

<b>SULZER PUMPS SOLUTIONS IN PRODUCT SPECIFICATION</b>	<table> <tr> <td>Description</td><td>CPT23-1B 100131478</td></tr> <tr> <td>Reference no.</td><td>245370/</td></tr> <tr> <td>Time of delivery/EXW</td><td>09/01/2014</td></tr> <tr> <td>Date printed</td><td>07/15/2015    Page 1</td></tr> </table>	Description	CPT23-1B 100131478	Reference no.	245370/	Time of delivery/EXW	09/01/2014	Date printed	07/15/2015    Page 1
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<p>Customer PATRIOT RENEWABLE FUELS INC. 101 PATRIOT WAY ANNAWAN IL 61234 USA</p> <p>Cust. Order                    93035</p> <p>Cust. PO line</p> <p>Country code                US</p>	<p>THE WALLING COMPANY 6103 NORTH 90TH STREET OMAHA NE 68134 USA</p> <p>P-112 FD FILTRATION PUMP</p>								

## GENERAL

Pump type: **CPT**  
Version: **03**  
Classification: **B, Pre-engineered**  
Units: **US**  
Painting method: **Standard, Corrosivity C4 [NZ]**

Color shade: **NCS 1700**  
Coupling and Guard: **Included in the delivery**  
Base plate: **Included in the delivery**  
Drive motor: **Included in the delivery**

## PROCESS DATA

Mill: **PATRIOT RENEWABLE FUELS**  
Process: **Biomass Handling**  
Application: **FD FILTRATION PUMP**  
Pumped liquid: **WATER**

Specific gravity: **0.91**  
Temperature: **240 °F**  
Capacity Q: **40.0 gpm**  
Head H: **116.0 Feet**

## PUMP PERFORMANCE

Characteristic curve: **K17460, O 1770 rpm 23-1B**  
Rated power P: **5.7 HP**  
Motor power: **7.5 HP**  
Efficiency: **18.0 %**  
Pump rotational speed: **1770 rpm**  
Variable speed: **No**

NPSH required: **4.4 Feet**  
Capacity Q water: **40.0 gpm**  
Head H water: **120.0 Feet**  
Rated power P water: **5.3 HP**  
Efficiency water: **23.0 %**

## PUMP

Pump Size: **23-1B**  
Flange drilling: **ASME B16.42 CLASS 150**  
Impeller no.: **610466, O 23-1B**  
Impeller Type: **Open**  
Impeller diameter: **10.875 "**  
Impeller max. diameter: **11.00 "**  
Impeller balance holes: **Yes**  
Casing material: **A395 60-40-18**  
Casing screw type: **Hexagonal screw**  
Screw material: **A4-80 ISO 3506**  
Gasket Material: **PTFE/Glass**  
Casing gasket thickness: **0,8 mm**

Shaft seal fitting: **MC01 Mechanical seal CS**  
Shaft seal box type: **ASB, Standard**  
Mechanical seal type: **AES CSSN**  
Mechanical seal material: **TC/TC/AZ**  
Draining of pump conn. 040: **Yes**  
Discharge pipe conn. 027: **Yes**  
Press. measuring conn. 036: **No**  
Temper. measuring conn. 048: **No**  
Bearing Unit Lubrication: **Oil lubrication**  
Bearing unit type: **Foot frame Shaft Solid**  
Bearing unit model: **06, 52 / 33 / NSs / Met**  
Sign: **2006/42/EC**

<p>Sulzer Process Pumps (US) Inc. Easley Pump Factory 155 Ahlstrom Way EASLEY SC 29640</p>	<p>Contact Person Bishop Gabiga LBU Order    0000245370 LBU Position    20 Reference no.    245370/000020 Telephone Telefax</p>
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O-ring Material: **EPDM**

