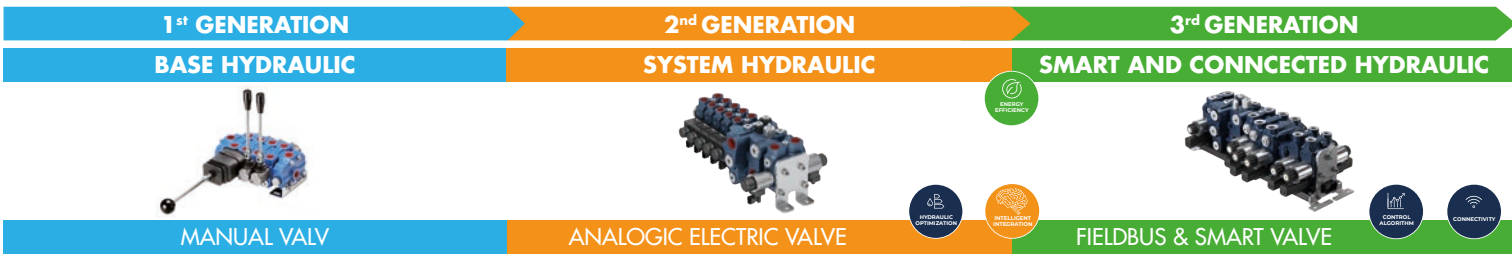


BYWIRE HUB

BYWIRE HUB SYSTEM

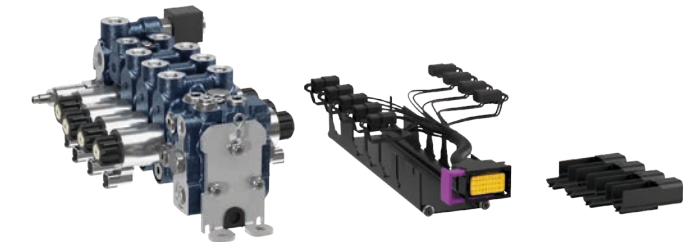
ByWire HUB is a new approach to hydraulic management, moving from analogue control (valve actuated by an analogue signal) to Fieldbus control in which the ByWire valve is connected to all other machine parts

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

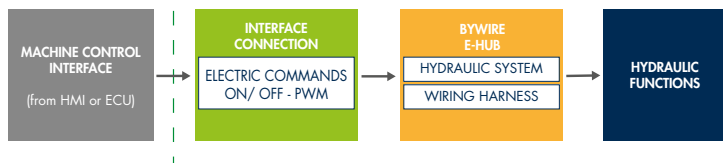


E-HUB

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.

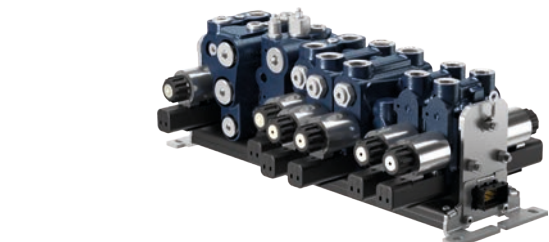


- The benefits are:
- Reduced installation time by the customer (one electrical connection connects the entire electro-hydraulic system)
 - Additional protection from the exterior environment
 - Plug and Play solution
 - Clean, industrialised solution (no more messy cables around the valve block).

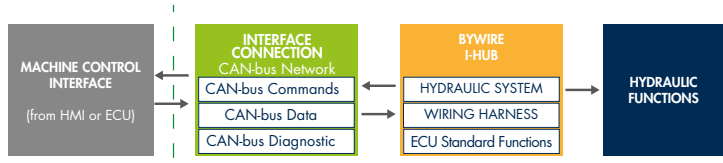


I-HUB

I-HUB 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 I-HUB 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 I-HUB.



- The benefits of I-HUB 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

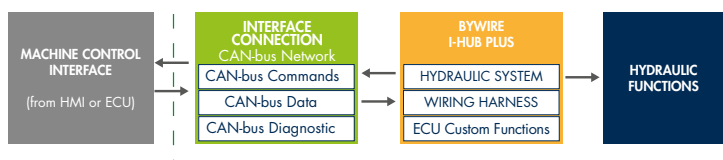


I-HUB PLUS

I-HUB PLUS incorporates all the features of I-HUB, but in addition a customised control logic is integrated into the ECU. This means that the ByWire I-HUB 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

