

PORTADA 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.	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

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

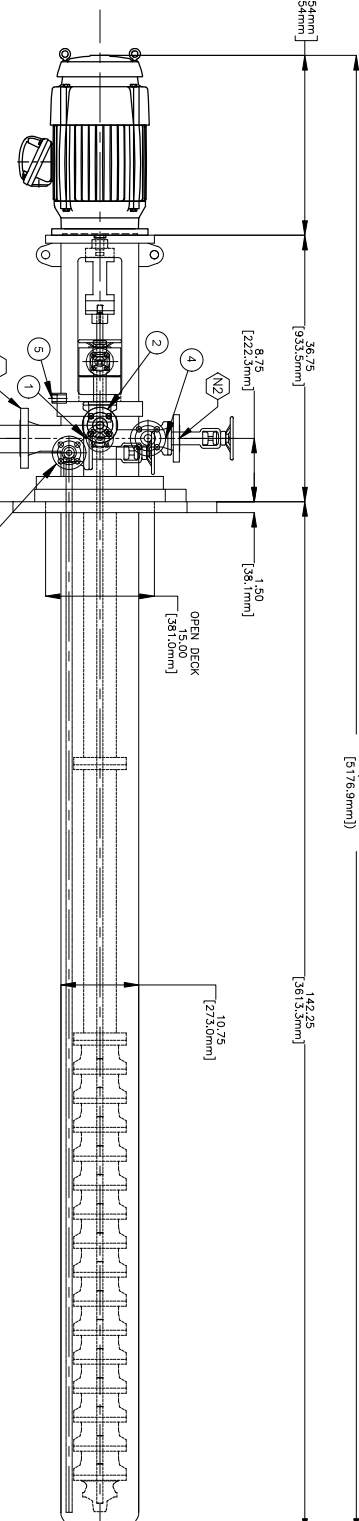


Customer P. O.	YPFBTR.GCON.1338.19	Service:	BOOSTER PUMP
Project:	VILLAMONTES BATCHED PUMP STATION	Job #	151600016
Customer:	YPFB Transporte S.A.	Date:	9 / Julio / 2020

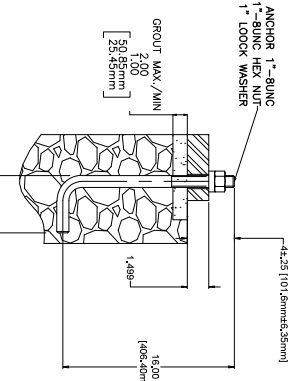
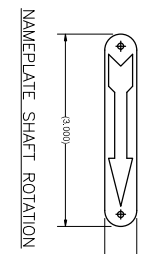
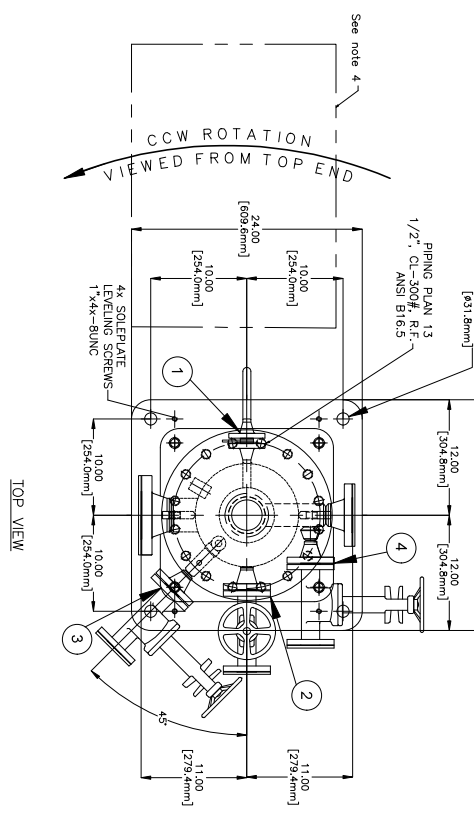
Resolution Sheet

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 bridas ciegas ASME #300. 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.
7	Drenaje de la caja de sello (conexión 5)	Esta conexión no incluye válvula. Lleva un tapón de 3/4" NPT al final de la conexión.
8		

TOTAL PUMP LENGTH
[51769mm]



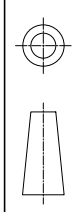
- NOTES:
- 1- Plan 53B Tank will be installed by customer.
 - 2- There will not be axial space on the outside for 53B seal piping will be shown on drawing 7102910107
 - 3- Suggested location of the plan 53B reservoir, it could be changed by customer as required. See Piping Drawing Plan 13-53B.



ITEM	CUSTOMER CONNECTION POINTS	SIZE	TYPE	TERMINATION
1	PLAN 13 "FLUSH"	1/2"	FLANGED	BLIND FLG. PROT
2	SUCTION VENT 300# RF	1"	FLANGED	BLIND FLG. PROT
3	BARREL DRAIN 300# RF	1"	FLANGED	BLIND FLG. PROT
4	DISCHARGE VENT 300# RF	1"	FLANGED	BLIND FLG. PROT
5	SEAL BOX AREA DRAIN	3/4"	NPT	PLUGGED
N1	SUCTION 300# RF	3"	FLANGED	BLIND FLG. PROT.
N2	DISCHARGE 300# RF	2"	FLANGED	BLIND FLG. PROT.

