Become energy efficient with Frico's intelligent fan heater

Champ is a quiet fan heater with numerous energy-saving features, for water connection. Champ is ideal for applications where fan heaters are commonly used, such as industrial and commercial buildings, as well as environments with strict noise requirements. Water-heated products can effectively recover residual heat, which reduces energy losses and optimizes energy use. Champ is specifically designed to make maximum use of residual heat.

Cutting costs, boosting efficiency

Champ fan heater offers features such as return water temperature control and a modular actuator, effectively minimizing energy losses and ensuring economical operation.

Intelligent fan heater

With its advanced features, Champ provides fully automatic room heating adaptable to each unique area of use. In this way, optimized energy savings and comfort are enabled with minimal effort. Very low sound level and optimal settings are made possible by the EC motor's stepless control of the air flow.

Easy installation and comfort

Champ fan heater offers easy installation and comes with cable and plug. It is compatible with various accessories and can be rotated to locate pipes on either the left or the right side. This ensures effortless placement and facilitates a straightforward and flexible installation.

Product specifications

- Mounted on wall or ceiling. Water connection .
- The fan heater is equipped with an EC motor that is up to 50% more energy efficient than a traditional AC motor.
- Automatic speed adjustment to minimize noise and maximize heat.
- Possibility of heat blocking to avoid unnecessary heating.
- Intended for water temperatures up to +150 °C and 10 bar in standard design.
- Must be supplemented with FC control system and VPFC valve system of your choice.

Design and specifications are subject to change without notice.

Champ

Fan heater Champ (IP44) - Water heat ⬤

Voltage motor: 230V

Item number	Type	Heat output*[1,2] [kW]	Airflow*[2] [m³/h]	Sound power*[3] [dB(A)]	Sound pressure [dB(A)]*[2,4]	Δt*[1,2,5] [°C]	Water volume [l]*[6]	Air throw [m]*[2,7]	Amperage*[2] [A]	Weight [kg]
333750	CPF02	5,5/14	400/1480	68	18/49	40/18	1,3	3/10	0,05/0,48	20
333751	CPF12	7/17	600/2400	72	21/52	34/21	1,5	4/16	0,07/0,68	24
333752	CPF22	9,1/25	700/3050	71	22/54	38/24	2,7	7/18	0,08/0,67	34
333753	CPF32	19/50	1500/6450	77	22/58	37/23	3,8	9/30	0,16/1,43	55
333755	CPF33	21/64	1380/5950	77	22/58	45/32	5,2	8/28	0,16/1,48	59

*[1]) Applicable at water temperature 80/60 °C, air temperature, in +15 °C.
*[2]) Applicable at control signal 20%/80%.
*[3]) Sound power (L_{WA}) measurements according to ISO 27327-2: 2014, Installation type E.
*[4]) Sound pressure (L_{pA}). Conditions: Distance to the unit 5 metres. Directional factor: 2. Equivalent absorption area: 200 m².
*[5]) Δt = temperature rise of passing air.
*[6]) Water volume inside water coil.
*[7]) The air throw data is valid at room temperature. The air throw is defined as the distance in a straight angle from the fan heater to the point where the average air speed has dropped to 0,5 m/s.

Approved for 220V/1ph/60Hz. Product performance for 220V/1ph/60Hz will differ from stated data.

Manufactured in Sweden with a corrosion proof housing made of hot zinc-plate and powder coated steel panels. Colour: white, RAL 9016. Aluminium louvres.

Residual heat
Industrial residual heat, also referred to as *industrial waste heat,* is residual heat from industrial processes. Making better use of residual heat reduces the need to use fossil fuels and can replace some electricity generation. Champ is designed to make optimal use of this kind of heat!

FC Control system

This fan heater comes with an integrated PC-board and must be supplemented with the intelligent control system FC of your choice. FC enables many smart and automated functions, including return water temperature control, which minimizes energy losses and provides low operating costs. There are four different packages to choose from, depending on your requirements.

