SMART CENTRAL MANIFOLDS «SX1 & SX2»

NEW

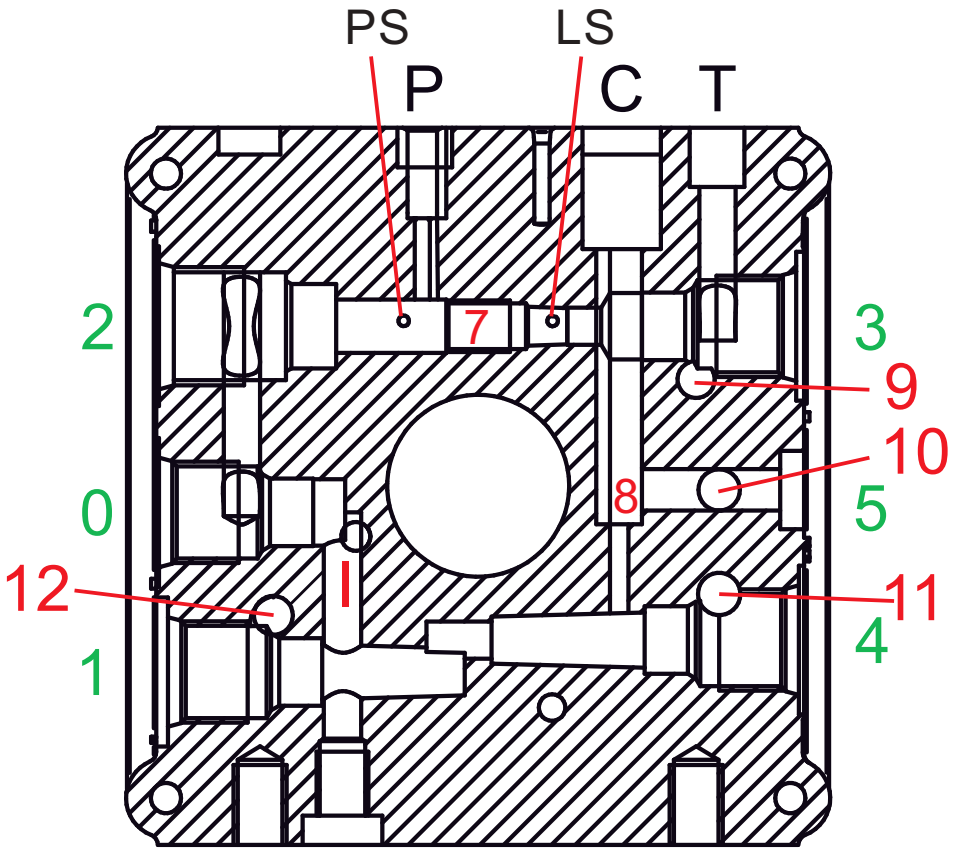
The **cavity #2** can accomodate SAE08 or SAE10 proportional flow control or standard on-off valves, for higher flow, specifically designed for the Smart Power Unit functionality.

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.

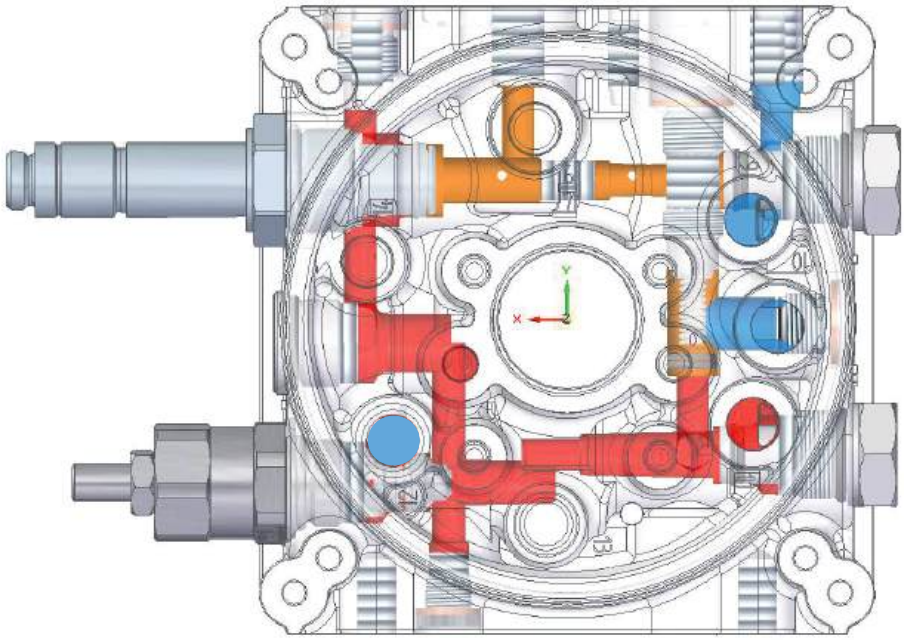
Embeded pressure and motor shaft speed sensors allow closed loop full control of the application, by a proper software code

