

# herga



## Pressure & Vacuum Switches

SWITCHING AND SENSING SOLUTIONS



Herga Electric Limited is an independent UK manufacturer of switching systems. In addition to pressure and vacuum switches, we offer other innovative switching solutions:-

<b>hergair</b>	Airswitching systems
<b>herga</b>	Footswitches
<b>hergalite</b>	Fibre Optics / Infra red safety products
<b>herga</b>	Hand controls

Our expertise spans the automotive, medical, packaging, domestic appliance and spa industries.

Herga is driven to respond rapidly to delight our customers. Herga seeks to develop its relations with customers to achieve their business goals.

### Global Presence

Our distributor network covering the worlds major markets enables technical help and assistance to be just a phone call away.

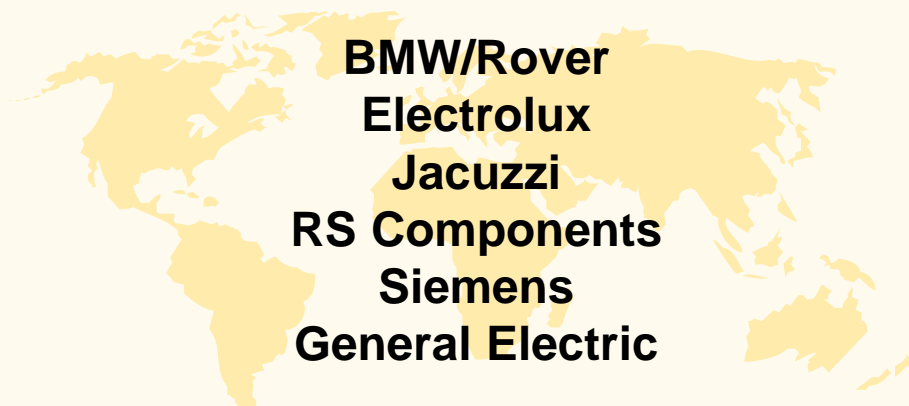
### Continuous Improvement

Herga's approval to ISO 9002 ensures that we are fully in control of our quality. However, this is just the starting point for an aspiring World Class company. We encourage training and development and continuous improvements at individual, team and company level.

### How can we help you?

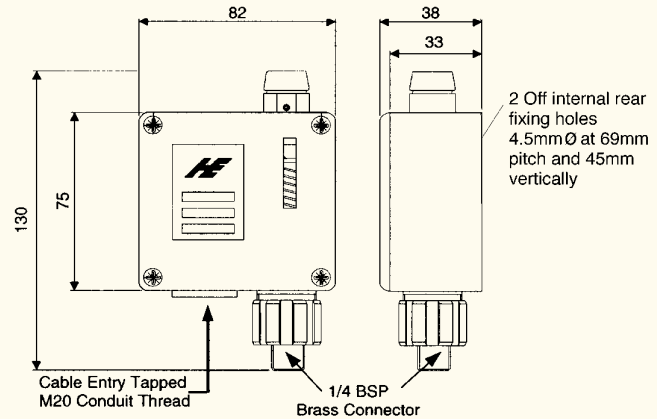
This brochure provides a brief overview of our product range. If you require further information, please contact us at our e-mail address: [herga.electric@dial.pipex.com](mailto:herga.electric@dial.pipex.com)

### Herga's customers worldwide include



<p><b>6702 High Pressure Switch</b> High pressure switch all plastic construction. Ranges 1.4-13.8 Bar (20-200 PSI). Two (2) Pole Electrical Switching.</p>		<p>Page PV1 &amp; 2</p>
<p><b>6773 Double Diaphragm Pressure Switch</b> Double diaphragm construction to meet double insulation requirements of EN 60335-2-60. Water presence detection.</p>		<p>Page PV3</p>
<p><b>6761 and 6763 Low Air Pressure Vacuum Switches</b> Printed circuit board mounted, pressure/vacuum switches. UL versions available. Range from (0.015 Bar - 1.0 Bar Pressure) (-0.015 Bar - 0.670 Bar Vacuum).</p>		<p>Page PV4</p>
<p><b>6741 and 6742 Medium Pressure Switches</b> Constructed in Nylon 12 material (pressure range 0.1 Bar to 8.2 Bar). Single or double pole in 8 adjustable switch ranges. UL versions available.</p>		<p>Page PV5 &amp; 6</p>
<p><b>6731 and 6732 Low Pressure Switches</b> Constructed in Nylon 12 material (pressure range 0.0037 Bar to 0.137 Bar). Single or double pole in 3 adjustable switch ranges. UL versions available.</p>		<p>Page PV7 &amp; 8</p>
<p><b>6753 Low Air Pressure/Vacuum Switches</b> Small versatile compact differential switch with low contact inertia for rapid switching (range 2.5 mbar to 40 mbar).</p>		<p>Page PV9 &amp; 10</p>
<p><b>6721 and 6722 Vacuum Switches</b> Constructed in Nylon 12 material (vacuum range -0.0075 Bar to -0.670 Bar). Single or double pole in 5 adjustable switch ranges. UL versions available.</p>		<p>Page PV11 &amp; 12</p>
<p><b>Pressure Conversion Chart</b> For more commonly used measurements, including flow, liquid, force and weight equivalents.</p>		<p>Page PV13</p>
<p><b>Certification Markings</b> Covers most worldwide authorities/certification marks.</p>		<p>Page PV14</p>
<p><b>Accessories / Switch Housings</b> Air and electrical connections are available for all pressure and vacuum switches. Please also refer to Airswitching section or contact herga for details.</p>		<p>Page PV15</p>
<p><b>Fax Back Sheet</b> For your fast quotation service.</p>		<p>Page PV16</p>

# 6702 ~ High Pressure Switch



## Benefits

- ❖ High pressure switch, all plastic construction (glass loaded nylon)
- ❖ Alternate diaphragm and connectors available for volume orders

- ❖ Excellent repeatability
- ❖ Switches have adjustable pressure and differential
- ❖ Specific settings can be set for volume orders
- ❖ IP65 enclosures class II double insulated

6702 - [ ] [ ] [ ] [ ] - 0 0 0 0

### 1. Model Number

### 2. Operating Pressure

- A 20 - 50 PSI (1.40 - 3.45 Bar) Red Spring
- B 40 - 100 PSI (2.76 - 6.89 Bar) White Spring
- C 80 - 200 PSI (5.52 - 13.79 Bar) Blue Spring

### 3. Additional Operating (Springs)

- A 20 - 50 PSI (1.40 - 3.45 Bar)
- B 40 - 100 PSI (2.76 - 6.89 Bar)
- C 80 - 200 PSI (5.52 - 13.79 Bar)
- D 20 - 50 PSI (1.40 - 3.45 Bar) & 40 - 100 PSI (2.76 - 6.89 Bar)
- E 40 - 100 PSI (2.76 - 6.89 Bar) & 80 - 200 PSI (5.52 - 13.79 Bar)
- F 80 - 200 PSI (5.52 - 13.79 Bar) & 20 - 50 PSI (1.40 - 3.45 Bar)
- G 20 - 50 PSI (1.40 - 3.45 Bar) & 40 - 100 PSI (2.76 - 6.89 Bar) & 80 - 200 PSI (5.52 - 13.79 Bar)
- Z No additional springs supplied

