

Description of function for Glembring heaters

The principle of the system is that floating fuel evaporates and mixes with air, before the actual combustion occurs. In our heaters we have a special turbo unit which efficiently mixes gas and air. This patented design of the carburation and combustion unit gives high effect and soot free burning.

As shown in the principle sketch, the heater can also be equipped with a built in coil to heat circling water, in a central heating system.

Air inlet for combustion can be fitted in different ways. As a standard the heater uses the air from the space where it is placed, but various regulations from local authorities, can demand a closed system of air and stack gas outlet, and then it is possible to arrange the inlet so as to meet the requirements.

Universal heater Glembring IG 92/5

In stainless polished steel alternatively in painted sheet iron

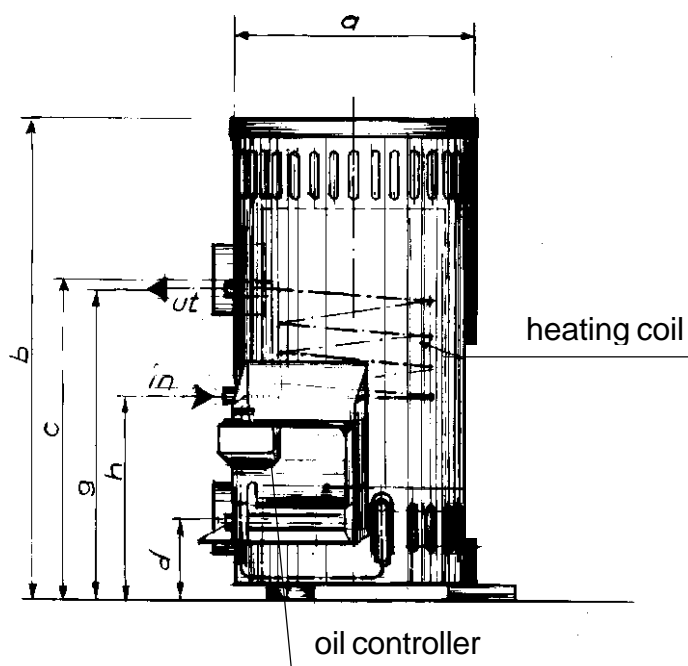
The heater is especially designed for boats, caravans and houses.

The heater can also be delivered with a built in coil for central heating system.

The heater has separate outlet and inlet for the exhaustgas and the combustion air.

Technical data:

Maximum output	1,8 kW
Minimum output	0,5 kW
Maximum fuel consumption	0,2 liter pro hour
Minimum fuel consumption	0,1 liter pro hour
Weight per heater unit	5,0 kg
Pipe diameter	70 mm



