

# RV, CK & M Series

## Variable Priority Flow Dividers with Built in Relief or Check Valve

Aimed at mobile and industrial applications the RV, CK & M Series can be used for controlling hydraulic motor and cylinder speeds by manually adjusting the flow rate.

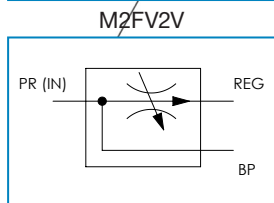
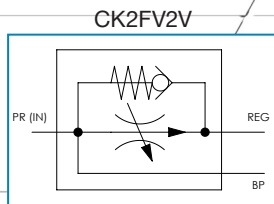
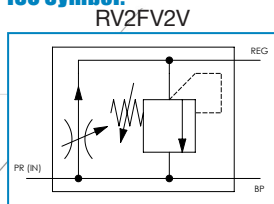
Variable priority flow dividers split a single input (PR) flow into a priority (REG) flow and an excess or by-pass (BP) flow which can be returned directly to the oil reservoir or used to power a second system. This is possible due to the valve's adaptive pressure compensation characteristics meaning both the priority and bypass flows can be used to drive separate circuits, even under varying loads. In many instances this dispenses with the need for another pump to operate a second system.

The RV series have an adjustable built in relief valve which protects the valve from overpressure. The relief valve should not be used as a system relief. The CK series have a built-in check valve which allows reverse flow on the Priority line. The M series offer a more compact solution by utilising a manifold mounted body.

### Specifications

<b>Maximum Rated Pressure:</b>	Up to 250 bar, 3630 psi
<b>Maximum Rated Flow:</b>	Up to 114 L/min, 30 US gpm
<b>Fluid Temperature Range:</b>	-30 to 120 °C, -22 to 248 °F
<b>Ambient Temperature Range:</b>	-30 to 50 °C, -22 to 122 °F
<b>Compatible Fluids:</b>	Mineral oils to ISO 11158. Other fluids consult sales office
<b>Porting:</b>	BSPP, NPTF, SAE, METRIC
<b>Material:</b>	Cast Iron, Aluminium knob
<b>Body Materials:</b>	Cast Iron, Aluminium knob
<b>Internal Materials:</b>	Steel components
<b>Weight:</b>	3.5 kg, 7.7 lbs
<b>Mounting:</b>	Two M8 or 5/16" bolt (Except manifold version which uses 4 bolts)

### ISO Symbol:



Make it **BLUE**

### Features

- Clearly marked single turn hand dial permits fast visual adjustments to pre-determined 'Priority' flow.
- Fast easy adjustments of 'Priority' circuit to meet varying requirements.
- RV and CK models are supplied with an adjustable pressure relief or check valve on 'Priority' flow.
- Anti-tamper locknut option available for all models.
- Remote control versions available see Hydraulics Catalogue.

## Sales Order Code

Please contact our technical sales team to discuss any special order requirements.

TYPICAL CODE	DESCRIPTION	SEE TABLE	YOUR CODE
CK2FV2V	Valve Type	Table 1	
080	Priority (REG) Flow Capacity	Table 2	
H	Porting	Table 3	
-	Anti-Tamper Option (Regulated flow setting)	-	

**Note:** Add - LN at the end of the ordering code for Anti-Tamper option. State flow setting required.

**Table 1:** Valve Type

CODE	DESCRIPTION
RV2FV2V*	Relief Valve Between Priority and By-Pass Flow Port
CK2FV2V	Check Valve Between Priority and Inlet Flow Port
M2FV2V	Manifold Mounted

**Notes:** \*Relief valve adjustable between 35-207 bar, 508-3000 psi. Factory set to 138 bar, 2000 psi. Max. Priority Flow 50 L/min, 13.2 US gpm.

