

SALES ACKNOWLEDGEMENT

SULZER

Print Date 10/13/2000

Page 1

SULZER PROCESS PUMPS (CANADA) INC. 5055, rue Levy, Saint-Laurent, Québec H4R 2N9, Canada Phone 514 - 333-7760 Fax 514 - 333-6324		Sulzer Order No. CAE2000075	Item # 046	Order Date 10/12/2000
		Customer P.O. No. 445014	P.O. Date 09/22/2000	
Bill to ALLIANCE FOREST PRODUCTS U.S. CORP. 17589 PLANT ROAD COOSA PINES, AL 35044-0555		Equipment Number 310-1140-041/M94291		
		Serial Number	Currency USD	Net Amount 15250.00
		Terms of Payment SPECIAL TERMS, SEE NOTE		
Ship to ALLIANCE FOREST PRODUCTS U.S. CORP. 17589 PLANT ROAD COOSA PINES, AL 35044-0555		Terms of Delivery DDP (INCOTERMS 2000) COOSA PINES, AL, PREPAID		
		Way of Delivery Truck		Onsite Date 02/16/2001
Marks and Tagging PUMP, B-LINE SECONDARY FINE SCREEN FEED 310-1140-041 / M94291 445014 4121001112 CAE2000 075 46		Order Contact TONY LIANE		
		Sales Contact TONY GEDEON		
		Document Requirements 4 Copies in English		
Pump Size APT55-12	N.Am. Pump Size 16X12-25	Casing Material A890 3A	Consistency 0.67 % BD	Pumped liquid DEINKED STOCK
Capacity Q 6700 USGPM	Head H 115 ft	NPSH av 26 ft	NPSH req 24 ft	pH 7-9
Capacity in alternative unit 76 %	Efficiency 76 %	Temperature 125 F	Dimensional drawing P20056	Characteristic curve K00958
Impeller Type Special open	Impeller No. 285341	Impeller diameter 510 mm	Pump power P 262 HP	Base plate type Pump Motor/Steel/Zinc
Coupling Type Rex-Omega ES	Mechanical seal type	Coupling Guard material S + Z EN10025	Dynamic seal power	Shaft Seal Fitting P02
Motor IEC/NEMA code 5010 US	Power 300 HP	Rotational Speed 1200 RPM	Manufacturer TOSHIBA	Future motor IEC/NEMA code 5010 US.
Frequency 60 Hz	Voltage 2.3KV	Enclosure TEFC	Motor Supplied by Customer	Bearing Unit Lubrication Oil lubrication
Order Remarks: TERMS OF PAYMENT: ----- ALL PAYMENTS ARE DUE NET THIRTY (30) DAYS AFTER COMPLETION OF EACH EVENT AND RECEIPT OF INVOICE COMPLETE WITH SUPPORTING DOCUMENTATION, WHICHEVER OCCURS LAST 90% UPON DELIVERY OF EACH PUMP THAT HAS BEEN RELEASED AND THE CORRESPONDING CHANGE ORDER ISSUED 10% HOLD BACK UNTIL COMMISSIONING AND ACCEPTANCE BY BUYER ===== PRICING: ----- FOR NON-MENA MOTORS, FINAL PRICES ARE SUBJECT TO CONFIRMATION AFTER RECEIPT OF CERTIFIED MOTOR PRINTS				
===== INSPECTION LOCATION: ----- FOR INSPECTION PURPOSES PLEASE CONTACT: MR. SAM SEWELL SULZER PROCESS PUMPS (US) 155 AHLSTROM WAY (PUE FACTORY) EASLEY, SC, USA, 29640 TEL: (864) 855-9090, FAX: (864) 855-9095 ===== PAINTING: ----- SULZER STANDARD FACTORY APPLIED PAINTING WITH THE RAL 5019 (CAPRI BLUE) COLOR & GUARDS IN RAL 1021 (SAFETY YELLOW) AT NO EXTRA CHARGE ===== FINAL IMPELLER TRIMS:				

