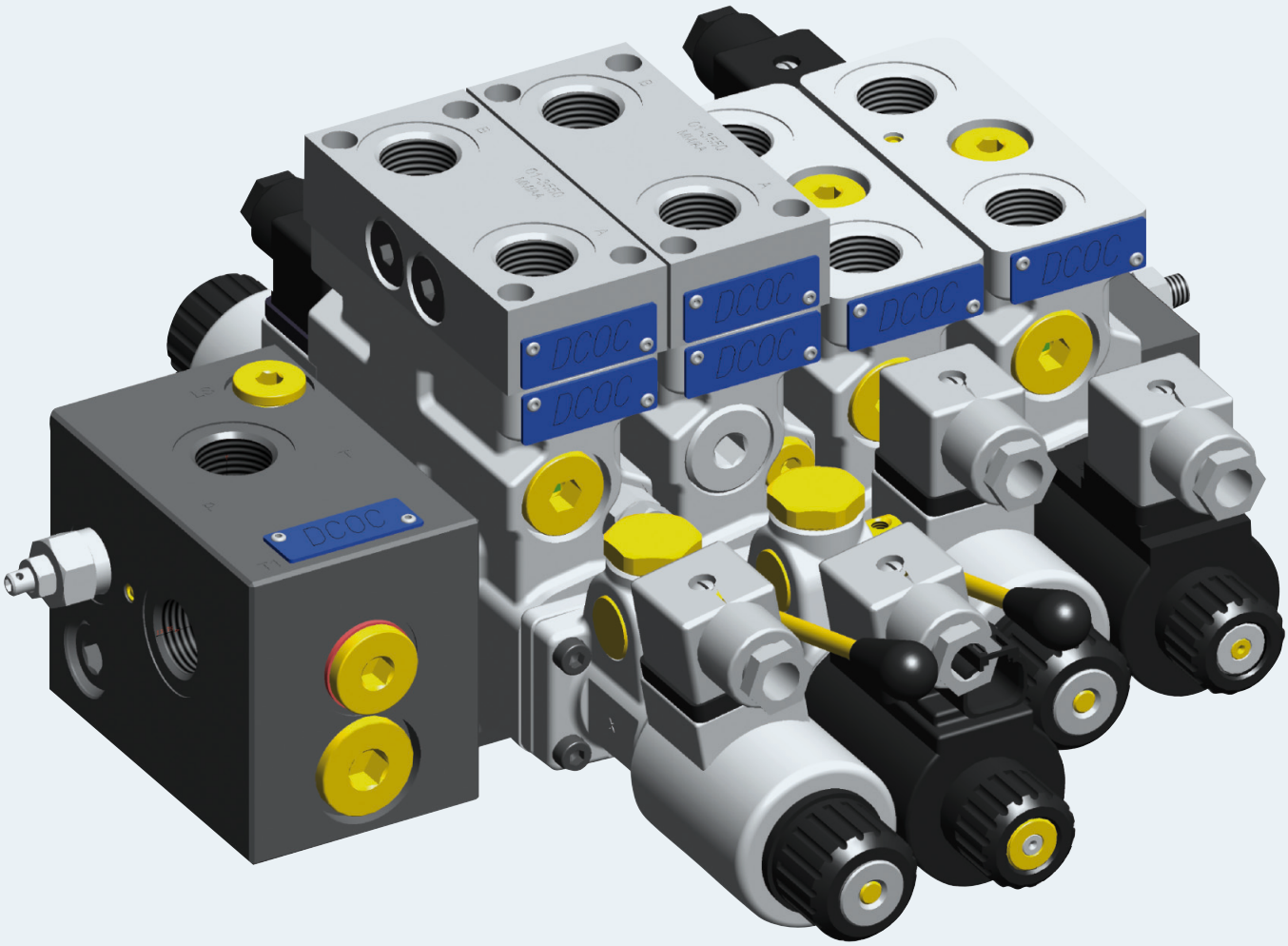
The Drive & Control Company

Rexroth
Bosch Group

Control block EDC
Modular Directional Valve
Flow Sharing System



Bosch Rexroth Oil Control S.p.A. introduces the EDC size 06 directional control valve with flow sharing (LUDV concept) to the Bankable product line. It is an ideal solution for applications that require simultaneous movement on more than one actuator in small to medium size mobile machinery.

