

DI 230104221



Industrial Sales & Manufacturing Co.

Plot No. 10, Sector 10, Gurgaon, Haryana - 122001

Phone: 0122-2600000
Mobile: 9899000000

E-mail: sales@ismc.com

ISM/S-4/2022-23/1272
M/s. Jindal Aluminium
Bhiwadi

17.12.2022

Kind Attn.: Mr. Rajgopal Sir

Subject: Your requirement of Grundfos make Pump-set

Dear Sir,

With reference to our discussions, we are pleased to submit our offer:

Sno.	Description	Price Each in Rs.	Quantity	Total Price
1	Grundfos make Pump-Set			
	The Technical details of the system are as under:			
	Make - GRUNDFOS			
	Model - LS 200-150-3B1A			
	Pump Type - Horizontal splitcase single stage long coupled			
	Head - 40 mtr			
	Flow - 400 m ³ /hr			
	Pipe connection - 200 X 150 mm			
	Absorbed KW - 53.57 KW			
	Brake KW - 75 KW			
	NPSHr - 4.31 mtr	1173777.00	2 No.	2347554.00
	Pump RPM - 1485 RPM			
	Phase - Three			
	Eff. Pump - 85.9%			
	Seal - Mechanical Seal			
	Liquid			
	a) Sp. Gravity - 1			
	b) Temperature - 0°C - 120°C			
	c) Viscosity - As Water			
	MOC Pump			
	Impeller - SS			
	Casing - CI			
	Shaft - SS			
	Motor - Grundfos			
	KV - 75 Kw			
	RPM - 1500 RPM			
	Motor Efficiency class - IE3			

Rs. 880,330/ Each. Pump
→ coupled Pump

TOTAL PRICE	23,47,554.00
DISCOUNT	23%
BEST PRICE	18,31,692.12

25%

TERMS & CONDITIONS:

- 1) F.O.R. - OUR GODOWN.
- 2) GST / HSN Code - Extra as applicable at the time of billing. (Centrifugal pumps@18% (84137010).
- 3) Payment - 50% Advance & Bal. Agnst. PI before Dispatch.
- 4) Delivery - 14-16 weeks from the date of your techno-commercially approved PO along with advance.
- 5) Warranty - 18 months from the date of commissioning OR 24 months from the date of supply, whichever is earlier.
- 6) Performance test report and inspection charges extra as per our policy. We provide compliance warranty certificate.
- 7) All civil works, electrical cabling etc. at your scope.
- 8) ID clause is not acceptable.
- 9) Order cancellation - Penalty towards order cancellation shall be applicable as per Grundfos Policy.
- 10) Validity - Offer valid for 30 days.

We now look forward towards receiving your valued order.
Thanking you for assuring you of our best services and co-operation always.

Yours sincerely,
Industrial Sales & Manufacturing Co.

Virendra Singh (9829872274)

Discussed with Mr. Virendra Singh and given above
31/01/23

CHECK LIST

DISCOUNT *ed Rate as always*

PRICE BASIS : FOR BHIWADI *FOR-JAL BWA*

PAYMENT *25% Advance, balance within 7 days*

DELIVERY *16 to 18 days*

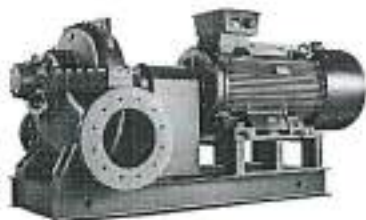
WARRANTY *24 months from the date of Invoice or 18 months from the date of Commissioning whichever is earlier*

VALIDITY *WEIR Rajgopal*



Qty. | Description

1 LS 200-150-381A ,1F1DSBBQE1 75,0/4



Note! Product picture may differ from actual product.

Product No.: On request

Non-self-priming, single-stage centrifugal pump with radial suction and radial discharge port.
 Pump for the pumping of thin, clean or slightly contaminated, non-aggressive liquids without abrasive or long-fibred solids.
 The pump has horizontal pump shaft and the housing can be dismantled in the horizontal plane along the drive shaft.
 Pump and motor are mounted as separate units on a common baseframe and connected via a flexible coupling.
 The impeller is hydraulically as well as dynamically balanced.
 Complete unit consists of pump, baseframe, coupling guard and electric motor.

