



***GEOVENT***

# INSTRUCTION MANUAL



# PERMA ARM



## Content

1.0 General safety precautions.....	3
1.2 Field of application .....	3
1.3 Technical data.....	3
1.4 Construction .....	4
2.0 Installation .....	4
2.1 Mounting of optional equipment .....	4
2.3 Trial run – exact adjustment .....	6
2.4 Replacement of equipment.....	6
3.0 User instruction – application .....	6
4.0 Maintenance .....	6
5.0 Liability.....	6
6.0 Declaration of conformity.....	7

## 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.

## 1.2 Field of application

Geovent offers a new extraction arm, PERMA. PERMA arm is good for use in hair dressing, dental clinics, jewelers, pharmacies, veterinarians, podiatrists, schools, laboratories/ hospitals, butchery extraction, milk extraction and extraction in supermarkets.

The Perma arm must not be used in areas categorized as ATEX zones, for example. the extraction of aluminum dust, flour, textile, wood dust and other media associated with the explosion.

By ATEX-related processes, the ASX-arms must be used.

## 1.3 Technical data

### PERMA arm ø57

Art. nr. 10-300H/S	380 mm 2 joint white or black
Art. nr. 10-301H/S	480 mm 2 joint white or black
Art. nr. 10-302H/S	580 mm 2 joint white or black
Art. nr. 10-303H/S	380x380 mm 3 joint white or black
Art. nr. 10-304H/S	480x480 mm 3 joint white or black
Art. nr. 10-305H/S	580x680 mm 3 joint white or black
Art. nr. 10-306H/S	580x680 mm 3 joint white or black
Art. nr. 10-307H/S	680x680 mm 3 joint white or black
Art. nr. 10-308H/S	750x680 mm 3 joint white or black
Art. nr. 10-309H/S	750x750 mm 3 joint white or black

### PERMA ø57 ESD

Art. nr. 10-350	380 mm 2 joint
Art. nr. 10-351	480 mm 2 joint
Art. nr. 10-352	580 mm 2 joint
Art. nr. 10-353	380x380 mm 3 joint
Art. nr. 10-354	480x480 mm 3 joint
Art. nr. 10-355	580x680 mm 3 joint
Art. nr. 10-356	580x680 mm 3 joint
Art. nr. 10-357	680x680 mm 3 joint
Art. nr. 10-358	750x680 mm 3 joint
Art. nr. 10-359	750x750 mm 3 joint

### PERMA ø76

Art. nr. 10-400H/S	380 mm 2 joint white or black
Art. nr. 10-401H/S	480 mm 2 joint white or black
Art. nr. 10-402H/S	580 mm 2 joint white or black
Art. nr. 10-403H/S	380x380 mm 3 joint white or black
Art. nr. 10-404H/S	480x480 mm 3 joint white or black
Art. nr. 10-405H/S	580x680 mm 3 joint white or black
Art. nr. 10-406H/S	580x680 mm 3 joint white or black
Art. nr. 10-407H/S	680x680 mm 3 joint white or black
Art. nr. 10-408H/S	750x680 mm 3 joint white or black
Art. nr. 10-409H/S	750x750 mm 3 joint white or black

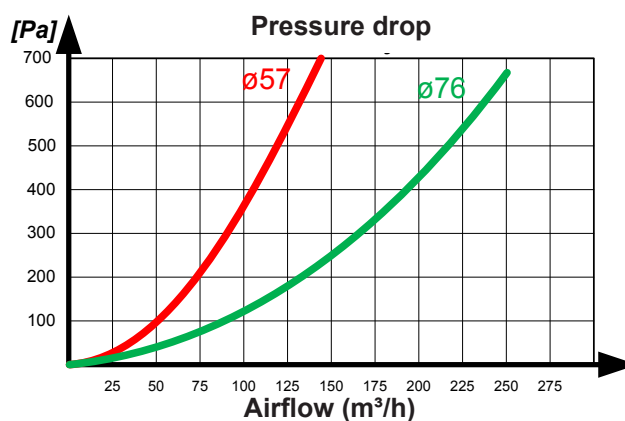
### PERMA ø76 ESD

Art. nr. 10-450	380 mm 2 joint
Art. nr. 10-451	480 mm 2 joint
Art. nr. 10-452	580 mm 2 joint
Art. nr. 10-453	380x380 mm 3 joint
Art. nr. 10-454	480x480 mm 3 joint
Art. nr. 10-455	580x680 mm 3 joint
Art. nr. 10-456	580x680 mm 3 joint
Art. nr. 10-457	680x680 mm 3 joint
Art. nr. 10-458	750x680 mm 3 joint
Art. nr. 10-459	750x750 mm 3 joint

