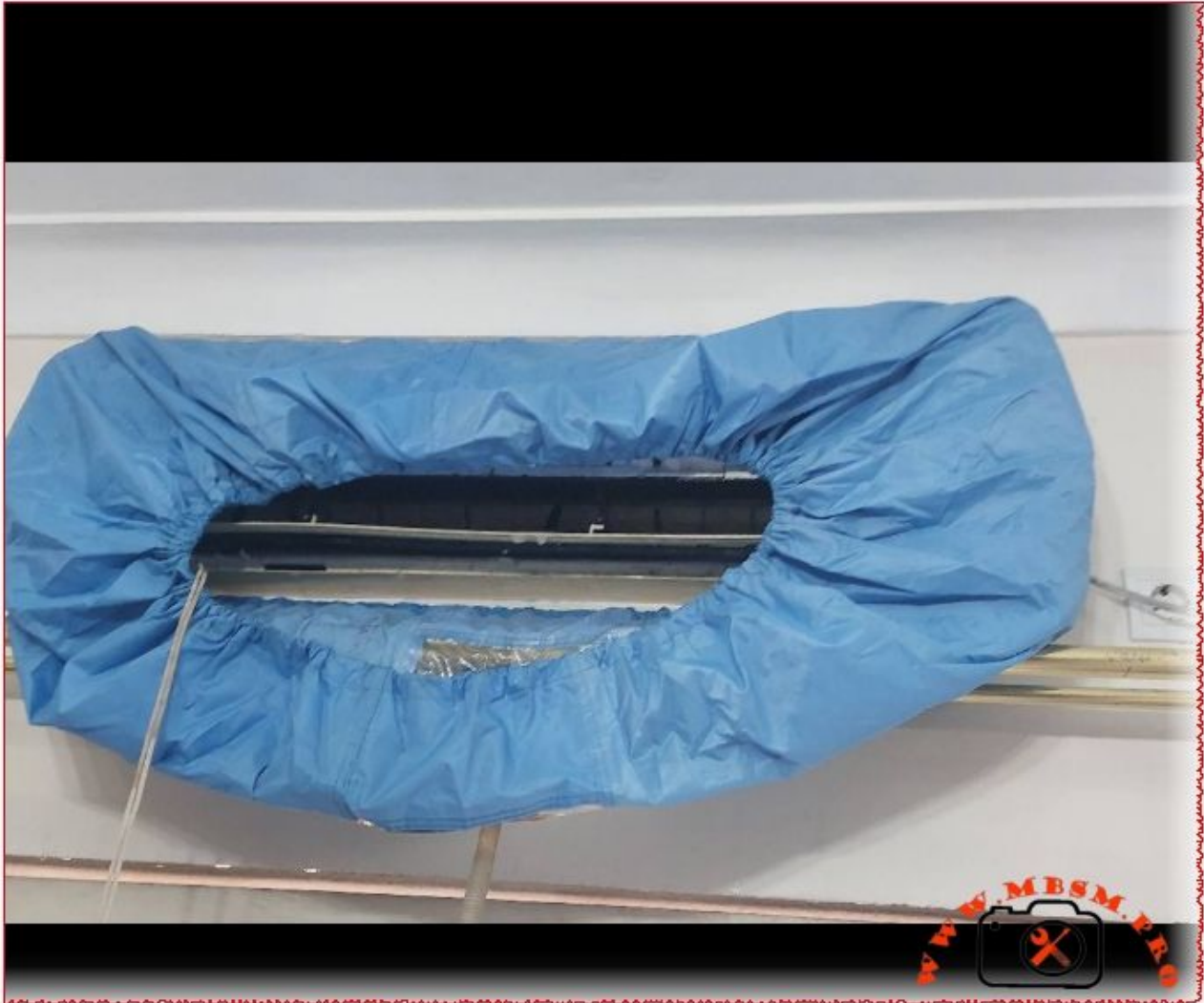


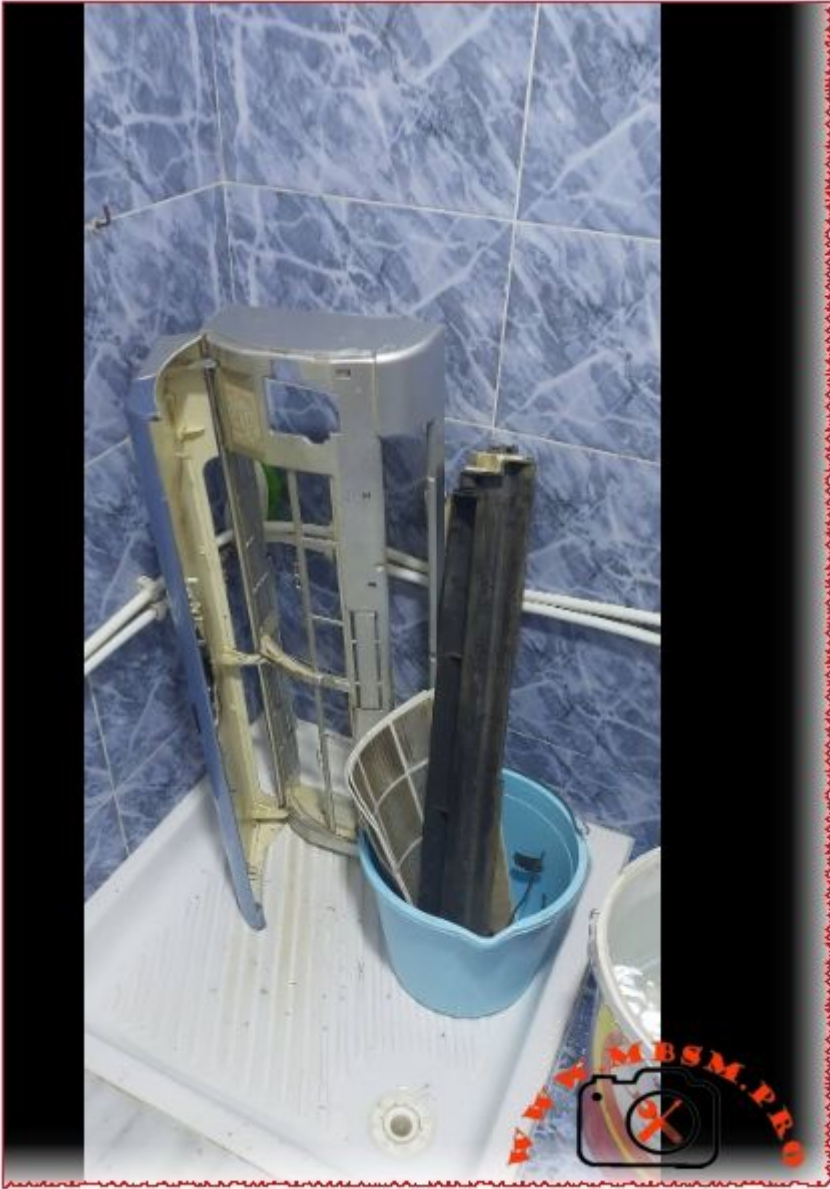
# Deep cleaning AC units from A to Z... that's our