



GEOVENT

INSTRUCTION MANUAL



EXTRACTION PERMA

Contents

| | |
|---|----|
| 1.0 Introduction | 3 |
| 2.0 Safety | 3 |
| 2.1 General safety | 3 |
| 2.2 Danger | 3 |
| 3.0 Machine overview | 4 |
| 3.1 Description | 4 |
| 3.2 Intended use | 4 |
| 3.3 Machine specifications | 4 |
| 3.3.1 Design | 4 |
| 3.3.2 Technical data | 5 |
| 4.0 Transport, handling and storage | 5 |
| 5.0 Assembly, installation and start of operation | 5 |
| 5.1 Location | 5 |
| 5.2 Installation | 5 |
| 5.3 Control and test of the security system | 7 |
| 6.0 Commissioning | 7 |
| 6.1 After installation | 7 |
| 7.0 Control, test and maintenance | 8 |
| 7.1 Control | 8 |
| 7.2 Maintenance | 8 |
| 7.3 Replacing filter | |
| 8.0 Cleaning | 8 |
| 9.0 Troubleshooting | 8 |
| 10.0 Dismantling, disabling and scrapping | 8 |
| 11.0 Dimensions | 8 |
| 12.0 Liability | 9 |
| 13.0 Declaration of conformity | 10 |
| 14.0 Spare part list | 10 |

1.0 Introduction

This manual is made and designed in order to facilitate the best and most secure interaction with the product. The manual is relevant for people involved in transportation, stocking, installation, using, maintaining and all other thinkable interaction with the product.

The manual must be read in full and understood before interacting with the product.

When the manual has been read and understood in full, the table of contents can be used to find the relevant information in each case.

The product is manufactured by:

Geovent A/S
Hovedgaden 86
DK-8861 Løgstrup
DENMARK

Tel.: (+45) 86 64 22 11
E-mail: salg@geovent.dk
www.geovent.com

This manual is to be used for all interactions with the product including: Transportation, stocking, installation, operation and maintenance.

This product is marked with: (example)

10-300H



PERMA arm ø57 L380 2 led hvid

2.0 Safety

2.1 General safety

Carefully read this manual before use and observe the safety instructions in order to avoid injuries!
Keep this manual in a safe place!

Secure that all users of the product have read this manual and that they follow the instructions as described. Observe all instructions marked on the product! Observe the indications of the manufacturer. Never use the product if you are in doubt about how it works or what you should do.

When doing maintenance follow the instructions in chapter 7.0.

Do not modify the product or use spare parts from other suppliers than Geovent, as this may hamper the product and the function.

2.2 Danger

You must wear safety gloves when handling or using the product to protect your hands from scratches etc.

Be aware that the product may tilt when you move it. You must handle the product with care and tie it safely to the truck or the fork lift when it is in transport.

Follow the instructions in chapter 7.0 when the product is maintained.

When handling the product be sure that there is no risk for the installer, and secure that there are no people around the product, secure that the product cannot fall down risking to injure persons or subjects.

If the product is to be used in ATEX Zones, it must be an ATEX version marked as such. In this case the grounding of the equipment is of utmost importance.

If a repair is not possible you should dispose of the product. Please follow the instruction for disposal in chapter 10.0.

3.0 Machine overview

3.1. Description

Point extraction arm for laboratories, clinics etc. in different lengths and with different funnels etc.

3.2 Intended use

Geovent offers a new extraction arm, PERMA. PERMA arm is good for use in laboratories, hospitals, dental clinics, pharmacies, veterinarians, podiatrists, schools, electronic industry, hair dressing, jewelers, food industry, and extraction in shops and supermarkets.

In addition, the suction arm is suitable for the electronics industry (ESD approved), as well as for the chemicals, plastics. and other industries.

The product can be used in ATEX Zones, but it must be an ATEX version marked. In this case the grounding of the equipment is of utmost importance.

