



Product Information Bulletin (PIB)

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

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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.

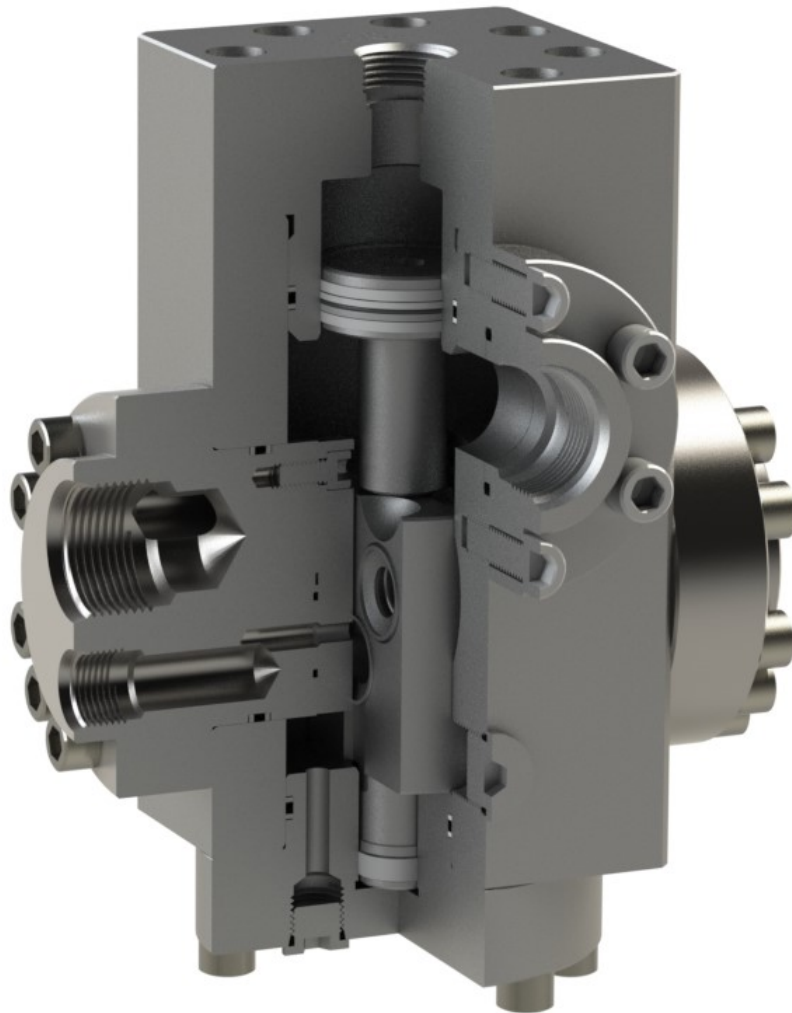


Figure 1. PN 29119: 1" GEN 2 Pressure Regulator, Hydraulic Pilot, Single Inlet, SAE Ports, 5000 – 300 psi range

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

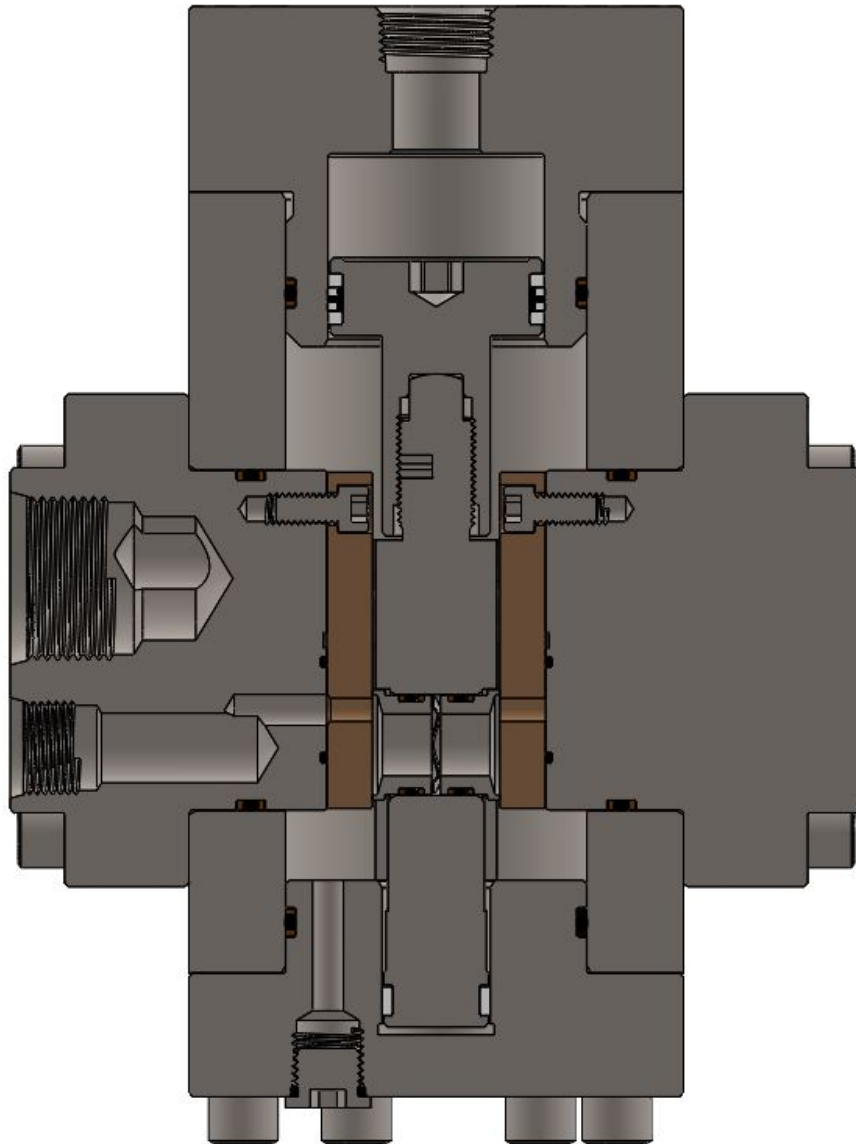


Figure 2. PN 29119 Cutaway: 1" GEN 2 Pressure Regulator, Hydraulic Pilot, Single Inlet, SAE Ports, 5000 – 300 psi range

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.

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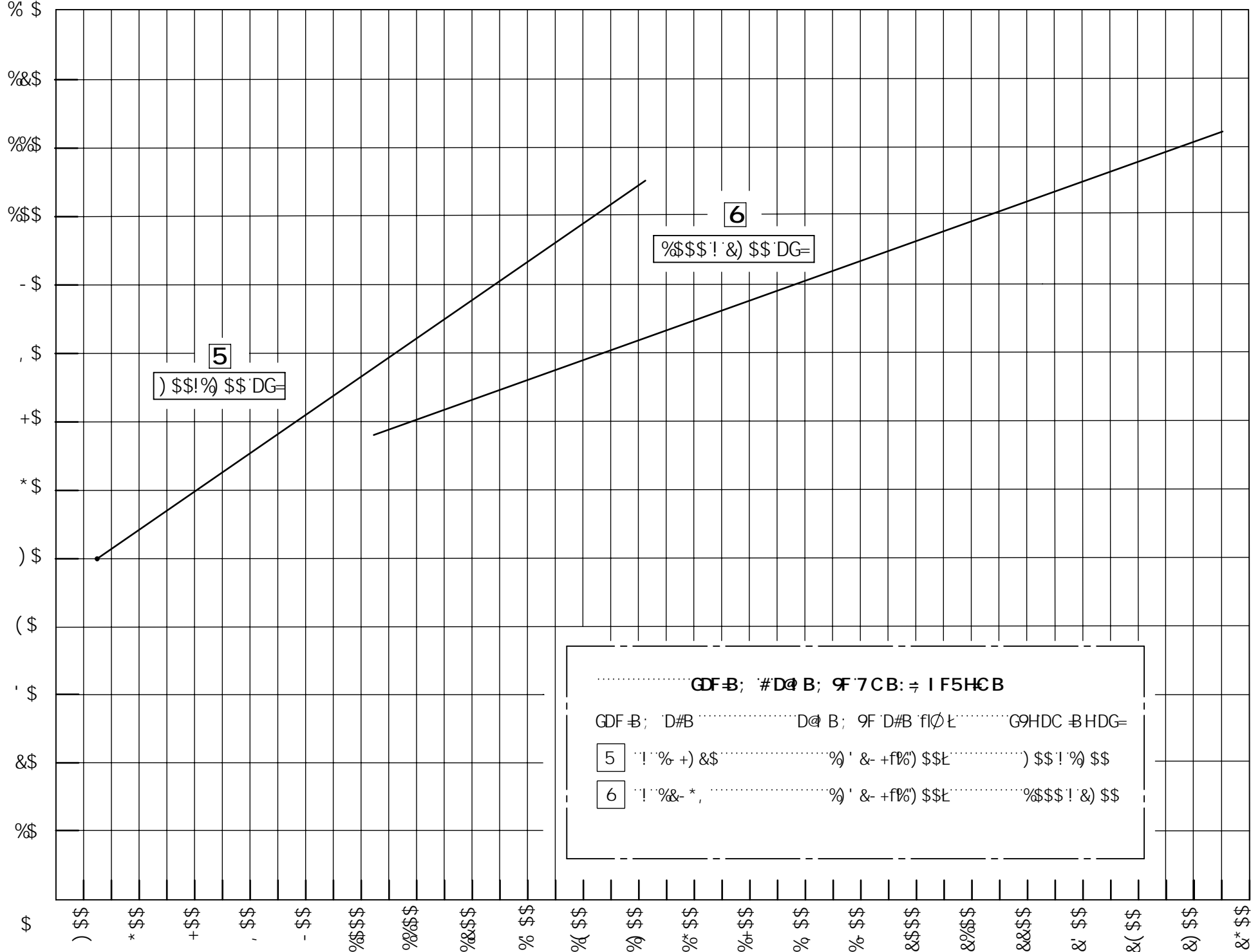
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; 9B '&'DF 9GGI F 9'F 9; I @5 HC F : @ C K 'F 5 H 9G: C F 'G 9HDC BHF 5 B; 9! 'G-B; @9' B @9H! ' \$\$\$ 'DG=G DD@M

HMD75@F9, I @5HCF'89A 5B8'7M @9: @K '7 5D57 #ME 'f[da t
K #K' C I H @9HDF 9GG F9'5DDFCL A 5H9M) \$i 'C: 'G9HDC BHF



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

BC H9G
%": @ K '7 5D57 #H9G'5F9' ±%\$! '5B8'65G98'C B: @ -B'GD97 ÷ 7; F5J #MC: '%\$
&": @ K '7 5D57 #H9G'5F9'5DDFCL A 5H9M8C I 6@98'K <9B'HK C 'B @9H'G'5F9'DFCJ '898"
' "'65G98'C B' B @9H5B8'F9; I @5H98' @B9'GA9'C: '%B7 <'L <'D@9'4 '((\$: 99H@C B; "
('"'57H 5@GMCHA : @ K 'F5H9GA 5MJ 5FM'
)"'7CBG @HK #k; @A C F9'9B; B99F B; ÷ 'C D9F5HB; 'C I H G89'K9' @G98'G9HDC BHF
"''F5B; 9"

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@

7CB8 #HB.

HF95HA 9BH

DFC798I F9'BI A 69F.

8-A 9BG@BG5B8'HC @F5B79G5F9
B' B7 <9GD9F'5GA 9M4(') A1% -('"
I B @GGC H: 9FK @9GD97 ÷ 98.
%HC @F5B79G "L: ±"%
"LL: ±"\$%
"LL: ±"\$%)
5B: @G ±")*
&L G F: 579H9LH F9. ✓
'L7CF58-5@: 95H F9GG<5 @69 ©
K #k-B "\$%\$
(L6F95? G<5FD98; 9G"\$%\$
)L BH9FB5@F58 =G<5 @69 "\$% "A 5L
*L8F @DC BHC DHC B5@K <9B G<CK B
I BGD97 ÷ 98Z5 @8F @DC BH5B; @G
G<5 @69 69HK 99B -S"1%\$*

5DDFCJ 5@

8F5K B 6M

JOP

7 <97?98 '6M

CMJ

9B: B99F

AJP

9FB'BI A 69F

02366

Hk9B: CFA 5HC B7CBH5B98' B Hk-68F5K-B: '6Hk9
GC @DFC D9F HMC: ; @A CF9J 5@97C I B @GGC H: 9FK @9
G5H98" 5BMF9DFC8I 7HC B' B D5FHC F'K <C @K #kC I H
Hk9K F #H9B D9FA @G@B C: ; @A CF9J 5@97C '6DFC <6H98"

6/09/20

85H9

6-9-20


85H9

6/9/20

85H9

6/09/20

85H9

 9B; B99F-B;

; 9B '&'F9, I @5HCF'J 5@9'
DI 6@G<98: @K '7 5D57 #H9G

GAP

8K; 'BC

F9J

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G7 5 @

%'

Gc'XK cf_g

G<99H % C: '

