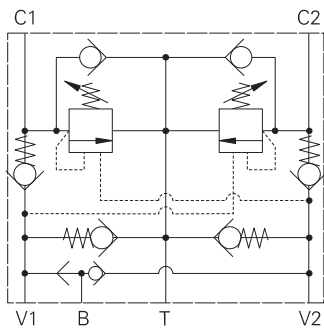


ICEESH35 - Motion control & lock valve

Pilot assisted relief with brake shuttle
30 L/min (8 USgpm) • 270 bar (4000 psi)



Operation

The check section allows free flow into the actuator then holds and locks the load against movement. The pilot assisted relief valve section will give controlled movement when pilot pressure is applied. The relief section is normally set to open at a pressure at least 1.3 times the maximum load induced pressure but the pressure required to open the valve and allow movement depends on the pilot ratio of the valve. For optimization of load control and energy

usage, a choice of pilot ratios is available.

The pressure required to open the valve and start actuator movement can be calculated as follows:

$$\text{Pilot Pressure} = \frac{(\text{Relief Setting}) - (\text{Load Pressure})}{\text{Pilot Ratio}}$$

A system of check valves allows crossline relief for dynamic applications with the optional make up facility to compensate for any change in system volume.

Feature

This valve provides complete circuit control and protection as with the standard motion control valve but has the addition of a brake release shuttle and brake port contained in a single body.

Pilot ratio

2.5:1 Best suited for extremely unstable applications such as long booms or flexible frameworks.

5:1 (standard) Best suited for applications where load varies and machine structure can induce instability.

10:1 Best suited for applications where the load remains relatively constant.

Description

Motion control and lock valves give static and dynamic control by regulating the flow into and out of hydraulic actuators. When installed close to an actuator, the valve can stop runaway in the event of hose burst. The valves also give dual thermal and overload relief protection.

A low pressure tank or charge line may be connected to the T port to provide a make-up flow to either actuator port.

The shuttle valve provides a signal from the high pressure side of the actuator to release sprung applied brakes.

Performance data

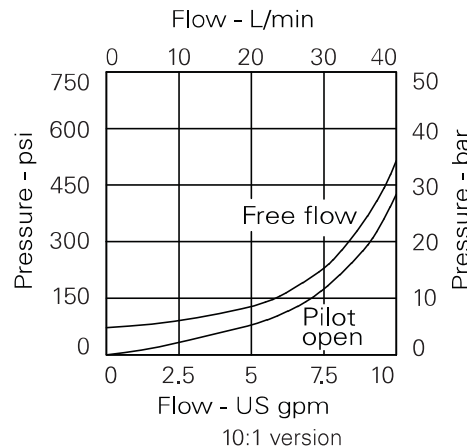
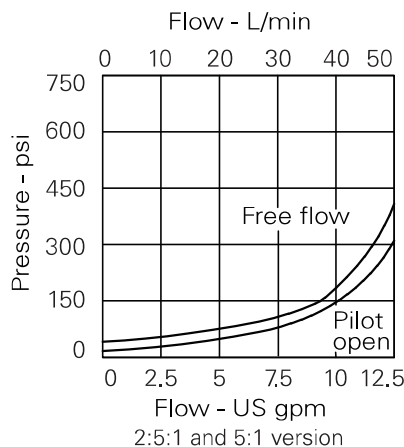
Ratings and specifications

Figures based on: Oil Temp = 40°C Viscosity = 32 cSt (150 SUS)

Rated flow	30 L/min (8 USgpm)
Max relief pressure	350 bar (5000 psi)
Max load induced pressure	270 bar (4000 psi)
Cartridge material	Working parts hardened and ground steel. External surfaces electroless nickel plated.
Standard housing materials	Steel
Mounting position	Line mounted
Weight	2.03 kg (4.5 lbs)
Seal kit	SK815 (Nitrile) SK815V (Viton®)
Filtration	BS5540/4 Class 18/13 (25 micron nominal)
Temperature range	-30° to +90°C (-22° to +194°F)
Internal leakage	0.3 ml/min (5 dpm)
Nominal viscosity range	5 to 500 cSt

Viton is a registered trademark of E.I. DuPont.

Pressure drop

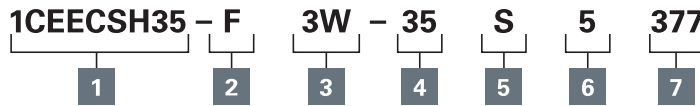


Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.

1CEECSH35 - Motion control & lock valve

Pilot assisted relief with brake shuttle
30 L/min (8 USgpm) • 270 bar (4000 psi)

Model code



1 Function

1CEECSH35 - Cartridges and body

2 Adjustment means

- F - Screw adjustment
- N - Fixed - State pressure setting required

For fixed versions add setting in 10 bar increments to end of part number. Subject to a ±10% tolerance.

