TW LogStacker

TW LogStackers

# CHANGING THE GAME IN LOG HANDLING

RTD12 KURO
RTD1723
RTD3126

# RTD12 KURO

reddot award 2016
honourable mention

# THE NEW GENERATION CHALLENGER

**RTD12 KURO is a revolutionary log handler in many respects. Its appearance is non-interferingly conventional, but still modern. The technology built into it, however, is nothing short of revolutionary and it makes it the most energy efficient diesel operated equipment for log yards. The basis for all the thinking and development has been low operational costs, lowest possible fuel consumption, simplicity in design and ease of maintenance.**

When creating the new generation RTD12 KURO, we used all of our 40 years of experience in producing and developing log stackers. In order to implement the most up to date technology, we collected a network of partners from 12 companies with the best competence and know-how found in Finland to develop this machine.

The target application for RTD12 is sawmill operation, which is work that, until today, was often performed by wheel loaders. Here comes the challenger: RTD12 exceeds the performance of wheel loaders with much higher stacking capability, better manoeuvrability and more capacity. Based on a yearlong field testing follow-up, the fuel consumption has proved to be 5-6 litres/hour lower than that of popular wheel loaders.

The main tasks for RTD12 are truck unloading (picking a bundle with 2 takes), sorting line to storage logistics operation and transporting the logs to the mill's saw table.

RTD12 is built with a heavy duty stack pusher that doubles as an intelligent support leg. Based on lifting height, boom extension and speed (stationary), the machine control system automatically adapts the capacity to the situation, for example when picking from the sorting line pocket or when placing the bundle at the top of the pile. As a result of this unique innovation, RTD12 has an intelligent capacity rating between 8 to 12 tons. The automatic stability guard adapts the lifting capacity to every situation and in all dimensions.

| RTD12 KURO TECHNICAL DATA | |
|---|---|
| **Lift capacity** | 8,000kg…12,000kg, intelligent<br>(Automatically adjusts to the machine status and boom position) |
| **Own weight** | 36,800kg |
| **Stacking height** | Up to 7.9m (with 3.7P900 and 4.0P900 grapples) |
| **Reach** | 3.0m, load distance 5.1m from the front face |
| **Standard grapple** | 4.0m² (4.0P900) |
| **Wheel base** | 4.8m |
| **Turning radius** | R 6.9m |
| **Engine power** | 210kW |
| **Travelling speed** | 30km/h |

## DESIGN

Award winning design that combines form with function.

## MAINTENANCE

Ease of maintenance never seen before. Engine and transmission maintenance access right behind the service doors.

## USER INTERFACE

Intuitive 12" graphical touch screen user interface with extensive fine tuning features and possibility for user defined joystick mapping.

## INTELLIGENT STABILITY GUARD

Stability guard and active supporting leg function that adjusts the actual capacity according to the machine status and boom position.

## NEW CABIN WITH NEW THINKING

EQUIPPED WITH A MULTI-PURPOSE DEVICE BAR

**PERFORMANCE AND PRODUCTIVITY**
Stacking up to **7.9m high**

**ENDLESS 360° GRAPPLE ROTATION**

**CONTROL**
over all operational costs

**INTELLIGENT CAPACITY**
FROM 8 TO **12 tons**

**EXCELLENT FUEL ECONOMY**
DUE TO THE HIGH EFFICIENCY HYDRAULICS SYSTEM AND BRAKE ENERGY RECOVERY

**ACTIVE SUPPORTING LEG FUNCTION**
ENSURES SAFETY AND ENABLES HIGHER CAPACITY

**PATENTS PENDING.**
PATENT APPLICATION NUMBERS
2150479FI/EP, 2150480FI/EP, 2150764FI/ATU
2150781FI/EP, 002716886-001

# RTD1723

# THE ULTIMATE SAW MILL MACHINE

**RTD1723 is a proven sawmill machine* used by most large sawmill companies in Central Europe – in operations where wheel loaders just cannot offer sufficient capacity and stacking capability.**

RTD1723 is the master in unloading trucks and can pick a full bundle with a single take from most trucks outside of Scandinavia. Other main tasks include picking from sorting line pockets and transporting to piles, storage logistics on wood yard and transportation of logs to a mill's saw table. The bigger grapple size of RTD1723 enables more efficiency, but requires bigger sorting line pockets than used with conventional wheel loader operation at medium or smaller sawmills.

