



**BREVINI®**

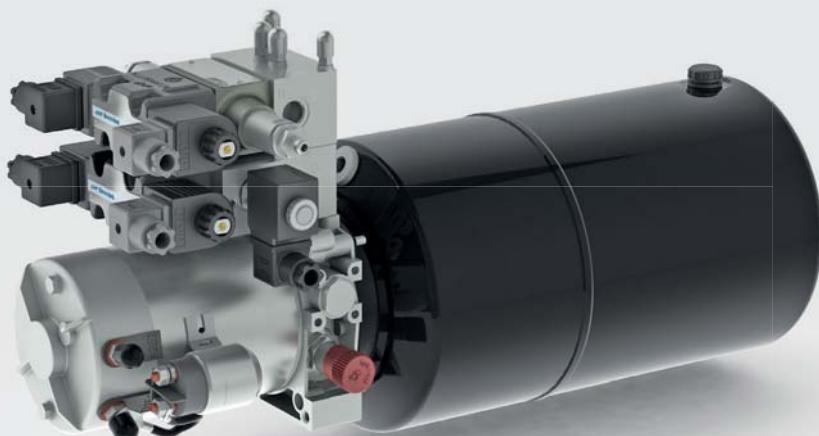
*Motion Systems*

## MC HYDRAULIC POWER PACK

**Technical Catalogue**

January  
**2018**

*web edition*





|   |           |
|---|-----------|
| <b>Introduction .....</b>               | <b>2</b>  |
| <b>Endhead configuration .....</b>      | <b>3</b>  |
| <b>Power pack sections .....</b>        | <b>5</b>  |
| <b>Selection code .....</b>             | <b>6</b>  |
| <b>Endhead overall dimensions .....</b> | <b>9</b>  |
| <b>Cavities dimensions .....</b>        | <b>10</b> |

## **SELECTIONS FOR "MCA-MCB" POWER PACK ENDHEAD**

|                                      |           |
|--------------------------------------|-----------|
| <b>Endhead choice .....</b>          | <b>11</b> |
| <b>Sect. I - MC Cavity 1 .....</b>   | <b>12</b> |
| <b>Sect. I - MC Cavity 1R .....</b>  | <b>13</b> |
| <b>Sect. II - MC Cavity 2 .....</b>  | <b>14</b> |
| <b>Sect. II - MCA Cavity 3 .....</b> | <b>17</b> |
| <b>Sect. II - MCB Cavity 3 .....</b> | <b>20</b> |
| <b>Sect. II - MCA Cavity 4 .....</b> | <b>21</b> |
| <b>Sect. II - MC Ports P-T .....</b> | <b>22</b> |

## **SELECTIONS FOR ALL POWER PACK ENDHEADS**

|   |           |
|---|-----------|
| <b>Sect. III - Pumps .....</b>                      | <b>23</b> |
| <b>Sect. IV - Tanks / Sect. V - Tubes kit .....</b> | <b>25</b> |
| <b>Sect. VI - DC Motors .....</b>                   | <b>41</b> |
| <b>Sect. VI - AC Motors .....</b>                   | <b>47</b> |
| <b>Sect. VII - Transmission kit DC motors .....</b> | <b>53</b> |
| <b>Sect. VIII - Blocks and CETOP valves .....</b>   | <b>55</b> |
| <b>Sect. IX - Accessories .....</b>                 | <b>59</b> |

|                       |           |
|-----------------------|-----------|
| <b>Examples .....</b> | <b>60</b> |
|-----------------------|-----------|

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Use of the products in this catalogue must comply with the operating limits given in the technical specifications. The type of application and operating conditions must be assessed as normal or in malfunction in order to avoid endangering the safety of people and/or items.

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The MC series power pack is an easy-to-assemble, compact, electro-hydraulic unit. With its versatility and modularity, it offers many combinations of hydraulic circuits to suit various requirements of plant design. This catalogue has been written to help the user choose the components for the power pack required for the specific application. However, the catalogue cannot foresee all the combinations that may be executed, so in some cases it may be necessary to consult our commercial engineering department.

For applications with very complex circuits, standard modular blocks for Cetop valves and other special blocks can be installed on the power pack, or blocks built to order can be included.

#### A few applications:

- Fork lifts
- Lifting platforms and beds
- Automotive lifts
- Cranes for small trucks
- Snowplows
- Industrial automation (machine tools, food industry, textile industry)

You can chose from a wide variety of components with the following specifications:

- Gear pumps - Group 0.5 / 1 - from 0.25 to 9.8 cc.
- DC motors, 12/24 V, light-duty service, from 0.35 to 3 Kw
- Single and triple-phase motors with power ratings of up to 4 Kw - in a standard version or built to the customer's specifications (with minimum overall dimensions)
- Tanks in sheet steel with capacities of up to 25 litres
- Tanks in plastic with capacities of up to 10 litres

A fundamental part of the power pack is the endhead, which is made of die-cast aluminum alloy. The parts and dimensions of this component are shown below.

#### Operating limits

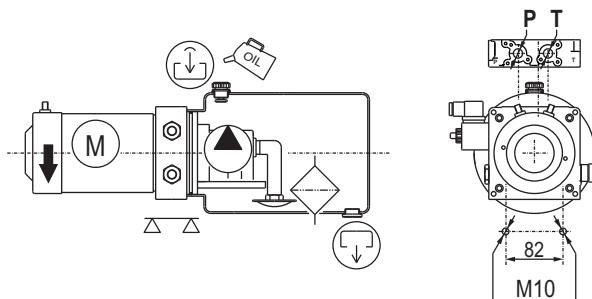
- Intermittent peak pressure: 290 bar (depending on pump type)
- Maximum flow rate: 20 l/min
- Maximum operating temperature:
  - 80°C (with sheet steel tank)
  - 70°C (with polyethylene tank)
  - 60°C (with polypropylene tank)
- Mineral-based hydraulic fluid: ISO 6743-4 (DIN 51524)
  - Minimum viscosity: 12 mm<sup>2</sup>/s
  - Maximum viscosity: 80 mm<sup>2</sup>/s
  - Maximum viscosity at start-up: 500 mm<sup>2</sup>/s
- Minimum ambient temperature -15°C
- Maximum ambient temperature 40°C (with peaks of 50°C)
- The validation of the endhead follows a life-test with 210 bar pulsed pressure repeated for 200.000 cycles



Operating pressure is controlled by the maximum pressure valve and the type of pump used (in terms of performance) may be determined by the maximum pressure valve. Therefore, it is essential not to change the maximum pressure valve. If necessary, contact our technical service department.

#### Installation

- 1) The power pack must be mounted using the M10 holes on the endhead.
- 2) The power pack must not come into contact with sheet metal, protective guards or any parts that may vibrate and transmit noise.
- 3) The ports on the endhead have been identified by the letters A-B-C. The hydraulic connection must be made with fittings with cylindrical thread and with copper or rubber sealing gaskets (O-rings).
- 4) After the electrical connections have been made, check the direction of motor rotation by executing short pulses of 1 second each (max.); the motor must turn anti-clockwise, as shown in the figure.



The tank must be filled with new mineral-based, ISO 6743/4 fluid: it is important to filter the fluid while filling the tank.

#### Symbols used in this catalog:

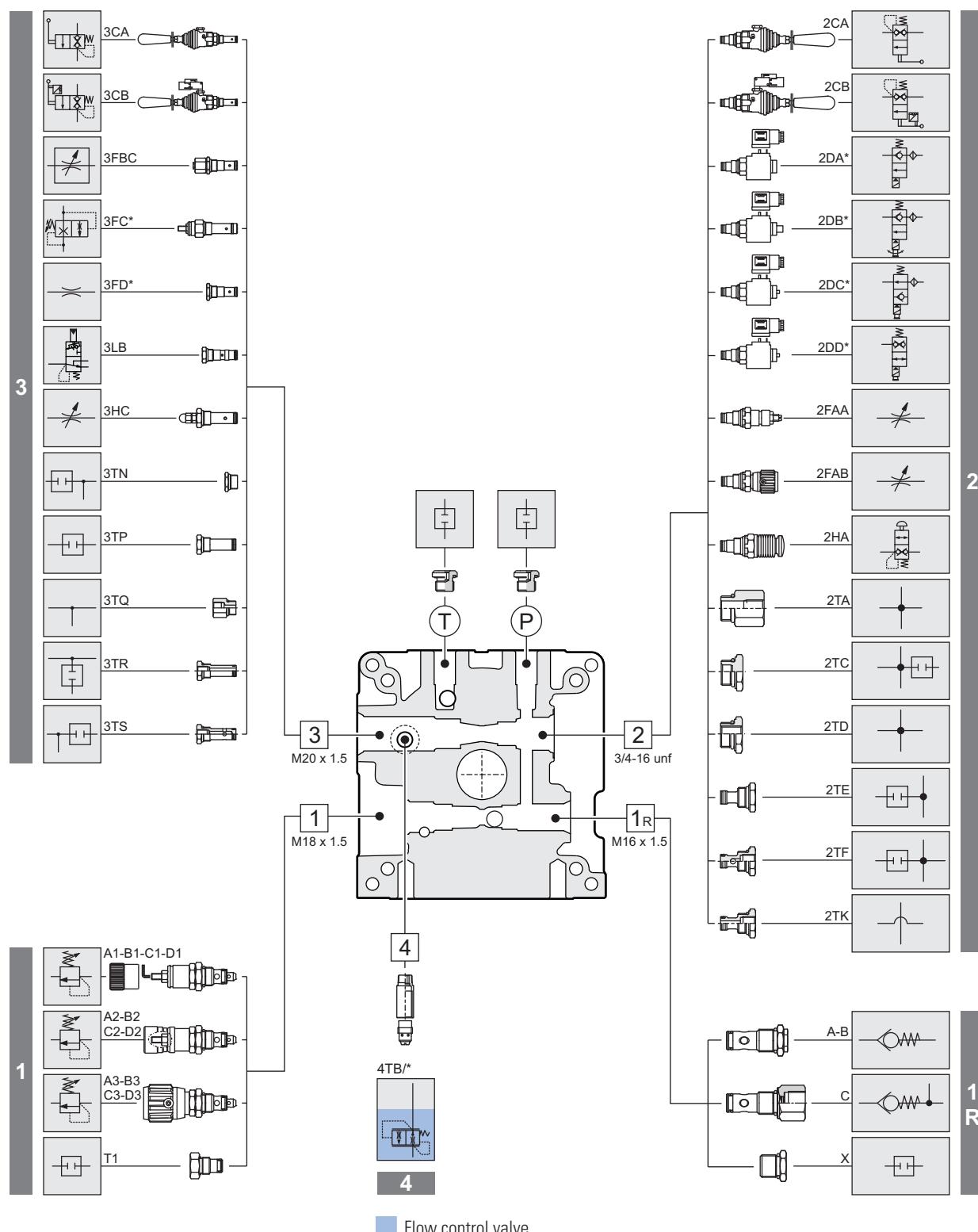
|   |   |
|---|---|
|   | Important data/information                  |
|   | Mounting endhead side                       |
|   | Ground floor                                |
|   | Electrical connection boxes on AC motors    |
|   | Poles and/or starting relays on DC motors   |
|   | Fill plug with breather and level stick     |
|   | Fill plug with breather                     |
|   | Standard plug (closed)                      |
|   | Standard oil fill plug                      |
|   | Fill plug                                   |
|   | Fill plug with check valve                  |
|   | Fill plug with back check                   |
|   | Drain plug with magnet                      |
|   | Plug (or level stick) with visual indicator |
|   | Drain plug                                  |
| * | Fields to be completed                      |

# Endhead configuration

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## Power pack endhead configuration

### MCA



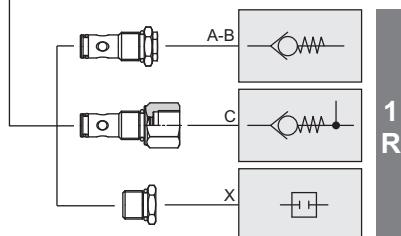
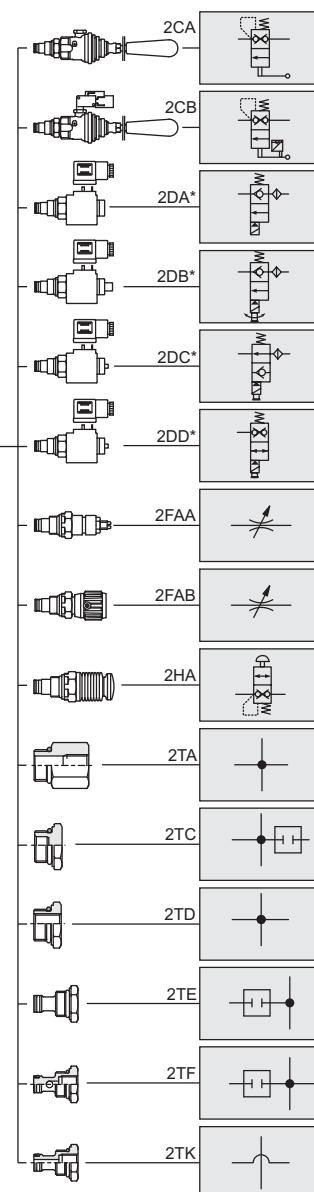
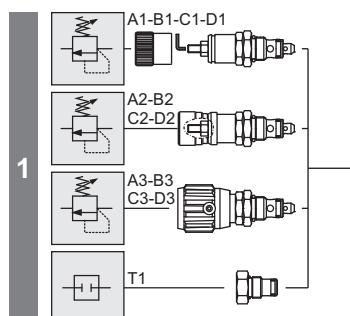
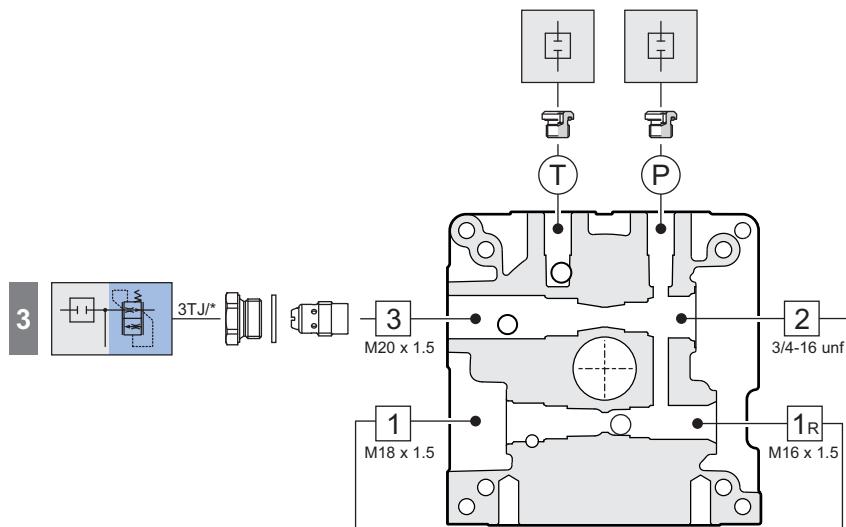
The possible configurations of the MC power pack are determined by the body machining.

**MCA** flange allows the mounting of controls and flow regulators in the **cavity 3** and fixed setting flow control valve on **cavity 4**.

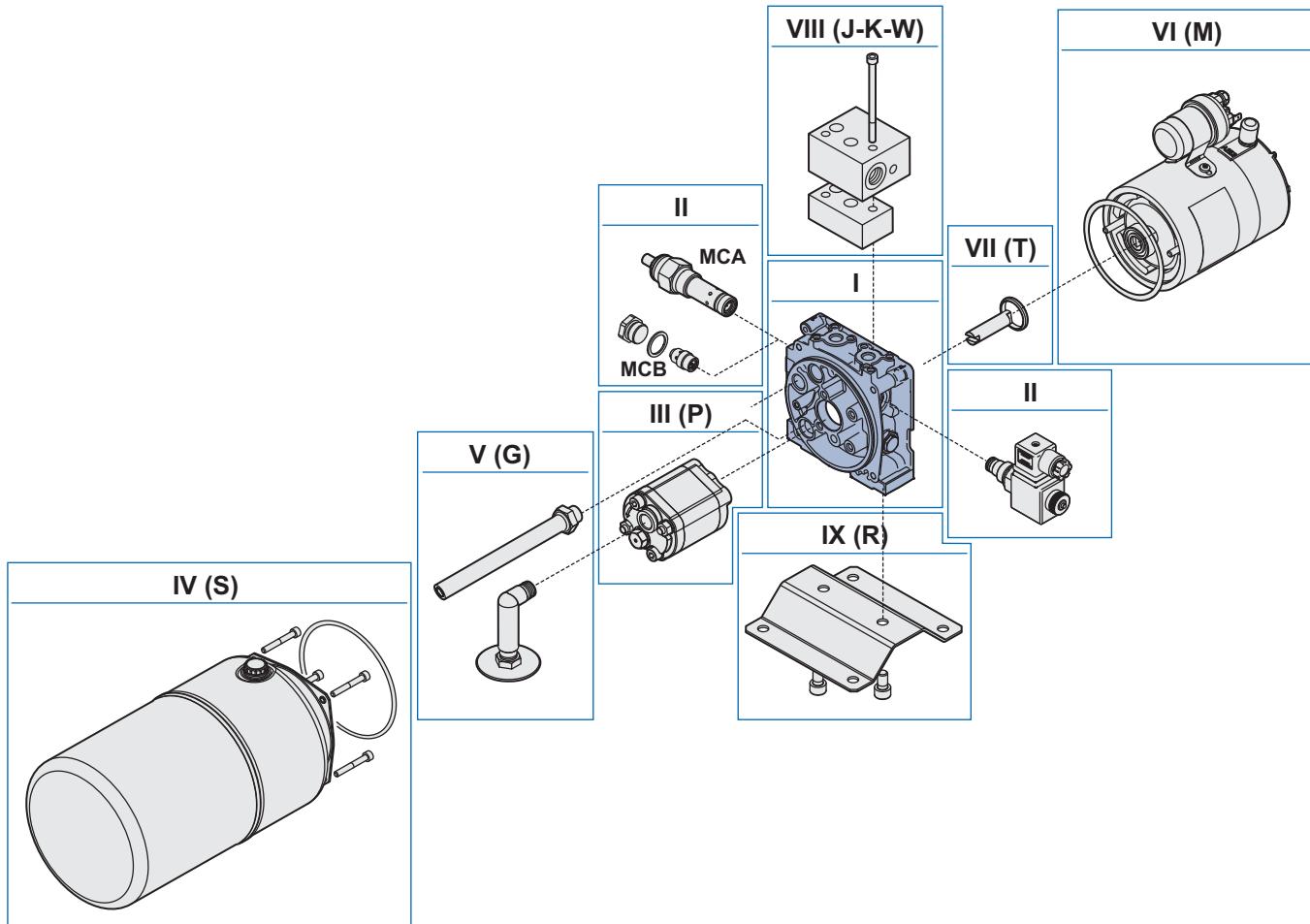
# Endhead configuration

## Power pack endhead configuration

### MCB



The possible configurations of the MC power pack are determined by the body machining.  
**MCA** flange allows the mounting of controls and flow regulators fixed setting in the **cavity 3**.



With its great modularity, the MC series of power packs can create multiple configurations which satisfy requirements in a wide range of applications. To make it easier to choose components, the power pack is subdivided into sections.

## SECTION I - SERIE, FLANGE TYPE, VALVES ON CAVITY 1 AND 1R

MC Series Powerpacks are based on the Flange features.

The Flange is the core of the unit, on the flange are mounted all the valves, the pump, the motor and the reservoir.

The MC Flange is available in several Versions (with different tooling options). The Flange Version must be chosen depending on the type of Hydraulic Circuit Layout required.

Together with the Flange Version, it is required to select the Valves to be mounted in the Various Cavities.

1 (Main Pressure Relief Valve).

## SECTION II - VALVES

Depending on the Type of Hydraulic Circuit Layout to be realized, it is required to Select the Valves for each of the available Cavities.

In order to correctly build up the Ordering Code, it is required to use the following procedure.

Peripheral Cavities (it is mandatory to mention all the Cavities in Numerical Order): starting from Cavity 2, mention all the Cavities and the Valves, Plugs or Fittings to be mounted in said Cavity.

Internal Cavities, mention the Internal Cavities where a Valve (usually a Return Line Valve) is mounted.

Outputs, see description in the Table.

## SECTION III - PUMPS

It is mandatory to mention this section, defined by the letter P.

Depending on the required features, select the pump from the table provided.

## SECTION IV - TANKS

This section is defined by the letter S.

Depending on the required features, select the reservoir from the list provided. If no Reservoir is required, and also no Suction / Return Kit is required, please omit this section.

If no Reservoir is required, but a Suction / Return Kit is required, please jump to Section V (defined by letter G).

## SECTION V - TUBES KIT (suction and return, only for tanks on the catalog)

This section is defined by the letter G.

In order to define this Section, please select the Reservoir Type anyways.

## SECTION VI - MOTORS

This section is defined by the letter M.

Depending on the Type of Hydraulic Circuit Layout to be realized, it is required to Select the Motor Type.

If no Motor is required, and no Transmission Kit is required, please omit this section.

If no Motor is required, but a Transmission Kit is required, please jump to Section VII (defined by letter T).

## SECTION VII - TRANSMISSION KIT (only for motors on the catalog)

This section is defined by the letter T.

Select the kit as per Table provided.

## SECTION VIII - BLOCKS

This section it is not mandatory, depending on the type of auxiliary block required, the letter J, identifies blocks with interface for CETOP valves.

## SECTION IX - ACCESSORIES

his section it is not mandatory, is defined by the letter R

Check the available options in the list provided.

Accessories must be listed in Alphabetical Order.

