

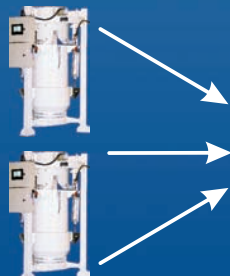


Application of scales LIBRA

The LIBRA scales are used for automatic weighing of loose, powdery and granular materials, including material hard to pour and tending to suspend.

They can be used as totalising, batch or flow monitoring scales.

The LIBRA scales are particularly designed for application in the system of production control in the mill (extraction calculations etc).



Technology WEB



Advantages and general information about the system

- system is designed for analyzing milling and flow process on the basis of data from scales
- from 2-16 scales can be used
- information available for each product – individual tones/hour – current, average over a time period, total over a time period
- calculation of product extraction rates – current, over a time period etc.
- wide range of the LIBRA scale sizes allows application of the system both in flour mills as well as other technological lines with bulk products
- software of production control in the mill is designed individually for each plant, taking into consideration features of process and client requirements



Scale LIBRA in the system of production control in the mill

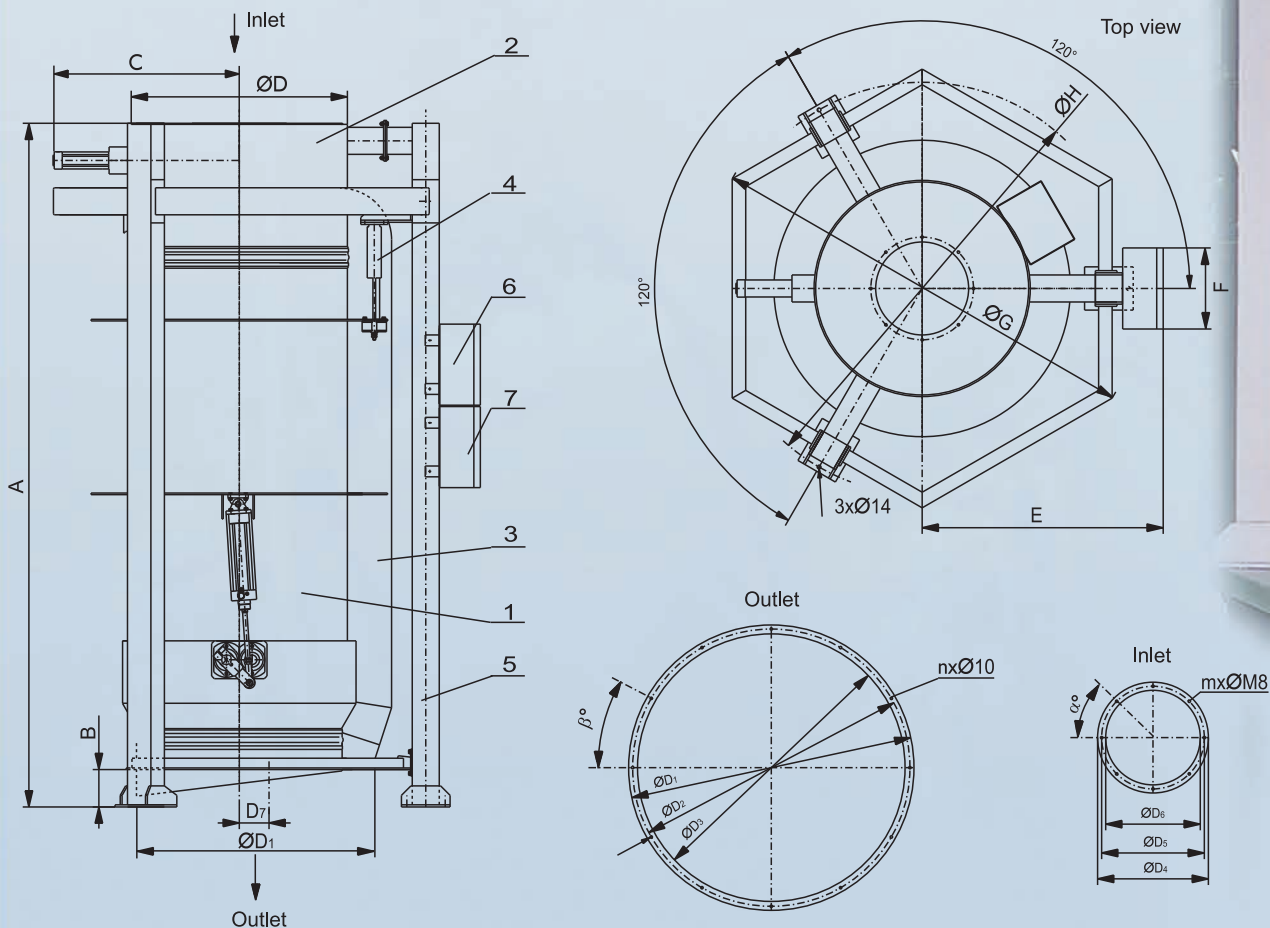
Grain flow balancer SSZ-e (electronically controlled)

