

# Breathe In...

Dust and Fume Extraction Products



Fresh Air By Design



# Contents

- ▶ 01 **Breathe In...**  
Our company overview
- ▶ 02 **Choose a flextraction HPD**  
A step-by-step guide to get you thinking about what you really need
- ▶ 04 **Hood Positioning Device (HPD) Range**  
An overview of our exciting product range
- ▶ 06 **Articulated HPD**  
Our fantastic new extraction solution
- ▶ 07 **Extended HPD**  
Extended reach for demanding applications
- ▶ 08 **Mini HPD**  
Compact extraction for limited space applications
- ▶ 10 **Telescopic HPD**  
Flexible and versatile solution for varying applications
- ▶ 12 **Brackets**  
Solutions for mounting your flextraction HPD
- ▶ 13 **Hoods**  
Multiple options for the extraction and containment point
- ▶ 14 **Hoses**  
Varying options for the hose material
- ▶ 16 **ATEX Information**  
Crucial information regarding safety protocol and legislation
- ▶ 17 **Services & Support**  
What level of service you can expect as a flextraction customer

## Where to start?

There are numerous variables in choosing an extraction system that will be sufficient in meeting your requirements, health and safety concerns and ongoing needs.

That's why we've designed a step-by-step guide to help you analyse your application, with links to pages within this brochure where you can find more information and other options.

We recommend starting overleaf on page 2 and working through the guide to arrive at the correct HPD.

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All information is correct at time of going to press. Errors and omissions exempt.

# Breathe in...

*Our Company Goal is: "To earn the status of best provider of dust and fume control equipment by exceeding the needs and expectations of our staff, our customers and our customers' employees."*



## Fresh Air By Design

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flextraction Ltd. is the leading independent UK firm specialising in the supply and manufacture of Local Exhaust Ventilation (LEV) products for dust extraction and fume extraction in the workplace. Our range of products, specifically designed for the removal of dust and fume at source, is second to none.

Our product range is suitable for all dust extraction and fume extraction applications, ranging from the smallest single HPD soldering point, multi station welding fume systems, through to large area Local Exhaust Ventilation of highly toxic and hazardous materials.

Within our range of extraction equipment are HPDs that conform to the Atmosphere Explosive Regulations (ATEX).

We custom design, manufacture, install, test and commission dust extraction and fume extraction systems. From a single flexible extraction HPD through to complete turnkey projects, we are able to offer a quality extraction system that will meet your needs.

We manufacture a range of popular downflow dust extraction booths that have been designed to offer containment of dust over a large area of emission where conventional hoods etc, do not offer adequate or effective extraction. For example, when scooping from tubs or bags into a weigh point, the area of dust emission can be very large. Industry sectors that have benefited most from this excellent product include Bakeries, Food Plants, Dye and Paint Manufacturers, Pharmaceutical and Chemical.

We also offer a comprehensive CoSHH (Control of Substances Hazardous to Health) advice and testing service.

# Your Guide to a Customised flextraction Solution...



You will need to consider many things before choosing an HPD that is correct for you. These pages detail the selection process and areas that you will need to consider before choosing your HPD.

## START HERE

Please use the tick boxes to remind you of your choices when you contact us. Wherever applicable, a page reference has been given for further information.

### 1 Product being Extracted

The product being extracted could determine the materials required in your HPD.

Corrosive	<input type="checkbox"/>
Temperature	<input type="checkbox"/>
Toxic	<input type="checkbox"/>
Flammable	<input type="checkbox"/>
Food	<input type="checkbox"/>
Fume	<input type="checkbox"/>
Dust	<input type="checkbox"/>
Acidic	<input type="checkbox"/>
Solvent	<input type="checkbox"/>

### 2 Hood Style

PAGE 13

The hood style is the type of attachment at the end of the hose that captures your product. Hoods are also available in different materials dependant upon your use.

Spun End / Flared	<input type="checkbox"/>
Flat Hood	<input type="checkbox"/>
Fish Tail	<input type="checkbox"/>
Custom Designed	<input type="checkbox"/>

### 3 Hood Material

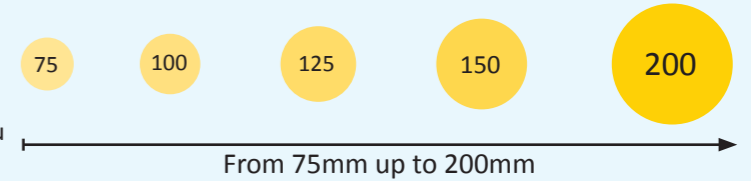
PAGE 13

Different applications will require a different material each with their own benefits.

Mild Steel	<input type="checkbox"/>
Stainless Steel	<input type="checkbox"/>
Polypropylene	<input type="checkbox"/>

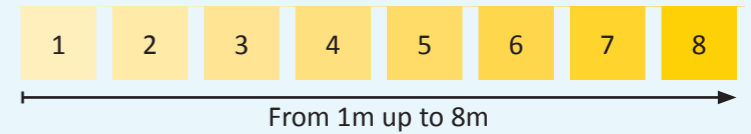
### 4 Hose Diameter

What diameter your hose will be is determined by the product and quantity you are extracting and the air volume required.



### 5 Length

HPD length determined by how far the extract product is from the mounting.



### 6 Hose Material

PAGE 14

Your hose material will be determined by the product you are extracting.

PVC	<input type="checkbox"/>
PU	<input type="checkbox"/>
High Temp	<input type="checkbox"/>
Antistatic	<input type="checkbox"/>

### 7 Mounting

PAGE 12

How your HPD will be mounted will depend on the space available and your individual application.

Wall	<input type="checkbox"/>
Ceiling	<input type="checkbox"/>
Column	<input type="checkbox"/>
Swivel	<input type="checkbox"/>

### 8 Finish

The finishing applied to your product will suit individual needs and environments.

Stainless Steel	<input type="checkbox"/>
Powder Coated Paint	<input type="checkbox"/>

### 9 ATEX

PAGE 16

To comply with European regulations for potentially explosive environments.

Certification Required	<input type="checkbox"/>
Zoned Area (see page 16 for more information)	<input type="checkbox"/>

# HPD Range (Hood Positioning Device)



## Benefits of the HPD Range

- 1 Totally self supporting mechanism capable of carrying various hood and hose combinations
- 2 Capable of supporting various hood designs' including bespoke solutions
- 3 Can be supplied as flange only for design and self fit collection hoods
- 4 Twin support tube allows simple fixing of a solid duct or flexible hose in various diameters
- 5 Support clips allow duct or hose to be easily removed for cleaning and reinstallation
- 6 All bolts can be easily accessed allowing simple and straightforward periodic adjustment
- 7 Increased surface area of all joints gives a much lighter feel to the HPD, allowing easier positioning with the HPD self supporting in its required position
- 8 HPDs are fitted with single or twin spring supporting mechanism to allow greater lengths and weights to be supported
- 9 The rear mechanism is now encased for improved safety and hygiene
- 10 A rear boom extension gives the HPD a 270° pivot greatly improving the working radius
- 11 Integrated hood damper allows greater control of the airflow in an extraction system
- 12 New 360° rotating swivel hood allows more accurate hood positioning
- 13 ATEX compliant and Stainless Steel versions available **optional**
- 14 Integral airflow indicator available **optional**

## Design Philosophy

flextraction's Hood Positioning Device (HPD) is the result of over 15 years use and application of flexible extraction arms.

flextraction has always strived to maintain its purist principles of LEV design and to offer the correct solution for any LEV problem. We are aware that 'off the shelf' flexible extraction arms are often misapplied. The HPD has been designed to address the deficiencies of conventional flexible extraction arms, in line with current HSE guidance, by enabling the correct design and positioning of LEV hoods.

