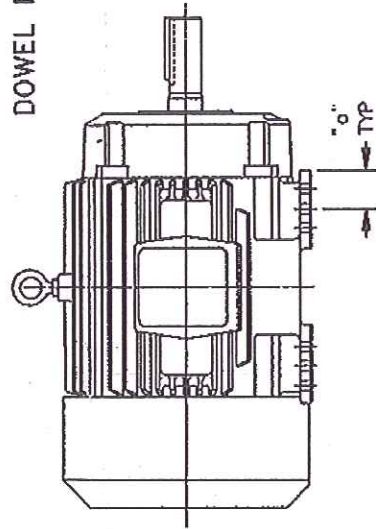


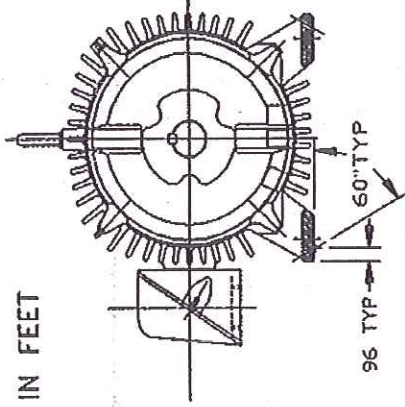
DUTY MASTER ALTERNATING CURRENT MOTORS

ENCLOSURE: TOTALLY ENCLOSED
MOUNTING: FOOT
SQUIREL-CAGE INDUCTION
CAST IRON CONSTRUCTION
COOLING: FAN COOLED

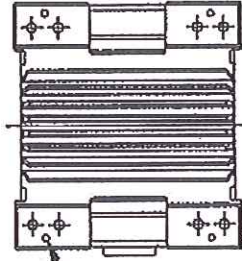
FRAMES 250T THRU 440T
FRAME ALTERATION STANDARD



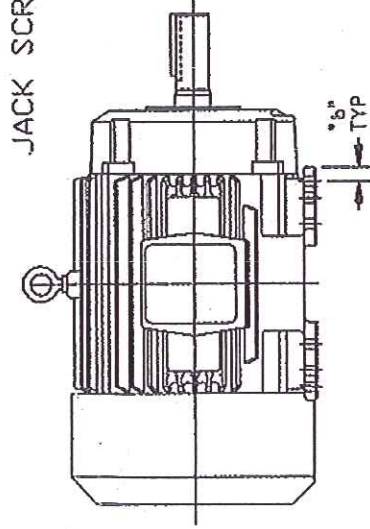
DOWEL PIN HOLES IN FEET



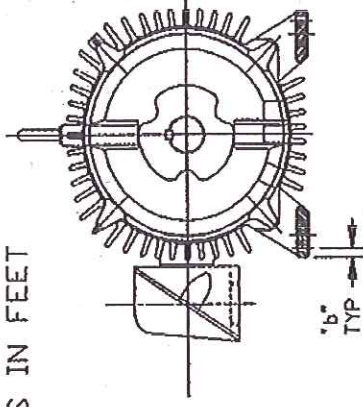
FRAME SIZE	"a"	"b"
E250	1.88	3/8
E280	1.88	3/8
E320	1.88	3/8
E360	1.88	3/8
E400	1.88	3/8
E440	1.88	3/8
(1)		



BOTTOM VIEW

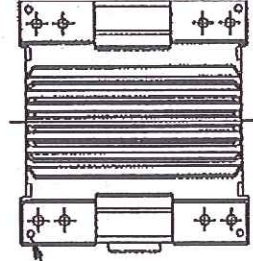


JACK SCREW HOLES IN FEET



FRAME SIZE	"a"	"b"
E250	3/8-16	.20
E280	3/8-16	.44
E320	3/8-16	.44
E360	3/8-16	.44
E400	1/2-13	.44
E440	1/2-13	.44
(1)		

Giant Industries
Grafton VA
SZorb Sulfur Removal Technology
Shaw Eng
Unit #6
Debutanizer Reflux Pump
FPD# 050-06202



BOTTOM VIEW

NOTES:

- SPECIAL DIMENSIONS APPLYING TO ORDER ON THIS LINE
- DOWEL PIN HOLES MAY VARY AS SPECIFIED ON ORDER, EXAMPLE: TWO HOLES DIAGONALLY OPPOSITE
- DIMENSIONS ARE IN INCHES, SEE SHEET 2 FOR DIMENSIONS IN MILLIMETERS

FRAME- 3261 TYPE- XI841 CERTIFIED FOR- FLOWSERVE
ORDER- 2006007408 TFM- 7295986 HP- 3V RPM- 1800 PH- 3 60 147 60 VTL TS-460 12-15-2006
RELANCE SALES ORDER- APPROVED BY- R Williams DATE-

RELANCE ELECTRIC

CLEVELAND, OHIO 44117 U. S. A.

