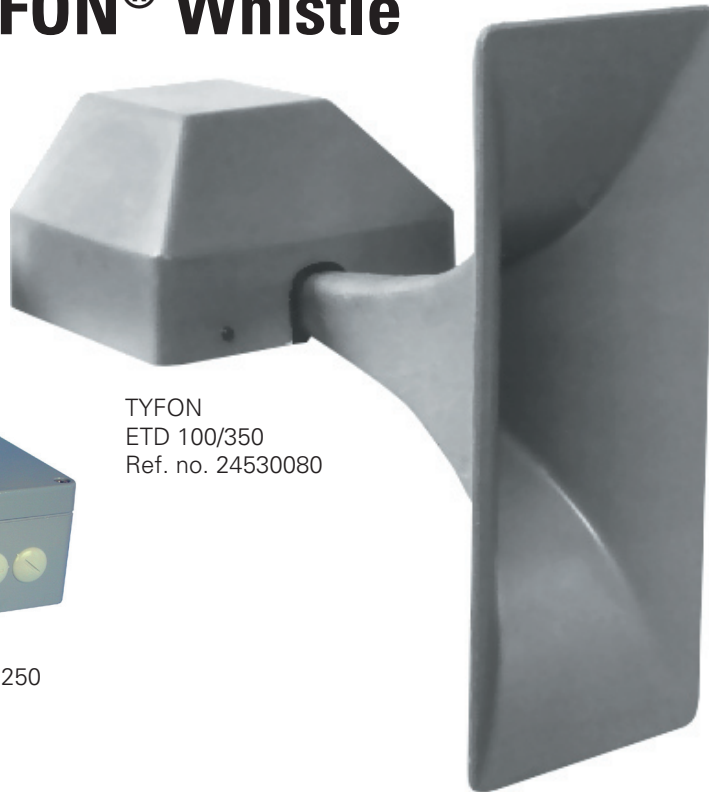


# Electronic TYFON® Whistle ETD 100/350



Power Amplifier MTK 250  
Ref. no. 25530060



TYFON  
ETD 100/350  
Ref. no. 24530080

## A Strong Signal Without Noise!?

Many who sail under the IMO Regulations COLREG 1972 know that these rules request very high sound pressure levels for efficient signalling, yet "...the sound pressure level of the vessel's own signal at the listening posts shall not exceed 110 dBA and so far as practicable should not exceed 100 dBA" (extract from IMO Regulations). The rules are demanding a strong signal on board but without noise!

A common way to solve this 'Paradox' of COLREG 1972 is to place a whistle very high above deck. But what if even the highest point is not high enough? A Whistle with Unsymmetrical Sound Distribution is the solution!!! The novelties in brief with the horn design are:

- Concentration of the total sound radiation towards the plane where it is needed-the horizontal plane. This means up to 10 dBA lower sound radiation downwards (and upwards).
- Appropriate sound spread in all horizontal directions with the strength related to the headline sound pressure level as prescribed by IMO.
- A sound spectrum specially created to give a high electro-acoustic efficiency and, as well, a rich "tone colour" and good properties for perception in noise.
- Twin unit electrodynamic special drivers of enclosed type, protected under cover of non-metallic material, glass-fibre reinforced polyester as the horn itself.

From the points above, it is easy to understand that some very important features have been gained with the new TYFON ETD 100/350. The new horn with its unique vertically extended front marks the innovation that makes a major problem reducible.

When a "combined system" of two whistles are used as described by IMO, a very effective and significant tone spectrum can be created. An airdriven TYFON for 260 or 440 Hz can be an excellent part of the appliances for the utmost total performance and reliability.

## Power Amplifier MTK 250

The Power Amplifier MTK 250 is in principle a converter by means of which the direct current from a battery or DC generator is treated by an electronic oscillator to an alternating current of a frequency and wave form suitable to feed the horn. A quartz crystal keeps the frequency superstable, and the digital oscillator followed by a special amplifier gives an extremely high efficiency and reliability in the conversion process.