a = 175 mm

b = 425 mm

c = 325 mm

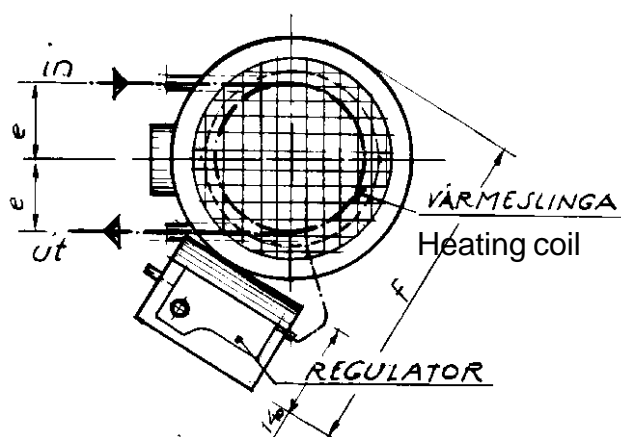
d = 90 mm

e = 80 mm

f = 260 mm

g = 290 mm

h = 110 mm



Universal heater Glembring IG 92/6

In stainless polished steel alternatively in painted sheet iron

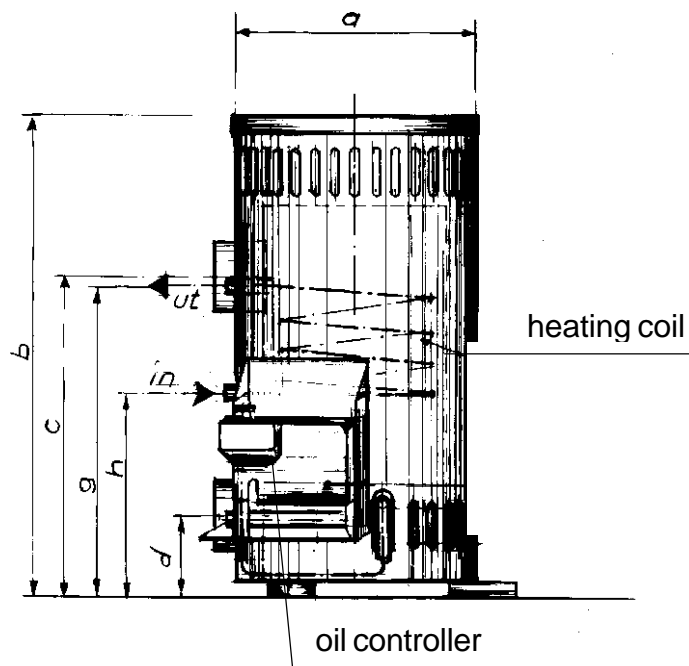
The heater is especially designed for boats, caravans and houses.

The heater can also be delivered with a built in coil for central heating system.

The heater has separate outlet and inlet for the exhaustgas and the combustion air.

Technical data:

Maximum output	2,0 kW
Minimum output	0,5 kW
Maximum fuel consumption	0,3 liter pro hour
Minimum fuel consumption	0,1 liter pro hour
Weight per heater unite	7,0 kg
Pipe diameter	70 mm



$$a = 245 \text{ mm}$$

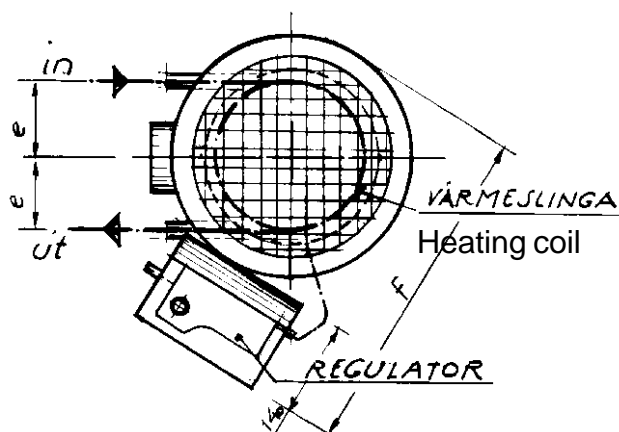
$$b = 450 \text{ mm}$$

$$c = 355 \text{ mm}$$

$$d = 115 \text{ mm}$$

$$e = 78 \text{ mm}$$

$$f = 346 \text{ mm}$$



Universal heater Glembring IG 92/7

In stainless polished alternativly in painted sheet steel

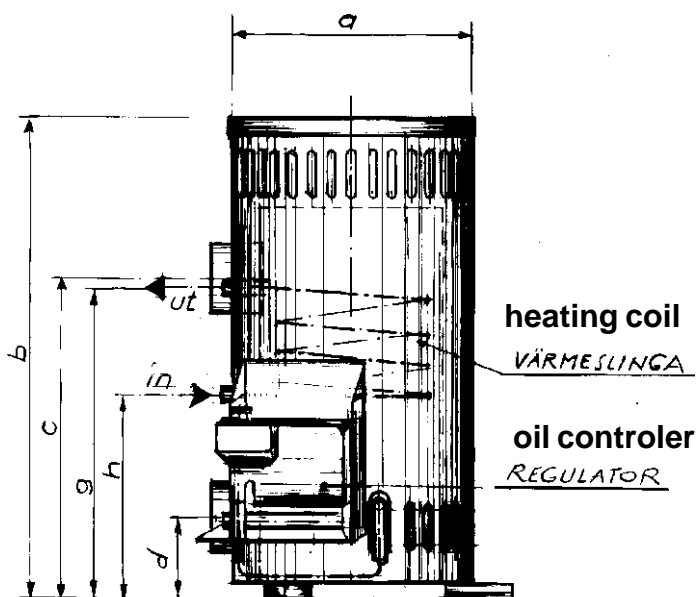
The heater is especially designed for boats, caravans and houses.

The heater can also be delivered with a built in coil for central heating system.

The heater has separate outlet and inlet for the exhaustgas and the combustion air.