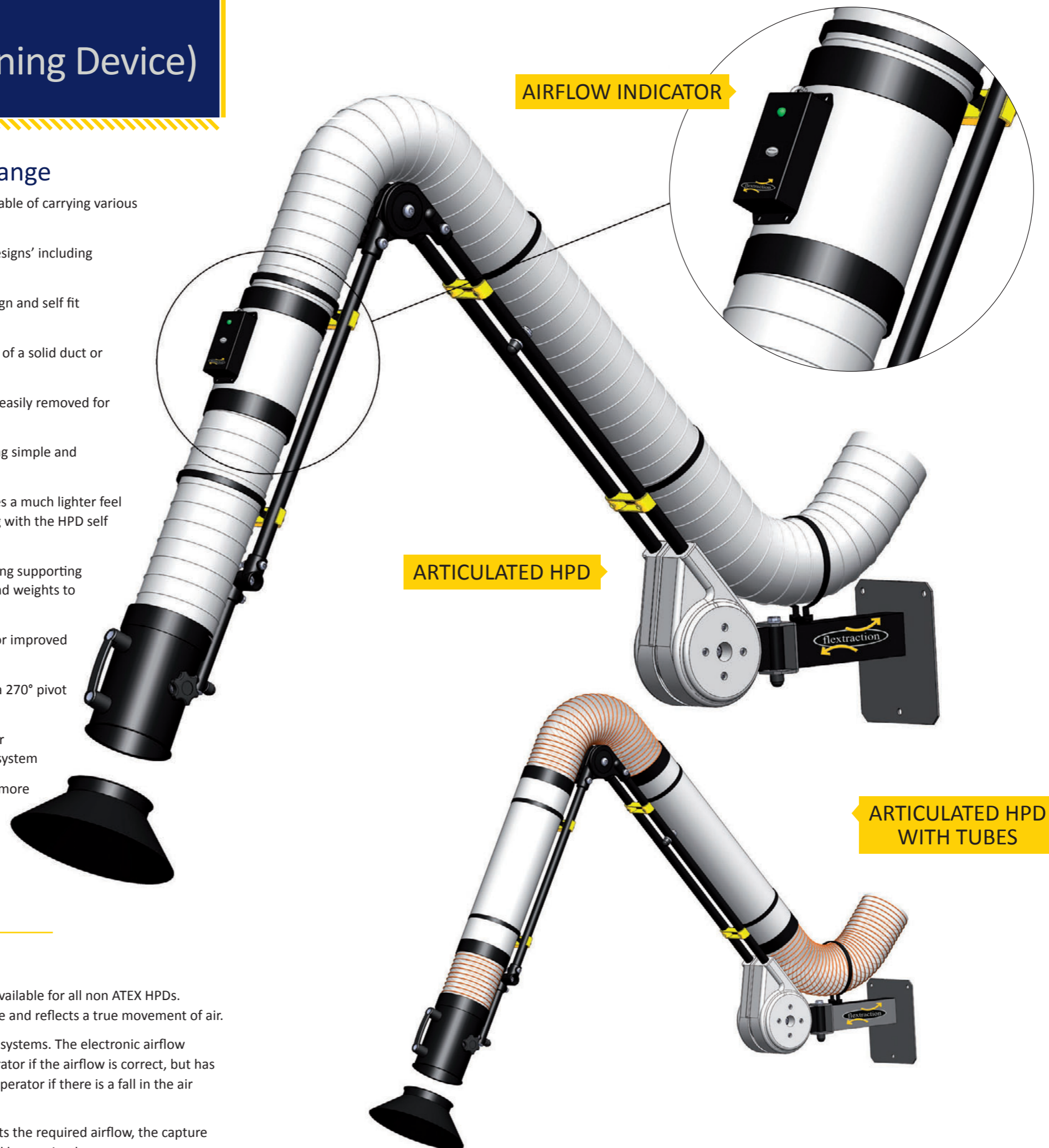
To this end, flextraction has invested in engineering expertise and computer modelling software and has gone through a stringent development process to bring the new HPD to industry. The engineering within the HPD enables it to accommodate purpose-designed hoods that can be positioned as demanded by the process.

## Airflow Indicator

Electronic airflow indicating devices are available for all non ATEX HPDs. Airflow is detected by differential pressure and reflects a true movement of air.

They are easily fitted to existing hoods or systems. The electronic airflow indicator not only visually shows the operator if the airflow is correct, but has an additional audible alarm to warn the operator if there is a fall in the air velocity.

NB: Even when an airflow indicator reflects the required airflow, the capture hood will only work if correctly positioned by a trained operator.



# Articulated HPD

- No internal obstructions apart from the Control Damper
- No internal wear, corrosion, flow restrictions or solids build up
- 5 standard diameters – 75 / 100 / 125 / 150 & 200mm
- Standard wall mounting bracket INCLUDED
- Arrives FULLY assembled
- Dust & Fume Extraction at exactly the point you need it!
- Range of hoods available – See page 13

## Mounting Brackets

For a range of mounting options please see page 12.

