

Mbsm.pro, Compressor, HIGHLY, BSA645CR-R1EN, GBSA645CR, 840w, r134a, 1.12hp, Constant-Speed, [1ph] 100/100-110V 50/60Hz

Category: compressor

written by Lilianne | 10 May 2025



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Performance Analysis of the BSA645CR Compressor with Horsepower Calculation

1. Introduction

The BSA645CR is a constant-speed reciprocating compressor designed for refrigeration and air conditioning systems using R134a refrigerant. It is commonly used in residential and light commercial applications due to its compact design, efficiency, and compatibility with standard voltage supplies. This article provides a detailed overview of the BSA645CR compressor's technical specifications, explains how to calculate its output horsepower (HP), and discusses its performance characteristics.

2. Technical Specifications of



系列 Series	型号 Model	排气量 Displacement (cc/rev)	冷量 Cooling Capacity (W)	冷量 Cooling Capacity (Btu/h)	COP (W/W)	电容 Capacitor (μ F/V)	压缩机高度 Height (mm)	测试工况 Testing Condition
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定速 R134a Constant-speed R134a
[1 ϕ]100/100-110V 50/60Hz

A	BSA357CR	3.57	450	1535	2.21	17/250	143.0	ASHRAE/T
	BSA357UR	3.57	455	1552	2.60	25/250	153.0	ASHRAE/T
	BSA460CR	4.60	584	1993	2.35	17/220	169.0	ASHRAE/T
	BSA586CR	5.86	789	2692	2.40	25/250	169.0	ASHRAE/T
	BSA645CR	6.45	840	2866	2.33	20/250	169.0	ASHRAE/T
	BSA725SR	7.25	945	3224	2.51	17/300	162.6	ASHRAE/T

定速 R134a Constant-speed R134a
[1 ϕ]110V 60Hz

A	BSA272HJ	2.72	345	1177	2.60	20/200	152.1	ASHRAE/T
	BSA325HJ	3.25	430	1467	2.81	15/250	162.6	ASHRAE/T
	BSA357UJ	3.57	465	1587	2.67	20/250	152.1	ASHRAE/T
	BSA460UJ	4.60	615	2098	2.80	20/250	162.6	ASHRAE/T
	BSA520HJ	5.20	704	2402	2.93	25/250	172.6	ASHRAE/T
	BSA535HJ	5.35	718	2450	2.92	25/250	172.6	ASHRAE/T
	BSA586UJ	5.86	780	2661	2.80	17/250	172.6	ASHRAE/T
	BSA586HJ	5.86	785	2678	2.92	25/250	172.6	ASHRAE/T



Parameter	Value
Model	BSA645CR
Refrigerant	R134a
Voltage	100/100-110V, 50/60Hz
Displacement	6.45 cc/rev
Cooling Capacity (W)	840 W
Cooling Capacity (Btu/h)	2866 Btu/h
COP (Coefficient of Performance)	2.33 W/W
Capacitor	20 μ F / 250 V
Compressor Height	169.0 mm
Test Condition	ASHRAE/T