# Mbsm.pro , تأمين الأجهزة ,Lockout Tagout, نظام ,المعدات الكهربائية السلامة المهنية

Category: Arabe,Développement,Technologie
written by www.mbsm.pro | 23 April 2019

PictureS Mbsm Dot Pro : www.mbsm.pro

غلق بمشبك قابل للطي ، مما يسمح لستة أقفال لقفل جهاز واحد.
أو **القفل والعلامة** هو إجراء أمان يستخدم في إعدادات الصناعة والبحث للتأكد من أن الآلات الخطرة مغلقة بشكل صحيح ولا يمكن تشغيلها مرة أخرى قبل الانتهاء من أعمال الصيانة أو الإصلاح. يتطلب الأمر عزل " مصادر الطاقة الخطرة وجعلها غير صالحة للعمل" قبل بدء العمل في المعدات المعنية. يتم بعد ذلك قفل مصادر الطاقة المعزولة ووضع علامة على القفل تحدد العامل الذي وضعه. عندها يمسك العامل بمفتاح القفل ، مما يضمن أنه فقط هو أو هي قادر على إزالة القفل وبدء تشغيل الجهاز. هذا يمنع بدء التشغيل العرضي لجهاز ما عندما يكون في حالة خطرة أو عندما يكون العامل على اتصال مباشر به.[1]
في مختلف الصناعات كوسيلة آمنة للعمل على المعدات الخطرة Lockout-tagout يستخدم ويفوضه القانون في بعض البلدان.

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# mbsm.pro , Compresseur Aspera , Embraco ,NEK2168GK , R404a/R507 , LBP ,3/4 HP,nominal output: 707 W

Category: Technologie,Tester ok
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EMBRACO is a company specialized in cooling solutions and
world leader in the hermetic compressor market. Our mission:
provide innovative solutions for a better quality of life, always
attentive to technological excellence and sustainability.
Technological leadership, operational excellence and sustainability are some of the pillars
which ensure the EMBRACO differential over other companies in the world market. Its
products are now considered the favorite leading home appliance manufacturers by major
automakers and are spotlighted by manufacturers of commercial refrigeration equipment.
With global operations and production capacity exceeding 34 million units a year, the
company offers solutions that are differentiated for their innovation and low energy
consumption. Its 11.500 employees work in factories and offices located in Brazil
(headquarters), China, Italy, Slovakia, Mexico, the United States and Russia.
Energy efficiency is constantly sought in the processes, products and relationships with
the communities where it operates. Our company is the absolute leader in this segment,
being able to offer products that meet the most restrictive international standards
regarding energy consumption.

As a worldwide leader, EMBRACO tries to anticipate market changes, and in doing so, our company is in a state of permanent transformation. We continuously assess our processes in order to maintain our leadership within the industry and promote growth, without forgetting the pillars of our organization.

**Compressor ASPERA NEK2168GK | NEK 2168 GK**

| | |
|---|---|
| Refigerant | R404/R507 |
| Working range[stC] **LBP** | -40 to -10 |
| Nominal capacity [W] (evaporating temperature -23,3C, Condensing temperatur +54,4C) | 688 |
| Power supply | 220-240V 50Hz |
| Engine type | CSIR |
| Displacement [cm³] | 14,28 |
| 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%** | | | |
|---|---|---|---|---|---|---|---|---|
| °C | (kcal/h) | (W) | (Btu/h) | (W) | (A) | (kg/h) | (kcal/Wh) | (W/W) |
| -40 | 226 | 263 | 897 | 370 | 3,46 | 6,01 | 0,61 | 0,71 |
| -35 | 309 | 359 | 1.224 | 435 | 3,57 | 8,22 | 0,71 | 0,82 |
| -30 | 413 | 481 | 1.640 | 506 | 3,73 | 11,06 | 0,82 | 0,95 |
| -25 | 541 | 629 | 2.146 | 584 | 3,95 | 14,52 | 0,93 | 1,08 |
| -20 | 691 | 803 | 2.740 | 668 | 4,21 | 18,64 | 1,03 | 1,20 |
| -15 | 863 | 1.004 | 3.424 | 759 | 4,53 | 23,43 | 1,14 | 1,32 |
| -10 | 1.058 | 1.230 | 4.197 | 856 | 4,90 | 28,92 | 1,24 | 1,44 |

