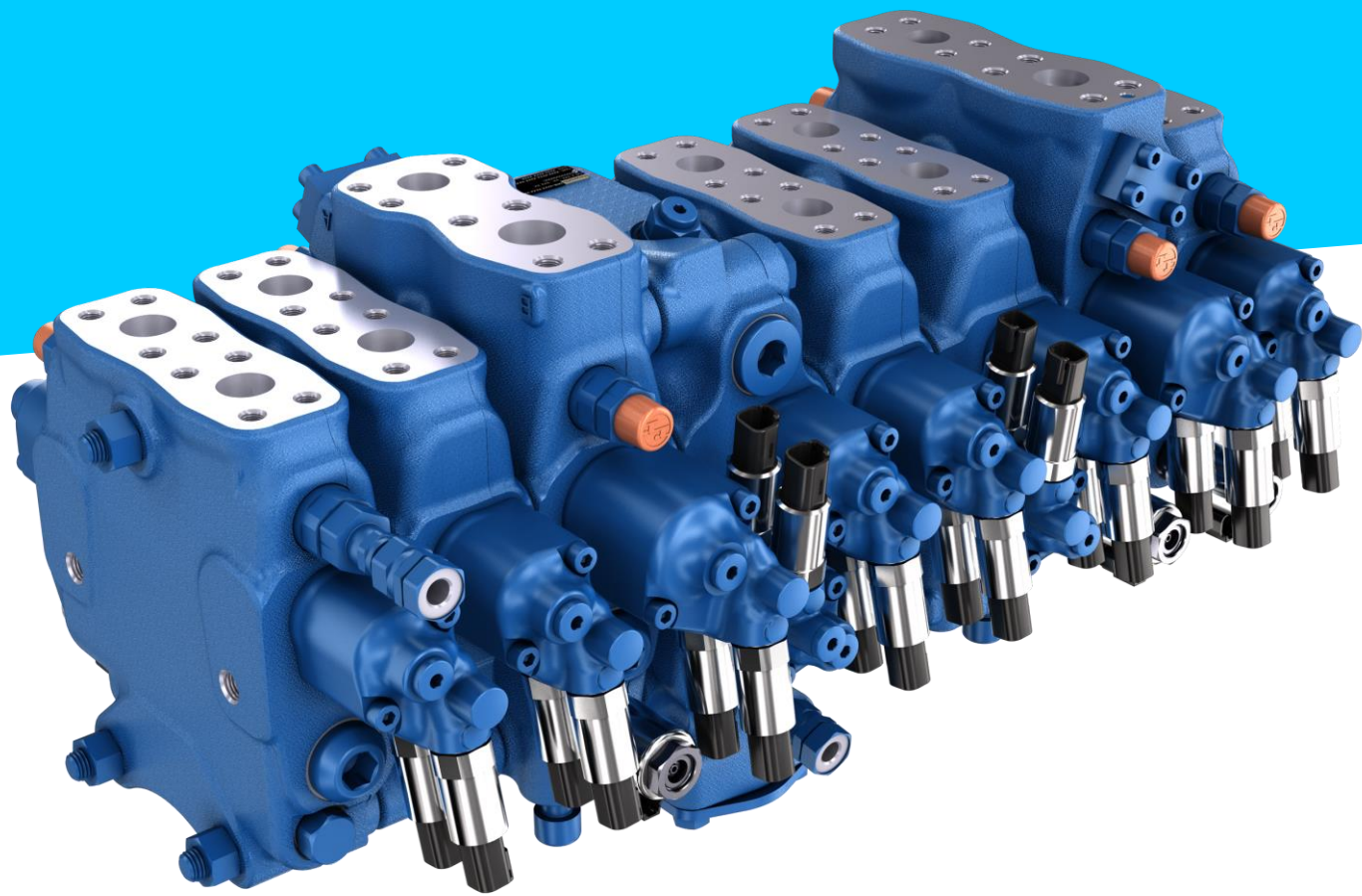


Control block RCS

Flexibly configurable valve platform for construction machines



The market for mobile working machines has been requested a customer specific differentiation for years. Even crawler excavators are no longer pure digging machines, but increasingly used for other tasks, such as material handling or used with attached auxiliaries. Therefore, Bosch Rexroth offers with the Virtual Bleed Off (VBO) software and the new RCS control block platform, a flexible and energy-optimized control concept for crawler, wheeled and mining excavators as well as other construction machinery.

CUSTOMER BENEFITS

- Modular and scalable control block structure
- Consumer specific configuration of sections
- Flow on demand
- High flexibility due to modular software concept
- Increased energy efficiency due to reduced pressure losses and intelligent control
- High nominal pressure up to 400 bar

FUNCTION AND BENEFITS

Modular and scalable control block structure

The Rexroth closed center control block RCS is a control valve platform for dual- or multiple-circuit systems. It allows variable and energy efficient flow and pressure control of all actuators. The RCS also offers scalable valve architecture in sandwich plate design. The section configuration and layout enables the use of the same VBO software (or other software modules) for all RCS nominal sizes in different machine classes.

