

## Product Information Bulletin

## 1" &amp; 1-1/2" GEN 2 Check Valve Product Line

REV	DATE	DESCRIPTION	ORIGIN (issued by)	APPROVED
REV 001	6/30/21	Document No: 100-063021-001	AP	GM

## COMPANY PROPRIETARY INFORMATION

© 2014 - 2021 Proserv Gilmore Valve, LLC and/or its affiliates (Gilmore). All rights reserved. Proserv®, Gilmore™, Gilmore & Design (Stallion) and Gilmore, a Proserv Company™ are registered trademarks or trademarks of Gilmore. This Bulletin 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 Bulletin 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 Bulletin 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 (800) 469-8786

[Gilmore@Gilmore.com](mailto:Gilmore@Gilmore.com)

Gilmore  
1231 Lumpkin Road  
Houston, TX 77043

## 1" & 1-1/2" GEN 2 Check Valve Product Line

Gilmore announces the new GEN 2 Check Valve product line for critical offshore and subsea applications. The 1" & 1-1/2" GEN 2 Check Valve has been redesigned with significant improvements, within the same cavity & footprint as the legacy Check Valve, allowing direct replacement inline or within existing Gilmore Check Valve Cartridge manifolds. Gilmore's proprietary valve technology provides an order of magnitude improvement in cycle life.

### Features and Benefits:

- Qualification exceeds API 16D requirements
  - Two valves, 2500 cycles each
- Multiple cracking pressure options
- Improved Seat design
- Bolted Cover design
- Damped SealSleeve
- Improved valve materials:
  - A286 Gr 660 SHCS
  - 17-4 (H1150D) Body
  - Inconel X-750 Spring
  - Nitronic 60 Seal Sleeve and Cage
  - Nitronic 60 Piston Rod
  - PEEK Back Up rings
  - HNBR Soft Seals
  - Delrin 511P Seats

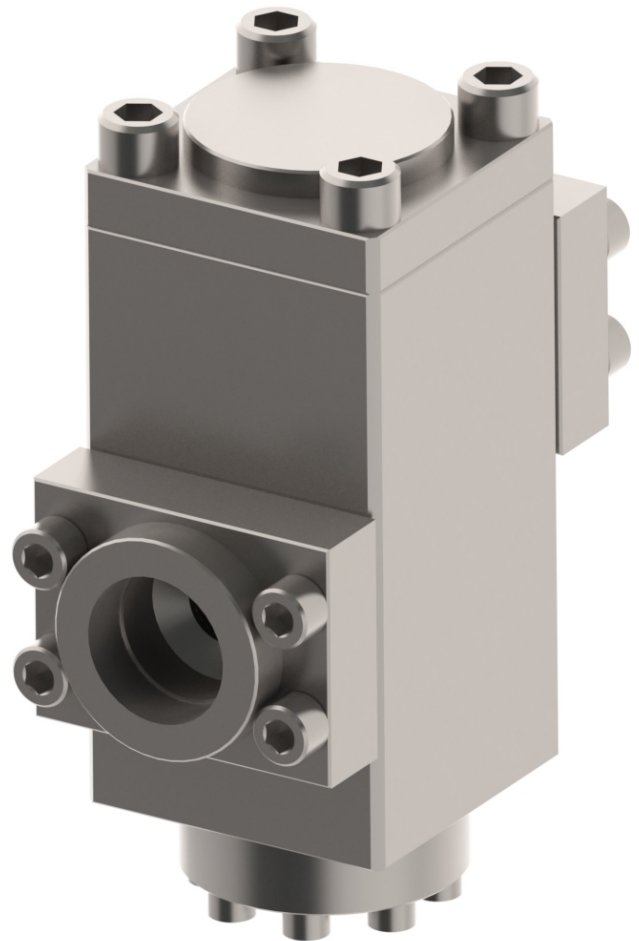
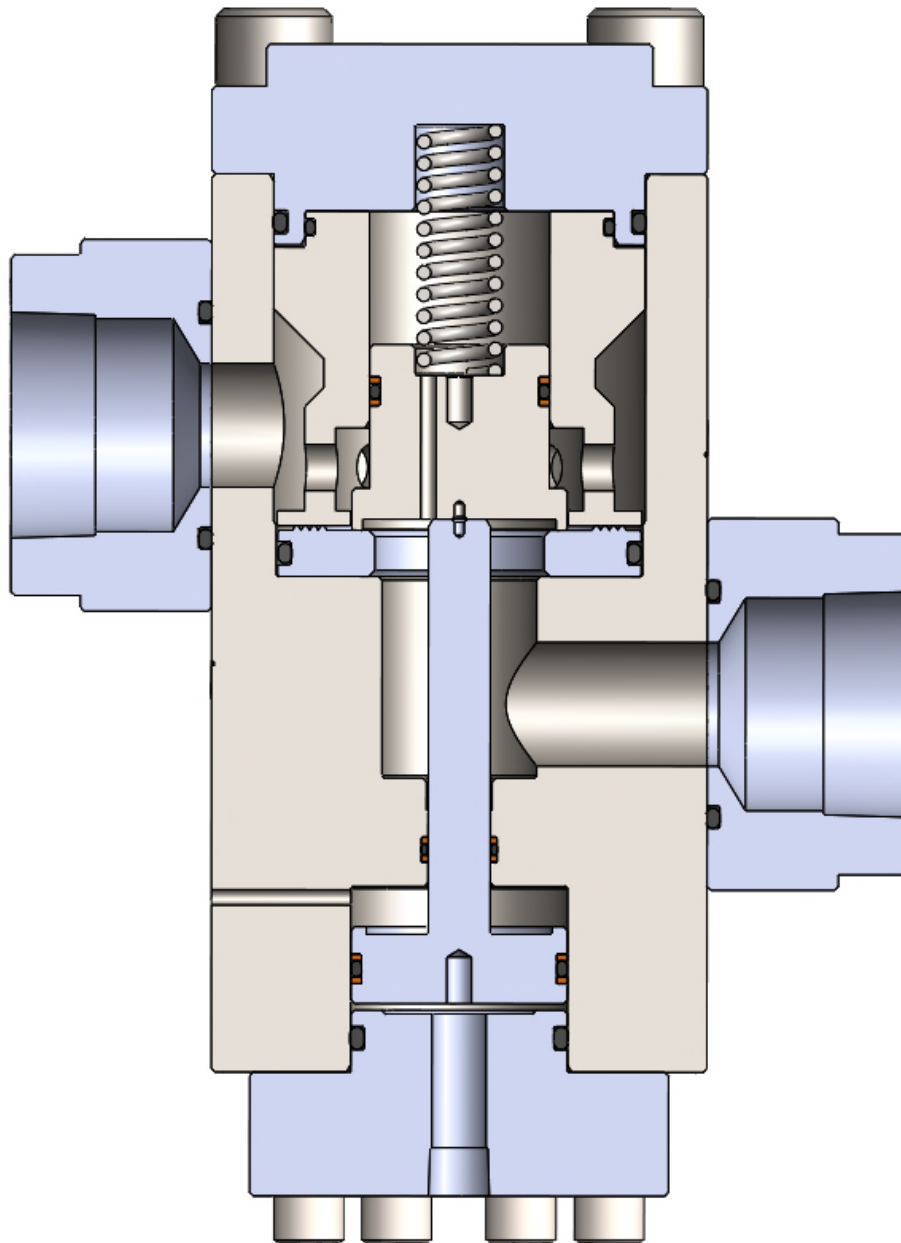


Figure 1. PN 29153: GEN 2 Check valve, Pilot Operated,  
Externally Vented Piston, 1-1/2 NPT, 5 ksi MAWP

## 1" & 1-1/2" GEN 2 Check Valve Product Line

Figure 2.

PN 29153: Cross-section GEN 2 Check valve, Pilot Operated, Externally Vented Piston, 1-1/2 NPT, 5 ksi MAWP



## Product Information Bulletin

## 1" &amp; 1-1/2" GEN 2 Check Valve Product Line

Gilmore has exceeded API 16D requirements by qualifying the new Gilmore 1" and 1-1/2" GEN 2 Check Valves to 2,500 cycles, with a 1" flow rate of 200 gpm and 1-1/2" flow rate of 300 gpm, at 5000 psi inlet with 1% - 4% water glycol test fluid.

The new 1" & 1-1/2" GEN 2 Check Cartridge and Valve have the identical cavity and valve footprint dimensions as the legacy Check Valves, allowing drop-in replacement.

As a result of the new 1" & 1-1/2" GEN 2 Check Valve product line, please note that sales of the legacy 1" & 1-1/2" Check Cartridge and Valve part numbers listed below will be discontinued as of June 30, 2022.

The new 1" & 1-1/2" GEN 2 Check Cartridge and Valve listed below are now available as a replacement for the legacy 1" & 1-1/2" Check Cartridge and Valve:

**Table 1. New and Legacy 1" Check Valve and Cartridge Part Number Cross Reference:**

Item	Legacy Description	Legacy Valve PN	Legacy Repair Kit PN	GEN 2 Description	New Valve PN	New Repair Kit PN
1	Valve, 1" Check, Piloted, Internal Vent, Standard Cracking, 5 ksi Inlet, 1" NPT Ports, 1/4" NPT Pilot	25100	25100 RK	Valve, 1" Check, GEN 2, Piloted, Internal Vent, Standard Cracking, 5 ksi Inlet, 1" NPT Ports, 1/4" NPT Pilot	29142	29142 RK
2	Valve, 1" Check, Piloted, Internal Vent, Standard Cracking, 5 ksi Inlet, 1" SAE Ports, 3/8" SAE Pilot	25145 28493	25145 RK 28493 RK	Valve, 1" Check, GEN 2, Piloted, Internal Vent, Standard Cracking, 5 ksi Inlet, 1" SAE, 3/8" SAE Pilot	29146	29146 RK
3	Valve, 1" Check, Non-Piloted, Low Cracking, 5 ksi Inlet, 1" NPT Ports	27232-4	27232-4 RK	Valve, 1" Check, GEN 2, Non-Piloted, Low Cracking, 5 ksi Inlet, 1" NPT Ports (Legacy Body Dimensions)	29173	29173 RK
4	Valve, 1" Check, Non-Piloted, Low Cracking, 5 ksi Inlet, 1" SAE Ports	27232-3	27232-3 RK	Valve, 1" Check, GEN 2, Non-Piloted, Low Cracking, 5 ksi Inlet, 1" SAE Ports (Legacy Body Dimensions)	29185	29185 RK
5	Valve, 1" Check, Non-Piloted, Standard Cracking, 5 ksi Inlet, 1" SAE Ports	27232-2	27232-2 RK	Valve, 1" Check, GEN 2, Non-Piloted, Standard Cracking, 5 ksi Inlet, 1" SAE (Legacy Body Dimensions)	29174	29174 RK
6	Cartridge, 1" Check, Standard Cracking, 5 ksi Inlet	27162	27162 RK	Cartridge, 1" Check, Standard Cracking, 5 ksi Inlet (Legacy Bolting Pattern)	29179	29179 RK

## Product Information Bulletin

## 1" &amp; 1-1/2" GEN 2 Check Valve Product Line

Table 2. New and Legacy 1-1/2" Check Valve and Cartridge Part Number Cross Reference:

Item	Legacy Description	Legacy Valve PN	Legacy Repair Kit PN	GEN 2 Description	New Valve PN	New Repair Kit PN
7	Double Valve, 1-1/2" Check, Piloted, Standard Cracking, 5 ksi Inlet, 1-1/2" SW ports, 1/4" NPT Pilot	25155-0.2	25155-0.2 RK	Double Valve, 1-1/2" Check, GEN 2, Piloted, Standard Cracking, 5 ksi Inlet, 1-1/2" SW Ports, 1/4" NPT Pilot	29158	29158 RK
8	Double Valve, 1-1/2" Check, Non-Piloted, Standard Cracking, 5 ksi Inlet, 1-1/2" Code 62 Ports	28608	28608 RK	Double Valve, 1-1/2" Check, GEN 2, Non-Piloted, Standard Cracking, 5 ksi Inlet, 1-1/2" Code 62 Ports	29157	29157 RK
9	Valve, 1-1/2" Check, Piloted, Low Cracking, 5 ksi Inlet, 1-1/2" NPT Ports, 1/4" NPT Pilot	28485	28485 RK	Valve, 1-1/2" Check, GEN 2, Piloted, Externally Vented, Low Cracking, 5 ksi Inlet, 1-1/2" NPT Ports, 1/4" NPT Pilot	29153	29153 RK
10	Valve, 1-1/2" Check, Non-Piloted, 5 ksi Inlet, 2" Code 62 Ports	28260	28260 RK	Valve, 1-1/2" Check, GEN 2, Non-Piloted, Standard Cracking, 5 ksi Inlet, 2" Code 62 Ports	29147	29147 RK
11	Valve, 1-1/2" Check, Non-Piloted, Standard Cracking, 5 ksi Inlet, 1-1/2" NPT Ports	27235-1	27235-1 RK	Valve, 1-1/2" Check, GEN 2, Non-Piloted, Standard Cracking, 5 ksi Inlet, 1-1/2" NPT Ports (Legacy Body Dimensions)	29170	29170 RK
12	Valve, 1-1/2" Check, Non-Piloted, Low Cracking, 5 ksi Inlet, 1-1/2" Code 62 Ports	27235-3	27235-3 RK	Valve, 1-1/2" Check, GEN 2, Non-Piloted, Low Cracking Pressure, 5 ksi Inlet, 1-1/2" Code 62 Ports (Legacy Body Dimensions)	29171	29171 RK
13	Valve, 1-1/2" Check, Non-Piloted, Standard Cracking, 5 ksi Inlet, 2" Code 62 Ports, Offset Spool	28521	28526 RK	Valve, 1-1/2" Check, GEN 2, Non-Piloted, Standard Cracking, 5 ksi Inlet, 2" Code 62 Ports, Offset Spool	29154	29154 RK
14	Cartridge, 1-1/2" Check, Low Cracking, 5 ksi Inlet	25120-0.2 209012	25120-0.2 RK 209012 RK	Cartridge, 1-1/2" Check, GEN 2, Low Cracking, 5 ksi Inlet (Legacy Bolt Pattern)	29172	29172 RK

## Product Information Bulletin

## 1" & 1-1/2" GEN 2 Check Valve Product Line

After the legacy valves are discontinued, Gilmore will continue to support the legacy 1" & 1-1/2" Check Cartridge and Check valve through repair kits and seals kits. Gilmore Aftermarket will continue to support discontinued legacy products with factory failure analysis and repair services.

