



UTEX INDUSTRIES, INC.

WELL SERVICE PRODUCTS CATALOG

THE GOLD STANDARD



**Products that Last.
Innovation that Keeps on Going.**

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For Superior Service and Seal Life, Use Only Authorized Utex Components!

For increased service life, reduction in downtime and increased profitability, Utex proudly recommends the SuperGold® Extreme Service Products and the Patented XLH® X-Tended Life Header Ring!

XLH[®] X-TENDED LIFE HEADER RING

The Gold Standard of High Performance Well Stimulation Packing

PATENTED
Pat. 9,534,691

Why Wait to Increase Profitability?

Significantly Lowers Maintenance Cost & Reduces Downtime!

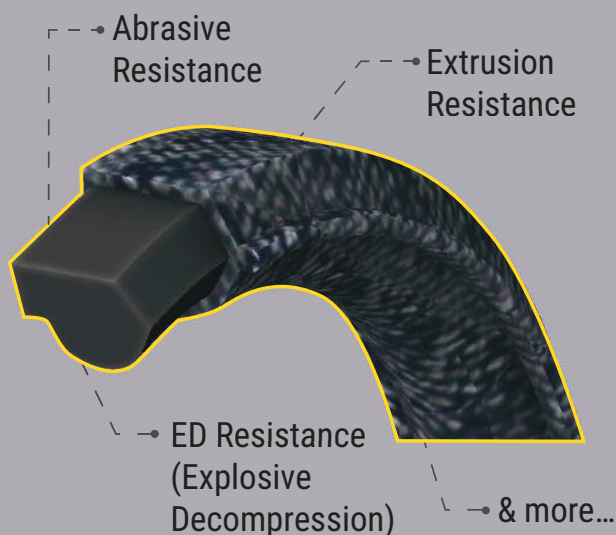
XLH[®] the only *patented* fabric reinforced header ring in the market today.

Exceptional performance levels up to 18% HCl.

XLH[®]

The industry standard for packing life & extending the life of the fluid end since 2007.

Featuring enhanced:



Applications include:

- Fracturing with high rate 100 mesh sand & ceramic proppant
- CO₂
- Cementing
- Hydrocarbon based fluids

Our ability to design & manufacture engineered seals & components has given us a reputation as innovators in worldwide markets.



XLH[®] Style Numbers for Well Service Packing Assemblies

SSF Design Pressure Ring

SSF Style	Header Ring Material		
	HNBR	FKME	D Resistant
1028 (490K)	2108	-	2128
1092 (126C)	-	2112	-
1093 (126K)	-	2113	-
4501 (5707)	2101	21112	121
1067 (46C)	2107	-	2127



SF Design Pressure Ring

SF Style	Header Ring Material		
	HNBR	FKME	D Resistant
0798 (490K)	2198	-	2178
6670 (126C)	-	2180	-
4515 (5707)	2195	2185	2175
0817 (46C)	2197	-	2177

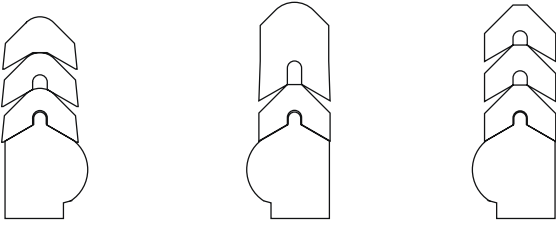
WELL SERVICE PACKING

Well Service Packing by Pump Model

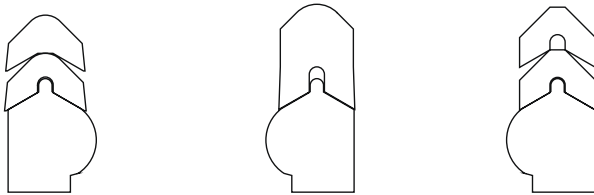
Complete Set - Includes all components as well as the Lantern Ring/Seal Carrier (unless otherwise noted)

Replacement Set - Includes Top Adapter, Pressure Ring, Header Ring, PS Seal and O-ring (where applicable)

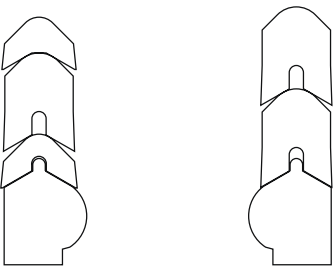
Possible Configurations



Header Ring with 3 Stack Height Tall Packing



Header Ring with 2 Stack Height Tall Packing



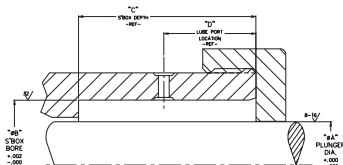
Header Ring with 4 Stack Height Tall Packing

Well Service Packing Application Data Request (ADR)

Please provide the following information:

Circle One: Triplex Quintuplex

- A) Plunger OD _____
 B) Stuffing Box Bore ID _____
 C) Stuffing Box Depth _____
 D) Lubrication Port _____



Utex Assembly P/N Nomenclature

XXXX-XX-XXXX-XX

Style | Size
 03 - Complete
 01 - Replacement

Utex Size Field Explained

XXXX-XX-0107-XX	3" X 4"
XXXX-XX-0283-XX	3-3/8" X 4-3/8"
XXXX-XX-0090-XX	3-3/4" X 4-3/4"
XXXX-XX-0103-XX	4" X 5"
XXXX-XX-0101-XX	4-1/2" X 5-1/2"
XXXX-XX-0250-XX	5" X 6"



SPECIAL PEEK ADAPTER PDN
 1036-52-XXXX-03



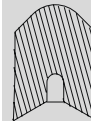
STANDARD TOP ADAPTER PDN
 1036-50-XXXX-03



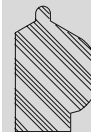
SPECIAL "S" VEE RING PDN
 4515-26-XXXX-04



"SF" PRESS. RING PDN XXXX-XX-XXXX-XX	MOLD SUFFIX
	SIZE FIELD
4515-26-	(5707 CARBON/GRAPHITE FILLED PTFE)
0758-52-	(490k SPECIAL HSN & ARAMID CLOTH - SUPER GOLD)
0809-52-	(46c NITRILE/PTFE & COTTON/POLYESTER/GLASS)



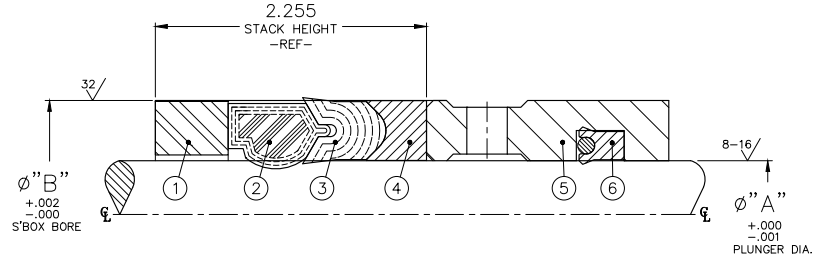
"SSF" PRESSURE RING PDN XXXX-XX-XXXX-01	MOLD SUFFIX
	SIZE FIELD
4501-26-	(5707 CARBON & GRAPHITE FILLED PTFE)
1091-52-	(126C FKM/POLYESTER/COTTON BLEND FABRIC)
1058-52-	(490K SPECIAL HSN & ARAMID CLOTH - SUPER GOLD)
1068-52-	(46C NITRILE/PTFE & COTTON/POLYESTER/GLASS)



HEADER RING PDN XXXX-XX-XXXX-XX	MOLD SUFFIX
	SIZE FIELD
0784-14-	(7579 FKM)
0788-18-	(8819 HNBR)
0788-19-	(8849 HNBR FOR CO2 SERVICE)
0788-20-	(10801/8849 HNBR FOR CO2 SERVICE)
0788-22-	(8818/37C HNBR W/COTTON POLYESTER FOR EXTREME ABRASIVE SERVICE)

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=.606")	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	50320 (PEEK)
5	LANTERN RING/SEAL CARRIER	1	NOT PROVIDED
6	PSOA SEAL	1	10819 (HNBR)



CHEMICAL SERVICE	STANDARD SERVICE			CO2 SERVICE		EXTENDED SERVICE			
	A	B	C	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	4-1/2"	5-1/2"	2.250"	4501-03-0101-29	4501-01-0101-30	4501-03-0101-31	4501-01-0101-32	2101-03-0101-31	2101-01-0101-32
	5-1/2"	6-1/2"	2.250"	4501-03-0416-16	4501-01-0416-17	4501-03-0416-18	4501-01-0416-19	2101-03-0416-18	2101-01-0416-19
	6"	7"	2.250"	4501-03-0223-09	4501-01-0223-10	4501-03-0223-11	4501-01-0223-12	2101-03-0223-11	2101-01-0223-12

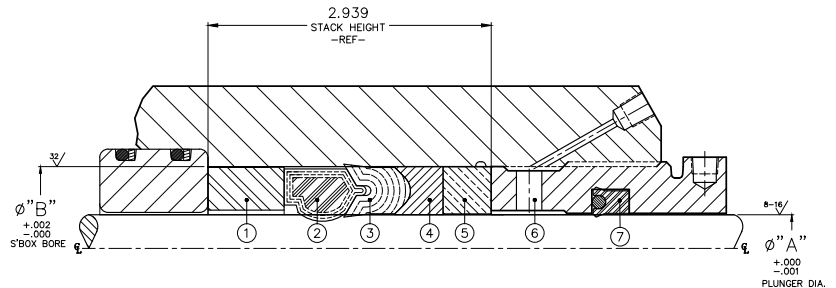
EXTREME SERVICE	STANDARD SERVICE			CO2 SERVICE		EXTENDED SERVICE			
	A	B	C	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	4-1/2"	5-1/2"	2.250"	1028-03-0101-63	1028-01-0101-64	1028-03-0101-65	1028-01-0101-66	2108-03-0101-65	2108-01-0101-66
	5-1/2"	6-1/2"	2.250"	1028-03-0416-04	1028-01-0416-05	1028-03-0416-06	1028-01-0416-07	2108-03-0416-06	2108-01-0416-07
	6"	7"	2.250"	1028-03-0223-02	1028-01-0223-03	1028-03-0223-04	1028-01-0223-05	2108-03-0223-04	2108-01-0223-05

FILE REFERENCE
DWG# B-7654-C
DWG# B-7799-C

GD-700, GD-1250

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=.790")	1	G10180 (1018 CS)
2	HEADER RING	1	See Table Page 12
3	"SSF" PRESSURE RING	1	Chemical Service - 4501 (C/G PTFE) Extreme Service - 1028 SUPERGOLD
4	TOP ADAPTER	1	50320 (PEEK)
5	BUSHING (L=.500")	1	C95400 (9C AL. BRZ.)
6	LANTERN RING/SEAL CARRIER	1	NOT PROVIDED
7	PS SEAL TYPE B (1/4" CS X 3/8" HT)	1	88195 (HNBR)



CHEMICAL SERVICE	STANDARD SERVICE			CO2 SERVICE		EXTENDED SERVICE			
	A	B	C	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	3"	4"	2.930"	4501-03-0107-05	4501-01-0107-04	4501-03-0107-12	4501-01-0107-13	2101-03-0107-12	2101-01-0107-13
	3-3/4"	4-3/4"	2.930"	4501-03-0090-04	4501-01-0090-03	4501-03-0090-05	4501-01-0090-06	2101-03-0090-05	2101-01-0090-06
	4"	5"	2.930"	4501-03-0103-14	4501-01-0103-15	4501-03-0103-16	4501-01-0103-17	2101-03-0103-16	2101-01-0103-17
	4-1/2"	5-1/2"	2.930"	4501-03-0101-13	4501-01-0101-12	4501-03-0101-19	4501-01-0101-20	2101-03-0101-19	2101-01-0101-20
	5"	6"	2.930"	4501-03-0250-19	4501-01-0250-18	4501-03-0250-22	4501-01-0250-23	2101-03-0250-22	2101-01-0250-23
	5-1/2"	6-1/2"	2.930"	4501-03-0416-07	4501-01-0416-08	4501-03-0416-14	4501-01-0416-15	2101-03-0416-14	2101-01-0416-15
	6"	7"	2.930"	4501-03-0223-06	4501-01-0223-05	4501-03-0223-07	4501-01-0223-08	2101-03-0223-07	2101-01-0223-08
	6-1/2"	7-1/2"	2.930"	4501-03-0230-04	4501-01-0230-03	4501-03-0230-05	4501-01-0230-06	2101-03-0230-05	2101-01-0230-06
	6-3/4"	7-3/4"	2.930"	4501-03-0558-02	4501-01-0558-01	4501-03-0558-03	4501-01-0558-04	2101-03-0558-03	2101-01-0558-04

EXTREME SERVICE	STANDARD SERVICE			CO2 SERVICE		EXTENDED SERVICE			
	A	B	C	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	3"	4"	2.930"	1028-03-0107-64	1028-01-0107-65	1028-03-0107-66	1028-01-0107-67	2108-03-0107-66	2108-01-0107-67
	3-3/4"	4-3/4"	2.930"	1028-03-0090-94	1028-01-0090-95	1028-03-0090-96	1028-01-0090-97	2108-03-0090-96	2108-01-0090-97
	4"	5"	2.930"	1028-03-0103-97	1028-01-0103-98	1028-03-0103-99	1028-01-0103-01	2108-03-0103-99	2108-01-0103-01
	4-1/2"	5-1/2"	2.930"	1028-03-0101-51	1028-01-0101-52	1028-03-0101-53	1028-01-0101-54	2108-03-0101-53	2108-01-0101-54
	5"	6"	2.930"	1028-03-0250-80	1028-01-0250-81	1028-03-0250-82	1028-01-0250-83	2108-03-0250-82	2108-01-0250-83
	5-1/2"	6-1/2"	2.930"	1028-03-0416-99	1028-01-0416-01	1028-03-0416-02	1028-01-0416-03	2108-03-0416-02	2108-01-0416-03
	6"	7"	2.930"	1028-03-0223-97	1028-01-0223-98	1028-03-0223-99	1028-01-0223-01	2108-03-0223-99	2108-01-0223-01
	6-1/2"	7-1/2"	2.930"	1028-03-0230-81	1028-01-0230-82	1028-03-0230-83	1028-01-0230-84	2108-03-0230-83	2108-01-0230-84
	6-3/4"	7-3/4"	2.930"	1028-03-0558-55	1028-01-0558-56	1028-03-0558-57	1028-01-0558-58	2108-03-0558-57	2108-01-0558-58

FILE REFERENCE
DWG# B-7300-C
DWG# B-7794-C

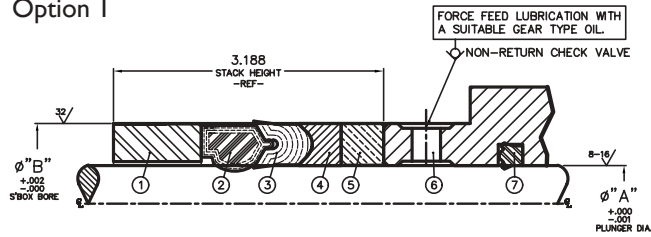


GD, PFP, ValTek, Forum - Y Fluid End / PFP

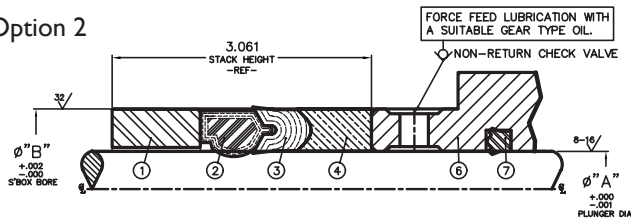
LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (Size Varies)	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING (Option 1 or 2) (Option 3)	1 2	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	50320 (PEEK) or C95400 (9C AL. BRZ.)
5	BUSHING (L=0.500")	1	C95400 (9C AL. BRZ.)
6	GLAND NUT		NOT PROVIDED
7	PS/PSO SEAL	1	10819 (HNBR)

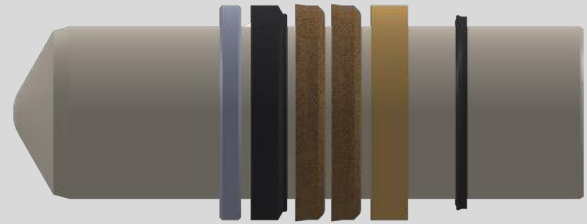
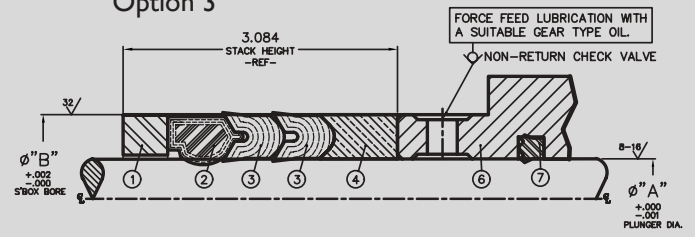
Option 1



Option 2



Option 3



		STANDARD SERVICE		CO2 SERVICE		CO2 / EXTENDED / EXTREME SERVICE	
		Style 1028, 1067 or 4501		Style 1028, 1067, 2108 or 4501		Style 1028, 1067, 2101, 2107, 2108, 4501	
	A B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
OPTION 1	3-3/4" 4-3/4"	XXXX-23-0090-39	XXXX-21-0090-40	XXXX-23-0090-41	XXXX-21-0090-42	XXXX-23-0090-43	XXXX-21-0090-44
	4" 5"	XXXX-23-0103-24	XXXX-21-0103-25	XXXX-23-0103-26	XXXX-21-0103-27	XXXX-23-0103-28	XXXX-21-0103-29
	4-1/2" 5-1/2"	XXXX-23-0101-01	XXXX-21-0101-02	XXXX-23-0101-03	XXXX-21-0101-04	XXXX-23-0101-05	XXXX-21-0101-06
	5" 6"	XXXX-23-0250-46	XXXX-21-0250-47	XXXX-23-0250-48	XXXX-21-0250-49	XXXX-23-0250-50	XXXX-21-0250-51
	5-1/2" 6-1/2"	XXXX-23-0416-01	XXXX-21-0416-02	XXXX-23-0416-03	XXXX-21-0416-04	XXXX-23-0416-05	XXXX-21-0416-06
OPTION 2	6" 7"	XXXX-23-0223-35	XXXX-21-0223-36	XXXX-23-0223-37	XXXX-21-0223-38	XXXX-23-0223-39	XXXX-21-0223-40
	3-3/4" 4-3/4"	XXXX-23-0090-45	XXXX-21-0090-46	XXXX-23-0090-47	XXXX-21-0090-48	XXXX-23-0090-49	XXXX-21-0090-50
	4" 5"	XXXX-23-0103-30	XXXX-21-0103-31	XXXX-23-0103-32	XXXX-21-0103-33	XXXX-23-0103-34	XXXX-21-0103-35
	4-1/2" 5-1/2"	XXXX-23-0101-30	XXXX-21-0101-31	XXXX-23-0101-32	XXXX-21-0101-33	XXXX-23-0101-34	XXXX-21-0101-35
	5" 6"	XXXX-23-0250-52	XXXX-21-0250-53	XXXX-23-0250-54	XXXX-21-0250-55	XXXX-23-0250-56	XXXX-21-0250-57
OPTION 3	5-1/2" 6-1/2"	XXXX-23-0416-30	XXXX-21-0416-31	XXXX-23-0416-32	XXXX-21-0416-33	XXXX-23-0416-34	XXXX-21-0416-35
	6" 7"	XXXX-23-0223-41	XXXX-21-0223-42	XXXX-23-0223-43	XXXX-21-0223-44	XXXX-23-0223-45	XXXX-21-0223-46
	3-3/4" 4-3/4"	XXXX-23-0090-51	XXXX-21-0090-52	XXXX-23-0090-53	XXXX-21-0090-54	XXXX-23-0090-55	XXXX-21-0090-56
	4" 5"	XXXX-23-0103-36	XXXX-21-0103-37	XXXX-23-0103-38	XXXX-21-0103-39	XXXX-23-0103-40	XXXX-21-0103-41
	4-1/2" 5-1/2"	XXXX-23-0101-38	XXXX-21-0101-39	XXXX-23-0101-40	XXXX-21-0101-41	XXXX-23-0101-42	XXXX-21-0101-43
	5" 6"	XXXX-23-0250-58	XXXX-21-0250-59	XXXX-23-0250-60	XXXX-21-0250-61	XXXX-23-0250-62	XXXX-21-0250-63
	5-1/2" 6-1/2"	XXXX-23-0416-36	XXXX-21-0416-37	XXXX-23-0416-38	XXXX-21-0416-39	XXXX-23-0416-40	XXXX-21-0416-41
	6" 7"	XXXX-23-0223-47	XXXX-21-0223-48	XXXX-23-0223-49	XXXX-21-0223-50	XXXX-23-0223-51	XXXX-21-0223-52
	7-1/2" 8-1/2"	XXXX-23-0506-09	XXXX-21-0506-10	XXXX-23-0506-11	XXXX-21-0506-12	XXXX-23-0506-13	XXXX-21-0506-14

FILE REFERENCE
DWG# B-7962-C

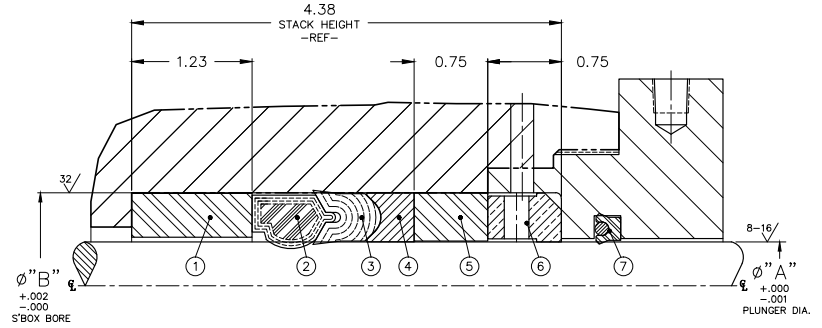
SPM Destiny™, NOV, ValTek, Forum, CAT - 2250, 2400, 2500

- Single SSF with PEEK

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=1.226")	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	50320 (PEEK)
5	BUSHING (L=.750")	1	C1018 (L.C. STEEL)
6	LANTERN RING	1	C95400 (9C AL. BRZ.)
7	PS/PSO SEAL	1	10819 (HNBR)

Destiny™ is a Tradename of Weir Oil and Gas



		STANDARD SERVICE		CO2 SERVICE		CO2 / EXTENDED / EXTREME SERVICE		HIGH TEMPERATURE / ACID SERVICE	
		Style 1028, 1067 or 4501		Style 1028, 1067 or 4501		Style 1028, 1067, 2101, 2107, 2108 or 4501		Style 1092 or 4501	
A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
2-3/4"	3-3/4"	XXXX-23-0108-01	XXXX-21-0108-02	XXXX-23-0108-03	XXXX-21-0108-04	XXXX-23-0108-05	XXXX-21-0108-06	XXXX-23-0108-07	XXXX-21-0108-08
3"	4"	XXXX-23-0107-01	XXXX-21-0107-02	XXXX-23-0107-03	XXXX-21-0107-04	XXXX-23-0107-05	XXXX-21-0107-06	XXXX-23-0107-07	XXXX-21-0107-08
3-1/2"	4-1/2"	XXXX-23-0082-01	XXXX-21-0082-02	XXXX-23-0082-03	XXXX-21-0082-04	XXXX-23-0082-05	XXXX-21-0082-06	XXXX-23-0082-07	XXXX-21-0082-08
3-3/4"	4-3/4"	XXXX-23-0090-01	XXXX-21-0090-02	XXXX-23-0090-03	XXXX-21-0090-04	XXXX-23-0090-05	XXXX-21-0090-06	XXXX-23-0090-07	XXXX-21-0090-08
4"	5"	XXXX-23-0103-01	XXXX-21-0103-02	XXXX-23-0103-03	XXXX-21-0103-04	XXXX-23-0103-05	XXXX-21-0103-06	XXXX-23-0103-07	XXXX-21-0103-08
4-1/2"	5-1/2"	XXXX-23-0101-13	XXXX-21-0101-14	XXXX-23-0101-15	XXXX-21-0101-16	XXXX-23-0101-17	XXXX-21-0101-18	XXXX-23-0101-19	XXXX-21-0101-20
5"	6"	XXXX-23-0250-07	XXXX-21-0250-08	XXXX-23-0250-09	XXXX-21-0250-10	XXXX-23-0250-11	XXXX-21-0250-12	XXXX-23-0250-13	XXXX-21-0250-14
5-1/2"	6-1/2"	XXXX-23-0416-07	XXXX-21-0416-08	XXXX-23-0416-09	XXXX-21-0416-10	XXXX-23-0416-11	XXXX-21-0416-12	XXXX-23-0416-13	XXXX-21-0416-14
5-3/4"	6-3/4"	XXXX-23-0346-01	XXXX-21-0346-02	XXXX-23-0346-03	XXXX-21-0346-04	XXXX-23-0346-05	XXXX-21-0346-06	XXXX-23-0346-07	XXXX-21-0346-08
6"	7"	XXXX-23-0223-01	XXXX-21-0223-02	XXXX-23-0223-03	XXXX-21-0223-04	XXXX-23-0223-05	XXXX-21-0223-06	XXXX-23-0223-07	XXXX-21-0223-08
6-1/2"	7-1/2"	XXXX-23-0230-01	XXXX-21-0230-02	XXXX-23-0230-03	XXXX-21-0230-04	XXXX-23-0230-05	XXXX-21-0230-06	XXXX-23-0230-07	XXXX-21-0230-08
6-3/4"	7-3/4"	XXXX-23-0558-01	XXXX-21-0558-02	XXXX-23-0558-03	XXXX-21-0558-04	XXXX-23-0558-05	XXXX-21-0558-06	XXXX-23-0558-07	XXXX-21-0558-08
7-1/2"	8-1/2"	XXXX-23-0506-01	XXXX-21-0506-02	XXXX-23-0506-03	XXXX-21-0506-04	XXXX-23-0506-05	XXXX-21-0506-06	XXXX-23-0506-07	XXXX-21-0506-08

