

MODEL 106/206-PG POWER OPERATED GLOBE VALVE

Sizes 1/2" to 8" (106-PG) 3" to 10" (206-PG)
Installation, Operating and Maintenance Instructions

DESCRIPTION:

This valve is the basic component used for most Singer Model 106/206 Automatic Valves. It is a hydraulically operated valve.

DESCRIPTION OF OPERATION:

The valve opens when the bonnet (area above the diaphragm) is connected to the downstream side of the valve AND a pressure drop of 5 psi (35 kPa) is available across the valve. The valve also opens when the bonnet is vented to atmosphere, regardless of pressure drop, provided that the line pressure is 5 psi (35 kPa) or more.

The valve closes when the inlet pressure is directed to the bonnet.

The valve can be made to modulate by varying the bonnet pressure between inlet pressure and outlet pressure. This is done by the pilot circuit.

In some cases the line media is unsuitable for use in the pilot system. In these circumstances external water pressure can be used in the pilot system. The external pressure must be equal to or higher than the line pressure.

If available pressure drop is less than 5 psi (35 kPa), spring lift and external water pressure must be used (consult factory).

Unless otherwise specified, the valve is assembled with components suitable for water service up to 180° F (80° C). For other service conditions, contact your Singer Valve representative.

STORAGE:

This valve must be stored indoors, away from direct sunlight.

INSTALLATION:

Use washers under nuts when bolting valve flanges to pipe flanges to protect the Epoxy Coating.

Control valves must be installed in a horizontal pipe with the bonnet up. Smaller valves (6" and smaller) can be installed in a vertical pipe if the order states the orientation. Disassembly is difficult but not impossible in valves installed in vertical pipe.

A stable, non-failing source of pressure is necessary to operate a pilot operated control valve.

Operating fluid must be clean and free of air.

Under high velocity conditions the pressure signal, when the pick-up point is located on the main valve inlet, may be adversely affected. As an example, a relief valve will operate more effectively and control more accurately if the operating pressure and sensing pressure is connected to the header.

Ideally, six pipe diameters of straight pipe is required on the inlet of any control valve but

- Fully open **Gate Valve** can be installed on the inlet of a valve, provided it is used as an isolating valve and never used in partially open condition.
- A **Butterfly Valve** with stem horizontal can not be installed in the inlet of a control valve unless operating pressure and sensing lines are connected upstream of the butterfly valve, in a location that gives true system pressure.
- A **Butterfly Valve** with stem vertical can be installed in the inlet of a control valve as long as velocity does not exceed 15 ft/sec. The butterfly valve can not be used for throttling. If problems develop at high flows, operating pressure and possible sensing can be connected upstream of the butterfly valve, in a location that gives true system pressure.
- A control valve can be installed with no straight pipe on the inlet if the operating and sensing lines are connected to a location that gives true system pressure.

The connection point should be made at the pipe centerline to avoid air pick-up at the top of the pipe.

1. **It is possible that diaphragms may take a set after shipping and storage. It is highly recommended that Bonnet and Body Bolts or Nuts be tightened after installation but before pressurizing the valve. If a leak develops after pressurizing, de-pressurize the valve and tighten the bolts or nuts.**
2. For most convenient operation and maintenance, line isolation valves should be installed.
3. A suitable bypass should be provided to allow for servicing of the valve without interrupting the flow.

Installation (Cont.):

4. Install pressure gauges upstream and/or downstream of valve as appropriate. This will facilitate ease of setting the pilot system.
5. A strainer with a suitable basket should be installed ahead of the valve to protect it from foreign material.
6. Sufficient space should be provided around the valve for disassembly.
7. Flush system of all foreign matter before installing the valve.
8. Check direction of flow (inlet of valve is marked OR an arrow on the side of body indicates flow direction) and install the valve accordingly.
9. **VENT AIR FROM THE BONNET.** After installation, when the valve is pressurized, vent air from the bonnet:
 - a) Valves installed in horizontal piping with bonnet up (NO LIMIT SWITCH):
Sizes up to 2" where pilot connection is to the guide bushing at the center of the valve do not require venting (they vent automatically).
Sizes up to 2" with position indicator: use bleed-cock on indicator.
Sizes 2-1/2" and larger, loosen pipe plug at the center of the bonnet to bleed air. If equipped with position indicator, use bleed-cock on indicator.
 - b) Valves installed in horizontal piping with bonnet up (WITH LIMIT SWITCH): Refer to Drawing A0707A. Use bleed screw (63) to vent air.
 - c) Valves installed in vertical pipe: The pilot connection will be to the highest point on the bonnet if the orientation and flow direction were specified on the order. Some sizes vent automatically. Some sizes are provided with a small screw to facilitate bleeding (do not remove completely).
 - d) Valves that do not have the bleed screw and do not bleed completely from existing connections must be bled by loosening the bonnet bolts.

SERVICE SUGGESTIONS:

POSSIBLE CAUSE / REMEDY

FAILS TO OPEN

1. Insufficient inlet pressure. / Increase pressure

2. Pressure in the bonnet is not released:

- Isolating valves on pilot lines closed. - Open valves
 - Pilot components not functioning. - Refer to specific instructions on pilot components
 - Foreign material in pilot system. - Clear obstruction
- FAILS TO CLOSE**

Lack of pressure in the bonnet due to:

- Pilot components not functioning. - Refer to specific instructions on pilot components.
- Foreign material in pilot system.
- Ruptured diaphragm.
- Obstruction in the valve.
- Worn main valve disc.

PULSATIONS

- Air in the bonnet. - Vent air. Refer to "Installation (9)" above.
- Improper adjustment to pilot components. - Refer to specific instructions on pilot components.
- Valve oversized. A smaller valve in parallel may be required.

MAINTENANCE:

