

## Customer Technical Offer

Customer	PT Intech Pumps Indonesia	Size / Stages	RG 3x2 S-600 / 1
Item number	GA-30-0-21	Pump speed	3089 rpm
Customer reference	PT Cabot Asia pacific south	Quote number	1884283

## Pump

Qty	Description
1	<p><b>RG 3x2 S-600</b></p> <p><b>General Pump Options</b></p> <p><b>Roto-Jet General Pump Options</b></p> <p>Stainless Steel Pump (ASTM - A743)</p> <p>17-4 PH Pitot Tube</p> <p>Viton O-rings</p> <p>Belt drive pump design</p> <p>We reserve the right to add a discharge orifice to meet the specified conditions.</p> <p>The maximum horsepower limit for belt drive applications is 250HP. For belt driven applications, check the belt/sheave limitations for applications above 125HP. For applications above 150HP, please consult factory to check the shaft fatigue and bearing life.</p> <p><b>Seal assembly</b></p> <p><b>Mechanical Seals</b></p> <p>Single Stationary Pusher Carbon Seal - Tungsten Carbide Mating Ring</p> <p>Seal manufacturer - Trillium Standard</p> <p>Stainless steel seal hub/seal plate</p> <p><b>Seal flush plan</b></p> <p>Plan 11 seal flush</p> <p><b>Rotor Assembly</b></p> <p><b>Rotor Assembly</b></p> <p>Stainless steel rotor and rotor cover (ASTM - A743)</p> <p><b>Manifold</b></p> <p><b>Manifold Configuration</b></p> <p>Stainless Steel Flanged Manifold (ASTM - A743)</p> <p>600 LB x 600 LB RF Flanges</p> <p><b>Bearing Housing</b></p> <p><b>Bearing Housing</b></p> <p>Ductile Iron Bearing Housing</p> <p><b>Vibration Connections</b></p> <p>No Vibration Connection</p> <p><b>Driver</b></p> <p><b>Motors</b></p> <p>Trillium Supplied Motor: Trillium Supplied Motor</p> <p>55Kw 1500RPM Horizontal TEFC Electric Motor</p> <p>All motors are sized and selected in accordance with Hydraulic Institute Grade 2 - 2B performance test acceptance grades and tolerances which adds 8% to the rated horsepower requirement of the pump. This calculation has not changed the rated horsepower or efficiency shown on the Performance Data Sheet. View the link for more information from Hydraulic Institute.</p> <p>Motor manufacturer - Trillium Standard</p> <p><b>Baseplate &amp; Drives</b></p> <p><b>Baseplate Configuration</b></p> <p>Side mount belt drive base</p> <p><b>Belts &amp; sheaves</b></p> <p>Belts &amp; sheaves - Trillium decision</p> <p><b>Protective Coatings</b></p> <p><b>Paint type</b></p> <p>Acrylic 2 Coat Paint - Blue (Epoxy Prime and Acrylic Top Coat) - Option #7</p> <p>Unless otherwise noted all motors will be supplied with manufacturer's standard coating only</p> <p><b>Boxing and Shipping</b></p> <p><b>Boxing and Shipping</b></p> <p>Export boxing (Complete package)</p>

