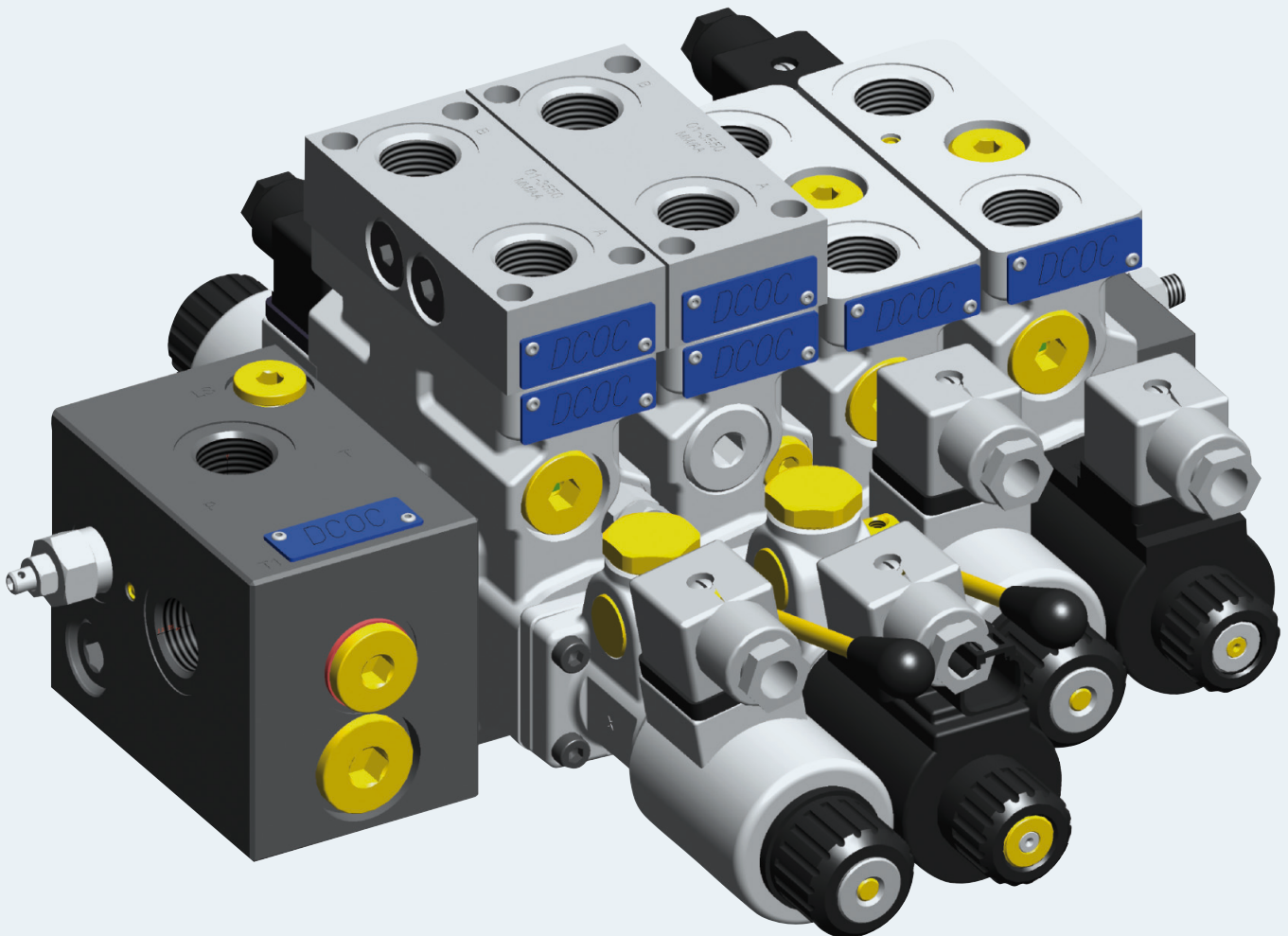


# Control block EDC Modular Directional Valve Flow Sharing System





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

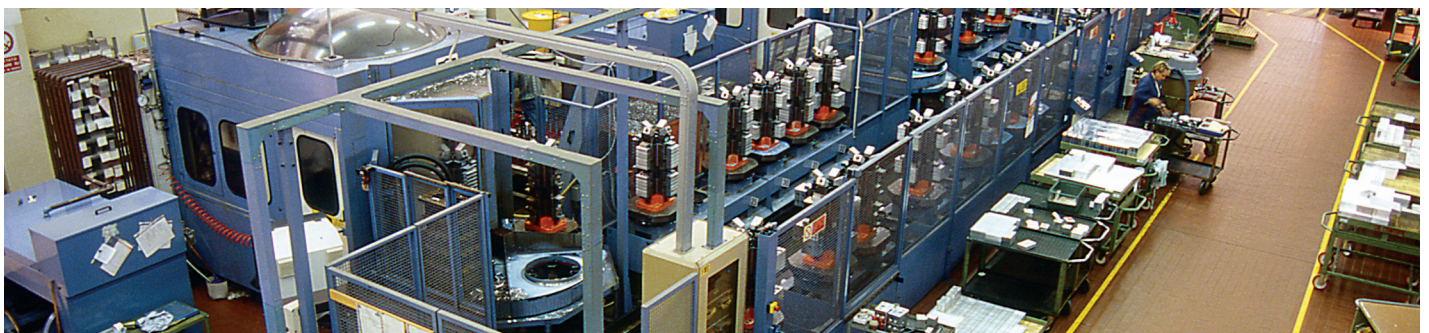
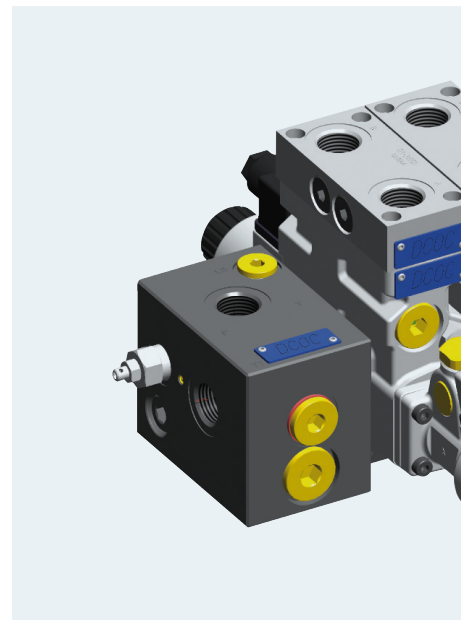
- ▶ Modular elements for creating on-off and