FILE REFERENCE
DWG# B-7971-C

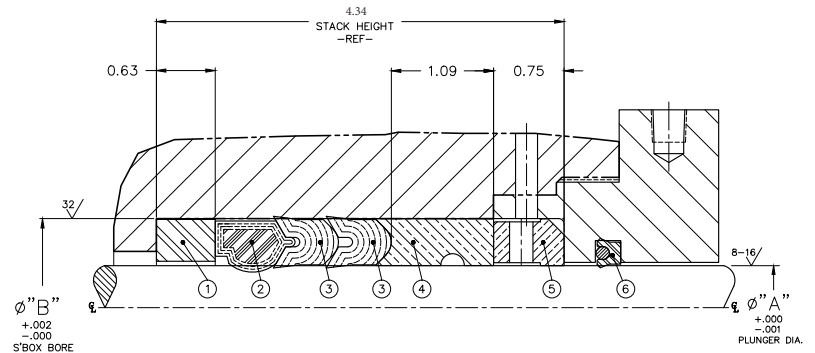
SPM Destiny™, NOV, ValTek, Forum, CAT - 2250, 2400, 2500

- Double SSF

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=.625")	1	C1018 (L.C. Steel)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	2	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	C95400 (9C AL. BRZ.)
5	LANTERN RING	1	C95400 (9C AL. BRZ.)
6	PS/PSO SEAL	1	10819 (HNBR)

Destiny™ is a Tradename of Weir Oil and Gas



		STANDARD SERVICE		CO2 SERVICE		CO2 / EXTENDED / EXTREME SERVICE	
		Style 1028 or 1067		Style 1028 or 1067		Style 1028, 1067, 2107, 2108, 2112 or 2113	
A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
2-3/4"	3-3/4"	XXXX-03-0108-42	XXXX-01-0108-43	XXXX-03-0108-44	XXXX-01-0108-45	XXXX-03-0108-46	XXXX-01-0108-47
3"	4"	XXXX-03-0107-84	XXXX-01-0107-85	XXXX-03-0107-86	XXXX-01-0107-87	XXXX-03-0107-88	XXXX-01-0107-89
3-1/2"	4-1/2"	XXXX-03-0082-34	XXXX-01-0082-35	XXXX-03-0082-36	XXXX-01-0082-37	XXXX-03-0082-38	XXXX-01-0082-39
3-3/4"	4-3/4"	XXXX-03-0090-15	XXXX-01-0090-16	XXXX-03-0090-17	XXXX-01-0090-18	XXXX-03-0090-19	XXXX-01-0090-20
4"	5"	XXXX-03-0103-11	XXXX-01-0103-12	XXXX-03-0103-13	XXXX-01-0103-14	XXXX-03-0103-15	XXXX-01-0103-16
4-1/2"	5-1/2"	XXXX-03-0101-76	XXXX-01-0101-77	XXXX-03-0101-78	XXXX-01-0101-79	XXXX-03-0101-80	XXXX-01-0101-81
5"	6"	XXXX-03-0250-07	XXXX-01-0250-08	XXXX-03-0250-09	XXXX-01-0250-10	XXXX-03-0250-11	XXXX-01-0250-12
5-1/2"	6-1/2"	XXXX-03-0416-17	XXXX-01-0416-18	XXXX-03-0416-19	XXXX-01-0416-20	XXXX-03-0416-21	XXXX-01-0416-22
5-3/4"	6-3/4"	XXXX-03-0346-91	XXXX-01-0346-92	XXXX-03-0346-93	XXXX-01-0346-94	XXXX-03-0346-95	XXXX-01-0346-96
6"	7"	XXXX-03-0223-14	XXXX-01-0223-15	XXXX-03-0223-16	XXXX-01-0223-17	XXXX-03-0223-18	XXXX-01-0223-19
6-1/2"	7-1/2"	XXXX-03-0230-93	XXXX-01-0230-94	XXXX-03-0230-95	XXXX-01-0230-96	XXXX-03-0230-97	XXXX-01-0230-98
6-3/4"	7-3/4"	XXXX-03-0558-67	XXXX-01-0558-68	XXXX-03-0558-69	XXXX-01-0558-70	XXXX-03-0558-71	XXXX-01-0558-72
7-1/2"	8-1/2"	XXXX-03-0506-39	XXXX-01-0506-40	XXXX-03-0506-41	XXXX-01-0506-42	XXXX-03-0506-43	XXXX-01-0506-44

FILE REFERENCE
DWG# B-7816-C
DWG# B-8248-C

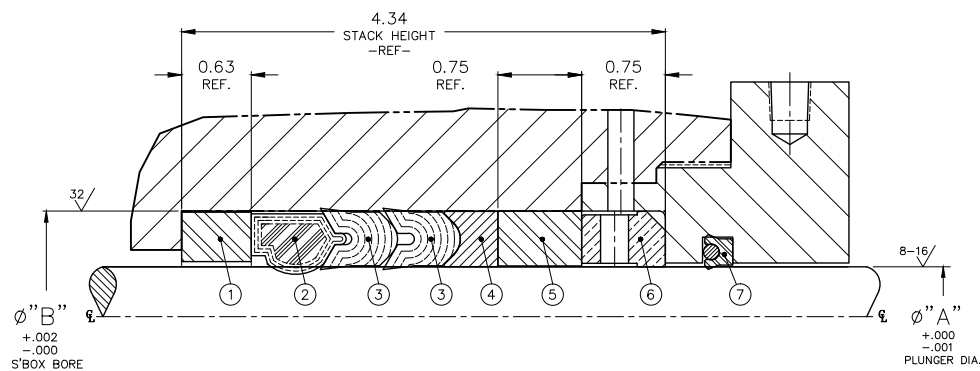
SPM Destiny™, NOV, ValTek, Forum, CAT - 2250, 2400, 2500 ———

- Double SSF with PEEK

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=.625")	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	2	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	50320 (PEEK)
5	BUSHING (L=.750")	1	C1018 (L.C. STEEL)
6	LANTERN RING	1	C95400 (9C AL. BRZ.)
7	PS/PSO SEAL	1	10819 (HNBR)

Destiny™ is a Tradename of Weir Oil and Gas



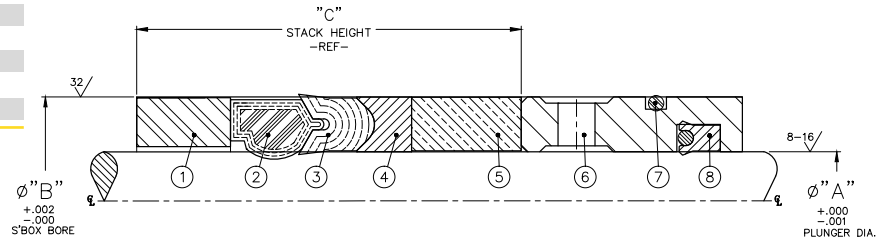
		STANDARD SERVICE		CO2 SERVICE		CO2 / EXTENDED / EXTREME SERVICE	
		Style 1028 or 1067		Style 1028 or 1067		Style 1028, 1067, 2107 or 2108	
A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
2-3/4"	3-3/4"	XXXX-03-0108-25	XXXX-01-0108-26	XXXX-03-0108-27	XXXX-01-0108-28	XXXX-03-0108-29	XXXX-01-0108-30
3"	4"	XXXX-03-0107-58	XXXX-01-0107-59	XXXX-03-0107-60	XXXX-01-0107-61	XXXX-03-0107-62	XXXX-01-0107-63
3-1/2"	4-1/2"	XXXX-03-0082-20	XXXX-01-0082-21	XXXX-03-0082-22	XXXX-01-0082-23	XXXX-03-0082-24	XXXX-01-0082-25
3-3/4"	4-3/4"	XXXX-03-0090-84	XXXX-01-0090-85	XXXX-03-0090-86	XXXX-01-0090-87	XXXX-03-0090-88	XXXX-01-0090-89
4"	5"	XXXX-03-0103-90	XXXX-01-0103-91	XXXX-03-0103-92	XXXX-01-0103-93	XXXX-03-0103-94	XXXX-01-0103-95
4-1/2"	5-1/2"	XXXX-03-0101-40	XXXX-01-0101-41	XXXX-03-0101-42	XXXX-01-0101-43	XXXX-03-0101-44	XXXX-01-0101-45
5"	6"	XXXX-03-0250-69	XXXX-01-0250-70	XXXX-03-0250-71	XXXX-01-0250-72	XXXX-03-0250-73	XXXX-01-0250-74
5-1/2"	6-1/2"	XXXX-03-0416-89	XXXX-01-0416-90	XXXX-03-0416-91	XXXX-01-0416-92	XXXX-03-0416-93	XXXX-01-0416-94
5-3/4"	6-3/4"	XXXX-03-0346-77	XXXX-01-0346-78	XXXX-03-0346-79	XXXX-01-0346-80	XXXX-03-0346-81	XXXX-01-0346-82
6"	7"	XXXX-03-0223-91	XXXX-01-0223-92	XXXX-03-0223-93	XXXX-01-0223-94	XXXX-03-0223-95	XXXX-01-0223-96
6-1/2"	7-1/2"	XXXX-03-0230-69	XXXX-01-0230-70	XXXX-03-0230-71	XXXX-01-0230-72	XXXX-03-0230-73	XXXX-01-0230-74
6-3/4"	7-3/4"	XXXX-03-0558-43	XXXX-01-0558-44	XXXX-03-0558-45	XXXX-01-0558-46	XXXX-03-0558-47	XXXX-01-0558-48
7-1/2"	8-1/2"	XXXX-03-0506-25	XXXX-01-0506-26	XXXX-03-0506-27	XXXX-01-0506-28	XXXX-03-0506-29	XXXX-01-0506-30

FILE REFERENCE
DWG# B-7769-C

MD-1000 3" & 3 3/4", PG/R Fluid End 3"

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (Size Varies by Plunger)	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	50320 (PEEK)
5	BUSHING (L=1.000")	1	C95400 (9C AL. BRZ.)
6	LANTERN RING/SEAL CARRIER	1	NOT PROVIDED
7	O-RING	1	NITRILE
8	PSO SEAL	1	10819 (HNBR)



CHEMICAL SERVICE	STANDARD SERVICE			CO2 / EXTENDED SERVICE	
				Style 2101 or 4501	
	A	B	C	COMPLETE SET	REPLACEMENT SET
	3"	4"	3.505"	4501-03-0107-14	4501-01-0107-15
	3-3/4"	4-3/4"	3.255"	4501-03-0090-11	4501-01-0090-12

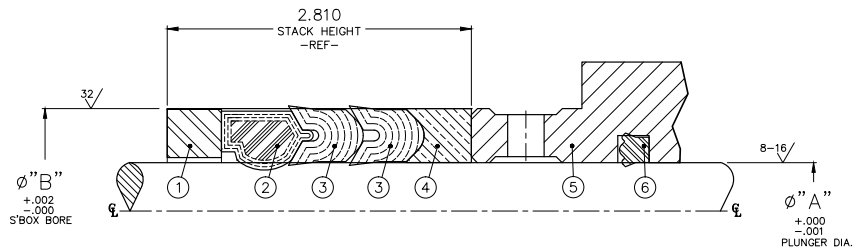
EXTREME SERVICE	STANDARD SERVICE			CO2 / EXTENDED SERVICE	
				Style 1028 or 2108	
	A	B	C	COMPLETE SET	REPLACEMENT SET
	3"	4"	3.505"	1028-03-0107-72	1028-01-0107-73
	3-3/4"	4-3/4"	3.255"	1028-03-0090-03	1028-01-0090-04

FILE REFERENCE
DWG# B-7653-C
DWG# B-7798-C

Forum 2500YB

LEGEND

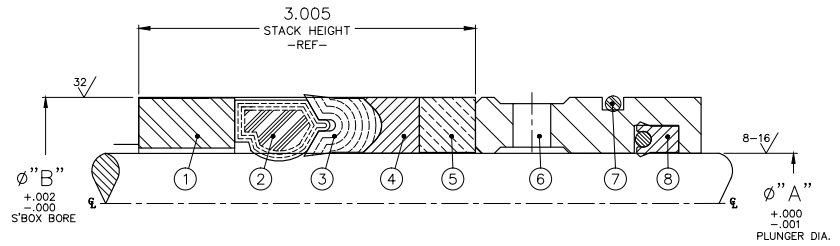
ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=.500")	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	2	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	C95400 (9C AL. BRZ.)
5	LANTERN RING/SEAL CARRIER	1	NOT PROVIDED
6	PSO SEAL	1	10819 (HNBR)



		STANDARD SERVICE		CO2 SERVICE		EXTENDED SERVICE	
		Style 1028 or 1067		Style 1028 or 1067		Style 2107 or 2108	
A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
4"	5"	XXXX-23-0103-90	XXXX-21-0103-91	XXXX-23-0103-92	XXXX-21-0103-93	XXXX-23-0103-92	XXXX-21-0103-93
4-1/2"	5-1/2"	XXXX-23-0101-94	XXXX-21-0101-93	XXXX-23-0101-96	XXXX-21-0101-95	XXXX-23-0101-96	XXXX-21-0101-95
5"	6"	XXXX-23-0250-89	XXXX-21-0250-90	XXXX-23-0250-91	XXXX-21-0250-92	XXXX-23-0250-91	XXXX-21-0250-92
5-1/2"	6-1/2"	XXXX-23-0416-85	XXXX-21-0416-86	XXXX-23-0416-87	XXXX-21-0416-88	XXXX-23-0416-87	XXXX-21-0416-88
6"	7"	XXXX-23-0223-53	XXXX-21-0223-54	XXXX-23-0223-55	XXXX-21-0223-56	XXXX-23-0223-55	XXXX-21-0223-56

FILE REFERENCE
DWG# B-8610-C

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=,856")	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	50320 (PEEK)
5	BUSHING (L=,500")	1	C95400 (9C AL. BRZ.)
6	LANTERN RING/SEAL CARRIER		NOT PROVIDED
7	O-RING	1	NITRILE
8	PSOA SEAL	1	10819 (HNBR)

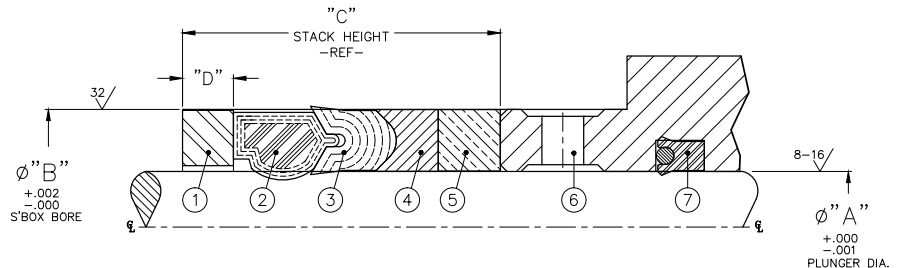


			STANDARD SERVICE		CO2 / EXTENDED SERVICE	
					Style 2101 or 4501	
CHEMICAL SERVICE	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	3-3/4"	4-3/4"	4501-03-0090-07	4501-01-0090-08	XXXX-03-0090-09	XXXX-01-0090-10
	4-1/2"	5-1/2"	4501-03-0101-21	4501-01-0101-22	XXXX-03-0101-23	XXXX-01-0101-24
	5"	6"	4501-03-0250-24	4501-01-0250-25	XXXX-03-0250-26	XXXX-01-0250-27

			STANDARD SERVICE		CO2 / EXTENDED SERVICE	
					Style 1028 or 2108	
EXTREME SERVICE	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	3-3/4"	4-3/4"	1028-03-0090-98	1028-01-0090-99	XXXX-03-0090-01	XXXX-01-0090-02
	4-1/2"	5-1/2"	1028-03-0101-55	1028-01-0101-56	XXXX-03-0101-57	XXXX-01-0101-58
	5"	6"	1028-03-0250-84	1028-01-0250-85	XXXX-03-0250-86	XXXX-01-0250-87

OPI with F, X, E, H, I, U, J Fluid Ends ———

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (See Table Below)	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	50320 (PEEK)
5	BUSHING (L= .500")	1	C95400 (9C AL. BRZ.)
6	LANTERN RING/SEAL CARRIER		NOT PROVIDED
7	PSA/PSOA SEAL	1	10819 (HNBR)



						STANDARD SERVICE		CO2 SERVICE		CO2 / EXTENDED SERVICE	
										Style 2101 or 4501	
CHEMICAL SERVICE	FLUID END	A	B	C	D	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	FOPI	3-3/4"	4-3/4"	2.44"	0.290"	4501-03-0090-21	4501-01-0090-22	4501-03-0090-35	4501-01-0090-36	XXXX-03-0090-23	XXXX-01-0090-24
	XOPI	4"	5"	2.56"	0.410"	4501-03-0103-40	4501-01-0103-41	4501-03-0103-42	4501-01-0103-43	XXXX-03-0103-44	XXXX-01-0103-45
	EOPi	4-1/2"	5-1/2"	2.56"	0.410"	4501-03-0101-37	4501-01-0101-38	4501-03-0101-57	4501-01-0101-58	XXXX-03-0101-39	XXXX-01-0101-40
	HOPi	5"	6"	2.56"	0.410"	4501-03-0250-36	4501-01-0250-37	4501-03-0250-50	4501-01-0250-51	XXXX-03-0250-38	XXXX-01-0250-39
	IOPI	5-1/2"	6-1/2"	2.56"	0.410"	4501-03-0416-24	4501-01-0416-25	4501-03-0416-44	4501-01-0416-45	XXXX-03-0416-26	XXXX-01-0416-27
	UOPi	6-1/2"	7-1/2"	2.75"	0.602"	4501-03-0230-13	4501-01-0230-14	4501-03-0230-25	4501-01-0230-26	XXXX-03-0230-15	XXXX-01-0230-16
	JOPI	6-3/4"	7-3/4"	2.44"	0.290"	4501-03-0558-11	4501-01-0558-12	4501-03-0558-23	4501-01-0558-24	XXXX-03-0558-13	XXXX-01-0558-14

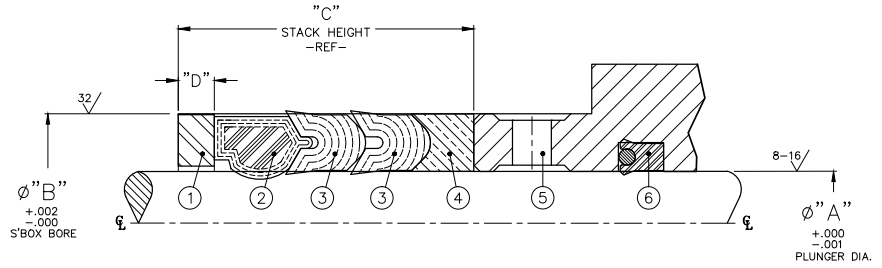
						STANDARD SERVICE		CO2 SERVICE		CO2 / EXTENDED SERVICE	
										Style 1028 or 2108	
EXTREME SERVICE	FLUID END	A	B	C	D	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	FOPi	3-3/4"	4-3/4"	2.44"	0.290"	1028-03-0090-90	1028-01-0090-91	1028-03-0090-25	1028-01-0090-26	XXXX-03-0090-92	XXXX-01-0090-93
	XOPI	4"	5"	2.56"	0.410"	1028-03-0103-33	1028-01-0103-34	1028-03-0103-35	1028-01-0103-36	XXXX-03-0103-62	XXXX-01-0103-63
	EOPi	4-1/2"	5-1/2"	2.56"	0.410"	1028-03-0101-46	1028-01-0101-47	1028-03-0101-98	1028-01-0101-99	XXXX-03-0101-48	XXXX-01-0101-49
	HOPI	5"	6"	2.56"	0.410"	1028-03-0250-75	1028-01-0250-76	1028-03-0250-20	1028-01-0250-21	XXXX-03-0250-77	XXXX-01-0250-78
	IOPI	5-1/2"	6-1/2"	2.56"	0.410"	1028-03-0416-95	1028-01-0416-96	1028-03-0416-23	1028-01-0416-24	XXXX-03-0416-97	XXXX-01-0416-98
	UOPI	6-1/2"	7-1/2"	2.75"	0.602"	1028-03-0230-75	1028-01-0230-76	1028-03-0230-77	1028-01-0230-78	XXXX-03-0230-79	XXXX-01-0230-80
	JOPI	6-3/4"	7-3/4"	2.44"	0.290"	1028-03-0558-49	1028-01-0558-50	1028-03-0558-51	1028-01-0558-52	XXXX-03-0558-53	XXXX-01-0558-54



OPI with F, X, E, H, I, U, J Fluid Ends ———

- Option 2

LEGEND			
ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (See Table Below)	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	2	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER (L=.375")	1	C95400 (9C AL. BRZ.)
5	LANTERN RING/SEAL CARRIER	NOT PROVIDED	
6	PSA/PSOA SEAL	1	10819 (HNBR)

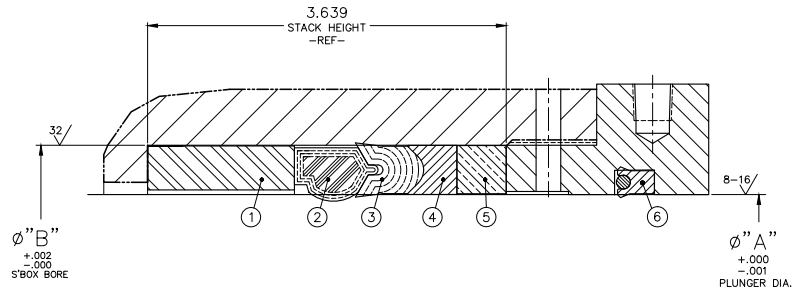


FLUID END	A	B	C	D	STANDARD SERVICE		CO2 SERVICE		CO2 / EXTENDED SERVICE Style 1028 or 2108	
					COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
FOPI	3-3/4"	4-3/4"	2.44"	0.191"	1028-23-0090-21	1028-21-0090-22	1028-23-0090-23	1028-21-0090-24	XXXX-23-0090-25	XXXX-21-0090-26
XOPI	4"	5"	2.56"	0.312"	1028-23-0103-74	1028-21-0103-75	1028-23-0103-76	1028-21-0103-77	XXXX-23-0103-78	XXXX-21-0103-79
EOPI	4-1/2"	5-1/2"	2.56"	0.312"	1028-23-0101-81	1028-21-0101-82	1028-23-0101-83	1028-21-0101-84	XXXX-23-0101-85	XXXX-21-0101-86
HOPi	5"	6"	2.56"	0.312"	1028-23-0250-77	1028-21-0250-78	1028-23-0250-79	1028-21-0250-80	XXXX-23-0250-81	XXXX-21-0250-82
IOPI	5-1/2"	6-1/2"	2.56"	0.312"	1028-23-0416-61	1028-21-0416-62	1028-23-0416-63	1028-21-0416-64	XXXX-23-0416-65	XXXX-21-0416-66
UOPI	6-1/2"	7-1/2"	2.75"	0.500"	1028-23-0230-13	1028-21-0230-14	1028-23-0230-15	1028-21-0230-16	XXXX-23-0230-17	XXXX-21-0230-18
JOPI	6-3/4"	7-3/4"	2.44"	0.191"	1028-23-0558-15	1028-21-0558-16	1028-23-0558-17	1028-21-0558-18	XXXX-23-0558-19	XXXX-21-0558-20

FILE REFERENCE
DWG# B-8232-C

OPI & Omega with Standard Gland Nut ———

LEGEND			
ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=1.490")	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	50320 (PEEK)
5	BUSHING (L=.500")	1	C95400 (9C AL. BRZ.)
6	PSA/PSOA SEAL	1	10819 (HNBR)



	STANDARD SERVICE				CO2 / EXTENDED SERVICE Style 2102 or 4501	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
CHEMICAL SERVICE	2-1/4"	3-1/4"	4501-03-0222-19	4501-01-0222-20	XXXX-03-0222-21	XXXX-01-0222-22
	2-3/4"	3-3/4"	4501-03-0108-19	4501-01-0108-20	XXXX-03-0108-21	XXXX-01-0108-22
	3"	4"	4501-03-0107-28	4501-01-0107-29	XXXX-03-0107-30	XXXX-01-0107-31
	3-1/2"	4-1/2"	4501-03-0082-20	4501-01-0082-21	XXXX-03-0082-22	XXXX-01-0082-23
	3-3/4"	4-3/4"	4501-03-0090-29	4501-01-0090-30	XXXX-03-0090-31	XXXX-01-0090-32
	4"	5"	4501-03-0103-28	4501-01-0103-29	XXXX-03-0103-30	XXXX-01-0103-31
	4-1/2"	5-1/2"	4501-03-0101-45	4501-01-0101-46	XXXX-03-0101-47	XXXX-01-0101-48
	5"	6"	4501-03-0250-44	4501-01-0250-45	XXXX-03-0250-46	XXXX-01-0250-47
	5-1/2"	6-1/2"	4501-03-0416-32	4501-01-0416-33	XXXX-03-0416-34	XXXX-01-0416-35
	5-3/4"	6-3/4"	4501-03-0346-20	4501-01-0346-21	XXXX-03-0346-22	XXXX-01-0346-23
	6"	7"	4501-03-0223-23	4501-01-0223-24	XXXX-03-0223-25	XXXX-01-0223-26
	6-1/2"	7-1/2"	4501-03-0230-21	4501-01-0230-22	XXXX-03-0230-23	XXXX-01-0230-24
EXTREME SERVICE	6-3/4"	7-3/4"	4501-03-0558-19	4501-01-0558-20	XXXX-03-0558-21	XXXX-01-0558-22
	7"	8"	4501-03-0172-05	4501-01-0172-06	XXXX-03-0172-07	XXXX-01-0172-08
	7-1/2"	8-1/2"	4501-03-0506-05	4501-01-0506-06	XXXX-03-0506-07	XXXX-01-0506-08
	STANDARD SERVICE				CO2 / EXTENDED SERVICE Style 1028 or 2108	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	2-1/4"	3-1/4"	1028-03-0222-99	1028-01-0222-01	XXXX-03-0222-02	XXXX-01-0222-03
	2-3/4"	3-3/4"	1028-03-0108-37	1028-01-0108-38	XXXX-03-0108-39	XXXX-01-0108-40
	3"	4"	1028-03-0107-80	1028-01-0107-81	XXXX-03-0107-82	XXXX-01-0107-83
	3-1/2"	4-1/2"	1028-03-0082-30	1028-01-0082-31	XXXX-03-0082-32	XXXX-01-0082-33
	3-3/4"	4-3/4"	1028-03-0090-11	1028-01-0090-12	XXXX-03-0090-13	XXXX-01-0090-14
	4"	5"	1028-03-0103-06	1028-01-0103-07	XXXX-03-0103-08	XXXX-01-0103-09
	4-1/2"	5-1/2"	1028-03-0101-71	1028-01-0101-72	XXXX-03-0101-73	XXXX-01-0101-74
	5"	6"	1028-03-0250-96	1028-01-0250-97	XXXX-03-0250-98	XXXX-01-0250-99
	5-1/2"	6-1/2"	1028-03-0416-12	1028-01-0416-13	XXXX-03-0416-14	XXXX-01-0416-15
	5-3/4"	6-3/4"	1028-03-0346-87	1028-01-0346-88	XXXX-03-0346-89	XXXX-01-0346-90
	6"	7"	1028-03-0223-10	1028-01-0223-11	XXXX-03-0223-12	XXXX-01-0223-13
	6-1/2"	7-1/2"	1028-03-0230-89	1028-01-0230-90	XXXX-03-0230-91	XXXX-01-0230-92
	6-3/4"	7-3/4"	1028-03-0558-63	1028-01-0558-64	XXXX-03-0558-65	XXXX-01-0558-66
	7"	8"	1028-03-0172-43	1028-01-0172-44	XXXX-03-0172-45	XXXX-01-0172-46
	7-1/2"	8-1/2"	1028-03-0506-35	1028-01-0506-36	XXXX-03-0506-37	XXXX-01-0506-38

