



**ÖZKAN  
MAKİNA**

*one step ahead*



**New technology  
extra safety  
and comfort...**



**CE**



## FL-Series: An extraordinary front loader

# “ahead of your expectations”

*You use our tractor for agricultural purposes, and would like to use it in such works as loading and unloading at the same time. You need to be able to find in your front loader the same features you asked for in your tractor while buying it.*

*The **FL-Series by Özkan Makina** offers you all those features you are looking for. When you have one of the new technology **FL-Series** front loaders designed by **Özkan Makina**, you will notice that nothing is as difficult as it was before, and you will be able to get over even the toughest challenges.*

*We combined our experience with our customers' views to come up with the perfect results. We made extraordinary front loaders that meet our customers' demands at the optimum level. We have used advanced production technologies in the manufacturing phase.*

*We work with all our strength to make **FL-Series** front loaders and their attachments for different purposes for you to use all year round.*

### **Extraordinary features of FL-Series:**

- Design of connection mounting kits that does not require any alteration in the original structure of your tractor (in the cabin, platform, fuel tank, etc.).
- One-minute disassembly of your front loader from your tractor, so that your tractor may be used for multi-purposes.
- Easy and rapid change of the attachments, which makes the front loaders more functional.
- Protection of tractors and their operators from sudden impacts thanks to the “soft drive” feature.
- Easy, functional and ergonomic use thanks to the joystick control unit.
- Perfect vantage point from the operator's cabin due to the superior design.
- Perfect durability and maximum power owing to the advanced construction.
- Biggest attachment loading and unloading angles, which enables easy function.

# Easy and Comfortable Operation with FL- Series



## Attachment Balancing System:

FL-Series loaders have a technology that combines safety and easy operation. Control and safety of the loads on the attachment at the optimum level are provided due to the attachment balancing system. The attachment balancing system provides the safety of the load by keeping the angle between the attachment and the ground equal during upward and downward movements of the attachment. This feature allows the operator to work easily, comfortably and safely.



## Soft Drive

FL-Series loaders are equipped with hydraulic valves that can absorb sudden impacts which may appear during operation. By this means, tractors, rims, front axle and operators are protected from shocks. Operators are not affected by sudden shakes in drive or operation modes. The Soft Drive System can be engaged or disengaged as desired with a key located on the joystick. Operator's control on the loader was brought to the maximum by that feature. The shock absorbing batteries were placed and covered in the construction and protected against external threats.



## Vantage Point:

You need to have a good vantage point to best operate your tractor and front loader. Our FL-Series loaders offer operators the vantage point at the highest level while in drive and operation. The construction that is designed not to block your headlights allows you to drive safely in drive mode.





Changing attachments has never been so easy.



## Fast and Easy Attachment Change:

It allows easy and fast assembly and disassembly of different attachments to the loader. Locking of attachments is done automatically. There is no need to use any tools during attachment changes. This feature allows more functional use of the loaders.

## Perfect Loading Angle of Attachments:

The perfect loading angle of attachments provides maximum amount of load to be taken on the attachment. The capacity of the attachment is always full due to the collecting angle determined through bucket applications. This feature saves the operator time and energy.



## Dump Angle of Attachments:

The material in the bucket is easily unloaded thanks to the perfect dump angle. The angle allows unloading of even the stickiest loads from the bucket with ease. Convenient loading and dump angles of attachments increase work performance and productivity.

## Loader Mounting Kits:

Loader mounting kits are installed in three points of the tractor, by which a strong structure is generated. Mounting kits are designed according to the original structure of the tractor and does not damage it (its cabin, platform, fuel tank, etc.).





## Protective Front Bars (Bumpers):

The protective front bars which were designed to protect the body of your tractor from hits and damages help your tractor remain to look brand new. They were designed in such a way not to block the light of the headlights.

*Optional accessory.*



## Easy Maintenance of Your Tractor:

You can always make the maintenance at the following points of your tractor easily with FL-Series loaders attached: opening the hood in every mode of the loader, checking oil level, cleaning air filters, maintenance of the battery and many others. We provided you with a hassle-free opportunity to make your maintenance and checks.