proportional solenoid operated hydraulic control blocks for actuators (motors or cylinders)
- ▶ Flow sharing system (LUDV)
- ▶ Standard spools with specific nominal flow rates. Custom on request.

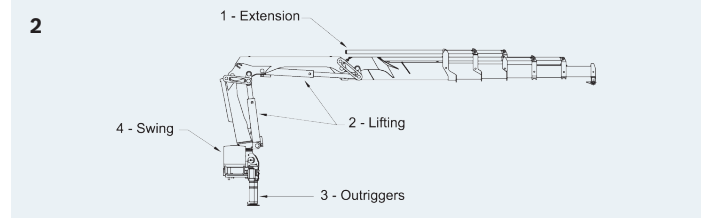
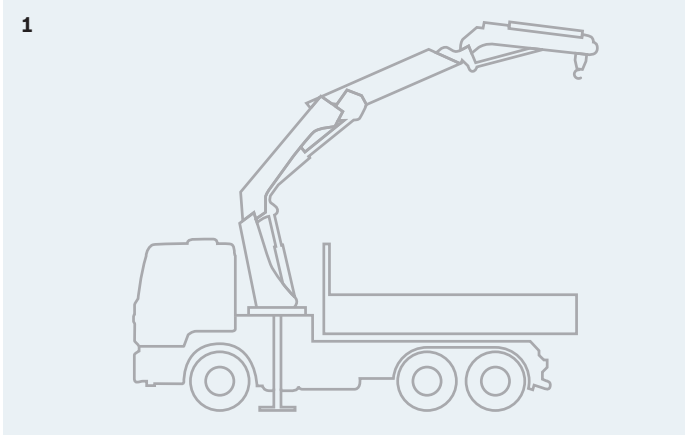
#### Operation