Refrigerant: R404A, R507

| | R404A / R507 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | LBP | VOLT. FREQ. | COOL. CAP. [W] | DISPL. [cc] | MBP | VOLT. FREQ. | COOL. CAP. [W] | DISPL. [cc] |
| NE NEK | NEK2117GK | A | 125 | 4,51 | NEK6144GK | A | 550 | 4,51 |
| | NEK2121GK | A | 151 | 5,44 | NEK6165GK | A | 743 | 6,20 |
| | NEK2125GK | A | 182 | 6,20 | NEK6181GK | A | 841 | 7,28 |
| | NEK2130GK | A | 213 | 7,37 | NEK6210GK | A / N | 1.005 | 8,77 |
| | NEK2134GK | A / N | 248 | 8,77 | NEK6213GK | A | 1.337 | 12,11 |
| | NEK2150GK | A | 329 | 12,11 | NEK6217GK | A / N | 1.164 | 14,28 |
| | NEK2168GK | A | 378 | 14,28 | | | | |
| | NEK2172GK | C | 819 | 16,80 | | | | |

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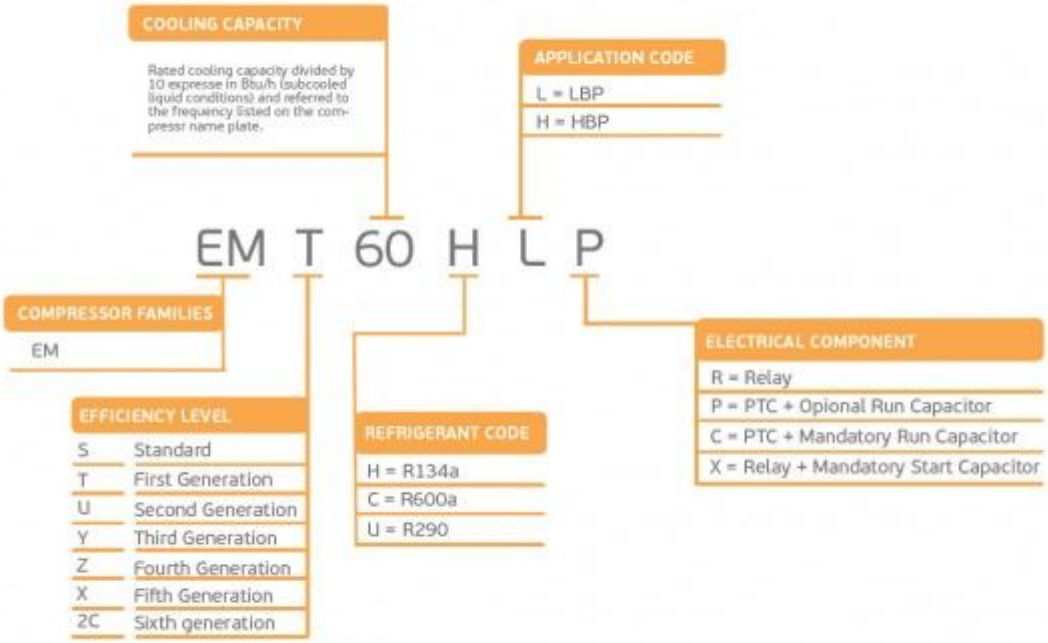


PictureS Mbsm Dot Pro : www.mbsm.pro

# embraco NEK

# R404A LBP

PictureS Mbsm Dot Pro : www.mbsm.pro

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mbsm.pro , Compresseur Aspera , Embraco NEK2168GK , R404A , LBP ,3/4 HP
Compresseur hermetique de Aspera – Embraco NEK2168GK – R404A
3/4 HP
220-240V 50 Hz
Cylindrée =  14.3 CM3
APPLICATIONS = LBP
Moteur type: CSR