The flexibility of RTD1723 for many kinds of log handling operations is made possible by offering a wide range of grapples in several sizes and shapes. If needed, TW can custom design the grapple to the application, if none of the existing models fit the purpose.

RTD1723 has a powerful but economical diesel engine that complies with the latest emission requirements and a 5 speed automatic transmission with a lock-up feature which can be disengaged for smoother short distance manoeuvring. The turning radius is extremely tight: this big machine can turn even in a congested space.

Component layout and access are well designed: The hydraulic functions are on the left side, and the electrics on the right. The control system features a graphic display with an advanced stability guard and a load display in tons. At all times, the machine knows its status and this information can be used for various load and speed limitations, thereby enhancing safety and durability.

* Predecessor RTD1623 with same structural design.

| RTD1723 TECHNICAL DATA | |
|---|---|
| **Lift capacity** | 17,000kg |
| **Own weight** | 50,500kg |
| **Stacking height** | Up to 7.2m (with 4.8P900 grapple) |
| **Reach** | 3.0m, load distance 5.1m from the front face |
| **Standard grapple** | 4.8m² (4.8P900) |
| **Wheel base** | 4.8m |
| **Turning radius** | R 6.5m |
| **Engine power** | 265kW |
| **Travelling speed** | 30km/h |

**VERSATILITY**
Grapple is the tool. To fit the purpose, a wide range of grapple models are available.

**MAINTENANCE**
Easy access for service. Components well protected in side cabinets.

**USABILITY**
Excellent ergonomics and comfort; all controls are well positioned and within easy reach. Well thought out mounting arrangements for a customer's own equipment.

**MANOEUVRABILITY**
Extremely tight turning radius.

**PERFORMANCE AND PRODUCTIVITY**
Stacking up to **7.2m high**

**ENDLESS 360° GRAPPLE ROTATION**

**LONG LIFE AND DURABILITY**
WITH AN EXTREMELY STRONG TELESCOPIC BOOM AND CHASSIS FRAME CONSTRUCTION.

**LIFTING CAPACITY**
up to **17 tons**

**EXCELLENT 360° VISIBILITY**

# RTD3126

# THE HEAVYWEIGHT CHAMPION

**Most of the large European and South American companies which use round wood as a raw material have used RTD3126* for years as the ultimate wood handling equipment. This makes RTD3126 by far the world's most popular wood handling machine in pulp and paper mills.**

RTD3126 is designed and built for the toughest possible requirements. Many users run them up to 8,000 operating hours a year – a true 24/7 process machine in conditions where the ambient temperature can vary between -35°C snow and ice to +40°C tropical.

The typical task for RTD3126 is truck unloading. The efficiency criteria for unloading is 'the whole bundle with one take' or when using TW's patented Twin Grapple even two truck bundles at the same time. A wide range of grapples and even custom designed grapples are available for RTD3126. In Finland and Sweden, where log trucks and rail cars are bigger than elsewhere, a grapple size up to 9.2 m² is used.

In order to secure a constant flow of round wood to the mill and to compensate for seasonal variations in log availability, large mills usually have a large wood yard. For the efficient transportation of high wood volume RTD3126 is the choice. It can carry more than 50 m³ of logs (loose volume) in the grapple several hundreds of meters economically and fast.

