



SYBLEND³

Continuous loss-in-weight gravimetric blender

SYBLEND³ is a continuous gravimetric blender that monitors the loss in weight to dose and blend multiple components simultaneously, representing the ideal solution for all those processes where a homogeneous mix is critical to achieve the excellence in the final product. It meets all the needs for demanding processes such as BCF, FDY and POY production.

OPERATING PRINCIPLE

All the components are stocked in hoppers, each of which is weighted through an off-center load cell, and is metered through a static cascade mixer into a collection downcomer, which is also weighted; the loss in weight per second in each hopper gives a direct feedback on the metering rates of the single materials, which allows to keep their respective dosing ratios constant and equal to the setpoint percentages. The downcomer, which feeds directly the extruder with the blended materials, is kept at a fixed level so that the throughput of the machine is always equal to the extruder's.



MAIN FEATURES

GREAT ACCURACY & CONTINUOUS ACTION

SYblend³ continuously measures the flow rate of each material, so that any variation is registered instantly and the machine immediately regulates all the dosing in order to keep the specified setpoint. Since the flow rates of the individual components and the extruder's are known, their cross-comparing allows to identify irregularities and achieve better dosing accuracy.

The solid structure works as a filter for the effects of the vibrations, so that no noise is introduced in the load cells' measurements.

EXTENDED RANGE AND MODULARITY

SYblend³ has a flexible choice of machine sizes and dosing screws in order to cover a wide range of flow rates and material granulometries, from the lowest rates of additives in the small lines to the highest rates of main components in the big lines.

Thanks to its modularity, it can also be easily configured in up to 6 components with an on-board cabinet that allows fast installation.

EASY CLEANING & MAINTENANCE

Thanks to its removable hoppers and screws, SYblend³ allows for an easy cleaning and changeover process.

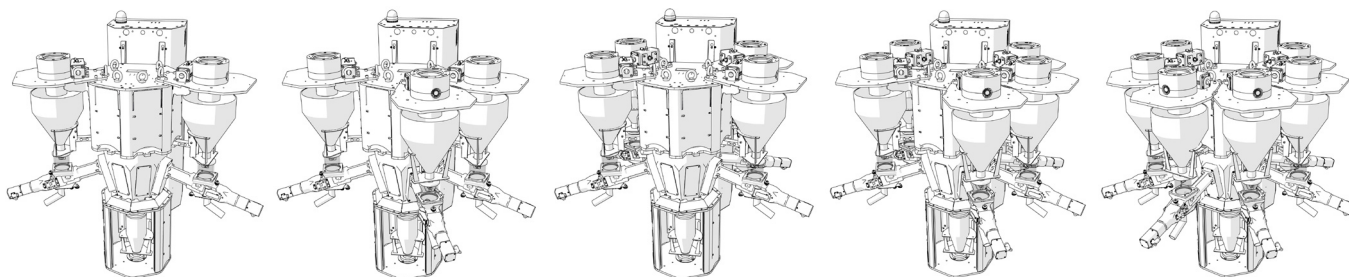
OPTIONALS

There are different optionals available in order to satisfy every need: components and kits for dosing high-temperature materials, a centralized conveying system controlled by the machine itself, and SMARTDRAYN for an automatic drainage procedure that doesn't require the action of an operator.

