

Document No:

19208-M-DTS-01-A (Sump Outlet Pump).docx

Rev:

0

Job Number:

19208

Sheet:

1 of 5

Compiled By:

Process:

R. Thomson

Date:

26/04/2021

Mechanical:

R. Thomson

Date:

26/04/2021

Electrical:

C. Kuun

Date:

26/04/2021

SUMP OUTLET PUMP

Vertical Spindle Pump Data Sheet

<u>DETAIL</u>	<u>SPECIFIED</u>	<u>SUPPLIED</u>
Pump Type	Centrifugal	
Pump Layout	Vertical Spindle	
Applicable Standard	Largely to one or more of the following: ASME B73.1, EN 733 (DIN 24255), ISO 5199 - ISO 2858 / EN 22858, API 610 / API 682.	
Client Standard	Not Applicable	
Pump Number	TBC	
Number Required	1 OFF	
Make	Manufacturer to advise	
Model Number	Manufacturer to advise	
<b>COMMERCIAL &amp; DELIVERY</b>		
Terms and Conditions	Transnet Pipelines Standard Terms & Conditions	
Delivery Period	No more than 8 weeks after placement of order	
Delivery Terms (INCOTERMS)	DDP	
Delivery Address	TPL Waltloo Depot	
Delivery Responsibility	Supplier	
Delivery Package	Sealed container with lifting points	
Delivery Off-loading	By others	
Delivery Condition	Complete, all openings plugged, rotating/loose parts constrained	
Warranty Period	24 Months	
<b>INSTALLATION LOCATION</b>		
City	Waltloo, Pretoria, South Africa	
Plant	TPL Waltloo Depot	
Area	Inland	
Location	Outdoors	
Operation	Spill Basin Outlet	
Duty	Intermittent	
Area Classification	Zone 1	

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INSTALLATION & COMMISSIONING		
Installation – Labour	Supplier	
Installation – Supervision	Supplier	
On Site Laser Alignment	Supplier	
Commissioning – Labour	Supplier	
Commissioning – Supervision	Supplier	
FLUID DATA		
Liquid 1	Water	
Temperature @ Operating Point	0 - 50 °C	
Density @ Operating Point	1000 kg/m <sup>3</sup>	
Viscosity @ Operating Point	0.9 cSt at 20°C	
Vapour Pressure	3.2 kPa	
Flash Point	Not applicable	
OPERATING CONDITIONS		
Duty Point	50m <sup>3</sup> /h @ 1 Bar(g) at outlet flange	
Sump depth	6.85m below ground level	
Maximum Flow	70m <sup>3</sup> /h	
Maximum Operating Pressure	2.5 Bar(g)	
Normal Operating Pressure	1 Bar(g)	
Suction conditions	Flooded	
NPSH Available	0m	
NPSH Required	Manufacturer to advise	

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MECHANICAL DATA		
Type of Pump	Centrifugal, Vertical Spindle	
Seal	Mechanical, Single	
Priming	Self-priming	
Coupling	Flexible	
Coupling Guard	Metal, extending to base plate	
Internal Pressure Relief	Not applicable	
Dry Run Protection	By others, Pump seal must survive 60sec dry running	
Casing Mounting	Base Plate	
Direction of Flow (facing driven end from driver)	Bottom suction, Top discharge	
Bearing Lubrication	Manufacturer's standard	
Seal Type	Manufacturer to advise	
Suction Diameter	Manufacturer to advise	
Discharge Diameter	Manufacturer to advise	
Flange Drilling	ANSI B16.5 150lb RF	
Laser Alignment	Factory by Supplier, Onsite by Others	
MATERIALS OF CONSTRUCTION		
Casing	Carbon Steel / Stainless Steel	
Impeller	Suitable for fluids	
Seal	Viton, Manufacturer to advise	
Coupling	Manufacturer to advise	
Shaft	Stainless Steel (AISI 316)	
Rotating Parts	Stainless Steel (AISI 316)	
Guard	Metal, Manufacturer to advise	
Base	Carbon Steel (S355JR) or Stainless Steel	

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CORROSION PROTECTION		
Environment	SANS 12944 C5I	
External - Casing	Manufacturer's Standard	
External – Coupling	Manufacturer's Standard	
External – Coupling Guard	Powder Coating	
External - Base Plate	Hot Dip Galvanised or stainless steel	
Internal	Not Applicable, Manufacturer to advise	
PUMP DRIVE & MOTOR		
Motor	Electric	
Gearbox Required	No	
Voltage	400V AC	
Phase / Frequency	3 / 50Hz	
Motor Starter Type	Direct On Line	
Motor Speed Range	50Hz	
Insulation Class	F (5)	
Temperature Rise	B	
Protection Rating	IP55	
Power Absorbed (running)	Manufacturer to advise	
Power Absorbed (starting)	Manufacturer to advise	
Motor Size	Manufacturer to advise	
Frame Size	Manufacturer to advise	
Drive (Direct, Gearbox)	Direct	
Motor RPM	Manufacturer to advise	
Pump RPM	Manufacturer to advise	
Explosion Protection	ExD	
Temperature Class	T5	
Gas Group	IIA	
BASE PLATE DIMENSIONS		
Length	Manufacturer to advise	
Width	Manufacturer to advise	
Height	Manufacturer to advise	

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**PUMP DIMENSIONS**

H indicates horizontal dimension, V indicates vertical dimension

H: Inlet Strainer to Outlet Nozzle Centreline	Manufacturer to advise	
V: Inlet Strainer to Outlet Centreline	Manufacturer to advise	
V: Inlet Strainer to Top of Baseplate	Manufacturer to advise	
H: Inlet Strainer to Top of Driver	Manufacturer to advise	

**QUALITY CONTROL**

ISO9000 Manufacturer	Preferred	
Certificate of Manufacture	Required	
Material Certification	Required	
Factory Pressure Test	Required – 1.5x Max Pressure	
Factory Performance Test	Required – Type test acceptable	
Certified Pump Curve	Required – Type test acceptable	
Noise Level Test	Required – Type test acceptable	
Witnessed Tests:		
Flow	No	
NPSH	No	
Pressure	No	
Noise	No	

**NOTES**Specific Notes:

- (1) The supplier is required to provide the pump, motor & base plate combination. The supplier is solely responsible to correctly match the motor and pump to the driven load to ensure successful application, based on the varying load / speed requirements of the pump.
- (2) Motor must be suitably cooled e.g. forced cooling, for the application as per manufacturer's recommendation.
- (3) The supplier is to supply all necessary mountings
- (4) The pump is to be capable to pass all solids smaller than the bottom strainer mesh
- (5) The bottom strainer is to have an open area 400% larger than the outlet pipe area
- (6) Pump outlet flange to be aboveground
- (7) Automated stopping of the pump is to be priced as an option

General Notes:

Alternate proposals are welcomed; please use multiple copies of this sheet.

Fluid MSDS available on request.

NPSHa Determined using vapour pressure of Water

Please fill in all blanks in the Supplied column