

CLIENT: _____

PROJECT TITLE: _____

JOB NUMBER: _____

EQUIPMENT NUMBER: _____

EQUIPMENT SERVICE: _____

SERIAL NUMBER: _____

REQ / SPEC NO: _____

PURCH ORDER NO. _____

COMMENTS:

DATASHEETS	
ITEM No.	ATT
PUMP	<input type="radio"/>
MOTOR	<input type="radio"/>
GEAR	<input type="radio"/>
TURBINE	<input type="radio"/>

APPLICABLE OVERLAY STANDARDS

Rev	Date	Description	Prepared By
		ISSUED FOR	
CENTRIFUGAL PUMP DATASHEET API 610 11TH EDITION			DATASHEET No.

CENTRIFUGAL PUMP DATASHEET API 610 11TH EDITION

Metric

1	APPLICABLE TO: _____	APPLICABLE NTL/INTNTL STANDARD: _____
2	FOR _____	UNIT _____
3	SITE _____	SERVICE _____
4	NO. REQ _____ PUMP SIZE _____	TYPE _____ No. STAGES _____
5	MANUFACTURER _____	MODEL _____ SERIAL NO _____
6	LIQUID CHARACTERISTICS	
7	Units	Maximum
8	LIQUID TYPE OR NAME: _____	Minimum
9	VAPOR PRESSURE: _____	Note
10	RELATIVE DENSITY: _____	Max & min values refer
11	SPECIFIC HEAT: _____	only to the property
12	VISCOSITY: _____	listed
13	OPERATING CONDITIONS (6.1.2)	
14	Units	Maximum
15	NPSHA Datum: _____	Rated
16	PUMPING TEMPERATURE: _____	Normal
17	FLOW: _____	Minimum
18	DISCHARGE PRESSURE: (6.3.2) _____	
19	SUCTION PRESSURE: _____	
20	DIFFERENTIAL PRESSURE: _____	
21	DIFFERENTIAL HEAD: _____	
22	NPSHA: _____	
23	HYDRAULIC POWER: _____	
24	SITE AND UTILITY DATA	
25	LOCATION: _____	
26	MOUNTED AT: _____ <input type="radio"/> TROPICALIZATION REQ	
27	ELECTRIC AREA CLASSIFICATION: 6.1.22 DIVISION _____	
28	GROUP _____ TEMP CLASS _____	
29	SITE DATA:	
30	ELEVATION (MSL) _____ m	BAROMETER: _____ kg/cm ² abs
31	RANGE OF AMBIENT TEMPS: MIN / MAX _____ / _____	deg C
32	RELATIVE HUMIDITY: MIN / MAX _____ / _____	%
33	UNUSUAL CONDITIONS: _____	
34	• SPECIFY OTHER: _____	
35	UTILITY CONDITIONS:	
36	ELECTRICITY: DRIVERS HEATING CONTROL SHUTDOWN	
37	VOLTAGE _____	
38	PHASE _____	
39	HERTZ _____	
40		
41	PERFORMANCE	
42	PROPOSAL CURVE NO. _____ RPM _____	
43	As Tested Curve No. _____	
44	IMPELLER DIA RATED _____ MAX. _____ MIN. _____	mm
45	RATED POWER _____ kW	EFFICIENCY _____ (%)
46	RATED CURVE BEP FLOW (at rated impeller dia) _____	m ³ /hr
47	MIN FLOW: THERMAL _____ gpm	STABLE _____ m ³ /hr
48	PREFERRED OPERATING REGION (6.1.12) _____ to _____	m ³ /hr
49	ALLOWABLE OPERATING REGION _____ to _____	m ³ /hr
50	MAX HEAD @ RATED IMPELLER _____	m
51	MAX POWER @ RATED IMPELLER (6.8.9) _____	kW
52	NPSHr AT RATED FLOW: _____	m
53	CL PUMP TO U/S BASEPLATE _____	m
54	NPSH MARGIN AT RATED FLOW: _____	m
55	SPECIFIC SPEED (6.1.9) _____	m ³ /hr,m
56	SUCTION SPECIFIC SPEED LIMIT _____	
57	SUCTION SPECIFIC SPEED _____	m ³ /hr,m
58	MAX. ALLBLE SOUND PRESS.LEVEL REQD (6.1.14) _____	(dBA)
59	EST MAX SOUND PRESS.LEVEL _____	(dBA)
60	MAX. SOUND POWER LEVEL REQ'D (6.1.14) _____	
61	EST MAX SOUND POWER LEVEL _____	
41	DRIVER (7.1.5)	
42	Driver Type _____	
43	GEAR _____	
44	VARIABLE SPEED REQUIRED _____	
45	SOURCE OF VARIABLE SPEED _____	
46	OTHER _____	
47	MANUFACTURER _____	
48	NAMEPLATE POWER _____	kW
49	Nominal RPM _____	
50	RATED LOAD RPM _____	
51	FRAME OR MODEL _____	
52	ORIENTATION _____	
53	LUBE _____	
54	BEARING TYPE (RADIAL) _____	
55	BEARING TYPE (THRUST) _____	
56	RADIAL _____	
57	THRUST _____	
58	STARTING METHOD _____	
59	SEE DRIVER DATASHEET _____	

