

#### Innofixx Machinery Manufacturing Foreign Trade. Ind. Ltd. Co.

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2023

#### COMPANY PROFILE

Innofixx Machinery Manufacturing Foreign Trade. Ind. Ltd. Co. is a high-tech enterprise and manufacturer that integrates product design, production and sales and service for oil drilling equipment.. The company is located in the beautiful Ostim OSB District 1214. Street No:8 Yenimahalle/Ankara. Our factory is mainly engaged in manufacturer of mud pump accessories, including F series, HHF series, 3NB series, Qingzhou 3NB and other mud pump. Our main products are cylinder liners, pistons, piston rods, extension rods, crosshead,v belt and other mud pump accesso- ries. All the products all meet the requirements of ISO9001, and API-7K (American Petroleum Association) standards.

Our factory has senior technician and advanced equipment engaged in petroleum machinery manufacturing, and combines the customer's feedback, continuously improve and improve the product technology and quality since 2006. From the first step of raw material order to delivery from our warehouse, we strictly implementation our plan as GB / T19001-2016 / ISO9001: 2015 quality management system and American Petroleum Institute quality system API7K standards for production and testing, product quality are the center of our service. It won a lot of praise from domestic and foreign customers.

High-quality raw materials are our most powerful guarantee. Competitive prices are our most competitive advantage. Customers' good feedbacks are our consistent pursuit. The spirit of innovation is our most greatest strengths. We will be your good partner in oil drilling field with our most sincere attitude, full of enthusiasm and dedication to serve our customers!

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## **MUD PUMP VALVE & SEAT**

#### Roughneck Type

Material is premium alloy steel ASTM4119 or AISI8620. The upper body of the valve is friction- welded together with claw and carburized & quenched, which has big discharge capacity and suitable for many kinds of mud pump



#### Fout Web Type

4-web valve & seat features an extra wide metal to metal seal on the valve flange. The serrated upper surfacc on the valve gives a longer non-breathing seal between valve body and insert while the rigid seat cross-arm give greater strength and positive sealing.



The strong, thick, valve knock off nut holds he insert tightly reducing flex and breathing which lessens the chance of foreign matter getting between valve and insert.

#### Three Web Type

Three web type features greater fluid flow than 4-web seats, as well as it features an extra wide metal to metal seal on the valve flange,. The serrated upper surface on the valve gives a longer non-breathing seal between valve body and insert while the rigid seat cross-arm give greater strength and positive sealing.



The strong, thick, valve knock off nut holds the insert tightly reducing flex and breathing which lessens the chance of foreign matter getting between valve and insert.



# **MUD PUMP VALVE & SEAT**

#### FKN (G2) Type

Material is premium alloy steel ASTM4119 or AISI8620. Rubber and plate are vulcanized into one body to prevent the rubber out of shape. Normally used by National P series mud pumps.

#### **Duplex Pump Valve & Seat**

Suitable for duplex mud pumps of Gardner Denver, Gaso, Failing.etc

#### **Bomco Full Open Type**

Suitable for Chinese made F series mud pumps,like F500,F800,F1000, F1300,F1600,etc.

#### Ls Full Open Type

Suitable for 3NB series mud pump made by ISPE,like 3NB800,3NB1300,3NB1600,etc.

#### High Pressure Full Open Valve & Seat

Suitable for high pressure mud pumps, like F1600HL,F2200HL,etc.













# PISTON

#### Roughneck Type

The piston assembly is the main part at fluid end of mud pump, produces discharge pressure of pump from reciprocating straight-line motion in the liner. Small piston produces higher pressure and lower slow, while large piston produces lower pressure and higher slow. Pumps in different systems should be assembled with pistons in according systems, and  $\varphi$ 170,  $\varphi$ 160,  $\varphi$ 150, 6", 6-1/2"and 7"are often

used. The metric pumps F800, F1000, F1300 and F1600 are equipped with metric pistons of general use; however the piston bore of F500 is smaller than others. The pumps from F500 to F1600 are equipped with pistons of general use. Piston bore of F500 is  $\varphi$ 25.4, piston bore of F800 -1300 is  $\varphi$ 42 and piston bore is  $\varphi$ 38.1. Piston core is manufactured in 42CrMo and rubber is Buna N or polyurethane.

#### **Replaceale Rubber Piston**

The piston core is forged from 40Cr, and then heat treatment. The material of rubber is polyurethane, NBR or HNBR

#### **Bonded Piston**

Piston rubber is bonded on the hub, without snap ring and platc, suitable for many kinds of drilling condition, especially for high pressure jetting drilling and ceramic liners.









# PISTON

#### Fluid End Module

The material of the Fluid End Module is a special alloy steel forging, which is processed by mature scientific technology, with reasonable structure and high efficiency. The Fluid End Module is equipped with corresponding bolts and nuts for the Fluid End Module. The material of the Fluid End Module is alloy steel forged, and the three Fluid End Module of each pump are interchangeable. If required, the surface of the



Fluid End Module can be treated with electroless nickel plating to enhance its corrosion resistance. The discharge part is equipped with discharge air bag, shear pin safety valve and discharge filter screen respectively.

