

# **\*User Manual**



## **ATEX Super-M**

**ATEX Extraction-Arm for use in Zone 1/21 and 2/22.  
For Tough Areas or High Hygiene Requirements.**

- **Completely made of Acid Proof Mirror Polished Stainless Steel.**
- **Gas Spring balanced Parallellogram Arms Outside.**
- **Free Flow in the Hose.**
- **Extremely easy to move and stays in position.**
- **Models: Dia. 110mm or 160mm. Length: 1.5m/2m/2.2m/2.5m/3m/4m.**
- **Hose  $<10^4$  Ohm.**
- **Easy to dismantle and clean.**
- **Dia. 110mm: Straight Hood, 67° Hood or 150° Hood.**
- **Dia. 160mm: 42° Hood.**

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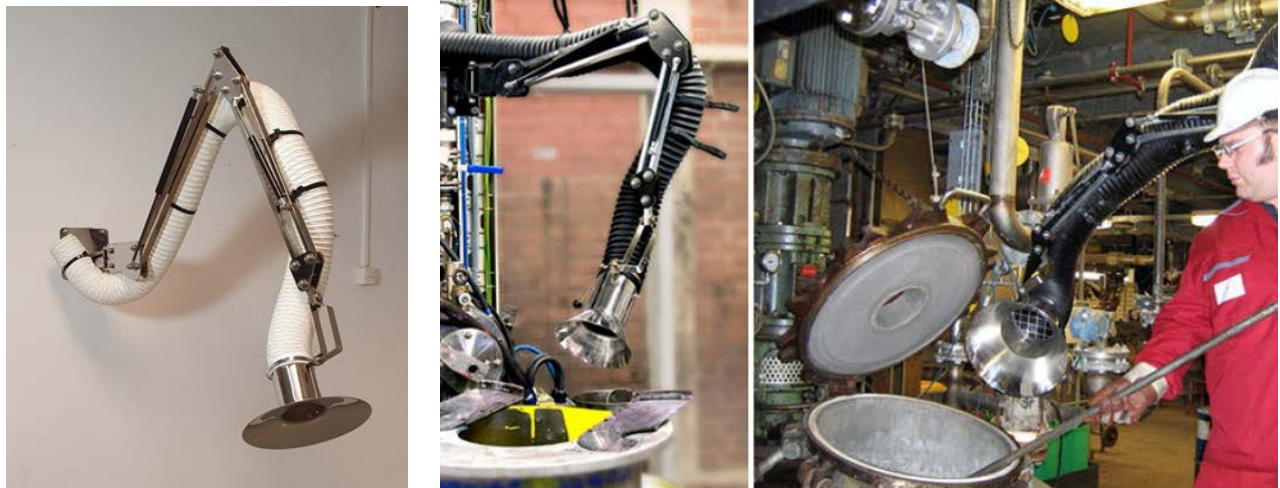
### **1.3 Unit Description**

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# 1.0 General Information.



**ATEX Stainless Steel Extraction-Arms d. 110/160mm.  
1.5m/2m/2.2m/2.5m/3m/4m.  
Completely made of Acid Proof Mirror Polished Stainless Steel.**

## ATEX conformal execution

for Ex-Aera 1/21 and 2/22

ATEX: EX II 2D/2G





PVC-hose, electrically conductive <math>10^4</math> Ohm

## Pharmaceutical, Food process and Technical Chemical Industry

Extraction-Arm for explosive gas in zone 1 and 2 as well as dust for zone 21 and 22.

**The Hood is the Secret behind the efficiency.** The hoods are developed in cooperation with one of the biggest companies in the chemical industry. The straight hood is for dust. The 67° hood is for smoke and the 150° hood is for gases. The 150° hood develops a "tornado," effect, which enhances its capacity to extract gases.

**Perfectly balanced.** External hydraulically suspended parallelogram arms make the hood incredibly easy to move and 100 % stable in all positions.

<b>ATEX Super-M</b> incl. wall bracket, parallelogram arm, hood and handle of acidproof mirror polished stainless steel. 10 <sup>4</sup> Ohm electrically conductive PVC Hose.	 Straight	 150°		
	Hose/Hood Ø 110mm	Hose/Hood Ø 110mm	Hose/Hood Ø 110mm	Hose/Hood Ø 160mm
<b>ATEX Super-M 1.5 m</b> (0.25 m+1.5 m)	P-331	P-343	P-337	P-178
<b>ATEX Super-M 2 m</b> (0.5 m+1.5 m)	P-332	P-344	P-338	P-179
<b>ATEX Super-M 2.2m</b> (0.25 m+2 m)	P-333	P-345	P-339	P-180
<b>ATEX Super-M 2.5m</b> (0.5 m+2 m)	P-334	P-346	P-340	P-181
<b>ATEX Super-M 3m</b> (0.5 m+3 m)	P-335	P-347	P-341	P-182
<b>ATEX Super-M 4m</b> (0.5 m+0.6 m+3 m)	P-336	P-348	P-342	P-183
<b>Damper</b> , tight, acidproof stainless steel	P-483	P-482	P-482	P-484

## 1.1 Safety Notes

The product is designed to meet the requirements of the relevant EC directives. To maintain this status all installations, repair and maintenance work must be carried out by qualified personnel using only original spare parts.

Contact your nearest authorized dealer for advise.

Use adequate safety clothing when cleaning the unit.

Check that no objects, which can cause problems, are sucked into the Extraction-Arm.

Avoid impacts against the Hood.

Apart from the general information given in our user manual it is necessary to perform a risk analysis for the particular work prodeses that are going to be done in each induvidual case.

**The final responsibility for safety can only be taken by the owner of the installation.**

## 1.2 Range of Application

ATEX Super-M Extraction-Arms are designed for being used in Zone 1 and 21 as well as Zone 2 and 22.

Suitable for Pharma-, Food- and Chemical Industry by for example weighing, mixing, taking samples, examinations, experiments and so on.

