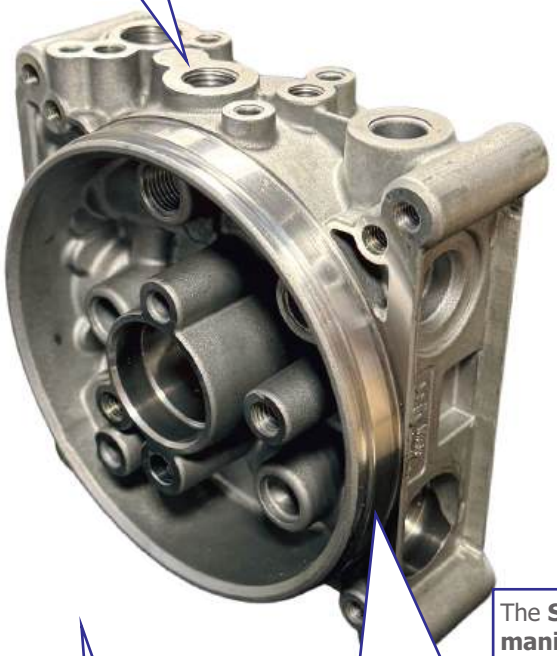
# CENTRAL MANIFOLDS for PPC

The **Universal central manifold** with up to 5 lateral cavities in 3 main executions

Two **die-cast aluminium central manifold**s in eight main executions is the core part of all power units for all industrial, mobile and marine applications. They feature the **highest integration and flexibility** on the market, with up to **eleven cavities** where valves and components can be fit

The **interface** to hose fittings or external additional manifolds is **standardised**. The P and T ports are **1/4" BSP** threaded (International standard) or **9/16-18UNF** (SAE06 - American standard) for direct connection of hose fittings.



The **Smart central manifold** with up to 6 lateral cavities in 5 main executions

Lateral cavities are conform to **SAE08 standard** (3/4-16UNF)

Clockwise (our standard) or counterclockwise tang drive shaft **external gear pumps** can be mounted. **Double pumps**, including those with an integral **HI-LO circuit**, and **low noise helicoidal gear pumps** are also available. The maximum flow is **25l/min** (6,5GPM), with a **low pressure drop**. Electric motor power up to 7,5kW.

The **interfaces** to tanks and motors are **unified.** All plastic and steel tanks can be easily interchanged.
AC or DC motors can be fit.
B14 IEC or NEMA 56C and 184TC standard motors interfaces are available

