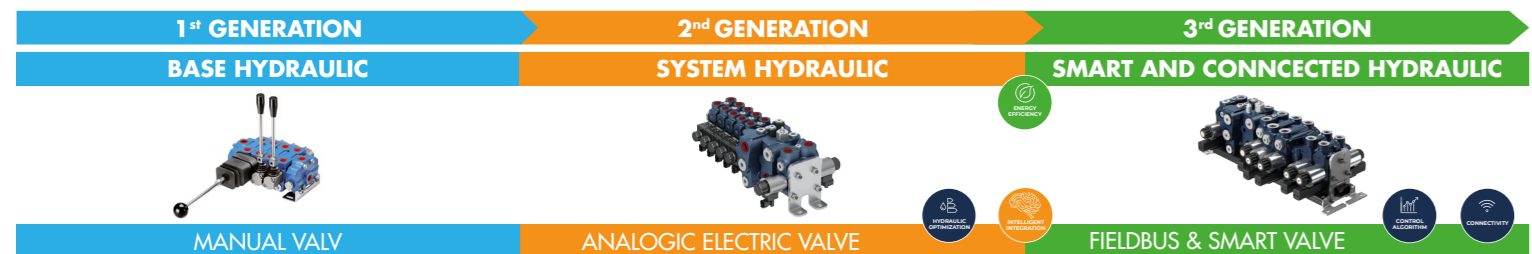


BYWIRE HUB

BYWIRE HUB SYSTEM

ByWire HUB is a new approach to hydraulic management, moving from analogue control (valve actuated by an analogue signal) to Fieldbus control in which the ByWire valve is connected to all other machine parts

with continuous exchange of digital data, controls and diagnostic signals. A new generation of intelligent and connected hydraulics.

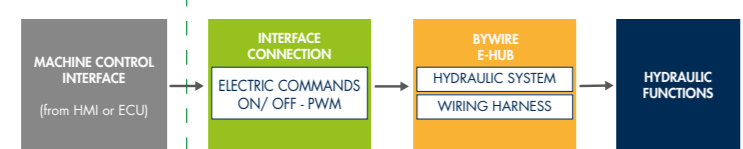
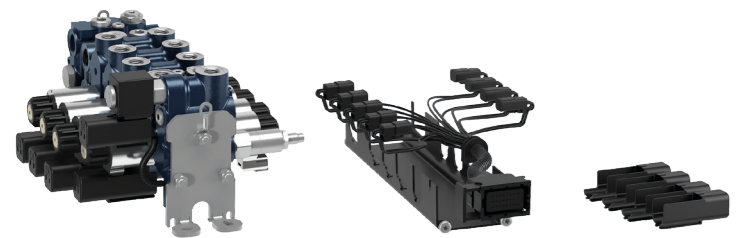


E-HUB

The connection of the valve to the other machine components is simplified thanks to a single electric connector positioned in front of the valve. E-HUB simplifies not only the connection of the wiring, but represents an additional protection from the external environment (water, sludge, grease etc.) via the protective cover.

The benefits are:

- Reduced installation time by the customer (one electrical connection connects the entire electro-hydraulic system)
- Additional protection from the exterior environment
- Plug and Play solution
- Clean, industrialised solution (no more messy cables around the valve block).

