

PURTADA DE DOCUMENTO

ADQUISICIÓN DE UNIDADES DE BOMBEO BOOSTER PARA LOS POLIDUCTOS PCS Y PVT

Cliente:	YPFB Transporte S.A.	Proyecto:	151600016 VILLAMONTES BATCHED PUMP STATION
Orden de Compra:	002-20-T-ADQ	Documento RP:	151600016-002
No. Tag:	GLP/GE/DO	Revisión:	1

Arreglo General del Sistema de bombeo

1	09-Jul-20	Aprobación	Eugenio B.	Eduardo M.	Eduardo M.
0	12-Jun-20	Aprobación	Eugenio B.	Eduardo M.	Eduardo M.
REV	FECHA	ENVIADO PARA:	ELABORÓ	REVISÓ	APROBÓ





Customer P.O.

YPF BTR GC ON 1338/19

Service:

BOOSTER PUMP

Project:

VILLAMONTES BATCHED PUMP
STATION

Job #

151600016

Customer:

YPFB Transporte S.A.

Date:

9 / Julio / 2020

Resolution Sheet

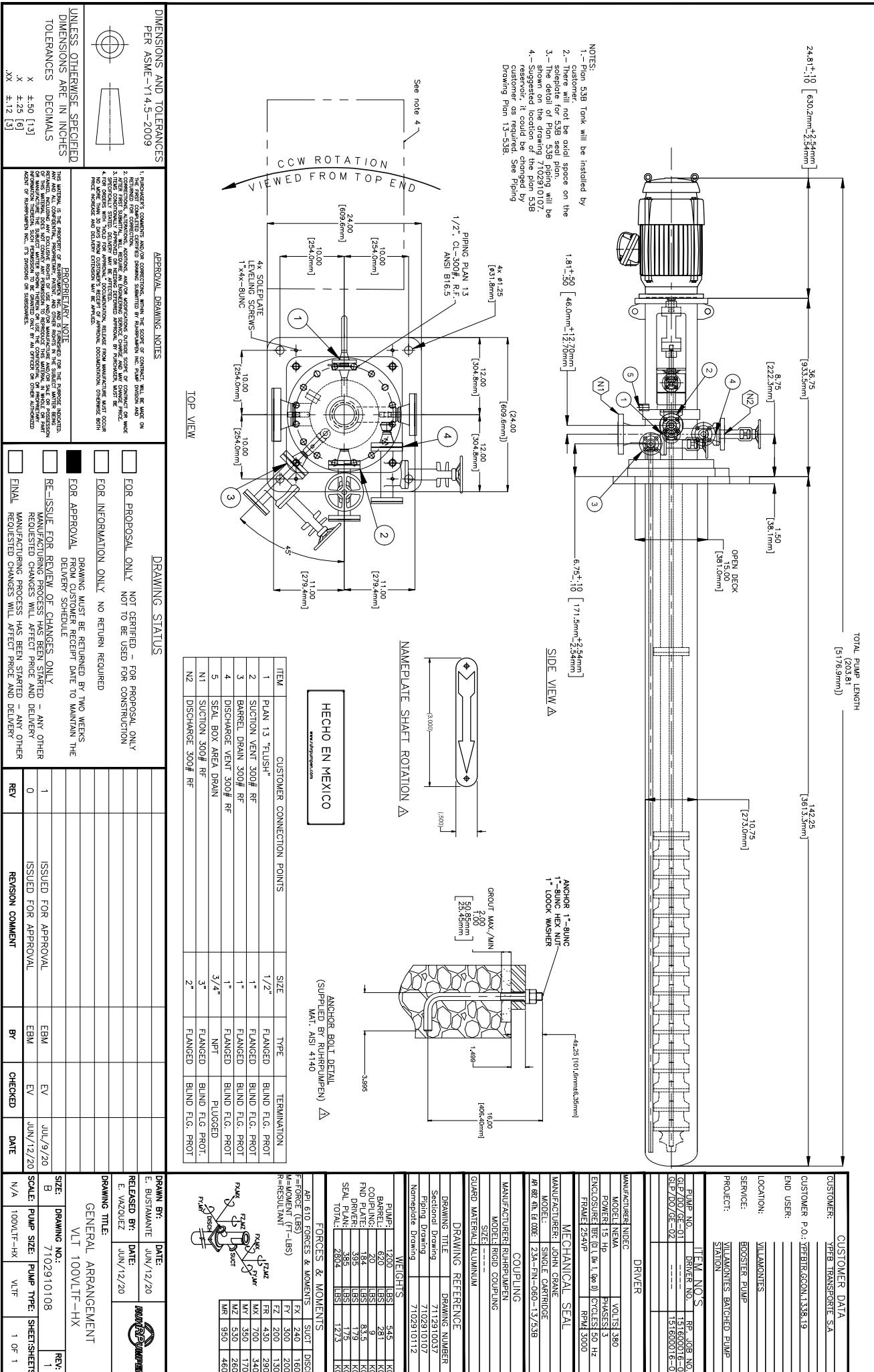
No.	Comments	Answers
1	<p>Error en Plan de sello</p>	<p>Se considera un plan 13-53B, hubo un error al momento de poner la nota.</p> <p>Ver conexiones en el dibujo del plan de sello (13-53B) el cual se entregara en el documento aparte titulado "API Plan 13/53B Piping Drawing".</p>
2	<p>Tornillos de nivelación y anclaje deben ser provistos por parte de Ruhrpumpen.</p>	<p>Ok</p>
3	<p>Información del motor.</p>	<p>Toda la información del motor será entregada en el documento titulado "Hoja de datos del motor"</p> <p>En ese documento se encuentra la clase, división y grupo de clasificación del motor lo que hace que se considera como "Explosion proof".</p>
4	<p>Nameplate</p>	<p>Se aplican los comentarios del nameplate con los datos solicitados y serán emitidos en un documento aparte.</p>



Customer P.O.	YPFBTR GCON/1338/19	Service:	BOOSTER PUMP
Project:	VILLAMONTES BATCHED PUMP STATION	Job #	151600016
Customer:	YPFB Transporte S.A.	Date:	9 / Julio / 2020

Resolution Sheet

5	Tipo de valvula	Se consideran válvulas de compuerta.
6	Bridas ciegas	Se considera que las conexiones son para uso de cliente, no para que se queden tapadas con bridgas ciegas ASME #300.
7	Drenaje de la caja de sellado (conexión 5)	Las tapas son para proteger el acabado final de la brida de conexión del cliente. Al final, se remueven al momento de hacer la instalación en sitio.
8		Esta conexión no incluye válvula. Lleva un tapón de 3/4" NPT al final de la conexión.



