3.3

Features

1. Structure

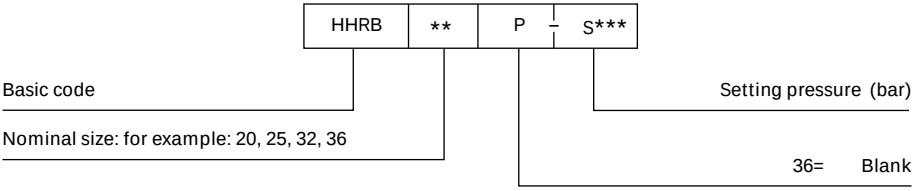
· No lowering of the load in the neutral position, e.g. In excavators, cranes.
· Direct attachment on the cylinder with SAE connection ports.
· Pipe burst protection for heavy duty applications.
· Very good, smooth fne control characteristics in each cylinder position.
· Minimization of power losses (Δp values) during lifting operation.

2. Applications

Excavators

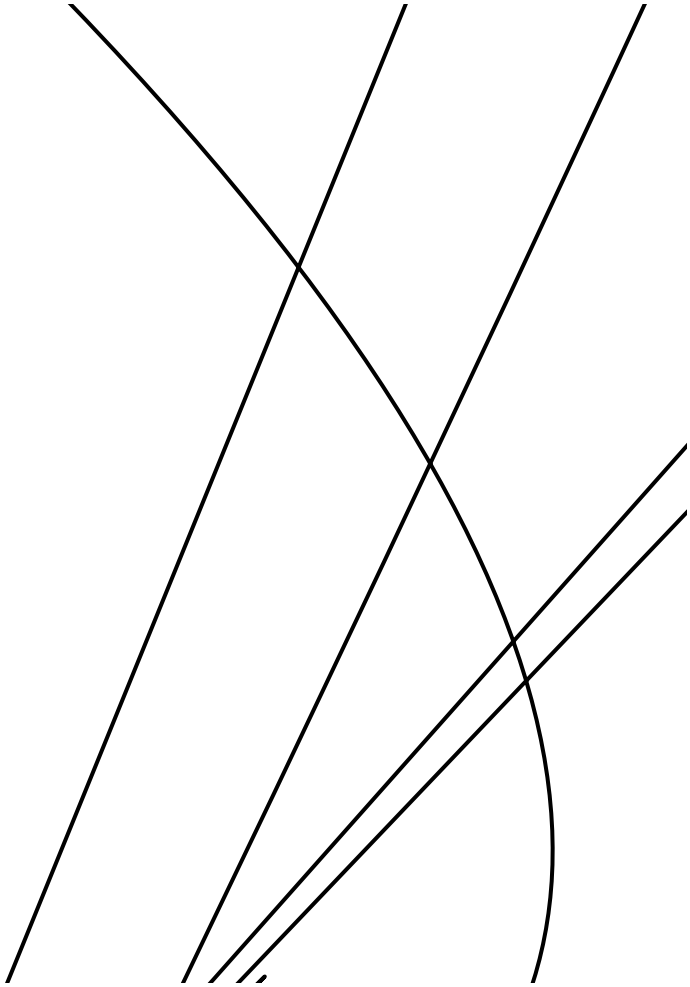
Cranes

Ordering code



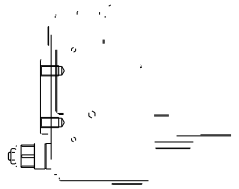
Technical Data (HHRB20, 25 Type)

Characteristic curves (HHRB20, 25 Type)



Unit dimension (HHRB20, 25 Type)

(Dimensions in mm)