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

NEW

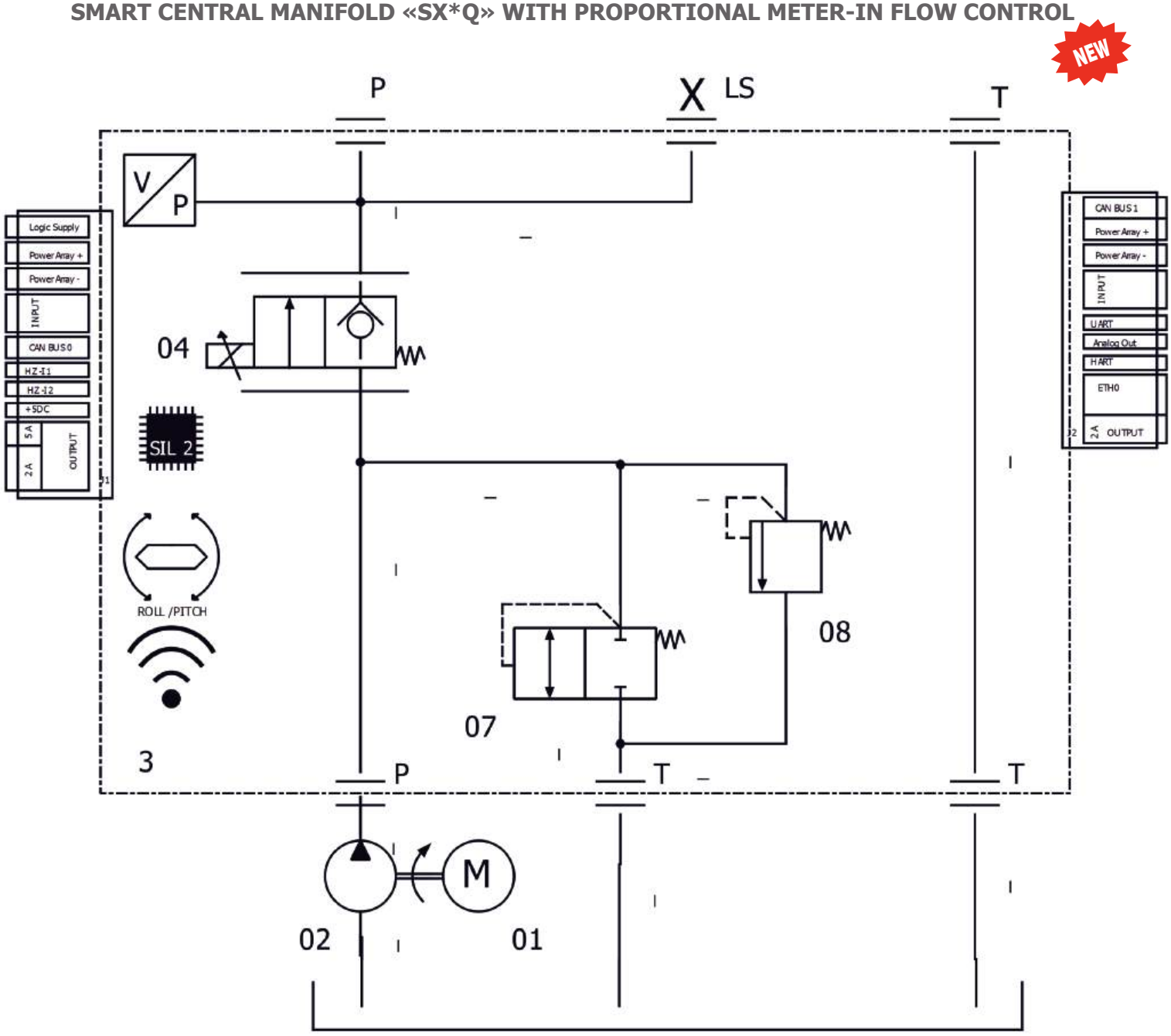


0) Plug
1) Relief valve or plug
2) Proportional flow valve
3) Plug
4) Relief valve or plug
5) Plug
7) Calibrated orifice
8) 3 way compensator
9) Return pipe
10) Return pipe
11) Empty or Relief valve return line
12) Empty or Relief valve return line
PS) Pressure transducer
LS) Pressure transducer on LS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



P line
Return line
Reduced pressure line

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



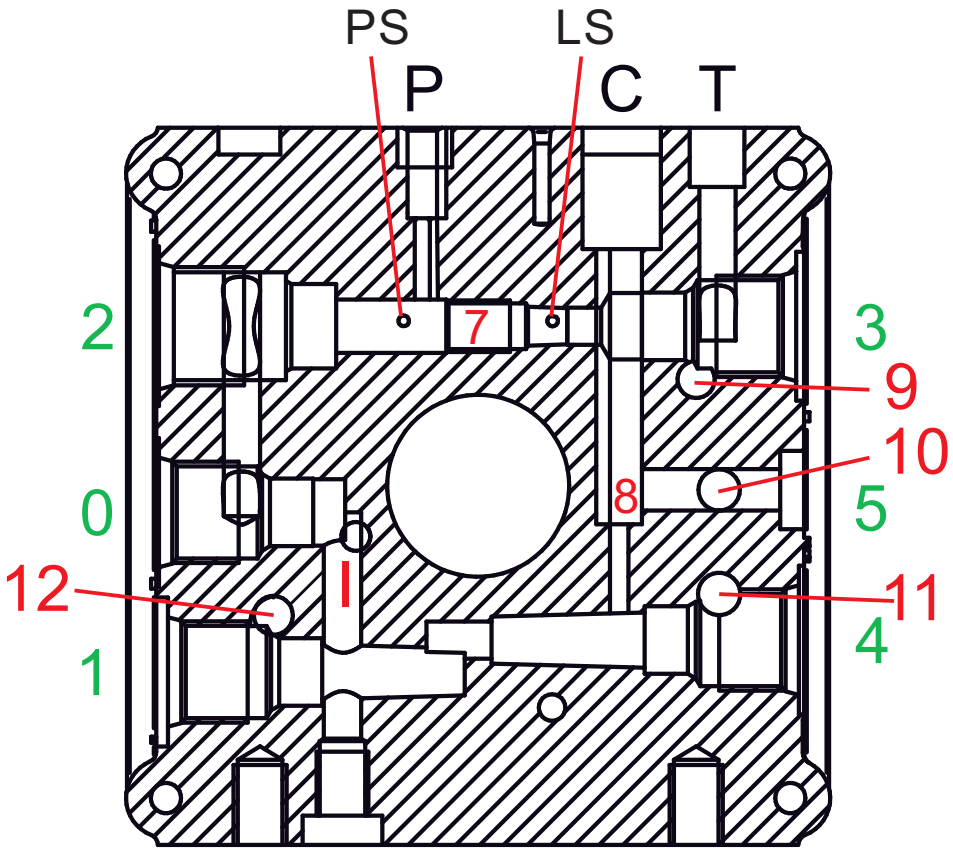
HPC02:** Hydraulic Diagrams with meter-in proportional Flow control