#### High Pressure Fluid End Assembly



"I"Style



Fluid End Module with nut



"L"Style





# **FLUID END & PARTS**

#### Valve Cover



#### **Threaded Ring**



#### Liner Flange



#### **Piston Rod**



#### **Cylinder Head**



#### **Discharge Manifold**



Wear Plate



#### Spacer





# **FLUID END & PARTS**

#### Crankshaft



**Bull Gear** 



**Pinion Shaft** 



**Pinion Bearing Housing** 



#### **Crankshaft Assembly**



**Connecting Rod** 



Wear Plate



2S Gear oil Pump





# **CROSSHEAD PARTS**

#### Crosshead



#### **Guide Assembly**



**Baffle Disc** 



**Double-lip Seal** 



#### **Crosshead Pin**



Pony Rod



**Stuffing Box** 



**Oil-Seal Ring** 



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# **OTHER MUD PUMP SPARE PARTS**

#### **Pulsation Dampener**



#### **Flange Elbow**



**Pressure Gauge** 



#### **Discharge Filter**



Bladder



#### **Relief Valve**



#### Elbow



#### **Spray Pump**





# MUD PUMP BEARINGS







| Bearing For Mud Pump F-1000 |             |                      |      |                      |
|-----------------------------|-------------|----------------------|------|----------------------|
|                             | Old PN      | New PN KG            |      | mm                   |
| Pinion Shaft Bearing        | 4G32840H    | NU3040X3M/C4         | 38.4 | 220*320*88.9         |
| Main Bearing                | 4053156H    | 24056CA/W33          | 69.2 | 280*420*104          |
| Eccentric Wheel Bearing     | 929/558.8QU | NUP464744Q4/C9       | 83.4 | 558.8*685.8*100      |
| Cross Head Bearing          | 254936Q     | NNAL6/177.8Q4/W33XYA | 34.2 | 177.8*257.175*196.85 |

| Bearing For Mud Pump F-1300 |             |                          |      |                       |
|-----------------------------|-------------|--------------------------|------|-----------------------|
|                             | Old PN      | New PN KG                |      | mm                    |
| Pinion Shaft Bearing        | 32844       | NU3044X3M                | 38.4 | 220*350*98.4          |
| Main Bearing                | 4053160H    | 24060CA/W33              | 97.6 | 300*460*160           |
| Eccentric Wheel Bearing     | 928/660.4QU | NUP464776Q4/C9YA4        | 129  | 660.4*812.8*107.95    |
| Cross Head Bearing          | 254941QU    | NNAL6/206.375Q4/W33XYA 2 | 44.9 | 206.375*285.75*222.25 |

| Bearing For Mud Pump F-1600 |             |                          |      |                       |
|-----------------------------|-------------|--------------------------|------|-----------------------|
|                             | Old PN      | New PN                   | KG   | mm                    |
| Pinion Shaft Bearing        | 32844       | NU3044X3M                | 38.4 | 220*350*98.4          |
| Main Bearing                | 3003760Y    | 23160/W33                | 127  | 300*500*160           |
| Eccentric Wheel Bearing     | 929/660.4QU | NUP464777Q4/C9YA4        | 178  | 660.4*863.6*107.95    |
| Cross Head Bearing          | 254941QU    | NNAL6/206.375Q4/W33XYA 2 | 44.9 | 206.375*285.75*222.25 |



# **MUD PUMP BEARINGS**

#### F Series Mud Pump:

- Power end: The shell is a steel plate welded structure, and the internal stress is eliminated after welding. power end gear
- The gear is involute tooth type, with stable operation, high efficiency and long service life. Crankshaft is hollow Integral casting. The power end lubrication method is splash lubrication.



- Fluid end: Suction and discharge flanges meet ASA and API specifications.
- The piston rod and the pony rod are connected by a clamp, which can realize quick assembly and disassembly. Bottom of valve hole There is a step at the top to prevent the valve seat from sinking. Piston and cylinder liner powered by a separate spray pump which cooled and lubricated for a long service life.
- The wearing parts can be replaceable.

| Model                   | F-800                            | F-1000                    | F-1300                 | F-1600/1600L                       | F-2200                          |
|-------------------------|----------------------------------|---------------------------|------------------------|------------------------------------|---------------------------------|
| Max.Liner Size x Stroke | (6-3/4 x 9)                      | 170 x 254<br>(6-3/4 x 10) | 180 x 305<br>(7 x 12)  | 180 x 305<br>(7 x 12)              | 230 x 356<br>(9 x 14)           |
| Rating Srtokes s/min    | 150                              | 140                       | 120                    | 120                                | 105                             |
| Rating Power KW(HP)     | 597                              | 746 (1000)                | 969 (1300)             | 1193 (1600)                        | 1640 (2200)                     |
| Gear Ratio              | 4.185 : 1                        | 4.207 : 1                 | 4.206 : 1              | 4.206 : 1                          | 3.512 : 1                       |
| Suction Flange          | 10                               | 12                        | 12                     |                                    |                                 |
| Discharge Flange        | 5                                | 5                         | 5                      |                                    |                                 |
| Pinion Shaft Dia.mm(in) | 177.8 (7)                        | 196.9 (7-3/4)             | 215.9 (8-1/2)          | 215.9 (8-1/2)                      | 254 (10)                        |
| Key mm (in)             | 44.45 x 44.45<br>(1-3/4 x 1-3/4) | 50.8 x 50.8<br>(2 x 2)    | 50.8 x 50.8<br>(2 x 2) | 50.8 x 50.8<br>(2 x 2)             | 63.5 x 44.45<br>(2-1/2 x 1-3/4) |
| Valve Pots              | Valve-over-ValveAPI #6           | Valve-over-ValveAPI #6    | Valve-over-ValveAPI #6 | Valve-over-ValveAPI #6             | Valve-over-ValveAPI #6          |
| Approx.Weight kg (Ib)   | 14500 (31970)                    | 18790 (41420)             | 24572(54170)           | 24791 (54660)<br>25900kg (57100lb) | 38460 (84790)                   |



# **PRODUCT DELIVERY**





# **SPOT GOODS**



# INNCE History

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