

HOT STEEL DESCALING SYSTEM

TECHNO-COMMERCIAL QUOTATION



21-24, PanchRatna Industrial Estate Near Oad Village, Paldi Kankaj, Satpanth
Mandir Pirana Rd, Ahmedabad, Gujarat, India. 382427



+91 93750 22359



sales@pressurejet.com



www.pressurejet.com

Quotation for Primary Descaling System:
FGA95-60 - 300 bar @ 2075 LPM @ (335*5 HP)
(5 working + 1 Standby)

GST Number	24AAECP0774H1ZI	PAN Number	AAECP0774H
CIN Number	U29120GJ2006PTC049331	Offer Validity	30 Days from Quote Date
Date	06-Mar-2024	Unit Currency	INR
Process No	255780	Revision	00
Company Name	Jailaxmi Alloys Steel Pvt. Ltd.		
Address	Paithan Aurangabad, Maharashtra - 431107 India		
Kind Attention	Mr. Manish Patel		
Reference	As Per Your Mail Received Date 08-Feb-2024 for Descaling System		

TECHNICAL DATA FOR HOT STEEL DESCALING

Sr No	Description	Specifications
1	Type Of Descaling (Primary/Secondary)	Primary
2	Billet Size	400x350mm,280x350mm,280,320mm,240x200mm, 200x200mm
3	Billet length	Min -2.0mtr. Max -4.00 mtr.
4	Ingot size	650x530x2000mm,540x430x2000mm,400x330x2000mm,300x275x2000mm
5	Billet Temperature	1240 to 1300 Degree °C
6	MOC	Mild Steel
7	No. of Surface to Clean	Top & Bottom
8	Billet Speed (Mtr/s)	1 m/sec
9	No. Of Pieces Per Hour	40 to 50 Pcs/ Hr
10	Furnace Type & Fuel	Pusher Type Billet Reheating Furnace -20 MT/Hr Capacity
11	Furnace to First Pass Distance	-
12	Finished Product	-

BILLET SIZEWISE PUMP WORKING DETAILS

Billet Size (mm)	Pressure (BAR)	Total Capacity (LPM)	Pump System (Working)	Pump System (Standby)	Bare Shaft (Spare)
650mm X 530mm	300	1715	5	1	0
540mm X 430mm	300	1402	4	2	0
300mm X 275mm	300	998	3	3	0

280mm X 350mm 280mm X 320mm	300	1033	3	3	0
240mm X 200mm 200mm X 200mm	300	665	2	4	0
400mm X 350mm 400mm X 330mm	300	1012	3	3	0

PUMP DETAILS

Pump Model	FGA95-60	Each Pump Flow Rate	335 LPM
Max. Working Pressure	300 Bar	Pump Speed	-
Max. Fluid Temperature	50	Transmission & working type	Direct Couple & Clean Water