4.2





PORADA DE DOCUMENTO

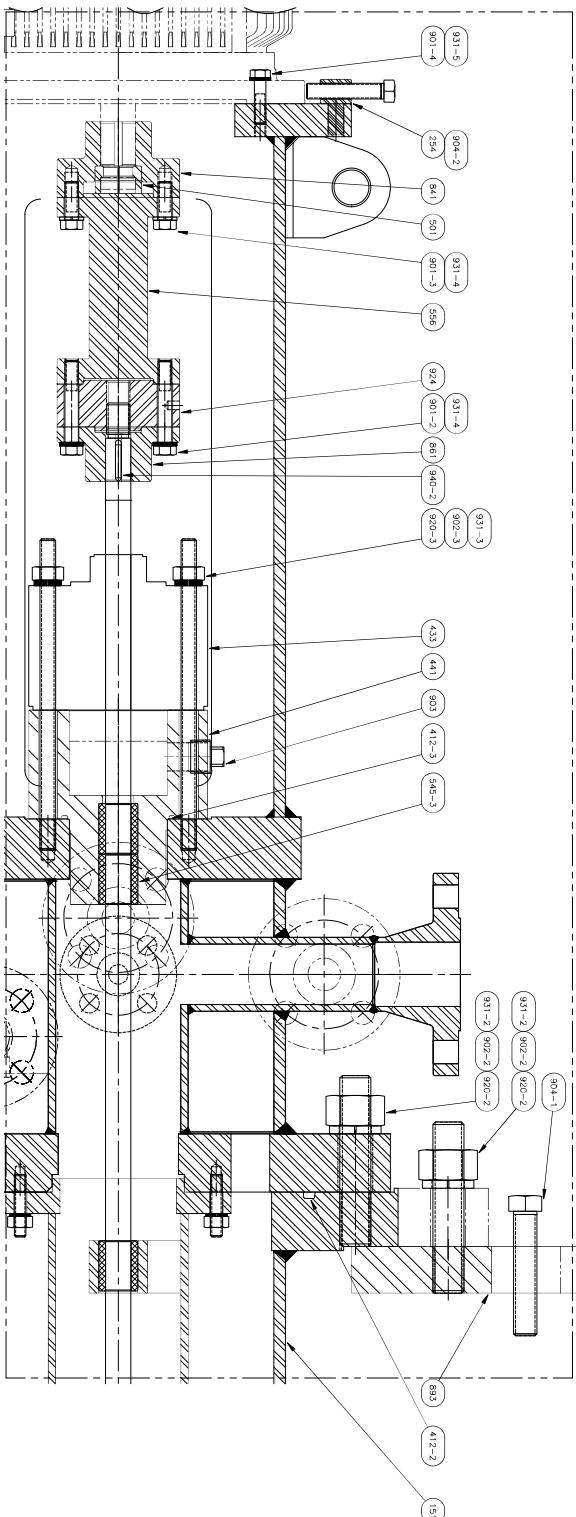
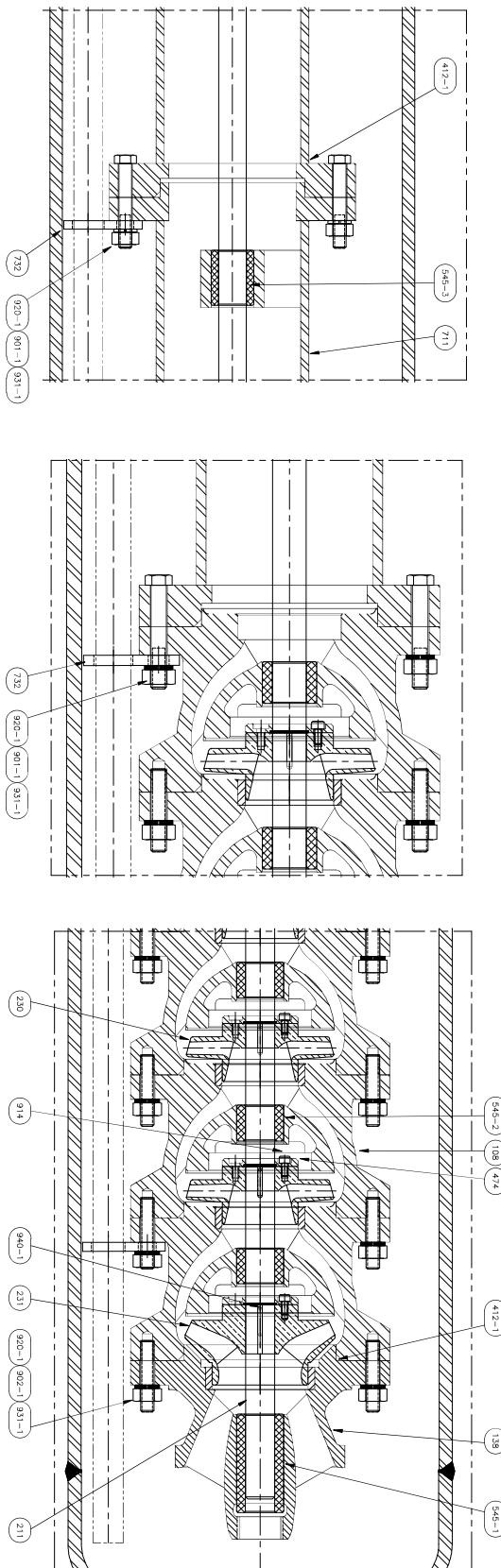
ADQUISICIÓN DE UNIDADES DE BOMBEO BOOSTER PARA LOS POLIDUCTOS PCS Y PVT

Cliente:	YPFB Transporte S.A.	Proyecto:	151600016 Bomba "Booster" Multiproducto
Orden de Compra:	002-20-T-ADQ	Documento RP:	151600016-003
No. Tag:	GLP/GE/DO	Revisión:	2

