

“Cool down and safeguard your system”



◆ *Panel Air conditioner* ◆ *Coolant chiller* ◆ *Heat exchanger*

Panel Air Conditioner

Panel Air Conditioner

For CNC/ Electronic panels

Zapp Cool offers panel air conditioners. It provides the machine tool industry a highly dependable and quantitative atmosphere. Closed loop cooling system will cool the internal cabinet air and isolate dirty ambient air entering into the cabinet. It has a microprocessor controller, which displays the enclosure temperature and its working condition. Zapp Cool offers face mount, top mount and ductable models in various sizes and performance capabilities. Maintains steady air conditioned cooling within the recommended operating temperature of the panel.

Applications

- ◆ CNC Machine Panel
- ◆ Control System Panel
- ◆ Telecommunication Panel
- ◆ Drive/Robot System Panel

Features

- ◆ Units use environmentally safe refrigerants
- ◆ 100% Functionally tested
- ◆ Condensate at bottom
- ◆ Easy component access and filter change
- ◆ Powder coated grey
- ◆ Micro processor controller

Optional Features

- ◆ Alarm output
- ◆ Special Double Filter
- ◆ Condensate container
- ◆ Non cycle capacity regulator
- ◆ Condensate Evaporator

Model Selection

PAC 135 F 00

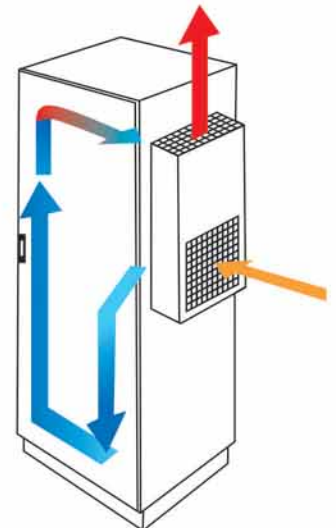
Panel Air Conditioner — P A C

Cooling Capacity Kcal /Hr.
Ex.135 means
135x10=1350 Kcal /Hr. — 1 3 5

F - Face Mount
D - Ductable
T - Top Mount — F

00 - Advanced
75 - Economical
80 - Alarm Signal — 0 0

Typical Installation



PAC Econo Series

PAC Econo Series designed for small panels, economical while retaining the quality.

Mounting : Face and Side. Application : Operating panel, Small CNC turning centers, Gas cutting machine



S.No	Model	PAC 045F 75	PAC 060F 75	PAC 090F 75
1	Capacity - Kcal / Hr	450	600	900
2	Capacity - Watts	525	700	1050
3	Power – input	1Ø- 230V - 50Hz		
4	Power – Watts	400	450	750
5	Refrigerant	R134a		
6	Dimension - mm(LBH)	335x260x450		370x270x655
7	Weight - Kg	22	23	33

PAC Face Series

PAC Face Series tall boy design offers good air circulation in the control panel.

Mounting : Face and side. *Application* : VMC, HMC and special machine panel.

S.No	Model	PAC 060F	PAC 090F	PAC 135F	PAC 200F	PAC 300F
1	Capacity - Kcal / Hr	600	900	1350	2000	3000
2	Capacity - Watts	700	1050	1575	2325	3500
3	Power - input	1Ø- 230V -50Hz				
4	Power - Watts	450	750	900	1400	1750
5	Refrigerant	134a			R22	
6	Dimension - mm (LBH)	350x250 x550	420x225x1000		420x330x1000	
7	Weight - Kg	25	36	42	60	68



PAC Duct Series

PAC Duct Series are used in panels, where there is no space to fix face mountable models.

Mounting : Standalone –air inlet and outlet duct mouth with panel.

Application : CNC plano machine and special machine panels

S.No	Model	PAC 060D	PAC 090D	PAC 135D	PAC 200D	PAC 300D
1	Capacity - Kcal / Hr	600	900	1350	2000	3000
2	Capacity - Watts	700	1050	1575	2325	3500
3	Power - input	1Ø- 220V - 50Hz				
4	Power - Watts	450	750	900	1400	1750
5	Refrigerant	R134a			R22	
6	Dimension - mm(LBH)	370x350x650	370x370x755	420x375x1100	420x450x1100	
7	Weight - Kg	35	46	52	70	78
8	Duct - mm	75	100	100	150	150



PAC Top Series

PAC Top Series units are mounted on top of the panel and it discharges the heat to the top.

