

**1" GEN 2 V-Seal Shuttle Valve**

REV	DATE	DESCRIPTION	ORIGIN (issued by)	APPROVED
001	03-21-2018	Document No: 120-032118-001	AP	SS
002	07-24-2019	Document No: 120-032118-002	AP	SS
003	11-01-2019	Document No: 120-032118-003	CM	BR
004	12-16-2020	Document No: 120-032118-004	SD	BR

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**For more information: Call**  
**(800) 469-8786**  
Info@gilmore.com

Gilmore  
1231 Lumpkin Road  
Houston, TX 77043

## 1" GEN 2 V-Seal Shuttle Valve

Gilmore announces the new 1" GEN2 V-Seal Shuttle Valve for critical offshore and subsea applications. The soft-seated 1" GEN2 Shuttle Valve is designed with the same footprint as the legacy Traditional Shuttle Valves for effortless retrofits. Gilmore's new proprietary dynamic V-Seal technology provides an order of magnitude improvement in cycle life.

### Features and Benefits:

- Qualification exceeds API 16D requirements
  - Two separate 2500 cycle tests at maximum flow conditions
- New V-Seal and hydraulic dampening technology which does not feather or extrude to improve cycle life
- Corrosion Resistant Materials for subsea applications:
  - T316 Body, Nitronic 60 Shuttle, Sleeve and Cap
  - PEEK Spacer and PTFE/Nitrile 90 Duro V-Seal
  - A286 Cap Screws with 254 SMO Nordlock Washers
- Designed and tested to meet demands of 5 year maintenance free service under normal operating conditions
- Field Repairable
- U.S. Patent 9,719,600

Figure 1. PN 29042: 1" NPT GEN 2 V-Seal Shuttle Valve, 5000 psi, Low interflow

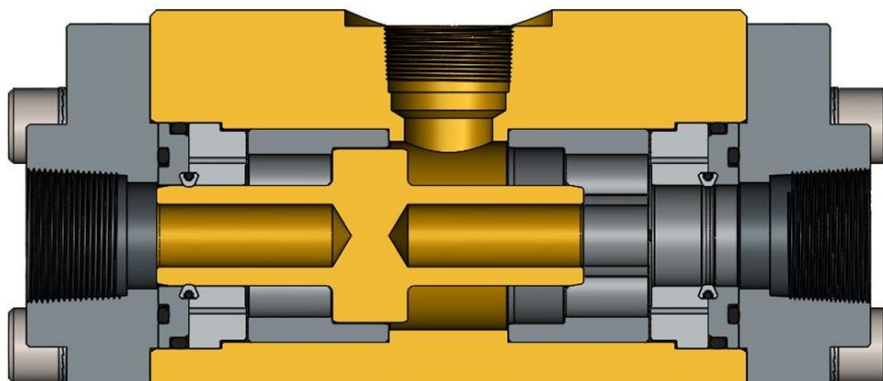
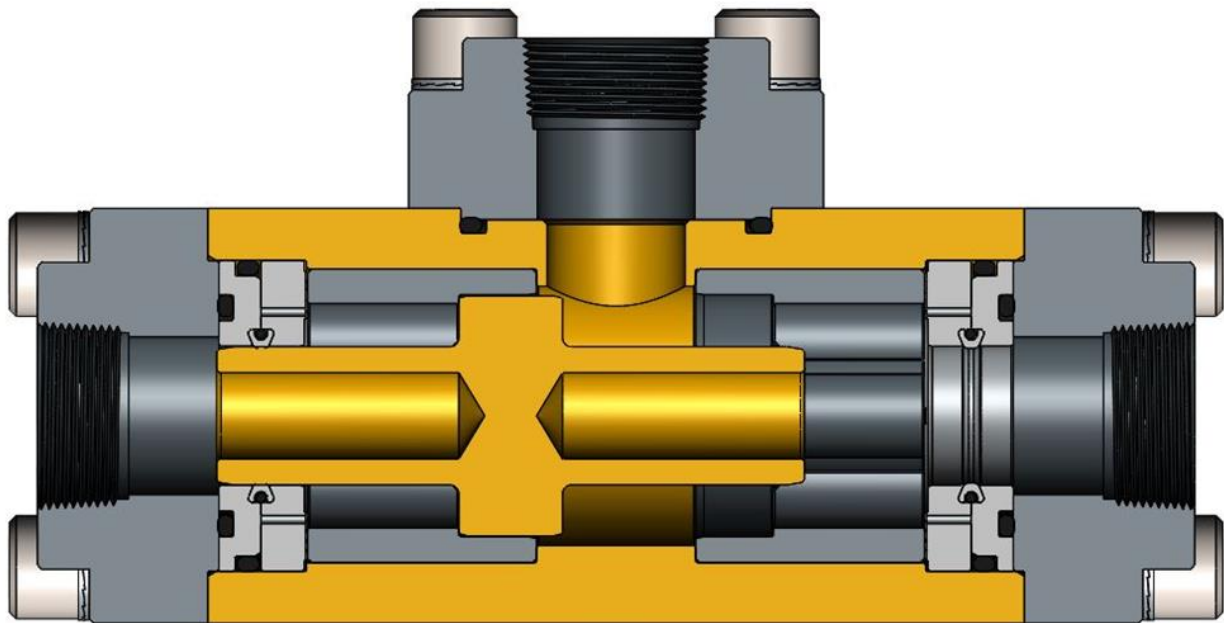


Figure 2. PN 29041: 1" NPT GEN 2 V-Seal Shuttle Valve, 3000 psi, High Interflow



Gilmore has exceeded API 16D requirements by qualifying the new 1" GEN2 V-Seal Shuttle Valve designs to multiple endurance qualification tests to 2500 cycles, at a starting flow rate of 150 gpm at 5000 psi, with 1% - 4% water glycol test fluid.

The new Gilmore 1" GEN2 V-Seal Shuttle Valves have an identical footprint to the legacy valves.

As a result of the new Gilmore 1" GEN2 V-Seal Shuttle Valve product line, please note that sales of the legacy 1" Traditional Shuttle Valve part numbers listed below in Table 1 were discontinued as of March 21, 2019.

The new Gilmore 1" GEN2 V-Seal Shuttle Valve is now available as a replacement for the legacy 1" Traditional Shuttle Valves.

Gilmore will continue to sell and support the legacy 1" shuttle valve repair kits, seal kits and Aftermarket support after new valve sales of the legacy design are discontinued.

**Table 1. New and Legacy 1" V-Seal Shuttle Valve Part Numbers:**

Item	Legacy Description	Legacy Valve PN	Legacy Repair Kit PN	New Valve Description	New Valve PN	New Repair Kit PN
1	Valve, Shuttle, Traditional, 1" NPT, Low Interflow, 3000 psi	25413	25413 RK	Valve, Shuttle, GEN 2, 1" NPT, Low Interflow, 3000 psi	29043	29043 RK
2	Valve, Shuttle, Traditional, 1" NPT, Low Interflow, 3000 psi, Country of Origin material	25413-1	25413-1 RK	Valve, Shuttle, GEN 2, 1" NPT, Low Interflow, 3000 psi	29043	29043 RK
3	Valve, Shuttle, Traditional, 1" NPT, High Interflow, 3000 psi	25429	25429 RK	Valve, Shuttle, GEN 2, 1" NPT, High Interflow, 3000 psi	29041	29041 RK
4	Valve, Shuttle, Traditional, 1" NPT, High Interflow, 5000 psi	25475	25475 RK	Valve, Shuttle, GEN 2, 1" NPT, High Interflow, 5000 psi	29044	29044 RK
5	Valve, Shuttle, Traditional, 1" NPT, Low Interflow, 5000 psi	25476	25476 RK	Valve, Shuttle, GEN 2, 1" NPT, Low Interflow, 5000 psi	29042	29042 RK
6	Valve, Shuttle, Traditional, 1" NPT, High Interflow, N60 Trim, 5000 psi	115396	115518	Valve, Shuttle, GEN 2, 1" NPT, High Interflow, 5000 psi	29044	29044 RK
7	Valve, Shuttle, Traditional, 1" NPT, Low Interflow, N60 Trim, 5000 psi	139907	140249	Valve, Shuttle, GEN 2, 1" NPT, Low Interflow, 5000 psi	29042	29042 RK
8	Valve, Shuttle, Traditional, 1" SAE, Low Interflow, 3000 psi	25427	25427 RK	Valve, Shuttle, GEN 2, 1" SAE in, 1" SAE Out, Low Interflow, 3000 psi	29070	29070 RK
9	Valve, Shuttle, Traditional, 1" SAE, Low Interflow, 3000 psi, Code 62 Outlet	25802	25802 RK	Valve, Shuttle, GEN 2, 1" SAE in, Special 1" SAE C62 Out, Low Interflow, 3000 psi	29071	29071 RK

The following legacy 1" Traditional Shuttle Valves listed in Table 2 were discontinued March 21, 2019. If a new 1" GEN 2 V-Seal Shuttle Valve part number is needed but not listed for a specific legacy part number, please contact Gilmore Customer Service to request a quotation for a new 1" GEN 2 part number.

