



GEOVENT

INSTRUCTION MANUAL



With remote-controlled electrical motor or mechanically controlled spring system

HOSE REELS GTE AND GTS

Dimensions $\varnothing 80$, $\varnothing 100$, $\varnothing 125$ $\varnothing 150$ and $\varnothing 200$ mm

Lengths: 5, 7.5, 10 and 15 m

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1.0 General safety precautions

This instruction manual covers hose reel, type GTE with remote-controlled electrical motor as well as GTS mechanically controlled spring system.

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.

An authorized electrician must carry out all electrical installations.

1.1 Danger

Opening the spring box on the hose reel (GTS) could be fatal!

Do not let go of the hose/nozzle, when coiling up, as there is danger of mutilation. Avoid being hit by the nozzle – and be careful not to hit someone else with it.

1.2 Field of application

The GEOVENT hose reels are suitable for the extraction of exhaust gasses, welding smoke and grinding dust, etc. Do not use hose reels in areas categorized as ATEX-zones, e.g. for the extraction of aluminium dust, flour, textile dust, nor for sawdust or other media, which are connected with danger of explosion.

1.3 Handling

Always use gloves when handling the product.
Always use suitable lifting equipment.

1.4 Technical data

Temperature extracted air: Max. 170°C briefly 200°C
Temperature surroundings: 0 - 50°C

Noise data

The hose reel itself does not emit any noise (however, it may emit a little noise during coiling). The sound level primarily depends on the relation between the diameter of the hose and the extracted volume of air (wind roar).

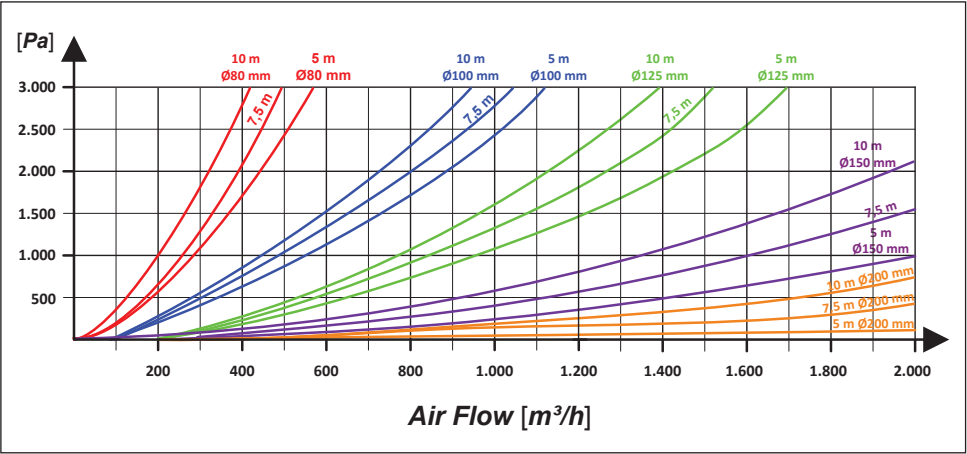
Optimum air volume

Several factors are of importance when selecting the correct hose reel. Depending on the application, use the table below as a guideline for the volume of air, requested for the various requirements.

Type of vehicle	Recommended air volume	Recomm. hose dimen.
Small cars	200-300 m³/h	ø80/ø100
Smaller private cars	300-400 m³/h	ø100
Private cars > 3000 ccm	600-800 m³/h	ø125
Vans/smaller trucks	600-800 m³/h	ø125
Trucks	1000 m³/h	ø150
Contractors' machinery	1000 m³/h	ø150
Test stand	1000-2000 m³/h	ø150/ø200

The details of the table above apply to *idle running* and are only intended as a guideline. Various projects may involve situations in which deviations from the table may occur.

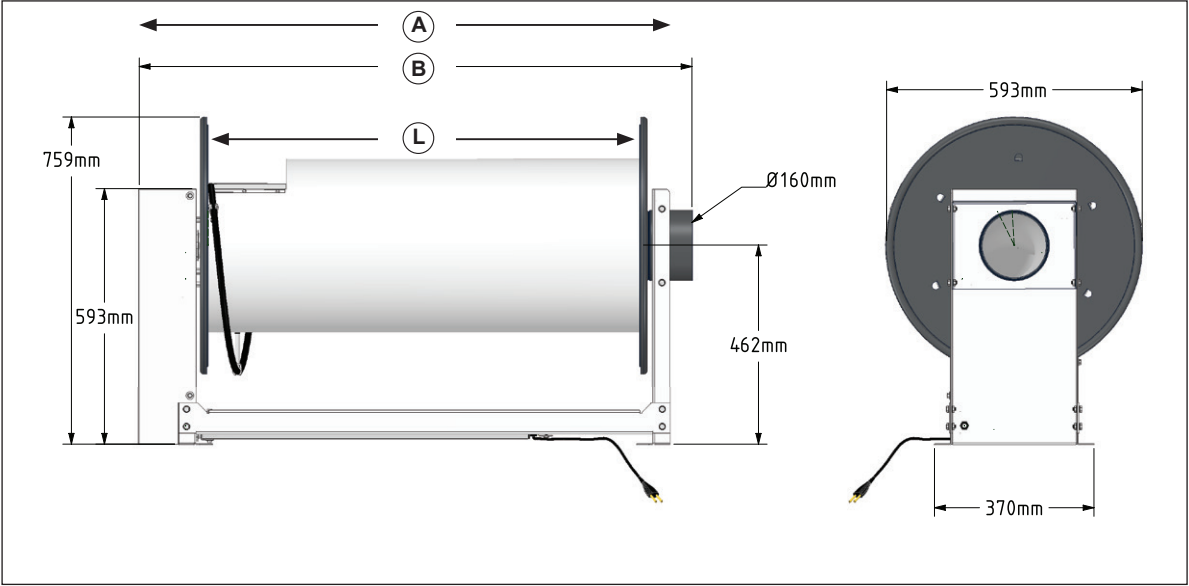
Pressure drop curve for hose reel
 The pressure drop through reel and hose may vary depending on the way you handle the hose. This pressure drop curve illustrates typical use.



