



MGF-ST Gravimetric Feeders

Gravimetric feeder for the price of a volumetric model

Eliminate waste of colorants and additives with this compact loss-in-weight feeder that precisely measures the amount of additive that is fed directly into the machine throat.

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YEAR
warranty



Full function gravimetric feeder for the price of a volumetric model.

4 Standard Modes of Operation

Cyclical, continuous, extrusion following and rate (vol/hr). -ST models utilize a contact closure signal from the injection machine while the extrusion following mode depends on a 0-10 VDC proportional signal from the extruder drive.

* See NOTE below

Reduces Input Error

The easiest setup procedure in the industry: enter let-down ratio and either shot weight or lb/hr output and press start. Feeder automatically adjusts to screw recovery time and extruder output.

Fine Metering Resolution

100 rpm Stepper Motor advances at 200 increments per revolution. In combination with digital control, the 200-step rotation achieves fine metering resolution of $\pm 0.2\%$.

Automatic Re-calibration

Ensures Continuous Accuracy Automatic adjustments guarantee that feed rate is held to within $\pm 0.2\%$ of desired let-down ratio.

Dual Load Cells

Balanced load readings improve accuracy.

Torque-limiting Drive Coupling

Protects drive motor in case of jammed auger.

Easy-to-Use Microprocessor

Controller Saves Time User-friendly controller has intuitive setup procedure.

USB Port

Allows data download, data printout and software update capability.

Detailed Material Usage

Documentation Microprocessor control allows data collection via G2 networking software, or MLAN protocol via Ethernet.

Eliminates Downtime Associated

with Color Change Feeder automatically e-calibrates to new color, so no additional setup required. Spare hoppers available for faster color changes.

* NOTE: When selecting an MGF feeder, you will need to determine if your machine/extruder will use as the input signal: a contact closure or a 24-250V voltage signal.

For a contact closure, order the MGF-X-ST for injection molding or extrusion.

For a 24-250V signal order the MGF-X-STV only for injection molding.

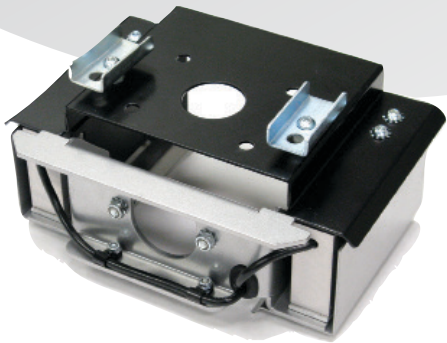
The MGF proven loss-in-weight technology automatically calibrates itself, totally eliminating manual catch-and-weigh calibration procedures and even more common and erroneous guessing of metering rates.

- › No tools required for assembly or removal of load cell assembly, hopper and metering device.
- › The throat adapter fits readily on most processing machine throats and easily supports nearly any main material supply hopper.

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YEAR
warranty

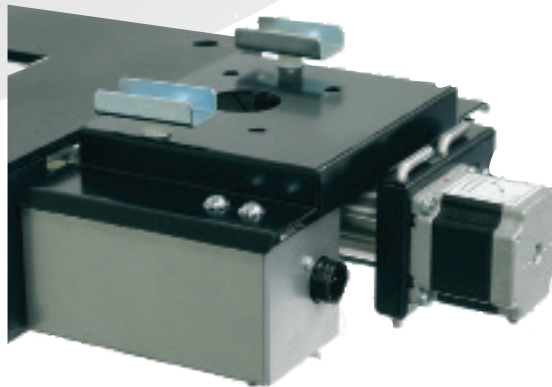


Dual Load Cells



Hopper is mounted on two load cells to prevent distorted readings from cantilevered loads in the hopper.

No Tools Required



Load cell assembly slips easily into place. The metering device is locked in place by two clips and can be quickly removed.

Fast Clean-out and Replacement

Aluminum hopper with brushed exterior holds up to 25 lb (11 Kg) of material. Easy removal and replacement of supply hopper allows fast material change. Spare supply hoppers and hopper extensions are available.



Hopper easily removed.

Easy To Use Microprocessor Controller

- › Large, user-friendly keypads for easy input
- › Back-lit LCD display
- › Can be mounted remotely with optional extension cables
- › Password protection

Alarm light indicates low-load (2-3 lb) in hopper



Conveniently located On/Off power switch and Run/Stop switch

EASY SET-UP

1.

Choose the mode of operation for your process:
CYCLE for injection OR
CONTINUOUS, EXTRUSION FOLLOWING or
RATE for extrusion applications

2.

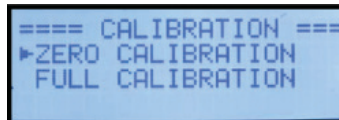
Enter let-down ratio "LDR" and either shot size
"SHOT/WT." or extruder output "LBS./HOUR"
Press "RUN"

3.

