



Pump and Motor sold separately

## Axial Plunger Pumps

Models

**1LX100**  
**1LX125**

### 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.

### SPECIFICATIONS

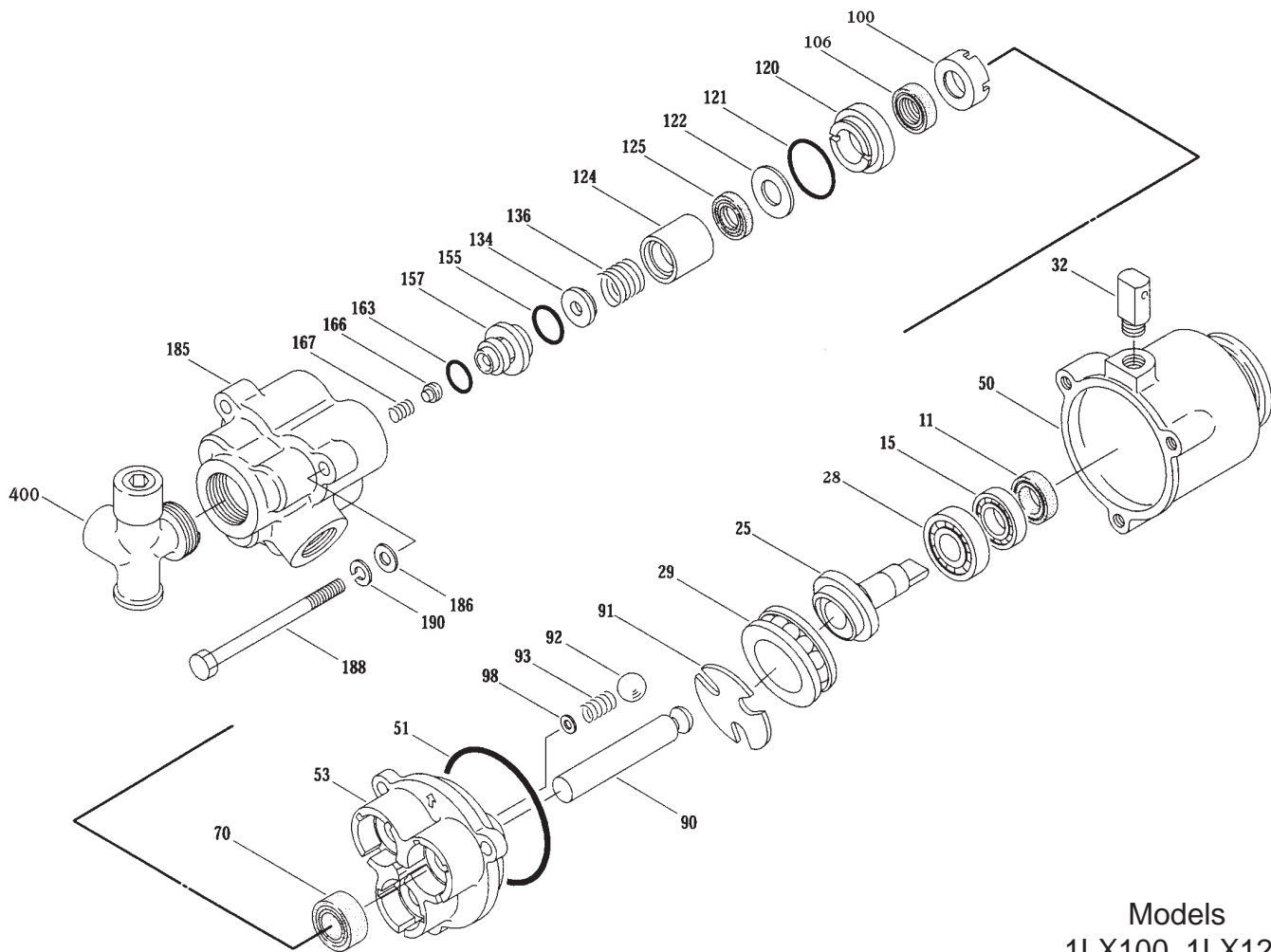
	U.S. Measure	Metric Measure
<b>MODEL 1LX100</b>		
Volume .....	1.0 GPM	(3.8 L/M)
Stroke .....	.029"	(7.4 mm)
<b>MODEL 1LX125</b>		
Volume .....	1.25 GPM	(4.75 L/M)
Stroke .....	.035"	(8.9 mm)
<b>COMMON SPECIFICATIONS</b>		
Max. Discharge Pressure .....	500 PSI	(35 BAR)
Max. Inlet Pressure .....	Flooded to +20 PSI	(Flooded to +1.4 BAR)
RPM .....	1725 RPM	(1725 RPM)
Bore .....	.047"	(12 mm)
Crankcase Capacity .....	2.36 oz.	(70 L)
Max. Fluid Temperature .....	160°F	(71°C)
Inlet Ports .....	1/2" NPT	(1/2" NPT)
Discharge Ports .....	1/4" NPT	(1/4" NPT)
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	PSI	PSI	
	U.S. GPM	L/M	100	300	500	
			BAR	BAR	BAR	
			7	21	35	
<b>1LX100</b>	1.0	3.8	.05	.20	.34	1725
<b>1LX125</b>	1.25	4.75	.08	.24	.42	1725

