

# Types of Electrical Motors, RSIR, CSIR, RSCR, CSR, PTC, NTC, LST, HST, MBP, HBP, LBP

Category: compressor, Files

written by [www.mbsm.pro](http://www.mbsm.pro) | 8 April 2021

## Types of Electrical Motors

### RSIR (Resistance Start-Induction Run)

LST motor. No capacitors. Auxiliary winding is disconnected after start up. Standard energy efficiency.

### CSIR (Capacitor Start-Induction Run)

HST motor. With starting capacitor. Auxiliary winding is disconnected after start up. Standard efficiency.

### RSCR (Resistance Start-Capacitor Run)

LST motor. With running capacitor. Auxiliary winding remains connected after start up. Used for high efficiency in small capacity compressors (particularly in household refrigeration)

### CSR (Capacitor Start and Run)

HST motor. Two capacitors (starting and running). Auxiliary winding remains connected after start up. Used for high efficiency in small compressors and for size reduced size motors in compressors with comparatively large displacements.



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HST motor. Two capacitors (starting and running). Auxiliary winding remains connected after start up. Used for high efficiency in small compressors and for size reduced size motors in compressors with comparatively large displacements.



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Type of starting device

Current relay – (electromechanical). RSIR/CSIR motors and CSR low/medium-power motors with NTC (the NTC is connected in series with the starting capacitor and the main purpose is to reduce the current peaks in the relay contacts)

Potential relay – (electromechanical). CSR high-power motors.

PTC – (Positive Temperature Coefficient), the resistance increases with the temperature. Device only with RSIR or RSCR motors in the (Small L, B), L and P ranges.

NTC – (Negative Temperature Coefficient), the resistance decreases with the temperature. Used in some CSR in order to reduce dimensions and components.

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## Type of torque

LST – Low Starting Torque – Systems with capillary tube or balanced pressures at start up.

HST – High Starting Torque – Systems with expansion valve or capillary tube, with unbalanced pressures at start up.

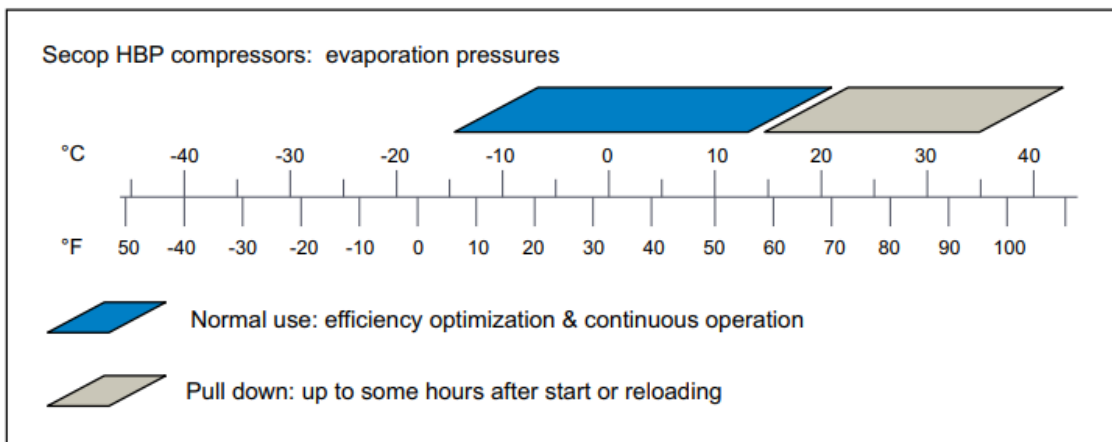
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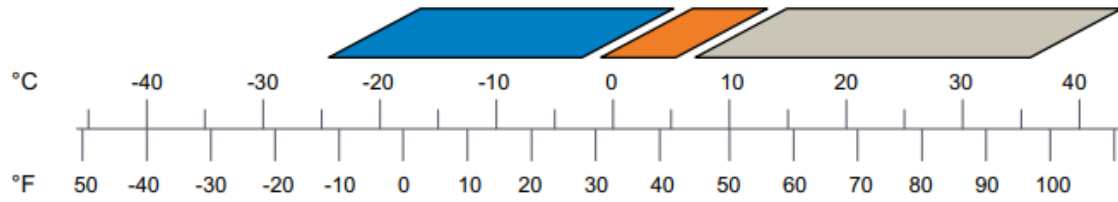