The MTK 250 amplifier has the following feature:

- Generate momentary signals with a push-button or our series of signalcontrollers.
- Be used as a "General Emergency Alarm" unit.
- Together with a microphone be used as a PA-amplifier.

## Technical data

Frequency (basic):	350 Hz
Sound Pressure Level (1 m) Total:	132 dB
1/3 octave IMO limit:	130 dB
Power consumption (battery):	250 W
Heating element:	25 W
Power source (battery) Nominal:	24V DC

Min: 20V DC. Max: 27V DC

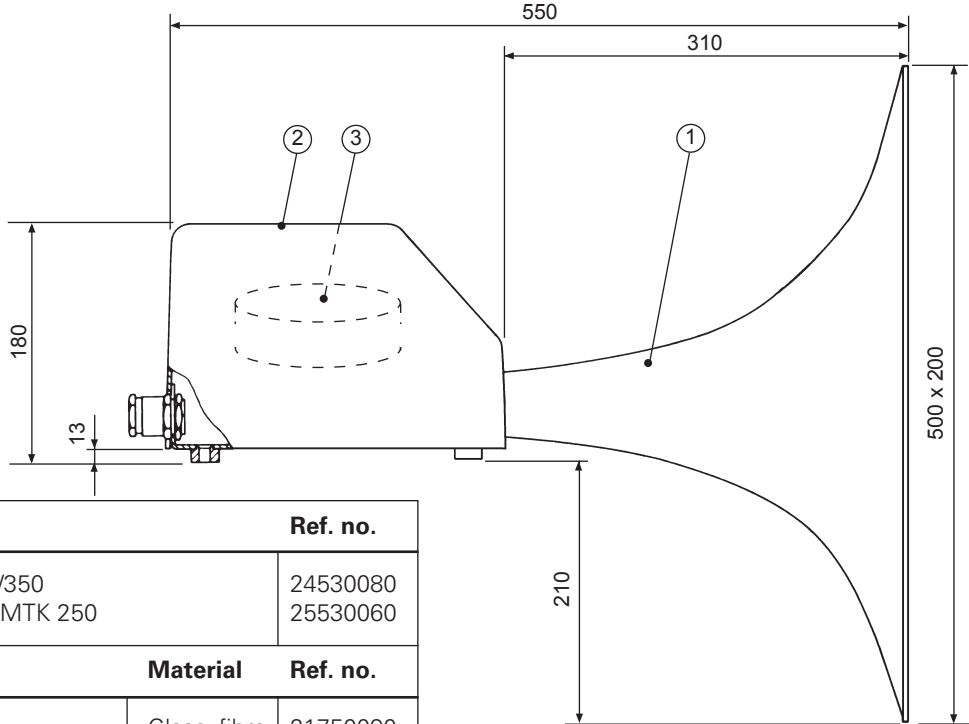
Operating ambient temp. for MTK 250: 0... + 50° C

Protection class: IP64

Weights: Whistle: 13 kg. Power amplifier: 4 kg

TYFON ETD 100/350 is equipped with a heating element controlled by a thermostat which switches on at a temperature below + 10° C.

# TYFON ETD 100/350 with Power Amplifier MTK 250



Units		Ref. no.	
TYFON ETD 100/350		24530080	
Power Amplifier MTK 250		25530060	
Spare parts	Material	Ref. no.	
1	Horn	Glass-fibre polyester	21750090
2	Cover		21772330
3	Driver		20620019
	Heating element		20320031
	Thermostat		36181148
4	Fuse 15 A**		
5	Fuse 10 A**		
	Microphone*		20141010
	Microphone holder**		

Spare parts can be obtained from Kockum Sonics or their agents. When ordering, give part name and reference no.  
 \*Option.  
 \*\*Not kept in stock.