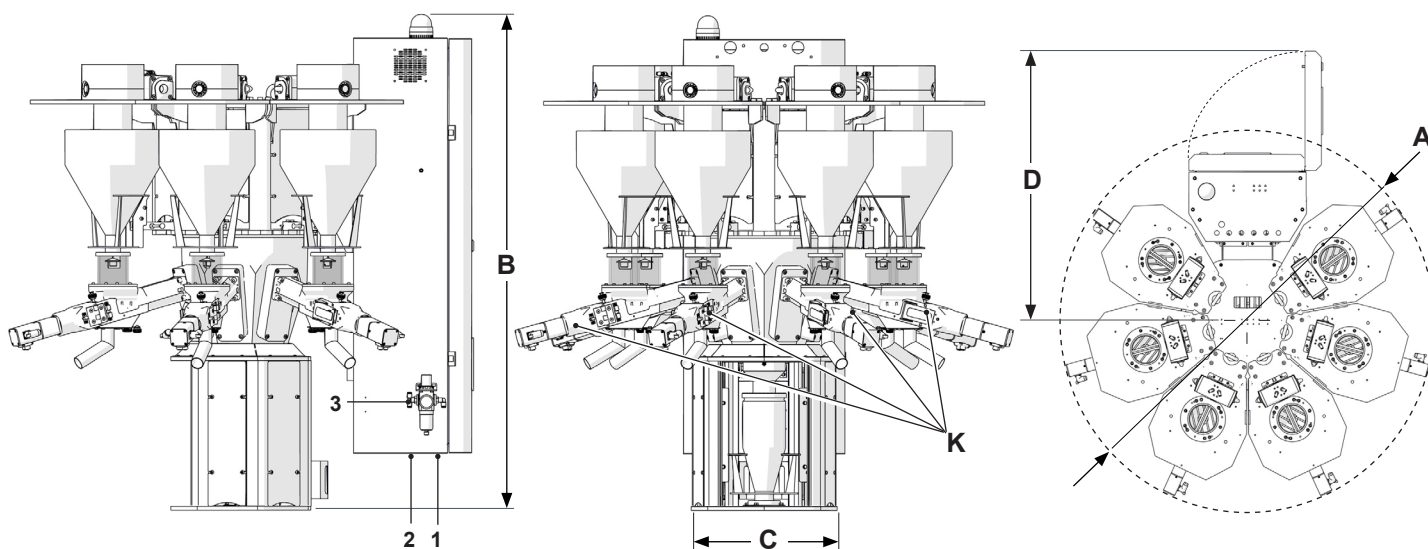
INDUSTRY 5.0 & IoT

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.

MODULARITY



TECHNICAL DATA



Model*	XS2	XS3	XS4	XS5	XS6	S2	S3	S4	S5	S6	M2	M3	M4	M5	M6	L2	L3	L4	L5	L6
Max capacity** single component (kg/h)	176					352					587					1115				
Single hopper volume (dm³)	6					12					20					38				
Installed power (kW)	1	1,4	1,8	2,2	2,6	1	1,4	1,8	2,2	2,6	1,7	2,5	2,9	3,3	3,65	2,2	3,2	4	4,7	5,45
Suitable hopper loaders	F270										F270 - F370									
Working temperature (°C)	0 - 40																			
Storage temperature (°C)	-10 - 60																			
Pneumatic working pressure (bar)	6																			
Weight (kg)	130	150	170	190	210	220	245	270	295	320	250	275	300	325	350	280	310	340	370	400
Ø A (mm)***	1365										1450									
B (mm)***	1320					1530					1630					1830				
Ø C (mm)***	400					450														
D (mm)***	1050										1135									

Dosing screws (K)											
Diameter x pitch (mm)	8 x 8	10 x 8	15 x 10	15 x 15	20 x 20	25 x 25	30 x 30	40 x 40	50 x 50	60 x 60	70 x 70
Flow rate** @ 450 rpm (kg/h)	9,5	23	53	85	110	218	305	602	1010	1480	2020
Flow rate** @ 300 rpm (kg/h)	5,3	14,7	38	59	77	142,8	227,7	405,5	673,5	1002	1397
Flow rate** @ 5 rpm (kg/h)	0,06	0,2	0,6	1,3	1,3	3,1	3,7	6,9	11,2	16,7	23,3

* Depending on the model, the possible dosing screws are as follows: XS models from 8 x 8 to 25 x 25; S models from 8 x 8 to 30 x 30, M models from 8 x 8 to 40 x 40; L models from 8 x 8 to 70 x 70.

** Flow rate values are calculated considering the apparent density of the granule = 0,55 kg/dm³. They vary according to the grain size of the material.

*** The values indicated must be confirmed by SYNCRO's technical department.

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