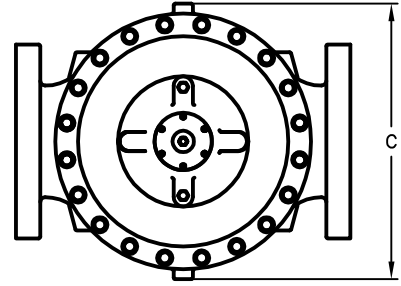
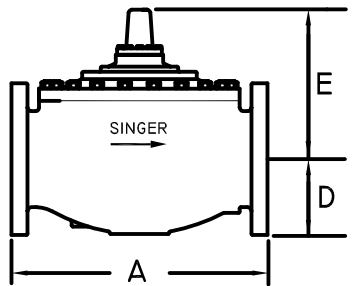
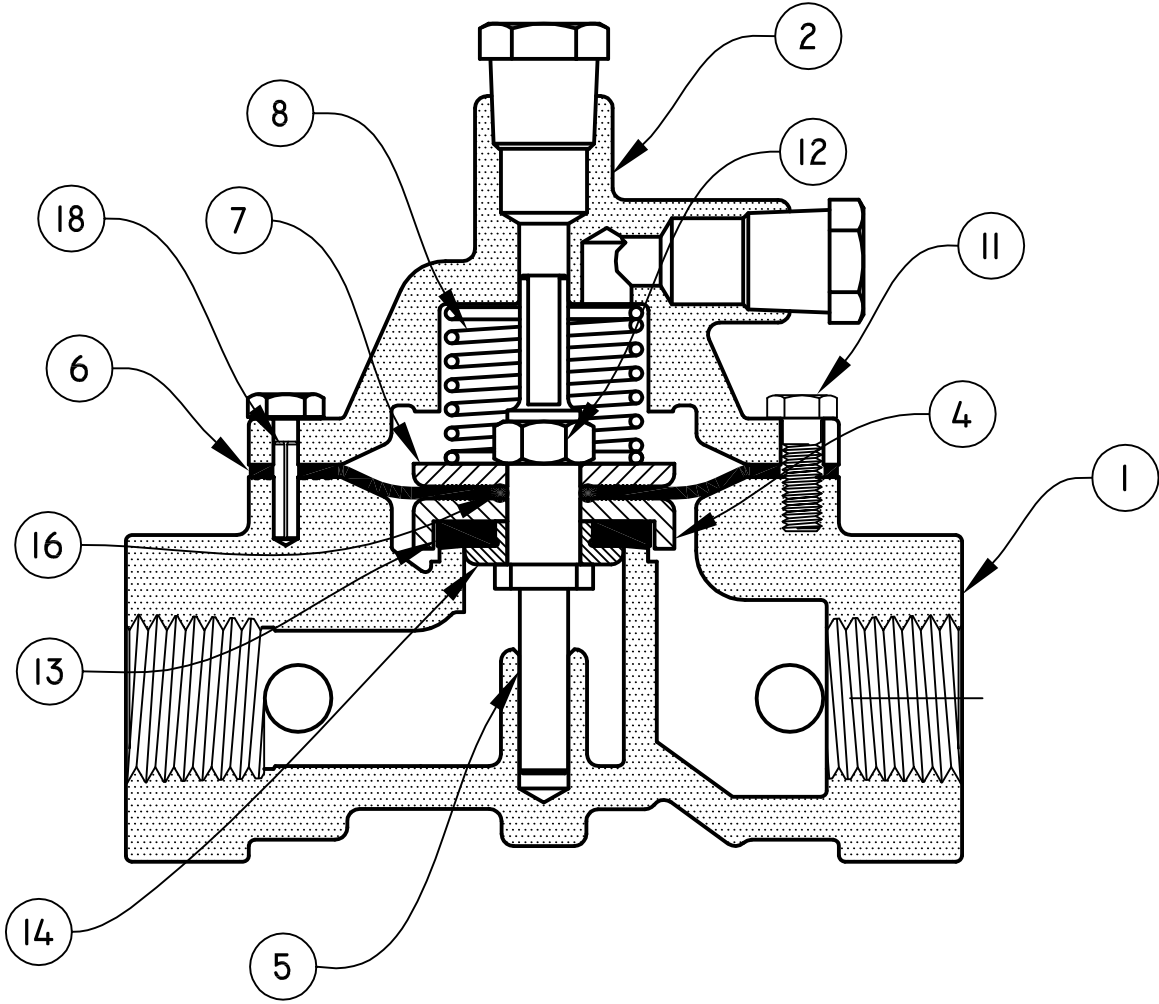
The SINGER Model 106/206-PG requires a minimum of maintenance. All parts are accessible for inspection and repair without removing the valve from the line.

1. Close upstream and downstream isolating gate valves.
2. Disconnect body and bonnet pilot lines.
3. Remove bonnet. If bonnet does not come free readily, it can be pried loose with a small pry-bar.
4. Remove main valve assembly for inspection. Do not remove seat ring unless inspection shows that it is damaged.
5. Replace worn or defective parts and reassemble.

NOTE REGARDING FREEZING:

This valve does not drain completely when inlet and outlet pipes are drained. Where freezing conditions are expected, one of the following must be performed:

- Drain valve and pilot system completely.
- Add suitable anti-freeze to valve and pilot system (**Non-potable water service only**).
- Provide insulation and/or heating to keep the valve from freezing.



 SINGER VALVE <i>Result-Based Solutions. Globally.™</i>	
www.singervalve.com 12850-87th Avenue, Surrey, B.C. V3W 3H9	
Drawn By: SPB / VS	Approved By:
Date: NOVEMBER 2nd 2010	Drawing: A0950C
1/2" TO 3/4" 106PG STAINLESS STEEL	

Material Specifications & Dimensions

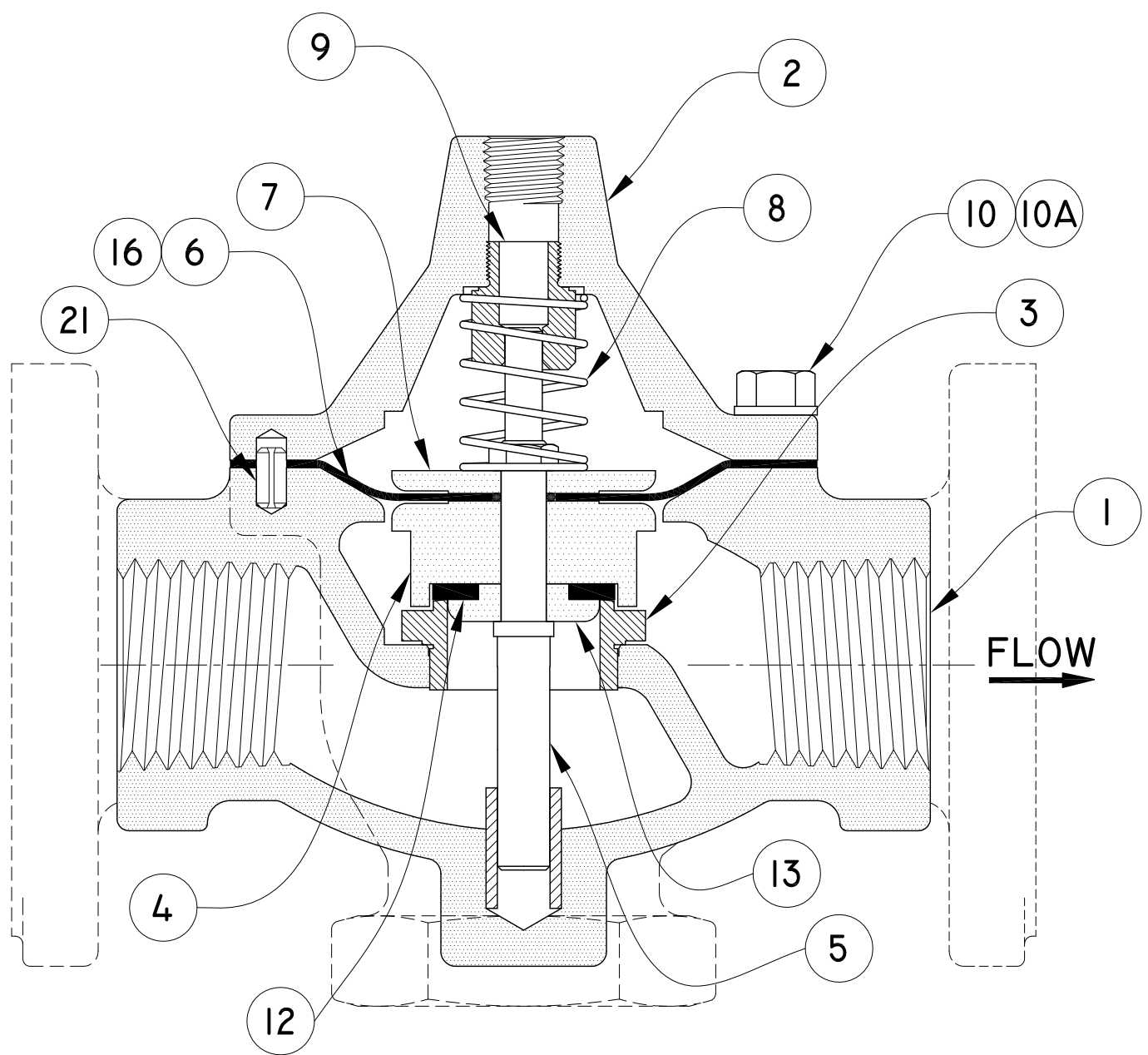
1/2" to 3/4" (15mm to 20mm) 106-PG
Drawing A0950C