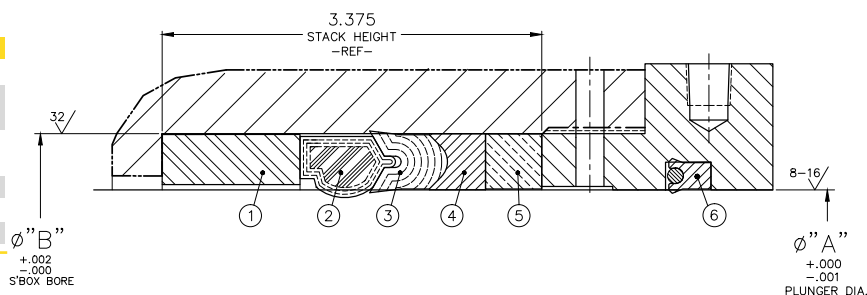
FILE REFERENCE
DWG# B-7709-C
DWG# B-7803-C



OPI with Long Gland Nut

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=1.226")	1	C1018(L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	50320 (PEEK)
5	BUSHING (L=.500")	1	C95400 (9C AL. BRZ.)
6	PSA/PSOA SEAL	1	10819 (HNBR)



			STANDARD SERVICE		CO2 SERVICE		EXTENDED SERVICE	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
CHEMICAL SERVICE	2-1/4"	3-1/4"	4501-03-0222-15	4501-01-0222-16	4501-03-0222-17	4501-01-0222-18	2101-03-0222-17	2101-01-0222-18
	2-3/4"	3-3/4"	4501-03-0108-15	4501-01-0108-16	4501-03-0108-17	4501-01-0108-18	2101-03-0108-17	2101-01-0108-18
	3"	4"	4501-03-0107-24	4501-01-0107-25	4501-03-0107-26	4501-01-0107-27	2101-03-0107-26	2101-01-0107-27
	3-1/2"	4-1/2"	4501-03-0082-16	4501-01-0082-17	4501-03-0082-18	4501-01-0082-19	2101-03-0082-18	2101-01-0082-19
	3-3/4"	4-3/4"	4501-03-0090-25	4501-01-0090-26	4501-03-0090-27	4501-01-0090-28	2101-03-0090-27	2101-01-0090-28
	4"	5"	4501-03-0103-24	4501-01-0103-25	4501-03-0103-26	4501-01-0103-27	2101-03-0103-26	2101-01-0103-27
	4-1/2"	5-1/2"	4501-03-0101-41	4501-01-0101-42	4501-03-0101-43	4501-01-0101-44	2101-03-0101-43	2101-01-0101-44
	5"	6"	4501-03-0250-40	4501-01-0250-41	4501-03-0250-42	4501-01-0250-43	2101-03-0250-42	2101-01-0250-43
	5-1/2"	6-1/2"	4501-03-0416-28	4501-01-0416-29	4501-03-0416-30	4501-01-0416-31	2101-03-0416-30	2101-01-0416-31
	5-3/4"	6-3/4"	4501-03-0346-16	4501-01-0346-17	4501-03-0346-18	4501-01-0346-19	2101-03-0346-18	2101-01-0346-19
	6"	7"	4501-03-0223-19	4501-01-0223-20	4501-03-0223-21	4501-01-0223-22	2101-03-0223-21	2101-01-0223-22
	6-1/2"	7-1/2"	4501-03-0230-17	4501-01-0230-18	4501-03-0230-19	4501-01-0230-20	2101-03-0230-19	2101-01-0230-20
	6-3/4"	7-3/4"	4501-03-0558-15	4501-01-0558-16	4501-03-0558-17	4501-01-0558-18	2101-03-0558-17	2101-01-0558-18
	7"	8"	4501-03-0172-01	4501-01-0172-02	4501-03-0172-03	4501-01-0172-04	2101-03-0172-03	2101-01-0172-04
	7-1/2"	8-1/2"	4501-03-0506-01	4501-01-0506-02	4501-03-0506-03	4501-01-0506-04	2101-03-0506-03	2101-01-0506-04

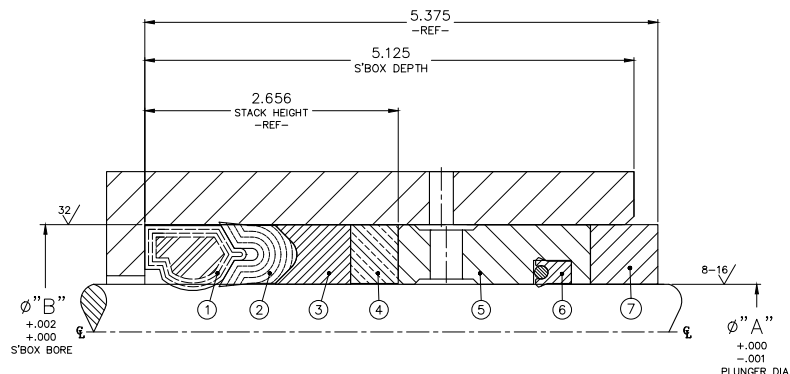
			STANDARD SERVICE		CO2 SERVICE		EXTENDED SERVICE	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
EXTREME SERVICE	2-1/4"	3-1/4"	1028-03-0222-95	1028-01-0222-96	1028-03-0222-97	1028-01-0222-98	2108-03-0222-97	2108-01-0222-98
	2-3/4"	3-3/4"	1028-03-0108-33	1028-01-0108-34	1028-03-0108-35	1028-01-0108-36	2108-03-0108-35	2108-01-0108-36
	3"	4"	1028-03-0107-76	1028-01-0107-77	1028-03-0107-78	1028-01-0107-79	2108-03-0107-78	2108-01-0107-79
	3-1/2"	4-1/2"	1028-03-0082-26	1028-01-0082-27	1028-03-0082-28	1028-01-0082-29	2108-03-0082-28	2108-01-0082-29
	3-3/4"	4-3/4"	1028-03-0090-07	1028-01-0090-08	1028-03-0090-09	1028-01-0090-10	2108-03-0090-09	2108-01-0090-10
	4"	5"	1028-03-0103-02	1028-01-0103-03	1028-03-0103-04	1028-01-0103-05	2108-03-0103-04	2108-01-0103-05
	4-1/2"	5-1/2"	1028-03-0101-67	1028-01-0101-68	1028-03-0101-69	1028-01-0101-70	2108-03-0101-69	2108-01-0101-70
	5"	6"	1028-03-0250-92	1028-01-0250-93	1028-03-0250-94	1028-01-0250-95	2108-03-0250-94	2108-01-0250-95
	5-1/2"	6-1/2"	1028-03-0416-08	1028-01-0416-09	1028-03-0416-10	1028-01-0416-11	2108-03-0416-10	2108-01-0416-11
	5-3/4"	6-3/4"	1028-03-0346-83	1028-01-0346-84	1028-03-0346-85	1028-01-0346-86	2108-03-0346-85	2108-01-0346-86
	6"	7"	1028-03-0223-06	1028-01-0223-07	1028-03-0223-08	1028-01-0223-09	2108-03-0223-08	2108-01-0223-09
	6-1/2"	7-1/2"	1028-03-0230-85	1028-01-0230-86	1028-03-0230-87	1028-01-0230-88	2108-03-0230-87	2108-01-0230-88
	6-3/4"	7-3/4"	1028-03-0558-59	1028-01-0558-60	1028-03-0558-61	1028-01-0558-62	2108-03-0558-61	2108-01-0558-62
	7"	8"	1028-03-0172-39	1028-01-0172-40	1028-03-0172-41	1028-01-0172-42	2108-03-0172-41	2108-01-0172-42
	7-1/2"	8-1/2"	1028-03-0506-31	1028-01-0506-32	1028-03-0506-33	1028-01-0506-34	2108-03-0506-33	2108-01-0506-34

FILE REFERENCE
DWG# B-7708-C
DWG# B-7802-C

LC-1200

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
2	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
3	TOP ADAPTER (L=.562")	1	50320 (PEEK)
4	BUSHING (L=.500")	1	C95400 (9C AL. BRZ.)
5	LANTERN RING/SEAL CARRIER		NOT PROVIDED
6	PSOA SEAL	1	10819 (HNBR)
7	GLAND BUSHING		NOT PROVIDED



			STANDARD SERVICE		CO2 SERVICE		EXTENDED SERVICE	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
CHEMICAL SERVICE	5"	6-1/4"	4501-03-0219-07	4501-01-0219-08	4501-03-0219-09	4501-01-0219-10	2101-03-0219-09	2101-01-0219-10

			STANDARD SERVICE		CO2 SERVICE		EXTENDED SERVICE	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
EXTREME SERVICE	5"	6-1/4"	1028-03-0219-52	1028-01-0219-53	1028-03-0219-54	1028-01-0219-55	2108-03-0219-54	2108-01-0219-55

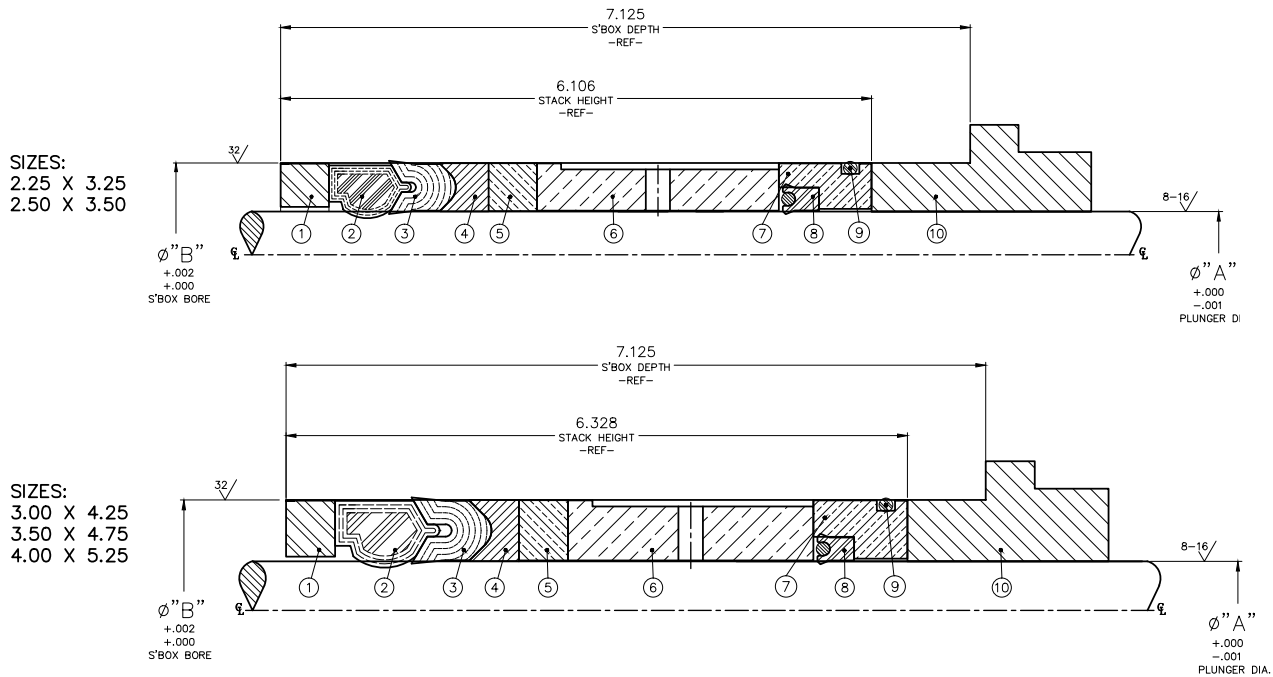
FILE REFERENCE
DWG# B-7706-C
DWG# B-7800-C



PE5/TEE

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=.500")	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	50320 (PEEK)
5	BUSHING (L=.500")	1	C95400 (9C AL. BRZ.)
6	LANTERN RING	1	C95400 (9C AL. BRZ.)
7	SEAL CARRIER	1	C95400 (9C AL. BRZ.)
8	PSA/PSOA SEAL	1	10819 (HNBR)
9	O-RING	1	NITRILE
10	GLAND BUSHING		NOT PROVIDED



CHEMICAL SERVICE			STANDARD SERVICE		CO2/EXTENDED SERVICE	
					Style 2101 or 4501	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	2.250"	3.250"	4501-03-0222-11	4501-01-0222-12	XXXX-03-0222-13	XXXX-01-0222-14
	2.500"	3.500"	4501-03-0074-09	4501-01-0074-10	XXXX-03-0074-11	XXXX-01-0074-12
	3.000"	4.250"	4501-03-0151-06	4501-01-0151-07	XXXX-03-0151-08	XXXX-01-0151-09
	3.500"	4.750"	4501-03-0084-01	4501-01-0084-02	XXXX-03-0084-03	XXXX-01-0084-04
	4.000"	5.250"	4501-03-0093-01	4501-01-0093-02	XXXX-03-0093-03	XXXX-01-0093-04

EXTREME SERVICE			STANDARD SERVICE		CO2/EXTENDED SERVICE	
					Style 1028, 2108 or 2112	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	2.250"	3.250"	1028-03-0222-91	1028-01-0222-92	XXXX-03-0222-93	XXXX-01-0222-94
	2.500"	3.500"	1028-03-0074-35	1028-01-0074-36	XXXX-03-0074-37	XXXX-01-0074-38
	3.000"	4.250"	1028-03-0151-62	1028-01-0151-63	XXXX-03-0151-64	XXXX-01-0151-65
	3.500"	4.750"	1028-03-0084-50	1028-01-0084-51	XXXX-03-0084-52	XXXX-01-0084-53
	4.000"	5.250"	1028-03-0093-52	1028-01-0093-53	XXXX-03-0093-54	XXXX-01-0093-55

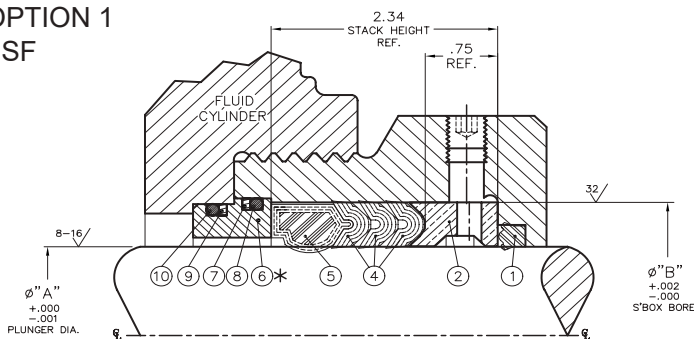
FILE REFERENCE
DWG# B-7707-C
DWG# B-7801-C

SPM, GD, DIW - TI 600, TWS 600, QWS 1000S
- Compact

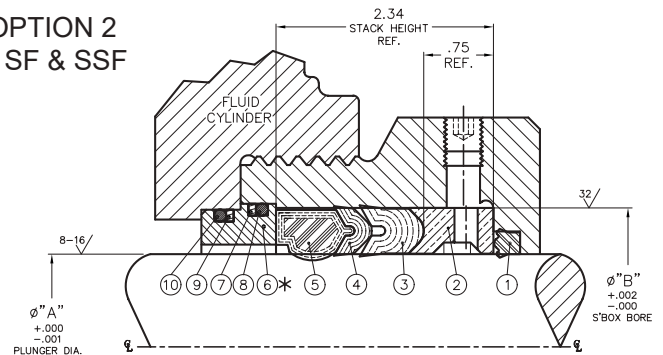
LEGEND			
ITEM	DESCRIPTION	QTY	MATERIAL
1	PSO SEAL	1	10819 (HNBR)
2	LANTERN RING / FEMALE ADAPTER	1	C95400 (9C AL. BRZ.)
3	"SSF" PRESSURE RING (Option 2)	1	See Styles & Material Selection Guide at End of Booklet
4	"SF" PRESSURE RING (Option 1) (Option 2)	3	See Styles & Material Selection Guide at End of Booklet
5	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
6	SEAL RING		Not Provided
7	BACK-UP RING	1	PTFE
8	O-RING	1	NITRILE
9	BACK-UP RING	1	PTFE
10	O-RING	1	NITRILE

* Item 6 is not a component of the complete assembly.

OPTION 1
- SF



OPTION 2
- SF & SSF



				STANDARD SERVICE		CO2 / EXTENDED / EXTREME SERVICE		HIGH TEMPERATURE / ACID SERVICE	
				Style 0798 or 0817		Style 0798, 0817, 2190, 2197 or 2198		Style 6670	
OPTION 1	A	B	ITEM 6"	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	2-1/2"	3-1/2"		XXXX-03-0074-03	XXXX-01-0074-04				
	3"	4"	1435-28-0312-95	XXXX-03-0107-05	XXXX-01-0107-03	XXXX-03-0107-06	XXXX-01-0107-04	6670-03-0107-06	6670-01-0107-04
	3-1/2"	4-1/2"	1435-28-2544-08	XXXX-03-0082-05	XXXX-01-0082-03	XXXX-03-0082-06	XXXX-01-0082-04	6670-03-0082-06	6670-01-0082-04
	4"	5"		XXXX-03-0103-05	XXXX-01-0103-03	XXXX-03-0103-06	XXXX-01-0103-04	6670-03-0103-06	6670-01-0103-04
	4-1/2"	5-1/2"	1435-28-0670-08	XXXX-03-0101-01	XXXX-01-0101-03	XXXX-03-0101-02	XXXX-01-0101-04	6670-03-0101-02	6670-01-0101-04
				STANDARD SERVICE		CO2 / EXTENDED / EXTREME SERVICE		HIGH TEMPERATURE / ACID SERVICE	
				Style 1028 or 1067		Style 1028, 1067, 2107 or 2108		Style 1092	
OPTION 2	A	B	ITEM 6"	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	2-1/2"	3-1/2"		XXXX-03-0074-50	XXXX-01-0074-51	XXXX-03-0074-48	XXXX-01-0074-49	1092-03-0074-01	1092-01-0074-02
	2-3/4"	3-3/4"	1435-28-05115-55	XXXX-03-0108-64	XXXX-01-0108-65	XXXX-03-0108-66	XXXX-01-0108-67	1092-03-0108-03	1092-01-0108-04
	3"	4"	1435-28-0312-95	XXXX-03-0107-34	XXXX-01-0107-45	XXXX-03-0107-35	XXXX-01-0107-46	1092-03-0107-01	1092-01-0107-02
	3-1/2"	4-1/2"	1435-28-2544-08	XXXX-03-0082-51	XXXX-01-0082-42	XXXX-03-0082-52	XXXX-01-0082-43	1092-03-0082-01	1092-01-0082-02
	4"	5"		XXXX-03-0103-31	XXXX-01-0103-39	XXXX-03-0103-32	XXXX-01-0103-40	1092-03-0103-05	1092-01-0103-02
4-1/2"	5-1/2"	1435-28-0670-08	XXXX-03-0101-96	XXXX-01-0101-90	XXXX-03-0101-97	XXXX-01-0101-91	1092-03-0101-21	1092-01-0101-02	

FILE REFERENCE
DWG# B-7833-C
DWG# B-8080-C

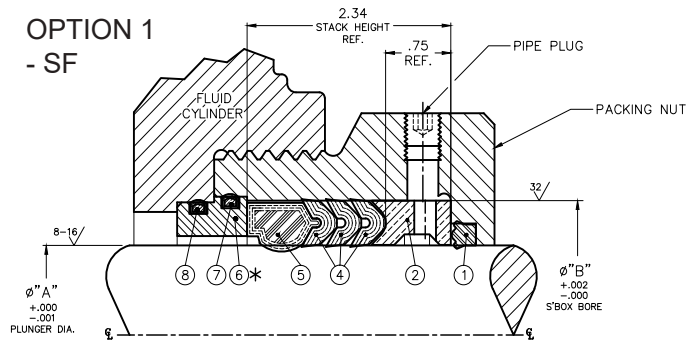
SPM, GD, DIW - TI 600, TWS 600, QWS 1000S - Compact D-Seal Option

LEGEND

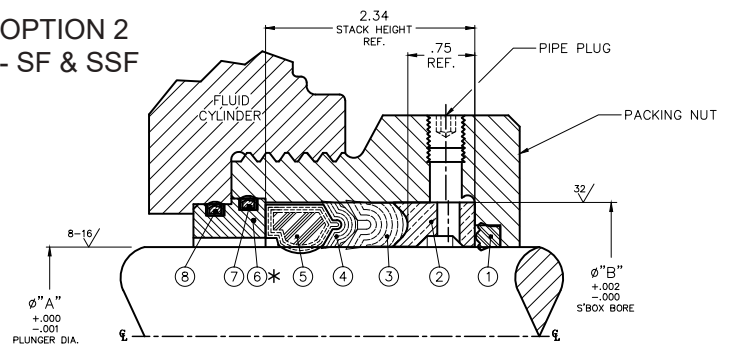
ITEM	DESCRIPTION	QTY	MATERIAL
1	PS/PSO SEAL	1	10819 (HNBR)
2	LANTERN RING / FEMALE ADAPTER	1	C95400 (9C AL. BRZ.)
3	"SSF" PRESSURE RING (Option 2)	1	See Styles & Material Selection Guide at End of Booklet
4	"SF" PRESSURE RING (Option 1)	3	See Styles & Material Selection Guide at End of Booklet
	(Option 2)	1	See Styles & Material Selection Guide at End of Booklet
5	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
6	SPOOL, STUFFING BOX ADAPTER		Not Provided
7	D-SEAL	1	HNBR/COTTON FABRIC
8	D-SEAL	1	HNBR/COTTON FABRIC

* Item 6 is not a component of the complete assembly.

OPTION 1 - SF



OPTION 2 - SF & SSF



				STANDARD SERVICE		CO2 / EXTREME SERVICE		EXTENDED SERVICE	
				Style 0798 or 0817		Style 0798, 0817, 2190		Style 2180, 2197, or 2198	
OPTION 1	A	B	ITEM 6*	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	3"	4"	1435-28-0312-95	XXXX-03-0107-15	XXXX-01-0107-16	XXXX-03-0107-17	XXXX-01-0107-18	XXXX-03-0107-17	XXXX-01-0107-18
	3-1/2"	4-1/2"	1435-28-2544-08	XXXX-03-0082-13	XXXX-01-0082-14	XXXX-03-0082-15	XXXX-01-0082-16	XXXX-03-0082-15	XXXX-01-0082-16
	4"	5"		XXXX-03-0103-20	XXXX-01-0103-21	XXXX-03-0103-22	XXXX-01-0103-23	XXXX-03-0103-22	XXXX-01-0103-23
	4-1/2"	5-1/2"	1435-28-0670-08	XXXX-03-0101-20	XXXX-01-0101-21	XXXX-03-0101-22	XXXX-01-0101-23	XXXX-03-0101-22	XXXX-01-0101-23
				STANDARD SERVICE		CO2 / EXTREME SERVICE		EXTENDED SERVICE	
				Style 1028 or 1067		Style 1028, 1067, 2107 or 2108		Style 2180, 2197, OR 2198	
OPTION 2	A	B	ITEM 6*	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	2-1/2"	3-1/2"		XXXX-33-0074-05	XXXX-31-0074-06	XXXX-33-0074-07	XXXX-31-0074-08	XXXX-33-0074-07	XXXX-31-0074-08
	2-3/4"	3-3/4"	1435-28-0115-55	XXXX-33-0108-09	XXXX-31-0108-10	XXXX-33-0108-11	XXXX-31-0108-12	XXXX-33-0108-11	XXXX-31-0108-12
	3"	4"	1435-28-0312-95	XXXX-33-0107-05	XXXX-31-0107-06	XXXX-33-0107-07	XXXX-31-0107-08	XXXX-33-0107-07	XXXX-31-0107-08
	3-1/2"	4-1/2"	1435-28-2544-08	XXXX-33-0082-01	XXXX-31-0082-02	XXXX-33-0082-03	XXXX-31-0082-04	XXXX-33-0082-03	XXXX-31-0082-04
	4"	5"		XXXX-33-0103-05	XXXX-31-0103-06	XXXX-33-0103-07	XXXX-31-0103-08	XXXX-33-0103-07	XXXX-31-0103-08
	4-1/2"	5-1/2"	1435-28-0670-08	XXXX-33-0101-19	XXXX-31-0101-20	XXXX-33-0101-21	XXXX-31-0101-22	XXXX-33-0101-21	XXXX-31-0101-22

FILE REFERENCE
DWG# B-7833-C
DWG# B-8080-C
- Sheet 2 of 2

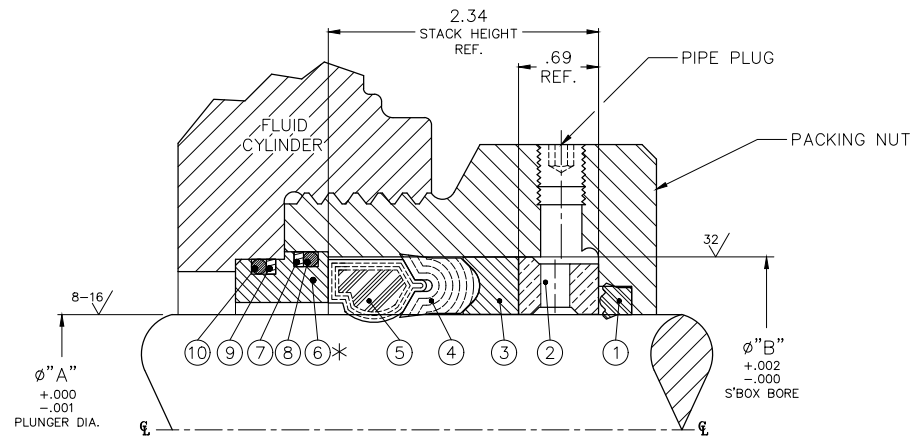
SPM, GD, DIW - TI 600, TWS 600, QWS 1000S

- Compact, SSF with PEEK

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	PSO SEAL	1	10819 (HNBR)
2	LANTERN RING / FEMALE ADAPTER	1	C95400 (9C AL. BRZ.)
3	TOP ADAPTER	1	50320 (PEEK)
4	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
5	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
6	SEAL RING		NOT PROVIDED
7	BACK-UP RING	1	PTFE
8	O-RING	1	NITRILE
9	BACK-UP RING	1	PTFE
10	O-RING	1	NITRILE

* Item 6 is not a component of the complete assembly.