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

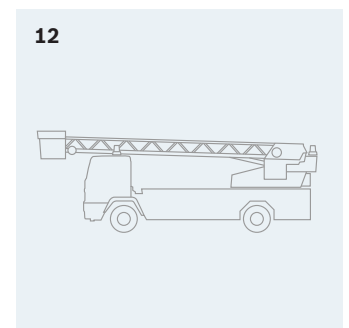
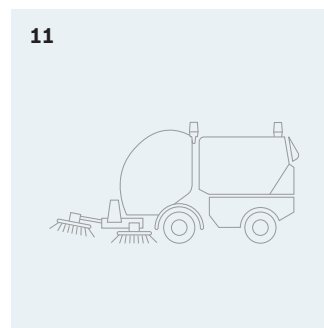
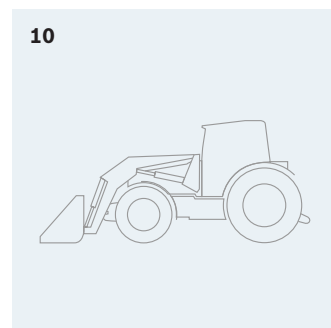
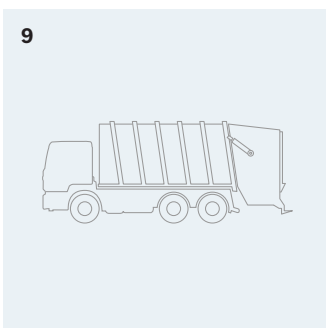
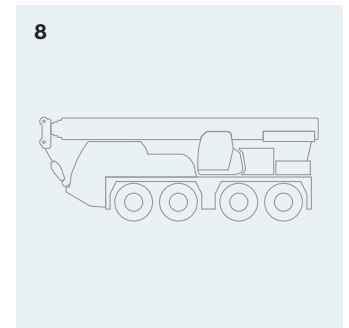
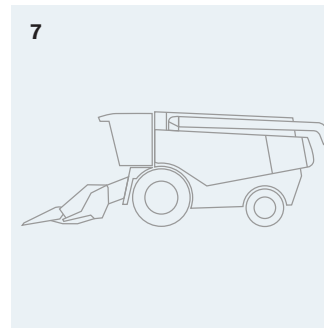
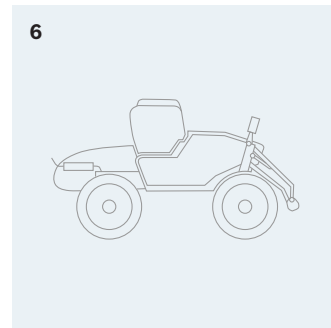
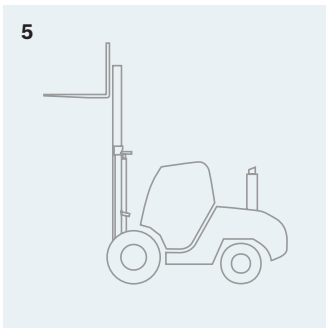
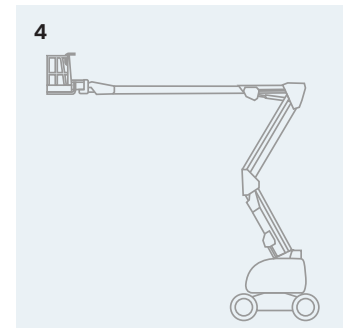
