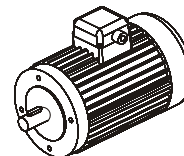


QUICK SELECTION GUIDE

1: AC motors

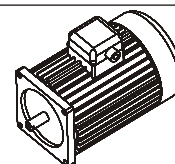


1.1: B14 AC motors (See table U040.40.08)

| B14 AC motor frame size | Typical power range [kW] | Spare flange code | Spare coupling code | Mounting kit code (to be indicated in PPC code) |
|-------------------------|--------------------------|-------------------|--|--|
| 71 | 0,25 ÷ 0,37 | F27010001 | E36100001 + E36100006 E36100001 + E36100000 | XB1471 -0 (gr.0 pumps) XB1471 -1 (gr.1 pumps) |
| 80 | 0,55 ÷ 0,75 | F27010002 | E36100002 + E36100006 E36100002 + E36100000 | XB1480 -0 (gr.0 pumps) XB1480 -1 (gr.1 pumps) |
| 90 | 1,1 ÷ 1,5 | F27010003 | E36100003 + E36100000 | XB1490 (only gr.1 pumps) |
| 100/112 | 2,2 ÷ 7,5 | F27010004 | E36100004 + E36100000 | XB14100 (only gr.1 pumps) |

PPC for B14 motors are normally supplied with mounting kit only. The motor is at customer care.

1.2: AC integral motors three-phase (See tables U040.40.07)



| Integral AC motor frame size | Maximum Power (S3 40%) | | Rated Power (S1 continuous duty) | | Spare motor code | Spare coupling code (only for spare parts orders) |
|--|------------------------|-----|----------------------------------|------|------------------|---|
| | kW | HP | kW | HP | | |
| Three-phase 4 poles (~1450 rpm at 50Hz) | | | | | | |
| 71 | - | - | 0,25 | 0,35 | E025AC341 | E36100006 (gr.0 pumps) E36100000 (gr.1 pumps) |
| | - | - | 0,37 | 0,5 | E037AC341 | |
| | - | - | 0,55 | 0,75 | E055AC341 | |
| | 0,75 | 1 | - | - | E075AC341S3 | |
| 80 | 0,75 | 1 | 0,55 | 0,75 | E075AC342S3 | |
| | 1,1 | 1,5 | 0,75 | 1 | E110AC342S3 | |
| 90 | 1,5 | 2 | 1,1 | 1,5 | E150AC343S3 | |
| | 2,2 | 3 | 1,5 | 2 | E220AC343S3 | |
| | 3 | 4 | 2,2 | 3 | E300AC343S3 | |

Three-phase 2 poles (~2900 rpm at 50Hz)

| | | | | | | |
|----|-----|-----|------|------|-------------|--|
| 71 | - | - | 0,37 | 0,5 | E037AC321 | E36100006 (gr.0 pumps) E36100000 (gr.1 pumps) |
| | - | - | 0,55 | 0,75 | E055AC321 | |
| 80 | 1,1 | 1,5 | 0,75 | 1 | E110AC322S3 | |
| | 1,5 | 2 | 1,1 | 1,5 | E150AC322S3 | |
| | 2,2 | 3 | 1,5 | 2 | E220AC322S3 | |
| 90 | 3 | 4 | 2,2 | 3 | E300AC323S3 | |
| | 4 | 5,4 | 3 | 4 | E400AC323S3 | |

Other power / frame sizes and special motor types are available on request. Motors with codes ending with "S3" are for intermittent duty, S3 40% duty cycle means up to 6 switching on and off in an hour, i.e. the motors is ON for 4 min. and OFF for 6 min.

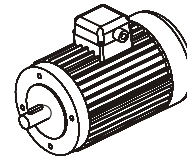
Ask to our technical office: we will offer optimised solutions for either intermittent or heavy duty applications.

In PPC code ordering code just specify the motor power and type and the pump type; the relevant coupling is provided as standard.

When ordering spare motors the coupling is not included and must be ordered separately.

QUICK SELECTION GUIDE

1: AC motors

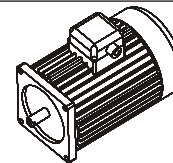


1.1: B14 AC motors (See table U040.40.08)

| B14 AC motor frame size | Typical power range [kW] | Spare flange code | Spare coupling code | Mounting kit code (to be indicated in PPC code) |
|-------------------------|--------------------------|-------------------|--|---|
| 71 | 0,25 ÷ 0,37 | F27010001 | E36100001 + E36100006 E36100001 + E36100000 | XB1471 -0 (gr.0 pumps) -1 (gr.1 pumps) |
| 80 | 0,55 ÷ 0,75 | F27010002 | E36100002 + E36100006 E36100002 + E36100000 | XB1480 -0 (gr.0 pumps) -1 (gr.1 pumps) |
| 90 | 1,1 ÷ 1,5 | F27010003 | E36100003 + E36100000 | XB1490 (only gr.1 pumps) |
| 100/112 | 2,2 ÷ 7,5 | F27010004 | E36100004 + E36100000 | XB14100 (only gr.1 pumps) |

PPC for B14 motors are normally supplied with mounting kit only. The motor is at customer care.

1.2: AC integral motors three-phase (See tables U040.40.07)



| Integral AC motor frame size | Maximum Power (S3 40%) | | Rated Power (S1 continuous duty) | | Spare motor code | Spare coupling code (only for spare parts orders) |
|--|------------------------|-----|----------------------------------|------|------------------|---|
| | kW | HP | kW | HP | | |
| Three-phase 4 poles (~1450 rpm at 50Hz) | | | | | | |
| 71 | - | - | 0,25 | 0,35 | E025AC341 | E36100006 (gr.0 pumps) E36100000 (gr.1 pumps) |
| | - | - | 0,37 | 0,5 | E037AC341 | |
| | - | - | 0,55 | 0,75 | E055AC341 | |
| | 0,75 | 1 | - | - | E075AC341S3 | |
| 80 | 0,75 | 1 | 0,55 | 0,75 | E075AC342S3 | |
| | 1,1 | 1,5 | 0,75 | 1 | E110AC342S3 | |
| 90 | 1,5 | 2 | 1,1 | 1,5 | E150AC343S3 | |
| | 2,2 | 3 | 1,5 | 2 | E220AC343S3 | |
| | 3 | 4 | 2,2 | 3 | E300AC343S3 | |

| | | | | | | |
|--|-----|-----|------|------|-------------|--|
| Three-phase 2 poles (~2900 rpm at 50Hz) | | | | | | |
| 71 | - | - | 0,37 | 0,5 | E037AC321 | E36100006 (gr.0 pumps) E36100000 (gr.1 pumps) |
| | - | - | 0,55 | 0,75 | E055AC321 | |
| 80 | 1,1 | 1,5 | 0,75 | 1 | E110AC322S3 | |
| | 1,5 | 2 | 1,1 | 1,5 | E150AC322S3 | |
| | 2,2 | 3 | 1,5 | 2 | E220AC322S3 | |
| 90 | 3 | 4 | 2,2 | 3 | E300AC323S3 | |
| | 4 | 5,4 | 3 | 4 | E400AC323S3 | |

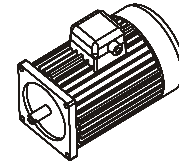
Other power / frame sizes and special motor types are available on request. Motors with codes ending with "S3" are for intermittent duty, S3 40% duty cycle means up to 6 switching on and off in an hour, i.e. the motors is ON for 4 min. and OFF for 6 min.

Ask to our technical office: we will offer optimised solutions for either intermittent or heavy duty applications.

In PPC code ordering code just specify the motor power and type and the pump type; the relevant coupling is provided as standard.

When ordering spare motors the coupling is not included and must be ordered separately.

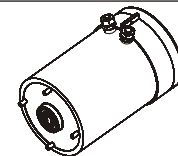
1.3: AC integral motors single-phase (See tables U040.40.07)



| Integral AC motor frame size | Maximum Power (S3 40%) | | Rated Power (S1 continuous duty) | | Spare motor code | Spare coupling code (only for spare parts orders) |
|---|------------------------|------|----------------------------------|------|------------------|---|
| | kW | HP | kW | HP | | |
| Single-phase 4 poles (~1450 rpm at 50Hz) | | | | | | |
| 71 | - | - | 0,25 | 0,35 | E025ACS41 | E36100006 (gr.0 pumps) E36100000 (gr.1 pumps) |
| | - | - | 0,37 | 0,5 | E037ACS41 | |
| 80 | 0,55 | 0,75 | 0,37 | 0,55 | E055ACS42S3 | |
| | 0,75 | 1 | 0,55 | 0,75 | E075ACS42S3 | |
| 90 | 1,1 | 1,5 | - | - | E110ACS43S3 | |
| | 1,5 | 2 | 1,1 | 1,5 | E150ACS43S3 | |
| | 2,2 | 3 | 1,5 | 2 | E220ACS43S3 | |
| Single-phase 2 poles (~2900 rpm at 50Hz) | | | | | | |
| 71 | - | - | 0,37 | 0,5 | E037ACS21 | E36100006 (gr.0 pumps) E36100000 (gr.1 pumps) |
| | - | - | 0,55 | 0,75 | E055ACS21 | |
| 80 | 0,75 | 1 | 0,55 | 0,75 | E075ACS22S3 | |
| | 1,1 | 1,5 | 0,75 | 1 | E110ACS22S3 | |
| | 1,5 | 2 | 1,1 | 1,5 | E150ACS22S3 | |
| 90 | 1,5 | 2 | - | - | E150ACS23S3 | |
| | 2,2 | 3 | 1,5 | 2 | E220ACS23S3 | |

Other power / frame sizes and special motor types are available on request. Motors with codes ending with "S3" are for intermittent duty. S3 40% duty cycle means up to 6 switching on and off in an hour, i.e. the motors is ON for 4 min. and OFF for 6 min. Ask to our technical office: we will offer optimised solutions for either intermittent or heavy duty applications. In PPC code ordering code just specify the motor power and type and the pump type; the relevant coupling is provided as standard. When ordering spare motors the coupling is not included and must be ordered separately.

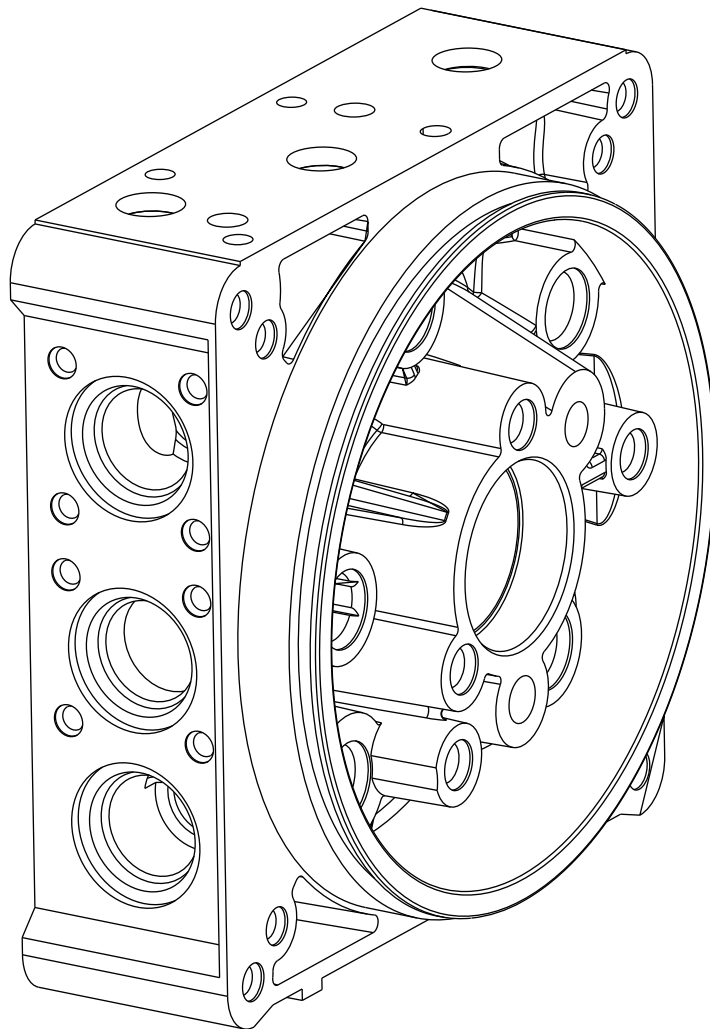
2: DC motors (See tables U040.40.01 ÷ U040.40.06)



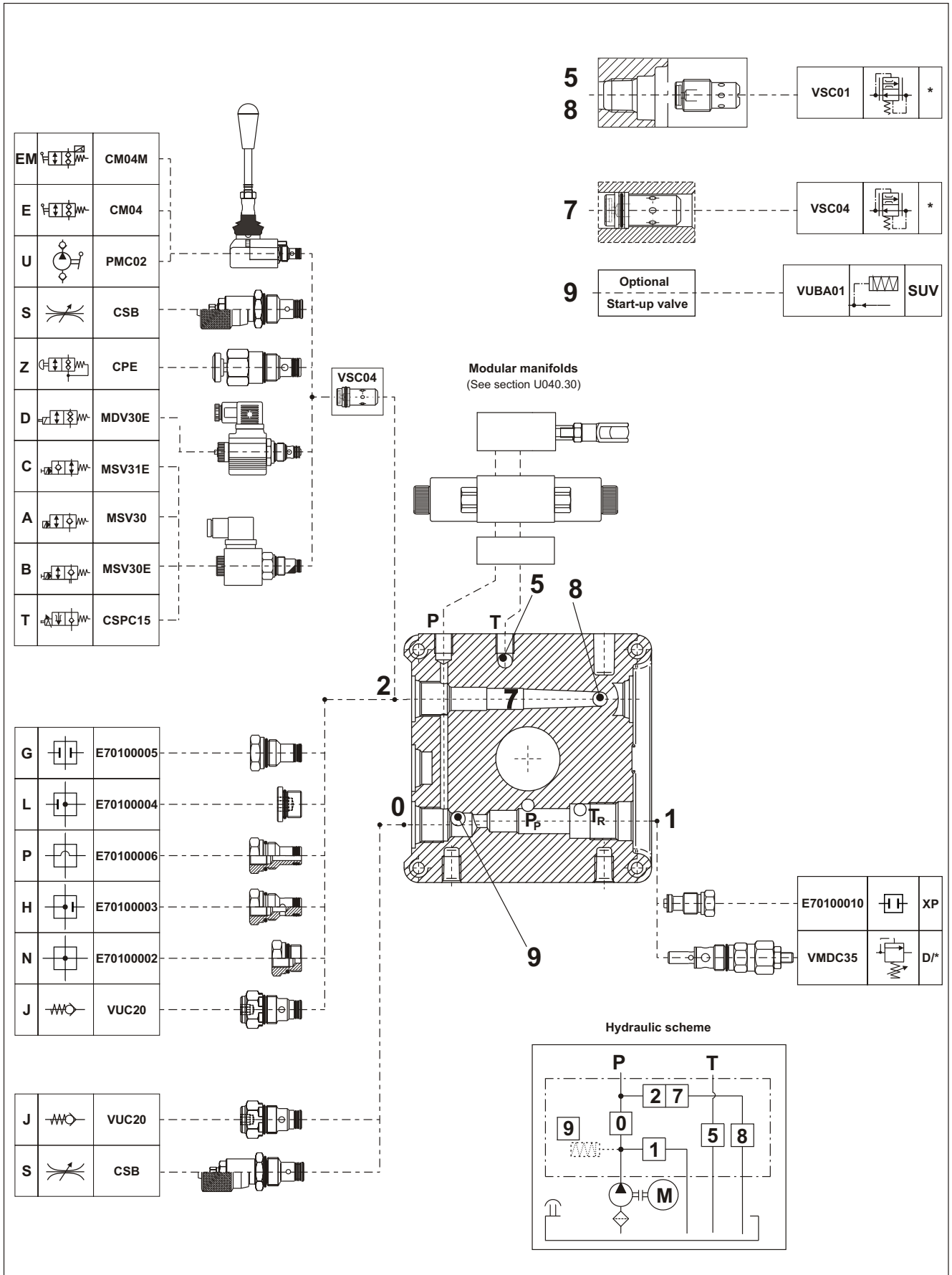
| DC motor frame size | Power kW | Voltage V DC | PPC Assembly code | PPC assembly code (with thermal protection) | Spare motor code | Spare motor code (with thermal protection) | Spare mounting kit code (only for spare parts orders) |
|---------------------|----------|--------------|-------------------|---|------------------|--|---|
| Ø80 | 0,5 | 12 | 0,5 12DC | 0,5 12DC/T | M46C1S005 | M46C1ST05 | E36200006 (gr.0 pumps) E36200002 (gr.1 pumps) |
| | 0,5 | 24 | 0,5 24DC | 0,5 24DC/T | M46C2S005 | M46C1ST05 | |
| | 0,8 | 12 | 0,8 12DC | 0,8 12DC/T | M46C1S008 | M46C1ST08 | |
| | 0,8 | 24 | 0,8 24DC | 0,8 24DC/T | M46C2S008 | M46C2ST08 | |
| Ø112 | 1,6 | 12 | 1,6 12DC | 1,6 12DC/T | M46C1S016 | M46C1ST16 | E36200001 (only for gr.1 pumps) |
| | 2,1 | 12 | - | 2,1 12DC/T | - | M46C1ST21 | |
| | 2,2 | 24 | 2,2 24DC | 2,2 24DC/T | M46C2S022 | M46C2ST22 | |
| Ø125 | 2,4 | 12 | - | 2,4 12DC/T | - | M46C1ST24 | E36200001 (only for gr.1 pumps) |
| | 3,0 | 24 | - | 3 24DC/T | - | M46C2ST30 | |
| Ø151 | 2,5 | 12 | - | 2,5HD 12DC/T | - | MB14C1ST25 | XB1490 |
| | 3,0 | 24 | - | 3HD 24DC/T | - | MB14C2ST30 | |
| | 4,0 | 24 | - | 4HD 24DC/T | - | MB14C2ST40 | |