* Predecessor RTD3026 and RTD2626 with the same structural design.

| RTD3126 TECHNICAL DATA | |
|---|---|
| **Lift capacity** | 31,000kg |
| **Own weight** | 73,900kg |
| **Stacking height** | Up to 7.9m |
| **Reach** | 4.7m, load distance 7m from the front face |
| **Standard grapple** | 7.8m² (7.8P900) |
| **Wheel base** | 5.7m |
| **Turning radius** | R 7.8m |
| **Engine power** | 285kW |
| **Travelling speed** | 27km/h |

**VERSATILITY**
Wide range of grapples, even customised grapples, available for individual needs.

**MAINTENANCE**
Easy access for service. Components well protected in the side cabinets.

**USABILITY**
Excellent ergonomics and comfort; all the controls are well positioned and within easy reach. Well thought out mounting arrangements for the customer's own equipment.

**PRODUCTIVITY**
RTD3126 delivers the highest possible performance for large pulp and paper mills.

## THE NEW TW CABIN FOR RTD12 KURO

# OFFERING PERFECTION IN PERFORMANCE AND COMFORT

**A whole new cabin with new thinking was developed for RTD12 KURO. As the operator is the most important factor for productivity, everything around him/her needs to be truly optimised. The key to efficiency is ease of use.**

We conducted an investigation of log stacker operations and realised that there should be the space and possibility for various variations regarding cabin equipment. This thinking resulted in the concept of variable mounting locations for practically everything in the cabin.

### 1. MINI-SIZED JOYSTICKS
Mini-sized finger-operated joysticks improve the operator's ergonomics and reduce work related arm injuries.

### 2. MULTI-PURPOSE DEVICE BAR
The cabin is fitted with three red device bars, which makes it possible to freely mount additional equipment, vary the position of the main control display (12" touch screen) or even the steering wheel on any location on these bars.

### 3. USER INTERFACE
A large 12" graphical touch screen user interface is the most intuitive way for the operator to communicate with the machine. The criterion for the ease of use is that no instruction manual should be needed to operate most of the equipment's functions.

### 4. EXCELLENT ERGONOMY
The new cabin is considerably larger than any of the previous log stacker cabins. There is more legroom, but also more space behind the operator. The operator's comfort is also considered by adding space for modern communication equipment, for instance there are charging plugs for mobile phones and tablets and also a mobile phone/tablet holder.

### 5. OPERATORS'S PERSONAL SETTINGS
Every operator will have the possibility to tune the machine according to his/her own preference. The parameters can then be saved on a USB stick that is also a modern replacement to the ignition key.

## TAKE A TOUR
### INSIDE THE CABIN

360°


## CABIN FOR RTD1723 AND RTD3126

# TAKE CONTROL OF YOUR CABIN

**The cabin offers a spacious and ergonomic environment for the operator with the comfort that is essential for maintaining the operator's agility during the long and busy work shift.**

All the controls are within easy reach and intuitive and all the functions are computer controlled. The climate inside the cabin is controlled by the automatic electronic climate control ECC.

Through a graphical user interface with a colour display it is possible to monitor all the machine functions and even set the certain control parameters and features to fit individual needs. The display replaces all the gauges and pointers and automatically gives an alarm with a message if the operator's attention is needed.

Red device bar for mounting various equipment like displays is optional for RTD1723 and RTD3126.

## TW REMOTE

# ONLINE GRAPHICAL REPORTS RESULT IN MORE EFFICIENCY AND IMPROVED ECONOMY

**The unique TW REMOTE generates online graphical reports on the user's PC screen or mobile device of everything which is essential to the equipment's operation. All the data from the equipment's startup until the current date can be analysed in TW REMOTE's graphs. Numerical summary tables or monthly reports are no longer needed. The graphs are living reports and their time span can be freely selected from a single day to the entire lifespan of the equipment. And everything stays in the memory of the system.**

TW REMOTE is a valuable tool for condition monitoring, early diagnostics, maintenance planning, capacity & work cycle planning and fuel economy.

The hardware for TW REMOTE is a standard feature of RTD12 KURO. The new equipment comes with a free trial period for TW REMOTE and, after the trial, the user can order a monthly subscription of the service depending on the actual need. TW REMOTE needs an Internet connection (data SIM with min. 256 kb/sec or WI-FI connection needed).

