

## Model FPW257

Description . . . . . Wet Valve Pump  
 Flow Range . . . . . To 94.4 GPM  
 Displacements . . . . . To 8.750 C.I.E.  
 Maximum Pressure to . . . . . 3500 PSI  
 Maximum Speed to . . . . . 2500 RPM  
 Rotation . . . . . A or C  
 Bearings . . . . . Journal  
 Construction . . . . . Cast Iron

### Performance Data

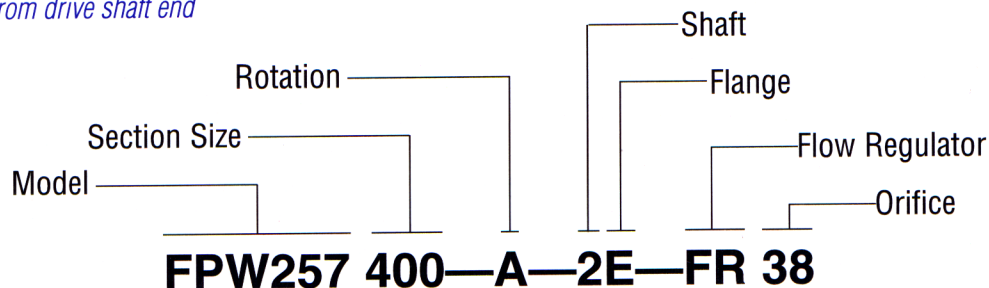
PUMP MODELS	SECTION SIZE	DISPLACEMENT/REVOLUTION (Theoretical)					MAXIMUM PRESSURE		MAXIMUM SPEED
		US Gallons	Cubic Inches	Liters	Cubic Centimeters	Imperial Gallons	PSI	BAR	RPM
		FPW257	250	.0219	5.050	.0828	82.75	.0282	3500
FPW257	300	.0262	60.06	.0993	99.31	.0219	3500	246	2500
FPW257	350	.0306	7.070	.1159	115.86	.0255	3500	246	2500
FPW257	400	.0350	8.080	.1324	132.41	.0291	3200	220	2500
FPW257	450	.0379	8.750	.1434	143.39	.0316	3000	207	2500

**CAUTION:** "Inlet vacuum" should not exceed 5" Hg at normal operating speed and temperature. Operation of pumps in excess of 5" Hg requires factory approval.

When sizing pumps, refer to the performance charts in the back of the catalog to determine the volumetric efficiency and input horsepower requirements.

### How To Order

'A' denotes counterclockwise rotation  
 'C' denotes clockwise rotation  
 When viewed from drive shaft end



Note: Add prefix 'V' to pump model number (VFPW257) when ordering pumps with Viton Seals for use with phosphate ester base fluids.

# Built-In Benefits

### New Patented Standby Mode Eliminates Dry Valves or Clutches

The new "stand-by" mode is provided by an air actuated integral system.

### No External Bleed Valves or Associated Hardware Needed

There is no wasted pump flow in the pumping mode.

### Very Low Standby Pressure

The power requirements are lower than most dry valve systems (50 PSI or less).

### Rugged Cast Iron Body

Exceptional resistance to pressure spikes and contamination for long life.

### 10 Tooth Gear Design

Provides high efficiency and contamination resistance for demanding applications.

### Pressures to 3000 PSI

Flexibility for almost any application.

### Large Diameter Journal

Large shafts and journal bearings allow high pressure use with a long life.

### New Pressure Balanced Design

One piece pressure balance design simplifies assembly and service.

### Light Weight

This creative new design is more compact, has fewer parts, and is lighter than comparable pumps.

### Eliminates Need for Large Flow Capacity By-Pass Line to Reservoir

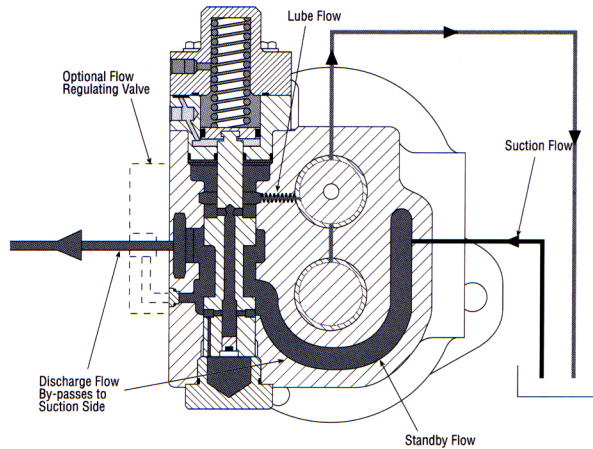
# Operation

The new "stand-by" mode of the Model FPW257 allows you to direct-mount the pump without clutches, dry valves or PTOs. This by-pass feature has low power requirements in the standby mode and eliminates the need for external bleed valves.

