



PHOTOS MAY SHOW OPTIONAL OR CUSTOMISED EQUIPMENT.



Double basic line



Double basic line



Edgeflex



Longflex



Chess



Agglomerate

## THERMOPLASTIC EXTRUSION AND AGGLOMERATE APPLICATION

The BM 5000 is a high capacity line marking machine designed for large scale jobs such as marking highways, motorways or airport runways.

The material tank capacity can be up to 710L. The possibility for the large material capacity naturally gives fewer stops during the day for refilling.

The BM 5000 has a two-seat slidable drive and operator section for flexible working on the left or right side.

The Borum Master 5000 can be supplied with the thermoplastic Borum extruder of 30, 40 or 50cm. The extruder may be used for the application of various types of plain and profiled lines, single and double lines of different widths, as well as for simultaneous application of continuous and interrupted lines.

# KNOWING THE BM 5000

**FULL REAR VIEW**

## OPERATOR SECTION

Quick and easy change from side to side for marking left and right. Dual torque steering - good directional stability. Cruise control can be added as optional equipment.

## LINEMASTER COMPUTER

With the LineMaster Computer you can control up to 6 paint or spray guns, 6 bead guns and equipment with up to 24 shutters. Moreover, it controls all these various sets of equipment in this ONE unit.

## DIESEL TANKS

Allows for a full day's work.

## ENGINE ROOM

Easy access  
for service.

## PRESSURIZED BEAD TANK

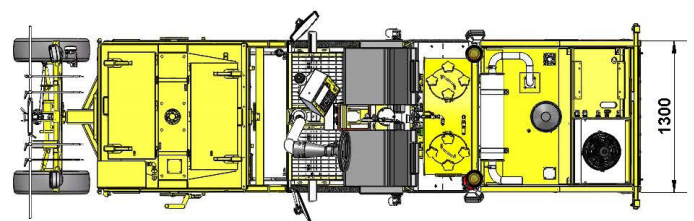
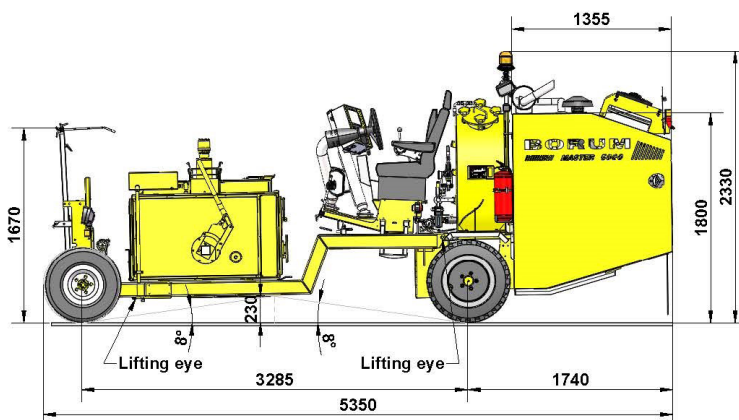
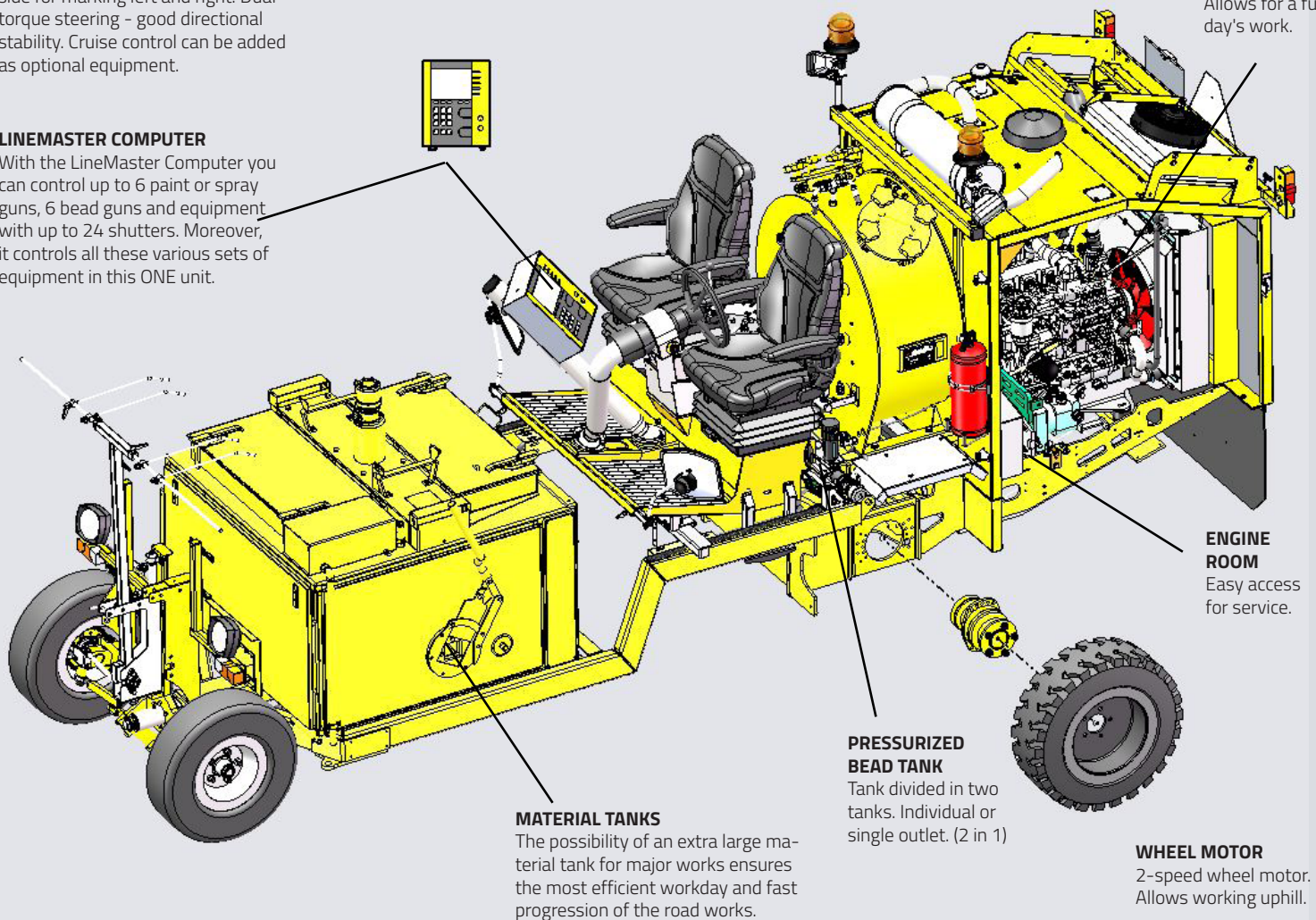
Tank divided in two tanks. Individual or single outlet. (2 in 1)