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Secop MBP compressors: evaporation pressures

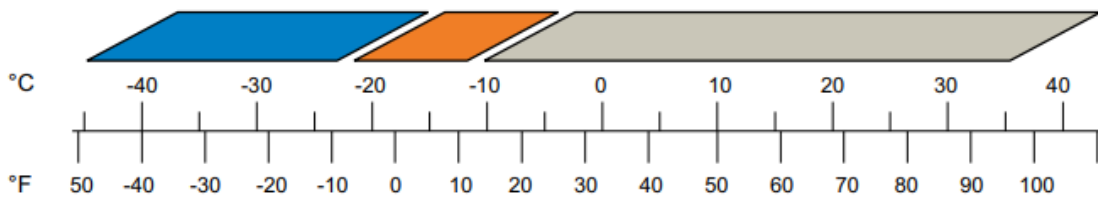





-  Normal use: efficiency optimization & continuous operation
-  High load: continuous operation
-  Pull down: up to some hours after start or reloading



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Secop LBP compressors: evaporation pressures



-  Normal use: efficiency optimization & continuous operation
-  High load: continuous operation
-  Pull down: short time operation (<60min.) after start or defrost



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# Catalogue, DANFOSS, All Compressor, PDF Catalogs, Documentation

Category: compressor,Files

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Catalogue, DANFOSS, All Compressor, PDF Catalogs, Documentation

[Mbsm\\_dot\\_pro\\_private\\_PDF\\_DANFOSS-FRCC.PK\\_.046.A1.02Télécharger](#)

[Mbsm\\_dot\\_pro\\_private\\_PDF\\_Danfoss\\_scroll\\_compressors\\_HXX\\_R410ATélécharger](#)

[Mbsm\\_dot\\_pro\\_private\\_PDF\\_DANFOSS-1Télécharger](#)

[Mbsm\\_dot\\_pro\\_private\\_PDF\\_DANFOSSTélécharger](#)



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Compressor, 1/3HP, FR10S, 103U2930,  
SECOP, 103U, 2930, Compressor  
Danfoss, R12, 220-240V, 50Hz

Category: compressor

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• DESCRIPTION

# DESCRIPTION



		R404a / R507a		
13	104L2523	Danfoss Compressor SC 10CL	1/3 HP	352 W
14	104L2623	Danfoss Compressor SC 12CL	3/8 HP	445 W
15	104L2853	Danfoss Compressor SC 15CL	1/2 HP	560 W
16	104L2123	Danfoss Compressor SC 18CL	5/8 HP	615 W
17	104L2322	Danfoss Compressor SC 21CL	7/8 HP	702 W

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		R134a		
9	104G8240	Danfoss compressor SC 12G	3/8 HP	298 W
10	104G8520	Danfoss compressor SC 15G	1/2 HP	356 W
11	104G8820	Danfoss compressor SC 18G	5/8 HP	615 W
12	104G8140	Danfoss compressor SC 21G	7/8 HP	702 W

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		R12a		
5	103G2630	Danfoss compressor FR 6S	1/6 HP	119 W
6	103U2730	Danfoss compressor FR 7.5S	1/5 HP	138 W
7	103U2830	Danfoss compressor FR 8.5S	1/4 HP	164 W
8	103U2930	Danfoss compressor FR 10S	1/3 HP	194 W

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		R134a		
1	103G6660	Danfoss Compressor FR 6G	1/6 HP	119 W
2	103G6680	Danfoss compressor FR 7.5G	1/5 HP	138 W
3	103G6780	Danfoss compressor FR 8.5G	1/4 HP	164 W
4	103G6880	Danfoss compressor FR 10G	1/3 HP	194 W

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Sr Material Material Description Capacity Cons. Watts -25

**R134a**

1	103G6660	Danfoss	Compressor	FR 6G	1/6 HP	119 W
2	103G6680	Danfoss	compressor	FR 7.5G	1/5 HP	138 W
3	103G6780	Danfoss	compressor	FR 8.5G	1/4 HP	164 W
4	103G6880	Danfoss	compressor	FR 10G	1/3 HP	194 W