The Q type diagram is useful for sequential motion in automation, normally the Q manifold feeds an array of ON-OFF directional valves, regulating the common flow and the max pressure. Q system allows just sequential asynchronous movements. Typical applications are: personal lift equipment, small cranes,...

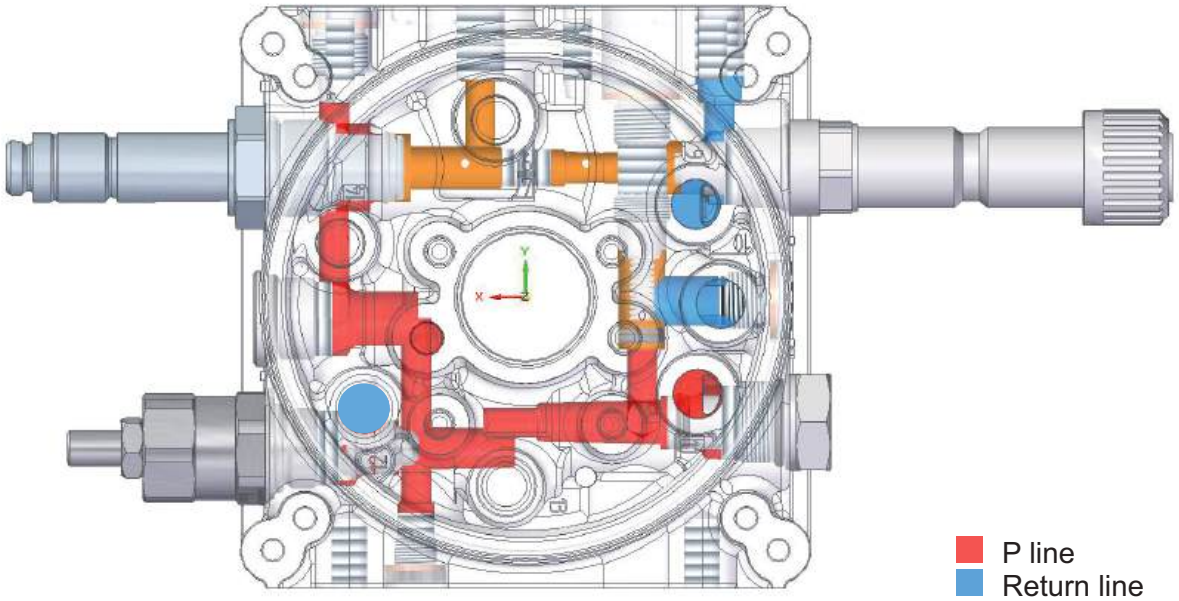
The Manifold contains a 3rd way pre-compensator wich is sensing pressure across the proportional flow regulator. The proportional pressure relief valve is limiting the max pressure allowed on the system. Pressure sensors (rated for 300 bar) sense Delivery line (P) or Load Sensing Line (the other line being plugged); pressure sensor is rated for max 5 bar and senses the return line pressure.
They are installed and electrically connected inside the manifold to the Logic controller. The Electronic Programmable controller drives the proportional valves according to the application software.