craft

Category: Mbsmpro

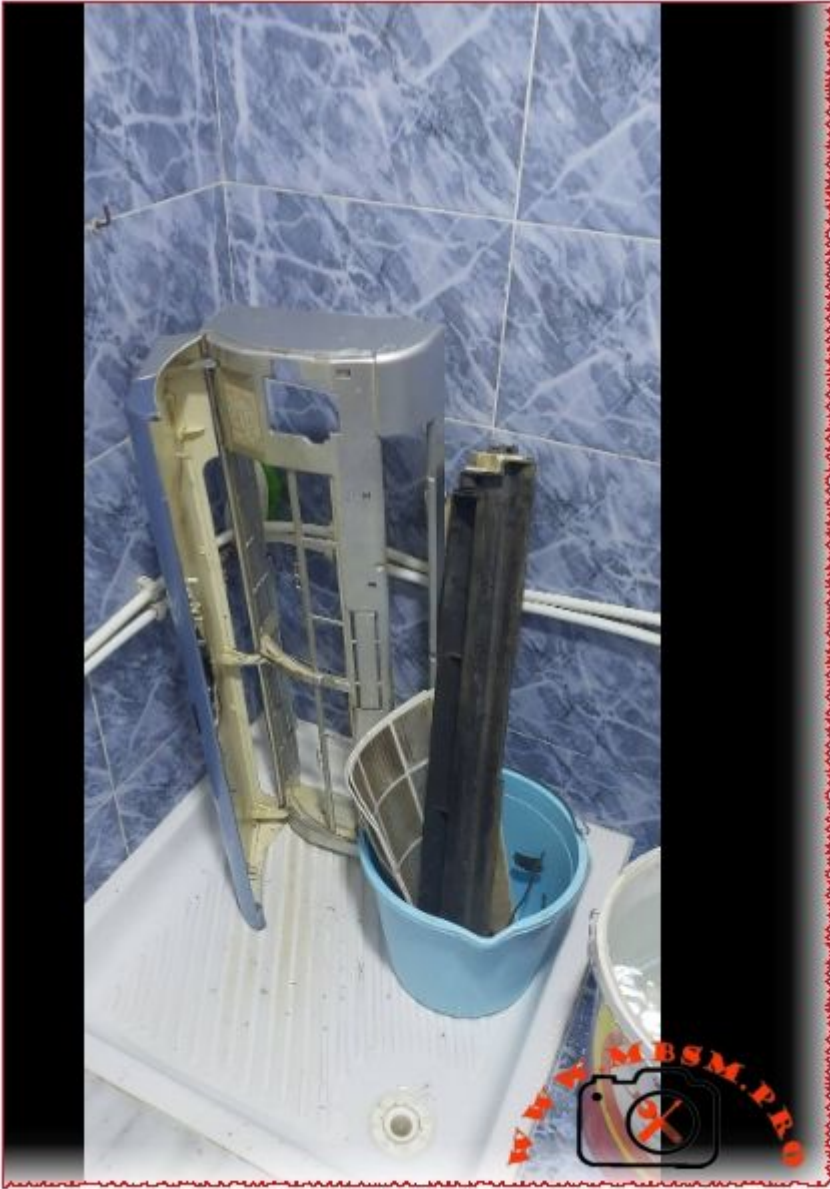
written by [www.mbsm.pro](http://www.mbsm.pro) | 13 April 2026