DIMENSION 611740-911
SHEET
SHEET 1 OF 2
ISSUE DATE: FEBRUARY 9, 1994

C/R 323240-192

105839
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#105839
#105840

CENTRIFUGAL PUMP DATA SHEET (API 610-10th)									
CLIENT: D-Cok		ITEM NO.: G663A/B							
UNIT: Glant Yorktown, Inc.		LOCATION: Grafton, Virginia							
1 EQUIPMENT NAME: DEBUTANIZER REFLUX PUMP				NUMBER OF ITEMS:					
2 APPLICABLE TO: ☒ PROPOSALS ☐ PURCHASE ☐ AS BUILT									
3 NOTES: INFORMATION BELOW TO BE COMPLETED: ☐ BY PURCHASER ☐ BY MANUFACTURER ☒ BY MANUFACTURER OR PURCHASER									
4 ☐ DATA SHEETS				REVISIONS					
5									
6 PUMP				1					
7 MOTOR				2					
8 GEAR				3					
9 TURBINE				4					
10				5					
11 ☐ OPERATING CONDITIONS (5.1.3)				☐ LIQUID (5.1.3)					
12 FLOW, NORMAL 557 (GPM) RATED 835 (GPM)				LIQUID TYPE OR NAME DEBUTANIZER BOTTOMS					
13 OTHER				☐ HAZARDOUS ☐ FLAMMABLE ☐ (5.1.5)					
14									
15 SUCTION PRESSURE MAX. RATED 279.9 / 247.7 (PSIG)				MIN. NORMAL MAX.					
16 DISCHARGE PRESSURE 300.7 (PSIG)				PUMPING TEMP (°F) 100 100					
17 DIFFERENTIAL PRESSURE 53 (PSI)				VAPOR PRESS (PSIA) 250					
18 DIFF HEAD 219.0 (FT) NPSHA 11.9 (FT)				RELATIVE DENSITY (SG) 0.559					
19 PROCESS VARIATIONS (5.1.4)				VISCOSITY (cP) 0.145					
20 STARTING CONDITIONS (5.1.4)				SPECIFIC HEAT, Cp 0.611 (BTU/LB °F)					
21 SERVICE: ☒ CONT ☐ INTERMITTENT (STARTS/DAY)				☐ CHLORIDE CONCENTRATION (5.2.4) (ppm)					
22 ☐ PARALLEL OPERATION REQ'D (5.1.13)				☐ H ₂ S CONCENTRATION (PPM) WET (5.12.1.12c)					
23 ☐ SITE DATA (5.1.3)				CORROSIVE / EROSION AGENT (5.12.1.9)					
24 LOCATION: (5.1.30)				MATERIALS (5.12.1.1)					
25 ☐ INDOOR ☐ HEATED ☒ OUTDOOR ☐ UNHEATED				☒ ANNEX H CLASS (5.12.1.1) S-6					
26 ☒ ELECTRICAL AREA CLASSIFICATION (5.1.24/1.4)				☐ MIN DESIGN METAL TEMP (5.12.4.1) 0 (°F)					
27 CL 1 GR B,C,D DIV 2, T3				☐ REDUCED HARDNESS MATERIALS REQ'D (5.12.1.12)					
28 ☒ WINTERIZATION REQ'D ☐ TROPICALIZATION REQ'D				CASE A216-WCB IMPELLER A487-CA6NM					