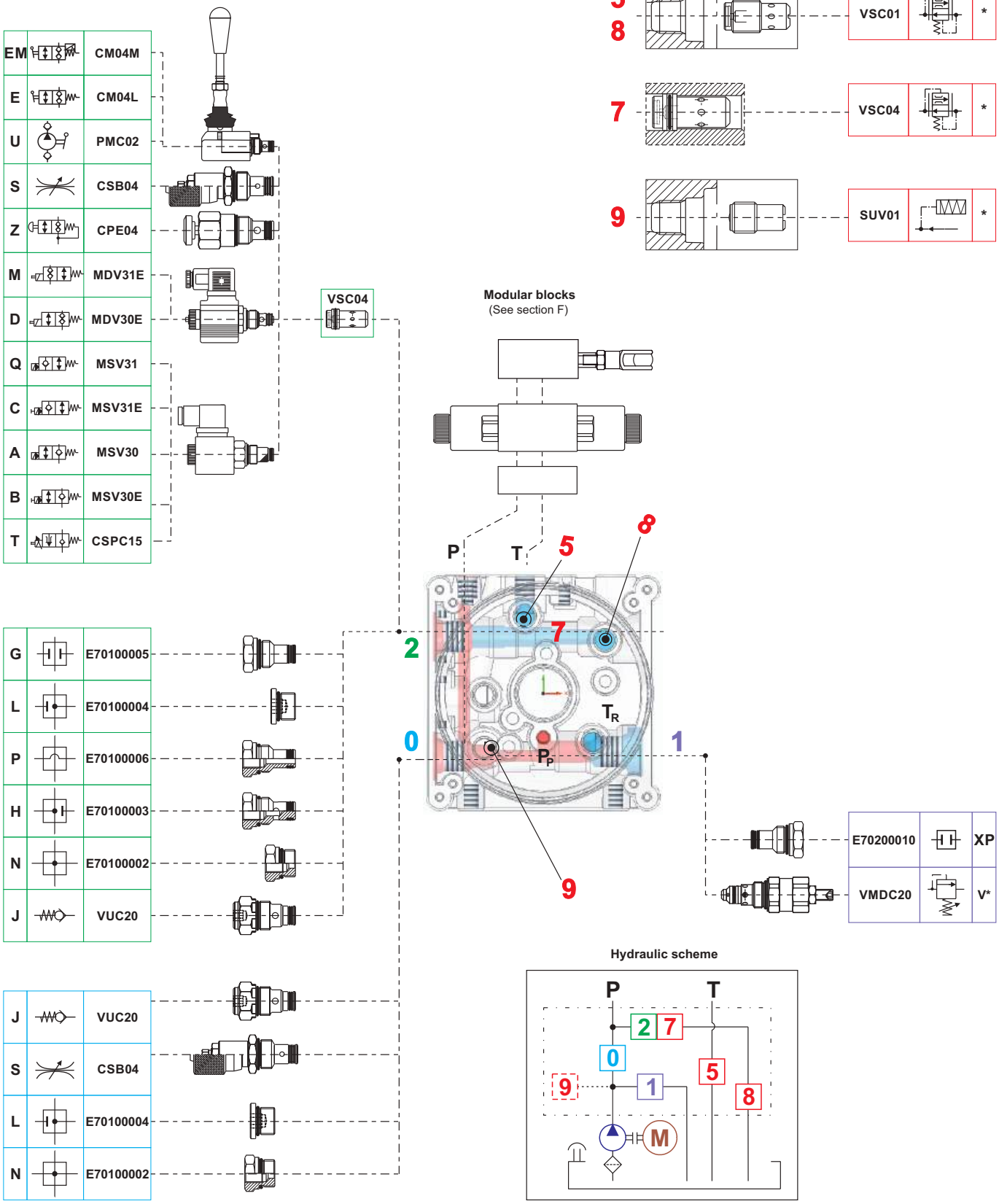
## Q & A

**Which central manifold type and execution should I choose?**
UA type is the most widely applied for single acting or double acting circuits. UB is the real «Universal» central manifold since, in addition to UA type features, there are two extra lateral cavities to mount, for example, an integrated emergency hand pump and an externally adjustable flow control. U4 is recommended for compact and cost effective double acting circuits with a single cylinder.
SR type is used with bidirectional pumps and can integrate P.O. check valves and differential cylinder vent valve (SRD version), SB3 is for circuits with 3-way hydraulic operated valve for automatic venting when the electric motor is off, SB is applied for single acting or double acting circuits with alternative components location than the UB and additional features. S4 is recommended for driving up to two double acting cylinders with integrated cartridge valves. SX* are for SPU. Further exectutions are available on request.

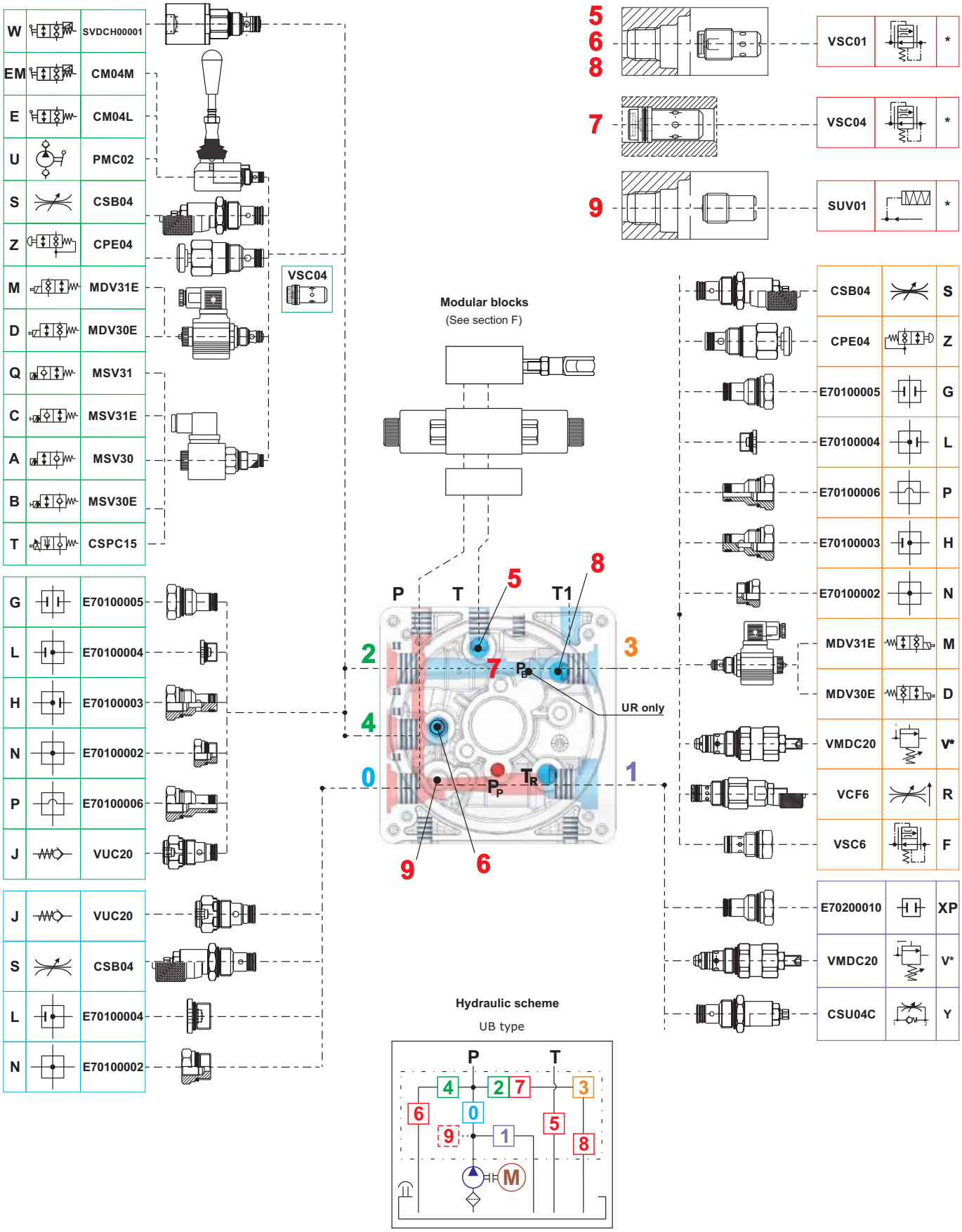
**Do I need special tools to assemble the components within the central manifold?**
No. All valves are screw-in type in a single piece construction (no loose nuts, washers, springs; nothing difficult to assemble or fall apart). The components can be easily assembled with simple hand tools and hexagon or Allen wrenches.

