



$\$P_{01}$



$\$P_{10}/\$P_{30}$

PNEUMATIC REMOTE CONTROL VALVES



## Features

This catalog presents the **SP** pneumatic remote control valves with high metering characteristics for proportional control of directional control valves.

- SP01 - SP10 monoblock body SP30 or stackable.
- Aluminum body.
- Low actioning efforts.
- Easy installation.
- Frictions, detents, safety lever, several types of knob available.

## Working conditions

This catalog shows technical specifications and diagrams measured at ambient temperature of 20°C.

|                             |                    |                          |                           |
|-----------------------------|--------------------|--------------------------|---------------------------|
| Maximum feeding pressure    |                    | 10 bar                   | 145 psi                   |
| Air flow at 7 bar (102 psi) |                    | 350 dm <sup>3</sup> /min | 12.4 ft <sup>3</sup> /min |
| Ambient temperature         |                    | from -40° to 60°C        |                           |
| Tie rod tightening torque   | <i>SP30 only</i>   | 30 Nm                    | 22.2 lb ft                |
| Standard threads            | <i>NPT</i>         | 1/8-27                   |                           |
| Stud ends tightening torque | <i>All ports</i>   | 15 Nm                    | 11 lb ft                  |
| Weight                      | <i>SP01</i>        | 2,5 kg                   | 5,5 lb                    |
|                             | <i>SP10 - SP11</i> | 1,7 kg                   | 3.7 lb                    |
|                             | <i>SP30</i>        | see table on page 8      |                           |

NOTE - For different conditions please contact Sales Dept.

### Additional information

This catalog shows the product in the most standard configurations.  
Please contact Sales Dpt. for more detailed information or special request.

### WARNING!

All specifications of this catalog refer to the standard product at this date.  
Walvoil, oriented to a continuous improvement, reserves the right to discontinue, modify or revise the specifications, without notice.

WALVOIL IS NOT RESPONSIBLE FOR ANY DAMAGE CAUSED BY AN  
INCORRECT USE OF THE PRODUCT.

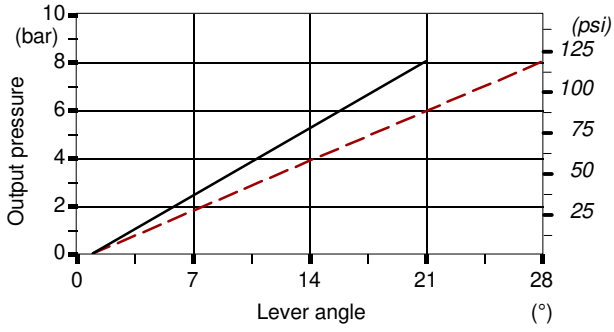
5<sup>th</sup> edition February 2003:

**This edition supercedes all prior documents.**

Measured with 501MA pressure control curve on work ports.

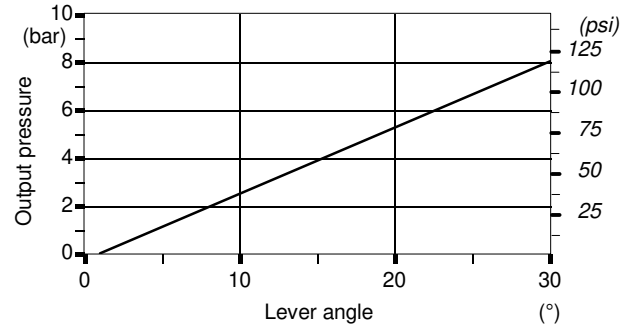
Piloting pressure

SP01



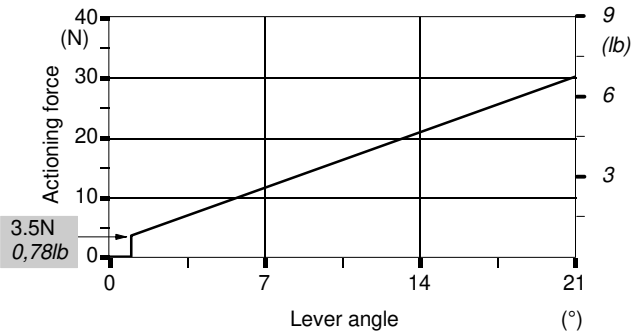
— Single port      - - - Two contemporary