Section 10

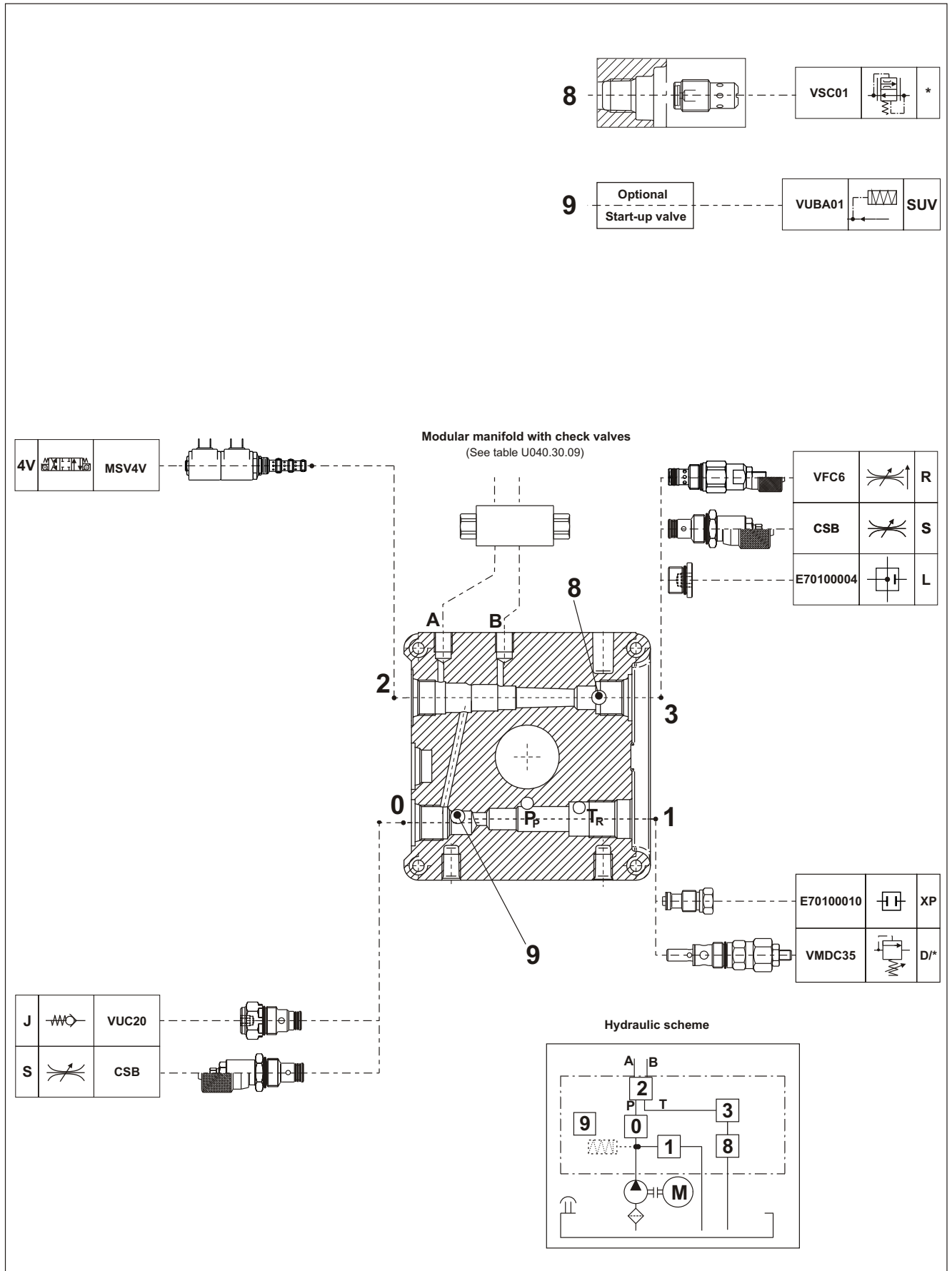
UNIVERSAL CENTRAL MANIFOLD



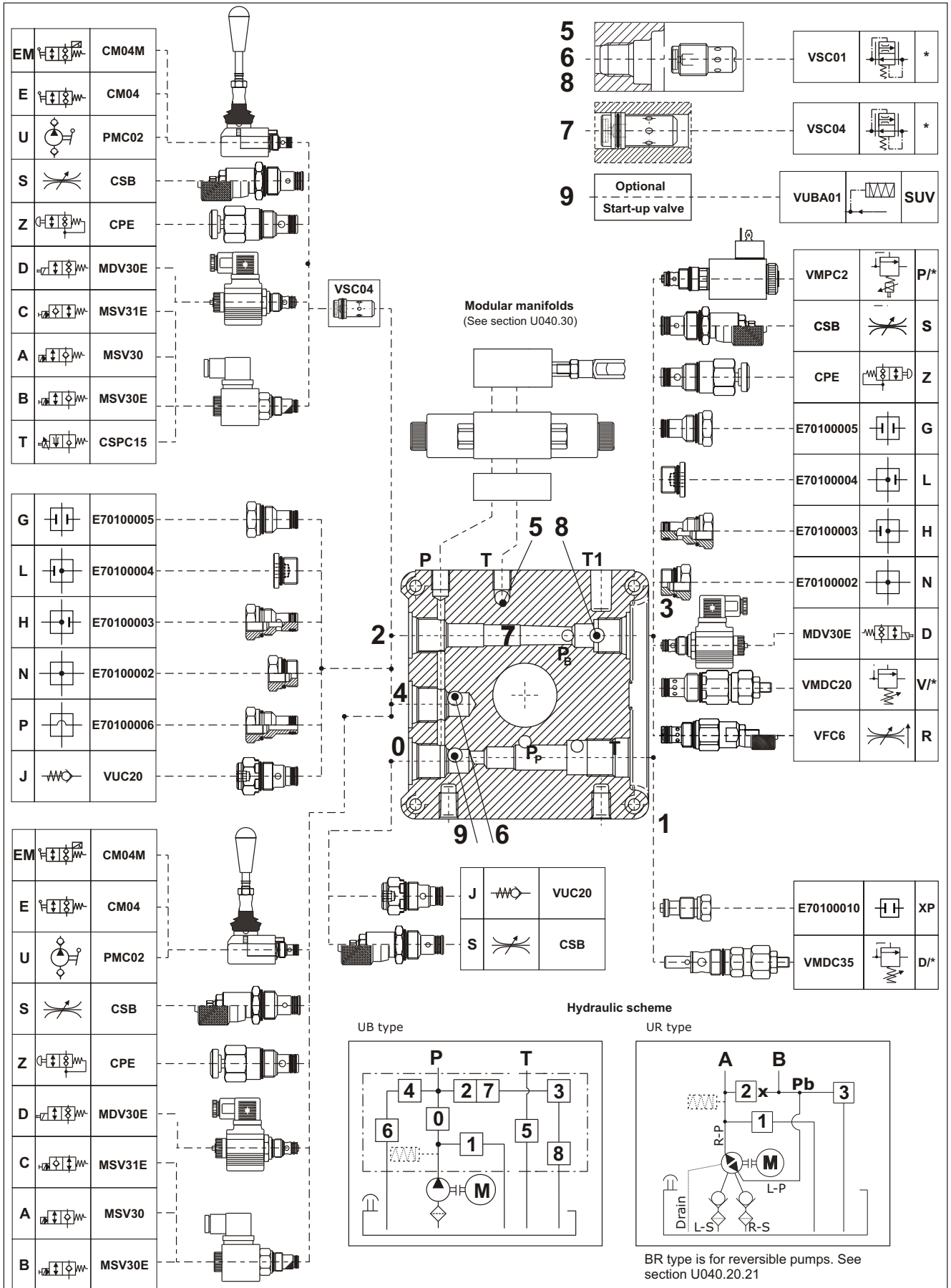
Universal central manifold "UA" execution valve combinations



Universal central manifold "U4" execution valve combinations

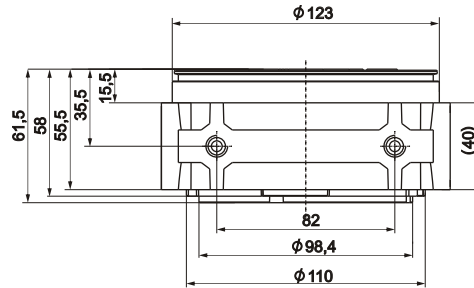


Universal central manifold "UB" and "UR" execution valve combinations

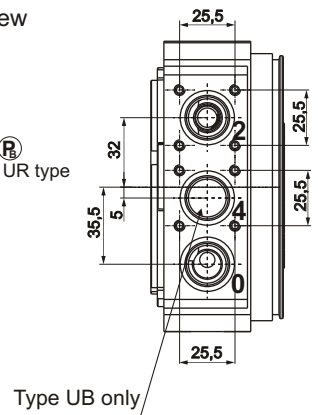
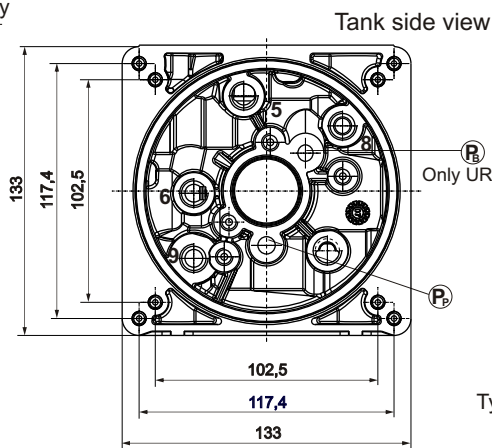
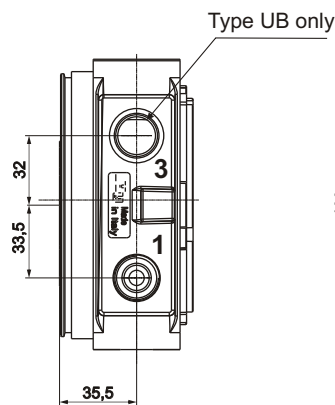


Universal central manifolds overall dimensions

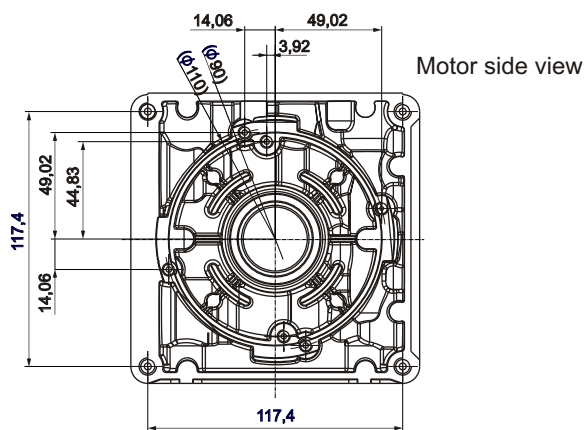
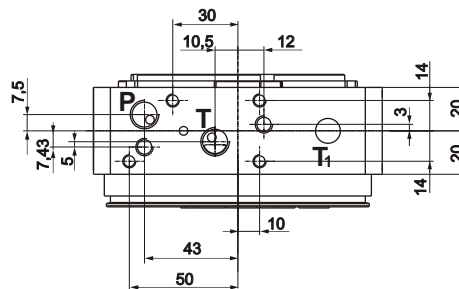
| Type | Spare part code |
|------|-----------------|
| UA | E60104020 |
| UB | E60104021 |
| U4 | E60104022 |
| UR | E60104023 |



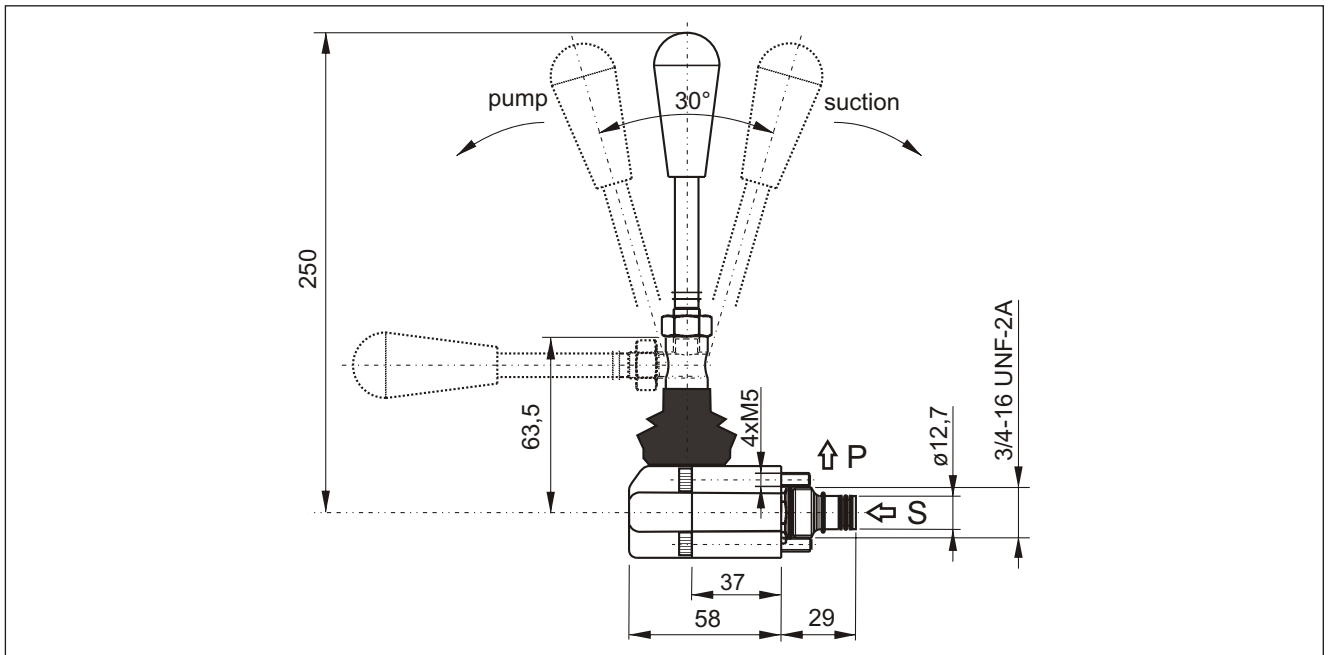
Weight: 1,10 kg



| Cavity | Threads |
|--|--|
| 1 | M20 x 1,5 (relief valve) |
| 0,2,3,4 | 3/4-16 UNF |
| P-T | 1/4" BSPP |
| T ₁ | 1/4" BSPP (threaded on request only) |
| 5,6,8,9 | 1/4" BSPP (9 threaded on request only) |
| External manifold attachments | 2 x M8 4 x M6 |
| Tanks attachments | 4 x M6X14 |
| Integral AC Motors attachments | 4 x M8X25 |
| DC Motors attachments | 2 x M6x14 or M6 tie rods |
| Pump attachments | 2 x M8 (see pump lenght on the relevant tables) |
| Foot mounting support attachments | 2 x M10X18 |
| PMC hand pump / CM lever valve cap attachments | 2 x M5x45 |



PMC - Cartridge hand pump



Spare part code

- PMC** — Hand pump
- 02** — Nominal size:
02 = 2 cc/stroke
- L** — Type:
L = lever (std)

PPC assembly code field

U

Mounting cavities

| | | | |
|---|---|---|---|
| 0 | 1 | | |
| 2 | 3 | 4 | |
| 5 | 6 | 7 | 8 |

Note: cavities 3, 4 and 6 are present on central manifold type UB only.