### WHEEL MOTOR

2-speed wheel motor.  
Allows working uphill.

## CHASSIS

Solid double-frame construction



# TECHNICAL SPECIFICATIONS

## ENGINE

Manufacturer	Kubota
Type	Turbo (Diesel)
Cooling	Water
Cylinder	4 stroke 3800 cm <sup>3</sup>
RatedPower	74 KW
Approval	EU Stage IIIA resp. TIER 3

## COMPRESSOR

Compressor Capacity	Choice of 1-2 compressors can give 1800 - 3600 L/min @ 10 bar. Integrated oil-cooling system. Air-cooler incl. water separator
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## FILLING CAPACITIES

Fuel tank capacity	180 L (2 x 90 L) - Diesel
Hydraulic tank size	93 L
Bead capacity	330 L (2 x 165 L). Pressurized (max 3 bars)

## MATERIAL TANK

Material Tank	445 L, 585 L, or 710 L
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## DRIVING PROPERTIES

Drive angle	12.5 degrees / 22% (low gear 7200 kg)
Turning radius	4.90 m.
Steering	Dual torque steering

## TRANSMISSION

Hydrostatic transmission	For variable speed
Speed	Low gear 0-12 km/h, high gear 0-24 km/h

## ELECTRICAL SYSTEM

Electrical system	12 V / 150 Amp
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## CONTROL UNIT

Borum LineMaster	Program up to 99 different line types. Organise lines in up to 30 marking programs. 8" display. Transfer of daily marking reports. Data about road marking jobs can be accessed online (optional).
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## COLOUR

Colour	RAL 1007 (Other colours available on request)
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## DIMENSIONS

