

# hergair



AIRSWITCHING AND SENSING SOLUTIONS

## Airswitches

### 6871 and 6872 Airswitches

UL & CSA approved compact and economical switches, ideal for OEM applications. Back and side entry, alternate and momentary actions available.



Page AS2

### 6773 Double Diaphragm

With multiple spout options. Tube inlets can be added to make multiple actuating versions using only one switch.



Page AS3

### 6753 Low Air Pressure/Vacuum Switches

For very sensitive pressure, vacuum and differential switching. Ideal for sensing short duration low pressure pulses.



Page AS4-5

### 6806 Triple Cam

Four function switches featuring 3 outputs and 4 positions. UL & CSA approved. Each of the 4 steps operate in turn giving different switching combinations. A choice of switching sequences is available.



Page AS6

### 6891 & 6893 Low Air Pressure/Vacuum Switches

Adjustable PCB mountable switch with multiple spout options and orientations giving a wide range of switching pressures and settings. Additional inlets can be added to the pressure connection. UL versions available.



Page AS7

### 6861 to 6869 General purpose Airswitches

These airswitches offer a wide range of momentary and latching variants single or double pole containing various spout options and additional bleed settings, if required. UL versions available.



Page AS8

## Bellows

### 6431 and 6439 Surface Mounting Bellows

With built in temperature compensation for use with the longest length of tube. Available with anti skid foam base for extra stability.



Page AS9

### 6433 Threaded Bellows

An economical rugged bellows designed for panel mounting. Ideal for outdoor use.



Page AS15

## Pushbuttons

### 6442 Push Button Bellows (Standard) 6443 Vandal-Proof Push Button Bellows

Rugged high performance bellows designed for high volume air operation and repetitive use. The vandal-proof push button bellows is made of stainless steel.



Page AS13

### 6438 Push Button Bellows

Reliable snap action bellows offering high environmental remote switching protection.



Page AS11

### 6434 Micro Bellows

Ultra compact and economical push bellows for durable repetitive operations.



Page AS10

### 6445 Long Thread Push Button

Can mount in panels up to 51mm thick. The large volume bayonet mounting bellows is easy to install.



Page AS12

### 6470 Light Duty Push Button

Light duty push buttons with interlocking snap bezel and body ideal for fast panel assembly.



Page AS14

## Foot Bellows

### 6448 Hand or Foot Bellows

Low profile easy to operate foot bellows. For free standing applications or secured with a built in bayonet mounting plate. Available as twin foot bellows (6447).



Page AS16

### 6447 Foot Bellows

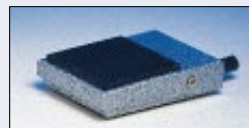
Low profile twin bellows for hand or foot operation, strong ABS body with PVC coloured bellows. Light or heavy weighted versions.



Page AS17

### 6289 Foot Bellows

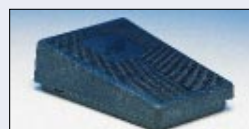
Tough, compact, versatile steel construction with non slip base, safety guards available. Colour options upon request.



Page AS18

### 6210 Foot Bellows

Tough versatile reinforced plastic foot bellows, designed to reduce operator fatigue. Safety guard available.



Page AS18

### 6254 Rugged Die Cast Aluminium Foot Bellows

Die cast aluminium construction for remote switching in harsh environmental conditions where durability is required. Diamond cut pattern assists in providing good operator grip. Safety guard available.



Page AS18

## Linear Actuator

### 6830

A simple, effective actuator that converts air pressure to a linear movement via a steel rod.



Page AS26

## Air Potentiometer

### 6832

Robust air operated potentiometer with resistance that varies with the air pressure applied. For repetitive use. Various resistance values available.



Page AS26

## Hand Controls

### 6446 Hand Control

Ingenious all plastic handle grip bellows with snap fit quick installation onto 20.5mm - 23.0mm diameter tube.



Page AS19

### 6440 Hand Control

All plastic handle grip bellows with snap fit. Trigger action.



Page AS19

### 6449 Hand Controls

Strong, all plastic construction. Well suited for hazardous, dirty and wet conditions. 2, 4 and 6 way versions. Medical and industrial versions available.



Page AS20-21

## Accessories

**Special Purpose Bellows, Bulkhead Connectors, Connectors, Switch Housings and Linear Actuator Air Potentiometer.**  
Fax Back form in rear of catalogue.



Page AS22-26

## What is hergair?

Hergair air activated remote control systems are the answer to all kinds of electric switching problems.

Hergair is simple - pressing the buttons or footswitches operates a bellows which forces air along the tube creating enough pressure to activate the electric switch placed outside the dangerous zone.

The switches are grouped into functions:-

Single action Press ON, Release OFF

Maintain action Press ON, Press OFF

Special action Which includes a range of switch sequence variations and configurations.

### ❖ Selection

With most hergair systems, the air circuit is permanently sealed. As a result, the actuator bellows can be used frequently and regularly without loss of air. Built-in temperature compensation allows for changing ambient conditions. It is normally not recommended to use hergair systems on applications where the air system is permanently pressurised.

The maximum tube length with any system depends on several variables including the type of bellows, the type of switch, the size of tube, the temperature range and the atmospheric pressure range.

Allow 10m/Secs delay for every metre of standard 3mm bore tubing, and 20m/Secs for every metre of 1mm bore.

Tube lengths should be reduced by 12% for 1000m altitude and by 10% for each 1000m thereafter.

For multi-way pendant controls, the specified tube length is in addition to the 2m pre-fitted tube.

### ❖ Why choose hergair?

**Safety** The bellows are not affected by water, dirt, dust or flammable gasses and cannot become 'live' if damaged.

**E.M.C** Herga systems avoid problems in meeting new standards for electro magnetic compatibility.

**Simplicity** The controls are straightforward to install and service and are simple to operate. Replacements can often be carried out by non technical staff.

**Reliability** All systems have exceptionally long lives, proven both in the field and in herga's extensive laboratory facilities.

**International** The use of air as a switching medium removes the need to comply with a world-wide multiplicity of differing electrical specifications. One design will serve all markets.

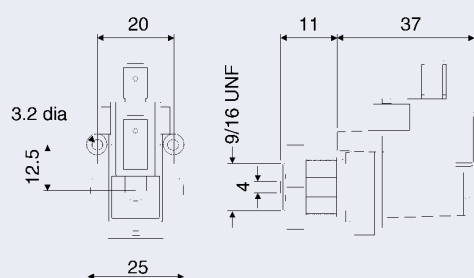
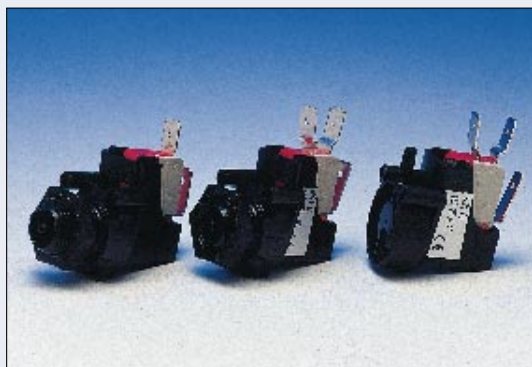
**Innovation** Herga are the innovative and acknowledged experts in airswitching systems with a total commitment to quality and service.

### Technical Advice

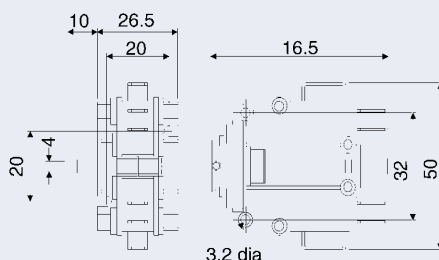
Herga operates a comprehensive advice and design service - please do not hesitate to use it.

### MINIMUM STANDARD TUBE LENGTH (M): Temperature range +10°C to +30°C

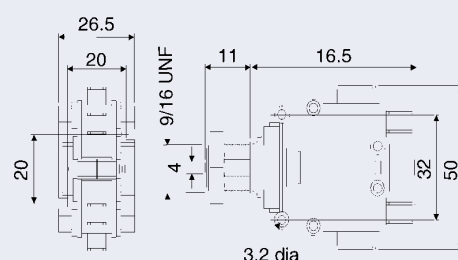
	6470 Light Duty	6442 Standard	6443-00 Vandal Proof	6445 Miniature	6445 Flow Control	6431 Surface Mount	6433 Thread Mount	6439 Panel Mount	6210-0B Foot Standard	6254-0B Foot Heavy Duty	6448 Foot Actuator	6448 Double Volume	6446 Handle Grip	6449 Pendant Standard	6434 Micro Bellows	6438 Mini Bellows	6447 Twin Foot Bellows	
6753-0F	100.0	100.0	100.0	70.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	50.0	16	24	50
6861-00	16.0	24.0	24.0	20.8	24.0	33.6	73.0	33.6	24.0	24.0	48.0	48.8	30.4	10.0		12	15	
6862-00	11.2	16.8	16.8	14.4	16.8	21.6	46.0	21.6	16.0	16.0	32.0	44.4	20.8	6.0		9.0	15	
6871-00	8.0	10.0	10.0	6.0	6.0	15.0	15.0	15.0	10.0	10.0	20.0	36.0	18.4	7.8	2.0	8.0	30.0	
6872-00 & 0C	6.0	7.0	7.0	4.0	4.0	10.0	10.0	10.0	6.0	6.0	14.0	22.0	5.0		1.0	6.0	2.0	
6861-A0 & 0C	5.6	8.8	8.8	6.5	8.8	10.4	27.2	10.4	8.8	8.8	15.2	37.0	11.2	3.6		2.4	7.0	
6862-A0 & AC	4.0	6.4	6.4	5.1	6.4	8.0	20.8	8.0	7.2	7.2	11.2	37.0	8.8	2.8		2.0	7.0	
6871-A0 & AC	7.0	8.0	8.0	5.0	5.0	18.0	18.0	18.0	10.0	10.0	15.0	20.0	13.6	5.6	1.2	8.0	9.0	
6872-A0 & AC	5.0	6.0	6.0	3.0	3.0	9.0	9.0	9.0	6.0	6.0	10.0	19.0	5.0			5.0	8.0	
6806-02	2.4	4.8	4.8	3.9	4.8	5.6	13.6	5.6	4.8	4.8	8.0	24.0	7.2				7.0	
6806-04	2.4	4.8	4.8	3.9	4.8	5.6	13.6	5.6	4.8	4.8	8.0	24.0	7.2				7.0	
6806-05	1.2	2.4	2.4	1.8	2.4	1.6	8.0	1.6	2.4	2.4	2.4	13.6	3.6				7.0	
6872-H0 & HC	4.0	5.0	5.0	2.0	2.0	7.0	7.0	7.0	4.0	4.0	8.0	16.0	5.0			4.0	6.0	
Tube Dia	3mm																1.5mm	



