



**Pharmatech**  
Innovation in Pharmaceutical Engineering

# Dust Containment Systems

## Dust Cap Seals



Simple and effective dust and fume tight transfer systems

# 1. Dust Cap Seals



## Temporary Dust Tight Connections

Pharmatech Dust Cap Seals are designed for use wherever two components are to be temporarily joined for product transfer.

## FDA Acceptable Polymer

Dust Cap Seals are manufactured using an FDA acceptable grade of silicone rubber and so are suitable for product contact in most pharmaceutical and food applications.

## Durable

Dust Cap Seals are highly durable and are suitable for repeated use even with automated or mechanical docking systems.

## Easy to Clean

Most users clean their Dust Cap Seals by hand however they can withstand temperatures of up to 200° and so can be cleaned in washing machines and are also suitable for autoclaving.

# 2. Mounting Rings



Mounting rings are essential as they are used to hold Dust Cap Seals firmly in place.

## GMP Correct

Mounting rings are essential to ensure a good connection between the dust cap seal and the item of processing machinery.

## Effective

The solid bar around the top of the Mounting Ring is designed to fit exactly the recess in the Dust Cap Seal. This helps to ensure that the Dust Cap Seal stays in place and will resist pressure from beneath.

## Mounting Ring Design

Mounting Rings are designed for use in GMP applications. The rim of the Mounting Ring consists of a solid bar that is welded to the metal ring. This design is completely crevice free, unlike a rolled rim that is a product trap, water trap and a biological hazard.

The GMP Correct Mounting Ring



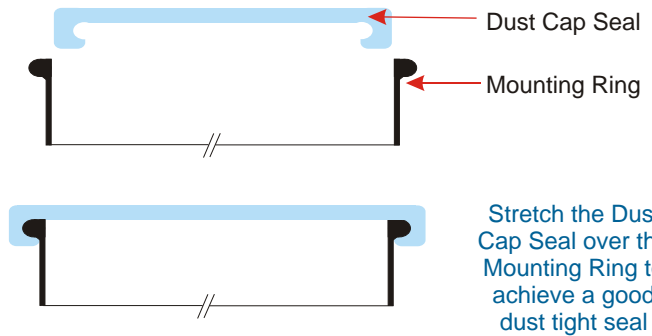
Unhygienic Rolled Rim





### 3. Fitting Dust Cap Seals

Dust Cap Seals are specially designed to be undersized and require to be stretched over the mounting ring. The tight seal obtained ensures that Dust Cap Seal is secure and that dust can not leak between the seal and the mounting ring.



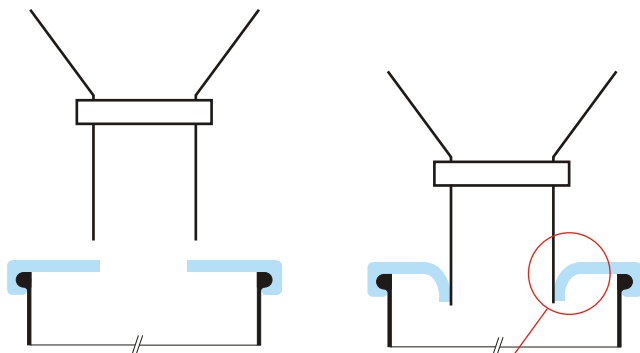
### 4. Hole Cutting

Pharmatech offer a [hole cutting service](#) to ensure that the hole is both the correct size and the correct shape. Holes must be cut before the Dust Cap Seal is fitted to the mounting ring.

**A. Hole Size** - To ensure a good dust tight fit the hole needs to be smaller than the pipe that will pass through it. This forces the silicone rubber to stretch around the down pipe.

The hole should be approximately 30mm smaller than the diameter of the pipe passing through it.

**B. Hole Shape** - To ensure a good dust tight fit and to ensure the edges of the hole do not shed then the hole needs to be exactly circular.



The Dust Cap Seal is stretched and pushed downwards as the spigot passes through

**Do not use a knife is used to cut the hole** as this will not produce a circular hole. A knife will also leave spicules of rubber along the cut edge, these may then end up in the product. Pharmatech use a heavy duty press and have developed a range of special punches to cut the holes.