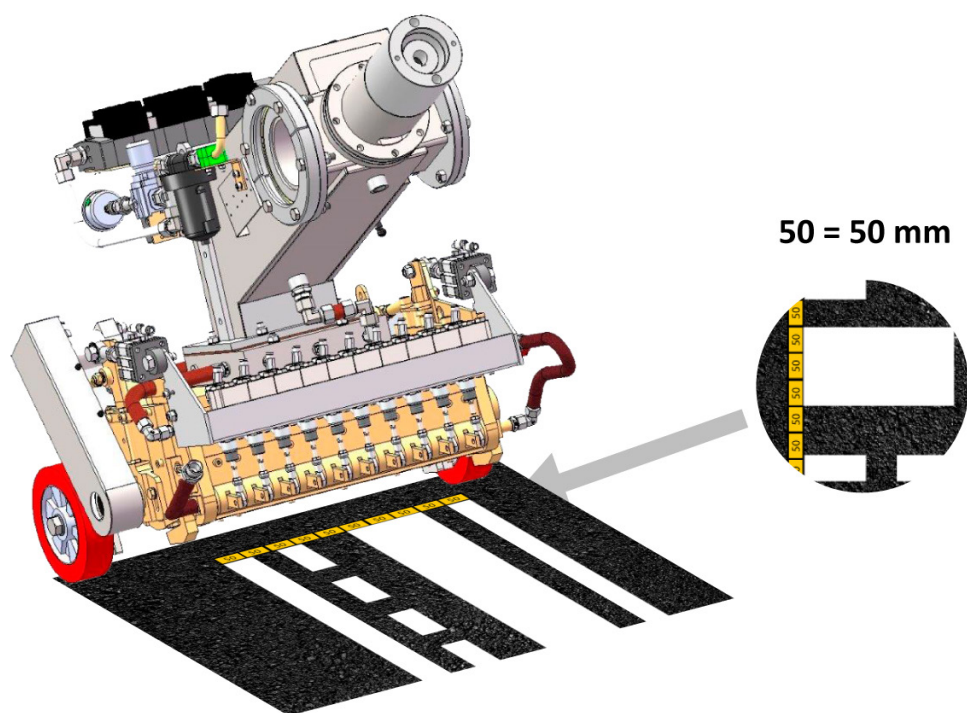
Length	5350 mm
Width	1300 mm
Height	2250 mm (Without Beacon)



# THERMOPLASTIC EXTRUDER

The working principle of the extruder lies in the extrusion of the hot thermoplastic material through the extruder shutters onto the road surface. This allows to switch between line types in seconds with a push of a button. No need for mechanical adjustment.

The thickness of the line is controlled by the slot gap and the speed of the machine, coupled to the thermoplastic feed rate. Glass beads can be pre-mixed and/or automatically applied with glass bead guns.



You can choose between thermoplastic extruder of 30, 40, or 50 cm in total line width, built-up with 5 cm standard shutters (alternative shutter dimensions in the range of 4-10 cm for alternative line widths).

Effective heating of the complete unit using a centrifugal pump, 42 L/min, hydraulically driven. This ensures optimal performance and that the material does not stiffen and set inside the equipment.

Pneumatic lifting cylinder for up/down function, operation controlled from operator's seat.

Pneumatically controlled quick cleaning system for removal of solids left in the extrusion slot. It can be activated while extrusion is in process and is only slightly detectable on the line in the form of a moderate thickening of the layer.