## High Maneuverability:

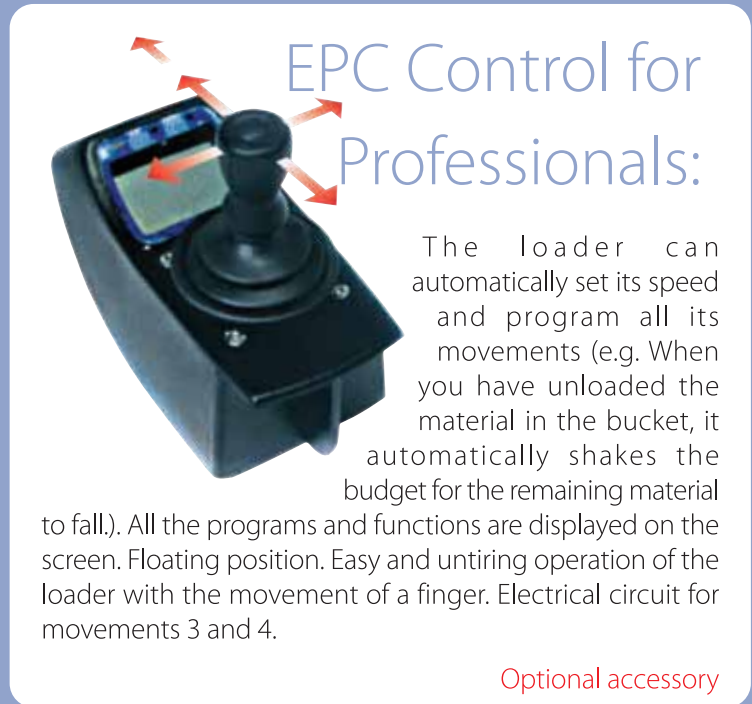
Your tractor must always have high maneuverability in tough field conditions. FL-Series front loaders and mounting kits have been designed in such a way not to limit your tractor's maneuverability, and they offer you the perfect maneuverability.





## Joystick Control:

The operator may control all the maneuvers of the loader with a joystick and there is no hydraulic hose in the operator cabin. Due to the locking mechanism, the joystick is locked in the drive mode or during maintenance, and movements are disabled. Movements 3 and 4 can be made with the buttons on the joystick. The loader works according to the surface with the feature of floating position.



## EPC Control for Professionals:

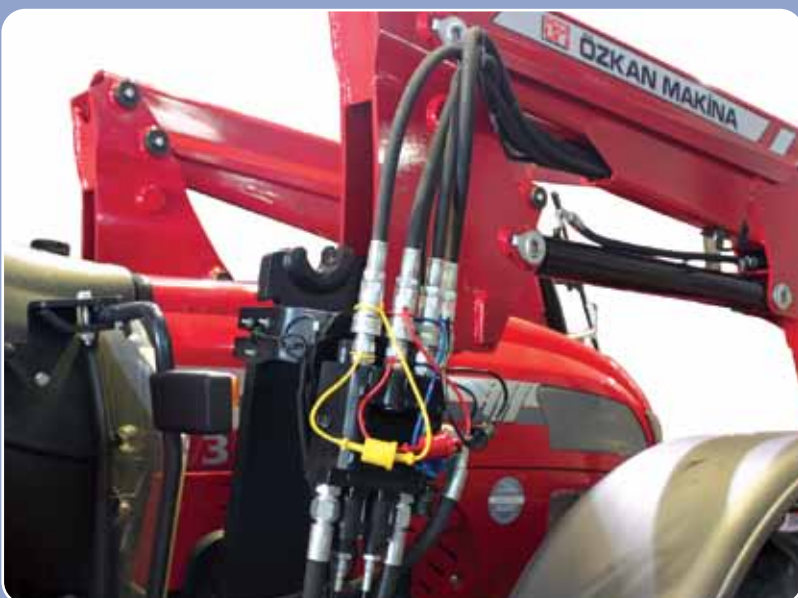
The loader can automatically set its speed and program all its movements (e.g. When you have unloaded the material in the bucket, it automatically shakes the bucket for the remaining material to fall.). All the programs and functions are displayed on the screen. Floating position. Easy and untiring operation of the loader with the movement of a finger. Electrical circuit for movements 3 and 4.

