

DRAULICS



SMART PU – 4SYNCHRO
machine management

SMART PU 4SYNCHRO system



Hydronit patented SMART POWER UNIT technology offers to manufacturers a one-stop-shop solution for special hydraulics applications. It reduces TCO due to a **simplified electric and hydraulic circuit**, reducing the time-to market.

The 4SYNCHRO SMART PU is a MECHATRONIC system consisting of:

- A control Panel
- An hydraulic power unit with embedded programmable PLC
- Four directional proportional valves, properly sized to achieve speed and accuracy
- An APPLICATION SOFTWARE which manages the four valves in order to operate three actuators as speed/position controlled loop and a master actuator as a speed loop.

The system requires one length sensor for each cylinder. The accuracy of the length sensor affect the overall accuracy: the highest resolution allows the highest accuracy.

Functions:

The 4SYNCHRO system is equipped with a control pane which includes a 7" display and a CAN-BUS keyboard. The display shows actual position and load per each cylinder (weighing system is option and requires extra pressure sensors). Display allows to configure the system to operate with any cylinder size.

NOTE:Length sensor must match the the stroke of the cylinder

Display allows to set-up working speed for lifting and lowering as well as intermediate virtual end strokes.

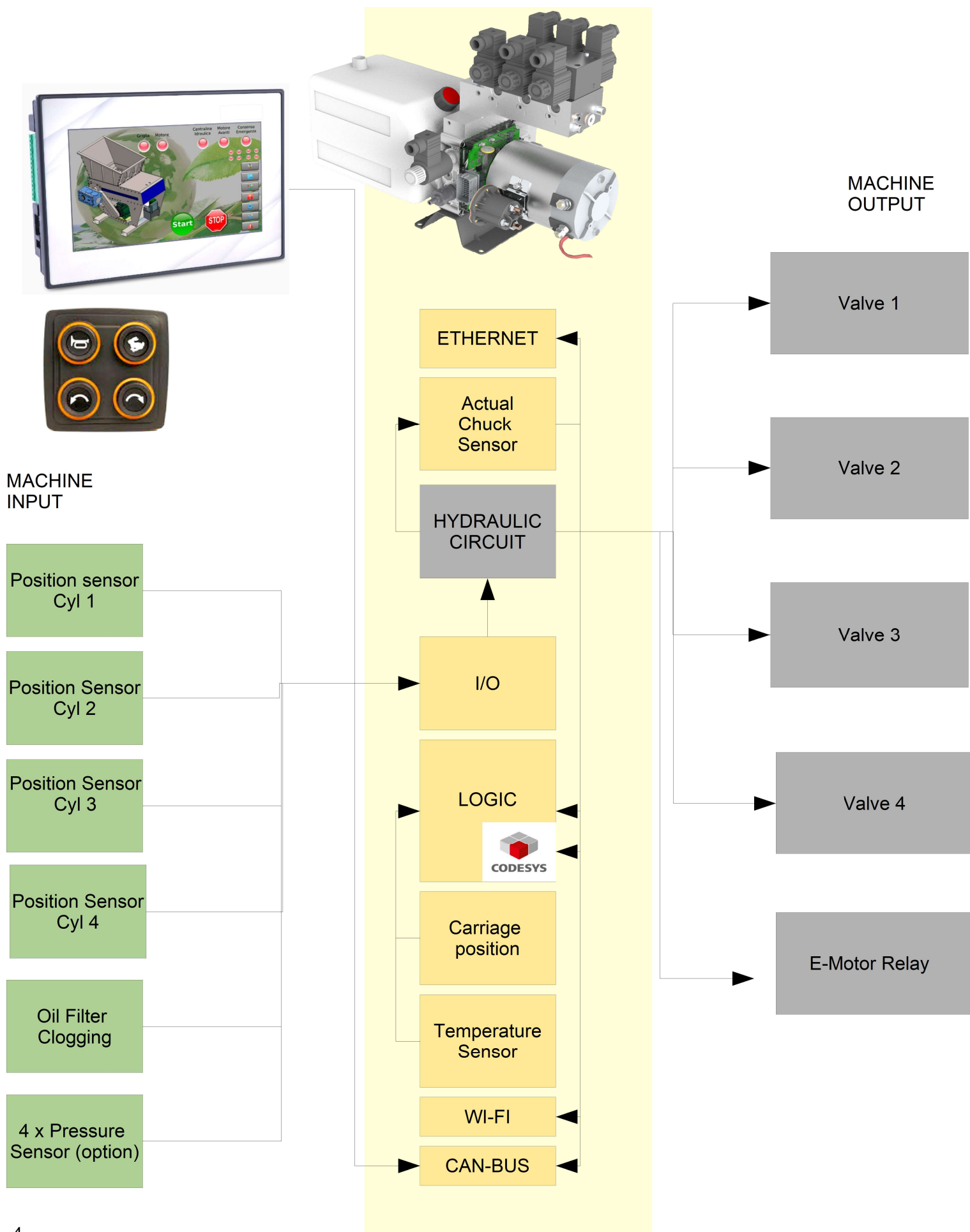
A by-pass mode is available to operate each cylinder independently