Item	Part Name	Material	Item	Part Name	Material
1	Body	Stainless Steel	12	Stem Nut	Stainless Steel
2	Bonnet	Stainless Steel	13	** Resilient Disc	Buna-N
4	Inner Valve	Stainless Steel	14	Disc Retainer	Stainless Steel
5	Stem	Stainless Steel	16	** Diaphragm Seal	Buna-N
6	** Diaphragm	EPDM	18	Locating Pin	Stainless Steel
7	Clamp Plate	Stainless Steel			
8	Spring	Stainless Steel			
11	Bonnet Bolts	Stainless Steel			

**** Recommended spare parts (included in the Rebuild Kit)**

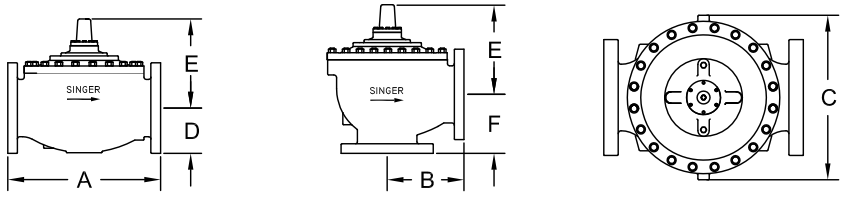
		Globe			Globe	Angle		
		A	D	E	C	B	E	F
1/2" & 3/4"	NPT / BSPT	4.25"	1.20"	3.06"	3.00"	N/A	N/A	N/A
15mm & 20mm		108mm	31mm	78mm	76mm			

N/A = Not Available



SINGLE CHAMBER MAIN VALVE

SIZES 1" TO 1-1/2" (25MM TO 40MM)



SINGER VALVE

Result-Based Solutions. Globally.

www.singervalve.com 12850-87th Avenue, Surrey, B.C. V3W 3H9

Drawn By:	Approved By:
Kari Oksanen	Kari Oksanen
Date:	Drawing:
December 16, 2005	A0341F
Model 106-PG & A106-PG	

Material Specifications & Dimensions

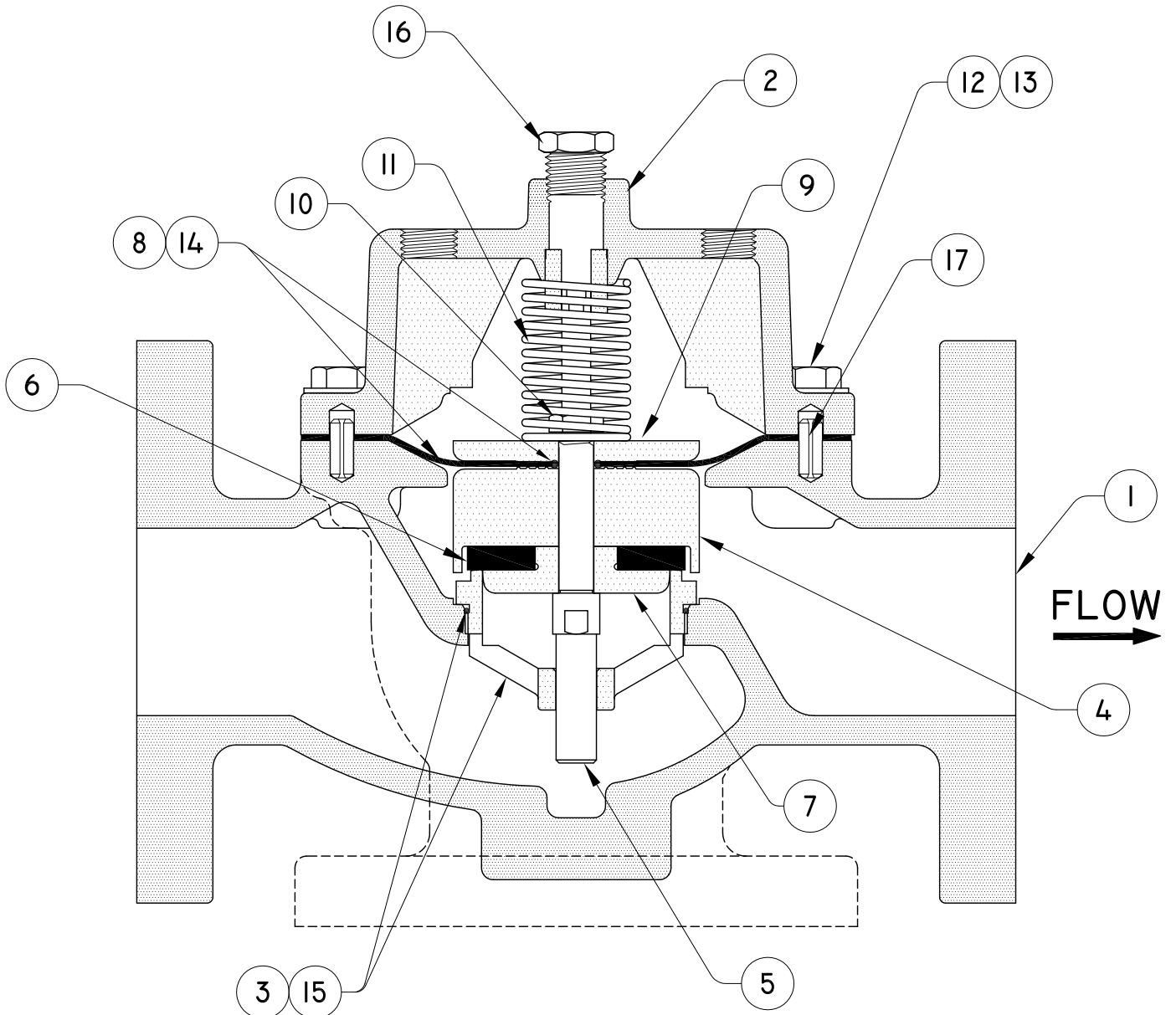
 1" to 1-1/2" (25mm to 40mm) 106-PG & A106-PG
 For Drawing A0341F

Item	Part Name	Material	Item	Part Name	Material
1	Body	Ductile Iron & Bronze	10A	Bonnet Washers	Stainless Steel
2	Bonnet	Ductile Iron	11	Lock Nut	Stainless Steel
3	Seat Ring	Stainless Steel	12 **	Resilient Disc	EPDM or Buna-N
4	Inner Valve	Brass	13	Disc Retainer	Brass
5	Stem	Stainless Steel	16 **	Diaphragm Seal	Buna-N
6 **	Diaphragm	EPDM or Buna-N	21	Locating Pins	Stainless Steel
7	Clamp Plate	Brass			
8	Spring	Stainless Steel			
9	Guide Bushing	Brass			
10	Bonnet Cap Screw	Stainless Steel			

** Recommended spare parts (included in Rebuild Kit)

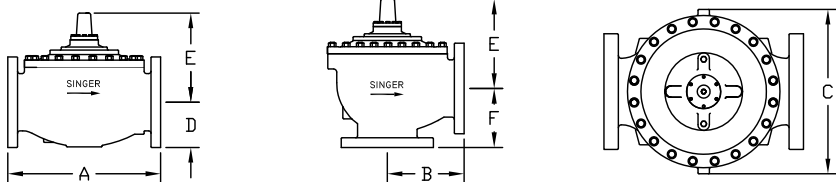
Note: Bronze bushing is part of the body component

