



1" GEN2 Pressure Regulator, Hydraulic Pilot

REV	DATE	DESCRIPTION	ORIGIN (issued by)	APPROVED
Rev 001	8/17/20	Document No: 135-081720-001	AP	BR

COMPANY PROPRIETARY INFORMATION

Gilmore Technologies, LLC and/or its affiliates (Gilmore). All rights reserved. Gilmore™, Gilmore & Design (Stallion) are registered trademarks or trademarks of Gilmore. This notice and the information contained herein is not to be, in whole or in part, reproduced or transmitted in any form by any means without the express permission of Gilmore. **DISCLAIMER:** Whilst Gilmore has carefully reviewed the contents of this notice and believes the information to be correct, Gilmore does not assume any liability in connection with any use of or reliance upon this information and gives no representation or warranty, express or implied, in respect of the information or any products described herein. This notice is intended for use by persons having suitable technical expertise and skill, at their own discretion and risk. Gilmore may change the information contained herein at any time without notice.

For more information:

Call (713) 468 8778
info@gilmore.com

Gilmore
1231 Lumpkin Road
Houston, TX 77043

1" GEN2 Pressure Regulator, Hydraulic Pilot

Gilmore announces the new 1" GEN 2 Pressure Regulator with Hydraulic Pilot product line for critical offshore and subsea applications. The Tungsten Carbide seal trim GEN 2 Pressure Regulator has been designed with the same footprint as the legacy Gilmore Hydraulic Pilot Regulators. This thoroughly redesigned product offering provides an improvement in cycle life and performance.

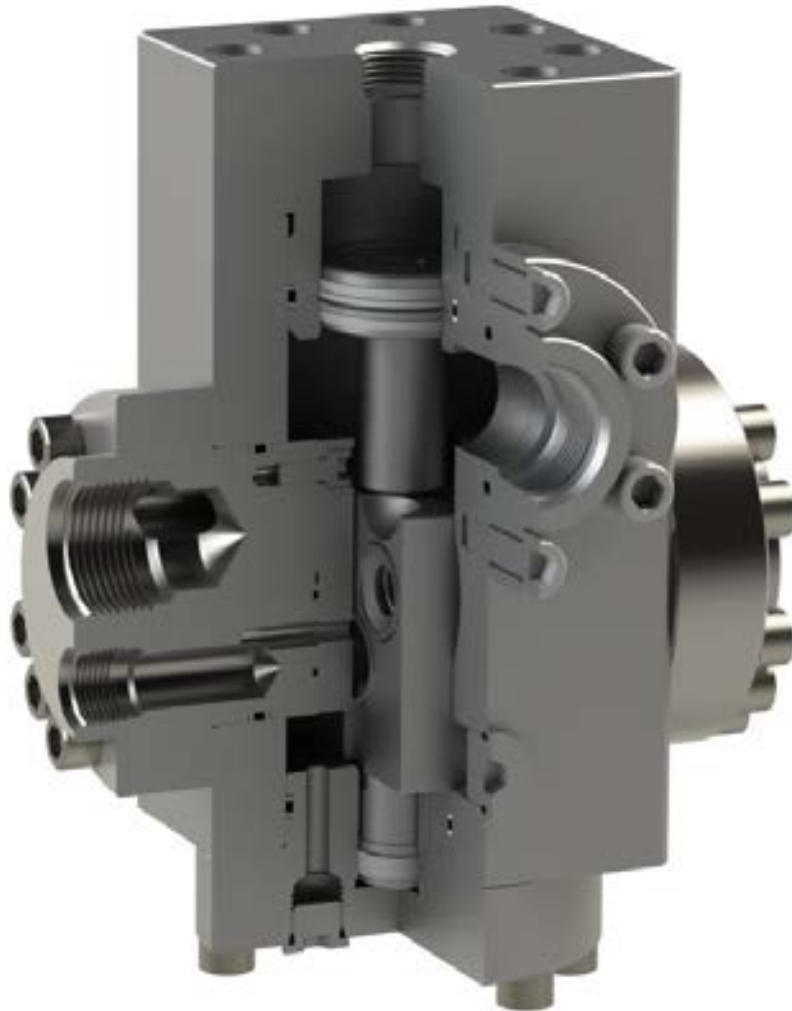


Figure 1. PN 29119: 1" GEN 2 Pressure Regulator, Hydraulic Pilot, Single Inlet, SAE Ports, 5000 – 300 psi range

Features and Benefits:

- Qualification exceeds API 16D requirements – 10,000 cycles at full flow rate and pressure
- Guided hydraulic dampening technology
- Improved deadband performance
- Refined Tungsten Carbide seal trim
- Enhanced bolted plunger guide
- Upgraded dynamic plunger T-Seal
- CRA Material Construction
- Threaded seal carrier alignment
- SAE Gauge and Auxiliary ports
- Performance Data available
- US Patent #10,739,796

1" GEN2 Pressure Regulator, Hydraulic Pilot

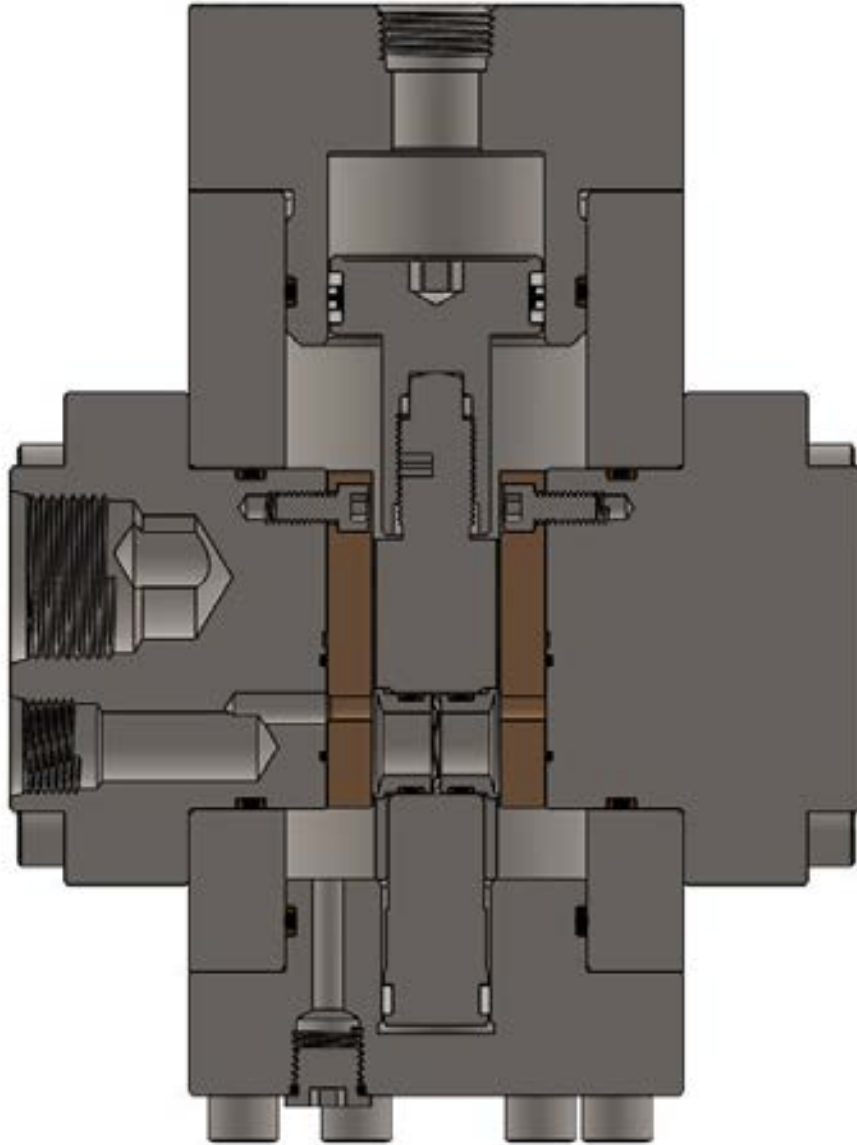


Figure 2. PN 29119 Cutaway: 1" GEN 2 Pressure Regulator, Hydraulic Pilot, Single Inlet, SAE Ports, 5000 – 300 psi range

Gilmore has exceeded API 16D requirements by qualifying the new 1" GEN 2 Hydraulic Pilot Regulator designs to multiple endurance tests to 10,000 cycles, at a starting flow rate of 150 gpm per inlet, at 5000 psi, with 1% - 4% water glycol test fluid. The detailed qualification report is available by request.

The new Gilmore 1" GEN 2 Hydraulic Pilot Regulators are drop-in replacements to the Gilmore legacy regulators.



Product Information Bulletin (PIB)

1" GEN2 Pressure Regulator, Hydraulic Pilot

The new Gilmore 1" GEN 2 Hydraulic Pilot Regulators are now available for purchase. Several examples of common Gilmore regulators are listed below for reference. Gilmore will be creating other drop-in 1" GEN 2 Hydraulic Pilot Regulator configurations as required.

Note that Gilmore will continue to sell and support the legacy 1" Hydraulic Pilot Regulators with valve sales, repair kits, seal kits, conversion kits and Aftermarket support.

Please contact Gilmore Customer Service to request a quotation for the 1" GEN 2 Hydraulic Pilot Pressure Regulators listed below, or any other configurations required that are not listed.

Table 1. Examples of New 1" GEN 2 Hydraulic Pilot Pressure Regulators:

Item	New Valve Description	Legacy PN Reference	GEN 2 Valve PN	GEN 2 Repair Kit PN	GEN 2 Seal Kit PN
1	Valve, Pressure Regulator, GEN 2, Hydraulic Pilot, Seal Sub Mounted, Dual Inlets	60173-1*	29092	29092 RK	29092 SK
2	Valve, Pressure Regulator, GEN 2, Hydraulic Pilot, Seal Sub Mounted, Dual Inlets	60173-1-TC*	29092	29092 RK	29092 SK
3	Valve, Pressure Regulator, GEN 2, Hydraulic Pilot, Seal Sub Mounted, Dual Inlets	60173*	29092	29092 RK	29092 SK
4	Valve, Pressure Regulator, GEN 2, Hydraulic Pilot, Seal Sub Mounted, Dual Inlets	170955	29092-1	29092-1 RK	29092-1 SK
5	Valve, Pressure Regulator, GEN 2, Hydraulic Pilot, 1" SAE, Single Inlet	44575-4*, **	29119	29119 RK	29119 SK
6	Valve, Pressure Regulator, GEN 2, Hydraulic Pilot, 1" NPT, Single Inlet	44575*	29120	29120 RK	29120 SK
7	Valve, Pressure Regulator, GEN 2, Hydraulic Pilot, 1" NPT, Single Inlet	44575-1*	29120	29120 RK	29120 SK
8	Valve, Pressure Regulator, GEN 2, Hydraulic Pilot, 1" NPT, Single Inlet	44575-2*	29120	29120 RK	29120 SK
9	Valve, Pressure Regulator, GEN 2, Hydraulic Pilot, Seal Sub Mounted, LH Inlet	60176*	29121	29121 RK	29121 SK

*Gage port improvement from NPT to SAE. Exact like for like porting can be created as needed

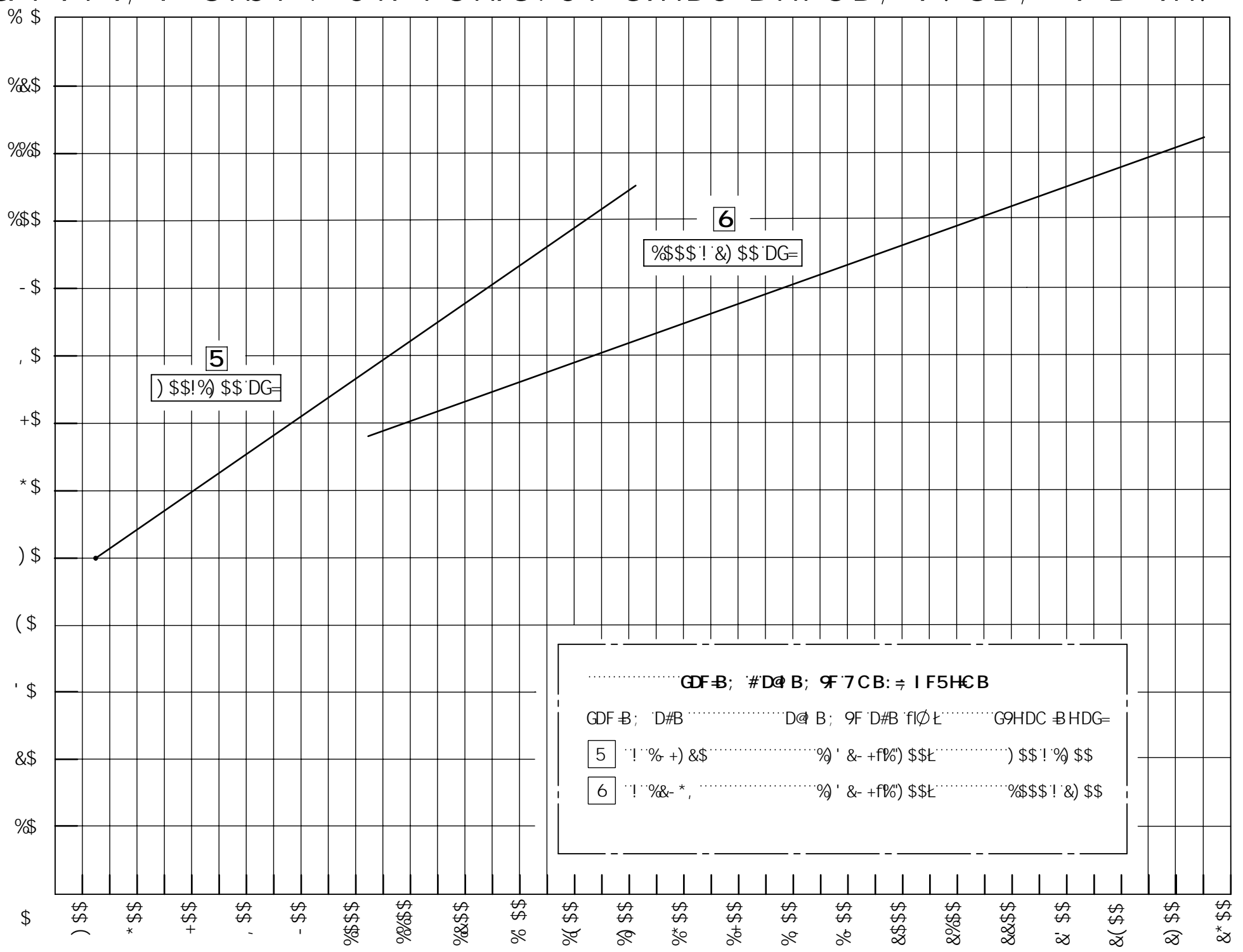
**Vent port increased from 3/8" SAE to 1/2" SAE. Exact like for like porting can be created as needed

Note that GEN 2 regulator kits are **not** interchangeable with legacy kits and cannot be used in the legacy regulators.

Please contact Gilmore Customer Service to request any drawings, manuals and quotations for these new GEN 2 regulators at info@gilmore.com.

