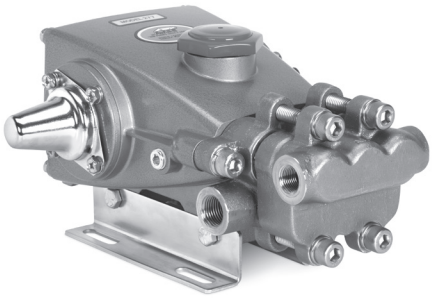
DATA SHEET
3 FRAME PLUNGER PUMPS

The Pumps with Nine Lives

Stainless Steel Models: **231, 241, 271**

Nickel Aluminum Bronze Models: **237, 247, 277**



Model 277 Shown
(Mounting rails and shaft protector sold separately)

FEATURES

- Triplex design offers high efficiency and low pulsation.
- Belt-driven option provides precision flow setting.
- Direct-drive option offers a compact footprint for electric motors with a NEMA or IEC, or SAE hydraulic motor with a bell housing/flexible coupler assembly.
- Nickel Aluminum Bronze and 316 Stainless Steel models available to suit a range of high-salinity sea water or chemicals.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

SPECIFICATIONS	U.S. Measure	Metric Measure
231, 237		
Flow	2.3 gpm	8.7 lpm
Pressure Range	100–1500 psi	6.9–103 bar
Pump RPM*	1725 rpm	1725 rpm
Stroke	0.287"	7.3 mm
241, 247		
Flow	3.6 gpm	13.6 lpm
Pressure Range	100–1200 psi	6.9–82 bar
Pump RPM*	1725 rpm	1725 rpm
Stroke	0.433"	11 mm
271, 277		
Flow	3.5 gpm	13.2 lpm
Pressure Range	100–1500 psi	6.9–103 bar
Pump RPM*	1420 rpm	1420 rpm
Stroke	0.500"	12.7 mm
ALTERNATE SPECIFICATIONS		
271, 277		
Flow	4.2 gpm	15.9 lpm
Pressure Range	100–1000 psi	6.9–69 bar
Pump RPM*	1725 rpm	1725 rpm
Stroke	0.500"	12.7 mm

* Pump minimum is 100 RPM.

COMMON SPECIFICATIONS	U.S.	Metric
Bore	0.709"	18 mm
Inlet Pressure Range	Flooded to 60 psi	Flooded to 4.1 bar
Max. Liquid Temperature (NBR)	160° F	71° C
Alternative seals available for higher temperatures up to 200° F		
Crankcase Capacity	15 oz	0.44 l
Inlet Ports (2)	½" NPT(F)	½" NPT(F)
Discharge Ports (2)	⅜" NPT(F)	⅜" NPT(F)
Shaft Diameter	0.650"	16.5 mm
Pulley Mounting	Either Side	Either Side
Weight	13.4 lbs	6.1 kg
Dimensions	10.28 x 8.78 x 5.35"	261 x 223 x 136 mm

ALTERNATIVE SEAL CONFIGURATION

MATERIAL	SUFFIX CODE	MAXIMUM TEMPERATURE	
NBR	—	160° F	(71° C)
FPM	.0110	180° F	(82° C)
EPDM	.0220	160° F	(71° C)
FFKM	.0770	200° F	(93° C)
HT	.3000	180° F	(82° C)
STHT	.3400	190° F	(88° C)

See **Tech Bulletin 002** for inlet conditions and RPM at higher temperatures.

DETERMINING THE PUMP RPM

$$\frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{Desired gpm}}{\text{Desired rpm}}$$

DETERMINING THE REQUIRED HP

$$\frac{\text{hp (Electric Brake)}}{} = \frac{\text{gpm x psi}}{1460}$$

DETERMINING MOTOR PULLEY SIZE

$$\frac{\text{Motor Pulley OD}}{\text{Pump rpm}} = \frac{\text{Pump Pulley OD}}{\text{Motor rpm}}$$

Refer to pump **Service Manual** for repair procedure and additional technical information.