### Stand-By Mode

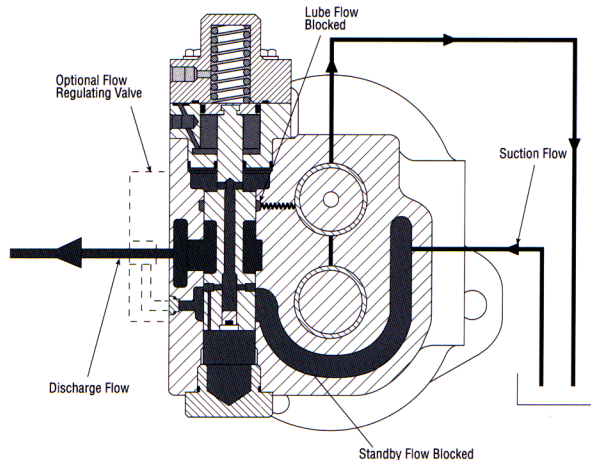
In the standby mode, the integral air shifted valve allows the pump flow to be by-passed to the inlet side of the pump. This is done with very little pressure loss, therefore the power demand is very low. At the same time, some of the flow is routed through the journal bearing area to lubricate and cool the bearings.

Because all flow is internal to the pump, there is no need to provide an external bleed valve. The only requirement is for a bearing drain line direct to the reservoir.



### Pumping Mode

In the pumping mode, the valve blocks the internal coring so that full pump flow is available for work.

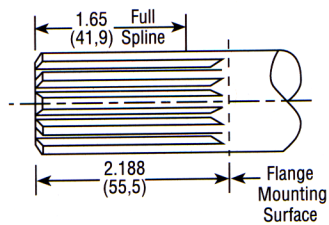


## Shafts Available

**1**

### 1-1/4" 14 Tooth Spline

Torque Limit 655 Lbs. Ft. (888, Nm)



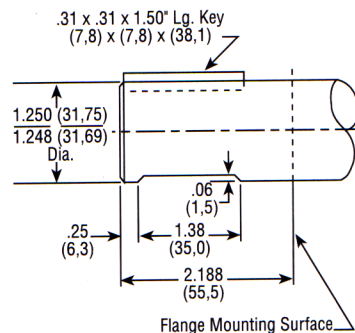
**Spline Data**

Diametral Pitch ..... 12/24  
 Pressure Angle ..... 30°  
 No. Of Teeth ..... 14

**2**

### 1-1/4" Straight Shaft

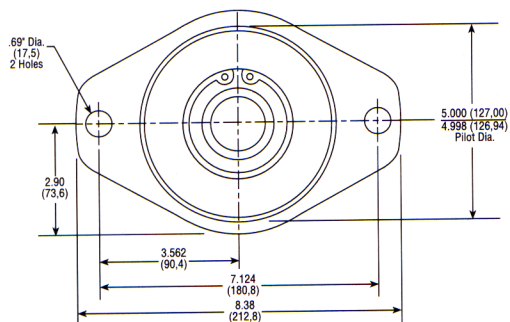
Torque Limit 655 Lbs. Ft. (888, Nm)