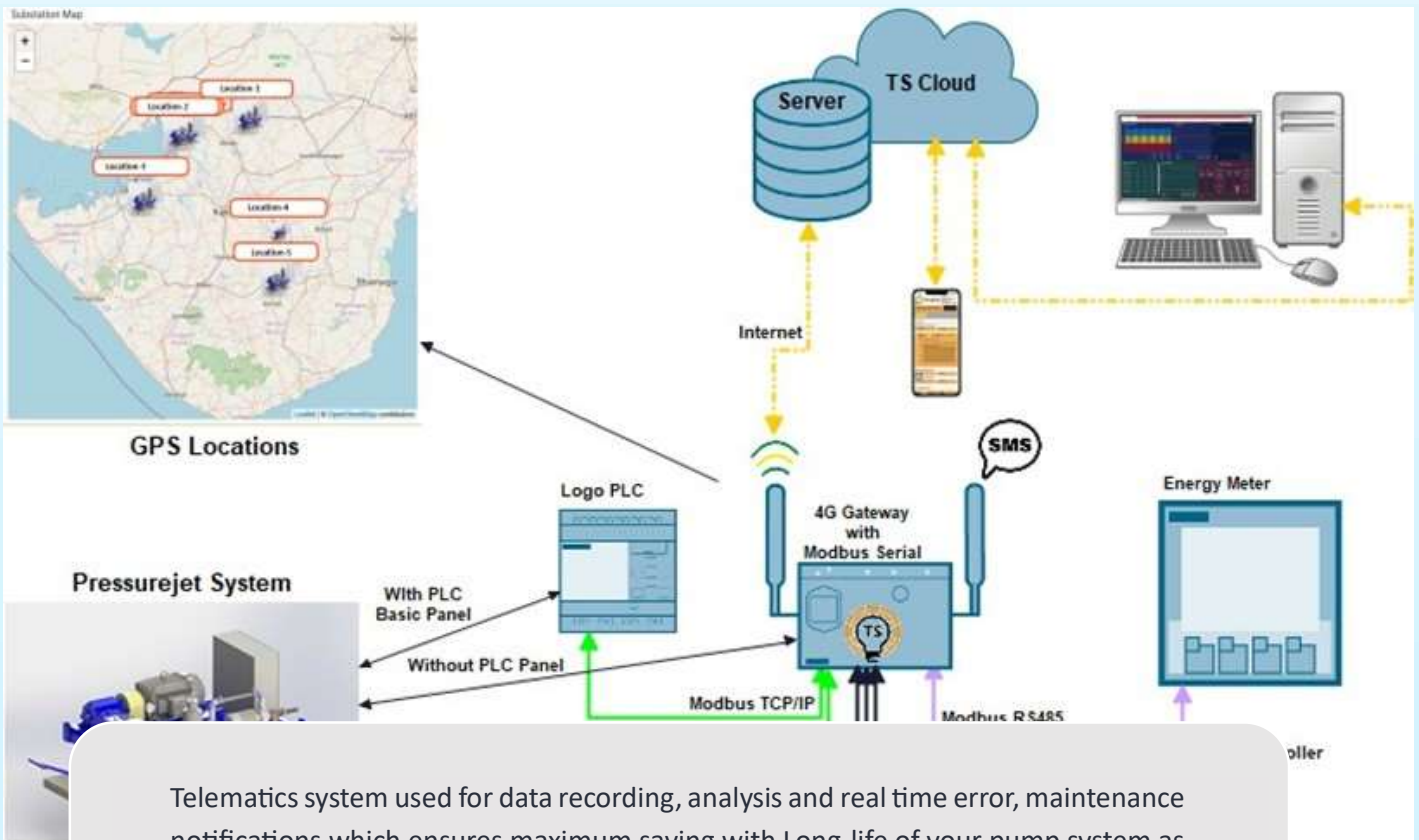


PUMP SPECIFICATIONS

Model	<u>FGA95-60</u>
Type	High Pressure Triplex Plunger Pump
Required Suction Pressure	Flooded Suction (Required booster pump is quoted)
Stroke Length	mm
Plunger Diameter (mm)	60 mm
Connection Size (BSP) (Both Female Type)	Inlet 3" / Out let"
Permissible Oil Temperature	Room Temp. + 50 °C
Lubrication Type / Grade / Quantity	<u>Forced Feed</u> / Gear Oil 220 / 12 liter
Water Intel Condition	Clean Water, Filtration 80-100 Micron at Flooded Suction Pressure @ Amb. Temp.

TELEMATIC SYSTEM

Volumetric Efficiency	$\geq 90\%$ (Even if pumps are similar, their efficiency may differ by $\pm 2\%$, but overall, it will be $\geq 90\%$)
Max. Thrust on Plunger	Kgs
Working Duty	Continuous



Telematics system used for data recording, analysis and real time error, maintenance notifications which ensures maximum saving with Long-life of your pump system as not facing unplanned maintenance and heavy breakdown of the descaling system.

MATERIAL OF CONSTRUCTION



Connecting rod (forged alloy steel)

- (Measured in CMM) G.D. & T.: 10 μm .
Heavy pin area construction, which added load strength.