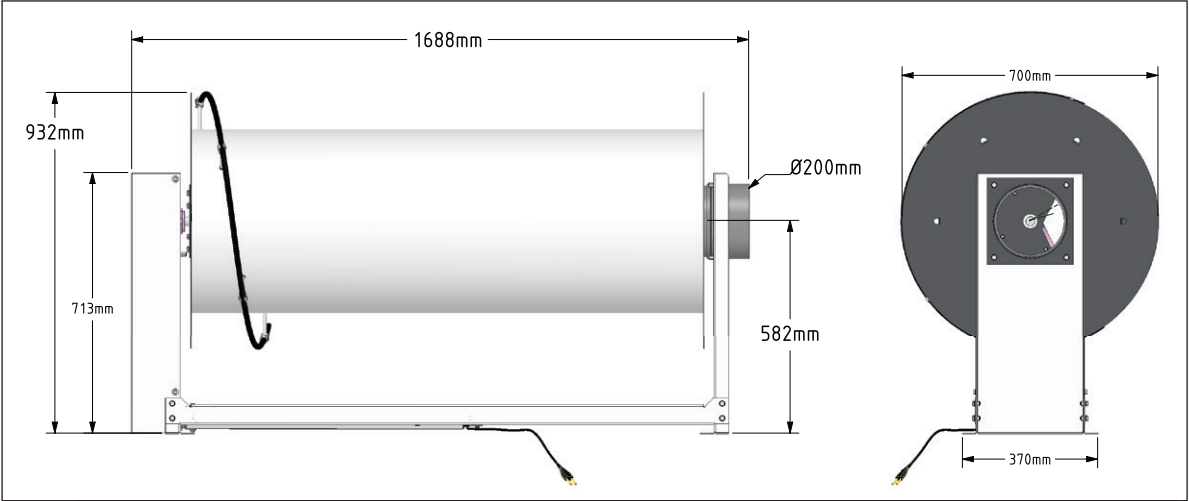
Dimensions:

GTE/GTS	L	A	B
750	750 mm	980 mm	1031 mm
1000	1000 mm	1230 mm	1281 mm
1400	1400 mm	1630 mm	1681 mm

Hose reels ø80, 100, 125, 150 mm



Hose reels ø200 mm



Powder enamelled end plates: RAL 7015
 Discharge ø160mm nozzle
 Frame – electro-galvanized steel frame.
 Bearing by the drive side: Spherical ball bearing. The bearing is maintenance-free.
 Hose (standard) GeoFlex Exhaust – EPDM / PP de-gas-hose. The hose may be conditionally be run over. Temperature resistant up to 170°C, however, briefly up to 200°C. Other types of hoses with temperature resistance up to 1000° C are available on request.
 Hose guide: Black PVC pipe.

GTS – spring – technical data:

The GTS hose reel is mounted with a hanging hose piece so that the hose can be reached by the operator.
 Note that the GTS-750-10-100 will have a minimum of 2.5 metres of hose hanging down.

Steel spring, encapsulated spring drive.

Spring: Made of C45K tempered steel and in fully tensioned condition the capacity is 15 kg.

GTE - motor - technical data:

- Motor 230V/50Hz 170W 0.77A
- Torque 40Nm
- Speed 15 rpm
- Max. No of coils 25 revs.
- Max. power time 4 min.
- Diameter 45mm (motor)
- Length of cable 190cm
- Temperature protection: ~ 140 °C
- Temperature area: -15 / +80 °C
- Circuit breaker max 13A

Plastic remote control:

The frequency of transmission is at 433MHz.

