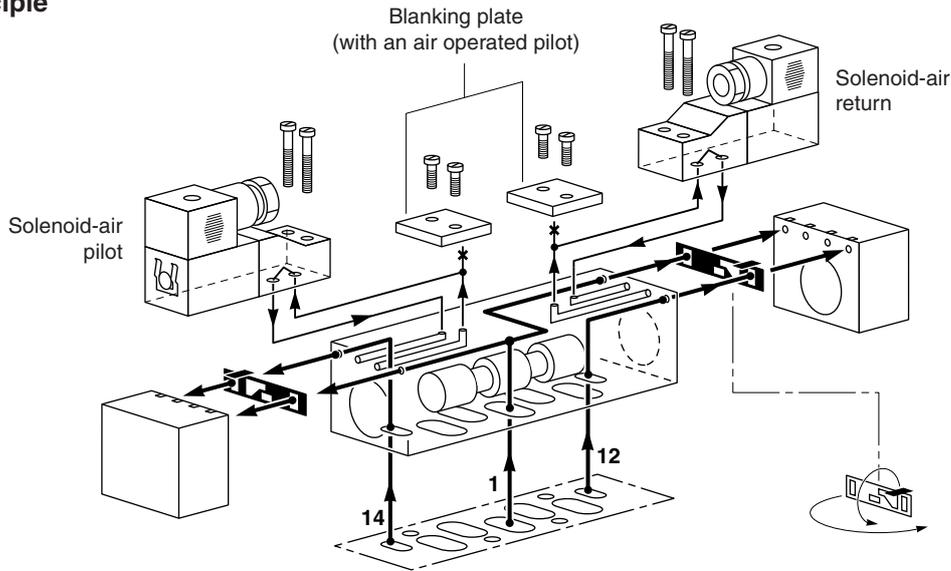


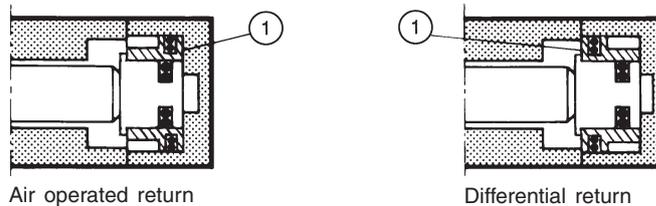


• **Operating principle**



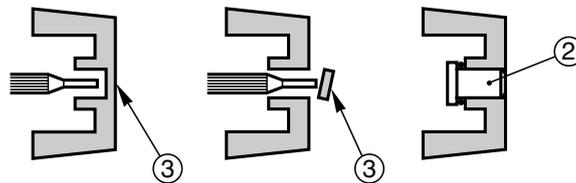
• **Changing from an air operated return valve to a differential return valve**

An air operated return valve can be changed into a differential return valve by turning over the outside piston ring as shown in the diagram below (1).



• **Manual operator using a tester (option)**

A manual operator can be equipped with a tester (2) by knocking the knock-out plug (3) out of the end cover.



• **An air operated valve can be changed into a solenoid air valve by :**

- re-positioning the selector seal,
- removing the upper blanking plate (side 12 or 14),
- fitting a selector seal if lacking,
- adding a solenoid pilot valve on the upper part.

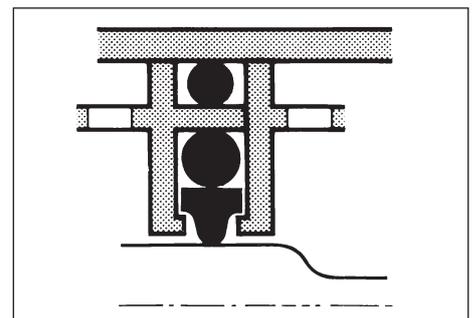
• **A solenoid air valve can be changed into an air operated valve by :**

- removing the solenoid pilot valve,
- fitting a blanking plate on the pilot base (plate code : **88100073**),
- re-positioning the selector seal.

**USE WITH UNLUBRICATED AIR**

This range of JOUCOMATIC valves will operate satisfactorily with lubricated air or unlubricated air and even with dry air, due to a sealing device which has been patented. Essentially, a "T" seal backed up by a cushioning or compensation seal.

This arrangement of seals assures a minimum pilot pressure which will remain constant even after the valve has been stopped for a long period of time. When re-starting, the performance of the valve will be the same as during continuous operation. This important "non-stiction" characteristic assures satisfactory performance under all conditions.



