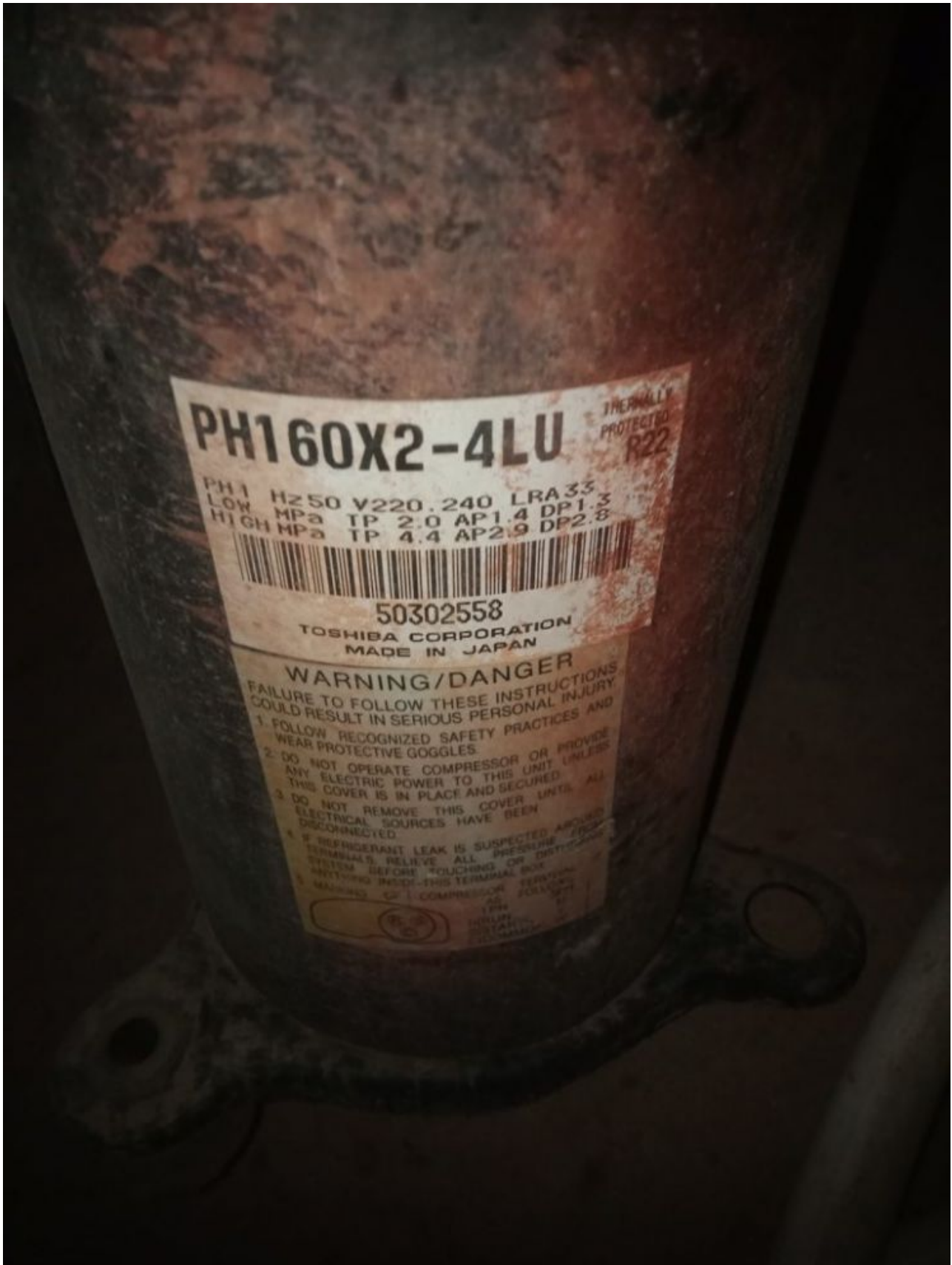


**Mbsm.pro, Compressor,
Toshiba, PH160X2-4LU, 12000
btu, 220 v, 1ph, rla 6.5 a,
fla 40 a, 35 μ F**

written by Lilianne | 19 February 2022



PH160X2-4LU

THERMALLY
PROTECTED
R22

PH1 H250 V220.240 LRA33
LOW MPa TP 2.0 AP1.4 DP1.3
HIGH MPa TP 4.4 AP2.9 DP2.8



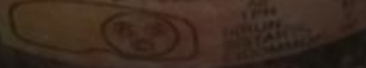
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TOSHIBA CORPORATION
MADE IN JAPAN

WARNING/DANGER

FAILURE TO FOLLOW THESE INSTRUCTIONS
COULD RESULT IN SERIOUS PERSONAL INJURY

- 1 FOLLOW RECOGNIZED SAFETY PRACTICES AND WEAR PROTECTIVE GOGGLES.
- 2 DO NOT OPERATE COMPRESSOR OR PROVIDE ANY ELECTRIC POWER TO THIS UNIT UNLESS THIS COVER IS IN PLACE AND SECURED.
- 3 DO NOT REMOVE THIS COVER UNTIL ALL ELECTRICAL SOURCES HAVE BEEN DISCONNECTED.
- 4 IF REFRIGERANT LEAK IS SUSPECTED AROUND TERMINALS RELIEVE ALL PRESSURE FROM SYSTEM BEFORE TOUCHING OR DISTURBING ANYTHING INSIDE THIS TERMINAL BOX.
- 5 MATCHING OF COMPRESSOR TERMINAL



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Mbsm.pro, Compressor, Toshiba, PH160X2-4LU, 12000 btu, 220 v, 1ph, rla 6.5 a, fla 40 a, 35 µF

**Mbsm.pro, Compressor, Haili,
sl310MV, 5270 W, 17981 BTU,
220 V, 1PH, R22, 2.2 HP**

written by Lilianne | 19 February 2022