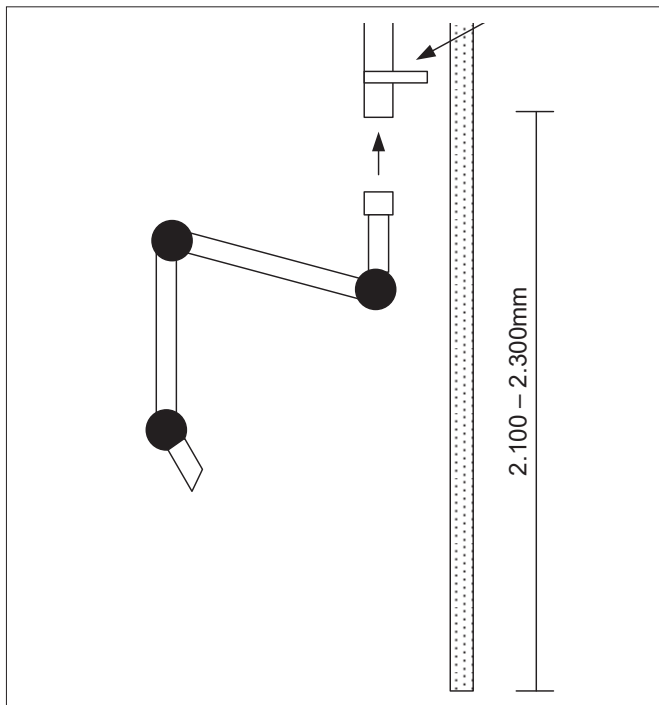
3.3 Machine specifications

3.3.1 Design

Ceiling, wall- and table bracket: Coated steel.

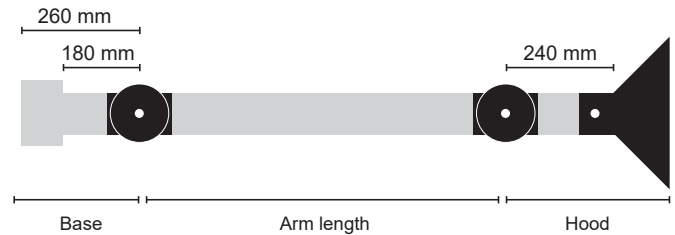
Hood and suction pen: Is delivered in clear, impact-resistant polycarbonate or aluminum. Can be rotated in multiple positions. Many variants are available.

Arms and joints: Is made of aluminum with two molded plastic joints in black or white (PP), connected by friction o-ring.

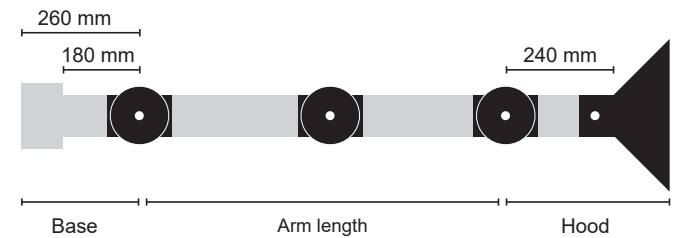


3.3.2 Technical data

Dimensions



Example: PERMA arm $\varnothing 57$ ESD, 580 mm 2 joint
The 580 mm is from center joint to center joint.



Example: PERMA arm $\varnothing 57$ mm, 1150 mm 3 joint
The 1150 mm is from center joint to center joint.

Recommended flow area

Pipe dimension:

| | |
|------------------|-------------------------|
| $\varnothing 57$ | 50-100m ³ /h |
| $\varnothing 76$ | 80-180m ³ /h |

Max. temp.

-15 - +95°C

4.0 Transport, handling and storage

During transport in a truck or in another means of transportation the product must be securely packed in a box or a pallet and covered with a water proof material. The product must be securely stowed in the truck so that it will neither tilt nor shift during transport.

During transport over a short distance e.g. in a stock or a factory, the product can be moved by means of a forklift or a stabeler.

When moved it must be secured that the product does not tilt or shift. And it must be secured that the limitations of the means of transportation is not exceeded.

Secure that there are no people around the product, when the product is moved.

The product must be placed in a dry place and covered securely, in order to secure that moist, metal parts or other substances do not damage the product.

