

Inflatable Bulk Bag Clamp

Pneumatic Bulk Bag Seal Quick Detach – Poly Urethane (PBS-QD)



- ✓ 100% sealed – no leaks
- ✓ Easy to install
- ✓ Quick to fit & remove bags
- ✓ Strong and Durable
- ✓ No pinching points
- ✓ No loose parts
- ✓ Inflates in seconds
- ✓ Deflates in seconds
- ✓ Custom sizes
- ✓ For all sizes of Bulk Bags and bulk containers
- ✓ Fits every existing equipment connection
- ✓ Jacob, Tri-clamp, Snap in cuffs connections available
- ✓ For imperial and metric tubing



O
Unworked End for hoseclamp

F
FSC sealed in jacob flange

M
FDM pressed on Jacob flange

L
LFR pressed on Tri-clamp

S
Snap In Ring

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Advantages

- Available with most common quick couplings and connections, and available with custom connections.
- Inflates in seconds and provides a tight seal on the neck / spout of the bulk bag eliminating product leaks.
- Much safer for workers hands as there are no pinch points
- Can be used on bulk bags with or without plastic liners, bins or containers.
- Easy to detach in only seconds for easy cleaning
- Standardized sizes fast available
- Custom made sizes fast available
- Hygienic Poly Urethane material
- Explosion safety
- Food contact safety according to all big international regulations
- No parts that can loosen and be lost in the machinery or bulk container or bag
- Filcoflex Poly Urethane is non porous and easy to clean
- Filcoflex Poly Urethane does not degrade

Can be used to fill or empty all sorts of bulk containers such as:

- Big Bag
- Plastic bag
- Paper bag
- Super sack
- FIBC
- Bin
- Vessel
- Drum
- Bags and bins with or without liners
- Bulk packaging

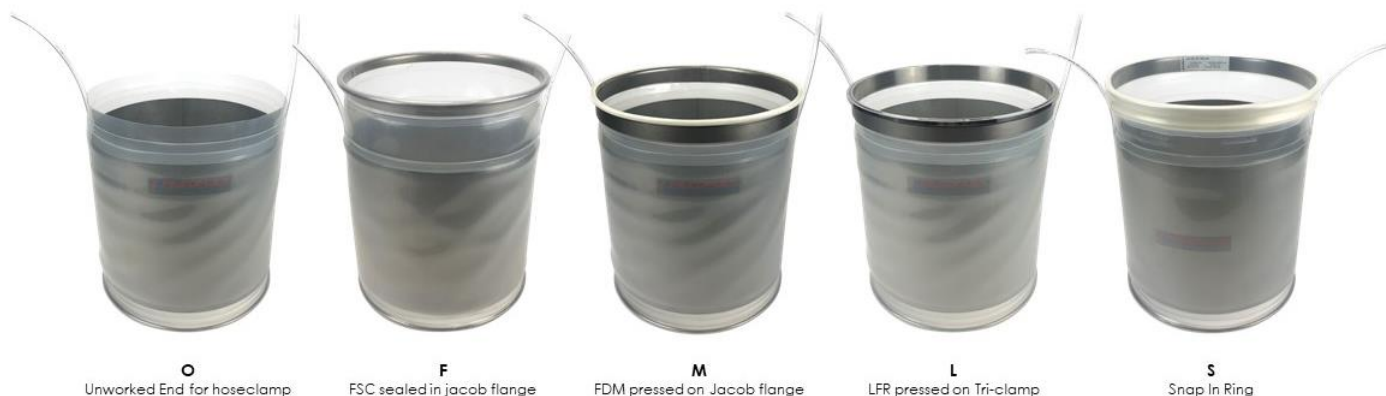


Pneumatic Bag Seal – Quick Detach

An Inflatable Seal that attaches to a filling head of a filling or emptying station for filling all sorts of Big Bags, containers and bins.

The name PBS QD stands for Pneumatic Bag Seal - Quick Detach. Quick Detach meaning this version is available with a number of connecting methods that allow to quickly attach or detach this inflatable seal to the big-bag filling equipment.

