GEOVENT

INSTRUKTIONSMANUAL

TORNADO HOOD

for Paint Shops

GT-600, GT-900, GT-1350

Version 1.0 06.06.19

www.geovent.com

Contents

1.0 General safety precautions

IMPORTANT - Please study all the instructions before mounting and commissioning.

Please keep these instructions in a safe place and instruct all users in the function and operation of the product.

Do not dismantle any factory-mounted parts, since it impedes the commissioning of the equipment.

All electrical installations must be carried out by an authorised electrician.

1.1 Field of application

The Hood has been designed for extraction in paint-shops, workshops or in other rooms, where work involving the development of vapours, injurious to health, is carried out.

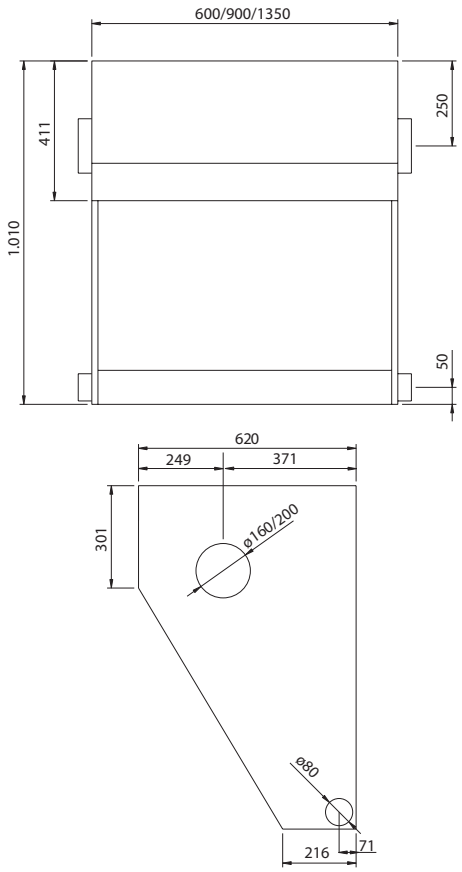
1.2 Construction

Tornado Hood: Executed in hot-galvanised plate
Supplied unassembled, with “pre-drilled” pilot holes for easy and simple assembly with self-tapping or galvanised screws with 1/4” width across fl ats.

Mixing table (accessory): The table, which is supplied unassembled, is executed in hot-galvanised steel plate with “pre-drilled” holes for easy assembly. The table is supplied with height adjustable mixing section.
To be ordered seperately (order no 01-901).

”Søfartens Arbejdsmiljøråd”
(The Danish Maritime Occupational Health Service recommends a combined solution of Tornado and table, so that the system appears as one unit, ensuring optimum working conditions in connection with performing the work.

1.3 Technical data



GT-600

Width: 625 mm
Depth: 725 mm
Connection, extraction: ø160 mm NP
Connection, pilot air ø80 mm NP
Extraction fan: MSX 180, 0.55 kW, 3 x 400 VAC, 50/60 Hz, 1.3 A, EEX-e T3 explosion-proof.
Pilot air fan: LSX 146, 0.25 kW, 3 x 400 VAC, 50/60 Hz, 0.81 A, EEX-e T3 explosion-proof.
Noise level: Noise level for two fans and the Hood is 78dB(A).
Recommended airfl ow, extraction: 600-800 m³/h