SULZER**SALES ACKNOWLEDGEMENT**

Print Date 10/13/2000

Page 2

SULZER PROCESS PUMPS (CANADA) INC. 5055, rue Levy, Saint-Laurent, Québec H4R 2N9, Canada Phone 514-333-7760 Fax 514-333-6324	Sulzer Order No. CAE2000075	Item # 046	Order Date 10/12/2000
	Customer P.O. No 445014		P.O Date 09/22/2000
Bill to ALLIANCE FOREST PRODUCTS U.S. CORP. 17589 PLANT ROAD COOSA PINES, AL 35044-0555	Equipment Number 310-1140-041/M94291		
	Serial Number	Currency USD	Net Amount 15250.00
	Terms of Payment SPECIAL TERMS, SEE NOTE		
Ship to ALLIANCE FOREST PRODUCTS U.S. CORP. 17589 PLANT ROAD COOSA PINES, AL 35044-0555	Terms of Delivery DDP (INCOTERMS 2000) COOSA PINES, AL, PREPAID		
	Way of Delivery Truck		Onsite Date 02/16/2001
	Order Contact TONY LIANE		
Marks and Tagging PUMP, B-LINE SECONDARY FINE SCREEN FEED 310-1140-041 / M94291 445014 4121001112 CAE2000 075 46	Sales Contact TONY GEDEON		
	Document Requirements 4 Copies in English		

Remarks Continued

MUST BE PROVIDED SIX (6) WEEKS PRIOR TO DELIVERY
EXCEPT FOR APT6, APT54 & APT55 WHICH WILL REQUIRE
THEM NINE (9) WEEKS PRIOR TO DELIVERY
=====

MOTOR MOUNTING:

SULZER WILL DRILL BASE PLATES AS PER CERTIFIED
MOTOR PRINTS BY CUS. SULZER WILL MOUNT CUS.
SUPPLIED NEMA MOTORS AT EASLEY, SC FACTORY
CUS. RESPONSABLE FOR MOUNTING NON-NEMA MOTORS
=====

PRODUCT SPECIFICATION	Description	APT55-12	
	Serial Number		
	Time of delivery/EXW	02/02/2001	
	Date printed	10/13/2000	Page 1
Customer	ALLIANCE FOREST PRODUCTS U.S. CORP.		
17589 PLANT ROAD	17589 PLANT ROAD		
COOSA PINES, AL 35044-0555	COOSA PINES, AL 35044-0555		
UNITED STATES	UNITED STATES		
Cust. order #	445014		
Cust. PO Line #	ZOR		
Country code	US	Equipment No	310-1140-041/M94291

PROCESS DATA

Mill	13	Capacity Q	6700 USGPM
Process	270	Head H	115 ft
Application	<i>Sec.</i> FINE SCREEN FEED	Characteristic curve	K00958
Pumped liquid	DEINKED STOCK	Pump power P	262 HP
Temperature	125 F	Motor power	300 HP
pH	7-9	Efficiency	76 %
Consistency	0.67 % BD	Pump rotational speed	1190 RPM
Min head on suction side	1 ft	Variable speed	No
Max head on suction side	13 (STATIC) ft	NPSH req	24 ft
NPSH av	26 ft		

PUMP

Supplier	Easley
Dimensional drawing	P20056
Conformity	89/392/EEC machinery /US
Version	09
Pump Size	APT55-12
Impeller Type	Special open
Impeller No.	285341
Impeller diameter	510 mm
Impeller turning angle	4 °
Impeller max.diameter	625 mm
Flange Drilling	ASME B16.5 CLASS 150

IMPELLER MATERIAL A890 3A
SHAFT MATERIAL SS 2324

Casing Material	A890 3A
Gasket Material	Klinger SIL-4430
O-ring Material	NBR
Bearing Unit Lubrication	Oil lubrication
Bearing unit model	01 SS2324/NotSpec
Constant level oiler 638	Yes
Shaft Seal Fitting	P02
Customer documents lang./q	EN/04
Component documents lang./	EN/04
Special parts	METCO 16 SLEEVE