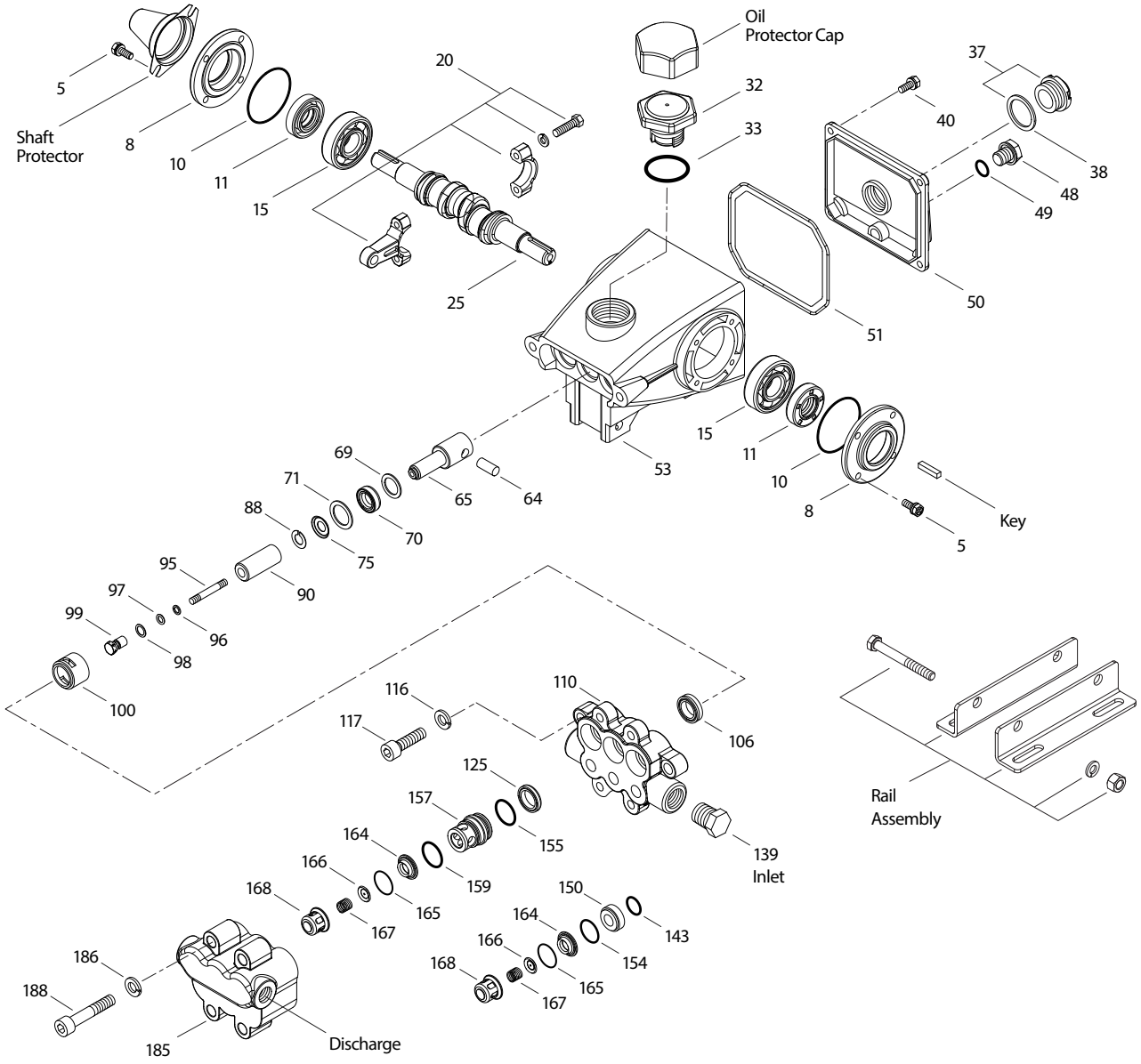
PARTS LIST

ITEM	PART NUMBER 231, 241, 271	MATL	PART NUMBER 237, 247, 277	MATL	DESCRIPTION	QTY
5	92538	S	92538	S	Screw, HHC Sems (M6 x 16) (See Tech Bulletin 074)	8
8	27950	AL	27950	AL	Cover, Bearing	2
10	26536	NBR	26536	NBR	O-Ring, Cover, Bearing	2
11	24159	NBR	24159	NBR	Seal, Oil	2
15	14487	STL R	14487	STL R	Bearing, Ball	2
20	48867	TNM	48867	TNM	Rod, Connecting Assembly (See Tech Bulletin 074)	3
25	**46946**	FCM	**46946**	FCM	Crankshaft, Dual-End (M7.3) (Models: 231, 237)	1
	46951	FCM	**46951**	FCM	Crankshaft, Dual-End (M11) (Models: 241, 247)	1
	108062	FCM	**108062**	FCM	Crankshaft, Dual-End (M12.7) (Models: 271, 277)	1
32	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	O-Ring, Oil Filler Cap	1
37	92241	PC	92241	PC	Gauge, Oil Bubble with Gasket	1
38	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge	1
40	92542	S	92542	S	Screw, HHC Sems (M6 x 20) (See Tech Bulletin 074)	4
48	25625	STCP	25625	STCP	Plug, Drain (¼" x 19 BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug	1
50	48772	AL	48772	AL	Cover, Rear	1
51	48773	NBR	48773	NBR	O-Ring, Rear Cover	1
53	128354	AL	128354	AL	Crankcase	1
64	16948	CM	16948	CM	Pin, Crosshead	3
65	45114	SSZZ	45114	SSZZ	Rod, Plunger	3
69	126259	STCP R	126259	STCP R	Washer, Oil (M24)	3
70	25301	NBR	25301	NBR	Seal, Oil	3
71	126189	STCP R	126189	STCP R	Washer, Oil Seal	3
75	43900	S	43900	S	Slinger, Barrier	3