HECHO EN MEXICO
www.dynapump.com

DIMENSIONS AND TOLERANCES PER ASME-Y14.5-2009



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS
X ±.50 [13]
X.X ±.25 [6]
X.XX ±.12 [3]

APPROVAL DRAWING NOTES

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2. CONTACT: APPROVER'S SIGNATURE AND/OR APPROVING ENGINE SIGNATURE OF CONTACT SHALL BE MADE ON THE REVISIONS AND/OR CORRECTIONS.
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 - NOT TO BE USED FOR CONSTRUCTION
 - NO RETURN REQUIRED
- DRAWING MUST BE RETURNED BY TWO WEEKS FROM CUSTOMER RECEIPT DATE TO MAINTAIN THE SCHEDULE

REV	REVISION COMMENT	BY	DATE
1	ISSUED FOR APPROVAL	EBM	JUL/9/20
0	ISSUED FOR APPROVAL	EBM	JUN/12/20

CUSTOMER DATA

CUSTOMER: YEFB TRANSPORTE S.A
CUSTOMER P.O.: YEFBTR-GEOL.1338.19
END USER: YEFB

LOCATION: YILLAMONTES
SERVICE: BOOSTER PUMP
PROJECT: YILLAMONTES BATCHED PUMP STATION

ITEM NOS
PUMP NO. RP-008 NO.
DRIVER NO. 151600016-01
SIP P.00/GE-01 151600016-02
SIP P.00/GE-02 151600016-02

MANUFACTURER NIDEC
MODEL NEMA
POWER 15 HP
ENCLOSURE IEC (L W 1.9m D)
FRAME 2554VP
RPM 3000

MECHANICAL SEAL
MANUFACTURER: JOHN CRANE
MODEL: SINGLE CARTRIDGE
M 88 AL BA OME 23A-FIN-08C-13/53B

COUPLING
MANUFACTURER: RUDOLPHER
MODEL: RUDOLPHER
SIZE: RUDOLPHER

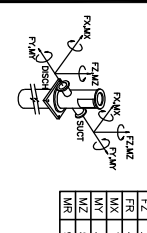
GUARD MATERIAL: ALUMINUM
DRAWING REFERENCE
DRAWING TITLE: DRAWING NUMBER
Piping Drawing: 7102910107
Nameplate Drawing: 7102910112

WEIGHTS

PUMP	1200	185	545	46
BARREL	620	185	281	46
COUPLING	20	185	9	46
FND PLATE	184	185	83.5	46
DRIVER	385	185	176	46
SEAL	104	185	127.3	46
TOTAL	2804	185	1273	46

FORCES & MOMENTS

API 610 FORCES & MOMENTS	FX	FY	FZ	SLCT	DISCH
F=FORCE (LBS)	240	240	180		
M=MOMENT (FT-LBS)	200	200	130		
R=RESULTANT	300	300	230		
	430	430	290		
	500	500	340		
	350	350	170		
	530	530	260		
	950	950	460		



DRAWN BY: DATE: JUN/12/20
E. BUSTAMANTE
RELEASED BY: DATE: JUN/12/20
E. VAZQUEZ

GENERAL ARRANGEMENT
VLT 100V/LF-HX

SCALE: PUMP SIZE: 7102910108
PUMP TYPE: SHEETS/SHEETS
N/A 100V/LF-HX V/LF 1 OF 1

4.2



PORTADA DE DOCUMENTO

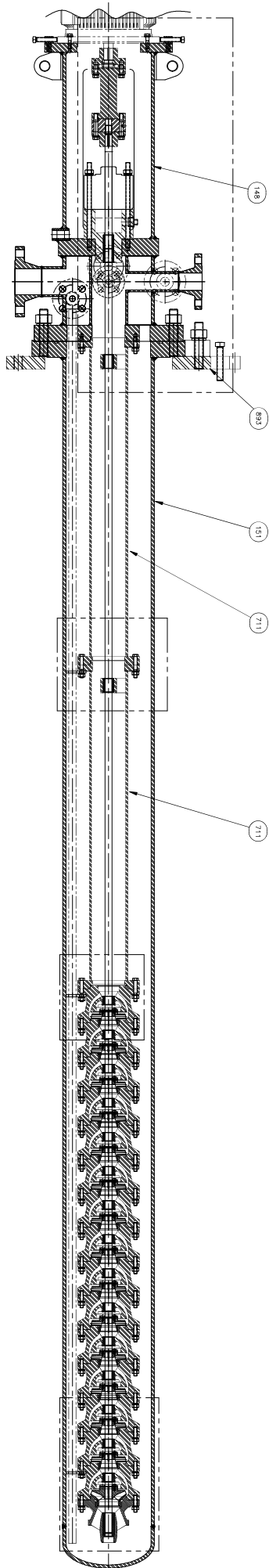
ADQUISICIÓN DE UNIDADES DE BOMBEO BOOSTER PARA LOS POLIDUCTOS PCS Y PVT

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

REV	FECHA	ENVIADO PARA:	ELABORÓ	REVISÓ	APROBÓ
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.