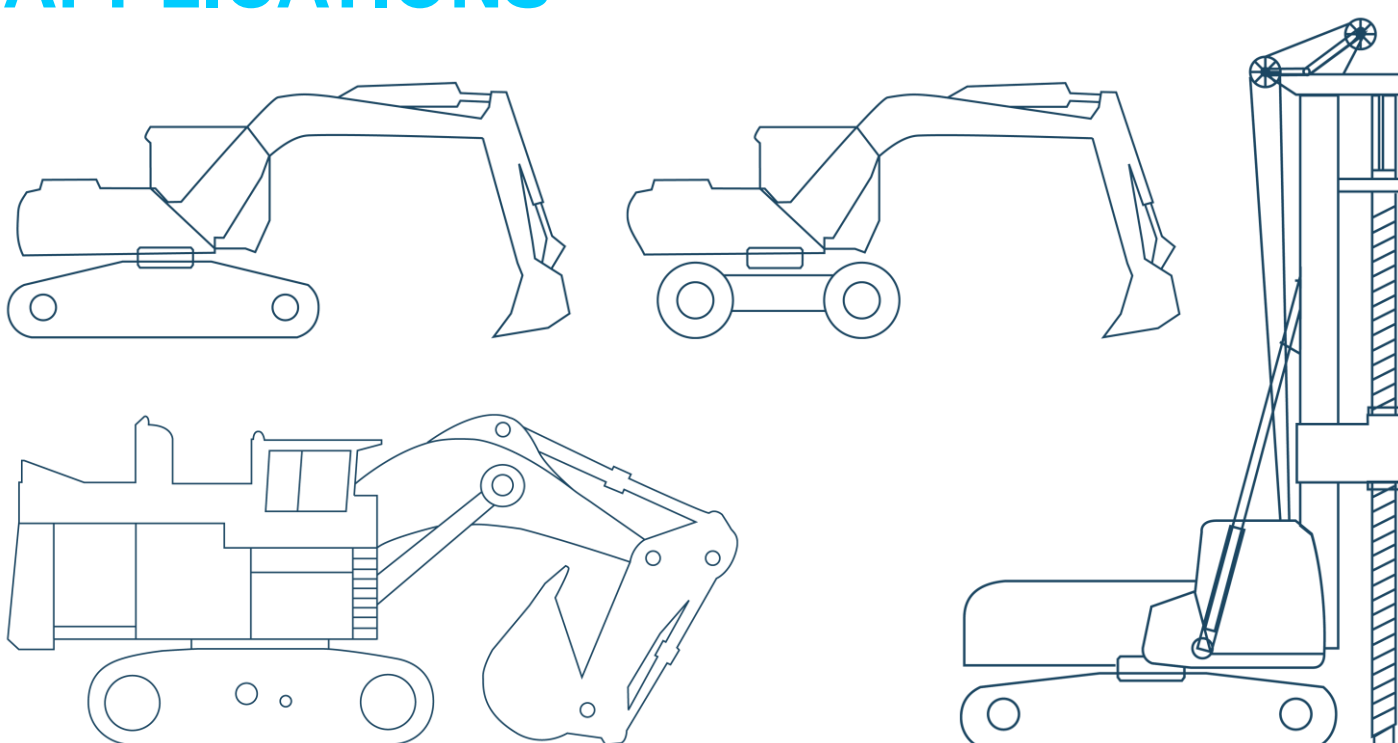
Consumer specific configuration of sections

The RCS sections can be flexibly configured in number, position and size for the exact required function. Therefore the best controllability, energy efficiency and costs for the hydraulic system can be achieved. The sections can be also equipped with Anti-Drift valves, Rexroth eValves or load holding valves and hydraulic or electro-hydraulic control covers.

Flow on demand

The electronic operation of the eValves and the main spools by the VBO software allows the summation and prioritization of the pump flow to be adapted to consumer needs. Also the number of Rexroth eValves can be freely configured according to customer requirements. The internal flow summation in front of the main spool also improves the $MTTF_D$ values.