## Mounting Flanges Available

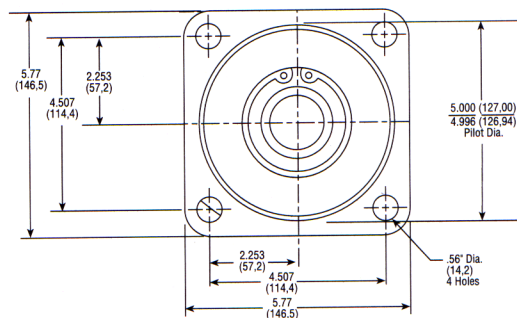
**F**

### SAE 'C' 2-Bolt



**E**

### SAE 'C' 4-Bolt



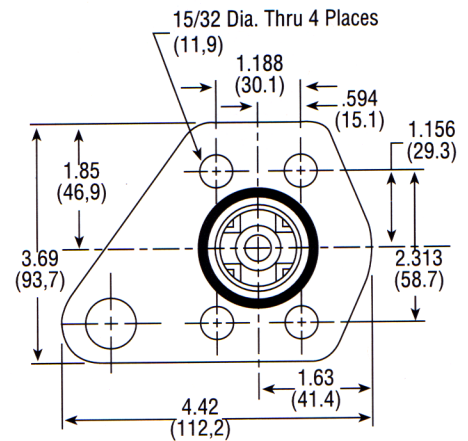
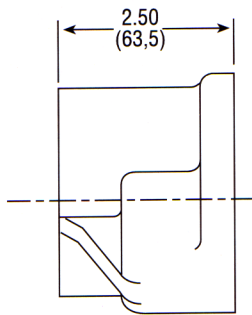
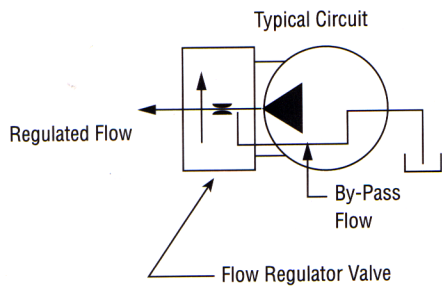
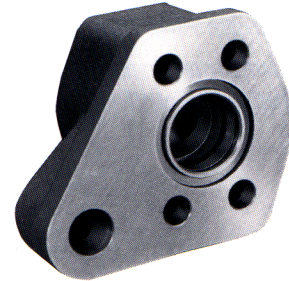
See "General Product & Safety Information" on inside front cover of this catalog



# Flow Regulator Valve (FR) — Option

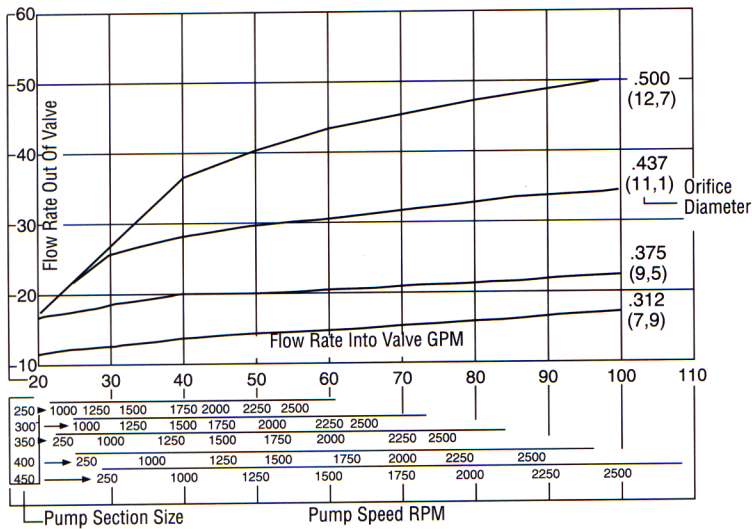
The by-pass flow regulator allows the excess flow above the regulated flow to be by-passed for return to pump suction. Typically, they are used for limiting flow to refuse packer circuits. The valve is designed to be bolted directly to the discharge port of the FPW257 Model pump with a 1-1/4" SAE 4-bolt connector pattern.

*Note: The excess flow can not be used for secondary circuits.*



## Performance Data

Flow Characteristic Curves



### Standard Orifice Sizes Available:

- 31 — .312" Part No. 34024-A
- 38 — .375" Part No. 34024-B
- 44 — .438" Part No. 34024-C
- 50 — .500" Part No. 34024-D

See chart to determine correct size.

### Please Note:

To order separately, place order from the Service Kits and Parts Catalog No. H609-LP.

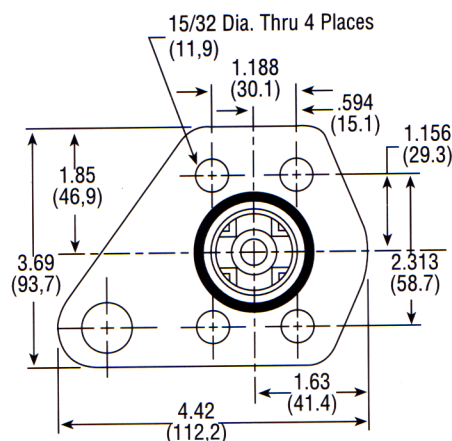
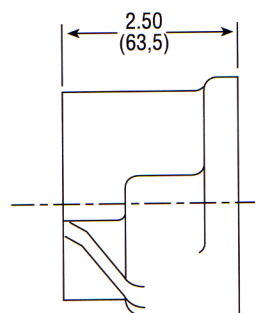
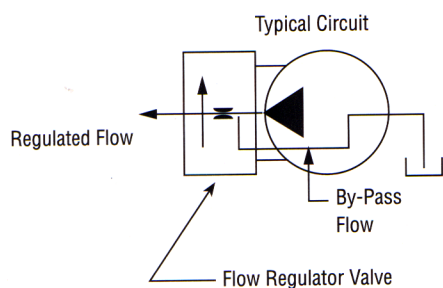
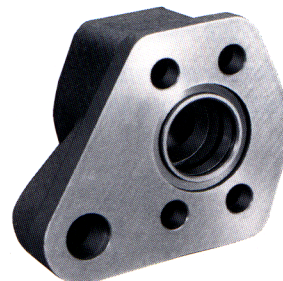
To order with pump, order as part of pump model number.