Features

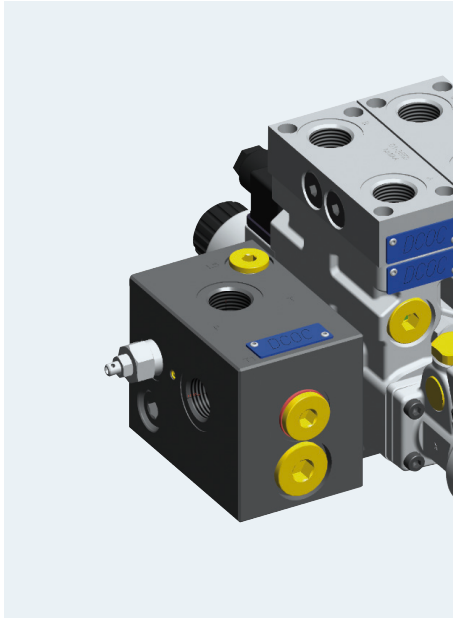
- Modular elements for creating on-off and proportional solenoid operated hydraulic control blocks for actuators (motors or cylinders)
- Flow sharing system (LUDV)
- Standard spools with specific nominal flow rates. Custom on request.

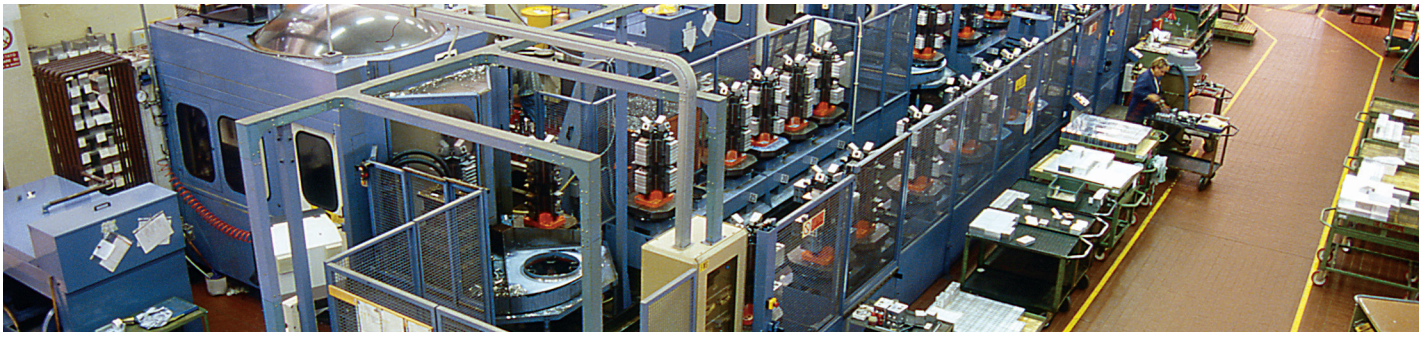
Operation

Each valve element is direct acting, and has on-off or proportional flow sharing control. When combined in a block, these elements can achieve simultaneous activation of different actuators independent from the working pressure by distributing the available flow proportionally to the speeds selected by the operator. All simultaneous movements continue at the same relative speed even in case of flow shortage. The flow range for each valve element can be realized by selecting the appropriate spool. Manual override (push-button, screw type or emergency lever) and different plug-in electric connectors are available upon request.

Advantages

- Energy savings
- Simplification of the hydraulic circuit
- Easily applied to match actuator flow requirements
- Flow sharing solves the saturation problems seen in load-sensing circuits.
- Ideal for any mobile application where simultaneous multiple movements are requested.
- Same flange interface as the ED series
- Direct acting
- Compact envelope size