9B & DF 9GGI F9 F9; I @5 HC F : @ C K F5 H9G: C F G9HDC BHF5B; 9! GB; @9 B @9H! \$\$\$ DG=GI DD@M

HMD75@F9, I @5HCF 89A 5B8 7M @9: @CK 75D57 HME f[da t
K #K CI H@HDF 9GG F9 5DDFCL A 5H@M) \$i C: G9HDC BH



GDF-B; #D@ B; 9F 7CB: ÷ I F5HCB
 GDF-B; D#B D@ B; 9F D#B f[@ L G9HDC B HDG=
 5 !' % +) &\$ %' & +f%) \$\$\$) \$\$\$! % \$\$
 6 !' % & - * , %' & +f%) \$\$\$ %\$\$\$! &) \$\$\$

BC H9G
 %": @K 75D57 H9G5F9 ±%\$! 5B8 65G98 CB: @ B GD97 ÷ 7; F5J HMC: %"\$
 &": @K 75D57 H9G5F9 5DDFCL A 5H@M8CI 6@98 K <9B HK C B @HG5F9DFCJ 898"
 ' " 65G98 CB B @H5B8 F9; I @5H98 @B9GA9C: %B7 <L <D@94 '(\$: 99H@ B; "
 (" 57H 5@GM@A : @CK F5H9GA 5MJ 5FM'
)" 7CBG @HK #k; @A CF99B; B 99F B; ÷ C D9F5HB; CI HG89HK9 @GH8 G9HDC BH
 "" F5B; 9"

G9HDC BHFDG

F9J GCBG				
REV	ERN/ECO NUMBER	DRAWN	CHECKED	APPROVED
A	ERN 02366	JOP 6/09/20	CMJ 6-9-20	AJP 6/9/20

A 5H9F 5@	8 A 9BGC BG5B8 HC @F5B7 9G5F9 B B7 <9GD9F 5GA 9M() A 1% - (" I B @GGC H: 9FK @9 GD97 ÷ 98. %L HC @F5B7 9G L: ±% LL: ±\$% LLL: ±\$\$ 5B: @G ±") & G F: 57 9H L H F9. ✓	5DDFCJ 5@	85H9 6/09/20
7CB8 HCB.		85H9 6-9-20	
HF95HA 9BH		85H9 6/9/20	
DFC 798I F9BI A 69F.		85H9 6/09/20	

9B; B99F-B;

; 9B & F9, I @5HCF J 5@ 9
 DI 6@G < 98: @CK 75D57 H9G

GAP	8K; BC	F9J
6	(\$\$*	5
G7 5@ %'	Gc JK cf_g	G<99H % C: '

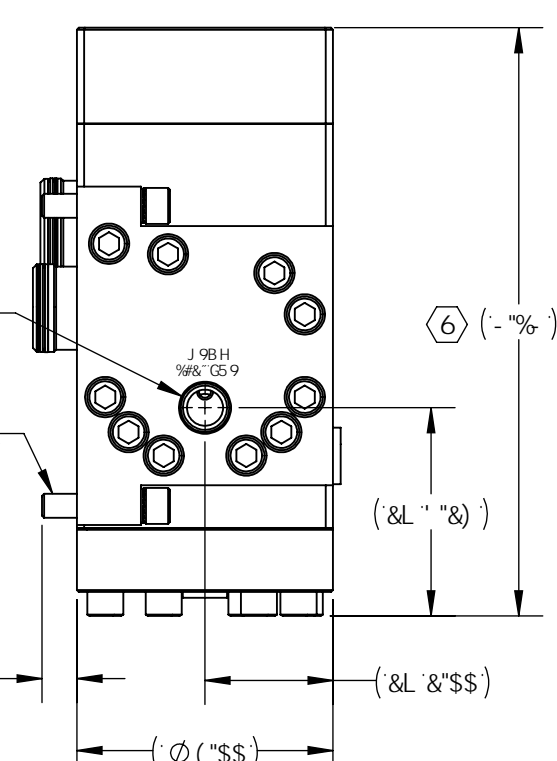
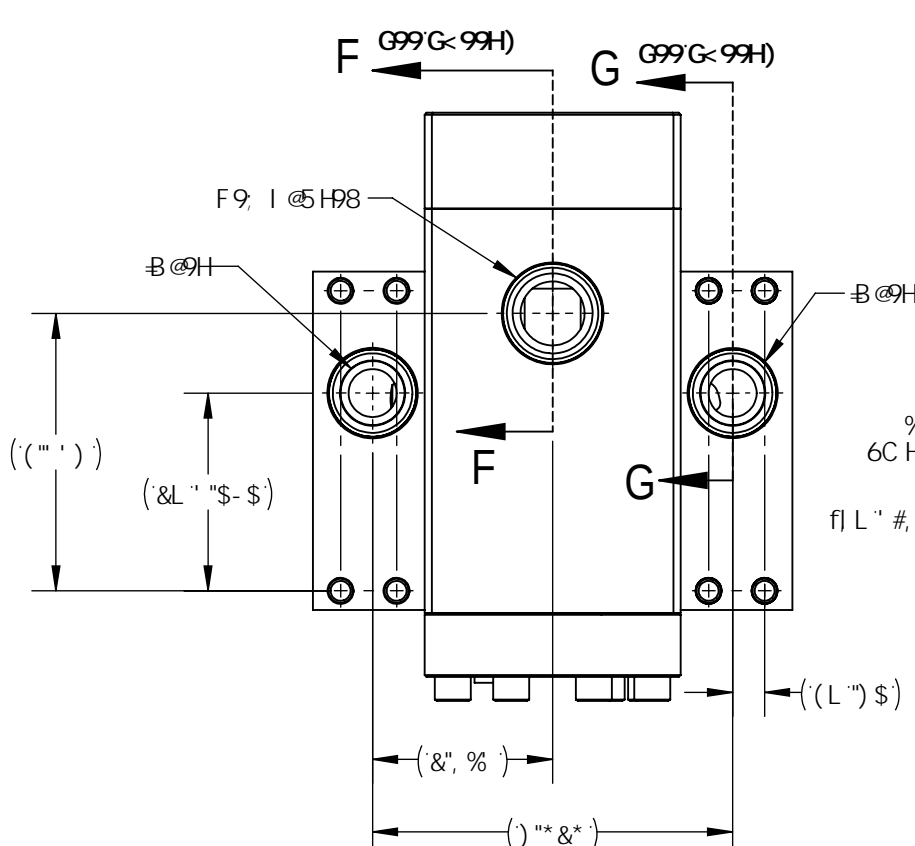
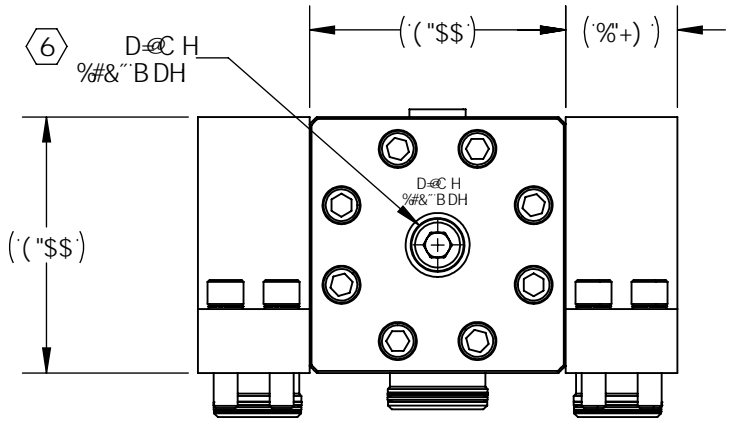
6

6

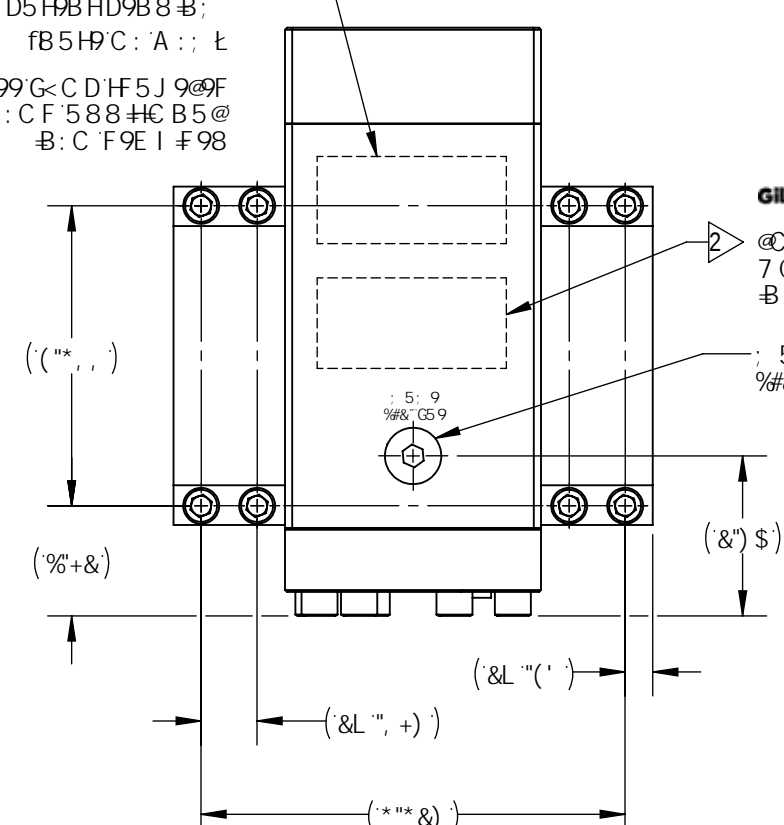
5

5

F9J GCBG				
REV	ERN/ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 018916	JOP 6/12/20	CMJ 6-12-20	AJP 6/12/20

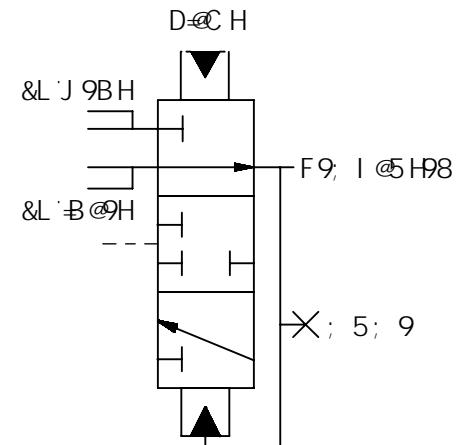


& \$- &
 J 9F 'f5 L' J 9FGCB' L
 FG9F 5 @BI A 69FL
 * \$\$\$ DG=
 D5H9B HD9B8-B;
 fB5H9C: A: ; L
 G99G<C D'F5J 9@9F
 : C F'588 H C B5@
 B: C F9E I F98

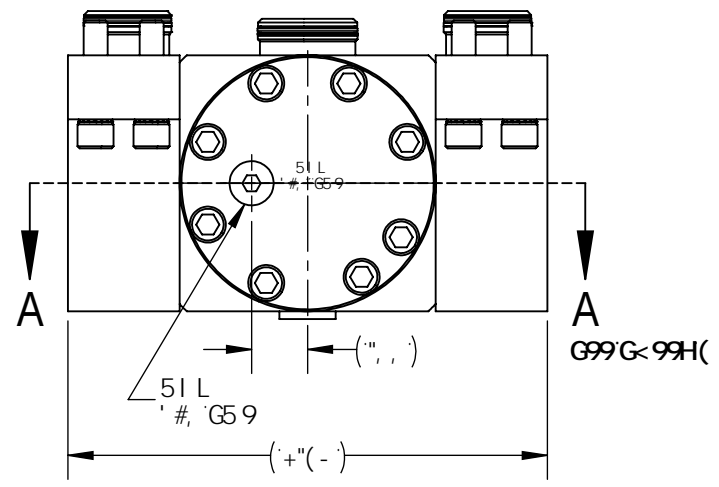


@C: C'5B8
 7CA D5BM
 B: CFA 5HC B

5; 9
%#&"G59



G7 < 9A 5H7



D5 H9 BH'D9 B8-B;

A 5HPF 5@ G99 B8 J 6C A +PA G	8-A 9BGC BG5B8 HC @F5B7 9G5F9 B B7 < 9GD9F 5GA 9M() A 1% - (" I B @GGC H: 9FK @9 GD97 ≠ 98. %L HC @F5B7 9G "L: ±% "LL: ±\$% "LLL: ±\$\$) 5B: @G: ±")° &L G F: 57 9H9LH F9. ** ✓	5DDFC J5@ 85F5K B 6M 7 < 97 98 6M 9B: B 99F 9FB BI A 69F	85H9 (#&, #&\$) 85H9 (#&, #&\$) 85H9 (# \$#&\$) 85H9 \$(# \$#% 85H9
7CB8 HCB.	'L 7CF58-5@: 95H F9GG<5 @69 © K H-B "\$% (L 6F 95? G<5FD 98; 9G "\$%) L BH9FB5@F58 =G<5 @69 "\$% 'A 5L *L 8F @DC-BHG C DHC B5@K < 9B G<C K B I BGD97 ≠ 98 Z5 @8F @DC BH5B: @G G<5 @69 69K 99B -S "%(\$	Hk9 B: CFA 5HC B 7CBH5-B98-B Hk-68F5K-B: 6Hk-9 GC @DFC D9F HMC: ; @A CF9J 5@ 97C I B @GGC Hk 9FK @9 G5H98" 5B MF9DFC 8I 7HC B-B D5FHC F K < C @K Hk C I H Hk 9K F H98 D9FA GGC B C: ; @A CF9J 5@ 97C GDFC < 6H98	85H9 (#&, #&\$) 85H9 (# \$#&\$) 85H9 \$(# \$#% 85H9
HF95HA 9BH			
DFC 798I F9BI A 69F.			



9B; B99F-B;

J 5@ 9ZDF9GG F9F9, I @HC FZ
 ; 9B &Z%#&"BDH D @CH'G95@G 6Z
 8CI 6@B @H) \$\$\$ #* \$\$\$ DG=

GAP	8K: BC	F9J
6	& \$- &	6
G7 5@ % (	Gc JXK cf_g	G<99H % C:)

CD9F5HB; '85H5.

% :CFHMD75@:CK 75D57#MF9:9F'HC'8F5K'B; ; (\$\$*:CF'8CI'6@'B@H
&".....7CBG5BHD@HDF9GGI'F9'F9E I'F98'HC'A'5'B'H5'B'7CBG5BHF9; I'@H98
.....DF9GGI'F9'"8I'9'HC'@'K'895865B8'5H'\$\$\$'DG=G'DD@M'.....&\$\$'±)'\$'DG=
.....B'1'BG56@'F9; I'@H98'DF9GGI'F9"
".....:CF'A'CF9'89H5'@8'89G7F'DHC'BG'F9:9F'HC'G9FJ'7'9'A'5BI'5@)'%\$&,"

DF9GGI'F9'85H5.

A'5L'A'1'A'1'A'1'B'@HDF9GGI'F9'F5HB;*Z\$\$\$'DG=
F9; I'@H98'F5B; 9.....)Z\$\$\$'!' '\$\$'DG=
HMD'7'5'@895865B8'5H'\$\$\$'DG=G'DD@M'.....&\$\$'±)'\$'DG=
HMD'7'5'@895865B8'5H'\$\$\$'DG=G'DD@M'.....%\$\$'±)'\$'DG=
A'5L'A'1'A'1'A'1'F9; I'@H98'5B8'J'9BH
DF9GGI'F9'F5HB;)Z\$\$\$'DG= 6

:@CK'85H5.

:I'@MCD9B'7j'F9; I'@H98.....%(f7'5@7'±
:I'@MCD9B'7j'J'9BH.....&f7'5@7'±
:I'@MCD9B'A'5L'F9; I'@H98:@CK'F5H9.' '\$\$'; DA 6

:@'8G'K'5HF'65G98'8F'@B; '7CBHFC@:@'8
.....A'B'9F5@C'@65G98'8F'@B; '7CBHFC@:@'8

DCFHG

B@H%.....%'G95@G'6
B@H&.....%'G95@G'6
F9; I'@H98.....%#&'G95@G'6
6 D@H.....%#&'BDH
J'9BH%.....%#&'G59
J'9BH&.....%#&'G59
; 5; 9.....%#&'G59
5I'L.....'#;'G59

;9B9F5@85H5.