Mbsm.pro, Compressor, Haili, sl310MV, 5270 W, 17981 BTU, 220
V, 1PH, R22

**Mbsm.pro, Compressor,
AJE4511YTZ , R134a, hbp,
TAJ4511Y, R-12/R-409A, lbp,
1HP, 3hp, 400V U.H.,
CAJ4511A, 1ph, R-12, lbp,
220v**

written by Lilianne | 19 February 2022



Mbsm.pro, Compressor, AJE4511Y TZ , R134a, TAJ4511Y, R-12/R-409A, 1HP, 3hp, 400V U.H., CAJ4511A, 1ph, R-12, 220v

**Mbsm.pro, DL25YE-4, 1/4 hp ,
1Ph, DAEWOO, COMPRESSOR R12,
CSR, compressor, LBp, 220V
60hz**

written by Lilianne | 19 February 2022



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Mbsm.pro, DL25YE-4, 1/4 hp , 1Ph, DAEWOO,COMPRESSOR, R12, CSR, compressor, LBp, 220V 60hz

**Mbsm.pro, COPLAND,
Compressor, KCJ511HAE,
KCJ511HAE-BXXX , HBP, 1-3/8
hp big ++, R-22 , 230 V, 50
Hz, 1PH , FAN, 350 ft3 / m**

written by Lilianne | 19 February 2022

Technical Specification	
Cooling Capacity (Btu/hr)	11275
Cooling Capacity (w)	3302

Technical Specification	
HP	1-3/8
LRA	54

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Number of cylinders 2

Displacement @ 50 Hz, cu.m/h 3.2

Bore/Stroke, mm 3.5/1.9

Length/Width, mm 235/179

Height, mm 264

Net Weight, kg 21.5

Stub Suction, inch 5/16

Stub Discharge, inch 5/16

Oil Quantity, l 0.9

Base mounting (hole dia), mm NA (0.0)

