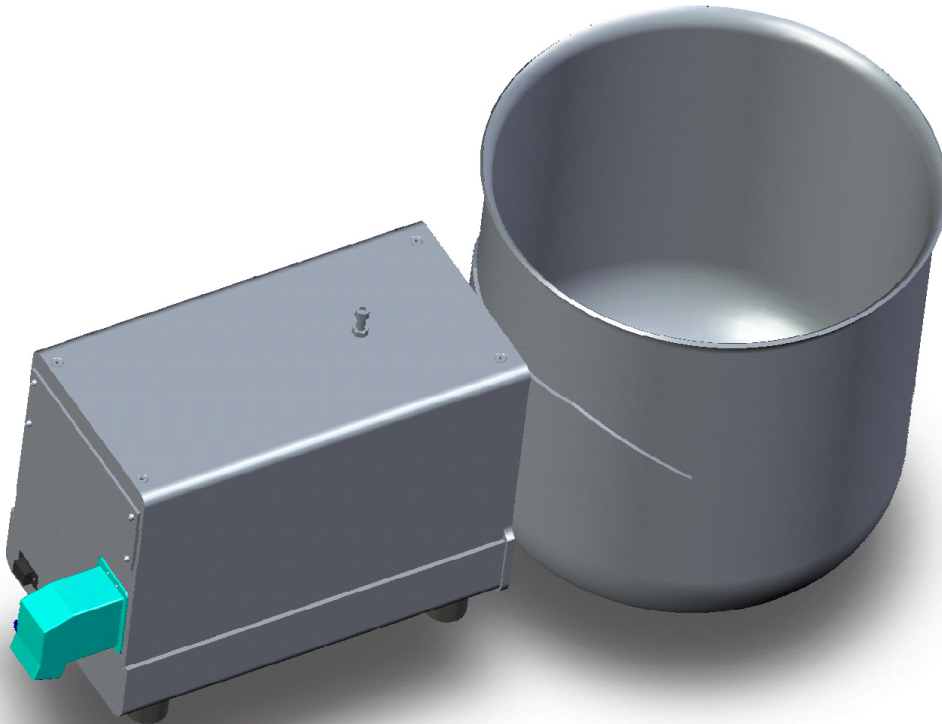


solids Rotating Bowl Scale

Type GSC GiroScale



The weighing vessel is designed as a rotating bowl that is turned by 180° for emptying. This simple concept enables a compact assembly and high accuracy at a weighing capacity of up to 60 kg.



Advantages:

- High accuracy
- Simple, compact and robust design
- Suitable for foodstuffs
- Complete emptying
- Automatable for up to 9 components
- Suitable for recipe compilation

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Function and Assembly

The rotating bowl scale is designed for weighing the batches of small/smallest components with high accuracy. It has a simple and robust design. It can weigh bulk solids as well as liquids. It consists of a housing with a weighing device, a rotating drive and a plugable rotating bowl as a weighing vessel that can be mounted/dismantled without any tool.

The extremely compact shape and the nearly quadratic design of the weighing vessel with a pivot pin attached at the centre ensure minimum installation space. In the filling position (normal position), the opening of the rotating bowl faces upwards. It is turned by 180° (opening faces downwards) for emptying. The positions are checked using initiators.

A test weight is provided for functional check. It is placed on the weighing device using a pneumatic cylinder. An error message is generated if the weight is not in the prescribed tolerance zone. This check is executed fully automatically, and ensures the correct functioning of the scale. A transportation lock is provided for the test weight.

The scale is pressure and vibration-resistant, and has high accuracy since there is no mechanical coupling with the metering or following equipment, and since the tare/net ratio is excellent due to the design.

A gasket is provided between the housing and the slip-on pin to protect the inner side of the scale housing from the dust of bulk solids. In addition, a small overpressure can be generated and be kept in the housing.

The scale series comprises three main sizes for different weighing capabilities. They are equipped with rotating bowls whose volume is adapted to the density of bulk solids.

All actuations are electropneumatic.

Outer housing walls, rotating bowl and the slip-on pin are made of stainless steel 1.4301, and so are the parts of the taper that come in contact with the product. Special vessels with lining or flexible walls are available for special bulk solids.

