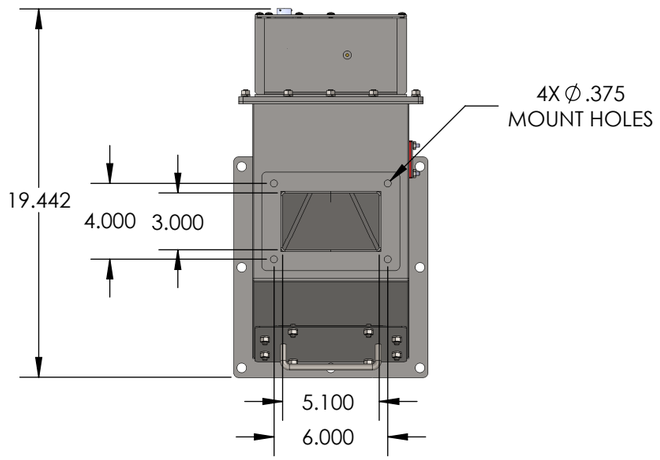
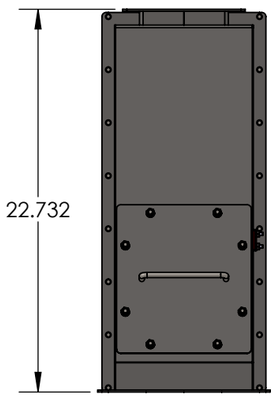
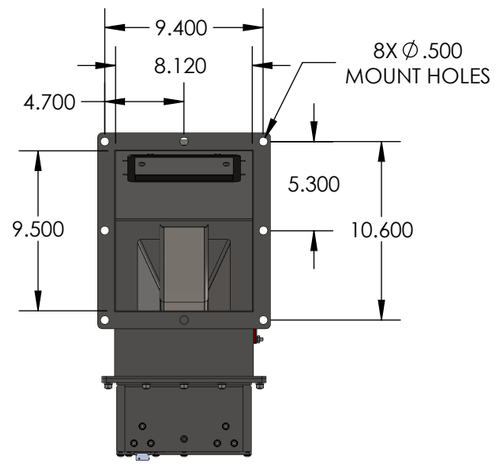
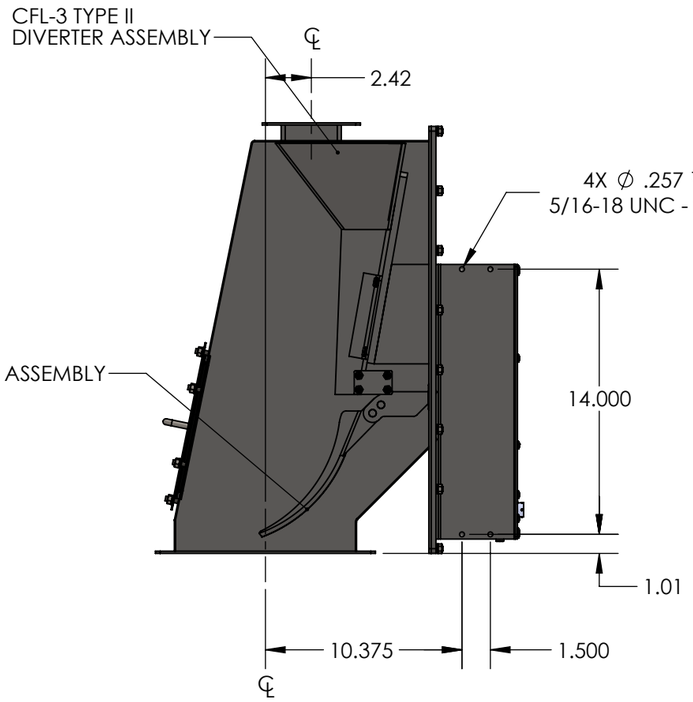
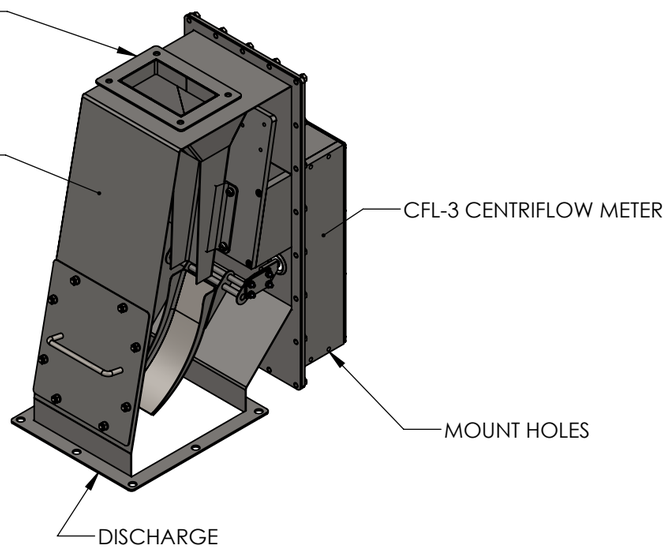
REVISIONS			
REV.	DESCRIPTION	DATE	DRAWN BY
1	ADDED MOUNTING INFORMATION	2/2/17	RCH
2	ADDED MATERIAL INFORMATION	2/28/17	RCH
3	ADDED CENTERLINE DIMENSION	8/3/18	RCH