6871-0C / AC



6872-00 / 0C / A0 / AC



6872-H0 / HC

## Benefits

- ❖ UL approved compact and economical switches
- ❖ Ideal for OEM applications

- ❖ Base or side entry
- ❖ Choice of alternate and momentary actions available

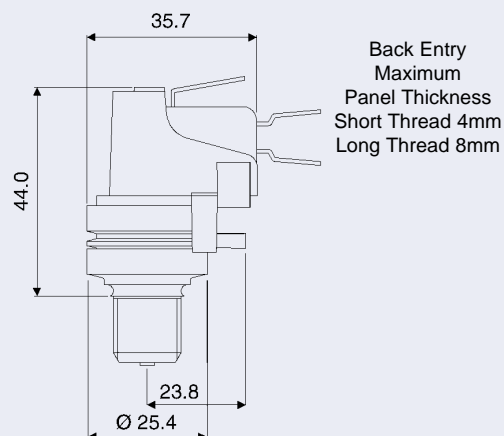
Model No	6871-0C	6871-AC	6872-0C	6872-AC	6872-HC
Switch Details Number of Poles & Action	1 pole C/O momentary	1 pole C/O alternate	2 pole C/O momentary	2 pole C/O alternate	2 pole C/O 1 pole momentary 1 pole alternate
Air Connection	Back entry	Back entry	Back entry	Back entry	Back entry
Air Spout Diameter	4mm	4mm	4mm	4mm	4mm
Connecting Tube Part Number	2311-08	2311-08	2311-08	2311-08	2311-08
Alternative Air Connection Model Number	Back entry 2mm spout 6871-0K side entry 4mm spout 6871-01	Back entry 2mm spout 6871-AK side entry 4mm spout 6871-AO	Back entry 2mm spout 6872-0K side entry 4mm spout 6872-00	Back entry 2mm spout 6872-AK side entry 4mm spout 6872-A0	Back entry 2mm spout 6872-HK side entry 4mm spout 6872-HO
Body Material	Acetal	Acetal	Acetal	Acetal	Acetal
Diaphragm Material	Silicone	Silicone	Silicone	Silicone	Silicone
Electrical rating @ 250V ac	16A Res 4A Ind 1/2 HP	16A Res 4A Ind 1/2 HP	21A (8A) 250V 2HP 250V ac 1HP 125V ac	21A (8A) 250V 2HP 250V ac 1HP 125V ac	21A (8A) 250V 2HP 250V ac 1HP 125V ac
Special Approvals Upon request	UL CSA	UL CSA	UL CSA	UL CSA	UL CSA

All European electrical switch approvals apply.

- ❖ 6872 Variants can be obtained with double diaphragm upon request.



# 6773 ~ Double Diaphragm Airswitch



## Benefits

- ❖ Specified to EN 60335-2-60 double insulated for water detection
- ❖ UL and CSA approvals available upon request
- ❖ Various microswitch options

- ❖ Gold contacts available
- ❖ Other pressures available up to 10 PSI
- ❖ Multiple cap and spout options available

6773 - A [ ] [ ] [ ] [ ] - A [ ] [ ] [ ]

### 1. Model Number

### 2. Pressure Range

A 250mm H<sub>2</sub>O to 760mm H<sub>2</sub>O Standard

### 3. Caps

- A Side Entry Std Spout Std Orientation 4.0mm Spout
- B Side Entry Std Spout Rotated 90° Viewed From Cap 4.0mmØ Spout
- C Side Entry Std Spout Rotated 180° Viewed From Cap 4.0mmØ Spout
- D Side Entry Std Spout Rotated 270° Viewed From Cap 4.0mmØ Spout
- E Side Entry Long Spout 4.0mmØ Std Orientation
- F Side Entry Long Spout Rotated 90° Viewed From Cap 4.0mmØ Spout
- G Side Entry Long Spout Rotated 180° Viewed From Cap 4.0mmØ Spout
- H Back Entry Short Thread 4.0mmØ Spout. Not suitable for 'O' ring
- J Back Entry Long Thread 4.0mmØ Spout
- K Back Entry Long Thread 2.0mmØ Spout
- L Long Thread Spout Rotated @ 90° 4.0mmØ Spout

### 4. Bleed

- A No Bleed Cap
- J With Bleed Cap

### 5. Nut Specification

- A Black Moulded Nut
- B Black Moulded Nut and 'O' Ring (only available with options 3J, K & L above)

### 6. Authority

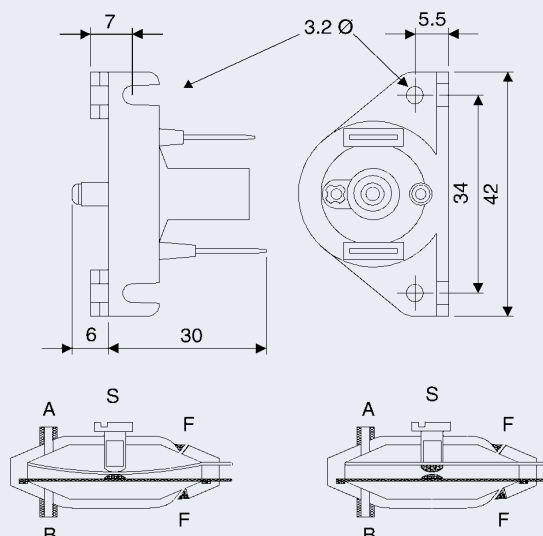
- A European Tag Configuration

### 7. Terminal Combinations

- A 3 Blade QC 6.3mm x 0.8mm
- B 2 Blade QC 6.3mm x 0.8mm Normally Open Contacts
- C 2 Blade QC 6.3mm x 0.9mm 90° Crank Normally Open Contacts

### 8. Microswitch Rating

- A 0.1A 125/250V ac Gold Contacts (not available with option 7c)
- B 10A 1/4 HP 125/250V ac
- C 21A 250V ac 1 HP 125V ac 2 HP 250V ac



## Benefits

- ❖ Sensitive versatile switch - ideal for longer tube lengths
- ❖ Normally open or normally closed contact configuration
- ❖ Ideal for switching low power circuits

- ❖ Differential switching
- ❖ Bleed versions available for temperature compensation
- ❖ Easily adjustable settings

6753 -     -

## 1. Model Number

## 2. Operation

- A Normally Open - Pressure
- B Normally Closed - Vacuum

## 3. Bleed Adjuster Options

- A Bleed A Side only, Vacuum N/O to N/C Pressure N/C to N/O
- B Bleed B Side only, Vacuum N/C to N/O Pressure N/O to N/C
- C Bleed Both Sides Vacuum / Pressure
- D No Bleed Variant either side Vacuum / Pressure

## 4. Bleed Setting

- A 100 - 300 CC/Min Factory Setting (as 5 PSI flow)
- J No Bleed Setting

## 5. Pressure Setting

- A 2.25" WG  $\pm 0.5"$  Std
- B 2" WG  $\pm 0.5"$
- C 3" WG  $\pm 0.5"$
- D 4" WG  $\pm 0.5"$
- E 6" WG  $\pm 10\%$
- F 8" WG  $\pm 10\%$
- G 10" WG  $\pm 10\%$
- H 12" WG  $\pm 10\%$
- J 14" WG  $\pm 10\%$
- K 16" WG  $\pm 0 - 10\%$

## 6. Packaging Options

- A Vacuum Form Tray (100 Off Volumes - ideal for OEM applications)
- B Poly Bag (individual)

Technical Data	
Pressure / Vacuum range minimum	25mm (1 in) WG
Maximum	400mm (16 ins) WG
Maximum Differential	400mm (16 ins) WG
Pressure Standard Factory Setting	50mm (2 ins) WG (Contacts Normally Open) Other settings available
Maximum Differential Between Pressure Connection	0.34 Bar (5 PSI)
Body Withstand Pressure	1.0 Bar (14.7 PSI)
Air Bleed Version	See choice options 3 & 4 for other settings available
Flow Rate Litre / Min	Standard 100-300 cc/Min. At 5 PSI
Connection Position	Base
Pressure Connection	4mm Dia spouts for reducing connectors please refer to accessories page
Connecting Tube Reference	2311-08 or 2311-01

Technical Data	
Temperature Range	-5°C to 50°C
Electrical Data	
Switch	Single pole, N/Open / N/Closed
Contact Rating Maximum	0.5A RES 250V ac (Maximum ratings may not be achieved at low pressure settings)
Dry Switching Minimum Current	5mA 4V dc
Body	Glass filled nylon 12
Diaphragm	Neoprene
Contacts	Gold plated silver mounted on phosphor bronze blades
Contact Resistance	0.05 Ohms
Mechanical Life	1 x 10 <sup>6</sup> cycles
Weight (grams)	10grms

## 6753 Pressure Switch Range

**For very sensitive pressure, vacuum and differential pressure switching.**

The 6753 range of switches provide a high specification in a small, versatile body shell. Great care has been taken in the switch unit design keeping the moving mass and therefore inertia to a minimum. This means that it can operate at a high cycle rate with low pressures, vacuum or pressure differential.

When measuring pressure pulses such as on component counting applications and when used with herga Safe Edges, the switch will operate very rapidly due to the low inertia of the moving parts and the low swept volume.

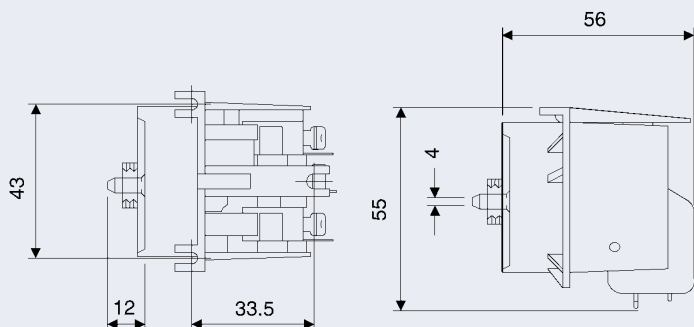
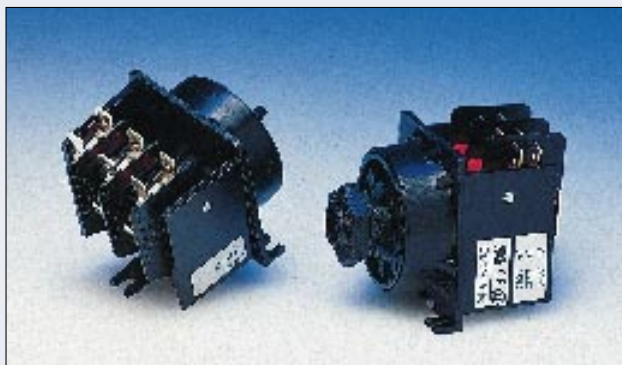
For good repeatable switching, the contacts are gold plated on solid silver. The electrical rating of the switch is dependent on the contact pressure. This pressure is dependent on the air pressure. Thus for very sensitive setting the permissible switching current will be lower than normal.

