

# MODELS 106-SC / 206-SC SOLENOID CONTROL VALVE

## KEY FEATURES

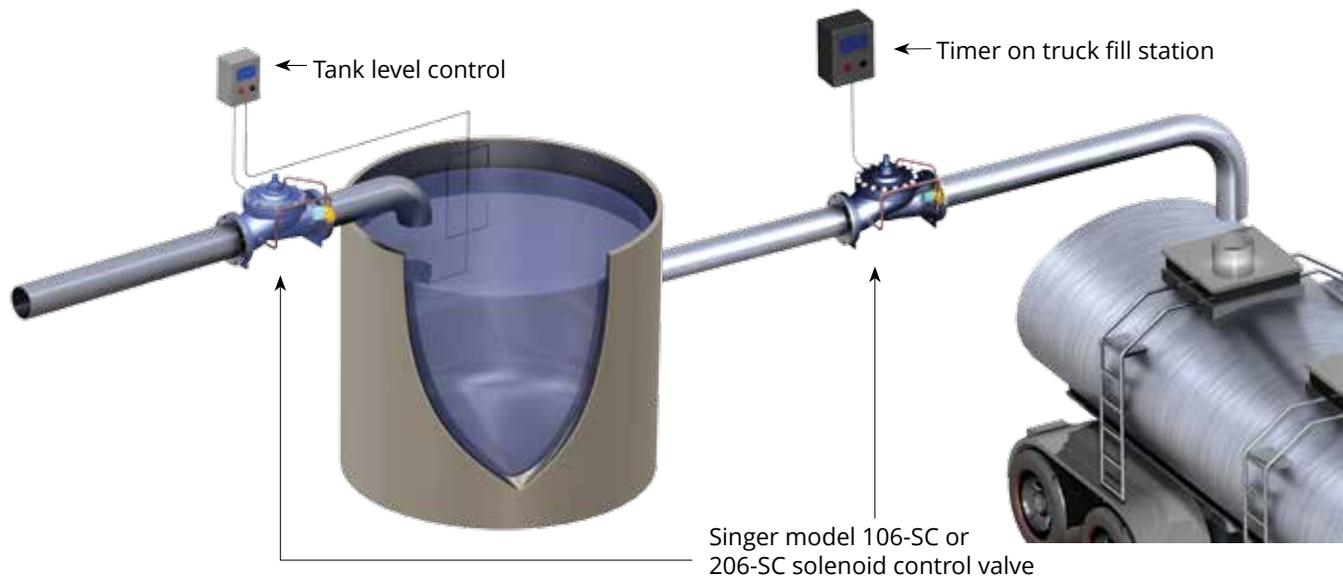
- Positive, drip-tight shut-off
- Simple, on-off operation
- Globe or angle style body

## 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 control 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). This 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.)

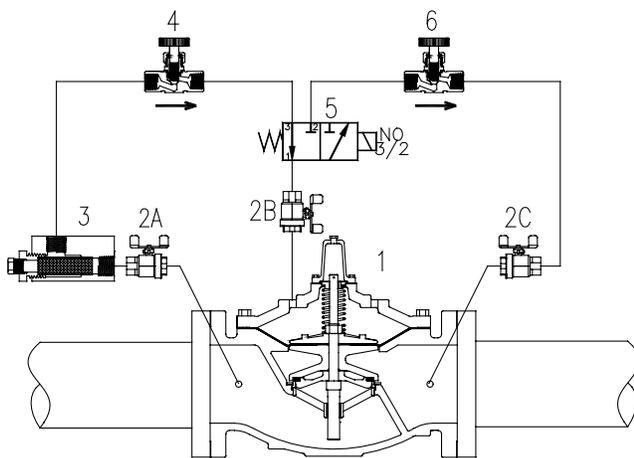


## TYPICAL APPLICATION



## SCHEMATIC DRAWING

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 - 3 way - 120 VAC / 60 Hz standard, other voltages available
6. Opening Speed Control - model 852-B (optional on 3 in / 80 mm and smaller).



Schematic A-0593C

## 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 231).
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 185.
  - For two (2) stage opening or closing, consult with Singer Valve.
  - Most pilot functions may be combined with the model SC, consult Singer Valve.

## ORDERING INSTRUCTIONS

Refer to page 244 for the order form and ordering instructions.

1. Single chamber (106) or (206)
2. Solenoid voltage
3. Energize or de-energize solenoid to close main 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