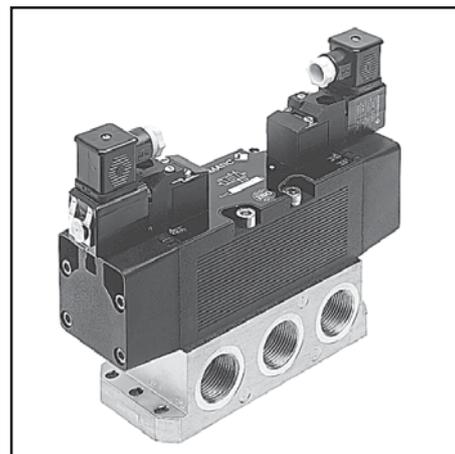


**FEATURES**

- Choice of internal/external supply with selector seals (vacuum use to -0,950 bar)

**GENERAL**

|                            |   |
|----------------------------|---|
| <b>Fluid</b>               | Air or neutral gas, filtered, lubricated or not   |
| <b>Operating pressure</b>  | - 0.950 to +12 bar (with external supply to pilot)<br>+2.5 to +10/12 bar (with internal supply to pilot)<br>See specifications tables |
| <b>Pilot pressure</b>      | See specifications tables   |
| <b>Ambient temperature</b> | -10°C to +40°C  |
| <b>Flow (Qv at 6 bar)</b>  | 6300 l/min (ANR) (with subbase G 3/4)<br>7000 l/min (ANR) (with subbase G 1)  |
| <b>Flow coefficient</b>    | Kv = 90 (with subbase G 3/4)<br>Kv = 100 (with subbase G 1)   |
| <b>Life</b>                | 5 millions of cycles (in normal operating conditions)   |
| <b>Base</b>                | ISO 5599/1 - Size 4   |
| <b>Subbase</b>             | Single subbase ISO/AFNOR NF E49085  |



**CONSTRUCTION**

|                       |   |
|-----------------------|---|
| <b>Body and cover</b> | Die-cast zinc alloy                                   |
| <b>Seals</b>          | NBR (nitrile)   |
| <b>Internal parts</b> | Light alloy and POM (polyacetal), die-cast zinc alloy |

**ELECTRICAL CHARACTERISTICS**

| type of coil | voltage |                         | consumption |            | insulation class | protection degree | electrical connection  |
|--------------|---------|-------------------------|-------------|------------|------------------|-------------------|--|
|              | ~       | =                       | inrush      | hold       |                  |                   |  |
| series 192   | ~       | 24V-48V-115V-230V-50 Hz | 12 VA       | 6 VA (4 W) | F                | IP 65             | spade plug size 30 connector, ISO4400/EN175301-803, form A, rotatable by 90° |
|              | =       | 24V-48V                 | 5 W         |            |                  |                   |  |

**E**

**SPECIFICATIONS 5/2**

| function 5/2<br>symbol | operators<br>pilot (14)<br>solenoid<br>air operated<br>return (12) | response time (ms) |               | pilot pressure (bar) |      | 2 catalogue numbers |   |             |
|------------------------|--|--------------------|---------------|----------------------|------|---------------------|---|-------------|
|                        |  | ener-gized         | de-ener-gized | min.                 | max. | valve               | + solenoid pilot quantity & catalogue number<br>with standard connector | (M)         |
|                        | spring return  | 60                 | 220           | 2,5                  | 12   | 54490017            | + 1x {<br>19201001<br>19201002<br>19201003                              | X<br>●<br>▼ |
|                        | differential return  | 90                 | 170           | 2                    | 12   | 54490018            |   |             |
|                        | air return   | 40                 | -             | 1,5                  | 12   | 54490019            |   |             |
|                        | solenoid differential return                                       | 40                 | -             | 2                    | 12   | 54490020            | + 2x {<br>19201001<br>19201002<br>19201003                              | X<br>●<br>▼ |
|                        | solenoid air operated return                                       | 40                 | -             | 1,5                  | 12   | 54490021            |   |             |

(M) Type of manual operator on pilot(s) : X : without ● : maintained ▼ : impulse

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**SPECIFICATIONS 5/3**

| function<br>5/3<br><br>symbol | operators<br>pilot (14)<br>solenoid<br>air operated<br>return (12) | response<br>time<br>(ms) |                   | pilot<br>pressure<br>(bar) |      | 2 catalogue numbers |  |             |
|-------------------------------|--|--------------------------|-------------------|----------------------------|------|---------------------|--|-------------|
|                               |  | ener-<br>gized           | de-ener-<br>gized | min.                       | max. | valve               | + solenoid pilot<br>quantity & catalogue<br>number | (M)         |
|                               | Pressure held<br><b>W1</b>   | 70                       | 250               | 3                          | 12   | <b>54490022</b>     | + 2x {<br>19201001<br>19201002<br>19201003         | ×<br>●<br>▼ |
|                               | Pressure release<br><b>W3</b>                                      | 70                       | 250               | 3                          | 12   | <b>54490023</b>     |  |             |

(M) Type of manual operator on pilot(s) : × : without ● : maintained ▼ : impulse

**OPTIONS**

- Equipment with manual testers so that the spool position can be checked
- Solenoid valve intrinsically safe series 195/ia certified EEx «ia»
- Connector with cable 2m long - code : **88122612**
- Connector with transil protection (see “Coils and accessories” section)
- Solenoid valve with plug and built-in visual control and protection :