29 SITE DATA (5.1.30)				CASE/IMPELLER WEAR RINGS A426-CPCA15					
30 ☐ ALTITUDE (FT) BAROMETER 14.76 (PSIG)				SHAFT A434-4140					
31 ☒ RANGE OF AMBIENT TEMPS: MIN/MAX 0 / 95 (°F)				☐ DIFFUSERS					
32 ☐ RELATIVE HUMIDITY: MIN / MAX / 95 (%)									
33 UNUSUAL CONDITIONS: (5.1.30) ☐ DUST ☐ FUMES									
34 ☒ OTHER Refinery Service									
35									
36									
37 ☐ DRIVER TYPE				PERFORMANCE:					
38 ☒ INDUCTION MOTOR ☐ STEAM TURBINE ☐ GEAR				PROPOSAL CURVE NO. 6HPX18A-1-1 1775 RPM					
39 ☐ OTHER				IMPELLER DIA RATED 15.15 MAX 18.11 MIN 14.67 (in)					
40				IMPELLER TYPE					
41				RATED POWER 39.8 (HP) EFFICIENCY 64.8 (%)					
42 ☐ MOTOR DRIVER (5.1.1 / 6.1.4)				MINIMUM CONTINUOUS FLOW:					
43 MANUFACTURER Reference				THERMAL (GPM) STABLE 243 (GPM)					
44 FRAME 326T ENCL. TYPE TEFC-XEX+				PREFERRED OPER REGION 648 TO 892 (GPM)					
45 HORIZONTAL ☒ VERTICAL SERVICE FACTOR 1.15				ALLOWABLE OPER REGION 243 TO 950 (GPM)					
46 VOLTS/PHASE/HERTZ 460 / 3 / 60				MAX HEAD @ RATED IMPELLER 273 (FT)					
47 ☐ TYPE				MAX POWER @ RATED IMPELLER 41.7 (HP)					
48 MINIMUM STARTING VOLTAGE (5.1.5)				NPSH AT RATED FLOW 9.8 (FT) (5.1.10)					
49 INSULATION F @ 1.15 s.f. ☐ TEMP RISE				MAX SUCTION SPECIFIC SPEED 9520 (5.1.11)					
50 FULL LOAD AMPS				☒ MAX SOUND PRESS LEVEL REQ'D (dBA) (5.1.15)					
51 LOCKED ROTOR AMPS				☐ EST MAX SOUND PRESS LEVEL (dBA) (5.1.15)					
52 STARTING METHOD				☐ EST MAX SOUND POWER LEVEL (dBA) (5.1.15)					
53 LUBE Gresse									
54									
55 BEARINGS (TYPE/NUMBER):				☐ UTILITY CONDITIONS (5.1.3)					
56 RADIAL Ball /				ELECTRICITY VOLTAGE PHASE HERTZ					
57 THRUST Ball /				DRIVERS 460 3 60					
58 ☐ VERTICAL THRUST CAPACITY				HEATING 120 1 60					
59 UP (N) DOWN (N)				SYSTEM VOLTAGE DIP ☐ 60% ☐ OTHER (5.1.5)					
60									
61									
62									
63									
SEE SHEET 1 OF THIS DOCUMENT FOR COPYRIGHT, CONFIDENTIALITY AND OTHER RESTRICTIONS									
ISSUE DATE SHEET DOC NO.									
2 01-dic-06 2 OF 7 120653-DS-RE-G663A/B									