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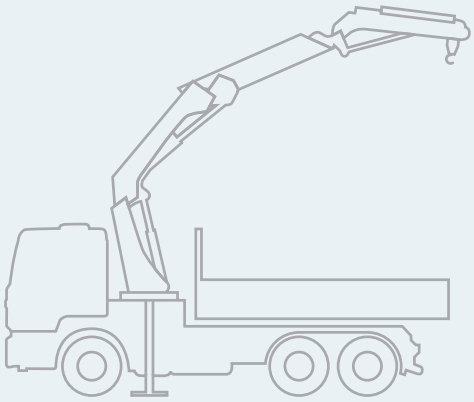

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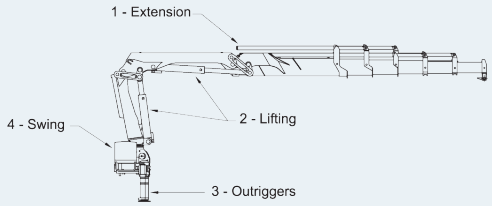
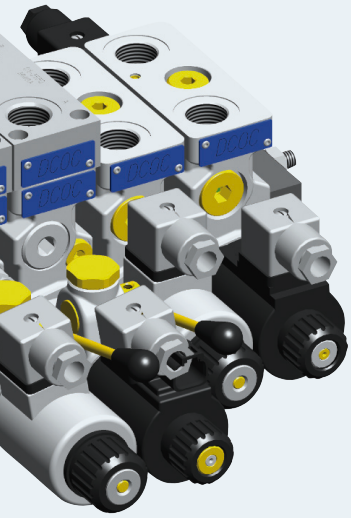


Applications

1. Truck mounted crane
2. Crane
3. Truck mounted crane layout
4. Aerial platform
5. Fork lift
6. Sprayer
7. Harvester
8. All terrain crane
9. Garbage truck
10. Front loader
11. Road sweeper
12. Aerial ladder platform



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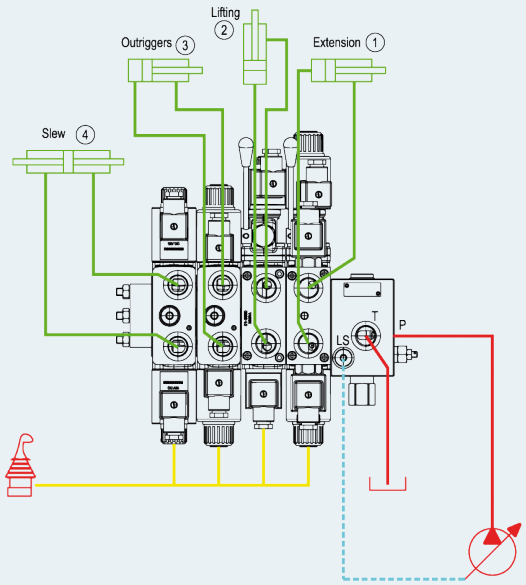

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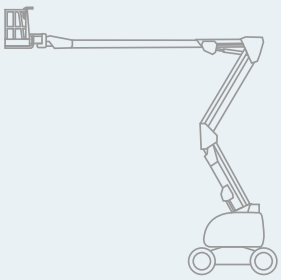

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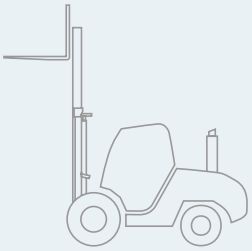

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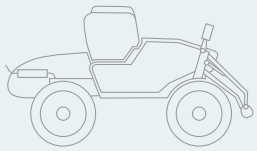

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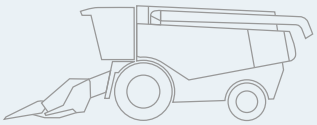

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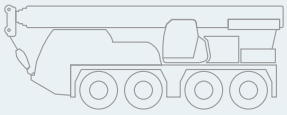

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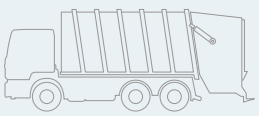

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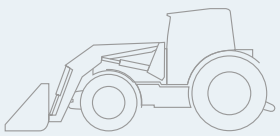