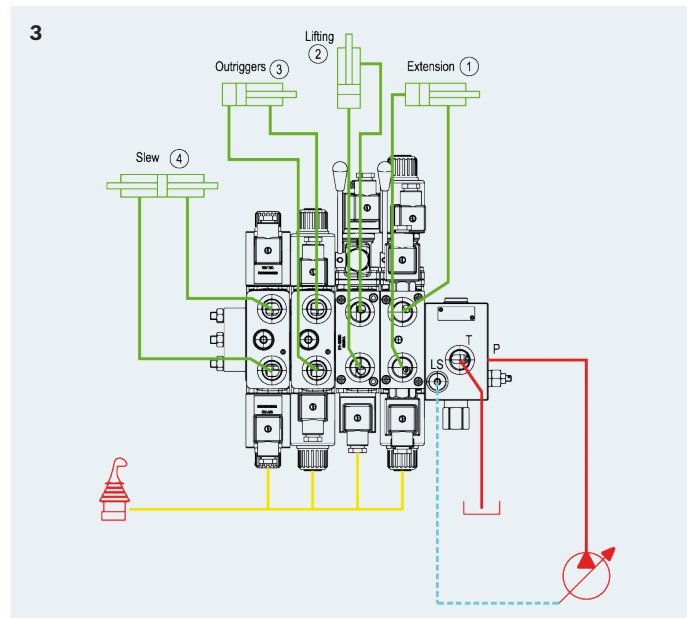
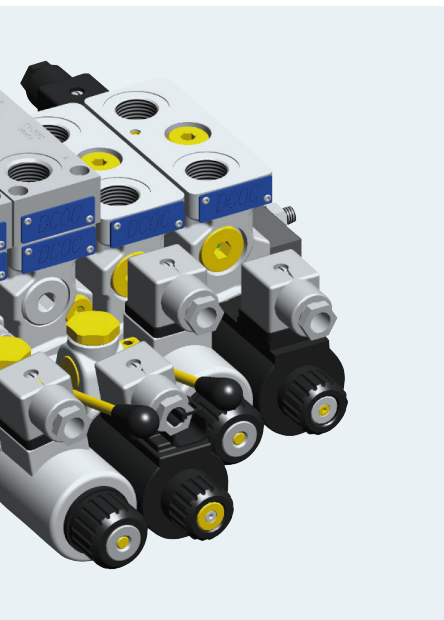
- ▶ Energy savings
- ▶ Simplification of the hydraulic circuit
- ▶ Easily applied to match actuator flow requirements
- ▶ Flow sharing solves the saturation problems seen in load-sensing circuits.
- ▶ Ideal for any mobile application where simultaneous multiple movements are requested.
- ▶ Same flange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





