

# DATA SHEET

## DIRECT DRIVE PLUNGER PUMP



**Brass Model: 67DX39G11**



SPECIFICATIONS	U.S. Measure	Metric Measure
Flow	3.9 gpm	14.8 lpm
Pressure Range	100 – 4000 psi	6.9 – 276 bar
Pump RPM	3450 rpm	3450 rpm
Inlet Pressure Range	Flooded – 75 psi	Flooded – 5.2 bar
Max. Liquid Temperature	140° F	60° C
Above 130° F call Cat Pumps for inlet conditions and elastomer recommendations.		
Bore	0.551"	14 mm
Stroke	0.405"	10.3 mm
Crankcase Capacity	13.5 oz.	0.4 l
Inlet Port (1)	½" NPT(F)	½" NPT(F)
Discharge Port (1)	⅜" NPT(F)	⅜" NPT(F)
Discharge Port w/chem. Inj. (1)	⅜" NPT(M)	⅜" NPT(M)
Inlet Auxiliary Port (1)	¼" NPT(F)	¼" NPT(F)
Shaft Diameter (Hollow)	1"	25.4 mm
Weight	17 lbs.	7.7 kg
Dimensions	11.50 x 8.82 x 7.99"	292 x 224 x 203 mm

Mounting Flange: SAE J609, Flange B, Extension 4 (1"Ø), Shaft Length = 3 ¼", Pilot Ø = 5 ¾", B.C. Ø = 6 ½", Thread = ⅜"-16 UNC TAP

### FEATURES

- Triplex plunger design provides a smooth liquid flow.
- Special concentric, high-density, polished, solid ceramic plungers provide a true wear surface and extended seal life.
- Built-in flange mount for easy, direct mounting to most gas engines. Eliminates the need for pulleys, belts, gearboxes.
- Integral regulating unloader with built-in by-pass is standard for safety and pressure setting.
- Stacked stainless steel valve design for long life and easy servicing.
- Fixed chemical injector is standard and mounts directly onto unloader to provide cleaning flexibility.