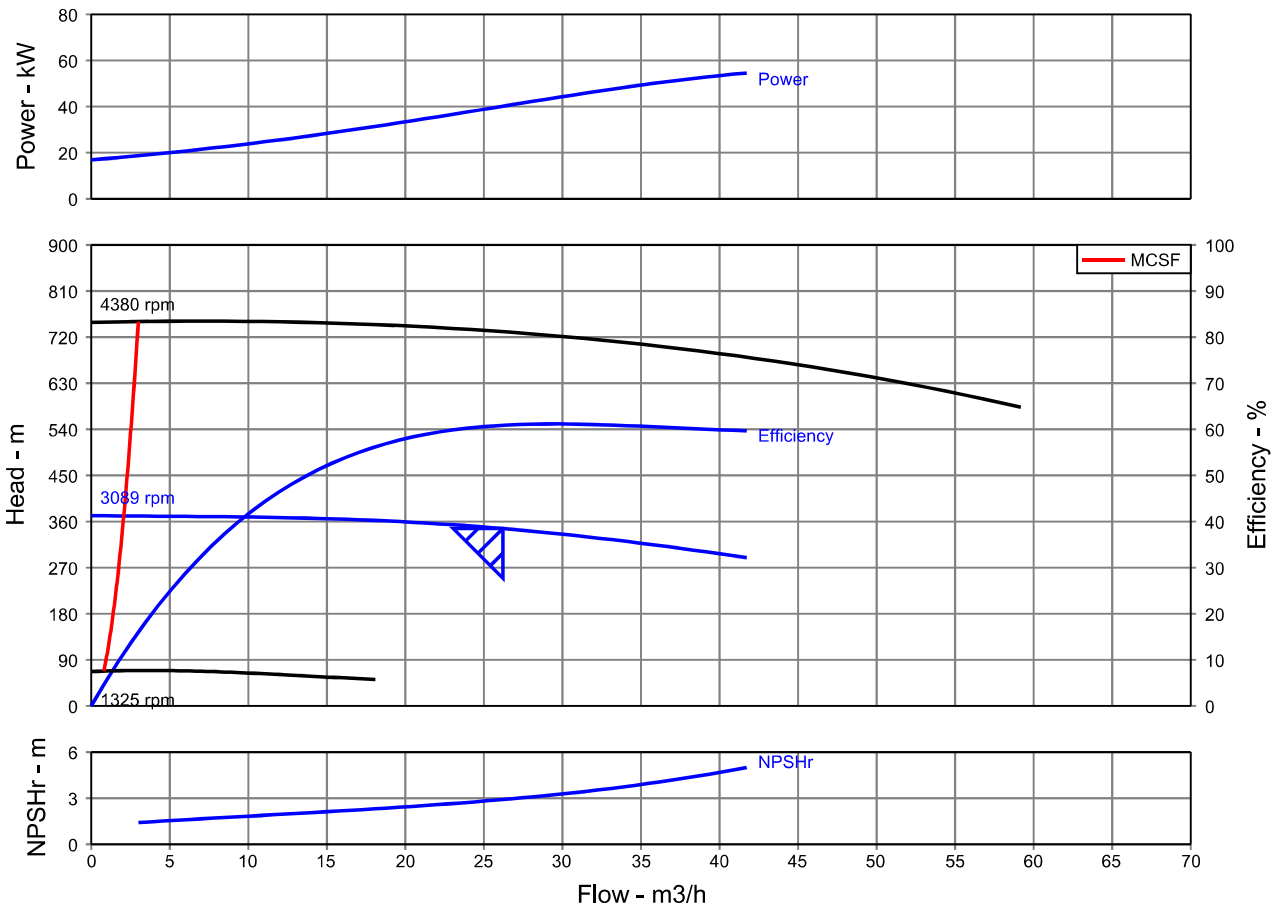
## Pump

Qty	Description
	<b>Testing &amp; Documentation</b> <b>Performance Testing</b> Witnessed 5 point performance test Non-witnessed hydrotest Witnessed four hour mechanical run test Witnessed sound level test (for reference only) Witnessed vibration test Factory Vibration Testing is done without fully anchoring and grouting the pump and results are not indicative of actual field installed vibration values. <b>Inspection</b> Material Certificates: Foundry Material Certs Foundry Material Certs - Manifold Foundry Material Certs - Rotor Foundry Material Certs - Rotor Cover <b>Documentation</b> Installation, Operation & Maintenance manuals (Qty. 1) <b>Estimated Weights</b> Bareshaft Pump: 394.6 kg Baseplate: 400.0 kg Driver: 475.0 kg

## Pump Performance Datasheet

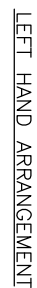
Customer	: PT Intech Pumps Indonesia	Quote number	: 1884283
Customer reference	: PT Cabot Asia pacific south	Size	: RG 3x2 S-600
Item number	: GA-30-0-21	Stages	: 1
Service	: Quench Water Pump	Based on curve number	: P7015-SI
Quantity	: 1	Date last saved	: 13 Feb 2023 6:01 PM

