

PHOTOS MAY SHOW OPTIONAL OR CUSTOMISED EQUIPMENT.



Single basic line



Single basic line



Longflex

## 2-COMPONENT COLD PLASTIC EXTRUSION APPLICATION (98:2)

From city areas to urban and interurban roads, the BM 2500 can handle both smaller jobs and longer road stretches.

The BM 2500 is an agile machine with excellent load abilities. It allows for thermoplastic capacities up to 360 liters, 2- component or Cold Paint capacities of 440 liters and for two colors cold paint also 2 x 220 liters.

Equipped with the new generation of Borum's LineMaster computer, operating the machine is easy and convenient.

The Borum 2-component application equipment can be equipped to execute lines in widths between 10-30 cm. The equipment on this machine may be used for the application of single continuous or interrupted flat lines in pre-defined widths.

# KNOWING BM 2500

## 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.

## FULL REAR VIEW

## 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

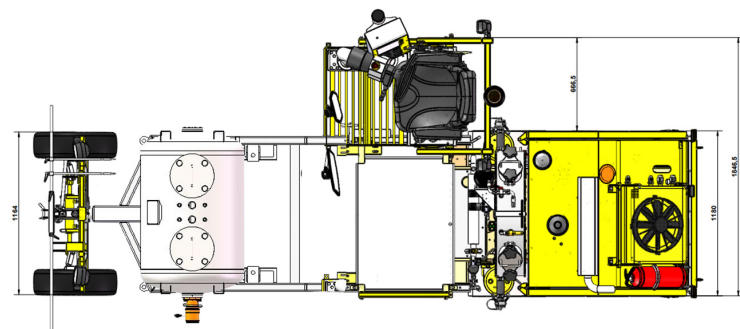
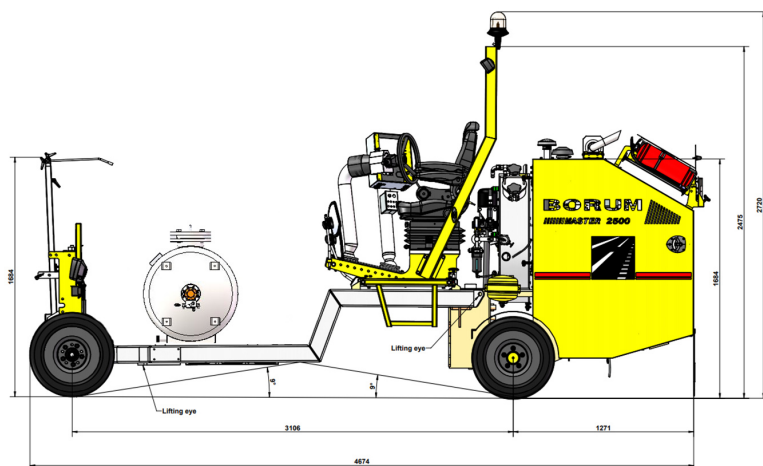
Easy access for service.

## CHASSIS

Solid double-frame construction

## MATERIAL TANKS

The possibility of an extra large material tank for major works ensures the most efficient workday and fast progression of the road works.



# TECHNICAL SPECIFICATIONS

ENGINE							
Manufacturer	Kubota						
Type	Turbo (Diesel)						
Cylinder	4 stroke 2400 cm <sup>3</sup>						
RatedPower	44 KW						
Approval	EU Stage IIIA resp. TIER 3						
Cooling	Water						
COMPRESSOR							
Compressor Capacity	Screw compressor. 1800 L/min @ 10 bar Integrated oil-cooling system. Air-cooler incl. water separator.						
FILLING CAPACITIES							
Bead capacity	115 L/170 kg. Pressurized (max 1.2 bars)						
Hydraulic tank size	70 L						
Fuel tank capacity	2 x 50L						
MATERIAL TANK							
Material Tank	440 L or 2 x 220 L						
DRIVING PROPERTIES							
Steering	Dual torque steering						
Drive angle	12 degrees / 21% (5000 kg)						
Turning radius	4,2 m						
TRANSMISSION							
Speed	0-15 km/h						
Hydrostatic transmission	For variable speed, forward/backwards						
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).						
DIMENSIONS							
Length	4750 mm						
Height	2520 mm						
Width	1180 mm without equipment						



# 2-COMPONENT COLD PLASTIC (98:2) EQUIPMENT

## - GENERAL INTRODUCTION

Being equipped with an internal mixer for mixing of the paint and hardener and efficient cleaning system that is easily triggered from the machine's computer, the Borum 2-component cold plastic equipment is constructed to provide high-quality road markings.

