

Economical Feeding of Colorants, Additives

Conair Feeders provide injection molders and extruders with a versatile, economical way to volumetrically meter colorants or other additives into the flow of virgin material directly at the throat of the processing machine.

By metering additives directly at the throat, greater savings in material inventory and colorant can be achieved over traditional pre-colored or centrally blended material schemes.



Precise Metering Reduces Colorant Costs

Each feeder is equipped with a throat adapter that fits between the material supply hopper and the processing machine throat. The feeder connects easily to the adapter allowing additives to be metered by an auger into the flow of material as it passes through the adapter. Up to two feeders may be mounted on one throat adapter.

For injection machines the feeder's digital timer controls the metering motor during screw recovery. This supplies a consistent volume of additive in proportion to the flow of material into the machine throat.

For extruders the feeder meters continuously. The speed control of the extrusion models includes a voltage tracking circuit to slave the feeder metering rate to the speed of the extruder.

- ▶ **Models for low/high throughput**
Model BFS and BFH feeders feature a compact size for metering additives to machines down to 0.01 gram per second or up to 160 lb. per hour. Model BFH provides high throughput metering up to 100 grams per second or 800 lb. per hour.
- ▶ **Injection or extrusion control**
The precision injection control provides on-demand metering, based on a signal from the press. The extrusion control is designed to operate continuously with the extruder.
- ▶ **Easy, no-tools cleanout**
BFH models have removable supply hoppers and augers to allow fast clean-out for color changes. The standard BFS model has a stationary hopper, a removable supply hopper option is available.
- ▶ **Digital setpoint accuracy**
Easy-to-set thumbwheel switches provide digital accuracy for speed and time rate control.
- ▶ **Optional low level alarm**
Small add-on module offers audible and visual warnings if the additive level drops below the hopper sight glass.

Controls



The **Precision Feeder Control** for injection molding provides on-demand metering, based on a signal from the press (for example, the screw retraction start.) The signal may be a contact closure or a voltage (Choose from these available voltages: 120 VAC; 240 VAC; or 24 VDC). Push button thumbwheels set the metering cycle time and motor speed. An accurate digital timer controls the metering duration indicated by the setting. The feeder speed setting is a percentage of maximum motor speed.

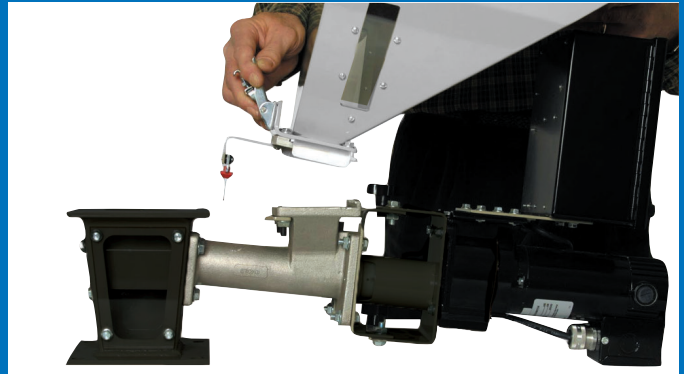


The **Extrusion Control** for the feeder is designed to operate continuously with the extruder, to meter a precise flow of additives at the desired rate. Push button thumbwheels set the speed of the metering auger. The speed of the feeder may be slaved to the extruder with a DC voltage follower circuit, driven by the extruder tach generator or armature voltage (0 to 600 VDC or 4-20 milliamps). (Shown is control with optional voltmeter.)

Features



The standard BFH model includes a combination hopper/auger assembly that may be quickly removed from the feeder's mainframe/motor assembly. No tools are required.



The compact BFS model is available with an optional quick release hopper with a built-in electrical interlock and slide gate that allows quick removal cleaning and replacement for color changes. No tools are required.

Options



The BFS Feeder with a Conair self-contained vacuum loader
The loader automatically fills the additive hopper with color concentrate or other pelletized additives.