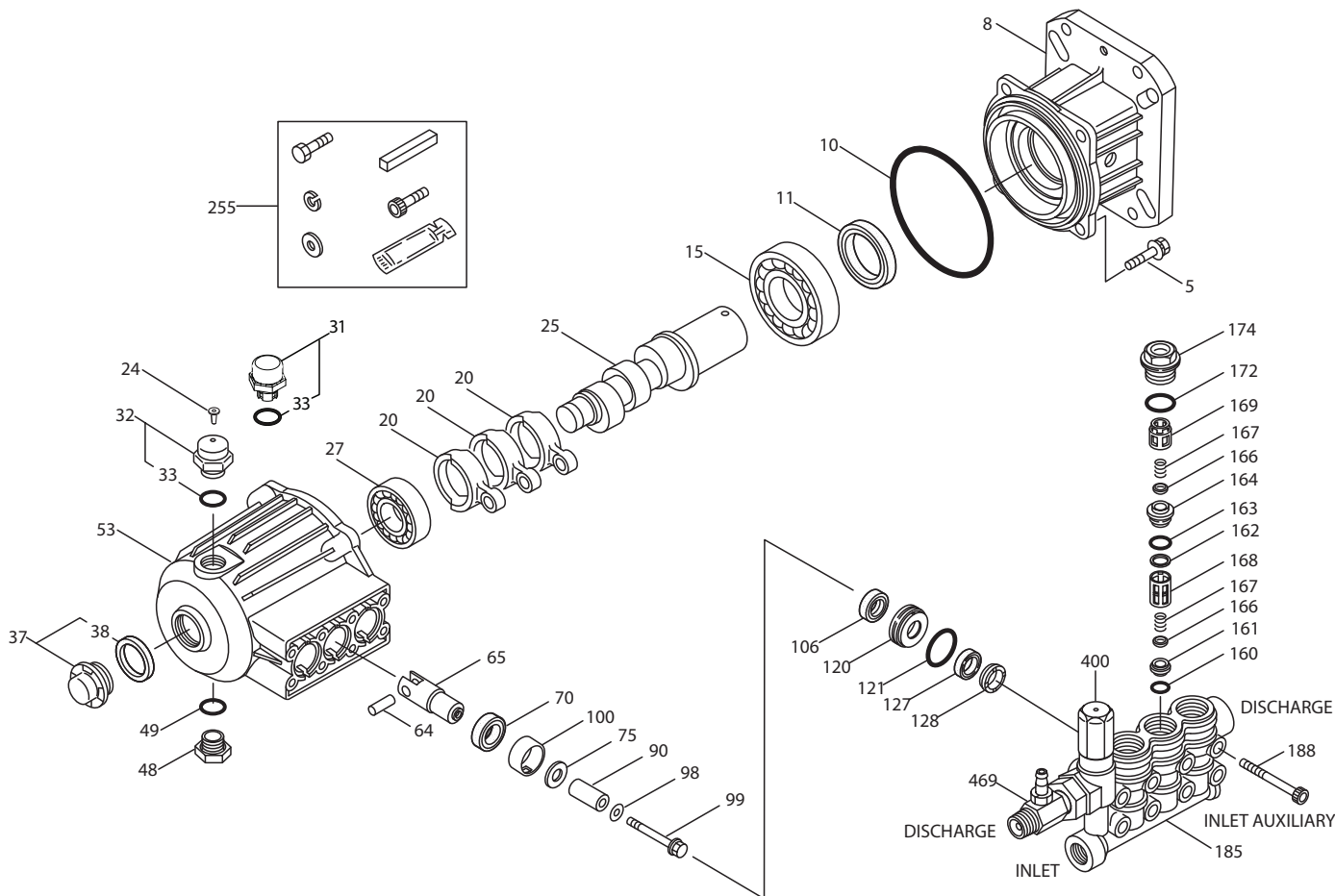
### ELECTRIC HORSEPOWER REQUIREMENTS

MODEL	FLOW		PRESSURE			RPM
			psi 2500	psi 3200	psi 4000	
	gpm	lpm	bar 172	bar 220	bar 276	
67DX39G11	3.9	14.8	6.7	8.5	10.7	3450

<b>DETERMINING THE PUMP R.P.M.</b>	Rated gpm	=	"Desired" gpm
	Rated rpm	=	"Desired" rpm
<b>DETERMINING THE REQUIRED H.P.</b>	Hp	=	gpm x psi
	(Electric Brake)	=	1460

Note: Consult engine manufacturer when using gas or diesel engine.  
Refer to pump **Service Manual** for repair procedure and additional technical information.

## EXPLODED VIEW



## PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
5	127285	STCP R	Screw, HH, Sems (M8x25)	4
8	49361	AL	Cover, Adapter Bearing	1
10	14043	NBR	O-Ring, Bearing Cover	1
11	125351	NBR	Seal, Oil Crankshaft	1
15	146421	STL	Bearing, Ball - Inner	1
20	49364	TNM	Rod, Connecting	3
24	549608	LDPE	Plug, Oil Cap	1
25	49391	CM	Crankshaft (10.3mm)	1
27	49363	STL	Bearing, Ball - Outer	1
31	549726	—	Cap, Vented w/O-Ring (Rain Cap)	1
32	547961	RTP	Cap, Oil Filler w/O-Ring	1
33	14179	NBR	O-Ring, Filler Cap - 70D	1
37	92241	PC	Gauge, Oil Bubble w/Gasket - 80D	1
38	44428	NBR	Gasket, Flat, Oil Gauge - 80D	1
48	44842	NY	Plug, Drain	1
49	14179	NBR	O-Ring, Drain Plug - 70D	1
53	49352	AL	Crankcase	1
64	49366	CM	Pin, Crosshead	3
65	49368	BB	Rod, Plunger	3
70	47215	NBR	Seal, Oil Crankcase	3
75	49370	S	Slinger, Barrier	3
90	49367	CC	Plunger (M14x28)	3
98	46730	NBR	Washer, Seal - 90D	3
99	49369	S	Retainer, Plunger	3
100	49371	NY	Retainer, Seal	3

