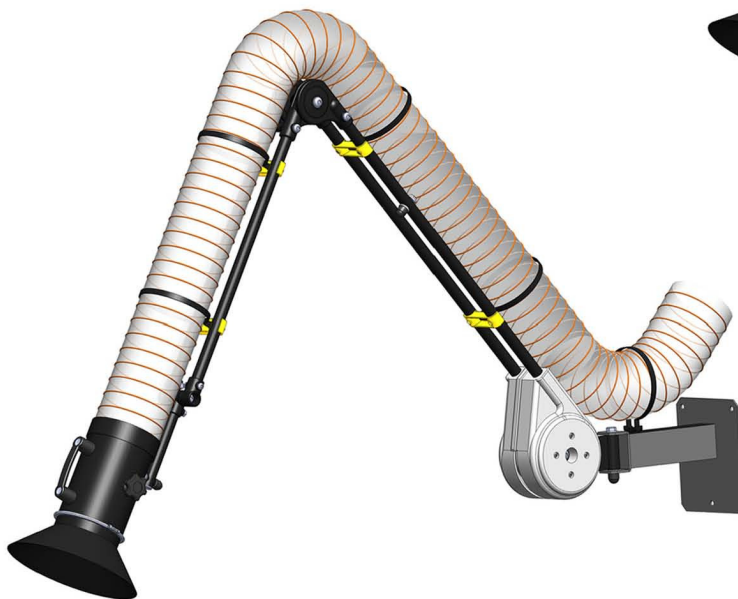


ATEX Articulated HPD  
ATEX Telescopic HPD  
ATEX Mini HPD

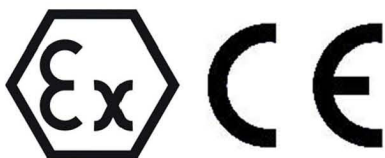


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Serial No.

EX

Year of construction



**Manual**

Read this manual carefully before installation and operation

# Contents

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Important information	2
Intended use	2
Technical information	3
Installation	6
Maintenance	13
Adjustment	14
Spares parts and accessories	16
Testing and troubleshooting	22

# Important information

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**Important: Ensure that these instructions are thoroughly read and understood before installing or using this equipment.**

The ATEX range of HPD's (Hood Positioning Devices) have been designed and manufactured to meet the requirements as set out in the ATEX Directive 94/9/EC Equipment intended for use in potentially Explosive Atmospheres.

To ensure that the explosion proof properties of the equipment are maintained throughout its working life these instruction should be carefully read and followed. This manual should be kept safe and used for recording test results and for reference. Additional copies of the manual can be obtained by contacting flextraction Ltd.

Only original spare parts or accessories should fitted and used on the equipment to maintain its explosion proof properties. Any modifications or use of non-original spares could affect the explosion proof properties of the equipment and will render any Declaration of Conformity invalid.

Details of parts and accessories can be found on page 16, if in any doubt contact flextraction Ltd.

## Intended use

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The ATEX range of HPD's have been designed and approved for use in environments where potentially explosive atmospheres are likely to occur under normal operation occasionally (zone 1 & 21 gas and dust) or unlikely to occur in normal operation but if it does will only be for short periods (zone 2 & 22 gas and dust). The equipment has therefore been given the following classification;

Category II	Zone 1 & 21
	Zone 2 & 22



# Technical information

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**The equipment must not be used in environments in which substances may attack or react with any of the materials in the equipment** – please see below for details of materials used in the equipment.

The equipment has been certified for use at;

Ambient air temperature	0°C to 60°C
Air velocity to avoid dust accumulation	18 to 25m/s
Hose and hood dimension	∅ 75mm, 100mm, 125mm, 150mm, 200mm
Articulated HPD lengths	2m, 2.5m, 3m, 4m, 5m, 6m, 7m, 8m.
Telescopic HPD length	1.2m – 1.8m
Mini HPD lengths	1m, 1.5m

- **Articulated HPD**

Wall bracket	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Rear joint	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Rear supporting arms	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Centre joint	Aluminium with conductive epoxy based powder coating $R < 10^6\Omega$
Front supporting arms	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Front support joints	Aluminium with conductive epoxy based powder coating $R < 10^6\Omega$
Nozzle body	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Hood	Steel with conductive epoxy based powder coating $R < 10^6\Omega$

- **Articulated HPD Stainless Steel**

Wall bracket	304 Stainless steel
Rear friction joint	304 Stainless steel
Rear supporting arms	304 Stainless steel
Centre friction joint	304 Stainless steel - Cast
Front supporting arms	304 Stainless steel
Front friction joint	304 Stainless steel - Cast
Nozzle body	304 Stainless steel
Hood	304 Stainless steel

- **Telescopic HPD**

Wall bracket	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Rear joint	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Rear supporting arms	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Telescopic arms	Stainless steel
Front supporting arms	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Front support joints	Aluminium with conductive epoxy based powder coating $R < 10^6\Omega$
Nozzle body	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Hood	Steel with conductive epoxy based powder coating $R < 10^6\Omega$

- **Telescopic HPD Stainless Steel**

Wall bracket	304 Stainless steel
Rear friction joint	304 Stainless steel
Rear supporting arms	304 Stainless steel
Telescopic arms	304 Stainless steel
Front supporting arms	304 Stainless steel
Front friction joint	304 Stainless steel - Cast
Nozzle body	304 Stainless steel
Hood	304 Stainless steel

- **Mini HPD**

Mounting bracket	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Rear joint	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Rear supporting arms	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Centre Joint	Aluminium with conductive epoxy based powder coating $R < 10^6\Omega$
Front supporting arms	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Nozzle body	Steel with conductive epoxy based powder coating $R < 10^6\Omega$
Hood	Steel with conductive epoxy based powder coating $R < 10^6\Omega$

- **Mini HPD Stainless Steel**

Mounting bracket	304 Stainless steel
Rear joint	304 Stainless steel
Rear supporting arms	304 Stainless steel
Centre Joint	304 Stainless steel - Cast
Front supporting arms	304 Stainless steel
Nozzle body	304 Stainless steel
Hood	304 Stainless steel

- **All other materials – All HPD’s**

Strap anchor	Polyamide 6/6
Rear casing	ABS
Friction discs	Silicone
Tension chain	Steel or Stainless steel
Tension spring	Spring steel
Centre clip	Polypropylene
Hose strap	Polyamide 6/6
Hose clamp	Galvanised steel or Stainless steel
Bridge handle	PA6
Wheel handle	PA6
Damper washer	Rubber
Hood pivot washer	Polyamide 6/6
Hose	ATEX rated PU hose/Electrically conductive PE hose

- **Accessories**

Boom extension	Steel with conductive epoxy based powder coating $R < 10^6 \Omega$
Boom support	Steel with conductive epoxy based powder coating $R < 10^6 \Omega$
Boom extension	Stainless Steel
Boom support	Stainless Steel

# Installation

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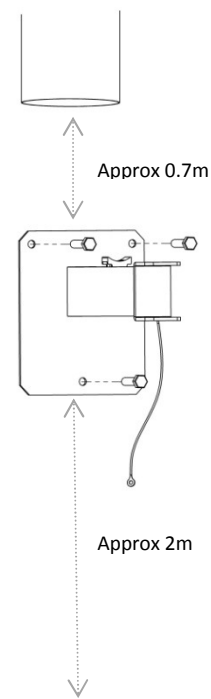
For ease of installation, all flextraction ATEX Hood Positioning Devices (HPDs) are supplied fully assembled\* and complete with mounting plate. Please refer to the correct section below to mount the supplied bracket system.