### Applications

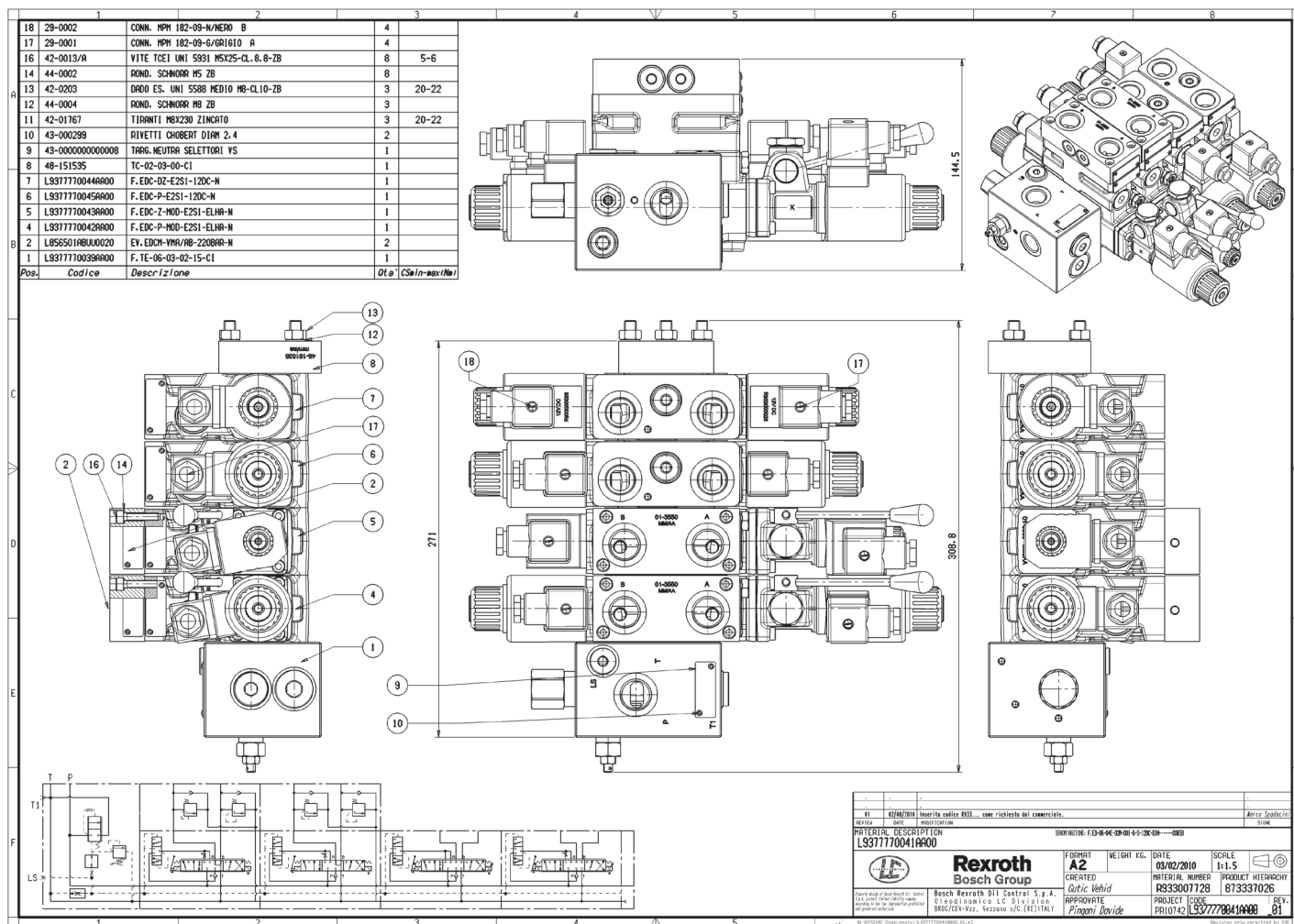
- ▶ 1. Truck mounted crane
- ▶ 2. Crane
- ▶ 3. Truck mounted crane layout
- ▶ 4. Aerial platform
- ▶ 5. Fork lift
- ▶ 6. Sprayer
- ▶ 7. Harvester
- ▶ 8. All terrain crane
- ▶ 9. Garbage truck
- ▶ 10. Front loader
- ▶ 11. Road sweeper
- ▶ 12. Aerial ladder platform



# EDC – Control block



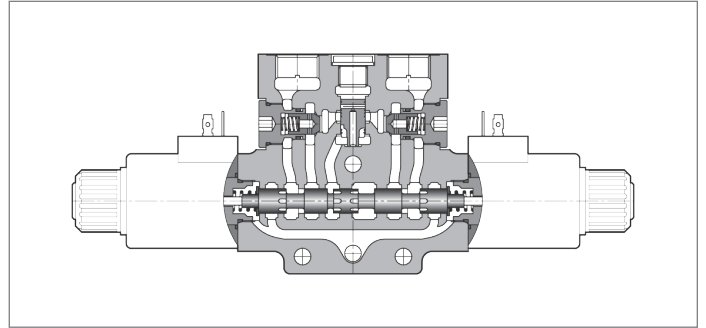
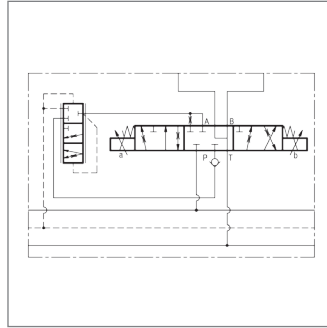
## Assembly drawing



- Modular system to create electro-hydraulic control of actuators (motors or cylinders) in open circuits.
- Flow sharing (LUDV) system for multiple movements simultaneously.

