



PRODUCT RANGE

Member of **DEXKO**
GLOBAL

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- **APPLICATIONS SECTORS**

VEHICLES

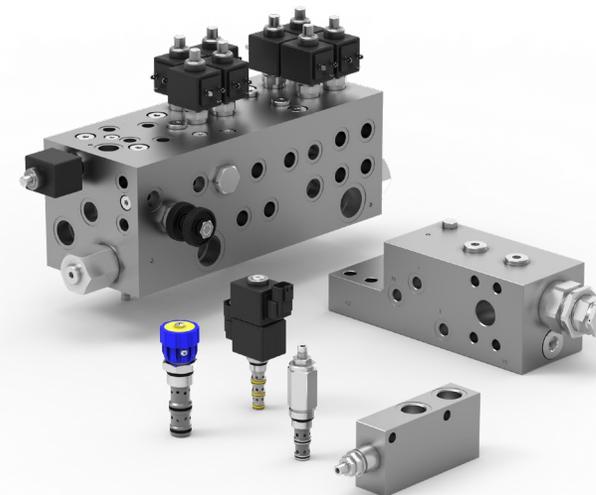
- **1. BRAKING SYSTEM**

TRAILER BRAKE UNIT
FULL POWER BRAKE VALVES,
HAND BRAKE VALVES,
MASTER PRIORITY VALVES,
MASTER CYLINDERS
COMPLETE SYSTEMS FOR TOWED VEHICLES

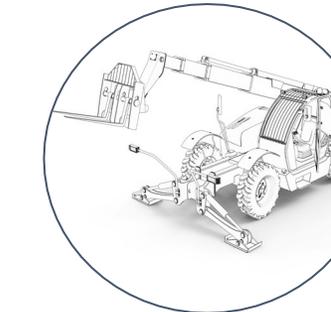
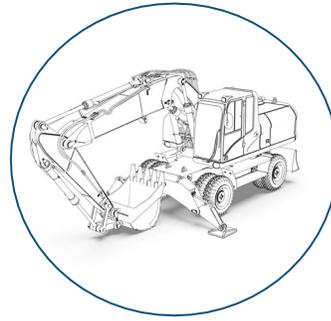
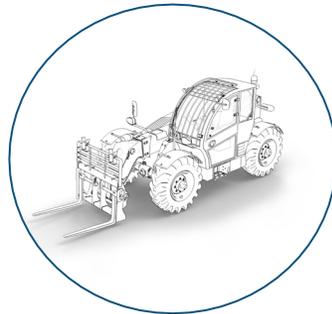
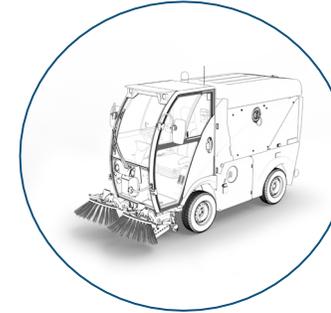
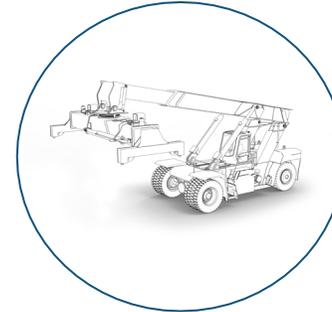
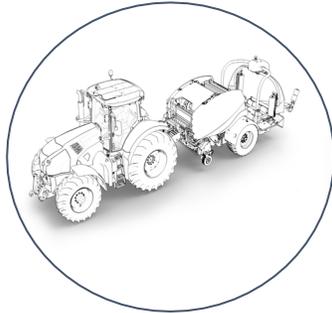
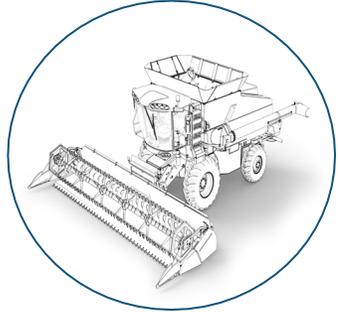


- **2. MOTION CONTROL & ELECTRICAL COMPONENTS**

CARTRIDGE VALVE,
PARTS-IN-BODY,
HYDRAULIC INTEGRATED CIRCUITS



APPLICATION SECTORS



All components are manufactured to cover the widest range of mobile and off-highways vehicles. We can serve our customer either on a integrated solution base or on specific requirements.

1. BRAKING SYSTEMS



TRAILER BRAKE
UNITS



POWER BRAKES
VALVE



MASTER PRIORITY
VALVES



MASTER
CYLINDERS



HAND BRAKE
VALVES

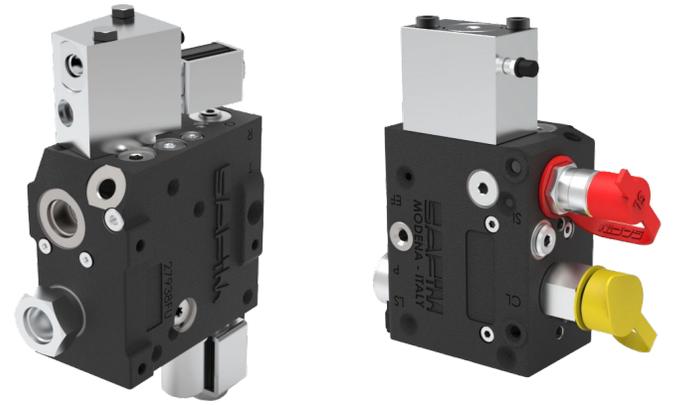


TOWED
VEHICLE

Product line specifically dedicated to braking systems for off-highway vehicles. The range includes power brake valves, hand brake valves, master priority valves, master cylinders, and complete systems for towed vehicles.

TRAILER BRAKE UNITS

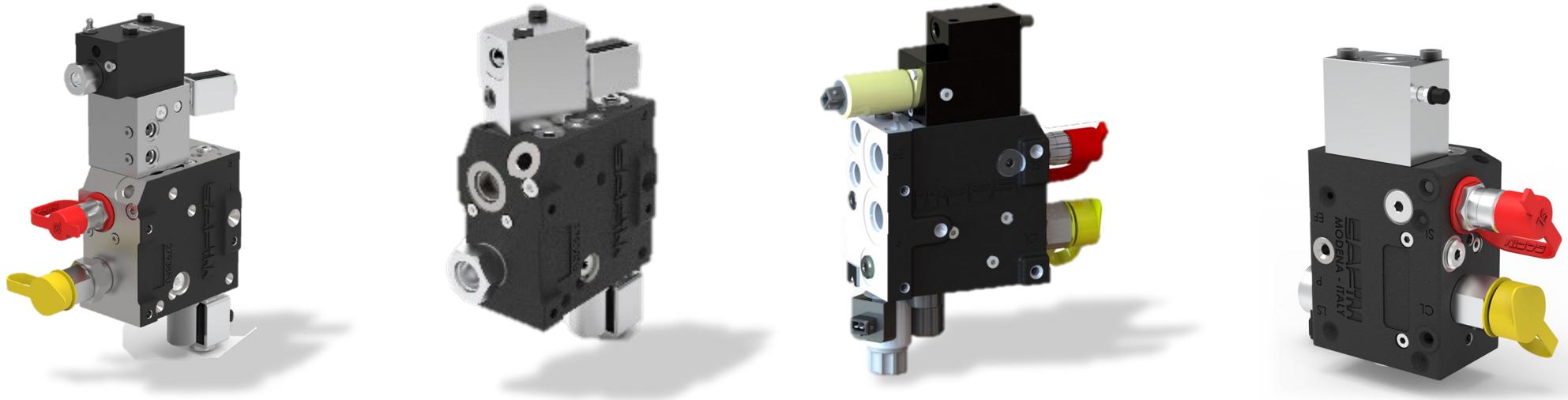
TBU
SINGLE LINE TRAILER BRAKE VALVE



TBU

The Dual Line Trailer Brake Unit provides complete control of the Control Line and/or the Supplementary Line in RVBR tractors. They can easily be installed in existing hydraulic systems, can be mounted in-line or flanged to the existing valve stack. Open Center and Closed Center (LS) versions available. Max pressures up to 220 bar with flow rates up to 100 LPM.

- Electrohydraulic Proportional Pilot
- Automatic detection of trailer connection type
- Parking function piloted by tractor parking brake pressure line
- Advanced functions giving priority to trailer braking

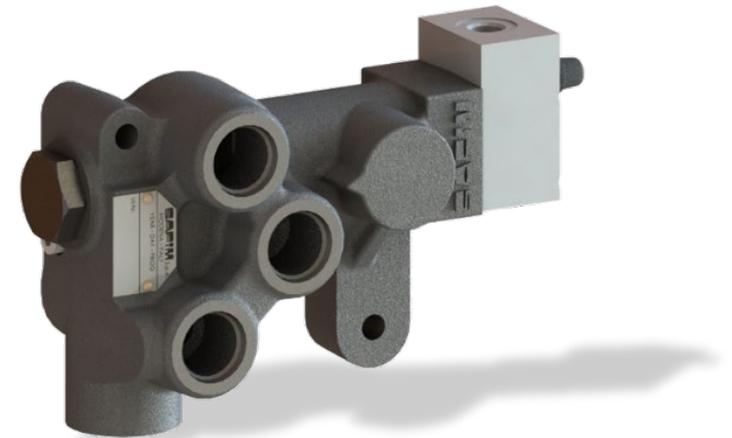


SINGLE LINE TRAILER BRAKE VALVE

The Single Line Trailer Brake Valve is piloted by the tractor brake pressure to proportionally operate the brakes at the trailer.