Adapter guard 683: **Stainless steel**

## ASSEMBLY

Dim.drawing, Assembly of Pump: **P12032, STYLE1,2 NEMA 23-1B<**

Foundation screw type: **Grouted**

Next larger motor frame option: **Not included in the deliver**

Coupling type: **Rex Viva VS**

Base plate type: **Style 1 PuMo Steel Paint**

Coupling guard material: **S+Z EN10025**

Baseplate color shade: **NCS 1700**

Riser block material: **Steel**

Motor NEMA code: **213T**

## MOTOR

Motor Supplier: **Easley**

Power: **7.50 HP**

Motor manufacturer: **WEG**

Frequency: **60 Hz**

Motor NEMA code: **213T**

Voltage: **208-230/460**

Motor type: **SEVERE DUTY**

Enclosure: **TEFC**

Rotational speed: **1,800 rpm**

Specialities of Motor: **PB-SD7.5/1800WEG.208-230/460**

## CUSTOMER INSTRUCTIONS

End user language: **English**

Sulzer Process Pumps (US) Inc.  
Easley Pump Factory  
155 Ahlstrom Way  
EASLEY SC 29640

Contact Person Bishop Gabiga  
LBU Order    0000245370  
LBU Position    20  
Reference no.    245370/000020  
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## Customer Instructions

000.01	1	SPECIFICATION AND PART LIST	000 SERIAL NUMBER
001.01	1	Dimensional drawing	P12032EN
001.02	1	Dimensional drawing	P11990EN
002.01	1	Characteristic curve	K17460EN
010.01	1	ASSEMBLY SECTDWG	N14219EN_20100215
011.01	1	PUMP SECTDWG	N15078EN_20080601
012.01	1	SHAFT SEAL SECTDWG	N15085EN_20010515
013.01	1	BEARING UNIT SECTDWG	N13970EN_20020501
058.01	1	DECLARATION OF QUALITY	N15110EN_20100430
059.01	1	PAINTING CERTIFICATE	N15111EN_20100430
062.01	1	INTENDED USE	N15252EN_20100430
063.01	1	SAFETY OF MACHINERY	N31142EN
063.02	1	SAFETY INSTRUCTIONS	N15062EN_20101025
064.01	1	HOISTINGS AND TRANSPORTATIONS	N15063EN_20010515
065.01	1	COMMISSIONING	N15064EN_20010515
067.01	1	INSTALLATION	N15253EN_20020501
068.01	1	OPERATION	N15066EN_20010515
069.01	1	PREVENTIVE MAINTENANCE	N15254EN_20040401
070.01	1	CORRECTIVE MAINTENANCE	N15255EN_20110929
071.01	1	SPARE PARTS RECOMMENDATION	N15069EN_20080601
D001.01	1	INSTRUCTION, DRIVE MOTOR, WEG, NEMA	C10632EN
D001.02	1	INSTRUCTION, DRIVE MOTOR	CJE51300754EN
D002.01	1	INSTRUCTION, COUPLING, REX VIVA	C10014EN
D003.01	1	INSTRUCTION, MECHANICAL SEAL, AES CSSN	C10775EN
D003.02	1	Component documents, Shaft seal	CFH022540B3EN

## Connections

027.01	CON027	1	DISCHARGE PIPE CONN. 1/4-18NPT
040.01	CON040	1	DRAINING OF PUMP 1/2-14NPT
042.01	CON042	1	OIL FILLING 1/2-14NPT
043.01	CON043	1	DRAINING OF LUBRICAT 1/2-14NPT
044.01	CON044	2	CONSTANT LEVEL OILER 1/4-18NPT

## Parts

102.01	530240CA5H	1	VOLUTE CASE CPT23-1B O (5H) A395 60-40-18
			Flange drilling: <b>ASME B16.42 CLASS 150</b>
			Draining of pump conn. 040: <b>Yes</b>
			Discharge pipe conn. 027: <b>Yes</b>