Sound Pressure @ 1m (HT), dBA 57

Sound Power (HT), dBA 68

COMPRESSOR ELECTRICAL DATA (220/240V – 1~ – 50Hz)

Locked Rotor Current, A 25

Default Enclosure Class IP 21 (IEC 34)

ACCESSORIES OPTIONAL

Mounting Grommets Standard

Single Phase Equipment Relay, Start and Run Capacitor



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Horse Power

50HZ

Brand

COPLAND

Compressor Technology

HERMETIC

Model Name/Number

KCJ511HAE

Power

220V



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COMPRESSOR, ASPERA, NJ2192GK, 1.1/4 HP, 220V, 1PH, R404A, LBP, 1199w

written by Lilianne | 19 February 2022
Compressor ASPERA NJ2192GJ | NJ 2192 GJ

Product replaced the old model NJ2192GK

Refrigerant	R404A
Working range[stC] LBP	-40 do -10
Nominal capacity [W] (evaporating temperature -23,3C, Condensing temperatur +54,4C)	1199
Power supply	220-240V 50Hz
Engine type	CSR
Displacement [cm ³]	26,10
Weight [kg]	22

Condensing temperature +55 C

Evaporating Temperature	Cooling Capacity +/-5%			Power Consumption +/-5%	Current Consumption +/-5%
	(kcal/h)	(W)	(Btu/h)	(W)	(A)
°C					
-40					
-35					
-30		797		773	4,37
-25		1084		908	4,92
-20		1413		1045	5,49
-15		1784		1181	6,10
-10		2196		1317	6,72
Refrigerant:	R404A				



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**Kulthorn, compressor,
Kulthorn compressor, c-
qn76l6f, c-qn76l6f-l, 1/10
Hp, 1Ph, Serie C-q, R134a, 76
watt, Low back pressure,
200-220V/50hz, 220v/60hz,
Compressor modifier**

written by Lilianne | 19 February 2022

Kulthorn, compressor, Kulthorn compressor, c-qn76l6f, 1/10 Hp, 1Ph, Serie C-q, R134a, 76 watt, Low back pressure, 200-220V/50hz, 220v/60hz, Compressor modifier

Compressor Motor Protectors

Each compressor incorporates a motor protection device or system. Generally, the larger the compressor, the more sophisticated the motor protector.

It is essential that an electric motor is protected against conditions that could otherwise result in damage to the motor or to the electrical supply system. For this reason, every Kulthorn compressor is supplied with a motor protector, sometimes referred to as an overload. The more expensive the compressor, the greater is the economic justification for specifying a motor protector that has the ability to protect over a wider range of conditions.

1. External Motor Protectors

A smaller compressor (such as an AZ, AE or WJ) is fitted with an external motor protector. Most commonly, this is a compact, cylindrical device that contains a snapaction bimetallic disc. The protector is mounted in contact with the surface of the compressor housing, inside the terminal guard.

The compressor current passes through the bimetallic disc. The resistance of this disc causes the disc temperature to increase as the motor current increases. There is usually a small heater, located under the disc and connected in series with the disc itself. This heater further raises the temperature of the disc. There is also the impact of the compressor shell temperature, and a hot compressor will further increase the disc temperature. The temperature of the disc is thus influenced by the combined effects of –

- the compressor motor current
- the compressor shell temperature

When the bimetallic disc reaches a predetermined temperature (often either 105°C or 120°C) the disc will snap open, and power supply to the compressor will be interrupted.

