



Date : ^r · April 2021

Technical report on explosion-proof air conditioner performance

EGS-cert, number 151,48 in accordance with Article 9 of the Council 152 Pilgrim St, Newcastle upon Tyne NE1 6SN, United Kingdom Directive 94/9/EC of 23 march 1994, certifies that this equipment or protective system has been * Correspondence: Info@egscert.uk; Tel.: +44 191 232 5371 Received: 23 April 2021; Accepted: 30 April 2021; Published: 21 June 2021

Report No: VIC20200318-GKU02-CE-N

Applicant : Irancooler Factory

Product: Explosion proof Air Conditioner

Normative References(Required to achieve compliance to this standard) :

Directive 94/9/EC of the European Parliament and the Council of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres

No longer in force, Date of end of validity: 20/04/2016; Repealed by 32014L0034. Latest consolidated version: 01/01/2013

Date of document: 23/03/1994

Date of effect: 09/05/1994; Entry into force Date pub. + 20 See 192E191-P2

Date of transposition: 01/09/1995; At the latest Adoption See Art 15

Date of transposition: 01/03/1996; Application See Art 15

Date of end of validity: 20/04/2016; Repealed by <u>32014L0034</u>

Informative References(Provided for Information) :

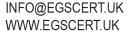
EN 60079-0: 2012+A11:2013 EN 60079-11:2012 This part of IEC 60079 specifies the general requirements for construction, testing and marking of electrical equipment and Ex Components intended for use in explosive atmospheres.

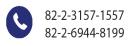
The standard atmospheric conditions (relating to the explosion characteristics of the atmosphere) under which it may be assumed that electrical equipment can be operated are: temperature -20 °C to +60 °C;

pressure 80 kPa (0,8 bar) to 110 kPa (1,1 bar); and













air with normal oxygen content, typically 21 % v/v.

This standard and other standards supplementing this standard specify additional test requirements for equipment operating outside the standard temperature range, but further additional consideration and additional testing may be required for equipment operating outside the standard atmospheric pressure range and standard oxygen content, particularly with respect to types of protection that depend on quenching of a flame such as ' flameproof enclosure "d"' (IEC 60079-1) or limitation of energy, 'intrinsic safety "i" (IEC 60079-11).

NOTE 1

Although the standard atmospheric conditions above give a temperature range for the atmosphere of - 20 °C to +60 °C, the normal ambient temperature range for the equipment is -20 °C to +40 °C, unless otherwise specified and marked. See 5.1.1. It is considered that -20 °C to +40 °C is appropriate for most equipment and that to manufacture all equipment to be suitable for a standard atmosphere upper ambient temperature of +60 °C would place unnecessary design constraints.

NOTE 2

Requirements given in this standard result from an ignition hazard assessment made on electrical equipment. The ignition sources taken into account are those found associated with this type of equipment, such as hot surfaces, mechanically generated sparks, mechanical impacts resulting in thermite reactions, electrical arcing and static electric discharge in normal industrial environments.

NOTE 3

It is acknowledged that, with developments in technology, it may be possible to achieve the objectives of the IEC 60079 series of standards in respect of explosion prevention by methods that are not yet fully defined. Where a manufacturer wishes to take advantage of such developments, this International Standard, as well as other standards in the IEC 60079 series, may be applied in part. It is intended that the manufacturer prepare documentation that clearly defines how the IEC 60079 series of standards has been applied, together with a full explanation of the additional techniques employed. The designation "Ex s" has been reserved to indicate special protection. A standard for special protection "s", IEC 60079-33, is in preparation.

NOTE 4

Where an explosive gas atmosphere and a combustible dust atmosphere are, or may be, present at the same time, the simultaneous presence of both should be considered and may require additional protective measures.

This standard does not specify requirements for safety, other than those directly related to the explosion risk. Ignition sources like adiabatic compression, shock waves, exothermic chemical reaction, self ignition of dust, naked flames and hot gases/liquids, are not addressed by this standard.

