Series AEL/AEL B

Constant pressure valves (automatic expansion valves) with soldering connections optionally with by-pass

Specification-Data

Application for use

- Air conditioners, dehumidifiers, water coolers, ice-making machines, air dryer.
- Application should be limited to units equipped with one single evaporator.

Types **AEL B** are particularly suitable for units which up to now have been controlled by injection capillary.

- Use of compressor driving motors with low starting torque possible.
- For units without receiver.
- Easy adjustment of the requested evaporating pressure.
- Easy servicing (no dimensioning of capillary tube).

Capacity

The indicated nominal capacity is related to - 10 °C (14 °F) evaporating temperature and 35 °C (95 °F) condensing temperature at 1 K subcooling of refrigerant (without by-pass).
For other temperature conditions – please refer to capacity tables.

Technical Data

Type	Size	Nominal capacity in kW (ton)			Solder tube connections				Available for refrigerant	Weight
					Inlet		Outlet			
		R 134a	R 22	R 404 A	mm.	"	mm.	"		g
AEL	0,5 B…	1,1 (0,31)	1,4 (0,40)	1,0 (0,29)	6	1/4	10	3/8		
AEL	1 B…	1,7 (0,49)	2,1 (0,60)	1,6 (0,46)	6	1/4	10	3/8		
AEL	2 B…	3,4 (0,98)	4,3 (1,24)	3,1 (0,89)	6	1/4	10	3/8	all refrigerants	130
AEL	3 B…	7,1 (2,04)	9,4 (2,70)	6,7 (1,93)	6	1/4	10	3/8	exept NH_3	
AEL	4 B…	9,6 (2,76)	12,4 (3,56)	9,0 (2,59)	6	1/4	10	3/8		
AEL	6 B…	23,7 (6,81)	30,8 (8,85)	22,7 (6,52)	10	3/8	16	5/8		250

Adjustment

One complete revolution of the adjusting screw effects an alteration of the evaporating pressure by approx. 0,8 bar (11,20 lbs. per □ inch).

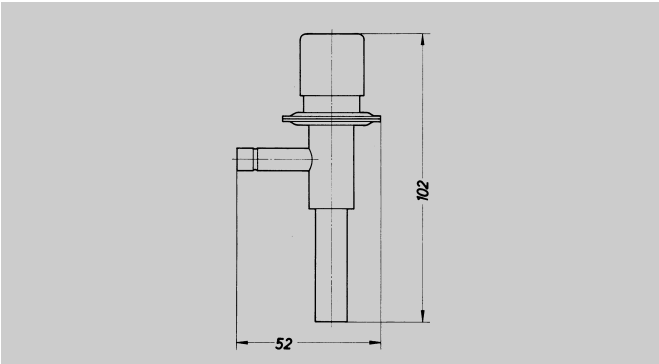
- Clockwise rotation
  = higher evaporation
- Counter-clockwise rotation
  = lower evaporation

Adjusting range

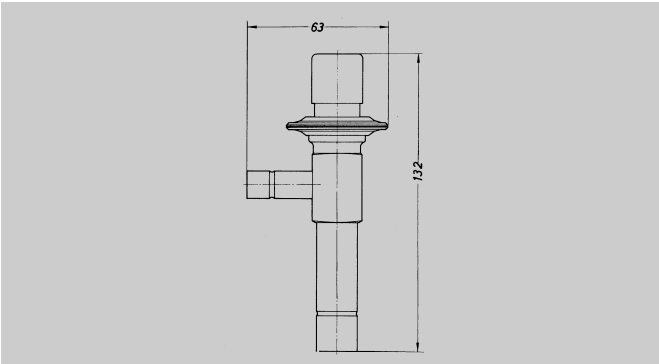
- 1–7 bar (14–98 lbs. per □ inch)
  corresponding temperatures
  R 134 a - 27 °C to 27 °C (- 15 °F to 80 °F)
  R 22 - 40 °C to 10 °C (- 39 °F to 51 °F)
  R 404 A - 46 °C to 5 °C (- 50 °F to 41 °F)

Cooling Solutions

AEL 0,5 – 4 B...



AEL 5 + 6 B...



Adjusting range
Standard setting for evaporating pressure
$p_{O\,(abs)}$ 2,2 bar (30,80 lbs. per □ inch).

Special construction features
Diaphragm valve with stainless steel head, brass valve body
maximum text pressure: 28 bar (392 lbs. per □ inch).
rupture pressure > 100 bar (1400 lbs. per □ inch).
maximum permissible temperature on the valve body:
100 °C (212 °F).
(when mounting pls. make sure that the permissible temperature is not exceeded).

Data requested when ordering
- valve type
- size
- size of by-pass[1)]
- tube connections (mm. or inch)

If special construction is requested, please state in addition
- evaporating pressure.

[1)] Size of by-pass is determined according to unit capacity.
Pressure equalizing to be effected within approx. 2 minutes.

Installation
Valve can be mounted in any position.

Identification
- type
- size
- by-pass

or
- code-no.

Caution
When soldering copper tubes into solder connections, make sure that the flame does not touch and damage the valve body. Take also care that heat is drawn from the valve body in a suitable manner.

Honeywell

Honeywell
Cooling and Refrigeration Controls
Honeywell AG

Hardhofweg
D-74821 Mosbach
Phone (0049) 06261/81475
Fax (0049) 06261/81461
e-Mail: Cooling.Mosbach@Honeywell.com

Atelier Klöpfer 02.2000