105839
105840

CENTRIFUGAL PUMP DATA SHEET - TYPE OH				
CLIENT: D-Cok		ITEM NO.: G663A/B		
UNIT: Glant Yorktown, Inc.		LOCATION: Grafton, Virginia		
1 EQUIPMENT NAME: DEBUTANIZER REFLUX PUMP		NUMBER OF ITEMS:		
2 CONSTRUCTION		SURFACE PREPARATION AND PAINT		
3 ROTATION: (VIEWED FROM COUPLING END) ☐ CW ☒ CCW		4 MANUFACTURER'S STANDARD ☐ OTHER (SEE BELOW)		
4 PUMP TYPE: (4.1)		5 SPECIFICATION NO.		
5 ☒ OH2 ☐ OH3 ☐ OH8 ☐ OTHER		PUMP:		
6 CASING MOUNTING:		☐ PRIMER ☐ FINISH COAT		
7 ☒ CENTERLINE ☐ IN-LINE ☐ OTHER		☐ SEE PAINTING PROCEDURE		
8		☐ SEE PAINTING PROCEDURE		
9 CASING TYPE:		BASEPLATE: (6.3.17)		
10 ☐ SINGLE VOLUTE ☒ MULTIPLE VOLUTE ☐ DIFFUSER		☐ PRIMER ☐ FINISH COAT		
11 CASE PRESSURE RATING:		☐ SEE PAINTING PROCEDURE		
12 ☐ OH2 PUMP SUCTION REGION DESIGNED FOR MAWP (5.3.6)		☐ DETAILS OF LIFTING DEVICES (6.3.20)		
13 ☒ MAX ALLOWABLE WORKING PRESSURE 600.2 (PSIG)		SHIPMENT: (7.4.1)		
14 @ 100 (°F)		☒ DOMESTIC ☐ EXPORT ☐ EXPORT BOXING REQUIRED		
15 HYDROTEST PRESSURE 900.3 (PSIG)		☐ OUTDOOR STORAGE MORE THAN 6 MONTHS		
16 NOZZLE CONNECTIONS: (5.4.2)		SPARE ROTOR ASSEMBLY PACKAGED FOR:		
17		☐ HORIZONTAL STORAGE ☐ VERTICAL STORAGE		
18		☐ TYPE OF SHIPPING PREPARATION		
19 SUCTION		HEATING AND COOLING		
20 DISCHARGE		☐ HEATING JACKET REQ'D (5.9.8)		
21		☒ COOLING REQ'D		
22 PRESSURE CASING AUX. CONNECTIONS: (5.4.3)		☐ COOLING WATER PIPING PLAN (5.5.3.1)		
23		C.W. PIPING:		
24 ☒ DRAIN		☒ PIPE ☒ TUBING: ☐ FITTINGS		
25 ☐ VENT		C.W. PIPING MATERIALS:		
26 ☐ WARM-UP		☒ S STEEL ☒ C STEEL ☐ GALVANIZED		
27		COOLING WATER REQUIREMENTS:		
28 ☐ MACHINED AND STUDDED CONNECTIONS (5.4.3.8)		☐ BEARING HOUSING (GPM)		
29 ☐ CYLINDRICAL THREADS REQUIRED (5.4.3.3)		☐ HEAT EXCHANGER (GPM)		
30 ROTOR:		TOTAL COOLING WATER (GPM)		
31 ☐ COMPONENT BALANCE TO ISO 1940 G1.0 (5.9.4.4)		HEAT MEDIUM ☐ STEAM ☐ OTHER		
32 COUPLINGS: (5.2.2)		HEATING PIPING: ☐ TUBING ☐ PIPE		
33 ☒ MANUFACTURER Autogard ☐ MODEL ECS35HVII Auto/lex		BEARINGS AND LUBRICATION		
34 ☐ RATING (HP per 100 RPM) 4.96		BEARING (TYPE/NUMBER) (5.10.1):		
35 ☒ SPACER LENGTH 7.097 (in) ☐ SERVICE FACT 1.5		☒ RADIAL BALL ☐ THRUST BALL		
36 ☐ COUPLING BALANCED TO ISO 1940-1 G6.3 (5.2.3)		LUBRICATION (5.11.3, 5.11.4):		
37 ☐ COUPLING WITH PROPRIETARY CLAMPING DEVICE (5.2.11)		☒ FLINGER ☐ OIL		
38 ☐ COUPLING PER ISO 14691 (5.2.4)		☐ PURGE OIL MIST ☐ PURE OIL MIST		
39 ☐ COUPLING PER ISO 10441 (5.2.4)		☒ CONSTANT LEVEL OILER PREFERENCE (5.10.2.2): Trico		
40 ☐ COUPLING PER API 671 (5.2.4) ☐ ASME B15.1		☒ OIL VISC. ISO GRADE		
41 ☒ NON SPARK COUPLING GUARD (5.2.14c)		INSTRUMENTATION		
42 ☐ COUPLING GUARD STANDARD PER (5.2.14a)		☐ ACCELEROMETER (5.4.2.1)		
43 BASEPLATES:		☐ PROVISION FOR MOUNTING ONLY (5.10.2.11)		
44 ☐ API BASEPLATE NUMBER (ANNEX O)		☐ FLAT SURFACE REQ'D (5.10.2.12)		
45 ☐ NON-GROUT CONSTRUCTION (5.3.13)		☐ TEMP. GAUGES (WITH THERMOWELLS) (5.1.3.6)		
46 ☐ OTHER		☐ PRESSURE GAUGE TYPE		
47 MECHANICAL SEAL: (5.8.1)		REMARKS:		
48 ☐ SEE ATTACHED ISO 21048/API 682 DATA SHEET				
49 Mechanical Seal API Code: BSTIN				
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SEE SHEET 1 OF THIS DOCUMENT FOR COPYRIGHT, CONFIDENTIALITY AND OTHER RESTRICTIONS				
ISSUE 2		DATE 01-dic-06		SHEET 3 OF 7
DOC NO 120653-DS-RE-G663A/B				

