

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 to 4000 psi | 6.9 to 275 bar |
| Pumop RPM | 3450 rpm | 3450 rpm |
| Inlet Pressure Range | Flooded to 75 psi | Flooded to 5.2 bar |
| Bore | 0.551" | 14 mm |
| Stroke | 0.405" | 10.3 mm |
| Crankcase Capacity | 13.5 oz. | 0.4 l |
| Max. Liquid Temperature | 140° F | 60° C |
| Above 130°F call Cat Pumps for inlet conditions and elastomer recommendations. | | |
| Inlet Port (1) | 1/2" NPT(F) | 1/2" NPT(F) |
| Discharge Port (1) | 3/8" NPT(F) | 3/8" NPT(F) |
| Discharge Port w/chem. Inj. (1) | 3/8" NPT(M) | 3/8" NPT(M) |
| Inlet Auxiliary Port (1) | 1/4" NPT(F) | 1/4" 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 1/4", Pilot Ø = 5 3/4", B.C. Ø = 6 1/2", Thread = 3/8"-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

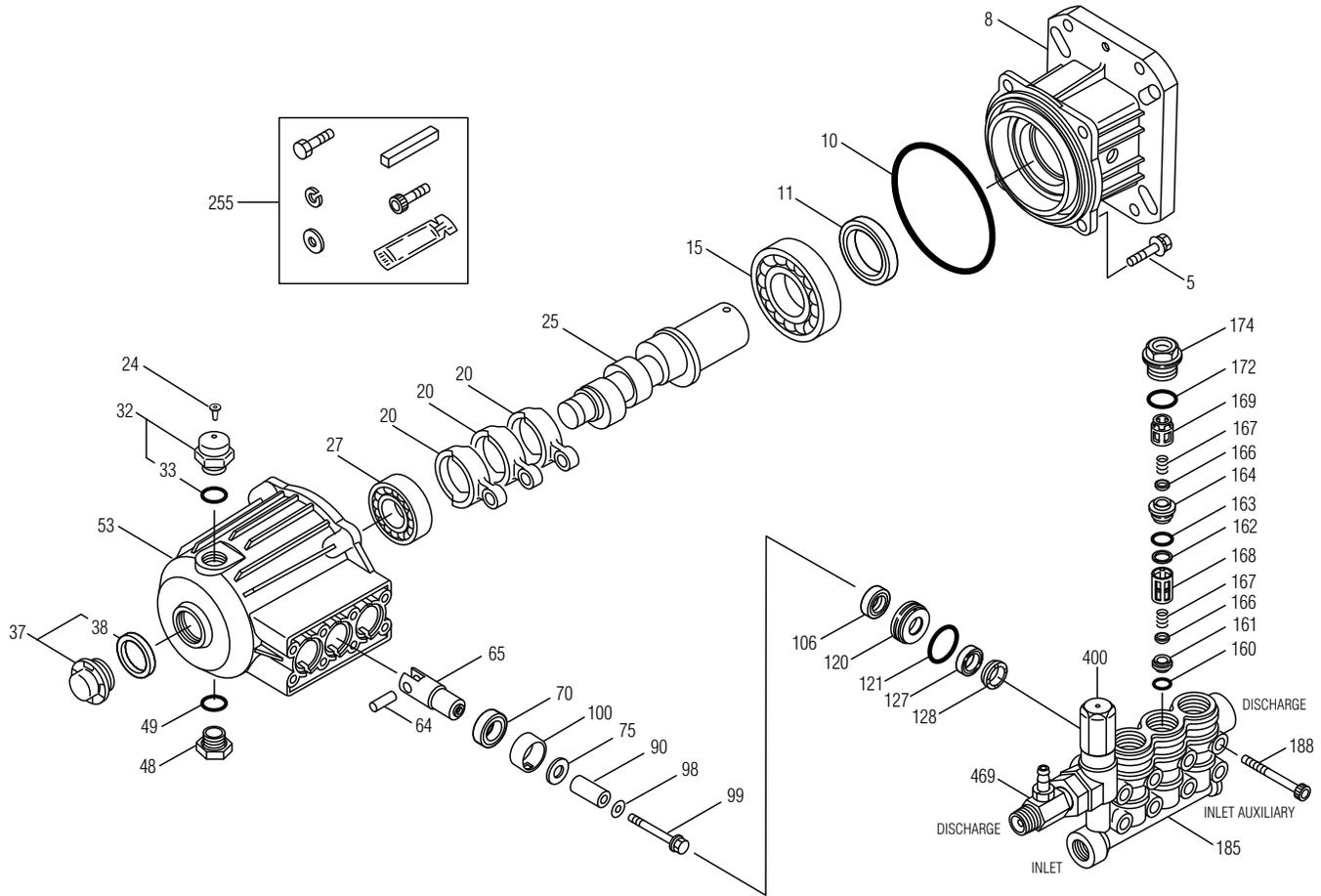
| MODEL | FLOW | | PRESSURE | | | RPM |
|------------------|------|------|-------------|-------------|-------------|------|
| | | | psi 2500 | psi 3200 | psi 4000 | |
| | gpm | lpm | bar 172 | bar 220 | bar 275 | |
| 67DX39G11 | 3.9 | 14.8 | 6.7 | 8.5 | 10.7 | 3450 |

