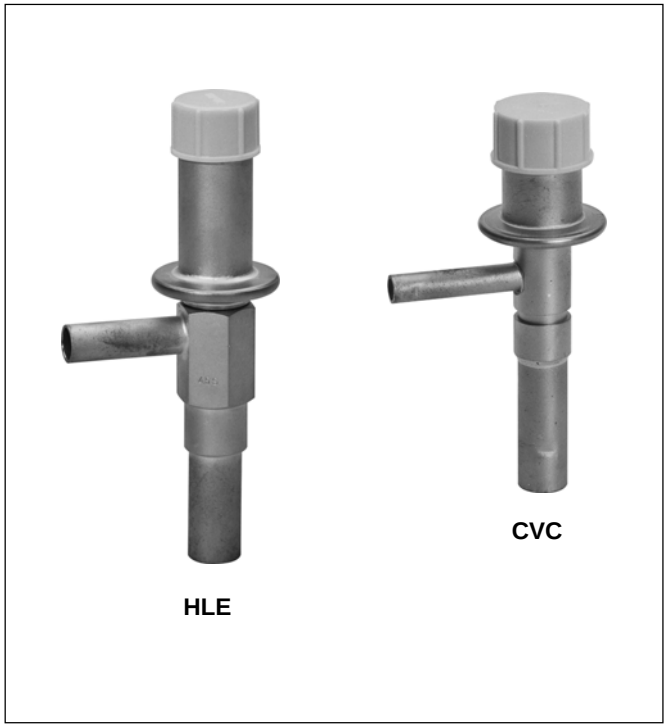
Honeywell

Series CVC and HLE

HOT GAS BYPASS VALVES
FIXED ORIFICE, ADJUSTABLE SUCTION PRESSURE LIMITATION

PRODUCT DATA



Application

Hot gas bypass valves series CVC and HLE are used to adjust the compressor capacity to the actual evaporator capacity in a refrigerating plant.

The hot gas bypass valve can be installed in a bypass tube between the hot gas line and suction line. The suction pressure is downward limited by flowing hot gas from the high pressure to the low pressure side.

For plants in general refrigeration and for original equipment such as dehumidifiers, air driers, water coolers or ice-making machines.

Materials

Body	brass
Head	stainless steel, brass
Connection tubes	copper

Features

- **CVC: Orifice size 4.0, equivalent to 1 kW bypass capacity R134a**
- **HLE: Orifice size 4.5S, equivalent to 1.5 kW bypass capacity R134a**
- **Smallest dimensions**
- **High performance**
- **Hermetic construction**
- **Adjustable suction pressure limitation**
- **Solder connections**
- **Internal pressure equalisation**
- **Extreme durable due to stainless steel head and stainless steel diaphragm welded using protective gas**
- **Fixed orifice**
- **Refrigerants: all CFC, HCFC, HFC, not for ammonia**

Specification

Nominal capacity	see table on page 2
Adjusting range for suction pressure limitation	1 - 6 bar (CVC) 1 - 9 bar (HLE)
Factory setting	3.2 bar (CVC) 3.5 bar (HLE)
Maximum pressure PS	25.5 bar
Maximum test pressure	28 bar
Max. ambient temperature	100 °C

Installation

- The valves may be installed in any position.
- When soldering the valve, the valve body must not get warmer than 100 °C.
- Remove plastic cap during soldering
- Constructive modifications at the valve are not allowed.

Adjustment

One complete revolution of the adjusting screw effects an alternation of the suction pressure limitation by approx. 0.5 bar (CVC) resp. 0.4 bar (HLE).

Turning clockwise	=	Higher suction pressure
Turning counterclockwise	=	Lower suction pressure

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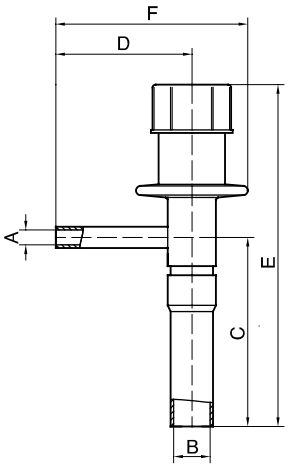
Capacities

Type	Valve size	Condensing temperature t_c (°C)	Δp_{Offset} (bar)	Bypass-capacity Q_N (kW)		
				R134a	R407C	R404A
CVC	4.0	35	0.5	0.62	1.05	0.88
			0.7	0.85	1.45	1.20
		50	0.5	0.71	1.16	0.88
			0.7	1.00	1.60	1.20
HLE	4.5S	35	0.5	0.98	1.67	1.40
			0.7	1.37	2.33	1.95
		50	0.5	1.13	1.86	1.41
			0.7	1.57	2.60	1.97

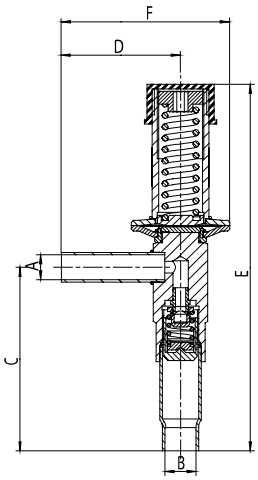
Evaporating temperature t_0: 0 °C; Hot gas superheat Δt_{V2oh}: 25 K

Dimensions and Weights

Type	Valve size	Connections		Dimensions (mm)				Weight (kg)
		Inlet (A)	Outlet (B)	C	D	E	F	
CVC	4.0	6 mm ODF	12 mm ODF	64	43	113	61	approx. 0.16
		1/4" ODF	1/2" ODF					
HLE	4.5S	10 mm ODF	12 mm ODF	71	46	142	65	approx. 0.3
		3/8" ODF	1/2" ODF					



CVC



HLE

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