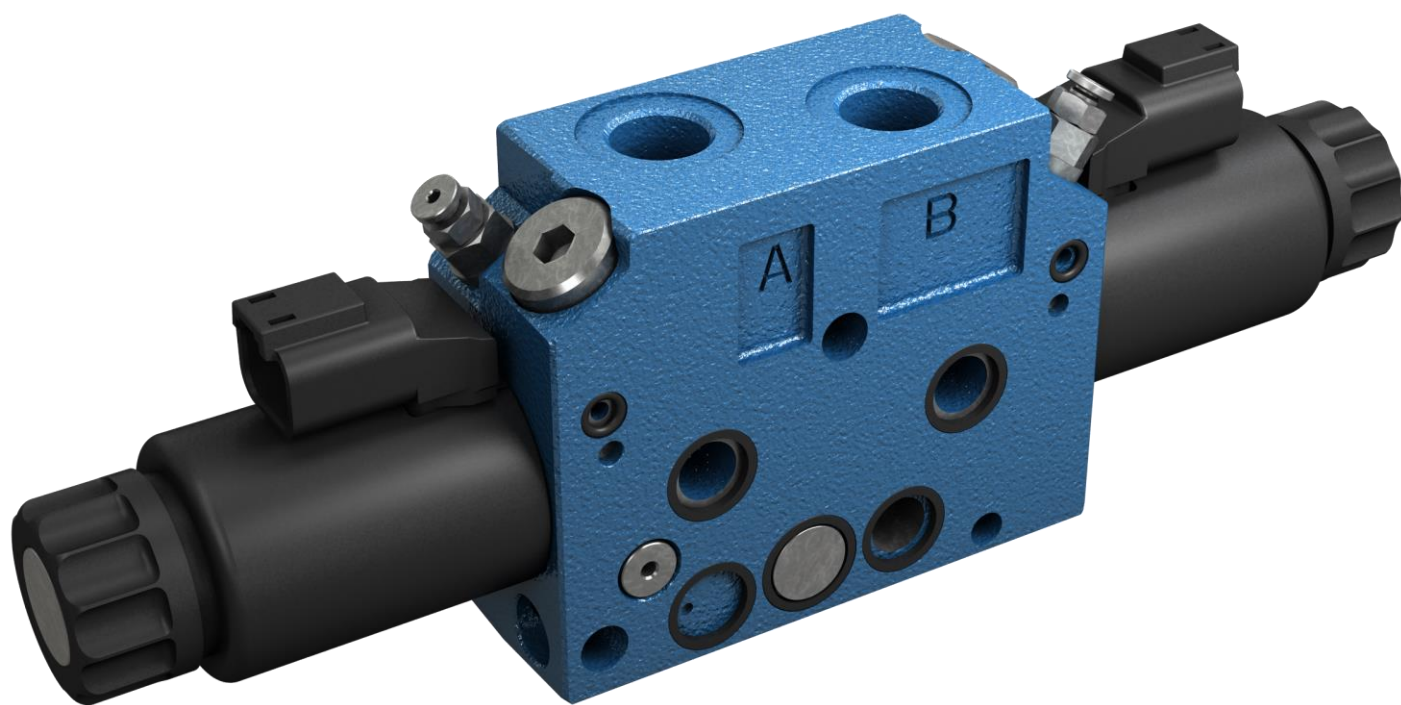


Compact sectional valve platform EDG

Direct acting directional valve elements with load sensing pre compensation

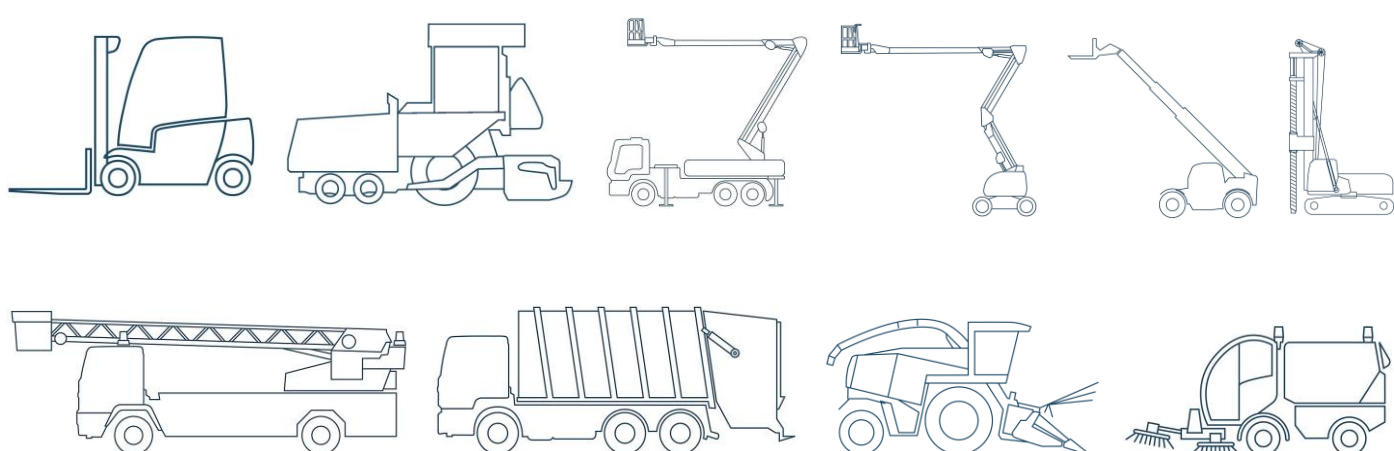


The EDG platform represents a modern, yet highly flexible and configurable valve solution for performance advantages in evolving compact mobile equipment platforms. EDG valves are available in either on-off or proportional versions. Features include circuit modularity, compact dimensions, light weight and load-sensing for system energy savings. Additionally, integrated port reliefs with anti-cavitation valves are an available option along with a hall-effect spool position sensor. These features are ideal for forklifts, mobile elevating work platforms, truck mounted cranes, telehandlers, agricultural harvesters, municipal vehicles and small construction equipment.

CUSTOMER BENEFITS

- Achieve industry leading low energy consumption across hydraulic system
- Enables customer to achieve overall lighter machine weight to meet regulatory classification requirement
- Ensure longevity of actuators by smartly integrated control valves