## Finish

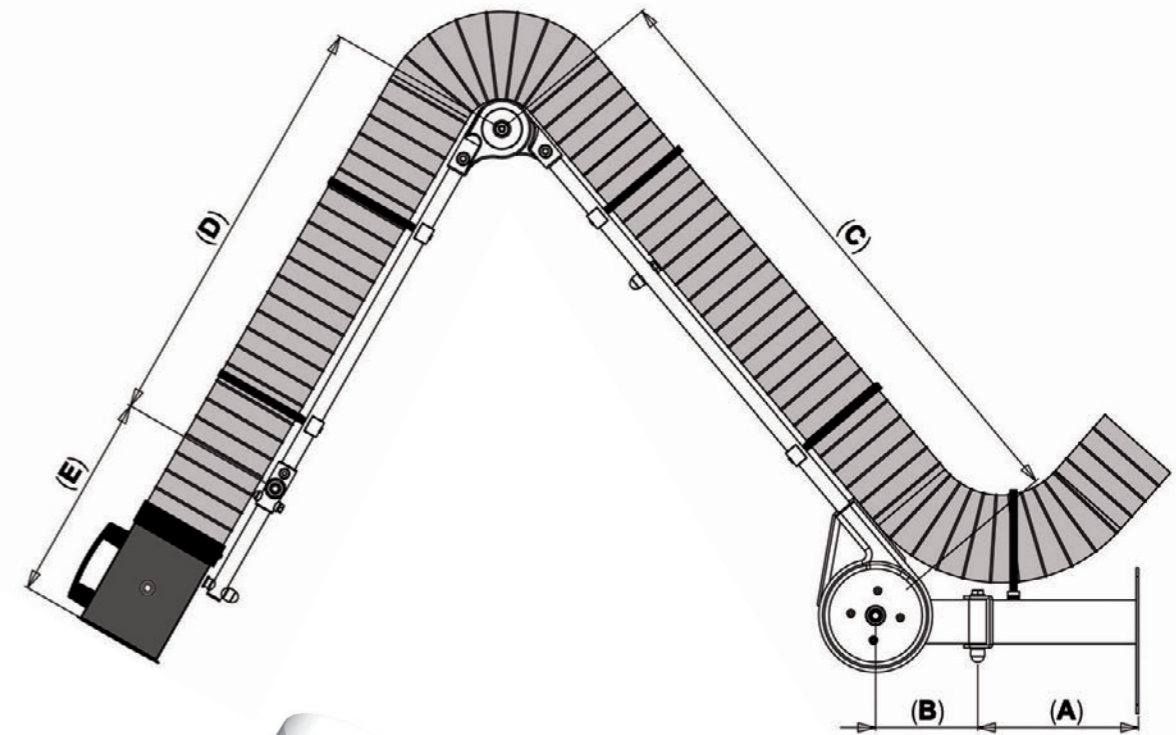
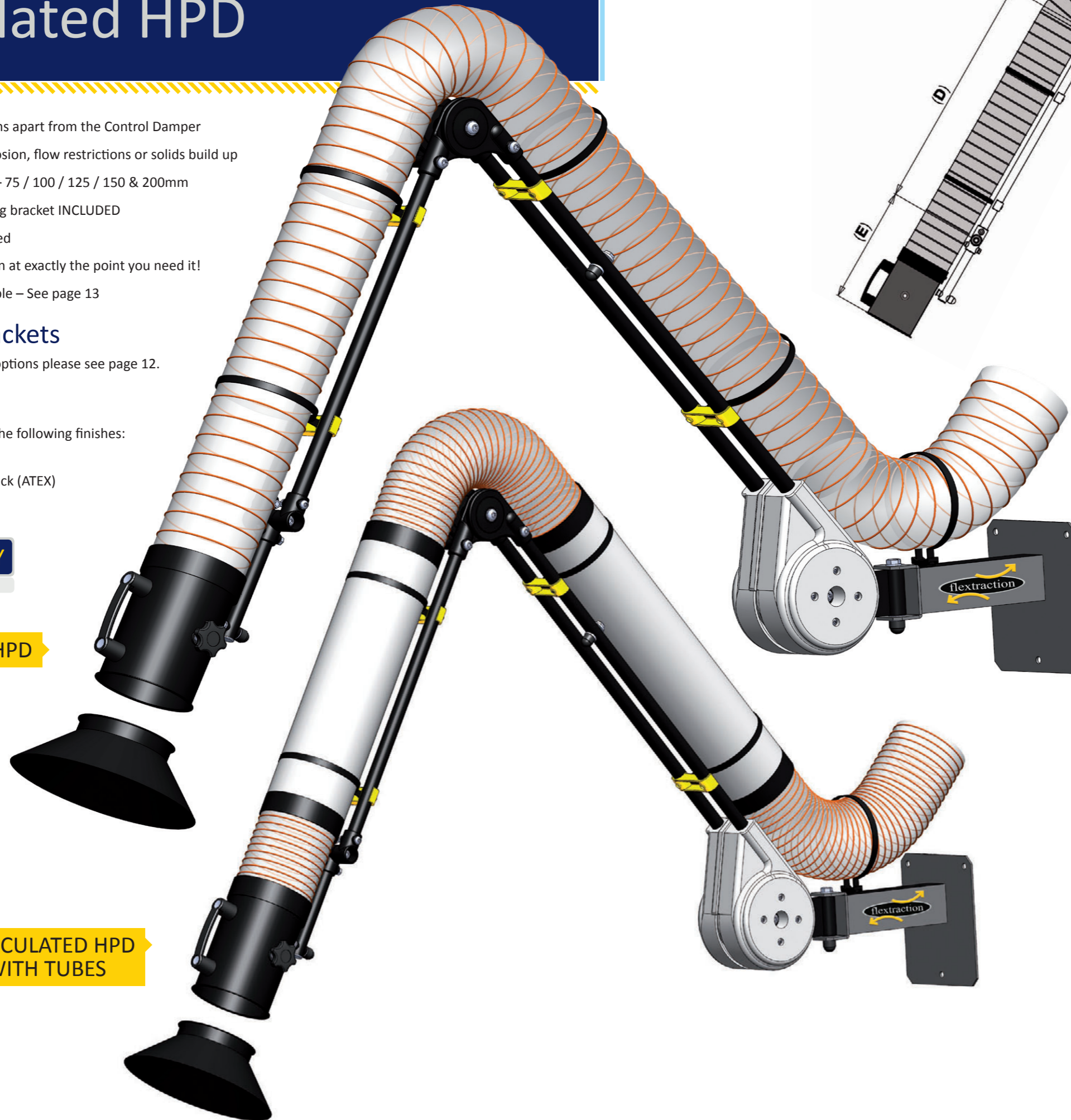
All HPDs are available in the following finishes:

- Polyester Coated Black
- Texture Conductive Black (ATEX)
- Stainless Steel



ARTICULATED HPD

ARTICULATED HPD WITH TUBES



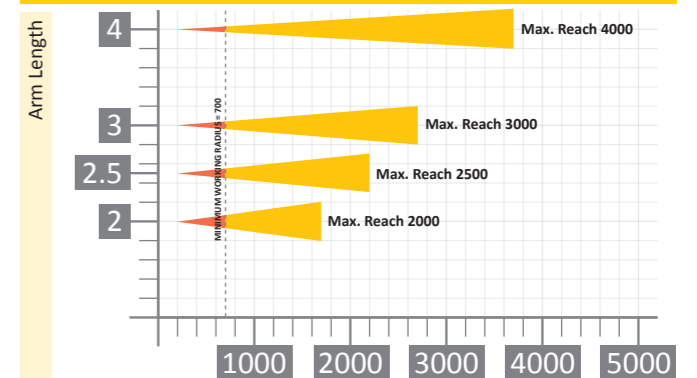
## HPD DIMENSIONS

HPD	HPD Length	A	B	C	D	E	Max Reach	Wt Kg <sup>2</sup>	Load Capacity <sup>2</sup>
2	2000	275	175	875	575	375	2275	13	5
2.5	2500	275	175	1250	700	375	2775	14	4
3	3000	275	175	1500	950	375	3275	15	3
4	4000	850	175	1500	950	375	3850	18	3

<sup>1</sup> e.g. Mild steel/150mm dia/PVC hose

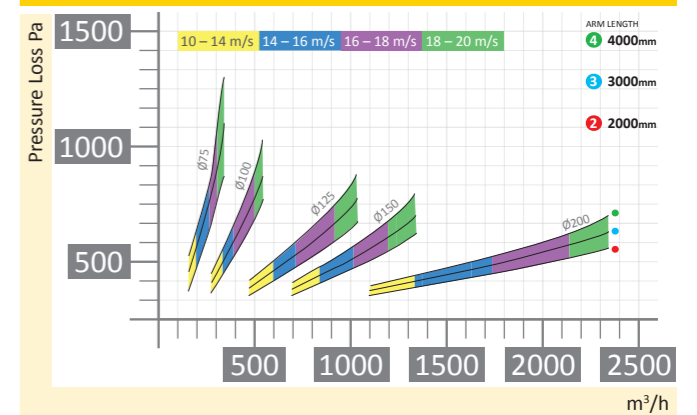
<sup>2</sup> Applies only when the arm is positioned within its working radius