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CENTRIFUGAL PUMP DATASHEET API 610 11TH EDITION

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CONSTRUCTION

API PUMP TYPE: _____ [Based on API 610 definitions]

NOZZLE CONNECTIONS: (6.5.5)

	Size	Facing	Rating	Position
SUCTION				
DISCHARGE				

PRESSURE CASING AUX.CONNECTIONS: (6.4.3.2)

	No.	Size	Type
BALANCE/LEAK OFF			
DRAIN			
VENT			
PRESS GAUGE			
TEMP GAUGE			
WARM-UP LINE			

	Rating	Posn.	Facing
BALANCE/LEAK OFF			
DRAIN			
VENT			
PRESS GAUGE			
TEMP GAUGE			
WARM-UP LINE			

Drain Valve Supplied By _____

DRAINS MANIFOLDED ☐

VENT Valve Supplied By _____

VENTS MANIFOLDED ☐

THREADED CONS FOR PIPELINE SERVICE & < 50°C (6.4.3.2) ☐

SPECIAL FITTINGS FOR TRANSITIONING (6.4.3.3) ☐

CYLINDRICAL THREADS REQUIRED (6.4.3.8) ☐

GUSSET SUPPORT REQUIRED ☐

MACHINED AND STUDDED CONNECTIONS (6.4.3.12) ☐

VS 6 DRAIN _____

DRAIN TO SKID EDGE ☐

CASING MOUNTING:

CASING TYPE: (6.3.10) _____

OH3 BACKPULLOUT LIFTING DEVICE REQD. (9.12.6) ☐

CASE PRESSURE RATING:

MAWP : (6.3.6) _____ kg/cm² g @ _____ deg CHYDROTEST : _____ kg/cm² g @ _____ deg CHYDROTEST OH PUMP AS ASSEMBLY ☐SUCTION PRESS. REGIONS DESIGNED FOR MAWP ☐ROTATION: (VIEWED FROM COUPLING END) _____ ☐• IMPELLERS INDIVIDUALLY SECURED : ☐• BOLT OH 3/4/5 PUMP TO PAD / FOUNDATION : ☐• PROVIDE SOLEPLATE FOR OH 3/4/5 PUMPS ☐

ROTOR:

SHAFT FLEXIBILITY INDEX (SFI) (9.1.1.3) _____

First Critical Speed Wet (Multi stage pumps only) ☐COMPONENT BALANCE TO ISO 1940-1, G1.0 ☐SHRINK-FIT-LIMITED MOVEMENT IMPELLERS (9.2.2.3) ☐

