SB DRY
SYNCRO GROUP

VHELYOS

Super-Drying

Extreme dehumidification solutions for the most difficult plastic materials.

OPERATING PRINCIPLE

The super-dehumidifiers of the VHELYOS series use an irradiation heating system, thanks to which the energy is transferred directly to the material, therefore without any "medium" that could alter the nature of the plastic polymer. The humidity, on the other hand, is extracted with the application of the vacuum up to a residual pressure lower than 0.1 mbar. The result of this combination of radiation and "stripping" allows VHELYOS super-dehumidifiers to obtain extreme levels of dehumidification, quickly, with low energy consumption, without oxidation and in any case without interference of foreign agents with the plastic polymer.

MAIN FEATURES

DRYING TIME

Vacuum reduces the boiling point of the water.
Vacuum is the fastest way to remove the humidity.
The drying time is reduced up to 50%.

ENERGY CONSUMPTION

The yield of the infrared radiation under vacuum increases by up to 30% compared to the same radiation in air.
The direct heating by IR is the most efficient way to heat a body.
The combination of IR and vacuum guarantees the maximum energy efficiency.

ACCURACY

Temperature control is precise as VHELYOS directly heats the material and controls its temperature.
The reactor works in batch mode mixing the material under treatment.
At the end of the process, every single particle is in the same condition of temperature and humidity.

MATERIALS ALLOWED

The combination of IR, vacuum and mixing allows to process pellets, regrinds, irregular shapes, dusty materials or a mix of them.

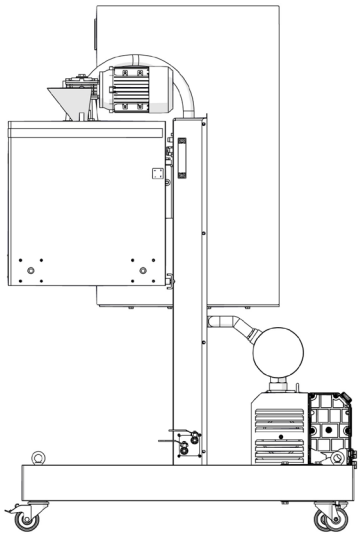
OXIDATION

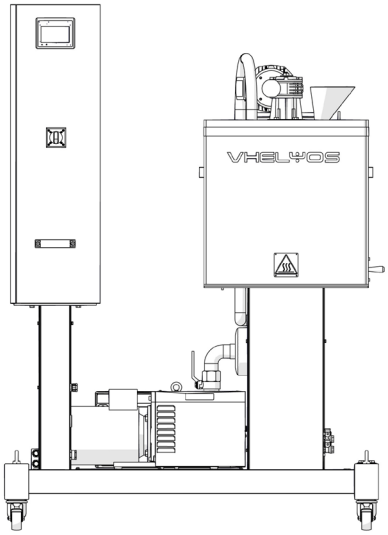
The whole process of drying and even the storage are done under vacuum, so preventing any contact of the material with oxygen.
Aft.er the treatment, the material can be stored under vacuum for indefinite time with no risk of oxidation or re absorption of humidity.

INDUSTRY 4.0 & IoT

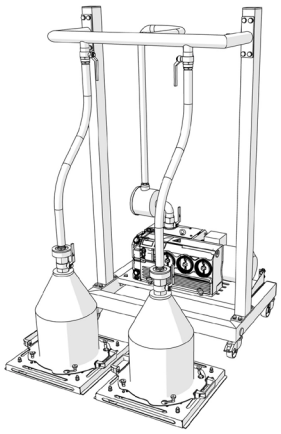
All SB DRY machines are ready to be integrated with third party supervisory controls and ERP systems using the latest generation of OPC-UA protocols as standard.

TECHNICAL DATA





Docking Station



Model	VH-10*	VH-15*	VH-30
Capacity (LT)	10	15	30
Availability	Standard		On request
Docking Station	Standard: up to 5 stations. Possible with several stations on request.		
*Best solution for laboratory uses			

COMPARED PRODUCTION DATA

Material*	P.S.A. (kg/dm³)	Traditional dehumidification (air)		VHELYOS super-dryng (IR+V)	
		Time (h)	Temperature (°C)	Time (h)	Temperature (°C)
ABS	0,55	3 - 4	80 - 85	< 1 - 2	80 - 90
EVOH	0,6	2 - 3	90 - 105		90 - 110
PA		4 - 6	70 - 80	2 - 3	70 - 90
PBT	0,8	3 - 4	130 - 140	< 1 - 2	130 - 150
PC	0,65	2 - 3	120		120 - 135
PC / ABS		3	100		100 - 120
PC / PBT	0,75	3 - 4	110		110 - 125
PET	0,84	4 - 6	160 - 180		140 - 180
PMMA acrilic	0,65	3 - 4	80		80 - 90
PPS	0,8	2 - 3	130 - 140		130 - 145
TPU	0,75		70 - 100		70 - 110
*Typical hygroscopic polymers					

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