**R12a**

5	103G2630	Danfoss	compressor	FR 6S	1/6 HP	119 W
6	103U2730	Danfoss	compressor	FR 7.5S	1/5 HP	138 W
7	103U2830	Danfoss	compressor	FR 8.5S	1/4 HP	164 W
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10	104G8520	Danfoss	compressor	SC 15G	1/2 HP	356 W
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**R404a / R507a**

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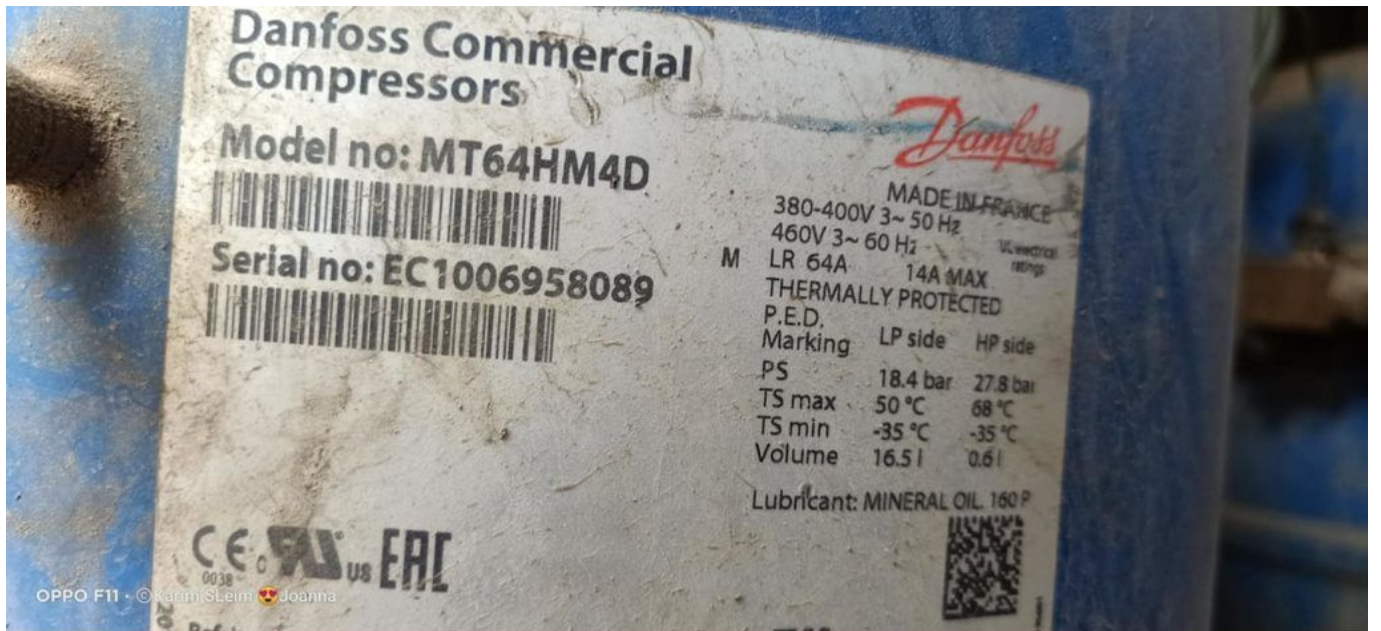
## Danfoss, Compressor, 5 Hp, R22, Démontage, ouverture, DESTRUCTION

