

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

Category: Pictures,Technologie,Tester ok  
written by www.mbsm.pro | 11 April 2019



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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 shreds 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 \(4 MB\)](#)



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جدول بأ أنواع الزيوت ,  
الم مناسبة لوسائط وضواغط التبريد و  
اللزوجة 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  
written by www.mbsm.pro | 11 April 2019

جدول بأنواع الزيوت المناسبة لوسائط وضواغط التبريد حسب اللدوجة

A	B	C	D	E	F	G	H	I	J	K	L
وسيط التبريد		Ramçoo	درجة حرارة البخار		ISO VG الزيت بجانبه قيمة اللدوجة						
ASHRAE تسمية	الصفة	الخطا لفر	من (°C)	الى (°C)	Piston	بستوني	Scrws	سكرو	سكرو	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 (Polyalphaolefin) Polyamphalene oil

MN (Mineral Naphthenic) Oil

AB (Alkylbenzene) Petrol oil

POE (Polyol Ester) Polyethylene oil

PG (Polyglycol) Polyglycol

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

# 1/5Hp , Gaz 12A

Category: Solutions,Technologie,Tester ok  
written by [www.mbsm.pro](http://www.mbsm.pro) | 11 April 2019



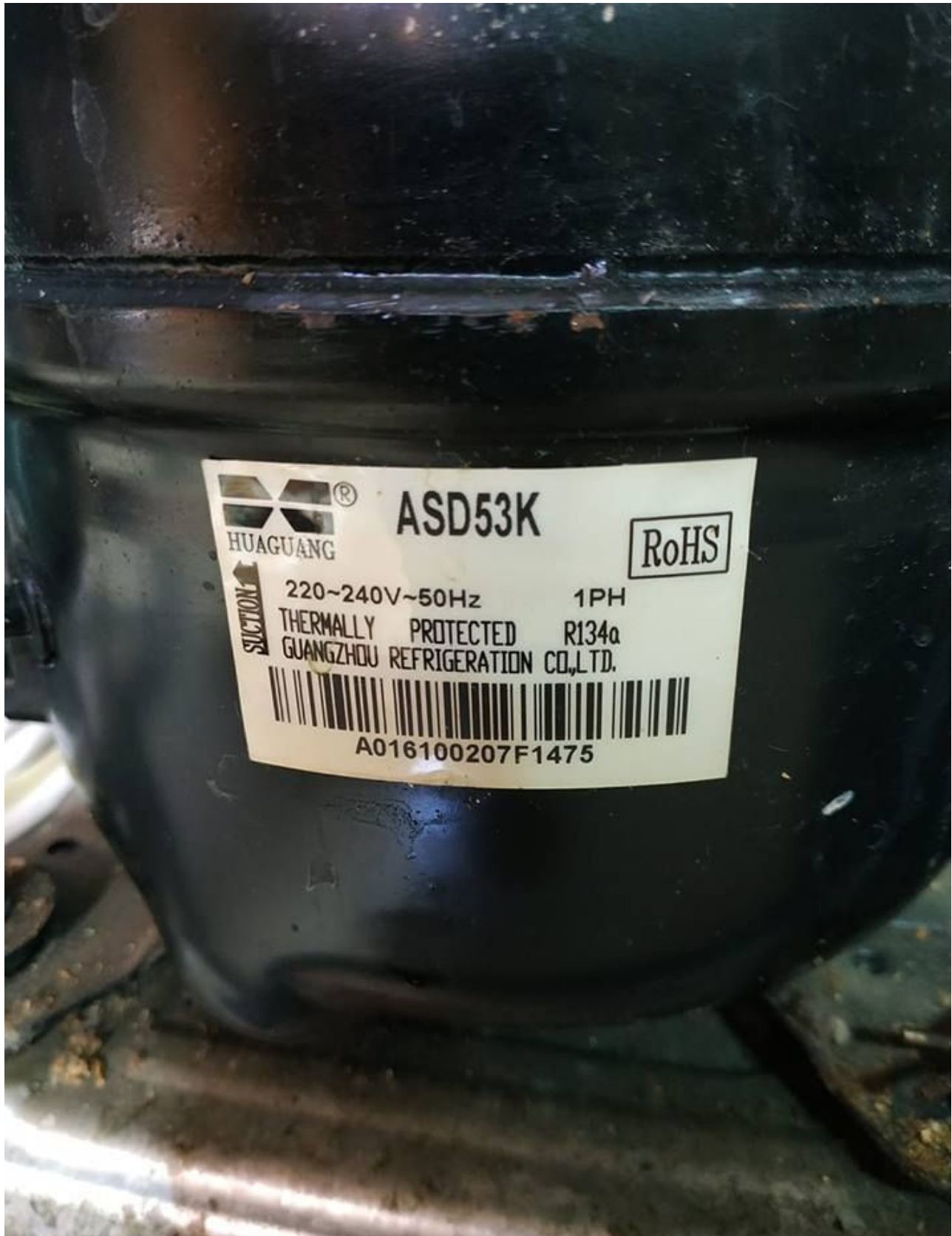
Picture5 Mbsm Dot Pro : [www.mbsm.pro](http://www.mbsm.pro)

