rotating lever | 890                   | 6,5     | 0,24         | 27         | D           | 2    | G      | 113,5        |  |
|                                                                                    | <b>CM-9440E</b> | 5/3<br>P.C. | G1/4   | rotating lever | 1480                  | 8,5     | 0,26         | 29         | D           | 2    | G      | 130,5        |                                                                                       |



■ RED  
CP-915R


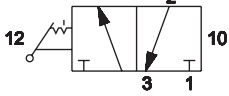

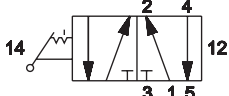
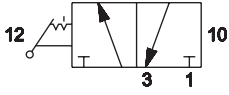

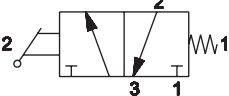


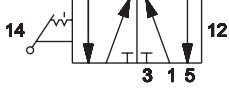
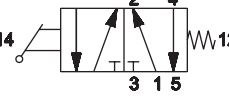

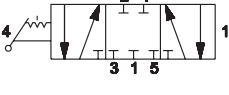


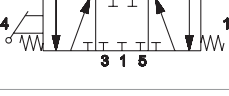

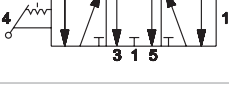

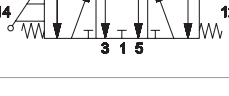
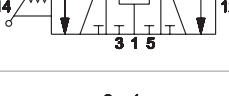
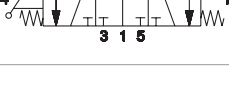


■ RED  
CP-916R

C.C. = open centres O.C. = closed centres P.C. = pressurized centres  
Valves are supplied without operator

To get 3/2 NO version, supply the valve from port 3

**MANUALLY OPERATED VALVES**

| Code                                                                               | Way             | Thread         | Return | Flow rate<br>(NI/min) | Ø<br>mm | Weight<br>kg | Force<br>N | Composition |      |        | tot. L<br>mm | Diagram | Accessories                                                                           |                                                                                       |
|------------------------------------------------------------------------------------|-----------------|----------------|--------|-----------------------|---------|--------------|------------|-------------|------|--------|--------------|---------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                                                                                    |                 |                |        |                       |         |              |            | Control     | Body | Return |              |         |                                                                                       |                                                                                       |
| <b>90° LEVER - 3 POSITION</b>                                                      |                 |                |        |                       |         |              |            |             |      |        |              |         |                                                                                       |                                                                                       |
|    | <b>CL-123</b>   | 3/2<br>NC - NO | G1/8   | lever                 | 890     | 6,5          | 0,17       | 2,5÷4       | E    | 1      | H            | 79,5    |    |                                                                                       |
|                                                                                    | <b>CL-9123</b>  | 3/2<br>NC - NO | G1/4   | lever                 | 1480    | 8,5          | 0,23       | 2,7÷4,5     | E    | 1      | H            | 99,5    |                                                                                       |                                                                                       |
|    | <b>CM-423</b>   | 5/2            | G1/8   | lever                 | 890     | 6,5          | 0,23       | 2,5÷4       | E    | 2      | H            | 96      |    |                                                                                       |
|                                                                                    | <b>CM-9423</b>  | 5/2            | G1/4   | lever                 | 1480    | 8,5          | 0,28       | 2,7÷4,5     | E    | 2      | H            | 117,5   |                                                                                       |                                                                                       |
|                                                                                    | <b>CL-123D</b>  | 3/2<br>NC - NO | G1/8   | lever                 | 890     | 6,5          | 0,17       | 3,5÷5       | E    | 1      | G            | 92      |    |                                                                                       |
|    | <b>CL-9123D</b> | 3/2<br>NC - NO | G1/4   | lever                 | 1480    | 8,5          | 0,23       | 3,6÷5,2     | E    | 1      | G            | 110,5   |                                                                                       |                                                                                       |
|                                                                                    | <b>CL-123A</b>  | 3/2<br>NC - NO | G1/8   | mechanical<br>spring  | 890     | 6,5          | 0,18       | 9 ÷ 13      | E    | 1      | F            | 92      |    |    |
|                                                                                    | <b>CL-9123A</b> | 3/2<br>NC - NO | G1/4   | mechanical<br>spring  | 1480    | 8,5          | 0,24       | 10 ÷ 14     | E    | 1      | F            | 110,5   |                                                                                       |                                                                                       |
|  | <b>CM-423D</b>  | 5/2            | G1/8   | lever                 | 890     | 6,5          | 0,23       | 3,5÷5       | E    | 2      | G            | 108,5   |   |                                                                                       |
|                                                                                    | <b>CM-9423D</b> | 5/2            | G1/4   | lever                 | 1480    | 8,5          | 0,28       | 3,6÷5,2     | E    | 2      | G            | 128     |                                                                                       |                                                                                       |
|                                                                                    | <b>CM-423A</b>  | 5/2            | G1/8   | mechanical<br>spring  | 890     | 6,5          | 0,23       | 9 ÷ 13      | E    | 2      | F            | 108,5   |  |  |
|                                                                                    | <b>CM-9423A</b> | 5/2            | G1/4   | mechanical<br>spring  | 1480    | 8,5          | 0,28       | 10 ÷ 14     | E    | 2      | F            | 128     |                                                                                       |                                                                                       |
|                                                                                    | <b>CM-423E</b>  | 5/3<br>C.C.    | G1/8   | lever                 | 890     | 6,5          | 0,23       | 3,5 ÷ 5     | E    | 2      | G            | 108,5   |  |  |
|                                                                                    | <b>CM-9423E</b> | 5/3<br>C.C.    | G1/4   | lever                 | 1480    | 8,5          | 0,28       | 3,6÷5,2     | E    | 2      | G            | 128     |                                                                                       |  |
|                                                                                    | <b>CM-423F</b>  | 5/3<br>C.C.    | G1/8   | lever with<br>spring  | 890     | 6,5          | 0,23       | 6,5 ÷ 10    | E    | 2      | F            | 108,5   |  |  |
|                                                                                    | <b>CM-9423F</b> | 5/3<br>C.C.    | G1/4   | lever with<br>spring  | 1480    | 8,5          | 0,28       | 6,7÷11      | E    | 2      | G            | 128     |                                                                                       |                                                                                       |
|                                                                                    | <b>CM-424E</b>  | 5/3<br>O.C.    | G1/8   | lever                 | 890     | 6,5          | 0,23       | 3,5 ÷ 5     | E    | 2      | G            | 108,5   |  |                                                                                       |
|  | <b>CM-9424E</b> | 5/3<br>O.C.    | G1/4   | lever                 | 1480    | 8,5          | 0,28       | 3,6÷5,2     | E    | 2      | G            | 128     |                                                                                       |                                                                                       |
|                                                                                    | <b>CM-424F</b>  | 5/3<br>O.C.    | G1/8   | lever with<br>spring  | 890     | 6,5          | 0,23       | 6,5 ÷ 10    | E    | 2      | F            | 108,5   |  |                                                                                       |
|                                                                                    | <b>CM-9424F</b> | 5/3<br>O.C.    | G1/4   | lever with<br>spring  | 1480    | 8,5          | 0,28       | 6,7÷11      | E    | 2      | G            | 128     |                                                                                       |                                                                                       |
|                                                                                    | <b>CM-425E</b>  | 5/3<br>P.C.    | G1/8   | lever                 | 890     | 6,5          | 0,23       | 3,5 ÷ 5     | E    | 2      | G            | 108,5   |  |                                                                                       |
|                                                                                    | <b>CM-9425E</b> | 5/3<br>P.C.    | G1/4   | lever                 | 1480    | 8,5          | 0,28       | 3,6÷5,2     | E    | 2      | G            | 128     |                                                                                       |                                                                                       |
|                                                                                    | <b>CM-425F</b>  | 5/3<br>P.C.    | G1/8   | lever with<br>spring  | 890     | 6,5          | 0,23       | 6,5 ÷ 10    | E    | 2      | F            | 108,5   |  |                                                                                       |
|                                                                                    | <b>CM-9425F</b> | 5/3<br>P.C.    | G1/4   | lever with<br>spring  | 1480    | 8,50         | 0,28       | 6,7÷11      | E    | 2      | G            | 128     |                                                                                       |                                                                                       |