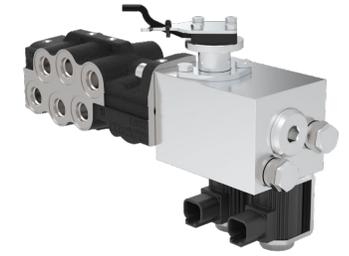
Valve is available in Open Center / Closed Center / Load Sensing (Open and/or Closed Center).

Valve designs compliant with CUNA Regulation for Italian market.



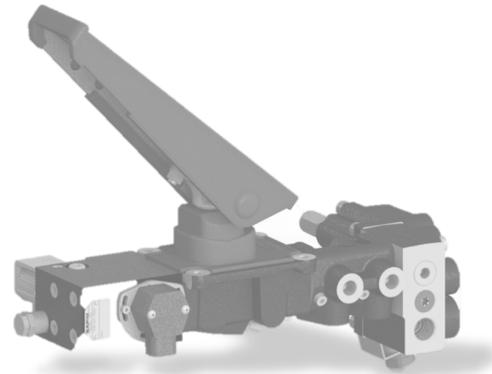
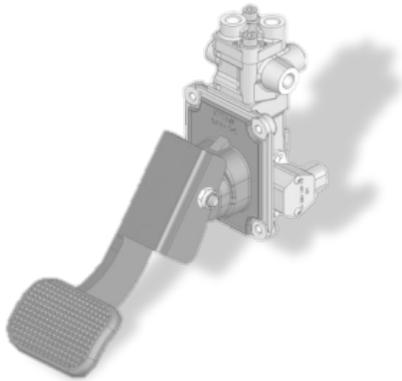
FULL POWER BRAKE VALVES

S6M | S6E | S6T | S6EK
ACCUMULATOR CHARGING VALVE



S6M

- **S6** Power Brake System family is a compact assembly with all the various valve components grouped in a single modular unit, with the advantage of reducing the number of connections.
-
- The S6 is available in both Horizontal and Vertical version, Negative and Positive Brakes, from 1 up to 4 circuits, Floor or Firewall mount pedal assemblies.
- Factory pressure setting, with fine tuning available in the field.
- Additional functions available:
 - Parking Brake control
 - Pilot Operated
 - EH control
 - Position Sensor



S6E

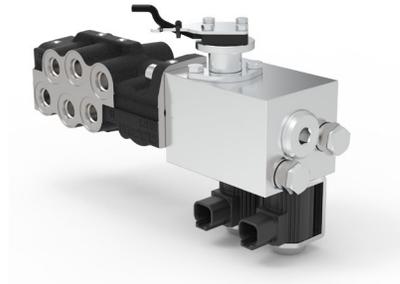
Compact assembly with all the various valve components grouped in a single modular unit, with the advantage of reducing the number of connections.

Available in both Horizontal and Vertical version, Negative and Positive Brakes, from 1 up to 4 circuits, Floor or Firewall mount pedal assemblies. Factory pressure setting, with fine tuning available in the field.

The S6E Power Brake Valves provide reduced pedal effort along with higher pressures and flows to the brakes for larger vehicles, is available in both Horizontal and Vertical version, Negative and Positive Brakes, Single and Dual Circuits, Push rod, Firewall and Floor Mount Pedal assemblies.

Additional functions available:

- | Pilot Operated
- | EH control
- | Position Sensor (Non-contacting hall effect)



S6T

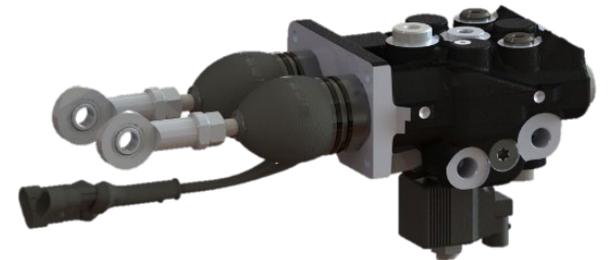
S6T Power Brake Valve is a compact design for brake assist steering applications. Valve maintains equalized pressure on all brakes, dual pedal or push rod input for control of individual rear brakes. Factory pressure setting, with fine tuning available in the field.

Compact assembly with all the various valve components grouped in a single modular unit, with the advantage of reducing the number of connections.

Available in both Horizontal and Vertical version, Negative and Positive Brakes, from 1 up to 4 circuits, Floor or Firewall mount pedal assemblies. Factory pressure setting, with fine tuning available in the field.

Additional functions available:

- | Parking Brake control
- | Pilot Operated
- | EH control
- | Position Sensor

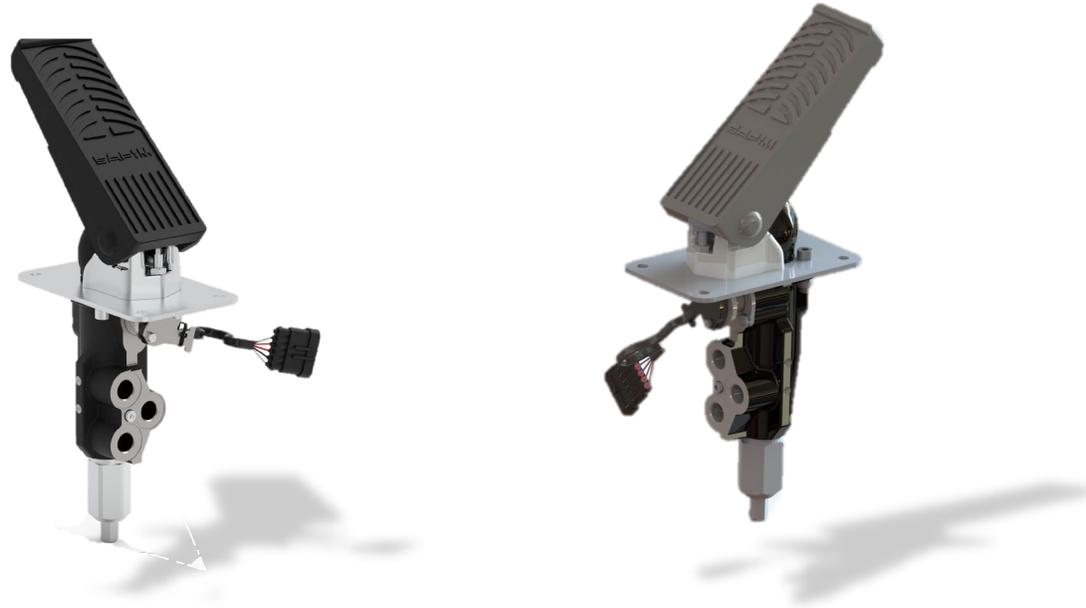


S6EK

The S6EK is available in both Horizontal and Vertical version, Floor or Firewall mount pedal assemblies.
Factory pressure setting, with fine tuning available in the field.

Additional functions available:

- | Parking Brake control
- | Pilot Operated
- | EH control
- | Position Sensor



ACCUMULATOR CHARGING VALVES

SAFIM Accumulator Charge Valves supply oil to an accumulator to supply power to the brake system for service and/or power off braking. Factory pressure setting, with fine tuning available in the field.

Additional functions available:

- | Parking Brake control
- | Parking Brake control with Pressure Reducing Valve in-built
- | Start Unloading valve



HAND BRAKE VALVES



PARK BRAKE LEVER

Park brake Lever Power Brake Valve is a compact design for brake assist steering. Manual valve controlled by a lever which manages the park parking braking function. This valve allows the pressure to fall to the contact point of brake discs within the first few degrees of rotation of the lever, the subsequent stroke of the lever is used to modulate the pressure to the parking brakes until fully engaged.

Additional functions available:

- Parking Brake control
- Pilot Operated
- EH control
- Position Sensor



MASTER PRIORITY VALVES

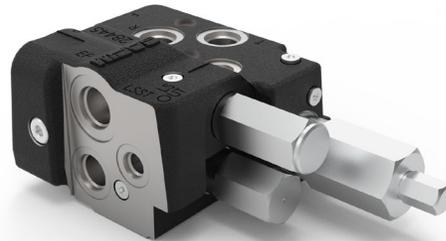


MASTER PRIORITY VALVES

The Master Priority Valve® is a hydraulic unit which delivers oil to 3 different functions with different customizable priority levels:

- Steering unit
- Brakes
- Exceeding Flow for Directional valves
- Position Sensor

The MPV can be Open center or LS, inline and flange mount, its flow rates are 80LPM, 160 LPM, 250 LPM and pressures up to 300 bar. The large internal passage gives a very low-pressure drop.