DRIVE MOTOR For Information Only

Motor Supplied by	Customer	Rotational Speed	1200 RPM
Manufacturer	TOSHIBA	Power	300 HP

MOTOR TECHNICAL SOLOUS

SULZER PROCESS PUMPS (CANADA) INC.
 5055, rue Levy
 Saint-Laurent, Québec
 H4R 2N9
 Canada

Contact Person	TONY GEDEON
LBU Order #	CAE2000075
LBU Position	046
Telephone	514 - 333-7760
Telefax	514 - 333-6324 (bomcust1)

PRODUCT SPECIFICATION	Description APT55-12 Serial Number Time of delivery/EXW 02/02/2001 Date printed 10/13/2000 Page 2
	Customer ALLIANCE FOREST PRODUCTS U.S. CORP. 17589 PLANT ROAD COOSA PINES, AL 35044-0555 UNITED STATES Cust. order # 445014 Cust. PO Line # ZOR Country code US ALLIANCE FOREST PRODUCTS U.S. CORP. 17589 PLANT ROAD COOSA PINES, AL 35044-0555 UNITED STATES Equipment No 310-1140-041/M94291

COUPLING

Coupling Type Rex-Omega ES

COUPLING GUARD

Coupling Guard material S+Z EN10025

BASE PLATE

Base plate type Pump Motor/Steel/Zinc Foundation screw type Grouted

FUTURE MOTOR IEC/NEMA 5010US

MOTOR ALIGNMENT BLOCK

ORDER REMARKS

TERMS OF PAYMENT:

 ALL PAYMENTS ARE DUE NET THIRTY (30) DAYS AFTER
 COMPLETION OF EACH EVENT AND RECEIPT OF INVOICE
 COMPLETE WITH SUPPORTING DOCUMENTATION, WHICHEVER
 OCCURS LAST
 90% UPON DELIVERY OF EACH PUMP THAT HAS BEEN
 RELEASED AND THE CORRESPONDING CHANGE ORDER ISSUED
 10% HOLD BACK UNTIL COMMISSIONING AND ACCEPTANCE
 BY BUYER

=====

PRICING:

 FOR NON-MENA MOTORS, FINAL PRICES ARE SUBJECT TO
 CONFIRMATION AFTER RECEIPT OF CERTIFIED MOTOR
 PRINTS

=====

INSPECTION LOCATION:

SULZER PROCESS PUMPS (CANADA) INC. 5055, rue Levy Saint-Laurent, Québec H4R 2N9 Canada	Contact Person TONY GEDEON LBU Order # CAE2000075 LBU Position 046 Telephone 514 - 333-7760 Telefax 514 - 333-6324 (bomcust1)
--	---

PRODUCT SPECIFICATION	Description	APT55-12
	Serial Number	
	Time of delivery/EXW	02/02/2001
	Date printed	10/13/2000
Customer		Page 3
ALLIANCE FOREST PRODUCTS U.S. CORP.		
17589 PLANT ROAD		
COOSA PINES, AL 35044-0555		
UNITED STATES		
Cust. order #	445014	
Cust. PO Line #	ZOR	
Country code	US	
ALLIANCE FOREST PRODUCTS U.S. CORP.		
17589 PLANT ROAD		
COOSA PINES, AL 35044-0555		
UNITED STATES		
Equipment No		310-1140-041/M94291

FOR INSPECTION PURPOSES PLEASE CONTACT:

MR. SAM SEWELL

SULZER PROCESS PUMPS (US)

155 AHLSTROM WAY (PUE FACTORY)

EASLEY, SC, USA, 29640

TEL: (864) 855-9090, FAX: (864) 855-9095

PAINTING:

SULZER STANDARD FACTORY APPLIED PAINTING WITH
THE RAL 5019 (CAPRI BLUE) COLOR & GUARDS IN
RAL 1021 (SAFETY YELLOW) AT NO EXTRA CHARGE

FINAL IMPELLER TRIMS:

MUST BE PROVIDED SIX (6) WEEKS PRIOR TO DELIVERY
EXCEPT FOR APT6, APT54 & APT55 WHICH WILL REQUIRE
THEM NINE (9) WEEKS PRIOR TO DELIVERY

MOTOR MOUNTING:

SULZER WILL DRILL BASE PLATES AS PER CERTIFIED
MOTOR PRINTS BY CUS. SULZER WILL MOUNT CUS.
SUPPLIED NEMA MOTORS AT EASLEY, SC FACTORY
CUS. RESPONSABLE FOR MOUNTING NON-NEMA MOTORS

P A I N T I N G

Painting E180/3-Fe Sa2 1/2 SFS4962
Color Shade RAL-5019

SULZER PROCESS PUMPS (CANADA) INC.
5055, rue Levy
Saint-Laurent, Québec
H4R 2N9
Canada

Contact Person
LBU Order #
LBU Position
Telephone
Telefax

TONY GEDEON
CAE2000075
046
514 - 333-7760
514 - 333-6324 (bomcust1)

AHLSTROM

Version 01> / en / 920908 / Replaces 880101 / K00958

The graph plots pressure P (Hp) on the vertical axis against flow rate Q (USGP) on the horizontal axis. The vertical axis has major grid lines every 250 units (0, 250, 500, 750). The horizontal axis has major grid lines every 2500 units (0, 2500, 5000, 7500, 10000, 12500). Four curves are shown, each labeled with a number: 490, 520, 565, and 625. The curves represent the performance of different pump configurations. The curve for 625 starts at approximately 350 Hp at 0 USGP and rises to about 650 Hp at 11000 USGP. The curve for 565 starts at approximately 250 Hp at 0 USGP and rises to about 450 Hp at 10000 USGP. The curve for 520 starts at approximately 180 Hp at 0 USGP and rises to about 300 Hp at 8500 USGP. The curve for 490 starts at approximately 120 Hp at 0 USGP and rises to about 220 Hp at 8500 USGP.

Q (USGP)	P (Hp) for 490	P (Hp) for 520	P (Hp) for 565	P (Hp) for 625
0	120	180	250	350
2500	160	220	280	400
5000	190	250	320	450
7500	210	280	380	520
10000	-	-	450	600
11000	-	-	-	650

[illegible]

PUMP 3-LINE SECONDARY FIRE GREEN FEED

SERVICE:	B-Line Sec. Fine Screen Feed P.
EQUIP. No.:	310-1140-041 / M94291
CUST. P.O. No.:	445014
API-C JOB No.:	CAE2000 075 46
DATE / REV.:	OCT-16-2000 / R. 0