(\*Unless supplied without the standard wall mounting bracket)

**Ensure that any mounting surface is sufficient to bear the load of any articulated HPD.**

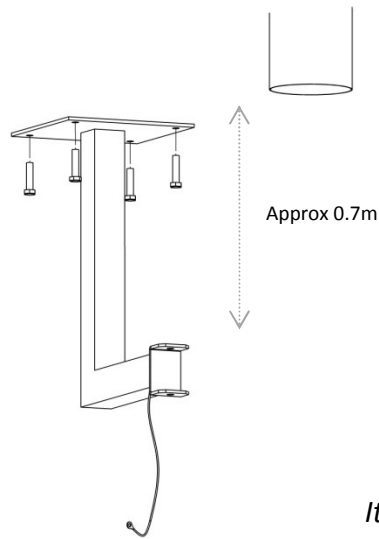
## Installation of the ATEX Articulated and Telescopic HPD's

1a) *Installation of the wall/pillar mounting bracket;*



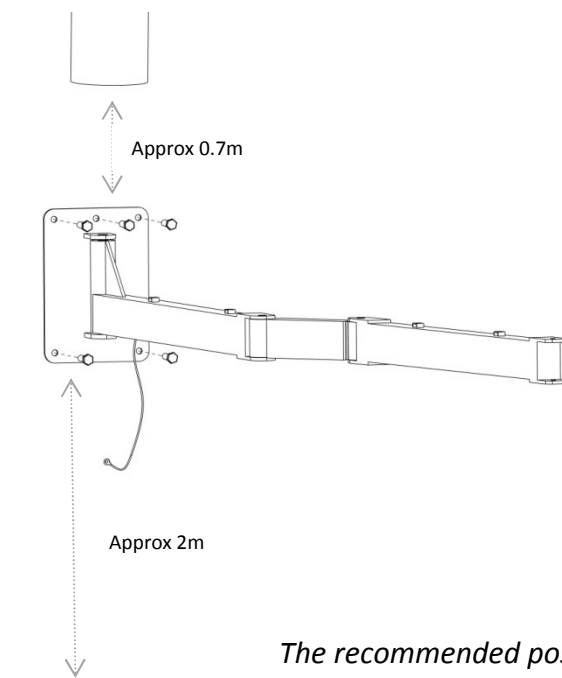
*The recommended position of the wall/pillar mounting bracket is 2m from level ground and 0.7m from the duct connection.*

*1b) Installation of the ceiling mounting bracket (if supplied);*



*It is recommended that the ceiling bracket is installed within 0.7m of the duct connection.*

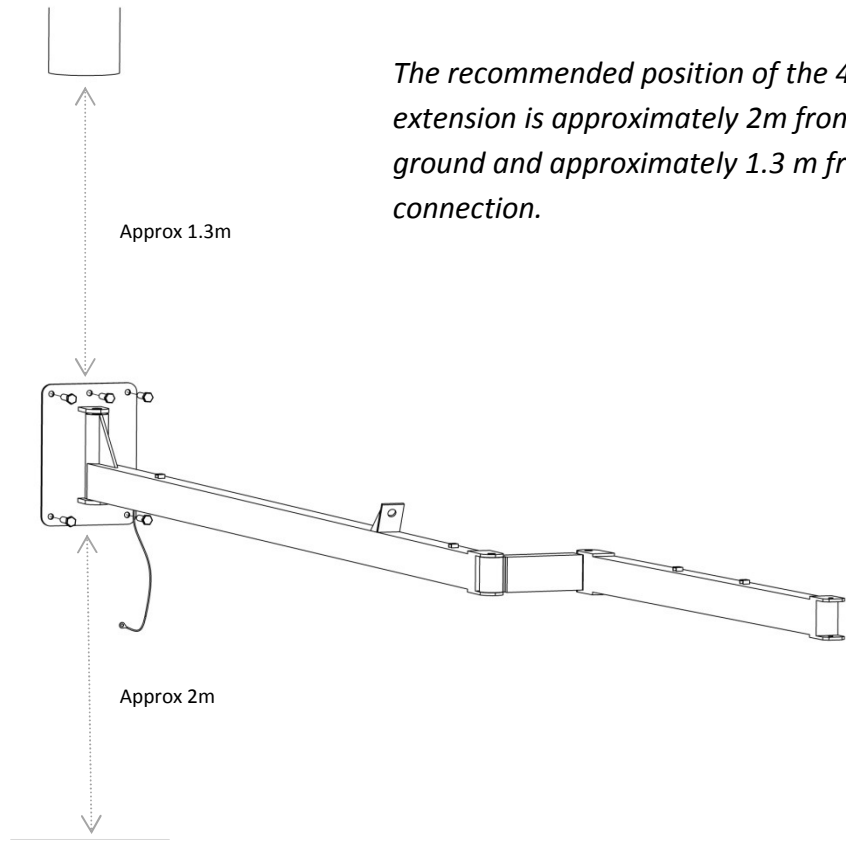
*1c) Installation of the boom extension system (1m/2m/3m - if supplied);*



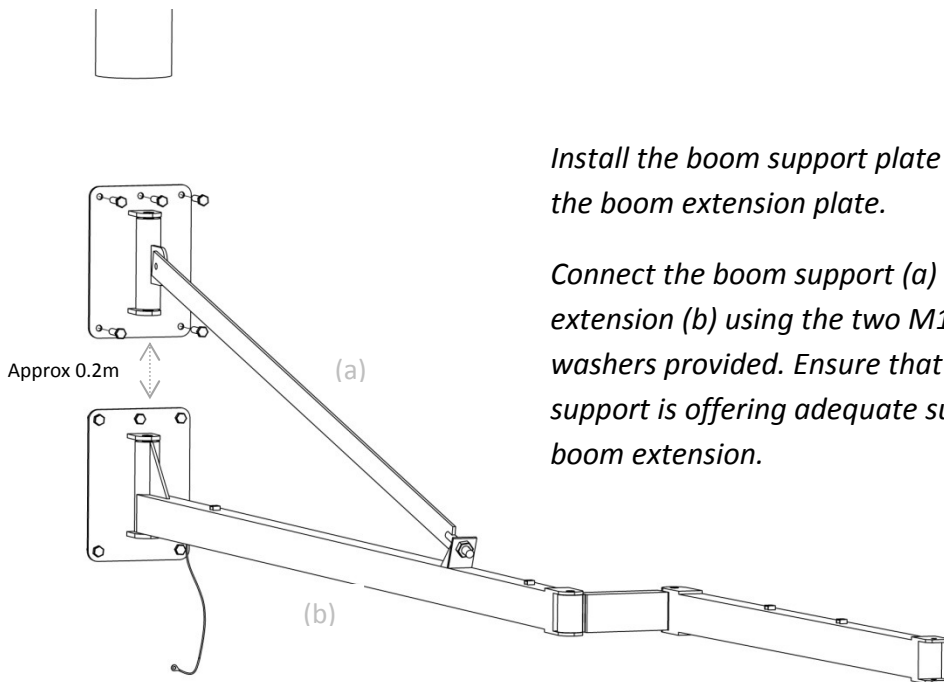
*The recommended position of the boom extension is approximately 2m from level ground and approximately 0.7m from the duct connection.*