FC Direct	**FC Smart**	**FC Pro**	**FC Building - BMS**
Entry level	*FC Direct +*	*FC Direct + FC Smart +*	*FC Direct +*
• Automatic fan speed control	• Control via app (Bluetooth)	• Automatic heat blocking	• 0-10V, potential free contact or Modbus
• Calendar function	• Wireless sensors possible		• Automatic heat blocking*
• Built-in temperature sensor	• Adjustable calendar function		• Heat and fan settings
• Outlet temperature limit	• Away, Boost and Presence function		• Alarm indication
	• Zone possibility		• Read values
	• Enhanced water control possible		• Enhanced water control possible
			* Requires outdoor temp signal

FC Direct

Entry level control system for a great start. The fan speed is automatically adjusted in auto-mode, achieving the right amount of heat with the lowest possible speed and sound level. With the calender function, you can choose periods of comfort and reduced mode. It is possible to limit the outlet temperature. The control panel has a built-in temperature sensor, which is used for control when external sensors are not used.

FC Smart

Second level control system for full freedom. FC Smart comes with all features from FC Direct plus additional energy saving features and the possibility of app control (Bluetooth). The app gives you access to all functions in the system, allowing you to set it up exactly the way you want it. It also enables you to create different zones with different settings in a larger system. Choose between several modes for heating only when needed, such as Away, Boost and Presence. The app FRICO CONTROL is available for both iOS and Android.

FC Pro

Third level control system for maximum savings. FC Pro comes with all features from FC Direct and FC Smart plus additional automatic energy saving features. The heat blocking function prevents unnecessary heating, using the wireless outdoor temperature sensor.

FC Building - BMS system

Comprehensive control system for buildings, with the option to control via 0-10V, potential free contact (e.g. a relay) and/or Modbus RTU (RS485). FC Building enables you to receive product information status and alarms. Modbus allows for full use of all the energy saving features within the control system.

Item number	Type	Description
74688	**FCDF**	FC Direct, first level control system
74689	**FCSF**	FC Smart, second level control system
74690	**FCPF**	FC Pro, third level control system
74691	**FCBF**	FC Building - BMS system

FC Control system helps to create many smart and energy saving features. In addition to our four packages, components can be added to expand and customize the system. With the app levels (FC Smart and FC Pro) it is also possible to create and control different zones. Each added zone needs to be equipped with one FC Direct and can be designed to fit its specific needs by adding different accessories. Air curtains and fan heaters with FC can be installed in separate zones in the same system.

FC Direct, control kit
Control panel for fan and heat and 5 m communication cable. Used for additional zones with FC Smart and FC Pro. IP44.

FCRTX, external room temperature sensor
For reading of the room temperature on another location than that of the control panel, incl. 10 m sensor cable. IP20.

FCOTX, outdoor temperature sensor
Reading the outdoor temperature, incl. 10 m sensor cable. Enables heat blocking. IP44.

FCLAP, local access point
Local access point for extra wireless sensors (when operating more than 8 sensors) and extended range for wireless sensors or app control (Bluetooth), incl. 10 m communication cable. IP44.

FCSC/FCBC, cable
FCSC Sensor cable available in 10 or 25 m for extra length. FCBC Communication cable for additional products within the same zone, available in 5, 10 or 25 m.

FCTXRF, indoor/outdoor wireless sensor
Indoor/outdoor wireless sensor with same features as FCRTX and FCOTX. The set up as outdoor or indoor sensor is made by a switch inside the sensor. Range up to 50 m. Battery life: 3-5 years (2xAAA). IP44.

FCWTA, return water temperature sensor
Enables control of return water temperature which provides reduced energy consumption and extended frost protection.