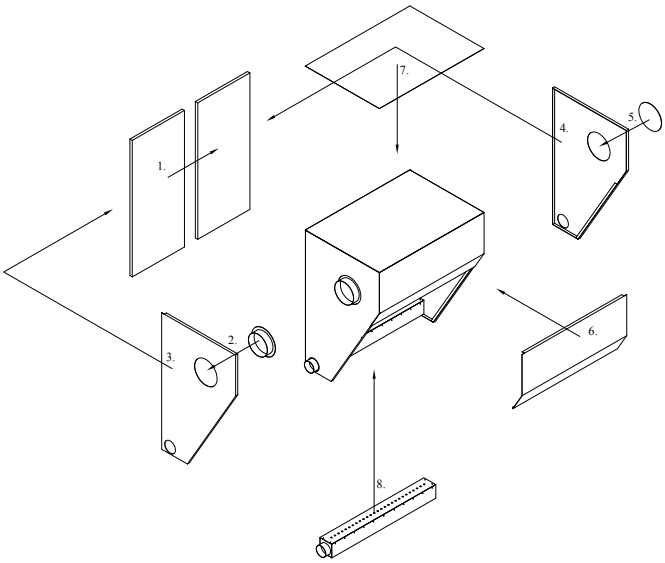
GT-900

Width: 925 mm
Depth: 725 mm
Connection, extraction: ø160 mm NP
Connection, pilot air ø80 mm NP
Extraction fan: MSX 180, 0.55 kW, 3 x 400 VAC, 50/60 Hz, 1.3 A, EEX-e T3 explosion-proof.
Pilot air fan: LSX 146, 0.25 kW, 3 x 400 VAC, 50/60 Hz, 0.81 A, EEX-e T3 explosion-proof.
Noise level: Noise level for two fans and the Hood is 78dB(A).
Recommended airfl ow, extraction: 600-800 m³/h

GT-1350

Width: 1375 mm
Depth: 725 mm
Connection, extraction: ø200 mm NP
Connection, pilot air ø80 mm NP
Extraction fan: MSX 200, 1.1 kW, 3 x 400 VAC, 50/60 Hz, 2.6 A, EEX-e T3 explosion-proof.
Pilot air fan: LSX 146, 0.25 kW, 3 x 400 VAC, 50/60 Hz, 0.81 A, EEX-e T3 explosion-proof.
Noise level: Noise level for two fans and the Hood is 78dB(A).
Recommended airfl ow, extraction: 1300-1800 m³/h

2.0 Mounting instructions



Needed tools for assembly:

1 pcs. drilling machine
1 pcs. toolbit with 7mm hexagon

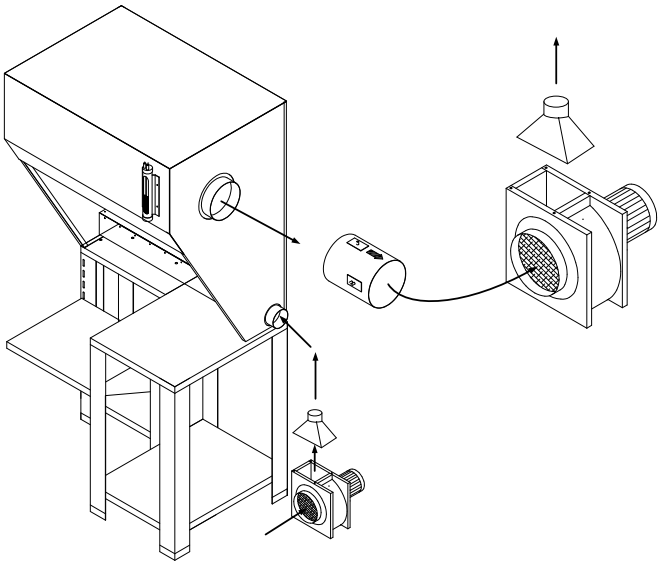
The Tornado-kit consists of:

1 pcs. unassembled Tornado hood
75 pcs. 4.2x13mm screws
1 pcs. inlet fan LSX-146-3, 0.25 kW, 3x400V, 50/60 Hz
1 pcs. inlet flange 146/ø80
1 pcs. extraction fan MSX-180-3, 0.55 kW, 3x400V, 50/60 Hz
1 pcs. outlet flange 180/ø160/200
1 pcs. flowsensor
1 pcs. U-manometer 0-500 Pa for mounting on the front panel of the Tornado hood.