SP10-SP30



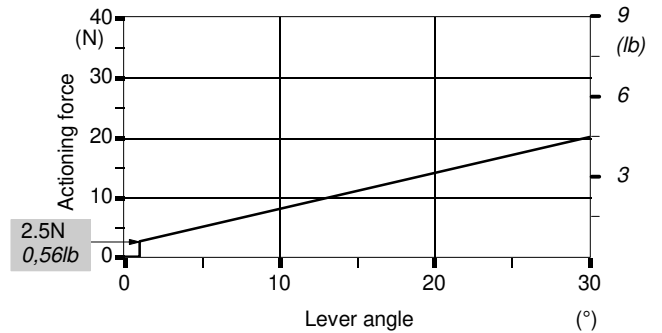
Actioning force

SP01



— Single port

SP10-SP30

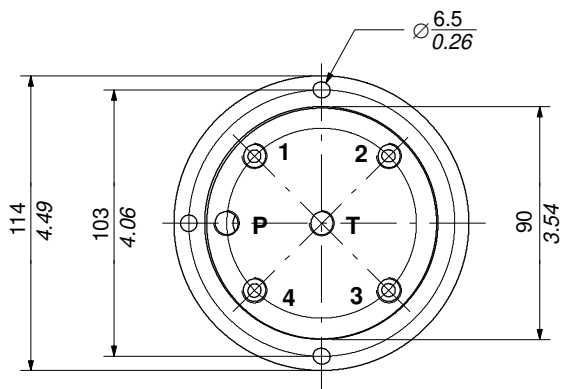
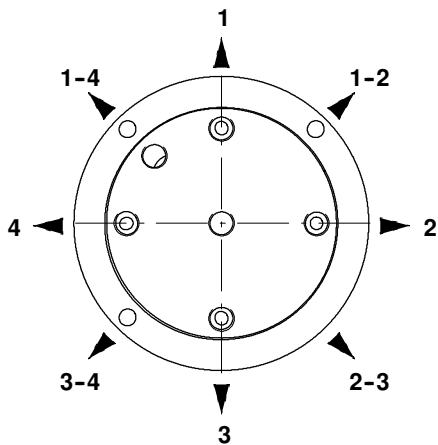


NOTE - Pivot distance from actioning point = 150mm - 5.90 in

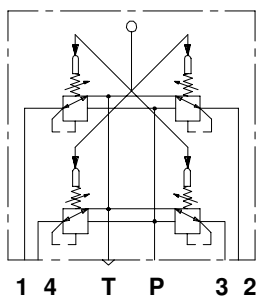
## Dimensional data and hydraulic circuit

Monoblock joystick with 1 lever and 4 work ports, for operation of 2 valve sections.  
Bottom all ports.

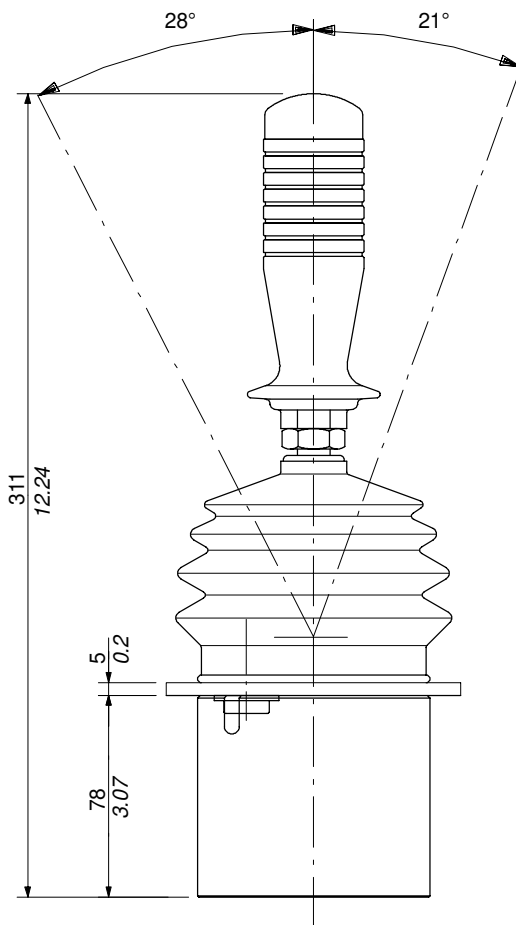
**Movements**



**Circuit**

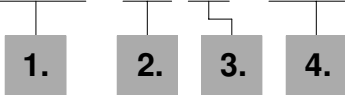


2 simultaneously work ports      Single work port



**Description example:**

**SP 01 - N / 01 W1 - 501 A x 4**



**1. SP body kit**

| TYPE | CODE       | DESCRIPTION |
|------|------------|-------------|
| 01-N | 5CO4010500 | Body kit    |

