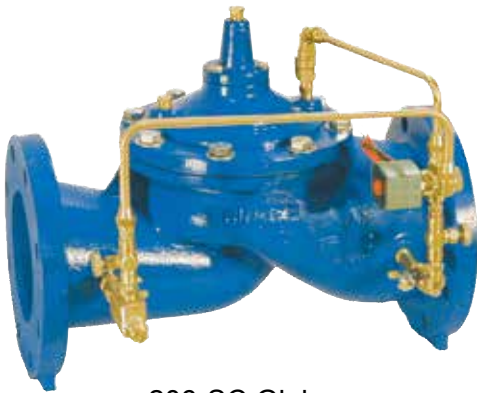


# Models 106-SC / 206-SC Solenoid Control Valve



206-SC Globe

## KEY FEATURES

- Positive, drip-tight shut-off
- Simple, on-off operation
- Globe or angle style body

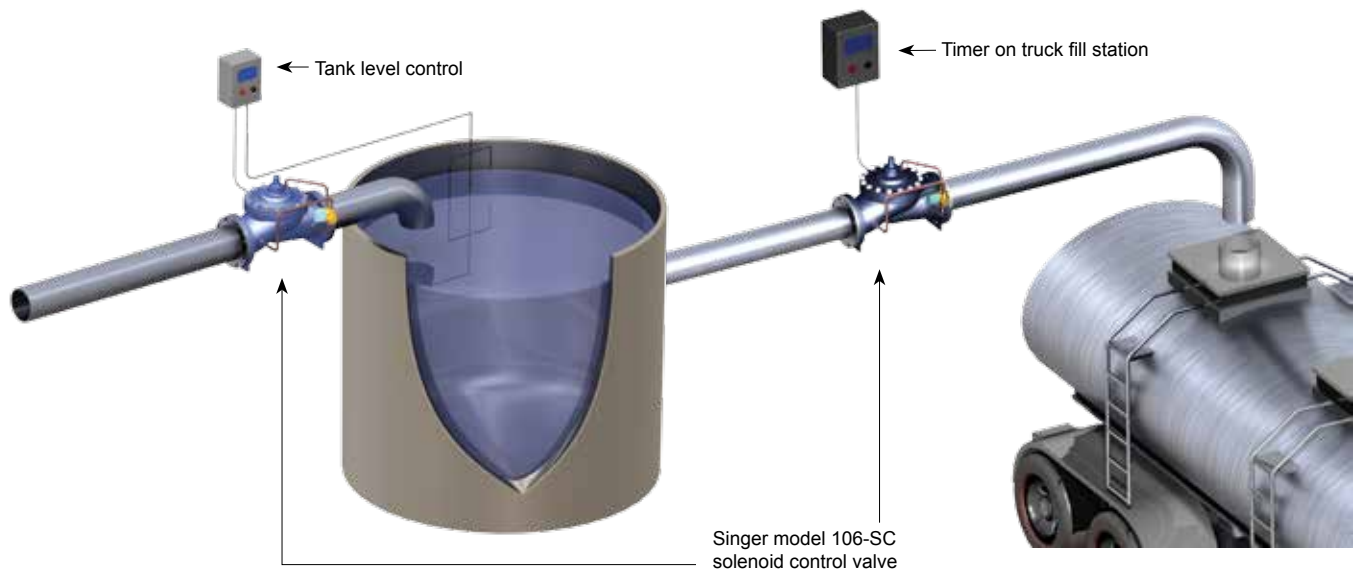
## Product Overview

Singer models 106-SC and 206-SC solenoid control valves are based on the Singer model 106-PG or 206-PG main valve.

The solenoid pilot valve provides on-off position operation. The solenoid either admits inlet pressure into the main valve operating chamber or releases pressure from the operating chamber. The pilot system is usually piped to discharge at the valve outlet, but can be piped to discharge to drain (atmosphere).

