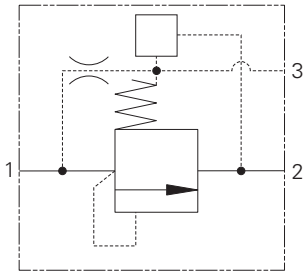


# LEV402 - Logic Element

Spool type with control cartridge cavity  
Up to 400 L/min (100 USgpm) • 250 bar (5000)



## Operation

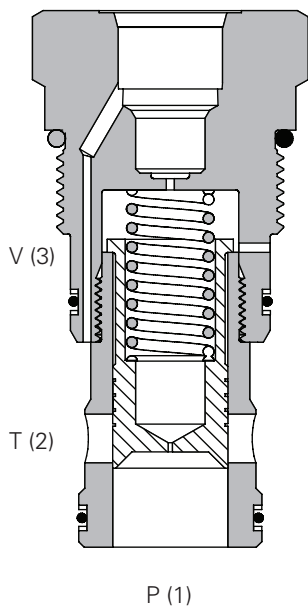
With a pilot valve fitted the valve will only open when flow is allowed across the orifice in the middle of the spool. Flow passing across this orifice will cause there to be a pressure difference that acts over the full area of the spool to move it back against the spring that biases it closed.

By controlling the pressure in the spring chamber you can control the pressure at which the valve opens.  
The vent port can be used as a remote control port to provide two pressure operation or a dump facility.

## Features

Very versatile in its application using hardened and ground spool and sleeve giving minimal internal leakage and long life. High flow and pressure rating increases the variety of applications into which it can fit.  
With small modifications to the spool the valve can be used in load sensing circuits or as a compensator for by-pass pressure compensated flow controls.

## Sectional View



## Performance Data

### Ratings and Specifications

Performance data is typical with fluid at 32,0 cSt (150 SUS)	
Figures based on oil temperature of 40° C and viscosity of 40 cSt	
Rated Flow	400 liters/min (100 USgpm)
Maximum working pressure	P1 and P2: 250 bar (3500 psi), P3: 210 bar (3000 psi)
Cartridge material	Working parts hardened and ground steel. External surfaces zinc plated
Body material	Standard aluminum (up to 210 bar*). Add suffix '377' for steel option
Mounting position	Unrestricted
Cavity number	A21773 (see Section M)
Torque cartridge into cavity	150 Nm (110 lbs. ft.)
Weight	LEV402: 0.70 kg (1.54 lbs), LEV452: 2.54 kg (5.6 lbs)
Seal kit number	SK1232 (Nitrile), SK1232V (Viton®) <small>Viton is a registered trademark of E. I. DuPont</small>
Recommended Filtration Level	BS5540/4 Class 18/16/13 (25 micron nominal)
Operating temperature	-30° to +90° C (-22° to 194° F)
Leakage	Up to 350 ml/min
Nominal viscosity range	32 cSt
For applications above 210 bar, please consult our technical department or use the steel body option	

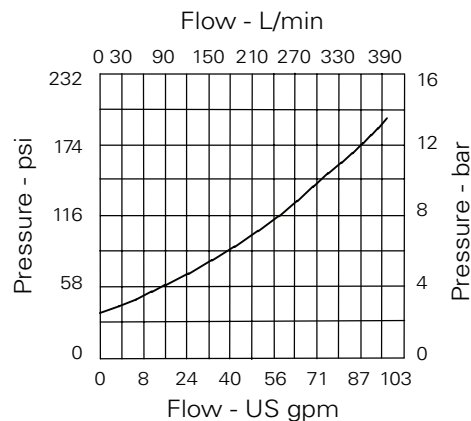
## Description

For use in conjunction with pilot valves to allow control of larger flows. When used with a 2/2 solenoid valve the combination allows control of flows to 400 lts/min (100 US gpm). With a pilot relief valve or a proportional relief valve the element becomes a high flow pilot style ventable relief. With a needle valve an on/off function is achieved.

The outlet flow would normally go to tank because back pressure will act on the pilot cartridge to increase the switching pressure.

## Pressure Drop Curve

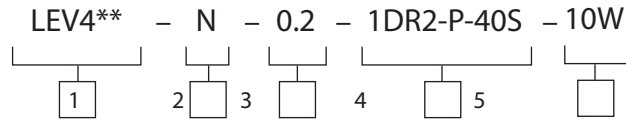
### Vented pressure drop



# LEV402 - Logic Element

Spool type with control cartridge cavity  
Up to 400 L/min (100 USgpm) • 250 bar (5000 psi)

## Model Code



### 1 Basic code

1LEV402 - Cartridge only (Logic Element)  
1LEV452 - Cartridge (Logic Element) and body

### 2 Seals

N - Nitrile (for use with most industrial hydraulic oils)  
V - Viton® (for high temperature & most special fluid applications)

### 3 Spring

0.2 - 2 bar

### 4 Pilot cartridge

Blank - None  
1DR2-P-40S - See pg E-100  
PDR21AN\*6\*\* - See pg B-270  
S207N - See pg A-280

### 5 Port Size

Omit - Cartridge only

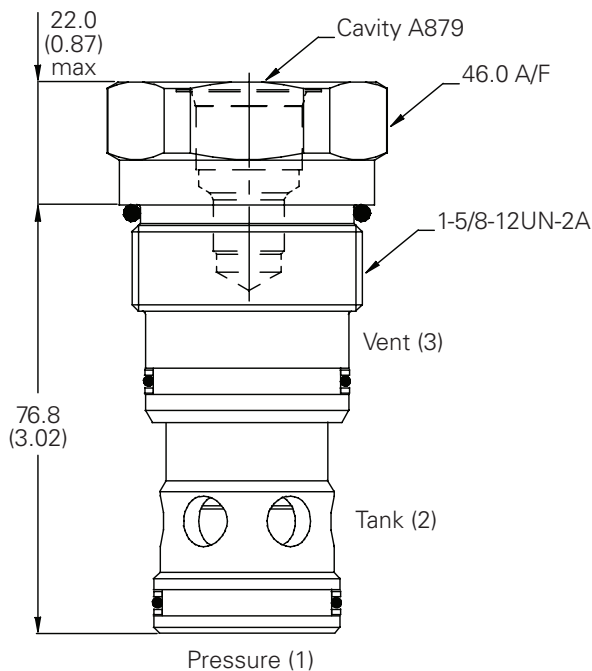
Code	Port Size	Aluminum	Steel
10W	1-1/4" BSPP, 1/4" BSPP vent	C23285	C23286
12W	1-1/2" BSPP, 1/4" BSPP vent	C23278	C23283
20T	1-1/4" SAE, 1/4" SAE vent	C23279	C23284
24T	1-1/2" SAE, 1/4" SAE vent	C23287	C23288

## Dimensions

mm (inch)

### Cartridge Only

Basic Code: LEV402



### Installation Drawing

Basic Code: LEV452

1 1/4" 1/2" Ports