C.C. = open centres O.C. = closed centres P.C. = pressurized centres

Valves are supplied without operator

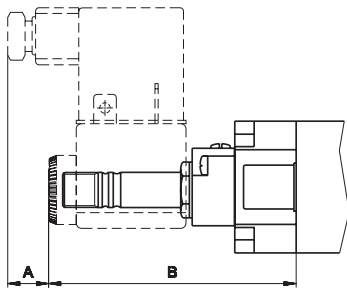
To get 3/2 NO version, supply the valve from port 3

## VALVES WITH PNEUMATIC / ELECTRIC CONTROL

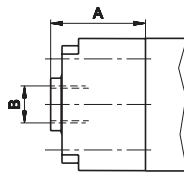
CONTROL

BODY

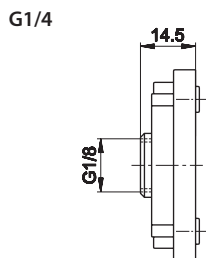
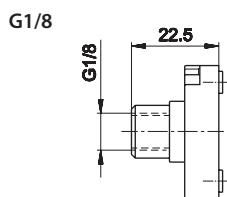
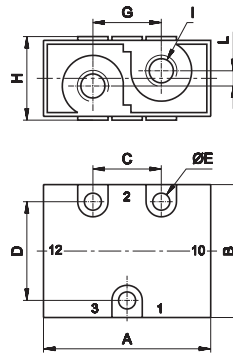
RETURN

**A ELECTRIC/AMPLIFIED**


|      | A  | B  |
|------|----|----|
| G1/8 | 10 | 77 |
| G1/4 | 10 | 80 |

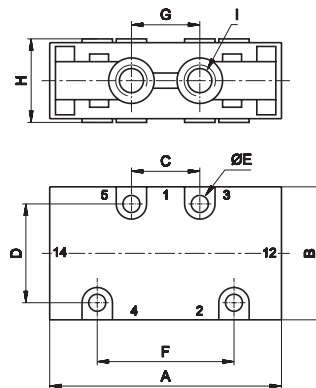
**B PNEUMATIC AMPLIFIED**


|      | A    | B    |
|------|------|------|
| G1/8 | 25   | G1/8 |
| G1/4 | 28,5 | G1/8 |

**C PNEUMATIC NOT AMPLIFIED**

**1 3/2 NC-NO**


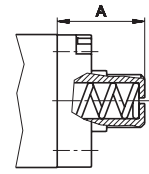
| NC              | NO              |
|-----------------|-----------------|
| 1 = Supply port | 1 = Supply port |
| 2 = Use         | 2 = Use         |
| 3 = Exhaust     | 3 = Exhaust     |
| 12 = Control    | 12 = Control    |
| 10 = Return     | 10 = Return     |

|      | A    | B  | C  | D  | E   | G  | H  | I    | L |
|------|------|----|----|----|-----|----|----|------|---|
| G1/8 | 47,5 | 35 | 18 | 26 | 4,5 | 18 | 22 | G1/8 | 4 |
| G1/4 | 60   | 48 | 22 | 38 | 5,5 | 22 | 26 | G1/4 | 4 |

