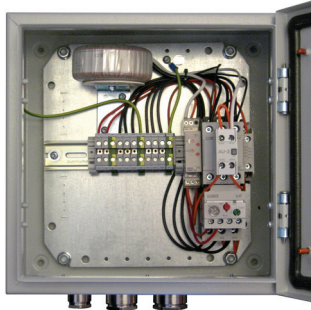
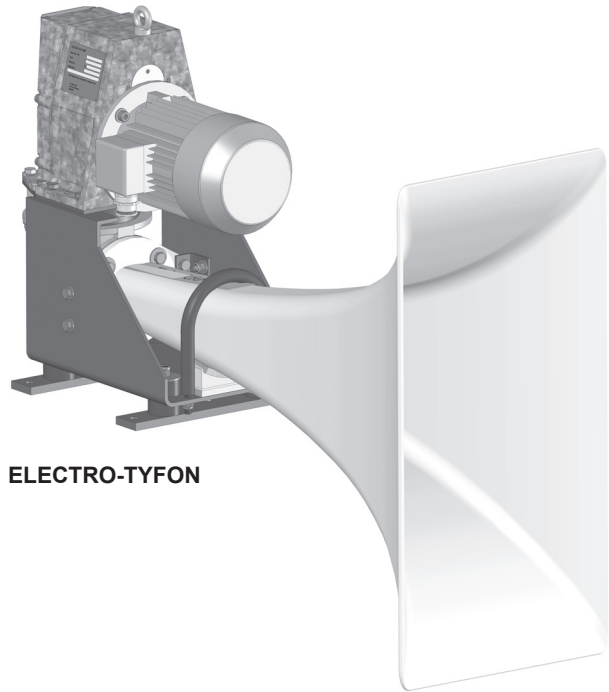


# ELECTRO-TYFON® MTX 150/130

For vessels of 200 m or more in length



**Contactor Unit TK 80**  
See separate leaflet KSM742



**ELECTRO-TYFON**

## General Information

**ELECTRO-TYFON® MTX 150/130** is an electrically driven piston ship's whistle. It is built up of comparatively few moving parts as the "swinging piston", no lubricated cylinder and an oil free gearbox.

Important features:

- unsymmetrical sound distribution
- operates in all ambient temperatures without any additional measures
- unaffected by voltage and frequency fluctuations
- oil free, maintenance free and non-corrosive
- easy to install
- complies fully with the International Regulations IMO 1972

## Operates in all temperatures without any additional measures

**ELECTRO-TYFON® MTX 150/130** will give a high performance in both arctic and tropical climates. A patented system with a high efficiency rectangular horn and a specially designed motor will match the motor speed to the acoustic resonance of the horn at any ambient temperature without any additional measures. This system also prevents the whistle from being affected by voltage and frequency fluctuations in onboard mains.

## Unsymmetrical Sound Distribution

The IMO Regulations stipulate a very high Sound Pressure Level for efficient signaling, yet the sound level of the vessel's own signal at the listening posts shall not exceed 110 dBA.

A common way to solve this "paradox" is to place the whistle very high above deck. But what if the highest point is not high enough? For example: to reduce the noise from the signal by 6 dB, the distance between the listening post and the whistle must be doubled!

**ELECTRO-TYFON® MTX 150/130** with Unsymmetrical Sound Distribution is the solution. The horn with its unique vertically extended front, and a specially created sound spectrum will reduce the noise on deck with 6–8 dB compared to a conventional whistle with circular outlet.

## Technical Data

Type	Power Supply	Ref No
MTX 150/130	3 ph 380-440 V 60 Hz	24800287
MTX 150/130	3 ph 380-440 V 50 Hz	24800534
MTX 150/130	3 ph 660-690 V 60 Hz	24800535
MTX 150/130	3 ph 660-690 V 50 Hz	24800536

Sound frequency (basic): 130 Hz  
 Sound Pressure Level acc to IMO (1/3 oct band): >143 dB/1m  
 Sound Level A-weighted: 146 dBA/1m  
 Rated current: 12.5A /440V at 20°C  
 8A / 690V at 20°C

Electrical protection class: IP 56  
 Colors:  
     Body Galvanized nat.  
     Motor Grey RAL 7030  
     Horn White RAL 9003  
 Weight (approx.): 70 kg