Technical data:

Maximum output	4,0 kW
Minimum output	1,0 kw
Maximum fuel consumption	0,5 liter pro hour
Minimum fuel consumption	0,2 liter pro hour
Weight per heater unite	9,0kg
Pipe diameter	90 mm



a = 265 mm

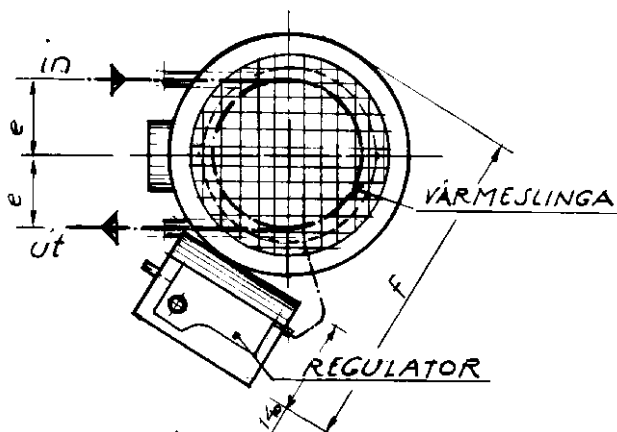
b = 600 mm

c = 455 mm

d = 125mm

e = 95 mm

f = 380 mm



Universal heater Glembring IG 92/8

In stainless polished steel alternatively in painted sheet iron

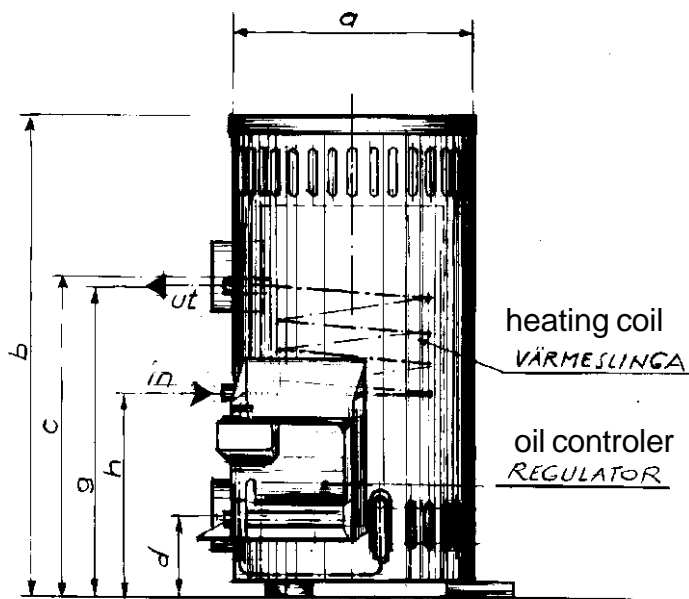
The heater is especially designed for boats, caravans and houses.

The heater can also be delivered with a built in coil for central heating system.

The heater has separate outlet and inlet for the exhaustgas and the combustion air.

Technical data:

Maximum output	8,0 kW
Minimum output	1,2kW
Maximum fuel consumption	1,0liter pro hour
Minimum fuel consumption	0,2 liter pro hour
Weight per heater unite	14,2kg
Pipe diameter	90 mm alt 120 mm