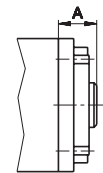
**2 5/2**


|                 |
|-----------------|
| 1 = Supply port |
| 2 - 4 = Use     |
| 3 - 5 = Exhaust |
| 14 = Control    |
| 12 = Return     |

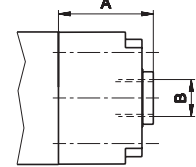
|      | A    | B  | C  | D  | E   | F  | G  | H  | I    |
|------|------|----|----|----|-----|----|----|----|------|
| G1/8 | 64   | 35 | 18 | 26 | 4,5 | 36 | 18 | 22 | G1/8 |
| G1/4 | 77,5 | 48 | 22 | 38 | 5,5 | 48 | 22 | 26 | G1/4 |

**D MECHANICAL SPRING**


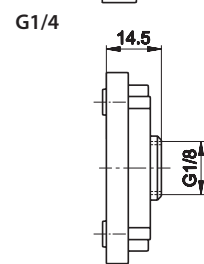
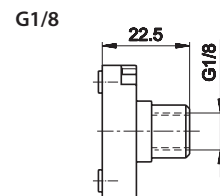
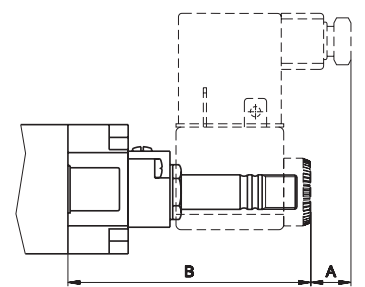
| A         |
|-----------|
| G1/8 22,5 |
| G1/4 25,5 |

**E PNEUMATIC SPRING**


| A         |
|-----------|
| G1/8 10   |
| G1/4 14,5 |

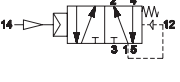

**F PNEUMATIC AMPLIFIED**


| A         | B    |
|-----------|------|
| G1/8 25   | G1/8 |
| G1/4 28,5 | G1/8 |

**G PNEUMATIC NOT AMPLIFIED**

**H ELECTRIC AMPLIFIED**



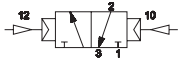

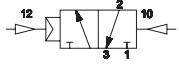

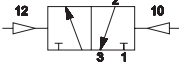

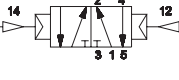

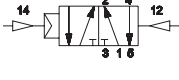



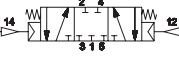

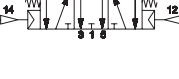

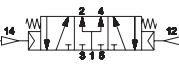
| A       | B    |
|---------|------|
| G1/8 10 | 73   |
| G1/4 10 | 76,5 |

**VALVES WITH PNEUMATIC CONTROL**

|                                                                                    | Code     | Way | Thread  | Control | Return               | Press. Flow rate  |          | Ø    | Weight | Resp. Time (ms) |    | Composition |       |         | tot. L |       |                                                                                       |
|------------------------------------------------------------------------------------|----------|-----|---------|---------|----------------------|-------------------|----------|------|--------|-----------------|----|-------------|-------|---------|--------|-------|---------------------------------------------------------------------------------------|
|                                                                                    |          |     |         |         |                      | bar               | (Nl/min) |      |        | mm              | kg | Ecc.        | Diss. | Control |        |       | Body                                                                                  |
| <b>SINGLE IMPULSE</b>                                                              |          |     |         |         |                      |                   |          |      |        |                 |    |             |       |         |        |       |                                                                                       |
|    | CL-200   | 3/2 | NC      | G1/8    | pneumatic amplified, | pneumatic spring  | 2,3÷10   | 890  | 6,5    | 0,20            | 11 | 14          | B     | 1       | E      | 82,5  |    |
|                                                                                    | CL-9200  | 3/2 | NC      | G1/4    | pneumatic amplified, | pneumatic spring  | 2÷10     | 1480 | 8,5    | 0,23            | 13 | 16          | B     | 1       | E      | 103   |                                                                                       |
|    | CL-203   | 3/2 | NO      | G1/8    | pneumatic amplified, | pneumatic spring  | 2,3÷10   | 890  | 6,5    | 0,20            | 11 | 14          | B     | 1       | E      | 82,5  |    |
|                                                                                    | CL-9203  | 3/2 | NO      | G1/4    | pneumatic amplified, | pneumatic spring  | 2÷10     | 1480 | 8,5    | 0,23            | 13 | 16          | B     | 1       | E      | 103   |                                                                                       |
|    | CM-500   | 5/2 |         | G1/8    | pneumatic amplified, | pneumatic spring  | 2,5÷10   | 890  | 6,5    | 0,20            | 10 | 15          | B     | 2       | E      | 99    |    |
|                                                                                    | CM-9500  | 5/2 |         | G1/4    | pneumatic amplified, | pneumatic spring  | 2÷10     | 1480 | 8,5    | 0,26            | 13 | 16          | B     | 2       | E      | 120,5 |                                                                                       |
|  | CL-200A  | 3/2 | NC - NO | G1/8    | pneumatic amplified, | pneumatic spring  | 2,5÷10   | 890  | 6,5    | 0,21            | 9  | 17          | B     | 1       | D      | 95    |  |
|                                                                                    | CL-9200A | 3/2 | NC - NO | G1/4    | pneumatic amplified, | pneumatic spring  | 2÷10     | 1480 | 8,5    | 0,24            | 10 | 19          | B     | 1       | D      | 114   |                                                                                       |
|  | CM-500A  | 5/2 |         | G1/8    | pneumatic amplified, | mechanical spring | 3÷10     | 890  | 6,5    | 0,19            | 10 | 18          | B     | 2       | D      | 111,5 |  |
|                                                                                    | CM-9500A | 5/2 |         | G1/4    | pneumatic amplified, | mechanical spring | 2÷10     | 1480 | 8,5    | 0,26            | 11 | 20          | B     | 2       | D      | 131,5 |                                                                                       |