**Is the central manifold available as a loose component?**
Yes. We can supply either fully assembled and tested power packs or kits of loose components which can be kept in stock by our worldwide distributors and easily assembled to satisfy local market demand quickly and effectively. Central manifolds and other components are 100% tested even when supplied as loose parts.

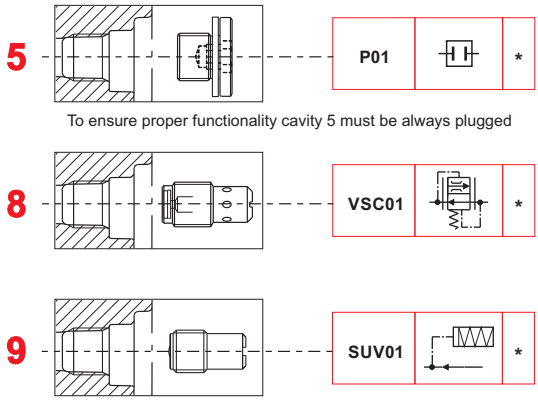
## UNIVERSAL CENTRAL MANIFOLD «UA»



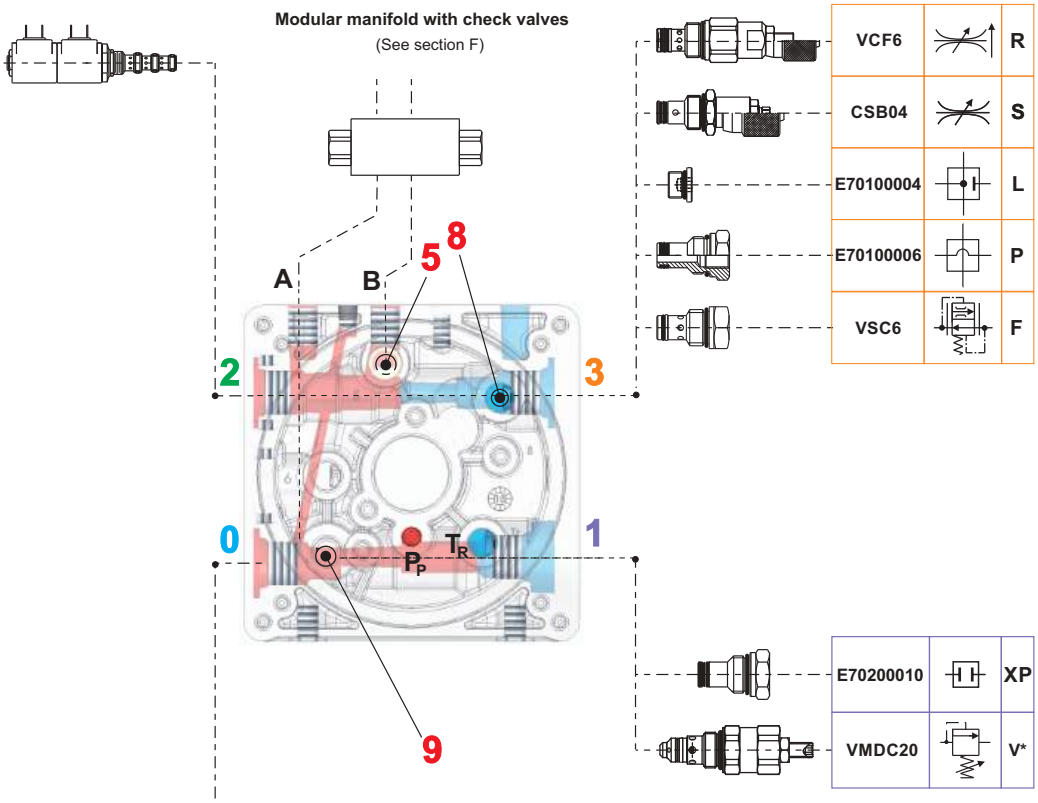
## UNIVERSAL CENTRAL MANIFOLD «UB»



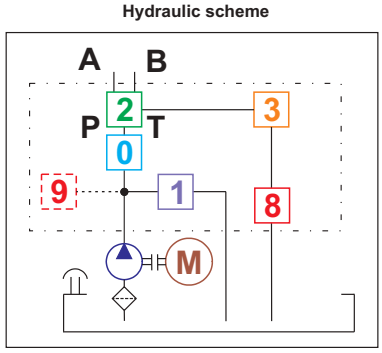
## UNIVERSAL CENTRAL MANIFOLD «U4»




| | | |
|---|---|---|
| 4VA2 | | MSV4VA2 |
| 4VB2 | | MSV4VB2 |
| 4VC2 | | MSV4VC2 |
| 4VE2 | | MSV4VE2 |
| 4VA11C | | MSV4VA11C |

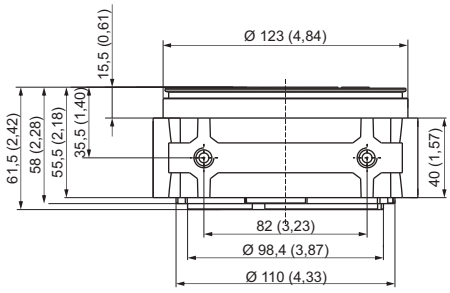



| | | |
|---|---|---|
| J | | VUC20 |
| S | | CSB04 |
| L | | E70100004 |
| N | | E70100002 |



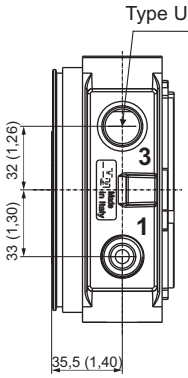
## UNIVERSAL CENTRAL MANIFOLDS - OVERALL DIMENSIONS