See HOW TO ORDER section of this catalog.

# Flow Regulator Valve (FR) — Option

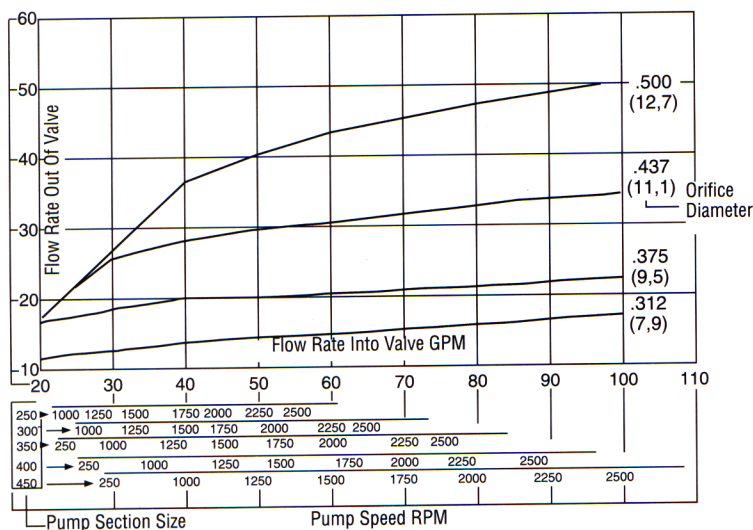
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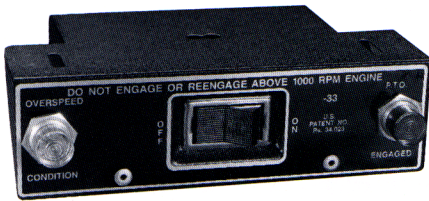
See HOW TO ORDER section of this catalog.

## Accessories — With Electronic Overspeed Control

The Electronic Overspeed Control is an electro-magnetic switch that prevents the pump and driven equipment from being operated at excessive speeds. This is done by automatically switching from the pumping mode to the we mode, whenever a pre-set overspeed RPM is exceeded.

The Electronic Overspeed Control reads true mechanical pump speed, which provides highly reliable overspeed control to reduce possible damage to hydraulic components. Once it is installed, it is virtually tamperproof, making it very difficult for operators to tamper with the speed settings.

*Note: It is strongly recommended that all installations include a "Pressure Protection Valve" to ensure the vehicle air pressure is maintained in case of a line or fitting failure in the pump control system.*



COMPLETE Electronic Overspeed Control Package contains:

- Electronic Overspeed Control Package w/flow regulator
    - ◆ Electronic Overspeed Control Package
      - Pressure switch
      - Protection valve
    - Electronic Overspeed Package
      - Transducer
    - Indicator Package
    - Hose Package
      - Drain Line Kit
      - Pneumatic Tubing Kit
- (Contains enough fittings and tubing for normal installation.)

## Accessories

Item No.	Item Description	Part No.
A	<b>COMPLETE</b> Manual Air Shift Package (consists of items 4, 7, 8, 9 & 10)	29884
B	<b>COMPLETE</b> Solenoid Air Shift Package (consists of items 5, 7, 8, 9 & 10)	29885
C	<b>COMPLETE</b> Electronic Overspeed Control Package (consists of items 6, 7, 8, 9 & 10)	29886
1	Manual Air Shift Package (Consisting of accessory items 4, 7, & 8)	17514
2	Solenoid Air Shift Package (Consisting of accessory items 5, 7, & 8)	17515
3	Electronic Overspeed Control Package (Consisting of accessory items 6, 7, & 8)	17516
4	Manual Valve Package	17508
5	Solenoid Valve Package	17509
6	Overspeed Control Package	17510
7	Indicator Package	17506
8	Hose Package	17507
9	Pressure Switch (Air)	16117
10	Protection Valve (Air)	16393
11	Transducer	16174