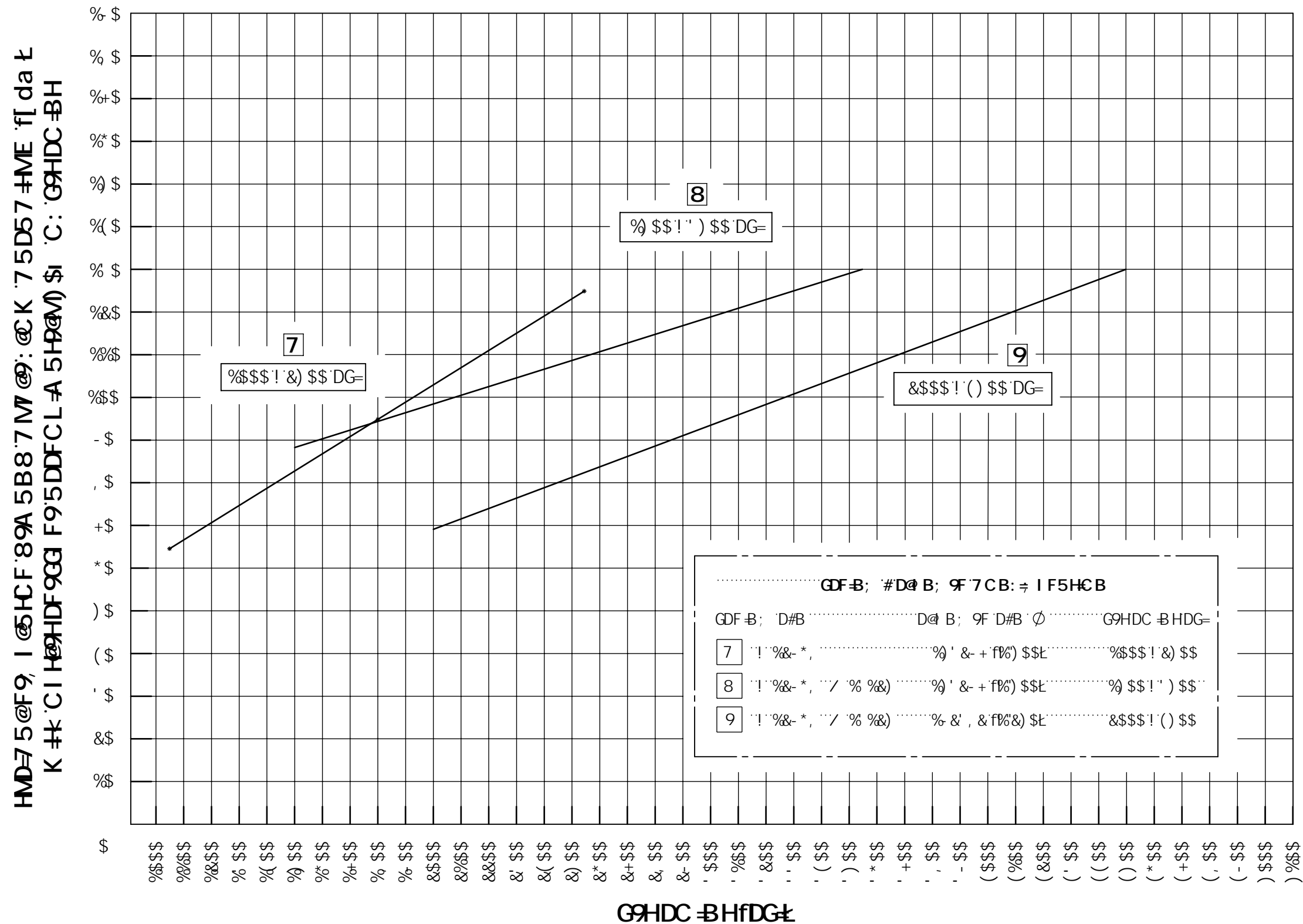
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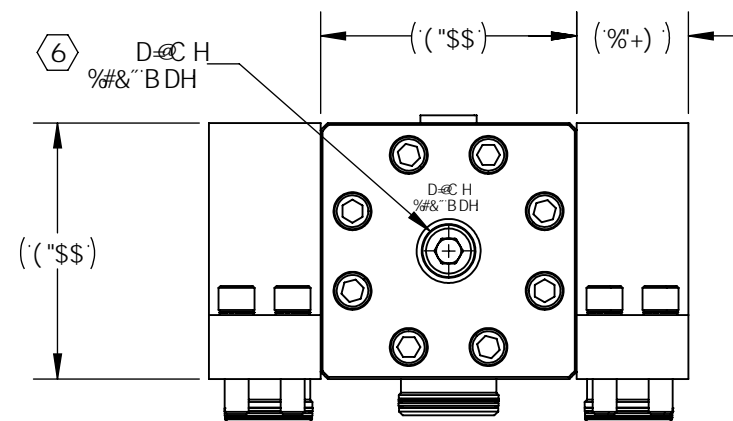
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; 9B `&`DF 9GGI F 9`F 9; I @5HC F : @C K `F5H9G: C F`G9HDC BHF5B; 9!`G=B; @9`B @9H!`) \$\$\$\$`DG=G DD@M

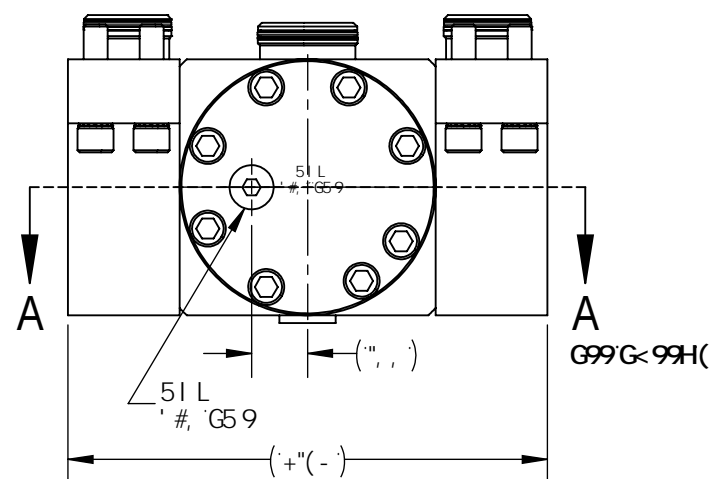
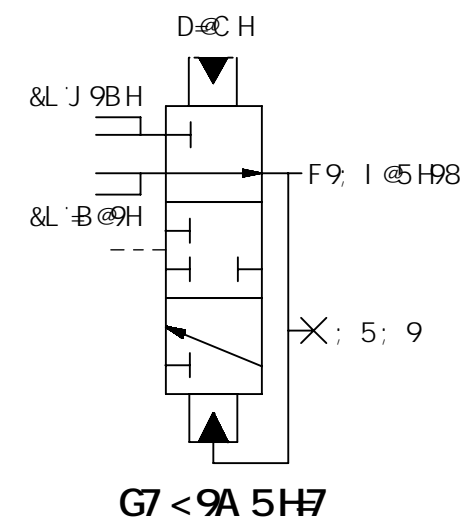
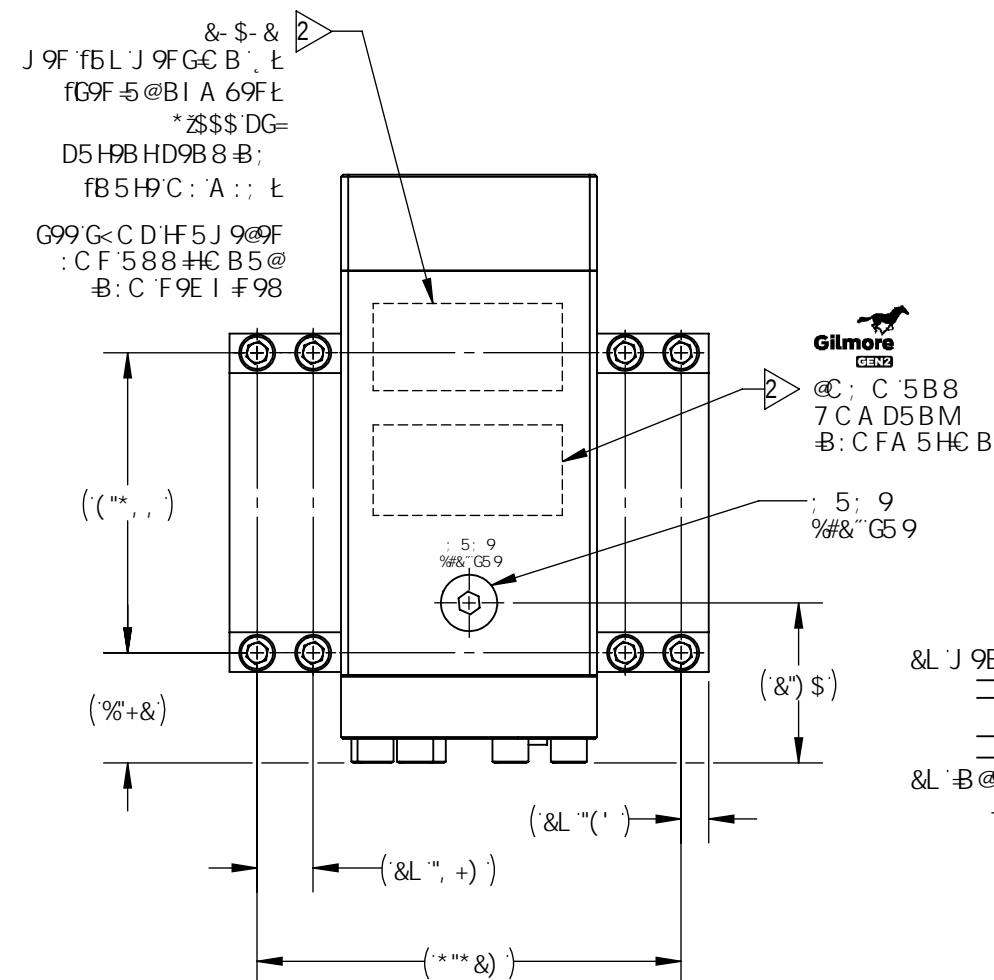
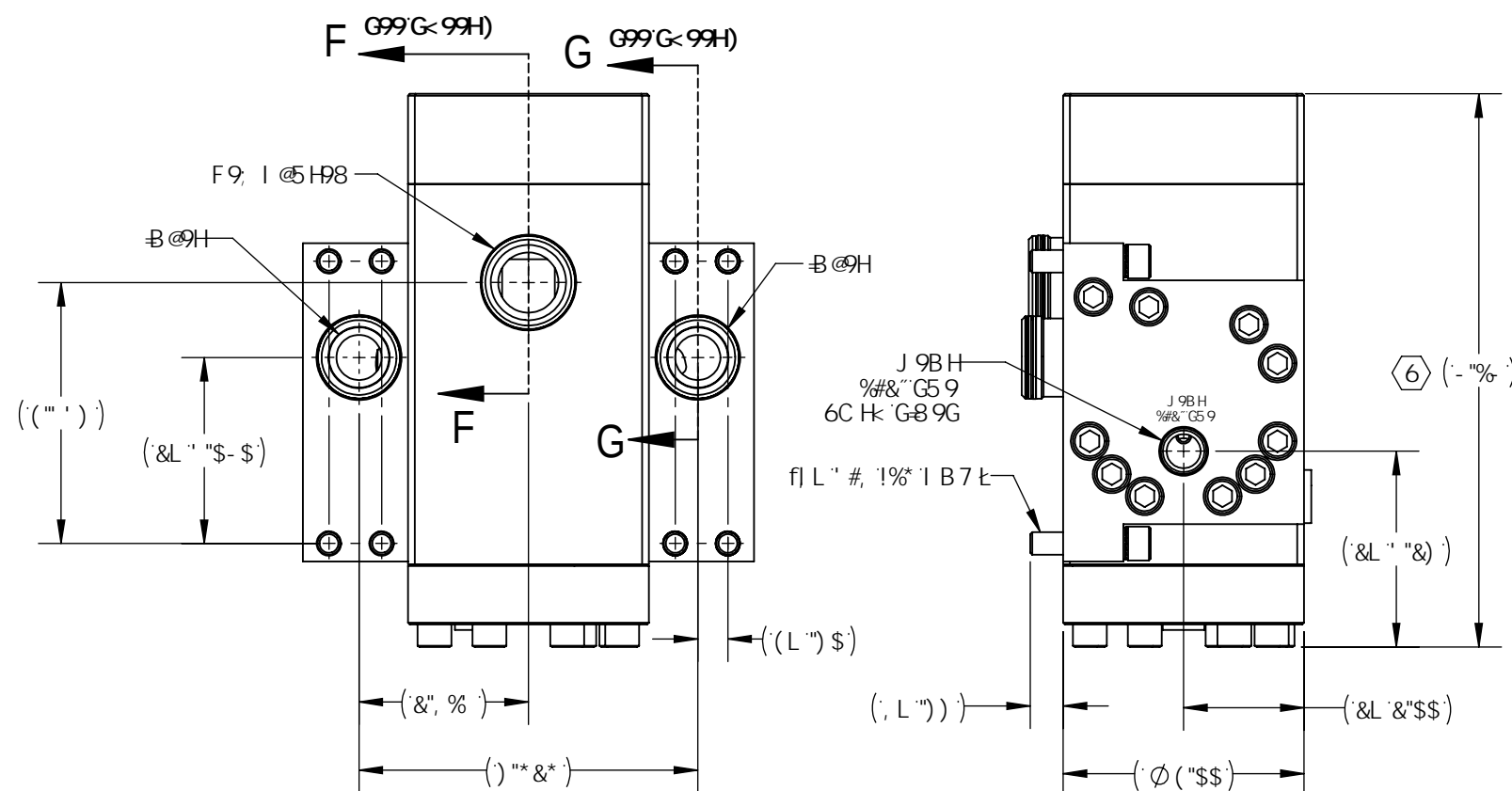


BC H9G
%": @ K '7 5D57 #H9G5F9'±%\$! '5B8'65G98'CB': @ -8'D97 ÷÷÷'; F5J #MC: %"\$
&": @ K '7 5D57 #H9G5F9'5DDFC L A 5H9CM8C I 6@98'K <9B'HK C' B @9HG5F9'DFC J -8 98"
' "'65G98'CB' B @9H5B8'F9; I @5H98'@B9'GA9'C: %B7 <'L<'D'D9'4'('\$: 99H@CB; "
("'57H 5@GMG9A': @ K 'F5H9GA 5MJ 5FM'
) "'7CBGI @HK HK'; @A C F9'9B; -B 99F B; ÷÷÷ C D9F 5HB; 'C I H G89'H K 9'@GH8'G9HDC BHF5B; 9"


 Gilmore <small>a pottery company</small>				9B; B99F B;	
G49 6	8K ; BC			F9J 5	
G7 5@9 %'		Gc`JK cf_g		G< 99H & C: '	



F91 - GCBG				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 018916	JOP 6/12/20	CMG 6-12-20	AJP 6/12/20



D5 H9 BH'D9 B8 =B;

A 5H9F-5@ G99-B 8 3 '6C A '19A G	18 A 9 B G 6 G B 5 B 8 H C 9 F 5 B 7 9 G 5 F 9 -B 'B 7 < 9 G D 9 F 5 G A 9 M(") A 1 % - (" I B 9 G G C H 9 F K 4 9 D 9 97 ÷ 9 8 . % 1 C 9 F 5 B 7 9 G " L . ± % " L L . ± % \$ % " L L L . ± % \$ \$ 5 B ; 9 G ± ") ° & 6 G F : 5 7 9 H L H F 9 . * " ✓ ' 1 7 C F 5 8 5 @ : 9 5 H F 9 G G 5 9 6 9 9 K # k - B " \$ % \$ (1 6 F 9 5 ? G < 5 F D 9 8 ; 9 G " \$ % \$) 1 8 H F B 5 @ F 5 8 = G < 5 9 6 9 " \$ % " A 5 L * 1 8 F 9 9 D C B H G C D H C B 5 @ K < 9 B G < C K B I B D 9 97 ÷ 9 8 2 5 9 8 F 9 9 D C B H 5 B : 9 G G < 5 9 6 9 9 K 9 9 B " \$ " 1 % " \$ "	5 D D F C J 5 @ 8 F 5 K B ' 6 M 8 5 H 9 > N (# & , # & \$ 7 < 9 7 ' 9 8 ' 6 M 8 5 H 9 7 M (# & , # & \$ 9 B ; B 9 9 F 8 5 H 9 5 > D (# \$ # & \$ 9 F B ' B I A 6 9 F 8 5 H 9 \$ & & - - \$ (# \$ % # H K 9 B : C F A 5 H C B 7 C B H 5 B 9 8 - B H 4 8 F 5 K B ; 4 H K 9 G C @ D F C D 9 F H M C . ; 4 C F 9 J 5 @ 9 7 C 1 B @ G G C H 9 F K 4 9 G 5 H 9 8 " 5 B M F 9 D F C B 7 H C B B D 5 F H C F K < C < 9 K # C I H H 9 K F # 9 8 D 9 F A 4 9 G B C . ; 4 C F 9 J 5 @ 9 7 C 4 9 D F C 4 4 9 8 "	<div><div>9 B ; B 9 9 F - B ;</div></div> <div>J 5 @ 9 7 D F 9 G G F 9 F 9 , I 5 H C F 7 ; 9 B & 7 " # & " B D H ' D = C H 7 G 9 5 @ G 6 7 8 C I 6 9 - B @ 9 H) \$ \$ \$ # * \$ \$ \$ D G =</div> <table><tr><td>G A 9</td><td>8 K ; ' B C</td><td>F 9 J</td></tr><tr><td>6</td><td>& - \$ - &</td><td>6</td></tr><tr><td>G 7 5 9 % (</td><td>G < " X K c f a</td><td>G < 9 9 H % C :)</td></tr></table>	G A 9	8 K ; ' B C	F 9 J	6	& - \$ - &	6	G 7 5 9 % (G < " X K c f a	G < 9 9 H % C :)
G A 9	8 K ; ' B C	F 9 J										
6	& - \$ - &	6										
G 7 5 9 % (G < " X K c f a	G < 9 9 H % C :)										

CD9F5HB; '85H5.