*“Customer confidence is our greatest asset”*

# EXPLODED VIEW



Models  
1LX100, 1LX125  
August 1998

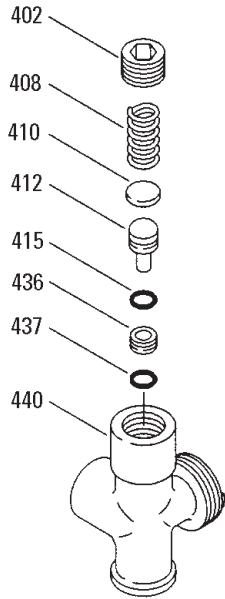
## PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY	ITEM	P/N	MATL	DESCRIPTION	QTY
11	100552	NBR	Seal, Oil, Crankcase	1	124	48321	RTP	Cylinder	3
15	19585	STL	Bearing, Inner	1	125	48322	HT	Seal, HPS	3
25	48336	STL/AL	Cam, Offset - 1LX100	1	134	48325	HT	Valve, Inlet	3
—	48455	STL/AL	Cam, Offset - 1LX125	1	136	48339	S	Spring, Coil, Inlet	3
27	12693	STL	Bearing, Outer	1	155	17549	NBR	O-Ring, Cylinder	3
28	48346	STL	Bearing, Thrust	1	157	48326	RTP	Seat, Inlet/Discharge	3
32	48330	RTP	Cap, Oil Filler/Drain	1	163	48348	NBR	O-Ring, Seat	3
50	48314	AL	Cover, Crankcase	1	166	48327	HT	Valve	3
51	14029	NBR	O-Ring, Crankcase	1	167	48340	S	Spring, Coil	3
53	48317	RTP	Crankcase	1	185	48319	RTP	Manifold	1
70	29250	NBR	Seal, Oil, Crankcase	3	186	12488	STZP	Washer	3
90	48333	STCP	Plunger	3	188	82195	STZP	Bolt, Manifold	3
91	48316	STL	Plate, Guide	1	190	12502	STZP	Washer, Lock	3
92	48337	STL	Ball	1	255	35950		<i>Mounting, Assy (Incls: 34924,6106)</i>	1
93	48338	STL	Coil Spring	1	298	33419		<i>Drive Assembly - 1LX100</i>	1
98	20020	STL	Washer	2				<i>(Incls: 11,15,25,27,28,32,50,51,53,70,90-93,98)</i>	
100	48318	RTP	Retainer, Seal	3		33416		<i>Drive Assembly - 1LX125</i>	1
106	48323	NBR	Seal, LPS	3				<i>(Incls: 11,15,25,27,28,32,50,51,53,70,90-93,98)</i>	
120	48320	RTP	Case, Seal	3	300	33451	NBR	<i>Kit, Seal (Incls: 106,121,125)</i>	1
121	13977	NBR	O-Ring, Seal Case	3	310	33452	NBR	<i>Kit, Valve (Incls: 134,136,155,157,163,166,167)</i>	1
122	48324	S	Washer, HPS	3	400	7550	RTP	<i>Regulator Assembly (Included w/pump)</i>	1

*Italics are optional items.*

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

## 7550 REGULATOR EXPLODED VIEW



### PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
400	7550	—	Regulator Assembly	1
402	48329	RTP	Screw, Adjustment, Allen	1
408	48341	STZP	Spring, Coil	1
410	45862	STZP	Retainer, Spring	1
412	48342	S	Stem, Piston	1
415	14759	NBR	O-Ring, Stem	1
436	48343	S	Seat	1
437	25300	NBR	O-Ring, Seat	1
440	48328	RTP	Body	1
468	33418	NBR	Kit, O-Ring, (Incls: 415,436,437)	1

*Italics are optional items.*

MATERIAL CODES (Not Part of Part Number): 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.

