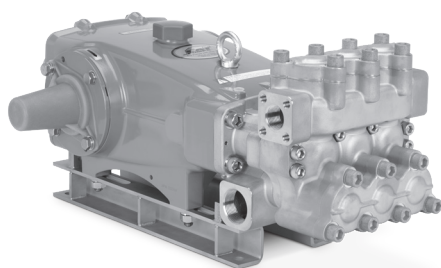


# DATA SHEET

## 36 FRAME PLUNGER PUMP



### Duplex Stainless Model: 3642X



Model 3642X Shown  
(Shaft protector included, mounting rails sold separately)

#### FEATURES

- Innovative X-Series high-pressure packings offer up to three times the lifespan of our standard packings.
- Cast duplex stainless steel inlet and discharge manifolds are more resilient than 316 stainless steel when pumping high-salinity water.
- Advanced connecting rods and plunger rod materials optimize the drive end's performance for continuous-duty applications.
- Delrin plunger sleeves provide enhanced separation between the packing spring and the ceramic plunger, providing a longer operational life for both plungers and packings.
- High-strength valve plate cover design eliminates the need for threaded stainless steel valve plugs, making servicing easier.
- Machined duplex stainless steel valves and seats ensure a long lifespan when pumping high-salinity water.
- High-strength coated screws help reduce the risk of galling while preventing corrosion in harsh environments.

| SPECIFICATIONS          | U.S. Measure           | Metric Measure     |
|-------------------------|------------------------|--------------------|
| Flow                    | 45 gpm                 | 170 lpm            |
| Pressure Range          | 100–1000 psi           | 6.9–69 bar         |
| Pump RPM*               | 765 rpm                | 765 rpm            |
| Inlet Pressure Range    | Flooded to 70 psi      | Flooded to 4.8 bar |
| Max. Liquid Temp. (NBR) | 140° F                 | 60° C              |
| Bore                    | 1.772"                 | 45 mm              |
| Stroke                  | 1.890"                 | 48 mm              |
| Crankcase Capacity      | 4.2 qts                | 4 l                |
| Inlet Ports (2)         | 1½" NPT(F)             | 1½" NPT(F)         |
| Discharge Ports (2)     | 1" NPT(F)              | 1" NPT(F)          |
| Shaft Diameter          | 1.378"                 | 35 mm              |
| Pulley Mounting         | Either Side            | Either Side        |
| Weight                  | 138 lbs                | 62.5 kg            |
| Dimensions              | 25.35 x 18.11 x 10.28" | 644 x 460 x 261 mm |

\* Pump minimum is 100 RPM.

|                                          |                                                                                                   |
|------------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>DETERMINING<br/>THE PUMP RPM</b>      | $\frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{Desired gpm}}{\text{Desired rpm}}$       |
| <b>DETERMINING<br/>THE REQUIRED HP</b>   | $\frac{\text{hp}}{\text{(Electric Brake)}} = \frac{\text{gpm} \times \text{psi}}{1460}$           |
| <b>DETERMINING<br/>MOTOR PULLEY SIZE</b> | $\frac{\text{Motor Pulley OD}}{\text{Pump rpm}} = \frac{\text{Pump Pulley OD}}{\text{Motor rpm}}$ |

