

**Hydronit**



**2012**  
**AC & DC Hydraulic**  
**Power Packs Compact**



## AC & DC electric motors

### Section A

#### DC motors

<b>0,15 12DC_T</b>	12VDC motor - 150W - Ø 80 + thermal switch
<b>0,15 24DC_T</b>	24VDC motor - 150W - Ø 80 + thermal switch
<b>0,5 12DC</b>	12VDC motor - 500W - Ø 80
<b>0,5 24DC</b>	24VDC motor - 500W - Ø 80
<b>0,5 12DC_T</b>	12VDC motor - 500W - Ø 80 + thermal switch
<b>0,5 24DC_T</b>	24VDC motor - 500W - Ø 80 + thermal switch
<b>0,8 12DC</b>	12VDC motor - 800W - Ø 80
<b>0,8 24DC</b>	24VDC motor - 800W - Ø 80
<b>0,8 12DC_T</b>	12VDC motor - 800W - Ø 80 + thermal switch
<b>0,8 24DC_T</b>	24VDC motor - 800W - Ø 80 + thermal switch
<b>1,6 12DC_T</b>	12VDC motor - 1600W - Ø 114 + thermal switch
<b>2,1 12DC_T</b>	12VDC motor - 2100W - Ø 114 + thermal switch
<b>2,2 24DC_T</b>	24VDC motor - 2200W - Ø 114 + thermal switch
<b>2,4 12DC_T</b>	12VDC motor - 2400W - Ø 125 fan cooled + thermal switch
<b>3 24DC_T</b>	24VDC motor - 3000W - Ø 125 fan cooled + thermal switch
<b>2,5HD 12DC_T</b>	12VDC motor - 2500W - Ø 151 fan cooled B14-90 frame + thermal switch
<b>3HD 24DC_T</b>	24VDC motor - 3000W - Ø 151 fan cooled B14-90 frame + thermal switch
<b>4HD 24DC_T</b>	24VDC motor - 4000W - Ø 151 fan cooled B14-90 frame + thermal switch

#### AC motors: three-phase 4 poles (~1450 rpm @ 50Hz / ~1750 rpm @ 60Hz)

<b>E037AC341S3</b>	integral motor 0,37kW S3 3-ph 4-pole 220/380V 50/60Hz frame 71
<b>E055AC341S3</b>	integral motor 0,55kW S3 3-ph 4-pole 220/380V 50/60Hz frame 71
<b>E075AC342S3</b>	integral motor 0,75kW S3 3-ph 4-pole 220/380V 50/60Hz frame 80
<b>E110AC342S3</b>	integral motor 1,1kW S3 3-ph 4-pole 220/380V 50/60Hz frame 80
<b>E150AC343S3</b>	integral motor 1,5kW S3 3-ph 4-pole 220/380V 50/60Hz frame 90
<b>E220AC343S3</b>	integral motor 2,2kW S3 3-ph 4-pole 220/380V 50/60Hz frame 90
<b>E300AC343S3</b>	integral motor 3kW S3 3-ph 4-pole 220/380V 50/60Hz frame 90

#### AC motors: single-phase 4 poles (~1450 rpm at 50Hz)

<b>E037ACS41S3</b>	integral motor 0,37kW S3 1-ph 4-pole 220V 50Hz frame 71
<b>E055ACS41S3</b>	integral motor 0,55kW S3 1-ph 4-pole 220V 50Hz frame 71
<b>E075ACS42S3</b>	integral motor 0,75kW S3 1-ph 4-pole 220V 50Hz frame 80
<b>E110ACS43S3</b>	integral motor 1,1kW S3 1-ph 4-pole 220V 50Hz frame 90
<b>E150ACS43S3</b>	integral motor 1,5kW S3 1-ph 4-pole 220V 50Hz frame 90
<b>E220ACS43S3</b>	integral motor 2,2kW S3 1-ph 4-pole 220V 50Hz frame 90

2 pole and special execution motors (High starting torque, high IP, with thermal protector,...) available on request



## AC & DC electric motors

### B14 AC motors

<b>B14550AC324S3</b>	B14 motor 5,5kW S3 3-ph 2-pole 220/380V 50/60Hz frame 100
<b>B14750AC325S3</b>	B14 motor 7,5kW S3 3-ph 2-pole 220/380V 50/60Hz frame 112
<b>B14400AC344S3</b>	B14 motor 4kW S3 3-ph 4-pole 220/380V 50/60Hz frame 100
<b>B14550AC344S3</b>	B14 motor 5,5kW S3 3-ph 4-pole 220/380V 50/60Hz frame 100
<b>B14750AC345S3</b>	B14 motor 5,5kW S3 3-ph 4-pole 220/380V 50/60Hz frame 112
<b>B14300ACS44S3</b>	B14 motor 3kW S3 1-ph 4-pole 220V 50Hz frame 100
<b>B14400ACS24S3</b>	B14 motor 4kW S3 1-ph 2-pole 220V 50Hz frame 100



### No motor: B14 Flange + coupling kit

<b>XB14 71-0</b>	mounting kit PPC for B14 motors frame 71 with pump group 0
<b>XB14 80-0</b>	mounting kit PPC for B14 motors frame 80 with pump group 0
<b>XB14 71-1</b>	mounting kit PPC for B14 motors frame 71 with pump group 1
<b>XB14 80-1</b>	mounting kit PPC for B14 motors frame 80 with pump group 1
<b>XB14 90-1</b>	mounting kit PPC for B14 motors frame 90 with pump group 1
<b>XB14 100-1</b>	mounting kit PPC for B14 motors frame 100/112 with pump group 1
<b>X56C-0</b>	mounting kit PPC for Nema 56C-face motors with pump group 0
<b>X56C-1</b>	mounting kit PPC for Nema 56C-face motors with pump group 1



