

## 1/2" GEN2 10 ksi Pressure Regulator

REV	DATE	DESCRIPTION	ORIGIN (issued by)	APPROVED
Rev 001	05/25/22	Document No: 135-052522-001	AP	BR

### COMPANY PROPRIETARY INFORMATION

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

---

**For more information:**

(713) 468 8778  
info@gilmore.com

Gilmore  
1231 Lumpkin Road  
Houston, TX 77043

## 1/2" GEN2 10 ksi Pressure Regulator

Gilmore announces the new 1/2" GEN2 10 ksi Pressure Regulator, with Manual Spring and Hydraulic Pilot options.

With Tungsten Carbide shear seal trim and internal damping, this new 10,000 psi supply regulator product line provides the utmost reliability for critical pressure regulating applications.

### Features and Benefits:

- Qualification exceeds API 16D requirements –
  - 7,500 endurance cycles
  - Hyperbaric Chamber Testing to 15,000 ft water depth
- Proprietary guided hydraulic dampening technology
- Low deadband performance
- Tungsten Carbide seal trim
- Inconel X-750 Compression Springs
- Dynamic Plunger T-Seal
- 17-4 H1150D & T316 Body & Flanges
- Nitronic 60 Seal Container & Plunger Guide



Figure 1 PN 29197: 1/2" GEN2 Pressure Regulator, 10 ksi, Manual Spring, 9/16" MP ports, 8000 – 4000 psi range

## 1/2" GEN2 10 ksi Pressure Regulator



Figure 2 PN 29193: 1/2" GEN2 Pressure Regulator, 10 ksi, Hyd Pilot, 9/16" MP ports, 8000 – 1000 psi range

## 1/2" GEN2 ksi Pressure Regulator

Gilmore has exceeded API 16D requirements by qualifying the new Gilmore 1/2" GEN2 Pressure Regulator 10 ksi designs to 7,500 cycles, at a starting flow rate of 20 gpm, at 10 ksi inlet pressure, with 1% - 4% water glycol test fluid. Hyperbaric testing at an equivalent depth of 15,000 feet has been completed.

The new Gilmore 1/2" GEN2 10 ksi Pressure Regulators are now available for purchase. A few examples of typical assembly configurations are listed below for reference. Gilmore will create other customized 1/2" GEN2 10 ksi Pressure Regulator configurations that are required.

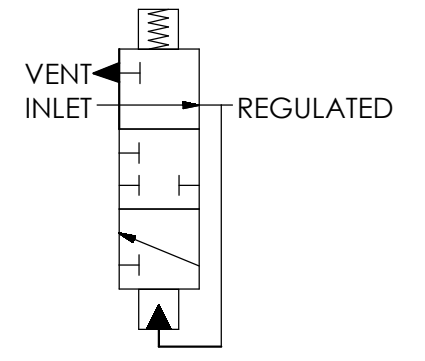
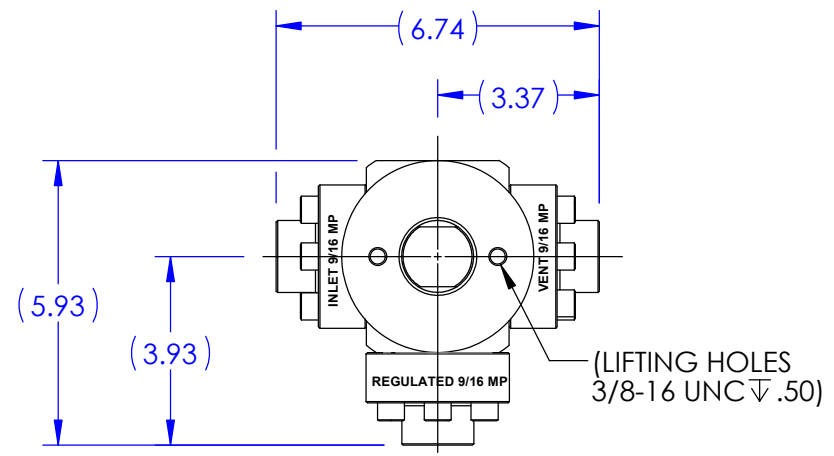
Please contact Gilmore Customer Service to request a quotation for the 1/2" GEN2 10 ksi Pressure Regulator listed below, or other custom configurations as required.

**Table 1. New 1/2" GEN2 10ksi Pressure Regulators:**

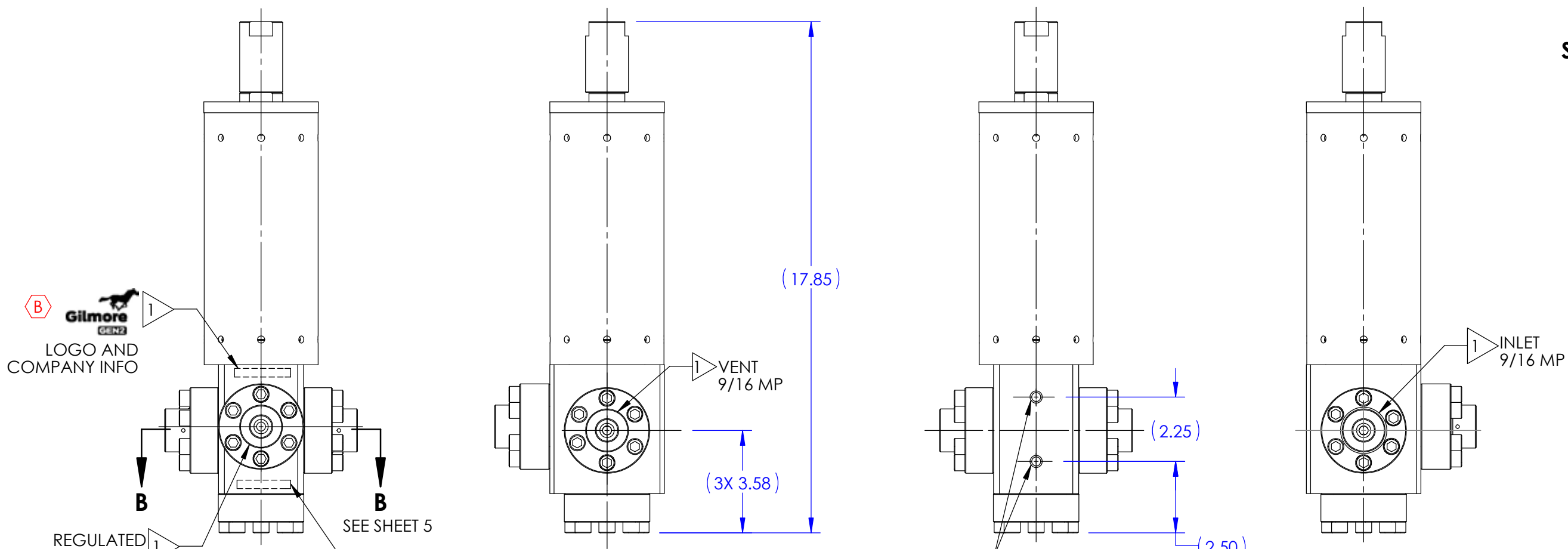
Item	New Valve Description	New Valve PN	New Repair Kit PN	New Seal Kit PN
1	Valve, Pressure Regulator, GEN2, 10 ksi, Manual Spring, 6000-3000 psi range, 9/16" MP Ports	29192	29192 RK	29192 SK
2	Valve, Pressure Regulator, GEN2, 10 ksi, Hyd Pilot, 8000-1000 psi range, 9/16" MP Ports	29193	29193 RK	29193 SK
3	Valve, Pressure Regulator, GEN2, 10 ksi, Manual Spring, 8000-4000 psi range, 9/16" MP Ports	29197	29197 RK	29197 SK

Please contact Gilmore Customer Service to request any drawings and quotations for these new GEN2 Regulators at [Info@gilmore.com](mailto:Info@gilmore.com).

REVISIONS						
REV	ERN /ECO NUMBER	DRAWN	DRAFT CHECK	ENGR. REVIEW	ENGR. APPROVED	MFG. APPROVED
B	ECO 022631	JZ 4/6/22	JB 4/6/22	AJP 4/6/22	4/8/22	jke 4/8/22



**SCHEMATIC**



**B** Gilmore  
GEN2  
LOGO AND  
COMPANY INFO

29192  
VER (AX VERSION #)  
(SERIAL NUMBER)  
10,000 PSI  
US PATENT 10,739,796  
(DATE OF MFG)

SEE SHOP TRAVELER  
FOR ADDITIONAL  
INFO REQUIRED

**US PATENT 10,739,796**

MATERIAL: SEE BOM	APPROVAL	
	DRAWN BY JZ	DATE 11/11/2021
CONDITION:	DRAFT CHECKED BY CY	DATE 11/11/2021
	ENGR. REVIEW BY AP	DATE 11/11/2021
TREATMENT:	ENGR. APPROVE BY MS	DATE 11/22/2021
	MFG. APPROVE BY	DATE
PROCEDURE NUMBER:	ERN NUMBER 02529	DATE 10/11/2021

**Gilmore ENGINEERING**

**PRESSURE REGULATOR,  
1/2" GEN 2, MANUAL SPRING,  
6KSI / 10KSI, 9/16 MP**

SIZE <b>B</b>	DWG NO	REV <b>B</b>
SCALE 1:4	SolidWorks	SHEET 1 OF 5

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**

**A**

**A**

4

3

2

1

4

3

2

1

**OPERATING DATA:**

1. ADJUSTMENT SCREW TURNS NEEDED FOR 3,000 PSI SET POINT: 2±1/2 TURN FOR SPRING COMPRESSION.  
(BASED ON FULLY OPEN POSITION SHOWN ON SHEET 4)
2. ADJUSTMENT SCREW TORQUE FOR 6,000 PSI SET POINT: 50±10 FT-LB.
3. CHANGE IN SET POINT PER ADJUSTMENT SCREW TURN: 750±100 PSI.
4. SET POINT ADJUSTED TO LESS THAN 3,000 PSI MAY RESULT IN NON-LINEAR DROP IN FLOW CAPACITY.
5. FOR MORE DETAILED OPERATIONS INFORMATION REFER TO SERVICE MANUAL TBA.