% : CF HMD7 5@: @K '7 5D57 +MF9: 9F HC '8F5K B; , (\$\$*: CF '8CI 6@B @H'
&"7 CBG5BHD-@ HDF9GGI F9F9E I f98 HC 'A 5-BH5-B '7 CBG5BHF9; I @H98
DF9GGI F9""8I 9HC @K '895865B8ZI BGH56@D-@ HDF9GGI F9A 5MF9G @H
B 'I BGH56@F9; I @H98 'DF9GGI F9"
' "": CF 'A CF9'89H5 -@8 '89G7 F-@HC BGF9: 9F HC 'G9FJ 7 9'A 5BI 5@) %\$&,"

DF9GGI F9'85H5.

A 5LAIA 'B @HDF9GGI F9F5HB; . *Z\$\$\$ DG=
F9; I @H98 'F5B; 9.) Z\$\$\$! " \$\$\$\$ DG=
HMD7 5@895865B8 '5H) \$\$\$\$ DG=G DD@M ""&\$\$+) \$\$\$\$ DG=
HMD7 5@895865B8 '5H' \$\$\$\$ DG=G DD@M ""%\$\$+) \$\$\$\$ DG=
A 5LAIA 'F9; I @H98 '5B8J 9BH
DF9GGI F9F5HB; .) Z\$\$\$ DG= 6

: @K '85H5.

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

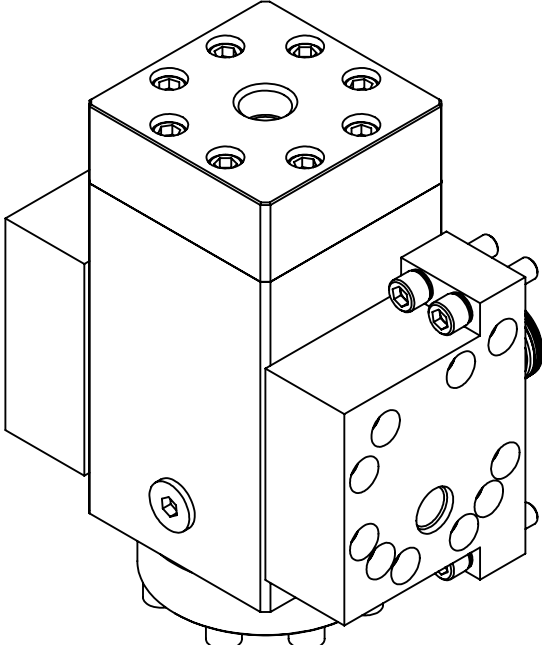
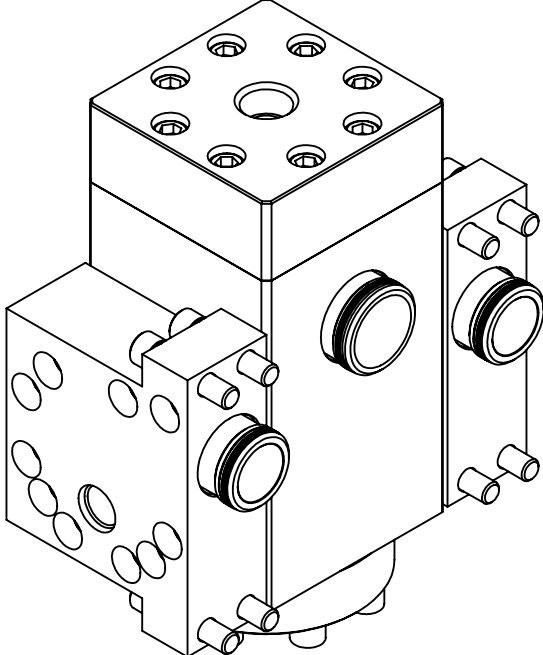
: @ -8G 'K 5H9F '65G98 '8F @@B; '7 CBHFC @: @ -8
A -B 9F5@C @65G98 '8F @@B; '7 CBHFC @: @ -8

DCFHG

-B @H% ""G95 @GI 6
-B @H& ""G95 @GI 6
F9; I @H98. ""%#&""G95 @GI 6
D-@H ""#&""BDH
J 9BH% ""#&""G5 9
J 9BH& ""#&""G5 9
; 5; 9. ""#&""G5 9
5I L. ""#,""G5 9


; 9B9F5@85H5.

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



BCH9G

%> A 5F? '5GG9A 6@MK "C ""'5HJ 5@ 9'5GG9A 6@M
B '577 CF85B7 9K #k 'A 5!K I -!%\$Z6M; @A CF9"
> A 5F? '5GG<CK B 'I GB; ' @G9F '9H7 < 'CF '7 CA DI H9F
7 CBHFC @@8 '8CHD99B 'A 5F? B; 'A 57 <B 9Z "\$* '<÷ <
A -B '7 <5F57 H9FG"
6 ' " L 'B 'Hk 9'6CA 'B8 7 5H9GD5FHG-B 'F9D5 F ? #I&- \$- &F?Z
G95@? #I&- \$- &G? '5B8 'A CI BHB; ? #I&- \$- &A ?"
> 5GG9A 6@MDFC 7 98I F9. "") \$&- -
G5B85F8 : 5HDFC 7 98I F9. "") \$' '\$\$
9LH9B898 : 5HDFC 7 98I F9. "") \$' '\$%
G9FJ 7 9'A 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 'H9A G5F9'D5GGJ 5H98"
6 %\$ " 8CI 6@B @9HA CI BHB; ? #5J 5 -@6@' 'D5FHBI A 69F '&- %&,"



9B; -B99F-B;

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

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6-@C: A 5H9F-5@G							
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

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6-@C: A 5H9F-5@G							
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	

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9B; B99F-B;

G49
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8K ; BC

&- \$- &

F9J
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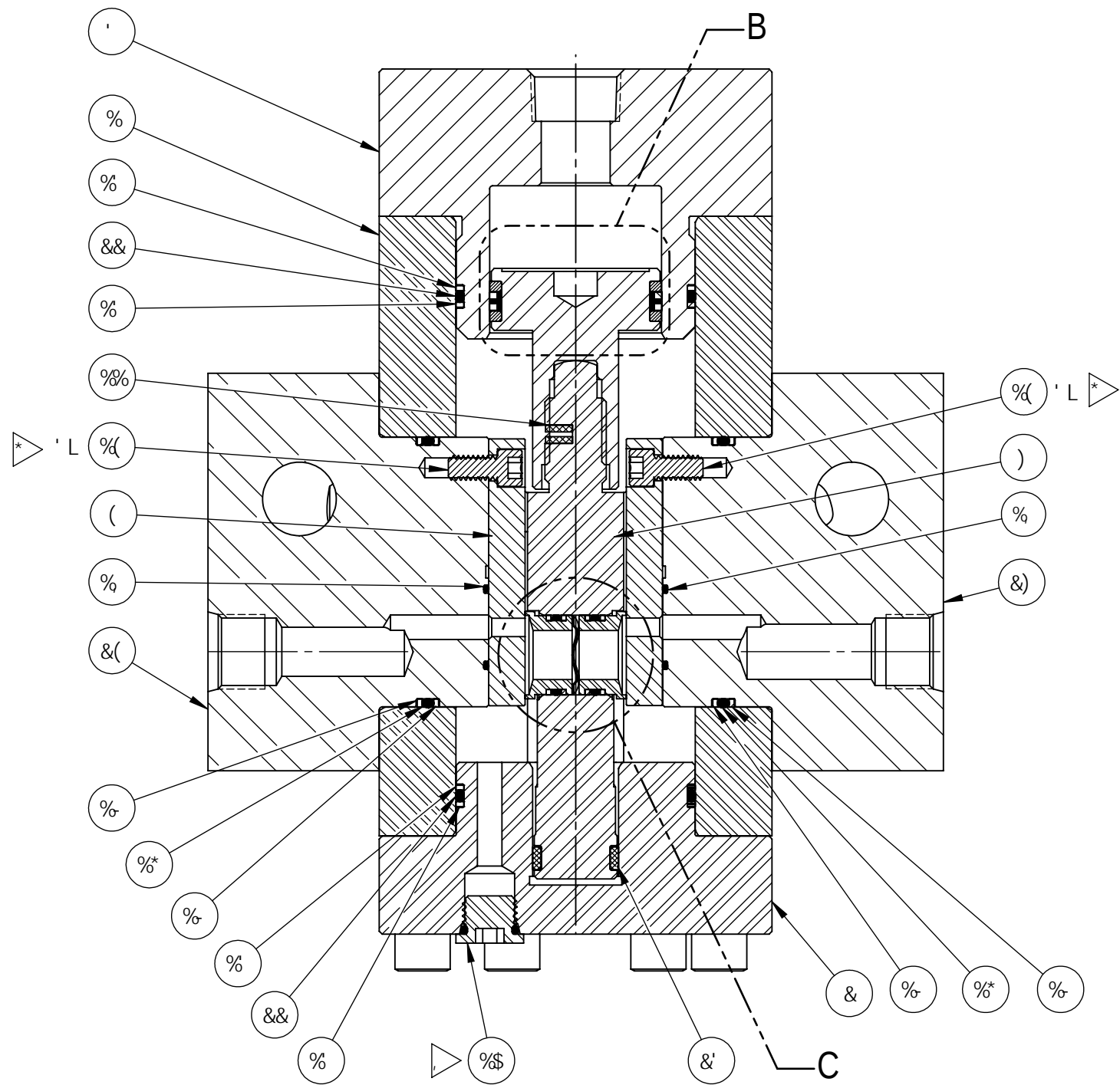
G7 5@ %,

Gc`JK cf_g

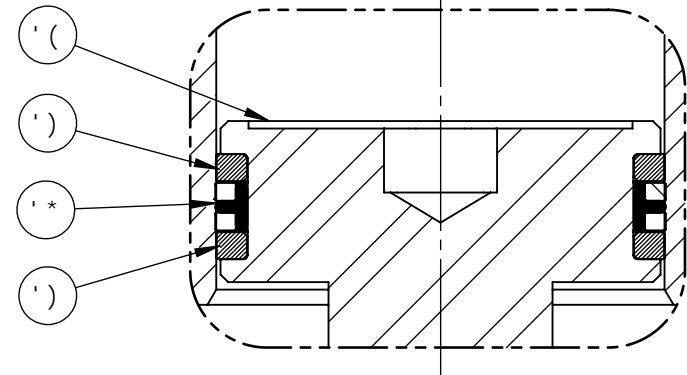
G<99H ' C:)

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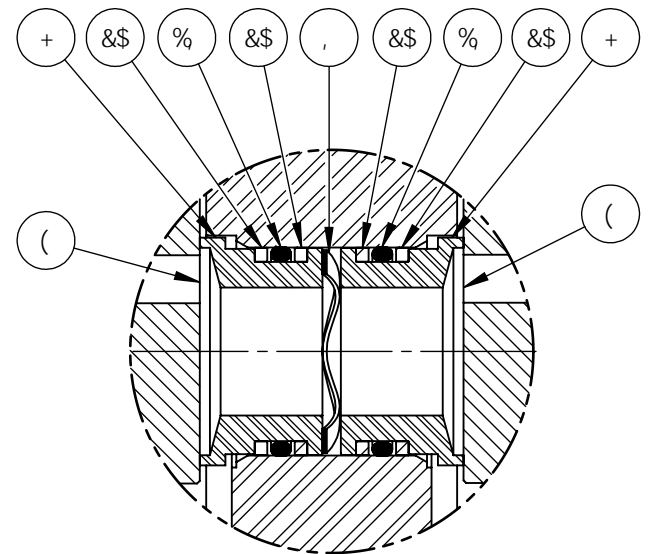
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SECTION A-A
VIEW ROTATED 90°