**2. Kinematic kit**

*page 10*

| TYPE | CODE       | DESCRIPTION              |
|------|------------|--------------------------|
| 01   | 5ART310100 | spring return to neutral |

**3. Handles with joint**

| TYPE | CODE       | DESCRIPTION   |
|------|------------|---|
| W1   | 5IMP522000 | less micro (standard)                                 |
| X1   | 5IMP532000 | n.1 micro with push-button                            |
| K1   | 5IMP542000 | n.1 micro with recessed push-button                   |
| Z1   | 5IMP502000 | n.1 micro with detented rocker-switch                 |
| Y1   | 5IMP512000 | n.2 micro with spring return to neutral rocker-switch |
| T1   | 5IMP552000 | n. 2 micro with detented 3 position rocker-switch     |

For different handles see page 11 and ask related catalogue **DHR001E**.

**2.+3. Kinematic kits with handle**

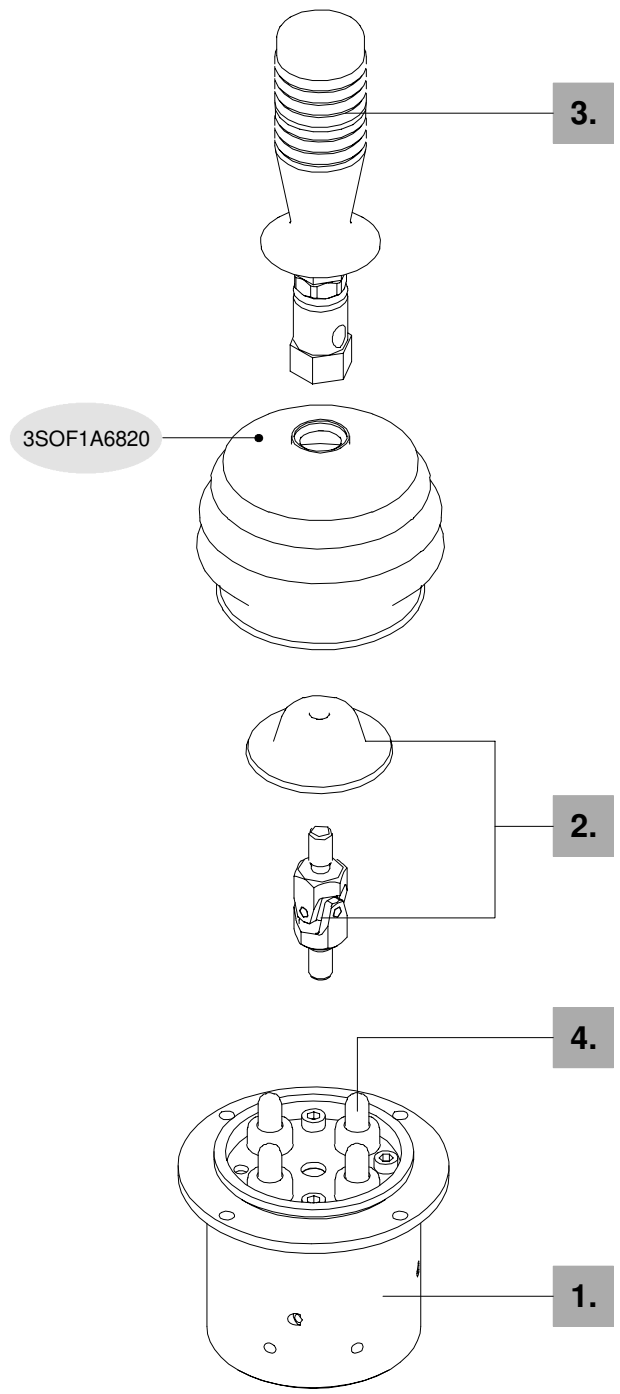
*page 10*

For assembling reasons, the under listed kinematic kits must be supplied complete with handle. Please contact our Sales Department for use with different handles.

| TYPE | CODE    | DESCRIPTION                            |
|------|---------|--|
| 02Y  | 5CIN902 | with detent in neutral and type Y knob |

**4. Pressure control curve 501A**

| TYPE | CODE      | DESCRIPTION                                  |
|------|-----------|--|
| 501A | 5CUR501MA | without step, from 0 to 8 bar / 0 to 116 psi |