Operating Conditions		Liquid	
Flow, rated	: 26.2 m3/h	Liquid type	: Water
Differential head / pressure, rated (requested)	: 346 m	Additional liquid description	: Quench water
Differential head / pressure, rated (actual)	: 346 m	Solids diameter, max	: 0.00 mm
Suction pressure, rated / max	: 1.03 / 1.36 bar.g	Solids concentration, by volume	: 0.00 %
NPSH available, rated	: 9.20 m	Temperature, max	: 55.00 deg C
Site Supply Frequency	: 50 Hz	Fluid density, rated / max	: 0.989 / 0.989 kg/dm3
Performance		Viscosity, rated	: 0.54 cSt
Speed criteria	: Synchronous	Vapor pressure, rated	: 0.13 bar.a
Speed, rated	: 3089 rpm	Material	
Speed, maximum	: 4380 rpm	Material selected	: Standard
Speed, minimum	: 1325 rpm	Pressure Data	
Efficiency	: 60.87 %	Maximum working pressure	: 37.40 bar.g
NPSH required / margin required	: 2.91 / 0.91 m	Maximum allowable working pressure	: 99.97 bar.g
Ns (imp. eye flow) / Nss (imp. eye flow)	: 184 / 6,625 US Units	Maximum allowable suction pressure	: 13.79 bar.g
MCSF	: 2.1 m3/h	Hydrostatic test pressure	: 150.0 bar.g
Head maximum, rated speed	: 372 m	Driver & Power Data (@Max density)	
Head rise to shutoff	: 7.33 %	Driver sizing specification	: Rated power
Flow, best eff. point	: 29.5 m3/h	Margin over specification	: 20.00 %
Flow ratio, rated / BEP	: 88.74 %	Service factor	: 1.00
Speed ratio (rated / max)	: 70.53 %	Power, hydraulic	: 24.43 kW
Head ratio (rated speed / max speed)	: 47.40 %	Power, rated	: 40.14 kW
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00	Power, maximum, rated diameter	: 54.57 kW
Selection status	: Acceptable	Minimum recommended motor rating	: 55.93 kW / 75.00 hp

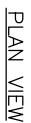


## Construction Datasheet


Customer : PT Intech Pumps Indonesia					Quote Number : 1884283	
Project : PT Cabot Asia pacific south					Model / Size : RG 3x2 S-600	
Item number : GA-30-0-21					Stages : 1	
Service : Quench Water Pump					Pump speed : 3089 rpm	
Quantity of pumps : 1					Date last saved : 13 Feb 2023 6:01 PM	
Construction					Driver Information	
Nozzle	Size	Rating (ANSI)	Face	Pos'n	Manufacturer : Trillium Pumps USA Choice	
Suction	3 in	600 lbs.	RF	Left	Power : 55.00 kW	
Discharge	2 in	600 lbs.	RF	Right	Service factor : 1.15	
Pump Drive Type : Belt drive					Speed : 1500 rpm	
Pump Orientation : Horizontal					Motor efficiency : Premium	
Bearing Type (Rad/Thr) : Ball/Ball					Orientation / Mounting : Horizontal/Foot	
Bearing Lubrication : Grease					Driver type : -	
Rotation (view from shaft-end) : -					Frame-size : No Frame Size Available	
Materials					Enclosure : -	
Manifold : Stainless steel (ASTM - A743)					Hazardous area class : -	
Rotor Assembly : Stainless steel (ASTM - A743)					Explosion rating : -	
Pick-Up Tube : 17-4 PH					Volts / Phase / Hz : / 0 / 50	
Elastomer : Viton					Insulation : -	
Shaft : 4140 carbon steel					Temperature Rise : -	
					Motor mounted by : Trillium Pumps USA	
Baseplate, Connection and Guard					Seal, Gland and Piping	
Baseplate Type : Belt drive - sidemount					Seal Arrangement : Single	
Baseplate Material : Fabricated steel					Seal Size : N/A	
Orientation : Horizontal					Manufacturer : Trillium Choice	
Connection Type : Belt drive					Seal Hub / Seal Plate Mat'l : Stainless Steel	
Guard : Fiberglass/Polyethylene					Seal Face Mat'l : Carbon seal - tungsten carbide mating ring	
Weights (Approx.)					Throat Bushing : N/A	
Bareshaft pump : 394.6 kg					Seal Flush Plan : Plan 11	
Baseplate : 400.0 kg					Seal Flush Construction : -	
Driver : 475.0 kg						
Gearbox : 0.00 kg						
Total weight : 1,269.6 kg						



- NOTES:



CUSTOMER			
USER			
SERIAL NO.			
CUSTOMER ORDER NUMBER			
SPS SALES SHEET NO.			
DATE BY			
ENGINE			
DATE			
APPROVED			



**TRIBULUM**  
FLUOR TECHNOLOGIES

**WEMCO**  
**ROTO-JET**

**GENERAL ARRANGEMENT**

3 x 2 MODEL R64 III ROTO-JET PUMP  
FLANGED SUCTION AND DISCHARGE  
WITH SIDE MOUNTED 36H-449F FR. MOTOR  
ROTO-JET PUMP

SIZE NO. R64937-1	SHEET 1 OF 1	DATE NO.	/
<b>D</b> R64937-1			
REVISION			