It is not allowed to place anything on top of the product.

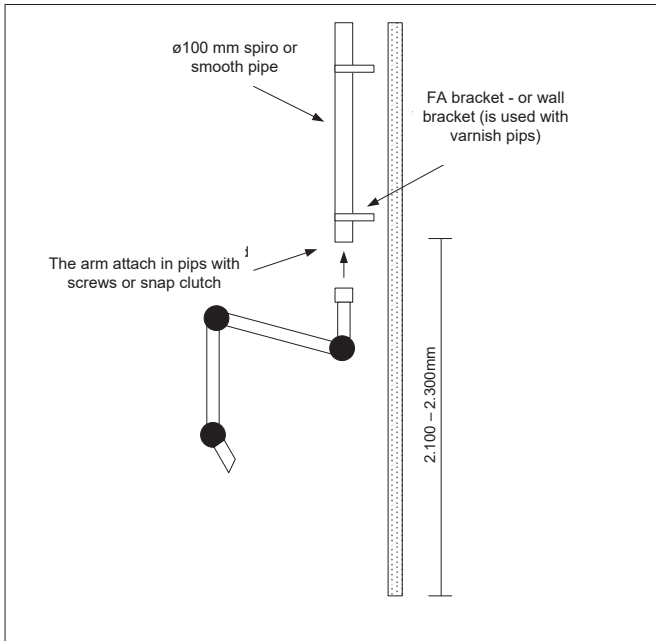
5.0 Assembly, installation and start of operation

5.1 Location

It is recommended to use the PERMA arm indoors.

5.2 Installation

The PERMA arm is delivered in separate parts. Base, hoods and other accessories are to be assembled on site.



Procedure:

1. The Spiro pipe or wall/ceiling bracket is mounted with brackets on the wall or ceiling at the appropriate height.
2. Typical installation height is adapted to the work position: Standing or sitting.
3. The base of the arm is mounted in the spiro pipe / ceiling bracket / wall bracket pipe with screws or pop nuts. It is IMPORTANT that the arm is mounted on the right side of the horizontal pipe. (See photo below)



- 3A. Press the base up into the pipe.
 - 3B. Drill 3 holes distributed around the pipe.
 - 3C. Drill the holes 9 mm over the edge.
 - 3D. Do not drill the holes on the 4 white markings, shown with the 2 red arrows.
 - 3E. Do not drill deeper than 6 mm.
4. The first arm joint must be installed so that it can be placed in a horizontal position from the wall.
 5. The hood or extraction pen is mounted.
 6. Tighten the arm joint, so that the arm can hold itself.

Mounting of optional equipment

Geovent offers a great range of accessories for the PERMA arm: Round hood, extraction pen, flat hood, aluminium hood. There are different types of accessories for each type of arm ø57, ø57 ESD, ø76 and ø76 ESD.

As standard the arm is delivered with manual damper for opening and closing the air passage.

When the product is to be used to ATEX or ESD it must be secured, that the product is marked as such. Further it is important that the arm is grounded.

5.3 Control and test of the security system

After the final mounting, the PERMA arm should be adjusted to the typical working area, for optimum utilisation of the arm. Do so by adjusting the points mentioned in item section 3.3.1.

After some time of use the arm may have difficulty with holding itself. In this case the finger screws at the joints must be tightened.

Connecting lights

Lights

In some cases the PERMA arm can be supplied with a light in some cases. The light is fitted from the factory. Electrical installations must be carried out by an authorised electrician.

