Exact Match for **Tekpan** Enclosures

COSMOTEC industrial cooling STULZ

Controlling enclosure or cabinet internal temperature is crucial for the efficiency of the equipments operating inside. In electrical equipments, particulary those operating with electronic signalling, heat and dust directly effect equipment performance. The maximum temperature for equipments supposed to operate at max 30°C should not exceed 26-27°C In particular, efficiency of CPU operated equipments decrease if not cooled. As a result of this, the equipments fail communicate at the desired speed and efficiency leading to temporary or permanent malfunction. Tracking costs of these malfunctions are known by everyone. There is also another problem in terms of heat and chemicals. External dust sticks on the surface of the CPU or other equipments during cooling. It gradually strafies and constitutes a layer between the surface and air. This layer blocks cooling regardless of the cooling equipment and causes malfunctions. This is the first impact of the dust. The second impact is chemical and physical. As known, dust acidifies metal particles and accomodates similar bacteria. These cause corrosion on the conductive surface and separation of contacts and conductors. These even decrease conductivity of the material. Another factor that affects the equipments is humidity. As oxidized materials in humidity cause separation in inter-conductor contact, they increase the temperature and decrease the flow.

Here follow a summary of the factors to consider for cooling electrical equipments and maintaining their performance:

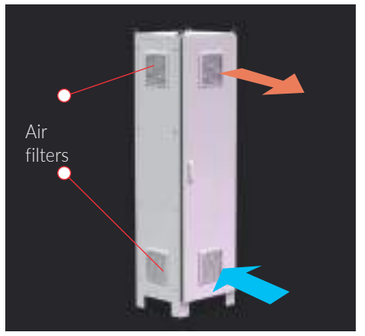
1-) Heat radiated by the equipment (watt value in terms of total power)
2-) Outdoor temperature
3-) Dust
4-) Outdoor humidity proportion (multiple humidity)

Suitable air-conditioning product can be chosen according to heat radiated by the equipment, enclosure/cabinet size and outdoor temperature factors. Please contact our customer service for your requests.

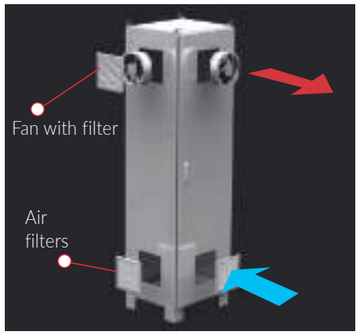
AIR-CONDITIONING APPLICATIONS BY FACTORS

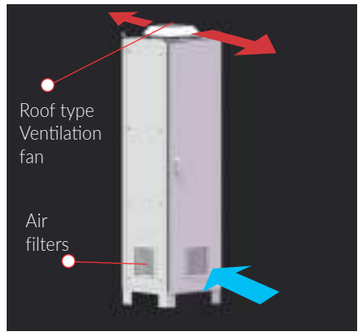
1 MAX. OUTDOOR TEMP ⩽ REQUIRED MAX. INDOOR TEMP. HARMLESS DUST and HUMIDITY DENSITY

METHOD I
(PASSIVE VENTILATION)

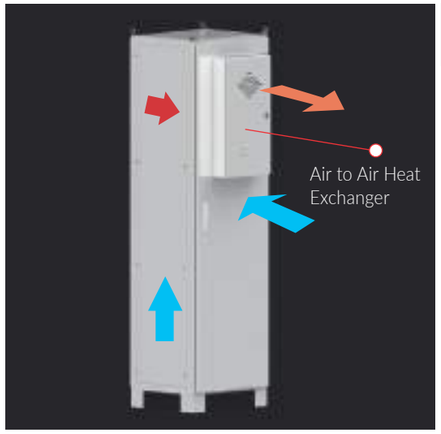


METHOD II
(ACTIVE VENTILATION)



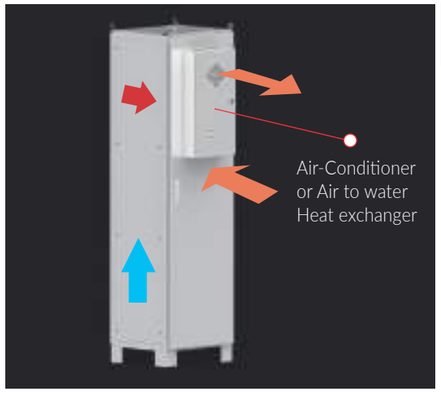


ATTENTION : In Method I equipment heat is not high. Filters require maintanence.
In Method II equipment heat is high. Air volume is required. Filters require maintanence.