To get 3/2 NO version, supply the valve from port 3

**VALVOLE AD AZIONAMENTO PNEUMATICO**

|                                                                                    | Code           | Way         | Thread | Control                 | Return                  | Press. | Flow rate | Ø   | Weight | Resp. Time (ms) |       | Composition |      | tot. L |       |                                                                                       |
|------------------------------------------------------------------------------------|----------------|-------------|--------|-------------------------|-------------------------|--------|-----------|-----|--------|-----------------|-------|-------------|------|--------|-------|---------------------------------------------------------------------------------------|
|                                                                                    |                |             |        |                         |                         | bar    | (Nl/min)  | mm  | kg     | Ecc.            | Diss. | Control     | Body | Return |       | mm                                                                                    |
|    | <b>CL-220</b>  | 3/2         | G1/8   | pneumatic amplified     | pneumatic amplified     | 1÷10   | 890       | 6,5 | 0,16   | 6               | 6     | B           | 1    | F      | 97,5  |    |
|                                                                                    | <b>CL-9220</b> | 3/2         | G1/4   | pneumatic amplified     | pneumatic amplified     | 1÷10   | 1480      | 8,5 | 0,21   | 8               | 8     | B           | 1    | F      | 117   |                                                                                       |
|    | <b>CL-221</b>  | 3/2         | G1/8   | pneumatic amplified     | pneumatic not amplified | 1,7÷10 | 890       | 6,5 | 0,15   | 6               | 8     | B           | 1    | G      | 95    |    |
|                                                                                    | <b>CL-9221</b> | 3/2         | G1/4   | pneumatic amplified     | pneumatic not amplified | 1,5÷10 | 1480      | 8,5 | 0,22   | 8               | 10    | B           | 1    | G      | 103   |                                                                                       |
|    | <b>CL-224</b>  | 3/2         | G1/8   | pneumatic not amplified | pneumatic not amplified | 1,7÷10 | 890       | 6,5 | 0,14   | 8               | 8     | C           | 1    | G      | 92,5  |    |
|                                                                                    | <b>CL-9224</b> | 3/2         | G1/4   | pneumatic not amplified | pneumatic not amplified | 1,5÷10 | 1480      | 8,5 | 0,24   | 10              | 10    | C           | 1    | G      | 89    |                                                                                       |
|   | <b>CM-520</b>  | 5/2         | G1/8   | pneumatic amplified     | pneumatic amplified     | 1,2÷10 | 890       | 6,5 | 0,18   | 7               | 7     | B           | 2    | F      | 114   |   |
|                                                                                    | <b>CM-9520</b> | 5/2         | G1/4   | pneumatic amplified     | pneumatic amplified     | 1,5÷10 | 1480      | 8,5 | 0,24   | 9               | 9     | B           | 2    | F      | 134,5 |                                                                                       |
|  | <b>CM-521</b>  | 5/2         | G1/8   | pneumatic amplified     | pneumatic not amplified | 2÷10   | 890       | 6,5 | 0,19   | 7               | 9     | B           | 2    | G      | 111,5 |  |
|                                                                                    | <b>CM-9521</b> | 5/2         | G1/4   | pneumatic amplified     | pneumatic not amplified | 1,8÷10 | 1480      | 8,5 | 0,25   | 9               | 10    | B           | 2    | G      | 120,5 |                                                                                       |
|  | <b>CM-524</b>  | 5/2         | G1/8   | pneumatic not amplified | pneumatic not amplified | 2÷10   | 890       | 6,5 | 0,20   | 9               | 9     | C           | 2    | G      | 109   |  |
|                                                                                    | <b>CM-9524</b> | 5/2         | G1/4   | pneumatic not amplified | pneumatic not amplified | 1,8÷10 | 1480      | 8,5 | 0,27   | 10              | 10    | C           | 2    | G      | 198,5 |                                                                                       |
|  | <b>CM-580</b>  | 5/3<br>C.C. | G1/8   | pneumatic amplified     | pneumatic amplified     | 2,5÷10 | 890       | 6,5 | 0,21   | 8               | 12    | B           | 2    | F      | 114   |  |
|                                                                                    | <b>CM-9580</b> | 5/3<br>C.C. | G1/4   | pneumatic amplified     | pneumatic amplified     | 2,8÷10 | 1480      | 8,5 | 0,30   | 10              | 13    | B           | 2    | F      | 134,5 |                                                                                       |
|  | <b>CM-585</b>  | 5/3<br>O.C. | G1/8   | pneumatic amplified     | pneumatic amplified     | 2,5÷10 | 890       | 6,5 | 0,21   | 8               | 12    | B           | 2    | F      | 114   |  |
|                                                                                    | <b>CM-9585</b> | 5/3<br>O.C. | G1/4   | pneumatic amplified     | pneumatic amplified     | 2,8÷10 | 1480      | 8,5 | 0,30   | 10              | 13    | B           | 2    | F      | 134,5 |                                                                                       |
|  | <b>CM-590</b>  | 5/3<br>P.C. | G1/8   | pneumatic amplified     | pneumatic amplified     | 2,5÷10 | 890       | 6,5 | 0,21   | 8               | 12    | B           | 2    | F      | 114   |  |
|                                                                                    | <b>CM-9590</b> | 5/3<br>P.C. | G1/4   | pneumatic amplified     | pneumatic amplified     | 2,8÷10 | 1480      | 8,5 | 0,30   | 10              | 13    | B           | 2    | F      | 134,5 |                                                                                       |

