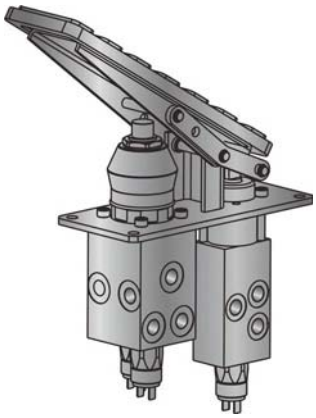
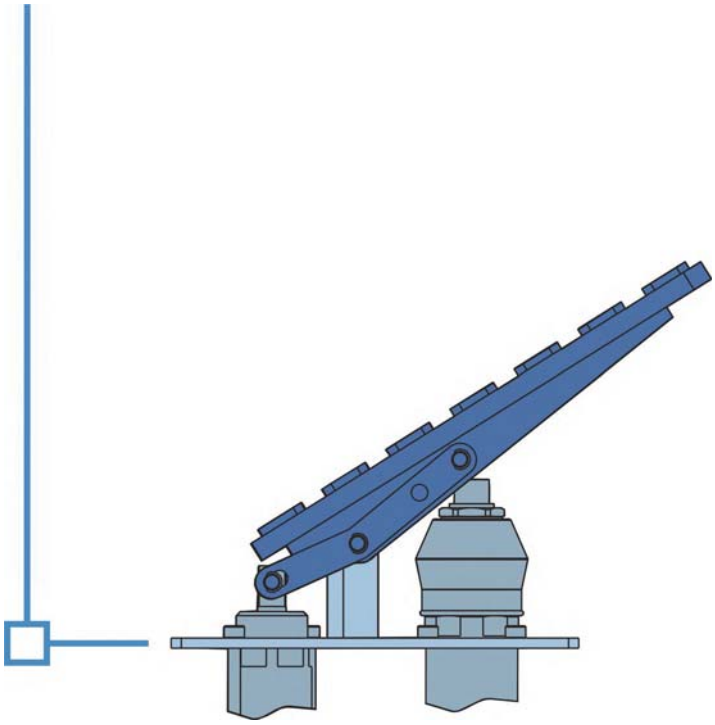


VB-022

- **Combination of VB-002 + VB-020**
- **Dual-circuit**
- **VB3-002 can be used for VB-022***

*For more information please contact your Poclain Hydraulics application engineer.



VB-002 characteristics VB-020 characteristics

Applications

The VB-022 brake control is a dual-circuit braking assembly combining:

- The VB-002 emergency / parking brake valve, which provides an output pressure to control the automotive pump (inching),
- The VB-020 service brake valve, which provides two output pressures, F1 and F2, for independent braking circuits.

Output pressures F1 and F2 can be equal (VB-022) or different according to a ratio F2/F1 = 0.64 (VB-0E2) or 0.44 (VB-0F2).

Operation

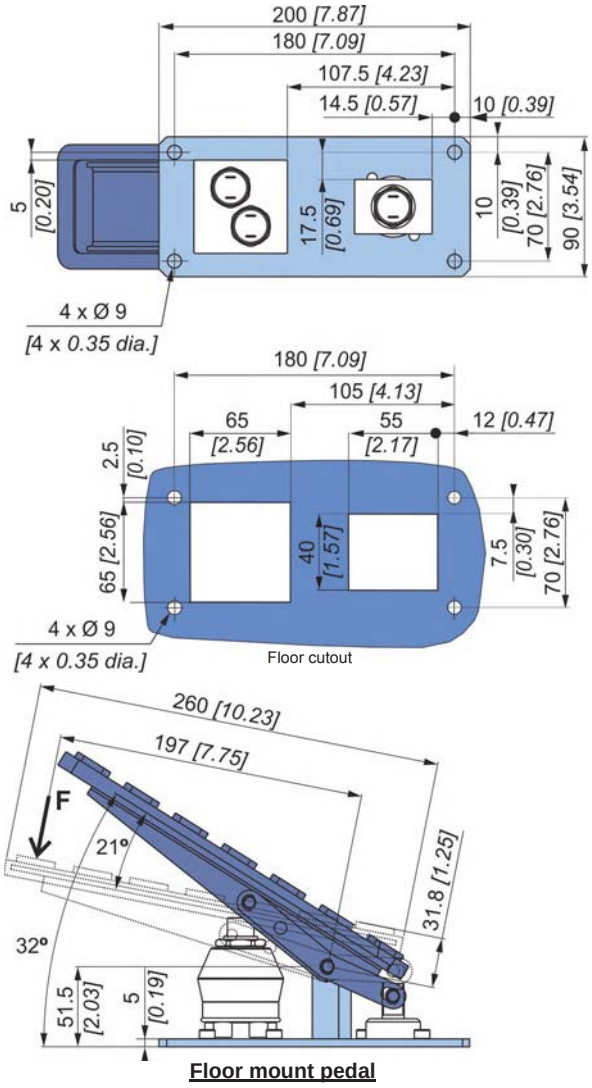
VB-022 controls three independent pressures via a pedal. One pressure controls the automotive pump, and the other two pressures control the service braking.

- **Two-step braking:**

  When the operator presses the pedal, the VB-022 supplies a pressure that is inversely proportional to the angular displacement of the pedal, to control the hydraulic pump. If more braking is required, the operator continues to press the pedal. VB-022 then supplies an output pressure to the service brakes in proportion to the angular displacement of the pedal.
- **Simultaneous braking:**
  VB-022, VB-0E2 and VB-0F2 simultaneously control the pump (hydrostatic braking) and the service braking (mechanical braking) for more aggressive dynamic braking.

