

Explosion  
Proof HVAC

# Heating Ventilation Air-Conditioning System

## TC Series



**TAECHIN**  
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# Explosion Proof HVAC

## Heating Ventilation Air-Conditioning System TC Series



### Features

#### User friendly HMI

By adopting user friendly HMI(Human Machine Interface), easier maintenance with powerful function and convenient interface was realized.

#### Various and stable communication

Communication network can be easily built on any site through the VNC Serial (RS-485) and Ethernet communication, realizing remote control of the equipment.

#### Specialized design to ensure safety

TC series are designed in accordance to EN60079-0, 60079-1, 60079-2 and international standards which is suitable for safety area as well as for Zone2 or Zone1.

#### Full redundant system

A stable positive pressure inside a shelter is maintained by a full redundant fan system and the motor are protected programmatically through the 24-hour auto changeover system.




#### Customized design

The dimensions of some parts such as stack, cabinet and also the location of the control panel can be customized.

#### Real-time data logging

Data can be saved to its memory, SD card, USB memory in CSV file.

### Description

- IECEx, ATEX, KCs   
- Zone1 IIB+H2 T3 or T4
- Suitable for hazardous area Zone1(Zone2) according to EN60079-10 standard.
- Power 380~400Vac / 3Ph / 50,60Hz
- Power 440~460Vac / 3Ph / 60Hz
- Heating capacity\_1~10kW
- Ambient temperature: -20°C to 50 °C or -20 °C to 55 °C
- HVAC cabinet material\_Galvanized steel
- Evaporator fan (Full redundant\_option)
- Condenser fan
- HVAC control via PLC (Programmable Logic Controller)
- Refrigerant fluid\_R407c or R134a
- Aluminum finned copper tube coils
- High/Low pressure switch for compressor
- High pressure switch for condenser
- Dual Low pressure switch for compressor low purge alarm
- DP switch for shelter positive pressure (option)
- DP switch for evaporator fan fault
- Dust filter in Evaporator inlet (Grade MERV8\_only TC66,77)
- Dust filter in stack for fresh air (Grade MERV8)
- Humidity sensor for Dehumidification (option)

Model	Cooling Capacity	Heating Capacity	Type of Protection	Electric Data
TC66	30,000 BTU	1~6KW	Ex d e i a m b p x IIB+H2 T3, Zone1 Tamb. -20°C to +50°C ATEX, IECEx, KCs	380~400VAC / 3Ph / 50Hz 460VAC / 3Ph / 60Hz
TC77	50,000 BTU	1~10KW	Ex d e i a m b p x IIB+H2 T4, Zone1 Tamb. -20°C to +55°C ATEX, IECEx, KCs	380~400VAC / 3Ph / 50,60Hz 440~460VAC / 3Ph / 60Hz
TC-050CD	50,000 BTU	1~10KW	Ex d e i a m b p x IIB+H2 T4, Zone1 Tamb. -20°C to +55°C ATEX, IECEx, KCs	380~400VAC / 3Ph / 50,60Hz 440~460VAC / 3Ph / 60Hz
TC-070CD	70,000 BTU	1~10KW	Ex d e i a m b p x IIB+H2 T4, Zone1 Tamb. -20°C to +55°C ATEX, IECEx, KCs	380~400VAC / 3Ph / 50,60Hz 440~460VAC / 3Ph / 60Hz
TC-100CD	100,000 BTU	1~10KW	Ex d e i a m b p x IIB+H2 T4, Zone1 Tamb. -20°C to +55°C ATEX, IECEx, KCs	380~400VAC / 3Ph / 50,60Hz 440~460VAC / 3Ph / 60Hz

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Results may vary under different operating conditions. Specifications, terms and pricing are subject to change.

Not all products are available in all countries. Please consult TaeChin SMET Sales team for details.