C.C. = open centres O.C. = closed centres P.C. = pressurized centres

To get 3/2 NO version, supply the valve from port 3

**VALVES WITH ELECTRIC CONTROL**

|                       | Code     | Way    | Thread | Control              | Return            | Press. | Flow rate | Ø   | Weight | Resp. Time (ms) |       | Composition |      |        | tot. L |  |
|-----------------------|----------|--------|--------|----------------------|-------------------|--------|-----------|-----|--------|-----------------|-------|-------------|------|--------|--------|--|
|                       |          |        |        |                      |                   | bar    | (NI/min)  | mm  | kg     | Ecc.            | Diss. | Control     | Body | Return | mm     |  |
| <b>SINGLE IMPULSE</b> |          |        |        |                      |                   |        |           |     |        |                 |       |             |      |        |        |  |
|                       | CL-300   | 3/2 NC | G1/8   | electrical amplified | pneumatic spring  | 2,3÷10 | 890       | 6,5 | 0,20   | 23              | 19    | A           | 1    | E      | 140,5  |  |
|                       | CL-9300  | 3/2 NC | G1/4   | electrical amplified | pneumatic spring  | 2÷10   | 1480      | 8,5 | 0,27   | 24              | 28    | A           | 1    | E      | 161    |  |
|                       | CL-302A  | 3/2 NC | G1/8   | electrical amplified | mechanical spring | 2,5÷10 | 890       | 6,5 | 0,21   | 20              | 24    | A           | 1    | D      | 153    |  |
|                       | CL-9302A | 3/2 NC | G1/4   | electrical amplified | mechanical spring | 2÷10   | 1480      | 8,5 | 0,28   | 22              | 35    | A           | 1    | D      | 172    |  |
|                       | CL-301   | 3/2 NO | G1/8   | electrical amplified | pneumatic spring  | 2,3÷10 | 890       | 6,5 | 0,20   | 23              | 19    | A           | 1    | E      | 140,5  |  |
|                       | CL-9301  | 3/2 NO | G1/4   | electrical amplified | pneumatic spring  | 2÷10   | 1480      | 8,5 | 0,27   | 24              | 28    | A           | 1    | E      | 161    |  |
|                       | CL-303A  | 3/2 NO | G1/8   | electrical amplified | mechanical spring | 2,5÷10 | 890       | 6,5 | 0,21   | 20              | 24    | A           | 1    | D      | 153    |  |
|                       | CL-9303A | 3/2 NO | G1/4   | electrical amplified | mechanical spring | 2÷10   | 1480      | 8,5 | 0,28   | 22              | 35    | A           | 1    | D      | 172    |  |
|                       | CM-600   | 5/2    | G1/8   | electrical amplified | pneumatic spring  | 2,5÷10 | 890       | 6,5 | 0,24   | 24              | 20    | A           | 2    | E      | 157    |  |
|                       | CM-9600  | 5/2    | G1/4   | electrical amplified | pneumatic spring  | 2÷10   | 1480      | 8,5 | 0,30   | 25              | 32    | A           | 2    | E      | 178,5  |  |
|                       | CM-602A  | 5/2    | G1/8   | electrical amplified | mechanical spring | 3÷10   | 890       | 6,5 | 0,25   | 21              | 25    | A           | 2    | D      | 169,5  |  |
|                       | CM-9602A | 5/2    | G1/4   | electrical amplified | mechanical spring | 2÷10   | 1480      | 8,5 | 0,31   | 22              | 43    | A           | 2    | D      | 189,5  |  |

To get 3/2 NO version, supply the valve from port 3  
 The solenoid valves are supplied without a coil or connector