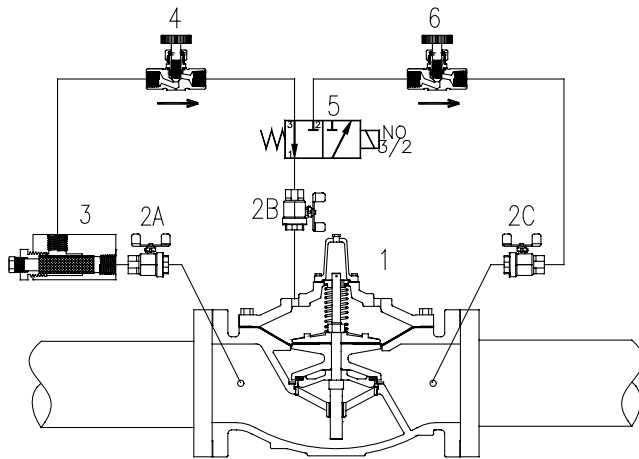
The SC valve is available either with the main valve closed when the solenoid is de-energized (NC - Normally Closed) or with the main valve open when the solenoid is de-energized (NO- Normally Open). (NC or NO refers to the main valve, not the solenoid.)

## Typical Application



# Models 106-SC / 206-SC Solenoid Control Valve

## Schematic Drawing



SCHEMATIC A-0593C

1. Main Valve - 106-PG or 206-PG
2. Isolating Valves - (2A, 2B, 2C - (optional on 3 in / 80 mm and smaller).
3. Strainer - 40 mesh stainless steel screen
4. Closing Speed Control - model 852-B (optional on 3 in / 80 mm and smaller).
5. Solenoid Pilot Valve
6. Opening Speed Control - model 852-B (optional on 3 in / 80 mm and smaller).

## Standard Materials

Standard materials for pilot system components are:

- ASTM B62 bronze or ASTM B-16 brass
- Stainless steel trim
- Standard solenoid coil is rated as NEMA 1, 2, 3, 3S, 4 and 4X, combination general purpose and watertight. Other voltages, ratings and constructions are available, consult with Singer Valve.

## Selection Summary

1. Select the valve with sufficient capacity, using the allowable operating pressure drop across the valve.
2. If the outlet pressure is less than 35% of the inlet pressure, check for cavitation.
3. Ensure the maximum working pressure rating of the valve exceeds the maximum operating pressure.
4. Continuous, "C", service up to 20 ft / s / 6 m/s is generally suitable. Refer to chart and/or performance curves (see Technical & Sizing Information section, page 284).
5. Provide system maximum and minimum operating pressures, electrical voltage, etc for correct solenoid selection.
6. If control fluid is from a separate source, provide Singer Valve with details.
  - For valve positioning - process control, see section 2SC-PCO, Dual Solenoid Control Valve, page 231.
  - For two (2) stage opening or closing, consult with Singer Valve.
  - Most pilot functions may be combined with the model SC, consult Singer Valve.

# Models 106-SC / 206-SC Solenoid Control Valve

106-SC	Flow Capacity (See 106-PG in Main Valve section for other valve data)								
	1/2 in	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	3 in	4 in
Size (inches)	1/2 in	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	3 in	4 in
Size (mm)	15 mm	19 mm	25 mm	32 mm	40 mm	50 mm	65 mm	75 mm	100 mm
Minimum (USGPM) Flat Diaphragm	1	1	1	1	1	5	5	5	10
Minimum (L/s) Flat Diaphragm	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.6
Maximum Continuous (USGPM)	12	19	49	93	125	210	300	460	800
Maximum Continuous (L/s)	0.8	1	3	6	8	13	19	29	50