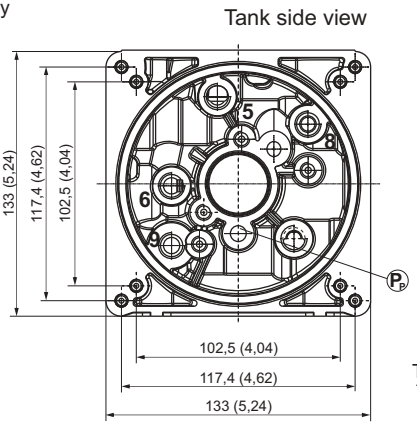
| Type | Spare part code |
|---|---|
| UA | C30401000 |
| UB | C30402000 |
| U4 | C30404000 |
| UAUS | C30401010 |
| UBUS | C30402010 |
| U4US | C30404010 |

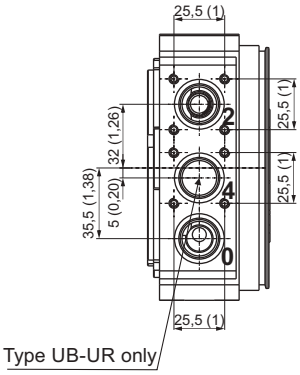



Weight: 1,2 kg (2,65 lb)

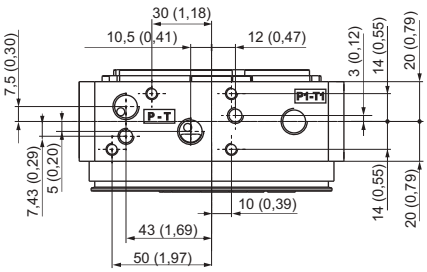
**Notes:**
- codes ending with **US** are according American standards, machined with 9/16-18 UNF (SAE06) P-T exit ports.
- all dimensions in mm (inches)

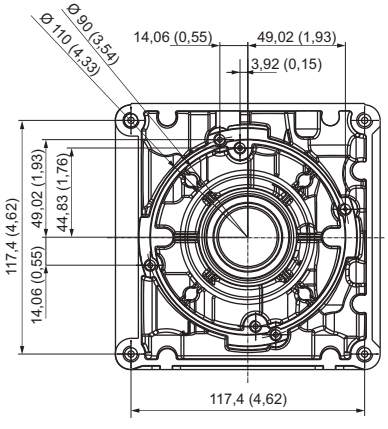



| Cavity | Thread |
|---|---|
| 0, 1, 2, 3, 4 | 3/4-16 UNF (SAE08) |
| P-T | 1/4 BSP<br>9/16-18UNF (SAE06 - US type) |
| $P_1$-$T_1$ | 1/4 BSP (threaded on request only) |
| 5, 6, 8, 9 | 1/4 BSP (cavity 9 threaded on request only) |
| External manifolds fixings | 2 tie rods M8<br>4 tie rods M6 (UB type only) |
| Tank fixings | 4 screws M6x14 |
| Integral AC motors and B14 flanges fixings | 4 screws M8x25 |
| DC motors fixings | 2 screws M6x14<br>or tie rods M6 |
| Pumps fixings | 2 screws M8<br>(see pump lenghts on the relevant tables) |
| Mounting Foot fixings | 2 screws M10x18<br>3/8-16 UNC US type |
| PMC hand pump and CM lever valve fixings | 4 screws M5x45 |