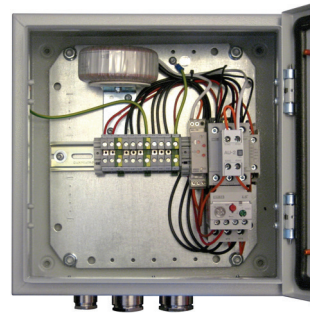
## Motor Control

Kockum Sonic's Contactor Unit TK 80 is especially developed to control the **ELECTRO-TYFON® MTX 150/130**

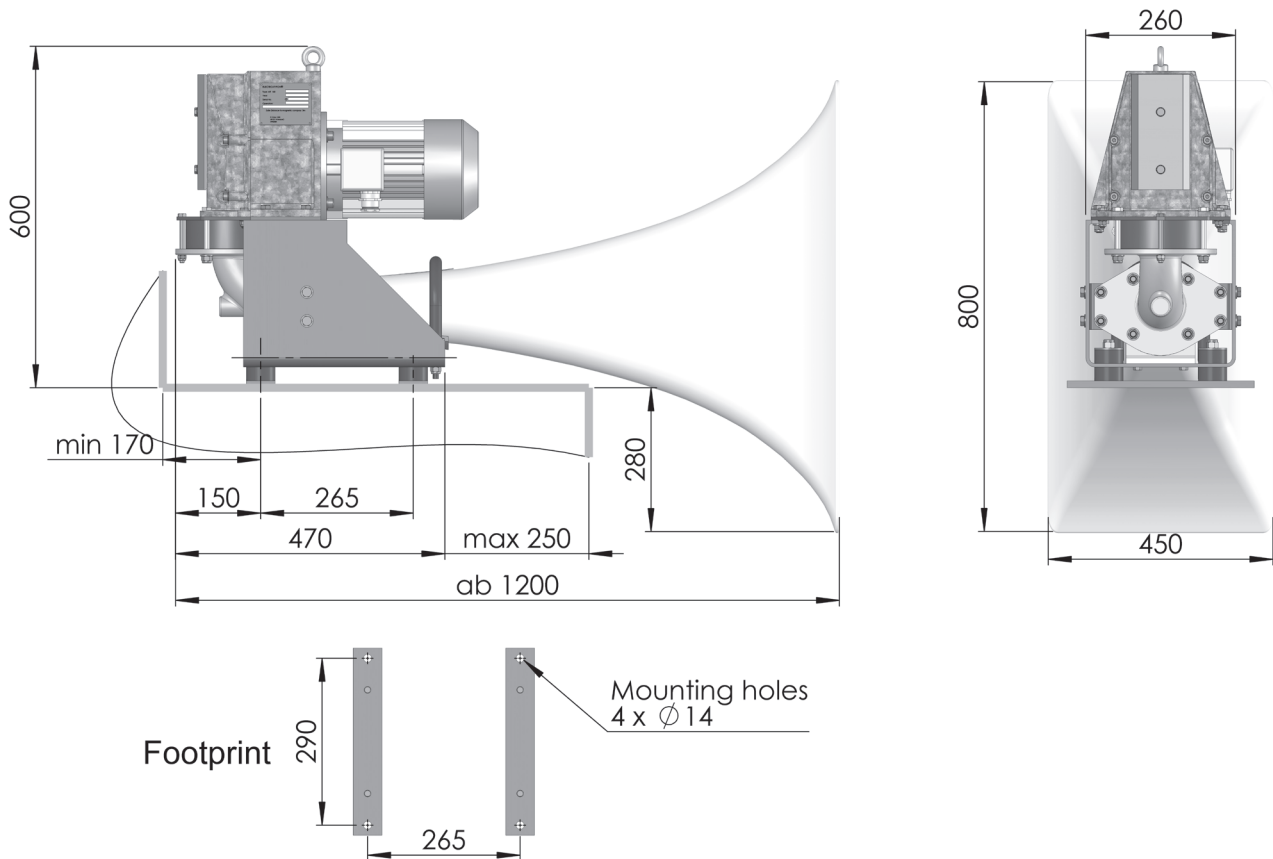
Functions:

- Motor start
- Motor overload protection
- Winding heating of motor for anti-condensation purpose.