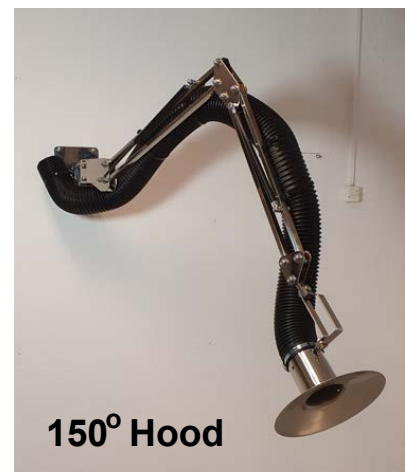
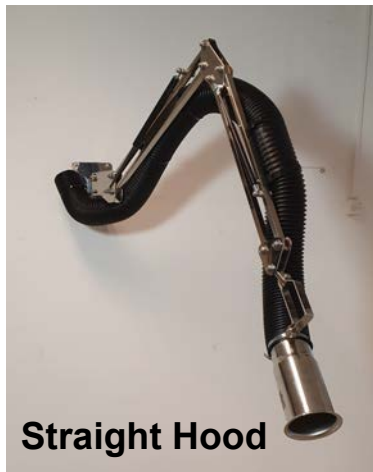
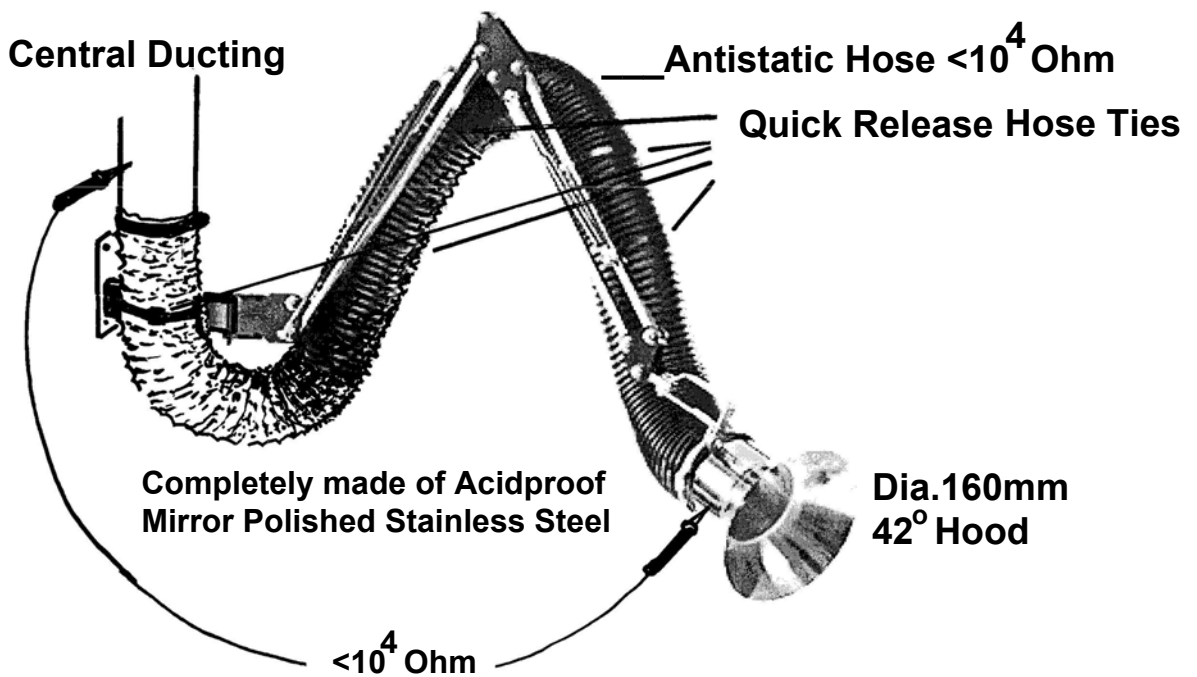
The Hood is easy to position at any point within the working area.

For the best capturing efficiency the hood should be positioned as near the contamination generating process as possible.

Always dimension your system so the airflow is sufficient for the application in question.

Be sure to follow local laws and regulations.

### 1.3 Unit Description: ATEX Super-M.



**The ATEX Super-M Extraction-Arms** are designed to extract fume, light dust and gases in tough environments where there is risk of explosions. The flexible PVC Hose (Conductivity  $<10^4$  Ohm), with covered steelspiral, has a parallellogram system outside to balance the hose and hood.

Free flow in the hose gives lower pressure drop and less maintenance.

The Hood can be turned  $90^\circ$  in all directions. It is easy to position at any point within the working area.

The Hood can be equipped with a Stainless Steel Damper (Accessory).

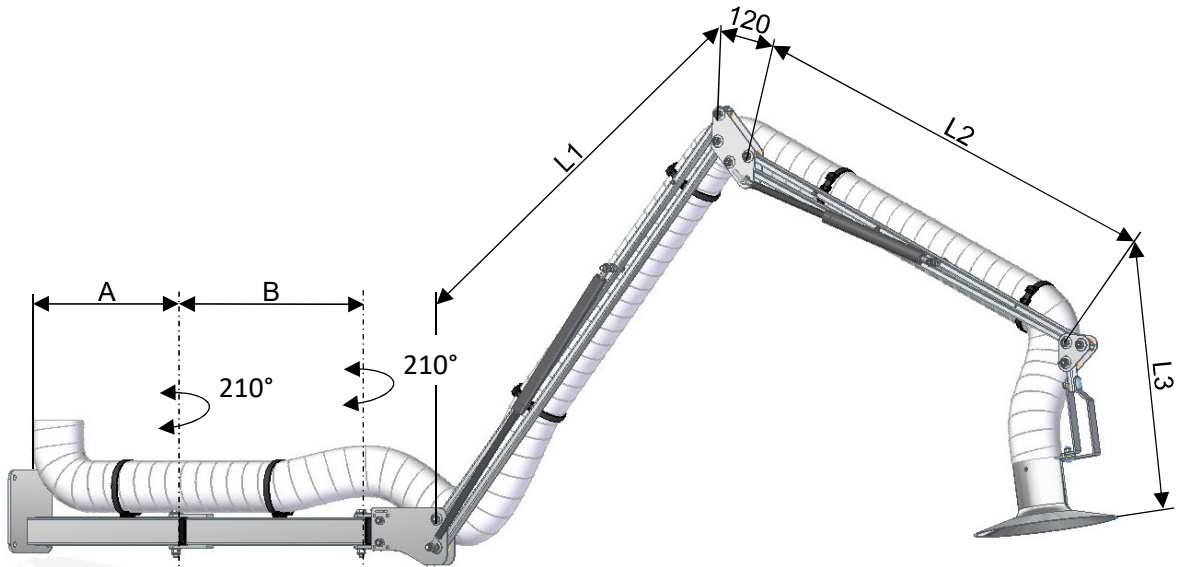
The Super-M Extraction-Arm shall be connect to a an exhaust system designed for the work situation. Max allowed vacuum is 1500Pa.