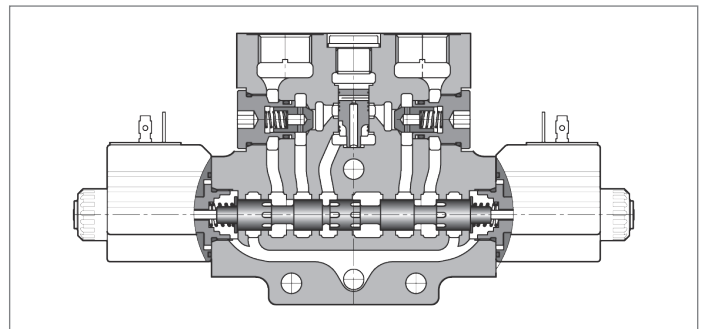
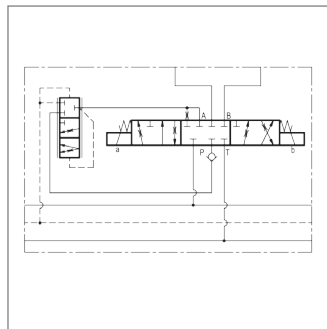
- Energy saving.
- Simplification of the hydraulic circuit.
- Solution to flow saturation problems seen in load-sensing circuits.

## EDC-P – Proportional modular directional valves



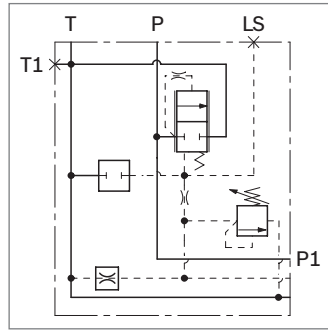
|                                             |            |             |                                                         |               |
|---------------------------------------------|------------|-------------|---------------------------------------------------------|---------------|
| 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

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



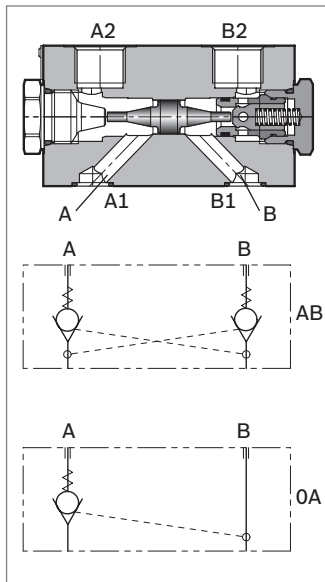
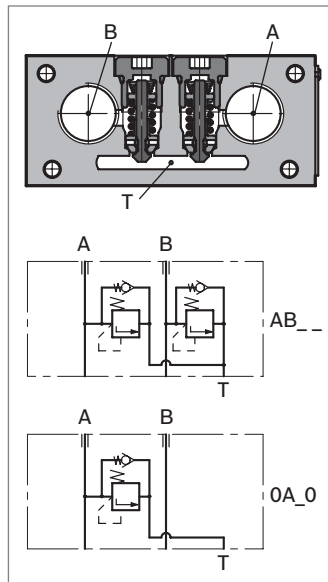
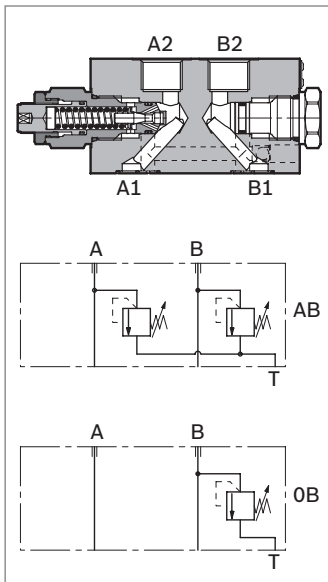
|                                             |            |             |                                                         |  |
|---------------------------------------------|------------|-------------|---------------------------------------------------------|--|
| <b>Port</b>               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