NOTES:

1. MODULE PARTS ARE CONSTRUCTED OF 304 STAINLESS STEEL.
2. TYPE II ENCLOSURE IS CONTRUCTED OF 16 GAUGE (0.060") 304 STAINLESS STEEL.
3. NOT PRESSURE RATED.
4. WEIGHT: STAINLESS STEEL ≈ 92 lbs.

GENERAL NOTES:
1. BREAK ALL SHARP EDGES AND CORNERS.
2. ALL DRILLED, TAPPED, AND BORED HOLES WILL HAVE A .01 X 45° CHAMFER
3. WELD NOTES:
   a. ALL WELDS TO BE CONTINUOUS, FULL PENETRATION WELDS.
   b. WELDS TO BE FREE OF PIN HOLES, VOIDS, GAS OR SLAG POCKETS, AND CRACKS.
   c. WELD FINISH TO BE A FINE RIPPLE OR A 200 GRIT GRIND AS REQUIRED.
   d. WELDS TO BLEND WITH PARTS WITHOUT EXCESSIVE UNDERCUT OR OVERLAP.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN IN [MM]
TOLERANCES ARE:
X.X ± .03 [0.76]
X.XX ± .01 [0.25]
X.XXX ± .005 [0.13]
X.XXXX ± .001 [0.03]
X.XXXXX ± .0005 [0.01]
FRACTIONAL: ± 1/32 [0.79]
ANGULAR: ± .25°

MATERIAL: NOTED

FINISH: 32µin [0.8µm]