CHEMICAL SERVICE			STANDARD SERVICE		CO2 / EXTENDED SERVICE Style 2111, 2112 or 4501		HIGH TEMPERATURE / ACID SERVICE Style 1092 or 4501	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	2-3/4"	3-3/4"	4501-03-0108-27	4501-01-0108-25	XXXX-03-0108-28	XXXX-01-0108-26	XXXX-03-0108-29	XXXX-01-0108-30
	3"	4"	4501-03-0107-34	4501-01-0107-32	XXXX-03-0107-35	XXXX-01-0107-33	XXXX-03-0107-36	XXXX-01-0107-37
	3-1/2"	4-1/2"	4501-03-0082-30	4501-01-0082-28	XXXX-03-0082-31	XXXX-01-0082-29	XXXX-03-0082-32	XXXX-01-0082-33
	4"	5"	4501-03-0103-36	4501-01-0103-34	XXXX-03-0103-37	XXXX-01-0103-35	XXXX-03-0103-38	XXXX-01-0103-39
	4-1/2"	5-1/2"	4501-03-0101-53	4501-01-0101-51	XXXX-03-0101-54	XXXX-01-0101-52	XXXX-03-0101-55	XXXX-01-0101-56

EXTREME SERVICE			STANDARD SERVICE		CO2 / EXTENDED SERVICE Style 1028 or 2108	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	2-3/4"	3-3/4"	1028-03-0108-54	1028-01-0108-48	XXXX-03-0108-55	XXXX-01-0108-49
	3"	4"	1028-03-0107-92	1028-01-0107-90	XXXX-03-0107-93	XXXX-01-0107-91
	3-1/2"	4-1/2"	1028-03-0082-44	1028-01-0082-40	XXXX-03-0082-45	XXXX-01-0082-41
	4"	5"	1028-03-0103-21	1028-01-0103-17	XXXX-03-0103-22	XXXX-01-0103-18
	4-1/2"	5-1/2"	1028-03-0101-11	1028-01-0101-88	XXXX-03-0101-12	XXXX-01-0101-89

EXTREME SERVICE			STANDARD SERVICE		CO2 / EXTENDED SERVICE Style 1067 or 2107	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	2-3/4"	3-3/4"	1067-03-0108-18	1067-01-0108-19	XXXX-03-0108-20	XXXX-01-0108-21
	3"	4"	1067-03-0107-30	1067-01-0107-31	XXXX-03-0107-32	XXXX-01-0107-33
	3-1/2"	4-1/2"	1067-03-0082-26	1067-01-0082-27	XXXX-03-0082-28	XXXX-01-0082-29
	4"	5"	1067-03-0103-55	1067-01-0103-56	XXXX-03-0103-57	XXXX-01-0103-58
	4-1/2"	5-1/2"	1067-03-0101-46	1067-01-0101-47	XXXX-03-0101-48	XXXX-01-0101-49

FILE REFERENCE
DWG# B-7675-C
DWG# B-7832-C

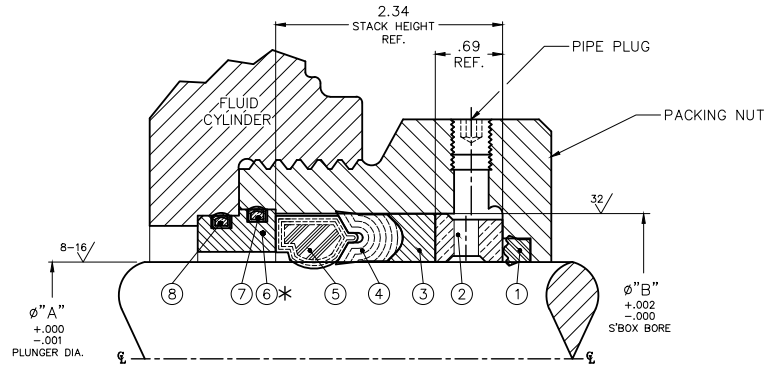
SPM, GD, DIW - TI 600, TWS 600, QWS 1000S

- Compact, SSF with PEEK D-Seal Option

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	PS/PSO SEAL	1	10819 (HNBR)
2	LANTERN RING / FEMALE ADAPTER	1	C95400 (9C AL. BRZ.)
3	TOP ADAPTER	1	50320 (PEEK)
4	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
5	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
6	SPOOL, STUFFING BOX ADAPTER		Not Provided
7	D-SEAL	1	HNBR/COTTON FABRIC
8	D-SEAL	1	HNBR/COTTON FABRIC

* Item 6 is not a component of the complete assembly.



			STANDARD SERVICE		CO2 / EXTENDED / EXTREME SERVICE	
			Style 1067 or 1028		Style 1028, 1067, 2107, 2108, 2197, or 2198	
	A	B	ITEM 6"	COMPLETE SET	REPLACEMENT SET	COMPLETE SET
GENERAL SERVICE	2-1/2"	3-1/2"		XXXX-33-0074-XX	XXXX-31-0074-XX	
	2-3/4"	3-3/4"	1435-28-0115-55	XXXX-33-0108-XX	XXXX-31-0108-XX	
	3"	4"	1435-28-0312-95	XXXX-33-0107-09	XXXX-31-0107-10	XXXX-33-0107-11
	3-1/2"	4-1/2"	1435-28-2544-08	XXXX-33-0082-05	XXXX-31-0082-06	XXXX-33-0082-07
	4"	5"		XXXX-33-0103-09	XXXX-31-0103-10	XXXX-33-0103-11
	4-1/2"	5-1/2"	1435-28-0670-08	XXXX-33-0101-23	XXXX-31-0101-24	XXXX-33-0101-25

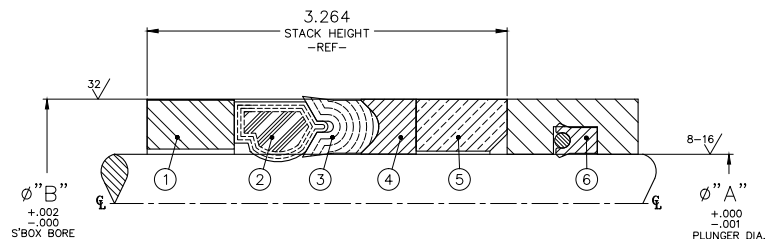
FILE REFERENCE
DWG# B-7675-C
DWG# B-7832-C
-Sheet 2 of 2

			STANDARD SERVICE		CO2 / EXTENDED SERVICE		EXTREME SERVICE	
			Style 4501 or 1092 W/ HOMOGENEOUS HEADER RING		Style 4501 or 1092 W/ DUAL DUROMETER HEADER RING		Style 1092 or 4501	
	A	B	ITEM 6"	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET
CHEMICAL SERVICE	2-1/2"	3-1/2"						
	2-3/4"	3-3/4"	1435-28-0115-55					
	3"	4"	1435-28-0312-95	XXXX-03-0107-40	XXXX-01-0107-41	XXXX-03-0107-42	XXXX-01-0107-43	XXXX-03-0107-44
	3-1/2"	4-1/2"	1435-28-2544-08	XXXX-03-0082-40	XXXX-01-0082-41	XXXX-03-0082-42	XXXX-01-0082-43	XXXX-03-0082-44
	4"	5"		XXXX-03-0103-54	XXXX-01-0103-55	XXXX-03-0103-56	XXXX-01-0103-57	XXXX-03-0103-58
	4-1/2"	5-1/2"	1435-28-0670-08	XXXX-03-0101-63	XXXX-01-0101-64	XXXX-03-0101-65	XXXX-01-0101-66	XXXX-03-0101-67

Halliburton HT-150

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=.790")	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	1	SuperGold (490K)
4	TOP ADAPTER	1	50320 (PEEK)
5	LANTERN RING (L=.825")	1	C95400 (9C AL. BRZ.)
6	PSA/PSOA SEAL	1	10819 (HNBR)



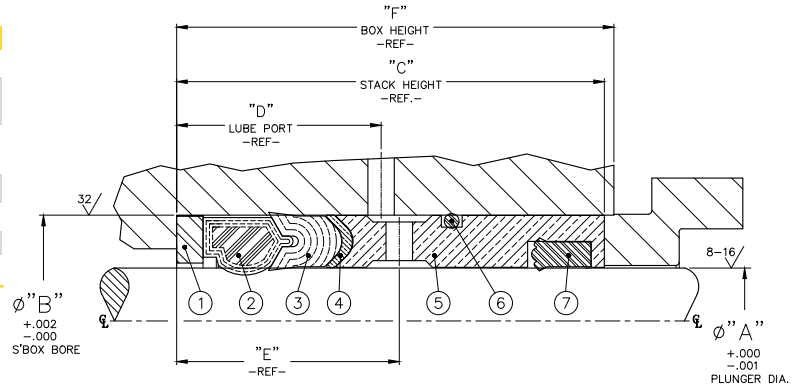
			STANDARD SERVICE		CO2 SERVICE		EXTENDED SERVICE	
	A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
	2"	3"	1028-03-0006-53	1028-01-0006-54	1028-03-0006-55	1028-01-0006-56	2108-03-0006-55	2108-01-0006-56
EXTREME SERVICE	3"	4"	1028-03-0107-41	1028-01-0107-42	1028-03-0107-43	1028-01-0107-44	2108-03-0107-43	2108-01-0107-44
	4"	5"	1028-03-0103-54	1028-01-0103-55	1028-03-0103-56	1028-01-0103-57	2108-03-0103-56	2108-01-0103-57

FILE REFERENCE
DWG# B-7717-C

Halliburton HT-400, HT-2000, Grizzly, Bearcat, HCLE, ——— Demay - Axon, HD-500, Q10

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (Size Varies by Plunger)	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	SPECIAL ADAPTER	1	50320 (PEEK)
5	LANTERN RING/SEAL CARRIER	1	C95400 (9C AL. BRZ.)
6	O-RING	1	NITRILE
7	PSOE SEAL	1	10819 (HNBR)



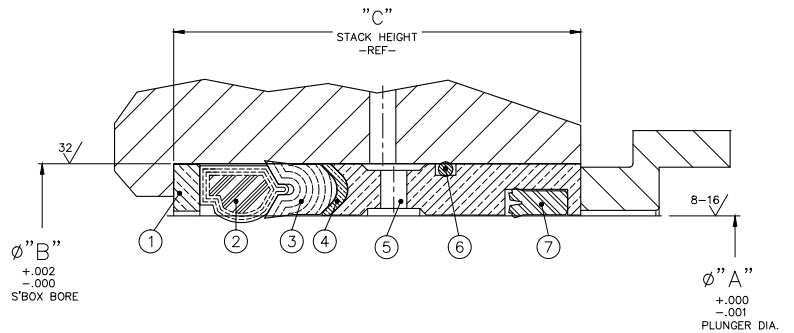
STANDARD SERVICE				CO2 SERVICE				CO2 / EXTENDED / EXTREME SERVICE			
Style 1028, 1067, 1092, 1093 or 4501				Style 1028, 1067, 1092, 1093 or 4501				Style 2101, 2107, 2108, 2112 or 2113			
A	B	C	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET
3-3/8"	4-3/8"	3.51"	XXXX-23-0283-01	XXXX-21-0283-02	XXXX-23-0283-03	XXXX-21-0283-04	XXXX-23-0283-03	XXXX-21-0283-04	XXXX-23-0283-03	XXXX-21-0283-04	XXXX-23-0283-03
4"	5"	3.89"	XXXX-23-0103-13	XXXX-21-0103-14	XXXX-23-0103-15	XXXX-21-0103-16	XXXX-23-0103-15	XXXX-21-0103-16	XXXX-23-0103-15	XXXX-21-0103-16	XXXX-23-0103-15
4-1/2"	5-1/2"	3.89"	XXXX-23-0101-19	XXXX-21-0101-20	XXXX-23-0101-21	XXXX-21-0101-22	XXXX-23-0101-21	XXXX-21-0101-22	XXXX-23-0101-21	XXXX-21-0101-22	XXXX-23-0101-21
5"	6"	4.04"	XXXX-23-0250-13	XXXX-21-0250-14	XXXX-23-0250-15	XXXX-21-0250-16	XXXX-23-0250-15	XXXX-21-0250-16	XXXX-23-0250-15	XXXX-21-0250-16	XXXX-23-0250-15
6"	7"	3.79"	XXXX-23-0223-07	XXXX-21-0223-08	XXXX-23-0223-09	XXXX-21-0223-10	XXXX-23-0223-09	XXXX-21-0223-10	XXXX-23-0223-09	XXXX-21-0223-10	XXXX-23-0223-09

FILE REFERENCE
DWG# B-7678-C

Halliburton HT-400, HT-2000, Grizzly, Bearcat, HCLE, Q10 ——— - Halliburton Use Only

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (Size Varies by Plunger)	1	C95400 (9C AL. BRZ.)
2	HEADER RING	1	XLH (8818/38C)
3	"SSF" PRESSURE RING	1	SuperGold (490K)
4	SPECIAL ADAPTER	1	50320 (PEEK)
5	LANTERN RING/SEAL CARRIER	1	C95400 (9C AL. BRZ.)
6	O-RING	1	NITRILE
7	WQ SEAL	1	8509 (NBR)



HALLIBURTON USE ONLY STANDARD SERVICE

A	B	C	COMPLETE SET		REPLACEMENT SET	
			Utex Part #	HAL Part #	Utex Part #	HAL Part #
3-3/8"	4-3/8"	3.51"	2108-03-0283-41	101748780	2108-01-0283-42	101748781
4"	5"	3.89"	2108-03-0103-74	101748782	2108-01-0103-75	101748783
4-1/2"	5-1/2"	3.89"	2108-03-0101-24	101748784	2108-01-0101-25	101748785
5"	6"	4.04"	2108-03-0250-53	101748786	2108-01-0250-54	101748787
6"	7"	3.79"	2108-03-0223-75	101748788	2108-01-0223-76	101748789

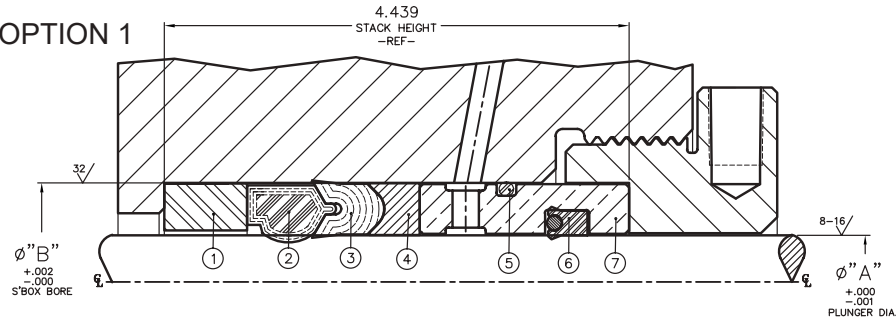
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GD - SGWS

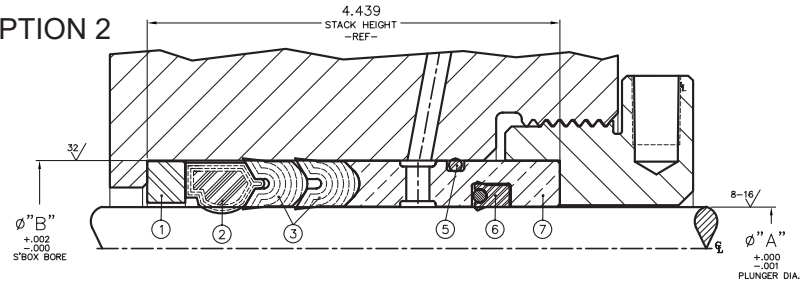
LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (Option 1 L=.790") (Option 2 L=.410")	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING (Option 1) (Option 2)	1 2	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER (Option 1)	1	50320 (PEEK)
5	O-RING	1	NITRILE
6	PSA/PSOA SEAL	1	10819 (HNBR)
7	LANTERN RING	1	C95400 (9C AL. BRZ.)

OPTION 1



OPTION 2



OPTION 1

		STANDARD SERVICE		CO2 SERVICE		CO2 / EXTENDED / EXTREME SERVICE	
		Style 1028, 1067 or 4501		Style 1028, 1067 or 4501		Style 1028, 1067, 2101, 2107, 2108 or 2113	
A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
3"	4"	XXXX-23-0107-09	XXXX-21-0107-10	XXXX-23-0107-11	XXXX-21-0107-12	XXXX-23-0107-13	XXXX-21-0107-14
3-3/4"	4-3/4"	XXXX-23-0090-27	XXXX-21-0090-28	XXXX-23-0090-29	XXXX-21-0090-30	XXXX-23-0090-31	XXXX-21-0090-32
4"	5"	XXXX-23-0103-42	XXXX-21-0103-43	XXXX-23-0103-44	XXXX-21-0103-45	XXXX-23-0103-46	XXXX-21-0103-47
4-1/2"	5-1/2"	XXXX-23-0101-57	XXXX-21-0101-58	XXXX-23-0101-59	XXXX-21-0101-60	XXXX-23-0101-61	XXXX-21-0101-62
5"	6"	XXXX-23-0250-34	XXXX-21-0250-35	XXXX-23-0250-36	XXXX-21-0250-37	XXXX-23-0250-38	XXXX-21-0250-39
5-1/2"	6-1/2"	XXXX-23-0416-67	XXXX-21-0416-68	XXXX-23-0416-69	XXXX-21-0416-70	XXXX-23-0416-71	XXXX-21-0416-72
6"	7"	XXXX-23-0223-17	XXXX-21-0223-18	XXXX-23-0223-19	XXXX-21-0223-20	XXXX-23-0223-21	XXXX-21-0223-22
6-1/2"	7-1/2"	XXXX-23-0230-19	XXXX-21-0230-20	XXXX-23-0230-21	XXXX-21-0230-22	XXXX-23-0230-23	XXXX-21-0230-24
6-3/4"	7-3/4"	XXXX-23-0558-21	XXXX-21-0558-22	XXXX-23-0558-23	XXXX-21-0558-24	XXXX-23-0558-25	XXXX-21-0558-26

OPTION 2

		STANDARD SERVICE		CO2 SERVICE		CO2 / EXTENDED / EXTREME SERVICE	
		Style 1028 or 1067		Style 1028 or 1067		Style 1028, 1067, 2107, 2108 or 2113	
A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
3"	4"	XXXX-23-0107-15	XXXX-21-0107-16	XXXX-23-0107-17	XXXX-21-0107-18	XXXX-23-0107-19	XXXX-21-0107-20
3-3/4"	4-3/4"	XXXX-23-0090-33	XXXX-21-0090-34	XXXX-23-0090-35	XXXX-21-0090-36	XXXX-23-0090-37	XXXX-21-0090-38
4"	5"	XXXX-23-0103-48	XXXX-21-0103-49	XXXX-23-0103-50	XXXX-21-0103-51	XXXX-23-0103-52	XXXX-21-0103-53
4-1/2"	5-1/2"	XXXX-23-0101-63	XXXX-21-0101-64	XXXX-23-0101-65	XXXX-21-0101-66	XXXX-23-0101-67	XXXX-21-0101-68
5"	6"	XXXX-23-0250-40	XXXX-21-0250-41	XXXX-23-0250-42	XXXX-21-0250-43	XXXX-23-0250-44	XXXX-21-0250-45
5-1/2"	6-1/2"	XXXX-23-0416-73	XXXX-21-0416-74	XXXX-23-0416-75	XXXX-21-0416-76	XXXX-23-0416-77	XXXX-21-0416-78
6"	7"	XXXX-23-0223-23	XXXX-21-0223-24	XXXX-23-0223-25	XXXX-21-0223-26	XXXX-23-0223-27	XXXX-21-0223-28
6-1/2"	7-1/2"	XXXX-23-0230-25	XXXX-21-0230-26	XXXX-23-0230-27	XXXX-21-0230-28	XXXX-23-0230-29	XXXX-21-0230-30
6-3/4"	7-3/4"	XXXX-23-0558-27	XXXX-21-0558-28	XXXX-23-0558-29	XXXX-21-0558-30	XXXX-23-0558-31	XXXX-21-0558-32

FILE REFERENCE
DWG# B-8330-C

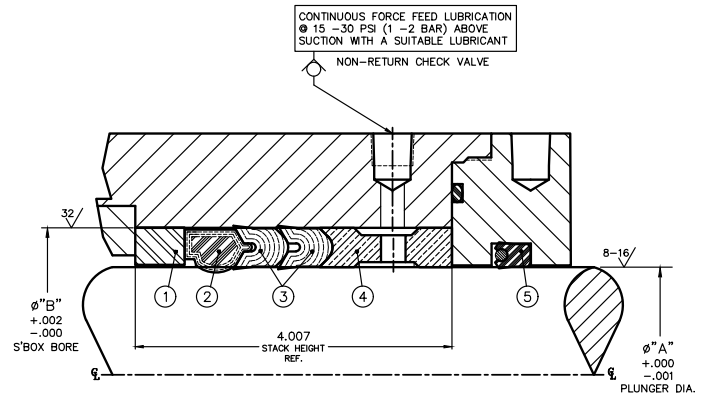


GD 3000

- Extreme Service

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	JUNK RING	1	G10180 (C1018)
2	HEADER RING	1	See Styles & Materials Selection Guide at End of Booklet
3	PRESSURE RING, SSF	2	See Styles & Materials Selection Guide at End of Booklet
4	TOP ADAPTER/LANTERN RING	1	C95400 (AL. BRZ)
5	PS/PSO WIPER SEAL	1	STYLE 10819 (HNBR)



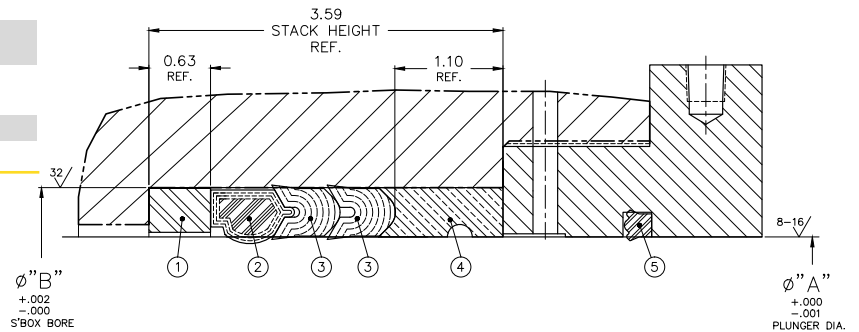
		STANDARD SERVICE		EXTENDED HPP SERVICE		EXTENDED CHEMICAL SERVICE	
A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
4"	5"	1067-23-0103-68	1067-31-0103-16	2108-23-0103-98	2108-31-0103-26	2113-23-0103-98	2113-31-0103-26
4-1/2"	5-1/2"	1067-23-0101-48	1067-31-0101-34	2108-23-0101-55	2108-31-0101-34	2113-23-0101-55	2113-31-0101-34
5"	6"	1067-23-0250-33	1067-31-0250-06	2108-23-0250-27	2108-31-0250-24	2113-23-0250-27	2113-31-0250-24
5-1/2"	6-1/2"	1067-23-0416-46	1067-31-0416-06	2108-23-0416-48	2108-31-0416-15	2113-23-0416-48	2113-31-0416-15
6"	7"	-	-	2108-23-0223-15	2108-31-0223-09	-	-
6-1/2"	7-1/2"	-	-	2108-23-0230-31	2108-31-0230-09	-	-
6-3/4"	7-3/4"	-	-	2108-23-0558-13	2108-31-0558-09	-	-

FILE REFERENCE
DWG# B-9740-C

GD, Serva - 2250/2500, PSFT 945

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	SPACER (L=.625")	1	C1018 (L.C. STEEL)
2	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
3	"SSF" PRESSURE RING	2	See Styles & Material Selection Guide at End of Booklet
4	TOP ADAPTER	1	C95400 (9C AL. BRZ.)
6	PS/PSO SEAL	1	10819 (HNBR)



		STANDARD SERVICE		CO2 SERVICE		EXTREME / EXTENDED SERVICE	
		Style 1028 or 1067		Style 1028 or 1067		Style 1028, 1067, 2107, 2108, 2112 or 2113	
A	B	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
2-3/4"	3-3/4"	XXXX-23-0108-XX	XXXX-21-0108-XX	XXXX-23-0108-XX	XXXX-21-0108-XX	XXXX-23-0108-XX	XXXX-21-0108-XX
3"	4"	XXXX-23-0107-XX	XXXX-21-0107-XX	XXXX-23-0107-XX	XXXX-21-0107-XX	XXXX-23-0107-XX	XXXX-21-0107-XX
3-1/2"	4-1/2"	XXXX-23-0082-XX	XXXX-21-0082-XX	XXXX-23-0082-XX	XXXX-21-0082-XX	XXXX-23-0082-XX	XXXX-21-0082-XX
3-3/4"	4-3/4"	XXXX-23-0090-XX	XXXX-21-0090-XX	XXXX-23-0090-XX	XXXX-21-0090-XX	XXXX-23-0090-XX	XXXX-21-0090-XX
4"	5"	XXXX-23-0103-86	XXXX-21-0103-87	XXXX-23-0103-88	XXXX-21-0103-89	XXXX-23-0103-84	XXXX-21-0103-85
4-1/2"	5-1/2"	XXXX-23-0101-93	XXXX-21-0101-94	XXXX-23-0101-95	XXXX-21-0101-96	XXXX-23-0101-91	XXXX-21-0101-92
5"	6"	XXXX-23-0250-85	XXXX-21-0250-86	XXXX-23-0250-87	XXXX-21-0250-88	XXXX-23-0250-83	XXXX-21-0250-84
5-1/2"	6-1/2"	XXXX-23-0416-81	XXXX-21-0416-82	XXXX-23-0416-83	XXXX-21-0416-84	XXXX-23-0416-79	XXXX-21-0416-80
5-3/4"	6-3/4"	XXXX-23-0346-XX	XXXX-21-0346-XX	XXXX-23-0346-XX	XXXX-21-0346-XX	XXXX-23-0346-XX	XXXX-21-0346-XX
6"	7"	XXXX-23-0223-31	XXXX-21-0223-32	XXXX-23-0223-33	XXXX-21-0223-34	XXXX-23-0223-29	XXXX-21-0223-30
6-1/2"	7-1/2"	XXXX-23-0230-XX	XXXX-21-0230-XX	XXXX-23-0230-XX	XXXX-21-0230-XX	XXXX-23-0230-XX	XXXX-21-0230-XX
6-3/4"	7-3/4"	XXXX-23-0558-XX	XXXX-21-0558-XX	XXXX-23-0558-XX	XXXX-21-0558-XX	XXXX-23-0558-XX	XXXX-21-0558-XX
7-1/2"	8-1/2"	XXXX-23-0506-XX	XXXX-21-0506-XX	XXXX-23-0506-XX	XXXX-21-0506-XX	XXXX-23-0506-XX	XXXX-21-0506-XX

FILE REFERENCE
DWG# B-8506-C



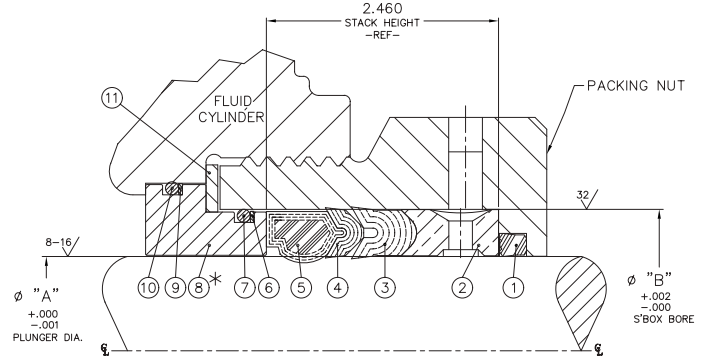
Serva - TPD 600

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	PSO SEAL	1	10819 (HNBR)
2	ADAPTER LANTERN RING	1	C95400 (9C AL. BRZ.)
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	"SF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
5	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
6	BACK-UP RING	1	PTFE
7	O-RING	1	NITRILE
8	SPOOL, SEAL CARRIER *	1*	C1018 (L.C. STEEL)
9	BACK-UP RING	1	PTFE
10	O-RING	1	NITRILE
11	SPACER	0 or 1	C1018 (L.C. STEEL)

* Item 8 is not a component of the complete assembly.

