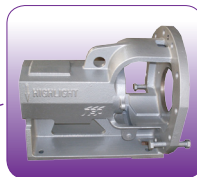
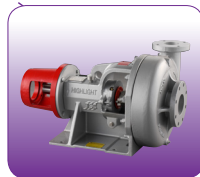




Centrifugal pumps
Centrifugal Pumps
Centrifugal pumps

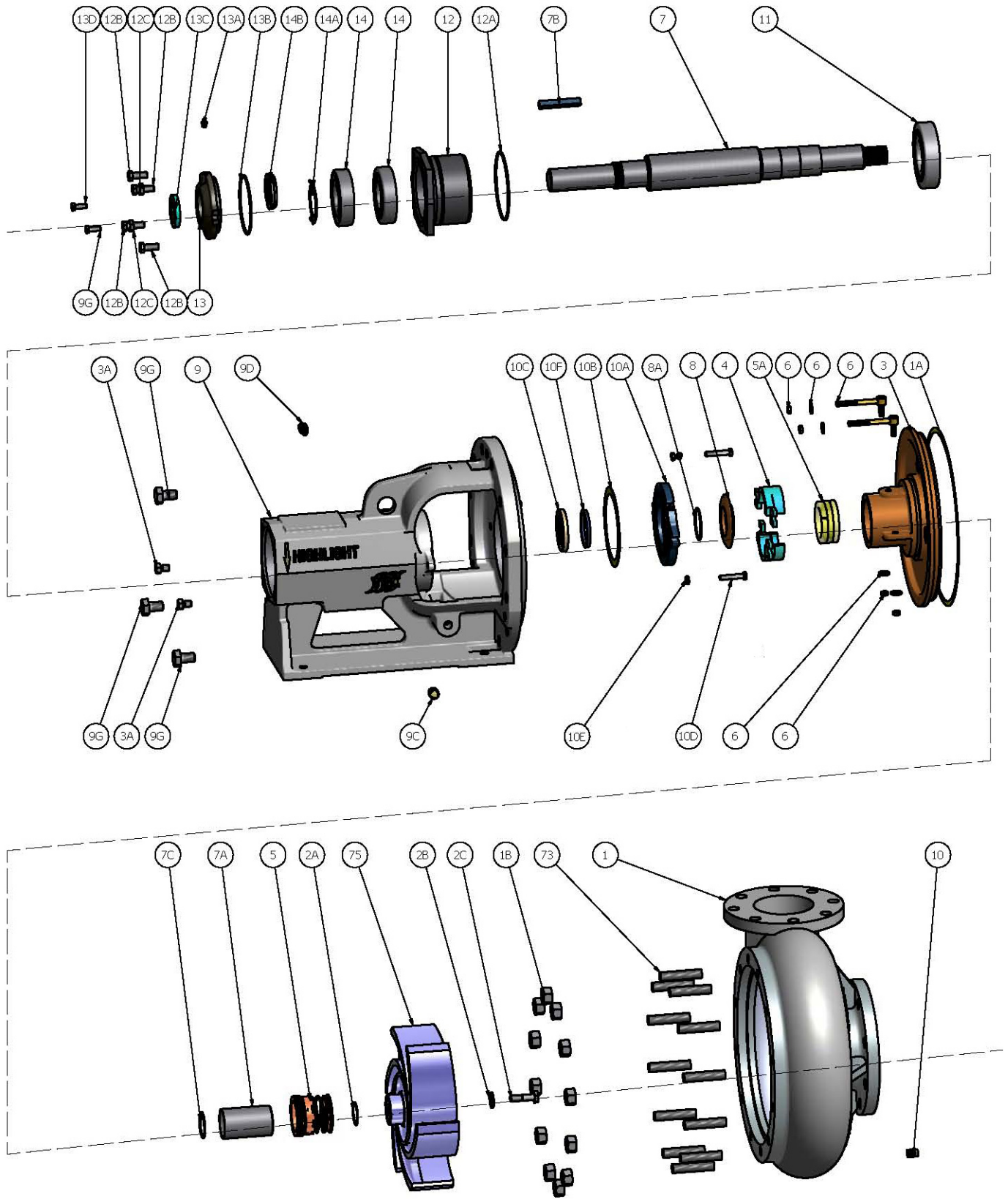


GLOBAL SOLUTIONS

DESIGNING, MANUFACTURING AND PACKAGING FOR THE OIL & GAS INDUSTRY

Beyond Integration
Seamless Solutions™

Centrifugal Pumps



Centrifugal Pumps

| Item | Part Number | Reference Number | Description | Item | Part Number | Reference Number | Description |
|------|-----------------|------------------|--|---|---|---|---|
| 1A | TS-10399-46-1 | 648403012 | Gasket, Casing | POWER FRAME | | | |
| 1B | TS-3932-61 | 648402014 | Nut, Casing | | TS-250PFMS | ASSY, Power Frame (no casing and no Impeller) | ASSY, Power Frame (no casing and no Impeller) |
| 1C | TS-3862-76 | 648401115 | Stud, Casing | KITS | | | |
| 1D | TS-8505-04-01 | 86485503 | Plug, Casing Drain | | TS-17950AH | (10B, 10C, & 10F) | KIT, Inboard Bearing Cover |
| 1E | TS-8505-04-01 | 646400507 | Plug, Flush Line | | TS-20617AH | (12A, 13B, & 13C) | KIT, Outboard Bearing Cover |
| 2A | TS-19110-72 | 648405082 | Seal, Impeller | | TS-601174550 | | KIT, Packing |
| 2B | TS-7300239 | 7300239 | Washer, Impeller | | TS-641101076 | (1A, 2A, & 7C) | KIT, Gasket & O-Ring, Fluid End |
| 2C | TS-7415648 | 7415648 | Bolt, Impeller Lock | | TS-641103353 | (10B, 12A, 13B) | KIT, Power End Gasket |
| 3 | TS-22223-01-30 | 641116157 | Stuffing box, Mech. Seal --Hard Iron | | TS-641103312 | (10C, 10F, 13C) | KIT, Grease Seal |
| 3 | TS-20614-01-30 | 643365042 | Stuffing box, Packed --Hard Iron | | TS-648414308 | (1A, 2A, 5, 5B, & 7C) | KIT, Mechanical Seal |
| 3A | TS-3861-117 | 648401016 | Bolt, Stuffing box | | | | |
| 3B | TS-19368-01 | 601499403 | Grease Fitting | CASINGS - INCLUDES STUDS, NUTS, AND CASING GASKET | | | |
| 4 | TS-20622A | 641103338 | Gland Assy., Packing | 1 | TS-19203-01-30A | 641101753 | Pump Casing 3 x 2 x 13 |
| 5 | TS-22451-1 | 648414308 | Seal, Mechanical | 1 | TS-19205-01-30A | 641101902 | Pump Casing 4 x 3 x 13 |
| 5A | TS-25014-04M-B | 661007005 | Packing, Shaft - w/ lantern ring | 1 | TS-19222-01-30A | 641102058 | Pump Casing 5 X 4 X 14 |
| 5B | TS-648402600 | 648402600 | Packing, Shaft -Mechanical Seal Backup 3 rings | 1 | TS-19122-01-30A | 641101456 | Pump Casing 6 x 5 x 11 |