6.0 Commissioning

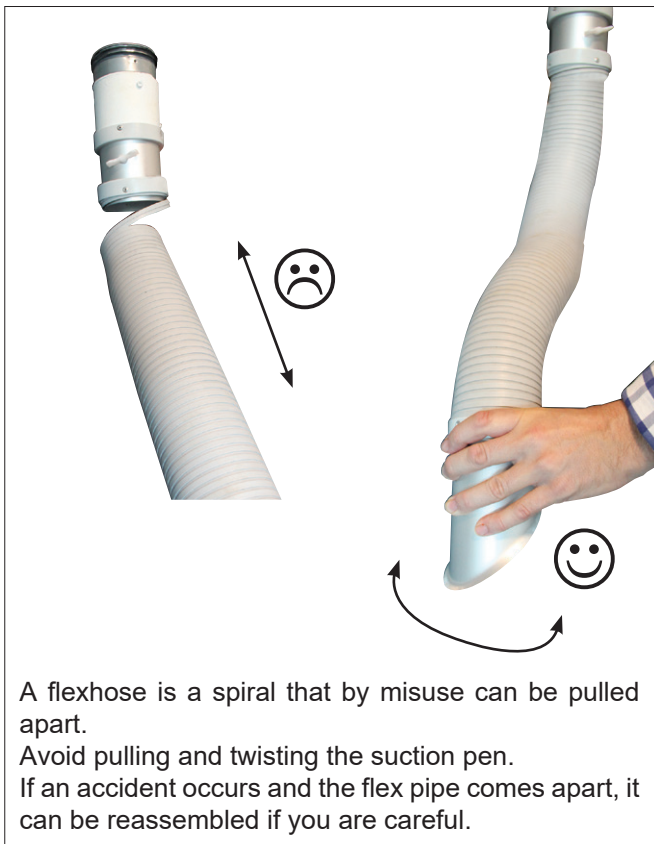
For normal use the arm is self-retaining in the required position within the working area. The bracket of the arm supplies a 360° rotary working area.

If the arm has been correctly dimensioned, the hood of the arm should be placed in a vertical position. That is just above the pollutant. In this case up to 99% of the polluting particles will be caught.

Always check that the correct volume of air is extracted by the suction pen or/hood.

The Arm does not work if ...

- unauthorised parts have been mounted on the arm.
- if anything is suspended from the arm. The arm is only intended to support the weight of the arm.



6.1 After installation

Check the installation according to chapter 5.3.

7.0 Control, test and maintenance

7.1 Control

Check the installation according to chapter 5.3.

7.2 Maintenance

Periodic maintenance

- When it becomes difficult to position the arm, e.g. if it will not remain in the required position, please adjust the finger screws on the joints.
- Please check the condition of the hose and the spring, and exchange them if necessary.

Please contact your dealer in respect of spare parts. At least once annually, the whole point extraction system should be overhauled by an authorised serviceman.

7.3 Replacement of equipment

Geovent has made it easy to replace equipment on the PERMA arm. When you need to change a hood or a flat hood, screw off existing hood or extraction pen and mount the new hood.

8.0 Cleaning

The outside of the product is cleaned with a vacuum cleaner or a cloth.

9.0 Troubleshooting

If there is insufficient suction in the hood: Check if there is full flow in the arm, if the ventilator is switched on and if the ventilator is working as prescribed.

If the arm does not stay up, check that the arm is correctly mounted as in 5.3 above.

10.0 Dismantling, disabling and scrapping

Deactivate the product by disconnection the electrical mains. Dismantle all pipes or wires etc.

The inside of the product must be cleaned by means of a vacuum cleaner with a filter which suits the purpose.

Dismantle plastic parts and dispose of it according to local regulations.

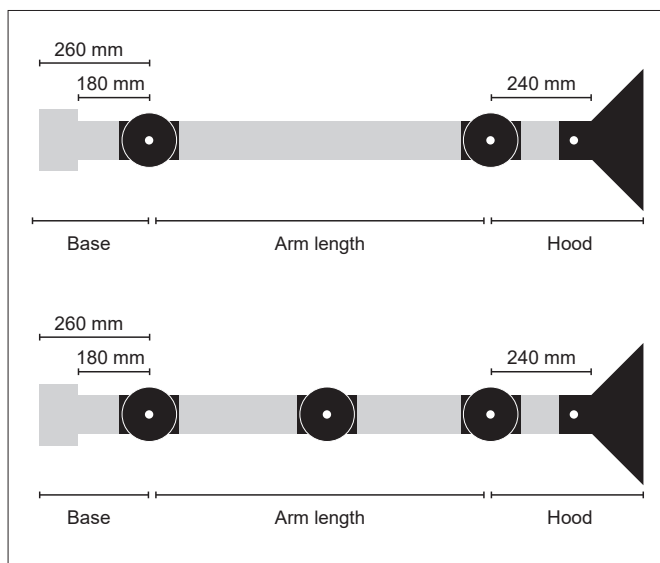
Dismantle the metallic parts by unscrewing screws and bolts. Afterwards cut the larger pieces into smaller pieces and dispose of it according to local regulation.