Category: compressor

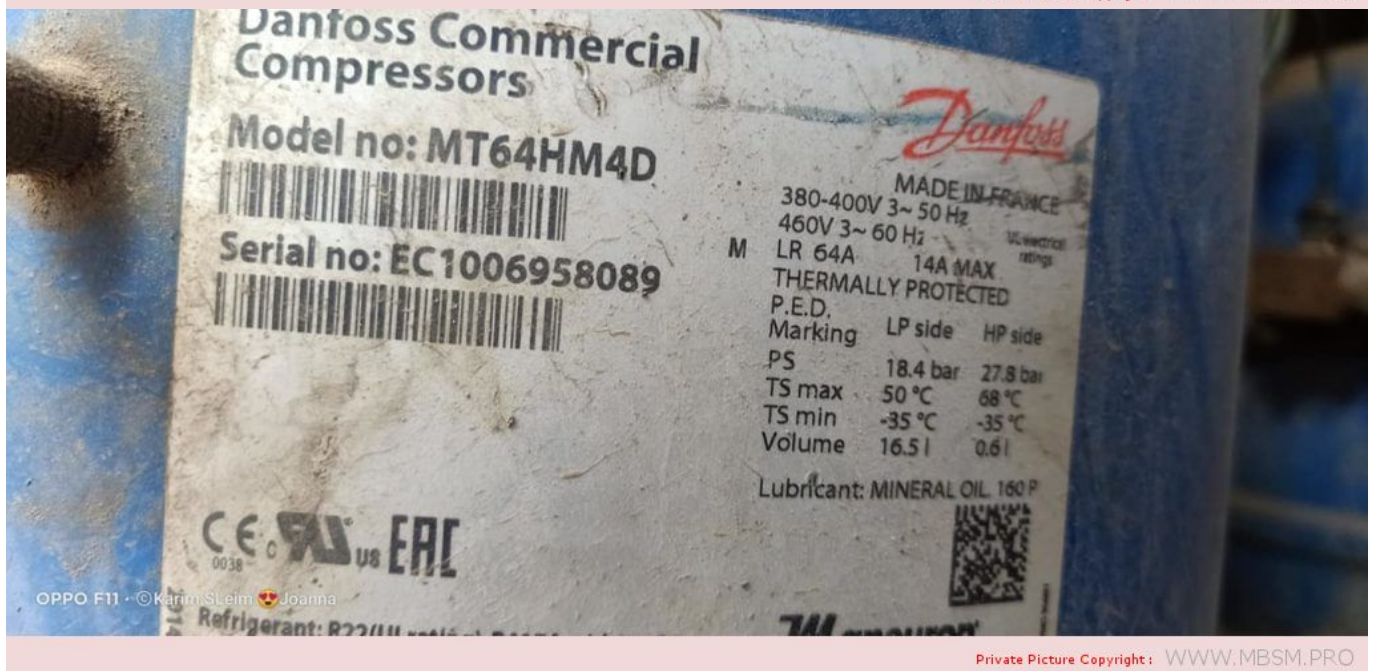
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Product : Compressor  
 产地: 法国制造  
 Plant : Made in France  
 客户: 丹佛斯自动控制管理(上海)有限公司  
 Customer service: Danfoss Automatic Controls Management (Shanghai) Co.Ltd  
 地址电话: 上海市宜山路900号科技大楼C楼20层200233 / (021)61513000  
 Address/Tel: 20th Floor Block C, Hi-Tech Building  
 900 Yi Shan Road Shanghai 200233 / (021)61513000  
 警告: 只有具备一定经验和安全程序  
 培训的授权人员才可以进行安装和维修。  
 Warning: The installation and maintenance  
 should be performed by the authorized  
 person only



**Danfoss Commercial Compressors**



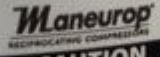
型号: MT64HM4DVE  
  
 序列号: EC1006983516  


产地法国  
 380-400V 3~ 50 Hz  
 460V 3~ 60 Hz  
 额定电流: 6A 最大工作电流: 14A  
 过热保护  
 低压倒  
 最高额定压力 18.4 bar  
 最高额定温度 50 °C  
 最低额定温度 -35 °C

润滑油: MINERAL OIL 160 P



R134a 制冷剂: R22 或 R417A 仅和 160PZ



**WARNING**

Installation and servicing shall be performed by trained personnel only. Failure to observe these safety warnings could result in personal injury or death.  
 1. Before working on the compressor, turn off power before removing the charge of capacitors.  
 2. Never remove cover in place and securely fastened whenever power is applied to the compressor. Use this equipment on a grounded system only.  
 3. The system contains refrigerant and oil under pressure. Release pressure from both the high and low side before servicing under safety conditions.  
 4. Do not touch the hot surface of the compressor.



