

Flanged, In-Line Disc Type For Ammonia (R717) and Halocarbon Refrigerants Available Sizes: 1/2" to 4"

FEATURES

- **ASTM A536 Gr. 65-45-12 Ductile Iron Body (600J Series)**
- **ASTM A36 Steel Body (600K)**
- **ASTM A350 LF2 Steel Body (600AK)**
- **Spring Closing**
- **Install Horizontally or Vertically**
- **1/4" Purge Line Connection (600K, 600AK, 600BJ, 600DJ)**



Valve Model	Temperature Rating	Pressure Rating
600JR, 600J, 600AJ, 600BJ, 600DJ	-20°F to 240°F (-29°C to 116°C)	300 PSIG (21 bar, gauge)
600K, 600AK	-50°F to 240°F (-46°C to 116°C)	600 PSIG (41 bar, gauge)

DESCRIPTION

The Series 600 flanged, in-line disc-type check valves are spring closing valves designed for installation in either horizontal or vertical piping runs. A removable back plate allows the valve to be disassembled for maintenance.

The Series 600J and 600K valves are equipped with Teflon seats. When supplied without the "S" suffix, these valves are furnished with a light spring, making them well-suited for gravity drain and other low-pressure applications.

Valves designated with an "S" suffix are equipped with a heavier closing spring that requires approximately 2 psi differential pressure to initiate opening.

DESIGN FUNCTION

Series 600 check valves are designed to prevent reverse refrigerant flow in suction, hot gas, and liquid lines. Typical applications include liquid refrigerant gravity drain systems, pump discharge lines, and pump suction lines. For gravity drain service, valves should be installed in a vertical orientation. Series 600J check valves are rated for a maximum working pressure of 300 psi. Series 600K check valves are rated for a maximum working pressure of 600 psi.

In hot gas defrost applications, the valve is installed between the drain pan and the evaporator hot gas inlet. This arrangement prevents liquid refrigerant from accumulating in the drain pan coil during normal evaporator operation.

Series 600 check valves are generally not recommended for reciprocating compressor discharge applications or other systems where flow pulsations may create a resonant frequency that can cause valve chatter.

The Series 600 check valve is a normally closed, spring-actuated design. When refrigerant flow is able to generate sufficient differential pressure to overcome the closing spring force, the disc lifts from its seat, allowing flow through the valve. As flow decreases and the differential pressure drops below the spring force, the disc returns to the seat, preventing reverse flow.



CHECK VALVE DIMENSIONS DIAGRAM

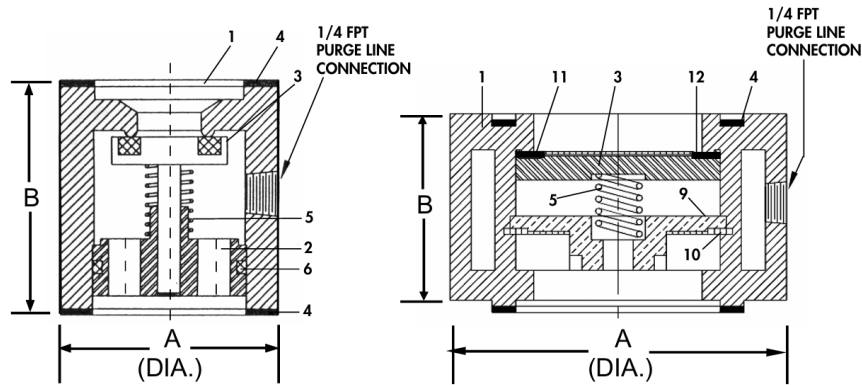


Fig. 1 600K Check Valves

Fig. 2 600J Check Valves

Valve No.	Drawing No.	Flanged Connection**	Outside Diameter Dimension 'A'	Height Less Flanges Dimension 'B'	Overall Height with Flanges	Orifice Size	Flange Type	Shipping Weight [lbs]
600JR	Fig. 2	1/2, 3/4, 1	2.31	1.56	3.31	1	Oval	5.0
600J	Fig. 2	1 1/4, 1 1/2	3.25	2.06	4.06	1 1/2	Square	10.0
600AJ	Fig. 2	1 1/2, 2	4.00	2.31	4.44	2	Square	12.0
600K*	Fig. 1	1, 1 1/4	2.38	2.63	4.63	15/16	Square	7.0
600AK*	Fig. 1	1 1/2, 2	3.25	3.33	5.46	1-9/16	Square	10.5
600BJ*	Fig. 2	3	5.63	3.50	6.50	3	Square	30.0
600DJ*	Fig. 2	4	7.13	4.19	7.82	4	Square	45.0

All dimensions in inches.

*If ordered with suffix 'S', valve will be supplied with a heavy spring (not suitable for gravity drain).

*Only these valves have the 1/4" FPT purge connection.

**Flanges may be available in socket weld, weld neck, FPT, or ODC configurations, depending on size.

SPARE PARTS

Item No.	Description	600JR (Fig. 2)	600J (Fig. 2)	600AJ (Fig. 2)	600K‡ (Fig. 1)	600AK‡ (Fig. 1)	600BJ‡ (Fig. 2)	600DJ‡ (Fig. 2)	
1	Valve Body	600JR-VB	600J-VB	600AJ-VB	600K-VB	600AK-VB	600BJ-VB	600DJ-VB	
2	Guide Piece	-	-	-	602K	602AK	-	-	
3	Valve Piece	604JR	604J	604AJ	604	604A	604BJ	604DJ	
4	Gasket (2)	626	63W	73	63	73	326Y	326YA	
5	Spring	Light	605JR	605AJ	605AJ	477K	605A4	605BJ	605DJ
		Heavy	-	-	-	477-1	605A1	605BJS	605DJS
6	O-Ring	-	-	-	11-222	11-229	-	-	
7	Flange Bolt (4)	72C*	721A	72E	721L	726C	24B	24C	
8	Flange Nut (4)	58*	57	58	57	58	59	60	
9	Back Plate	602JR	602J	602AJ	-	-	602BJ	602DJ	
10	Back Plate Ring	608JR	608J	608AJ	-	-	608BJ	608DJ	
11	PTFE Ring	603JR	603J	603AJ	-	-	603BJ	603DJ	
12	Snap Ring	601JR	601J	601AJ	-	-	601BJ	601DJ	
13	Pipe Plug	-	-	-	12	12	12	12	
Ref.	Lines Sizes	1/2", 3/4", 1"	1 1/4", 1 1/2"	1 1/2", 2"	1", 1 1/4"	1 1/2", 2"	3"	4"	

*Only 2 bolts and nuts.

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H.A. Phillips & Co.
770 Enterprise Avenue
DeKalb, IL 60115 U.S.A.
Phone: (630) 377-0050