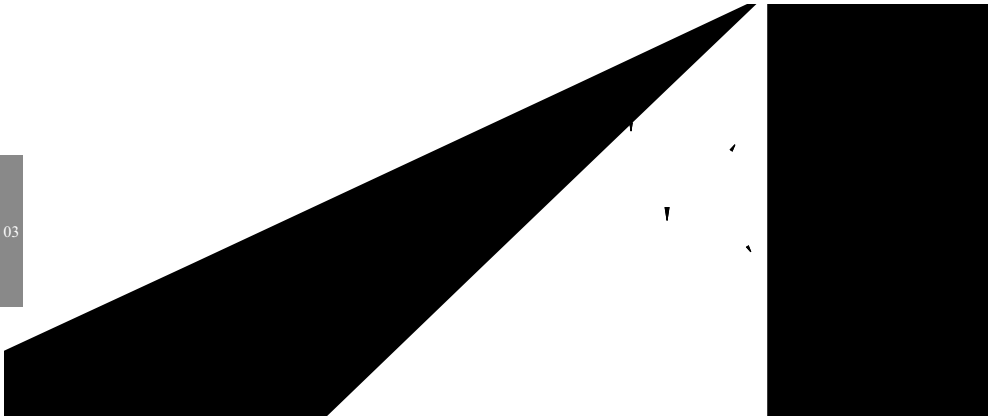
Function and symbols (HHRB32 Type)

The upward flow (A--C) is not restricted and can flow through check valve 6 to the hydraulic cylinder while the downward flow(C--A) is controlled by check valve 6 and non-leakage main spool 3. It remains closed under the spring force and pressure of load port C.

Under the action of the pilot pressure of port X (operating rod), the pilot spool 2 changes the direction, and the spring cavity of the main spool 3 and port A are connected to the oil return passage decreases. The other end of the main spool 3 opens under the pressure of port C. The opening degree of the main spool 3 is proportional to the opening of the pilot spool 2. The pilot pressure X can finely control the opening of the pilot spool 2, and accurate

The plug-in relief valve (1) can detect the pressure of port C and conditions so that the pressure difference between the left and right chambers of the main spool (3) occurs. The main spool opens then the hydraulic cylinder pressure is released downstream through the main hose (V2) and the main control valve.

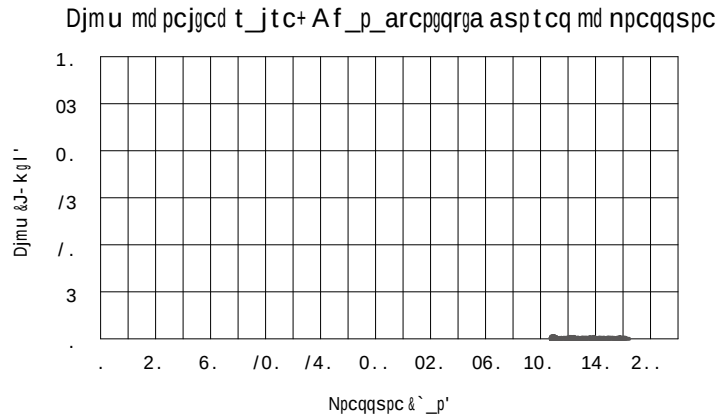
For safer and compact assembly, the C port is mounted directly to the valve body through a gasket.

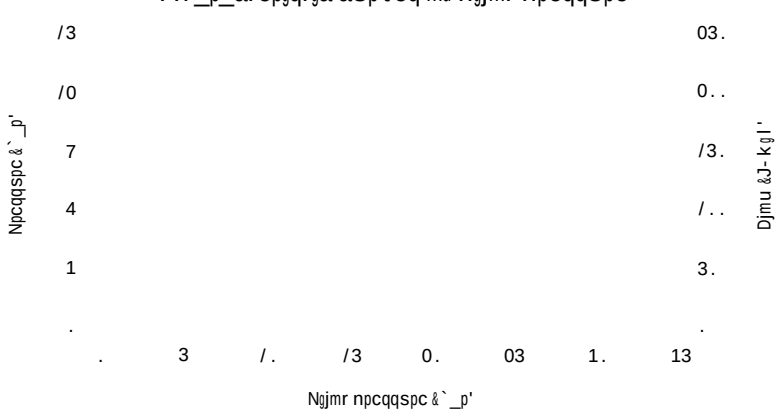


Technical Data (HHRB32 Type)

Code		
Max. operating pressure	bar (psi)	460(6670)
Max. fow	L/min (gpm)	600(158)
Hydraulic fuid		ISO VG46 or VG32
Oil Cleanliness		NAS 1638-8 Level or less
Operating temperature		-20~90
C port without	cc/min	≤ 2 @ 80% of the set pressure
Port dimension	A C port	1_1/4 ” — SAE 6000PSI
	X L E port	G1/4 ” — ISO 1179-1
Relief valve 1 setting parameters	pressure adjustment range	300~460 bar
	Pressure adjusted by rotating the screw for one circle	168 bar/circle
	Factory default setting pressure	390 ± 5 bar@5L/min
Pilot valve 2 setting parameters	Pilot operating pressure range	7~13 bar
	Pressure adjusted by rotating the screw for one circle	3 bar/circle
	Factory default starting pressure	7 ± 0.3 bar