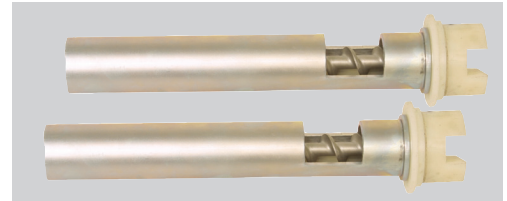
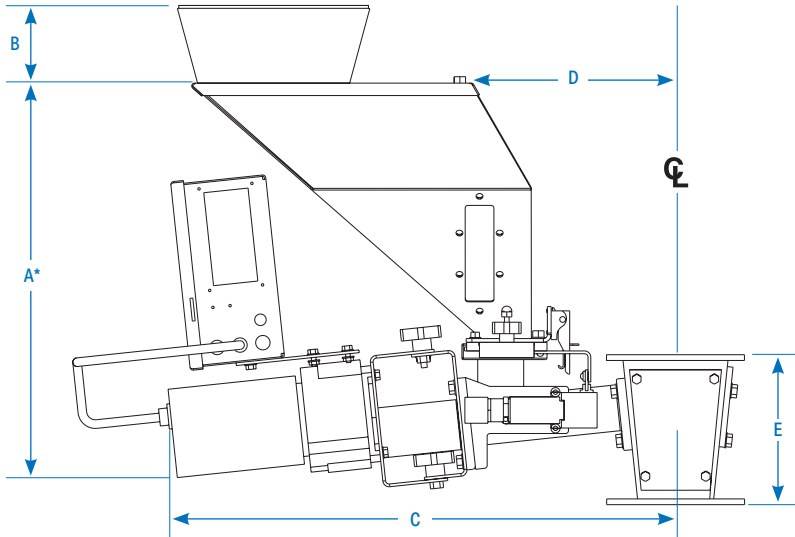


The BFH Feeder with a DustBeater mounted on a high volume loader extension
At 500 pounds per hour, the standard Conair DustBeater assures a reliable material supply for extrusion or continuous molding. Choose the brushless DustBeater for loading rates up to 1000 pounds per hour.



Low level alarm kit
The low level alarm kit may be factory ordered, or may be installed later on any feeder control package.

Specifications



Model	BFS					
Auger sizes inches (mm)	3/8 x 1/4 {9.53 x 6.35}	3/8 x 3/8 {9.53 x 9.53}	1/2 x 1/2 {12.70 x 12.70}	3/4 x 3/4 {19.05 x 19.05}	1 x 1 {25.40 x 25.40}	
Performance characteristics Pellets only						
Throughput @ 9 rpm, Injection [†] grams/sec	0.005 to 0.05	0.006 to 0.06	0.015 to 0.15	0.051 to 0.51	0.108 to 1.08	
Throughput @ 9 rpm, Extrusion [†] lb/hour	0.042 to 0.42	0.051 to 0.51	0.12 to 1.2	0.42 to 4.2	0.87 to 8.7	
Throughput @ 30 rpm, Injection [†] grams/sec	0.016 to 0.16	0.02 to 0.2	0.05 to 0.5	0.17 to 1.7	0.36 to 3.6	
Throughput @ 30 rpm, Extrusion [†] lb/hour	0.14 to 1.4	0.17 to 1.7	0.40 to 4.0	1.4 to 14.0	2.9 to 29.0	
Throughput @ 64 rpm, Injection [†] grams/sec	0.034 to 0.34	0.043 to 0.43	0.107 to 1.07	0.363 to 3.63	0.77 to 7.68	
Throughput @ 64 rpm, Extrusion [†] lb/hour	0.297 to 2.97	0.363 to 3.63	0.85 to 8.53	2.98 to 29.8	6.19 to 61.86	
Throughput @ 95 rpm, Injection [†] grams/sec	0.05 to 0.51	0.063 to 0.63	0.158 to 1.58	0.538 to 5.38	1.14 to 11.40	
Throughput @ 95 rpm, Extrusion [†] lb/hour	0.44 to 4.43	0.538 to 5.38	1.27 to 12.67	4.43 to 44.34	9.18 to 91.84	
Throughput @ 170 rpm, Injection [†] grams/sec	0.09 to 0.91	0.113 to 1.13	0.283 to 2.83	0.963 to 9.63	2.04 to 20.4	
Throughput @ 170 rpm, Extrusion [†] lb/hour	0.79 to 7.93	0.96 to 9.63	2.27 to 22.67	7.93 to 79.34	16.43 to 164.34	
Hopper capacity ft ³ {liter}	0.68 {19.2}					
Motor power Hp {kW}	1/8 {0.093}					
Gear motor output rpm	0 - 9, 0 - 30, 0 - 60, 0 - 95, 0 - 170					
Dimensions inches (mm)						
Top/bottom throat adapter plate	6 x 6 {152 x 152}			8 x 8 {203 x 203}		
A - Overall height - with removable hopper				21.69 {550.9}		
A - Overall height - with standard hopper				21.31 {541.3}		
B - Loader lid adapter height [†] (optional)				6.44 {163.5}		
C - Length to centerline throat plate	22.50 {571.5}			23.50 {596.9}		
D - Hopper to centerline throat plate	8.87 {225.4}			9.87 {250.8}		
E - Throat adapter height	6.50 {165.1}			7.00 {177.8}		
Approximate weight lb {kg}						
Installed				61 {27.7}		
Shipping				110 {49.9}		
Voltage Full load amps[§]						
120/1 phase/60 Hz				4		
240/1 phase/50-60 Hz				2		