Plano seccional con lista de materiales

2	21-Oct-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
1	7-Jul-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
0	11-Jun-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
REV	FECHA	ENVIADO PARA:	ELABORÓ	REVISÓ	APROBÓ





CUSTOMER:	
YPF TRANSPORTE SA	
CUSTOMER P.O. #002-02-7-000	
END USER:	
LOCATION:	
VILLAMONTES	
SERVICE:	
BOoster PUMP	
PROJECT:	
VILLAMONTES BANCED PUMP	
STATION:	
PUMP NO.	PIPE NO.
UB7 G-60-CP	15160006-0
---	15160006-0
UB7 G-60-CP	15160006-0
DRAWING REFERENCE	
DRAWING TITLE	DRAWING NUMBER
General Arrangement	7712910108

4.3





PORADA DE DOCUMENTO

ADQUISICIÓN DE UNIDADES DE BOMBEO BOOSTER PARA LOS POLIDUCTOS PCS Y PVT

Cliente:	YPFB Transporte S.A.	Proyecto:	151600016 Bomba "Booster" Multiproducto
Orden de Compra:	002-20-T-ADQ	Documento RP:	151600016-009
No. Tag:	GLP/GE/DO	Revisión:	1

API Plan 13/53B Piping Drawing

1	7-Oct-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
0	31-Aug-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
REV	FECHA	ENVIADO PARA:	ELABORÓ	REVISÓ	APROBÓ





Customer P.O.	002-20 -T-ADQ	Service:	BOOSTER PUMP
Project:	CHORETY BATTCHED PUMP STATION	Job #	151600016
Customer:	YPFB Transporte S.A.	Date:	6/ October/ 2020

Resolution Sheet

No.	Comments	Answers
1	Debe incluir arandelas y pernos (Plan 13)	Comentario aplicado
2	Debe incluir arandelas y pernos (Plan 53B)	Comentario aplicado
3	Todos los materiales son Inoxidables en las uniones bridadas de transición entre el inoxidable y del plan de sellos y el acero al carbono de la bomba se debe tener en cuenta las empaquetaduras dielectricas con su debida protección en los espárragos	Se tiene considerado un "Flange isolation gasket kit" para lo señalado.
4	Verificar en el plano de arreglo general todas las conexiones son clase 300#	Se considera una brida de 600# debido a que el tanque del plan de sello incluye bridadas de 600# como estándar. Por lo tanto, la primera conexión al tanque es de 600#, todas las demás son de 300#.
5	Nota 10: Favor indicar dónde están los enfriadores (air coolers) para prever su ingreso natural de aire y viento.	Comentario aplicado. Nota: Ver el documento titulado "151600016-020-VLTF-Vendor Drawing (Plan 53B Reservoir)".



Customer P.O.

002-20 -T-ADQ

Service:

BOOSTER PUMP

Project:

CHORETY BATTCHED PUMP STATION

Job #

151600016

Customer:

YPF B Transporte S.A.

Date:

6/ October/ 2020

Resolution Sheet

6	Todas las conexiones son soldadas???, Verificar	Todos es soldado menos la primer (Flush, LBI, LBO) conexiones al sello mecánico que son NPT.
7	Indicar cuál es la brida de ingreso y salida de la bomba	<p>Se señala brida de succión y descarga.</p> <p>Con respecto al plan de sello, está indicado como "LBI" para la entrada y "LBO" para la salida.</p>
8	Es transmisor, switch? De qué (presión)?	<p>Ver el documento titulado "151600016-020-VLT-F-Vendor Drawing (Plan 53B Reservoir)".</p> <p>Se agregó la Nota 13 en el dibujo para hacer la referencia "13. See connections and components on the reservoir drawing titled "151600016-020-VLT-F-Vendor Drawing (Plan 53B Reservoir)"</p>
9	Entre la válvula de proceso y el manómetro deberá contener una válvula de aguja para purgar el producto entrampado y evitar accidentes al momento de extraer el manómetro para su respectiva calibración y mantenimiento.	<p>Ver el documento titulado "151600016-020-VLT-F-Vendor Drawing (Plan 53B Reservoir)".</p> <p>Se agregó la Nota 13 en el dibujo para hacer la referencia "13. See connections and components on the reservoir drawing titled "151600016-020-VLT-F-Vendor Drawing (Plan 53B Reservoir)"</p> <p>Similar enfoque para el transmisor o switch aguas abajo</p>

	Customer P.O.	002-20 -T-ADQ	Service:	BOOSTER PUMP
Project:	CHORETY BATTCHED PUMP STATION	Job #		151600016
Customer:	YPFB Transporte S.A.	Date:		6/ October/ 2020