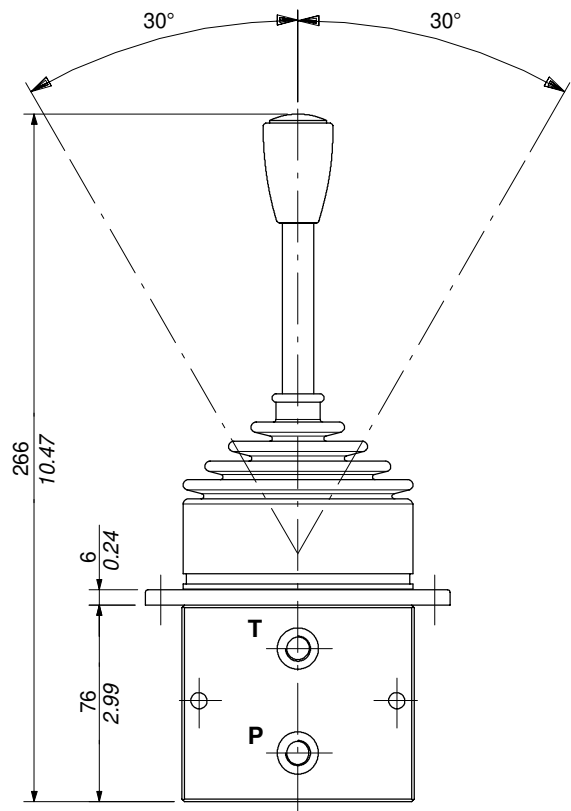
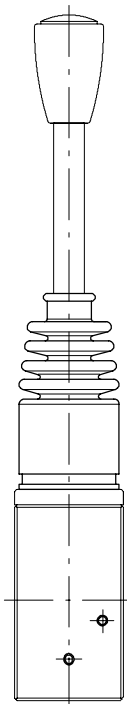
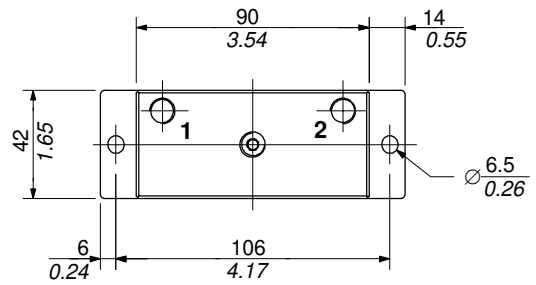
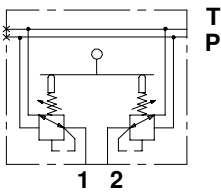


# SP10

## Dimensional data and hydraulic circuit

Monoblock with 1 lever and 2 work ports.  
Side P and T ports.

Circuit



Description example:

SP 10 - N / 01 G3 - 501 A x 2

1.

2.

3.

**1. SP body kit**

| TYPE | CODE       | DESCRIPTION |
|------|------------|-------------|
| 10-N | 5CO4100500 | Body kit    |

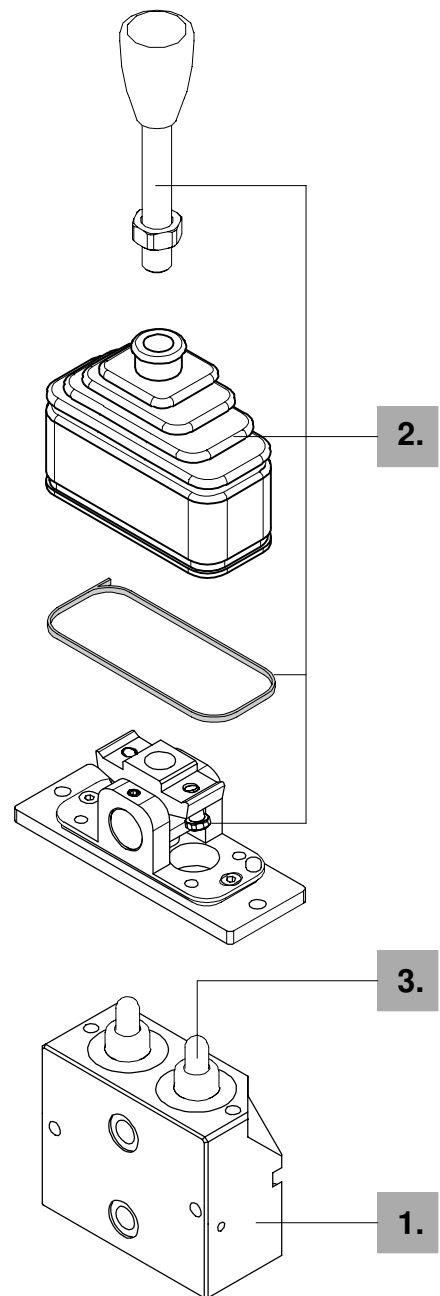
**2. Kinematic kits with handle *page 10***

For assembling reasons, the under listed kinematic kits must be supplied complete with handle. Please contact our Sales Department for use with different handles.