## RADIUS DIMENSIONS



Based on HPD fitted with a standard flared hood

## AIR VELOCITIES



# Extended HPD

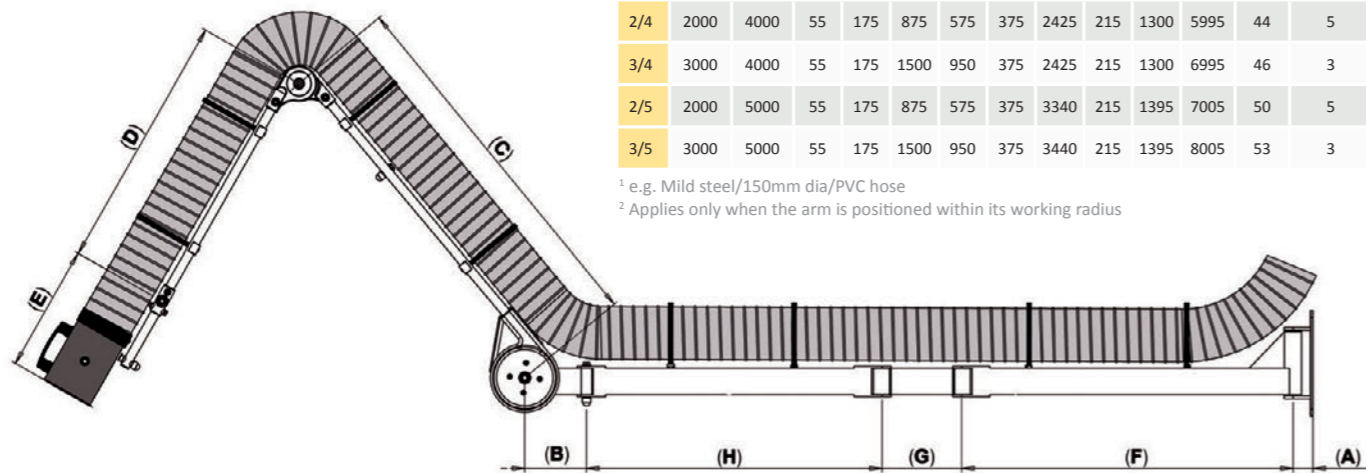
The extended HPD incorporates the same design philosophy and features shown on page 4 with the added benefit of a much larger reach capability.

## HPD DIMENSIONS

Arm	Arm Length	Boom Length	A	B	C	D	E	F	G	H	Max Reach	Wt Kg <sup>1</sup>	Load Capacity <sup>2</sup>
2/2	2000	2000	55	175	875	575	375	945	215	785	4000	32	5
3/1	3000	1000	55	175	1500	950	375	640	n/a	n/a	3995	30	3
3/2	3000	2000	55	175	1500	950	375	945	215	785	5000	34	3
2/3	2000	3000	55	175	875	575	375	1425	215	1305	5000	38	5
3/3	3000	3000	55	175	1500	950	375	1425	215	1305	6000	40	3
2/4	2000	4000	55	175	875	575	375	2425	215	1300	5995	44	5
3/4	3000	4000	55	175	1500	950	375	2425	215	1300	6995	46	3
2/5	2000	5000	55	175	875	575	375	3340	215	1395	7005	50	5
3/5	3000	5000	55	175	1500	950	375	3440	215	1395	8005	53	3

<sup>1</sup> e.g. Mild steel/150mm dia/PVC hose

<sup>2</sup> Applies only when the arm is positioned within its working radius



## Mounting Brackets

For a range of mounting options please see page 12.

## Finish

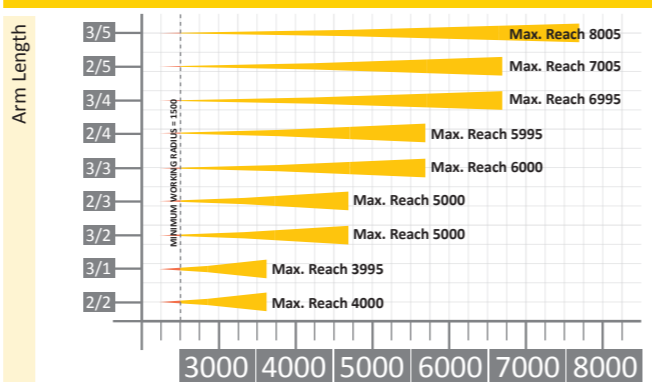
All HPDs are available in the following finishes:

- Polyester Coated Black
- Texture Conductive Black (ATEX)
- Stainless Steel



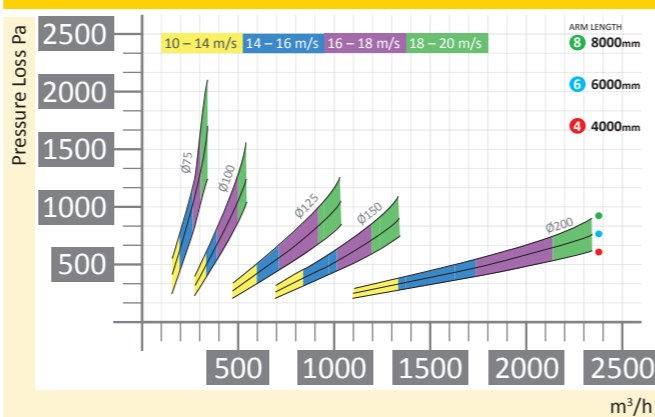
See page 17 for more information.

## RADIUS DIMENSIONS



Based on HPD fitted with a standard flared hood Working Radius

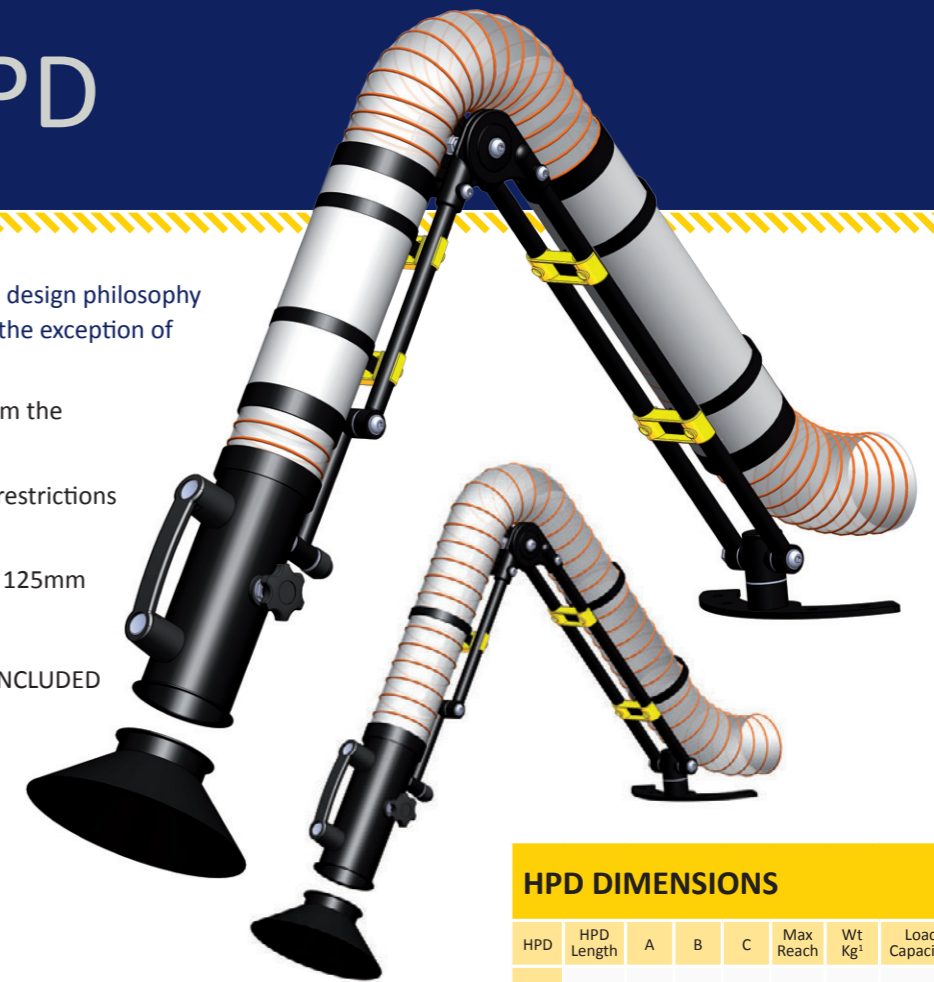
## AIR VELOCITIES



# Mini HPD

The Mini HPD incorporates the same design philosophy and features shown on page 4 (with the exception of points 8–10).