**PRESSURE DATA:**

MAXIMUM INLET PRESSURE RATING: 10,000 PSI

REGULATED RANGE: 3,000 - 6,000 PSI  
 TYPICAL DEADBAND AT 10,000 PSI SUPPLY: 600±100 PSI  
 TYPICAL DEADBAND AT 7,500 PSI SUPPLY: 450±100 PSI  
 MAXIMUM REGULATED AND VENT PRESSURE RATING: 6,000 PSI

**FLOW DATA:**

FULLY OPEN Cv REGULATED: 0.5 (CALC)  
 FULLY OPEN Cv VENT: 0.2 (CALC)  
 FULLY OPEN MAXIMUM REGULATED FLOW RATE: 25 GPM  
 FLUIDS: WATER BASED DRILLING CONTROL FLUID  
 MINERAL OIL BASED DRILLING CONTROL FLUID

**PORTS:**

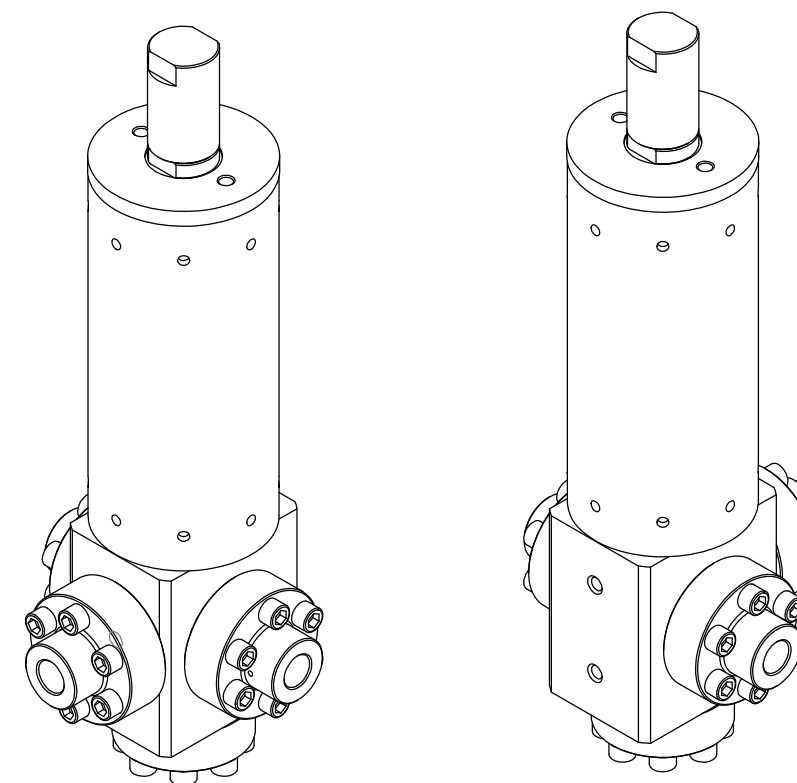
INLET: 9/16" MP  
 REGULATED: 9/16" MP  
 VENT: 9/16" MP

**GENERAL DATA:**

TEMP RANGE: 32 °F TO 150 °F  
 APPROX WEIGHT: 47 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. REGULATED RANGE SPECIFIED ENSURES ADEQUATE AMOUNT OF SPRING PRELOAD IS PRESENT FOR RELIABLE AND REPEATABLE SET POINT ADJUSTMENT.
4. X IN THE BOM INDICATES PARTS IN REPAIR KIT 29192 RK AND SEAL KIT 29192 SK.
- 5 ▷ ASSEMBLY PROCEDURE: 50368  
 STANDARD FAT PROCEDURE: 50369  
 EXTENDED FAT PROCEDURE: 50370  
 SERVICE MANUAL: 51039
- 6 ▷ TORQUE TO 20 FT-LB
- 7 ▷ TORQUE TO 5 FT-LB
- 8 ▷ ALL MANUFACTURED ITEMS ARE PASSIVATED.



		<b>ENGINEERING</b>	
SIZE	DWG NO	REV	
<b>B</b>	<b>29192</b>	<b>B</b>	
SCALE	1:8	SolidWorks	SHEET 2 OF 5

4

3

2

1

BILL OF MATERIALS

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	201865	BODY	A564 TP 630 (H1150D)	1		
2	201869	SEAL CONTAINER	A276 UNS S21800 (NITRONIC 60)	1		
3	18100-004K1	O-RING	HNBR	2	X	X
4	18100-052K1	O-RING	HNBR	2	X	X
5	18100-008K1	O-RING	HNBR	2	X	X
6	18100-055K1	O-RING	HNBR	2	X	X
7	18100-074K1	O-RING	HNBR	1	X	X
8	18108-518	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
9	18100-113K1	O-RING	HNBR	2	X	X
10	205038	HYDRO SEAL, VENT	TUNGSTEN CARBIDE/ NICKEL	2	X	
11	205018	HYDRO SEAL, SUPPLY	TUNGSTEN CARBIDE/ NICKEL	2	X	
12	202123	BACKUP RING, .375 O.D.	PEEK	4	X	X
13	201867	PLUNGER GUIDE	A276 UNS S21800 (NITRONIC 60)	1		
14	193757	PLATE, SPRING	A276 TP 316	2		
15	219620	SCREW, ADJUSTING, .75 NC	F593 GR1	1		
16	201866	FLANGE, INLET / VENT 9/16 MP	A276 TP 316 (316 SS)	2		
17	192847	SPRING, COMPRESSION	AMS5670 (X-750) AMS 5667 (X-750)	1		
18	177586	HOUSING, SPRING	A276 TP 316	1		
19	219621	CAP, SPRING HOUSING, .75 NC	A276 UNS S21800 (NITRONIC 60)	1		
20	219618	NUT, O-LOCK, .75 NC	A276 TP 316 (316SS)	1		
21	219619	CAP, LOCK, .75 NC	A276 TP 316 (316 SS)	1		
22	201868	FLANGE, BOTTOM	A276 UNS S21800 (NITRONIC 60)	1		
23	18224-003	SHCS, 3/8-16 UNC X 1-1/2 LG	A286 GR 660	26		

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
24	18110-029P	BACKUP RING	PEEK	4	X	X
25	18108-005	T-SEAL	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
26	204976	BACKUP RING, .625 O.D.	PEEK	2	X	X
27	205004	BACKUP RING, 1.500 O.D.	PEEK	4	X	X
28	202124	BACKUP RING, .473 O.D.	PEEK	4	X	X
29	11600	SPRING, COMPRESSION	INCONEL X-750	2	X	
30	204973	BACKUP RING, 1.490 O.D.	PEEK	2	X	X
31	204403	FLANGE, REGULATED, 9/16MP	A276 TP 316 (316 SS)	1		
32	205008	FLOW PLATE	TUNGSTEN CARBIDE/ NICKEL	2	X	
33	18224-001	SHCS, 3/8 - 16 UNC-2A X 1.00 LG	A453 GR660	8		
34	154799	SHCS, THREAD-LOCKING	A593 T316 / NYLON	4	X	X
35	192385	WIPER, D-STYLE	POLYURETHANE	1	X	X
36	18800-001	BALL, 1/2" DIA.	A276 TP 316	1		
37	18100-013K1	O-RING	HNBR	2	X	X
38	18800-043	BALL, 9/16" DIA	A276 TP 316	1		

B

B

A

A

4

3

2

1



ENGINEERING

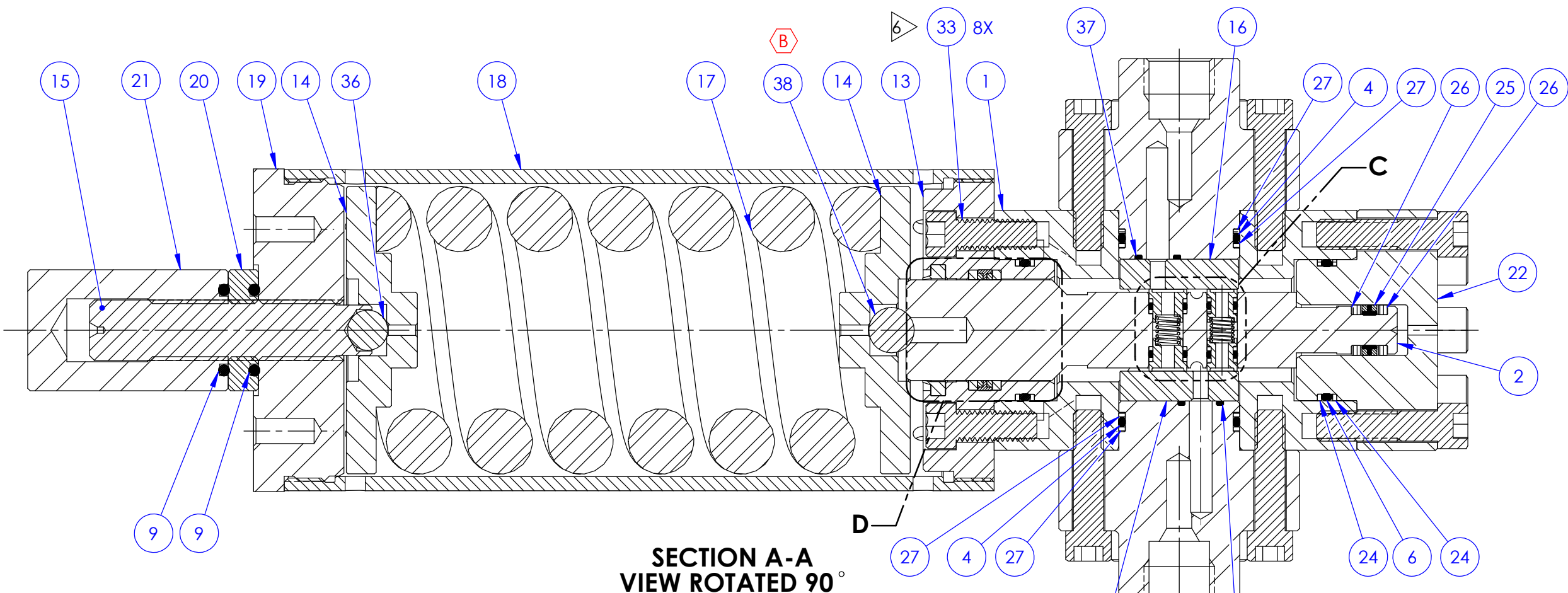
SIZE	DWG NO	REV
<b>B</b>	<b>29192</b>	<b>B</b>
SCALE	1:8	SHEET 3 OF 5
SolidWorks		