**Table 2:** Priority (REG) Flow Capacity\*\*

CODE	REGULATED FLOW	
	L/MIN	US GPM
030	0-11	0-3.0
050	0-19	0-5.0
080	0-30	0-8.0
125	0-47	0-12.5
200	0-76	0-20.0
250	0-95	0-25.0
300	0-114	0-30.0

**Notes:**

\*\*Input flow will affect the maximum seen priority flow capacity. To achieve the given flow capacity, the input flow needs to be greater

**Table 3:** Porting

CODE	PORT THREADS INLET REGULATED FLOW AND EXCESS FLOW
A	3/4" NPTF****
G	1-1/16" -12UN #12 SAE ORB
H	1/2" BSPP***
J	3/4" BSPP
K	Manifold mounted (custom hole pattern)***
M	M22 x 1.5 ***

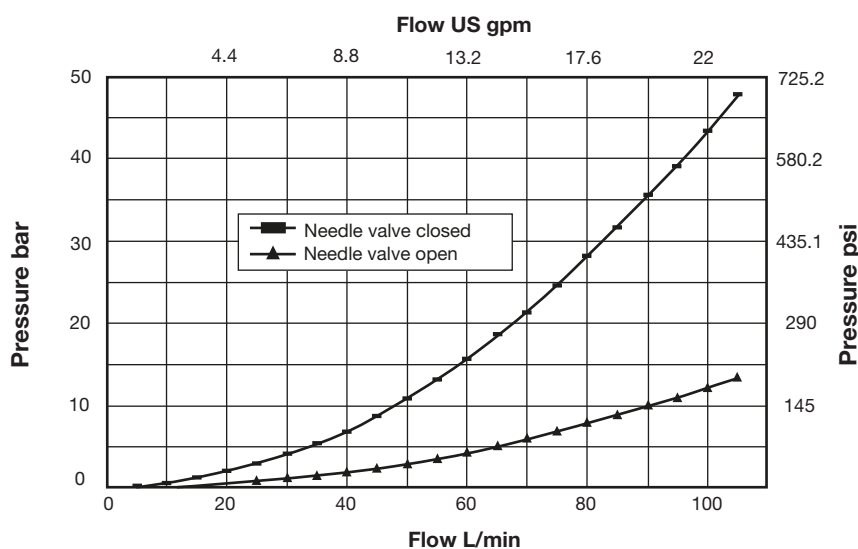
**Notes:**

\*\*\*M22, Manifold Mounted and 1/2" BSPP only available in flow code 030 to 125.

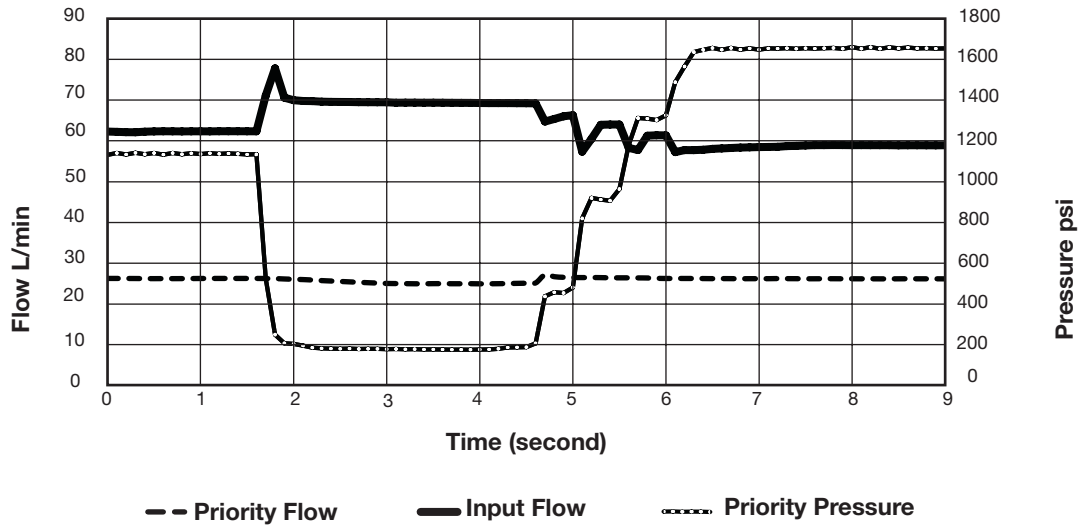
\*\*\*\*All NPTF threads are to ANSI B1.20.3 -1976 Class 1. As stated in the standard it is recommended that "sealing is accomplished by the means of a sealant applied to the thread". NPT fittings may also be used to connect to NPTF ports (also with a sealant applied to the thread).

