



**SAMPO ROSENLEW**

[www.sampo-rosenlew.fi](http://www.sampo-rosenlew.fi)



# HR46x HARVESTER

Thinning Specialist

An enterprise has a future only if it is economically sound, and forest is no exception to this rule.

### Economy in the forest

When growing wood in a forest, we aim at maximizing the yield - not only in the terms of volume but also in terms of quality. Thinning is the most important tool for controlling wood production.

The purpose of thinning is to concentrate the soil production capacity and growth on certain chosen trees. The goal is normally to grow large trees with high technical quality. The entire land area is reserved for a dense, healthy forest.

The forest owner/wood producer is merely interested in what is mentioned above. Technical details are only relevant if they contribute to correct, good thinning harvesting.

### Economy of the contractor

Forest contracting is an economical activity that must be profitable. Factors that make thinning harvesting difficult are the small yield per hectare and the fact that the remaining trees must not be damaged. Cost control is the contractor's most efficient tool when aiming at profitability.

Sampo Rosenlew forest machines are designed with special emphasis on the conditions in thinning. Not only are their technical features perfect for thinning, but they are also economically superior. Appropriate size for thinning, durability and well thought-out construction result in capital and running costs clearly lower than those of the competitors.



### The history of Sampo Rosenlew forest machines

The founder of Sampo Rosenlew, mr Timo Prihti was born and raised on a farm. In Finland this means that he got used to work hard not only on the fields but also and especially in the forest. In this environment mr Prihti learned that it is not only the fields that require constant attention but also forest. It must be managed – and managed well.

When mr Prihti in the early 1990's decided to continue the long industrial traditions of the Rosenlew Company by launching an enterprise of his own, Sampo Rosenlew, there was a demand for new products. At the same time he noticed that management of young forest was suffering from a lack of manual workers and a lack of suitable machinery. This led to a decision to start production of special harvesters for thinning harvesting.

Mr Prihti is now very pleased to see that it was a good decision. Forest machines manufactured by Sampo Rosenlew are nowadays used to manage hundreds of hectares of young forests every day. These forests will produce high-quality wood for the needs of future generations.



## HR46x Harvester

### PROFITABLE DECISIONS ARE MADE IN THE CAB

Sampo Rosenlew HR46x cab is a silent, safe and comfortable place for the operator. Visibility is good even over tree tops. There are also special lights on the roof pointing upwards to ensure the necessary visibility. The outside dimensions and forms are planned to minimize damage to the trees and the cab.

### UNBEATABLE MANEUVERABILITY

Sampo Rosenlew HR46x is specially designed for thinning conditions. The maneuverability of the harvester is unique thanks to the big turning angle and small dimensions. This helps the harvester to move in the terrain and improves the work quality. It also helps the forwarder to work more efficiently.

### HR46x - SMALL BUT STRONG

Plenty of power is packed in the small dimensions of the HR46x. The diesel torque is high even in low rpm. The big hydraulic pump in the work circuit utilizes the engine power in full. Harvesting work goes on swiftly, and the tree trunks run through the head without disruption.



### THE HR46x IS EASY TO USE

A small harvester is easy to move from one site to another. Since the Sampo Rosenlew HR46x is a 4-wheel harvester, it is also practical to drive on the road. Filters and lubrication points are easy to reach, which enables quick service measures. This leaves more time for productive harvesting work.

### DESIGN IS VERY PRACTICAL

The Sampo Rosenlew HR46x -harvester design is the result of thorough consideration. Maneuvering in a dense young forest requires that the outer surface is even. This helps to avoid damage both to the remaining trees and the harvester. Visibility is unobstructed in all directions without any blind spots.

### THE HR46x MAKES SENSE

The Sampo Rosenlew HR46x harvester has everything that is necessary. What is not needed has been left out. This means that the capital and running costs are low but the machine yield is higher than that of many heavier competitors. The HR46x is the choice of a smart contractor.



## Features

### Economic and dependable

The profitability of HR46x in thinning has been improved further, setting it in a class of its own among its competitors. The machine is extremely dependable and pleasant to operate.

### Stump treatment

The tank for stump treatment agent is in the front carriage. It is made of a material that is resistant to chemicals and is easy to fill with an electric pump. The tank volume is 80 liters.

### Harvesting head

Sampo Rosenlew HR46x harvester is equipped according to the customer's desires either with a roller or track driven harvester head. Our basic selection includes Keto 51 and Kesla 18RH head models.

### Efficient brakes

The HR46x is equipped with wet multi-disc brakes positioned in the hub motors. Impurities, sawdust or oil cannot compromise the braking power. Because the brake impacts the wheel directly, clearance cannot sway the machine back and forth, but it will stay in place, making it pleasant to operate. The brakes require very little adjustment and maintenance.