Please note that GEN 2 repair kits are not interchangeable with legacy repair kits and cannot be used in legacy Check Cartridge and Valve. Please contact Gilmore Customer Service to assist you with selecting the GEN 2 replacement valve part number.

**Table 3. Further GEN 2 Part Numbers with Additional Standardization and features:**

Item	Additional GEN 2 Description	Additional GEN 2 Valve PN	Additional GEN 2 Repair Kit PN	Comment
15	Valve, 1" Check, GEN 2, Piloted, External Vent, Standard Cracking, 5 ksi Inlet, 1" SAE Ports, 3/8" SAE Pilot	29175	29175 RK	Same as GEN 2 PN 29142 except externally vented
16	Valve, 1" Check, GEN 2, Non-Piloted, Low Cracking, 5 ksi Inlet, 1" NPT Ports	29140	29140 RK	Same as GEN 2 PN 29173 except weight reduced
17	Valve, 1" Check, GEN 2, Non-Piloted, Low Cracking, 5 ksi Inlet, 1" SAE Ports	29186	29186 RK	Same as GEN 2 PN 29185 except weight reduced
18	Valve, 1" Check, GEN 2, Non-Piloted, Standard Cracking, 5 ksi Inlet, 1" SAE Ports	29145	29145 RK	Same as GEN 2 PN 29174 except weight reduced
19	Valve, 1-1/2" Check, GEN 2, Non-Piloted, Low Cracking, 5 ksi Inlet, 1-1/2" Code 62 Ports	29152	29152 RK	Same as GEN 2 PN 29171 except weight reduced
20	Valve, 1-1/2" Check, GEN 2, Non-Piloted, Standard Cracking, 5 ksi Inlet, 1-1/2" NPT Ports	29151	29151RK	Same as GEN 2 PN 29170 except weight reduced

Please contact Gilmore Customer Service to request drawings and quotations for these GEN 2 Check Valves at [Gilmore@Gilmore.com](mailto:Gilmore@Gilmore.com).

4

3

2

1

NOTES:

- 1
- MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON THE COMPONENT DRAWING
- 2
- MARKING: MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 3
- ALL METAL ITEMS ARE PASSIVATED
- 4
- 'X' IN THE BOM DEPICTS PARTS IN REPAIR KIT 29146 RK AND SEAL KIT 29146 SK.
- 5
- FOR ASSEMBLY PROCEDURE SEE 50335, FOR STANDARD FAT PROCEDURE SEE 50336, FOR EXTENDED FAT PROCEDURE SEE 50337, FOR MAINTENANCE MANUAL SEE 51034.
- 6
- LOCTITE 242 (BLUE) AND TORQUED ITEM 9 CAPSCREWS TO 100 FT-LB
- 7
- TORQUE ITEM 10 CAPSCREWS TO 20 FT-LB

PRESSURE DATA

MAXIMUM SUPPLY PRESSURE: 5,000 PSI  
MAXIMUM PILOT PRESSURE: 5,000 PSI  
CRACKING PRESSURE: 80 PSI ±10 PSI  
PILOT PRESSURE/OUTLET RATIO: 1:4  
PILOT PISTON VENT: INTERNAL

FLOW DATA

MAX FLOW CAPACITY: 200 GPM  
CV (CALV): 9

CONNECTION

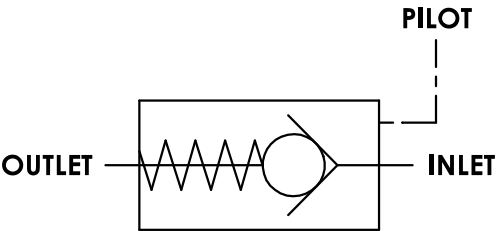
INLET: 1" SAE  
OUTLET: 1" SAE  
PILOT: 3/8" SAE

GENERAL DATA

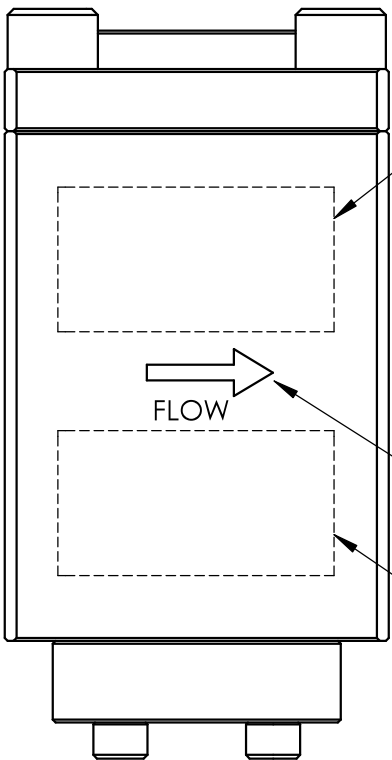
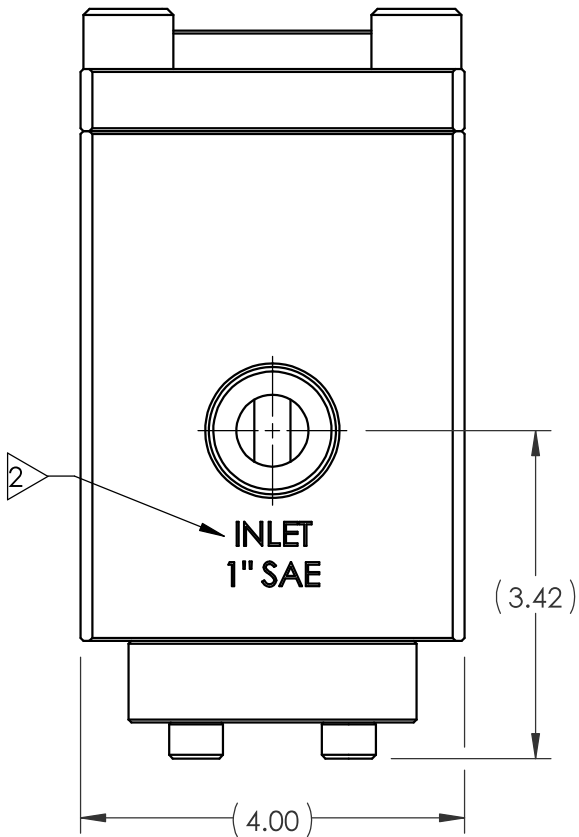
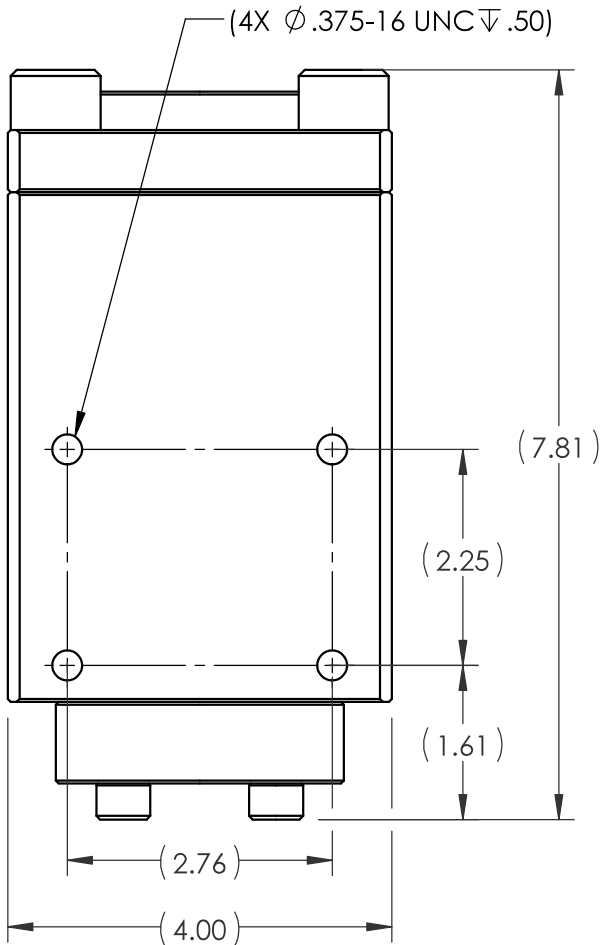
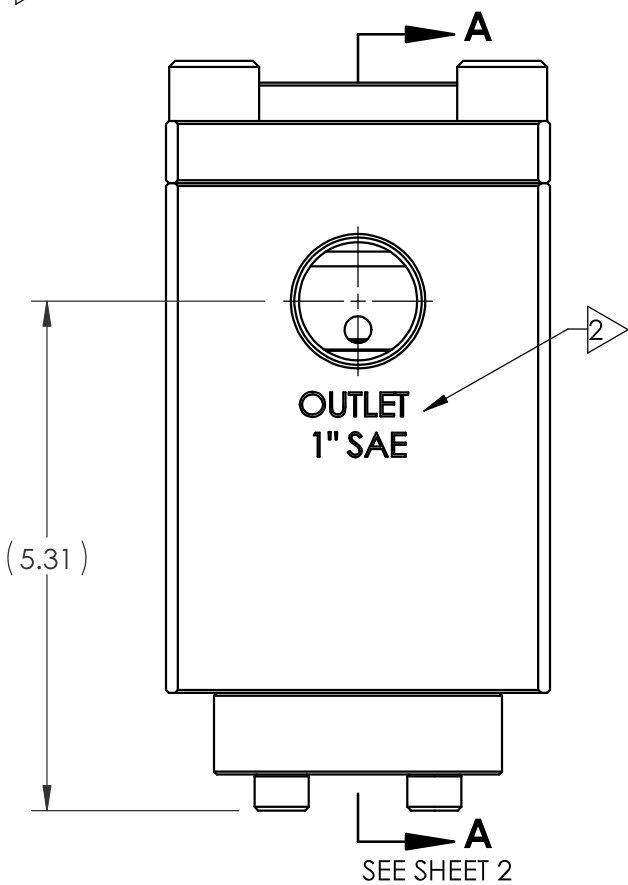
APPROX WEIGHT: 26.8 LBS  
TEMPERATURE RANGE: +32 °F TO +150 °F  
FLUIDS: - WATER BASED DRILLING CONTROL FLUID.  
- MINERAL OIL BASED DRILLING CONTROL FLUID.  
FIELD SERVICEABLE

REVISIONS

REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
A	ERN 02453	JZ 4/5/21	CMJ 4-6-21	AGP 4/5/21



SCHEMATIC



29146  
VER (AX VERSION #)  
(SERIAL NUMBER)  
5,000 PSI  
PATENT PENDING  
(DATE OF MFG)

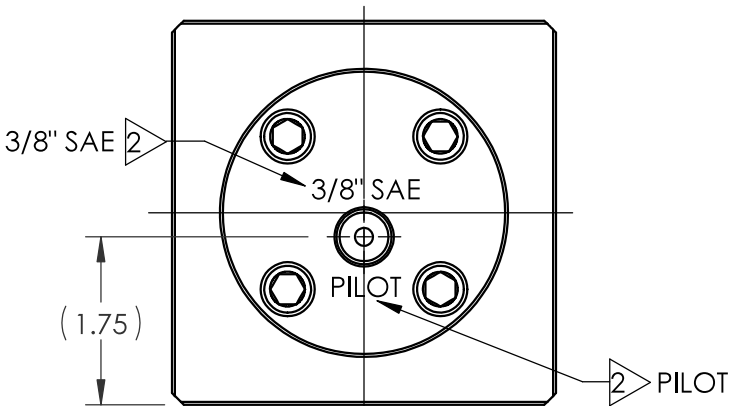
SEE SHOP TRAVELER  
FOR ADDITIONAL  
INFO REQUIRED

2 MARK WITH  
ARROW AND  
TEXT "FLOW"


2 MARK WITH  
LOGO AND  
COMPANY  
INFORMATION  
OPPOSITE SIDE  
FROM P/N

A

A



PATENT PENDING

MATERIAL: SEE PARTS IN BOM	CONDITION:	TREATMENT:	PROCEDURE NUMBER:	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 RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	APPROVAL		 <b>VALVE, 1" CHECK, GEN 2, PILOT OPERATED, 1" SAE, INT PISTON VENT, STD CRACKING</b>				SIZE	DWG NO	REV
DRAWN BY JZ					DATE 4/5/21		<b>B</b>	<b>29146</b>	<b>A</b>				
CHECKED BY CMJ					DATE 4-6-21								
ENGINEER AGP					DATE 4/5/21								
ERN NUMBER 02453					DATE 12/18/20								
					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.								
					SCALE 1:2		SolidWorks			SHEET 1 OF 2			