PBS-QD is available in standardized sizes and in any custom size, both are in the same price strategy and are available with the same fast delivery.

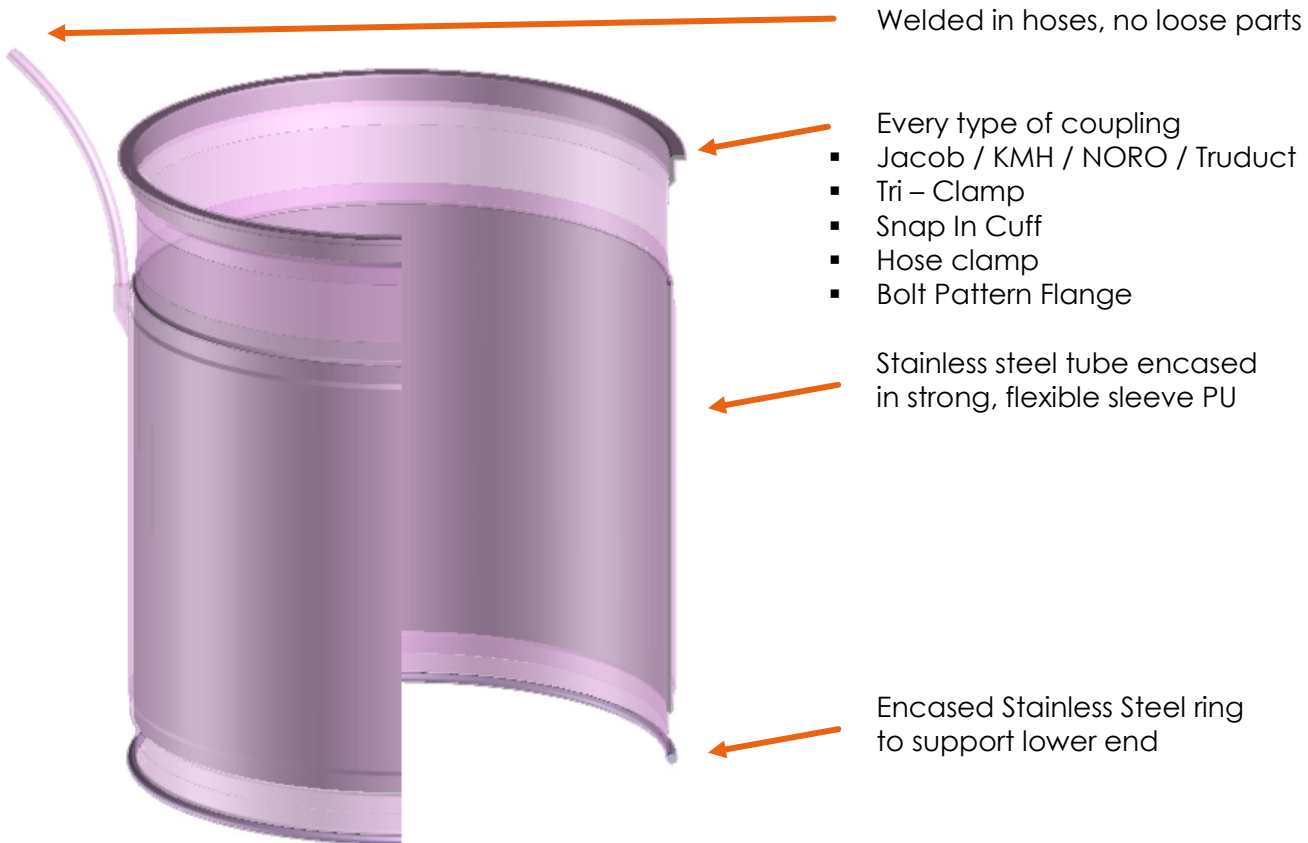


Construction of the product

PBS-QD is built up out of three layers of Poly Urethane film of 1.0mm thickness

PBS-QD has a Stainless steel tube incased in between the 2 inner layers which are sealed airtight to prevent any accumulation of dust or fluids from inside the Big-Bag filling station and from the outside production room.