106-PG & A106-PG		Globe			Globe & Ang	Angle		
		A	D	E	C	B	E	F
1"	NPT / BSPT	6.75"	2.50"	4.38"	4.88"	3.38"	4.38"	3"
25mm		171mm	64mm	111mm	124mm	86mm	111mm	76mm
1-1/4"	NPT / BSPT	6.75"	2.50"	4.38"	4.88"	3.38"	4.38"	3"
32mm		171mm	64mm	111mm	124mm	86mm	111mm	76mm
1-1/2"	NPT / BSPT	6.75"	2.50"	4.38"	6.13"	3.38"	4.38"	3"
40mm		171mm	64mm	111mm	156mm	86mm	111mm	76mm
	150F	8.50"	2.75"	4.38"	6.13"	-	-	-
		216mm	70mm	111mm	156mm	-	-	-
	300F / PN10, PN16, PN25, PN40	9"	3.25"	4.38"	6.13"	-	-	-
		229mm	83mm	111mm	156mm	-	-	-



SINGLE CHAMBER MAIN VALVE

SIZE 2" (50MM)



SINGER VALVE

Result-Based Solutions. Globally.

www.singervalve.com 12850-87th Avenue, Surrey, B.C. V3W 3H9

Drawn By: Kari Oksanen	Approved By: Kari Oksanen
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Date: December 16, 2005	Drawing: A0872C
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Model 106-PG & A106-PG

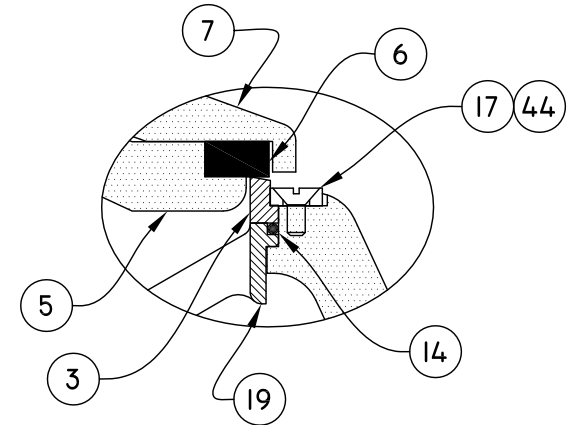
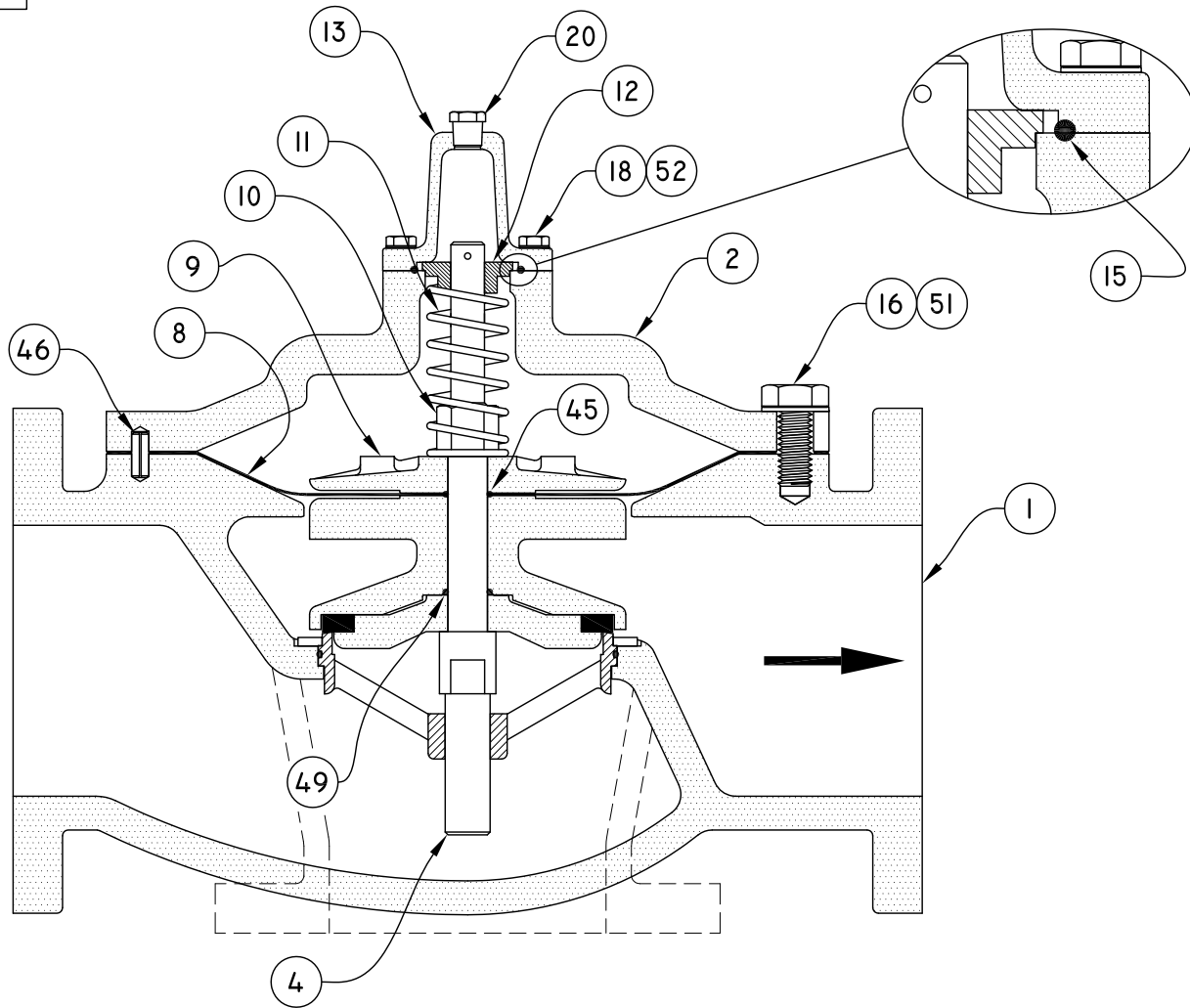
Material Specifications & Dimensions

2" (50mm) 106-PG & A106-PG
For Drawing A0872C

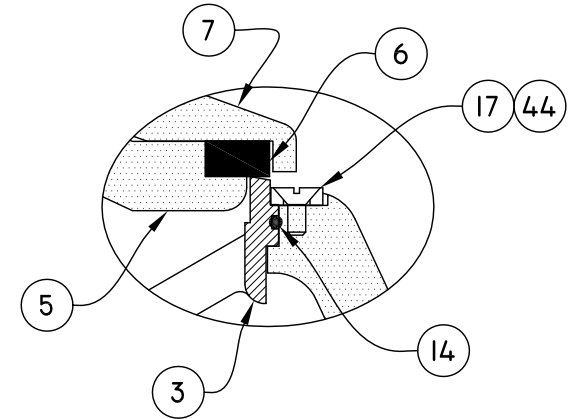
<u>Item</u>	<u>Part Name</u>	<u>Material</u>	<u>Item</u>	<u>Part Name</u>	<u>Material</u>
1	Body	Ductile Iron	11	Spring	Stainless Steel
2	Bonnet	Ductile Iron	12	Bonnet Cap screws	Stainless Steel
3	Seat Ring	Stainless Steel	13	Bonnet Washers	Stainless Steel
4	Inner Valve	Brass	14 **	Diaphragm Seal	Buna-N
5	Stem	Stainless Steel	15 **	Seat Ring Seal	Buna-N
6 **	Resilient Disc	EPDM or Buna-N	16	Bonnet Plug	Brass
7	Disc Retainer	Brass	17	Locating Pins	Stainless Steel
8 **	Diaphragm	EPDM			
9	Clamp Plate	Brass			
10	Lock Nut	Stainless Steel			