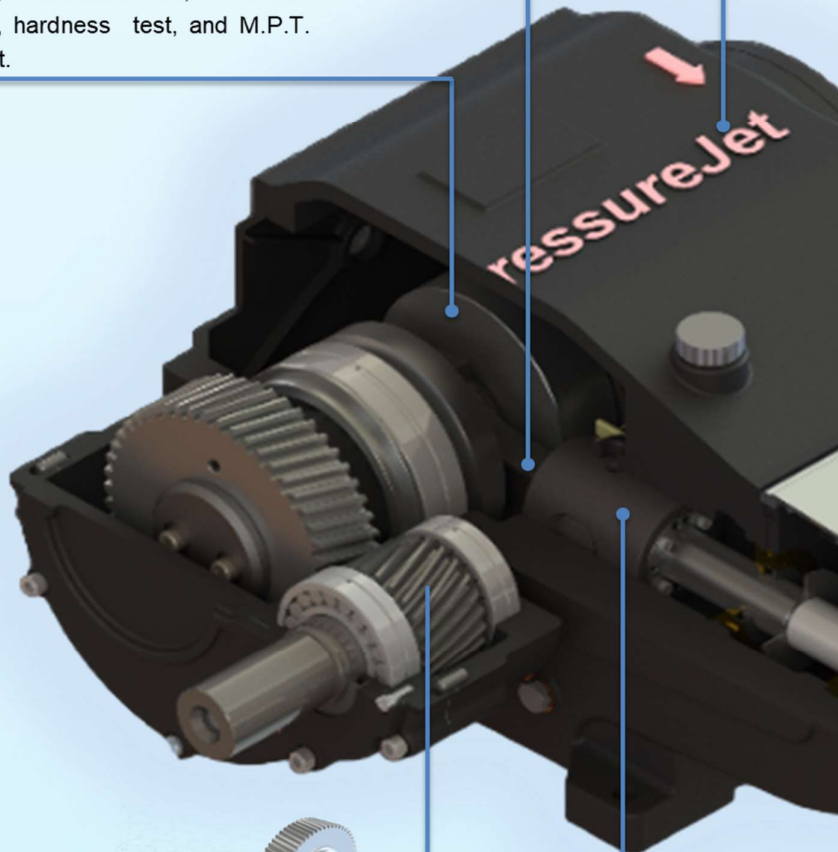
Crank shaft (forged alloy steel)

- Ra value: 0.2 μm (measured in CMM)
- G.D. & T.: 10 μm .
- Raw material testing: physical test, chemical test, ultrasonic test, hardness test, and M.P.T. Test.



Crankcase (FG 260 IS 210-1993-GR)

- Crosshead bore Ra value: 0.2 μm (measured in CMM)
- G.D. & T.: 10 μm .
- Raw material testing: physical test.
- It's a single piece housing that removes the misalignment of the plunger and increases the life of the seal.



Integrated gear unit (alloy steel)

- Class of accuracy: DIN 6 The integrated gear unit allows for a very compact construction with maximum efficiency.



Crosshead assembly (cast ductile iron + stainless steel)

- Ra value: 0.2 μm
- G.D. & T.: 10 μm (measured in CMM).
- Anti-corrosion treatment on a surface hardness of 50 HRC.



