

# 2021

## Dehydrators - Technical Characteristics and Pricelist



**BLUE SPARK SYSTEMS**

Bucharest, Romania

1/1/2021

# 1. Basic information

## 1.1. General characteristics

All the models have these basic characteristics. For certain applications, custom models can be built. The basic standard characteristics are presented below.

CHARACTERISTIC	VALUE
<b>ELECTRICAL</b>	
Voltage for $P_{el} > 4kW$ models FD-<2...7>x<1...4>	3 x 400v AC
Voltage $P_{el} < 4kW$ models FD-1x<1...4>	3 x 400v AC or 1 x 230v AC
Fan type, voltage and power (each module in depth has one fan)	High temperature (120°C), high humidity (100%) H class tropicalized motor, 600[mm] diffuser and propeller diameter, aluminum propeller and motor frame, stainless steel motor shaft  3 x 400v AC or 3 x 230v AC / 1.5 kw
Frequency drives for fans	all systems come equipped with <b><u>frequency drives</u></b> for fan speed control and energy saving
Actuators voltage and power	24v DC / 5w
<b>THERMAL</b>	
Thermal energy requirement	avg. 2kWt for each kg of water which is vaporized.
Heating agent	Hot water (deionized) with <b><u>propylene glycol</u></b> antifreeze (or ethylene glycol, do not mix) 4:1 at $T_{process\ max} + 15^{\circ}C$ , minimum of 85°C. Steam heating is possible for custom builds.
Heating element	Aluminum radiator with 1" connections, 15kw at $\Delta T = 2...3^{\circ}C$ and $Q_{min} = 8000\ l/h$ .

Heating control	Computer controlled actuator tap with flow return connection
Air flow rate	0 - 16.000[m <sup>3</sup> ], variable flow rate due to variable fan speed
Air velocity	0 - 4[m/s]
<b>SHELL AND MECHANICAL</b>	
Shell material	Aluminum <b><u>resistant in high corrosive environments</u></b> on the inside, 1.5mm thickness, aluminum painted with electrostatic coating on the outside. Custom builds are also available with stainless steel shell.
Insulation material	100mm thick mineral wool
Assembly and materials	Mostly assembled with aluminum rivets and stainless steel bolts. Certain fasteners and components might be also manufactured out of steel, plastic, brass, copper, or other materials due to their functional role.
Technical space (inside the machine)	960[mm] on each side of the modules, 960[mm] above the carts
<b>TRAYS AND CARTS</b>	
Size of a tray	400[mm] x 600[mm] x 12[mm]
Tray material (standard)	1.5[mm] thick ANSI 304 Stainless Steel frame, with ANSI 304 Stainless Steel Mesh with 2[mm] x 2[mm] x 0.5[mm] weave
Drying area per tray	0.24 [m <sup>2</sup> ]
Cart	<b>48 trays cart</b> , with 2 trays per level, 24 levels spaced at 65[mm], ANSI 304 Stainless Steel frame, high temperature resistant wheels  Custom models can be built in certain conditions.
<b>AUTOMATION AND CONTROL SYSTEM</b>	
Software	The system is controlled by specialized software which runs on computer or tablet with Windows or Linux operating system. All the parameters

	are recorded in a database for further analysis. The system allows more than 10.000 recipes to be created, remote control and monitoring of the process, alarms and many others. <b><u>The software is continuously updated and the last version can be downloaded for free from our website.</u></b> Please refer to the automation's documentation for further information.
Electronics	One relay control board, one parameter board with 2 sets of air parameter sensors, 8 inputs for product moisture monitoring*, one digital to analog board for proportional actuators and fan speed control
Electrical components	industrial grade electrical components
Voltage for automation	<ul style="list-style-type: none"> <li>• 1 x 230v or</li> <li>• 3 x 400v depending on the model</li> </ul>

\* - can only be used with certain products

## 1.2. Models

Due to the **modular design** of the system only certain dimensions are available. See the [Modules](#) chapter for the module's characteristics. In the table below are the most common dimensions. Other combinations are available, but for larger machinery we recommend using smaller models or our tunnel dehydrators or belt dehydrators. For details regarding those, please contact us.

No.	Model Code	Width [modules]	Depth [modules]	Trays [pcs]	Carts / Modules [pcs]	Drying surface [m <sup>2</sup> ]	Load (average) [kg]
1	FD-1x1	1	1	<u>48</u>	1	<i>11.52</i>	50
2	FD-1x2	1	2	<u>96</u>	2	<i>23.04</i>	100
3	FD-1x3	1	3	<u>144</u>	3	<i>34.56</i>	150
4	FD-1x4	1	4	<u>192</u>	4	<i>46.08</i>	200
5	FD-2x1	2	1	<u>96</u>	2	<i>23.04</i>	100
6	FD-2x2	2	2	<u>192</u>	4	<i>46.08</i>	200
7	FD-2x3	2	3	<u>288</u>	6	<i>69.12</i>	300