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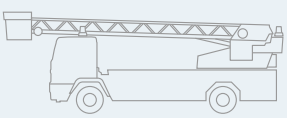
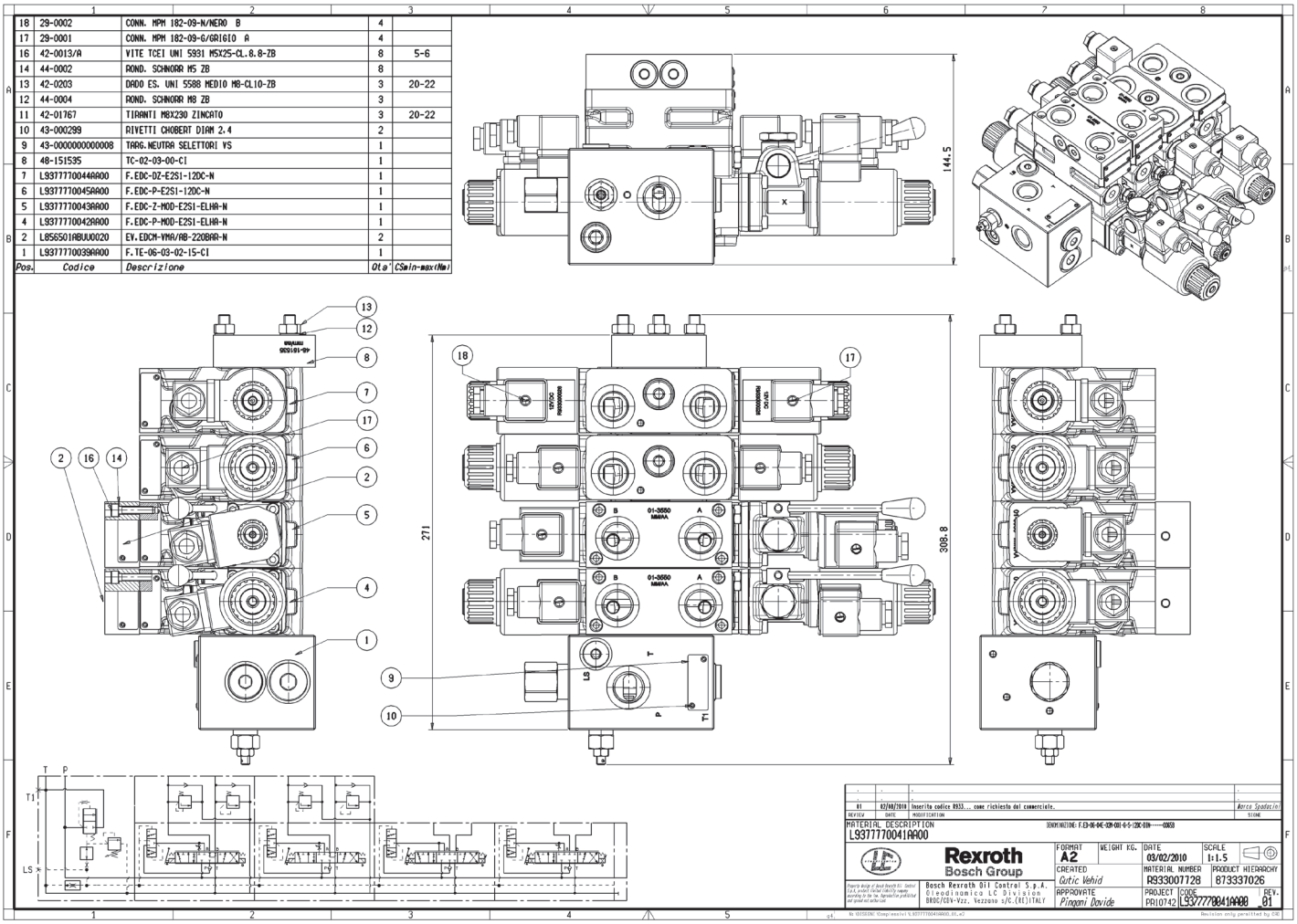