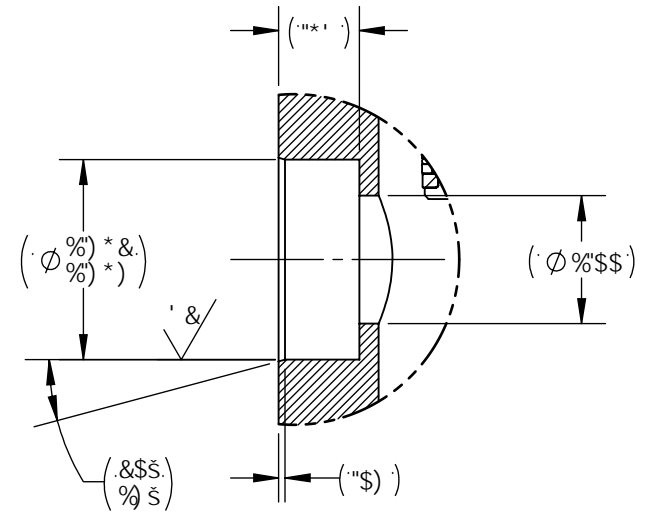
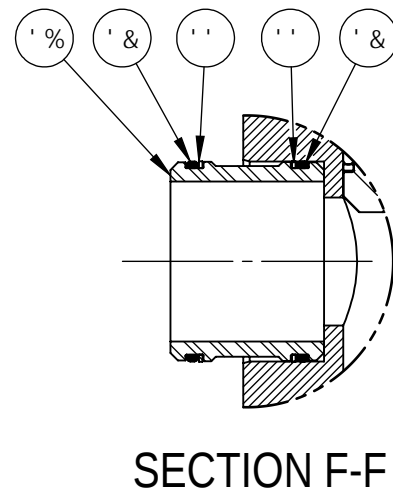
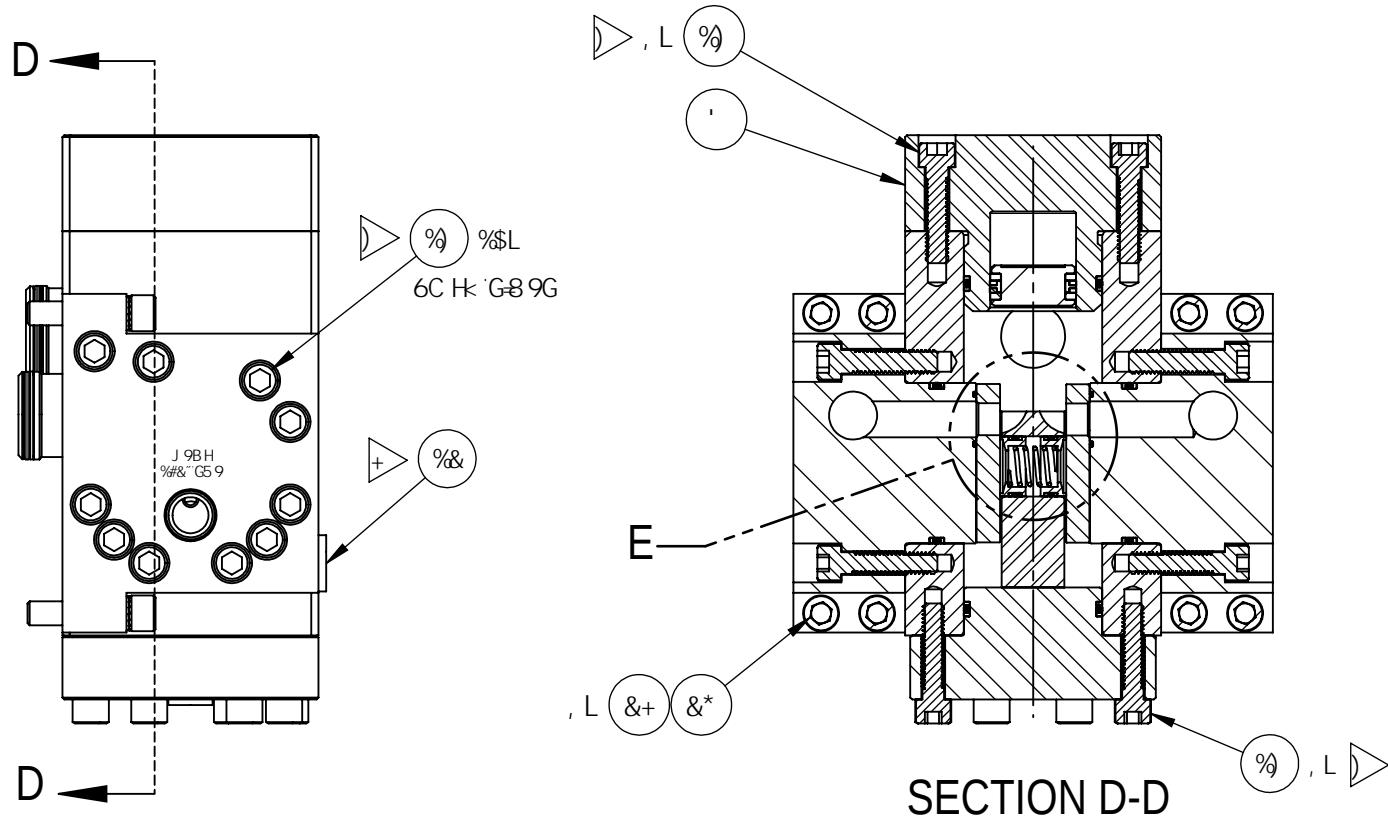
DETAIL B



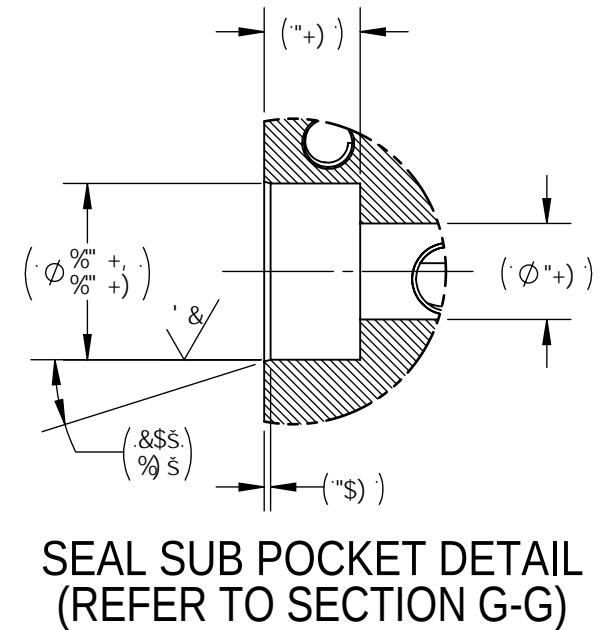
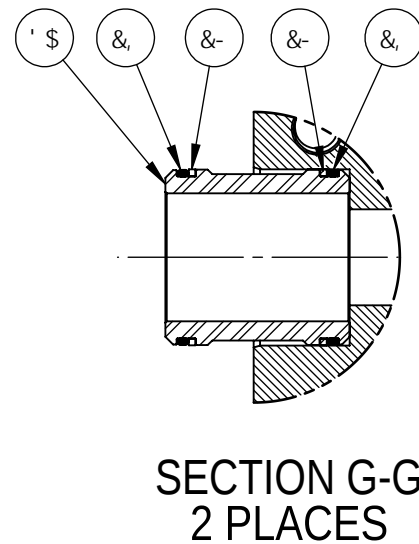
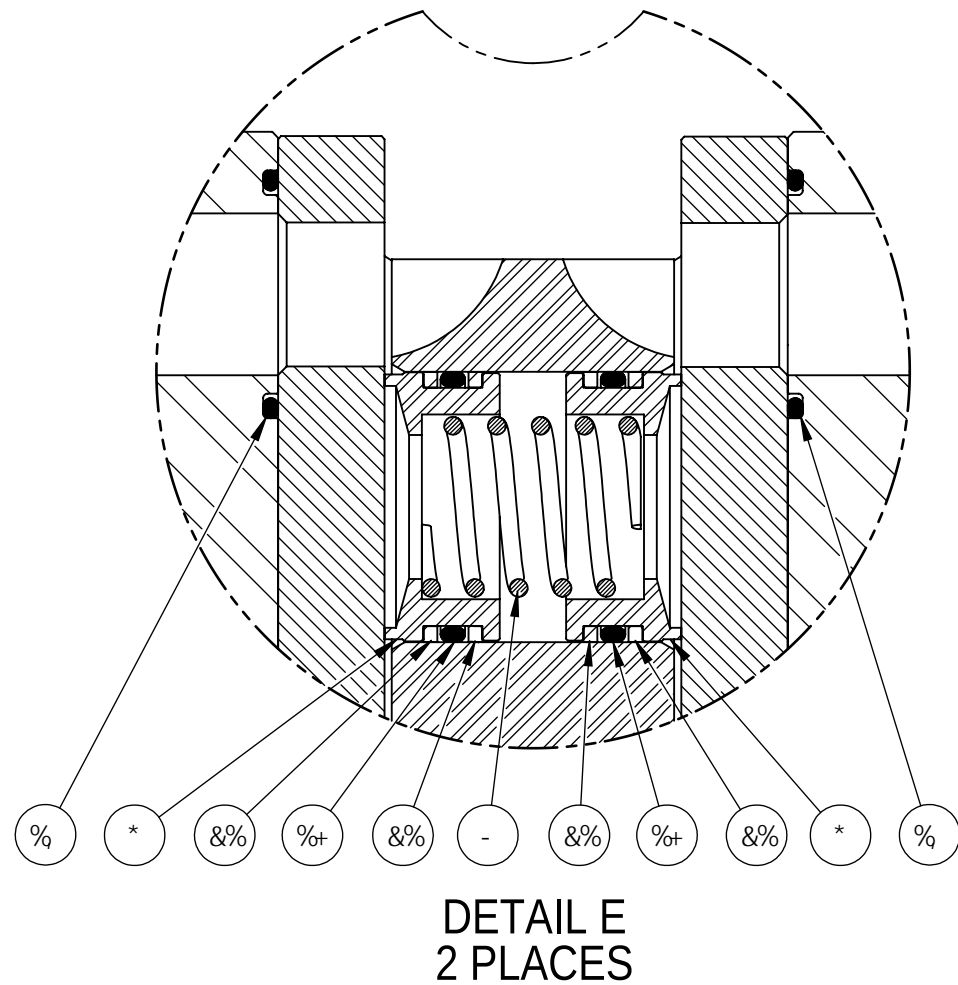
DETAIL C

 Gilmore a pro/eny company			9B; B99F-B;		
GA9	8K ; BC				F9J
6	&- \$- &				6
G7 5@ % (		Gc`JK cf_g		G<99H (C:)	

6



5



 Gilmore <small>a proserv company</small>			9B; B99B;	
GAP	8K; BC	& \$- &		F9J
6				6
G7 5 @	%'	Gc JK cf_g	G< 99H) C:)	

CD9F5HB; '85H5.

% : CFHMD75@: @K '75D57 +MF9: 9F'HC '8F5K -B; , (\$\$*: CF'GB; @-B@H'
&".....7CBG5BHD-@ HDF9GGI F9F9E I f98'HC 'A 5-BH5-B '7CBG5BHF9: I @5H98
.....DF9GGI F9'"8I 9'HC '@K '895865B8Zi BG56@D-@ HDF9GGI F9'A 5MF9GI @H
.....B'I BG56@F9; I @5H98 'DF9GGI F9"
' ".....: CF'A CF989H5 @98 '89G7 F-DHC BGF9: 9F'HC 'G9FJ 7 9'A 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

: @K '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 : @K 'F5H9. "% \$; DA 6

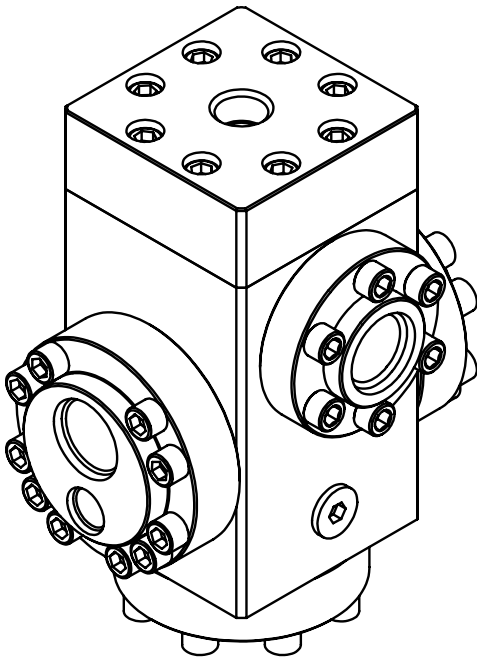
: @ -B G'K 5H9F '65G98 '8F-@B: '7CBHFC @: @ -B
.....'A -B 9F5@C @65G98 '8F-@B; '7CBHFC @: @ -B

DCFHG

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

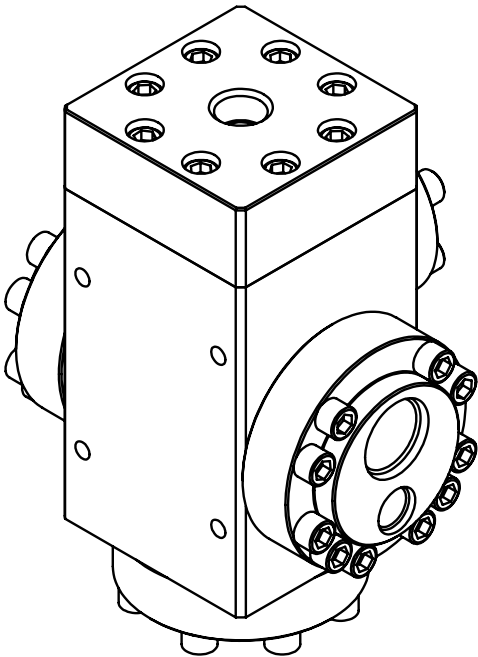
; 9B9F5@85H5.