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105840

CENTRIFUGAL PUMP DATA SHEET - TYPE OH				
CLIENT: D-Cok		ITEM NO.: G663A/B		
UNIT: Grant Yorktown, Inc.		LOCATION: Grafton, Virginia		
1 EQUIPMENT NAME: DEBUTANIZER REFLUX PUMP		NUMBER OF ITEMS:		
2 SPARE PARTS (TABLE 1B)		QA INSPECTION AND TESTING (CONT.)		
3 ☐ START-UP ☐ NORMAL MAINTENANCE		TEST		
4 ☐ OTHER PURCHASER REQUIREMENTS		NON-WT		
5 ☐ COORDINATION MEETING REQUIRED (9.1.3)		WT		
6 ☐ MAXIMUM DISCHARGE PRESSURE TO INCLUDE (5.3.2)		OBSERVE		
7 ☐ MAX RELATIVE DENSITY		☒ HYDROSTATIC (7.3.2)		
8 ☐ MAX DIA IMPELLERS AND/OR NO OF STAGES		☒ PERFORMANCE (7.3.3)		
9 ☐ OPERATION TO TRIP SPEED		☐ RETEST ON SEAL		
10 ☐ OH3 BEARING HSG LIFTER (8.1.2.6)		☐ LEAKAGE (7.3.3.2a)		
11 ☐ CONNECTION DESIGN APPROVAL (5.12.3.4)		☒ NPSH (7.3.4.2)		
12 ☒ TORSIONAL ANALYSIS REQUIRED (5.9.2.1)		☐ TRUE PEAK VELOCITY		
13 ☐ TORSIONAL ANALYSIS REPORT (5.9.2.6)		DATA (7.3.3.4d)		
14 ☐ PROGRESS REPORTS (9.3.3)		☐ COMPLETE UNIT TEST (7.3.4.3)		
15 ☐ OUTLINE OF PROCEDURES FOR OPTIONAL TESTS (9.2.5)		☐ SOUND LEVEL TEST (7.3.4.4)		
16 ☐ ADDITIONAL DATA REQUIRING 20 YEARS RETENTION (7.2.1.1f)		☐ CLEANLINESS PRIOR TO		
17 PIPING AND APPURTENANCES		FINAL ASSEMBLY (7.2.2.2)		
18 MANIFOLD PIPING TO SINGLE CONNECTION (6.5.1.6)		☐ NOZZLE LOAD TEST (6.3.6)		
19 ☒ VENT ☒ DRAIN ☐ COOLING WATER		☐ CHECK FOR CO-PLANAR		
20 ☒ MOUNT SEAL RESERVOIR OFF BASEPLATE (6.5.1.4)		MOUNTING PAD SURFACES (6.3.3)		
21 ☒ FLANGES REQ'D IN PLACE OF SOCKET WELD UNIONS (6.5.2.6)		☐ MECHANICAL RUN UNTIL OIL		
22 ☒ INSTALLATION LIST IN PROPOSAL (9.2.3L)		TEMP STABLE (7.3.4.7.1)		
23 CONNECTION BOLTING		☐ 4 HR MECHANICAL RUN AFTER		
24 ☐ PTFE COATING ☐ ASTM A153 GALVANIZED		OIL TEMP STABLE (7.3.4.7.3)		
25 ☐ PAINTED ☐ SS		☐ 4 HR MECH RUN TEST (7.3.4.7.2)		
26 QA INSPECTION AND TESTING		☐ BRG HSG RESONANCE		
27 ☐ SHOP INSPECTION (7.1.4)		TEST (7.3.4.6)		
28 ☐ PERFORMANCE CURVE APPROVAL		☐ AUXILIARY EQUIPMENT		
29 ☒ TEST WITH SUBSTITUTE SEAL (7.3.3.2b)		TEST (7.3.4.5)		
30 ☒ MATERIAL CERTIFICATION REQUIRED (5.12.1.8)		☒ IMPACT TESTING (5.12.4.3)		
31 ☒ CASING ☒ IMPELLER ☐ SHAFT		☐ PER EN 13445		
32 ☐ OTHER		☐ PER ASME VIII		
33 ☐ CASTING REPAIR PROCEDURE APPROVAL REQ'D (5.12.2.5)		☐ VENDOR KEEP REPAIR AND HT RECORDS (7.2.1.1c)		
34 ☒ INSPECTION REQUIRED FOR CONNECTION WELDS (5.12.3.4a)		☐ VENDOR SUBMIT TEST PROCEDURES (7.3.1.2/9.2.5)		
35 ☒ MAG PARTICLE ☐ LIQUID PENETRANT		☐ VENDOR SUBMIT TEST DATA WITHIN 24 HOURS (7.3.3.3a)		
36 ☒ RADIOGRAPHIC ☐ ULTRASONIC		☐ INCLUDE PLOTTED VIBRATION SPECTRA (5.9.3.3)		
37 ☒ INSPECTION REQUIRED FOR CASTINGS (7.2.1.3/5.12.1.5)		☐ SUBMIT INSPECTION CHECK LIST (7.1.6)		
38 ☒ MAG PARTICLE ☐ LIQUID PENETRANT		☒ WITNESSED FINAL INSPECTION		
39 ☒ RADIOGRAPHIC ☐ ULTRASONIC				
40 ☐ HARDNESS TEST REQUIRED: (7.2.2.3)				
41 ☐ ADDITIONAL SUBSURFACE EXAMINATION FOR 7.2.1.3				
42 FOR				
43 METHOD				
44 REMARKS				
45 1. All process piping shall be schedule 160 (for pump only)				
46 2. All connections shall be socket-welded.				
47 3. Submit recommended spare parts list with pricing.				
48				
49				
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SEE SHEET 1 OF THIS DOCUMENT FOR COPYRIGHT, CONFIDENTIALITY AND OTHER RESTRICTIONS				
ISSUE		DATE	SHEET	DOC NO.
2		01-dic-06	4 OF 7	120653-DS-RE-G663A/B

