



Gate Box Settings

Once a desired flow rate has been calculated a static test should be performed to determine the gate box setting to achieve the desired flow rate. With the material texture and density fluctuation it would be impossible to create a universal chart that would apply to all operators. We recommend that as each test is performed make a chart to record each setting for ease of future use and testing.

How to conduct a static test:

Weigh a selected amount of material that will be used.

Example: If desired flow rate is 100 lbs. /min, load hopper with 100 lbs. of selected material into hopper.

Choose a gate box opening size to start. Measure from the closing seal on the inside of the door to the opening edge of the door, this will give the opening size. When using a Q.D. plate with a spreader measure from the seal to the opening edge of the Q.D. plate.

Using a stopwatch run the loaded gates box for 10 seconds and then weigh the released material. Multiply the weight by 6 to find if the gate setting achieves the desired flow rate in lbs. per minute.

Example: If a gate setting of 1" is selected and the weight of material released after 10 sec run resulted in 20 lbs. $20\text{lbs. (weight)} \times 6 = 120 \text{ lbs./min}$

Results: According to the calculations the gate setting of 1" with the selected material would flow 120 lbs. /min. Increase or decrease opening size as needed to achieve desired flow rate.

Repeat the above process until the gate settings for the desired flow rates are recorded on chart for use in work.

