



Technical Summary

Customer: Pending TPI Customer

Cust / Proj Ref: Public Authority For Water

FLS # / Reference: 5949736921 / SZIAL26024

Date: Oct 19, 2026

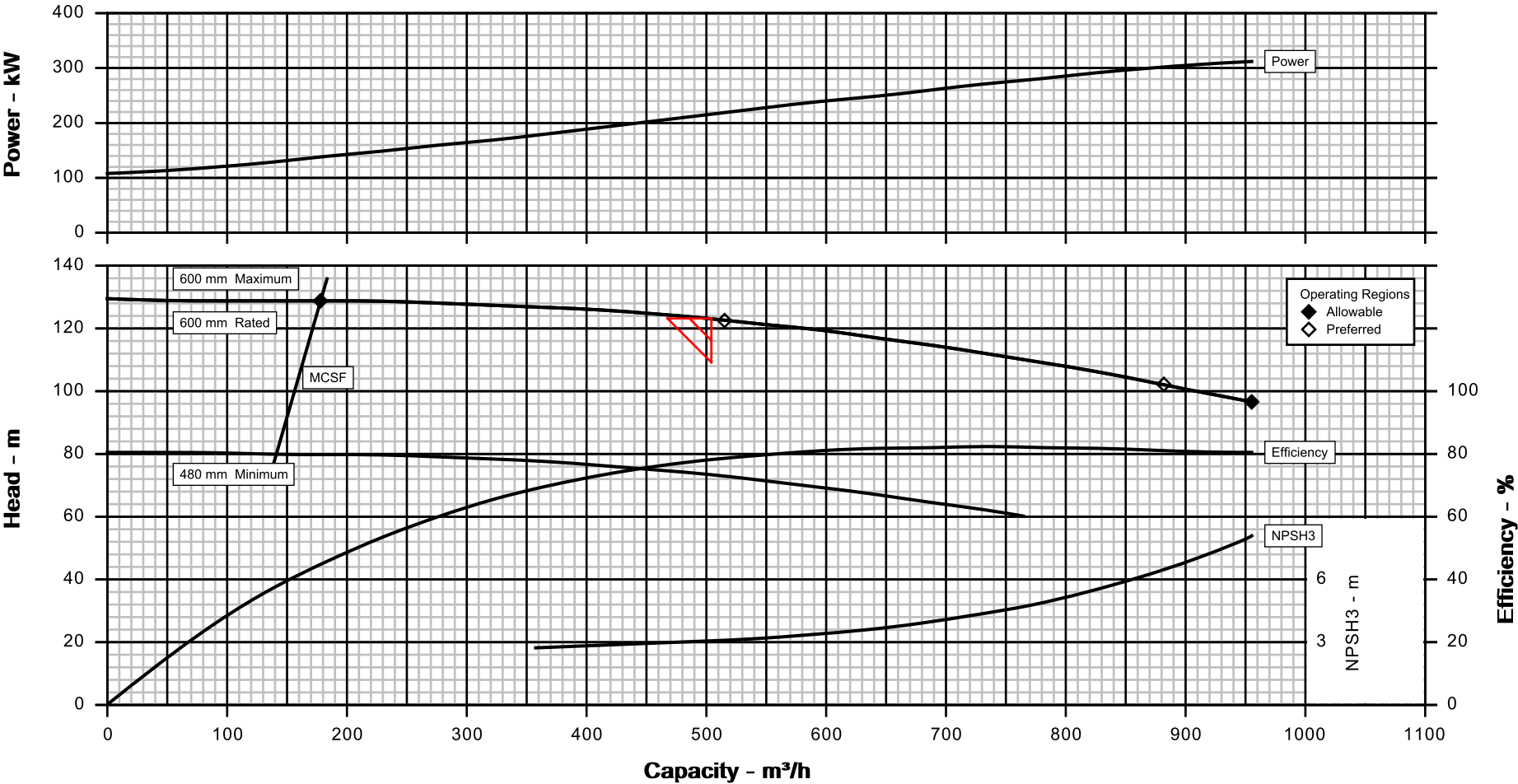
Primary Selection Summary - Centrifugal

Item number	Qty	Rated capacity	Max temp	Max suct pres	Speed	Rated dia	Power rated	Cap. BEP	Dia ratio	Working pres
Product	Mat'l	Rated head	Rated viscosity	NPSHa	Eff'y	Max dia	Power max	% Cap BEP	Max head cut	MAWP
Pump / Stages		SG	Vapor pres	NPSH3	Nss (per eye)	Min dia	Power motor	MCSF	Head rise	
Al Roudah Pump Station	6	505.0 m³/h	40 °C	0.0 kPa.g	1,468 rpm	600 mm	216 kW	734.8 m³/h	100.0 %	1,266.0 kPa.g
LNN Single Stage HSC	B4	123.00 m	1.00 cP	Ample	78.4 %	600 mm	313 kW	68.7 %	129.29 m	1,600.0 kPa.g