EDC – Control block

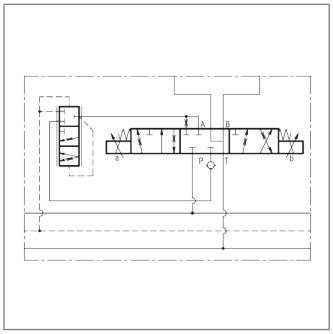
Assembly drawing

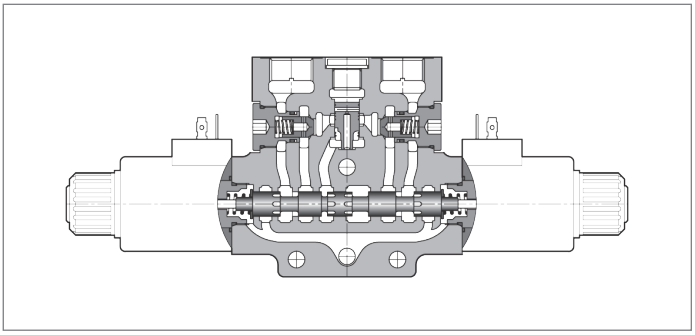


Pos.	Codice	Descrizione	Qta'	CSain-max(Nm)
18	29-0002	CONN. MPM 182-09-N/NERO B	4	
17	29-0001	CONN. MPM 182-09-G/GRIGIO A	4	
16	42-0013/A	VITE TCEI UNI 5931 M5X25-CL.8.8-ZB	8	5-6
14	44-0002	ROND. SCHNORR M5 ZB	8	
13	42-0203	DADO ES. UNI 5588 MEDIO M8-CL10-ZB	3	20-22
12	44-0004	ROND. SCHNORR M8 ZB	3	
11	42-01767	TIRANTI M8X230 ZINCATO	3	20-22
10	43-000299	RIVETTI CHOBERT DIAM 2.4	2	
9	43-0000000000008	TARG.NEUTRA SELETTORI VS	1	
8	48-151535	TC-02-03-00-CI	1	
7	L9377770044AA00	F.EDC-DZ-E2SI-12DC-N	1	
6	L9377770045AA00	F.EDC-P-E2SI-12DC-N	1	
5	L9377770043AA00	F.EDC-Z-MOD-E2SI-ELHA-N	1	
4	L9377770042AA00	F.EDC-P-MOD-E2SI-ELHA-N	1	
2	L856S010BUU0020	EV.EDCM-VMA/AB-220BAR-N	2	
1	L9377770039AA00	F.TE-06-03-02-15-CI	1	

- Modular system to create electro-hydraulic control of actuators (motors or cylinders) in open circuits.
- Flow sharing (LUDV) system for multiple movements simultaneously.
- Energy saving.
- Simplification of the hydraulic circuit.
- Solution to flow saturation problems seen in load-sensing circuits.

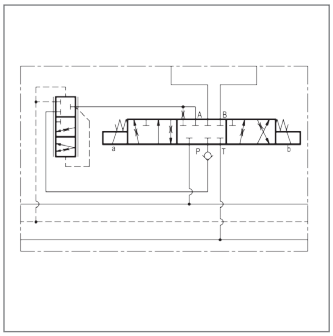
EDC-P – Proportional modular directional valves

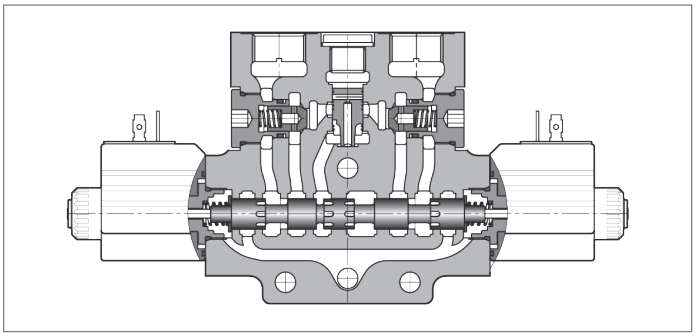




Port			SAE 8	
Nominal flow		l/min (gpm)	4 (1), 8 (2), 12 (3), 16 (4), 25 (7), 40 (11), 50 (13)	14 bar deltaP
Maximum flow		l/min (gpm)	58 (15.3)	18 bar deltaP
Maximum operating pressure	P, A and B	bar (psi)	310 (4500)	
	T	bar (psi)	210 (3000)	
Maximum number of directional valves			10	
Actuation	Electrical		Solenoid operated direct acting proportional	PWM 120 Hz
	Override		Push button, screw type, lever type	
Voltage supply		Volt	DC: 12, 13, 24, 27, 48, 110 RAC: 24, 110, 230	
Current max.		Ampere	1.76 (12 DC) - 0.88 (24 DC)	
Electrical connections		Type	DIN EN 175301-803, AMP-J, Deutsch DT04-2P	
Stacking module			Port relief, Port relief with anti-cavitation, PO Check	