4

3

2

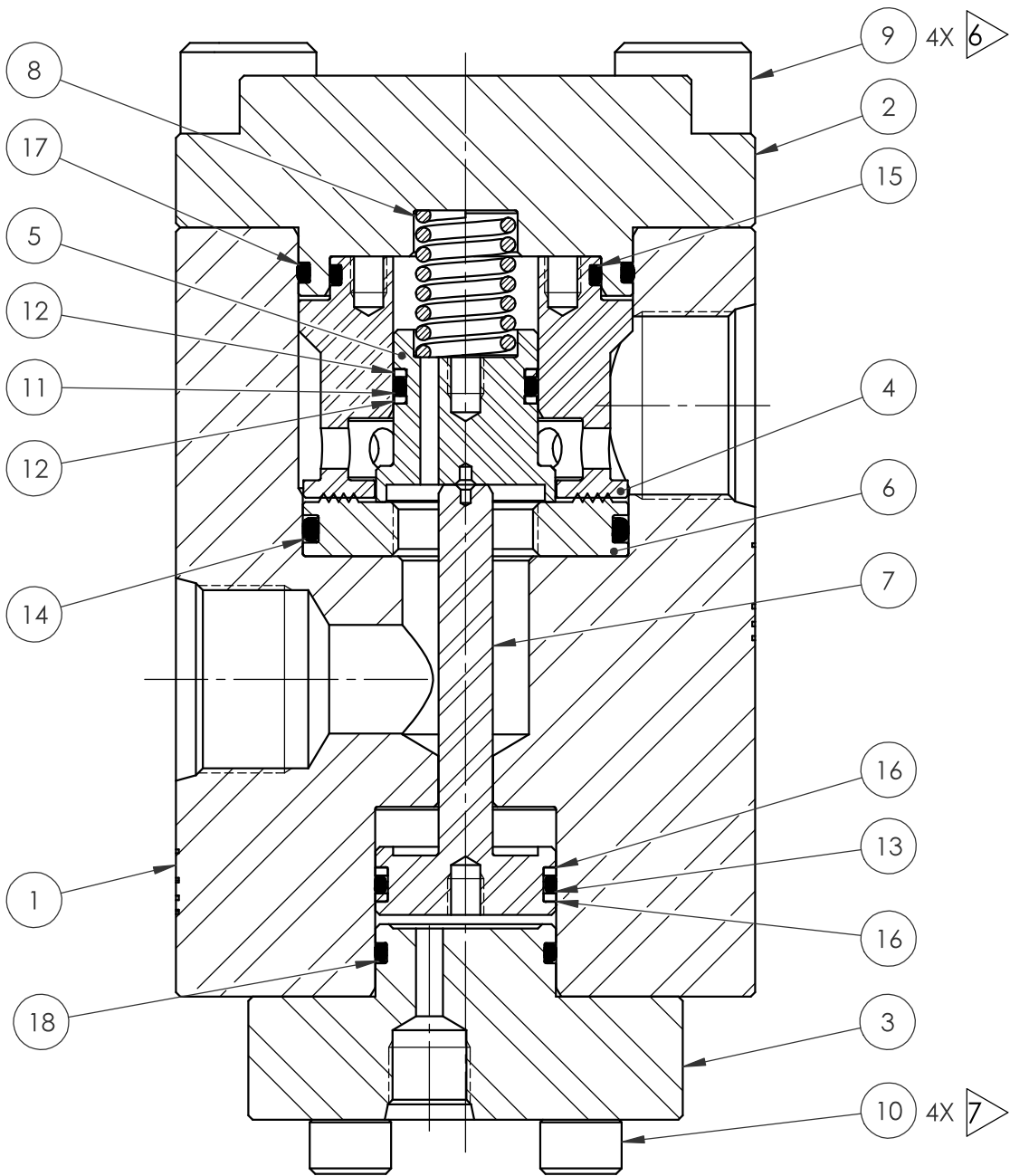
1

4

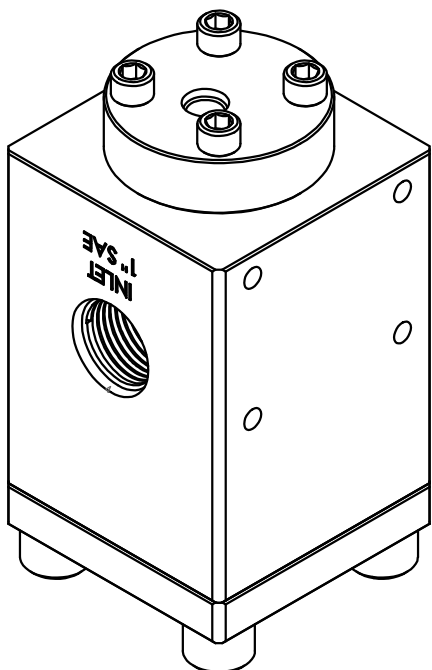
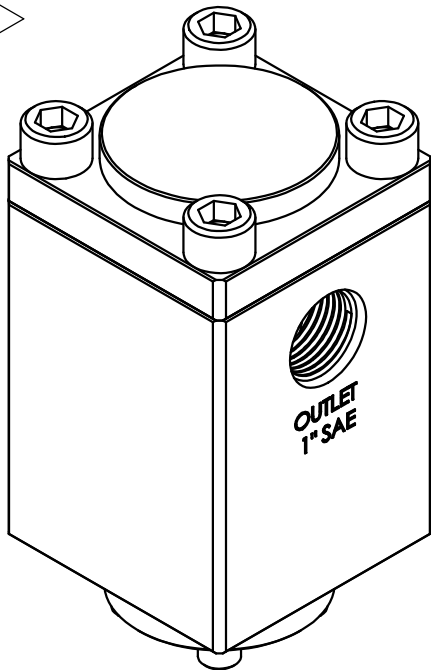
3

2

1



SECTION A-A



**Gilmore**  
a proserv company

**ENGINEERING**

SIZE

**B**

DWG NO

**29146**

REV

**A**

SCALE

1:2

**SolidWorks**

SHEET 2 OF 2

4

3

2

1

NOTES:

- 1
- MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON THE COMPONENT DRAWING
- 2
- MARKING: MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 3
- ALL METAL ITEMS ARE PASSIVATED
- 4
- 'X' IN THE BOM DEPICTS PARTS IN REPAIR KIT 29152 RK AND SEAL KIT 29152 SK.
- 5
- FOR ASSEMBLY PROCEDURE SEE 50335, FOR STANDARD FAT PROCEDURE SEE 50336, FOR EXTENDED FAT PROCEDURE SEE 50337, FOR MAINTENANCE MANUAL SEE 51034.
- 6
- LOCTITE 242 (BLUE) AND TORQUED ITEM 7 CAPSCREWS TO 100 FT-LB

PRESSURE DATA

MAXIMUM SUPPLY PRESSURE: 5,000 PSI  
CRACKING PRESSURE: 40 PSI ± 10 PSI

FLOW DATA

MAX FLOW CAPACITY: 300 GPM  
CV (CALC): 15

CONNECTION

INLET: 1-1/2" CODE 62  
OUTLET: 1-1/2" CODE 62

REVISIONS

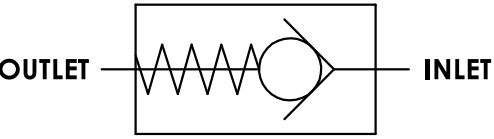
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
A	ERN 02466	JZ 4/27/21	CMJ 4-27-21	AJP 4/28/21

GENERAL DATA

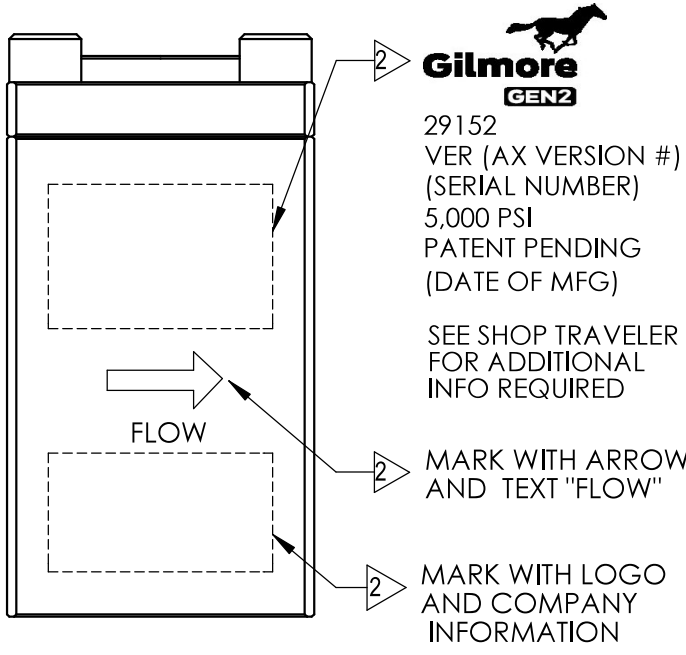
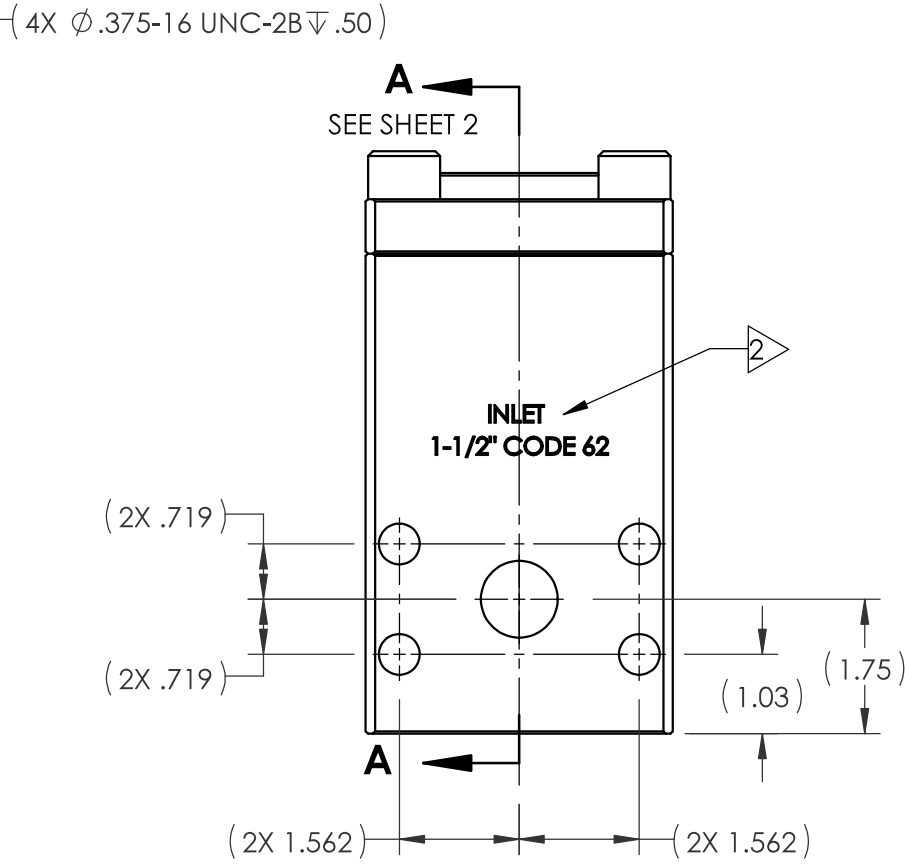
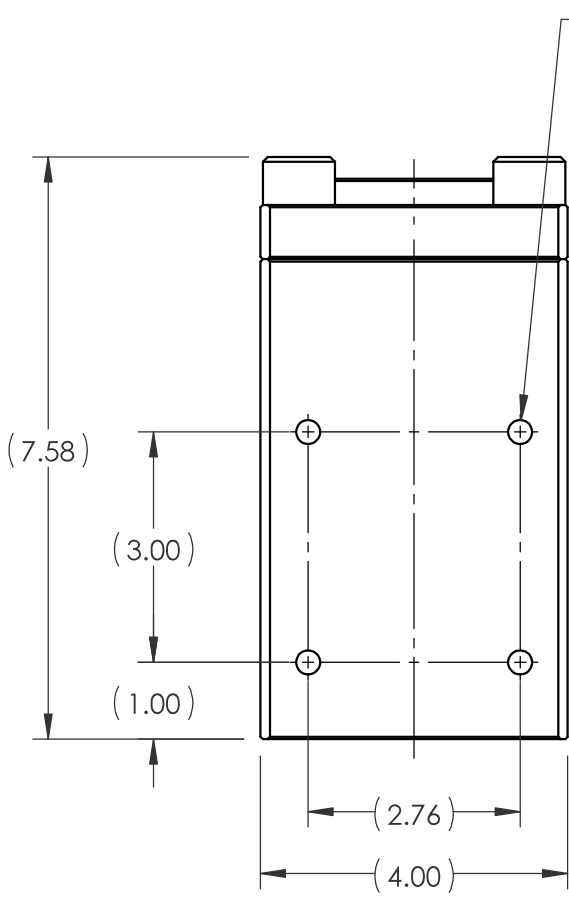
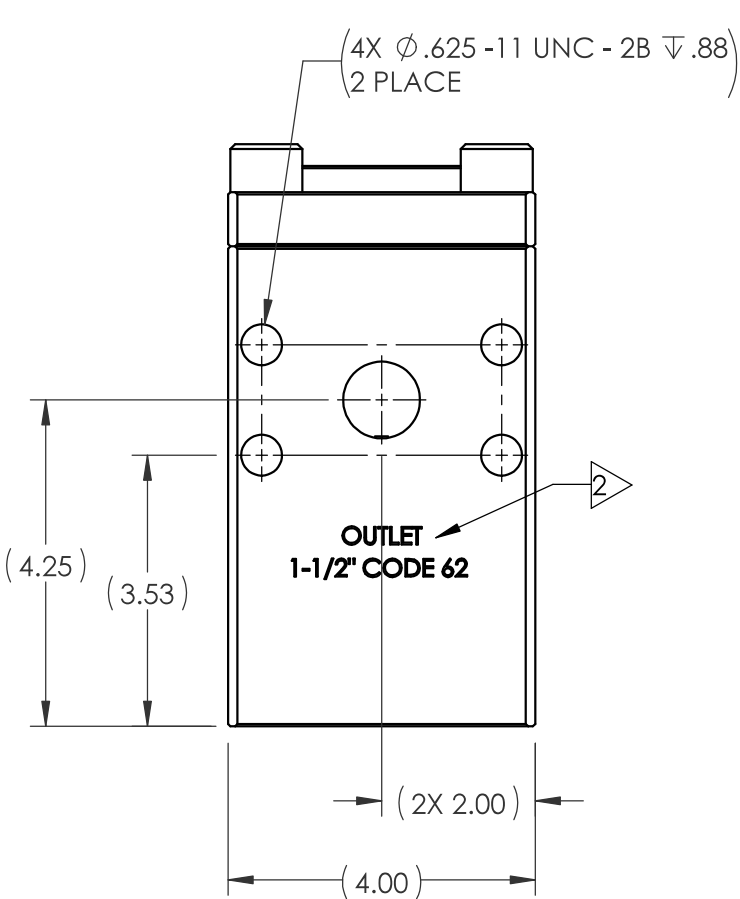
APPROX WEIGHT: 28.2 LBS  
TEMPERATURE RANGE: +32 °F TO +150 °F