FC Direct

Content
- FCCF control panel
- FCBC05

FC Smart

Content
- FCCF control panel
- FCBC05
- FCLAP

FC Pro

Content
- FCCF control panel
- FCBC05
- FCLAP
- FCTXRF

FC Building - BMS

Content
- FCCF control panel
- FCBC10
- FCBAP building access point

Item number	Type	Description	Dimensions
74688	**FCDF**	FC Direct, first level control system	89x89x26 mm (FCCF)
74694	**FCRTX**	External room temperature sensor	39x39x23 mm
74695	**FCOTX**	Outdoor temperature sensor	39x39x23 mm
74699	**FCLAP**	Local access point for extra wireless sensors and extended range	89x89x26 mm
74718	**FCBC05**	Extra communication cable, 5 m	5 m
74719	**FCBC10**	Extra communication cable, 10 m	10 m
74720	**FCBC25**	Extra communication cable, 25 m	25 m
74721	**FCSC10**	Extra sensor cable, 10 m	10 m
74722	**FCSC25**	Extra sensor cable, 25 m	25 m
74703	**FCTXRF**	Indoor/outdoor wireless sensor (for FC Smart, FC Pro)	89x89x26 mm
74702	**FCWTA**	Return water temperature sensor	
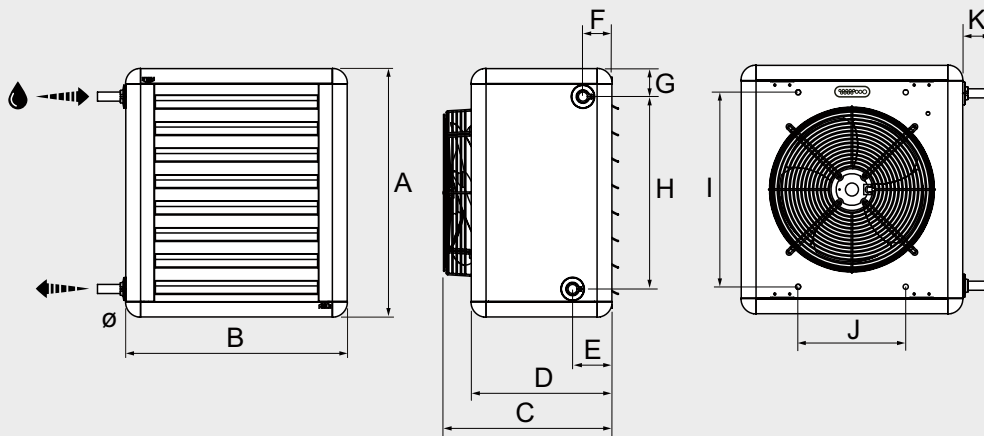
	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]	J [mm]	K [mm]	Ø [mm]
CPF02	525	515	430	320	95	70	70	390	405	260	70	22
CPF12	600	535	425	340	95	70	70	465	470	260	70	22
CPF22	725	680	405	370	100	70	70	585	580	400	75	28
CPF32	850	820	550	450	100	70	70	710	700	530	75	28
CPF33	850	820	550	450	100	70	70	710	700	530	75	28

Mounting brackets, SWB
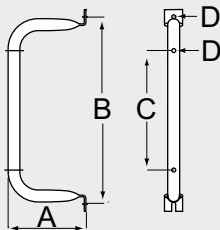
	A [mm]	B [mm]	C [mm]	D [mm]
SWB0	195	405	235	10
SWB1	195	470	300	10
SWB2	250	580	410	10
SWB3	335	700	530	10

Filter section, SWF
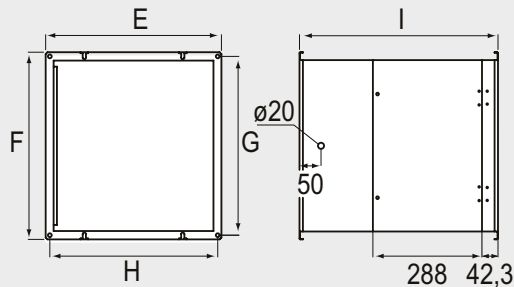
	E [mm]	F [mm]	G [mm]	H [mm]	I [mm]
SWF1	466	492	470	444	524
SWF2	616	602	580	594	524
SWF3	746	722	700	724	524

Return air intake, SWD
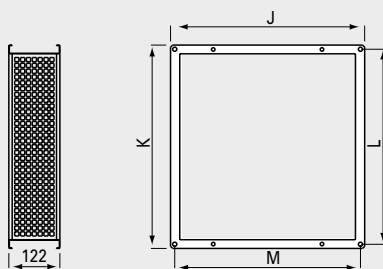
	J [mm]	K [mm]	L [mm]	M [mm]
SWD1	464	490	470	444
SWD2	614	600	580	594
SWD3	676	720	700	656