Specification Notes

* Overall height is different with the optional removable hopper. See the specification table.

[†] Throughput is dependent upon the combination of auger and motor rpm selected.

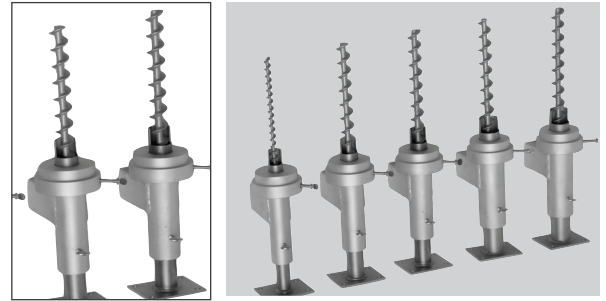
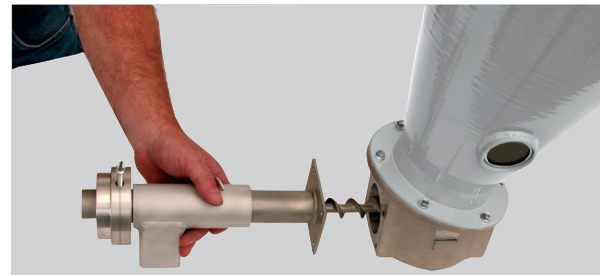
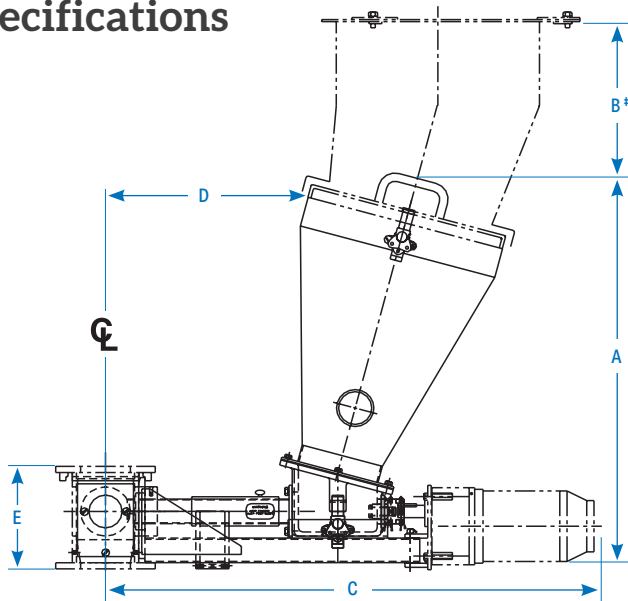
[‡] Optional loader adapter lid is shown for use with 8 inch and TLM tube loader, standard is supplied with a handfill lid.

[§] FLA data for reference purposes only. Does not include any options or accessories on equipment. For full FLA detail for power circuit design of specific machines and systems, refer to the electrical diagrams of the equipment order and the nameplate applied to the machine.