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

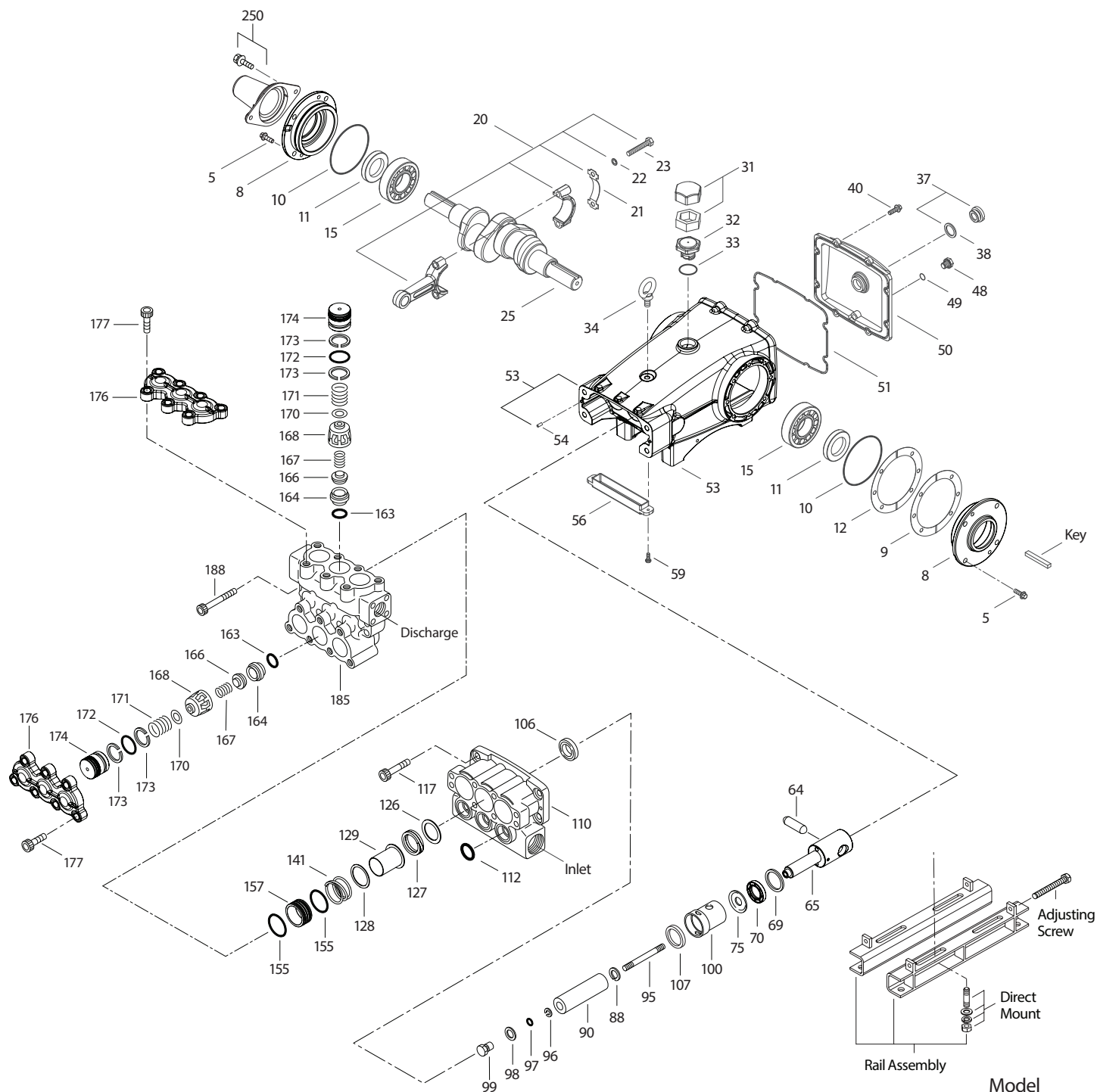
# PARTS LIST

| ITEM | PART NUMBER | MATL   | DESCRIPTION                                                                               | QTY |
|------|-------------|--------|-------------------------------------------------------------------------------------------|-----|
| 5    | 96049       | S      | Screw, HHC Sems (M10 x 25) ( <a href="#">See Tech Bulletin 074</a> )                      | 8   |
| 8    | 134604      | ALE    | Cover, Bearing                                                                            | 2   |
| 9    | 815279      | FBR    | Shim, Split 2-Piece                                                                       | 2   |
| 10   | 12398       | NBR    | O-Ring, Bearing Cover                                                                     | 2   |
| 11   | 13296       | NBR    | Seal, Oil, Crankshaft                                                                     | 2   |
| 12   | 855049      | S      | Shim, Split 2-Piece                                                                       | 2   |
| 15   | 29326       | STL    | Bearing, Roller                                                                           | 2   |
| 20   | 126725      | BZ R   | Assembly, Connecting Rod (Includes: 21, 22, 23) ( <a href="#">See Tech Bulletin 074</a> ) | 3   |
| 21   | 126749      | STCP R | Washer, Locking (M10)                                                                     | 3   |
| 22   | 126593      | STCP R | Shim, Washer (M10.5 x 1.5)                                                                | 6   |
| 23   | 122045      | STZP   | Screw, HH (M10 x 55)                                                                      | 6   |
| 25   | 29325       | FCM    | Crankshaft, Dual-End (M48)                                                                | 1   |
| 31   | 828710      | PE     | Protector, Oil Cap with Polyurethane Gasket                                               | 1   |
| 32   | 43211       | ABS    | Cap, Oil Filler                                                                           | 1   |
| 33   | 14177       | NBR    | O-Ring, Oil Filler Cap                                                                    | 1   |
| 34   | 126743      | STCP R | Bolt, Eye (M12 x 1.75) (For Lifting Pump Only)                                            | 1   |
| 37   | 92241       | PC     | Gauge, Oil, Bubble with Gasket ( <a href="#">See Tech Bulletin 074</a> )                  | 1   |
| 38   | 44428       | NBR    | Gasket, Flat, Oil Gauge                                                                   | 1   |
| 40   | 125753      | S      | Screw, HH Sems (M8 x 25) ( <a href="#">See Tech Bulletin 074</a> )                        | 8   |
| 48   | 25625       | STCP   | Plug, Drain (1/4" x 19 BSP)                                                               | 1   |
| 49   | 23170       | NBR    | O-Ring, Drain Plug                                                                        | 1   |
| 50   | 45936       | ALE    | Cover, Rear                                                                               | 1   |
| 51   | 16612       | NBR    | O-Ring, Rear Cover                                                                        | 1   |
| 53   | 134784      | ALE    | Crankcase Assembly (Includes: 54)                                                         | 1   |
| 54   | 27488       | S      | Pin, Guide                                                                                | 2   |
| 56   | 27790       | POP    | Pan, Oil                                                                                  | 1   |
| 59   | 92538       | S      | Screw, HHC Sems (M6 x 16)                                                                 | 2   |
| 64   | 43864       | CM     | Pin, Crosshead                                                                            | 3   |
| 65   | 49166       | SSHB   | Rod, Plunger                                                                              | 3   |
| 69   | 126587      | STCP R | Washer, Oil Seal                                                                          | 3   |
| 70   | 100488      | NBR    | Seal, Oil, Crankcase                                                                      | 3   |
| 75   | 43865       | S      | Slinger, Barrier                                                                          | 3   |