H9A'D'F5B; 9.....&°:HC'%'\$°:
5DDFC'L'K'9±'<H'')&@G

BCH9G

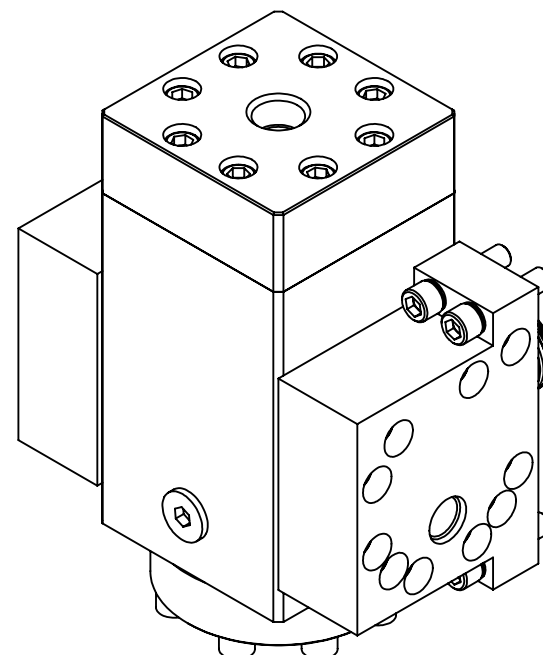
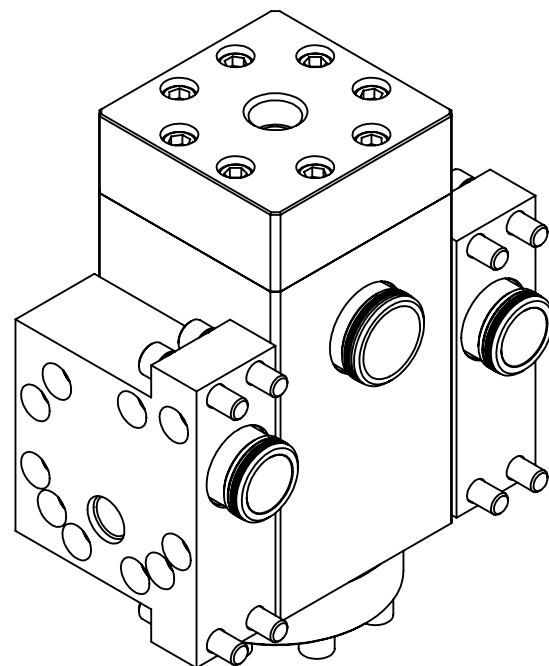
- ▷ A'5F?'5GG9A'6@MK'C'"'5HJ'5@'9'5GG9A'6@M
B'577CF85B79K'±'A'5IK'I-'!%\$Z6M; @A'CF9"
- ▷ A'5F?'5GG<CK'B'1'GB; '@G9F'9H7'<CF'7CA'DI'H9F
7CBHFC'@8'8CHD99B'A'5F?'B; 'A'57'<B'9Z'"\$*'<±'<
A'B'7'<5F57'H9FG"
- 6 " L'B'H'9'6CA'1'B'8'7'5H9GD5FHG'B'F9D5F'?'#I&-'\$-'&F?'Z
G95@?'#I&-'\$-'&G?'5B8'A'CI'BHB; '?#I&-'\$-'&A'?"
- ▷ 5GG9A'6@MDFC'798I'F9.....)'\$&--
G5B85F8':5HDFC'798I'F9.....)'\$'\$\$
9LH9B898':5HDFC'798I'F9.....)'\$'\$\$%
G9FJ'7'9'A'5BI'5@'.....)'%\$&,"
- ▷ HCFE'19HC'&\$':H@
- * ▷ HCFE'19HC')':H@
- + ▷ HCFE'19HC'(\$':H@
- ▷ HCFE'19HC'&\$':H@
- ▷ 5@A'5BI':57H'F98'±9A'G5F9'D5GGJ'5H98"
- 6 %\$" 8CI'6@'B'@HA'CI'BHB; '?#I5J'5'±6@'D5FHBI'A'69F'&-'%&,"


6

6

5

5



 Gilmore <small>a praxair company</small>		9B; B99F-B;	
GAD	8K; BC	F9J	
6	&- \$- &		6
G75@	'%	Gc'JK cf_g	G-99H & C:)

6

5

6@@C: A 5H9F 5@							
ITEM NO	PART NUMBER	DESCRIPTION	A 5H9F 5@	QTY	RK	SK	MK
1	196803	BODY	A564 TP 630 (17-4 PH)	1			
2	153290	FLANGE BOTTOM	A276 TP 316	1			
3	207807	GUIDE, PLUNGER, 1-3/4"	A276 TP 316	1			
4	153292	INSERT, FLOW PORT, SUPPLY & VENT	TUNGSTEN CARBIDE 8-10% NICKEL	2	X		
5	153294	CARRIER, SEAL	A276 TP S21800 (NITRONIC 60)	1			
6	154597	RING, SEAL, SUPPLY	TUNGSTEN CARBIDE 8-10% NICKEL	4	X		
7	154599	RING, SEAL, VENT	TUNGSTEN CARBIDE 8-10% NICKEL	2	X		
8	18701-002	WAVE SPRING	AMS5699 (X-750)	1	X		
9	154598	SPRING, COMPRESSION	AMS5699 (X-750)	2	X		
10	18603-006	PLUG, HEX, 3/8" SAE	A240 TP 316	1	X		
11	154797	PELLET, NYLOK	NYLON	1	X	X	
12	18603-008	HOLLOW HEX PLUG, 1/2" SAE	A240 TP 316	1	X		
13	154659	RING, BACKUP	PEEK	4	X	X	
14	154799	SHCS, THREAD-LOCKING, 1/4-20 UNC X 1/2" LONG	A593 T316 (& NYLON)	6	X	X	
15	18224-003	SHCS 3/8-16 UNC X 1-1/2 LG	A286 GR 660	36			
16	18100-051K1	O-RING	HNBR	2	X	X	
17	18100-026K1	O-RING	HNBR	4	X	X	
18	18100-009K1	O-RING	HNBR	8	X	X	
19	195435	RING, BACKUP	PEEK	4	X	X	
20	195436	RING, BACKUP	PEEK	4	X	X	
21	195437	RING, BACKUP	PEEK	8	X	X	
22	18100-082K1	O-RING	HNBR	2	X	X	
23	161776	WEAR BAND, SEAL CARRIER	DELTRIN AF	1	X	X	
24	196801	FLANGE, INLET, RIGHT	A276 TP 316	1			
25	196802	FLANGE, INLET, LEFT	A276 TP 316	1			
26	18225-001	SHCS 3/8 - 16 X 1-5/8" LG	A286	8			X
27	10794442-001	WASHER, NORD-LOCK, 3/8	254 SMO	8	X		X

6

&

%

6@@C: A 5H9F 5@							
ITEM NO	PART NUMBER	DESCRIPTION	A 5H9F 5@	QTY	RK	SK	MK
28	18100-002K1	O-RING	HNBR	4	X	X	X
29	18110-026T	BACKUP RING	TEFLON	4	X	X	X
30	12528	SEAL SUB, 1"	A564 TP 630 (17-4PH)	2			X
31	12966	SEAL SUB, 1-1/4"	A564 TP 630 (17-4PH)	1			X
32	18100-038K1	O-RING	HNBR	2	X	X	X
33	18114-003T	BACKUP RING	TEFLON	2	X	X	X
34	207808	HYDRAULIC PLUNGER, 1-3/4"	A276 TP S21800 (NITRONIC 60)	1			
35	207809	WEAR BAND, PLUNGER	DELTRIN AF	2	X	X	
36	18108-022	T-SEAL, PISTON	CARBOXYLATED NITRILE / NYLATRON	1	X	X	

6

6

5

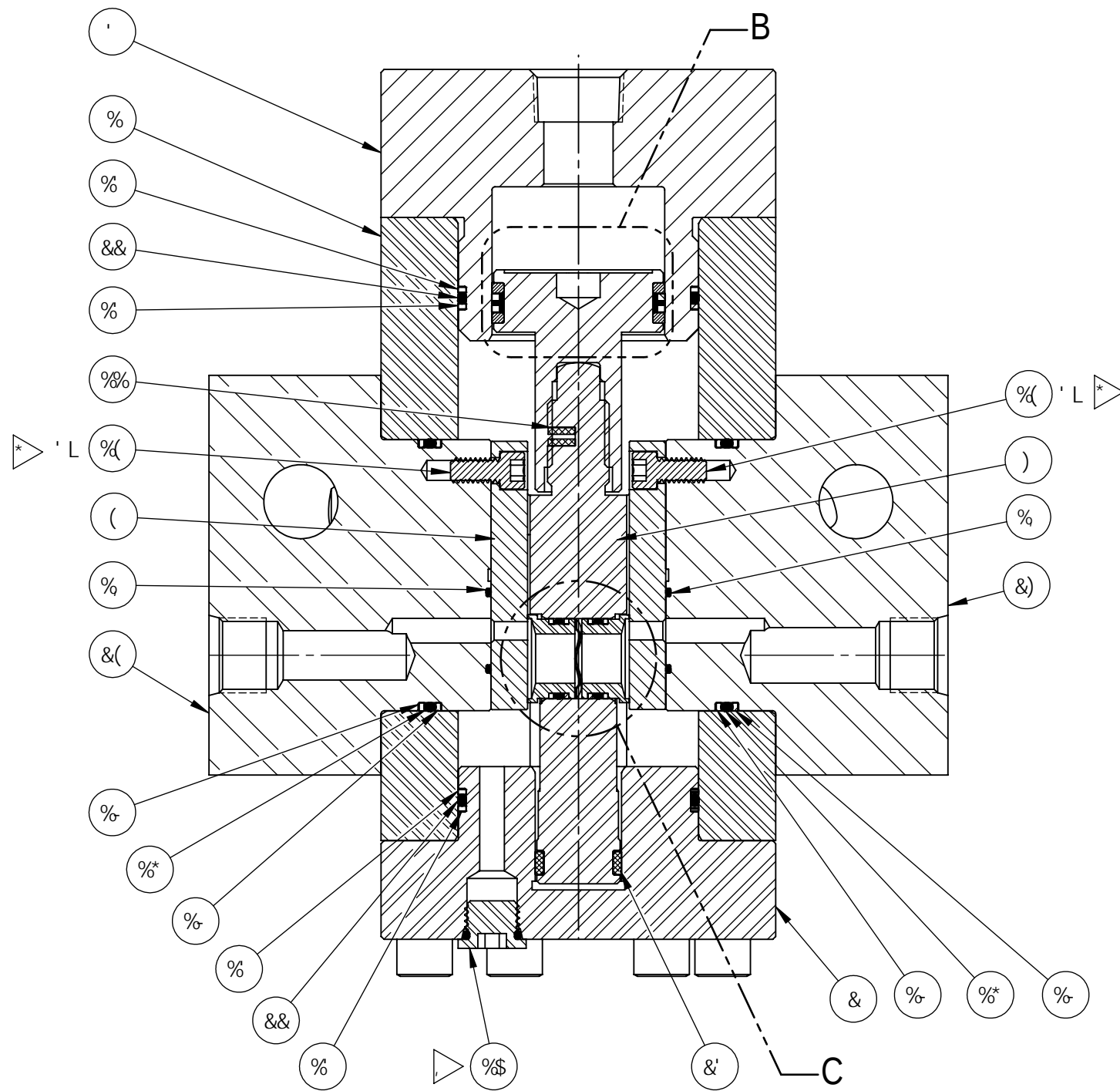
		9B; B99F B;	
GAD	8K; BC	F9J	
6		& \$- &	
G7 5@	%,	Gc JK cf_g	G-99H ' C:)