PART NUMBER	PRODUCT TYPE	PART DESCRIPTION	MATERIAL	QTY	INITIAL	1-3 YEAR	3+ YEAR	PART NUMBER	PRODUCT TYPE	PART DESCRIPTION	MATERIAL	QTY	INITIAL	1-3 YEAR	3+ YEAR
38002583-99	108	Stage Casing	A216 Gr. WC6	15				46000937	861	Coupling Half	Carbon Steel	1			
38000988-99	138	Impeller	A216 Gr. WC6	1				46002237	892-1	Foundation Node	Carbon Steel	1			
37000468-02	158	Baffle Head T	See P&ID Notes	1				72600348	901-1	Bolt, Hex, 3/8"-16 UNC-2A, 2.507" Long, 1.007" Thread	Carbon Steel	24			
37000468-02	151	Impeller	See P&ID Notes	1				72600349	901-2	Bolt, Hex, 3/8"-16 UNC-2A, 2.75" Long, 1.13" Thread	Carbon Steel	4			
37000468-02	211	Impeller H	A216 Gr. WC6	14				72600350	901-3	Bolt, Hex, 7/16"-14 UNC-2A, 1.13" Thread	Carbon Steel	4			
370003746-99	230	Impeller X	A216 Gr. WC6	14				72600351	901-4	Bolt, Hex, 3/8"-16 UNC-2A, 1.507" Long, 1.007" Thread	Carbon Steel	4			
370003746-99	231	Impeller X	Stainless Steel	4				72600352	902-1	Stud, 1/8" UNC-2A, 2.00" Long	316 ss	192			
81011673	254	Adjusting Piece	Stainless Steel	4				72600353	902-2	Stud, 1/8" UNC-2A, 5.50" Long	Carbon Steel	20			
60003263	412-1	O-Ring Case/Column	Viton	18				72600354	902-3	Stud, 1/2"-13 UNC-2A, 10.00" Long	Carbon Steel	4			
60003101	412-2	O-Ring Bracket	Viton	1				72600355	903-1	Pump, Square Head, 0.75" - 14 NPT	Stainless Steel	4			
60004373	412-3	O-Ring S/W	Viton	1				72600356	903-2	Screw, Square Head, 3/4"-10 UNC-2A, 4.00" Long	Carbon Steel	4			
41000206	441	Mechanical Seal	Assembly	1				72601663	904-1	Screw, Square Head, 1/2"-20 UNC-2A, 2.50" Long	Carbon Steel	4			
41000206	441	Housing for Shaft Seal	Carbon Steel	15				72600371	904-2	Cap screw, SH, #10-24 UNC-2A, .38" Long	Carbon Steel	45			
81003851	474	Thrust Ring	416 ss	1				74600159	920-1	Nut, Hex, Heavy, 3/8"-16 UNC-2B	316 ss	161			
71001396	520	Split Ring	Carbon Steel	1				74600159	920-2	Nut, Hex, Heavy, 1/2"-13 UNC-2B	Carbon Steel	20			
67004325-02	520-1	Split Ring Case 141 Stg	416 ss (38-42HRC)	1				74600159	920-3	Nut, Hex, Heavy, 1/2"-13 UNC-2B	Carbon Steel	1			
67004325-02	520-2	Split Ring Case	416 ss (38-42HRC)	14				74600159	920-4	Nut, Hex, Heavy, 1/2"-13 UNC-2B	Carbon Steel	1			
81000842	526	Position Ring	416 ss (38-42HRC)	14				74600159	920-5	Nut, Hex, Heavy, 1/2"-13 UNC-2B	Carbon Steel	1			
68005586	545-1	Bearing Bush	Filed Carbon	1				74600155	931-1	Washer, Split Lock Spring, Regular, 3/8"	316 ss	181			
68005583	545-2	Bearing Bush	Filed Carbon	15				74600155	931-2	Washer, Split Lock Spring, Regular, 3/8"	Carbon Steel	4			
68001172	545-3	Bearing Bush	Filed Carbon	4				74600157	931-3	Washer, Split Lock Spring, Regular, 1/2"	Carbon Steel	4			
48000233	556	Spacer Part	Carbon Steel	1				74600164	931-4	Washer, Split Lock Spring, Regular, 1/16"	Carbon Steel	8			
43012137-04	711	Column Pipe	See Note 1	2				75000075	940-1	Key, SAE Impellers	Carbon Steel	15			
50115413	722	Drive Line Bracket	Carbon Steel	3				75001415	940-2	Key, SAE Coupling	18-8 ss	1			
48000312	841	Drive Coupling	Carbon Steel	1											

PARTS LIST

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DRAWING STATUS

FOR PROPOSAL ONLY - NOT GRANTED - FOR PROPOSAL ONLY
 FOR INFORMATION ONLY - NO RETURN REQUIRED
 FOR APPROVAL FROM CUSTOMER REQUIRED BY TWO WEEKS
 RE-USE FOR REVIEW OF CHANGES ONLY
 REQUESTED CHANGES WILL AFFECT PRICE AND DELIVERY
 ENCL. REQUESTED CHANGES WILL AFFECT PRICE AND DELIVERY

DRAWING REFERENCE	
General Arrangement	7102310108
DRAWING NO.: 7112910037	
PROJECT: 100VLT-HX / 15 STGS	
SCALE: PUMP SIZE PUMP TYPE SHEET/SHEETS	
DATE: OCT/26/20	
DRAWN BY: R. WANKOIN	
CHECKED BY: E. VANDERZEE	
DATE: JUN/17/20	
PROJECT: 100VLT-HX / 15 STGS	
SCALE: PUMP SIZE PUMP TYPE SHEET/SHEETS	
DATE: OCT/26/20	
DRAWN BY: R. WANKOIN	
CHECKED BY: E. VANDERZEE	
DATE: JUN/17/20	

CUSTOMER DATA & PUMP TRANSPORT SA	
CUSTOMER P.O.:	7112910037
CUSTOMER:	VEEVA TRANSPORT SA
END USER:	VEEVA TRANSPORT SA
LOCATION:	ULMONTENES
SERVICE:	ULMONTENES EXISTING PUMP
PROJECT:	100VLT-HX / 15 STGS
SCALE:	PUMP SIZE PUMP TYPE SHEET/SHEETS
DATE:	OCT/26/20
DRAWN BY:	R. WANKOIN
CHECKED BY:	E. VANDERZEE
DATE:	JUN/17/20
PROJECT:	100VLT-HX / 15 STGS
SCALE:	PUMP SIZE PUMP TYPE SHEET/SHEETS
DATE:	OCT/26/20
DRAWN BY:	R. WANKOIN
CHECKED BY:	E. VANDERZEE
DATE:	JUN/17/20

4.3



PORTADA 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

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





Customer P. O.	002-20 -T-ADQ	Service:	BOOSTER PUMP
Project:	CHORETY BATCHED 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 dieléctricas 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 bridas de 600# como estándar. Por lo tanto, la primer conexión al tanque es de 600#, todas las demás son de 300#.
5	Nota 10: Favor indicar donde 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 BATCHED PUMP STATION	Job #	151600016
Customer:	YPFB 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	Se señala brida de succión y descarga. Con respecto al plan de sello, está indicado como "LBI" para la entrada y "LBO" para la salida.
8	Es transmisor, switch? De qué (presión)?	Ver el documento titulado "151600016-020-VLTF-Vendor Drawing (Plan 53B Reservoir)". Se agregó la Nota 13 en el dibujo para hacer la referencia "13. See conexions and components on the reservoir drawing titled "151600016-020-VLTF-Vendor Drawing (Plan 53B Reservoir)"
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. Similar enfoque para el transmisor o switch aguas abajo	Ver el documento titulado "151600016-020-VLTF-Vendor Drawing (Plan 53B Reservoir)". Se agregó la Nota 13 en el dibujo para hacer la referencia "13. See conexions and components on the reservoir drawing titled "151600016-020-VLTF-Vendor Drawing (Plan 53B Reservoir)"