The standard switch can be adjusted to give normally closed or normally open contacts depending on the application. For operation on pressure with normally closed contacts, connected to air connection 'A' and screw in the adjusting screw 'S' sensitively until contacts are normally closed. For operation on pressure with normally open contacts, connect to air connection 'B' and set with contacts normally open.

A separate version, see bleed options, is provided with adjustable air bleeds on both sides of the diaphragm. These air bleeds are adjusted to a level which is suitable for most applications involving safe edges or bellows, and prevent pressure or vacuum building up inside when the ambient temperature or atmospheric pressure changes.

For dry switching applications i.e. for currents less than 10mA 24V dc we recommend gold plated contacts are used. The lowest reliably switched voltage/current depends upon the pressure/vacuum and its rate of application.





## Benefits

- ❖ Choice of spout options
- ❖ UL and CSA approved

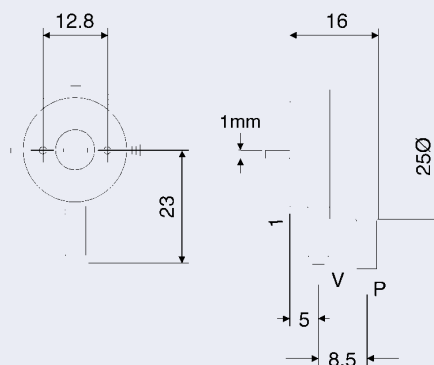
- ❖ Multi switching options
- ❖ Alternate microswitch options

	6806-02 / 04 / 06	6806-08 / 09 / 10
<b>Air Connection</b>	<b>4mm back entry spout</b>	<b>4mm spout with threaded base 9/16 UNF</b>
Connecting Tube Part No.	(2311-08) (2311-01)	(2311-08) (2311-01)
Material Body/Base	Nylon 6	Nylon 6
Other Parts	Acetal	Acetal
Diaphragm	Silicone	Silicone
Weight	66 grms	66 grms
Rating @ 250V ac	16A Res (as Std) 4A Inductive (21A available)	16A Res (as Std) 4A Inductive (21A available)
Approvals Available	UL & CSA	UL & CSA

## Switching Sequence

Models 6806-02 & 6806-08 (Blue Cam)	Cam Positions				Models 6806-04 & 6806-09 (Green Cam)	Cam Positions				Models 6806-06 & 6806-10 (White Cam)	Cam Positions			
Switch No	1	2	3	4	Switch No	1	2	3	4	Switch No	1	2	3	4
1 c — — N/C — N/O	On	Off	On	On	1 c — — N/C — N/O	On	Off	On	Off	1 c — — N/C — N/O	On	Off	On	Off
	Off	On	Off	Off		Off	On	Off	On		Off	On	Off	On
2 c — — N/C — N/O	On	On	Off	On	2 c — — N/C — N/O	On	Off	Off	On	2 c — — N/C — N/O	On	Off	On	Off
	Off	Off	On	Off		Off	On	On	Off		Off	On	Off	On
3 c — — N/C — N/O	On	On	On	Off	3 c — — N/C — N/O	On	Off	Off	On	3 c — — N/C — N/O	On	Off	On	Off
	Off	Off	Off	On		Off	On	On	Off		Off	On	Off	On

## 6891 & 6893 ~ Low Air Pressure Switches (slow make contacts)



### Benefits

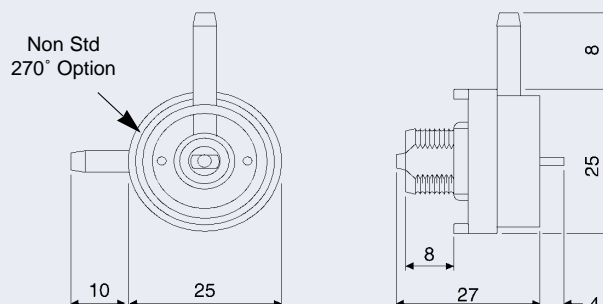
- ❖ A range of small switches designed for direct mounting onto printed circuit boards (UL versions available)
- ❖ Low pressure switching
- ❖ Various spout orientations available and double diaphragm

- ❖ Available with base or side tube entry
- ❖ Silver or gold contact options
- ❖ Switches can be factory set within specified tolerances

Printed Circuit Board Mounting Switches			
Model No		6891 Standard	6893 (Sensitive)
Pressure range	Minimum	15" WG	150mm (6 ins) WG
	Maximum	670 millibar (9-8) PSI	1.2 Bar (18) PSI
Maximum Differential		Approximately 0.06 ins WG	Approximately 0.06 ins WG
Pressure - Standard Factory Setting		15, 25" WG	6, 10" WG
Body Withstand Pressure		2.7 Bar (40) PSI	2.7 Bar (40) PSI
Air Bleed Version		Available upon request	Available upon request
Flow Rate Litre / Min (with air bleed)		8 - 30cc/Min @ 31 ins WG	8 - 30cc/Min @ 31 ins WG
Pressure Connection		4mm Ø spout for side and back entry 2mm Ø spout for back entry only	4mm Ø spout for side and back entry 2mm Ø spout for back entry only
Connecting Tube Reference		Lower spout 'V' Vacuum 4mm spout = 2311-01 or 2311-08 2mm spout = 2311-03	Upper spout 'P' Pressure 4mm spout = 2311-01 or 2311-08 2mm spout = 2311-03
Temperature Range		-10°C to 85°C (flow solder 220°C for 5 Sec)	-10°C to 85°C (flow solder 220°C for 5 Sec)
<b>Electrical Data</b>			
Switch		Single pole normally open	Single pole normally open
Contact Rating Maximum		0.5A RES 250V ac	0.5A RES 250V ac
(Maximum ratings may not be achieved at low pressure settings)			
Dry Switching Maximum Recommended Current		10mA 24V dc	10mA 24V dc
Body		Glass filled polyester	Glass filled polyester
Diaphragm		Silicone as standard	Silicone as standard
Contacts		Silver or gold plated copper pins	Silver or gold plated copper pins
Mechanical Life		1 x 10 <sup>6</sup> cycles	1 x 10 <sup>6</sup> cycles
Weight (grams)		8 grms	8 grms

### Switch Range

A miniature, compact low pressure switch designed for direct fitting by solder pins to printed circuit boards. Both vacuum and pressure ports are provided making the unit ideal for differential switching. Typical applications are indicators, emergency cut-out and alarms, filter and low pressure/vacuum monitoring. The switch is made to order for specific applications, the actual operating pressures or vacuum being set during production. However, finite adjustment may be made after installation by the slotted screw in the base. The body construction allows the two ports to be set at any angle to each other.

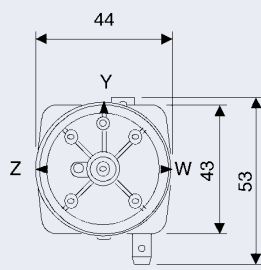
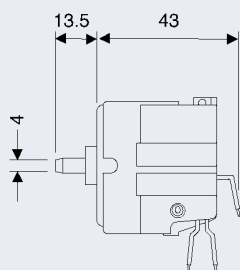


- ❖ For Pressure or Vacuum versions see also 6763/6761 in Pressure and Vacuum Catalogue

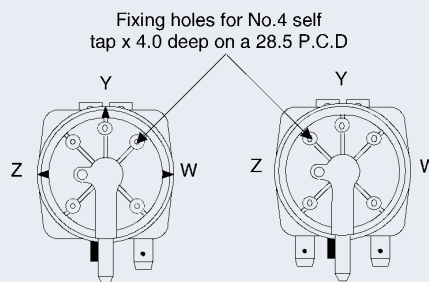


## Benefits

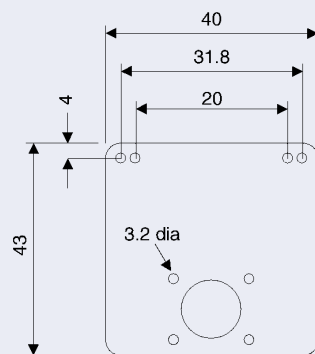
- ❖ General purpose airswitch, with alternate or momentary action
- ❖ UL versions available
- ❖ Mounting plate available



Back Entry



Side Entry



Mounting Plate 3351-109

**Note:** Longer screws will penetrate diaphragm chamber

Model No	6861-0C	6861-AC	6863-0C	6869-0C	6862-0C	6862-AC	6864-0C
Number of Pole & Action	1 pole C/O momentary	1 pole C/O alternate	1 pole C/O momentary low pressure	1 pole C/O momentary very low pressure	2 pole C/O momentary	2 pole C/O alternate	2 pole C/O double action
Air Connection	Back entry	Back entry	Back entry	Back entry	Back entry	Back entry	Back entry
Air Spout Dia.	4mm	4mm	4mm	4mm	4mm	4mm	4mm
Connecting Tube Part No.	2311-08	2311-08	2311-08	2311-08	2311-08	2311-08	2311-08
Alternate Air Connection Model No.	Side entry 4mm spout 6861-00	Side entry 4mm spout 6861-A0	Side entry 4mm spout 6863-00	Side entry 4mm spout 6869-0F	Side entry 4mm spout 6862-00	Side entry 4mm spout 6862-A0	Side entry 4mm spout 6864-00
Body Material	Nylon 6	Nylon 6	Nylon 6	Nylon 6	Nylon 6	Nylon 6	Nylon 6
Diaphragm Material	Neoprene	Silicone	Neoprene	Neoprene	Neoprene	Silicone	Neoprene
Rating @ 250V ac	21A Res 8A Ind 2 HP	21A Res 8A Ind 2 HP	10A Res 1.7A Ind 1/3 HP	3A Res 1A Ind	21A Res 8A Ind 2 HP	21A Res 8A Ind 2 HP	21A Res 8A Ind 2 HP
Approvals Available	UL	UL	UL	UL	UL	UL	UL

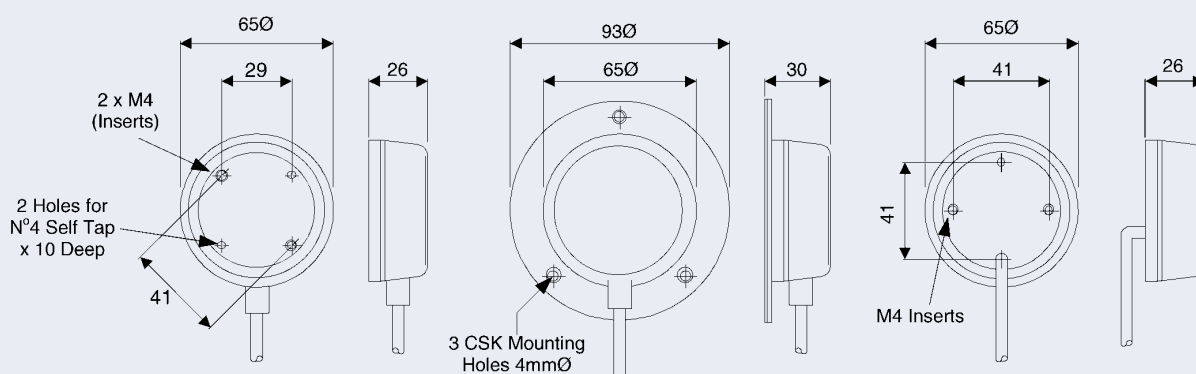
All European electrical switch approvals apply

- ❖ Bleed version variants available upon request.
- ❖ Mounting plate screws No. 4 x 1/4" Lg. CSK. Herga Part No. 2112-643-047 (2 per plate).



