

ScrewDisc Loss-In-Weight Controls



CONTROLS SUMMARY

	Multiple Feeders (up to 16)	Single Feeder
Congrav Operator Interface	OP5 Color Touch Screen or Individual Feeder can have OP1	LM3 Keypad Display RC4 Keypad/Display
Wiring	Single Cable Connection - Serial	Hard Wired and Serial
Feeder Mounted Components	ISC-CM Control module Motor mounted VFD	Junction box to load cell Motor mounted VFD
Communication on Operator Interface	RC4: Siemens RK512 Profibus ControlNet A-B DF1 Modbus RTU Ethernet OP5: Ethernet	LM3: Siemens RK512 Profibus ControlNet A-B DF1 Modbus RTU Ethernet
Communication on Feeder Mounted Components	Profibus: Ethernet/IP	N/A



Brabender Technologie Inc

TF: (888) 284-4574 Tel: (905) 670-2933 Fax: (905) 670-2557

6500 Kestrel Road Mississauga, Ontario L5T 1Z6 Canada

www.brabenderti.com

Brabender ScrewDisc Feeder



**Loss In Weight
Feeder for pellets
and free flowing
dry ingredients.**

**Changing
ingredients is
as easy as
1,2,3, without
tools, offline.**

**Multi-Component
Feeding Station**



The Brabender ScrewDisc Feeder

is a loss-in-weight feeder with a unique metering technique particularly developed for pellets and free flowing dry ingredients. The design features a vertical metering screw interconnected with a horizontal rotating disc. This feeder assembly is secured to a single load cell mounted on a support bracket. A compact, Panasonic AC (115/230v) Servo motor provides a 100:1 screw speed range. Speed control is motor mounted, varied by RS485 serial communication from the controller.

Efficient Performance

The vertical screw flights fill to virtually 100% which is the primary requisite in dry ingredient metering accuracy (repeatability). The termination of the vertical screw on a disc ensures screw flights empty onto the disc resulting in a 360° flow distribution. 100:1 feed rate range is achieved with one screw.

Compact

The short vertical ScrewDisc results in a compact feeder in both headroom and area. Hopper volume can be optimized to further reduce headroom and cleanout.

Multi-Feeder Station

Up to 8 Brabender ScrewDisc Feeders (4 shown on cover) can be arranged compactly on a common support stand. For starve fed (twin screw) extruders, the feed streams from each feeder flow directly into the extruder throat. For flood fed (single screw) extruders, the feed streams can be fed into a constant level mixing hopper mounted above the extruder inlet. Feed rate proportion is maintained. Total feed rate of all feeders is controlled by maintaining a constant level (weight) in the extruder mounted hopper (mixer optional).

Options:

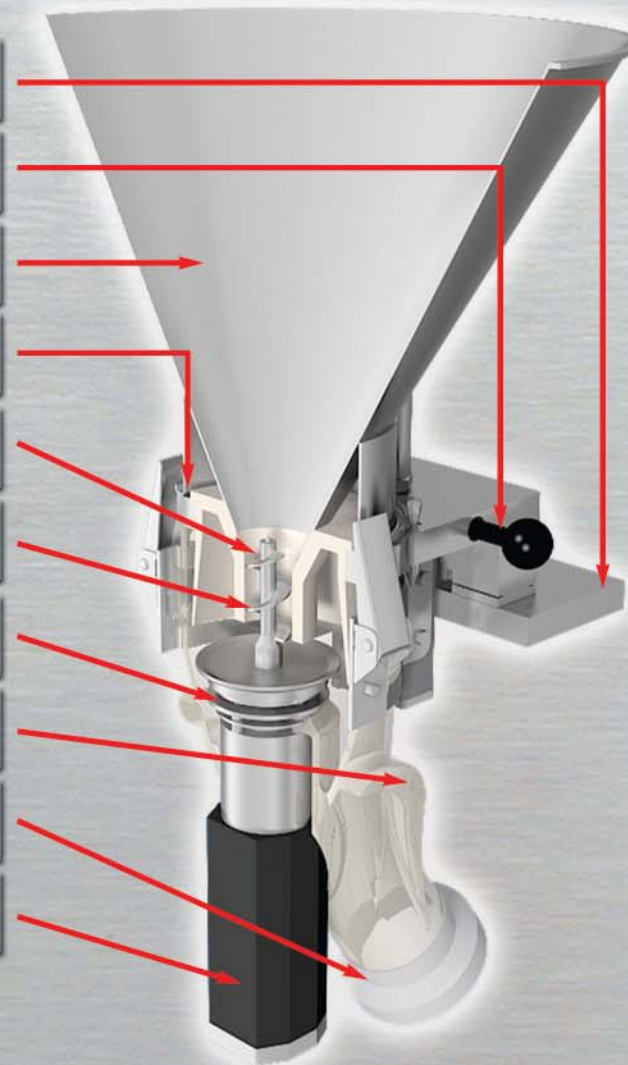
- Common support stand
- Refill valves
- Pneumatic loaders
- Blending hopper for flood fed extruders

Feeder Models:

- SD50: 4 to 1500 lbs/hr
 - SD100: 20 to 5000 lbs/hr
- (Based on pellets, 30 lbs/cuft.)

ScrewDisc Components

- Feeder Support Bracket
- Lowering Mechanism & Load Cell
- Removable Extension Hopper
- Quick Release Clamp
- Polyurethane Screw Tube
- Vertical Screw empties into integrally rotating disc
- Suspended & Rotatable Transparent Outlet
- Handles on Outlet
- Flexible Connection to Vertical Outlet
- AC Servo Motor with RS485 serial interface (100:1)



Optional Extension Hopper Lids

- 1) Elastic filter cloth cover
- 2) Loose lid with handle for manual refilling
- 3) Lid with inlet pipe for automatic refilling
- 4) Safety grid

3 Step Pellet Change, without tools

Step 1 - Lowering and Emptying

After unlocking two quick release clamps, the feed unit slides down and separates from the feeder extension hopper, which remains in place held by spring clamps. The transparent outlet can now be turned 360° into any desired discharge position, using the integral handles. For hopper emptying, the locking bolt is pulled so that the outlet slides down and clears the cross section of the screw tube. As a result, the ingredient flows out at a high rate by gravity without turning the screw.



Step 2 - Cleaning

For cleaning, the entire outlet is turned to the side allowing unrestricted access to the feeder interior. The screw and the screw tube can be removed. The extension hopper held by the spring clamps can also be taken off for cleaning. Wet cleaning of the hopper and feed unit is possible. (TENV Motor)



Step 3 - Ingredient Changeover

If feed rates have to be changed when changing over from one ingredient to another, screws and screw tubes are interchangeable. However, due to the 100:1 turndown, a screw change is often not required. The ScrewDisc Feeder is ready for operation again by carrying out the steps described above in reverse order.



Brabender ScrewDisc Feeder