



Eshel Terminal

**FIRE PUMP & JOCKEY PUMP SPEC'.**

**#296641**

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## SCOPE:

This document covers the technical requirements for design, fabrication, supply, and delivery of one (1) horizontal split case fire pump fitted with diesel motor, pump control panel as well as electrical jockey pump and control panel.

The pumps shall to be operated in Eshel Terminal.

The pumps and all accessories shall be design and manufacture according to NFPA 20 and shall be U.L listed; FM approve.

## SITE CONDITIONS:

1. Site altitude is about 200 m' above sea level.
2. Ambient temperature varies between 0<sup>0</sup>C- 48<sup>0</sup>C.
3. Relative humidity varies between 45% - 80%.
4. Rain falls around 200 mm' / year.
5. The pump shall be installed indoor.

## PUMP REQUIREMENTS:

1. The pump shall be rated to **3500 gpm, 200 psi** (795 m<sup>3</sup>/hr. @ 14 bar).
2. The pump shall be design to provide the rated capacity with the following safety factors:
  - 2.1 The rated capacity shall not be less than 150% at 65% of the rated head.
  - 2.2 The maximum head shall not exceed 140% of the rated head.
3. The pump shall be of an horizontal split case design.
4. The pump shall be supply with ANSI #300 flanges.
5. The pumps shall be fitted with class 300 cast iron casing, bronze casing wearing rings, bronze impellers and renewable key driven bronze shaft sleeves through the packing.
6. The bearings shall be greasing lubricated cartridge anti-friction type.
7. Pump shaft sealing:

Alternative A: Packing, sleeve shaft and gland. The packing box gland shall be of bronze split type.

Alternative B: Mechanical seal.

The vendor shall quote price for both alternatives if possible.

Each alternative shall be UL/FM approve

8. The pumps shall be fitted with high-strength steel shaft. The shaft deflection shall not exceed 0.002" at the stuffing boxes when the pump is operating at 25% of the B.E.P.
9. Jockey pump shall be an electrically operated pump, rated to 30 GPM, 210 PSI

### **DIESEL MOTOR DRIVE REQUIREMENTS:**

1. The pump shall be fitted with diesel engine drive.
2. The diesel drive manufacture shall be a well-known OECD company, with a permanent representation in Israel with a full spare part stock.
3. The motor drive shall be sized for and have enough power to operate the pump (see paragraph 2)
4. The motor drive shall be fitted with stainless steel nameplate with all data required by the NFPA
5. The driver shall be supply with all the accessories such as but not limited:
  - a. Fuel filter.
  - b. Oil filter.
  - c. Air filter.
  - d. Fuel tank and fuel tank accessories such as: filling nozzles, & strainer, vent, outlet nozzle, level indicator, all complies with the recommendation practices described in the appendix of NFPA 20.
  - e. 12 VDC starters.
  - f. Batteries.
  - g. Batteries charger.
  - h. Batteries rack.
  - i. Batteries cables.
  - j. UL/FM Controller.
  - k. Industrial grade muffler.
  - l. Coupling and coupling guard.

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- m. Common base plate.
- n. One set of spare part.
- o. Cooling system.
- p. Exhaust unit and accessories.

### **BASE PLATE AND MOUNTING OF THE DRIVE:**

1. The motor and the pump shall be supply and assembled by the pump manufacturer on a common base-plate
2. The base-plate shall be fitted with at least 6 grout holes, located so that the base can be grouted in place without the need to removal of the pump or the drive.
3. The base plate shall be large and rigid enough for fit to the largest possible drive applicable to the pump.
4. The base-plate shall include drain rims and port to effect complete drainage of the pump leaks.
5. Fixing bolts and dowels for pump and drive shall supplied by the pump manufacturer.

### **ACCESSORIES AND FITTINGS:**

The pump shall be furnished with the following accessories and fitting:

- 3.5" diameter compound suction gauge.
- 3.5" discharge pressure gauge.
- 1/2" automatic air release valve.
- Spring Relief Valve FM approve
- FM approve meter device. The unit shall be capable of water flow not less than 175% of the rated flow.
- Closed cone with eyepiece.
- UL/FM flow metering device.

### **PAINT:**

All parts that required painting shall be painted.

The painting shall be min of 200 micron of epoxy with 80% volume solids.

### **TAG AND MARKING:**

The equipments shall bear name plate made of stainless steel.

The plate thickness shall be 1.5 mm'.

The plate shall contain the following data:

- Manufacturer name.
- Manufacturer country.
- Year of built.
- Equipment model.
- Manufacturer item number.
- Rating.
- Size.
- All data that might be needed by the codes.

### **PACKING:**

1. All machined surfaces shall be greased.
2. All rotation elements shall be factory lubricated and tied up.
3. All ports and opening shall be blanked off.
4. The goods shall be packed of in containers or boxes with water repellent materials.
5. The package shall be suitable for export and capable of withstanding rough handing – marine package.
6. The vendor shall quote the list of all items in each container or box.

### **INSPECTION AND TESTING:**

1. The vendor shall supply performance test curve for the pump.
2. The pump shall be hydraulically tested.

## **GUARANTEE:**

The vender shall guarantee the design, materials, equipments, and workmanship for a period of 24 months from operation but not later then 30 months after shipment.

Should any defect due to faulty design, materials or bad workmanship become apparent during the guarantee period, the vendor shall agree to make all necessary to repairs or replacements the defect parts, free of charge, and shall pay transportation costs involved.

## **GENERAL TERMS:**

In order to evaluate the tender's quotations, the following information must be given:

- Dimensional drawings.
- Performance curve / test certificates.
- Accessories drawings.
- Description of all components of the scope of supply.
- Data sheet for all the goods.
- List of recommended spare parts for two (2) years of operation. The spare part list shall be quoted with itemized prices.
- Assembly, installation, operation and maintenance instructions.
- Fabrication schedule.
- Installation description.
- Price listing of the offer.

Units: All drawings and dimension prints shall be in accordance with SI System.

Language: All proposals, drawings, specifications, material/quality Control sheet, reports, test certificates and other documents Shall be in English

**DOCUMENTATION:**

Item	Document	Offer stage	Supply stage
1	General drawings.	2	2
2	Accessories description and drawings.	2	2
3	Data sheet.	2	2
4	List of spare parts	2	2
5	Sectional drawings with lists of parts		2
6	All the instructions	2	2
7	Price listing of the offer	1	
8	Time schedule	2	
9	Test documentation		2

**QUOTATION:**

Item	Description	Price (\$)
1	UL/FM, Diesel motor horizontal split case fire pump supply with controller, closed cone element, flow meter accessories and electrical jockey pump unit supply with UL/FM controller:	
	<b>Alternative A:</b> Diesel pump 3500 GPM 200 psi. fitted with packing, sleeve shaft and gland	
	<b>Alternative B:</b> Diesel pump 3500 GPM 200 psi. fitted with mechanical seal.	
	Electrical Jockey pump 30 GPM 210 psi	
	Pressure relief valve.	
	Cone Relief element	
	Flow meter.	
	<b>Total:</b>	