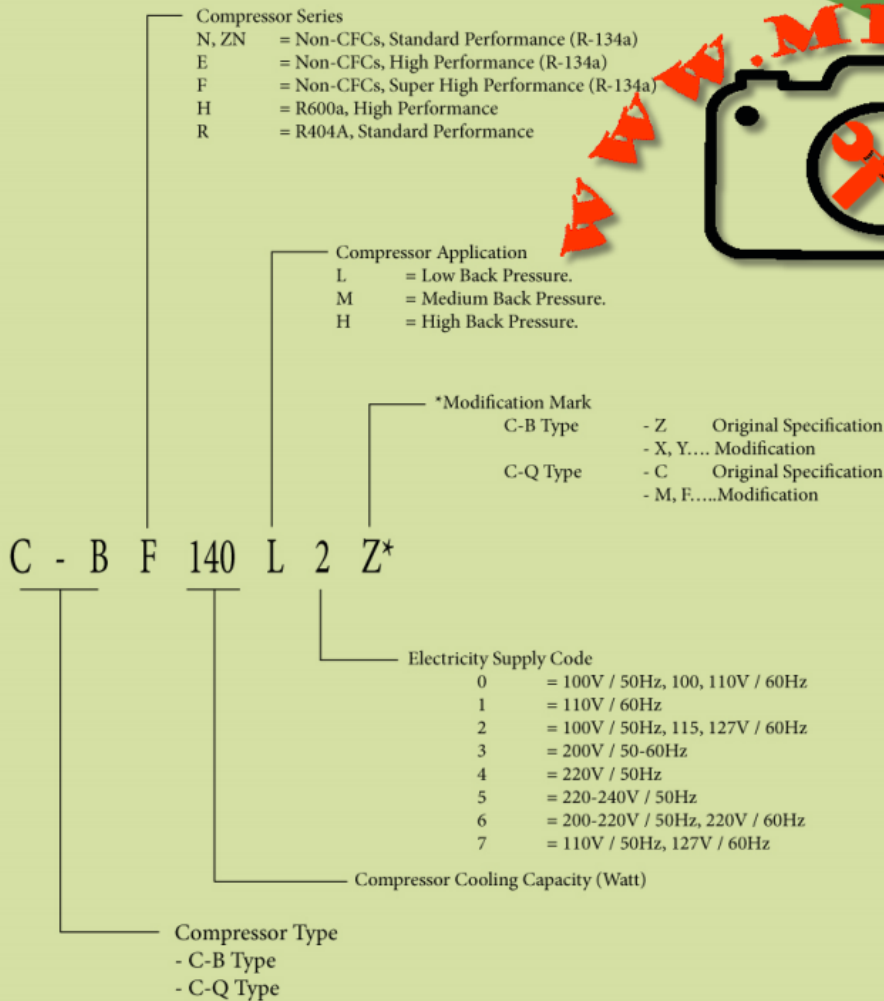
The compressor will cool, and at a reduced disc temperature the protector will reset and the compressor will restart, or attempt to restart. If the abnormal condition that caused the protector to trip in the first place still exists, the compressor is likely to continue to cycle on the overload until that condition is corrected.

There are two situations where a motor protector is expected to operate.

2. When the compressor is running under extreme conditions.
3. When the compressor is in a locked rotor condition. This is a situation where the compressor cannot start because the voltage is too low, the system pressures are outside the range for which the compressor is approved, there is internal damage to the compressor, or there is some other reason why the compressor is incapable of starting



Model Number System



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KULTHORN

COMPRESSOR

Private Picture Copyright : WWW.MBSM.PRO

Name: Kulthorn Premier Company Limited (KPC)
 Established: December 1982
 Registered Capital: Baht 1,125 Million
 Address: 446/3 Moo 9 Chachoengsao – Nakornratchasima Road,
 Kabinburi Industrial Estate, Nongki, Kabinburi, Prachinburi 25160, Thailand
 Telephone: (037) 204835, 455516
 Fax: (037) 455525, 204844
 E-mail: sales_kpc@kulthorn.com
 kamjorn@kulthorn.com
 Employees: 900 persons
 Land area: 91 rai (145,600 m²)
 Building of area: 41,500 m²
 Business Products: Hermetic Reciprocating Compressor (Scotch Yoke Mechanism)
 (Product under license SANYO Japan) Size 30-250 Watt.
Compressor series / Refrigerant
 C-BN, C-BZN, C-BE, C-BF / R-134a
 C-QN / R-134a
 C-BH / R-600a
 C-BR / R-404A
 Shareholder: Kulthorn Kirby Public Company Limited 100%
 Customers: **Domestic** – Haier, Sanyo, Toshiba, Hitachi, Daewoo, Samsung, Sanden, etc.
Total = 35%
Export – Daewoo, Sanyo Group, GE, Sanden, Haier, Singer, Videocon,
 Toshiba, etc.
Total = 65%
 Quality System: ISO 9001:2000 Certified by TUV Nord Year 2003
 Q-Mark Certified by F.T.I. Year 2007



