



# MODYX

## Continuous loss-in-weight dosing system

**MODYX**, continuous loss-in-weight dosing system designed to ensure gravimetric feeding of a recipe in processes requiring low throughputs and high accuracy. It guarantees the ratio between components in the recipe, respects and controls dosing accuracy and the total throughput of the extruder or press. ModYx is ideal for injection molding, blown molding and extrusion lines.

### PRINCIPLE OF OPERATION

Each sub-component is fully weighed on an off-center load cell. The hopper feeds an underlying motorised screw conveyor. The weight loss of the material exiting the auger provides the PLC, instant by instant, direct feedback on the component's flow rate, and any potential instantaneous or cumulative deviation is quickly checked and constantly adjusted to maintain the flow rate set.



### MAIN FEATURES

#### GREAT ACCURACY & CONTINUOUS CONTROL SYSTEM

ModYx continuously measures the dosing rate of the each secondary component, so that any variation is recorded and compensated for. The primary component can end up passively in the extruder or be weighted too in order to achieve greater precision and control.

#### LOW THROUGHPUTS

Specially designed augers for dosing at very low rates are available. The dosing stop shutter (only available on certain configurations) allows for immediate recipe changes, such as colour changes, reducing transition waste and contamination risks.

#### STRUCTURAL RIGIDITY

The solid structure of the body acts as a vibration filter so as not to introduce noise into the load cell readings.

#### MULTI-COMPONENT STATION

ModYx can be customised with one, two or three sub-components, plus the main component.

#### EXTENDED RANGE AND MODULARITY

ModYx uses a wide range of dosing screws to cover a variety of material flow rates and granulometry, from low percentage additives as well as secondary components with a higher percentage in the recipe.

#### EASY-ACCESS

Installation and easy access are strengths of the design, making cleaning and maintenance extremely fast and intuitive.

#### LOADING AND TRANSPORT

Modyx is capable of loading and conveying management as an integrated logic function.

#### REMOTING FOR INJECTION

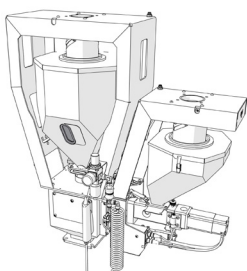
The HMI and control panel can be remote-controlled for installation on molding machines.

#### INDUSTRY 5.0 & IoT

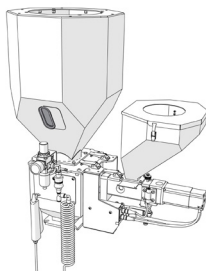
All Syncro machines are ready to be integrated with third party supervisory controls and ERP systems using the latest generation of OPC-UA protocols as standard.

## CONFIGURATIONS

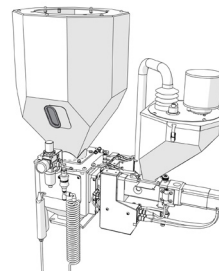
Modyx with loading structure



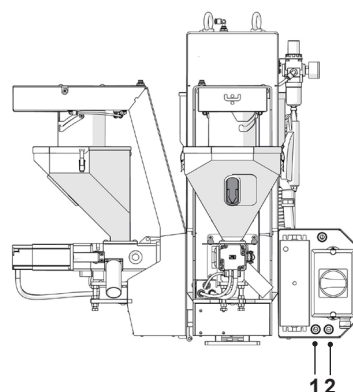
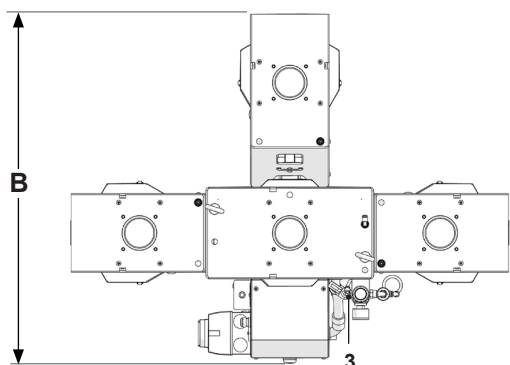
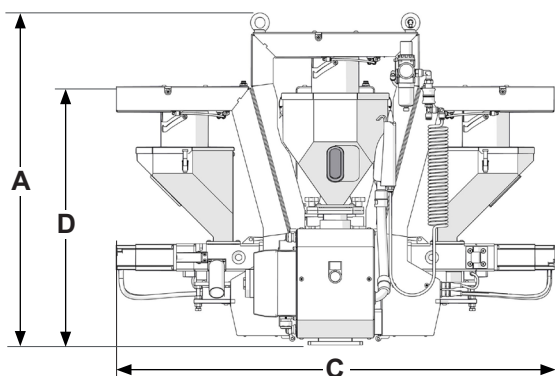
Modyx with manual loading



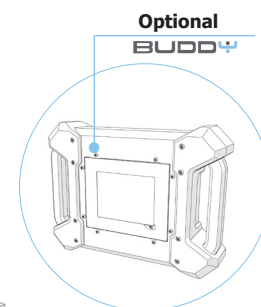
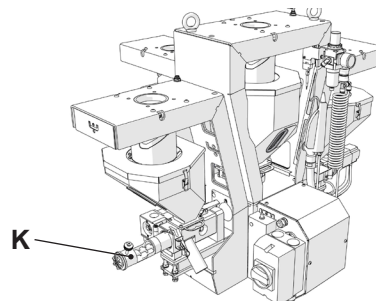
Modyx with venturi loading



## TECHNICAL DATA



Modyx 1+3 with loading structure



| Model*                      | Modyx XS 1+1 | Modyx XS 1+2 | Modyx XS 1+3 |
|-----------------------------|--------------|--------------|--------------|
| Dimension A (mm)            | 760          |              |              |
| Dimension B (mm)            | 410          | 790          |              |
| Dimension C (mm)            | 1010         |              |              |
| Dimension D (mm)            | 600          |              |              |
| Voltage/frequency (V~ / Hz) | 230~50/60    |              |              |
| Power (k/W)                 | 2,6          |              |              |
| Weight (kg)                 | 64           | 82           | 100          |

\* Other models available on request.

1\_Communication interface; 2\_ Power supply; 3\_ Compressed air inlet.

| Dosing screws (K)           |      |        |         |         |         |         |         |
|-----------------------------|------|--------|---------|---------|---------|---------|---------|
| Diameter x pitch (mm)       | 8x 8 | 10 x 8 | 15 x 10 | 15 x 15 | 20 x 20 | 25 x 25 | 30 x 30 |
| Flow rate* @ 450 rpm (kg/h) | 9,5  | 23     | 50      | 75      | 110     | 220     | 320     |
| Flow rate* @ 300 rpm (kg/h) | 5,3  | 14,7   | 38      | 59      | 77      | 142,8   | 227,7   |
| Flow rate* @ 5 rpm (kg/h)   | 0,06 | 0,1    | 0,6     | 1       | 1,3     | 2,9     | 3,5     |

\* Flow rate values are calculated considering the apparent density of the granule = 0,55 kg/dm<sup>3</sup>. They vary according to the grain size of the material.