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



BCFHG

%> A 5F? "5GG9A 6@MK "C ""5HJ 5@ 9'5GG9A 6@M
-B '577CF85B79K +-A 5IK !-!%\$Z6M; -@A CF9"
& A 5F? '5GG<CK B'I GB; ' @5G9F '9H7 <'CF '7CA DI H9F
7CBHFC @98 '8C HD99B 'A 5F?-B; 'A 57 <-B 9Z"\$* '<÷ <
A -B '7<5F57H9FG'
' " L '-B 'H<9'6CA '-B 87 5H9G'D5FHG-B 'F9D5F ? #H&- %%- 'F? '5B8 '
G95@? #H&- %%- 'G?"
(5GG9A 6@MDFC 798I F9.) \$&- -
GH5B85F8': 5HDFC 798I F9.) '\$' \$\$
9LH9B898': 5HDFC 798I F9.) '\$' \$%
G9FJ 7 9A 5BI 5@) %\$&,
> HC FE I 9'HC '&\$': H@
> HC FE I 9'HC ') : H@
> HC FE I 9'HC '(\$': H@
> HC FE I 9'HC '&\$': H@
> 5@@A 5BI : 57H F98 'H9A G5F9'D5GGJ 5H98"



Gilmore
a proserv company

9B; -B99F-B;

G49	8K ; 'BC	F9J
6	&- %%	6
G7 5@	%(	Gc`JK cf_g
	G<99H & C:)	

6

6

6@@C: 'A 5HF-5@G						
#9A 'BC	D5FHBI A 69F	8 9G7 F-ÐHC B	A 5HF-5@	E HM	F?	G?
%	%' & , +	6C 8M	'5) *(' 'HD'' '\$ f%!('D<Ł	%	.	.
&	%' &- \$	: @5B; 9'6C HC A	'5 &+* 'HD' %*	%	.	.
'	&\$+, \$+	; I -8 9žD@ B; 9Fž%#("	5 &+* 'HD' %*	%	.	.
(	%' &- &	-BG9FHž: @C K 'DC FHžG DD@M 'J 9BH	H B; GH9B '7 5F6-8 9', !%\$İ ' B-ž ? 9@	%	L	
)	%' &- (	7 5FF-9FžG95@	5 &+* 'HD'G&% \$\$ fB +FC B-ž '* \$Ł	%	.	.
*	%() - +	F-B; žG95 @G DD@M	H B; GH9B '7 5F6-8 9', !%\$İ ' B-ž ? 9@	(	L	.
+	%() --	F-B; žG95 @J 9BH	H B; GH9B '7 5F6-8 9', !%\$İ ' B-ž ? 9@	&	L	.
,	% +\$%\$\$\$&	K 5J 9'GDF-B;	5A G) *- - 'fL!+) \$Ł	%	L	
-	%() -,	GDF-B; ž7 C A DF9GG-€ B	5A G) *- - 'fL!+) \$Ł	&	L	.
%\$	% *\$' !\$\$*	D@ ; ž< 9Lž' #, "G5 9	5 &(' \$ 'HD' %*	%	L	
%%	%() +- +	D9@@9HžBM@ ?	BM@CB '	%	L	'L
%&	% *\$' !\$\$,	<C @@C K ' < 9L 'D@ ; ž%#&"G5 9	5 &(' \$ 'HD' %*	%	L	
%	%(*) -	F-B; ž65 7 ?I D	D99?	(	L	L
%{	%() +--	G< 7 GžH-F958!@C 7 ?-B; ž%#(!&\$' I B 7 'L '%#&"@C B;	5) -' 'H %* 'f' 'BM@CBŁ	*	L	L
%	% &&(!\$\$'	G< 7 G' #, !%* 'I B 7 'L '%#&'@	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@G						
#9A 'BC	D5FHBI A 69F	8 9G7 F-ÐHC B	A 5H9F-5@	E HM	F?	G?
&\$	%(' ')	F-B; ž65 7 ?I D	D99?	(	L	L
&%	%(' *	F-B; ž65 7 ?I D	D99?	(	L	L
&&	%(' +	F-B; ž65 7 ?I D	D99?	,	L	L
&'	%' &- '	-BG9FHž: @C K 'DC FHž6@5B?	H B; GH9B '7 5F6-8 9', !%\$İ ' B-ž ? 9@	%	L	
&(	%*%+*	K 95F '65B8žG95@7 5FF-9F	8 9@F-B '5:	%	L	L
&)	%+) *	: @5B; 9ž%"G5 9'-B @9Hž%#&"G5 9J 9BH	5 &+* 'HD' %*	%		
&*	%' &, ,	: @5B; 9ž6@5B?	5 &+* 'HD' %*	%		
&+	&\$+, \$,	<MBF5I @7 'D@ B; 9Fž%#("	5 &+* 'HD'G&% \$\$ fB +FC B-ž '* \$Ł	%	.	.
&,	&\$+, \$-	K 95F '65B8žD@ B; 9F	8 9@F-B '5:	&	L	L
&-	% %\$, !\$&&	HG95 @D@HC B	7 5F6CLM5H98 'B +F @9# BM5HFC B	%	L	L
' \$	%+) *-	: @5B; 9'CI @9H	5 &+* 'HD' %*	%	.	.
' %	% &&\$!\$\$%G	G< 7 Gž' #, !%* 'I B 7 !&5 'L '%#&'@	% !, 'Gž:) -' '5@@C M	*		
' &	% %\$!\$&' ?%	C !F-B;	<B 6F	%	L	L

%

6

5

5



9B; -B99F-B;

G49

8K ; 'BC

F9J

6

&- %%

6

G7 5@

%(

Gc`JK cf_g

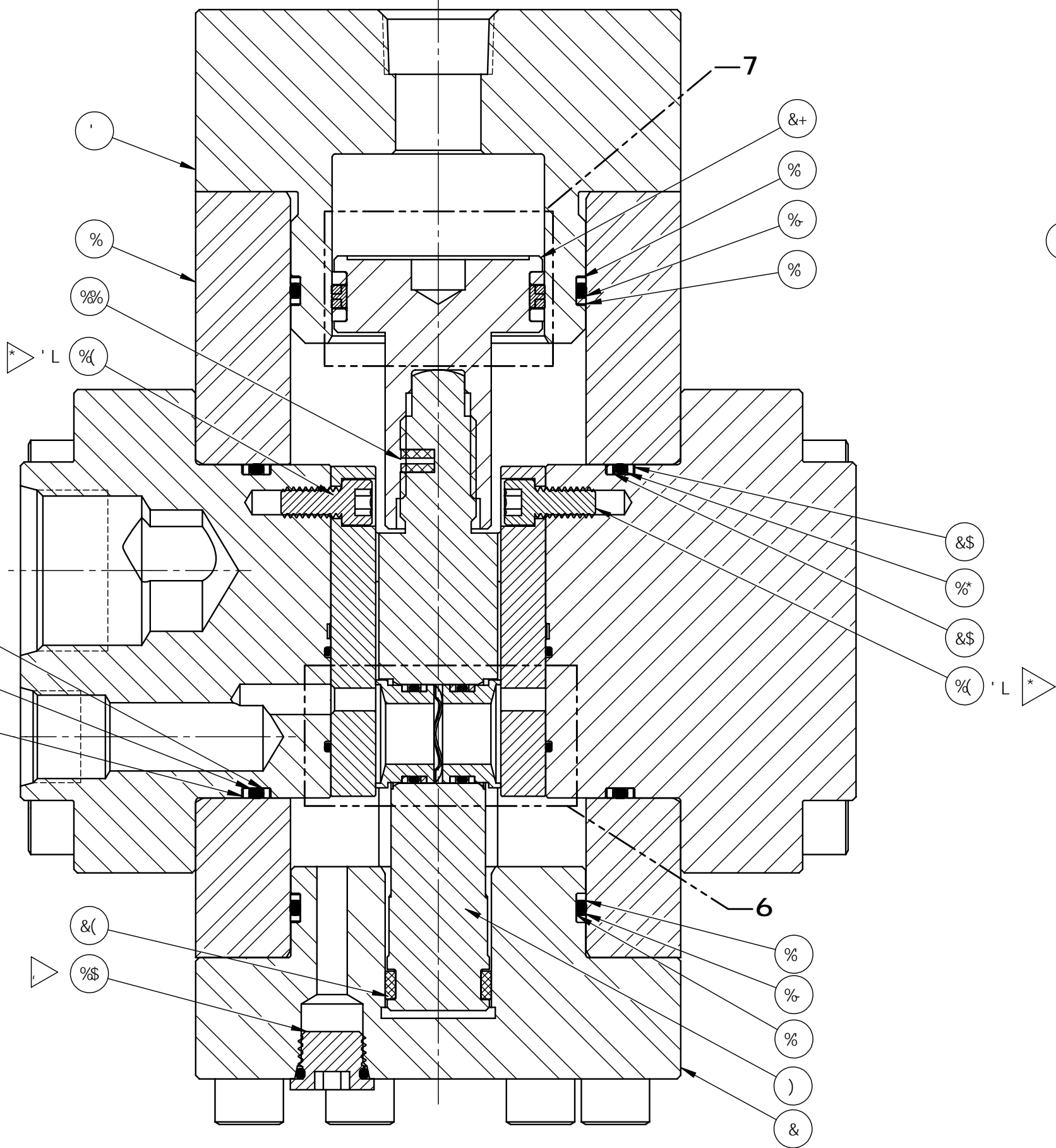
G< 99H ' C:)

5

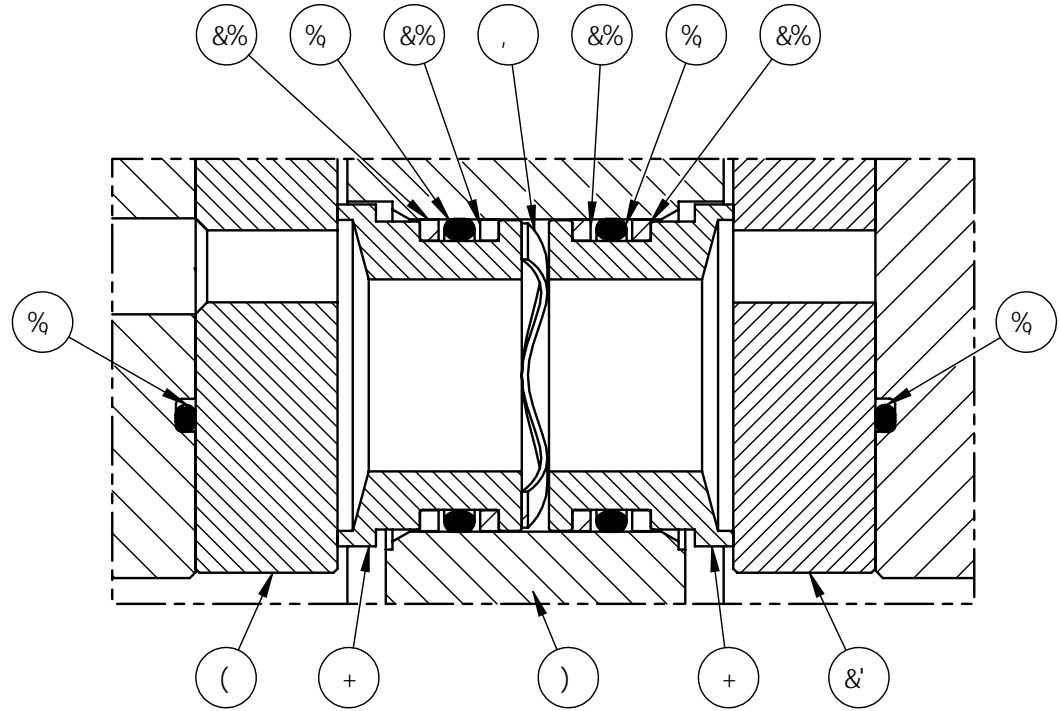
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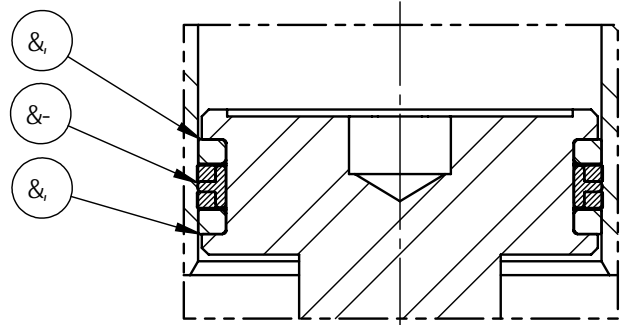
5




G97 HCB 5! 5

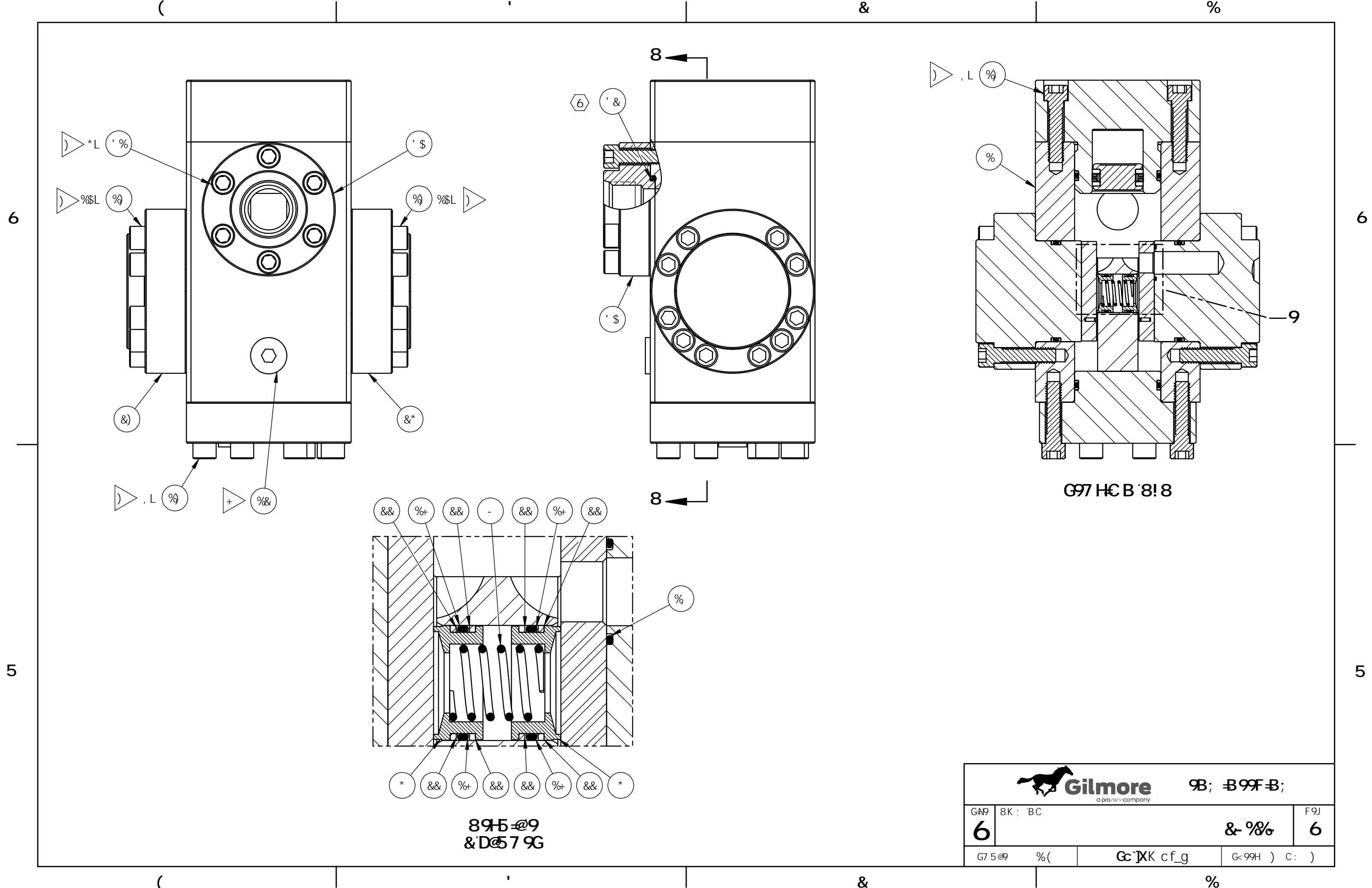


895-@6



895-@7

 Gilmore <small>a proserv company</small>		9B; B99B;	
GAP	8K; BC	F9J	
6	&- %%		6
G7 5@	%(Gc`JK cf_g	G<99H (C:)