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			Press. measuring conn.036: <b>No</b>	
			Temper. measuring conn. 048: <b>No</b>	
161.01	610506CC5H	1	CASE COVER CPT23 ASB	(5H) A395 60-40-18
			Temper. measuring conn. 048: <b>No</b>	
183.01	610481SF52	1	SUPPORT FOOT CPT2	(52) A48 CL 30 B
210.01	610500SH33	1	SHAFT CPT2 SO	(33) SS2324
230.01	610466MP41	1	IMPELLER O 11" B33/64" Z5 CPT23-1B	(41) A890 3A
			Impeller diameter: <b>10.875 "</b>	
			Impeller max. diameter: <b>11.00 "</b>	
320.01	G433000311	1	ANTIFRICTION BEARING NUP311 ECJ	
320.02	G325007309	2	ANTIFRICTION BEARING 7309 BECBM	
330.01	533175BH52	1	BEARING HOUSING CPT2 O	(52) A48 CL 30 B
339.01	6130942206	1	BEARING UNIT CPT2 O FSO	
344.01	610510AD5H	1	ADAPTER CPT23	(5H) A395 60-40-18
360.01	712198BC52	1	BEARING COVER CPT2	(52) A48 CL 30 B
382.01	712194BR5H	1	BEARING CARRIER O CPT2	(5H) A395 60-40-18
400.01	E808304D84	1	GASKET 304(-2/-3)/284(-1/-2)X0.8	(84) PTFE/Glass
412.01	E124041094	1	O-RING 41,0 X 1,78 BS1806 SIZE NO.030	(94) PTFE
412.02	E11B119591	2	O-RING 119,5X3 SMS1586	(91) NBR
412.03	E11B094591	1	O-RING 94,5X3 SMS1586	(91) NBR
423.01	GK1A320000	1	LABYRINTH RING CPT2 VBX 2,125" INBOARD	Bronze
423.02	GK1B320000	1	LABYRINTH RING CPT2 VBX 1,375" OUTBOARD	Bronze
433.01	FH022540B3	1	MECHANICAL SEAL CSSN/2.125"/3AVTT17A01	TC/TC/AFLAS
554.01	B360010537	4	WASHER 10,5 DIN7349	(37) A4 ISO3506
554.02	B310010537	6	WASHER ISO 7089-10-200 HV-A4	(37) A4 ISO3506
554.03	B360008437	4	WASHER 8,4 DIN7349	(37) A4 ISO3506
554.04	B360013037	2	WASHER 13 DIN7349	(37) A4 ISO3506
554.05	B360013037	2	WASHER 13 DIN7349	(37) A4 ISO3506
554.10	B310006437	1	WASHER ISO 7089-6-200 HV-A4	(37) A4 ISO3506
556.01	7092640710	4	RISER BLOCK 4"X4"X4.5"	(10) S EN10025
571.01	9392030132	1	CLAMP CPT1-3	(32) SS2333
642.01	GH3330506D	2	SIGHT GLASS SM-12 ISO 228/1-G 1/2	(6D) Al (aluminium)
644.01	914706LR12	1	OIL RING CPT2 D122/57	(12) Fe P01 EN10130
672.01	GH55305000	1	VENTING DEVICE EV 1028-14-00 R 1/2	
683.01	93919701BG	1	GUARD CPT23	(BG) EN 1.4301
683.02	93919701BG	1	GUARD CPT23	(BG) EN 1.4301
683.03	93745501BG	1	GUARD A1-A3 T	(BG) EN 1.4301
685.01	6105780111	1	GUARD END 250MM O.D. FOR BEARING UNIT #2	(11) S235JRG2 EN10025
686.01	933203011K	1	GUARD JACKET D250,L200	(1K) S+Z EN10025
686.02	384476011K	1	GUARD JACKET D250 L165	(1K) S+Z EN10025
800.01	JE51300754/PB	1	MOTOR WEG 7.5HP/1800RPM/213T/230-460V	
840.01	KAC1035349	1	COUPLING VS110-R-FBH D1=1.375 D2=1.375	
890.01	610558XX10	1	BASEPLATE #252 MULTI DRILLED	(10) S EN10025