Liquid:

Pumped liquid: Water
 Liquid temperature range: 273 .. 373 K
 Selected liquid temperature: 293 K
 Density: 998.2 kg/m³
 Kinematic viscosity: 1 mm²/s

Technical:

Actual calculated flow: 400.1 m³/h
 Resulting head of the pump: 40.05 m
 Actual impeller diameter: 348.3 mm
 Impeller nom: 381 mm
 Primary shaft seal: BBQE
 Approvals: CE
 Curve tolerance: ISO9906.2012 2B
 Rotation direc: CW
 MaxPowerP2AlongTheCurve: 60.15 kW
 MinimumContinuousSuctionFlow: 212.7 m³/h
 MaximumHead: 46.2 m
 HeadRiseToShutOff: 87.86 %
 FlowBEP: 410.9 m³/h
 FlowRatioBEP: 97.35 %
 HeadRatio: 81.05 %
 DiameterRatio: 91.42 %
 MaximumWorkingPressure: 0.4523 MPa
 MaxAllowableSuctionPressureLimit: 0.548 MPa

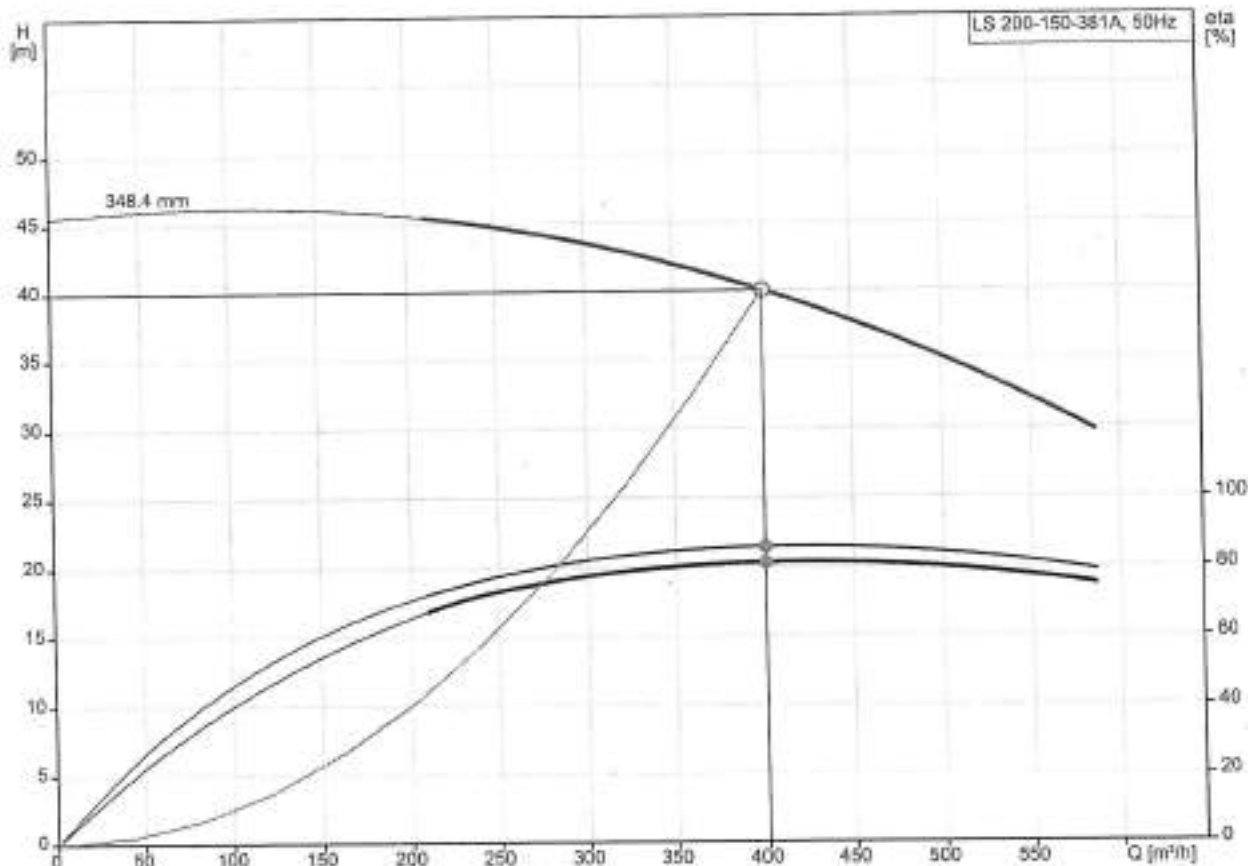
Materials:

Pump housing: Cast iron
 EN 1561 EN-GJL-250
 Wear ring: Brass
 Impeller: Stainless steel
 EN 1.4308
 ASTM ASTM A351 CF8

Qty. | Description

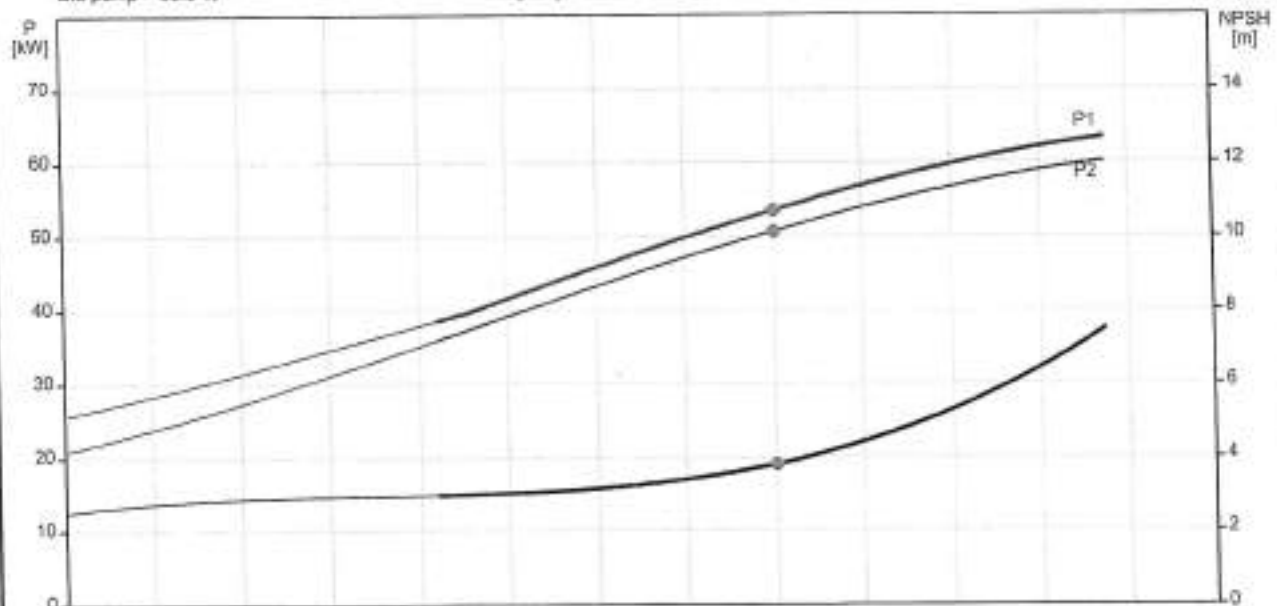
1	<p>Shaft: Stainless steel</p> <p>Installation:</p> <p>Range of ambient temperature: 258 .. 313 K</p> <p>Maximum operating pressure: 1000 kPa</p> <p>Flange standard: DIN</p> <p>Pump inlet: DN 200</p> <p>Pump outlet: DN 150</p> <p>Pressure rating for connection: PN 10</p> <p>Coupling type: Pin and bush coupling</p> <p>Electrical data:</p> <p>Motor type: 280S</p> <p>IE Efficiency class: IE3</p> <p>Rated power - P2: 75 kW</p> <p>Mains frequency: 50 Hz</p> <p>Rated voltage: 3 x 380-400D/660-690Y V</p> <p>Rated current: 136-129/78,5-75,1 A</p> <p>Starting current: 690-690 %</p> <p>Cos phi - power factor: 0.88</p> <p>Rated speed: 1485 rpm</p> <p>Efficiency: IE3 95,0%</p> <p>Motor efficiency at full load: 95.0-95.0 %</p> <p>Motor efficiency at 3/4 load: 94.9-94.9 %</p> <p>Motor efficiency at 1/2 load: 94.2-94.2 %</p> <p>Number of poles: 4</p> <p>Enclosure class (IEC 34-5): 55 (Protect. water jets/dust)</p> <p>Insulation class (IEC 85): F</p> <p>Motor No: 99547662</p> <p>Others:</p> <p>Net weight: 1140 kg</p> <p>Gross weight: 1260 kg</p> <p>Shipping volume: 2.92 m³</p> <p>Rotation direc: CW</p>
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LS 200-150-381A ,1F1DSBBQE1 75,0/4 50 Hz