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






FIELD SERVICEABLE



SCHEMATIC



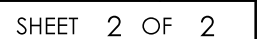
PATENT PENDING

MATERIAL: SEE PARTS IN BOM		<div>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 RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°</div>	APPROVAL		<div> <b>Gilmore</b> <small>a pro/srv company</small> <b>ENGINEERING</b></div>		
CONDITION:	DRAWN BY <i>JZ</i>		DATE 4/27/21				
	CHECKED BY <i>CMJ</i>		DATE 4-27-21	<div><b>VALVE, 1-1/2" CHECK, GEN 2, 1-1/2" CODE 62, NON - PILOTED, LOW CRACKING</b></div>			
	ENGINEER <i>AJP</i>		DATE 4/28/21				
ERN NUMBER 02466	DATE 1/22/21						
TREATMENT:	<div>3 </div>		<div>SIZE <b>B</b> DWG NO <b>29152</b> REV <b>A</b></div>				
PROCEDURE NUMBER:	<div>5 </div>						
		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.					
		SCALE 1:3		SolidWorks		SHEET 1 OF 2	

1



**A**



1

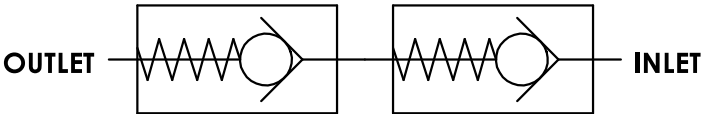
4

3

2

1

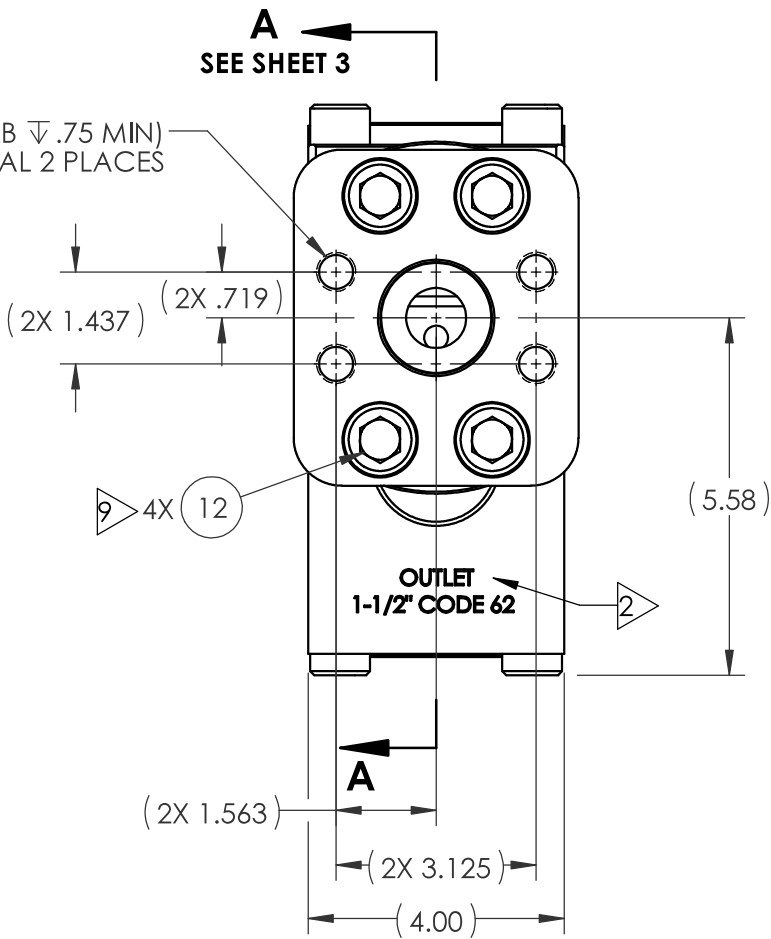
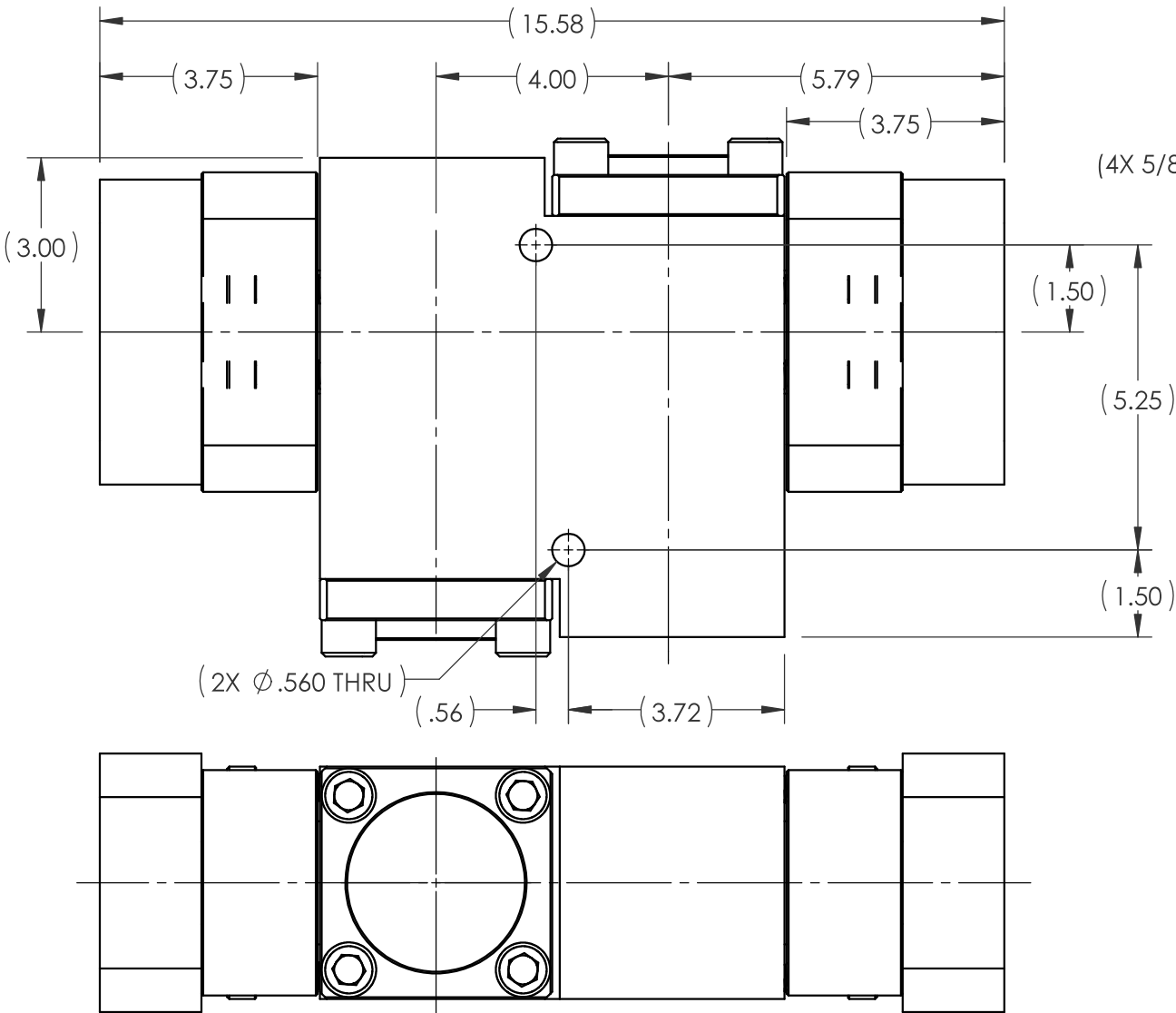
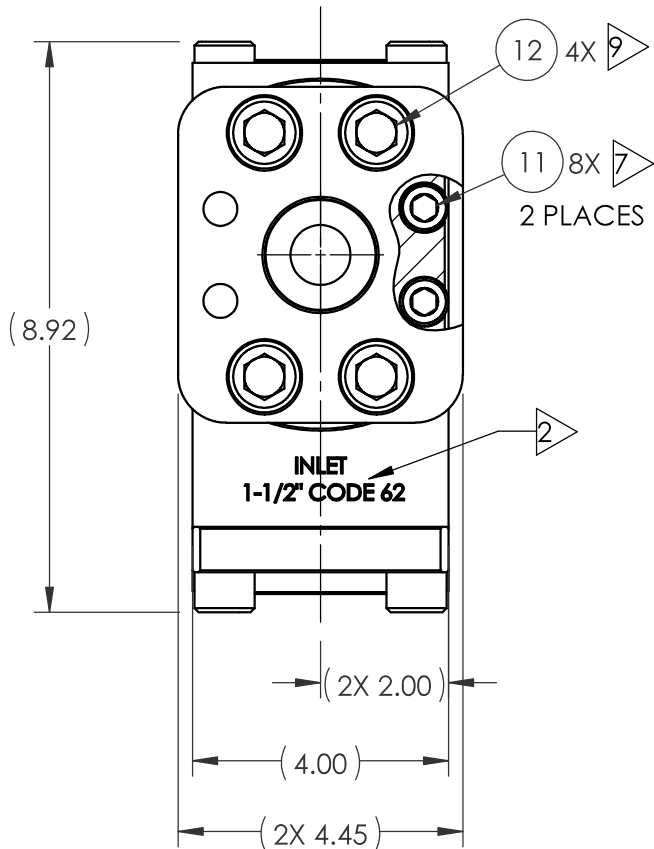
REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
A	ERN 02466	JZ 4/27/21	CMCJ 4-27-21	AQP 4/28/21



SCHEMATIC

B

B



PATENT PENDING

A

A

MATERIAL: SEE PARTS IN BOM		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 RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°		APPROVAL DRAWN BY JZ DATE 4/27/21 CHECKED BY CMCJ DATE 4-27-21 ENGINEER AQP DATE 4/28/21 ERN NUMBER 02466 DATE 2/1/21		Gilmore ENGINEERING a pro/erv company	
CONDITION:						VALVE, 1-1/2" CHECK, GEN 2, DOUBLE, C62 SEAL SUB, NON-PILOT, STANDARD CRACKING	
TREATMENT:	3					SIZE B	DWG NO 29157
PROCEDURE NUMBER:	5					SCALE 1:4	SHEET 1 OF 3
						SolidWorks	

4

3

2

1

NOTES:

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O.  
AS SHOWN ON THE COMPONENT DRAWING
- 2 MARKING: MARK AS SHOWN USING LASER ETCH OR  
COMPUTER CONTROLLED DOT PEEN MARKING MACHINE,  
.06 HIGH MIN CHARACTERS.
- 3 ALL METAL ITEMS ARE PASSIVATED
4. 'X' IN THE BOM DEPICTS PARTS IN REPAIR KIT 29157 RK  
AND SEAL KIT 29157 SK.
- 5 FOR ASSEMBLY PROCEDURE SEE 50335,  
FOR STANDARD FAT PROCEDURE SEE 50336,  
FOR EXTENDED FAT PROCEDURE SEE 50337,  
FOR MAINTENANCE MANUAL SEE 51034.
- 6 LOCTITE 242 (BLUE) AND TORQUED ITEM 10  
CAPSCREWS TO 100 FT-LB
- 7 TORQUED ITEM 11 CAPSCREWS TO 20 FT-LB
- 8 TORQUED ITEM 7 HEX PLUG TO 100 FT-LB
- 9 TORQUED ITEM 12 CAPSCREWS TO 100 FT-LB

**PRESSURE DATA**

MAXIMUM PRESSURE 5,000 PSI  
CRACKING PRESSURE 80 ± 10 PSI

**FLOW DATA**

MAX FLOW CAPACITY: 300GPM  
CV (CALC): 10

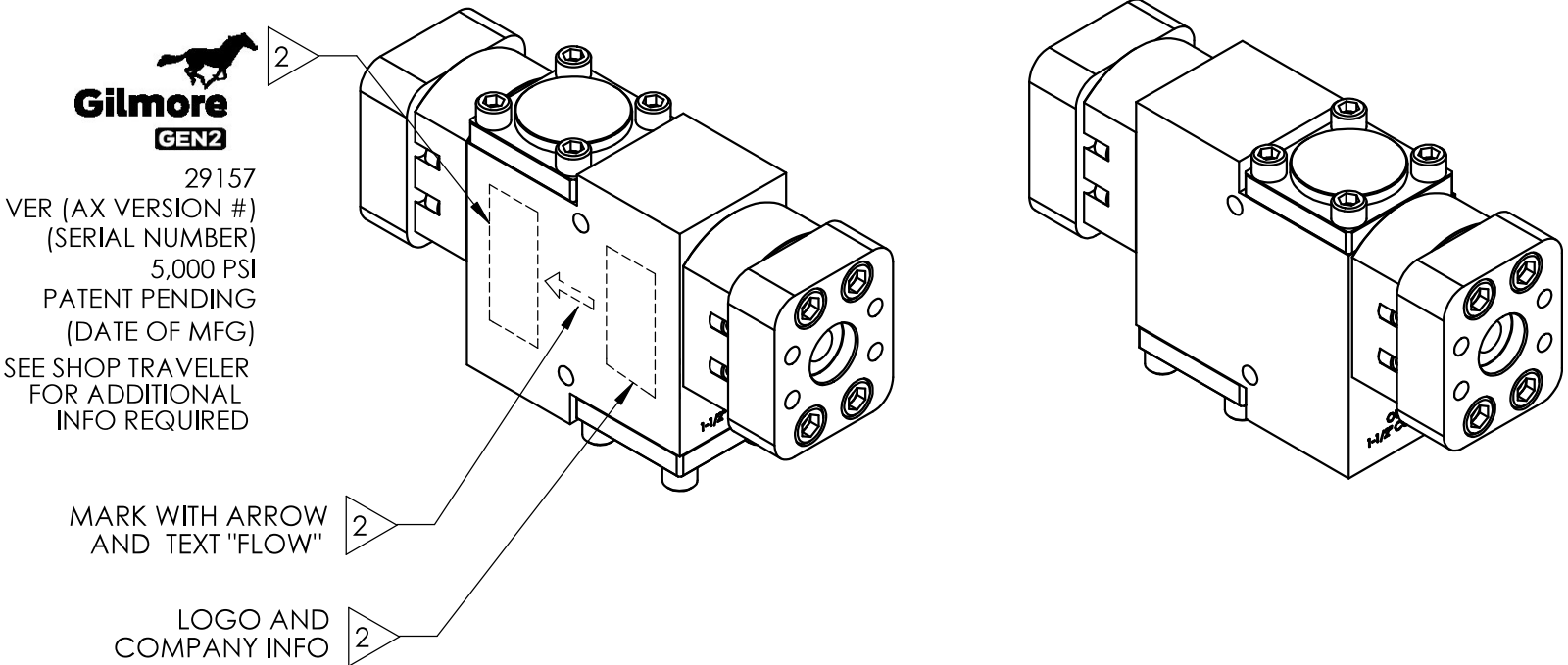
FLUIDS: 1.) WATER BASED DRILLING  
CONTROL FLUID.  
2.) MINERAL OIL BASED DRILLING  
CONTROL FLUID.