Recomended Airflow for dia.110mm Models is 400-700m<sup>3</sup>/h.

Recomended Airflow for dia. 160mm Models is 700-1300m<sup>3</sup>/h.

## Measures (mm.).

ATEX Super-M Extraction-Arms. 1.5m/2m/2.2m/2.5m/3m and 4m Models.



**Important for All Super-M Models!**  
**Each of the Wall Bolts must stand**  
**a Traction Power of min. 1600N.**

### Nozzles/Hoods

Ø110 -Straight



Ø110 - 67°



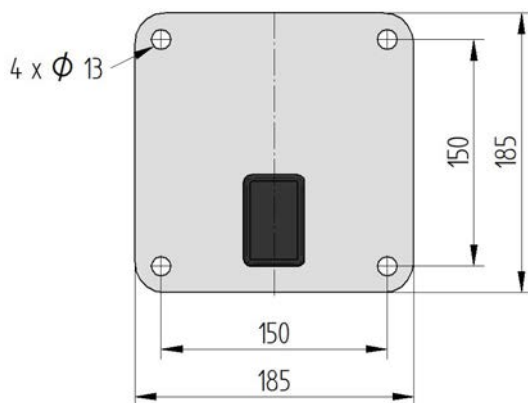
Ø110 - 150°



Ø160



### Wallbracket



	A	B	L1	L2	L3	Weight	Length
<b>1,5 m</b>	250 mm	-	435 mm	335 mm	480 mm	14 kg	1750 mm
<b>2,0 m</b>	500 mm	-	435 mm	335 mm	480 mm	15 kg	2000 mm
<b>2,2 m</b>	250 mm	-	665 mm	565 mm	480 mm	17 kg	2250 mm
<b>2,5 m</b>	500 mm	-	665 mm	565 mm	480 mm	18 kg	2500 mm
<b>3,0 m</b>	500 mm	-	1165 mm	960 mm	480 mm	24 kg	3350 mm
<b>4,0 m</b>	500 mm	500 mm	1165 mm	960 mm	480 mm	27 kg	3850 mm

# Pressure Drop: ATEX Super-M Extraction-Arms.

## Ø 110mm Extraction-Arms.

Extraction-Arm	400m <sup>3</sup> /h	500m <sup>3</sup> /h	600m <sup>3</sup> /h	700m <sup>3</sup> /h
1.5-2.5m Ø 110mm	300 Pa	450 Pa	600 Pa	750 Pa
3m Ø 110mm	325 Pa	5000 Pa	650 Pa	825 Pa
4m Ø 110mm	375 Pa	550 Pa	700 Pa	900 Pa



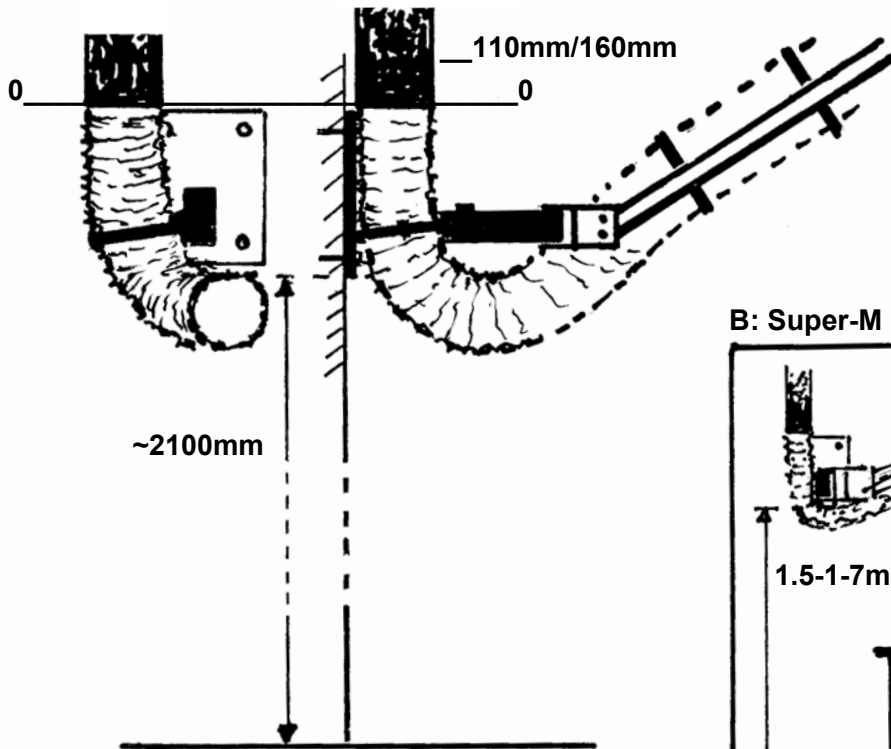
## Ø 160mm Extraction-Arms.

Extraction-Arm	700m <sup>3</sup> /h	1.000 m <sup>3</sup> /h	1.200 m <sup>3</sup> /h	1.300 m <sup>3</sup> /h
1.5-2.5m Ø 160mm	350 Pa	550 Pa	700 Pa	780 Pa
3m Ø 160mm	375 Pa	600 Pa	750 Pa	850 Pa
4m Ø 160mm	400 Pa	650 Pa	800 Pa	900 Pa

