

RTM traction module

Flow divider/combiner for open and closed circuits



Mobile machines with a hydraulic single-wheel drive usually need a traction control system similar to a differential lock which prevents the wheels spinning. However, common solutions such as a cartridge flow divider or anti-slip control with variable motors cannot always meet the requirements of all applications. With road building vehicles such as road milling machines and rollers, the focus is on division accuracy, flexibility and efficiency. In order to meet these strict requirements as regards drive trains, Bosch Rexroth developed the RTM traction module which can be used in a variety of areas, even those which go beyond the typical fields. The RTM is also ideal for other mobile applications with specific, exacting requirements.

CUSTOMER BENEFITS

- Consistent performance over the entire flow range
- Low Delta P
- Multi-way traction modules possible
- Division accuracy can be adjusted according to the application – electro-proportionally if necessary
- No interference between consumers
- Asymmetrical division ratios possible

FUNCTION AND ADVANTAGES

Consistent performance over the entire flow range

A self-regulating metering orifice ensures a variable opening cross-section and adjusts to the flow. The controlled pressure difference allows efficiency and division performance that are independent of flow and consistent.

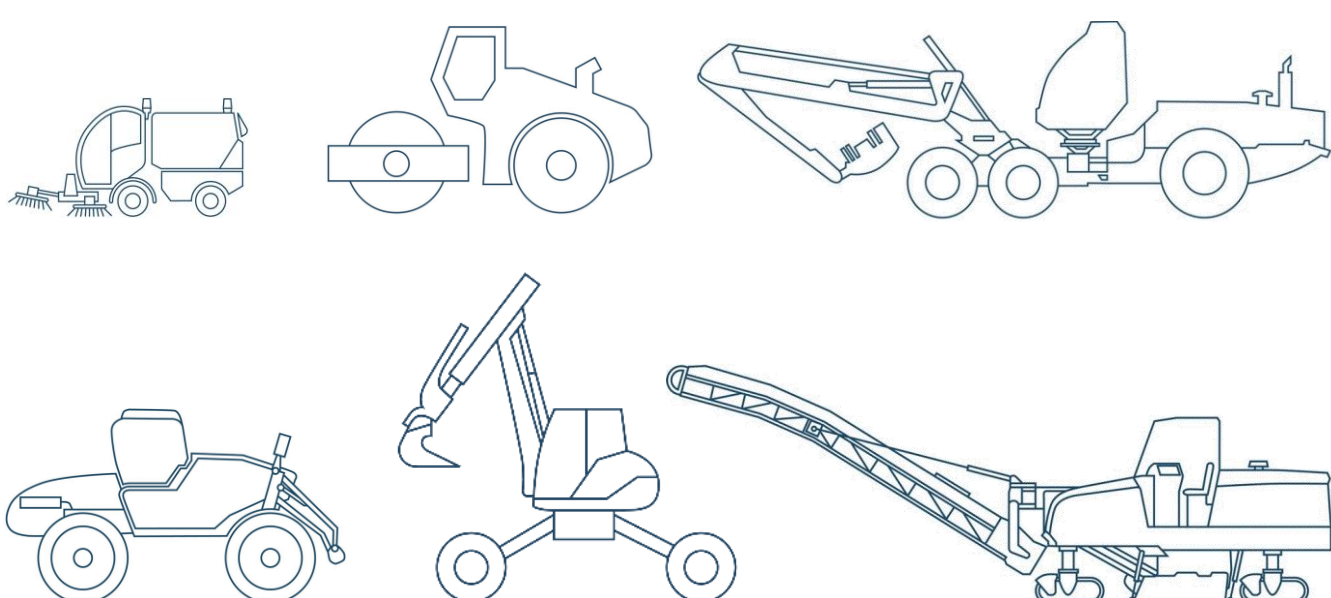
Low Delta P

With the RTM, the load pressures are exchanged hydraulically between the pressure compensators. In contrast to other 3 and 4-way flow dividers, this makes it possible to arrange all pressure compensators in parallel to each other, which results in a significant improvement in efficiency.

Multi-way traction modules possible

Another advantage of the hydraulic load pressures is the flexible communication of several RTMs with optional "W" connection. The connected Rexroth modules form a multi-way traction module. For example, two 3-way RTMs connected to each other result in a 6-way solution in which all pressure compensators are operated in parallel.