- Additional monitoring function with independent spool sensor
- Initiates quick machine setup, agile engineering and fast production ramp up with wide standard selection
- Integration into existing portfolio and higher flow valve solutions

APPLICATIONS



FUNCTION AND BENEFITS

Low energy consumption in the hydraulic system

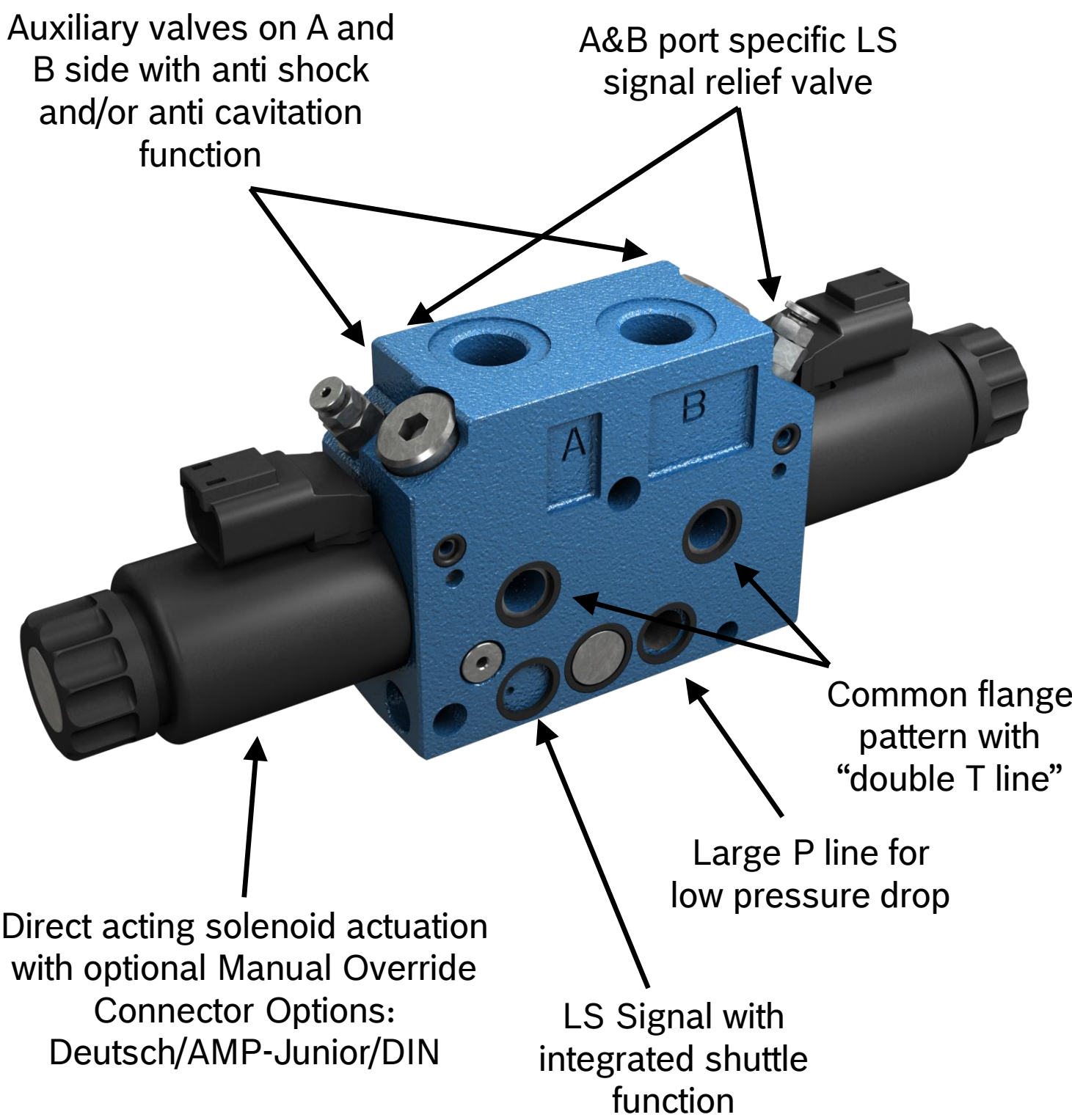
The EDG platform design enables industry leading low energy consumption with multiple build-in features. The use of a cast iron production design with internal channel flow optimization ensures a low pressure drop across the valve section. Small orifices have been avoided in the design to maximize flow and eliminate contamination caused plugging. The additional inclusion of dedicated A and B port specific LS relief valves can be set to different LS maximum pressure level which will prevent energy losses over the main relief valve for every single operation. One additional function is build into the inlet element with a dual stage compensator to unload the pumps full flow when none of the implement functions need actuation.