MASTER CYLINDERS

NON-BOOSTED
BOOSTED VERSION



MASTER CYLINDERS NON-BOOSTED VERSION

Straight and Step Bore Master Cylinders

Master Cylinders, Straight and Step Bore type, are available in both Hydraulic oil and brake fluid versions; actuated by mechanical effort with a pedal assembly or by a push-rod. Brake pressure is based on the bore diameter and the force applied to the piston. Piston sensors can be added to the cylinder or pedal assemblies.

Both straight bore and step bore master cylinders available in multiple configurations:

- Single or Double circuit
- Twin and Balanced design

Step Bore master cylinders allow the user to generate higher brake pressures with less pedal effort than a straight bore cylinder. Step Bore master cylinders fill the brakes with the large bore dia. then transition to the small bore to generate the high pressure. The Non-Boosted Master Cylinders are used in applications that have lower brake displacement requirements.

Brake pressure is based on the bore diameter and the force applied to the piston.



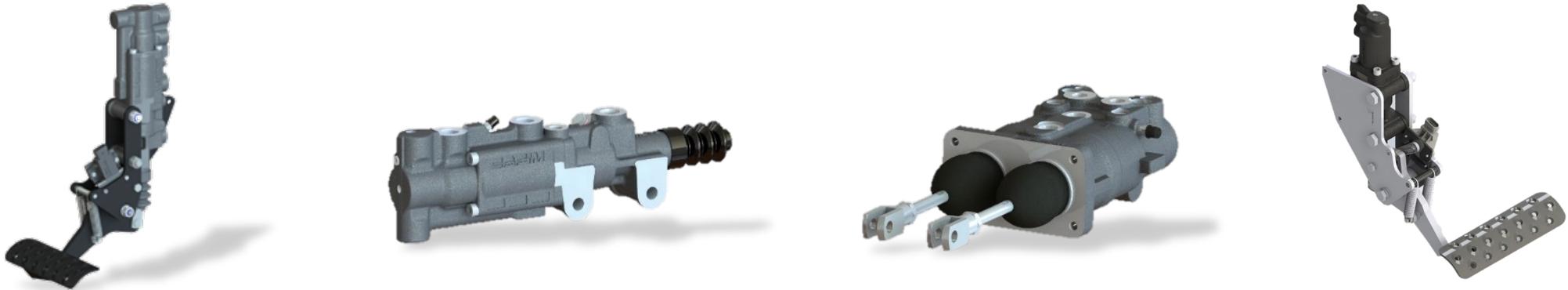
MASTER CYLINDERS BOOSTED VERSION

Open and Closed Center with Straight and Step Bore Master Cylinders

The SAFIM boosted Master Cylinders are used in applications having higher brake pressure requirements, in fact boosted master cylinders allow for lower pedal effort over standard Master Cylinders. Boosters can be used with Straight and Step Bore Master Cylinders. Position sensors can be added to the cylinder or pedal assemblies. Vertical and horizontal mounts available, the Boosted version are available for Hydraulic Oil and Brake Fluid Systems, Open and Close (Load Sensing) center more accumulator can be added for Power off braking.

Boosted master Cylinders are available in multiple configurations:

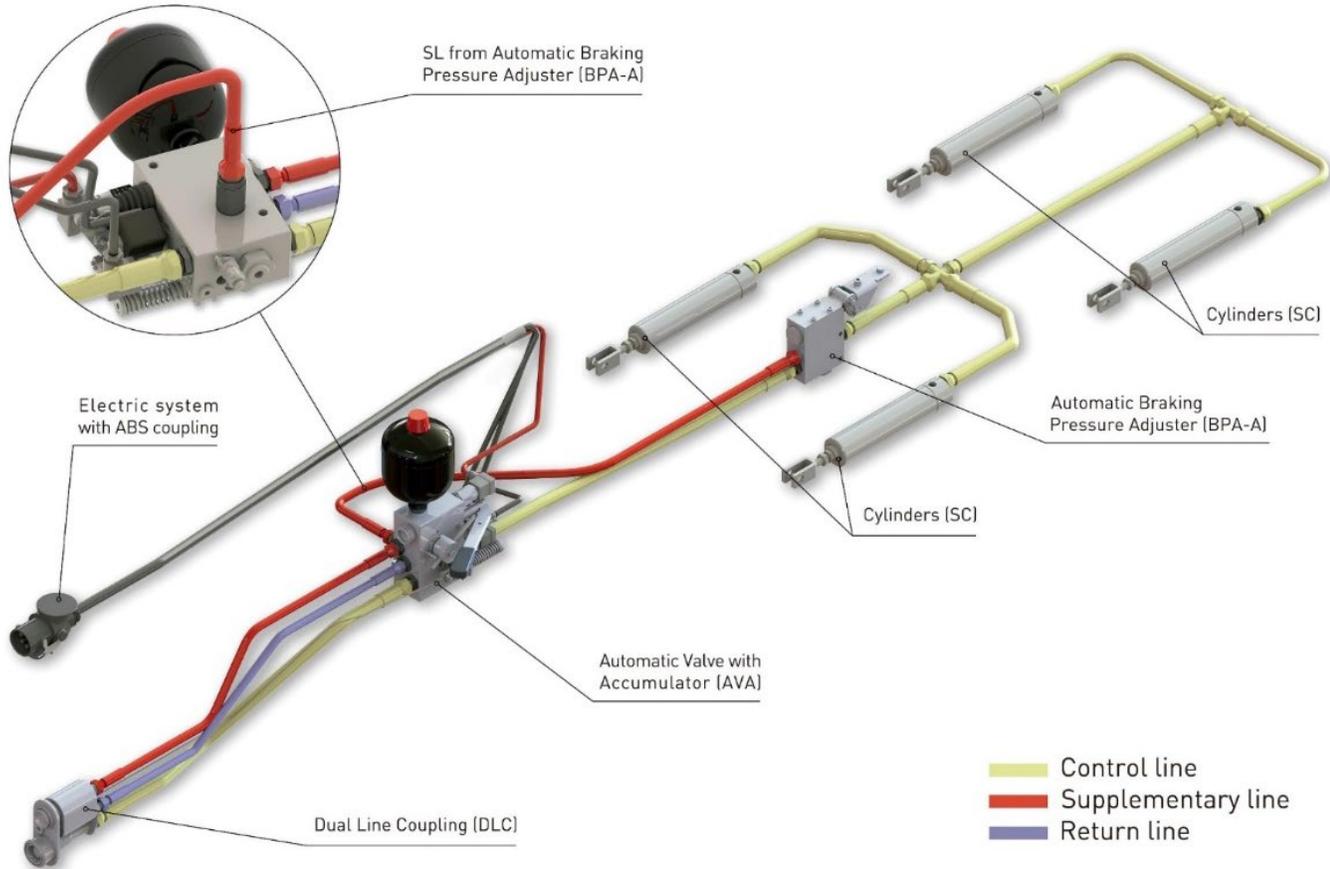
- Single or Double circuit
- Twin and Balanced design