**PORTS**

INLET: 1-1/2" CODE 62 SEAL SUB  
OUTLET: 1-1/2" CODE 62 SEAL SUB

**GENERAL DATA**

APPROX WEIGHT: 101 LBS  
TEMPERATURE RANGE: 32 °F TO 200 °F  
FIELD SERVICEABLE



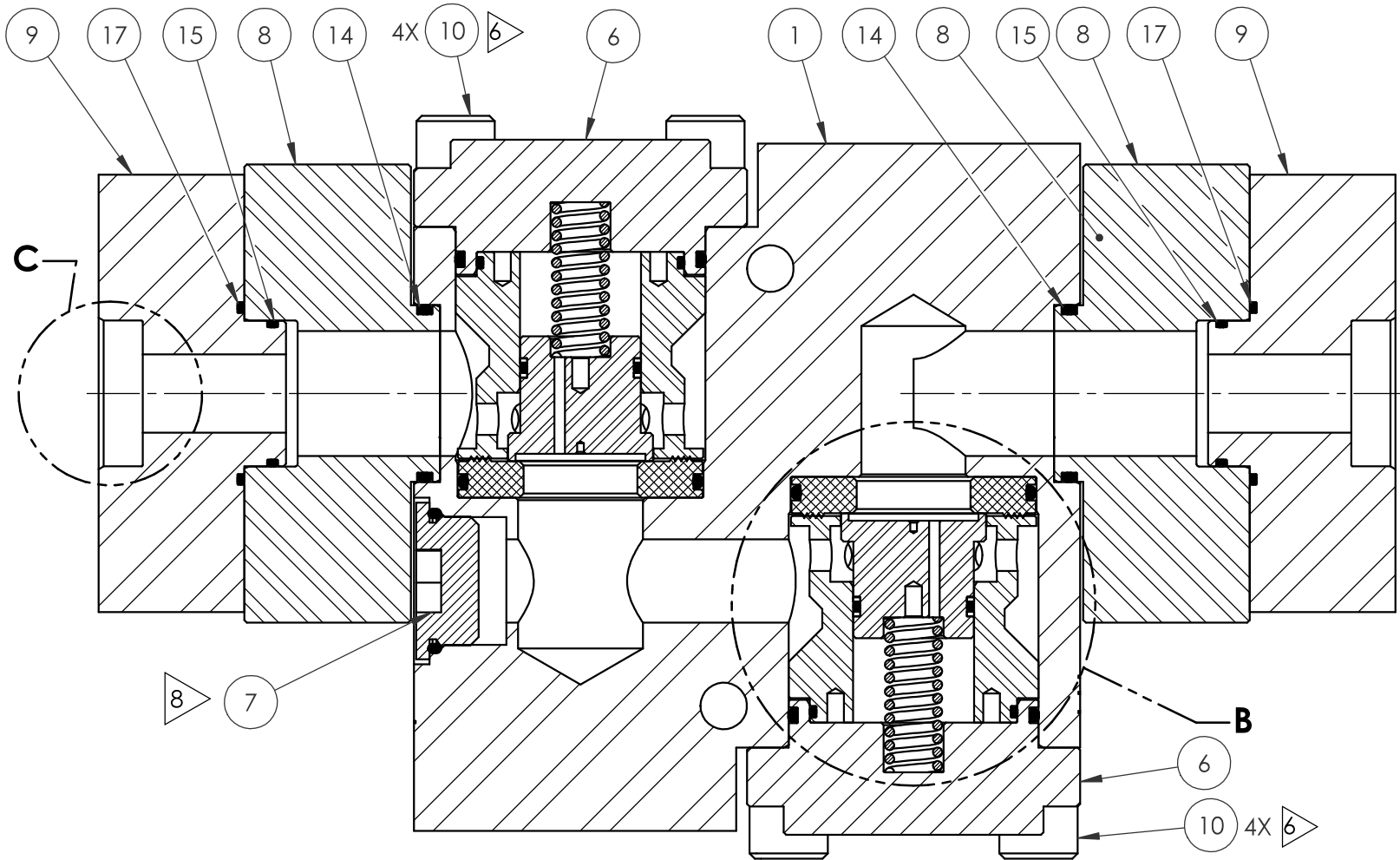
		<b>GILMORE VALVE</b> 1231 LUMPKIN RD, HOUSTON, TX 77043	
SIZE <b>B</b>	DWG NO	<b>29157</b>	REV <b>A</b>
SCALE 1:4	SolidWorks		SHEET 2 OF 3

4

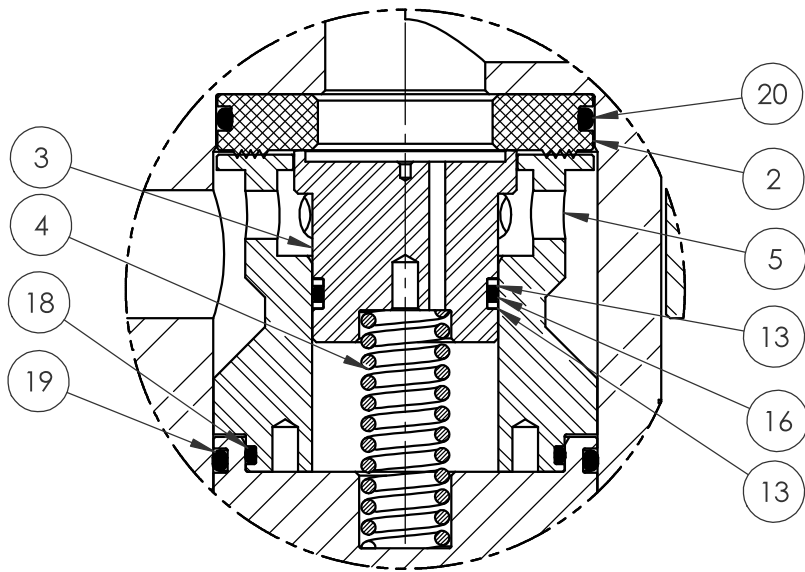
3

2

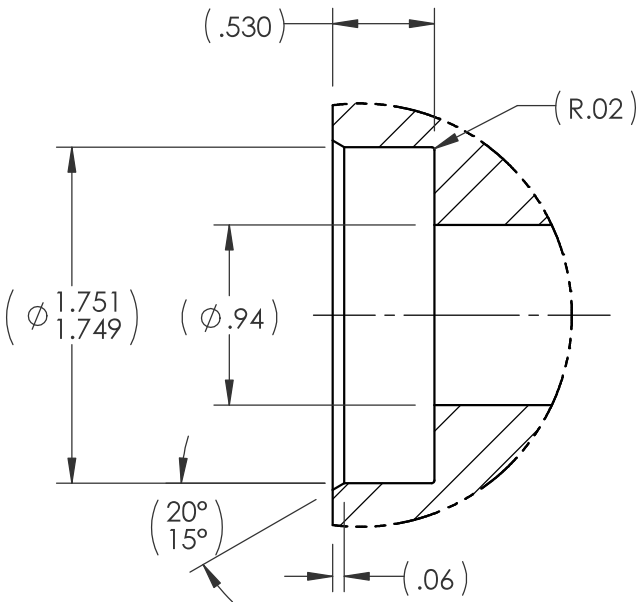
1



SECTION A-A  
SCALE 1 : 2



DETAIL B  
2 PLACES



DETAIL C  
2 PLACES

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	216938	BODY, 1-1/2" CHECK VALVE, GEN 2, NON-PILOT, DOUBLE, C62 SEAL SUB	A 564 TP 630 (17-4PH)	1		
2	216193	SEAL, 1-1/2" CHECK VALVE, GEN 2	DELTRIN 511P	2	X	X
3	216194	SEAL SLEEVE, 1-1/2" CHECK VALVE, GEN 2	A276 UNS S21800 (NITRONIC 60)	2	X	
4	216190	SPRING, COMPRESSION, 1-1/2" CHECK VALVE, GEN 2	INCONEL X-750	2	X	
5	216192	CAGE, 1-1/2" CHECK VALVE, GEN 2	A276 UNS S21800 (NITRONIC 60)	2		
6	216056	COVER, 1-1/2" CHECK VALVE, GEN 2, STD CRACKING PRESSURE	A276 TP 316 (316 SS)	2		
7	18603-020	HOLLOW HEX PLUG, 1-1/4"	A240 TP 316	1		
8	218981	INLET FLANGE, 1-1/2" CHECK VALVE, GEN 2, DOUBLE, C62 SEAL SUB	A276 TP 316 (316L)	2		
9	28610	FLANGE, 1-1/2" CHECK VALVE, GEN 2 DOUBLE, C62 SEAL SUB	A276 UNS S21800 (NITRONIC 60)	2		
10	18224-013	SHCS 0.625-11 UNC x1.5 0 LG	A-286	8		
11	18224-018	SHCS 1/2-13 UNC x1.75 LG	A-286	8		
12	18224-039	SHCS .750-10 UNC x 2.00 LG.	A-286	8		
13	18110-138P	BACKUP RING	PEEK	4	X	X
14	18100-117C	O-RING	BUNA-N	2	X	X
15	18100-055C	O-RING	BUNA-N	2	X	X
16	18100-070B	O-RING	BUNA-N	2	X	X
17	18100-073C	O-RING	BUNA-N	2	X	X
18	18100-061K1	O-RING	HNBR	2	X	X
19	18100-115K1	O-RING	HNBR	2	X	X
20	18100-155K1	O-RING	HNBR	2	X	X



**GILMORE VALVE**  
1231 LUMPKIN RD, HOUSTON, TX 77043

SIZE	DWG NO	REV
<b>B</b>	<b>29157</b>	<b>A</b>
SCALE	1:4	SHEET 3 OF 3
SolidWorks		

NOTES:

- 1
- MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON THE COMPONENT DRAWING
- 2
- MARKING: MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 3
- ALL METAL ITEMS ARE PASSIVATED
4.
- 'X' IN THE BOM DEPICTS PARTS IN REPAIR KIT 29171 RK AND SEAL KIT 29171 SK.
- 5
- FOR ASSEMBLY PROCEDURE SEE 50335, FOR STANDARD FAT PROCEDURE SEE 50336, FOR EXTENDED FAT PROCEDURE SEE 50337, FOR MAINTENANCE MANUAL SEE 51034.
- 6
- LOCTITE 242 (BLUE) AND TORQUED ITEM 7 CAPSCREWS TO 100 FT-LB

PRESSURE DATA

MAXIMUM SUPPLY PRESSURE: 5,000 PSI  
CRACKING PRESSURE: 40 PSI ± 10 PSI

FLOW DATA

MAX FLOW CAPACITY: 300 GPM  
CV (CALC): 15

CONNECTION

INLET: 1-1/2" CODE 62  
OUTLET: 1-1/2" CODE 62

REVISIONS

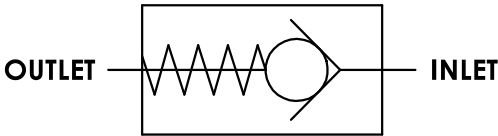
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
A	ERN 02466	JZ 4/27/21	Cmf 4-27-21	AGP 4/28/21