## Electric motors options

### DC motor options

<b>S150 12DC 80</b>	starting relay 12VDC 150A with mounting kit for Ø 80 motors
<b>S150 24DC 80</b>	starting relay 24VDC 150A with mounting kit for Ø 80 motors
<b>S150 12DC 112</b>	starting relay 12VDC 150A with mounting kit for Ø 112-114 motors
<b>S150 24DC 112</b>	starting relay 24VDC 150A with mounting kit for Ø 112-114 motors
<b>S200 12DC</b>	starting relay 12VDC 200A for Ø 125 and Ø 151 motors
<b>S200 24DC</b>	starting relay 24VDC 200A for Ø 125 and Ø 151 motors



## Universal central manifold

### Section B

### International execution (1/4" BSP exit ports)

<b>UA</b>	Universal A type PPC body with 3 lateral cavities
<b>UB</b>	Universal B type PPC body with 5 lateral cavities
<b>U4</b>	Universal 4 type PPC body for 4 way cartridge valves
<b>UR</b>	Universal R type PPC body for reversible pump

### USA execution (SAE 06 exit ports)

<b>UAUS</b>	Universal A type PPC body with 3 lateral cavities US execution
<b>UBUS</b>	Universal B type PPC body with 5 lateral cavities US execution
<b>U4US</b>	Universal 4 type PPC body for 4 way cartridge valves US execution
<b>URUS</b>	Universal R type PPC body for reversible pump US execution



## Gear Pumps

### Section C

<b>G0,8</b>	gear pump group 1 – 0,85 cc/rev G series
<b>G1,1</b>	gear pump group 1 – 1,15 cc/rev G series
<b>G1,3</b>	gear pump group 1 – 1,3 cc/rev G series
<b>G1,6</b>	gear pump group 1 – 1,6 cc/rev G series
<b>G2,1</b>	gear pump group 1 – 2,1 cc/rev G series
<b>G2,6</b>	gear pump group 1 – 2,6 cc/rev G series
<b>G3,2</b>	gear pump group 1 – 3,2 cc/rev G series
<b>G3,7</b>	gear pump group 1 – 3,7 cc/rev G series
<b>G4,2</b>	gear pump group 1 – 4,2 cc/rev G series
<b>G4,9</b>	gear pump group 1 – 4,9 cc/rev G series
<b>G6,0</b>	gear pump group 1 – 6,0 cc/rev G series
<b>G7,9</b>	gear pump group 1 – 7,9 cc/rev G series
<b>G9,8</b>	gear pump group 1 – 9,8 cc/rev G series



<b>G0,1</b>	gear pump group 0 – 0,19 cc/rev K series + adaptor flange for group 0 pump
<b>K0,2</b>	gear pump group 0 – 0,26 cc/rev K series + adaptor flange for group 0 pump
<b>K0,4</b>	gear pump group 0 – 0,38 cc/rev K series + adaptor flange for group 0 pump
<b>K0,6</b>	gear pump group 0 – 0,64 cc/rev K series + adaptor flange for group 0 pump
<b>K0,9</b>	gear pump group 1 – 0,89 cc/rev K series
<b>K1,2</b>	gear pump group 1 – 1,27 cc/rev K series
<b>K1,6</b>	gear pump group 1 – 1,66 cc/rev K series
<b>K2,1</b>	gear pump group 1 – 2,17 cc/rev K series
<b>K2,7</b>	gear pump group 1 – 2,8 cc/rev K series
<b>K3,2</b>	gear pump group 1 – 3,3 cc/rev K series
<b>K3,7</b>	gear pump group 1 – 3,8 cc/rev K series
<b>K4,2</b>	gear pump group 1 – 4,3 cc/rev K series
<b>K5,0</b>	gear pump group 1 – 5,1 cc/rev K series
<b>K6,0</b>	gear pump group 1 – 6,0 cc/rev K series
<b>K7,9</b>	gear pump group 1 – 7,9 cc/rev K series



<b>H1,2</b>	gear pump group 1 high pressure – 1,2 cc/rev H series
<b>H1,7</b>	gear pump group 1 high pressure – 1,7 cc/rev H series
<b>H2,2</b>	gear pump group 1 high pressure – 2,2 cc/rev H series
<b>H2,6</b>	gear pump group 1 high pressure – 2,6 cc/rev H series
<b>H3,2</b>	gear pump group 1 high pressure – 3,2 cc/rev H series
<b>H3,8</b>	gear pump group 1 high pressure – 3,8 cc/rev H series
<b>H4,2</b>	gear pump group 1 high pressure – 4,3 cc/rev H series
<b>H4,7</b>	gear pump group 1 high pressure – 4,7 cc/rev H series



## QUICK SELECTION GUIDE

### Gear Pumps

#### Double gear pumps with Hi-Lo system

<b>K0,9+3,2HL</b>	HI-LO double pump - 0,9 + 3,3cc/rev K series
<b>K1,2+5HL</b>	HI-LO double pump - 1,2 + 5cc/rev K series



#### Bidirectional gear pumps

<b>R0,2</b>	Reversible gear pump group 0-0,26 cc/rev + adaptor flange for group 0 pump
<b>R0,4</b>	reversible gear pump - 0,38cc/rev + adaptor flange for group 0 pump
<b>R0,6</b>	reversible gear pump - 0,63cc/rev + adaptor flange for group 0 pump
<b>R0,9</b>	reversible gear pump - 0,88cc/rev + adaptor flange for group 0 pump
<b>R1,3</b>	reversible gear pump - 1,25cc/rev + adaptor flange for group 0 pump
<b>R1,5</b>	reversible gear pump - 1,5cc/rev + adaptor flange for group 0 pump
<b>R2,1</b>	Reversible gear pump group 1 - 2,1 cc/rev
<b>R2,6</b>	Reversible gear pump group 1 - 2,6 cc/rev



#### Helical rotor pumps for high pressure and low noise and low pulsation applications

<b>S4,2</b>	low noise helical rotor pump group 1 - 4,2cc/rev
<b>S6,4</b>	low noise helical rotor pump group 1 - 6,4cc/rev
<b>S8,3</b>	low noise helical rotor pump group 1 - 8,3cc/rev
<b>S10</b>	low noise helical rotor pump group 1 - 10,2cc/rev
<b>S13</b>	low noise helical rotor pump group 1 - 12,9cc/rev