&

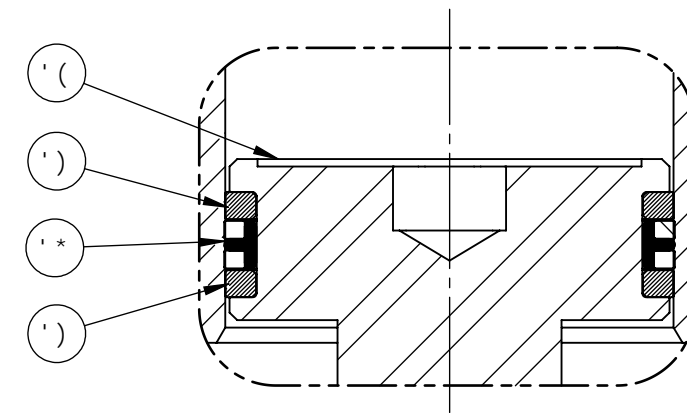
%

6

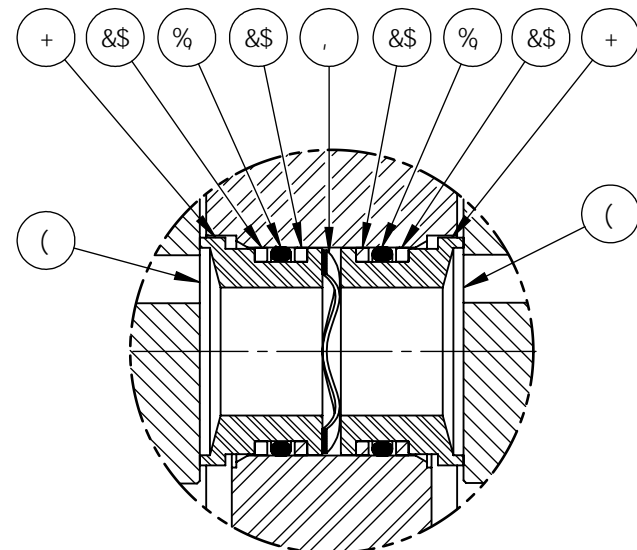
6



SECTION A-A
VIEW ROTATED 90°




DETAIL B

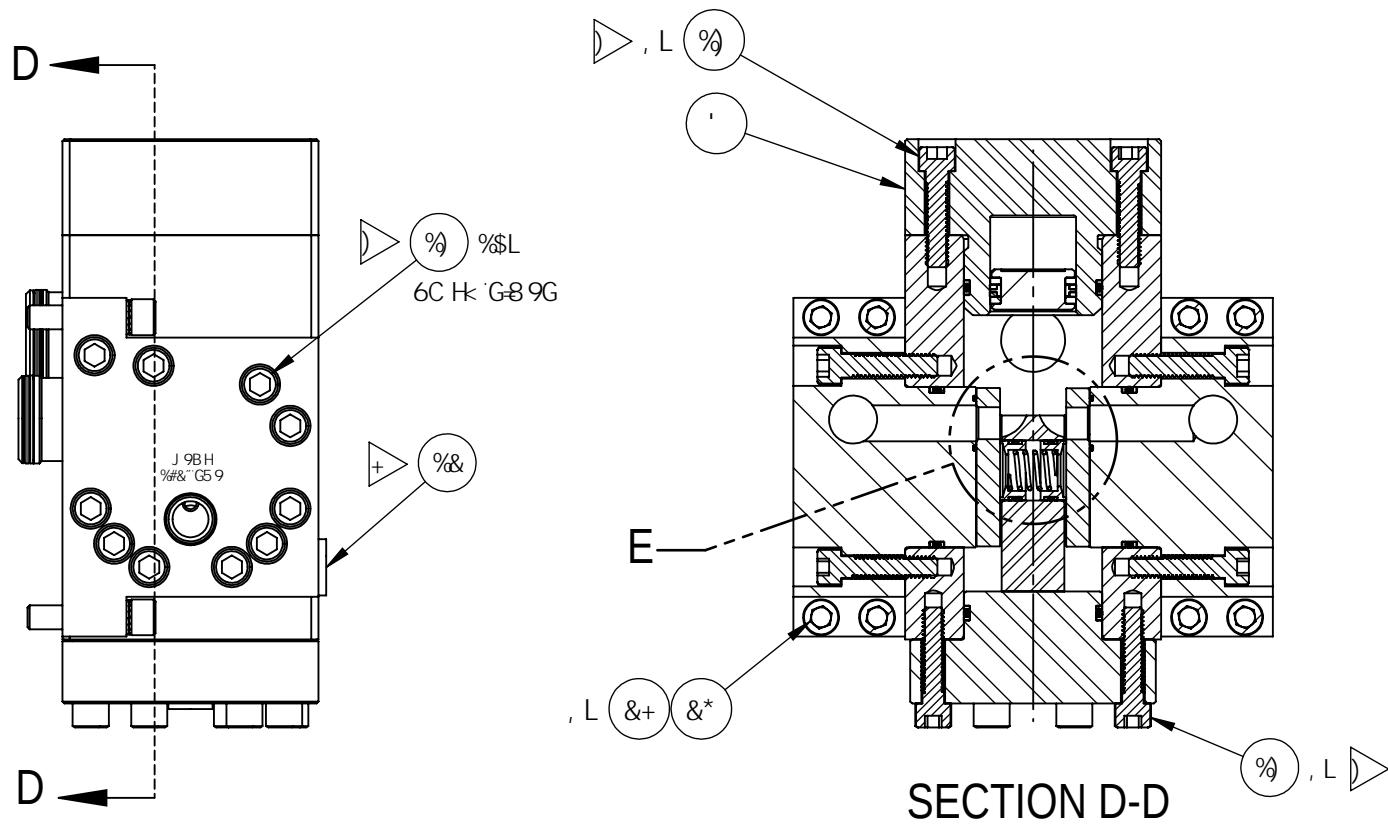


DETAIL C

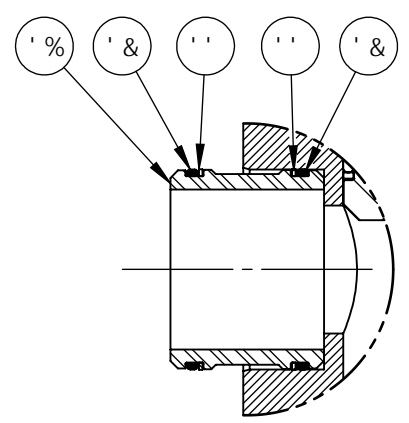
5

5

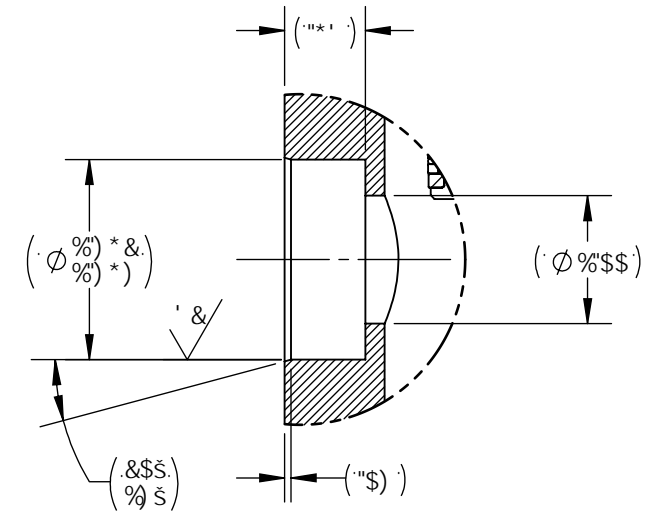
 Gilmore <small>a precision company</small>		9B; B99B;
GA9 6	8K; BC	F9J 6
G75@	% (	Gc JK cf_g G-99H (C:)



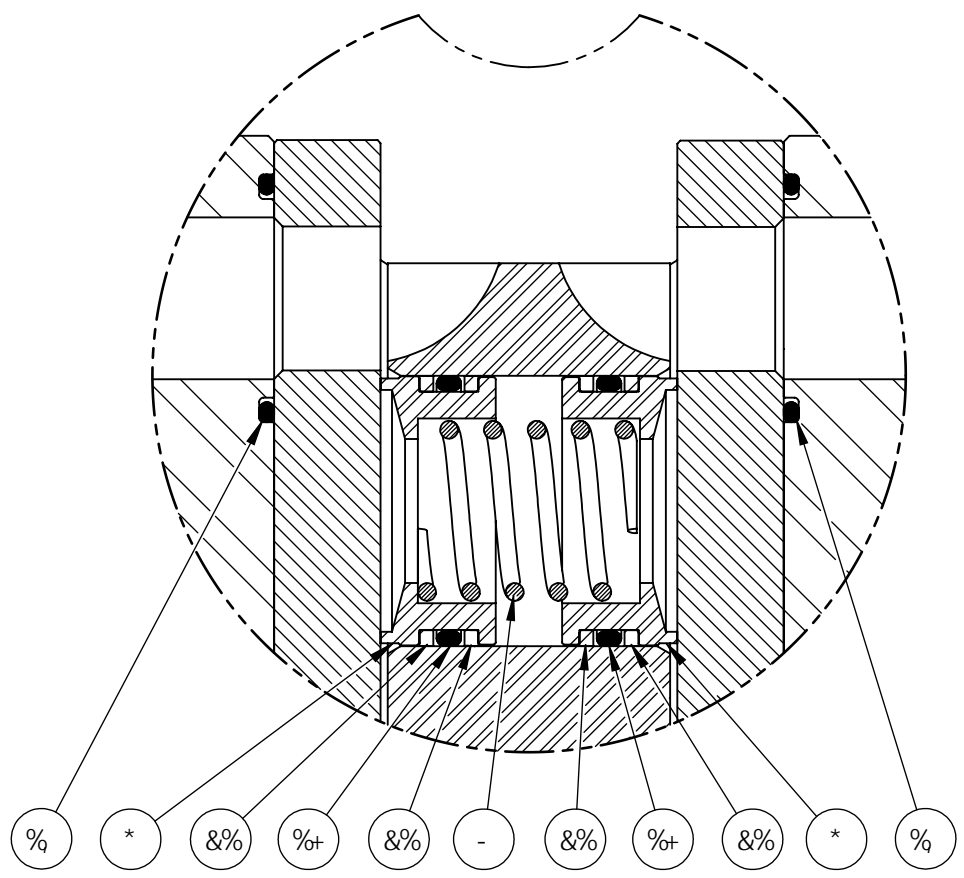
SECTION D-D



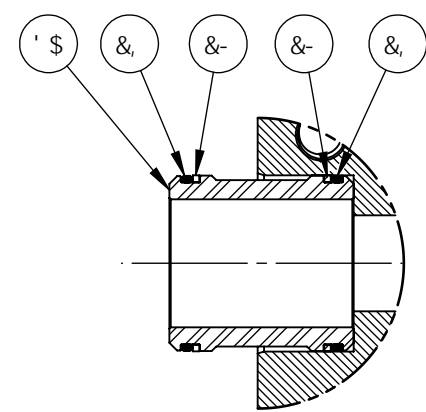
SECTION F-F



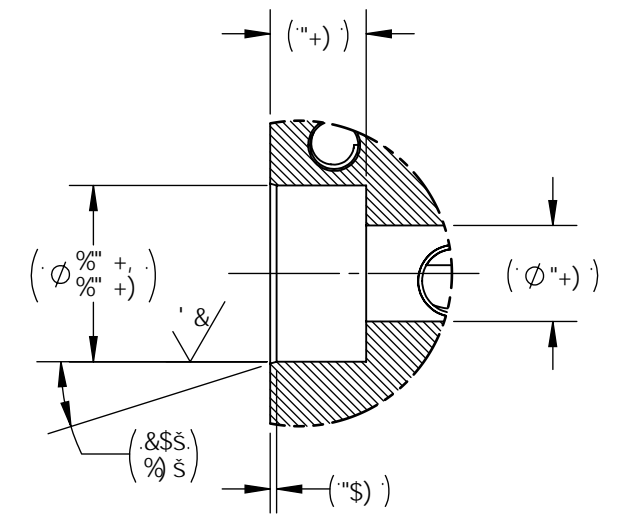
SEAL SUB POCKET DETAIL
(REFER TO SECTION F-F)



DETAIL E
2 PLACES



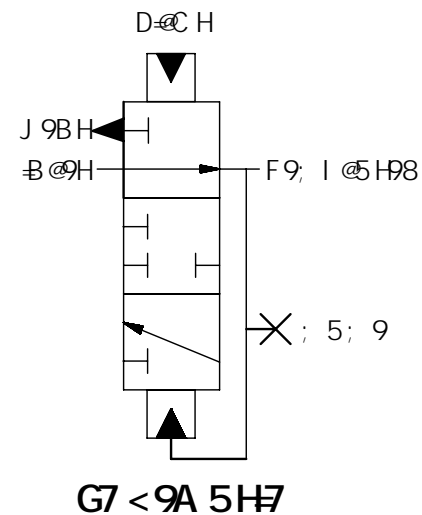
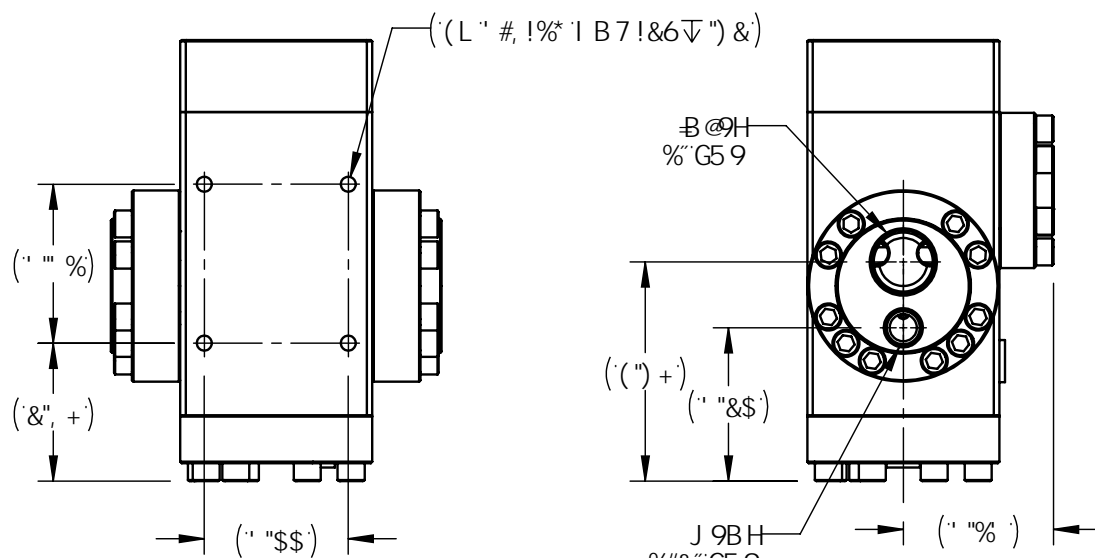
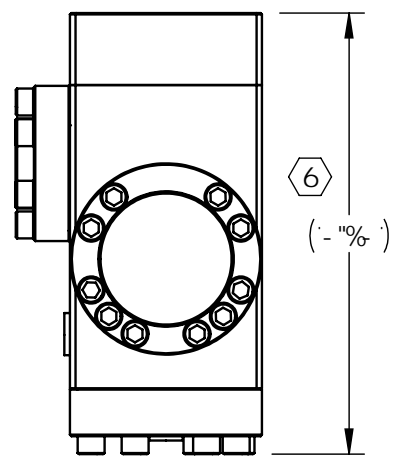
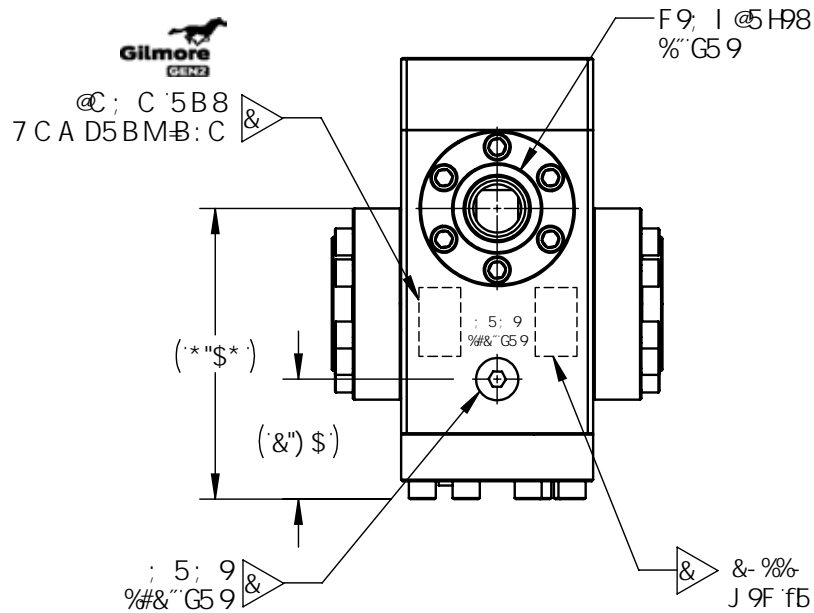
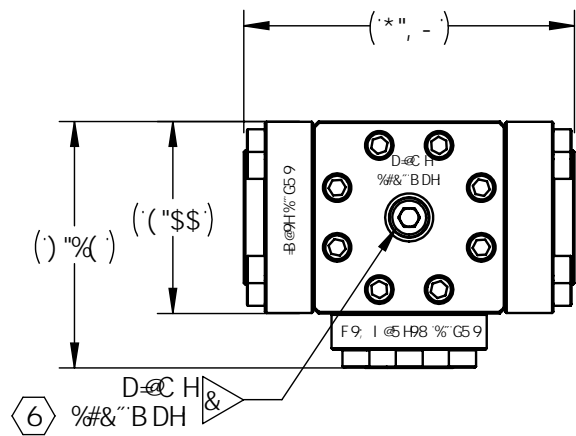
SECTION G-G
2 PLACES



SEAL SUB POCKET DETAIL
(REFER TO SECTION G-G)

 Gilmore <small>a precision company</small>		9B; B99B;
6	8K; BC	&- \$- &
G75@	%'	Gc JK cf_g
		G-99H) C:)

F9J GCBG				
F9J	9FB #97C BI A 69F	8F5K B	7 <97?98	5DDFC J 98
6	97C %\$ - %*	JOP 6/12/20	CMJ 6-12-20	AJP 6/12/20



&- %%
 J 9F 'f5L' J 9FG€ B', Ł
 FG9F -5@BI A 69F Ł
 *Z\$\$\$ DG=
 D5H9BHD9B8-B;
 FB5H9'C: A:; Ł

 G99'G<C D'HF5J 9@F
 : C F '588 #€ B5@
 B: C F9E I F98

D5H9BHD9B8-B;

A 5HPF 5@ G99' B 8 J '6C A ' #PA G	8-A 9BGC BG5B8 HC @F5B7 9G5F9 B 'B7 <9GD9F 5GA 9M() A 1% - (" I B @GGC H: 9FK €9 GD97 ≠ 98. %L HC @F5B7 9G "L: ±% "LL: ±\$% "LLL: ±\$\$) 5B; @G ±") *	5DDFC J 5@ 8F5K B 6M 7 <97?98 6M 9B; B 99F 9FB BI A 69F	85H9 (#&+ #&\$) 85H9 (#&+ #&\$) 85H9 (#&(#&\$) 85H9 ' #% #&\$	 9B; B 99F-B; J 5@ 9ZDF9GG F9F9, I @5HCFZ ; 9B 'ž%#&"BDH 'D=C H' %'G5 9' GB; @-B @H) \$\$\$ # * \$\$\$ DG=	
7CB8 #€ B.	&L G F: 57 9H9LH F9. ** ✓	8K; BC	6	6	
HF95HA 9BH	' Ł 7CF58-5@: 95H F9GG<5 @69 © K #K-B "\$\$ (Ł 6F 95? G<5FD 98; 9G "\$\$) Ł BHPFB5@F58 =G<5 @69 "\$% 'A 5L * Ł 8F @DC -BHG CDHC B5@K <9B G<C K B I BGD97 ≠ 98Z5 @8F @DC BH5B; @G G<5 @69 69K 99B -S *1% \$*	Hk9-B: CFA 5HC B 7CBH5-B98-B Hk-68F5K-B; €Hk-9 GC @DFC D9F HMC: ; €A CF9J 5@97C I B @GGC H: 9FK €9 G5H98" 5B MF9DFC 8I 7HC B-B D5FHC F'K <C @K #C I H H: 9K F #H9B D9FA €GCB C: ; €A CF9J 5@97C €DFC <6H98"	G7 5@ % (	Gc JXK cf_g	G<99H % C:)
DFC 798I F9'BI A 69F.					

6

CD9F5HB; 85H5.