| TYPE | CODE       | DESCRIPTION                             |
|------|------------|---|
| 01G3 | 5CIN901000 | spring centered, G knob                 |
| 02G3 | 5CIN904000 | with detent in neutral, G knob          |
| 05G3 | 5CIN907000 | with detent in position 1, G knob       |
| 06G3 | 5CIN907000 | with detent in position 2, G knob       |
| 07G3 | 5CIN905000 | with detent in position 1 and 2, G knob |

**3. Pressure control curve 501A**

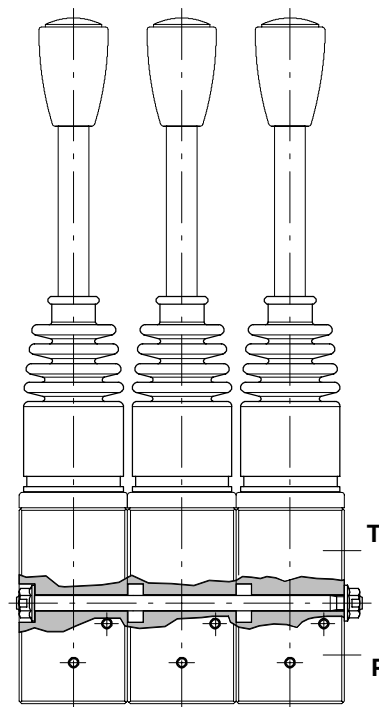
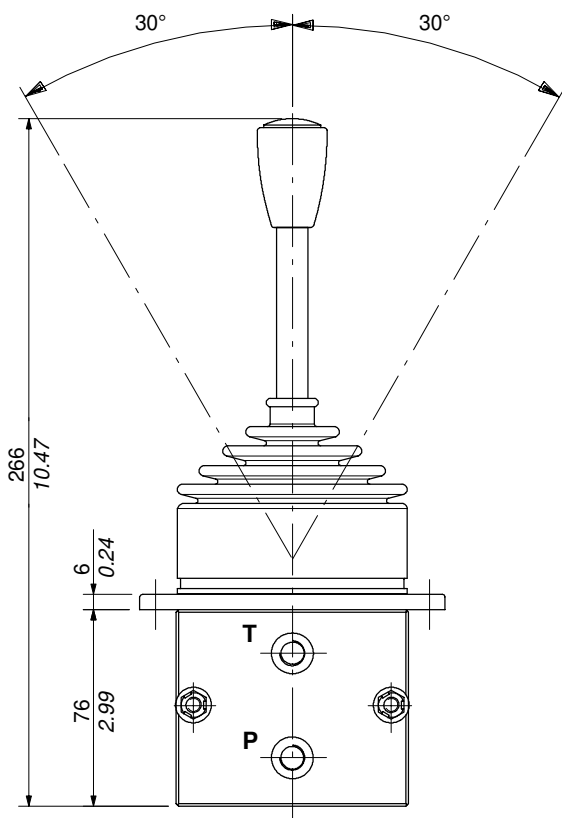
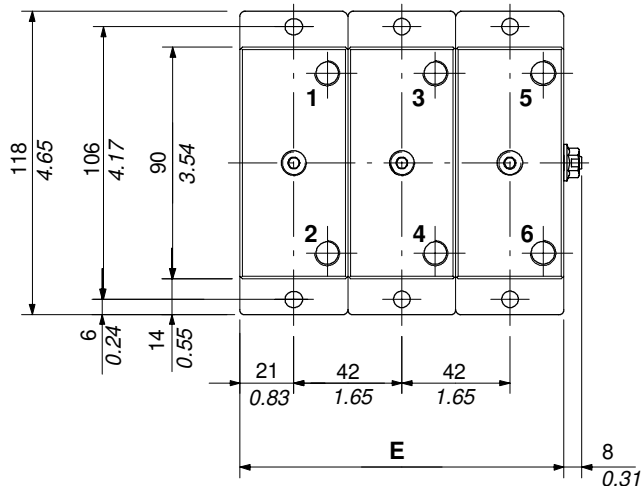
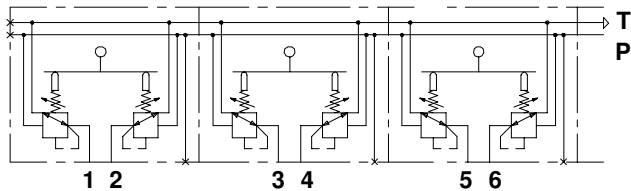
| TYPE | CODE      | DESCRIPTION                                  |
|------|-----------|--|
| 501A | 5CUR501MA | without step, from 0 to 8 bar / 0 to 116 psi |



## Dimensional data and hydraulic circuit

It's composed from nr.2 to 8 of single sections.  
Side P and T ports.