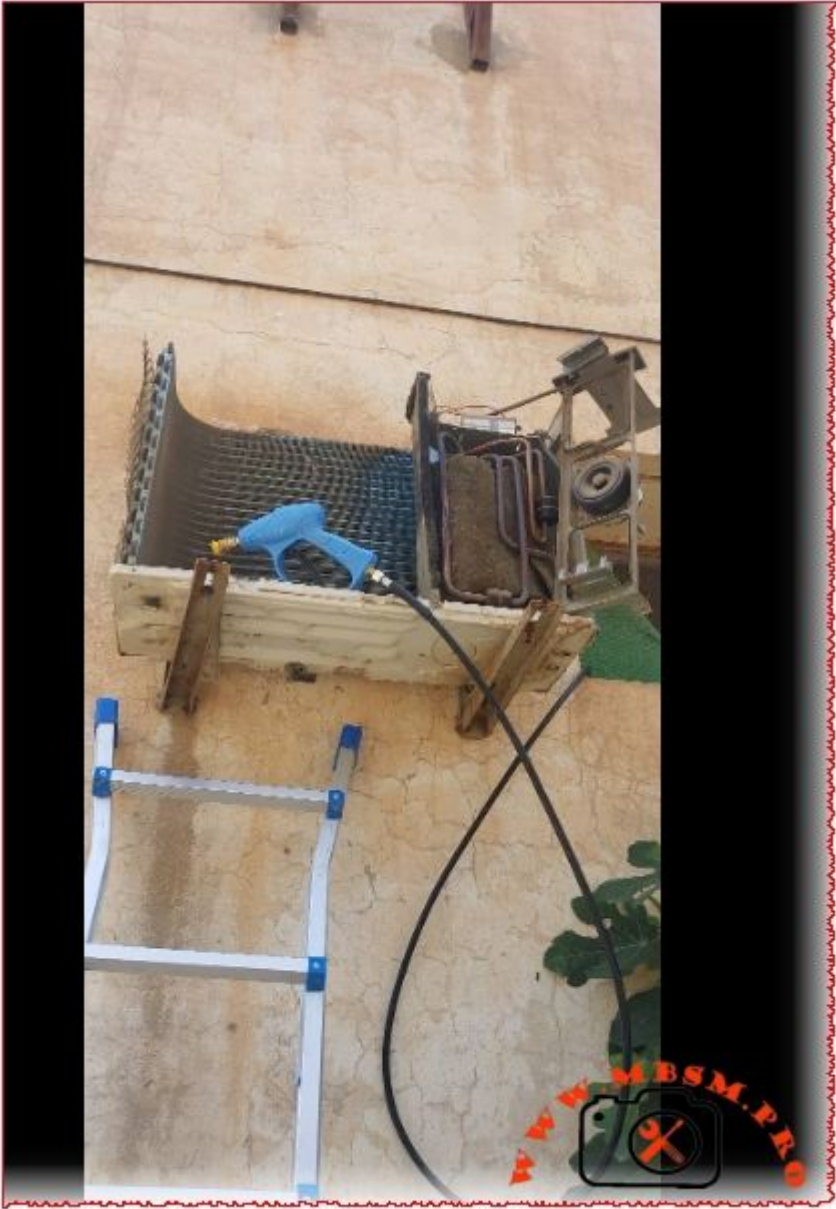
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