- No internal obstructions apart from the Control Damper
- No internal wear, corrosion, flow restrictions or solids build up
- 3 standard diameters – 75 / 100 / 125mm
- Available in either 1m or 1.5m
- Wall or Bench mounting bracket INCLUDED
- Arrives FULLY assembled
- Dust & Fume Extraction at exactly the point you need it!
- Range of hoods available – See page 13



## HPD DIMENSIONS

HPD	HPD Length	A	B	C	Max Reach	Wt Kg <sup>1</sup>	Load Capacity <sup>2</sup>
1	1000	475	250	275	1000	5	1.5
1.5	1500	725	500	275	1500	6	1

<sup>1</sup> e.g. Mild steel/150mm dia/PVC hose

<sup>2</sup> Applies only when the arm is positioned within its working radius

## Mounting Brackets

For details please see page 12.

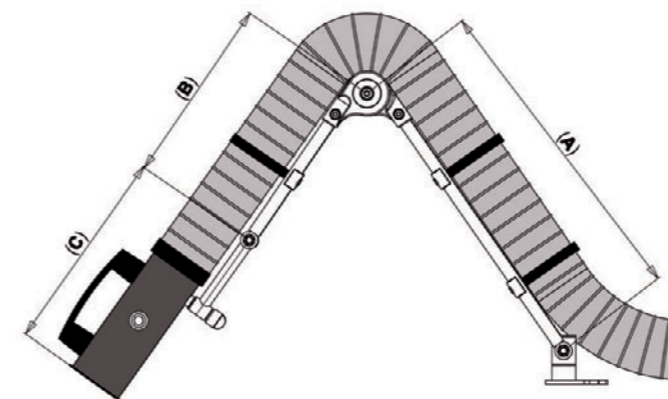
## Finish

All HPDs are available in the following finishes:

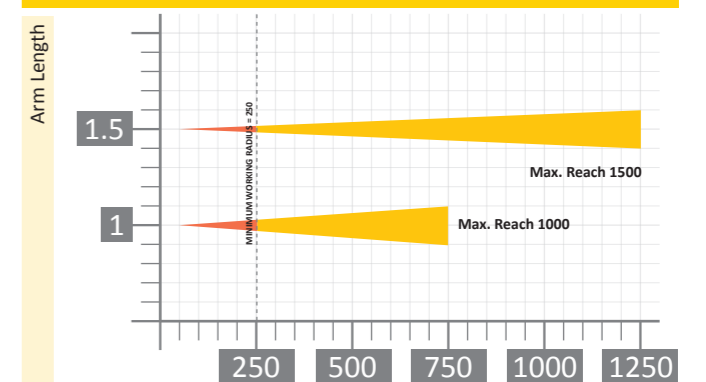
- Polyester Coated Black
- Texture Conductive Black (ATEX)
- Stainless Steel



See page 17 for more information.