## TE-13 – Inlet plate open center circuit

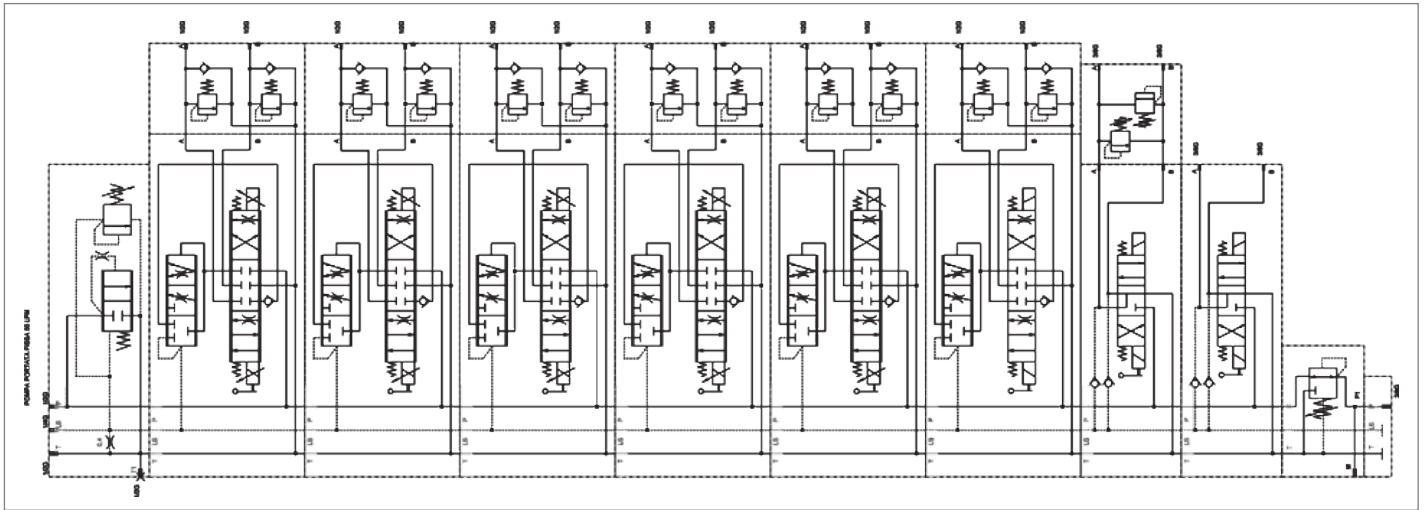


|                                   |             |                                               |
|-----------------------------------|-------------|-----------------------------------------------|
| <b>Port</b>                       |             | SAE 10                                        |
|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

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

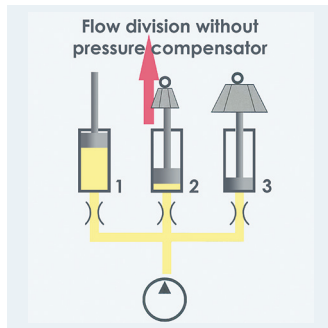


## Application circuit



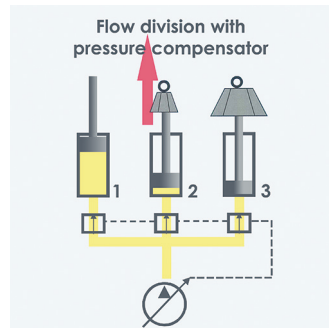
- ▲ Hydraulic circuit, with open center inlet plate, 6 elements EDC Flow Sharing on-off and Proportional Control, anti-shock and anti-cavitation valves, combined with 2 elements not compensated on-off control

## Flow sharing – LUDV



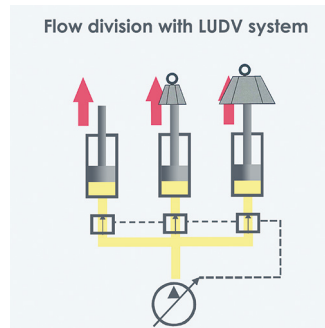
### Standard

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.

**Bosch Rexroth Oil Control S.p.A.**

Via L. da Vinci, 5

I - 41015 Nonantola (MO), Italy

Tel +39 059 887 611

Fax +39 059 547 848

[www.oilcontrol.com](http://www.oilcontrol.com)

[compact-directional-valves@oilcontrol.com](mailto:compact-directional-valves@oilcontrol.com)

The data specified above only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that our products are subject to a natural process of wear and aging.

RE 98351/09.2013

© Bosch Rexroth Oil Control S.p.A. - All rights reserved.

Printed in Italy