## Benefits

- ❖ Ideal for hand or foot operation
- ❖ Tough flexible PVC cover
- ❖ Large air volume for ease of operation
- ❖ Choice of colours
- ❖ Available with aluminium base plate for added stability or permanent fixing
- ❖ Anti slip foam base plate available
- ❖ Side or base entry tube outlet
- ❖ Built in temperature compensation for use with the longest tube length



643 - - - - - 0000

### 1. Model Number

- 1 Matt Finish, Soft PVC Bellows, Side Entry Tube
- 9 Gloss Finish, Soft PVC Bellows, Back Entry Tube

### 2. Bellows Colour

- A Black
- B Grey
- C White
- D Red
- E Brown
- F Green

### 3. Tube Type

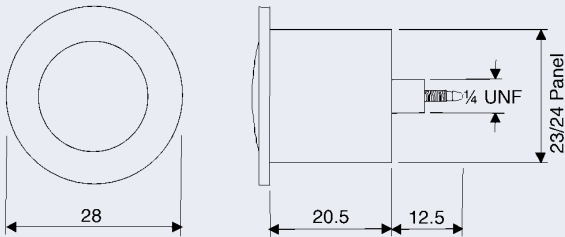
- A Black PVC Tubing with 3mm I/D & 6mm O/D
- B Clear PVC Tubing with 3mm I/D & 6mm O/D
- C Black PU Tube with 1.5mm I/D & 3mm O/D
- D Black PU Curly Coil 300mm Unstretched & 2M Stretched Length 1.5mm I/D & 3mm O/D (please select option 4G below)
- Z No Tube Required

### 4. Tube Length

- A 1.5 Metres
- B 2 Metres
- C 3 Metres
- D 4 Metres
- E 5 Metres
- F 6 Metres
- G Curly Coil Tube
- Z No Tube Required

### 5. Mounting Option

- A Mounting Plate fitted
- B Mounting Plate supplied loose with screws
- Z No Mounting Plate required



Benefits

- ❖ Choice of colours
  - ❖ Our smallest push button bellows
- ❖ Choice of bellows and finish
  - ❖ Rear bracket available upon request

6434 - 

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1. Model Number

2. Button Finish Options

- A White

C Chrome

E Bone/Ivory

G Black
- B Brilliant White

D Gold

F Grey

Z No Button Required

3. Escutcheon Finish Option

- A White

C Chrome

E Bone/Ivory

G Black
- B Brilliant White

D Gold

F Grey

Z No Escutcheon Required

4. Packaging & Label Option

- A Poly Bag (1 Off)

B Poly Bag (50 Off)

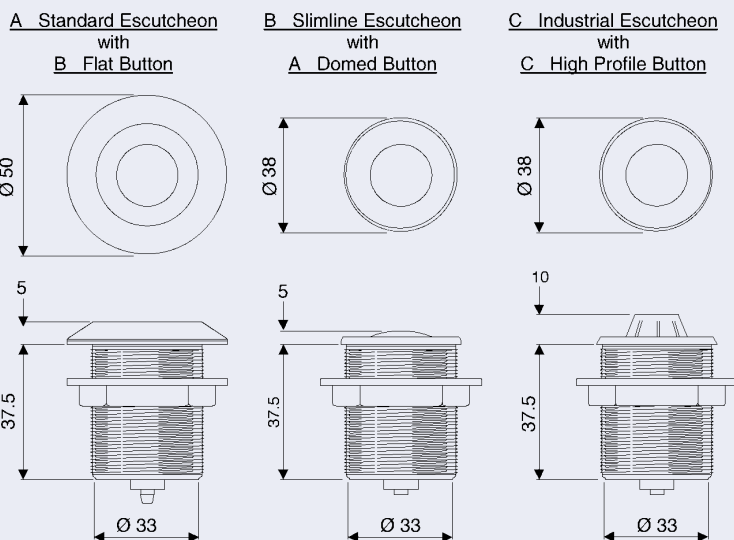
C Vac Form Tray (50 Off - Ideal for OEM applications)

Mounting	Push Fit	Mounting	Push Fit
Air Connection Dia	2.5mm	Panel Thickness	0.5 to 15.0mm
Connecting Tube Part N <sup>o</sup> .	2311-03	Cut Out	23.0mm Dia
Projection Front	3.7mm	Body Material	Acetal
Projection Rear	13mm	Bellows Material	Silicone



### Benefits

- ❖ Compact size
- ❖ Choice of colours and styles
- ❖ Low profile above surface



Panel Hole Not To Exceed Ø 35.0 On all Versions

6438 -         -     0 0

#### 1. Model Number

#### 2. Escutcheon Type

- |              |                          |
|--------------|--------------------------|
| A Standard   | B Slimline               |
| C Industrial | D No Escutcheon Required |

#### 3. Escutcheon Finish

- |                 |                   |
|-----------------|-------------------|
| A White         | B Brilliant White |
| C Chrome        | D Gold            |
| E Bone/Ivory    | F Black           |
| Z None Supplied |                   |

#### 4. Button Type

- |                |                      |
|----------------|----------------------|
| A Domed        | B Flat               |
| C High Profile | Z No Button Required |

#### 5. Button Finish

- |                 |                   |
|-----------------|-------------------|
| A White         | B Brilliant White |
| C Chrome        | D Gold            |
| E Bone/Ivory    | F Black           |
| G Red           | H Green           |
| Z None Supplied |                   |

#### 6. Spout Diameter

- |       |       |
|-------|-------|
| A 4mm | B 2mm |
|-------|-------|

#### 7. Nut/Washer Option

- |                           |
|---------------------------|
| A Nut Supplied 1" BSP     |
| B Nut and Washer Supplied |
| Z None Required           |

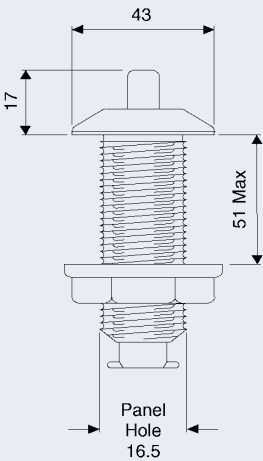
A wide choice of medium size snap action bellows which fit in between the larger 6442 and the smaller 6434. The body is moulded in ABS and the bellows inside is of Silicone.

When used as part of the hergair switching system, the connecting air tubes to link the bellows to the airswitches are either 2311-03 (2mm spout) or 2311-08 (4mm spout).

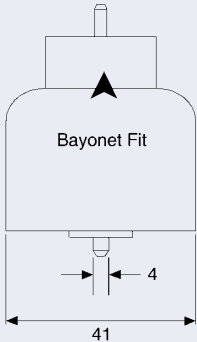
A longer threaded body version to suit up to 50mm panels are available upon request.



6445 ~ Long Thread Push Button Bellows



This Bellows base unit is fitted by 1/4 turn clockwise and removed by 1/4 turn anti-clockwise.  
Overall length = 95mm



Benefits

- ❖ Designed for ease of mounting through and/or where space above panel is at a premium
- ❖ Choice of colours

- ❖ Suits large / thick panels
- ❖ Outer construction ABS
- ❖ PVC Bellows

6445 -  -  B 0

1. Model Number

2. Escutcheon Type

- A Standard                      Z No Escutcheon Required

3. Escutcheon Finish

- A White                      B Brilliant White  
C Chrome                    D Gold  
E Bone/Ivory                F Black  
L Brown/Tan                Z None Supplied

4. Button Type

- A High Profile                      Z No Button Required

5. Button Finish

- A White                      B Brilliant White  
C Chrome                    D Gold  
E Bone/Ivory                F Black  
L Brown/Tan                Z None Supplied

6. Spout Diameter

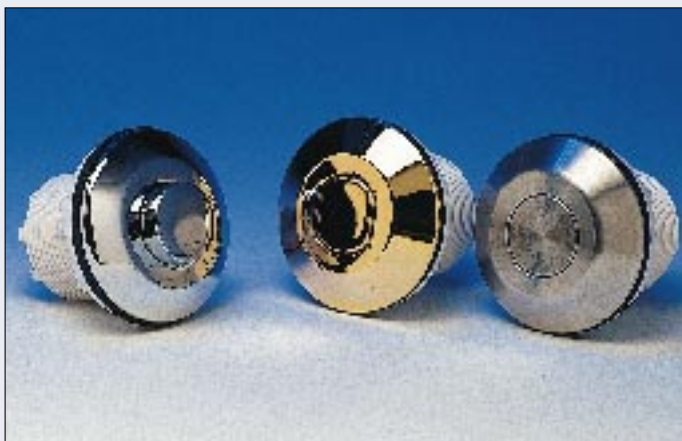
- A 4mm                              B 2mm (Inserted Connector)

7. Nut Option

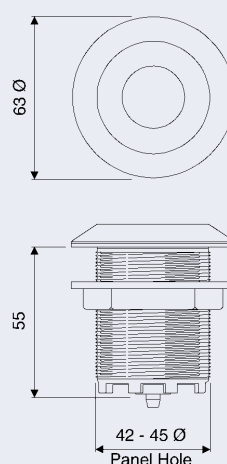
- A Nut Supplied  
B Nut and Washer Supplied  
Z No Nut Required

8. Panel Fixing Length

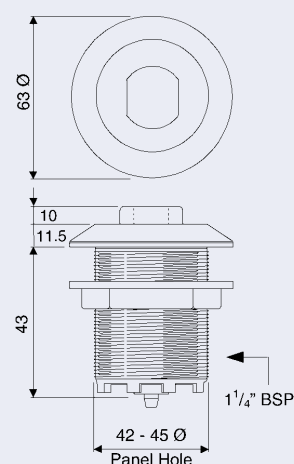
- B Push Button Actuator with 51mm Threaded Body



Stainless &amp; Chrome Options



Plastic Variants



### Benefits

- ❖ Choice of colours
- ❖ Extensive range of finishes
- ❖ Choice of tube options

- ❖ Choice of air connections
- ❖ Selection of styles including plastic, brass or stainless
- ❖ Large air volume for longer tube lengths