Q = 400.1 m³/h
 Pumped liquid = Water
 Density = 998.2 kg/m³
 Eta pump = 85.9 %

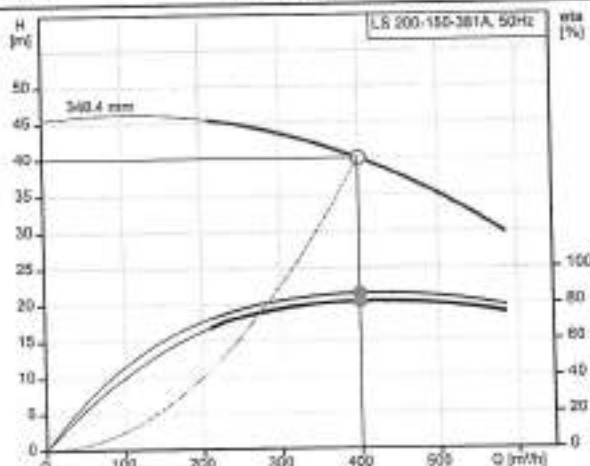
H = 40.05 m
 Liquid temperature during operation = 293 K
 Motor power reserve according to ISO 5199
 Eta pump+motor = 81.3 %



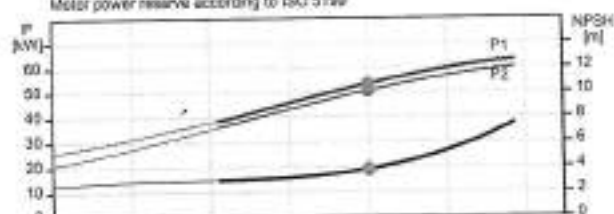
P1 = 53.57 kW
 Motor size = 75 kW
 NPSH = 3.61 m

P2 = 50.73 kW
 Max. power P2 due to ISO5199 = 68 kW
 Max power P2 required along the curve = 60.15 kW