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE

APPROVALS	DATE
DRAWN RCH	12/8/15
CHECKED	
ENG CHK	
MFG CHK	
PROD CHK	

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CFL-3
CFL-3 TYPE II-FULL ASSEMBLY
STANDARDIZED DRAWING

WEIGHT: 100lbs

SIZE B | DWG. NO. 15-06250-700D1 | REV. 3

SCALE : X:X | CAD FILE: 15-06250-700D1.drw | SHEET 1 OF 1

REVISIONS			
REV.	DESCRIPTION	DATE	DRAWN BY
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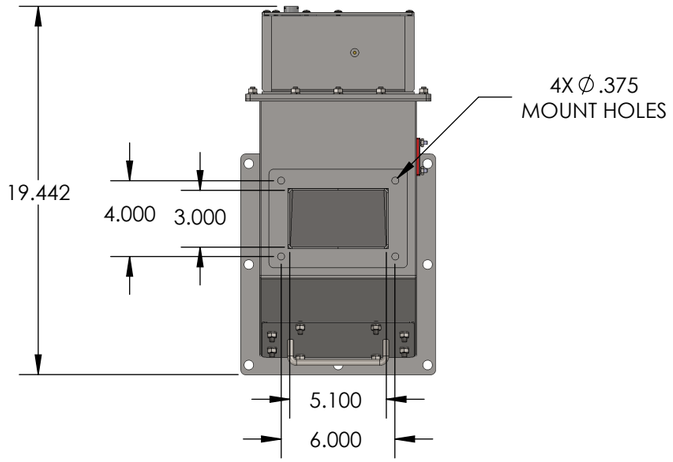
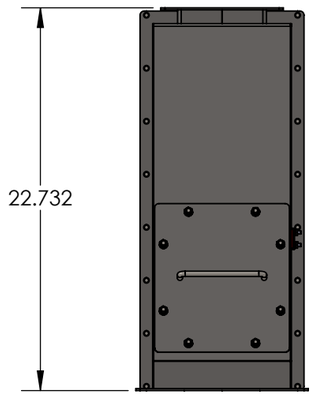
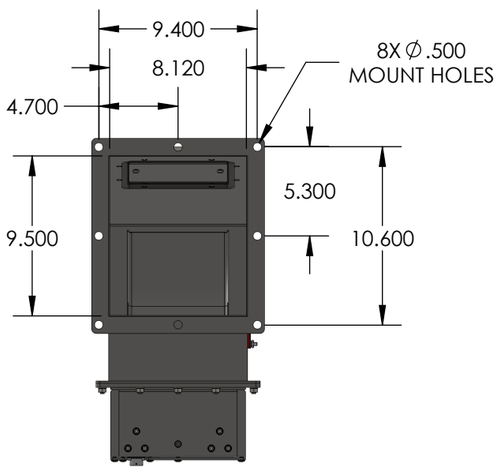
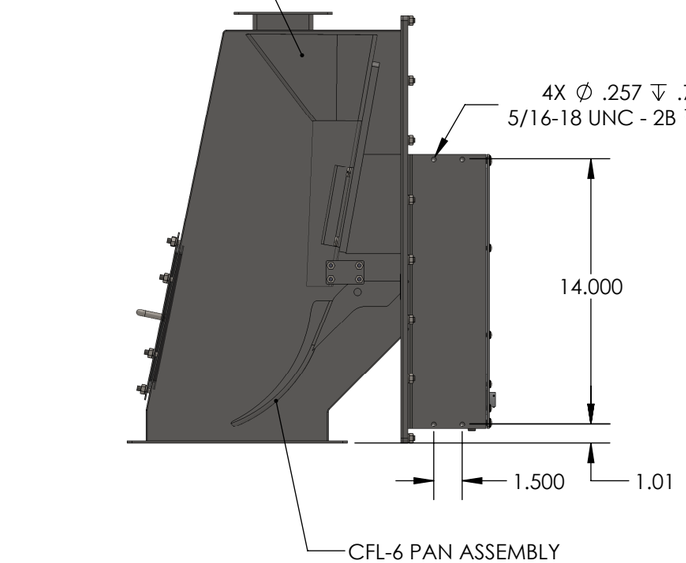
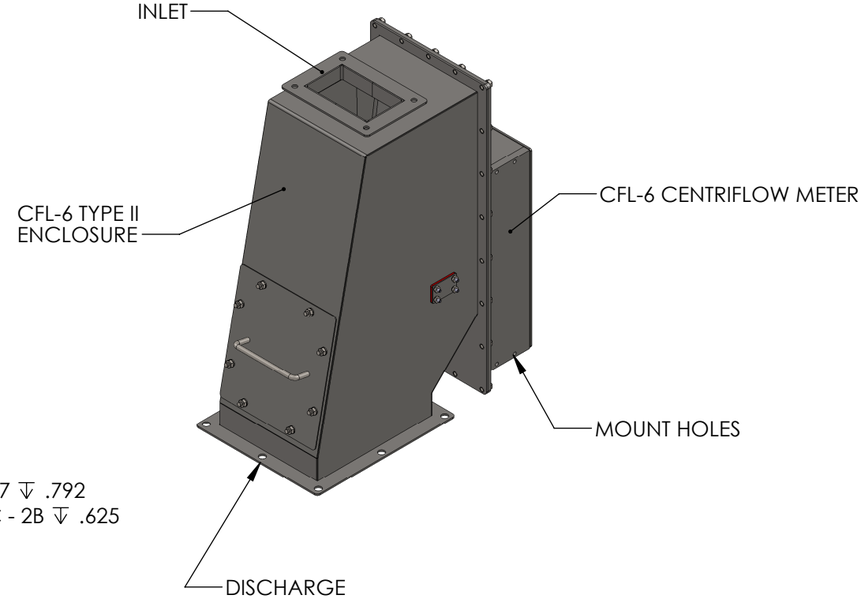
2	ADDED MATERIAL INFORMATION	2/28/17	RCH