## Typical Pressure Drop (reverse direction)

All tests completed using ISO32 Mineral oil at 50 degrees C (21 cSt)

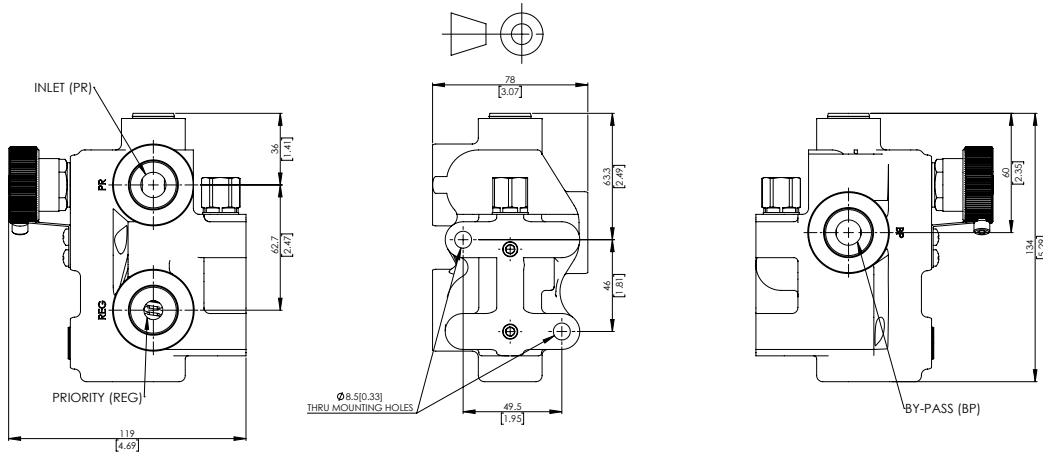


### Typical flow control performance - Varying input conditions

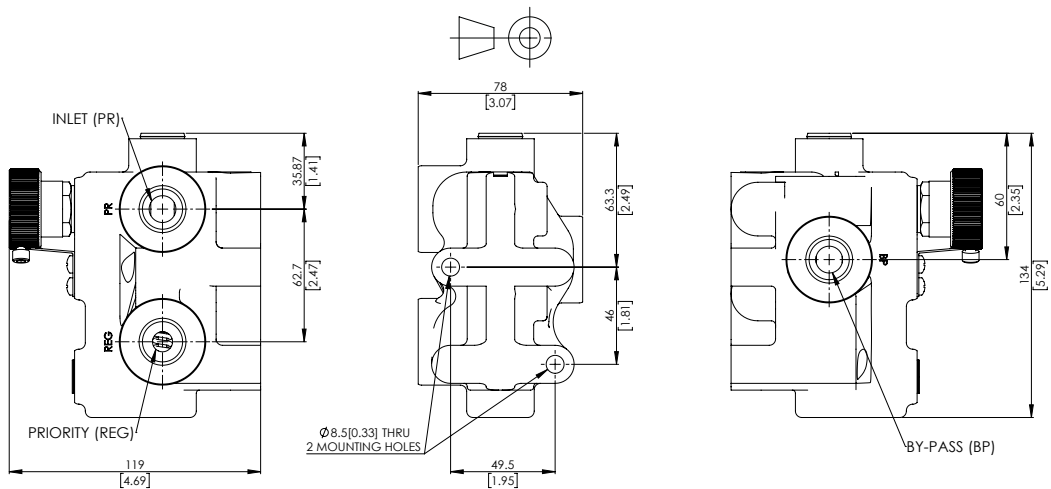


### Installation Details Dimensions in mm [Inches]

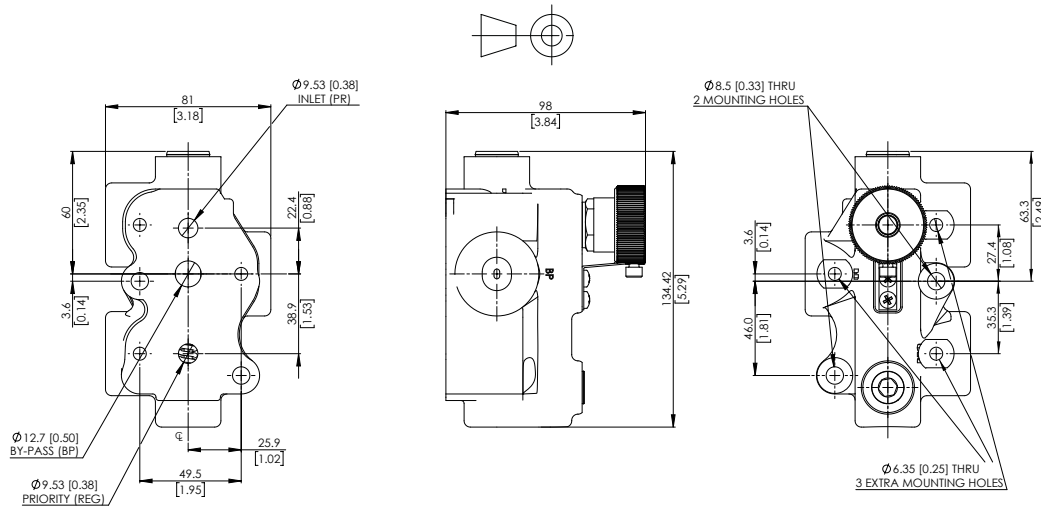
RV2FV2V (Internal Relief Valve Between Priority and By-Pass Flow Ports)



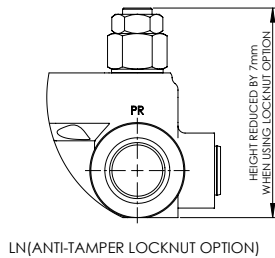
CK2FV2V (Internal Check Valve Between the Priority and Inlet Flow Ports)



### M2FV2V (Manifold Mount)



### LN (Anti-Tamper Locknut Option)

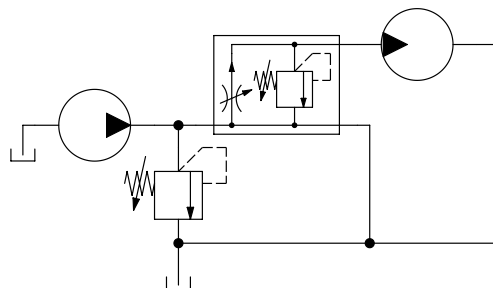


## Circuit Suggestions

### 1. Variable Speed of Hydraulic Motor Drive on Agricultural Tractor

This circuit gives the capability to vary the speed of a hydraulic motor as required. Also, for a given control knob setting, the hydraulic motor speed stays constant regardless of the tractor speed.