SMART CENTRAL MANIFOLD «SX*PQ» WITH PROPORTIONAL PQ CONTROL

NEW



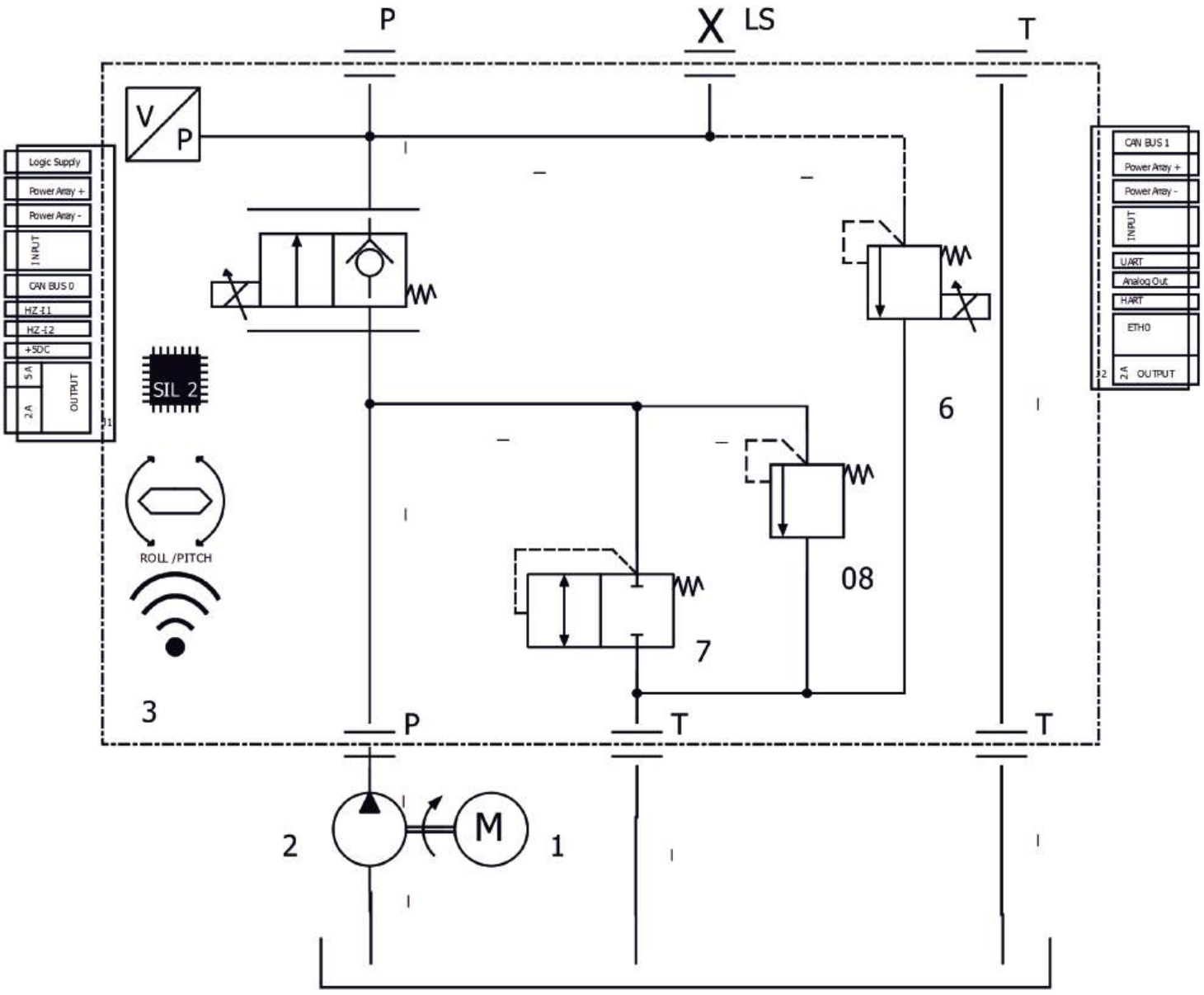
0) Plug
1) Relief valve or plug
2) Proportional flow valve
3) Proportional relief valve
4) Relief valve or plug
5) Plug
7) Calibrated orifice
8) 3 way compensator
9) Return pipe
10) Return pipe
11) Empty or Relief valve return line
12) Empty or Relief valve return line
PS) Pressure transducer
LS) Pressure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



P line
Return line
Reduced pressure line

SMART CENTRAL MANIFOLD «SX*PQ» WITH PROPORTIONAL PQ CONTROL

NEW



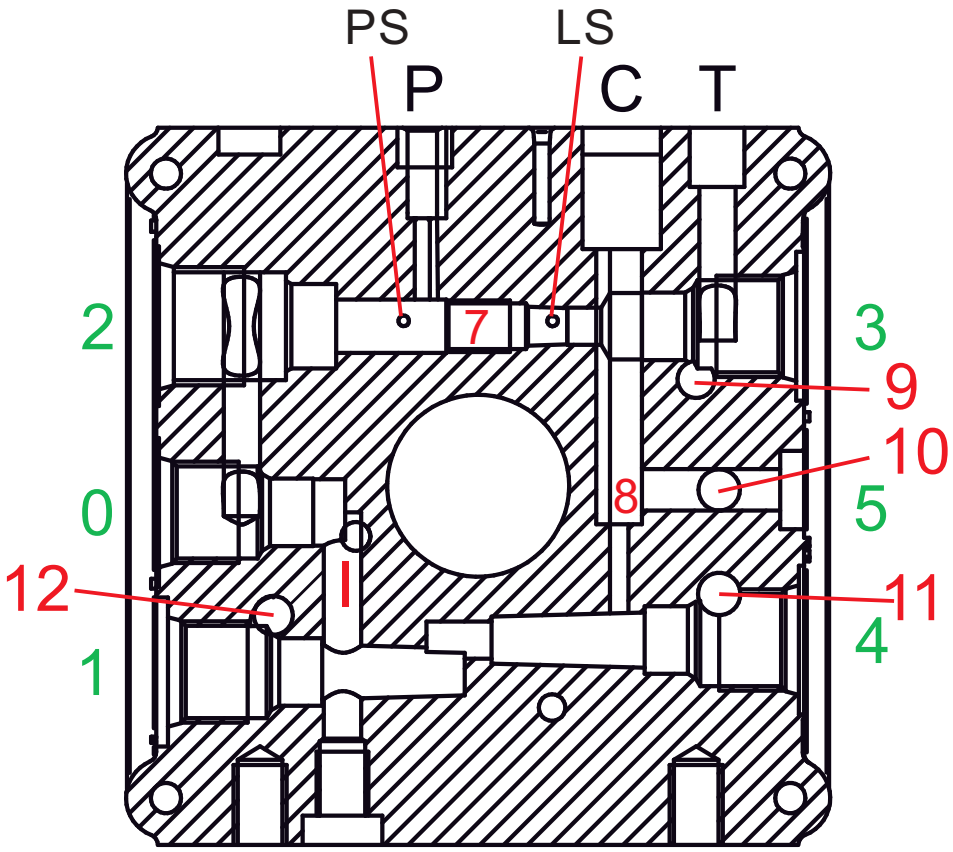
HPC02PQ: Hydraulic Diagram

The PQ type diagram is useful for sequential motion in automation, normally the PQ manifold feeds an array of ON-OFF directional valves, regulating the common flow and the max pressure. PQ system allows just sequential asynchronous movements. Typical applications are: personal lift equipment, small cranes,...

