



PHOTOS MAY SHOW OPTIONAL OR CUSTOMISED EQUIPMENT.



Double basic  
line



Double basic  
line



Edgeflex



Longflex



Chess



Agglomerate

## THERMOPLASTIC EXTRUSION AND AGGLOMERATE APPLICATION

From city areas to urban and interurban roads, the BM 2000 can handle both smaller jobs and longer road stretches.

The BM 2000 T AG is an agile machine with excellent load abilities and a turning radius of only 3,2 m. It allows for material tank capacity of 265 L.

The BM 2000 has a one-seat slidable drive and operator section for flexible working on the left or right side.

The thermoplastic Borum extruder can apply lines of 5 – 40 cm width depending on the set-up. 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.

The thermoplastic agglomerate equipment can apply one line in widths up to 40 cm.

# KNOWING THE BM 2000

## 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.

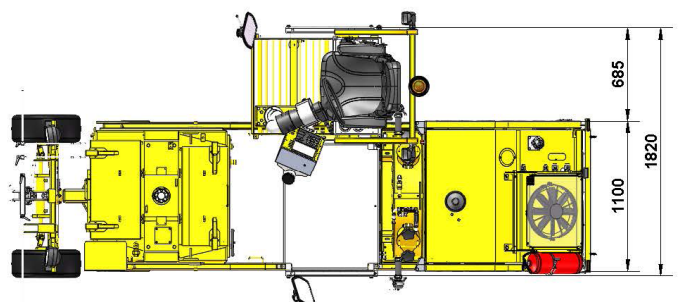
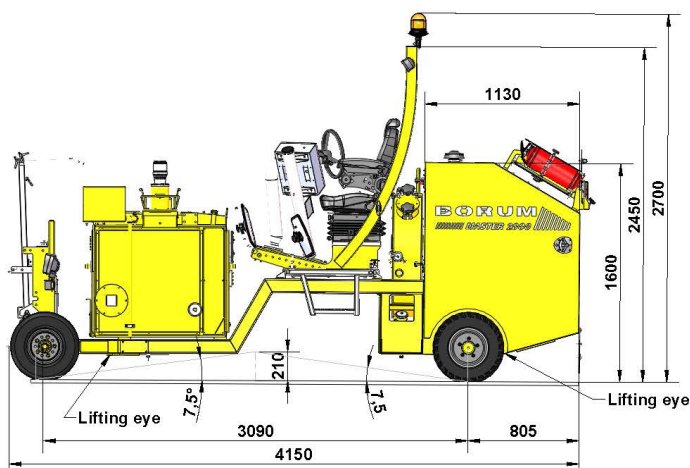
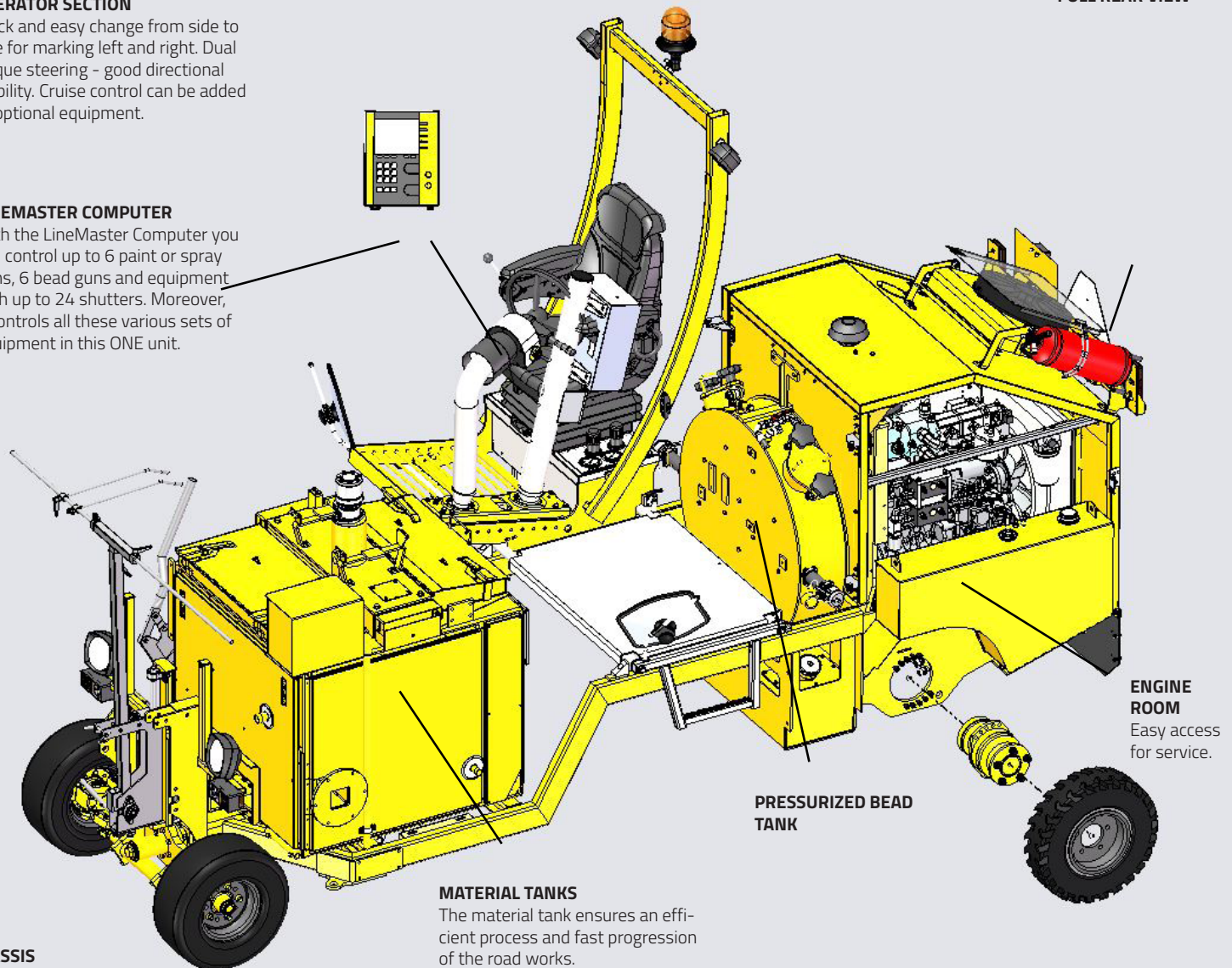
## LINEMASTER COMPUTER