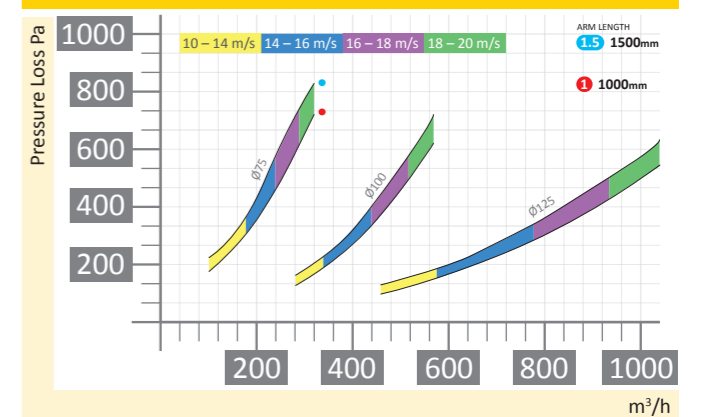


## RADIUS DIMENSIONS



Based on HPD fitted with a standard flared hood Working Radius

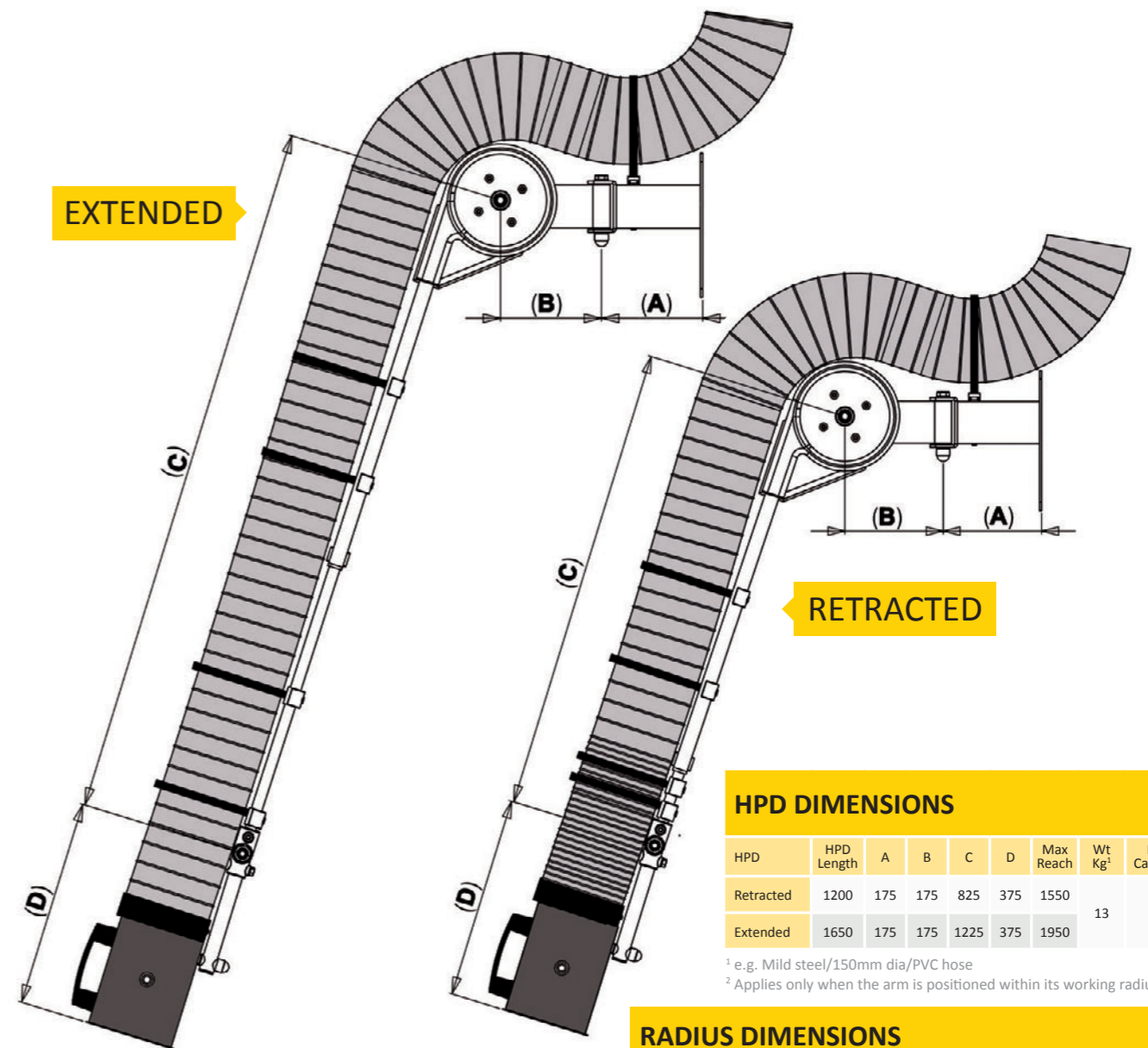
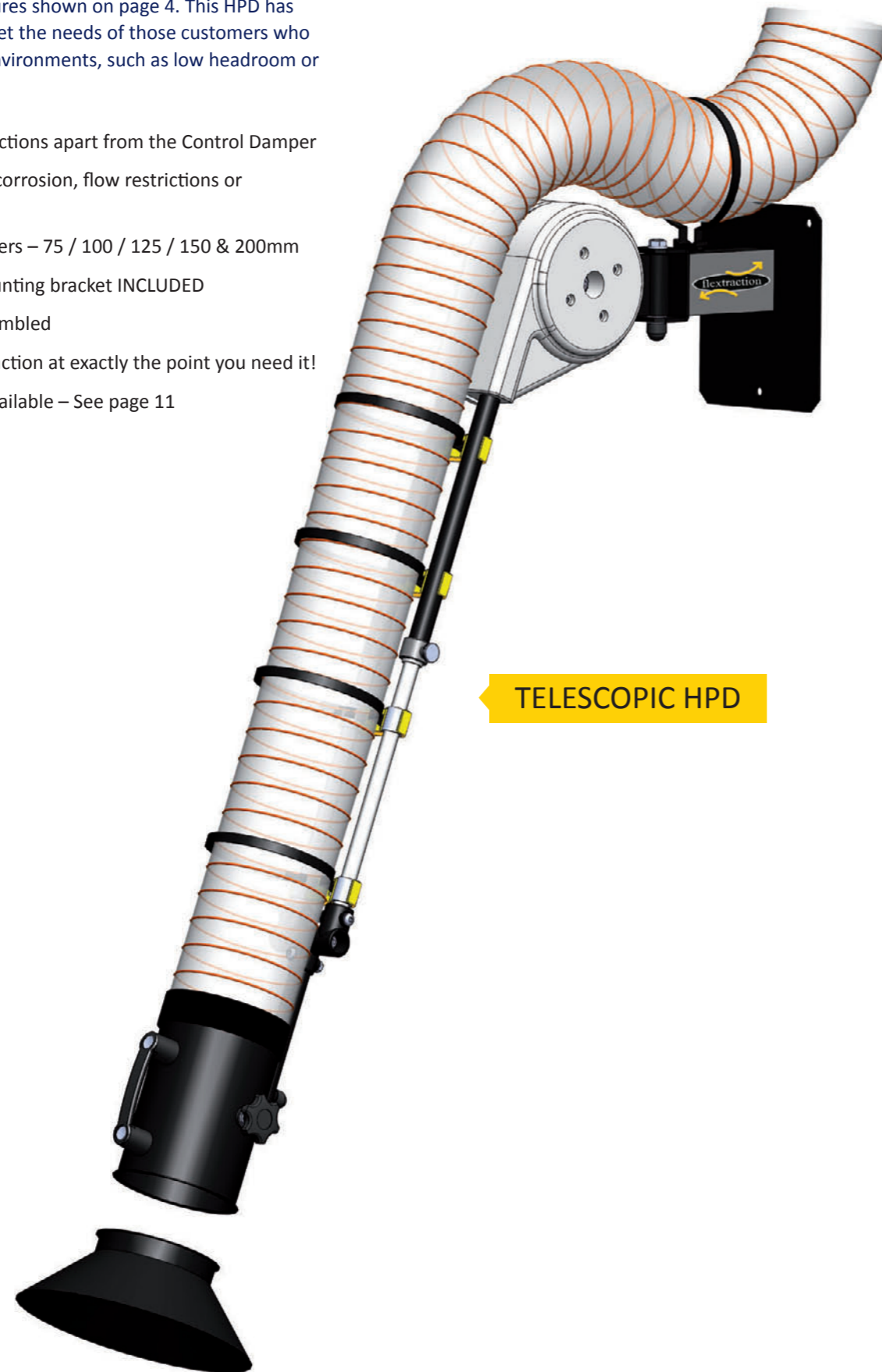
## AIR VELOCITIES



# Telescopic HPD

The Telescopic HPD incorporates the same design philosophy and most of the features shown on page 4. This HPD has been designed to meet the needs of those customers who have limited space environments, such as low headroom or small working areas.

- No internal obstructions apart from the Control Damper
- No internal wear, corrosion, flow restrictions or solids build up
- 5 standard diameters – 75 / 100 / 125 / 150 & 200mm
- Standard wall mounting bracket INCLUDED
- Arrives FULLY assembled
- Dust & Fume Extraction at exactly the point you need it!
- Range of hoods available – See page 11



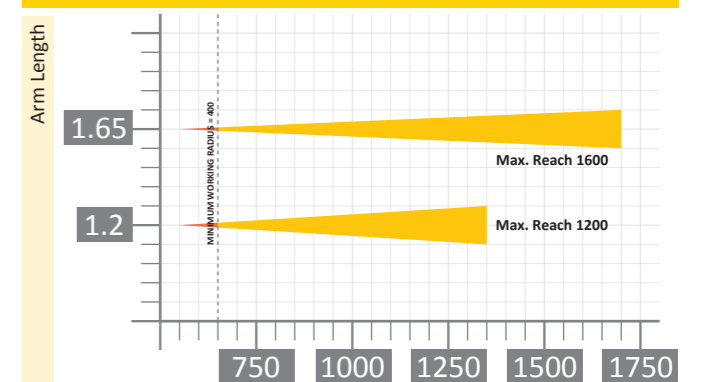
## HPD DIMENSIONS

HPD	HPD Length	A	B	C	D	Max Reach	Wt Kg <sup>1</sup>	Load Capacity <sup>2</sup>
Retracted	1200	175	175	825	375	1550	13	3
Extended	1650	175	175	1225	375	1950		

<sup>1</sup> e.g. Mild steel/150mm dia/PVC hose

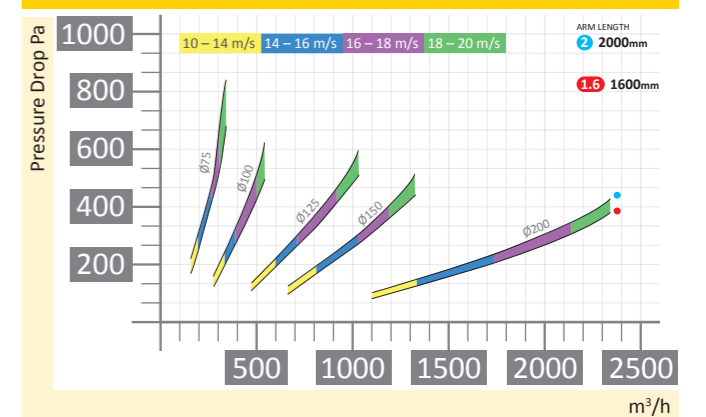
<sup>2</sup> Applies only when the arm is positioned within its working radius

## RADIUS DIMENSIONS



Based on HPD fitted with a standard flared hood

## AIR VELOCITIES



## Mounting Brackets

For a range of mounting options please see page 12.