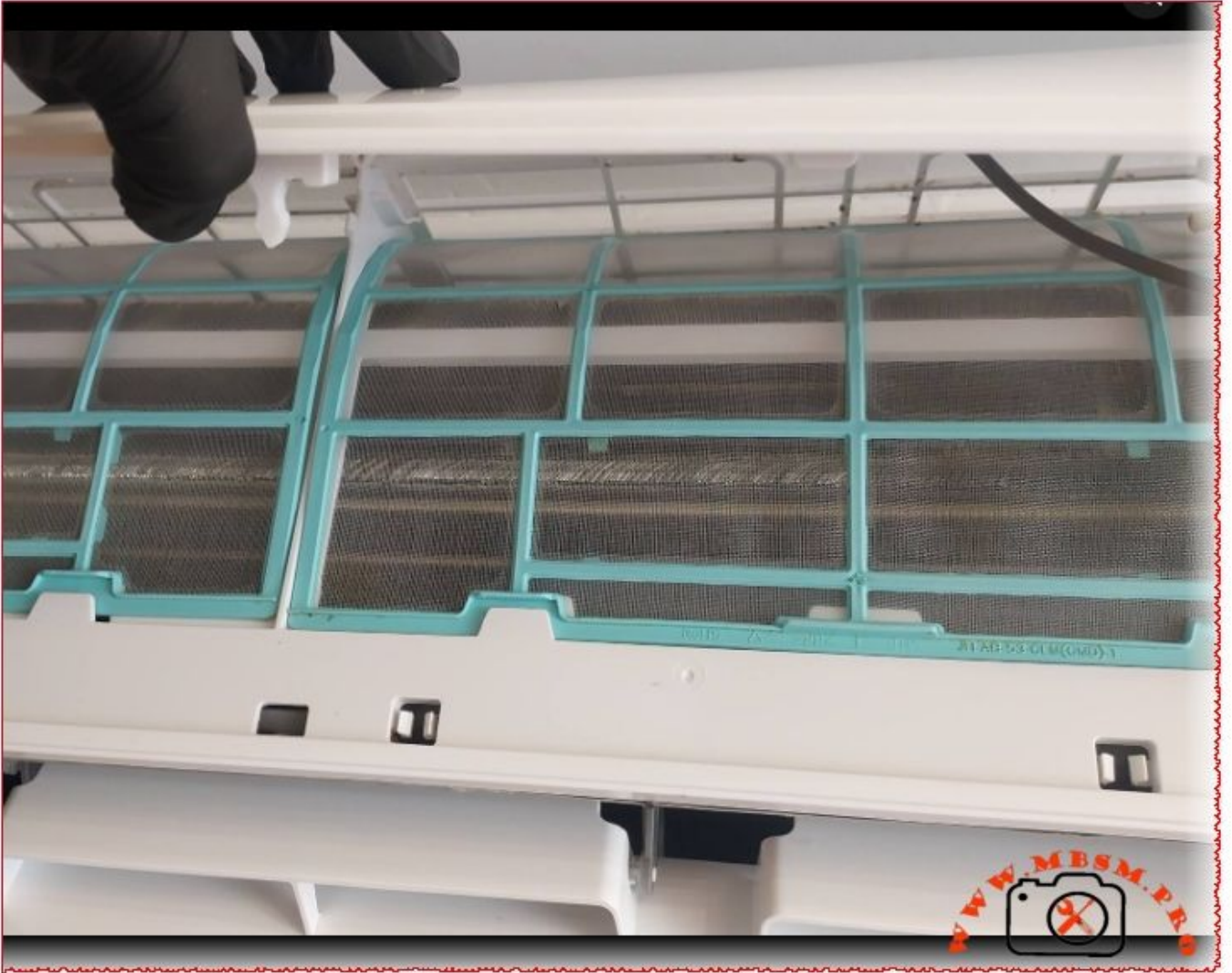
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