RVBR - DUAL LINE TRAILER BRAKE SYSTEM



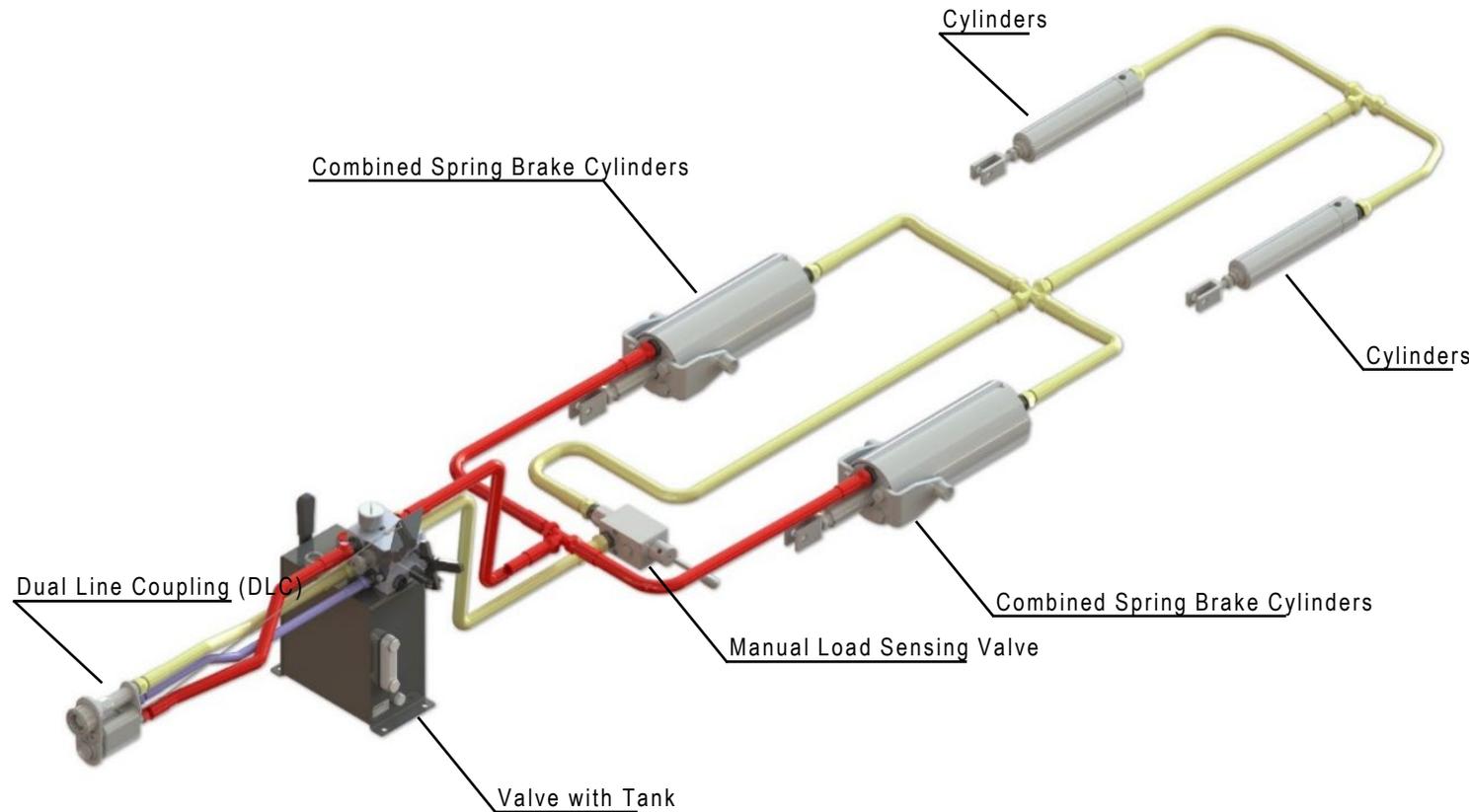
AS SYSTEM



■ ACCUMULATOR SYSTEM

In event of emergency, the automatic braking function uses the pressurized oil stored in the accumulator. The benefit of this system is the compactness of the brake actuators, which can be located on trailers having limited room. This system can be used with the hydraulic brakes integrated on the hub too. Further to the standard two hydraulic lines, the system needs an electrical connection to the tractor (ISO 7638 – ABS plug).

CTS SYSTEM



■ CYLINDER & TANK SYSTEM

A CTS system uses a merely mechanical energy source to actuate the automatic emergency brake function. The compressed springs, located in one of the two section of of a combined cylinder, provide the energy. The Supplementary Line oil in pressure keeps the springs compressed and releases them when the coupling disconnects from the tractor.

This system does not need any electrical connection, because is connected to the tractor only via hydraulic hoses.

Brake actuators are combined cylinders, made up of two sections, one for service brake function, the other for automatic brake and parking brake function.

A separated tank collects the oil used to release the spring brakes. If it is necessary to remove the automatic braking function, a manual pump conveys the oil to the cylinders compressing again the springs.

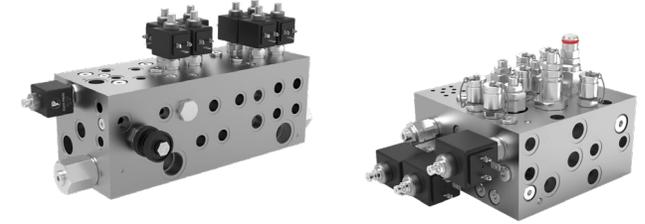
2. MOTION CONTROL & ELECTRICAL COMPONENTS



PARTS IN BODY



CARTRIDGES



HYDRAULIC INTEGRATED
CIRCUITS

Product line specifically dedicated to the actuation systems of off-highway and industrial vehicles.

The range includes cartridge valves, parts-in-body solutions, and manifolds.

PARTS IN BODY

VALVES FOR MOTORS

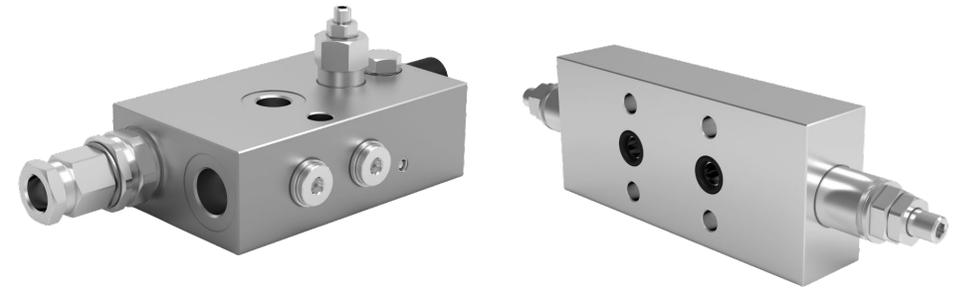
FLOW-REGULATOR

CHECK VALVE

PILOT OPERATED CHECK-VALVE

COUNTERBALANCED VALVE

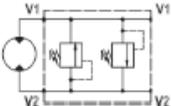
VALVES (OTHERS)



VALVE FOR MOTORS

Prevent high pressure spikes in the hydraulic circuit from damaging the system components.

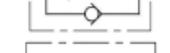
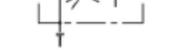
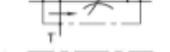


Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPM-D-IL	Azione Diretta doppie incrociate / <i>Direct Acting dual cross</i>	40	350 bar - 5100 psi

FLOW REGULATOR

They control of the flow to keep it constant while the supply flow and pressure may vary.

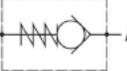
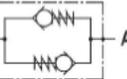


Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPCU		10 – 18	250 bar – 3625 psi
	FPRUC	Regolatore di flusso compensato, con ritorno libero / <i>In line pressure compensated flow regulator, with free reverse flow</i>	30 – 90	350 bar - 5100 psi
	FPRBC	Regolatore di flusso a due vie compensato in linea / <i>In line pressure compensated two-way flow regulator</i>	30 – 90	350 bar - 5100 psi
	FPRF	Regolatore di flusso a tre vie compensato, con eccedenza a scarico / <i>In line three way pressure compensated flow regulator, with exceeding flow to tank</i>	50 – 240	350 bar - 5100 psi
	FPRFU	Regolatore di flusso a tre vie compensato, con eccedenza a scarico e ritorno libero / <i>In line three way pressure compensated flow regulator, free reverse flow, with exceeding flow to tank</i>	50 – 150	350 bar - 5100 psi
	FPVP	Regolatore di flusso a tre vie compensato, con eccedenza in pressione / <i>In line three way pressure compensated flow regulator, with exceeding flow in pressure</i>	50 – 150	350 bar - 5100 psi
	VSC	Valvola controllo discesa compensata / <i>Pressure compensated flow restricting valve</i>	1 – 47	300 bar – 4350 psi
	VSC-G	Valvola controllo discesa compensata / <i>Pressure compensated flow restricting valve</i>	1 – 10	250 bar – 3625 psi
	VSCR	Valvola controllo discesa compensata regolabile / <i>Adjustable pressure compensated flow restricting valve</i>	1 – 150	300 bar – 4350 psi

CHECK VALVE

Allow the free flow in one direction while stopping it from the opposite one.

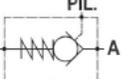
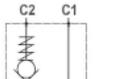
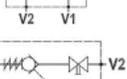
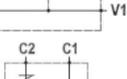
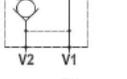
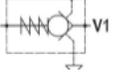
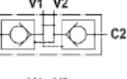
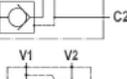


Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPR		12 - 310	350 bar - 5100 psi
A1  A	FPR-MF	Versione maschio - femmina / <i>male - female version</i>	12 - 310	350 bar - 5100 psi
	FPRI	Versione inserto / <i>Insert version</i>	15 - 80	350 bar - 5100 psi
	FPRI-S	Versione inserto, tenuta a sfera / <i>Insert ball version</i>	15 - 80	350 bar - 5100 psi
A  A1	FPRD	A ritegni contrapposti / <i>Bi-directional</i>	85	350 bar - 5100 psi

PILOT OPERATED CHECK VALVE

They block a cylinder or an actuator port preventing the flow in the opposite direction until the pilot release pressure is applied.



Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPS	Montaggio in linea / <i>Line mounted</i>	12 - 85	350 bar - 5100 psi
A1  A	FPS-C-40-B-3/8-SP-5FA	Montaggio con vite forata / <i>Drilled screw version</i>	40	250 bar - 3625 psi
	FPS-C-40-B-PR1-3/8	Montaggio con vite forata, rubinetto, versione destra / <i>Drilled screw version with manual shut-off, right version</i>	30	250 bar - 3625 psi
	FPS-C-40-B-PR2-3/8	Montaggio con vite forata, rubinetto, versione sinistra / <i>Drilled screw version with manual shut-off, left version</i>	30	250 bar - 3625 psi
	FPSLE-1/4-S	Montaggio in linea / <i>Line mounted</i>	20	350 bar - 5100 psi
	FPSL	Montaggio in linea / <i>Line mounted</i>	30 - 85	350 bar - 5100 psi
C2  V2 C1 V1	FPS-LR1	Versione sinistra con rubinetto / <i>Left version with manual shut-off</i>	30	350 bar - 5100 psi
	FPS-LR2	Versione destra con rubinetto / <i>Right version with manual shut-off</i>	30	350 bar - 5100 psi
	FPS-F	Montaggio a flangia / <i>Gasket mounted</i>	30 - 85	350 bar - 5100 psi
C1  V1	FPSFB-L	Bilanciata / <i>Fully balanced</i>	30 - 80	250 bar - 3625 psi
	FPD	Montaggio in linea / <i>Line mounted</i>	12 - 85	350 bar - 5100 psi
C1  C2	FPD-1RO-SR	Predisposta per un raccordo / <i>Prepared for one union</i>	12 - 20	250 bar - 3625 psi
	FPD-2RO-SR	Predisposta per due raccordi / <i>Prepared for two union</i>	12 - 20	250 bar - 3625 psi
C1  C2	FPD-1R	Montaggio in linea / <i>Line mounted</i>	20	350 bar - 5100 psi
	FPD-LE-1/4-S	Montaggio in linea / <i>Line mounted</i>	20 - 85	350 bar - 5100 psi
	FPD-L	Montaggio in linea / <i>Line mounted</i>	30 - 85	350 bar - 5100 psi
	FPD-F	Montaggio a flangia / <i>Gasket mounted</i>	12 - 20	250 bar - 3625 psi

COUNTERBALANCED VALVES

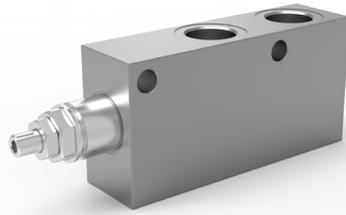
Controls the actuator (cylinder or hydraulic motor) in a hydraulic system for overriding or suspended loads.



Schema idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPO-35-D-1/4-L	Valvola overcenter doppia / <i>Dual overcenter valve</i>	35	350 bar - 5100 psi
	FPOE-40-D-3/8-L-A	Valvola overcenter doppia, E series / <i>Dual overcenter valve, E series</i>	40	350 bar - 5100 psi
	FPO-50-D-L	Valvola overcenter doppia / <i>Dual overcenter valve</i>	50	350 bar - 5100 psi
	FPO-35-DD-1/4-L	Valvola overcenter doppia / <i>Dual overcenter valve</i>	35	350 bar - 5100 psi
	FPO-50-DX-L	Valvola overcenter doppia, corpo in alluminio / <i>Dual overcenter valve, aluminium body</i>	50	350 bar - 5100 psi
	FPOE-70-D-1/2-L-A	Valvola overcenter doppia, serie E / <i>Dual overcenter valve, E series</i>	70	350 bar - 5100 psi
	FPO-90-D-3/4-L	Valvola overcenter doppia, pilotaggio interno / <i>Dual overcenter valve, internal pilot</i>	90	350 bar - 5100 psi
	FPOE-120-D-3/4-L-A	Valvola overcenter doppia, serie E / <i>Dual overcenter valve, E series</i>	120	350 bar - 5100 psi
	FPO-150-DD-3/4-L	Valvola overcenter doppia / <i>Dual overcenter valve</i>	150	350 bar - 5100 psi
	FPO-50-D-3/8-1F-M	Valvola overcenter doppia, montaggio a flangia singolo, attacco manometro / <i>Dual overcenter valve, single gasket mounted, pressure gauge port</i>	50	350 bar - 5100 psi
	FPO-35-D-1/4-2F	Valvola overcenter doppia, montaggio a flangia / <i>Dual overcenter valve, gasket mounted</i>	35	350 bar - 5100 psi
	FPOE-40-D-3/8-2F-A	Valvola overcenter doppia, montaggio a flangia, serie E / <i>Dual overcenter valve, gasket mounted, E series</i>	40	350 bar - 5100 psi
	FPO-50-D-2F	Valvola overcenter doppia, montaggio a flangia / <i>Dual overcenter valve, gasket mounted</i>	50	350 bar - 5100 psi
	FPO-50-DX-2F	Valvola overcenter doppia, montaggio a flangia, corpo in alluminio / <i>Dual overcenter valve, gasket mounted, aluminium body</i>	50	350 bar - 5100 psi

COUNTERBALANCED VALVES

Controls the actuator (cylinder or hydraulic motor) in a hydraulic system for overriding or suspended loads.

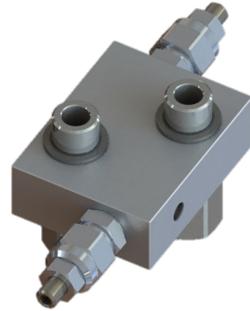


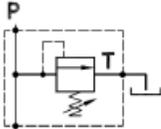
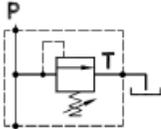
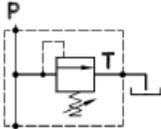
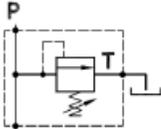
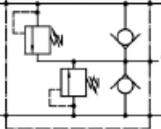
Schema idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPOFB-35-S-1/4-L	Montaggio in linea / <i>Line mounted</i>	35	350 bar - 5100 psi
	FPOB-50-S-L	Parzialmente bilanciata / <i>Partially balanced</i>	50	350 bar - 5100 psi
	FPOB-50-S-1F	Parzialmente bilanciata, montaggio a flangia / <i>Partially balanced, gasket mounted</i>	50	350 bar - 5100 psi
	FPOB-50-S-1/2-1F-SAE	Parzialmente bilanciata, montaggio a flangia, SAE 6000 / <i>Partially balanced, gasket mounted, SAE 6000</i>	50	350 bar - 5100 psi
	FPOB-50-S-2F-P-M	Parzialmente bilanciata, montaggio con C1-C2 flangiate, attacco manometro / <i>Partially balanced, gasket mounted: C1-C2 flanged, pressure gauge port</i>	50	350 bar - 5100 psi
	FPOB-35-S-1/4-L-P	Pilotaggio interno / <i>Internal pilot</i>	35	350 bar - 5100 psi
	FPOFB-35-S-1/4-L-P	Pilotaggio interno / <i>Internal pilot</i>	35	350 bar - 5100 psi
	FPOB-50-S-L-P	Pilotaggio interno / <i>Internal pilot</i>	50	350 bar - 5100 psi
	FPOFB-50-S-L-P	Pilotaggio interno / <i>Internal pilot</i>	50	350 bar - 5100 psi
	FPOEB-70-S-1/2-L-P-A	Pilotaggio interno, serie E / <i>Internal pilot, E series</i>	70	350 bar - 5100 psi
	FPOB-90-S-3/4-L-P-35	Pilotaggio interno / <i>Internal pilot</i>	90	350 bar - 5100 psi
	FPOEB-120-S-3/4-L-P-A	Pilotaggio interno, serie E / <i>Internal pilot, E series</i>	120	350 bar - 5100 psi
FPOFB-150-S-L-P-M	Pilotaggio interno, attacco manometro e pilotaggio regolabile / <i>Internal and adjustable pilot, pressure gauge port</i>	150	350 bar - 5100 psi	
	FPOB-50-S-1F-P-M	Parzialmente bilanciata, montaggio con C2 flangiata, V1-C1 contrapposte e attacco manometro / <i>Partially balanced, gasket mounted, C2 flanged, V1-C1 through ported, gauge port</i>	50	350 bar - 5100 psi
	FPOFB-150-S-1F-P-M	Parzialmente bilanciata, montaggio con C2 flangiata, V1-C1 contrapposte e attacco manometro / <i>Partially balanced, gasket mounted, C2 flanged, V1-C1 through ported, gauge port</i>	150	350 bar - 5100 psi
	FPOFB-150-S-1/2-2F-P	Parzialmente bilanciata, montaggio con C1-C2 flangiate, pilotaggio interno e regolabile / <i>Partially balanced, gasket mounted: C1-C2 flanged, internal and adjustable pilot</i>	150	350 bar - 5100 psi

PRESSURE RELIEVING VALVE

Available for several functions have in common a body designed for the direct mounting on the most hydraulic systems.

Two solutions are available: gasket mounted and drilled screw mounted.



Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPM-D-CB	Azione Diretta / <i>Direct Acting</i>	05 – 80	350 bar – 5100 psi
	FPM-D-F-CB	Azione Diretta mont. Pannello / <i>Direct Acting panel mounted</i>	15 – 80	350 bar - 5100 psi
	FPMHP-D-CB	Azione Diretta pressioni elevate / <i>Direct Acting high pressure</i>	100	420 bar - 6090 psi
	FPMA-A-100-CB	Azione diretta area differenziale / <i>Direct Acting differential piston</i>	100	350 bar - 5100 psi
	FPM-D-IL-AC	Azione Diretta doppie incrociate con anticavitazione / <i>Dual cross direct acting relief valves line mounted version, anti-cavitation</i>	40	250 bar – 3625 psi

SEQUENCE VALVE

Pressure control valves designed to sequence the hydraulic operations within a hydraulic system dependent on applied pressure.



