Envi Group

FOUR TCR & FOUR TCRH

Tropical Rooftop & Heat-Pump Rooftop

FOUR SEASONS®

- 14 Different Models for FOUR-TCR & FOUR TCRH
- Rooftop Packaged Air Conditioners
- Optional Only Cooling or Heat-Pump Systems
- Different Range for Different Air Climates

Air Conditioning Solutions

- High Energy Efficient Packaged Air Conditioners
- Eco-Friendly R410A Refrigerant Gas
- Advanced Microprocessor Control Options
- Easy Maintenance and Installation

Compactness with Well Qualified Air

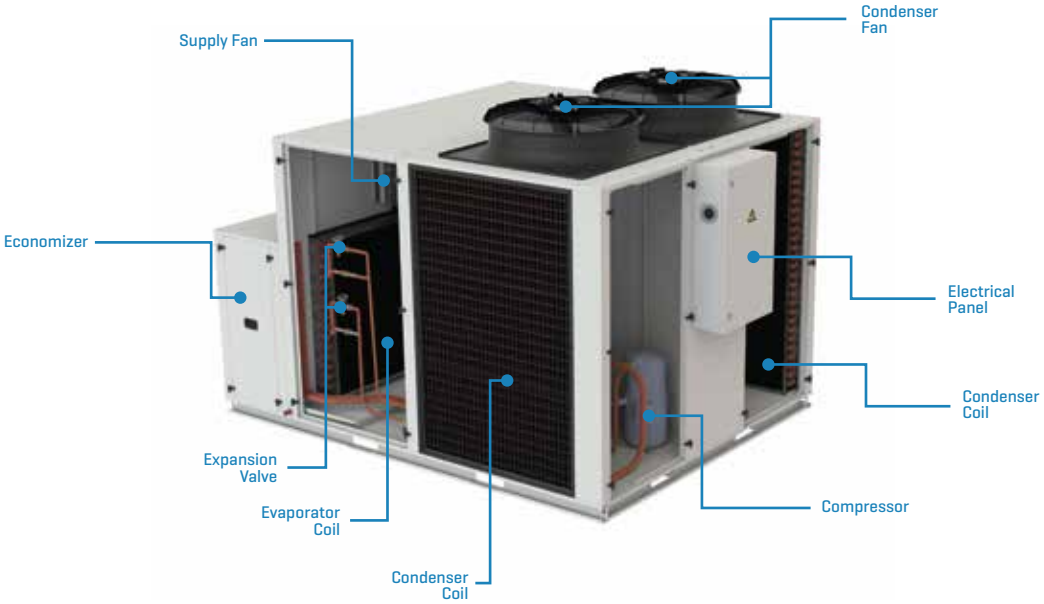
- Optimal Energy Efficiency, Air Quality and Comfort
- Wide and Versatile Range
- Energy Saving Solutions for All Commercial Buildings

GENERAL SPECIFICATIONS

These are roof type (ROOFTOP) package air conditioners that can work only cooling or reversible with the direct expansion refrigerant system, cool the place air with the Cooling / DX battery in the summer and heat it in the winter. It provides the conditioning of the air inside the place by ducts, which will meet the fresh air requirement it needs and can perform all heating, cooling and ventilation processes in a compact unit. FOUR TCR is designed for climates that need cooling only (Tropical), and FOUR TCRH series is designed for areas that need heating and cooling. It is offered with many capacity options according to the size of the environment to be air-conditioned.

It has high energy efficiency and is budget friendly with fast and easy installation, low operating and initial investment cost. Its main areas of usage are that large commercial buildings, business centers, airports, restaurants, large stores, cinema and theatre halls, conference halls, industrial buildings and centers of logistic.

COMPONENTS



FOUR TCR & FOUR TCRH

- High efficient and low noise centrifugal fans
- Compact design
- Full integrated control system
- Plug&Play

COMPRESSOR

- High efficiency
- Quite operation, low sound levels
- Fewer moving parts
- Compact and light design
- Crank case heater

HEAT EXCHANGER COIL

- Copper pipe-aluminum fin exchanger
- High temperature and humidity efficiency

FILTER

- Large filtering area for energy efficiency and long service period
- High efficiency ISO Course filters