3 Port sizes - bodied valves only

Code	Port size	Housing number - sub assembly
Steel		
3W	3/8" BSP Valve & Cyl Port. 1/4" BSP Brake Port	CXP15947-3W-S-377

4 Pressure range @ 4.8 L/min

Note: Code based on pressure in bar.
35 - (2.5:1 and 5:1) 100-350 bar Std setting 210 bar
 (10:1) 120-350 bar Std setting 210 bar

Std setting made at 4.8 L/min

5 Seals

- S** - Nitrile (For use with most industrial hydraulic oils.)
- SV** - Viton (For high temperature and most special fluid applications made at 4.8 L/min)

6 Pilot ratios

- 2** - 2.5:1
- 5** - 5:1 (Standard)
- 10** - 10:1

7 Body material

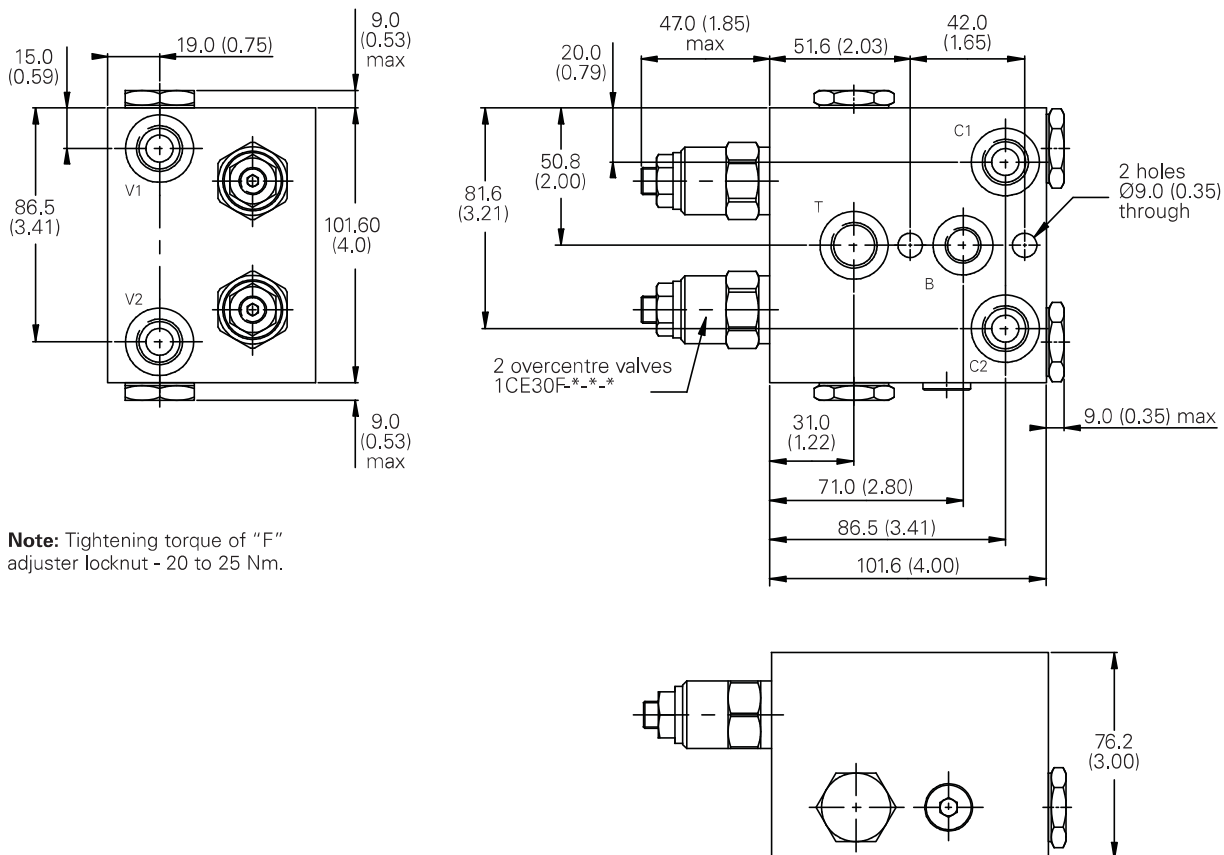
377 - Steel

Dimensions

mm (inch)

Complete valve

3/8" Ports
 Basic Code
 1CEECSH35
 Internally Cross Piloted



Note: Tightening torque of "F" adjuster locknut - 20 to 25 Nm.

Where measurements are critical request certified drawings. We reserve the right to change specifications without notice.