| 6 | TS-B3701A | 601102494 | Bolt Assy, Gland | 1 | TS-19123-01-30A | 641101605 | Pump Casing 6 x 5 x 14 |
| 7 | TS-20612-02-33 | 646490557 | Shaft | 1 | TS-19763-01-30A | 641102157 | Pump Casing 8 x 6 x 11 |
| 7 | TS-20612-02-04 | | Shaft, Stainless Standard | 1 | TS-19117-01-30A | 641101308 | Pump Casing 8 x 6 x 14 |
| 7A | TS-20943-21 | 641102182 | Sleeve, Shaft (Mechanical Seal Pump) | 1 | TS-20937-01-30A | 641102322 | Pump Casing 10 x 8 x 14 |
| 7A2 | TS-20613-21G-7A | 641102181 | Sleeve, Shaft (Packed Pump) | | | | |
| 7B | TS-4372-05-21 | 601212392 | Key, Shaft | IMPELLERS -30 H.I. -AZ CHROME -04 SS -13 ALUM. BRZN | | | |
| 7C | TS-23444-01-72 | 648415156 | Seal, Shaft Sleeve | 2 | TS-19204- XX ** -30 | Impeller for 3 x 2 x 13 | |
| 8 | TS-22210-1A | 641116108 | Deflector Assembly | 2 | TS-19206- XX ** -30 | Impeller for 4 x 3 x 13 | |
| 9 | TS-20618-12-1 | 644302499 | Frame, Grease Lubricated | 2 | TS-19224- XX ** -30 | Impeller for 5 x 4 x 14 | |
| 9A | TS-8505-05 | 601474737 | Plug, Frame Drain | 2 | TS-19121- XX ** -30 | Impeller for 6 x 5 x 11 | |
| 9B | TS-18471 | 648403608 | Plug, Oil Fill | 2 | TS-19224- XX ** -30 | Impeller for 5 x 4 x 14 | |
| 9C | TS-8505-05 | 601474737 | Plug, Frame Drain | 2 | TS-19121- XX ** -30 | Impeller for 6 x 5 x 14 | |
| 9D | TS-8267-01 | 601473689 | Breather | 2 | TS-19121- XX ** -30 | Impeller for 6 x 5 x 11 | |
| 9E | TS-8478-3 | 601174584 | Oiler Assembly | 2 | TS-19121- XX** -30 | Impeller for 8 x 6 x 11 | |
| 9F | TS-66214131 | 662014131 | Dip Stick | 2 | TS-19116- XX ** -30 | Impeller for 8 x 6 x 14 | |
| 9G | TS-2538-1 H | 2538-1H | Bolt, Casing Jack | 2 | TS-21867- XX ** -30 | Impeller for 10 x 8 x 14 | |
| 10A | TS-20626A | 644303109 | Cover, Inboard Bearing | | | | |
| 10B | TS-20625 | 648408706 | Gasket, I.B. Brg. Cover | ** | Impeller Diameter Code Replaces the XX in the Part Number | | |
| 10C | TS-20619-01 | 648408300 | Oil Seal, I.B. Brg. Cover | | XX - First X equates to the diameter in inches minus the number 4. | | |
| 10D | TS-3861-1 | 601407505 | Bolt, I.B. Brg. Cover | | i.e. 13"-4=9, 12" - 4 = 8, 11-4=7, 10-4=6, 9-4=5, 8-4=4, 7-4=3 (14" Impellers = A0) | | |
| 10E | TS-3932-2 | 601408560 | Nut, I.B. Brg. Cover | | XX - Second X equates to a fraction of an inch by 1/8" increments. | | |
