# TANA E SERIES LANDFILL COMPACTORS

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## **TANA E SERIES LANDFILL COMPACTORS**

# **THE MOST PRODUCTIVE COMPACTOR ON THE MARKET**

A MINIMUM OF 10 % BETTER COMPACTION THAN ANY OTHER COMPACTOR

## SUPPORTED BY ACTUAL CUSTOMER RESULTS

TANA compactors are reaching a minimum of 10 % better compaction rate than any other landfill compactor on the market.

This highest rate of compaction is achieved by TANA's unique design: the rigid frame utilizes the weight of the machine through the twin drums.

The end result is a smooth, firmly compacted area. The waste trucks can drive safely and quickly to the tipping area for unloading with minimized risk of vehicle breakdowns caused by unevenly compacted ground.

#### LESS DRIVING, LOWER OPERATING COSTS

The advantage of the unique full width twin drum design of a TANA compactor reduces the number of passes required from 6 to 4. This creates savings both in time and fuel.

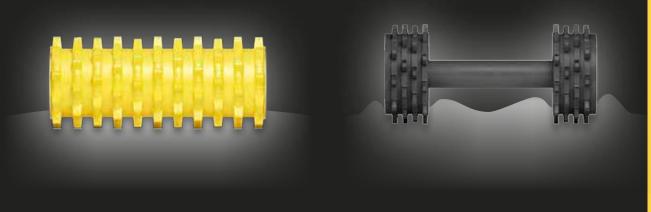
A four-wheeled compactor requires more passes to cover the same area to the wanted compaction rate as a TANA compactor.

#### SMART AND EFFICIENT

The TANA E Series offers the most advanced smart tools to increase efficiency even further.

You can also manage and track costs with TANA SMART SITE<sup>™</sup>. Improve the operating efficiency by the optionally available TANA ProLoc<sup>®</sup> – the operator's own real time operating efficiency navigator.

The weight of a TANA landfill compactor is optimally distributed into the waste through the rigid frame construction, the two full-width drums and the crushing teeth. A traditional four-wheeler extrudes large amounts of waste from the middle and the sides, which means more passes for the same compaction level, and thus lower efficiency.





#### VALUE THROUGH BETTER COMPACTION

By achieving a better compaction rate, you can extend the landfill's life expectancy by several years. Each additional year and month increases the value of the landfill.

## **Increase in revenues**

# **BETTER AIRSPACE MANAGEMENT**

TANA Compaction Guarantee: Minimum of 10 % better compaction is not just words, we are ready to prove it. Ask more about the details of the compaction tests from your closest Tana distributor.



## ADDITIONAL ADVANTAGES

## REDUCED FUEL CONSUMPTION

More efficient and faster operation means lower fuel consumption. Several tests have proved that a TANA compactor can outperform the competitors by a 8–12 % savings in fuel consumption.

The environmentally friendly ecomodel with a Tier 4 final engine reduces fuel consumption up to 8–9 % over Tier 3 engines.

#### LOWER USE OF COVER SOIL

A TANA compactor's better compaction rate with a smoother surface reduces the use of cover soil by 50 %.

Calculations are based on a real life scenario. Find more test reports at www.tana.fi

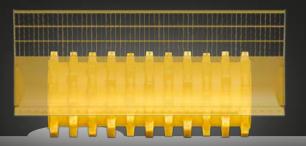
## **Comparison:** a rigid frame vs. an oscillating frame



A TANA compactor's rigid frame maximizes the weight distribution of compaction into an area with uneven bumps.

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50 % of the compactor's total weight is optimized for leveling any bumps. The result: high compaction efficiency with a smooth surface.



A traditional four-wheeler compactor with an oscillating frame loses its compaction force in uneven areas.

Only 25 % of the compactor's total weight optimized to level the bumps. The result: uneven compaction.



