SULZER

Centrifugal Pump Datasheet

Customer:	AIR PRODUCTS AND CHEMICALS	Sulzer Reference ID:	USA.5539-AME.21.0851-F0
Project name:	World Energy Paramount Biodiesel Project	Inquiry Date:	
Inquiry Number/ID:	EN207020 WEP SMR - G707 AB BFW Make up Pumps	Bid Submitted Date:	
Item number:	201-G707 A/B - IL Rev3.1 - As Purchased	Date of Last Update:	2021-12-13 15:49:42
Service:	BFW Make up Pumps	Quantity:	2

Operating Conditions

Liquid type:	Demin Water
Temperature, Rated / Max:	80.00 deg F / 90.00 deg F
Fluid density, rated / max:	0.997 SG / 1.000 SG
Vapor pressure, rated:	0.51 psi.a
Viscosity, rated:	0.87 cP
Consistency:	-
Air Content:	-
Discharge Flow, Rated:	705.0 USgpm
Differential Head, Rated / Actual:	248.5 ft / 252.7 ft
Suction pressure, rated / max:	-0.50 psi.g / 26.30 psi.g
NPSH Available:	28.4 ft

Performance

Performance Curve No.(s):	CPE21-3_O_1800
Pump speed:	3550 rpm
Frequency:	60 Hz
Fixed / Variable Speed:	Fixed speed
Impeller diameter, rated:	8.17 in
Impeller diameter, maximum:	8.27 in
Impeller diameter, minimum:	6.40 in
Efficiency:	80.35 %
NPSH (3% head drop):	18.8 ft / 0.0 ft
Ns / Nss:	1,811 US: Ns (imp. eye flow) / / 10,530 US: Ns (imp. eye flow)
Head, maximum, rated diameter:	281.9 ft
Head rise to shutoff:	13.29 %
Flow, best eff. point:	902.2 USgpm
Diameter ratio (rated / max):	98.81 %
Head ratio (rated dia / max dia):	95.37 %
Viscous Coefficients (CQ / CH / CE):	1 / 1 / 1

Pressure Data

Maximum Working Pressure:	148.3 psi.g
Working Pressure Limit:	290.0 psi.g
Suction Pressure Limit:	290.0 psi.g
Hydrostatic Test Pressure (Suction/Discharge):	435.0 psi.g
Suction pressure, rated / max:	-0.50 psi.g / 26.30 psi.g
Discharge pressure, rated:	106.8 psi.g
Differential Pressure, Rated:	107.3 psi

Equipment Weights (Approximate)

Pump:	260.0 lb
Driver:	1,450 lb
Baseplate:	761.0 lb
Total Package	2,500 lb

Pump Design Data

Pump Type:	CPE
Product Line:	CPE
Pump Size / No. of Stages:	CPE 21-3 (4x3x8) O / 1
Rotation (viewed from drive end):	Clockwise
Impeller type:	Semi-Open
Casing mounting:	Foot
Casing split:	Radial
Casing Type:	Single volute

Nozzle	*Size*	*Rating*	*Face*	*Position*
Suction	NPS 4	150#	FF	End
Discharge	NPS 3	150#	FF	Top

Lineshaft Diameter:	-
Bearing Type, Radial:	Cylindrical roller bearing NUP 311
Lineshaft Bearing / Bowl Bearing (Vert. pumps only):	-
Bearing Type, Thrust:	2 x Angular contact ball bearing 7309
Bearing lubrication:	Oil bath equipped with oil slinger
Baseplate type:	ANSI style PIP standard (Fabricated steel)

Materials

API Material Class:	-
Barrel / Can:	-
Case / Bowls:	Duplex CD6MN (ASTM A890 3A)
Column:	-
Discharge Head:	-
Impeller:	Duplex CD6MN (ASTM A890 3A)
Case / Impeller Wear Rings:	Duplex CD6MN (ASTM A890 3A)
Shaft:	Duplex 2205 (UNS S32205 / EN1.4462)
Diffusers:	-

Shaft Sealing, Flush & Cooling Piping Plans

Seal Size / Type:	- / Cartridge single, sleeve installation
Seal Code:	AES, CSSN+
Seal Manufacturer:	-
Seal Flush Piping, Primary:	Piping Plan 11
Seal Flush Piping, Secondary:	-
Cooling Water Piping:	N/A

Driver & Power Data

Driver Size:	75.0 hp
Volts/ Phase / Hz:	460V / 3 / 60 Hz
Service factor:	1.15
Power, rated:	55.1 hp
Power, maximum, rated diameter:	67.1 hp
Enclosure:	Class F

Accessories

Driver:	Siemens Motors Quote: SUL080621SC-1B NEMA Premium efficient, severe duty 75HP 460 Vol / 60 Hz
Coupling:	Thomas XTSR71 726

Comments

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