### THE BORUM 2-COMPONENT COLD PLASTIC EQUIPMENT (LOW PRESSURE SYSTEM) CONSISTS OF:

1. Separate material tanks for:
  - Paint
  - Hardener or the paint and hardener
  - Mixer for blending the paint and the hardener. The mixing of the material is done internally, so it is not affected by external factors as wind etc., as for external mixing
  - Pressure valves digitally controlled by Borum LineMaster computer. No need for mechanical adjustment while marking



### LOW PRESSURE PUMP SYSTEM WITH INTERNAL MIXING FOR SECURING 98:2 RATIO

The pump system consists of a lobe type paint pump and gear type pump for hardener. The two pumps are driven by one hydraulic motor via chain and variable gearbox securing the 98:2 relation between paint and hardener.

The system is also equipped with a controller for performing the flushing of gun(s) and mixer.

### BORUM VARIO RETAINER FOR EASY EQUIPMENT SWITCH

The Borum Vario Retainer provides a unique possibility to interchange between applications in a very short time, with very few standard tools. When the work is done, the retainer and application equipment can be easily stowed under the machine. The retainer makes it possible to use all application equipment in different positions on the machine.

Easily slidable from side to side for an optimal working position. Ground distance is maintained by retainer wheel to ensure a constant road marking width.

### ALARMS

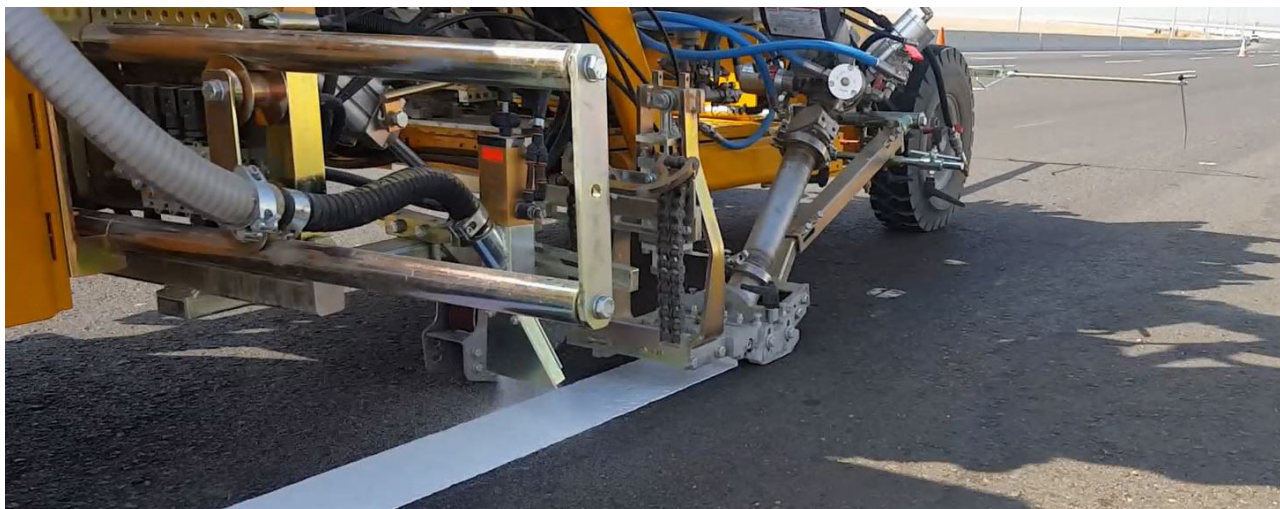
- Alarm when hardener does not flow during marking work. This helps to avoid non-cured markings to be applied
- Alarm when there is a break in the marking works which is longer than set in the computer. This notifies you to clean the system before material cures inside the equipment.