% : CFHMD75@: @CK 75D57 #MF9: 9F HC 8F5K B; ; (\$\$: CF GB; @B@H
&.....7C.BG5BHD @C HDF9GGI F9F9E I F98 HC A 5-BH5-B 7C.BG5BHF9; I @5H98
.....DF9GGI F9" 8I 9HC @C K 895865B8ZI BG56@D @C HDF9GGI F9A 5MF9G @H
.....B I BG56@F9; I @5H98 DF9GGI F9"
".....: CF A CF989H5 @98 89G7 F @HC BGF9: 9F HC G9FJ 7 9A 5BI 5@) %&,"

DF9GGI F985H5.

A 5L A I A B @HDF9GGI F9F5HB;*Z\$\$\$DG=
F9; I @5H98 F5B; 9.....) Z\$\$\$!" \$\$DG=
HMD75@895865B8 5H) \$\$\$DG=G DD@M&\$\$±) \$DG=
HMD75@895865B8 5H' \$\$\$DG=G DD@M%\$\$±) \$DG=
A 5L A I A F9; I @5H98 5B8 J 9BH
DF9GGI F9F5HB;) Z\$\$\$DG= 6

: @CK 85H5.

: I @MC D9B 7j F9; I @5H98.....+f7 5@7 t
: I @MC D9B 7j J 9BH.....%f7 5@7 t
: I @MC D9B A 5L F9; I @5H98: @CK F5H9. % \$; DA 6

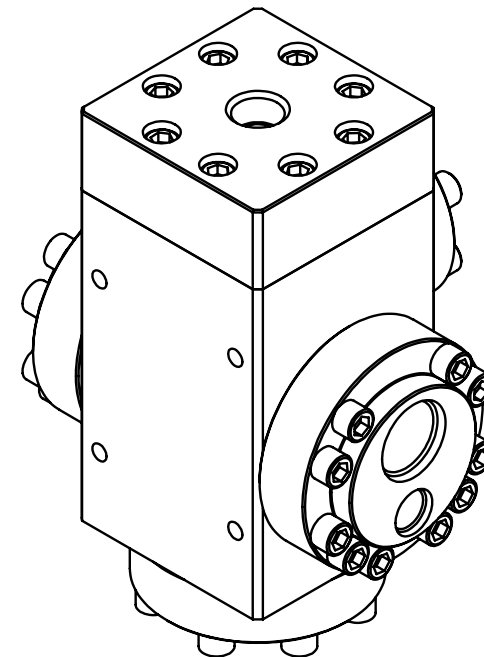
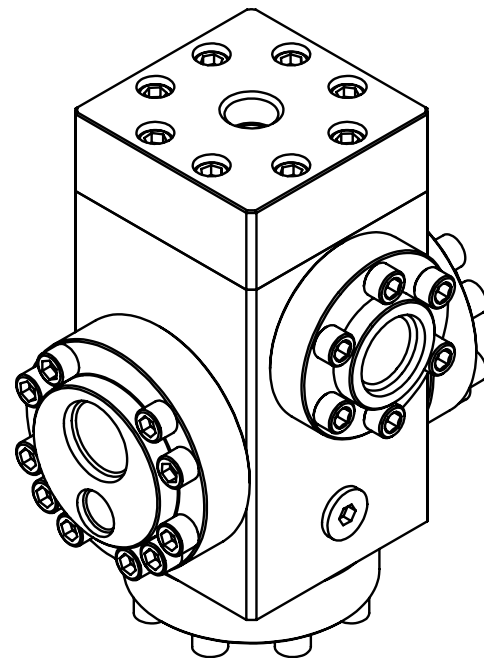
: @ B G K 5H9F 65G98 8F @B; 7 C B H C @: @ B
.....A B 9F5@C @65G98 8F @B; 7 C B H C @: @ B

DCFHG

B @H.....% G59
F9; I @5H98.....% G59
6 D @C H.....%#&"BDH
J 9BH.....%#&"G59
; 5; 9.....%#&"G59
5 I L.....#,"G59

; 9B9F5@85H5.

H9A D F5B; 9.....&: HC % \$:
5DDFCL K 9 < H.....) @6G



BCFHG

%> A 5F? 5GG9A 6@MK "C "" 5HJ 5@ 9 5GG9A 6@M
B 577CF85B79K #K A 5IK !-!%\$Z6M; @A CF9"

& A 5F? 5GG<CK B I GB; @5G9F 9H7 < CF 7 CA DI H9F
7 C B H C @98 8C HD99B A 5F? B; A 57 < B 9Z "\$* ' < < <
A B 7 < 5F57 H9FG"

" " L B H 9 6CA B 8 7 5H9G D5FHG B F 9D5 F ? #I&- %& F? 5B8
G95@? #I&- %& G?"

> 5GG9A 6@MDFC 7 98I F9.....) \$&-
GH5B85F8: 5HDFC 7 98I F9.....) \$' \$\$
9LH9B898: 5HDFC 7 98I F9.....) \$' %
G9FJ 7 9A 5BI 5@.....) %&,"

> HC FE I 9HC &\$: H@

*> HC FE I 9HC) : H@

+> HC FE I 9HC (\$: H@

> HC FE I 9HC &\$: H@

> 5@A 5BI : 57 H F98 #9A G5F9D5GGJ 5H98"

6

5

5

 Gilmore <small>a praxair company</small>		9B; B99F B;
6	8K ; BC	F9J
&- %/σ		6
G75@	%(	Gc JK cf_g
		G-99H & C:)

(

&

%

6

5

6@@C: A 5H9F-5@						
#PA BC	D5FHBI A 69F	8 9G7 F-DHC B	A 5H9F-5@	E HM	F?	G?
%	% ' & , +	6C 8M	'5) *('HD' * '\$ f%!('D<L	%	.	.
&	% ' & - \$	: @B; 9'6C HC A	'5 &+* 'HD' %*	%	.	.
'	&\$+, \$+	; I -8 9ZD@ B; 9F Z%#("	5 &+* 'HD' %*	%	.	.
(	% ' & - &	B G9FHZ: @C K 'DC FHZG DD@M 'J 9BH	H B; GH9B '7 5F6-89', !%\$i ' B-7?9@	%	L	.
)	% ' & - (	7 5FF-9F ZG95@	5 &+* 'HD' G&% \$\$ fB #FC B-7 *\$L	%	.	.
*	% () - +	F-B; Z'G95 @G DD@M	H B; GH9B '7 5F6-89', !%\$i ' B-7?9@	(	L	.
+	% () --	F-B; Z'G95 @J 9BH	H B; GH9B '7 5F6-89', !%\$i ' B-7?9@	&	L	.
,	% +\$%\$\$&	K 5J 9'GDF-B;	5A G) *-- 'fL!+) \$L	%	L	.
-	% () - ,	GDF-B; Z'7 C A DF9G@B	5A G) *-- 'fL!+) \$L	&	L	.
%\$	% *\$' !\$\$*	D@ ; Z'<9L Z' #, "G5 9	5 &('HD' %*	%	L	.
%%	% (+ +	D9@9H ZBM@C ?	BM@C B'	%	L	L
%&	% *\$' !\$\$,	<C @C K ' <9L 'D@ ; Z'%#&"G5 9	5 &('HD' %*	%	L	.
%	% (*) -	F-B; Z'65 7?I D	D99?	(	L	L
%{	% (+ - -	G<7 GZ'HF958!@C 7?B; Z'%#(!&\$' I B7 'L '%&"@C B;	5) -' 'H %' f' 'BM@C B L	*	L	L
%}	% &&!\$\$'	G<7 G' #, !%' I B7 'L '%&"@	5 & , *; F' ** \$	' *	.	.
%*	% %\$!\$) %?	C I F-B;	<B 6F	&	L	L
%+	% %\$!\$&*?%	C I F-B;	<B 6F	(	L	L
%	% %\$!\$-?%	C I F-B;	<B 6F	*	L	L
%	% %\$!\$, &?%	C I F-B;	<B 6F	&	L	L

6

6

6

&

%

6@@C: A 5H9F-5@						
#PA BC	D5FHBI A 69F	8 9G7 F-DHC B	A 5H9F-5@	E HM	F?	G?
&\$	%) (')	F-B; Z'65 7?I D	D99?	(	L	L
&%	%) (' *	F-B; Z'65 7?I D	D99?	(	L	L
&&	%) (' +	F-B; Z'65 7?I D	D99?	,	L	L
&'	% ' & -'	B G9FHZ: @C K 'DC FHZ6@B?	H B; GH9B '7 5F6-89', !%\$i ' B-7?9@	%	L	.
&{	%*%+*	K 95F '65B8 Z'G95@7 5FF-9F	89@F-B '5:	%	L	L
&}	% +) *	: @B; 9Z%"G5 9'-B @9H Z%#&"G5 9'J 9BH	5 &+* 'HD' %*	%	.	.
&*	% ' & ,	: @B; 9Z'6@B?	5 &+* 'HD' %*	%	.	.
&+	&\$+, \$,	<MBF5I @7 'D@ B; 9F Z%#("	5 &+* 'HD' G&% \$\$ fB #FC B-7 *\$L	%	.	.
&.	&\$+, \$-	K 95F '65B8 Z'D@ B; 9F	89@F-B '5:	&	L	L
&-	% %\$, !\$\$&	HG95@D-GHC B	7 5F6C LM5H8 'B #F @9# BM5HFC B	%	L	L
' \$	% +) *-	: @B; 9'CI @9H	5 &+* 'HD' %*	%	.	.
' %	% &&!\$\$%G	G<7 GZ' #, !%' I B7 !&5 'L '%&"@	% !, 'GGZ:) -' '5@C M	*	.	.
' &	% %\$!\$' ?%	C I F-B;	<B 6F	%	L	L

6

5

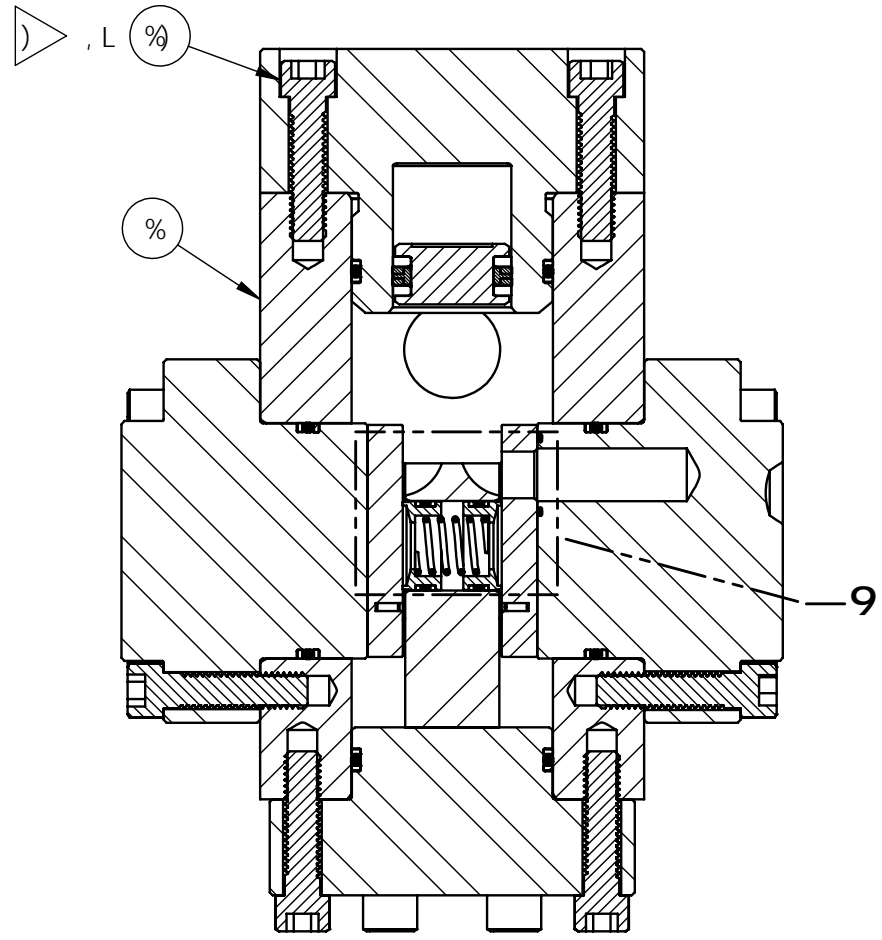
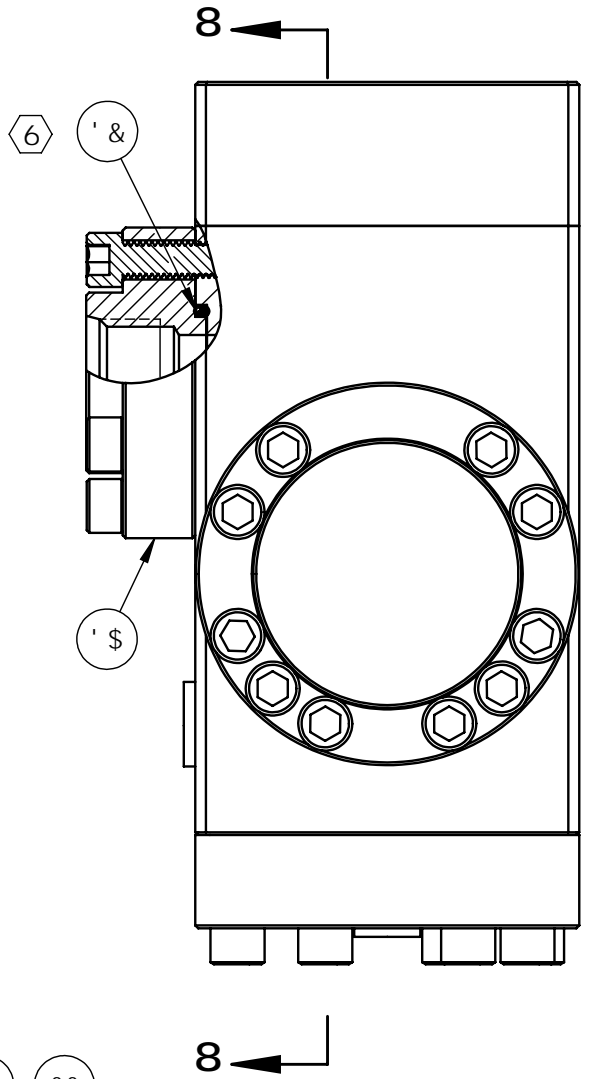
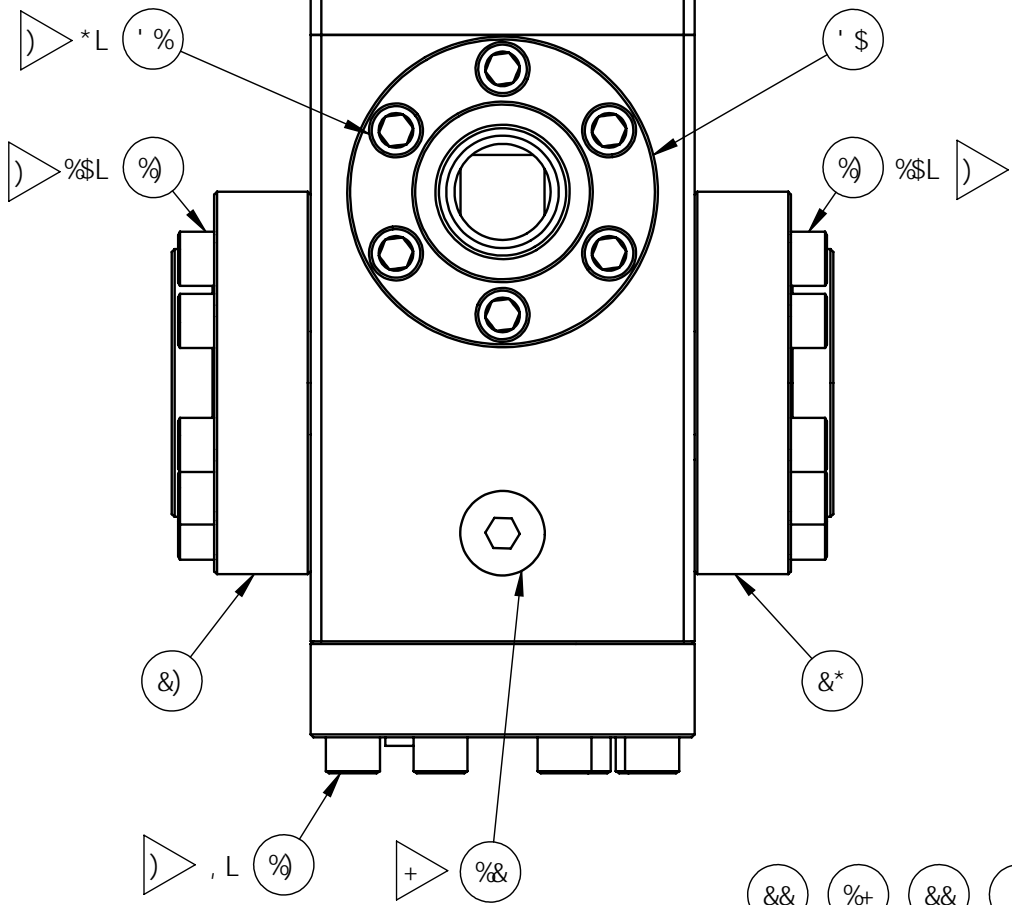
 Gilmore <small>a prairi company</small>			9B; B99F-B;
GAD 6	8K; BC	&- %%	F9J 6
G7 5@	%(	Gc`JK cf_g	G<99H ' C:)