The third layers is the outside inflatable bladder, which inflates outward to provide a 100% seal between the filling installation and the powder container or big bag neck / spout.



- When inflated the outer Poly Urethane layer will securely hold the bag neck up and open for clean, efficient filling.
- There are no pinch points to endanger operator's hands when fitting the bag.
- Can be used with or without plastic liners.

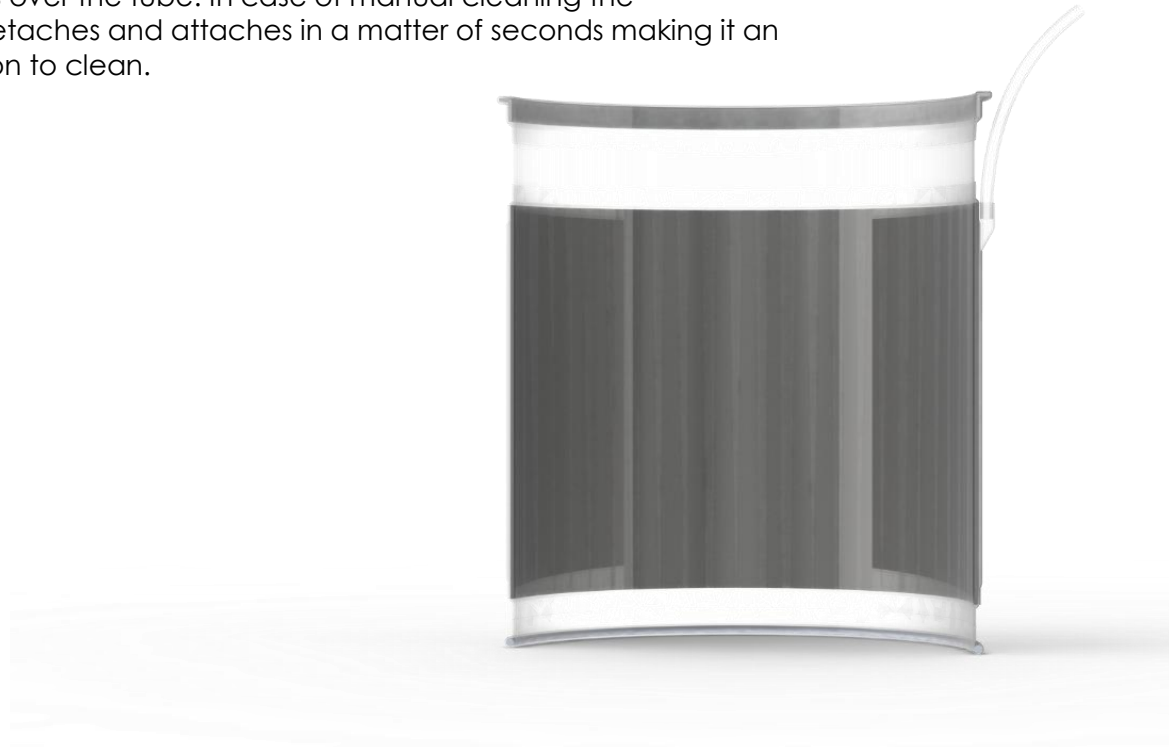
Connecting method

Traditional Inflatable seals are fitted by being mounted on the outside of the tube or filling head. When the inflatable seal is pressurized it shortens and a pocket is opens up between the inflatable seal and the machine tube / filling head, In this pocket dust or powder can accumulate. In some applications this is not permitted. For those applications PBS-QD is designed.

Pocket with accumulation



PBS-QD does not slide over the filling spout or tube, but it connects to it. Because the seal is not fitted on the outside of any existing tube anymore there is no more gap where powder or dust can accumulate between the tube or chute of the bag filling station and the inflatable seal that slides over the tube. In case of manual cleaning the Inflatable Bag Clamp detaches and attaches in a matter of seconds making it an nearly effortless operation to clean.



