

Pump and Motor sold separately

Axial Plunger Pumps

Models **1LX100**
1LX125
1LXB100

FEATURES

- Low amp draw for compatibility with portable machines.
- Smooth, quiet operation for sound sensitive areas.
- Special Hi-Pressure and Lo-Pressure Seals offer exceptional life.
- RTP heat resistant fluid end and Regulator.
- Mechanically actuated plungers offer greater efficiency.
- Direct coupled motors for compact, easy assembly or convenient belt drive mounting option.
- Pump comes with oil in the crankcase.

INSTALLATION: Connect a flexible hose equal to or one size larger than the inlet port at the **bottom** of the pump body. Connect a flexible high pressure hose to the regulator discharge port at the **side of the regulator**. Connect a by-pass hose to the **bottom port of the regulator** and run to drain or supply tank.

CAUTION

Do not over tighten the RTP pump or regulator body.

SPECIFICATIONS

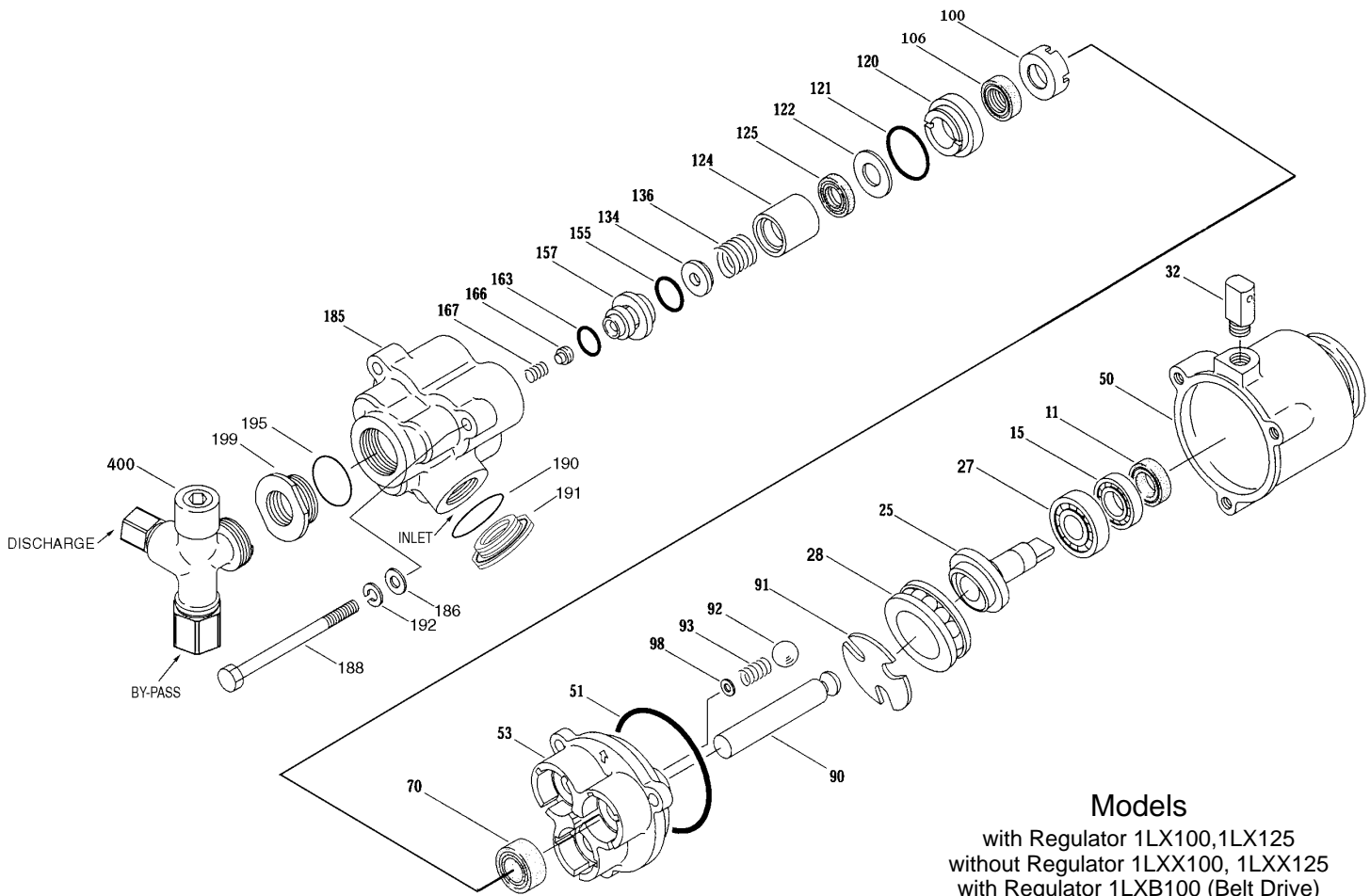
	U.S. Measure	Metric Measure
MODELS 1LX100, 1LXB100		
Flow	1.0 GPM	(3.8 L/M)
Stroke	0.29"	(7.4 mm)
MODEL 1LX125		
Flow	1.25 GPM	(4.75 L/M)
Stroke	0.35"	(8.9 mm)
COMMON SPECIFICATIONS		
Max. Discharge Pressure	500 PSI	(35 BAR)
Max. Inlet Pressure	Flooded to +20 PSI	(Flooded to +1.4 BAR)
RPM	1725 RPM	(1725 RPM)
Bore	0.47"	(12 mm)
Crankcase Capacity	2.23 oz.	(66 ml)
Max. Liquid Temperature	160°F	(71°C)
Inlet Fitting (1)	1/2" NPTF	(1/2" NPTF)
By-Pass Ports (1)	1/4" NPTF	(1/4" NPTF)
Discharge Ports (1)	1/4" NPTF	(1/4" NPTF)
Manifold Fitting	3/8" NPTF	(3/8" NPTF)
Weight	2.65 lbs.	(1.2 kg)
Dimensions	4.4 x 3.2 x 8.4"	(112 x 81 x 212 mm)

HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE			RPM
			PSI 100	PSI 300	PSI 500	
	U.S. GPM	L/M	BAR 7	BAR 21	BAR 35	
1LX100, 1LXB100	1.0	3.8	.05	.20	.34	1725
1LX125	1.25	4.75	.08	.24	.42	1725

"Customer confidence is our greatest asset"

EXPLODED VIEW



Models
with Regulator 1LX100, 1LX125
without Regulator 1LXX100, 1LXX125
with Regulator 1LXB100 (Belt Drive)

June 2000

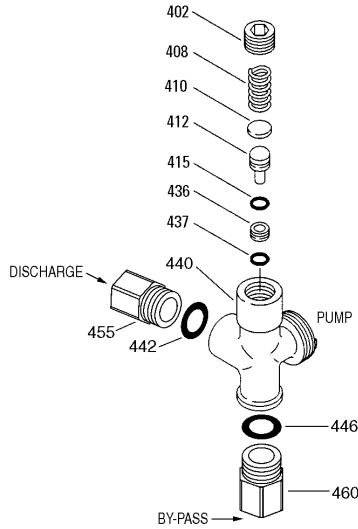
PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	MODEL USED	QTY	ITEM	P/N	MATL	DESCRIPTION	MODEL USED	QTY
11	100552	NBR	Seal, Oil, Crankcase - 70D		1	155	17549	NBR	O-Ring, Cylinder - 70D		3
15	19585	STL	Bearing, Inner		1	157	48326	RTP	Seat, Inlet/Discharge		3
25	48336	STL	Cam, Offset	1LX100	1	163	48348	NBR	O-Ring, Seat - 70D		3
—	48455	STL	Cam, Offset	1LX125	1	166	48327	HT	Valve		3
27	12693	STL	Bearing, Outer	1LX100, 1LX125	1	167	48340	S	Spring, Coil		3
28	48346	STL	Bearing, Thrust		1	185	48319	RTP	Manifold		1
32	48330	RTP	Cap, Oil Filler/Drain		1	186	12488	STZP	Washer, Flat (M6)		3
50	48314	AL	Cover, Crankcase		1	188	82195	STZP	Bolt, Manifold		3
51	14029	NBR	O-Ring, Crankcase - 70D		1	190	13973	NBR	O-Ring, Mfld, I.F.		1
53	48317	RTP	Crankcase		1	191	48580	BB	Fitting, Inlet 1/2 NPT		1
70	29250	NBR	Seal, Oil, Crankcase		3	192	12502	STZP	Lockwasher (M6)		3
90	48333	STCP	Plunger (M12x78)		3	195	13982	NBR	O-Ring, Mfld, D.F.	1LXX100, 1LXX125	1
91	48316	STL	Plate, Guide		1	199	48574	BB	Fitting, Discharge 3/4-14 NPSM x 3/8 NPTF	1LXX100, 1LXX125	1
92	48337	STL	Ball		1	255	35950	—	Kit, Mounting	1LX100, 1LX125	1
93	48338	STL	Coil Spring		1	● 275	33836	—	Assembly, Drive Mount	1LXB100	1 ●
98	20020	STL	Washer		2	298	33419	—	Assembly, Drive (Incls: 11,15,25,27,28,32,50,51,53,70,90-93,98)	1LX100	1
100	48318	RTP	Retainer, Seal		3	33416	—	Assembly, Drive (Incls: 11,15,25,27,28,32,50,51,53,70,90-93,98)	1LX125	1	
106	48323	NBR	Seal, LPS		3	300	33451	NBR	Kit, Seal (Incls: 106,121,125)		1
120	48320	RTP	Case, Seal		3	310	33452	NBR	Kit, Valve (Incls: 134,136,155,157,163,166,167)		1
121	13977	NBR	O-Ring, Seal Case - 70D		3	400	7550	RTP	Regulator Assembly	1LX100, 1LX125	1
122	48324	S	Washer, HPS		3						
124	48321	RTP	Cylinder		3						
125	48322	STG	Seal, HPS		3						
134	48325	NY	Valve, Inlet		3						
136	48339	S	Spring, Coil, Inlet		3						

