

Aircraft heaters

Polar GSH-1, 120 HD and Polar GSH-W20

Polartherm has manufactured and marketed aircraft heaters since 1985. Since then we have delivered over 5000 aircraft heaters to both civilian and military customers around the world. Our biggest customer since 1999 has been the US Air Force.

Currently we manufacture 3 models of aircraft heaters for commercial aircrafts: Polar 120 HD and GSH-1 are both designed for heating up narrow body commercial aircrafts whereas Polar GSH-W20 is designed for wide body aircraft heating. Main customers of our aircraft heaters for commercial aircrafts include major airlines and ground handling companies in Northern and Central Europe as well as in Russia.



Polar GSH-1

GSH-1 utilizes Hatz diesel engine and GTS alternator. The heater is equipped with a powerful centrifugal blower, heating unit, generator and fuel tank and in addition it can also be operated straight from the electric power network. GSH-1 has received special thanks from operators for its very simple and reliable braking system: When the tow bar is lifted to an upright position the breaks turn on preventing the unit from moving anywhere while the heater is on and the air outlet hose is attached to the aircraft.

We can also design the products to meet various customers' specifications. GSH-1 can e.g be delivered without wheels allowing mounting the heater on a truck. Another version, called GSH-2, has no engine/generator and the electricity to run the fan and fuel burner is taken from an external power supply.

Polar 120 HD

Polar 120 HD was born as a result of long term co-operation and development of Polartherm and Finnair. Polar 120 HD and its earlier versions have been in use on airports since 1985 and it has proven a very reliable and robust heater. The unit is compact and easy to move by one operator due to its long tow bar, single axle design and good balance. 120 HD has a Yanmar - GTS engine-generator for producing the electricity needed to run the fan and fuel burner.



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Polar GSH-W20



Polar GSH-W20 is a heavy-duty ground heater for wide body aircraft. Utilizing a large blower, electrically powered by a Deutz 4-cylinder diesel and a generator, the unit moves the heating air efficiently throughout the whole fuselage of the aircraft.

Conceptually, the design is similar to that of Polartherm's narrow body aircraft heaters: Heat energy is produced by a combustor system and air movement by the blower. Combustion gases and fresh air are not mixed at any stage and therefore the outlet air is always 100% free from any impurities or smoke residues.

Technical information

Model		GSH-1	120 HD	GSH-W20
Output power	kW	115	100	140
Air volume	m ³ / h	3000 (@1000Pa)	2500 (1000Pa)	5000 (@4500Pa)
Air outlet Ø	mm	300	300	300
Operation time (@100%)	h	12	10	10
Fuel tank capacity	litre	175	130	200
Dimensions L*W*H	mm	3550*1715*1880	3000*1700*1850	3500*2000*2200
Weight (dry)	kg	950	700	2100



"The model which we have the greatest number of is the 120 HD, which is easily maneuvered on the airport aprons. The original Polartherm heaters in our fleet - still in use - were manufactured in the late 1980s. I can sincerely recommend Polartherm aircraft heaters to anyone."

Mauri Huttunen
Ground Handling Manager
Helsinki-Vantaa Airport, Finland