106-SC	Flow Capacity (See 106-PG in Main Valve section for other valve data)								
	6 in	8 in	10 in	12 in	14 in	16 in	20 in	24 in	36 in
Size (inches)	6 in	8 in	10 in	12 in	14 in	16 in	20 in	24 in	36 in
Size (mm)	150 mm	200 mm	250 mm	300 mm	350 mm	400 mm	500 mm	600 mm	900 mm
Minimum (USGPM) Flat Diaphragm	20	40	-	-	-	-	-	-	-
Minimum (USGPM) Rolling Diaphragm	1	1	3	3	3	3	10	10	20
Minimum (L/s) Flat Diaphragm	1.3	2.5	-	-	-	-	-	-	-
Minimum (L/s) Rolling Diaphragm	0.1	0.1	0.2	0.2	0.2	0.2	0.6	0.6	1.3
Maximum Continuous (USGPM)	1800	3100	4900	7000	8500	11000	17500	25000	55470
Maximum Continuous (L/s)	114	196	309	442	536	694	1104	1577	3500

206-SC	Flow Capacity (See 206-PG in Main Valve section for other valve data)								
	3 in	4 in	6 in	8 in	10 in	12 in	16 in	18 in	20 in
Size (inches)	3 in	4 in	6 in	8 in	10 in	12 in	16 in	18 in	20 in
Size (mm)	80 mm	100 mm	150 mm	200 mm	250 mm	300 mm	400 mm	450 mm	500 mm
Minimum (USGPM) Flat Diaphragm	5	5	10	20	40	-	-	-	-
Minimum (USGPM) Rolling Diaphragm	-	-	-	-	-	3	3	3	3
Minimum (L/s) Flat Diaphragm	0.3	0.3	0.6	1.3	2.5	-	-	-	-
Minimum (L/s) Rolling Diaphragm	-	-	-	-	-	0.2	0.2	0.2	0.2
Maximum Continuous (USGPM)	300	580	1025	2300	4100	6400	9230	16500	16500
Maximum Continuous (L/s)	19	37	65	145	260	404	582	1040	1040

206-SC	Flow Capacity (See 206-PG in Main Valve section for other valve data)						
	24 x 16 in	24 x 20 in	28 in	30 in	32 in	36 in	40 in
Size (inches)	24 x 16 in	24 x 20 in	28 in	30 in	32 in	36 in	40 in
Size (mm)	600 x 400 mm	600 x 500 mm	700 mm	750 mm	800 mm	900 mm	1000 mm
Minimum (USGPM) Rolling Diaphragm	3	3	10	10	10	10	20
Minimum (L/s) Rolling Diaphragm	0.2	0.2	0.6	0.6	0.6	0.6	1.3
Maximum Continuous (USGPM)	16500	21700	33600	33650	33700	33800	62000
Maximum Continuous (L/s)	1040	1370	2120	2123	2126	2132	3912

# Models 106-SC / 206-SC Solenoid Control Valve

---

## Specifications

- The valve shall be a Singer Valve model 106-SC / 206-SC, size “\_\_\_\_\_”, ANSI Class 150 (ANSI 300, ANSI Flanges drilled to ISO PN10 / 16 / 25 or 40) pressure rating/ flange standard, globe (angle) style valve. The solenoid pilot shall be ASCO three-way normally closed: de-energize to close valve (normally open: de-energize to open valve) with 120VAC / 60Hz (220VAC / 50Hz or 24VDC) solenoid coil. Assembly shall be according to Schematic A-0593C.
- The valve shall open and close fully in response to energizing and de-energizing of the solenoid pilot.
- Refer to Main Valve section, see page 11, 106-PG (or 206-PG) for detailed information pertaining to valve sizes and materials, selection criteria and specifications.
- Refer to Pilot and Accessories section, see page 279, Model 852-B Needle Valve for detailed information pertaining to materials and specifications of Opening and Closing Speed Controls.

## Ordering Instructions

Refer to page 293 for the order form and ordering instructions.

1. Full port (106) or reduced port (206)
2. Solenoid voltage
3. Energize or de-energize solenoid to close main valve