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# www.mbsm.pro , when capacitor explodes , Pictures

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A capacitor is a device used to store an electric charge, consisting of one or more pairs of conductors separated by an insulator.
Unexpectedly the electrolytic capacitors explodes with huge sound and sometime it smoke.
Get started , how to explode a capacitor ???
All capacitors have a maximum voltage and their destruction depends upon the internal construction. Explosions are understood only by delving into the internal construction of electrolytic capacitors – the primary culprit.
Most small value capacitors are simple sandwiches of conductor and insulator and when the voltage exceeds the dielectric strength of the insulation, they short out and burn, crack, pop, open, or smoke. Explosions are rare for these. Popping open is more likely. Their failure is self evident either visually or by failure to function in the circuit.
Most large value capacitors in order to be as small in physical size as possible, have to get the conductive plates of the capacitor as close together as possible and at the same time not so small that the voltage rating is impractical.
It is for this reason that the family of electrolytic capacitors was developed. The trick they use to get high capacity with small separations and reasonable voltage is that they use the “anodizing” of chemical electrolysis on one surface and a water based electrolyte for the other surface. Take one apart and see.
Notice that when a conductive metal is “anodized” by electrochemical process it turns into a dull film that is rather tough and is an insulator. This means that the actual conductive plate of the capacitor has this film entirely between itself and the other plate.
Then the other plate uses a trick too. There’s a water base solution soaked into a paper separator. Now if there was no water, the paper would be the dielectric of a normal capacitor separating the plates. But not here. Here the water has an alkali added to become a fair conductor. And as a liquid it soaks right into the surface structures of the capacitor. So it’s not the paper thickness at all – and not even the insulating surface on the other plate, but the inner recesses of the anodized surface that determine the dielectric distances.
So the operating voltage that a capacitor can tolerate depends upon how thick this anodized film is. And that is a function of it’s manufacture. Now there is a most useful characteristic that tells us we are nearing the max voltage, called leakage.
Here is a way you can check this out. Put in series, a test electrolytic capacitor (polarize it correctly), a variable power supply, a microammeter, and

a 1 meg resistor (to limit and protect the meter). From zero as you increase the voltage there will be no current initially, then as you approach the spec op voltage, there will start a small leakage current. Since you have a limiting resistor here, you can increase the voltage without damage. continuing to increase the voltage discovers an increasing leakage current. It is a matter of practice how much safety you apply between the rating and the actual voltage of the circuit.

You can now see how it is that an electrolytic capacitor fails, it is not a voltage breakdown of the dielectric material, but the increase of leakage current that is troublesome. A rising leakage means heat which will boil the water and make steam – that’s the explosion process.

This is explosion as occasional failure of the few. But there is a more spectacular explosion process – it’s explosion by mistake – namely being installed backward. In such a case, the anodizing chemistry is reversed and rather rapidly, the anodized film starts to reverse, and quickly thins out at a weak spot in the rather large effective film area of the capacitor. Then we have short circuit currents and steam generation rather quickly. This sort of explosion usually fills the space (the casing or the whole room if exposed) with little shreads of aluminum foil and alkali soaked paper.

This insightful solution is most successful to achieve capacitors with large values in small spaces, but has a lot of lesser characteristics as the price to pay.

The worst limit, is storage. Electrolytic capacitors store very poorly, and the voltage rating can reduce substantially as the internal chemistry deteriorates. Some equipment manufacturers recommend that capacitors stored for a few years have their inner anodizing conditions restored by simply putting them to the spec voltage for a day to restore full spec.

At the least, if you replace capacitors with old stock, and it didn’t explode when power was restored, be aware that it may not reach it’s spec capacity value for a few hours. A capacitor in use will always be maintained by the voltage in the circuit you use it in.

