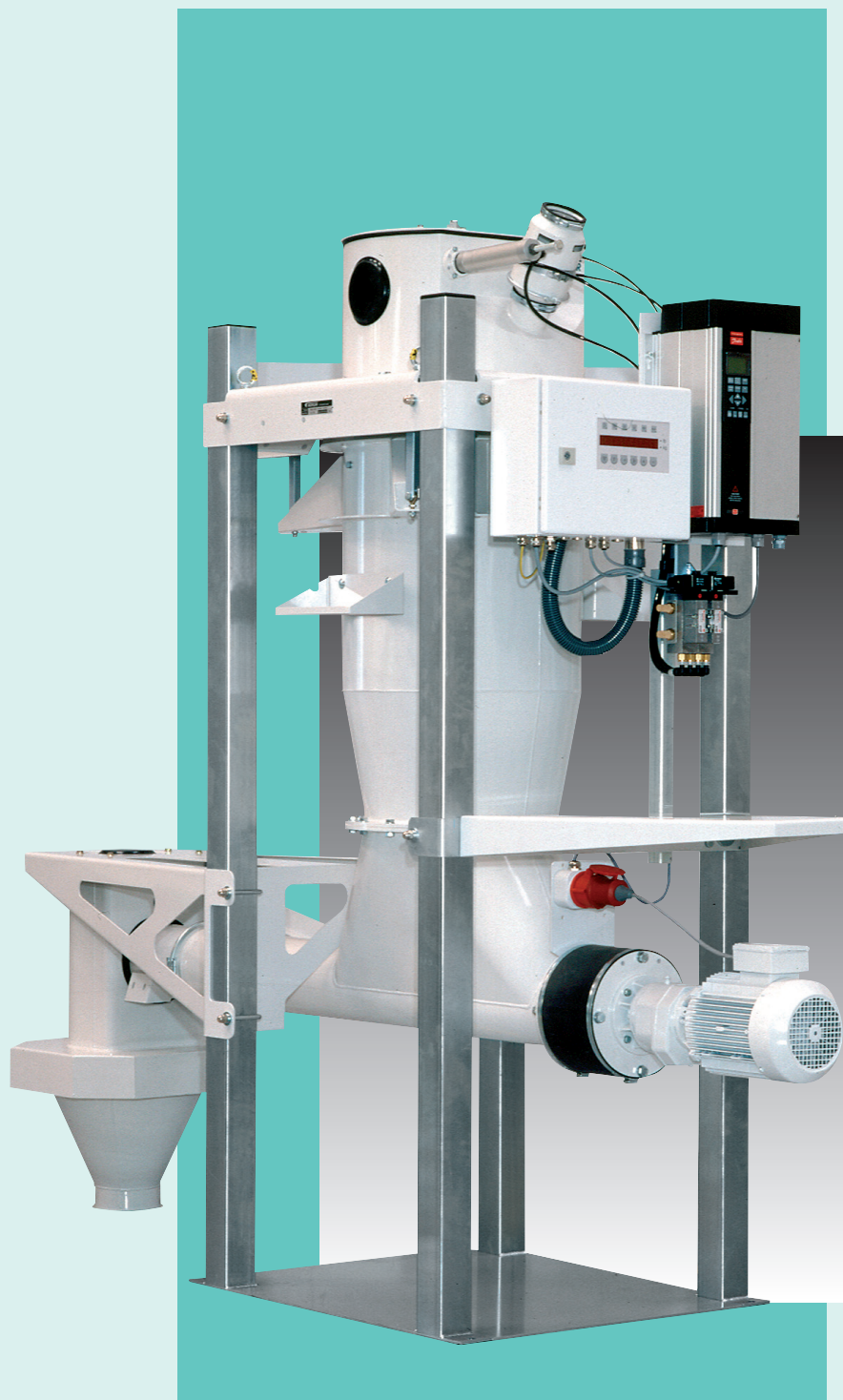


# Mini-Differential Proportioning Scale

MSDA



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Flow rate controller/flowmeter for non-freeflowing products such as flours, semolinas, sugar, salt and starch.

### Working principle

The MSDA mini-differential dosing scale can be applied both as a flow rate controller for accurately maintaining a selectable throughput with simultaneous, precise weight measurement, and as a flowmeter for precise weight and throughput measurement of a given product stream. The weigh hopper with the discharge feed screw is attached to 3 rod-type force transducers.

The MEAF electronic control and evaluation unit controls the speed of the discharge screw – and as a result the throughput – through a frequency converter. Depending on the particular throughput, the differential weight per time unit is measured during gravimetric proportioning over several measuring cycles, allowing determination of the current actual throughput in kilograms. During the brief reloading period, proportioning continues at the same throughput rate on a volumetric basis.