NOTES:

1. MODULE PARTS ARE CONSTRUCTED OF 304 STAINLESS STEEL.
2. TYPE II ENCLOSURE IS CONTRUCTED OF 16 GAUGE (0.060") 304 STAINLESS STEEL.
3. NOT PRESSURE RATED.
4. WEIGHT: STAINLESS STEEL ≈ 110 lbs.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN IN [MM]
TOLERANCES ARE:

X.X	± .03 [0.76]
X.XX	± .01 [0.25]
X.XXX	± .005 [0.13]
X.XXXX	± .001 [0.03]
X.XXXXX	± .0005 [0.01]
FRACTIONAL:	± 1/32 [0.79]
ANGULAR:	± .25°

MATERIAL: NA

FINISH: 32µin [0.8µm]

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE

APPROVALS	DATE
DRAWN RCH	12/7/15
CHECKED	
ENG CHK	
MFG CHK	
PROD CHK	

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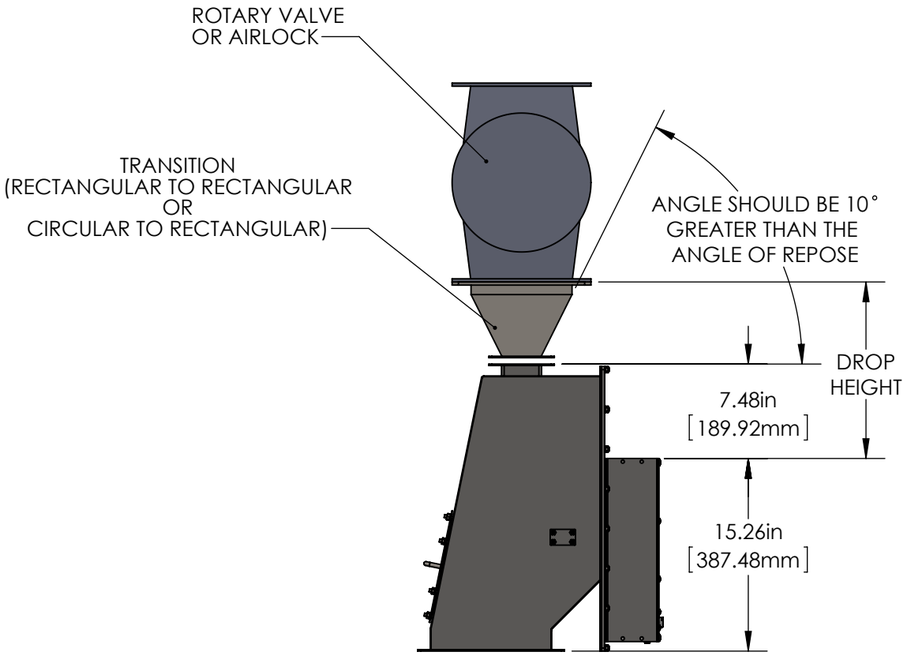
CFL-6
CFL-6 TYPE II - 56deg GEN 2
STANDARDIZED DRAWING