Engineer the lightest possible hydraulic system

Compact dimensions and light weight with less than 2,5 kg (5,5 lbs) per slice - With the compact design the product achieves industry benchmark power density, overall dimensions and weight. Besides the benefit of hydraulic system weight, the smaller mass supports achieving low emissions for moving Machines.

TECHNICAL DATA

Compact sectional valve platform EDG	
EDG control options:	Direct acting on-off or proportional
Port connections:	G 3/8, G 1/2, SAE6, SAE8
Maximum pressure:	350 bar (5000 psi)
Maximum flow:	40 l/min (10,6 gpm)
Weight with 2 solenoids:	2,2 kg (4,85 lbs)
Weight with 1 solenoid:	1,7 kg (3,75 lbs)
Data sheet:	RE18301-19



In detail: EDG series slice

Hydraulic system and actuator longevity

Actuator longevity can be achieved by avoiding pressure peaks in the system. Additional cavities for A and B port specific auxiliary valves with anti-cavitation as well as anti-cavitation including anti-shock function provide this additional system functionality. The integrated design into the housing ensure additional flexibility without the need of adding unnecessary system modules.

Monitoring function with Hall effect spool sensor

Future demand to monitor operational status of machine is driving electronification to the next level. The spool sensor is directly connected to the valve and monitors consequently the position of the main spool. The integrated electronics provide analog output signal.

Rapid prototyping for agile machine development and quick production ramp-up

Standard catalogue inlet element selection ranges from the basic TEG-16 (data sheet RE18300-15), which includes relief valve options to the enhanced TEG-13 (data sheet RE18300-16), with standalone features like LS line unloading and the innovative dual stage compensator. Beyond the highly configurable inlet, all sections can be modified with various spool versions, relive valves, electronic sensors, manual override options, electric connections and flow ranges.

Integration into existing portfolio and higher flow valve solutions

Customers benefit from tailored solutions for their application needs. The combination of the LS pre compensated EDG family to other Rexroth product lines provide flexibility to rightsized selection based on function flow demand. Modularity allows valves to be matched to actuator flow requirements, integrated as hybrids with other Bosch Rexroth valve families or customized integrated circuits.

The combination can include e.g. the ED family for lower demand actuators or to higher flow platforms like the M4 and RM10. A wide selections of center inlets, transition plates and accessories is a part of the standard product offering.