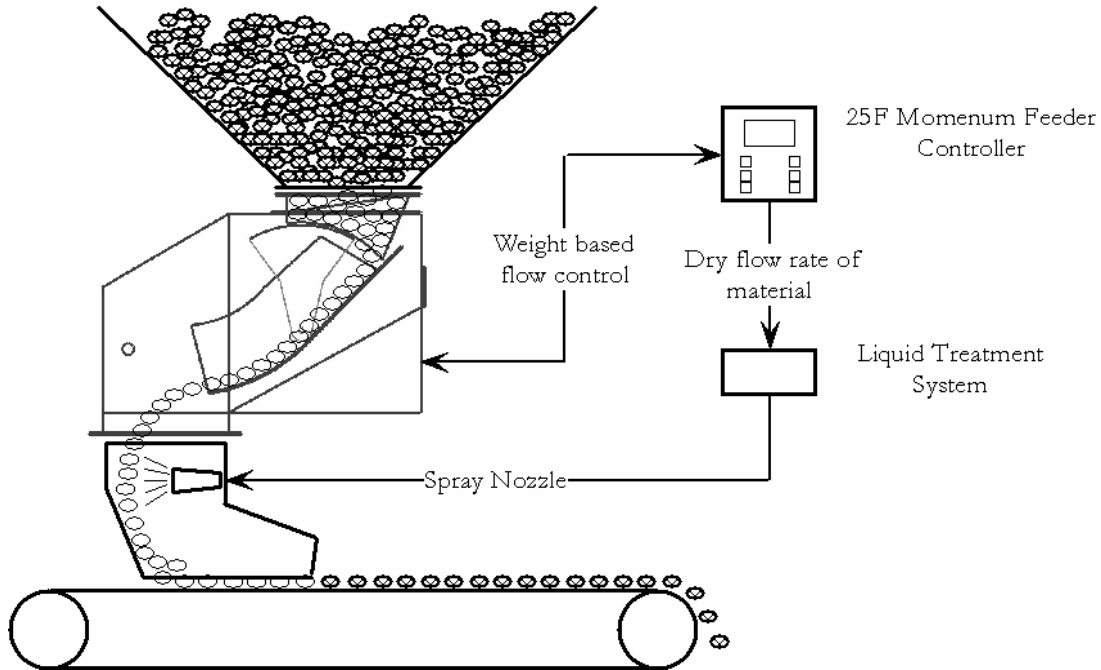


Application    **Post Pellet Liquid Treatment**  
 Industry       **Animal Feed Industry**  
 Products       **25F Momentum Feeder/25M Momentum Monitor**



### Process Description

Post pellet liquid treatment is a critical function in proper feed production. Heat sensitive enzymes or fat must be added to feed at the post pellet stage for effective application. The exact amount of the treatment must be applied to ensure proper absorption and uniform coating.

Proper control of the dry material flow has been a challenge in this industry. Continuous mixing systems can be fed either by a volumetric devices, weight based feeders or loss in weight scales. The liquid application system is then slaved to the dry product flow rate. The volumetric devices give some indication of flow rate but do not adjust for changes in density and therefore deliver marginal accuracy. The weight based feeder and loss in weight scale delivery greater accuracy in the dry product flow rate and therefore produces a better quality formulation.

Consistency in the application of the liquid treatment is a key element in quality control of the final product. **The ideal solution to this process would be to use a continuous weight-based feeding device to precisely feed the pellets at a known flow rate** in to the coating chamber.

Comptrol's 25F Momentum Feeder is capable of delivering a controlled flow of material from a bin or silo at an accuracy of  $\pm 0.5\%$  of full scale over a wide operating range. This will produce a consistent formulation based on precise weights and improve the final product's consistency and quality. In addition, the feeder is capable of presenting to the application chamber a thin curtain of material. This thin curtain ensures a more even coating of the liquid for full penetration into the pellet.

### Advantages of Weight Based Liquid Treating with 25F Momentum Feeders

1. Weight-based feeding of the dry material significantly improves the **quality** of the final product composition. It produces a product with the correct coating by weight. This is a key driving quality issue for feed formulation.
2. Repeatability achieved using weight-based technology versus volumetric technology produces better final product **consistency**.

3. In applications where one of the components is significantly more expensive, weight based blending ensures that there is no excessive waste of expensive materials.
4. The thin curtain of material fed into the coating chamber improves the uniformity of the coating and ensures complete penetration of the liquid treatment into the pellet.

**Features Critical to Application.**

1. 25F Momentum Feeder can be installed beneath silo or bins with as little as 18 inches (460 mm) of head room.
2. 25F Momentum Feeders can directly feed or transport conveyor with the precise weight based blend.
3. 25F Momentum Feeders can be installed in unheated environments since they do not require compressed air for operation.

**Competitive Advantages**

1. Cost comparable to variable speed volumetric device but with strength of weight based feeding.
2. Less expensive than loss in weight feeding technology but with similar results.
3. Feeders have a 10:1 turn down ratio.
4. A number of models are available from 4 tones through to 80 tones allowing a wide range of feed rates from a minimum of 800 lb/hr to a maximum of 160,000 lb/hr.
5. The feeders can be interface to a PLC application for control of recipe blending directly through standard I/O or to a SCADA system using a one of several fieldbus networks such as DeviceNet or Profibus.
6. Feeder can be installed with a Blendview? system as a stand-alone blending system. Blendview? is capable of storing, controlling, tracking and reporting blends produced. In addition, it monitors the current operation providing the operator with live feedback on the blending operation.

**Target Customer**

1. Animal feed producers
2. Pet food producers