*Optional accessory*



## Multi Coupler Option for Comfort:

The multi coupler allows assembly and disassembly of the 4 hydraulic circuits with the movement of one hand. It provides you with fast and easy assembly. It does not cause any oil leakage during assembly and disassembly of the hydraulic circuit, by which it is environment-friendly at the same time. It allows you to have comfort. *Optional accessory*



## Quick Couplers for Hydraulic Circuits

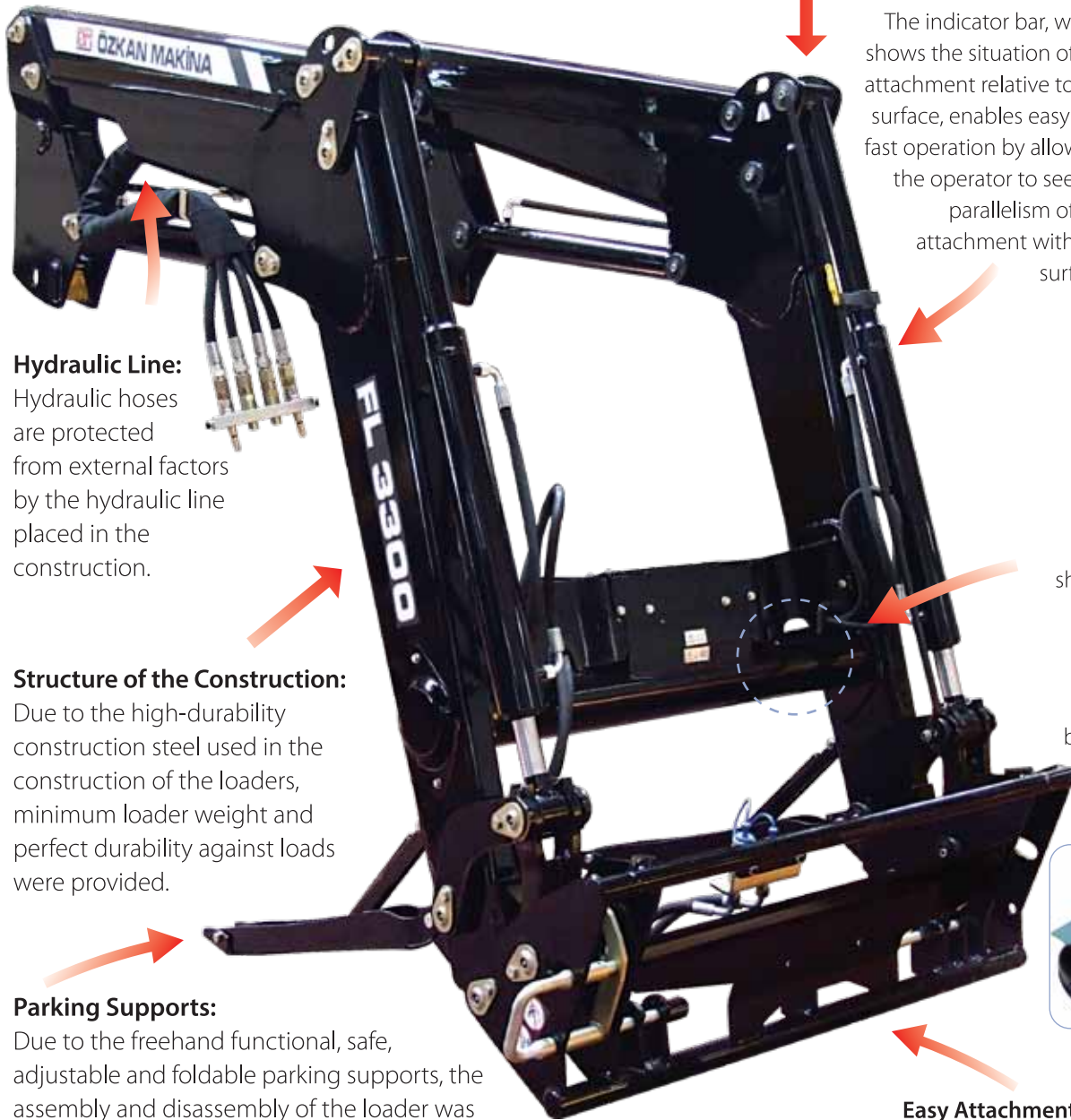
The connection of the front loader to the tractor is provided with 4 quick couplers. The quick couplers are all in different colors, which prevents confusion during assembly and disassembly. Quick couplers are not affected by external factors due to their protective covers, which makes it last for longer periods.