**Table 2. Legacy Shuttle Valve Part Numbers:**

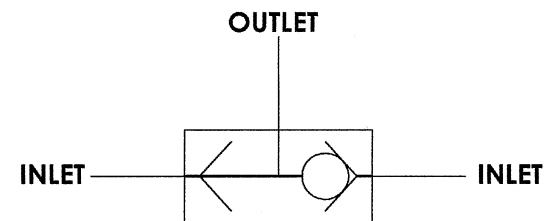
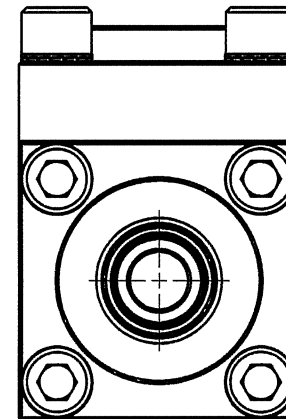
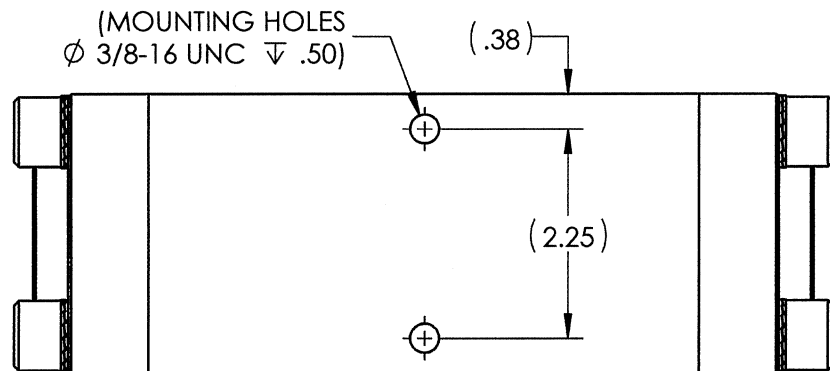
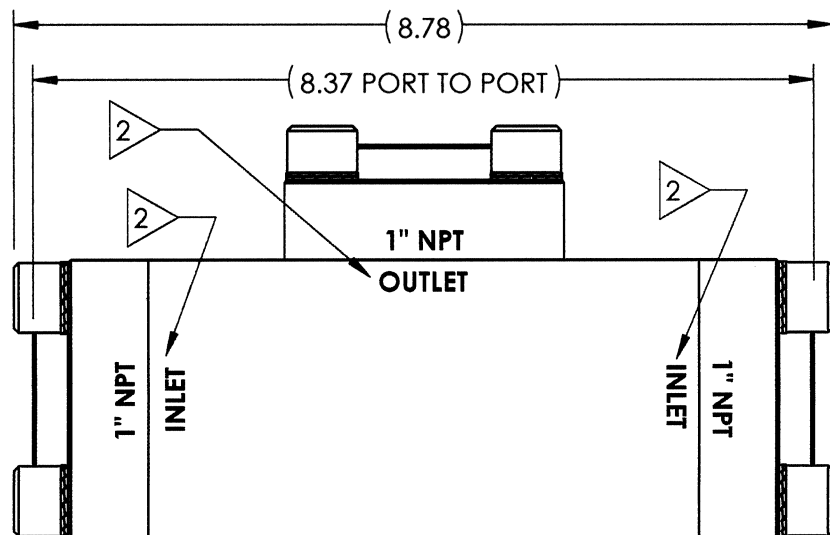
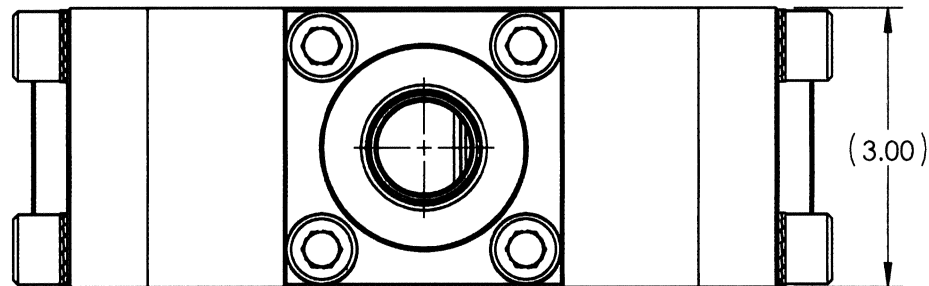
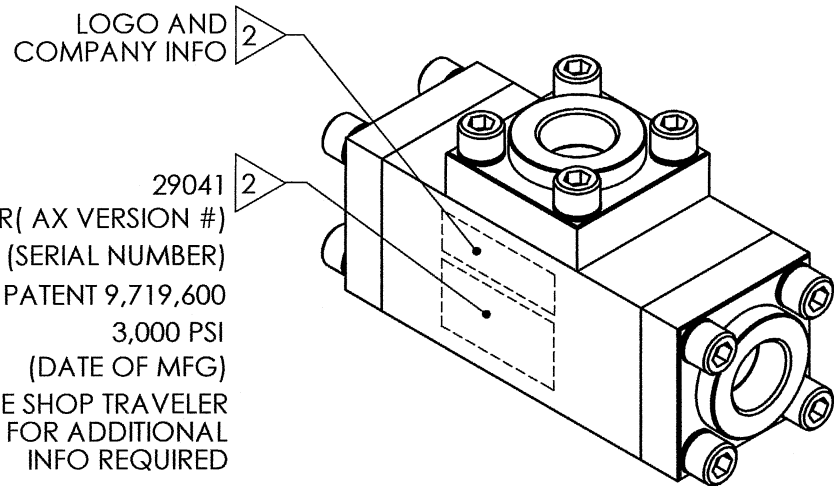
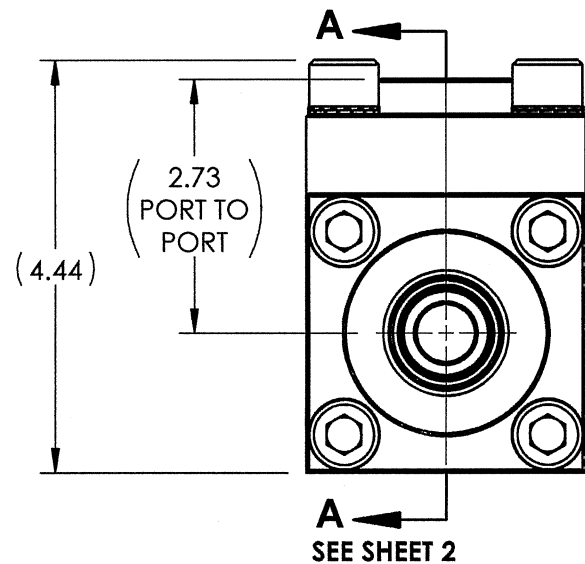
Item	Legacy Description	Legacy Valve PN	Legacy Repair Kit PN	New Valve Description	New Valve PN	New Repair Kit PN
1	Valve, Shuttle, Traditional, 1" Socket Weld, Low Interflow, 5000 psi	28337	28337 RK	N/A	N/A	N/A



Please contact Gilmore Customer Service to request drawings and quotations for these 1" GEN 2 V-Seal Shuttle Valves at [Info@gilmore.com](mailto:Info@gilmore.com).

NOTES:

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON THE COMPONET DRAWING.
- 2 MARKING: MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
3. "X" IN COLUMN RK DENOTES PARTS CONTAINED IN REPAIR KIT 29041 RK.
4. "X" IN COLUMN RK DENOTES PARTS CONTAINED IN SEAL KIT 29041 SK.
- 5 ALL METAL ITEMS PASSIVATED
- 6 TORQUE ITEM 8 AT ASSEMBLY TO 50 FT-LBS. (12X)
- 7 ASSEMBLY PROCEDURE: 50209  
MAINTENANCE MANUAL: 51021  
STANDARD FAT PROCEDURE: 50210  
EXTENDED FAT PROCEDURE: 50211



SCHEMATIC

U.S. PATENT 9,719,600



REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 011763	JP 1/8/18	JB 1/8/18	AJP 1/9/18

**PRESSURE DATA**  
MAX WORKING PRESSURE: 3,000 PSI

**PORTS**  
INLETS: 1 NPT  
OUTLET: 1 NPT

**FLOW DATA**  
 $C_v$ : 5 (CALCULATED)  
MAX FLOW CAPACITY: 150 GPM  
MINIMUM SHIFT FLOW: 5 GPM

**GENERAL DATA**  
APPROX WEIGHT: 19 LBS  
TEMPERATURE: 32°F TO 150°F  
FLUIDS: - WATER BASED DRILLING CONTROL FLUID.  
- MINERAL OIL BASED DRILLING CONTROL FLUID.  
FIELD SERVICEABLE, REPAIR KITS AVAILABLE  
RECOMMENDED INSTALLED POSTION IS HORIZONTAL CENTERLINE, A VERTICAL CENTERLINE WILL INCREASE MINIMUM SHIFT FLOW REQUIRED AND GRAVITY MAY CAUSE SHUTTLE TO MOVE TO LOWEST POSITION

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		proserv   		
CONDITION:		DRAWN BY CY	DATE 11/10/17	VALVE, SHUTTLE, GEN 2, 1" NPT IN, 1" NPT OUT, 3000 PSI, HIGH INTERFLOW		
TREATMENT:		CHECKED BY JB	DATE 11/10/17			
		ENGINEER AJP	DATE 11/10/17			
	ERN NUMBER 02151	DATE 10-12-17				
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.					
		SIZE B	DWG NO 29041		REV B	
		SCALE 1:2		SolidWorks		SHEET 1 OF 2