(

&

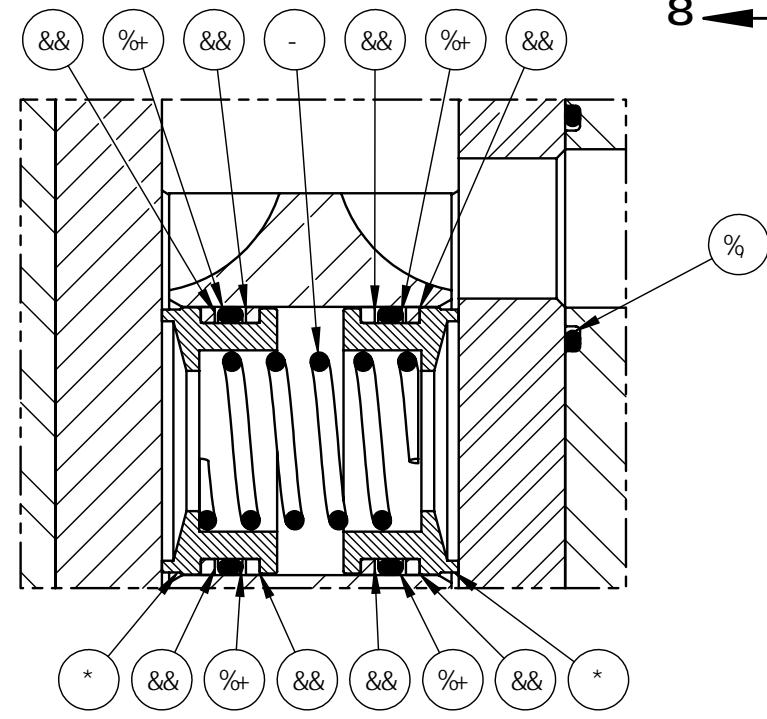
%

6



G97 HCB '8!8

5



895 @9
& D 57 9G

 Gilmore <small>a precision company</small>		9B; B99F B;	
GAD9 6	8K; BC	&- %/σ	F9J 6
G75 @9	%(	Gc JK cf_g	G-99H) C:)

6

5

(

&

%

6

CD9F5HB; 85H5.

% :CFHMD75@: @K 75D57 #MF9: 9F HC 8F5K B; ; (\$\$:CFGB; @B@H
&.....7CBG5BHD@C HDF9GG F9F9E I F98 HC A 5B5B 7CBG5BHF9; I @H98
.....DF9GG F9" 8I 9HC @K 895865B8ZI BG56@D@C HDF9GG F9A 5MF9G @H
.....B 1BG56@F9; I @H98 DF9GG F9"
".....:CFA CF989H5 @98 89G7 F@HC BGF9: 9F HC G9FJ 79A 5BI 5@)%\$&,"

DF9GG F985H5.

A 5L A I A B@HDF9GG F9F5HB;*Z\$\$\$ DG=
F9 I @H98 F5B; 9.....) Z\$\$\$!" \$\$ DG=
HMD75@895865B8 5H) \$\$\$ DG=G DD@M&\$\$+) \$ DG=
HMD75@895865B8 5H' \$\$\$ DG=G DD@M%\$\$+) \$ DG=
A 5L A I A F9; I @H98 5B8 J9BH
DF9GG F9F5HB;) Z\$\$\$ DG= 6

:@K 85H5.

:I @MC D9B 7j F9; I @H98.....+f7 5@t
:I @MC D9B 7j J9BH%f7 5@t
:I @MC D9B A 5L F9; I @H98 :@K F5H9: %\$; DA 6

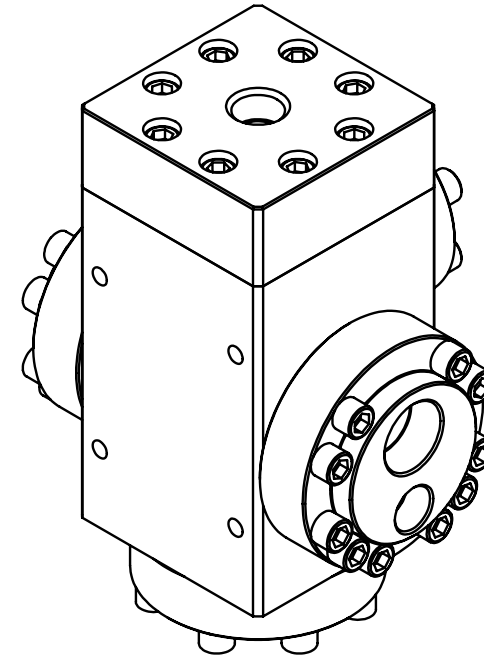
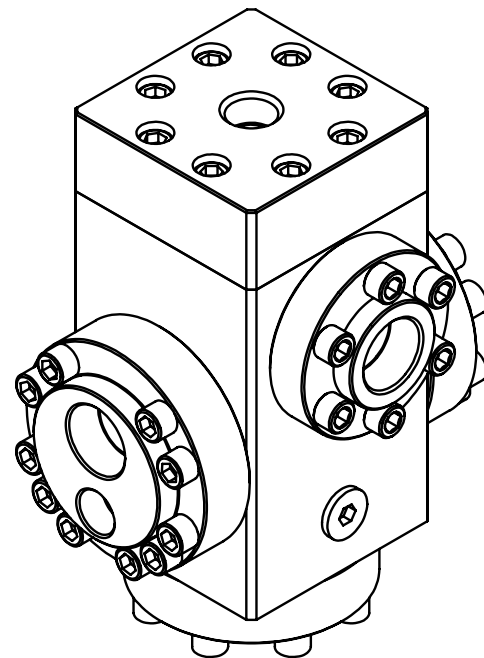
:@ 8G K 5HF 65G98 8F @B; 7CBHC @: @ 8
.....A 89F5@C @65G98 8F @B; 7CBHC @: @ 8

DCFHG

B@H%"BDH
F9; I @H98.....%"BDH
6 D@H%#&"BDH
J9BH.....%#&"BDH
; 5; 9.....%#&"G59
5I L.....#,"G59

; 9B9F5@85H5.

H9A DF5B; 9.....&: HC %\$":
5DDFCL K 9# <H"") @G



BCFHG

- %> A 5F? 5GG9A 6@MK "C ""5HJ 5@ 95GG9A 6@M
B 577CF85B79K #K A 5IK !-!%\$Z6M; @A CF9"
& A 5F? 5GG<CK B I G-B; @G9F 9H7 <CF 7CA DI HF
7CBHC @98 8C HD99B A 5F?B; A 57 <B 9Z"\$* '<# <
A B 7 <5F57H9FG"
" L B H 96CA B 8 7 5H9G D5FHG B F 9D5 F ? #I&- %&\$ F? 5B8
G95 @? #I&- %&\$ G?"
> 5GG9A 6@MDFC 7 98I F9.....) \$&- -
GH5B85F8: 5HDFC 7 98I F9.....) \$' \$\$
9LH9B898: 5HDFC 7 98I F9.....) \$' \$%
G9FJ 79A 5BI 5@.....)%\$&,
> HC FE I 9HC '&\$: H@
* HC FE I 9HC): H@
+ HC FE I 9HC '(\$: H@
- HC FE I 9HC '&\$: H@
- 5@A 5BI : 57 H F98 #9A G5F9D5GGJ 5H98"

6

5

5

Gilmore logo with a horse icon and text 'a precision company'. Below it is a table with technical specifications and a large number '6'.

6

6

6

5

6-@@C: 'A 5H9F-5@						
#PA BC	D5FHBI A 69F	8 9G7 F-DHC B	A 5H9F-5@	E HM	F?	G?
%	%' & +	6C 8M	'5)*('HD'' \$ f%!('D<L	%	.	.
&	%' & - \$	: @B; 9'6C HCA	'5 &+* 'HD' %*	%	.	.
'	&\$+, \$+	; I -8 9ZD@ B; 9F Z'8' #('	5 &+* 'HD' %*	%	.	.
(	%' & - &	B G9FHZ: @C K 'DC FHZG DD@M' J 9BH	H B; GH9B '7 5F6-8 9', !%\$i ' B-7?9@	%	L	.
)	%' & - (	7 5FF-9F Z'G95 @	5 &+* 'HD'G&% \$\$ fB #FC B-7 '* \$L	%	.	.
*	%() - +	F-B; Z'G95 @G DD@M	H B; GH9B '7 5F6-8 9', !%\$i ' B-7?9@	(	L	.
+	%() --	F-B; Z'G95 @J 9BH	H B; GH9B '7 5F6-8 9', !%\$i ' B-7?9@	&	L	.
,	% +\$!\$\$&	K 5J 9 GDF-B;	5A G) *- - 'fL!+) \$L	%	L	.
-	%() - ,	GDF-B; Z'7 C A DF9G@C B	5A G) *- - 'fL!+) \$L	&	L	.
%%	% *\$' !\$\$*	D@; Z'<9LZ' #, "G5 9	5 &(\$'HD' %*	%	L	.
%%	%() ++	D9@9H ZBMC ?	BMC B'	%	L	L
%%	% *\$' !\$\$,	<C @C K ' <9L 'D@; Z'8'G5 9	5 &(\$'HD' %*	%	L	.
%	%() (*)-	F-B; Z'657?1 D	D99?	(	L	L
%	%() ++-	G<7 GZHK F958!@C 7?B; Z'8'(!&\$' I B7 'L' %&' @C B;	5) -' 'H %* 'f' 'BMC B L	*	L	L
%	% &&!\$\$'	G<7 G' #, !%' I B7 'L' %&' @C	5 & *; F**\$	'*	.	.
%*	% %\$!\$) %?	C!F-B;	<B 6F	&	L	L
%+	% %\$!\$&*?%	C!F-B;	<B 6F	(	L	L
%	% %\$!\$-?%	C!F-B;	<B 6F	*	L	L
%	% %\$!\$, &?%	C!F-B;	<B 6F	&	L	L

6

6

6

&

%

6-@@C: 'A 5H9F-5@						
#PA BC	D5FHBI A 69F	8 9G7 F-DHC B	A 5H9F-5@	E HM	F?	G?
&\$	%) (')	F-B; Z'657?1 D	D99?	(	L	L
&%	%) (' *	F-B; Z'657?1 D	D99?	(	L	L
&&	%) (' +	F-B; Z'657?1 D	D99?	,	L	L
&'	%' & -'	B G9FHZ: @C K 'DC FHZ6@B?	H B; GH9B '7 5F6-8 9', !%\$i ' B-7?9@	%	L	.
&(	%*%+*	K 95F '65B8 Z'G95 @7 5FF-9F	8 9G7 F-5:	%	L	L
&)	%' & -	: @B; 9Z%'BDH-B @H Z'8'BDHJ 9BH	5 &+* 'HD' %*	%	.	.
&*	%' & ,	: @B; 9Z'6@B?	5 &+* 'HD' %*	%	.	.
&+	&\$+, \$,	<MBF5I @7 'D@ B; 9F Z'8' #('	5 &+* 'HD'G&% \$\$ fB #FC B-7 '* \$L	%	.	.
&.	&\$+, \$-	K 95F '65B8 Z'D@ B; 9F	8 9G7 F-5:	&	L	L
&-	% %\$, !\$\$&	HG95 @D-GHC B	7 5F6C LM5 H8 'B #F @9 # BM5 HFC B	%	L	L
' \$	%' & - %	: @B; 9'CI @H	5 &+* 'HD' %*	%	.	.
' %	% &&!\$\$%G	G<7 GZ' #, !%' I B7 !&5 'L' %&' @C	% !, 'GGZ:) -' '5 @C M	*	.	.
' &	% %\$!\$' ?%	C!F-B;	<B 6F	%	L	L

%

6

6

5

 Gilmore <small>a prairiex company</small>		9B; B99F-B;	
GAD	8K; BC	6	&- %&\$
G7 5 @		%(	Gc JXK cf_g
		G<99H ' C:)	F9J

(

&

%

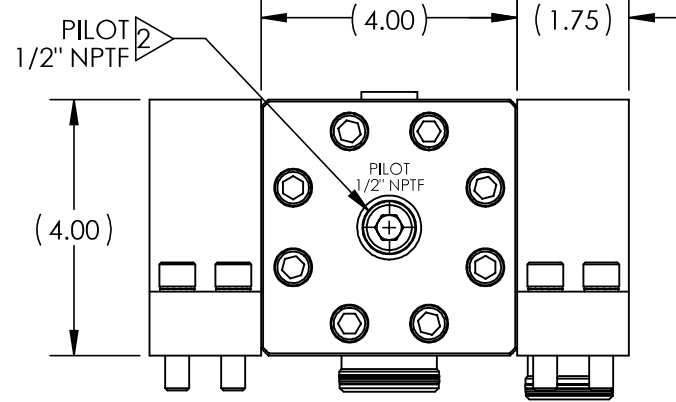
4

3

2

1

REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
C	ECO 019258	JZ 8/5/20	CMJ 8-5-20	AJP 8/4/20