## Finish

All HPDs are available in the following finishes:

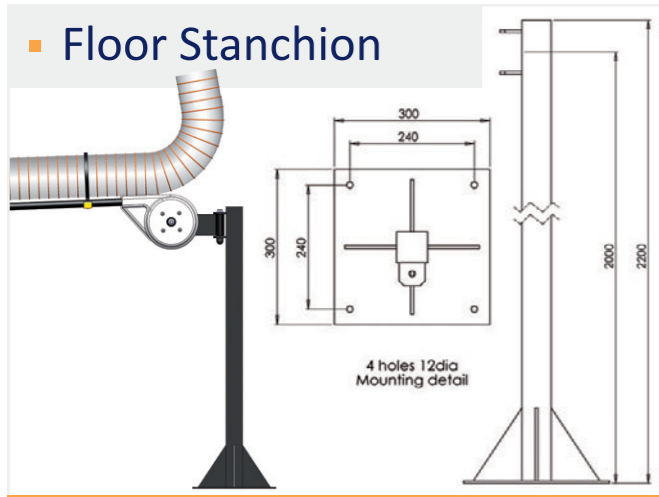
- Polyester Coated Black
- Texture Conductive Black (ATEX)
- Stainless Steel

**5 YEAR WARRANTY**

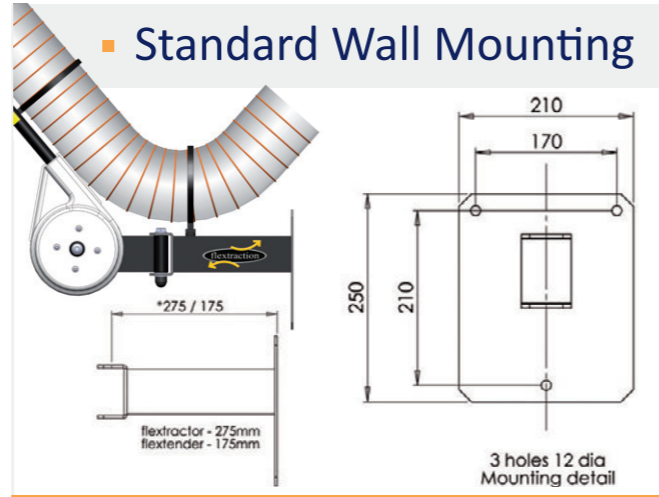
See page 17 for more information.

# Brackets

## ■ Floor Stanchion



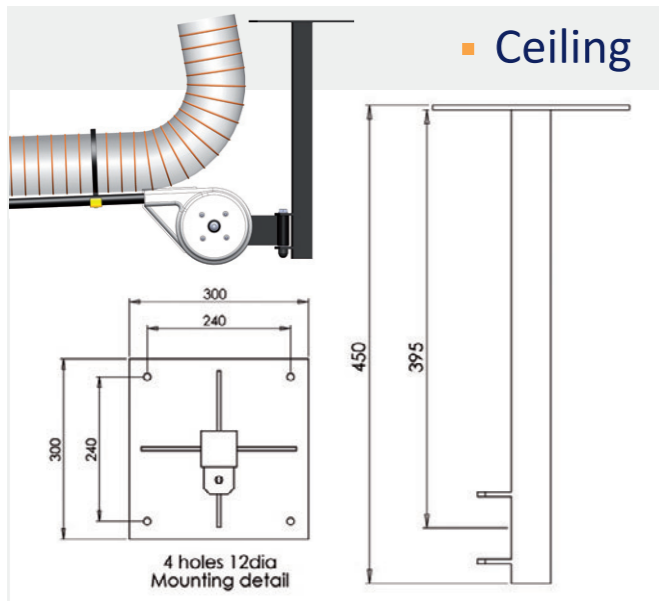
## ■ Standard Wall Mounting



## ■ Up and Down Swivel



## ■ Ceiling



## ■ Mini HPD Mounting Brackets



Table mounting bracket is available on the Mini HPD only.

In addition we are able to offer a custom designed bracket to meet your requirements.

# Hoods

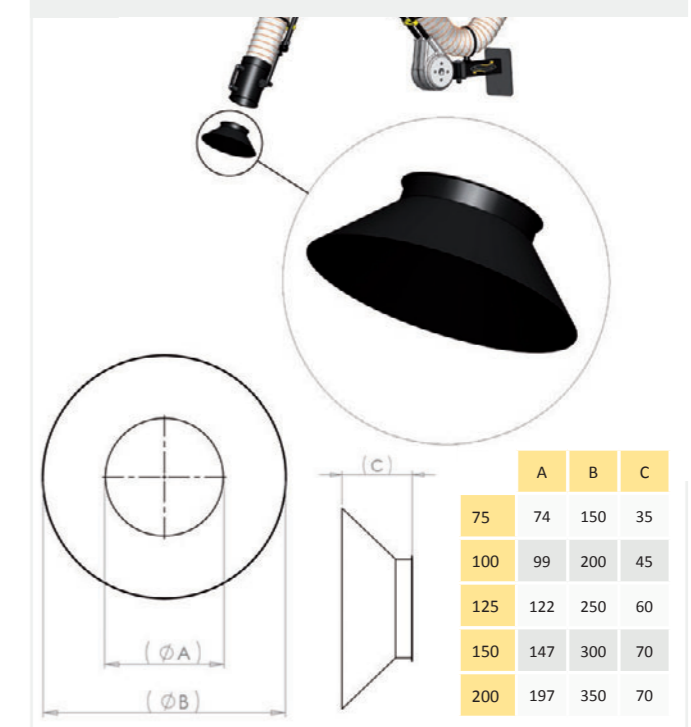
The choice of the correct hood, in conjunction with the correct operational use of your HPD, is fundamental to its success as a dust or fume extraction instrument. Factors that MUST be considered are the product and process being extracted and the distance from the hood to the process. Get that right and you will vastly increase the effectiveness of the HPD.

- They are available in the following:
- Polyester Coated Black
  - Texture Conductive Black (ATEX)
  - Stainless Steel
  - Polypropylene

## ■ Spun Bell Mouth



## ■ Flared



## ■ Fish Tail



## ■ Flat Hood



## ■ Ring Hood



## ■ Fish Tail Curve



Additionally, we are able to custom design and manufacture a hood to accommodate your extraction process.



# Hoses

We pride ourselves in being able to offer a comprehensive range of quality hoses suitable for many standard solutions and normally available from stock. They comply with a wide range of standards and specification in the most diverse of industries, including ATEX Directive, FDA conformity and food regulations.

In addition to premium quality standard products, we also offer innovative product solutions as well as individual system solutions tailored to each customer's unique requirements.

Shown here is a short selection of the range and you are welcome to contact our sales staff or visit our website ([www.flextraction.co.uk](http://www.flextraction.co.uk)) for further information.



**High Flexibility**  
Minimal counterforce and restoring force when bent.



**Electro-Static Discharge**  
Has a steel wire helix embedded to enable electro static discharge. Hose has to be grounded by exposing the helix and connecting to a conductive fitting.



**Ether-PUR**  
High quality ether polyurethane for commercial applications – Microbe and Hydrosols resistant.



**Approved for Food Use**  
Has one or more national and/or international approvals and certifications of conformity that permits their use in the food industry.



**Pre-PUR**  
Special ester-polyurethane and ether-polyurethane mixture consisting of hard and soft Pre-PUR® segments to give superior properties.



**Abrasion Resistant**  
Designed for long service life for the delivery of highly abrasive media.



**ATEX – Electrically Conductive**  
Has a steel wire helix embedded to enable electro static discharge. Hose has to be grounded by exposing the helix and connecting to a conductive fitting.



**Flame Retardant**  
Has one or more national and/or international approvals and certifications of conformity that classifies them as having low flammability.

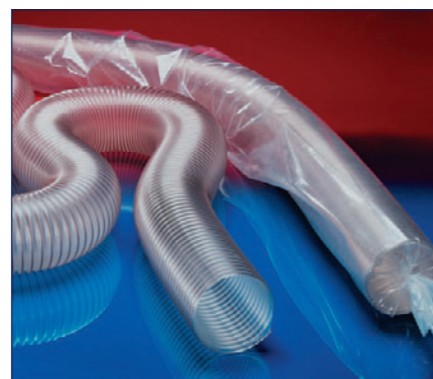


**PVC Free**  
Defines hose as free from PVC as hoses with a PVC content are increasingly becoming undesirable in some market sectors.



