



## *Certification Application Form*

John Smeeth

Date : ٢٠ 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

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**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No longer in force, Date of end of validity: 20/04/2016; Repealed by 32014L0034.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20/04/2016; Repealed by [32014L0034](#)

### **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





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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";





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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

Approved ( signature ).....: David Zhang

Date of issue .....: 2021-07-21

Total number 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.....: Irancooler Factory



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<b>Split Type Model</b>		<b>EX IRS12CH</b>	
<b>Mounting</b>		<b>split type</b>	
<b>Ambient temperature</b>		<b>from -7C ta60C</b>	
<b>climatic ambient</b>		<b>T3</b>	
<b>Explosion protection CLASSIFICATION</b>		<b>EX d II C G&amp;D T4</b>	
			
<b>CLASS - PROTEZIONE</b>		<b>II C T4</b>	
<b>Degree of protection</b>		<b>IP 65</b>	
<b>Capacity</b>	<b>Cooling</b>	<b>BTU</b>	<b>12000</b>
<b>Rated Input (W)</b>	<b>Cooling</b>	<b>3516</b>	
<b>Capacity</b>	<b>Heating</b>	<b>BTU</b>	<b>12300</b>
<b>Rated Input (W)</b>	<b>Heating</b>	<b>3604</b>	
<b>Rated voltage/Frequency (V/Hz)</b>		<b>210-240-/1/50 or 60</b>	
<b>Rated current (A)</b>	<b>Cooling</b>	<b>5</b>	
<b>IP Classification Fan Motor (indoor)</b>		<b>65</b>	
<b>Motor insulation</b>		<b>Class "F"</b>	
<b>IP Classification Fan Motor (outdoor)</b>		<b>65</b>	
<b>Motor insulation</b>		<b>Class "F"</b>	
<b>Air Circulation (CFM)</b>		<b>560</b>	
<b>EXPLOSION-PROOF &amp; FLAME-PROOF COMPRESSOR</b>			
<b>ENVIROMENT</b>			
<p>encapsulation technique also protects electrical connectors and controls in corrosive environments which are not hazardous.</p> <p>all its compressors with epoxy coatings so durable that they are suitable for immersion in sea water.</p> <p>the diameter of the housing is big enough to wire the connections by hand.</p> <p>All welds are pressure tested for integrity.</p>			
<b>Compressor (type)</b>		<b>Explosion proof</b>	
<b>Brand explosion-proof compressor</b>		<b>APS USA</b>	
<b>Type of pipe used in the condenser</b>		<b>Pipe grooves</b>	
<b>Fin Material</b>		<b>Aluminum with anti-corrosion coating</b>	
		<b>Coated Herside</b>	
<b>All internal electrical connections are connected to each other by a resin flange.</b>			

<b>Split Type Model</b>		<b>EX IRS18CH</b>	
<b>Mounting</b>		<b>split type</b>	
<b>Ambient temperature</b>		<b>from -7C ta60C</b>	
<b>climatic ambient</b>		<b>T3</b>	
<b>Explosion protection CLASSIFICATION</b>		<b>EX d G T4</b>	
			
<b>Cable glands</b>		<b>EExe certified cable glands to be used</b>	
<b>Degree of protection</b>		<b>IP65</b>	
<b>Cooling Capacity</b>		<b>BTU</b>	<b>18000</b>
<b>Heating Capacity</b>		<b>BTU</b>	<b>18500</b>







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Rated Input (W)	Cooling	5333	
Rated Input (W)	Heating	5421	
Rated voltage/Frequency (V/Hz)		Or 60210-240/1/50	
Rated current (A)	Cooling	11	
Motor insulation (indoor)		Class "F"	
IP Classification Fan Motor (outdoor)		65	
Motor insulation (outdoor)		Class "F"	
Compressor (type)		Explosion proof compressors	
Brand		APS USA	
Fin Material		Aluminum with anti-corrosion coating	
All internal electrical connections are connected to each other by a resin flange.			
Split Type Model		EX IRS24CH	
Mounting		split type	
Ambient temperature		from -10C ta60C	
climatic ambient		T3	
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/Frequency (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 PROOF	
Brand		APS	
Fin Material		Aluminum with anti-corrosion coating	
All internal electrical connections are connected to each other by a resin flange.			