**VALVES WITH ELECTRIC CONTROL**

|  | Code           | Way       | Thread | Control              | Return                   | Press. bar | Flow rate (NI/min) | Ø mm | Weight kg | Resp. Time (ms) |       | Composition |      |        | tot. L mm |  |
|--|----------------|-----------|--------|----------------------|--------------------------|------------|--------------------|------|-----------|-----------------|-------|-------------|------|--------|-----------|--|
|  |                |           |        |                      |                          |            |                    |      |           | Ecc.            | Diss. | Control     | Body | Return |           |  |
|  | <b>CL-320</b>  | 3/2       | G1/8   | electrical amplified | electrical amplified     | 1÷10       | 890                | 6,5  | 0,24      | 17              | 17    | A           | 1    | H      | 213,5     |  |
|  | <b>CL-9320</b> | 3/2 NC-NO | G1/4   | electrical amplified | electrical amplified     | 2÷10       | 1480               | 8,5  | 0,29      | 18              | 18    | A           | 1    | H      | 233       |  |
|  | <b>CL-321</b>  | 3/2       | G1/8   | electrical amplified | electrical not amplified | 1,7÷10     | 890                | 6,5  | 0,24      | 17              | 20    | A           | 1    | H      | 213,5     |  |
|  | <b>CL-9321</b> | 3/2 NC-NO | G1/4   | electrical amplified | electrical not amplified | 1,5÷10     | 1480               | 8,5  | 0,30      | 18              | 22    | A           | 1    | H      | 233       |  |
|  | <b>CL-322</b>  | 3/2       | G1/8   | electrical amplified | pneumatic amplified      | 2,5÷10     | 890                | 6,5  | 0,21      | 20              | 7     | A           | 1    | F      | 155,5     |  |
|  | <b>CL-9322</b> | 3/2 NC-NO | G1/4   | electrical amplified | pneumatic amplified      | 2÷10       | 1480               | 8,5  | 0,26      | 22              | 8     | A           | 1    | F      | 175       |  |
|  | <b>CM-620</b>  | 5/2       | G1/8   | electrical amplified | electrical amplified     | 1,2÷10     | 890                | 6,5  | 0,28      | 20              | 20    | A           | 2    | H      | 230       |  |
|  | <b>CM-9620</b> | 5/2       | G1/4   | electrical amplified | electrical amplified     | 1,5÷10     | 1480               | 8,5  | 0,32      | 22              | 22    | A           | 2    | H      | 250,5     |  |
|  | <b>CM-621</b>  | 5/2       | G1/8   | electrical amplified | electrical not amplified | 2÷10       | 890                | 6,5  | 0,28      | 20              | 23    | A           | 2    | H      | 230       |  |
|  | <b>CM-9621</b> | 5/2       | G1/4   | electrical amplified | electrical not amplified | 1,8÷10     | 1480               | 8,5  | 0,32      | 22              | 25    | A           | 2    | H      | 250,5     |  |
|  | <b>CM-622</b>  | 5/2       | G1/8   | electrical amplified | pneumatic amplified      | 1,2÷10     | 890                | 6,5  | 0,24      | 20              | 8     | A           | 2    | F      | 172       |  |
|  | <b>CM-9622</b> | 5/2       | G1/4   | electrical amplified | pneumatic amplified      | 1,5÷10     | 1480               | 8,5  | 0,29      | 22              | 10    | A           | 2    | F      | 192,5     |  |
|  | <b>CM-680</b>  | 5/3 C.C.  | G1/8   | electrical amplified | electrical amplified     | 2,5÷10     | 890                | 6,5  | 0,21      | 18              | 24    | A           | 2    | H      | 230       |  |
|  | <b>CM-9680</b> | 5/3 C.C.  | G1/4   | electrical amplified | electrical amplified     | 2,8÷10     | 1480               | 8,5  | 0,30      | 20              | 35    | A           | 2    | H      | 250,5     |  |
|  | <b>CM-685</b>  | 5/3 O.C.  | G1/8   | electrical amplified | electrical amplified     | 2,5÷10     | 890                | 6,5  | 0,21      | 18              | 24    | A           | 2    | H      | 230       |  |
|  | <b>CM-9685</b> | 5/3 O.C.  | G1/4   | electrical amplified | electrical amplified     | 2,8÷10     | 1480               | 8,5  | 0,30      | 20              | 35    | A           | 2    | H      | 250,5     |  |
|  | <b>CM-690</b>  | 5/3 P.C.  | G1/8   | electrical amplified | electrical amplified     | 2,5÷10     | 890                | 6,5  | 0,21      | 18              | 24    | A           | 2    | H      | 230       |  |
|  | <b>CM-9690</b> | 5/3 P.C.  | G1/4   | electrical amplified | electrical amplified     | 2,8÷10     | 1480               | 8,5  | 0,30      | 20              | 35    | A           | 2    | H      | 250,5     |  |

C.C. = open centres O.C. = closed centres P.C. = pressurized centres

To get 3/2 NO version, supply the valve from port 3  
The solenoid valves are supplied without a coil or connector

**COILS**

CSA/UL

Possibility of replacement without intervention in the pneumatic circuit

Other voltages available upon request

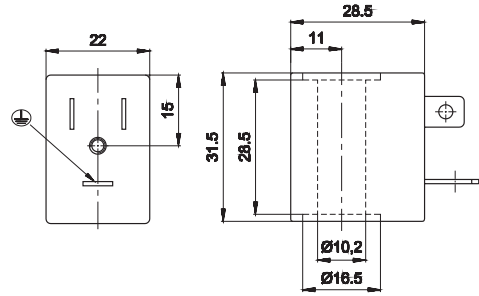
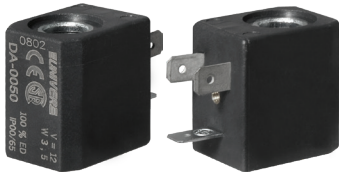
360° rotation on the pilot. Coil winding: H class

Ambient temperature: -10 ÷ +45 °C. Fluid temperature: -10 ÷ +95 °C.

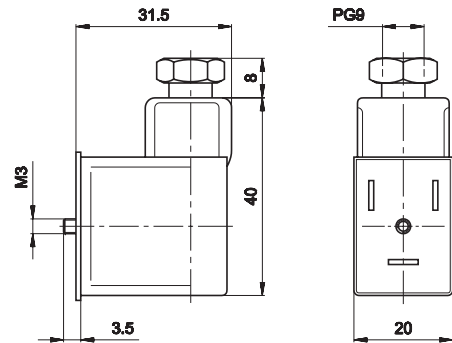
The solenoid valves functioning with 100V-230V must be incorporated (EN60204-1)

Under continuous service a maximum temperature will not compromise the functioning of the coil provided that the working position is ventilated.

Protection class IP65, if used with connector.