Battery: 3V CR2430

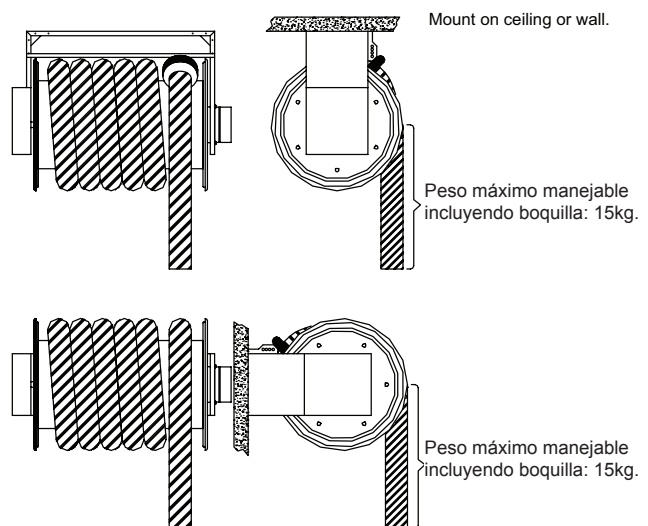
2.0 Installation

We supply the hose reel in complete/ assembled condition, ready for installation and connection of piping. Only let trained personnel carry out the installation. Before mounting, please consider the following points:

- Space for the mounting and service of the hose reel
- Connection possibilities for piping and automatics.

The hose reel with spring (GTS) is suitable for an installation height of max. 5 meters, as the force of the spring is reduced when used in large work areas. For installation heights above 5 meters, we recommend using an electric hose reel (GTE). The hose reel GTE, however, we do not recommend installing higher than 10 meters as standard. Contact us if a higher installation height is desired.

The hose reel is suitable both for mounting in the ceiling as well as on the wall. Ceiling mounting is the best option, if possible, since this position secures the optimum operation of the hose reel.

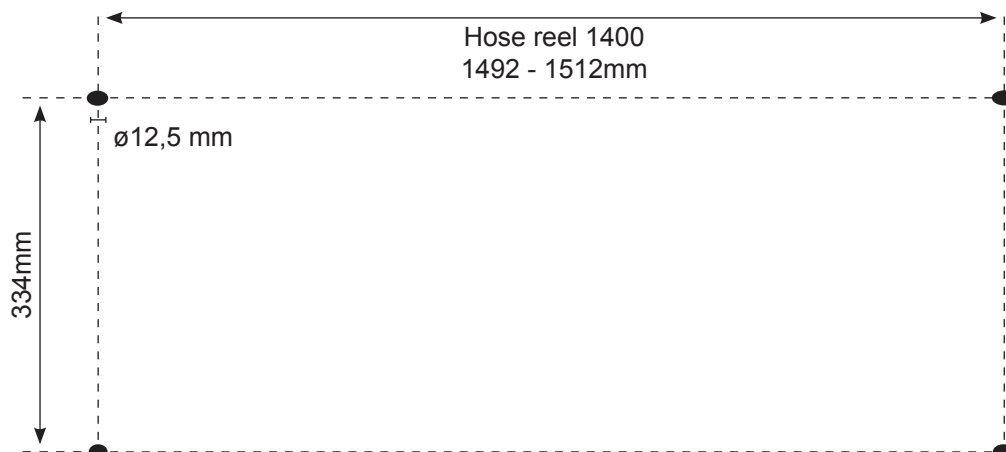


Hose reel 750
842 - 862mm

Hose reel 1000
1092 - 1112mm

Hose reel 1400
1492 - 1512mm

Mounting sketch



IN GENERAL

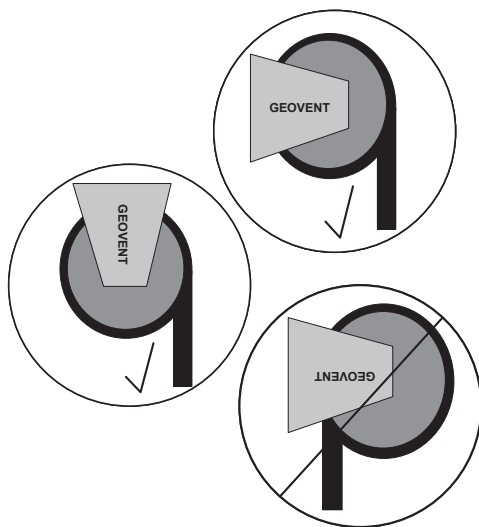
Procedure:

1. Firmly attach the hose reel to the ceiling or on the wall. The wall or the ceiling must be capable of withstanding a pull of at least 300 kg in order to prevent a collapse. Fix the hose reel by means of four M12 bolts.

2. **Important!** Mount the hose reel on a plane and stable installation surface and ensure that the reel/mounting frame is not twisting. I.e. it must be able to rotate almost without friction around its own shaft. If the reel twists, it may reduce the functionality or the service life of the hose reel.

3. Now connect the piping to the hose reel.
Since the inlet of the hose reel is an $\varnothing 160$ mm nipple, use an $\varnothing 160$ mm coupling as suction branch. Make sure not to twist the hose reel, since it could damage the bearings.

4. Nozzle and automatics are factory-mounted optional extras. Please order these parts when ordering your hose reel.



GTS – spring

The hose stop is factory-mounted and determines the operating range of the hose reel, i.e. how high up the hose has to stop when coiling-up.

However, in certain cases you will have to move/ adjust the rubber stop of the hose in order for it to fit to the actual situation. Do so by means of a 13 mm box spanner and a 13 mm single end wrench. You can move the rubber stop to the place on the hose, which fits the required stopping height. Make sure to fasten the rubber collar tightly.