## PVC – 371

- Suction and blast hose
- Super-light, highly flexible and compressible 6:1, fabric reinforced
- Flame-retardant
- Capable of electro-static discharge (according to BGR 132, formerly ZH 1/200) by grounding the spiral
- Wall thickness 0.25mm approx.
- Wall: PVC coated fabric
- Temperature Range: -10°C approx. to +110°C approx.



## PU – 301L

- Abrasion proof suction and blast hose
- Spring steel wire integrated in wall
- Wall thickness 0.4mm approx.
- Super-light model, highly flexible and compressible 4:1
- High tensile strength and tear resistant – good resistant to mineral oils, UV, ozone and chemicals
- Kink proof
- Gas & liquid tight
- Temperature Range: -40°C approx. to +90°C approx., short time to +125°C



**PERMANENTLY ANTI-STATIC**



## ATEX – PE 322 EL

- Electrically conductive suction and blast hose
- PE 10<sup>3</sup> Ω, super-light and compressible, highly chemical resistant, capable of electro-static discharge
- Extremely good resistance to chemicals
- Free of softener and halogen
- Electrical and surface resistance < 10<sup>3</sup> Ω
- Conforms to the requirements of the European ATEX guideline
- Capable of electro-static discharge (according to BGR 132, formerly ZH 1/200) by grounding the spiral
- Wall thickness 0.4mm approx.
- Wall: electrically conductive polyethylene (PE)
- Temperature Range: -35°C approx. to +80 °C approx.



## High Temp – VA 471

- Suction and blast hose
- TEFLON®, double-layer, super-light and compressible,  $\lambda$  to 1.000mm (to +250°C)
- Abrasion protection via external clamp profile
- Extremely good resistance to chemicals
- Painted CP construction
- Wall: Interior PTFE foil, exterior special-coated glass fabric
- Clamp profile: Stainless steel (VS)
- Temperature Range: -150°C approx. to +250°C approx., short time to +270°C approx.



**PERMANENTLY ANTI-STATIC**



## ATEX – PU 330 MHF/AS

- Anti-static and abrasion-proof suction and blast hose
- PUR < 106Ω, super-light and reinforced, highly flexible and compression 3:1
- Electrical and surface resistance < 106Ω due to permanently anti-static material without migration
- Optimised flow properties
- Microbe and hydrolysis resistance
- Food quality complies with: FDA 21 CFR 177.2600 and 178.2010, EC guideline 2002/72/EC (formerly 90/128/EC)
- Free of softener and halogen
- Capable of electro-static discharge (according to BGR 132, formerly ZH 1/200) by grounding the spiral
- Wall thickness 0.6mm approx.
- Wall: special premium ether-polyurethane (Pre-PUR®)
- Abrasion resistance about 2.5 to 5 times better than most rubber materials and about 3 to 4 times better than most soft PVC's
- Temperature Range: -40°C approx. to +90°C approx., short time to +125°C approx.



Fresh Air By Design



# ATEX information



# flextraction services and support

flextraction has continually strived to provide solutions to dust & fume problems in line with acknowledged best practice in design. We offer a full range of HPDs certified as ATEX compliant.

We're more than just the product...

## Marking of ATEX products



## ATEX

The following information is an extraction from the HSE website outlining some basics on ATEX. To ensure full compliance, you should check against the full ATEX Directive and The Dangerous Substances and Explosive Atmospheres Regulations 2002 (DSEAR).

### Hazardous area zones and equipment categories

Hazardous places are classified in terms of zones on the basis of the frequency and duration of the occurrence of an explosive atmosphere.

#### Gases, vapours and mists

For gases, vapours and mists the zone classifications are:

- Zone 1** A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally
- Zone 2** A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapour or mist is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

#### Dusts

For dusts the zone classifications are:

- Zone 21** A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur in normal operation occasionally.
- Zone 22** A place in which an explosive atmosphere in the form of a cloud of combustible dust in air is not likely to occur in normal operation but, if it does occur, will persist for a short period only.

#### Notes

- Layers, deposits and heaps of combustible dust must be considered as any other source which can form an explosive atmosphere.
- "Normal operation" means the situation when installations are used within their design parameters.

#### Equipment categories and zones

The hazardous area zone classification and corresponding equipment categories are:

**Zone 1 or Zone 21 – Category 2 equipment**

**Zone 2 or Zone 22 – Category 3 equipment**

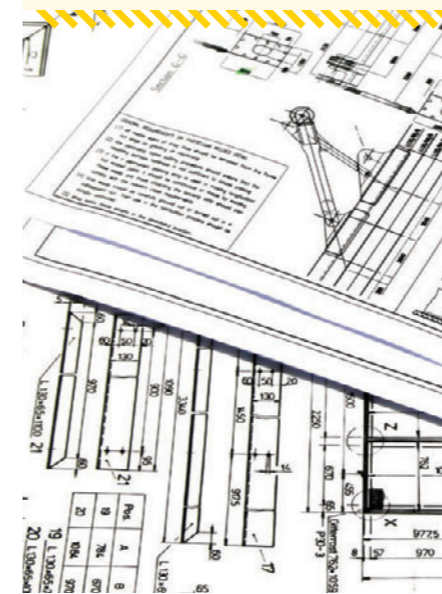
#### Notes

- Category 3 equipment can also be used in Zones 2 and 22.

## Project Installation & Design

flextraction commands the capability and experience to comfortably handle turnkey projects including full installation, commissioning and testing in accordance with Health and Safety Guidance 258 (HSG 258).

Via industry-standard CAD software, we offer direct interface with the customer's own CAD plant layout drawings. Plants for the production of foodstuffs, cement, paint, plastics and pharmaceuticals have all gained from the use of flextraction's custom-designed systems



## 5 YEAR WARRANTY

### Our 5 year warranty

We have provided quality extraction arms to industry for over 15 years. Combined with our proven track record and design and engineering excellence, we are happy to offer our new HPD range with a 5 year warranty.

To take advantage of the warranty, customers are asked to complete and return the registration card that is supplied with each HPD.

(Excludes hose and failure due to misuse)

### CoSHH Testing

The Control of Substances Hazardous to Health (CoSHH) Regulations 2002, state that 'control measures' (in this case LEV systems) should be thoroughly examined and tested at least every 14 months to safeguard against workforce exposure. flextraction has a broad experience in helping customers meet existing Regulations, limiting costs of expensive retrofitting and, when possible, building in dust and fume control measures into greenfield projects. Our examination and testing services are carried out in accordance with the requirements of Regulation 9 of the CoSHH regulations.

## Other useful links and resources

### Clearing the Air

A simple but useful guide to buying and using local exhaust ventilation (LEV).

Available at:

[www.flextraction.co.uk/pdfs/hse/indg408.pdf](http://www.flextraction.co.uk/pdfs/hse/indg408.pdf)

### LEV Information for Employers

This website will help employers develop a systematic and critical approach to buying and using LEV to avoid expensive mistakes and control exposures effectively.

Available at:

[www.hse.gov.uk/lev/employers.htm](http://www.hse.gov.uk/lev/employers.htm)

### LEV Information for employees

This website provides guidelines on how employees should protect their health in the workplace, and check their LEV equipment.

Available at:

[www.hse.gov.uk/lev/employees.htm](http://www.hse.gov.uk/lev/employees.htm)

flextraction Ltd is the leading independent UK firm specialising in the manufacture and supply of products for dust and fume extraction. In particular, HPDs and associated items have been specifically designed for the capture and extraction of dusts and hazardous fumes at source.



flextraction Ltd are the UK suppliers for the following quality European Brands:



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