| 88   | 45676       | S      | Washer, Keyhole                                                                           | 3   |
| 90   | 46806       | CC     | Plunger (M45 x 145)                                                                       | 3   |
| 95   | 89778       | SS     | Stud, Plunger Retainer (M10 x 145)                                                        | 3   |
| 96   | 20189       | PTFE   | Backup Ring, Plunger Retainer                                                             | 3   |
| 97   | 11345       | NBR    | O-Ring, Plunger Retainer                                                                  | 3   |
| 98   | 44085       | SS     | Gasket, Plunger Retainer                                                                  | 3   |
| 99   | 670149      | SSD    | Retainer, Plunger (M10) ( <a href="#">See Tech Bulletin 074</a> )                         | 3   |
| 100  | 44119       | PPG    | Retainer, Seal                                                                            | 3   |
| 106  | 48384       | NBR    | Seal, Low-Pressure with SS-Spring                                                         | 3   |
| 107  | 48380       | D      | Spacer, Low-Pressure Seal                                                                 | 3   |
| 110  | 670151      | SSD    | Manifold, Inlet                                                                           | 1   |
| 112  | 18688       | NBR    | O-Ring, Inlet Manifold                                                                    | 3   |
| 117  | 44585       | S      | Screw, HSH (M14 x 40) ( <a href="#">See Tech Bulletin 074</a> )                           | 4   |
| 126  | 670238      | PVDF   | Backup Ring, Packing                                                                      | 3   |
| 127  | 670237      | PFB    | Packing, Square                                                                           | 3   |
| 128  | 670236      | SSD    | Washer, Spring                                                                            | 3   |
| 129  | 670239      | D      | Sleeve, Plunger                                                                           | 3   |
| 141  | 670231      | SS     | Spring, Coil, Large                                                                       | 3   |
| 155  | 17784       | NBR    | O-Ring, Packing, Spacer                                                                   | 6   |
| 157  | 670154      | SSD    | Spacer, Packing                                                                           | 3   |
| 163  | 26143       | NBR    | O-Ring, Seat                                                                              | 6   |
| 164  | 670157      | SSD    | Seat                                                                                      | 6   |
| 166  | 670158      | SSD    | Valve                                                                                     | 6   |
| 167  | 44109       | SS     | Spring                                                                                    | 6   |
| 168  | 44728       | PVDF   | Retainer, Spring                                                                          | 6   |
| 170  | 670159      | SSD    | Washer, Spring                                                                            | 6   |
| 171  | 44644       | SS     | Spring, Coil                                                                              | 6   |
| 172  | 89827       | NBR    | O-Ring, Valve Plug                                                                        | 6   |
| 173  | 48364       | D      | Backup Ring, Valve Plug                                                                   | 12  |
| 174  | 670225      | SSD    | Plug, Valve                                                                               | 6   |
| 176  | 129759      | SSD    | Plate, Valve                                                                              | 2   |
| 177  | 32393       | STZF   | Screw (M14 x 35) ( <a href="#">See Tech Bulletin 074</a> )                                | 14  |
| 185  | 670107      | SSD    | Manifold, Discharge                                                                       | 1   |
| 188  | 89981       | S      | Screw, HSH (M12 x 70) ( <a href="#">See Tech Bulletin 074</a> )                           | 8   |
| 250  | 855042      | POP    | Protector, Shaft with Two (2) Screws, Lockwashers and Washers                             | 1   |