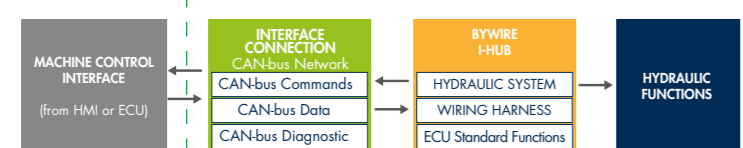
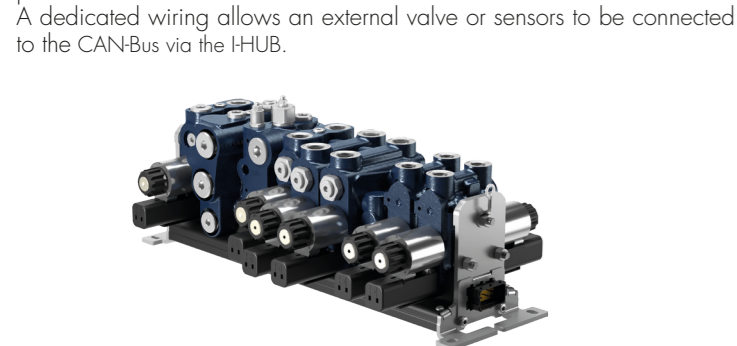


I-HUB

IHUB means the integration of two main components: an ECU and a wiring. It allows for the exchange of data, controls and signals with all other machine components via a CAN-Bus line with standardised protocol network. The ByWire valve receives functional commands which are processed by the ECU to activate a specific coil of the valve, exchange data from sensors and diagnostic information with all components connected to the same CAN-Bus line. In the IHUB too, all signals and controls pass through a single connector and the internal parts are protected from the external environment. A dedicated wiring allows an external valve or sensors to be connected to the CAN-Bus via the IHUB.

The benefits of IHUB are:

- CAN-Bus communication with all other parts of the machine
- Diagnostic warnings for external valves and sensors as well
- Standardised communication protocol
- Reduced installation time by the customer (one electrical connection connects the entire electro-hydraulic system)
- ECU integration, in other words more precise, IoT-ready control
- Additional protection from the exterior environment

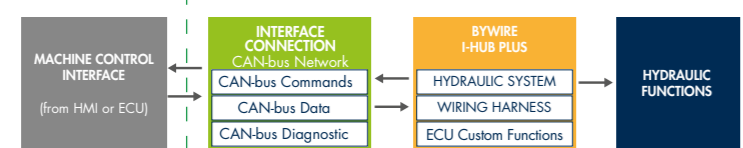
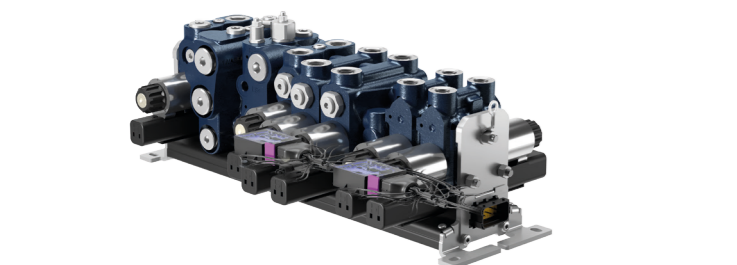


I-HUB PLUS

IHUB PLUS incorporates all the features of IHUB, but in addition a customised control logic is integrated into the ECU. This means that the ByWire IHUB PLUS devices not only exchange information and data with all other machine components connected to the CAN-Bus line, but also incorporate parts or the entire custom control logic or of a specific subsystem.