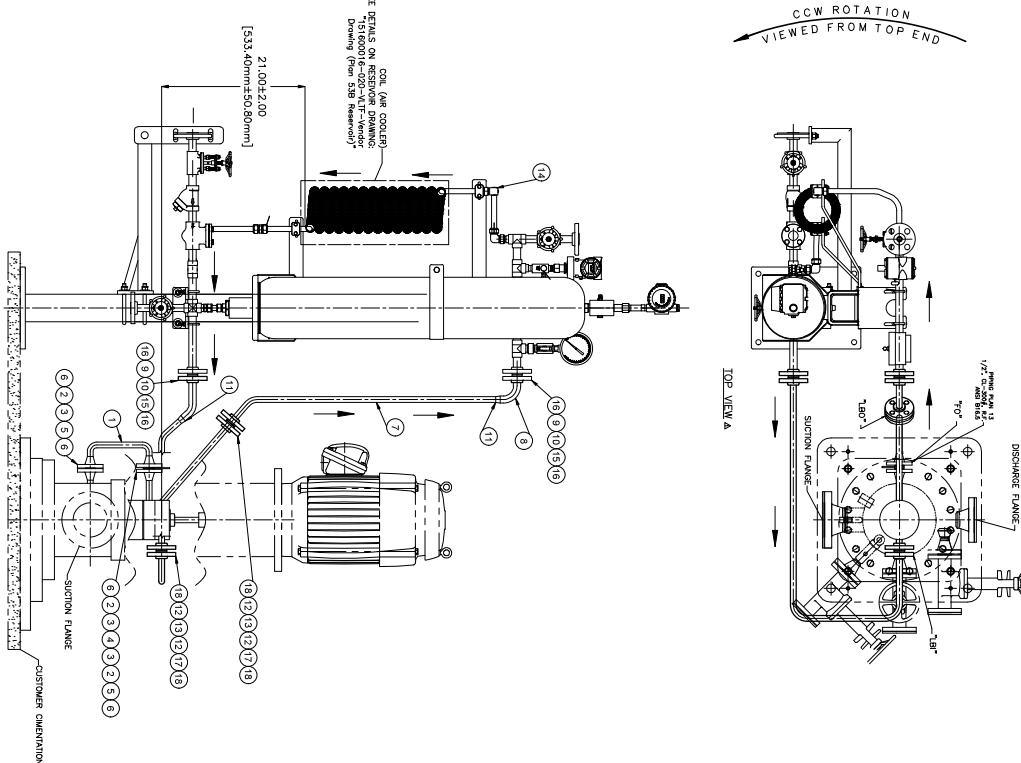
Resolution Sheet

10	<i>Esta es la brida de succión o descarga. Favor aclarar</i>	Comentario aplicado.
11	<i>Indicar el servicio / función de esta línea</i>	<p>Ver el documento titulado "151600016-020-VLT-F-Vendor Drawing (Plan 53B Reservoir)".</p> <p>Se agregó la Nota 13 en el dibujo para hacer la referencia "13. See connections and components on the reservoir drawing titled "151600016-020-VLT-F-Vendor Drawing (Plan 53B Reservoir)"</p>
12	<i>Favor ilustrar la información de las válvulas: diámetro, conexión, ANSI o WOG, etc.)</i>	<p>Ver el documento titulado "151600016-020-VLT-F-Vendor Drawing (Plan 53B Reservoir)".</p> <p>Se agregó la Nota 13 en el dibujo para hacer la referencia "13. See connections and components on the reservoir drawing titled "151600016-020-VLT-F-Vendor Drawing (Plan 53B Reservoir)"</p>
13	<i>Indicar el servicio / función de esta línea</i>	<p>Ver el documento titulado "151600016-020-VLT-F-Vendor Drawing (Plan 53B Reservoir)".</p> <p>Se agregó la Nota 13 en el dibujo para hacer la referencia "13. See connections and components on the reservoir drawing titled "151600016-020-VLT-F-Vendor Drawing (Plan 53B Reservoir)"</p>

	<i>Customer P.O.</i>	002-20 -T-ADQ	<i>Service:</i>	BOOSTER PUMP
	<i>Project:</i>	CHORETY BATTCHED PUMP STATION	<i>Job #</i>	151600016
	<i>Customer:</i>	YPF B Transporte S.A.	<i>Date:</i>	6/ October/ 2020

Resolution Sheet

14	<i>Favor proveer las conexión de válvulas con su respectiva brida ciega.</i>	<i>De acuerdo.</i>
15		



→ Note

2. Item 13 will be inscribed by Kumpfumpf, will be shipped loose.
 3. Plan 53B material (see table) will be installed by customer.
 4. There will not be axial space on the soleplate for 53B seal plan.
 5. Suggested location of the plan 53B reservoir shown in the drawing, the path could be changed by customer as required according to the final location of the tank, but the connection points (input and output) of the seal and reservoir will be the same.
 6. Piping or tubing to have a minimum bore of $\frac{1}{2}$ " or 13mm.
 7. Stainless steel material
 8. The reservoir is <1m horizontal distance from the seal assembly for induce circulation system and <500mm for thermo-siphon systems.
 9. Lines are horizontal or continuously rising (supply) and continuously rising (return) to aid venting.
 10. Ensure air coolers are exposed to air or wind flow.
 11. Do no include check valves.
 12. Flow indicator are not recommended, they may be used when a circulation pump's incorporated. If essential only use low resistance designs
 13. See conexions and components on the reservoir drawing titled

REF.		LIST OF MATERIAL PLAN 13△	
		DESCRIPTION	MATERIAL
REF.		DESCRIPTION	MATERIAL
1	PIPE 1/2"	CED. 160	SS-316
2	WELDED FLANGE 1/2"	300# W.N. RF.	SS-316
3	GASKET 1/2"	300#	SS-316
4	ORIFICE PLATE 1/2"		SS-316
5	CONT STUD 1/2" X 3 1/2"		SS-316
6	HEX NUT 1/2" 13UNC		SS-316
			16
		LIST OF MATERIAL PLAN 53B△	
REF.		DESCRIPTION	MATERIAL
7	PIPE 1/2"	CED. 160	SS-316
8	PIPE 3/4"	CED. 160	SS-316
9	GASKET 3/4" 600#		SS-316
10	WELDED FLANGE 3/4"	600# W.N. RF.	SS-316
11	B.W. REDUCER 3/4" - 1/2"		SS-316
12	WELDED FLANGE 1/2" 300# S.W. RF.		SS-316
13	GASKET 1/2" 300#		SS-316
14	RESERVOIR PLATE 53B		SS-316
15	CONT STUD 5/8" X 3 5/8"		SS-316
16	HEX NUT 5/8" 11UNC2B		SS-316
17	CONT STUD 1/2" X 3 1/2"		SS-316
18	HEX NUT 1/2" 13UNC		SS-316
			16

**DIMENSIONS AND TOLERANCES
PER ASME-Y14.5-2009**

APPROVAL DRAWING N

3. Restructuring designs. See connections and components on the reservoir drawing titled "151600016-020-VLTF-Vendor Drawing (Plan 53B Reservoir")

CUSTOMER DATA ▲	
CUSTOMER: TFTS TRANSPORT SA	
CUSTOMER P.O.: 302-20-T-A00...	
END USER:	
LOCATION:	VILLAMONTES
SERVICE:	BOOSTER PUMP
PROJECT:	VILLAMONTES BACKED PUMP
STATION:	
ITEM NO./SA	DRIVER NO./RE. JOB NO.
PUMP NO.	151600016-C
BBB-GGE-DGP	-----
BBB-S-GE00-GIP	151600016-C
DRAWING REFERENCE	
DRAWING TITLE	DRAWING NUMBER

4.4





PORADA DE DOCUMENTO

ADQUISICIÓN DE UNIDADES DE BOMBEO BOOSTER PARA LOS POLIDUCTOS PCS Y PVT

Cliente:	YPFB Transporte S.A.	Proyecto:	151600016 Bomba "Booster" Multiproducto
Orden de Compra:	002-20-T-ADQ	Documento RP:	151600016-037
No. Tag:	GLP/GE/DO	Revisión:	3