## FL-Series Front Loaders

## FL - Serisi

### New Technology FL-Series Front Loaders:

- Maximum Power
- Very light due to its special construction.
- Maximum vantage point due to its superior design.
- Highest lifting and breakout force in its class.
- Biggest angles of attachment loading and unloading.
- Assembly and disassembly in one minute.
- Attachment change in 30 seconds.



#### Hydraulic Line:

Hydraulic hoses are protected from external factors by the hydraulic line placed in the construction.

#### Structure of the Construction:

Due to the high-durability construction steel used in the construction of the loaders, minimum loader weight and perfect durability against loads were provided.

#### Parking Supports:

Due to the freehand functional, safe, adjustable and foldable parking supports, the assembly and disassembly of the loader was made easier.

#### Pins and Bearings:

Oil pocket bearings and pins which produce perfect results with heavy loads with high slip layer were used. An advantage for the operator was provided with extended maintenance interval.

#### Attachment Level Indicator Bar:

The indicator bar, which shows the situation of the attachment relative to the surface, enables easy and fast operation by allowing the operator to see the parallelism of the attachment with the surface.



#### Shock Absorbing Batteries

They absorb the shocks generated in the loader. The batteries were protected from external factors by being concealed in the construction.



#### Easy Attachment Change System:

This feature enables multiple attachments be assembled to and disassembled from the loader with ease.



- New technology
- Superior design
- High performance
- Maximum vantage point
- Construction that makes maintenance easy
- Ergonomic use
- Functionality



You can disassemble your front loader from your tractor easily without needing any auxiliary tools or persons, due to which you can use your tractor for agricultural purposes whenever you wish.



# 1 Minute 3 Steps

**1** The parking supports on the front loader are removed from their slots easily and without needing a tool, and they are fixed simply. You can remove the safety pins and the land the front loader on its parking supports.



**2** When you have landed your front loader, the loader is already separated. The hydraulic quick couplers are easily removed from their slots and the tractor is removed from the front loader.



**3** Now the tractor and the front loader are disconnected. You can now have a tractor to use for agricultural purposes by safely moving your tractor backward.



## Having a tractor with a front loader is just one minute away

**1** You carefully approach your tractor to the front loader. You attach the hydraulic couplers, and then provide the connection of the loader with the mounting kits by moving the loader with the joystick.



**2** Now the loader is attached to the tractor. When you have returned the parking supports to their slots and fixed the safety pin to the mounting kit, your front loader is attached to your tractor.



**3** You have assembled your front loader to your tractor without needing any auxiliary tools or persons. Your tractor is ready in a functional manner to be used for the purpose desired.



Assembling and disassembling of a front loader have never been so easy...