### 4. Electrical Microswitching Rating

- A 21A 250V ac Silver Change Over Contacts
- B 0.1A 250V ac Gold Change Over Contacts
- C 0.1A 24V ac/dc Gold Change Over Contacts

### 5. Packaging and Label Option

- A Herga individually packed in plain carton
- B Herga vacuum form tray (for quantities 10+)

# 6702 ~ High Pressure Switch



## 6702 Pressure Switch

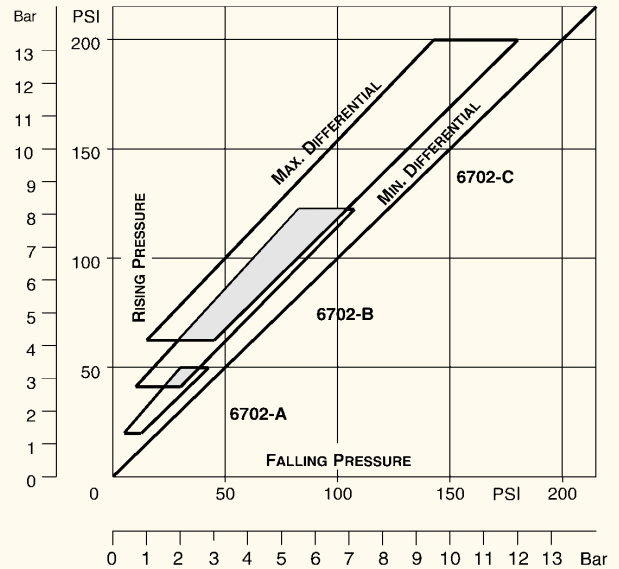
The industrial pressure switch is moulded entirely in plastic with the exception of the pressure connection and is water, oil and dust proof to IP65. The switches have excellent repeat accuracy, even over widely varying ambient conditions.

The operating pressure is adjustable externally using the thumb screw on the top and the approximate pressure setting can be seen through a window in the cover. To discourage unauthorised tampering, the adjusting screw can be locked in position with an M1.5mm Allen screw.

The microswitches have independent vernier adjustment and are normally set to operate within 2 PSI on rising pressure. Where two pressure levels are to be controlled, the switches can be adjusted separately so that one switch will operate at up to 80% of the level of the second. The switches can also be set to operate simultaneously on falling pressure instead of rising pressure.

The pressure switch is of Class II construction with double insulation. For quantity orders, many special options are available, please enquire:-

- ❖ Single or double pole switching set to specific pressure levels
- ❖ Alternative connector sizes
- ❖ Alternative diaphragms and metal chambers to resist particular fluids
- ❖ Installation and setting instructions are supplied with each product



Note: differentials are approximate

### Other Information

Withstand pressure	500 PSI (34.5 Bar)
Setting accuracy when set by herga	± 10%
Temperature range	-5°C to +70°C
Diaphragm	Fabric reinforced Nitrile
Weight	300g

### Silver Contact Microswitch Data

Average Life Expectancy	Mechanical	1.0 x 10 <sup>6</sup>		
	Electrical	2.0 x 10 <sup>5</sup> @ 10A 1.0 x 10 <sup>4</sup> @ 21A		
Electrical Rating		Max. Electrical Load		
	Voltage	Res.	Ind.	(Pf 0.75 Motor)
AC	250V	21A		1HP
	250V	21A	8A	2HP
	125V	21A		
DC	6V	21A	21A	
	12V	15A	15A	
	24V	8A	7A	
	60V	1A	0.5A	
	110V	0.5A	0.2A	
	220V	0.25A	0.1A	

### Gold Contact Microswitch Data

Average Life Expectancy	Mechanical	1.0 x 10 <sup>6</sup>		
	Electrical	2.0 x 10 <sup>5</sup> @ 10A 1.0 x 10 <sup>4</sup> @ 21A		
Electrical Rating		Max. Electrical Load		
	Voltage	Res.	Ind.	(Pf 0.75 Motor)
AC	250V	0.1A	0.05	N/A
UL/CSA Only	125V	0.1A	-----	-----

Switch Standards: EN 60730, EN 61058 and UL 508

Approvals Available: CE, BEAB, CSA, DEMCO, IMQ, KEMA, NEMCO, OVE, SEMCO, SET I, SEV, UL, VDE

### Suitability for use with different operating media

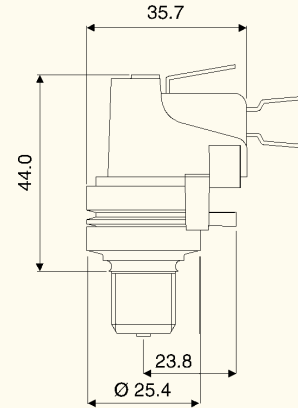
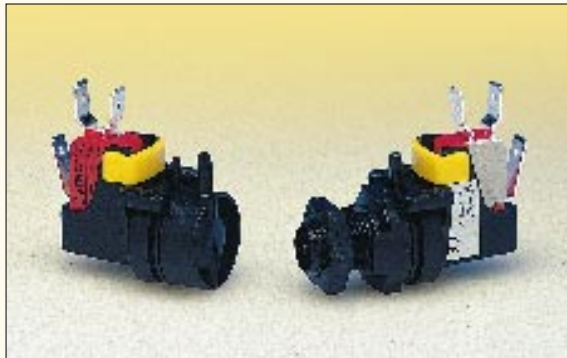
Pressure Medium	6702
Acetone	<input checked="" type="checkbox"/>
Ammonia (Liquid)	<input checked="" type="checkbox"/>
Amyl Alcohol to 20°C	<input checked="" type="checkbox"/>
Automotive Brake Fluid	<input checked="" type="checkbox"/>
Beer	<input checked="" type="checkbox"/>
Butane	<input checked="" type="checkbox"/>
Carbon Dioxide (Dry)	<input checked="" type="checkbox"/>
Citric Acid	<input checked="" type="checkbox"/>
Copper Sulphate (Sol.)	<input checked="" type="checkbox"/>
Compressed Air	<input checked="" type="checkbox"/>
Cutting Oil	<input checked="" type="checkbox"/>
Diesel Oil	<input checked="" type="checkbox"/>
Detergent Solution	<input checked="" type="checkbox"/>
Fuel Oil	<input checked="" type="checkbox"/>
Glycol	<input checked="" type="checkbox"/>
Hydraulic Oil	<input checked="" type="checkbox"/>
Hydrogen	<input checked="" type="checkbox"/>
Lubricating Oil	<input checked="" type="checkbox"/>
Milk	<input checked="" type="checkbox"/>
Mineral Oil	<input checked="" type="checkbox"/>
Natural Gas	<input checked="" type="checkbox"/>
Oxygen to 70°C	<input checked="" type="checkbox"/>
Petrol	<input checked="" type="checkbox"/>
Plating Solution (Chrome)	<input checked="" type="checkbox"/>
Salt Water	<input checked="" type="checkbox"/>
Sewage	<input checked="" type="checkbox"/>
Turpentine	<input checked="" type="checkbox"/>
Vinegar	<input checked="" type="checkbox"/>
Water	<input checked="" type="checkbox"/>

✓ = Recommended       = Suitable with modifications

**Note:** Dry Switching - if switching low power circuits, low current (4 to 100 milliamperes) and low voltage (below 30V), consult herga or refer to gold contact in section 4 of the opposite page.