When electrolytics are used without the circuit supplying a maintenance voltage to keep the anodized film that all depends upon, such as in speaker cross over applications that have no sustaining DC, then the values of the capacitor will deteriorate at least at storage rates, and if AC currents are substantial, even faster.

mbsm-dot-pro-capacitor-explodes- Pictures-A.jpg (4 MB)

mbsm-dot-pro-capacitor-explodes- Pictures-A.jpg (1 MB)

mbsm-dot-pro-capacitor-explodes- Pictures-B.jpg (3 MB)

mbsm-dot-pro-capacitor-explodes- Pictures-B.jpg (1 MB)

mbsm-dot-pro-capacitor-explodes- Pictures-C.jpg (3 MB)

mbsm-dot-pro-capacitor-explodes- Pictures-C.jpg (1 MB)

mbsm-dot-pro-capacitor-explodes- Pictures-D.jpg (3 MB)

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mbsm-dot-pro-capacitor-explodes- Pictures-J.jpg (2 MB)

mbsm-dot-pro-capacitor-explodes- Pictures-J.jpg (739 KB)

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# Mbsm.pro , جدول بأنواع الزيوت المناسبة لوسائط وضواغط التبريد و اللذوجة المناسبة لكل نوع من الضواغط , table of the types of oils suitable for the appropriate refrigeration and liquefied media and compressors for each type of compressor

Category: Arabe,Solutions,Technologie,Tester ok
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جدول بأنواع الزيوت المناسبة لوسائط وضواغط التبريد حسب اللذوجة

| A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | وسيط التبريد | Ramçoo | درجة حرارة المبخر | | موديل الضاغط. ونوع الزيت بجانبه قيمة اللذوجة ISO VG | | | | | | |
| تسمية ASHRAE | الصيغة | البديل/تغير | من (°c) | إلى (°c) | Piston. | | بستوني | Scrwe. | | سكرو | طرد مركزي |
| R12 | CFC | | -40 | 40+ | MN 32 | | | MN 68 | PAO 400 | | MN 68 |
| R502 | CFC | | -50 | 20- | MN 32 | AB 32 | | MN 68 | AB 100 | | MN 68 |
| R22 | HCFC | | -25 | 10+ | MN 32 | AB 32 | PAO 68 | MN 68 | AB 100 | | MN 68 |
| R22 | HCFC | | -30 | 10+ | | AB 32 | PAO 68 | | AB 100 | | MN 68 |
| R22 | HCFC | | -40 | 10+ | | AB 32 | | | AB 100 | | MN 68 |
| R22 | HCFC | | -50 | 10+ | | AB 32 | | | AB 68 | | |
| R123 | HCFC | R11 | 0 | 20+ | | | | | | | |
| R124 | HCFC | R114 | 0 | 80+ | MN 68 | | | AB 100 | | | |
| R401a | HCFC | R12 | -20 | 10+ | MN 32 | AB 32 | | | | | |
| R402a | HCFC | R502 | -50 | 30- | AB 32 | | | | | | |
| R408a | HCFC | R502 | -50 | 30- | AB 32 | | | AB 100 | | | |
| R409a | HCFC | R12 | -20 | 10+ | MN 32 | AB 32 | | | | | |
| R290 | C3H8(propane) | | -30 | 20+ | MN 68 | | | PG 150 | | | PG 150 |
| R600/R600a | Butane /Iso But | | -30 | 20+ | MN 68 | | | PG 150 | | | PG 150 |
| R717 | NH3(ammonia) | | -30 | 10+ | MN 68 | AB 32 | PAO/AB 68 | MN 68 | PAO 68 | PAO/AB 68 | MN 68 |
| R717 | NH3(ammonia) | | -50 | 10+ | | AB 32 | PAO/AB 68 | | PAO 68 | PAO/AB 68 | MN 68 |
| R744 | CO2 | | -55 | 10- | | | | | | | |
| R23 | HFC | | -100 | 40- | POE 22 | | | | | | |
| R134a | HFC | R12 | -20 | 10+ | POE 22 | | | POE 220 | | | POE 68 |
| R134a | HFC | R12 | -30 | 10+ | POE 22 | | | POE100 | | | POE 68 |
| R404a | HFC | R502 | -40 | 30- | POE 22 | | | POE 220 | | | POE 68 |
| R404a | HFC | R502 | -50 | 30- | POE 22 | | | POE100 | | | POE 68 |
| R407C | HFC | R22 | 0 | 10+ | POE 68 | | | POE 220 | | | |
| R410a | HFC | | -45 | 10+ | POE 22 | | | POE100 | | | POE 68 |
| R410a | HFC | | -25 | 10+ | POE 32 | | | POE 220 | | | POE 68 |
| R410b | HFC | | -25 | 10+ | POE 22 | | | POE 220 | | | POE 68 |
| R417a | HFC | R22 | -15 | 15+ | POE 68 | | | POE 220 | | | POE 68 |
| R422a | HFC | R22 | -45 | 5- | POE 22 | | | POE100 | | | POE 68 |
| R422a | HFC | R22 | -25 | 5- | POE 32 | | | POE 220 | | | POE 68 |
| R422d | HFC | R22 | -45 | 10+ | POE 22 | | | POE100 | | | POE 68 |
| R422d | HFC | R22 | -25 | 10+ | POE 32 | | | POE 220 | | | POE 68 |
| R427a | HFC | R22 | -40 | 10+ | POE 22 | | | POE100 | | | POE 68 |
| R427a | HFC | R22 | -20 | 10+ | PAO 400 | | | POE 220 | | | POE 68 |
| R507/507a | HFC | | -40 | 0 | POE 22 | | | POE100 | | | POE 68 |