Hydraulic symbol

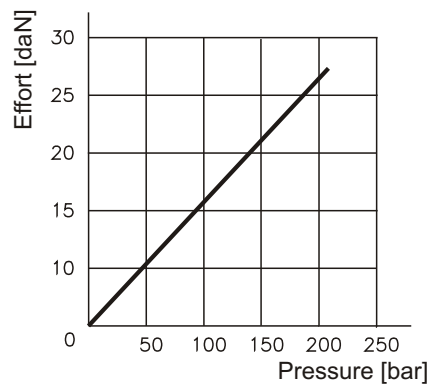


Main features

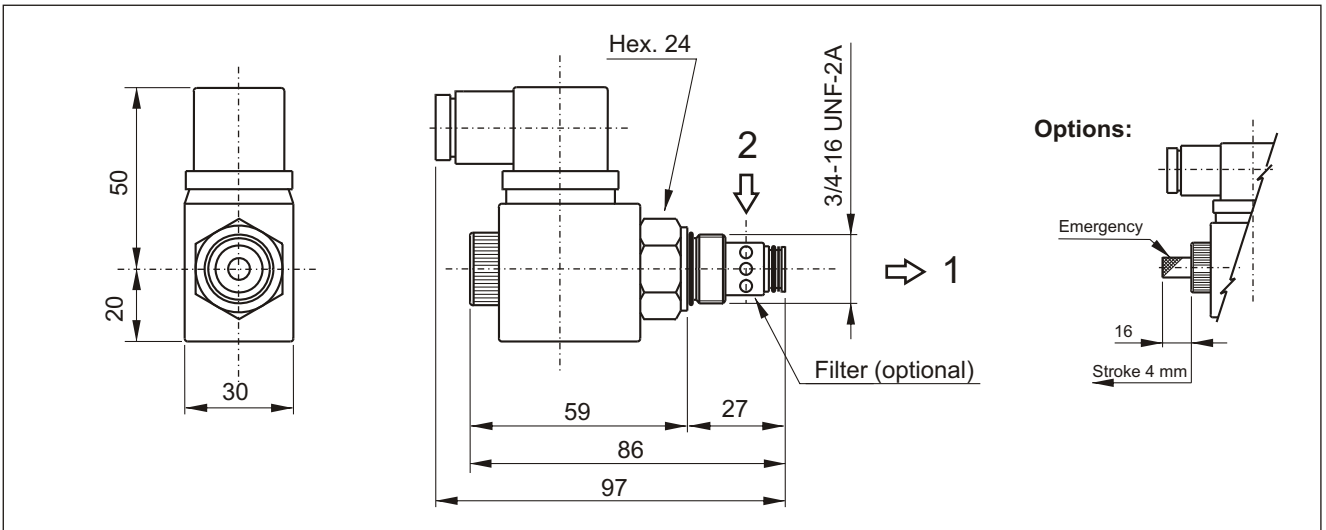
| | |
|---------------------|---------|
| Max pressure | 200 bar |
| Max flow | - |
| Weight | 0,34 Kg |

Fixing bolts: 4x M5x45 (tightening torque: 5 Nm)
 Recommended cartridge tightening torque: 15 Nm
 Recommended filtration settings: 25 + 50 μ
 Oil temperature: -30 + + 80 °C

Effort (daN) operating on the lever end



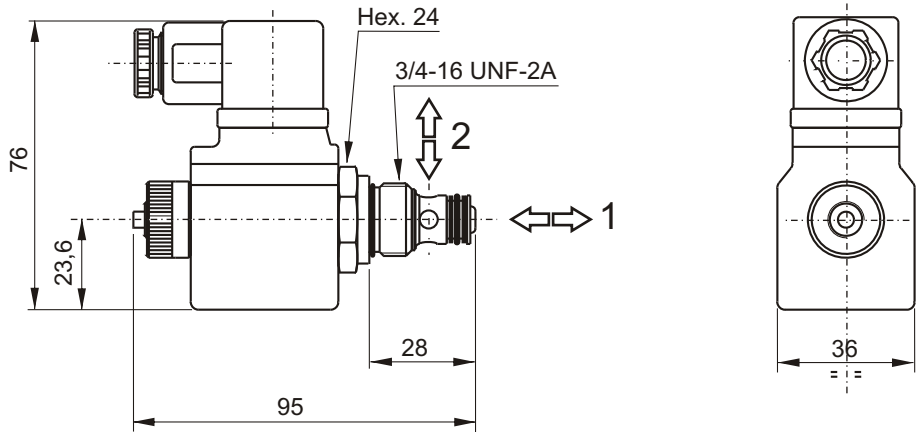
MSV - Pilot operated two-way single locking solenoid valve



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|---|---|---|---|---|---|---|---|--|--------------|-------------------------|----------|----------|--------|---------------------|-------------------------|--------------------|---------------------|------------------------|------------------------|-------------------|------------|-------------------|------------------|-------------------------|------------|--|
| <p>Spare part code</p> <p>MSV — Two-way pilot operated solenoid valve</p> <p>30 — Operation: 30 = normally closed 31 = normally open</p> <p>0 — Options: 0 = no options (std) E = emergency</p> <p>0000 — Supply voltage: 0000 = no coil (std) see below table</p> | <p>PPC assembly code field</p> <p>A (MSV30) Voltage B (MSV30E) Voltage C (MSV31E) Voltage</p> <p>Ex: A12DC</p> <p>Mounting cavities</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>0</td><td>1</td></tr> <tr><td>2</td><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td></tr> </table> <p>Note: cavities 3, 4 and 6 are present on central manifold type UB only.</p> | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | <p>Hydraulic symbol</p> <p>MSV30 MSV30E MSV31E</p> <p>Main features</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Max pressure</td><td>210 bar (up to 300bar*)</td></tr> <tr><td>Max flow</td><td>20 l/min</td></tr> <tr><td>Weight</td><td>0,27 Kg (with coil)</td></tr> <tr><td>Coil thermal insulation</td><td>Class F (Class H*)</td></tr> <tr><td>Electric connection</td><td>DIN 43650-A / ISO 4400</td></tr> <tr><td>Coil protection degree</td><td>IP 65 / DIN 40050</td></tr> <tr><td>Duty cycle</td><td>ED 75% (ED 100%*)</td></tr> <tr><td>Voltage required</td><td>+/- 10% nominal voltage</td></tr> <tr><td>Normatives</td><td>EN50081-1/EN50082-2 (89/336 CEE electromagnetic comp.) 73/23/CEE / 96/68/CEE (low voltage)</td></tr> </table> <p>*: with M140 series coils only. See table U040.20.12 coils selection. The max flow/max pressure cannot be achieved at the same time.</p> | Max pressure | 210 bar (up to 300bar*) | Max flow | 20 l/min | Weight | 0,27 Kg (with coil) | Coil thermal insulation | Class F (Class H*) | Electric connection | DIN 43650-A / ISO 4400 | Coil protection degree | IP 65 / DIN 40050 | Duty cycle | ED 75% (ED 100%*) | Voltage required | +/- 10% nominal voltage | Normatives | EN50081-1/EN50082-2 (89/336 CEE electromagnetic comp.) 73/23/CEE / 96/68/CEE (low voltage) |
| 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 6 | 7 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max pressure | 210 bar (up to 300bar*) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Max flow | 20 l/min | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weight | 0,27 Kg (with coil) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coil thermal insulation | Class F (Class H*) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electric connection | DIN 43650-A / ISO 4400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coil protection degree | IP 65 / DIN 40050 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Duty cycle | ED 75% (ED 100%*) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Voltage required | +/- 10% nominal voltage | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Normatives | EN50081-1/EN50082-2 (89/336 CEE electromagnetic comp.) 73/23/CEE / 96/68/CEE (low voltage) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| <p>Coils selection</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Supply voltage (V)</th> <th>Coil type</th> <th>Spare coil code</th> <th>Spare connector code</th> <th>Holding power consumption</th> </tr> </thead> <tbody> <tr><td>12DC</td><td>12DC</td><td>M13040001</td><td>KA132000B1</td><td>18W</td></tr> <tr><td>24DC</td><td>24DC</td><td>M13040002</td><td>KA132000B1</td><td>18W</td></tr> <tr><td>24AC/ 50 Hz / 60 Hz</td><td>24DC</td><td>M13040002</td><td>KA132R11B1</td><td>18W</td></tr> <tr><td>115AC/ 50 Hz / 60 Hz</td><td>110RC</td><td>M13040004</td><td>KA132R12B1</td><td>18W</td></tr> <tr><td>230AC/ 50 Hz / 60 Hz</td><td>220RC</td><td>M13040005</td><td>KA132R13B1</td><td>18W</td></tr> <tr><td>115AC/50Hz*</td><td>115/50AC</td><td>M13040006</td><td>KA132000B1</td><td>28VA</td></tr> <tr><td>230AC/50Hz*</td><td>230/50AC</td><td>M13040007</td><td>KA132000B1</td><td>28VA</td></tr> </tbody> </table> <p>*Only for MSV30*NC valves. Other voltages and electric connectors types (Amp Juior, flying leads,...) are available on request. Inrush power consumption can be up to 3,5 times higher than the holding one.</p> | Supply voltage (V) | Coil type | Spare coil code | Spare connector code | Holding power consumption | 12DC | 12DC | M13040001 | KA132000B1 | 18W | 24DC | 24DC | M13040002 | KA132000B1 | 18W | 24AC/ 50 Hz / 60 Hz | 24DC | M13040002 | KA132R11B1 | 18W | 115AC/ 50 Hz / 60 Hz | 110RC | M13040004 | KA132R12B1 | 18W | 230AC/ 50 Hz / 60 Hz | 220RC | M13040005 | KA132R13B1 | 18W | 115AC/50Hz* | 115/50AC | M13040006 | KA132000B1 | 28VA | 230AC/50Hz* | 230/50AC | M13040007 | KA132000B1 | 28VA | <p>Recommended tightening torque: 45 Nm Recommended filtration settings: 25 + 50 μ Oil temperature: -30 + + 80 °C</p> <p>Pressure drop diagram</p> <p>Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature</p> |
|---|--------------------|-----------------|----------------------|---------------------------|---------------------------|------|------|-----------|------------|-----|------|------|-----------|------------|-----|---------------------|------|-----------|------------|-----|----------------------|-------|-----------|------------|-----|----------------------|-------|-----------|------------|-----|-------------|----------|-----------|------------|------|-------------|----------|-----------|------------|------|---|
| Supply voltage (V) | Coil type | Spare coil code | Spare connector code | Holding power consumption | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12DC | 12DC | M13040001 | KA132000B1 | 18W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24DC | 24DC | M13040002 | KA132000B1 | 18W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24AC/ 50 Hz / 60 Hz | 24DC | M13040002 | KA132R11B1 | 18W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115AC/ 50 Hz / 60 Hz | 110RC | M13040004 | KA132R12B1 | 18W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 230AC/ 50 Hz / 60 Hz | 220RC | M13040005 | KA132R13B1 | 18W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115AC/50Hz* | 115/50AC | M13040006 | KA132000B1 | 28VA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 230AC/50Hz* | 230/50AC | M13040007 | KA132000B1 | 28VA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

MDV - Direct operated two-way double blocking solenoid valve



Spare part code

- MDV** — Two-way double blocking solenoid valve
- 30** — Operation:
30 = normally closed
- E** — Options:
E = emergency (std)
- 0000** — Supply voltage:
0000 = no coil (std)
see below table

PPC assembly code field

D Voltage

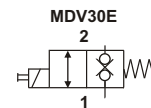
Ex: D24DC

Mounting cavities

| | |
|---|-------|
| 0 | 1 |
| 2 | 3 4 |
| 5 | 6 7 8 |

Note: cavities 3, 4 and 6 are present on central manifold type UB only.

Hydraulic symbol



Main features

| | |
|-------------------------|--|
| Max pressure | 250 bar |
| Max flow | 15 l/min |
| Weight | 0,34 Kg (with coil) |
| Coil thermal insulation | Class H |
| Electric connection | DIN 43650-A / ISO 4400 |
| Coil protection degree | IP 65 / DIN 40050 |
| Duty cycle | ED 100% |
| Voltage required | +/- 10% nominal voltage |
| Normatives | EN50081-1/EN50082-2 (89/336 CEE electromagnetic comp.) 73/23/CEE / 96/68/CEE (low voltage) |

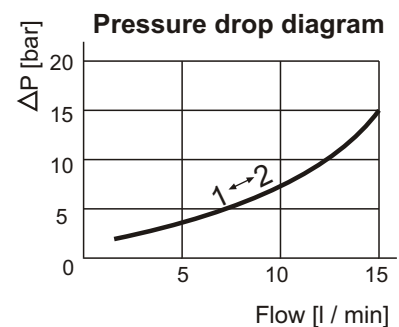
Note: On request version with max flow 25 l/min and max pressure 210 bar is available.

