MODELS 106-BPC / 206-BPC / 306-BPC

Booster Pump Control Valve – Double Chamber

KEY FEATURES

- Suitable for most pumping applications, including suction lift and low differential head
- Prevents pump starting and stopping surges
- Built-in, non-slam mechanical check reduces surges on loss of power
- Separate opening and closing speed controls

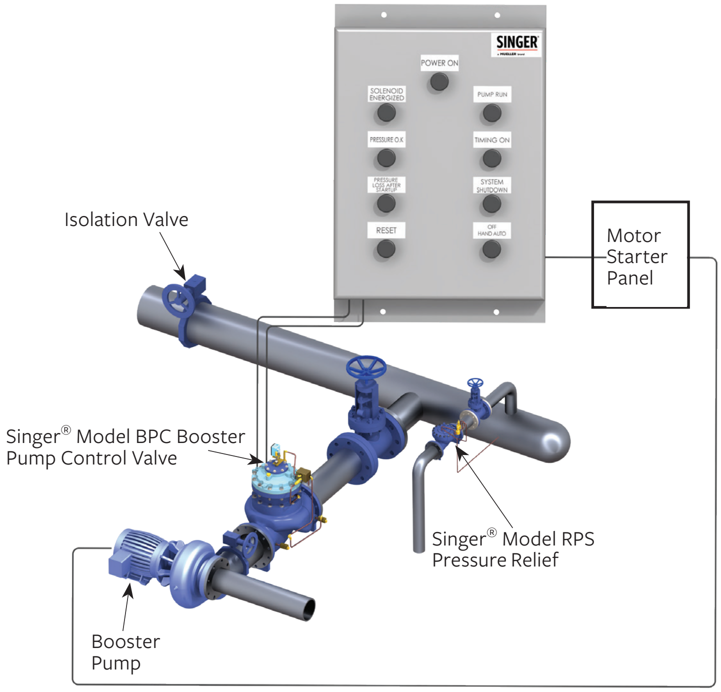
PRODUCT OVERVIEW

The 106-BPC, 206-BPC or 306-BPC booster pump control valves are installed in-line, directly downstream of the pump discharge.

The pump control valve is normally closed and on pump start-up, a pilot solenoid is energized to open the valve, at a rate governed by the opening speed control. When shut-down is required the pilot solenoid on the valve is de-energized to commence closing. The pump is kept running while the valve slowly closes. When the valve is almost fully closed and flow is virtually zero, a stem mounted cam triggers the limit switch to stop the pump.

In the event of a power failure, the built-in mechanical drop check closes immediately when the flow stops, independently of the valve position. Surges are minimized by closing the valve before reverse flow occurs.

TYPICAL APPLICATION



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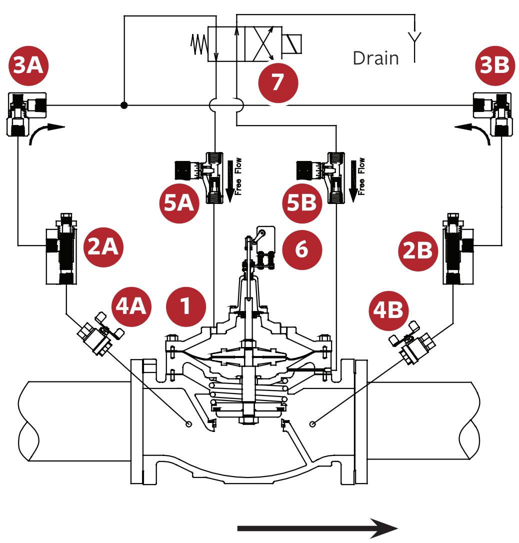
SCHEMATIC DRAWING

NO.	PART
1	Main Valve - 106-PTC, 206-PTC or 306-PTC
2	Strainer - (2A,2B) - 40 Mesh Stainless-Steel
3	Check Valves - (3A,3B)
4	Isolation Valves - (4A,4B)
5	Micrometer Flow Control Valves - (5A Opening Speed Control, 5B Closing Speed Control)
6	Model X129 Limit Switch Assembly - NEMA 4, SPDT
7	Solenoid Valve - Four Way, NEMA 4



SCHEMATIC A-0426H

STANDARD MATERIALS

Standard materials for pilot system components are:

- ASTM B-62 bronze or ASTM B-16 brass
- AISI 303 / 316 stainless-steel trim

Refer to Electronic Control section (SPC product) and consult us for pump control panel options.

SELECTION SUMMARY

1. In-line pump control valves incur continuous head loss while the pump is running. Refer to the (106), (206) or (306) performance curves (straight line) (See Technical and Sizing section). Select the smallest size meeting the capacity requirements, with a pressure drop that is acceptable.
2. Standard configuration provides for NEMA 4 watertight enclosures for the Honeywell model OP-AR, SPDT limit switch and the ASCO solenoid with 120 VAC / 60 Hz (or 220 VAC/ 50 Hz or 240 VAC / 60 Hz) coil. For other electrical service or higher pressure ratings, consult us. A manual override is available upon request.
3. Other functions may be combined with Booster Pump Control valves, usually in conjunction with single chamber main valves (e.g., model 106-BPC-R pump control with pressure sustaining feature).

ORDERING INSTRUCTIONS

Refer to the order form and ordering instructions.

Additionally, include the following information for this product:

1. Double chamber (106), (206) or (306)
2. Solenoid voltage
3. Maximum inlet pressure

MODELS 106-BPC / 206-BPC / 306-BPC

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106-BPC

FLOW COEFFICIENT C_V
(SEE 106-PTC IN MAIN VALVE SECTION FOR OTHER VALVE DATA)

Size (in)	6″	8″	10″	12″	14″	16″	20″	24″	36″
Size (mm)	150 mm	200 mm	250 mm	300 mm	350 mm	400 mm	500 mm	600 mm	900 mm
C_v [1]	460	800	1300	2100	2575	3300	5100	7600	16340
K_v [2]	398	692	1125	1817	2227	2855	4412	6574	14134

206-BPC

FLOW COEFFICIENT C_V
(SEE 206-PTC IN MAIN VALVE SECTION FOR OTHER VALVE DATA)

Size (in)	12″	16″	18″	20″	24 x 16″	24 x 20″	36 x 24″	40 x 36″	40 x 36″
Size (mm)	300 mm	400 mm	450 mm	500 mm	600 x 400 mm	600 x 500 mm	900 x 600 mm	1000 x 900 mm	1200 x 900 mm
C_v [1]	1550	2200	3300	3400	3500	5300	7800	16340	16340
K_v [2]	1341	1903	2855	2941	3028	4585	6747	14134	14134

306-BPC

"FLOW COEFICIENT K_V
(SEE 306-PTC IN MAIN VALVE SECTION FOR OTHER VALVE DATA)"

Size	DN65	DN80	DN100	DN150	DN200	DN250	DN300	DN350	DN400
K_v - Globe (m^3/h @ 1 bar)	48	69	130	261	462	852	1341	2045	2149

*C_V = USGPM at 1 psi pressure drop

**K_V = m^3/h at 1 bar pressure drop

$(Q=C_V\sqrt{\Delta P})$