**U1 22 MM COIL**


| Code    | Duty cycle ED (a) % | Power consumption W |              | Tolerance tension % | Rated voltage     | Weight Kg |
|---------|---------------------|---------------------|--------------|---------------------|-------------------|-----------|
|         |                     | Hold                | Inrush       |                     |                   |           |
| DA-0050 | 100                 | 3,5                 | 3,5          | ±10                 | 12 V DC           | 0,06      |
| DA-0051 | 100                 | 3,5                 | 3,5          | ±10                 | 24 V DC           | 0,06      |
| DA-0106 | 100                 | 5,4 VA (Max)        | 7,8 VA (Max) | ±10                 | 24 V AC/50-60 HZ  | 0,06      |
| DA-0108 | 100                 | 5,4 VA (Max)        | 7,8 VA (Max) | ±10                 | 110 V AC/50-60 HZ | 0,06      |
| DA-0124 | 100                 | 5,4 VA (Max)        | 7,8 VA (Max) | ±10                 | 230 V AC/50-60 HZ | 0,06      |

**CONNECTOR FOR COIL U1**


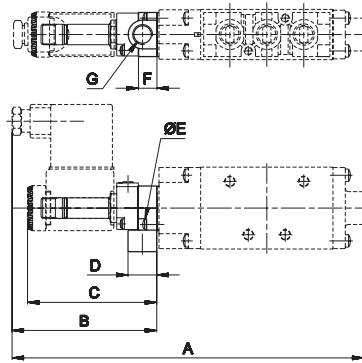
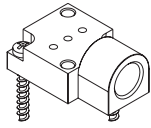
| Code    | Series coils | Protection rating | Cable connection | Guidance |
|---------|--------------|-------------------|------------------|----------|
| AM-5110 | U1           | IP65              | PG9              | 180°     |

LED available upon request.

(a) = 110V - 230V solenoid valves must be built-in (EN-60204-1)

Under continuous service a maximum temperature will not compromise the functioning of the coil provided that the working position is ventilated

LATE FOR EXTERNAL PILOT

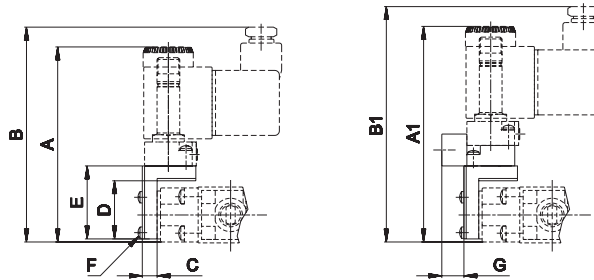
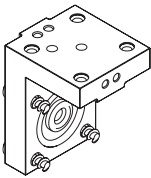


AM-5148

Plate for external servoassisted pilot weight: 0,03 Kg

|      | A     | B    | C  | D  | E      | F | G    |
|------|-------|------|----|----|--------|---|------|
| G1/8 | 171,5 | 70,5 | 63 | 14 | 2,9X10 | 9 | G1/8 |
| G1/4 | 186   | 70,5 | 63 | 14 | 2,9X10 | 9 | G1/8 |

ANGLE PLATE FOR "H"

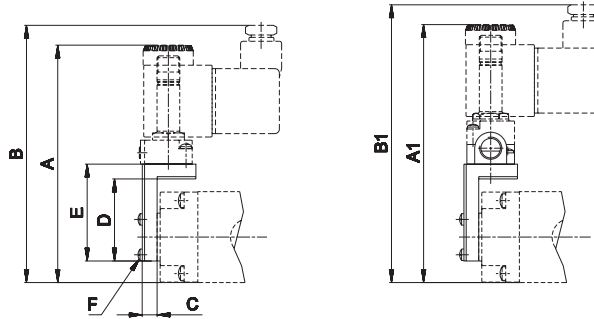
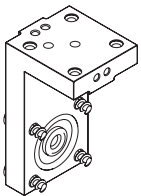


AM-5151 + AM-5148

"H" option solenoid square weight: 0,035 Kg

|      | A    | A1   | B    | B1    | C   | D    | E  | F      | G   |
|------|------|------|------|-------|-----|------|----|--------|-----|
| G1/8 | 87,7 | 96,7 | 95,5 | 104,5 | 6,5 | 25,5 | 32 | 2,9X10 | 9,7 |
| G1/4 | 88,7 | 97,7 | 96,5 | 105,5 | 6,5 | 25,5 | 32 | 2,9X10 | 9,7 |

ANGLE PLATE FOR "P"



AM-5152 + AM-5148

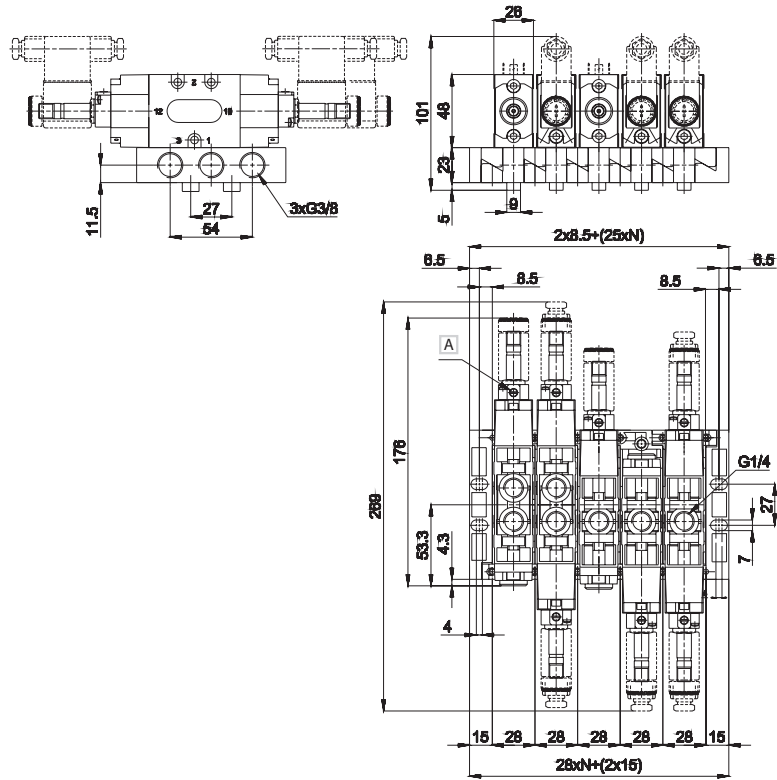
"P" option solenoid square weight: 0,05 Kg

|      | A   | A1  | B     | B1    | C   | D  | E    | F      |
|------|-----|-----|-------|-------|-----|----|------|--------|
| G1/8 | 106 | 115 | 113,5 | 122,5 | 6,5 | 36 | 42,5 | 2,9X10 |
| G1/4 | 111 | 120 | 118,5 | 127,5 | 6,5 | 36 | 42,5 | 2,9X10 |



