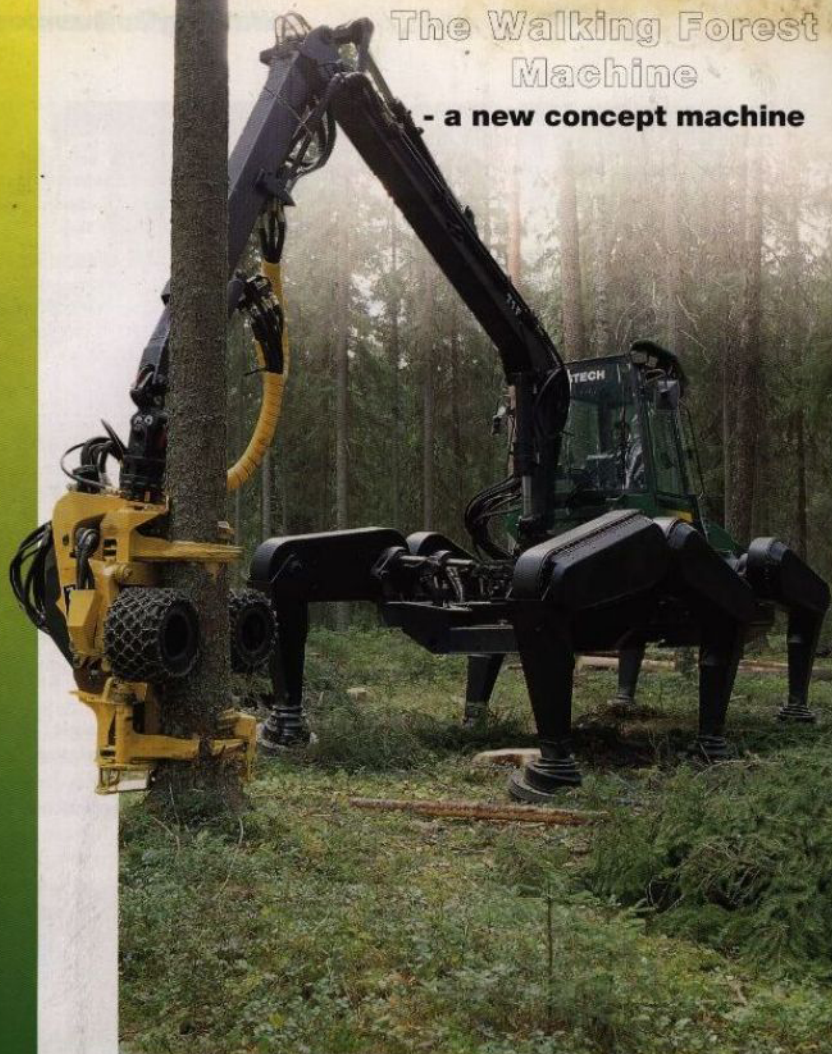


The Walking Forest
Machine

- a new concept machine



Timberjack

Walking is the most gentle

The key goal of today's timber harvesting is to combine sustainable forestry and efficiency. Timberjack is actively searching for and testing new innovations in logging technology. Several nature-sensitive advances have already been made in forest machines. Timberjack's new concept machine – a walking forest machine – takes this development another major step forward. Designed to meet tomorrow's environmental demands, this new forest machine concept is especially well suited to difficult terrain, including steep slopes and soft ground.



Environmental issues are playing an increasing role in timber harvesting. The most important factors are careful planning, a professional and skillful operator and thirdly, more environmentally sound forest machines. Timberjack is committed to developing new concepts in forest machine design and timber harvesting. Today's purpose-built forest machines are environmentally sound and cost-

efficient when driven by skilled operators. Even so, new solutions are required to keep pace with changing demands and specific application areas.

Walking is the most natural and nature-sensitive way to move in the forest, and this is also principle behind the prototype of the world's first working machine application of walking technology.

Smooth cooperation of 'intelligent' technology and agile feet

The computer-controlled walking machine adapts automatically to the terrain, distributing its weight evenly over the ground and finding a support base for each leg. Depending on the terrain, the ground pressure can be adjusted by changing the machine's six 'shoes'.

The easy-to-use machine controls include one joystick, which controls both the direction and the driving speed. The walking forest machine also contains many of the same components and parts of more traditional forest machines.

The walking machine is an important new advance toward more specialized and environmentally sound harvesting. This technology is especially promising for demanding conditions like steep slopes or soft ground where conventional methods are difficult to use or cause extensive damage.



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Timberjack's new machine concept has been developed to test the suitability of walking technology for mechanical harvesting. The prototype was introduced in 1995 and is not yet commercially available.

Successful prototype tests

After the launch of the prototype in 1995, the walking forest machine has been tested in a number of countries, environments and operating conditions. Different harvesting methods, including the full-tree method, have also been tested – with very good results. The machine's excellent stability was an important factor contributing to the success of these trials.

The walking forest machine has also proved its effectiveness in cold, wet and other difficult operating conditions.

Strengths of walking technology for forest applications:

- Spot contact with the ground avoids significant ground disturbance
- Minimum risk of soil erosion on steep slopes
- Optimum distribution of ground pressure
- Minimum damage to tree roots
- Good maneuverability in difficult terrain
 - moves in all directions
 - turns in place without damaging the ground
 - well suited to steep slopes and soft terrain
 - high variable ground clearance
- Easy handling
- Excellent stability ensures precise crane movements



Award-winning innovation

Timberjack's prototype of the walking forest machine has been recognized for its strong environmental focus. In 1996, it was Highly Commended by the European Better Environment Awards for Industry in the Eco-Design category. The goal of the award is to recognize and focus attention on the efforts of environmentally progressive companies and inform the public about their achievements in this field.

The standards for the award were very high. Winning entries had to be innovative and economically viable and show substantial environmental benefits. As a technological and environmental breakthrough, the walking forest machine meets all the criteria for eco-design.



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The concept machine was developed by Plustech Oy, a Timberjack affiliate company specializing in advanced long-range product development. Plustech Oy is part of Timberjack's European R&D Center in Tampere, Finland.