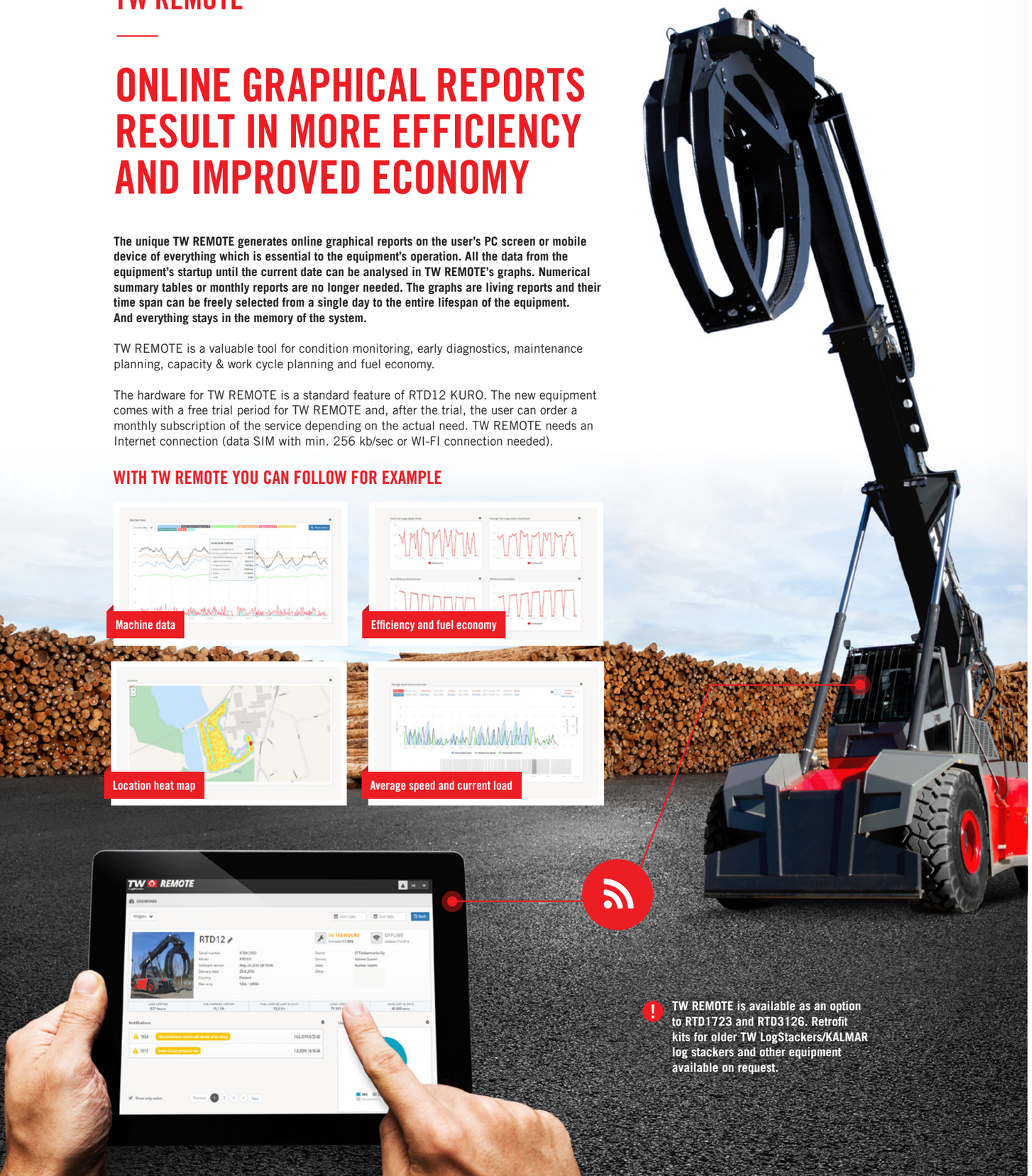
### WITH TW REMOTE YOU CAN FOLLOW FOR EXAMPLE