1d) Installation of the boom extension system (4m/5m - if supplied);



The recommended position of the 4m/5m boom extension is approximately 2m from level ground and approximately 1.3 m from the duct connection.

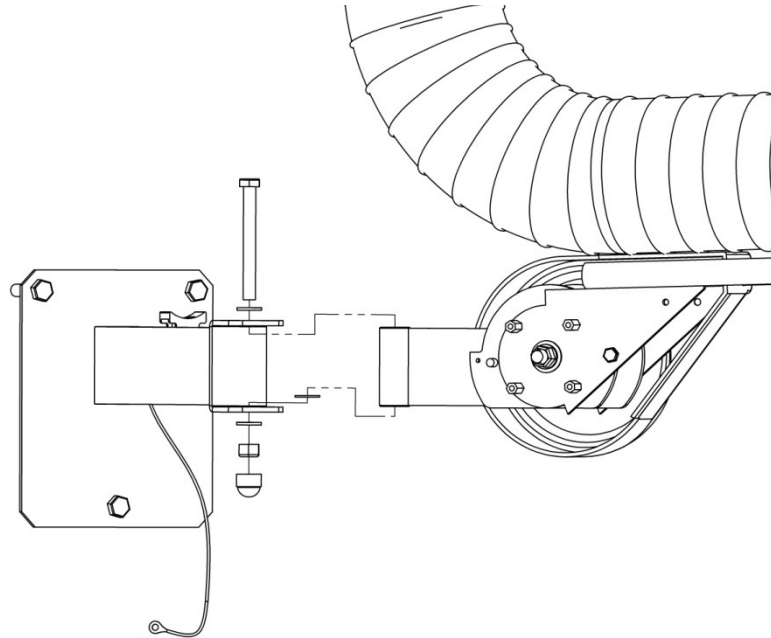


Install the boom support plate within 200mm of the boom extension plate.

Connect the boom support (a) to the boom extension (b) using the two M16 bolts and washers provided. Ensure that the boom support is offering adequate support to the boom extension.

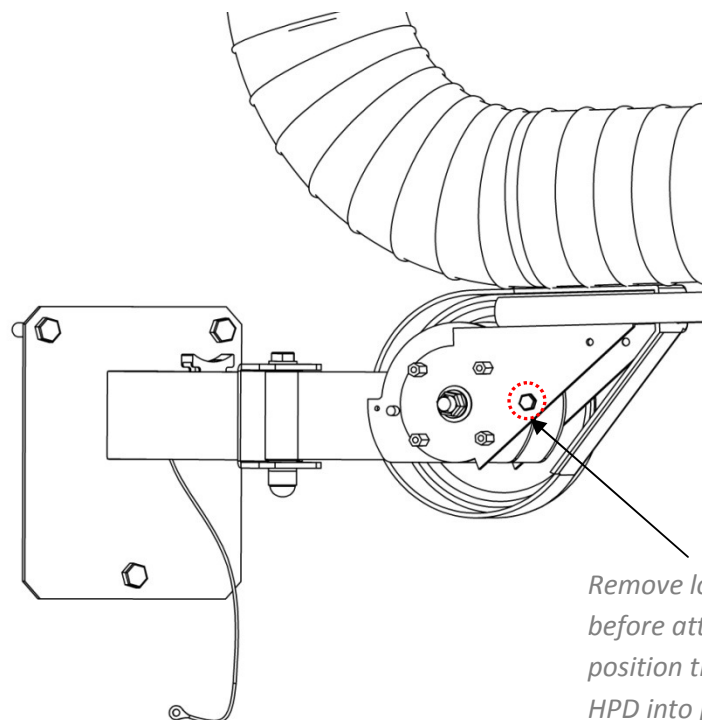
## 2) Mounting the HPD

Once the bracket has been securely attached the HPD can be mounted to the bracket using the fixings provided.



## 3) Removal of the locking pin

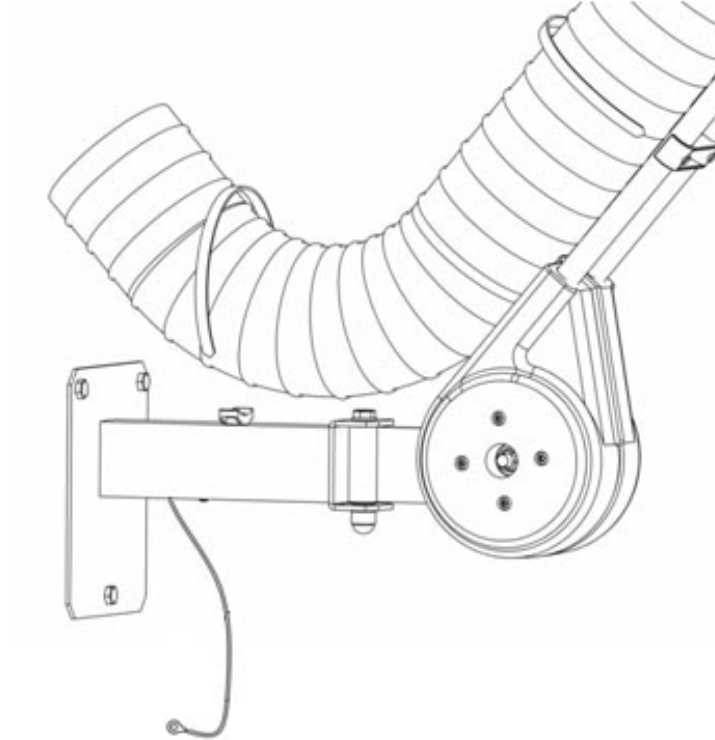
The articulated range of HPD's is fitted with a temporary locking pin to aid with the installation. **THE LOCKING PIN MUST BE REMOVED ONCE THE ARTICULATED HPD HAS BEEN FITTED TO ITS MOUNTING BRACKET AND BEFORE ANY ATTEMPT IS MADE TO MANOEUVRE IT INTO POSITION.**



*Remove locking pin bolt before attempting to position the articulated HPD into position.*

Once the locking pin has been removed the rear casing can be fitted into position using the four button head bolts provided.