Circuit



## Pneumatic pilot control valves dimensions

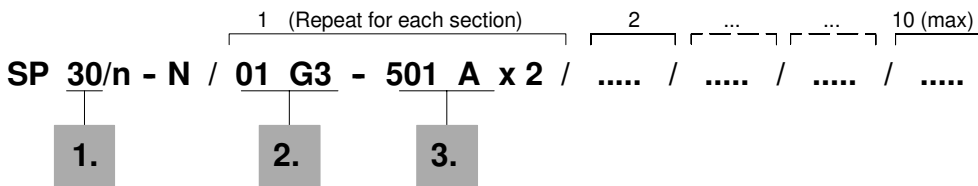
| TYPE   | E   |      | Weight |      |
|--------|-----|------|--------|------|
|        | mm  | in   | kg     | lb   |
| SP30/2 | 84  | 3.31 | 3.4    | 7.4  |
| SP30/3 | 126 | 4.96 | 5.1    | 11.1 |
| SP30/4 | 168 | 6.61 | 6.8    | 14.8 |

| TYPE   | E   |       | Weight |      |
|--------|-----|-------|--------|------|
|        | mm  | in    | kg     | lb   |
| SP30/5 | 210 | 8.27  | 8.5    | 18.5 |
| SP30/6 | 252 | 9.92  | 10.2   | 22.2 |
| SP30/7 | 294 | 11.57 | 11.9   | 25.9 |

| TYPE   | E   |       | Weight |      |
|--------|-----|-------|--------|------|
|        | mm  | in    | kg     | lb   |
| SP30/8 | 336 | 13.23 | 13.6   | 29.6 |



Description example:



n number of sections from 2 to 8

**1. SP body kit**

| TYPE | CODE       | DESCRIPTION |
|------|------------|-------------|
| 30-N | 5CO4100501 | Body kit    |

**2. Kinematic kits with handle *page 10***

For assembling reasons, the under listed kinematic kits must be supplied complete with handle. Please contact our Sales Department for use with different handles.

| TYPE | CODE       | DESCRIPTION                             |
|------|------------|---|
| 01G3 | 5CIN901000 | spring centered, G knob                 |
| 02G3 | 5CIN904000 | with detent in neutral, G knob          |
| 05G3 | 5CIN907000 | with detent in position 1, G knob       |
| 06G3 | 5CIN907000 | with detent in position 2, G knob       |
| 07G3 | 5CIN905000 | with detent in position 1 and 2, G knob |