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.

## CHASSIS

Solid double-frame construction

**FULL REAR VIEW**



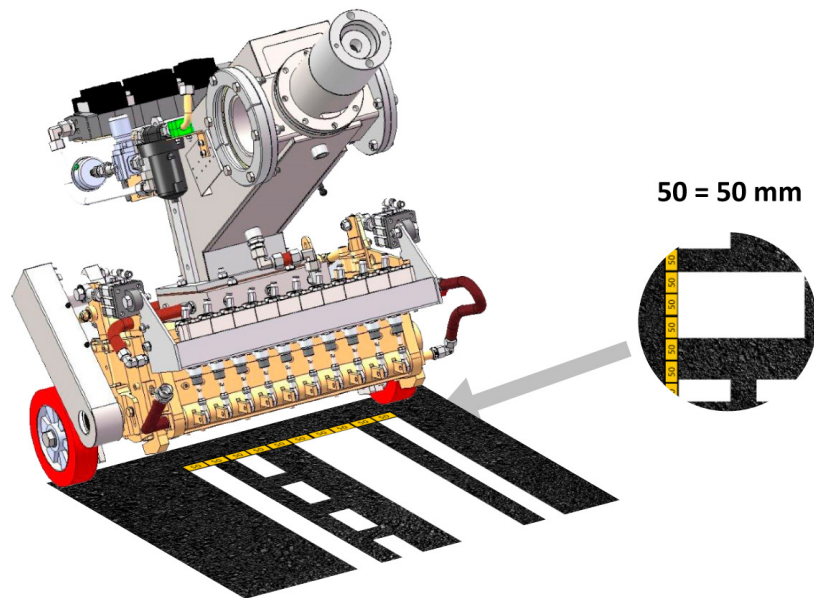
# TECHNICAL SPECIFICATIONS

ENGINE							
Manufacturer	Kubota						
Type	Turbo (Diesel)						
Cooling	Water						
Cylinder	4 stroke 2400 cm3						
RatedPower	44 KW						
Approval	EU stage IIIA (type V2403-M-T-)/US Interim TIER 4						
COMPRESSOR							
Compressor Capacity	Screw compressor. 1800 L/min @ 10 bar Integrated oil-cooling system. Air-cooler incl. water separator.						
FILLING CAPACITIES							
Fuel tank capacity	50 L (diesel)						
Hydraulic tank size	50 L						
Bead capacity	115 L/170 kg. Pressurized (max 1.2 bars)						
MATERIAL TANK							
Material Tank	265 L						
DRIVING PROPERTIES							
Turning radius	3,2 m						
Steering	Dual torque steering						
TRANSMISSION							
Hydrostatic transmission	For variable speed, forward/backwards						
Speed	0-16 km/h						
ELECTRICAL SYSTEM							
Electrical system	12 V / 150 Amp						
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).						
COLOUR							
Colour	RAL 1007 (Other colours available on request)						
DIMENSIONS							
Length	4150 mm						
Width	1100 mm						
Height	2450 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 or 40 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