ITEM	P/N	MATL	DESCRIPTION	QTY
106	45188	NBR	Seal, LPS w/S-Spg	3
120	49374	BB	Case, Seal	3
121	13977	NBR	O-Ring, Seal Case - 70D	3
127	49606	PTFE	V-Packing (Black)	3
128	49605	D	Adapter, Male	3
160	26129	NBR	O-Ring, Inlet Valve Seat - 70D	3
161	49378	S	Seat, Inlet	3
162	48361	D	Back-up-Ring, Discharge Seat	3
163	43358	NBR	O-Ring, Discharge Seat - 70D	3
164	49376	S	Seat, Discharge	3
166	547098	S	Valve	6
167	49354	S	Spring	6
168	49377	PVDF	Retainer, Spring, Inlet	3
169	547441	PVDF	Retainer, Spring, Discharge	3
172	49382	NBR	O-Ring, Valve Plug - 90D	3
174	49380	BB	Plug, Valve	3
185	49372	BB	Head, Manifold	1
188	126512	STCP R	Screw, HSH (M8x65)	8
197	941517	BB	Assy, GH, ½" (Not Shown)	1
255	31445	STZP	Assy, Bolt Mount, Gas	1
300	76262	NBR	Kit, Seal (Incls: 98, 106, 121, 127, 128)	1
310	76260	NBR	Kit, Valve Pre-Assembled (Incls: 160-164,166,167,168,169,172)	1
400	—	—	Unloader, Integral (See individual parts)	1
469	7367	BB	Injector, Chemical Fixed	1

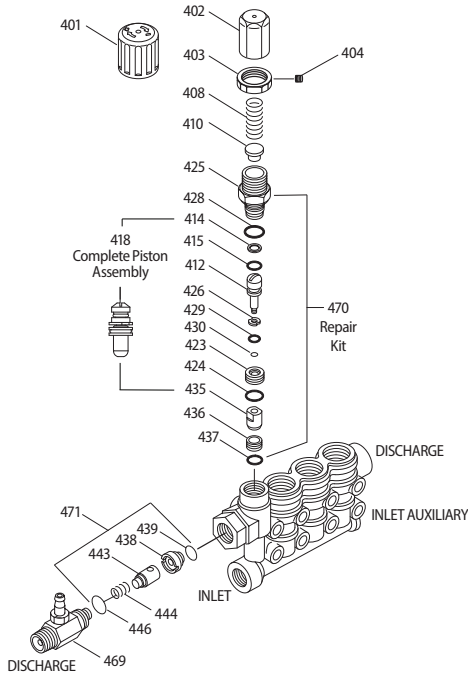
*Italics are optional items.* R Components comply with RoHS Directive.

MATERIAL CODES (Not Part of Part Number): AL=Aluminum BB=Brass CC=Ceramic CM=Chrome-moly D=Acetal LDPE=Low Density Polyethylene  
NBR=Medium Nitrile (Buna-N) NY=Nylon PC=Poly Carbonate PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride RTP=Reinforced Composite S=304SS  
STCP=Steel/Chrome Plated STL=Steel STZP=Steel/Zinc Plated TNM=Special High Strength

## INTEGRAL UNLOADER

### SPECIFICATIONS

	U.S.	Metric
Flow	3.9 gpm	4.8 lpm
PSI Range	100 – 4000 psi	6.9 – 276 bar
Inlet Port	½" NPT(F)	½" NPT(F)
Discharge Port w/ Chem. Injector	¾" NPT(M)	¾" NPT(M)



### PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
401	49100	NY	Handle, Adjusting (Black)	1
402	49099	BB	Cap, Adjusting	1
403	125521	BB	Nut, Locking (M25x1)	1
404	88953	S	Screw, Set (M4x4)	1
408	45198	ZP R	Spring, Pressure	1
410	49101	STZP R	Retainer, Spring	1
412	49103	S	Stem, Piston	1
414	129638	PTFE	Back-up-Ring, Piston Stem	1
415	49104	NBR	O-Ring, Piston Stem - 90D	1
418	—	BB	Assy, Piston (Included in Repair Kit)	1
423	49105	BB	Retainer, Valve	1
424	49106	NBR	O-Ring, Valve Retainer - 70D	1
425	49102	BB	Retainer, Piston	1
426	49107	S	Washer	1
428	26133	NBR	O-Ring, Piston Retainer - 80D	1
429	22056	NBR	O-Ring, Valve Retainer - 70D	1
430	49123	D	Back-up-Ring, Valve Retainer	1
435	49383	S	Valve/Ball Assembly	1
436	49384	S	Seat	1
437	13965	NBR	O-Ring, Seat - 70D	1
438	49386	D	Seat, Check Valve	1
439	13963	NBR	O-Ring, Check Valve Seat - 70D	1
443	49245	BB	Valve, Check w/NBR O-Ring	1
444	117275	S	Spring, Check Valve	1
446	26133	NBR	O-Ring, Body - 80D	1
460	126974	BB	Fitting, Discharge [¾" NPT(M)] (Not Shown)	1
468	76708	NBR	Kit, O-Ring (Incls: 414, 415, 424, 428, 429, 430, 437, 439, 446)	1
469	7367	BB	Injector, Chemical Fixed	1
470	31556	NBR	Kit, Repair (Incls: 418, 425, 428, 436, 437)	1
471	76188	NBR	Kit, Check Valve (Incls: 438 – 446)	1

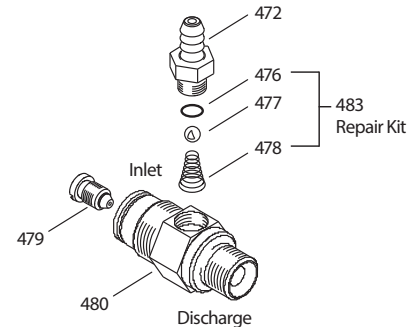
*Italics are optional items.* R Components comply with RoHS Directive.

MATERIAL CODES (Not Part of Part Number): BB=Brass D=Acetal  
NBR=Medium Nitrile (Buna-N) NY=Nylon PTFE=Pure Polytetrafluoroethylene  
S=304SS STZP=Steel/Zinc Plated ZP=Zinc Plated

## MODEL 7367 FIXED CHEMICAL INJECTOR

### SPECIFICATIONS

	U.S.	Metric
Flow	3.9 gpm	14.8 lpm
Nozzle Orifice	2.1 mm	2.1 mm
Hose Barb	¼"	¼"
Tapped Barb	8-32" UNF	8-32" UNF
Inlet Port	M20 x 1.0	M20 x 1.0
Discharge Port	¾" NPT(M)	¾" NPT(M)
Weight	5.3 oz.	0.15 kg
Dimensions	2 x 1 x 1.75"	51 x 25 x 44 mm



### PARTS LIST

ITEM	PN	MATL	DESCRIPTION	QTY
472	—	BB	Barb	1
476	—	NBR	O-Ring, Barb - 70D	1
477	—	S	Ball	1
478	—	S	Spring	1
479	—	S	Orifice	1
480	—	BB	Body	1
483	76176	NBR	Kit, Repair (Includes: 476, 477, 478)	1