Mounting : Top side. *Application* : CNC spring forming machine, CNC gas cutting machine, and textile machineries.

S.No	Model	PAC 060T	PAC 090T	PAC 135T	PAC300T	
1	Capacity - Kcal / Hr	600	900	1350	3000	
2	Capacity - Watts	700	1050	1575	3500	
3	Power - input	1Ø- 230V-50Hz				
4	Power - Watts	450	750	900	1750	
5	Refrigerant	R134a			R22	
6	Dimension - mm(LBH)	500x310x300	650x550x310		1100x710x550	
7	Weight - Kg	25	30	35	45	



Environment Friendly Chiller

Environment Friendly Chiller

For Process / Machine Cooling

Zapp Cool Package Chillers are compact in size and mounted on a heavy base made out of MS Sheets. Completely assembled at the factory including all the inter connecting pipes. The units are cleaned by dry air, pressure tested by nitrogen, properly evacuated and gas charged. Zapp Cool environmental friendly chiller will be the choice for heavy industrial applications. The control panel has an unique built in failure detection system for easy fault finding.

Applications

- ◆ Water / Coolant / Oil Cooling
- ◆ Precision Component Machining
- ◆ Plastic / Aluminum Mould Cooling.
- ◆ Treatment Process Cooling.

Features

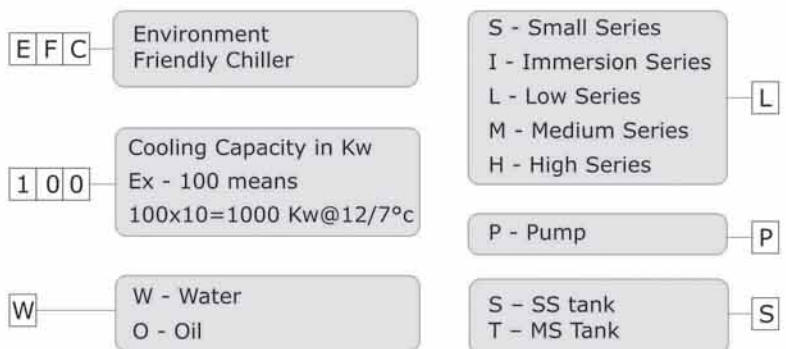
- ◆ Micro processor Controller
- ◆ Environment friendly Refrigerant used.
- ◆ Wide Range to suit application.
- ◆ Colour Powder Coated Grey.
- ◆ Wheel Mounted for easy mobility.

Optional Features

- ◆ MS / SS Inbuilt tank.
- ◆ Input Pump
- ◆ Alarm output for external connection.
- ◆ Non cyclic Capacity Regulator.

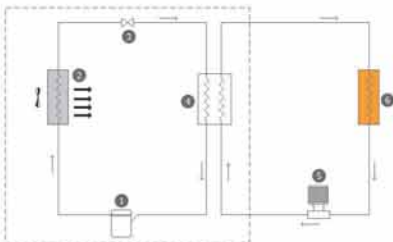
Model Selection

EFC L 100 W P S



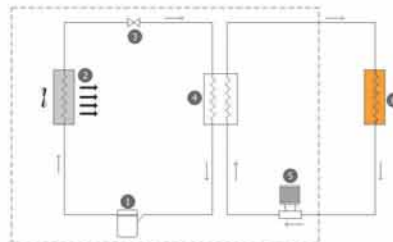
TYPICAL INSTALLATION

CHILLER ALONE

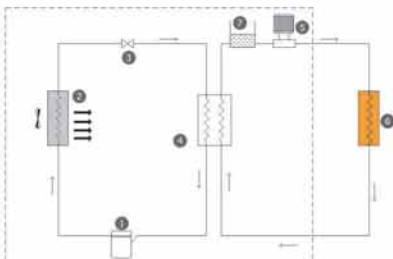


A typical coolant chiller without tank and / or pump connected to a continuous cooling system.