For full description see data sheet KSM742.



## Dimensions, Installation and Maintenance



### Installation

**ELECTRO-TYFON® MTX 150/130** shall be fixed with four M12 screws that must be firmly tightened and locked.

Mount the whistle on a platform supplied with a safety rail. As the whistle is subject to vibration on starting and stopping, flexible electric cables should be used nearest the motor. The gland on the electric Motor Terminal Box is M 32 for cable  $\varnothing$  17 - 28 mm.

Optional: M 25 for cable  $\varnothing$  9-20 mm.

Recommended power cable section:

For cable length up to 100 m  $\varnothing$  4 mm<sup>2</sup>

For cable length over 100 m  $\varnothing$  6 mm<sup>2</sup>

Recommended fuses slow 20A

### Maintenance

All components are chosen to withstand corrosion and to give a minimum of maintenance.

The crankcase and foundation is hot galvanized. The motor is marine coated - Marine C4 class.

The horn is made of glass fiber armed polyester (white). The cylinder is non lubricated and the gearbox is entirely oil free.

**ELECTRO-TYFON® MTX 150/130** is designed to give long reliable service without routine maintenance, but a periodic inspection always gives early warning of any faults that may develop.

# Trouble shooting and refurbishing

## Trouble shooting, refurbishing

Prior to any work on the unit disconnect power.

Eliminate possible power failure; check the voltage of every phase on motor wire terminals.

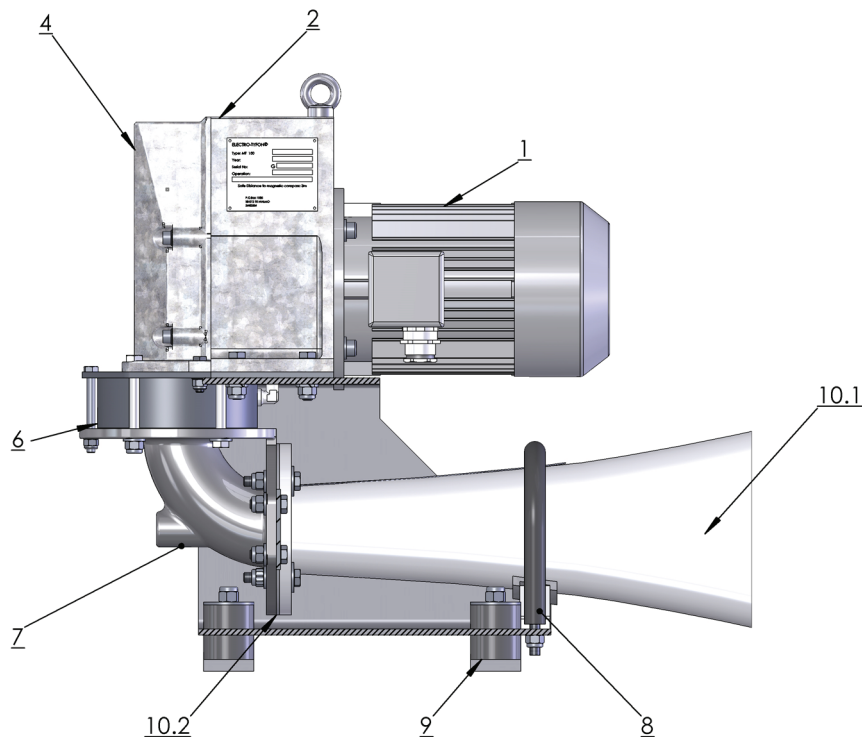
Motor is not running	Check the wirings for possible shortcut or insulation error.	Change the motor together with the motor gearwheel.
Motor is running slow, Weak sound	Check the wirings for possible shortcut or insulation error.	If motor OK check and change, if required, the shaft with bearings.
Motor is running, only mechanical noise	Check the piston, piston rings and piston rod.	Change damaged components. It is not necessary to disassembly the motor.
Powerful vibration, entire unit	Check the vibration dampers.	Change if damaged