G1/4 MODULAR SUBBASE "CLIPS"

1/4



A Manual override

NC

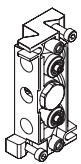
- 1 = Supply port
- 2 = Use
- 3 = Exhaust
- 12 = Control
- 10 = Return

NO

- 1 = Exhaust
- 2 = Use
- 3 = Supply port
- 12 = Control
- 10 = Return

N = Number of valve places

When assembling the manifold put the sub-base on a flat surface and tighten the special screw supplied. This will give perfect alignment.



CP-9100

modular sub-base regulated and conveyed exhausts connections: G1/4 material: zamak weight: 0,210 Kg

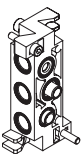
standard supplied: screws, seals, exhaust regulator and fixing coupling



CP-9110

coupling connections: G1/4 material: brass weight: 0,028 Kg

For each additional pressure, one coupling and two separators must be ordered.



CP-9101

modular sub-base without exhaust regulator connections: G1/4 material: zamak weight: 0,210 Kg

standard supplied: screws, seals and fixing coupling of valve



CP-9111

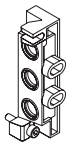
pressure separator connections: G1/4 material: aluminium weight: 0,013 Kg



CP-9112

cap for 3/2 valve mounting connections: G1/4 material: aluminium weight: 0,010 Kg

Cap for mounting of 3/2 NC-NO valves on "CLIPS" sub-base to close non-used way. Standard sub-base with adjustment screw. The screw head has a slot for screwdrivers. Upon request: adjustment screw with crimped head.



CP-9105

inlet plate side connections connections: G3/8 material: zamak weight: 0,120 Kg

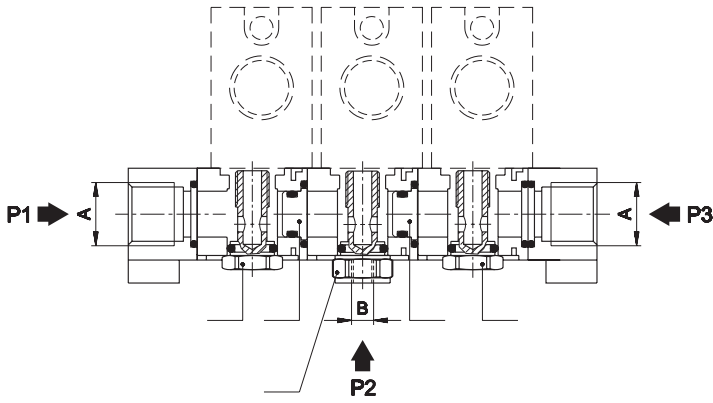
standard supplied: screws and seals



CP-9113

adjustment screw connections: G1/4 material: ottone weight: 0,006 Kg

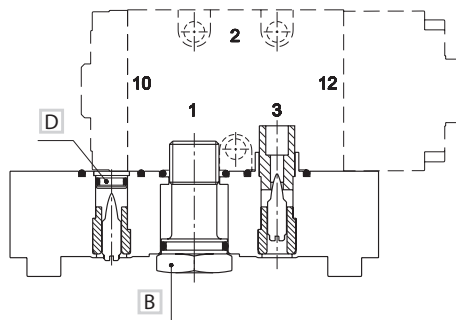
ASSEMBLY EXAMPLES MANIFOLD 3 PRESSURES



- 1 Separator of differential pressures [CP-111/CP-9111](#)
- 2 Fixing coupling for valve inside the sub-base
- 3 Coupling [CP-110/CP-9110](#)

|      | A    | B    |
|------|------|------|
| G1/8 | G1/4 | G1/8 |
| G1/4 | G3/8 | G1/4 |

MOUNTING OF 3/2 NC VALVE



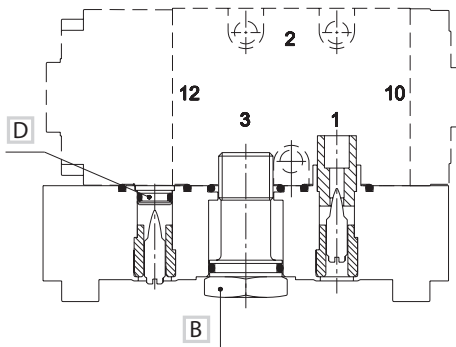
NC

- 1 = Supply port
- 2 = Use
- 3 = Exhaust
- 12 = Control
- 10 = Return

**B** Fixing coupling for valve inside the sub-base

**D** Cap for valve mounting [CP-112/CP-9112](#)

MOUNTING OF 3/2 NO VALVE



NO

- 1 = Exhaust
- 2 = Use
- 3 = Supply port
- 12 = Control
- 10 = Return

**B** Fixing coupling for valve inside the sub-base

**D** Cap for valve mounting [CP-112/CP-9112](#)

In case there should be no need to regulate exhaust, plastic insert has to be removed whilst the adjustment screw must remain in its place.