Customer P. O.	002-20 -T-ADQ	Service:	BOOSTER PUMP
Project:	CHORETY BATCHED 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>	<i>Ver el documento titulado "151600016-020-VL TF-Vendor Drawing (Plan 53B Reservoir)". Se agregó la Nota 13 en el dibujo para hacer la referencia "13. See conexions and components on the reservoir drawing titled "151600016-020-VL TF-Vendor Drawing (Plan 53B Reservoir)"</i>
12	<i>Favor ilustrar la información de las valvulas: diámetro, conexión, ANSI o WOG, etc.)</i>	<i>Ver el documento titulado "151600016-020-VL TF-Vendor Drawing (Plan 53B Reservoir)". Se agregó la Nota 13 en el dibujo para hacer la referencia "13. See conexions and components on the reservoir drawing titled "151600016-020-VL TF-Vendor Drawing (Plan 53B Reservoir)"</i>
13	<i>Indicar el servicio / función de esta línea</i>	<i>Ver el documento titulado "151600016-020-VL TF-Vendor Drawing (Plan 53B Reservoir)". Se agregó la Nota 13 en el dibujo para hacer la referencia "13. See conexions and components on the reservoir drawing titled "151600016-020-VL TF-Vendor Drawing (Plan 53B Reservoir)"</i>

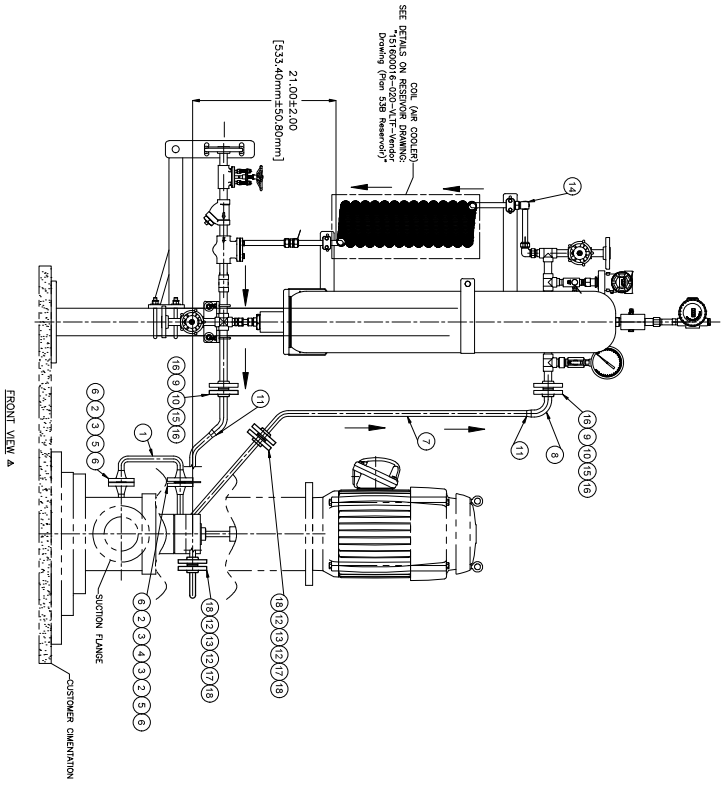
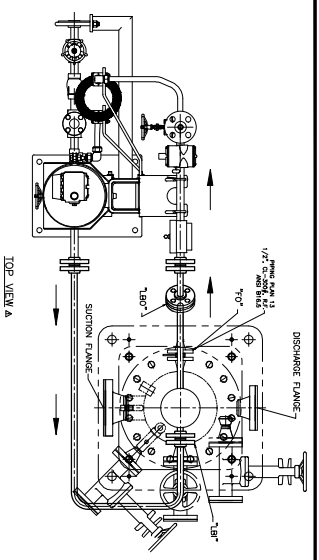


Customer P.O.:	002-20 -T-ADQ	Service:	BOOSTER PUMP
Project:	CHORETY BATCHED PUMP STATION	Job #	151600016
Customer:	YPFB Transporte S.A.	Date:	6/October/2020

Resolution Sheet

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

CCW ROTATION
VIEWED FROM TOP END



LIST OF MATERIAL PLAN 13		
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

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 REDUCTOR 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 PLAN 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

- NOTES:
- Plan 13 will be installed by Ruhrpumpen
 - Plan 53B material (see table) will be shipped loose.
 - The reservoir and piping will be installed by customer.
 - Plan 53B reservoir and piping on the soleplate for 53B seal plan.
 - There will not be axial space on the soleplate for 53B seal plan.
 - 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.
 - Piping or tubing to have a minimum bore of 1/2" or 13mm.
 - Stainless steel material
 - The reservoir is <1m horizontal distance from the seal assembly for induce circulation system and <500mm for thermo-siphon systems.
 - Lines are horizontal or continuously rising (supply) and continuously rising (return) to aid venting.
 - Ensure air coolers are exposed to air or wind flow.
 - Do no include check valves.
 - Flow indicator are not recommended, they may be used when a circulation pump is incorporated. If essential only use low resistance designs
 - See connexions and components on the reservoir drawing titled "151600016-020-VLTF-Vendor Drawing (Plan 53B Reservoir)"

DIMENSIONS AND TOLERANCES PER ASME-Y14.5-2009

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES DECIMALS

X ±.50 [1.3]
X ±.25 [6]
.XX ±.12 [3]

APPROVAL DRAWING NOTES

1. ENGINEER'S COMMENTS AND/OR SPECIFICATIONS, WITH THE SIGNATURE OF CONTACT, SHALL BE MADE ON THIS DRAWING. THE SIGNATURE OF CONTACT SHALL BE MADE ON THE DRAWING. APPROVALS SHALL BE MADE BY THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE. APPROVALS SHALL BE MADE BY THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE. APPROVALS SHALL BE MADE BY THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE.

2. COMMENTS, ADDITIONS, AND/OR DELETIONS SHALL BE MADE BY THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE. APPROVALS SHALL BE MADE BY THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE. APPROVALS SHALL BE MADE BY THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE.

3. THIS DRAWING IS THE PROPERTY OF RUHRPUMPEN. IT IS TO BE USED ONLY FOR THE PURPOSES INDICATED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF RUHRPUMPEN. IT IS TO BE USED ONLY FOR THE PURPOSES INDICATED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF RUHRPUMPEN. IT IS TO BE USED ONLY FOR THE PURPOSES INDICATED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE WRITTEN PERMISSION OF RUHRPUMPEN.