4

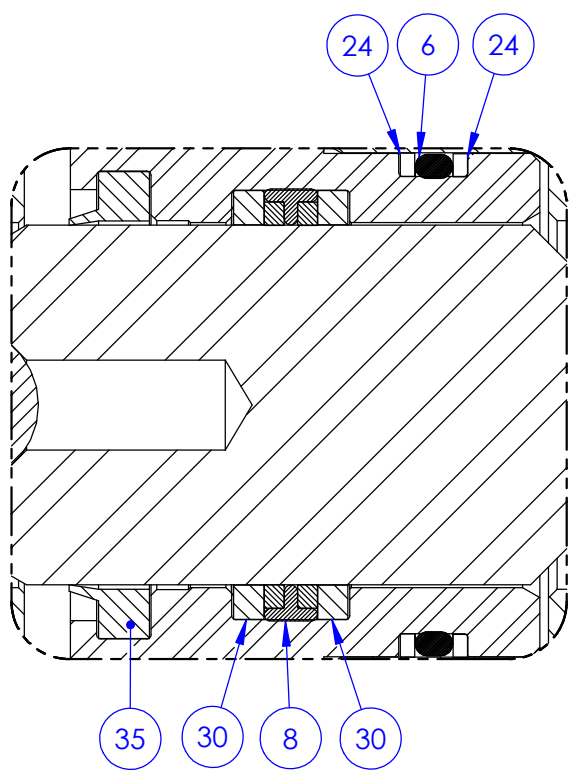
3

2

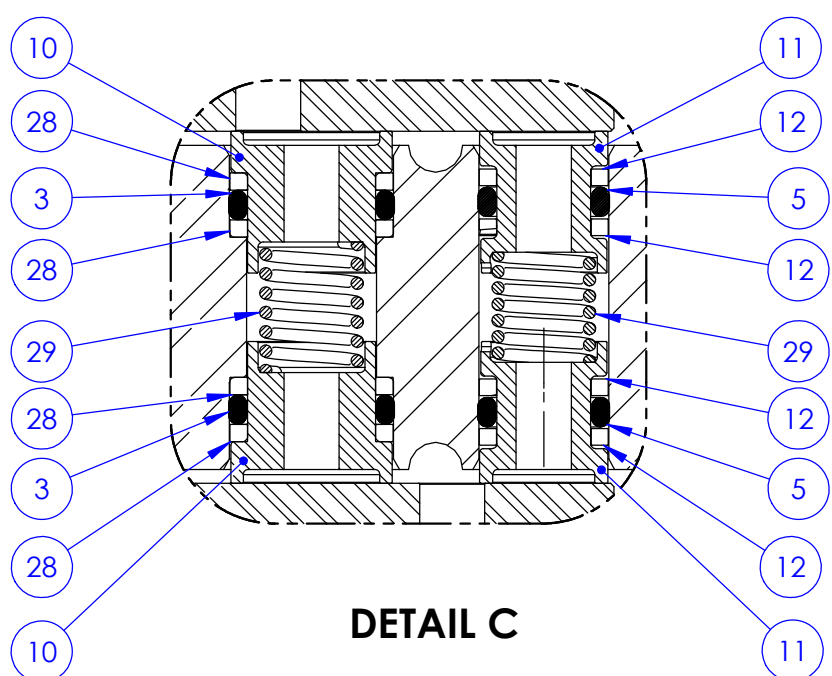
1



SECTION A-A  
VIEW ROTATED 90°



DETAIL D



DETAIL C



ENGINEERING

SIZE <b>B</b>	DWG NO <b>29192</b>	REV <b>B</b>
SCALE 1:4	SolidWorks	SHEET 4 OF 5

4

3

2

1

B

B

A

A

4

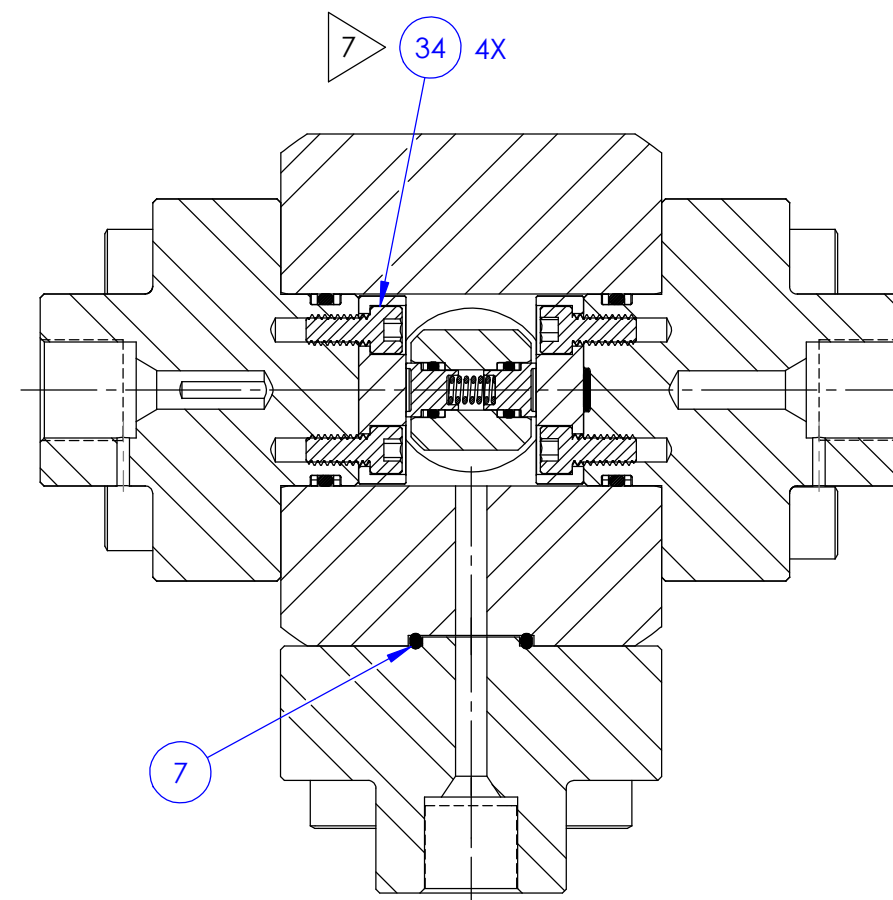
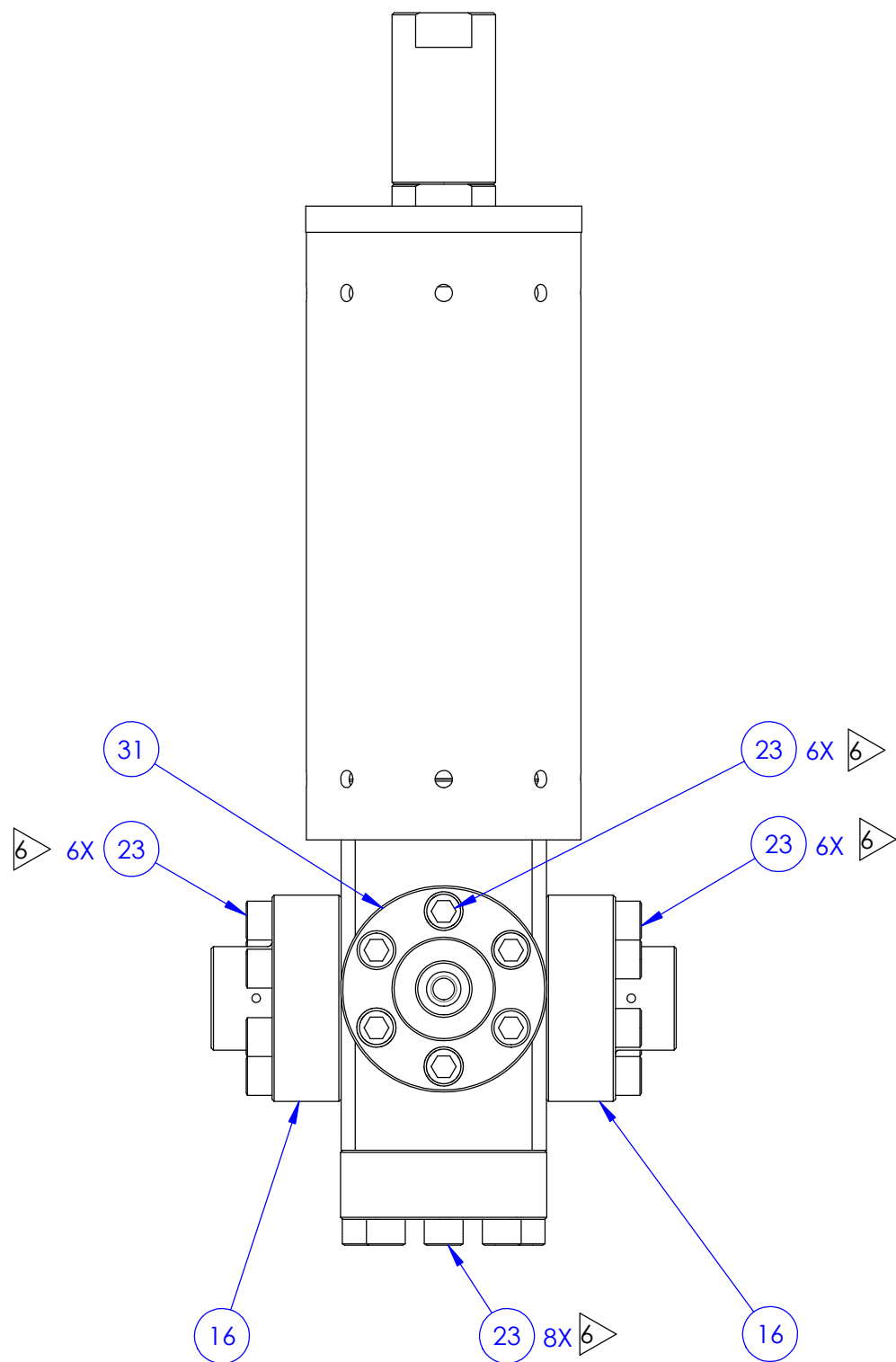
3

2

1

B

B



SECTION B-B

A

A

4

3

2

1



ENGINEERING

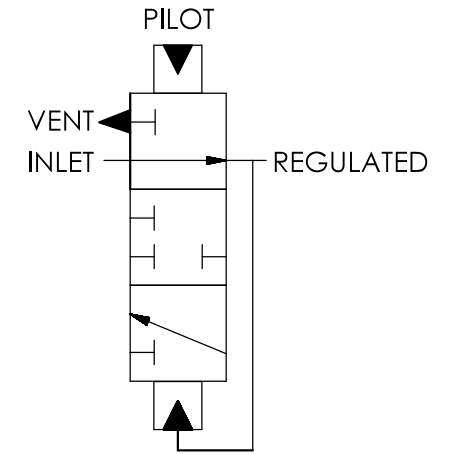
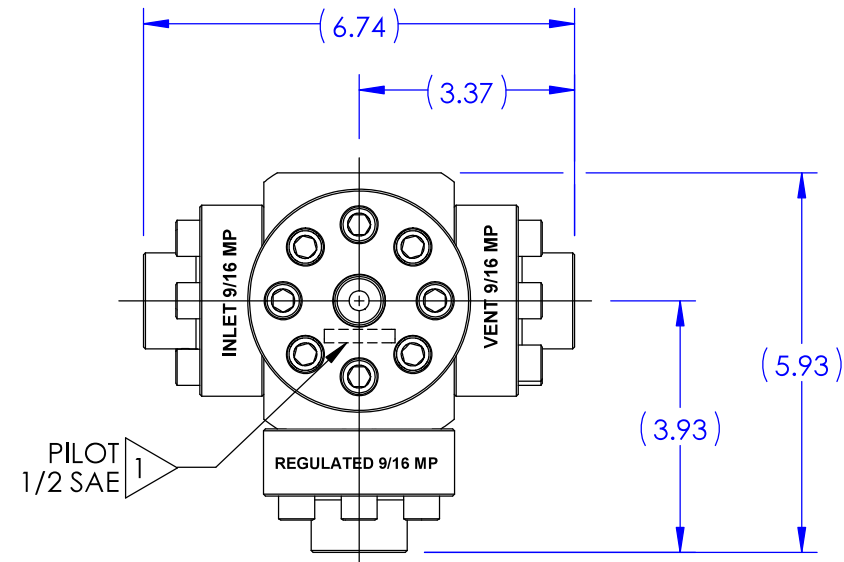
SIZE	DWG NO	REV
<b>B</b>	<b>29192</b>	<b>B</b>
SCALE	1:4	SHEET 5 OF 5
SolidWorks		