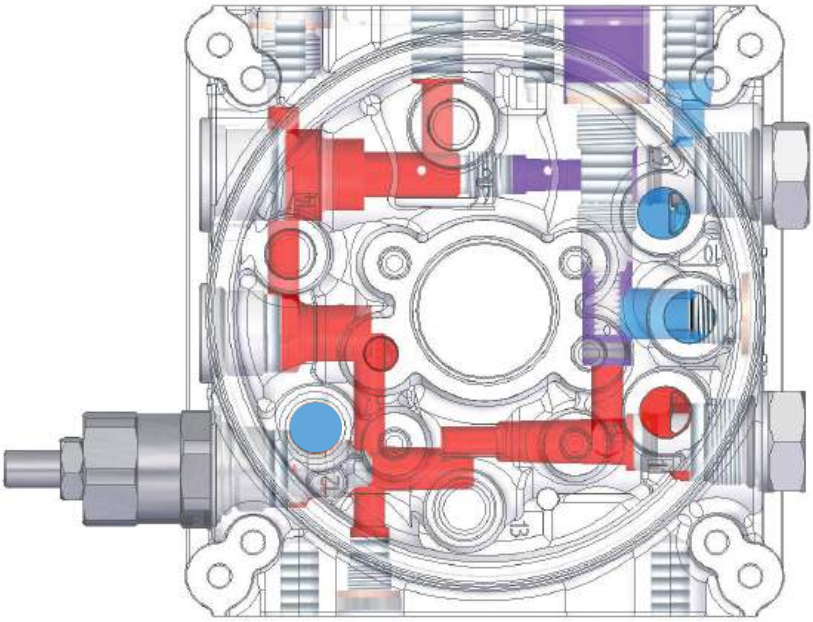
The Manifold contains a 3rd way pre-compensator wich is sensing pressure across the proportional flow regulator. The proportional pressure relief valve is limiting the max pressure allowed on the system. Pressure sensors (rated for 300 bar) sense Delivery line (P) or Load Sensing Line (the other line being plugged); pressure sensor is rated for max 5 bar and senses the return line pressure.
They are installed and electrically connected inside the manifold to the Logic controller. The Electronic Programmable controller drives the proportional valves according to the application software.