# Selection code

## SECTION I - SERIE, ENDHEAD, VALVES ON CAVITY 1 AND 1R

|  |  |
|--|--|
|  | Power pack type  |
|  | Endhead type   |
|  | Thread ports   |
|  | Pressure relief valve - Plug                                 |
|  | Setting type (or plug features)                              |
|  | Special setting pressure relief valve (omit if not required) |

MC \* \* \* \* (...) -

## SECTION II - VALVES

|  |   |
|--|---|
|  | Cavity 2  |
|  | Type  |
|  | Features  |
|  | Cavity 3  |
|  | Type  |
|  | Features  |
|  | Flow control valve can be combined with plug TC ( <b>only for MCB</b> ) |
|  | Cavity 4  |
|  | Fitting on return (omit if not required)                                |
|  | Flow control valve (omit if not required)                               |
| <b>Combination plugs for ports (ABC)</b> |   |
| <b>End section II</b>                    |   |

2 .. \*\* 3 .. \*\* /\* 4 .. /\* -\*\* -

## SECTION III - PUMPS

|  |                                    |
|--|------------------------------------|
|  | Pump                               |
|  | Pump group                         |
|  | Performance level                  |
|  | Nominal displacement               |
|  | Accessories (omit if not required) |
|  | <b>End section III</b>             |

P \* (\*) \*\* /\* -

# Selection code

## SECTION IV - TANKS / SECTION V - TUBES KIT

|  |  |  |  |  |  |  |   |
|--|--|--|--|--|--|--|---|
|  |  |  |  |  |  |  | <b>Section:</b>   |
|  |  |  |  |  |  |  | <b>S</b> = tank (with tubes kit);<br><b>G</b> = only with tubes kit, without tank;<br><b>OMIT</b> if without tank and without tubes kit |
|  |  |  |  |  |  |  | Capacity liters   |
|  |  |  |  |  |  |  | Features (material and construction)  |
|  |  |  |  |  |  |  | Mounting position:<br><b>H</b> = horizontal;<br><b>V</b> = vertical   |
|  |  |  |  |  |  |  | Variants<br><b>00</b> = standard, no variant;<br><b>OMIT</b> if with tubes kit (section "G")  |
|  |  |  |  |  |  |  | Orientation<br><b>OMIT</b> if with tubes kit in vertical mounting position (section "G")  |
|  |  |  |  |  |  |  | <b>End section IV and V</b>   |

\* \*\* \* (\*) \*\* /\* -

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## SECTION VI - MOTORS

|  |  |  |  |  |  |  |                                 |
|--|--|--|--|--|--|--|---------------------------------|
|  |  |  |  |  |  |  | <b>DC motor</b>                 |
|  |  |  |  |  |  |  | Voltage                         |
|  |  |  |  |  |  |  | Power / Size                    |
|  |  |  |  |  |  |  | Version                         |
|  |  |  |  |  |  |  | Accessories                     |
|  |  |  |  |  |  |  | <b>0</b> = whitout accessories; |
|  |  |  |  |  |  |  | Orientation                     |
|  |  |  |  |  |  |  | <b>End section VI</b>           |

M \* \*\* (\*) \* /\* -

OR ..

|  |  |  |  |  |  |  |                       |
|--|--|--|--|--|--|--|-----------------------|
|  |  |  |  |  |  |  | <b>AC motor</b>       |
|  |  |  |  |  |  |  | Phases                |
|  |  |  |  |  |  |  | Poles                 |
|  |  |  |  |  |  |  | Size                  |
|  |  |  |  |  |  |  | Power range           |
|  |  |  |  |  |  |  | Version               |
|  |  |  |  |  |  |  | Orientation           |
|  |  |  |  |  |  |  | <b>End section VI</b> |

M \* \* \* \* (\*) /\* -

# Selection code

## SECTION VII - TRANSMISSION KIT (only for motors on the catalog)

|        |  |
|--------|--|
| T ** - | Transmission kit<br>Type<br><b>End section VII</b><br>Specify the transmission kit whether you requested the joint and accessories assembly (without motor). |
|--------|--|

## SECTION VIII - BLOCKS

|                                      |   |
|--------------------------------------|---|
| J * (00) - ** (00) (..) (..) /***/ - | Blocks<br>Mounting position<br>Accessory<br><b>Separation line</b><br>Block type<br>Accessory<br>Pressure relief valve setting on "A" line<br>Pressure relief valve setting on "B" line<br>CETOP valve<br><b>End section VIII</b> |
|--------------------------------------|---|

## SECTION IX - ACCESSORIES

|       |   |
|-------|---|
| R * * | Accessories (optional)<br>First accessory<br>Second accessory |
|-------|---|

# Endhead overall dimensions

## Cavities on endhead:

|                      | Cavity                            | Thread               | Endhead type |       |
|----------------------|-----------------------------------|----------------------|--------------|-------|
|                      |                                   |                      | MCA          | MCB   |
| <b>P</b><br><b>T</b> | <b>Ports</b>                      | G1/4"                | • (1)        | • (1) |
|                      |                                   | G3/8"                | •            | •     |
|                      |                                   | 7/16" 20 UNF         | •            | •     |
|                      |                                   | 9/16" 18 UNF         | •            | •     |
| <b>1</b>             | <b>Peripheral</b>                 | M18 x 1.5            | •            | •     |
| <b>1R</b>            | <b>Peripheral</b>                 | M16 x 1.5            | •            | •     |
| <b>2</b>             | <b>Peripheral</b>                 | 3/4" 16 UNF          | •            | •     |
| <b>3</b>             | <b>Peripheral</b>                 | M20 x 1.5            | •            | • (2) |
| <b>4</b>             | <b>Primary return</b>             | G3/8"                | •            | •     |
| <b>5</b>             | <b>Secondary return</b>           | Ø 14<br>not thread   | •            | •     |
| <b>S</b>             | <b>Press. relief valve return</b> | Ø 12,5<br>not thread | •            | •     |

1) blocks interface

2) end cavity tooled G3/8" for flow regulator VSC06

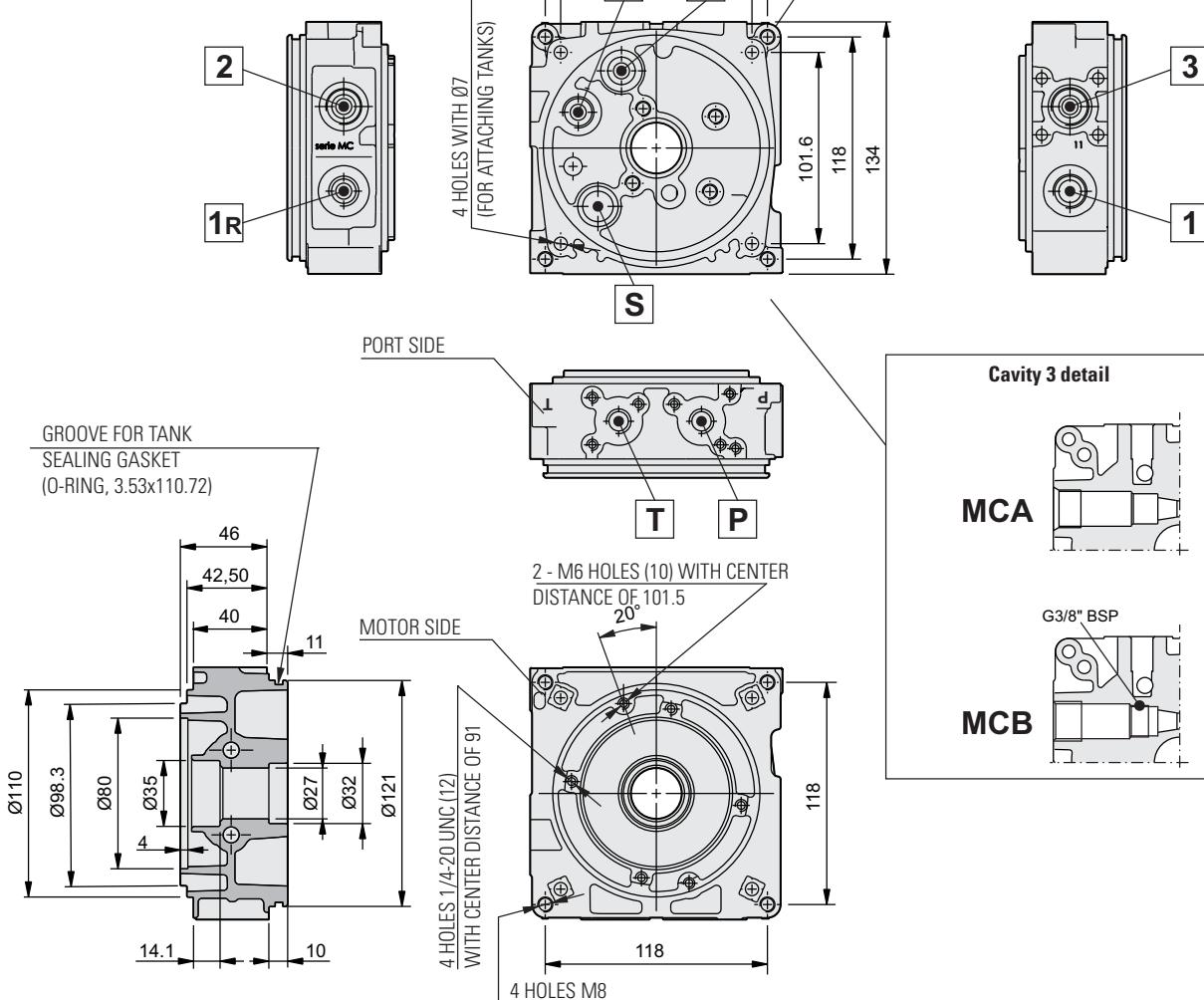
3) return from T (ex. blocks)

The number of cavities tooled identify the endhead type:

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There are three types of cavities:

- **Peripheral cavities**, which can be accessed externally
- **Return cavities**, inside of the tank.
- **Ports**



On the endhead are highlighted (P-T) ports. In the drawing are shown the common dimensions.

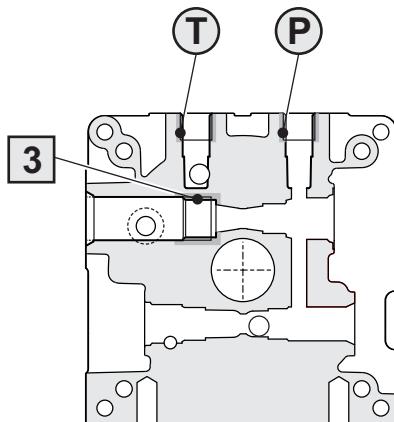
# Cavities dimensions

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|          | Cavity     | Thread     | Drawing         |
|----------|------------|------------|-----------------|
| 1        | Peripheral | M18 x 1.5  | <p>CN037004</p> |
| 1R       | Peripheral | M16 x 1.5  | <p>CN041007</p> |
| 2        | Peripheral | 3/4 16 UNF | <p>3A</p>       |
| 3<br>MCA | Peripheral | M20 x 1.5  | <p>1C</p>       |
| 3<br>MCB | Peripheral | M20 x 1.5  | <p>1P</p>       |

|              |   |   |
|--------------|---|---|
| MC           | * | * |
| Endhead type |   |   |
| Thread ports |   |   |

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The machining of the **cavity 3** and the **P-T** ports define the body type.

**\* Endhead type**

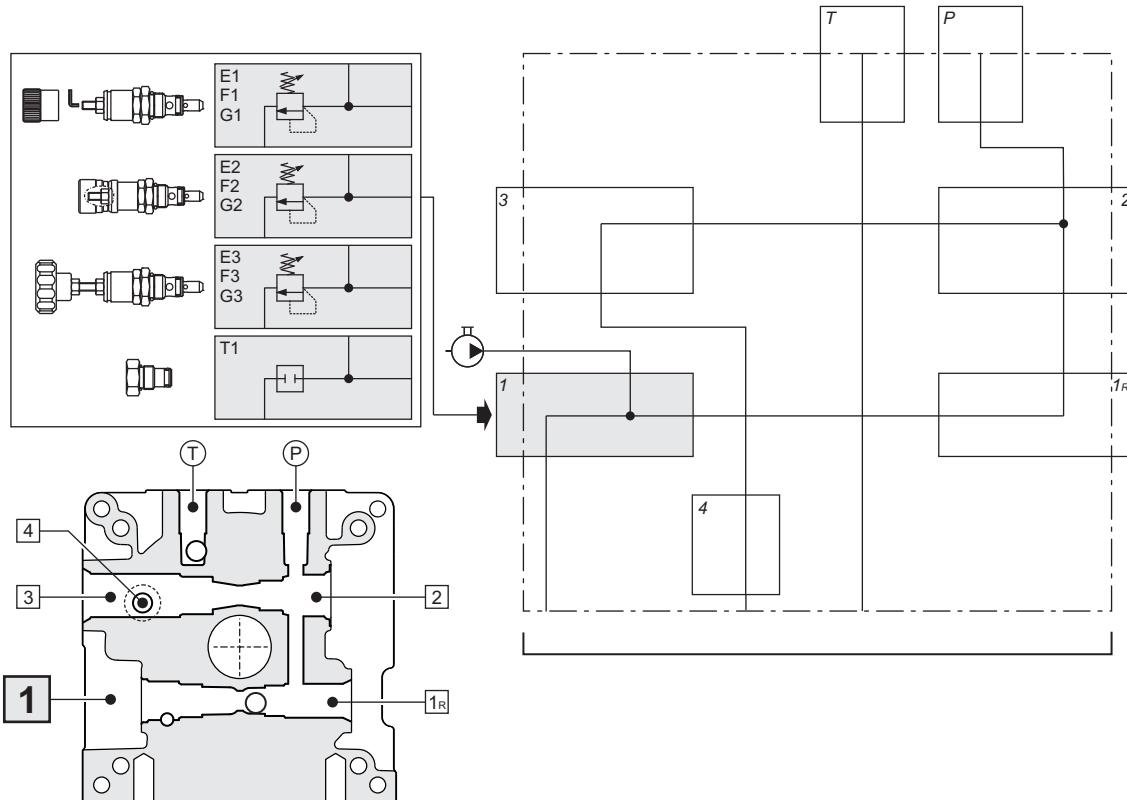
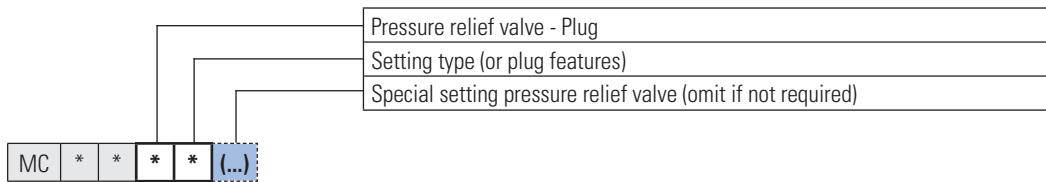
| * | Description  |
|---|--|
| A | For manual controls, flow regulators, logic valves on <b>cavity 3</b><br>(Old commercial description MC) |
| B | For flow regulator VSC06 (3/8" BSP) on <b>cavity 3</b><br>(Old commercial description MS)                |

**\* Thread ports P-T"**

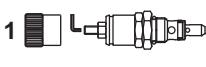
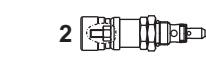
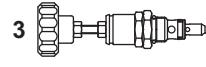
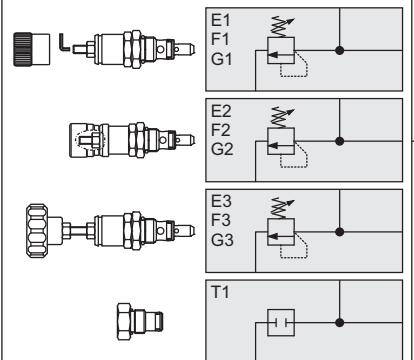
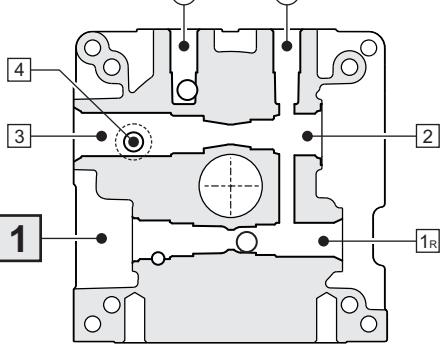
| * | Ports thread |       |              |              | Blocks interface |
|---|--------------|-------|--------------|--------------|------------------|
|   | G1/4"        | G3/8" | 9/16" 18 UNF | 7/16" 20 UNF |                  |
| 0 | YES          |       |              |              | YES              |
| 1 |              | YES   |              |              | NO               |
| 2 |              |       | YES          |              | NO               |
| 3 |              |       |              | YES          | NO               |

|     | Endhead codes |              |              |              |
|-----|---------------|--------------|--------------|--------------|
|     | G1/4"         | G3/8"        | 7/16" 20 UNF | 9/16" 18 UNF |
| MCA | 71013000.000  | 71013001.000 | —            | 71013022.000 |
| MCB | 71013003.000  | 71013005.000 | 71013007.000 | —            |

# Sect. I - MC Cavity 1



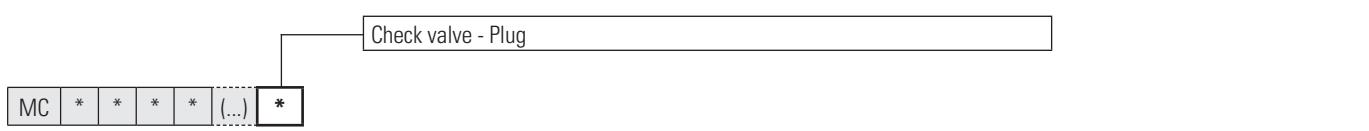
\* \* (...) Pressure relief valve direct-acting

| * | * | Pressure (bar) | STD setting (bar) | (...) Special setting (bar) | Setting type              | Code                       | Symbol  | Drawing  |
|---|---|----------------|-------------------|-----------------------------|---------------------------|----------------------------|---|--|
| E | 1 | 35 ÷ 90        | 50                | 35 ÷ 90<br>(5 to 5)         | Detachable closing        | 21000000.000<br>+ 60309100 |    |    |
|   | 2 |                |                   |                             | Non removable closing (1) | 21000000.000<br>+ 60309200 |   |  |
|   | 3 |                |                   |                             | Handwheel                 | 21000003.000               |   |  |
| F | 1 | 75 ÷ 190       | 150               | 75 ÷ 190<br>(5 to 5)        | Detachable closing        | 21000001.000<br>+ 60309100 |   |  |
|   | 2 |                |                   |                             | Non removable closing (1) | 21000001.000<br>+ 60309200 |   |  |
|   | 3 |                |                   |                             | Handwheel                 | 21000004.000               |   |  |
| G | 1 | 160 ÷ 290      | 180               | 160 ÷ 290<br>(10 to 10)     | Detachable closing        | 21000002.000<br>+ 60309100 |   |  |
|   | 2 |                |                   |                             | Non removable closing (1) | 21000002.000<br>+ 60309200 |   |  |
|   | 3 |                |                   |                             | Handwheel                 | 21000005.000               |   |  |

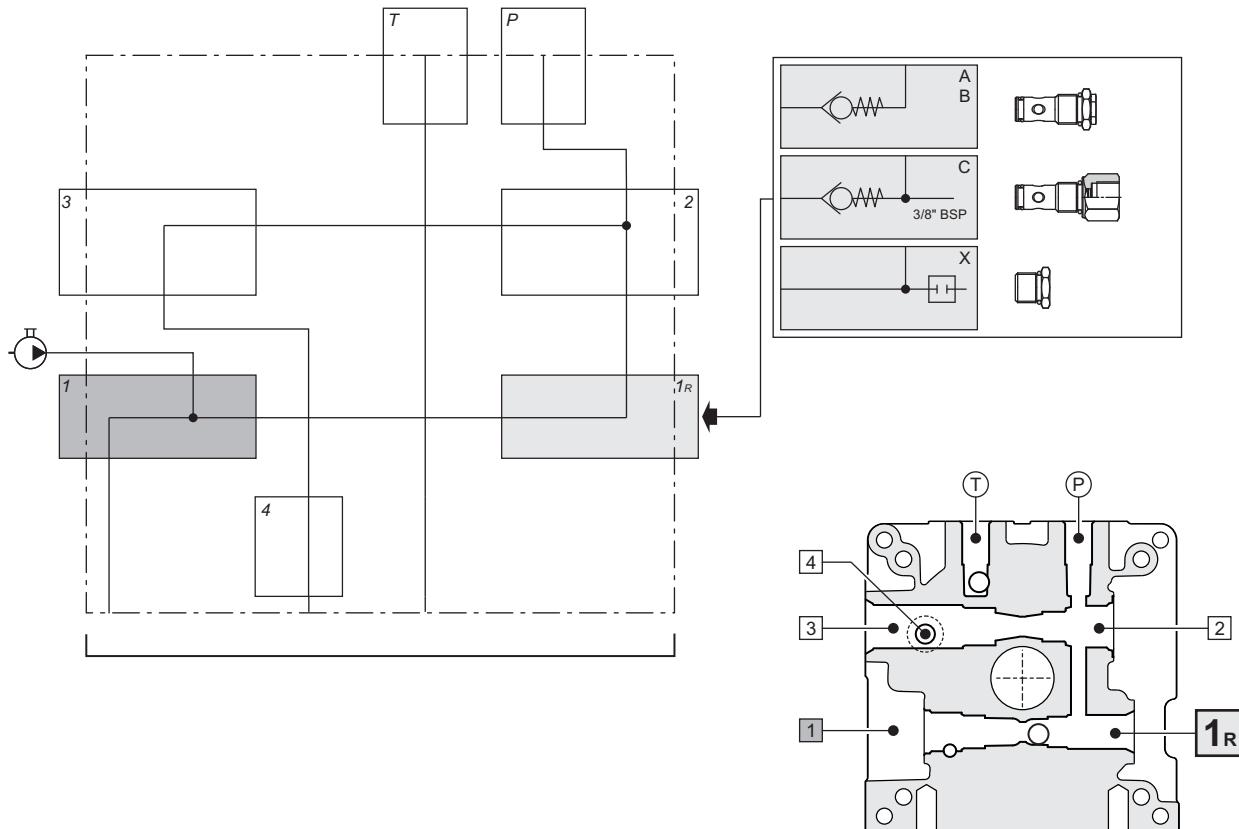
1 = Supplied assembled. Unassembled, see accessories page 59

\* \* Plug

| * | * | Description | Code     | Symbol  | Drawing   |
|---|---|-------------|----------|---|---|
| T | 1 | Closed plug | 20001600 |  |  |



II



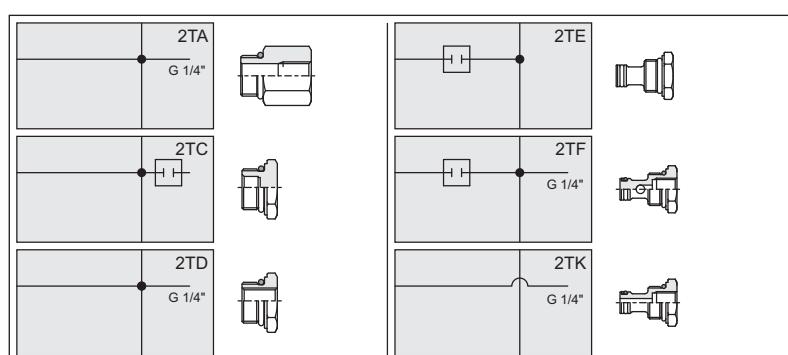
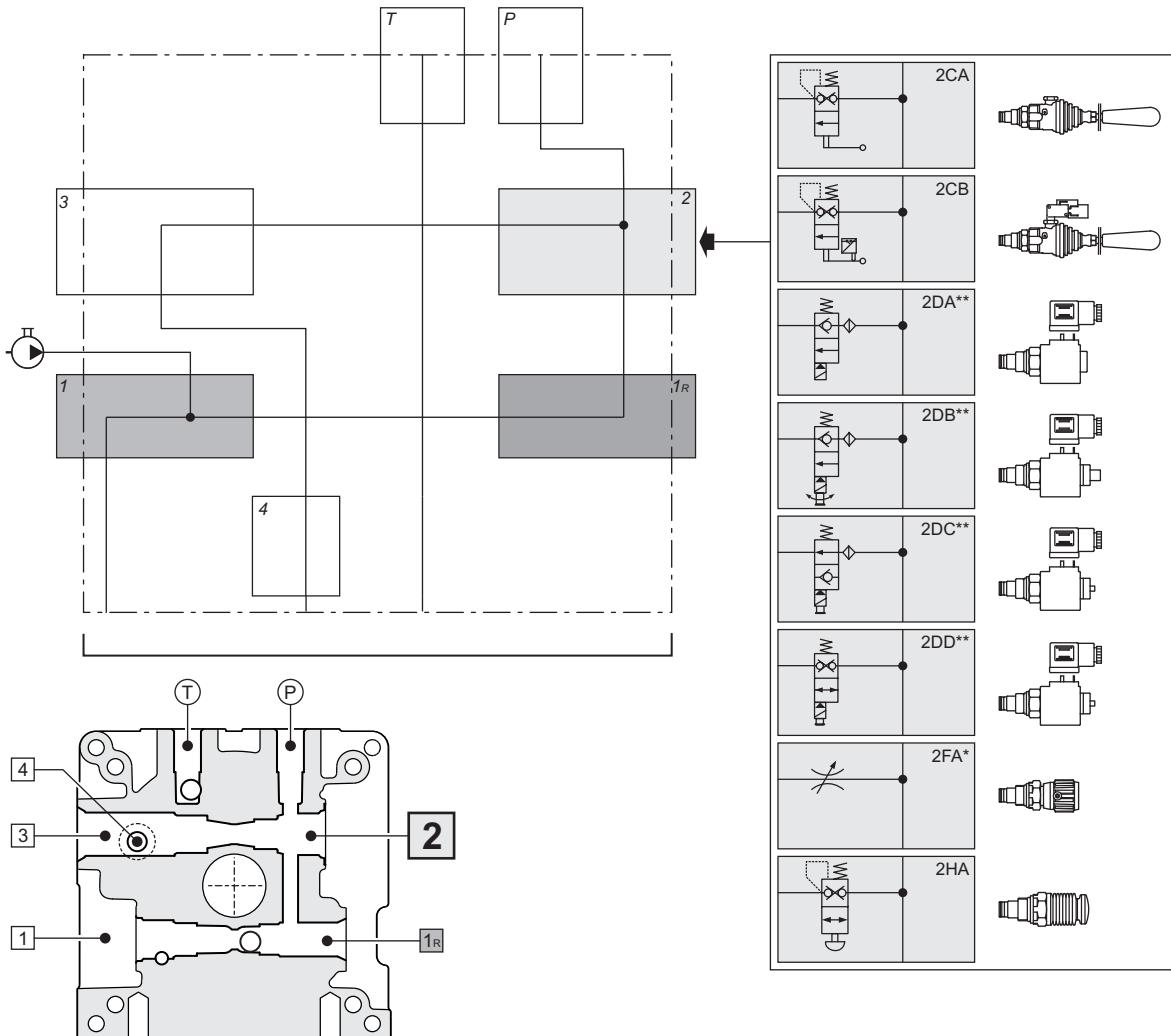
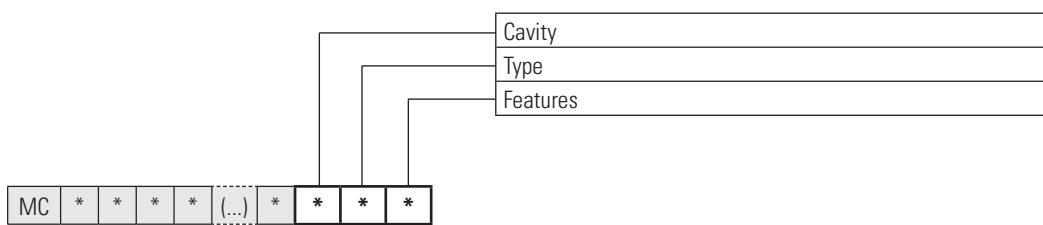
## \* Check valve

| *        | Description          | Code     | Symbol | Drawing |
|----------|----------------------|----------|--------|---------|
| <b>A</b> | Standard             | 20020400 |        |         |
| <b>B</b> | Pre-setting 2 bar    | 20012000 |        |         |
| <b>C</b> | With outlet 3/8" BSP | 20023900 |        |         |