Mounting instructions:

1. Assemble the two back panels using the enclosed 4.2x13mm screws.
2. Mount the inlet on either the right or left side panel, depending on where the fans are situated.
3. Fasten the sidepanel to the assembled backpanel.
4. Fasten the other sidepanel to the assembled backpanel+sidepanel.
5. Fasten the end cover.
6. Mount the front panel.
7. Mount the top panel.
8. Mount the inlet box, depending on where the fans are situated.

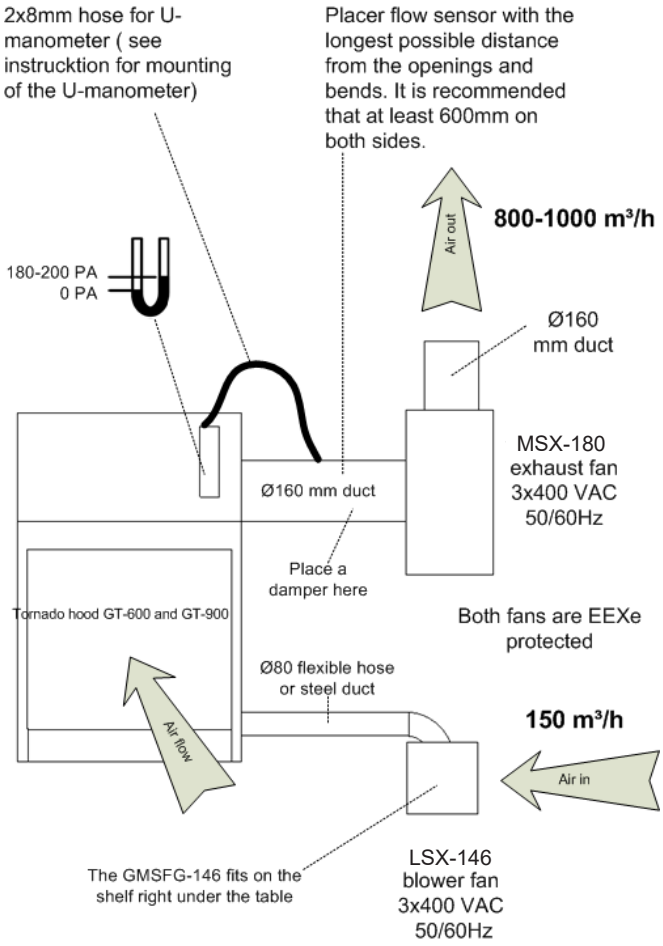
2.0 Mounting instructions



Tornado Hood System:

A: Table for Tornado. Supplied unassembled.
B: Tornado Hood. Supplied unassembled.
C: U-pipe manometer. Gives you an indication of the flow.
D: Flow sensor.
E: Pilot air fan LSX-146-3. Explosion proof EeXe.
F: Outlet fl ange.
G: Extraction air fan MSX-180-3. Explosion proof EeXe.