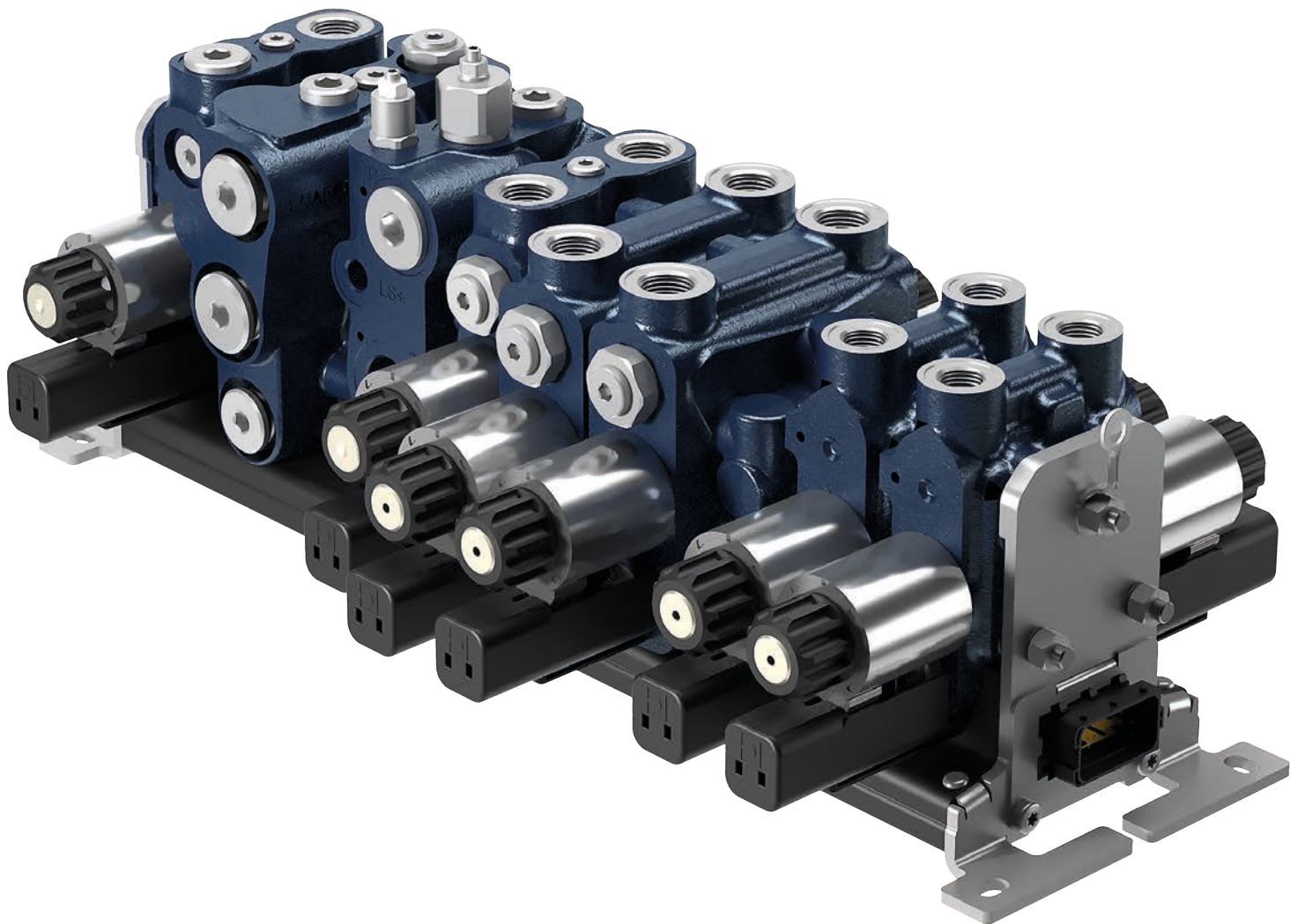


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BYWIRE

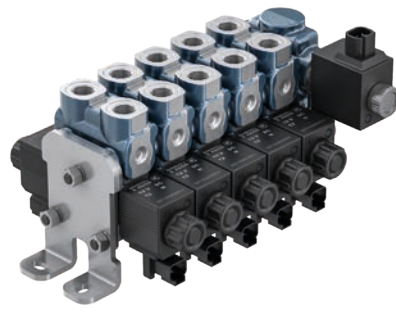
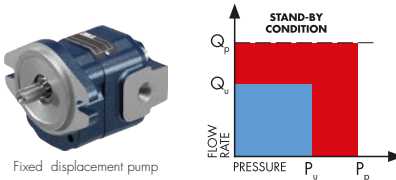
MODULAR DIRECTIONAL CONTROL VALVES



HYDRAULIC PLATFORMS

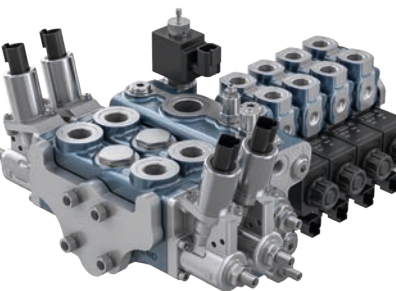
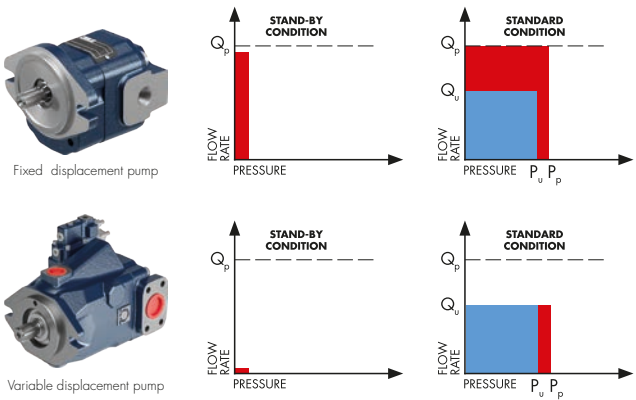
OC Open Center platform