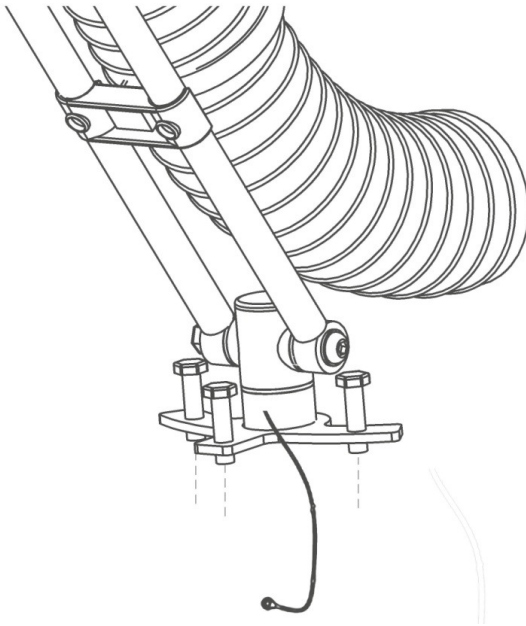
Use the hose strap provided to fix the hose to the mounting bracket, allow enough hose to ensure free movement of the HPD.



If the HPD has been installed using a boom extension use the hose straps provided to secure the hose ensuring the boom extension is free to pivot.

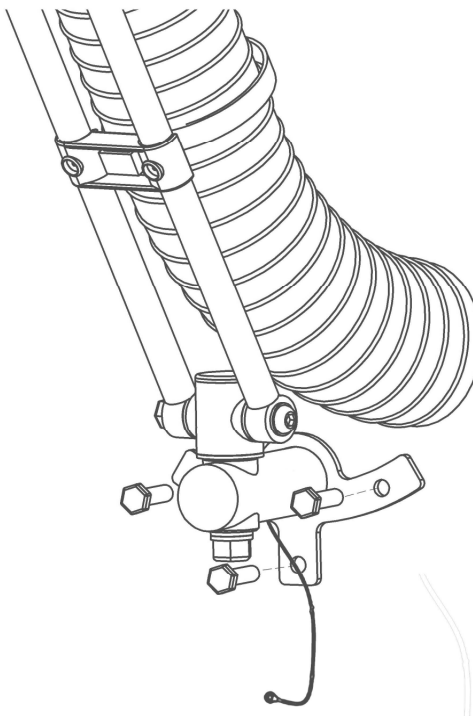
## Installation of the ATEX Mini HPD's

### 1a) *Installation of the bench mounting bracket;*



Install the bench mounting bracket using 3 x M8 bolts, It is recommended that the mini HPD is installed within 0.4m of the duct connection.

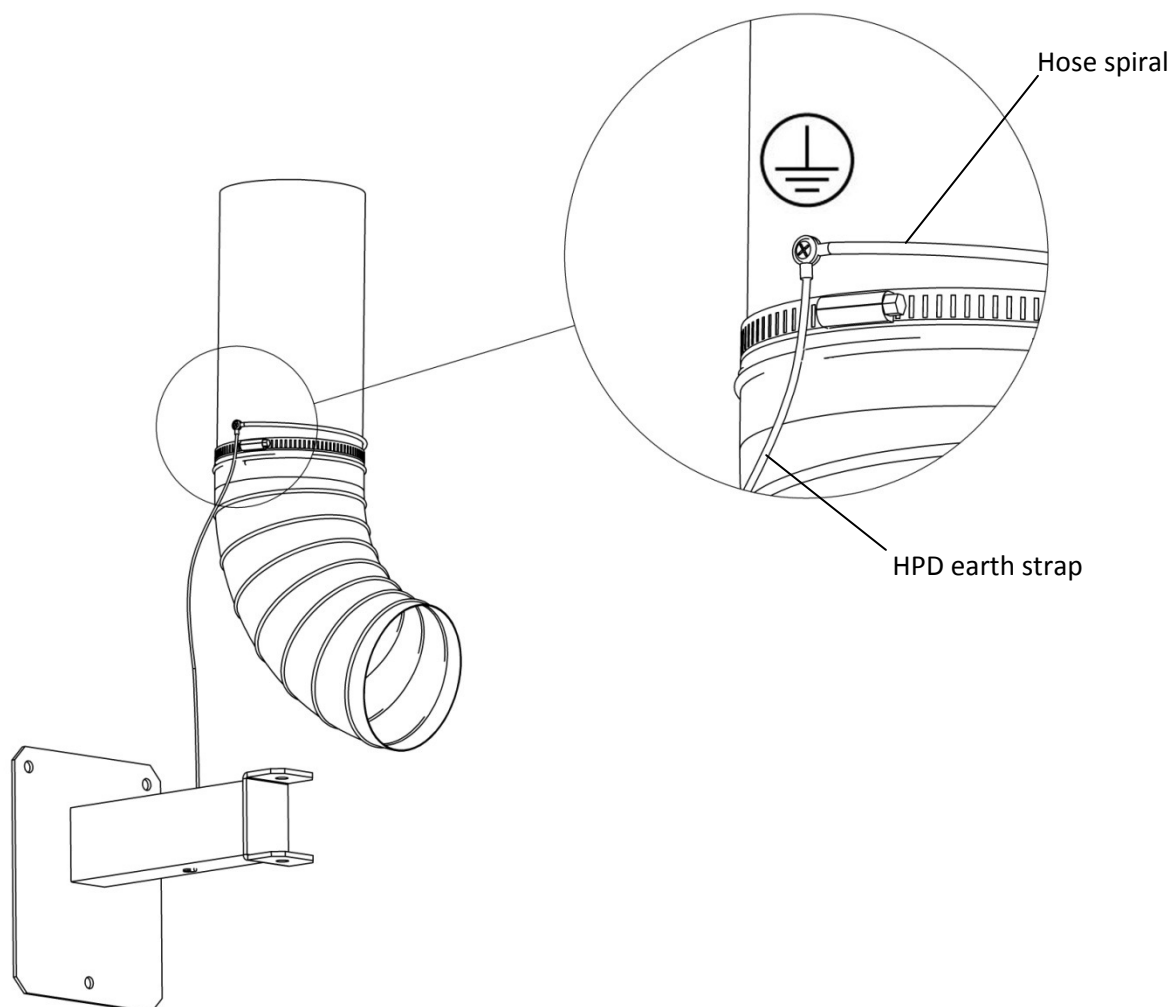
### 1b) *Installation of the wall mounting bracket;*



Install the wall mounting bracket using 3 x M8 bolts, It is recommended that the mini arm is installed within 0.4m of the duct connection.

## Earthing of the equipment

Upon installation it is essential that the equipment is earthed. The hose spiral earthing connector and the HPD earthing strap must both be connected to an appropriate earth point to ensure maximum protection.