SMART CENTRAL MANIFOLD «SX*LS» WITH LOAD SENSING

NEW

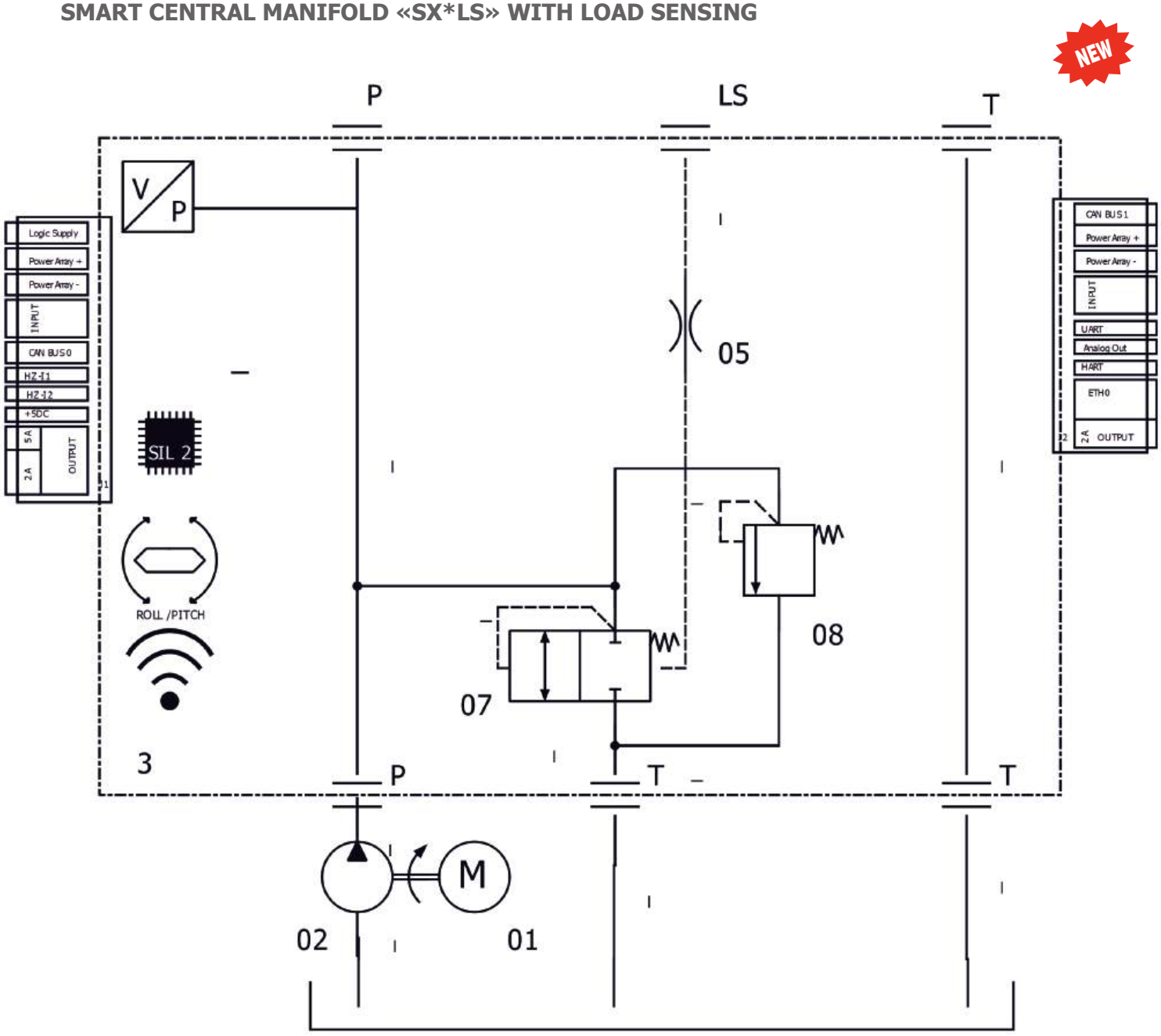


0) Plug
1) Relief valve or plug
2) 7/8"-14 UNF Plug
3) Plug
4) Relief valve or plug
5) Plug
7) Calibrated orifice
8) 3 way compensator
9) Return pipe
10) Return pipe
11) Empty or Relief valve return line
12) Empty or Relief valve return line
PS) Pressure transducer
LS) Pressure transducer on LS line
C) Special Plug



P line
Return line
LS line

SMART CENTRAL MANIFOLD «SX*LS» WITH LOAD SENSING

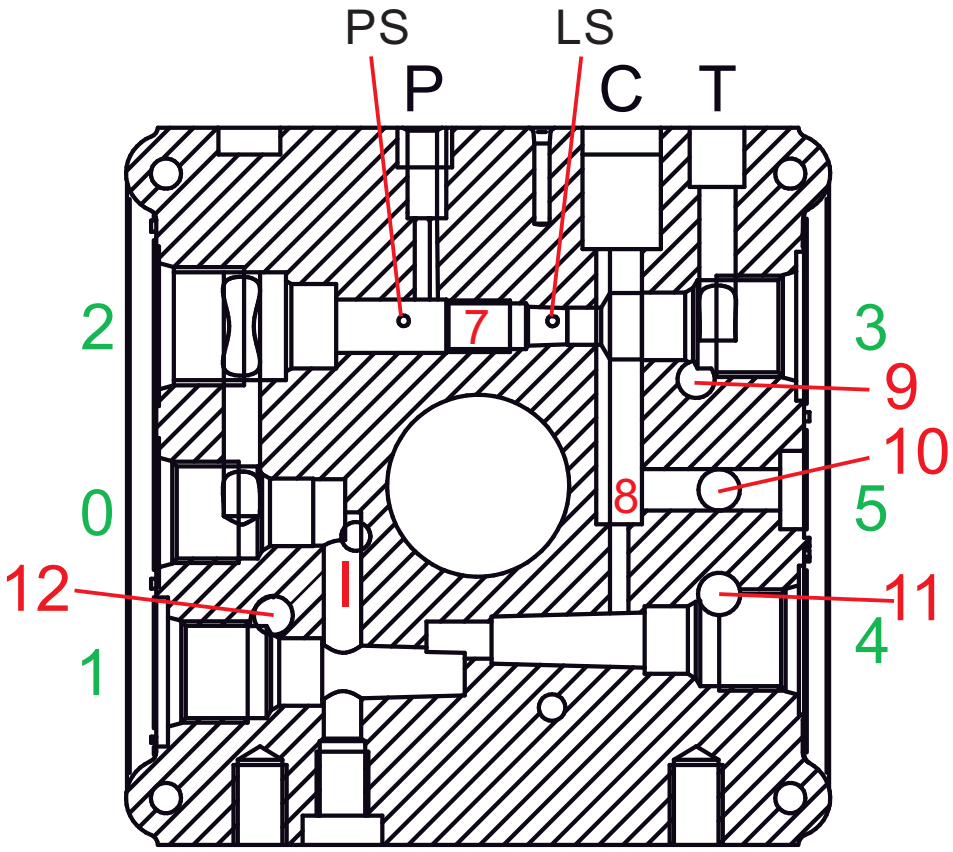


HPC02LS: Hydraulic Diagrams with Load Sensing for external proportional LS valves (type SDP02):

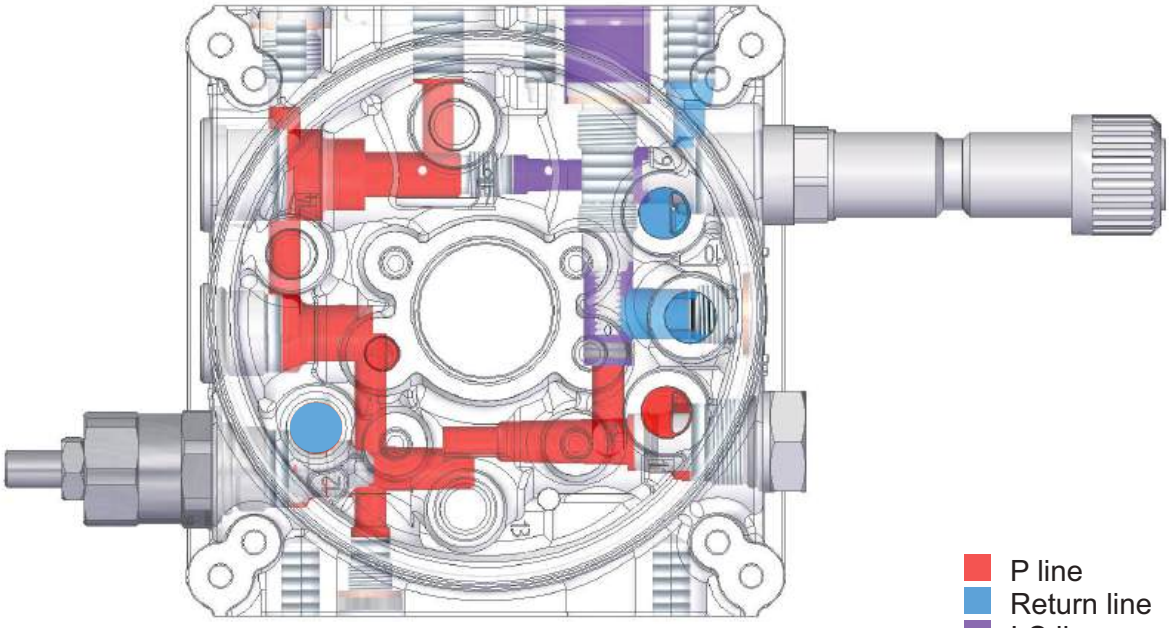
By replacing the Proportional Flow Control valve or/and the Proportional Pressure Relief valve with the related manual adjustment valves, and plugging/unplugging the LS lines, additional hydraulic configurations are available as well.
HPC02 is equipped with SAE08 normalised cavities in order to offer the maximum flexibility in configuration.
Also available with ON/OFF valves.
The Manifold contains a 3rd way pre-compensator wich is sensing the load driven by LS line of the highest loaded valve.
Pressure sensors (rated for 300 bar) sense the Load Sensing Line (the other line being plugged); pressure sensor is rated for max 5 bar and senses the return line pressure.
They are installed and electrically connected inside the manifold to the Logic controller. The Electronic Programmable controller drives the proportional valves according to the application software.