Herga do not accept liability for any pressure operated device used outside the pressure range specified by the company.

# 6773 ~ Double Diaphragm Pressure Switch



### Benefits

- ❖ Specified to EN 60335-2-60 double insulated for water detection
- ❖ 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

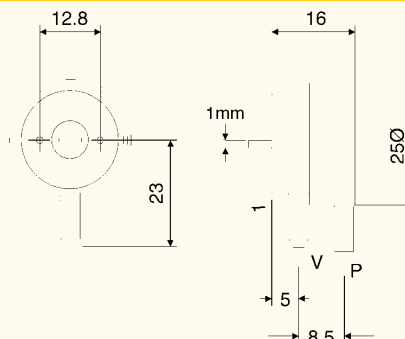
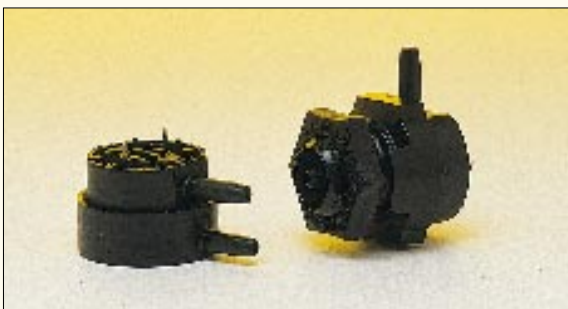
#### 7. Terminal Combinations

- 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

# 6761 & 6763 ~ Low Air Pressure Vacuum Switches (slow make contacts)



### Benefits

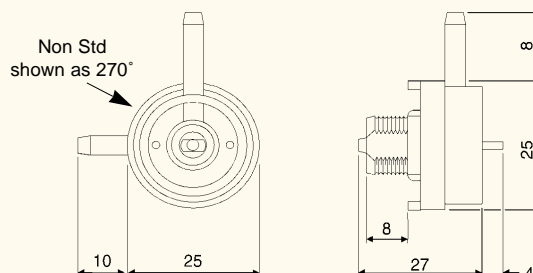
- ❖ A range of small switches designed for direct mounting onto printed circuit boards
- ❖ UL versions available
- ❖ Various spout orientations available
- ❖ Double diaphragm versions available upon request

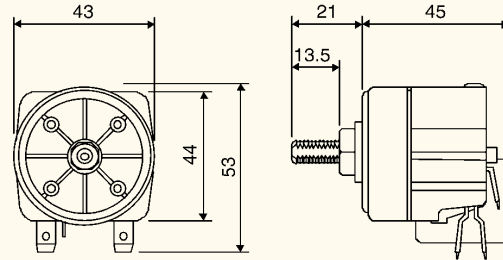
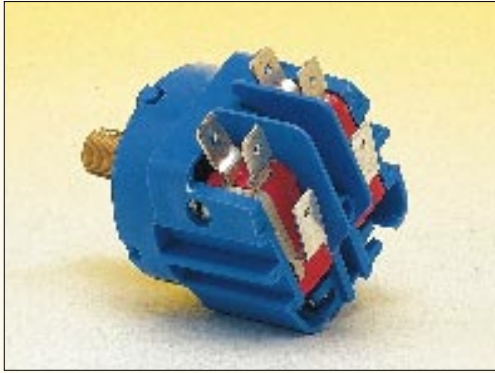
- ❖ Available with base or side tube entry
- ❖ Silver or gold contact options
- ❖ Switches can be factory set within specified tolerances
- ❖ 'O' ring seals available for dust and water tight applications, back entry versions only

Printed Circuit Board Mounting Switches			
Model No		6761 (Vacuum)	6763 (Pressure)
Pressure/Vacuum range	Minimum	150mm (6 ins) Wg	150mm (6 ins) Wg
	Maximum	670 millibar (9.8) PSI	1.0 Bar (14.7) PSI
Maximum Differential		Approximately 0.06 ins WG	Approximately 0.06 ins WG
Pressure/Vacuum Range		Adjustable variants	Adjustable variants
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	4mm Ø spout for side and back entry
		2mm Ø spout for back entry only	2mm Ø spout for back entry only
		Lower spout 'V' vacuum	Upper spout 'P' pressure
Connecting Tube Reference		4mm spout = 2311-01 or 2311-08	4mm spout = 2311-01 or 2311-08
		2mm spout = 2311-03	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 (Silver contacts)	0.5A RES 250V ac (Silver Contacts)
UL		50mA RES 250V ac	50mA RES 250V ac
		(Maximum ratings may not be achieved at low pressure settings)	
Dry Switching Maximum Recommended Current		10mA 24V dc (UL)	10mA 24V dc (UL)
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)		8grms	8grms

### 6761/6763 Vacuum and Pressure 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, final 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.





**Benefits**

- ❖ Switches set to specific rising or falling pressures
- ❖ UL recognised versions available
- ❖ High performance repeatability

- ❖ Single or double pole switching
- ❖ Customised settings available upon request
- ❖ Various connector options available

**Silver Contact Microswitch Data**

Average Life Expectancy	Mechanical	1.0 x 10 <sup>6</sup>		
	Electrical	2.0 x 10 <sup>5</sup> @ 10A 1.0 x 10 <sup>4</sup> @ 21A		
Electrical Rating		Max. Electrical Load		
	Voltage	Res.	Ind.	(Pf 0.75 Motor)
AC	250V	21A		1HP
	250V	21A	8A	
	125V	21A		1HP
DC	6V	21A	21A	
	12V	15A	15A	
	24V	8A	7A	
	60V	1A	0.5A	
	110V	0.5A	0.1A	
	220V	0.25A	0.1A	

Model No	6742-20/30/40/50/60	6742-70/80/90
Electrical Switch Data	2 Pole change over	2 Pole Change over
Contact Rating	21 (8) A 250V ac	21 (8) A 250V ac
Pressure Connection	Brass 1/8" BSPT	Brass 1/8" BSPT
Setting Accuracy	± 10% as standard	± 10% as standard
Withstand Pressure	25 PSI or x 2	150 PSI 10 Bar
Temperature Range	-5°C to + 70°C	-5°C to + 70°C
Body Material	Nylon 12	Nylon 12
Diaphragm	Neoprene	Nitrile fabric reinforced fitted in brass pressure capsule
Spring	Spring steel	Spring steel
Weight	50gm	85gm