## Dehydrators - Technical Characteristics and Pricelist

8	FD-2x4	2	4	<u>384</u>	8	<i>92.16</i>	400
9	FD-3x1	3	1	<u>144</u>	3	<i>34.56</i>	150
10	FD-3x2	3	2	<u>288</u>	6	<i>69.12</i>	300
11	FD-3x3	3	3	<u>432</u>	9	<i>103.68</i>	450
12	FD-3x4	3	4	<u>576</u>	12	<i>138.24</i>	600
13	FD-4x1	4	1	<u>192</u>	4	<i>46.08</i>	200
14	FD-4x2	4	2	<u>384</u>	8	<i>92.16</i>	400
15	FD-4x3	4	3	<u>576</u>	12	<i>138.24</i>	600
16	FD-4x4	4	4	<u>768</u>	16	<i>184.32</i>	800
17	FD-5x1	5	1	<u>240</u>	5	<i>57.6</i>	250
18	FD-5x2	5	2	<u>480</u>	10	<i>115.2</i>	500
19	FD-5x3	5	3	<u>720</u>	15	<i>172.8</i>	750
20	FD-5x4	5	4	<u>960</u>	20	<i>230.4</i>	1000
21	FD-6x1	6	1	<u>288</u>	6	<i>69.12</i>	300
22	FD-6x2	6	2	<u>576</u>	12	<i>138.24</i>	600
23	FD-6x3	6	3	<u>864</u>	18	<i>207.36</i>	900
24	FD-6x4	6	4	<u>1152</u>	24	<i>276.48</i>	1200
25	FD-7x1	7	1	<u>336</u>	7	<i>80.64</i>	350
26	FD-7x2	7	2	<u>672</u>	14	<i>161.28</i>	700
27	FD-7x3	7	3	<u>1008</u>	21	<i>241.92</i>	1050
28	FD-7x4	7	4	<u>1344</u>	28	<i>322.56</i>	1400

If a **height restriction** exists, *small form units* can be manufactured. These units have a height of only **2.12 [m]** but are wider. See their specifications below for more details.

No.	Model Code	Width [modules]	Depth [modules]	Trays [pcs]	Carts / Modules [pcs]	Drying surface [m²]	Load (average) [kg]
1	FD-1x1-SF	1	1	<u>48</u>	1	<i>11.52</i>	50
2	FD-1x2-SF	1	2	<u>96</u>	2	<i>23.04</i>	100
3	FD-1x3-SF	1	3	<u>144</u>	3	<i>34.56</i>	150
4	FD-2x2-SF	2	2	<u>192</u>	4	<i>46.08</i>	200

When choosing a configuration you have to **take into account the main products that you will be dehydrating**. Dehydrating a fast drying product (apple slices for example) will require a deeper and less wide machine. If you dehydrate a slow drying product (whole or half plums or apricots for example) you can use a shallower and wider machine. Also please note that the **drying time is proportional with the product's thickness**, so thicker slices will take longer to dry than the thinner ones do. When you choose a machine please also note that the "Load" in this document is given for 6mm apple slices. If you dry whole plums or apricots for example, the "Load" can be double. If you have any doubt, please consult with our specialists when choosing a machine.

## 1.3. Modules

**The system is built around the module concept.** The modular system allows adding and removing of modules to an already built machine. To add a module to an already existing system the price is calculated taking into account the following: the number of modules to be added, the size of the current machine and the placement of the new modules. Some configurations might not be possible. Please contact us for a quote and technical information.

The unit size is represented by one module which has the following basic characteristics:

CHARACTERISTIC	VALUE
Module dimension (viewed from above)	<b><u>Normal</u></b> units: 960[mm] x 960[mm] x (min.) 3100[mm] (H) <b><u>Small Form</u></b> units: 960[mm] x 960[mm] x (min.) 2120[mm] (H)
Number of trays	<b><u>48 pcs.</u></b>
Number of carts	1 pc. that holds 48 trays on 24 levels (two trays per level), level spacing 65[mm]
Size of a tray	<b><u>400[mm] x 600[mm] x 12[mm]</u></b>

Tray material	ANSI 304 frame with ANSI 304 Mesh with 2[mm] x 2[mm] x 0.5[mm] weave
Drying are per tray	0.24 [m <sup>2</sup> ]
Drying area per module	11.52 [m <sup>2</sup> ]
Standard load of one module	50 ... 100 [kg / module]
Standard tray loading	1.04 ... 2.08[kg/tray]
Standard product quantity per m <sup>2</sup>	4.3 ... 8.7 [kg/m <sup>2</sup> ]
Maximum module load	115 [kg / module]
Maximum tray loading	2.4 [kg/tray]
Maximum product quantity per m <sup>2</sup>	10 [kg/m <sup>2</sup> ]
Equipment for adding modules on depth	Fan x 1, Radiator x 1, Intake / Exhaust System x 1, Cart x 1, Ceiling x 1
Equipment for adding widening modules	Door x 1, Cart x 1, Ceiling x 1