SMART CENTRAL MANIFOLD «SX*LSP» WITH LS AND PROPORTIONAL P CONTROL

NEW



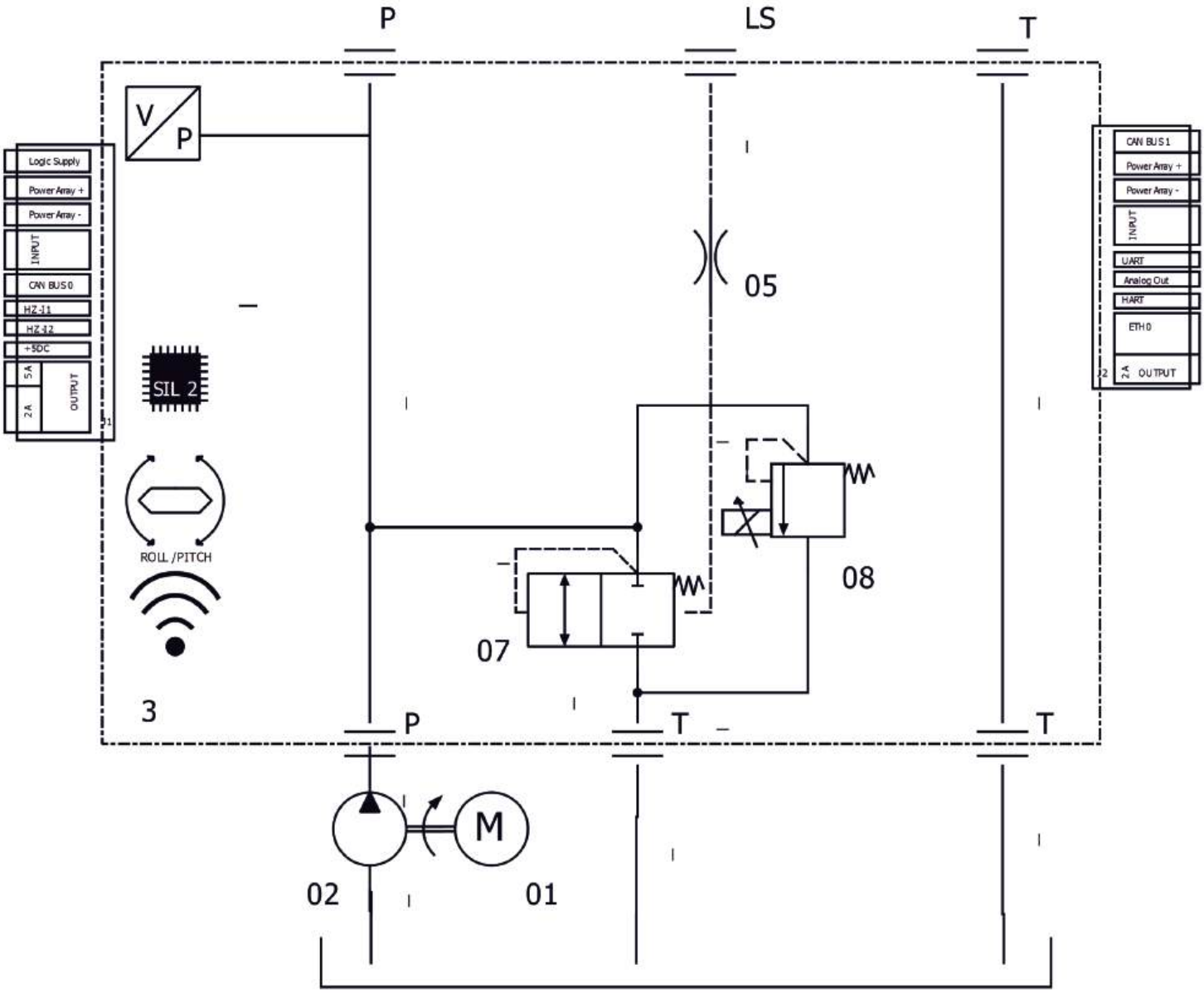
0) Plug
1) Relief valve or plug
2) 7/8"-14 UNF Plug
4) Relief valve or plug
5) Plug
7) Calibrated orifice
8) 3 way compensator
9) Return pipe
10) Return pipe
11) Empty or Relief valve return line
12) Empty or Relief valve return line
PS) Pressure transducer
LS) Pressure transducer on LS line
C) Special Plug