CASE

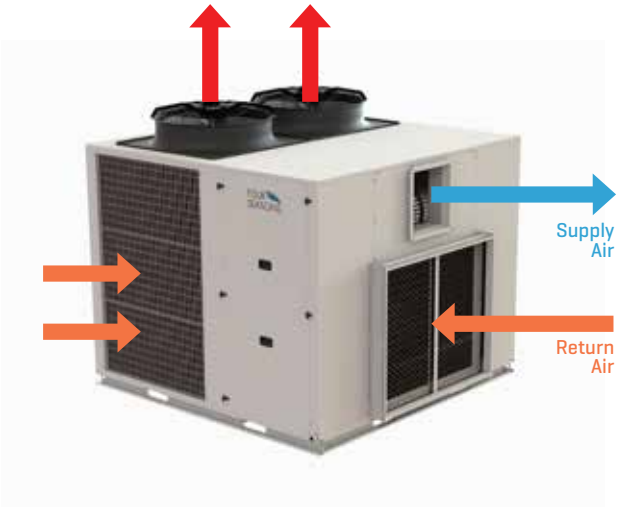
- Galvanized sheet with electrostatic powder paint
- Insulated with 19 mm rubber
- Easy maintainability and serviceability

OPERATING LIMITS

OPTIONS

- Economizer
- Bag filter chamber
- Electric heater
- Heating coil
- Cooling coil
- Coil coating
- Electronic expansion valve
- Dirty filter sensor
- CO_2 sensor
- Enthalpy control
- Condenser fan speed control
- Smoke detector

AIR CONFIGURATION



COOLING	Outdoor Air Temperature		Indoor Air Temperature	
	Dry Bulb	Wet Bulb	Dry Bulb	Wet Bulb
	°C	°C	°C	°C
Minimum	15	7	18	14
Average	35	24	27	19
Maximum	52	27	36	24

HEATING	Outdoor Air Temperature		Indoor Air Temperature	
	Dry Bulb	Wet Bulb	Dry Bulb	Wet Bulb
	°C	°C	°C	°C
Minimum	-5	3	18	14
Average	7	6	27	19
Maximum	24	22	36	24

FOUR TCR Series Technical Data

		018 - 072						
		TCR-18	TCR-23	TCR-32	TCR-37	TCR-47	TCR-64	TCR-72
Airflow Rate	m³/h	2850	3600	4800	5650	7250	9400	10750
(1)Total Cooling Capacity	kW	19	24	33	38	48	65	73
(1)Sensible Cooling Capacity		14	18	24	28	36	48	54
(2)Total Cooling Capacity		17	22	29	34	44	58	67
(2)Sensible Cooling Capacity		13	17	23	26	34	45	51
Total Absorbed Power (High)		7.1	8.6	12.8	14.1	16.7	24.6	26.3
Fan Motor Absorbed Power		0.8	1.1	1.5	1.5	2.2	3	3
Total Compressor Absorbed Power		4.8	5.9	7.7	9.5	11.6	15,4	17.5
Compressor / Circuit Number	pcs.	1/1	1/1	1/1	2/2	2/2	2/2	2/2
(3)Max. External Static Pressure	Pa	524	538	621	504	594	596	486
Energy	380-400 V / 3 ph. / 50 Hz.							
Refrigerant	R410A							

		080 - 176						
		TCR-80	TCR-94	TCR-108	TCR-122	TCR-138	TCR-154	TCR-176
Airflow Rate	m³/h	12200	14100	16500	18750	21150	23750	27100
(1)Total Cooling Capacity	kW	81	95	109	123	139	155	177
(1)Sensible Cooling Capacity		60	70	82	92	104	116	133
(2)Total Cooling Capacity		75	86	99	113	129	142	159
(2)Sensible Cooling Capacity		60	66	77	87	98	109	125
Total Absorbed Power (High)		29.9	33.6	40.6	47.5	54.7	58.8	69
Fan Motor Absorbed Power		4	5.5	5.5	5.5	7.5	7.5	11
Total Compressor Absorbed Power		19.5	22.7	26.5	30.2	34.7	39.1	44.4
Compressor / Circuit Number	pcs.	2/2	2/2	2/2	2/2	2/2	2/2	2/2
(3)Max. External Static Pressure	Pa	635	710	625	554	771	554	623
Energy	380-400 V / 3 ph. / 50 Hz.							
Refrigerant	R410A							

NOTES:
(1) Capacities as per of EN 14511 @ 27/19 °C coil inlet and 35 °C ambient temperature.
(2) Capacities @ 27/19 °C Coil inlet and 46 °C ambient temperature.
(2) Maximum ESP at nominal airflow rate for high pressure class units.