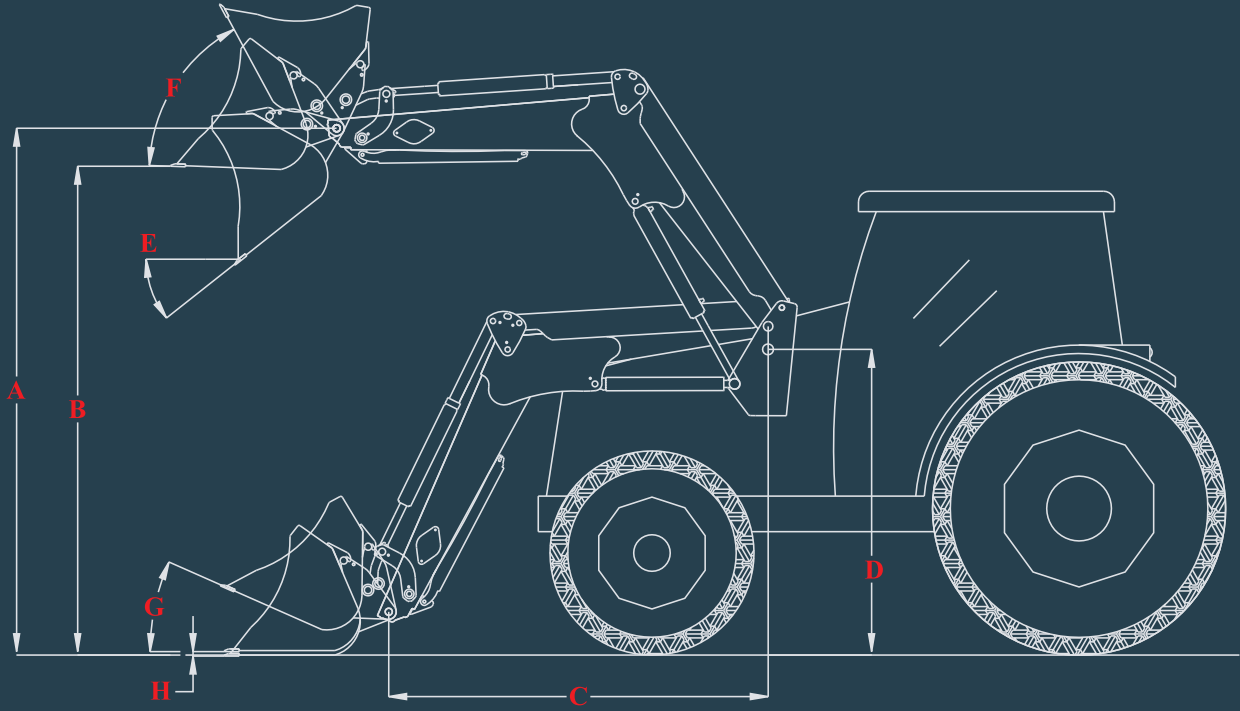


Our expectations,  
Our experience,  
Our Technology...



**FL - Series**





Technical Features	FL-3.000	FL-3.300	FL-3.500	FL-3.800	FL-4.200
A Maximum lifting height (from crackpin center)	3,20 m	3,50 m	3,75 m	4,00 m	4,50 m
B Maximum lifting height (from bottom of attachment)	2,95 m	3,30 m	3,50 m	3,80 m	4,25 m
C Loader boom center	1,5 m	1,75 m	1,90 m	2,15 m	2,45 m
D Loader bearing center	1,5 m	1,55 m	1,65 m	1,70 m	1,88 m
E Attachment dump angle	53 °	58 °	57 °	55 °	55 °
F Attachment rollback angle at max. lifting height	45 °	55 °	55 °	57 °	57 °
G Attachment rollback angle at bottom	41 °	45 °	45 °	44 °	44 °
H Digging depth	0,1 m	0,1 m	0,1 m	0,1 m	0,15 m
Time for lifting to max. height	5 Seconds	5 Seconds	5 Seconds	6 Seconds	7 Seconds
Lifting capacity	1.100 Kg	1.300 kg	1.550 Kg	1.900 Kg	2.350 Kg
Weight of loader (w/o attachment)	500 kg	530 kg	600 kg	640 Kg	800 Kg
Attachment balancing system	Standard	Standard	Standard	Standard	Standard
Soft drive	Optional	Optional	Optional	Optional	Standard
Joystick control system	Standard	Standard	Standard	Standard	Standard
Electro-hydraulic third line	Optional	Optional	Optional	Optional	Standard
Easy attachment change adaptor	Standard	Standard	Standard	Standard	Standard
Engine power of tractor that loader will be attached to	50-70 Hp	60-80 Hp	70-100 Hp	85-130 Hp	150-200 Hp
Max. weight of tractor that loader will be attached to	3.000 Kg	4.000 kg	4.500 Kg	5.200 kg	8.000 kg



### Bottom Opening Bucket

Width	Weight	Volume
165 cm	230 Kg	0,50 m <sup>3</sup>
185 cm	260 Kg	0,65 m <sup>3</sup>
205 cm	300 Kg	0,80 m <sup>3</sup>



### Silage Cutter

	120	190
Block size	110 x 80 cm	180 x 80 cm
Volume	0,70 m <sup>3</sup>	1,15 m <sup>3</sup>
Opening	80 cm	80 cm
Weight	350 Kg	640 Kg
Number of Tines	9	15