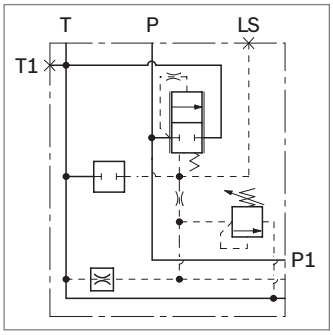
EDC-Z and DZ – On-off modular directional valves





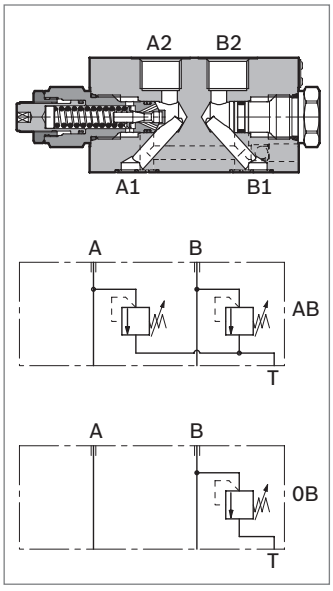
Port			SAE 8
Maximum flow		l/min (gpm)	54 (14.3)
Maximum operating pressure	P, A and B	bar (psi)	310 (4500)
	T	bar (psi)	210 (3000)
Maximum number of directional valves			10
Actuation	Electrical		Solenoid operated direct acting on/off
	Override		Push button, screw type, lever type
Voltage supply		Volt	DC: 12, 13, 24, 27 RAC: 24, 110, 230
Power consumption		Watt	DC: 26, 31, 33 RAC: 29, 33, 35
Electrical connections		Type	DIN EN 175301-803, AMP-J, Deutsch DT04-2P
Stacking module			Port relief, Port relief with anti-cavitation, PO Check

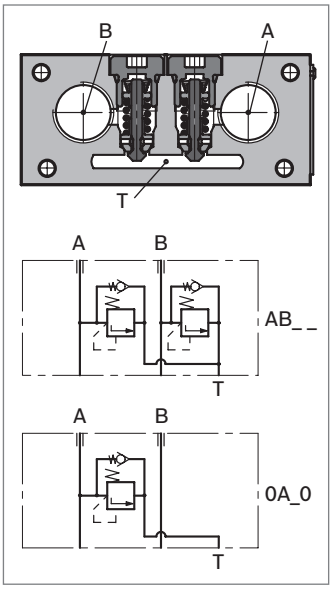
TE-13 – Inlet plate open center circuit

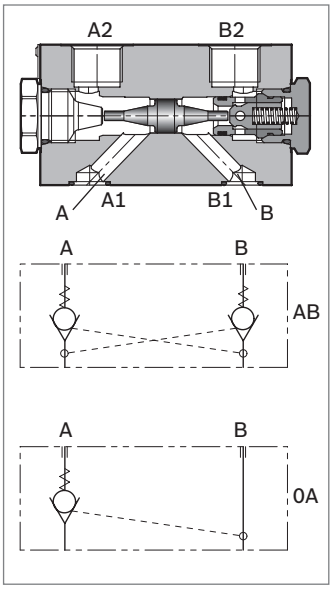


Port		SAE 10
Maximum flow	l/min (gpm)	33 (9), 50 (13), 80 (21), 120 (32)
Maximum operating pressure	bar (psi)	310 (4500)
Cracking pressure	bar (psi)	14 (203), 18 (261), Adjustable 8-18 (116-261)
Internal LS drain	mm	0.3, 0.4, 0.5