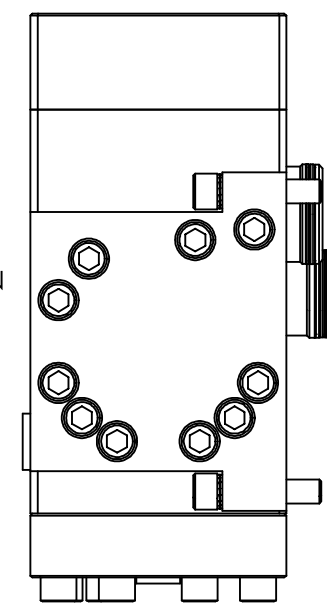
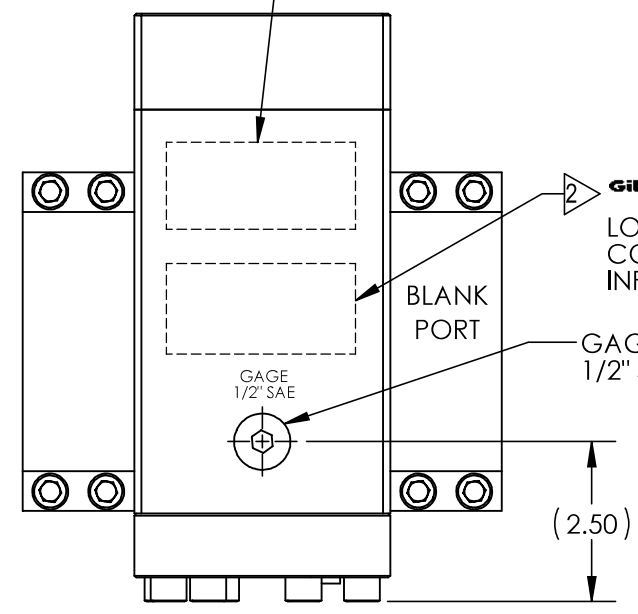
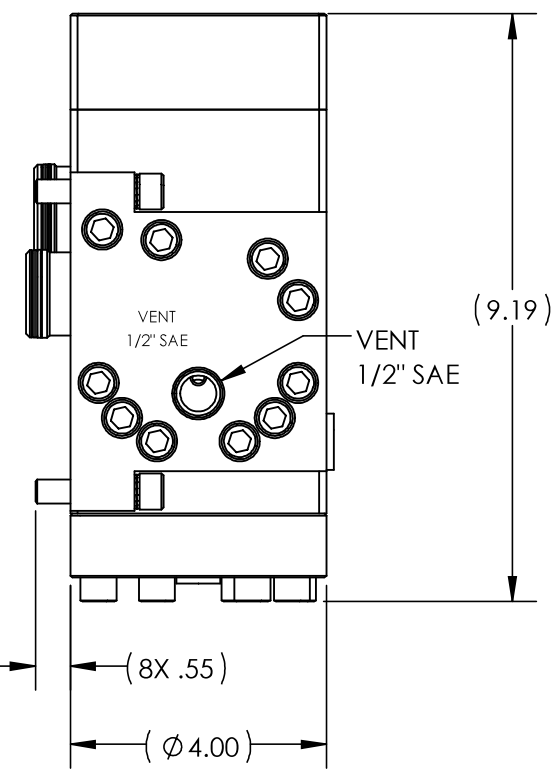
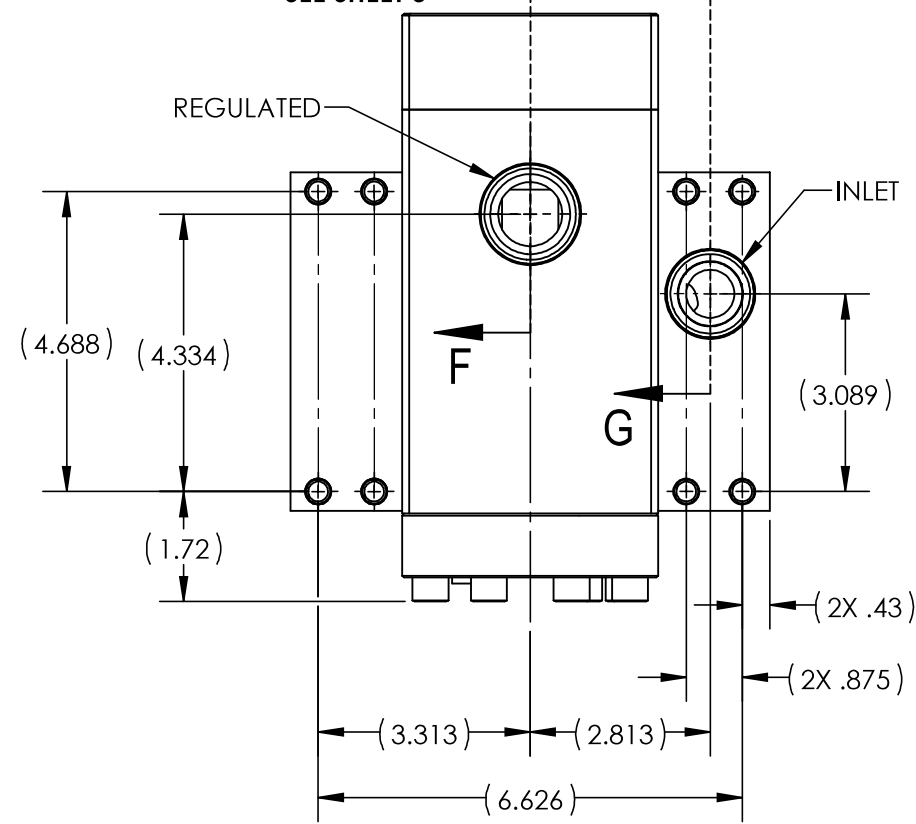


29121
 VER (AX VERSION #)
 (SERIAL NUMBER)
 6,000 PSI
 PATENT PENDING
 (DATE OF MFG)
 SEE SHOP TRAVELER
 FOR ADDITIONAL
 INFO REQUIRED

B

B

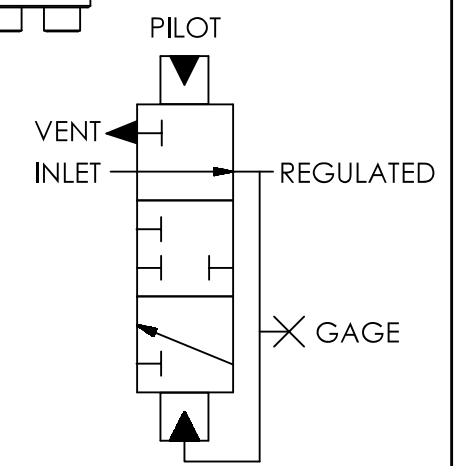
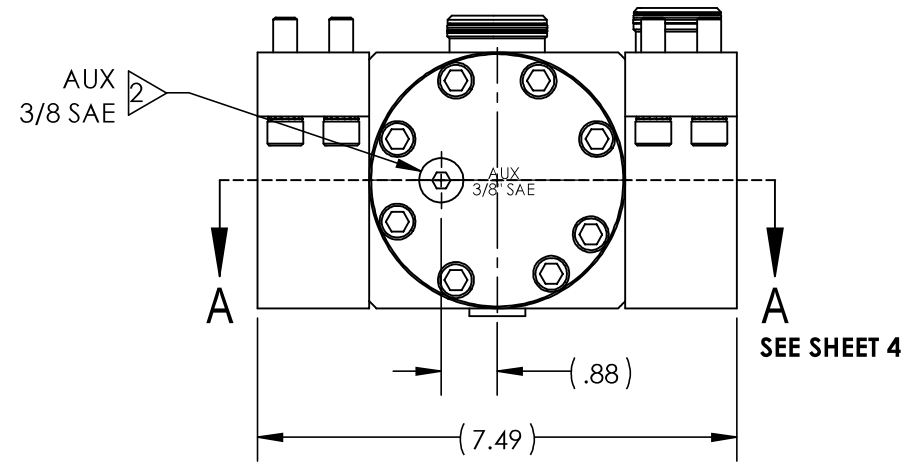
F SEE SHEET 5
 G SEE SHEET 5



Gilmore
 GEN2
 LOGO AND
 COMPANY
 INFORMATION

A

A



PATENT PENDING

SCHEMATIC

MATERIAL: SEE INDIV BOM ITEMS	DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED: 1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5° 2) SURFACE TEXTURE: 63/ 3) CORADIAL FEATURES SHALL BE © WITHIN .010 4) BREAK SHARP EDGES .010 5) INTERNAL RADI SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED. ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	APPROVAL	
CONDITION:		DRAWN BY JZ	DATE 4/28/20
TREATMENT:		CHECKED BY CY	DATE 4/28/20
PROCEDURE NUMBER:		ENGINEER AJP	DATE 4/30/20
		ERN NUMBER 02299	DATE 04/30/19
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF GILMORE VALVE CO UNLESS OTHERWISE STATED. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF GILMORE VALVE CO IS PROHIBITED.			

Gilmore ENGINEERING
 a pro company

**VALVE, PRESSURE REGULATOR,
 GEN 2, 1/2" NPTF PILOT, SEAL SUB,
 LH INLET, 5000/6000 PSI**

SIZE B	DWG NO	REV C
SCALE 1:4	SolidWorks	SHEET 1 OF 5

4

3

2

1

OPERATING DATA:

- 1. FOR TYPICAL FLOW CAPACITY REFER TO DRAWING 84006 FOR SINGLE INLET.
- 2. CONSTANT PILOT PRESSURE REQUIRED TO MAINTAIN CONSTANT REGULATED PRESSURE. DUE TO LOW DEADBAND, UNSTABLE PILOT PRESSURE MAY RESULT IN UNSTABLE REGULATED PRESSURE.
- 3. FOR MORE DETAILED DESCRIPTIONS REFER TO SERVICE MANUAL 51028.

PRESSURE DATA:

MAXIMUM INLET PRESSURE RATING: 6,000 PSI
 REGULATED RANGE: 5,000 - 300 PSI
 TYPICAL DEADBAND AT 5000 PSI SUPPLY: 200±50 PSI
 TYPICAL DEADBAND AT 3000 PSI SUPPLY: 100±50 PSI
 MAXIMUM REGULATED AND VENT PRESSURE RATING: 5,000 PSI

FLOW DATA:

FULLY OPEN Cv REGULATED: 7 (CALC)
 FULLY OPEN Cv VENT: 1 (CALC)
 FULLY OPEN MAX REGULATED FLOW RATE: 150 GPM

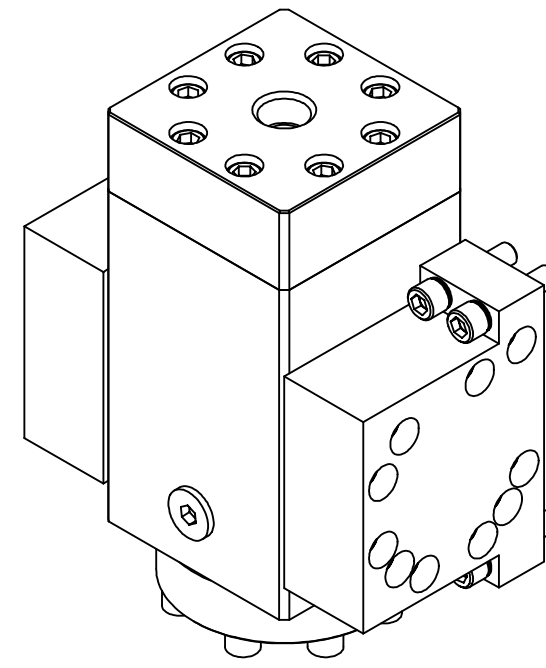
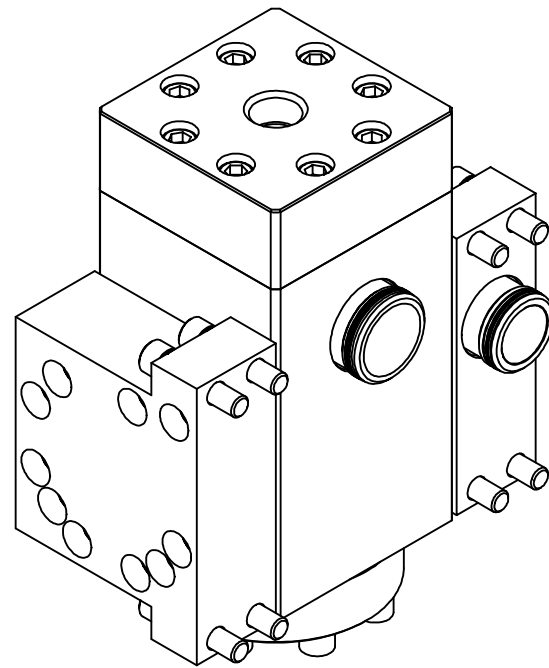
FLUIDS: WATER BASED DRILLING CONTROL FLUID
 MINERAL OIL BASED DRILLING CONTROL FLUID

PORTS:

INLET : 1" SEAL SUB
 REGULATED: 1-1/2" SEAL SUB
 PILOT: 1/2" NPTF
 VENT: 1/2" SAE
 AUX: 3/8" SAE
 GAGE: 1/2" SAE

GENERAL DATA:

TEMP RANGE: 32°F TO 150°F
 APPROX WEIGHT: 51 LBS



NOTES:

- 1 ▷ MARK "ASSEMBLY W.O." AT VALVE ASSEMBLY IN ACCORDANCE WITH MA-W-9-10, BY GILMORE.
- 2 ▷ MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 3. X IN THE BOM INDICATES PARTS IN REPAIR KIT 29121 RK, SEAL KIT 29121 SK AND MOUNTING KIT 29121 MK.
- 4 ▷ ASSEMBLY PROCEDURE: 50299
 STANDARD FAT PROCEDURE: 50300
 EXTENDED FAT PROCEDURE: 50301
 SERVICE MANUAL: 51028
- 5 ▷ TORQUE TO 20 FT-LB
- 6 ▷ TORQUE TO 5 FT-LB
- 7 ▷ TORQUE TO 40 FT-LB
- 8 ▷ TORQUE TO 20 FT-LB
- 9 ▷ ALL MANUFACTURED ITEMS ARE PASSIVATED.
- 10. SINGLE INLET MOUNTING KIT AVAILABLE. PART NUMBER 29127.

B

B

A

A

 Gilmore <small>a pro company</small>		ENGINEERING	
SIZE B	DWG NO 29121	REV C	
SCALE 1:3	SolidWorks	SHEET 2 OF 5	

4

3

2

1

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK	MK
1	196803	BODY	A564 TP 630 (17-4 PH)	1			
2	153290	FLANGE BOTTOM	A276 TP 316	1			
3	207807	GUIDE, PLUNGER, 1-3/4"	A276 TP 316	1			
4	153292	INSERT, FLOW PORT,SUPPLY	TUNGSTEN CARBIDE 8-10% NICKEL	1	X		
5	153294	CARRIER, SEAL	A276 TP S21800 (NITRONIC 60)	1			
6	154597	RING, SEAL, SUPPLY	TUNGSTEN CARBIDE 8-10% NICKEL	4	X		
7	154599	RING, SEAL, VENT	TUNGSTEN CARBIDE 8-10% NICKEL	2	X		
8	18701-002	WAVE SPRING	AMS5699 (X-750)	1	X		
9	154598	SPRING, COMPRESSION	AMS5699 (X-750)	2	X		
10	18603-006	PLUG, HEX, 3/8" SAE	A240 TP 316	1	X		
11	154797	PELLET, NYLOK	NYLON	1	X	X	
12	18603-008	HOLLOW HEX PLUG, 1/2" SAE	A240 TP 316	1			
13	154659	RING, BACKUP	PEEK	4	X	X	
14	154799	SHCS, THREAD-LOCKING, 1/4-20 UNC X 1/2" LONG	A593 T316 (& NYLON)	6	X	X	
15	18224-003	SHCS, 3/8-16 UNC X 1-1/2 LG	A286 GR 660	36			
16	18100-051K1	O-RING	HNBR	2	X	X	
17	18100-026K1	O-RING	HNBR	4	X	X	
18	18100-038K1	O-RING	HNBR	2	X	X	X
19	18100-082K1	O-RING	HNBR	2	X	X	
20	18100-009K1	O-RING	HNBR	6	X	X	
21	195435	RING, BACKUP	PEEK	4	X	X	
22	195436	RING, BACKUP	PEEK	4	X	X	
23	195437	RING, BACKUP	PEEK	8	X	X	
24	208933	FLANGE, BLANK, RIGHT	A276 TP 316	1			

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK	MK
25	196802	FLANGE, INLET, LEFT	A276 TP 316	1			
26	18225-001	SHCS, 3/8 -16 UNC X 1-5/8" LG	A286	8			X
27	10794442-001	WASHER, NORD-LOCK, 3/8	254 SMO	8	X		X
28	18100-002K1	O-RING	HNBR	2	X	X	X
29	18110-026T	BACKUP RING	TEFLON	2	X	X	X
30	12528	SEAL SUB, 1"	A564 TP 630 (17-4PH)	1			X
31	12966	SEAL SUB, 1-1/4"	A564 TP 630 (17-4 PH)	1			X
32	153293	INSERT, FLOW PORT, BLANK	TUNGSTEN CARBIDE 8-10% NICKEL	1	X		
33	18114-003T	BACKUP RING	TEFLON	2	X	X	X
34	207808	HYDRAULIC PLUNGER, 1-3/4"	A276 TP S21800	1			
35	207809	WEAR BAND, PLUNGER	DELFIN AF	2	X	X	
36	18108-022	T-SEAL, PISTON	CARBOXYLATED NITRILE / NYLATRON	1	X		
37	161776	WEAR BAND, SEAL CARRIER	DELFIN AF	1	X	X	