6442 -

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#### 1. Model Number

#### 2. Button Type - please see note below

- A Flush Fitting Button
- B Raised Button (10mm High)
- C Extended Button (16mm High)
- D Round Button
- Z No Button Required

#### 3. Button Finish - please see note below

- |                   |                       |
|-------------------|-----------------------|
| A White           | B Brilliant White     |
| C Chrome          | D Gold                |
| E Bone/Ivory      | F Black               |
| G Red             | H Green               |
| M Grey Plate      | N Chrome Plated Brass |
| P Stainless Steel | Z None Supplied       |

#### 4. Escutcheon Finish - please see note below

- |                   |                       |
|-------------------|-----------------------|
| A White           | B Brilliant White     |
| C Chrome          | D Gold                |
| E Bone/Ivory      | F Black               |
| G Red             | H Green               |
| M Grey Plate      | N Chrome Plated Brass |
| P Stainless Steel | Z None Supplied       |

#### 5. PVC Bellows Option

- A Bellows - 4mm Spout to suit 2311-01/08 Tube
- B Bellows - 2mm Spout to suit 2311-03 Tube
- Z No Bellows Required

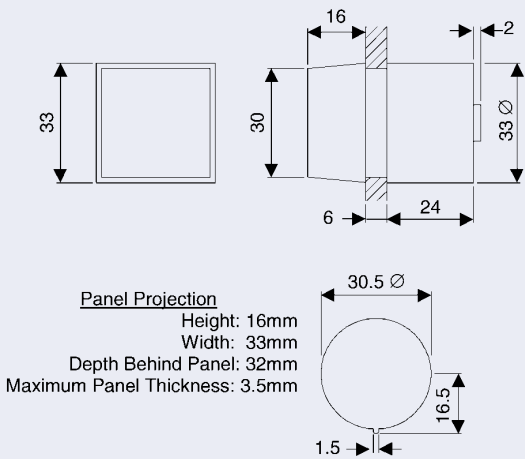
#### 6. Nut and Washer Option

- A Supplied with Nut and Washer
- B Supplied with a Nut Only
- Z No Nut or Washer Required

**Note:** Button Type option 'D' can only be supplied with Button Finish 'N' or 'P' and Escutcheon Finish 'N' or 'P' and vice versa.

For vandal resistant version order 6443-0001

Similar to 6442-DPPA -A000 (stainless)



Benefits

- ❖ Light duty push button with interlocking snap bezel and body ideal for fast assembly
- ❖ Cannot be removed from the front of the panel

- ❖ 4mm connections available
- ❖ Also available without the square button and bezel

1. Model Number

2. Bezel/Escutcheon Colour

- |                     |          |
|---------------------|----------|
| A Black             | B White  |
| C Blue              | D Yellow |
| E Red               | F Green  |
| Z No Bezel Required |          |

3. Lens/Button Colour

- |                    |          |
|--------------------|----------|
| A Black            | B White  |
| C Blue             | D Yellow |
| E Red              | F Green  |
| Z No Lens Required |          |

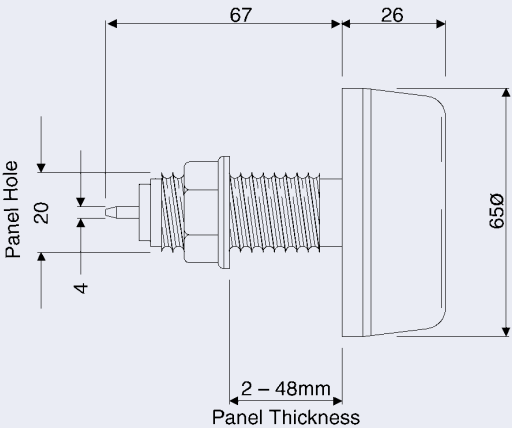
4. Plunger, Housing and Spout Option

- |   |
|---|
| A Black Housing, Black Plunger with 4mm Spout |
| B Black Housing, Red Plunger with 4mm Spout   |
| C Black Housing, Green Plunger with 4mm Spout |
| D Black Housing, Black Plunger with 2mm Spout |
| E Black Housing, Red Plunger with 2mm Spout   |
| F Black Housing, Green Plunger with 2mm Spout |
| Z No Housing, Plunger or Bellows Required     |

5. Packaging and Label Option

- |   |
|---|
| A Packed in Cartons (1 Off)                                   |
| B Vacuum Form Tray (1 to 50 Off - ideal for OEM applications) |
| C Poly Bags (1 Off)   |

Mounting	Through panel with snap on escutcheon		Body Material	Acetal
Connecting Tube Part No.	2311-01 or 2311-08	4mm Spout	Bellows Material	Flexible PVC
Connecting Tube Part No.	2311-03 or 2311-12	2mm Spout	See also accessories page in back	



Benefits

- ❖ Economical rugged bellow designed for panel mounting
  - ❖ Other colours available upon request for volume applications
- ❖ Ideal for outdoor use
  - ❖ Easily cleaned
  - ❖ Operates most herga airswitches

6433 - 

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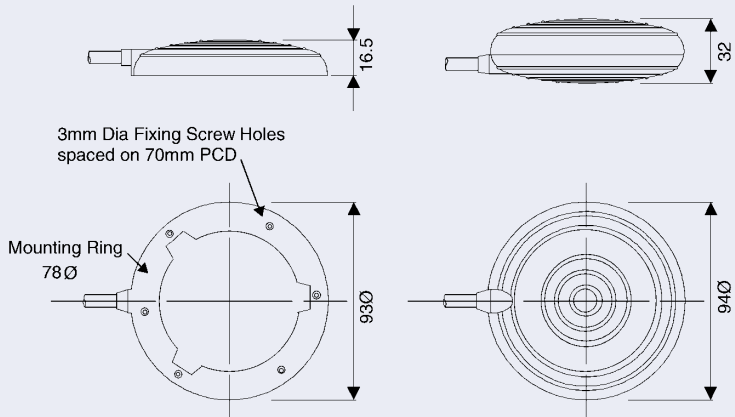
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1. Model Number

2. Bellows Colour

- A Black
- B Grey
- C White
- D Red
- E Brown/Tan
- F Green

Mounting	Through panel with integral thread and nut	Panel Thickness	2.0mm to 48.0mm
Air Connection	4mm	Bellows Material	Flexible PVC
Tube Reference	2311-01 or 2311-08		



**Note:**  
To Remove mounting ring from bellows as supplied by inserting a 3.0Ø bar in one of the holes and twisting anti-clockwise through 41°. Mounting ring can be used as a template for drilling/tapping holes in mounting face.

**Benefits**

- ❖ Low profile easy to operate foot bellow
- ❖ For free standing applications or secured with a built in mounting plate

- ❖ Available as twin foot bellows (see 6447) and with convex top and base
- ❖ Base material - black rigid PVC, except double volume
- ❖ Bellow material - flexible PVC

6448 - [ ] [ ] [ ] [ ] - 0 0 0 0

**1. Model Number**

**2. Tube Entry**

- A Side Entry Tube, Flat Base with Mounting Ring
- B Side Entry Tube, Flat Base, no Mounting Ring
- C Back Entry 2mm Spout, Flat Base with Mounting Ring
- D Back Entry 2mm Spout, Flat base, no Mounting Ring
- E Side Entry Tube, Flexible Base (Double Volume)

**3. Colour Option**

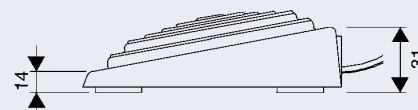
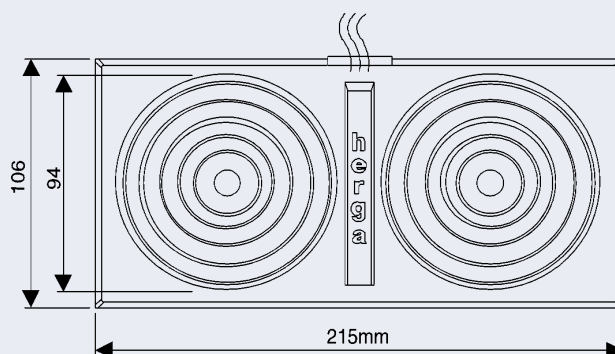
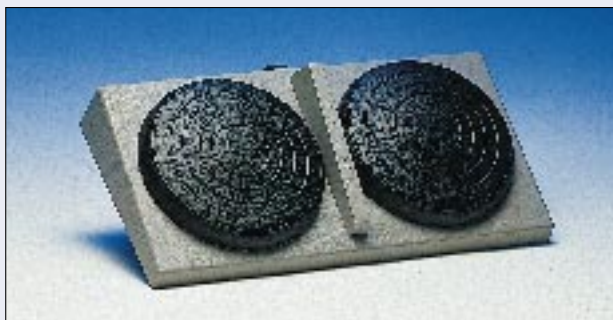
- |         |         |
|---------|---------|
| A Black | B Grey  |
| C White | D Red   |
| E Brown | F Green |

**4. Tube Type**

- A Black PVC Tubing with 3mm I/D and 6mm O/D
- B Clear PVC Tubing with 3mm I/D and 6mm O/D
- C Black PU Tube with 1.5mm I/D and 3mm O/D
- D Black PU Curly Coil with 1.5mm I/D and 3mm O/D (please select option 8G below)
- Z No Tubing required

**5. Tube Length**

- |              |                 |
|--------------|-----------------|
| A 1.5 Metres | B 2 Metres      |
| C 3 Metres   | D 4 Metres      |
| E 5 Metres   | F 6 Metres      |
| G Curly tube | Z None supplied |



### Benefits

- ❖ Ideal for dirty environments
- ❖ Angled for ease of use
- ❖ Variety of colour options for OEM applications
- ❖ Light weight or heavy weight versions
- ❖ Customised labels available upon request

6447 -

### 1. Model Number

### 2. Top/Cover Option

- |         |         |
|---------|---------|
| A Grey  | B Black |
| C White | D Ivory |

### 3. Divider & Colour

- |  |
|--|
| A Grey with herga Logo                     |
| B Grey without herga Logo (Plain Surface)  |
| C Black with herga Logo                    |
| D Black without herga Logo (Plain Surface) |
| E White with herga Logo                    |
| F White without herga Logo (Plain Surface) |
| G Bone with herga Logo                     |
| H Bone without herga Logo (Plain Surface)  |

### 4. Left Hand Bellows Colour

- |             |         |
|-------------|---------|
| A Black     | B Grey  |
| C White     | D Red   |
| E Brown/Tan | F Green |

### 5. Right Hand Bellows Colour

- |             |         |
|-------------|---------|
| A Black     | B Grey  |
| C White     | D Red   |
| E Brown/Tan | F Green |

### 6. Weight

- |                      |                   |
|----------------------|-------------------|
| A Lightweight (300g) | B Weighted (600g) |
|----------------------|-------------------|