### Integral components: Cavity 0

#### Components in central manifold cavity 0

<b>J</b>	check valve ball type 3/4-16UNF
<b>S</b>	flow control valve 3/4-16UNF with screw
<b>L</b>	plug 3/4-16UNF basic
<b>N</b>	plug 3/4-16UNF open passage with 1/4"BSPP exit port

#### Cavity 0 option

<b>EP01</b>	exit port 1/4 BSPP
<b>EM9001C</b>	pressure gauge shut-off valve 90° F-F + nipples M 1/4" BSPP – M 1/4" BSPP
<b>EMIL01C</b>	pressure gauge shut-off valve F-F + nipples M 1/4" BSPP – M 1/4" BSPP
<b>F401**J</b>	pressure switch 1/4" BSPP where ** = max setting pressure (050-100-200-400 bar)
<b>MIR63**EM</b>	pressure gauge Ø63 where ** = max press. (60-160-250-315 bar) + shut-off valve 90°

#### Section D



### Integral components: Cavity 1

#### Components in central manifold cavity 1

<b>D_60</b>	guided needle relief valve M20x1,5 - 10÷60 bar - socket screw adj.
<b>D_180</b>	guided needle relief valve M20x1,5 - 20÷180 bar - socket screw adj.
<b>D_280</b>	guided needle relief valve M20x1,5 - 35÷280 bar - socket screw adj.
<b>D_350</b>	Guided needle relief valve M20x1,5 - 50÷350 bar - socket screw adj.
<b>XP</b>	closed plug for relief valve M20x1,5 cavity



# QUICK SELECTION GUIDE

## Cavity 1 option

2	handwheel M8 for VMDC35/VMDC20/VCF6 valves
3	steel cap for VMDC35 relief valve
4	plastic seal for VMDC35 relief valve

## Integral components: Cavity 2

### Components in central manifold cavity 2

<b>X</b>	open cavity – no valve
<b>A</b>	NC solenoid 2/2 way 3/4-16UNF poppet valve
<b>B</b>	NC solenoid 2/2 way 3/4-16UNF poppet valve with emergency
<b>C</b>	NO solenoid 2/2 way 3/4-16UNF poppet valve with emergency
<b>D</b>	NC solenoid 2/2 way 3/4-16UNF double poppet valve with emergency
<b>E</b>	lever operated 2/2 way valve without micro-switch
<b>EM</b>	lever operated 2/2 way valve with micro-switch
<b>Z</b>	2 way emergency button valve
<b>S</b>	flow control valve 3/4-16UNF with screw
<b>T12DC</b>	proportional flow control valve poppet type 15l/min 315 bar + coil 12VDC ED100%
<b>T24DC</b>	proportional flow control valve poppet type 15l/min 315 bar + coil 24VDC ED100%
<b>U</b>	hand pump 3/4-16UNF 2 cc/stroke + suction/return line pipe 1/4"BSPP 370mm
<b>G</b>	closed plug 3/4-16UNF
<b>H</b>	plug 3/4-16UNF with 1/4"BSPP exit port
<b>N</b>	plug 3/4-16UNF open passage with 1/4"BSPP exit port
<b>P</b>	plug 3/4-16UNF passing through 1/4"BSPP
<b>L</b>	plug 3/4-16UNF basic
<b>J</b>	check valve ball type 3/4-16UNF
<b>4VA11C</b>	4/2 way solenoid directional valve, closed center transient (only for U4 manifolds)
<b>4VA2</b>	4/3 way solenoid directional valve, center P to T (only for U4 manifolds)
<b>4VB2</b>	4/3 way solenoid directional valve, closed center (only for U4 manifolds)
<b>4VC2</b>	4/3 way solenoid directional valve, H center (only for U4 manifolds)
<b>4VE2</b>	4/3 way solenoid directional valve, center A-B to T (only for U4 manifolds)



### Cavity 2 option

<b>V-CSB</b>	handwheel for CSB/CSU
<b>EM9001C</b>	pressure gauge shut-off valve 90° F-F + nipples M 1/4" BSPP – M 1/4" BSPP
<b>EMIL01C</b>	pressure gauge shut-off valve F-F + nipples M 1/4" BSPP – M 1/4" BSPP
<b>F401**</b>	pressure switch 1/4" BSPP where ** = max setting pressure (050-100-200-400 bar)
<b>MIR63**EM</b>	pressure gauge Ø63 where ** = max press. (60-160-250-315 bar) + shut-off valve 90°



### Cavity 2 valve coil

<b>12DC_M130</b>	Coil 12V DC 18W ED75% for MSV30-31 + Electric connector DIN 43650-A
<b>24DC_M130</b>	Coil 24V DC 18W ED75% for MSV30-31 + Electric connector DIN 43650-A
<b>24RAC_M130</b>	Coil 24V DC 18W ED75% for MSV30-31 + El. connector with rectifier 12-24V
<b>115_50AC_M130</b>	Coil 115V/50Hz AC 28VA ED75% only for MSV30 + El. connector DIN 43650-A
<b>230_50AC_M130</b>	Coil 230V/50Hz AC 28VA ED75% only for MSV30 + El. connector DIN 43650-A
<b>110RAC_M130</b>	Coil 110V RAC 18W ED75% for MSV30-31 + El. connector with rectifier 115 V
<b>220RAC_M130</b>	Coil 220V RAC 18W ED75% for MSV30-31 + El. connector with rectifier 230 V