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



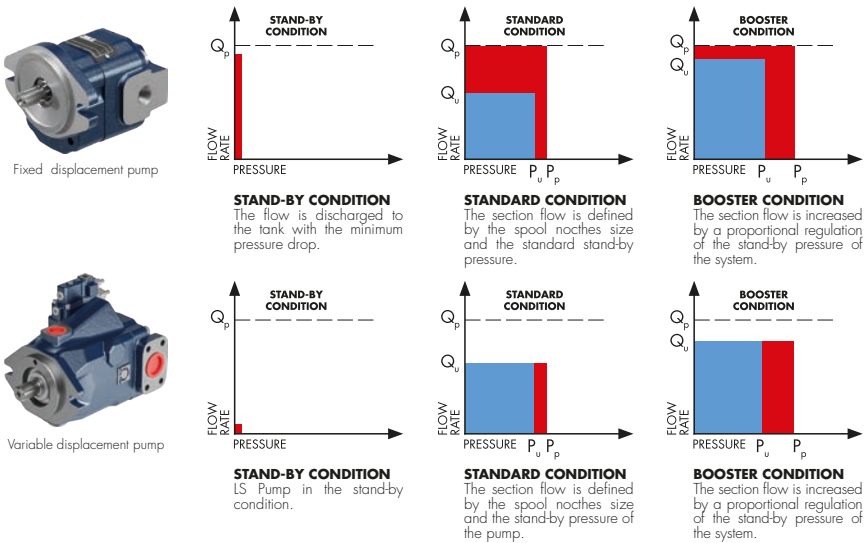
LS Load Sensing platform

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.

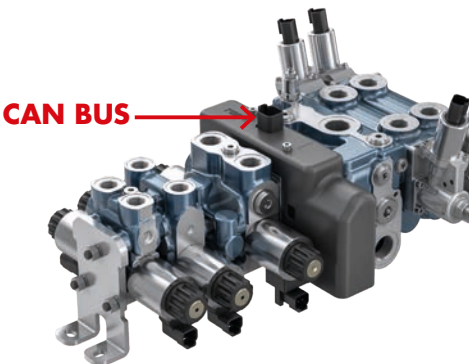


HL Hybrid Load Sensing platform

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

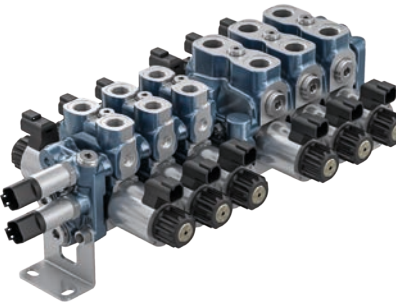
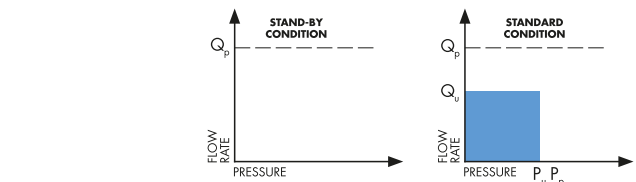


to a programmed logic. The system guarantees the use of the minimum necessary power for each function.



EL 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.



■ STOP POWER ■ WORKING POWER
Q_p = Pump Flow Q_s = Section Flow
P_p = Pump Pressure P_s = Section Load

EN

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																																								
	TE050L_A	TE051L_A	TE050L_B	TE051L_B	TE051L_C					BW0500DO																						TU050L	TU051L	TU05LH1	TU05LH2					
BW05 50 l/min 250 bar																																								
	TE050F	TE051F	TE050D	TE051T			TE050T	TE05P_A P	BW0500AO	BW0500BO	BW0500TO		BW0511BO	BW0511HO	BW0511LP	BW0511HP	BW0511TM	BW0511CP	BW0511CO	BW0511FO	BW0511FP				PI05												TU050F	TU051F	TU05H1	TU05H2
BW10 100 l/min 250 bar																																								
	TE102F	TE103F	TE102D	TE103D	TE10CL	TE10P_C N	TE10P_C P	BW1022AO	BW1022AO	BW1022TO		BW1033AO	BW1033HO	BW1033BP	BW1033HP	BW1033TM	BW1033CP	BW1033CO						RF10A2P	PI10															
BW14 140 l/min 300 bar																																								
	TE14A C	TE14B	TE14A B	TE14C	TE14P				BW1477BP	BW1477TP	BW1455TM	BW1477AP			BW1455AM				BW1477FP																					
BW16 160 l/min 300 bar																																								
	TE16B A	TE16A	TE16B B						BW1677BP	BW1677TP	BW1655TM	BW1677AP			BW1655AM				BW1677FP																					

CMP = COMPENSATOR COMP. = COMPENSATED PROP. = PROPORTIONAL