2 MAX. OUTDOOR TEMP ⩽ REQUIRED MAX. INDOOR TEMP HARMFUL DUST and HUMIDITY DENSITY

- As dense dust and humidity frequently fills the filters, air flow and cooling weakens. The filters require frequent maintanence and this poses a risk.
- Heat exchangers do not mix indoor air flow and outer air flow. It is dust-resistant and does not require cleaning. There is no risk of failure as they do not have compressing and gas. It is not consume in high level energy



3 MAX. OUTDOOR TEMP ⩾ REQUIRED MAX. INDOOR TEMP HARMFUL DUST and HUMIDITY DENSITY

- High outdoor heat is reduced to the desired level by means of gas and compressing equipment.
- Indoor cooling (evaporator) and outer cooling (condenser) are separate, and the indoor environment does not catch any dust from outside.
- The condenser requires cleaning at regular intervals.
- Cooling is restored by use of air/ water type heater exchanger. No compressor cost, low energy consumption. Outdoor of the compressor does not cause overheating with the condenser.

AIR FILTER and FAN FILTER

AIR FILTERS (RAL 7035)

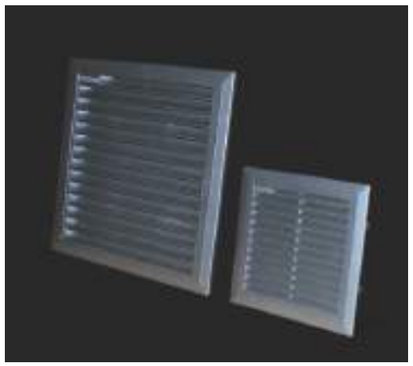
Material : ABS Ral 7035

IP Rate : IP54

- Easy cleaning with drawer filter.

PRODUCT CODE	FILTER SIZE
983.106	150x150 mm
983.107	250x250 mm
983.110	325x325 mm

AIR FILTERS (CHROME COLOR)



Material : ABS + metallic coating

IP Rate : IP54

- Easy cleaning with drawer filter.

PRODUCT CODE	FILTER SIZE
983.108	150x150 mm
983.109	250x250 mm
983.111	325x325 mm

FAN WITH FILTER

IP Rate : IP54

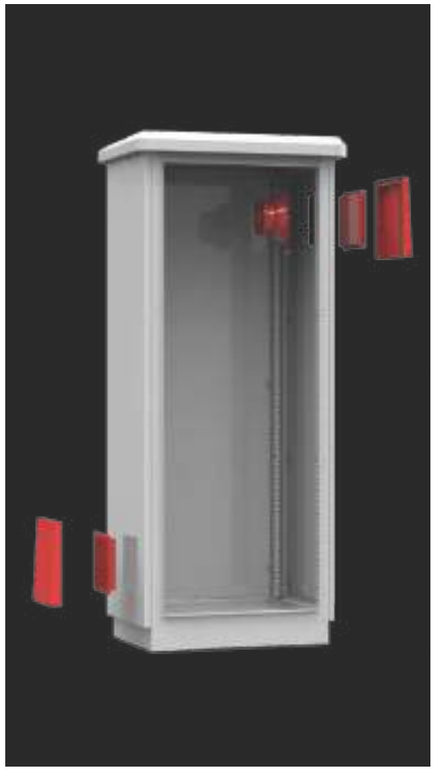
Used Fan : EBM PAPST

- 230V AC Voltage
- It suggest using at the situation which the maximum inside required temperature is higher than or equal maximum outside temperature.
- At standard fans fix to eject air. For opposite the fan positions must be changed.

PRODUCT CODE	FILTER SIZE	COLOUR	AIR FLOW	FAN POWER
983.131	150x150mm	RAL 7035	60m³/hour	19W
983.141	250x250mm	RAL 7035	160m³/hour	45W
983.151	250x250mm	RAL 7035	450m³/hour	64W
983.331	150x150mm	CROME	60m³/hour	19W
983.341	250x250mm	CROME	160m³/hour	45W
983.351	250x250mm	CROME	450m³/hour	64W

ROOF TYPE VENTILATION FAN

RAIN CANOPY WITH FAN FILTER



Material : 1,50 mm Galvanized steel+RAL 7035 polyester coating filtre: ABS

IP Rate : IP55

Supply Includes : 1 Pcs rain canopy , 1 Pcs 150x150 mm or 250x250 mm filtered ventilation, assembly parts