NOTE 5

Such equipment should be subjected to a hazard analysis that identifies and lists all of the potential sources of ignition by the electrical equipment and the measures to be applied to prevent them becoming effective.

This standard is supplemented or modified by the following standards concerning specific types of protection:

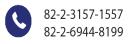
IEC 60079-1: Gas - Flameproof enclosures "d";

IEC 60079-2: Gas - Pressurized enclosures "p";













IEC 60079-5: Gas - Powder filling "q";

IEC 60079-6: Gas - Oil immersion "o";

IEC 60079-7: Gas - Increased safety "e";

IEC 60079-11: Gas - Intrinsic safety "i";

IEC 60079-15: Gas – Type of protection "n";

IEC 60079-18: Gas and dust - Encapsulation "m";

IEC 60079-31: Dust - Protection by enclosure "t"

IEC 61241-4: Dust - Pressurization "pD".

NOTE 6

Additional information on types of protection for non-electrical equipment can be found in ISO/IEC 80079-36 (to be published).

This standard is supplemented or modified by the following equipment standards:

IEC 60079-13: Explosive atmospheres - Part 13: Equipment protection by pressurized room"p"

IEC 60079-25: Explosive atmospheres - Part 25: Intrinsically safe electrical systems

IEC 60079-26: Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

IEC 60079-28: Explosive atmospheres – Part 28: Protection of equipment and transmission systems using optical radiation

IEC 62013-1: Caplights for use in mines susceptible to firedamp – Part 1: General requirements – Construction and testing in relation to the risk of explosion

IEC 60079-30-1: Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements.

This standard with the additional standards mentioned above, are not applicable to the construction of

electromedical apparatus,

shot-firing exploders,

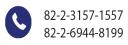
test devices for exploders, and

shot-firing circuits









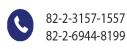




Technical report			
EC/94/9-2013			
Explosion proof Air Conditioner			
Report Number: VIC20200318-GKU02-CE-N			
Tested by (Name signature) Peter Chen			
Apporoved (signature): David Zhang			
Date of issue: 2021-01-71			
Total namber of page			
Number of Testing Laboratory			
Preparing the Report VIC TESTING AND CERTIFICATION LTD			
Address CHASE BUSINESS CENTER (CHD) 39-41 CHASE SIDE			
LONDON, N14, 5BP, U.K,			
Applicant's name: Irancooler Factory			
Addres Deadlock of Shahid Maksusi 3, Babataher St., Maqbel Sq.,			
Khorramshahr, Iran.			
Manufacturer's name Irancooler Factory			
Addres Deadlock of Shahid Maksusi 3, Babataher St., Maqbel Sq.,			
Khorramshahr, Iran.			
Test spécification :			
Standard EN 60079-0: 2012+A11:2013 EN 60079-11:2012			
Test procedure: Atex			
Non-standard test method: -			
Technical item description: Explosion proof Air Conditioner	—		
Trade mark			









Split Type Model		EX IRS12C	Н
Mounting		split type	
Ambient temperature		from -7C ta60C	
climatic ar	nbient	Т3	
Explosion protection C	LASSIFICATION	EX d II C G	&D T4
CLASS - PRO	TEZIONE	II C T4	
Degree of pr	otection	IP 65	
Capacity	Cooling	BTU	12000
Rated Input (W)	Cooling	3516	
Capacity	Heating	BTU	12300
Rated Input (W)	Heating	3604	
Rated voltage/Free	quency (V/Hz)	210-240-/1/50	or 60
Rated current (A)	Cooling	5	
IP Classification Fan	Motor (indoor)	65	
Motor insu	Ilation	Class "F"	
IP Classification Fan	Motor (outdoor)	65	
Motor insu	Ilation	Class "F"	
Air Circulatio		560	
		LAME-PROOF COMPRESSOR	
ENVIROMENT			
encapsulation technique also	protects electrical conne	ctors and controls in corrosive envir	ronments which are not
11 14	· · · · · · · · · · · · · · · · · · ·	· I with the dust of a second state for a	hazardous.
an its compress		o durable that they are suitable for i the housing is big enough to wire th	
	the diameter of		sure tested for integrity.
Compresso	r (type)	Explosion pro	
Brand explosion-pro		APS USA	
Type of pipe used in		Pipe groove	es
Fin Mate		Aluminum with anti-cor	
		Coated Hers	
All internal electrical connections are connected to each other by a resin flange.			
			_

