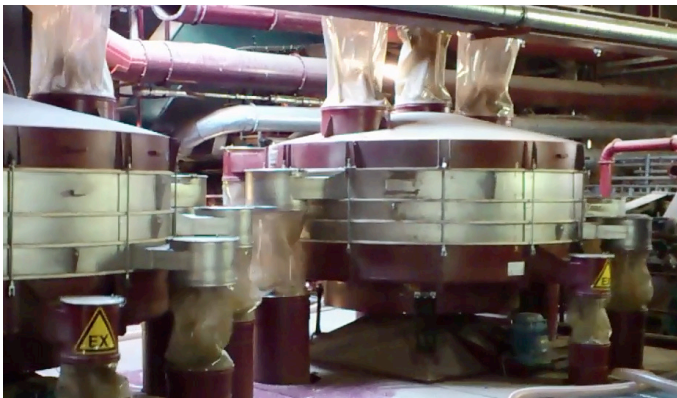


Sifters

Sifters are used for many and varying products, ranging from dried food to aggregates, pharmaceutical to liquid chocolate. The movement of the sifter requires a flexible connection between both the feed hopper and the output.

The most common problem with sifters is poor sealing around the flexible connector leading to a loss of product and serious hygiene issues. The BFM® fitting is perfectly suited for all oscillating, gyrating or vibratory equipment with its unique internal snap-fit system that creates a perfect seal every time. No more product leakage or build-up at the connection points.

OSCILLATING SIFTERS (SWING IN A ROTATING MOVEMENT)



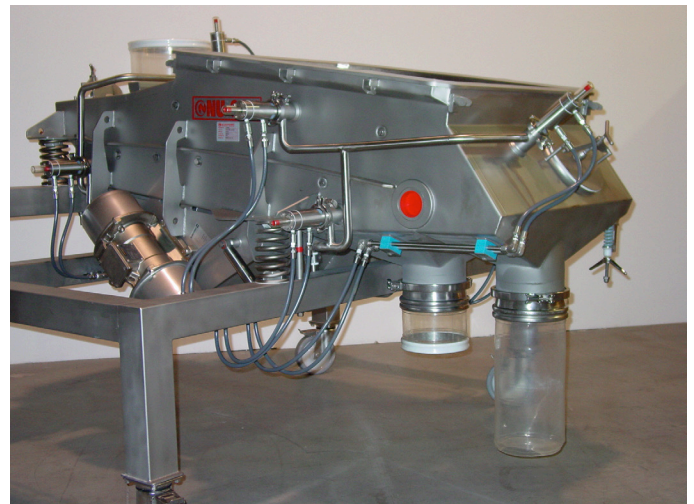
Oscillating sifters, such as Allgier, Great Western and Rotex have a large throw (movement) from left to right as well as up and down. To allow for sufficient flexibility to take up the oscillating movement of the sifter decks, the flexible connectors typically need to be longer than the usual standard of 100 or 200mm. The rule of thumb is: connector length is equal to the diameter x 1.5. To keep the product range as standard as possible, we recommend that you keep to these lengths if at all possible.

VARIABLES THAT AFFECT CONNECTOR LIFE ON SIFTERS:

There are a number of variables that will effect the life of any connector on a sifter (regardless of whether it is BFM® or a conventional type), such as:

- Extent and duration of operation.
- Abrasion from product flow.
- Additional stress from chemical products (e.g Acid, Caustic).
- Extreme temperatures.
- Installation height (the straighter the connector, the less wear will occur).
- Diameter of the connector (larger diameter connectors will typically tolerate the necessary compression better than a smaller one).
- Negative pressure - there is often a small vacuum in the system to help product exit the sifter smoothly. This vacuum may slightly suck the connector walls to the inside and cause further creasing with potential premature damage. If at all possible, pneumatic suction should be avoided in conjunction with strong oscillating movement.

VIBRATING SIFTERS (SHAKE RAPIDLY FROM SIDE TO SIDE)



Vibrating sifters, such as VAV and Sweco, have a far smaller amount of movement when compared to a vibratory sifter, either sideways or up and down. The sifters run at a far higher rate, hence the term vibratory. This means that sizing and working out an installation gap is much easier for these types of sifters.

THE ADVANTAGES OF THE BFM® FITTING IN SIFTER APPLICATIONS:

- Dust-tight and therefore: no product loss, no contamination of the work environment, no risk of dust explosions outside the system.
- Perfect closure of the snap band in the spigots every time. The BFM® seal can withstand pulling forces due to the equipment movement multiple far better than hose clips. No re-fitting necessary ever.
- Higher pressure tolerance than any hose clip connector due to the sealing from the inside.
- Atex, FDA and EC approved connector materials.
- Quick and easy replacement and cleaning - less equipment down time.

For more information on calculating the correct installation height and connector length, please refer to the following page.

Sifters: calculating installation gap

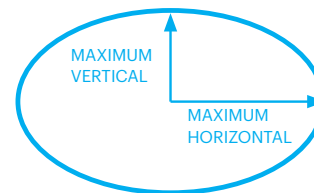
The outlets of the various sifter decks have different amounts of movement, usually larger on the upper decks and less the further down you get. In general, no two sifters will behave exactly the same, so you should treat each case individually when calculating the installation gap and connector length required.

01. MEASURE THE MOVEMENT OF THE SIFTER OUTLET

There are two methods for measuring this movement:

1ST METHOD: Measure the distances between the outlet and a fixed point (e.g. floor or the entry point of the pipe that it is to be connected to the outlet) at four different stages during an example run of the machine. The longest measured difference is then the starting point to calculate the optimal installation gap. You need to make sure that you are measuring when the sifter is at the maximum amount of movement.

2ND METHOD: Draw a motion curve for each outlet and measure the maximum vertical and horizontal distance from there. This method is the more exact way of determining the real movement but requires the necessary tools and some experience in taking those measurements.



02. CALCULATE INSTALLATION GAP

When calculating the required installation gap (measurement between welded spigots) it is important all factors of the sifters operation are taken into account.

The formula listed below offers a guideline to begin looking at the installations requirements.

$$\text{INSTALLATION GAP (IG)} = \text{connector length (less)} \\ \text{maximum vertical movement (less) } 13 \text{ mm}$$

The 13mm gives tolerance in the movement and should ensure that the connector does not get stretched during machine operation as this will diminish both the connector's durability as well as the functionality of the sifter.

EXAMPLE:

- Outlet X has a diameter of 300mm.
- Connector length to be used is therefore 450mm (300 x 1.5)
- Maximum measured vertical movement is 50 mm.

$$450 - 50 - 13 = \text{installation gap of } 387 \text{ mm}$$

So the spigots need to be welded onto the machine and the connecting pipes in such a fashion that the remaining distance between both BFM® spigots is 387mm.

NOTE:

- To get an optimal fit for the BFM® connector, creating the right gap is essential. The areas where the material folds up will be most prone to abrasion and eventual cracking.
- Switching the connectors upside down regularly will help spread out the burden a little and therefore extend the operating life of the BFM® connector.
- It is also important to install the connectors with the vertical seam at a right angle to the spigot and to avoid twisting of the connector. Refer to the 'Easy Installation Guide'.

BFM® FITTING HAS AN INSTALLATION GAP CALCULATOR AVAILABLE TO ASSIST WITH CALCULATING THE APPROPRIATE CONNECTOR LENGTH. CONTACT US TO FIND OUT MORE.