

Semiautomated SIPs production line SPL-2 “ADVANCE”

The sandwich panels SIPs manufacturing line is intended for bonding **in any combinations** metals, PVC sheet, OSB boards, MgO, fibre-cement boards, particleboards and other flat materials with different types of insulation, such as expanded polystyrene, extruded polystyrene, mineral wool, etc. by using 1-component polyurethane adhesives.



The line SPL-2 “ADVANCE” consists of:

1. Stationary frame of glue extruder «KAM-Pro» series, equipped with electric drive motor for lifting up and down of the applicator depends from the quantity of materials, placed on the carriage;
2. Two transmission type stationary air pod presses completed with movable platforms, which moves on the rails under the glue applicator.

The manufacturing process of SIPS panels on line SPL-2:

- 1) The OPERATOR runs the lines on the control panel. Time of the readiness for operation is 2 minutes.
- 2) The OPERATOR sets the necessary installations for the operation of the line on the control panel (length, height of panel, adhesive consumption).
- 3) the movable table №1 automatically moves in place of assembling of the sandwich panels.
- 4) sheets of materials (PVC, OSB, MgO, ...) are fit and positioned by WORKERS (2 persons) on the movable table. OPERATOR presses the “Start” button.

The movable table starts to move. Application of glue and water occurs in the automatic mode on the table, which is goes under the carriage of gluing application site. The exact start and finish line is controlled by the program.

5) on a sheet of material with glue WORKERS stack and position a sheet of core material. The OPERATOR presses the “Start” button. Application of glue and water occurs in the automatic mode.

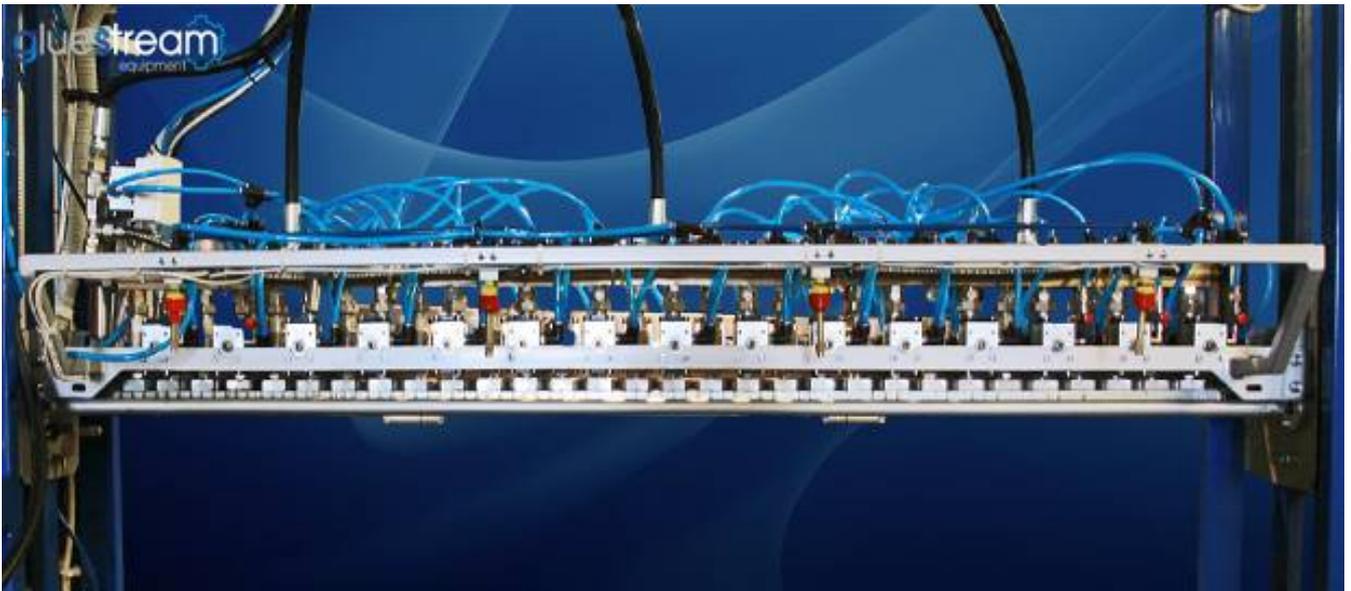
6) WORKERS place and position the sheet (PVC, OSB, MgO). The cycle is repeated until the required number of the bonding panels are assembled.