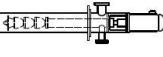
Plano de placa de identificacion

3	14-Oct-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
2	5-Oct-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
1	4-Sep-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
0	7-Aug-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
REV	FECHA	ENVIADO PARA:	ELABORÓ	REVISÓ	APROBÓ



RUHRPUMPE	<i>Customer P.O.</i>	002-20-T-ADQ	<i>Service:</i>	BOOSTER PUMP
	<i>Project:</i>	VILLAMONTES BATCHED PUMP STATION	<i>Job #</i>	151600016
	<i>Customer:</i>	YPFB Transporte S.A.	<i>Date:</i>	14 / October / 2020

Resolution Sheet

No.	Comments	Answers
1	Type of pump.	Comentario aplicado. Se corrige a VS6, hubo un error al momento de revisar el tipo de bomba. 4.2.2.17 Pump type VS6 Double-casing, diffuser, vertically suspended pumps shall be designated pump type VS6.  Figure 17 — Pump type VS6
2	Actualizar conforme a la hoja de datos aprobada	Comentario aplicado.
3		
4		
5		

NOTES:

1. Font: ISOCP
 2. Font size: 2 mm
 3. Colors: A: Polished silver
B: Black
 4. Material: SST Austenitic
 5. Thickness: 1 mm

RUHRPUMPEN	
Type	VS6
Serial No.	151600016-02
Tag No.	UBB 8 GE-DO-GLP
Cust. Order No.	0022-20-T-AQD
Liquid	GLPGASOLINE/DIESEL
Material	S-5
Pump Efficiency	70.8 %
Sp. Gr.	0.55 - 0.88
MAWP	316 psig
Hydro Test	474 psig
Dry Weight	1220 lbs
During installation, raise impellers	
	<input type="text"/> off bottom
Size	<input type="text"/> 100VLT-F-HX
Year	<input type="text"/> 2020
Qty Stages	<input type="text"/> 15
Head	<input type="text"/> 508.2 ft
Capacity	<input type="text"/> 78.75 gpm
Rot. Speed	<input type="text"/> 2757 rpm
Power (Rated)	<input type="text"/> 10.58 HP
Power (Driver)	<input type="text"/> 15 HP
	<input type="text"/> 114.8 °F
NPSH req	<input type="text"/> 0 ft
Min. Submergence	<input type="text"/> 11.78 ft
For Parts & Service Call +52 (81) 8158-5500 www.ruhrpumpen.com	

DIMENSIONS AND TOLERANCES		APPROVAL DRAWING NOTES	
PER ASME Y14.5-2003			
 		DRAWING STATUS <input type="checkbox"/> FOR APPROVAL ONLY NOT CERTIFIED – FOR PROPOSAL ONLY <input type="checkbox"/> FOR INFORMATION ONLY NO RETURN REQUIRED	
UNLESS OTHERWISE SPECIFIED		DRAWING MUST BE RETURNED BY TWO WEEKS FROM DATE RECEIVED TO MAINTAIN THE DELIVERY SCHEDULE	
DIMENSIONS ARE IN INCHES		DRAWN BY: E. BUSTAMANTE DATE: AG/07/20 RELEASED BY: E. VARGOUZ DATE: AG/07/20 DRAWING TITLE: NAMEPLATE DRAWING VLT 100VLT-HX	
TOLERANCES DECIMALS		PROBLEMY NOTE: THE MATERIAL IS THE PROPERTY OF WILSON INDUSTRIAL INC. AND IS FURNISHED FOR THE PURPOSE INDICATED. THIS DRAWING IS THE PROPERTY OF WILSON INDUSTRIAL INC. AND IS RESTRICTED FROM EXCLUSIVE RIGHTS OF USE AND FURNISHING THE DRAWING TO ANY PERSONS OR PARTIES OTHER THAN THE MATERIAL OWNER OR OWNER'S AGENT, WHOLE OR PARTIAL, WITHOUT THE WRITTEN PERMISSION OF THE MATERIAL OWNER OR OWNER'S AGENT. REPRODUCTION OF THE DRAWING IS PROHIBITED, EXCEPT WITH THE WRITTEN PERMISSION THEREOF. SUCH PERMISSION IS TO BE GRANTED ONLY BY AN OFFICER OR OTHER AUTHORIZED AGENT OF WILSON INDUSTRIAL INC., ITS DIVISIONS OR SUBSIDIARIES.	
TOLERANCES DECIMALS X ± .25 [6] X ± .12 [3]		<input type="checkbox"/> RE-ISSUE FOR REVIEW OF CHANGES ONLY MANUFACTURING PROCESS HAS BEEN STARTED – ANY OTHER REQUESTED CHANGES WILL AFFECT PRICE AND DELIVERY MANUFACTURING PROCESS HAS BEEN STARTED – ANY OTHER REQUESTED CHANGES WILL AFFECT PRICE AND DELIVERY	
REV	REVISION COMMENT	BY	CHECKED

4.5





PORADA DE DOCUMENTO

ADQUISICIÓN DE UNIDADES DE BOMBEO BOOSTER PARA LOS POLIDUCTOS PCS Y PVT

Cliente:	YPFB Transporte S.A.	Proyecto:	151600016 Bomba "Booster" Multiproducto
Orden de Compra:	002-20-T-ADQ	Documento RP:	151600016-020
No. Tag:	GLP/GE/DO	Revisión:	1

Reservoir Drawing (Plan 53B)

1	21-Dec-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
0	7-Oct-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
REV	FECHA	ENVIADO PARA:	ELABORÓ	REVISÓ	APROBÓ