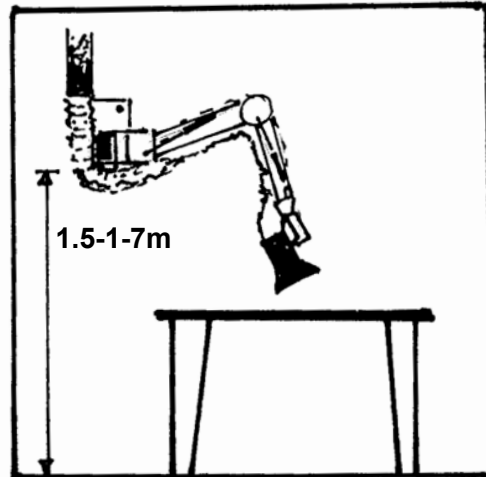


# 1.4 Installation Super-M: Mounting Height and Connection to Central Ducting.

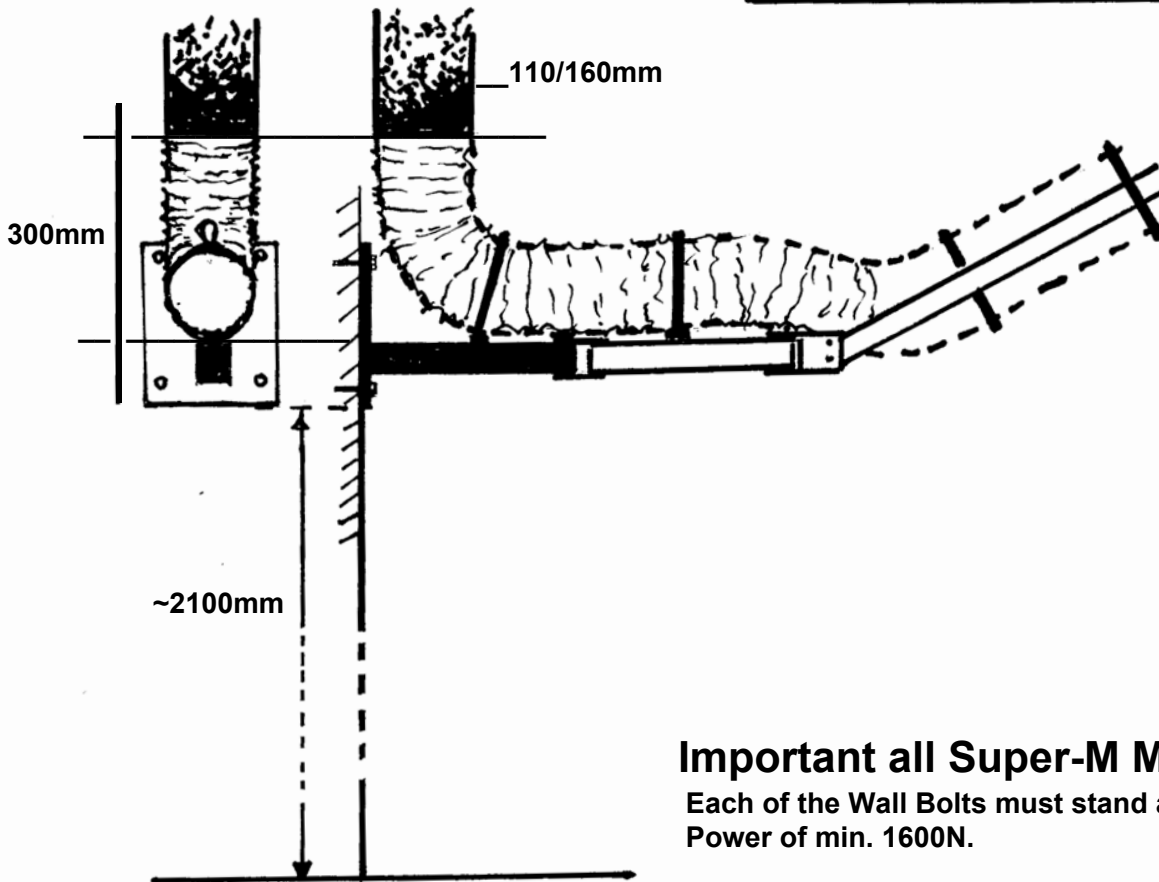
A: Super-M 2m/2.2m/2.5m and 3m Models. Dia.110mm and 160mm.