Solenoid valve **without** connector + Connector with built-in visual control and VDR/RC protection

| type<br>of valve | (M) | solenoid valve<br>without connector<br>catalogue number | catalogue number (~ / =) |                 |                 |                 |
|------------------|-----|---|--------------------------|-----------------|-----------------|-----------------|
|                  |     |   | 24V                      | 48V             | 115V            | 230V            |
| 192 NC (1)       | ×   | <b>19201022</b>   | <b>88122603</b>          | <b>88122604</b> | <b>88122605</b> | <b>88122608</b> |
|                  | ●   | <b>19201023</b>   |                          |                 |                 |                 |
|                  | ▼   | <b>19201024</b>   |                          |                 |                 |                 |

(M) Type of manual operator on pilot(s) : × : without ● : maintained ▼ : impulse

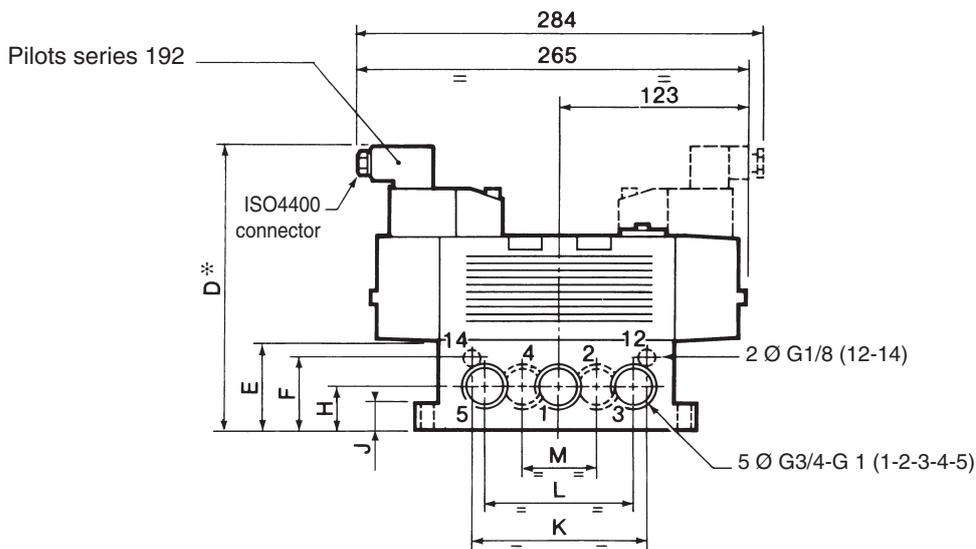
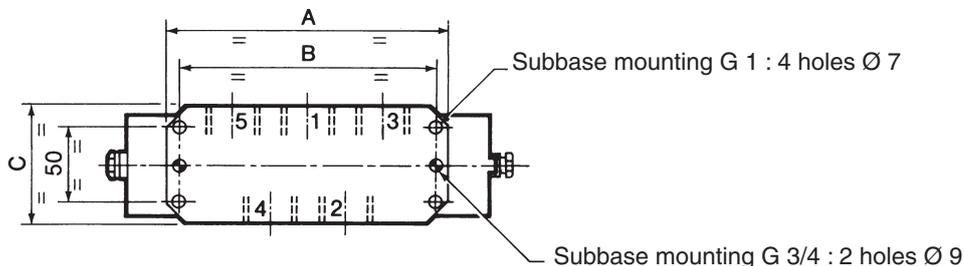
(1) Solenoid valve series 192 - 3/2 NC - Ø 2,1mm with exhaust in base

**SUBBASES**

| type<br>of subbases                  | subbase<br>catalogue<br>number | port<br>orifices |       |       |
|--------------------------------------|--------------------------------|------------------|-------|-------|
|                                      |                                | 12-14            | 1-2-4 | 3-5   |
| single subbases<br>with<br>side port | <b>35500144</b>                | G 1/8            | G 3/4 | G 3/4 |
|                                      | <b>35500082</b>                | G 1/8            | G 1   | G 1   |

**DIMENSIONS (mm), WEIGHT (kg)**

VALVE ON SINGLE SUBBASE WITH SIDE PORT



| code subbase | port orifices |       |       | dimension |     |      |     |    |    |    |    |     |     |    | weight           |                   |
|--------------|---------------|-------|-------|-----------|-----|------|-----|----|----|----|----|-----|-----|----|------------------|-------------------|
|              | 12-14         | 1-2-4 | 3-5   | A         | B   | C    | D   | E  | F  | H  | J  | K   | L   | M  | with 1 pilot 192 | with 2 pilots 192 |
| 35500144     | G 1/8         | G 3/4 | G 3/4 | 195       | 177 | 85,5 | 189 | 42 | 32 | 22 | 19 | 116 | 88  | 40 | 4,860            | 5,120             |
| 35500082     | G 1/8         | G 1   | G 1   | 186       | 172 | 80   | 207 | 60 | 47 | 30 | 18 | 116 | 106 | 50 | 4,960            | 5,220             |

\* + 15 mm for plug removal

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