



4 Frame Piston Pump

Standard Brass Models	333,430
Stainless Steel Models	331,431
Pulse Pump Models	335,435

FEATURES

Superior Design

- Triplex Uniflow design provides continuous forward liquid flow for smooth operation.
- Wetted cups and floating pistons are lubricated and cooled by pumped liquid for long cup life.
- Mechanically actuated inlet valves give strong lift and easy prime.
- 304 stainless steel discharge valves for wear resistance.
- Oil bath crankcase assures optimum lubrication.
- 100% wetted seal design allows pumped liquid to cool and lubricate for longer life.

Quality Materials

- Cylinder and sleeve wear surfaces are hard chrome plated 304 stainless steel for maximum durability and abrasion resistance.
- Chrome plated, brass manifolds and optional stainless steel manifolds are strong and corrosion resistant.
- Special high strength TNM connecting rods offer superior bearing quality strength.
- Chrome-moly crankshaft gives unmatched strength and surface hardness.
- Oversized crankshaft bearings with greater loading capacity mean longer bearing life.

Easy Maintenance

- Stepped stainless steel piston rod with chrome-plated, stainless steel sleeve allows easy replacement from front of pump.
- All wet-end wear parts are easily serviced without entering crankcase, requiring less time and effort.
- Wear parts are available in convenient kits.

⚠ WARNING

All systems require both a primary pressure regulating device (i.e., regulator, unloader) and a secondary pressure safety relief device (i.e., pop-off valve, safety valve). Failure to install such relief devices could result in personal injury or damage to the pump or to system components. CAT PUMPS does not assume any liability or responsibility for the operation of a customer's high pressure system.

SPECIFICATIONS

U.S. Measure

Metric Measure

MODEL 333, 331, 335

Flow	4.0 GPM	(15 L/M)
Pressure Range	100 to 1200 PSI	(7 to 85 BAR)
RPM	1070 RPM	(1070 RPM)
Bore	0.709"	(18 mm)

MODEL 430, 431, 435

Flow	5.0 GPM	(19 L/M)
Pressure Range	100 to 1000 PSI	(7 to 70 BAR)
RPM	1040 RPM	(1040 RPM)
Bore	0.787"	(20 mm)

COMMON SPECIFICATIONS

Stroke	0.768"	(19.5 mm)
Crankcase Capacity	21 oz.	(0.6 L)
Maximum Liquid Temperature	160°	(71°C)

Above 130°F call CAT PUMPS for inlet conditions and elastomer recommendations.

Inlet Pressure Range	-8.5 to +40 PSI	(-0.6 to +2.8 BAR)
Inlet Ports (1)	1/2" NPTF	(1/2" NPTF)
Auxiliary Port (1)	1/4" NPTF	(1/4" NPTF)
Discharge Ports (2)	3/8" NPTF	(3/8" NPTF)
(1)	1/2" NPTF	(1/2" NPTF)
Pulley Mounting	Either Side	(Either Side)
Shaft Diameter	0.650"	(16.5 mm)
Weight	17.7 lbs.	(8.0 kg)
Dimensions	12.56 x 8.8 x 5.33"	(319 x 223 x 135.5mm)

ELECTRIC HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE			MOTOR PULLEY SIZE	
	U.S. GPM	L/M	PSI 800	PSI 1000	PSI 1200	Using 1725 RPM Motor & Std. 8" Pump Pulley O.D.	
			BAR 55	BAR 70	BAR 85	RPM	Pulley O.D.
333,331,335	4.0	15	2.2	2.7	3.3	1070	5.0
	3.0	11.4	1.6	2.1	2.5	803	3.8
	2.0	7.6	1.1	1.4	1.6	535	2.5
430,431,435	5.0	19	2.7	3.4	N/A	1040	5.1
	4.0	15	2.2	2.7	N/A	832	4.1
	3.0	11.4	1.6	2.1	N/A	624	3.1

DETERMINING THE PUMP R.P.M.	$\frac{\text{Rated G.P.M.}}{\text{Rated R.P.M.}}$	=	$\frac{\text{"Desired" G.P.M.}}{\text{"Desired" R.P.M.}}$
DETERMINING THE REQUIRED H.P.	$\frac{\text{GPM x PSI}}{1460}$	=	Electric Brake H. P. Required
DETERMINING MOTOR PULLEY SIZE	$\frac{\text{Motor Pulley O.D.}}{\text{Pump R.P.M.}}$	=	$\frac{\text{Pump Pulley O.D.}}{\text{Motor R.P.M.}}$

See complete Drive Packages [Includes: Pulleys, Belts, Hubs, Key] Tech Bulletin 003. Refer to pump **Service Manual** for repair procedure, additional technical information and **pump warranty**.

"Customer confidence is our greatest asset"