* Item 11 is provided on 3-1/2 only



		ITEM 8*	STANDARD SERVICE		CO2 SERVICE		HIGH TEMPERATURE / ACID SERVICE		EXTREME / EXTENDED SERVICE	
			Style 1067 or 1028		Style 1067 or 1028		Style 1092		Style 2107 or 2108	
A	B	COMPLETE SET		REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
3"	4"	1435-28-0029-59	XXXX-03-0107-10	XXXX-01-0107-11	XXXX-03-0107-12	XXXX-01-0107-13	1092-03-0107-03	1092-01-0107-04	XXXX-03-0107-12	XXXX-01-0107-13
3-1/2"	4-1/2"	1435-28-1838-59	XXXX-03-0082-63	XXXX-01-0082-64	XXXX-03-0082-65	XXXX-01-0082-66	1092-03-0082-03	1092-01-0082-04	XXXX-03-0082-65	XXXX-01-0082-66
4-1/2"	5-1/2"	1435-28-1838-59	XXXX-03-0101-81	XXXX-01-0101-80	XXXX-03-0101-79	XXXX-01-0101-78	1092-03-0101-03	1092-01-0101-04	XXXX-03-0101-79	XXXX-01-0101-78

FILE REFERENCE
DWG# B-8495-C

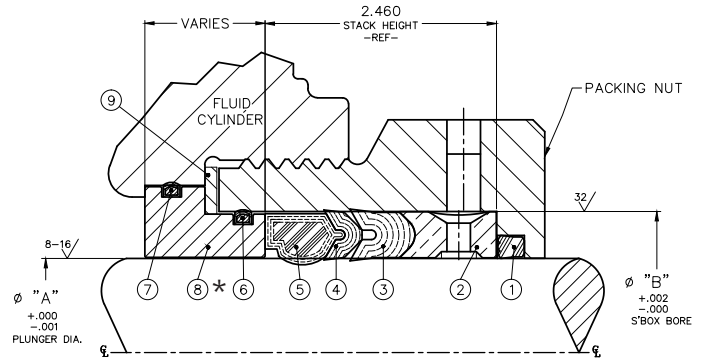
Serva - TPD 600 - D-Seal Option

LEGEND

ITEM	DESCRIPTION	QTY	MATERIAL
1	PSO SEAL	1	10819 (HNBR)
2	ADAPTER LANTERN RING	1	C95400 (9C AL. BRZ.)
3	"SSF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
4	"SF" PRESSURE RING	1	See Styles & Material Selection Guide at End of Booklet
5	HEADER RING	1	See Styles & Material Selection Guide at End of Booklet
6	D-SEAL	1	HNBR/ COTTON FABRIC
7	D-SEAL	1	HNBR/ COTTON FABRIC
8	SPOOL, SEAL CARRIER*	1	C1018 (LC Steel)
9	SPACER	1	C1018 (LC Steel)

Provided on 3 - 1/2 Only

* Item 8 is not a component of the complete assembly.



		ITEM 8*	STANDARD SERVICE		CO2 SERVICE		EXTREME / EXTENDED SERVICE	
			Style 1067 or 1028		Style 1067 or 1028		Style 2107 or 2108	
A	B		COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET	COMPLETE SET	REPLACEMENT SET
3"	4"	1435-28-0029-59	XXXX-33-0107-17	XXXX-31-0107-18	XXXX-33-0107-19	XXXX-31-0107-20	XXXX-33-0107-19	XXXX-31-0107-20
3-1/2"	4-1/2"	1435-28-1838-59	XXXX-33-0082-21	XXXX-31-0082-22	XXXX-33-0082-23	XXXX-31-0082-24	XXXX-33-0082-23	XXXX-31-0082-24
4-1/2"	5-1/2"	1435-28-0101-59	XXXX-33-0101-29	XXXX-31-0101-30	XXXX-33-0101-31	XXXX-31-0101-32	XXXX-33-0101-31	XXXX-31-0101-32

FILE REFERENCE
DWG# B-8495-C
-Sheet 2 of 2

Fabric Reinforced Seals



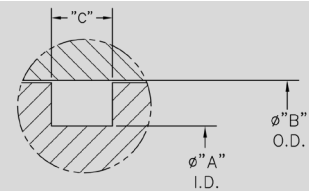
PDN INFORMATION

0761-XX-XXXX-XX

- 01-8867 HNBR WITH 38C CLOTH *
- 02-8818 HNBR WITH 38C CLOTH
- 03-8819 HNBR WITH 38C CLOTH

- 73: SHORT D-SEAL ("C" DIM LESS THAN OR EQUAL TO .30)
- 74: TALL D-SEAL ("C" DIM MORE THAN .30)

* 01-8867 HNBR WITH 38C Cloth is the standard construction



TALL D-SEAL

D-SEAL TALL SERIES	A	B	C	SUCTION COVER	DISCHARGE COVER	PACKING SPOOL	PDN
	2.875	3.500	0.558	2.50 X 3.00 SPM TWS-600S 2.50 X 3.00 SPM TWS-1000S 3.00 X 4.00 Serva TPD-600	2.5 X 3.00 SPM TWS-600S 2.50 X 3.00 SPM TWS-1000S 3.00 X 4.00 SERVA TPD-600		0761-73-0942-XX
	2.908	3.250	0.412				0761-73-0930-XX
	3.625	4.250	0.564		3.25 X 4.50 MSI TI-600 3.50 - 4.50 TWS-600S/1000S		0761-73-0946-XX
	3.910	4.250	0.412				0761-73-0931-XX
	4.125	4.750	0.636	3.25 - 4.50 MSI TI-600 3.50 - 4.50 SPM TWS-600S 3.50 - 4.50 SPM TWS-1000S 3.50 - 4.00 SPM TWS-900 4.00 X 5.50" CAT PUMP	2.75 - 4.50 SPM TWS-600 3.75 - 4.00 SPM TWS-900 3.75 - 4.00 SPM QWS-2250/2500 4.00 x 5.00 CAT PUMP		0761-73-0943-XX
	4.250	4.750	0.619	4.00 X 5.00 GD SGWS	4.00 X 5.00 GD SGWS		0761-73-0937-XX
	4.625	5.125	0.638				0761-73-0953-XX
	4.750	5.250	0.638	4.50 X 5.50 SHANGHAI QINGHE 4.50 GD SGWS	4.50 X 5.50 SHANGHAI QINGHE 4.50 GD SGWS		0761-73-0954-XX
	4.795	5.251	0.540	4.00 XOPI 4.00 & 4.50 EOPI 4.50 x 5.00 SPM DURALAST 5.00 GD SGWS 5.00 HOPI	4.00 & 4.50 EOPI & XOPI 4.00 X 5.00 GD "Y" FLUID END 5.00 GD SGWS 5.00 SPM 2250/2500		0761-73-0932-XX
	5.000	5.500	0.638	4.50 X 5.00 TWS-900 4.50 X 5.00 QWS-2250/2500 4.50 x 5.50 CAT PUMP 5.00 SPM 2250/2500	4.50 X 5.50 SERVA TPD-600		0761-73-0938-XX
	5.296	5.751	0.540	5.50 IOPI	5.00 HOPI 5.50 IOPI 4.50 X 5.50 GD "Y" FLUID END 4.50 X 5.50 PFP		0761-73-0933-XX
	5.796	6.250	0.540		4.50 X 5.00 CP 600		0761-73-0934-XX
	6.046	6.501	0.412			PFS-014 GD	0761-73-0955-XX
	6.546	7.000	0.540		6.50 UOPI		0761-73-0936-XX
	6.796	7.252	0.540	6.50 UOPI			0761-73-0935-XX



SHORT D-SEAL

D-SEAL SHORT SERIES	A	B	C	SUCTION COVER	DISCHARGE COVER	PACKING SPOOL	PDN
	2.375	2.750	0.182		MSI TI-600HP FLANGE		0761-74-0941-XX
	3.375	3.750	0.182				0761-74-0944-XX
	3.654	3.875	0.210			2.75 X 3.75 SPM TWS-600S 3.00 X 4.00 SPM TPD-600 2.75 X 3.75 SPM/KERR TWS-600S 3.00 X 4.00 SERVA TPD-600	0761-74-0926-XX
	3.500	4.000	0.281		6.50 - 6.75 SPM TWS-2250 FLANGE: 3.75 SPM QWS FLANGE		0761-74-0957-XX
	3.779	4.000	0.210			3.00 X 4.00 SERVA TPD-600	0761-74-0927-XX
	3.783	4.125	0.300			3.00 X 4.00 SPM TWS-600S	0761-74-0947-XX
	4.027	4.250	0.210			3.00 KERR TWS-600S-3	0761-74-0958-XX
	4.033	4.375	0.297				0761-74-0948-XX
	4.279	4.500	0.210			3.50 X 4.50 SERVA TPD-600	0761-74-0929-XX
	4.283	4.625	0.297			3.50 X 4.50 SPM TWS-600S	0761-74-0949-XX
	4.783	5.125	0.300				0761-74-0950-XX
	4.904	5.125	0.210			3.50 X 4.50 SPM TPD-600 4.50 X 5.50 SPM TPD-600 3.50 X 4.50 SPM TWS-600S 4.50 X 5.50 SPM TWS-600S 3.50 X 4.50 MSI TI-600	0761-74-0928-XX
	5.000	5.500	0.281		4.50 X 5.00 SPM TWS-900 4.50 X 5.00 SPM QWS-2250/2500	5.00 SPM 2250/2500	0761-74-0939-XX
	5.283	5.625	0.299			4.50 X 5.50 SPM TWS-600S	0761-74-0952-XX
	5.277	5.500	0.210			4.50 X 5.50 SERVA TPD-600	0761-74-0925-XX

U-PAK® Centrifugal Pump Packing



U-PAK Assemblies

U-PAK 100 SuperGold Injectable Packing Kits

U-PAK 100 SuperGold is a blend of synthetic fibers and proprietary lubricants, gold in color. Resistant to both water-based and hydrocarbon-based fluids, particularly those used in oil exploration drilling and servicing. Kits include auxiliary hardware and U-PAK SuperGold packing set.

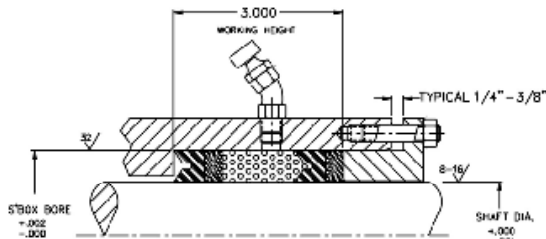
Shaft Size	1-1/8" Shaft	1-7/8" Shaft	2-1/2" Shaft
Part Number	0668-06-0012-62	0668-06-0109-87	0668-06-0074-26

Compression Packing Assemblies

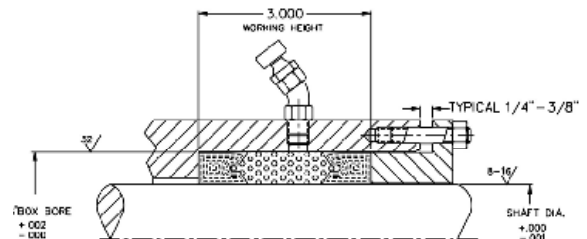
Base Material Style	1-1/8" Shaft	1-7/8" Shaft	2-1/2" Shaft
Graphite/Acrylic 165	0299-02-0012-11	0299-01-0109-08	0299-02-0074-42
Graphite/Aramid 225	0299-02-0012-38	0225-02-0109-44	0299-02-0074-54
PTFE/Aramid 237	0261-02-0012-07	0261-02-0109-10	0299-02-0074-86
PTFE 232	0232-02-0012-34	0232-02-0109-45	
King Type Packing Molded NBR		0811-02-6007-01 or 0001-10-0800-04	0811-02-6075-01
V-Type Packing Molded NBR	0701-02-0012-65	0701-02-0109-42	

NOTE: All above PDN's include Plastic Lantern Rings. U-PAK® is a Registered TradeName of Utex Industries, Inc.

U-PAK Rotary Packing Kit for Abrasive Service



U-PAK Rotary Packing Kit for Chemical Service



U-PAK® Injection Gun



The U-PAK® Injection Gun utilizes a button-head or flow-through fitting which is permanently installed on the pump or valve stuffing box. Since it requires no electricity, the U-PAK Gun can be used anywhere to replenish sealant easily and conveniently. The all steel hydraulic gun is completely portable and very easy to use. The valve or pump stuffing box fitting allows the U-PAK sealant to be hand injected into the shaft stuffing box using the injection gun. No downtime is required for the injection operation as the equipment is recommended to run during the repacking operation.

How to use the U-PAK® Injection Gun

To properly replenish the packing material, the stuffing box fitting must be located. Next, the injection gun is coupled to the fitting. The on/off handle on the fitting is turned to the open position and the U-PAK sealant is pumped into the fitting until the required amount is injected. When the operation is complete, the fitting handle is placed in the off position and the injection gun is disconnected from the stuffing box fitting. Remember to properly disassemble and return the injection gun to its container where it may be stored until needed again.

Note: Button-head fittings with check ball valve do not require ball valve for online repacking.



Styles & Material Selection Guide

Geometry	Style	Description	Temp.	Max PSI	Compatibility
	0701	Nitrile with cotton fabric, Medium hard, Black	-10 to +250°F	3,500 psi*	Resistant to hydrocarbons
	0758,0798	High-temperature HNBR with high-strength synthetic fabric, Hard, Gold	-10 to +300°F	40,000 psi*	Resistant to hydrocarbons, acids, H ₂ S below 6%, abrasive fluids
	0805,0815	Low-friction nitrile with cotton/synthetic fabric, Medium hard, Gray	-40 to +250°F	10,000 psi*	Resistant to hydrocarbons
	0817,0809	Nitrile with cotton/synthetic fabric, Hard, Black	-10 to +250°F	10,000 psi*	Resistant to hydrocarbons, acids, abrasive fluids
	4510	Virgin PTFE, Soft, White	-110 to +500°F	4,500 psi*	Resistant to most fluids, chemically inert
	4511	Glass, Moly filled PTFE, Med hard, Light gray	-110 to +500°F	5,500 psi*	Resistant to most fluids, chemically inert
	4515	Carbon graphite filled PTFE, Hard, Gray/black	-110 to +500°F	5,500 psi*	Resistant to most fluids, chemically inert
	6618	FEPM with aramid/Glass blend, Hard, Black	+10 to +450°F	15,000 psi*	Resistant to hydrocarbons, H ₂ S, acids
	6625	FKM with aramid/Glass blend, Hard, Black	+10 to +425°F	15,000 psi*	Resistant to hydrocarbons, aromatic solvents, strong and mild acids
	6665	EPDM with cotton and synthetic fabric, Hard, Black	-30 to +275°F	10,000 psi*	Good general service, water, steam, glycol and fire-resistant fluids (phosphate esters)
	6676	HNBR with cotton/synthetic fabric, Medium hard, Black	-40 to +275°F	7,500 psi*	Resistant to hydrocarbons, mild acids, mild caustics and water
	6677	Pure PTFE with aramid fabric reinforcement, FDA Compliant, Medium hard, Brown	-50 to +500°F	10,000 psi*	Resistant to most fluids, chemically inert, complies with FDA Requirements (CFR 177.1550 & CFR 177.1632)
	6681	Nitrile with cotton/synthetic fabric, FDA Compliant, Medium hard, Grayish/white	-10 to +250°F	5,000 psi*	Resistant to mild acids, mild caustics and water, complies with FDA Requirements (CFR 177.2600)
	6686	Neoprene® with cotton fabric, Medium hard, Black	-10 to +225°F	10,000 psi*	General service, anhydrous ammonia, water
	1028,1058	High-temperature HNBR with high-strength synthetic fabric, Hard, Gold	-10 to +300°F	40,000 psi*	Resistant to hydrocarbons, acids, H ₂ S below 6%, abrasive fluids
	1043	FEPM with aramid/glass blend, Hard, Black	+10 to +450°F	15,000 psi*	Resistant to hydrocarbons, H ₂ S, acids
	1045	HNBR with cotton/synthetic fabric, Medium hard, Black	-40 to +275°F	7,500 psi*	Resistant to hydrocarbons, mild acids, mild caustics and water
	1056	Low-friction nitrile with cotton/synthetic fabric, Medium hard, Gray	-10 to +250°F	15,000 psi*	Resistant to hydrocarbons
	1064	Pure PTFE with aramid fabric reinforcement, FDA Compliant, Medium hard, Brown	-50 to +500°F	15,000 psi*	Resistant to most fluids, chemically inert, complies with FDA requirements (CFR 177.1550 and CFR 177.1632)
	1066	Neoprene® with cotton fabric, Hard, Black	-10 to +250°F	15,000 psi*	General service elastomer, anhydrous ammonia, water
	1067,1068	Nitrile with cotton/synthetic fabric, Hard, Black	-10 to +250°F	15,000 psi*	Resistant to hydrocarbons, acids, abrasive fluids
	1073	FKM with aramid/glass blend, Hard, Black	+10 to +425°F	15,000 psi*	Resistant to hydrocarbons, aromatic solvents, strong and mild acids
	1077	Nitrile with cotton/synthetic fabric, FDA Compliant, Medium hard, Grayish white	-10 to +250°F	15,000 psi*	Resistant to mild acids, mild caustics, water, complies with FDA requirements (CFR 177.2600)
	1081	EPDM with cotton/synthetic fabric, Hard, Black	-30 to +275°F	15,000 psi*	Good general service, water, steam, glycol and fire-resistant fluids (phosphate esters)
	1091	FKM with cotton/synthetic fabric, Med Hard, Black	-10 to +250°F	15,000 psi*	Resistant to hydrocarbons, aromatic solvents, strong and mild acids
	4501,4521	Carbon/Graphite filled PTFE, Hard, Gray black	-110 to +500°F	5,500 psi*	Resistant to hydrocarbons, strong acids, strong caustics, abrasive fluids
	4509	Virgin Teflon®, Soft, White	-110 to +500°F	4,500 psi*	Resistant to most fluids, chemically inert
	4516	Glass, Moly filled PTFE, Med hard, Light gray	-110 to +500°F	15,000 psi*	Resistant to most fluids, chemically inert
	1601	Low friction nitrile with cotton/synthetic fabric, Medium hard, Gray	-40 to +250°F	10,000 psi*	Resistant to hydrocarbons, liquids and gasses
	1605	Pure PTFE with aramid fabric reinforcement, FDA Compliant, Hard, Brown	-50 to +500°F	15,000 psi*	Resistant to most fluids, chemically inert, complies with FDA Requirements (CFR 177.1550 and CFR 177.1632)
	1606	FEPM with aramid fabric, Hard, Black	+10 to +450°F	15,000 psi*	Resistant to hydrocarbons, H ₂ S, acids, steam, high-temperatures and pressures
	1608	FKM with aramid/glass blend reinforcement, Hard, Black	+10 to +425°F	15,000 psi*	Resistant to hydrocarbons, aromatic solvents, strong and mild acids
	1609	Nitrile with cotton/synthetic fabric reinforcement, FDA Compliant, Medium hard, Gray white	-10 to +250°F	5,000 psi*	Resistant to hydrocarbons, liquids and gasses, complies with FDA Requirements (CFR 177.2600)
	1610	EPDM with cotton/synthetic fabric reinforcement, Hard, Black	-30 to +275°F	10,000 psi*	Compatible with water and phosphate ester hydraulic fluids. Do not use with petroleum based hydrocarbon fluids.