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Air velocity : 7~9 m/s  
Overpressure : More than 25pa.  
Cooling Air from HVAC

Air velocity : 2~5 m/s  
Fresh Air from Stack

Warmed Air to HVAC  
Air velocity : 2~3 m/s

Damper - Adjust Fresh air flow,  
velocity and overpressure



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# Heating Ventilation Air-Conditioning System

## TC Series



Model : TC66



Model : TC77



Model : TC-\*\*\*CD



## Optional

- Cabinet material: Stainless steel 304 or 316
- Industrial cabinet coatings
- BLYGOLD anti-corrosion coating on tube coils and fin
- External emergency push button switch
- Location of stack
- Humidity sensor for dehumidification (only TC77 and TC-\*\*\*CD)

# Certificate

		<b>IECEX Certificate of Conformity</b>
<b>INTERNATIONAL ELECTROTECHNICAL COMMISSION</b> <b>IEC Certification Scheme for Explosive Atmospheres</b> <small>In order to enable its Members from non-participating countries</small>		
Certificate No.	2025-036, 1610159	Issue No. 2
Status	<b>Current</b>	<b>Certificate Validity</b> From 01-01-2025 To 31-12-2026
Date of Issue	<b>2025-03-01</b>	Page 1 of 3
Applicant	<b>TASMEB SBT Corporation</b> El Compañía Manufactura Aluminio Sociedad de Capital <b>Feder. Republica</b>	
Equipment (Optional accessory)	<b>MSC-MET "THERM"</b>	
Type of Protection	<b>Remotely, Intrinsic safety, powered, intrinsic safety, independent</b>	
Marking	<b>Ex ib IIC at 90 °C Ex ib IIC at 100 °C Ex ib IIC at 120 °C</b> <b>T x A 0 °C to +40 °C</b>	
For daily certification meetings are indicated for separately certified equipment		
Approval for issue on behalf of the IECEE Certification Body	At IECEE M87	
Position:	Technical Manager	
Signature: (or printed name)		
Date:	<b>September 28, 2018</b>	

1. This certificate and checklist may only be reproduced in full.  
2. This certificate is not transferable and remains the property of the issuing body.  
3. The validity and authenticity of the certificate may be verified by contacting the IECEE Secretariat.

Certificate issued by:

**Certification Management Unit**  
Unit 1 - Concepto Nacional Park  
New Port Road  
Chamorro Park, D-108-AZ  
United Kingdom

  
www.iecee.org

# CERTIFICATE

## Ey-Type Examination

(1) Equipment of protection systems intended for use in potentially explosive atmospheres ( Directive 2014/54/EU )

Product: Heating, Ventilation and Air Conditioning (HVAC) system, Type TC700

Manufacturer: Tecumseh SMET Corporation

Address: 65, Courcelle, Monseigneur, Palmyre, Ouyangzuo 1922 Republic of China

This product has been found to comply with the applicable technical specifications and the requirements herein referred to.

Technical description: V.1. Northern Data Number (CNC) is specified with Article 17 of Directive 2014/54/EU of the European Parliament and of the Council, dated 28 February 2014, notified that this product has been found to comply with the Essential Safety and Safety Requirements relating to the design and construction of plants intended for use in potentially explosive atmospheres given in Annex 3 to the Directive.

The manufacturer and test results are certified by an authorized third-party company (No. 12-000107-17) (CNAS 010102002).

Compliance with the Essential Safety and Safety Requirements has been assessed by compliance with:

EN-IEC 60079-1: 2014	EN 60079-1: 2014
EN 60079-10: 2014	EN 60079-10: 2014

except in respect of those requirements listed in item 6 of the Schedule.

Following the examination of the technical file, the Commission hereby certifies that the product is subject to the Specific Conditions of use specified in the schedule to this certificate.

(2) The Ey-Type Examination Certificate relates only to the design and construction of the specified product. Further compliance with the Directive applies to the finished products and to any type of fitment.

(3) The marking of the product shall include the following:

	Ex	Ex 00079-AE 002 - AEx I, T4 Gc	(overall PNEC)
	Ex 002 - AEx I, T4 Gc	(Electric Hazards)	
	Ex db p00 - I - P0, T4 Gc	(compressor)	

Date of certification: 9 August 2023

CE/TA Certification No. V.1

*[Signature]*

1. Scheduler  
Certificate Manager

 UKAS  
UKAS is not an official UK body

UKAS Certification No.: 18466  
UKAS Registration No.: 18466  
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UKAS Registration No.: 18466

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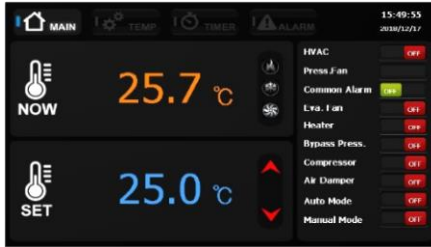
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## Model : TC66 &amp; TC77

**Main page**

Setting up now temperature by external pushbutton switches.