APPLICATIONS



TECHNICAL DATA

RTM series 10 traction module		
Size:	16	25
Max. pump flow	160 l/min	440 l/min
Max. working pressure	500 bar	
Ambient temperature range	-25 to +80 °C	
Number of consumer ports	2, 3 or 4	
Sealing material	FKM (fluor elastomer)	
Data sheet	64592	

Division accuracy can be adjusted according to the application – electro-proportionally if necessary

Adjustment of the pressure compensator, metering orifice spring or fixed orifice makes it possible to adapt Bosch Rexroth’s RTM to the vehicle-specific requirements. With an optional electro-proportional valve, it is also possible to adjust the division accuracy dynamically.

No interference between consumers

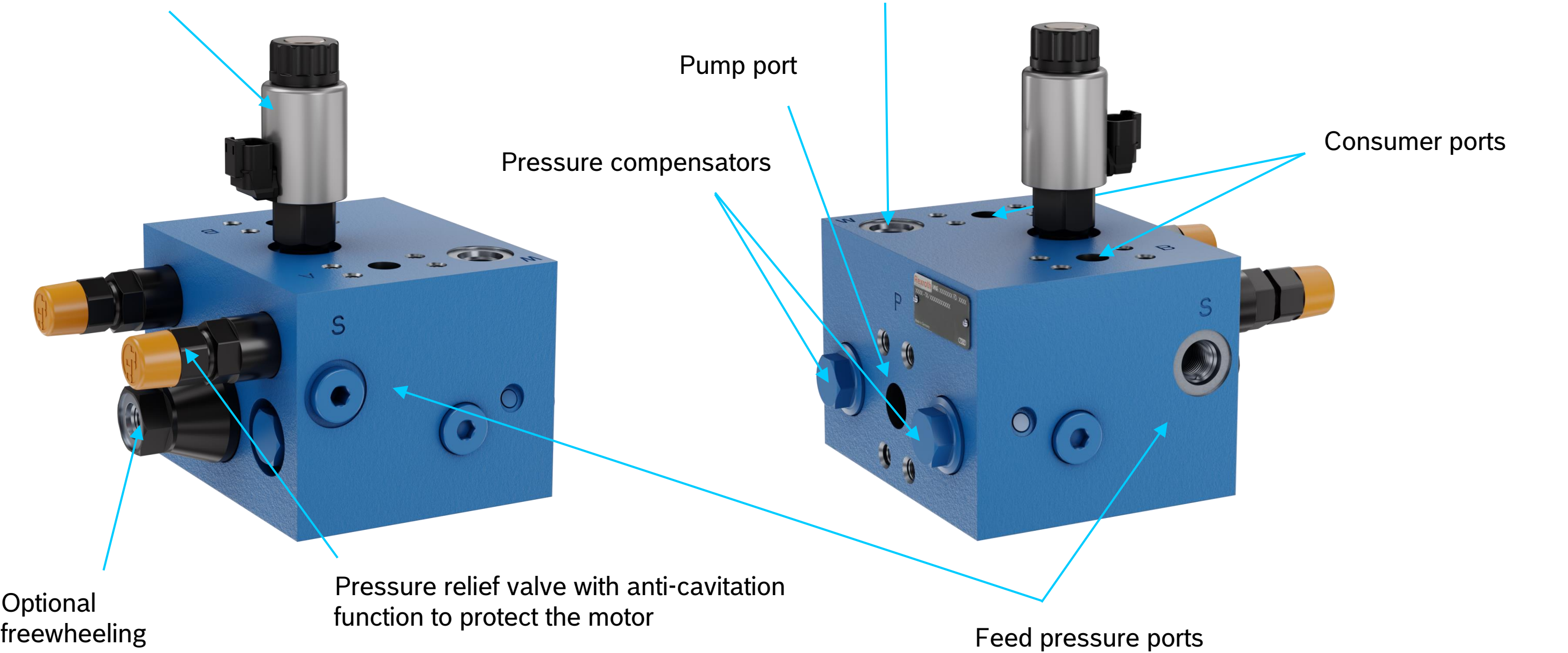
With the adjustment of the springs and the fixed orifice, no balancing nozzle between the consumers is needed. This prevents interference between consumers and improves performance (e.g. when traveling downhill).

Asymmetrical division ratios possible

By changing the metering orifice geometry, individual division ratios are possible. As a result, different motor combinations, transmission ratios or wheel sizes can be used.

Optional proportional valve for changing the division accuracy

Optional W port for coupling several RTMs



RTM16S2: 2-channel traction module