7) the table №1 with stacked sandwich panels glued moves to the press №1.

8) while the 1-st set of panels is under the press, the 2-nd set of panels is under assembling on the table No.2.

Adhesive applicator of the glue extruder:

Represents a vertical frame with carriage, that equipped with motor drive and moves up or down in automatic mode, according to the stack of panels that is forming one-by-one on the sliding platform of the press. Carriage applies adhesive on the substrate, during the platform is going under the applicator, and applies water mist during the platform is on the way back.



GLUESTREAM automatic shutdown system:

Adhesive applicator is equipped with automatic nozzle shutter that prevents the reaction of single polyurethane adhesive with moisture in the air. This original function eliminates the need of the regular cleaning and makes the work with the machinery more easy and comfortable.

System can be used in automatic and manual modes. The shutter shutdown time can be changed on the control panel. Automatic shutdown occurs during the power failure or during pause in operation more than 3 minutes (time value can be changed according the characteristics of the adhesive system).

GLUESTREAM sensor control panels:

Control system is equipped with sensor displays and controllers which provide a great variety of possibilities to control workflow diagnose the system.

Operator can set the required adhesive consumption, running rate of the carriage directly from the control panel.

The statistics information about adhesive consumption for certain period is also available.

Gluestream machinery is equipped with remote access module that provides the customer with 24/7 online support.



SPL-2 “ADVANCE”, Technical details:

No	Name of parameter	Standard
1	Type of PU adhesive	One component PU adhesive
2	Viscosity range, mPas (Brookfield RVT)	4000...12000
3	Adhesive consumption, gram/m2	80-150
4	Gluing width, mm	4,1 ft. (1250 mm)
5	Steps of changing the gluing width, mm	100; 10
6	Step of glue tracks, not more than, mm	10
7	Gluing length (programmable), mm	up to 3100
8	Gluing speed, m/min	15
9	Precision flow of glue, gram/m2	+5
10	Programming closing valves for adhesive, sec	0-180
11	Programmable height of the workpiece, mm	0-350

12	Automatic fault diagnostics	Yes
13	The press working area:	
	- length, mm:	3100
	- width, mm:	1250
	- height, mm:	1575
14	Size of panels (length x width):	2440x1100
	- minimum, mm:	
	- maximum, mm:	3100x1250
15	Pressing force, kg/m ²	500-900
16	Stroke length of the cylinder, mm	500
17	Synchronization system lowering plates	Yes
18	Programmable shut-off cylinders	No
19	Manometer	Yes
20	Automatic control of pressing time and pressing force with alarm indicator	Yes
21	Compressed air pressure, bar	6-8
22	Compressed air consumption, nl/h (cyclic)	5000
23	Electricity: Voltage, V / Frequency, Hz	400-415V / 50 Hz*
24	Power consumption, kW	6,0
25	Irrigation water tank, liter	50
26	Connectors for adhesive barrel, tank	200L, 1000L
27	Overall dimensions, mm:	
	- length	16000
	- width	2200
	- height	2500
28	The number of service personnel, pers.	2
29	Operator's screen interface language	English

*Please, pay attention on the parameters of available electrical networks in Your region.

Air pod presses are equipped with:

- special stationary vertical guides which provides the accurate positioning of the stack;
- Camozzi (Italy) pneumatic system;
- Operating surfaces of the press covered with specialized water resistant plywood.
- The lower plate of press has the slots, which allow to unload the press with a fork-lifter for removing the stack of the panels

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