**Gold Contact Microswitch Data**

Average Life Expectancy	Mechanical	1.0 x 10 <sup>6</sup>		
	Electrical	2.0 x 10 <sup>5</sup> @ 10A 1.0 x 10 <sup>4</sup> @ 21A		
Electrical Rating		Max. Electrical Load		
	Voltage	Res.	Ind.	(Pf 0.75 Motor)
AC	250V	0.1A	0.05	N/A
UL/CSA Only	125V	0.1A	-----	-----

Model No	Pressure Range		Differential (Fixed)
	P.S.I	Bar	
6742-20	1.5 - 3.5	0.10 - 0.24	See chart 1
6742-30	3.0 - 5.5	0.20 - 0.37	See chart 1
6742-40	5 - 10	0.34 - 0.68	See chart 1
6742-50	8 - 18	0.54 - 1.22	See chart 2
6742-60	16 - 30	1.08 - 2.04	See chart 2
6742-70	25 - 55	1.70 - 3.79	See chart 3
6742-80	45 - 75	3.1 - 5.17	See chart 3
6742-90	60 - 120	4.14 - 8.27	See chart 3

Switch Standards: EN 60730, EN 61058 and UL 508

Approvals Available: CE, BEAB, CSA, DEMCO, IMQ, KEMA, NEMCO, OVE, SEMCO, SET I, SEV, UL, VDE

**NB**

Herga do not accept liability for any pressure operated device used outside the pressure range specified by the company.

**Special options are available for quantity orders**

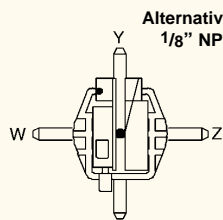
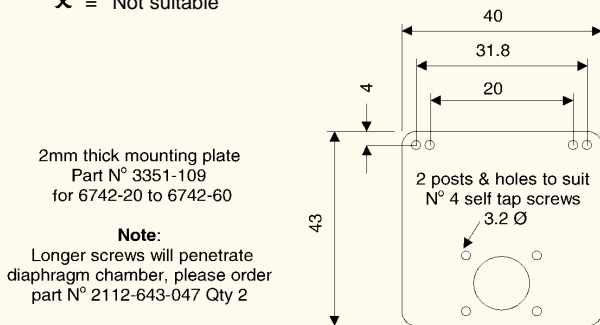
- ❖ Diaphragms in silicon rubber, nitrile, EPDM
- ❖ Switches with wide or close differentials
- ❖ Springs in stainless steel
- ❖ NPT connectors available



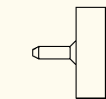
## Suitability for use with different operating media

Pressure Medium Chemical Compatibility	Diaphragms	
	6742/20/30/40 50 & 60	6742/70/80 & 90
Acetone	✓	✓
Ammonia (Liquid)	✓	✓
Amyl Alcohol to 20°C	✓	✓
Automotive Brake Fluid	✓	✓
Beer	✓	✓
Benzyl Alcohol	✗	✓
Butane	✓	✓
Carbon Dioxide - Dry	✓	✓
Citric Acid	✓	✓
Copper Sulphate (Sol.)	✓	✓
Compressed Air	✓	✓
Cutting Oil	✓	✓
Diesel Oil	✓	✓
Detergent Solution	✓	✓
Fuel Oil	✓	✓
Glycol	✓	✓
Hydraulic Oil	✓	✓
Hydrogen	✓	✓
Lubricating Oil	✓	✓
Milk	✓	✓
Mineral Oil	✓	✓
Natural Gas	✓	✓
Nitric Acid (Dil.)	✗	✓
Oxygen to 70°C	✓	✓
Petrol	✓	✓
Plating Solution (Chrome)	✓	✓
Salt Water	✓	✓
Sewage	✓	✓
Sulphur Dioxide	✗	✓
Turpentine	✓	✓
Vinegar	✓	✓
Water	✓	✓

**Key:** ✓ = Recommended  
 ✓ = Suitable with modification  
 ✗ = Not suitable



Non standard tube connection positions for 4mm Ø spout connection. Not recommended for pressure over 20 PSI

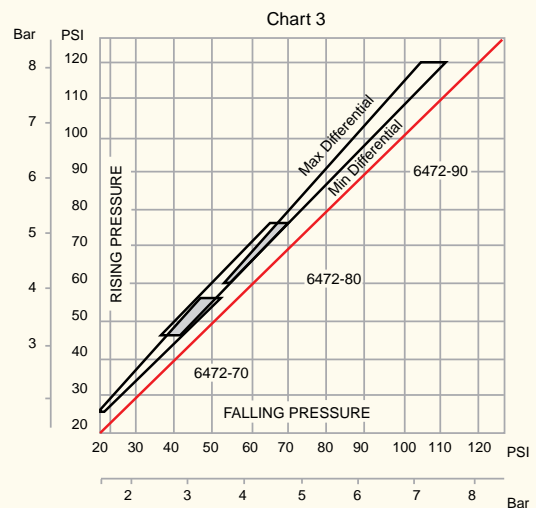
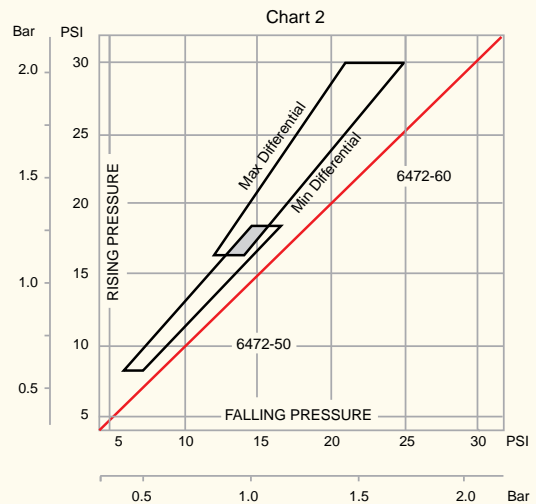
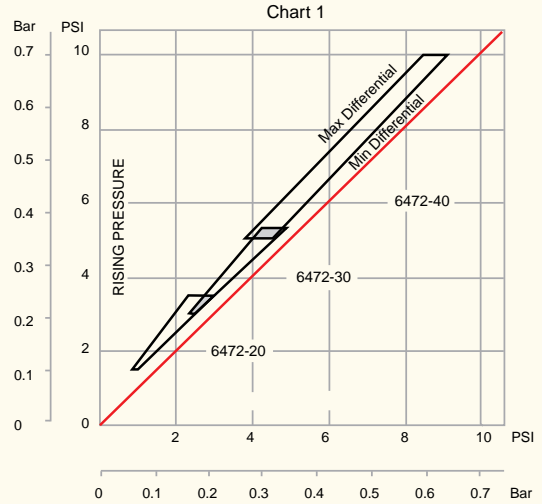