2.1 Installation of GT-600 and GT-900



Recommendations

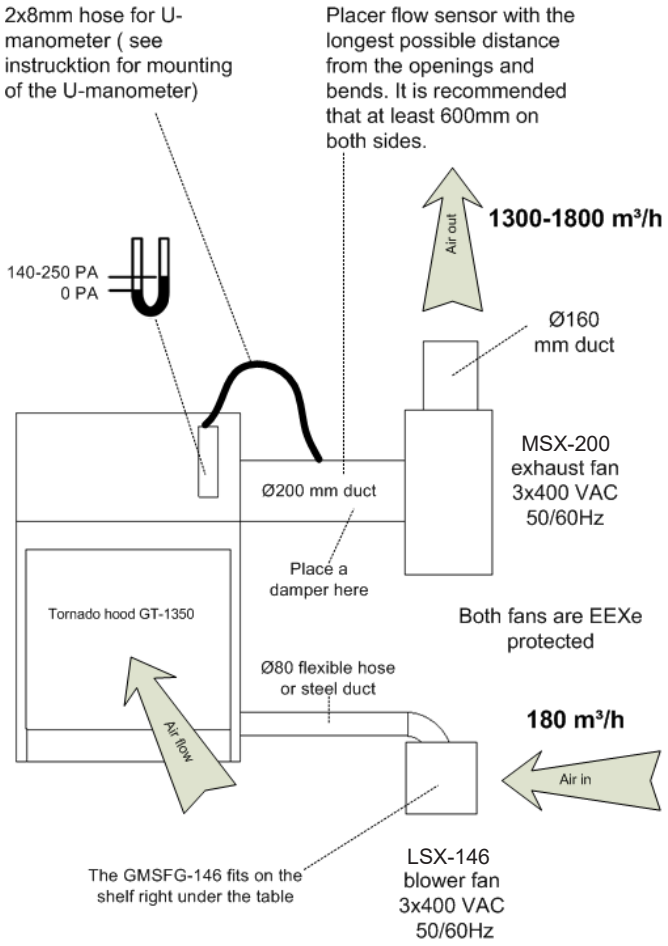
In some 50Hz and most 60Hz installations a damper has to be fi tted between the MSX-180 extraction fan and the ø160 mm suction duct in order to minimize the air flow to a maximum of 1000 m³/h. If this not is done the MSX-180 will be overloaded (max 1,3A).

Build your electrical installation (has to be EEXe) so that both fans start at the same time. The GEOVENT control panel 01-900A and 01-900B will ensure this.

Do not make any modifications of the Tornado hood (holes in top etc.). The optimized air flow will be ruined and the hood will not work as intended.

To lower the sound level we recommend installing a ø160mm silencer between the MSX-180 and the Tornado hood.

2.1 Installation of GT-1350



Recommendations

In some 60Hz installations a damper has to be fitted between the MSX-200 extraction fan and the ø200mm suction duct in order to minimize the air flow to a maximum of 1800 m³/h. If this not is done the MSX-200 will be overloaded (max 2,6A).

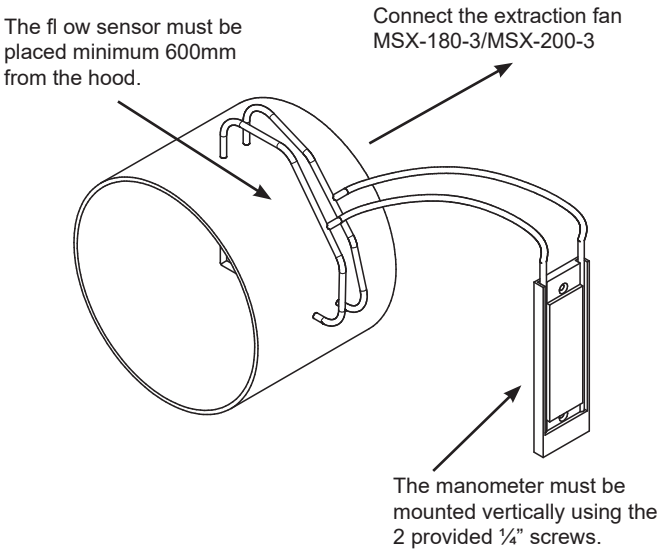
Build your electrical installation (has to be EEXe) so that both fans start at the same time. The GEOVENT control panel 01-900A and 01-900B will ensure this.

Do not make any modifi cations of the Tornado hood (holes in top etc.). The optimized air flow will be ruined and the hood will not work as intended.

To lower the sound level we recommend installing a ø200mm silencer between the MSX-200 and the Tornado hood.

IMPORTANT
Make sure that the motor runs in the right direction (See the arrow on the motor) before installing the ducting. If it runs in the wrong direction the airflow will only be 1/3 !!!!!