FLOW (USGPM)	TDH (ft)
6700.00	115.00
EFF. (%)	Power (HP)
76	300.0
NEMA PR.	NEMA FUT.
BY OWNER	BY OWNER

SOLD US SOLD US

APT Process Pumps

Dimensional drawing P20056

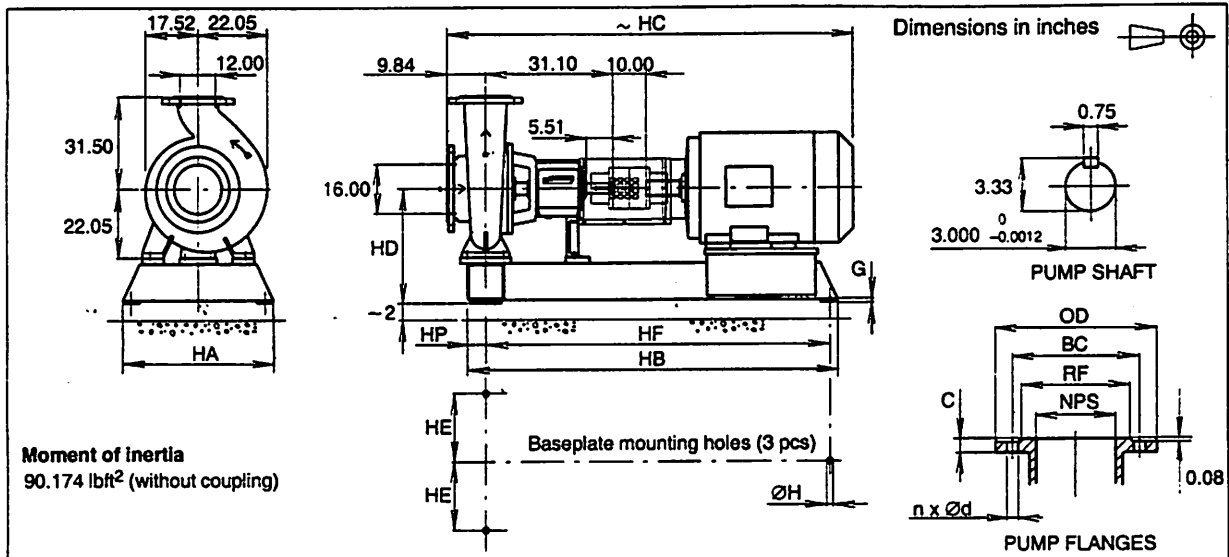


COPYRIGHT © AHLSTROM PUMPS CORP

Version 04 > / 940221 / en / P20056

APT55-12 (16x12-25)

Steel baseplate pump and motor



DIMENSIONS													
Primary motor frame	Max motor frame		Baseplate	HD	HC	HB	HP	HF	HA	HE	H	G	Weight lbs ⁽³⁾
(1)	(2)												
405T	444T	-	9	34.25	89.50	101.75	5.00	94.50	45.63	20.50	1.50	0.69	2950
444T	509LL	449T	9	34.25	93.50	101.75	5.00	94.50	45.63	20.50	1.50	0.69	3150
445T	509LL	449T	9	34.25	95.50	101.75	5.00	94.50	45.63	20.50	1.50	0.69	3150
447T	5011LL	449T	10	34.25	98.50	112.25	5.00	105.00	45.63	20.50	1.50	0.69	3270
447TS	509LS	449TS	9	34.25	96.50	101.75	5.00	94.50	45.63	20.50	1.50	0.69	3150
449T	5011LL	-	10	34.25	104.50	112.25	5.00	105.00	45.63	20.50	1.50	0.69	3270
449TS	509LS	-	9	34.25	101.50	101.75	5.00	94.50	45.63	20.50	1.50	0.69	3150

DRILLING OF FLANGES									
				ANSI B 16.1 Class 125			ANSI B 16.5 Class 150		
NPS	OD	RF	C	BC	d	n ⁽⁴⁾	BC	d	n ⁽⁴⁾
12.00	18.90	14.57	1.25	17.00	1.00	12	17.00	1.00	12
16.00	23.82	18.98	1.44	21.25	1.12	16	21.25	1.12	16

- Max. NEMA motor frame, which can be installed onto the baseplate.
- Max. NEMA motor frame with the same shaft height as primary motor.
- Weight without coupling and motor.
- Flange bolting straddles centerline.

FOR REFERENCE

PUMP, 3-LINE SECONDARY FINE SCREEN FEED.

SERVICE:	8-Line 600-Fine Screen Feed P.
EQUIP. No.:	310-1140-041 / M94291
CUST. P.O. No.:	445014
API-C JOB No.:	CAE2000 075 46
HP / RPM / FRAME:	262.0 / 1190 / 3000

CERTIFIED FOR CONSTRUCTION	
DATE / REV.:	OCT-16-2000 / R. 0
SIGNED:	

ISOIOUS.

APT Process Pumps

Design data



COPYRIGHT © AHLSTROM PUMPS CORP.