4. FOR CHANGES, CONTACT THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE. APPROVALS SHALL BE MADE BY THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE. APPROVALS SHALL BE MADE BY THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE. APPROVALS SHALL BE MADE BY THE ENGINEER OR HIS DESIGNATED REPRESENTATIVE.

DRAWING STATUS

FOR PROPOSAL ONLY NOT CERTIFIED - FOR PROPOSAL ONLY

FOR INFORMATION ONLY NO RETURN REQUIRED

FOR APPROVAL DRAWING MUST BE RETURNED BY TWO WEEKS FROM CUSTOMER RECEIPT DATE TO MAINTAIN THE DELIVERY SCHEDULE

RE-ISSUE FOR REVIEW OF CHANGES ONLY

MANUFACTURING PROCESS HAS BEEN STARTED - ANY OTHER REQUESTED CHANGES WILL AFFECT PRICE AND DELIVERY

FINAL MANUFACTURING PROCESS HAS BEEN STARTED - ANY OTHER REQUESTED CHANGES WILL AFFECT PRICE AND DELIVERY

REV	ISSUED FOR APPROVAL	ISSUED FOR APPROVAL	BY	CHECKED	DATE
1	ISSUED FOR APPROVAL	ISSUED FOR APPROVAL	EBM	EV	OCT/6/20
0	ISSUED FOR APPROVAL	ISSUED FOR APPROVAL	EBM	EV	AG/25/20

DRAWN BY: E. BUSTAMANTE
DATE: AG/25/20

RELEASED BY: E. VASQUEZ
DATE: AG/25/20

DRAWING TITLE: Piping Drawing (Plan 13 - 53B)
VLTF 100/VLTF-HX

SCALE: PUMP SIZE: PUMP TYPE: SHEETS/SHEETS
N/A 100%/LT-HX VLTF 1 OF 1

CUSTOMER DATA

CUSTOMER: YEBER TRANSPORT S.A

CUSTOMER P.O.: 002-20-1-AD0

END USER: VILAMONTES

LOCATION: VILAMONTES

SERVICE: BOOSTER PUMP

PROJECT: VILAMONTES BATCHED PUMP STATION

ITEM NO'S

PUMP NO.	BAKER NO.	RP - 08 NO.
151600016-01		
151600016-02		

DRAWING REFERENCE

DRAWING TITLE	DRAWING NUMBER
Sectional Drawing	7102910037
General Arrangement	7102910108
Noncomplete Drawing	7102910112

4.4



PORTADA 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 identificación

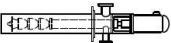
3	14-Oct-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
2	5-Oct-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
1	4-Sep-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
0	7-Aug-20	Aprobación	Eugenio Bustamante	Eugenio Bustamante	Eduardo R.
REV	FECHA	ENVIADO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







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

Resolution Sheet


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

- NOTES:
- Font: ISOCP
 - Font size: 2 mm
 - Colors: A: Polished silver
B: Black
 - Material: SST Austenitic
 - Thickness: 1 mm

		Ruhrpumpen, S.A. de C.V. Monterrey, N.L., Mexico	
Type	VS6	Size	100VLTf-HX
Serial No.	151600016-01	Year	2020
Tag No.	UBB 7 GE-DO-GLP	Qty. Stages	15
Cust. Order No.	002-20-T-ADQ	Head	508.2 ft
Liquid	GLP/GASOLINE/DIESEL	Capacity	78.75 gpm
Material	S-5	Rot. Speed	2757 rpm
Pump Efficiency	70.8 %	Power (Rated)	10.58 HP
Sp. Gr.	0.55 / 0.88	Power (Driver)	15 HP
MAWP	316 psig	@	114.8 °F
Hydro Test	474 psig	NPSH req.	0 ft
Dry Weight	1220 lbs	Min. Submergence	11.78 ft
During installation, raise impellers [125] off bottom			
For Parts & Service Call +52 (81) 8158-5500 www.ruhrpumpen.com			

		Ruhrpumpen, S.A. de C.V. Monterrey, N.L., Mexico	
Type	VS6	Size	100VLTf-HX
Serial No.	151600016-02	Year	2020
Tag No.	UBB 8 GE-DO-GLP	Qty. Stages	15
Cust. Order No.	002-20-T-ADQ	Head	508.2 ft
Liquid	GLP/GASOLINE/DIESEL	Capacity	78.75 gpm
Material	S-5	Rot. Speed	2757 rpm
Pump Efficiency	70.8 %	Power (Rated)	10.58 HP
Sp. Gr.	0.55 / 0.88	Power (Driver)	15 HP
MAWP	316 psig	@	114.8 °F
Hydro Test	474 psig	NPSH req.	0 ft
Dry Weight	1220 lbs	Min. Submergence	11.78 ft
During installation, raise impellers [125] off bottom			
For Parts & Service Call +52 (81) 8158-5500 www.ruhrpumpen.com			

DIMENSIONS AND TOLERANCES
PER ASME-Y14.5-2009



UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES DECIMALS

X ±.50 [1.3]
X ±.25 [6]
.XX ±.12 [3]

APPROVAL DRAWING NOTES

1. ENGINEER'S COMMENTS AND/OR REVISIONS, WITH THE SIGNATURE OF THE ENGINEER, SHALL BE MADE ON THE FRONT DRAWING SHEET.
2. COMMENTS, ADDITIONS, AND/OR DELETIONS SHALL BE MADE ON THE FRONT DRAWING SHEET.
3. THE DRAWING SHALL BE KEPT IN THE OFFICE OF THE ENGINEER.
4. FOR COPIES WITH "NOT FOR APPROVAL" INDICATION, RELEASE FROM MANUFACTURING MUST OCCUR FIRST. RELEASED COPIES SHALL BE DESTROYED UPON RECEIPT OF THE ORIGINAL DRAWING.