## QUICK SELECTION GUIDE

### Cavity 2 valve coil

<b>12DC_M140</b>	Coil 12V DC 22W ED100% for MSV-MDV + Electric connector DIN 43650-A
<b>24DC_M140</b>	Coil 24V DC 22W ED100% for MSV-MDV + Electric connector DIN 43650-A
<b>24RAC_M140</b>	Coil 24V DC 22W ED100% for MSV-MDV + El. connector with rectifier 12-24 V
<b>110RAC_M140</b>	Coil 110V RAC 22W ED100% for MSV-MDV + El. connector with rectifier 115 V
<b>220RAC_M140</b>	Coil 220V RAC 22W ED100% for MSV-MDV + El. connector with rectifier 230 V
<b>12DC_M630</b>	coil 12V DC ED100% + Electric connector DIN 43650-A
<b>24DC_M630</b>	coil 24V DC ED100% + Electric connector DIN 43650-A
<b>24AC_M631</b>	coil 24V AC ED100% with integrated rectifier + Electric connector DIN 43650-A
<b>115AC_M631</b>	coil 115V AC ED100% with integrated rectifier + Electric connector DIN 43650-A
<b>230AC_M631</b>	coil 230V AC ED100% with integrated rectifier + Electric connector DIN 43650-A



## Integral components: Cavity 3

### Components in central manifold cavity 3

<b>F02</b>	fixed pressure compensated flow control valve 3/4-16UNF hole 0,8mm
<b>F03</b>	fixed pressure compensated flow control valve 3/4-16UNF hole 1mm
<b>F04</b>	fixed pressure compensated flow control valve 3/4-16UNF hole 1,25mm
<b>F05</b>	fixed pressure compensated flow control valve 3/4-16UNF hole 1,5mm
<b>F06</b>	fixed pressure compensated flow control valve 3/4-16UNF hole 1,75mm
<b>F07</b>	fixed pressure compensated flow control valve 3/4-16UNF hole 2mm
<b>F09</b>	fixed pressure compensated flow control valve 3/4-16UNF hole 2,5mm
<b>F11</b>	fixed pressure compensated flow control valve 3/4-16UNF hole 3mm
<b>F13</b>	fixed pressure compensated flow control valve 3/4-16UNF hole 3,5mm
<b>F15</b>	fixed pressure compensated flow control valve 3/4-16UNF hole 4mm
<b>R2</b>	compensated flow control valve 3/4-16UNF with screw 1 ÷ 2,2 l/min
<b>R3</b>	compensated flow control valve 3/4-16UNF with screw 1,6 ÷ 4 l/min
<b>R4</b>	compensated flow control valve 3/4-16UNF with screw 2,5 ÷ 5 l/min
<b>R5</b>	compensated flow control valve 3/4-16UNF with screw 3 ÷ 7 l/min
<b>R6</b>	compensated flow control valve 3/4-16UNF with screw 4,9 ÷ 10,8 l/min
<b>R7</b>	compensated flow control valve 3/4-16UNF with screw 8 ÷ 18,5 l/min
<b>S</b>	flow control valve 3/4-16UNF with screw
<b>Z</b>	2 way emergency button valve
<b>AR</b>	NC solenoid 2/2 way 3/4-16UNF poppet valve with reversible flow
<b>BR</b>	NC solenoid 2/2 way 3/4-16UNF poppet valve +emergency with reversible flow
<b>CR</b>	NO solenoid 2/2 way 3/4-16UNF poppet valve + emergency with reversible flow
<b>D</b>	NC solenoid 2/2 way 3/4-16UNF double poppet valve with emergency
<b>J</b>	check valve ball type 3/4-16UNF
<b>G</b>	closed plug 3/4-16UNF
<b>H</b>	plug 3/4-16UNF with 1/4"BSPP exit port
<b>N</b>	plug 3/4-16UNF open passage with 1/4"BSPP exit port
<b>P</b>	plug 3/4-16UNF passing through 1/4"BSPP
<b>L</b>	plug 3/4-16UNF basic
<b>P**12DC</b>	proportional relief valve 3/4-16UNF 12VDC where ** = max pressure (60-210 bar)
<b>P**24DC</b>	proportional relief valve 3/4-16UNF 24VDC where ** = max pressure (60-210 bar)
<b>V**</b>	relief valve 3/4-16UNF where ** = max pressure (40-110-250-350 bar) - socket screw



# QUICK SELECTION GUIDE

## Cavity 3 option

<b>V-CSB</b>	handwheel for CSB/CSU
<b>2</b>	handwheel M8 for VMDC35/VMDC20/VCF6 valves
<b>EM9001C</b>	pressure gauge shut-off valve 90° F-F + nipples M 1/4" BSPP – M 1/4" BSPP
<b>EMIL01C</b>	pressure gauge shut-off valve F-F + nipples M 1/4" BSPP – M 1/4" BSPP
<b>F401**</b>	pressure switch 1/4" BSPP where ** = max setting pressure (050-100-200-400 bar)
<b>MIR63**EM</b>	pressure gauge Ø63 where ** = max press. (60-160-250-315 bar) + shut-off valve 90°



## Cavity 3 valve coil voltage

<b>12DC_M130</b>	Coil 12V DC 18W ED75% for MSV30-31 + Electric connector DIN 43650-A
<b>24DC_M130</b>	Coil 24V DC 18W ED75% for MSV30-31 + Electric connector DIN 43650-A
<b>24RAC_M130</b>	Coil 24V DC 18W ED75% for MSV30-31 + El. connector with rectifier 12-24 V
<b>115_50AC_M130</b>	Coil 115V/50Hz AC 28VA ED75% only for MSV30 + Electric connector DIN 43650-A
<b>230_50AC_M130</b>	Coil 230V/50Hz AC 28VA ED75% only for MSV30 + Electric connector DIN 43650-A
<b>110RAC_M130</b>	Coil 110V RAC 18W ED75% for MSV30-31 + El. connector with rectifier 115 V
<b>220RAC_M130</b>	Coil 220V RAC 18W ED75% for MSV30-31 + El. connector with rectifier 230 V
<b>12DC_M140</b>	Coil 12V DC 22W ED100% for MSV-MDV + Electric connector DIN 43650-A
<b>24DC_M140</b>	Coil 24V DC 22W ED100% for MSV-MDV + Electric connector DIN 43650-A
<b>24RAC_M140</b>	Coil 24V DC 22W ED100% for MSV-MDV + El. connector with rectifier 12-24 V
<b>110RAC_M140</b>	Coil 110V RAC 22W ED100% for MSV-MDV + El. connector with rectifier 115 V
<b>220RAC_M140</b>	Coil 220V RAC 22W ED100% for MSV-MDV + El. connector with rectifier 230 V