| 10F | TS-20620-01 | 648408409 | Exclusion Seal, I.B. Bearing Cover | | i.e. 1/4 or 2/8s = 2, 1/2 or 4/8s = 4, 3/4 or 6/8s = 6 | | |
| 10G | TS-21641-01 | 661010033 | Grease Fitting | | For a 11-34" impeller, the two digit code for the middle number set would be 74. | | |
| 10H | TS-648411908 | 648411908 | Grease Fitting | | | | |
| 11 | TS-250BIS | 661009010 | Bearing, Inboard & Spacer | COMPLETE BARE PUMPS | | | |
| 11 | TS-250IBB | 648408102 | Bearing, Inboard Ball | | TS-640202123-ITXX ** | 3x2x13 | Centrifugal Pump, Mechanical Seal |
| 12 | TS-20624-01-01 | 644308504 | Housing, O.B. Bearing | | TS-640202222-ITXX ** | 4x3x13 | Centrifugal Pump, Mechanical Seal |
| 12A | TS-7496-253 | 648402295 | Seal, O.B. Brg. Housing | | TS-640202321-ITXX ** | 5x4x14 | Centrifugal Pump, Mechanical Seal |
| 12B | TS-3861-138 | 648401057 | Bolts, O.B. Brg. Housing | | TS-640202529-ITXX ** | 6x5x11 | Centrifugal Pump, Mechanical Seal |
| 12C | TS-3932-62 | 658404702 | Nut, O.B. Brg. Housing Jam | | TS-640202628-ITXX ** | 6x5x14 | Centrifugal Pump, Mechanical Seal |
| 13 | TS-20617A | 641103296 | Cover, O.B. Bearing | | TS-640202826-ITXX ** | 8x6x11 | Centrifugal Pump, Mechanical Seal |
| 13A | TS-661010020 | 661010020 | Grease Fitting, O.B. Bearing Cover | | TS-640202925-ITXX ** | 8x6x14 | Centrifugal Pump, Mechanical Seal |
| 13B | TS-7496-26 | 072200017 | O-ring, O.B. Bearing Cover | | TS-640203121-ITXX ** | 10x8x14 | Centrifugal Pump, Mechanical Seal |
| 13C | TS-20619-02 | 648408359 | Oil Seal, O.B. Brg. Cover | | | | |
| 13D | TS-3861-139 | 648401081 | Bolt, O.B. Brg. Cover | ** | Impeller Diameter Code Follows the IT (Impeller Trim) in the Part Number | | |
| 14 | TS-250BOB | 648408201S | Bearing, O.B. (sold as 2 Brg. Set ONLY) | | XX - First X equates to the diameter in inches minus the number 4. | | |
| 14A | TS-6124-4 | 648402105 | Lock washer, O.B. Bearing | | i.e. 13"-4=9, 12" - 4 = 8, 11-4=7, 10-4=6, 9-4=5, 8-4=4, 7-4=3 (14" Impellers = A0) | | |
| 14B | TS-6123-4 | 648402055 | Locknut, O.B. Bearing | | XX - Second X equates to a fraction of an inch by 1/8" increments. | | |
| | TS-20938-02-1 | | Frame, Grease Lubricated Short/Sandmaster | | i.e. 1/4 or 2/8s = 2, 1/2 or 4/8s = 4, 3/4 or 6/8s = 6 | | |
| | TS-20939-02-33 | | Shaft, Short/Sandmaster | | For a 11-34" impeller, the two digit code for the middle number set would be 74. | | |