## \* Plug

| *        | Description                 | Code     | Symbol | Drawing |
|----------|-----------------------------|----------|--------|---------|
| <b>X</b> | Plug to replace check valve | 20006100 |        |         |

## Sect. II - MC Cavity 2



# Sect. II - MC Cavity 2

## 2 C \* Lever operated valve

| * | Description         | Code      | Symbol | Drawing |
|---|---------------------|-----------|--------|---------|
| A | Without microswitch | CMF04L001 |        |         |
| B | With microswitch    | CMF04M001 |        |         |

## 2 DA \*\* Piloted solenoid valves normally closed, without emergency (1)

| ** | Description           | Code (valve + connector)    | Symbol | Drawing |
|----|-----------------------|-----------------------------|--------|---------|
| AA | Voltage 12 Vdc        | CRP0418NCASL003 + V86050002 |        |         |
| AB | Voltage 24 Vdc        | CRP0418NCASM003 + V86050002 |        |         |
| AC | Voltage 24 Vac 50 Hz  | CRP0418NCASA003 + V86050002 |        |         |
| AD | Voltage 115 Vac 50 Hz | CRP0418NCASJ003 + V86050002 |        |         |
| AE | Voltage 230 Vac 50 Hz | CRP0418NCASI003 + V86050002 |        |         |

## 2 DB \*\* Piloted solenoid valves normally open, with rotary emergency (1)

| ** | Description           | Code (valve + connector)    | Symbol | Drawing |
|----|-----------------------|-----------------------------|--------|---------|
| AA | Voltage 12 Vdc        | CRP0418NCAEL003 + V86050002 |        |         |
| AB | Voltage 24 Vdc        | CRP0418NCAEM003 + V86050002 |        |         |
| AC | Voltage 24 Vac 50 Hz  | CRP0418NCAEA003 + V86050002 |        |         |
| AD | Voltage 115 Vac 50 Hz | CRP0418NCAEJ003 + V86050002 |        |         |
| AE | Voltage 230 Vac 50 Hz | CRP0418NCAEI003 + V86050002 |        |         |

## 2 DC \*\* Piloted solenoid valves normally open, with button emergency (1)

| ** | Description  | Code (valve + connector)    | Symbol | Drawing |
|----|--|-----------------------------|--------|---------|
| AA | Voltage 12 Vdc   | CRP0418NAAEL003 + V86050002 |        |         |
| AB | Voltage 24 Vdc   | CRP0418NAAEM003 + V86050002 |        |         |
| AC | Voltage 24 Vac 50/60 Hz<br>(RAC with rectifier)            | CRP0418NAAE2003 + V86200002 |        |         |
| AD | Voltage 115 Vac 50 - 120 Vac 60 Hz<br>(RAC with rectifier) | CRP0418NAAEZ003 + V86200002 |        |         |
| AE | Voltage 230 Vac 50 - 240 Vac 60 Hz<br>(RAC with rectifier) | CRP0418NAAEX003 + V86200002 |        |         |
| AF | Voltage 48 Vdc   | CRP0418NAAEN003 + V86050002 |        |         |

## 2 DD \*\* Direct operated solenoid valve normally closed, with button emergency (1)

| ** | Description    | Code (valve + connector)    | Symbol | Drawing |
|----|----------------|-----------------------------|--------|---------|
| AA | Voltage 12 Vdc | CRD0418NCAEL002 + V86050002 |        |         |
| AB | Voltage 24 Vdc | CRD0418NCAEM002 + V86050002 |        |         |

1 = Valves supplied with connector. Without connector see accessories page 59

# Sect. II - MC Cavity 2

## 2 FA \* Bidirectional flow control valves not compensated

| * | Description             | Code       | Symbol | Drawing |
|---|-------------------------|------------|--------|---------|
| A | Screw adjustment        | CSB04C0000 |        |         |
| B | Plastic knob adjustment | CSB04V0000 |        |         |

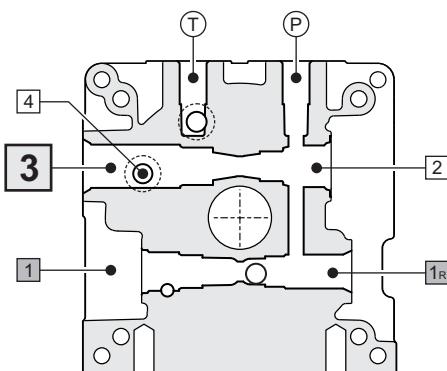
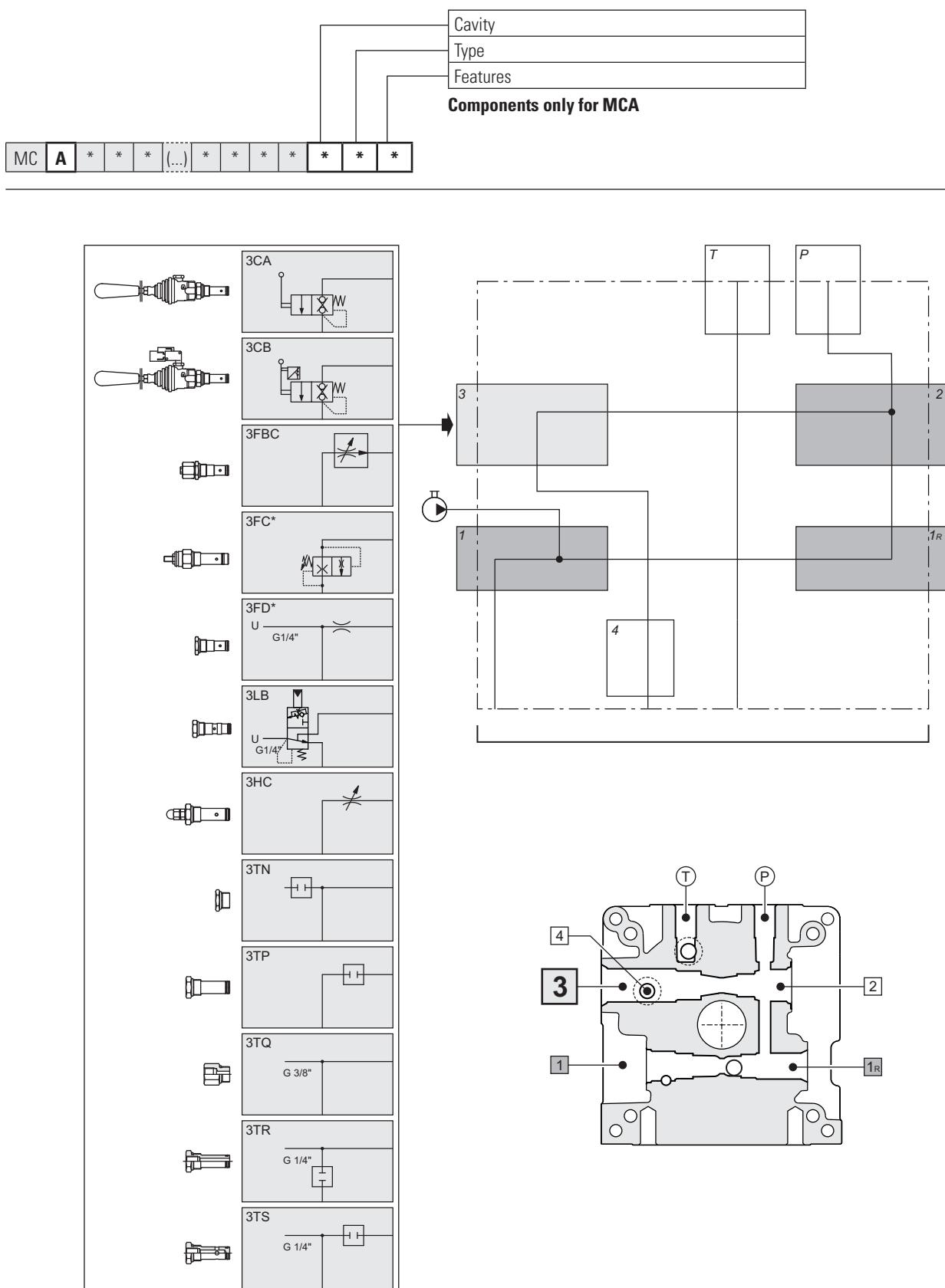
## 2 H \* Button operated valves

| ** | Description         | Code        | Symbol | Drawing |
|----|---------------------|-------------|--------|---------|
| A  | Push-button control | CPE04P000.1 |        |         |

## 2 T \* Plugs and fittings

| * | Description                   | Code      | Symbol | Drawing |
|---|-------------------------------|-----------|--------|---------|
| A | Fitting 3/4 16 UNF - G1/4     | 20012100  |        |         |
| C | Plug 3/4 16 UNF               | R78150099 |        |         |
| D | Fitting 3/4 16 UNF - G1/4     | 20001700  |        |         |
| E | Long plug 3/4 16 UNF          | 20003800  |        |         |
| F | Fitting 3/4 16 UNF - G1/4     | 20009400  |        |         |
| K | Fitting 3/4 16 UNF DIN - G1/4 | 20018000  |        |         |

## Sect. II - MCA Cavity 3



# Sect. II - MCA Cavity 3

## 3 C \* Lever operated valve

| * | Description         | Code        | Symbol | Drawing |
|---|---------------------|-------------|--------|---------|
| A | Without microswitch | CMT044L0001 |        |         |
| B | With microswitch    | CMT044M0001 |        |         |

II  
MCA

## 3 FB \* Adjustable unidirectional flow control valve compensated

| * | Description      | Setting        | Code         | Symbol | Drawing |
|---|------------------|----------------|--------------|--------|---------|
| C | Screw adjustment | 0.5 ÷ 22 l/min | 21000020.000 |        |         |

## 3 FC \* Adjustable flow control valve compensated (type VRFE)

| * | Description      | Setting          | Code     | Symbol | Drawing |
|---|------------------|------------------|----------|--------|---------|
| A | Screw adjustment | 2 ÷ 3,5 l/min    | 20019800 |        |         |
| B |                  | 5 ÷ 7,5 l/min    | 20019900 |        |         |
| C |                  | 8,5 ÷ 13,5 l/min | 20020000 |        |         |

## 3 FD \* Flow control valve

| * | Description | Ø hole | Code     | Symbol | Drawing |
|---|-------------|--------|----------|--------|---------|
| A | With G 1/4" | 0,7 mm | 20020300 |        |         |
| B |             | 0,9 mm | 20017500 |        |         |
| C |             | 1 mm   | 20014400 |        |         |

## 3 LB \* Logic valve with chek valve

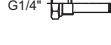
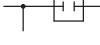
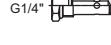
| * | Description | Code     | Symbol | Drawing |
|---|-------------|----------|--------|---------|
| A | Out G 1/4"  | 20024100 |        |         |

## 3 H \* Flow control valve not compensated

| * | Description      | Code     | Symbol | Drawing |
|---|------------------|----------|--------|---------|
| C | Screw adjustment | 20003900 |        |         |

## Sect. II - MCA Cavity 3

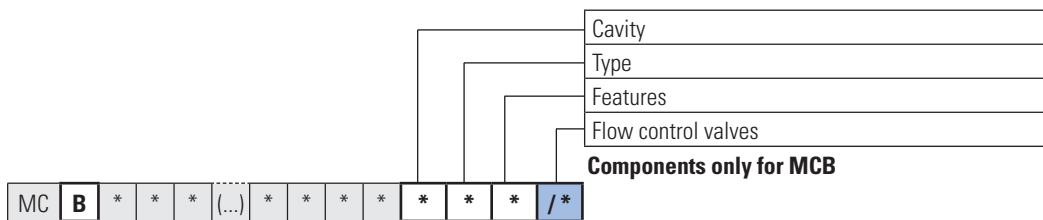
3 T \* **Plugs and fittings**

| *        | Description               | Code     | Symbol  | Drawing  |
|----------|---------------------------|----------|---|--|
| <b>N</b> | Plug                      | 20002200 |  |       |
| <b>P</b> | Long plug                 | 20001100 |  |       |
| <b>Q</b> | Fitting G3/8"             | 20022800 |  |  |
| <b>R</b> | Long fitting G1/4"        | 20007900 |  |  |
| <b>S</b> | Return line fitting G1/4" | 20001400 |  |  |

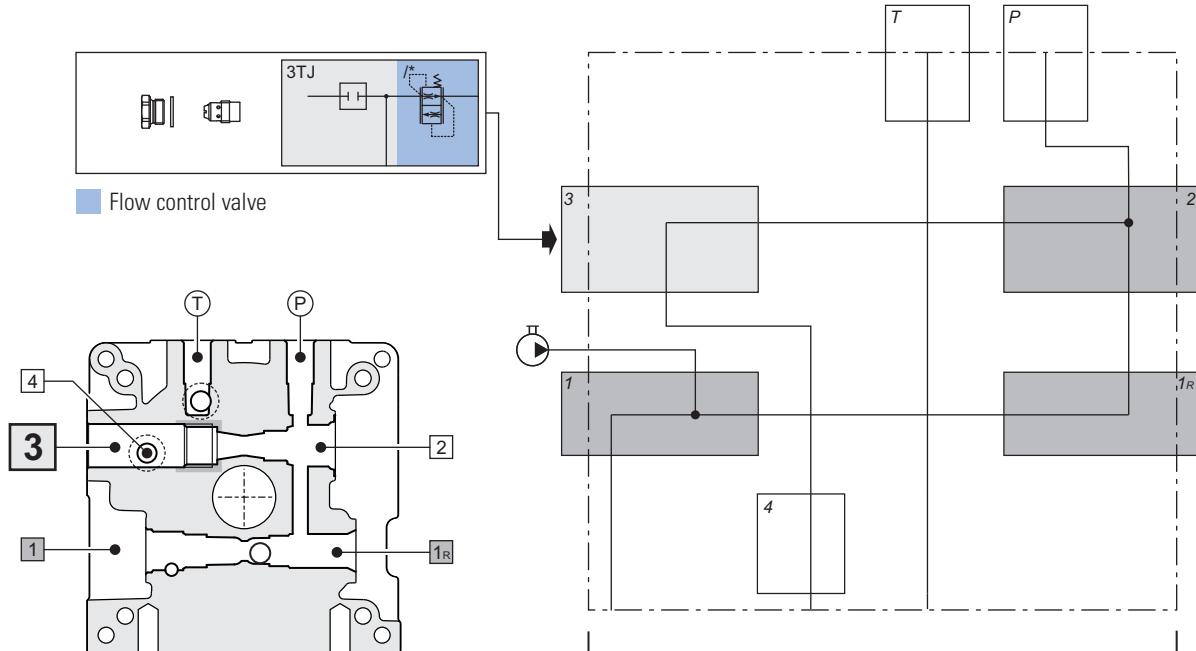
II

MCA

## Sect. II - MCB Cavity 3



II  
MCB



3 TJ /\* **Plug with flow control valve**

| /* | Flow       | Code (flow control valve) | Code (kit plug + washer) | Symbol | Drawing |
|----|------------|---------------------------|--------------------------|--------|---------|
| /A | 0.7 l/min  | VSC0610002                |                          |        |         |
| /B | 1.1 l/min  | VSC06120002               |                          |        |         |
| /C | 2.1 l/min  | VSC06130002               |                          |        |         |
| /E | 3.2 l/min  | VSC06150002               |                          |        |         |
| /G | 4.7 l/min  | VSC06190002               |                          |        |         |
| /K | 6.3 l/min  | VSC06220002               | 17010085                 |        |         |
| /N | 7.5 l/min  | VSC06240002               |                          |        |         |
| /Q | 10.0 l/min | VSC06280002               |                          |        |         |
| /U | 13.2 l/min | VSC06330002               |                          |        |         |
| /V | 15.7 l/min | VSC06350002               |                          |        |         |

## Sect. II - MCA Cavity 4

MC **A** \* \* \* (...) \* \* \* \* \* / \* **4TB** /\*

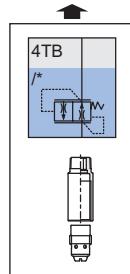
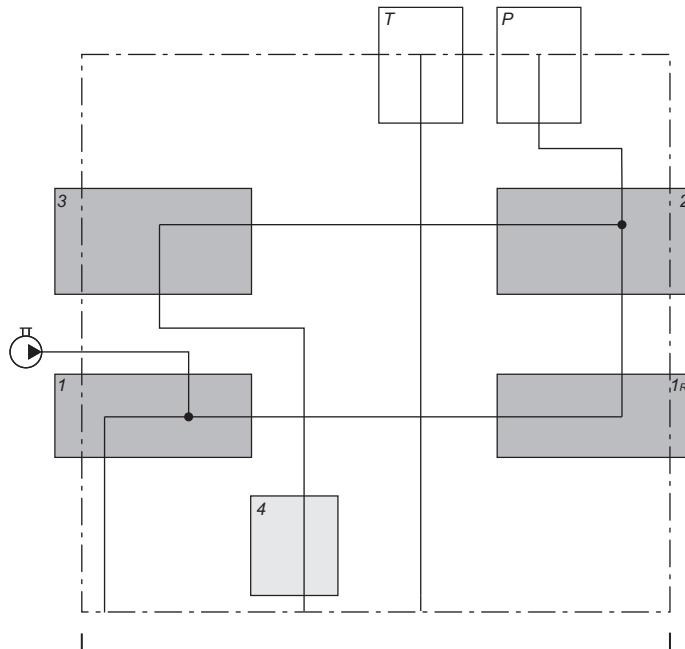
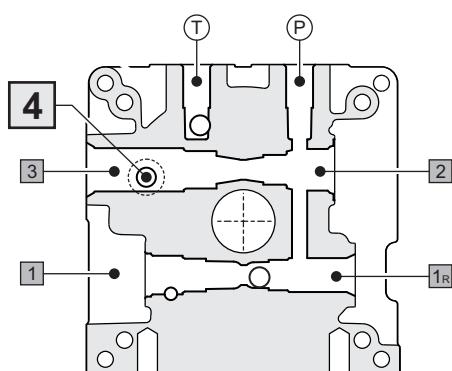
Fitting on return cavity 4  
Flow control valve on fitting 4

Omit if not required  
Components only for MCA

II

MCA

Componenti solo per MCA



■ Any fitting and flow control valve on cavity 4

**4 TB \*/ Fitting and flow control valve**

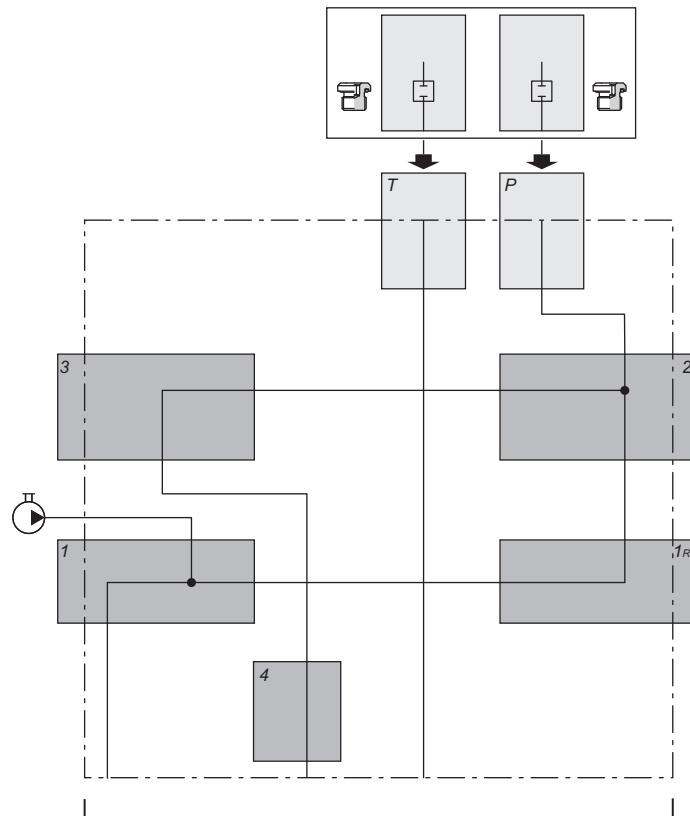
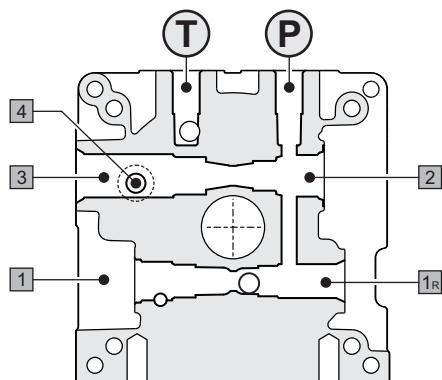
| *         | Flow       | Code<br>(flow control valve) | Code<br>(fitting for flow control valve) | Symbol | Drawing |
|-----------|------------|------------------------------|--|--------|---------|
| <b>/A</b> | 0.7 l/min  | VSC06100002                  |  |        |         |
| <b>/B</b> | 1.1 l/min  | VSC06120002                  |  |        |         |
| <b>/C</b> | 2.1 l/min  | VSC06130002                  |  |        |         |
| <b>/E</b> | 3.2 l/min  | VSC06150002                  |  |        |         |
| <b>/G</b> | 4.7 l/min  | VSC06190002                  |  |        |         |
| <b>/K</b> | 6.3 l/min  | VSC06220002                  | M67250053                                |        |         |
| <b>/N</b> | 7.5 l/min  | VSC06240002                  |  |        |         |
| <b>/Q</b> | 10.0 l/min | VSC06280002                  |  |        |         |
| <b>/U</b> | 13.2 l/min | VSC06330002                  |  |        |         |
| <b>/V</b> | 15.7 l/min | VSC06350002                  |  |        |         |

MC \* \* \* \* (...) \* \* \* \* \* / \* /\* -\*\*

Combinations plugs on ports

End section II

II



-\*\*

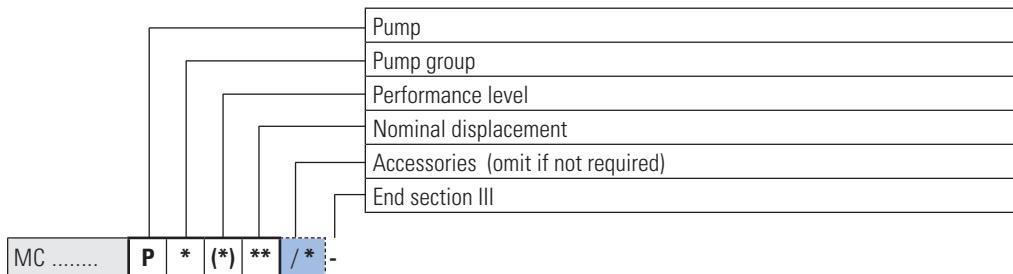
## Combinations plugs on ports P-T

|     | P | T |
|-----|---|---|
| -00 | ↑ | ↑ |
| -02 | ⊗ | ↑ |
| -03 | ↑ | ⊗ |
| -06 | ⊗ | ⊗ |

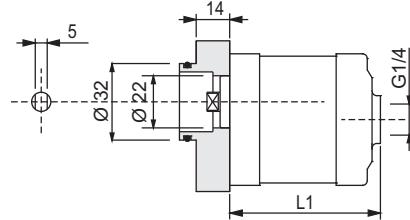
## Symbols description

| Type | Description           | Thread       | Code                                  | Symbol | Drawing |
|------|-----------------------|--------------|---------------------------------------|--------|---------|
| ⊗    | Port closed with plug | G 1/4"       | 20024000                              |        |         |
|      |                       | G 3/8"       | Q26622255 (plug) + Q51435044 (washer) |        |         |
|      |                       | 7/16" 20 UNF | TJ08072000                            |        |         |
|      |                       | 9/16" 18 UNF | TJ08091800                            |        |         |
|      | Port open             |              | —                                     | —      | —       |

# Sect. III - Pumps



**P 0 (1) \*\*** Pumps group 05 - Performance level 1



| ** | Nominal displacement | Tolerance on geometric displacement | P2 bar | P3 bar | Code complete kit | L1 mm | Tanks not compatible (•) |          |          |         | Motors not compatible           |
|----|----------------------|-------------------------------------|--------|--------|-------------------|-------|--------------------------|----------|----------|---------|---------------------------------|
|    |                      |                                     |        |        |                   |       | S01A (H)                 | S09E (V) | S02G (H) | All (V) |                                 |
| 02 | 0.25 cc              | 0.25 ÷ 0.33                         | 230    | 270    | 17050037.035      | 54    |                          |          |          |         | M4FB(1) - M4GJ(1)<br>MM*PA(1)   |
| 04 | 0.45 cc              | 0.45 ÷ 0.55                         | 230    | 270    | 17050036.035      | 55.7  |                          |          |          |         | M*AA(1)D - M*AA(1)G<br>M*AA(1)H |
| 05 | 0.56 cc              | 0.56 ÷ 0.68                         | 230    | 270    | 17050039.035      | 56.7  | •                        |          | •        |         | M*AB(1)D - M*AB(1)G<br>M*AB(1)H |
| 07 | 0.75 cc              | 0.69 ÷ 0.82                         | 230    | 270    | 17050038.035      | 58.5  | •                        |          | •        |         |                                 |
| 09 | 0.92 cc              | 0.83 ÷ 0.95                         | 230    | 270    | 17050053.035      | 59.8  | •                        |          | •        |         |                                 |