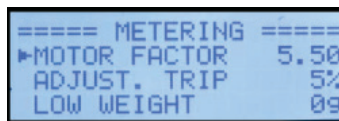
As material is metered into the feed throat,
the dual load cells under the loss-in-weight hopper
detect material usage
Loss-in-weight data is gathered by the controller
and
monitored continuously



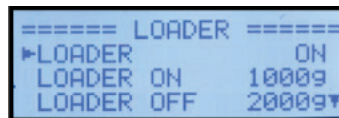
Password Protection



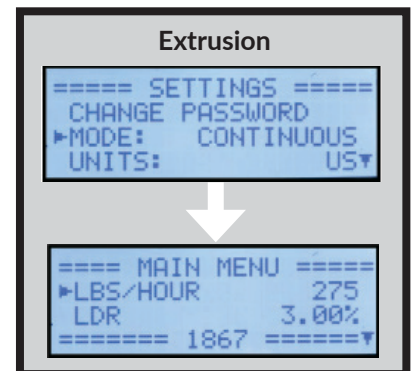
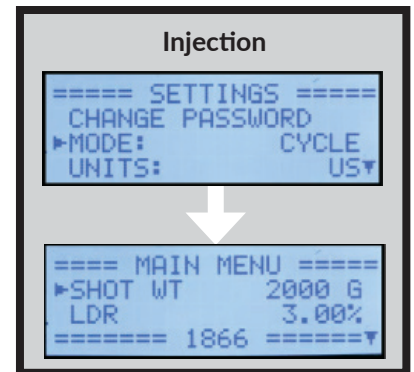
Easy Initial Calibration



Adjustable low-weight alarm
for supply hopper



Loader Weight Settings



Specifications:

	MGF-3-ST		MGF-4-ST		MGF-8-ST	
	Inches	mm	Inches	mm	Inches	mm
Auger Diameter	3/8"	9.5	1/2"	12.7	1"	25.4
Extrusion	lb/hr*	Kg/hr*	lb/hr*	Kg/hr*	lb/hr*	Kg/hr*
Minimum Rate	0.4	0.18	0.6	0.3	4	1.8
Maximum Rate	8	3.6	40	18	120	55
Injection	shot size x LDR / screw recovery = grams/second					
Maximum Rate	1 gm/sec		5 gm/sec		20 gm/sec	
Minimum Dispense	0.25 gram		0.5 gram		5 gram	

*Based on material density of 55lb/ft³ (881 Kg/m³)

MGF Configuration – ST vs. STV

The standard MGF-X-ST stepper configuration can be used for either injection or extrusion applications. The injection mode utilizes a contact closure from the machine as a means of detecting the plastification time while the extrusion mode input will accept a 0-10 Vdc proportional signal from the extruder drive.

MGF-X-STV is the alternate option. The input circuitry is voltage sensing. The V suffix represents voltage and is a different circuit board which does not have extrusion following capability. This model is injection only.

- X = 3 for 3/8"
- X = 4 for 1/2"
- X = 8 for 1"

Novatec reserves the right to cancel product or change product, product specifications and data without notice to improve reliability, function, design or otherwise.

Dry Contact Signal	
MGF-3-ST	MGF-8-ST
3/8" Auger	1/2" Auger
Stepper motor	Stepper motor
Dry contract injection	Dry contract injection
0-10 extrusion	0-10 extrusion

MGF Machine Mounting Frames	
Model	Through Hole
865-40	For smaller injectors
SGF-3	For large extruders
SGF-4	
SGF-5	
OPF-P40	Pedestal
OPF-MKT*	Tower Bin

*MGF option with tower bin

MGF-ST Remote Controller and LDR	
Extension kits for remote mounting of	
Model	Cable Length
AEK-GSC-05	5ft (1.5m)
AEK-GSC-10	10ft (3.0m)
AEK-GSC-20	20ft (6.0m)
AEK-GSV-05	5ft (1.5m)
AEK-GSV-10	10ft (3.0m)
AEK-GSV-20	20ft (6.0m)

<i>(typically newer machines)</i>		24-120 Volt Signal <i>(typically older machines)</i>		
MGF-4-ST	MGF-8-ST	MGF-3-STV	MGF-4-STV	MGF-8-STV
2" Auger	1" Auger	3/8" Auger	1/2" Auger	1" Auger
Stepper motor	Stepper motor	Stepper motor	Stepper motor	Stepper motor
Dry contract injection	Dry contract injection	24-120 volt injection signal	24-120 volt injection signal	24-120 volt injection signal
Extrusion	0-10 extrusion	-	-	-

Throat Mounting Adaptor	Frame	Feed hole	Material Baffle with Sight Window
Injection molding machines and extruders	-	-	-
Blow molding machines and injection molding machines	Black square 10" x 10"	3"	Included with MGF – only additional frames
Throat adapter	Black square 10" x 10"	4"	In lieu of SCF standard
Throat adapter	Black square 10" x 10"	5"	In lieu of SCF standard
Partial throat mount adapter	Black square 8" x 8"	3"	In lieu of SCF frame
Throat mount adapter	White frame 8" x 8"	3"	In lieu of SCF frame