## Integral components: Cavity 4

### Component in central manifold cavity 4

<b>A</b>	NC solenoid 2/2 way 3/4-16UNF poppet valve
<b>B</b>	NC solenoid 2/2 way 3/4-16UNF poppet valve with emergency
<b>C</b>	NO solenoid 2/2 way 3/4-16UNF poppet valve with emergency
<b>D</b>	NC solenoid 2/2 way 3/4-16UNF double poppet valve with emergency
<b>E</b>	lever operated 2/2 way valve without micro-switch
<b>EM</b>	lever operated 2/2 way valve with micro-switch
<b>Z</b>	2 way emergency button valve
<b>S</b>	flow control valve 3/4-16UNF with screw
<b>T12DC</b>	proportional flow control valve poppet type 15l/min 315 bar + coil 12VDC ED100%
<b>T24DC</b>	proportional flow control valve poppet type 15l/min 315 bar + coil 24VDC ED100%
<b>U</b>	hand pump 3/4-16UNF 2 cc/stroke + suction/return line pipe 1/4" BSP 370mm
<b>G</b>	closed plug 3/4-16UNF
<b>H</b>	plug 3/4-16UNF with 1/4" BSPP exit port
<b>N</b>	plug 3/4-16UNF open passage with 1/4" BSPP exit port
<b>P</b>	plug 3/4-16UNF passing through 1/4" BSPP
<b>L</b>	plug 3/4-16UNF basic
<b>J</b>	check valve ball type 3/4-16UNF



## QUICK SELECTION GUIDE

### Cavity 4 option

<b>V-CSB</b>	handwheel for CSB/CSU
<b>EM9001C</b>	pressure gauge shut-off valve 90° F-F + nipples M 1/4" BSPP – M 1/4" BSPP
<b>EMIL01C</b>	pressure gauge shut-off valve F-F + nipples M 1/4" BSPP – M 1/4" BSPP
<b>F401**</b>	pressure switch 1/4" BSPP where ** = max setting pressure (050-100-200-400 bar)
<b>MIR63**EM</b>	pressure gauge Ø63 where ** = max press. (60-160-250-315 bar) + shut-off valve 90°



### Cavity 4 valve coil voltage

<b>12DC_M130</b>	Coil 12V DC 18W ED75% for MSV30-31 + Electric connector DIN 43650-A
<b>24DC_M130</b>	Coil 24V DC 18W ED75% for MSV30-31 + Electric connector DIN 43650-A
<b>24RAC_M130</b>	Coil 24V DC 18W ED75% for MSV30-31 + El. connector with rectifier 12-24 V
<b>115_50AC_M130</b>	Coil 115V/50Hz AC 28VA ED75% only for MSV30 + Electric connector DIN 43650-A
<b>230_50AC_M130</b>	Coil 230V/50Hz AC 28VA ED75% only for MSV30 + Electric connector DIN 43650-A
<b>110RAC_M130</b>	Coil 110V RAC 18W ED75% for MSV30-31 + El. connector with rectifier 115 V
<b>220RAC_M130</b>	Coil 220V RAC 18W ED75% for MSV30-31 + El. connector with rectifier 230 V
<b>12DC_M140</b>	Coil 12V DC 22W ED100% for MSV-MDV + Electric connector DIN 43650-A
<b>24DC_M140</b>	Coil 24V DC 22W ED100% for MSV-MDV + Electric connector DIN 43650-A
<b>24RAC_M140</b>	Coil 24V DC 22W ED100% for MSV-MDV + El. connector with rectifier 12-24 V
<b>110RAC_M140</b>	Coil 110V RAC 22W ED100% for MSV-MDV + El. connector with rectifier 115 V
<b>220RAC_M140</b>	Coil 220V RAC 22W ED100% for MSV-MDV + El. connector with rectifier 230 V



## Flow restrictor in central manifold cavity 5

### Flow restrictor in central manifold cavity 5

<b>PLUGTCE01</b>	1/4" BSPP plug with copper washer
<b>PP01370</b>	suction/return line pipe 1/4"BSP 370mm
<b>RETURN-KIT</b>	1/4" BSP holder for SF12 + flexible plastic pipe 12 mm for return line / price per meter
<b>C34200001</b>	return line tank immersed filter
<b>1(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 1l/min
<b>2(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 2l/min
<b>3(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 3l/min
<b>4(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 4l/min
<b>5(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 5l/min
<b>6(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 6l/min
<b>8(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 8l/min
<b>10(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 10l/min
<b>12(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 12l/min
<b>15(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 15l/min



## Flow restrictor in central manifold cavity 6

### Flow restrictor in central manifold cavity 6

<b>PLUGTCE01</b>	1/4" BSPP plug with copper washer
<b>PP01370</b>	suction/return line pipe 1/4"BSP 370mm
<b>RETURN-KIT</b>	1/4" BSP holder for SF12 + flexible plastic pipe 12 mm for return line / price per meter
<b>C34200001</b>	return line tank immersed filter
<b>1(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 1l/min
<b>2(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 2l/min
<b>3(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 3l/min
<b>4(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 4l/min
<b>5(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 5l/min
<b>6(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 6l/min
<b>8(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 8l/min
<b>10(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 10l/min
<b>12(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 12l/min
<b>15(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 15l/min