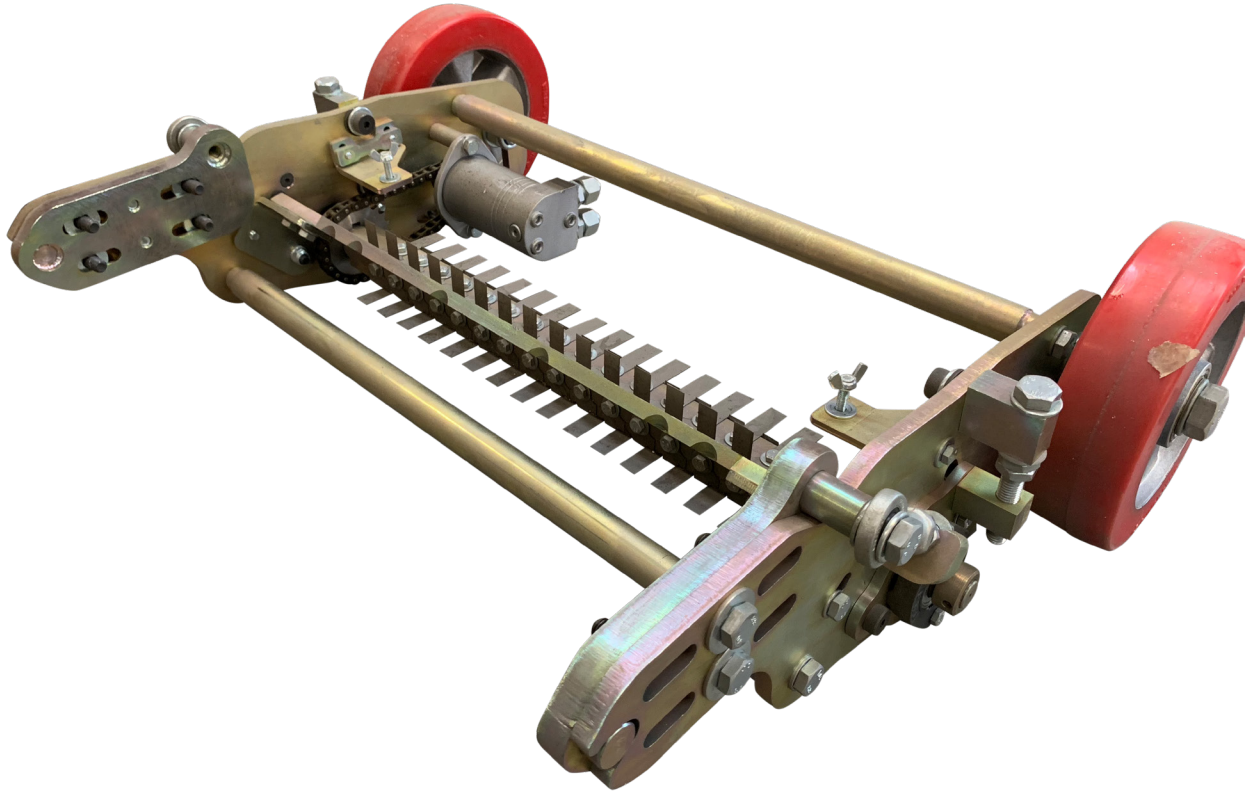
The application speed varies according to the material, line type and width. Usual working speed is 3-6km/h but can go up to 8 km/h for some lines. Speed-dependent settings are possible.

## AUGER SCREW PUMP WITH CONTINUOUS RECIRCULATION SYSTEM

The transport of material from tank to extruder head is done by a hydraulically driven auger screw pump, which is electronically controlled. The screw pump has a permanent thermoplastic recirculation system which ensures a constant flow past the inactive extrusion shutters, keeping these clean and ready for opening. This avoids settling and catching of solid parts and prevents unnecessary wear of mechanical parts.

# THERMOPLASTIC AGGLOMERATE EQUIPMENT

The agglomerate equipment consists of a roller with sheet metallic blades mounted under the thermoplastic extruder. Therefore, this equipment can only work together with the Borum thermoplastic extruder.



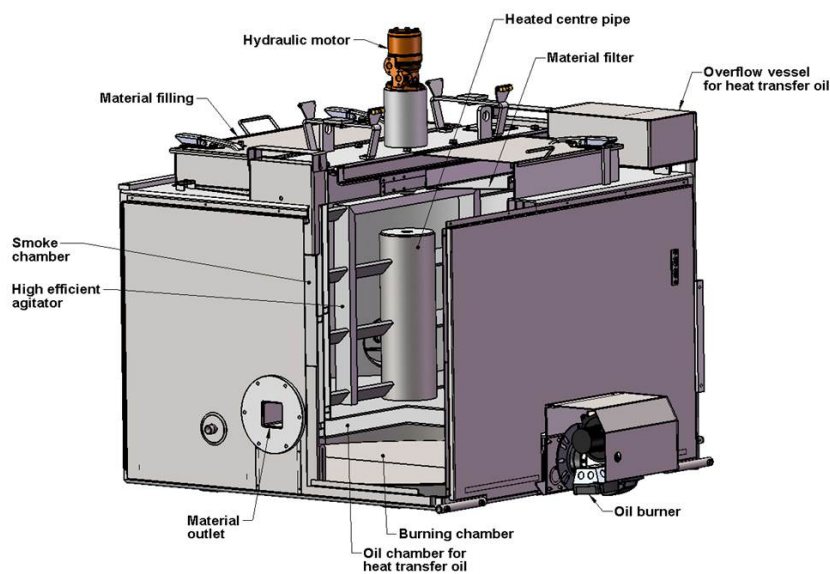
The roller is hydraulically driven and the rpm is controlled by the machine's LineMaster computer (control unit).