GTE – electrical motor

Connect power – 220V 50Hz - to the motor.

There must be possibility that the power supply for each hose reel can be interrupted individually.

The remote control is programmed especially for the hose reel.

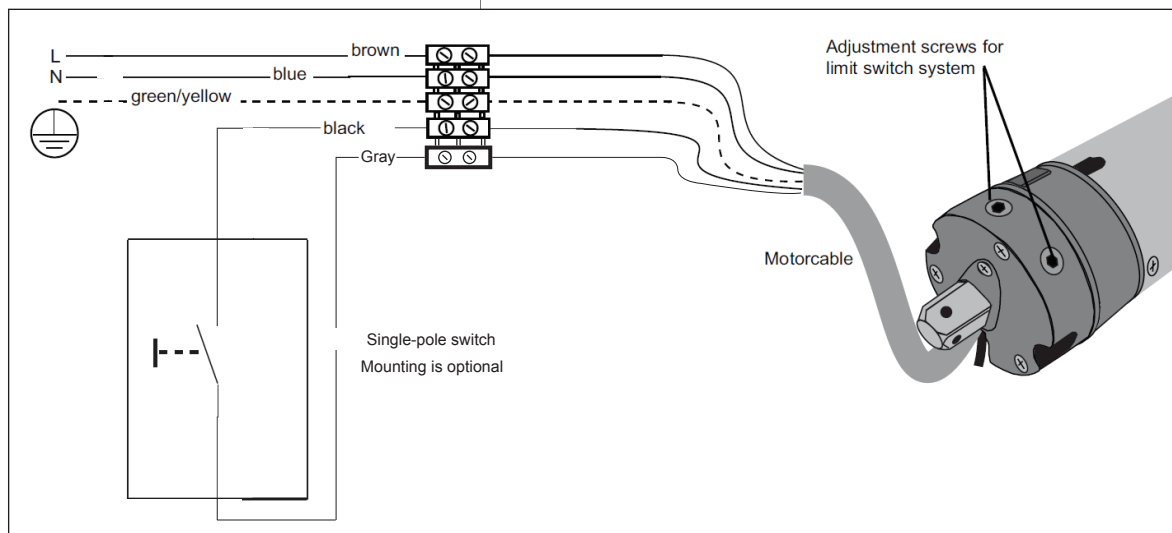
Please refer to section 3.0 for operation of the remote control.

Only activate the hose reel, when you can see that there is no obstacles in its way and it has been adjusted correctly.

We recommend assigning a permanent place to keep the remote control, e.g. on the wall or on the lift by the individual workstation.

IMPORTANT:

Never connect black and / or gray wires to electrical power



2.1 Trial run – exact adjustment

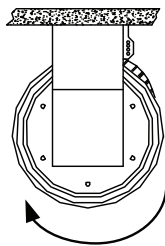
Always check whether the fan supplies the volume of air, for which the equipment was dimensioned. If the correct suction is not present, then there is an increased risk of the hose melting, when extracting warm exhaust gasses.

GTS – spring

Upon completion of the installation, please check whether the hose reel is functioning satisfactorily. Pull out the hose to the required working area and coil it back up again. Activate the coiling up of the hose by pulling the hose approx. 10 cm downward to start with. Subsequently, let it coil up again at an even pace. Avoid letting go of the hose, so that it coils up too quickly, since this may impede the future use of the reel (e.g. if the spring has seized).

Loosening/tightening of the spring

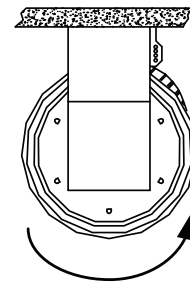
In some situations, it may be necessary to tension or release the spring, which determines the power with which the hose coils up and down. For example, if the hose is to be exchanged.



Spring is loosened

Tightening of the spring

1. To start with, dismantle the nozzle and the hose stop.
2. **Important** - Tape the hose to the reel!
3. Let the reel turn in the direction "hose down" once, until the pawl engages.
4. Each turn adds approx. 1.5 – 2.5 kg of tractive power. NB! From released condition to tensioned spring = max. nine turns.
5. **Warning** – Do not tighten the spring too much, since it may burst.



Spring is loosened

Loosening of the spring

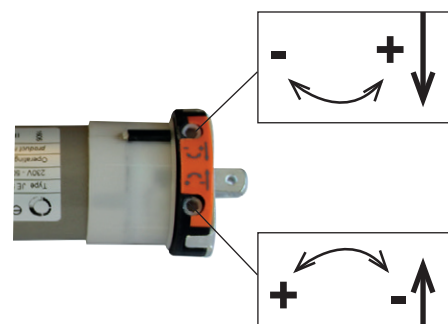
1. To start with, dismantle the nozzle and the hose stop.
2. Important - Tape the hose to the reel!
3. Let the reel turn in the direction "hose up" once, until the pawl engages.
4. Each turn loosens the spring approx. 1.5 – 2.5 kg of tractive power. NB! From max. tensioned condition to tensioned spring = max. nine turns.
5. **Warning** – Do not loosen the spring too much, since it may jump out of its base.