200-LNN-600 / 1		1.000	0.00 kPa.a	3.1 m	7950 US	480 mm	355 kW	177.3 m³/h	5.1 %	

Customer	: Pending TPI Customer		Capacity	: 505.0 m³/h
Item number	: Al Roudah Pump Station		Head	: 123.00 m
Service	: -		Density / Specific gravity	: - / 1.000
Flowserve reference	: 5949736921		Pump speed	: 1,468 rpm
Pump size & type / Stages	: 200-LNN-600	/ 1	Ns / Nss (per eye)	: 19 / 154 (SI)
Based on curve no.	: 921R1/1-AA		Test tolerance	: ISO 9906 Grade 1U
Impeller diameter	: 600 mm		Date	: October 19, 2026



CURVES ARE APPROXIMATE, PUMP IS GUARANTEED FOR ONE SET OF CONDITIONS; CAPACITY, HEAD, AND EFFICIENCY.



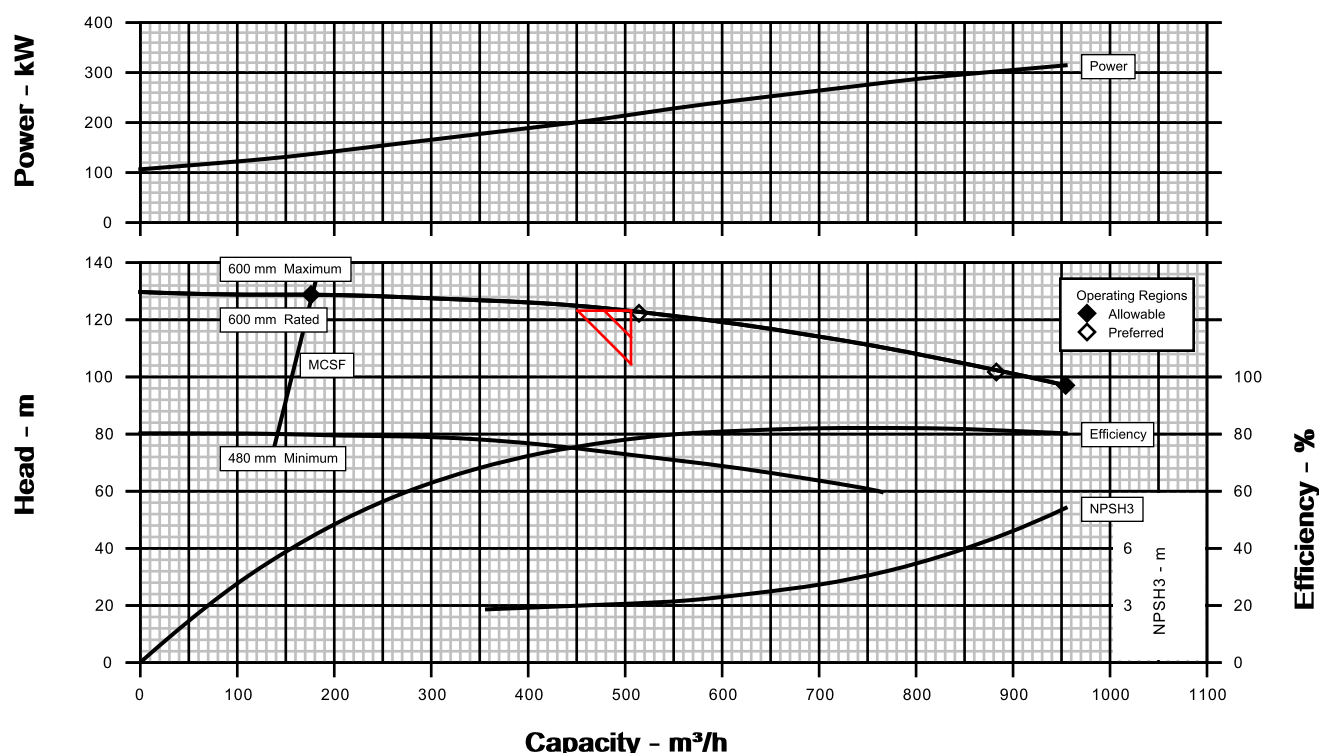
The customer must provide a minimum NPSHa of 4.6 m.