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Compressor, ZMC, EGM99AZ, 1/4 Hp, 1PH, R134a, LBP, 220-240V 50Hz

written by Lilianne | 19 February 2022



Private Picture Copyright : WWW.MBSM.PRO

General Data

R134a	:Refrigerant
LBP	:Application
30°C to -10°C-	:Evaporating Temperature Range
220/240V/50 HZ	:Voltage/Frequency
Static	:Compressor Cooling
Capillary Tube	:Expansion Device
Multi - 96:120 pcs	:Packaging Quantity
CE-VDE-GOST	:Approvals



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Mechanical Data

cm3 350	:Oil Charge
ester	:Oil Type Configuration
cSt 19	:Oil Type Viscosity
kg 10.25	:Weight

Electrical Data

*RSIR / RSCR	:Motor Type
187-264V	:Voltage working range at 50 Hz
130°C	:Maximum Motor Temperature
A 10.19 / 14.49	:Locked Rotor Current
25.08Ω at 25°C	:Start Winding Resistance
Ω at 25°C 7.33	:Run Winding Resistance
ph 1	:Phase



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External Characteristics

(mm)	Internal Diameter
6.5	Suction Connector
4.9	Discharge Connector
6.5	Process Connector
Copper	Material

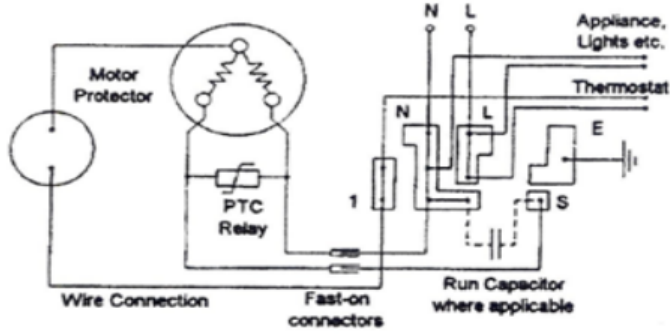


Electrical Components

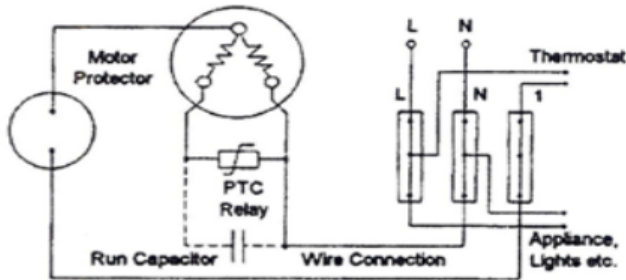
PTC 14Ω	:Starting Device
T0137/xx	:Motor Protection

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Circuit Diagram for Mod 90 Terminal Board



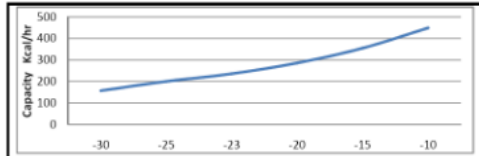
Circuit Diagram for U.H. Terminal Board



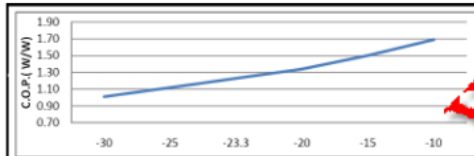
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PERFORMANCE CURVE DATA :