a = 325 mm

b = 680mm

c = 540 mm

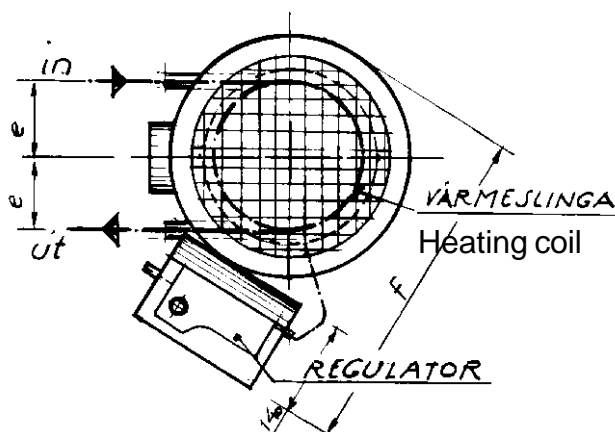
d = 120 mm

e = 30 mm

f = 440 mm

g = 525 mm

h = 290 mm



Universal heater Glembring IG 92/10

In stainless polished steel alternatively in painted sheet iron

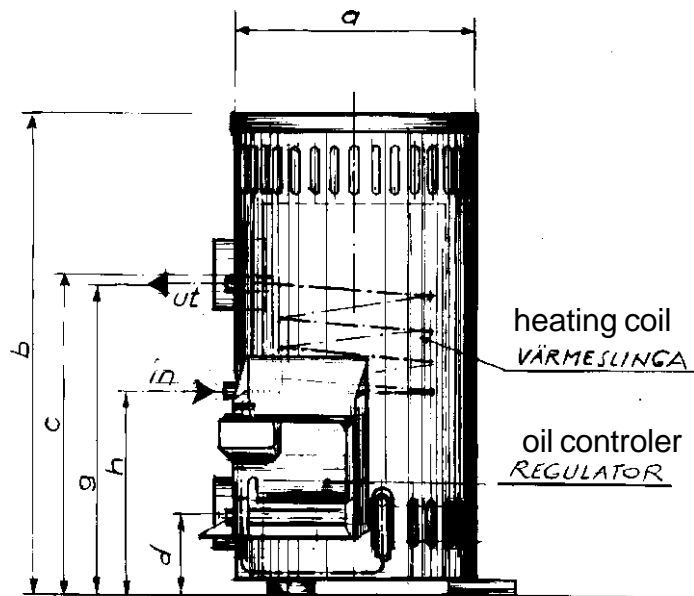
The heater is especially designed for boats, caravans and houses.

The heater can also be delivered with a built in coil for central heating system.

The heater has separate outlet and inlet for the exhaustgas and the combustion air.

Technical data:

Maximum output	12,0 kW
Minimum output	1,9 kw
Maximum fuel consumption	1,6 liter pro hour
Minimum fuel consumption	0,3 liter pro hour
Weight per heater unite	17,8kg
Pipe diameter	120 mm alt 150 mm



a = 390 mm

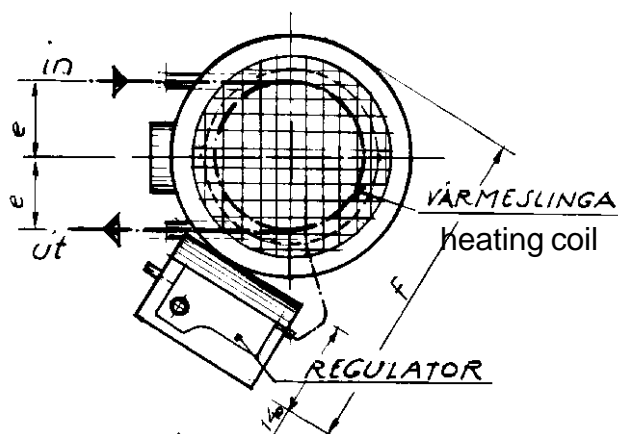
b = 765 mm

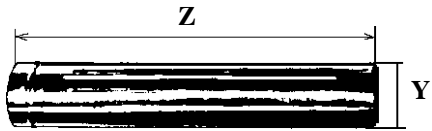
c = 545 mm

d = 155mm

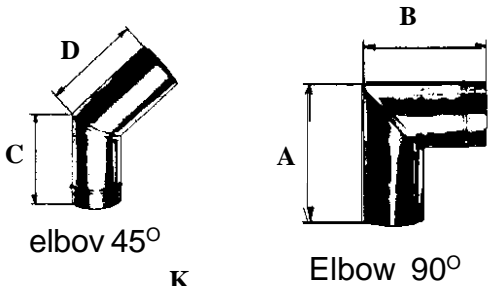
e = 130 mm

f = 510 mm



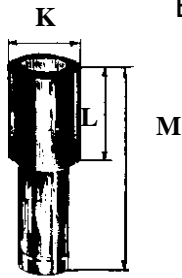


Smoke vent pipe

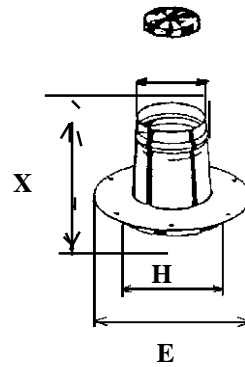


elbov 45°

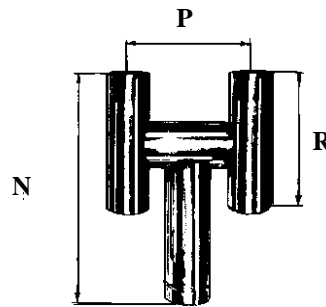
Elbow 90°



Chimney termination cylindric.



Passage unite for tube through deck or roof.



Chimney termination H-formed.