B: Super-M 1.5m dia. 110 or 160mm



C: Super-M 4m Models. Dia.110mm and 160mm

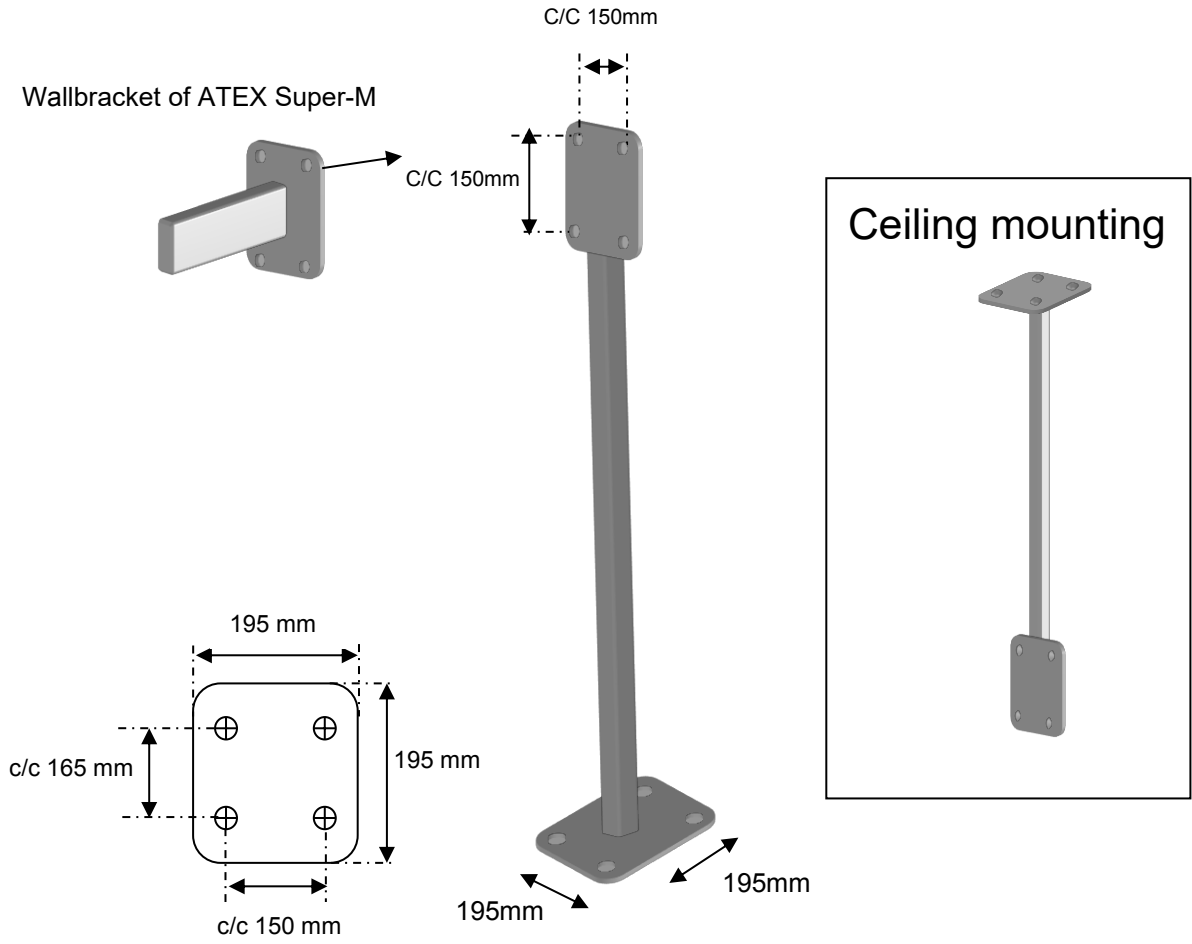


**Important all Super-M Models!**

Each of the Wall Bolts must stand a Traction Power of min. 1600N.



**Floor/Ceiling Stanchions: Acidproof Mirror Polished Stainless Steel for ATEX Super-M Extraction-Arms.  
1.5m/2m/2.2m/2.5m/3m and 4m Models.**

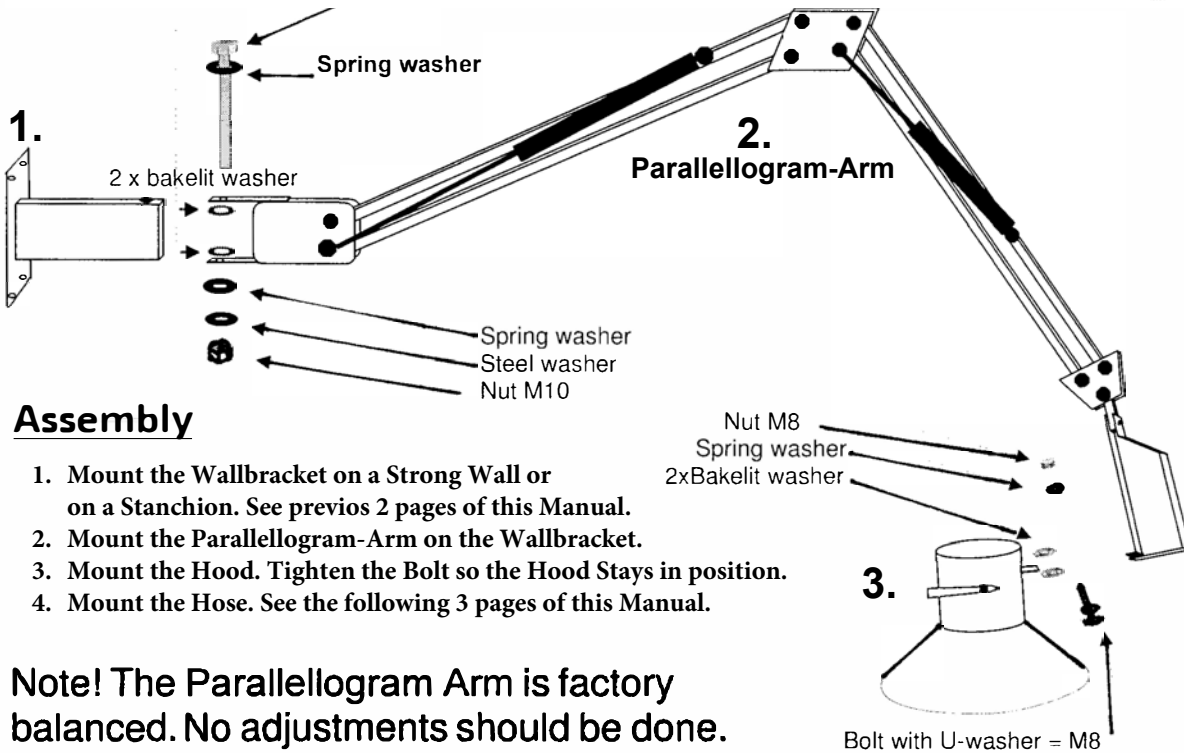
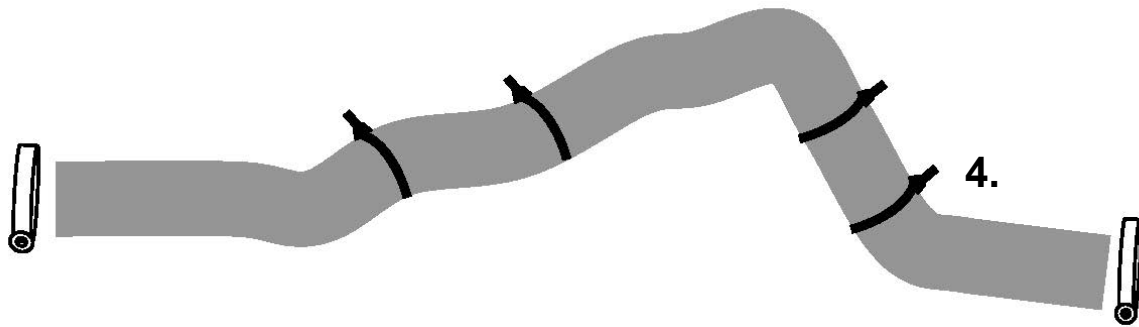


**Acidproof Mirror Polished Stainless Steel Stanchions: Product No.**

Length	Art.-Nr.
0,5m	P-999
0,75m	P-1000
1,0m	P-1001
1,25m	P-1002
1,5m	P-1003
1,75m	P-1004
2,0m	P-1005
2,25m	P-1006
2,5m	P-1007

# Assemblage of the ATEX Super-M Extraction-Arm.

A: 1.5m/2m/2.2m/2.5m and 3m Models.