● Industrial discount. *Italics are optional items.*

MATERIAL CODES (Not Part of Part Number): AL=Aluminum HT=Hi-Temp (EPDM Alternative) NY=Nylon NBR=Medium Nitrile (Buna-N)
RTP=Reinforced Composite S=304SS STG=Special Blend (Teflon®) White STCP=Steel/Chrome Plated STL=Steel STZP=Steel/Zinc Plated

7550 REGULATOR EXPLODED VIEW



PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
	7550	—	Regulator Assembly	1
402	48329	RTP	Screw, Adjustment, Allen	1
408	48341	STZP	Spring, Coil	1
410	45862	BB	Retainer, Spring	1
412	48342	S	Stem, Piston	1
415	14160	FPM	O-Ring, Stem - 80D	1
436	48343	S	Seat	1
437	14196	FPM	O-Ring, Seat	1
440	48328	RTP	Body	1
442	11343	NBR	O-Ring, Fitting	1
446	11343	NBR	O-Ring, Fitting	1
455	25144	BB	Fitting, By-Pass (1/4" NPTF)	1
460	25144	BB	Fitting, Discharge (1/4" NPTF)	1
468	33418	FPM	Kit, O-Ring, (Incls: 415,436,437)	1

Italics are optional items.

MATERIAL CODES (Not Part of Part Number):

BB=Brass FPM=Fluorocarbon (Viton®) NBR=Medium Nitrile (Buna-N)
RTP=Reinforced Composite S=304SS STZP=Steel/Zinc Plated

OPERATION: The 1LX pumps are axial plunger pumps. Special direct drive motors are secured to the pump with a V-Clamp Mounting or Belt Drive option.

The motor rotates the offset cam and guide plate which is connected to the three plungers. Each plunger moves forward at a different stage of the cam rotation, providing a smooth, forward, liquid flow through the pump.

On the back stroke, the liquid enters the inlet chamber and flows through each inlet valve. As the stroke reaches the forward position, the inlet valve closes.

On the forward stroke, the liquid goes through the seat and forces the discharge valve to open to allow the liquid out the regulator discharge port.

TORQUE CHART

Item	Size	in.lbs.	Nm
Pump Inlet	1/2"	25	3
Unloader Discharge	1/4"	50	6
Unloader By-Pass	1/4"	25	3
Clamp Screw	10-32	20	2.4

For warranty consideration, please contact CAT PUMPS for local Service Center. If you are uncertain as to the cause of failure (pump or motor), secure a Returned Goods Authorization Number and return the complete assembly to CAT PUMPS for evaluation.