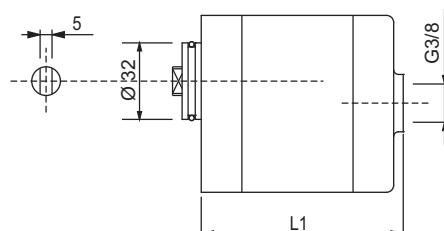
P2 = Intermittent operating pressure

P3 = Intermittent peak pressure (20 sec. max)

Tanks not compatible (as dimensions, see page 25)

Motors not compatible (interface and transmission not supplied, see pages 41 - 47)

**P 1 (1) \*\* / \*** Pumps group 1 - Performance level 1



| ** | Nominal displacement | Tolerance on geometric displacement | P2 bar | P3 bar | Code complete kit | L1 mm | Tanks not compatible (•) |          |          |         | Motors not compatible |
|----|----------------------|-------------------------------------|--------|--------|-------------------|-------|--------------------------|----------|----------|---------|-----------------------|
|    |                      |                                     |        |        |                   |       | S01A (H)                 | S09E (V) | S02G (H) | All (V) |                       |
| 07 | 0.80 cc              | 0.69 ÷ 0.82                         | 170    | 210    | 17050107.018      | 72.4  | •                        |          |          |         |                       |
| 10 | 1.00 cc              | 0.96 ÷ 1.09                         | 170    | 210    | 17050088.018      | 73.5  | •                        |          |          |         |                       |
| 12 | 1.20 cc              | 1.10 ÷ 1.30                         | 250    | 290    | 17050005.018      | 74.8  | •                        |          |          |         |                       |
| 17 | 1.70 cc              | 1.50 ÷ 1.70                         | 250    | 290    | 17050006.018      | 76.2  | •                        |          |          |         |                       |
| 22 | 2.20 cc              | 2.10 ÷ 2.30                         | 250    | 290    | 17050007.018      | 78.2  | •                        |          |          |         |                       |
| 26 | 2.60 cc              | 2.50 ÷ 2.70                         | 250    | 290    | 17050008.018      | 79.7  | •                        |          | •        |         |                       |
| 32 | 3.20 cc              | 3.10 ÷ 3.32                         | 250    | 290    | 17050009.018      | 82.0  | •                        |          | •        |         |                       |
| 38 | 3.80 cc              | 3.60 ÷ 3.99                         | 250    | 290    | 17050010.018      | 84.0  | •                        |          | •        |         |                       |
| 43 | 4.30 cc              | 4.00 ÷ 4.35                         | 250    | 290    | 17050011.018      | 86.6  | •                        |          | •        |         |                       |
| 48 | 4.80 cc              | 4.85 ÷ 4.95                         | 225    | 260    | 17050033.018      | 88.1  | •                        |          | •        |         |                       |
| 60 | 6.00 cc              | 5.62 ÷ 6.02                         | 185    | 215    | 17050012.018      | 92.2  | •                        | •        | •        | •       |                       |
| 78 | 7.80 cc              | 7.48 ÷ 7.90                         | 140    | 160    | 17050013.018      | 98.9  | •                        | •        | •        | •       |                       |
| 98 | 9.80 cc              | 9.60 ÷ 10.00                        | 110    | 125    | 17050054.018      | 107.2 | •                        | •        | •        | •       |                       |

P2 = Intermittent operating pressure

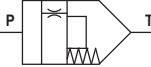
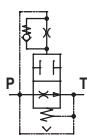
P3 = Intermittent peak pressure (20 sec. max)

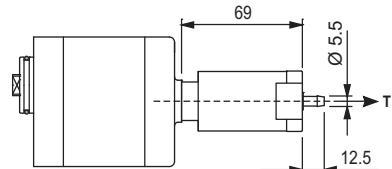
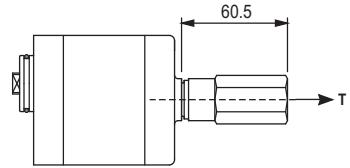
Tanks not compatible (as dimensions, see page 25).

# Sect. III - Pumps

P | 1 | (1) \*\* / \*

## Accessories for pumps group 1

| *  | Description  | Type              | Code        | Symbol   |
|----|--|-------------------|-------------|--|
| /A | Single-phase motor start valve - on auxiliary outlet | 0.8 ÷ 2.5 l/min   | VAM0400L    |  |
|    |  | > 2.5 ÷ 8.0 l/min | VAM0400M    |  |
|    |  | > 8.0 ÷ 14 l/min  | VAM0400H    |  |
| /D | Soft start valve - on auxiliary outlet               | hole Ø 0.4 mm     | VAMS0404001 |   |



| ** | With accessory | Tanks not compatible (*) |      |      |     |
|----|----------------|--------------------------|------|------|-----|
|    |                | S01A                     | S09E | S02G | All |
| 09 | /A /B /C       |                          |      |      |     |
|    | /D             | •                        | •    | •    |     |
| 12 | /A /B /C       |                          |      |      |     |
|    | /D             | •                        | •    | •    |     |
| 17 | /A /B /C       |                          |      |      |     |
|    | /D             | •                        | •    | •    |     |
| 22 | /A /B /C       |                          |      |      |     |
|    | /D             | •                        | •    | •    |     |
| 26 | /A /B /C       |                          |      |      |     |
|    | /D             | •                        | •    | •    |     |
| 32 | /A /B /C       |                          |      |      |     |
|    | /D             | •                        | •    | •    |     |
| 38 | /A /B /C       |                          |      |      |     |
|    | /D             | •                        | •    | •    |     |
| 43 | /A /B /C       |                          |      |      |     |
|    | /D             | •                        | •    | •    |     |

Tanks not compatible (as dimensions, see page 25).

# Sect. IV - Tanks / Sect. V - Tubes kit

|  |  |
|--|--|
|  | Tank ( <b>S</b> = with tank and tubes kit; <b>G</b> = only tubes kit, without tank; <b>OMIT</b> if without tank and without tubes kit) |
|  | Capacity liters  |
|  | Features (material and construction)   |
|  | Mounting position: ( <b>H</b> = horizontal; <b>V</b> = vertical)   |
|  | Variants ( <b>00</b> = standard, no variant) - <b>OMIT if with tubes kit</b>   |
|  | Orientation - <b>OMIT if with tubes kit in vertical mounting position</b>  |
|  | End section IV and V   |

MC ..... \* \*\* \* (\*) \*\* /\* -

| **        | Liters | * | Dimensions (mm)            | Material      | (*)<br>Mounting | **<br>Variants       | Page     | *<br>Orientation | Page |
|-----------|--------|---|----------------------------|---------------|-----------------|----------------------|----------|------------------|------|
| <b>01</b> | 1      |   | <b>A</b> Ø 123 - L 141     | Sheet steel   | (H)<br>(V)      | 00<br>00             | 26       |                  |      |
| <b>02</b> | 1,5    |   | <b>G</b> Ø 130x140 - L 135 | Polyethylene  | (H)<br>(V)      | 00<br>00             | 35       |                  |      |
|           | 2      |   | <b>A</b> Ø 123 - L 200     | Sheet steel   | (H)<br>(V)      | 00<br>00             | 26       |                  |      |
| <b>03</b> | 2,5    |   | <b>G</b> Ø 130x140 - L 235 | Polyethylene  | (H)<br>(V)      | 00<br>00             | 35       |                  |      |
|           | 3      |   | <b>A</b> Ø 123 - L 330     | Sheet steel   | (H)<br>(V)      | 00<br>00             | 26       |                  |      |
| <b>04</b> | 4      |   | <b>G</b> Ø 130x140 - L 295 | Polyethylene  | (H)<br>(V)      | 00<br>00             | 35       |                  |      |
|           | 4      |   | <b>L</b> Ø 180 - L 210     | Polyethylene  | (H)<br>(V)      | 00<br>00             | 36       |                  |      |
| <b>05</b> | 5      |   | <b>B</b> Ø 175 - L 246     | Sheet steel   | (H)<br>(V)      | 00-01-02-03-04<br>00 | 27       |                  |      |
|           | 5      |   | <b>C</b> Ø 200 - L 210     | Sheet steel   | (H)<br>(V)      | 00<br>00             | 28       |                  |      |
|           | 5      |   | <b>F</b> Ø 180 - L 240     | Polypropylene | (H)<br>(V)      | 00<br>00             | 34       |                  |      |
| <b>06</b> | 6      |   | <b>B</b> Ø 175 - L 308     | Sheet steel   | (H)<br>(V)      | 00-04<br>00          | 27       |                  |      |
| <b>07</b> | 7      |   | <b>E</b> Ø 154x188 - L 299 | Sheet steel   | (H)<br>(V)      | 00-01<br>00          | 30       |                  |      |
|           | 7      |   | <b>F</b> Ø 180 - L 308     | Polypropylene | (H)<br>(V)      | 00<br>00             | 34       |                  |      |
|           | 7      |   | <b>L</b> Ø 180 - L 310     | Polyethylene  | (H)<br>(V)      | 00<br>00             | 37       |                  |      |
|           | 7      |   | <b>M</b> Ø 180 - L 335     | Polietilene   | (H)<br>(V)      | 00<br>00             | 38       |                  |      |
| <b>08</b> | 8      |   | <b>B</b> Ø 175 - L 370     | Sheet steel   | (H)<br>(V)      | 00-04<br>00          | 27       |                  |      |
|           | 8      |   | <b>C</b> Ø 200 - L 306     | Sheet steel   | (H)<br>(V)      | 00<br>00             | 28       |                  |      |
| <b>09</b> | 9      |   | <b>E</b> Ø 230x130 - L 350 | Sheet steel   | (H)<br>(V)      | 00<br>00             | 31       |                  |      |
|           |        |   | <b>L</b> Ø 180 - L 370     | Polietilene   | (H)<br>(V)      | 00<br>00             | 37       |                  |      |
| <b>10</b> | 10     |   | <b>C</b> Ø 200 - L 373     | Sheet steel   | (H)<br>(V)      | 00<br>00             | 28       |                  |      |
|           | 10     |   | <b>D</b> Ø 217 - L 273     | Sheet steel   | (H)<br>(V)      | 00<br>00             | 29       |                  |      |
| <b>12</b> | 12     |   | <b>L</b> Ø 180 - L 410     | Polyethylene  | (H)<br>(V)      | 00<br>00             | 37       |                  |      |
|           |        |   | <b>D</b> Ø 217 - L 370     | Sheet steel   | (H)<br>(V)      | 00<br>00             | 29       |                  |      |
| <b>14</b> | 14     |   | <b>E</b> Ø 255x193 - L 366 | Sheet steel   | (H)<br>(V)      | 00-01<br>00-01       | 32<br>33 |                  |      |
| <b>25</b> | 25     |   | <b>E</b> Ø 250x255 - L 436 | Sheet steel   | (H)<br>(V)      | 00-01<br>00-01       | 33       |                  |      |

IV  
V

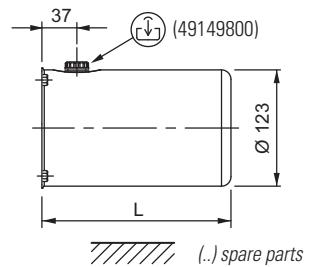
/1(std)  
/2  
/3  
/4

39

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (H) \*\* \* - **Tanks Ø 123 - Sheet steel, capacity 1-2-3 liters - Horizontal mounting (black painted)**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plug) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|---------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable              |   |          |
| 01       | A        | (H)      | 00          | 141               | 1       | 1.0  | 0.7                 | 90310000                                  | 17010086 |
| 02       |          |          |             | 200               | 2       | 1.6  | 1.5                 | 90310001                                  |          |
| 03       |          |          |             | 330               | 3       | 3    | 2.8                 | 90310002                                  |          |



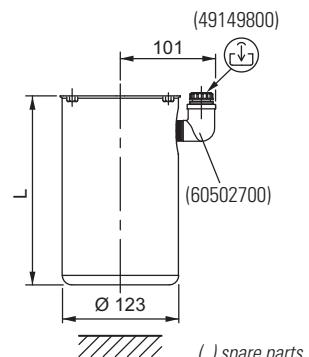
(1) Variant - OMIT if without tank but with tubes kit

## Other variants

|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

\* \*\* \* (V) \*\* \* - **Tanks Ø 123 - Sheet steel, capacity 1-2-3 liters - Vertical mounting (black painted)**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plug) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|---------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable              |   |          |
| 01       | A        | (V)      | 00          | 141               | 1       | 0.9  | 0.7                 | 90310009                                  | 17010086 |
| 02       |          |          |             | 200               | 2       | 1.6  | 1.5                 | 90310010                                  |          |
| 03       |          |          |             | 330               | 3       | 2.9  | 2.9                 | 90310011                                  |          |



(1) Variant - OMIT if without tank but with tubes kit

## Other variants

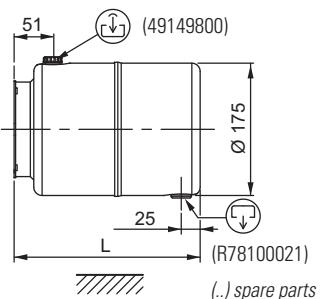
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (H) \*\* \* - **Tanks Ø 175 - Sheet steel, capacity 5-6-8 liters - Horizontal mounting (black painted)**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|----------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| 05       | B (H) 00 |          |             | 246               | 5       | 4.7  | 4.5                  | 90310003                                  | 17010086 |
| 06       |          |          |             | 308               | 6       | 6    | 5.9                  | 90310004                                  |          |
| 08       |          |          |             | 370               | 8       | 8    | 7.3                  | 90310005                                  |          |

(1) Variant - OMIT if without tank but with tubes kit



## Other variants

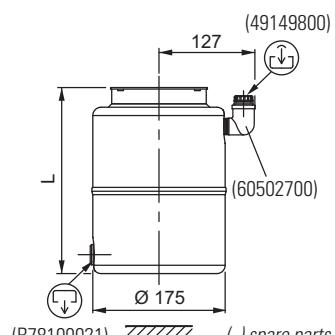
|                           |                  |                           |                  |                           |  |                           |                  |
|---------------------------|------------------|---------------------------|------------------|---------------------------|--|---------------------------|------------------|
| Variant<br>05<br>06<br>08 | Tank<br>90310003 | Variant<br>05<br>06<br>08 | Tank<br>90310149 | Variant<br>05<br>06<br>08 | Tank<br>90310134<br>90310062<br>90310069 | Variant<br>05<br>06<br>08 | Tank<br>90310176 |
| B (H) 01                  |                  | B (H) 02                  |                  | B (H) 03                  |  | B (H) 04                  |                  |
|                           |                  |                           |                  |                           |  |                           |                  |
|                           |                  |                           |                  |                           |  |                           |                  |

IV  
V

\* \*\* \* (V) \*\* \* - **Tanks Ø 175 - Sheet steel, capacity 5-6-8 liters - Vertical mounting (black painted)**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|----------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| 05       | B (V) 00 |          |             | 246               | 5       | 4.3  | 4.1                  | 90310012                                  | 17010086 |
| 06       |          |          |             | 308               | 6       | 5.8  | 5.5                  | 90310013                                  |          |
| 08       |          |          |             | 370               | 8       | 7.5  | 7.2                  | 90310015                                  |          |

(1) Variant - OMIT if without tank but with tubes kit



## Other variants

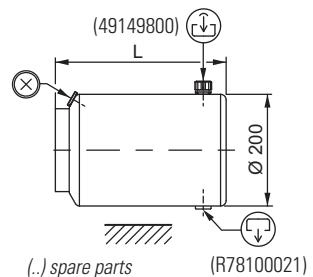
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (H) \*\* \* - **Tanks Ø 200 - Sheet steel, capacity 5-8-10 liters - Horizontal mounting (black painted)**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|----------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| 05       | C        | (H)      | 00          | 205               | 5       | 5.3  | 5.0                  | 90310425                                  | 17010086 |
| 08       |          |          |             | 301               | 8       | 8.0  | 7.7                  | 90310428                                  |          |
| 10       |          |          |             | 368               | 10      | 10   | 9.3                  | 90310431                                  |          |

(1) Variant - OMIT if without tank but with tubes kit



## Other variants

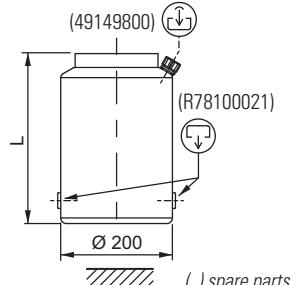
|         |      |         |      |         |          |         |      |
|---------|------|---------|------|---------|----------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank     | Variant | Tank |
|         |      |         |      | 05      | 90310453 |         |      |
|         |      |         |      | 08      | 90310443 |         |      |
|         |      |         |      | 10      | 90310483 |         |      |

(49107500) (R78100021)

\* \*\* \* (V) \*\* \* - **Tanks Ø 200 - Sheet steel, capacity 5-8-10 liters - Vertical mounting (black painted)**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|----------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| 05       | C        | (V)      | 00          | 205               | 5       | 4.6  | 4.3                  | 90310444                                  | 17010086 |
| 08       |          |          |             | 301               | 8       | 7.5  | 7.1                  | 90310437                                  |          |
| 10       |          |          |             | 368               | 10      | 9.5  | 9.1                  | 90310439                                  |          |

(1) Variant - OMIT if without tank but with tubes kit



## Other variants

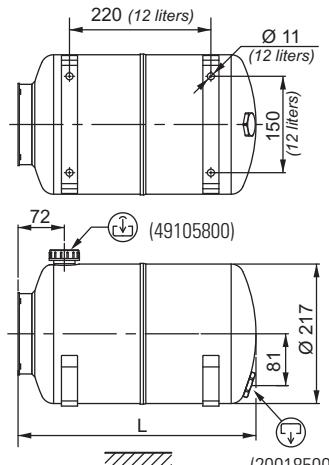
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

## Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (H) \*\* \* - **Tanks Ø 217 - Sheet steel, capacity 10-12 liters - Horizontal mounting (black painted)**

| Capacity  | Features | Mounting   | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|-----------|----------|------------|-------------|-------------------|---------|------|----------------------|---|----------|
|           |          |            |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| <b>10</b> | <b>D</b> | <b>(H)</b> | <b>00</b>   | 273               | 10      | 8    | 7.6                  | 90310006                                  | 17010086 |
|           |          |            |             | 370               | 12      | 12   | 11                   | 90310058                                  |          |

(1) Variant - OMIT if without tank but with tubes kit



(..) spare parts

### Other variants

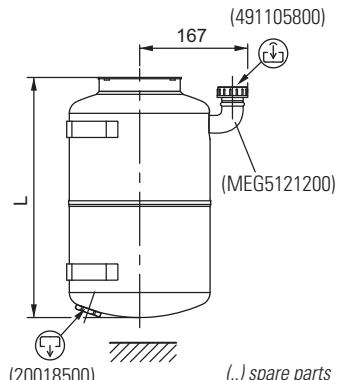
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

**IV**  
**V**

\* \*\* \* (V) \*\* \* - **Tanks Ø 217 - Sheet steel, capacity 10-12 liters - Vertical mounting (black painted)**

| Capacity  | Features | Mounting   | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|-----------|----------|------------|-------------|-------------------|---------|------|----------------------|---|----------|
|           |          |            |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| <b>10</b> | <b>D</b> | <b>(V)</b> | <b>00</b>   | 273               | 10      | 7    | 6.8                  | 90310029                                  | 17010086 |
|           |          |            |             | 370               | 12      | 10.3 | 10.1                 | 90310100                                  |          |

(1) Variant - OMIT if without tank but with tubes kit



(..) spare parts

### Other variants

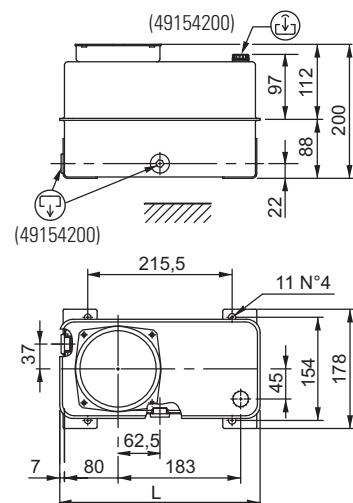
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (V) \*\* \* - *Rectangular tanks - Sheet steel, capacity 7 liters - Vertical mounting (black painted)*

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|----------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full |                      |   |          |
| 07       | E        | (V)      | 00          | 299               | 7       | 5.5  | 5.1                  | 90310014                                  | 17010086 |

(1) Variant - OMIT if without tank but with tubes kit



(..) spare parts

## Other variants

| Variant     | Tank     | Variant | Tank | Variant | Tank | Variant | Tank |
|-------------|----------|---------|------|---------|------|---------|------|
| 07 E (V) 01 | 90310036 |         |      |         |      |         |      |
|             |          |         |      |         |      |         |      |
|             |          |         |      |         |      |         |      |
|             |          |         |      |         |      |         |      |

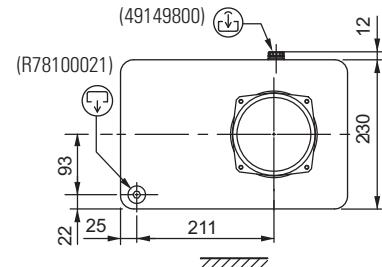
(49107500) (49154200)

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (H) \*\* \* - **Rectangular tanks - Sheet steel, capacity 9 liters - Horizontal mounting (black painted)**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|----------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| 09       | E        | (H)      | 00          | 350               | 9       | 9    | 8                    | 90310142                                  | 17010086 |

(1) Variant - OMIT if without tank but with tubes kit



(..) spare parts

## Other variants

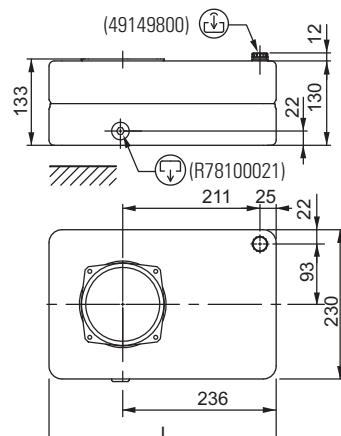
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

**IV**  
**V**

\* \*\* \* (V) \*\* \* - **Rectangular tanks - Sheet steel, capacity 9 liters - Vertical mounting (black painted)**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|----------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| 09       | E        | (V)      | 00          | 350               | 9       | 8.6  | 7.5                  | 90310142                                  | 17010086 |

(1) Variant - OMIT if without tank but with tubes kit



(..) spare parts

## Other variants

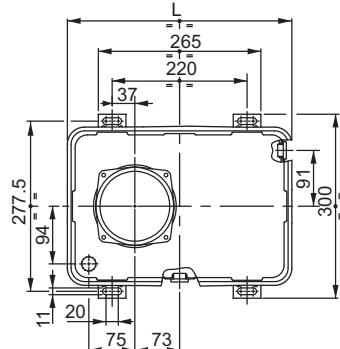
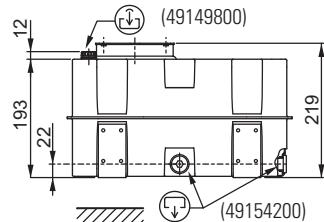
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (\*) \*\* \* - *Rectangular tanks - Sheet steel, capacity 14 liters - Vertical mounting (black painted)*

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|----------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| 14       | E        | (V)      | 00          | 366               | 14      | 14   | 13                   | 90310045                                  | 17010086 |

(1) Variant - OMIT if without tank but with tubes kit



(..) spare parts

## Other variants

| Variant     | Tank     | Variant | Tank | Variant | Tank | Variant | Tank |
|-------------|----------|---------|------|---------|------|---------|------|
| 14 E (V) 01 | 90310046 |         |      |         |      |         |      |
|             |          |         |      |         |      |         |      |
|             |          |         |      |         |      |         |      |
|             |          |         |      |         |      |         |      |

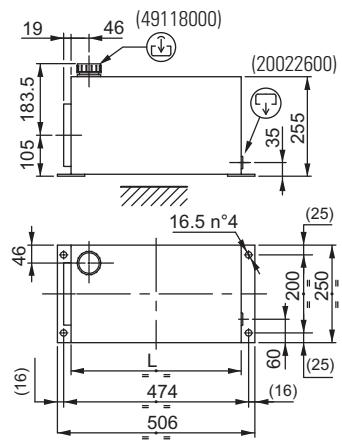
Technical drawing showing the dimensions of the tank assembly for variant 01. The overall width is 265 mm, height is 300 mm, and depth is 220 mm. The tank body is labeled (49107500) and the tank fixing kit is labeled (49154200).