The roller gives you the possibility to apply line widths up to 50 cm. The application width is controlled from the machine's LineMaster computer by setting how many of the extruder's shutters should be open and let material flow.

Line thickness can be up to 4 mm.

The usual working speed when doing agglomerate lines is 4-5 km/h depending on the conditions, e.g. material, line type, and operator experience

# NON-PRESSURIZED THERMOPLASTIC TANK



Non-pressurized thermoplastic tank, indirectly heated via heat transfer oil. The thermal oil and thermoplastic material temperature is thermostatically controlled and regulated automatically according to the settings

## BURNER SYSTEM

Diesel burner system for heating of the thermal oil (and thermoplastic). Propane burner is available on demand.

## VERTICAL AGITATOR (MIXER)

With hydraulic transmission. Heated center pipe for efficient uniform temperature control. Perfect melting & homogenization of the thermoplastic. Stable construction with foundation and bearings at the top of the material tank.

## LINEMASTER FEATURES

The Borum LineMaster control unit is an easy way of setting and controlling your line marking jobs. The LineMaster is attached to the operator's section of the machine and gives you full control of all your line marking tasks, from line application and pre-marking to reporting and invoicing.

It is possible to store up to 99 different line types, and to arrange these in up to 30 different marking programs. You are also able to pre-set line widths, line types and different combinations to have them ready for marking, and can instantly adjust them on the go.

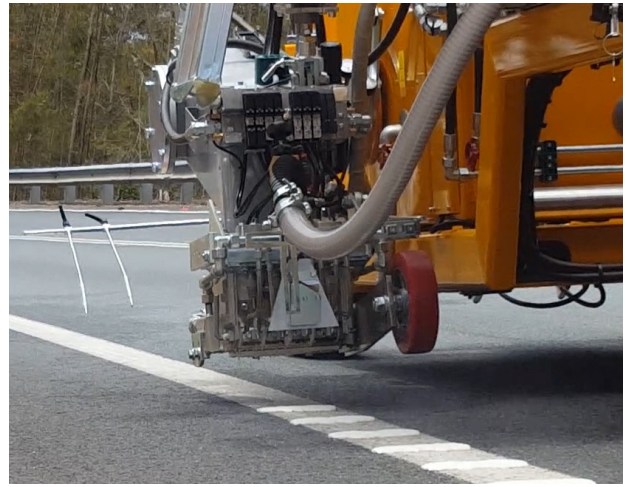


Furthermore, you are able to view the status of various parts of the machine (e.g. compressor) on the computer screen that will help with correctly maintaining the machine and avoiding break downs.



## THERMOPLASTIC FEATURES

Thermoplastic is a durable material that cures quickly and adheres strongly to the road surface. It can be used for applications of both flat lines (also known as type 1 lines) or of thick profiled lines and markings (also known as type 2 lines).



This type of material is used on various types of roads, but you will often see it on highways or motorways as it can withstand high traffic density, it has a high visibility at night and during wet conditions and glass beads can be mixed in for enhancing visibility.



### TYPICAL USES:

Thermoplastic is generally used on roads with high traffic volume and low night visibility as highways and motorways.



### LEARN MORE

Find out more in the Borum Knowledge Lab.



# ADDITIONAL EQUIPMENT

The additional equipment can be mounted on the machine according to your requirements. They are not necessary for the running of the machine but add to the comfort of the machine driver or to the functionality of the machine.



**Pre-marking system with paint can**



**BM Online**



**Air drier for bead tank**



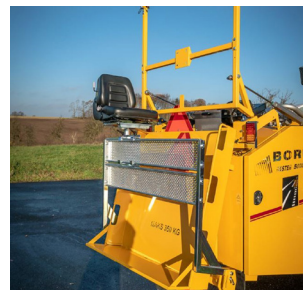
**Bead alarm mounted on bead gun**



**Pointer turning with steering**  
With hydraulic lifting system



**Bar with pneumatic lift for mounting warning lights**  
(Comes without lights)



**Cone holder**



**Remote control for BM Lin-eMaster**



**Cruise control**



**Sunshade with 1 rotating light**



**Pre-marking system with paint gun**



**Airknife**



**Ejector filling of bead tank**



**Fixed pointer**  
With hydraulic lifting system



**Hydraulic broom**



**Quick shift**