### Bigger working pump

The working pump volume of the HR46x harvester is 140ccm (in HR46 model 135ccm). This enables lowering the rpms (recommended 1300 rpm). Timber moves in the harvester head as before but fuel consumption is decreased.

### Comfort

The cab is spacious and cozy. The operator has excellent visibility in all directions. Thanks to the hydrostatic power transmission and low rpms of the engine, the noise and vibration of the cab is negligible. This makes the operator's work pleasant and efficient throughout the day.

### Shapely design

The design of the shields repels sticks. All shields are ever easier to open. The hood opens with an electric motor. The cooler grid opens handily and easily sideways.

### Larger fuel tank

The fuel tank inside the rear frame is now 180 liters in volume. This means that the HR46x harvester is able to work two long work shifts without refueling, because it consumes less than 7 liters of fuel per hour.

### Ample electric power

The batteries are sufficiently large to cold-start the machine and there is enough power for the accessories.

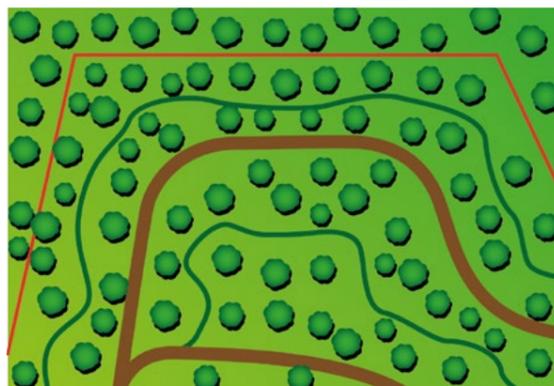
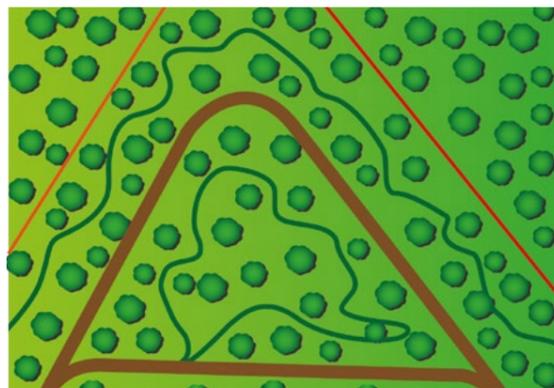
### 100% hydrostatic

The driving power transmission is fully hydrostatic. The system contains no easily damaged axles or wheelwork. The movements are fluent and pleasant. Gears are shifted electrically or, if the operator so desires, also automatically.

# Sampo-thinning

The Sampo Rosenlew HR46x –harvester utilizes Sampo -thinning method. The basic idea is that since the thinning harvester is small and very maneuverable, it can move in the forest outside the road system opened for the forwarder. This brings a number of benefits.

1. The distance between the forwarder roads can be flexibly changed.
2. Forwarder road system can be very simple and clear with straight roads.
3. If the terrain is difficult, the roads can follow the best possible routes.
4. After thinning the density of trees is the same in all parts of the forest.



- Limit of the area
- Strip road that is opened for the forwarder
- Route where only small harvester can move