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°

4

3

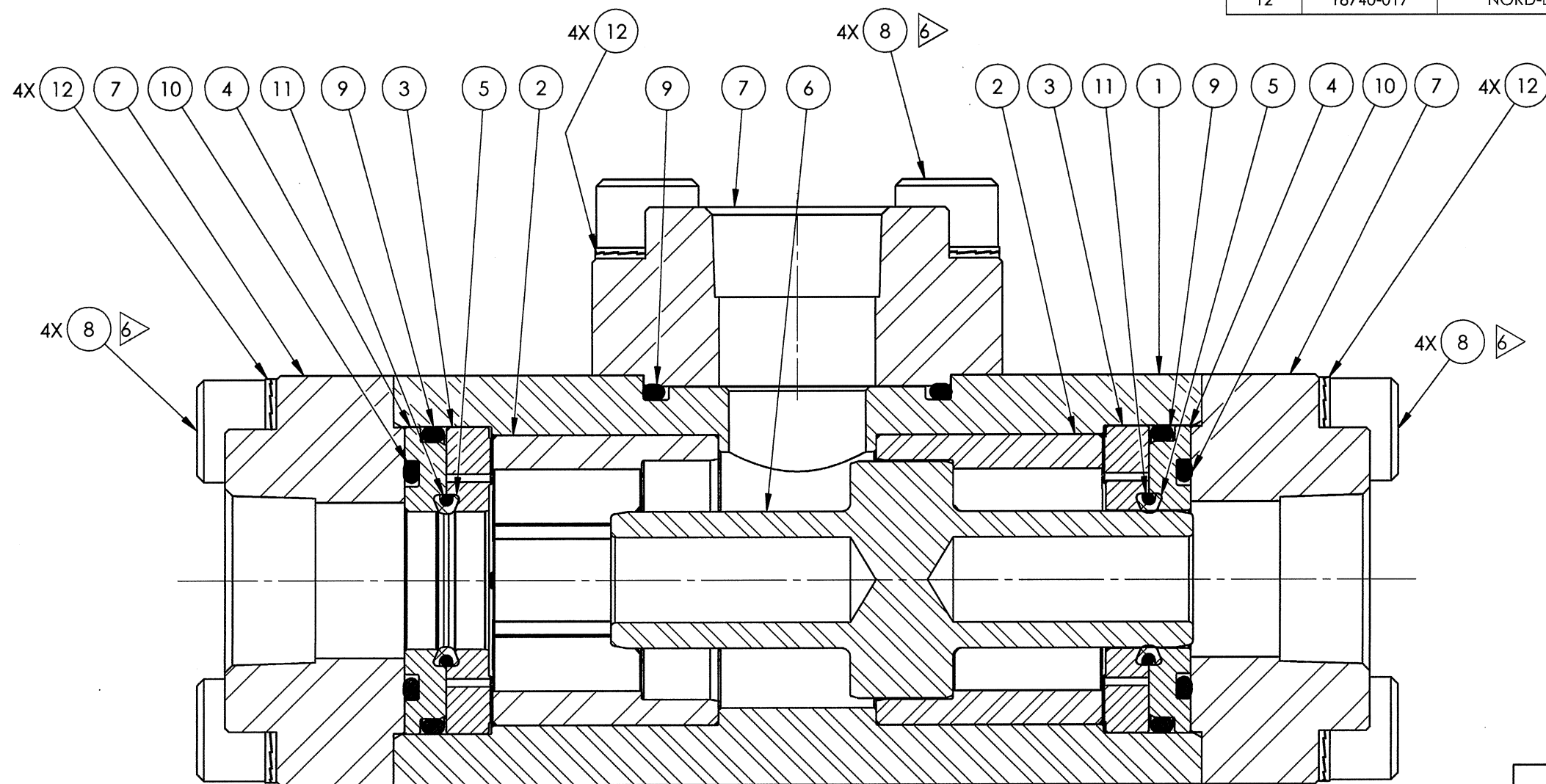
2

1

BILL OF MATERIALS						
ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	165420	BODY	A276 TP 316	1		
2	165422	SLEEVE, HIGH INTERFLOW	A276 S21800 (NITRONIC 60)	2	X	
3	165423	SPACER, HIGH INTERFLOW	POLYETHERETHERKETONE (PEEK)	2	X	
4	165427	CAP	A276 S21800 (NITRONIC 60)	2	X	
5	165426	V SEAL	PTFE MOLDED BAR	2	X	X
6	165425	SHUTTLE	A276 UNS S21800	1	X	
7	165421	FLANGE, 1" NPT	A276 TP 316	3		
8	18224-018	HEX-SHCS 1/2-13 UNC X 1.75 LG	A286 (GR660)	12		
9	18100-102C	O-RING	BUNA-N 90 DURO	3	X	X
10	18100-104C	O-RING	BUNA-N 90 DURO	2	X	X
11	18100-012C	O-RING	BUNA-N 90 DURO	2	X	X
12	18740-017	NORD-LOCK, 1/2", 254 SMO	254 SMO	12		

B

B



A

A

SECTION A-A  
FROM SHEET 1  
SCALE 1 : 1

proserv   			
SIZE <b>B</b>	DWG NO <b>29041</b>	REV <b>B</b>	
SCALE 1:2	SolidWorks	SHEET 2 OF 2	

4

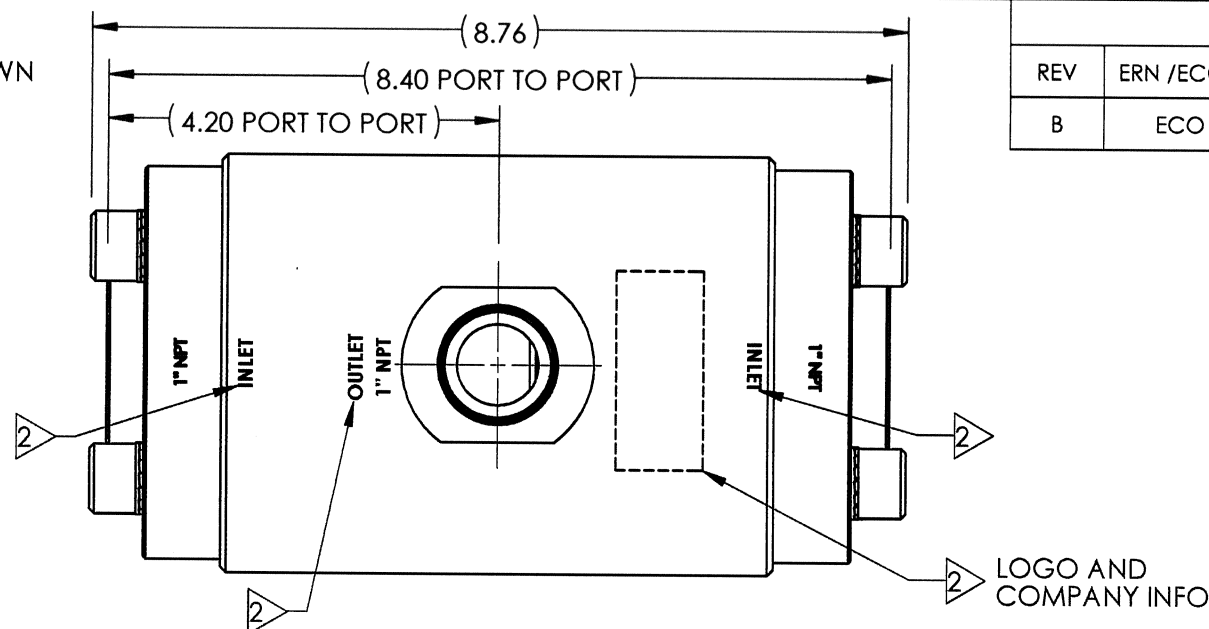
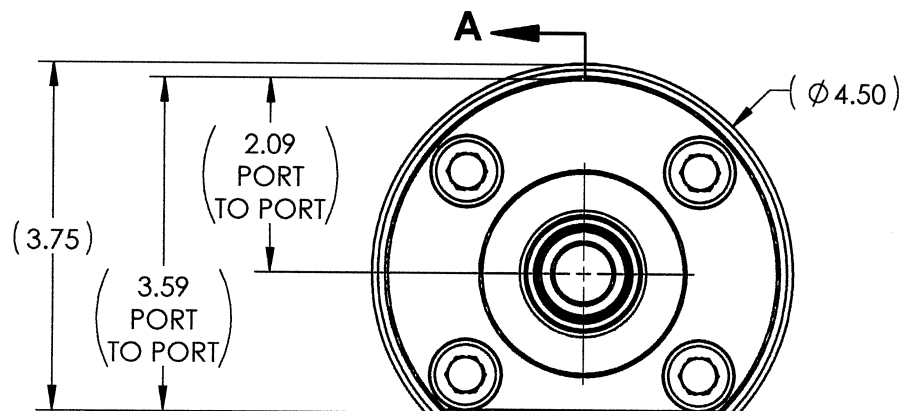
3

2

1

NOTES:

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- MARKING: MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- "X" IN COLUMN RK DENOTES PARTS CONTAINED IN REPAIR KIT 29042 RK.
- "X" IN COLUMN RK DENOTES PARTS CONTAINED IN SEAL KIT 29042 SK.
- ALL METAL ITEMS PASSIVATED
- TORQUE ITEM 8 AT ASSEMBLY TO 50 FT-LBS. (8X)
- ASSEMBLY PROCEDURE: 50209  
MAINTENANCE MANUAL: 51021  
STANDARD FAT PROCEDURE: 50210  
EXTENDED FAT PROCEDURE: 50211



**REVISIONS**

REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 011763	JP 1/8/18	JB 1/8/18	AJP 1/9/18

**PRESSURE DATA**

MAX WORKING PRESSURE: 5,000 PSI

**PORTS**

INLETS: 1" NPT

OUTLET: 1" NPT

**FLOW DATA**

C<sub>v</sub>: 5 (CALCULATED)

MAX FLOW CAPACITY: 150 GPM

MINIMUM SHIFT FLOW: 1 GPM

**GENERAL DATA**

APPROX WEIGHT: 26 LBS

TEMPERATURE: 32°F TO 150°F

FLUIDS: - WATER BASED DRILLING

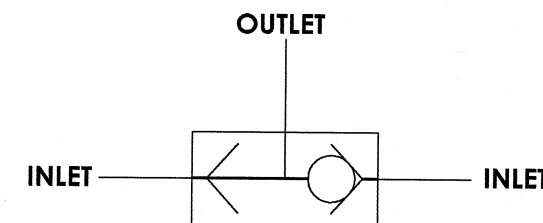
CONTROL FLUID.

- MINERAL OIL BASED DRILLING

CONTROL FLUID.

FIELD SERVICEABLE, REPAIR KIT AVAILABLE

RECOMMENDED INSTALLED POSITION IS HORIZONTAL CENTERLINE, A VERTICAL CENTERLINE WILL INCREASE MINIMUM SHIFT FLOW REQUIRED AND GRAVITY MAY CAUSE SHUTTLE TO MOVE TO LOWEST POSITION



**SCHEMATIC**

**U.S. PATENT 9,719,600**

**proserv** **Gilmore**

**VALVE, SHUTTLE, GEN 2, 1" NPT IN, 1" NPT OUT, 5000 PSI, LOW INTERFLOW**

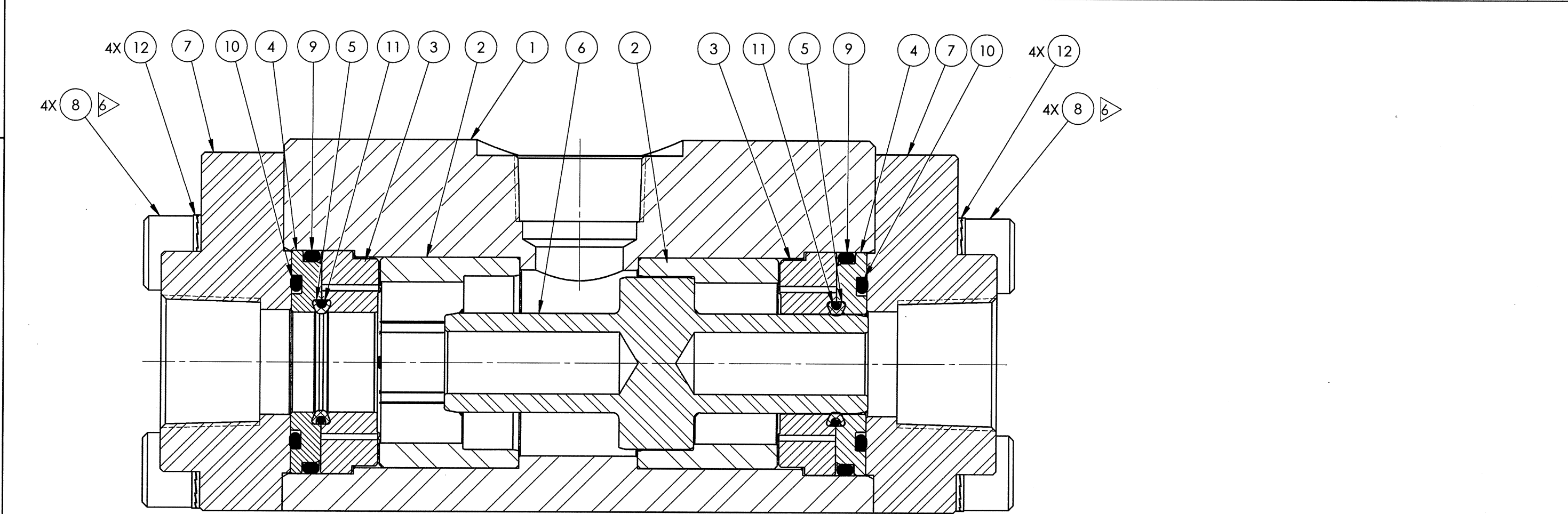
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SCALE 1:2	SolidWorks	SHEET 1 OF 2