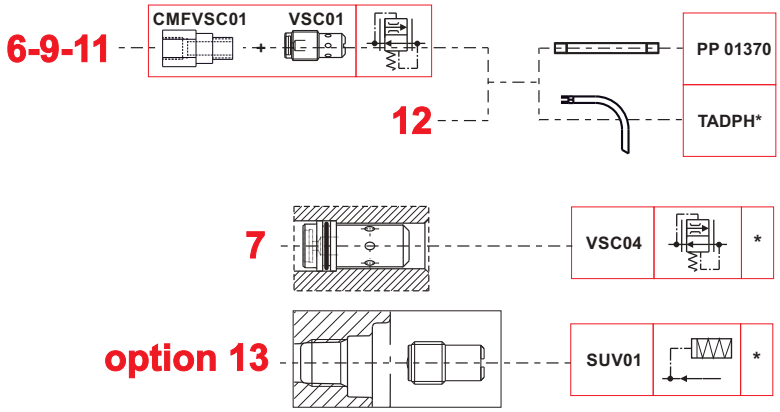


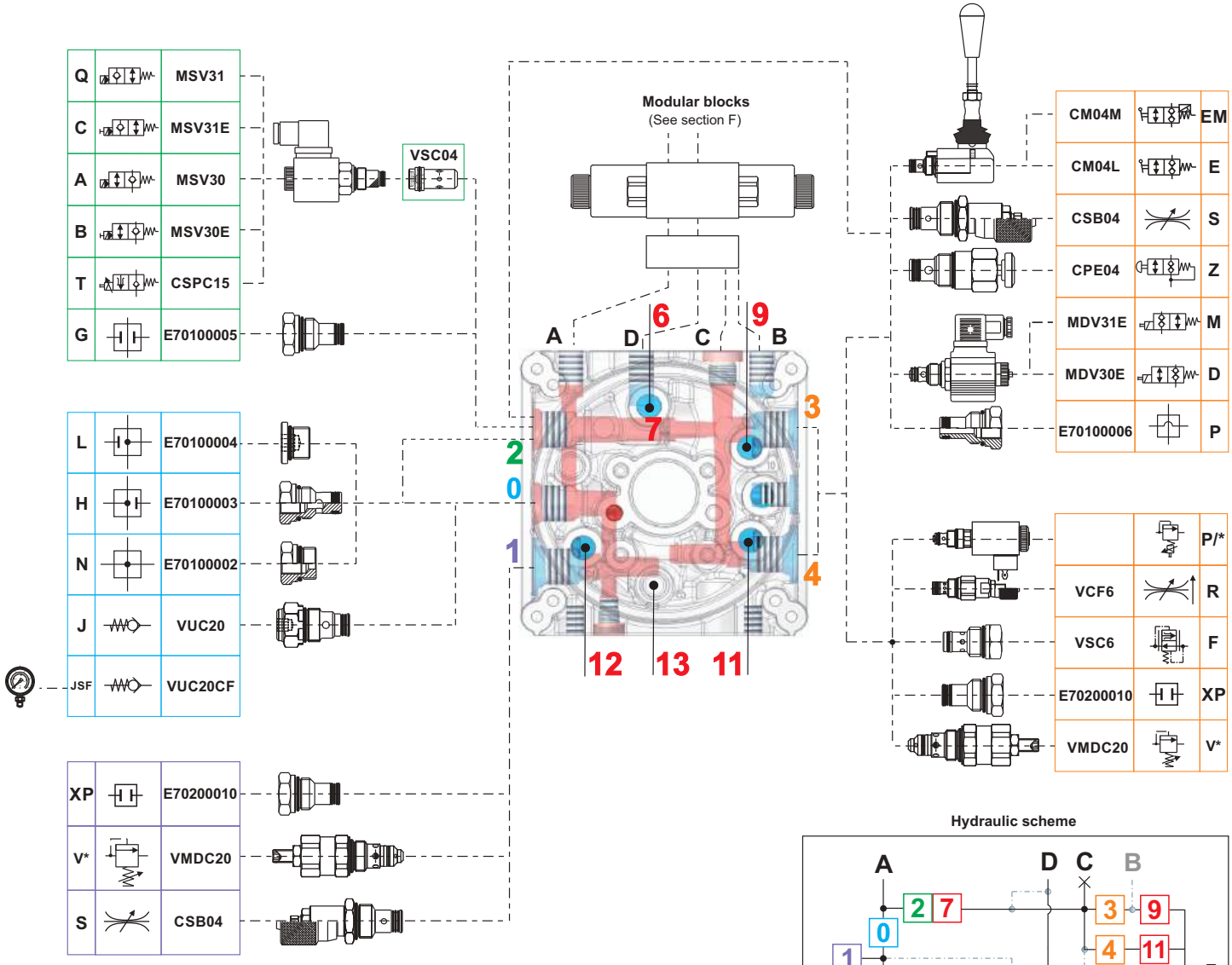




Motor side view

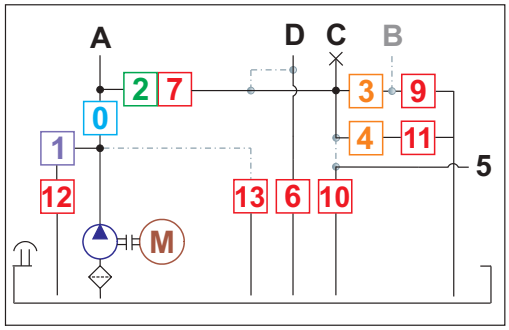
## SMART CENTRAL MANIFOLD «SB»