COUPLING: (7.2.3) (7.2.13.f) _____

MANUFACTURER _____

MODEL _____

RATING (BHP/100 RPM) _____

SPACER LENGTH _____ mm

SERVICE FACTOR _____

RIGID ☐

COUPLING WITH HYDRAULIC FIT (7.2.10) _____

COUPLING BALANCED TO ISO 1940-1 G6.3 (7.2.3) ☐COUPLING WITH PROPRIETARY CLAMPING DEVICE (7.2.11) ☐

COUPLING IN COMPLIANCE WITH (7.2.4) _____

COUPLING GUARD STANDARD PER (7.2.13.a) _____

Window on Coupling Guard ☐

BASEPLATE

API BASEPLATE NUMBER : _____

BASEPLATE CONSTRUCTION (7.3.14) _____

BASEPLATE DRAINAGE (7.3.1) _____

MOUNTING : _____

NON-GROUT CONSTRUCTION : (7.3.13) ☐VERTICAL LEVELING SCREWS : ☐LONGITUDINAL DRIVER POSITIONING SCREWS : ☐SUPPLIED WITH : • GROUT AND VENT HOLES ☐• DRAIN CONNECTION ☐MOUNTING PADS SIZED FOR BASEPLATE LEVELING (7.3.5) ☐MOUNTING PADS TO BE MACHINED (7.3.6) ☐PROVIDE SPACER PLATE UNDER ALL EQUIPMENT FEET ☐

OTHER _____

REMARKS :

MATERIAL (6.12.1.1)

APPENDIX H CLASS _____

MIN DESIGN METAL TEMP (6.12.4.1) _____ deg C

REDUCED-HARDNESS MATERIALS REQ'D (6.12.1.12.1) ☐

Applicable Hardness Standard (6.12.1.12.3) _____

BARREL : _____

CASE: _____

DIFFUSERS: _____

IMPELLER: _____

IMPELLER WEAR RING: _____

CASE WEAR RING: _____

SHAFT: _____

Bowl (if VS-type) _____

Inspection Class _____

BEARINGS AND LUBRICATION (6.10.1.1)

BEARING (TYPE / NUMBER): (6.11.4) _____

RADIAL _____ / _____

THRUST _____ / _____

REVIEW AND APPROVE THRUST BEARING SIZE : (9.2.5.2.4) ☐

LUBRICATION : (6.10.2.2) (6.11.3) (9.6.1) _____

PRESSURE LUBE SYSTEM STANDARD _____

(9.2.6.5) ☐

ISO 10438 DATASHEETS ATTACHED _____

Pressurized Lube Oil System mtd on pump baseplate ☐

Location of Pressurized Lube Oil System mounted on baseplate: _____

INTERCONNECTING PIPING PROVIDED BY _____

OIL VISC. ISO GRADE VG _____

CONSTANT LEVEL OILER: _____

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Metric

INSTRUMENTATION		SEAL SUPPORT SYSTEM MOUNTING	
1	SEE ATTACHED API-670 DATASHEET	SEAL SUPPORT SYSTEM MOUNTED ON PUMP BASEPLATE	
2	ACCELEROMETER (7.4.2.1)	(7.5.1.4)	
3	Number of Accelerometers	IDENTIFY LOCATION ON BASEPLATE	
4	Mounting Location of Accelerometers	INTERCONNECTING PIPING BY	
5			
6	PROVISION FOR MTG ONLY (6.10.2.10)		
7	Number of Accelerometers	MECHANICAL SEAL (6.8.1)	
8	Mounting Location of Accelerometers	SEE ATTACHED ISO 21049/API 682 DATASHEET	
9		ADDITIONAL CENTRAL FLUSH PORT (6.8.9)	
10	FLAT SURFACE REQUIRED (6.10.2.11)	HEATING JACKET REQ'D (6.8.11)	
11	Number of Accelerometers		
12	Mounting Location of Accelerometers		
13		HEATING AND COOLING (6.1.17)	
14	VIBRATION PROBES (7.4.2.2)	COOLING REQ'D	
15	PROVISIONS FOR VIB. PROBES	COOLING WATER PIPING PLAN	
16	NUMBER PER RADIAL BEARING	COOLING WATER PIPING	
17	NUMBER PER AXIAL BEARING	FITTINGS	
18	PROVISION FOR MTG ONLY	COOLING WATER PIPING MATERIALS	
19	MONITORS AND CABLES SUPPLIED BY (7.4.2.4)	COOLING WATER REQUIREMENTS:	
20		BEARING HOUSING m³/hr	
21		HEAT EXCHANGER m³/hr	
22	TEMPERATURE (7.4.2.3)	TOTAL COOLING WATER m³/hr	
23	PROVISIONS FOR TEMP PROBES	HEATING MEDIUM	
24	RADIAL BEARING TEMP.	OTHER	
25	NUMBER PER RADIAL BEARING	HEATING PIPING	
26	THRUST BEARING TEMP.		
27	NUMBER PER THRUST BEARING ACTIVE SIDE	PIPING & APPURTENANCES	
28	NUMBER PER THRUST BEARING INACTIVE SIDE	MANIFOLD PIPING FOR PURCHASER CONNECTION (7.5.1.6)	
29	TEMP. GAUGES (WITH THERMOWELLS) (9.1.3.6)	VENT	
30	PRESSURE GAUGE TYPE	DRAIN	
31	Remarks	COOLING WATER	
32		TAG ALL ORIFICES (7.5.2.4)	
33		SOCKET WELD CONN ON SEAL GLAND (7.5.2.8)	
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DATASHEET No. _____