PROBATIONARY NOTE

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DRAWING STATUS

FOR PROPOSAL ONLY NOT CERTIFIED - FOR PROPOSAL ONLY
 FOR INFORMATION ONLY NO RETURN REQUIRED
 FOR APPROVAL DRAWING MUST BE RETURNED BY TWO WEEKS FROM CUSTOMER RECEIPT DATE TO MAINTAIN THE DELIVERY SCHEDULE
 RE-ISSUE FOR REVIEW OF CHANGES ONLY
 MANUFACTURING PROCESS HAS BEEN STARTED - ANY OTHER REQUESTED CHANGES WILL AFFECT PRICE AND DELIVERY
 FINAL MANUFACTURING PROCESS HAS BEEN STARTED - ANY OTHER REQUESTED CHANGES WILL AFFECT PRICE AND DELIVERY

REV	REVISION COMMENT	BY	CHECKED	DATE
3	ISSUED FOR APPROVAL	EBM	EV	OCT/14/20
2	ISSUED FOR APPROVAL	EBM	EV	OCT/22/20
1	ISSUED FOR APPROVAL	EBM	EV	SEP/3/20
0	ISSUED FOR APPROVAL	EBM	EV	AG/07/20

DRAWN BY: E. BUSTAMANTE
DATE: AG/07/20

RELEASED BY: E. VAZQUEZ
DATE: AG/07/20

DRAWING TITLE: NAMEPLATE DRAWING
VLT 100VLTf-HX

SCALE: PUMP SIZE: 7102910112
PUMP TYPE: SHEETS/SHEETS
N/A 100VLTf-HX VLTf 1 OF 1

CUSTOMER DATA

CUSTOMER: YEBE TRANSPORT S.A.
CUSTOMER P.O.: 002-20-T-ADQ
END USER: VILLAMONTES
LOCATION: VILLAMONTES
SERVICE: BOOSTER PUMP
PROJECT: VILLAMONTES BATCHED PUMP STATION

ITEM NOS

PUMP NO.	BAKER NO.	RP - JOB NO.
UBB 7 GE-DO-GLP	151600016-01	
UBB 8 GE-DO-GLP	151600016-02	

DRAWING REFERENCE

DRAWING TITLE	DRAWING NUMBER
Sectional Drawing	7102910037
Flange Drawing	7102910107
General Arrangement	7102910106

4.5



PORTADA 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)

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



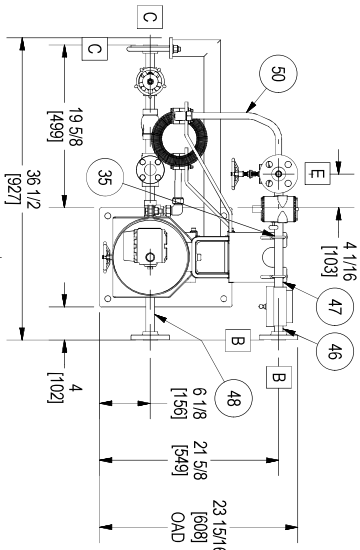
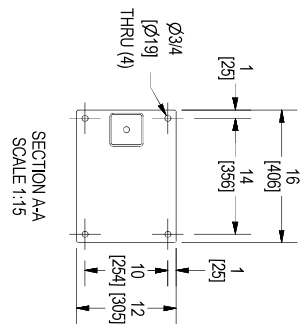
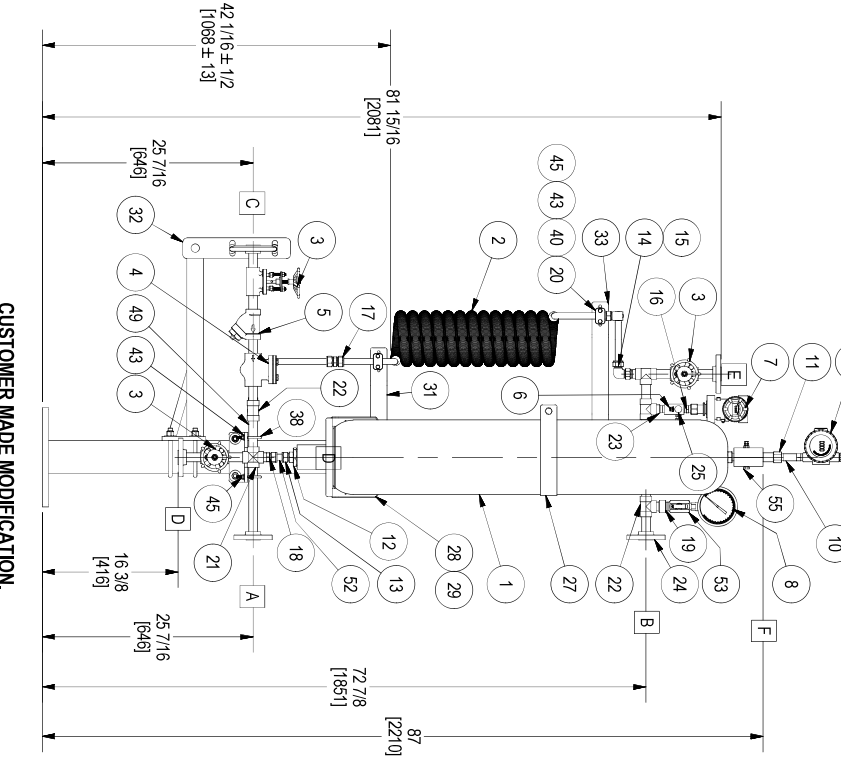
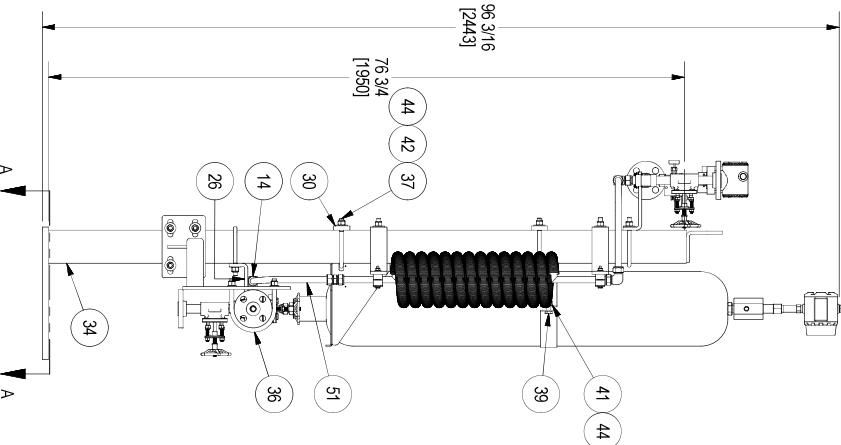