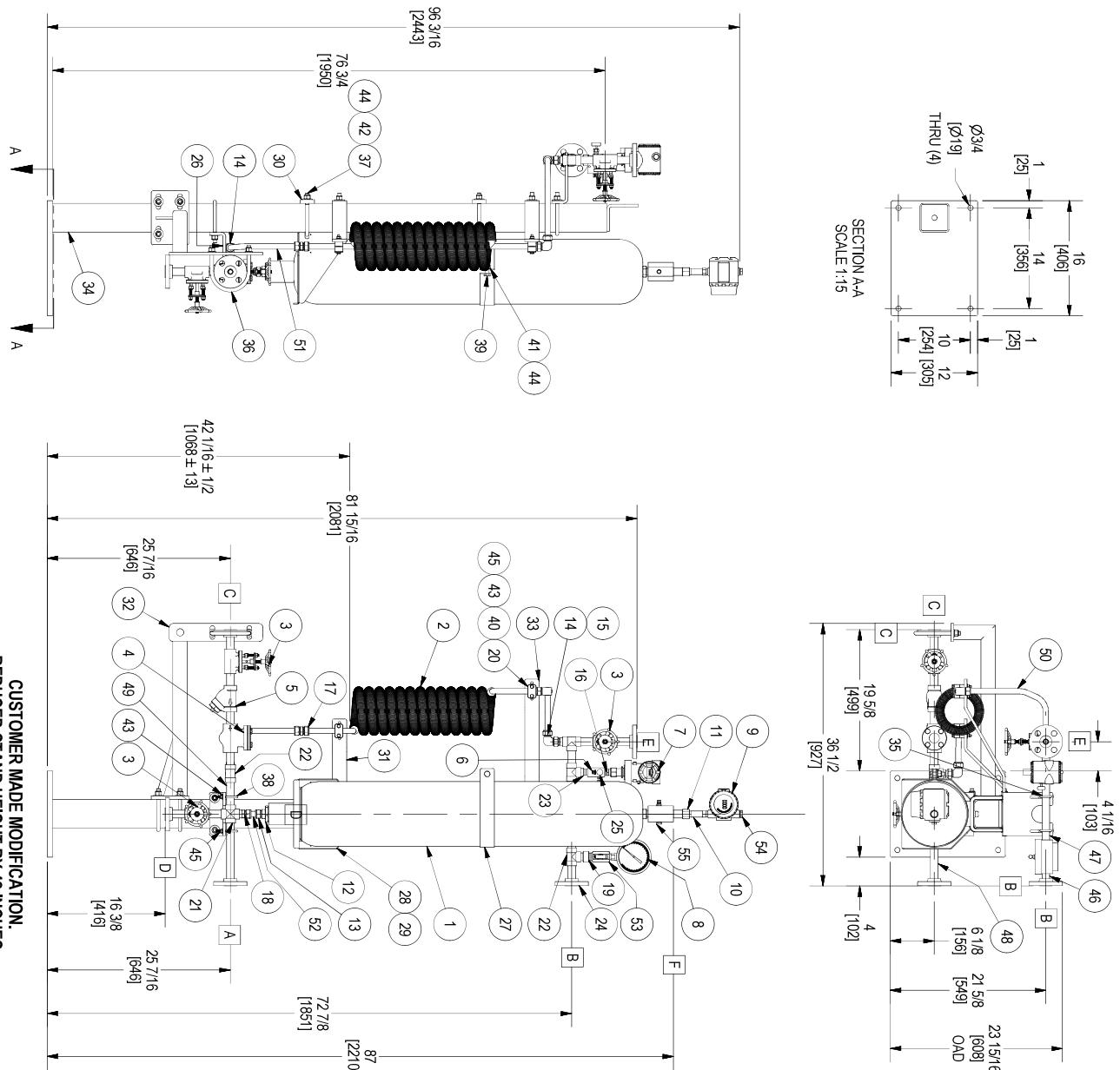




Customer P.O.	002-20 -T-ADQ	Service:	BOOSTER PUMP
Project:	CHORETY BATTCHED PUMP STATION	Job #	151600016
Customer:	YPF B Transporte S.A.	Date:	17/December/ 2020

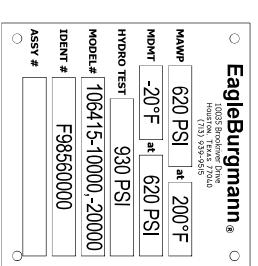
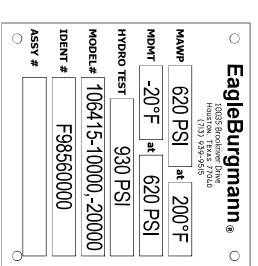
Resolution Sheet

No.	Comments	Answer
1	Tanto la conexión 54 como el transmisor de temperatura (9) son de 1/2". No obstante la conexión F relativa a esta linea indica 1/4"; favor aclarar.	Las conexiones en el acumulador. Tiene una conexión de nitrógeno para conectar el kit de carga de 3/8" - 24 puerto lateral SAE con válvula de gas instalada y luego tiene otro puerto 1/4" FNPT que se puede usar para otra conexión.
2	Cuáles son sus SET de Alarmas, diagramas de control de lazos	Se agrega hoja al final del documento.
3		
4		



CUSTOMER MADE MODIFICATION.
REDUCED STAND HEIGHT BY 43 INCHES.

- 1) ALL DIMENSIONS ARE $\pm 1/4"$ ON VESSEL, $\pm 1/2"$ ON PLUMBING, $\pm 2"$ UNLESS OTHERWISE SPECIFIED.
- 2) VESSEL TO BE BUILT PER ASME SECT.VIII, DIV. 1, E2015.
- 3) ASME CODE STAMP PROVIDED FOR ACCUMULATOR ONLY.
- 4) MAWP IS 620 PSI @ -20 TO 200°F
- 5) HYDRIC @ 930 PSI
- 6) RECOMMEND BARRIER PRO AS THE BARRIER FLUID.



CUSTOMER CONNECTION LIST	
LEGEND	FUNCTION / SIZE
A	SEAL SUPPLY / 3/4" 300# RFSW FLANGE
B	SEAL RETURN / 3/4" 300# RFSW FLANGE
C	FILL CONNECTION / 3/4" 300# RFSW FLANGE
D	DRAIN / 3/4" 300# RFSW FLANGE
E	VENT / 3/4" 300# RFSW FLANGE
F	NITROGEN CONNECTION / 1/4" NPT SIDE PORT

INCHES [MILLIMETERS] (REFERENCE ONLY)

No.	Revision	Date	Name	Drawn	Checked	Approved	Comments
No.1				07/27/2020	SAG		
No.2				07/28/2020	DAH		
No.3							
No.4							
No.5							
No.6							
No.7							
No.8							
No.9							
No.10							

INCHES [MILLIMETERS] (REFERENCE ONLY)

INV

F98560000

Original from

Replacement for

F98560000

Item Number

Part #

Quantity

Job Number

SEE NOTE

Drawing No.