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<b>Split Type Model</b>		<b>EX IRS30C</b>	
<b>Mounting</b>		<b>Floor Standing type</b>	
<b>Ambient temperature</b>		<b>from -7C ta60C</b>	
<b>Explosion protection CLASSIFICATION</b>		<b>EX d G&amp;D II C T4</b>	
			
<b>CLASS - PROTEZIONE</b>		<b>IIC T4</b>	
<b>Certificates ATEX</b>		<b>ATEX Directive 94/9/EC</b>	
		<b>EU : n.1E1631080IF56</b>	
<b>Ambient temperature</b>		<b>T3</b>	
<b>Capacity</b>	<b>Cooling</b>	<b>BTU</b>	<b>30000</b>
<b>Capacity</b>	<b>Heating</b>	<b>BTU</b>	<b>31000</b>
<b>Rated Input (W)</b>	<b>Cooling</b>	<b>8792</b>	
	<b>Heating</b>	<b>9085</b>	
<b>Rated voltage/Frequency (V/Hz)</b>		<b>210-240/1/50 or 60</b>	
<b>IP Classification Fan Motor (indoor)</b>		<b>65</b>	
<b>Motor insulation</b>		<b>Class "F"</b>	
<b>IP Classification Fan Motor (outdoor)</b>		<b>65</b>	
<b>Motor insulation</b>		<b>Class "F"</b>	
<b>EXPLOSION-PROOF &amp; FLAME-PROOF COMPRESSOR ENVIROMENT</b>			
<b>Compressor (type)</b>		<b>Explosion proof Tropical</b>	
<b>Refrigerant</b>		<b>R22 or 410</b>	
<b>Brand</b>		<b>APS</b>	
<b>Fin Material</b>		<b>Aluminum with anti-corrosion coating Coated Herside</b>	
<b>Split Type Model</b>		<b>EX IRS36CH</b>	
<b>Mounting</b>		<b>split type</b>	
<b>Ambient temperature</b>		<b>from -7C ta60C</b>	
<b>climatic ambient</b>		<b>T3</b>	
<b>Explosion protection CLASSIFICATION</b>		<b>EX d G &amp; D II C T4</b>	
			
<b>CLASS - PROTEZIONE</b>		<b>IIC T4</b>	
<b>Capacity</b>	<b>Cooling</b>	<b>BTU</b>	<b>36000</b>
<b>Capacity</b>	<b>Heating</b>	<b>BTU</b>	<b>36200</b>
<b>Rated Input (W)</b>	<b>Cooling</b>	<b>10550</b>	
<b>Rated Input (W)</b>	<b>Heating</b>	<b>10579</b>	
<b>(V/Hz)</b>	<b>Rated voltage/Frequency</b>	<b>210-240/1/50 or 60</b>	







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<b>IP Classification Fan Motor (indoor)</b>		<b>65</b>
<b>Motor insulation</b>		<b>Class "F"</b>
<b>IP Classification Fan Motor (outdoor)</b>		<b>65</b>
<b>Motor insulation</b>		<b>Class "F"</b>
<b>Compressor (type)</b>		<b>Explosion proof compressors</b>
<b>Brand</b>		<b>APS USA</b>
<b>Fin Material</b>		<b>Aluminum with anti-corrosion coating</b>
<b>All internal electrical connections are connected to each other by a resin flange.</b>		
<b>Split Type Model</b>		<b>EX IRS48CH</b>
<b>Mounting</b>		<b>split type</b>
<b>Ambient temperature</b>		<b>from -7C ta60C</b>
<b>climatic ambient</b>		<b>T3</b>
<b>Cooling Capacity</b>	<b>BTU</b>	<b>48000</b>
<b>Heating Capacity</b>	<b>BTU</b>	<b>48500</b>
<b>Rated Input (W)</b>	<b>Cooling</b>	<b>14067</b>
<b>Rated Input (W)</b>	<b>Heating</b>	<b>14213</b>
<b>Rated voltage/Frequency (V/Hz)</b>		<b>380-400/3/50</b>
<b>Rated current (A)</b>	<b>Cooling</b>	<b>9</b>
<b>IP Classification Fan Motor (indoor)</b>		<b>65</b>
<b>Motor insulation</b>		<b>Class "F"</b>
<b>IP Classification Fan Motor (outdoor)</b>		<b>65</b>
<b>Motor insulation</b>		<b>Class "F"</b>
<b>Compressor (type)</b>		<b>Explosion proof compressors</b>
<b>Brand</b>		<b>APS USA</b>
<b>Refrigerant</b>		<b>R 410 or 22</b>
<b>Type of pipe used in the condenser</b>		<b>Pipe grooves</b>
<b>Fin Material</b>		<b>Aluminum with anti-corrosion coating</b>
<b>All internal electrical connections are connected to each other by a resin flange.</b>		
<b>Split Type Model</b>		<b>EX IRS60CH</b>
<b>Mounting</b>		<b>split type</b>
<b>Ambient temperature</b>		<b>from -7C ta60C</b>
<b>climatic ambient</b>		<b>T3</b>
<b>Cooling Capacity</b>	<b>BTU</b>	<b>60000</b>
<b>Heating Capacity</b>	<b>BTU</b>	<b>62000</b>
<b>Rated Input (W)</b>	<b>Cooling</b>	<b>17584</b>
<b>Rated Input (W)</b>	<b>Heating</b>	<b>18170</b>
<b>Rated voltage/Frequency (V/Hz)</b>		<b>380-400/3/50</b>
<b>Rated current (A)</b>	<b>Cooling</b>	<b>9</b>
<b>IP Classification Fan Motor (indoor)</b>		<b>65</b>
<b>Motor insulation</b>		<b>Class "F"</b>
<b>IP Classification Fan Motor (outdoor)</b>		<b>65</b>
<b>Motor insulation</b>		<b>Class "F"</b>







