

Gravimetric Extrusion Control for X-Series Blenders



X Series blender with extrusion control: Proven Gravitrol® gravimetric extrusion control and blending in one integrated, easy-to-use package.

PROCESS CONTROL "X" Series blenders can be equipped with extrusion control software to allow the blender to control the extruder and line speed on monoextrusion lines for consistent output by weight. The only additional hardware needed is an B&R Drive Speed module and, if line speed is to be controlled, a B&R Line Speed Control module.

Gravitrol® extrusion control offers the benefits of improved product quality, reduced material usage, quicker startups and product changeovers, reduced scrap, and improved product repeatability. At the same time, it

reduces the operator's workload by maintaining a consistent output, regardless of screen pack or material variations.

The system uses Process Control's proven Gravitrol® software to automate the control of the line and hold the extruder output to $\pm 0.5\%$ by weight. This tight control of output means that product can be made consistently within tolerance at the lowest possible cost.

Process Control "X" Series blenders monitor the extruder usage in order to follow the extruder rate and insure

a consistent supply of material. In an extrusion control system, this extruder rate is used to adjust the screw speed by minute amounts to hold the overall throughput to the value entered in the blender operator station.

Because the blender already has a powerful computer and equipment necessary to measure the extruder rate, adding extrusion control on a monoextrusion line with a Process Control "X" Series blender is a very cost-effective addition. This feature can be easily retrofitted to existing installations with "X" Series or B Series blenders.

"X" Series blenders can also be easily integrated into coextrusion applications with extrusion control for controlling product layer ratios and total line throughput. On coextrusion applications the blender computer reports to a master EXB2 central Gravitrol® computer, which also receives weight throughput reading from HG Weigh Hoppers mounted on single-component extruders. ■

Standard Features

- B&R Color Touch Screen Control
- Quick installation on new or existing lines
- 0-10 VDC or 4-20 mA analog drive control signals

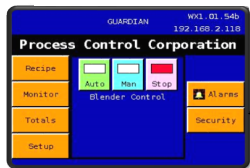
Options

- B&R Drive Speed Control Module
- B&R Line Speed Control Module
- Special Electricals

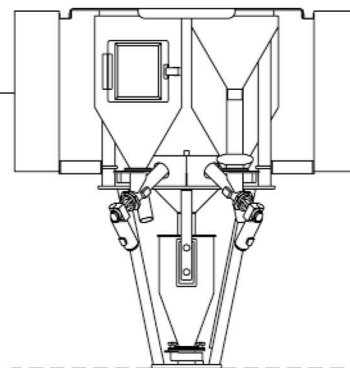
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Typical Gravimetric Extrusion Control Process Flow Diagram

B&R Color Touch Screen
Control



Actual Extruder
Rate



Extruder Output
is Held Constant
to $\pm 0.5\%$

Set Extruder Rate
via
B&R Control Module

Finished Product

Line Speed Information

B&R Line Speed Module

via B&R Line Speed Module



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