Version 09 > / 960801 / en / N12851 / Page 6 (7)

Table 6 Bearing unit size 5, continued

Pump type	54-16	54-20	55-4	55-8	55-10	55-12
Shaft diameters						
At impeller	2.559					
Under sleeve	3.150					
Between bearings	4.09					
At coupling	3.000					
Bearings						
Radial bearing type	NUP 317					
Thrust bearing type	2x7318 BECB					
Radial brg. life (HRS. x 10 ³) ⁽¹⁾	1000 +	1000 +	1000 +	1000 +	1000 +	1000 +
Thrust brg. life (HRS. x 10 ³) ⁽¹⁾	50	100	23	120	100	50
Bearing span	11.10					
Shaft overhang	11.75					
Stuffing box						
Bore	4.750					
Depth	3.937					
Shaft sleeve dia.						
Packing	3.500					
Mechanical seal, general	3.375					
Mech. seal, ready-fitted ⁽²⁾	3.150					
Packing size	0.625					
No. of packing rings	4					
Lantern ring width	0.79					
Neck bush clearance	0.042					
Distance to nearest obstruction	3.94					
Wear ring clearance	0.034	0.036	0.027	0.029	0.029	0.032
Impeller						
Front clearance (open impeller)	0.020					
Back clearance	0.040					
Eye area (in ²)						
Closed	220.9	263.00	50.6	90.0	113.2	162.1
Open	220.9	263.00	50.6	90.0	113.2	162.1
Special open	220.9	263.00	-	-	113.2	162.1
Max. diameter solids (in)						
Closed	2.95	4.45	1.18	1.34	1.69	2.64
Open	2.91	4.45	1.18	1.81	1.69	2.68
Special open	3.62	4.45	-	-	1.69	2.68
Max. shaft deflection at st. box	0.002					
Casing						
Type (single or dual)	DV	DV	SV	SV	DV	DV
Casing thickness (iron)	0.75	0.79	0.79	0.75	0.75	0.79
Casing thickness (steel)	0.63	0.63	0.79	0.63	0.63	0.67
Bearing unit weight (LBS)	333					
HP/100 rpm (shaft SS2324)	74					

1) Min. L10h-life, full impeller dia., max. speed, direct coupled and 50 - 100 % BEP

2) Installed on the pump shaft

PUMP, B-LINE SECONDARY FINE SCREEN FEED

SERVICE:	B-Line Sec. Fine Screen Feed
EQUIP. No.:	310-1140-041 / M94291
CUST. P.O. No.:	445014
MODEL / SIZE:	APT55-12 / 16x12-25
APLC JOB No.:	CAE2000 075 46

APT Process Pumps

Shaft sealing



COPYRIGHT © AHLSTROM PUMPS CORP.

Version 09 > / 960601 / en / N12559

Gland packings

Fitting P02

2 braids + lantern ring + 2 braids. Standard casing cover. Installed onto the shaft wearing sleeve.

Characteristics of fitting

E	External flushing that prevents pumped liquid from precipitating in the sealing housing. Flushing liquid is mixed with the pumped liquid.
----------	---

Pumped liquid	Impure liquids, stock, lye
Temperature (°F)	max 250
Stuffing box pressure p_T (psi)	Positive or negative

Sealing waters	
Connection No.	020
Size (NPT)	3/8 - 18
Quality	External clean water, maximum particle size 0.002 in, maximum solid material content (PPM-value) 0.00027 lb/in ³ .
Flow rate (USGPM)	0.5 - 0.8
Pressure (psi)	$p_T + 7$ psi min. 7 psi

Seal size (Ø in)

Bearing unit					
1	2	3	4	5	6
1 5/8 x 2 3/8 x 3/8	2 x 2 3/4 x 3/8	2 3/8 x 3 3/8 x 1/2	2 3/4 x 3 3/4 x 1/2	3 1/2 x 4 3/4 x 5/8	3.937 x 5.198 x 5/8

Pressure behind the impeller can approximately be calculated from the formula

$$p_T = p_0 - 0.725 \text{ psi}$$

Where p_T = pressure behind the impeller (psi)
 p_0 = inlet pressure (psi)

Atmospheric pressure used as reference pressure = 0 psi.

PUMP, B-LINE SECONDARY FINE SCREEN FEED

SERVICE:	B-Line Sec. Fine Screen Feed P.
EQUIP. No.:	310-1140-041 / M94291
CUST. P.O. No.:	445014
MODEL / SPEED:	APT55-12 / 1190
APL-C JOB No.:	CAE2000 075 48