Less damage to soil

## TRAIL DEPTH

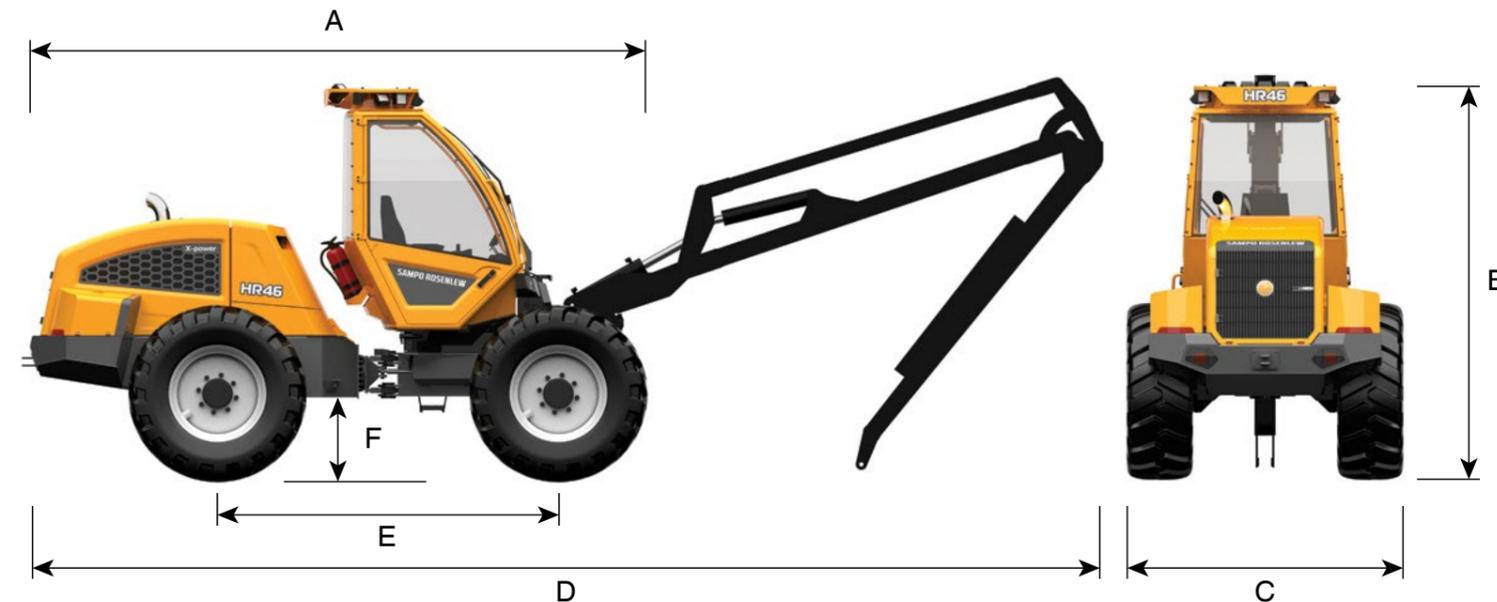
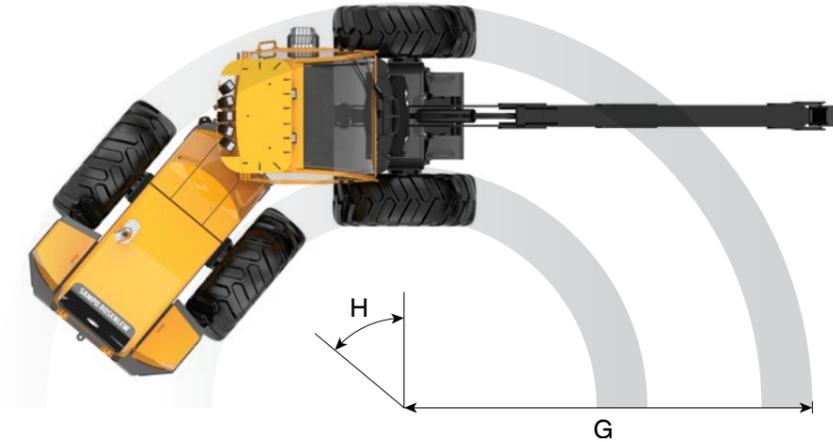


Sampo Rosenlew HR46x wheel size: 650/60-26.5  
 6-wheel harvester wheel size front 650/45-22.5 (bogie), rear 650/60-26.5

Trail depth comes from a calculation model for forest machine ground pressure and trail depth. This model was developed by the research institutes VTT and Metsäteho Oy. For further information please consult [www.metsateho.fi](http://www.metsateho.fi).

## Dimensions

<b>A</b>	Length mm	4900
<b>B</b>	Height mm	3200
<b>C</b>	Width mm	2100 - 2400
<b>D</b>	Length with crane mm	8760
<b>E</b>	Axle to axle mm	2735
<b>F</b>	Ground clearance mm	670
<b>G</b>	Turning radius mm	4020
<b>H</b>	Turning angle (degrees)	50°



## Technical information

Weight & dimensions	Weight at work	8, 000-9, 500 kg	
	Length	4950 mm	
	Width	2100-2400 mm	
	Wheelbase	2735 mm	
	Ground clearance	670 mm	
	Height	3200 mm	
	Engine	Agco Power	49AWE, max. 124 kW @ 2100 rpm
		Fuel tank	180 l
	Transmission	Type	Hydrostatic
		Turning radius	4020 mm
Steering angle		50°	
Speed		0-13 km/h	
Traction force		90 kNm	
Wheels	Front and rear	500/70-28, 540/65-28, 650/60-26.5	
	Hydraulics	Pump	Rexroth A10V0 140cc/ 294 l/min/2100 rpm
Hydraulic oil tank		130 l	
Working pressure		230 bar	
Electrics	Batteries	24 V, 2 x 145 Ah	
	Charging generator	100 A	
Crane	Reach	7,1 m	
	Lifting torque, gross	55 kNm	
	Turning torque	17 kNm	
Head		Keto 51 Eco Supreme	
		Kesla 18RH-II	
Max. delimiting diameter Mittalaite		n. 320 mm	
		Technion	
		Motomit	
Brakes	Type	Multi-disk brakes	
Cab		Quiet safety cab	
	Standards	(FOPS, ROPS, OPS)	
	Windows	12 mm polycarbonate	



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