**Fig. 1.** *FD-1×1B with back exhaust (back exhaust is possible only on 1 module deep models)*

---



**Fig. 2.** *FD-1×2, top exhaust and intake model (standard model)*

---





**Fig. 3.** *FD-1x2-SF, 100kg Small Form unit model with back intake and exhaust*

## 1.4. Machine load

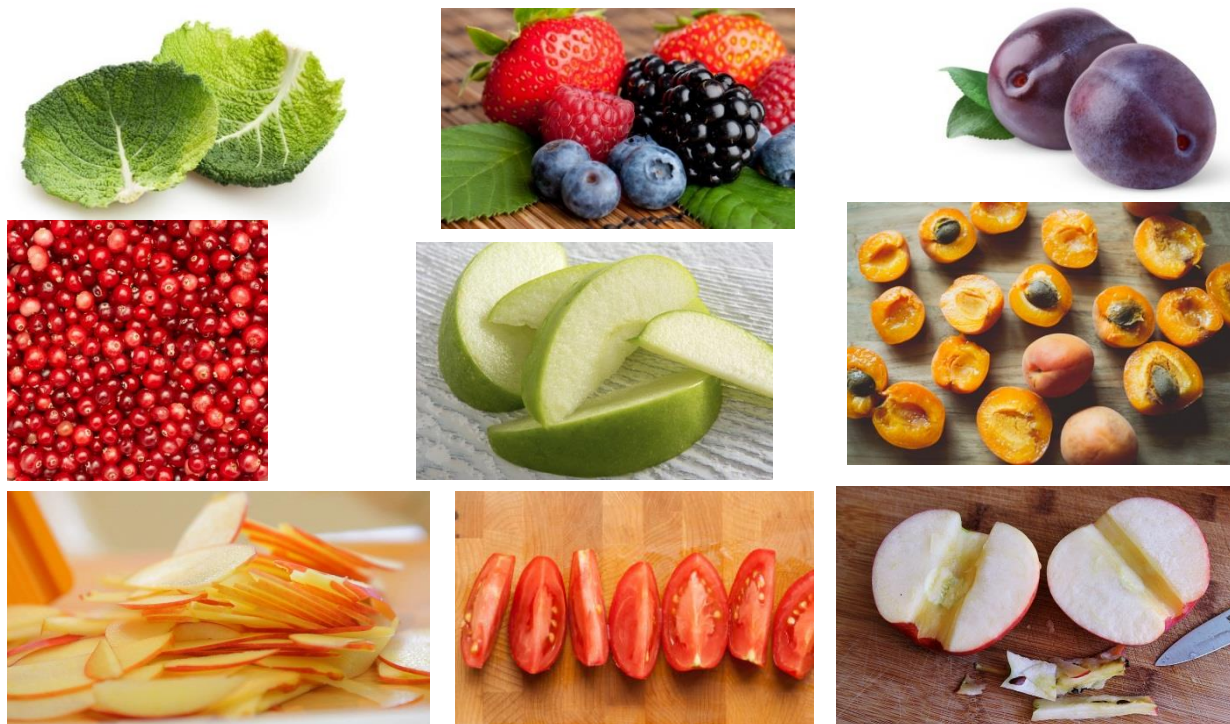
The machine load is dependent on the type of products being dehydrated and the way the products are cut. For products that have a light weight or are cut in a way that doesn't allow them to be laid on the trays in a space efficient manner, the machine load is less than when the products are heavy or arranged on the trays in thicker layers.

The table below presents a few examples for machine load estimation depending on the type of product and the way the products are cut.

Cut and shape		Ultra-thin slices 0.5-2 mm, leaves, flowers, tea, small diameter berries Ø < 5mm	Thin slices 4 – 5 mm, berries with Ø 10- 12mm <u>Standard Load</u>	Medium slices 6 – 7 mm, Ø 60- 70mm fruit quarters with	Thick slices 10-15 mm, halves / thirds or quarters with Ø 40-50mm	Whole fruits with Ø 40- 60mm, squeezed fruits, thick paste
Density		1 - 2 [kg / m <sup>2</sup> ]	3 - 5 [kg / m <sup>2</sup> ]	6 - 8 [kg / m <sup>2</sup> ]	8 - 10 [kg / m <sup>2</sup> ]	10 - 12 [kg / m <sup>2</sup> ]
1	FD-1x1 (SF)	25	50	75	100	125
2	FD-1x2 (SF)	50	100	150	200	250
3	FD-1x3 (SF)	75	150	225	300	375
4	FD-1x4	100	200	300	400	500
5	FD-2x1	50	100	150	200	250
6	FD-2x2 (SF)	100	200	300	400	500
7	FD-2x3	150	300	450	600	750
8	FD-2x4	200	400	600	800	1000
9	FD-3x1	75	150	225	300	375
10	FD-3x2	150	300	450	600	750
11	FD-3x3	225	450	675	900	1125
12	FD-3x4	300	600	900	1200	1500
13	FD-4x1	100	200	300	400	500
14	FD-4x2	200	400	600	800	1000

## Dehydrators - Technical Characteristics and Pricelist

15	<b>FD-4x3</b>	300	<b>600</b>	900	1200	1500
16	<b>FD-4x4</b>	400	<b>800</b>	1200	1600	2000
17	<b>FD-5x1</b>	125	<b>250</b>	375	500	625
18	<b>FD-5x2</b>	250	<b>500</b>	750	1000	1250
19	<b>FD-5x3</b>	375	<b>750</b>	1125	1500	1875
20	<b>FD-5x4</b>	500	<b>1000</b>	1500	2000	2500
21	<b>FD-6x1</b>	150	<b>300</b>	450	600	750
22	<b>FD-6x2</b>	300	<b>600</b>	900	1200	1500
23	<b>FD-6x3</b>	450	<b>900</b>	1350	1800	2250
24	<b>FD-6x4</b>	600	<b>1200</b>	1800	2400	3000
25	<b>FD-7x1</b>	175	<b>350</b>	525	700	875
26	<b>FD-7x2</b>	350	<b>700</b>	1050	1400	1750
27	<b>FD-7x3</b>	525	<b>1050</b>	1575	2100	2625
28	<b>FD-7x4</b>	700	<b>1400</b>	2100	2800	3500