Pneumatic Connection and operation

PBS-QD is built with welded in compressed air lines, made of poly urethane hoses. The hoses are completely airtight welded in to the upper rim of the Poly Urethane inflatable bladder. The 8x5.5mm PU air hose is suitable to use with any standard 8mm push in air fitting, allowing it to be attached and detached within seconds.

The hoses are welded up straight to stay clear from the bulk bag. The inflatable bladder is 100% free of any obstructions, sharp edges or pneumatic fittings. The full bladder length can be used to clamp the bulk bag or container.

Because there are no obstructions or fittings in the inflatable bladder, more bladder surface can be used making it easier to position or align Bulk bags or containers without losing time.

The 3D HF welding technique used to weld the hoses in the inflatable clamp ensures a 100% seal.

Each weld is tested before the Pneumatic Bag Seal is shipped out.



Threaded fittings create possible entry points into the bladder. This can be classified as a hygiene risk.

By welding the hoses in the upper rim instead of using threaded fittings in the outside sleeve, the entire inflatable bladder surface is free of any sharp objects.

Threaded parts can loosen and because of these parts can be lost in the machinery or bulk container or bag. Threaded fittings can start to leak, and can't be tied down because one side is not accessible to hold while tightening down.



PBS-QD as a standard comes with 2 hoses, divided over 180° from each other.
The quantity of hoses can be anywhere between 1 and 6 pcs.
The number of hoses has an effect on the speed of inflating and deflating.



The distance between the hoses can be evenly spaced around the full 360° circumference.
The hoses can also be orientated together on one side.



The Polyether Urethane hoses can be easily cut to length.
The standard length is 175mm
Simply use a pair of Multipurpose Miter Shears for the best and easiest cut.

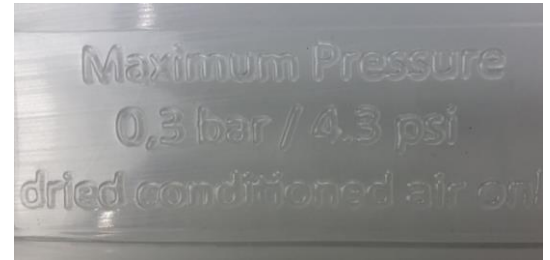


Operator safety

There are no pinch points no sharp edges or metal objects in the clamping area that endanger the hands or fingers of operators.



Safety instructions can be embossed in the PU



Air pressure / Compressed Air

The ideal compressed air line operating pressure is recommended to 0,3 Bar / 4.3 PSI.

If a higher pressure is required to reach a larger inflated diameter this is possible, the absolute recommended maximum pressure is 0.41 Bar / 6 PSI.

If air pressure recommendations are exceeded this may cause permanent damage to the inflatable bladder. Even though a higher pressure can be held in without any immediate burst, it is recommended to not to exceed the Maximum pressure recommendations.



A hand operated button or switch as well as a foot pedal can be used to operate the inflation of the seal. Filcoflex offers a full kit with a hand button.



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Connection Styles and Dimensions

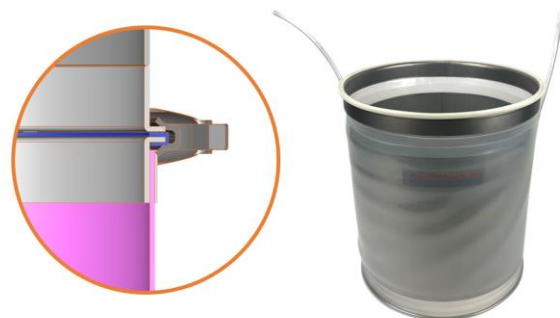
Tri- clamp connection

LFR (L) or CFL
Length 350mm
Standards: DIN 32676 / ISO 1127 / BS 4825 pt.3
Standards: DIN 11864 / Sterivalve
and others
Ø 100 - 315