Customer	: Pending TPI Customer	Pump / Stages	: 200-LNN-600 / 1
Customer reference	: Public Authority For Water	Based on curve no.	: 921R1/1-AA
Item number	: Al Roudah Pump Station	Flowserve reference	: 5949736921
Service	: -	Date	: October 19, 2026

Operating Conditions		Materials / Specification	
Capacity (rated/normal)	: 505.0 m³/h / -	Material column code	: B4
Water capacity (CQ=1.00)	: -	Pump specification	: -
Total developed head	: 123.00 m	Other Requirements Hydraulic selection : No specification Construction : No specification Test tolerance : ISO 9906 Grade 1U Variable Speed - Maximize Efficiency Driver Sizing : Max Power(MCSF to EOC) using SF	
Water head (CH=1.00)	: -		
NPSHa/NPSHa less margin	: Ample / -		
Maximum suction pressure	: 0.0 kPa.g		
Liquid			
Liquid type	: Fresh water		
Liquid description	: -		
Temperature	: 40 °C		
Density / Specific gravity	: - / 1.000		
Solid Size - Actual / Limit	: - / -		
Viscosity / Vapor pressure	: 1.00 cP / 0.00 kPa.a		

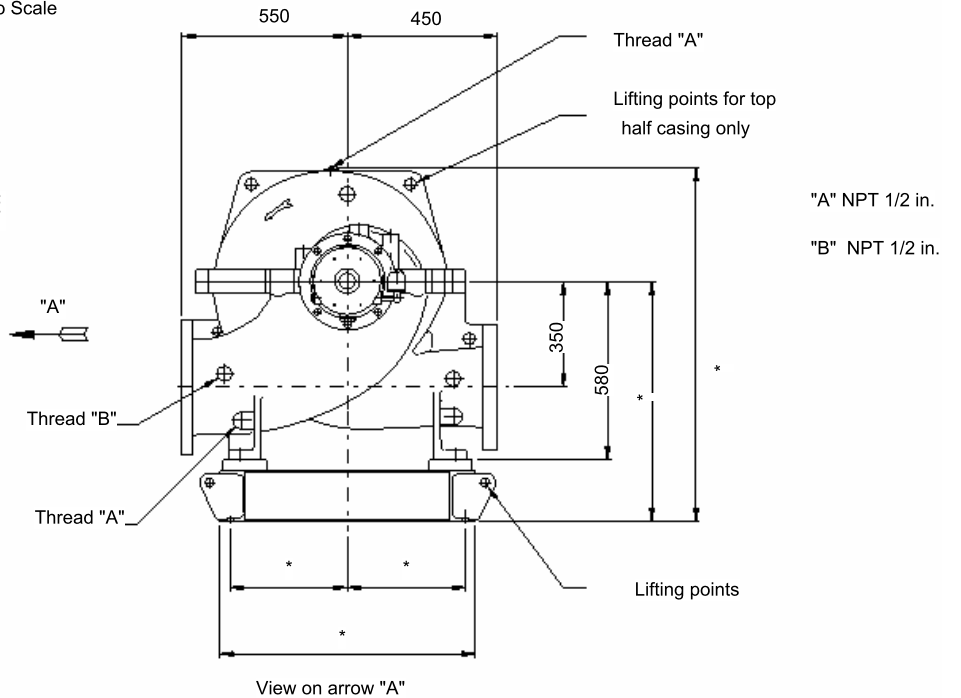