MATERIAL OF CONSTRUCTION

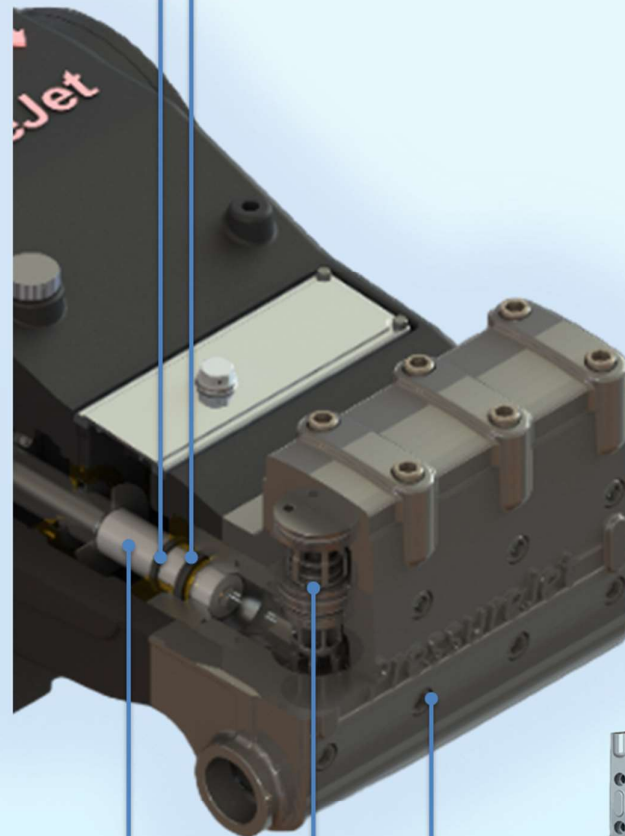
Low pressure Seal

- Low pressure seal along with HP seal forms a water jacket around plunger for lower operating temperature & friction, higher seal life.



High Pressure Plunger Seal

- "V" style strong and tightens under load packing