

HPS MULTISTAGE PUMP
UNIT: PUM026
PERFORMANCE

Flow Rate	500 – 2,250 m ³ /day
Maximum Head	9,000 kPa (1,305 psi)
Minimum NPSH	5 m (16.4 ft)

Contact Roska Engineering for Detailed Performance Specifications

INJECTION DRIVE

Make	Teco Optim HE Plus
Type	AEHH-8N
Horse Power	250 HP
Maximum RPM	3570 RPM
Phase	3
Volts	460 V
Hertz	60 Hz
VFD	YES


PUMP

Make	Weatherford Borets
Model	22STG 675-9000-TA
Type	Multistage Centrifugal
Stages	22
Maximum RPM	3570 RPM

POWER REQUIREMENTS

Motor Only	224 kW
Building Total	266 kW
Main Disconnect	600 A
Voltage Input	480 V
Phase	3

Approximate Power Requirements


SHIPPING DIMENSIONS

Width	4.3 m (14 ft)
Length	13.7 m (45 ft)
Height	3.6 m (11.8 ft)
Weight Estimate	42,000 lb (19,051 kg)

CERTIFICATION

Area Classification	Class I, Zone 2
Piping	CSA Z662 / ASME B31.3
Electrical Room	General Purpose

SUCTION PIPING

Maximum Allowable Working Pressure	1,440 psi (9,930 kPa)
Size	4"
Connection (External)	4" CL600 RF

DISCHARGE PIPING

Maximum Allowable Working Pressure	1,440 psi (9,930 kPa)
Size	4"
Connection (External)	3" CL600 RF

SHUTDOWNS

Vibration Switch
Inlet ESD
High/Low Suction Pressure
High/Low Discharge Pressure
High Sump Level
High LEL Level
High Motor Temperature
High Discharge Temperature

FEATURES

Ruffneck Electric Heater
Eagle Air Compressor
Sump Pump
MCC Unit
Control Logix PLC
Harmonic Filter (IEEE519 Compliant)
Exhaust Fan
LEL Beacon
250 HP Variable Frequency Drive





BORETS

HPS Design

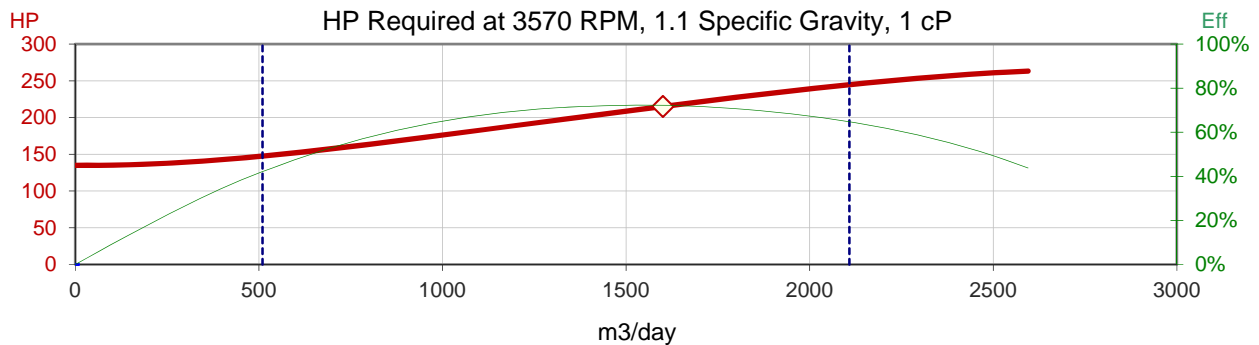
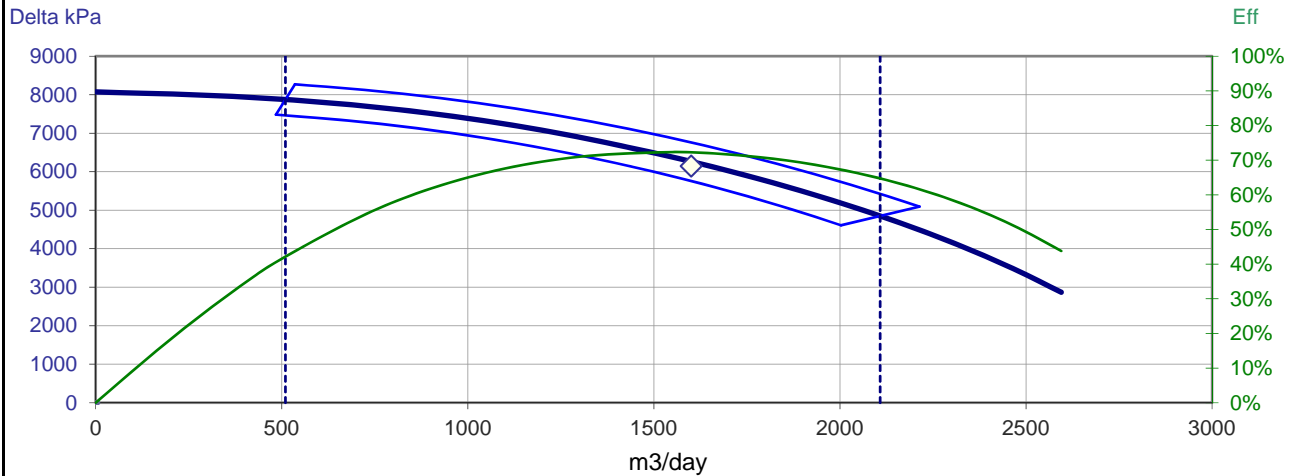
Client	Roska
Contact	Jarret Mann
Field	Rental Fleet
Application	Water Injection
Quotation Number	
Application Engineer	Jerry Evans