Schema Idraulico Hydraulic circuit	Tipo Type	Caratteristiche Tecniche Technical Features	Q (L/min)	P max (BAR)
	FPSQ-D-CB	Azione Diretta / Direct Acting	15 - 80	350 bar - 5100 psi
	FPSQL-D-3/8	Azione Diretta, taratura fissa, montaggio in linea / Direct Acting, fixed setting, line mounting	30	350 bar - 5100 psi
	FPSQR-L-D	Azione Diretta, taratura regolabile, montaggio in linea / Direct Acting, adjustable setting, line mounting	40 - 80	350 bar - 5100 psi
	FPSQB-D-30-CB	Azione Diretta, bilanciata / Direct Acting, fully balanced	40	350 bar - 5100 psi
	FPSQB-D-150-CB	Azione Diretta, bilanciata / Direct Acting, fully balanced	150	350 bar - 5100 psi
	FPSQRB-L-D	Azione Diretta, bilanciata, taratura regolabile, montaggio in linea / Direct Acting, fully balanced, adjustable setting, line mounting	40 - 150	350 bar - 5100 psi

PRESSURE REDUCING VALVES

Maintains lower pressures in branches of a hydraulic system.



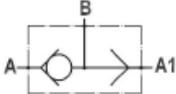
Schema Idraulico Hydraulic circuit	Tipo Type	Caratteristiche Tecniche Technical Features	Q (L/min)	P max (BAR)
	FPRP-2D-25-CB-1/4	Valvola di riduzione pressione, due vie, azione diretta / Pressure reducing valve, two way, direct acting	25	250 bar - 3625 psi
	FPRP-D-30-CB	Azione Diretta, con relief / Direct Acting with reverse relief	30	350 bar - 5100 psi
	FPRPN-D-30-CB	Azione Diretta, con relief / Direct Acting with reverse relief	30	350 bar - 5100 psi
	FPRPU-D-30-CB-3/8	Azione Diretta, con relief e ritorno libero / Direct Acting with reverse relief and free reverse flow	30	350 bar - 5100 psi

VALVES (OTHERS)

SHUTTLE VALVES

They are used when is necessary to provide flow from one to two priority lines to a single output.

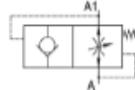


Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPT	Montaggio in linea / <i>Line mounted</i>	25 – 110	350 bar - 5100 psi
	FPTI	Cartuccia ad inserto / <i>Insert Ball version</i>	10 – 40	350 bar - 5100 psi

HOSE BREAK VALVES

They are used to stop the outflow of fluid in case of hoses breaking.



Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPP		8 – 20	350 bar - 5100 psi

VALVES (OTHERS)

RESTRICTOR VALVE

They allow the free flow in one direction thanks to a check valve while controlling the flow in the opposite direction.



Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPU	Valvola regolatrice di flusso unidirezionale / <i>Restrictor valve</i>	12 – 85	300 bar – 4350 psi
	FPUN		90	400 bar – 5800 psi
	FPSU			
	FPMU			
	FPRU-F	Tipo a manicotto / <i>Barrel type</i>	12 – 150	350 bar - 5100 psi
		Valvola di strozzamento unidirezionale fissa / <i>Fixed setting throttle check valve</i>	12 – 310	350 bar - 5100 psi
	FPRU-MF	Valvola di strozzamento unidirezionale fissa, versione maschio-femmina / <i>Fixed setting throttle check valve, male-female version</i>	12 – 310	350 bar - 5100 psi

NEEDLE VALVE

They control the flow in both directions controlling it through the rotation of a knob or screw with hexagonal socket.



Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPB	Valvola regolatrice di flusso bidirezionale / <i>Needle valve</i>	12 – 85	300 bar – 4350 psi
	FPBN		100	400 bar – 5800 psi
	FPSB		12 – 25	300 bar – 4350 psi
	FPMB		12 – 150	350 bar - 5100 psi
		Tipo a manicotto / <i>Barrel type</i>		

VALVES (OTHERS)

AUTOMATIC DIRECTIONAL

An automatic hydraulic valve for cylinders is a control and safety component designed to automatically manage hydraulic fluid flow to and from a hydraulic cylinder, ensuring precise operation and system protection without continuous manual intervention.



Schema idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPIA-L6-VM	Aumento di pressione, flangiato CETOP 3 <i>/ Pressure increase control, flanged CETOP 3</i>	3 – 35	350 bar - 5100 psi
	FPIA-L10-VM	Aumento di pressione, flangiato CETOP 5 <i>/ Pressure increase control, flanged CETOP 5</i>	3 – 80	350 bar - 5100 psi

CARTRIDGES VALVES

MECHANICAL
ELECTRIC



PRESSURE RELIEF VALVE

Prevent high pressure spikes in the hydraulic circuit from damaging the system components.



schema	Caratteristica tecnica	Q (L/min)	P max (bar)
	FPM-A-S08-C Azione Diretta, area differenziata, cavità SAE / <i>Direct Acting, differential piston, SAE cavity</i>	50	350 bar – 5100 psi
	FPM-D-C Azione Diretta / <i>Direct Acting</i>	05 – 80	350 bar – 5100 psi
	FPM-D-S08-C Azione Diretta cavità SAE / <i>Direct Acting SAE cavity</i>	50	350 bar – 5100 psi
	FPM-D-S10 Azione Diretta cavità SAE / <i>Direct Acting SAE cavity</i>	70	350 bar – 5100 psi
	FPM-D-F-C Azione Diretta mont. Pannello / <i>Direct Acting panel mounted</i>	15 – 80	350 bar – 5100 psi
	FPMHP-D-C Azione Diretta pressioni elevate / <i>Direct Acting high pressure</i>	30 – 120	420 bar – 6090 psi
	FPM-I-D-3-P Azione Diretta guided poppet / <i>Direct Acting guided poppet</i>	3	260 bar – 3770 psi
	FPM-P-150-C Pilotata a cursore / <i>Pilot operating sliding spool type</i>	150	350 bar – 5100 psi
	FPM-P-S10-C Pilotata a cursore, cavità SAE / <i>Pilot operating sliding spool type, SAE cavity</i>	110	350 bar – 5100 psi
	FPM-D-S08-IL-C Bidirezionale cavità SAE / <i>Bidirectional SAE cavity</i>	50	350 bar – 5100 psi
	FPM-A-S08-C Azione Diretta, area differenziata, cavità SAE / <i>Direct Acting, differential piston, SAE cavity</i>	50	350 bar – 5100 psi

SEQUENCE VALVE

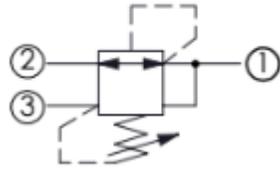
Pressure control valves designed to sequence the hydraulic operations within a hydraulic system dependent on applied pressure.



schema	Caratteristica tecnica	Q (L/min)	P max (bar)
	FPSQB-D-30-C-NA Azione Diretta, bilanciata, normalmente aperta / Direct Acting, balanced, normally open	30	350 bar – 5100 psi
	FPSQB-D-30-C-NC Azione Diretta, bilanciata, normalmente chiusa / Direct Acting, balanced, normally closed	30	350 bar – 5100 psi
	FPSQB-D-PD-30-C-NA Valvola di sequenza bilanciata, ad azione diretta, a cartuccia, normalmente aperta / Direct acting, fully balanced sequence valve, cartridge version, normally open	30	350 bar – 5100 psi
	FPSQB-D-PD-30-C-NC Valvola di sequenza bilanciata, ad azione diretta, a cartuccia, FLUID-PRESS Application / Direct acting, fully balanced sequence valve, cartridge version, normally closed	30	350 bar – 5100 psi

PRESSURE REDUCING DIRECT ACTING WITH RELIEVING

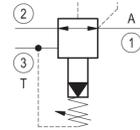
Maintains lower pressure in branches of a hydraulic system. Absorbs pressure spikes in the system.



schema	Caratteristica tecnica	Q (L/min)	P max (bar)
	FPRP-D-30-C	Azione Diretta, con relief / <i>Direct Acting with reverse relief</i>	30 350 bar – 5100 psi
	FPRPN-D-30-C	Azione Diretta, con relief / <i>Direct Acting with reverse relief</i>	30 350 bar – 5100 psi

PRESSURE REDUCING PILOT OPERATED

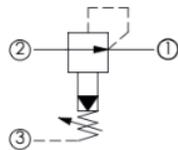
Maintains lower pressure in branches of a hydraulic system. Absorbs pressure spikes in the system.



schema	Caratteristica tecnica	Q (L/min)	P max (bar)
	FPRP-P-150-C	Pilotata / <i>Pilot operated</i>	150 350 bar – 5100 psi

PRESSURE REDUCING PILOT OPERATED WITHOUT RELIEVING

Maintains lower pressure in branches of a hydraulic system. Absorbs pressure spikes in the system.



schema	Caratteristica tecnica	Q (L/min)	P max (bar)

CHECK VALVE

Allow the free flow in one direction while stopping it from the opposite direction.



Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPR-C	Versione cartuccia / <i>Cartridge version</i>	15 – 70	350 bar – 5100 psi
	FPR-C-S	Versione cartuccia, cavità SAE / <i>Cartridge version, SAE cavity</i>	50 – 120	350 bar – 5100 psi
	FPR-C-S08-S	Versione cartuccia, tenuta a sfera, cavità SAE / <i>Cartridge version, cartridge ball version, SAE cavity</i>	50	350 bar – 5100 psi
	FPR-CR-SAE	Versione cartuccia, cavità SAE / <i>Cartridge version, SAE cavity</i>	20 – 100	350 bar – 5100 psi

P.O. CHECK VALVE

They block a cylinder or an actuator port preventing the flow in the opposite direction until the pilot release pressure is applied.



Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPS-C	Versione cartuccia / <i>Cartridge version</i>	15 – 40	350 bar – 5100 psi
	FPS-C-S	Versione cartuccia, cavità SAE / <i>Cartridge version, SAE cavity</i>	30 – 90	350 bar – 5100 psi
	FPS-CR	Versione cartuccia, cavità SAE / <i>Cartridge version, SAE cavity</i>	20 – 70	350 bar – 5100 psi
	FPS-CR-1/2	Valvola di blocco pilotata, versione cartuccia, cavità GAS / <i>Pilot operated check valve, cartridge version, GAS cavity</i>	30	350 bar – 5100 psi
	FPSFB-CR-70	Versione cartuccia bilanciata / <i>Cartridge version fully balanced</i>	70	350 bar – 5100 psi

FLOW CONTROL NEEDLE VALVE

They control the flow in both directions controlling it through the rotation of a knob or screw with hexagonal socket.

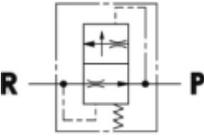


Schema Idraulico Hydraulic circuit	Tipo Type	Caratteristiche Tecniche Technical Features	Q (L/min)	P max (BAR)
	FPU-C	Cavità SAE / SAE cavity	20 – 140	350 bar – 5100 psi

FLOW CONTROL 2WAYS PRESSURE COMPENSATED FIX SETTING

They allow the free flow in one direction thanks to a check valve while controlling the flow in the opposite direction.



Schema Idraulico Hydraulic circuit	Tipo Type	Caratteristiche Tecniche Technical Features	Q (L/min)	P max (BAR)
	FPRBCF-30-C	Regolatore di flusso a 2 vie compensato fisso, a cartuccia / Two way pressure compensated, fixed flow regulator, cartridge version	30	350 bar – 5100 psi
	FPRBCF-60-C		60	350 bar – 5100 psi
	FPRBCF-90-C	Regolatore di flusso a due vie compensato fisso, a cartuccia / Two way pressure compensated, fixed flow regulator, cartridge version	90	350 bar – 5100 psi

FLOW CONTROL 3WAYS PRESSURE COMPENSATED

They control of the flow to keep it constant while the supply flow and pressure may vary.



Schema Idraulico Hydraulic circuit	Tipo Type	Caratteristiche Tecniche Technical Features	Q (L/min)	P max (BAR)
	FPVP-50-C-R	Regolatore di flusso a tre vie compensato, con eccedenza in pressione / three way, pressure compensated flow regulator, with exceeding flow in pressure	50	350 bar – 5100 psi
	FPVP-90-C-R	Regolatore di flusso a tre vie compensato, con eccedenza in pressione / three way, pressure compensated flow regulator, with exceeding flow in pressure	90	350 bar – 5100 psi
	FPVPF-60-C	Regolatore di flusso a tre vie compensato, con eccedenza in pressione / three way, pressure compensated fixed flow regulator, with exceeding flow in pressure	60	350 bar – 5100 psi
	FPVPF-90-C	Regolatore di flusso a tre vie compensato, con eccedenza in pressione / three way, pressure compensated fixed flow regulator, with exceeding flow in pressure	90	350 bar – 5100 psi

FLOW DIVIDERS AND COMBINER

Splits the flow and compensates for pressure differences.



Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPDF	Cavità SAE / <i>SAE cavity</i>	1 – 150	350 bar – 5100 psi
	FPDF-S10-C-SP-11B	Divisore-riunificatore di flusso, anti stallo <i>/ Flow divider-combiner, anti stall features</i>	50	350 bar – 5100 psi

COUNTERBALANCED RELIEF COMPENSATED

Controls the actuator (cylinder or hydraulic motor) in a hydraulic system for overriding or suspended loads.



Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPOFB-15-CM	Cavità metrica / <i>Metric cavity</i>	15	350 bar – 5100 psi
	FPOFB-25-CM	Cavità metrica / <i>Metric cavity</i>	25	350 bar – 5100 psi
	FPOFB-150-C-35	Cavità metrica / <i>Metric cavity</i>	150	350 bar – 5100 psi
	FPOFB-300-C-35	Cavità metrica / <i>Metric cavity</i>	300	350 bar – 5100 psi
	FPOFB-25-C	Cavità SAE 08 / <i>SAE 08 cavity</i>	25	350 bar – 5100 psi
	FPOFB-50-C	Cavità metrica / <i>Metric cavity</i>	50	350 bar – 5100 psi
	FPOFB-60-C	Cavità SAE 10 / <i>SAE 10 cavity</i>	60	350 bar – 5100 psi
	FPOFB-100-C	Cavità SAE 12 / <i>SAE 12 cavity</i>	100	350 bar – 5100 psi
	FPOFB-60-CT	Cavità SUN / <i>SUN cavity</i>	60	350 bar – 5100 psi
	FPOFB-100-CT	Cavità SUN / <i>SUN cavity</i>	100	350 bar – 5100 psi
	FPOFB-140-CT	Cavità SUN / <i>SUN cavity</i>	140	350 bar – 5100 psi

COUNTERBALANCED AIR VENTED

Controls the actuator (cylinder or hydraulic motor) in a hydraulic system for overriding or suspended loads.



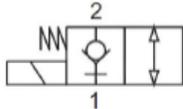
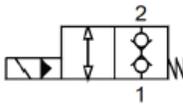
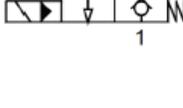
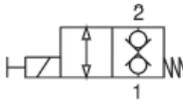
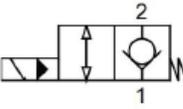
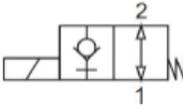
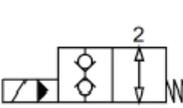
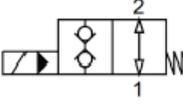
Schema Idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche Tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
	FPO-15-CM	Cavità metrica / <i>Metric cavity</i>	15	350 bar – 5100 psi
	FPO-25-CM	Cavità metrica / <i>Metric cavity</i>	25	350 bar – 5100 psi
	FPO-140-CM-35	Cavità metrica / <i>Metric cavity</i>	140	350 bar – 5100 psi
	FPOCP-140-CM-35	Con controbilanciamento, cavità metrica / <i>With counterbalance, Metric cavity</i>	140	350 bar – 5100 psi
	FPO-150-C	Cavità metrica / <i>Metric cavity</i>	150	350 bar – 5100 psi
	FPO-300-C	Cavità metrica / <i>Metric cavity</i>	300	350 bar – 5100 psi
	FPO-25-C	Cavità SAE 08 / <i>SAE 08 cavity</i>	25	350 bar – 5100 psi
	FPO-50-C	Cavità SAE 12 / <i>SAE 12 cavity</i>	50	350 bar – 5100 psi
	FPO-60-C	Cavità SAE 10 / <i>SAE 10 cavity</i>	60	350 bar – 5100 psi
	FPO-90-C	Cavità SAE 1 3/16"-12 unf / <i>SAE 1 3/16"-12 unf cavity</i>	90	350 bar – 5100 psi
	FPO-100-C	Cavità SAE 12 / <i>SAE 12 cavity</i>	100	350 bar – 5100 psi
	FPOF-60-CT	Cavità SUN / <i>SUN cavity</i>	60	350 bar – 5100 psi
	FPOF-100-CT	Cavità SUN / <i>SUN cavity</i>	100	350 bar – 5100 psi
	FPOF-140-CT	Cavità SUN / <i>SUN cavity</i>	140	350 bar – 5100 psi

ELECTRIC VALVE POPPET TYPE 2WAYS 2POSITIONS

NORMALLY OPEN
NORMALLY CLOSED

Electrically operated valves with Poppet for lower leakage.