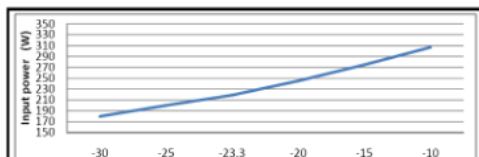
EGM99AZ



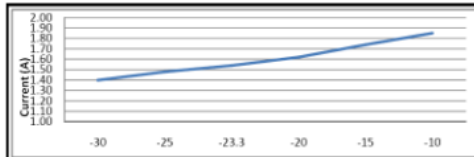
Capacity - Kcal/hr	157	200	236	286	355	449
Evap. Temp. (°C)	-30	-25	-23.3	-20	-15	-10



C.O.P. W/W	1.01	1.12	1.23	1.34	1.50	1.69
Evap. Temp. (°C)	-30	-25	-23.3	-20	-15	-10



Input power (W)	180	200	219	245	275	307
Evap. Temp. (°C)	-30	-25	-23.3	-20	-15	-10

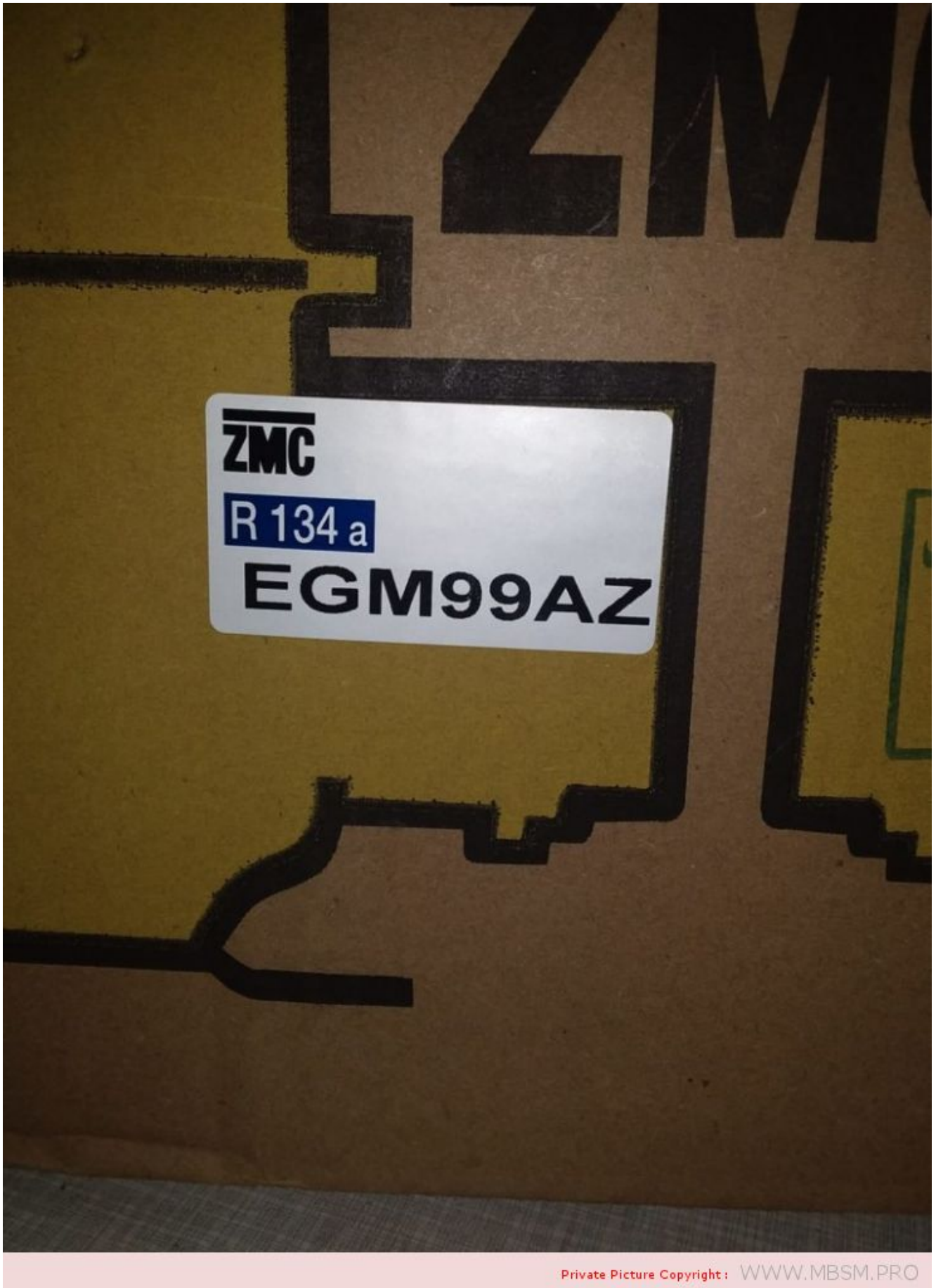


Current (A)	1.40	1.48	1.54	1.62	1.74	1.85
Evap. Temp. (°C)	-30	-25	-23.3	-20	-15	-10

Test Condition: Ashrae, Static, Return Gas 32°C Subcooling OK, Evaporating: 23.3°C, Condensing: 55°C, Ambient: 32°C

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COMPRESSEURS, 1/6, RSIR/RSCR, 124W, CUBIGEL / ACC, TUBED, R600A, 1PH, HPKD190A, COMPRESSOR – HPKD190A, R600A, Compresseur Zel

written by Lilianne | 19 February 2022



R600a

型号	电机	转速范围	排气量	电机类型	制冷量	输入功率	性能系数	高度	重量	认证
Model	Motor	Speed Range	Displ.	Motor Type	Cooling Capacity	Input Power	COP	Height	Net Weight	Certification
		rpm	cm ³		w	w	w/w	mm	kg	
220-240V/50Hz										
T系列变频 T Series VSC										
HKD66FSK	Al	1400-4000	6.6	PMSM	45-150	26-85	Up to 1.90	163	7.1	
HKD75FSK	Al	1400-4000	7.5	PMSM	52-170	29-96	Up to 1.90	163	7.1	
HKD86FSK	Al	1400-4000	8.6	PMSM	60-190	35-105	Up to 1.90	163	7.1	