R Components comply with RoHS Directive. For additional technical information see [www.catpumps.com/literature/tech-bulletins](http://www.catpumps.com/literature/tech-bulletins).  
MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum ALE=Aluminum Epoxy BZ=Bronze CC=Ceramic CM=Chrome-Moly  
D=Acetal FBR=Fiber FCM=Forged Chrome-moly NBR=Medium Nitrile (Buna-N) NBRs=Buna, Silicone Free PC=Polycarbonate PE=Polyethylene  
PFB= Proprietary Fiber Blend POP=Polypropylene PPG=Glass Filled Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride  
S=304SS SS=316SS SSD=Duplex Stainless Steel SSHB=316SS/High Strength Brass STCP=Steel/Chrome Plated  
STL=Steel STZF=Steel/Zinc Flake Coated STZP=Steel/Zinc Plated

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

## EXPLODED VIEW



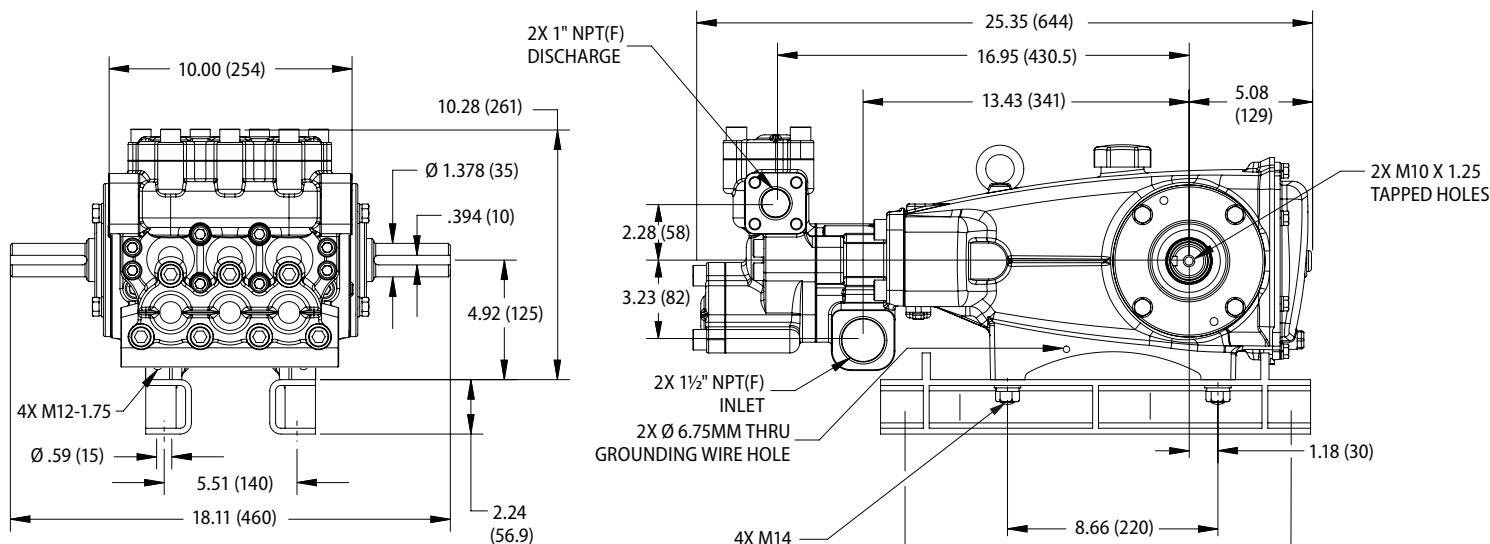
Model  
3642X  
November 2025

### OPTIONAL PARTS AND ACCESSORIES

| PART   | DESCRIPTION                                | QTY |
|--------|--------------------------------------------|-----|
| 34021  | Key (M10 x 8 x 70)                         | 1   |
| 76514  | Mount, Rail Assembly (S) (Includes: 34039) | 1   |
| 34039  | Mount, Direct (S)                          | 1   |
| 990013 | Hub, "B", 35 mm (STL)                      | 1   |
| 80540  | Screw, Adjusting (M12 x 100)               | 2   |
| 34314  | Kit, Oil Drain (3/8" x 48") (Not Shown)    | 1   |

### SERVICE PARTS

| PART   | DESCRIPTION                                                                                                               | QTY |
|--------|---------------------------------------------------------------------------------------------------------------------------|-----|
| 32542  | Kit, Seal, NBR                                                                                                            | 1   |
| 32320  | Kit, Valve, NBR                                                                                                           | 2   |
| 6100   | Oil, Case (12-21 oz bottles)<br>(Fill to Specific Crankcase Capacity Prior to Start-up)                                   | 1   |
| 6124   | Gasket, Liquid (3 oz)                                                                                                     | 1   |
| 6139   | Lubricant, Anti-Seize (8 oz) ( <a href="#">See Tech Bulletin 095</a> )                                                    | 1   |