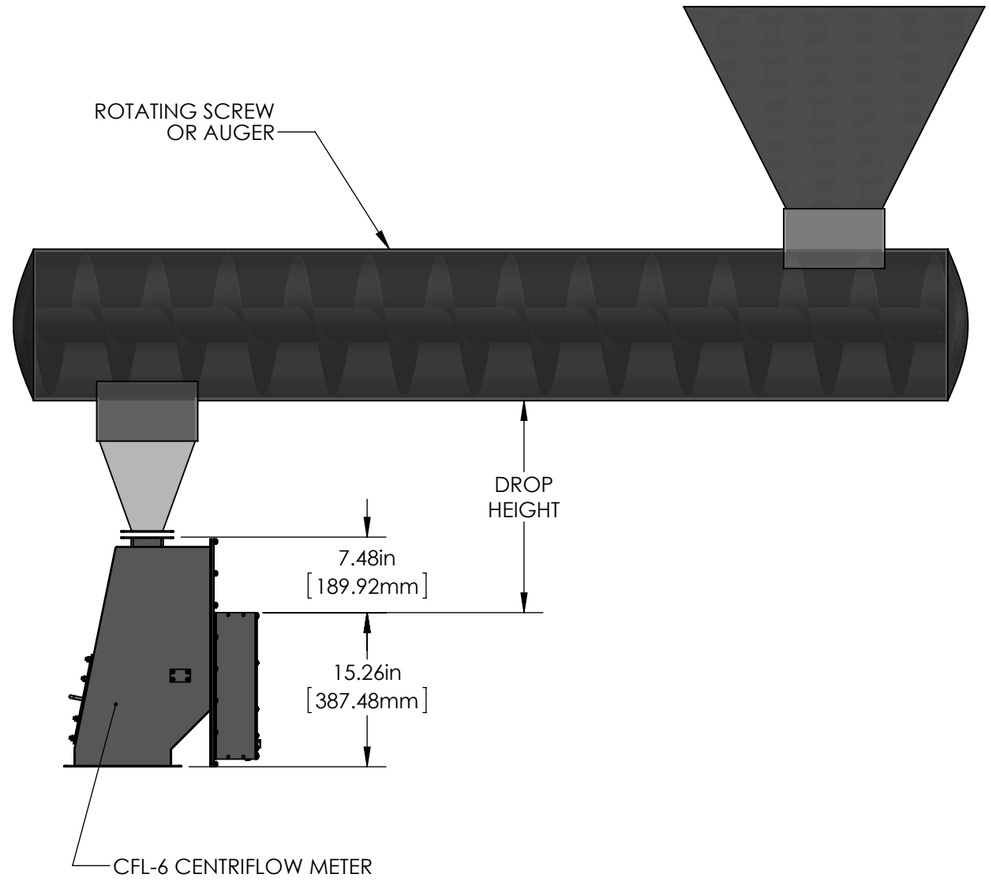
WEIGHT: 110LBS

SIZE B | DWG. NO. 15-06250-701D1 | REV. 2

SCALE : X:X | CAD FILE: 15-06250-701D1.drw | SHEET 1 OF 1

REVISIONS			
REV.	DESCRIPTION	DATE	DRAWN BY





	CONDITIONS		
	STANDARD	PREFERRED	MAXIMUM
DROP HEIGHT	8.60 [218.44]	8.1 - 16.1 [205.74 - 408.94]	7.6 - 40.1 [193.04 - 1018.54]
HORIZONTAL DIMENSION	*2.50 [64] (SET BY AN INTERNAL PLATE)*		

NOTES:
1.FLEXIBLE CONNECTIONS OR MINIMUM 1/2" GASKET RECOMMENDED FOR INTAKE AND DISCHARGE TO ISOLATE METER FROM VIBRATION AND KEEP FEED AND DISCHARGE DEVICES FROM APPLYING FORCE TO METER ENCLOSURE.
2. MUST SUPPORT METER USING THE MOUNT SIDES ONLY. THE TYPE II ENCLOUSRE IS NOT DESIGNED TO SUPPORT WEIGHT OF FEED OR DISCHARGE DEVICES.
3. THE DROP HEIGHT SHOULD BE MINIMIZED AND REFERENCED AS PER CONDITIONS ABOVE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN IN [MM]
TOLERANCES ARE:
X.X ± .03 [0.76]
X.XX ± .01 [0.25]
X.XXX ± .005 [0.13]
X.XXXX ± .001 [0.03]
X.XXXXX ± .0005 [0.01]
FRACTIONAL: ± 1/32 [0.79]
ANGULAR: ± .25°

MATERIAL: NA

FINISH: 32µin [0.8µm]