Protective Ventilation Filter	
Filter Dimension	PRODUCT CODE
150x150 mm	983.121
250x250 mm	983.122

Material : 1,50 mm Galvanized steel+RAL 7035 polyester coating filtre: ABS

IP Rate : IP55

Supply Includes : 1 Pcs raincoat, 1 Pcs 150x150 mm or 250x250 mm filtered ventilation, assembly parts, 1 Pcs Fan

Ventilation Filter with Protective Fan			
Filter dimension	Voltage	Motor Power	PRODUCT CODE
150x150 mm	230 V AC	19 W	983.123
250x250 mm	230 V AC	45 W	983.124

ROOF TYPE VENTILATION FAN

Colour : RAL 7035

IP Rate : IP44

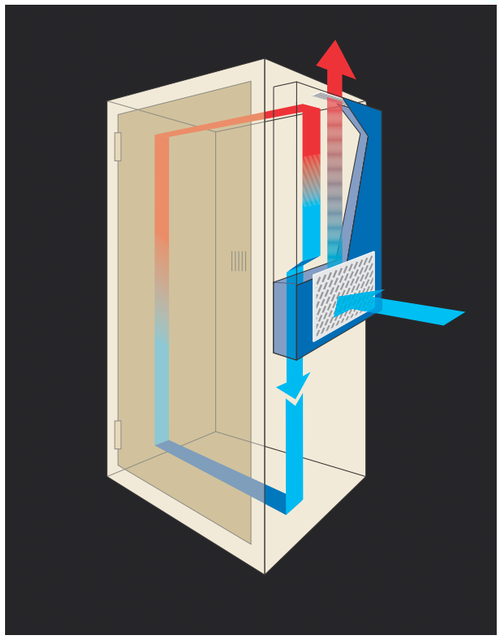
Used Fan : EBM PAPST

- Used in 230V AC.
- It ejects the heated air inside of the enclosure coming from vertical angle to horizantal angle. From the reason type of fan which ejects the air with horizantal angle, the counterpressure is at the minumum level. By this way it makes active and economic cooling with less power/ consumption and low fan cost.
- It requires sufficient size of air filters for compensation of the enclosure inside pressure between fan force of gravity.
- It suggests using at the situation which the maximum inside required temprature is higher than or equal maximum outside temperature
- Required max. Inside temp. $\geqslant$ Outside max. temp

PRODUCT CODE	FAN FLOW	FAN POWER
982.202	560 m³/hour	58 W
982.203	970 m³/hour	85 W

AC / AIR-CONDITIONERS

WALL-MOUNTED AIR-CONDITIONERS

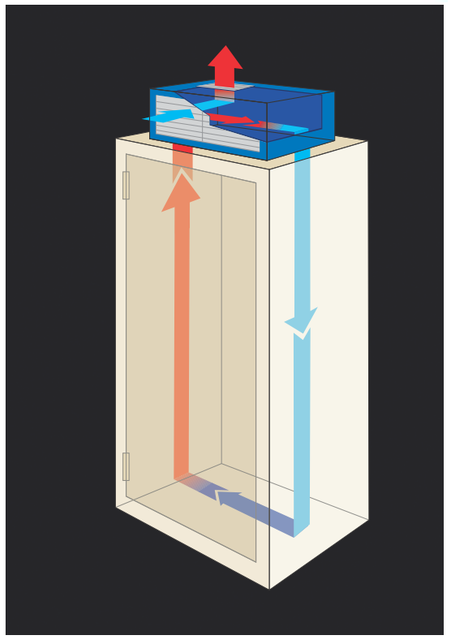


- 230 V products are in stock. Please contact our customer service for 115 V or 400 V product demands.
- Please contact our customer service for your UL version product demands.

			AIR CONDITIONER SIZES (mm)					
PRODUCT CODE	COOLING CAPACITY (W)	POWER SUPPLY V-ph-Hz	WIDTH	HEIGHT	DEPTH	FAN FLOW (m^3/h)	POWER CONSUMPTION (W)	WEIGHT Kg
CVE05002208000	550/580	230-1-50/60	315	642	221	164-195	295	17
CVE08002208000	850/900	230-1-50/60	315	642	221	406	435	27
CVE11002208000	1100/1150	230-1-50/60	413	913	248	540-580	505	44
CVE15002208000	1500/1600	230-1-50/60	413	913	248	540-580	630	46
CVE20002208000	2100/2200	230-1-50/60	413	1005	263	540-580	980	48
CVE30002208000	3000/3150	230-1-50/60	514	1219	347	890-930	1100	75