## Flow restrictor in central manifold cavity 7

### Flow restrictor in central manifold cavity 7

<b>0(04)</b>	closed plug Ø 12,7 with o-ring
<b>1(04)</b>	fixed pressure compensated flow control valve Ø 12,7 with o-ring 1l/min
<b>2(04)</b>	fixed pressure compensated flow control valve Ø 12,7 with o-ring 2l/min
<b>3(04)</b>	fixed pressure compensated flow control valve Ø 12,7 with o-ring 3l/min
<b>4(04)</b>	fixed pressure compensated flow control valve Ø 12,7 with o-ring 4l/min
<b>5(04)</b>	fixed pressure compensated flow control valve Ø 12,7 with o-ring 5l/min
<b>6(04)</b>	fixed pressure compensated flow control valve Ø 12,7 with o-ring 6l/min
<b>8(04)</b>	fixed pressure compensated flow control valve Ø 12,7 with o-ring 8l/min
<b>10(04)</b>	fixed pressure compensated flow control valve Ø 12,7 with o-ring 10l/min
<b>12(04)</b>	fixed pressure compensated flow control valve Ø 12,7 with o-ring 12l/min
<b>15(04)</b>	fixed pressure compensated flow control valve Ø 12,7 with o-ring 15l/min



## Flow restrictor in central manifold cavity 8

### Flow restrictor in central manifold cavity 8

<b>PLUGTCE01</b>	1/4" BSPP plug with copper washer
<b>PP01370</b>	suction/return line pipe 1/4"BSP 370mm
<b>RETURN-KIT</b>	1/4" BSP holder for SF12 + flexible plastic pipe 12 mm for return line / price per meter
<b>C34200001</b>	return line tank immersed filter
<b>1(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 1l/min
<b>2(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 2l/min
<b>3(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 3l/min
<b>4(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 4l/min
<b>5(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 5l/min
<b>6(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 6l/min
<b>8(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 8l/min
<b>10(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 10l/min
<b>12(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 12l/min
<b>15(01)</b>	fixed pressure compensated flow control valve 1/4"BSP 15l/min



# QUICK SELECTION GUIDE

## Tanks

### Section E

#### Steel tanks

<b>1,5A</b>	1,5l cylindrical steel tank horizontal mounting + 1/2"BSPP std filler & breather plug
<b>1,5AV</b>	1,5l cylindrical steel tank vertical mounting + 1/2"BSPP std filler & breather plug
<b>2,5A</b>	2,5l cylindrical steel tank horizontal mounting + 1/2"BSPP std filler & breather plug
<b>2,5AV</b>	2,5l cylindrical steel tank vertical mounting + 1/2"BSPP std filler & breather plug
<b>5B</b>	5l cylindrical steel tank horizontal mounting + 1/2"BSPP std filler & breather plug
<b>5BV</b>	5l cylindrical steel tank vertical mounting + 1/2"BSPP std filler & breather plug
<b>10B</b>	10l cylindrical steel tank horizontal mounting + 1/2"BSPP std filler & breather plug
<b>10BV</b>	10l cylindrical steel tank vertical mounting + 1/2"BSPP std filler & breather plug
<b>12B</b>	12l cylindrical steel tank horizontal mounting + 1/2"BSPP std filler & breather plug
<b>12BV</b>	12l cylindrical steel tank vertical mounting + 1/2"BSPP std filler & breather plug
<b>10C</b>	10l square steel tank horizontal mounting + 1/2"BSPP std filler & breather plug
<b>10CV</b>	10l square steel tank vertical mounting + 1/2"BSPP std filler & breather plug
<b>22C</b>	22l square steel tank horizontal mounting + 3/4"BSPP male filler & breather plug
<b>22CV</b>	22l square steel tank vertical mounting + 3/4"BSPP male filler & breather plug
<b>3EV</b>	3l vertical square steel tank vertical mounting + 1/2"BSPP std filler & breather plug
<b>7EV</b>	7l vertical square steel tank vertical mounting + 1/2"BSPP std filler & breather plug
<b>8EV</b>	8l vertical square steel tank vertical mounting + 3/4"BSPP male filler & breather plug
<b>15EV</b>	15l vertical square steel tank vertical mounting + 3/4"BSPP male filler & breather plug
<b>20EV</b>	20l vertical square steel tank vertical mounting + 3/4"BSPP male filler & breather plug
<b>30EV</b>	30l vertical square steel tank vertical mounting + 3/4"BSPP male filler & breather plug
<b>F80000001</b>	steel tank adapter for PPC - to be welded on custom made tanks



#### Plastic tanks

<b>1,5L</b>	1,5l square plastic tank type L horizontal mounting + 3/4"BSPP F filler & breather plug
<b>1,5LV</b>	1,5l square plastic tank type L vertical mounting + 3/4"BSPP F filler & breather plug
<b>3L</b>	3l square plastic tank type L horizontal mounting + 3/4"BSPP F filler & breather plug
<b>3LV</b>	3l square plastic tank type L vertical mounting + 3/4"BSPP F filler & breather plug
<b>6L</b>	6l square plastic tank type L horizontal mounting + 3/4"BSPP F filler & breather plug
<b>6LV</b>	6l square plastic tank type L vertical mounting + 3/4"BSPP F filler & breather plug
<b>5M</b>	5l square plastic tank 170mm type M horizontal mounting + 3/4"BSPP F filler & breather
<b>5MV</b>	5l square plastic tank 170mm type M vertical mounting + 3/4"BSPP F filler & breather
<b>8M</b>	8l square plastic tank 170mm type M horizontal mounting + 3/4"BSPP F filler & breather
<b>8MV</b>	8l square plastic tank 170mm type M vertical mounting + 3/4"BSPP F filler & breather
<b>5P</b>	5l round plastic tank for PPC Ø195mm horizontal mounting + 1/2"BSPP filler & breather
<b>5PV</b>	5l round plastic tank for PPC Ø195mm vertical mounting + 1/2"BSPP filler & breather
<b>9P</b>	9l round plastic tank for PPC Ø195mm horizontal mounting + 1/2"BSPP filler & breather
<b>9PV</b>	9l round plastic tank for PPC Ø195mm vertical mounting + 1/2"BSPP filler & breather
<b>12N</b>	12l square plastic tank 180mm type N horizontal mounting + 1/2"BSPP filler & breather
<b>12NV</b>	12l square plastic tank 180mm type N vertical mounting + 1/2"BSPP filler & breather



