

# The GRUB Grinder Residential Underground Basin Part Selection Guide

AFS GRUB's are designed to be easy to select and install.

To select the right grinder for your application, one will need to determine:

- The inlet depth, in feet
- The total system rise and run, in feet
- Control type

This document will walk you through the selection process.



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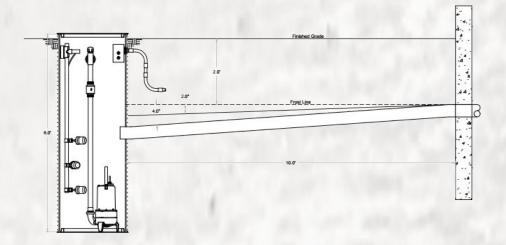


## **Step 1: Determine Inlet Depth**

To determine basin inlet depth, first consider the following two factors:

Frost Line (where applicable) - the maximum depth of ground below which the soil does not freeze in winter.

Minimum Slope - Defined by local sewer code; usually 2% grade or ¼" per foot.



Record the required measurements below:

Record the minimum slope in either % slope or inches per foot

Record the sewer outlet depth (from building)

Record the distance between the basin and the sewage outlet, in feet

If the slope has been recorded in % slope: multiply the distance (in inches) by the slope. e.g. 2% slope 10 feet away is 0.02 \* 120" = 2.4"

If the slope has been recorded in inches drop per foot multiply by the distance. e.g.  $\frac{1}{2}$  /foot \* 10 ft = 2.5"

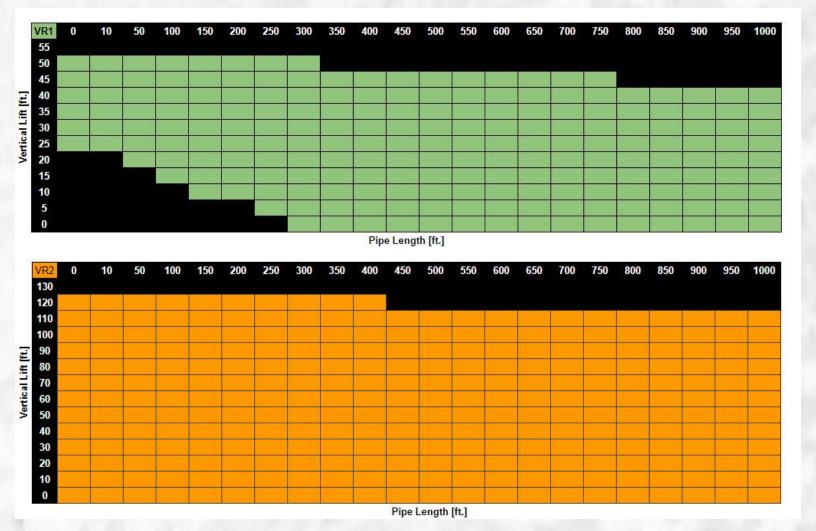
Add this figure to the depth of the sewer outlet and round to the next whole number. e.g. 2' + 2.5'' is rounded to 3'

### Step 2: Selecting the Total System Rise and Run

We've made it easy to select the proper pump package by taking all of the guesswork out. The charts below have been formulated to ensure that the minimum fluid velocity of 2 ft/sec will be maintained at all times.

The total transfer pipe length goes along the top (x-axis) of the chart and is measured in feet. The total elevation rise goes along the left side (y-axis) of the chart and reads in feet.

- Step 1: Determine your linear length of pipe.
- Step 2: Determine your vertical rise (lift).
- Step 3: Find where the points intersect to determine which package to select.



#### **Step 3: Selecting the Systems Controls**

The standard basin is shipped with a CSI Controls Power Zone control

panel with a redundant off.

An alarm panel and an automatic pump is also an option. In lieu of a control panel.

Note: It is considered best practice to provide a separate control circuit.

Installing this panel on walls opposite living areas is not recommended. Due to the noise of the mechanical contactor.



## **Final Step: Part Number Selection**

**AFSGRB** 

#### Inlet Depth (ft.)

2 = 2'(5' Basin)

3 = 3'(6' Basin)

4 = 4'(7' Basin)

5 = 5'(8' Basin)

#### **Pump Selection**

1 = 1HP VR1 115V

2 = 2HP VR2 230V

#### **Control Option**

AO = Alarm Only Leave blank for standard control panel.