GENERAL DATA

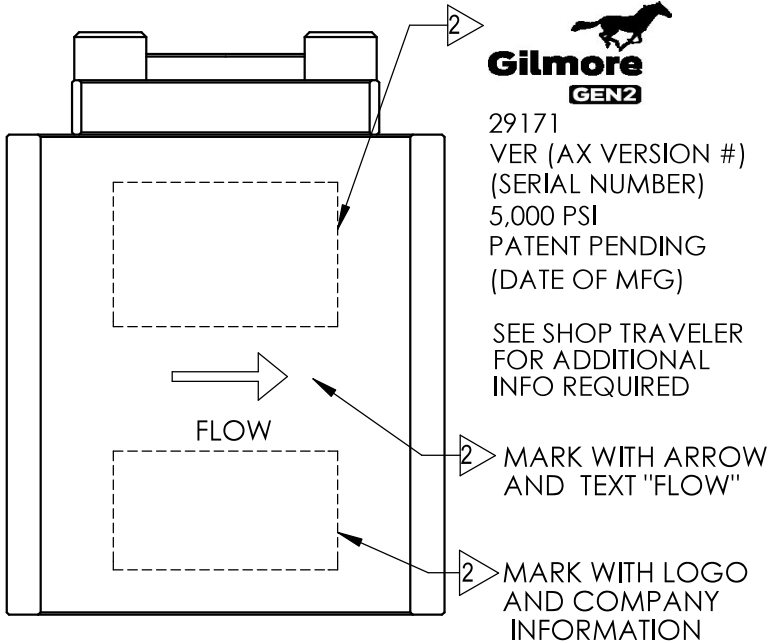
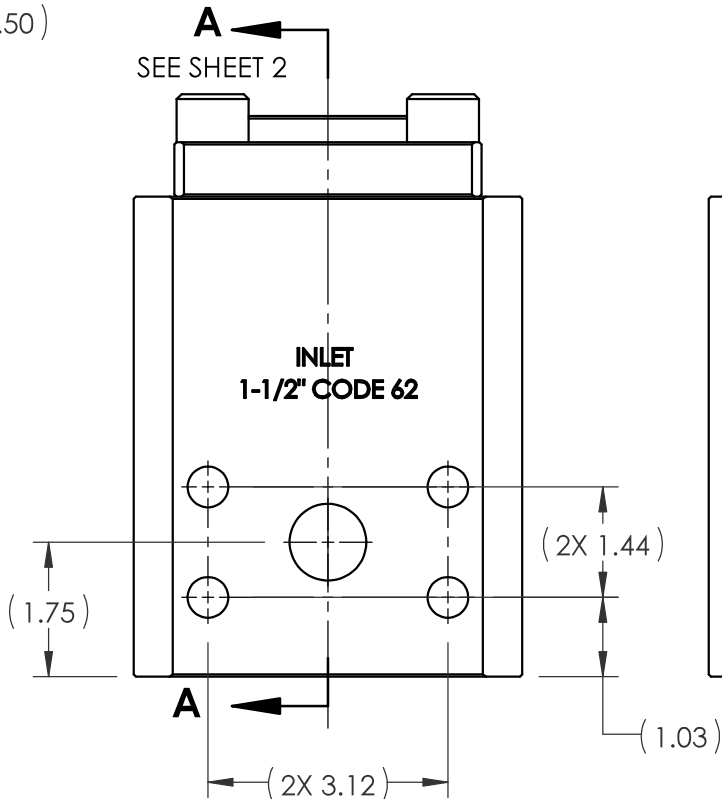
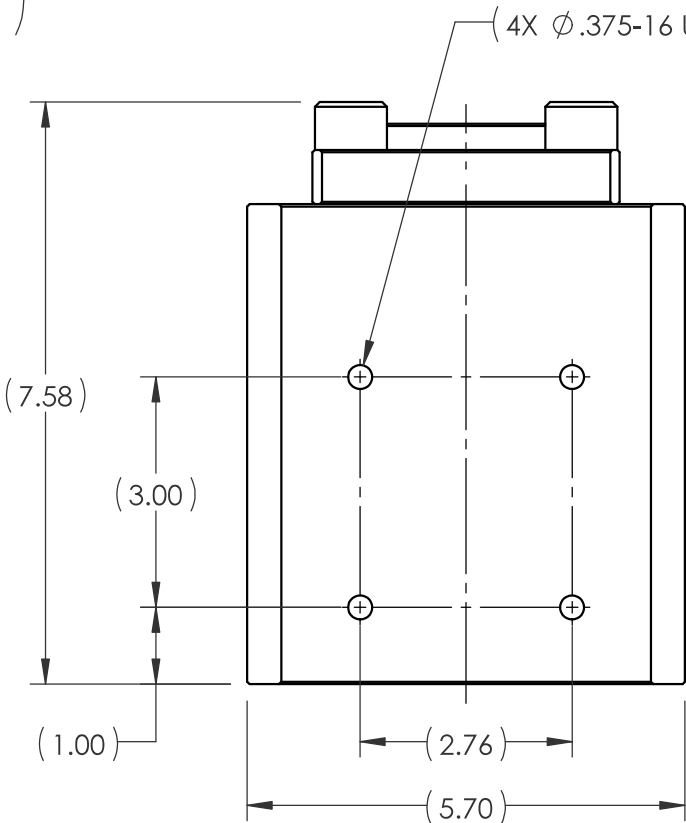
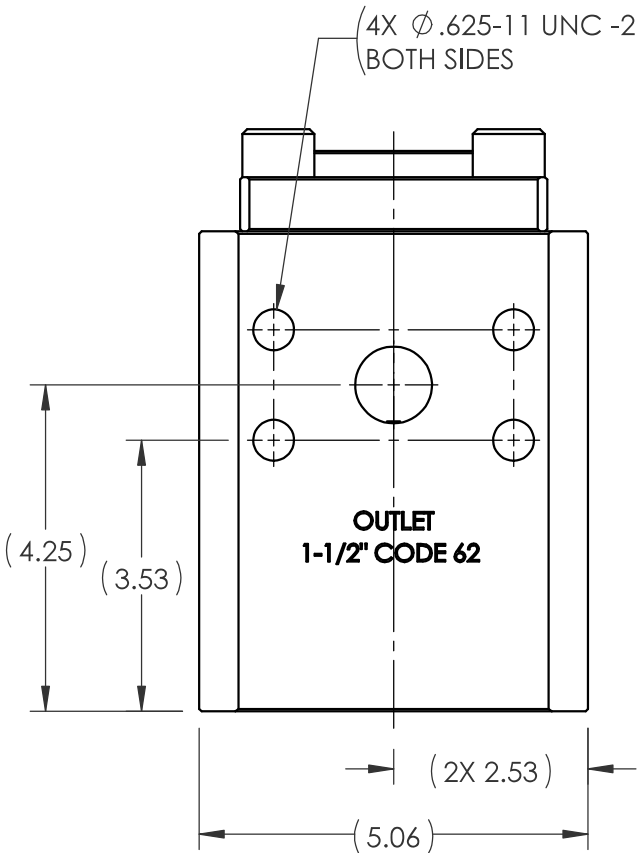
APPROX WEIGHT: 49.7 LBS  
TEMPERATURE RANGE: +32 °F TO +150 °F

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

FIELD SERVICEABLE

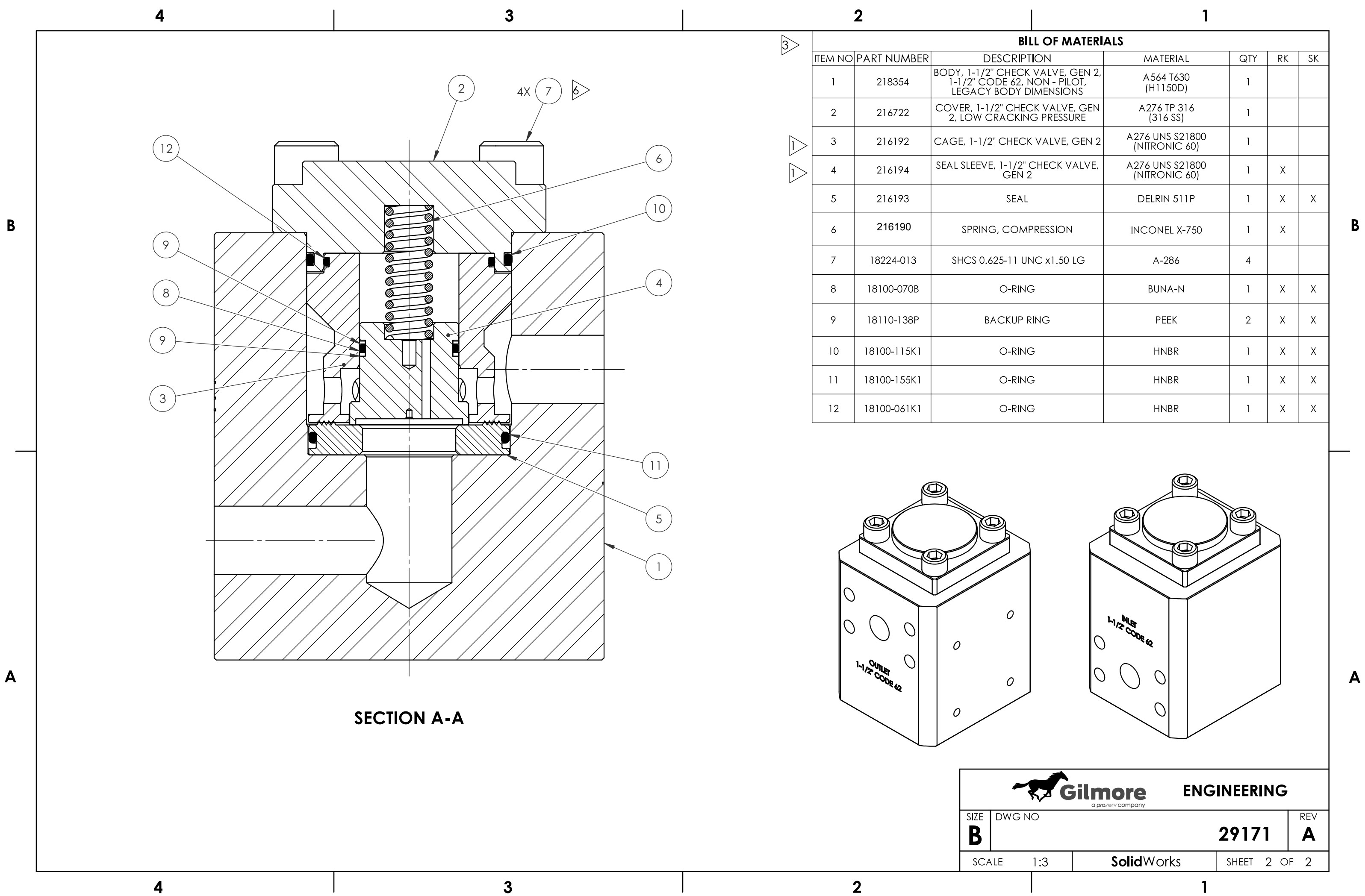


SCHEMATIC

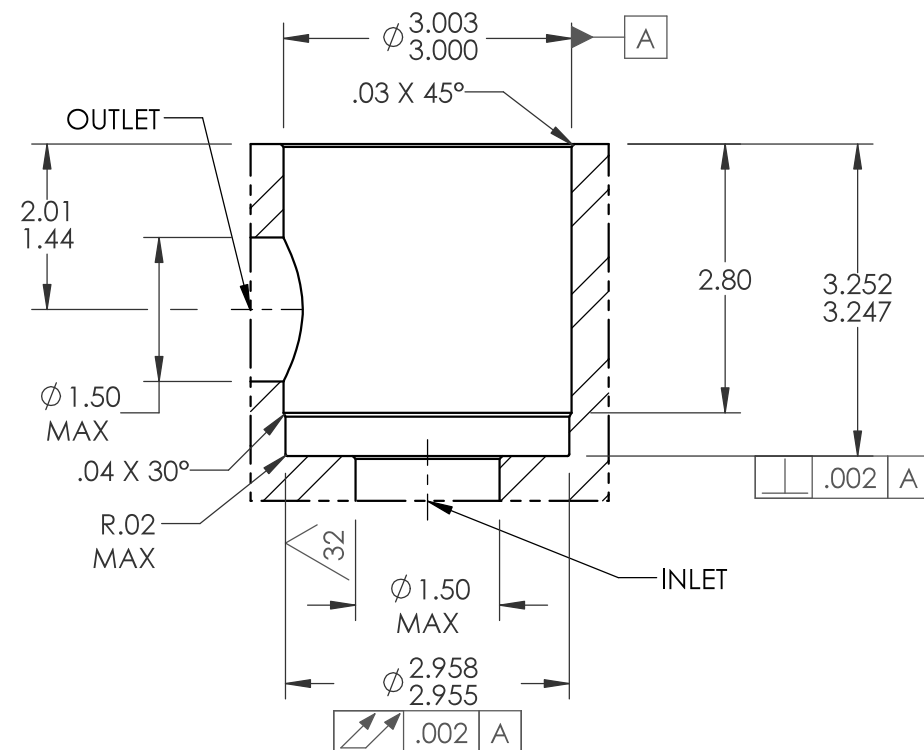


PATENT PENDING

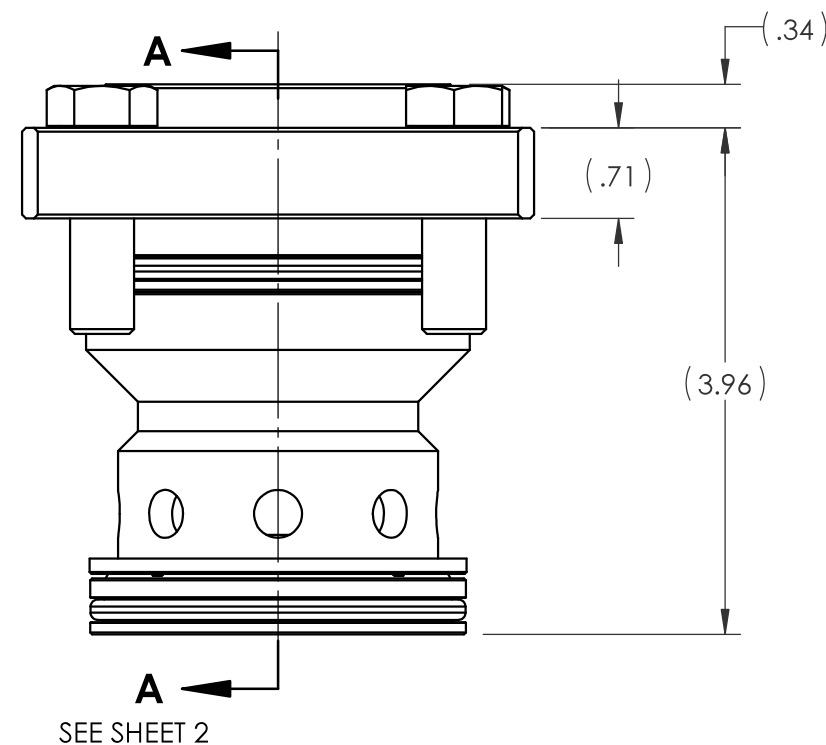
MATERIAL: SEE PARTS IN BOM		DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED: 1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5° 2) SURFACE TEXTURE: 63/√		APPROVAL DRAWN BY JZ DATE 4/27/21 CHECKED BY Cmf DATE 4-27-21 ENGINEER AGP DATE 4/28/21 ERN NUMBER 02466 DATE 3/20/21		Gilmore ENGINEERING a praxair company		
CONDITION:		3) CORADIAL FEATURES SHALL BE .010 WITHIN .010 4) BREAK SHARP EDGES .010 5) INTERNAL RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°		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.		VALVE, 1-1/2" CHECK, GEN 2, 1-1/2" CODE 62, NON-PILOT, LOW CRACKING, LEGACY BODY DIMENSION		
TREATMENT:	3					SIZE B	DWG NO	REV A
PROCEDURE NUMBER:	5					SCALE 1:3	SolidWorks	SHEET 1 OF 2