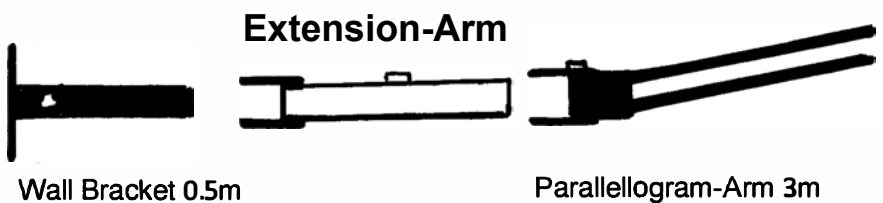
## Assembly

1. Mount the Wallbracket on a Strong Wall or on a Stanchion. See previous 2 pages of this Manual.
2. Mount the Parallelogram-Arm on the Wallbracket.
3. Mount the Hood. Tighten the Bolt so the Hood Stays in position.
4. Mount the Hose. See the following 3 pages of this Manual.

Note! The Parallelogram Arm is factory balanced. No adjustments should be done.

## B: 4m Models.

As above but with the Extension-Arm between the Wall-Bracket and the Parallelogram Arm.



Wall Bracket 0.5m

Parallelogram-Arm 3m

# Electric grounding of the Antistatic Hose.

Step 1:



After you have mounted the Hose on the Parallellogram Arm, you put one Hose Clamp over each End of the Hose.

Step 2:



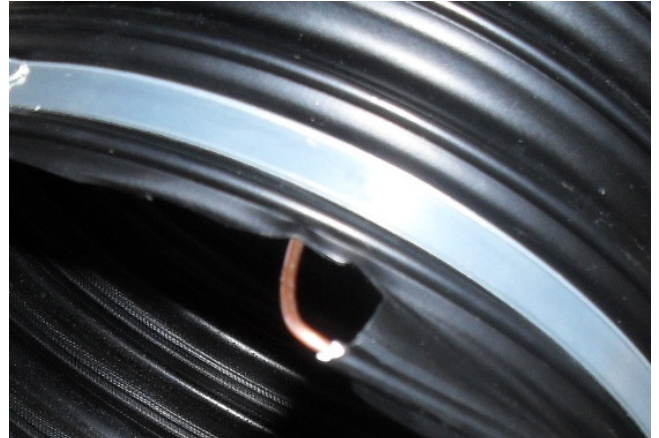
Clean 40mm of the Steel Spiral in each end of the Hose from hose material.

Step 3:



Bend the cleaned Steel Spirals in 90 degrees.

Step 4:



Push the Steel Spiral inside the Hose in each end.

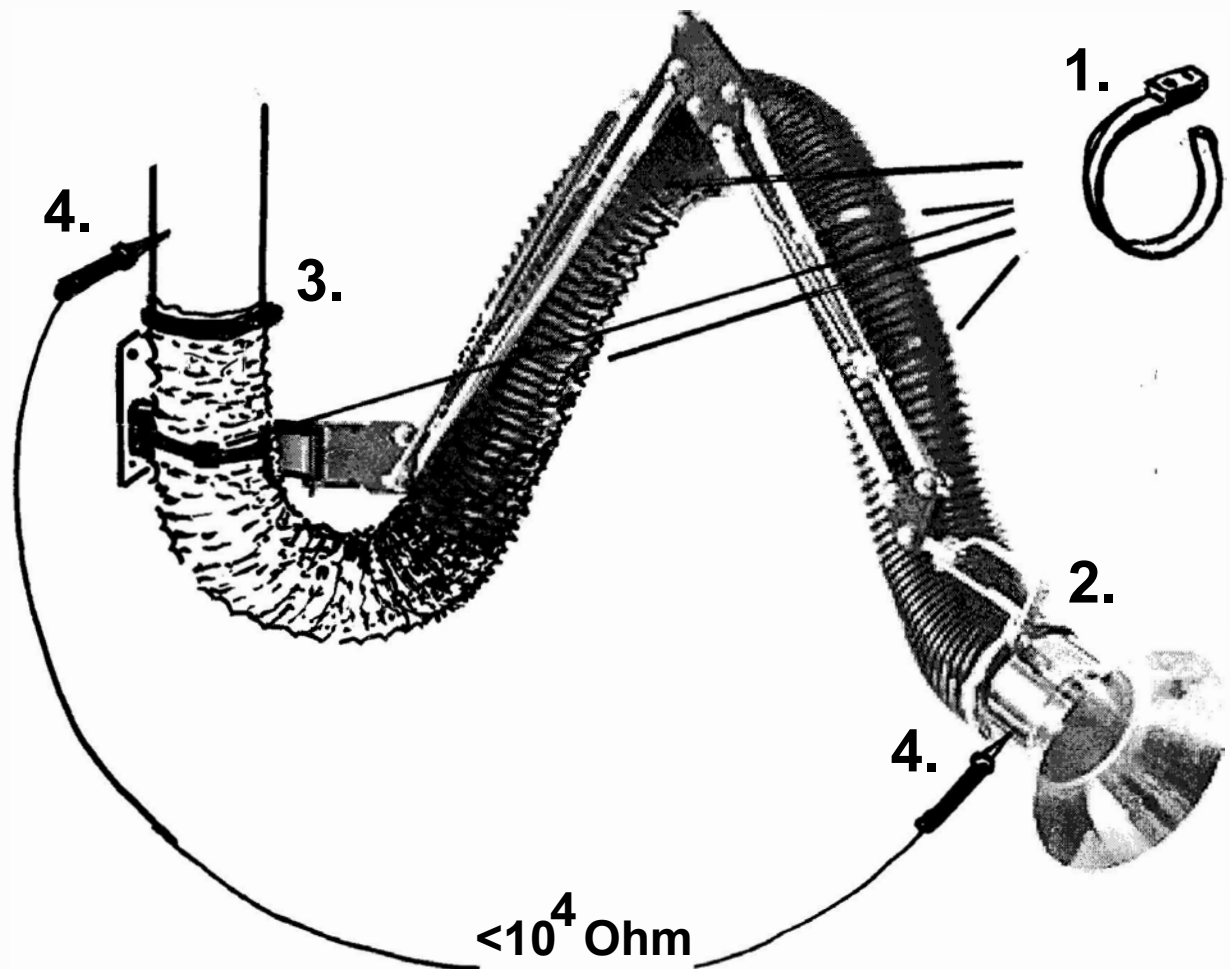
Step 5:



Draw the Hose Ends on to the Hood and the Ducting. Be sure that the clean Steel Spiral is inside the Hose and past the Hose Clamp. Tighten the Hose Clamps so the Steel Spiral is pressed against the Hood and the Ducting for a safe grounding.