## QUICK SELECTION GUIDE

### Accessories

#### Accessories

<b>E60543006</b>	foot mounting support 45mm
<b>E60543007</b>	foot mounting support tall type (67mm)
<b>MIR63**</b>	pressure gauge Ø63 where ** = max press. (60-160-250-315 bar)
<b>EM9001C</b>	pressure gauge shut-off valve 90° F-F + nipples M 1/4" BSPP – M 1/4" BSPP
<b>EMIL01C</b>	pressure gauge shut-off valve F-F + nipples M 1/4" BSPP – M 1/4" BSPP
<b>F16000001</b>	plastic Ø112-114 DC motor protection cover
<b>F401**</b>	pressure switch 1/4" BSPP where ** = max setting pressure (050-100-200-400 bar)
<b>F4R0M3</b>	pressure switch 1/8" BSPP 0,2-2,5bar for filter manifold E60403020
<b>MIR4010</b>	pressure gauge Ø40 10bar max for filter manifold E60403020
<b>P0201</b>	remote up/down control with 3m flying cable for single/double acting cylinder
<b>P0202</b>	remote 4 buttons control with 3m flying cable for 2 double acting cylinders
<b>VPC00</b>	electronic PWM driver for proportional valves 12/24VDC
<b>BFCSAE0801</b>	in-line manifolds for 3/4-16UNF valves 1/4" BSPP ports
<b>BFCSAE0802</b>	in-line manifolds for 3/4-16UNF valves 3/8" BSPP ports



### External manifolds

#### External manifolds

<b>E60403004</b>	28mm spacer subplate
<b>E60403005</b>	PPC 90° rotation manifold 79 mm
<b>E60403002</b>	PPC 90° rotation manifold 49 mm
<b>E60403001</b>	NG6 (cetop 3) parallel block - 3/8" BSPP rear ports (9/16-18UNF for US)
<b>E60403010</b>	NG6 (cetop 3) parallel block - 3/8" BSPP lateral ports (9/16-18UNF for US)
<b>E60403011</b>	NG6 (cetop 3) series block - 3/8" BSPP lateral ports (9/16-18UNF for US)
<b>E60413002</b>	NG6 (cetop 3) manifold with piloted check valve on A
<b>E60413001</b>	NG6 (cetop 3) manifold with piloted check valve on A and B
<b>E60413003</b>	NG6 (cetop 3) manifold with piloted check valve on B
<b>E60403027</b>	modular manifold with piloted check valves on A and B
<b>E60403028</b>	modular manifold with check valve for differential area cylinder
<b>E60403020</b>	modular basic manifold for spin-on return filter on T line
<b>PM09</b>	hand pump 8,8 cc/stroke – cartridge only + base modular manifold
<b>E60403006</b>	PPC to SD01 converter (needed to mount SD01 stackable valves)
<b>E60403008M</b>	PPC to PPM base converter (needed to mount SD00 NG3 MICRO valves)
<b>M60403010</b>	PPM NG3 MICRO modular manifold with 1/4" BSPP lateral ports (9/16-18UNF for US)
<b>M60403004</b>	PPM spacer element
<b>M60403005</b>	PPM 90° rotation manifold
<b>M60413002</b>	PPM NG3 MICRO modular manifold with piloted check valves on A
<b>M60413001</b>	PPM NG3 MICRO modular manifold with piloted check valves on A and B
<b>M60413003</b>	PPM NG3 MICRO modular manifold with piloted check valves on B
<b>E60403030</b>	manifold for MSV or MDV 2/2 way cartridge valves
<b>E60403031</b>	manifold for MSV3V 3/2 way cartridge valve

