**Thermoplastic Preheaters**

**BORUM thermoplastic preheaters**

for trouble-free heating of block, granulate or liquid thermoplastic material. Efficient vertical double mixer arms, which ensure uniform heating of the material. 50 mm heat insulation. Hydraulic forward/reverse transmission. Preheaters driven by a hydraulic power unit, which can be installed independent of location of preheater. Standard length for connection of hoses and cables 6.0 m.

Diesel oil burner or propane gas system can be supplied for heating. All sizes of preheaters up to 1600 can be delivered as double (twin) units driven by a common BM PS-15 power unit.

**ID Indirectly heated preheater.**

- Hydraulic motor with agitator bearing.
- Start/stop/reverse valve for agitator drive. Vertical agitator with double arms and paddles.
- Material container surrounded by heat transfer oil, to distribute heat.
- Oil-heated center pipe in material tank. Oil-heated material outlet.
- The preheater is equipped with a thermostat for thermoplastic material and for heat transfer oil temperatures from +50 to +270°C. Includes an integrated display showing actual temperatures.
- Standard sizes 250, 400, 600, 800, 1100, 1600, 2500 L.

**D Directly heated preheaters**

- Hydraulic motor with agitator bearing.
- Start/stop/reverse valve for agitator drive. Agitator with double arms and paddles.
- The preheater is equipped with a thermostat for thermoplastic material temperatures from +50 to +250°C. Includes an integrated display showing actual thermoplastic temperature.
- Standard sizes 300, 500, 750, 1000 L.

**Hydraulic Power Unit:**

**BM PS-15 Hydraulic power unit**

Suitable for powering one or two preheaters. 9.5 kW (13 HP) at 3600 rpm. Water-cooled 2-cylinder diesel engine. 83 L diesel oil tank with level control and diesel oil filter. 2x4.5 cm3/rev. hydraulic pump with safety valve, capacity 2x11 L/min v. 2400 rpm.

66 L hydraulic oil tank with filter. Alternator 12 V DC/65 Amp. Engine foundation with vibration absorbers. Noise level @ 7m distance = 73 dbA

**BM PS-9 Hydraulic Power Unit**

Suitable for powering one preheater only. 7.0 kW (9HP) at 3600 rpm. Air-cooled 1-cylinder diesel engine. 83L diesel oil tank with level control and diesel oil filter. 4.5 cm3/rpm hydraulic pump with safety valve. Capacity 11 L/min v. 2400 rpm.

66 L hydraulic oil tank with filter. Alternator 12 V DC/55 Amp. Engine foundation with vibration absorbers. Noise level @ 7m distance = 68 dbA

**Diesel oil burner**

Diesel oil burner for 12 V DC power supply.

**Propane burner**

Propane burner with electric ignition and safety system. Active flame control.

Available on demand

**Dimensions and weight**

**Filling system:**

Filling system for transportation and lift of thermoplastic, mostly used for transporting thermoplastic from preheaters placed on a supply truck/trailer to a material tank placed on the marking truck.

Borum has the following filling systems:

**TLS 1** - for connecting to a single preheater.

**TLS 2** - for connection to double preheaters.

The units have a hydraulically driven piston pump.

The bottom part and material pipe is heated by heat transmission oil, which is circulated by a hydraulically driven pump.

When run by a standard PS 15, the capacity is 40 litres/min. Capacity for both models can be up to 120 litres/min, when fed by 30 litres/min hydraulic oil. For instance if operated by a PS 15 with extra large hydraulic pump

**Auger pump**

is mounted on single preheater. The pump is driven by a hydraulic motor. The pump and pivoted material pipe is heated by heat transmission oil, which is circulated by a hydraulically driven pump.

The capacity is 45 litres/min, when operated by a PS 15, provided with extra large hydraulic pump.

**Gear pump SP 2000**

is especially used for jobs with big lifting height, or long material pipe. The gear pump is operated by a hydraulic motor. Pump and material pipes are heated by heat transmission oil, which is circulated by a hydraulically driven pump.

Max capacity is 120 litres/min when fed with 30 litres/min. hydraulic oil flow.

For the SP2000 a motor driven PTO can be used for driving a hydraulic pump. An electrically operated control valve govern the gear pump speed.

With this arrangement remote operation of the pump system can easily be performed.

See photos of Borum filling systems

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