The pressures at F1 and F2 are strictly independent. A failure in one of the circuits does not affect the operation of the other circuit.

Mechanical control with standard valve orientation



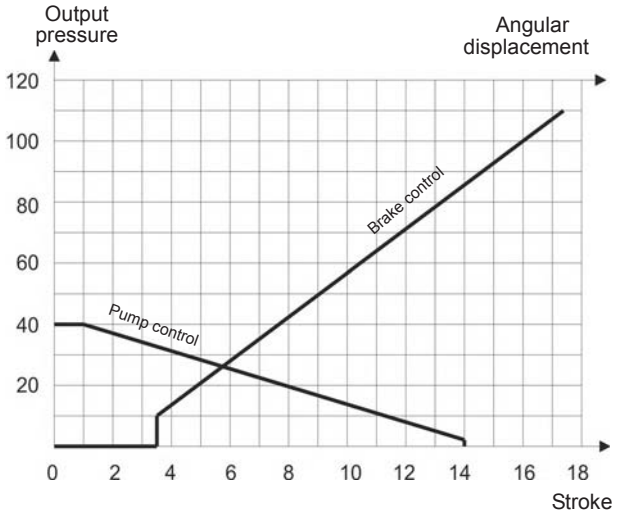
Floor mount pedal

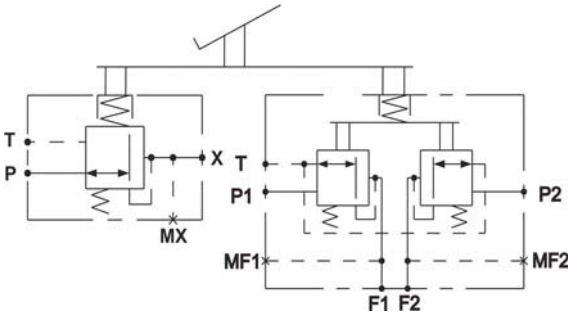
Connections

	Max. pressure bar [PSI]	Connection	Function	kg [lbs]
P	210 [3 046]	M14 x 1.5 or 9/16" 18 UNF	Input	
P1 - P2				
T	1 [14,5]		Tank	
F1 - F2	120 [1 740]		Service braking	
X	20 [290,1] (1)		Inching control	
MF1*		M10 x 1	Service braking pressure switch	4,1 [9.04]
MF2*		M10 x 1 (VB022) M12 x 1.5 (VB0E2) M14 x 1.5 (VB0F2)	Service braking pressure switch	
MX*		M12 x 1.5	Inching control pressure switch	

(1) : Higher pressures: please contact us
* : Option

Hydraulic diagram and characteristic curves

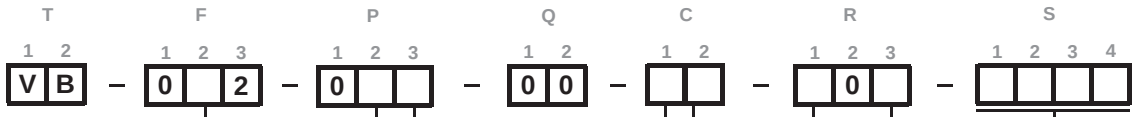




To calculate the actuator forces for your mechanical control: please contact your Poclain Hydraulics Application Engineer.

For information concerning special operating conditions (environment, temperatures, etc.), please contact your Poclain Hydraulics Application Engineer.

Model Code



Service brake

Dual circuit with F2/F1 = 1	**2**
Dual circuit with F2/F1 = 0.64	**E**
Dual circuit with F2/F1 = 0.44	**F**

Operating pressure

40 bar *[580 PSI]*	**4**
60 bar *[870 PSI]*	**5**
80 bar *[1160 PSI]*	**6**
100 bar *[1450 PSI]*	**7**
120 bar *[1740 PSI]*	**8**

Inching

10 bar *[145 PSI]*	**2**
20 bar *[290 PSI]*	**3**
30 bar *[435 PSI]*	**A**

Pressure switch **

Without	**0**
On MF (service brake pressure)	**2**
On MX (inching pressure)	**4**
On MF and MX	**B**

Electrical connection

Without	**0**
Deutsch	**3**
AMP (6.3 x 0.8)	**5**

Hydraulic connection

ISO 9974-1 (metric fittings)	**4**
ISO11926-1 (SAE J514 fittings with O-ring)	**A**

Control

Floor mount pedal	Smooth	**A**
	Aluminum non-slip	**B**
	Rubber non-slip	**C**

For other operating pressures, please consult your Poclain Hydraulics application engineer.

Options (See page 85)

Special calibration*	**1**
Special port*	**2**
Non-standard component*	**3**
Dual-slope spring mechanism*	**7**
Pressure sensor	**8**
Circuit Pressurization*	**B**
Ports oriented to the right (East)*	**E**
Ports oriented to the front (North)*	**N**
Ports oriented to the back (South)*	**S**
Ports oriented to the left (West)*	**W**

* Please ask us

** Limitations

Pressure rise	< 1 bar *[14.5 PSI]* / ms
Current	min. 100 mA to assure contact
	max. 4 A for Resistor load
	max. 2,5 A for Inductive load
Voltage	max. 42 V