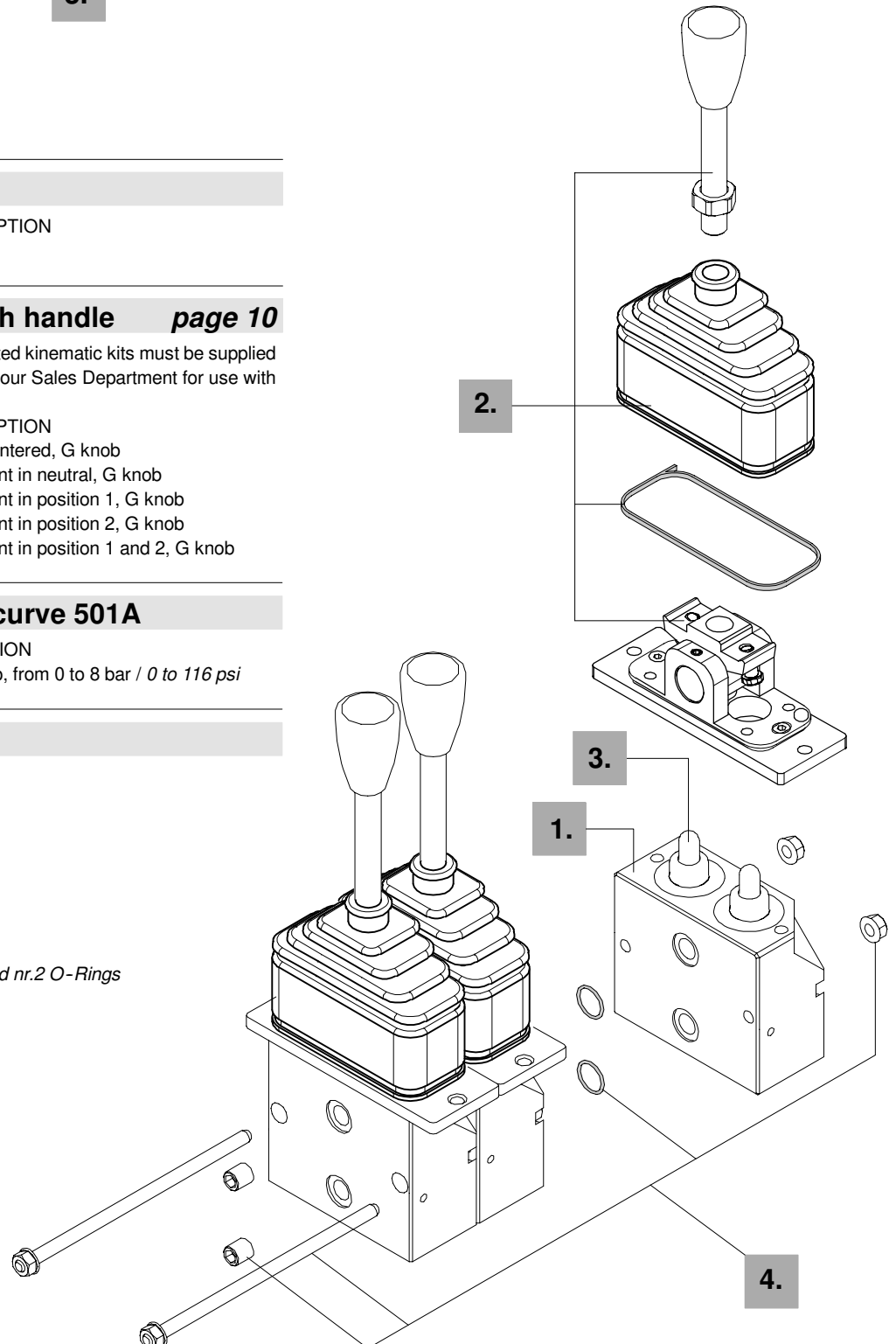
**3. Pressure control curve 501A**

| TYPE | CODE      | DESCRIPTION                                  |
|------|-----------|--|
| 501A | 5CUR501MA | without step, from 0 to 8 bar / 0 to 116 psi |

**4. Assembling kit**

| CODE       | DESCRIPTION |
|------------|-------------|
| 5TIR106092 | for SP30/2  |
| 5TIR106134 | for SP30/3  |
| 5TIR106176 | for SP30/4  |
| 5TIR106218 | for SP30/5  |
| 5TIR106260 | for SP30/6  |
| 5TIR106301 | for SP30/7  |
| 5TIR106344 | for SP30/8  |

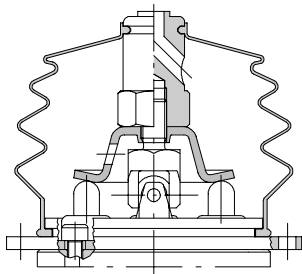
Tie rod kits with nr.2 NPT1/2 plugs and nr.2 O-Rings



## SP01 kinematic kits

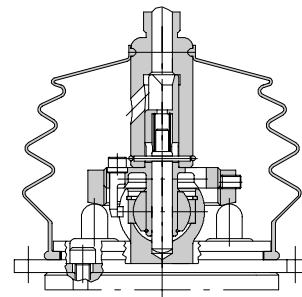
### Type 01

Spring centered to neutral position.



### Type 02

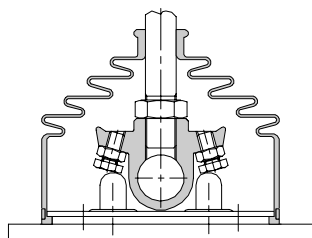
With lock in neutral positions.  
Unlock moving up knob.



## SP10-SP30 kinematic kits

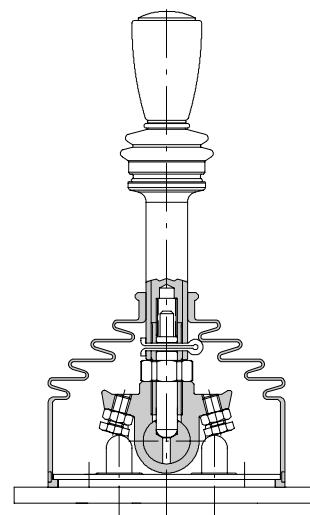
### Type 01

Spring centered to neutral positions.



### Type 02

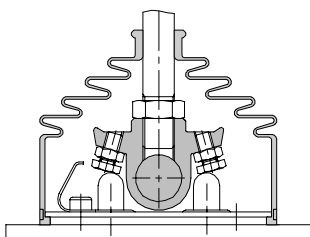
With lock in neutral positions.  
Unlock moving up knob.