Scale LIBRA in the system of production control in the mill

Features of LIBRA scales

- automatic reset before each cycle
- adding weighed batches [kg]
- reset of sum (with password)
- specifying of current average flow [t/h]
- stabilizing of settled flow
- turning off of the scale after a pre-set total is reached
- setting of scale parameters, communication and calibration
- main PLC communication using RS-485 with Modbus RTU

- 1 weighing tank
- 2 batching unit
- 3 exhaust outlet
- 4 strain gauge sensor
- 5 supporting structure
- 6 electric control box
- 7 pneumatic control box



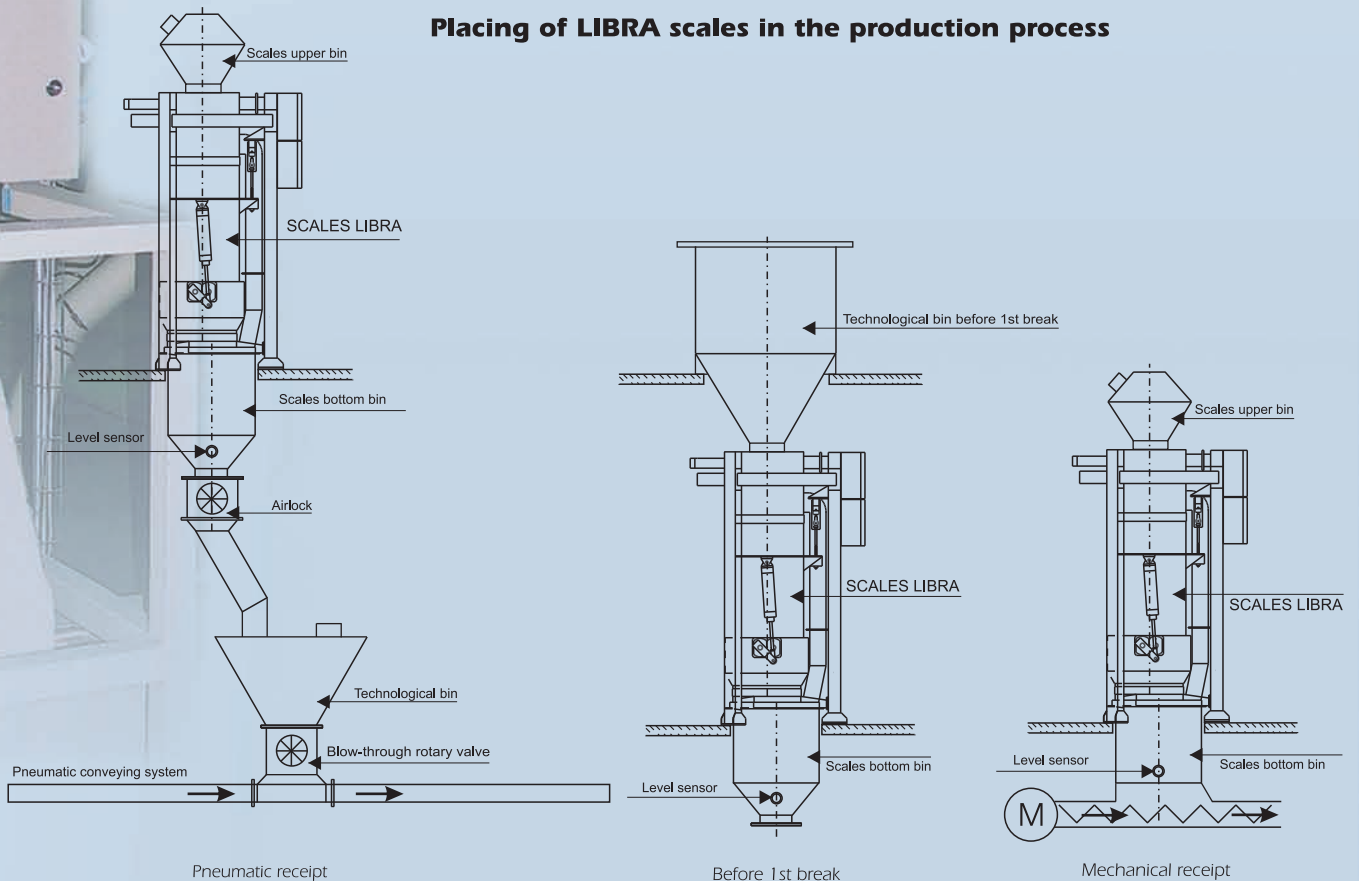
Type of scales	Dimensions [mm]																Pieces		Angle [°]		Mass [kg]
	A	B	C	D	E	F	G	H	D ₁	D ₂	D ₃	D ₄	D ₅	D ₆	D ₇	m	n	α	β		
LIBRA-24	1150	78	390	360	542	300	736	816	506	476	442	210	180	150	54	6	8	60°	45°	195	
LIBRA-80	1575	105	500	476	635	300	900	1000	640	610	580	260	230	200	65	8	12	45°	30°	332	
LIBRA-120	1775	105	500	476	635	300	900	1000	640	610	580	260	230	200	65	8	12	45°	30°	352	
LIBRA-200	1802	117	602	625	734	300	1108	1208	826	796	766	310	280	250	82	8	12	45°	30°	408	
LIBRA-300	2191	117	602	625	734	300	1108	1208	826	796	766	310	280	250	82	8	12	45°	30°	435	
LIBRA-500	2287	138	690	800	842	300	1343	1423	1056	1026	990	410	380	350	110	8	12	45°	30°	600	
LIBRA-600	2530	138	703	800	892	300	1624	1526	1056	1026	990	410	380	350	110	8	12	45°	30°	625	