for high compressive & tensile strength ensure effective sealing.



Plunger (solid ceramic)

- Ra value : 0.025 μm (measured in CMM)
- G.D & T: 10 μm



Pump head (casting stainless steel)

- Testing: - chemical test

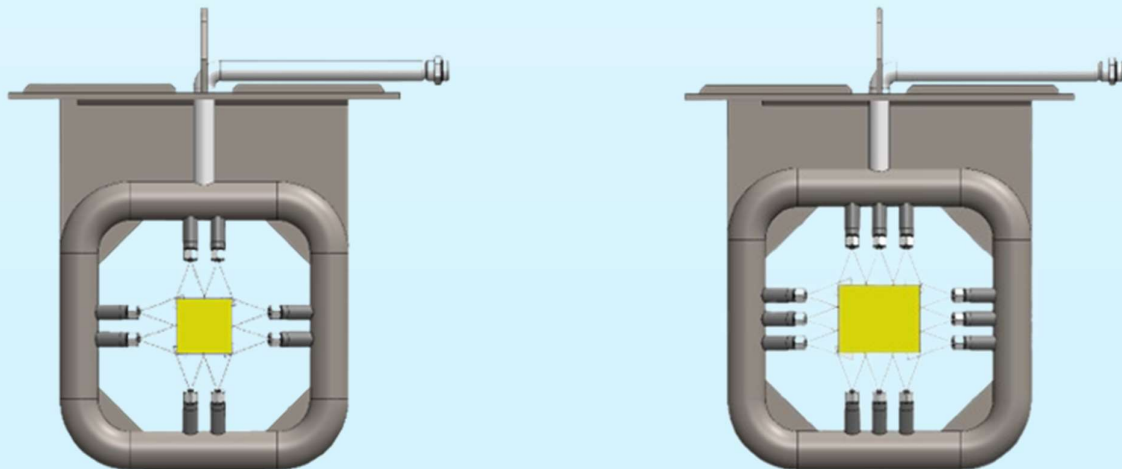
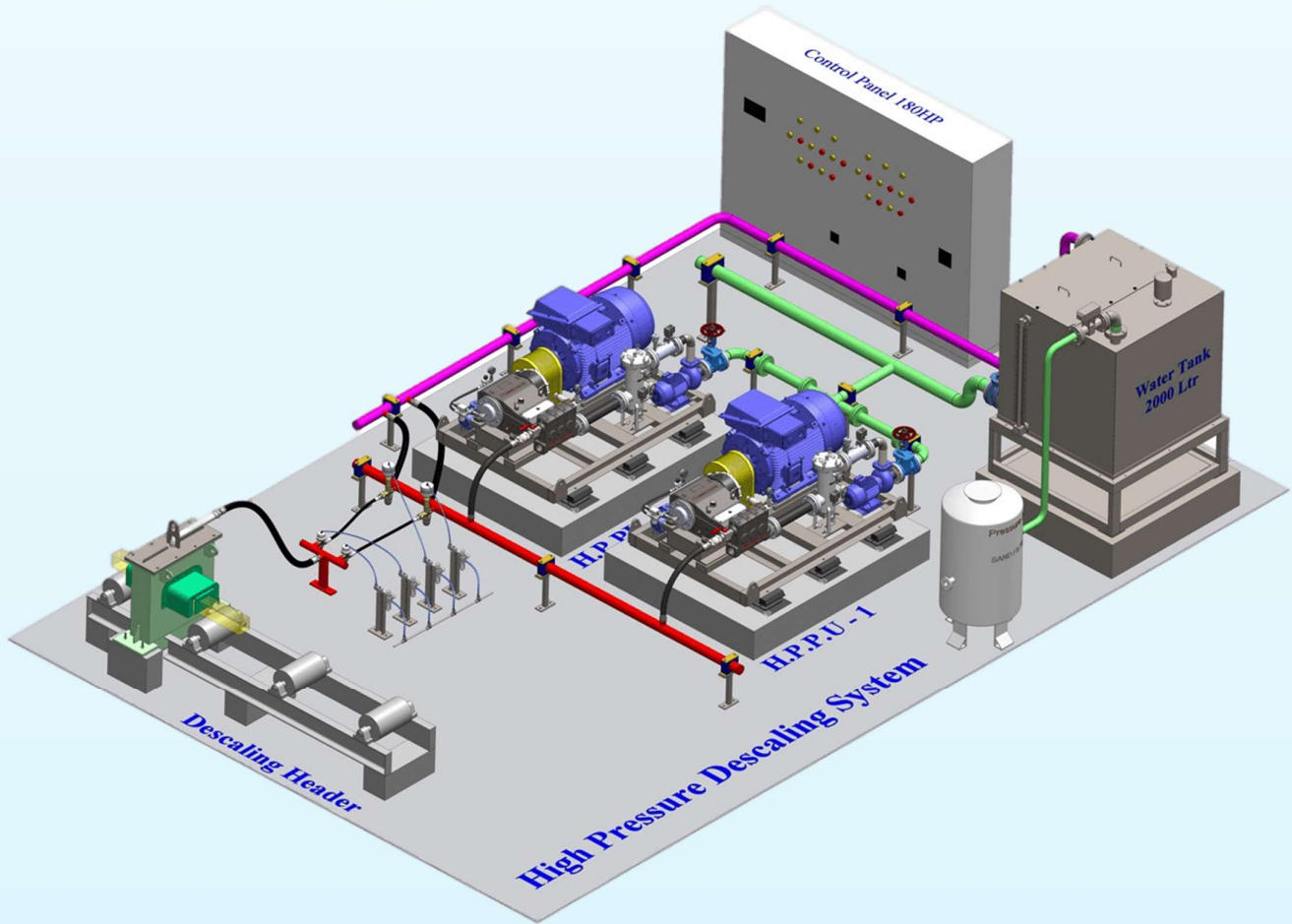