AC / AIR-CONDITIONERS

TOP MOUNTED AIR-CONDITIONERS

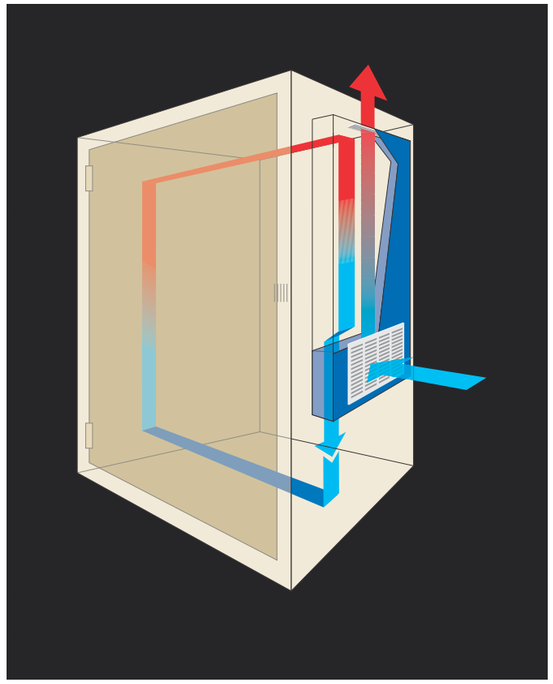


- 230 V products are in stock. Please contact our customer service for 115V or 400V product demands.
- Please contact our customer service for your UL version product demands.

			AIR CONDITIONER SIZES (mm)					
PRODUCT CODE	COOLING CAPACITY (W)	POWER SUPPLY V-ph-Hz	WIDTH	HEIGHT	DEPTH	FAN FLOW (m^3/h)	POWER CONSUMPTION (W)	WEIGHT Kg
ETE20002207000	2000	230-1-50/60	600	450	400	860	1200	51.5
ETE41002207000	3800	230-1-50/60	800	480	450	1450	2000	76.5

AC / AIR-CONDITIONERS

WALL-MOUNTED OUTDOOR AIR-CONDITIONERS

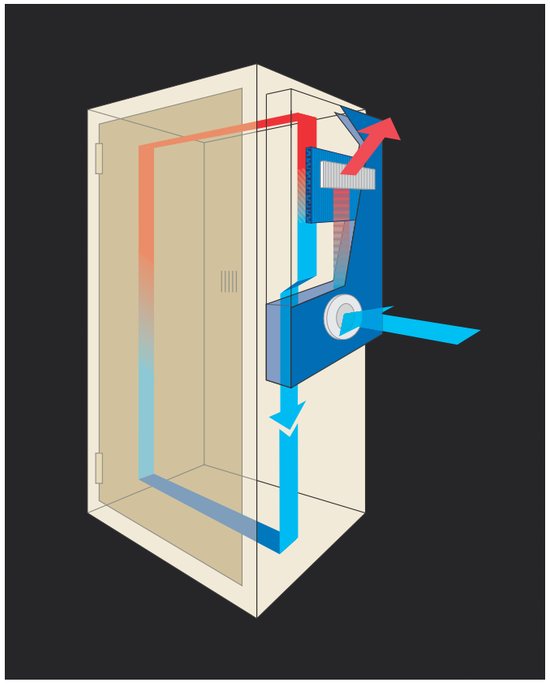


- 230V products are in stock. Please contact our customer service for 115V or 400V product demands.

PRODUCT CODE	COOLING CAPACITY (W)	POWER SUPPLY V-ph-Hz	AIR CONDITIONER SIZES (mm) WIDTH	HEIGHT	DEPTH	FAN FLOW (m^3/h)	POWER CONSUMPTION (W)	WEIGHT Kg
CVO08002208000	850/900	230-1-50/60	308	634	221	340-356	430	26
CVO15002208000	1500/1600	230-1-50/60	409	934	244	540-580	630	42
CVO20002208000	2100/2200	230-1-50/60	409	934	244	540-580	980	44
CVO40002208000	4000/4100	230-1-50/60	508	1234	375	1730-1950	1640	81