NEW



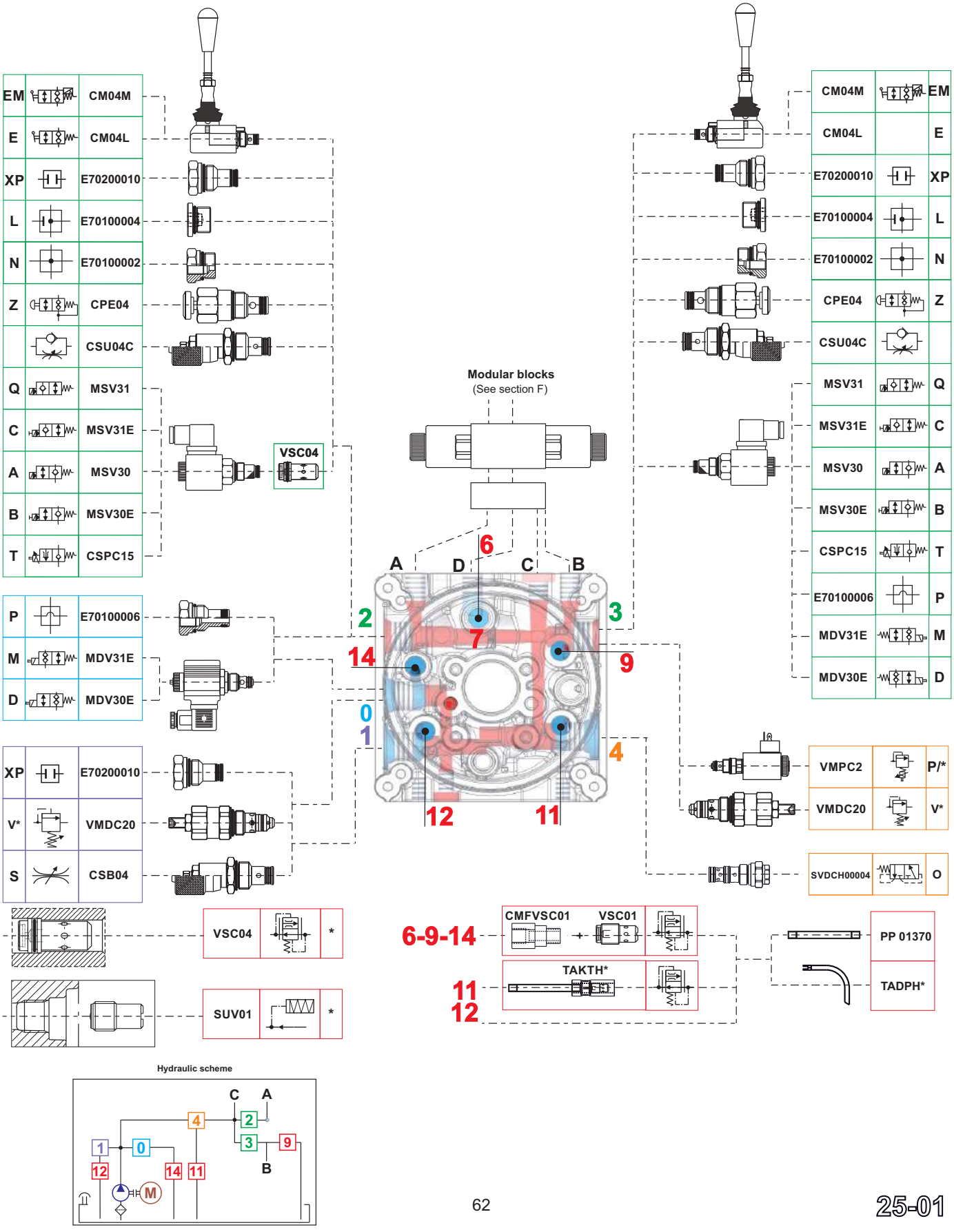




Hydraulic scheme



## SMART CENTRAL MANIFOLD «SB3»

NEW



## SMART CENTRAL MANIFOLDS «SR, SRD, SRT & SRDT»

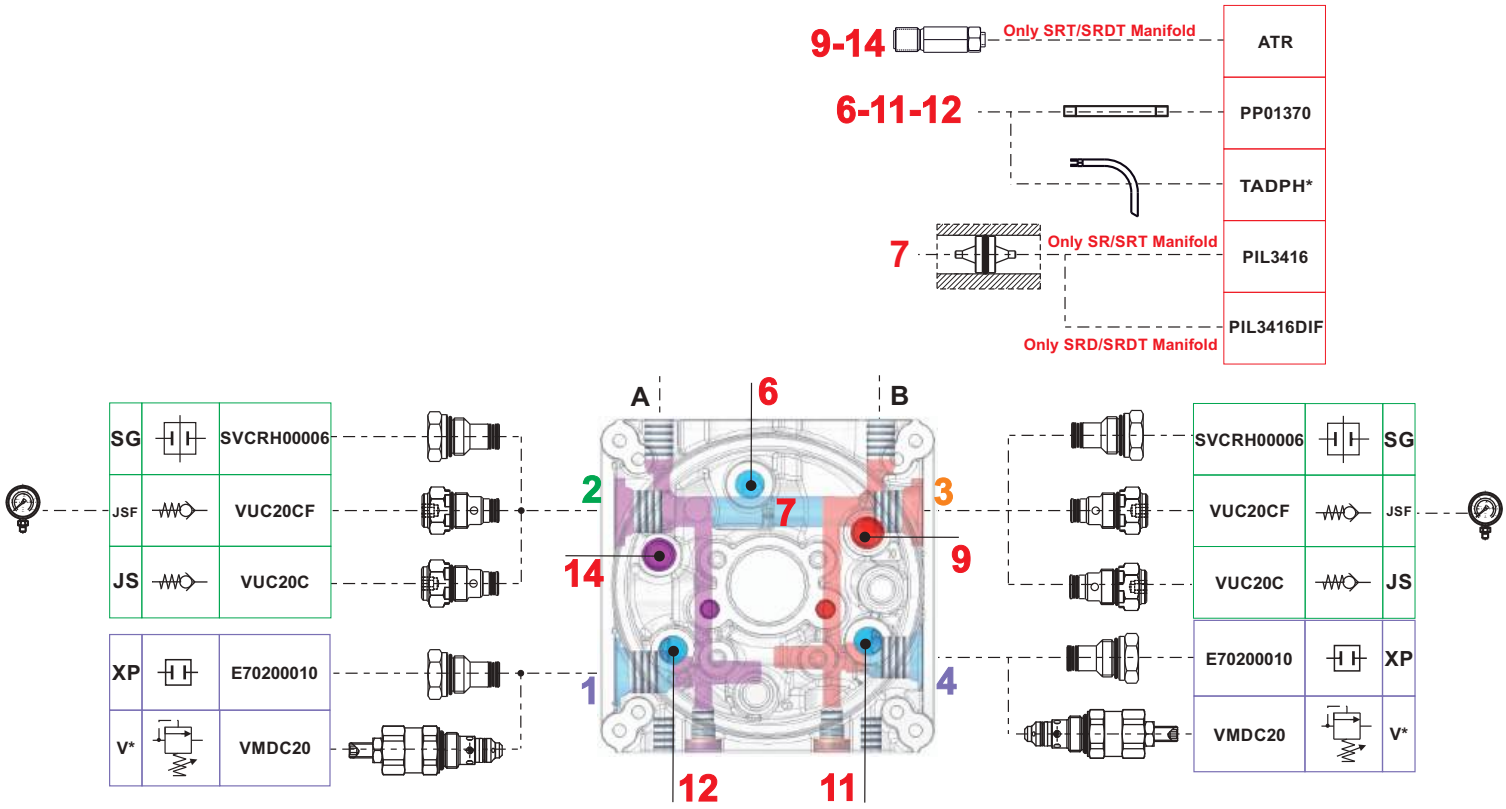
NEW

SR: Smart Central Manifold for reversible applications with cylinder area ratio equal to 1