Correct

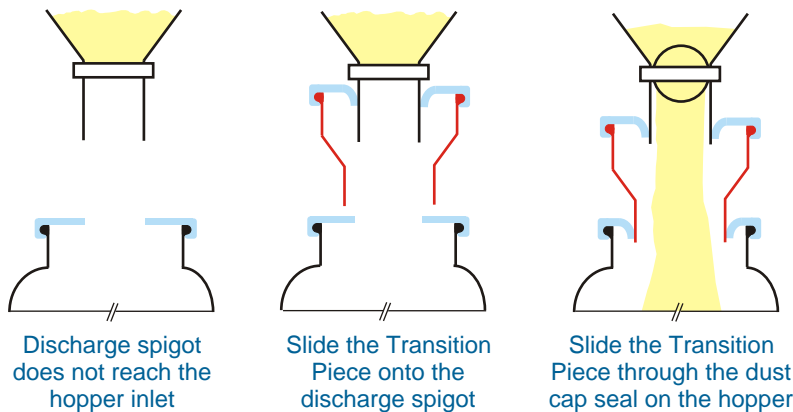


Incorrect

### 5. Dust Cap Seal Accessories

#### Transition pieces

Transition pieces (shown in red) can be used to bridge the gap between the outlet of one piece of equipment and the inlet of another. They are especially useful for equipment that is not height adjustable.



## 5. Dust Cap Seal Accessories continued.

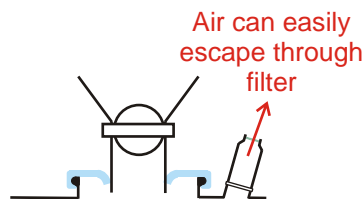
### Lids

Lids can be used to cover the hole in a dust cap seal. The lid is securely held in place, by a simple thumb tightened nut, and provides a safe non-leak seal.



### Vents

Filter Vents can be used to quickly dissipate any over-pressure that is created when a large amount of product is quickly added into a container.



## Dust Cap Seals

### Dust Cap Seals

Material:	Silicone Rubber
Standard Colours:	Blue or Translucent
Documentation:	Certificate of Conformity
	FDA standard 177.2600

Other polymers and colours are available - ask for details

Part Number	Nominal Diameter	Maximum Inlet Diameter	Weight (approx.)
095/100	100mm	60mm	0.2kg
095/150	150mm	100mm	0.3kg
095/200	200mm	150mm	0.3kg
096/250	250mm	200mm	0.5kg
095/300	300mm	250mm	0.6kg
095/315	315mm	265mm	0.7kg
095/400	400mm	350mm	1.0kg

### How To Order Dust Cap Seals

Use the following format to specify the Dust Cap Seals that you require:

095/XXX/Y/ZZZ

where:

XXX	Nominal Diameter of the dust cap seal
Y	Colour - B for blue or T for Translucent
ZZZ	Diameter of the hole

### Examples:

095/250/B/120	= 250mm Dust Cap Seal, blue with a 120mm hole
095/300/T	= 300mm Dust Cap Seal, translucent with no hole

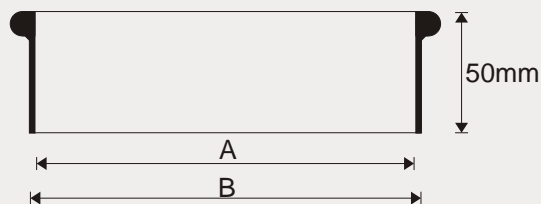
## Mounting Rings

### Standard Mounting Rings

Material:	316L stainless steel
Standard Finish:	240 grit finish inside and out
Welds:	Ground and polished
Documentation:	Certificate of Conformity

### Optional Extras

Optional Finishes:	Bright polish
	Beadblasted
	Pickled and Passivated
	Electro-polished
Optional Documentation:	Mill Certificates



Part Number	Nominal Diameter A	Outer Diameter B	Weight (approx.)
096/100	100mm	104mm	0.5kg
096/150	150mm	154mm	0.6kg
096/200	200mm	204mm	0.8kg
096/250	250mm	254mm	0.9kg
096/300	300mm	304mm	1.0kg
096/315	315mm	319mm	1.0kg
096/400	400mm	404mm	1.2kg