Split Type Model	EX IRS18CH	
Mounting	split type	9
Ambient temperature	from -7C ta	60C
climatic ambient	Т3	
Explosion protection CLASSIFICATION	EX d	G T4
Cable glands	EExe certified cable glands to be used	
Degree of protection	IP65	
Cooling Capacity	BTU	18000
Heating Capacity	BTU	18500







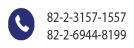


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Rated Input (W)	Cooling	5333	
Rated Input (W)	Heating	5421	
Rated voltage/Freq	uency (V/Hz)	Or 60210-24	0/1/50
Rated current (A)	Cooling	11	
Motor insulatio	<u>n (indoor)</u>	Class "F"	
IP Classification Fan N	<mark>/lotor (outdoor)</mark>	65	
Motor insulation	n <u>(outdoor)</u>	Class "F"	
Compressor	(type)	Explosion proof com	pressors
Brand		APS USA	
Fin Mate		Aluminum with anti-corr	
		connected to each other by a r	
Split Type		EX IRS24C	H
Mounti		split type	
Ambient tem		from -10C ta60C	
climatic an		Τ3	
Explosion protection CLASSIFICATION		EX d G	T4
Degree of protection		IP65	
Capacity	Cooling	BTU	24000
	Heating	BTU	25000
Rated Input (W)	Cooling	7033	
	Heating	7180	
Rated voltage/Free	[uency (V/Hz)	210-240/1/50 or 60	
IP Classification Fan	Motor (indoor)	65	
Motor insulation		Class "F"	
IP Classification Fan Motor (outdoor)		65	
Motor insulation		Class "F"	
Compressor (type)		EXPLOSION PI	ROOF
Brand		APS	
Fin Material		Aluminum with anti-cor	
All internal electrical connections are		connected to each other by a r	esin flange.





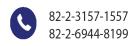




Split Type Model		EX IRS30	С
Mounting		Floor Standing type	
Ambient temperature		from -7C ta60C	
Explosion protection CLASSIFICATION		$\langle \mathbf{\xi} \mathbf{x} \rangle$ EX d G&D	IIC T4
CLASS - PROT	TEZIONE	IIC T4	
Certificates	ATEX	ATEX Directive	
		EU : n.1E16310	801F56
Ambient temp	berature	ТЗ	20000
Capacity	Cooling	BTU	30000
Capacity	Heating	BTU	31000
	Cooling	8792	
Rated Input (W)	Heating	9085	
I	0	210-240/1/50 0	or 60
Rated voltage/Freq	uency (V/Hz)		
IP Classification Fan		65	
Motor insu	lation	Class "F"	
IP Classification Fan Motor (outdoor)		65	
Motor insulation		Class "F"	
		LAME-PROOF COMPRESSOR	
		ROMENT	
Compressor (type)		Explosion proof	
Refrigerant		R22 or 410	0
Brand		APS	
Fin Mate	rial	Aluminum with anti-con Coated Hers	
Split Type	Model	EX IRS36CH	
Mounti		split type	
Ambient tem	<u> </u>	from -7C ta60C	
climatic an		ТЗ	
Explosion pr	otection	$\langle Ex \rangle$ EX d G & I	DIICT4
CLASSIFIC	CLASSIFICATION		
CLASS - PRO	FEZIONE	II C T4	
Capacity	Cooling	BTU	36000
Capacity	Heating	BTU	36200
Rated Input (W)	Cooling	10550	
Rated Input (W) Heating		10579	
(V/Hz) Rated voltage/Frequency		210-240/1/50	or 60