** Recommended spare parts (included in the Rebuild Kit)

106-PG & A106-PG		Globe			Globe & Ang	Angle		
		A	D	E	C	B	E	F
2" 50mm	NPT / BSPT	9.38"	2.75"	4.75"	6.50"	4.69"	4.75"	3.25"
		238mm	70mm	121mm	165mm	119mm	121mm	83mm
	150F / PN10, PN16, PN25, PN40	9.38"	3"	4.75"	6.50"	4.75"	4.75"	3.25"
		238mm	76mm	121mm	165mm	121mm	121mm	83mm
	300F	10"	3.25"	4.75"	6.50"	5"	4.75"	3.50"
		254mm	83mm	121mm	165mm	127mm	121mm	89mm



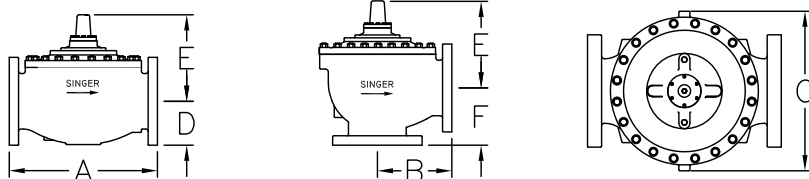
TWO PIECE SEAT & BOTTOM GUIDE DETAIL



ONE PIECE SEAT & BOTTOM GUIDE DETAIL

SINGLE CHAMBER MAIN VALVE

SIZES 2-1/2" TO 8" (65MM TO 200MM)



REV: ADDED ONE AND TWO PIECE SEAT DETAILS. JUNE 5, 2008.

 SINGER VALVE <i>Result-Based Solutions. Globally.™</i>	
www.singervalve.com 12850-87th Avenue, Surrey, B.C. V3W 3H9	
Drawn By:	Approved By:
STEPHEN BISHOP	
Date:	Drawing:
JUNE 5th 2008	A0719B
Model 106-PG & A106-PG	

Material Specifications & Dimensions

 2-1/2" to 8" (65mm to 200mm) 106-PG & A106-PG
 For Drawing A0719B

Item	Part Name	Material	Item	Part Name	Material
1	Body	Ductile Iron	19 Φ	Bottom Guide	Ductile Iron & Bronze (only on two piece seat/bottom guide)
2	Bonnet	Ductile Iron	44 %	Seat Retaining Washer	Stainless Steel
3 X	Seat Ring	Stainless Steel	45 **	Diaphragm Seal	Buna-N
4	Stem	Stainless Steel	46	Locating Pin	Stainless Steel
5 !	Disc Retainer	Ductile Iron	49 **	Disc Retainer Seal	Buna-N
6 **	Resilient Disc	EPDM	51	Bonnet Washer	Stainless Steel
7	Inner Valve	Ductile Iron	52	Stem Cap Washer	Stainless Steel
8 **	Diaphragm	Reinforced EPDM			
9	Clamp Plate	Ductile Iron			
10	Stem nut	Brass B-16			
11	Spring	Stainless Steel			
12	Guide Bushing	Brass B-16			
13	Stem Cap	Ductile Iron			
14 **	Seat Ring Seal	Buna-N			
15 **	Stem Cap Seal	Buna-N			
16	Bonnet Bolt	Stainless Steel			
17 %	Seat Ring Screws	Stainless Steel			
18	Stem Cap Capscrew	Stainless Steel			

** Recommended spare parts (included in the Rebuild Kit)
 % Not required on size 2-1/2", (One piece seat ring and guide, shown as item 3).
 X On sizes 2-1/2" - 8" items 3 & 19 may be one piece; material - Stainless Steel
 ! On sizes 2-1/2" & 3", material is brass B-16. On size 4", material is bronze.
 Φ On size 3", material is bronze B-62.

106-PG & A106-PG		Globe			Globe & Ang	Angle		
		A	D	E	C	B	E	F
2-1/2" 65mm	NPT / BSPT	11" 279mm	3.38" 86mm	7.50" 191mm	8.19" 208mm	5.50" 140mm	7.50" 191mm	4" 102mm
	150F / PN10, PN16, PN25, PN40	11" 279mm	3.50" 89mm	7.50" 191mm	8.19" 208mm	5.50" 140mm	7.50" 191mm	4" 102mm
	300F	11.63" 295mm	3.75" 95mm	7.50" 191mm	8.19" 208mm	5.88" 149mm	7.50" 191mm	4.31" 109mm
3" 80mm	NPT / BSPT	13.50" 343mm	3.68" 93mm	8" 203mm	9.25" 235mm	6.63" 168mm	8" 203mm	4.63" 118
	150F	12" 305mm	3.75" 95mm	8" 203mm	9.25" 235mm	6" 152mm	8" 203mm	4" 102mm
	300F	13.25" 337mm	4.13" 105mm	8" 203mm	9.25" 235mm	6.38" 162mm	8" 203mm	4.38" 111mm
	PN10, PN16, PN25, PN40	318mm	100mm	203mm	235mm	162mm	203mm	111mm
4" 100mm	150F / PN10, PN16, PN25, PN40	15" 381mm	4.60" 117	9.15" 232mm	10.88" 276mm	7.50" 191mm	9.15" 232mm	5" 127mm
	300F	15.63" 397mm	5.09" 129mm	9.15" 232mm	10.88" 276mm	7.88" 200mm	9.15" 232mm	5.31" 135mm
6" 150mm	150F / PN10, PN16	20" 508mm	5.60" 142mm	11.75" 298mm	16.63" 422mm	10" 254mm	11.75" 298mm	6" 152mm
	300F / PN25, PN40	21" 533mm	6.34" 161mm	11.75" 298mm	16.63" 422mm	10.50" 267mm	11.75" 298mm	6.50" 165mm
8" 200mm	150F / PN10, PN16	25.38" 645mm	7.63" 194mm	14.91" 379mm	21.63" 549mm	12.75" 324mm	14.91" 379mm	8" 203mm
	300F / PN25, PN40	26.38" 670mm	7.88" 200mm	14.91" 379mm	21.63" 549mm	13.25" 337mm	14.91" 379mm	8.50" 216mm

MODEL S106/S206-PG POWER OPERATED GLOBE VALVE

Sizes 6" to 16" (S106-PG) 12" to 24" (S206-PG)
Installation, Operating and Maintenance Instructions

DESCRIPTION:

This valve is the basic component used for most Singer Automatic Valves. It is a hydraulically operated valve.

DESCRIPTION OF OPERATION:

The valve opens when the bonnet (area above the diaphragm) is connected to the downstream side of the valve AND a pressure drop of 5 psi (35 kPa) is available across the valve. The valve also opens when the bonnet is vented to atmosphere, regardless of pressure drop, provided that the line pressure is 5 psi (35 kPa) or more.

The valve closes when the inlet pressure is directed to the bonnet.

The valve can be made to modulate by varying the bonnet pressure between inlet pressure and outlet pressure. This is done by the pilot circuit.

In some cases the line media is unsuitable for use in the pilot system. In these circumstances external water pressure can be used in the pilot system. The external pressure must be equal to or higher than the line pressure.

Unless otherwise specified, the valve is assembled with components suitable for water service up to 180° F (80° C). For other service conditions, contact your Singer Valve representative.

STORAGE:

This valve must be stored indoors, away from direct sunlight.