APPROVAL		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.
DRAWN BY	DATE	
CY	11/10/17	
CHECKED BY	DATE	
JB	11/10/17	
ENGINEER	DATE	02151 10-12-17
AJP	11/10/17	
ERN NUMBER	DATE	
02151	10-12-17	


MATERIAL: SEE PARTS IN BOM	DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED:
CONDITION:	1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5°
TREATMENT:	2) SURFACE TEXTURE: 63
PROCEDURE NUMBER:	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°



BILL OF MATERIALS						
ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	114917	BODY	A276 TP 316 (316 SS)	1		
2	130500	SLEEVE, LOW INTERFLOW	A276 S21800 (NITRONIC 60)	2	X	
3	130499	SPACER, LOW INTERFLOW	POLYETHERETHERKETONE (PEEK)	2	X	
4	165427	CAP	A276 S21800 (NITRONIC 60)	2	X	
5	165426	V SEAL	PTFE MOLDED BAR	2	X	X
6	165425	SHUTTLE	A276 UNS S21800	1	X	
7	165424	FLANGE, 1" NPT	A276 TP 316	2		
8	18224-018	HEX-SHCS 1/2-13 UNC X 1.75 LG	A286 (GR660)	8		
9	18100-102C	O-RING	BUNA-N 90 DURO	2	X	X
10	18100-104C	O-RING	BUNA-N 90 DURO	2	X	X
11	18100-012C	O-RING	BUNA-N 90 DURO	2	X	X
12	18740-017	NORD-LOCK, 1/2", 254 SMO	254 SMO	8		



SECTION A-A

proserv | 

SIZE  
**B**

DWG NO  
**29042**

REV  
**B**

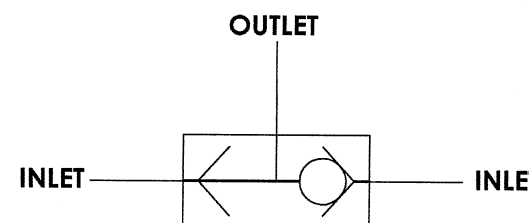
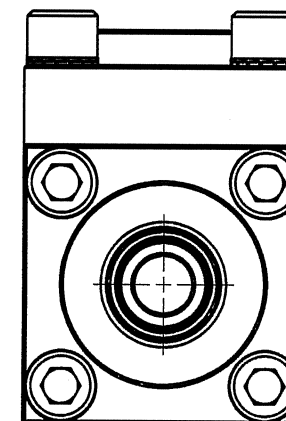
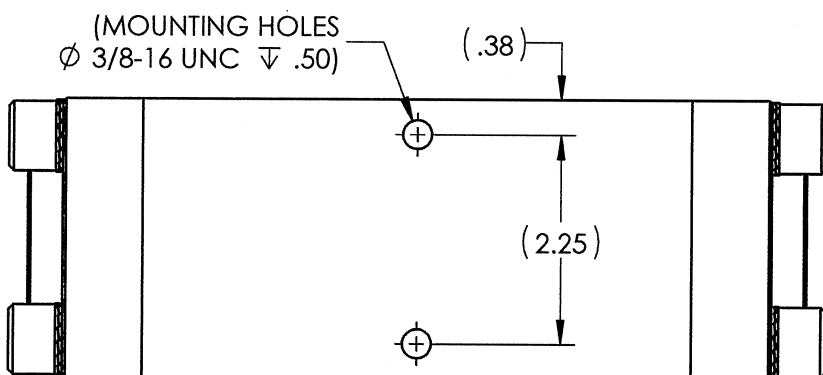
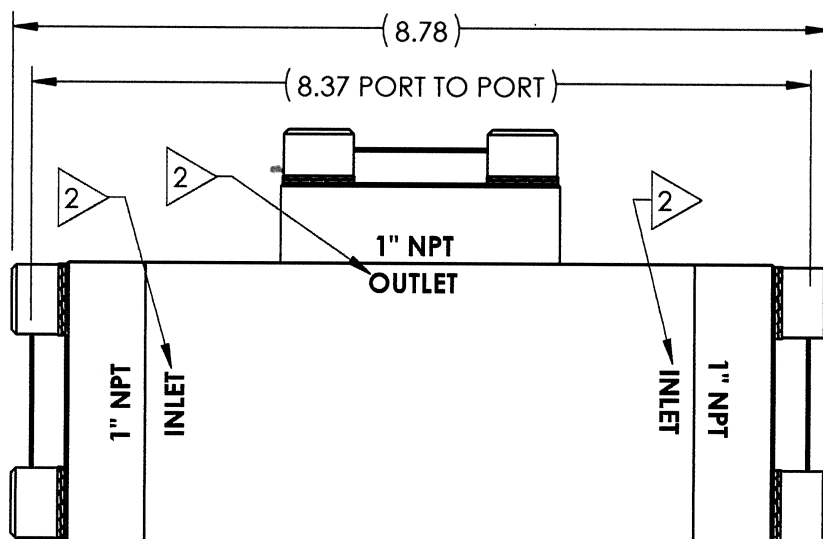
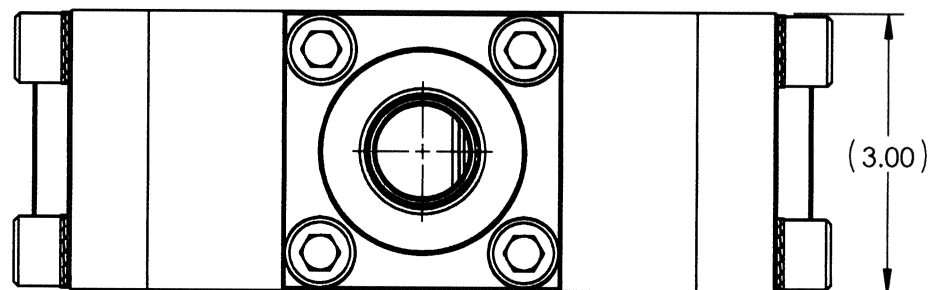
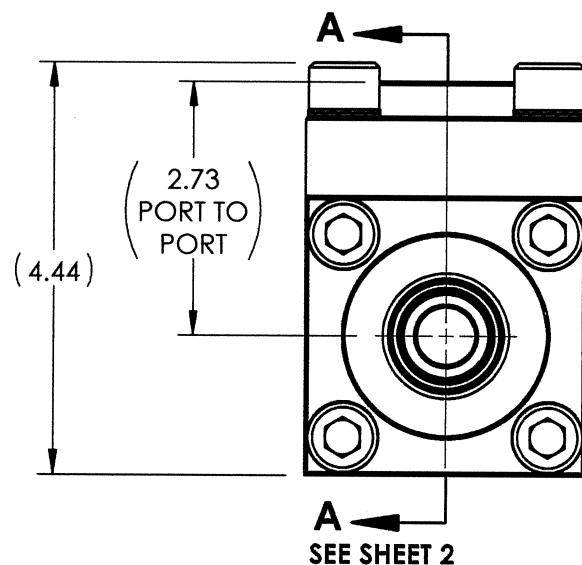
SCALE  
1:1

SolidWorks

SHEET 2 OF 2

NOTES:

- MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON THE COMPONENT DRAWING.
- MARKING: MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- "X" IN COLUMN RK DENOTES PARTS CONTAINED IN REPAIR KIT 29043 RK.
- "X" IN COLUMN RK DENOTES PARTS CONTAINED IN SEAL KIT 29043 SK.
- ALL METAL ITEMS PASSIVATED
- TORQUE ITEM 8 AT ASSEMBLY TO 50 FT-LBS. (12X)
- ASSEMBLY PROCEDURE: 50209  
MAINTENANCE MANUAL: 51021  
STANDARD FAT PROCEDURE: 50210  
EXTENDED FAT PROCEDURE: 50211



SCHEMATIC

U.S. PATENT 9,719,600

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VALVE, SHUTTLE, GEN 2, 1" NPT IN,  
1" NPT OUT, 3000 PSI, LOW  
INTERFLOW

SIZE	DWG NO	REV
B	29043	B
SCALE 1:2	SolidWorks	SHEET 1 OF 2

REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 011763	SP 1/8/18	JB 1/8/18	AJP 1/9/18

PRESSURE DATA

MAX WORKING PRESSURE: 3,000 PSI

PORTS

INLETS: 1 NPT  
OUTLET: 1 NPT

FLOW DATA

C<sub>v</sub>: 5 (CALCULATED)