### 7. Tube Type

- |  |
|--|
| A Grey Polyurethane Tubing with Straight Twin Bore 1.5mm Bore  |
| B Grey Polyurethane Curly Coil Tubing - Unstretched Length 0.9 Metres Extended Length 2.4 Metres, 1.5mm Bore (please select option 8G below) |

### 8. Tube Length

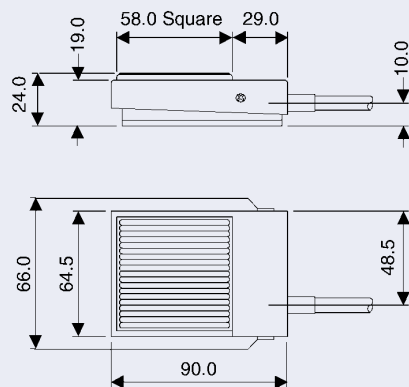
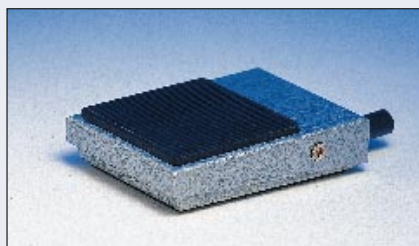
- |              |             |
|--------------|-------------|
| A 2 Metres   | B 3 Metres  |
| C 4 Metres   | D 5 Metres  |
| E 6 Metres   | F 10 Metres |
| G Curly Coil |             |

### 9. Tube Identification

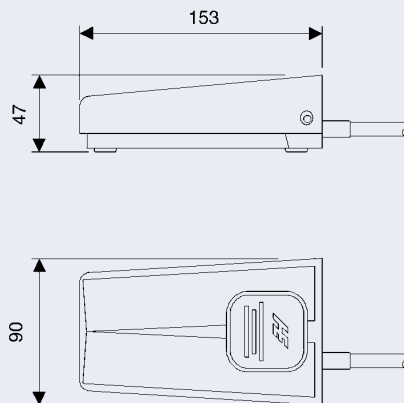
- |  |
|--|
| A Green Label in Heatshrink identifying left hand bellows at the end of the tubing |
| Z No Identification Provided   |



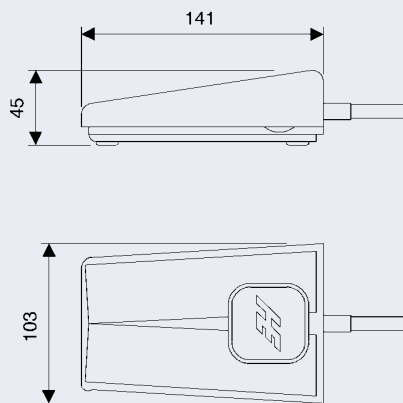
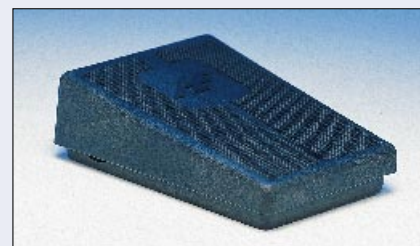
6289-0B



6254-0B



6210-0B



## Benefits

- ❖ 6289 Colour options available upon request
- ❖ 6254 Strong conduit tubing
- ❖ 6210 Light, easy operation

- ❖ 6289 Compact, robust switching
- ❖ 6254 Aluminium construction for harsh environments
- ❖ 6210 Tough reinforced plastic

Model Number	6289-0B	6254-0B	6210-0B
Weight	248g	475g	200g
Guard Option	Available in 2 sizes upon request	Available in 1 size upon request	Available in 1 size upon request
Air Connection	Complete with 2m x 3mm bore tubing	Complete with 2m x 3mm bore tube with armour flex covering	Complete with 2m x 3mm PVC bore tubing
Alternative Air Connections	See note below	See note below	See note below
Body/Base Material	Painted 16 SWG mild steel	Diecast aluminium	Black glass filled nylon
Tread	Polypropylene	As cast	Black glass filled nylon
Bellows Material	Flexible PVC	Flexible PVC	Flexible PVC

**Note:** Each of the above product types can be purchased without tube fitted. \*These versions have an integral 4mm spout connector with restraining cap ideally suited for tubing 3mm bore 6mmØ (black PVC, part number 2311-08 and clear PVC, part number 2311-01) which can be purchased separately, at your required length. For guidance please refer to tube length chart at the front of this catalogue.

\* for these product types please order / refer to product numbers 6289-0124, 6254-0031 and 6210-0033.

These versions are ideal for OEM customers unsure of required tube lengths and also for applications where replacement tubes are required, due to damage. (See accessories pages in rear of this section for tubing)

## 6289-0B

This small, compact, painted mild steel (standard grey hammertone) foot control complete with 2 metres of black PVC tube 3mm bore 6mm O/D as standard can also be supplied with 2 types of safety guard to prevent accidental operation. Special logos and colours can be provided upon request. A conduit tube version can be obtained upon request with length to suit your needs.

## 6254-0B

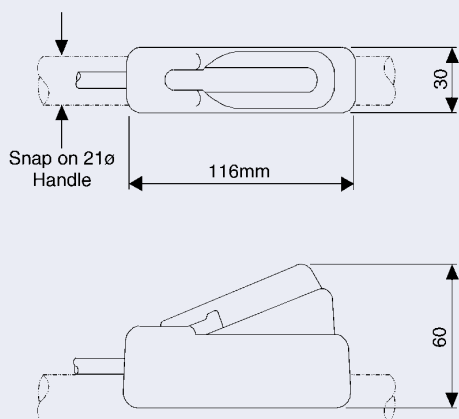
This foot control uses a substantial die-cast aluminium housing and is suitable for use in rough conditions. A safety guard can be provided to prevent accidental operation. The standard version is supplied with 2 metres of black PVC coated flexible steel conduit 10mm O/D containing a 3mm bore PVC tube, different lengths are available upon request.

## 6210-0B

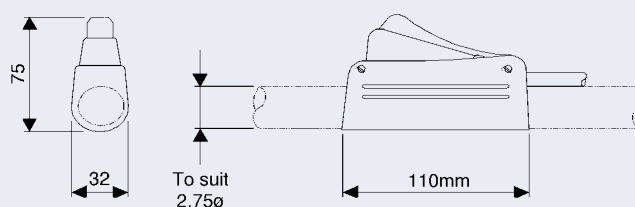
This foot control uses a tough reinforced plastic housing for extra protection. The light operating force does not tire the operator who may be either seated or standing. A safety guard can be provided to prevent accidental operation. Special logos and colours can be provided on quantity orders. Supplied with 2 metres of black PVC Tube 3mm bore 6mm O/D. A conduit tube version can be obtained upon request with length to suit your needs.



**6446**



**6440**



## Benefits - 6446

- ❖ Easy hand grip
- ❖ Sensitive operation

## Benefits - 6440

- ❖ Ergonomic trigger action
- ❖ Ideal for handle bar mounting

Model No	6446-00	6440-00
Mounting*	Snap on fit to handles of 20.5mm to 23.0mm dia.	End mounting to handles of 27.5mm dia.
Air Connection	1.5m black PVC tube x 3mm bore	1.5m black PVC tube x 3mm bore
Grip Height	60mm	75mm
Material:	Body Bellows	Body Bellows
	Black polypropylene Flexible PVC	Black polypropylene Flexible PVC
Weight	86 grms	90grms

**Note:** \* Advice on reducing handle bar diameter can be given upon request  
\* Longer tube lengths can be supplied

6449 -

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**1. Model Number****2. Body Colour**

- |         |          |
|---------|----------|
| A Grey  | B Yellow |
| C Black | D White  |

**3. Action Quantity**

- A 1 Way Plain without Spacers
- B 1 Way with Spacers
- C 2 Way Plain without Spacers
- D 2 Way with Spacers
- E 4 Way Plain without Spacers
- F 4 Way with Spacers
- G 6 Way Plain without Spacers
- H 6 Way with Spacers

**4. Button Colour**

- |                   |                      |
|-------------------|----------------------|
| A Grey            | B Yellow             |
| C Black           | D White              |
| E Red             | F Green              |
| G Brilliant White | Z No button required |

**5. Button Pressure**

- |                         |                            |
|-------------------------|----------------------------|
| A Lightweight (Medical) | B Heavyweight (Industrial) |
|-------------------------|----------------------------|

**6. Label Option - supplied in sets of 6, not fitted**

- A Bed Motif
- B Arrow
- C Red Spot
- D Green Spot
- Z No labels required

**Note:** Labels can be purchased individually, please refer to next page

**7. Tube Type**

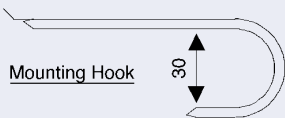
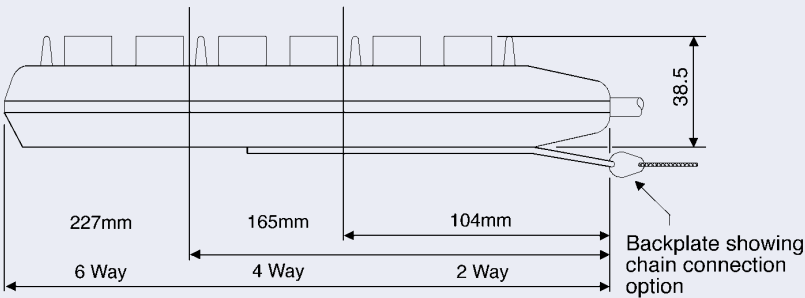
- A 2 Way Grey Standard Multi Tube with Socket
- B 2 Way White Multi Tube with Socket
- C 4 Way Grey Standard Multi Tube with Socket
- D 4 Way White Multi Tube with Socket
- E 6 Way Grey Standard Multi Tube with Socket
- F Grey Twin Polyurethane 1.5mm Bore
- G Grey Twin Polyurethane Curly Coil (please select option 8F below)
- H Straight Twin Tube Black 3mm Bore 6mm Ø each
- J Straight Single Black 1 Way only 1.5mm Bore
- K Straight Single Black 1 Way only 3mm Bore
- L Black Curly Coil 1 Way 1.5mm Bore (please select option 8F below)
- M 2 Way Grey Standard Multi Core, No Socket
- N 4 Way Grey Standard Multi Core, No Socket
- M 2 Way White Multi Core, No Socket
- Z No tube required

**8. Tube Length**

- A 2 Metres
- B 3 Metres
- C 4 Metres
- D 5 Metres
- E 10 Metres
- F Curly Coil - Unstretched 0.9M Stretched 2.4M
- Z No tube required