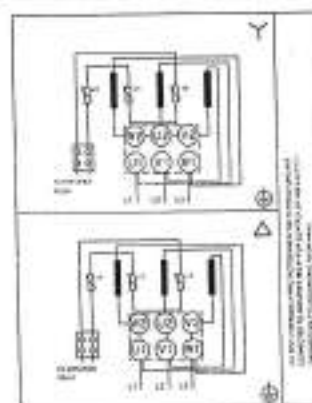
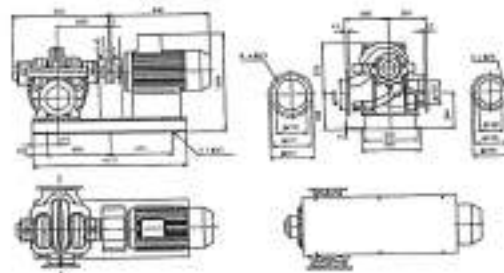
Description	Value
General information:	
Product name:	LS 200-150-381A 1F1DS9BQE1 75,0/4
Product No:	On request
Based on:	99729542
EAN number:	On request
Technical:	
Actual calculated flow:	400.1 m ³ /h
Resulting head of the pump:	40.05 m
Actual impeller diameter:	348.3 mm
Impeller nom:	381 mm
Primary shaft seal:	BBQE
Approvals:	CE
Curve tolerance:	ISO9906:2012 2B
Pump version:	1
Cooling:	IC 411
Rotation direc:	CW
Max power P2 along the curve:	66.15 kW
Minimum continuous suction flow:	212.7 m ³ /h
Maximum head, actual impeller diameter:	46.2 m
Head rise to shut off:	87.86 %
Flow, best efficiency point (BEP):	410.9 m ³ /h
Flow ratio (calculated/BEP):	97.35 %
Head ratio (resulting/max. diameter):	81.05 %
Diameter ratio (actual/max.):	91.42 %
Maximum working pressure:	0.4523 MPa
Maximum allowable suction pressure limit:	0.548 MPa
Materials:	
Pump housing:	Cast iron
Pump housing:	EN 1561 EN-GJL-250
Wear ring:	Brass
Impeller:	Stainless steel
Impeller:	EN 1.4308
Impeller:	ASTM ASTM A351 CF8
Material code:	DS
Shaft:	Stainless steel
Installation:	
Range of ambient temperature:	258 .. 313 K
Maximum operating pressure:	1000 kPa
Flange standard:	DIN
Pump inlet:	DN 200
Pump outlet:	DN 150
Pressure rating for connection:	PN 10
Coupling type:	Pin and bush coupling
Connect code:	F1
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	273 .. 373 K
Selected liquid temperature:	293 K
Density:	998.2 kg/m ³
Kinematic viscosity:	1 mm ² /s
Electrical data:	
Motor type:	280S
IE Efficiency class:	IE3
Rated power - P2:	75 kW
Mains frequency:	50 Hz



Q = 400.1 m³/h **H = 40.05 m**
 Pumped liquid = Water Density = 998.2 kg/m³
 Eta pump = 81.05 % Eta pump+motor = 81.3 %
 Liquid temperature during operation = 293 K
 Motor power reserve according to ISO 5199



P1 = 53.57 kW **P2 = 20.73 kW**
 Motor size = 75 kW NPSH = 3.81 m
 Max. power P2 due to ISO5199 = 66 kW
 Max power P2 required along the curve = 66.15 kW





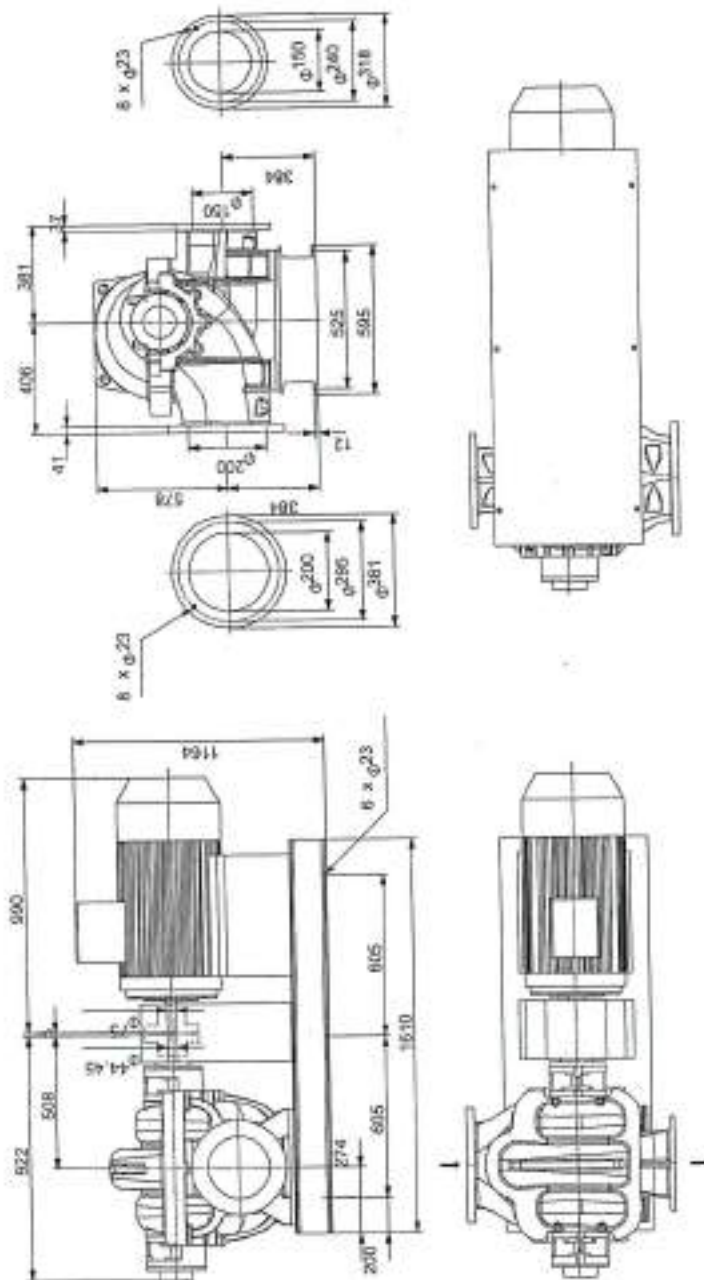
Company name: Industrial Sales & Mfg. Co. Jaipur.
Created by: Virendra Singh
Phone: 9929522274
Email: sales.g@ismcindia.com
Date: 17/12/2022