2.3 Mounting of U-manometer and flowsensor



3.0 User instruction – application

The Fan does not work according to the purposes, if …

- unauthorised parts have been mounted on the Fan (e.g. unauthorised wheel).
- the wheel runs in the wrong direction. It will still work, but the capacity will be reduced to a third of the normal capacity.
- no motor protection switch is used.

4.0 Maintenance

Periodic maintenance

- In principle, the motor is maintenance-free because of the factory-mounted, completely closed special ball bearings, which do not require any maintenance. Exchange of worn bearings should only be handled by an electrician.
- The wheel and the fan housing should be cleaned every year or according to requirement. The wheel and the housing may be cleaned by means of a washing-up brush and dishwater. Remember to disconnect the power before the washing and to wipe the parts afterwards with a dry cloth. This operation results in a longer life of the Fan.

4.1 Trouble-shooting

In case of problems with the Fan, the following items may be reviewed in order to check whether:

The volume of air or the pressure is below the stated level:

- Wrong direction of operation of the wheel. May be due to wrong electrical installation. Please double-check the direction of rotation. Change two phases, if necessary.
- Leaky channel system.
- Poor inlet/outlet possibilities near the Fan may reduce the yield (e.g. 90° bend before the inlet).
- Damaged wheel.
- The rotation speed has been set lower.
- If the temperature deviates substantially from the lab measurements, where the temperature was 20°C with an atmospheric pressure of 101.4 kPa.
- The dampers have not been correctly adjusted.
- The central lid on the sound box is turned the wrong way and thus blocks the air.
- The suction net has been blocked by cotton waste, a cloth or the like.

Vibrations and noise:

- The base is not even/stable.
- Elements coming from the outside are stuck in the Fan.
- Damaged wheel or motor.
- The wheel is loose.
- The wheel may have become unstable, for instance as a result of dirt on the impellers.
- The wheel is rotating in the wrong direction.
- The Fan supplies more air than for which the equipment has been dimensioned. Use adjustment damper.
- Loose bolts or screws.

The motor is overtaxed:

- The cabling of the motor is not correct.
- The shaft has been bent.
- The Fan has over-capacity in relation to the resistance in the system. Use adjustment damper.
- The speed of the motor is too high.
- Defective motor – please contact your dealer!

5.0 Liability

Warranty
Geovent A/S grants a warranty for products, which are defective, when it can be proved that the defects are due to poor manufacture or materials on the part of Geovent. The warranty comprises remedial action (reparation or exchange) until one year after date of shipment. No claims can be made against Geovent A/S in relation to loss of earnings or consequential loss as a result of defects on products from Geovent.

Wear parts like fan wheels are not included in the warranty

User liability
In order for Geovent to be capable of granting the declared warranty, the user/fi tter must follow this Instruction Manual in all respects.

Under no circumstances may the products be changed in any way, without prior written agreement with Geovent A/S.

6.0 Declaration of conformity

CE

The manufacturer: GEOVENT A/S
HOVEDGADEN 86
DK-8831 LØGSTRUP

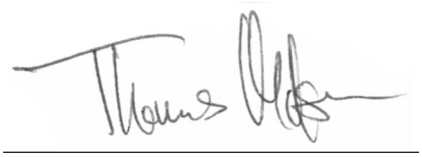
hereby declares that:

The product: Tornado Hood
Model: GT-600/GT-900/GT-1350

has been manufactured in compliance with the directi-ons of the Directive Council of 14 June 1989 in common approximation to the legislation of the member states regarding machine safety (89/392/EEC amended by the directive 91/368/EEC) with special reference to appendix 1 in the Directive regarding basic health and safety requirements in connection with the construction and manufacturing of machinery

GEOVENT A/S • HOVEDGADEN 86
DK-8831 LØGSTRUP

Position: Managing Director
Name: Thomas Molsen
Date: 06/06-19

Signature: 

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