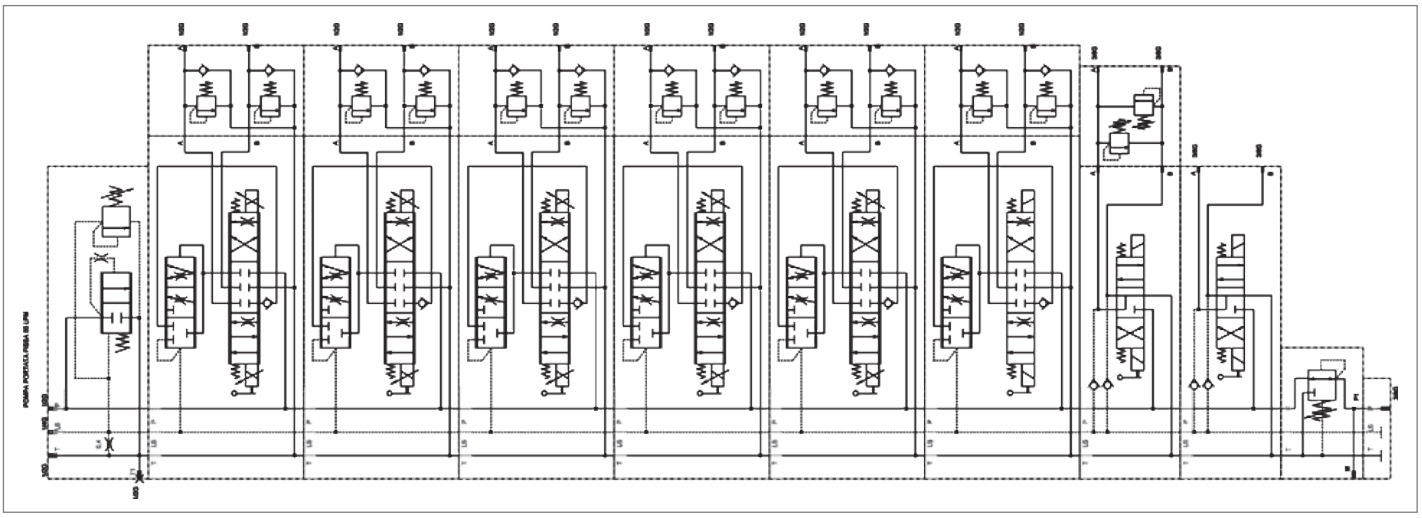
EDCMF – stacking modules: relief, relief/anti-cavitation, pilot operated check





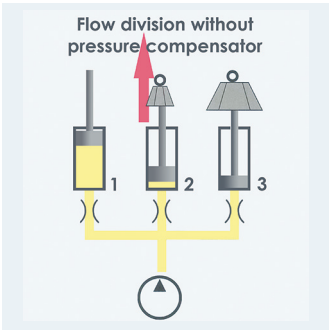


Application circuit

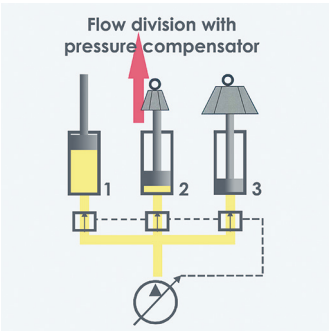


▲ **Hydraulic circuit, with open center inlet plate, 6 elements EDC Flow Sharing on-off and Proportional Control, anti-shock and anti-cavitation valves, combined with 2 elements not compensated on-off control**

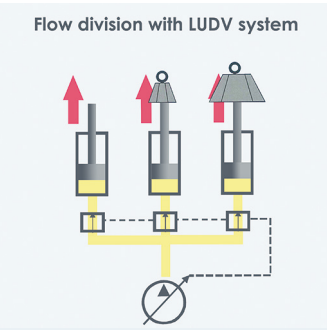
Flow sharing – LUDV



Standard
The simultaneous movements are allowed only if load pressures are balanced. When an operation needs a higher pressure, the movement is stopped.



Load sensing
The simultaneous movements are allowed until the saturation of the system. Then the operation which needs the higher pressure will stop.



Flow sharing
Even in the case of a saturation condition, the simultaneous movements are assured.

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