* May require an engineered assembly with special fit adapters to meet these elevated pressure ranges



Styles & Material Selection Guide

Geometry	Style	Description	Temp.	Max PSI	Compatibility
 ASF (Continued)	1615	Nitrile with cotton/synthetic fabric reinforcement, Hard, Black	-10 to +225°F	20,000 psi*	Resistant to hydrocarbon, liquids and gasses, and mild acids
	1629	HNBR with cotton/synthetic fabric reinforcement, Medium hard, Black	-40 to +275°F	7,500 psi*	Resistant to hydrocarbons, mild acids, mild caustics, water
	1633	Chloroprene (Neoprene®) with cotton fabric, Hard, Black	-10 to +250°F	10,000 psi*	General service elastomer, anhydrous ammonia, water
	1658	High-temperature HNBR with high-strength synthetic fabric, Hard, Gold	-10 to +300°F	40,000 psi*	Resistant to hydrocarbons, mild acids and H ₂ S below 6%
	4554	Glass/Moly filled PTFE, Medium hard, Light gray	-30 to +500°F	15,000 psi*	Resistant to most fluids, chemically inert
	4555	Carbon, graphite PTFE, Hard, Grayish black	-110 to +500°F	5,500 psi*	Resistant to most fluids, except alkali metals or elemental fluorine
	4556	Glass filled PTFE, Hard, White	-110 to +500°F	5,500 psi*	Resistant to most fluids, except alkali metals or elemental fluorine
 Compression Packing	0212	Aramid IT fibers with high-temperature lubricants	-320 to +500°F	5,500 psi*	Mild chemicals and caustics, hydrocarbons, aromatic and aliphatic solvents, salt solutions, slurries and abrasive services
	0217	Aramid fibers in corners with PTFE seams	-320 to +500°F	4,000 psi*	Hydrocarbon resistant, acids, water
	0220	Spun aramid impregnated with PTFE	-320 to +500°F	3,500 psi*	Mild chemicals and caustics, hydrocarbons, aromatic and aliphatic solvents, salt solutions, slurries and abrasive services
	0232	Pure PTFE filaments impregnated with PTFE	-400 to +550°F	3,600 psi*	Process chemicals and concentrated acids, NSF approved
	0238	Synthetic yarn impregnated with PTFE	0 to +500°F	1,500 psi*	Alkalies, mild acids, solvents, steam and oils
	0241	Aramid fibers in corners with synthetic filament in seams	0 to +500°F	4,000 psi*	Petrochemical and industrial applications
	0242	Aramid IT fibers constructed around an aluminum core for cross-section stabilization	-320 to +500°F	5,500 psi*	Mild chemicals, oils, mild caustics, hydrocarbons, aromatic and aliphatic solvents, salt solutions, abrasive services
	0249	Carbon yarns treated with PTFE	-300 to +650°F	3,200 psi*	Paper and pulp process chemicals, hydrocarbons, hot water, acids
	0255	Synthetic filament impregnated, non-lubricated, PTFE spacer	-30 to +350°F	3,000 psi*	Resistant to hydrocarbons, alcohol, glycol and water
	0268	Spun aramid, lead foil rings with PTFE spacer	-10 to +300°F	5,000 psi*	Resistant to hydrocarbons, acids, water
 U-PAK® Injectable Packing	0668	(100 SG) Abrasion resistant fibers with lubricants and special binders, Gold	0 to +400°F	3,000 psi*	Water, drilling fluids, produced fluids, seawater, brine, acids, alkalis and other aqueous media (ph 2-12)
	0675	(400 HP) Blend of high-performance fibers with chemical resistant lubricants and special binders, Dark gray	0 to +500°F	3,000 psi*	Brine, acids, alkalis, certain solvents, seawater (ph 0-14)
	0670	(500 FG) Blend of non-toxic fibers with lubricants, NSF approved for potable water, White	0 to +500°F	1,200 psi*	Used in food, potable water and pharmaceuticals (ph 0-14)
	0671	(600 BG) Blend of abrasion resistant fibers with lubricants and special binders, Brownish gray	0 to +500°F	5,000 psi*	Used with drilling fluids, produced fluids, seawater, brine, acids, alkalis and aqueous media (ph 0-13)
	0679	(799 RP) Blend of high-strength abrasion resistant fibers with lubricants and special binders, Yellow	0 to +250°F	15,000 psi*	Hydrocarbon resistant, seawater, brine, acids, alkalis, other aqueous media (ph 2-12)
	0678	(800 HR) Blend of high-strength fibers, hydrocarbon resistant lubricants and special binders, Dark gray	0 to +500°F	3,000 psi*	Resistant to hydrocarbons (natural gas, crude oil, lubricating oils), seawater, brine, acids, alkalis and certain solvents (ph 0-14)
	0669	(1000 LT) Blend of high-strength abrasion resistant fibers with low-temperature lubricants and special binders, Gray	-50 to +350°F	3,000 psi*	Soft packing resistant to hydrocarbons, drilling fluids, produced fluids, seawater, brine, acids, alkalis and other aqueous media (ph 2-12)
	0676	(2000 ES) Blend of exfoliated graphite particles with high-temperature lubricants, Dark gray	0 to +700°F	3,000 psi*	Process chemicals, steam, petroleum fuels (ph 0-14)

* May require an engineered assembly with special fit adapters to meet these elevated pressure ranges

Styles & Material Selection Guide Legend

Abbreviation	Common Name	Chemical Name	Tradename
CR	Chloroprene	Polychloroprene	Neoprene®
EPDM	EPDM, EPR	Ethylene-Propylenediene Terpolymer	Royalene®, Nordel®
FEP	TFEP	Tetrafluoroethylene-Propylene	Aflas® HTCR™
FKM	Fluorocarbon	Hexafluoropropylene-Copolymer	Viton® Fluorel®
HNBR, HSN	Hydrogenated Nitrile, Highly Saturated Nitrile	Hydrogenated Butadiene-Acrylonitrile	Zetpol®, Therban®
NBR	Nitrile	Butadiene-Acrylonitrile	Hycar®, Nipol®, Paracril®
PTFE	PTFE	Polytetrafluoroethylene	Teflon®
SBR	SBR	Styrene-Butadiene	

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NOTE: The information herewith is believed to be reliable and correct, but the products discussed or described herein are sold without warranty, expressed or implied, as to the results the user may obtain with them. The application and uses information contained herein are general in nature and not intended for specific installations. Combinations of service environment may alter the serviceability of these products. Contact Utex for specific recommendations.

Troubleshooting Guide

PROBLEM	DIAGNOSIS	UTEX SOLUTION
Leakage at startup	Packing installed incorrectly	Remove and reinstall packing. Refer to Installation Instructions on Page 25.
	Worn stuffing box	Replace stuffing boxes that are excessively worn, damaged or show signs of "washboarding."
	Packing too loose	Review installation and tightening procedure. Packing should be axially compressed .025" to .040" after the plunger is installed.
Wiper or secondary seal failure	Damaged during installation	Lubricate packing and plunger before installing plunger. Make sure plunger shoulder is radiused or chamfered.
	Lubrication pressure too high	Utex PS Type Secondary Seals should be run with low-pressure air-over-oil type lubrication systems. If other lube systems are used, provisions must be made to avoid pressure trapping between the primary packing set and the secondary lubrication seal.
Packing running hot or showing damage on only one cylinder	Over-tightened gland nut	Review Installation Instructions on Page 25. Packing should be compressed about .040" or 1/4 turn of a typical gland nut. If the packing is too tight, it will run hot. On equipment with adjustable stuffing boxes, simply back off the gland nut slightly. If the stuffing box is non-adjustable, the metal trim should be modified to reduce the compression of the packing.
	Fluid cylinder not filled or pumps not properly primed	Remove and replace packing. Check all valves to ensure they are operating properly. Remove old packing and reinstall new packing. Run pump slowly until it is fully primed.
	Insufficient lubrication	Check lubrication levels and ensure each plunger is receiving adequate lubrication. Increase lubrication rate until packing is running without excessive heat.
	Stuck or damaged discharge valve	Will cause packing to be under high pressure during both suction and discharge stroke. Repair or replace discharge valve.
	Insufficient suction pressure	Increase charge pump pressure or reduce pump speed.
Short packing life - no apparent damage to packing other than header	Over-tightening, rough plunger finish or inadequate lubrication	Maximum packing life is achieved when the packing is compressed approximately .040" during installation and is run on smooth plungers with adequate lubrication. A normal failure will show wear and some damage to the rubber header ring while the two plastic rings will show little or no wear.
	Low suction pressure or inadequate volume	Avoid running packing dry.
	Loose gland nut	If the packing is not slightly compressed, the packing can move excessively in the stuffing box. Excess movement can cause leakage or, in severe cases, packing failure. Ensure gland nut is compressing packing approximately .040". Mark the gland nut and fluid end so operators can visually check to ensure the gland nut has not backed off.
Short packing life - catastrophic failure or severe damage to packing	Can be caused by extreme problems as listed above	See above.
	Extrusion or fatigue of female adapter and/or pressure ring	Ensure the bronze spacer ring used to back up the female adapter is in good condition and not more than .030" over the plunger size. Use a new PEEK adapter with each packing set. Worn adapters may allow the pressure ring to extrude at high pressure.
	Grooving, gouging and extreme wear to all packing rings	Hardened, abrasive material will cause severe damage to packing components. Ensure pumps are thoroughly cleaned/flushed after each job.

Plunger and Packing Replacement Instructions

This procedure may be performed while the fluid end is still on the pump. Before starting, make sure you have all the tools required for this procedure. For the best results and reduced downtime, please follow the instructions below:

1. Remove suction cover retainer nut with a Retainer Nut Removal Tool.
2. Remove the suction cover with the suction/discharge valve cover removal tool. You may have to also remove the suction valve spring retainer.
3. Remove any other covers over the top of the plungers to get access to the plunger clamp/ extension rod area.
4. Remove the cap screws that hold the plunger clamp, then remove the clamp.
5. Loosen the packing nut to help free the plunger from packing. Then remove the plunger and complete packing assembly through the suction cover opening.
6. Clean and inspect the stuffing box bore to ensure it is clean and all debris is removed. Make sure that the bore is smooth and it is not washed out.
7. Inspect the trim and plungers for damage. Replace if they have significant scoring or poor surface finish.
8. Lubricate packing set with standard packing lubrication oil.
9. Install trim and packing one ring at a time, pulling each component completely against shoulder in fluid end (Spacer, header ring, pressure ring, lantern ring).
10. With the plunger removed, tighten the packing nut hand tight plus 1/4 turn to ensure that the packing is seated.
11. Draw a line with a marker from the stuffing box to the gland nut (Figure 1).
12. Back off the packing nut 3/4 to 7/8 of a turn, coat the plunger with a thin film of oil and install the plunger by pushing it into the stuffing box bore (Do not beat the plunger with Hammer. Figure 2 and 3).
13. Tighten the packing nut to realign with the mark on the stuffing box. This alignment mark also provides a visual indicator if the gland nut should back off during operation or transportation (Figure 4)

14. Inspect the clamp surfaces, plungers, and extension rods for cleanliness. Then install the clam and tighten screws.
15. Replace the seals on the suction cover, install the suction valve spring retainer if necessary, and then tighten the suction cover retainer nut.



Fig. 1 - Alignment mark with packing hand tight plus 1/4 turn with no plunger.



Fig. 2 - Gland nut backed off.



Fig. 3 - Installation of plunger.



Fig. 4 - Gland nut tightened back to alignment mark.

Core-X® Plungers Standard Part Number and Description Explanation

STP **0300A** - **600S** - **SQ**

CORE-X® PLUNGER

DIAMETER	BASE METAL
0300	3" A 1018
0325	3-1/4" B 65/45/12
0350	3-1/2" C 4140
0375	3-3/4" D 304 SS
0400	4" E 316 SS
0450	4-1/2" F

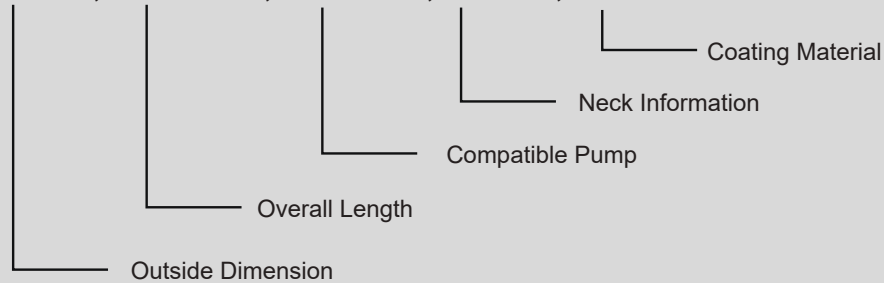
PUMP STYLE	
600S	3.0 TWIN PUMPER
SQH	MSI HYBRID
SQH	XX.00 PUMPER
TQ	2250/2500
CA	CAT 3000
Y	XX.00 PUMPER
AC	XX.00 PUMPER
D	DEMAY
DY	DESTINY™
F	2400/2700
G	GD Y-BLOCK
GD	GD 8" STROKE
GD3	GD 3000
YWS	Y-BLOCK

STYLE SUFFIX

Refer to part matrix
Defines connector end design and coating material

Note: Part numbers with a 'W' at the end are tungsten alloy

PLUNGER 4.50" OD, 12.635" OAL, TWIN PUMP, DRILLED, TUNGSTEN



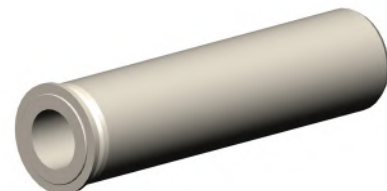
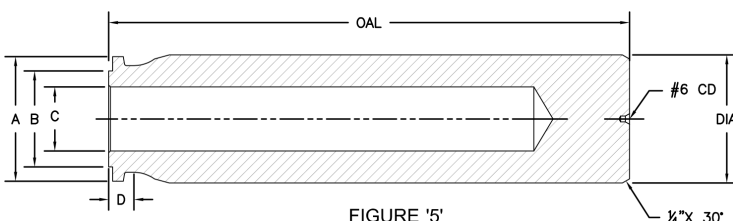
**Not meant for part number generation; information provided for explanation only. For parts not shown, please consult your local sales representative.

CORE-X® DY Style Plunger ——— - SPM Destiny™ Style Pump

'DY' STYLE PART NUMBER MATRIX -- FITS DESTINY™ STYLE PUMPS

PUMP	PART NUMBER	DESCRIPTION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	FIG.
DESTINY	STP0450B-DY-FC	PLUNGER, 4.50 OD, 18.375 OAL, 65/45/12, DESTINY™, FLAT CENTER DRILLED	4.875	4.000	3.373	0.75	5
DESTINY	STP0450B-DY-FCW	PLUNGER, 4.50 OD, 18.375 OAL, 65/45/12, DESTINY™, FLAT CENTER DRILLED TUNGSTEN	4.875	4.000	3.373	0.75	5
DESTINY	STP0500B-DY-FC	PLUNGER, 5.00 OD, 18.375 OAL, 65/45/12, DESTINY™, FLAT CENTER DRILLED	4.875	4.000	3.373	1.000	5
DESTINY	STP0500B-DY-FCW	PLUNGER, 5.00 OD, 18.375 OAL, 65/45/12, DESTINY™, FLAT CENTER DRILLED TUNGSTEN	4.875	4.000	3.373	1.000	5

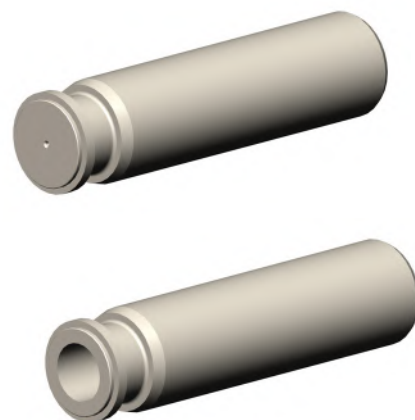
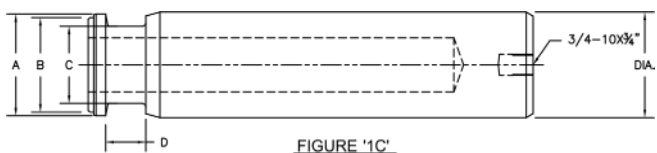
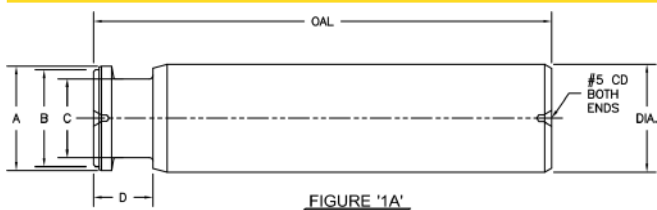
Destiny™ is a Tradename of Weir Oil and Gas



CORE-X® TQ Style Plunger - 2250/2500 Style Pump

'TQ' STYLE PART NUMBER MATRIX -- FITS 2250/2500 PUMP

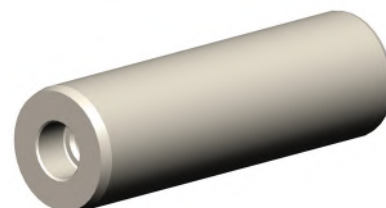
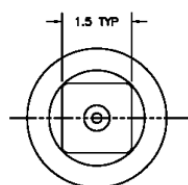
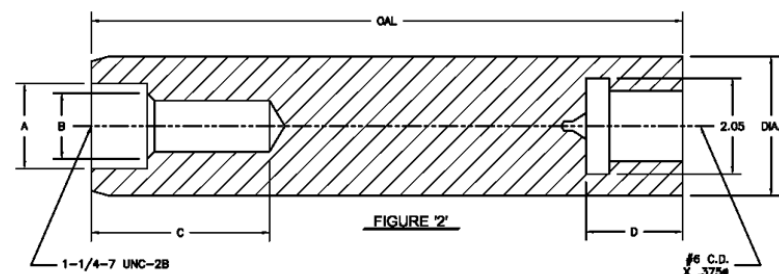
PUMP	PART NUMBER	DESCRIPTION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	FIG.
2250/2500	STP0375B-TQ-FC	PLUNGER, 3.75 OD, 16.00 OAL, 65/45/12, 2250/2500, FLAT CENTER DRILLED	3.625	3.373	2.75	2.0625	1A
2250/2500	STP0375B-TQ-FCW	PLUNGER, 3.75 OD, 16.00 OAL, 65/45/12, 2250/2500, FLAT CENTER DRILLED TUNGSTEN	3.625	3.373	2.75	2.0625	1A
2250/2500	STP0400B-TQ-F68	PLUNGER, 4.00 OD, 16.00 OAL, 65/45/12, 2250/2500, DRILLED AND TAPPED	3.625	3.373	2.75	2.0625	*
2250/2500	STP0400B-TQ-FC	PLUNGER, 4.00 OD, 16.00 OAL, 65/45/12, 2250/2500, FLAT CENTER DRILLED	3.625	3.373	2.75	2.0625	1A
2250/2500	STP0400B-TQ-FCW	PLUNGER, 4.00 OD, 16.00 OAL, 65/45/12, 2250/2500, FLAT CENTER DRILLED TUNGSTEN	3.625	3.373	2.75	2.0625	1A
2250/2500	STP0450B-TQ-FC	PLUNGER, 4.50 OD, 16.00 OAL, 65/45/12, 2250/2500, FLAT CENTER DRILLED	3.625	3.373	2.75	2.0625	1A
2250/2500	STP0450B-TQ-FCW	PLUNGER, 4.50 OD, 16.00 OAL, 65/45/12, 2250/2500, KERR FLAT CENTER DRILLED TUNGSTEN	3.625	3.373	2.75	2.0625	1A
2250/2500	STP0450B-TQ-KFCW	PLUNGER, 4.50 OD, 16.00 OAL, 65/45/12, 2250/2500, KERR FLAT CENTER DRILLED TUNGSTEN	3.625	3.373	2.75	2.0625	1A
2250/2500	STP0500B-TQ-FC	PLUNGER, 5.00 OD, 16.00 OAL, 65/45/12, 2250/2500, FLAT CENTER DRILLED	4.875	4.00	3.373	0.437	1B
2250/2500	STP0500B-TQ-FCW	PLUNGER, 5.00 OD, 16.00 OAL, 65/45/12, 2250/2500, FLAT CENTER DRILLED TUNGSTEN	4.875	4.00	3.373	0.437	1B
2250/2500	STP0550B-TQ-FC	PLUNGER, 5.50 OD, XX OAL, 65/45/12, 2250/2500, FLAT CENTER DRILLED	4.875	4.00	3.373	0.437	1B



CORE-X® 600S Style Plunger - 3.0 Twin Pumper Style Pump

'600S' STYLE PART NUMBER MATRIX -- FITS TWIN PMPER STYLE PUMPS

PUMP	PART NUMBER	DESCRIPTION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	FIG.
TWIN PUMPER	STP0300B-600S-SQ	PLUNGER, 3.00 OD, 12.625 OAL, 65/45/12, TWIN PUMPER, SQUARE HOLE	1.807	1.44	3.8125	2.06	2
TWIN PUMPER	STP0300B-600S-SQW	PLUNGER, 3.00 OD, 12.625 OAL, 65/45/12, TWIN PUMPER, SQUARE HOLE, TUNGSTEN	1.807	1.44	3.8125	2.06	2
TWIN PUMPER	STPB0325-600S-SQ	PLUNGER, 3.25 OD, 12.625 OAL, 65/45/12, TWIN PUMPER, SQUARE HOLE	1.807	1.44	3.8125	2.06	2
TWIN PUMPER	STP0350B-600S-SQ	PLUNGER, 3.50 OD, 12.625 OAL, 65/45/12, TWIN PUMPER, SQUARE HOLE	1.807	1.44	3.8125	2.06	2
TWIN PUMPER	STP0350B-600S-SQW	PLUNGER, 3.50 OD, 12.625 OAL, 65/45/12, TWIN PUMPER, SQUARE HOLE, TUNGSTEN	1.807	1.44	3.8125	2.06	2
TWIN PUMPER	STP0400B-600S-SQ	PLUNGER, 4.00 OD, 12.625 OAL, 65/45/12, TWIN PUMPER, SQUARE HOLE	1.807	1.44	3.8125	2.06	2
TWIN PUMPER	STP0400B-600S-SQW	PLUNGER, 4.00 OD, 12.625 OAL, 65/45/12, TWIN PUMPER, SQUARE HOLE, TUNGSTEN	1.807	1.44	3.8125	2.06	2
TWIN PUMPER	STP0450B-600S-SQ	PLUNGER, 4.50 OD, 12.625 OAL, 65/45/12, TWIN PUMPER, SQUARE HOLE	1.807	1.44	3.8125	2.06	2
TWIN PUMPER	STP0450B-600S-SQW	PLUNGER, 4.50 OD, 12.625 OAL, 65/45/12, TWIN PUMPER, SQUARE HOLE, TUNGSTEN	1.807	1.44	3.8125	2.06	2



CORE-X® D Style Plunger - DeMay Style Pump

'D' STYLE PART NUMBER MATRIX -- FITS DEMAY PUMPS

PUMP	PART NUMBER	DESCRIPTION	OAL	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	FIG.
DEMA	STP0450B-D-CEM-1	PLUNGER, 4.50 OD, 14.50 OAL, 65/45/12, DEMAY, HOLLOW	14.50	3.463	2.875	0.75	-	4A
DEMA	STP0450B-D-CEM	PLUNGER, 4.50 OD, 12.465 OAL, 65/45/12, DEMAY, HOLLOW	12.465	3.525	2.656	0.75	0.625	4
DEMA	STP0450B-D-1	PLUNGER, 4.50 OD, 12.465 OAL, 65/45/12, DEMAY, HOLLOW	-	-	-	-	-	-

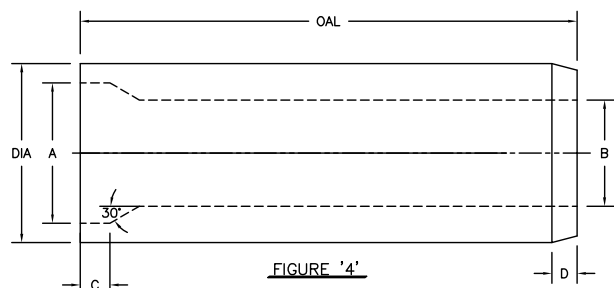


FIGURE '4'

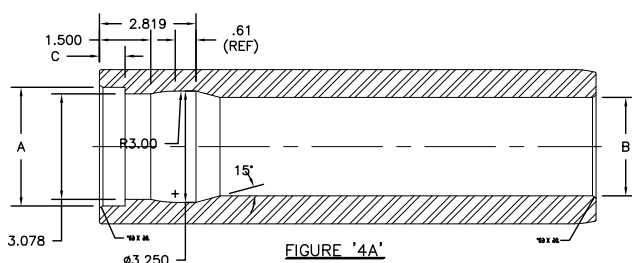
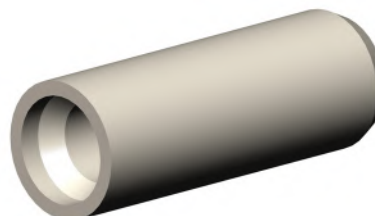


FIGURE '4A'



CORE-X® CA Style Plunger - CAT 3000 Style Pump

'CA' STYLE PART NUMBER MATRIX -- FITS CAT 3000 STYLE PUMPS

PUMP	PART NUMBER	DESCRIPTION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	FIG.
CAT 3000	STP0400B-CA-FC	PLUNGER, 4.00 OD, 18.125 OAL, 65/45/12, CAT 3000, FLAT CENTER DRILLED	3.625	3.373	2.750	1.438	3A
CAT 3000	STP0450B-CA-F68	PLUNGER, 4.50 OD, 18.13 OAL, 65/45/12, CAT 3000, DRILLED AND TAPPED	3.625	3.373	2.750	1.585	3B
CAT 3000	STP0450B-CA-FC	PLUNGER, 4.50 OD, 18.125 OAL, 65/45/12, CAT 3000, FLAT CENTER DRILLED	3.625	3.373	2.750	1.585	3A
CAT 3000	STP0450B-CA-FCW	PLUNGER, 4.50 OD, 18.125 OAL, 65/45/12, CAT 3000, FLAT CENTER DRILLED TUNGSTEN	3.625	3.373	2.750	1.585	3A

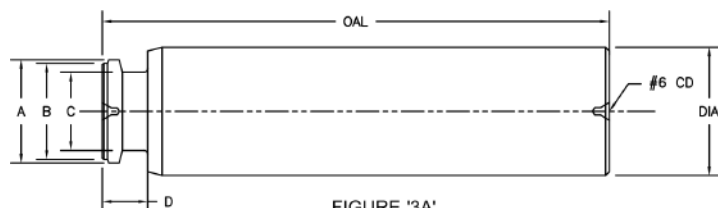


FIGURE '3A'

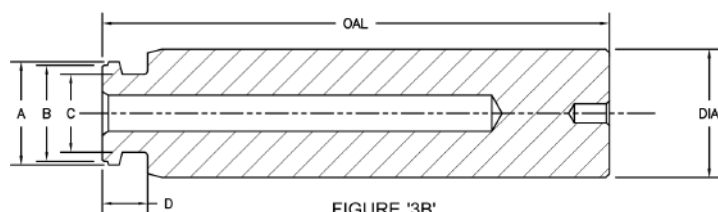


FIGURE '3B'



CORE-X® GD3 Plunger - GD 3000 Style Pump

'GD3' STYLE PART NUMBER MATRIX -- FITS GD 3000 STYLE PUMP

PUMP	PART NUMBER	DESCRIPTION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	FIG.
GD3000	STP0450B-GD3-F68	PLUNGER, 4.50 OD, 16.00 OAL, 65/45/12, GD 3000, DRILLED AND TAPPED	3.37	3.500	4.380	1.06 1A	

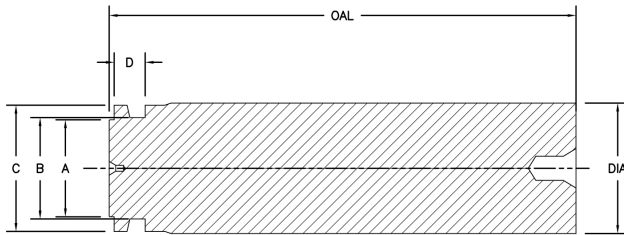


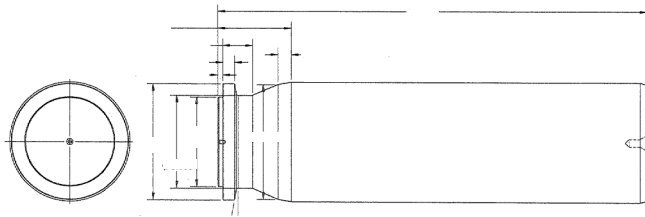
FIGURE '7'