Coils selection

| Supply voltage (V) | Coil type | Spare coil code | Spare connector code | Holding power consumption |
|-----------------------|-----------|-----------------|----------------------|---------------------------|
| 12DC | 12DC | M14040001 | KA132000B1 | 22W |
| 24DC | 24DC | M14040002 | KA132000B1 | 22W |
| 24AC/ 50 Hz 60 Hz | 24DC | M14040002 | KA132R11B1 | 22W |
| 115AC/ 50 Hz 60 Hz | 110RC | M14040004 | KA132R12B1 | 22W |
| 230AC/ 50 Hz 60 Hz | 220RC | M14040005 | KA132R13B1 | 22W |

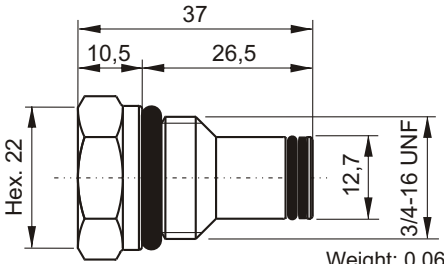

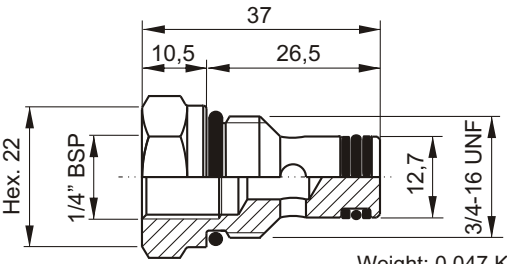
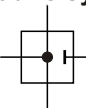
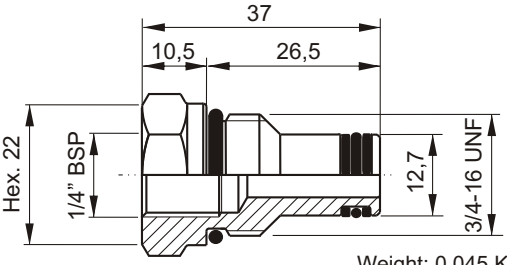
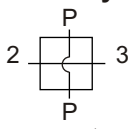
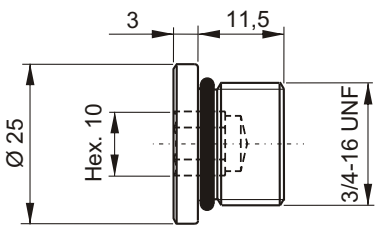
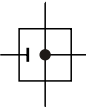
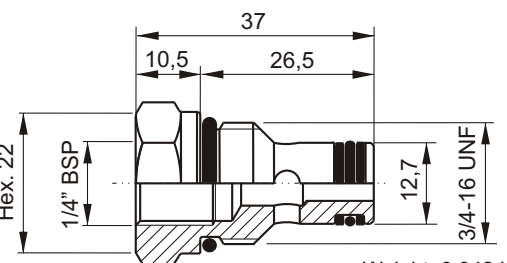
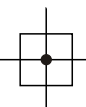
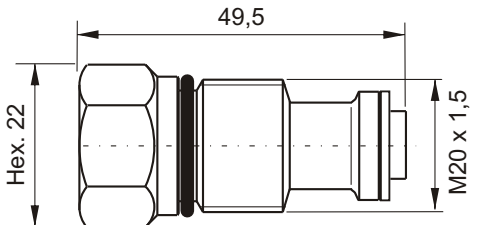
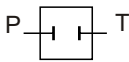
Other voltages and electric connectors types (Amp Junior, flying leads,...) available on request.
 Inrush power consumption can be up to 3,5 times higher than the holding one.

Recommended tightening torque: 45 Nm
 Recommended filtration settings: 25 + 50 μ
 Oil temperature: -30 + + 80 °C



Note: Values measured on valve alone (no cavity) with an oil viscosity of 46 cSt at 50 °C. Pressure drop may change depending on fluid viscosity and temperature

Plugs

| | | | | | | | | | | | | |
|---|--|---|---|---|--|---|---|---|---|---|---|---|
|  <p>Weight: 0,066 Kg</p> | <p>Hydraulic symbol</p>  <p>Spare part code</p> <p>E70100005</p> | <p>PPC assembly code</p> <p>G</p> <p>Mounting cavities</p> <table border="1" data-bbox="1182 472 1358 593"> <tr><td>0</td><td>1</td><td></td></tr> <tr><td>2</td><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td></tr> </table> | 0 | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 0 | 1 | | | | | | | | | | | |
| 2 | 3 | 4 | | | | | | | | | | |
| 5 | 6 | 7 | 8 | | | | | | | | | |
|  <p>Weight: 0,047 Kg</p> | <p>Hydraulic symbol</p>  <p>Spare part code</p> <p>E70100003</p> | <p>PPC assembly code</p> <p>H</p> <p>Mounting cavities</p> <table border="1" data-bbox="1182 763 1358 884"> <tr><td>0</td><td>1</td><td></td></tr> <tr><td>2</td><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td></tr> </table> | 0 | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 0 | 1 | | | | | | | | | | | |
| 2 | 3 | 4 | | | | | | | | | | |
| 5 | 6 | 7 | 8 | | | | | | | | | |
|  <p>Weight: 0,045 Kg</p> | <p>Hydraulic symbol</p>  <p>Spare part code</p> <p>E70100006</p> | <p>PPC assembly code</p> <p>P</p> <p>Mounting cavities</p> <table border="1" data-bbox="1182 1048 1358 1169"> <tr><td>0</td><td>1</td><td></td></tr> <tr><td>2</td><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td></tr> </table> | 0 | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 0 | 1 | | | | | | | | | | | |
| 2 | 3 | 4 | | | | | | | | | | |
| 5 | 6 | 7 | 8 | | | | | | | | | |
|  <p>Weight: 0,027 Kg</p> | <p>Hydraulic symbol</p>  <p>Spare part code</p> <p>E70100004</p> | <p>PPC assembly code</p> <p>L</p> <p>Mounting cavities</p> <table border="1" data-bbox="1182 1346 1358 1467"> <tr><td>0</td><td>1</td><td></td></tr> <tr><td>2</td><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td></tr> </table> | 0 | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 0 | 1 | | | | | | | | | | | |
| 2 | 3 | 4 | | | | | | | | | | |
| 5 | 6 | 7 | 8 | | | | | | | | | |
|  <p>Weight: 0,042 Kg</p> | <p>Hydraulic symbol</p>  <p>Spare part code</p> <p>E70100002</p> | <p>PPC assembly code</p> <p>N</p> <p>Mounting cavities</p> <table border="1" data-bbox="1182 1637 1358 1758"> <tr><td>0</td><td>1</td><td></td></tr> <tr><td>2</td><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td></tr> </table> | 0 | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 0 | 1 | | | | | | | | | | | |
| 2 | 3 | 4 | | | | | | | | | | |
| 5 | 6 | 7 | 8 | | | | | | | | | |
|  <p>Weight: 0,110 Kg</p> | <p>Hydraulic symbol</p>  <p>Spare part code</p> <p>E70100010</p> | <p>PPC assembly code</p> <p>XP</p> <p>Mounting cavities</p> <table border="1" data-bbox="1182 1928 1358 2049"> <tr><td>0</td><td>1</td><td></td></tr> <tr><td>2</td><td>3</td><td>4</td></tr> <tr><td>5</td><td>6</td><td>7</td><td>8</td></tr> </table> | 0 | 1 | | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 0 | 1 | | | | | | | | | | | |
| 2 | 3 | 4 | | | | | | | | | | |
| 5 | 6 | 7 | 8 | | | | | | | | | |

Note: cavities 3, 4 and 6 are present on central manifold type UB only.

PM09 hand pump modular manifold

Spare part code

PM09

Crowded deepness: 39mm

Weight: 1,62 kg
 Fixing system: 2xM8 tie-rods
 Material class: min. 8.8 or equivalent

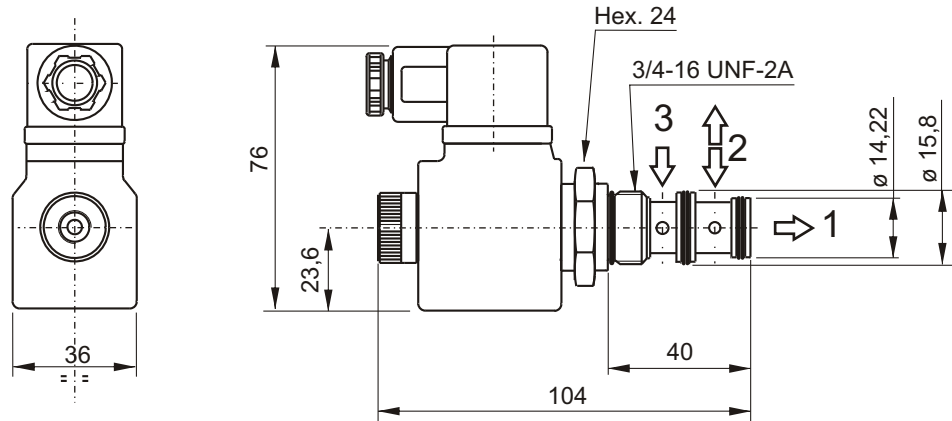
Mounting example

| | |
|--------------------------|--------------------------|
| Max pressure | 210 bar |
| Displacement | 8,8 cc/stroke |
| Fixing bolts | 2 x M8 (8.8 class steel) |
| Filtration grade | 25 ÷ 50 µ |
| Temperature range | -20 ÷ +70°C |

Recommended tightening torque for M8 bolts: 16 Nm.

Commissioning: the pump must be bled by opening the plug of the unused pressure port (P o P1), pumping a few times until oil comes out, then tightening the plug again.

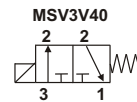
MSV3V - Direct operated 3/2 way directional spool solenoid valve



Spare part code

- MSV3V** — Three-way pilot operated solenoid valve
- 40** — Spool type: 40 = std
- 0** — Options: 0 = no options (std) E = emergency
- 0000** — Supply voltage: 0000 = no coil (std) see below table

Hydraulic symbol



Main features

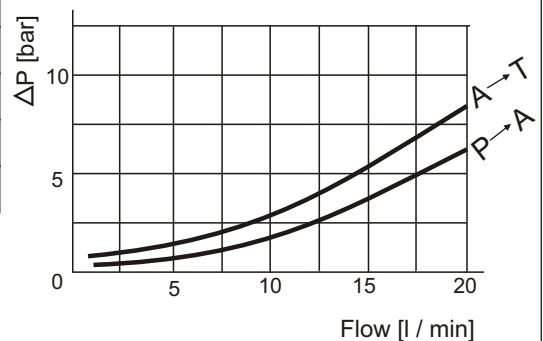
| | |
|-------------------------------|-----------------------------------|
| Max pressure | 210 bar |
| Max flow | 12 l/min (20 l/min with no block) |
| Weight | 0,35 Kg (with coil) |
| Coil thermal insulation | Class H |
| Electric connector | DIN 43650-A/ISO 4400 |
| Coil protection class | IP 65/DIN 40050 |
| Duty cycle | ED 100 % |
| Voltage required | +/- 10% nominal voltage |
| Recommended tightening torque | 30 Nm |
| Oil temperature | -25 ÷ +70°C |

Coils selection

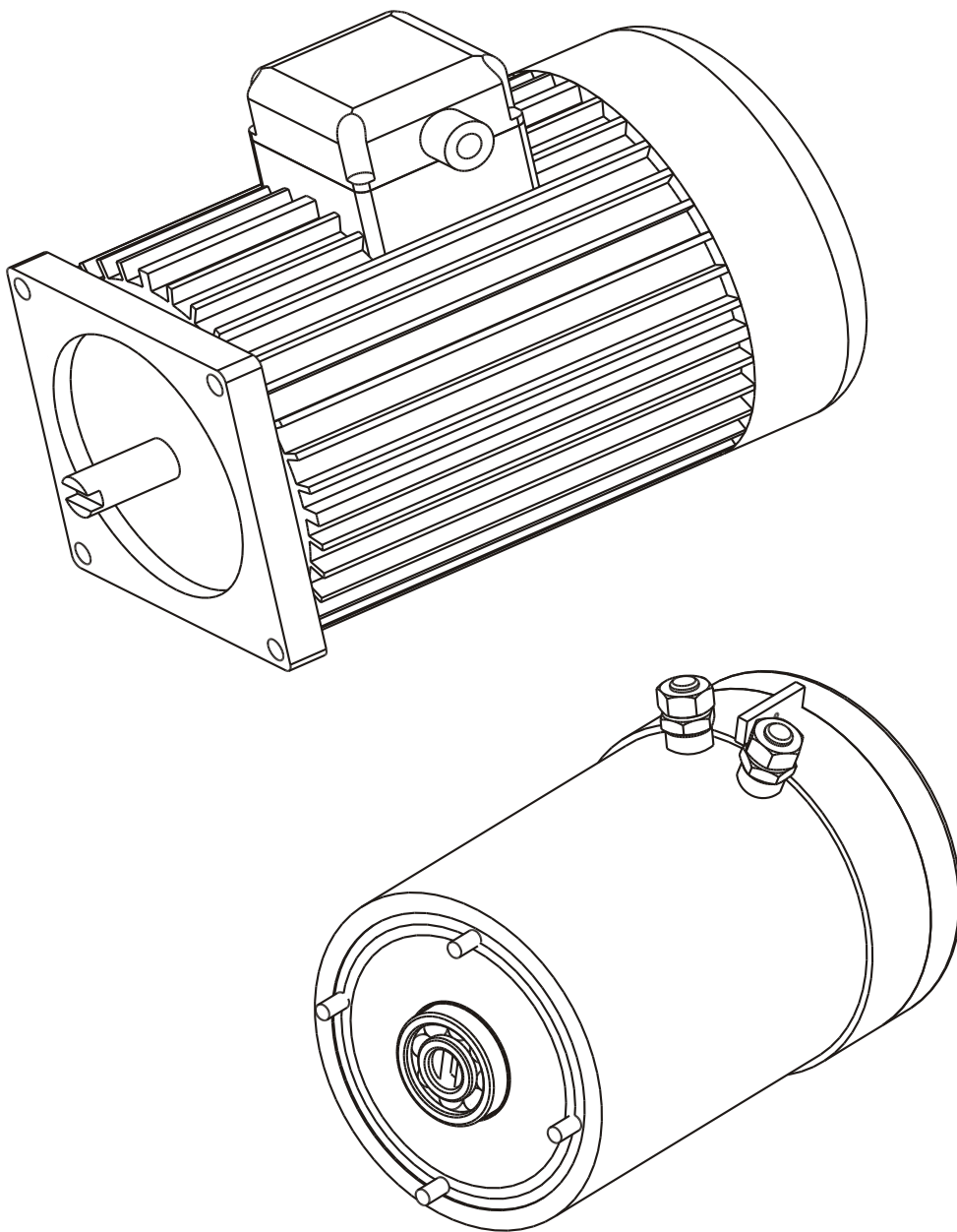
| Supply voltage (V) | Coil type | Spare coil code | Spare connector code | Holding power consumption |
|----------------------|-----------|-----------------|----------------------|---------------------------|
| 12DC | 12DC | M14040001 | KA132000B1 | 22W |
| 24DC | 24DC | M14040002 | KA132000B1 | 22W |
| 24AC/50 Hz 60 Hz | 24DC | M14040002 | KA132R11B1 | 22W |
| 115AC/50 Hz 60 Hz | 110RC | M14040004 | KA132R12B1 | 22W |
| 230AC/50 Hz 60 Hz | 220RC | M14040005 | KA132R13B1 | 22W |

Other voltages and electric connectors types (AMP JUNIOR, flying leads,...) are available on request.
Inrush power consumption can be up to 3,5 times higher than the holding one.

