

polartherm oy

AIR HEATING EQUIPMENT



HEAT WHERE YOU NEED IT

CEL
AVIATION
www.contarnex.com



POLARTHERM OY

Polartherm Oy is the leading manufacturer of air heating equipment in Northern Europe. We can guarantee the quality and reliable operation of our products with over 40 years of experience. A major portion of our production is exported. In addition to our home market in Finland, Polartherm has a solid partner and customer base in Northern America, central Europe, Baltic countries and Russia.

Our major customer groups are Defence Industry, Construction, Aviation and Agriculture. Our products are used whenever efficient temporary heating is needed.

POLARTHERM OY

We manufacture all our heating equipment at our two production facilities on the southwest coast of Finland. We also have an assembly facility in the U.S.

Polartherm has equipment certificates for a multiple of markets such as the EU, USA, Canada and Russia, and our quality

assurance system is monitored by several domestic and foreign certification institutes. All products are tailor made to suit every country's demands. Polartherm has its own product development and testing department. We utilize our customers' experience and knowledge of the use of our products as a base for development. The most modern sheet metal working machinery is used to produce parts for our heaters.



HEATERS FOR AVIATION AND DEFENCE

- ☐ Military heaters
- ☐ Airplane ground support heaters



OIL FIRED heaters

- ☐ Polar E
- ☐ Remko VRS
- ☐ Remko Climat
- ☐ Polar Heatmobil



OIL ELECTRIC & LIQUID PROPANE FIRED heaters

- ☐ Polar HC Heat Container
- ☐ Polar S
- ☐ Polar Infra



SOLID FUEL FIRED heaters

- ☐ Airmat
- ☐ Allmat
- ☐ Airmat Combi



WATER TO AIR heaters

- ☐ Polar WH
- ☐ Polar WHT
- ☐ Polar PWW



PORTABLE equipment



STATIONARY equipment





HEATERS FOR AVIATION AND DEFENCE

Polartherm has manufactured portable oil fired heaters for over 50 years. The design and configuration of our military heaters is based on our know how and accumulated experience. Given the set of Customer requirements we modify and combine our proven components and systems to configurate a unit that satisfies those requirements.

Our biggest Military Customer is the United States Air Force. Polartherm is

the Prime Contractor for the most recent large heater contracts. Over 100 units have been delivered since 2000. We have assembly, QA, shipping and of fice facilities in Indiana. Spare part and warranty issues are delt with at our Indiana office, too.

Our military design Shelter Heaters have found use outside the military community as well. They are widely

used in heating temporary housing, field hospitals, etc.

Recently we have broadened our product range to artillery support equipment with our new Polar CLEAR BORE, a system for automatic barrel cleaning and decoppering.

MILITARY HEATERS

POLAR BEAR 130 SHELTER HEATER, NSN 4520-01-521-2076EJ

Bear Shelter Heater was developed for the US Air Force Basic Expeditionary Aerospace Resource BEAR program. The heater matches and exceeds all requirements set forth by the USAF.



- Internal fuel tank
- Skid mounted forklift maneuverable stackable
- Lightweight modular design
- Recirculation type with fresh air mix

NEW GENERATION HEATER NGH-1, NSN 4520-01-482-8571

This heater is the US Air Force's new efficient AGE Aerospace Ground Equipment heater. The first units were delivered in 2000.

Polar		Bear 130	NGH-1
Power	kW	38	115
Air volume	m ³ /h	1 700	2 900
Weight	kg	125	470

 PORTABLE equipment

Thousands of heaters are in use on AFB's all over the world from Alaska to Antarctica, operating to full satisfaction of the users and maintainers around the world.

The yellow units pictured above are some of a fleet of heaters used by the US National Science Foundation on their Antarctic McMurdo Research Station and on the South Pole itself.





AIRPLANE GROUND SUPPORT HEATERS

These heaters make even airplanes purr



Polartherm has produced airplane ground support heaters since 1970. Our product range covers heaters for airplanes from Commuter size to Widebody. The heaters are designed for heating up airplanes and maintaining the temperature during planes' overnight stays at the airport. Heaters are equipped with powerful radial blower heating unit, generator and fuel tank. All heaters can also be operated straight from the electric power network. Heat is produced with either fuel oil or kerosenes. JET A, JET A

Polar		120 HD	GSH-1	GSH-W20
Power	kW	100	115	140
Air volume	m ³ /h	2 500	3 000	5 000
Fan pressure	Pa	1 000	1 200	4 500
Operation time (@100%)	h	10	12	10
Weight	kg	~700	~900	~1 900

PORTABLE equipment

POLAR 120 HD

Polar HD was born as a result of Polartherm's and Finnair's long term cooperation and development. Polar HD and its earlier versions have been in use on airports since 1970 and have proven a very reliable and robust heater. The unit is compact and easy to move by one operator due to its long towbar, single axle design and good balance.



POLAR GSH-1

GSH-1 is Polartherm's latest model of ground support heaters for narrowbody airplanes. GSH-1 utilizes Hatz Silent Pack generator with excellent sound attenuation in comparison with a regular air cooled diesel engine. The heater is very silent to operate. SAS Scandinavian is one of the airlines using Polar GSH-1 model.