MOTOR SPECIFICATIONS

Pump and Motor Unit 1LX100D331 Pump Model 1LX100* – Motor Model 8088

Horsepower	1/3	
Shaft	Clamp Coupling	
Hertz	50/60	
Phase	Single	
Max. Volts.....	115/230	
FULL LOAD AMPS.....	3.0	
RPM	1425/1725	
Frame Size (Barrel-Carbonator Type).....	48	
Service Factor	1.15	
U. L. Reference No.	E22922	
CSA Reference No.	LR2459	
CE Reference No.	Pending	
	U.S. Measure	Metric Measure
Weight (Motor)	20.0 lbs.	(9.1 kg)
Weight (Unit).....	22.65 lbs.	(10.3 kg)
Weight (4-pack)	90.6 lbs.	(41.2 kg)
Mounting Assy.....	35950	
Dimensions	15.36 x 7.63 x 7.81"	(390.14 x 193.8 x 198.37 mm)

*Sold in 4-pack

Pump and Motor Unit 1LX125D501 Pump Model 1LX125* – Motor Model 8089

Horsepower	1/2	
Shaft	Clamp Coupling	
Hertz	50/60	
Phase	Single	
Max. Volts.....	115/230	
FULL LOAD AMPS.....	5.0	
RPM	1425/1725	
Frame Size (Barrel-Carbonator Type).....	48	
Service Factor	1.15	
U. L. Reference No.	E22922	
CSA Reference No.	LR2459	
CE Reference No.	Pending	
	U.S. Measure	Metric Measure
Weight (Motor)	21.25 lbs.	(9.65 kg)
Weight (Unit).....	23.9 lbs.	(10.9 kg)
Weight (4-pack)	95.6 lbs.	(43.6 kg)
Mounting Assy.....	35950	
Dimensions	16.92 x 7.63 x 7.81"	(429.76 x 193.8 x 198.37 mm)

*Sold in 4-pack

Pump Model 1LXB100* – Motor Model 8090

Horsepower	1/3	
Shaft.....	Solid w/Keyway	
Hertz	60	
Phase	Single	
Max. Volts.....	115/230	
FULL LOAD AMPS.....	3.4	
RPM	1725	
Frame Size	56C	
Service Factor	1.15	
U. L. Reference No.	E22922	
CSA Reference No.	LR2459	
CE Reference No.	Pending	
	U.S. Measure	Metric Measure
Weight (Motor)	16.25 lbs.	(7.37 kg)
Weight (Unit).....	21.97 lbs.	(9.96 kg)
Mounting Assy.....	33836	
Dimensions.....	12.4 x 10.2 x 7.81"	(314.96 x 259.1 x 198.37 mm)

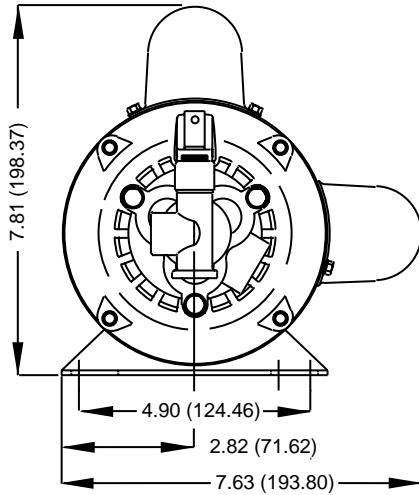
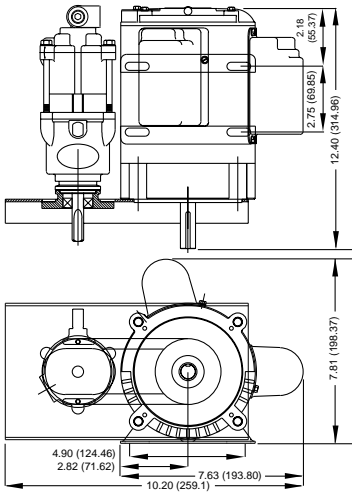
*Sold in 4-pack

WARRANTY

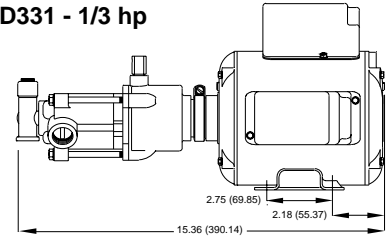
6 Month Warranty

Refer to complete CAT PUMPS Warranty for further information.

