# M-Planter

Tehokkuutta istutukseen

*Efficiency to forestation!*

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## From manual planting to mechanical planting

Our story begins at 1970's, as we began soil cultivation and manual planting.

At the beginning of the 21st century, we began to investigate different possibilities to make planting more efficient. We made research on different possibilities and developed different mechanical soil cultivators, and ended up developing our own planter. As the excavator was already used for soil cultivation before manual planting, we decided to combine soil cultivation and planting.

And now the work continues in second generation.

**1st prototype:** Made at 2005, still operates and was used in plantation at autumn 2015.

**M-240:** Research has proven two-headed M-240 as very efficient planter.

**M-Planter Oy:** Manufacturer of one- and two-headed M-Planters.

## M-Planter - Mechanized planter

M-Planter is a Finnish invention, which was developed at the beginning of 21st century.

At 2005 we made our first official M-Planter prototype. We saw great potential in it, and we started to develop it more. As our contracting company also does forestation, we have had perfect opportunitiy to test planters in real life.

At 2007 we made our second prototype. The second prototype participated in METLA (Finnish forest research institute) research, where it showed its efficiency.

At 2008 we founded company M-Planter Oy (Ltd), which focuses on developing, manufacturing and sales of M-Planter planting devices. At the same year we made our first mass-production.

In development we have focused on durability and reliability of the planter and on the planting quality. Research has shown, that good planting quality combined with good soil sealing from two sides of the seedling has given trees even 10 – 20 % more growth and especially better survival rate.

Now, with more than 10 years of experience, we are customizing our planters for our clients' significant needs.

# Single-headed planters

## M-120

- Single-headed planter, which is operated with an excavator.
- Designed for planting of softwoods, but it can be also customized for different species.
- Includes mounding claw for the soil cultivation.
- Attachment will be customized to fit to the client's excavator.
- Planter can be equipped with tilt function, and also with several additional applications. *(*See page 4)*

### Specs

**Weight:** 900 kg
**Width:** 1 000 mm
**Height:** 1 100 mm
**Depth:** 2 000 mm
**Plantingtube Ø:** 60 mm
**Seedlingtable capacity:** 122 seedlings
**Min. excavator (flat terrain):** 12 ton
**Min. excavator (steep terrain):** 14 ton
**Hydraulic pressure:** 160 bar
**Hydraulic flow:** 100 l/min

## M-160

- Single-headed planter, which is operated with a harvester.
- Designed for planting of softwoods, but it can be also customized for different species.
- Includes mounding claw for the soil cultivation.
- Attachment will be customized to fit to the client's harvester.
- Planter can be equipped with several additional applications. *(*See page 4)*

### Specs

**Weight:** 900 kg
**Width:** 1 000 mm
**Height:** 1 600 mm
**Depth:** 2 000 mm
**Plantingtube Ø:** 60 mm
**Seedlingtable capacity:** 160 seedlings
**Min. harvester:** Ask for more!
**Hydraulic pressure:** 160 bar
**Hydraulic flow:** 100 l/min

# Two-headed planters

## M-240

- Two-headed planter, which is operated with an excavator.
- Designed for planting of softwoods, but it can be also customized for different species.
- Includes mounding claws for the soil cultivation.
- Attachment will be customized to fit to the client's platform machine.
- Planter can be equipped with tilt function, and with several additional applications. *(*See page 4)*

### Specs

**Weight:** 1 500 kg
**Width:** 2 890 mm
**Height:** 1 400 mm
**Depth:** 1 450 mm
**Plantingtube Ø:** 60 mm
**Seedlingtable capacity:** 244 seedlings
**Min. excavator (flat terrain):** 14 ton
**Min. excavator (steep terrain):** 17 ton
**Hydraulic pressure:** 160 bar
**Hydraulic flow:** 100 l/min

## M-320

- Newly developed two-headed planter, which is operated with an excavator or with a harvester.
- Designed for planting of eucalyptus and other hardwoods, but it can be also444 customized for different species.
- M-320 is designed to be used only for planting, not for soil cultivation.
- Attachment will be customized to fit to the client's platform machine.
- Planter can be equipped with several additional applications. *(*See page 4)*

### Specs

**Weight:** 1 500 kg
**Width:** 2 890 mm
**Height:** 1 400 mm
**Depth:** 1 450 mm
**Plantingtube Ø:** 60 mm
**Seedlingtable capacity:** 320 seedlings
**Min. excavator (flat terrain):** 14 ton
**Min. excavator (steep terrain):** 17 ton
**Hydraulic pressure:** 160 bar
**Hydraulic flow:** 100 l/min

# Customizing

As different climate areas, soils and different tree species have own requirements, we are ready to customize our planters for our clients. Below you can find a list of additional applications, that has been already designed.

**Adjustable planting depth:** Standard models already have adjustable planting depth from 120 mm to 150 mm, but it can be customized for client's needs.
**Adjustable planting width (for two-headed planters):** Planting width of our standard two-headed model is 2 meters. It can be customized, and/or it can be made adjustable, which allows planting width to be adjusted between 2 and 3 meters.
**Attachments:** Attachment to the platform machine is always customized to fit to the client's platform machine.
**Fertilizer dispenser:** Fertilizer dispensers can be added, that are suitable for granular, liquid or powder fertilizer.
**Herbicide and insectiside:** Planters can include nozzles for spraying of herbicide and/or insectiside.
**Hydro-gel dispenser:** For dry areas planters can include hydro-gel dipenser.
**Irrigation system:** For dry areas planters can include irrigation system.
**Rotator and tilt functions:** Planters can include rotator for horizontal rotation and/or different tilt functions, which makes the planter more adaptive to different terrains.
**Soil cultivation:** Different tree species have different soil preparation requirements. Our standard model includes soil cultivation claw, which is used for mounding, as it's suitable soil preparation for spruce. We have also designed different grinders and drills for different soil cultivation requirements. We can also customize the soil cultivation suitable for client's needs.

In addition to applications shown above we are also developing new applications, for example GPS-seedling tracker with data collection ability. Applications are also customized from clients' order, so if You have some application in your mind, please send inquiry to us!

# M-Planter: Product of ongoing development

First M-Planter prototype was developed at 2005 and it has been developed since. We have had a great opportunity to test our planters in field on our own tree plantations. We have also participated on many research made by METLA (Finnish forest research institute, nowadays LUKE). Regarding the test results and our own experience, we have seen that M-Planter improves the quality and efficiency of forestation.

Now we would like to share our experience, and customize our planters to Your significant needs!

# *Efficiency to forestation!*

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