Jacob Connection

FSC (F) or FDM (M)
Standardized sizes
Length 350mm
Ø 100, 120, 140, 150, 175, 200, 224, 250, 280, 300, 315,
350, 400, 450, 500, 560, 600, 630



Snap In Flexible (B)

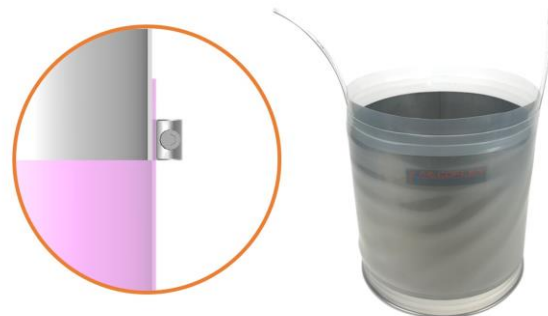
Length 350mm (+30mm Snap In Band)
Ø 200, 250, 300, 350, 400, 450



Connection Styles and Dimensions

Unworked end for hose clamp (R)

Length 350mm (+30mm Snap In Band)
Ø 100 – no maximum diameter



Sealed in hose clamp (K)

Length 350mm (+30mm Snap In Band)
Ø 100 – no maximum diameter



Bolt Pattern flanges (D)

Length 350mm (+30mm Snap In Band)
Ø 100 – no maximum diameter
Every bolt pattern



Diameters and expansion

Inside diameter (ID)	Outside diameter (OD)	Expands to fit Bag Neck Sizes (mm):	
		0.30 bar	0.41 bar
Ø100	110		
Ø114	124		
Ø140	150		
Ø150	160		
Ø168	178		
Ø175	185		
Ø200	210	230	242
Ø219	229		
Ø224	234		
Ø250	260		340
Ø280	290		375
Ø300	310	375	400
Ø315	325		
Ø319	329		
Ø350	360	425	460
Ø400	410		540
Ø450	460		590
Ø500	510		550
Ø560	570		710
Ø600	610		750
Ø630	640		780

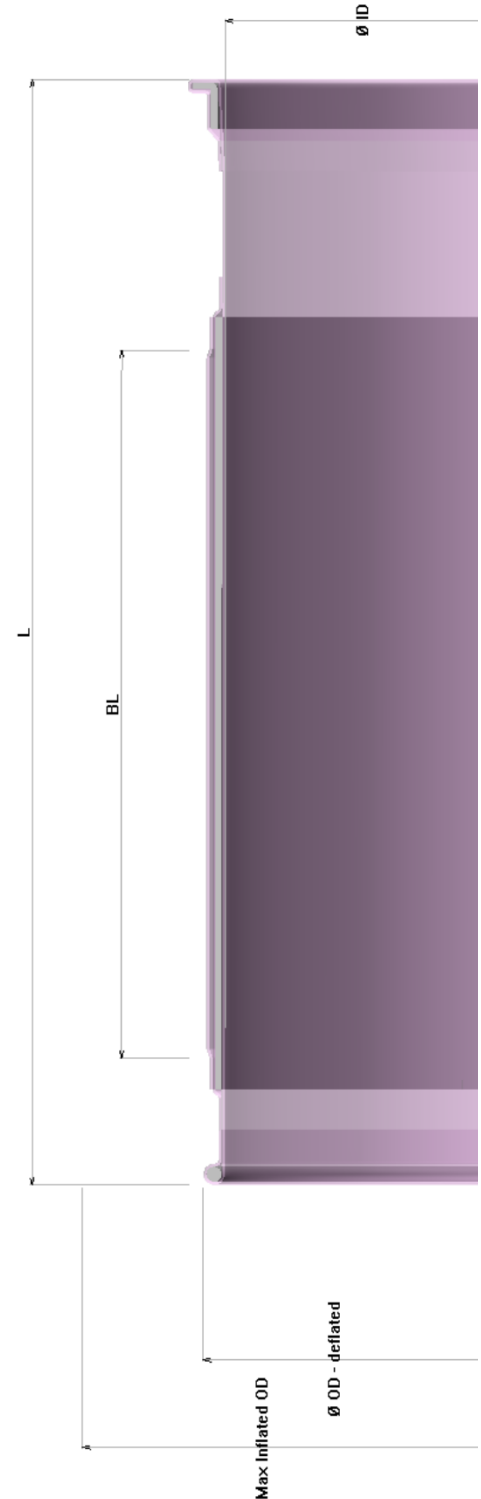
* All expanded diameters are based on the 350mm standard length.