4

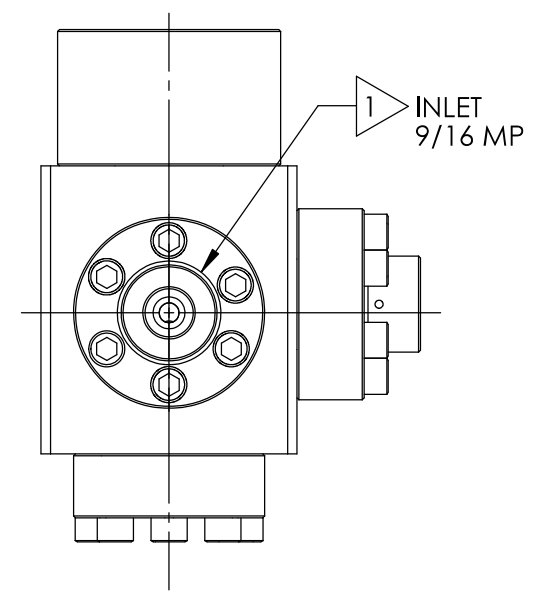
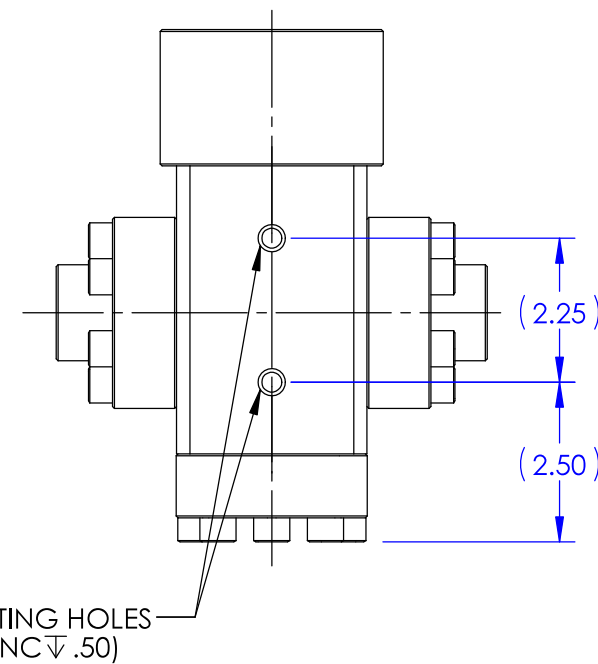
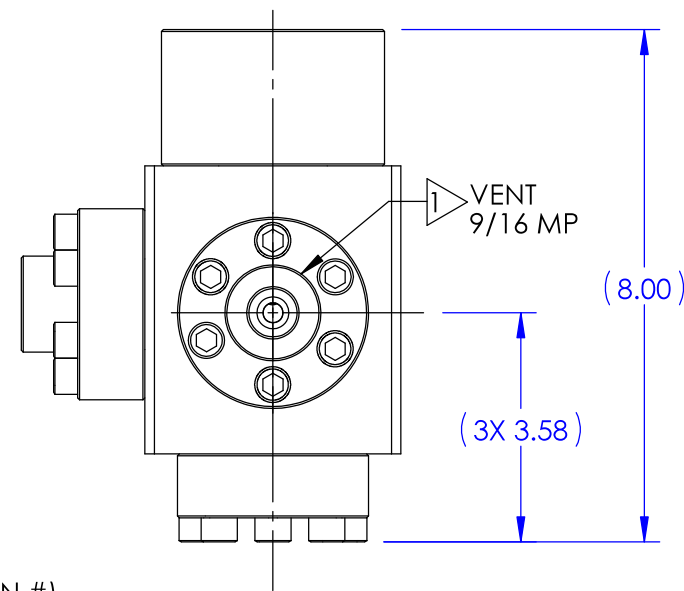
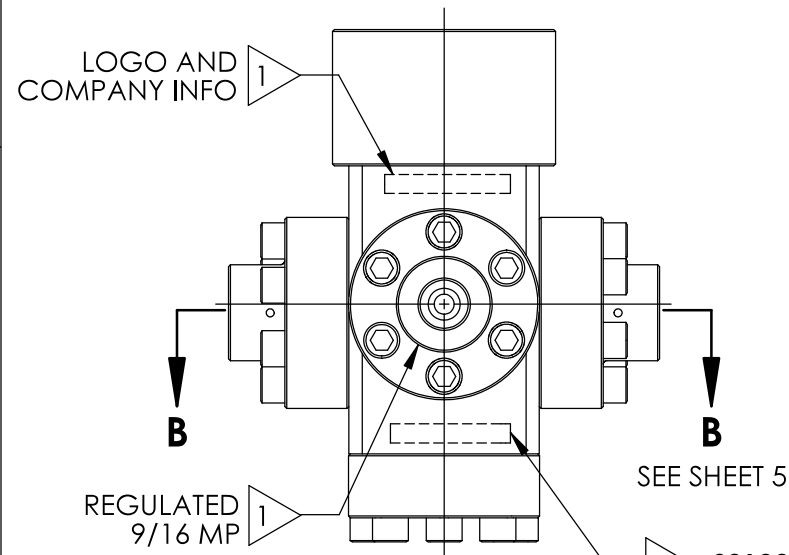
3

2

1



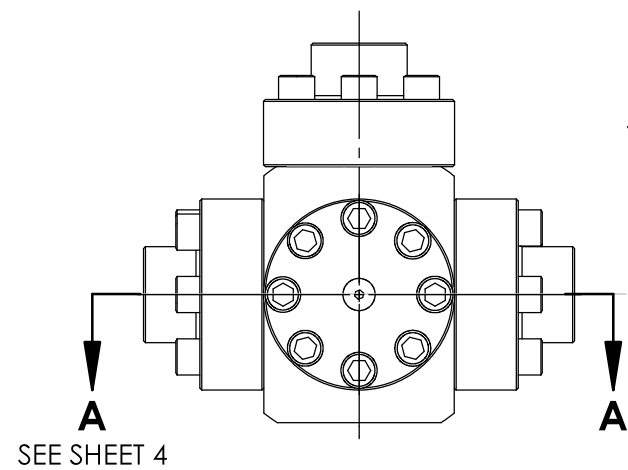
**SCHEMATIC**



29193  
 VER (AX VERSION #)  
 (SERIAL NUMBER)  
 10,000 PSI  
 US PATENT 10,739,796  
 (DATE OF MFG)

SEE SHOP TRAVELER  
 FOR ADDITIONAL  
 INFO REQUIRED

**US PATENT 10,739,796**



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.

MATERIAL: SEE BOM	APPROVAL	
	DRAWN BY <i>JZ</i>	DATE 11/8/21
CONDITION:	DRAFT CHECKED BY <i>CMJ</i>	DATE 11-10-21
	ENGR. REVIEW BY <i>AGP</i>	DATE 11/8/21
TREATMENT:	ENGR. APPROVE BY <i>AGP</i>	DATE 11/22/21
	MFG. APPROVE BY	DATE
PROCEDURE NUMBER:	ERN NUMBER 02529	DATE 10/11/2021



**PRESSURE REGULATOR,  
 1/2" GEN 2, HYDRAULIC PILOT,  
 8KSI/10KSI, 9/16 MP**

SIZE <b>B</b>	DWG NO	REV <b>A</b>
SCALE 1:4	SolidWorks	SHEET 1 OF 5

4

3

2

1

**OPERATING DATA:**

- 1. FOR MORE DETAILED OPERATIONS INFORMATION REFER TO SERVICE MANUAL 51040.
- 2. CONSTANT PILOT PRESSURE REQUIRED TO MAINTAIN CONSTANT REGULATED PRESSURE. DUE TO LOW DEADBAND, UNSTABLE PILOT PRESSURE MAY RESULT IN UNSTABLE REGULATED PRESSURE.

**PRESSURE DATA:**

MAXIMUM INLET PRESSURE RATING: 10,000 PSI

REGULATED RANGE: 8,000 - 1,000 PSI  
 TYPICAL DEADBAND AT 10,000 PSI SUPPLY: 600±100 PSI  
 TYPICAL DEADBAND AT 7,500 PSI SUPPLY: 450±100 PSI  
 MAXIMUM REGULATED AND VENT PRESSURE RATING: 8,000 PSI

**FLOW DATA:**

FULLY OPEN Cv REGULATED: 0.5 (CALC)  
 FULLY OPEN Cv VENT: 0.2 (CALC)  
 FULLY OPEN MAXIMUM REGULATED FLOW RATE: 25 GPM  
 FLUIDS: WATER BASED DRILLING CONTROL FLUID  
 MINERAL OIL BASED DRILLING CONTROL FLUID

**PORTS:**

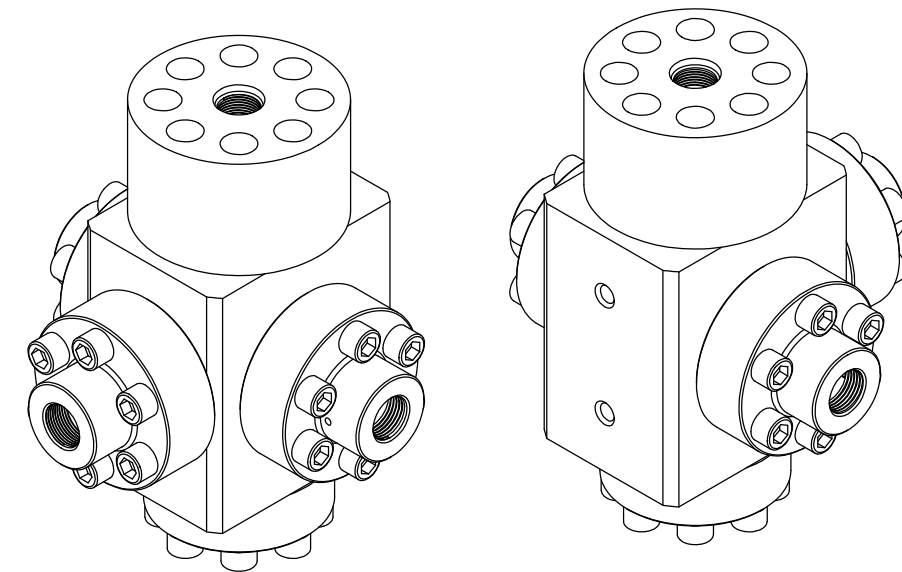
INLET: 9/16" MP  
 REGULATED: 9/16" MP  
 VENT: 9/16" MP  
 PILOT: 1/2" SAE


**GENERAL DATA:**

TEMP RANGE: 32 °F TO 150 °F  
 APPROX WEIGHT: 29 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 29193 RK AND SEAL KIT 29193 SK.
- 4 ▷ ASSEMBLY PROCEDURE: 50371  
 STANDARD FAT PROCEDURE: 50372  
 EXTENDED FAT PROCEDURE: 50373  
 SERVICE MANUAL: 51040
- 5 ▷ TORQUE TO 20 FT-LB
- 6 ▷ TORQUE TO 5 FT-LB
- 7 ▷ TORQUE TO 10 FT-LB
- 8 ▷ ALL MANUFACTURED ITEMS ARE PASSIVATED.



