

Survey

Briquetting has tangible advantages

During the production process, residual materials in the form of shavings, dusts and wood chips are generated which are recycled, used for energy or disposed of. For many applications briquetting represents a solution alternative which exhibits considerable advantages:

- Volume reduction,
 - material-related: up to 95%
 - pouring-related: up to 50 %
- Better handling of the residual materials,
- Manufacturing of salable briquettes,
- Reduction of the risk of fire and explosion caused by fine dust,
- Recovery of cooling lubricants,
- Lower melting losses of metal briquettes,
- No complicated material processing required.

The following materials in the form of shavings, dust and wood chips can be briquetted:

- Solid wood,
- particle board, MDF, etc.
- Plastics (PU, Styrofoam, etc.),
- Paint and grinding dusts,
- Paper, cardboard packaging and bank notes,
- Steel and cast iron,
- Aluminum and other light metals,
- Cotton, textiles,
- Biomass (tobacco, rice husks, coffee hulls, etc.).

Depending on the material properties and the required briquette quality for the recycling, different pressures are required. With the SHB M series, pressures of up to 5,000 bar can be achieved.

Fully developed program

For over 40 years, SPÄNEX has produced briquette presses. More than 3,000 machines in practical use means:

- Know-how and experience,
- Trust of the clients,
- Solutions suitable for the market,
- Convincing technology,
- The highest quality standard,
- Long service life,
- Heavy, solid design,
- Optimal price-performance ratio and
- Capable service.

Several series with several briquette forms are manufactured in a power range between 40 and 2000 kg/h (depending on the material).



SHB 40 - 55



SHB 60 - 125 R



SHB 150/250



SHB HP 45 - 120

Applications

Use

The majority of the briquette presses is used as a component in the suction and filter systems from SPÄNEX to transform the shavings and dusts or wood chips discharged in the material separators or filtration systems into briquettes. The briquette presses are placed under containers or silos and fed directly via chutes.

When setting up the briquette presses in buildings, feed systems, e.g. and auger conveyor, are required between the container of the filtration system and the briquette presses.

In addition, the machines are integrated directly into the production processes in order to manufacture briquettes out of the shavings and dusts generated during processing directly or after upstream material



processing.

Material-side requirements

The material to be briquetted must fulfill certain requirements, e.g. for wood and biomass:

- Humidity: 6 - 20 %,
- Structure: free-flowing,
- Particle size: < 15 mm,
- Wood chip percentage: < 25 %

Sample briquetting

The briquettes are generally manufactured without adding binding agents. To test the material's ability to be briquetted, a test press is performed with the original material provided and the results are documented. The achievable throughput amount and the ability to be briquetted are dependent upon the material data (humidity, structure, consistency, etc.) and the machine type used.

Based on the data determined during the test press, the optimal machine can be selected for the respective application and a detailed offer can be drafted.

The test press is free of charge.



SHB 60 with cross conveyor screw

Executions

Several series

The SHB 40 to 250 and the SHB R 60 to 150 series are predestined for application for biomass, paper and plastic since in general, lower pressures are required.

For metals and certain plastics, the SHB M can be used with which the pressure can reach up to 5,000 bar.

SHB 40 - 250 and SHB R 60 - 150 series

- SHB 40 - 55

The introductory model is specially designed for use in combination with dust extractors. The briquette form is square and is 120 x 45 mm.

- SHB 60 - 250 The series includes five machines. For SHB 60/100/125 sizes, the hydraulic aggregate is mounted directly on the base frame of the press. For SHB 150/250 types, the hydraulic aggregate is installed separately from the machine body. The briquette form is octagonal (union briquette) and is 125 x 70 mm. All machines are designed for multi-shift operation.
- SHB R 60 - 150 With regards to setup and function, the machines correspond with the SHB 60 to 250 series. However, the briquette form is round with a diameter of 70 mm. The series is preferred for use when briquettes are intended for energy use and furnace systems are to be automatically fed.

SHB M 45 - 120 series

- The series was especially developed for materials that required higher specific pressures (e.g. metallic materials, special plastics, etc.). The machine capacities are highly dependent upon the material. All machines in this series are designed for multi-shift operation.

Standard scope of delivery

The machines are delivered ready to connect including the hydraulic aggregate and complete electrical switching (Simatic S7-200).

Configuration versions/accessories

The machines in the series can be modified to suit the individual requirements using a variety of accessories:

- SHB 40 - 250, R 60 - 150 series
 - extended briquette pliers,
 - reinforced clamping cylinder,
 - wear and tear protection for the supply and compressor chambers and the crimping pliers,
 - oil heating when setup in non-temperature-controlled rooms,
 - dust extraction,



SHB 40



SHB 250

- electronic briquette length monitoring with filling count control for the briquette press,
- automatic processing of the briquette press via the filling status sensor in the container.
- SHB HP series
 - material processing,
 - feed technology,
 - lifting and tilting systems,
 - oil spraying unit,
 - oil heating when setup in non-temperature-controlled rooms,
 - emulsion pump.

Technical data

■ SHB 40 ■ SHB 60/100/125/150/250 ■ SHB (R) 60/100/125/150 ■ SHB HP 45 - 120

Technical data - series SHB

Series	Unit	SHB 40 - 55	SHB R 60 - 150	SHB 60 - 250	SHB HP 45 - 120
Form of briquette	mm	120 x 45	Ø 70	125 x 70 2)	Ø 45 - 120
output 1)	kg/h	40 - 70	60 - 150	60 - 250	40 - 2.500
capacity	m³/h	0,2 - 0,5	0,4 - 1,2	0,5 - 2,0	0,3 - 6,0
engine power	kW	4 - 5,5	5,5 - 7,5	5,5 - 11	7,5 - 55
dimensions l x b x h	m	1,6 x 1,0 x 0,7	bis	bis	bis
			1,7 x 2,4 x 1,5	1,7 x 2,4 x 1,5	2,2 x 2,7 x 2,7
weight 3)	t	0,5 - 0,65	0,7 - 1,5	0,7 - 1,5	2,2 - 9,0

1) depends upon the material density/structure 2) octagonal 3) without oil filling

Plant pictures