88	45697	S	45697	S	Washer, Keyhole (M18 x 10)	3
90	43901	CC	43901	CC	Plunger (M18 x 43)	3
95	126550	STCP R	126550	STCP R	Stud, Plunger Retainer (M6 x 43)	3
96	43235	PTFE	43235	PTFE	Backup Ring, Plunger Retainer	3
97	17399	NBR	17399	NBR	O-Ring, Plunger Retainer	3
98	44041	SS	44041	SS	Gasket, Plunger Retainer (M12.5)	3
99	44031	SS	44031	SS	Retainer, Plunger (M6) (See Tech Bulletin 074)	3
100	28597	PVDF	28597	PVDF	Retainer, Seal	3
106	44053	NBR	44053	NBR	Seal, Low-Pressure with SS-Spring	3
110	**46425**	SS	**44052**	NAB	Manifold, Inlet	1
116	15847	S	15847	S	Lockwasher (M10)	2
117	87950	S	87950	S	Screw, HSH Sems (M10 x 35)	2
125	44652	SNG	44652	SNG	Seal, High-Pressure with SS-Support	3
139	**45156**	SS	**44563**	NAB	Plug, Inlet [½" NPT(M)]	1
143	17547	NBR	17547	NBR	O-Ring, Inlet Valve Adapter, Rear	3
150	44060	SS	44060	SS	Adapter, Inlet Valve	3
154	43893	NBR	43893	NBR	O-Ring, Inlet Valve Adapter, Front	3
155	26089	NBR	26089	NBR	O-Ring, Discharge Valve Adapter, Rear	3
157	44059	SS	44059	SS	Adapter, Discharge Valve	3
159	26089	NBR	26089	NBR	O-Ring, Discharge Valve Adapter, Front	3
164	44058	SS	44058	SS	Seat	6
165	44001	NBR	44001	NBR	O-Ring, Seat	6
166	543669	SS	543669	SS	Valve	6
167	44056	SS	44056	SS	Spring	6
168	44055	SS	44055	SS	Retainer, Spring	6
185	**46427**	SS	**44054**	NAB	Manifold, Discharge	1
186	15847	S	15847	S	Lockwasher (M10)	4
188	87952	S	87952	S	Screw, HSH (M10 x 55) (See Tech Bulletin 074)	4

