

**HPS MULTISTAGE PUMP**

**UNIT: PUM037**

**PERFORMANCE**

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

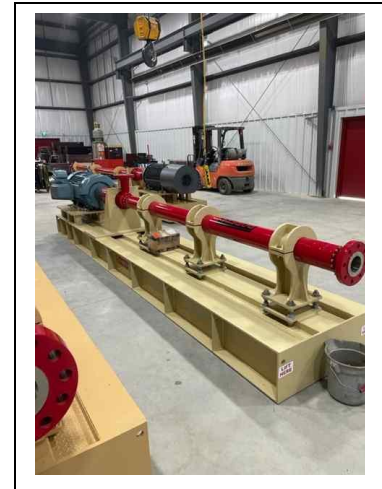
\*\*Contact Roska Engineering for Detailed Performance Specifications\*\*

**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	250HP
Main Disconnect	600 A
Voltage Input	460 V
Phase	3

\*\*Approximate Power Requirements\*\*

**SHIPPING DIMENSIONS**

Width	0.965m (3.2')
Length	5.81m (19.1')
Height	1.34m (4.4')
Weight Estimate	8100 lbs (3682kg)

**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)	4" 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**

250 HP Variable Frequency Drive
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**BORETS**

# HPS Design

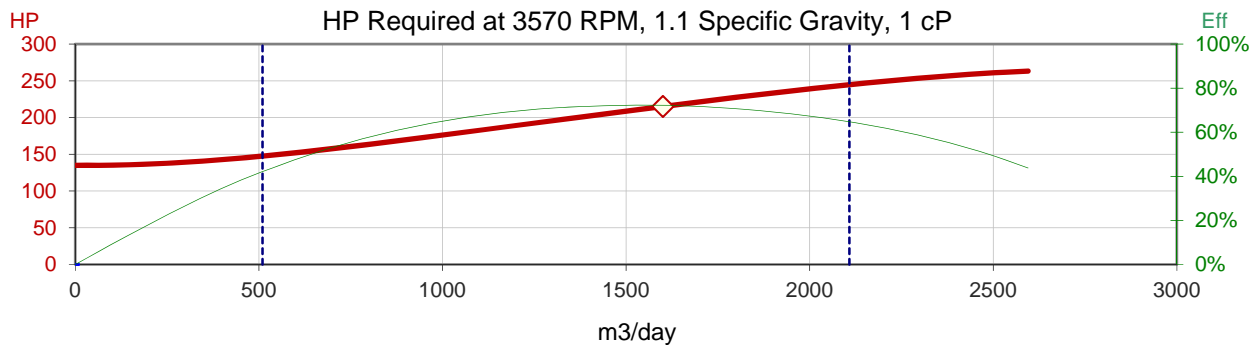
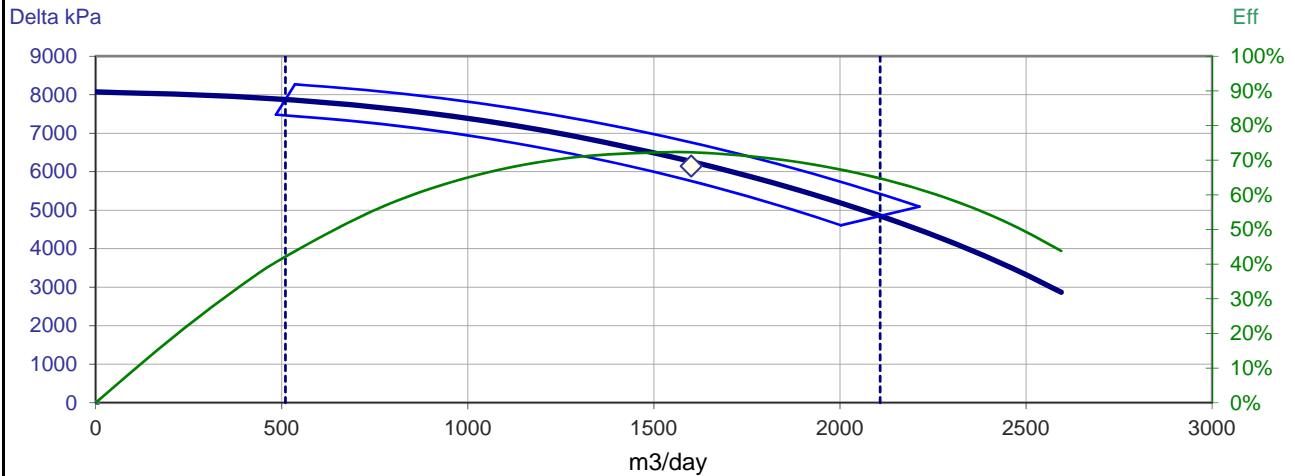
Client	Roska
Contact	Jarret Mann
Field	Rental Fleet
Application	Water Injection
Quotation Number	
Application Engineer	Jerry Evans