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

**12000BTU WIDOW TYPE**

Type Model	EX IRW12CH EX d IIC T4	
Capacity BTU	Cooling	12000
Rated Input (W)	Cooling	3516
Volt/Phase/ Hz		210-240/1/50 or 60
Rated Current (A)	Cooling	4/5
Refrigerant type	R	22 or 410
Compressor (type)		EX
Compressor (model)	Explosion proof	IP 68
	APS USA	
IP Fan Motor outdoor)		65
Type of pipe used in the condenser		Pipe grooves
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





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Model	Type	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 <sup>3</sup>	Test room size
0.8 m <sup>3</sup>	Injectable gas volume
3	Repeat the test

  
SCHEME MANAGER







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<b>Split Type Model</b>		<b>EX IRW18C</b>	
<b>Mounting</b>		<b>Window Type</b>	
<b>Ambient temperature</b>		<b>from -7C ta60C</b>	
<b>Explosion protection CLASSIFICATION</b>		<b>EX d G&amp;D II C T4</b>	
<b>CLASS - PROTEZIONE</b>		<b>IIC T4</b>	
<b>Certificates ATEX</b>		<b>Registration NO</b>	<b>EXEGSYATATEX000X</b>
		<b>Report Number</b>	<b>VIG20200318-GKU02-CE-N</b>
		<b>EA code</b>	<b>0151</b>
		<b>Nace code</b>	<b>048</b>
<b>Certificates ATEX</b>		<b>ATEX Directive 94/9/EC</b>	
		<b>EU : n.1E16310801F56</b>	
<b>Degree of protection</b>		<b>IP65 (Gas)</b>	
<b>Ambient temperature</b>		<b>T3</b>	
<b>Capacity</b>	<b>Cooling</b>	<b>BTU</b>	<b>18000</b>

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

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





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





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Type Model	EX IRW24C EX d IIC T4		
Capacity BTU	Coolin	24000	
Rated Input (W)	Coolin	7033	
Certificates ATEX	Registration NO	EXEGSYYATEX000X	
	Report Number	VIG20200318-GKU02-CE-N	
	EA code	0151	
	Nace code		
Certificates ATEX	ATEX 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	T3		
Fan Motor (Outdoor) BRAND	General Electric		
(IP Fan Motor (indoor	65		
Motor insulation	"Class "F		
CLASS – PROTEZIONE Fan	EX e IIC G&D		
OUT Door Fan Motor Annex Certificate	EXIROUFM02		
Volt/Phase/ Hz	220-240/1/50		
Rated Current (A)	Cooling	10	
	Heating		
Refrigerant type	R	410	
	(Kg)	1.5	
Compressor (type)	EXPLOSION PROOF		
classification	EX d IIC G T4		
Compressor (model)	Explosion proof	IP 68	
	APS USA		
Type of pipe used in the condenser		Pipe grooves	
Fin Material	Aluminum with anti-corrosion coating Coated polyester		
Ambient temp	C -60		