**IMPORTANT:** Control the conductivity between the Hood and the Central Ducting. Has to be  $< 10^4$  Ohm.

## Mounting of the Hose with Nylon Ties and Stainless Steel Hose Clamps.



1. Nylon Ties for Hose mounting on Wallbracket and Parallellogram Arm.

2.-3. Stainless Steel Hose Clamps for mounting the Hose Ends over Hood and Exhaust Ducting. Check that the cleaned Steel Spiral of the Hose is inside the Hose and in contact with Hood and Ducting.

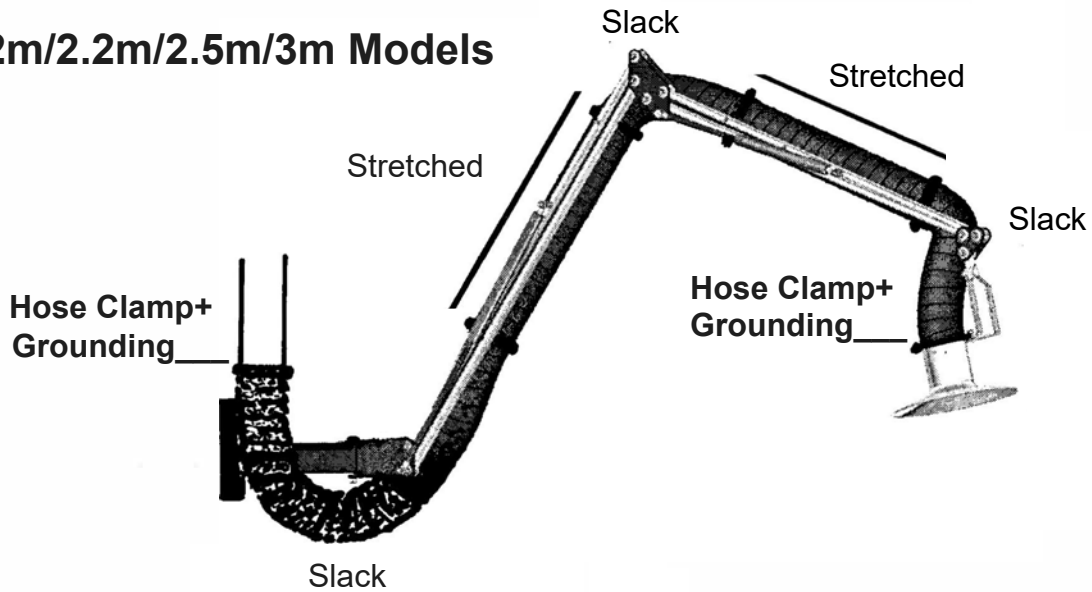
4. Check with Instrument that the Hood is grounded.

## Important Details of the Hose mounting.

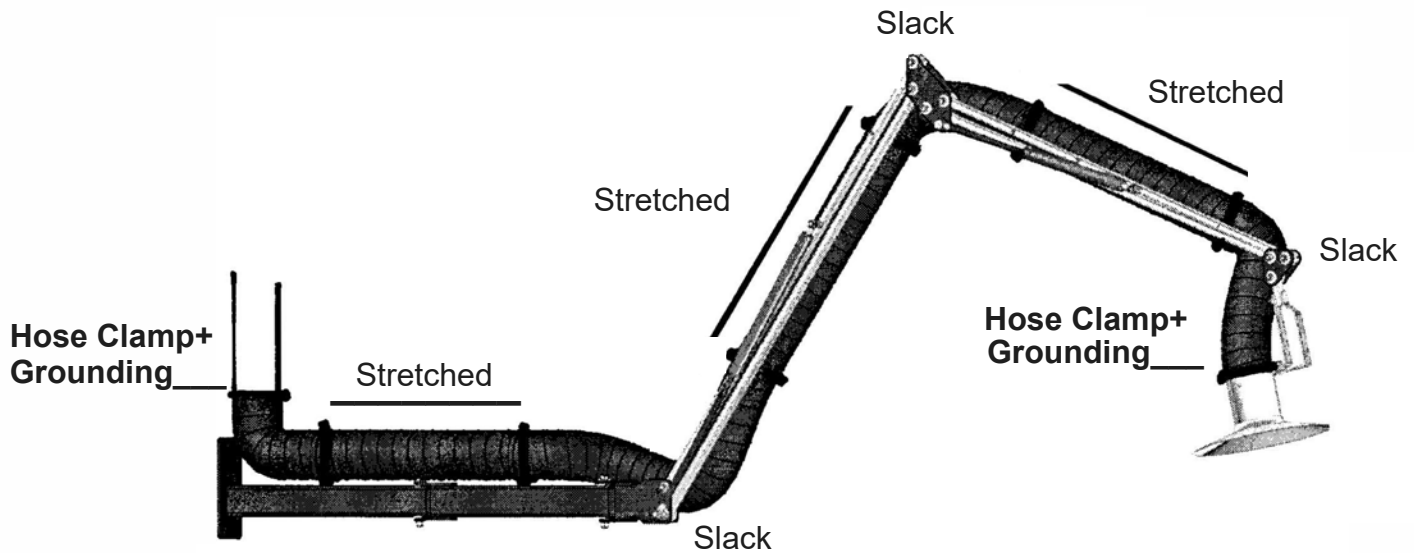
**Stretched**= Stretch the Hose between the Nylon Ties.

**Slack**= Mount the Hose so it is not too hard or loose when moving the joints. Cut it then to the right length.

### 1.5m/2m/2.2m/2.5m/3m Models



### 4m Models



**IMPORTANT!!** Check the Grounding between the Hood and the Central Ducting with an Instrument.

## 2.0 Maintenance

We recommend regular safety controls at least once a year on the following points:

Control the bolts of the wallbracket.

Control the hose. Small holes is no problem.