Complete valve assembly

- Valves made of special imported stainless steel - hardened & anti corrosion hard surface coated for long life.
- Ease of access to suction-discharge valve assembly for maintenance.



DESCALING SYSTEM



Note: These images are for illustration purpose only, actual may be different than it appears.

ITEM LIST

SR. NO.	ITEM NAME	QTY.
BARE SHAFT PUMP		
1	FGA-95-60 (415 LPM @ 300 Bar) Bare Pump with Force Lubrication System	6 Nos.
2	Safety Valve	6 Nos.
3	Pressure Gauge	6 Nos.
4	Needle Valve	6 Nos.
PUMP SYSTEM ELEMENT		
5	Electric Motor – VFD Compatible -335 Hp-1500 Rpm-415v-50Hz-3 Ph-355 Frame Size-Non FLP-Foot Mounted with Gland & Lugs	6 Nos.
6	FGA-95 Base frame	6 Nos.
7	B Flex Coupling	6 Nos.
8	Coupling Guard	6 Nos.
9	High Pressure 2 Way Carbon Steel Ball Valve-2" Bspff-500 Bar	6 Nos.
10	Non Return Valve-2" BSPFF	6 Nos.
11	Pressure Switch Mnh-07-Cs-10-7 bar	6 Nos.
12	Basket Type Filter High Volume 3" - 100 Micron (SS 304) with 1 extra filter element	6 Nos.
13	Booster Pump-10HP-2800rpm-50Hz-415V	6 Nos.
CONTROL PANEL AND ITS ACCESORIES		
14	Electric Control Panel VFD with HMI, PLC,335 Hp-415v-3Ph-50Hz (Operate 5 + 1 Standby Electric Motor-335Hp and Operate 5 + 1 Standby Booster pump-10HP in Single Box With AC, Telematic system and UPS)	1 Nos.
HEADER AND OTHER COMMON ACCESSORIES		
15	DV-80 (loading - unloading Valve)	2 Nos.
16	DV-80 /VRPP 450 (on-Off Valve)	2 Nos.
17	Hot Metal detector 24V DC(600-1800C)	1 Nos.
18	Pressure Regulating Valve	5 Nos.
19	Primary Descaling header with 22 carbide nozzles ,cover and stand to cover billet size-650*530 mm*mm	1 Nos.
20	Primary Descaling header with 18 carbide nozzles ,cover and stand to cover billet size-540*430 mm*mm	1 Nos.
21	Primary Descaling header with 16 carbide nozzles ,cover and stand to cover billet size-300*275 mm*mm	1 Nos.
22	Primary Descaling header with 18 carbide nozzles ,cover and stand to cover billet size-280*320 mm*mm and 280*350 mm*mm	1 Nos.

23	Primary Descaling header with 12 carbide nozzles ,cover and stand to cover billet size-240*200 mm*mm and 200*200 mm*mm	1 Nos.
24	Primary Descaling header with 18 carbide nozzles ,cover and stand to cover billet size-400*350 mm*mm and 400*330 mm*mm	1 Nos.
25	Header box + scale guider + cover	1 Nos.
26	Tool kit (Common for all pumps)	6 Nos

Total System Very Special Introductory Price (Incl. of above items): Rs. 4,82,00,000/-

Note: Pump Inspection testing – Only one at a time.

RECOMMENDED SPARES AND COMMISSIONING

LIST OF RECOMMENDED SPARES

SR. NO.	ITEM NAME	ITEM CODE	Qty	UOM	Unit Price (Rs.)
1	Plunger Seal Kit	2	nos	8600	17200
2	Complete Valve Kit	2	nos	37600	75200
3	Support ring kit	2	nos	6200	12400
4	Oil seal Kit	2	nos	1300	2600
5	O-Ring Kit	2	nos	2800	5600
Total (Rs.):					1,13,000

Supervision for Installation & Commissioning of Descaling System

Installation	<p>Customer to Provide:</p> <ul style="list-style-type: none"> • To & fro air fare • Hotel lodging & boarding • Local transportation • Max. Stay for engineer 3 days at site (1 person) • For more than 3 days, Rs. 8000/- per day / person shall be charged extra 	Rs. 50,000
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SCOPE OF SUPPLY

Sr.	Item	Scope Under
1	FGA-95-60 (415 LPM @ 300 Bar) Bare Pump with Force Lubrication System	Pressure Jet Scope
2	Electric Motor – VFD Compatible -335 Hp-1500 Rpm-415v-50Hz-3 Ph-355 Frame Size-Non FLP-Foot Mounted with Gland & Lugs	
3	FGA-95 Base frame	
4	B Flex Coupling	
5	Coupling Guard	
6	Safety Valve	
7	Pressure Gauge	
8	Needle Valve	
9	High Pressure 2 Way Carbon Steel Ball Valve-2" Bspff-500 Bar	
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24	Primary Descaling header with 18 carbide nozzles ,cover and stand to cover billet size-400*350 mm*mm and 400*330 mm*mm	
25	Header Box + Scale Guider + Cover	
26	Tool kit (Common for all pumps)	
27	Civil Work for Pump foundation	