2

P.O. # 123006725

C:\Users\Robert.Nell\Documents\Vault\Designs\Job Files\SSG STANDARD ASS'Y INVENTOR\PLAN53B\F98560000-4TH W-2KW\CUSTOMER MODIFICATION BY RUHRPUMPEN\F98560000-ABM-106415-10000-20000.idw

ITEM	QTY	STOCK NUMBER	DRAWING DESCRIPTION	MATERIAL	ITEM	QTY	STOCK NUMBER	DRAWING DESCRIPTION	MATERIAL
1	1	G31120234	10 GALLONS TRANSFER BARRIER ACCUMULATOR, 316 SS SHELL, ASME CODE U-STAMP 3/4" COUPLER PORT, 200 PSI SAE #24 FLUID PORT, BUNA-NITRILE BLADDER, ACCUMULATOR INC. A-10-TBC-2100-3 COIL: 3/4" X 0.035" WALL TUBE X 20' COIL WITH 1/4" FINS GATE VALVE: 3/4" SW X 3/4" SW, 800# BOLTED BONNET, OS&Y, 316SS BODY AND TRIM, CMTRS ARE REQUIRED FOR THE VALVE BODIES, CASTINGS OR FORGINGS FROM CHINA, ARE NOT ALLOWED. PROCESS CONNECTIONS ARE 3/4" SW & 3/4" SW, VOGT #SW17401 CHECK VALVE: 3/4" SW, 800#, BOLTED BONNET, PISTON, VOGT #SW17405 Y-STRAINER, TITAN # Y882-SS CLASS 600# 3/4" SW ENDS, 1/16 SCREEN 41% OPEN AREA, SA-351 GR. CFM, WITH 3/8" NPT SS PLUG.	SA-965 F316 SA-269 316L SS SA-182 F316L SS	21	1	G18898234	CROSS, 3-4" SW, #3000, 316	SA-182 F316L SS
2	1	G20617234		22	4	G18898234	TEE, 3/4" SW, 300# SWAGE NIPPLE, 3/4"PE X 1/2" NPT, 2" LG	SA-182 F316L SS	
3	3	G21420234		23	1	G35373234	FLANGE, 3/4" 300# RFSW, 125-250 RMS G21181234	SA-312 F316L SS	
4	1	G18991234		24	5	G21181234	PLUG, 1/2" NPT, ROUND HEAD, 316 PIPE BRACKET, #PBKT-5-5TC-FOR CROSS, 5.5" CENTER, BURN-OUT FOR SWAGELOK CROSS	SA-182 F316L SS	
5	1	G25375234		25	1	G19943234	UPPER ACCUMULATOR BRACKET ACC-BKT-U SA-351 GR. CFM	SA-36 CS	
6	1	G25374234		26	2	G25371234	ACCUMULATOR LOWER SUPPORT BRACKET: SP#ACC-BKT-L G2445400 MOUNTING RING, ACCUMULATOR BACKER PLATE, 1/2" X 2" X 6" WITH (2) 3/8" DIAMETER HOLES ON 4 1/2" CENTERS, USED WITH 4" SQUARE U-BOLTS, ACC-BKT-CL-SUP-LWR-GALV RUBBER	SA-36	
7	1	G24750199	STATIC PRESSURE 2 VALVE MANIFOLD AGCO#P1MVS-4, 1/2" NPT PROCESS PRESSURE TRANSMITTER, 1/2" FNPT 316SS PROCESS CONNECTOR, TEFLON BONNET, PACKING, HOUSING, 1/2" NPT ELECTRICAL CONNECTION, HART PROTOCOL, HART PROTOCOL, DIAPHRAGM, WITH LCD DIGITAL INDICATOR & METRIC UNITS CALIBRATION LOOP POWERED FM FLAMEPROOF, 20 TO 1450 PSI ADJUSTABLE RANGE, YOKOGAWA #EX39A-JCS4N-012DNFF-1D4.	316SSMTD	30	2	G20259000	53B-SUPPORT 22.75" GALV LEFT HAND BK-PLT-COIL-SUP-UPPGALV	SA-36 CS (GALVANIZED)
8	1	G24866234	PRESSURE GAUGE, 4 1/2" DIAL SIZE, 0.5% ACCURACY, SOLID FRONT CASE DESIGN WITH BLOW-OUT BACK, 4 1/2" DIAL SIZE, CASE MATERIAL 316SS, BOURDON TUBE AND SOCKET MATERIAL, 1/2" M-NPT LOWER CONNECTION, SAFETY GLASS WINDOW, 0-600 PSIG RANGE, ASHCROFT 451108SD 04L XSG-50600#.	SA-240 316L SS	34	1	F05799239	STAND, 120" 4X4X14, 12X16 BASE, GALVANIZED U-BOLT, 1/4-20 X 1.125" DIA X 20" 304 SS	SA-36 CS
9	1	G28563234	314APD-A15M5A04 ROSELOCK TEMPERATURE TRANSMITTER, ALUMINUM HOUSING, 1/2" ELECTRICAL CONNECTION, 4-20 mA DIGITAL SIGNAL, HART PROTOCOL, SINGLE SENSOR INPUT FM'S, NONINCENDIVE & EXPLOSION-PROOF COMBO (INCLUDES STANDARDS AND FISCO FOR FIELDBUS UNITS), LCD DISPLAY, CALIBRATION CERTIFICATE, 4-20 mA=0-200°F, SENSOR SPECIFIED SEPARATELY AND ASSEMBLED TO TRANSMITTER.	ALUMINUM	35	1	G25565234	4" SQU-L-BOLT, 1/2-13 X 4" INSIDE DIMENSION X 5 3/4" LEG U-BOLT, 1/4-20 X 1.125" DIA, 2.34" DEPTH 304 SS HEX HEAD CAP SCREW, 1/2-13 X 1-3/4" LG, 304 STAINLESS STEEL, ALLOY GROUP,2, CONDITION C/W PER ASTM F593	SA-580 316L SS