**9. Fixture Options**

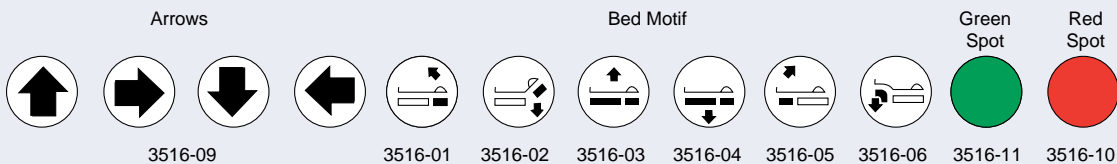
- A Grey Moulded Rigid Plastic Hook
- B Black Metal Backplate and Chain - 1 & 2 way versions
- C Black Metal Backplate and Chain - 4 & 6 way versions
- Z No fixtures required



**Benefits**

- ❖ Strong, all plastic construction
- ❖ Well suited for hazardous, dirty and wet conditions
- ❖ 1, 2, 4, and 6 way versions
- ❖ Medical and industrial versions available
- ❖ Spacers to prevent accidental operation
- ❖ Optional Strain Relief Chain

**Example of Label Options**



Medical and Industrial Hand Controls		
Description		
Weight	1 and 2 Way	150 - 190 grm
	4 Way	200 - 240 grm
	6 Way	320 - 360 grm
Body Material	ABS as selected	
Buttons	Acetal	
Bellow Material	Flexible PVC	
Accessories	See fixture options and accessories page	
Special versions for quantity OEM applications. Please contact herga for more information.	<ul style="list-style-type: none"><li>❖ Custom designed labels</li><li>❖ Special connecting tubes</li><li>❖ Tube lengths</li><li>❖ Air connection / mating bulkhead connectors</li><li>❖ Fixing options e.g. Velcro</li></ul>	

**Pendant Control**

The hergair pendant control obviates the need for low voltage switching circuits and is suitable for use in dirty, wet and hazardous areas. The slim design and light weight makes it easy to handle without tiring and prevents damage if it accidentally swings across the factory floor. The flexible bellows are enclosed in the housing and cannot be damaged by operators.

This range of pendant hand controls is available in 1, 2, 4 or 6 way. The strong, all plastic construction makes it ideal for hazardous factory situations. Each pendant can be supplied with a strain relief chain and is factory fitted with a choice of single or multi-core tube and connector.

Mating Bulkhead Connectors can be obtained for all hand controls. Refer to accessories pages in the main catalogue or contact herga ref 6418/6419 connectors.

**Multi-way Hand Control**

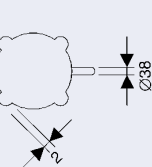
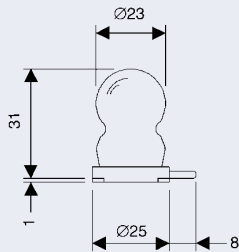
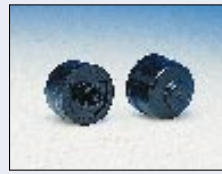
The multi-way hand control is used on applications such as electrically adjustable beds, nurse call systems and X-ray equipment. A light duty range of pendant controls, ideal for hospital and 'clean' environments since the unit can be gas sterilised.

The buttons are easy to locate and yet light to operate in comparison with the pendant control, making it ideal for the disabled and infirm. With a tough, moulded housing and inaccessible flexible bellows, it will withstand the worst maltreatment by operators.

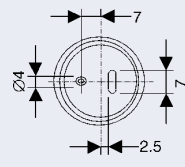
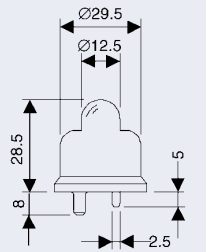
The multi-way plug can only be connected in one direction and allows fast replacement by non-technical staff.



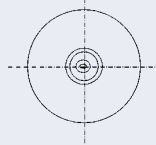
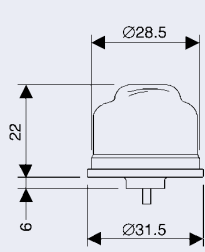
## Special Purpose Bellows



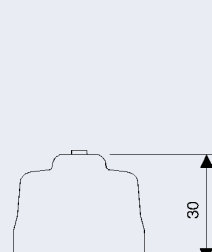
6444-01



6444-02



6444-03





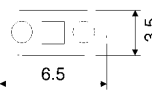
6444-04

These four bellows are incorporated into volume production equipment. They can be used in conjunction with push buttons, as limit switches or in situations where a mechanical linkage presents problems.

Material: PVC  
Air Connection: Push onto 3mm Tube  
Colour: Black

If a smaller spout is required to suit tube 2311-03, please select part number 3612-04

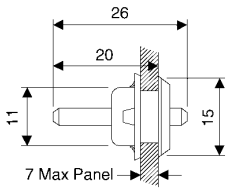
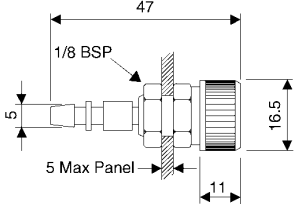
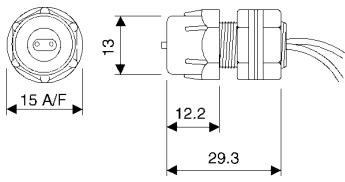
## Tubing

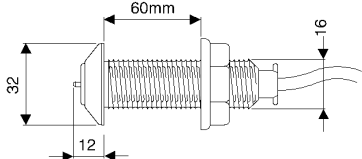
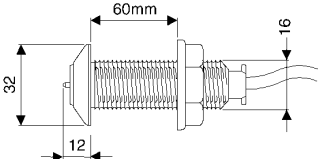
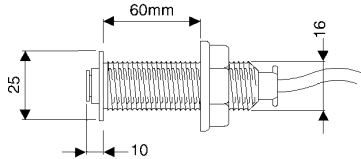
Tube Type	Product Number	Material	Bore mm	O/D mm	For use with Spout Dia.	In Line Joint Use Part No.	Application
Single Tube 	2311-01	Clear PVC	3.0	6.0	4.0mm	6420-00 6419-02	For connecting all air, vacuum and low pressure switches and airswitches
	2311-08	Black PVC	3.0	6.0	4.0mm	6420-00 6419-02	
	2311-03	Black Polyurethane	1.5	3.2	2.1-2.5mm to fit 4.0mm spout use 3420-28	3420-20	For microbore air systems see note 1 on page 24
	2311-12	Black PVC	2.0	4.0	Use part No. 3321-107 to fit 4.0mm spout	3420-20	To increase operational tube length - see 'selection'
Twin Tube 	2311-09	Black PVC	3.0	2 x 6.0	4.0mm	6420-00 6419-02	For connecting all air, vacuum and low pressure switches and airswitches
Flat Twin Tube 	2311-15	Grey Polyurethane	1.5	N/A	2.1-2.5mm to fit 4.0mm spout use 3420-28	3420-20 3612-04	For use with all foot bellows and special versions of hand controls. Tubes can be split into single cores.
2.4m Coiled Twin Tube (stretched)	2311-14	Grey Polyurethane	1.5	N/A	2.1-2.5mm to fit 4.0mm spout use 3420-28	3420-20 3612-04	

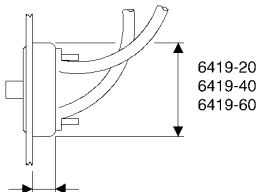
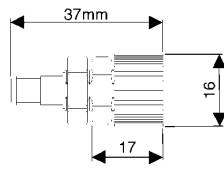
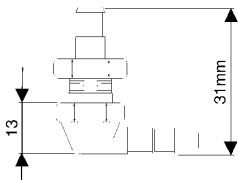
## Pre-Cut Lengths of Tube

	2311-01 Clear PVC Tube 6mmØ 3mm Bore	2311-08 Black PVC Tube 6mmØ 3mm Bore	2311-03 Black Polyurethane 3mmØ 1.5mm Bore	2311-12 Black PVC 4mmØ 2mm Bore
1 Metre	6050-2311-0106	6050-2311-0810	6050-2311-0308	6050-2311-1205
2 Metres	6050-2311-0107	6050-2311-0811	6050-2311-0309	6050-2311-1206
3 Metres	6050-2311-0108	6050-2311-0812	6050-2311-0310	6050-2311-1207
5 Metres	6050-2311-0109	6050-2311-0813	6050-2311-0311	6050-2311-1208
10 Metres	6050-2311-0101	6050-2311-0801	6050-2311-0301	6050-2311-1201

Additional lengths and types of tube can be obtained upon request, please contact herga with your requirements.

				
<b>Model No</b>		<b>6418-00</b>	<b>6419-00</b>	<b>6419-0010</b>
Panel Thickness		1mm to 7mm	1mm to 5mm	0.5mm to 4mm
Cut Out Diameter		11mm	10mm	13mm
Spout Diameter	In	4mm	4mm & locking collar	2 x 2.1mm brass spout for twin tube with locking collar
	Out	4mm	5mm fir tree nylon plastic	2 x 1.5mm bore PVC tube 150mm long
Material		Black nylon	Black nylon	Black nylon & PVC
Fixing		Spire fix	Flange nut	Flange nut
Use		Low cost bulkhead connector for 3mm tubes. 2311-01; 2311-08; 2311-09	Bulkhead connector with connecting tube lock for 3mm I/D tube. 2311-01; 2311-08; 2311-09	Bulkhead connector for tube part numbers 2311-14 & 2311-15
Also available:		6419-0011 white gland 500mm tubes	6419-0012 grey gland 500mm tubes	6419-0013 black gland 500mm tubes

Through connector to suit standard tubing for panels up to 60mm thick				
<b>Model No</b>		<b>6418-0004 (white escutcheon)</b>	<b>6418-0003 (chrome escutcheon)</b>	<b>6418-0002 (white escutcheon)</b>
Panel Thickness		0mm to 60mm	0mm to 50mm	0mm to 50mm
Cut Out Diameter		16mm	16mm	16mm
Spout Diameter	In	4mm spigot push on	4mm spigot push on	6mm female (quick release)
	Out	3mm bore tube clear PVC 1 metre long	3mm bore tube clear PVC 1 metre long	3mm bore tube clear PVC 1 metre long
Material		Body, nut & escutcheon = ABS	Body, nut & escutcheon = ABS	Body, nut & escutcheon = ABS
Fixing		16mm thread with nut & washer	16mm thread with nut & washer	16mm thread with nut & washer
Use		Low cost bulkhead connector for 6mm tubes. 2311-01; 2311-08; 2311-09	Low cost bulkhead connector for 6mm tubes. 2311-01, 2311-08 & 2311-09	Low cost bulkhead connector for 6mm tubes. 2311-01, 2311-08 & 2311-09. Suitable for low pressure applications.

