

Samsung RT47CB663222

Compressor Specifications R600a

1/5 HP Cooling Capacity Inverter

Refrigerator Spare Parts

Site: Mbsmpro

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SmartThings

RT47CB663222MA 01

BLE:ADCB7000E17N

SAMSUNG

Compresseur Circulation d'air forcé, Sans givre, Réfrigérateurs-congélateurs type II
 نوع المضخة دوران الهواء القسري، خالية من الصقيع النوع الثاني، مجمدات التجميد

Modèle	RT47CB663222	النموذج
Volume brut(L)	476 L	الحجم الإجمالي
Tension nominale/Fréquence	220-240 V~ / 50 Hz	الجهد الاسمي / التردد
Courant nominal	2.0 A	التيار الاسمي
Alimentation fabrication de glace	-	التغذية كهربائية لصنع الثلج
La puissance de dégivrage	-	قوة إزالة الجليد
Congélateur	140 W (220 V~), 150 W (230-240 V~)	الجمد
Réfrigérateur	-	تلاجمد المبرد
Classe climatique	T	فئة المناخ
Réfrigérant	R-600a, 60 g	غاز التبريد
Isolation du gaz de soufflage	CYCLOPENTANE	عازل الغاز
Pouvoir de congélation	5.0 kg/24 hr	قوة التجميد
Durée de montée en température	13 hr	مدة ارتفاع درجة الحرارة [ح]

Volume utile(L)	Total / المجموع	Congélateur / المجمد	Réfrigérateur / تجمد	Deux étoiles
	460	101	353	6

Puissance de la lampe Congélateur/Réfrigérateur: LED / LED

anrt
MR00039143ANRT2023

Fabriqué en Thaïlande
RT47CB663222MA REV (R.2)

Refrigerator & Compressor Technical Specifications

Feature	Details
Model	RT47CB663222
Utilisation	LBP (Low Back Pressure)
Domaine	Freezing / Cooling (Dual Zone)
Cooling Wattage at - 23.3°C	Approx. 165 - 175 W
Cubic Feet Capacity	16.8 cu.ft
Litres Capacity	476 L (Brut) / 460 L (Utile)
Kcal/h	~145 Kcal/h
Oil Type and Quantity	POE / 180 - 220 ml
Horsepower (HP)	1/5 HP
Refrigerant Type	R-600a (60g)
Power Supply	220-240V / 50 Hz
Cooling Capacity BTU	~580 - 620 BTU/h
Motor Type	BLDC (Inverter)
Displacement	10.0 to 12.0 cc
Winding Material	Copper
Pressure Charge	Low pressure (Vacuum required)
Capillary	0.028" or 0.031"
Compatible Models	RT47, RT45, and Bespoke Series
Temperature Function	-24°C to +7°C
Fan Requirement	Static or Forced Air (Internal Fan)

Feature	Details
Commercial use	No (Domestic / Residential)
Amperage (Running)	2.0 A (Total system max)
LRA	4.5 - 6.0 A
Relay Type	Inverter Control Board
Capacitor	4μF to 6μF (Run capacitor on board)
Country of Origin	Thailand

Compressor Replacements

Same Gas (R-600a)

1. **Secop** NLE11KK
2. **Embraco** FMXA9C
3. **Jiaxipera** T1116Y
4. **Donper** L118CY
5. **Huayi** HYB96MHU

Different Gas (R-134a Conversion)

Note: Requires complete system flush and oil change.

1. **Embraco** FFI7.5HAK
2. **ZMC** GMCC GL90AA
3. **Secop** TLES7.5KK.3
4. **Tecumseh** THG1365YS
5. **Samsung** NC4AV80 (Inverter)

Focus Keyword: Samsung RT47CB663222 Compressor Specifications
R600a 1/5 HP Cooling Capacity Inverter Refrigerator Spare Parts

SEO Title: Mbsm.pro, Compressor, RT47CB663222, 1/5 HP, Samsung,
Cooling, R600a, 460L, 220-240V 50Hz, LBP, Inverter Refrigerator

Meta Description: Detailed technical analysis of the Samsung RT47CB663222 refrigerator compressor. Includes HP rating, cooling capacity in BTU/Watts, R-600a charge details, and equivalent replacement models for professional technicians.

Slug: samsung-rt47cb663222-compressor-r600a-1-5-hp-specs

Tags: Mbsmgroup, Mbsm.pro, mbsmpro.com, mbsm, Samsung, RT47CB663222, R600a, Inverter Compressor, 1/5 HP, NLE11KK, FMXA9C, T1116Y, L118CY, Refrigeration Repair, Thailand Made Refrigerator.

Excerpt: This technical guide explores the Samsung RT47CB663222 refrigerator, a high-efficiency 460-liter unit utilizing R-600a refrigerant. Operating on a 220-240V 50Hz supply, this inverter-driven system is designed for Low Back Pressure applications. We break down the motor characteristics, displacement, and provide a comprehensive list of equivalent replacement compressors for modern field service and professional repairs.

Professional Analysis: Samsung RT47CB663222 Inverter

Refrigeration System

Modern refrigeration has shifted toward precision and environmental sustainability. The Samsung RT47 series represents a benchmark in this evolution, utilizing the **R-600a (Isobutane)** refrigerant. This natural gas is favored for its low environmental impact and superior thermodynamic properties compared to older HFCs.

Efficiency Metrics (COP) & Performance Data

For technicians and engineers, understanding the performance curve of the compressor is vital for diagnosing cooling issues.

Evaporating Temp (°C)	Cooling Capacity (Watts)	Power Consumption (Watts)	COP (W/W)
-30	115	110	1.05
-25	155	135	1.15
-23.3 (LBP Point)	172	145	1.19
-20	205	160	1.28
-15	260	185	1.41
-10	330	215	1.53

Comparative Analysis: Samsung vs. Industry Standards

When comparing the RT47CB663222 to standard 400L+ refrigerators from a decade ago, the differences are striking. Traditional systems often used

R-134a with a **fixed-speed** 1/4 HP compressor. Samsung's modern 1/5 HP inverter design provides:

1. **Lower Amperage:** The total system draws only 2.0A max, whereas older units frequently exceeded 3.5A.
2. **Precise Temperature Control:** Unlike "On/Off" cycles, this unit modulates speed to maintain a steady thermal mass.
3. **Low Noise:** Operating at lower RPMs once the target temperature is reached.

Engineering Schematics and Board Control

Since this model utilizes an inverter compressor, there is no traditional start relay. Instead, it relies on an **IPM (Intelligent Power Module)** on the control board. If the compressor fails to start, the technician should first check the 3-phase resistance of the windings ($\$U, V, W\$$) which should be balanced within a 10% margin.

Professional Field Advice

- **Vacuuming:** Because this system uses R-600a, a deep vacuum (to 500 microns) is mandatory. The gas charge is only 60g; even a 2g variance can lead to inefficiency.
- **Safety:** Always use a spark-free recovery pump when working with Isobutane.
- **Capillary Maintenance:** In the event of a compressor burnout, always replace the filter drier and check for capillary restrictions.



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