**Fig. 4.** Machine load is lower for products on the left and higher for products on the right

## 2. Specifications

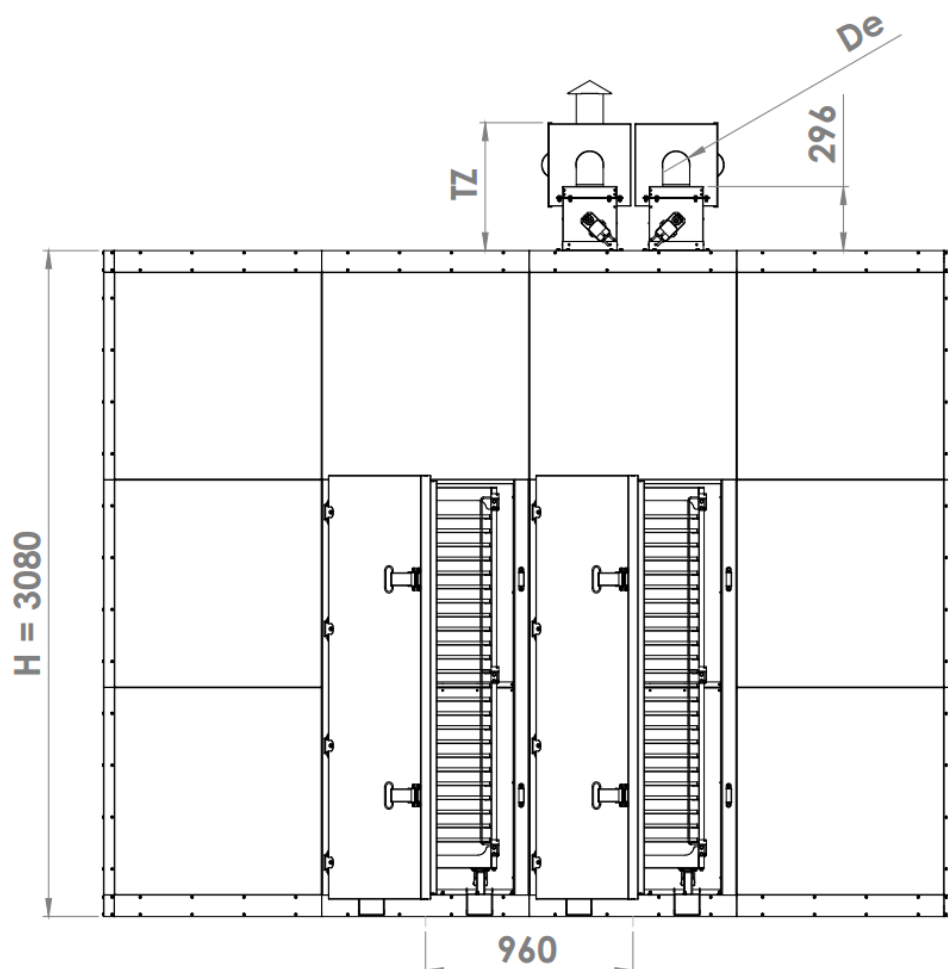
### 2.1. Dimensions

**Standard** models have a height of:  **$H = 3.08[m]$**

**Small Form** models have a height of:  **$H = 2.12[m]$**

For models deeper than 1 module, we need a space above the dehydrator for the air exhaust and intake piping. These are pipes with a diameter ranging from 125mm to 250mm that take the wet air out of the machine and supply fresh air back inside.

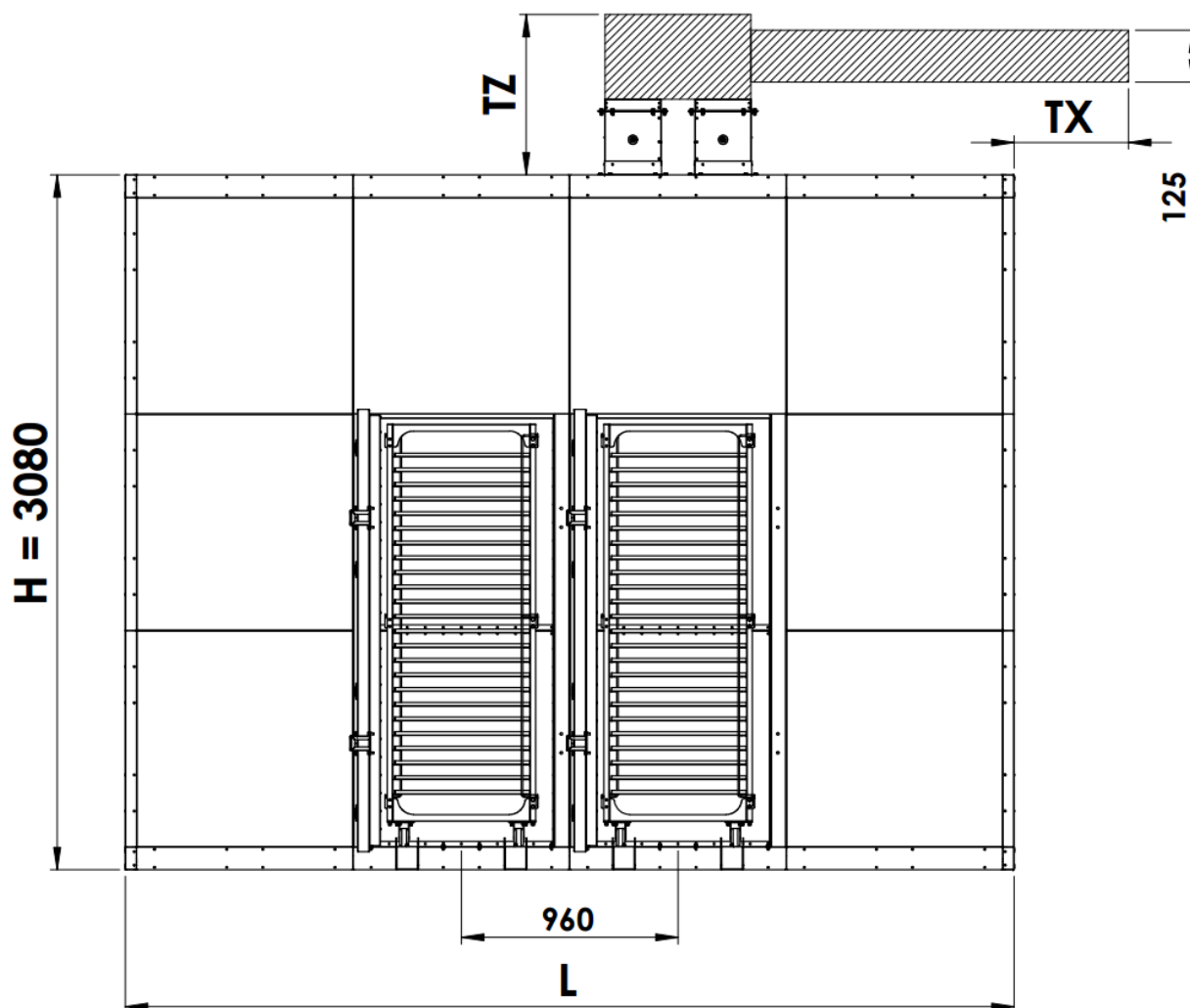
Depending on the placement of the machine and the direction that the piping will take to the exterior wall of the building, the space above the machine (parameter **TZ**) might vary from  **$0.6[m]$**  to  **$1.5[m]$** .