INSTALLATION:

Use washers under nuts when bolting valve flanges to pipe flanges to protect the Epoxy Coating.

Control valves must be installed in a horizontal pipe with the bonnet up. Smaller valves (6" and smaller) can be installed in a vertical pipe if the order states the orientation. Disassembly is difficult but not impossible in valves installed in vertical pipe.

A stable, non-failing source of pressure is necessary to operate a pilot operated control valve.

Operating fluid must be clean and free of air.

Under high velocity conditions the pressure signal, when the pick-up point is located on the main valve inlet, may be adversely affected. As an example, a relief valve will operate more effectively and control more accurately if the operating pressure and sensing pressure is connected to the header.

Ideally, six pipe diameters of straight pipe is required on the inlet of any control valve but

- Fully open **Gate Valve** can be installed on the inlet of a valve, provided it is used as an isolating valve and never used in partially open condition.
- A **Butterfly Valve** with stem horizontal can not be installed in the inlet of a control valve unless operating pressure and sensing lines are connected upstream of the butterfly valve, in a location that gives true system pressure.
- A **Butterfly Valve** with stem vertical can be installed in the inlet of a control valve as long as velocity does not exceed 15 ft/sec. The butterfly valve can not be used for throttling. If problems develop at high flows, operating pressure and possible sensing can be connected upstream of the butterfly valve, in a location that gives true system pressure.
- A control valve can be installed with no straight pipe on the inlet if the operating and sensing lines are connected to a location that gives true system pressure.

The connection point should be made at the pipe centerline to avoid air pick-up at the top of the pipe.

1. **It is possible that diaphragms may take a set after shipping and storage. It is highly recommended that Bonnet and Body Bolts or Nuts be tightened after installation but before pressurizing the valve. If a leak develops after pressurizing, de-pressurize the valve and tighten the bolts or nuts.**

Installation (Cont.):

2. For most convenient operation and maintenance, line isolation valves should be installed.
3. A suitable bypass should be provided to allow for servicing of the valve without interrupting the flow.
4. Install pressure gauges upstream and/or downstream of valve as appropriate. This will facilitate ease of setting the pilot system.
5. A strainer with a suitable basket should be installed ahead of the valve to protect it from foreign material.
6. Sufficient space should be provided around the valve for disassembly.
7. Flush system of all foreign matter before installing the valve.
8. Check direction of flow (inlet of valve is marked OR an arrow on the side of body indicates flow direction) and install the valve accordingly.
9. VENT AIR FROM THE BONNET After installation, when the valve is pressurized, vent air from the bonnet:
 - Valves with no Limit Switch: Loosen pipe plug at the centre of the bonnet to bleed air. If equipped with position indicator, use bleed-cock on indicator.
 - Valves with Limit Switch: Refer to Drawing A0707A. Use bleed screw (63) to vent air.

SERVICE SUGGESTIONS:

POSSIBLE CAUSE / REMEDY

FAILS TO OPEN

1. Insufficient inlet pressure. / Increase pressure
2. Pressure in the bonnet is not released:
 - Isolating valves on pilot lines closed. - Open valves
 - Pilot components not functioning. - Refer to specific instructions on pilot components
 - Foreign material in pilot system. - Clear obstruction

FAILS TO CLOSE

Lack of pressure in the bonnet due to:

- Pilot components not functioning. - Refer to specific instructions on pilot components.
- Foreign material in pilot system. - Clear obstructions.
- Ruptured diaphragm. - Replace worn parts.
- Obstruction in the valve. - Remove obstructions.
- Worn main valve disc. - Replace disc.

PULSATATIONS

- Air in the bonnet. - Vent air. Refer to "Installation (9)" above.
- Improper adjustment to pilot components. - Refer to specific instructions on pilot components.
- Valve oversized. A smaller valve in parallel may be required.

MAINTENANCE:

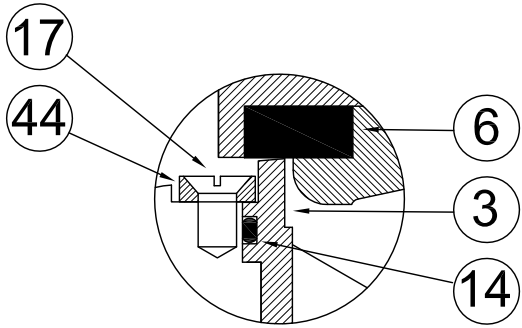
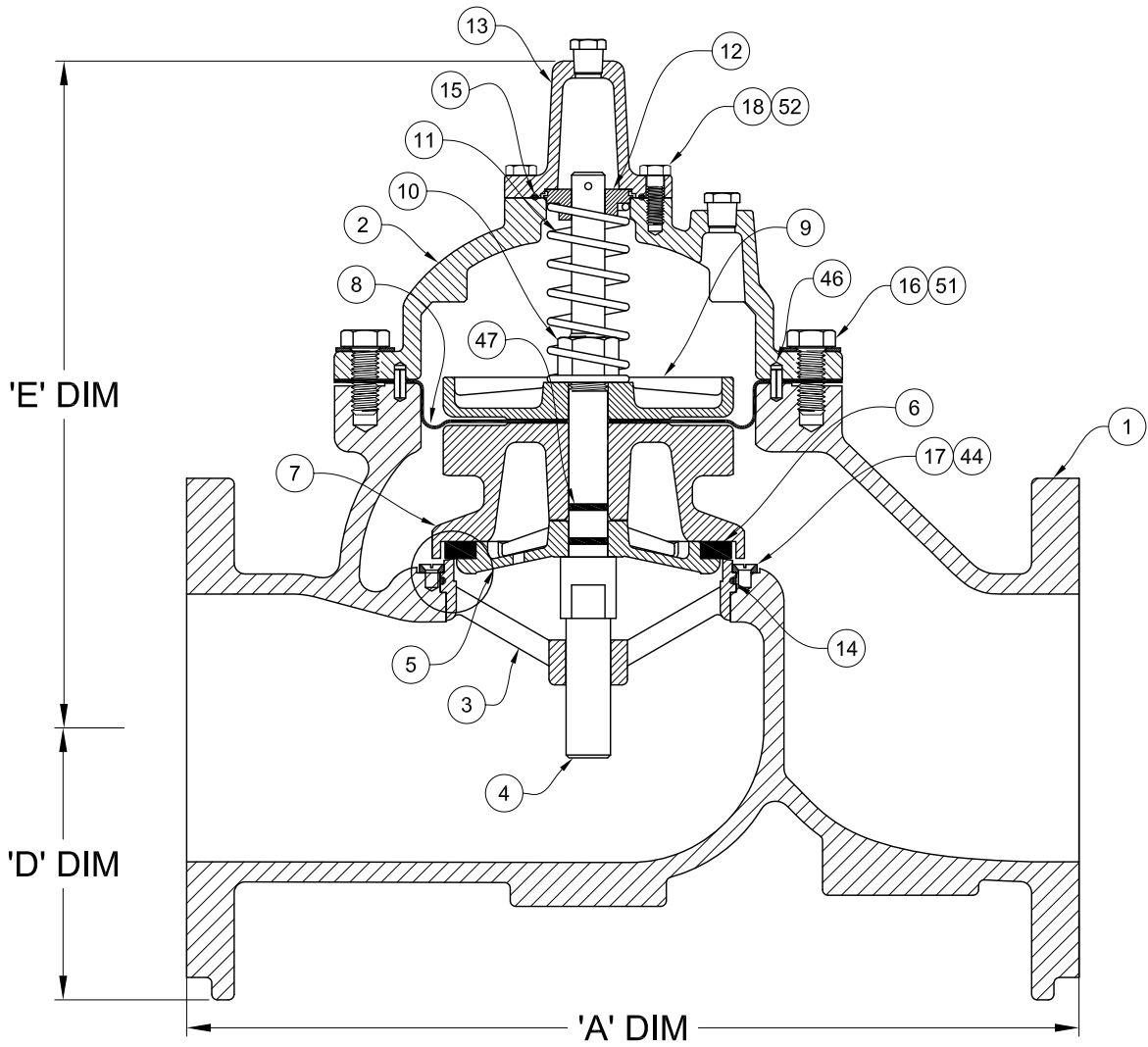
The SINGER Model S106/S206-PG requires a minimum of maintenance. All parts are accessible for inspection and repair without removing the valve from the line.