### Recommended flow area

Pipe dimension:	
ø57	50-100m <sup>3</sup> /h
ø76	80-180m <sup>3</sup> /h
Max. temp.	Up to 140°C

### Pressure drop



## 1.4 Construction

### Ceiling and wall bracket:

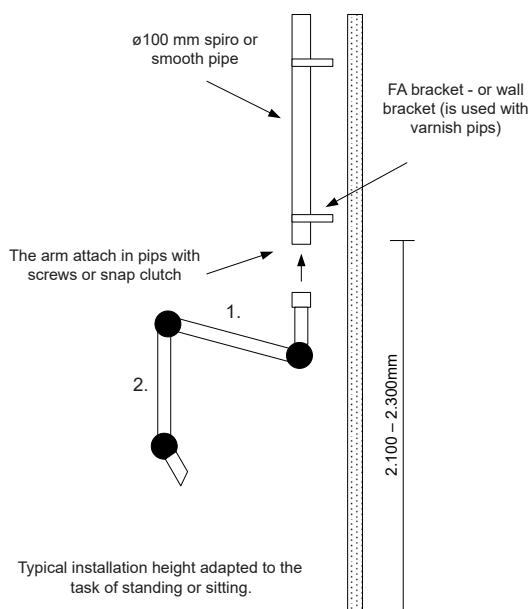
**Hood:** Is delivered in clear, impact-resistant polycarbonate or aluminum.

Can be rotated in multiple positions.

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

## 2.0 Installation

PERMA armen is delivered complete, with 1 arm and the orderet accessories. If you buy a hood it is delivered separate and must be installed.



### Procedure:

1. Spiro is mounted with brackets on the wall or ceiling bracket at the appropriate height.
2. Typical installation height adapted to the task of standing or sitting.
3. Arm is mounted in spiro/smooth pipe with screws or pop nuts.
4. 1. arm joint adapted so that it can be placed in a horizontal position from the wall.
5. Hood or extraction pen is mounted.
6. Arm joint tight, so that the arm can hold itself.

## 2.1 Mounting of optional equipment

Geovent offers a great range of accessories for PERMA armen: round hood, extraction pen, flat hood, aluminiumhood. There are different types af accessories for each type of arm ø57, ø57 ESD, ø76 and ø76 ESD.

The hood can be delivered in clear, impact resistant polycarbonate with an diameter of up to 380 mm, or aluminum that can take higt temperature.

Normally it is delivered with manual damper for opening and closing the air passage.

### Mounting the damper

Must be factory-mounted. Contact your dealer.