## Controls with detent

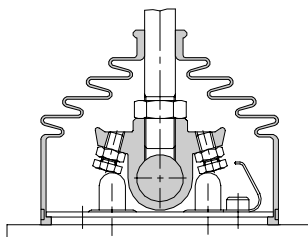
### Type 05

Detent in position 1, spring centered to neutral positions.



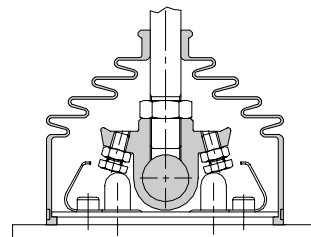
### Type 06

Detent in position 2, spring centered to neutral positions.



### Type 07

Detent in position 1 and 2, spring centered to neutral positions.

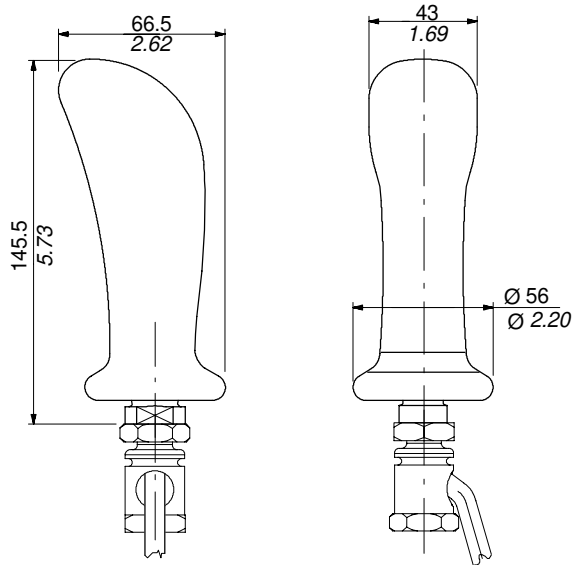


**Handles with switches**

Series V and H handles assembled on joystick **SP01** are available.

For any further information, please contact Sales Dept. or ask the related catalogue **DHR001E**.

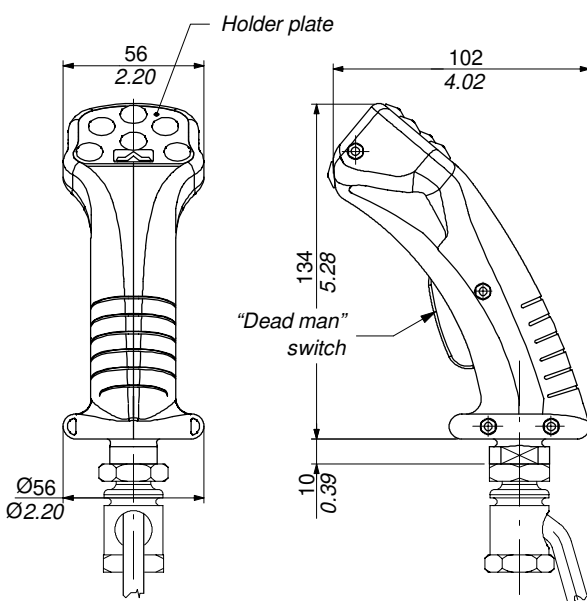
**Series V**



**Available types**

- Type **V**: available without switches or fitted with push-button or rocker switch (front of upper position)
- Type **VM**: fitted up to 4 (nr.1 upper and nr.3 front) push-buttons with 100/200mA current capability.
- Type **VT**: fitted up to 4 (nr.1 upper and nr.3 front) push-buttons with 5A current capability

**Series H**



**Available types**

- Type **H**: fitted up to 8 microswitch push-button, with rocker switch and "dead man" switch
- Type **HM**: fitted up to 4 push-buttons (100/200mA types), with "dead man" and ON/OFF switches
- Type **HT**: fitted up to 4 push-buttons (5A types), with rocker switch, "dead man" and ON/OFF switches
- Type **HZ**: with potentiometer, fitted up to 2 microswitch push-button, "dead man" and ON/OFF switches



**WALVOIL S.P.A.**

42100 REGGIO EMILIA • ITALY • VIA ADIGE, 13/D  
TEL. +39.0522.932411 • FAX +39.0522.300984  
E-MAIL: INFO@WALVOIL.COM • HTTP: //WWW.WALVOIL.COM

**SALES DEPARTMENT**

TEL. +39.0522.932555 • FAX +39.0522.932455

**DFC020E**