Damages to the Steelspiral can affect the grounding.  
Check conductivity.

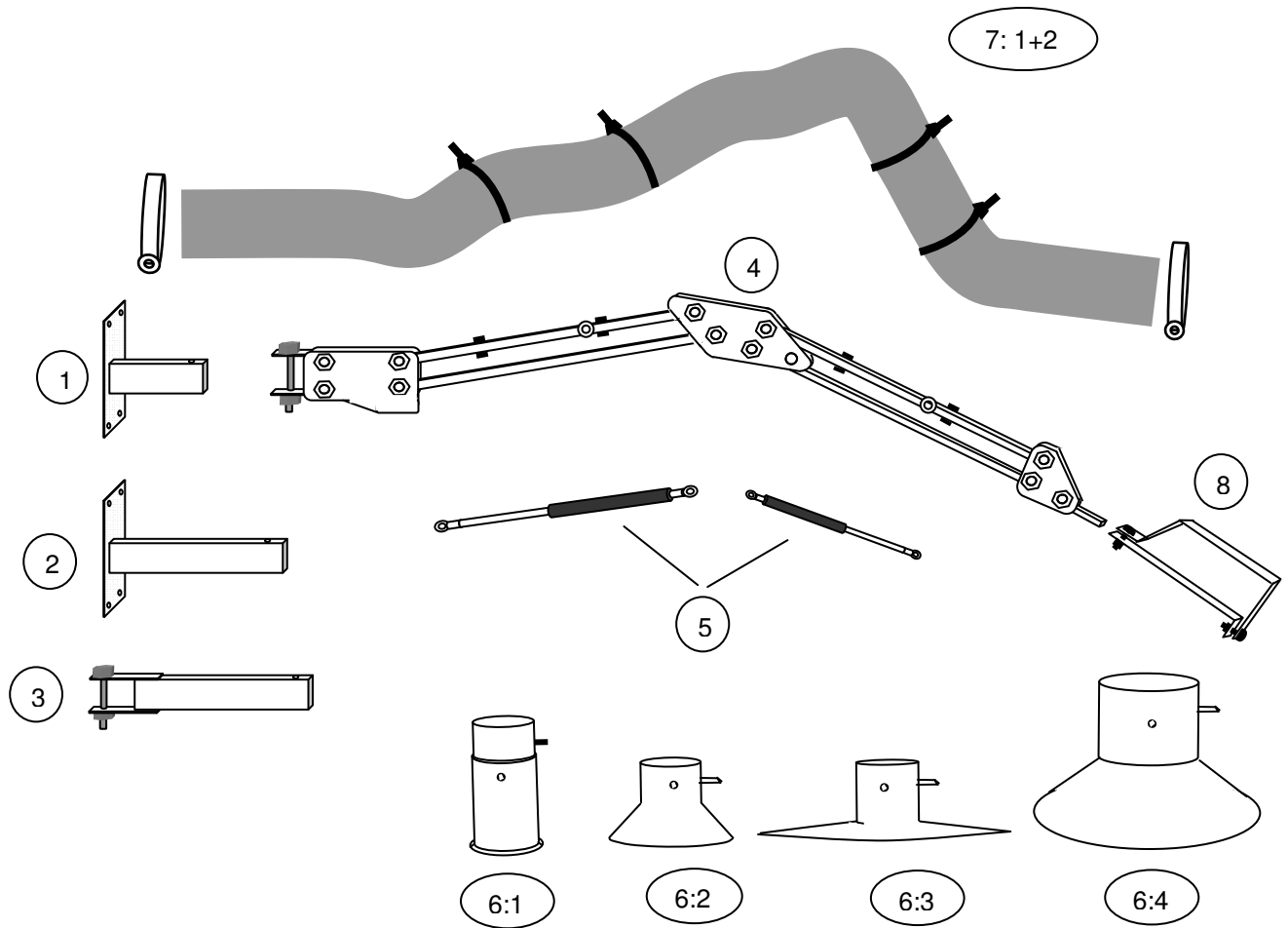
Control bakelite washers and Bolts.

Control the "Ears" of the Gas Springs. If there are cracks you have to change them.

Control the airvolume.

Control that the Arm is grounded. Shall be  $<10^4$  Ohm between the Hood and the Central Ducting.

## 2.1 Spare Parts ATEX Super-M: Made of Acidproof Mirror Polished Stainless Steel with ATEX Hose.



	Specification	1.5m/2 m	2.2m/2.5 m	3 m	4 m
1	Wallbracket 0,25 m	OM-018	OM-018	OM-018	
2	Wallbracket 0,5 m	OM-015	OM-015	OM-015	OM-015
3	Horizontalboom 0,5 m				OM-047
4	Parallelogramarm	R-135	R-136	R-137	R-137
5	Set of 2 Hydraulic springs	R-116	R-117	R-118	R-118
6:1	Hood ø 110 mm Straight	R-112	R-112	R-112	R-112
6:2	Hood ø 110 mm 67°	R-113	R-113	R-113	R-113
6:3	Hood ø 110 mm 150°	R-114	R-114	R-114	R-114
6:4	Hood ø 160 mm	R-115	R-115	R-115	R-115
7:1	Hose ø 110 mm ATEX	R-119	R-120	R-121	R-122
7:2	Hose ø 160 mm ATEX	R-123	R-124	R-125	R-126
8	Handle	R-134	R-134	R-134	R-134



## Declaration of Conformity

In conformity with Directives 2014/34/EU

Responsible person is Jenny Nilsson, -see Manufacturer Adress below:-

### The Manufacturer

Plymoth AB, Traryds allén 4 D, 28772 Traryd Sweden

declare under our sole responsibility that the product line:

### ATEX Super-M Extraction-Arm

is in conformity with the above mentioned Directives- including the at the time of this Declaration in force being Changes-and accordingly is permitted to be used in EX-Zone 1/21 and 2/22.

The ATEX Super-PM Extraction-Arm is designed to meet the requirements of Product groupe II, Category 2G/2D, Explosion groupe IIB, Temperature Class T3/200°Celsius and Flame protection C.

Is in conformity with the following EN Standards:

ISO 80079-36

ISO 80079-37

Ort: Traryd/ Schweden

Datum: 21. März 2024

  
\_\_\_\_\_  
Jenny Nilsson  
Geschäftsführerin