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (\*) \*\* \* - **Rectangular tanks - Sheet steel, capacity 25 liters - Horizontal mounting (black painted)**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|----------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| 25       | E        | (H)      | 00          | 436               | 25      | 22   | 21                   | 90310060                                  | 17010086 |

(1) Variant - OMIT if without tank but with tubes kit



## Other variants

|                        |                  |         |      |         |      |         |      |
|------------------------|------------------|---------|------|---------|------|---------|------|
| Variant<br>25 E (H) 01 | Tank<br>90310083 | Variant | Tank | Variant | Tank | Variant | Tank |
|                        |                  |         |      |         |      |         |      |
|                        |                  |         |      |         |      |         |      |
|                        |                  |         |      |         |      |         |      |
|                        |                  |         |      |         |      |         |      |

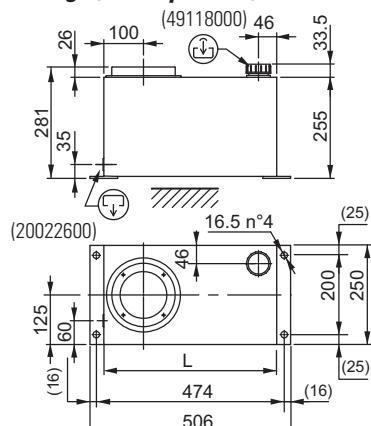
Technical drawing showing a vertical cross-section of a rectangular tank for horizontal mounting. The tank is shown with its thickness of 25mm and its height of 183.5mm. Mounting holes are indicated at the top and bottom edges.

**IV**  
**V**

\* \*\* \* (\*) \*\* \* - **Rectangular tanks - Sheet steel, capacity 25 liters - Vertical mounting (black painted)**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|----------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable               |   |          |
| 25       | E        | (V)      | 00          | 436               | 25      | 25   | 22                   | 90310071                                  | 17010086 |

(1) Variant - OMIT if without tank but with tubes kit



## Other variants

|                        |                  |         |      |         |      |         |      |
|------------------------|------------------|---------|------|---------|------|---------|------|
| Variant<br>25 E (V) 01 | Tank<br>90310124 | Variant | Tank | Variant | Tank | Variant | Tank |
|                        |                  |         |      |         |      |         |      |
|                        |                  |         |      |         |      |         |      |
|                        |                  |         |      |         |      |         |      |
|                        |                  |         |      |         |      |         |      |

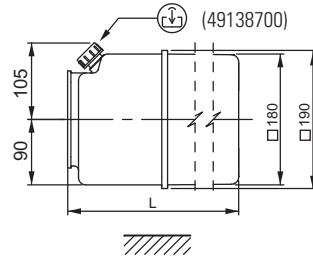
Technical drawing showing a vertical cross-section of a rectangular tank for vertical mounting. The tank is shown with its thickness of 25mm and its height of 281mm. Mounting holes are indicated at the top and bottom edges.

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (H) \*\* \* - **Square polypropylene tanks capacity 5-7 liters - Horizontal mounting**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plug, brackets, nuts) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|-------------------------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable                              |   |          |
| 05       | F        | (H)      | 00          | 242               | 5       | 5.4  | 4.5                                 | 90310313                                  | 17010086 |
| 07       |          |          |             | 308               | 7       | 7.4  | 6.5                                 | 90310289                                  |          |

Operating temperature -10°C ÷ +60°C - (1) Variant - OMIT if without tank but with tubes kit



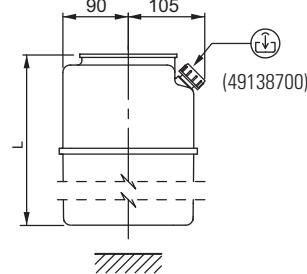
(..) spare parts

**IV**  
**V**

\* \*\* \* (V) \*\* \* - **Square polypropylene tanks capacity 5-7 liters - Vertical mounting**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plug, brackets, nuts) | Tank fixing<br>kit<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|-------------------------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable                              |   |          |
| 05       | F        | (V)      | 00          | 242               | 5       | 5.4  | 4.5                                 | 90310313                                  | 17010086 |
| 07       |          |          |             | 306               | 7       | 7.4  | 6.5                                 | 90310289                                  |          |

Operating temperature -10°C ÷ +60°C - (1) Variant - OMIT if without tank but with tubes kit



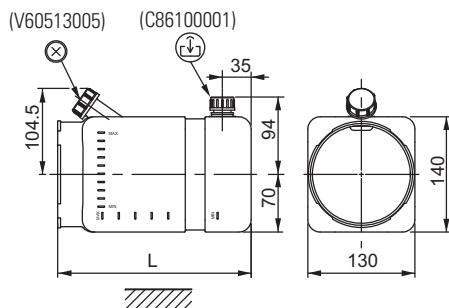
(..) spare parts

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (H) \*\* \* - **Square polyethylene tanks capacity 1.5-2.5-4 liters - Horizontal mounting**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs, clamp, nuts) | Tank fixing<br>kit collar Ø123<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|-----------------------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable                            |   |          |
| 02       | G (H) 00 | 00       |             | 135               | 1.5     | 1.3  | 1                                 | 90310491  | 17010087 |
| 03       |          |          |             | 235               | 2.5     | 2.5  | 2                                 | 90310484  |          |
| 04       |          |          |             | 295               | 4       | 3.4  | 2.5                               | 90310422  |          |

Operating temperature -10°C ÷ +70°C - (1) Variant - OMIT if without tank but with tubes kit



## Other variants

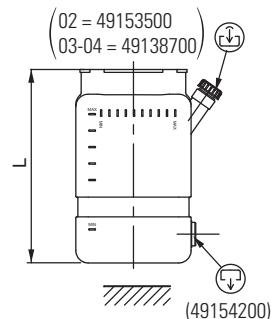
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

**IV**  
**V**

\* \*\* \* (V) \*\* \* - **Square polyethylene tanks capacity 1.5-2.5-4 liters - Vertical mounting**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs, clamp, nuts) | Tank fixing<br>kit collar Ø123<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|-----------------------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable                            |   |          |
| 02       | G (V) 00 | 00       |             | 135               | 1.5     | 1.1  | 0.7                               | 90310486  | 17010087 |
| 03       |          |          |             | 235               | 2.5     | 2.7  | 2.3                               | 90310419  |          |
| 04       |          |          |             | 296               | 4       | 3.5  | 3.1                               | 90310402  |          |

Operating temperature -10°C ÷ +70°C - (1) Variant - OMIT if without tank but with tubes kit



(..) spare parts

## Other variants

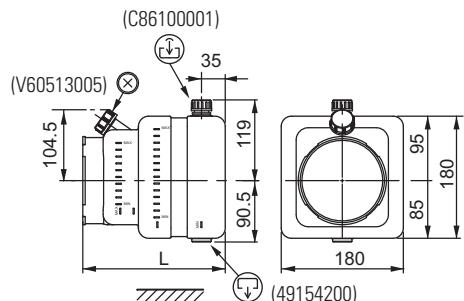
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (H) \*\* \* - **Square polyethylene tanks capacity 4 liters - Horizontal mounting**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs, clamp, nuts) | Tank fixing<br>kit collar Ø123<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|-----------------------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable                            |   |          |
| 04       | L        | (H)      | 00          | 210               | 4       | 3.6  | 3                                 | 90310331  | 17010087 |

Operating temperature -10°C ÷ +70°C - (1) Variant - OMIT if without tank but with tubes kit



## Other variants

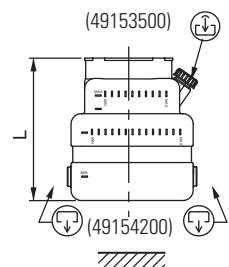
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

IV  
V

\* \*\* \* (V) \*\* \* - **Square polyethylene tanks capacity 4 liters - Vertical mounting**

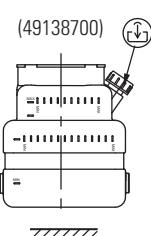
| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs, clamp, nuts) | Tank fixing<br>kit collar Ø123<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|-----------------------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable                            |   |          |
| 04       | L        | (V)      | 00          | 210               | 4       | 3.7  | 3                                 | 90310332  | 17010087 |

Operating temperature -10°C ÷ +70°C - (1) Variant - OMIT if without tank but with tubes kit



## Other variants

|             |          |         |      |         |      |         |      |
|-------------|----------|---------|------|---------|------|---------|------|
| Variant     | Tank     | Variant | Tank | Variant | Tank | Variant | Tank |
| 04 L (V) 01 | 90310433 |         |      |         |      |         |      |
|             |          |         |      |         |      |         |      |
|             |          |         |      |         |      |         |      |
|             |          |         |      |         |      |         |      |
|             |          |         |      |         |      |         |      |

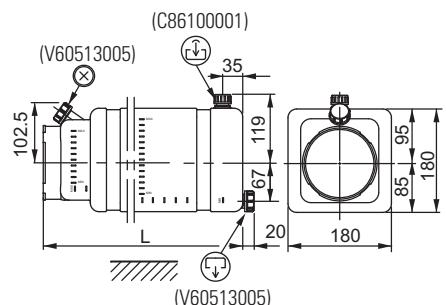


# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (\*) \*\* \* - **Square polyethylene tanks capacity 7-10 liters - Horizontal mounting**

| Capacity  | Features | Mounting   | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs, clamp, nuts) | Tank fixing<br>kit collar Ø123<br>(screws and O-Ring) |          |
|-----------|----------|------------|-------------|-------------------|---------|------|-----------------------------------|---|----------|
|           |          |            |             | L<br>(mm)         | Nominal | Full | Usable                            |   |          |
| <b>07</b> | <b>L</b> | <b>(H)</b> | <b>00</b>   | 310               | 7       | 6.7  | 5.5                               | 90310330  | 17010087 |
|           |          |            |             | 410               | 10      | 8.7  | 7.5                               | 90310339  |          |

Operating temperature -10°C ÷ +70°C - (1) Variant - OMIT if without tank but with tubes kit

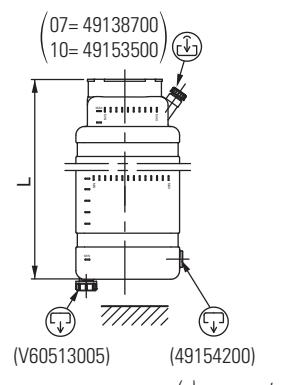


(..) spare parts

\* \*\* \* (\*) \*\* \* - **Square polyethylene tanks capacity 7-10 liters - Vertical mounting**

| Capacity  | Features | Mounting   | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs, clamp, nuts) | Tank fixing<br>kit collar Ø123<br>(screws and O-Ring) |          |
|-----------|----------|------------|-------------|-------------------|---------|------|-----------------------------------|---|----------|
|           |          |            |             | L<br>(mm)         | Nominal | Full | Usable                            |   |          |
| <b>07</b> | <b>L</b> | <b>(V)</b> | <b>00</b>   | 310               | 7       | 6.7  | 6                                 | 90310403  | 17010087 |
|           |          |            |             | 410               | 10      | 9.8  | 9                                 | 90310338  |          |

Operating temperature -10°C ÷ +70°C - (1) Variant - OMIT if without tank but with tubes kit



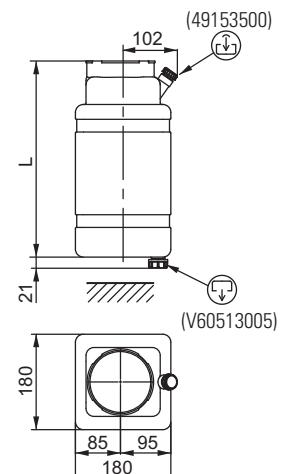
(..) spare parts

**IV**  
**V**

\* \*\* \* (\*) \*\* \* - **Square polyethylene tanks capacity 9 liters - Vertical mounting**

| Capacity  | Features | Mounting   | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs, clamp, nuts) | Tank fixing<br>kit collar Ø123<br>(screws and O-Ring) |          |
|-----------|----------|------------|-------------|-------------------|---------|------|-----------------------------------|---|----------|
|           |          |            |             | L<br>(mm)         | Nominal | Full | Usable                            |   |          |
| <b>09</b> | <b>L</b> | <b>(V)</b> | <b>00</b>   | 370               | 9       | 8.6  | 8                                 | 90310371  | 17010087 |

Operating temperature -10°C ÷ +70°C - (1) Variant - OMIT if without tank but with tubes kit



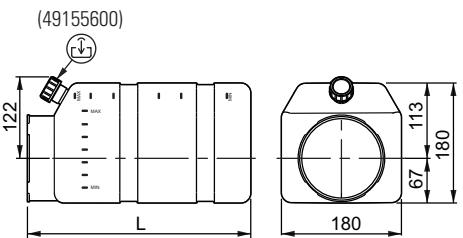
(..) spare parts

# Sect. IV - Tanks / Sect. V - Tubes kit

\* \*\* \* (H) \*\* \* - **Special square polyethylene tanks capacity 7 liters - Horizontal mounting**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs, clamp, nuts) | Tank fixing<br>kit collar Ø123<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|-----------------------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable                            |   |          |
| 07       | M        | (H)      | 00          | 335               | 7       | 7.3  | 6.6                               | 90310380  | 17010087 |

Operating temperature -10°C ÷ +70°C - (1) Variant - OMIT if without tank but with tubes kit



(..) spare parts

## Other variants

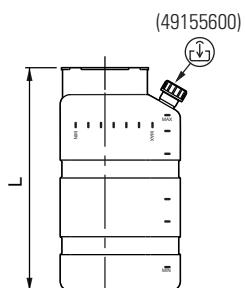
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

IV  
V

\* \*\* \* (V) \*\* \* - **Special square polyethylene tanks capacity 7 liters - Vertical mounting**

| Capacity | Features | Mounting | Variant (1) | Capacity (liters) |         |      | Tank<br>(with plugs, clamp, nuts) | Tank fixing<br>kit collar Ø123<br>(screws and O-Ring) |          |
|----------|----------|----------|-------------|-------------------|---------|------|-----------------------------------|---|----------|
|          |          |          |             | L<br>(mm)         | Nominal | Full | Usable                            |   |          |
| 07       | M        | (V)      | 00          | 335               | 7       | 7.2  | 6.4                               | 90310380  | 17010087 |

Operating temperature -10°C ÷ +70°C - (1) Variant - OMIT if without tank but with tubes kit

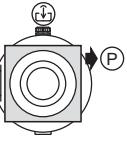
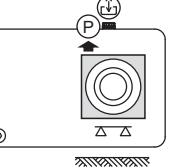
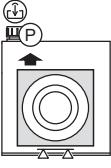
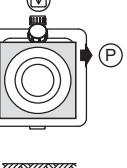


(..) spare parts

## Other variants

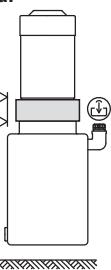
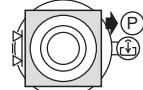
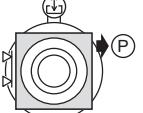
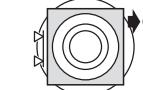
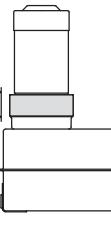
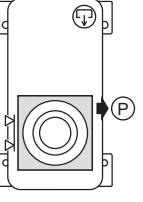
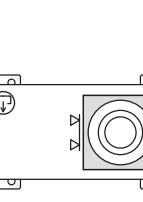
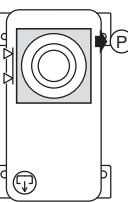
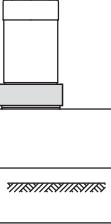
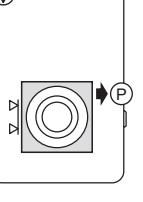
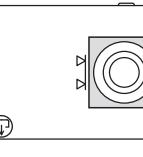
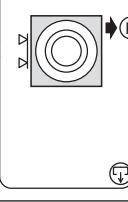
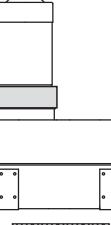
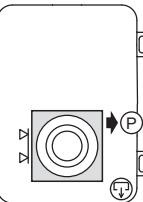
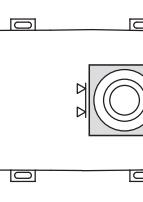
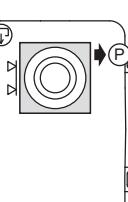
|         |      |         |      |         |      |         |      |
|---------|------|---------|------|---------|------|---------|------|
| Variant | Tank | Variant | Tank | Variant | Tank | Variant | Tank |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |
|         |      |         |      |         |      |         |      |

# Sect. IV - Tanks / Sect. V - Tubes kit

| *         | ** | *                | (*) | **                | /*  |   | - Tanks orientation according to the mounting position                                |
|-----------|----|------------------|-----|-------------------|---|---|---|
|           |    |                  |     |                   |   |   |   |
| For tanks |    |                  | (*) | Mounting position |   |   |   |
| S         | ** | A<br>B<br>C<br>D | (H) | Horizontal        | /1 (standard)   | /2  | /3  |
|           |    |                  |     |                   |    |    |    |
|           |    |                  |     |                   | (1)   |   |   |
|           |    |                  |     |                   |   |   |   |
| For tanks |    |                  | (*) | Mounting position |   |   |   |
| S         | 09 | E                | (H) | Horizontal        | /1 (standard)   |   |   |
|           |    |                  |     |                   |   |   |   |
|           |    |                  |     |                   |   |   |   |
| For tanks |    |                  | (*) | Mounting position |   |   |   |
| S         | 25 | E                | (H) | Horizontal        | /1 (standard)   |   |   |
|           |    |                  |     |                   |  |   |   |
|           |    |                  |     |                   |   |   |   |
| For tanks |    |                  | (*) | Mounting position |   |   |   |
| S         | ** | F<br>G<br>L      | (H) | Horizontal        | /1 (standard)   | /2  | /3  |
|           |    |                  |     |                   |  |  |  |
|           |    |                  |     |                   | (1)   |   |   |
|           |    |                  |     |                   |   |   |   |

(1) Orientation TO BE USED with blocks

# Sect. IV - Tanks / Sect. V - Tubes kit

| *         | ** | *                               | (*) | **                | /*  |   | - Tanks orientation according to the mounting position                                |   |
|-----------|----|---------------------------------|-----|-------------------|---|---|---|---|
|           |    |                                 |     |                   |   |   |   |   |
| For tanks |    |                                 | (*) | Mounting position | /1 (standard)   | /2  | /3  |   |
| S         | ** | A<br>B<br>C<br>D<br>F<br>G<br>L | (V) | Vertical          |    |    |      |    |
|           |    |                                 |     |                   | (2)   |   |   |   |
| For tanks |    |                                 | (*) | Mounting position | /1 (standard)   | /2  | /3  | /4  |
| IV        |    |                                 |     | Vertical          |   |   |   |   |
| V         |    |                                 |     | S 07 E            | (V)   | (1)   |   |   |
| For tanks |    |                                 | (*) | Mounting position | /1 (standard)   | /2  | /3  | /4  |
| S         | 09 | E                               | (V) | Vertical          |  |  |  |  |
|           | 25 |                                 |     |                   | (1)   |   |   |   |
| For tanks |    |                                 | (*) | Mounting position | /1 (standard)   | /2  | /3  | /4  |
| S         | 14 | E                               | (V) | Vertical          |  |  |  |  |
|           |    |                                 |     |                   | (1)   |   |   |   |

(1) Orientation TO BE USED with blocks

(2) D Orientation DO NOT USE with blocks

# Sect. VI - DC Motors

|          |          |   |    |     |   |    |   |                |
|----------|----------|---|----|-----|---|----|---|----------------|
| MC ..... | <b>M</b> | * | ** | (*) | * | /* | - | Motor          |
|          |          |   |    |     |   |    |   | Voltage        |
|          |          |   |    |     |   |    |   | Power / Size   |
|          |          |   |    |     |   |    |   | Version        |
|          |          |   |    |     |   |    |   | Accessories    |
|          |          |   |    |     |   |    |   | Orientation    |
|          |          |   |    |     |   |    |   | End section VI |

All motors are equipped with a transmission kit  
(coupling and components for the assembly)

| *        | Voltage | **        | Power  | Size  | (*) | Version | Page | * Accessories                    |
|----------|---------|-----------|--------|-------|-----|---------|------|----------------------------------|
| <b>2</b> | 12 VDC  | <b>GA</b> | 350 W  | Ø 80  | (1) | Std     | 42   | <b>O - B</b>                     |
|          |         | <b>GC</b> | 700 W  | Ø 80  | (1) | Std     | 42   | <b>O - B</b>                     |
|          |         | <b>AA</b> | 1500 W | Ø 115 | (1) | Std     | 43   | <b>O - B - C - D - F - G - H</b> |
|          |         | <b>EN</b> | 1600 W | Ø 115 | (1) | Std     | 43   | <b>O - B - C - E</b>             |
|          |         | <b>GN</b> | 1600 W | Ø 115 | (1) | Std     | 44   | <b>O - B</b>                     |
| <b>4</b> | 24 VDC  | <b>GB</b> | 400 W  | Ø 80  | (1) | Std     | 42   | <b>O - B</b>                     |
|          |         | <b>GD</b> | 800 W  | Ø 80  | (1) | Std     | 42   | <b>O - B</b>                     |
|          |         | <b>AB</b> | 2000 W | Ø 115 | (1) | Std     | 43   | <b>O - B - C - D - F - G - H</b> |
|          |         | <b>ES</b> | 2200 W | Ø 115 | (1) | Std     | 43   | <b>O - B - C - E</b>             |
|          |         | <b>GP</b> | 2200 W | Ø 115 | (1) | Std     | 44   | <b>O - B - C - E</b>             |
|          |         | <b>GJ</b> | 3000 W | Ø 125 | (1) | Std     | 44   | <b>O - B - C - E</b>             |
|          |         | <b>FB</b> | 3000 W | Ø 125 | (1) | Std     | 44   | <b>O - B - C - E</b>             |

| /* Orientation | Page |
|----------------|------|
| /1             | 46   |
| /2 Std         |      |
| /3             |      |
| /4             |      |

| *            | Accessories description                            | Page |
|--------------|--|------|
| <b>O</b>     | Without accessories                                | —    |
| <b>B</b>     | Starting switch                                    | 45   |
| <b>C</b>     | Thermal protection                                 | —    |
| <b>D (•)</b> | Ventilation  | 45   |
| <b>E</b>     | Starting switch + thermal protection               | —    |
| <b>F (•)</b> | Starting switch + ventilation                      | —    |
| <b>G</b>     | Thermal protection + ventilation                   | —    |
| <b>H (•)</b> | Starting switch + thermal protection + ventilation | —    |

(•)= IP protection level becomes effective after installation on power pack.  
Acquires IP 10 level with "ventilation" accessory.

For more details, features and performances DC motors, see catalog Dana Brevini code DOC00053.

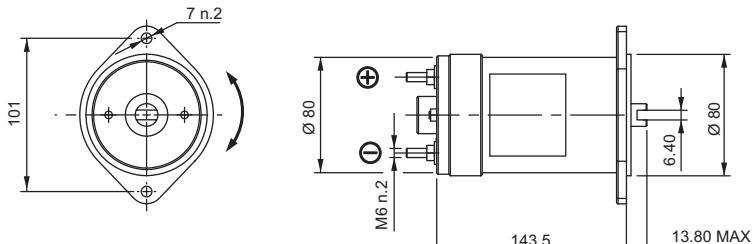
# Sect. VI - DC Motors

## Motors: 12 VDC 350 W / 24 VDC 400 W (permanent magnets)

| Voltage                   | W      | A   | rpm | Nm   | S2 min | S3% | IP | IC | Ø mm | Code (⊗) |          |
|---------------------------|--------|-----|-----|------|--------|-----|----|----|------|----------|----------|
| M   2   GA   (1)   *   /* | 12 VDC | 350 | 40  | 3300 | 1.0    | 10  | 35 | 54 | F    | 80       | 25021400 |
| M   4   GB   (1)   *   /* | 24 VDC | 400 | 30  | 3100 | 1.2    | 5   | 20 | 54 | F    | 80       | 25021500 |

(⊗) IP protection level becomes effective after installation on power pack.

(⊗) Motor without accessories



### Accessories (page 45)

| * | Description                            |
|---|--|
| 0 | Without accessories                    |
| B | Starting switch 120A fixing with clamp |

Code transmission kit: page 53

VI

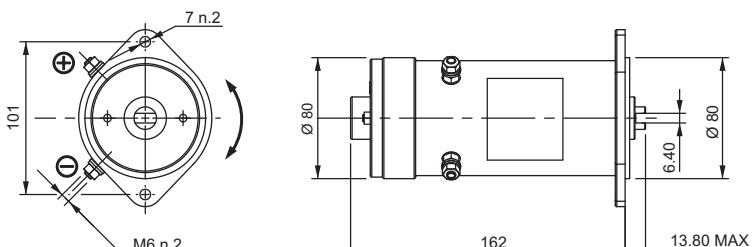
DC

## Motors: 12 VDC 700 W / 24 VDC 800 W (permanent magnets)

| Voltage                   | W      | A   | rpm | Nm   | S2 min | S3% | IP | IC | Ø mm | Code (⊗) |          |
|---------------------------|--------|-----|-----|------|--------|-----|----|----|------|----------|----------|
| M   2   GC   (1)   *   /* | 12 VDC | 700 | 90  | 3300 | 2.0    | 2.5 | 10 | 54 | F    | 80       | 25021600 |
| M   4   GD   (1)   *   /* | 24 VDC | 800 | 70  | 3000 | 2.5    | 2   | 5  | 54 | F    | 80       | 25021700 |

(⊗) IP protection level becomes effective after installation on power pack.