Back entry  
 6.4mm Ø spout

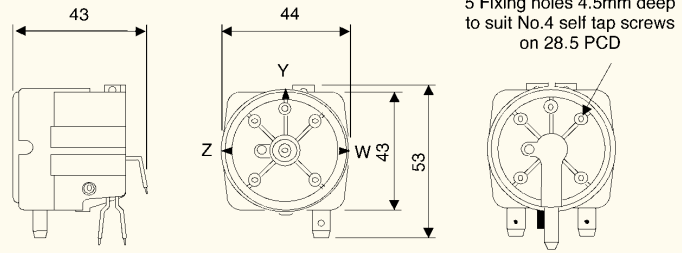
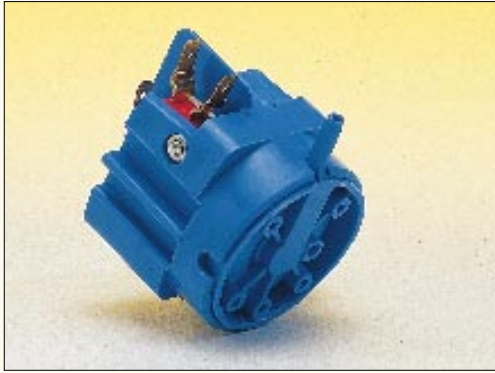


Back entry  
 4mm Ø spout

6742-20 to 6742-60 only



**Note:** Differentials are approximate



**Benefits**

- ❖ These switches have been designed primarily for the OEM manufacturer who requires low cost and high reliability
- ❖ UL recognised versions available

- ❖ The switches have excellent repeat accuracy
- ❖ Double pole switching available upon request
- ❖ Wide choice of microswitch options including tab configurations

Model No	6731-03	6731-06	6731-10
Electrical Switch	Single Pole change over	Single Pole change over	Single Pole change over
Contact Rating	3(1)A 250V ac	10(3)A 250V ac	21(8)A 250V ac
Pressure Connection	Side entry spout 4mm O/D	Side entry spout 4mm O/D	Side entry spout 4mm O/D
Setting Accuracy	± 10% as std	± 10% as std	± 10% as std
Withstand Pressure	25 PSI	25 PSI	25 PSI
Body Material	Nylon 12	Nylon 12	Nylon 12
Diaphragm	Neoprene	Neoprene	Neoprene
Spring	Spring steel	Spring steel	Spring steel
Weight	50gm	50gm	50gm

Model No	Pressure Range		Differential (Fixed)
	Inches Water	mm Water	
6731-03	1.5 - 7	40 - 180	See chart 1
6731-06	5 - 25	127 - 635	See chart 1
6731-10	20 - 55	510 - 1400	See chart 1

**Special options are available for quantity orders**

- ❖ Switches set to specific operating pressure, rising or falling
- ❖ Diaphragms in silicon rubber, nitrile, EPDM
- ❖ Switches with wide or close differentials
- ❖ Springs in stainless steel

Pressure Switches		6731-03		6731-06			6731-10		
Average Life Expectancy	Mechanical	2 x 10 <sup>6</sup>		2 x 10 <sup>6</sup>			1.0 x 10 <sup>6</sup>		
	Electrical	0.2 x 10 <sup>6</sup> @ 1A		0.2 x 10 <sup>6</sup> @ 6A 50K @ 10A			0.2 x 10 <sup>6</sup> @ 10A 10K @ 21A		
Electrical Rating		Max Electrical Load		Max Electrical Load			Max Electrical Load		
	Voltage	Resistive	Inductive	Resistive	Inductive	Motor (Pf0.75)	Resistive	Inductive	Motor (Pf0.75)
	125V	3A	1A	10A	10A	0.5HP	21A	15A	1HP
AC	250V	3A	1A	10A	10A	0.5HP	21A	15A	2HP
DC	6V	3A	1A	10A	10A		21A	21A	
	12V	3A	1A	5A	3A		15A	15A	
	24V	1A	0.5A	5A	3A		8A	7A	
	60V	1A	0.5A	1A	0.5A		1A	0.5A	
	110V	0.5A	0.2A	0.5A	0.2A		0.5A	0.2A	
	220V	0.25	0.1A	0.25A	0.1A		0.25A	0.1A	
Switch Standards:		EN 60730, EN 61058 and UL 508							
Approvals Available		CE, BEAB, CSA, DEMCO, IMQ, KEMA, NEMCO, OVE, SEMCO, SET I, SEV, UL, VDE. Approved to BS 3955 part III							

**Note:** Dry Switching

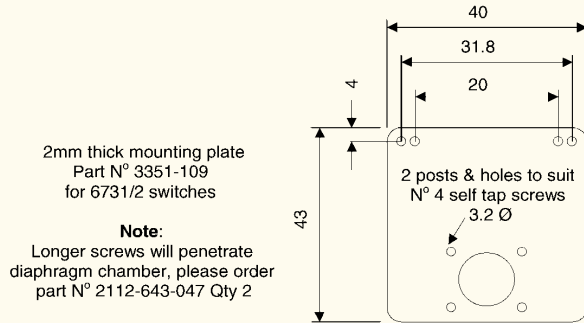
If switching low power circuits, low current (4 to 100 milliamperes) and low voltage (below 30V), consult herga for special switches.

**NB** - Herga do not accept liability for any pressure operated device used outside the pressure range specified by the company.