1. Close upstream and downstream isolating gate valves.
2. Disconnect body and bonnet pilot lines.
3. Remove bonnet. If bonnet does not come free readily, it can be pried loose with a small pry-bar.
4. Remove inner valve assembly for inspection. Do not remove seat ring unless inspection shows that it is damaged. **Be very careful not to damage the epoxy coating when removing and installing the inner valve assembly.**
5. Replace worn or defective parts and reassemble.

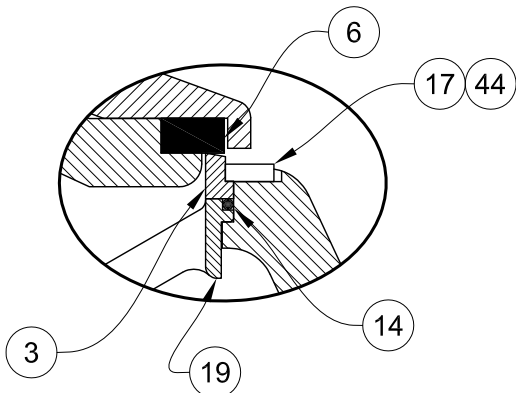
NOTE REGARDING FREEZING:

This valve does not drain completely when inlet and outlet pipes are drained. Where freezing conditions are expected, one of the following must be performed:

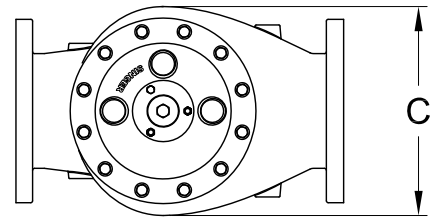
- Drain valve and pilot system completely.
- Add suitable anti-freeze to valve and pilot system (**Non-potable water service only**).
- Provide insulation and/or heating to keep the valve from freezing.

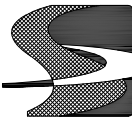


ONE PIECE SEAT & BOTTOM GUIDE DETAILS



TWO PIECE SEAT & BOTTOM GUIDE DETAILS



 SINGER VALVE <i>Result-Based Solutions. Globally.™</i>	
www.singervalve.com 12850-87th Avenue, Surrey, B.C. V3W 3H9	
Drawn By: STEPHEN BISHOP	Approved By:
Date: APRIL 25th 2008	Drawing: A0961A
6" & 8" S106 PG ASSEMBLY	

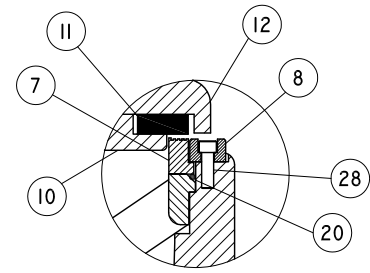
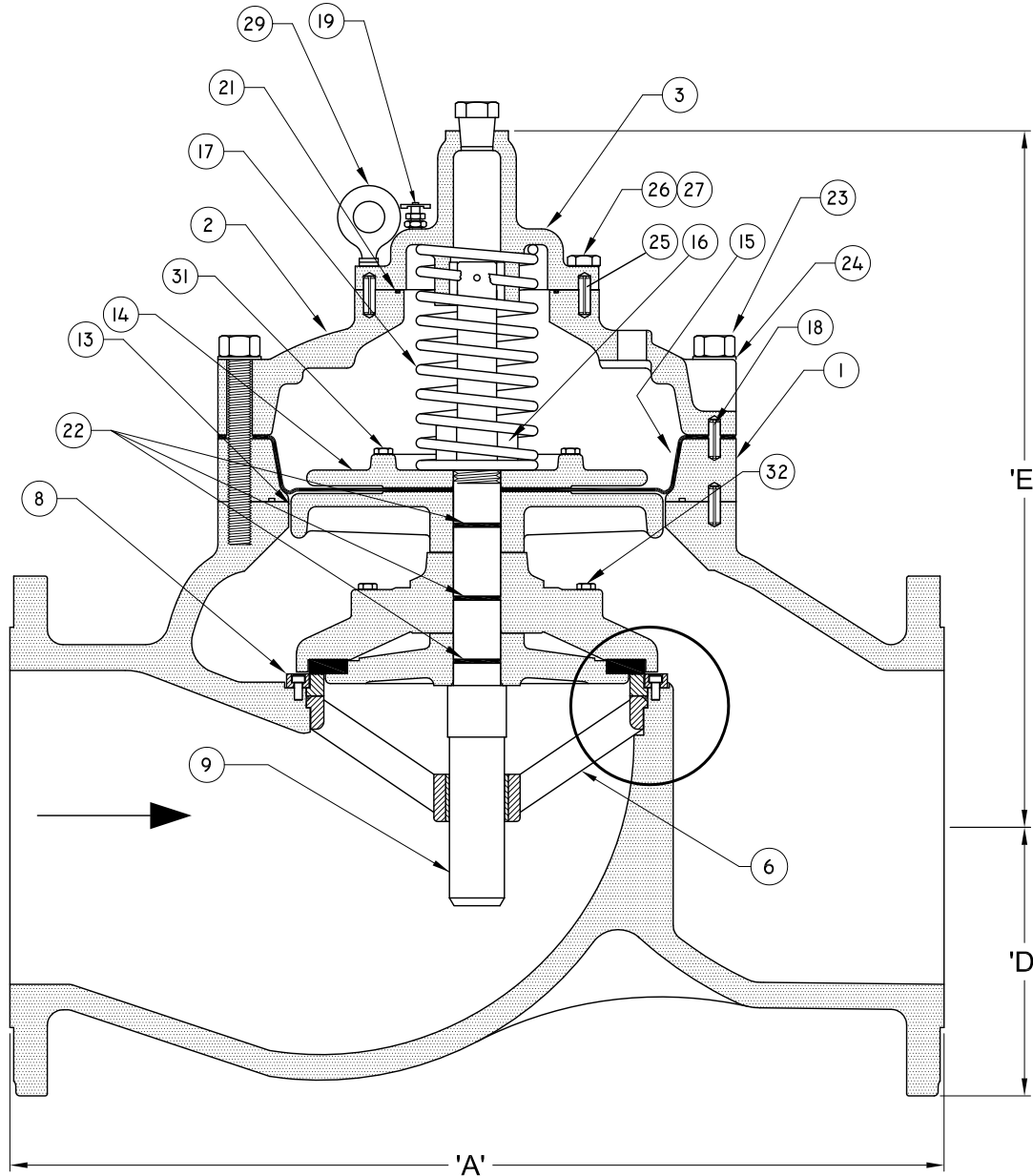
Material Specifications & Dimensions