HEAT EXCHANGERS

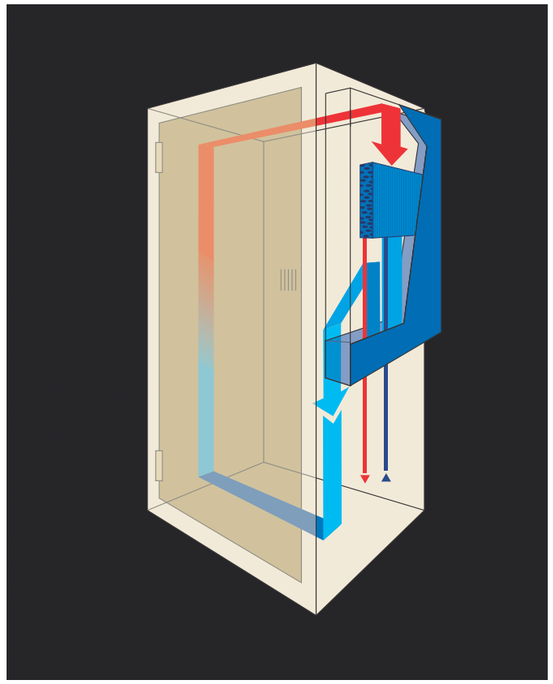
AIR / AIR HEAT EXCHANGERS (INDOOR)



PRODUCT CODE	SPECIFIC HEAT TRANSMISSION (W/K)	POWER SUPPLY V-ph-Hz	AIR CONDITIONER SIZES (mm) WIDTH	HEIGHT	DEPTH	FAN FLOW (m^3/h)	POWER CONSUMPTION (W)	WEIGHT Kg
XVA3500320	35	230-1-50/60	252	780	86	575	160	7,5
XVA8000320	80	230-1-50/60	311	1250	106	860	170	20

HEAT EXCHANGERS

AIR / WATER HEAT EXCHANGERS (INDOOR)



PRODUCT CODE	COOLING CAPACITY (W)	POWER SUPPLY V-ph-Hz	AIR CONDITIONER SIZES (mm) WIDTH	HEIGHT	DEPTH	FAN FLOW (m^3/h)	POWER CONSUMPTION (W)	WEIGHT Kg
EXW1500220	2200	230-1-50/60	400	925	205	330	575	20
EXW5000220	6700	230-1-50/60	501	1101	300	1450	215	39
EXWA500220	17500	230-1-50/60	800	2000	600	2365	170	90
EXWB000220	25000	230-1-50/60	800	2000	600	4730	340	95

HEATERS

ENCLOSURE HEATERS

Heater device : PTC semi-conductive

Heating body : Eloxal aliminium profile

Body temperature : 75-130 °C

IP Rate : IP20

Combination : with two 0,75- 1,50m^2 screw terminal.

- 110-230 V AC/DC
- In line with the CE norms.
- Mounting on 35mm DIN rail with a clip-on.

PRODUCT CODE	POWER (W)	BODY HEAT	HEATER SIZE (mm) WIDTH	HEIGHT	DEPTH
984.100	20	85	82	65	42
984.200	30	85	82	75	42
984.300	50	85	82	85	42
984.400	75	125	82	105	42
984.500	100	125	82	120	42
984.600	125	125	82	150	42
984.700	150	125	82	190	42

HEATERS

ENCLOSURE HEATERS WITH FAN

Heater device : PTC semi-conductive

Heating body : Eloxal aliminium profile

Body temperature : 120 °C

IP Rate : IP20

Combination : with 2,5mm² screw terminal.

- 110-230 V AC/DC
- In line with the CE norms.
- Mounting on 35mm DIN rail with a clip-on.

PRODUCT CODE	POWER (W)	BODY HEAT	HEATER SIZE (mm)		
			WIDTH	HEIGHT	DEPTH
984.101	300-600	120	82	180	110

THERMAL CONTROL PRODUCTS

FAN THERMOSTATE

Sensor device : Bimetallic thermostate

IP Rate : IP20

Product Code : **983.011** (1 pcs)

- In line with the CE norms.
- Mounting on 35mm DIN rail.
- 0,75 - 1,50 mm2 combination
- Normally opened switch (NO)
- 110-230 V AC/DC 10A

HEATER THERMOSTATE

Sensor device : Bimetallic thermostate

IP Rate : IP20

Product Code : **983.012** (1 pcs)

- In line with the CE norms.
- Mounting on 35mm DIN rail.
- 0,75 - 1,50 mm2 combination
- Normally closed switch (NC)
- 110-230 V AC/DC 10A

HYGROSTAT

Sensor device : Bimetallic thermostate

IP Rate : IP20

Product Code : **983.013** (1 pcs)

- In line with the CE norms.
- Mounting on 35mm DIN rail.
- 2,5mm2 combination.
- Both open and closed switch (NO/NC)
- For simultaneous cooling and heating applications.
- 110-230 V AC/DC