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE

APPROVALS	DATE
DRAWN RCH	9/26/16
CHECKED	
ENG CHK	
MFG CHK	
PROD CHK	

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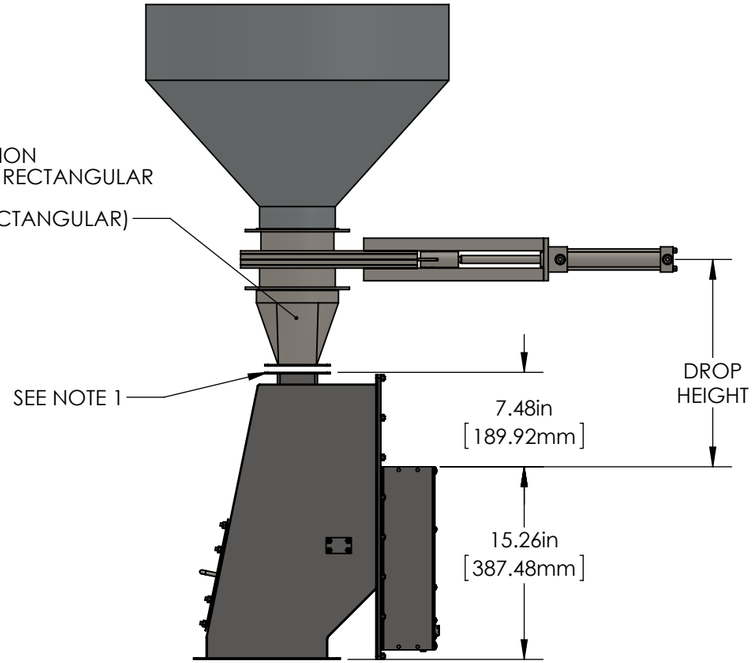
CFL
CFL-6 FEED FOR FREE-FLOWING SPECIFICATION DRAWING