Dismantle electronic and electric parts and dispose of it according to local regulations.

The packing material must be sorted according to local regulation in order to be able to reuse the material.

11.0 Dimensions

PERMA arm



12.0 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 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 on parts such as filter cartridges and hose is 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.

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

Please refer to the current sales and delivery conditions at www.geovent.com

13.0 Declaration of conformity

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

Hereby declares that:

The product: PERMA arm
Model: PERMA arm ø57 mm,
PERMA arm ø76 mm

Complies with the relevant parts of the following directives and standards:

Directive 2006/42 / EC of the European Parliament and of the Council of 17 May 2006 on machines and amending directives 95/16 / EC.

This declaration is no more valid if changes are made to the product by others than the manufacturer.

Authorized to collect the technical file:

Lise Cramer

Date: 03.07.2023

Position: Director
Name: Thomas Molsen

Signature: 



14.0 Spare part list

| Art. No. | Description |
|----------|---|
| 10-520 | Table spring for 1490 mm PERMA arm |
| 10-521 | Wall spring for 1490 mm PERMA arm |
| 10-525 | Tight damper - ø57 mm |
| 10-526 | Tight damper - ø76 mm |
| 10-527 | Tight damper, ESD - ø57 mm |
| 10-528 | Tight damper, ESD - ø76 mm |
| | |
| 10-316 | Hood ø380 mm, polycarbonate, ø57 |
| 10-416 | Hood ø380 mm, polycarbonate, ø76 |
| 10-316A | Hood ø280 mm, polycarbonate, ø57 |
| 10-416A | Hood ø280 mm, polycarbonate, ø76 |
| 10-317 | Hood conical ø250 mm, polycarbonate, ø57 |
| 10-417 | Hood conical ø250 mm, polycarbonate, ø76 |
| 10-318 | Hood conical ø250 mm, polycarbonate, m. flexrør 300 mm, ø57 |
| 10-418 | Hood conical ø250 mm, polycarbonate, m. flexrør 300 mm, ø76 |
| 10-319 | Hood conical ø250 mm, polycarbonate, straight edge, ø57 |
| 10-419 | Hood conical ø250 mm, polycarbonate, straight edge, ø76 |
| 10-320 | Hood conical ø250 mm, polycarbonate, m. flexrør 300 mm straight edge, ø57 |
| 10-420 | Hood conical ø250 mm, polycarbonate, m. flexrør 300 mm straight edge, ø76 |
| 10-321 | ALU Hood conical ø150 mm, ø57 |
| 10-421 | ALU Hood conical ø150 mm, ø76 |
| 10-366 | ALU Hood conical ø150 mm, ESD, ø57 |
| 10-466 | ALU Hood conical ø150 mm, ESD, ø76 |
| 10-323 | Hood 340x250 mm, polycarbonate, ø57 |
| 10-425 | Hood 340x250 mm, polycarbonate, ø76 |
| 10-324 | Suction Pen L:250 mm, ALU, ø57 |
| 10-422 | Suction Pen L:250 mm, ALU, ø76 |
| 10-367 | Suction Pen L:250 mm, ALU, ESD, ø57 |
| 10-467 | Suction Pen L:250 mm, ALU, ESD, ø76 |