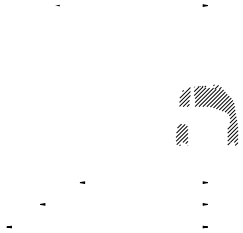
Characteristic curves (HHRB32 Type)





Unit dimension (HHRB32 Type)

(Dimensions in mm)



Function and symbols (HHRB36 Type)

The upward flow (A-C) is not restricted and can fow to the hydraulic cylinder through check valve 2 while the downward fow (C—A/C—R) is locked and controlled by check valve 2 and non-leakage main spool 1.It remains closed under the spring force and pressure of load port C.

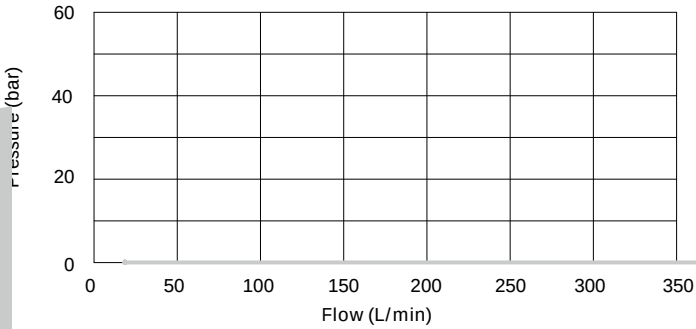
Under the action of the pilot pressure of the Pp port (operating rod), the spring cavity of the main spool 1 is connected with the Dr port to release the non-leakage lock. The pilot pressure at the Pp port increases further, and the main spool 1 opens.

The plug-in relief valve 5 opens under pressure overload or impact conditions at port C as overload protection.

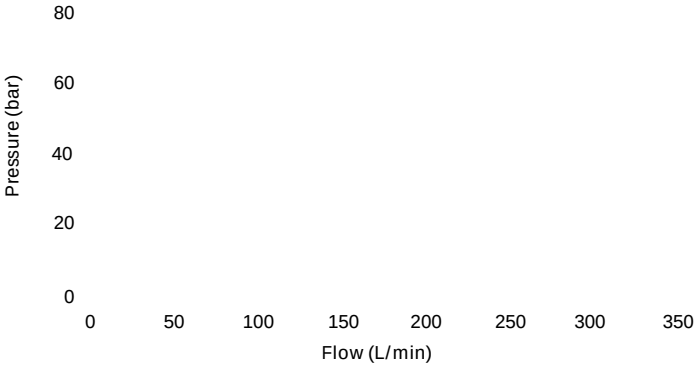
For safer and compact assembly, the C port is mounted directly on the actuator via a gasket.

Characteristic curves (HHRB36 Type)

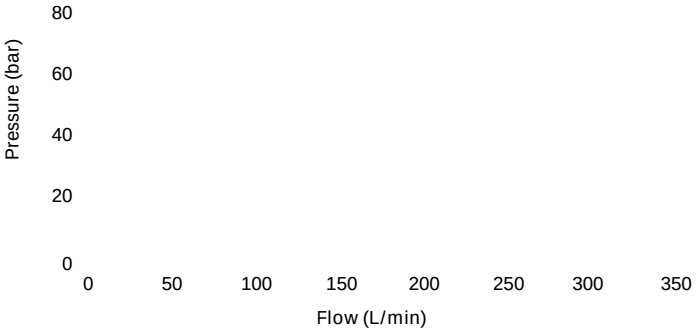
A-C characteristic curves of pressure drop