MAX FLOW CAPACITY: 150 GPM

MINIMUM SHIFT FLOW: 1 GPM

GENERAL DATA

APPROX WEIGHT: 19 LBS

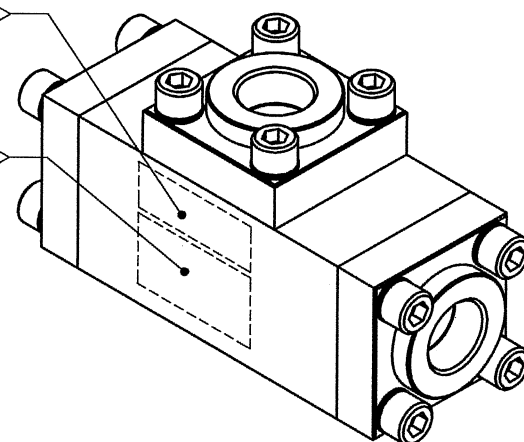
TEMPERATURE: 32°F TO 150°F

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

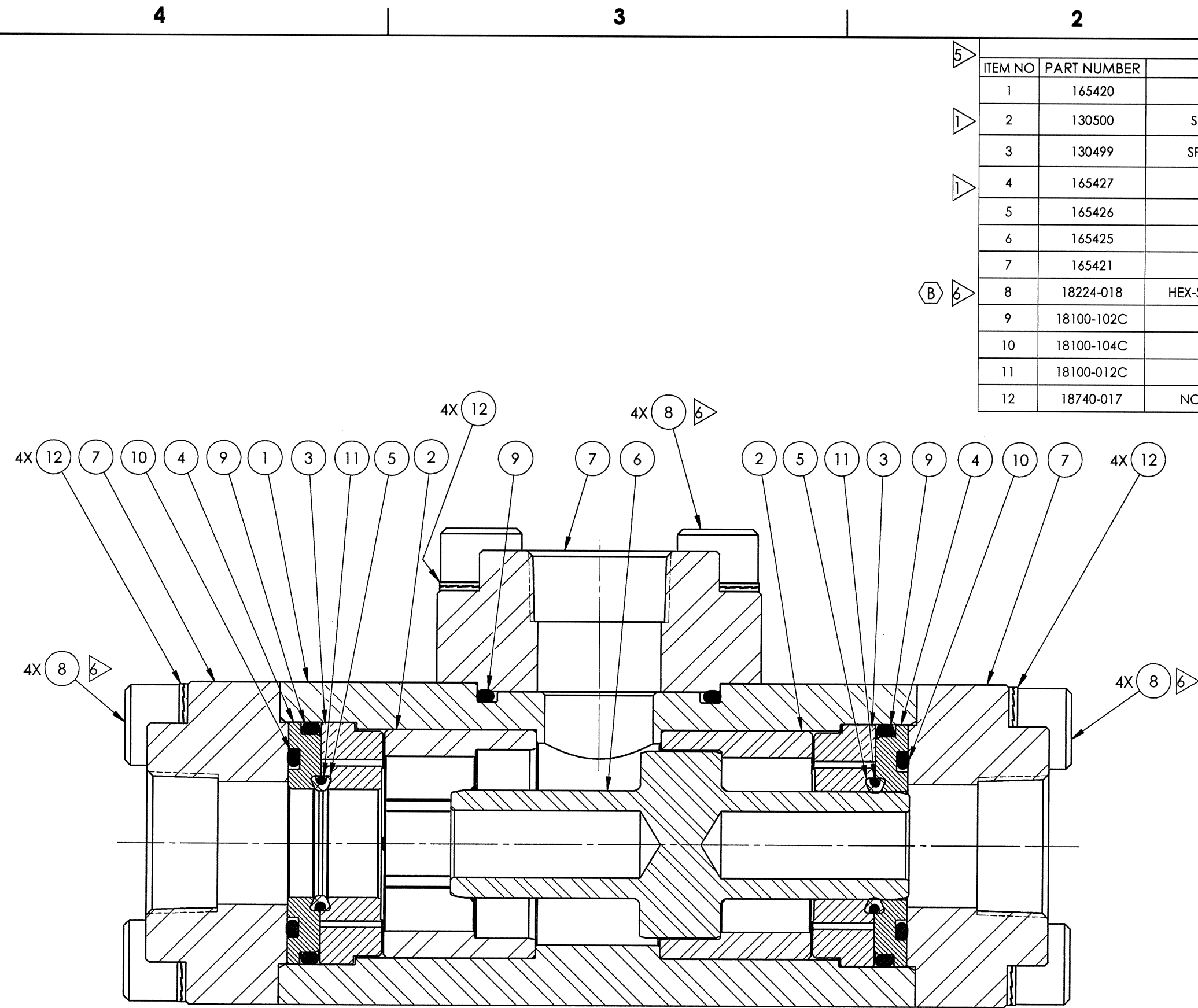
FIELD SERVICEABLE, REPAIR KITS AVAILABLE

RECOMMENDED INSTALLED POSITION IS  
HORIZONTAL CENTERLINE, A VERTICAL  
CENTERLINE WILL INCREASE MINIMUM  
SHIFT FLOW REQUIRED AND GRAVITY MAY  
CAUSE SHUTTLE TO MOVE TO LOWEST  
POSITION

29043  
VER( AX VERSION #)  
(SERIAL NUMBER)  
US PATENT 9,719,600  
3,000 PSI  
(DATE OF MFG)  
SEE SHOP TRAVELER  
FOR ADDITIONAL  
INFO REQUIRED




MATERIAL:		DIMENSIONS AND TOLERANCES ARE IN INCHES PER ASME Y14.5M-1994. UNLESS OTHERWISE SPECIFIED:		APPROVAL	
SEE PARTS IN BOM	CONDITION:	1) TOLERANCES: .X: ±.1 .XX: ±.01 .XXX: ±.005 ANGLES: ±.5°	2) SURFACE TEXTURE: 63	DRAWN BY CY	DATE 11/10/17
TREATMENT:	PROCEDURE NUMBER:	3) CORADIAL FEATURES SHALL BE © WITHIN .010	4) BREAK SHARP EDGES .010	CHECKED BY JB	DATE 11/10/17
		5) INTERNAL RADII SHALL BE .016 MAX	6) DRILL POINTS OPTIONAL WHEN SHOWN UNSPECIFIED, ALL DRILL POINT ANGLES SHALL BE BETWEEN 90°-140°	ENGINEER AJP	DATE 11/10/17
				ERN NUMBER 02151	DATE 10-12-17
				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.	



BILL OF MATERIALS						
ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	165420	BODY	A276 TP 316	1		
2	130500	SLEEVE, LOW INTERFLOW	A276 S21800 (NITRONIC 60)	2	X	
3	130499	SPACER, LOW INTERFLOW	POLYETHERETHERKETONE (PEEK)	2	X	
4	165427	CAP	A276 S21800 (NITRONIC 60)	2	X	
5	165426	V SEAL	PTFE MOLDED BAR	2	X	X
6	165425	SHUTTLE	A276 UNS S21800	1	X	
7	165421	FLANGE, 1" NPT	A276 TP 316	3		
8	18224-018	HEX-SHCS 1/2-13 UNC X 1.75 LG	A286 (GR660)	12		
9	18100-102C	O-RING	BUNA-N 90 DURO	3	X	X
10	18100-104C	O-RING	BUNA-N 90 DURO	2	X	X
11	18100-012C	O-RING	BUNA-N 90 DURO	2	X	X
12	18740-017	NORD-LOCK, 1/2", 254 SMO	254 SMO	12		