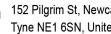








IP Classification Far	IP Classification Fan Motor (indoor)		
Motor inst		Class "F"	
IP Classification Fan	Motor (outdoor)	65	
Motor insu		Class "F	
Compresso		Explosion proof co	
Bran		APS USA	-
Fin Mate	erial	Aluminum with anti-co	rrosion coating
		connected to each other by a	resin flange.
Split Type		EX IRS48C	
Mounti		split type	
Ambient tem		from -7C ta6	0C
climatic an		Т3	
Cooling Ca		BTU	48000
Heating Ca		BTU	48500
Rated Input (W)	Cooling	14067	
Rated Input (W)	Heating	14213	
Rated voltage/Freq	uency (V/Hz)	380-400/3/	′50
Rated current (A)	Cooling	9	
IP Classification Far	lassification Fan Motor (indoor)		
Motor insulation		Class "F"	
IP Classification Fan	Motor (outdoor)	65	
Motor inst	ilation	Class "F	
Compressor (type)		Explosion proof con	npressors
Brand		APS USA	
Refriger		R 410 or 2	
Type of pipe used in		Pipe groov	
Fin Mate		Aluminum with anti-cor	
Split Type		connected to each other by a	
Mounti		EX IRS60CH split type	
Ambient tem	•	from -7C ta6	
climatic an		T3	
Cooling Ca		BTU	60000
Heating Ca		BTU	62000
Rated Input (W)	Cooling	17584	
Rated Input (W)	Heating	18170	
Rated voltage/Freq	uency (V/Hz)	380-400/3/50	
Rated current (Å)	Cooling	9	
IP Classification Far	Motor (indoor)	65	
Motor insulation		Class "F	
IP Classification Fan Motor (outdoor)		65	
Motor insu		Class "F	



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Compressor (type)	Explosion proof compressors	
Brand	APS USA	
RefrigerantR 410 or 22		
Type of pipe used in the condenser Pipe grooves		
Fin Material Aluminum with anti-corrosion coating		
All internal electrical connections are connected to each other by a resin flange.		

12000BTU WIDOW TYPE

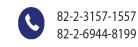
Type Model	EX IRW12CH EX d IIC T4		
Capacity BTU	Cooling	12000	
Rated Input (W)	Cooling	3516	
	ase/ Hz	210-240/1/50 or 60	
Rated Current (A)	Cooling	4/5	
Refrigerant type	R	22 or 410	
Compres	sor (type)	EX	
	Explosion proof	IP 68	
Compressor (model)		USA	
IP Fan Mot	or outdoor)	65	
		Pipe grooves	
Type of pipe used	Type of pipe used in the condenser		
Fin Material	Aluminum with anti-corrosion coating		
	Coated polyester		
Ambient temp	C -60		
All internal electrical connections are connected to each other by a resin flange.			

technical file content

No.	Components	File NO
1	Compressor	EXIRCOM 01
2	Out Door Fan Motor	EXIROUFM02
3	Junction BOX	EXIRJB03
4	Resin flange	EXIRRF04
5	IN Door Fan Motor	EXIRIDFM06
6	Solenoid valve	EXIRSV07
7	Resin switch and thermostat	EXIRRST08









Model	Туре	Serial number	to	Serial number
EXIRS12CH	Split	EXIRS12CH1-00	to	EXIRS12CH100-00
EXIRS18CH	Split	EXIRS18CH1-00	to	EXIRS18CH100-00
EXIRS24CH	Split	EXIRS24CH1-00	to	EXIRS24CH100-00
EXIRS30CH	Split	EXIRS30CH1-00	to	EXIRS30CH100-00
EXIRS36CH	Split	EXIRS36CH1-00	to	EXIRS36CH100-00
EXIRS48CH	Split	EXIRS48CH1-00	to	EXIRS48CH100-00
EXIRS60CH	Split	EXIRS60CH1-00	to	EXIRS60CH100-00
EXIRW12C	Window	EXIRW12C1-00	to	EXIRW12C100-00
EXIRW18C	Window	EXIRW18C1-00	to	EXIRW18C100-00
EXIRW24C	Window	EXIRW24C1-00	to	EXIRW24C100-00