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115031

DATA TRANSMITTAL AND CERTIFICATION									
SOLD TO	Customer P.O. Number 2006007408		P.O. Date 11/09/06		Sales Order Number 7295986		Refer To This Number In All Correspondence		
	FLONSERVE-WORTHINGTON S P A VIA ROSSINI 90/92 DESIO (MI), UN 20033					FINAL, APPROVED FOR CONSTRUCTION OR INSTALLATION. Giant Industries Grafton VA S2orb Sulfur Removal Technology Shaw Eng Unit #6 Debutolizer Reflux Pump FPD# 050-05192			
SHIP TO	Same as "Sold To" unless shown FLONSERVE-WORTHINGTON S P A VIA ROSSINI 90/92 DESIO (MI), UN 20033								
DATA SOURCE	ISSUED BY REBA WILLIAMS DATE 11/28/2006 ATHENS PLANT 197 COLLINS INDUSTRIAL DRIVE ATHENS, GA 30601								
MOTOR OR GEN. DATA	P.O. Item		Application Pump - Centrifugal				Motor or Gen. D/S 611760-966		
	Quantity 2	Frame 326T	HP 50	Bar/Fct 1.15	Disc Type	RPM 1800	O Box D/S		
	Prtn/Vol Winding 3/60/460		Duty Cont	Enclosure TEFC	Amb/Int 40/F	Power Code	Motor or Gen. C/D 416820-25		
	Bearing Ball	Mounting & Method of Drive F-1 Direct		Base/Rails	Model Number		Reducer or Aux. D/S 611740-911		
	Rotation from Opp Dr end Bi-directional		D-C Field Excitation		Electrical Design Number W00114-A-A001		Brake or Aux. D/S		
BRAKE DATA	Brake Type	Torque Ft Lb	Enclosure	Phase	Hz	Voltage	Brake Motor		
DATA FOR CONTROL	D-C MOTOR ARMATURE CURRENT: _____ AMPS						A-C MOTOR INFORMATION FOR SELECTION OF STARTER HEATERS:		
	FIELD CHARACTERISTICS PER CURVE:								
SPCL. FEAT. AND MISC. DATA	F1-F2		MAX AMPS		RPM		CODE: G		
	F11-F22		MAX AMPS		RPM		LOCKED AMPS:		
	F3-F4		MAX AMPS		RPM		FL CURRENT AMPS: 58.4		
Special Marks:	PO 2006007408, FPD SO 050-06202 GIANT INDUSTRIES -SHAW D-COK								
	Special Features: Special Item 2 T-drain in c/box Special Item 1 All curves to be drawn at 100 and 80 percent voltage Product Category Medium AC Motors								
Bearing / Seals / Lubrication Typical Bearing Construction O Open Typical Bearing Construction D Open Relief Fitting Type Gitts Cup Opposite Drive End Seal Inpro Lube Type Grease Grease Type Standard (Ball Bearing) - Chevron SRI #2 Grease Fittings Rqd Y Grease Fitting Type Alemite 1610 or Equal Drive End Seal Inpro Bearing Type - ODE Ball									
**CONTINUED ON PAGE 2 **									