Description	Value
Rated voltage:	3 x 380-400/660-690Y V
Rated current:	136-129/78,5-75,1 A
Starting current:	690-690 %
Cos phi - power factor:	0.88
Rated speed:	1485 rpm
Efficiency:	IE3 95,0%
Motor efficiency at full load:	95.0-95.0 %
Motor efficiency at 3/4 load:	94.9-94.9 %
Motor efficiency at 1/2 load:	94.2-94.2 %
Number of poles:	4
Enclosure class (IEC 34-5):	55 (Protect. water jets/dust)
Insulation class (IEC 85):	F
Built-in motor protection:	PTC
Motor No:	99547662
Others:	
Net weight:	1140 kg
Gross weight:	1260 kg
Shipping volume:	2.82 m ³
Sales region:	China
Rotation direc:	CW

GRUNDFOS

Company name: Industrial Sales & Mfg. Co. Jaipur.
Created by: Virendra Singh
Phone: 9929522274
Email: sales.g@ismcindia.com
Date: 17/12/2022

LS 200-150-381A ,1F1DSBBQE1 75,0/4 50 Hz



Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Client	Jindal Aluminium Ltd
End Client	Jindal Aluminium Ltd
Project	Cooling Tower Pump-Set
Offer Ref	WMP/GI/JP/22-23/1003/R3
Date	24-12-2022

wilo

Sr. No.	Description		Cooling Tower Pump-Set
1	Tag No	-	NA
2	Qty	No	1
3	APPLICATION	-	Water Pump-Set
4	LIQUID	-	Clear Water
5	SP GRAVITY	-	1
6	TEMPERATURE IN DEG C	Deg C	Upto 90 degree C
7	VISCOSITY IN CST	Centipoise	1
8	ANY SOLID CONTENTS	MM	Nil
9	SOLID SIZE IN MM	MM	Nil
PERFORMANCE PARAMETERS			
11	PUMP TYPE	-	Split Case Pump set
12	RATED CAPACITY (M ³ /HR)	M ³ /hr.	500 m ³ /h
13	TOTAL DYNAMIC HEAD	M	40 m
14	PUMP MODEL	-	SCP 200-370 HA
15	SPEED	RPM	1480
16	EFFICIENCY	%	85.54
17	PUMP INPUT	Kw	63.67
18	RECOMM. KW	Kw	75 KW
19	NPSHR	Mtr.	4.56
20	SHUT OFF HEAD	Mtr.	42
21	APPROX. IMPELLER DIA - RATED	MM	346
22	NO. OF STAGES	-	Single
23	SUCTION X DELIVERY SIZE	MM	200 X 200
24	RECOMM. PIPE SIZE	MM	300 x 200
25	TYPE OF SEALING	-	Gland Pack
MATERIAL OF CONSTRUCTION			
25	CASING	-	CI
26	IMPELLER	-	CF8M = 55 316
27	CASING MCKK RING	-	CF8M = 55 316
28	PUMP SHAFT	-	→ SS 410
29	PUMP SLEEVE	-	→ SS 410
30	FLANGIBLE COUPLING	-	CAST IRON
31	COUPLING WAVE	-	RATH/EQUIV
32	COUPLING TYPE	-	SPACER TYPE
33	GLAND PACKING	-	GRAPHITE COTTON
34	REPAIRING PARTS	-	AS PER M & P STD
TESTING			
31	PERFORMANCE TESTING	-	IS 9906 Gr II
34	Hydro TESTING	-	HIS
35	IMPELLER BALANCING	-	ISO 1940 GR 6.3
DRIVER DETAILS			
36	MOTOR/ENGINE	-	Motor
37	MAKE	-	CGL/Equiv.
38	EFF CLASS	-	IE2
39	FREQUENCY	Hz	50HZ +/-5%
40	CLASS OF INSULATION/ DEGREE OF PROTECTION	-	IP55
41	VOLTAGE	V	415 +/-10%
42	TYPE OF MOTOR/ENGINE	LT/HT	LT
43	RATING	KW	75 KW
44	SPEED	RPM	1480
45	POLE	-	4
46	MOUNTING	-	Foot Mounted ✓
SUPPLY			
47	SCOPE OF SUPPLY		Pump with gland pack + Base Frame + Coupling + Coupling Guard + Electric Motor + Foundation bolts.