A CAN-BUS operated keyboard allows manual movements

The control panel is connected to the SMART POWER UNIT with 4SYNCHRO SMART PU through a CAN BUS fieldbus.

Each valve manages one cylinder. One cylinder is managed with a speed control profile and it acts as a MASTER of the system. The other three cylinders are managed with a position closed loop.

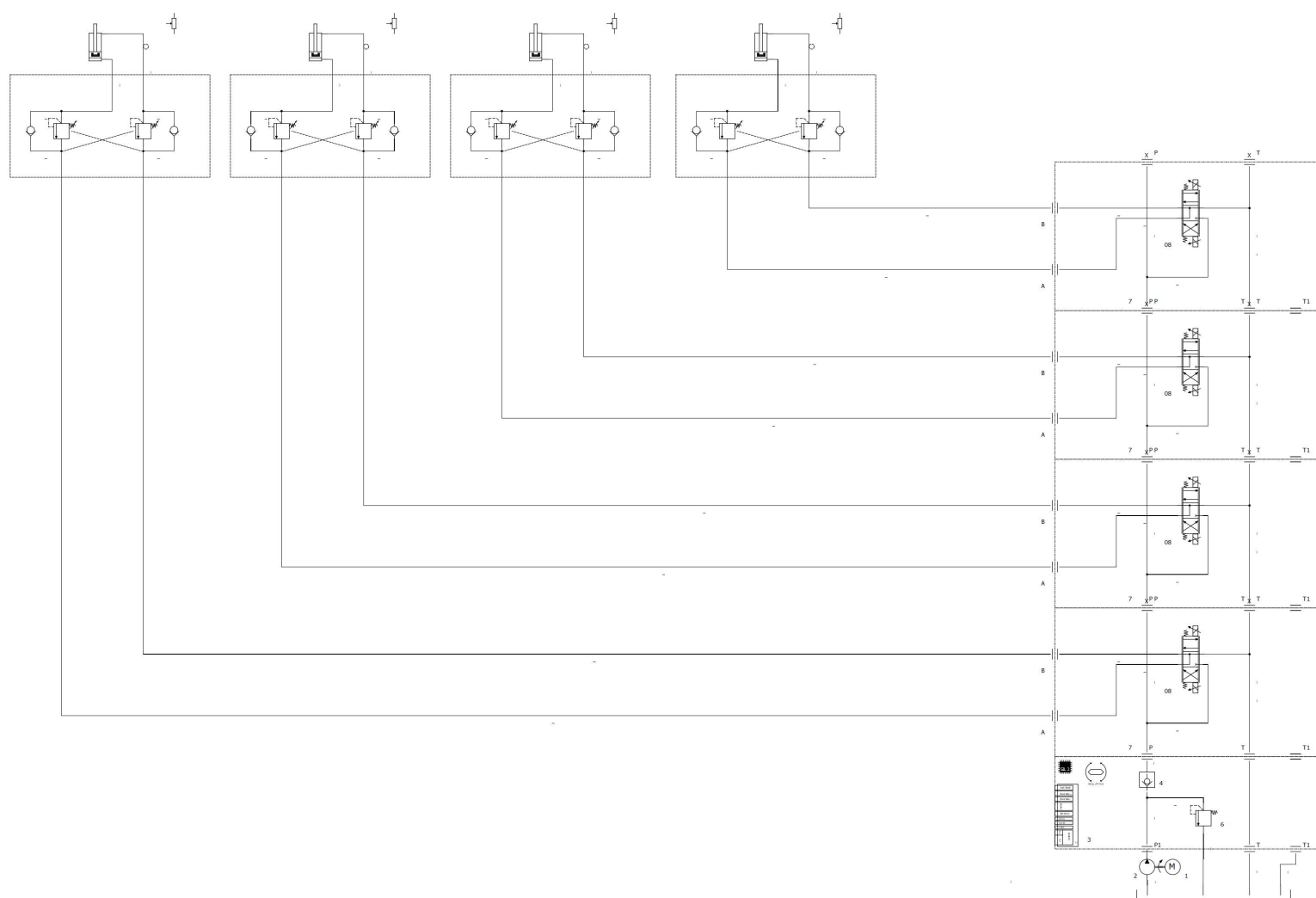
SMART PU TTC BLOCK UNIT



SMART PU 4SYNCHRO system



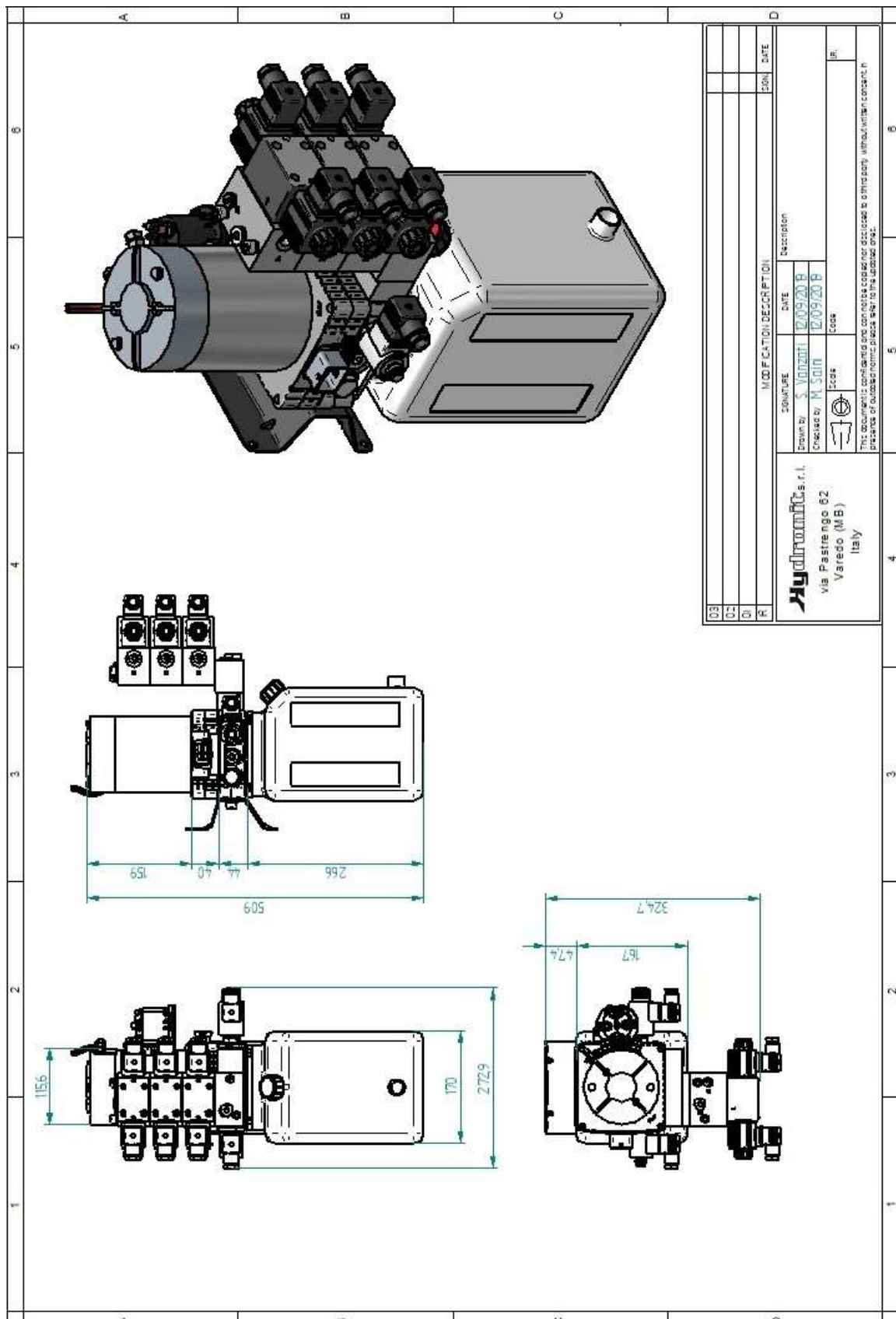
Hydraulic Scheme



SMART PU 4SYNCHRO system



OVERALL DIMENSIONS
(size can change depending on hydraulic configuration)



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