### Suitability for use with different operating media

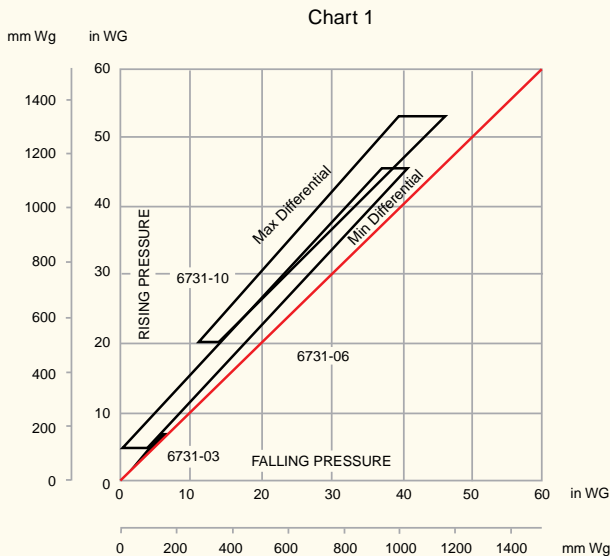
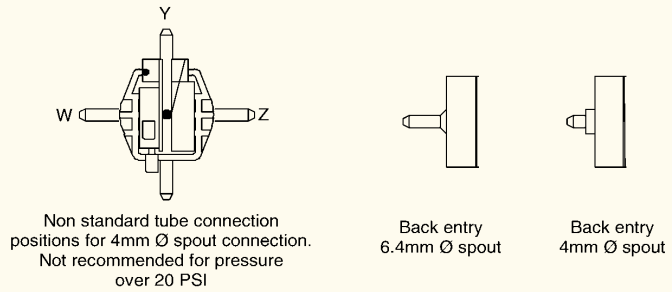
Pressure Medium	Diaphragms
Chemical Compatibility	6731
Acetone	✓
Ammonia (Liquid)	✓
Amyl Alcohol to 20°C	✓
Automotive Brake Fluid	✓
Beer	✓
Benzyl Alcohol	✗
Butane	✓
Carbon Dioxide - Dry	✓
Citric Acid	✓
Copper Sulphate (Sol.)	✓
Compressed Air	✓
Cutting Oil	✓
Diesel Oil	✓
Detergent Solution	✓
Fuel Oil	✓
Glycol	✓
Hydraulic Oil	✓
Hydrogen	✓
Lubricating Oil	✓
Milk	✓
Mineral Oil	✓
Natural Gas	✓
Nitric Acid (Dil.)	✗
Oxygen to 70°C	✓
Petrol	✓
Plating Solution (Chrome)	✓
Salt Water	✓
Sewage	✓
Sulphur Dioxide	✗
Turpentine	✓
Vinegar	✓
Water	✓

**Key:** ✓ = Recommended  
 ✓ = Suitable with modification  
 ✗ = Not suitable

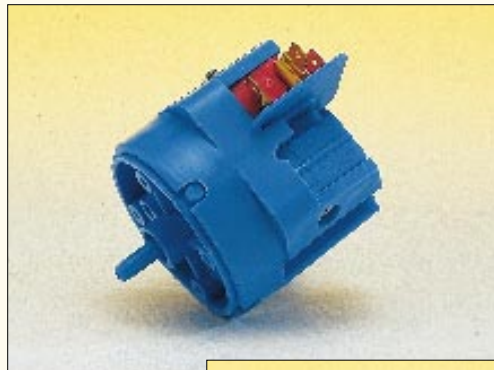


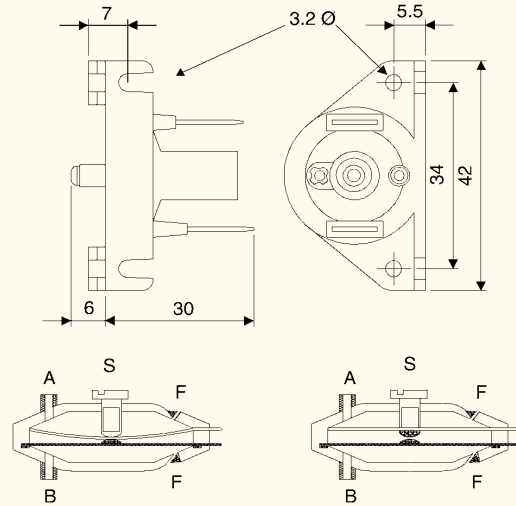
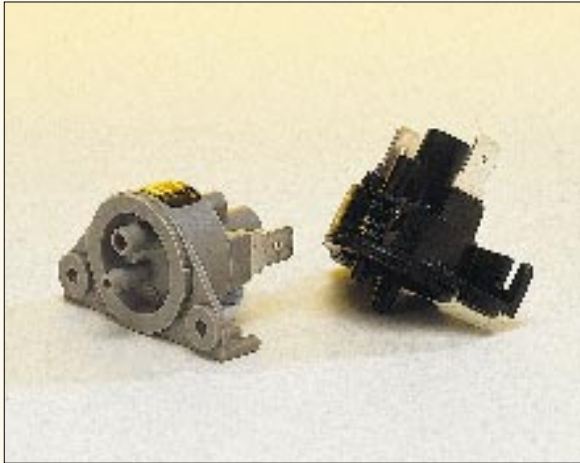
### Alternative Pressure Connections

Back Entry 1/8" BSPT and NPT Pressure Connectors



**Note:** Differentials are approximate





**Benefits**

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

- ❖ Bleed versions available for temperature compensation
- ❖ Easily adjustable settings
- ❖ Custom pressure, vacuum and bleed settings available upon request

6753 - [ ] [ ] [ ] [ ] - [ ] [0] [0] [0]

- 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/O to N/C, Pressure N/C to N/O
  - C Bleed both sides Vacuum / Pressure
  - D No bleed variant either side Vacuum / Pressure
- 4. Bleed Setting**
  - A 100 - 300 cc/Min Factory Setting
  - J No bleed setting
- 5. Pressure Setting**

A 2.25" WG ± 0.5" Std	B 2" WG ± 0.5"
C 3" WG ± 0.5"	D 4" WG ± 0.5"
E 6" WG ± 10%	F 8" WG ± 10%
G 10" WG ± 10%	H 12" WG ± 10%
J 14" WG ± 10%	K 16" WG ± 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 (2.25 ins) Wg (Contacts Normally Open) Other settings available see note <sup>2)</sup>
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, other settings available, see note <sup>3)</sup>
Flow Rate Litre / Min	Standard 100 - 300 cc/Min @ 5 PSI
Connection Position	Base see note <sup>2)</sup>
Pressure Connection	4mm dia spouts For reducing connectors, please refer to accessories page
Connecting Tube Reference	2311-08 or 2311-01
Temperature Range	-5°C to 50°C

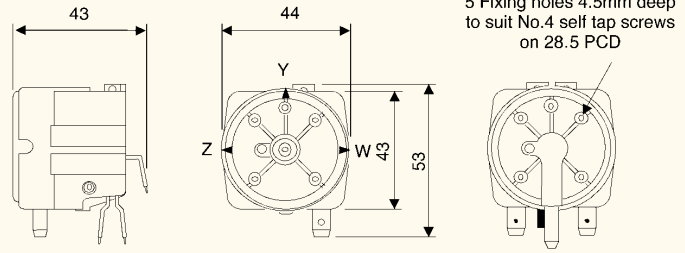
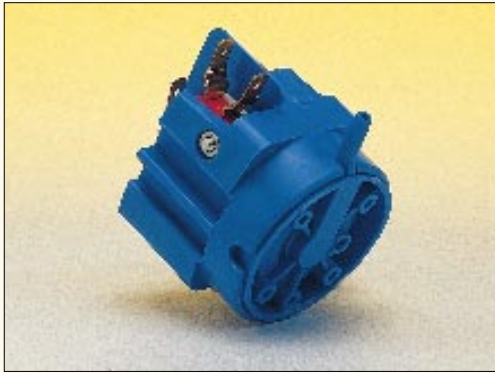
Electrical Data	
Switch	Single pole, N/Open / N/Closed
Contact Rating Maximum	0.5A RES 250V ac (Maximum ratings may not be achieved at low pressure settings)
Dry Switching Minimum Current	5mA 4V dc
Body	Glass filled nylon 12
Diaphragm	Neoprene
Contacts	Gold plated silver mounted on phosphor-bronze blades
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 pressure, vacuum or pressure differential. This design feature can be used when measuring pressure pulses such as on component counting applications and used with herga Safe Edges. The switch will operate very rapidly keeping the switch delay to a minimum.