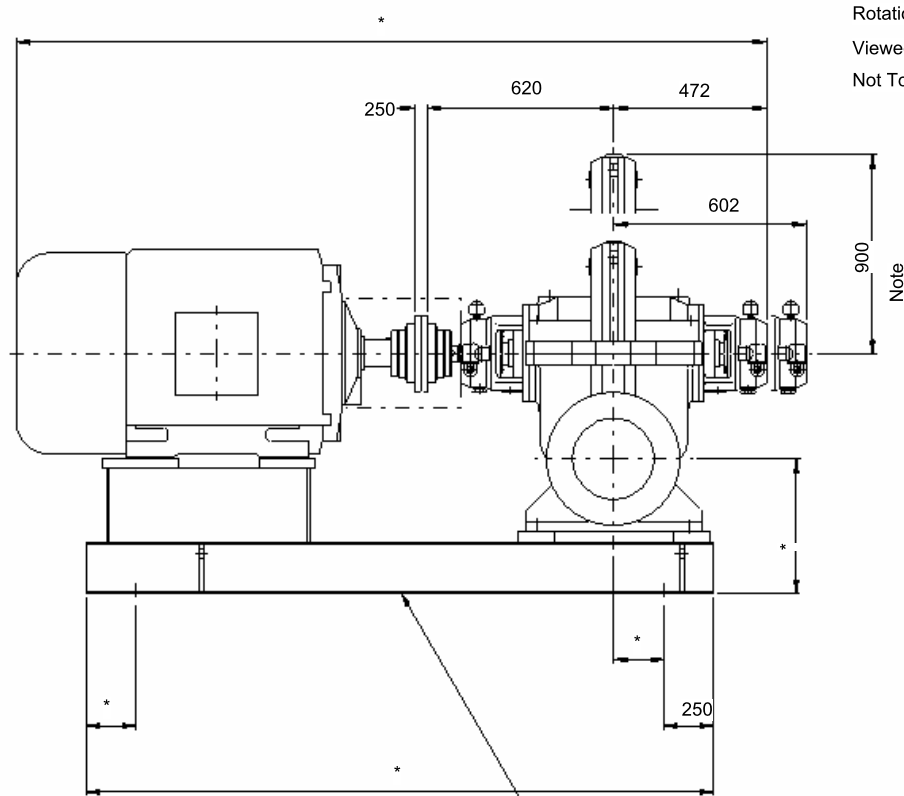
Performance			
Hydraulic power	: 169 kW	Impeller diameter	
Pump speed	: 1,468 rpm	Rated	: 600 mm
Pump overall efficiency (CE=1.00)	: 78.4 %	Maximum	: 600 mm
NPSH required (NPSH3) (CNPSH=1.00)	: 3.1 m	Minimum	: 480 mm
Rated brake power	: 216 kW	Ns / Nss (per eye)	: 19 / 154 (SI)
Maximum brake power	: 313 kW	Minimum continuous flow	: 177.3 m³/h
Driver power rating	: 355 kW / 476 hp	Maximum head at rated diameter	: 129.29 m
Casing working pressure	: 1,266.0 kPa.g	Flow at BEP	: 734.8 m³/h
(based on shut off @ cut dia/rated SG)		Flow as % of BEP	: 68.7 %
Maximum allowable	: 1,600.0 kPa.g	Efficiency at normal flow	: -
Hydrostatic test pressure	: 2,400.0 kPa.g	Impeller diameter ratio (rated/max)	: 100.0 %
Estimated rated seal chamber pressure	: 6.9 kPa.g	Head rise to shut off	: 5.1 %
		Total head ratio (rated / max) / (max / rated)	: 95.5 % / 104.7 %

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The customer must provide a minimum NPSHa of 4.6 m.