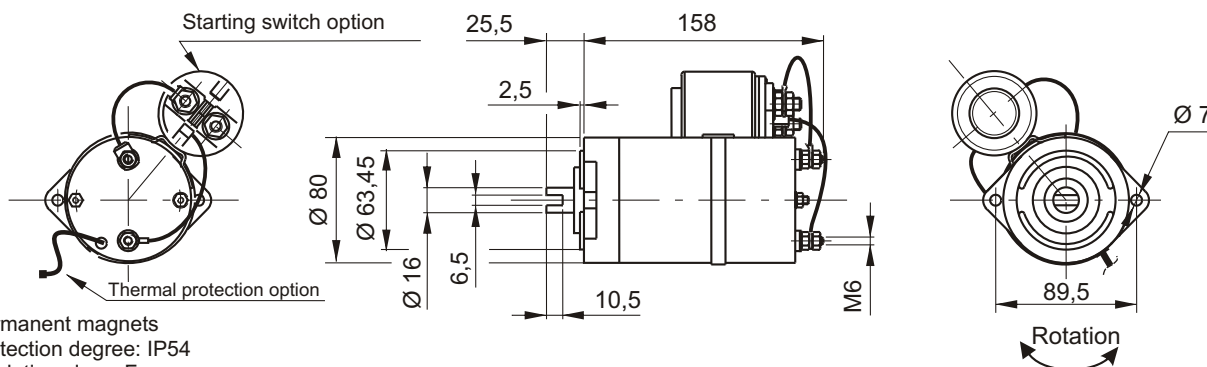
Pressure drop diagram



Section 40 MOTORS



Integral DC motors Ø 80



Permanent magnets
Protection degree: IP54
Insulation class: F
Weight: 2,6 kg

Code

| Description | PPC assembly code | Spare part code | Nominal duty cycle | Nominal speed | Nominal current |
|---|-------------------|------------------|------------------------|---------------|-----------------|
| 500W 12V DC motor | 0,5 12DC | M46C1S005 | S2: 6min S3: 10% ED | 2800 rpm | 90 A |
| 500W 24V DC motor | 0,5 24DC | M46C2S005 | S2: 6min S3: 10% ED | 2800 rpm | 50 A |
| 800W 12V DC motor | 0,8 12DC | M46C1S008 | S2: 3min S3: 10% ED | 4000 rpm | 130 A |
| 800W 24V DC motor | 0,8 24DC | M46C2S008 | S2: 4min S3: 10% ED | 4000 rpm | 80 A |
| 500W 12V DC motor with thermal protection | 0,5 12DC/T | M46C1ST05 | S2: 6min S3: 10% ED | 2800 rpm | 90 A |
| 500W 24V DC motor with thermal protection | 0,5 24DC/T | M46C2ST05 | S2: 6min S3: 10% ED | 2800 rpm | 50 A |
| 800W 12V DC motor with thermal protection | 0,8 12DC/T | M46C1ST08 | S2: 3min S3: 10% ED | 4000 rpm | 130 A |
| 800W 24V DC motor with thermal protection | 0,8 24DC/T | M46C2ST08 | S2: 4min S3: 10% ED | 4000 rpm | 80 A |

Options

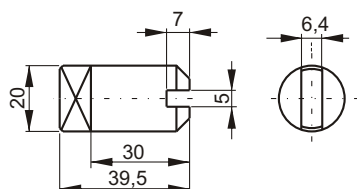
| Description | PPC assembly code | Spare part code |
|---|--|---|
| 12 or 24V DC 150 Amp start switch + mounting kit | S150 12DC 80 S150 24DC 80 | M47SC0001 + M47SK0801 (12V DC) M47SC0002 + M47SK0801(24V DC) |
| Remote wired control with two buttons and 3m cable (see U040.40.03) | P0201 | P0201 |
| | P0202 | P0202 |

Note: the starting switch mounting kit is provided when specifying the /S in PPC assembly code. It is not supplied when ordering spare starting switches.

Coupling

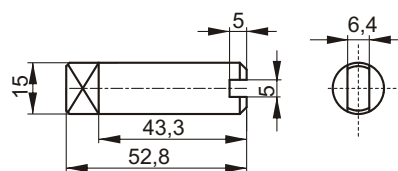
| Description | PPC assembly code / Spare part code |
|---|-------------------------------------|
| Shaft coupling for Ø 80 DC motors and Gr.1 pump | E36200002 |
| Shaft coupling for Ø 80 DC motors and Gr.0 pump | E36200006 |

Note: the coupling is already included when specifying the motor in PPC assembly code. It is to be indicated only when ordering PPC with no motor but with coupling.



E36200002

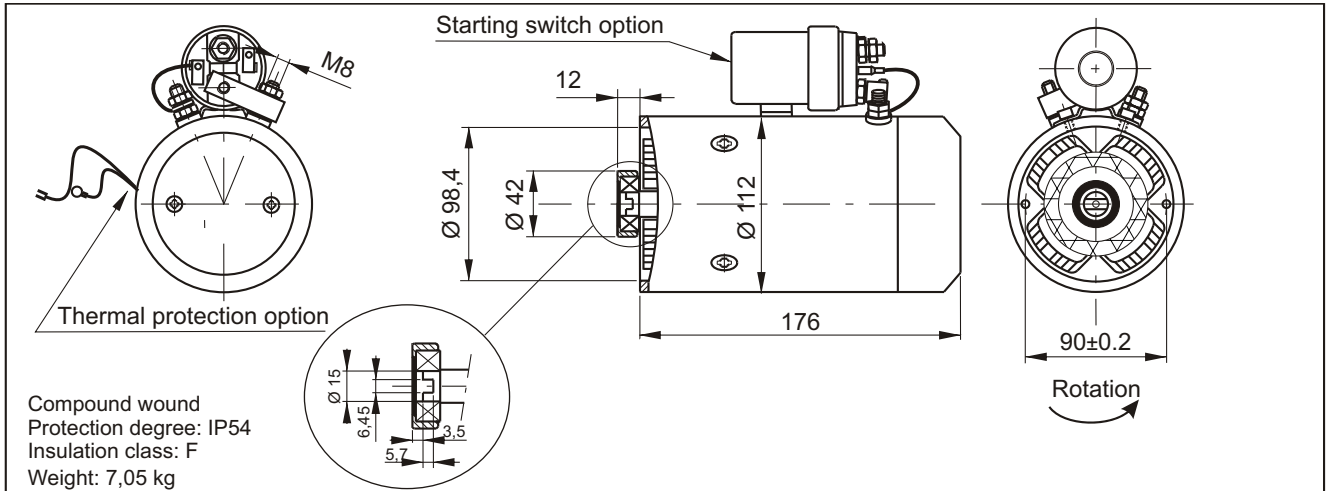
Weight: 0,075 kg



E36200006

Weight: 0,063 kg

Integral DC motors Ø 112



Code

| Description | PPC assembly code | Spare part code | Nominal duty cycle | Nominal speed | Nominal current |
|--|-------------------|------------------|---------------------------|---------------|-----------------|
| 1600W 12V DC motor | 1,6 12DC | M46C1S016 | S2: 2min S3: 7,5% ED | 2600 rpm | 230 A |
| 2200W 24V DC motor | 2,2 24DC | M46C2S022 | S2: 1,2min S3: 4,5% ED | 2600 rpm | 140 A |
| 1600W 12V DC motor with thermal protection | 1,6 12DC/T | M46C1ST16 | S2: 2min S3: 7,5% ED | 2600 rpm | 230 A |
| 2100W 12V DC motor with thermal protection | 2,1 12DC/T | M46C1ST21 | S2: 1,2min S3: 7,5% ED | 2300 rpm | 330 A |
| 2200W 24V DC motor with thermal protection | 2,2 24DC/T | M46C2ST22 | S2: 1,2min S3: 4,5% ED | 2600 rpm | 140 A |

Options

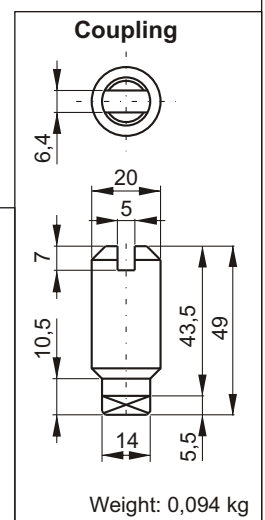
| Description | PPC assembly code | Spare part code |
|---|--|---|
| Starting switch 150A 12 or 24V DC + mounting kit | S150 12DC 112 S150 24DC 112 | M47SC0001 + M47SK1121 (12V DC) M47SC0002 + M47SK1121(24V DC) |
| Remote wired control with two buttons and 3m cable (see U040.40.03) | P0201 | P0201 |
| | P0202 | P0202 |
| DC motors plastic cover | F16000001 | F16000001 |

Notes: the starting switch mounting kit is provided when specifying the /S in PPC assembly code. It is not supplied when ordering spare starting switches.

Coupling

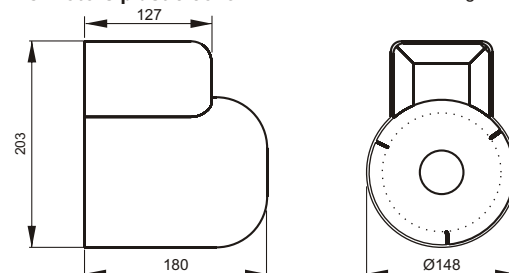
| Description | PPC assembly code / Spare part code |
|---|-------------------------------------|
| Shaft coupling for Ø112 and Ø 125 DC motors | E36200001 |

Note: the coupling is already included when specifying the motor in PPC assembly code. The coupling spare code is to be indicated only when ordering PPC with no motor, but with coupling.

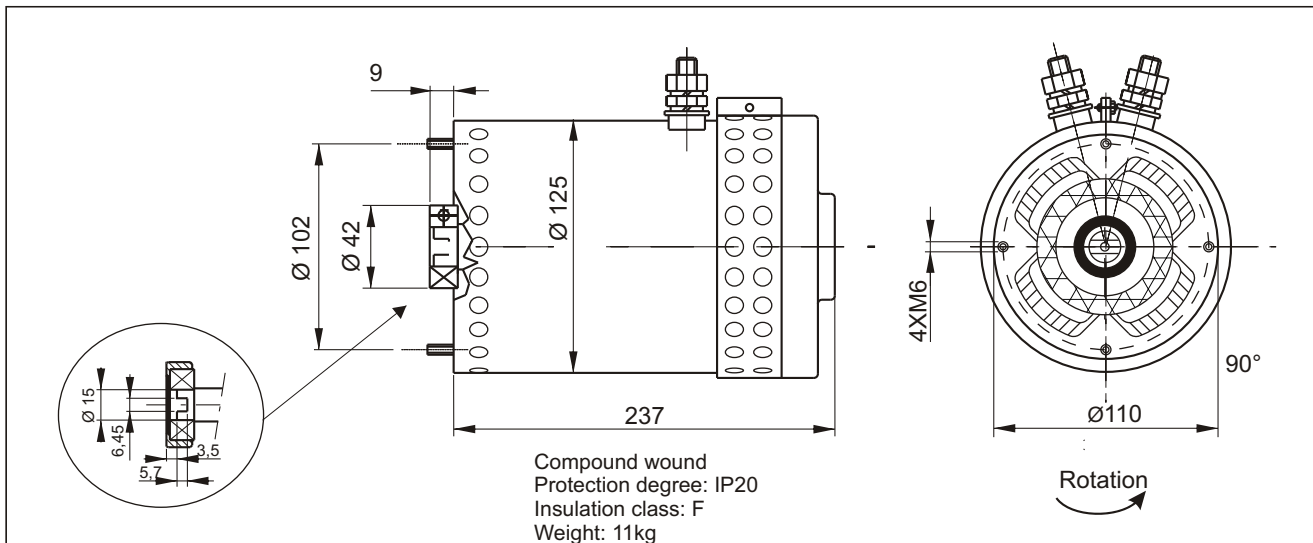


DC motors plastic cover

Weight: 0,27 kg



Fan cooled integral DC motors Ø 125



Code

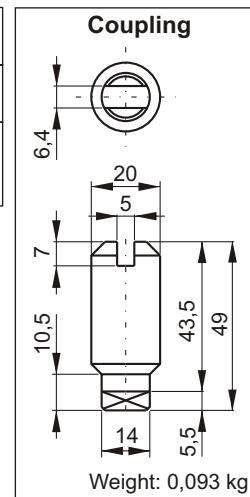
| Description | PPC assembly code | Spare part code | Nominal duty cycle | Nominal speed | Nominal current |
|---|-------------------|------------------|-------------------------|---------------|-----------------|
| 2400W 12V DC motor with thermal protection & fan | 2,4 12DC/T | M46C1ST24 | S2: 4min S3: 7,5% ED | 3400 rpm | 290 A |
| 3000W 24 V DC motor with thermal protection & fan | 3 24DC/T | M46C2ST30 | S2: 4min S3: 7,5% ED | 3500 rpm | 170 A |

Options

| Description | PPC assembly code | Spare part code |
|---|--------------------------------------|--|
| Starting switch 200A 12 or 24V DC | S200 12DC S200 24DC | M47ZC0001 (12V DC) M47ZC0002 (24V DC) |
| Remote wired control with two buttons and 3m cable (see U040.40.03) | P0201 P0202 | P0201 P0202 |

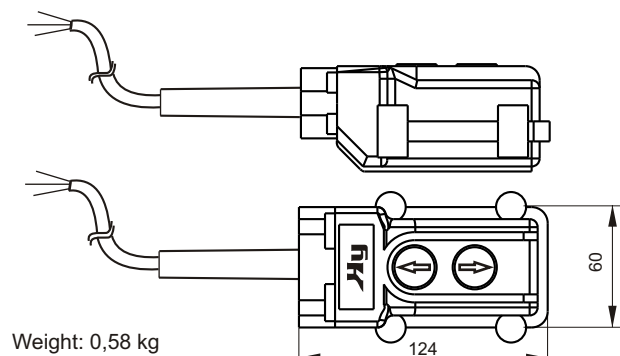
Coupling

| Description | PPC assembly code / Spare part code |
|---|-------------------------------------|
| Shaft coupling for Ø 112 and Ø125 DC motors | E36200001 |

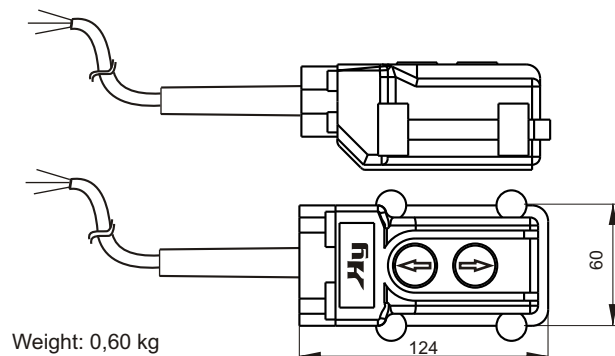


Note: the coupling is already included when specifying the motor in PPC assembly code.
The coupling spare code is to be indicated only when ordering PPC with no motor, but with coupling.

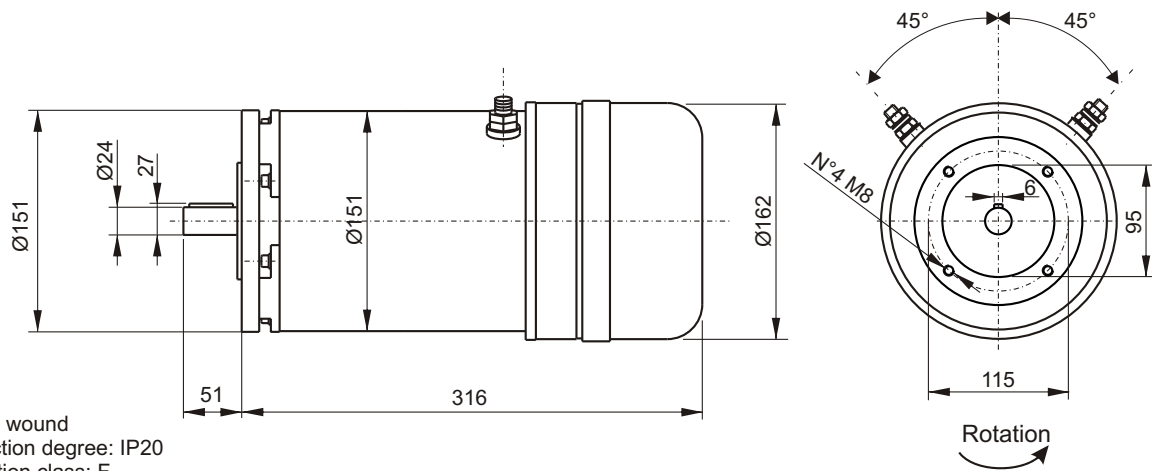
Remote control P0201: for single acting cylinder



Remote control P0202: for double acting cylinder



Heavy duty DC motors Ø 151 with fan cooling



Series wound
Protection degree: IP20
Insulation class: F
Weight: 21,5 kg

Code

| Description | PPC code | Spare part code | Nominal duty cycle | Nominal speed | Nominal current | Mounting kit |
|---|---------------------|-------------------|--------------------|---------------|-----------------|--------------|
| 2500W 12V DC motor + thermal protection & fan | 2,5HD 12DC/T | MB14C1ST25 | S2: 16min | 1700 rpm | 290 A | XB1490 |
| 3000W 24V DC motor + thermal protection & fan | 3HD 24DC/T | MB14C2ST30 | S2: 16min | 1700 rpm | 170 A | XB1490 |
| 4000W 24V DC motor + thermal protection & fan | 4HD 24DC/T | MB14C2ST40 | S2: 10min | 2000 rpm | 240 A | XB1490 |

Options

| Description | PPC assembly code | Spare part code |
|---|--------------------------------------|--|
| Starting switch 200A 12 or 24V DC | S200 12DC S200 24DC | M47ZC0001 (12 V DC) M47ZC0002 (24 V DC) |
| Remote wired control with two buttons and 3m cable (see U040.40.03) | P0201 P0202 | P0201 P0202 |

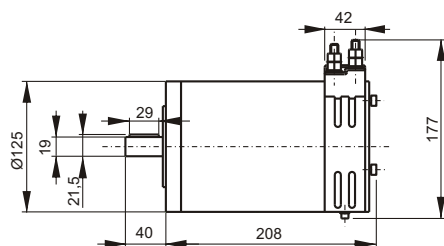
Other B14 DC motors for heavy duty or special applications

They are available with Ø125, Ø151 or Ø191 in multiple executions, engineered to perform heavy duty cycles and tailor made to suit each specific application, with or without fan cooling or thermal protection. They are mounted on the central manifold with B14 standard mounting kits (see tables U040.40.11 and following).