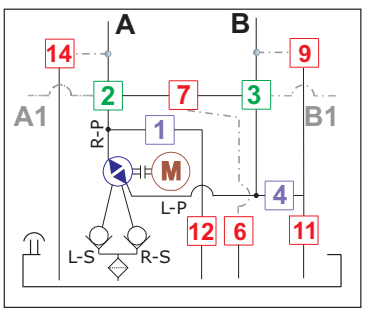
SRD: Smart Central Manifold for reversible applications with differentialarea cylinder area

SRT: Smart Central Manifold for reversible applications with cylinder area ratio equal to 1 plus termal valves

SRDT: Smart Central Manifold for reversible applications with differential area cylinder plus termal valves




Hydraulic scheme

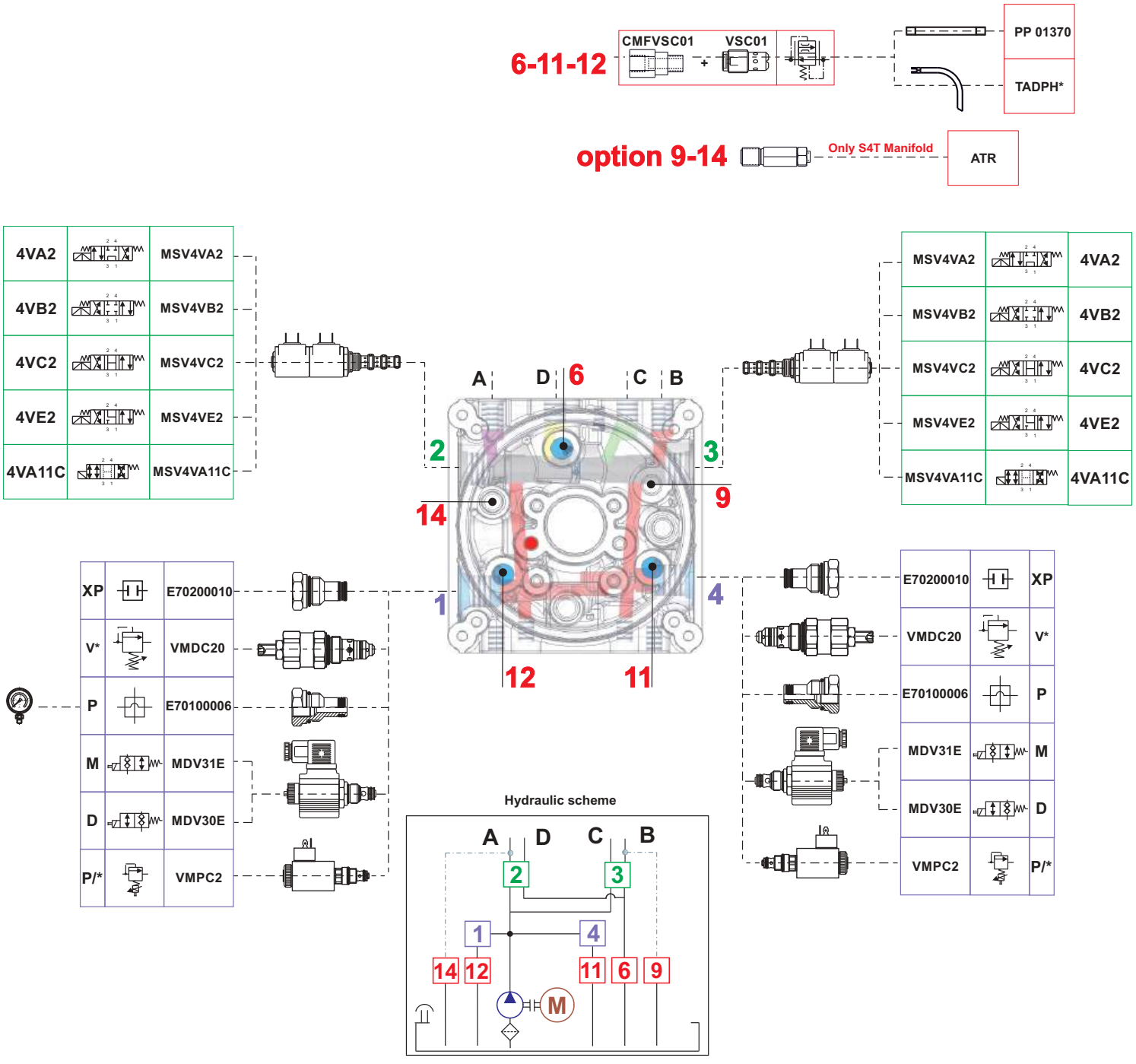


## SMART CENTRAL MANIFOLDS «S4 & S4T»

NEW

S4: Smart Central Manifold with double 4/3 cartridges

S4T: Smart Central Manifold with double 4/3 cartridges plus thermal valves



## SMART CENTRAL MANIFOLDS «SX1 & SX2»

NEW

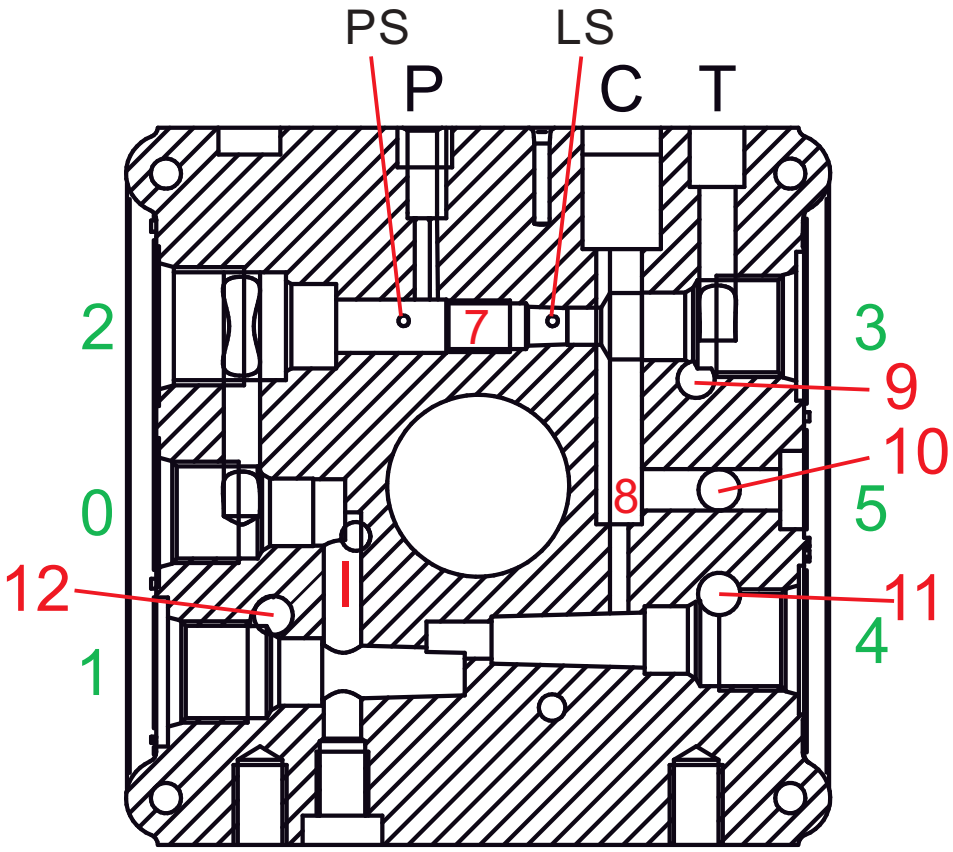
The **cavity #2** can accomodate SAE08 or SAE10 proportional flow control or standard on-off valves, for higher flow, specifically designed for the Smart Power Unit functionality.