POLAR GSH-W20

Polar GSH-W is a heater for widebody aircrafts. Most of GSH-W heaters have been delivered to Russia and the airlines using it include Aeroflot and Transaero. The design of W allows versatile adjustments of air temperature, volume and pressure. The unit can be used for both heating up the aircraft and melting the ice from wheels and turbine blades.





POLAR E - SERIES



AIR HEATERS FOR:

- WAREHOUSES
- SUPERMARKETS
- INDUSTRIAL BUILDINGS
- PUBLIC BUILDINGS
- FARM BUILDINGS
- GREENHOUSES

Air heating with Polar E series heaters is the most economical and easy way to comfortable and versatile heating. With a large selection of accessories, Polar E heaters can be adapted to numerous applications. Directions of both incoming and discharge air can be varied, ducting can be used, controlled fresh air mixing can be used, etc.

Some of the advantages listed:

- low investment costs
- over 90% fuel efficiency

- high versatility
- air circulation ensures even heat distribution
- can be used as a ventilator
- no liquids inside - no risk of freezing
- large variety of sizes

The fuel efficiency of Polar E series is higher than. Efficient radial blowers assure air circulation that will equalize the temperature inside the heated space very fast. The equipment can also be used for ventilation purposes during summer.

If heating is not required, E series heaters can be switched off with no damage to the equipment. There are no freezing materials or components sensitive to low temperatures in the heater. The Polar E series heaters output capacities range from to kilowatts.





Polartherm has manufactured air heaters since 1960. Over 50 years of experience in the design and production of air heaters. Today's design is the result of continuous product development based on long experience and customer feedback.

Polar E		
Power range	kW	25 - 476
Air volume	m ³ /h	2 400 - 27 700
Weight	kg	100 - 1 500

HIGH - CLASS MATERIAL

Only high class mainly domestic material and components such as Oilon burners are used to ensure a high level of quality and minimum maintenance.

EASY TO INSTALL

POLAR E heaters are delivered assembled ready to be installed. Electronic controls can be modified to match specific needs.

VERSATILITY

With the large selection of accessories POLAR E heaters can be adapted to numerous applications. Directions of both incoming and discharge air can be varied. Ducting can be used. Controlled fresh air mixing can be used etc.

HIGH EFFICIENCY

The fuel efficiency of POLAR E series is higher than other heaters. Ambient air is drawn in through the openings in the lower part of the heater and then forced through the burner chamber heat exchanger unit. Heated air is then distributed throughout the building either direct or via ducting. Modern radial blowers are used for quiet operation.

SAFETY

All Polar E models have been approved according to applicable EU directives and standards by testing and approval authorities in Finland. Consult your local fire authorities for local regulations and assembly safety demands.

POLAR E IN PAINTSHOPS

Polar E series heaters are also used in paintshops to accelerate drying of the paint. One of the accessories of Polar E series is automatics for paintshops especially designed for painting process.

With reliable heaters you will sleep better



REMKO VRS - SERIES



Gas heating is a noteworthy option especially when natural gas network is available. Polartherm manufactures stationary Remko VRS series airheaters which have an EU type certification for gas use.

The gas burners used with Remko VRS series heaters are made by Oilon and the

burners work with both liquid propane and natural gas. The power range of the heaters is from 25 to 476 kW and just as Polar E series heaters the VRS heaters are versatile and can be adapted to numerous applications.





- WAREHOUSES
- PARTY TENTS
- CONSTRUCTION SITES
- INDUSTRIAL BUILDINGS
- AIRPLANE HANGARS
- WORKSHOPS
- ETC

Polar Heatmobil HTL 250		
Power range	kW	195
Air volume	m ³ /h	13 350
Fan pressure	Pa	max.450
Weight with fuel tank (empty)	kg	1 100

POLAR HEATMOBIL HTL 250

Polar Heatmobil is a mobile oil fired powerful unit for temporary or long term heating on construction sites, warehouses, industrial buildings, party tents etc. Heating capacity of 195 kW and a large amount of air movement ensure that the unit is sufficient for spaces even over 100 m.

High quality, low noise radial fan enables long air ducting. This unit is specified for max 450 Pa static pressure. Fuel consumption is max 21 litres per hour. External room thermostat optimizes the temperature and fuel consumption.

Standard delivery of the heater unit includes a fuel burner, room thermostat with 10 m cable and fuel wand with 10 m hoses. 200 litre certified fuel tank and air ducts are optional.