P line
Return line
LS line

SMART CENTRAL MANIFOLD «SX*LSP» WITH LS AND PROPORTIONAL P CONTROL

NEW



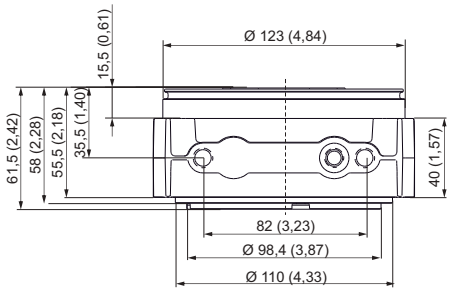
HPC02LSP: Hydraulic Diagram LS type for external proportional LS valves (type SDP02):

The LS type diagram is useful for simultaneous motion in automation, normally the PQ manifold feeds an array of Proportional or ON-OFF LS pre-compensated valves, regulating the common flow and the max pressure in the classic LoadSensing architecture. Contemporary movements are possible.

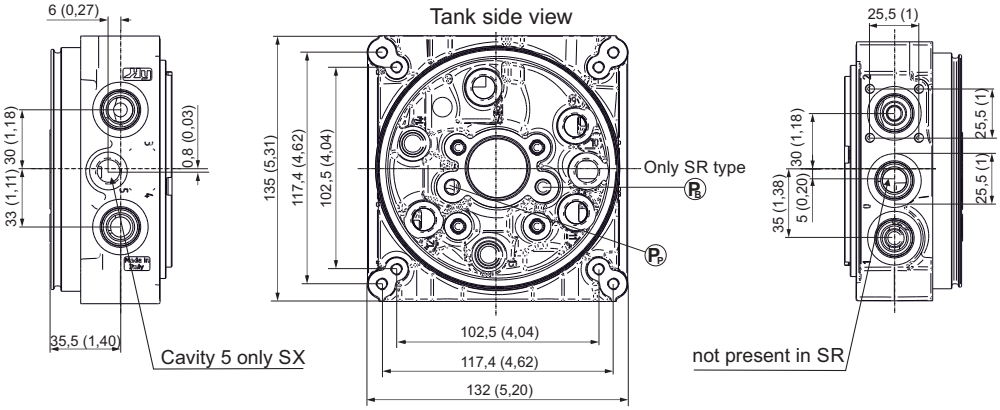
The Manifold contains a 3rd way pre-compensator wich is sensing pressure across the proportional flow regulator. The proportional pressure relief valve is limiting the max pressure allowed on the system. Pressure sensors (rated for 300 bar) sense Delivery line (P) or Load Sensing Line (the other line being plugged); pressure sensor is rated for max 5 bar and senses the return line pressure.
They are installed and electrically connected inside the manifold to the Logic controller. The Electronic Programmable controller drives the proportional valves according to the application software.

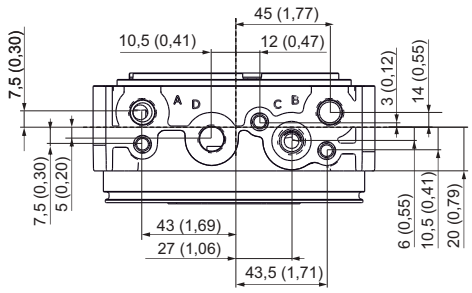
SMART CENTRAL MANIFOLDS - OVERALL DIMENSIONS

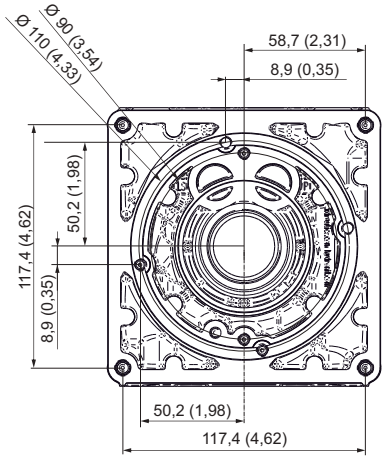
Type	Spare part code
SR	CMABH00003
SR2	CMABH00021
SRD	CMABH00013
SRT	CMABH00014
SRDT	CMABH00015
SB	CMABH00001
SB3	CMABH00002
S4	CMABH00006
S4T	CMABH00016
SX1	CMABH00004
SX2	CMABH00005
SRUS	CMABH00009
SRDUS	CMABH00017
SRDTUS	CMABH00019
SBUS	CMABH00007
SB3US	CMABH00008
S4US	CMABH00012
S4TUS	CMABH00020
SX1US	CMABH00010
SX2US	CMABH00011



Weight: 1,25 kg (2,75 lb)







Motor side view

Cavity	Thread
0, 1, 2, 3, 4	3/4-16 UNF (SAE08)
A-B-C-D	1/4 BSP 9/16-18UNF (SAE06 - US type). Presence depends on the body type.
5,6,9,11,12,13,14	1/4 BSP (presence depends on the body type)
External manifolds fixings	3 tie rods M8
Tank fixings	4 screws M6x14
Integral AC motors and B14 flanges fixings	4 screws M8x25
DC motors fixings	2 screws M6x14 or tie rods M6
Pumps fixings	2 screws M8 (see pump lenghts on the relevant tables). Only right pumps.
Mounting Foot fixings	2 screws M10x18 3/8-16 UNC US type
PMC hand pump and CM lever valve fixings	4 screws M5x45

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)