ENGINEERING

SIZE

DWG NO

REV

B

29121

C

SCALE

1:8

SolidWorks

SHEET 3 OF 5

4

3

2

1

4

3

2

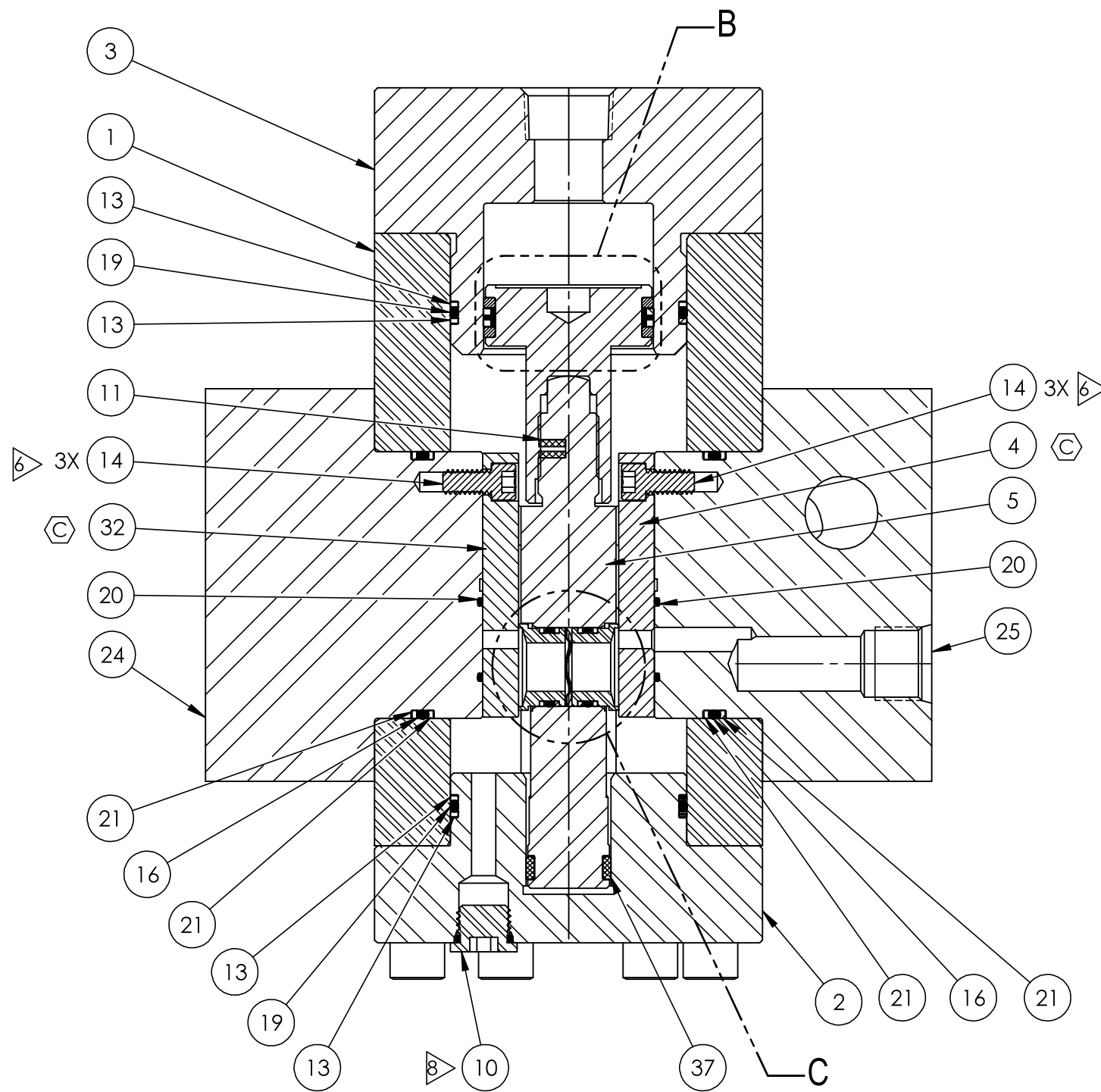
1

B

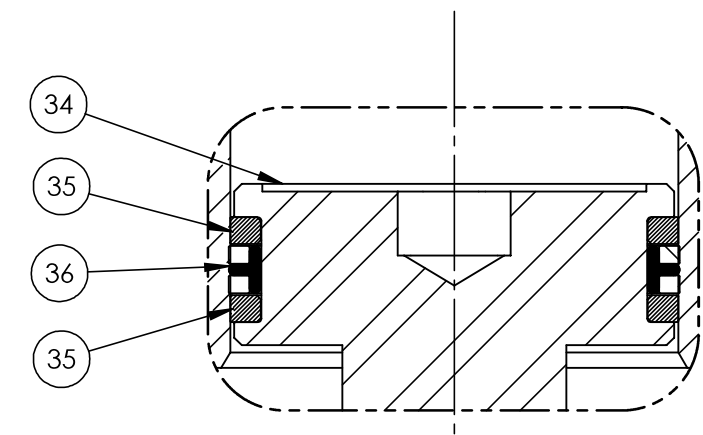
B

A

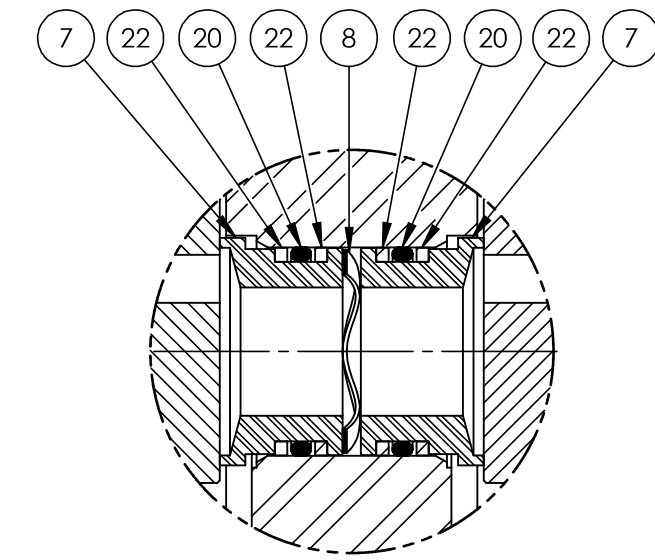
A



SECTION A-A
VIEW ROTATED 90°



DETAIL B



DETAIL C

		ENGINEERING	
SIZE B	DWG NO 29121	REV C	
SCALE 1:4	SolidWorks	SHEET 4 OF 5	

4

3

2

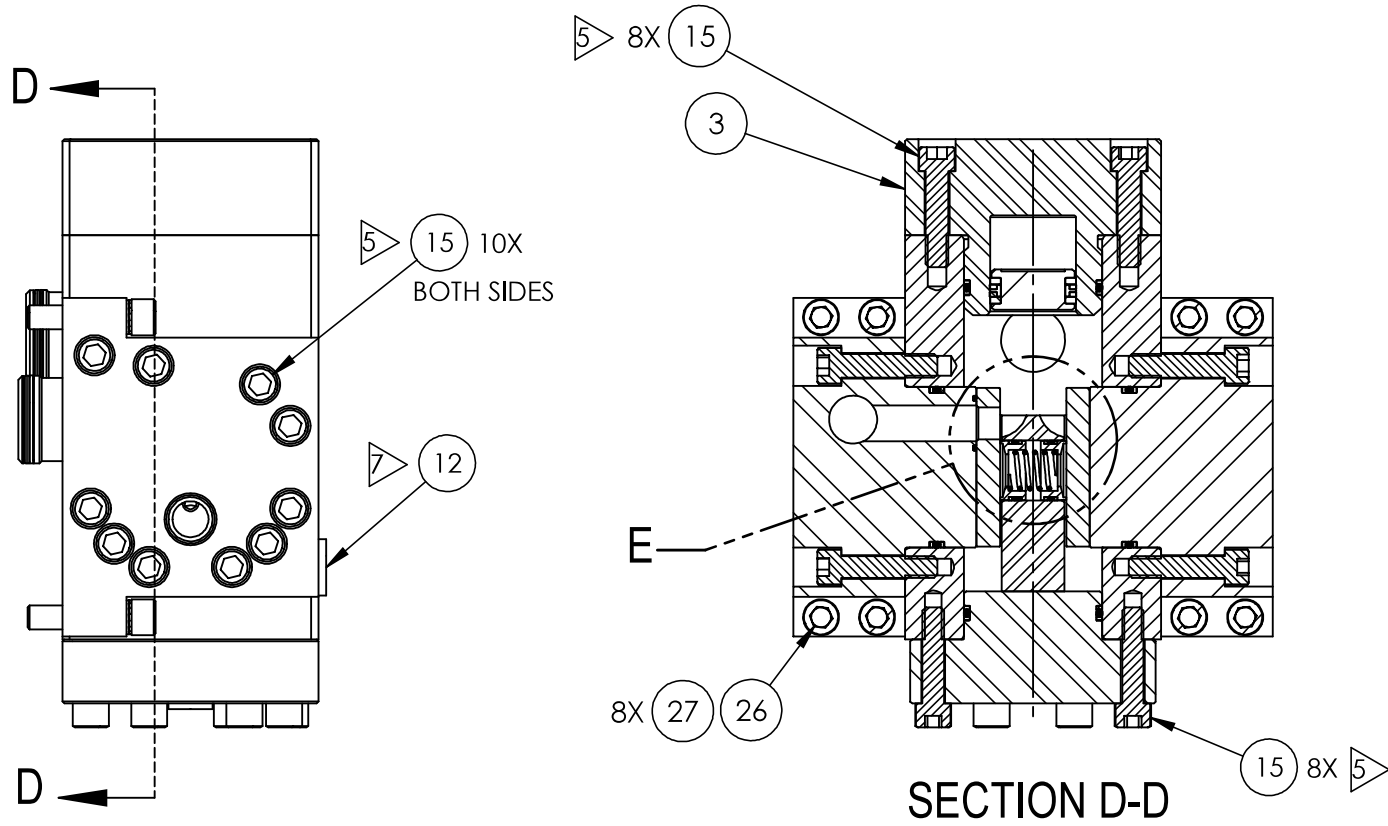
1

4

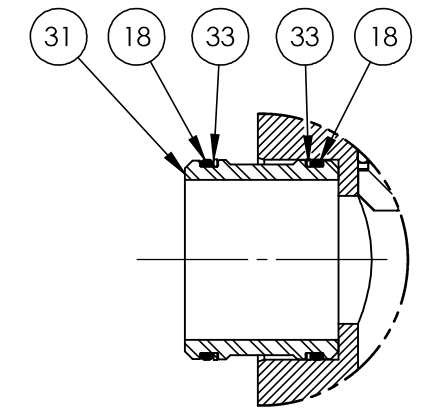
3

2

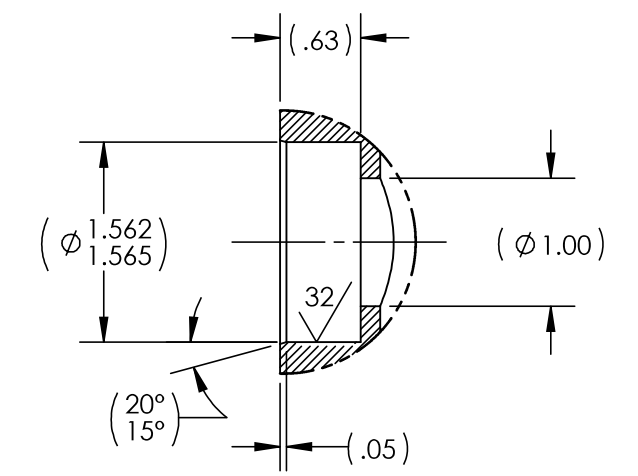
1



SECTION D-D



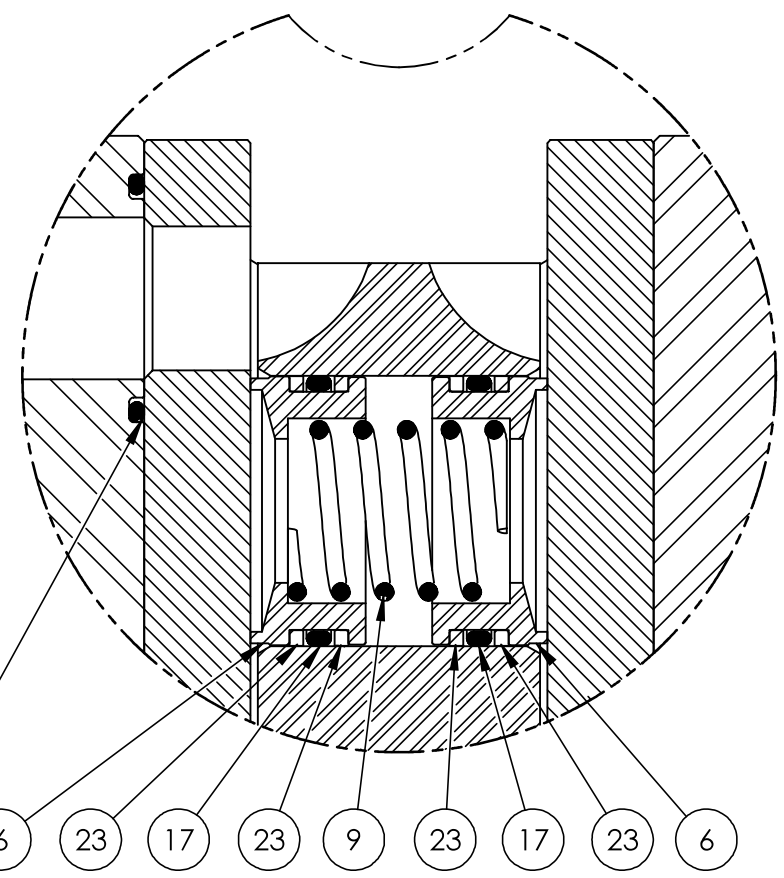
SECTION F-F



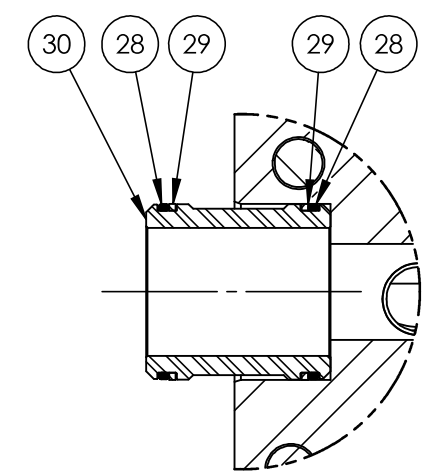
SEAL SUB POCKET DETAIL
(REFER TO SECTION F-F)

B

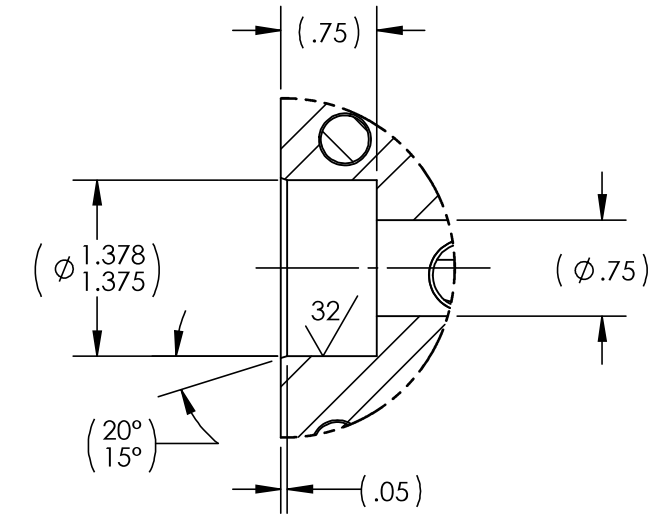
B



DETAIL E
2 PLACES



SECTION G-G



SEAL SUB POCKET DETAIL
(REFER TO SECTION G-G)

A

A

4

3

2

1

		ENGINEERING	
SIZE B	DWG NO 29121	REV C	
SCALE 1:3	SolidWorks	SHEET 5 OF 5	