Extra air director SWLR
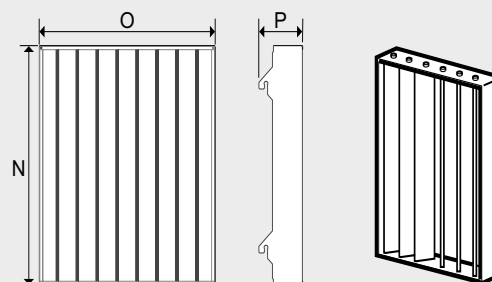
	N [mm]	O [mm]	P [mm]
SWLR1	527	398	136
SWLR2	652	547	136
SWLR3	779	676	136

Champ

1) Fan heater
2) Mounting brackets SWB
3) Basic filter SWFTN
4) Filter section SWF
5) Return air intake SWD
6) Extra air director SWLR
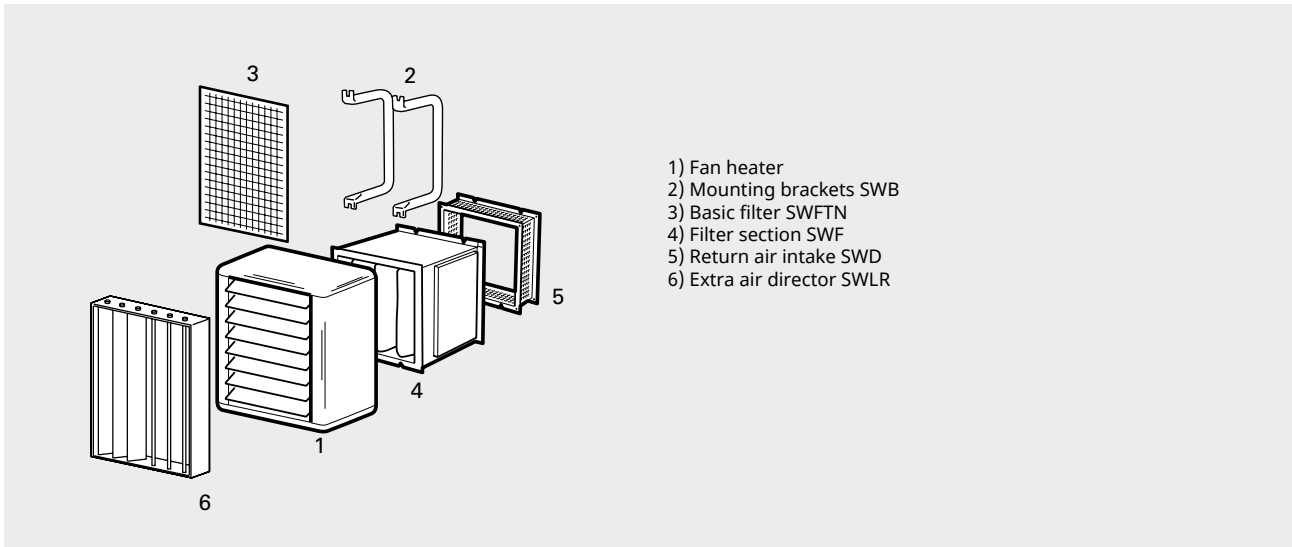
Item number	Type	Description	CPF02	CPF12	CPF22	CPF32/33
17577	SWB0	Mounting brackets	•			
17578	SWB1	Mounting brackets		•		
17579	SWB2	Mounting brackets			•	
17580	SWB3	Mounting brackets				•
10113	SWF1	Filter section		•		
10115	SWF2	Filter section			•	
10117	SWF3	Filter section				•
10099	SWD1	Return air intake		•		
10102	SWD2	Return air intake			•	
10103	SWD3	Return air intake				•
10108	SWEF1	Extra filter cassette		•		
10110	SWEF2	Extra filter cassette			•	
10111	SWEF3	Extra filter cassette				•
111307	SWFTN02	Basic filter	•			
111300	SWFTN1	Basic filter		•		
111301	SWFTN2	Basic filter			•	
111302	SWFTN3	Basic filter				•
10132	SWLR1	Extra air director		•		
10133	SWLR2	Extra air director			•	
10134	SWLR3	Extra air director				•

Champp

Accessories Champ 02-33

SWB, mounting brackets
Brackets for installing the fan heater on the wall or the ceiling. Consist of two brackets and a set of screws for fixing them on the fan heater. The brackets are made of grey powder coated steel tubes.