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, fluid flow through the pump.

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

### TORQUE CHART

Item	Size	in.lbs.	Nm
Pump Inlet	1/2"	17.35	1.96
Unloader Discharge	1/4"	21.7	2.45
Unloader By-Pass	1/4"	21.7	2.45

## MOTOR SPECIFICATIONS

### Pump and Motor Unit 1LX100D.331\*

#### 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 .....	Nema 48
Service Factor .....	1.15
U. L. Reference No. ....	E-22922
CSA Reference No. ....	LR-2459
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)
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 1LX125D.501\*

#### 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 .....	Nema 48
Service Factor .....	1.15
U. L. Reference No. ....	E-22922
CSA Reference No. ....	LR-2459
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)
Dimensions .....	16.92" x 7.63" x 7.81"      (429.76 x 193.8 x 198.37 mm)

\*Sold in 4-pack

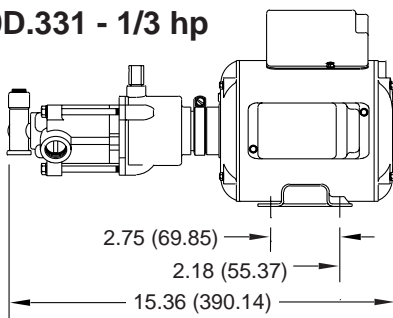
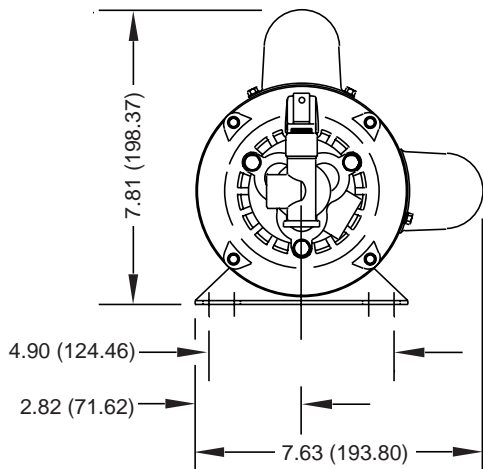
## WARRANTY

### 6 Month Warranty

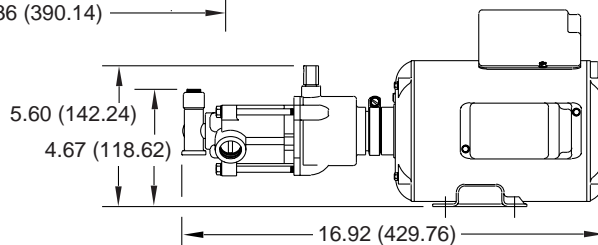
Refer to complete Cat Pump Warranty for further information.

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.