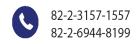
Terms of equipment testing

H2	Chemical name	
0.08988 KG/M3	Gas density	
1333-74-0	CAS NO	
IEC 60079-1	Standard	
48°C	environment temperature	
40°C	Hall temperature	
21%	Humidity	
250mb	Approximate hall pressure	
2 m^3	Test room size	
0.8 m^3	Injectable gas volume	
3	Repeat the test	











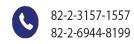
Split Type Model		EX IRW18C			
Mounting		Window Type			
Ambient tem	Ambient temperature		from -7C ta60C		
Explosion protection C	LASSIFICATION	EX d G&D II C T4			
CLASS - PRO	TEZIONE	IIC T4			
		Registration NO	EXEGSYYATEX000X		
		Report Number	VIG20200318-GKU02-CE-N		
Certificates	Certificates ATEX		0151		
		Nace code	048		
Certificates	Certificates ATEX		ATEX Directive 94/9/EC		
		EU : n.1E1631080IF56			
Degree of pr	Degree of protection		IP65 (Gas)		
Ambient tem	Ambient temperature		T3		
Capacity	Cooling	BTU 18000			

Rated Input (W)	Cooling	5553	
	Ī	220-240/1/50	
Rated voltage/Frequency (V/Hz)			
Rated current (A)	Cooling	9	

Fan Motor (indoor) BRAND	General Electric		
IN Door Fan Motor Annex Certificate	EXIRIDFM06		
IP Classification Fan Motor (indoor)	65		
CLASSIFICATION in door fan	EX e IIC T4 G&D		
Motor insulation	Class "F"		
	Indoor unit	52 / 57 / 60	
Sound level (dB)	Outdoor unit	60	





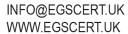


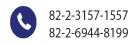


Air Circulation (CFM)	1700				
IP Classification Fan Motor (outdoor)	General Electric				
Motor insulation	Class "F"				
Fan Motor (Outdoor) BRAND	General Electric				
OUT Door Fan Motor Annex Certificate	EXIROUFM02				
Moister Removal(L/H.r)	4.0				
ENV Compressor (type)	ENVIROMENT Compressor (type) Super Tropical				
Compressor (type)	Super Tropical				
Refrigerant	R22 or R410				
Brand	APS				
Type of pipe used in the condenser Pipe grooves					
Fin Material	Aluminum with anti-corrosion coating				
	Coated polyester				











Type Model	EX IRW24C EX d IIC T4		EX d IIC T4	
Coolin		24000		
Capacity BTU				
Rated Input (W)	Coolin	7033		
		Registration NO	EXEGSYYATEX000X	
Certificates ATEX		Report Number	VIG20200318-GKU02-CE-N	
		EA code	0151	
		Nace code		
Certificates ATEX		ATE	X Directive 94/9/EC	
		EU : n.1E1631080IF56		
Degree of protection			IP65 (Gas)	
Moister Removal(L/H.r)		3.0		
Air Circulation (CFM)			1400	
EER for Cooling (BTU/W)	,	3.3		
Ambient temperature		Т3		
Fan Motor (Outdoor) BRAN	TD	General Electric		
(IP Fan Motor (indoor		65		
Motor insulation		"Class "F		
CLASS – PROTEZIONE Fa	an	EX e IIC G&D		
OUT Door Fan Motor Annex Cer	rtificate	EXIROUFM02		
Volt/Phase/ Hz		220-240/1/50		
	Cooling	10		
Rated Current (A)	Heating			
	R	410		
Refrigerant type	(Kg)		1.5	
Compressor (type)		EXPLOSION PROOF		
classification		EX d IIC G T4		
Compressor (model)		IP 68		
		APS USA		
Type of pipe used in the condenser		Pipe grooves		
Fin Material	Aluminum with anti-corrosion coating Coated polyester			
Ambient temp		С-6	0	





