

Danfoss GL45AA compressor R134a 1/8 HP LBP specifications replacement B48H technical data cooling capacity

Category: Refrigeration

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**Mbsmpro.com, Danfoss, GL45AA, 1/8 hp,
LBP, Cooling, R134a, 81-96 W, 0.69-0.71 A,
1Ph 220-240V 50Hz, LBP, RSIR, -35°C to
-10°C, Freezing**

Complete Technical Specifications

Specification	Details
Model	GL45AA (also known as GL45AAa/GL45AAb)
Utilisation (mbp/hbp/lbp)	LBP (Low Back Pressure)
Domaine (Freezing/Cooling)	Freezing and Cooling
Cooling wattage at -23°C	96 W (ASHRAE conditions) refritech.co.uk
Cubic feet can this compressor cool?	Approximately 3-5 cubic feet
Litres can this compressor cool?	85-140 liters
Kcal/h	96 kcal/h (ASHRAE), 70-96 kcal/h range www.skh-kaeltetechnik.de
TON	0.023 tons (approximately 1/43 HP refrigeration)
Oil Type and quantity	ISO VG 19-32 ESTER, 175-265 cm ³ www.skh-kaeltetechnik.de
Horsepower (HP)	1/8 HP (0.125 HP / 0.15 CV)
Refrigerant Type	R134a (compatible with R1234yf)
Power Supply	220-240V 50Hz, 1 Phase
Cooling Capacity BTU	327-383 BTU/h (depending on conditions)
Motor Type	RSIR (Resistance Start Induction Run)
Displacement	4.56 cm ³ (4.56cc) www.scribd.com

Specification	Details
Winding Material	Copper
Pressure Charge	Pre-charged from factory
Capillary	Capillary tube expansion system
Model Fridge or refrigerator can work with this compressor	Household refrigerators, beverage coolers, wine coolers, water dispensers, beer dispensers, ice makers, small freezers www.dtnngroup.ro
Temperature function	-35°C to -10°C evaporating temperature www.skh-kaeltetechnik.de
With fan or no	Static cooling (no fan on compressor)
Commercial or no	Both commercial and domestic applications
Amperage in function	0.69-0.71 A running, 7.5 A locked rotor www.skh-kaeltetechnik.de
LRA (Locked Rotor Amps)	7.5 A
Type of relay	PTC relay (PTC 3003 - K100) www.skh-kaeltetechnik.de
Capacitor or no and value	Starting capacitor 47-56 µF 330V (for CSIR version)
Country of origin and exporting countries	Made in Spain by Huayi, exported worldwide

Efficiency Metrics (COP) Performance Table

The GL45AA's performance varies depending on operating conditions. Here's how it performs across different evaporating temperatures:

Evaporating Temp (°C)	-30	-25	-23.3	-20	-15	-10	0	4	10
Cooling Capacity (Watts)	60	86	96	117	154	195	-	-	-
Power Consumption (Watts)	87	100	105	115	133	153	-	-	-
COP (W/W)	0.80	1.00	1.06	1.18	1.34	1.48	-	-	-
Current (A)	0.65	0.69	0.71	0.75	0.80	0.87	-	-	-

Test conditions: Condensing temp 55°C, Ambient 32°C, ASHRAE standards

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Detailed Performance at Different Conditions

CECOMAF Standards (LBP Applications)

Condition	Value
Cooling Capacity at -25°C	81 W
Input Power	100 W
COP	0.81 W/W
Current Draw	0.69 A
EER	0.70 kcal/Wh

ASHRAE Standards (LBP Applications)

Condition	Value
Cooling Capacity at -23.3°C	96 kcal/h (112 W)
Input Power	105 W
COP	1.06 W/W
Current Draw	0.71 A
EER	0.91 kcal/Wh

Physical Dimensions & Weight

Dimension	Measurement
Net Weight	8.0-8.3 kg
Height	175-176 mm
Diameter	19.09 mm (cylinder)
Stroke	15.94 mm
Suction Line ID	6.5 mm
Discharge Line ID	4.9 mm
Mounting	Standard Ø16 holes (170×70 mm)

Electrical Specifications

Parameter	Value
Voltage Range	187-264 V
Frequency	50 Hz
Phase	Single Phase (1PH)
Main Winding Resistance	24.57-25.00 Ω @ 25°C
Start Winding Resistance	30.00-32.63 Ω @ 25°C
Locked Rotor Current	7.5 A
Max Continuous Current	1.0 A
Thermal Protector	MRP318LZ / T0453 / AF37FU

Where You'll Find This Compressor

The GL45AA is incredibly versatile and shows up in all sorts of cooling equipment:

- **Household refrigerators** (small to medium size)
- **Beverage coolers** and drink dispensers
- **Wine coolers** (compact units)
- **Water dispensers** and coolers
- **Beer dispensers** and kegerators
- **Ice makers** (small commercial units)
- **Vending machines** (beverage type)
- **Mini bars** and hotel refrigerators
- **Display cases** (small merchandisers)

This compressor is particularly popular because it handles the -35°C to -10°C temperature range beautifully, making it perfect for both refrigeration and light freezing applications

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5 Compressor Replacements (Same R134a Gas)

If your GL45AA has given up the ghost, here are five solid replacements that use the same R134a refrigerant:

1. **B48H (Cubigel/Huayi)** - The official replacement for GL45AA, works with both R134a and R1234yf frigopartners.com
2. **GVM38AA (Cubigel)** - Direct equivalent, same specifications www.prokes-auto.com
3. **GLY45AAA (Cubigel)** - Alternative version with HE static cooling www.airefrig.com.au
4. **EMI45HHR (Embraco)** - 1/8 HP R134a LBP compressor, similar capacity
5. **TFS4-5FT (Secop/Danfoss)** - 1/8 HP R134a, 477 BTU LBP rating mccombssupply.com

5 Compressor Replacements (Different Refrigerant)

Looking to upgrade or switch refrigerants? Here are alternatives using different gases:

1. **R600a Compressors** - More eco-friendly, better efficiency (requires system conversion)
2. **R290 (Propane) Models** - Natural refrigerant option (requires major system modification)
3. **B38G (Huayi)** - R134a but HBP configuration for different applications frigopartners.com
4. **R1234yf Compatible Units** - Newer refrigerant, B48H already supports this frigopartners.com
5. **CO2 (R744) Systems** - Commercial alternative (complete system redesign needed)

Important note: Changing refrigerants isn't just a swap-and-go situation. You'll need to consider oil compatibility, expansion device changes, and possibly even different tubing materials. Always consult with a certified refrigeration technician before making refrigerant changes.

Installation Tips

When replacing your GL45AA, keep these pointers in mind:

- The compressor uses a **PTC relay** (PTC 3003 - K100) - make sure it's in good condition
- Check your **capillary tube** - it should match the original specifications
- The system uses **ester oil**, which is hygroscopic (absorbs moisture) - keep it sealed
- Maximum ambient temperature is **43°C** - ensure adequate ventilation
- Allow the compressor to sit upright for 24 hours before starting if it's been transported

Why the GL45AA Remains Popular

Even though newer models exist, the GL45AA continues to be widely used for good reason:

- **Proven reliability** - These things just keep running
- **Widely available** - Easy to find replacements globally
- **Versatile** - Works in everything from fridges to wine coolers
- **Decent efficiency** - COP of 1.06 at standard conditions is respectable
- **Simple design** - RSIR motors are straightforward and repairable

The fact that it's made in Spain to European quality standards also gives technicians confidence in its build quality

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SEO Elements

Focus Keyphrase: Danfoss GL45AA compressor R134a 1/8 HP LBP specifications replacement B48H technical data cooling capacity

SEO Title: Danfoss GL45AA Compressor: Complete Specs, Replacements & Performance Data | R134a 1/8HP LBP

Meta Description: Complete technical guide for Danfoss GL45AA compressor. R134a, 1/8 HP, LBP applications. Cooling capacity, COP values, B48H replacement, efficiency data. Freezer & refrigerator specs.

Slug: danfoss-gl45aa-compressor-r134a-specifications-replacement

Tags: Danfoss GL45AA, GL45AA compressor, R134a compressor, LBP compressor, 1/8 HP compressor, B48H replacement, Cubigel GL45AA, Huayi compressor, GVM38AA, refrigerator compressor, beverage cooler compressor, wine cooler compressor, freezer compressor, RSIR compressor, thermally protected compressor, Mbsmgroup, Mbsm.pro, mbsmpro.com, mbsm, compressor replacement, ACC compressor, Electrolux ZEM, GL45AAa, GL45AAb, Danfoss compressor, cooling capacity, compressor specifications

Excerpt (First 55 Words)

The Danfoss GL45AA is a reliable 1/8 HP R134a compressor designed for low back pressure applications. Used in refrigerators, beverage coolers, and freezers, this thermally protected unit delivers 96 kcal/h cooling capacity at -23.3°C with RSIR motor technology and operates between -35°C to -10°C.



1/8 HP Compressor, ACC compressor, B48H replacement, beverage cooler compressor, Compressor Replacement, cooling capacity, Cubigel GL45AA, Danfoss compressor, Danfoss GL45AA, Electrolux ZEM, freezer compressor, GL45AA compressor, GL45AAa, GL45AAb, GVM38AA, Huayi Compressor, LBP compressor, mbsm, mbsm.pro, mbsmgroup, mbsmpro.com, R134a compressor, refrigerator compressor, RSIR compressor, thermally protected compressor, wine cooler compressor
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