## Final installation check

- Ensure that all bolts have been securely fastened.
- Ensure the **TEMPORARY LOCKING PIN BOLT (as shown on page 9)** has been removed from the articulated HPD and the casing is securely fixed into position.
- Check that the flexible hose is securely connected to the duct outlet.
- Check that a good earth connection has been made between the spiral of the hose and the HPD to a suitable earthing point.
- Check that the HPD holds a fixed position, if adjustment is required, please refer page 14 of this manual.

# Maintenance

---

The equipment should be regularly checked maintained and cleaned to ensure that the highest levels of explosion protection are maintained.

Ensure that any persons cleaning the equipment are wearing adequate (PPE) personal protection equipment. **IMPORTANT: THIS EQUIPMENT MUST ONLY BE CLEANED WITH AN ANTI STATIC CLOTH.**

Clean the equipment when there is no risk of an explosion in the environment, if this is not possible the equipment should be carefully removed from its mountings, cleaned and reinstalled as per the instructions on page 6.

All surfaces must be cleaned using water and a mild cleaning agent. **DO NOT USE AGGRESSIVE CLEANING AGENTS ON THE EQUIPMENT AS THIS MAY LEAD TO DAMAGED COMPONENTS AND REDUCE EFFECTIVENESS OF THE EXPLOSION PROTECTION.**

The equipment should be thoroughly cleaned every 6 months to ensure that any dust accumulation on the product is kept to a minimum. If accumulation of dust on the product becomes noticeable between cleaning intervals then the cleaning schedule should be adjusted accordingly.

During the cleaning operation it is recommended that the equipment is inspected for damaged or defective components and parts reordered directly from flextraction Ltd. Details of parts and assemblies can be found on page 16.

Periodic testing of the continuity of the HPD should be frequently undertaken to ensure that explosion protection is maintained at times, please refer to page 22.

# Adjustment

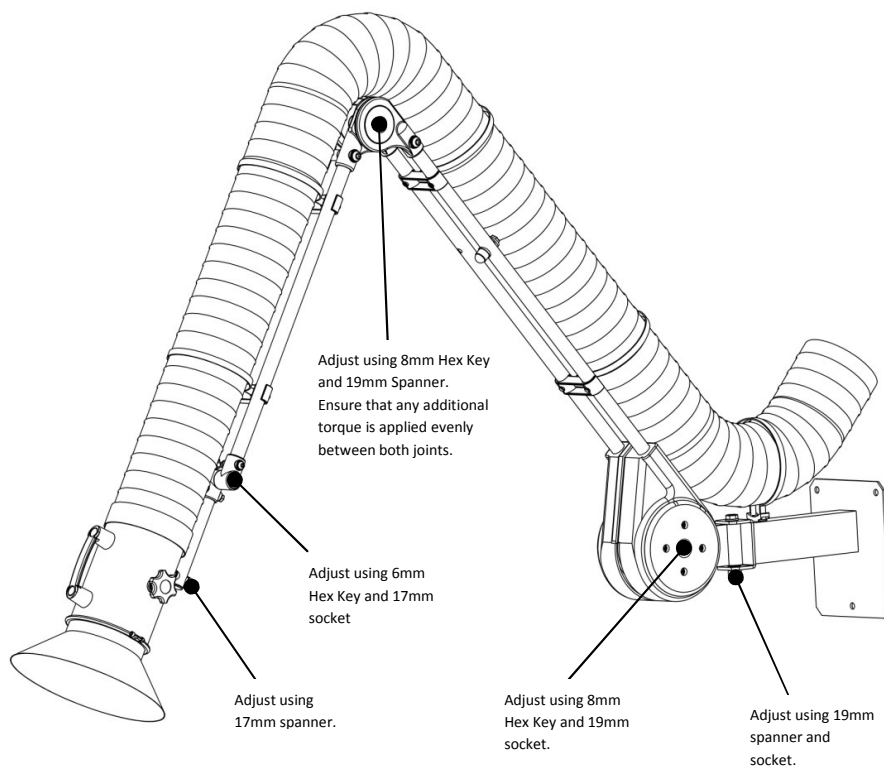
The equipment is fitted with easily accessible, externally mounted fixings to simplify the adjustment of any joint. It is normal practice for friction joints to become slack under constant use and periodic adjustment maybe necessary for the equipment to maintain a self supporting position.

- **ATEX Articulated HPD**

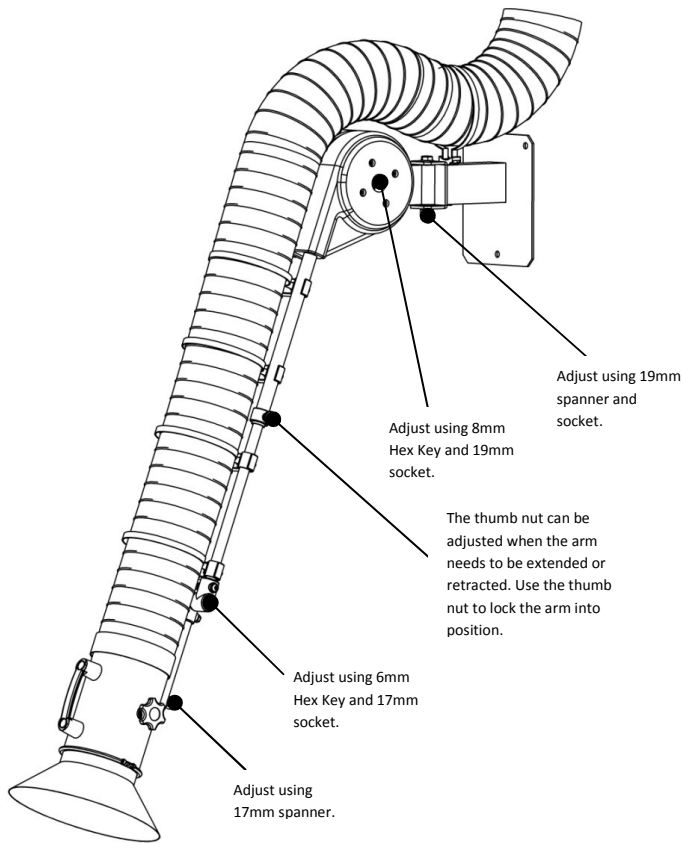
**WARNING:** The equipment is fitted with tension spring's that allow the product to self support. These springs are under constant tension and cannot be removed or adjusted. No attempt should be made to interfere with the spring or its mechanisms – If you have any questions or queries or are in any doubt contact flextraction Ltd.