**Fig. 5.** Front view of FD-2x2 (Standard model).

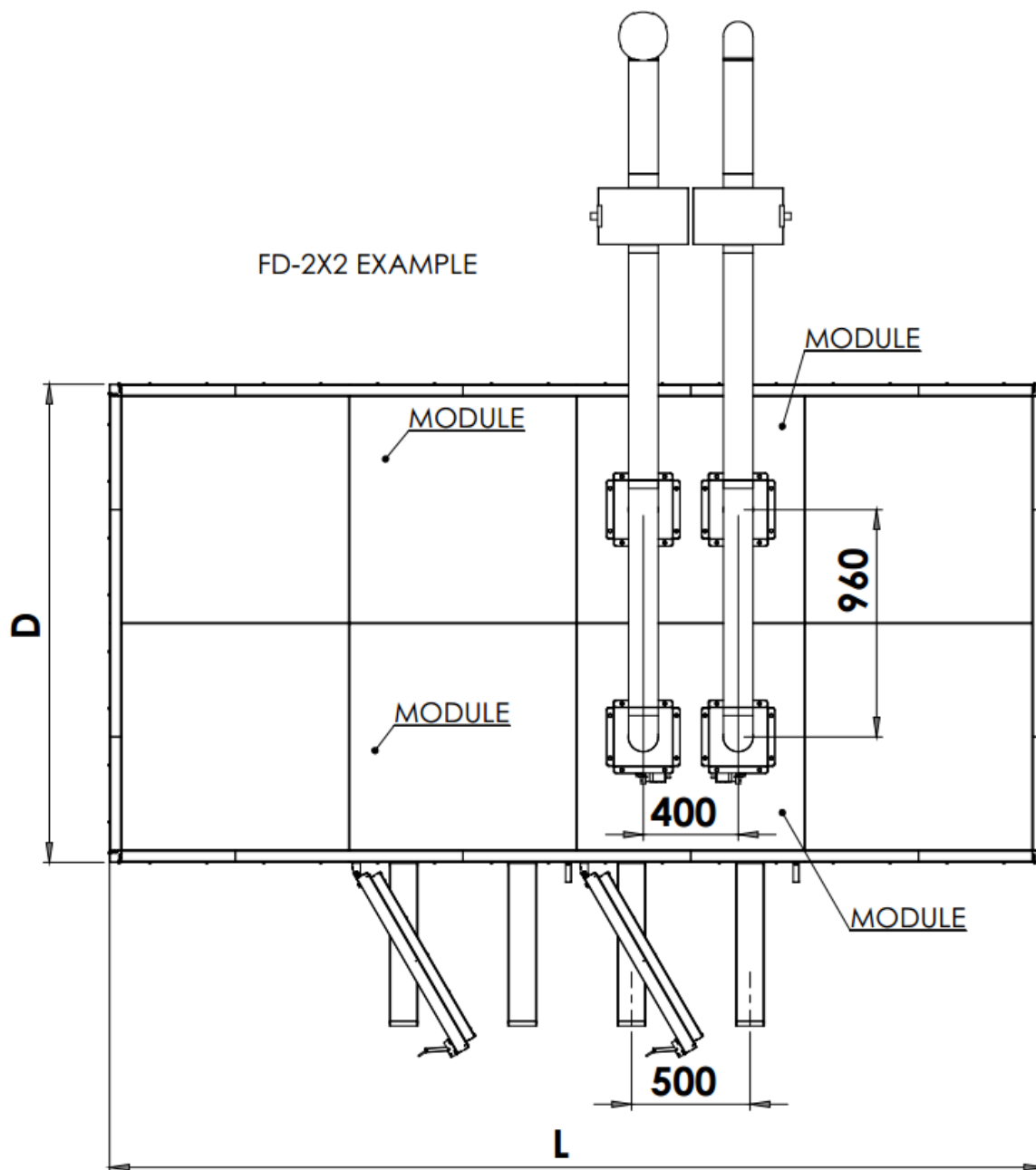
Usually these kinds of machines are used in large industrial areas that can easily accommodate these dimensions. In case of height restrictions, please consider using our **Small Form** models.

Around the whole machine you need to provide at least **1[m]** of free space to comply with the minimum the fire and safety regulations and allow easy assembly and maintenance. In front of the machine you need to provide as much space as you need to fit the carts while loading and unloading them. The minimum space we recommend is **2[m]**. The doors are opening at 100 to 170° depending on their position in the assembly. To load the carts with the trays, in front of each door you will mount the removable loading / unloading ramps.



**Fig. 6.** Side view of FD-2x2 (Standard model).

The **Small Form** models are  $960[\text{mm}]$  smaller in height, only  $2.12[\text{m}]$ , but their  $L$  dimension is greater with  $960[\text{mm}]$ .