Loader Kit for the control box
Drop
1.5m
3m
6m
1.5m
3m
6m

MGF Single Material Gravimetric Feeder – MGF Screw Conversion Kits		
Model	Convert to	Stepper Motor*
kitF-001	3/8" Auger	without
kitF-001M	3/8" Auger	with
kitF-002	1/2" Auger	without
kitF-002M	1/2" Auger	with
kitF-005	1" Auger	without
kitF-005M	1" Auger	with

*For frequent changes KIT with Motor recommended

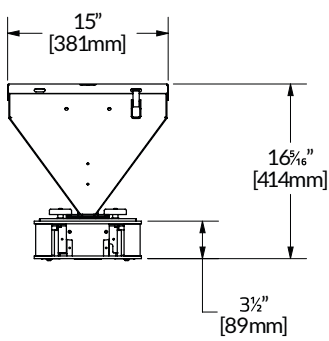
MGF Venturi Loader System Venturi operated automatic loading system – MGF Hopper	
AGL-ST	Stepper motor

MGF Remote Alarm	
OPF-GRA	Factory fitted USA
kitF-003	Field retrofit

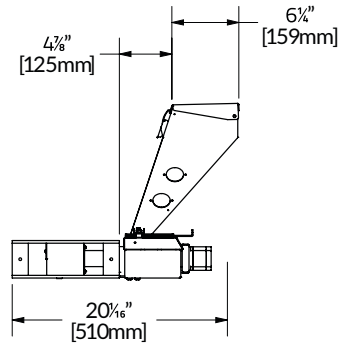
MGF Spare Controller	
ACA-GS	Generation 6 stepper motor (dry contact)
ACA-GSV	Generation 6 stepper motor (voltage signal)

Specifications: Dimensions in inches and [mm]

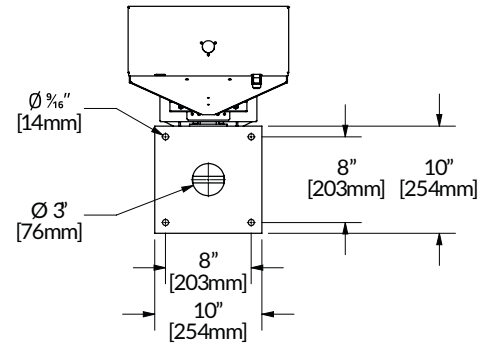
MGF-ST



Front View

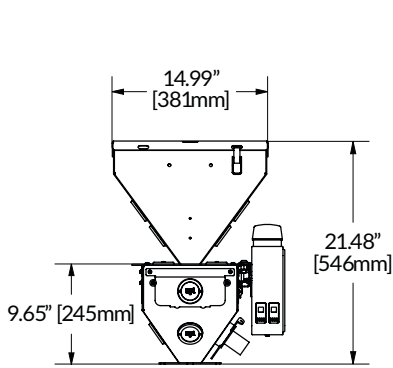


Side View

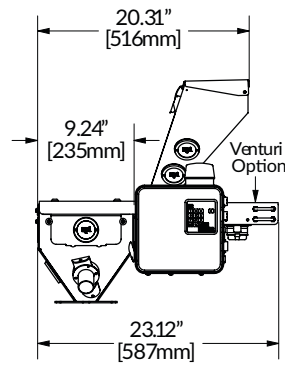


Top View

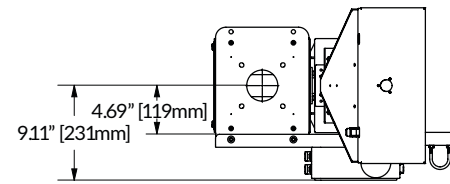
MGF Throat Mount Adaptor with White Frame 8" x 8"



Front View



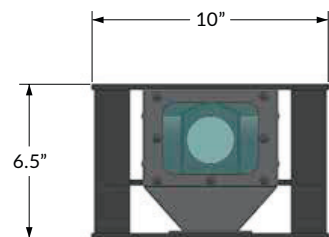
Side View



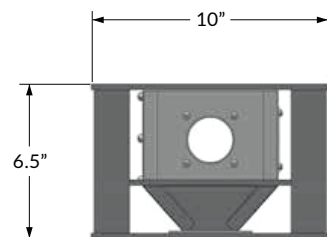
Top View

SGF – MGF Throat Mount Adaptor with Black Frame

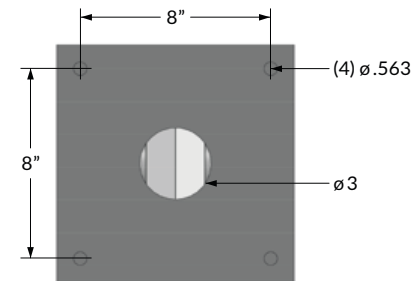
Throat adaptor has blind flanges for custom drilling



Front View



Side View



Top View

AGL Venturi Loader

(optional)

Exclusive, cost effective loading solution, ensures dosing accuracy of $\pm 0.1\%$ of set point. Loader is automatically activated by MGF controller.