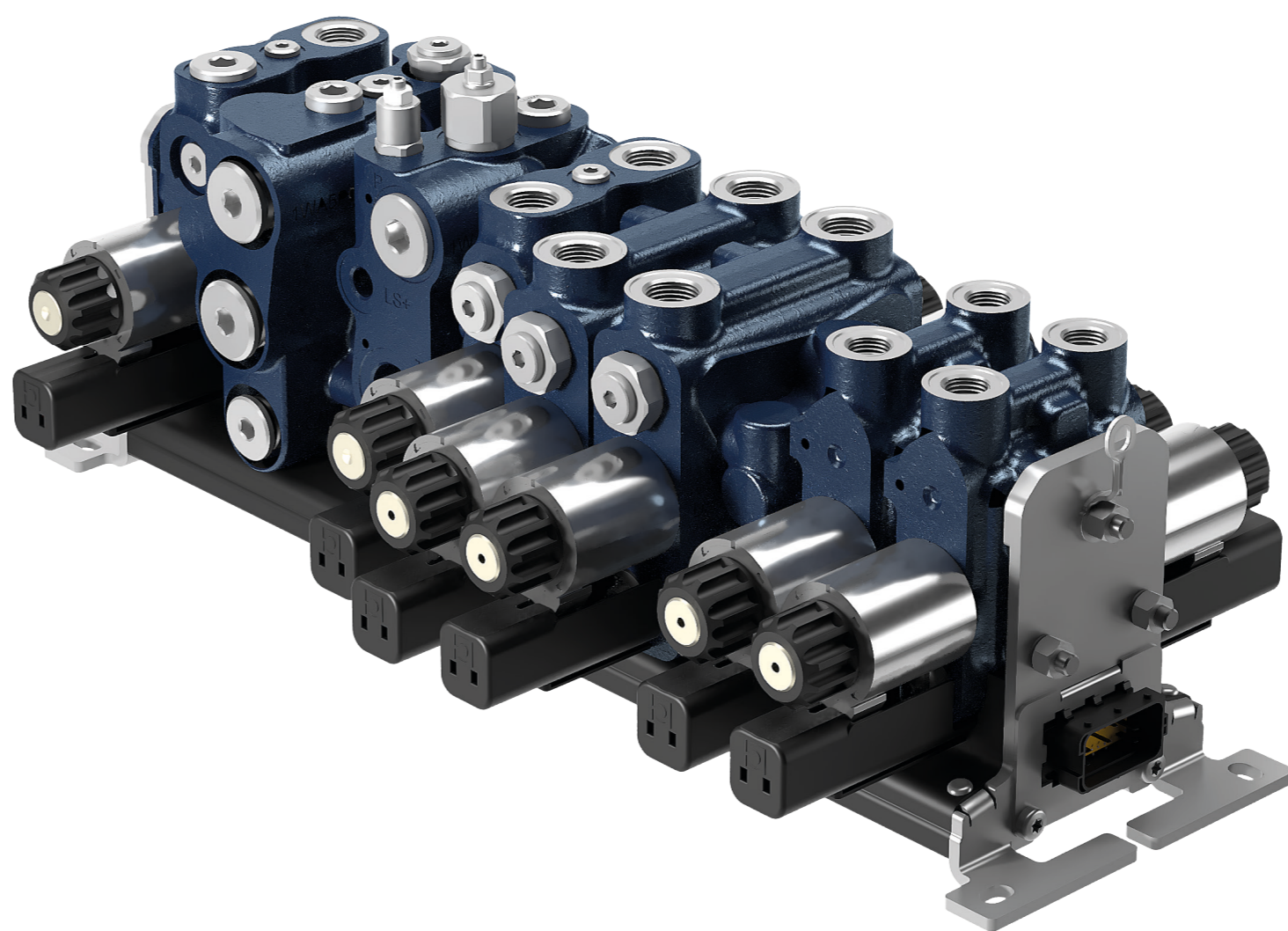
The benefits are:

- Integrated custom software
- CAN-Bus communication with all other parts of the machine
- Diagnostic warnings for external valves and sensors as well
- Standardised communication protocol
- Reduced installation time by the customer (one electrical connection connects the entire electro-hydraulic system)
- Additional protection from the exterior environment



BYWIRE

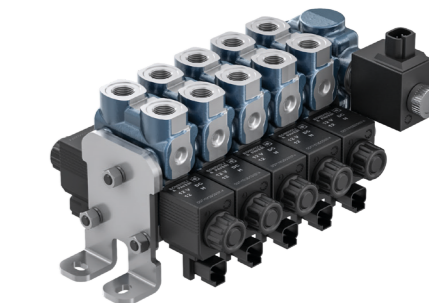
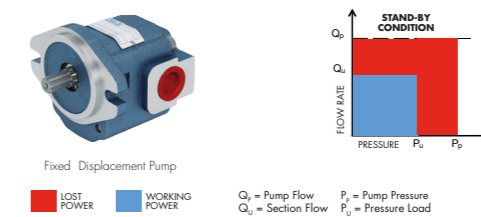
MODULAR DIRECTIONAL CONTROL VALVES