Customer P.O.:	002-20 -T-ADQ	Service:	BOOSTER PUMP
Project:	CHORETY BATCHED PUMP STATION	Job #	151600016
Customer:	YPFB Transporte S.A.	Date:	17/ December/ 2020

Resolution Sheet

No.	Comments	Answer
1	<i>Tanto la conexión 54 como el transmisor de temperatura (9) son de 1/2". No obstante la conexión F relativa a esta línea indica 1/4", favor aclarar.</i>	<i>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.</i>
2	<i>Cuáles son sus SET de Alarmas, diagramas de control de lazos</i>	<i>Se agrega hoja al final del documento.</i>
3		
4		

INCHES (MILLIMETERS) (REFERENCE ONLY)



CUSTOMER MADE MODIFICATION.
REDUCED STAND HEIGHT BY 43 INCHES.

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

EagleBurmgh
International Trade Trade
 (703) 539-2048

MAWP 620 PSI at 200°F
 MDWT -20°F at 620 PSI

HYDRO TEST 930 PSI

MODEL# 106415-10000-20000

IDENT # F98560000

ASSY #

- 1) ALL DIMENSIONS ARE ±1/4" ON VESSEL, ±1/2" ON PLUMBING, ±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) HYDRO @ 930 PSI
- 6) RECOMMEND BARRIER PRO AS THE BARRIER FLUID.

No.	Revision	Date	Num	Projection	Remove All Burrs And Sharp Edges. Finish To Be Smooth On All Square Surfaces.	Customer
No.1				3rd Angle		RuhrPumpEN
No.2						MAGELLAN MIDSTREAM PARTNERS
No.3						
No.4		07/28/2020			Checked	
No.5						
No.6						
No.7						
No.8						
No.9						
No.10						

Scale: 1:15

Description: ASSEMBLY DRAWING
 PLAN 538 WITH AIR COOLED HEAT EXCHANGER

Quantity: 2
 Lot Number: 106415-10000-20000
 P.O. #: 123006725

Drawn No: F98560000
 Checked No: F98560000
 Replacement for: F98560000

Customer: RuhrPumpEN
 Project #: MAGELLAN MIDSTREAM PARTNERS
 Refer to protection notice ISO 15616

EagleBurmgh
 EagleBurmgh GmbH & Co. KG
 10635 Brockdorf Dr., Houston, TX 77040 USA