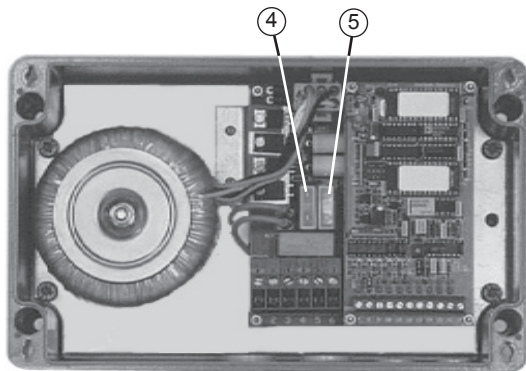
## Mounting

"A whistle shall be placed as high as practicable on a vessel in order to reduce interception of the emitted sound by obstructions..." according to the international regulations now in force.

The whistle shall be mounted on a horizontal support plane. The amplifier is to be mounted indoors.

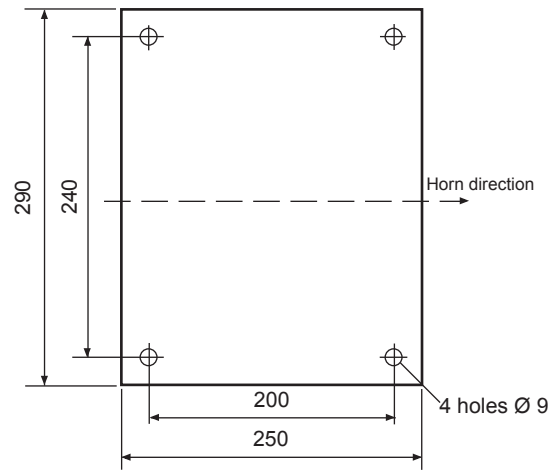
An advantage with TYFON ETD 100/350 is, that the length of the cable between whistle and power amplifier is not critical. With a cable section of 2 x 4mm<sup>2</sup> a distance up to 30m, and with 2 x 2,5mm<sup>2</sup> up to 10m.

**Note: Always use RF-shielded cables and always use the original enclosure.**



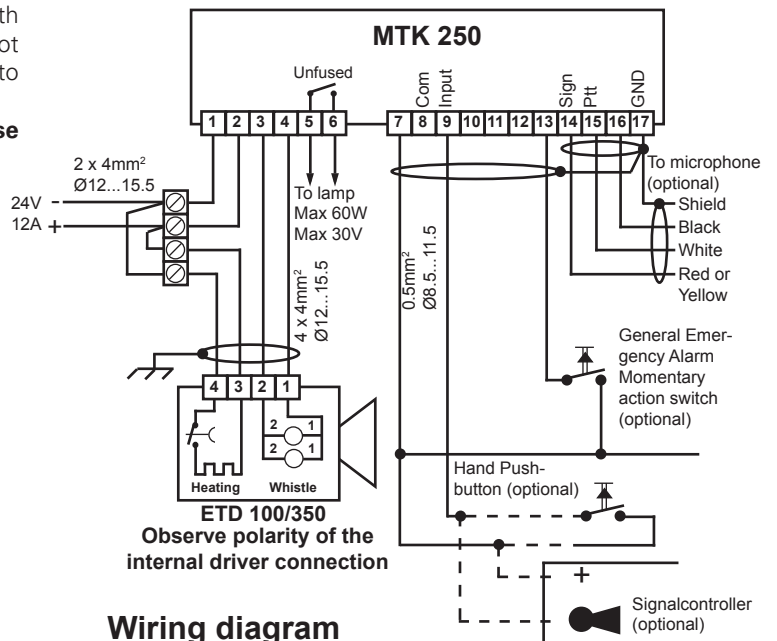
## Power Amplifier MTK 250

Box dimensions:  
 260 x 160 x 90mm (L x W x H)  
 240 x 110mm between mounting holes  
 4 mounting holes Ø 6,5mm



**Base plate**

Subject to alteration without notice.



**Wiring diagram**