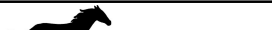


6 ▷ LOCTITE 242 (BLUE) AND TORQUED ITEM 11 CAPSCREWS TO 50 FT-LB



MARK WITH LOGO  
AND COMPANY  
INFORMATION



**PATENT PENDING**

MATERIAL: SEE PARTS IN BOM		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 RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED. ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	APPROVAL		 <b>ENGINEERING</b> <small>a praxair company</small>		
CONDITION:			DRAWN BY <i>JZ</i>	DATE 4/27/21	<b>VALVE, 1-1/2" CHECK, GEN 2, CARTRIDGE, LOW CRACKING, LEGACY BOLT PATTERN</b>		
			CHECKED BY <i>Cmf</i>	DATE 4-27-21			
			ENGINEER <i>AGP</i>	DATE 4/28/21			
TREATMENT:		ERN NUMBER <i>02466</i>	DATE 3/22/21	SIZE	DWG NO	REV	
PROCEDURE NUMBER:		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			<b>B</b>	<b>29172</b>	<b>A</b>
					SCALE 1:3	<b>SolidWorks</b>	SHEET 1 OF 2

1



**A**

A technical drawing of a square flange assembly. The top view shows a square plate with a central circular feature. Four hexagonal bolts are positioned around the central circle, one on each side. The side view shows the flange mounted on a cylindrical base. The base has a flange with four circular holes. The drawing is a black and white line drawing with no shading.

 <b>Gilmore</b> <small>a praxair company</small>						<b>ENGINEERING</b>					
SIZE <b>B</b>	DWG NO								<b>29172</b>		REV <b>A</b>
SCALE      1:3				<b>SolidWorks</b>				SHEET    2   OF    2			

4

3

2

1

NOTES:

- 1
- MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON THE COMPONENT DRAWING
- 2
- MARKING: MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 3
- ALL METAL ITEMS ARE PASSIVATED
- 4
- 'X' IN THE BOM DEPICTS PARTS IN REPAIR KIT 29173 RK AND SEAL KIT 29173 SK.
- 5
- FOR ASSEMBLY PROCEDURE SEE 50335, FOR STANDARD FAT PROCEDURE SEE 50336, FOR EXTENDED FAT PROCEDURE SEE 50337, FOR MAINTENANCE MANUAL SEE 51034.
- 6
- LOCTITE 242 (BLUE) AND TORQUED ITEM 7 CAPSCREWS TO 100 FT-LB

PRESSURE DATA

MAXIMUM SUPPLY PRESSURE: 5,000 PSI  
CRACKING PRESSURE: 40 PSI ± 10 PSI

FLOW DATA

MAX FLOW CAPACITY: 200 GPM  
CV (CALC): 9

CONNECTION

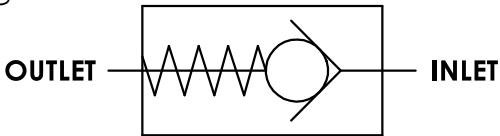
INLET: 1" NPTF  
OUTLET: 1" NPTF

REVISIONS

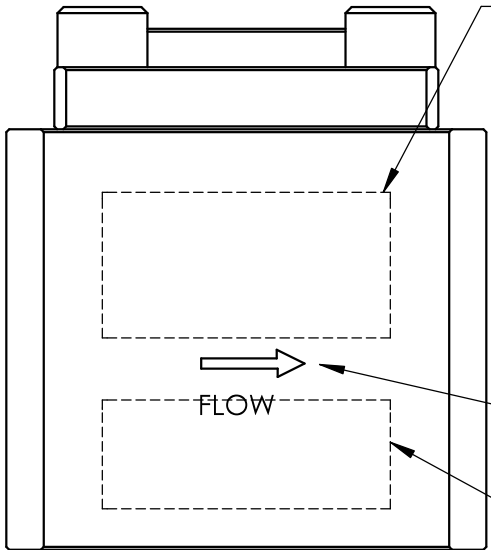
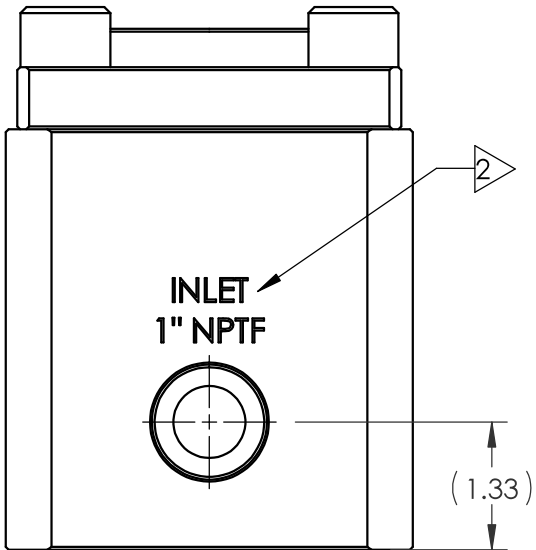
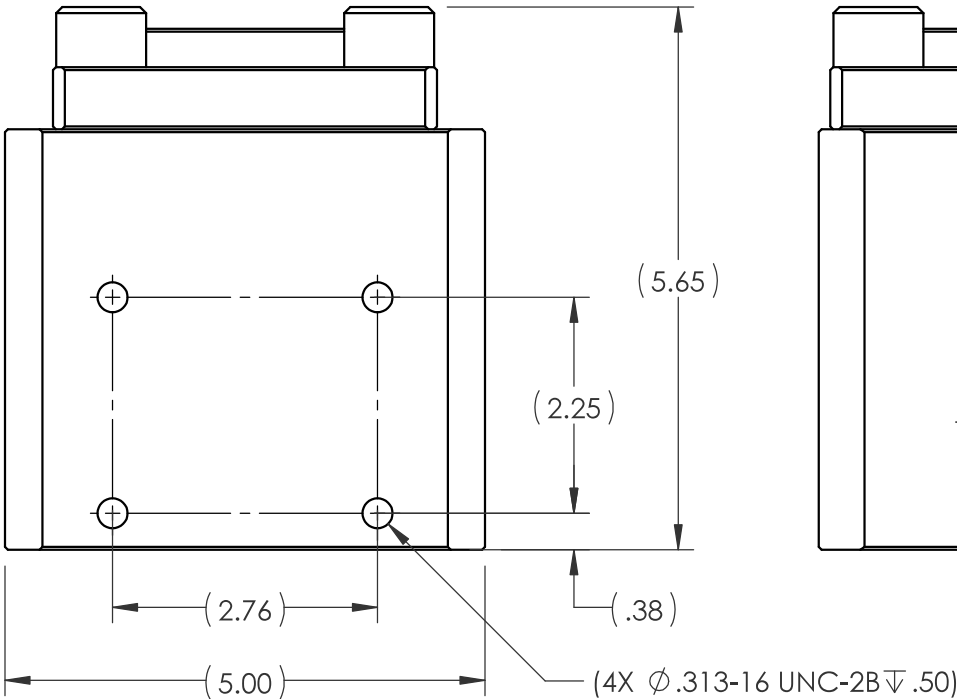
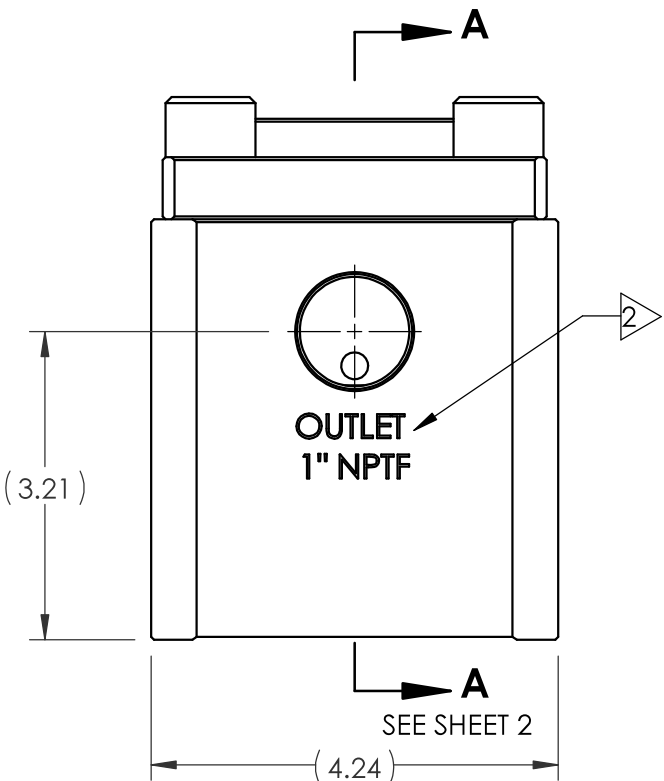
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
A	ERN 02453	JZ 4/5/21	Cmf 4-6-21	AJP 4/5/21

GENERAL DATA

APPROX WEIGHT: 28.0 LBS  
TEMPERATURE RANGE: +32 °F TO +150 °F  
FLUIDS: - WATER BASED DRILLING CONTROL FLUID.  
- MINERAL OIL BASED DRILLING CONTROL FLUID.  
FIELD SERVICEABLE



SCHEMATIC



29173  
VER (AX VERSION #)  
(SERIAL NUMBER)  
5,000 PSI  
PATENT PENDING  
(DATE OF MFG)

SEE SHOP TRAVELER  
FOR ADDITIONAL  
INFO REQUIRED

MARK WITH ARROW  
AND TEXT "FLOW"

MARK WITH  
LOGO AND  
COMPANY  
INFORMATION  
OPPOSITE SIDE  
FROM P/N

PATENT PENDING

MATERIAL:  
SEE PARTS IN BOM

CONDITION:

TREATMENT:

PROCEDURE NUMBER:

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 RADII SHALL BE .016 MAX

6) DRILL POINTS OPTIONAL WHEN SHOWN  
UNSPECIFIED, ALL DRILL POINT ANGLES  
SHALL BE BETWEEN 90°-140°

APPROVAL

DRAWN BY	JZ	DATE	4/5/21
CHECKED BY	Cmf	DATE	4-6-21
ENGINEER	AJP	DATE	4/5/21
ERN NUMBER	02453	DATE	3/22/21

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.