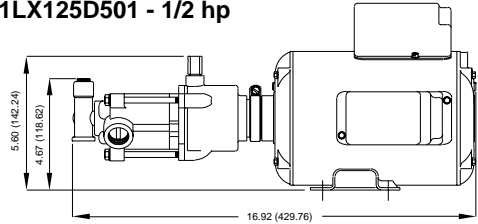
1LXB100D331 - 1/3 hp



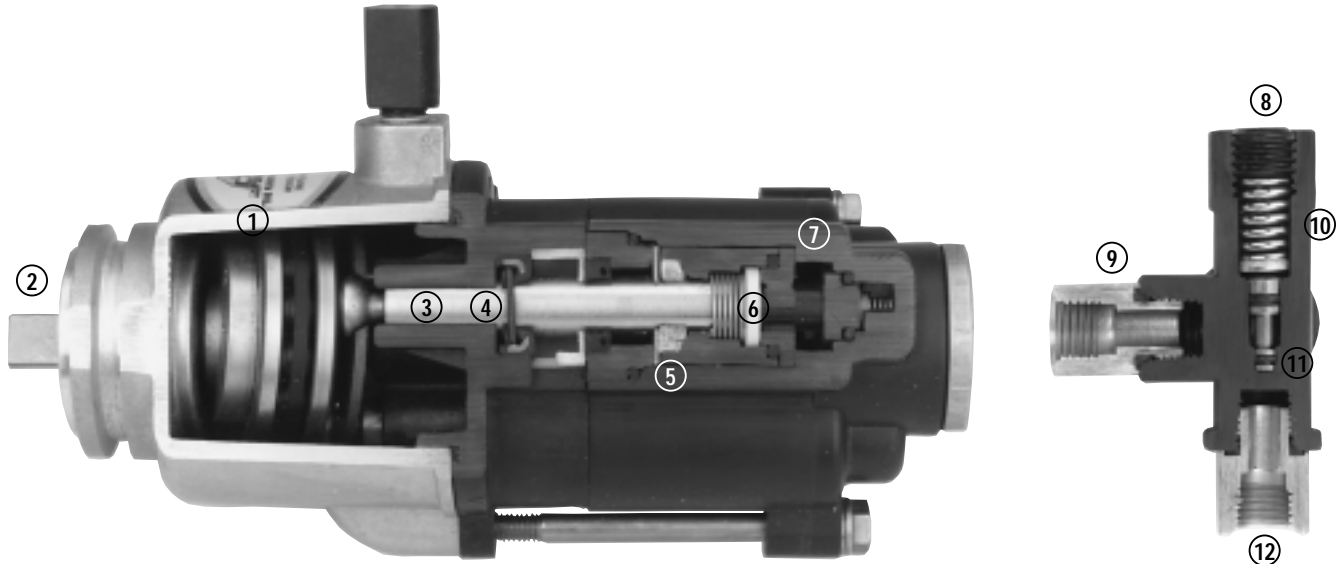
1LX100D331 - 1/3 hp



1LX125D501 - 1/2 hp



Models 1LX100, 1LX125, 1LXB100



- 1 High strength, lightweight, die cast aluminum **crankcase**.
- 2 Direct coupled, **clamp mounting** for easy, compact assembly and disassembly.
- 3 360° guided, mechanically actuated **plungers** offer precise flow with greater efficiency.
- 4 Spring reinforced **oil seal** separates crankcase from liquid end and allows easy maintenance of Lo-Pressure and Hi-Pressure Seals.

- 5 CAT PUMP exclusive, **Hi-Pressure Seals** offer exceptional performance and unmatched seal life with high temperature liquids.
- 6 Spring guided **inlet valve** design offers positive seating and a smooth, consistent flow.
- 7 Lightweight, heat-resistant RTP **liquid end** and **Regulator** offer extended life.

- 8 Easy access **adjusting screw** for precise pressure adjustment and servicing.
- 9 Ultra **compact design** and threaded back port permits direct mounting on manifold head.
- 10 RTP heat and chemical resistant **body**.
- 11 Stainless Steel **piston and seat** for multiple cycle durability.
- 12 Bottom **by-pass port** redirects liquid if discharge line becomes blocked protecting pump from over pressure.

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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