HKD93FSK	Al	1400-4000	9.3	PMSM	70-210	40-125	Up to 1.90	163	7.1	
HKD10FSK	Al	1400-4000	10.5	PMSM	83-235	49-132	Up to 1.90	163	7.1	CCC
HKD12FSK	Al	1400-4000	11.5	PMSM	95-270	51-154	Up to 1.90	163	7.1	CCC
HKD66FSK I	Cu	1400-4000	6.6	PMSM	45-150	25-82	Up to 1.95	163	8.0	
HKD75FSK I	Cu	1400-4000	7.5	PMSM	52-170	28-93	Up to 1.95	163	8.0	
HKD86FSK I	Cu	1400-4000	8.6	PMSM	60-190	32-102	Up to 1.95	163	8.0	
HKD93FSK I	Cu	1400-4000	9.3	PMSM	70-210	38-115	Up to 1.95	163	8.0	
HKD10FSK I	Cu	1400-4000	10.5	PMSM	83-235	44-123	Up to 1.95	163	8.0	CCC
HKD12FSK I	Cu	1400-4000	11.5	PMSM	95-270	50-146	Up to 1.95	163	8.0	CCC
Z系列变频 Z Series VSC										
HXZ150FSM	Al	1200-4200	6.5	PMSM	42-150	23-80	Up to 1.90	145	6.9	-
HXZ170FSM	Al	1200-4200	7.0	PMSM	50-170	26-92	Up to 1.90	145	6.9	-
HXZ200FSM	Al	1200-4200	8.6	PMSM	56-200	30-103	Up to 1.90	145	6.9	-
HXZ220FSM	Al	1200-4200	9.2	PMSM	68-220	36-120	Up to 1.90	145	6.9	-
HXZ240FSM	Al	1200-4200	9.5	PMSM	75-240	39-125	Up to 1.90	145	6.9	-
HDZ150FSM	Al	1200-4200	6.5	PMSM	42-150	25-88	Up to 1.80	145	6.3	-
HDZ170FSM	Al	1200-4200	7.0	PMSM	50-170	27-98	Up to 1.80	145	6.3	-
HDZ200FSM	Al	1200-4200	8.6	PMSM	56-200	30-110	Up to 1.80	145	6.3	-
HDZ220FSM	Al	1200-4200	9.2	PMSM	68-220	40-132	Up to 1.80	145	6.3	-
HDZ240FSM	Al	1200-4200	9.5	PMSM	75-240	43-136	Up to 1.80	145	6.3	-