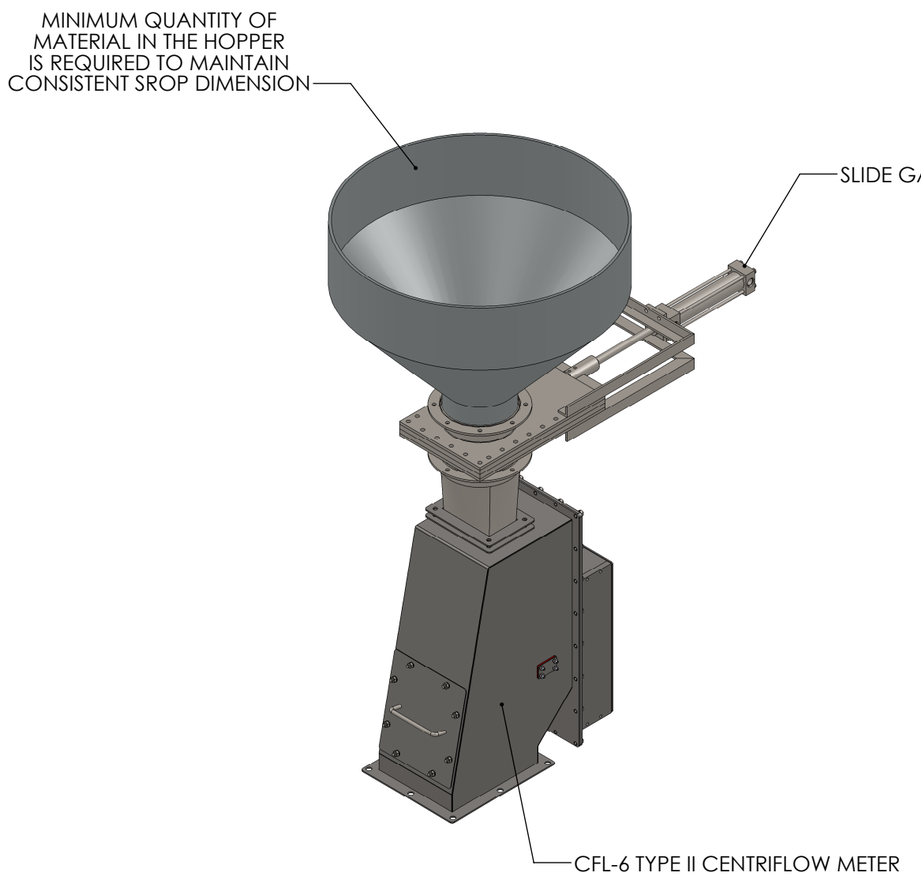
WEIGHT: 241.036

SIZE B | DWG. NO. CFL-6-SDD1 | REV. -

SCALE : X:X | CAD FILE: CFL-6-SDD1.drw | SHEET 1 OF 1

REVISIONS			
REV.	DESCRIPTION	DATE	DRAWN BY





	CONDITIONS		
	STANDARD	**PREFERRED**	**MAXIMUM**
DROP HEIGHT	8.60 [218.44]	8.1 - 16.1 [205.74 - 408.94]	7.6 - 40.1 [193.04 - 1018.54]
HORIZONTAL DIMENSION	*2.50 [64] (SET BY AN INTERNAL PLATE)*		

NOTES:
1.FLEXIBLE CONNECTIONS OR MINIMUM 1/2" GASKET RECOMMENDED FOR INTAKE AND DISCHARGE TO ISOLATE METER FROM VIBRATION AND KEEP FEED AND DISCHARGE DEVICES FROM APPLYING FORCE TO METER ENCLOSURE.
2. MUST SUPPORT METER USING THE MOUNT SIDES ONLY. THE TYPE II ENCLOUSRE IS NOT DESIGNED TO SUPPORT WEIGHT OF FEED OR DISCHARGE DEVICES.
3. THE DROP HEIGHT SHOULD BE MINIMIZED AND REFERENCED AS PER CONDITIONS ABOVE.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN IN [MM]
TOLERANCES ARE:
X.X ± .03 [0.76]
X.XX ± .01 [0.25]
X.XXX ± .005 [0.13]
X.XXXX ± .001 [0.03]
X.XXXXX ± .0005 [0.01]
FRACTIONAL: ± 1/32 [0.79]
ANGULAR: ± .25°

MATERIAL: NA

FINISH: 32µin [0.8µm]

CAD GENERATED DRAWING,
DO NOT MANUALLY UPDATE

APPROVALS	DATE
DRAWN RCH	9/26/16
CHECKED	
ENG CHK	
MFG CHK	
PROD CHK	

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CFL
CFL-6 FEED FOR FREE-FLOWING
SPECIFICATION DRAWING

WEIGHT: 243.271

SIZE B | DWG. NO. CFL-6-SD2D1 | REV. -

SCALE : X:X | CAD FILE: CFL-6-SD2D1.drw | SHEET 1 OF 1

Recommendations on Feeding/Installing a CentriFlow® Type II Meter

General Notes:
When installing a CentriFlow® Type II meter, there are some general guidelines that should be followed to ensure that the installation will provide repeatability and maximum accuracy of the measurement. These guidelines can be broken up into Mounting, Connections, Consistent Drop Point, and Performing Calibration Checks.

- **Mounting:**

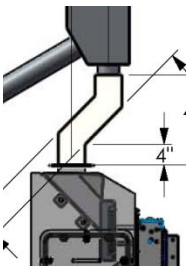
  When mounting the meter, it is important to mount it with the Mount Sides provided on the back of the meter. These Mount Sides provide four (4) 5/16"-18 threaded holes for mounting. The meter should be mounted to a sturdy, non-moving structure to prevent it from moving and swaying. When considering vibration in the plant, it should be noted that the meter is counterbalanced when manufactured and is not affected by typical plant vibrations. However, if at all possible, isolation from vibration is always a good practice. If the meter is configured with a VibraWeigh®, the mounting structure should be substantial/heavy enough to prevent the vibration that is created with the VibraWeigh® from being transferred out into the mount. This will optimize the effectiveness of the VibraWeigh® and allow it to do the maximum job.