### Features/advantages

- Optimum accuracy of weight measurement on the basis of the differential weighing principle
- Continuous product stream at a constant rate after the scale
- Good sanitation as there is no jacketing
- Easy operation and maintenance
- Easy installation by means of adjustable clamping columns
- Control range of 1:30 (2,6–80 Hz) if ATEX is not applied
- Control range of 1:20 (5–100 Hz) if ATEX is applied (no third-party fan allowed)

- Made of mild steel or with material-contacting parts of stainless steel

### Application

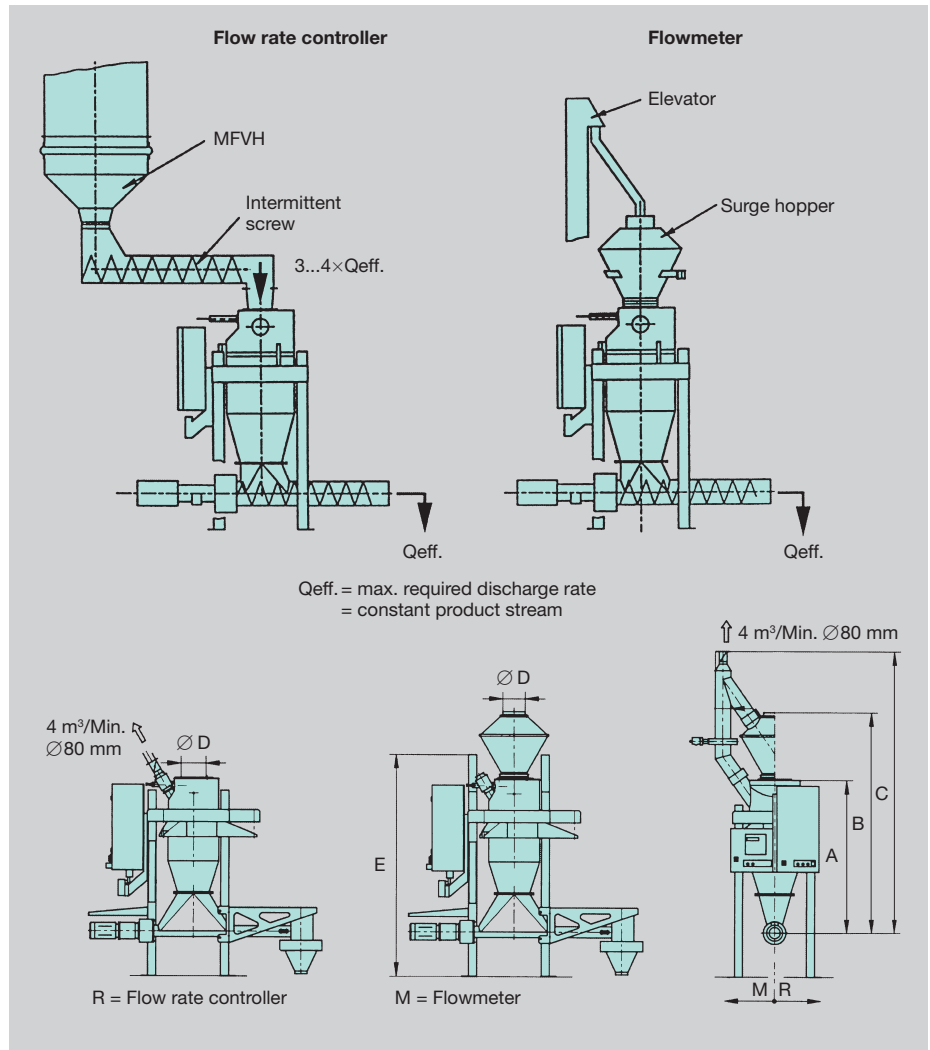
#### a) Flow rate controller

- For continuous blending installations
- Proportioning of extremely small quantities in batch blending installations
- As admixture scale (admixture of additives as a percentage)

- For establishing a precise total product quantity (batch)
- For feeding a process at an accurate throughput rate and with exact weight of product (extruders, pasta extrusion presses, dough kneaders, etc.)

#### b) Flowmeter

- Measurement of weight and throughput of a given product stream



### Technical data

Type MSDA-	Capacity range dm³/h	Bulk density kg/dm³	Aspiration m³/min Ø80 mm	Compressed air m³/h*	Weight kg	Volume m³	A	B	C	D	E	
100/100	R	200–6000	0.2–1.0	4	0.5	310	4	1505	–	–	250	1820
	M	200–4500	0.2–1.0	4	1.0	345	4	–	2175	2765	200	2820**
100/125	R	300–9000	0.2–1.0	4	0.5	370	4	1505	–	–	250	1820
	M	300–6600	0.2–1.0	4	1.0	405	4	–	2175	2765	200	2820**

R = Flow rate controller  
M = Flowmeter

\*air volume aspirated at 6 bar  
\*\*1 clamping column + 1 extension

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