HYDRAULIC PLATFORMS

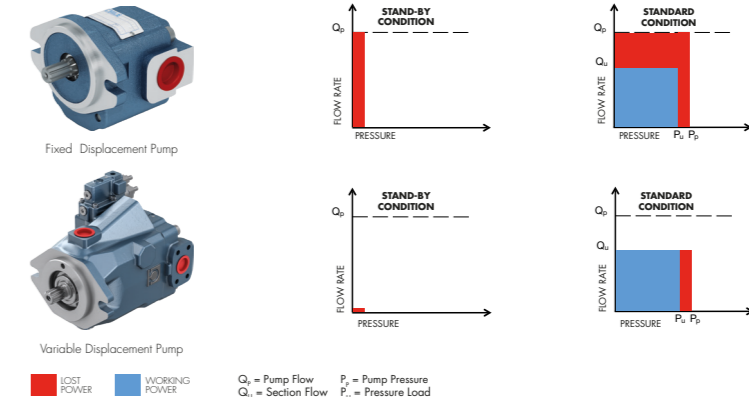
OC Platform Open Center Platform

Allows the circuit to be pressurised through the ON-OFF switch, and offers the possibility of integrating different sized modules, including proportionally controlled modules.

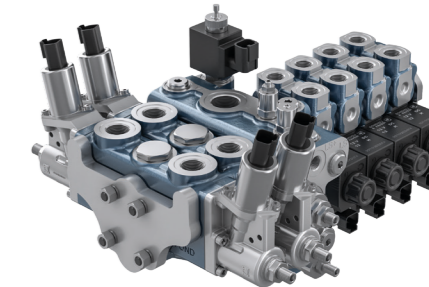


LS Platform Load Sensing Platform

The Load Sensing control improves the performance of the valve-pump system by reducing energy dissipation since the flow rate is adjusted according to the real needs of each function.

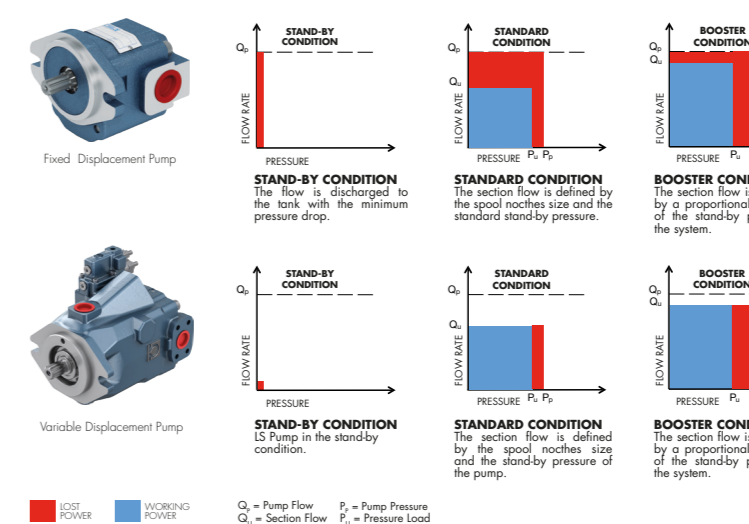


The LS platform can be configured either with variable flow rate pumps or with fixed flow rate pumps.