	Tube diameter	70	90	120	150
A	Elbow 90	165	180	200	
B	Elbow 90	170	180	200	
C	Elbow 45	160	165	200	
D	Elbow 45	160	165	200	
E	Flangediam.	150	180		
H	Openingdiam.	120	150		
K	Covertube	120	140		
L	Covertube.	200	200		
M	Covertube.	400	400		
N	Chimn. H-form.	350	450		
P	Chimn. H-form	240	320		
R	Chimn.H-form	230	300		
X	Totallheight	140	140		
Y	Ventpipe	70	90	120	150
Z	Ventpipe	L=1000 och 500 mm			



Fuel dosage

What type of fuel?

Theoretically you can use all kind of liquid fuels, which can be gasified. In reality, however, there are three kinds of fuel to be used, which are diesel, heating oil and at some times, kerosene. Depending on which fuel you use, you can get different capacity on the stove, with the same regulator adjustment.

What is viscosity?

Viscosity is a measurement for the floating ability of a liquid and the measurement unit is cSt, pronounced centistokes. Water has cSt 1,0, environment diesel 1,8 – 2,5 and heating fuels 2,8 – 3,5. The temperature affects the viscosity so that a floating product floats easier at a higher temperature and worse at a lower one. How then does the different viscosity affect the capacity of the stove?

Fuel flow

The regulator is the brain of the stove. It controls among other things that sufficient fuel to the gasification part at the bottom of the stove. A dosage pipe, which can be raised and lowered with the regulation handle, has a narrow slit at its side. With the handle you thus control how big a part is open for the fuel flow and what amount of fuel flows into the stove per minute. Thus with a more viscous product of fuel, less amount of fuel flows into the stove, than compared with a fuel of low viscosity.

The regulator

If the stove should go out, the regulator closes the inflow of fuel. Should the temperature, for some reason or other, reach an abnormally high level and the danger of fire occur, a fuse will blow and the fuel flow will stop. Should the stove tilt, the fuel flow will immediately stop. This does not apply for stoves designed for marine use, which always tilt due to sea waves. If the inflow valve controlled by the floating body for some reason should not close, the floating body will reach too high a level, which immediately closes the inflow of the fuel.

Viscosity problems

Different countries have different types of fuels and thus different viscosity. Of course the viscosity can vary even within a country or a continent. After being delivered from our factory, the regulator has been calibrated according to the value of that of the region in question. As explained above this means that we cannot guarantee that the stove will burn with the allowed maximal capacity. It is rare however that this is notable, unless the viscosity varies unusually much. At too high a viscosity level the maximal efficiency will be too low and with the opposite situation, the maximal efficiency will be too high making the stove burn heavily, be overheated and produce smoke. This can temporarily be adjusted by switching the regulator handle to a lower level. For permanent usage with this viscosity you should calibrate the regulator according to the following.

Can the stove bear to be overheated?

Yes without any problems. Even at extremely high burning, when some parts of the stove can be red-hot there is no danger. At the test for approval, all of our stoves have gone through all possible situations and simulating disasters. Nor are we any kinder or more careful in our own laboratory.

Adjustment of the land regulator

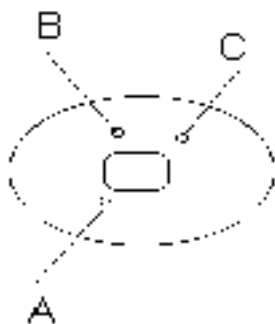
Stoves with different areas of capacity demand that the regulator has different lowest and highest level for fuel flow. See separate table for different sizes of stoves! As have been seen by the description above of the different viscosity for fuels, you must also be able to adjust the incoming quantity of fuel within each area of dosage. This is done with three adjustment screws placed at the cover of the regulator. Their positions on the cover are shown on the sketches below. Screw A regulates the maximum level and thus affects the maximum capacity. Screw B is an over-capacity lock; this is adjusted, at the delivery, so that it is impossible to adjust the maximum level with screw A above a certain level, at a certain viscosity, thus risking overheating. Screw C is for adjusting low effect level. If you use fuel with high viscosity and get low effect with a weak flame, you risk that the stove goes out. At every screw, there are markings with + and -.

Land regulator

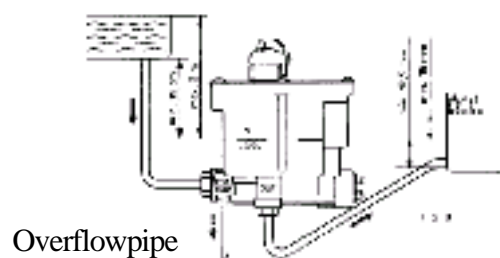
This description of adjustment applies for regulator DVR 5, which is most suitable for stoves on land. It has advantages for this purpose and it has a tip safe function. Should the stove for any reason come into an abnormal position, the regulator will immediately close the inflow of the fuel. This happens even if the level of the fuel in the regulator should be abnormally high. Resetting is done with the handle at the side of the regulator. Due to its design, it is not necessary to have an over-flow, which would require a collecting vessel below the stove.