#### Aluminium hood

Art. no. ø57

10-321 Aluminium hood conical ø150 mm w/damper

Art. no. ø57 ESD

10-366 Aluminium hood conical ø150 mm w/damper

Art. no. ø76

10-421 Aluminium hood conical ø150 mm w/damper

Art. no. ø76 ESD

10-466 Aluminium hood conical ø150 mm w/damper

#### Extraction pen

Art. no. ø57

10-324 Suction pen 250 mm w/damper

10-325 Suction pen 350 mm w/damper

Art. no. ø57 ESD

10-367 Suction pen 250 mm w/damper

10-368 Suction pen 350 mm w/damper

Art. no. ø76

10-422 Suction pen 250 mm w/damper

10-423 Suction pen 350 mm w/damper

Art. no. ø76 ESD

10-467 Suction pen 250 mm w/damper

10-468 Suction pen 350 mm w/damper

#### Extraction pen w/hose

Art. no. ø57

10-326 Suction pen ø250 mm w. flex pipe 300 mm w/damper

10-328 Suction pen ø150 mm w. flexpipe 400 mm w/damper

Art. no. ø57 ESD

10-369 Suction pen ø150 mm w. flex pipe 300 mm w/damper

10-370 Suction pen ø150 mm w. flex pipe 600 mm 1 joint w/damper

10-371 Suction pen ø150 mm w. flex pipe 600 mm w/damper

Art. no. ø76

10-424 Suction pen ø150 mm w. flex pipe 300 mm w/damper

Art. no. ø76 ESD

10-469 Suction pen ø150 mm w. flex pipe 300 mm w/damper

### Polycarbonate hood

Available in the following products:

Round hood :

ø57 mm

ø76 mm



Conical hood:

ø57 mm

ø76 mm



Flat hood:

ø57 mm

ø76 mm



Aluminium hood:

ø57 mm

ø76 mm



Extraction pen:

ø57 mm

ø76 mm

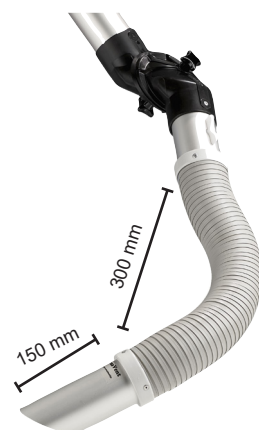


Extraction pen with hose

ø57 mm

ø76 mm

Extraction pen 150 mm with  
300 mm hose



### Ceiling Base

Conceited to duct ø100 mm.

Art. no.

10-315 Base for wall/ceiling type ø57 180 mm 1 joint

10-365 Base for wall/ceiling type ø57 ESD 180 mm 1 joint

10-415 Base for wall/ceiling type ø76 180 mm 1 joint

10-465 Base for wall/ceiling type ø76 ESD 180 mm 1 joint

### Table bracket

Conceited to duct ø80 mm.

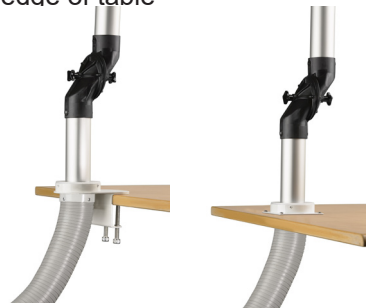
Art. no.

10-500 Table bracket mounted in ø80 hole in the tabled

10-500A PERMA ø76 Table bracket mounted in ø80 hole in the tabled

10-501 Table bracket mounted on the edge of table

10-501A PERMA ø76 Table bracket mounted on the edge of table



### Socket pipe

Art. no.

10-502 Socket pipe ø100 with. Side pipe 250 mm

10-503 Socket pipe ø100 mm with. Side pipe 350 mm

10-504 Socket pipe ø100 mm with. Side pipe 500 mm

10-505 Socket pipe ø100 mm with. Side pipe 750 mm

10-506 Socket pipe ø100 mm with. Side pipe 1000 mm



### Smooth pipe, wall mount, ceiling mount

Art. no. 10-507 Smooth pipe 500 mm

Art. no. 10-508 Smooth pipe 1000 mm

Art. no. 10-509 Wall mount

Art. no. 10-510 Ceiling mount closet ø100 mm

Art. no. 10-511 Ceiling mount through-going ø100 mm



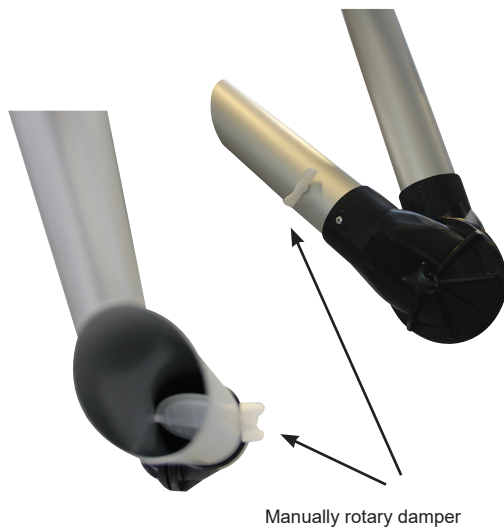
## 2.3 Trial run – exact adjustment

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 1.4 exactly.