Bold print part numbers are unique to a particular pump model. *Italics are optional items.*
For additional technical information see www.catpumps.com/literature/tech-bulletins. MATERIAL CODES (Not Part of Part Number):
ABS=ABS Plastic AL=Aluminum CC=Ceramic CM=Chrome-Moly EPDM=Ethylene Propylene Diene Monomer FCM=Forged Chrome-moly
FFKM=Perfluoroelastomer FPM=Fluorocarbon HT=Hi-Temp Special PTFE (EPDM Alternative) NAB=Nickel Aluminum Bronze NBR=Medium Nitrile (Buna-N)
PC=Poly Carbonate PE=Polyethylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SS=316SS SFTA=Special Blend PTFE
SNG=Special Blend (Buna) SSZZ=316SS/Zamak ST2=Special PTFE2 ST4=Special PTFE4 STCP=Steel/Chrome Plated STL=Steel
STZP=Steel/Zinc Plated TNM= Special High-Strength

Optional Parts and Accessories and Service Parts listed on page 3. Standard and optional Seal and Valve Kits listed on page 4.

EXPLODED VIEW



Models
Stainless Steel – 231, 241, 271
Nickel Aluminum Bronze – 237, 247, 277
March 2026

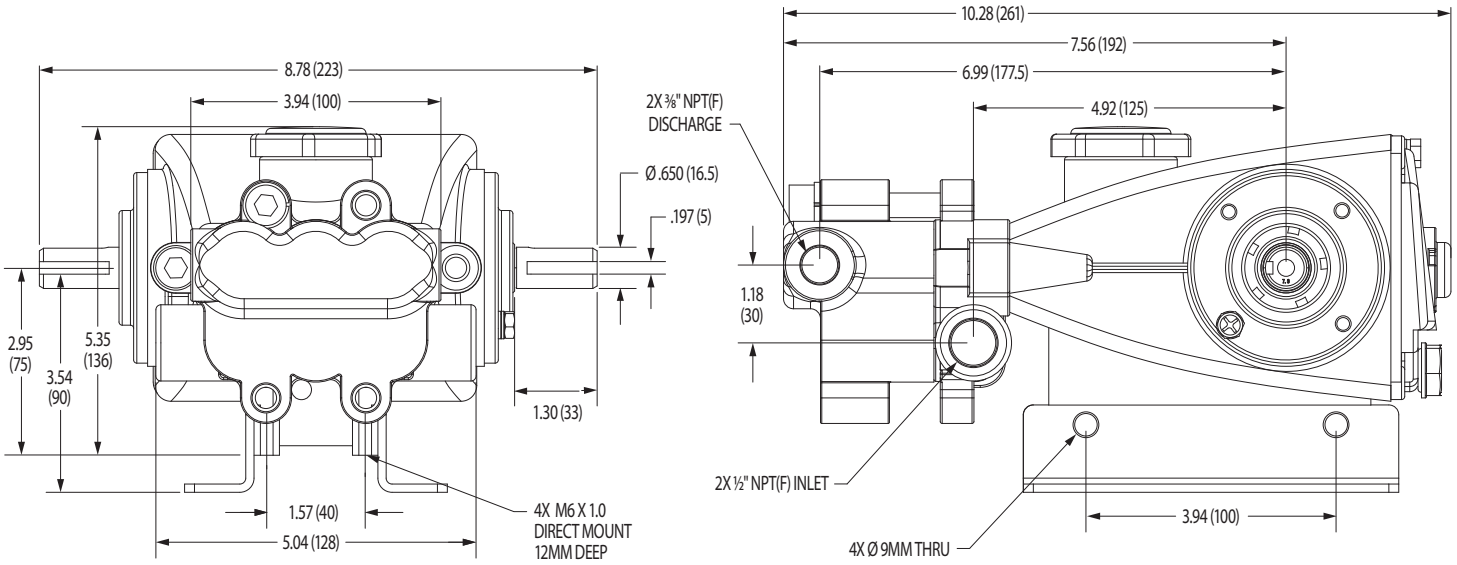
OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
30047	Key (M5 x 5 x 24)	1
30612	Assembly, Rail	1
32605	Assembly, Mount (Includes: Rail, Pulley) (Not Shown)	1
828710	Protector, Oil Cap	1
25130	Protector, Shaft	1
34334	Kit, Oil Drain (⅜" x 24") (Not Shown)	1
32603	Pulley (Includes: Key, Hub) (Not Shown)	1