# THIS MACHINE IS EQUIPPED WITH

## 2-COMPONENT COLD PLASTIC (98:2) EXTRUDER

The extruder is ordered for the specific line width. The line width can be 10-30 cm and the line thickness can be set to 1-3 mm (ribs/profiles can be up to 10mm depending on the material).



The extruder head is provided with a quick connector to the mixer head for easy exchange of equipment. The extruder is also provided with a pneumatic cylinder with cleaning arrangement.

The extruder is ordered for the specific line width. Available line widths are 10, 12, 15, 17, 20, 22, 24, 25, 30 (4, 5, 6, 7, 8, 8.5, 9, 9.5, 10, 12 inch.) Provided with quick connector to the mixer head for easy exchange of head.

Usual marking speed is between 2-6 km/h depending on work and weather conditions, operator experience, etc. Faster application speeds can be achieved.

Recommended paint viscosity for extruded lines is higher than 6500 cp and for ribs is higher than 8500 cp.

Fitting and exchanging the Borum 2-Component Extruder with other 2-component equipment, such as Dot or Agglomerate, can be done in less than 2 minutes, without the use of tools.

## AS AN OPTION YOU CAN ALSO ADD ONE OF THE FOLLOWING APPLICATION EQUIPMENTS

### 2-COMPONENT 98:2, AGGLOMERATE APPLICATION (STRUCTURED MARKING)

Agglomerate needle roller available in a standard width of 30 cm (12"). It must be mounted under the extruder unit. Line size depends on the extruder.

### 2-COMPONENT 98:2, DOT APPLICATION (STRUCTURED MARKING)

For making 2-component dotted lines. Available line widths are between 10 - 30 cm (4 - 12 inch).

### 2-COMPONENT SPRAY 98:2

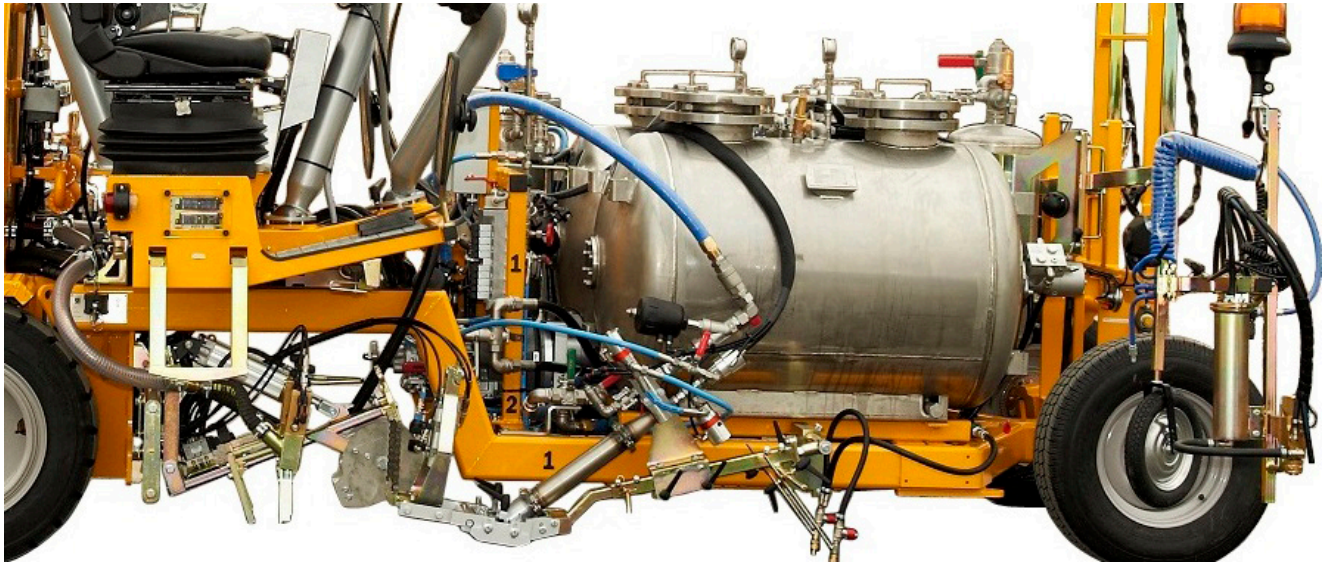
The machine can be supplied with one or two spray guns and the possibility to apply line widths of up to 20 cm (8") per gun. Please notice that restrictions apply when 2 guns are mounted.