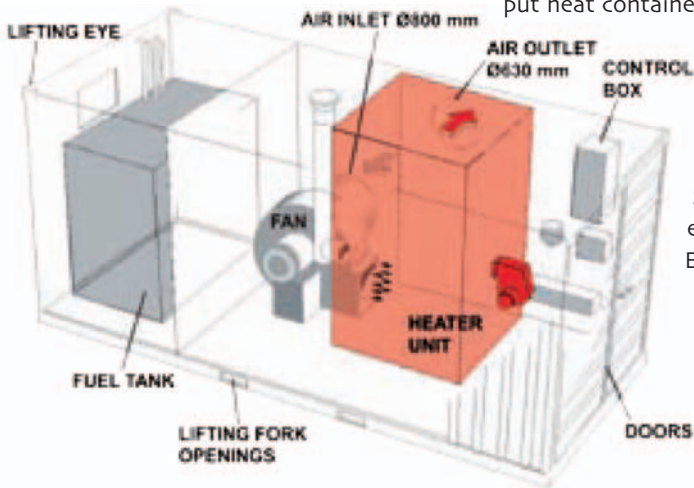
 PORTABLE equipment





POLAR HC 372 HEAT CONTAINER

PORTABLE equipment



Polar HC is a ready to use high output heat container. It brings instant heat to construction sites, warehouses, greenhouses, industrial buildings etc. Standard delivery includes Polar ES oil fired

heater unit, radial fan, kW, litre fuel tank, fuel pre heater, automatic controls and smoke flue. The heater unit is installed inside a foot sea container that protects the equipment. The container can be locked to protect the heater from inappropriate use.

Polar HC 372		
Power range	kW	372
Air volume	m ³ /h	18 000
Fan pressure	Pa	600
Fuel tank	l	3 000

POLAR S2



Polar S infrared radiating heater is designed for object heating. It does not heat the air between the heater and the object.

Polar S2		
Output power	kW	2.0
Weight	kg	6

PORTABLE equipment



POLAR INFRA



Polar Infra L infrared radiating heater is designed for efficient object heating. No heating of the air in between. LPG fired Polar Infra heater is very applicable in spaces with no electric power network. Output power of Polar Infra L is kW and it has a metal construction burner, no ceramics.

Gas regulator and m gas hose are included.

PORTABLE equipment



Polar Infra		
Power range	kW	11.2
Gas consumption	kg/h	0.9
Gas pressure	mbar	50
Weight	kg/h	8

SOLID FUEL FIRED HEATERS

Polartherm solid fuel fired heaters offer cost-effective heat energy from waste wood. The equipment is easy to install. All you need is a smoke flue and an electric socket.

Depending on the model and the quality of the wood one filling of wood will last from 24 to 48 hours.

The burner chambers are made from heat resistant steel and lined with fire bricks.

The heaters are easy to clean. All covers and hatches are equipped with quick latches.

No risk of freezing can be left unused in wintertime if needed.

ALLMAT

STATIONARY equipment

Allmat		
Power, max.	kW	11
Fuel tank capacity	l	50
Room size, max.	m ³	400

Allmat is a cost-effective solid fuel fired heater for farm buildings, livestock shelters, warehouses etc.

The heater is easy and reliable to operate due to automatic blower and heating power adjustment.

Operating time with one filling up to 48 hours.



AIRMAT 20



Solid fuel fired heater designed especially for heating of greenhouses and livestock shelters. Suitable also for larger farm buildings and machinery halls.

Operating time with one filling from 24 to 48 hours.

Airmat 20 is equipped with room thermostat.

STATIONARY equipment

Airmat 20		
Power, max.	kW	27
Fuel tank capacity	l	200
Room size, max.	m ³	900

AIRMAT COMBI

STATIONARY equipment

Airmat combi		
Power, max.	kW	wood 27 oil 35
Fuel tank capacity	l	200
Room size, max.	m ³	wood 900 oil 1 400

Solid fuel and fuel oil fired heater. Changing from solid fuel to fuel oil is easy and fast; install oil burner, turn the operating switch into burner use and the automatic control will do the rest.

Room thermostat included.



POLAR WH AND WHT

Polar WH and WHT mobile water to air heaters are mainly used on construction sites with district heating network. The heaters have an incoming water connection with cam lock coupler. AL Upper connection return has cam lock adapter adjustable valve for circulated water and a bleed screw. The units have an internal frost protector thermostat set at 5°C which stops the fan if temperature is too low. Incoming air filter protects the heat exchanger fins from dust.

Heaters are equipped with wheels and a roll cage for movability. The roll cage

also protects the heaters during transportation. Heat is transferred to outblown air using a heat exchanger with copper pipes and aluminium fins. Heat exchanger is only suitable for hot water not steam.

PORTABLE equipment



Polar WH and WHT		
Power range	kW	25 - 69
Air volume	m ³ /h	2 000 - 4 500
Weight	kg	57 - 150

POLAR PWW

STATIONARY equipment



Polar PWW stationary water to air heaters are used in spaces where circulated water is available like industrial buildings, warehouses, greenhouses etc.

Polar PWW fan heaters are equipped with a quiet direct driven axial fan and adjustable discharge louvers. Heat is transferred to outblown air using heat exchanger with copper pipes and aluminium fins. Heat exchanger is only suitable for hot water not steam.

Power range of Polar PWW heaters is from to kW.

Polar PWW-sarja		
Power, max.	kW	30 - 135 kW
Air volume	m ³ /h	1 500 - 7 670
Water pipe connection	R	1 1/4" - 1 1/2"



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