(⊗) Motor without accessories



### Accessories (page 45)

| * | Description          |
|---|----------------------|
| 0 | Without accessories  |
| B | Starting switch 120A |

Code transmission kit: page 53

For more details, features and performances DC motors, see catalog Dana Brevini code DOC00053.

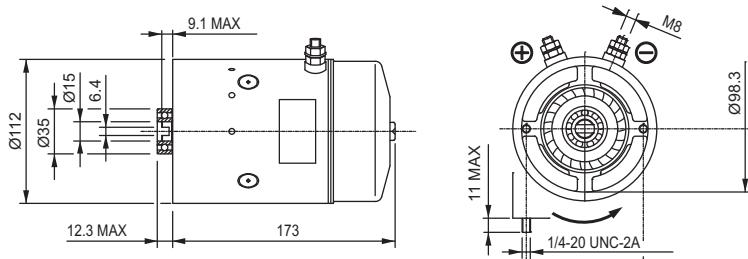
# Sect. VI - DC Motors

## Motors: 12 VDC 1500 W / 24 VDC 2000 W (wound field compound)

| Voltage                   | W      | A    | rpm | Nm   | S2 min | S3% | IP | IC | Ø mm | Code (⊗) |          |
|---------------------------|--------|------|-----|------|--------|-----|----|----|------|----------|----------|
| M   2   AA   (1)   *   /* | 12 VDC | 1500 | 225 | 2500 | 5.5    | 1   | 5  | 54 | F    | 115      | 25022200 |
| M   4   AB   (1)   *   /* | 24 VDC | 2000 | 150 | 2250 | 8      | 2   | 5  | 54 | F    | 115      | 25022300 |

IP protection level becomes effective after installation on power pack.

(⊗) Motor without accessories



Code transmission kit: page 53

## M | \* | \*\* | (\*) | \* | /\* - Accessories (page 45)

| *        | Description  |
|----------|--|
| <b>0</b> | Without accessories                                |
| <b>B</b> | Starting switch 120A                               |
| <b>D</b> | Ventilation  |
| <b>F</b> | Ventilation + Starting switch                      |
| <b>G</b> | Ventilation + Thermal protection                   |
| <b>H</b> | Ventilation + Thermal protection + Starting switch |

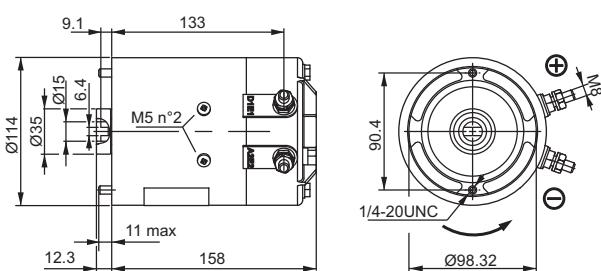
Acquires IP 10 protection level with "ventilation" accessory.

## Motors: 12 VDC 1600 W / 24 VDC 2200 W (wound field compound)

| Voltage                   | W      | A    | rpm | Nm   | S2 min | S3% | IP | IC | Ø mm | Code (⊗) |          |
|---------------------------|--------|------|-----|------|--------|-----|----|----|------|----------|----------|
| M   2   EN   (1)   *   /* | 12 VDC | 1600 | 230 | 2600 | 5      | 2   | 10 | 54 | F    | 115      | 25021100 |
| M   4   ES   (1)   *   /* | 24 VDC | 2200 | 140 | 2700 | 8      | 1.2 | 5  | 54 | F    | 115      | 25021200 |

IP protection level becomes effective after installation on power pack.

(⊗) Motor without accessories



Code transmission kit: page 53

## M | \* | \*\* | (\*) | \* | /\* - Accessories (page 45)

| *        | Description                          |
|----------|--------------------------------------|
| <b>0</b> | Without accessories                  |
| <b>B</b> | Starting switch 120A                 |
| <b>C</b> | Thermal protection                   |
| <b>E</b> | Starting switch + thermal protection |

For more details, features and performances DC motors, see catalog Dana Brevini code DOC00053.

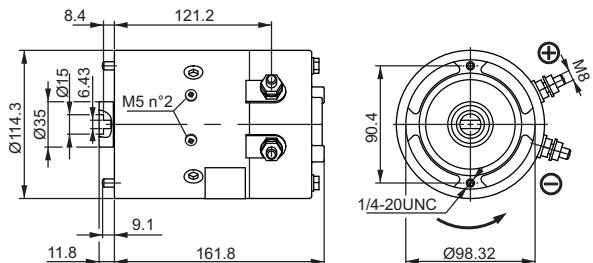
# Sect. VI - DC Motors

## Motors: 12 VDC 1600 W / 24 VDC 2200 W (wound field serie)

| Voltage         | W      | A    | rpm | Nm   | S2 min | S3% | IP  | IC | Ø mm | Code (⊗) |          |
|-----------------|--------|------|-----|------|--------|-----|-----|----|------|----------|----------|
| M 2 GN (1) * /* | 12 VDC | 1600 | 220 | 2600 | 6      | 4   | 8   | 54 | F    | 115      | 25022600 |
| M 4 GP (1) * /* | 24 VDC | 2200 | 140 | 2600 | 6      | 2   | 7.5 | 54 | F    | 115      | 25022700 |

IP protection level becomes effective after installation on power pack.

(⊗) Motor without accessories



### M \* \*\* (\*) \* /\* - Accessories (page 45)

| * | Description          |
|---|----------------------|
| 0 | Without accessories  |
| B | Starting switch 120A |

Code transmission kit: page 53

VI

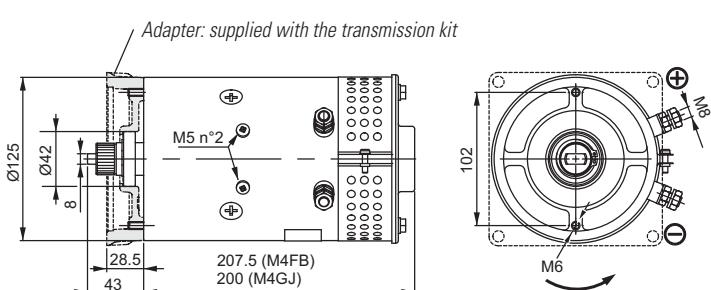
DC

## Motors: 24 VDC 3000 W (wound field compound)

| Voltage         | W      | A    | rpm | Nm   | S2 min | S3% | IP | IC | Ø mm | Code (⊗) |          |
|-----------------|--------|------|-----|------|--------|-----|----|----|------|----------|----------|
| M 4 FB (1) * /* | 24 VDC | 3000 | 200 | 3300 | 8.5    | 4   | 15 | 20 | F    | 125      | 25021300 |
| M 4 GJ (1) * /* | 24 VDC | 3000 | 180 | 3500 | 8.5    | 3.5 | 15 | 20 | F    | 125      | 25022400 |

IP protection level becomes effective after installation on power pack.

(⊗) Motor without accessories



### M \* \*\* (\*) \* /\* - Accessories (page 45)

| ** | * | Description  |
|----|---|--|
|    | 0 | Without accessories                                |
| FB | B | Starting switch 150A                               |
| GJ | D | Ventilation  |
|    | F | Ventilation + Starting switch                      |
| FB | G | Ventilation + Thermal protection                   |
|    | H | Ventilation + Thermal protection + Starting switch |

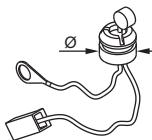
Code transmission kit: page 53

For more details, features and performances DC motors, see catalog Dana Brevini code DOC00053.

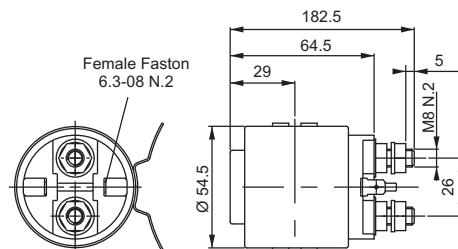
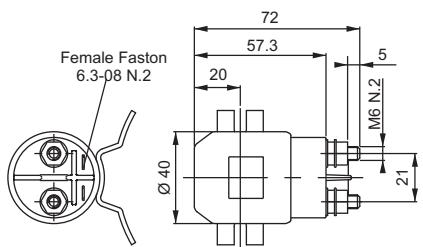
# Sect. VI - DC Motors

M \* \*\* (\*) C /\* - Accessory: Thermal protection

| Thermal protection |      |             |
|--------------------|------|-------------|
| Code               | Ø mm | For motors  |
| 90340009           | 16   | M2EN - M4ES |



M \* \*\* (\*) B /\* - Accessory: Starting switch



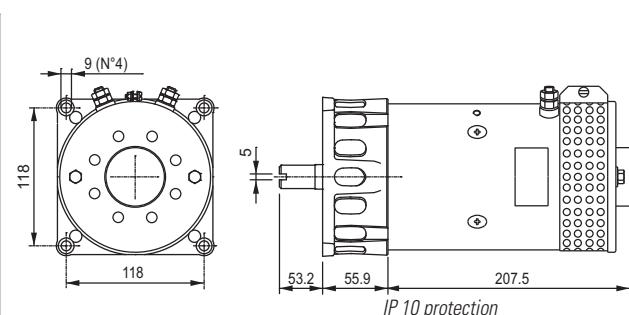
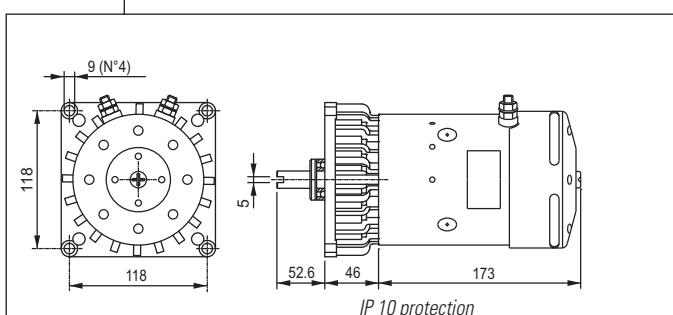
| 120A starting switch |     |             |
|----------------------|-----|-------------|
| Code (*)             | VDC | For motors  |
| KIT07012.027         | 12  | M2GA - M2GC |
| KIT07012.032         | 24  | M4GB - M4GD |
| KIT07012.033         | 12  | M2AA        |
| KIT07012.034         | 24  | M4AB        |
| KIT07012.025         | 12  | M2EN - M2GN |
| KIT07012.026         | 24  | M4ES - M2GP |

| 150A starting switch |     |             |
|----------------------|-----|-------------|
| Code (*)             | VDC | For motors  |
| KIT07012.019         | 24  | M4FB - M4GJ |

(\*) Complete kit with all assembly components.

For more details, features and performances DC motors, see catalog Dana Brevini code DOC00053.

M \* \*\* (\*) \* /\* - Accessory: Ventilation (motor included)



| * | Code (*)     | VDC | For motors                |
|---|--------------|-----|---------------------------|
| D | KIT01008.065 | 12  | M2AA                      |
| G | KIT01008.088 | 12  | M2AA + thermal protection |
| D | KIT01008.067 | 24  | M4AB                      |
| G | KIT01008.077 | 24  | M4AB + thermal protection |

| * | Code (*)     | VDC | For motors                |
|---|--------------|-----|---------------------------|
| D | KIT01008.118 | 24  | M4FB                      |
| D | KIT01008.215 | 24  | M4GJ                      |
| G | KIT01008.119 | 24  | M4FB + thermal protection |

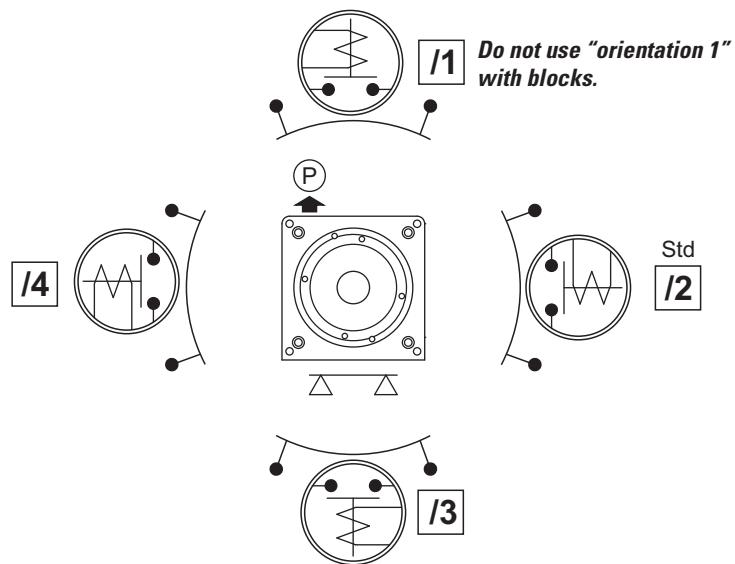
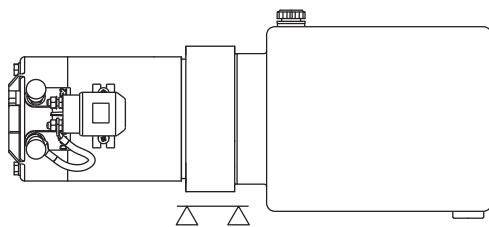
(\*) Complete kit with all assembly components (motor, transmission kit, etc).

For more details, features and performances DC motors, see catalog Dana Brevini code DOC00053.

## Sect. VI - DC Motors

M \* \*\* (\*) \* /\* - **Motor orientation**

Starting switch and poles position.

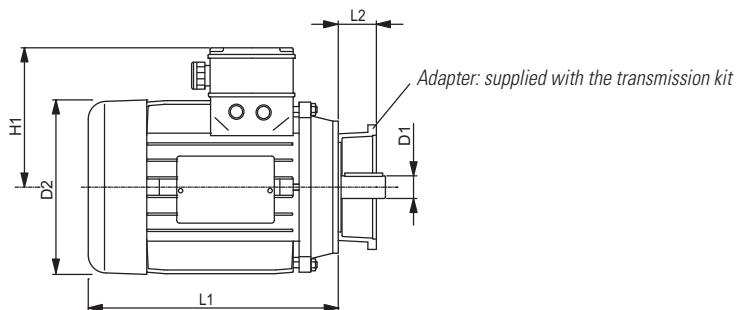


# Sect. VI - AC Motors

| MC ..... | M        | *             | *        | *            | *        | (*)         | /* -     | Motor              |
|----------|----------|---------------|----------|--------------|----------|-------------|----------|--------------------|
|          |          |               |          |              |          |             |          | Phases             |
|          |          |               |          |              |          |             |          | Poles              |
|          |          |               |          |              |          |             |          | Size               |
|          |          |               |          |              |          |             |          | Power range        |
|          |          |               |          |              |          |             |          | Version            |
|          |          |               |          |              |          |             |          | Orientation        |
|          |          |               |          |              |          |             |          | End section VI     |
| <b>M</b> | <b>*</b> | <b>Phases</b> | <b>*</b> | <b>Poles</b> | <b>*</b> | <b>Size</b> | <b>*</b> | <b>Power range</b> |
| <b>M</b> | Monofase | <b>2</b>      | <b>2</b> | <b>L</b>     | 71       | <b>A</b>    | 0.37 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>L</b>     | 71       | <b>B</b>    | 0.55 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>S</b>     | 71       | <b>A</b>    | 0.75 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>S</b>     | 71       | <b>B</b>    | 1.10 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>M</b>     | 80       | <b>A</b>    | 0.75 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>M</b>     | 80       | <b>B</b>    | 1.10 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>N</b>     | 90       | <b>A</b>    | 1.50 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>N</b>     | 90       | <b>B</b>    | 2.20 kW  | 230 Vac 50 Hz      |
| <b>T</b> | Trifase  | <b>4</b>      | <b>4</b> | <b>L</b>     | 71       | <b>A</b>    | 3.00 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>L</b>     | 71       | <b>A</b>    | 0.25 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>S</b>     | 71       | <b>B</b>    | 0.37 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>M</b>     | 80       | <b>C</b>    | 0.85 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>M</b>     | 80       | <b>A</b>    | 0.55 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>N</b>     | 90       | <b>B</b>    | 0.75 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>V</b>     | 90       | <b>A</b>    | 1.10 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>V</b>     | 90       | <b>B</b>    | 1.50 kW  | 230 Vac 50 Hz      |
| <b>T</b> | Trifase  | <b>2</b>      | <b>2</b> | <b>P</b>     | 100      | <b>A</b>    | 1.80 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>P</b>     | 100      | <b>B</b>    | 3.00 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>P</b>     | 100      | <b>A</b>    | 2.20 kW  | 230 Vac 50 Hz      |
|          |          |               |          | <b>R</b>     | 63       | <b>A</b>    | 0.18 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>R</b>     | 63       | <b>B</b>    | 0.25 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>L</b>     | 71       | <b>A</b>    | 0.37 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>L</b>     | 71       | <b>B</b>    | 0.55 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>S</b>     | 71       | <b>A</b>    | 0.75 kW  | 230/400 Vac 50 Hz  |
| <b>T</b> | Trifase  | <b>4</b>      | <b>4</b> | <b>S</b>     | 71       | <b>B</b>    | 1.10 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>M</b>     | 80       | <b>A</b>    | 0.75 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>M</b>     | 80       | <b>B</b>    | 1.10 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>T</b>     | 80       | <b>A</b>    | 2.70 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>T</b>     | 80       | <b>B</b>    | 2.70 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>N</b>     | 90       | <b>A</b>    | 1.50 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>N</b>     | 90       | <b>B</b>    | 2.20 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>P</b>     | 100      | <b>A</b>    | 3.00 kW  | 230/400 Vac 50 Hz  |
| <b>T</b> | Trifase  | <b>2</b>      | <b>2</b> | <b>P</b>     | 112      | <b>B</b>    | 4.00 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>R</b>     | 63       | <b>A</b>    | 0.12 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>R</b>     | 63       | <b>B</b>    | 0.18 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>L</b>     | 71       | <b>A</b>    | 0.25 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>L</b>     | 71       | <b>B</b>    | 0.37 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>S</b>     | 71       | <b>A</b>    | 0.75 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>M</b>     | 80       | <b>A</b>    | 0.55 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>M</b>     | 80       | <b>B</b>    | 0.75 kW  | 230/400 Vac 50 Hz  |
| <b>T</b> | Trifase  | <b>4</b>      | <b>4</b> | <b>T</b>     | 80       | <b>A</b>    | 2.20 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>T</b>     | 80       | <b>B</b>    | 2.20 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>T</b>     | 80       | <b>C</b>    | 2.20 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>T</b>     | 80       | <b>D</b>    | 3.00 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>N</b>     | 90       | <b>A</b>    | 1.10 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>N</b>     | 90       | <b>B</b>    | 1.50 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>P</b>     | 100      | <b>A</b>    | 2.20 kW  | 230/400 Vac 50 Hz  |
|          |          |               |          | <b>P</b>     | 100      | <b>B</b>    | 3.00 kW  | 230/400 Vac 50 Hz  |
| <b>T</b> | Trifase  | <b>2</b>      | <b>2</b> | <b>P</b>     | 112      | <b>C</b>    | 4.00 kW  | 230/400 Vac 50 Hz  |

Motors supplied with all assembly components (transmission kit, coupling, etc.).

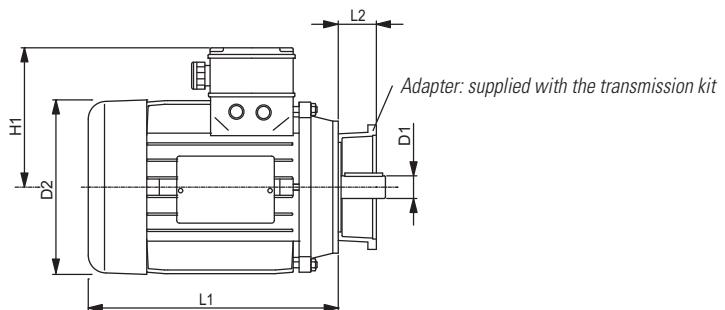
**VI**  
**AC**



## Single-phase motors 2-4 Poles - 230 Vac 50Hz - Version B14

| Phases<br>Poles         | Size   | D1<br>(•) | D2<br>(•) | H1<br>(•) | L1<br>(•) | Power range |         |    | Cable gland<br>metric thread | Adapter |    |      | Single<br>Motor      | Transmission kit<br>(for pump) |
|-------------------------|--|-----------|-----------|-----------|-----------|-------------|---------|----|------------------------------|---------|----|------|----------------------|--------------------------------|
|                         |  |           |           |           |           | Power<br>kW | Voltage | IP |                              | IC      | S1 | Code | Screw<br>UNI<br>5931 |                                |
| M   M   2   L   A   (1) | 2   2   71   14   148   115   208   0.37   230 Vac 50 Hz   54   F   Si   20-25   61000700   M6x20   19.5   M12E2000   KIT01008.006 (Gr.05)                       |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   2   L   B   (1) | 2   2   71   14   148   115   208   0.55   230 Vac 50 Hz   54   F   Si   20-25   61000700   M6x20   19.5   M12F2000   KIT01008.001 (Gr.1)                        |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   2   M   A   (1) | 2   2   80   19   170   126   234   0.75   230 Vac 50 Hz   54   F   Si   20-25   61000800   M6x20   30.4   M13G2000   KIT01008.005 (Gr.05)                       |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   2   M   B   (1) | 2   2   80   19   170   126   234   1.10   230 Vac 50 Hz   54   F   Si   20-25   61000800   M6x20   30.4   M13H2000   KIT01008.002 (Gr.1)                        |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   2   N   A   (1) | 2   2   90   24   185   142   247   1.50   230 Vac 50 Hz   54   F   Si   20-25   61000900   M8x21   40.4   M14L2000   KIT01008.007 (Gr.05)                       |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   2   N   B   (1) | 2   2   90   24   185   142   272   2.20   230 Vac 50 Hz   54   F   Si   20-25   61000900   M8x21   40.4   M14N2000   KIT01008.003 (Gr.1)                        |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   2   P   A   (1) | 2   2   100   28   210   155   310   3.00   230 Vac 50 Hz   54   F   Si   25-32   61001000   M8x28   75   M15P2000   KIT01008.013 (Gr.05)<br>KIT01008.004 (Gr.1) |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   4   L   A   (1) | 2   4   71   14   148   115   208   0.25   230 Vac 50 Hz   54   F   Si   20-25   61000700   M6x20   19.5   M12D4000   KIT01008.006 (Gr.05)                       |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   4   L   B   (1) | 2   4   71   14   148   115   208   0.37   230 Vac 50 Hz   54   F   Si   20-25   61000700   M6x20   19.5   M12E4000   KIT01008.001 (Gr.1)                        |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   4   M   A   (1) | 2   4   80   19   170   126   234   0.55   230 Vac 50 Hz   54   F   Si   20-25   61000800   M6x20   30.4   M13F4000   KIT01008.005 (Gr.05)                       |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   4   M   B   (1) | 2   4   80   19   170   126   234   0.75   230 Vac 50 Hz   54   F   Si   20-25   61000800   M6x20   30.4   M13G4000   KIT01008.002 (Gr.1)                        |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   4   N   A   (1) | 2   4   90   24   185   142   247   1.10   230 Vac 50 Hz   54   F   Si   20-25   61000900   M8x21   40.4   M14H4000   KIT01008.007 (Gr.05)                       |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   4   N   B   (1) | 2   4   90   24   185   142   272   1.50   230 Vac 50 Hz   54   F   Si   20-25   61000900   M8x21   40.4   M14L4000   KIT01008.003 (Gr.1)                        |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |
| M   M   4   P   A   (1) | 2   4   100   28   210   155   310   2.20   230 Vac 50 Hz   54   F   Si   25-32   61001000   M8x28   75   M15N4000   KIT01008.013 (Gr.05)<br>KIT01008.004 (Gr.1) |           |           |           |           |             |         |    |                              |         |    |      |                      |                                |