### Important:

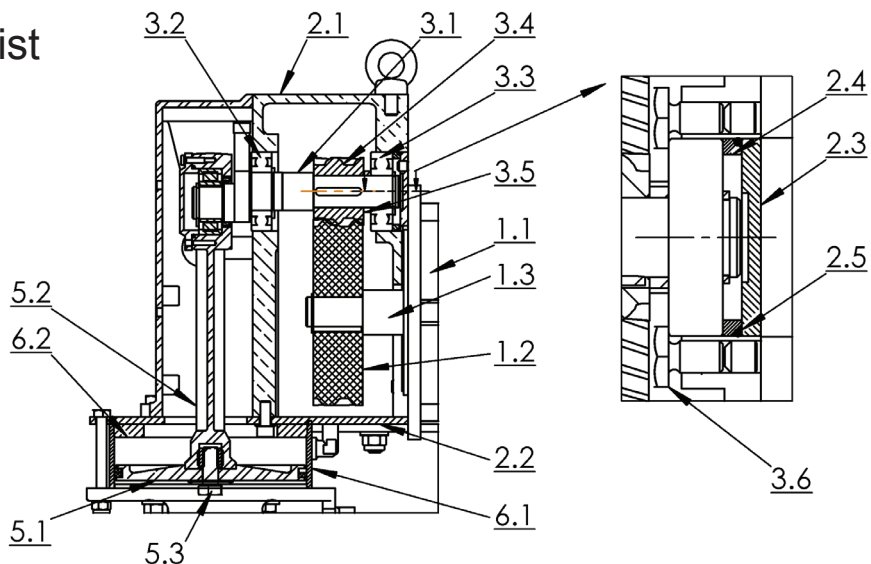
- The motor (driver) is always delivered with the driving gear wheel mounted on the shaft.
- Do not reuse the old gear wheel, it is made of bakelite and pressed with tight fit and may be damaged when removed/remounted.
- Lubricate the teeth of the gearwheels with the grease enclosed in the set.
- Change always piston and piston rod together. When loosening and retightening the piston screw counter hold with a spanner on the flat surfaces of the piston rod just above the piston to avoid twisting the rod.
- Lubricate the piston rod bearing and fill half of the volume inside the bearing cover with high-speed roller bearing grease enclosed in the set.
- The gear shaft as spare part is delivered complete with front bearing and gear wheel. Do not remove rear bearing if not necessary, it is fixed in the crank case.
- Do not reuse the steel gear wheel, it is warm pressed with very tight fit and may be damaged when removed/remounted.
- On inspection or change of parts, always replace O-rings, circlips, the piston rod sealing ring with new ones.
- Lock all screws with Loctite 242 or similar locking liquid.

In case of insecurity do not hesitate to contact Kockum Sonics for guidance.

Kockum Sonics can also carry out repair or deliver refurbished unit to a reduced price.



# MTX 150/130 - Parts list



Item	Description	Data/remarks	Ref. No.
1	Driver		
1.1	Motor	380-440V/50-60Hz 660-690V/50-60Hz	21800420 21801030
1.2	Motor gear wheel	60Hz 50Hz	21768360 21768358
1.3	Spacer		21768373
1.4	Circlip	SMS 1581	32470024
1.5	Connection box	Incl. terminals	20750100
2	Crank case		
2.1	Housing		21769059
2.2	Base plate		21768365
2.3	Cap		21768399
2.4	Spacer		21768404
2.5	O-ring	57,6 x 2,4	20862066
3	Crank shaft		
3.1	Crank shaft set	Incl. Crankshaft flat key screws and circlips	24800585
3.2	Bearing front		20880005
3.3	Bearing rear		20880003
3.4	Gear wheel	60 Hz 50 Hz	21768359 21768357
3.5	Spacer		21768376
3.6	Fixing screw	2 pcs	21769060
4	Cover		21769059
5	Piston		
5.1	Piston set	Incl piston, rings (x2) , pin	24530296
5.2	Piston rod set	Incl rod, cap, nut, bearing, radial seal, O-ring, screws, washers, circlip	24530291
5.3	Piston mounting set	Washer, screw	24530297
6	Cylinder		
6.1	Cylinder		21769402
6.2	Flange		21768368
7	Outlet		21768984
8	Clamp set	Incl clamp, slang, support, spacer, rubberpacking	24530294
9	Vibration damper set	Incl dampers, bushings washers and nuts	24530293
10	Horn		
10.1	Horn		21750123
10.2	Packing		21765049