If, after long use, there might be problems with the arm not can carry itself, then it can be remedy by tightening the thumb screws.

## 2.4 Replacement of equipment

Geovent has made it easy to replace aqipment on PERMA armen. When you need to change hood or a flat hood, screw off the extraction pen and mount the other hood.



## 3.0 User instruction – application

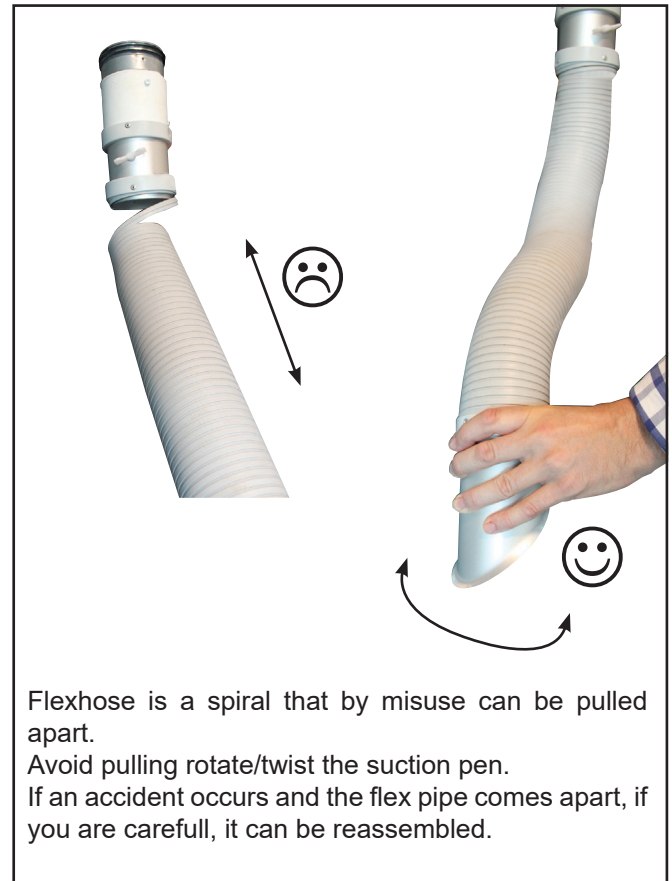
For normal use, the arm is to be self-retaining in the required position within the working area. The bracket of the arm supplies a 360° rotary working area.

If the equipment has been correctly dimensioned, the funnel of the arm should be placed in vertical position. That is just above the pollutant. It up to 99% of the polluting particles will be caught.

Always check that the correct volume of air is extracted by the suction head/funnel.

The Arm does not work if ...

- unauthorised parts have been mounted on the arm (e.g. power point on the funnel)



## 4.0 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 movable joints or the balancer (please refer to item 1.4)
- Please check the condition of the hose, the spring, the balancer and exchange them if necessary. Please contact your dealer in respect of spare parts.

At least once annually, the whole point extraction plant should be overhauled by an authorised serviceman.

## 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 hoses, etc. 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.

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

## 6.0 Declaration of conformity

Hereby declares that:

The products: Perma Arm  
Model: 1.0

have been manufactured in compliance with the directions 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.

Council Directive 2006/42/EC (May 17, 2006) of the European Parliament on machinery, and amending Directive 95/16/EC.

EN ISO 14121-1:2007 Safety of machinery -  
Risk assessment - Part 1: Principles

EN ISO 12100-1:2005 Safety of machinery -  
Basic concepts, general principles for design

EN ISO 12100-1:2009 Construction and design  
Part 1: Terminology, methodology

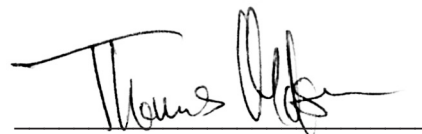
EN ISO 12100-2:2005 Basic concepts, general principles for design

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

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