GTE – electrical motor

As standard, the hose reel GTE with electrical motor and remote control comes pre-programmed, ready for use. Please note: Always adjust the hose reel to the working area by fine-tuning it.

Adjustment of end stop:

Adjust stop by means of a screwdriver.



Red = End stop
when coiled up (up)

White = End stop
when coiled out
(down)

The remote control will be programmed at the factory.

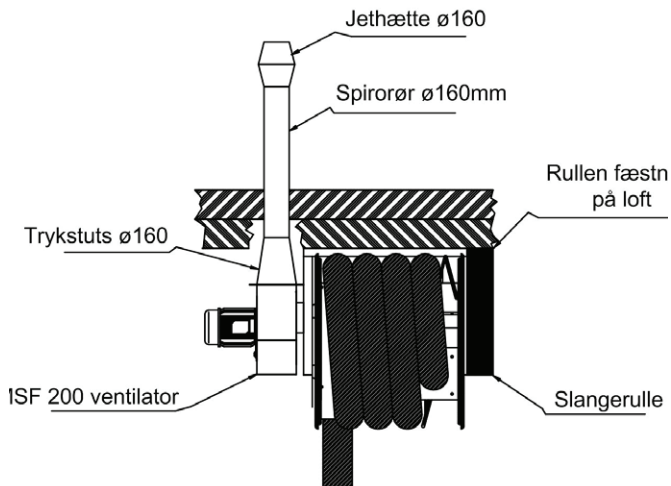
THE AERIAL:

Connect the aerial cable to the drive and let it hang freely. Do not let it coil up with the hose, into the chain or around the power supply cable.

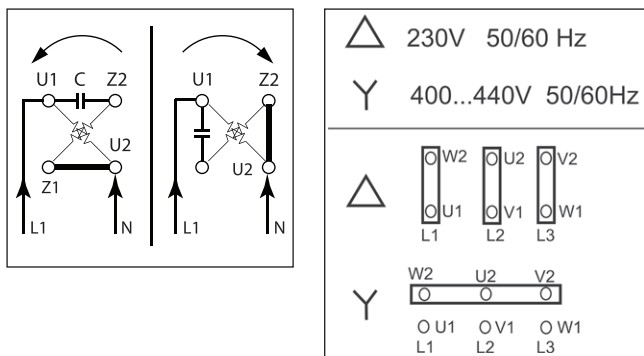
2.2 Mounting of optional equipment

Direct mounted fan MSQ-200

Fasten the MSQ fan (optional equipment) directly on the hose reel (see the fan manual). Start by fastening the adapter, on which the fan is to be mounted.



Connection of voltage



The fan is available in a one-phase and a three-phase version. See the electrical wiring diagram (principle sketch) below. Only an authorized electrician may connect the fan to the electrical power network. For further instructions to the installation and maintenance of the fan, please refer to the manual for MSQ fans.

Connection of wall-mounted control (via cable)
See the wiring diagram for connection of motor (page 5). Connect a wall switch for manual (cable) control via the black cable.

There is no need for special equipment; however, you can use a common one-pole toggle switch (automatic reset). Such switches are available in various shapes and variations.

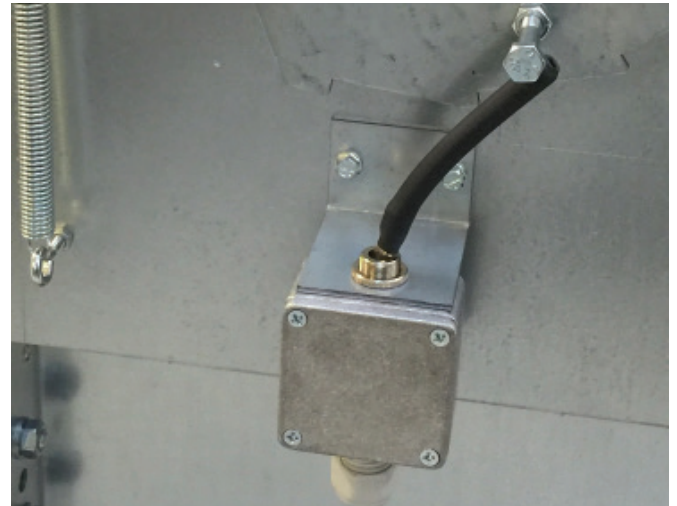
Function: The first push activates the reel, the second push stops it. The third push starts the reel again, however the drive reverses, etc.