CORE-X® SGWS Plunger - GD SGWS Style Pump

'SGWS' STYLE PART NUMBER MATRIX -- FITS GARDNER DENVER SGWS STYLE PUMPS

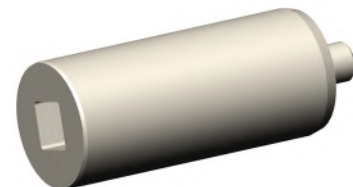
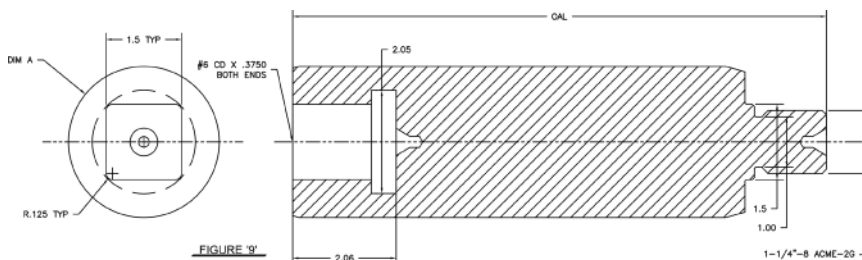
PUMP	PART NUMBER	DESCRIPTION	OAL	DIM 'B'	DIM 'C'	DIM 'D'	FIG.
SGWS	STP0400B-SGWS-FC	PLUNGER, 4.00 OD, 16.00 OAL, 65/45/12, SGWS	16.00	--	--	--	--
SGWS	STP0400B-SGWS-FCW	PLUNGER, 4.00 OD, 16.00 OAL, 65/45/12, SGWS, TUNGSTEN	16.00	--	--	--	--
SGWS	STP0450B-SGWS-FC	PLUNGER, 4.50 OD, 16.00 OAL, 65/45/12, SGWS	16.00	--	--	--	--
SGWS	STP0450B-SGWS-FCW	PLUNGER, 4.50 OD, 16.00 OAL, 65/45/12, SGWS, TUNGSTEN	16.00	--	--	--	--



CORE-X® MSI Hybrid Plunger - MSI Hybrid Style Pump

'MSI HYBRID' STYLE PART NUMBER MATRIX -- FITS MSI HYBRID STYLE PUMPS

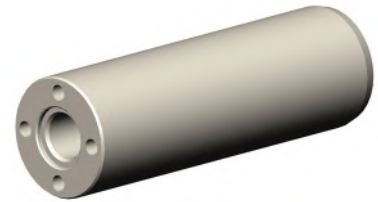
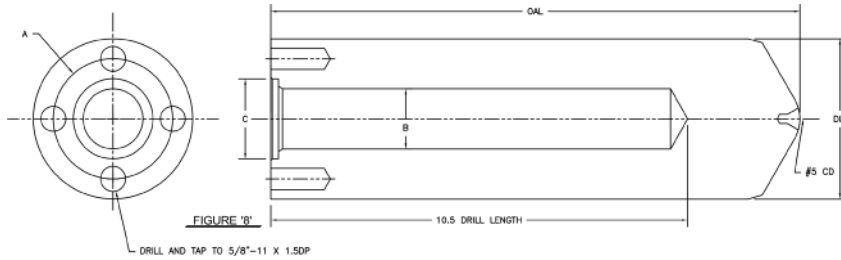
PUMP	PART NUMBER	DESCRIPTION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	FIG.
MSI HYBRID	STP0275B-SQH	PLUNGER, 2.75 OD, 65/45/12, MSI HYBRID, SQUARE HYBRID	2.75	-	-	-	9
MSI HYBRID	STP0300D-SQH	PLUNGER, 3.00 OD, 10.625 OAL, 65/45/12, 304 STAINLESS, MSI HYBRID, SQUARE HYBRID	3.000	-	-	-	9
MSI HYBRID	STP0300D-SQH-F	PLUNGER, 3.00 OD, 10.625 OAL, 65/45/12, 304 STAINLESS, MSI HYBRID, SQUARE HYBRID, 625A	3.000	-	-	-	9
MSI HYBRID	STP0325B-SQH	PLUNGER, 3.25 OD, 10.625 OAL, 65/45/12, MSI HYBRID, SQUARE HYBRID	3.250	-	-	-	9
MSI HYBRID	STP0350B-SQH	PLUNGER, 3.50 OD, 10.625 OAL, 65/45/12, MSI HYBRID, SQUARE HYBRID	3.500	-	-	-	9
MSI HYBRID	STP0400B-SQH	PLUNGER, 4.00 OD, 10.625 OAL, 65/45/12, MSI HYBRID, SQUARE HYBRID	4.000	-	-	-	9
MSI HYBRID	STP0450B-SQH	PLUNGER, 4.50 OD, 10.625 OAL, 65/45/12, MSI HYBRID, SQUARE HYBRID	4.500	-	-	-	9



CORE-X® Y Style Plunger ——— **- Forum, FTSI, GD, ValTek Y-Block Style Pump**

'Y' STYLE PART NUMBER MATRIX -- FITS Y BLOCK PUMPS

PUMP	PART NUMBER	DESCRIPTION	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	FIG.
Y-BLOCK	STP0400B-YWS	PLUNGER, 4.00 OD, 13.317 OAL, 65/45/12, Y-BLOCK	3.00	1.50	2.002	-	8
Y-BLOCK	STP0450B-YWS	PLUNGER, 4.50 OD, 13.463 OAL, 65/45/12, Y-BLOCK, GD STYLE	3.500	2.00	2.502	-	8
Y-BLOCK	STP0500B-YWS	PLUNGER, 5.00 OD, 13.595 OAL, 65/45/12, Y-BLOCK	4.00	2.00	3.002	-	8
Y-BLOCK	STP0450A-YWS	PLUNGER, 4.50 OD, 13.463 OAL, 1018, Y-BLOCK, GD STYLE	3.500	2.00	2.502	-	8
Y-BLOCK	STP0450A-YWS-FT	PLUNGER, 4.50 OD, 13.463 OAL, 1018, Y-BLOCK, FT STYLE	3.500	2.00	2.502	-	8
Y-BLOCK	STP0450B-YWS-FT	PLUNGER, 4.50 OD, 13.463 OAL, 65/45/12, Y-BLOCK, FT STYLE	3.500	2.00	2.502	-	8



XLU VALVES & SEATS

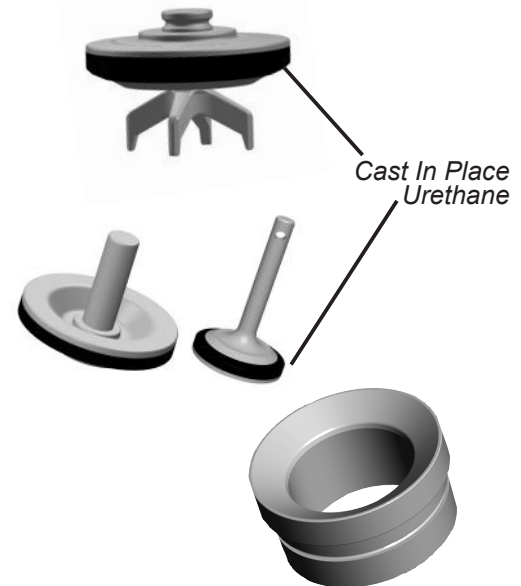
XLU X-Tended Life Urethane Valves & Seats

Valve Profile:

- Improved Urethane for high rate, high pressure, and high abrasive applications
- Enhanced mechanical bonding of the urethane
- Improved dynamic flow around the strike face of the valve to minimize flow restrictions
- Field friendly handling allows quicker servicing
- Improved leg design results in a more durable structure
- Uniform contact area to improve fluid end life
- Precision manufactured taper matches corresponding seat taper for faster seat removal

Utex Alloy:

- Improved Effective Case Depth (ECD) increases service life and reduces costly field replacement
- Upper body made out of forged Utex alloy steel
- Precision manufactured taper on the seat matches corresponding valve taper in the fluid cylinder



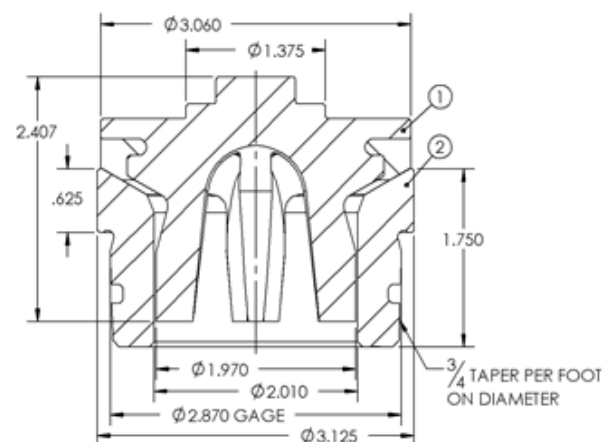
*Valves and Seats sold separately

XLU-2 Discharge Valve and Seat Assembly

ITEM	PART NUMBER	DESCRIPTION
1	SV-20302001	XLU-2 DISCHARGE VALVE ASSY
2	SV-20402001	XLU-2 SEAT

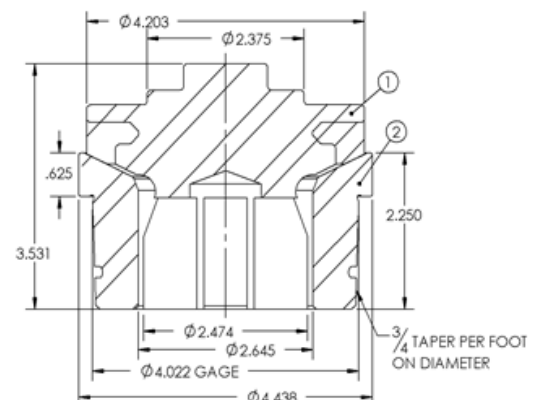
COMPATIBLE WITH:

ITEM	PART NUMBER	MANUFACTURER
1	NF2V1	NOVATECH
	HF2V01	HARRISBURG (ROUGHNECK™)
	9700013	MISSION (FLUID KING)
	U609	MISSION (SERVICE MASTER I)
	70210117	MISSION (FLUID KING 3)
	U27032	MISSION (SERVICE MASTER II)
	P105739	SPM
	927SH017	OPI
2	0518389	BAKER ("WM" FULL OPEN)
	208VWH482A	GARDNER DENVER
	NF2S1	NOVATECH
	HF2S01	HARRISBURG (ROUGHNECK™)
	80100787	MISSION (FLUID KING)
	2WG3	MISSION (SERVICE MASTER I)
	80100787	MISSION (FLUID KING 3)
	P105749	SPM
	928SH018	OPI



XLU-3 Discharge Valve and Seat Assembly

ITEM	PART NUMBER	DESCRIPTION
1	SV-30302001	XLU-3 DISCHARGE VALVE ASSY
2	SV-30402001	XLU-3 SEAT

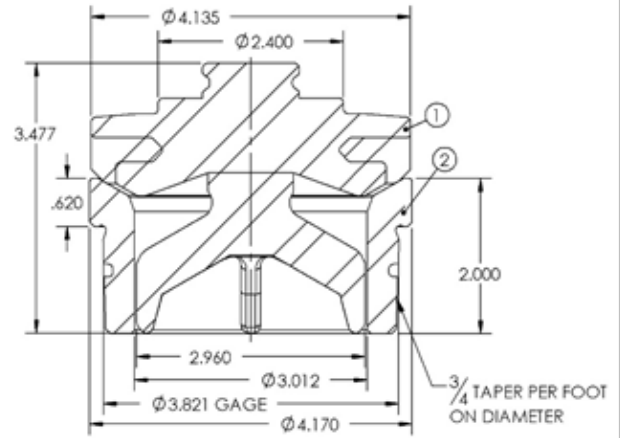


XLU-4 Cutdown Discharge Valve and Seat Assembly

ITEM	PART NUMBER	DESCRIPTION
1	SV-35301001	XLU-4 CUTDOWN DISCHARGE VALVE ASSY
2	SV-35401001	XLU-4 CUTDOWN SEAT

COMPATIBLE WITH:

ITEM	PART NUMBER	MANUFACTURER
1	NF4V2	NOVATECH
	HF4V02	HARRISBURG (ROUGHNECK™)
	9700110	MISSION (FLUID KING)
	U614	MISSION (SERVICE MASTER I)
	70102108	MISSION (FLUID KING 3)
	U23795F	MISSION (SERVICE MASTER II)
	40271	GRANT MCCLATCHIE
	P105742	SPM
	927SH013	OPI
	102794	WESTERN
2	7900070	OILWELL
	NF4S2	NOVATECH
	HF4S02	HARRISBURG (ROUGHNECK™)
	80612901	MISSION (FLUID KING)
	PF04S2	PEP (FULL OPEN)
	14WG10	MISSION (SERVICE MASTER I)
	80612901	MISSION (FLUID KING 3)
	45194	GRANT MCCLATCHIE
	P105752	SPM
	928SH014	OPI
2	117188	WESTERN
	517909	BAKER "WM" FULL OPEN
	1561260	NATIONAL (G1 SERIES)
	GDX7	MISSION (SILVER TOP)

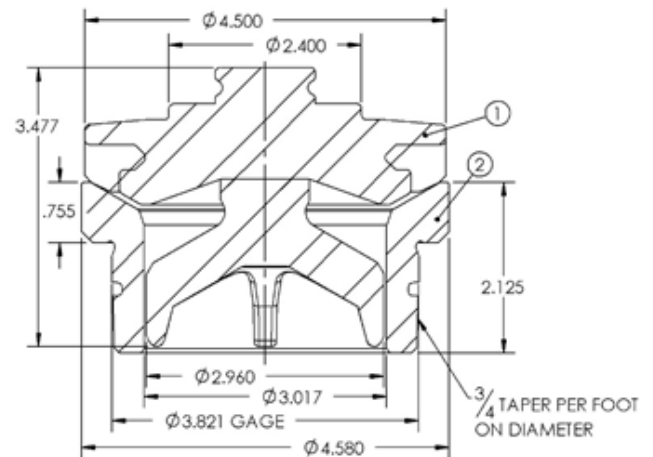


XLU-4 Discharge Valve and Seat Assembly

ITEM	PART NUMBER	DESCRIPTION
1	SV-40301001	XLU-4 DISCHARGE VALVE ASSY
2	SV-40401001	XLU-4 SEAT

COMPATIBLE WITH:

ITEM	PART NUMBER	MANUFACTURER
1	NF4V1	NOVATECH
	HF4V01	HARRISBURG (ROUGHNECK™)
	9700080	MISSION (FLUID KING)
	U611	MISSION (SERVICE MASTER I)
	70113352	MISSION (FLUID KING 3)
	U23357	MISSION (SERVICE MASTER II)
	40157	GRANT MCCLATCHIE
	P105741	SPM
	927SH018	OPI
	120181	BJ HUGHES
2	143847	WESTERN
	0504982	BAKER REED 3
	517077	BAKER ("WM" FULL OPEN)
	U5B15	MISSION (SUPREME)
	60152949	MISSION (FLUID KING 4)
	SWR0504982	SOUTHWEST (BARKER 3)
	7900071	OILWELL
	VB40040	KERR
	NF4S1	NOVATECH
	HF4S01	HARRISBURG (ROUGHNECK™)
2	80130297	MISSION (FLUID KING)
	14WG25	MISSION (SERVICE MASTER I)
	80130297	MISSION (FLUID KING 3)
	45267	GRANT MCCLATCHIE
	P105751	SPM
	928SH0110	OPI
	VS40040	KERR



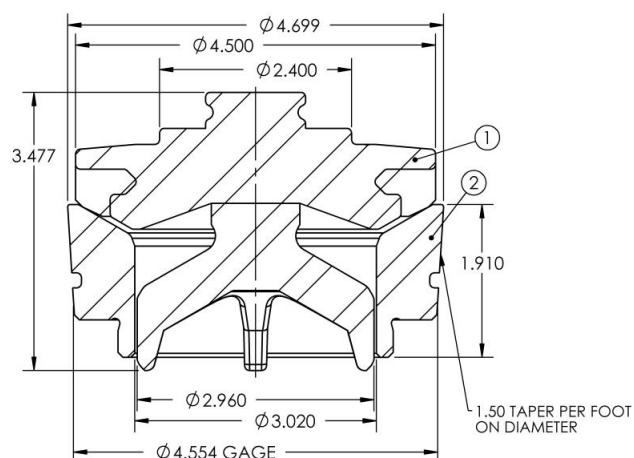
XLU-4 Discharge Valve and Seat Assembly

- XLU-4 Roughneck™ Seat

ITEM	PART NUMBER	DESCRIPTION
1	SV-40301001	XLU-4 DISCHARGE VALVE ASSY
2	SV-40401001	XLU-4 ROUGHNECK SEAT

COMPATIBLE WITH:

ITEM	PART NUMBER	MANUFACTURER
1	NF4V1N	OVATECH
	HF4V01H	HARRISBURG (ROUGHNECK™)
	9700080	MISSION (FLUID KING)
	U611M	MISSION (SERVICE MASTER I)
	70113352	MISSION (FLUID KING 3)
	U23317	MISSION (SERVICE MASTER II)
	40157	GRANT MCCLATCHIE
	P105741	SPM
	927SH0180	OPI
	120181	BJ HUGHES
	143847	WESTERN
	0504982	BAKER REED 3
	0517077	BAKER ("WM" FULL OPEN)
	U5B15	MISSION (SUPREME)
	60152949	MISSION (FLUID KING 4)
	SWR0504982S	SOUTHWEST (BAKER 3)
	7900071	OILWELL
	VB40040	KEER
2	P119738NF-4-S19	NOVATECH

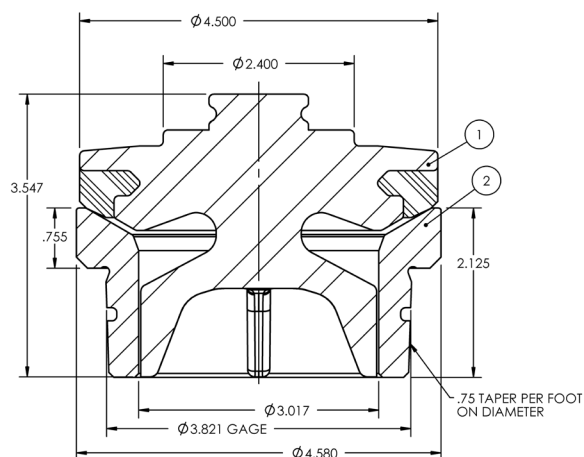


XLU Suction/Discharge Valve and Seat

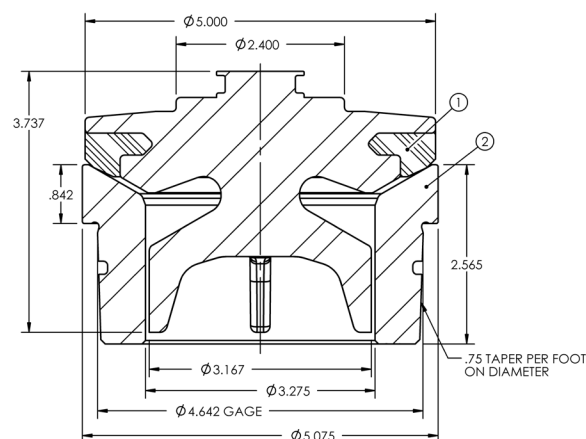
- One Piece Forged Valves

- One piece valve forging allows stronger material strength for decreased downtime
- State of the Art Manufacturing and computer aided design allows the seat to out last the competition
- Features Urethane with high acid and temperature resistance

ITEM	PART NUMBER	DESCRIPTION
1	SV-40331008	XLU-4 ONE PIECE FORGED VALVE ASSY
2	SV-40401001	XLU-4 SEAT



ITEM	PART NUMBER	DESCRIPTION
1	SV-50301005	XLU-5 ONE PIECE FORGED VALVE ASSY
2	SV-50401001	XLU-5 SEAT

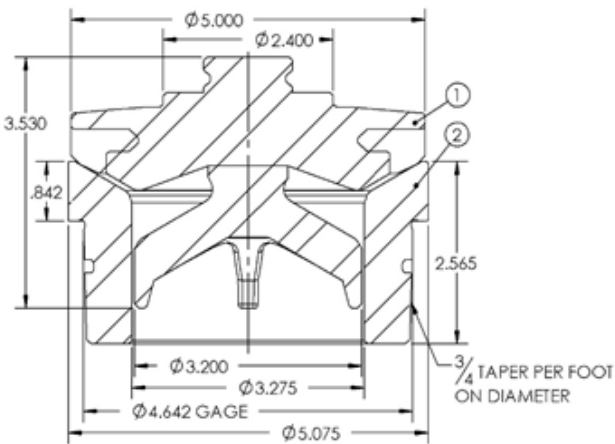


XLU-5 Discharge Valve and Seat Assembly

ITEM	PART NUMBER	DESCRIPTION
1	SV-50301001	XLU-5 DISCHARGE VALVE ASSY
2	SV-50401001	XLU-5 SEAT

COMPATIBLE WITH:

ITEM	PART NUMBER	MANUFACTURER
1	NF5V1C	NOVATECH
	073302424B	MISSION (FLUID KING 3)
2	NF5S1	NOVATECH
	HF5S01	HARRISBURG (ROUGHNECK™)
	80120504	MISSION (FLUID KING)
	5WG7	MISSION (SERVICE MASTER I)
	80120504	MISSION (FLUID KING 3)
	XM252	NOV (XM SERIES)
	P105753	SPM
	928SH011	OPI
	111230	WESTERN
	VS50040	KERR

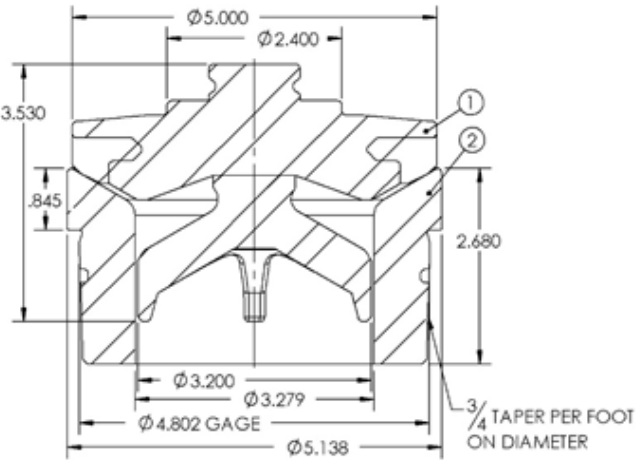


XLU-5 Discharge Valve and Seat Assembly ———

ITEM	PART NUMBER	DESCRIPTION
1	SV-50301001	XLU-5 DISCHARGE VALVE ASSY
2	SV-50401002	XLU-5 HEAVY CASE SEAT

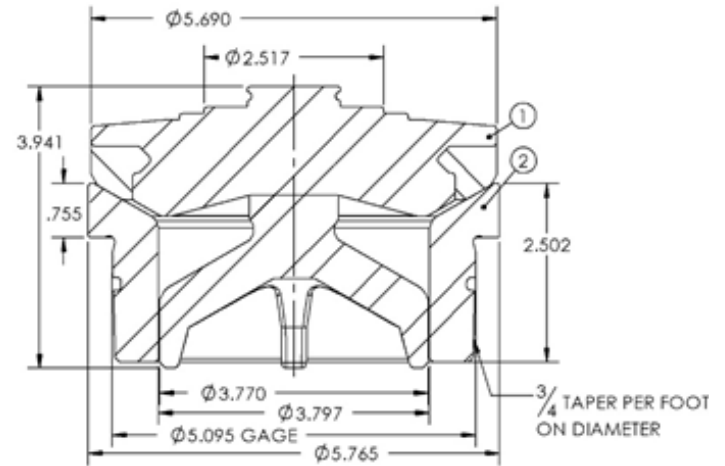
COMPATIBLE WITH:

ITEM	PART NUMBER	MANUFACTURER
1	NF51C	NOVATECH
	073302424B	MISSION (FLUID KING 3)
2	NF5DS1	NOVATECH
	HF5S06	HARRISBURG (ROUGHNECK™)
	80120306	MISSION (FLUID KING)
	5WG5	MISSION (SERVICE MASTER I)
	80120306	MISSION (FLUID KING 3)
	4405	MISSION (SERVICE MASTER II)
	XM245	NOV (XM SERIES)



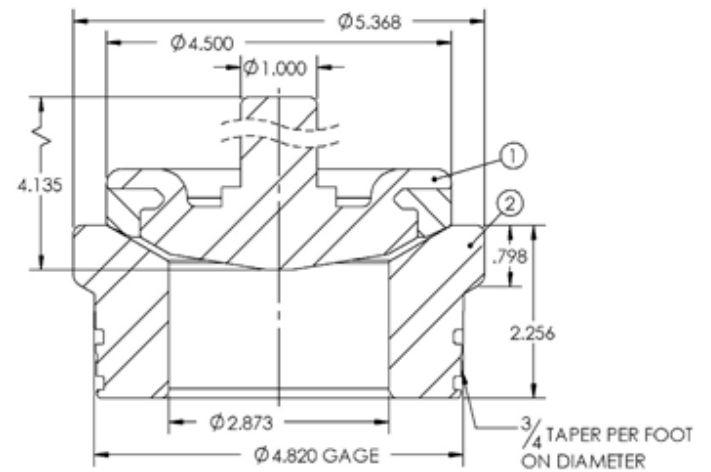
XLU-6 Discharge Valve and Seat Assembly

ITEM	PART NUMBER	DESCRIPTION
1	SV-60301001	XLU-6 DISCHARGE VALVE ASSY
2	SV-60401001	XLU-6 SEAT

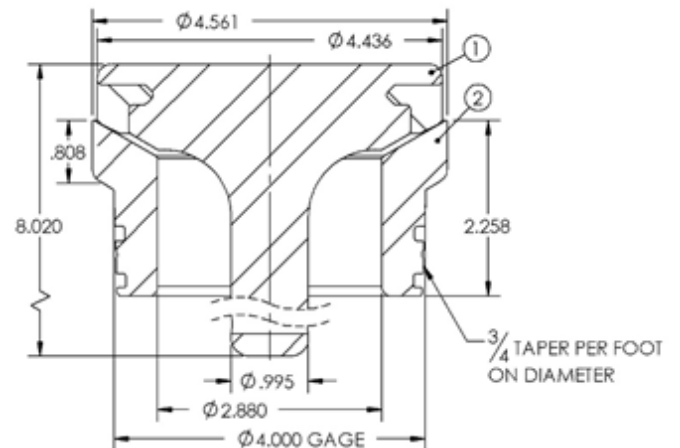


XLU-4 Y Fluid End Valves & Seats

ITEM	PART NUMBER	DESCRIPTION
1	SVY-40301003	XLU-4 DISCHARGE VALVE ASSY Y- FLUID ENDS
2	SVY-40401002	XLU-4 DISCHARGE SEAT Y-FLUID END