The **die-cast aluminium Smart central manifold** is the core part of all power units for all industrial, mobile and marine applications, requiring the embedded electronics and sensors provided by the HPC02 unit. Proportional flow, proportional pressure, or both PQ, and load sensing option.

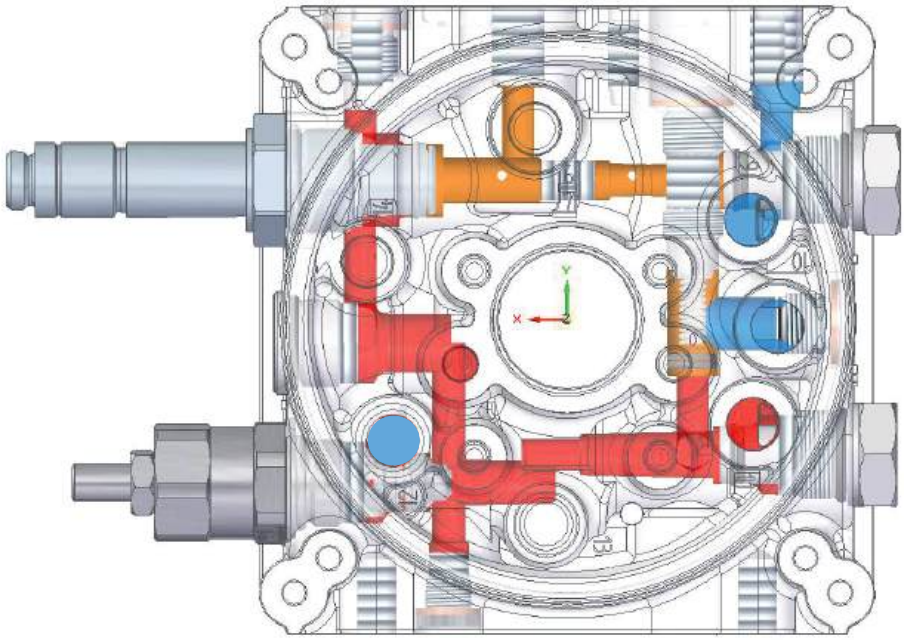
Embeded pressure and motor shaft speed sensors allow closed loop full control of the application, by a proper software code

## SMART CENTRAL MANIFOLD «SX*Q» WITH PROPORTIONAL METER-IN FLOW CONTROL

NEW




0) Plug
1) Relief valve or plug
2) Proportional flow valve
3) Plug
4) Relief valve or plug
5) Plug
7) Calibrated orifice
8) 3 way compensator
9) Return pipe
10) Return pipe
11) Empty or Relief valve return line
12) Empty or Relief valve return line
PS) Pressure transducer
LS) Pressure transducer on LS line
C) Plug



P line
Return line
Reduced pressure line