Mounting of automatic start/stop

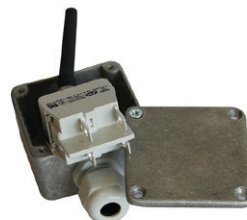
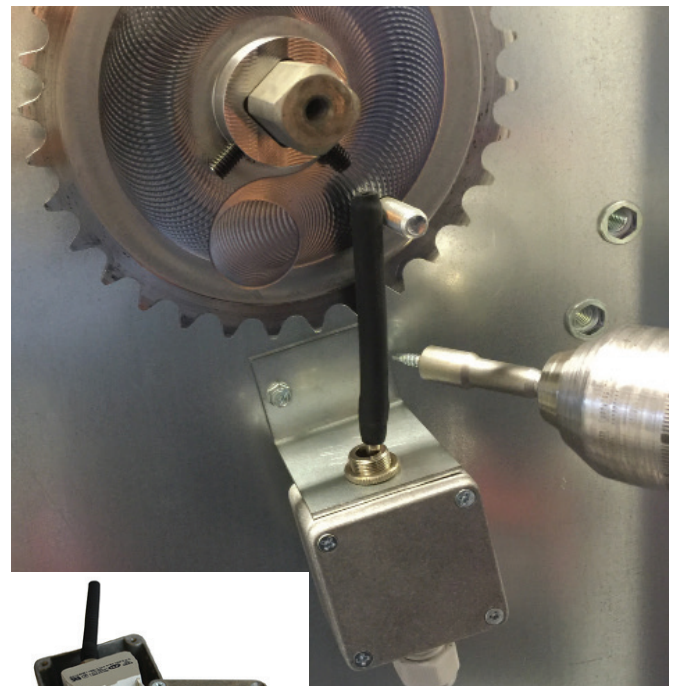
Switch for automatic start/stop (max. 250V 10A) (if ordered, it is factory-mounted) must be mounted under the protection shield. The two-pole switch sends a signal to the control panel LWS/Multibox, when activated, and/or a rapid-acting motor damper.

Mounting of switch for GTS - spring

REMEMBER: To remove the shield and connect the switch set to power.



Mounting of switch for GTE - motor



See electrical wiring diagram for cabling on the last page!

Please note: It is possible to connect a one-phase MSQ fan to the set of switches for direct operation of the fan (requires continuous use of protective circuit switch).

Programming remote

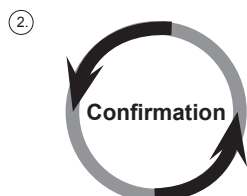
New remote

When programming a new remote control, it is important that only the respective hose reel is turned on.

Read all stages through to start programming.



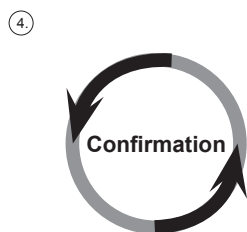
Switch on power only for the Hose reel that you are working on.



Then the motor will make a single to confirmation that it is redy.



Within 8 seconds, press one time at the button on the back.



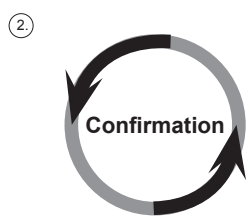
Then the motor will make a single to confirmation that the process is finished. At the end of programing press at **STOP**.

Codes an extra remote control with your existing remote controls

Read all stages through to start programming.



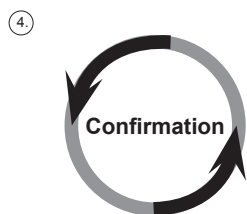
Press 8 time at the button on the back of the first remote control.



Then the motor will make a single to confirmation that it is redy.



Press 1 time at the button on the new/additional remote control



Then the motor will make a single to confirmation that the process is finished. At the end of programing press at **STOP**.

Delete remote

It is important that the hose reels that you want to remove the remote control from are on.

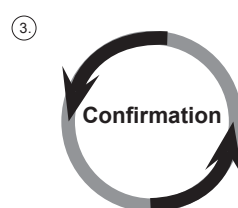
Read all stages through to start programming.



Press 6 time at the button on the back.



Press one time at up button.



Then the motor will make a single to confirmation that the emitter has been cancelled. At the end of programming press at **STOP**.

How to change the direction of rotation on a remote control



Press 6 time at the button on the back.



Press one time at down button.



Then the motor will make a single to confirmation that it is redy.



Press **STOP** to complete the programming.

3.0 User instruction - application

In general

Never use the hose reel without connecting it to a switched-on fan (and an open damper). If there is no air present or if the volume of air is not correct (too low), then the hose will melt or become deformed (turn oval).

In cases where the exhaust gasses have a temperature higher than 150 °C (e.g. if the motor starts running), then the hose may also melt and/or become deformed. In such cases, you must ensure to adapt the material/solution to the job. Check the temperature of the exhaust gasses before commissioning. Do so by testing with a probe thermometer in the airflow.

It is important that the fan is always switched on during use of the hose reel. If you have automatics ensuring that the fan starts, when using the reel, it is important that the hose reel is not running in the opposite direction at the commissioning, so that the actuation lever tips back. If this happens, then the fan will deactivate and the hose may melt.

Thus, always check that there is suction on the nozzle, when fixing it to the hose/upon commissioning.

GTS – spring

By accident, the hose reel may coil up more than intended by the user. Therefore, it could be advantageous to tie a string around the hose or to form it as a hook, so that you can always pull out the hose again.

If you want the hose to stop somewhere else on the reel, then move the stop (large rubber collar on the hose). Mount the stop in order to avoid misuse, which may deform the spring.