Powering up You

wilo

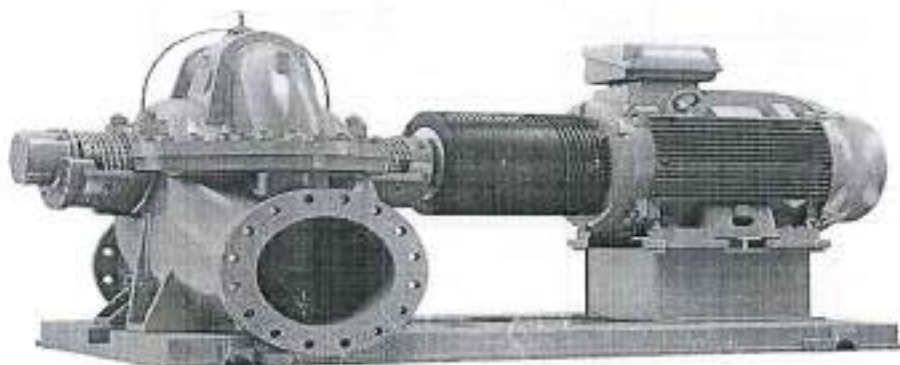
Mather+Platt

A WILF BRAND

WILO Mather and Platt Pumps Pvt. Ltd.

Techno-Commercial Offer

General Industry



PROJECT	Cooling Tower Pumps
CLIENT	Jindal Aluminium Ltd
END CLIENT	Jindal Aluminium Ltd
OFFER REFERENCE	WMP/GI/JP/22-23/1002/R2

WILO Mather and Platt Pumps Pvt. Ltd.

Ground Floor, "Elpro Vision Exchange",

Elpro Compound, CTS No.4270,

Chinchwad, Pune - 411033.