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HPKD190A

**Compressors ZMC, EGL70AT,
1/5Hp, 1Ph, GL70AT, R-134a,
standard Efficiency, 220-240V
50Hz, Cubigel Compressor,
Cubigel, RSIR, LBP – LST – S,
no Starting capacitor**

written by Lilianne | 19 February 2022



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G L Y 60 R A a

Indicates refrigerant.
G = R134a **N** = R290
M = R404A/R507 **H** = R600a

Indicates compressor range (overall design).
L = 4.5 - 10.7cm³ **X** = 16.0 - 23.0cm³
U = 4.5 - 8.9cm³ **P** = 12.0 - 18.0cm³ **S** = 18.0 - 38.0cm³

Indicates energy efficiency level. Not appearing in case of Standard efficiency.
Blank = Standard Efficiency **T** = Top Efficiency - Run Capacitor
C = Enhance Efficiency RSCR or CSR
M = Medium **S** = Super Efficiency - Run Capacitor
Y = High Efficiency - Run Capacitor Optional RSIR/RSCR or CSIR/CSR
Optional RSIR/RSCR or CSIR/CSR

Indicates approximate compressor displacement under the following rule:
U / L ranges 10 times the approx. displacement in cm³/rev (GL90TB -> approx 9 cm³/rev)
P / X / S ranges The approx. displacement in cm³/rev (MX21TG -> approx 21 cm³/rev)

Indicates the starting torque, application type and compressor cooling:
A = LBP - LST - S **L** = LBP - HST - Fan (Current Relay) **R** = HMBP - HST - FAN
C = LBP - LST - FAN **M** = HMBP - LST/HST - S/FAN (CSR versions with Current Relay)
D = LBP - HST - S **N** = LMBP - LST/HST - S/FAN **T** = HMBP - HST - FAN
F = LBP - HST -FAN **P** = HMBP - LST - FAN (CSR versions with Potential Relay)

Indicates the rated voltage:
A = 220-240V 50Hz **G** = 200-220V 50Hz / 220-230V 60Hz
B = 220-240V 50Hz (standard efficiency) **J** = 100V 50/60Hz
C = 100V 50/60Hz (standard efficiency) **N** = 200-220V 50Hz or 200-240V 50Hz /



Model: GL70AA

General data

Refrigerant:	R134a
Discharge element:	C
Cooling:	S
Maximum ambient temperature [°C]:	43

Compressor's data

Cylinder capacity [cm ³]:	6,7
Displacement [m ³ /h]:	1,1
Weight [kg]:	9,6
Oil charge [cm ³]:	345
Oil type:	ISO VG 19 ESTER

Engine's data

Engine type:	RSIR
Power [KM]:	1/5
Starting element:	LST
Power supply:	220V 50Hz
Voltage range:	187-264
Locked rotor current [A]:	10,9
Running winding resistance (25°C) [Ω]:	12,59
Starting winding resistance (25°C) [Ω]:	22,02

Electrical data

Relays:	3003
Shielding element:	MRA38028, T0508, AF18FU
Starting capacitor volume [μF]:	



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