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

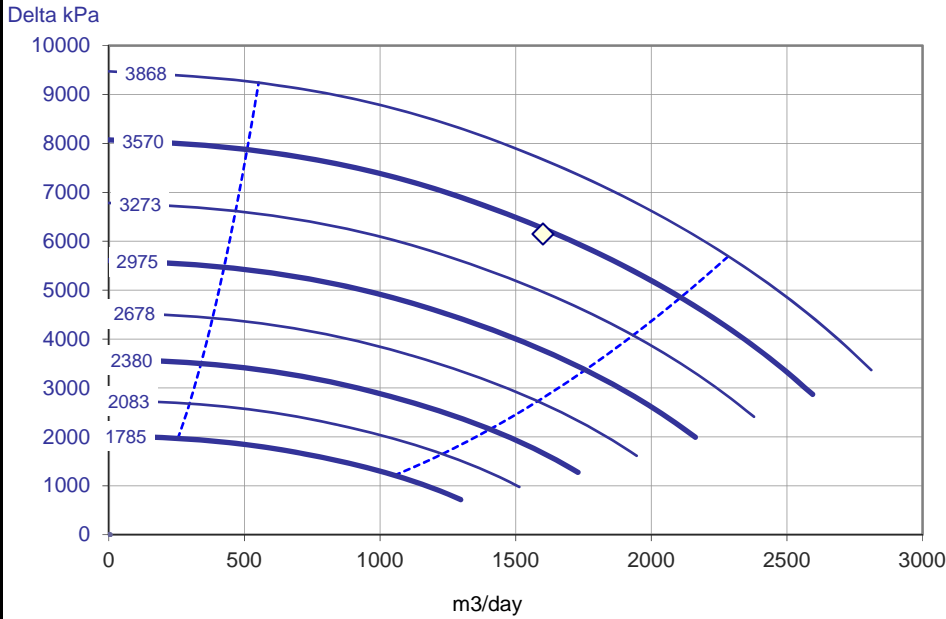
Pump	675-9000
Construction	Compression
Head Units	kPa
Flow Units	m3/day

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

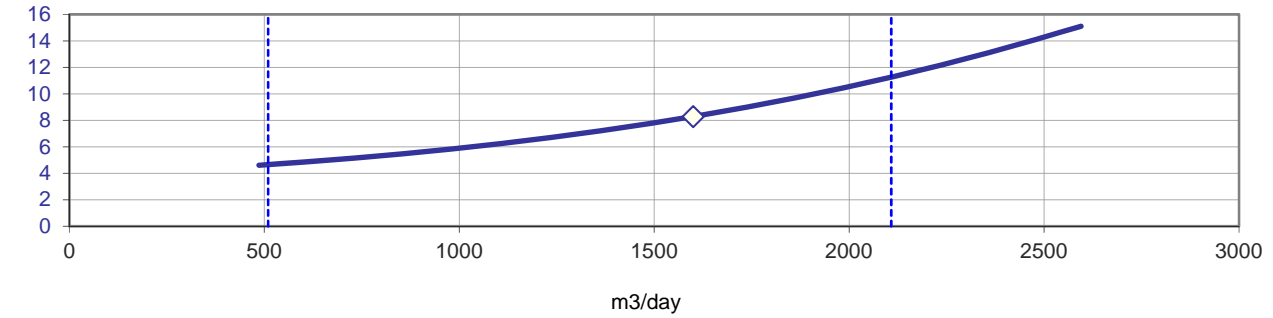


**22 Stage, 675-9000 Pump, 3570 RPM, 1.1 Specific Gravity, 1 cP**



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