SECTION A-A  
FROM SHEET 1  
SCALE 1 : 1

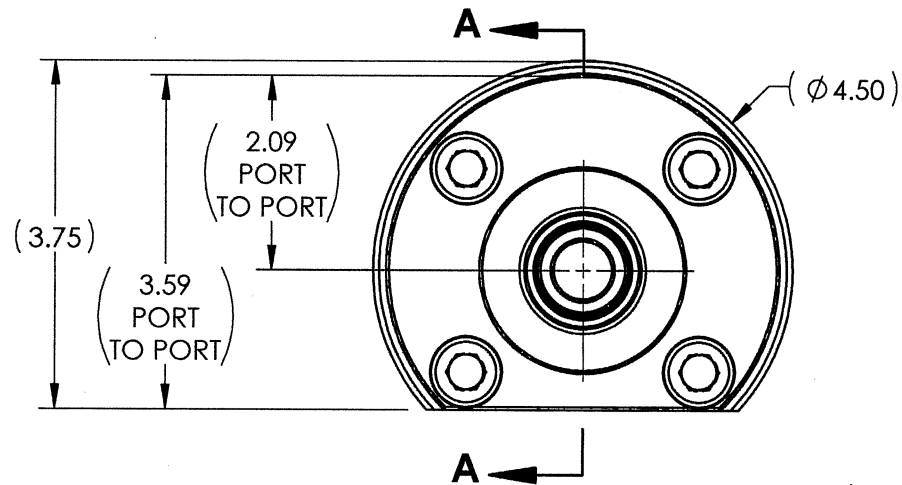
proserv

Gilmore

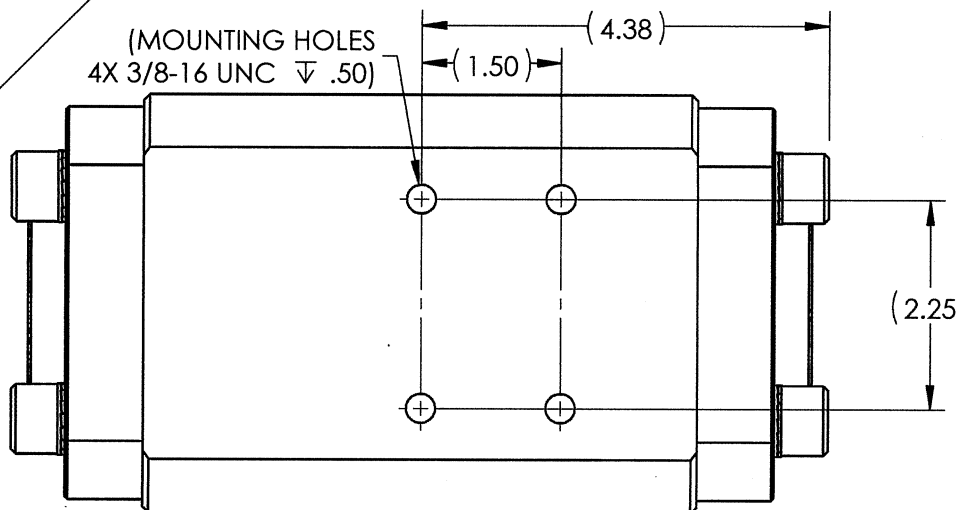
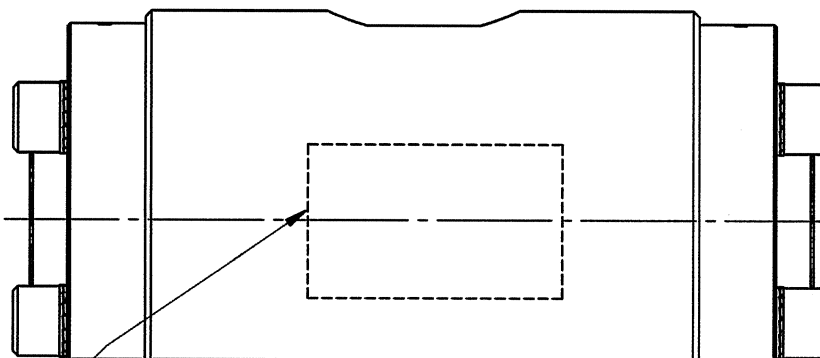
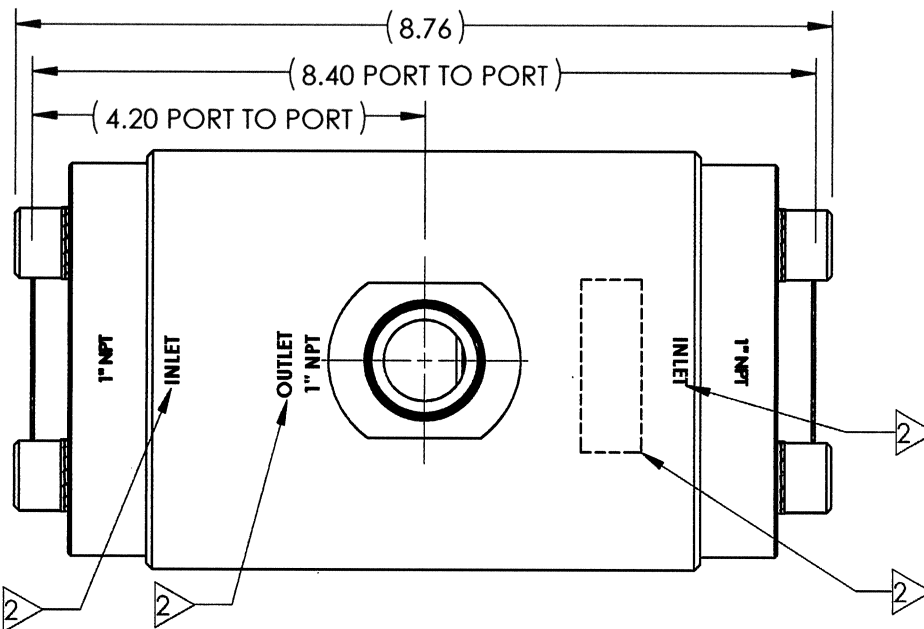
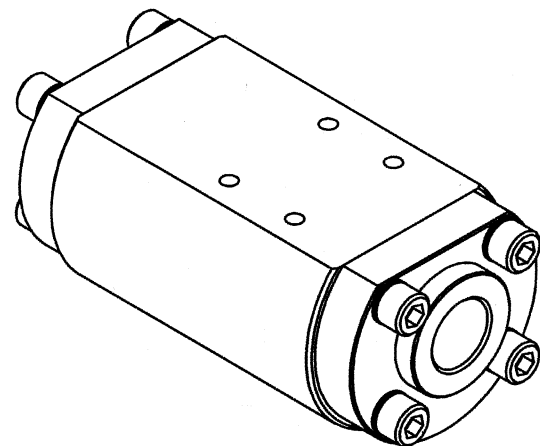
SIZE <b>B</b>	DWG NO <b>29043</b>	REV <b>B</b>
SCALE 1:2	SolidWorks	SHEET 2 OF 2

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 "X" IN COLUMN RK DENOTES PARTS CONTAINED IN REPAIR KIT 29044 RK.
- 4 "X" IN COLUMN RK DENOTES PARTS CONTAINED IN SEAL KIT 29044 SK.
- 5 ALL METAL ITEMS PASSIVATED
- 6 TORQUE ITEM 8 AT ASSEMBLY TO 50 FT-LBS. (8X)
- 7 ASSEMBLY PROCEDURE: 50209  
MAINTENANCE MANUAL: 51021  
STANDARD FAT PROCEDURE: 50210  
EXTENDED FAT PROCEDURE: 50211



29044  
VER (AX VERSION #)  
(SERIAL NUMBER)  
US PATENT 9,719,600  
5,000 PSI  
(DATE OF MFG)  
SEE SHOP TRAVELER  
FOR ADDITIONAL  
INFO REQUIRED



REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 011763	JP 1/8/18	JB 1/8/18	AJP 1/9/18

**PRESSURE DATA**

MAX WORKING PRESSURE: 5,000 PSI

**PORTS**

INLETS: 1" NPT

OUTLET: 1" NPT

**FLOW DATA**

C<sub>v</sub>: 5 (CALCULATED)

MAX FLOW CAPACITY: 150 GPM

MINIMUM SHIFT FLOW: 5 GPM

**GENERAL DATA**

APPROX WEIGHT: 26 LBS

TEMPERATURE: 32°F TO 150°F

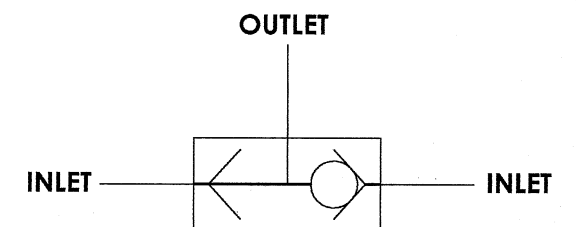
FLUIDS: - WATER BASED DRILLING

CONTROL FLUID.

- MINERAL OIL BASED DRILLING  
CONTROL FLUID.

FIELD SERVICEABLE, REPAIR KIT AVAILABLE

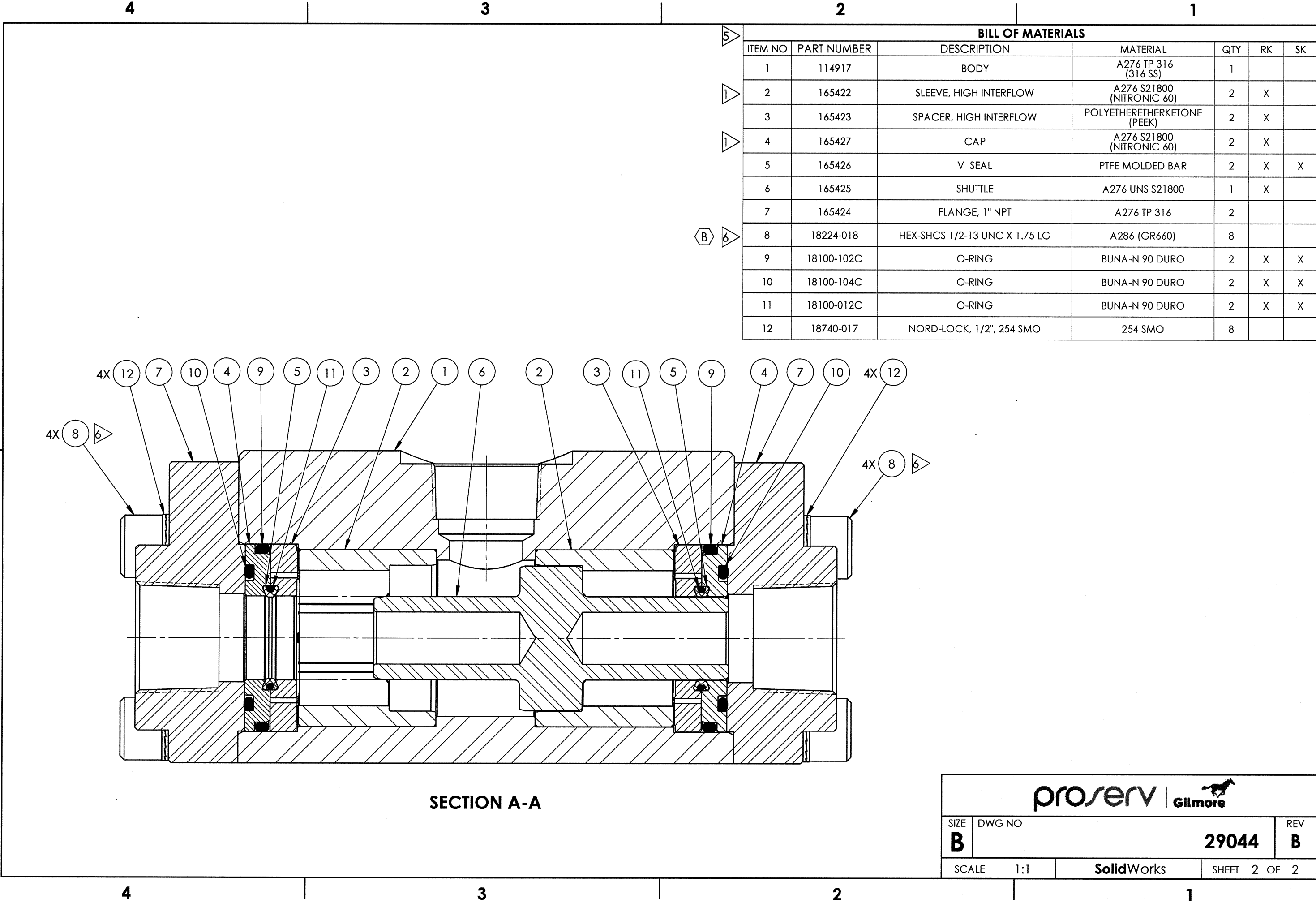
RECOMMENDED INSTALLED POSITION IS  
HORIZONTAL CENTERLINE, A VERTICAL  
CENTERLINE WILL INCREASE MINIMUM  
SHIFT FLOW REQUIRED AND GRAVITY  
MAY CAUSE SHUTTLE TO MOVE TO  
LOWEST POSITION



**SCHEMATIC**


**U.S. PATENT 9,719,600**

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 CY DATE 11/10/17 CHECKED BY JB DATE 11/10/17 ENGINEER AJP DATE 11/10/17 ERN NUMBER 02151 DATE 10-12-17		proserv   Gilmore	
CONDITION:		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, SHUTTLE, GEN 2, 1" NPT IN, 1" NPT OUT, 5000 PSI, HIGH INTERFLOW		SIZE B	DWG NO 29044
TREATMENT:		SCALE 1:2		SolidWorks		SHEET 1 OF 2	
PROCEDURE NUMBER:						REV B	



BILL OF MATERIALS						
ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	114917	BODY	A276 TP 316 (316 SS)	1		
2	165422	SLEEVE, HIGH INTERFLOW	A276 S21800 (NITRONIC 60)	2	X	
3	165423	SPACER, HIGH INTERFLOW	POLYETHERETHERKETONE (PEEK)	2	X	
4	165427	CAP	A276 S21800 (NITRONIC 60)	2	X	
5	165426	V SEAL	PTFE MOLDED BAR	2	X	X
6	165425	SHUTTLE	A276 UNS S21800	1	X	
7	165424	FLANGE, 1" NPT	A276 TP 316	2		
8	18224-018	HEX-SHCS 1/2-13 UNC X 1.75 LG	A286 (GR660)	8		
9	18100-102C	O-RING	BUNA-N 90 DURO	2	X	X
10	18100-104C	O-RING	BUNA-N 90 DURO	2	X	X
11	18100-012C	O-RING	BUNA-N 90 DURO	2	X	X
12	18740-017	NORD-LOCK, 1/2", 254 SMO	254 SMO	8		