14.0 Spare part list

| | |
|---------|---|
| 10-325 | Suction Pen L:350 mm, ALU, ø57 |
| 10-423 | Suction Pen L:350 mm, ALU, ø76 |
| 10-368 | Suction Pen L:350 mm, ALU, ESD ø57 |
| 10-468 | Suction Pen L:350 mm, ALU, ESD, ø76 |
| 10-324A | Suction press flange L:250 mm, ALU, ø57 |
| 10-422A | Suction press flange L:250 mm, ALU, ø76 |
| 10-367A | Suction press flange L:250 mm, ALU, ESD, ø57 |
| 10-467A | Suction press flange L:250 mm, ALU, ESD, ø76 |
| 10-325A | Suction press flange L:350 mm, ALU, ø57 |
| 10-423A | Suction press flange L:350 mm, ALU, ø76 |
| 10-368A | Suction press flange L:350 mm, ALU, ESD, ø57 |
| 10-468A | Suction press flange L:350 mm, ALU, ESD, ø76 |
| 10-326 | Suction Pen L:150 mm w/ flextube 300 mm, ALU, ø57 |
| 10-424 | Suction Pen L:150 mm w/ flextube 300 mm, ALU, ø76 |
| 10-369 | Suction Pen L:150 mm w/ flextube 300 mm, ALU, ESD, ø57 |
| 10-469 | Suction Pen L:150 mm w/ flextube 300 mm, ALU, ESD, ø76 |
| 10-326A | Suction press flange L:150 mm w/ flextube 300 mm, ALU, ø57 |
| 10-424A | Suction press flange L:150 mm w/ flextube 300 mm, ALU, ø76 |
| 10-369A | Suction press flange L:150 mm w/ flextube 300 mm, ALU, ESD, ø57 |
| 10-469A | Suction press flange L:150 mm w/ flextube 300 mm, ALU, ESD, ø76 |
| 10-370 | Suction Pen L:150 mm w/ flextube 600 mm, med spjæld, ALU, ø57 |
| 10-371 | Suction Pen L:150 mm w/ flextube 900 mm, med spjæld, ALU, ø57 |
| 10-329 | Sugetragt oval 140x180 mm, polycarbonate, ø57 |
| 10-382 | Sugetragt oval 140x180 mm, painted polycarbonate, ESD, ø57 |
| 10-374 | Hood, ø380 mm, painted polycarbonate, ESD, ø57 |

14.0 Spare part list

| | |
|---------|--|
| 10-470 | Hood, ø380 mm, painted polycarbonate, ESD, ø76 |
| 10-374A | Hood, ø280 mm, painted polycarbonate, ESD, ø57 |
| 10-470A | Hood, ø280 mm, painted polycarbonate, ESD, ø76 |
| 10-375 | Hood conical, ø250 mm, painted polycarbonat, ESD, ø57 |
| 10-471 | Hood conical, ø250 mm, painted polycarbonat, ESD, ø76 |
| 10-377 | Hood conical straight edge, ø250 mm, painted polycarbonate, ESD, ø57 |
| 10-473 | Hood conical straight edge, ø250 mm, painted polycarbonate, ESD, ø76 |
| 10-380 | Hood 340x250 mm, painted polycarbonate, ESD, ø57 |
| 10-475 | Hood 340x250 mm, painted polycarbonate, ESD, ø76 |
| 10-476 | Lys kit, LED, incl. trafo |

| | |
|---------|--|
| 10-502 | Ceiling console w/ side connection 250 mm |
| 10-503 | Ceiling console w/ side connection 350 mm |
| 10-504 | Ceiling console w/ side connection 500 mm |
| 10-505 | Ceiling console w/ side connection 750 mm |
| 10-506 | Ceiling console w/ side connection 1000 mm |
| 10-507 | Pipe white ø100 - 500 mm |
| 10-508 | Pipe white ø100 - 1000 mm |
| 10-515 | Coupling connector ø100, white for joining circular ducts |
| 10-509 | Wall bracket for pipe, 75 mm from the wall |
| 10-509A | Wall bracket for base/pipe - ø100 mm |
| 10-511 | Ceiling bracket open ø100 mm - 200x200 mm |
| 10-512 | Branch pipe ø100 mm, 620x250 mm - used for 1 outlet and 2 arms |
| 10-514 | Support bracket for ceiling pipes |



GEOVENT

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