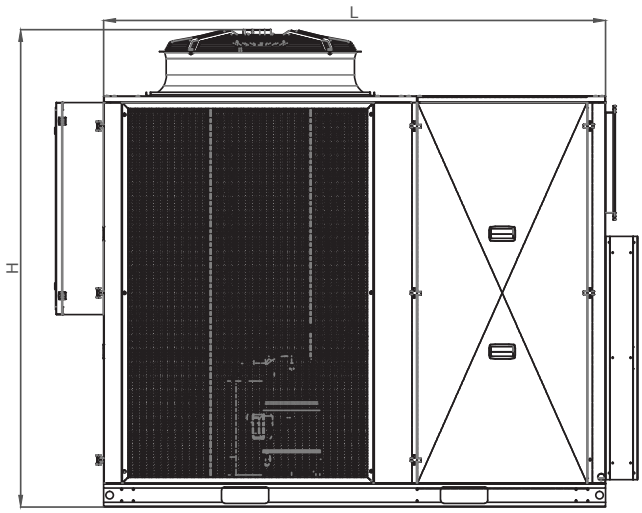
FOUR TCRH Series Technical Data

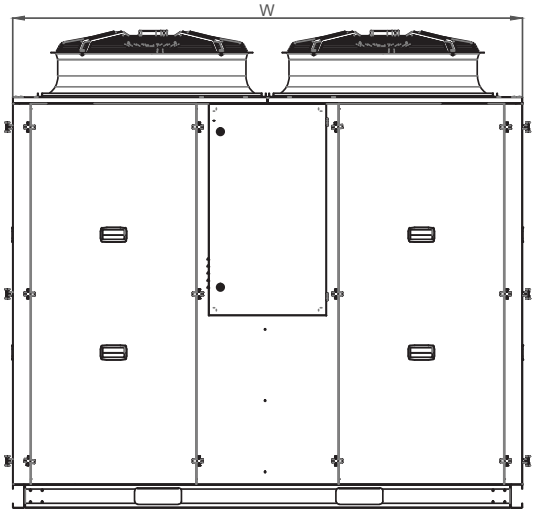
		018 - 072						
		TCRH-18	TCRH-23	TCRH-32	TCRH-37	TCRH-47	TCRH-64	TCRH-72
Airflow Rate	m³/h	2850	3600	4800	5650	7250	9400	10750
(1)Total Cooling Capacity	kW	19	24	33	38	49	65	75
(1)Sensible Cooling Capacity		15	19	25	30	38	51	59
(2)Total Heating Capacity		20	25	33	39	50	66	77
(2)Sensible HeatingCooling Capacity		15	19	25	30	38	50	58
(3)Total Cooling Capacity		17	22	29	35	44	58	67
(3)Sensible Cooling Capacity		14	17	23	27	34	46	53
(4)Total Heating Capacity		15	19	25	30	37	49	57
(4)Sensible Heating Capacity		11	14	19	22	28	37	43
Total Absorbed Power (High)		7	8.5	12.7	14.2	16.6	24.7	26.4
Fan Motor Absorbed Power		0.8	1.1	1.5	1.5	2.2	3	3
Total Compressor Absorbed Power		4.8	5.9	7.7	9.5	11.6	15.4	17.5
Compressor / Circuit Number	pcs.	1/1	1/1	1/1	2/2	2/2	2/2	2/2
(5)Max. External Static Pressure	Pa	524	538	621	504	594	596	486
Energy		380-400 V / 3 ph. / 50 Hz.						
Refrigerant		R410A						

		080 - 176						
		TCRH-80	TCRH-94	TCRH-108	TCRH-122	TCRH-138	TCRH-154	TCRH-176
Airflow Rate	m³/h	12200	14100	16500	18750	21150	23750	27100
(1)Total Cooling Capacity	kW	83	96	114	128	141	157	178
(1)Sensible Cooling Capacity		65	75	89	100	110	123	138
(2)Total Heating Capacity		85	99	117	131	144	161	182
(2)Sensible HeatingCooling Capacity		64	75	88	98	108	121	137
(3)Total Cooling Capacity		74	87	103	115	126	141	160
(3)Sensible Cooling Capacity		58	68	80	89	99	110	124
(4)Total Heating Capacity		63	74	87	98	107	120	135
(4)Sensible Heating Capacity		48	55	65	73	80	90	101
Total Absorbed Power (High)		29.8	33.8	40.5	47.3	54.6	58.6	69.1
Fan Motor Absorbed Power		4	5.5	5.5	5.5	7.5	7.5	11
Total Compressor Absorbed Power		19.5	22.7	26.5	30.2	34.7	39.1	44.4
Compressor / Circuit Number	pcs.	2/2	2/2	2/2	2/2	2/2	2/2	2/2
(5)Max. External Static Pressure	Pa	635	710	625	554	771	554	623
Energy		380-400 V / 3 ph. / 50 Hz.						
Refrigerant		R410A						

NOTES:
(1) Capacities @ 27/19 °C coil inlet and 35 °C ambient temperature.
(2) Capacities @ 21/15,5 °C coil inlet and 7 °C ambient temperature.
(3) Capacities @ 27/19 °C coil inlet and 46 °C ambient temperature.
(4) Capacities @ 21/15,5 °C coil inlet and -5 °C ambient temperature.
(5) Maximum ESP at nominal airflow rate for high pressure class units.