Rev : _____

CENTRIFUGAL PUMP DATASHEET API 610 11TH EDITION			Metric						
1	SURFACE PREPARATION AND PAINT		TEST						
2	MANUFACTURER'S STANDARD _____		SHOP INSPECTION (8.1.1) <input type="radio"/>						
3	OTHER (SEE BELOW) _____		PERFORMANCE CURVE _____						
4	SPECIFICATION NO. _____		& DATA APPROVAL PRIOR TO SHIPMENT <input type="radio"/>						
5			TEST WITH SUBSTITUTE SEAL (8.3.3.2.b) _____						
6	PUMP:		MATERIAL CERTIFICATION REQUIRED CASING <input type="radio"/>						
7	PUMP SURFACE PREPARATION _____		(6.12.1.8) IMPELLER <input type="radio"/>						
8	PRIMER _____		SHAFT <input type="radio"/>						
9	FINISH COAT _____		OTHER _____						
10			CASTING REPAIR WELD PROCEDURE APPR REQD <input type="radio"/>						
11	BASEPLATE:		(6.12.2.5) (6.12.3.1) _____						
12	BASEPLATE SURFACE PREPARATION _____		INSPECTION REQUIRED FOR CONNECTION WELDS (6.12.3.4.d)						
13	PRIMER _____		(6.12.3.4.e) MAG PARTICLE <input type="radio"/>						
14	FINISH COAT _____		RADIOGRAPHY <input type="radio"/>						
15	DETAILS OF LIFTING DEVICES _____		LIQUID PENETRANT <input type="radio"/>						
16			ULTRASONIC <input type="radio"/>						
17	SHIPMENT: (8.4.1) _____		INSPECTION REQUIRED FOR CASTINGS						
18	EXPORT BOXING REQUIRED _____		MAG PARTICLE <input type="radio"/>						
19	OUTDOOR STORAGE MORE THAN 6 MONTHS <input type="radio"/>		RADIOGRAPHY <input type="radio"/>						
20			LIQUID PENETRANT <input type="radio"/>						
21	SPARE ROTOR ASSEMBLY PACKAGED FOR:		ULTRASONIC <input type="radio"/>						
22	ROTOR STORAGE ORIENTATION (9.2.8.2) _____		HARDNESS TEST REQUIRED (8.2.2.7) _____						
23	SHIPPING & STORAGE CONTAINER FOR VERT STORAGE (9.2.8.3) _____		ADDNL SUBSURFACE EXAMINATION (6.12.1.5) (8.2.1.3) <input type="radio"/>						
24			FOR _____						
25	N2 PURGE (9.2.8.4) <input type="radio"/>		METHOD _____						
26	SPARE PARTS:		PMI TESTING REQUIRED (8.2.2.8) <input type="radio"/>						
27	START-UP <input type="radio"/>		COMPONENTS TO BE TESTED _____						
28	NORMAL MAINTENANCE <input type="radio"/>								
29	MASSES kg		RESIDUAL UNBALANCE TEST (J.4.1.2) <input type="radio"/>						
30			NOTIFICATION OF SUCCESSFUL SHOP						
31	<table><tr><th>ITEM No</th><th>PUMP</th><th>DRIVER</th></tr><tr><td> </td><td> </td><td> </td></tr></table>		ITEM No	PUMP	DRIVER				PERFORMANCE TEST (8.1.1.c) (8.3.3.5) <input type="radio"/>
ITEM No	PUMP	DRIVER							
32			BASEPLATE TEST (7.3.21) _____						
33			HYDROSTATIC _____						
34	<table><tr><th>GEAR</th><th>BASE</th><th>TOTAL</th></tr><tr><td> </td><td> </td><td> </td></tr></table>		GEAR	BASE	TOTAL				HYDRO TEST OF BOWLS & COLUMN (9.3.13.2) _____
GEAR	BASE	TOTAL							
35			PERFORMANCE TEST _____						
36	OTHER PURCHASER REQUIREMENTS		TEST IN COMPLIANCE WITH (8.3.3.2) _____						
37	COORDINATION MEETING REQUIRED (10.1.3) <input type="radio"/>		TEST DATA POINTS TO (8.3.3.3) _____						