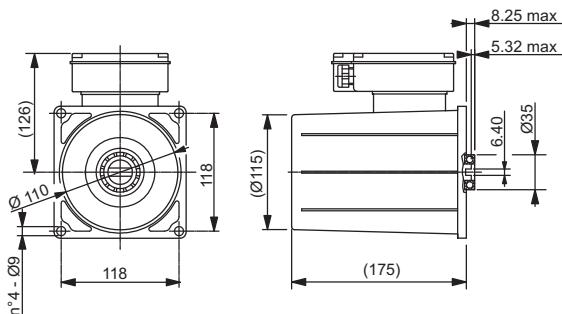
(•)= Approximate dimensions



## Three-phase motors 2-4 Poles - 230/400 Vac 50Hz - Version B14

| Phases<br>Poles | Size    | D1<br>(•) | D2<br>(•) | H1<br>(•) | L1<br>(•) | Power range |                   |    |    | Cable gland<br>metric thread | Adapter |                      |       |      | Single<br>Motor | Transmission kit<br>(for pump) |
|-----------------|---------|-----------|-----------|-----------|-----------|-------------|-------------------|----|----|------------------------------|---------|----------------------|-------|------|-----------------|--------------------------------|
|                 |         |           |           |           |           | Power<br>kW | Voltage           | IP | IC |                              | Code    | Screw<br>UNI<br>5931 | L2    |      |                 |                                |
| M T 2 R A (1)   | 3 2 63  | 11        | 125       | 95        | 189       | 0.18        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 16-20   | 61004300             | M5x16 | 19.5 | M31C2000        | KIT01008.008 (Gr.05)           |
| M T 2 R B (1)   | 3 2 63  | 11        | 125       | 95        | 189       | 0.25        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 16-20   | 61004300             | M5x16 | 19.5 | M31D2000        | KIT01008.014 (Gr.1)            |
| M T 2 L A (1)   | 3 2 71  | 14        | 148       | 115       | 208       | 0.37        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000700             | M6x20 | 19.5 | M32E2000        | KIT01008.006 (Gr.05)           |
| M T 2 L B (1)   | 3 2 71  | 14        | 148       | 115       | 208       | 0.55        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000700             | M6x20 | 19.5 | M32F2000        | KIT01008.001 (Gr.1)            |
| M T 2 M A (1)   | 3 2 80  | 19        | 170       | 126       | 234       | 0.75        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000800             | M6x20 | 30.4 | M33G2000        | KIT01008.005 (Gr.05)           |
| M T 2 M B (1)   | 3 2 80  | 19        | 170       | 126       | 234       | 1.10        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000800             | M6x20 | 30.4 | M33H2000        | KIT01008.002 (Gr.1)            |
| M T 2 N A (1)   | 3 2 90  | 24        | 185       | 142       | 247       | 1.50        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000900             | M8x21 | 40.4 | M34L2000        | KIT01008.007 (Gr.05)           |
| M T 2 N B (1)   | 3 2 90  | 24        | 185       | 142       | 272       | 2.20        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000900             | M8x21 | 40.4 | M34N2000        | KIT01008.003 (Gr.1)            |
| M T 2 P A (1)   | 3 2 100 | 28        | 210       | 155       | 310       | 3.00        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 25-32   | 61001000             | M8x28 | 75   | M35P2000        | KIT01008.013 (Gr.05)           |
| M T 2 P B (1)   | 3 2 112 | 28        | 225       | 182       | 325       | 4.00        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 25-32   | 61001000             | M8x28 | 75   | M36Q2000        | KIT01008.004 (Gr.1)            |
| M T 4 R A (1)   | 3 4 63  | 11        | 125       | 95        | 189       | 0.12        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 16-20   | 61004300             | M5x16 | 19.5 | M31B4000        | KIT01008.008 (Gr.05)           |
| M T 4 R B (1)   | 3 4 63  | 11        | 125       | 95        | 189       | 0.18        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 16-20   | 61004300             | M5x16 | 19.5 | M31C4000        | KIT01008.014 (Gr.1)            |
| M T 4 L A (1)   | 3 4 71  | 14        | 148       | 115       | 208       | 0.25        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000700             | M6x20 | 19.5 | M32D4000        | KIT01008.006 (Gr.05)           |
| M T 4 L B (1)   | 3 4 71  | 14        | 148       | 115       | 208       | 0.37        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000700             | M6x20 | 19.5 | M32E4000        | KIT01008.001 (Gr.1)            |
| M T 4 M A (1)   | 3 4 80  | 19        | 170       | 126       | 234       | 0.55        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000800             | M6x20 | 30.4 | M33F4000        | KIT01008.005 (Gr.05)           |
| M T 4 M B (1)   | 3 4 80  | 19        | 170       | 126       | 234       | 0.75        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000800             | M6x20 | 30.4 | M33G4000        | KIT01008.002 (Gr.1)            |
| M T 4 N A (1)   | 3 4 90  | 24        | 185       | 142       | 247       | 1.10        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000900             | M8x21 | 40.4 | M34H4000        | KIT01008.007 (Gr.05)           |
| M T 4 N B (1)   | 3 4 90  | 24        | 185       | 142       | 272       | 1.50        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 20-25   | 61000900             | M8x21 | 40.4 | M34L4000        | KIT01008.003 (Gr.1)            |
| M T 4 P A (1)   | 3 4 100 | 28        | 210       | 155       | 310       | 2.20        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 25-32   | 61001000             | M8x28 | 75   | M35N4000        | KIT01008.013 (Gr.05)           |
| M T 4 P B (1)   | 3 4 100 | 28        | 210       | 155       | 310       | 3.00        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 25-32   | 61001000             | M8x28 | 75   | M35P4000        | KIT01008.004 (Gr.1)            |
| M T 4 P C (1)   | 3 4 112 | 28        | 225       | 182       | 325       | 4.00        | 230/400 Vac 50 Hz | 54 | F  | 60%                          | 25-32   | 61001000             | M8x28 | 75   | M36Q4000        |                                |

(•)= Approximate dimensions



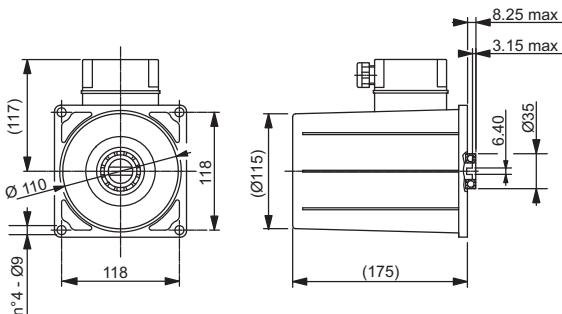
### Single-phase motors 2-4 Poles - 230 Vac 50Hz - Special housing

| Phases | Poles | Size | Power range |               |    |    |            | Cable gland metric thread | Single Motor | Transmission kit   | Note        |
|--------|-------|------|-------------|---------------|----|----|------------|---------------------------|--------------|--|-------------|
|        |       |      | Power kW    | Voltage       | IP | IC | Service    |                           |              |  |             |
| M      | M     | 2    | 0.75        | 230 Vac 50 Hz | 54 | F  | Light-duty | 20                        | M12GY3FF.001 | KIT01008.126 (per pompe Gr.1)<br>KIT01008.130 (per pompe Gr.0.5) | Without fan |
| M      | M     | 2    | 1.10        | 230 Vac 50 Hz | 54 | F  | Light-duty | 20                        | M12HY3FF.000 | KIT01008.126 (per pompe Gr.1)<br>KIT01008.130 (per pompe Gr.0.5) | Without fan |
| M      | M     | 4    | 0.85        | 230 Vac 50 Hz | 54 | F  | Light-duty | 20                        | M12YY3FF.001 | KIT01008.126 (per pompe Gr.1)<br>KIT01008.130 (per pompe Gr.0.5) | Without fan |

IP protection level becomes effective after installationon on power pack.

VI

AC



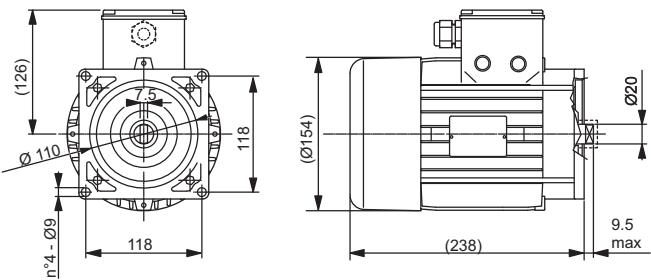
### Three-phase motors 2-4 Poles - 230/400 Vac 50Hz - Direct fixing

| Phases | Poles | Size | Power range |                   |    |    |            | Cable gland metric thread | Single Motor | Transmission kit   | Note        |
|--------|-------|------|-------------|-------------------|----|----|------------|---------------------------|--------------|--|-------------|
|        |       |      | Power kW    | Voltage           | IP | IC | Service    |                           |              |  |             |
| M      | T     | 2    | 0.75        | 230/400 Vac 50 Hz | 54 | F  | Light-duty | 20                        | M32GY3FL.003 | KIT01008.126 (per pompe Gr.1)<br>KIT01008.130 (per pompe Gr.0.5) | Without fan |
| M      | T     | 2    | 1.10        | 230/400 Vac 50 Hz | 54 | F  | Light-duty | 20                        | M32HY3FL.001 | KIT01008.126 (per pompe Gr.1)<br>KIT01008.130 (per pompe Gr.0.5) | Without fan |
| M      | T     | 4    | 0.75        | 230/400 Vac 50 Hz | 54 | F  | Light-duty | 20                        | M32YY3FL.002 | KIT01008.126 (per pompe Gr.1)<br>KIT01008.130 (per pompe Gr.0.5) | Without fan |

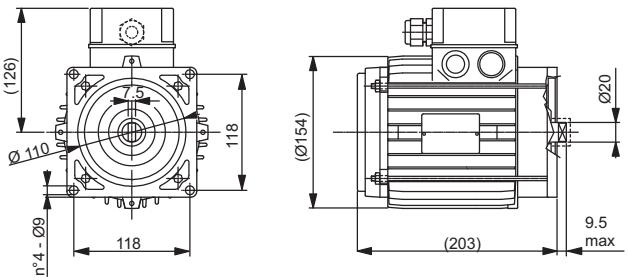
IP protection level becomes effective after installationon on power pack.

# Sect. VI - AC Motors

With fan



Without fan



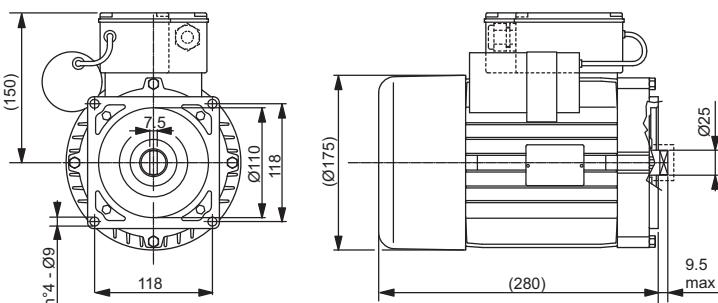
**Three-phase motors 2-4 Poles - 230/400 Vac 50Hz - Direct fixing**

| Phases | Poles | Size | Power range |         |                   |    |         | Cable gland metric thread | Single Motor | Transmission kit | Note                          |          |              |                               |             |
|--------|-------|------|-------------|---------|-------------------|----|---------|---------------------------|--------------|------------------|-------------------------------|----------|--------------|-------------------------------|-------------|
|        |       |      | Power kW    | Voltage | IP                | IC | Service |                           |              |                  |                               |          |              |                               |             |
| M      | T     | 2    | 80          | 2.7     | 230/400 Vac 50 Hz | 44 | F       | Light-duty                | 20-25        | M33YD1FF.000     | KIT01008.131 (per pompe Gr.1) | With fan |              |                               |             |
| M      | T     | 2    | T           | B       | (1)               | 80 | 2.7     | 230/400 Vac 50 Hz         | 44           | F                | Light-duty                    | 20-25    | M33YD1FF.001 | KIT01008.131 (per pompe Gr.1) | Without fan |
| M      | T     | 4    | T           | A       | (1)               | 80 | 2.2     | 230/400 Vac 50 Hz         | 44           | F                | S3 - 4%                       | 20-25    | M33NF1FF.001 | KIT01008.131 (per pompe Gr.1) | Without fan |
| M      | T     | 4    | T           | B       | (1)               | 80 | 2.2     | 230/400 Vac 50 Hz         | 55           | F                | S3 - 4%                       | 20-25    | M33NF4FF.000 | KIT01008.131 (per pompe Gr.1) | With fan    |
| M      | T     | 4    | T           | C       | (1)               | 80 | 2.2     | 230/400 Vac 50 Hz         | 44           | F                | S3 - 4%                       | 20-25    | M33NF1FF.000 | KIT01008.131 (per pompe Gr.1) | With fan    |
| M      | T     | 4    | T           | D       | (1)               | 80 | 3.0     | 230/400 Vac 50 Hz         | 54           | F                | Light-duty                    | 20-25    | M33PF3FF.000 | KIT01008.131 (per pompe Gr.1) | With fan    |

IP protection level becomes effective after installation on power pack.

VI

AC



**Single-phase motors 4 Poles - 230 Vac 50Hz - Direct fixing**

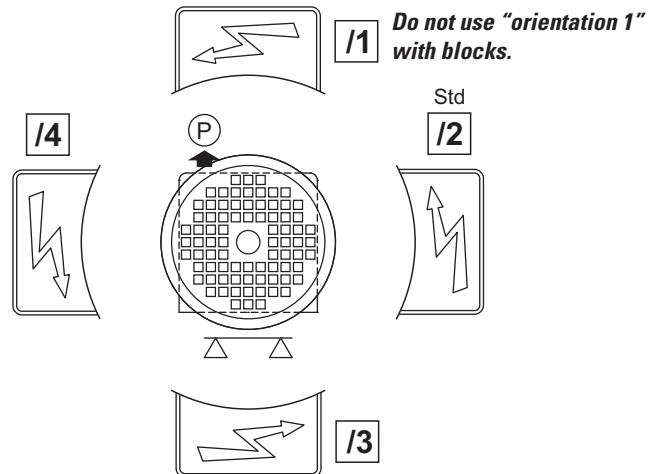
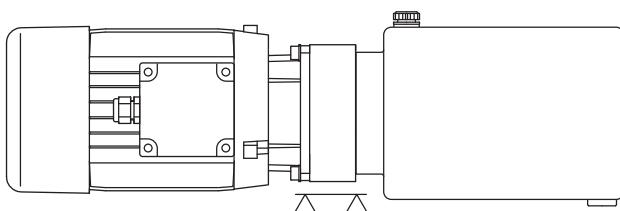
| Phases | Poles | Size | Power range |         |     |    |         | Cable gland metric thread | Single Motor | Transmission kit | Note       |       |              |                               |                               |
|--------|-------|------|-------------|---------|-----|----|---------|---------------------------|--------------|------------------|------------|-------|--------------|-------------------------------|-------------------------------|
|        |       |      | Power kW    | Voltage | IP  | IC | Service |                           |              |                  |            |       |              |                               |                               |
| M      | M     | 4    | V           | A       | (1) | 90 | 1.8     | 230 Vac 50 Hz             | 44           | F                | Light-duty | 20-25 | M14MF1FF.001 | KIT01008.131 (per pompe Gr.1) | With fan<br>Start torque 13Nm |
| M      | M     | 4    | V           | B       | (1) | 90 | 3.0     | 230 Vac 50 Hz             | 55           | F                | S3 - 7%    | 20-25 | M14PF4FF.000 | KIT01008.131 (per pompe Gr.1) | With fan                      |

IP protection level becomes effective after installation on power pack.

## Sect. VI - AC Motors

M \* \* \* (\*) /\* - **Motor orientation**

Connector box position on power pack.



**VI**

**AC**

# Sect. VII - Transmission kit DC motors

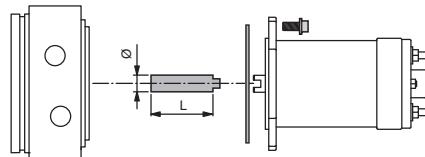
|          |   |    |   |   |
|----------|---|----|---|---|
| MC ..... | T | ** | - | Transmission kit (only for motors on the catalog) |
|          |   |    |   | Type  |
|          |   |    |   | End section VII                                   |

Specify the transmission kit whether you requested the joint and accessories assembly (without motor).

MC ..... T \*\* -

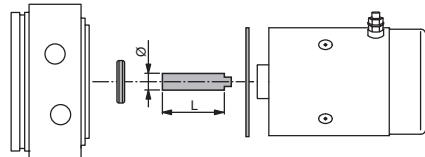
| ** | Transmission kit |         |      |    |
|----|------------------|---------|------|----|
|    | Code             | Pump    | L    | Ø  |
| 01 | KIT08019.027     | Gr. 0.5 | 52.7 | 14 |
|    | KIT08019.026     | Gr. 1   | 36.6 | 14 |

| For DC motors                      |  |  |  |  |
|------------------------------------|--|--|--|--|
| <b>GA</b> (350 W - Ø 80 - Page 42) |  |  |  |  |
| <b>GC</b> (700 W - Ø 80 - Page 42) |  |  |  |  |
| <b>GB</b> (400 W - Ø 80 - Page 42) |  |  |  |  |
| <b>GD</b> (800 W - Ø 80 - Page 42) |  |  |  |  |



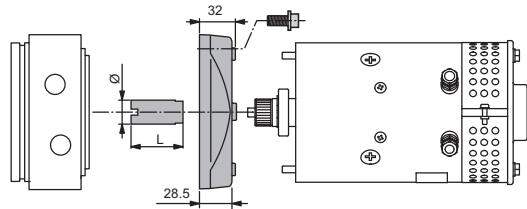
| ** | Transmission kit |         |      |    |
|----|------------------|---------|------|----|
|    | Code             | Pump    | L    | Ø  |
| 02 | KIT08019.028     | Gr. 0.5 | 64.5 | 14 |
|    | KIT08019.025     | Gr. 1   | 48.2 | 14 |

| For DC motors                        |  |  |  |  |
|--------------------------------------|--|--|--|--|
| <b>AA</b> (1500 W - Ø 115 - Page 43) |  |  |  |  |
| <b>EN</b> (1600 W - Ø 115 - Page 43) |  |  |  |  |
| <b>AB</b> (2000 W - Ø 115 - Page 43) |  |  |  |  |
| <b>ES</b> (2200 W - Ø 115 - Page 43) |  |  |  |  |
| <b>GN</b> (1600 W - Ø 115 - Page 44) |  |  |  |  |
| <b>GP</b> (2200 W - Ø 115 - Page 44) |  |  |  |  |



| ** | Transmission kit |       |    |    |
|----|------------------|-------|----|----|
|    | Code             | Pump  | L  | Ø  |
| 03 | KIT08019.029     | Gr. 1 | 28 | 20 |

| For DC motors                        |  |  |  |  |
|--------------------------------------|--|--|--|--|
| <b>GJ</b> (3000 W - Ø 125 - Page 44) |  |  |  |  |
| <b>FB</b> (3000 W - Ø 125 - Page 44) |  |  |  |  |



Note: in ventilated motors (accessory "D" page 44) the transmission is included in the kit ventilation

# Sect. VII - Transmission kit AC motors

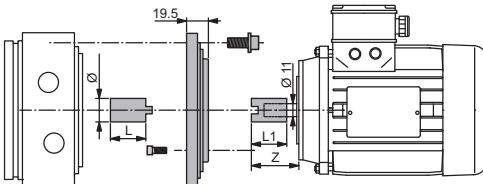
|   |
|---|
| Transmission kit (only for motors on the catalog) |
| Type  |
| End section VII                                   |

Specify the transmission kit whether you requested the joint and accessories assembly (without motor).

MC ..... **T** \*\* -

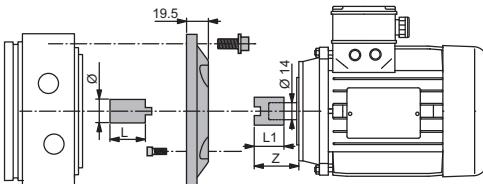
| **        | Transmission kit |         |      |    |      |      |
|-----------|------------------|---------|------|----|------|------|
|           | Code             | Pump    | L    | Ø  | L1   | Z    |
| <b>1R</b> | KIT01008.008     | Gr. 0.5 | 16   | 14 | 49.5 | 62.7 |
|           | KIT01008.014     | Gr. 1   | 19.5 | 20 | 30   | 42.8 |

| For AC motors |             | Page |
|---------------|-------------|------|
| Ref.          | Size        |      |
| <b>R</b>      | 63<br>(B14) | 49   |



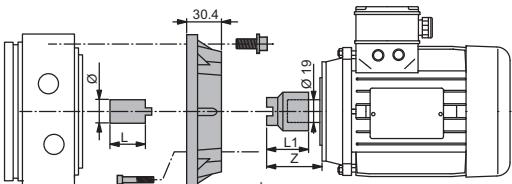
| **        | Transmission kit |         |      |    |      |    |
|-----------|------------------|---------|------|----|------|----|
|           | Code             | Pump    | L    | Ø  | L1   | Z  |
| <b>1L</b> | KIT01008.006     | Gr. 0.5 | 36.1 | 14 | 26.5 | 42 |
|           | KIT01008.001     | Gr. 1   | 19.5 | 20 | 26.5 | 42 |

| For AC motors |             | Page |
|---------------|-------------|------|
| Ref.          | Size        |      |
| <b>L</b>      | 71<br>(B14) | 48   |
|               |             | 49   |



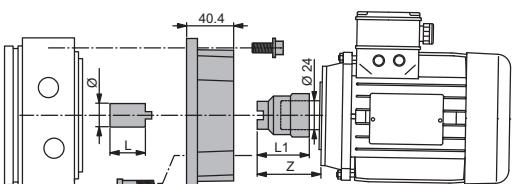
| **        | Transmission kit |         |      |    |    |    |
|-----------|------------------|---------|------|----|----|----|
|           | Code             | Pump    | L    | Ø  | L1 | Z  |
| <b>1M</b> | KIT01008.005     | Gr. 0.5 | 36.1 | 14 | 38 | 53 |
|           | KIT01008.002     | Gr. 1   | 19.5 | 20 | 38 | 53 |

| For AC motors |             | Page |
|---------------|-------------|------|
| Ref.          | Size        |      |
| <b>M</b>      | 80<br>(B14) | 48   |
|               |             | 49   |



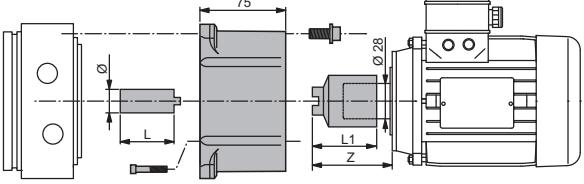
| **        | Transmission kit |         |      |    |      |    |
|-----------|------------------|---------|------|----|------|----|
|           | Code             | Pump    | L    | Ø  | L1   | Z  |
| <b>1N</b> | KIT01008.007     | Gr. 0.5 | 36.1 | 14 | 45.5 | 63 |
|           | KIT01008.003     | Gr. 1   | 19.5 | 20 | 45.5 | 63 |

| For AC motors |             | Page |
|---------------|-------------|------|
| Ref.          | Size        |      |
| <b>N</b>      | 90<br>(B14) | 48   |
|               |             | 49   |



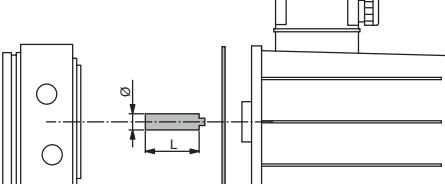
| **        | Transmission kit |         |      |    |    |      |
|-----------|------------------|---------|------|----|----|------|
|           | Code             | Pump    | L    | Ø  | L1 | Z    |
| <b>1P</b> | KIT01008.013     | Gr. 0.5 | 52.7 | 14 | 57 | 81.5 |
|           | KIT01008.004     | Gr. 1   | 36.3 | 20 | 57 | 81.5 |

| For AC motors |                  | Page |
|---------------|------------------|------|
| Ref.          | Size             |      |
| <b>P</b>      | 100-112<br>(B14) | 48   |
|               |                  | 49   |



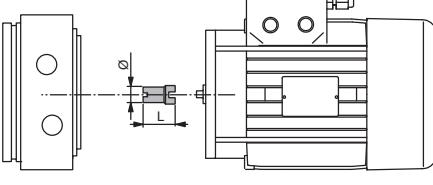
| **        | Transmission kit |         |   |   |      |    |
|-----------|------------------|---------|---|---|------|----|
|           | Code             | Pump    | L | Ø | L1   | Z  |
| <b>1S</b> | KIT01008.130     | Gr. 0.5 |   |   | 53.9 | 14 |
|           | KIT01008.126     | Gr. 1   |   |   | 37.9 | 14 |

| For AC motors |                       | Page |
|---------------|-----------------------|------|
| Ref.          | Size                  |      |
| <b>S</b>      | 71<br>(direct fixing) | 50   |