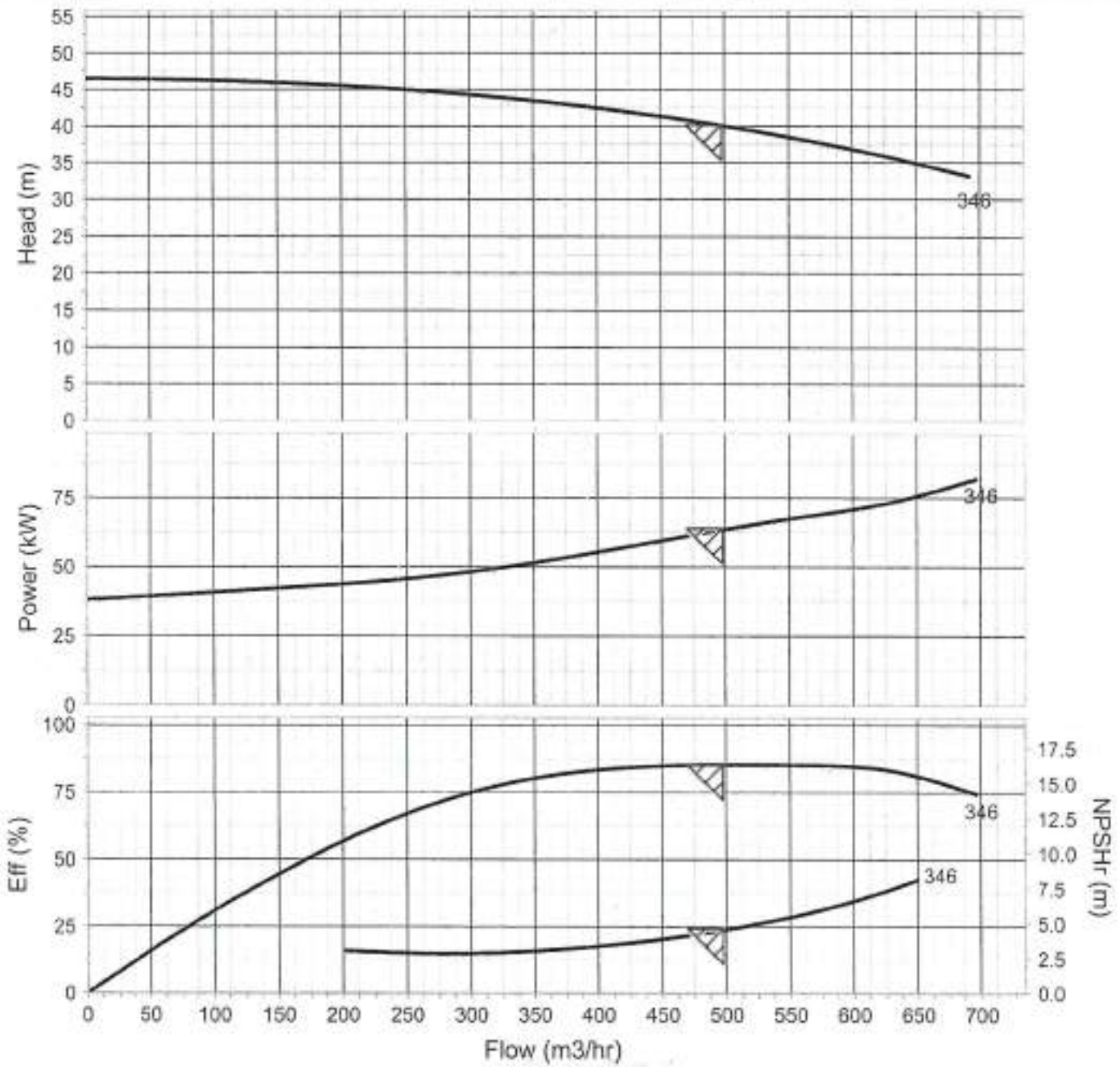
T +91 20 67347100

F +91 20 67347122

www.matherplatt.com

Toll free: 1-800-266-8966

Customer	-			Liquid	-	
Consultant	-			Specific Gravity	1	
Project	-					
Application	-					
Speed (RPM)	Frequency (HZ)	Pump Model SCP-200-370-HA			Solid Size	13.25 mm
1480	50	Flow	500.0 m3/hr	Head	40.0 m	Stage 1



Input	63.67 kW	NPSHA	-	Size	Pump Nozzle	Recommended Pipe
PrimeMover Power	75.0 kW	NPSHR	4.56 m	Suction (mm)	200	300
Eff	85.54 %	Shut Off Head	47 m	Discharge (mm)	200	200

Tag Number	-	Offer No	-	Prepared By/Checked By	Sharma Anupam
				Date	29/12/2022

Note : 1. Pump Performance with : ISO-9906-Gr2B
 2. NPSHa should be at least 0.5 m higher than NPSHR
 Technical matter is subjected to change without prior notice due to intensive Research & Development activities
 Reference: SCP 200-370 HA_30_4_B_002