28	Civil work for Descaler foundation	Jailaxmi Alloys Steel Pvt. Ltd..
29	Civil work for scale removing pit	
30	Piping work for suction line	
31	Piping work for discharge line	
32	Piping work for by pass line	
33	Electrical wiring (Plant power source to control panel)	
34	Electrical wiring (Pump unit to control panel)	
35	Electrical wiring (Control panel to all electrical equipment's)	
36	Wiring (Hot metal detector to control Panel)	
37	Supply of continuous air @ 6-8 bar for pneumatic valve operation	
38	Supply of continuous water @Flooded Flow for suction	
39	Settling Tank with capacity minimum 15000 to 25000 Ltr	
40	Internet connection and subscription for Telematic system	
41	Gate Valve 4" x 150 Class	
42	MS Seamless Pipes for suction, bypass & discharge as per requirement	
43	Suction water tank with capacity minimum 25000 Ltr	
43	Sand Filter	

TERMS AND CONDITIONS

Freight & Transportation	To pay (In Client Scope)
Packing And forwarding	<p>Packing & Forwarding charge is the costing of Packing Material, Local Transportation from our Factory to Transporter local Godown, Hamali, Loading- Unloading etc. This is considerable cost to us therefore it will always be charged extra, whenever material is to be dispatched in safely Packing. It will not be applicable when material is to be dispatched in unpacked condition.</p> <p>For domestic packing, P & F @ 3% will be charged extra & For export packing, it will be extra @ 5%.</p>
Payment Terms	50% advance with PO and balance against Proforma Invoice before dispatch.
Delivery	<p>Within 6-7 Months from the date of receipt of Approval of GAD or Advance Payment, whichever is later.</p> <p>In case of advance payment, delivery time will be considered from the date of receipt of advance payment. Early delivery can be possible subject to availability of stock, man power and other resources. In some cases, delivery may be later than specified. Therefore, reconfirmation of delivery at the time of placement of order is essential.</p> <p>Delivery dates are estimates only. In our business, we receive no. of receipts (Goods inward) and sales orders, in a highly volatile manner. So, commit exact delivery time before finalization of order is not possible. To overcome this situation, we have implemented world 's best Enterprise Resource Planning (ERP) - Oracle E-Business suite 12.1.3, so we can let you know the exact delivery time at the time of booking the order to meet your specific delivery date.</p>
Commissioning	<ul style="list-style-type: none"> ✓ You have to intimate us 10 days in advance for deputation of engineer for supervision of installation and commissioning. ✓ You have to provide all necessary help to our engineer at your site. ✓ All necessary Power connection, clean water, and other items necessary for commissioning of the pump should be available at site before our engineer visit. However, if the Pump will not be commissioned due to non-availability of inputs from your site being not ready, then engineer will be deputed again on extra chargeable basis. ✓ Commissioning is to be done within 60 days from the date of dispatch or within 30 days from the date of receipt of material at your site, whichever is earlier.

TERMS AND CONDITIONS

Preparation Required by Prior to Installation By Customer	<ul style="list-style-type: none">✓ Pump foundation, Civil Work, Piping Work, and electrification at your site✓ Water continuous supply at 2-3 bar suction pressure to be arranged.✓ Pump should be installed within 20 Mtrs. From Descaling Header.✓ Scale removing pit / arrangement.✓ Supply of Air at required pneumatic pressure of 6-8 Bar.✓ Power supply to Electric motors and control Panel.✓ Low pressure Billet line from main source of water to Sand Filter.✓ Necessary arrangement for conveyor, guides & desired speed of Slab.✓ Cable from Control Panel to Motor & all electrical equipment✓ Cable from Main Supply to Control Panel.
Guarantee	Pump is guaranteed for 12 months from the date of installation or 18 months the date of invoice whichever is earlier, against any manufacturing defects. Accessories, Parts subjected to wear and tear, rubber parts especially rubber hose and Pressure Gauge does not cover under any guarantee. For bought out items. i.e., Electric Motor, Starter, Pressure Gauge, Hoses etc. will be transferred as we get from its suppliers.
Warranty	For detailed “Warranty”, please Click Here
Jurisdiction	Any dispute shall be subject to Ahmedabad Jurisdiction only.
Note:	Please scan the given QR code in the next page for detailed terms and conditions

TERMS AND CONDITIONS



To read Detailed Terms and Conditions Please scan the mentioned QR code / [Click Here](#)



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