- 1) 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.
- 2) 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, connect to air connection 'A' and screw in sensitivity adjusting screw 'S' until contacts are normally closed. For operation on pressure with normally open contacts, connect to air connection 'B' and set with contacts normally open.
- 3) 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 elbows, and prevent pressure or vacuum building up inside when the ambient temperature or atmospheric pressure changes.



**Benefits**

- ❖ These switches have been designed primarily for the OEM manufacturer who requires low cost and high reliability
- ❖ UL recognised versions available

- ❖ The switches have excellent repeat accuracy
- ❖ Double pole switching available upon request
- ❖ Wide choice of microswitch options available including tab configurations

Model No	6721-03	6721-06	6721-20/30/40
Electrical Switch Data	Single Pole change over	Single Pole change over	Single Pole change over
Contact Rating	3(1)A 250V ac	10(3)A 250V ac	21(8)A 250V ac
Vacuum Connection	Side entry spout 4mm O/D	Side entry spout 4mm O/D	Side entry spout 4mm O/D
Setting Accuracy	± 10% std	± 10% std	± 10% std
Temperature Range	-5°C to + 70°C	-5°C to + 70°C	-5°C to + 70°C
Body Material	Nylon 12	Nylon 12	Nylon 12
Diaphragm	Neoprene	Neoprene	Neoprene
Spring (in Vacuum Cavity)	Spring steel <sup>1)</sup>	Spring steel <sup>1)</sup>	Spring steel <sup>1)</sup>

Model No	Vacuum Range		Differential (Fixed)
	Inches Water	mm Water	
6721-03	3 - 8	75 - 200	See chart 1
6721-06	7 - 15	180 - 380	See chart 1
6721-20	13 - 32	330 - 810	See chart 1
6721-30	28 - 80	710 - 2030	See chart 2
6721-40	75 - 270	1900 - 6860	See chart 2

**Special options are available for quantity orders**

- ❖ Switches set to specific operating vacuum, rising or falling
- ❖ Diaphragms in silicon rubber, nitrile, EPDM
- ❖ Switches with wide or close differentials
- ❖ Springs in stainless steel

**Note:** The spring is fitted in the vacuum cavity in contact with the media

Pressure Switches		6731-03		6731-06			6731-10		
Average Life Expectancy	Mechanical	2 x 10 <sup>6</sup>		2 x 10 <sup>6</sup>			1.0 x 10 <sup>6</sup>		
	Electrical	0.2 x 10 <sup>6</sup> @ 1A		0.2 x 10 <sup>6</sup> @ 6A 50K @ 10A			0.2 x 10 <sup>6</sup> @ 10A 10K @ 21A		
Electrical Rating		Max Electrical Load		Max Electrical Load			Max Electrical Load		
	Voltage	Resistive	Inductive	Resistive	Inductive	Motor (Pf0.75)	Resistive	Inductive	Motor (Pf0.75)
	125V	3A	1A	10A	10A	0.5HP	21A	15A	1HP
AC	250V	3A	1A	10A	10A	0.5HP	21A	15A	2HP
DC	6V	3A	1A	10A	10A		21A	21A	
	12V	3A	1A	5A	3A		15A	15A	
	24V	1A	0.5A	5A	3A		8A	7A	
	60V	1A	0.5A	1A	0.5A		1A	0.5A	
	110V	0.5A	0.2A	0.5A	0.2A		0.5A	0.2A	
	220V	0.25A	0.1A	0.25A	0.1A		0.25A	0.1A	

Switch Standards: EN 60730, EN 61058 and UL 508

Approvals Available CE, BEAB, CSA, DEMCO, IMQ, KEMA, NEMCO, OVE, SEMCO, SET I, SEV, UL, VDE. Approved to BS 3955 part III

**Note:** Dry Switching

If switching low power circuits, low current (4 to 100 milliamperes) and low voltage (below 30V), consult herga for special switches.

**NB** - Herga do not accept liability for any vacuum operated device used outside the pressure range specified by the company.

### Suitability for use with different operating media

Vacuum Medium	Diaphragms
Chemical Compatibility	6721
Acetone	✓
Ammonia (Liquid)	✓
Amyl Alcohol to 20°C	✓
Automotive Brake Fluid	✓
Beer	✓
Benzyl Alcohol	✗
Butane	✓
Carbon Dioxide - Dry	✓
Citric Acid	✓
Copper Sulphate (Sol.)	✓
Compressed Air	✓
Cutting Oil	✓
Diesel Oil	✓
Detergent Solution	✓
Fuel Oil	✓
Glycol	✓
Hydraulic Oil	✓
Hydrogen	✓
Lubricating Oil	✓
Milk	✓
Mineral Oil	✓
Natural Gas	✓
Nitric Acid (Dil.)	✗
Oxygen to 70°C	✓
Petrol	✓
Plating Solution (Chrome)	✓
Salt Water	✓
Sewage	✓
Sulphur Dioxide	✗
Turpentine	✓
Vinegar	✓
Water	✓

**Key:** ✓ = Recommended  
 ✓ = Suitable with modification  
 ✗ = Not suitable

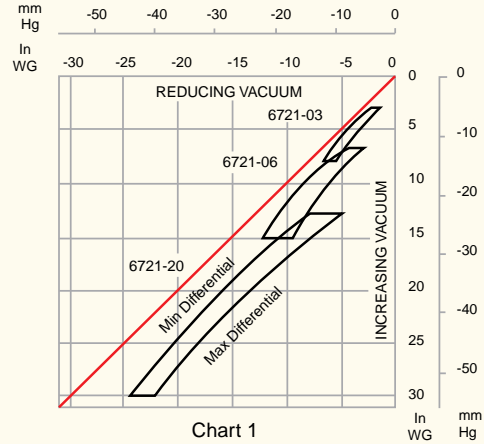


Chart 1

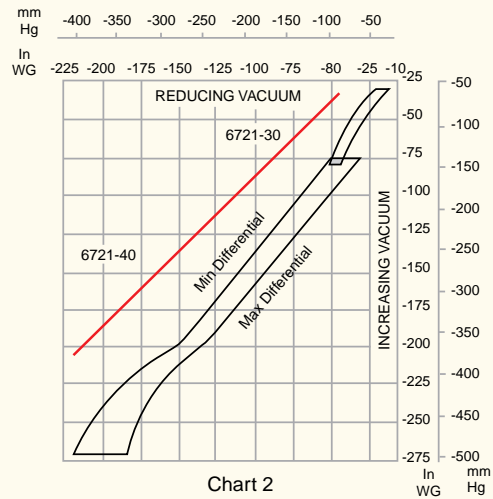
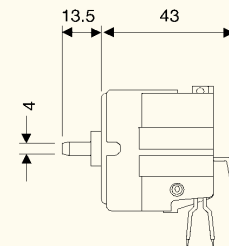
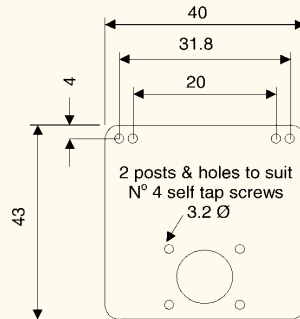