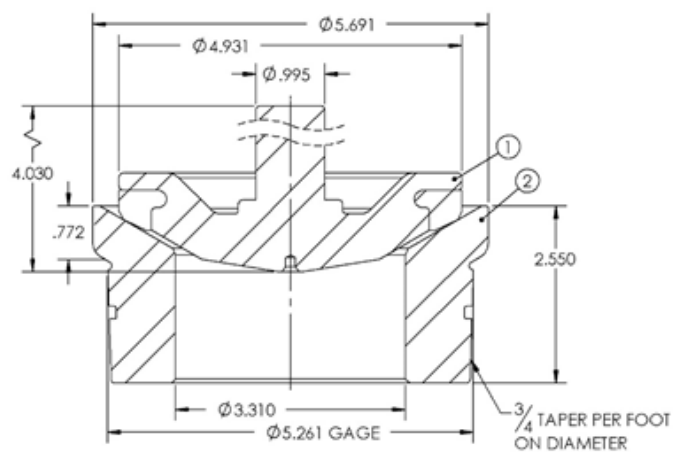


ITEM	PART NUMBER	DESCRIPTION
1	SVY-40301002	XLU-4 SUCTION VALVE ASSY Y-FLUID END
2	SVY-40401001	XLU-4 SUCTION SEAT Y-FLUID END



XLU-5 Y Fluid End Valves & Seats

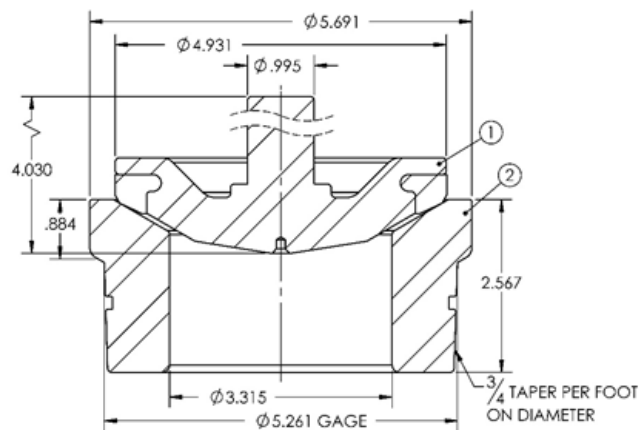
ITEM	PART NUMBER	DESCRIPTION
1	SVY-50301003	XLU-5 DISCHARGE VALVE ASSY Y-FLUID END
2	SVY-50401002	XLU-5 DISCHARGE SEAT Y-FLUID END



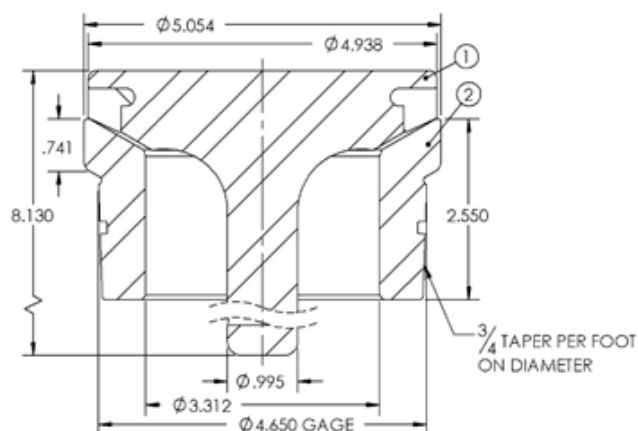
ITEM	PART NUMBER	DESCRIPTION
1	SVY-50301003	XLU-5 DISCHARGE VALVE ASSY Y-FLUID END
2	SVY-50401004	XLU-5 DISCHARGE SEAT Y-FLUID END

COMPATIBLE WITH:

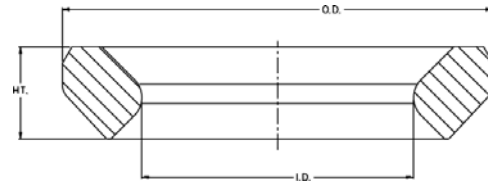
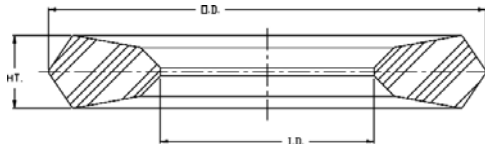
ITEM	PART NUMBER	MANUFACTURER
2	450YWS011	VALTEK



ITEM	PART NUMBER	DESCRIPTION
1	SVY-50301002	XLU-5 SUCTION VALVE ASSY Y-FLUID END
2	SVY-50401001	XLU-5 SUCTION SEAT Y-FLUID END

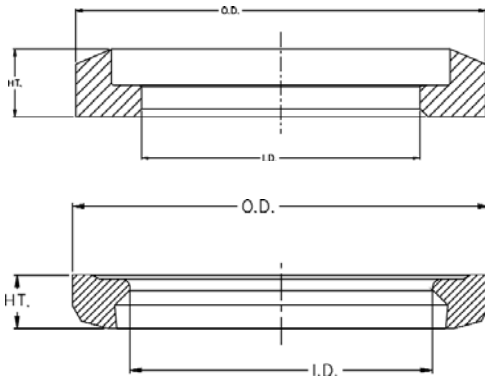


Urethane Valve Inserts ——— Snap-On or Bonded



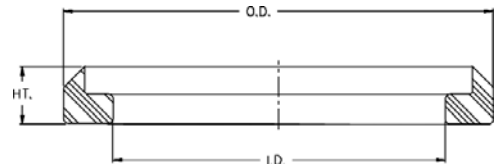
SM Stem Guided Inserts for Mud Pumps

- Available in Urethane and HNBR Elastomers
- Used in drilling fluids up to 230° F
- Operates in oil based drilling fluids
- Superior abrasion resistance
- Suitable for 5,000 psi operation
- Snap-on insert



RN Full Open Inserts for Mud Pumps

- Available in Urethane and HNBR Elastomers
- Pressure ratings up to 7,500 psi
- Operates in drilling fluids up to 230° F
- Operates in oil based drilling fluids
- Full open flow characteristics
- Snap-on insert



SM and RN Inserts for Frac Valves

- Available in Urethane and HNBR Elastomers
- Operates in oil-based drilling fluids
- Fits all major well-service pumps
- Snap-on insert

Abrasion Resistant Inserts for Plunger Pumps

- Available in Urethane
- Used in positive displacement pumps
- Superior abrasion resistance
- Snap-on insert

WHEN TO REPLACE VALVES & SEATS

Valves and seats are the number one expendables cost. This guideline will help you reduce those costs by giving you visual guides as to when to change valves and seats. We can't tell you how many hours, stages, strokes or pounds of proppant your valves will last as this varies from district to district. But by using these guidelines, you can extend fluid end maintenance schedules to minimize the number of times you pull covers and throw away good parts.

NEW VALVE ———

A brand new valve right out of the box – smooth insert and strike face. The operating principal is simple – the insert contacts the seat first and creates a seal, then the pressure differential forces the valve down until the valve's metal strike face contacts the seat. The key point is the insert has to complete the seal; there can be no leak paths.

As the valve is used, both the strike face and the insert wear. However, unless a rock or other object is caught in the valve, the wear is progressive and predictable. Based on your operations and the guidelines below, you can make better decisions on valve condition and may be able to lengthen the period before pulling caps and checking valves and seats.



EARLY WEAR - VALVE STILL GOOD ———

This valve has been in service a short time and has considerable life left. Insert wear has not bridged across surface so valve function is still good.

EVEN WEAR ON STRIKEFACE. NO CHIPS OR DAMAGE

SLIGHT NIBBLING ON INSERT ID

RIDGE OR GROOVE ON OD IS NORMAL



MEDIUM WEAR - VALVE STILL GOOD ———

This valve has been in service a short time and has considerable life left. Insert wear has not bridged across surface so valve function is still good.

DEEPER BUT EVEN WEAR ON STRIKEFACE. NO CHIPS OR WASHOUTS

MORE NIBBLING ON INSERT BUT DOES NOT BRIDGE ACROSS TO CREATE A LEAK PATH



HIGH WEAR - TIME TO CHANGE ———

Insert damage almost all the way across and the valve will soon leak, washout and fail!



SEAT REPLACEMENT ———

Replace seats when the strike face wear is .06 inch (1.5mm deep). Wear gauges are available. Worn seats shorten valve life.



Fluid Ends

All fluid ends include:

- Carbon or Stainless Steel Forgings
- Enhanced design through 3d modeling and Finite Element Analysis
- Discharge pressure ratings based on OEM specifications
- Discharge and gauge connections configured per customer requirements
- Available as loaded assemblies or bare blocks

Please contact our Willis Division or your local sales representative to place an order.

Triplex

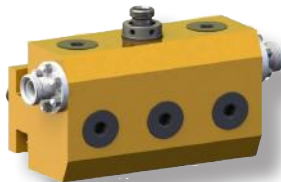
Legend			
ITEM	PUMP MODEL	CENTER	MATERIAL
1	600 HP TRIPLEX, 6" STROKE	9"	CARBON OR STAINLESS STEEL FORGINGS
2	2250 HP TRIPLEX, 8" STROKE	12"	CARBON OR STAINLESS STEEL FORGINGS
3	2500 HP TRIPLEX, 10" STROKE - For TWS2500 DESTINY™	12"	CARBON OR STAINLESS STEEL FORGINGS

Destiny™ is a Tradename of Weir Oil and Gas

1.



2.



3.



Quintuplex

Legend			
ITEM	PUMP MODEL	CENTER	MATERIAL
1	1000 HP QUINTUPLEX, 6" STROKE	9"	CARBON OR STAINLESS STEEL FORGINGS
2	2500 HP QUINTUPLEX 8" STROKE	10"	CARBON OR STAINLESS STEEL FORGINGS
3	2500 HP QUINTUPLEX, Y BLOCK, 8" STROKE (54" OR 60" LENGTH)	10" 12"	CARBON OR STAINLESS STEEL FORGINGS

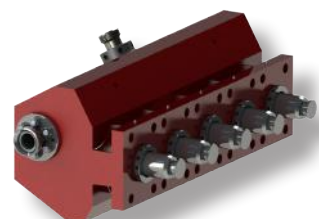
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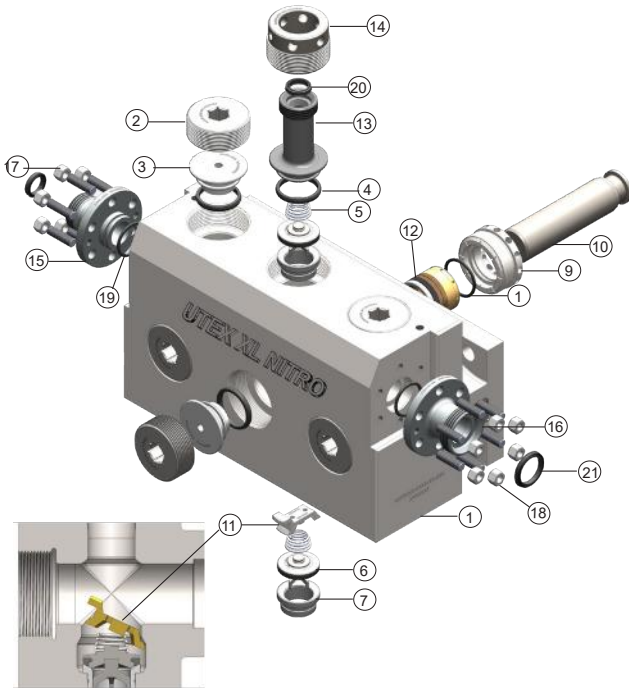
2.



3.



Utex's XL Fluid Ends



ITEM	DESCRIPTION	QTY.
1	4.5" MACHINED FLUID END 2250 XL-38" #4 VALVES	1
2	RETAINER NUT XL FOR #4 VALVES	5
3	VALVE COVER XL FOR #4 VALVE	5
4	D-SEAL	6
5	VALVE SPRING	6
6	XLU-4 DISCHARGE VALVE ASSY	6
7	XLU 4 SEAT	6
8	PLUG, 1/4" NPT SQ HD *(Not on Drawing)	6
9	PACKING NUT XL FOR 4.5" PLUNGER	3
10	4.5" PLUNGER	3
11	VALVE STOP XL FOR #4 VALVE	3
12	PACKING ASSY, SUPER GOLD	3
13	GAUGE CONNECTION XL FOR #4 VALVE	1
14	GAUGE CONNECTION RETAINER NUT XL FOR #4 VALVE	12
15	FEMALE DISCHARGE FLANGE OEM 2"	1
16	FEMALE DISCHARGE FLANGE OEM 3"	1
17	STUD 1"-8 X 3.50 LG B7	12
18	NUT 1"-8 UNC HVY HX	12
19	D-SEAL	2
20	2" FIG 1502 HAMMER UNION SEAL	2
21	3" FIG 1502 HAMMER UNION SEAL	1
22	FLUID END DATAPLATE	1
23	SCREW, #6 X .25" *(Not on Drawing)	4
24	LIFTING HOIST RING *(Not on Drawing)	2

All XL Fluid Ends feature an enhanced design for longer running hours. Design modifications include:

- The use of smaller bores for lower hoop and combined stress to enhance fatigue life.
- A grooveless valve stop design
- "D" Seals on suction and discharge covers
- Interchangeable components (Suction/discharge covers and retainer nuts, seals, gauge connections, lower valve stops...)

Legend

Item	Pump Model	Center	Length	Material
1	2250 HP Triplex, 8" Stroke	10"	38"	Carbon or Stainless Steel Forgings
1	2250 HP Triplex, 8" Stroke	12"	38"	Carbon or Stainless Steel Forgings
2	2500 HP Quintuplex, 8" Stroke	10"	54"	Carbon or Stainless Steel Forgings
2	2500 HP Quintuplex, 8" Stroke	12"	62"	Carbon or Stainless Steel Forgings
3	2500 HP Triplex, 10" Stroke with Integral Stuffing Box	12"	41-1/4"	Carbon or Stainless Steel Forgings

Destiny™ is a Tradename of Weir Oil and Gas

1.



2.



3.



Suction Manifolds

CORE-X® SUCTION MANIFOLDS

Available for All Pump Models



BFD Suction Manifold Balanced Fluid Dispersion

Equalized Pressure and Flow Reduced Cavitation and Vibration

- The internal core and external reservoir are configured to control flow dynamics and direction.
- Two piece design enables unit to manage pumping fluctuations to equalize pressure and flow within the fluid chamber minimizing acceleration head loss within the fluid ends.
- Flow and pressure remain consistent to all suction valves maintaining sufficient slurry to the fluid end.
- Significantly reduces cavitation and moves destructive residual vibrations away from the fluid end.

Uniform Proppant Suspension Higher Producing Fracturing Operations

- The optimized geometrics of the internal core and reservoir chamber inter-operate to create flow dynamics designed to keep proppants in homogeneous suspension.
- Increased operating ranges, at either low pressure or high flow, aids in proppant suspension.

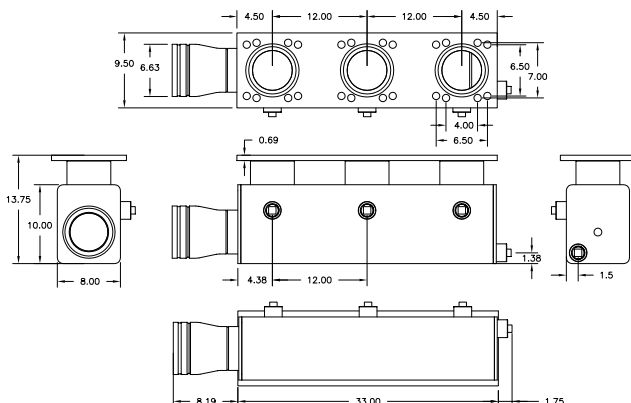


*The BFD Suction Manifold
is Patent Pending*

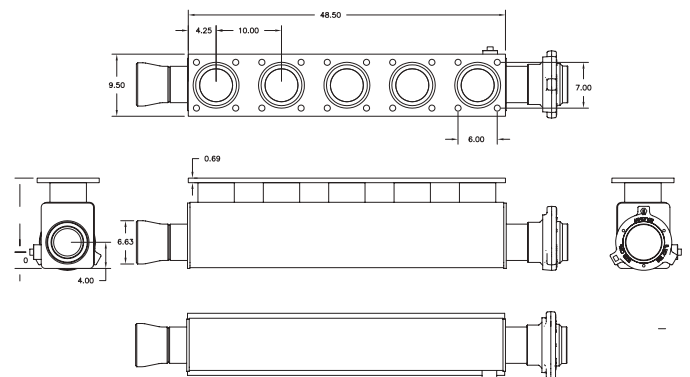
Durable, Wear-Resistant and Configurable Lasts Longer, Saves Money

- U.S. Patent Pending design extends the operating life of pumps, fluid ends, and associated expendable components.
- Right/Left hand mounting configurations available.
- Custom engineering supports all pump, rig, or well specific applications.
- Total cost of operations is significantly reduced when using CORE-X® engineered technologies.

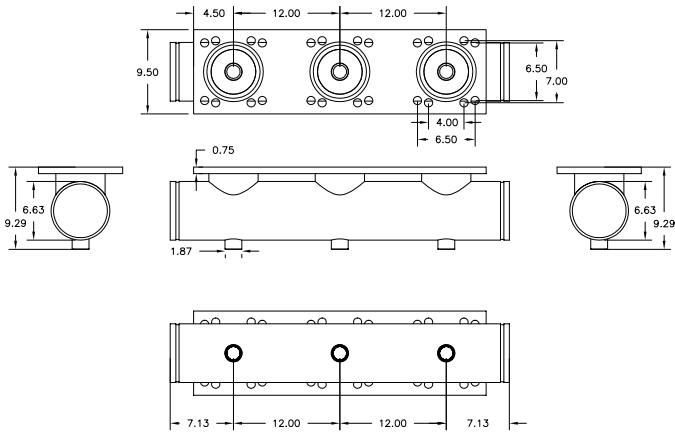
CORE-X® 3-Port - SSM Suction Manifold



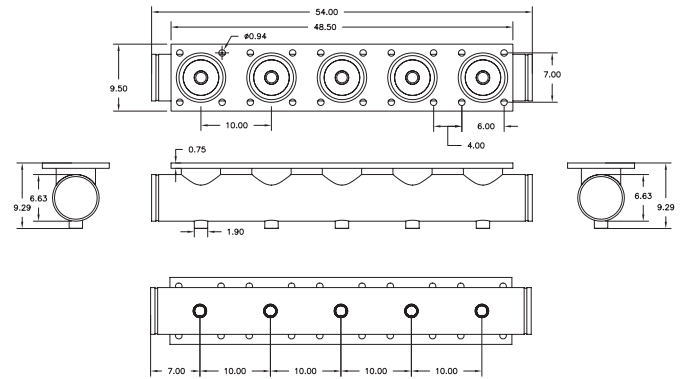
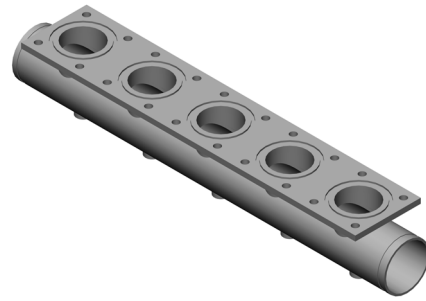
CORE-X® 5-Port - V4 SMM Suction Manifold



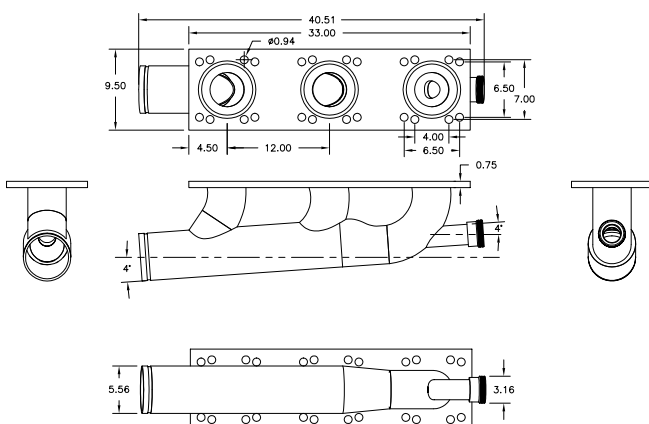
CORE-X® 3-Port - Log Suction Manifold



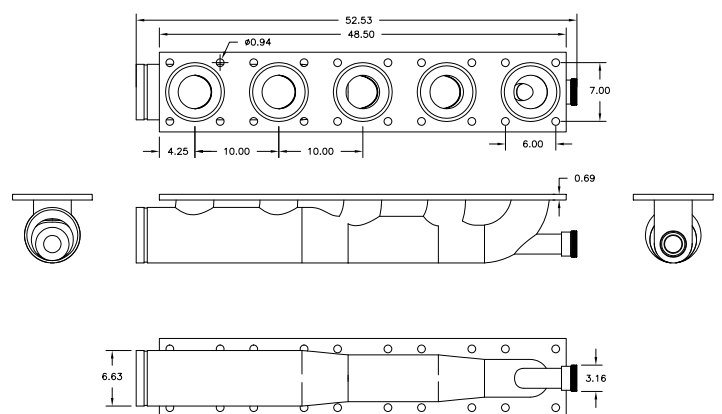
CORE-X® 5-Port - Log Suction Manifold



CORE-X® 3-Port - Zoomie Suction Manifold



CORE-X® 5-Port - Zoomie Suction Manifold



WELL SERVICE TOOLS

Well Service Tools

- Engineered to improve efficiency and safety when conducting fluid end maintenance.
- Reduces downtime by allowing quick and easy installation and removal.
- Designed to prevent damage to the fluid end expendables.

The Super Jack, A Hydraulic Valve Seat Removal Tool

LEGEND

DESCRIPTION	PART NUMBER
SUPER JACK, HYDRAULIC VALVE SEAT REMOVAL TOOL	0460-00-0050-00

- The fastest Seat Removal Tool the industry (10 seats in 10 minutes)
- Features a hydraulic cylinder that the Duckbill and Stem assembly can pass through the hydraulic cylinder eliminating the need of lifting the jack over the stem
- Other features include a longer stroking hydraulic cylinder, no helical threads on the stem eliminating the potential for thread damage, and a patent pending ratcheting nut that quickly positions for the rapid removal of the seat



Patent Pending

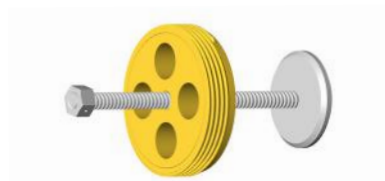
FILE REFERENCE:
DWG# A-14980-C

Plunger Pusher/Packing Pusher Tool ACME THRD

COMPLETE ASSEMBLY PART NUMBER CHART

0460-10-(XXXX)-01

PART NUMBER	THREAD RING/INSERT	PUSH BLOCK, JUNK RING
0020	6-3/4" - 4 TPI	3-3/4"
0021	6-3/4" - 4 TPI	4"
0022	6-3/4" - 4 TPI	4-1/2"
0029	7-3/4" - 3 TPI	4"
0030	7-3/4" - 3 TPI	4-1/2"



FILE REFERENCE:
DWG# B-8771-C

Plunger Separation Tool

LEGEND

DESCRIPTION	PART NUMBER
PLUNGER SEPARATION TOOL	0460-00-0004-00



FILE REFERENCE:
DWG# B-9208-C

Suction/Discharge Valve Cover Removal Tool

LEGEND

DESCRIPTION	PART NUMBER
SUCTION/ DISCHARGE VALVE COVER REMOVAL TOOL	0460-10-0060-01



FILE REFERENCE:
DWG# B-9332-C



Spring Retainer Installation Tool

LEGEND

DESCRIPTION	PART NUMBER
SPRING RETAINER INSTALLATION TOOL	0460-00-0025-00

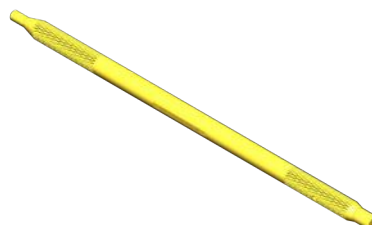


FILE REFERENCE:
DWG# B-9486-A

Packing Nut Bar

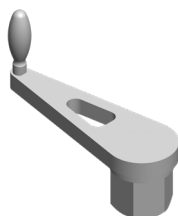
LEGEND

DESCRIPTION	PART NUMBER
PACKING NUT BAR, 4" GD SGWS	0460-00-0006-00
PACKNG NUT BAR, 4" 2400/2700, SPM	0460-00-0007-00



FILE REFERENCE:
DWG# B-8890
DWG# B-8901

Retainer Nut Removal Tools



LEGEND

DESCRIPTION	PART NUMBER
RETAINER NUT REMOVAL TOOL 2" 0460-10-0041-02	
RETAINER NUT REMOVAL TOOL 3" 0460-10-0041-03	

FILE REFERENCE:
DWG# B-9739-C
DWG# B-9731-C



** Pair with the Packing Nut Bar or ratchet for easier installation and removal of the retainer nut

LEGEND

DESCRIPTION	PART NUMBER
RETAINER NUT REMOVAL TOOL 2" HEX	0599-98-1016-00

FILE REFERENCE:
DWG# B-9690-A

Y Fluid End Tools



LEGEND

DESCRIPTION	PART NUMBER
PACKING REMOVAL TOOL, 4" - Y FLUID END	0460-10-0065-01
PACKING REMOVAL TOOL, 4 1/2" - Y FLUID END	0460-10-0070-01

FILE REFERENCE:
DWG# B-9391-C
DWG# B-9392-C



LEGEND

DESCRIPTION	PART NUMBER
PLUNGER REMOVAL TOOL, 4" - Y FLUID END	0460-10-0075-01
PLUNGER REMOVAL TOOL, 4 1/2" - Y FLUID END	0460-10-0078-01

FILE REFERENCE:
DWG# B-9549-C

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