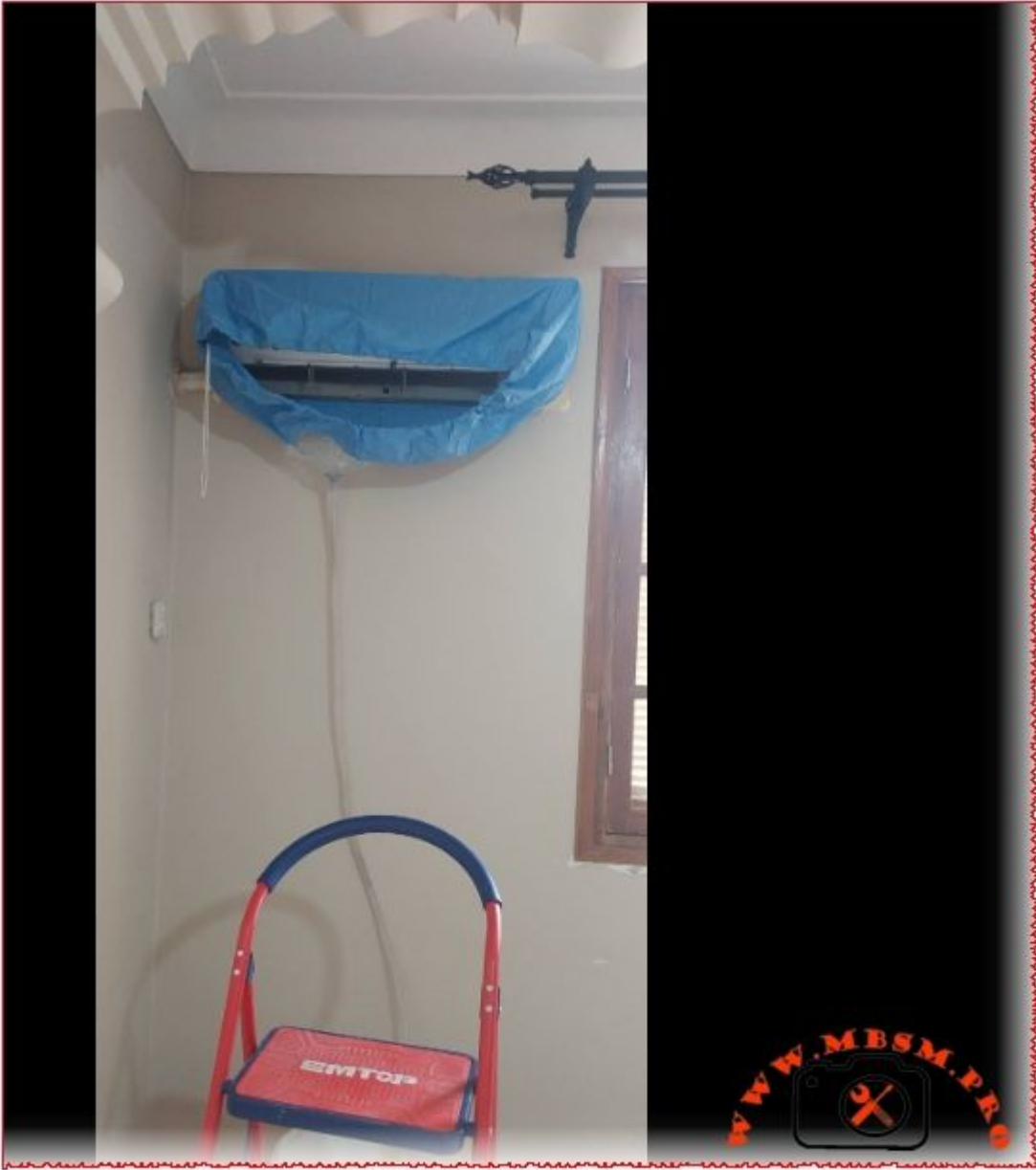
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