Centrifugal Pumps

The TSC Highlight™ centrifugal pump features a rugged design with heavy duty construction that reduces downtime and total cost of ownership for operators and contractors in today's highly competitive drilling industry.

MULTIPLE APPLICATIONS

Manufactured from wear resistant materials, the Highlight™ centrifugal pump can be used in a multitude of applications from handling abrasive cements and drilling fluids in the oil and gas industry, to waste disposal applications in the agriculture industry.

DIVERSE OPERATING RANGE

The Highlight™ pump line features seven different fluid end sizes and 100+ impeller sizes for fluid flows from as little as 160 gpm to as much as 2500 gpm.

DIMENSIONAL ENVELOPE

The Highlight™ conforms to the industry standard dimensional envelope in the oil and gas drilling and well service industry.

GLOBAL DISTRIBUTION

TSC has global distribution with offices and distributors located in major geographic oil and gas regions.

PROLONGED RUN TIMES

Wear resistant fluid end materials provide for prolonged run times on critical wear components.

PREVENT COSTLY FAILURES

TSC's 2-1/2" pump shaft is highly resistant to deflections induced by the pump impeller and helps prevent costly failure of optional mechanical seals.

IMPROVED FLUID FLOW

Wide vane impellers allow for improved fluid flow dynamics and high fluid volume.

IMPROVED OVERALL FATIGUE RESISTANCE

Heavy-walled power end construction improves overall fatigue

resistance through additional mass in critical stress areas.

IMPROVED BEARING LIFE

Heavy duty inboard roller bearings provide additional bearing area for longer bearing and mechanical seal life.

REDUCE MAINTENANCE

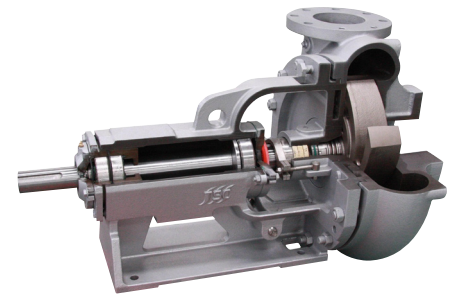
Optional mechanical seal reduces maintenance and improves long-term maintenance procedures.

FULL OPEN IMPELLER

Minimizes induced shaft loading.

ENHANCED PUMP EFFICIENCY

Concentric casing reduces turbulence and enhances fluid end life.



| Model | 10×8×14 | 8×6×14 | 8×6×11 | 6×5×14 |
|-------------------------|-----------|-----------|-----------|-----------|
| Discharge Volume (max.) | 4300 gpm | 2600 gpm | 2150 gpm | 1825 gpm |
| Discharge Head (max.) | 175 ft | 205 ft | 120 ft | 225 ft |
| RPM (min.-max.) | 1200-1800 | 1200-1800 | 1200-1800 | 1200-1800 |
| Inlet diameter (inch) | 10 | 8 | 8 | 6 |
| Outlet diameter (inch) | 8 | 6 | 6 | 5 |
| Weight (lb.) | 705 | 595 | 595 | 529 |
| Dimension (inch) | 38×26×26 | 38×25×25 | 38×24×24 | 36×22×21 |
| Model | 6×5×11 | 5×4×14 | 4×3×13 | 3×2×13 |
| Discharge Volume (max.) | 1800 gpm | 1150 gpm | 875 gpm | 550 gpm |
| Discharge Head (max.) | 120 ft | 215 ft | 530 ft | 500 ft |
| RPM (min.-max.) | 1200-1900 | 1200-2100 | 1200-3600 | 1200-3600 |
| Inlet diameter (inch) | 6 | 5 | 4 | 3 |
| Outlet diameter (inch) | 5 | 4 | 3 | 2 |
| Weight (lb.) | 529 | 529 | 445 | 432 |
| Dimension (inch) | 36×20×20 | 36×20×20 | 34×19×19 | 34×19×19 |