SERVICE PARTS

PART	DESCRIPTION	QTY
30983	Kit, Seal – Standard NBR	1
30982	Kit, Valve – Standard NBR	1
6107	Oil, Bottle (21 oz) (Fill to Specified Crankcase Capacity Prior to Start-up)	1
6124	Gasket, Liquid (3 oz)	1
6139	Lubricant, Anti-Seize (8 oz)	1
814823	Head, Complete with NBR Seals & O-Rings (Models: 231, 241, 271)	1
815262	Head, Complete with NBR Seals & O-Rings (Models: 237, 247, 277)	1

Kits - NBR, FPM (.0110), EPDM (.0220), FFKM (.0770), HT (.3000), STHT (.3400) listed on page 4.



Models 231, 241, 271, 237, 247, 277

SEAL KITS One (1) seal kit required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	EPDM (.0220) ◆	FFKM (.0770)	HT (.3000)	STHT (.3400)
231, 237, 241, 247, 271, 277	**30983**	**33609**	**33914 ***	**76660 ***	**33915**	**30735**

ITEM (Included in Seal Kits)							DESCRIPTION	QTY
97	17399	14160	46204	701715	17399	17399	O-Ring, Plunger Retainer	3
106	44053	44926	46651	702390	44053	76243	Seal, LPS with SS-Spring	3
125	44652	44925	46652	701382	46652	46652	Seal, High-Pressure	3
143	17547	11685	46648	703308	17547	17547	O-Ring, Inlet Valve Adapter, Rear	3
154	43893	44927	46649	703307	43893	43893	O-Ring, Inlet Valve Adapter, Front	3
155	26089	11377	46647	703244	26089	26089	O-Ring, Discharge Valve Adapter, Rear	3
159	26089	11377	46647	703244	26089	26089	O-Ring, Discharge Valve Adapter, Front	3
165	44001	44928	46650	703309	44001	44001	O-Ring, Seat	6

* Review material codes for individual items (HT, SFTA, SNG, ST2 may be used as alternative)

♦ Silicone Oil/Grease required

VALVE KITS One (1) valve kit required per pump

PUMP MODELS	NBR (STD)	FPM (0.0110)	EPDM (0.0220) ♦	IPFE (.0770)	HT (.3000)	STHT (.3400)
231, 237, 241, 247, 271, 277	**30982**	**31216**	**31217**	**76690**	**30982**	**30982**

ITEM (Included in Valve Kits)							DESCRIPTION	QTY
143	17547	11685	46648	703308	17547	17547	O-Ring, Inlet Valve Adapter, Rear	3
154	43893	44927	46649	703307	43893	43893	O-Ring, Inlet Valve Adapter, Front	3
155	26089	11377	46647	703244	26089	26089	O-Ring, Discharge Valve Adapter, Rear	3
164	44058	44058	44058	44058	44058	44058	Seat	6
165	44001	44928	46650	703309	44001	44001	O-Ring, Seat	6
166	543669	543669	543669	543669	543669	543669	Valve	6
167	44056	44056	44056	44056	44056	44056	Spring	6
168	44055	44055	44055	44055	44055	44055	Retainer, Spring	6

♦ Silicone Oil/Grease required

⚠ CAUTIONS AND WARNINGS

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

Read all CAUTIONS and WARNINGS before commencing service or operation of any high-pressure system. The CAUTIONS and WARNINGS are included in each Service Manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/dynamic-literature/cautions-and-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty online at www.catpumps.com/literature/cat-pumps-limited-warranty

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