Specifications may change without notice. Consult with a Conair representative for the most current information.



Specifications



Model	BFH				
Auger sizes inches (mm)	1/2 x 1/2 {12.7 x 12.7}	3/4 x 3/4 {19.05 x 19.05}	1 x 1 {25.4 x 25.4}	1 1/2 x 1 1/2 {38.1 x 38.1}	2 x 2 {50.8 x 50.8}
Performance Characteristics Pellets and free flowing powder*					
Throughput@9 rpm, Injection [†] grams/sec	0.015 to 0.15	0.036 to 0.36	0.087 to 0.87	0.280 to 2.90	0.581 to 5.81
Throughput@9 rpm, Extrusion [†] lb/hour	0.102 to 1.02	0.280 to 2.90	0.730 to 7.30	2.180 to 21.80	4.360 to 43.60
Throughput@30 rpm, Injection [†] grams/sec	0.048 to 0.48	0.120 to 1.20	0.290 to 2.90	0.968 to 9.68	1.936 to 19.36
Throughput@30 rpm, Extrusion [†] lb/hour	0.339 to 3.39	0.968 to 9.68	2.419 to 24.19	7.260 to 72.60	14.57 to 145.20
Throughput@64 rpm, Injection [†] grams/sec	0.100 to 1.00	0.250 to 2.50	0.600 to 6.00	2.000 to 20.00	4.000 to 40.00
Throughput@64 rpm, Extrusion [†] lb/hour	0.700 to 7.00	2.000 to 20.00	5.000 to 50.00	15.00 to 150.00	30.00 to 300.00
Throughput@95 rpm, Injection [†] grams/sec	0.153 to 1.53	0.383 to 3.83	0.919 to 9.19	3.065 to 30.65	6.129 to 61.29
Throughput@95 rpm, Extrusion [†] lb/hour	1.072 to 10.72	3.065 to 30.65	7.660 to 76.60	22.98 to 229.8	45.97 to 459.7
Throughput@170 rpm, Injection [†] grams/sec	0.266 to 2.66	0.685 to 6.85	1.650 to 16.50	5.484 to 54.84	10.968 to 109.68
Throughput@170 rpm, Extrusion [†] lb/hour	1.919 to 19.19	5.480 to 54.80	13.71 to 137.10	41.13 to 411.3	82.26 to 822.6
Hopper capacity ft ³ {liter}	0.62 {17.5}	0.62 {17.5}	0.62 {17.2}	0.62 {17.2}	0.62 {17.2}
Motor power Hp {kW}	1/8 {0.19}	1/8 {0.19}	1/8 {0.19}	1/8 {0.19}	1/8 {0.19}
Gear motor output rpm	0 - 9, 0 - 30, 0 - 60, 0 - 95, 0 - 170				
Dimensions inches (mm)					
Top/bottom throat adapter plate	6 x 6 {152 x 152}		8 x 8 {203 x 203}		
A - Overall height	23.50 {596.9}				
B - Loader lid adapter height [‡] (optional)	10.00 {254.0}				
C - Length to centerline throat plate	29.25 {743.0}		30.25 {768.4}		
D - Hopper to centerline throat plate	12.40 {315.0}		13.40 {340.4}		
E - Throat adapter height	6.25 {158.8}				
Weight lb {kg}					
Installed	61 {27.7}				
Shipping	110 {49.9}				
Voltage Full load amps [§]					
120/1 phase/60 Hz	4				
240/1 phase/50-60 Hz	2				

Specification Notes

- * Powder rates may be 60% less efficient than pellet rates shown in table.
 - [†] Throughput is dependent upon the combination of auger and motor rpm selected.
 - [‡] Standard handfill loading is shown in measurement "A". Optional adapter also shown in measurement "B" available for 8-inch, TLM tube loader and 12-inch loaders.
 - [§] FLA data for reference purposes only. Does not include any options or accessories on equipment. For full FLA detail for power circuit design of specific machines and systems, refer to the electrical diagrams of the equipment order and the nameplate applied to the machine.
- Specifications may change without notice. Consult with a Conair representative for the most current information.