CHILLER WITH PUMP

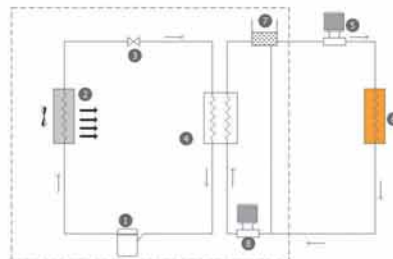


CHILLER WITH PUMP AND TANK



Single circuit system with buffer tank and pump equipment which helps for an accurate temperature control

CHILLER WITH TANK AND PUMP - DUAL CIRCUIT



Dual-circuit system with pump and tank equipment for various upstream applications. Secondary pump can be variably adapted for coolant volume and head.

- ① COMPRESSOR
- ② CONDENSOR
- ③ EXPANSION VALVE
- ④ EVAPORATOR
- ⑤ PUMP
- ⑥ CUSTOMER LOAD
- ⑦ TANK
- ⑧ SECONDARY PUMP

EFC – S Series

EFC – S Series is specially developed to cool and maintain the spindle oil and/or hydraulic oil temperature. It improves processing accuracy of the machine by maintaining oil viscosity and lubrication. It also extends the machine life and minimises rejection.

S.No	Model	EFCS007
1.	Capacity - Kcal / Hr	900
2.	Capacity - Watts	1050
3.	Input Power	1Ø - 220V - 50Hz
4.	Total Power - watts	1250
5.	Tank - Litres	25R
6.	Refrigerant	R134a
7.	Size - mm (LBH)	370x450x840
8.	Weight - Kg	40



EFC - I Series

EFC - I Series Immersion chiller is used for cutting oil, power pack oil & die water cooling. It increases the accuracy of the tool and extends the life. No impurities or metal clog interferes with the cooling and it is very easy to clean the coil

S.No	Model	EFCL 011	EFCL 018	EFCL 025
1	Capacity - Kcal / Hr	1350	2200	3000
2	Capacity - Watts	1570	2570	3500
3	Input Power	1Ø - 220V - 50Hz		
4	Total Power - watts	1100	1500	2000
5	Tank- Litres	50	50	50
6	Refrigerant	R22		
7	Size - mm (LBH)	370x450x1200		
8	Weight - Kg	58	65	75



EFC – L Series

EFC – L Series maintains constant coolant temperature that ensures the quality of EDM process. High pressure pump used in circulation ensures system operation stability. Applications – EDM wire cutting machine, die mould injection machine, ultrasonic machine, etc.,

S.No	Model	EFCL 037	EFCL 050
1	Capacity - Kcal / Hr	4500	6000
2	Capacity - Watts	5200	7000
3	Input Power	3Ø - 415V - 50Hz	
4	Total Power - watts	2750	3500
5	Tank- Litres	100	100
6	Refrigerant	R22	
7	Size - mm (LBH)	650 x 700 x 1450	
8	Weight - Kg	175	175



Environment Friendly Chiller

EFC - L Series

S.No	Model	EFCL 070	EFCL 100	EFCL 125
1	Capacity - Kcal / Hr	9000	12000	15000
2	Capacity - Watts	10400	14000	17500
3	Input Power	3Ø - 415V - 50Hz		
4	Total Power - watts	5250	7500	8250
5	Tank- Litres	100	100	100
6	Refrigerant	R22		
7	Size - mm (LBH)	1000x800x1300		
8	Weight - Kg	225	250	300



EFC - M Series

EFC - M Series specially designed plate heat exchanger ensures a high flow rate for rapid cooling requirements like punching and shearing application. It ensures a constant temperature of the coolant in heavy laser, broach machine and high cycle cooling machine.