Customer		: Pending TPI Customer			Pump / Stages		: 200-LNN-600 / 1	
Customer reference		: Public Authority For Water			Based on curve no.		: 921R1/1-AA	
Item number		: Al Roudah Pump Station			Flowserve reference		: 5949736921	
Service		: -			Date		: October 19, 2026	
Construction					Driver Information			
Nozzles	Size	Rating	Face	Position	Manufacturer		: IE4 Horiz WEG	
Suction	250 mm	PN16	FF	Side	Power		: 355 kW / 476 hp	
Discharge	200 mm	PN16	FF	Side	Service factor (requested / actual)		: 1.0 / 1.0	
Casing mounting			: Foot		Synchronous speed		: 1,500 rpm	
Casing split			: Axial		Orientation / Mounting		: Horizontal / Foot	
Impeller type			: Double Suction 5 Vanes		Driver type		: IEC	
Bearing type (radial)			: Single Row Ball		Frame-size / material		: 355M/L / Cast Iron	
Bearing number (radial)			: 6214		Enclosure		: TEFC IP55	
Bearing type (thrust)			: Single Row Ball		Hazardous area class		: Safe	
Bearing number (thrust)			: 6214		Explosion "T" rating		: Not Applicable	
Bearing lubrication			: Grease		Volts / Phase / Hz		: 415 V / 3 / 50 Hz	
Rotation (view from coupling)			: CW per Hyd. Institute		Amps-full load/locked rotor		: - / -	
Materials					Motor starting		: Other	
Casing			: EN-GJS-400-15		Insulation		: Cl. F	
Impeller			: 316 St.St		Temperature rise		: -	
Case wear ring			: 13% Cr Steel		Bearings		: Ball	
Impeller wear ring			: Not Fitted		Lubrication		: Grease	
Inducer			: N/A		Motor mounted by		: -	
Shaft			: 13% Cr Steel		Sound Pressure (dBA @ 1.0 m)			
Sleeve			: Not Fitted		Driver, expected		: 80.0 dBA	
Baseplate, Coupling and Guard					Pump & driver, estimated		: -	
Baseplate type			: Common Pump & Motor		Seal Information			
Baseplate material			: Fabricated Steel		Arrangement		: Sing.Bal Cartridge	
Coupling manufacturer			: Trumy TD		Size		: 80 mm	
Coupling size			: TD6-1300-250		Manufacturer / Type		: Flowserve / ISC2 in 316ss	
Coupling / Shaft guard			: Spacer Steel		Material code (Man'f/API)		: SiC/Car/Vit / 5Z4T	
Weights (Approx.)					Internal neck bushing		: None	
Bareshaft pump (net)			: 770.0 kg		Gland			
Baseplate (net)			: ***		Gland material		: 316 St St	
Driver (net)			: 2,089.0 kg		Flush		: 1/2" NPT	
Shipping gross weight/volume			: *** / ***		Vent		: 1/2" NPT	
Testing					Drain		: 1/2" NPT	
Hydrostatic test			: Non witnessed		Auxiliary seal device		: Carbon Bush	
Performance test			: Non witnessed		Piping			
NPSH test			: None		Seal flush plan		: Plan 11	
Paint and Package					Seal flush construction		: -	
Pump paint			: FPD STD Paint HLT-C3		Seal flush material		: Other	
Base grout surface prep			: -		Aux seal flush plan		: None	
Shipment type			: Export		Aux seal flush construction		: -	
					Aux seal flush material		: -	
Notes								
Sound Pressure Levels: -Subject to 3 dBA tolerance -Refer for Contractual Values Refer for Values not shown - -								



Note
Height to remove Top Half casing
Clearance required for lifting equipment
Top Half Casing weight approx 188 Kg

* Bolt holes each side
19 Dia. Equi spaced

Flanges Drilled PN 16

	Bore	P.C.D.	No of Holes	Size of Holes
Suction	250 mm	355 mm	12	26 mm
Discharge	200 mm	295 mm	12	22 mm

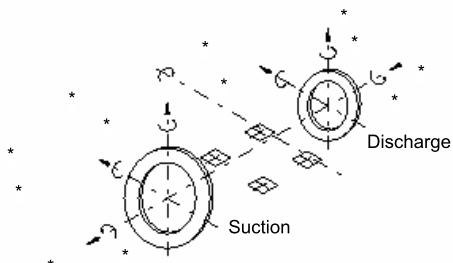
Holes drilled off centre equi spaced

Typical Drawing, not certified

Certified Drawir: C772/001/P01 order

Maximum Moments(kNm) and Forces(kN)

	Mx	My	Mz	Fx	Fy	Fz
Suction	5.02	2.44	3.80	5.34	6.68	4.45
Discharge	3.53	1.76	2.58	3.78	4.90	3.12



Customer : Pending TPI Customer
Item number : Al Roudah Pump Station
Service : -
Customer PO # : -
Flowserve reference : 5949736921

Pump size & type : 200-LNN-600
Pump speed / Stages : 1,468 rpm / 1
Flow / Head : 505.0 m³/h / 123.00 m
Driver power / Frame : 355 kW / 476 hp / 355M/L
Volts / Phase / Hz : 415 V / 3 / 50 Hz

Drawing number : -
Date : October 19, 2026
Certified by / Date : -
Seal type : ISC2 in 316ss
Seal flush plan : Plan 11