Points forts : Compresseur aez1360a pour réfrigérateur fagor FAGOR  
MA-10CA562COMP-QZQAZ

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www.mbsm.pro , Original New, ASD53K,  
Original New 1/6HP, R134a, LBP,  
Wanbao, Refrigerator, compressor,  
China, R134A, 220V/50Hz, 1PH, 144W,  
Huaguang, Refrigerator Reciprocating

Category: Solutions,Technologie,Tester ok  
written by Jamila | 11 April 2019




**ASD53K**
RoHS  
 HUAGUANG  
 220~240V~50Hz      1PH  
 THERMALLY PROTECTED      R134a  
 SUCTION ↑      GUANGZHOU REFRIGERATION CO.,LTD.  
  
 A016100207F1475

Picture5 Mbsm Dot Pro : [www.mbsm.pro](http://www.mbsm.pro)

[www.mbsm.pro](http://www.mbsm.pro) , Original New, ASD53K, Original New 1/6HP, R134a, LBP, Wanbao, Refrigerator, compressor, China, R134A, 220V/50Hz, 1PH, 144W, Huaguang, Refrigerator Reciprocating

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

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Picture5 Mbsm Dot Pro : [www.mbsm.pro](http://www.mbsm.pro)

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

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## www.mbsm.pro , panne , compresseur, frigorifique , pas de refoulement et présence d'aspiration

Category: Solutions,Technologie,Tester ok  
written by mahdi miled | 11 April 2019



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Solution d'absence de refoulement et de changer le compresseur c'est une clapets  
casser

Comment tester les clapets d'un compresseur ?

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**[www.mbsm.pro](http://www.mbsm.pro) , Full Form of Short  
Answer , Electric , climatisation ,  
Terms**

Category: Solutions,Technologie

written by [www.mbsm.pro](http://www.mbsm.pro) | 11 April 2019

## FULL FORM OF SHORT ANSWER

<b>HVAC</b>	- heat ventilation air conditioner
<b>AHU</b>	- Air handling unit
<b>FCU</b>	- Fan coil unit
<b>CSU</b>	- Ceiling suspended unit
<b>PAC</b>	- Precession air condition
<b>BMS</b>	- Building management system
<b>BTU</b>	- British thermal unit
<b>PSI</b>	- Pound square inches
<b>TR</b>	- Tonnage of refrigerant
<b>CFM</b>	- Cubic feet per minute
<b>VFD</b>	- Variable frequency drive
<b>VCD</b>	- Volume control damper
<b>VAV</b>	- Variable adjustable valve
<b>VRF</b>	- Variable refrigerant flow
<b>RPM</b>	- Revolution per Munit
<b>VRV</b>	- Variable refrigerant valve
<b>UPS</b>	- Uninterrupted power supply
<b>KW</b>	- kilo watt
<b>KVA</b>	- Kilo volt amps
<b>AC</b>	- Alternative current
<b>DC</b>	- Direct current
<b>DOL</b>	- Direct on line
<b>DB</b>	- Distribution board
<b>ACB</b>	- Air circuit breaker
<b>PCB</b>	- Printed circuit board
<b>PLC</b>	- Programming logic control
<b>MCCB</b>	- Molded case circuit breaker
<b>MCB</b>	- Miniature circuit breaker
<b>ELCB</b>	- Earth leakage circuit breaker.
<b>STP</b>	- Sewage treatment plant
<b>CCTV</b>	- Closed circuit television

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[www.mbsm.pro](http://www.mbsm.pro) , Full Form of Short Answer , Electric , climatisation , Terms