9B; 399F 3;

G49

8K; BC

F9J

6

&- %%

6

G7 5@

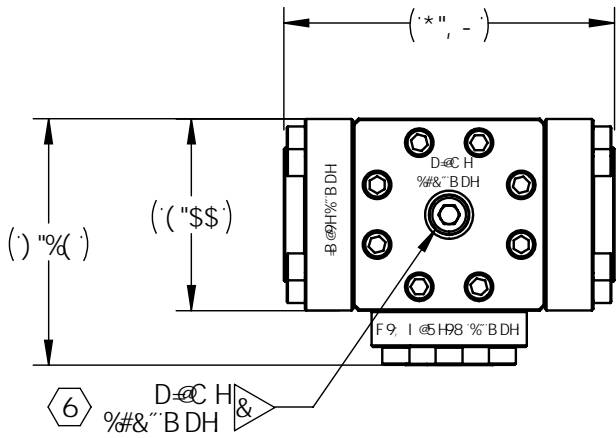
%(

Gc`JK cf_g

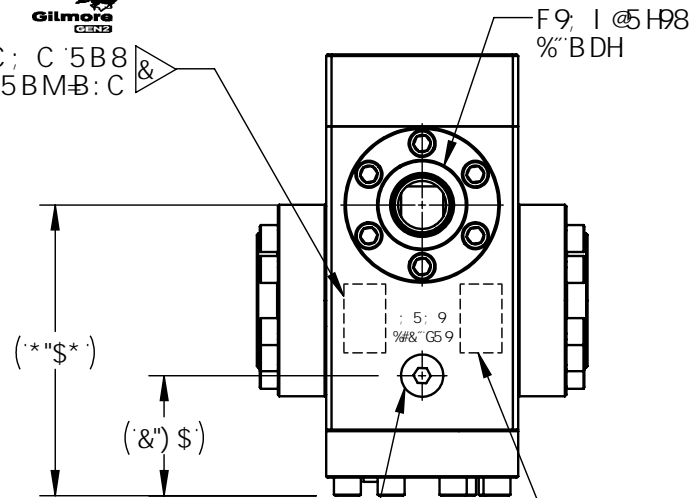
G<99H) C:)

895-@9
&D57 9G

6

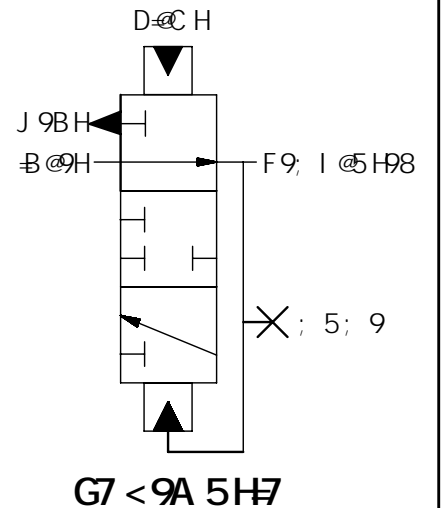
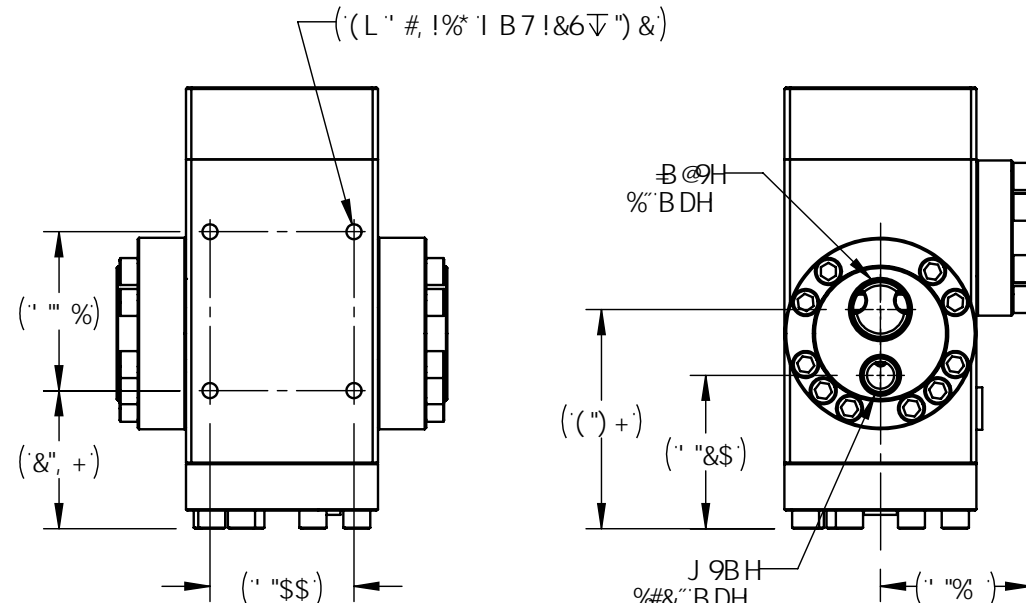
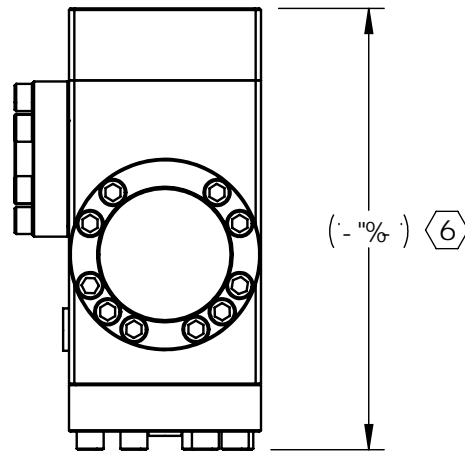
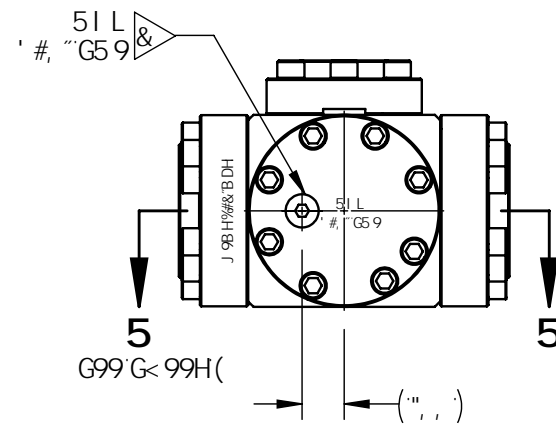


Gilmore
@; C'5B8
7 C A D5BM-B: C



J 9F 'f5L 'J 9FG€ B' . t
fG9F -5 @BI A 69F t
*Z\$\$\$ DG=
D5H9BHD9B8-B;
fB5H9'C: 'A:; t

G99'G<C D'f5J 9@9F
: C F'588 #HC B5@
B: C 'F9E I f98



5

A 5H9F-5@ G99' B8 3 '6C A ' #PA G		8A 9B G€ BG5B8 HC @F5B7 9G5F9 B B7 <9GD9F 5GA 9M(") A 1% - (") I B @GGC H: 9FK €9 GD97 ≠ 98. %HC @F5B7 9G "L: ±"% "LL: ±"\$% 5B: @G ±") ° & G F: 57 9H9LH F9. ✓	5DDFC J 5@ 8F5K B 6M 85H9 >N (#&, #&\$	Gilmore 9B; B 99F-B; a praver company
7CB8 #HC B.			7 <97?98 '6M 7 M (#&, #&\$	J 5@ 9ZDF9GG F9F9, I @HCFZ ; 9B &Z'%&""BDH D=CHZ'%BDH GB; @B@H) \$\$\$ #* \$\$\$ DG=
HF95HA 9BH			9B; B 99F 85H9 5 >D (# \$ #&\$	G99'G<99H(
DFC 798I F9BI A 69F.			9FB BI A 69F 85H9 \$&' - + ' # % #&\$	G7 <9A 5H7
			H:9B: CFA 5HC B 7CBH-B 98-B H:68F5K B: 6H:9 GC @DFC D9FHC:; A CF9J 5@ 97C I B @GGC H:9FK @9 G5H98" 5BMF9DFC 8I 7HC B-B D5FHC F K <C @K #C I H H:9K F #H9B D9FA GGC B C:; A CF9J 5@ 97C GDFC <6H98"	G7 5@ 6 8K; BC 6 &- %&\$ 6
				G7 5@ 6 8K; BC 6 &- %&\$ 6

D5H9BHD9B8-B;

&

%

CD9F5HB; '85H5.

% : C F HMD7 5@: @K '7 5D57 #MF9: 9F 'HC '8F5K B; , (\$\$*: C F 'GB; @'B@H'
&".....7 C BG5BHD-@ HDF9GG F9F9E I #98 'HC 'A 5 B H5 B '7 C BG5BHF9, I @H98
DF9GG F9""8I 9HC @K '895865B8Zl BG56@D-@ HDF9GG F9A 5MF9G @H
.....B 'I BG56@F9; I @H98 'DF9GG F9"
' ".....: C F 'A C F989H5 @98 '89G7 F DHC BGF9: 9F 'HC 'G9FJ 7 9A 5BI 5@) %\$& , "

DF9GG F985H5.

A 5L A I A 'B@HDF9GG F9F5HB;*Z\$\$\$ DG=
F9: I @H98 'F5B; 9:) Z\$\$\$!' '\$\$ DG=
HMD7 5@895865B8 '5H) \$\$\$ DG=G DD@M'&\$\$+) \$' DG=
HMD7 5@895865B8 '5H' \$\$\$ DG=G DD@M'%\$\$+) \$' DG=
A 5L A I A 'F9: I @H98 '5B8 'J 9BH
DF9GG F9F5HB;) Z\$\$\$ DG= 6

: @K '85H5.

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

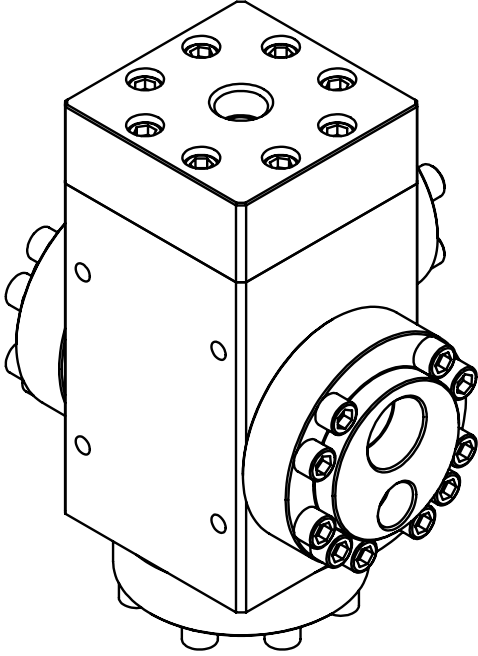
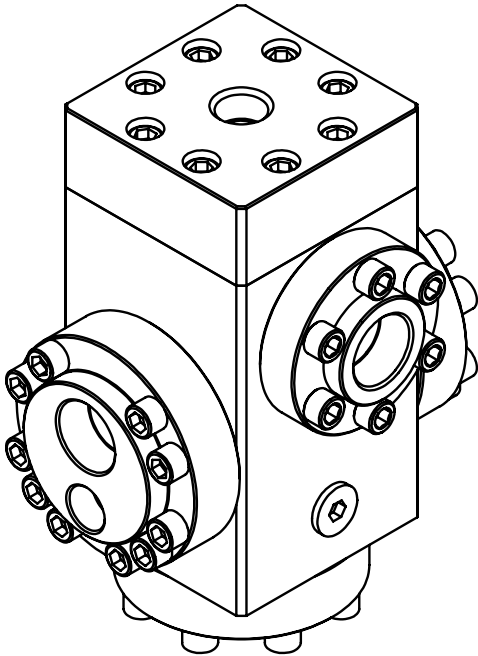
: @ 8G 'K 5H9F '65G98 '8F @@B; '7 C B HFC @: @ 8
.....A B 9F5@C @65G98 '8F @@B; '7 C B HFC @: @ 8

DC FHG

6 B@H%'BDH
F9: I @H98,%'BDH '
D-@ H%'#&"BDH
J 9BH,%'#&"BDH
, 5; 9,%'#&"G5 9
5I L,'#, "'G5 9


; 9B9F5@85H5.