Small rotating bowl scales (GSC10, GSC20) are preferably directly bolted onto the dust housing using a flange coupling. The large scale (GSC60) requires a separate base. The housings of GSC10 and GSC20 are identical, and differ slightly from that of GSC60 (see dimension sheet).

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Scale Series

Scale type	Weighing capability	Numeric step	Weighing signal	Accuracy	Vessel volume	Dead weight
	<i>kg (max.)</i>	<i>g (recommended)</i>	$\mu\text{V/d}$ (at $U_s 10\text{ V}$)	<i>g</i>	<i>Litre</i>	<i>kg</i>
GSC10	10	0.5	0.66	$\pm 1,5$	10	15
GSC20	20	1	0.66	± 3	10	20
GSC20	20	1	0.66	± 3	16	20
GSC20	25	1	0.66	± 3	25	20
GSC50	50	5	1.33	± 15	32	30
GSC50	50	5	1.33	± 15	50	30

The following weighing capabilities can be implemented additionally:

- GSC10: 2 and 5 kg
- GSC50: 30 and 50 kg Intermediate values can also be implemented.

Technical specifications:

- Power supply for solenoid valves, initiators and weighing terminal: 24 V DC approximately 10 W
- DMS readings recorder: 2 mV/V max. 15 V DC supply voltage C3 as per OIML
- An overload protection is integrated for weighing capability of up to 20 kg
- Ambient temperature: -10 °C to 40 °C
- Compressed air supply: 6 bar

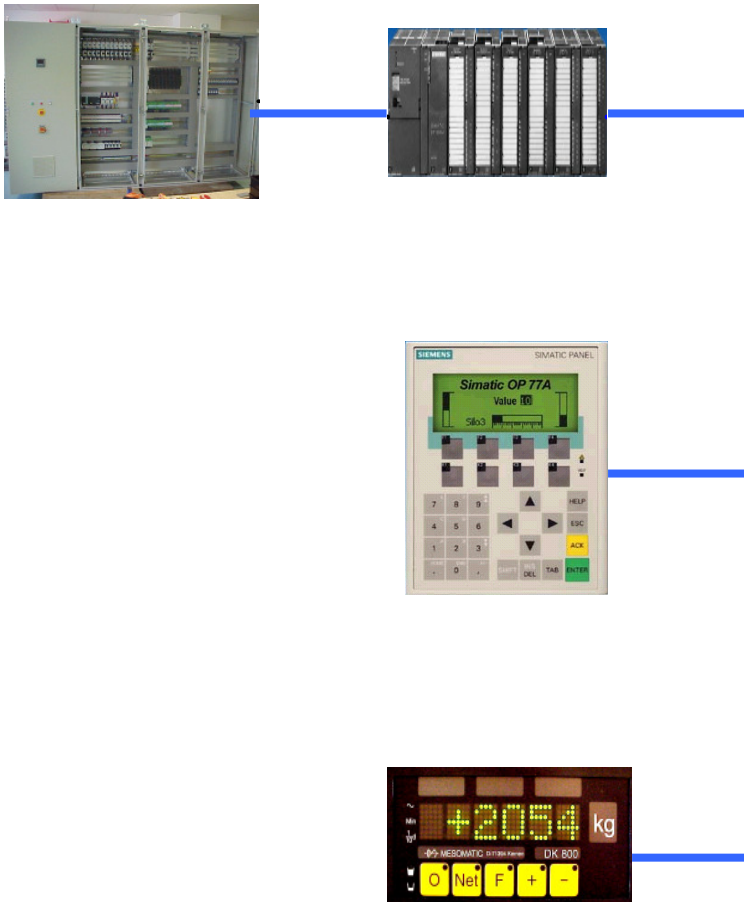


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Example for a control concept with many recipes and components.



Switch cabinet with frequency converter, power elements and separately illustrated PLC. Profibus is used for communication.

OP for recipe management, simple visualisation, automatic and manual operation, error messages. Can be mounted on the switch cabinet doors or separately.

Weighing terminal as complex metering controller with a direct control of metering elements is integrated into the rotating bowl scale or separated.

The OP can be omitted if a process control system is available, unless manual operation is desired on the site, e.g. since a large number of metering equipment has been installed or due to other reasons.