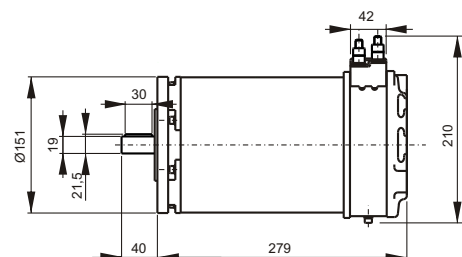
To properly choose these motors, following minimum information must be provided to our technical office: 1) motor power and voltage, 2) application type, 3) duty factors: S2 [min] continuous running time and S3 [%] percentage of running time on total cycle time, 4) required motor speed, 5) quantity to be supplied.

Some examples:

Cod. MB14M1S010: 1000W 12V DC frame 80 B14 motor



Cod. MB14M2S020: 2000W 24V DC frame 80 B14 motor



DC motors choice and electric connection schemes

DC motors choice

Once required pressure and flow and available voltage (12 or 24V DC) are known, you can select the motor checking on each provided diagram if a pump displacement is available at the intersection of pressure and flow values. On the relevant "I" curve you obtain the absorbed current. When the intersection point is not exactly on a pump curve, choose the closer pump.

On the right hand diagram, from the current value, you can easily obtain the maximum allowed S2 (min) and S3 (%) values. S2 gives the allowable motor continuous running time in minutes, S3 gives the allowable running time in % of the total cycle.

If obtained S2 and S3 values are not enough for required duty cycle, choose a bigger motor and repeat the calculation on the new motor curves.

Example:

For our application we have following data:

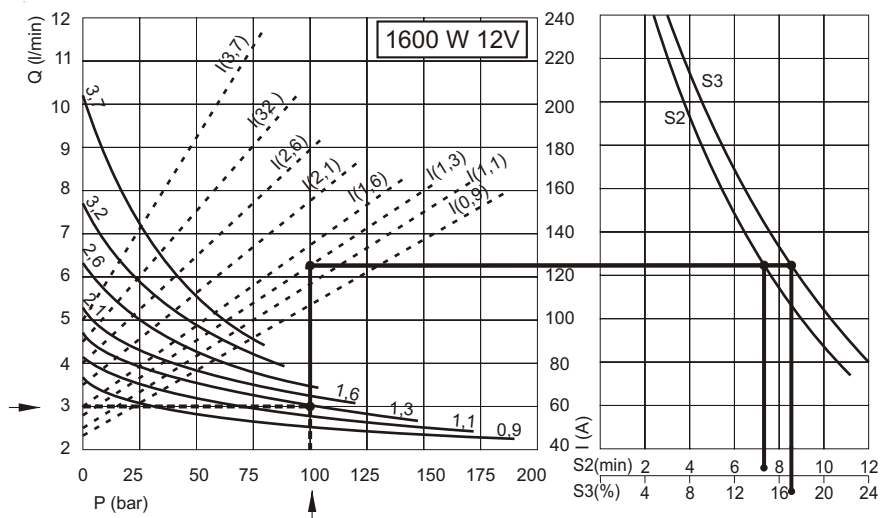
flow = 3 l/min, max pressure = 100 bar, not clearly defined duty cycle.

-We check on 1,6 Kw 12V DC motor diagram and see there is a pump available.

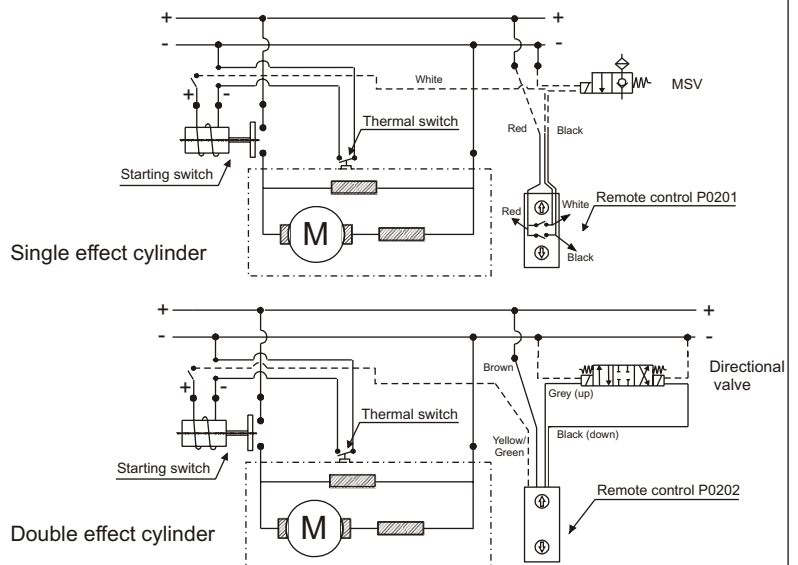
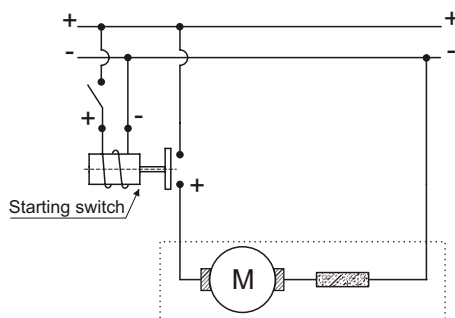
-We choose from curves 1,3 pump: a 1,3 cm³/rev pump. On the corresponding "I" curve we read 125 A absorbed current.

In these conditions on the S2 / S3 diagram we read that the DC motor can work for maximum 7 min (S2), that is 17% (S3) of the total cycle, i.e. after 7 min working, the motor should cool down for at least 34 min.

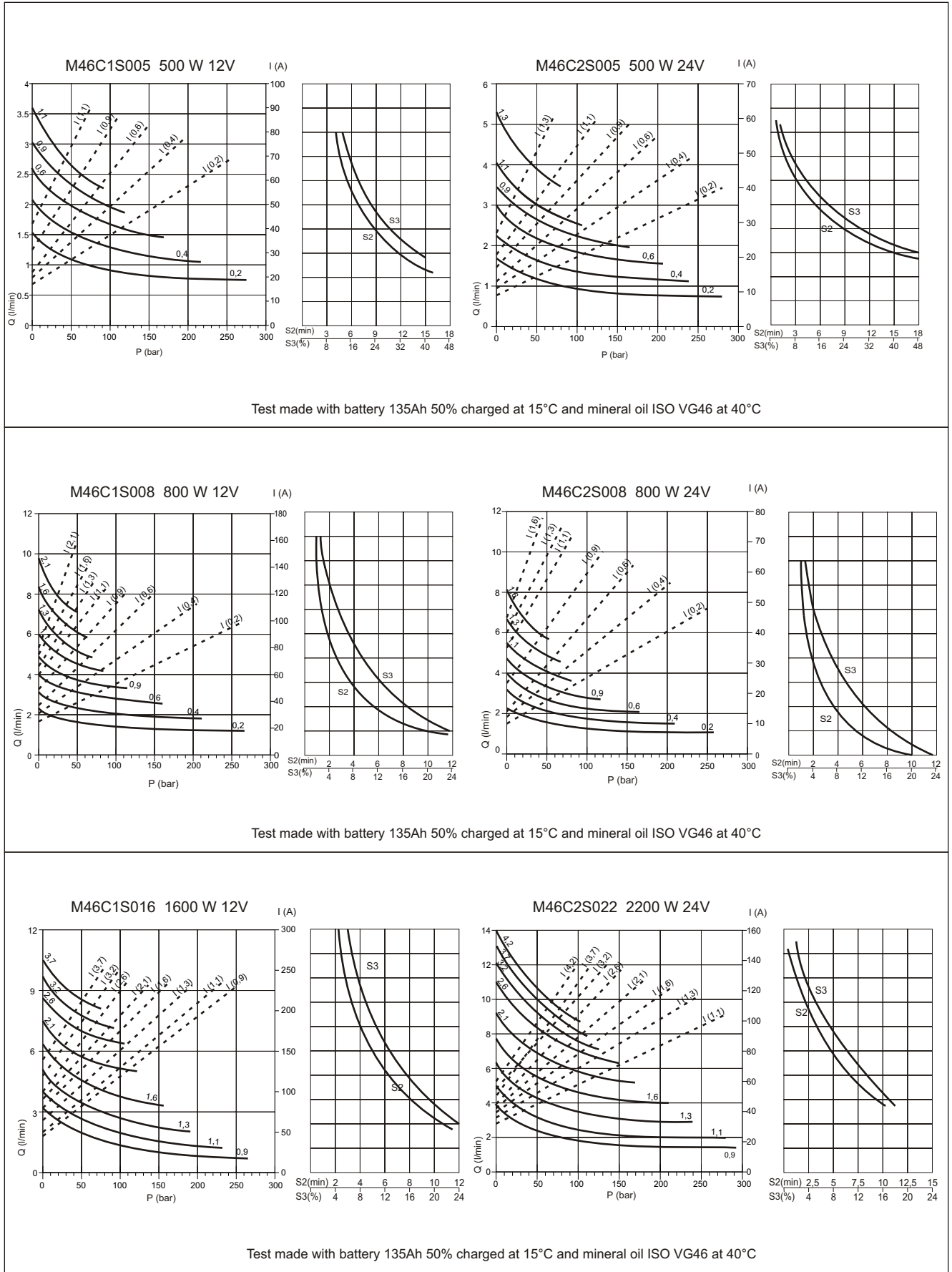
-The total cycle time is calculated adding the working time and the idle time (17% working time plus 83% idle time), in this case 41 min. If this duty cycle is not adequate for our application, we must choose a higher power DC motor and check the relevant diagram again.



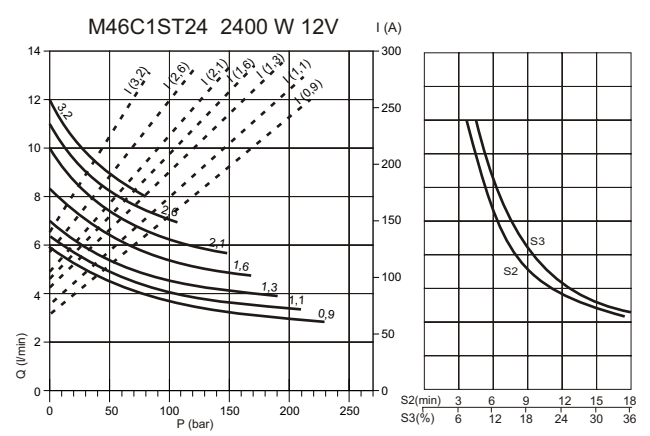
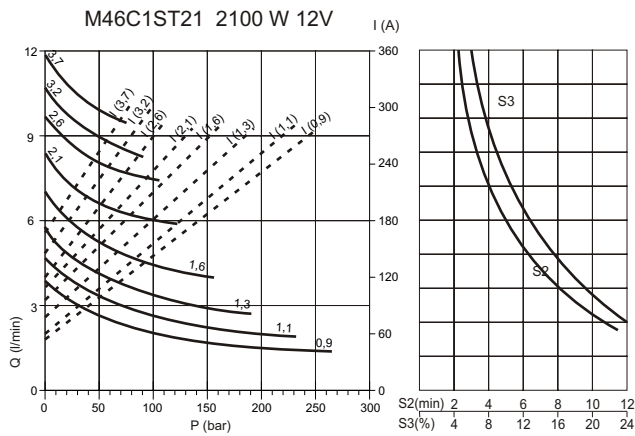
Electric connection schemes



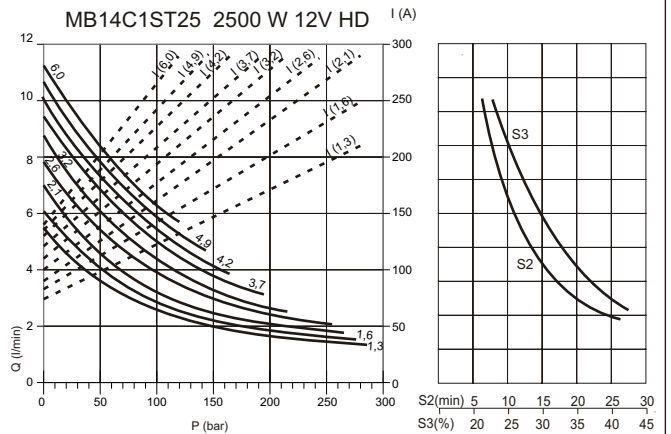
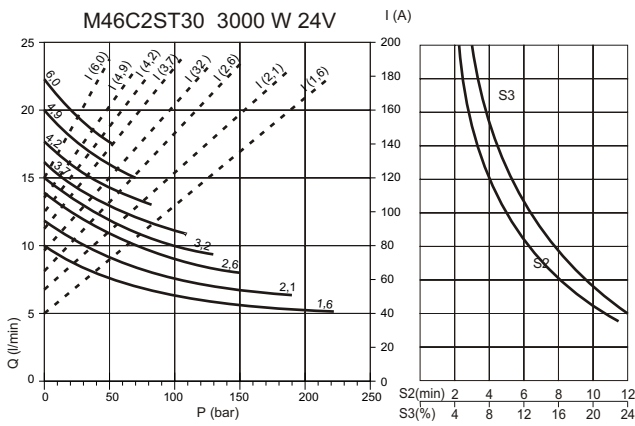
DC motors diagrams



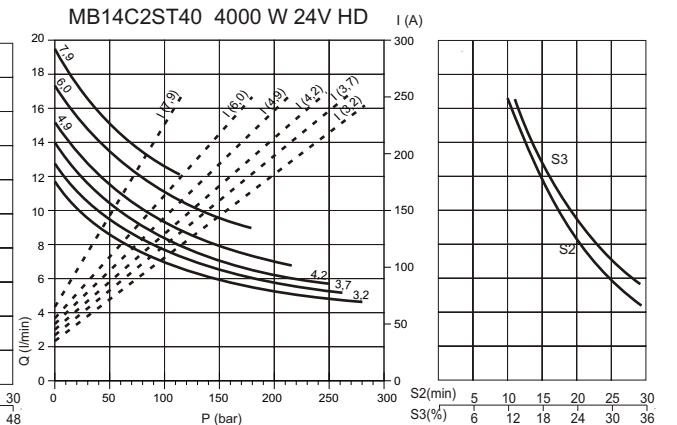
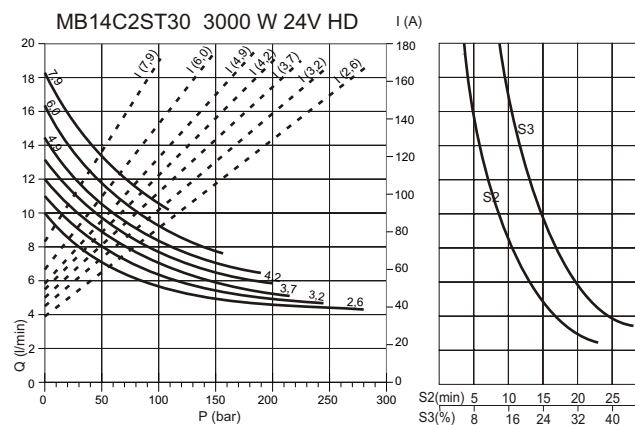
DC motors diagrams