H9A D'F5B; 9,&°: 'HC '9 \$°:
5DDFCL'K 9÷ <H""() "'@6G



BC H9G

%> A 5F? '5GG9A 6@MK "C ""'5HJ 5@ 9'5GG9A 6@M
B '577CF85B79K #K 'A 5!K !-!%\$Z6M; @A C F9"
& A 5F? '5GG<CK B 'I G-B; '5G9F '9H7 <'CF '7 C A DI H9F
7 C B HFC @98 '8C HD99B 'A 5F?B; 'A 57 <B 9Z"\$* '<÷ <
A B '7 <5F57 H9FG'
' " L 'B 'H<9'6CA 'B8 7 5H9G'D5FHG-B 'F9D5F '?H&- %&\$F?'5B8 '
G95@?'H&- %&\$'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 9'HC '&\$': H@
> HC FE I 9'HC ') : H@
> HC FE I 9'HC '(\$: H@
> HC FE I 9'HC '&\$': H@
> 5@A 5BI : 57 H F98 '#9A G5F9D5GGJ 5H98"



9B; B99F-B;

G49	8K ; 'BC	F9J
6	&- %&\$	6
G7 5@	%(Gc 'XK cf_g
		G<99H & C:)

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6@@C: 'A 5H9F-5@G						
#9A '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; 9Fž%#(' "	5 &+* 'HD' '%*	%	'	'
(	%' &- &	B G9FHž: @C K 'DC FHžG DD@M' 'J 9BH	H B; GH9B '7 5F6-8 9', !%\$! ' B-7? 9@	%	L	
%>	)	%' &- (	7 5FF-9FžG95 @	5 &+* 'HD'G&% \$\$ fB #FC B-7 '* \$L	%	'
	*	%() - +	F-B; žG95 @G DD@M	H B; GH9B '7 5F6-8 9', !%\$! ' B-7? 9@	(	L
	+	%() --	F-B; žG95 @J 9BH	H B; GH9B '7 5F6-8 9', !%\$! ' B-7? 9@	&	L
	,	% +\$%\$\$\$&	K 5J 9'GDF-B;	5A G) *- - 'fL!+) \$L	%	L
	-	%() -,	GDF-B; ž7 C A DF9GG-C B	5A G) *- - 'fL!+) \$L	&	L
	%%\$	% *\$'!\$\$*	D@ ; ž< 9Lž" #, "'G5 9	5 &(' \$'HD' '%*	%	L
	%%	%() +- +	D9@@9HžBM@C ?	BM@C B '	%	L
	%&	% *\$'!\$\$,	<C @@C K ' < 9L'D@ ; ž%#&"'G5 9	5 &(' \$'HD' '%*	%	L
	%	%() (*) -	F-B; ž65 7?I D	D99?	(	L
	%(%() +--	G< 7 GžH-F958!@C 7 ?-B; ž%#(!&\$' I B 7 'L '%#&"'@C B;	5) -' 'H %*' f' BM@C B L	*	L
	%	% &&(!\$\$'	G< 7 G' #, !%*' I B 7 'L '%#&"'@	5 &, *'; F**\$	' *	'
	%*	% %\$!\$) %ž%	C !F-B;	<B 6F	&	L
	%+	% %\$!\$&*?%	C !F-B;	<B 6F	(L
	%	% %\$!\$-\$-?%	C !F-B;	<B 6F	*	L
	%	% %\$!\$, &?%	C !F-B;	<B 6F	&	L

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6@@C: 'A 5H9F-5@G						
#9A 'BC	D5FHBI A 69F	8 9G7 F-DHC B	A 5H9F-5@	E HM	F?	G?
&\$	%(' ')	F-B; ž65 7?I D	D99?	(L	L
&%	%(' '*	F-B; ž65 7?I D	D99?	(L	L
&&	%(' ' +	F-B; ž65 7?I D	D99?	,	L	L
&'	%' &- '	B G9FHž: @C K 'DC FHž6@B?	H B; GH9B '7 5F6-8 9', !%\$! ' B-7? 9@	%	L	
&(	%*%+*	K 95F '65B8žG95 @7 5FF-9F	8 9@F-B '5:	%	L	L
&)	%' &, -	: @B; 9ž%"'BDH-B @9Hž%#&"'BDHJ 9BH	5 &+* 'HD' '%*	%		
&*	%' &, ,	: @B; 9ž6@B?	5 &+* 'HD' '%*	%		
%>	&+	&\$+, \$,	<MBF5I @7 'D@ B; 9Fž%#(' "	5 &+* 'HD'G&% \$\$ fB #FC B-7 '* \$L	%	'
	&,	&\$+, \$-	K 95F '65B8žD@ B; 9F	8 9@F-B '5:	&	L
	&-	% %\$, !\$&&	HG95 @D@HC B	7 5F6CLM5H98 'B #F @9# BM@F C B	%	L
	' \$	%' &- %	: @B; 9'CI @9H	5 &+* 'HD' '%*	%	'
	' %	% &&\$!\$%\$G	G< 7 Gž' #, !%*' I B 7 !&5 'L '%#&"'@	% !, 'GGž:) -' '5@@C M	*	
	' &	% %\$!%\$' ?%	C !F-B;	<B 6F	%	L

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9B; B99F-B;

G99

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Gilmore
a proserv company

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GAP

8K ; BC

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G7 5 @

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Gc`JK cf_g

G<99H (C:)

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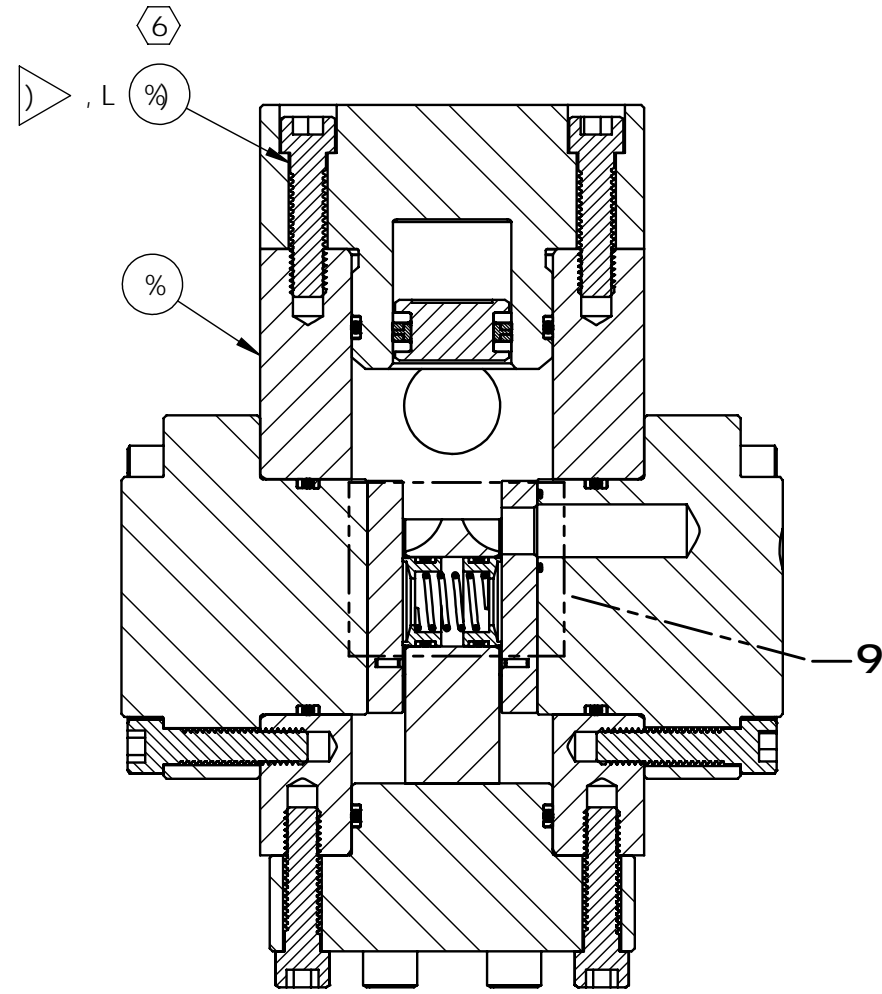
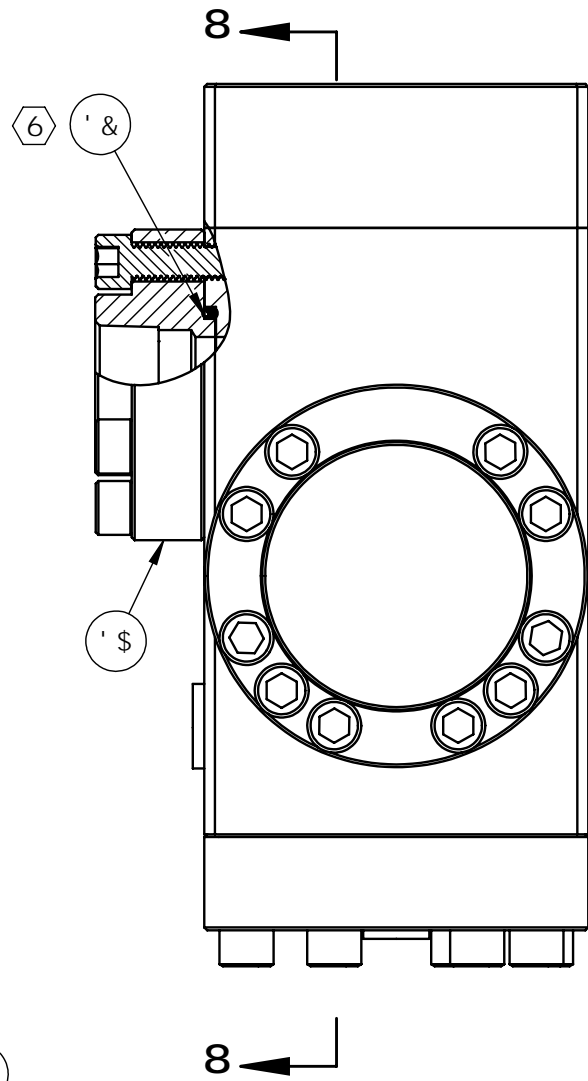
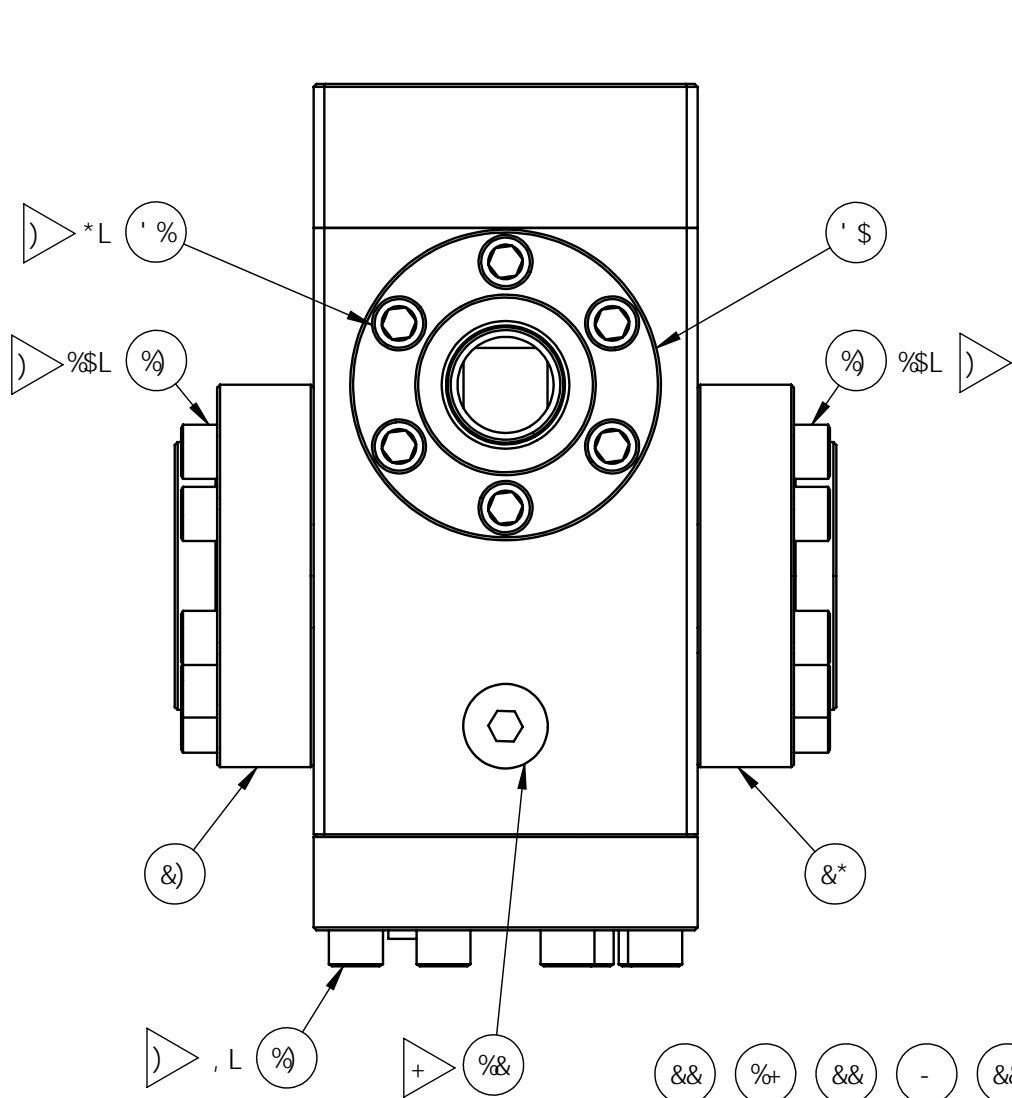
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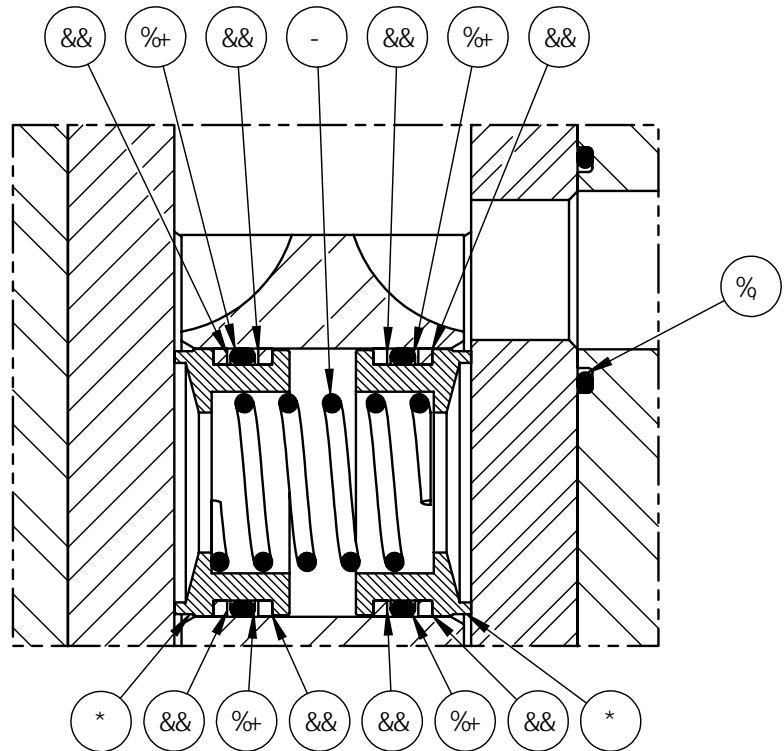
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G97 HCB '8!8

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895 @9
&D57 9G

 Gilmore <small>a pro/erv company</small>			9B; B99F B;		
G49	8K ; 'BC			F9J	
6			&- %&\$	6	
G7 5 @	%(Gc`JK cf_g		G<99H) C:)	

6

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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

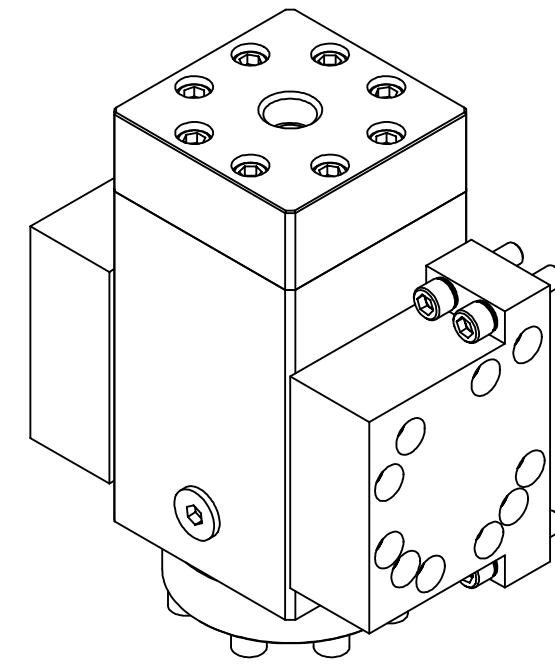
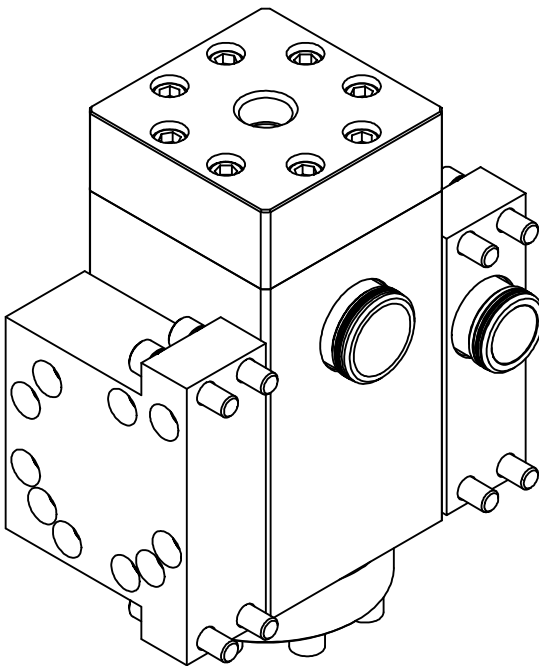
FLUIDS: WATER BASED DRILLING CONTROL FLUID
MINERAL OIL BASED DRILLING CONTROL FLUID

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.