**CAUTION**

Use only manufacturer's approved refrigerants, lubricants, and electrical components. Unauthorized refrigerants / lubricant / electrical component could cause fire, explosion, electrical shorting.  
 For details refer to multi language instruction and technical documents available on Danfoss website at [www.danfoss.com](http://www.danfoss.com)



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# COMPRESSEUR, DANFOSS, SECOP, NL7.3MF, 105G6772 195B0370, 105G, 6773, R134a, 1/5 Hp, cylindrée 7.27 cc, déplacement 7.27 cc, MBP

Category: compressor

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COMPRESSEUR, DANFOSS, SECOP, NL7.3MF, 105G6772 195B0370, 105G, 6773, R134a, 1/5 Hp, cylindrée 7.27 cc, déplacement 7.27 cc, MBP

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# COMPRESSEUR, EMBRACO, ASPERA, NEK6213GK, HMBP, 1/2+ hp, 614 W

Category: compressor

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Spécifications techniques			
Réfrigérant	R-404A - R-507A	Technologie de compresseur	Hermétique à piston
Application	Moyenne pression - Haute pression	Plage d'application	-20°C à +10°C
Type de tension	Monophasé	Tension	240 / 1 / 50
Cylindrée	12.1cm <sup>3</sup>	Puissance frigorifique @ -10°C	918W
Intensité maximale	6.01A	Type moteur	CSIR
Détente	Capillaire / Détendeur	Diamètre aspiration ODF	5/16"
Diamètre refoulement ODF	1/4"	Entraxes de fixation	170 x 70mm
Hauteur	206mm	Charge d'huile	0.35l



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- Puissance frigorifique à -10°C 1305 W
- Puissance électrique à -10 °C 614 W
- Puissance en cheval 1/2+ CV
- Alimentation 220-240 V 50 Hz
- Gaz R404a/R507 HMBP
- Moyenne et haute pression
- Complet avec starter, condensateur, boîtier et système de fixation

#### Codes fabricants

- ALPENINOX (anciennement NE9213GK)
- ASCASO-VF.792 (anciennement NE9213GK)
- ASPERA-NE9213GK (anciennement NE9213GK)
- ELECTROLUX-85551 (anciennement NE9213GK)
- EMBRACO-NE9213GK (anciennement NE9213GK)
- EUNASA-21075 (anciennement NE9213GK)
- EURFRIGOR-RB000447 (anciennement NE9213GK)
- ITV-302035 (anciennement NE9213GK)
- WHIRLP00L-485409918033 (anciennement NE9213GK)
- ZANUSSI-85551 (anciennement NE9213GK)
- ALPENINOX-91161
- ANGELO PO-3138720
- ASPERA-NEK6213GK
- ASPERA-NEK6213GK-CSIR
- ELECTROLUX-91161
- EMBRACO-NEK6213GK
- EMBRACO-NEK6213GK-CSIR
- EMMEPI-8C1300
- FAST RICAMBI-605.125
- GEV-605.125
- MIGEL-1RF173
- SAGI-3138720
- UGOLINI-22807-13010
- VND-605.125
- ZANUSSI-91161

#### Compressor ASPERA NEK6213GK | NEK 6213 GK

Refrigerant

Working range[stC] MBP

R404A/R507

-20 do +10

Nominal capacity [W] (evaporating temperature +7,2C, Condensing temperature +54,4C) 1761  
 Power supply 220-240V 50Hz  
 Engine type CSIR  
 Displacement [cm<sup>3</sup>] 12,11  
 Weight [kg] 11,6  
 Evaporating temperature +55 C

Evaporating Temperature	Cooling Capacity +/-5%			Power Consumption +/-5%	Current Consumption +/-5%	Gas Flow Rate +/-5%	Efficiency +/-7%	
	(kcal/h)	(W)	(Btu/h)	(W)	(A)	(kg/h)	(kcal/Wh)	(W/W)
-20	514	598	2.040	569	3,87	16,07	0,90	1,05
-15	643	747	2.551	642	4,13	20,19	1,00	1,16
-10	793	922	3.148	717	4,41	25,09	1,11	1,29
-5	966	1.124	3.835	792	4,70	30,85	1,22	1,42
0	1.163	1.352	4.615	868	5,02	37,57	1,34	1,56
5	1.384	1.610	5.493	946	5,36	45,32	1,46	1,70
10	1.631	1.896	6.472	1.025	5,72	54,18	1,59	1,85