6" and 8" (150mm and 200mm) S106-PG
For Drawing A0961A

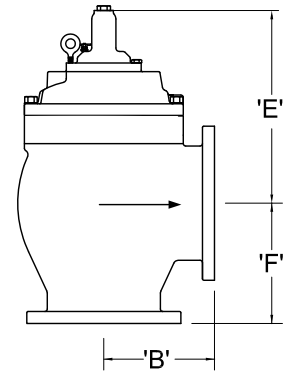
<u>Item</u>	<u>Part Name</u>	<u>Material</u>	<u>Item</u>	<u>Part Name</u>	<u>Material</u>
1	Body	Ductile Iron	15 **	Stem Cap Seal	Buna-N
2	Bonnet	Ductile Iron	16	Bonnet Bolt	Stainless Steel
3	Seat Ring / Bottom Guide	Stainless Steel	17	Seat Ring Screws	Stainless Steel
4	Stem	Stainless Steel	18	Stem Cap Capscrew	Stainless Steel
5	Disc Retainer	Ductile Iron	44	Seat Retaining Washer	Stainless Steel
6 **	Resilient Disc	EPDM	46	Locating Pin	Steel
7	Inner Valve	Ductile Iron	47 **	Stem Seal	Buna-N
8 **	Diaphragm	Reinforced EPDM	51	Bonnet Washer	18-8 Stainless Steel
9	Clamp Plate	Ductile Iron	52	Stem Cap Washer	18-8 Stainless Steel
10	Stem nut	Brass B-16			
11	Spring	Stainless Steel			
12	Guide Bushing	Brass B-16			
13	Stem Cap	Ductile Iron			
14 **	Seat Ring Seal	Buna-N			

** Recommended spare parts (included in the Rebuild Kit)

S106-PG		Globe			
		A	D	E	C
6"	150F / PN10, PN16	20"	6.09"	15.00"	12.16"
150mm		508mm	155mm	381mm	309mm
	300F / PN25, PN40	21"	6.84"	15.00"	12.68"
		533mm	174mm	381mm	322mm
8"	150F / PN10, PN16	25.38"	7.63"	19.75"	17.20"
200mm		645mm	194mm	502mm	437mm
	300F / PN25, PN40	26.38"	7.88"	19.75"	17.20"
		670mm	200mm	502mm	437mm



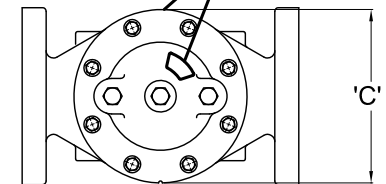
SEAT RING DETAIL



ANGLE CONFIGURATION

BRASS ID PLATE

SINGER VALVE INC.		REV.
MODEL		
SIZE		MAX. INLET PSI
SERIAL NO.		



SINGER SI06/S206-PG MAIN VALVE

MODEL SI06-PG : 10" TO 16" GLOBE AND ANGLE STYLE FULL PORT MAIN VALVE
 MODEL S206-PG : 12" TO 24" GLOBE STYLE REDUCED PORT MAIN VALVE



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Drawn By: Scott Grover	Approved By:
Date: January 20, 2006	Drawing: A0867C

Model S106-PG & S206-PG

Material Specifications & Dimensions

 10" to 16" (250mm to 400mm) S106-PG & SA106-PG
 12" to 24" (300mm to 600mm) S206-PG
 For Drawing A0867C

Item	Part Name	Material	Item	Part Name	Material
1.	Body	Ductile Iron	19.	Bleed Valve	Stainless Steel
2.	Bonnet	Ductile Iron	20.**	Seat Ring Seal	Buna-N
3.	Spring Casing	Ductile Iron	21.**	Spring Casing Seal	Buna-N
6.	Bottom Guide	Ductile Iron & Stainless Steel	22.**	Stem Seals	Buna-N
7.	Seat Ring	Stainless Steel	23.	Bonnet Bolts	Stainless Steel
8.	Seat Ring Washers	Stainless Steel	24.	Bonnet Washers	Stainless Steel
9.	Stem	Stainless Steel	25.	Spring Casing Locating Pins	Steel
10.	Disc Retainer	Ductile Iron	26.	Spring Casing Screw	Stainless Steel
11.**	Resilient Disc	EPDM or Buna-N	27.	Spring Casing Washers	Stainless Steel
12.	Inner Valve	Ductile Iron	28.	Seat Ring Screw	Stainless Steel
13.	Piston	Ductile Iron	29.	Eye Bolt	Steel
14.	Clamp Plate	Ductile Iron	31.	Clamp Plate Screw	Stainless Steel
15.**	Diaphragm	EPDM or Buna-N	32.	Inner Valve Screw	Stainless Steel
16.	Stem Nut	Stainless Steel			
17.	Spring	Stainless Steel			
18.	Bonnet Locating Pins	Steel			

** Recommended spare parts (included in the Rebuild Kit)

S106-PG & SA106-PG		Globe			Globe & Ang	Angle		
		A	D	E	C	B	E	F
10" 250mm	150F / PN10, PN16	29.75" 756mm	8.56" 217mm	23.31" 592mm	22.13" 562mm	11.50" 292mm	20" 508mm	12.50" 318mm
	300F / PN25, PN40	31.12" 790mm	9.56" 243mm	23.31" 592mm	22.13" 562mm	12.19" 310mm	20" 508mm	13.19" 335mm
12" 300mm	150F / PN10, PN16	34" 864mm	9.50" 241mm	26.75" 679mm	26" 660mm	13.75" 349mm	23.75" 603mm	12.50" 318mm
	300F / PN25, PN40	35.50" 902mm	10.25" 260mm	26.75" 679mm	26" 660mm	14.50" 368mm	23.75" 603mm	13.25" 337mm
14" 350mm	150F / PN10, PN16	31" 787mm	10.50" 267mm	26.80" 681mm	26" 660mm	-	-	-
	300F / PN25, PN40	32.50" 826mm	11.50" 292mm	26.80" 681mm	26" 660mm	-	-	-
16" 400mm	150F / PN10, PN16	41.38" 1051mm	11.75" 298mm	31.40" 798mm	32" 813mm	18" 457mm	28.50" 724mm	15.69" 399mm
	300F / PN25, PN40	43.50" 1105mm	12.75" 324mm	31.40" 798mm	32" 813mm	18.81" 478mm	28.50" 724mm	16.50" 419mm

S206-PG		Globe			Globe & Ang	Angle		
		A	D	E	C	B	E	F
12" 300mm	150F / PN10, PN16	27.50" 699mm	9.50" 241mm	23.35" 593mm	22.12" 562mm	-	-	-
	300F / PN25, PN40	29" 737mm	10.50" 267mm	23.35" 593mm	22.12" 562mm	-	-	-
16" 400mm	150F / PN10, PN16	36" 914mm	11.75" 298mm	26.75" 679mm	26" 660mm	-	-	-
	300F / PN25, PN40	37.63" 956mm	12.75" 324mm	26.75" 679mm	26" 660mm	-	-	-
18" 450mm	150F / PN10, PN16	42" 1067mm	12.50" 318mm	31.38" 797mm	30.31" 770mm	-	-	-
	300F / PN25, PN40	43.63" 1108mm	14" 356mm	31.38" 797mm	30.31" 770mm	-	-	-
20" 500mm	150F / PN10, PN16	45" 1143mm	13.75" 349mm	31.38" 797mm	30.50" 775mm	-	-	-
	300F / PN25, PN40	46.38" 1178mm	15.25" 387mm	31.38" 797mm	30.50" 775mm	-	-	-
24" 600mm	150F / PN10, PN16	50.50" 1283mm	16" 406mm	31.38" 797mm	36" 914mm	-	-	-
	300F / PN25, PN40	52.25" 1327mm	18" 457mm	31.38" 797mm	36" 914mm	-	-	-