**Fig. 7.** Top view of FD-2x2 (Standard model).

No.	Model Code	Depth D [m]	Width L [m]	Total real estate surface [m <sup>2</sup> ]	Number of doors [pcs]	Load (average) [kg]
1	FD-1x1	1.06	2.98	3.16	1	50
2	FD-1x2	1.06	3.94	4.18	2	100

## Dehydrators - Technical Characteristics and Pricelist

3	<b>FD-1x3</b>	1.06	4.9	5.19	3	<b>150</b>
4	<b>FD-1x4</b>	1.06	5.86	6.21	4	<b>200</b>
5	<b>FD-2x1</b>	2.02	2.98	6.02	1	<b>100</b>
6	<b>FD-2x2</b>	2.02	3.94	7.96	2	<b>200</b>
7	<b>FD-2x3</b>	2.02	4.9	9.90	3	<b>300</b>
8	<b>FD-2x4</b>	2.02	5.86	11.84	4	<b>400</b>
9	<b>FD-3x1</b>	2.98	2.98	8.88	1	<b>150</b>
10	<b>FD-3x2</b>	2.98	3.94	11.74	2	<b>300</b>
11	<b>FD-3x3</b>	2.98	4.9	14.60	3	<b>450</b>
12	<b>FD-3x4</b>	2.98	5.86	17.46	4	<b>600</b>
13	<b>FD-4x1</b>	3.94	2.98	11.74	1	<b>200</b>
14	<b>FD-4x2</b>	3.94	3.94	15.52	2	<b>400</b>
15	<b>FD-4x3</b>	3.94	4.9	19.31	3	<b>600</b>
16	<b>FD-4x4</b>	3.94	5.86	23.09	4	<b>800</b>
17	<b>FD-5x1</b>	4.9	2.98	14.60	1	<b>250</b>
18	<b>FD-5x2</b>	4.9	3.94	19.31	2	<b>500</b>
19	<b>FD-5x3</b>	4.9	4.9	24.01	3	<b>750</b>
20	<b>FD-5x4</b>	4.9	5.86	28.71	4	<b>1000</b>
21	<b>FD-6x1</b>	5.86	2.98	17.46	1	<b>300</b>
22	<b>FD-6x2</b>	5.86	3.94	23.09	2	<b>600</b>
23	<b>FD-6x3</b>	5.86	4.9	28.71	3	<b>900</b>
24	<b>FD-6x4</b>	5.86	5.86	34.34	4	<b>1200</b>
25	<b>FD-7x1</b>	6.82	2.98	20.32	1	<b>350</b>
26	<b>FD-7x2</b>	6.82	3.94	26.87	2	<b>700</b>

27	<b>FD-7x3</b>	6.82	4.9	33.42	3	<b>1050</b>
28	<b>FD-7x4</b>	6.82	5.86	39.97	4	<b>1400</b>

For the loading and unloading of the carts, the dehydrators feature two loading ramps on each door. The loading ramps are removable and must be removed before closing the doors. The loading ramps and internal rails on which the carts run are made out of stainless steel. The size of these ramps must be taken into account when placing the machine in the working area.

No.	Model Code	Depth D [m]	Width L [m]	Total real estate surface [m <sup>2</sup> ]	Number of doors [pcs]	Load (average) [kg]
1	<b>FD-1x1-SF</b>	1.06	3.94	4.18	1	<b>50</b>
2	<b>FD-1x2-SF</b>	1.06	4.90	5.20	2	<b>100</b>
3	<b>FD-1x3-SF</b>	1.06	5.86	6.22	3	<b>150</b>
4	<b>FD-2x2-SF</b>	2.02	4.90	9.90	2	<b>200</b>

## 2.2. Power requirements

The electrical power requirements are calculated only for powering the ventilation and automation systems. In case of a machine that uses electrical power for heating, the thermal requirements are added to the electrical ones.

Note that the minimum power requirements are calculated for a machine loading at the average load and a process that lasts for **10 hours**. For faster processes the power requirements rise accordingly.

No.	Model Code	Number of fans / radiators [pcs]	Minimum electrical power requirements [kWe]	Minimum thermal requirements [kWt]	Number of doors [pcs]	Load (average) [kg]
1	<b>FD-1x1 (SF)</b>	1	2	<b>12</b>	1	<b>50</b>
2	<b>FD-1x2 (SF)</b>	1	2	<b>24</b>	2	<b>100</b>
3	<b>FD-1x3 (SF)</b>	1	2	<b>36</b>	3	<b>150</b>
4	<b>FD-1x4</b>	1	2	<b>48</b>	4	<b>200</b>
5	<b>FD-2x1</b>	2	3.5	<b>24</b>	1	<b>100</b>

## Dehydrators - Technical Characteristics and Pricelist

6	FD-2x2 (SF)	2	3.5	48	2	200
7	FD-2x3	2	3.5	72	3	300
8	FD-2x4	2	3.5	96	4	400
9	FD-3x1	3	5	36	1	150
10	FD-3x2	3	5	72	2	300
11	FD-3x3	3	5	108	3	450
12	FD-3x4	3	5	144	4	600
13	FD-4x1	4	6.5	48	1	200
14	FD-4x2	4	6.5	96	2	400
15	FD-4x3	4	6.5	144	3	600
16	FD-4x4	4	6.5	192	4	800
17	FD-5x1	5	8	60	1	250
18	FD-5x2	5	8	120	2	500
19	FD-5x3	5	8	180	3	750
20	FD-5x4	5	8	240	4	1000
21	FD-6x1	6	9.5	72	1	300
22	FD-6x2	6	9.5	144	2	600
23	FD-6x3	6	9.5	216	3	900
24	FD-6x4	6	9.5	288	4	1200
25	FD-7x1	7	11	84	1	350
26	FD-7x2	7	11	168	2	700
27	FD-7x3	7	11	252	3	1050
28	FD-7x4	7	11	336	4	1400



## 2.3. Automation

The dehydrators are equipped with an automation system for process control. The main features of the automation system are:

- The system is controlled by an application which runs on a Windows computer;
- It can be remotely controlled and monitored it has access to the internet;
- All the processes are saved in Access databases and can be exported to various formats, displayed and analysed at any time;
- The computer is equipped with touch screen (it is usually a computer or mini PC with a touchscreen monitor);
- Standard recipes are provided for most of the fruits and vegetables. All the recipes are editable and the user can choose the required parameters. The recipes database gets updated sometimes and can be downloaded and imported for free;
- The software updates can be downloaded for free from one of our websites;
- The air parameters are measured with electronic sensors in two points: before and after the products. These parameters are the temperature and the relative humidity;
- The humidity of the products is optionally measured electronically. This system is usually used for research and development of recipes and involves some manpower to set up for each process. This system is not included as standard;
- The automation electrical panel is equipped with high quality industrial components;
- The fans are controlled by a frequency inverter to allow variable air velocity control and changing the direction of the air flow;
- The fans are IP65 protected and have class H insulation winding to withstand high temperatures and humidity;
- The heating and intake / exhaust control systems are equipped with servomotors;
- The system can be powered from 1 x 230V or 3 x 400V. Custom systems can be built for standard voltages outside this range. We recommend using the three phase electrical grid 3 x 400V.

The characteristics of the automation system might change without notice when upgrades are made. Our company tries to offer our customers the latest updates for our software for free without the need for hardware modifications even after the warranty period has passed, but sometimes this might not be possible without upgrading some hardware also. Upgrades and updates under warranty are always free.

Please refer to the automation system's manual for more information.

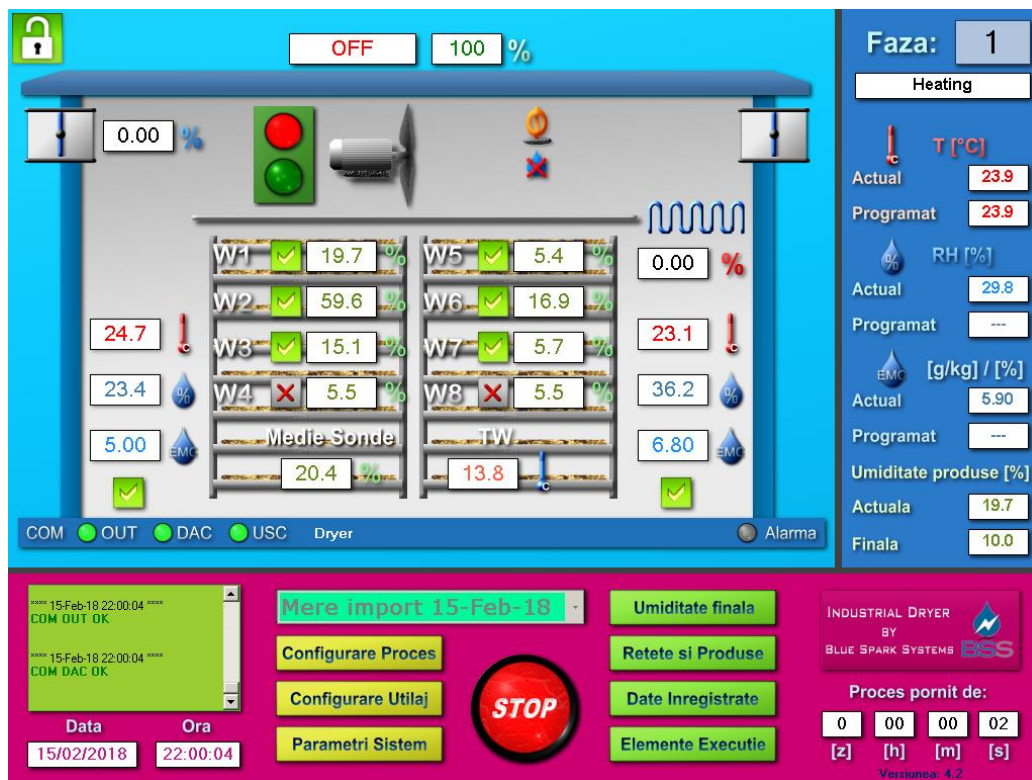


Fig. 8. Automation software

## 3. Prices

### 3.1. Dehydrators

The prices presented here are only for comparative reference, and are subject to change without notice. These prices are for the **default configuration** of the machine. Please see the notes below regarding the prices.

No.	Model Code	Load (average) [kg]	Price [EURO]	No.	Model Code	Load (average) [kg]	Price [EURO]
1	FD-1x1	50	23796	15	FD-4x3	600	91785
2	FD-1x2	100	29437	16	FD-4x4	800	109024
3	FD-1x3	150	35270	17	FD-5x1	250	67637
4	FD-1x4	200	40911	18	FD-5x2	500	88742
5	FD-2x1	100	34815	19	FD-5x3	750	111276
6	FD-2x2	200	44789	20	FD-5x4	1000	132380
7	FD-2x3	300	54681	21	FD-6x1	300	78468
8	FD-2x4	400	64187	22	FD-6x2	600	103906
9	FD-3x1	150	45414	23	FD-6x3	900	130031
10	FD-3x2	300	58787	24	FD-6x4	1200	155937
11	FD-3x3	450	73204	25	FD-7x1	350	88848
12	FD-3x4	600	86577	26	FD-7x2	700	118620
13	FD-4x1	200	56071	27	FD-7x3	1050	149271
14	FD-4x2	400	73309	28	FD-7x4	1400	178107

The price is given in **EURO** and doesn't include taxes or transportation costs.

The price **includes**: the dehydrator (shell, trays, cart, electrical equipment, and automation), the intake / exhaust system with filters for a distance **up to 1m** from the exterior wall, assembly of the machine, personnel training and testing.