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## CR20-06 A-F-A-E-HQQE

Category: Equipment

written by [www.mbsm.pro](http://www.mbsm.pro) | 13 April 2026

Type	CR20-06 A-F-A-E-HQQE				
Model	A96500512 P31643				
f	50	Hz	P2	7,50	kW
n	2919	min <sup>-1</sup>	H <sub>max</sub>	88.4	m
Q	21	m <sup>3</sup> /h	H	70.4	m
p <sub>max</sub> /t <sub>max</sub>	16/120	bar/°C		CCW	
Serial No.	0001	Made in Hungary			
			 <b>GRUNDFOS</b>  <small>DK-8850 Bjerringbro, Denmark</small>		
MEI ≥	0.7	η <sub>p</sub> (%)	75,6		





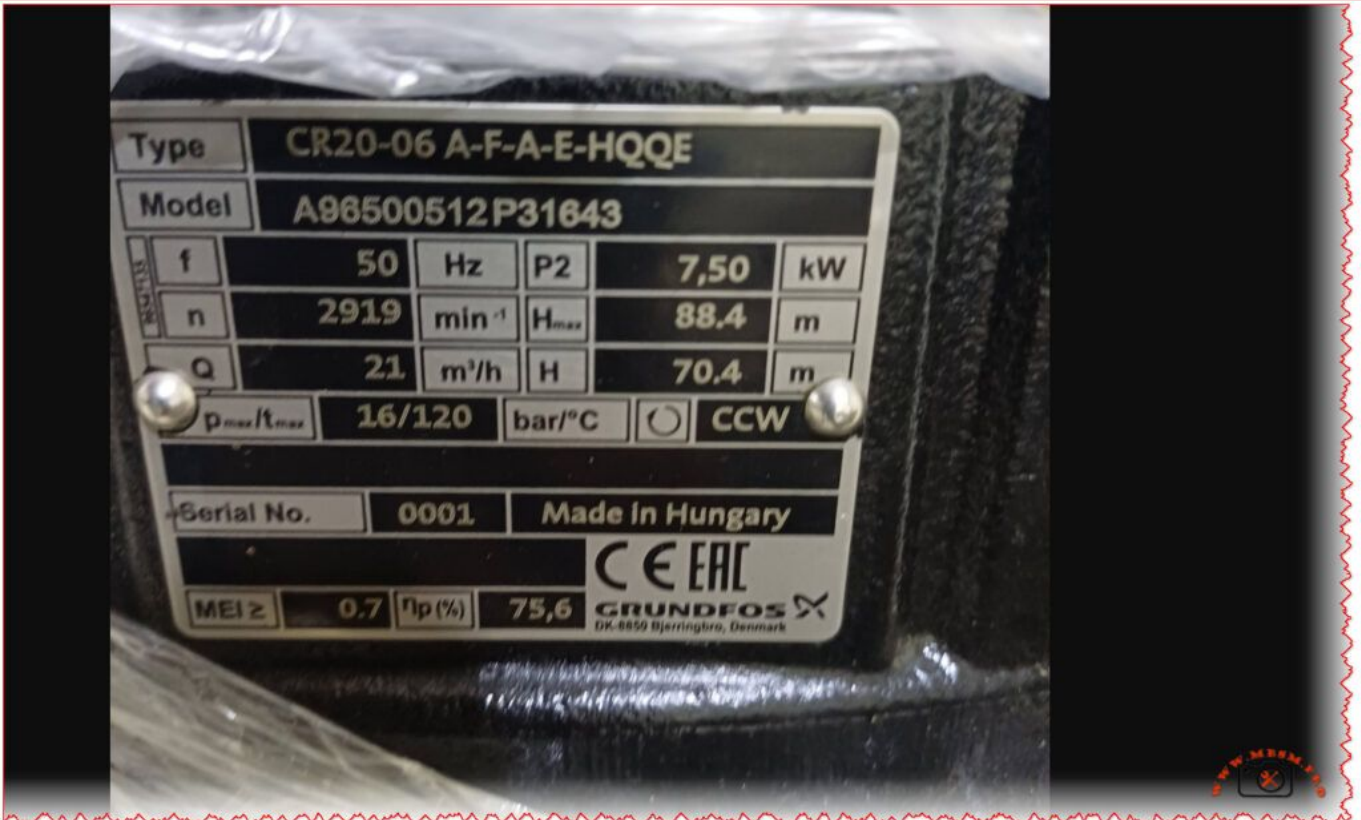
Type	CR90-1 A-F-A-E-H00E				
Model	B96124075P11522				
f	50	Hz	P2	7,50	kW
n	2919	min <sup>-1</sup>	H <sub>max</sub>	35.5	m
Q	90	m <sup>3</sup> /h	H	20.2	m
p <sub>max</sub> /t <sub>max</sub>	16/120	bar/°C	CCW		
Serial No.	0001				







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The Grundfos CR20-06 A-F-A-E-HQQE is a vertical multistage centrifugal pump delivering 21 m<sup>3</sup>/h at 70.4 m head with a 7.5 kW IE3 motor, designed for demanding water boosting and industrial applications.□□