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DATA TRANSMITTAL AND CERTIFICATION			
Customer PO Number	PO Data	Sales Order Number	Refer To This Number In All Correspondence
SPCL. FEAT. AND MISC DATA	Conduit Box / Leads / Connections		
	Space Heater To Aux Box 1	Y	
	Main Conduit Box Material	Cast Iron	
	Main Conduit Box Location	Standard (side)	
	Main Conduit Box	Required	
	Main Box Size	One Size Larger than Oversize	
	Main Box Main Drain Rqd	Y	
	Lead Lugs Required	Y	
	Lead Length from Frame	12	
	Auxiliary Conduit Box 1 Size	Std (180-3/4)	
	Auxiliary Conduit Box 1 Loc	ODE - Opposite Side as Main Cbox	
	Documentation		
	Time vs Speed	Y	
	Time vs Current	Y	
	Thermal Limit	Y	
	Standard Connection Diagram	Y	
	Accessory Connection Diagram(s):		
	Space Heater CD	416820-71	
	Thermistor CD	416820-122	
	Document Unit of Measure	US	
	Doc Renewal Parts	Y	
	Doc PDF Format	Y	
	Doc Instruction Manual	Y	
	Certified Motor Outline	Y	
	Acceleration Curve Note	Load Inertia and Application are required with PO to develop Acceleration Curve.	
	Enclosure Enhancements		
	XT Features Rqd	Y	
	Grounding Required	Y	
	Ground Pad Type	Drilled and Tapped Hole in Frame	
	Ground Pad Location	On frame on same side as conduit box	
	Frame Ground Rqd	Y	
	Auto Drain Type	Stainless Steel T-Drain	
	Mounting / Flange		
	Mounting Orientation	Horizontal	
	Lead Location	Toward Feet - Down	
Frame Mounting	Foot		
Dowel Provisions Qty	2		
Dowel Provisions	Y		
Nameplates / Labels			
Unit 2 Markings	G-663B		
Unit 1 Markings	G-663A		
Special Nameplate Rqd	Y		
Special Markings	Starting duty		
Space Heater Markings	Equipped with 120V/98W Space Heater		
Nameplate Language	English		
NP Spcl Marks Required	Y		
Grease Markings	Lubricated with Chevron SRI #2		
EPact marking	DOE CC Mark Required		
Paint / Packaging			
Special Packaging Type	Export Boxing		
Rockwell Paint Spec No	4824-7-K		
Paint System	Standard		
Paint Color Standard	Reliance		
Paint Color	Blue-Green		
**CONTINUED ON PAGE 3 **			

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DATA TRANSMITTAL AND CERTIFICATION		
Customer P.O. Number	P.O. Data	Sales Order Number
		Refer To This Number In All Correspondence
SPCL. FEAT. AND MISC. DATA	Performance	
	Sound Level dBA	64
	Rise at 1.0 SF	64
	Maximum Altitude (ft)	3300
	Balance	Ultra-Standard
	Ambient Minimum	-25C
	Altitude (ft)	3300
	Rating / Enclosure	
	Temp Code	T3
	Product	TEFC-841
	Poles	4
	NRCAN Covered Product	Y
	Motor Standard	NEMA - T
	Hazardous Location Price Group	Class I Grp A,B,C&D -T3
	Enclosure Family	Enclosed
	Enclosure Enhancement	841-XL
	Efficiency	XB
	Division	Div2
	Design Letter	B
	Class I, Group	B, C & D
	Allowed for use in Canada	Y
	AC/DC/INV	AC
	Shaft / Coupling	
	Shaft Extension	T
	Space Heaters	
	Space Heater Volts	120
	Space Heater Rated for	1Ph/50-60Hz/100-125V
	Space Heater Qty	1
	Motor Space Heater	Y
	Max Space Heater Temp	Standard(140 Deg C)
Temperature Detection		
Winding-Thermistor Qty	3 Total-One/Ph (Power Control)	
Wdg Thermistor To Main Cbox	Y	
Tests / Services		
Routine Test	Non-witnessed	
No-Load Vibration/Mech Run	Non-witnessed	