SWFTN, basic filter
The basic filter provides basic protection for the fan heater's heating coil. The filter is easily accessible from both the top and bottom of the unit for installation and cleaning. The filter can be reused after cleaning.

Accessories Champ 12-33

SWF   SWEF

SWF, filter section
The section filters the return air from particles that might reduce the performance and reliability of the fan heater. It is equipped with a filter cassette of disposable deep-pleated bagfilters of synthetic material. Filterclass G85 (EU3). Extra filter cassettes SWEF are available as accessories. The section is made of hot zinc-plate and white powder coated steel panels.
   When the filter section is used, it must be equipped with the return air intake SWD for air inlet when mounted directly against a wall or ceiling.
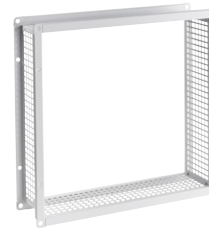
SWD, return air intake
The return air intake ensures air inlet when the filter section SWF is used, mounted directly against a wall or ceiling. The return air intake is mounted together with the filter section with screws or guides. The intake is made of hot zinc-plate and white powder coated steel panels.

SWEF, extra filtercassette
Replacement filter for filter section SWF.

SWLR, extra air director
The extra air director complements the air director already present on the fan heater, which directs the air vertically. The extra air director makes it possible to direct the air sideways. It is mounted to the unit by hooking it onto the existing air director. The frame is made of hot zinc-plate and white powder coated steel panels, with individually adjustable louvres in anodised aluminium.

3 SWFTN   2 SWB
5 SWD
4 SWF
1
6 SWLR

Champp
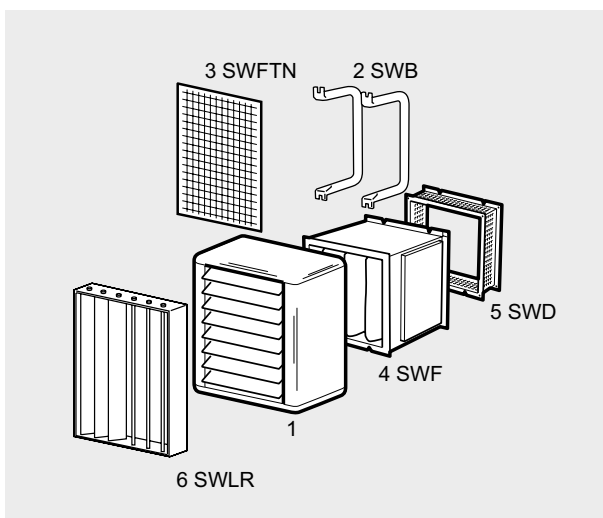
Mounting and connection

Mounting
The fan heaters can be permanently mounted on a wall for horizontal air distribution, or on the ceiling for vertical air distribution. Mounting brackets are extra. If the filter section SWF is used, there is no need for brackets.

Connection of heating coil
By turning the fan heater, pipe connections are possible on both sides. The heating coil is equipped with aluminum fins and copper pipes with smooth connections, for soldering or compression fittings. An air valve should be connected at a high point in the pipe system. Vent- and drain valves are not included. For correct inlet and outlet connection of the heating coil, see dimension drawing.

Connection
The Champ fan heater is intended for permanent installation. Champ is fitted with a 1.8 m cable with plug for connection to earthed outlet sockets.

Champ is prepared for FC control system, available in several packages for different requirements. The FC packages are ordered separately. The fan heater has an integrated PC board which is connected to the selected external control system FC. Communication and sensor cables are connected to the PC board via grommets on the back of the unit. The FC PC-board is placed in a box inside the unit.

For wiring diagrams and other technical information, please see the manual and www.frico.net.

