

Section 7. Technical Specifications

Group-A: HSD Pump with motor (Vertical inline centrifugal pump with explosion proof motor) and spare parts, Transfer Pump with motor (Vertical inline centrifugal pump with explosion proof motor) and spare parts.

ITEM NO.	QTY.	UNIT	SPECIFICATION/DESCRIPTION
HSD Pump with motor (Vertical inline centrifugal pump with explosion proof motor) and spare parts:			
01	02	Set	<p>HSD Pump Vertical Inline Centrifugal Pump with Explosion Proof Motor (Assembled)</p> <p><u>Specification of Pump:</u></p> <p>Type: Single Stage Vertical Working Fluid: Diesel Specific Gravity: 0.82 Working Temperature: 400° F Capacity: 0.25 m³/min Total Head: 40 m to 60 m NPSH: 1.2m to 2.4m or specify by supplier. Power: As Require (Should specify by supplier) (But not less than 7.0 KW) RPM: 2900 to 3000 Discharge Pressure: Minimum 110 psig Suction: 3 Inch, Rear Discharge: 1.5 Inch, Front Connecting Flange: ANSI 150 RF Cooling System: Supplier should specify about cooling system of pump if any. Model Number of Pump: Should specify by supplier.</p> <p><u>Pump Materials:</u></p> <p>Volute Casing: Stainless Steel Casing Cover: Stainless Steel Impeller: Stainless Steel Shaft: Stainless Steel</p> <p><u>Specification of Motor:</u></p> <p>Power: As require for above pump (Should specify by supplier) RPM: As require for above pump (Should specify by supplier) Voltage: 380-420 V AC Frequency: 50 HZ Connection: 3 Phase Explosion Proof: EEXE II Manufacturer: Siemens/ ABB/ Rushtorf Rott, Loher GmbH Model number of Motor: Should specify by supplier.</p> <p><u>Coupling:</u></p> <p>Coupling: Suitable coupling set to couple above mentioned pump and motor. Coupling Type: Should specify by supplier. Coupling Material: Should specify by supplier.</p>



ITEM NO.	QTY.	UNIT	SPECIFICATION/DESCRIPTION
			Sealing System: Mechanical Seal (Supplier should provide model and type of mechanical seal for above mentioned pump) Mechanical Seals should have the capability to withstand at high temperature(400° F or above)
Spare Parts for Above Pump			
02	06	Set	Coupling: As described above
03	10	Set	Mechanical Seal: As described above
Transfer Pump with motor (Vertical inline centrifugal pump with explosion proof motor) and spare parts			
04	02	Set	Transfer Pump Vertical Inline Centrifugal Pump with Explosion Proof Motor (Assembled) Specification of Pump: Type: Single Stage Vertical Working Fluid: Petrol and Diesel Specific Gravity: 0.68 to 0.87 Working Temperature: 40° C Capacity: 0.75 m ³ /min Total Head: 40 m to 50 m NPSH: 1.2m to 2.4m or specify by supplier. Power: As Require (But not less than 11 HP) (Should specify by supplier) RPM: 2800 to 3000 Discharge Pressure: Minimum 80 psig Suction: 4 Inch (100 mm), Rear Discharge: 3 Inch (75 mm), Front Connecting Flange: ANSI 150 RF Model Number of Pump: Should specify by supplier Pump Materials: Volute Casing: Stainless Steel Casing Cover: Stainless Steel Impeller: Stainless Steel Shaft: Stainless Steel Specification of Motor: Power: As require for above pump (Should specify by supplier) RPM: As require for above pump (Should specify by supplier) Voltage: 380-420 V AC Frequency: 50 HZ Connection: 3 Phase Explosion Proof: EEXE II Manufacturer: Siemens/ ABB/ Rushtorf Rott, Loher GmbH Model number of Motor: Should specify by supplier.



ITEM NO.	QTY.	UNIT	SPECIFICATION/DESCRIPTION
			Coupling: Coupling: Suitable coupling set to couple above mentioned pump and motor. Coupling Type: Should specify by supplier. Coupling Material: Should specify by supplier Sealing System: Mechanical Seal (Supplier should provide model and type of mechanical seal for above mentioned pump)
Spare Parts for Above Pump			
05	06	Set	Coupling: As described above
06	10	Set	Mechanical Seal: As described above

Group-B: Valves (Needle Valve, Plug Valve, Y-Pattern Globe Valve, Globe Valve, Ball Valve, Threaded Ball Valve, Butterfly Valve, Level Gauge Valve).