DETERMINING THE PUMP R.P.M. $\frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{"Desired" gpm}}{\text{"Desired" rpm}}$

DETERMINING THE REQUIRED H.P. $\frac{\text{Hp}}{\text{(Electric Brake)}} = \frac{\text{gpm} \times \text{psi}}{1460}$

Note: Consult engine manufacturer when using gas on 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 | — | 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 - 70D | 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 | 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, 1/2" | 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 |

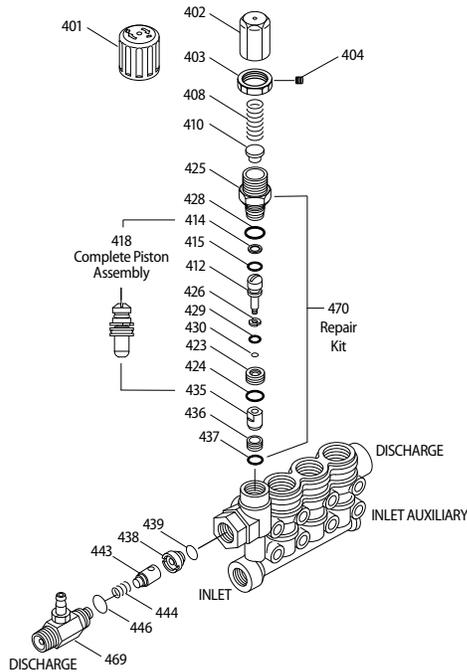
Italics are optional items. R Components comply with RoHS Directive.

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 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 - 275 bar |
| Inlet Port | 1/2" NPT(F) | 1/2" NPT(F) |
| Discharge Port w/ Chem. Injector | 3/8" NPT(M) | 3/8" 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 [3/8" 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 |

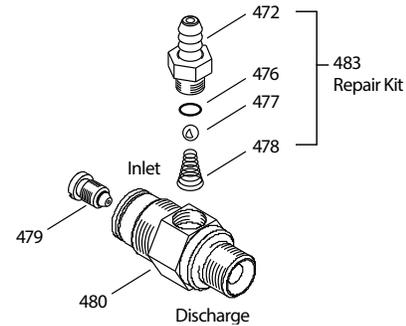
Italics are optional items. R Components comply with RoHS Directive.

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 | 1/4" | 1/4" |
| Tapped Barb | 8-32" UNF | 8-32" UNF |
| Inlet Port | M20 x 1.0 | M20 x 1.0 |
| Discharge Port | 3/8" NPT(M) | 3/8" 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 |

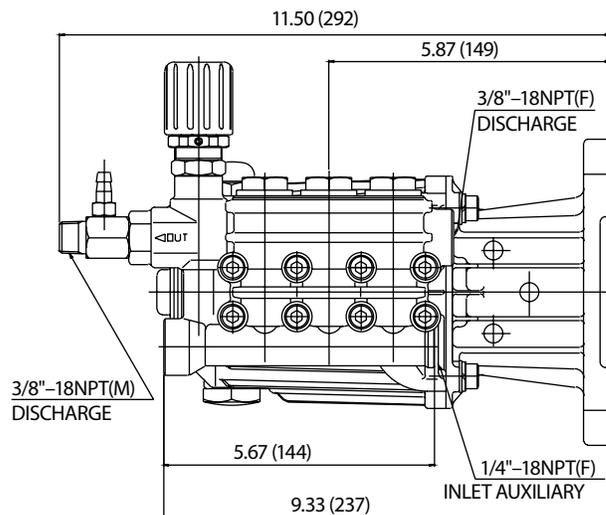
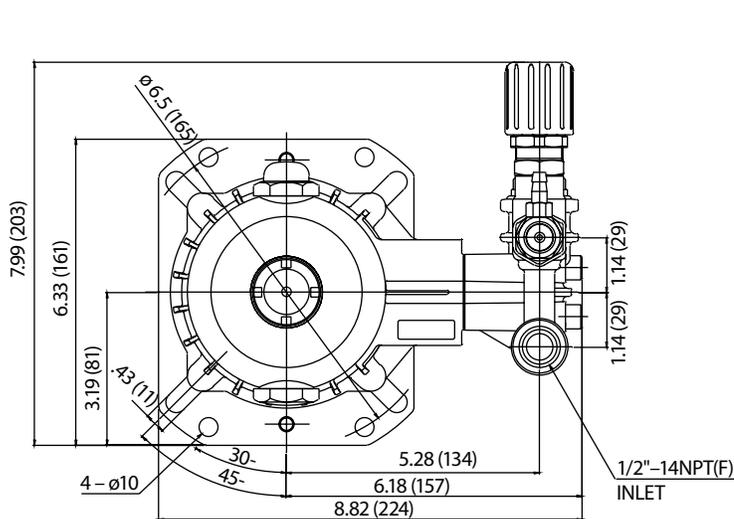
MATERIAL CODES (Not Part of Part Number):
 BB=Brass NBR=Medium Nitrile (Buna-N) S=304SS

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 or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/warranty.



CAT PUMPS

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