The price **doesn't include**: the tools and machines for preparing the products previous to dehydration, the heating agent generator (thermal power plant), piping for thermal agent transport, the thermal agent (**antifreeze and deionized water 1:4**), heat recovery systems, the transport of the machine, the transport and accommodation for the personnel that will be assembling the machine. These costs depend on the machine placing in the working area, the country's legislation regarding food safety regulations, the country where will be assembled and other factors that are out of our control. These costs will be discussed with each customer.

For **Small Factor** models the prices are given in the table below.

No.	Model Code	Load (average) [kg]	Price [EURO]	No.	Model Code	Load (average) [kg]	Price [EURO]
1	FD-1x1-SF	50	26176	3	FD-1x3-SF	150	38797
2	FD-1x2-SF	100	32380	4	FD-2x2-SF	200	49268

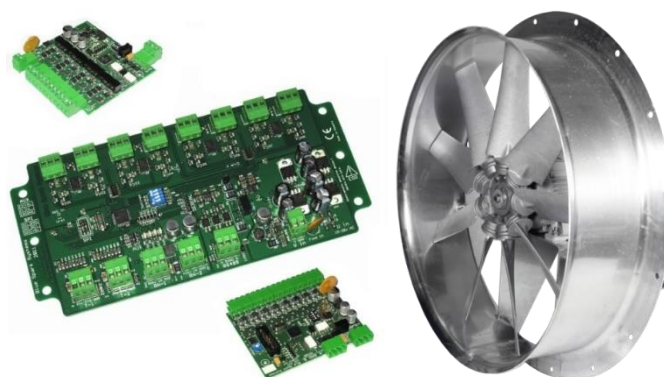
## 3.2. Parts and accessories

This parts and accessories are either optional or parts for repairs.

No.	Name	Description	Price [EURO/pc]
1	Tray 600 [mm] x 400 [mm]	Stainless steel tray with ANSI 304 frame with ANSI 304 Mesh with 2[mm] x 2[mm] x 0.5[mm] weave	48
2	Cart for 48 trays	Stainless Steel cart (without trays) for 48 trays on 24 levels (two trays per level), level spacing 60[mm]	1895
3	Cart with 48 trays	Stainless Steel cart (1 pc) and trays (48 pc) for food dehydrators	4152
4	Cart wheel	Stainless steel fork and heat resistant plastic wheel	65
5	Fan	600mm fan with tropicalized motor, class H insulation, aluminum propeller and frame, 1.5kW, 3 x 400V or 3 x 230V	880
6	Electric motor for the fan	1.5kW, 3 x 400V or 3 x 230V tropicalized motor, class H, with aluminum housing	460
7	Flap servomotor	Flap servomotor for air intake and exhaust system	152
8	16 outputs board	16 open collector output board for relay operation, with Ethernet and RS488 communication	310

## Dehydrators - Technical Characteristics and Pricelist

9	4 analog outputs board	4 analog outputs board, for fan, flaps and heating proportional control with RS485 communication	<i>370</i>
10	Temperature sensor	Temperature sensor for the automation system, -15°C - 125°C	<i>128</i>
11	Humidity sensor	Air humidity sensor 0-100%, -15°C - 125°C	<i>304</i>
12	Electronic module	Analog electronic module for parameters: 2 x temperature, 2 x RH, 8 x moisture, RS485	<i>728</i>
13	Auxiliary box	Auxiliary for 4 moisture probes	<i>210</i>
14	Connector	Chromed Brass connector for moisture probes	<i>1.78</i>
15	Probe nail	Stainless steel nail for product probing, D = 4 [mm], L = 30 ... 50 [mm]	<i>2.78</i>
16	Probe cable	Temperature resistant cable for moisture probes (price is for 1 [m])	<i>2.22</i>
17	Probe for food dehydration	Probe fitting to be used for food dehydration. Samples of the products are inserted in this fitting to allow electronic measuring of the product's water content. Up to 8 probes can be connected to one dehydration machine.	<i>650</i>
18	Automation system	Automation system without inverter: PC with software, electrical panel, air sensors	<i>4200</i>
19	Hot water radiator	Aluminum radiator for dehydrator heating. Only to be used with antifreeze and water mixed 1:4	<i>1980</i>
20	Tray 600 [mm] x 400 [mm], with legs	Stainless steel tray with ANSI 304 frame with ANSI 304 Mesh with 2[mm] x 2[mm] x 0.5[mm] weave, with legs for doubling the load	<i>68</i>



**Fig. 9.** *Parts and Accessories*

## 4. Contents

1. Basic information .....	1
1.1. General characteristics .....	1
1.2. Models .....	3
1.3. Modules .....	5
1.4. Machine load .....	8
2. Specifications .....	10
2.1. Dimensions .....	10
2.2. Power requirements .....	14
2.3. Automation .....	16
3. Prices .....	18
3.1. Dehydrators .....	18
3.2. Parts and accessories .....	19



**Fig. 10.**      *FD-2x2 – 200kg ... 400kg*





**Fig. 11.** *FD-1x2 – 100kg ... 200kg*



**Fig. 12.** *Stainless steel carts for fruits*



**Fig. 13.** *FD-3x3 – 450kg ... 900kg*

---

## Company details

**SC. Blue Spark Systems SRL.**

RO24493819 (EORI)

J40/15560/2008

**Address:** Str. Sold. Ene Modoran 9, Sector 5, Bucharest, Romania

**Main office:** Bd. Iuliu Maniu 101, Sector 6, Bucharest, Romania

**WEB:** [www.dehydrators.eu](http://www.dehydrators.eu)

[www.deshidrator.ro](http://www.deshidrator.ro)

---

*Copyright 2019 – Blue Spark Systems*