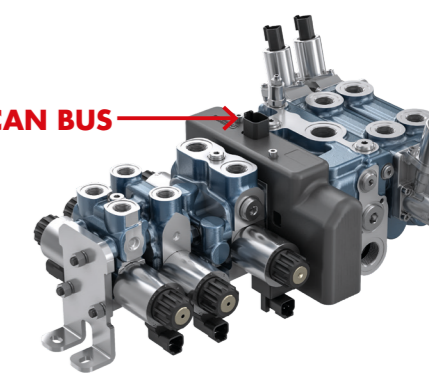


HL Platform Hybrid Load Sensing Platform

Through a hydraulic/electronic control system, the HL platform optimizes the behaviour of the Load Sensing signal on each function according

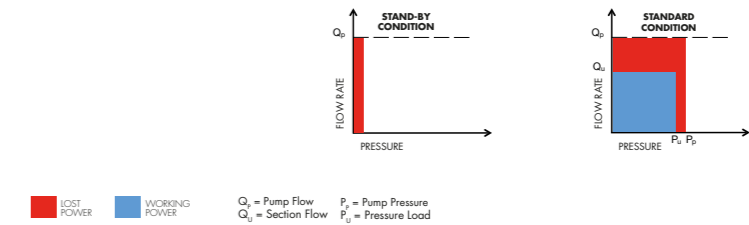


to a programmed logic. The system guarantees the use of the minimum necessary power for each function.

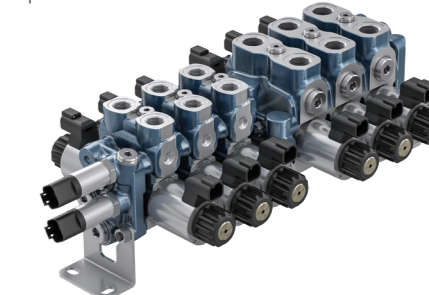


EL Platform Electronic Load Sensing Platform

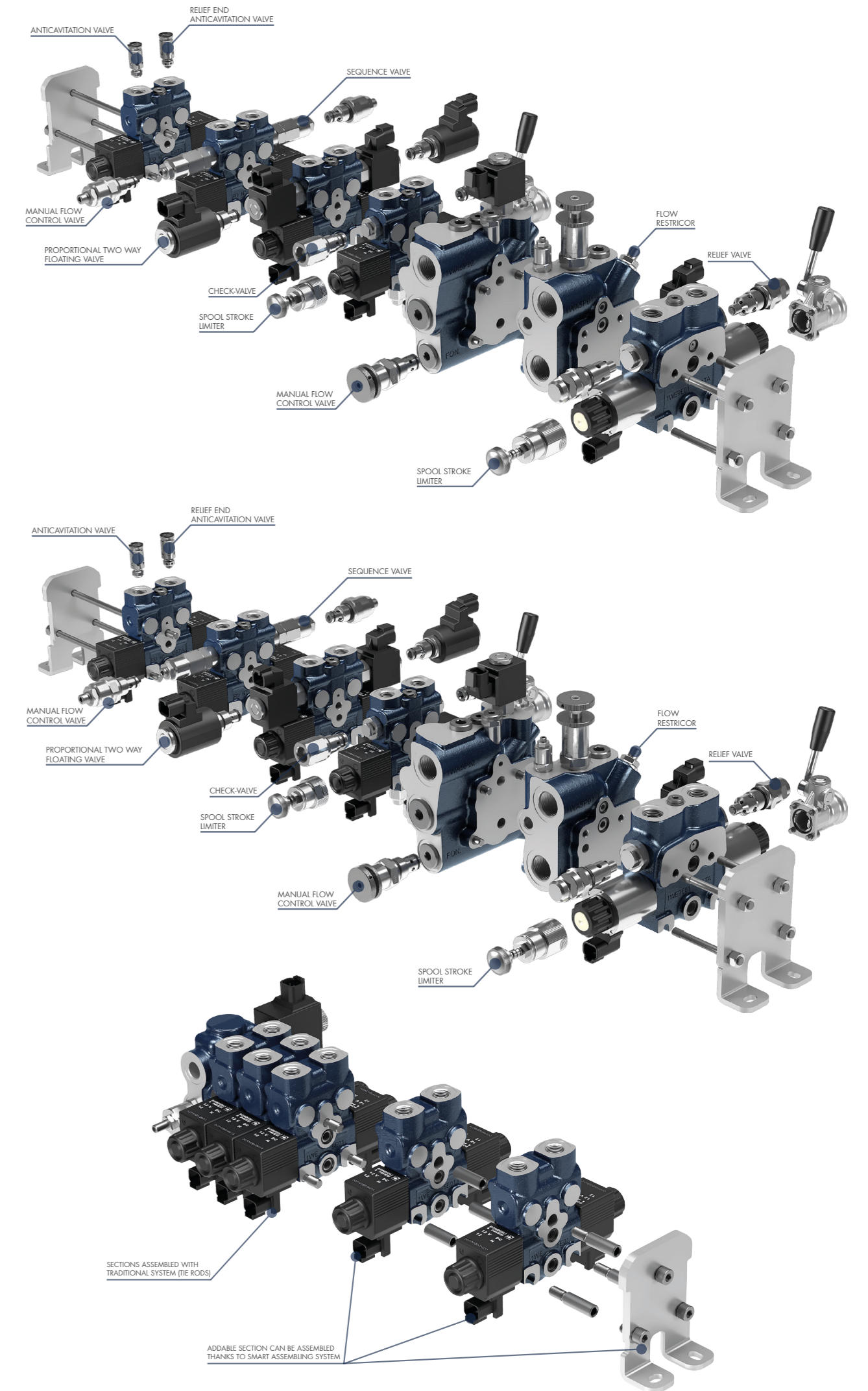
The EL platform represents the most advanced system, open to future developments of the IOT. The entire control of the system (adjustments and compensations) takes place electronically, obtaining maximum performance in terms of system optimization and safety.