To adjust the articulated HPD the following tools will be required;

- 6mm & 8mm Hex key
- Socket ratchet
- 17mm & 19mm Socket
- 17mm & 19mm Spanner



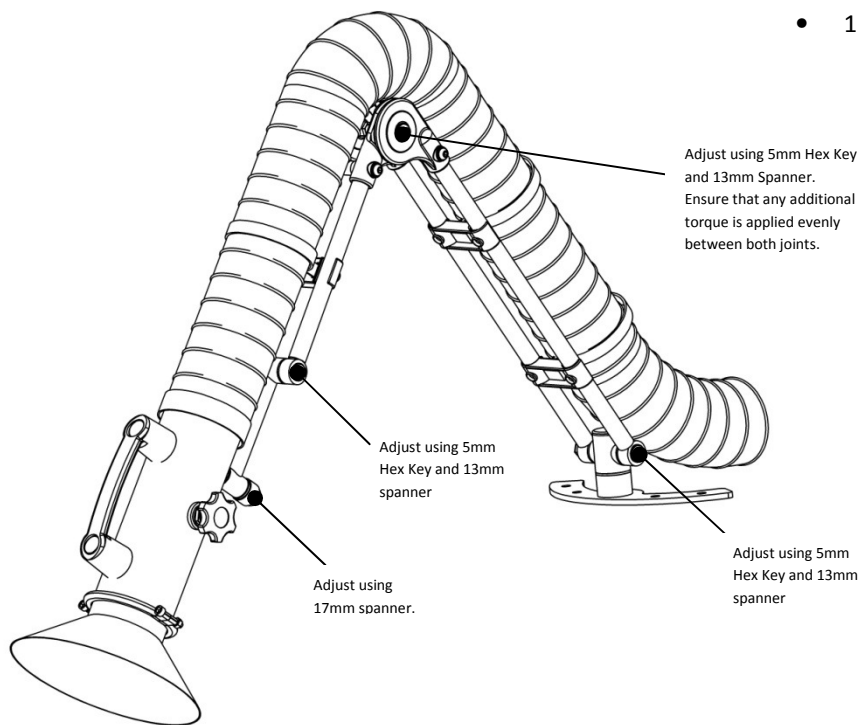
- **ATEX Telescopic HPD**



To adjust the telescopic HPD the following tools will be required;

- 6mm & 8mm Hex key
- Socket ratchet
- 17mm & 19mm Socket
- 17mm & 19mm Spanner

- **ATEX Mini HPD**



To adjust the mini HPD the following tools will be required;

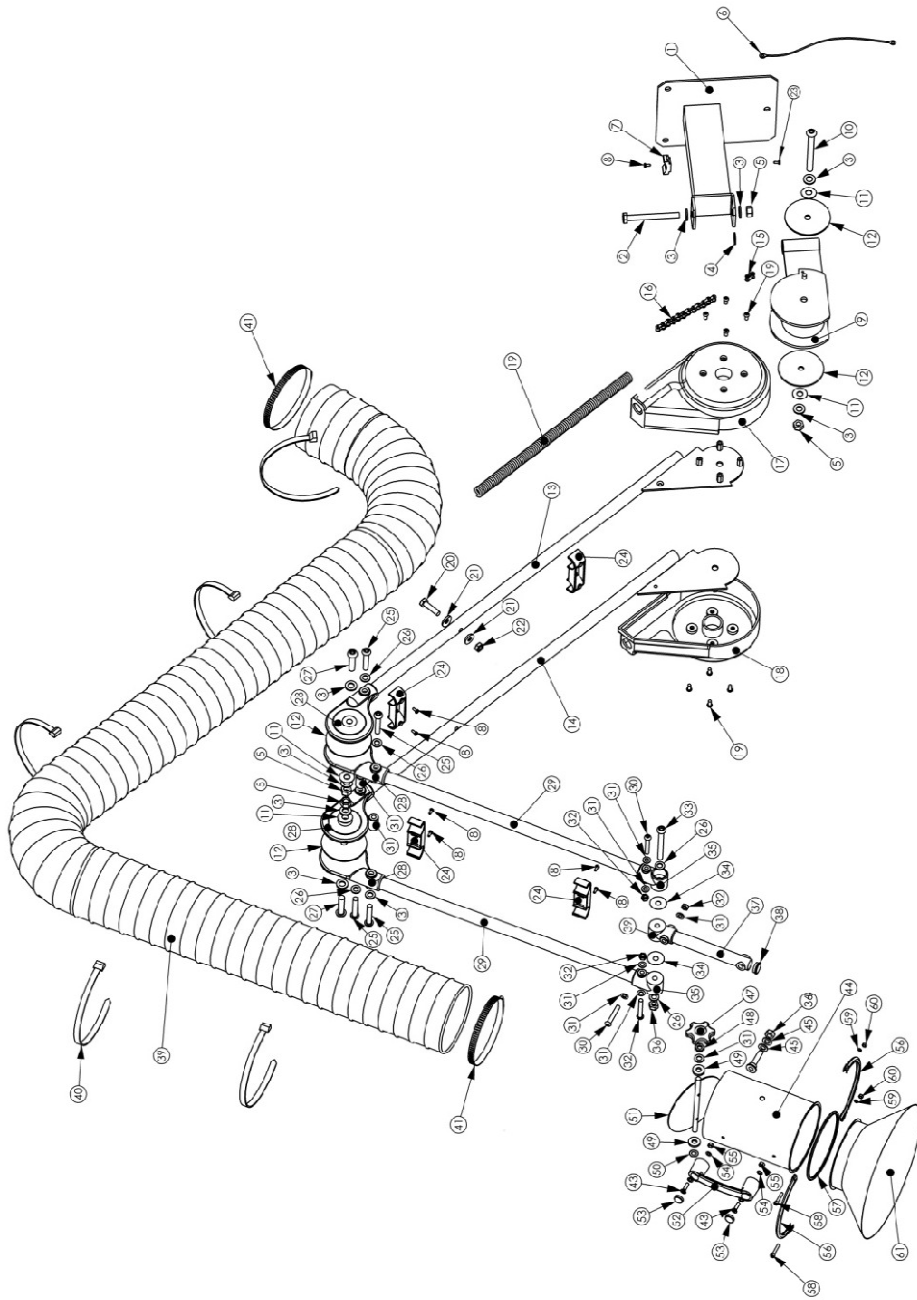
- 5mm Hex key
- Socket ratchet
- 13mm Spanner



# Spares parts and accessories

To maintain the explosion proof properties of the equipment only fit original spare parts and accessories. When ordering spare parts please quote the product serial number (details can be found on the rating plate on the HPD), part name, part number and required quantity.

