

Motion Control Valves

1SER90

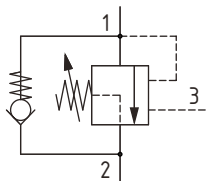
Overcenter Valve, Part Balanced, Direct Acting, Internal Drain, Port 3 Pilot

350 bar [5000 psi] • 90 l/min [24 US gpm]

DESCRIPTION AND OPERATION

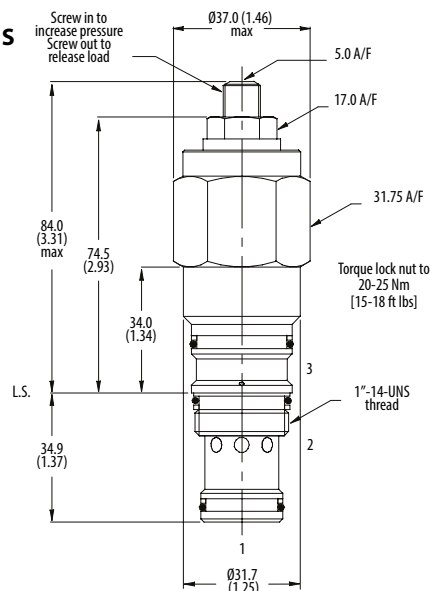
This is a direct acting overcenter valve, which is a pilot assisted relief with a free flow check. With the relief valve set at around 1.3 times the maximum load induced pressure, the valve will prevent flow from taking place between ports 1 and 2. When pilot pressure is applied to port 3, the valve will meter the flow from port 1 to 2 compensating for any change in pilot pressure due to over-running or unstable loads. Free flow from port 2 to port 1 can take place freely through the check portion of the valve. These valves are ideal in most applications bringing stability, load holding, and hose failure protection when the valve is mounted onto or into the actuator. The spring chamber is connected to the valve port 2 so any back pressure will increase the pilot pressure required to keep the valve open. However, the balanced poppet design allows the relief valve to remain open provided the inlet pressure is higher than the setting.

SCHEMATIC



DIMENSIONS

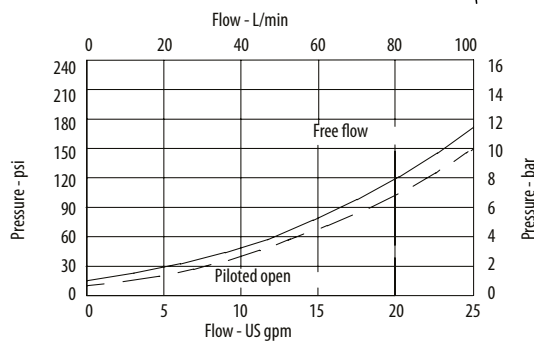
mm [in]



Installation Torque
60 Nm [44 ft. lbs]

PERFORMANCE CURVES

Pressure Drop



PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	90 l/min [24 US gpm]
Max total relief pressure	350 bar [5000 psi]
Max recommended load pressure at max setting	270 bar [3900 psi]
Pilot Ratio	4:1
Leakage	0.3 ml/min nominal [5 drops/min]
Weight	0.42 kg [0.92 lb]
Cavity	A20092-T2A

MODEL CODE

1SER90 - F - 35 - S - 4 - 210

Adjustment Option

F - External
N - Non-adjustable option, contact technical support

Pressure Range

Code	Bar	Psi
20	75-225	[1090-3260]
Standard Setting	100	[1450]
35	70-350	[1015-5000]
Standard Setting	210	[3000]

Std setting made at 4.5 l/min

Pressure Setting

Code Pressure setting in bar (10 bar increments within specified Pressure Range)
XXX-Standard setting (see Pressure Range for value)
Example:

Code	Bar	Psi
210	210	[3000]

Pilot Ratio

4 - 4:1

Seal Option

Code	Seal kit
S-Buna-N	SK1093
SV-Viton	SK1093V