


Calculating IG for Vertical Movement

When vertical movement is involved as well as horizontal (such as on Allgaier sifters), calculating the Installation Gap (IG - the space to leave between the two spigots) involves a little additional consideration.

Before you can calculate the correct IG, you will need to visually measure the amount of movement in both directions. We recommend doing this using slow-motion video with a ruler/tape measure in the shot to judge the movement.



The **installation gap (IG)** is the space to leave between the BFM® spigots. This will always be **slightly shorter than the connector length (CL)**.

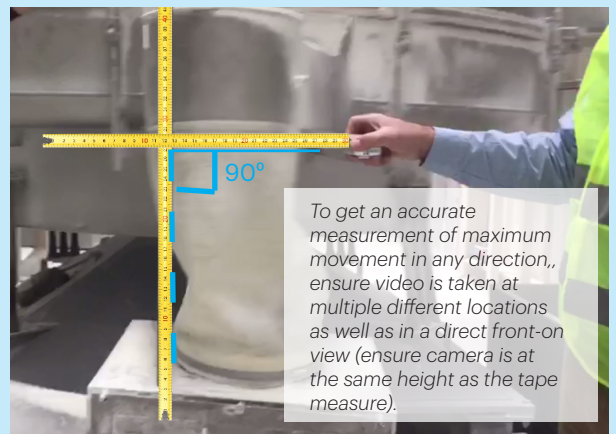
HOW TO MEASURE MOVEMENT (HORIZONTAL AND VERTICAL)

LASER POINTER: Attach a laser pointer to the pipe where the spigot will be welded, and then mark and measure the movement 'drawn' by the laser on the ground and wall (or surface that is horizontal to the laser to measure the movement up and down).

SLOW-MOTION VIDEO & TAPE MEASURES: Have two tape measures - one held up at the edge of the moving pipe and one at right-angles to the first, crossing over so that it extends across the front and past the edge of the moving pipe. Then, using slow-motion on your phone/camera, video the movement of the spigot. Ideally you need to have the camera at the same height as the horizontal tape measure to get an accurate reading.

Repeat this same process at several additional positions around the sides of the pipe as there may be more movement in one direction than the other and this may not be obvious if only videoed from front-on.

Be sure to measure the movement at both start-up and wind-down as there is often a larger swing at this time than during regular operation.



We recommend watching the ['Measuring for the Right Connector'](#) video on the BFM® fitting website for more guidance.

ADJUSTING IG FOR VERTICAL MOVEMENT: IDENTIFY THE 'STOPPED' POSITION WHEN INSTALLING SPIGOTS

The BFM® IG Calculator is designed to provide a recommended IG based on horizontal movement only, so this recommended IG needs to be adjusted to take into account any vertical movement.

To calculate this adjustment, **you'll need to know the actual 'stopped' position** your equipment is going to be in when it's shut down during your installation.

If it stops at the maximum point of the vertical movement, you don't need to make any adjustment to the recommended IG from the BFM® IG Calculator (refer over page for a brief guide to using the BFM® IG Calculator).

However, **if the machine stops anywhere other than at the maximum**

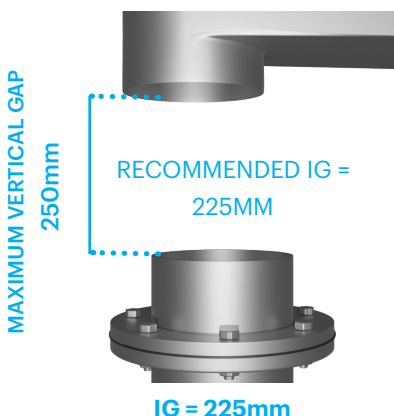
position, you will need to measure the gap between the pipes when it is stopped and subtract that measurement from the maximum position to know how much to deduct off the recommended IG from the Calculator.

In the example below (based on the screenshot over the page), the **maximum vertical gap is 250mm**, and at shutdown, the machine **stops with a 230mm gap**, so the difference is 20mm (ie. 250mm - 230mm).

The **recommended IG (from the IG Calculator) was 225mm**, so you simply subtract this 20mm difference to give you an adjusted IG for the actual installation of **205mm**.

IF MACHINE STOPS AT THE MAXIMUM POSITION OF THE VERTICAL MOVEMENT:

Install the spigots at the IG suggested by the calculator:



MAXIMUM VERTICAL GAP 250mm

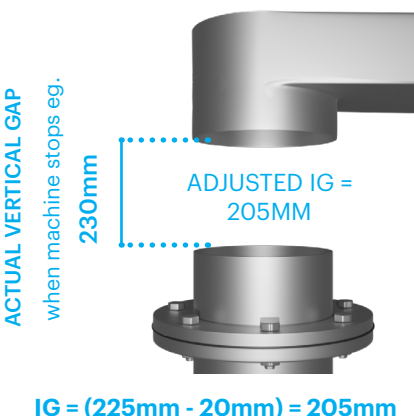
RECOMMENDED IG = 225MM

IG = 225mm

IF THE MACHINE STOPS AT ANY OTHER POSITION:

Subtract **difference between the maximum vertical gap and the position the machine actually stops at** from the suggested IG:

eg. (250mm - 230mm) = 20mm difference



ACTUAL VERTICAL GAP when machine stops eg. 230mm

ADJUSTED IG = 205MM

IG = (225mm - 20mm) = 205mm

Using the BFM® IG Calculator (to Calculate Horizontal Movement only)

BEFORE YOU START:


Ensure you know:

- **Total Space Available** (this is the maximum possible space you could use to install the spigots and connector ie. where there is the ability to cut back pipes if needed)
- **Maximum Horizontal Movement** (in any one direction from a fixed point)

DOWNLOAD THE BFM® IG CALCULATOR:

It's available as an App (for IOS and Android), or for use on desktop (for Mac or PC) and is also available to use online on the BFM® fitting website.

<https://www.bfmfitting.com/calculator>

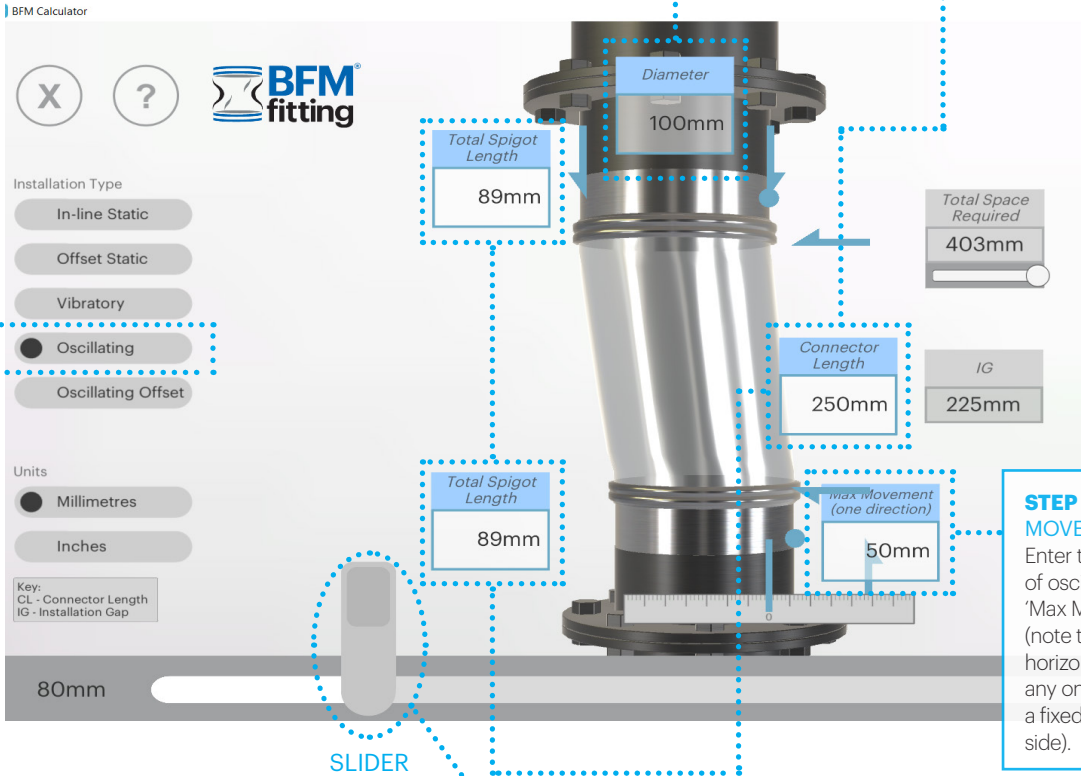


Get the app

STEP 1: INSTALLATION TYPE
Select 'Oscillating' in the 'Installation Type box.

STEP 2: DIAMETER
Enter the spigot (connector) diameter you are going to use.

STEP 3: CONNECTOR LENGTH
Enter your initial estimated connector length (50mm increments only).



STEP 6: NOTE THE RECOMMENDED IG
Once the 'Total Space Required' is within what you have identified as your Total Available Space', use the recommended IG as the starting point to calculate what the actual IG will need to be during the installation (depending on the actual 'stopped' position as described on the previous page).

STEP 5: ADJUST CONNECTOR/SPIGOT LENGTHS
Use the length slider to move the connector length up or down **until a suitable Total Available Space requirement is met.**

Spigot lengths can then also be adjusted using the slider to fine-tune if needed (To avoid having to cut both spigots, reduce one spigot down to the minimum level first before reducing the other spigot if possible).

STEP 4: HORIZONTAL MOVEMENT
Enter the amount of oscillation in the 'Max Movement' box (note this is the max. horizontal movement in any one direction from a fixed point ie. side to side).

We recommend contacting your local BFM® fitting Authorized Distributor if you need assistance with calculating the correct Installation Gap.

<https://www.bfmfitting.com/distributors>