ENGINEERING

VALVE, 1" CHECK, GEN 2, 1" NPTF,  
NON-PILOT, LOW CRACKING,  
LEGACY BODY DIMENSIONS

SIZE  
B

DWG NO

29173

REV  
A

SCALE 1:2

SolidWorks

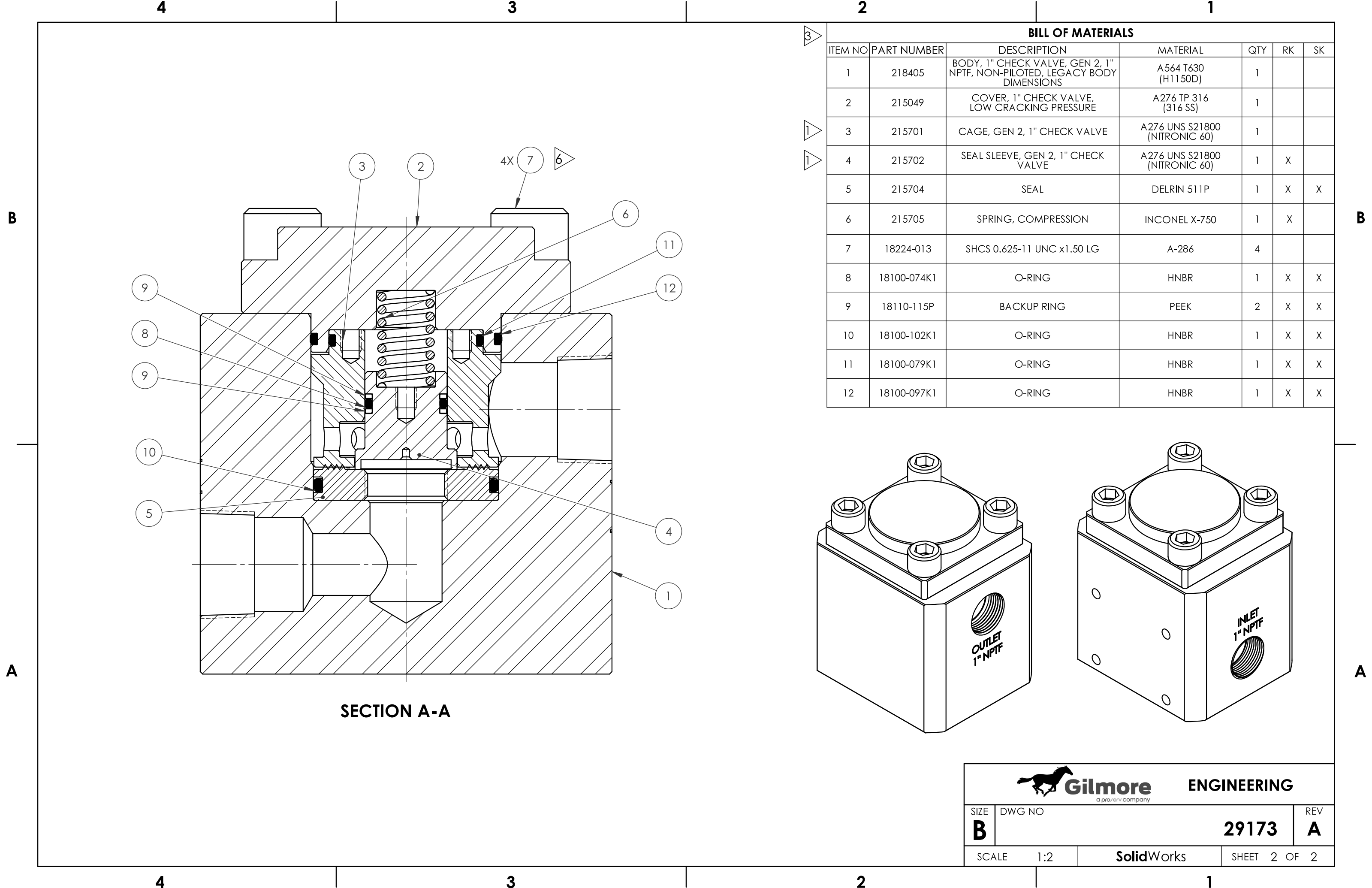
SHEET 1 OF 2

4

3

2

1



BILL OF MATERIALS						
ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	218405	BODY, 1" CHECK VALVE, GEN 2, 1" NPTF, NON-PILOTED, LEGACY BODY DIMENSIONS	A564 T630 (H1150D)	1		
2	215049	COVER, 1" CHECK VALVE, LOW CRACKING PRESSURE	A276 TP 316 (316 SS)	1		
3	215701	CAGE, GEN 2, 1" CHECK VALVE	A276 UNS S21800 (NITRONIC 60)	1		
4	215702	SEAL SLEEVE, GEN 2, 1" CHECK VALVE	A276 UNS S21800 (NITRONIC 60)	1	X	
5	215704	SEAL	DELRIN 511P	1	X	X
6	215705	SPRING, COMPRESSION	INCONEL X-750	1	X	
7	18224-013	SHCS 0.625-11 UNC x1.50 LG	A-286	4		
8	18100-074K1	O-RING	HNBR	1	X	X
9	18110-115P	BACKUP RING	PEEK	2	X	X
10	18100-102K1	O-RING	HNBR	1	X	X
11	18100-079K1	O-RING	HNBR	1	X	X
12	18100-097K1	O-RING	HNBR	1	X	X



ENGINEERING

SIZE	DWG NO	REV
<b>B</b>	<b>29173</b>	<b>A</b>
SCALE	1:2	SHEET 2 OF 2
SolidWorks		

4

3

2

1

NOTES:

- 1
- MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON THE COMPONENT DRAWING
- 2
- MARKING: MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 3
- ALL METAL ITEMS ARE PASSIVATED
- 4
- 'X' IN THE BOM DEPICTS PARTS IN REPAIR KIT 29175 RK AND SEAL KIT 29175 SK.
- 5
- FOR ASSEMBLY PROCEDURE SEE 50335, FOR STANDARD FAT PROCEDURE SEE 50336, FOR EXTENDED FAT PROCEDURE SEE 50337, FOR MAINTENANCE MANUAL SEE 51034.
- 6
- LOCTITE 242 (BLUE) AND TORQUED ITEM 9 CAPSCREWS TO 100 FT-LB
- 7
- TORQUE ITEM 10 CAPSCREWS TO 20 FT-LB

PRESSURE DATA

MAXIMUM SUPPLY PRESSURE: 5,000 PSI  
MAXIMUM PILOT PRESSURE: 5,000 PSI  
CRACKING PRESSURE: 80 PSI ±10 PSI  
PILOT PRESSURE/OUTLET RATIO: 1:4  
PILOT PISTON VENT: EXTERNAL

FLOW DATA

MAX FLOW CAPACITY: 200 GPM  
CV (CALV): 9

CONNECTION

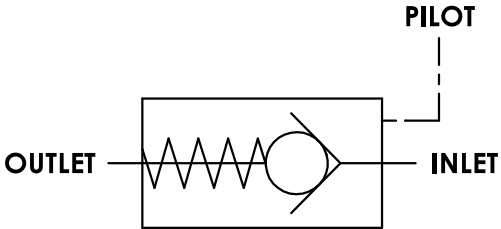
INLET: 1" SAE  
OUTLET: 1" SAE  
PILOT: 3/8" SAE

GENERAL DATA

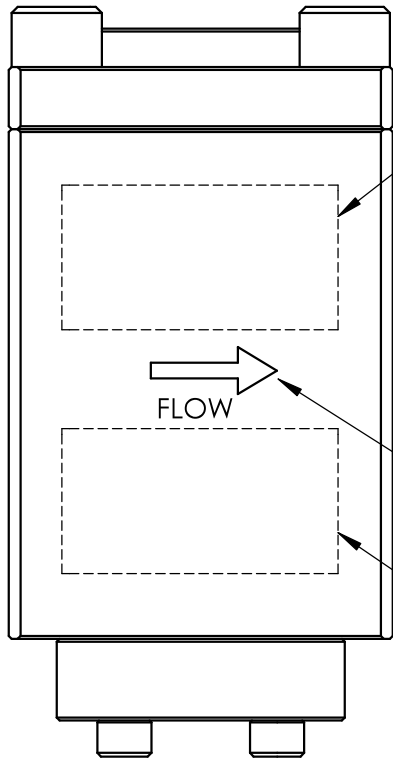
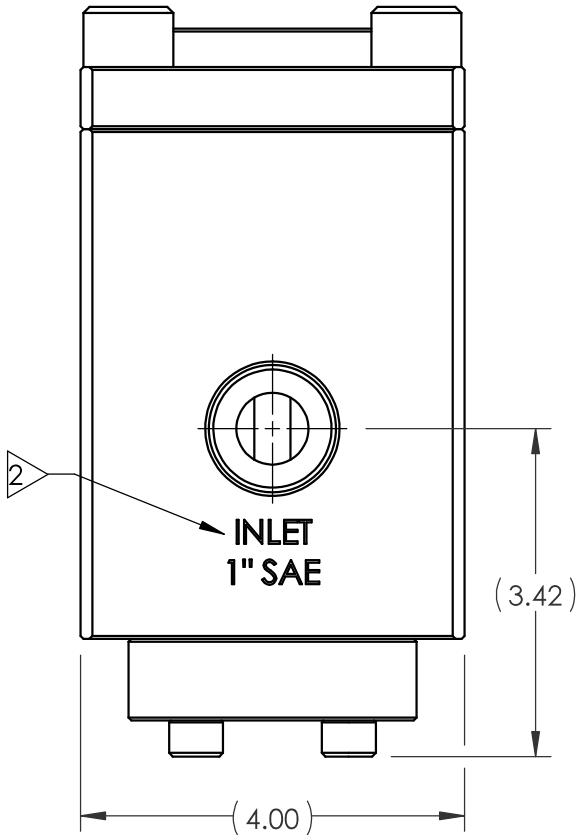
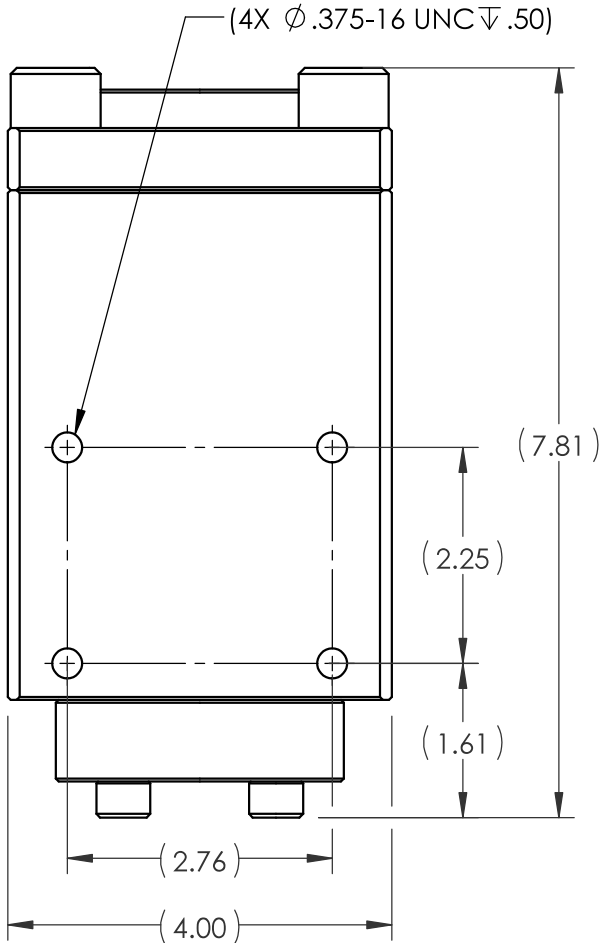
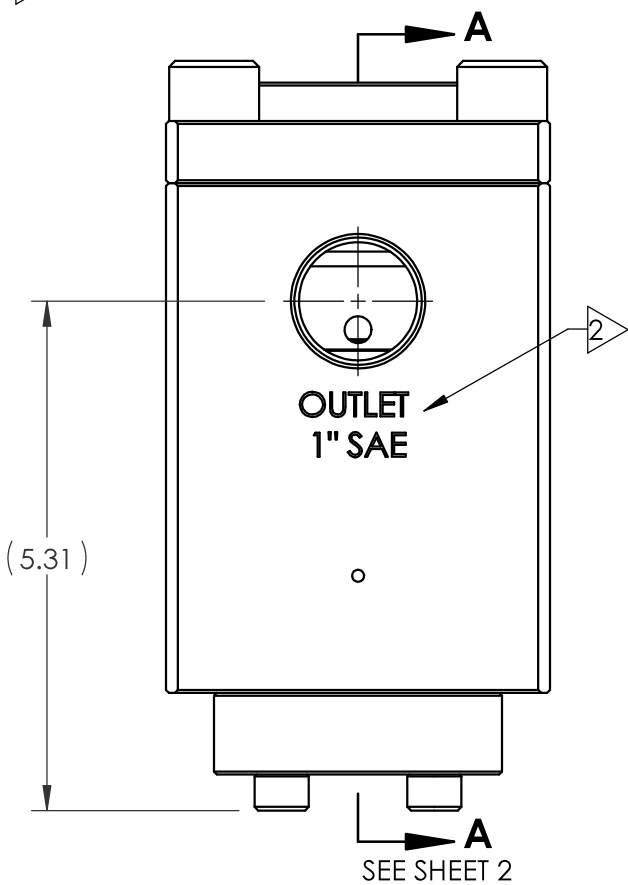
APPROX WEIGHT: 27.5 LBS  
TEMPERATURE RANGE: +32 °F TO +150 °F  
FLUIDS: - WATER BASED DRILLING CONTROL FLUID.  
- MINERAL OIL BASED DRILLING CONTROL FLUID.  
FIELD SERVICEABLE

REVISIONS

REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
A	ERN 02453	JZ 4/5/21	CMCf 4-6-21	AQP 4/5/21



SCHEMATIC



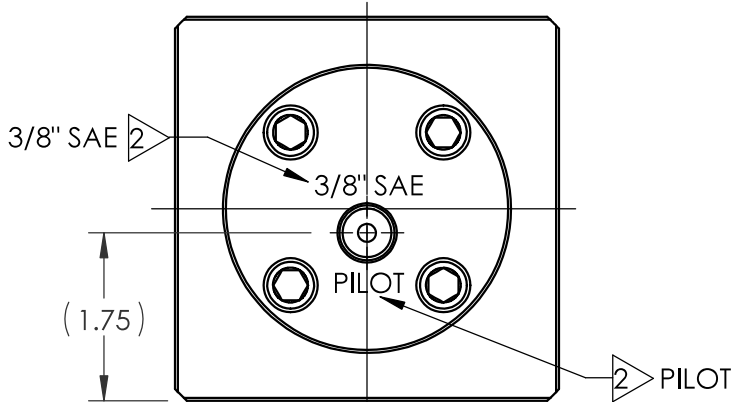
29175  
VER (AX VERSION #)  
(SERIAL NUMBER)  
5,000 PSI  
PATENT PENDING  
(DATE OF MFG)

SEE SHOP TRAVELER  
FOR ADDITIONAL  
INFO REQUIRED


MARK WITH  
ARROW AND  
TEXT "FLOW"

MARK WITH  
LOGO AND  
COMPANY  
INFORMATION  
OPPOSITE SIDE  
FROM P/N

SEE SHEET 2



PATENT PENDING

MATERIAL: SEE PARTS IN BOM		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 RADII SHALL BE .016 MAX 6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°		APPROVAL		 <b>VALVE, 1" CHECK, GEN 2, PILOT OPERATED, 1" SAE, EXT PISTON VENT, STD CRACKING</b>			
CONDITION:				DRAWN BY JZ	DATE 4/5/21				
TREATMENT: <div>3</div>				CHECKED BY CMCf	DATE 4-6-21				
				ENGINEER AQP	DATE 4/5/21				
PROCEDURE NUMBER: <div>5</div>				ERN NUMBER 02453	DATE 3/23/21	SIZE B	DWG NO	REV A	
				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.		SCALE 1:2		SolidWorks	SHEET 1 OF 2