Schema Idraulico Hydraulic circuit	Tipo Type	Caratteristiche Tecniche Technical Features	Q (L/min)	P max (BAR)
	FP-22-CS-S08-01	Valvola elettrica due vie, diretta, normalmente chiusa / two way, direct operated solenoid valve, normally closed	2	250 bar - 3625 psi
	FP-22-PD-02/03	Valvola elettrica due vie, doppia tenuta, normalmente chiusa / two way, pilot operated solenoid valve, double lock poppet, normally closed	1 - 140	350 bar - 5100 psi
	FP-22-PD-02/03	Valvola elettrica due vie, pilotata, doppia tenuta, normalmente chiusa, filettatura gas / two way, direct operated solenoid valve, double lock poppet, normally closed, bsp thread	2 - 150	350 bar - 5100 psi
	FP-22-SD-S08-04	Valvola elettrica due vie, diretta, normalmente chiusa	15	310 bar - 4495 psi
	FP-22-DD-S08-04-P	Valvola elettrica due vie, diretta, normalmente chiusa / two way, direct operated solenoid valve, normally closed	25	250 bar - 3625 psi
	FP-22-CP-05/06/07/08	Valvola elettrica due vie, pilotata, normalmente chiusa / two way, pilot operated solenoid valve, normally closed	0,5 - 140	350 bar - 5100 psi
	FP-22-CS-S08-11	Valvola elettrica due vie, diretta, normalmente aperta / two way, direct operated solenoid valve, normally open	2	250 bar - 3625 psi
	FP-22-PD-12	Valvola elettrica due vie, pilotata, doppia tenuta, normalmente aperta / two way, pilot operated solenoid valve, double lock poppet, normally open	1 - 140	350 bar - 5100 psi
	FP-22-PD-12	Valvola elettrica due vie, pilotata, normalmente aperta, filettatura gas / two way, pilot operated solenoid valve, normally open, bsp thread	2 - 140	350 bar - 5100 psi

ELECTRIC VALVE POPPET TYPE 2WAYS DIRECT ACTING

Electrically operated valves with Poppet for lower leakage.



Schema Idraulico Hydraulic circuit	Tipo Type	Caratteristiche Tecniche Technical Features	Q (L/min)	P max (BAR)
	FP-32-CD-S08	Valvola elettrica 3 vie – 2 posizione <i>3way – 2 positions solenoid valve</i>	15	250 bar – 3625 psi
	FP-32-SD-S08-* FP-32-SD-S10-*	Valvola elettrica 3 vie – 2 posizione <i>3way – 2 positions solenoid valve</i>	12 35	250 bar – 3625 psi 350 bar – 5075 psi
	FP-42-SD-S08-ID FP-42-SD-S10-ID	Valvola elettrica 4 vie – 2 posizione <i>4way – 2 positions solenoid valve</i>	12 35	250 bar – 3625 psi 350 bar – 5075 psi
	FP-42-SD-S08-DI FP-42-SD-S10-DI	Valvola elettrica 4 vie – 2 posizione <i>4way – 2 positions solenoid valve</i>	12 35	250 bar – 3625 psi 350 bar – 5075 psi
	FP-43-SD-S08-CY FP-43-SD-S10-CY	Valvola elettrica 4 vie – 3 posizione <i>4way – 3 positions solenoid valve</i>	12 35	250 bar – 3625 psi 350 bar – 5075 psi
	FP-43-SD-S08-CC FP-43-SD-S10-CC	Valvola elettrica 4 vie – 3 posizione <i>4way – 2 positions solenoid valve</i>	12 35	250 bar – 3625 psi 350 bar – 5075 psi
	FP-43-SD-S08-CH FP-43-SD-S10-CH	Valvola elettrica 4 vie – 3 posizione <i>4way – 3 positions solenoid valve</i>	12 35	250 bar – 3625 psi 350 bar – 5075 psi
	FP-43-SD-S08-PT FP-43-SD-S10-PT	Valvola elettrica 4 vie – 3 posizione <i>4way – 3 positions solenoid valve</i>	12 35	250 bar – 3625 psi 350 bar – 5075 psi

ELECTRIC VALVE POPPET TYPE 2WAYS DIRECT ACTING

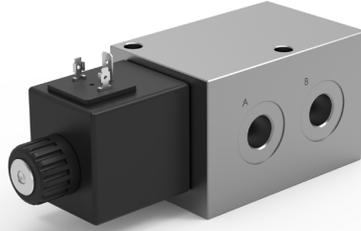
Electrically operated valves with Poppet for lower leakage.



Schema Idraulico Hydraulic circuit	Tipo Type	Caratteristiche Tecniche Technical Features	Q (L/min)	P max (BAR)
	FP-43-SD-S08-CY FP-43-SD-S10-CY	Valvola elettrica 4 vie - 3 posizione <i>4way - 3 positions solenoid valve</i>	12 12	250 bar - 3625 psi 250 bar - 3625 psi
	FP-43-SD-S08-CC FP-43-SD-S10-CC	Valvola elettrica 4 vie - 3 posizione <i>4way - 2 positions solenoid valve</i>	12 35	250 bar - 3625 psi 350 bar - 5075 psi
	FP-43-SD-S08-CH FP-43-SD-S10-CH	Valvola elettrica 4 vie - 3 posizione <i>4way - 3 positions solenoid valve</i>	12 12	250 bar - 3625 psi 250 bar - 3625 psi
	FP-43-SD-S08-PT FP-43-SD-S10-PT	Valvola elettrica 4 vie - 3 posizione <i>4way - 3 positions solenoid valve</i>	12 12	250 bar - 3625 psi 250 bar - 3625 psi

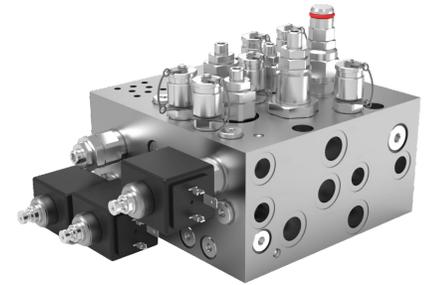
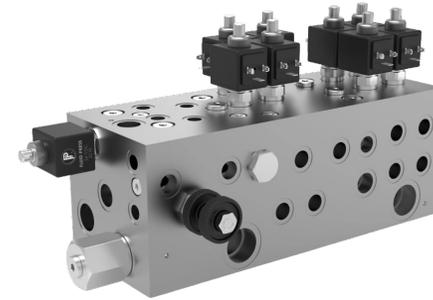
DIVERTERS

Allows the operation of more actuators with a single electric control



Schema idraulico <i>Hydraulic circuit</i>	Tipo <i>Type</i>	Caratteristiche tecniche <i>Technical Features</i>	Q (L/min)	P max (BAR)
<p>3A </p> <p>3C </p>	FP-D1-3-E-G-3	Deviatori elettrici tre vie / <i>three ways flow electric diverters</i>	50 - 60	310 bar – 4495 psi
<p>6A </p> <p>6B </p>	FP-D1-6-E-G-6	Deviatori elettrici sei vie / <i>six way flow electric diverters</i>	50 – 60	310 bar – 4495 psi
	FP-D2-6-E-G-6	Deviatori elettrici sei vie / <i>six way flow electric diverters</i>	80	310 bar – 4495 psi
	FP-D3-6-E-G1/4	Deviatori elettrici sei vie / <i>six ways flow electric diverters</i>	25	250 bar – 3625 psi
	FP-D3-6-E-G-6	Deviatori elettrici sei vie / <i>six way flow electric diverters</i>	50 – 60	310 bar – 4495 psi
	FP-D5-6-E-G-6	Deviatori elettrici sei vie flangiabili / <i>six way bankable flow electric diverters</i>	50 – 60	310 bar – 4495 psi
<p>6H </p>	FP-D6-6-E-G-6	Deviatori elettrici sei vie flangiabili / <i>six way bankable flow electric diverters</i>	80	310 bar – 4495 psi

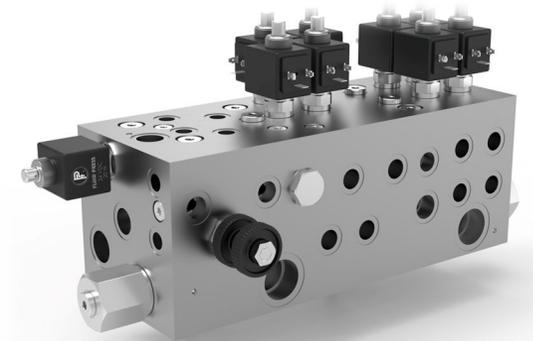
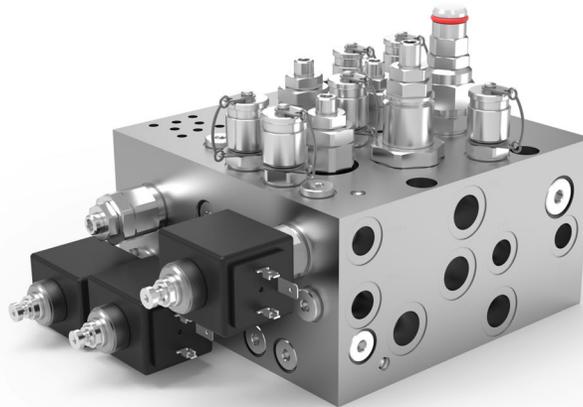
HYDRAULIC INTEGRATED CIRCUITS



MANIFOLD BLOCKS (HIC)

SPECIAL BLOCKS

Electric or mechanical valves installed in a single special body to meet the customer's needs. that can be used in various applications, both in the industrial and the mobile fields



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THANKS FOR YOUR ATTENTION