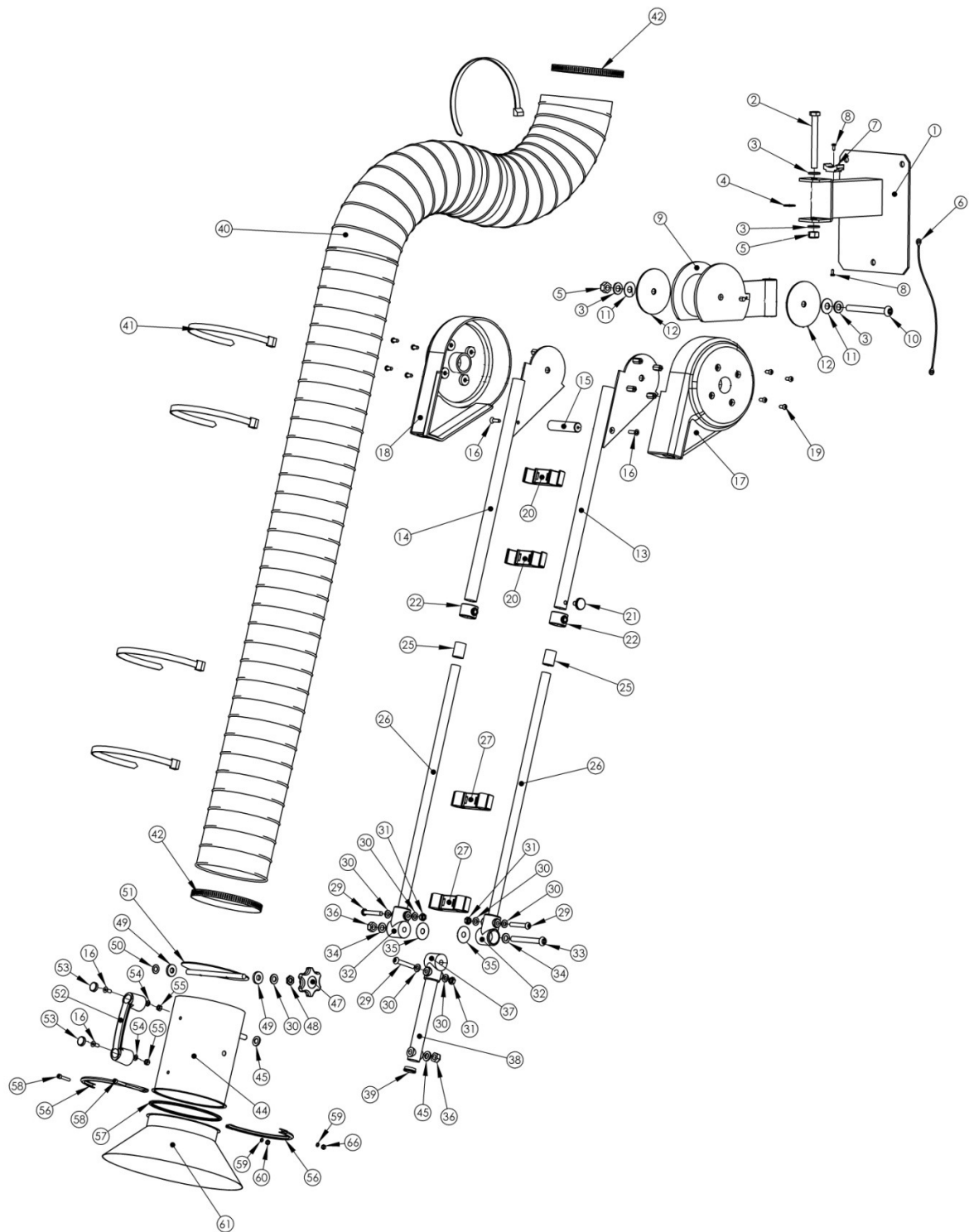
## ATEX Articulated HPD



## **ATEX Articulated HPD**

<b>No.</b>	<b>Part</b>		
1	Wall plate	32	Nut
2	Bolt	33	Bolt
3	Washer	34	Washer
4	Friction washer	35	End casting
5	Nut	36	Bolt
6	Earth strap	37	Hood support
7	Cable tie anchor	38	Tube insert
8	Screw	39	Hose
9	Rear friction joint	40	Hose strap
10	Bolt	41	Hose clamp
11	Beville washer	43	Bolt
12	Friction pad	44	Nozzle body
13	Left rear support	45	Washer
14	Right rear support	47	Hand wheel
15	Chain connector	48	Nut
16	Chain	49	Washer
17	Casing left	50	Star Cap
18	Casing right	51	Damper
19	Tension spring	52	Handle
20	Bolt	53	Handle caps
21	Saddle washer	54	Washer
22	Bolt	55	Nut
23	Screw	56	Split ring
24	Centre clip	57	Split ring rubber
25	Bolt	58	Bolt
26	Washer	59	Washer
27	Bolt	60	Nut
28	Centre casting	61	Hood flare
29	Front support		
30	Bolt		
31	Washer		