Chart 2

**Note:** Differentials are approximate

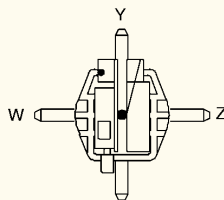
2mm thick mounting plate  
 part N° 3351-109  
 For 6721/2 switches

**Note:**  
 Longer screws will penetrate  
 diaphragm chamber, please order  
 part N° 2112-643-047 Qty 2



Back entry option available

### Alternative Vacuum Connections Back entry 1/8" BSPT and NPT Connectors



Non standard tube connection  
 positions for 4mm Ø spout connection.



Back entry  
 6.4mm Ø spout


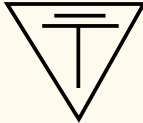




















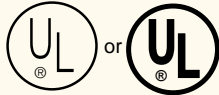




Back entry  
 4mm Ø spout





# Certification Markings

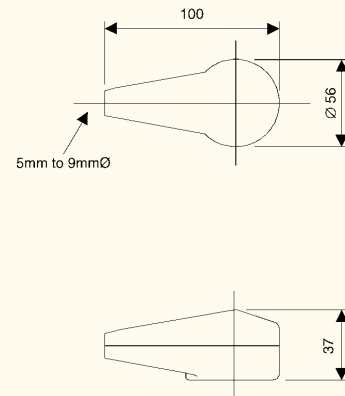
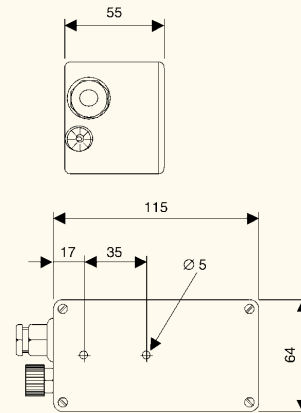
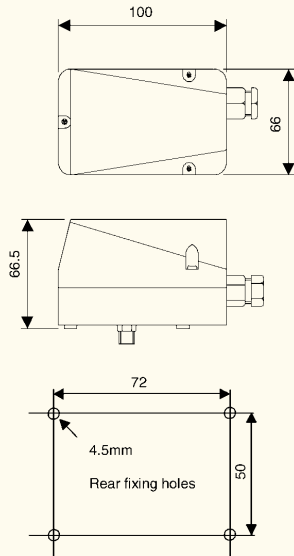
Country	Agency	Mark	Country	Agency	Mark
Australia	SAA		Japan	MITI	
Austria	OVE		Netherlands	KEMA	
Belgium	CEBEC		New Zealand	SECV SECQ SECWA EANSW ETSA HECT SANZ	
Canada	CSA				
Denmark	DEMKO		Norway	NEMKO	
Europe	MANY		Republic of South Africa	SABS	
Finland	FEI		Sweden	SEMKO	
France	UTE		Switzerland	SEV	
Germany	VDE		United Kingdom	ASTA	
				BSI	
India	ISI			BEAB	
Ireland	IIRS		United States	UL	
Italy	IMQ				



### 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 connection with this part.

# Rapid Response Form (Photostat and fax back)



It is our goal to give you a response within 24 hours. By completing this form it will help us to help you!  
Thank you.

CUSTOMER			
CONTACT NAME		TEL:	FAX:

\_\_\_\_\_ PRESSURE \_\_\_\_\_ VACUUM

INDUSTRY: MEDICAL  POOL & SPA  CHEMICAL/PROCESS  INDUSTRIAL  OTHER \_\_\_\_\_

CLASSIFICATION: OEM  DISTRIBUTOR / RESELLER  END USER  OTHER \_\_\_\_\_

REQUIREMENTS: \_\_\_\_\_ PRESSURE. \_\_\_\_\_ VACUUM. \_\_\_\_\_ DIFFERENTIAL PRESSURE.

IF PRESSURE OR VACUUM MEASURED GAUGE (AS IN CATALOGUE) OR ABSOLUTE? \_\_\_\_\_

\_\_\_\_\_ INCHES WG \_\_\_\_\_ PSI GAUGE OPERATING RANGE: \_\_\_\_\_ TO \_\_\_\_\_ ±

HERGA TO SET  WE WILL SET  ON RISING  ON FALLING

MAX PRESSURE/VACUUM UNIT WILL BE SUBJECTED TO \_\_\_\_\_ SETTING PREFERENCE ± \_\_\_\_\_

MAX DIFFERENTIAL (DIFF. BETWEEN RISE & FALL) \_\_\_\_\_ MIN DIFFERENTIAL \_\_\_\_\_

MEDIA GAS \_\_\_\_\_ TEMPERATURE \_\_\_\_\_ AMBIENT \_\_\_\_\_ TO \_\_\_\_\_

LIQUID \_\_\_\_\_ TEMPERATURE \_\_\_\_\_ MEDIA \_\_\_\_\_ TO \_\_\_\_\_

ELECTRICAL: VOLTS \_\_\_\_\_ AC \_\_\_\_\_ / \_\_\_\_\_ DC MAX CURRENT: AMPS \_\_\_\_\_ HP \_\_\_\_\_

\_\_\_\_\_ RESISTIVE \_\_\_\_\_ INDUCTIVE LOAD DESCRIPTION \_\_\_\_\_

APPROVAL NEEDED: UL  CSA  OTHER \_\_\_\_\_

CONTACT CONFIGURATION: SINGLE POLE  DOUBLE POLE  GOLD CONTACT

MECHANICAL: MOUNTING PREFERENCE 1/8" BSPT BRASS  1/8" BSPT STAINLESS  SIDE SPOUT  CENTRE SPOUT

1/8" NPT BRASS  1/8" NPT STAINLESS  PCB MOUNT  OTHER \_\_\_\_\_

APPLICATION (WHAT WILL SWITCH CONTROL?) \_\_\_\_\_

QUANTITY REQUIRED FOR PROTOTYPE? \_\_\_\_\_ REQUIRED DATE \_\_\_\_\_

ANNUAL PRODUCTION QUANTITY? \_\_\_\_\_ START DATE \_\_\_\_\_

CURRENT SWITCH USED? \_\_\_\_\_ PRICE RANGE \_\_\_\_\_

ANY PROBLEMS WITH PRESENT UNIT? \_\_\_\_\_