Uncoiling:

Operate the hose reel by pulling down the hose/nozzle, until reaching the required length. Hold back briefly and let it coil up slowly, until the pawl engages and locks the hose.

Coiling up:

When coiling the hose back up (up), pull lightly in the opposite direction (down), in order to release the pawl. Now the spring lifts the hose. The traction of the spring is progressive, i.e. the more the hose has been uncoiled, the tighter the spring. Be careful not to let go of the hose so that it is not coiling up too fast. It may damage the drive and result in a shorter service life.

The hose must not be rolled up when it is hot

The hose reel will not function as intended if unauthorized parts are mounted on the hose reel or if the spring is too loose or too tight. Refer to section 2.3 for instructions.

GTE – electrical motor

IMPORTANT! WE SUPPLY HOSE REEL GTE PRE-PROGRAMMED. I.E. THE REMOTE CONTROL IS CODED FOR THE INDIVIDUAL HOSE REEL AND THE END STOP IS SET.

Using the remote control:

The top button (UP), coils up the hose. A push on the button (DOWN) uncoils the hose. The button in the middle stops the hose. If you push the opposite directional button during operation, the drive will stop and then start turning in the opposite direction.



Part number 04-651-A-1/2

The hose reel may be connected to automatic start/stop of the fan. If the fan does not switch on automatically, then it is the responsibility of the user to make sure to switch on the fan.

The hose reel is not functioning as intended, if:

- Unauthorized parts are mounted on the Hose reel.
 - The total lifting capacity of 22 kg has been exceeded.
- Refer to the section for reprogramming of the hose reel.

Coiling up:

When coiling the hose up, it is important to guide the hose by hand.

The hose must not be rolled up when it is hot

4.0 Maintenance

Periodic maintenance:

- At least once every year, grease the V-ring of the hose reel in order to avoid deformation. Also, grease between pipes and connecting branch. Failing to maintain the hose reel will lead to squeaky noise coming from the hose reel.
- You cannot actually carry out maintenance on the hose, however, to secure a long service life, try to avoid running over the hose with cars, etc., make sure to extract adequate volumes of air and ensure that the hose does not bend/turn too much immediately after the exhaust pipe.
- Measure the volume of air on the hose reel at least once every year. If the volume of air is inadequate, it may result in burning a hole in the hose.

At least once every year, arrange for an authorized service engineer to carry out an inspection of the complete spot extraction plant.

4.1 Troubleshooting

In case of problems with the hose reel, check the following:

Problems with the operation of the hose reel:

- The pawl of the hose reel will not engage. Typically, the pawl is worn or the spring for the pawl is defective. Exchange defective parts.
- The hose reel coils slowly. Perhaps it is mounted on an uneven surface, or the bracket of the hose reel is deformed. Rectify by mounting the hose reel on an even surface or by correcting the bracket.

Noise problems

- If the hose reel emits a squeaking noise, typically, the V-ring by the inlet bearing is defective or out of position. Rectify by replacing the V-ring or by adjusting it. Remember to grease!
- The base on which the hose reel and the fan are mounted, is unstable.
- More air is extracted than for which the equipment has been dimensioned. Use an adjusting damper.

Problems with the hose

- The hose cannot withstand high temperatures; therefore, holes have been burnt into the hose. This happens if there is not sufficient suction on the equipment. Rectify by increasing the suction of air through the system or by extending the hose with 1 –2 m of high-temperature hose, or with a full-length HT hose, depending on the temperature. Also add "false air" in order to reduce the average temperature.

GTE – electrical motor

FAQ and troubleshooting (remote control)

The range is too short

- Roll out the aerial.
- Do not twist the aerial around the power supply cable.
- Reposition the aerial (do not extend it).
- Avoid placing it close to products emitting radio interference (e.g. overhead travelling cranes). Large volumes of electromagnetic noise may result in reduced range/function.
- If the LED is lit, normally, the battery in the remote control is sufficiently charged.
- If during the past few weeks the range has become shorter, replace the battery.