S.No	Model	EFCM 135	EFCM 200
1	Capacity - Kcal / Hr	16500	24900
2	Capacity - Watts	20000	30000
3	Input Power	3Ø - 415V - 50Hz	
4	Total Power - watts	8500	11000
5	Refrigerant	R22	
6	Size - mm (LBH)	1350 x 540 x 1330	
7	Weight - Kg	350	400



EFC - H Series

EFC - H Series higher capacity chillers are using scroll technology compressor with shell and tube heat exchanger in modular fashion. It is used for RF valve cooling, chemical process and in central AC plant

S.No	Model	EFCH 350	EFCH 840	EFCH 1225
1	Capacity - Kcal / Hr	30000	72000	108000
2	Capacity - KW	35	84	125.5
3	Input Power	3Ø - 415V - 50Hz		
4	Total Power - KW	14.5	30	45
5	Refrigerant	R22		
6	Size - mm (LBH)	1775	2285	2285
		935	1380	1380
7	Weight - Kg	1505	1985	1985
		625	1050	1250



Heat Exchanger

Air to Air heat Exchanger

Zapp Cool air to air heat exchanger can be used, when the external temperature is lower than the required maximum internal temperature. Steel sheet frame of treated powder coat with aluminum heat core and efficient radial fan makes trouble free operation possible for many years.



Model	AAH050
Capacity - Watts/°C	50
Power Input	1Ø - 220V - 50Hz
Power - Watts	120
Weight - Kg	12
Dimension - MM(LBH)	315x90x780

Air to Oil heat Exchanger

Zapp Cool has high efficient bullet expanded copper tube aluminum fin coolers for cooling a wide variety of oils with ambient air. Capable of cooling multiple circuits in a single cooler.



Model	AAC 135	AAC300
Capacity - Kcal/hr	1350	3000
In/Out Size	½" BSP	1" BSP
Input power	1Ø - 220V - 50Hz	
Fan	200Watts	
Dimension - MM (LBH)	760x360x500	

Water to Oil heat Exchanger

Zapp Cool Oil Coolers are suitable for heat transfer fluids, lubricating oil, power pack oil and other process coolants. Models available in wide range (4" to 10") shell diameter suitable for load 1500Kcal/Hr to 75000 Kcal/hr. (2Hp to 100Hp)



Customised Heat exchanger

Zapp Cool brand of customised heat exchangers are designed, developed and manufactured to our customer's specifications. We listen to our customer and personally work with their project team, depending on the complexity. Prototypes can be made in committed time frame. We have full system testing capabilities at our works.



Accessories

Panel Dust Filter

Zapp Cool panel dust filter with fan is a simple and cost effective solution for enclosure cooling. Simple and easy clip on mounting frame made out of ABS gives better life.



Model	PDF/PFF 205	PDF/PFF255
Size	205 x 205	255 x 255
Fan	4"	6"
Power	1Ø - 220v-50Hz	

Filter net with frame

Practically Panel Coolers used in a dusty environment, needs frequent cleaning of filters. Zapp Cool innovative filter net gives a long life compared to an ordinary filter.



Filter Mat

This chopped-fibre mat is used as a filter for the panel cooler. It is a reliable filtering media and filters all type of dust above 10µm size.



Panel Temperature Controller

Zapp Cool panel temperature indicator cum controller is practically suitable for controlling fan filter unit, heater and heat exchanger. It can be used for monitoring panel temperature.



Fan

Zapp Cool offers a wide range of axial fans, motorized impellers, packaged blowers, centrifugal blowers and fan trays for various applications.



The life expectancy of components is reduced to 50% for every 10° C raise in normal working temperature.

The aim of many engineers are the perfect conversion of energy from one form to other. But loss of energy will always occur in most cases in the form of heat. This heat must be removed, so that, we can protect the sensitive components. In most applications natural heat dissipation is not sufficient, so coolers are used to increase the heat dissipation.

Zapp Cool offers a wide range of cooling solution for various applications. Zapp Cool products are working successfully in CNC machine tool industry, robotics, automobile, food and chemical sector.

Zapp Cool strongly believes that the customer should gain the greatest benefit from our experience and our commitment to total quality.

"Cool down and safeguard your system"

Emmppe Associates

2/368A, Irugur Road, Chinniampalayam,
Coimbatore - 641062, Tamil Nadu, India
Tel : 91 422 2629655, 2629177
Fax : 91 422 2629930
E-mail : cooler@emmppe.com,
Web : www.emmppe.com