| 32273  | Crankcase Oil Seal Removal and Installation Kit (Not Shown)<br>(Includes: Oil Seals, Guide Tool, Screws, Washers, Driver) | 1   |
| 30696  | Reverse Pliers (Not Shown)                                                                                                | 1   |
| 910642 | Head, Complete with PFB Packings, NBR LPS and O-Rings                                                                     | 1   |



Model 3642X

## SEAL KIT One (1) seal kit required per pump

| PUMP MODEL | NBR (STD) |
|------------|-----------|
| 3642X      | 32542*    |

| ITEM (Included in Seal Kits) |        | DESCRIPTION                       | QTY |
|------------------------------|--------|-----------------------------------|-----|
| 97                           | 11345  | O-Ring, Plunger Retainer          | 3   |
| 106                          | 48384  | Seal, Low-Pressure with SS-Spring | 3   |
| 112                          | 18688  | O-Ring, Inlet Manifold            | 3   |
| 126                          | 670238 | Backup-Ring, Packing              | 3   |
| 127                          | 670237 | Packing, Square                   | 3   |
| 129                          | 670239 | Sleeve, Plunger                   | 3   |
| 155                          | 17784  | O-Ring, Packing, Spacer           | 6   |

\*Review material codes for individual items (PFB may be used as alternative)

## VALVE KIT Two (2) valve kits required per pump

| PUMP MODEL | NBR (STD) |
|------------|-----------|
| 3642X      | 32320     |

| ITEM (Included in Valve Kits) |        | DESCRIPTION             | QTY |
|-------------------------------|--------|-------------------------|-----|
| 163                           | 26143  | O-Ring, Valve Seat      | 3   |
| 164                           | 670157 | Seat                    | 3   |
| 166                           | 670158 | Valve                   | 3   |
| 167                           | 44109  | Spring                  | 3   |
| 168                           | 44728  | Retainer, Spring        | 3   |
| 170                           | 670159 | Washer, Spring Retainer | 3   |
| 172                           | 89827  | O-Ring, Valve Plug      | 3   |
| 173                           | 48364  | Backup Ring, Valve Plug | 6   |

### ⚠ 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](http://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](http://www.catpumps.com/literature/cat-pumps-limited-warranty)