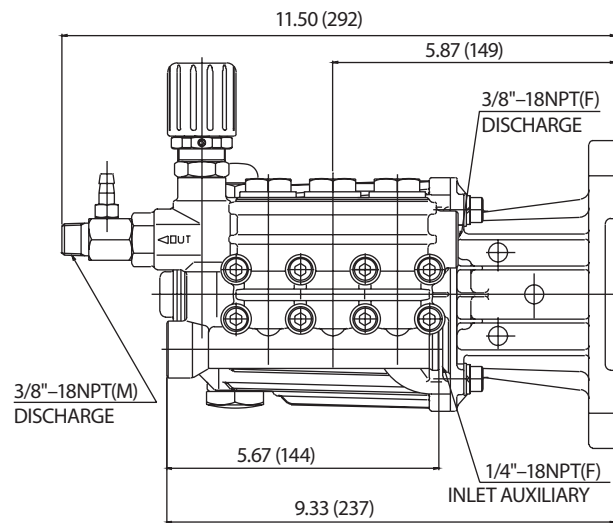
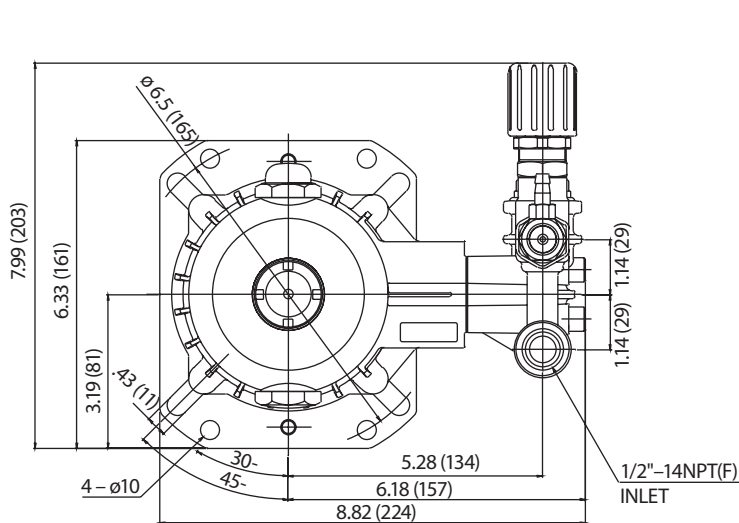
MATERIAL CODES (Not Part of Part Number):  
BB=Brass NBR=Medium Nitrile (Buna-N) S=304SS

### CHEMICAL INJECTOR PERFORMANCE CHART

Orifice Size	Injector Model	Maximum Injecting Pressure	Maximum Chemical Draw	Pressure Drop Across Injector At System Pressure (4000 psi)
2.1 mm	7367	358 psi	76.8 oz/min	288 psi

Optimum performance of chemical injector occurs with 35 ft. high pressure hose and a minimum 3/8" I.D. The type of hose, extended lengths, reduced I.D. and fittings may create back pressure in excess of the low pressure nozzle rating and prevent the injector from drawing chemical.

**CAUTION:** Deduct the pressure drop shown in the performance chart from your desired system pressure to arrive at the maximum high pressure nozzle rating. This is essential to avoid over-pressurizing the pump.



## UNLOADER TYPE:

An integral unloader with built-in by-pass is part of the discharge manifold to provide system pressure regulation and pump protection. This pump also includes a fixed chemical injector for chemical application.

## OPERATION:

Pump should be purged of air before commencing with operation. Liquid must flow through the pump without discharge restriction to assure full system pressure is reached.

Install a pressure gauge close to the manifold head of the pump to assist in setting system pressure and to periodically monitor system pressure.

Setting and adjusting the unloader pressure must be done with the system turned on. Start the system with the unloader backed off to the lowest pressure setting (counterclockwise direction). Squeeze the trigger and read the pressure on the gauge at the pump. Do not read pressure at the gun or nozzle. If more pressure is desired, release the trigger, turn adjusting cap one quarter turn in a clockwise direction. Squeeze the trigger and read the pressure. Repeat this process until the desired system pressure is reached. Thread locking nut up to adjusting cap and tighten set screw. All high pressure systems should have a secondary relief valve. Set secondary relief valve 200-300 psi above the unloader setting.

**NOTE:** Pressure is not set at the factory.

## SERVICE:

The unloader should be serviced on the same schedule as the seals in the pump. Refer to 67DX Service Manual for servicing of seals and valves, torque requirements and Diagnosis and Maintenance chart.

### ⚠ CAUTIONS AND WARNINGS

All High-Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. 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/cautions-warnings](http://www.catpumps.com/cautions-warnings) or can be requested directly from Cat Pumps.

### WARRANTY

View the Limited Warranty on-line at [www.catpumps.com/warranty](http://www.catpumps.com/warranty).