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REL. S.O.	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS
7295986	326T	50	P	3/60	1775	460
AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.
58.8	CONT	40/F	1.15	B	G	PCXEX
E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES @25 °C OHMS (BETWEEN LINES)		
490458	418140-36NE	---	---	130		
PERFORMANCE						
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY	
NO LOAD	0	18.0	1800	4.09	0	
1/4	12.5	22.9	1794	54.9	93.2	
2/4	25.0	32.5	1788	75.6	95.1	
3/4	37.5	44.9	1781	82.2	95.1	
4/4	50.0	58.8	1774	84.2	94.5	
5/4	62.5	73.7	1766	84.8	93.7	
Glast Industries Grafton VA SZorb Solter Removal Technology Shaw Eng Unit #6 Dehalanter Reflux Pump FPD# 050-05192						
SPEED TORQUE						
	RPM	TORQUE % FULL LOAD	TORQUE LB - FT.	AMPERES		
LOCKED ROTOR	0	193	285	355		
FULL UP	720	162	240	322		
BREAKDOWN	1676	255	378	203		
FULL LOAD	1774	100	148	58.8		
AMPERES SHOWN FOR 460 VOLT CONNECTION. IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE						
REMARKS: TYPICAL DATA XE MOTOR-NEMA NOM. EFF. 94.5 % GUARANTEED MIN EFF. 94.1%						
Rockwell Automation		DR. BY D. M. BYRD CK. BY C. P. MILLEY APP. BY C. P. MILLEY DATE 11/18/12		A-C MOTOR W00114-A-A001/ PERFORMANCE S7295986 DATA ISSUE DATE 11/15/06		

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REL. S.O.	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS
7295986-A	326T	50	P	3/60	1775	460
AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.
58.8	CONT	40/F	1.15	B	G	FCXEX
E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES. @25 °C OHMS (BETWEEN LINES)		
490458	418140-36NE	---	---	.130		
PERFORMANCE AT 368 VOLTS						
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY	
NO LOAD	0	13.3	1800	4.65	0	
1/4	12.5	20.8	1791	74.4	94.6	
2/4	25.0	35.3	1780	87.1	95.1	
3/4	37.5	53.2	1769	87.5	94.2	
4/4	50.0	74.4	1755	84.9	92.6	
5/4	62.5	100	1734	80.7	90.2	
Giant Industries Crafton VA SZorb Sulfur Removal Technology Shaw Eng Unit #6 Debutanizer Reflux Pump FPD# 050-06202						
SPEED TORQUE AT 368 VOLTS						
	RPM	TORQUE % FULL LOAD	TORQUE LB.-FT.	AMPERES		
LOCKED ROTOR	0	111	165	270		
PULL UP	720	93.9	141	246		
BREAKDOWN	1681	156	234	156		
FULL LOAD	1755	100	150	74.4		
AMPERES SHOWN FOR 460. VOLT CONNECTION. IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE TYPICAL DATA REMARKS: MOTOR PERFORMANCE AT 368 VOLTS XE MOTOR-NEMA NOM. EFF. 94.5 % GUARANTEED MIN. EFF. 94.1%						
Rockwell Automation		DR. BY D. M. BYRD CK. BY C. P. WILLEY APP. BY C. P. WILLEY DATE 12/18/92		A-C MOTOR W00114-A-A001/ PERFORMANCE S7295986-A DATA ISSUE DATE 11/15/06		

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Ingersoll-Dresser Pumps		Certified Performance ^{G2}	
Worthington S.p.A. Via Rossini 90/92 Desio (MI) - Italy		Tested : Certified :	
Information		Rated Point	
IDP Order : 2006-1913031	Capacity : 835.0 US gpm	TEAM DET 01 CONFORME Worthington S.p.A. TEST ROOM DEPT.	
IDP Item :	Head : 219.1 ft		
Pump size & type : 6 HPX 18 A	NPSHr : 7.8 ft		
Customer : D-COK	Efficiency : 64.8 %		
Customer Item : G 663 A	SG : 0.559		
Test Date : May 10, 2007	Viscosity : 0.0 cSt		
Pump Serial No. : D66880	Running speed : 1750 rpm		
Curve number : DCO67_07	Maximum Imp : 16.10 inch		
Imp Pattern :	Minimum Imp : 14.60 inch		
Imp Drawing No. : DM900148			
Case Pattern :			
Case Drawing No. :			

MOODY INTERNATIONAL
☒ Reviewed
☐ Witnessed
Date: 11/1/2007
J.P. Yezzi

Head - ft

Efficiency

Power - hp

NPSHr - ft

Capacity - US gpm