Intake kPa	350	
Discharge kPa	6500	
Desired Flow in m3/day	1600	
Speed in RPM	3570	60 Hz
Liquid Average Specific Gravity	1.1	Fresh Water = 1.00
Average Viscosity in cP	1	
Pump Delta Head	6264	kPa

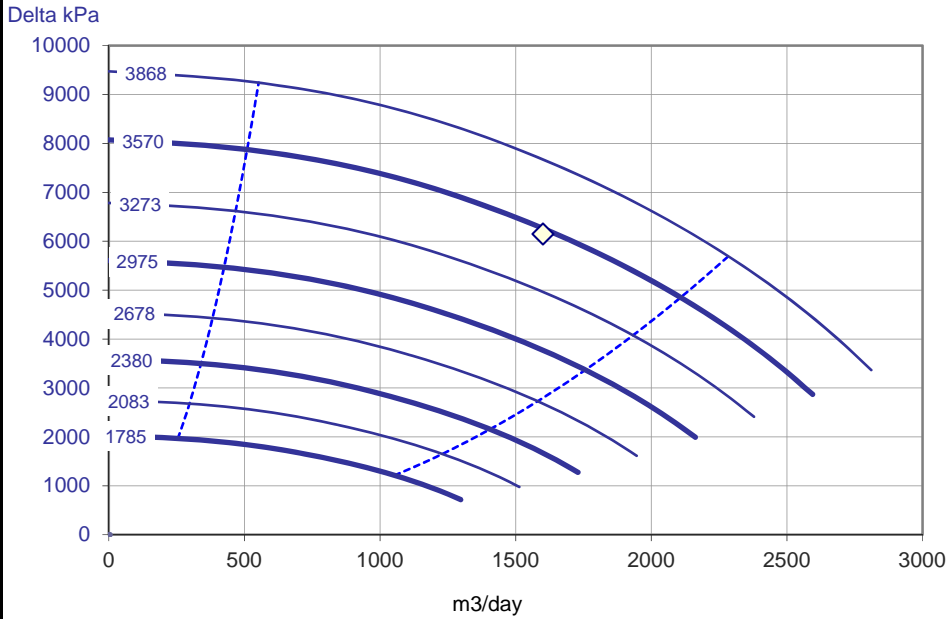
Pump	675-9000
Construction	Compression
Head Units	kPa
Flow Units	m3/day

Number of Stages Selected	22	
Number of Stages Required	22	
Operating HP	215	at 3570 RPM
Operating Thrust	2399	Lbs

22 Stage, 675-9000 Pump, 3570 RPM, 1.1 Specific Gravity, 1 cP

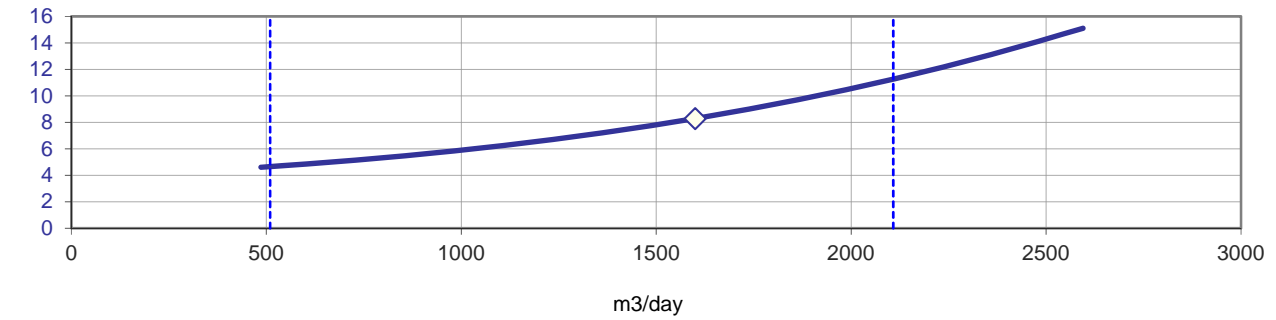


22 Stage, 675-9000 Pump, 3570 RPM, 1.1 Specific Gravity, 1 cP



Power		
Speed in RPM	Max BHP Within ROR	Motor HP Rating @ 60Hz
1785	31	61
2083	49	83
2380	73	109
2678	103	138
2975	142	170
3273	189	206
3570	245	245
3868	311	287

8.3 M NPSH Required at 3570 RPM - 1600 m3/day



Speed in RPM	Hz	Operating HP	Max HP within ROR	Monel Shaft HP Rating	SS Shaft HP Rating	Inconel Shaft HP Rating	Shut-in Pressure in PSI	Shut-in Thrust Load in Pounds	T/C Bearing Required
1785	30.0	27	31	329	347	627	293	743	2 Brg
2083	35.0	43	49	384	405	732	399	1011	2 Brg
2380	40.0	64	73	439	462	836	520	1320	2 Brg
2678	45.0	91	103	494	520	941	659	1672	2 Brg
2975	50.0	124	142	548	578	1046	813	2063	2 Brg
3273	55.0	166	189	603	636	1150	984	2497	2 Brg
3570	60.0	215	245	658	694	1255	1171	2971	2 Brg
3868	65.0	274	311	713	751	1359	1374	3488	2 Brg