		<b>ENGINEERING</b>	
SIZE	DWG NO	REV	
<b>B</b>	<b>29193</b>	<b>A</b>	
SCALE	1:8	SolidWorks	SHEET 2 OF 5

B

B

A

A

4

3

2

1

8

1

B

A

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
1	201865	BODY	A564 TP 630 (H1150D)	1		
2	201869	SEAL CONTAINER	A276 UNS S21800 (NITRONIC 60)	1		
3	18100-004K1	O-RING	HNBR	2	X	X
4	18100-052K1	O-RING	HNBR	2	X	X
5	18100-008K1	O-RING	HNBR	2	X	X
6	18100-055K1	O-RING	HNBR	2	X	X
7	18100-074K1	O-RING	HNBR	1	X	X
8	18108-518	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
9	205038	HYDRO SEAL, VENT	TUNGSTEN CARBIDE/ NICKEL	2	X	
10	205018	HYDRO SEAL, SUPPLY	TUNGSTEN CARBIDE/ NICKEL	2	X	
11	202123	BACKUP RING, .375 O.D.	PEEK	4	X	X
12	220609	CYLINDER, HYDRAULIC PILOT, 1/2" SAE	A276 TP 316 (316 SS)	1		
13	201866	FLANGE, INLET / VENT 9/16 MP	A276 TP 316 (316 SS)	2		
14	224994	FLANGE, BOTTOM	A276 UNS S21800 (NITRONIC 60)	1		
15	18224-003	SHCS, 3/8-16 UNC X 1-1/2 LG	A286 GR 660	26		
16	18110-029P	BACKUP RING	PEEK	4	X	X
17	220608	WEARBAND, HYDRAULIC PILOT	DELFIN AF	1	X	X
18	205004	BACKUP RING, 1.500 O.D.	PEEK	4	X	X

8

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL	QTY	RK	SK
19	202124	BACKUP RING, .473 O.D.	PEEK	4	X	X
20	11600	SPRING, COMPRESSION	INCONEL X-750	2	X	
21	204973	BACKUP RING, 1.490 O.D.	PEEK	2	X	X
22	204403	FLANGE, REGULATED, 9/16MP	A276 TP 316 (316 SS)	1		
23	205008	FLOW PLATE	TUNGSTEN CARBIDE/ NICKEL	2	X	
24	18224-001	SHCS, 3/8 - 16 UNC-2A X 1.00 LG	A453 GR660	8		
25	154799	SHCS, THREAD-LOCKING	A593 T316 / NYLON	4	X	X
26	18603-003	HEX PLUG, 3/16" SAE	T316 / BUNA	1	X	
27	18100-013K1	O-RING	HNBR	2	X	X