#### Circuit 1

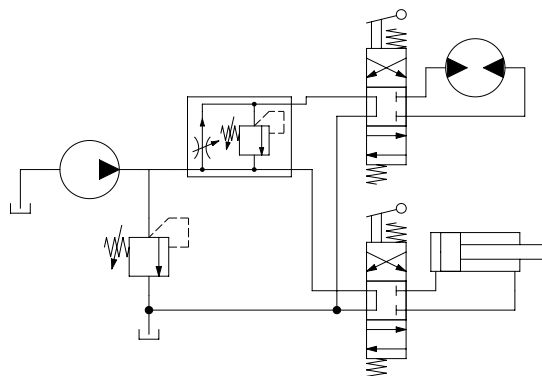


## Circuit Suggestions

### 2. Two Circuits From a Single Pump

Using only one pump, this circuit gives speed control of the hydraulic motor and powers a hydraulic cylinder. Each function can be used either simultaneously or independently because pressure variations between regulated and By-Pass flows do not effect the flow on the regulated circuit.

#### Circuit 2

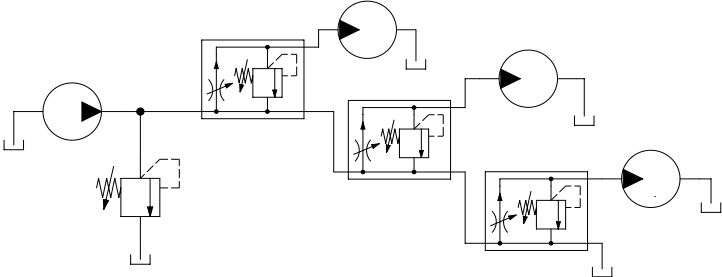


### Circuit Suggestions

#### 3. Multiple Circuits From a Single Pump

Using one pump, this circuit gives independently variable speed drive from three hydraulic motors. Motors can be used simultaneously or independently.

**Circuit 3**



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