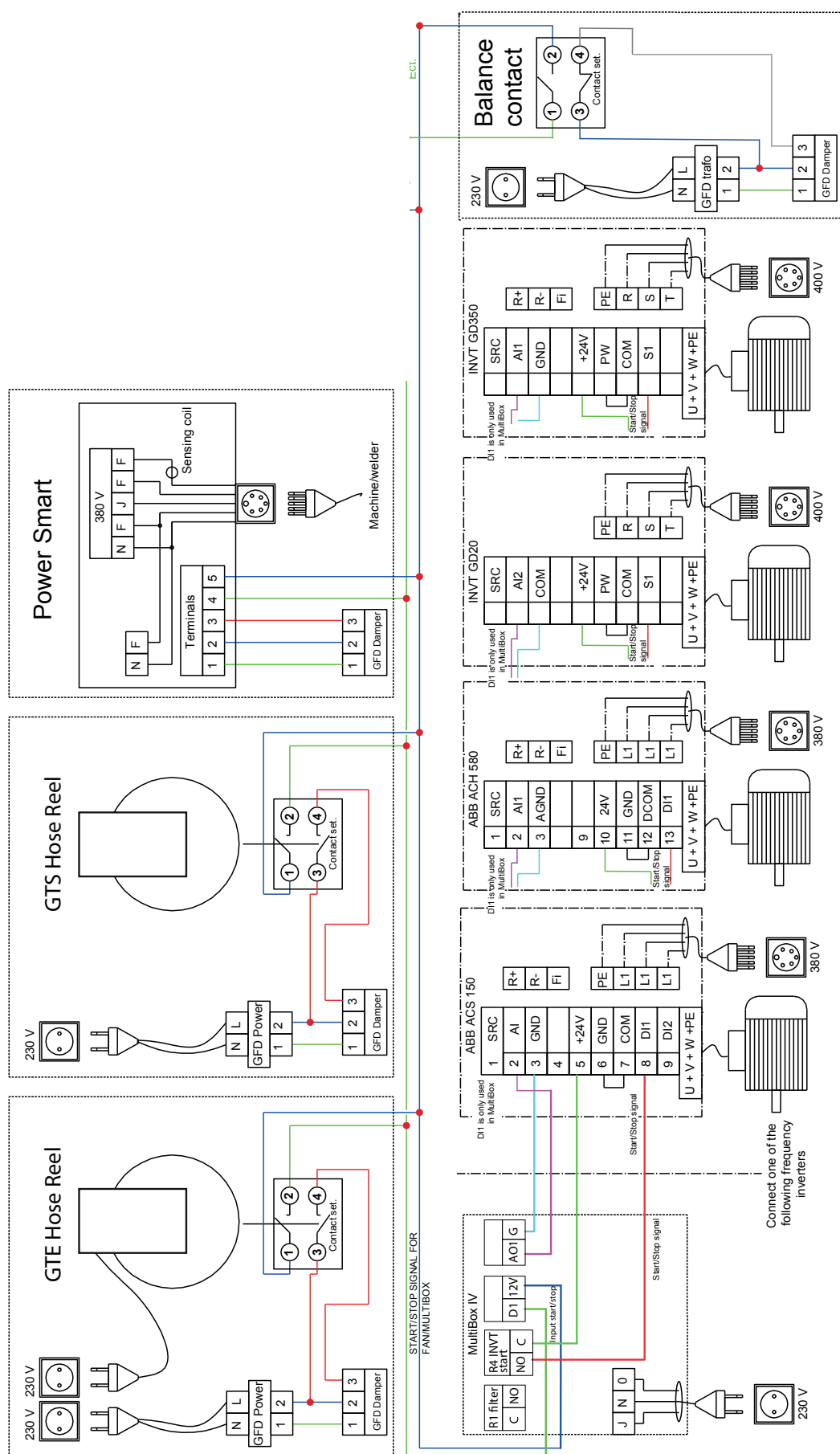
The range is subject to serious periodic variation/fluctuation:

- The remote control operates at the frequency of 433,92 MHz. In case other signals are using the same frequency, it may reduce the signal significantly, since the receiver/motor will block the signals for security reasons.
 - For example, weather stations or radio-controlled temperature sensors typically emit signals in cycles of 30-90 seconds lasting approx.1 second.
 - Headsets can also emit radio signals, just as airports and military zones may have equipment causing noise.
 - Try testing another position – or deactivate all other equipment.
 - Weak battery? Exchange it.
- Change to cable operation, if too noisy.

Is it possible to operate more than one hose reel with the same remote control?

- It is possible; however, we do not recommend operating the hose reels simultaneously, since you cannot operate the hose reels individually. If you wish to operate more hose reels with the same remote control, we recommend buying a six-channel remote control (optional equipment), with which you can operate the hose reels individually or simultaneously.

Multicoupling diagram for switches, MultiBox III and frequency inverters



Adjusting frequency inverter:
See manual - important parameters, must be adjusted:

Adjusting Multibox IV:
Quickguide - also see manual

Setpunkt 1
Min. alarm
Max. alarm

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 (repair or exchange) until one year after the 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 chains, motor and hoses are not included in the warranty.

User liability

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

Do not make any changes/ or change the design or the function of the hose reel. The liability of Geovent A/S no longer applies, if any such changes are made.

Please also refer to the current terms and conditions of sale and delivery on our website: www.geovent.dk

6.0 EU-Declaration of conformity



GEOVENT

HOVEDGADEN 86 • DK-8831 LØGSTRUP
(+45) 8664 2211 • salg@geovent.dk

The manufacturer:

GEOVENT A/S,
HOVEDGADEN 86,
DK-8831 LØGSTRUP

Hereby declares that:

The product: Hose reel
Models: GTE and GTS

have been manufactured in compliance with the following directives and standards:

The directive No 2006/42/EC of 17 May 2006 on machinery from the European Parliament and the Council and on changes of directive No 95/16/EEC.

EN ISO 14121-1:2007 Risk assessment – part 1

EN ISO 12100-1:2005 Basic concepts and general principles for design

EN ISO 12100-1:2009 Construction and design
Part 1: Basic terminology and methodology

EN ISO 12100-2:2005 Basic concepts and general principles for design

EN ISO 12100-2:2009 Construction and design
Part 2: Technical principles

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