Test made with battery 135Ah 50% charged at 15°C and mineral oil ISO VG46 at 40°C



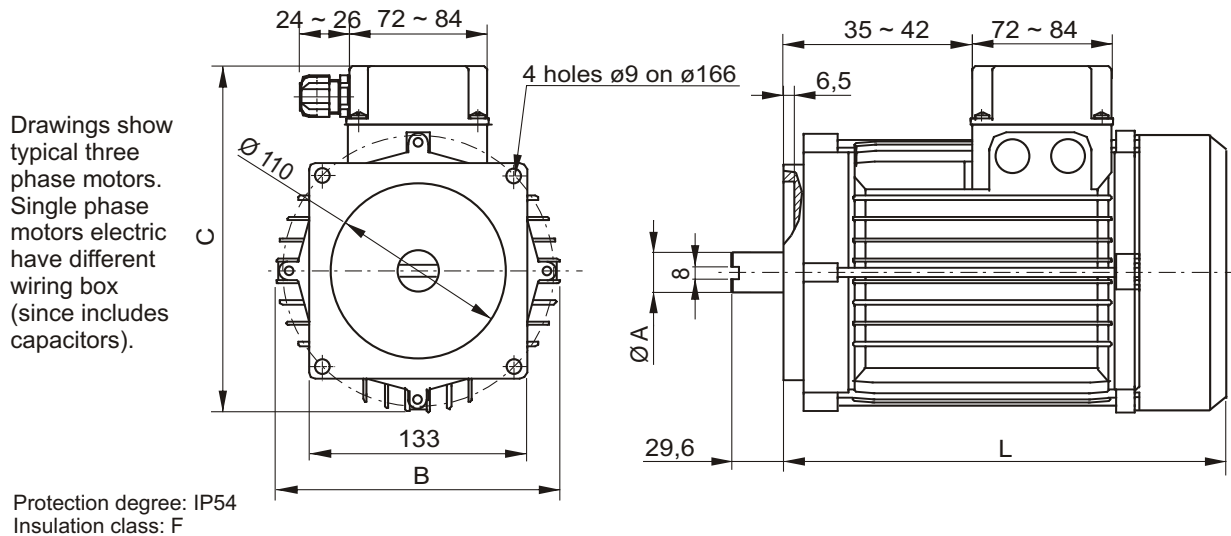
Test made with battery 135Ah 50% charged at 15°C and mineral oil ISO VG46 at 40°C



Test made with battery 135Ah 50% charged at 15°C and mineral oil ISO VG46 at 40°C

Integral AC motors

Integral AC motors: the engineered solution for compact and optimised power units from 0,25 to 4 kW. The AC motors are directly flanged on the central manifold. A single coupling -see below- can suit all frame sizes and powers. We suggest to adopt these advanced motors because of these peculiar advantages over standard B14 AC motors and because they are designed specifically for use on our mini power packs, offering an higher power density and high starting torque (in HT models) than market standard motors. Motors have a double power rating: the maximum power is for intermittent duty charge (S3 40%), which is typical for mini-power packs applications; if the application is continuative please consider the rated power as the maximum output to guarantee a proper cooling of the motor. In any case single phase motors should not run with no load to avoid the overheating.



PPC motor assembly code

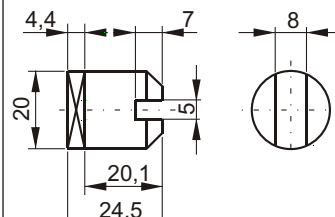
| | |
|------------|--|
| E | AC integral motor |
| 150 | Maximum Power [kW] i.e. 150 = 1,5kW |
| AC | Alternate current |
| 3 | Phase: 3 = three phase S = single phase |
| 4 | Poles: 4 = four poles 2 = two poles |
| 3 | Frame size: 1 = 71 2 = 80 3 = 90 |
| S3 | Type of Duty: - = ED 100% (S1) S3 = intermittent duty HT = high torque |

See a table of available codes on next table page

A single coupling can be applied on all motor frame sizes. This is the same coupling included in B14 motors mounting kit. The coupling is already included when specifying an integral AC motor in the PPC assembly code. When ordering spare motors, the coupling is not included and must be ordered separately.

Coupling spare part code

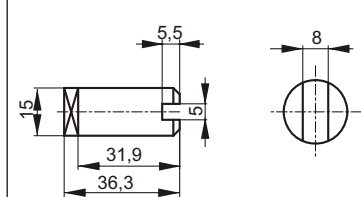
E36100000 for Gr.1 pumps



Weight: 0,046 Kg

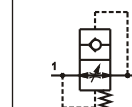
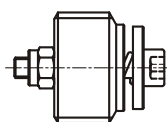
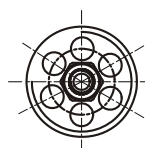
Coupling spare part code

E36100006 for Gr.0 pumps



Weight: 0,040 kg

Start-up Valve for single-phase motors



| PPC assembly code | Spare part code |
|-------------------|-----------------|
| SUV | VUBA01 |

Integral AC motors

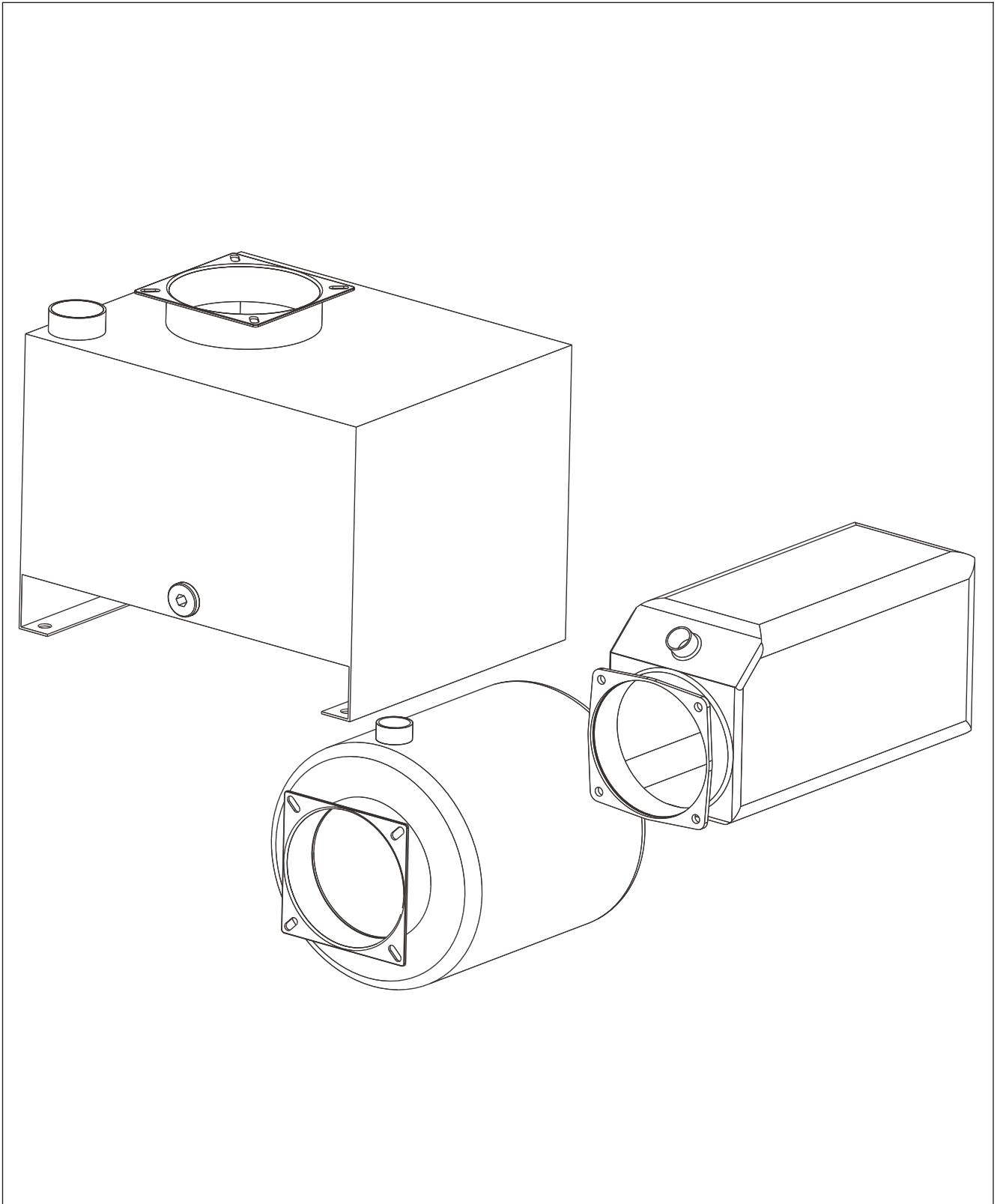
| Integral AC motor frame size | Maximum Power (S3 40%) | Rated Power (S1 continuous duty) | Spare motor code | Ø A | B | C | L | Weight Kg |
|---|------------------------|----------------------------------|--------------------|-----|-----|-----|-----|-----------|
| | kW (HP) | kW (HP) | | | | | | |
| Three-phase 4 poles (~1450 rpm at 50Hz) | | | | | | | | |
| 71 | - | 0,25 (0,35) | E025AC341 | 17 | 144 | 180 | 210 | 5,5 |
| | - | 0,37 (0,5) | E037AC341 | 17 | 144 | 180 | 210 | 5,5 |
| | - | 0,55 (0,75) | E055AC341 | 17 | 144 | 180 | 210 | 5,6 |
| | 0,75 (1) | - | E075AC341S3 | 17 | 144 | 180 | 210 | 5,6 |
| 80 | 0,75 (1) | 0,55 (0,75) | E075AC342S3 | 19 | 162 | 202 | 234 | 10 |
| | 1,1 (1,5) | 0,75 (1) | E110AC342S3 | 19 | 162 | 202 | 234 | 10,5 |
| 90 | 1,5 (2) | 1,1 (1,5) | E150AC343S3 | 24 | 175 | 217 | 279 | 14 |
| | 2,2 (3) | 1,5 (2) | E220AC343S3 | 24 | 175 | 217 | 279 | 15 |
| | 3 (4) | 2,2 (3) | E300AC343S3 | 24 | 175 | 217 | 279 | 16 |
| Three-phase 2 poles (~2900 rpm at 50Hz) | | | | | | | | |
| 71 | - | 0,37 (0,5) | E037AC321 | 17 | 144 | 180 | 210 | 5 |
| | - | 0,55 (0,75) | E055AC321 | 17 | 144 | 180 | 210 | 5 |
| 80 | 1,1 (1,5) | 0,75 (1) | E110AC322S3 | 19 | 162 | 202 | 234 | 10 |
| | 1,5 (2) | 1,1 (1,5) | E150AC322S3 | 19 | 162 | 202 | 234 | 12 |
| | 2,2 (3) | 1,5 (2) | E220AC322S3 | 19 | 162 | 202 | 234 | 12 |
| 90 | 3 (4) | 2,2 (3) | E300AC323S3 | 24 | 175 | 217 | 279 | 16 |
| | 4 (5,4) | 3 (4) | E400AC323S3 | 24 | 175 | 217 | 279 | 16 |
| Single-phase 4 poles (~1450 rpm at 50Hz) | | | | | | | | |
| 71 | - | 0,25 (0,35) | E025ACS41 | 17 | 144 | 180 | 210 | 6,5 |
| | - | 0,37 (0,5) | E037ACS41 | 17 | 144 | 180 | 210 | 7,2 |
| 80 | 0,55 (0,75) | 0,37 (0,55) | E055ACS42S3 | 19 | 162 | 202 | 234 | 8 |
| | 0,75 (1) | 0,55 (0,75) | E075ACS42S3 | 19 | 162 | 202 | 234 | 10 |
| 90 | 1,1 (1,5) | 0,75 (1) | E110ACS43S3 | 24 | 175 | 217 | 279 | 13 |
| | 1,5 (2) | 1,1 (1,5) | E150ACS43S3 | 24 | 175 | 217 | 279 | 15 |
| | 2,2 (3) | 1,5 (2) | E220ACS43S3 | 24 | 175 | 217 | 279 | 15,5 |
| Single-phase 2 poles (~2900 rpm at 50Hz) | | | | | | | | |
| 71 | - | 0,37 (0,5) | E037ACS21 | 17 | 144 | 180 | 210 | 6 |
| | - | 0,55 (0,75) | E055ACS21 | 17 | 144 | 180 | 210 | 6,5 |
| 80 | 0,75 (1) | 0,55 (0,75) | E075ACS22S3 | 19 | 162 | 202 | 234 | 8 |
| | 1,1 (1,5) | 0,75 (1) | E110ACS22S3 | 19 | 162 | 202 | 234 | 10 |
| | 1,5 (2) | 1,1 (1,5) | E150ACS22S3 | 19 | 162 | 202 | 234 | 11 |
| 90 | 1,5 (2) | 1,1 (1,5) | E150ACS23S3 | 24 | 175 | 217 | 279 | 12 |
| | 2,2 (3) | 1,5 (2) | E220ACS23S3 | 24 | 175 | 217 | 279 | 15 |

Motors with codes ending with "S3" are for intermittent duty.

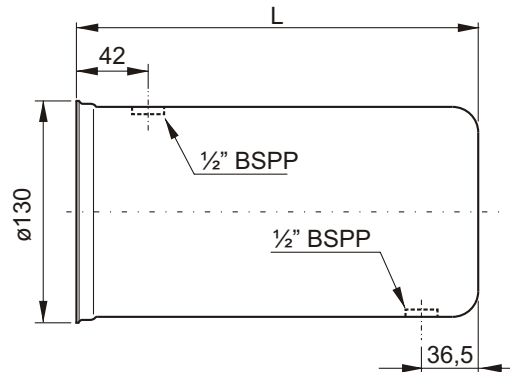
S3 40% duty cycle means up to 6 on - off cycles in an hour, i.e. the motors is ON for 4 min. and OFF for 6 min.