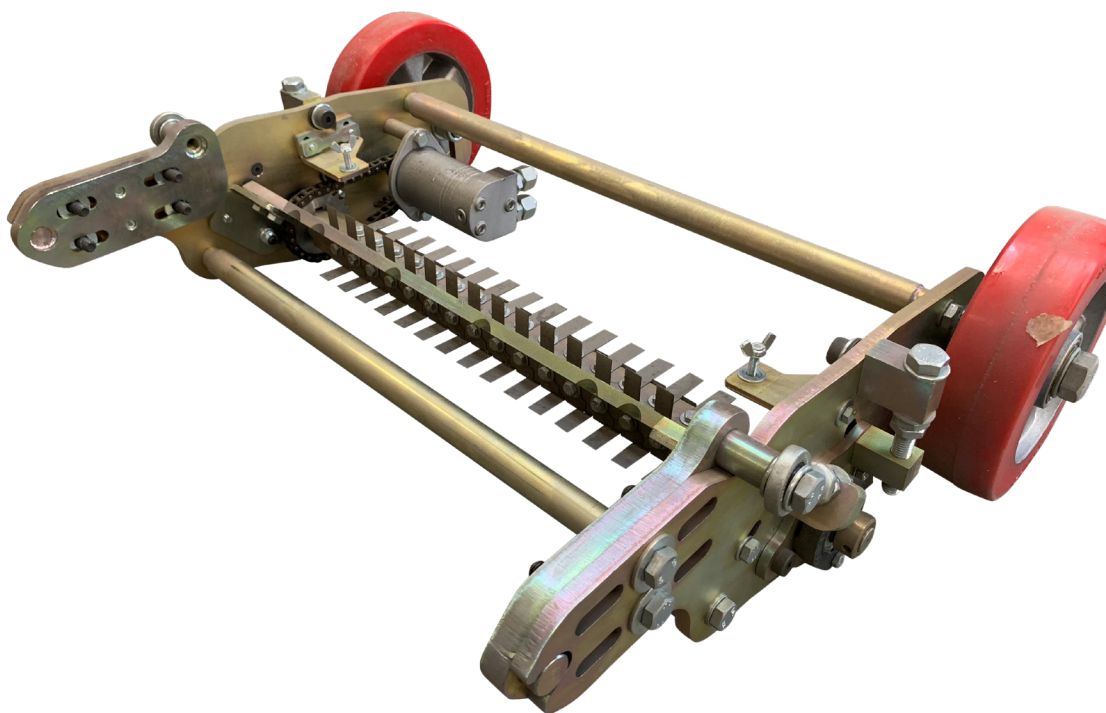
The transport of material from tank to extruder head is done by a hydraulically driven auger screw pump, which is electronically controlled. The screw pump has a permanent thermoplastic recirculation system which ensures a constant flow past the inactive extrusion shutters, keeping these clean and ready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

Build-in pressure regulating system ensures that line width and thickness does not change no matter the number of shutters involved in the current marking assignment.



# 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.

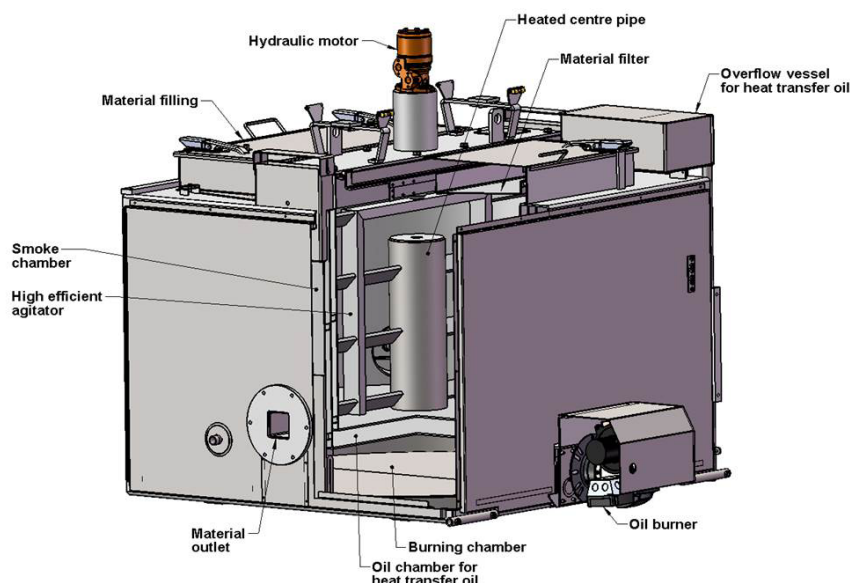


The roller is hydraulically driven and the rpm is controlled by the machine's LineMaster computer (control unit).

The roller gives you the possibility to apply line widths up to 40 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 onto the roller.

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

## 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.

## BURNER SYSTEM

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

## 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.



**Quick shift**



**Ejector filling of bead tank**



**Air drier for bead tank**



**Fixed pointer**  
With hydraulic lifting system



**Remote control for BM Lin-eMaster**



**Cone holder**



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



**Sunshade with 1 rotating light**



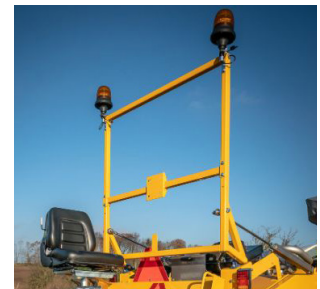
**Cruise control**



**BM Online**



**Bead alarm mounted on bead gun**



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



**Pre-marking system with paint gun**



**Airknife**



**Pre-marking system with paint can**



**Hydraulic broom**