min 850 mm

Floor

A

	A [mm]
CPF02	195
CPF12	195
CPF22	250
CPF32/33	335

Minimum distances
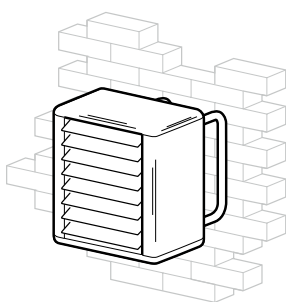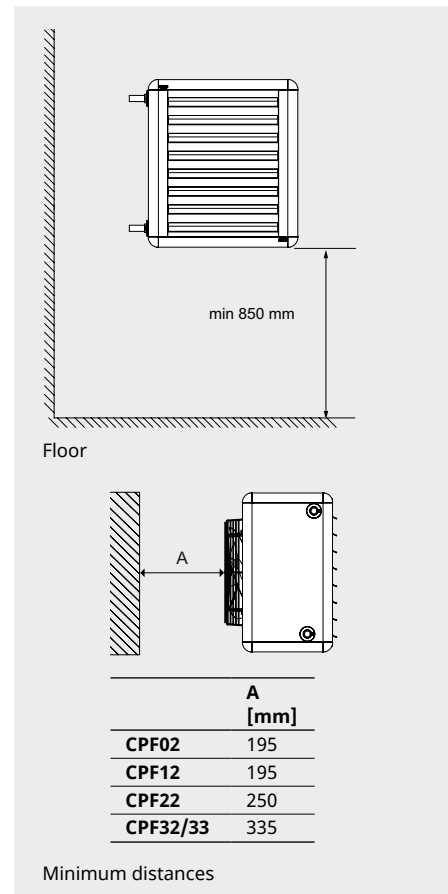
Mounting with brackets
The fan heater is mounted on the wall or the ceiling with mounting brackets SWB. The brackets are ordered separately.
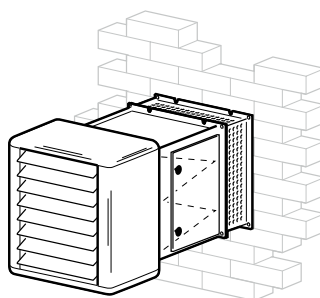
Mounting with the filter section SWF
When the filter section is used, it must be equipped with the return air intake SWD for air inlet when mounted directly against a wall or ceiling. The return air intake is mounted on the wall or ceiling with suitable fasteners.
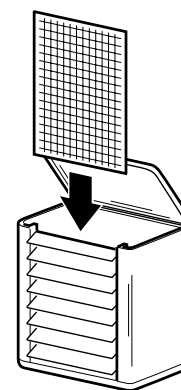
Mounting of the basic filter SWFTN
The fan heater can be provided with a basic filter to protect the water coil. The filter is accessible from both the top and the bottom of the unit.

Water heated units must be supplemented with valves. The valve system controls the water flow and activates maximum heat only when needed. The return water temperature sensor is making sure that as much energy as possible from the water in the coil is used, thus reducing energy consumption.

VPFC, pressure independent and modulating valve system
Two way pressure independent control and adjustment valve with modulating actuator and shut-off valve. UNSG-R: union set with swiveling nut and female thread.

WCK, Water connection kit
Water connection kit containing all necessary couplings and hoses to connect from product to valve system. The water connection kits are intended for valve systems containing a pressure independent control and adjustment valve.

UNSG and ANS, connection kits for valve system
UNSG: union set with swiveling nut and press end.
ANS: adapter nippel set with male thread and press end.

Item number	Type	DN	Flow range l/s
238293	**VPFC15LF**	DN15	0,012-0,068
238294	**VPFC15NF**	DN15	0,024-0,13
238295	**VPFC20**	DN20	0,058-0,32
238296	**VPFC25**	DN25	0,10-0,60
238297	**VPFC32**	DN32	0,22-1,03

Item number	Type	Description	Length
459323	**WCK1**	Water connection kit (Champ 02-12)	1000
459324	**WCK2**	Water connection kit (Champ 02-12)	350
459325	**WCK3**	Water connection kit (Champ 22-33)	800
459326	**WCK4**	Water connection kit (Champ 22-33)	350

Item number	Type	Description	Consists of
333344	**UNSG2015**	Union set G20 x 15mm	2
333345	**UNSG2518**	Union set G25 x 18mm	2
333346	**UNSG2522**	Union set G25 x 22mm	2
333347	**UNSG3228**	Union set G32 x 28mm	2
333348	**UNSG4035**	Union set G40 x 35mm	2
333349	**ANS1515**	Adapter nippel set R15	2
333350	**ANS2018**	Adapter nippel set R20	2
333351	**ANS2022**	Adapter nippel set R20	2
333352	**ANS2528**	Adapter nippel set R25	2
333353	**ANS3235**	Adapter nippel set R32	2