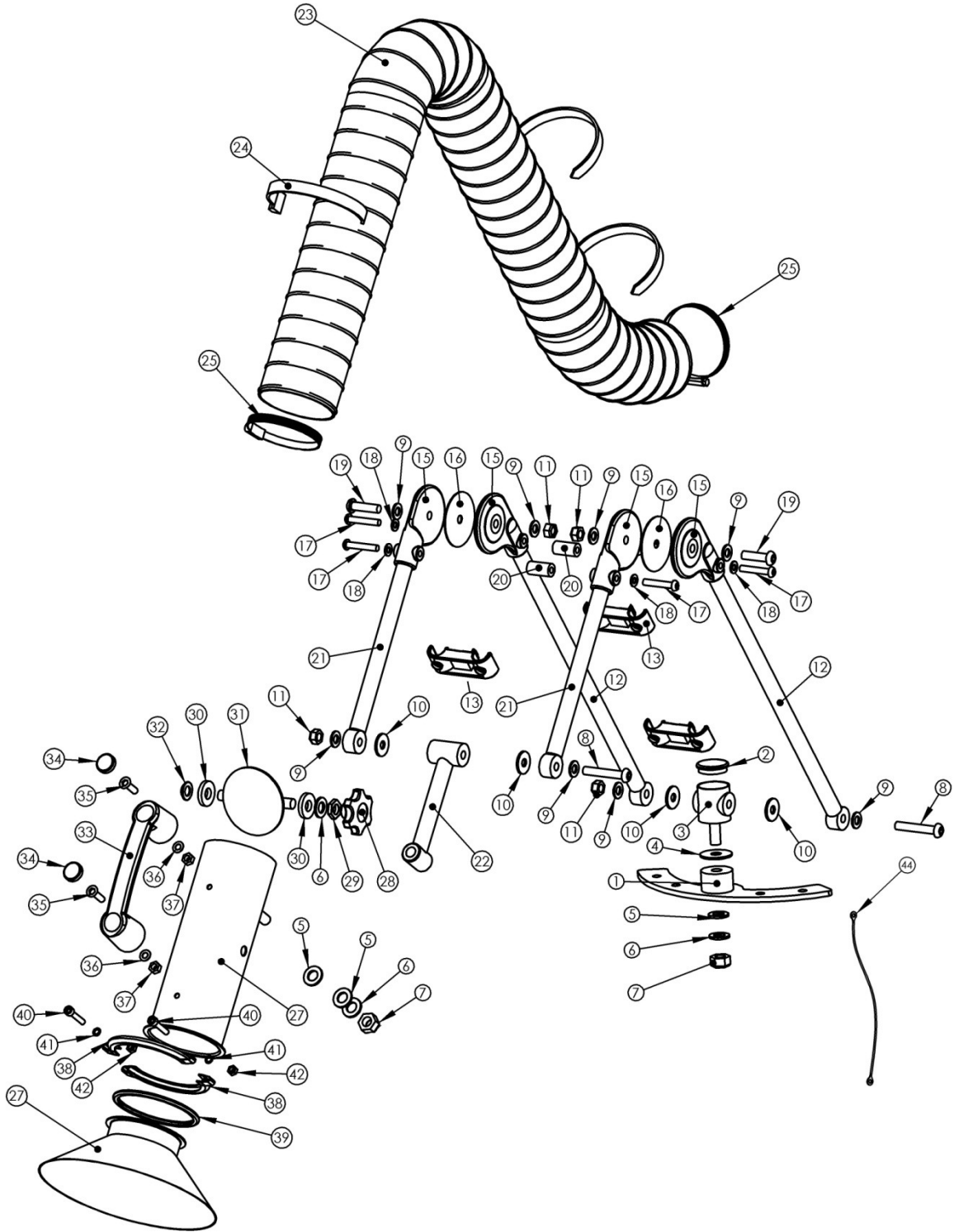
# ATEX Telescopic HPD



## **ATEX Telescopic HPD**

<b>No.</b>	<b>Part</b>		
1	Wall plate	32	End casting
2	Bolt	33	Bolt
3	Washer	34	Washer
4	Friction washer	35	Washer
5	Nut	36	Nut
6	Earth strap	37	End centre casting
7	Cable tie anchor	38	Hood support
8	Screw	39	Tube insert
9	Rear friction joint	40	Hose
10	Bolt	41	Hose strap
11	Beville washer	42	Hose clamp
12	Friction pad	44	Nozzle body
13	Left rear support	45	Washer
14	Right rear support	46	Nut
15	Centre bush	47	Hand wheel
16	Bolt	48	Nut
17	Casing left	49	Washer
18	Casing right	50	Star Cap
19	Bolt	51	Damper
20	Centre clip	52	Handle
21	Hand screw	53	Handle caps
22	Tube adjuster	54	Washer
25	Sliding bush	55	Nut
26	Front support	56	Split ring
27	Centre clip	57	Split ring rubber
29	Bolt	58	Bolt
30	Washer	59	Washer
31	Nut	60	Nut
		61	Hood flare

**ATEX Mini HPD**



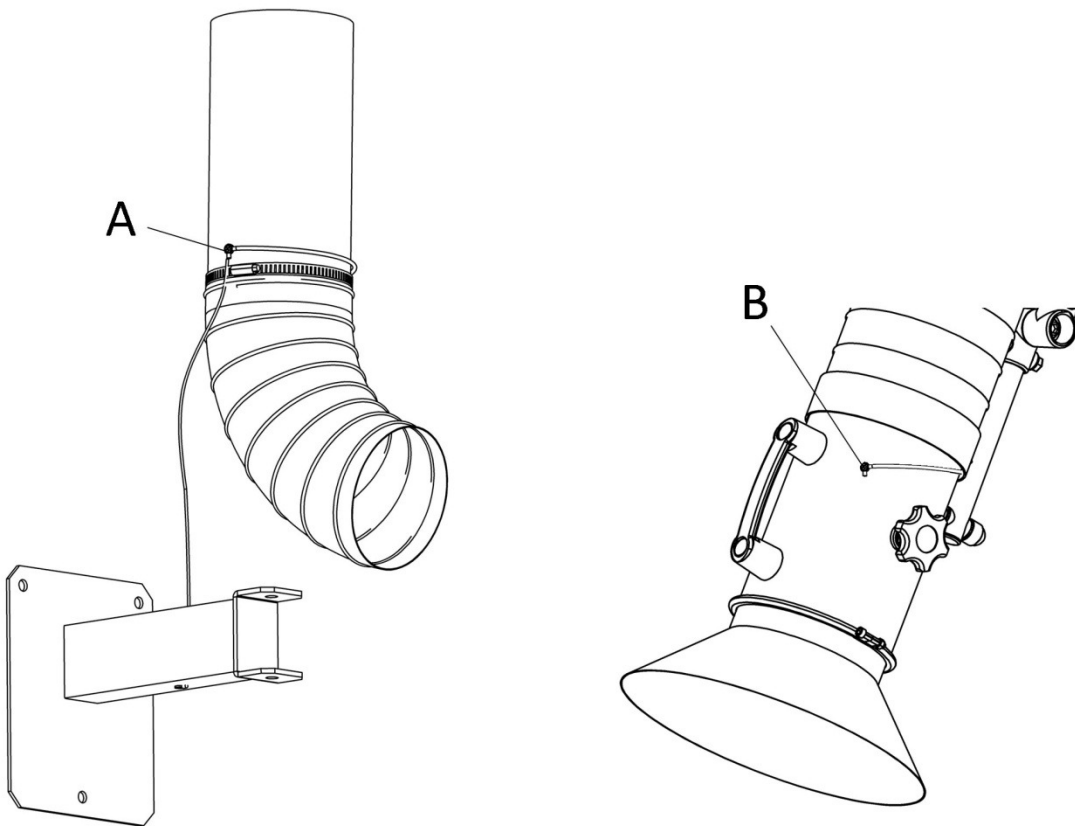
## **ATEX Mini HPD**

<b>No.</b>	<b>Part</b>		
1	Mounting plate	32	Star cap
2	End cap	33	Handle
3	Swivel mounting	34	Handle cap
4	Washer	35	Bolt
5	Nylon washer	36	Washer
6	Washer	37	Nut
7	Nut	38	Split ring
8	Bolt	39	Split ring rubber
9	Washer	40	Bolt
10	Washer	41	Washer
11	Nut	42	Nut
12	Rear tube	43	Hood flare
13	Centre Clip	44	Earth strap
14	Screw		
15	Centre joint		
16	Friction pad		
17	Bolt		
18	Washer		
19	Bolt		
20	Centre bush		
21	Font tube		
22	Hood support		
23	Hose		
24	Hose strap		
25	Hose clamp		
26	Hose clamp band		
27	Nozzle body		
28	Hand wheel		
29	Nut		
30	Washer		
31	Damper		

# Testing and Troubleshooting

The continuity of the HPD should be tested when the arm is cleaned to ensure that the explosion protection is not compromised, the test can be conducted using a continuity tester.

- 1) Place continuity test probe onto the duct earth point (A)
- 2) Place the second continuity test probe onto the hood earth connection (B) on the hood of the HPD



3) The continuity tester should indicate that there is a circuit present between the duct connection (A) and the hood (B). If no circuit is indicated as present, then there is a break in the spiral hose which must be replaced immediately. Contact flextraction with the details of the product serial number to ensure that the correct replacement hose is ordered.



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