#### Section F



## External valves

### Section G

#### External valves

<b>MSV3V4000000</b>	3/2 way solenoid cartridge valve, A to T de-energized
<b>MSV3000000</b>	NC solenoid 2/2 way 3/4-16UNF poppet valve
<b>MSV30E0000</b>	NC solenoid 2/2 way 3/4-16UNF poppet valve with emergency
<b>MSV31E0000</b>	NO solenoid 2/2 way 3/4-16UNF poppet valve with emergency
<b>MDV30E0000</b>	NC solenoid 2/2 way 3/4-16UNF double poppet valve with emergency
<b>SD00A11C</b>	NG3 MICRO solenoid directional valve 4 way, 2 positions
<b>SD00A2</b>	NG3 MICRO solenoid directional valve 4 way, 3 pos. center P to T
<b>SD00B2</b>	NG3 MICRO solenoid directional valve 4 way, 3 pos. closed center
<b>SD00C2</b>	NG3 MICRO solenoid directional valve 4 way, 3 pos. H center
<b>SD00E2</b>	NG3 MICRO solenoid directional valve 4 way, 3 pos. center A-B to T
<b>SD01A11C</b>	Stackable solenoid directional valve 4 way, 2 positions
<b>SD01A2</b>	Stackable solenoid directional valve 4 way, 3 pos. center P to T
<b>SD01B2</b>	Stackable solenoid directional valve 4 way, 3 pos. closed center
<b>SD01C2</b>	Stackable solenoid directional valve 4 way, 3 pos. H center
<b>SD01E2</b>	Stackable solenoid directional valve 4 way, 3 pos. center A-B to T
<b>SD01A11CC</b>	Stackable solenoid directional valve 4 way, 2 positions, stack top closed
<b>SD01A2C</b>	Stackable solenoid directional valve 4 way, 3 pos. center P to T, stack top closed
<b>SD01B2C</b>	Stackable solenoid directional valve 4 way, 3 pos. closed center, stack top closed
<b>SD01C2C</b>	Stackable solenoid directional valve 4 way, 3 pos. H center, stack top closed
<b>SD01E2C</b>	Stackable solenoid directional valve 4 way, 3 pos. center A-B to T, stack top closed
<b>SD03A11C</b>	NG6 (cetop3) solenoid directional valve 4 way, 2 positions
<b>SD03A2</b>	NG6 (cetop3) solenoid directional valve 4 way, 3 pos. center P to T
<b>SD03B2</b>	NG6 (cetop3) solenoid directional valve 4 way, 3 pos. closed center
<b>SD03C2</b>	NG6 (cetop3) solenoid directional valve 4 way, 3 pos. H center
<b>SD03E2</b>	NG6 (cetop3) solenoid directional valve 4 way, 3 pos. center A-B to T
<b>HD03A1</b>	NG6 (cetop3) manual directional valve, spring centered P to T
<b>HD03A2</b>	NG6 (cetop3) manual directional valve, spring centered closed center
<b>HD03A3</b>	NG6 (cetop3) manual directional valve, spring centered H center
<b>HD03A10</b>	NG6 (cetop3) manual directional valve, spring centered A-B to T
<b>HD03D1</b>	NG6 (cetop3) manual directional valve, detent, center P to T
<b>HD03D2</b>	NG6 (cetop3) manual directional valve, detent, closed center
<b>HD03D3</b>	NG6 (cetop3) manual directional valve, detent, H center
<b>HD03D10</b>	NG6 (cetop3) manual directional valve, detent, center A-B to T
<b>E60423001L</b>	NG6 (cetop3) sandwich type modular valve with relief valve on A & B 60bar max
<b>E60423001A</b>	NG6 (cetop3) sandwich type modular valve with relief valve on A & B 180bar max
<b>E60423001B</b>	NG6 (cetop3) sandwich type modular valve with relief valve on A & B 280bar max
<b>E60423002L</b>	NG6 (cetop3) sandwich type modular valve with relief valve on A 60bar max
<b>E60423002A</b>	NG6 (cetop3) sandwich type modular valve with relief valve on A 180bar max
<b>E60423002B</b>	NG6 (cetop3) sandwich type modular valve with relief valve on A 280bar max
<b>E60423003L</b>	NG6 (cetop3) sandwich type modular valve with relief valve on B 60bar max
<b>E60423003A</b>	NG6 (cetop3) sandwich type modular valve with relief valve on B 180bar max
<b>E60423003B</b>	NG6 (cetop3) sandwich type modular valve with relief valve on B 280bar max
<b>E60433000</b>	NG6 (cetop3) sandwich type modular valve for unidirectional throttle valve
<b>E60433001</b>	NG6 (cetop3) sandwich type modular valve with unidirectional throttle valve on A & B
<b>E60433002</b>	NG6 (cetop3) sandwich type modular valve with unidirectional throttle valve on A
<b>E60433003</b>	NG6 (cetop3) sandwich type modular valve with unidirectional throttle valve on B



# QUICK SELECTION GUIDE

## External cartridge valves coils

<b>12DC_M130</b>	Coil 12V DC 18W ED75% for MSV30-31 + Electric connector DIN 43650-A
<b>24DC_M130</b>	Coil 24V DC 18W ED75% for MSV30-31 + Electric connector DIN 43650-A
<b>24RAC_M130</b>	Coil 24V DC 18W ED75% for MSV30-31 + El. connector with rectifier 12-24 V
<b>115_50AC_M130</b>	Coil 115V/50Hz AC 28VA ED75% only for MSV30 + Electric connector DIN 43650-A
<b>230_50AC_M130</b>	Coil 230V/50Hz AC 28VA ED75% only for MSV30 + Electric connector DIN 43650-A
<b>110RAC_M130</b>	Coil 110V RAC 18W ED75% for MSV30-31 + El. connector with rectifier 115 V
<b>220RAC_M130</b>	Coil 220V RAC 18W ED75% for MSV30-31 + El. connector with rectifier 230 V
<b>12DC_M140</b>	Coil 12V DC 22W ED100% for MSV-MDV + Electric connector DIN 43650-A
<b>24DC_M140</b>	Coil 24V DC 22W ED100% for MSV-MDV + Electric connector DIN 43650-A
<b>24RAC_M140</b>	Coil 24V DC 22W ED100% for MSV-MDV + El. connector with rectifier 12-24 V
<b>110RAC_M140</b>	Coil 110V RAC 22W ED100% for MSV-MDV + El. connector with rectifier 115 V
<b>220RAC_M140</b>	Coil 220V RAC 22W ED100% for MSV-MDV + El. connector with rectifier 230 V



## External SD00 valves coils

<b>12DC_M100</b>	coil 12V DC 16W ED100% + Electric connector DIN 43650-A
<b>24DC_M100</b>	coil 24V DC 16W ED100% + Electric connector DIN 43650-A



## External SD01 valves coils

<b>12DC_M120</b>	coil 12V DC 22W ED100% + Electric connector DIN 43650-A
<b>24DC_M120</b>	coil 24V DC 22W ED100% + Electric connector DIN 43650-A
<b>24RAC_M120</b>	coil 24V DC 22W ED100% + El. conn. with rectifier 12-24 V black pg11
<b>220RAC_M120</b>	coil 220V RAC 26W ED100% + El. conn. with rectifier 230 V black pg11



## External SD03 valves coils

<b>12DC_M160</b>	coil 12V DC 26W ED100% + Electric connector DIN 43650-A
<b>24DC_M160</b>	coil 24V DC 26W ED100% + Electric connector DIN 43650-A
<b>24RAC_M160</b>	coil 24V DC 26W ED100% + El. conn. DIN 43650-A with rectifier 12-24 V black pg11
<b>110RAC_M160</b>	coil 110V RAC 26W ED100% + El. conn. DIN 43650-A with rectifier 115 V black pg11
<b>220RAC_M160</b>	coil 220V RAC 26W ED100% + El. conn. DIN 43650-A with rectifier 230 V black pg11