Its cast-iron base, stainless-steel internals and HQQE mechanical seal make it a durable, energy-efficient solution for process water, HVAC, boiler feed and general pressure boosting systems.□

---

## Introduction

In modern industry and building services, stable water pressure is no longer a luxury but a basic requirement. The Grundfos CR20-06 A-F-A-E-HQQE has become one of the quiet workhorses in this field, combining compact vertical design with serious performance for installations where downtime is simply not an option.□

---

## Technical profile of the CR20-06

The pump in the photo is clearly identified on its nameplate as a Grundfos CR20-06 A-F-A-E-HQQE with a 7.50 kW motor operating at 50 Hz and about 2919 rpm.□□

It delivers a nominal flow of 21 m<sup>3</sup>/h at a rated head of 70.4 m, with a maximum head up to 88.4 m and a maximum operating pressure of 16 bar at liquid temperatures up to 120 °C.□

## Main nameplate data

Item	Value
Pump type	CR20-06 A-F-A-E-HQQE
Rated power P2	7.5 kW
Frequency / speed	50 Hz / ≈2919 rpm
Rated flow Q	21 m <sup>3</sup> /h
Rated head H	70.4 m
Maximum head Hmax	88.4 m
Maximum pressure / temp.	16 bar / 120 °C
Shaft seal code	HQQE (single mechanical seal)
Pump orientation	Vertical, inline
Efficiency (pump)	≈75.6% (MEI ≥ 0.70)

□□  
The pump uses a vertical, inline layout with suction and discharge on the same level (DN 50 flanged connections, PN 25 rating), simplifying installation in compact plant rooms and on rigid pipe manifolds.□  
Its IE3 motor (size 132SB) offers motor efficiencies above 90% at typical loads, helping operators reduce long-term energy costs.□

---

## Construction, materials and seal

The CR20-06 belongs to the widely used CR multistage family, where several impellers are stacked in series to build pressure while maintaining moderate

flow.□

In this specific model, the base and pump head are in cast iron, while all wetted parts such as impellers and chambers are stainless steel AISI 304, providing a good balance between robustness and corrosion resistance for clean water duties.□

The HQQE mechanical seal is a single cartridge seal with silicon carbide/silicon carbide faces, EPDM elastomers and a stainless-steel spring, designed for long service life and easy replacement.□

This configuration suits cold and hot water, mildly aggressive media used in HVAC and process plants, and reduces the risk of dry-running damage during commissioning or transient operating conditions.□

---

## Typical applications and operating benefits

With its 21 m<sup>3</sup>/h at 70.4 m operating point, the CR20-06 is well suited to medium-pressure boosting in commercial buildings, industrial wash and rinse systems, boiler feed for small to mid-size boilers, and general process water circulation.□

Installers appreciate the inline design, which often allows direct replacement of older horizontal pumps without major changes to the pipework, while plant operators value the quiet operation and low vibration levels of the multistage design.□

From an energy perspective, the combination of high hydraulic efficiency and IE3 motor makes this model a strong candidate in projects where life-cycle cost analysis is required or where regulations demand a minimum efficiency index (MEI  $\geq 0.70$ ).□

Paired with an external frequency converter, the CR20-06 can be turned into a variable-speed booster, maintaining constant pressure in domestic water systems, process loops or district cooling circuits while cutting energy consumption during partial-load operation.□

---

## Practical selection notes for engineers

When selecting a CR20-06 for a project, engineers typically start from the required duty point on the pump curve and verify that 21 m<sup>3</sup>/h at around 70 m head fits the system's pressure losses, static height and safety margin.□

System designers also check NPSH requirements, temperature range from -20 to 120 °C, and maximum ambient temperature up to 60 °C to ensure trouble-free operation in machinery rooms and outdoor installations.□

Because the pump offers a maximum operating pressure of 16 bar with PN 25 flanges, it can be integrated into higher-pressure manifolds and ring mains, provided that upstream valves, fittings and vessels share compatible ratings.□

For users planning future upgrades, the CR range gives a modular platform: additional models and variants can be combined in parallel booster sets, or replaced one-to-one if system demand increases.