- **Connections:**

  When connecting to the meter or coupling to the meter, it is important to note that transitions and other equipment should not be directly mounted to the meter Type II housing/enclosure. This prevents surrounding equipment from applying a load to the enclosure. This Type II housing/enclosure, unless specifically designed to be, is not a weight/load bearing device. It is merely a housing around the meter to enclose the meter. Isolation gaskets or flexible couplings can be used to ensure that the other equipment will not load the enclosure.

- **Consistent Drop Point:**

  In order to attain the most accurate and repeatable measurement, ensuring that the meter receives the product flow from a consistent drop point is essential. To get a consistent drop point, the distance from the discharge of the feed device (see specific recommendations below) should be minimized. Also, transitions between these devices and the intake of the meter should be such that they don't unnecessarily deflect product or change its direction. The drop from the feed device should be a



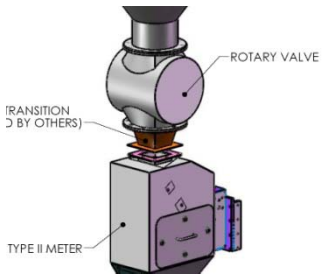
gravity drop. When a transition must be made that changes the direction, it should provide a vertical section that allows for a gravity drop after the change in direction, so that this point can become the new drop point (see graphic).

- **Performing Calibration Checks:**

  When dynamic calibration checks need to be performed on a regular basis, it is important to keep this in mind when installing the meter. The best calibration checks are performed when the flow to the meter can be stopped and started, in order to obtain a quantity run/batch total of meter that is weighed through the meter. This product would need to be collected and weighed independently on a reference scale and compared to the meter's total. Ideally this collection should occur directly out of the discharge of the meter, but when this cannot be done, the closer to this discharge point in the process, the better. Also, to get the best calibration, the reference scale should have a resolution of 3-5 x better than the desired accuracy of the sample. For example, if you want to calibrate the meter to 0.25%, and the sample collected is 500 lbs, then the reference scale resolution should be at least 3 x the 0.25% of 500 lbs (1.25 lbs), or at least 0.4 lb resolution, but would be best if it had a 0.25 lb resolution.

Feed Devices:

- **Rotary Valve:**

  When installing the meter under a rotary valve/rotary airlock, it is important to ensure that the meter will not have air pressure forced into the intake. There will most likely be a transition from the discharge of the valve to the intake of the meter, so keeping the transition short and symmetrical will get the best results. Here the drop from the rotary valve/rotary airlock becomes the drop point and will give consistency even as the flow pulsates from the valve. Sizing is important because the valve should not be so large that the rotation is so slow that large slugs drop through the meter with periods of no flow. This will not give an "average" flow reading. The best scenario is when the pulsations from the valve do not drop down to "zero" instantaneously.

- **Screw Conveyor:**

  When installing the meter under a screw conveyor, the drop from the screw becomes the drop point to the meter. There will most likely be a transition from the discharge of the screw to the intake of the meter, so

keeping the transition short and symmetrical will get the best results. When installing under a screw, it is important to ensure that the device below the meter takes away the product faster than the screw feeds the product, and that if this device stops, the screw stops. This is so that the product will not pack into the meter and damage the meter. The screw conveyor, unlike the rotary valve, will continue to force product into the meter if the product does not discharge out.

- **Bucket Elevator:**

  When installing the meter at the discharge of a bucket elevator, all attempts should be made to allow the product to discharge from the bucket and transition to the meter, making the transition the drop point. This may have to be done with an offset transition, as noted in the graphic in the Consistent Drop Point section. If the fill of the bucket is consistent and if the product drops from the bucket elevator, then a direct transition to the meter can be made, following the guidelines in the previous two sections.

- **Slide Gate:**

  Installing the meter under a slide gate typically is the simplest of the feed devices. Typically the product being measured is free-flowing and the slide gate provides a smooth, non-pulsating flow stream. When installing the meter under a slide gate, the drop from the gate becomes the drop point to the meter. There will most likely be a transition from the discharge of the gate to the intake of the meter, so keeping the transition short and symmetrical will get the best results. One thing to keep in mind is that if the silo/hopper above the gate empties completely, that the gate should be closed to allow a small about of head to be created. This is so that when the silo/hopper is being filled, the product does not fall directly through the open gate, causing a variance on the drop point.