



# C-LAB-ONE

## Single screw feeding unit for low throughputs

**C-LAB-ONE** is a single screw feeding unit engineered in different sizes in order to feed powders, granules, pellets, flakes and fibers at very low feedrates and is available in volumetric or gravimetric versions. In the loss-in-weight modules, an analogue load cell is installed to guarantee a high weighing accuracy. The C-LAB-ONE series is ideal for laboratory lines where small quantities of product need to be continuously fed at very low throughputs.



### PRINCIPLE OF OPERATION

One single motor through an integrated gear box, drives the feeding screw and the horizontal agitator which avoids bridging and keeps a constant material flow. Different screw configurations allows the user to feed any kind of product with any kind of throughput accurately and with consistency.

### MAIN FEATURES

#### EASY AND FAST CLEANING

Both the front and back feeder covers can be completely disassembled for cleaning operations

#### HIGH PERFORMANCE

C-LAB-ONE can guarantee a high accuracy in feeding ( $\pm 0.5\%$ ) in a range of 1:20.

#### MODULAR DESIGN

The design allows the possibility to change material and feed-rate by simply changing the screw and discharge outlet.

#### MODULAR HOPPERS

The various sizes of hopper can be easily replaced or disassembled for cleaning operations.

#### WEIGHING SYSTEM

C-LAB-ONE gravimetric units can be installed on a platform scale which guarantees high accuracy.

#### INSTALLATIONS

C-LAB-ONE is always supplied prewired with junction boxes to permit an easy and fast installation.

C-LAB-ONE feeders can be installed in a standalone frame or in a modular multi component dosing station frame C-MULTY which is available in various configurations: DS-4, DS-6 and DS-8, from 2 to 8 feeding units.

#### CONTROL SYSTEM & INDUSTRY 4.0

Feeder control system can manage from a single feeder up to several feeders. The PLC is supplied with OPC-UA protocol embedded, which makes each machine modular and ready for industry 4.0.

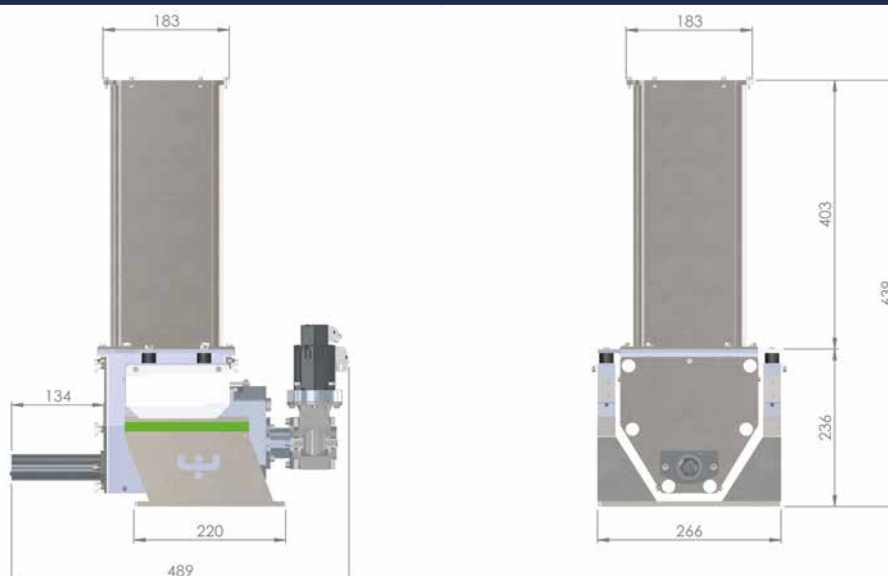
#### HMI

The feeding control system is equipped with a user friendly HMI touch screen (7"-9"-15").

#### OPTIONS AVAILABLE

As an option, C-LAB-ONE can be designed for high temperatures, ATEX compliant and/or FDA compliant.

## TECHNICAL DATA



### Configuration

- Vertical Hopper 10 lt
- Asymmetric Hopper 30 lt
- Stand alone feeder

### Option

- Vertical Agitator for conical, asymmetric Hoppers
- Screw extension 50 mm
- Horizontal agitator for powder
- Horizontal agitator for flakes or granules
- Horizontal agitator for fiber

### Configuration

- AC motor
- Brushless motor
- Single motorization
- FDA compliant
- ATEX compliant

### Technical Data

#### Brushless Motor - Drive

- Motor Size 0.2 kW
- Voltage 230 V
- Motor Class IP55
- Speed Reducers 7:1 / 14:1 / 30:1

#### AC Motor - Drive (Option)

- Motor Size 0.12 kW
- Voltage 230-460/3/50-60Hz
- Motor Class IP55
- Speed Reducers 7:1 / 14:1 / 30:1

### C-LAB-ONE-DLM-20

		SPIRAL			
Gear (AC motor)	rpm (screw)	Φ 17 x 17	Φ 20 x 20	Φ 30 x 16	Φ 30 x 32
		dmc/h	dmc/h	dmc/h	dmc/h
30:1	18 - 86	262 - 1255	4,5 - 21	7 - 34	11 - 53
15:1	40 - 185	584 - 2700	9,3 - 43	15 - 69	23 - 107
7:1	80 - 370	1168 - 5400	20 - 92	32 - 148	50 - 231
Gear (Brushless motor)	rpm (screw)	Φ 17 x 17	Φ 20 x 20	Φ 30 x 16	Φ 30 x 32
		dmc/h	dmc/h	dmc/h	dmc/h
30:1	4,6 - 93	0,4 - 8	1,15 - 23	1,8 - 36	2,8 - 56
15:1	9,3 - 186	0,8 - 16	2,3 - 46	3,7 - 74	5,8 - 116
7:1	20 - 400	1,8 - 36	5 - 100	8 - 160	12,5 - 250

### C-LAB-ONE-DLM-20

		AUGER			
Gear (AC motor)	rpm (screw)	Φ 15 x 10	Φ 25 x 25	Φ 30 x 16	Φ 30 x 32
		dmc/h	dmc/h	dmc/h	dmc/h
30:1	18 - 86	0,8 - 3,8	8,5 - 40	7 - 33	13 - 64
15:1	40 - 185	1,6 - 8,5	18 - 81	14 - 65	28 - 130
7:1	80 - 370	4 - 19	38 - 174	30 - 140	60 - 278
Gear (Brushless motor)	rpm (screw)	Φ 15 x 10	Φ 25 x 25	Φ 30 x 16	Φ 30 x 32
		dmc/h	dmc/h	dmc/h	dmc/h
30:1	4,6 - 93	0,2 - 4	2 - 43	1,7 - 35	3,5 - 70
15:1	9,3 - 186	0,4 - 9	4 - 88	3,5 - 71	7 - 140
7:1	20 - 400	1 - 20	9 - 188	7,6 - 152	15 - 300