[www.mbsm.pro](http://www.mbsm.pro) , TLES7FT.4 ,  
COMPRESSORE SECOP , TLES7FT.4 4707,  
R134a , LBP , 1/4 hp/60hz , 1/5 hp/50hz  
, 1ph , Danfoss , 4707 , compressors  
, medium temperature , Kiriazi 335l

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[www.mbsm.pro](http://www.mbsm.pro) , TLES7FT.4 , COMPRESSORE SECOP ,TLES7FT.4 , R134a , LBP ,Danfoss compressors ,medium temperature, HMBP

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## [www.mbsm.pro](http://www.mbsm.pro) , Liste des codes secrets sur Android

Category: Non classé,Technologie  
written by mahdi miled | 11 April 2019



Add to contacts



\*#\*#4636#\*#\*



1 OO	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
*	0 +	#

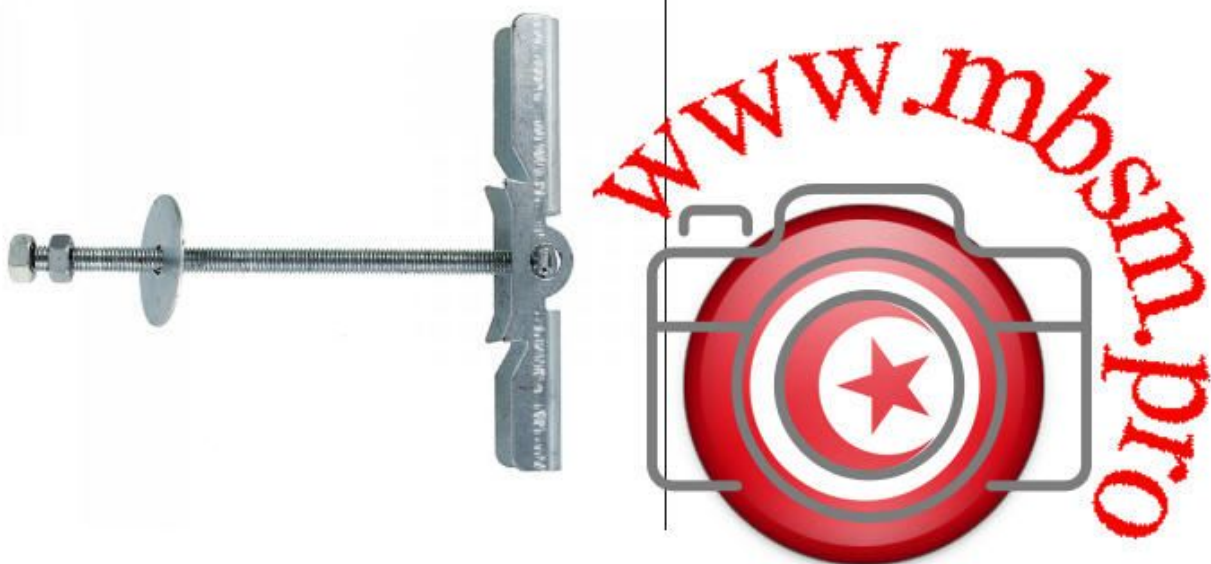


\*#06# – IMEI du téléphone  
\*#0\*# – Menu d'informations (ne fonctionne pas sur tous les téléphones)  
\*##4636## – Menu d'informations  
\*##34971539## – Menu d'informations sur l'appareil photo  
\*##1111## – Version software FTA  
\*#12580\*369# – Infos sur le logiciel et sur le hardware  
\*#7465625# – Statut de verrouillage de l'appareil  
\*##232338## – Montre l'adresse MAC de l'appareil

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## Mbsm.pro, cheville papillon pour plafond , ou La cheville ou l'ancrage sert à fixer un objet sur une surface

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written by [www.mbsm.pro](http://www.mbsm.pro) | 11 April 2019



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Les ancrages sont beaucoup utilisés en construction, mais on en utilise aussi régulièrement pour des choses simples comme faire la pose d'un portrait sur un mur.

L'ancrage est beaucoup utilisé pour visser dans un mur de gypse, car celui-ci n'est pas assez rigide pour maintenir un clou ou une vis fermement. Il faut donc utiliser un moyen afin pouvoir visser quelque chose solidement, malgré la fragilité du revêtement de mur.