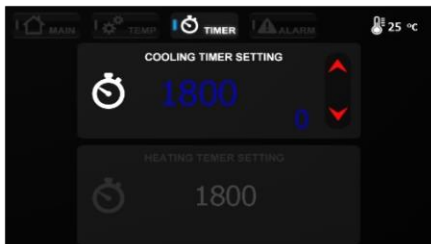
Checking overall current status for HVAC.

**High temperature setting page**

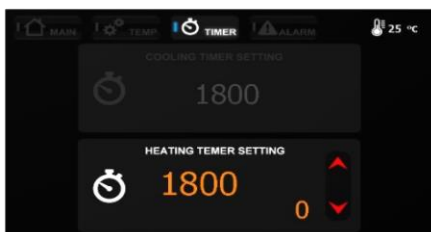
Factory setting: 35°C

**Low temperature setting page**

Factory setting: 2°C

**Cooling timer setting page**

Factory setting: 180s

**Heating timer setting page**

Factory setting: 180s

**Alarm page**

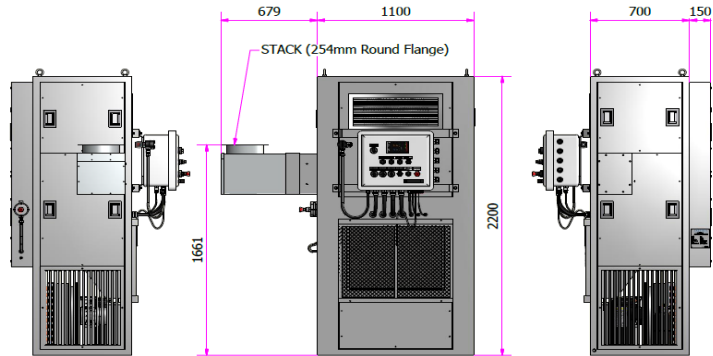
You can see major alarms and add alarms by user's request.



## Dimensions

### TC66

- 1100 X 700 X 2200mm



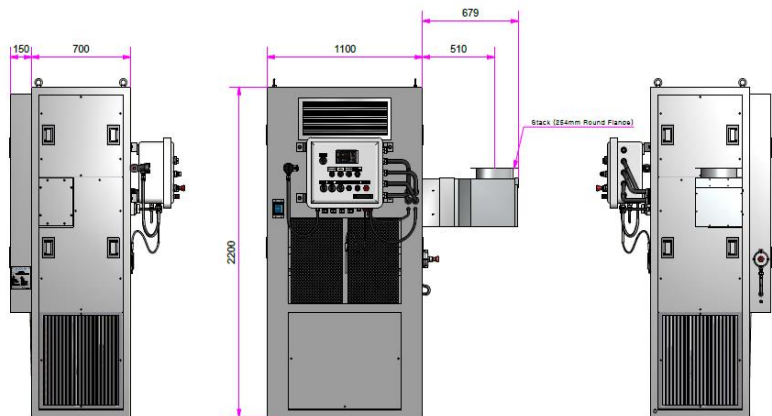
Left view

Front view

Right view

### TC77

- 1100 X 700 X 2200mm



Left view

Front view

Right view

### TC-050CD

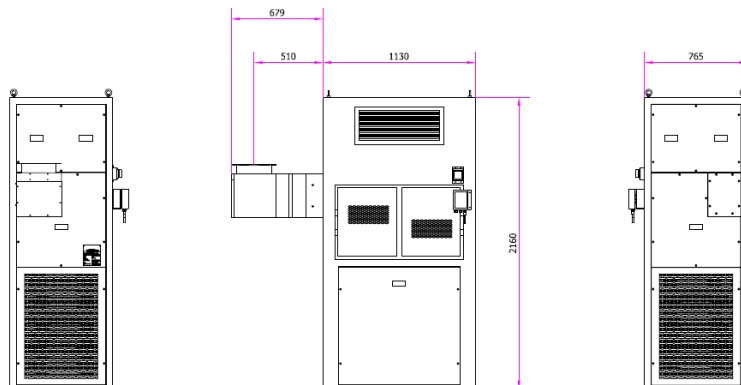
- 1130 X 765 X 2160mm

### TC-070CD

- 1130 X 765 X 2160mm

### TC-100CD

- 1180 X 900 X 2350mm



Left view

Front view

Right view