Machine data

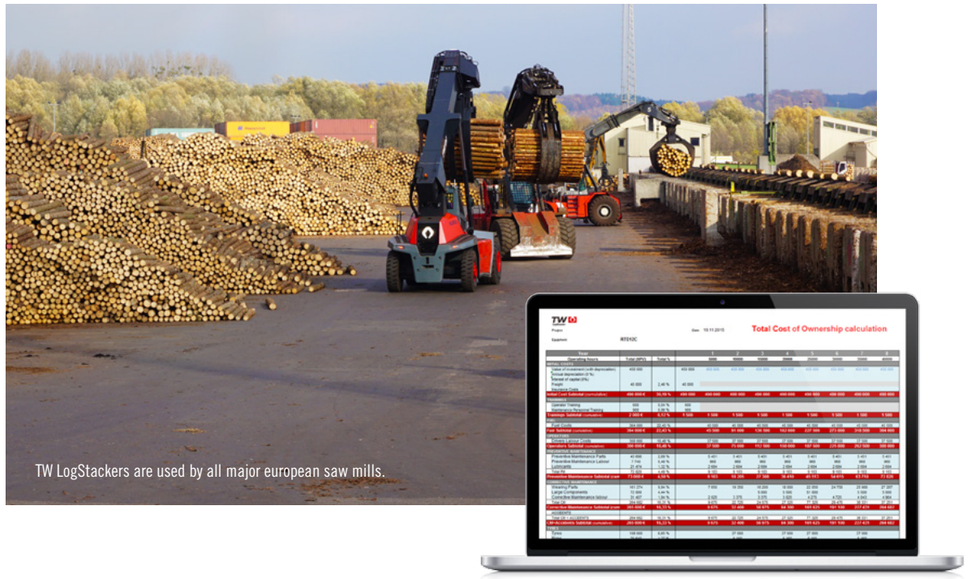

Efficiency and fuel economy


Location heat map


Average speed and current load




**TW REMOTE is available as an option to RTD1723 and RTD3126. Retrofit kits for older TW LogStackers/KALMAR log stackers and other equipment available on request.**




## TCO

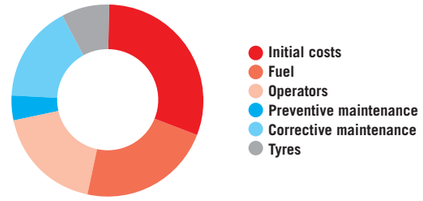
# TOTAL COST OF OWNERSHIP

**Log stackers are process machines and are frequently operated 24/7. In many applications, annual operating hours exceed 6,000 hours. Due to strict operational requirements, TW LogStackers have been built with high reliability in mind. The best available components have been selected for all systems.**

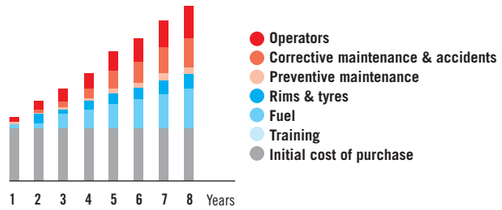
For the owner of the equipment, low total cost of ownership is extremely important, especially for contracting operations.

With TW's TCO calculation tool, it's possible to run TCO simulations of the operation. Our calculation software can generate a forecasted cost split of various cost elements, and calculate a cumulative operating cost estimate through the whole life cycle of the equipment and yearly operating costs based on the parameters from each individual application.

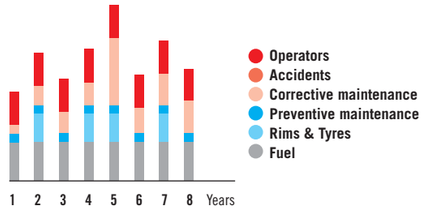
### COST ELEMENT'S PROPORTIONS OF THE TCO




### CUMULATIVE TCO




### YEARLY OPERATING COSTS



TW LogStacker

WWW.TWLOGSTACKER.FI

# TW LogStackers
# READY TO WORK 24/7. 365 DAYS A YEAR.


MADE IN FINLAND

SKS Toijala Works Oy, member of SKS Group

1257805EN 8.2016