ENGINEERING

SIZE	DWG NO	REV
B	29121	C
SCALE	1:3	SHEET 2 OF 5
SolidWorks		

4				3				2				1							
B	9	BILL OF MATERIALS							1	BILL OF MATERIALS							B		
		ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK		MK	ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK		SK	MK
		1	196803	BODY	A564 TP 630 (17-4 PH)	1					25	196802	FLANGE, INLET, LEFT	A276 TP 316	1				
		2	153290	FLANGE BOTTOM	A276 TP 316	1					26	18225-001	SHCS, 3/8 -16 UNC X 1-5/8" LG	A286	8				X
		3	207807	GUIDE, PLUNGER, 1-3/4"	A276 TP 316	1					27	10794442-001	WASHER, NORD-LOCK, 3/8	254 SMO	8	X			X
		4	153292	INSERT, FLOW PORT,SUPPLY	TUNGSTEN CARBIDE 8-10% NICKEL	1	X				28	18100-002K1	O-RING	HNBR	2	X		X	X
		5	153294	CARRIER, SEAL	A276 TP S21800 (NITRONIC 60)	1					29	18110-026T	BACKUP RING	TEFLON	2	X		X	X
		6	154597	RING, SEAL, SUPPLY	TUNGSTEN CARBIDE 8-10% NICKEL	4	X				30	12528	SEAL SUB, 1"	A564 TP 630 (17-4PH)	1				X
		7	154599	RING, SEAL, VENT	TUNGSTEN CARBIDE 8-10% NICKEL	2	X				31	12966	SEAL SUB, 1-1/4"	A564 TP 630 (17-4 PH)	1				X
		8	18701-002	WAVE SPRING	AMS5699 (X-750)	1	X				32	153293	INSERT, FLOW PORT, BLANK	TUNGSTEN CARBIDE 8-10% NICKEL	1	X			
		9	154598	SPRING, COMPRESSION	AMS5699 (X-750)	2	X				33	18114-003T	BACKUP RING	TEFLON	2	X		X	X
		10	18603-006	PLUG, HEX, 3/8" SAE	A240 TP 316	1	X				34	207808	HYDRAULIC PLUNGER, 1-3/4"	A276 TP S21800	1				
		11	154797	PELLET, NYLOK	NYLON	1	X	X			35	207809	WEAR BAND, PLUNGER	DELFIN AF	2	X		X	
		12	18603-008	HOLLOW HEX PLUG, 1/2" SAE	A240 TP 316	1					36	18108-022	T-SEAL, PISTON	CARBOXYLATED NITRILE / NYLATRON	1	X			
		13	154659	RING, BACKUP	PEEK	4	X	X			37	161776	WEAR BAND, SEAL CARRIER	DELFIN AF	1	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													
4				3				2				1							

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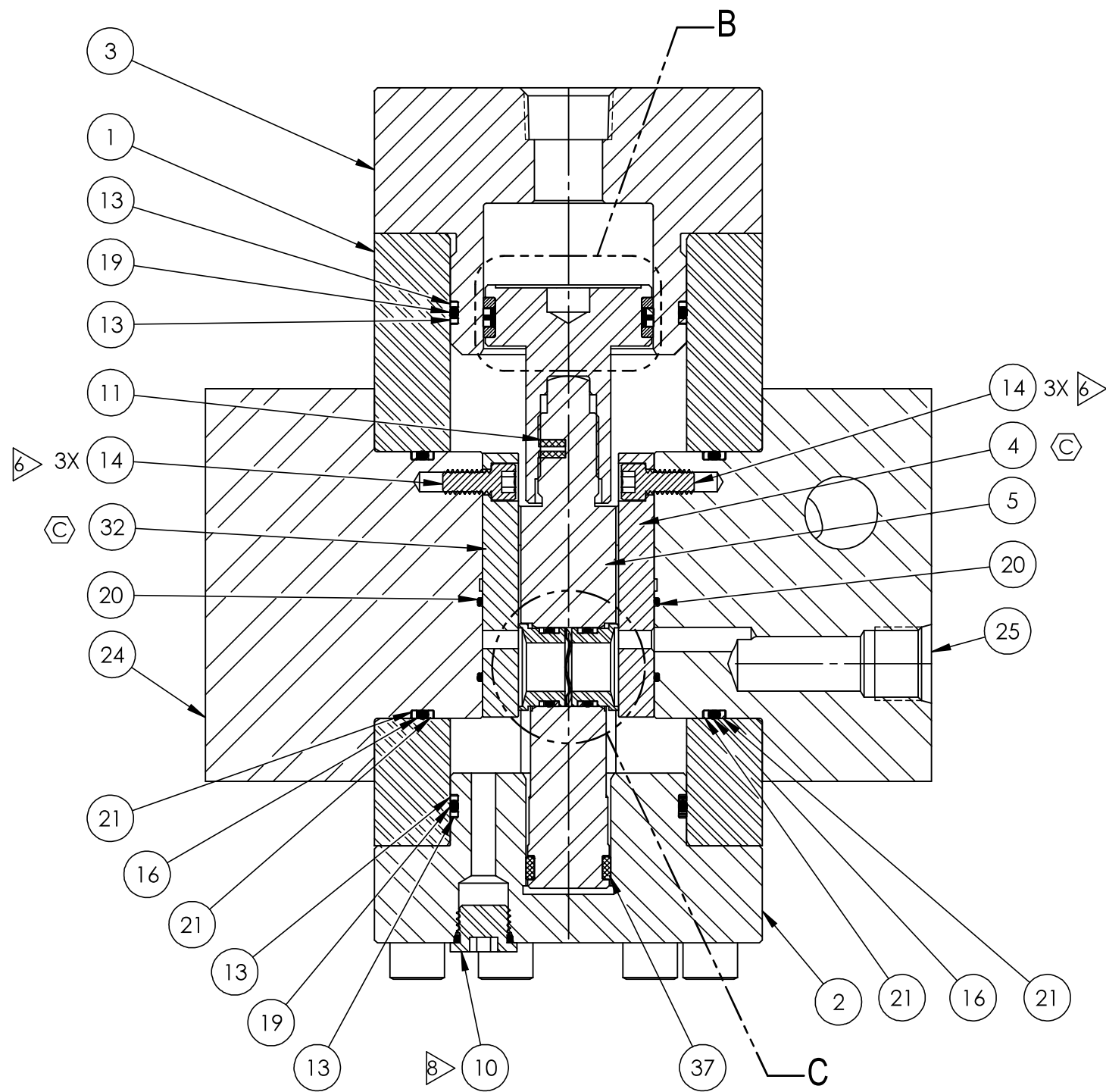
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B

B



SECTION A-A
VIEW ROTATED 90°

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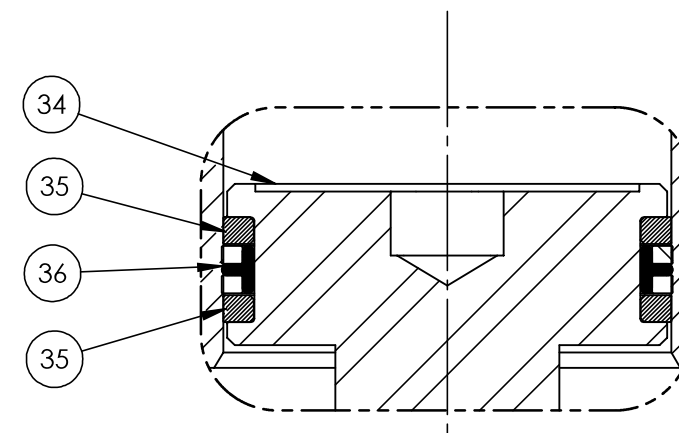
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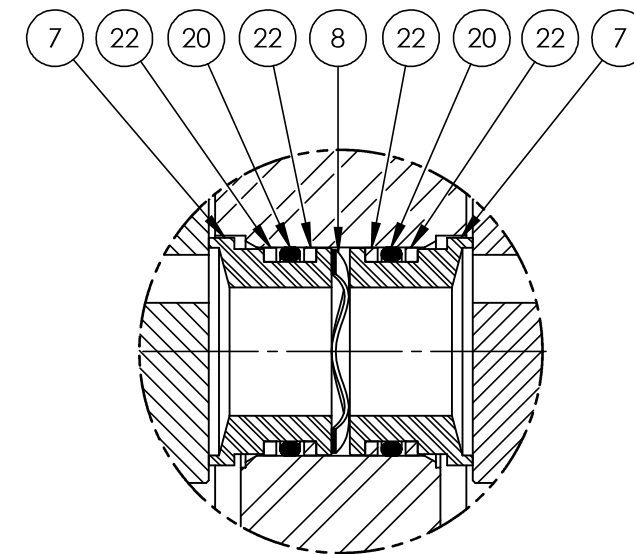
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A

A



DETAIL B



DETAIL C



Gilmore
a pro company

ENGINEERING

SIZE

B

DWG NO

29121

REV

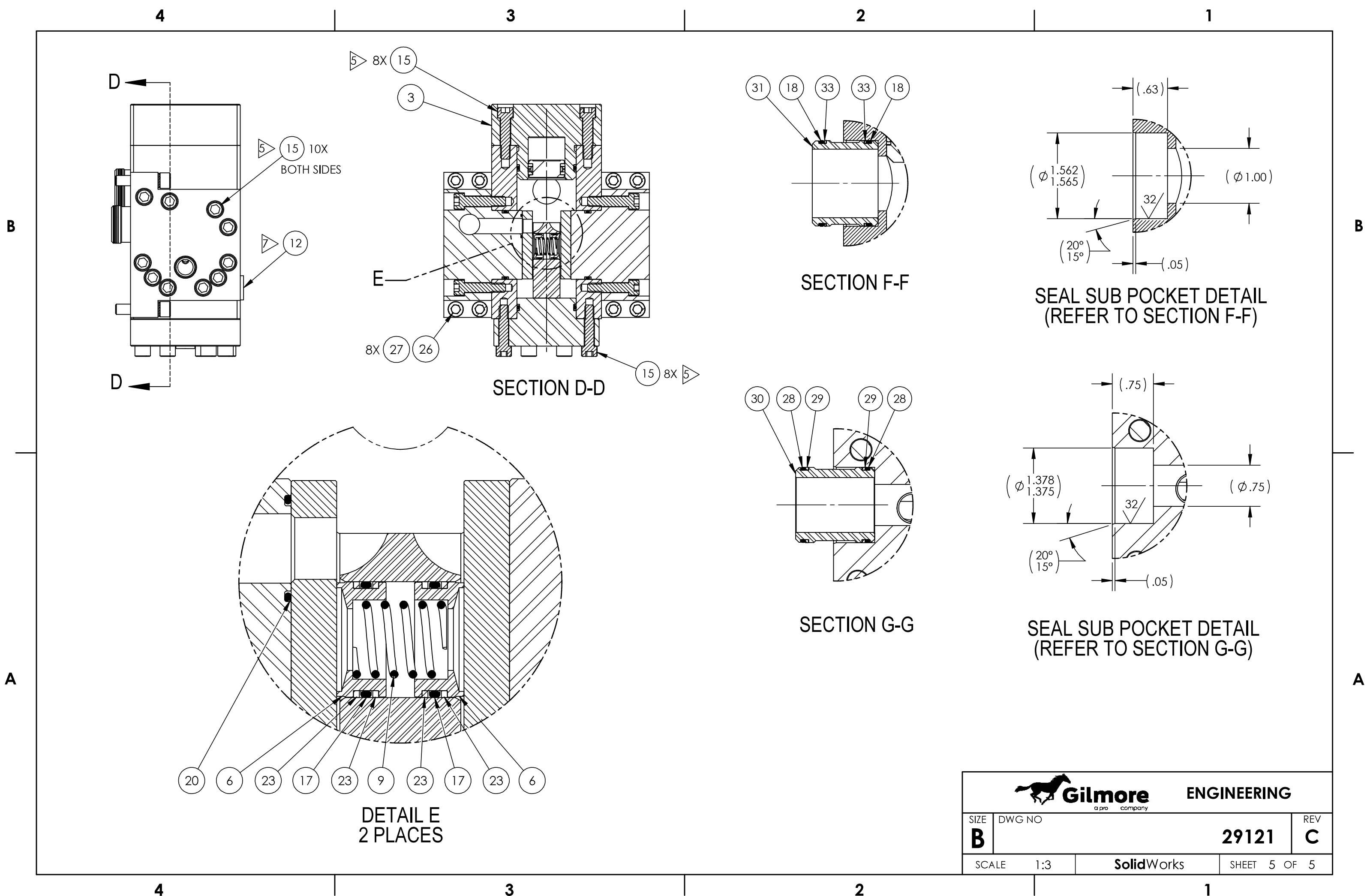
C

SCALE

1:4

SolidWorks

SHEET 4 OF 5



ENGINEERING

SIZE

DWG NO

REV

B

29121

C

SCALE

1:3

SolidWorks

SHEET 5 OF 5