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" COMPILER PORT, 2100 PSI, SAE #24 FLUID PORT, BURNA-NITRILE BLADDER, ACCUMULATOR INC. A-10-IBC-2100-3	SA-966 F316	21	1	G18988234	CROSS, 3/4" SW, #3000, 316	SA-182 F316L SS
2	1	G20617224	COIL, 3/4" x 0.095" WALL TUBE x 20' COIL WITH 1/4" FINS	SA-269 F316L SS	4	1	G18988234	TEE, 3/4" SW, 300#	SA-182 F316L SS
3	3	G21420234	GATE VALVE, 3/4" SW X 3/4" SW, 800# BOLTED BONNET, OS&Y, 316SS BODY AND TRIM, CAMS ARE REQUIRED FOR THE VALVE BODIES CASTINGS OR FORGINGS FROM CHINA ARE NOT ALLOWED. PROCESS CONNECTIONS ARE 3/4" SW & 3/4" SW, YOGT #SW12401	SA-182 F316L SS	22	1	G25373234	SWAGE NIPPLE, 3/4" PE X 1/2" NPT, 2" LG	SA-312 TP316L SS
4	1	G18991234	CHECK VALVE, 3/4" SW, 800#, BOLTED BONNET, PISTON, YOGT #SW178-05	SA-182 F316L SS	24	5	G21181234	FLANGE, 3/4" 300# FRSW, 125-250 RMS	SA-182 F316L SS
5	1	G25375234	Y-STRAINER, TTAN # YS82-SS, CLASS 800#, 3/4" SW ENDS, 1/16" SCREEN 41%, OPEN AREA, SA-351 GR CF8M, WITH 3/8" NPT SS PLUG.	SA-351 GR CF8M	25	2	G2537299	PIPE BRACKET, #P-BKT-5" C/FOR CROSS, 5.5" CENTER, BURNO-OUT FOR SWAGELOK CROSS	SA-36 CS (GALVANIZED)
6	1	G23374234	STATIC PRESSURE 2 VALVE MANIFOLD, AGON# BTMMWS-4, 1/2" NPT PROCESS, INSTRUMENT & VENT PORTS, 1/4" FNPT 316SS INTEGRAL SENITS, TEFLOM BONNET PACKING, PRESSURE TRANSMITTER, 1/2" FNPT 316SS PROCESS CONNECTION, CAST ALUMINUM HOUSING, 1/2" NPT ELECTRICAL CONNECTION, HART PROTOCOL, HASTELLOY C-276 DIAPHRAGM WITH LCD DIGITAL INDICATOR & METRIC UNITS CALIBRATION, LOOP POWERED, FW FLAME PROOF, 29 TO 1490 PSI ADJUSTABLE RANGE, YOKOGAWA #EX390A-CSA4-012DN-F1/D4.	SA-479 F316L SS	26	2	G2537299	UPPER ACCUMULATOR BRACKET ACC-BKT-U	SA-36 CS (GALVANIZED)
7	1	G24750199	PRESSURE GAUGE, 1/2" DIA, 0.5% ACCURACY, SOLID FRONT CASE DESIGN WITH BLOW-OUT BACK DESIGN, SS CASE MATERIAL, 316/316SS BOURDON TUBE AND SOCKET MATERIAL, 1/2" MA-NPT LOWER CONNECTION, SAFETY GLASS WINDOW, 0-600 PSIG RANGE, ASHROFT 45 1109SD DIA, XSG-0600#.	SA-479 F316L SS	27	1	G19905299	ACCUMULATOR LOWER SUPPORT BRACKET, SP #ACC-BKT-L	SA-36 CS (GALVANIZED)
8	1	G24866234	RTD, ROSEMOUNT 214CRTSMB1SAE0042SL5EXXXV, TEMPERATURE SENSOR (RTD), 1/2" NPT(M) PROCESS CONNECTIONS, 1/2" NPT(E) ELECTRICAL CONNECTIONS, -50 TO 450°C (-58 TO 842°F), FM EXPLOSION PROOF AND DUST-IGNITION PROOF, THIN-FILM PT100, SINGLE SENSOR, 4-WIRE CONFIGURATION, 4.25" INSERTION LENGTH, SPINNING LOADED ADAPTER MOUNTING STYLE, TRANSMITTER ASSEMBLED TO SENSOR AND SENSOR ASSEMBLED TO THERMOWELL	SA-240 316L SS	28	1	G24454000	ACCUMULATOR LOWER SUPPORT BRACKET, SP #ACC-BKT-L	SA-36 CS (GALVANIZED)
9	1	G28663234	314PD1A1K5MAYACA ROSEMOUNT TEMPERATURE TRANSMITTER, ALUMINUM HOUSING, 1/2" ELECTRICAL CONNECTION, 4.20 mA DIGITAL SIGNAL, HART PROTOCOL, SINGLE SENSOR INPUT, FMS, NON-INCENDIVE & EXPLOSION-PROOF COMBO (INCLUDES STANDARD IS AND FISCO FOR FIELDSUBS UNITS), LCD DISPLAY, CALL BRATION CERTIFICATE, 4.20 mA-0-2000°F, SENSOR SPECIFIED SEPARATELY AND ASSEMBLED TO TRANSMITTER	ALUMINUM	29	1	G25369299	BACKER PLATE, 1/2" X 2" X 6" WITH (2) 5/8" DIAMETER HOLES ON 4 1/2" CENTERS, USED WITH 4" SQUARE U-BOLTS, SA-36	SA-36 CS (GALVANIZED)
10	1	G24388239	RTD, ROSEMOUNT 214CRTSMB1SAE0042SL5EXXXV, TEMPERATURE SENSOR (RTD), 1/2" NPT(M) PROCESS CONNECTIONS, 1/2" NPT(E) ELECTRICAL CONNECTIONS, -50 TO 450°C (-58 TO 842°F), FM EXPLOSION PROOF AND DUST-IGNITION PROOF, THIN-FILM PT100, SINGLE SENSOR, 4-WIRE CONFIGURATION, 4.25" INSERTION LENGTH, SPINNING LOADED ADAPTER MOUNTING STYLE, TRANSMITTER ASSEMBLED TO SENSOR AND SENSOR ASSEMBLED TO THERMOWELL	316L SS WTD	30	2	G20259000	ACC-BK-PT-COIL-SUP-LWR-GALV	SA-36 CS (GALVANIZED)
11	1	G23090234	STRAIGHT SHANK THREADED T-WELL, 1.82" U", .280 BORE, 3/4" MA-NPT PROCESS TO 1/2" FNPT SENSOR, ROSEMOUNT #14CE00151AB1SC027BXW	SA-479 TP316L SS	31	1	G23368299	53B SUPPORT, 22.75" GALV LEFT HAND	SA-580 304 SS
12	1	G23036234	REDUCING BUSHING, SAE #24, THREAD X SAE #12 ID, THREAD, O-RING SEAL BOTH, HEX HEAD PARKER, #24-12 F50C5	SA-182 F316L SS	32	1	G23367299	BK-PT-COIL-SUP-PP-GALV	SA-580 304 SS
13	1	G23843234	TUBE FITTING, MALE CONNECTOR, 3/4 IN. TUBE OD X 1 1/16-12 MALE SAEMMS STRAIGHT THREADED, SWAGELOK #SS-1210-1-12ST	SA-479 F316L SS	33	1	G23366299	STAND, 120", 4X4X1/4, 12X16 BASE, GALVANIZED	SA-580 304 SS
14	3	G19054234	ELBOW, UNION 90, 3/4" TUBE, SWAGELOK #SS-1210-9	SA-479 TP316L SS	34	1	F05799299	FLAT WASHER, 1/2" SAE 1-1/16", DIA 3/4" SS	SA-580 304 SS
15	2	G22241234	MALE PIPE WELD CONNECTOR, 3/4" NPS X 3/4" TUBE, SWAGELOK #SS-12-1A-1-12W	SA-479 TP316L SS	35	2	G23365299	FLAT WASHER, 1/2" USS, 1.368 DIA., 3/16 SS	SA-580 304 SS
16	1	G21956234	HEX NIPPLE, 1/2" NPT, SWAGELOK #SS-8-1H	SA-479 TP316L SS	36	1	G23364234	U-BOLT, 1/4-20 X 1 1/2 DIA X 2.0 304 SS	SA-580 304 SS
17	1	G24166234	UNION, 3/4" TUBE TO 3/4" TUBE, SWAGELOK #SS-1210-6	SA-479 TP316L SS	37	8	G23363234	4" SQU-BOLT, 1-1/2-13 X 4" INSIDE DIMENSION X 5 3/4" LEG	SA-580 304 SS
18	1	G22246234	MALE WELD CONNECTOR, 3/4" TUBE TO 3/4" NPS WELD END, SWAGELOK #SS-1210-1-12W	SA-479 TP316L SS	38	2	G23362255	U BOLT, 1/4-20, 1 1/2 LD., 2 3/4" DEPTH, 304SS	SA-580 304 SS
19	1	G23058234	REDUCING INSERT, 3/4" SW X 3/4 FNPT TYPE 1	SA-479 TP316L SS	39	1	G21944255	HEX HEAD CAP SCREW, 1/2-13 X 1-3/4" LG., 304 STAINLESS STEEL, ALLOY GROUP 2, CONDITION CW PER ASTM F593	SA-583 304L SS
20	2	G24089239	TUBE SUPPORT KIT, 3/4" TUBE, SWAGELOK, #304-S3-PP-12T, POLYPROPYLENE & SS COVER.	MFR STD	40	4	G23360234	HEX HEAD CAP SCREW, 1/4-20 X 2-1/2" LG., 316 STAINLESS STEEL, ALLOY GROUP 2, CONDITION CW PER ASTM F593	SA-583 316L SS