

## MiniCap

### Fully Automated Capsulation Machine

The Mini-Cap – Fully Automated Capsule Filling Machine is used for a hand-free, fully automated filling of hard gelatin capsules. It was developed for the use in R&D, for Galenic Development and for small batch production. The Mini-Cap – Fully Automated Capsule Filling Machine is - contrary to manual capsulation systems- a perfect choice for Process Scale-Up and Preparation of Master Manufacturing Procedures.



Mini Cap

#### Operating Range

The Mini-Cap – Fully Automated Capsule Filling Machine is one of the first automatic bench-top capsule filling machine for powder and pellet filling. This machine has been designed to fill gelatin capsules. The Mini-Cap is equipped with PLC controls and it is designed as per GMP and CE standards. Thanks to its compact size and its smart design; it is easy to install the machine on any solid work bench. A massive L316 Stainless Steel trolley is available as an option. The work cycle is totally automatic and is controlled by Programmable Logic Control (PLC).

All contact parts are made of GMP compliant materials and can be sterilized in accordance with GMP.

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### **Safety Measures**

- » Electrical front panel box positioned on front side of the machine
- » Low-voltage 24-V Front panel control plate with push buttons & key type MMI
- » Red emergency push-button on the control desk
- » Upper doors front & rear provided with hinge blocks for protection against moving parts & safety switch interlocking in the compression zone
- » Lower guards provided for driving assembly with screw locking system & safety switch interlocking
- » Vacuum pump with electronic switch & filters
- » AC variable drive with PLC Unit is used for turret drive controls

### **Advantages**

- » Compact, automatic bench-top machine
- » Easy to install on any workbench
- » Easy operation, cleaning and service
- » Proper for powder, granules and pellets feeds
- » Auto rejection of un-opened capsules
- » Auto ejection of correct capsules
- » Good solution for R&D, galenic development and small batch production
- » Necessary for process scale-up and preparation of master manufacturing procedures
- » Corrosion resistant, medical & food grade contact parts.
- » Human touch-free capsulation

### **Features**

- » User friendly
- » Smart design
- » Versatile and flexible feed
- » Fully automated capsulation work cycle
- » Practical and economic
- » GMP compliant

### **Standard Scope of Supply**

The Mini Cap (part. no. 40-02400) comes with the following standard scope of supply:

- » IQ, OQ and User Manual

## Options

### Dosing Disc

Size	Dosing Plate
00	24.5; 22.5; 20.5
0	20.5; 18.5; 16.5
1	18.0; 17.0; 15.0
2	16.0; 13.7
3	12.5; 11.5

### Average Capacities of Capsules

Capsule Size	Volume [cm <sup>3</sup> ]	Capacity [mg]			
		For Powder: $\rho = 0.6$ [g/cm <sup>3</sup> ]	For Powder: $\rho = 0.8$ [g/cm <sup>3</sup> ]	For Powder: $\rho = 1.0$ [g/cm <sup>3</sup> ]	For Powder: $\rho = 1.2$ [g/cm <sup>3</sup> ]
000	1,37	822	1096	1370	1644
00	0,95	570	760	950	1140
0	0,68	408	544	680	816
1	0,50	300	400	500	600
2	0,37	222	296	370	444
3	0,30	180	240	300	360
4	0,21	126	168	210	252
5	0,13	78	104	130	156

## Application Specifications

Parameter	Specification
<b>Operation principle</b>	Rotary fully automatic capsule filling machine with integrated powder feeding and capsule closing system
<b>Process range</b>	<ul style="list-style-type: none"> <li>» Hand-free, fully automated filling of hard gelatin capsules</li> <li>» R&amp;D, galenic development and small batch production</li> </ul>
<b>Feed characteristics</b>	Free flowing granules, pellets and powders
<b>Range of applications</b>	Pharmaceutical, herbal & alternative medicine, agriculture, chemicals

## Capsulation Specifications

Parameter	No. of Units
<b>Upper Bushings</b>	8 Units
<b>Lower Bushings</b>	8 Units
<b>Dosing Disc with Counter Disc</b>	1 Unit
<b>Capsule Orientation Group</b>	1 Unit
<b>Pins for Powder Compression</b>	4 Units
<b>Pin for Powder Transfer</b>	1 Unit
<b>Pin for Capsule Closing</b>	1 Unit
<b>Dosing Discs (see encl. table)</b>	1 Each

## Technical Specifications

Parameter	Specification
<b>Production Rate</b>	Up to 3000 capsules/h.*
<b>Compatible Capsule Size</b>	00, 0, 1, 2, 3 and 4
<b>Electric Voltage</b>	230 V $\pm$ 10%, single phase, 50/60 Hz.
<b>AC Motor Rating</b>	90 W, 1400rpm, 230V, gear box ratio=30:1
<b>Rated Power</b>	0.75 KW, including vacuum pump
<b>Vacuum Pump for Capsule Opening</b>	6 m <sup>3</sup> /h. (VTE 6)
<b>Aspiration Vacuum Pump</b>	90 m <sup>3</sup> /h. pressure drop=120 mbar
<b>Air Compressor</b>	50l./min. at work pressure 1.5 bar
<b>Pneumatic Requirements</b>	Flow 300l/min. at 6bar
<b>Instrument dimensions</b>	Approx. 660 x 650 x 880 mm (width x depth x height)
<b>Packaging dimensions</b>	Approx. 815 x 820 x 1050 mm (width x depth x height)
<b>Net/ Gross weight (without sieve stacks)</b>	Approx. 286 / 435 kg

We reserve the right to make technical changes without any prior notice.