** Other lengths are available.

If your sizes is not mentioned please let us know we will gladly calculate or test it for you.

Parameters

- L** total Length
- BL** inflatable Blatter Length
- ID** Inside Diameter
- OD** Outside Diameter when deflated
- Max Inflated OD** Maximum Inflatable Outside Diameter



Standardized sizes are available, next to our custom made sizes all using the same price strategy, and fast delivery.

Physical properties

The standard material every Inflatable Bulk Bag Clamp is made in, is our PU-UF3

PU-UF3

A hygienic flexible material with food contact safety certification and migration testing reports and provides good explosion safety characteristics.

PU-UF3 has a gloss hygienic surface on both sides and is non porous.
PU-UF3 does not age, does not become porous, will not crack or turn brittle.

Poly Urethane has a great abrasion and wear resistance.

Material :	Poly Ether Urethane (thermoplastic)
Surface Finish :	Gloss / Gloss non porous
Color :	Transparent / Opaque
Hardness :	87° Shore A
Wall Thickness :	1.0mm / 0.04 inch
Tensile Strength :	1200 grams / M ²
Operating Temperature Range :	- 40°C / -40°F to 90°C / 194°F
Ultimate Elongation (%) :	550%
Tear Strength :	60 Mpa
Air Permeability :	0 – non permeable
Weight :	1200 grams/M ²

PU-UF3 is a thermoplastic material and is welded using High Frequency or Heat Contact welding. No glue or any other adhesive will be used in the manufacturing of PU-UF3 products.

PU-UF3 is tested to be safe to use in ATEX zones 20, 21 and 22.
Electrostatic properties have been tested and reported by independent laboratories.
Filcoflex would happily provide all documentation



Materials

- **PU-UF3** 1,0mm transparent / opaque food contact compliant, explosion safe Poly Urethane
Standard for each inflatable bulk bag seal
Next to the standard PU-UF3 material there are a few more alternative materials:
- **PUW1** 1,0mm solid white food contact compliant poly urethane
- **PU-AS1** 1,0mm transparent static dissipative food contact compliant poly urethane

Food Safety and Certification

Every PBS is made out of the Filcoflex poly urethane film PU-UF3 as a standard PU-UF3 is safe to use for repetitive contact with food according to main international food contact safety regulations as well as explosion safety guidelines.

PU-UF3 being a polyurethane film is a non-porous material which makes it far more hygienic than any rubber material. The color is translucent / transparent which allows to see inside the 3 layers and inspect visually if there is any contamination between the 3 layers of poly urethane which may form any risk to the high quality product passing through to the container or big bag.

Poly urethane films do not become brittle and the surface does not crack due to exposure to light, UV, temperature or other influences that may affect most rubber seals making it superior for hygienic use.



- United States Food contact safety regulations FDA 21 CFR
 - o 175.105
 - o 177.1680
 - o 177.2600



- European Food contact safety regulations
 - o (EC) 1935/2004
 - o (EC) 10/2011
 - o (EC) 2023/2006



- Chinese Food Contact regulations
 - o GB 4806.7 – 2016
 - o GB 5009.156
 - o GB 31604.1 – 2015
 - o GB 4806.6 – 2016
 - o GB 9685 – 2016

PU-UF3 contains no PVC, Phthalates, Animal derived components, Bisphenol, Silicone, Latex or heavy metals and do not contain any substances listed under REACH regulations.

Please contact us to receive the full safety datasheets, certificates, compliancy declarations, migration testing reports, explosion safety testing reports.