10	1	G24388239	RTD: ROSEMOULD, 214C15MBS4E0428LE3XAW, TEMPERATURE SENSOR (RTD), 1/2" NPT(M) PROCESS CONNECTION, 1/2" NPT(F) EXPANSION PROOF, AND DUST-IGNITION PROOF, THIN-FILM PT100, SINGLE SENSOR, 4-WIRE CONFIGURATION, 4.25" INSERTION LENGTH, SPRING LOADED ADAPTER MOUNTING STYLE, TRANSMITTER ASSEMBLED TO SENSOR AND SENSOR ASSEMBLED TO THERMOWELL.	SA-470 TY316L SS	36	1	G25565234	HEX HEAD CAP SCREW, 1/4-20 X 2-1/2" LG, 316 STAINLESS STEEL, ALLOY GROUP,2, CONDITION C/W PER ASTM F593	SA-583 316L SS
11	1	G28090234	STRAIGHT SHANK THREEADED T-WELL, 1-62 1/4", 260 BORE, 3/4" MNPT PROCESS TO 1/2" FNT SENSOR, ROSEMOULD #14CE015TAB-SC02/BXN REDUCING BUSHING, SAE #24 THREAD X SAE #12 ID THREAD, O-RING SEAL BOTH, HEX HEAD, PARKER #24-125005 TUBE FITTING, MALE CONNECTOR, 3/4 IN. TUBE OD X 1 1/16-12 MALE SA/MS STRAIGHT TUBE, SWAGELOK #SS-1210-1-12ST	SA-470 TY316L SS	37	1	G25565234	FLAT WASHER, 1/2" USS, 1-3/8" DIA, 316 SS NYLOC LOCK NUT, 1/2-13 PER ASME B18.6.6, 316 STAINLESS STEEL WITH 6/6 NYLON INSERT, ALLOY GROUP,2, CONDITION C/W PER ASTM F594	SA-594 316L SS
12	1	G23036234	REDUCING BUSHING, SAE #24 THREAD X SAE #12 ID THREAD, O-RING SEAL BOTH, HEX HEAD, PARKER #24-125005 TUBE FITTING, MALE CONNECTOR, 3/4 IN. TUBE OD X 1 1/16-12 MALE SA/MS STRAIGHT TUBE, SWAGELOK #SS-1210-1-12ST	SA-182 F316L SS	38	1	G25565234	NYLONLOCK NUT, 1/4-20, PER ASME B18.16.6, 316 STAINLESS STEEL WITH 6/6 NYLON INSERT, ALLOY GROUP,2, CONDITION C/W PER ASTM F594	SA-240 316L SS
13	1	G23643234	ELBOW, UNION, 90-34" TUBE, SWAGELOK, #SS-1210-9 MALE PIPE WELD CONNECTOR, 3/4" NPS X 3/4" TUBE, SWAGELOK, #SS-1210-1-12W HEX NIPPLE, 1/2" NPT, SWAGELOK, #SS-1210-9 UNION, 3/4" TUBE TO 3/4" TUBE, SWAGELOK, #SS-1210-6 MALE WELD CONNECTOR, 3/4" TUBE TO 3/4" NPS WELD END, SWAGELOK, #SS-1210-1-12W REDUCING INSERT, 3/4" SW X 3/4" FNPT TYPE 1 TUBE SUPPORT KIT, 3/4" TUBE, SWAGELOK, #304-S3-PP-12T, POLYPROPYLENE & SS COVER.	SA-479 316L SS	39	1	G25565234	TUBE, 3/4" X .095 COIL IN BEND PIPE NIPPLE, 3/4" SCH#80 X 2-1/2" LG, PE PIPE NIPPLE, 3/4" SCH#80 X 100 LG, PE PIPE NIPPLE, 3/4" SCH#80 X 8.5", 316 SS TO SUPPLY FLANGE PIPE NIPPLE, 3/4" SCH#80 X 4.0 LG, PE TUBE 3/4" X .095 COIL OUT BEND	SA-240 316L SS
14	3	G19054234	SA-479 316L SS	40	1	G25565234	PIPE NIPPLE, 3/4" SCH#80 X 2-1/2" LG, PE PIPE NIPPLE, 3/4" SCH#80 X 100 LG, PE PIPE NIPPLE, 3/4" SCH#80 X 8.5", 316 SS TO SUPPLY FLANGE PIPE NIPPLE, 3/4" SCH#80 X 4.0 LG, PE TUBE 3/4" X .095 COIL OUT BEND	SA-312 F316L SS	
15	2	G22241234	SA-479 316L SS	41	14.00	F80200234	TUBE RUN ACCUM IN, 3/4" .095 WALL 2" LNG	SA-312 F316L SS	
16	1	G21956234	SA-479 316L SS	42	2.000in	F80200234	SA-213A-289 F316L SS	SA-213A-289 F316L SS	
17	1	G241682234	SA-479 316L SS	43	1	G20384234	BLOCK&BLEED VALVE AG M9V146, 3/4" MNPT X 1/2" FNPT, 316SS BODY NONE	SA-479 TY316L SS	
18	1	G22245234	SA-479 316L SS	44	1	G22291234	PIPE PLUG, 1/2" NPT, HEX HEAD	SA-182 F316L SS	
19	1	G24059234	SA-479 TY316L SS	45	1	G18823234	PIPE PLUG, 1/4" NPT, HEX HEAD	SA-182 F316L SS	
20	2	G24089239	MR STD	46	1	G18898234	PIPE PLUG, 1/2" NPT, HEX HEAD	SA-182 F316L SS	

Sheet Format = B	Projection 3d Angle	Remove All Buses And Sheet Edges		
No. 1	Revision	Date	Name	Comments
No. 2		Drawn	01/27/2020	SAG
No. 3		Checked	07/28/2020	DAH
No. 4				EagleBurgmann Industries, LP EagleBurgmann System Group 10000 North Central Expressway, Suite 1000 Dallas, TX 75231 USA
No. 5				Customer RUHRPUMPF RUHRPUMPF MEN
No. 6				Project # MAGELLAN MIDSTREAM PARTNERS Refer to production notes ISO 9001:16
No. 7				Description: BILL OF MATERIAL Plan 55B WITH AIR COOLED HEAT EXCHANGER
No. 8				Part #
No. 9				Quantity
No. 10				Job Number
				See Note
				For Drawing No.
				2
				P.O. # 123006725
				Ident Number
				F98500000
				INV
				Original from
				Replacement for