Section 50

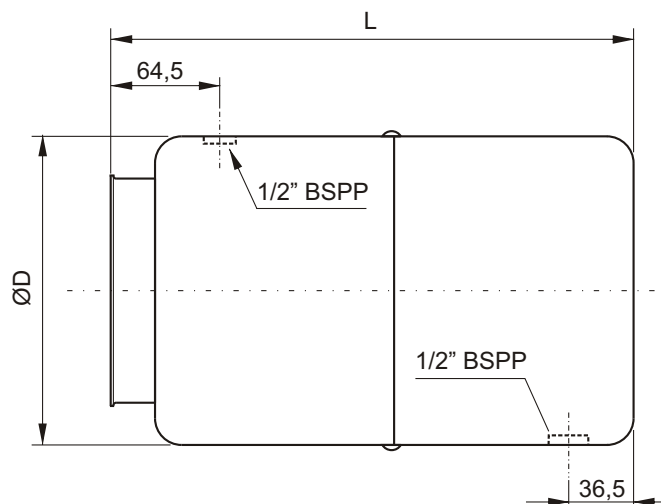
TANKS AND ACCESSORIES



Round steel tanks A & B series



| Description | PPC assembly code | Spare part code | L (mm) | Weight | Actual filling volume (lt) | |
|--|---------------------|------------------|--------|---------|----------------------------|----------|
| | | | | | Horizontal | Vertical |
| 1,5 l cylindrical horizontal / vertical mounting | 1,5A / 1,5AV | E60303001 | 150 | 0,78 Kg | 1,6 | 1,5 |
| 2,5 l cylindrical horizontal / vertical mounting | 2,5A / 2,5AV | E60303004 | 235 | 1,04 Kg | 2,8 | 2,4 |



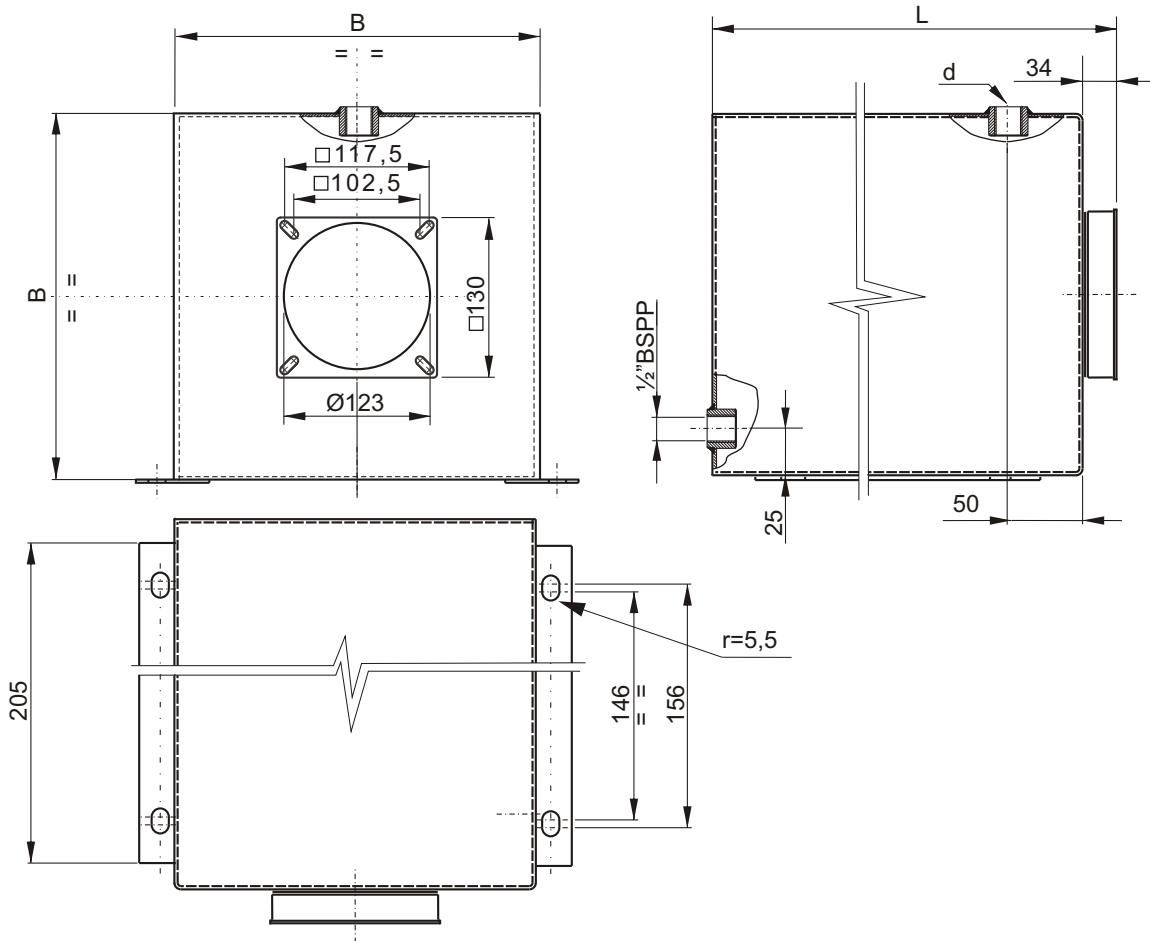
| Description | PPC assembly code | Spare part code | L (mm) | ØD (mm) | Weight | Actual filling volume (lt) | |
|---|-------------------|------------------|--------|---------|---------|----------------------------|-------|
| | | | | | | Horiz. | Vert. |
| 5 l cylindrical horizontal / vertical mounting | 5B / 5BV | E60303006 | 300 | 180 | 1,82 Kg | 5,3 | 5,3 |
| 10 l cylindrical horizontal / vertical mounting | 10B / 10BV | E60303011 | 262 | 220 | 2,01 Kg | 10,4 | 10,3 |
| 12 l cylindrical horizontal / vertical mounting | 12B / 12BV | E60303012 | 295 | 240 | 2,47 Kg | 13,5 | 13,5 |

All measures are indicative in mm

| | |
|----------------------------|--|
| Material | Fe P04-EN10130 steel sheet 1,5mm thickness |
| Fluid | Mineral based oil ISO/DIN 6743/4 |
| Working temperature | -15 / +70°C |

Note: the piping kit, standard suction filter, filler/breather and discharge plug are included when specifying the tank in PPC assembly code. When ordering spare parts, only the discharge plug and filler/breather are included. See accessories tables U040.50.06-07

Horizontal/Vertical square welded steel tanks C series



| Description | PPC assembly code | Spare part code | L (mm) | B (mm) | d | Weight | Actual filling volume (lt) | |
|------------------------------------|-------------------|------------------|--------|--------|---------|---------|----------------------------|----------|
| | | | | | | | Horizont. | Vertical |
| 10 l squared horiz./vert. mounting | 10C / 10CV | E60303042 | 330 | 185 | ½" BSPP | 5,50 Kg | 10,20 | 8,24 |
| 22 l squared horiz./vert. mounting | 22C / 22CV | E60303044 | 470 | 223 | ¾" BSPP | 6,80 Kg | 23,30 | 19,45 |

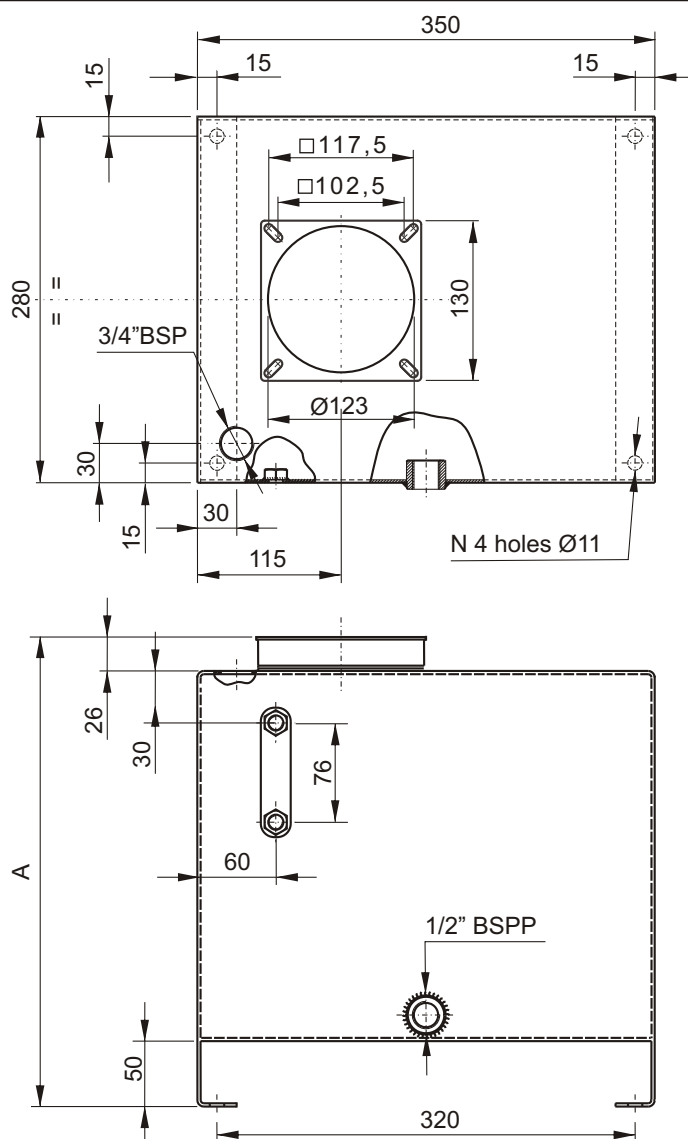
All measures are indicative in mm

| | |
|----------------------------|--|
| Material | Fe P04-EN10130 steel sheet 1,5mm thickness |
| Fluid | Mineral based oil ISO/DIN 6743/4 |
| Working temperature | -15 / +70°C |

Notes: the piping kit, standard suction strainer, filler/breather and discharge plug are included when specifying the tank in PPC assembly code.
 When ordering spare tanks, only the discharge plug and filler/breather are included.
 See accessories table U040.50.06-07

On request special square welded tanks can be realized. An inquiry must be sent to our technical department with indication of quantities.

Square welded steel tanks E series



| Description | PPC assembly code | Spare part code | A | Weight | Actual filling volume (lt) | |
|--------------------------------|-------------------|------------------|--------|---------|----------------------------|----------|
| | | | | | Horizontal | Vertical |
| 20 l squared vertical mounting | 20EV | E60303015 | 293 mm | 6,50 Kg | - | 21 |
| 30 l squared vertical mounting | 30EV | E60303048 | 423 mm | 8,50 Kg | - | 33,5 |

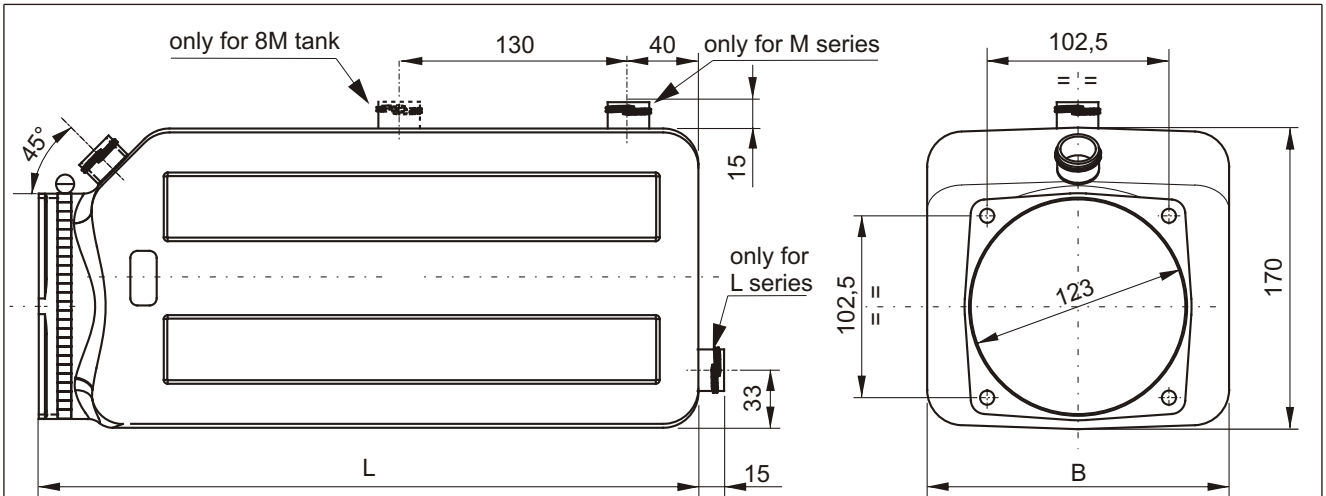
All measures are indicative in mm

| | |
|----------------------------|--|
| Material | Fe P04-EN10130 steel sheet 1,5mm thickness |
| Fluid | Mineral based oil ISO/DIN 6743/4 |
| Working temperature | -15 / +70°C |

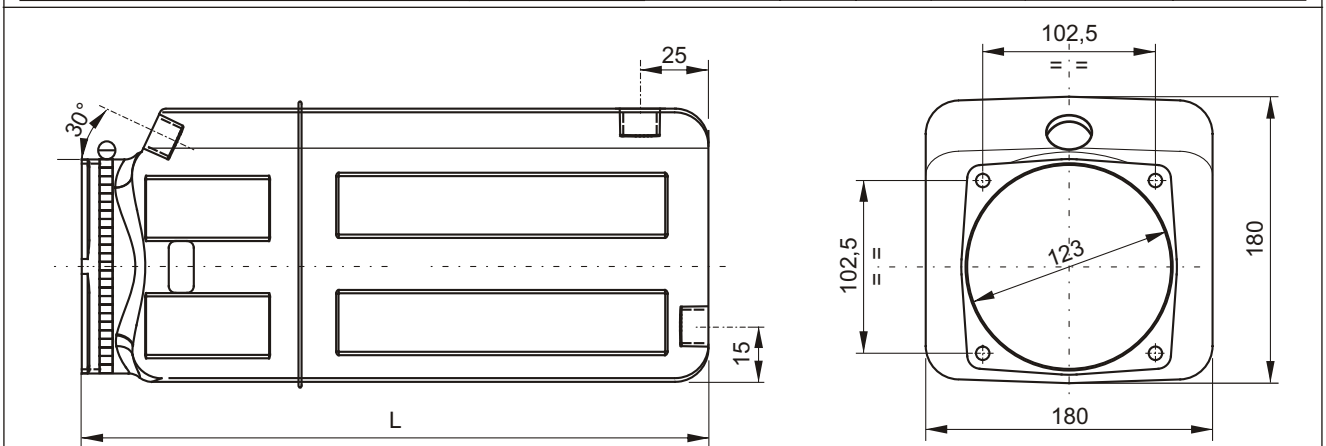
Notes: the piping kit, standard suction strainer, filler/breather, level gauge and discharge plug are included when specifying the tank in PPC assembly code. When ordering spare tanks, only the discharge plug, filler/breather and level gauge are included. See accessories table U040.50.06-07

On request special square welded tanks can be realized. An inquiry must be sent to our technical department with indication of quantities.

Square plastic tanks L, M & N series



| Description | PPC assembly code | Spare part code | B (mm) | L (mm) | Weight | Actual filling volume (lt) | |
|--|---------------------|------------------|--------|--------|---------|----------------------------|----------|
| | | | | | | Horizontal | Vertical |
| 1,5 l squared horizontal / vertical mounting | 1,5L / 1,5LV | H60303016 | 140 | 135 | 0,32 Kg | 2,46 | 1,43 |
| 3 l squared horizontal / vertical mounting | 3L / 3LV | H60303018 | 140 | 250 | 0,42 Kg | 4,55 | 4,17 |
| 6 l squared horizontal / vertical mounting | 6L / 6LV | H60303020 | 140 | 350 | 0,63 Kg | 6,37 | 6,55 |
| 5 l squared horizontal / vertical mounting | 5M / 5MV | H60303025 | 170 | 270 | 0,60 Kg | 5,97 | 5,64 |
| 8 l squared horizontal / vertical mounting | 8M / 8MV | H60303033 | 170 | 375 | 0,76 Kg | 8,29 | 8,67 |



| Description | PPC assembly code | Spare part code | L (mm) | Weight | Actual filling volume (lt) | |
|---|-------------------|------------------|--------|---------|----------------------------|----------|
| | | | | | Horizontal | Vertical |
| 6 l squared horizontal / vertical mounting | 6N / 6NV | H60303026 | 270 | 0,60 Kg | 6,43 | 6,28 |
| 12 l squared horizontal / vertical mounting | 12N / 12NV | H60303036 | 450 | 0,94 Kg | 12,23 | 12,14 |

| | |
|----------------------------|--|
| Material | PE-HD neutral / transparent color (DO NOT EXPOSE TO DIRECT SUNLIGHT) |
| Fluid | Mineral based oil ISO/DIN 6743/4 |
| Working temperature | -15 / +70°C |

Notes: the piping kit, standard suction strainer and filler/breather are included when specifying the tank in PPC assembly code. When ordering spare tanks, only the filler/breather C86100003, C86200002 or C86100001 and clamp band are included. Discharge ports are normally blind moulded. See accessories table U040.50.06 and .07