Marine Regulator

For marine purposes we use a different regulator, which is safer at sudden and repeated movements. In boats the stove can get very different movements and then "the Trailer Control Regulator" is the most suitable. This one has a more watertight cover and also designed in such a way that no extra fuel will flow into the stove when leaning or at heavy movements. The increased fuel level in the regulator, caused by these movements, will be adjusted by an over-flow when returning to normal run. The outlet of the over-flow is connected to a nearby collecting vessel by a hose or a pipe. The volume does not have to be big; a few litres ought to be sufficient,

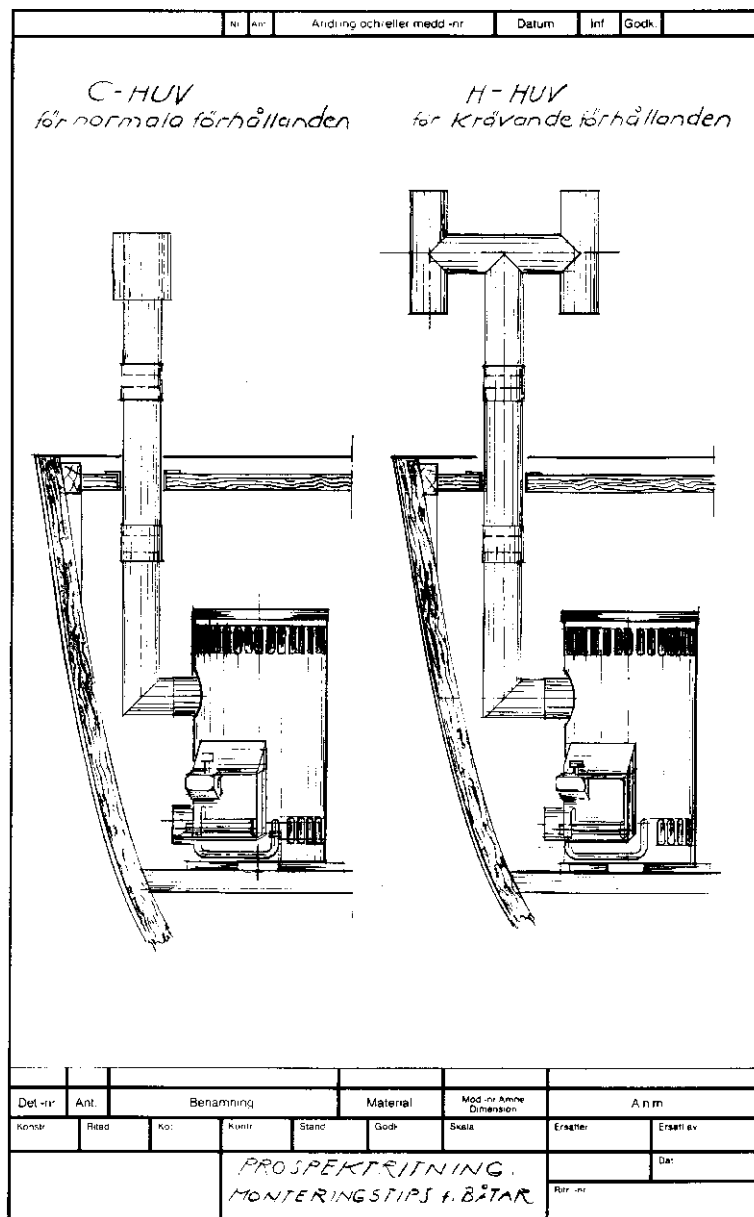


Land regulator



Marineregulator

Tips for installations in ships boats and yachts



The system works with draught, and it is therefore important that the stack gas system is designed in the best way possible.

The C-cowl is sufficient for most circumstances, but demands clear surroundings for an even and calm burning. Squalls and whirlwinds can cause an uneven draught, and if the cowl is to the leeward of something, the turbulence may be considerable, if the wind comes from the opposite direction.

The H-cowl is through its design less sensitive for the circumstances described above and is therefore used in more difficult draught circumstances. This type of cowl has been used for many years e.g. among professional fishermen, where it has proven to be very efficient even in very strong winds.