SECTION A-A

proserv | 

SIZE **B**

DWG NO **29044**

REV **B**

SCALE 1:1

SolidWorks

SHEET 2 OF 2

NOTES:

- 1 MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON THE COMPONET DRAWING.
- 2 MARKING: MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- 3 "X" IN COLUMN RK DENOTES PARTS CONTAINED IN REPAIR KIT 29070 RK.
- 4 "X" IN COLUMN RK DENOTES PARTS CONTAINED IN SEAL KIT 29070 SK.
- 5 ALL METAL ITEMS PASSIVATED
- 6 TORQUE ITEM 8 AT ASSEMBLY TO 50 FT-LBS. (12X)
- 7 ASSEMBLY PROCEDURE: 50209  
MAINTENANCE MANUAL: 51021  
STANDARD FAT PROCEDURE: 50210  
EXTENDED FAT PROCEDURE: 50211

REVISIONS

REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
C	ECO 017663	JS 11/26/19	JS 11/26/19	AP 12/2/19

PRESSURE DATA

MAX WORKING PRESSURE: 3,000 PSI

PORTS

INLETS: 1" SAE

OUTLET: 1" SAE

FLOW DATA

C<sub>v</sub>: 5 (CALCULATED)

MAX FLOW CAPACITY: 150 GPM

MINIMUM SHIFT FLOW: 1 GPM

GENERAL DATA

APPROX WEIGHT: 19 LBS

TEMPERATURE: 32°F TO 150°F

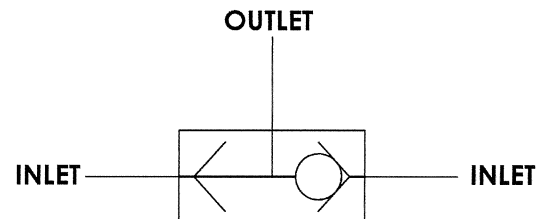
FLUIDS: - WATER BASED DRILLING

CONTROL FLUID.

- MINERAL OIL BASED DRILLING  
CONTROL FLUID.

FIELD SERVICEABLE, REPAIR KITS AVAILABLE

RECOMMENDED INSTALLED POSTION IS  
HORIZONTAL CENTERLINE, A VERTICAL  
CENTERLINE WILL INCREASE MINIMUM  
SHIFT FLOW REQUIRED AND GRAVITY MAY  
CAUSE SHUTTLE TO MOVE TO LOWEST  
POSITION



SCHEMATIC

U.S. PATENT 9,719,600



ENGINEERING

VALVE, SHUTTLE, GEN 2, 1" SAE IN,  
1" SAE OUT, 3000 PSI, LOW  
INTERFLOW

SIZE  
**B**

DWG NO

29070

REV  
**C**

SCALE 1:2

SolidWorks

SHEET 1 OF 2

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	JOP	DATE	07/03/19
CHECKED BY	CY	DATE	07/03/19
ENGINEER	AJP	DATE	07/03/19
ERN NUMBER	02325	DATE	07/02/19

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.

4

3

2

1

B

B

A

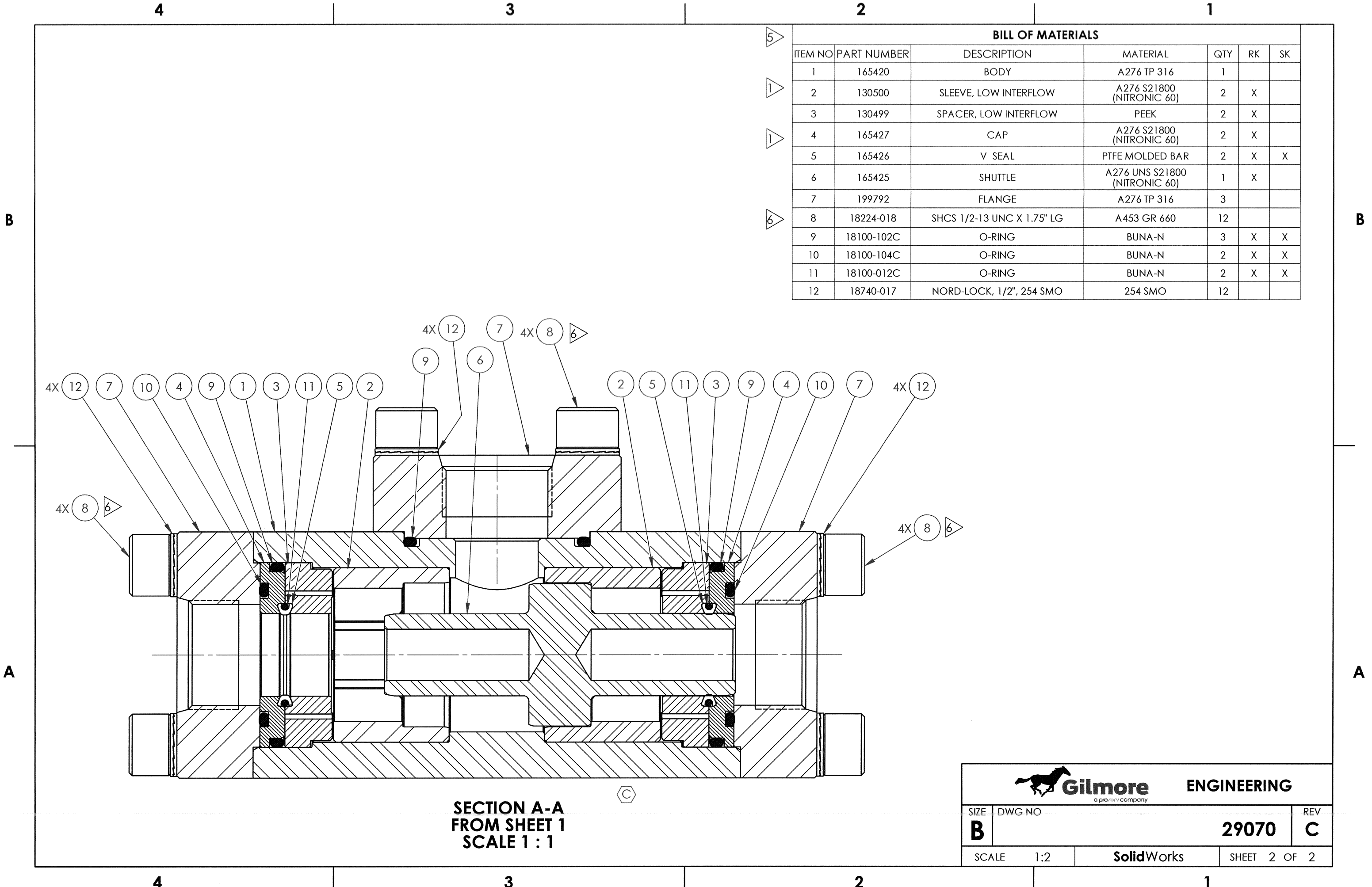
A

4

3


2

1



BILL OF MATERIALS						
ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	165420	BODY	A276 TP 316	1		
2	130500	SLEEVE, LOW INTERFLOW	A276 S21800 (NITRONIC 60)	2	X	
3	130499	SPACER, LOW INTERFLOW	PEEK	2	X	
4	165427	CAP	A276 S21800 (NITRONIC 60)	2	X	
5	165426	V SEAL	PTFE MOLDED BAR	2	X	X
6	165425	SHUTTLE	A276 UNS S21800 (NITRONIC 60)	1	X	
7	199792	FLANGE	A276 TP 316	3		
8	18224-018	SHCS 1/2-13 UNC X 1.75" LG	A453 GR 660	12		
9	18100-102C	O-RING	BUNA-N	3	X	X
10	18100-104C	O-RING	BUNA-N	2	X	X
11	18100-012C	O-RING	BUNA-N	2	X	X
12	18740-017	NORD-LOCK, 1/2", 254 SMO	254 SMO	12		

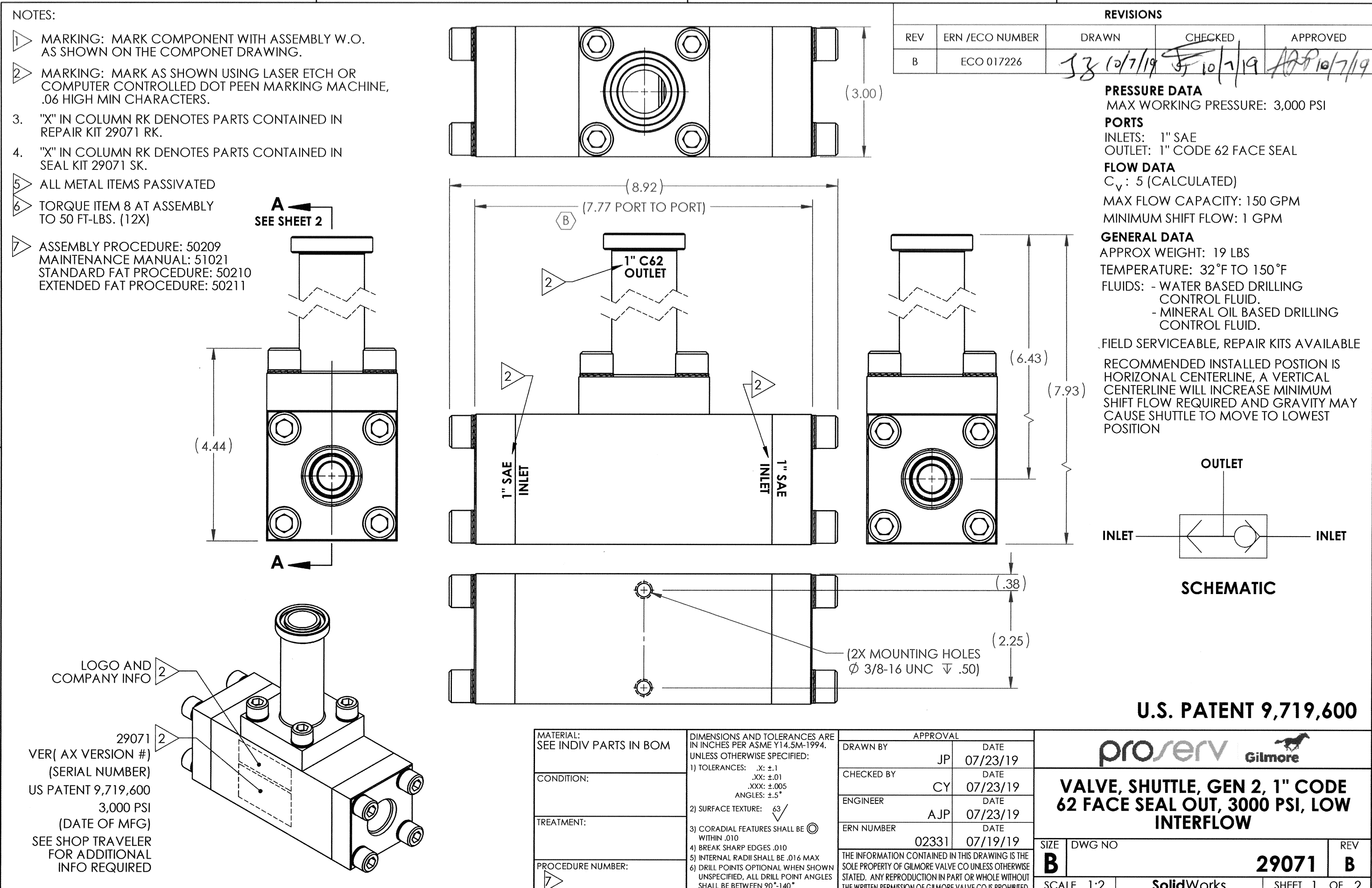
SECTION A-A  
FROM SHEET 1  
SCALE 1 : 1