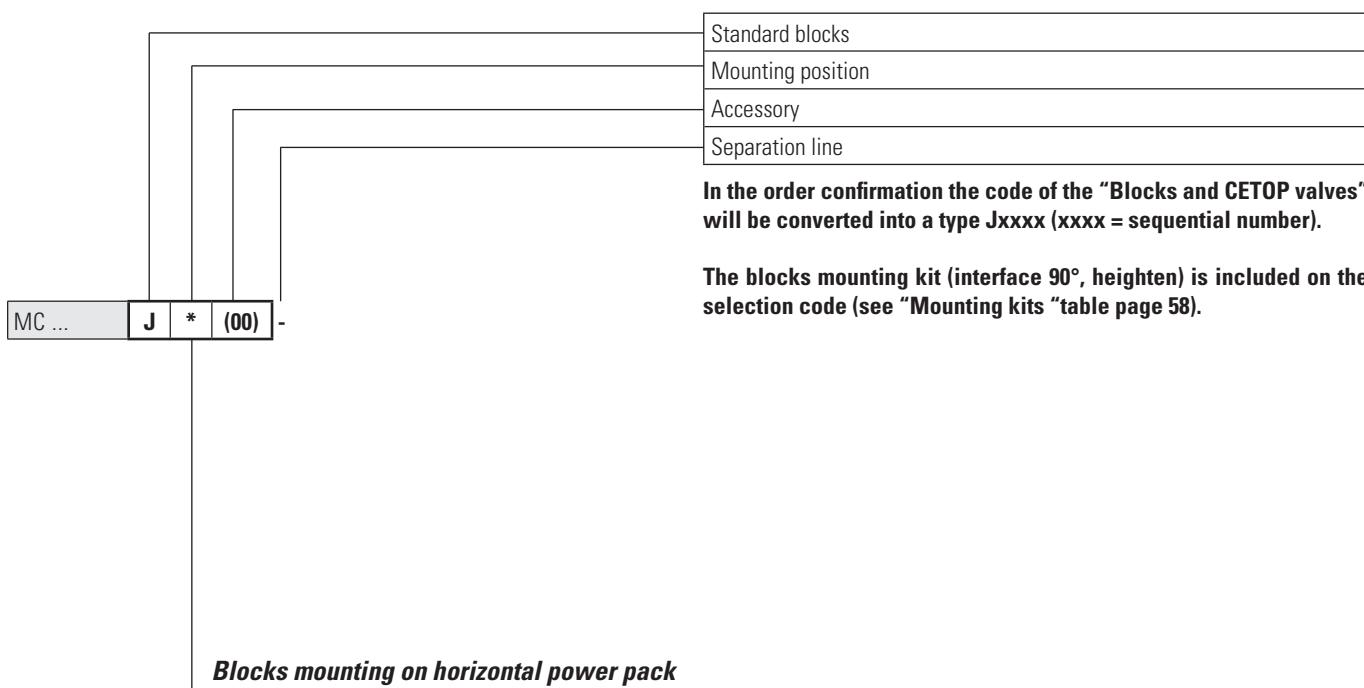
| **        | Transmission kit |       |   |   |      |    |
|-----------|------------------|-------|---|---|------|----|
|           | Code             | Pump  | L | Ø | L1   | Z  |
| <b>1T</b> | KIT01008.131     | Gr. 1 |   |   | 41.5 | 20 |

| For AC motors |                          | Page |
|---------------|--------------------------|------|
| Ref.          | Size                     |      |
| <b>TV</b>     | 80-90<br>(direct fixing) | 51   |

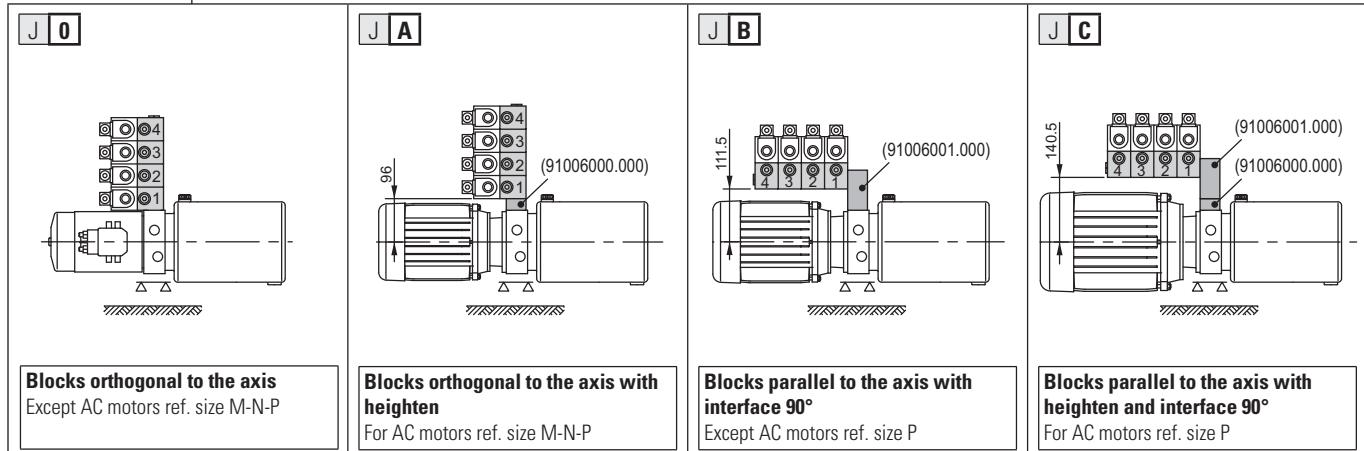


"Z" : dimension of the coupling side motor

# Sect. VIII - Blocks and CETOP valves

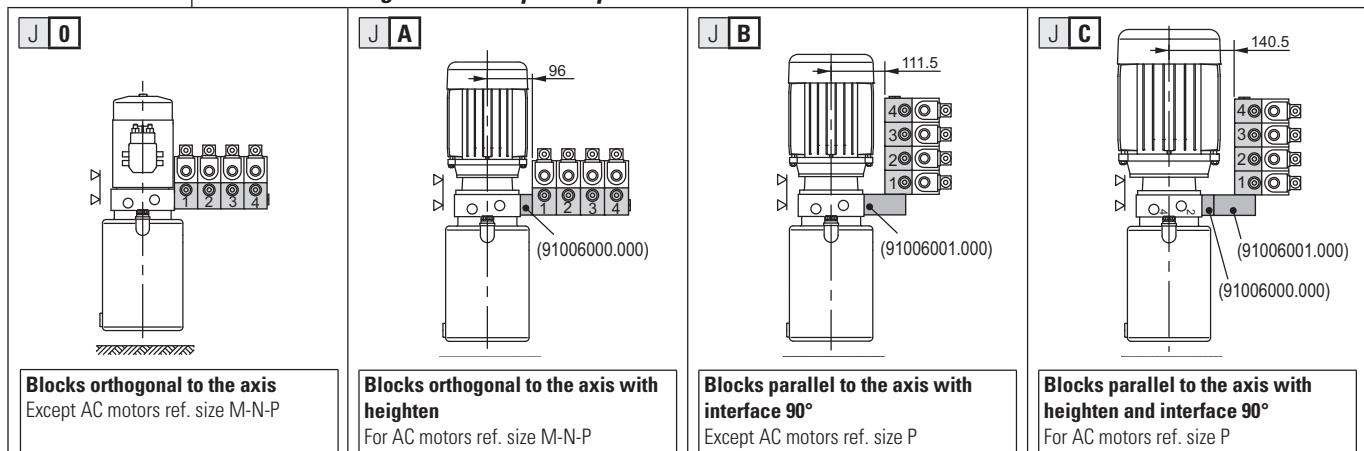


**Blocks mounting on horizontal power pack**



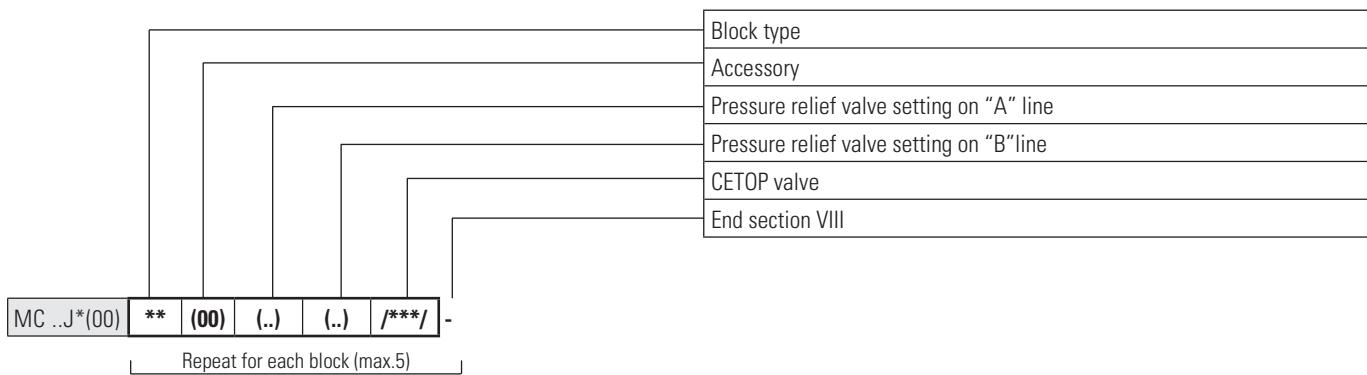
The blocks can not be mounted with motors oriented in position "1" (DC motors, see page 46. AC motors, see page 52).

**Blocks mounting on vertical power pack**



The blocks can not be mounted with motors oriented in position "1" - DC motors, see page 46. AC motors, see page 52.

# Sect. VIII - Blocks and CETOP valves

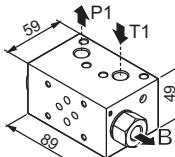
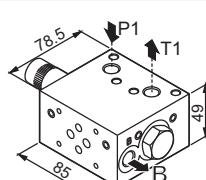
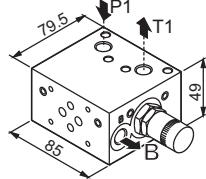
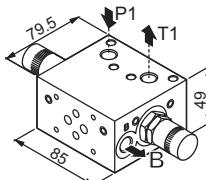
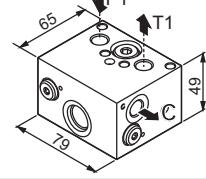
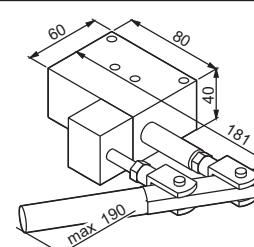


\*\* (00) (..) (..) /\*\*\*/ - **Block type**

| **        | (00) | (..)       | (..)       | Description  | Code         | Drawing | Scheme |
|-----------|------|------------|------------|--|--------------|---------|--------|
| <b>A1</b> | (00) | <b>(0)</b> | <b>(0)</b> | Middle parallel - Lateral ports G1/4"                | 91006002.000 |         |        |
| <b>A2</b> | (00) | <b>(0)</b> | <b>(0)</b> | Middle parallel - Lateral ports G3/8"                | 91006003.000 |         |        |
| <b>B1</b> | (00) | <b>(0)</b> | <b>(0)</b> | Middle series - Lateral ports G1/4"                  | 91006006.000 |         |        |
| <b>B2</b> | (00) | <b>(0)</b> | <b>(0)</b> | Middle series - Lateral ports G3/8"                  | 91006007.000 |         |        |
| <b>C1</b> | (00) | <b>(0)</b> | <b>(0)</b> | End - Lateral ports G1/4"                            | 91006004.000 |         |        |
| <b>C2</b> | (00) | <b>(0)</b> | <b>(0)</b> | End - Lateral ports G3/8"                            | 91006005.000 |         |        |
| <b>D1</b> | (00) | <b>(0)</b> | <b>(0)</b> | With pressure gauge connection - Lateral ports G1/4" | 91006008.000 |         |        |
| <b>D2</b> | (00) | <b>(0)</b> | <b>(0)</b> | With pressure gauge connection - Lateral ports G3/8" | 91006009.000 |         |        |

# Sect. VIII - Blocks and CETOP valves

\*\* (00) (..) (..) /\*\*\*\*/ - **Block type**

| ** | (00) | (..) | (..) | //****/ | - <b>Block type</b> | Description  | Code         | Drawing  | Scheme                |
|----|------|------|------|---------|---------------------|--|--------------|--|-----------------------|
| E1 | (00) | (0)  | (0)  |         |                     | With pilot check valve on "A" port<br>Lateral ports G1/4"  | 91006010.000 |  | P1 T1<br>A P T B      |
| E2 | (00) | (0)  | (0)  |         |                     | With pilot check valve on "B" port<br>Lateral ports G1/4"  | 91006011.000 |    | P1 T1<br>A P T B      |
| E3 | (00) | (0)  | (0)  |         |                     | With pilot check valve on "A" and "B" ports<br>Lateral ports G1/4"                                       | 91006012.000 |  | P1 T1<br>A P T B      |
| F1 | (00) | (A)  | (0)  |         |                     | With pressure relief valve on "A" port<br>Setting 35 ÷ 90 bar - Lateral ports G1/4"                      | 91006013.000 |   | P1 T1<br>A P T B      |
|    |      | (B)  | (0)  |         |                     | With pressure relief valve on "A" port<br>Setting 75 ÷ 190 bar - Lateral ports G1/4"                     | 91006014.000 |  |                       |
|    |      | (C)  | (0)  |         |                     | With pressure relief valve on "A" port<br>Setting 160 ÷ 290 bar - Lateral ports G1/4"                    | 91006015.000 |  |                       |
| F2 | (00) | (0)  | (A)  |         |                     | With pressure relief valve on "B" port<br>Setting 35 ÷ 90 bar - Lateral ports G1/4"                      | 91006016.000 |  | P1 T1<br>A P T B      |
|    |      | (0)  | (B)  |         |                     | With pressure relief valve on "B" port<br>Setting 75 ÷ 190 bar - Lateral ports G1/4"                     | 91006017.000 |  |                       |
|    |      | (0)  | (C)  |         |                     | With pressure relief valve on "B" port<br>Setting 160 ÷ 290 bar - Lateral ports G1/4"                    | 91006018.000 |  |                       |
| F3 | (00) | (A)  | (A)  |         |                     | With pressure relief valve on "A" and "B"<br>Setting 35 ÷ 90 bar - Lateral ports G1/4"                   | 91006019.000 |  | P1 T1<br>A P T B      |
|    |      | (B)  | (B)  |         |                     | With pressure relief valve on "A" and "B"<br>Setting 75 ÷ 190 bar - Lateral ports G1/4"                  | 91006020.000 |  |                       |
|    |      | (C)  | (C)  |         |                     | With pressure relief valve on "A" and "B"<br>Setting 160 ÷ 290 bar - Lateral ports G1/4"                 | 91006021.000 |  |                       |
| G1 | (00) | (0)  | (0)  |         |                     | Block No.13 (CRP04 valves to be ordered separately, see catalogue code. DOC00044)<br>Lateral ports G1/4" | 91006022.000 |  | P1 T1<br>A P T B<br>C |
| K1 | (00) | (0)  | (0)  |         |                     | End - Hand pump  | 91006023.000 |  | R1 R2<br>P1 T         |

## Mounting kits

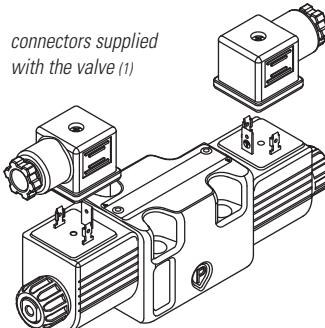
| Mounting kit: blocks                          | For No. blocks | Code     |
|---|----------------|----------|
| Mounting position <b>0-B-C</b>                | 1              | 17070013 |
|   | 2              | 17070015 |
|   | 3              | 17070017 |
|   | 4              | 17070019 |
| Mounting position <b>A</b><br>(with heighten) | 1              | 17070014 |
|   | 2              | 17070016 |
|   | 3              | 17070018 |
|   | 4              | 17070020 |

| Mounting kit: interface 90° | Code     |
|-----------------------------|----------|
| Mounting position <b>B</b>  | 17070022 |

| Mounting kit: interface 90° with heighten | Code     |
|---|----------|
| Mounting position <b>C</b>                | 17070023 |

The blocks mounting kit (interface 90°, heighten) is included on the selection code (see mounting position, page 55).

\*\* (00) (..) (..) /\*\*\*/ - **CETOP 3 valves**



| VIII | /***/ | Voltage       | Code         | Spool (2) |          |        | Screw kit for valve mounting |  |
|------|-------|---------------|--------------|-----------|----------|--------|------------------------------|--|
|      |       |               |              | Type      | Mounting | Scheme |                              |  |
|      | /000/ | Without valve |              |           |          |        |                              |  |
|      | /001/ | 24 VDC (M)    | ADC3E01CM001 | 01        | C        |        | V60513015                    |  |
|      | /002/ | 12 VDC (L)    | ADC3E01CL001 |           |          |        |                              |  |
|      | /003/ | 24 VDC (M)    | ADC3E02CM001 | 02        | C        |        |                              |  |
|      | /004/ | 12 VDC (L)    | ADC3E02CL001 |           |          |        |                              |  |
|      | /005/ | 24 VDC (M)    | ADC3E03CM001 | 03        | C        |        |                              |  |
|      | /006/ | 12 VDC (L)    | ADC3E03CL001 |           |          |        |                              |  |
|      | /007/ | 24 VDC (M)    | ADC3E04CM001 | 04        | C        |        |                              |  |
|      | /008/ | 12 VDC (L)    | ADC3E04CL001 |           |          |        |                              |  |

1 = Valves supplied with connector. Without connector see accessories page 59

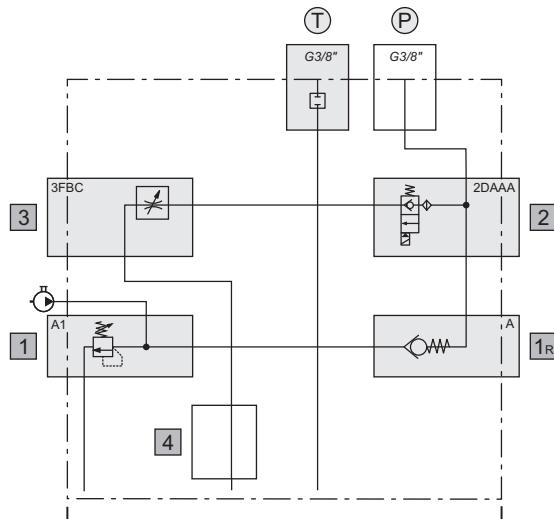
2 = More details, features and performances, see catalog Dana Brevini "Valves and Electronics" code DOC00078

# Sect. IX - Accessories

|          |  | Accessories (optional) |   |   |
|----------|--|------------------------|---|---|
|          |  | First accessory        |   |   |
|          |  | Second accessory       |   |   |
| *        | MC ..... R * *   |                        |   |   |
| *        | Description  | Drawing                | Code  | Note  |
| <b>G</b> | Standard foot, (galvanized sheet steel) thickness 2.5 mm (unassembled) |                        | Kit<br>(foot and screws):<br>17010021                                       | All motors are compatible except orientation / 3<br><br>Tanks compatible (except for orientation / 3)<br>S**A<br>S**B<br>S**C<br>S**G<br>S**L                 |
| <b>B</b> | Non-removable red plastic plug for pressure relief valve (unassembled) |                        | Plug:<br>60309200   |   |
| <b>C</b> | Protection device for DC motors (supplied assembled)                   |                        | Kit<br>(protectin, nut, tierods, washers):<br>17010048                      | For motors:<br>M2EN<br>M4ES<br><br>With blocks, please add the block code 91006000.000  |
| <b>D</b> | High foot, (galvanized sheet steel) thickness 2 mm (unassembled)       |                        | Kit<br>(foot and screws):<br>17010053                                       | All motors are compatible except orientation / 3<br><br>Tanks compatible (except for orientation / 3)<br>S**A<br>S**B<br>S**C<br>S**D<br>S**F<br>S**G<br>S**L |
| <b>E</b> | Collar in welded sheet steel, thickness 2 mm (unassembled)             |                        | Collar:<br>25000300<br><br>Tank fixing kit (screws and O-Ring):<br>17010086 |   |
| <b>F</b> | Without valves connectors  |                        |   |   |

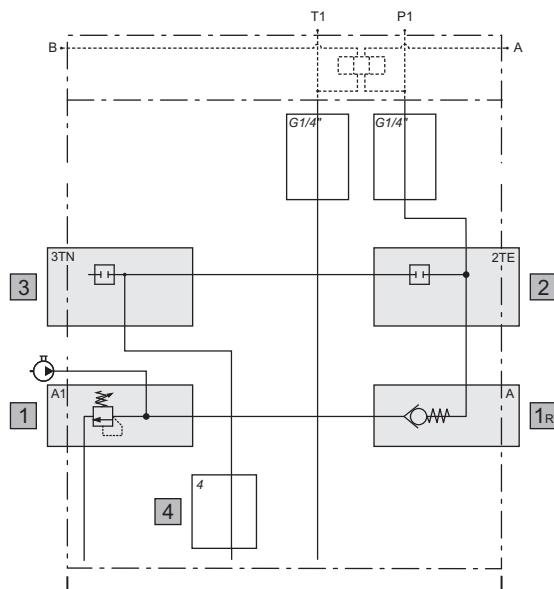
# Examples

## Examples with MCA endhead



MCA | 1 | A1 | A | 2DAAA | 3FBC | -03 | ..

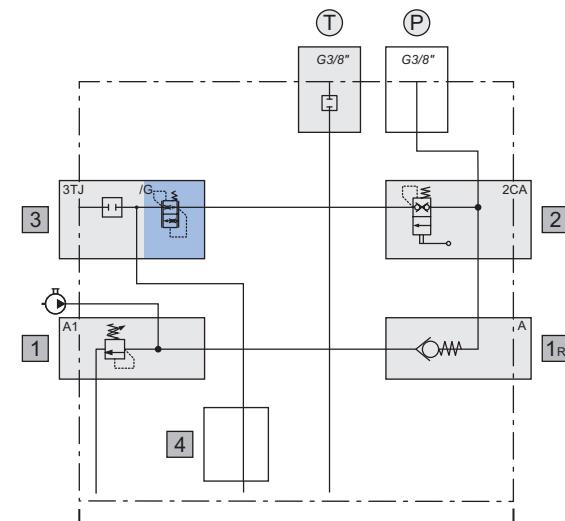
| Cavity | Code         | Description  | Page |
|--------|--------------|--|------|
| -      | <b>1</b>     | Thread ports P-T G3/8"   | 11   |
| 1      | <b>A1</b>    | Pressure relief valve with check valve (15 ÷ 50 bar) with screw and detachable closing, <b>standard</b> setting 50 bar | 12   |
| 1R     | <b>A</b>     | Standard check valve   | 13   |
| 2      | <b>2DAAA</b> | Piloted solenoid valve normally closed, without emergency. Voltage 12 VDC  | 15   |
| 3      | <b>3FBC</b>  | Unidirectional flow control valve compensated  | 18   |
| P-T    | <b>-03</b>   | Combinations plugs on ports (P= open ; T= closed)  | 22   |
| -      | -            | End section  | —    |



MCA | 0 | A1 | A | 2TE | 3TN | -00 | ..

| Cavity | Code       | Description  | Page |
|--------|------------|--|------|
| -      | <b>0</b>   | Thread ports P-T G1/4" (blocks interface)  | 11   |
| 1      | <b>A1</b>  | Pressure relief valve with check valve (15 ÷ 50 bar) with screw and detachable closing, <b>standard</b> setting 50 bar | 12   |
| 1R     | <b>A</b>   | Standard check valve   | 13   |
| 2      | <b>2TE</b> | Long plug 3/4 16 UNF - G1/4"   | 16   |
| 3      | <b>3TN</b> | Plug   | 19   |
| P-T    | <b>-00</b> | Combinations plugs on ports (P= open ; T= open)  | 22   |
| -      | -          | End section  | —    |

## Examples with MCB endhead



MCB | 1 | B1(80) | A | 2CA | 3TJ/G | -03 | ..

| Cavity | Code         | Description   | Page |
|--------|--------------|---|------|
| -      | <b>1</b>     | Thread ports P-T G3/8"  | 11   |
| 1      | <b>B1</b>    | Pressure relief valve with check valve with screw and detachable closing, <b>special</b> setting 80 bar | 12   |
| 1R     | <b>A</b>     | Standard check valve  | 13   |
| 2      | <b>2CA</b>   | Lever operated valve without microswitch  | 15   |
| 3      | <b>3TJ/G</b> | Plug and flow control valve 4.7 l/min   | 20   |
| P-T    | <b>-03</b>   | Combinations plugs on ports (P= open ; T= closed)   | 22   |
| -      | -            | End section   | —    |





**BREVINI®**  
Motion Systems

Code DOC00084 - Rev. 03

**Dana Brevini S.p.A.**  
Via Luciano Brevini 1/a  
42124 Reggio Emilia  
Tel. +39 0522 270711  
Fax +39 0522 270660  
[www.dana.com/brevini](http://www.dana.com/brevini)  
[info@brevinifluidpower.com](mailto:info@brevinifluidpower.com)