DIMENSIONS





PRODUCT CODE	PRODUCT NAME	L	W	H
FOUR TCR / TCRH-018	Tropical Rooftop/ Heat-Pump Rooftop-018	1846	1130	1442
FOUR TCR / TCRH-023	Tropical Rooftop / Heat-Pump Rooftop-023	1846	1130	1592
FOUR TCR / TCRH-032	Tropical Rooftop / Heat-Pump Rooftop-032	1926	1130	1708
FOUR TCR / TCRH-037	Tropical Rooftop / Heat-Pump Rooftop-037	2210	1300	1780
FOUR TCR / TCRH-047	Tropical Rooftop / Heat-Pump Rooftop-047	2360	1490	1820
FOUR TCR / TCRH-064	Tropical Rooftop / Heat-Pump Rooftop-064	2360	1860	1860
FOUR TCR / TCRH-072	Tropical Rooftop / Heat-Pump Rooftop-072	2700	1860	1960
FOUR TCR / TCRH-080	Tropical Rooftop / Heat-Pump Rooftop-080	2700	2020	1980
FOUR TCR / TCRH-094	Tropical Rooftop / Heat-Pump Rooftop-094	2950	2160	2070
FOUR TCR / TCRH-108	Tropical Rooftop / Heat-Pump Rooftop-108	3210	2160	2154
FOUR TCR / TCRH-122	Tropical Rooftop / Heat-Pump Rooftop-122	3350	2160	2364
FOUR TCR / TCRH-138	Tropical Rooftop / Heat-Pump Rooftop-138	3500	2170	2400
FOUR TCR / TCRH-154	Tropical Rooftop / Heat-Pump Rooftop-154	3500	2280	2400
FOUR TCR / TCRH-176	Tropical Rooftop / Heat-Pump Rooftop-176	3900	2280	2500

NOTE:
*All dimensions are in mm.

**All dimensions are approximative.

HEATING COIL

- Coils are Eurovent certified.
- Coils are made of copper pipes and aluminum fins.
- The cassette material is galvanized or stainless steel.
- The coils were tested at a pressure of at least 20 bar. On request, 30 bars can be tested under pressure.
- The collectors used in the coils are copper pipes.
- In hot and cold water coils, the water inlet is from the bottom and the water outlet is at the top.
- Air and water flows are counter-flowing to increase the heat transfer between them.
- Under the cooling coil, a condensate pan with a double slope is placed and the accumulated water is discharged through the drain pipe. In the case of a Drip Holder, a high-performance drill holder made of PVC material that can with stand up to 90° C is used.

ELECTRIC HEATER

Rectangular electric heaters have two thermostats as standard.

The first thermostat is set to 70° C, the air in the electric heater cuts off the electric current when it reaches 70° C, allowing the device to restart automatically when the temperature drops.

The second thermostat used for safety purposes is activated at 110° C and cuts off the electric current.

The thermostat must be reset manually from the red button in order for the appliance to operate again.

MODELS	AIR FLOW [m³/h]	DIMENSIONS	ΔT=5	ΔT=10
			kW	kW
FOUR TCR/TCRH-18	2800	800*572	6	9
FOUR TCR/TCRH-23	3600	800*572	6	12
FOUR TCR/TCRH-32	4750	800*762	8	16
FOUR TCR/TCRH-37	5600	970*762	9	20
FOUR TCR/TCRH-47	7200	1160*762	12	24
FOUR TCR/TCRH-64	9300	1520*826	15	33
FOUR TCR/TCRH-72	10800	1520*889	18	36
FOUR TCR/TCRH-80	12100	1680*889	20	42
FOUR TCR/TCRH-94	14000	1680*1016	25	48
FOUR TCR/TCRH-108	16600	1730*1143	27	57
FOUR TCR/TCRH-122	18800	1730*1334	33	63
FOUR TCR/TCRH-138	21200	1870*1397	36	72
FOUR TCR/TCRH-154	23700	1980*1397	42	81
FOUR TCR/TCRH-176	27000	1980*1651	48	93

NOTES

NOTES


We make the difference with
140 different types of products.
fourSEASON

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