B

A



SIZE	DWG NO	REV
<b>B</b>	<b>29193</b>	<b>A</b>
SCALE	1:4	SHEET 3 OF 5

**SolidWorks**

4

3

2

1

4

3

2

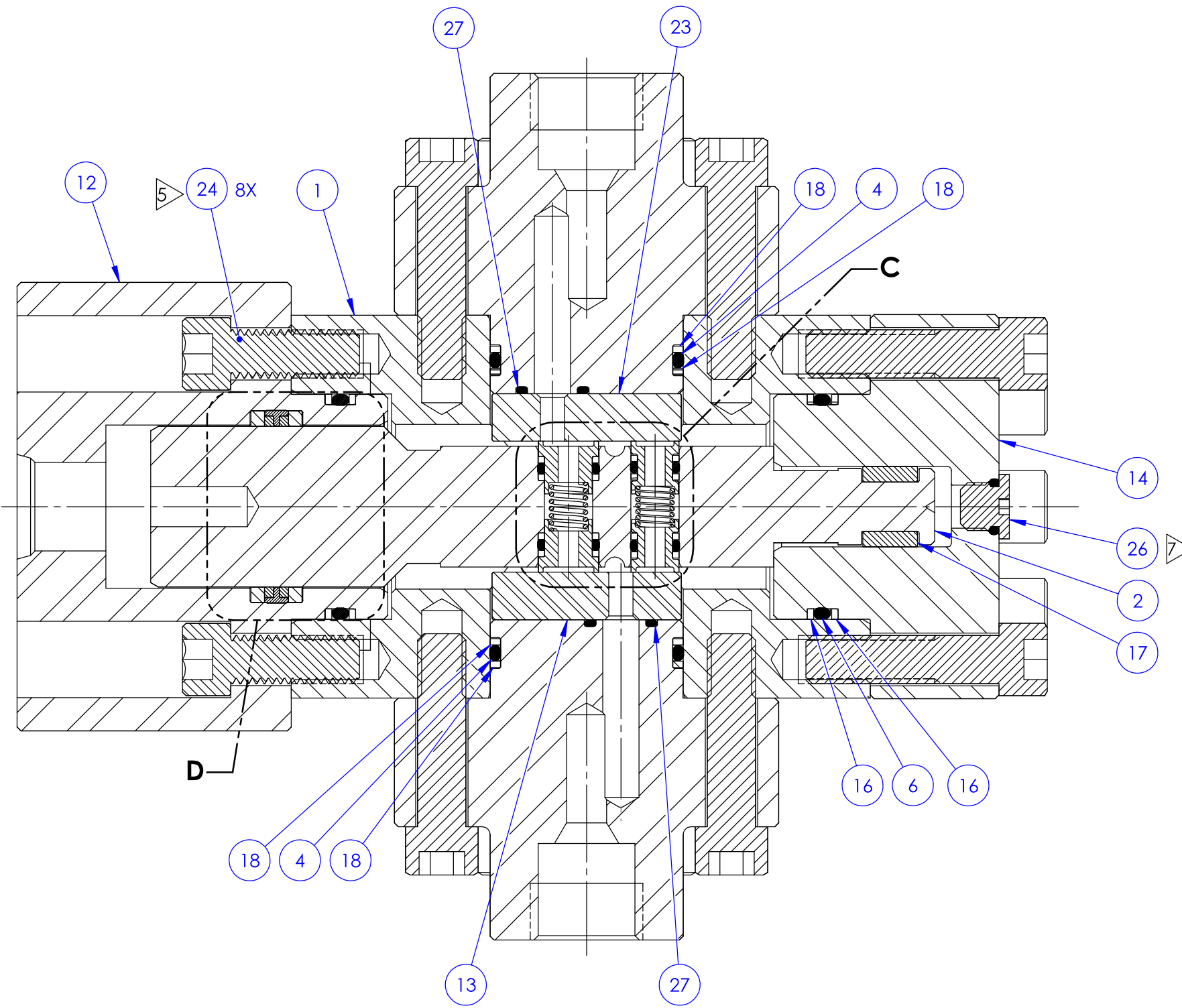
1

B

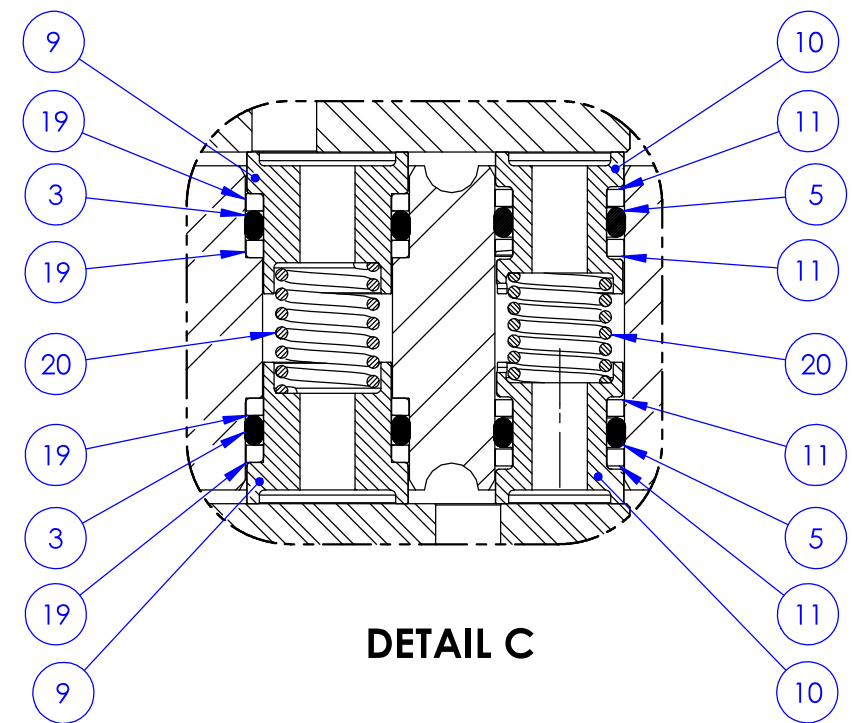
B

A

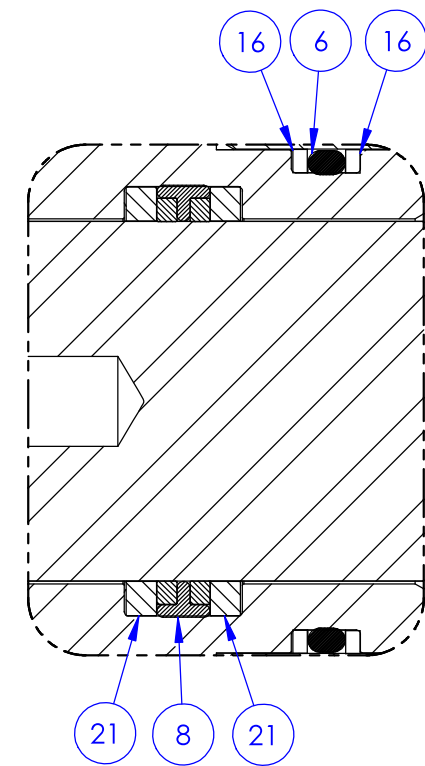
A



**SECTION A-A  
VIEW ROTATED 90°**



**DETAIL C**



**DETAIL D**

SIZE <b>B</b>	DWG NO <b>29193</b>
SCALE 1:4	REV <b>A</b>
SolidWorks SHEET 4 OF 5	

4

3

2

1

4

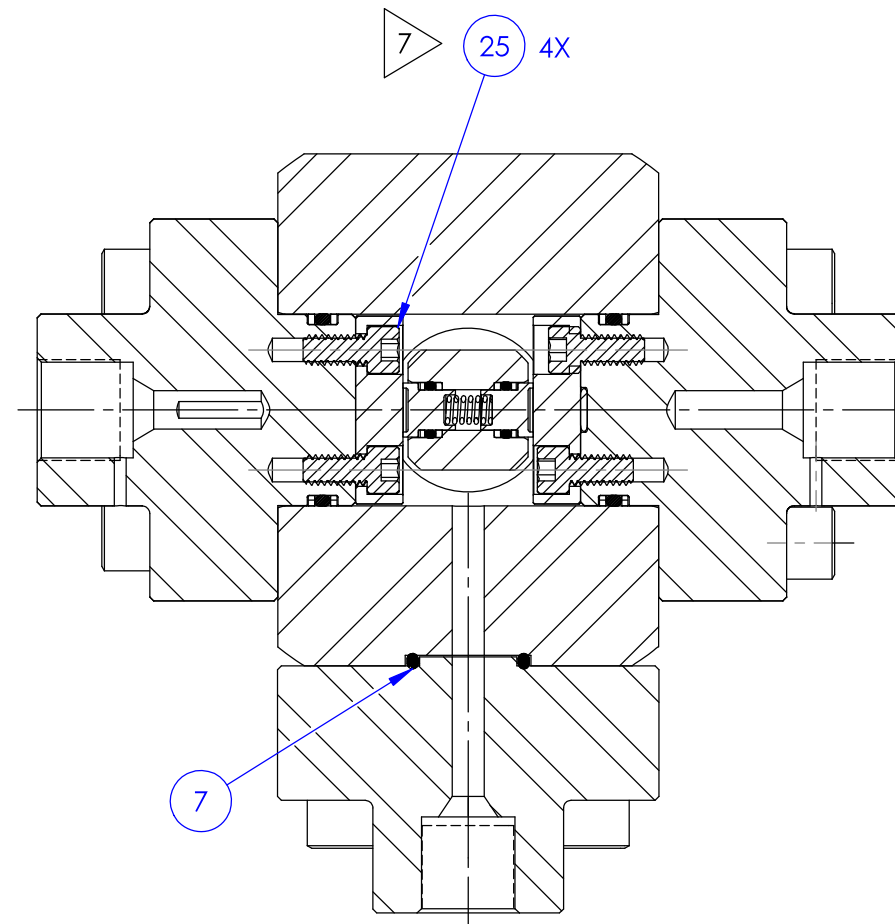
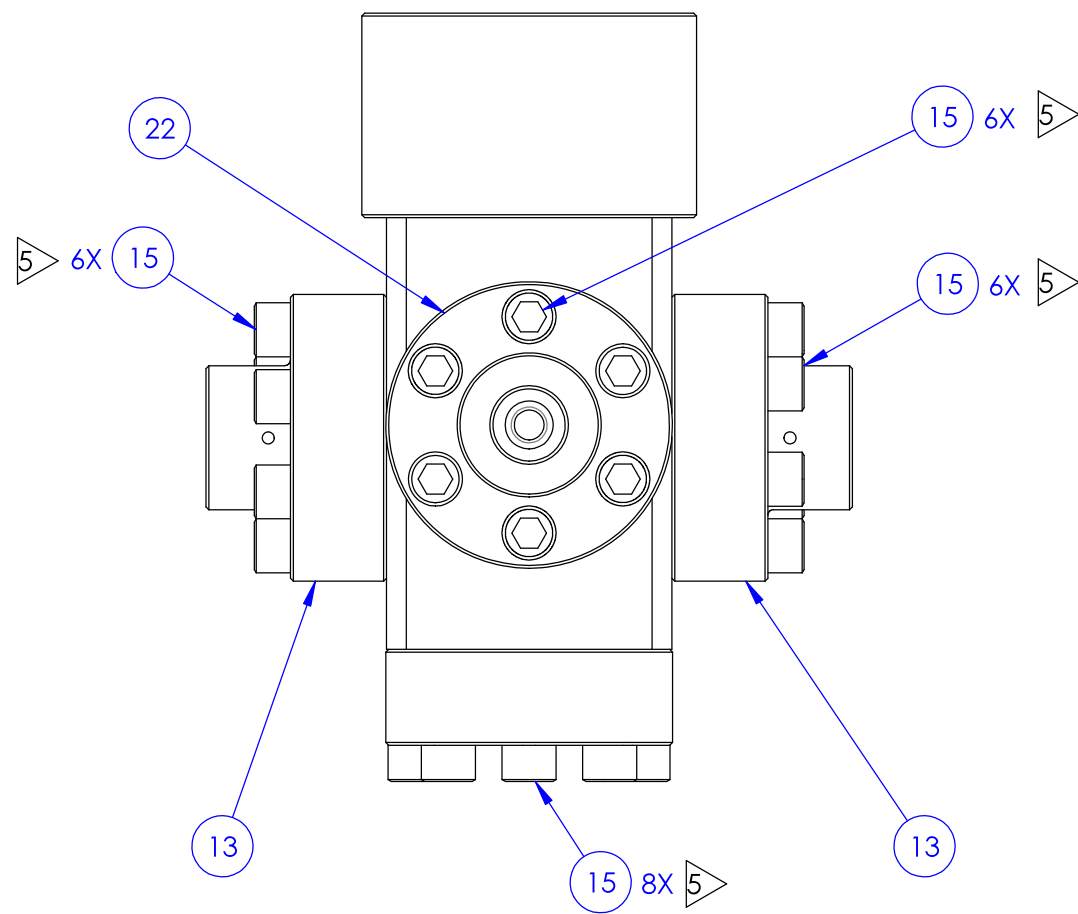
3

2

1

B

B



SECTION B-B

A

A

4

3

2

1



ENGINEERING

SIZE

DWG NO

REV

**B**

**29193**

**A**

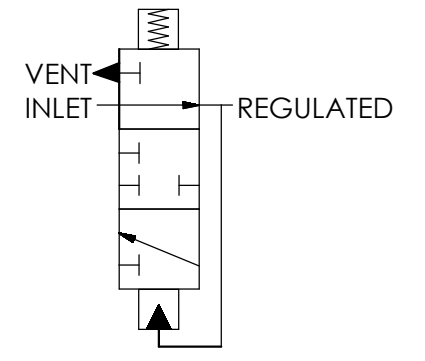
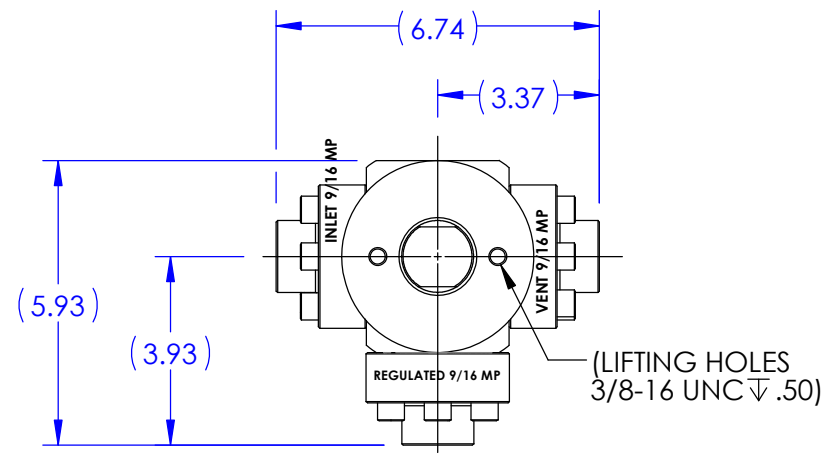
SCALE

1:4

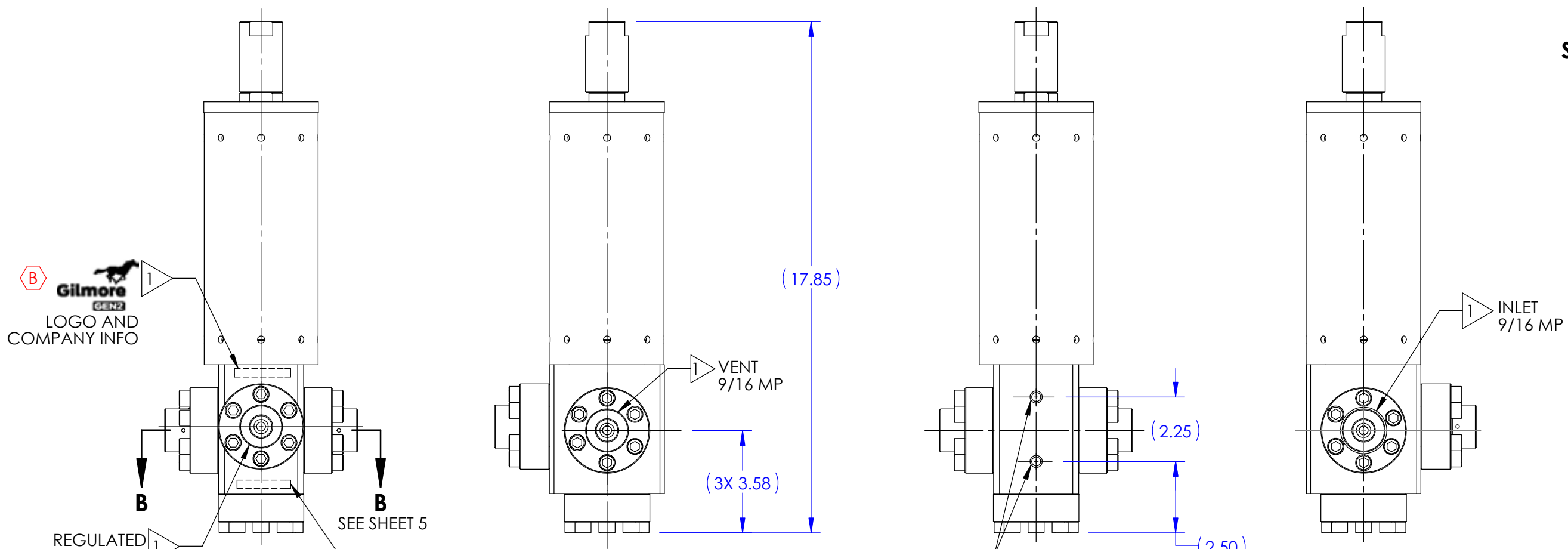
SolidWorks

SHEET 5 OF 5

REVISIONS						
REV	ERN /ECO NUMBER	DRAWN	DRAFT CHECK	ENGR. REVIEW	ENGR. APPROVED	MFG. APPROVED
B	ECO 022631	JZ 4/6/22	JB 4/6/22	AGP 4/6/22	4/8/22	jke 4/8/22



**SCHEMATIC**



LOGO AND COMPANY INFO

29197  
VER (AX VERSION #)  
(SERIAL NUMBER)  
10,000 PSI  
US PATENT 10,739,796  
(DATE OF MFG)

SEE SHOP TRAVELER  
FOR ADDITIONAL  
INFO REQUIRED

**US PATENT 10,739,796**

MATERIAL: SEE BOM	APPROVAL	
	DRAWN BY JZ	DATE 11/11/2021
CONDITION:	DRAFT CHECKED BY CY	DATE 11/11/2021
	ENGR. REVIEW BY AP	DATE 11/11/2021
TREATMENT:	ENGR. APPROVE BY MS	DATE 11/22/2021
	MFG. APPROVE BY	DATE
PROCEDURE NUMBER: 5	ERN NUMBER 02529	DATE 10/11/2021

**PRESSURE REGULATOR,  
1/2" GEN2, MANUAL  
SPRING, 8KSI/10KSI, 9/16 MP**

SIZE <b>B</b>	DWG NO	REV <b>B</b>
SCALE 1:4	SolidWorks	SHEET 1 OF 5

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**

**A**

**A**

4

3

2

1

4

3

2

1

**OPERATING DATA:**

- ADJUSTMENT SCREW TURNS NEEDED FOR 4,000 PSI SET POINT: 2±1/2 TURN B  
FOR SPRING COMPRESSION.  
(BASED ON FULLY OPEN POSITION SHOWN ON SHEET 4)
- ADJUSTMENT SCREW TORQUE FOR 8,000 PSI SET POINT: 70±10 FT-LB.
- CHANGE IN SET POINT PER ADJUSTMENT SCREW TURN: 1000±100 PSI.
- SET POINT ADJUSTED TO LESS THAN 4,000 PSI MAY RESULT IN NON-LINEAR DROP IN FLOW CAPACITY.
- FOR MORE DETAILED OPERATIONS INFORMATION REFER TO SERVICE MANUAL TBA.

