



MICRO-COMPACTOR

SAHUT-CONREUR has developed a new range of micro-compactors for laboratories use, Research and Development centers and the pharmaceutical industry as well.

This new equipment enables to make briquetting and compaction-granulation feasibility studies on a wide variety of products in very small quantities (about 0,25 liter for one test, a few kg/h in continuous use).

Another advantage of this equipment is that the pieces in contact with the product can be easily and rapidly dismantled, cleaned and reassembled.

These many pieces can be handled without any particular tools. (The heaviest part is not 8,5 kg heavy).

According to their configuration, the micro-compactors produce :

- either briquettes in varied shapes (pillow, soap, stick,...) and volume from 0,4 cm³ to about 1 cm³.
- or granules from 500 µ about 5 mm.



Micro-compactor type : PB1/150/30

These micro-compactors are available in 2 versions :

- the type PB1, made of 2 fixed rolls in translatory movement and without any hydraulic system.
- the type MP1, including a fixed roll, a mobile roll in translatory movement and a hydraulic system.

These micro-compactors are compact and very easy to handle and use. They can be readily installed in research laboratories.



FEED SYSTEM OF THE ROLLS

These micro-compactors are equipped with a force feeder with conical screw to feed the rolls. Thanks to its conical shape, the force feeder enables to predensify the powders before their compaction and so to obtain a better compacted product.

For very aerated powder and low density, an optional deaeration device (vacuum pump) can be installed in the force feeder to remove the air contained in the product before its compaction.

ROLLS

The rolls are installed in cantilever or they are mounted outside the mechanical part of the machine. This was specially designed to completely isolate the "process zone" from the mechanical part of the compactor. The surface of the rolls (pocketed, knurled, corrugated,...) depends on the process adopted and the product to treat.



Micro-compactor type : MP1/150/30



For thermosensitive products or which present a detrimental overheating during the compaction, an optional cooling system (water circulating in the rolls) can be installed.

HYDRAULIC SYSTEM

Thanks to the hydraulic system, a force adjusted according to the product is applied on the mobile roll.

The maximum force applied is 75 KN which corresponds to a maximum pressure of 25 KN/lcm.

An optional force sensor can be installed to know the load and pressure taken by the product during the compaction.

GRANULATOR

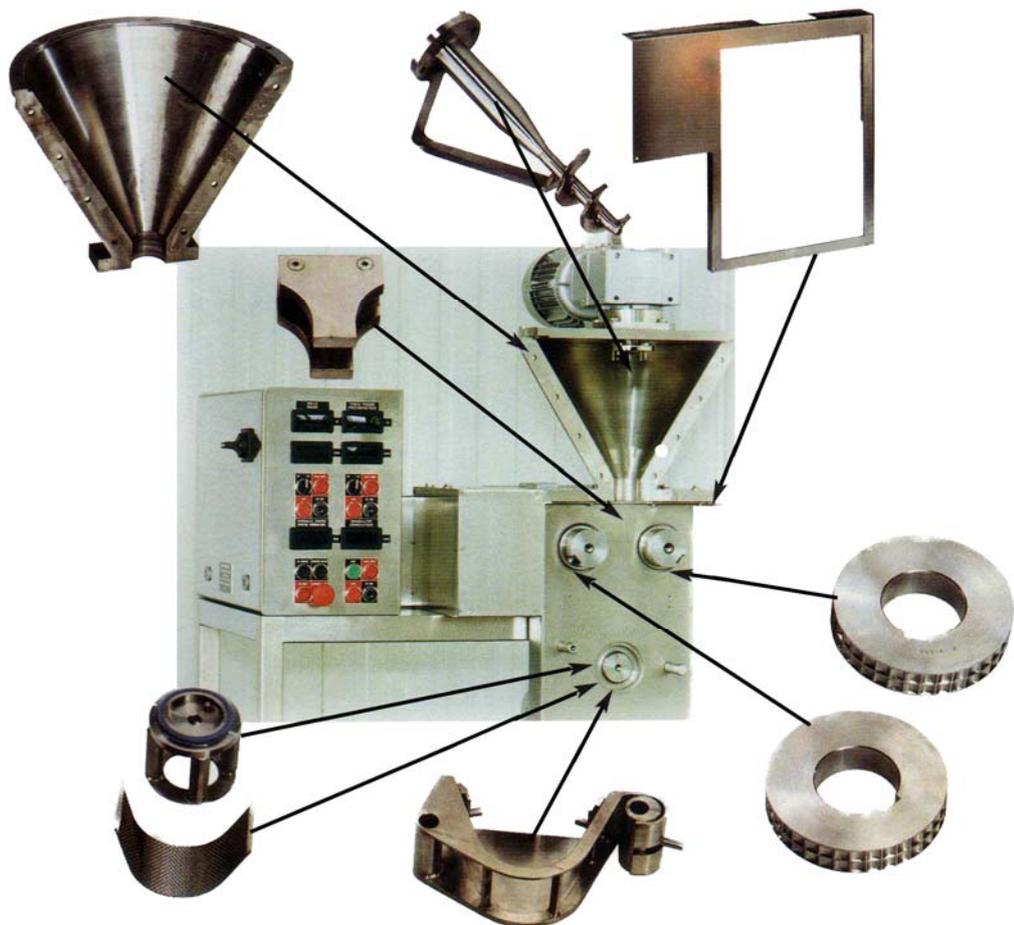
Concerning the compaction-granulation process, the micro-compactor is equipped with a granulator whose the rotor and the screen are also cantilever-mounted to isolate the "process zone" from the mechanical part.

An optional sampling device can be installed on the rolls cover to take some compacted product before granulation.

CONTROL PANEL

All these equipments are fitted with a drive and control panel which enable to adjust and visualise the different operating parameters (the force-feeder's screw speed, rolls speed, pressure in the hydraulic circuit, the granulator's rotor speed) and to constantly mess the operating conditions (motors amperage, charge on the product, thickness of the compacted product...)

A process regulation ensuring the automatic running and a data acquisition and computer record system can also be installed.



TABLE

The micro compactor can be installed on a table with swivelling rollers to give it greater handiness and mobility.

CHARACTERISTICS	BRIQUETTING		COMPACTION - GRANULATION	
	PB1/150/30	MP1/150/30	PB1/150/30/10	MP1/150/30/10
Roll diameter (mm)	150	150	150	150
Roll width (mm)	30	30	30	30
Hydraulic system (Kn/cm)	None	0 – 25	None	0 – 25
Roll speed (Rpm)	0 – 25	0 – 25	0 – 25	0 – 25
Force-feeder speed (Rpm)	0 – 150	0 – 150	0 – 150	0 – 150
Granulator speed (Rpm)	-	-	0 – 100	0 – 100
Total power (kW)	3.3	3.3 + 0.35	3.3 + 1.55	3.3 + 1.55 + 0.35
Dimension (mm)	930x660x1400	930x860x1400	950x660x1400	950x860x1400
Weight (kg)	300	350	400	450
Voltage	- 230 Volts monophase			
OPTIONS	<ul style="list-style-type: none"> - Stainless steel 304 L or 316 L for the parts in contact with the product - All parts in stainless steel 304 L or 316 L - Deaeration device system of the force feeder with possibly cheek plates - Rolls cooling system - Sampling device of flakes before granulation - Table - Automation/regulation and date recording system - Polished mirror - Gap sensor - Force sensor - GMP version 			



Small production units of briquettes or granules using these micro-compactors have also been designed and enable to obtain a briquettes or granules output of 50 kg/hour.



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