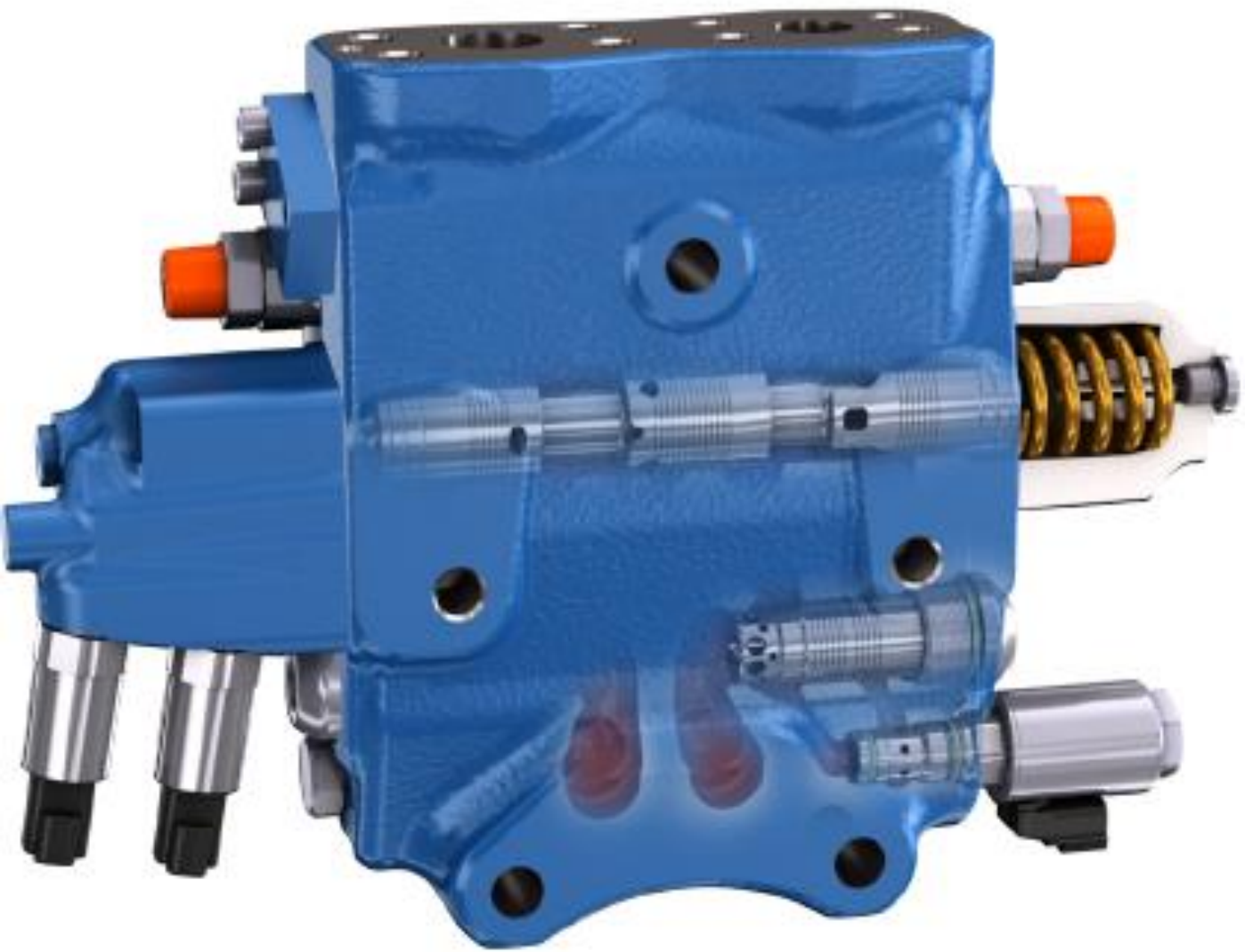
APPLICATIONS



TECHNICAL DATA

Control block	RCS			RCS-HPF
Sizes:	30	35	50	30
Nominal pressure [bar]:	400	400	380	380 ¹⁾
Secondary pressure [bar]:	420	420	420	420
Max. flow [l/min]:	2x300	2x400	2x550	2x520
Spool diameters:	25/36	32/40	40/56	25/36
Data sheet:	64155	64157	²⁾	64159

¹⁾ 400 on request
²⁾ In preparation



RCS functional axis of the boom of an excavator

EXPLORE MORE



Control block RCS

High flexibility due to modular software concept

The wide range of possible electrical interfaces and functions, such as the integrated electrohydraulic operation of the main axis, allows high flexibility. Different operator modes can be selected and additional software functions can be programmed.

Increased energy efficiency due to reduced pressure losses and intelligent control

The optimized and innovative channel system of the Rexroth RCS control block provides low Δp values. Energy efficiency can also be significantly increased by the intelligent use of electrical interfaces and VBO software.

High nominal pressure up to 400 bar

The Rexroth RCS control blocks enable a higher system pressure than conventional products on the market. The sizes 30 and 35 of the RCS control block are designed for nominal pressures up to 400 bar (size 50 for 380 bar) and secondary pressures up to 420 bar to meet demands of increased power density in hydraulic systems.