ITEM NO.	QTY.	UNIT	SPECIFICATION/DESCRIPTION
Needle Valve			
01	10	Nos.	½" High Pressure Needle Valve Pressure Range : 0-1500 Psi, NPT End Connection, Materials : C.S
02	10	Nos.	¼" High Pressure Needle Valve Pressure Range : 0-1500 Psi, NPT End Connection, Materials : C.S
Plug Valve			
03	02	Nos.	Size: 3 Inch, ANSI Class- 2500, RTJ End Flanged Regular Pattern, Dynamic Balanced, Body Material: ASTM A-216 WCC, Plug Materials: Alloy Steel, Valve Sealing Type: Grease, Fitted with standard Fittings, Gear & Hand Wheel Operated. Medium: Natural Gas, Operating Temperature: -20 °F to 200 °F
Y- Pattern Globe Valve			
04	02	Nos.	Size: 3 Inch, ANSI Class – 2500, RTJ End Flanged Bolted Bonnet, Body Material: ASTM A-216 WCB, Trim: Stainless Steel, Sealing: Metal to Metal, Bevel Gear Operated, Medium: Natural Gas, Operating Temperature: -20 °F to 200 °F
Valves (For Item No. 5-17): Design, Manufacture & End connections are as per API 6D, ANSI B16.34 ANSI B16.34 with fire safe test Certificate. Standards of all materials are as per ASTM standards. Bolted Bonnet Body Materials: Carbon Steel ASTM-A216 Gr. WCB/WCC, Trim: 13% Cr.			
Globe Valve			
05	10	Nos.	Size: 1 Inch, 600 RTJ, Hand wheel operated
06	10	Nos.	Size: 1 Inch, 600 RF, Hand wheel operated
07	10	Nos.	Size: 1 Inch, 1500 RTJ, Hand wheel operated
08	05	Nos.	Size: 6 Inch, RF end flanged, Class 1500, Gear and Hand wheel operated
09	05	Nos.	Size: 6 Inch, RTJ end flanged, Class 1500, Gear and Hand wheel operated

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ITEM NO.	QTY.	UNIT	SPECIFICATION/DESCRIPTION
Ball Valve			
10	20	Nos.	Size: 2 Inch 150 RF
11	20	Nos.	Size: 3 Inch 150 RF
Plug Valve			
Dynamic Balanced Plug Valve (Regular pattern), Plug Materials: Alloy Steel HRC-22, Max: 0.003 ENP			
12	10	Nos.	Size: 1 Inch 600 RTJ
13	10	Nos.	Size: 1 Inch 600 RF
14	10	Nos.	Size: 1 Inch 1500 RTJ
15	10	Nos.	Size: 4 Inch, RTJ end flanged, Class 1500, Gear and Hand Wheel operated.
16	05	Nos.	Size: 6 Inch, RF end flanged, Class 600, Gear and Hand Wheel operated.
17	05	Nos.	Size: 6 Inch, RTJ end flanged, Class 600, Gear and Hand Wheel operated.
Threaded Ball Valve (Two Piece)			
Thread (Both end): As per ASME B1.20.1			
Body: Carbon Steel, Ball: Stainless Steel, Bore: Full Bore			
Handle: Blow- Out Proof Stem with locking device			
18	20	Nos.	Size: 1 Inch, ASME Class 1500
19	20	Nos.	Size: 1 Inch, ASME Class 600
			Note: The following details should be noted for above valves <ol style="list-style-type: none"> Must maintain wall thickness, holes & groove of ring gasket of flange according to schedule. (For Item No.5-17) Machining assure that gasket face is always square with axis of pipe. (For Item No.5-17) Marking should complete on valve. Each valve should either run through a making machine or hand stamped along the outside diameter for complete and permanent identification. The stamping gives the size, name of manufacturer, materials specification, including grade and bore. (For Item No.5-19)
Butterfly Valve, Level Gauge Valve, Needle Valve			
20	04	Nos.	Valve for condensate Tank, Size: 3", 150lb, Rf Flange (Butter fly valve)
21	12	Nos.	Level Gauge Valve, Size: ½ inch male × ¾" Tube connection
22	12	Nos.	Level Gauge (Cock Type) valve, Size: : ½ inch male × ¾" Tube connection
23	20	Nos.	Needle Valve (Straight), WP=6000psi, Male×Female, Size: ½ inch