### Log Loader

Grapple Span	155 cm
Bottom Grapple Length	90 cm
Width	120 cm
Weight	230 Kg



### Forklift Attachment

Grapple Span	140 cm
Bottom Grapple Length	95 cm
Height	90 cm
Capacity	1500 Kg
Weight	165 Kg



### Round Bale Gripper RB - 48

Grapple diameter	80-120-160 cm
Weight	250 Kg

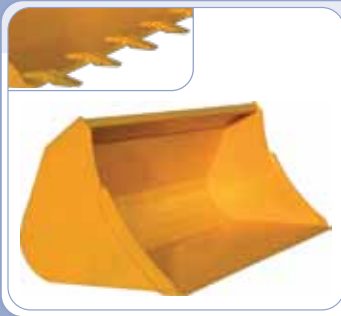


### Round Bale Gripper RB - 90

Grapple diameter	120 - 160 cm
Weight	250 Kg



# Ataşmanlar



## Standard Bucket

Width	Weight	Volume
140 cm	150 Kg	0,50 m <sup>3</sup>
165 cm	170 Kg	0,65 m <sup>3</sup>
185 cm	200 Kg	0,72 m <sup>3</sup>
205 cm	250 Kg	0,85 m <sup>3</sup>



## Finger Type Bucket

Width	Number of Fingers	Length of Fingers	Weight
160 cm	8	85 cm	145 Kg
180 cm	9	85 cm	158 Kg
200 cm	10	85 cm	180 Kg



## Fork Bucket

<b>Width</b>	160 cm	180 cm
<b>Weight</b>	450 Kg	510 Kg
<b>Volume</b>	0,80 m <sup>3</sup>	0,95 m <sup>3</sup>
<b>Depth</b>	75 cm	75 cm



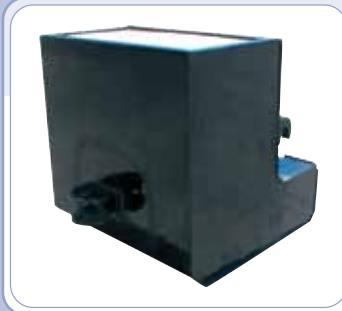
## Finger Type Grab Bucket

Width	Number of Fingers	Length of Fingers	Weight
160 cm	8	85 cm	280 Kg
180 cm	9	85 cm	305 Kg
200 cm	10	85 cm	330 Kg



## Multiple Tine Log Loader

<b>Grapple Span</b>	155 cm
<b>Bottom Grapple Length</b>	90 cm
<b>Width</b>	170 cm
<b>Weight</b>	370 Kg
<b>No. of Tines</b>	4



## Portable Counterweight

<b>Light Weight</b>	175 Kg
<b>Concrete Weight</b>	850 Kg



## Grain Bucket

Width	Weight	Volume
190 cm	280 Kg	1,50 m <sup>3</sup>
230 cm	340 Kg	2 m <sup>3</sup>



## Beet - Stone Bucket

<b>Tine Diameter</b>	20 mm
<b>Distance between Tines</b>	10 cm
<b>Width</b>	185 cm
<b>Volume</b>	0,80 m <sup>3</sup>
<b>Weight</b>	210 Kg



## Bail Fork

<b>Length of Tines</b>	110 - 140 cm
<b>Number of Tines</b>	2
<b>Width</b>	140 cm
<b>Height</b>	170 cm
<b>Weight</b>	110 Kg



## Silage Bucket

<b>Width</b>	185 cm	205 cm
<b>Number of Tines</b>	6	8
<b>Opening</b>	165 cm	165 cm
<b>Volume</b>	0,80 m <sup>3</sup>	0,95 m <sup>3</sup>
<b>Weight</b>	250 Kg	300 Kg



## Big Bag Fork

<b>Maximum Lifting</b>	1000 kg
<b>Width</b>	120 cm
<b>Height</b>	170 cm
<b>Weight</b>	120 kg



## Platform Attachment

<b>Width</b>	110 cm
<b>Length</b>	200 cm
<b>Height</b>	100 cm
<b>Weight</b>	200 Kg





Distributor;



**ÖZKAN MAKİNA**

TRAKTÖR HİDROLİK ÖNYÜKLEYİCİ BEKO VE ATAŞMANLARI İMALAT SAN. TİC.  
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