\*NB! There are limitations when using the same machine for both sprayed and profiled applications:

- Thorough cleaning of material tanks is needed when changing material
- The pump will be worn when using the rougher material for profiled markings, so after a while, the pressure will not be sufficient for a proper result with spray.



# PRESSURIZED STAINLESS STEEL TANK



## PRESSURIZED MATERIAL TANK FOR 2-COMPONENT

Pressurized material tank and filters in stainless steel for water and ammonium based paints. Option for black steel tanks.

The material tank has a filling system with two filling holes. This makes the filling process very easy to manage.

## AGITATOR (MIXER)

Driven by hydraulic motor and with manually operated reversing valve.

## EASY-TO-USE CLEANING SYSTEM

The cleaning system is formed by a solvent tank for cleaning of mixer-head, hoses and paint guns. The system is activated via the Borum LineMaster computer. The cleaning process is an automated preset sequence ensuring the correct valves are opening/closing.

36L (79 lb wt.) pressure solvent tank for cleaning of mixer-head, hoses and paint guns. Stainless steel, max 8.5 bar (123 psi).

NB! When working with 2-component whenever the application is stopped, application equipment has to be cleaned from the cold plastic mixture within a few minutes.

## 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.

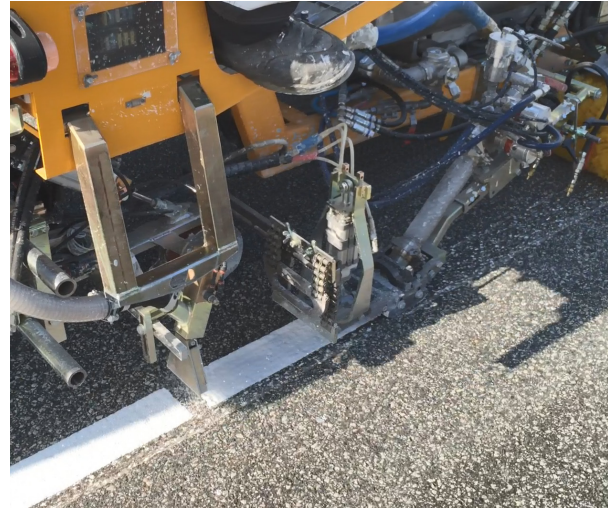
It is possible to store up to 99 different line types, and to arrange these in up to 30 different marking programs. You are also able to pre-set line widths, line types and different combinations to have them ready for marking, and can instantly adjust them on the go.



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.

## 2-COMPONENT MATERIAL ADVANTAGES

The 2-component application material is a great solution for ensuring reliable line markings in areas with dense traffic. With 2-component material, you get a wear-resistant road marking with good visibility, durability and little dirt pick up.



The challenge with 2-component cold plastic material is that once it is mixed it needs to be applied on the road right away. Even though Borum machines are designed to mix the materials as late as possible in the application process, you will need to pay attention to the time frame you have, before the material cures inside the machine / equipment.



### 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 you 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



**Ejector filling of bead tank**



**Sunshade with 1 rotating light**



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



**Remote control for BM Lin-eMaster**



**Air drier for bead tank**



**Cone holder**



**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**



**Fixed pointer**  
With hydraulic lifting system



**Airknife**



**Pre-marking system with paint can**



**Hydraulic broom**



**Hand paint gun**