38	MAXIMUM DISCHARGE PRESSURE TO INCLUDE: <input type="radio"/>		TEST TOLERANCES TO (8.3.3.4) _____						
39	MAX RELATIVE DENSITY <input type="radio"/>		NPSH (8.3.4.3.1) (8.3.4.3.4) _____						
40	OPERATION TO TRIP SPEED <input type="radio"/>		NPSH-1ST STG ONLY (8.3.4.3.2) _____						
41	MAX DIA. IMPELLERS AND/OR NO OF STAGES <input type="radio"/>		NPSH TESTING TO HI 1.6 OR ISO 9906 (8.3.4.3.3) _____						
42	CONNECTION DESIGN APPROVAL (9.2.1.4) <input type="radio"/>		TEST NPSHA LIMITED TO 110% SITE NPSHA (8.3.3.6) <input type="radio"/>						
43	TORSIONAL ANALYSIS / REPORT (6.9.2.10) <input type="radio"/>		RETEST ON SEAL LEAKAGE (8.3.3.2.d) _____						
44	PROGRESS REPORTS <input type="radio"/>		RETEST REQ AFTER FINAL HEAD ADJ (8.3.3.7.b) _____						
45	OUTLINE OF PROC FOR OPTIONAL TESTS (10.2.5) <input type="radio"/>		COMPLETE UNIT TEST (8.3.4.4.1) _____						
46	ADDITIONAL DATA REQUIRING 20 YEARS RETENTION (8.2.1.1) <input type="radio"/>		SOUND LEVEL TEST (8.3.4.5) _____						
47			CLEANLINESS PRIOR TO FINAL ASSEMBLY (8.2.2.6) _____						
48	LATERAL ANALYSIS REQUIRED (9.1.3.4) (9.2.4.1.3) <input type="radio"/>		LOCATION OF CLEANLINESS INSPECTION _____						
49	MODAL ANALYSIS REQUIRED (9.3.9.2) <input type="radio"/>		NOZZLE LOAD TEST _____						
50	DYNAMIC BALANCE ROTOR (6.9.4.4) <input type="radio"/>		CHECK FOR CO-PLANAR MOUNTING PAD SURFACES _____						
51	INSTALLATION LIST IN PROPOSAL (10.2.3.I) <input type="radio"/>		MECHANICAL RUN TEST UNTIL OIL TEMP STABLE _____						
52	VFD STEADY STATE DAMPED RESPONSE ANALYSIS (6.9.2.3) <input type="radio"/>		4 HR. MECH RUN AFTER OIL TEMP STABLE (8.3.4.2.1) _____						
53			4 HR. MECH RUN TEST (8.3.4.2.2) _____						
54	TRANSIENT TORSIONAL RESPONSE <input type="radio"/>		TRUE PEAK VELOCITY DATA _____						
55	BEARING LIFE CALCULATIONS REQUIRED (6.10.1.6) <input type="radio"/>		BRG HSG RESONANCE TEST (8.3.4.7) _____						
56	IGNITION HAZARD ASSMT TO EN 13463-1 (7.2.13.e) <input type="radio"/>		STRUCTURAL RESONANCE TEST (9.3.9.2) _____						
57	CASING RETIREMENT THICKNESS DRAWING (10.3.2.3) <input type="radio"/>		REMOVE / INSPECT HYDRODYNAMIC BEARINGS AFTER TEST						
58	FLANGES RQD IN PLACE OF SKT WELD UNIONS (7.5.2.8) <input type="radio"/>		(9.2.7.5) _____						
59	INCLUDE PLOTTED VIBRATION SPECTRA (6.9.3.3) <input type="radio"/>		AUXILIARY EQUIPMENT TEST (8.3.4.6) _____						
60	CONNECTION BOLTING (7.5.1.7) _____		EQUIPMENT TO BE INCLUDED IN AUXILIARY TESTS _____						
61	CADMIUM PLATED BOLTS PROHIBITED <input type="radio"/>								
62	VENDOR TO KEEP REPAIR AND HT RCDS (8.2.1.1.c) <input type="radio"/>		LOCATION OF AUXILIARY EQUIPMENT TEST _____						
63	VENDOR SUBMIT TEST PROCEDURES (8.3.1.1) <input type="radio"/>								
64	SUBMIT INSPECTION CHECK LIST (8.1.5) <input type="radio"/>		IMPACT TEST (6.12.4.3) PER EN 13445 _____						
65			PER ASME SECTION VIII _____						
66			REMOVE CASING AFTER TEST _____						
DATASHEET No. _____			Rev: _____						