**PRESSURE DATA:**

MAXIMUM INLET PRESSURE RATING: 10,000 PSI

REGULATED RANGE: 4,000 - 8,000 PSI  
 TYPICAL DEADBAND AT 10,000 PSI SUPPLY: 600±100 PSI  
 TYPICAL DEADBAND AT 7,500 PSI SUPPLY: 450±100 PSI  
 MAXIMUM REGULATED AND VENT PRESSURE RATING: 8,000 PSI

**FLOW DATA:**

FULLY OPEN Cv REGULATED: 0.5 (CALC)  
 FULLY OPEN Cv VENT: 0.2 (CALC)  
 FULLY OPEN MAXIMUM REGULATED FLOW RATE: 25 GPM  
 FLUIDS: WATER BASED DRILLING CONTROL FLUID  
 MINERAL OIL BASED DRILLING CONTROL FLUID

**PORTS:**

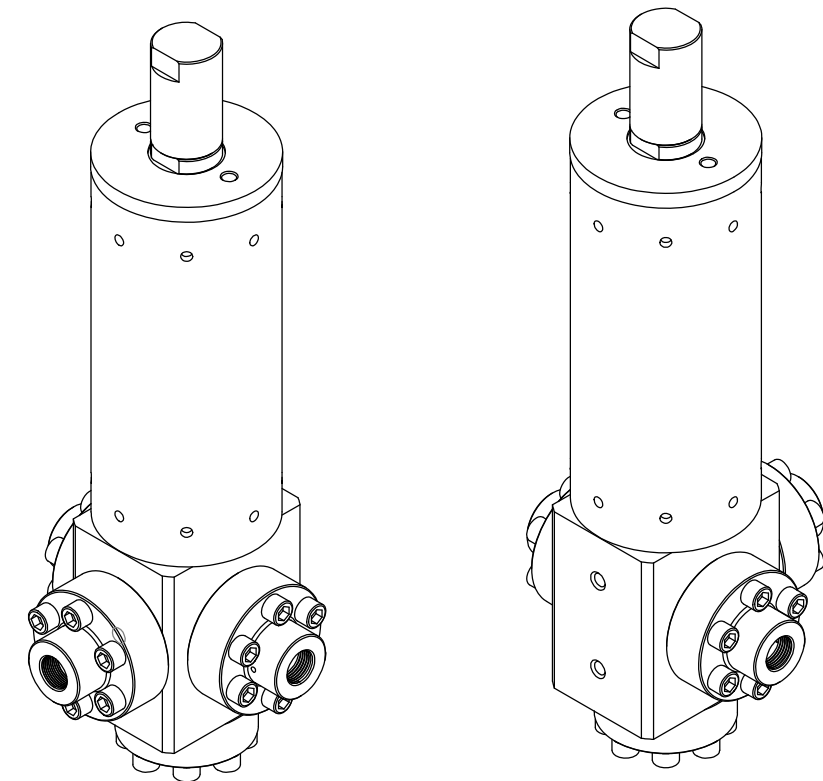
INLET: 9/16" MP  
 REGULATED: 9/16" MP  
 VENT: 9/16" MP

**GENERAL DATA:**

TEMP RANGE: 32 °F TO 150 °F  
 APPROX WEIGHT: 47 LBS

**NOTES:**

- MARK "ASSEMBLY W.O." AT VALVE ASSEMBLY IN ACCORDANCE WITH MA-W-9-10, BY GILMORE.
- MARK AS SHOWN USING LASER ETCH OR COMPUTER CONTROLLED DOT PEEN MARKING MACHINE, .06 HIGH MIN CHARACTERS.
- REGULATED RANGE SPECIFIED ENSURES ADEQUATE AMOUNT OF SPRING PRELOAD IS PRESENT FOR RELIABLE AND REPEATABLE SET POINT ADJUSTMENT.
- X IN THE BOM INDICATES PARTS IN REPAIR KIT 29197 RK AND SEAL KIT 29197 SK.
- ASSEMBLY PROCEDURE: 50368  
 STANDARD FAT PROCEDURE: 50369  
 EXTENDED FAT PROCEDURE: 50370  
 SERVICE MANUAL: 51039
- TORQUE TO 20 FT-LB
- TORQUE TO 5 FT-LB
- ALL MANUFACTURED ITEMS ARE PASSIVATED.



		<b>ENGINEERING</b>	
SIZE	DWG NO	REV	
<b>B</b>	<b>29197</b>	<b>B</b>	
SCALE	1:8	SolidWorks	SHEET 2 OF 5

B

B

A

A

4

3

2

1

BILL OF MATERIALS

BILL OF MATERIALS

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL		RK	SK
1	201865	BODY	A564 TP 630 (H1150D)	1		
2	201869	SEAL CONTAINER	A276 UNS S21800 (NITRONIC 60)	1		
3	18100-004K1	O-RING	HNBR	2	X	X
4	18100-052K1	O-RING	HNBR	2	X	X
5	18100-008K1	O-RING	HNBR	2	X	X
6	18100-055K1	O-RING	HNBR	2	X	X
7	18100-074K1	O-RING	HNBR	1	X	X
8	18108-518	T-SEAL, ROD	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
9	18100-113K1	O-RING	HNBR	2	X	X
10	205038	HYDRO SEAL, VENT	TUNGSTEN CARBIDE/ NICKEL	2	X	
11	205018	HYDRO SEAL, SUPPLY	TUNGSTEN CARBIDE/ NICKEL	2	X	
12	202123	BACKUP RING, .375 O.D.	PEEK	4	X	X
13	201867	PLUNGER GUIDE	A276 UNS S21800 (NITRONIC 60)	1		
14	193757	PLATE, SPRING	A276 TP 316	2		
15	219620	SCREW, ADJUSTING, .75 NC	F593 GR1	1		
16	201866	FLANGE, INLET / VENT 9/16 MP	A276 TP 316 (316 SS)	2		
17	192847	SPRING, COMPRESSION	AMS5670 (X-750) AMS 5667 (X-750)	1		
18	177586	HOUSING, SPRING	A276 TP 316	1		
19	219621	CAP, SPRING HOUSING, .75 NC	A276 UNS S21800 (NITRONIC 60)	1		
20	219618	NUT, O-LOCK, .75 NC	A276 TP 316 (316SS)	1		
21	219619	CAP, LOCK, .75 NC	A276 TP 316 (316 SS)	1		
22	201868	FLANGE, BOTTOM	A276 UNS S21800 (NITRONIC 60)	1		
23	18224-003	SHCS, 3/8-16 UNC X 1-1/2 LG	A286 GR 660	26		

ITEM NO	PART NUMBER	DESCRIPTION	MATERIAL		RK	SK
24	18110-029P	BACKUP RING	PEEK	4	X	X
25	18108-005	T-SEAL	CARBOXYLATED NITRILE/ NYLATRON	1	X	X
26	204976	BACKUP RING, .625 O.D.	PEEK	2	X	X
27	205004	BACKUP RING, 1.500 O.D.	PEEK	4	X	X
28	202124	BACKUP RING, .473 O.D.	PEEK	4	X	X
29	11600	SPRING, COMPRESSION	INCONEL X-750	2	X	
30	204973	BACKUP RING, 1.490 O.D.	PEEK	2	X	X
31	204403	FLANGE, REGULATED, 9/16MP	A276 TP 316 (316 SS)	1		
32	205008	FLOW PLATE	TUNGSTEN CARBIDE/ NICKEL	2	X	
33	18224-001	SHCS, 3/8 - 16 UNC-2A X 1.00 LG	A453 GR660	8		
34	154799	SHCS, THREAD-LOCKING	A593 T316 / NYLON	4	X	X
35	192385	WIPER, D-STYLE	POLYURETHANE	1	X	X
36	18800-001	BALL, 1/2" DIA.	A276 TP 316	1		
37	13125	SPRING, COMPRESSION	INCONEL X750	1		
38	18100-013K1	O-RING	HNBR	2	X	X
39	18800-043	BALL, 9/16" DIA	A276 TP 316	1		

