SYNCRO®
SYNCRO GROUP

sydos

Continuous loss-in-weight gravimetric Blender

SYDOS 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 with one principal component 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

The secondary components are stocked in hoppers, each of which is weighted through an off-center load cell, and is metered into the extruder throat; 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 principal component is metered directly into the extruder so the monitoring of its own loss in weight, together with the measured throughputs of the secondary components, gives the control of the total throughput of the extruder itself.

MAIN FEATURES

GREAT ACCURACY & CONTINUOUS ACTION

SYdos 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

SYdos 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 5 secondaty components with an on-board cabinet that allows fast installation.

EASY CLEANING & MAINTENANCE

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

OPTIONALS

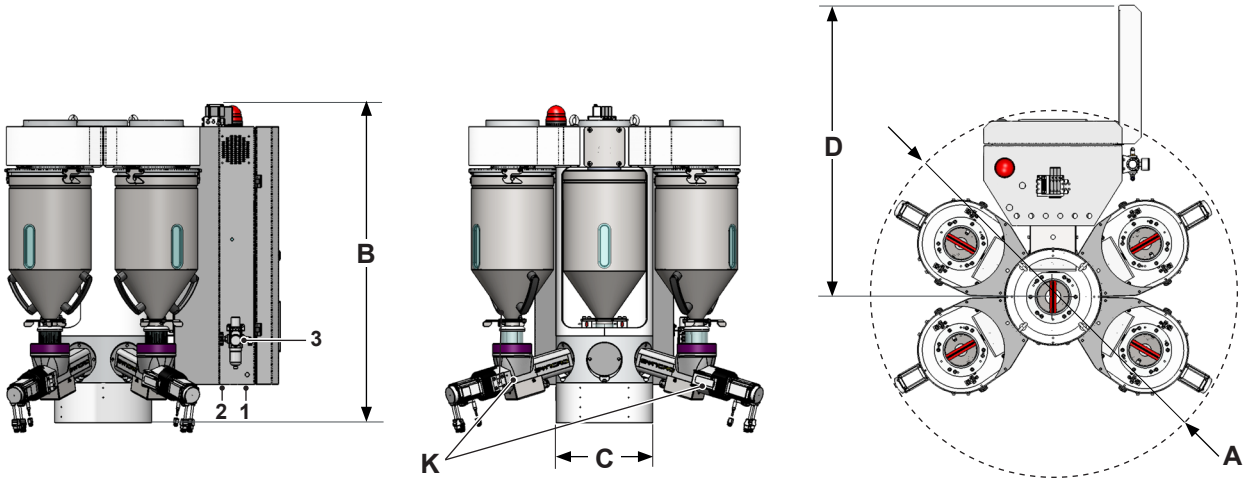
There are different optionals available in order to satisfy every need: components and kits for dosing high-temperature materials, and a centralized conveying system controlled by the machine itself.

INDUSTRY 4.0 & 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	S2*	S3*	S4*	S5*	S6*	S7*	M2	M3	M4	M5	M6	M7	L2	L3	L4	L5	L6	L7
Capacity max. main component (kg/h)**	550						1100						1850					
Capacity max. single side component (kg/h)**	550						550						940					
Main hopper volume (dm³)	16,7						35,2						57,0					
Single side hopper volume (dm³)	16,7												25,8					
Installed power (kW)	1	1,4	1,8	2,2	2,6	3,0	1,7	2,5	2,9	3,3	3,65	4,1	2,2	3,2	4	4,7	5,45	5,85
Suitable hopper loaders	F270						F270 - F370											
Working temperature (°C)	0 - 40																	
Storage temperature (°C)	-10 - 60																	
Pneumatic working pressure (bar)	6																	
Weight (kg)	150	175	205	235	265	295	175	190	215	245	275	315	205	235	265	295	325	355
Ø A (mm)	1160						1280						1380					
B (mm)	920						1000						1240					
Ø C (mm)	300						400											
D (mm)	900					1220	950					1220	950					1220

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

* For S models, possible dosing screws range from 8 x 8 to 40 x 40.

** 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.

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

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