ENGINEERING

SIZE	DWG NO	REV
<b>B</b>	<b>29070</b>	<b>C</b>
SCALE	1:2	SHEET 2 OF 2
SolidWorks		





- NOTES:
- 1. MARKING: MARK COMPONENT WITH ASSEMBLY W.O. AS SHOWN ON THE COMPONET DRAWING.
  - 2. MARKING: MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
  - 3. "X" IN COLUMN RK DENOTES PARTS CONTAINED IN REPAIR KIT 29071 RK.
  - 4. "X" IN COLUMN RK DENOTES PARTS CONTAINED IN SEAL KIT 29071 SK.
  - 5. ALL METAL ITEMS PASSIVATED
  - 6. TORQUE ITEM 8 AT ASSEMBLY TO 50 FT-LBS. (12X)
  - 7. ASSEMBLY PROCEDURE: 50209  
MAINTENANCE MANUAL: 51021  
STANDARD FAT PROCEDURE: 50210  
EXTENDED FAT PROCEDURE: 50211

REVISIONS				
REV	ERN /ECO NUMBER	DRAWN	CHECKED	APPROVED
B	ECO 017226	38 10/7/19	5 10/7/19	10/7/19

**PRESSURE DATA**  
MAX WORKING PRESSURE: 3,000 PSI

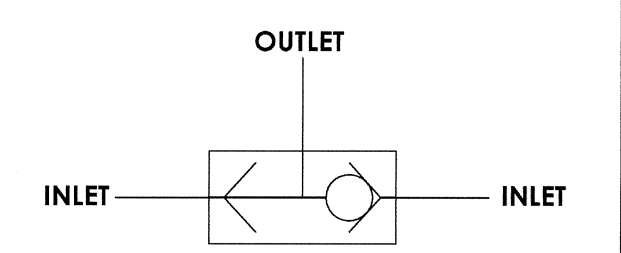
**PORTS**  
INLETS: 1" SAE  
OUTLET: 1" CODE 62 FACE SEAL

**FLOW DATA**  
C<sub>v</sub>: 5 (CALCULATED)  
MAX FLOW CAPACITY: 150 GPM  
MINIMUM SHIFT FLOW: 1 GPM

**GENERAL DATA**  
APPROX WEIGHT: 19 LBS  
TEMPERATURE: 32°F TO 150°F  
FLUIDS: - WATER BASED DRILLING CONTROL FLUID.  
- MINERAL OIL BASED DRILLING CONTROL FLUID.

FIELD SERVICEABLE, REPAIR KITS AVAILABLE

RECOMMENDED INSTALLED POSTION IS HORIZONTAL CENTERLINE, A VERTICAL CENTERLINE WILL INCREASE MINIMUM SHIFT FLOW REQUIRED AND GRAVITY MAY CAUSE SHUTTLE TO MOVE TO LOWEST POSITION





SCHEMATIC

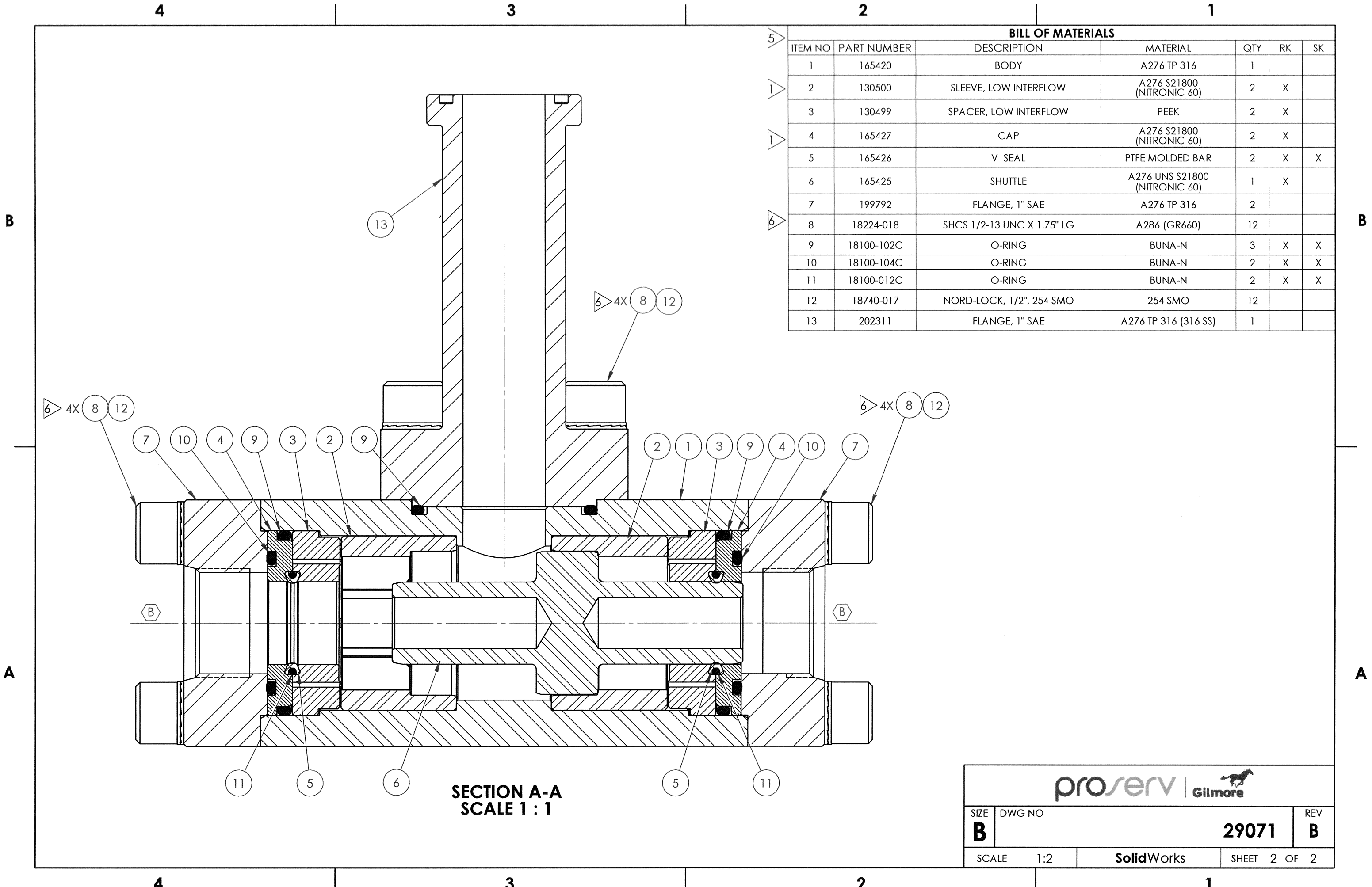
U.S. PATENT 9,719,600

LOGO AND COMPANY INFO

29071 VER( AX VERSION #) (SERIAL NUMBER)  
US PATENT 9,719,600  
3,000 PSI  
(DATE OF MFG)  
SEE SHOP TRAVELER FOR ADDITIONAL INFO REQUIRED

MATERIAL: SEE INDIV 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		<div>proserv</div> <div>Gilmore</div>	
CONDITION:		DRAWN BY JP	DATE 07/23/19		
TREATMENT:		CHECKED BY CY	DATE 07/23/19		
PROCEDURE NUMBER: 		ENGINEER AJP	DATE 07/23/19		
		ERN NUMBER 02331	DATE 07/19/19		
		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.			
		SIZE B	DWG NO 29071		REV B
		SCALE 1:2	SolidWorks		SHEET 1 OF 2





BILL OF MATERIALS						
ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	165420	BODY	A276 TP 316	1		
2	130500	SLEEVE, LOW INTERFLOW	A276 S21800 (NITRONIC 60)	2	X	
3	130499	SPACER, LOW INTERFLOW	PEEK	2	X	
4	165427	CAP	A276 S21800 (NITRONIC 60)	2	X	
5	165426	V SEAL	PTFE MOLDED BAR	2	X	X
6	165425	SHUTTLE	A276 UNS S21800 (NITRONIC 60)	1	X	
7	199792	FLANGE, 1" SAE	A276 TP 316	2		
8	18224-018	SHCS 1/2-13 UNC X 1.75" LG	A286 (GR660)	12		
9	18100-102C	O-RING	BUNA-N	3	X	X
10	18100-104C	O-RING	BUNA-N	2	X	X
11	18100-012C	O-RING	BUNA-N	2	X	X
12	18740-017	NORD-LOCK, 1/2", 254 SMO	254 SMO	12		
13	202311	FLANGE, 1" SAE	A276 TP 316 (316 SS)	1		

SECTION A-A  
SCALE 1 : 1

proserv | 

SIZE  
**B**

DWG NO  
**29071**

REV  
**B**

SCALE  
1:2

SolidWorks

SHEET 2 OF 2