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Mbsm.pro, Compressor, GM70AZ, 1/5 hp,  
ZMC, Cooling, R134a, 150 W, 1.3 A,  
1Ph 220-240V 50Hz, LBP capacity,  
RSIR, -30°C to -10°C

Category: compressor

written by [www.mbsm.pro](http://www.mbsm.pro) | 13 April 2026



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Le ZMC GM70AZ est un compresseur hermétique à piston fonctionnant au R134a, destiné aux applications à basse pression d'aspiration dans les réfrigérateurs et congélateurs ménagers alimentés en 220–240 V, 50 Hz. Fabriqué par Misr Compressor Manufacturing Co. en Égypte, il fournit une puissance d'environ 1/5 HP et une plage d'évaporation de  $-30\text{ }^{\circ}\text{C}$  à  $-10\text{ }^{\circ}\text{C}$ , ce qui en fait une solution courante et fiable pour le froid domestique dans la région MENA

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# Mbsm.pro, compressors, QD43H, QV30H, QD52H, QD65H, QD75H, WV43YB, QD91YB

Category: compressor

written by [www.mbsm.pro](http://www.mbsm.pro) | 13 April 2026



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AFT hermetic refrigerator compressors, including R134a models QD43H, QV30H, QD52H, QD65H and QD75H, alongside R600a models WV43YB and QD91YB, each supplied with starting components and packed in branded cartons for retail or OEM use. The power range spans from approximately 1/10 HP up to 1/4–1/5 HP

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Mbsm.pro, compressor, EGM91AA,  
refrigerators, Freezing, Cooling,  
R134a, ZMC compressors, 1/4 hp, Lbp

Category: compressor

written by [www.mbsm.pro](http://www.mbsm.pro) | 13 April 2026



The EGM91AA compressor from ZMC Egypt is a key component of modern household refrigeration, combining advanced engineering, R134a compatibility, and 220–240 V operation to deliver efficient, reliable cooling performance that appeals to appliance manufacturers and field technicians alike.

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# Mbsmpro.com, ZB38, 5HP, R404, MBP

Category: Refrigeration

written by [www.mbsm.pro](http://www.mbsm.pro) | 13 April 2026



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ZB38 5HP R404A MBP scroll compressor has become a reference point in medium-temperature commercial refrigeration, providing a compact, efficient and reliable heart for cold rooms, display cabinets and food service equipment worldwide. This article explores how it works, where it fits best and what technicians should verify before installing or replacing this type of compressor.

---

# Mbsm.pro, LRA to Ton

Category: expertise

written by [www.mbsm.pro](http://www.mbsm.pro) | 13 April 2026

## How to Convert

# LRA to TON

1 Phase

Formula

TOP COOLING SERVICE

$$\text{Ton} = \frac{\text{LRA}}{36}$$

$$\text{Ton} = \frac{54}{36}$$

TOP COOLING SERVICE

Ton = 1.5 Answer



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how to convert LRA (Locked Rotor Amps) into refrigeration tons using a simple formula, making HVAC system sizing and diagnostics accessible to field technicians. Using LRA values found on equipment labels, one can quickly estimate system tonnage, ensuring correct sizing for repairs or upgrades in air conditioning and refrigeration systems.

---

# Mbsmpro, Pdf, Convert LRA to Cooling Tons

Category: Pdf

written by [www.mbsm.pro](http://www.mbsm.pro) | 13 April 2026

## How to Convert

# LRA to TON

1 Phase

Formula

TOP COOLING SERVICE

$$\text{Ton} = \frac{\text{LRA}}{36}$$

$$\text{Ton} = \frac{54}{36}$$

TOP COOLING SERVICE

Ton = 1.5 Answer



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R134a compressor, 1/3 HP, LBP, commercial refrigeration, domestic freezer, cooling capacity, COP, mbsm.pro, mbsmgroup.tn, mbsmgroup, mbsmpro, mbsmpro.com, Siberia, Panasonic, Embraco, Secop, Tecumseh, Donper, Cubigel, Zero, ZMC, Samsung

Category: Refrigeration

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A technical comparison of the 10 best LBP R134a compressors (1/3 HP) for professional refrigeration and freezing applications—complete with specs, cooling capacities, and application tips.

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Mbsm.pro, Compressor, Bristol, Compressor, H20J283ABC, 28000 BTU/HR,

H29B18UABCC, 20000 BTU/HR,  
H29B18UABH, 18000 BTU/HR,  
H29B35UABCA, 35000 BTU/HR, R22, 1 PH,  
208/230 V

Category: compressor

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Mbsmpro, Compressor, Bristol, Compressor, H20J283ABC, 28000 BTU/HR, H29B18UABCC, 20000 BTU/HR, H29B18UABH, 18000 BTU/HR, H29B35UABCA, 35000 BTU/HR, R22, 1 PH, 208/230 V