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901.01	A132073839	12	HEXAGON HEAD SCREW 5/8-11UNCX1 1/2 ANSI	(39) A4-80 ISO3506
901.02	A132052539	2	HEXAGON HEAD SCREW 3/8-16UNC X 1 ANSI B1	(39) A4-80 ISO3506
901.03	A142063839	6	HEXAGON HEAD SCREW 1/2-13UNC X 1 1/2" AN	(39) A4-80 ISO3506
901.04	A132062539	2	HEXAGON HEAD SCREW 1/2-13 UNC X 1" ANSI	(39) A4-80 ISO3506
901.05	A142053239	3	HEXAGON HEAD SCREW 3/8-16UNC X 1 1/4 ANS	(39) A4-80 ISO3506
901.06	A132041939	4	HEXAGON HEAD SCREW 5/16-18UNC X 3/4 ANSI	(39) A4-80 ISO3506
901.09	A132051939	3	HEXAGON HEAD SCREW 3/8-16UNCX3/4 ANSI B1	(39) A4-80 ISO3506
901.11	A132064539	2	HEXAGON HEAD SCREW 1/2-13UNCX1 3/4 ANSI	(39) A4-80 ISO3506
901.12	A132064539	2	HEXAGON HEAD SCREW 1/2-13UNCX1 3/4 ANSI	(39) A4-80 ISO3506
901.20	A132033239	1	HEXAGON HEAD SCREW 1/4-20UNC X 1 1/4 ANS	(39) A4-80 ISO3506
902.02	AC22055733	4	STUD 3/8-16 UNC X 2 1/4 SAC200	(33) SS2324
902.03	AC2204G233	4	STUD 5/16-18UNC X 6 SAC200	(33) SS2324
903.01	CC25050034	1	THREADED PLUG 1/2-14 NPT SCC102	(34) SS2343
903.02	CC25030034	1	THREADED PLUG 1/4-18 NPT SCC102	(34) SS2343
903.05	CC25030034	1	THREADED PLUG 1/4-18 NPT SCC102	(34) SS2343
903.06	CC25030034	1	THREADED PLUG 1/4-18 NPT SCC102	(34) SS2343
903.07	CC25050034	1	THREADED PLUG 1/2-14 NPT SCC102	(34) SS2343
903.08	CC25030016	2	THREADED PLUG 1/4-18 NPT SCC102	(16) S+ZE EN10025
914.01	A611103539	3	CAP SCREW, SOCKET HD M10X35 ISO4762	(39) A4-80 ISO3506
918.01	AP2207N613	4	FOUNDATION SCREW 5/8-11UNCX14" SAP200	(13) S355J0 EN10025
920.02	B122050039	4	NUT 3/8-16UNC ANSI B18.2.2	(39) A4-80 ISO3506
920.03	B222704030	3	NUT M10 - PTROM-1040	(30) SS
920.04	B122040039	4	NUT 5/16-18.UNC ANSI B18.2.2	(39) A4-80 ISO3506
920.07	B12207001J	8	NUT 5/8-11UNC ANSI B18.2.2	(1J) 8 ZnK ISO898
923.01	GA11000910	1	BEARING NUT KM9	(10) S EN10025
931.01	GC10000910	1	LOCK WASHER MB9	(10) S EN10025
932.01	B710001030	3	RETAINING RING 10 - DIN471	(30) SS
940.01	B820804115	1	KEY 5/16X5/16X15/8 ANSI B 17.1-1967	(15) CK45K DIN1652
970.01	WK3130307A	2	SIGN SULZER LOGO L130 W30	(6D) Al (aluminium)
971.01	93265101BG	1	NAME PLATE CENTRIF PUMP EASLEY	(S0708) EN 1.4301
975.01	SS00050302	2	WARNING SIGN	
975.02	SS00050102	2	WARNING SIGN	
975.03	SS00050202	2	WARNING SIGN	
975.04	SS00050802	1	WARNING SIGN	
976.01	SS0006M002	1	MANDATORY ACTION SIG EN	
976.02	SS0006M022	1	MANDATORY ACTION SIG	

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