Model:	Size:	Hz	RPM:	Stages:
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Job/Inq.No. :			
Purchaser :			
End User :	Issued by :		Rev. :
Item/Equip.No. :	Quotation No. :		Date :
Service :			
Order No. :	Certified By :		

Operating Conditions

Liquid:

Temp.:

S.G./Visc.:

Flow:

TDH:

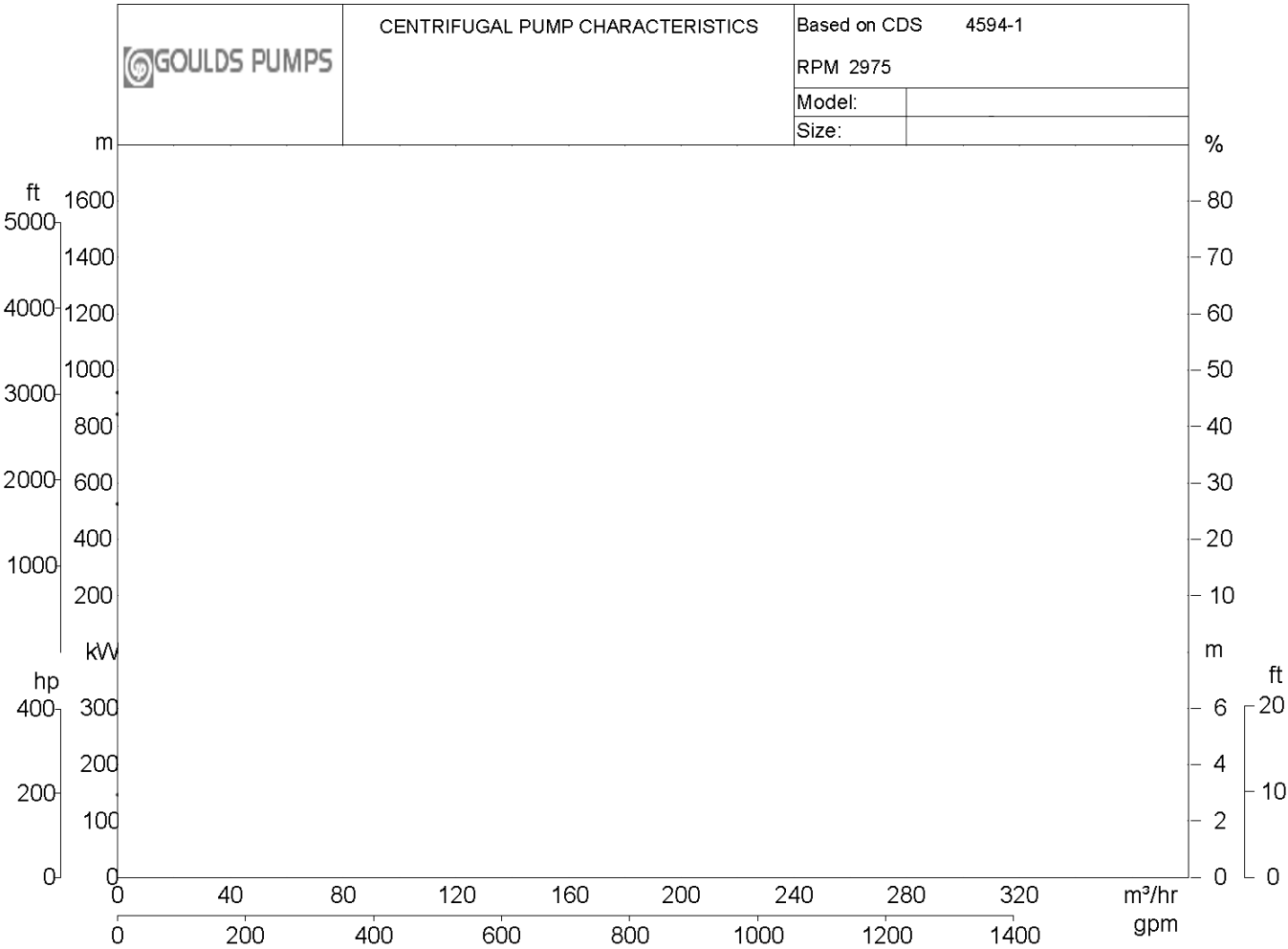
NPSHa:

Solid size:

Vapor Press:

Pump Performance

Published Efficiency:	Suction Specific Speed:
Rated Pump Efficiency:	Min. Hydraulic Flow:
Rated Total Power:	Min. Thermal Flow:
Non-Overloading Power:	
Imp. Dia. First 1 Stg(s):	Imp. Dia. Adl Stg(s):
NPSHr:	Shut off Head:
Max. Solids Size:	% Susp. Solids (by wtg):



Pump Specification

SUCT.FLANGE SIZE	DRILLING	FACING	FINISH
DISCH.FLANGE SIZE	DRILLING	FACING	FINISH
PUMP ROTATION (LOOKING AT PUMP FROM MOTOR)			
TYPE OF LUBRICATION			COOLED
TYPE OF STUFFING BOX			COOLED
TYPE OF SEALING			

Weights and Measurements

PUMP	kg
MOTOR	kg
BASEPLATE	kg
TOTAL	kg
GR.VOLUME w/BOX	
GR.WEIGHT w/BOX	

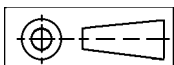
Motor Specification

MOTOR BY	MOUNT BY	MFG.
FRAME	POWER	RPM
PHASE	FREQUENCY	VOLTS
INSULATION	S.F.	
ENCLOSURE		

Notes and References

Auxiliary Specification

COUPLING BY	CPLG TYPE
CPL GUARD BY	CPLG GUARD MATL
BASEPLATE	
MECH.SEAL	



All dimensions are in mm.
Drawing is not to scale
Weights (kg) are approximate

DRAWING IS FOR REFERENCE ONLY.
NOT CERTIFIED FOR CONSTRUCTION UNLESS SIGNED.

Customer:
Serial No:
Customer P.O. No:
Item No:
Project No:
End User:
Service:

DRAWING NO