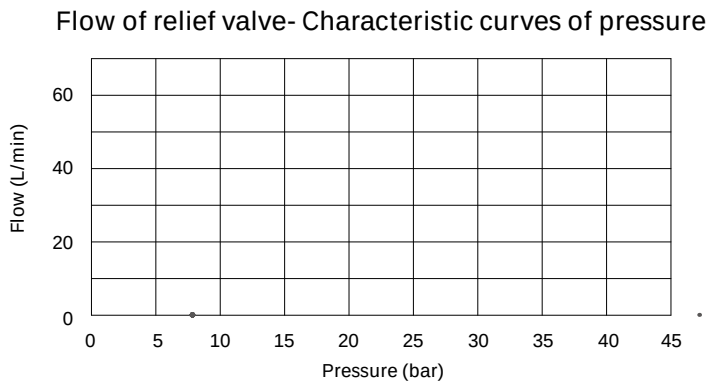
C-R characteristic curves of pressure drop

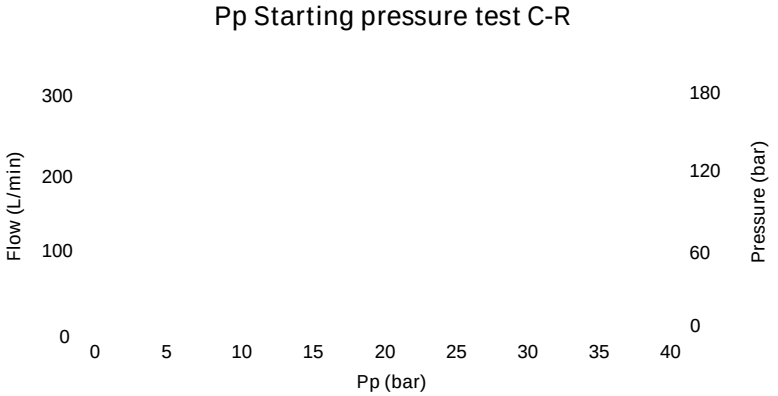


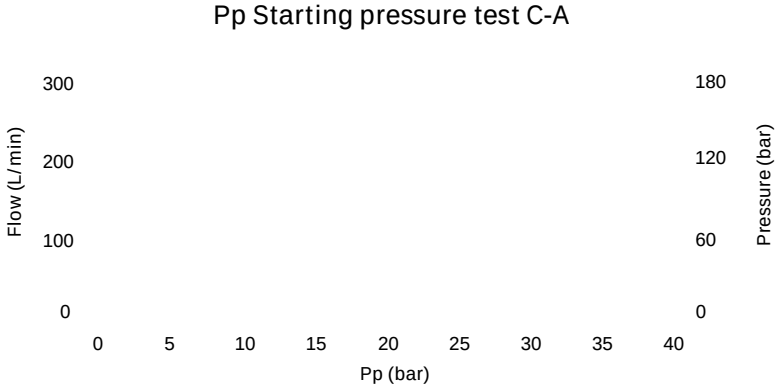
C-A characteristic curves of pressure drop



Characteristic curves (HHRB36 Type)