The sensors in the system (pressure, flow rate etc.) detect the need for each individual hydraulic function of the machine, allowing rapid management in maximum precision.



ACCESSORIES



INLET MODULE								ELEMENTS														INTERMEDIATE PLATE						OUTLET PLATE		PLATE					
PORTS CONNECTION P-T	LS PORT CONNECTION	INLET COVER WITH UNLOADING	INLET COVER VMP+ BLEED OFF	CMP. INLET MODULE	PRIORITY INLET MODULE	FLOW RATE SIZE	FLOW REGULATOR	ON-OFF TOP SIDE PORT	ON-OFF TOP PORT	ON-OFF TANDEM	TANDEM MANUAL	LS ON-OFF	LS ON-OFF WITH CLOSE PORTS	LS PROP.	LS PROP. CLOSE PORTS	LS MANUAL	PRE COMP. PROP.	PRE COMP. ON-OFF	POST COMP. ON-OFF	POST COMP. PROP.	FLOW REGULATOR ELEMENT	LS FLOW REGULATOR ELEMENT	SPACER PLATE	CHANGE INTERFACE PLATE BW16-BW14	CHANGE INTERFACE PLATE BW16-BW10	CHANGE INTERFACE PLATE BW16-BW05	CHANGE INTERFACE PLATE BW14-BW10	CHANGE INTERFACE PLATE BW14-BW05	CHANGE INTERFACE PLATE BW10-BW05	OUTLET PLATE P-T	OUTLET PLATE P-TLS	CLOSING PLATE SMALL	CLOSING PLATE STANDARD	CLOSING PLATE HIGH	
BW05 MINI 25 l/min 250 bar																																			
BW05 50 l/min 250 bar																																			
BW10 100 l/min 250 bar																																			
BW14 140 l/min 300 bar																																			
BW16 160 l/min 300 bar																																			

LEGENDA
 CMP -> COMPENSATOR
 COMP -> COMPENSATED
 PROP -> PROPORTIONAL