Substitutes for this compressor are: Electrolux/Cubigel MP12TB , Danfoss/Secop SC10DL , L'Unite Hermetique/Tecumseh CAE9470Z

R404A

Refrigerant: ,

R507

COMPRESSEUR EMBRACO NEK6213GK

220/240V 50Hz

puissance 1/2 Hp, le déplacement 12,12 cc

gaz réfrigérant R404a/R507 HMBP

**LES CODES DE FABRICANT**

091161 ALPENINOX

3138720 ANGELO PO

NEK6213GK ASPERA

NEK6213GK-CSIR ASPERA

091161 ELECTROLUX PROFESSIONNEL

NEK6213GK EMBRACO

NEK6213GK-CSIR EMBRACO

8C1300 EMMEPI

1RF173 MIGEL

3138720 SAGI

22807-13010 UGOLINI

091161 ZANUSSI

Alimentation

220/240 V-50 Hz-1 Ph

Chevaux

1/2 hp

Déplacement

12,11 cm<sup>3</sup>

Application

MHBP

Capacité frigorifique en conditions ASHRAE, R404A/R507

1,76 kW

Capacité frigorifique en conditions EN12900 MT, R404A/R507	0,97 kW
Réfrigérant	R404A, R452A, R507A
Aspiration	3/8"
Refoulement	1/4"
Poids	11,60 kg
Hauteur maximale	206 mm
LRA	19,30 A
Huile de recharge	350 cm <sup>3</sup>
Type d'huile	P0E 22 ester
Autres remarques	Accessoires de démarrage inclus
Technologie	Vitesse fixe
Type de refroidissement moteur	Ventilateur
Type moteur	CSIR
Type protection moteur	External

**Spécifications techniques**

Réfrigérant	R-404A - R-507A	Technologie de compresseur	Hermétique à piston
Application	Moyenne pression - Haute pression	Plage d'application	-20°C à +10°C
Type de tension	Monophasé	Tension	240 / 1 / 50
Cylindrée	12.1cm <sup>3</sup>	Puissance frigorifique @ -10°C	918W
Intensité maximale	6.01A	Type moteur	CSIR
Détente	Capillaire / Détendeur	Diamètre aspiration ODF	5/16"
Diamètre refoulement ODF	1/4"	Entraxes de fixation	170 x 70mm
Hauteur	206mm	Charge d'huile	0.35l





OPPO A1k

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Mbsm\_dot\_pro\_private\_PDF\_nek6213GK-Catalogue\_Embraco-1Télécharger

Designation	NEK6213GK
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	959BA51

**A - APPLICATION / LIMIT WORKING CONDITIONS**

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	220-240 / 50	[ V / Hz ]	
4 Application type	Medium Back Pressure (Commercial Compressors R404A)		
4.1 Evaporating temperature range	-20°C to 0°C	(-4°F to 32°F)	
5 Motor type	CSIR		
6 Starting torque	HST - High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	25.7	[kgf/cm <sup>2</sup> ] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm <sup>2</sup> ] (408 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

**B - MECHANICAL DATA**

1 Commercial designation	1/2+	[hp]
2 Displacement	12.11	[cm <sup>3</sup> ] (0.739 cu.in)
2.1 Bore	27.775	
2.2 Stroke	10.000	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight(with oil charge)	11.6	[kg] (25.57 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

**C - ELECTRICAL DATA**

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device		
3 Start capacitor	53-64(330)	[µf(VAC minimum)]
4 Run capacitor	-	[µf(VAC minimum)]
5 Motor protection (external)	T0743/G6	
6 Start winding resistance	20.88	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.93	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMQ	

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Compressor ,DANFOSS , 2123  
104L,coolant R404a/R507,SC18CL  
,220-240V 50Hz, LBP/MBP  
(csr),hermetic ,13,7kg ,5/8HP  
(Big),781W

Category: Tester ok

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Compressor ,DANFOSS , 2123 104L,coolant R404a/R507,SC18CL 220-240V 50Hz, LBP/MBP (csr),hermetic ,13,7kg ,5/8HP (Big),781W