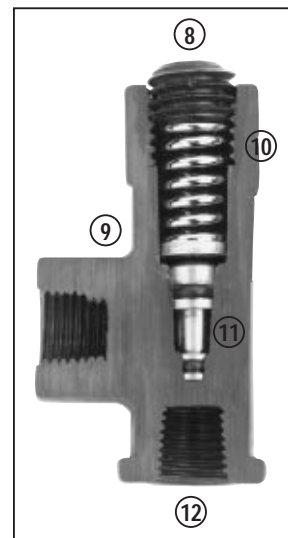
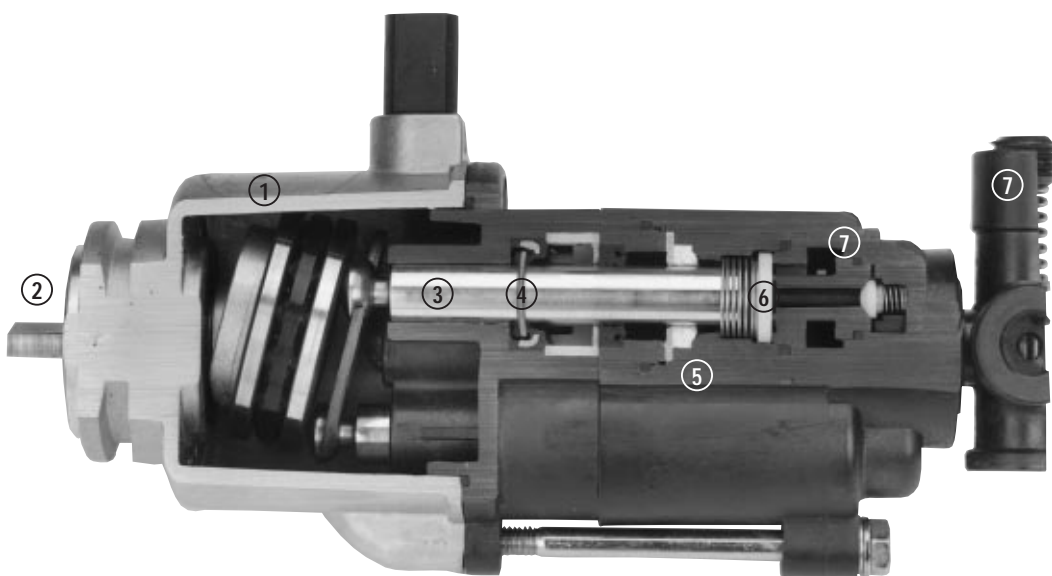
### 1LX100D.331 - 1/3 hp



### 1LX125D.501 - 1/2 hp



Models 1LX100, 1LX125



- |   |   |  |
|---|---|--|
| <p>1 High strength, lightweight, die cast aluminum <b>crankcase</b>.</p> <p>2 Direct coupled, <b>clamp mounting</b> for easy, compact assembly and disassembly.</p> <p>3 360° guided, mechanically actuated <b>plungers</b> offer precise flow with greater efficiency.</p> <p>4 Spring reinforced <b>oil seal</b> separates crankcase from fluid end and allows easy maintenance of Lo-Pressure and Hi-Pressure Seals.</p> | <p>5 CAT PUMP exclusive, <b>Hi-Pressure Seals</b> offer exceptional performance and unmatched seal life with high temperature fluids.</p> <p>6 Spring guided <b>inlet valve</b> design offers positive seating and a smooth, consistent flow.</p> <p>7 Lightweight, heat-resistant RTP <b>fluid end</b> and <b>Regulator</b> offer extended life.</p> | <p>8 Easy access <b>adjusting screw</b> for precise pressure adjustment and servicing.</p> <p>9 Ultra <b>compact design</b> and threaded back port permits direct mounting on manifold head.</p> <p>10 RTP heat and chemical resistant <b>body</b>.</p> <p>11 Stainless Steel <b>piston and seat</b> for multiple cycle durability.</p> <p>12 Bottom <b>by-pass port</b> redirects fluid if discharge line becomes blocked protecting pump from over pressure.</p> |
|---|---|--|

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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#### World Headquarters

CAT PUMPS

1681 - 94th Lane N.E. Minneapolis, MN 55449-4324

Phone (612) 780-5440 — FAX (612) 780-2958

e-mail: sales@catpumps.com

www.catpumps.com

#### International Inquiries

FAX (612) 785-4443

e-mail: intlsales@catpumps.com



The Pump with "Nine Lives"

#### CAT PUMPS (U.K.) LTD.

1 Fleet Business Park, Sandy Lane, Church Crookham, Fleet

Hampshire GU13 0BF, England

Phone Fleet 44 1252-622031 — Fax 44 1252-626655

#### N.V. CAT PUMPS INTERNATIONAL S.A.

Heiveldkens 6A, 2550 Kontich, Belgium

Phone 32-3-450.71.50 — Fax 32-3-450.71.51

e-mail: cpi@catpumps.be

#### CAT PUMPS DEUTSCHLAND GmbH

Buchwiese 2, D-65510 Idstein, Germany

Phone 49 6126-93030 — Fax 49 6126-930333

e-mail: catpumps@t-online.de