B

B

A

A



ENGINEERING

SIZE	DWG NO	REV
<b>B</b>	<b>29197</b>	<b>B</b>
SCALE	1:8	SHEET 3 OF 5
SolidWorks		

4

3

2

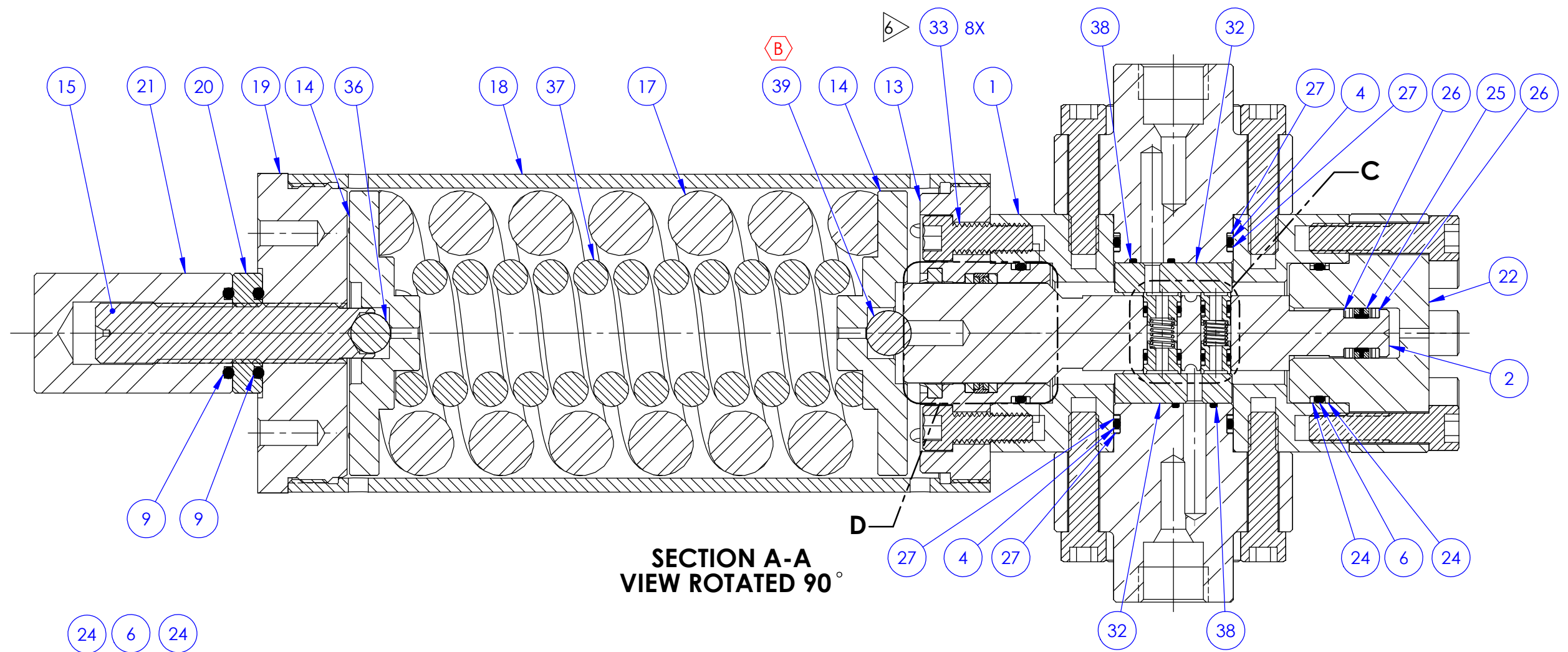
1

4

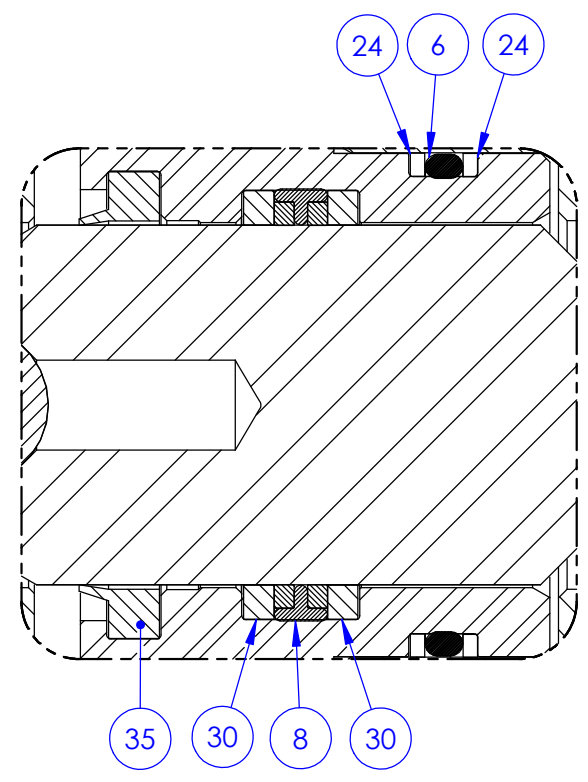
3

2

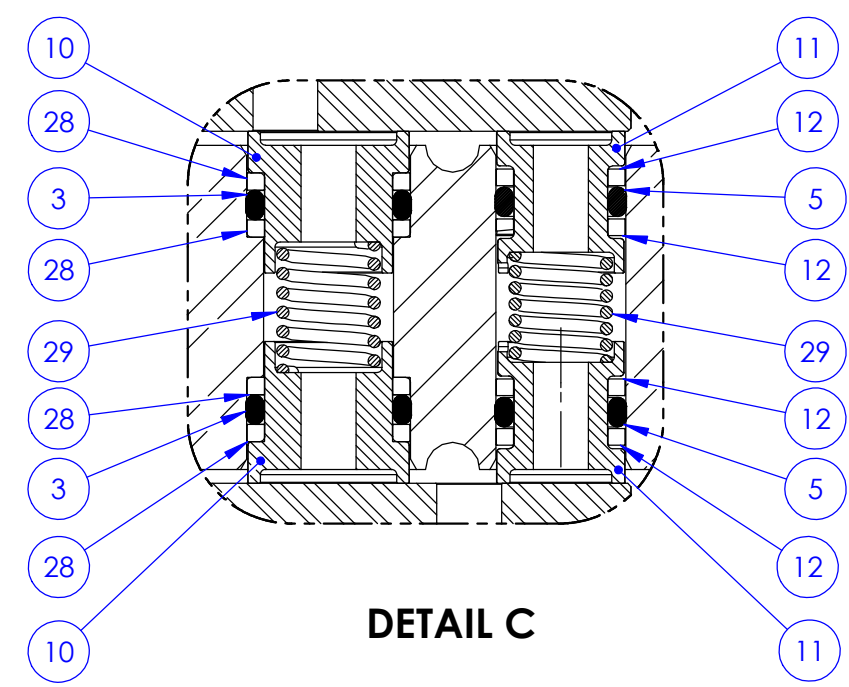
1



SECTION A-A  
VIEW ROTATED 90°



DETAIL D



DETAIL C

SIZE <b>B</b>	DWG NO <b>29197</b>
SCALE 1:4	REV <b>B</b>
SHEET 4 OF 5	

4

3

2

1

4

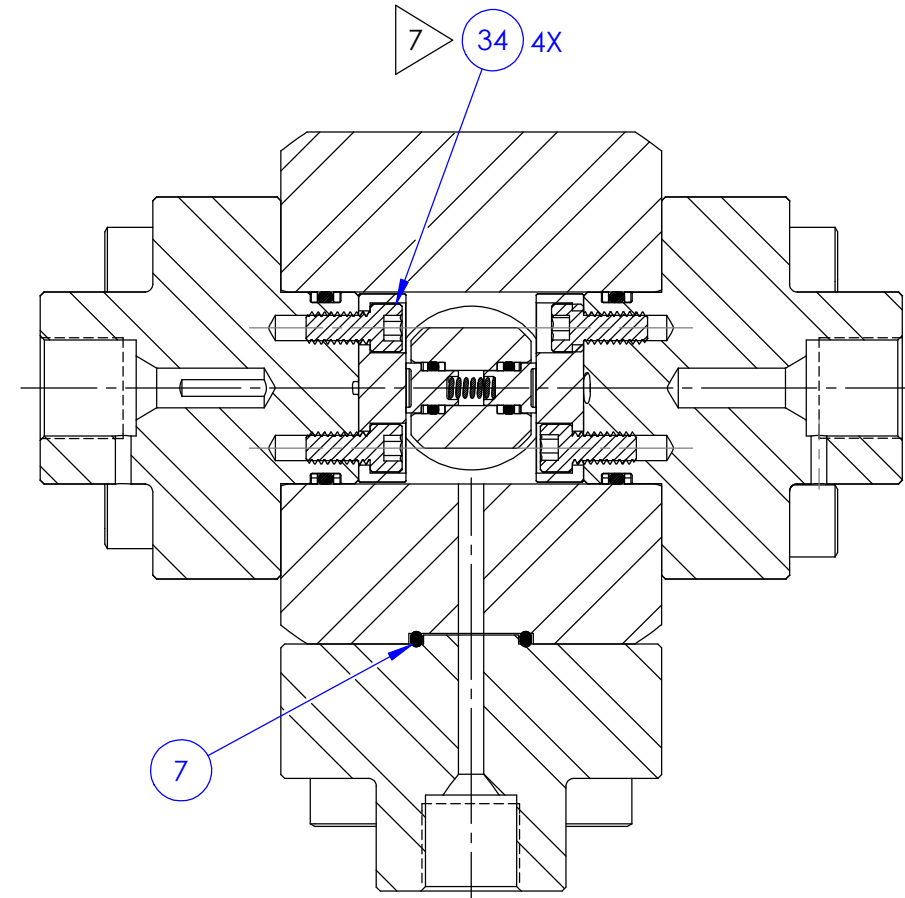
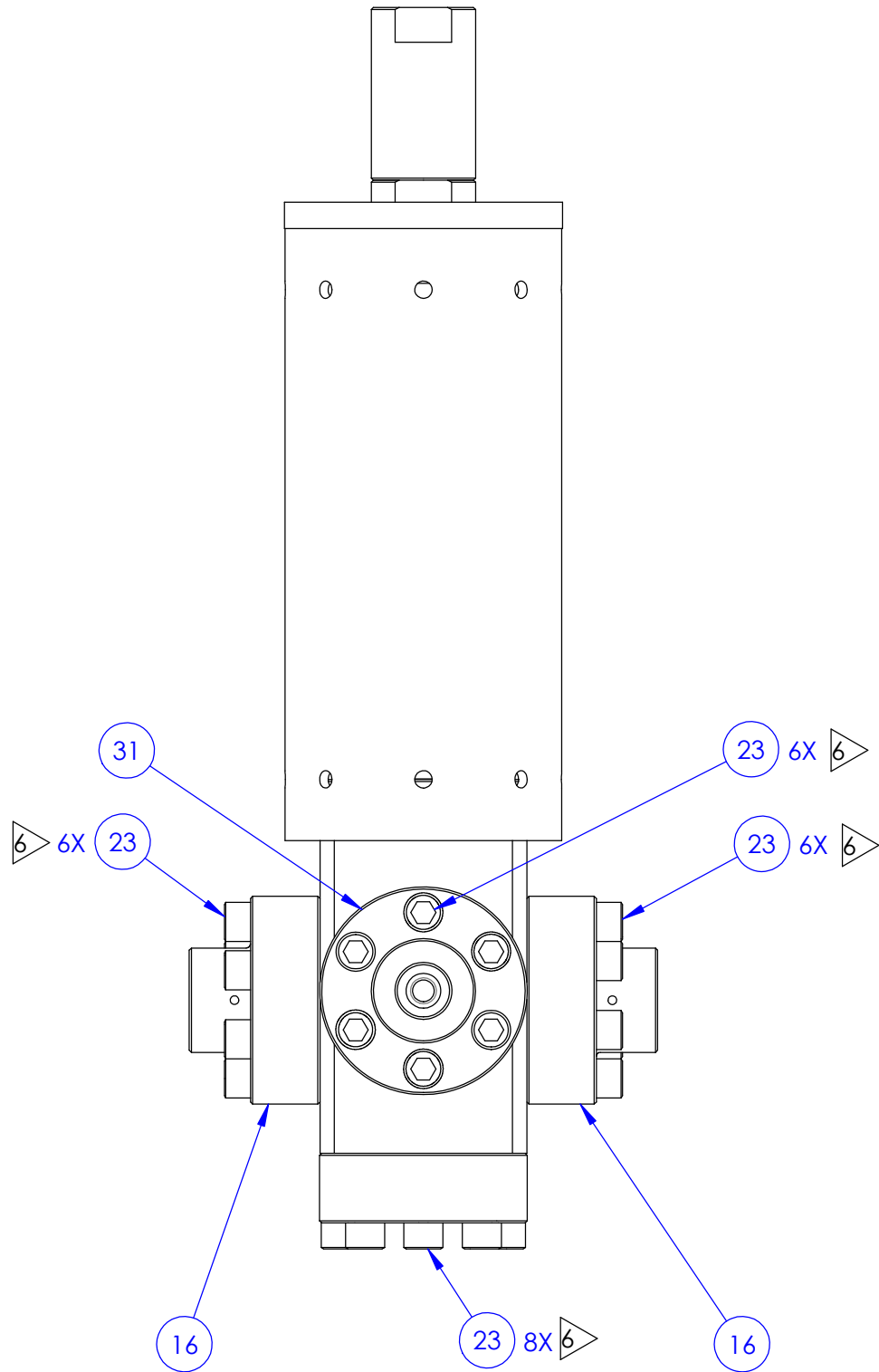
3

2

1

B

B



SECTION B-B

A

A

4

3

2

1



ENGINEERING

SIZE	DWG NO	REV
<b>B</b>	<b>29197</b>	<b>B</b>
SCALE	1:4	SHEET 5 OF 5
SolidWorks		