PictureS Mbsm Dot Pro : www.mbsm.pro

Table of oil types suitable for appropriate refrigeration and liquefied media and compressors for each type of compressor
PAO (Polyalphaolefi n) Polyamphalene oil
MN (Mineral Naphthenic) Oil
AB (Alkylbenzene) Petrol oil
POE (Polyol Ester) Polyethylene oil
PG (Polyglycol) Polyglycol

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# www.mbsm.pro, AEZ1360A, Kirby, Tecumseh, Compressors ,low back, pressure, models, 240v/50HT , 1PH ,

# 1/5Hp , Gaz 12A

Category: Solutions,Technologie,Tester ok
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Points forts : Compresseur aez1360a pour réfrigérateur fagor FAGOR MA-10CA562COMP-QZQAZ

# Resin Pack ,Brushless ,Dc motor , Gangdomg ,Welling Motor Manufacturing ,CO.,LTD. ,DC280v ,20w , 0.10a ECL ,8P 1300r/min

Category: Solutions,Technologie,Tester ok
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Resin Pack ,Brushless ,Dc motor , Gangdomg ,Welling Motor Manufacturing ,CO.,LTD. ,DC280v ,20w , 0.10a ECL ,8P 1300r/min

# www.mbsm.pro , ASD65 , R134A ,220V/50Hz ,1/5HP 173W ,Huaguang ,Refrigerator, Compressor ,LBP

Category: Solutions,Tester ok
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www.mbsm.pro , ASD65 , R134A ,220V/50Hz ,1/5HP 173W ,Huaguang ,Refrigerator, Compressor ,LBP

# www.mbsm.pro , Cold ,refrigeration ,compressor 1/4 hp, QD76HG ,HM Series , R134a ,HBP

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www.mbsm.pro , Cold ,refrigeration ,compressor 1/4 hp, QD76HG ,HM Series , R134a

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# www.mbsm.pro ,ZEL ,COMPRESSEUR ,R134a ,1/4 HP ,GVY75AA

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PictureS Mbsm Dot Pro : www.mbsm.pro

Compresseur frigorifique
Puissance en cheval 1/4 CV
Alimentation 220-240 V 50 Hz
Gaz R134a

# www.mbsm.pro, Té multicouche ,à sertissage ,en double ,reduit ,16 16 / 26 26 /20 20

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www.mbsm.pro, Te multicouche ,a sertissage ,en double ,reduit ,16 16 / 26 26 /20 20