				
<b>Model No</b>		<b>6419-20, 6419-40 and 6419-60</b>	<b>6419-02</b>	<b>6419-03</b>
Panel Thickness		0.5mm to 5mm	0mm to 5mm	0mm to 5mm
Cut Out Diameter		38mm	10mm (or 1/8th BSP threaded hole)	10mm (or 1/8th BSP threaded hole)
Spout Diameter Out		2, 4 and 6 x 150mm PVC tube 3mm I/D	4mm with restraining cap	4mm plastic rasp 90° elbowed
Material		Grey ABS / PVC	Nylon	Grey PVC with brass nut and connector
Fixing		2 clamping screws supplied	1/8th BSP thread with nut	1/8th BSP thread with nut
Use		Used with 2, 4 and 6 way hand controls fitted with socket	Straight through connector with brass rasp for 3mm I/D tubes	Elbow connector with brass rasp for 3mm I/D tubes

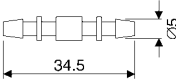
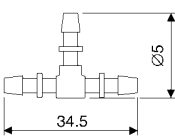
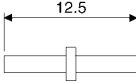
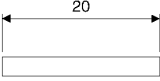
❖ Other connectors and adaptors are available upon request.

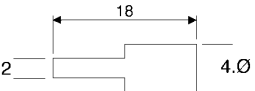
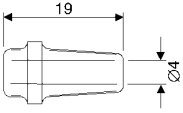
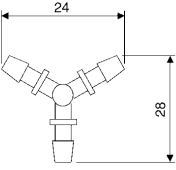
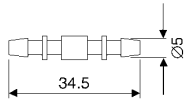




## Benefits

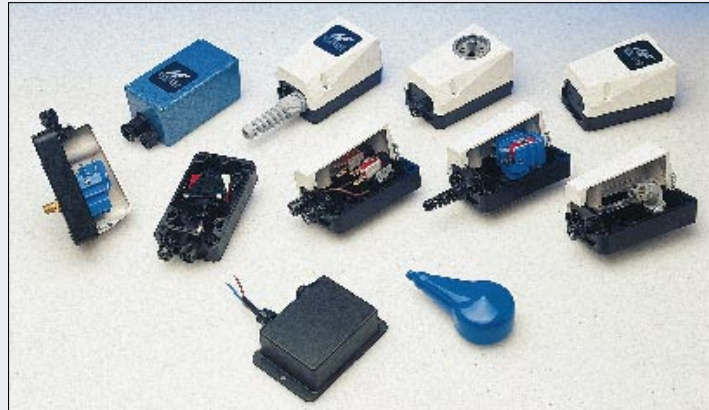
- ❖ Easy assembly, simple to use
- ❖ Brass fitting options also available upon request
- ❖ Vast collection of fittings to suit all tube sizes
- ❖ Adjustable bleed connectors available upon request

				
<b>Part Number</b>	<b>6420-00</b>	<b>6421-00</b>	<b>3612-04</b>	<b>3420-20</b>
<b>Material</b>	Translucent nylon	Translucent nylon	Brass	Brass
<b>Diameter</b>	5mm	5mm	2.1mm	2.0mm
<b>For Connecting Tube with Internal Diameters</b>	3mm (2311-01 and 2311-08)	3mm (2311-01 and 2311-08)	1.5mm see note 2	1.5mm

				
<b>Part Number</b>	<b>3420-28</b>	<b>3321-107</b>	<b>6422-00</b>	<b>6420-0001</b>
<b>Material</b>	Brass	Soft black PVC	Translucent nylon	Translucent nylon
<b>Diameter</b>	4mm to 2mm	4mm to 4mm	5mm	5mm
<b>For Connecting Tube with Internal Diameters</b>	3mm to 1.5mm		3mm (2311-01 and 2311-08)	3mm (2311-01 and 2311-08)
<b>Use</b>	For reducing or increasing small to large bore tubing. Can be used with 3321-107	In line reducer to connect from 4mm O/D PVC tube to 4mm spout	Combining variations of inlet and outlet e.g. 1 bellows 2 airswitches	Porous bleed filter flow 0.1/0.4 Lt/Min @ 8.5 PSI air flow damper

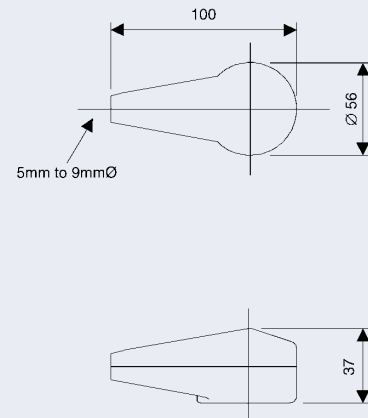
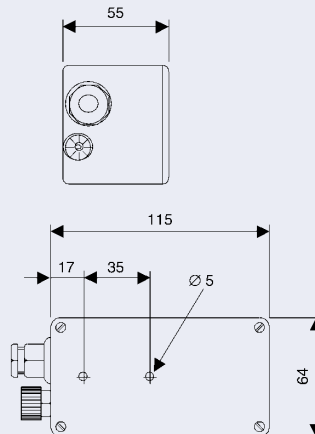
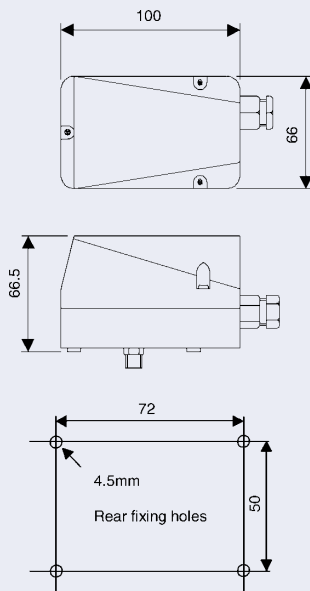
## ❖ Hints for selection and choice of tube connections

1. Correct selection of the bellows, tubing, airswitch combination will facilitate a connection without an adapter in most cases.
2. Where the combination of bellows and airswitch can only be achieved by adapting between 2mm and 4mm spouts, the following method is recommended for 1.5/2.0mm bore tube up to 3mm bore tube or 4mm spouts. Fit short length of tube 2311-08 to 4mm spout or fit 3321-107 to brass connector.
3. The 6434, 6435 and 6438 bellows models have 2mm spouts as standard. The back entry 'K' series airswitches are also fitted with 2mm spouts as standard.
4. For flat twin tube use split tube or bulk connector 6419-0010, 6419-0011, 6419-0012 or 6419-0013 and proceed as 1 or make correct selection of airswitch/bellows combination.



### Benefits

- ❖ IP40 and IP67 Housings with rear fixing positions
- ❖ Variations of air or electrical connections
- ❖ Unlimited options available - contact herga with your requirements
- ❖ Back entry versions for pressure switch connections
- ❖ Available for all herga switching systems
- ❖ Custom designed labels and housing colours available for volume OEM requirements



### Part Number: 6819-00 Variants

The most economical and compact housing, produced especially for hergair switches. Double insulated sealed enclosure is moulded in two tone black and white ABS as standard. The lid has an integral rubber sealing gasket and captive screws. Mounting holes and lid fixing screws are outside the seal, thus preventing the ingress of moisture and making the box waterproof to IP65.

The standard 6819-00 housing is supplied with a cable gland for cable diameter 5mm to 7mm and a type 6418-00 air tube connector is fitted.

The housing is suitable for all airswitches except model 6806.

### Part Number: 6816-00 Variants

Diecast aluminium housing for airswitch types except 6806 models. Finished in blue stove enamel. Ideal for use where electrical screening is required.

Other colour variants are available upon request as are specified fixing positions to suit your requirements.

Where a number of airswitches are to be fitted in one box, herga can supply a variety of special boxes complete with multi-way air connectors and electrical connections as required.

#### Note:

Herga can offer many other variants of electrical housings in size and colour up to IP67. We also manufacture world-wide (plug in) switch housings with or without cordsets in conjunction with our airswitching systems. Please contact us with your specific requirements.

### Part Number: 6819-01

Blue flexible PVC protective boot for air and pressure switch types 6721, 6731, 6741, 6861, 6863 and 6869.

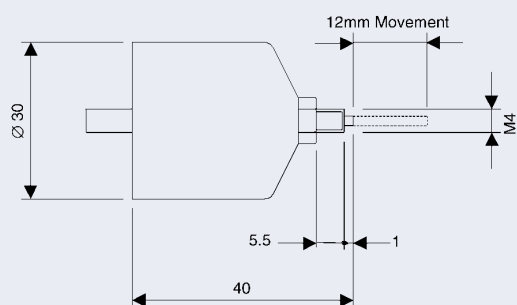
Covers all electrical connections and grips round outside of switch body. Can be used with cable 5mm to 9mm diameter.

We recommend a cable restraint is used in conjunction with this part.

## Accessories: Actuators

### Linear Actuator

**6830:** A simple, effective actuator that converts air pressure into a linear movement via a steel rod.



Description	Model
Actuator that converts air pressure to linear movement via steel sliding rod	6830-00
Air spout diameter	4mm
Air connection	Base entry
Body material	ABS
Diaphragm material	PVC
Tube reference	2311-08
Mounting	M4 threaded boss

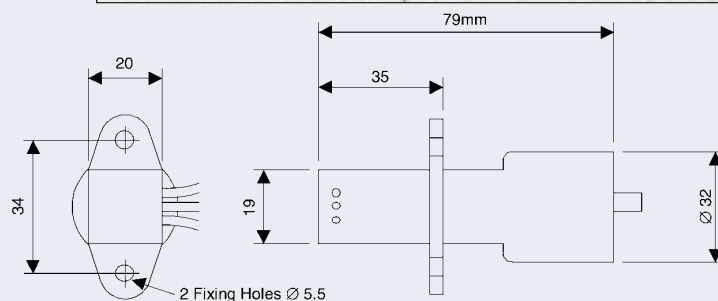
### Example

The chart below shows force available V's pressure applied using 6431-00 bellows and 2m x 3mm bore tubing at 20°C

Pressure Applied (mm Wg)	Rod Movement (mm)	Max Force (Kg F)
4570	5	1.00
3630	9	0.75
3170	10	0.40
3050	12	0.25

### Air Actuated Potentiometer

**6832:** Robust air operated potentiometer with resistance that varies with the air pressure applied. Also available in 5K and 10K Ohm.



Description	Model
Air operated output resistance varies with air pressure	6832-05 6832-10
Air spout diameter	4mm
Air connection	Base entry only
Body material	ABS
Diaphragm material	Silicone
Tube reference	2311-08
Electrical connection	200mm flying leads
Mechanical Rating - 5.0 x 10 <sup>6</sup> operations	

### Electrical Rating - 1 W

6832-05 500 Ohms - 5K Ohms ± 20%

6832-10 500 Ohms - 10K Ohms ± 20%

A feature of long life, ceramic tracks is the variability of wiper to track resistance. To reduce this effect we recommend the unit is connected in the potentiometric mode. Please refer to diagram below.