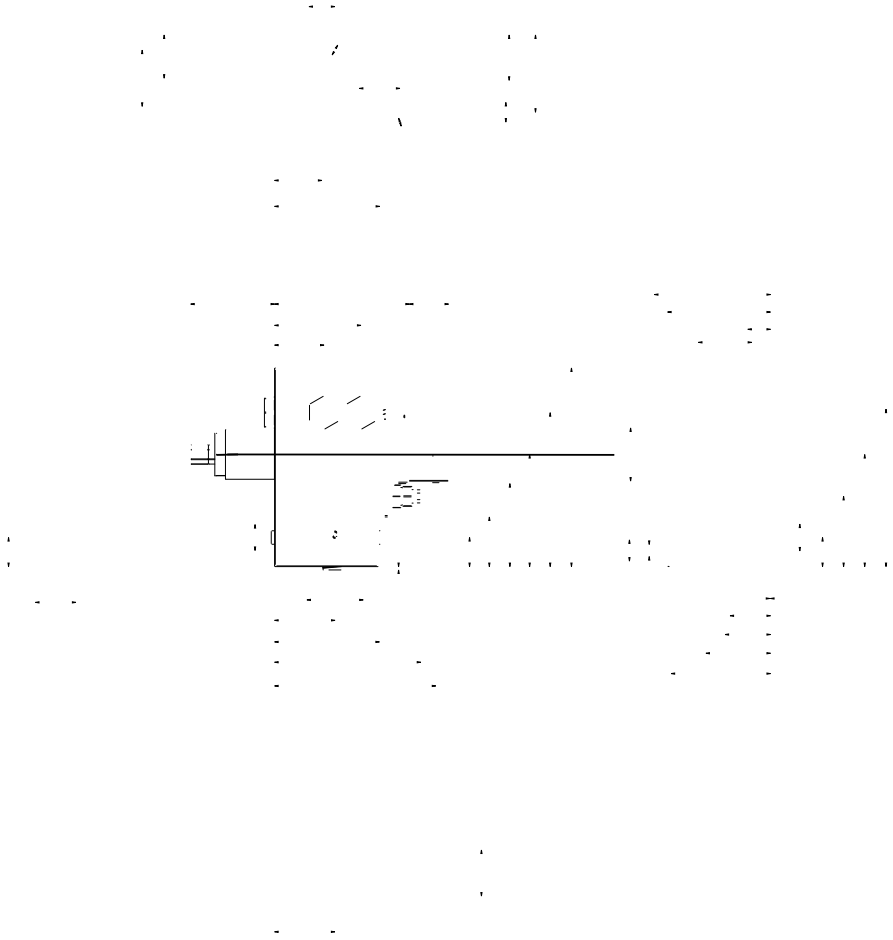


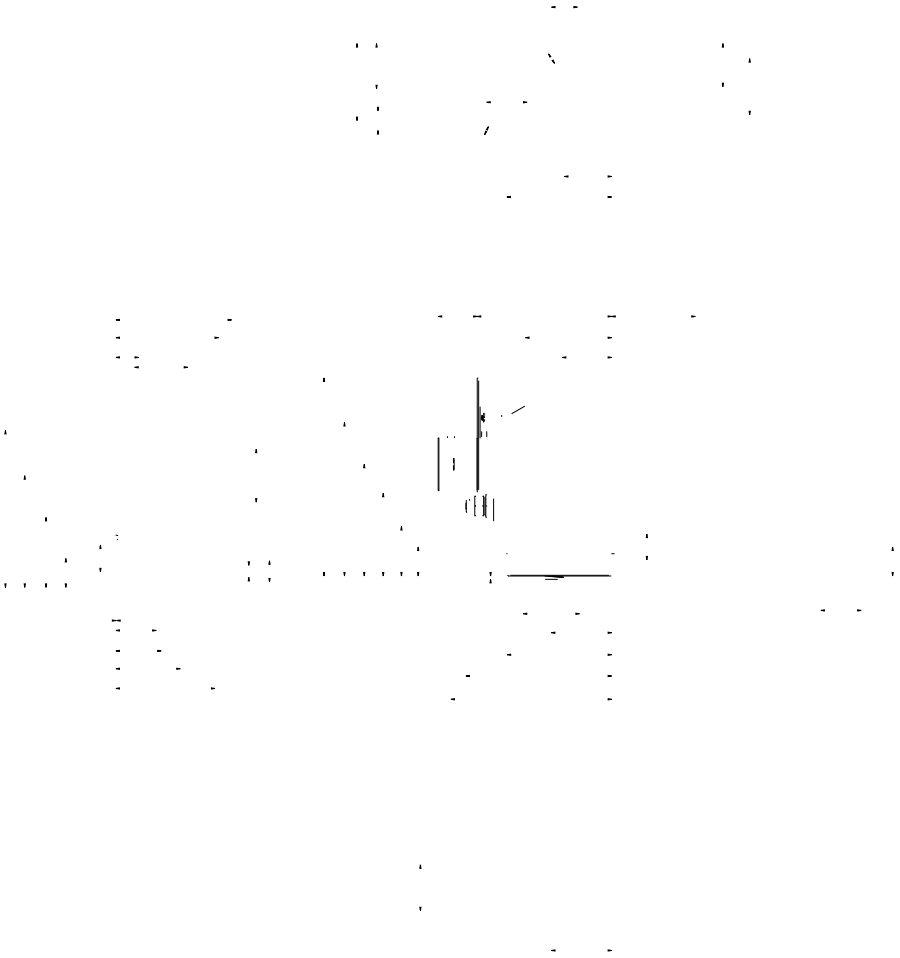




Unit dimension (HHRB36 Type-L)

(Dimensions in mm)



Unit dimension (HHRB36 Type-R)

(Dimensions in mm)