Technical data scales of the LIBRA type

- accuracy class: 0,2%
- energy consumption: 85 W
- power requirement: 24V DC
- compressed air pressure: 6 bar [0,6 Mpa]
- ambient temperature: 10°C to + 40°C
- noise level: < 70dB (A)

Type	Nominal capacity of weighing [m ³ /h]	Net capacity of weighing container [dm ³]	Compressed air requirement [m ³ /h]	Max mass (with product) [kg]
LIBRA-24	6	24	1,2	219
LIBRA-80	20	80	5,7	412
LIBRA-120	30	120	5,7	472
LIBRA-200	50	200	5,9	608
LIBRA-300	75	300	5,9	735
LIBRA-500	115	500	8,9	1100
LIBRA-600	135	600	8,9	1225

Placing of LIBRA scales in the production process



Grain flow balancer SSZ-e (electronically controlled)



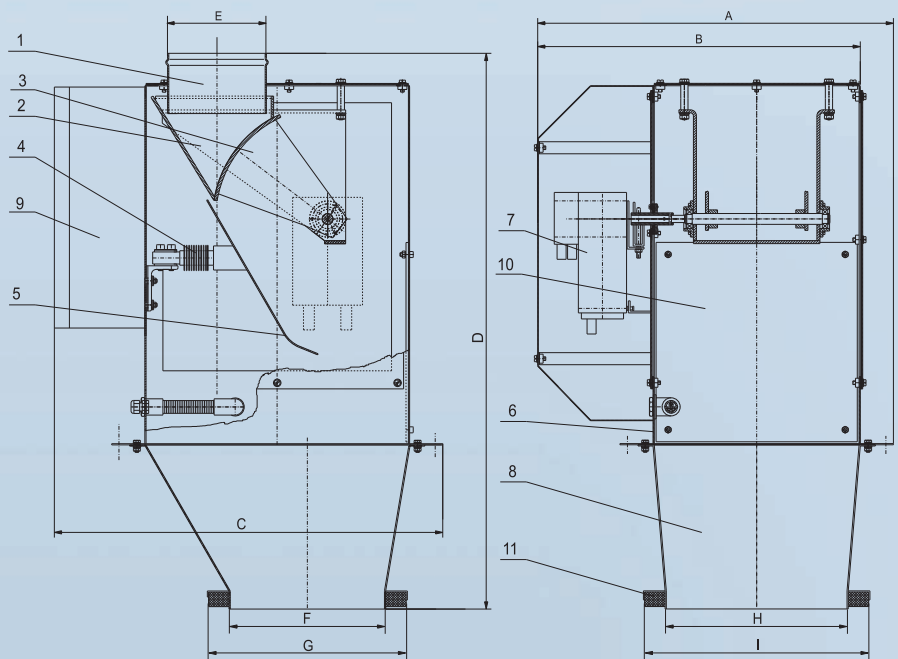
The FP SPOMAX's Electronically controlled Grain Flow Balancer is designed for gravimetric stabilisation of the grain flow in grain treatment lines before milling. Generally it is installed under grain silo. It can also be used as an independent machine or as a proportional dispenser when working parallel with a number of similar machines. In both cases the Grain Flow Balancer can be operated in computer control system.

Advantages and general information

- Stable flow under accurate control
- The flow value/rate easy to pre-set
- Simple and easy maintenance
- Permanent control of the grain flow
- Only electric power required (no need for compressed air)
- Easy to read and operate display
- Remote control
- Connection to local or central network possible

If several balancers are installed for common operation, they can be either individually controlled or can have one common control unit

- Dosing accuracy: +/- 1%
- Supply voltage: 230VAC (other supply voltage on request)
- Power demand: 90W
- Ambient temperature: 0-40 °C (under 0 °C on request)



- 1 - Input connection
- 2 - Batching chamber
- 3 - Limiting gate
- 4 - Weight sensor
- 5 - Pulse plate
- 6 - Body
- 7 - Motor
- 8 - Output connection
- 9 - Electronic control unit
- 10 - Supporting plate
- 11 - Sealing

Technical data

Type	Capacity t/h	A		B		C	D	E	F	G	H	I	Weight [kg]
		standard	ATEX	standard	ATEX								
SSZ -e-15	up to 15	487	551	441	505	605	825	ø129	260	332	304	376	56,8
SSZ -e-30	up to 30	526	590	471	535	645	922	ø164	260	332	304	376	67
SSZ -e-70	up to 70	630	694	575	640	805	1112	ø254	442	510	338	410	102

Manufacturer reserves the right for modifications of parameters and devices appearance in the course of its improvement.