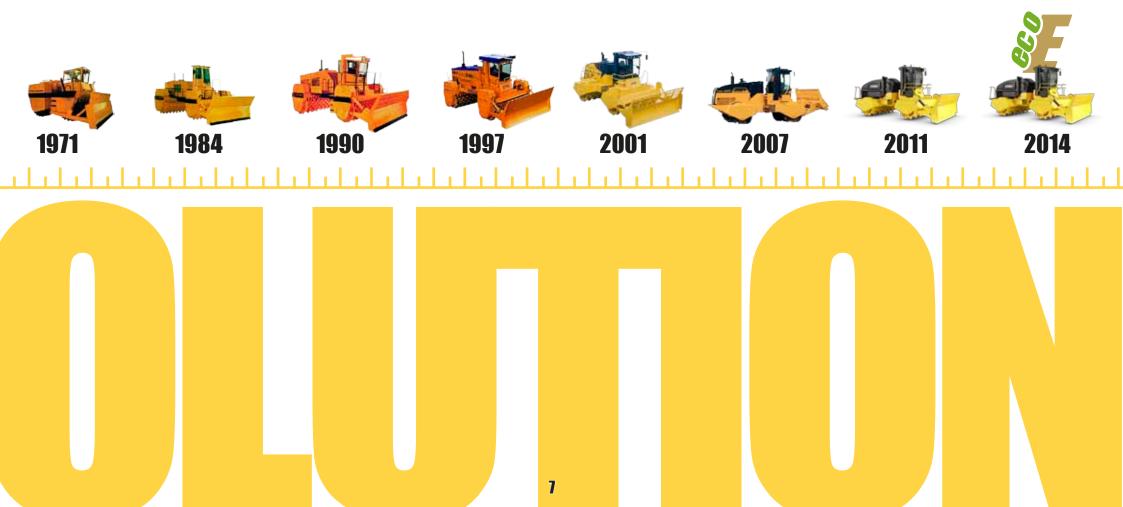
## TANA evolution

# **OVER 40 YEARS OF RESEARCH AND DEVELOPMENT**



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# WORLD'S FIRST LANDFILL COMPACTOR IN 1971



## New operational standard and ergonomy





## Tana Control System (TCS)

#### **OPERATION MANAGEMENT**

The Tana Control System (TCS) monitors and controls all system functions. While TANA SMART SITE<sup>™</sup> grants access to view the machine status and operations remotely – TCS is designed for local use as a tool for the operator.

TCS provides such information as the remaining amount of fuel, engine coolant temperature, hydraulic oil temperature and engine oil temperature. It also gives alarm notifications when something is out of its range.

The information in the alarm log helps with immediate troubleshooting on site.







## Manage your operations with real-time data

# **TOOLS FOR GATHERING INFORMATION**

## TANA SMART SITE™ **ENSURES HIGH UPTIME**

TANA SMART SITE<sup>™</sup> is the ultimate information management tool for receiving monthly reports and for providing real time remote access to the machine.

The tool provides valuable information by automatically tracking the working hours and work loads. It also collects data on the compactor's operational costs. like the fuel consumption.

The TANA SMART SITE<sup>™</sup> improves your business by maintaining a high uptime. It does this by providing automatic notifications on service intervals and by informing about critical alarms.

#### **A FAST AND EASY WAY** FOR MAKING SERVICE REQUESTS

The remote access on TANA SMART SITE<sup>™</sup> provides fault codes and detailed data on alarms to help your local service partner and TANA Service Center on to troubleshoot the problem.

	0:00	6:00	12:00	18:00	24:00
Mon 2014-09-01					
Tue 2014-09-02					<u> </u>
Wed 2014-09-03					
Thu 2014-09-04					
Fri 2014-09-05					
Sat 2014-09-06					
Sun 2014-09-07					
Mon 2014-09-08					
Tue 2014-09-09					
Wed 2014-09-10			THEFT		
Thu 2014-09-11					
Fri 2014-09-12					=

Monthly reports provide such key information as operator specific operation hours and fuel consumption.



TANA SMART SITE<sup>™</sup> offers a tool for viewing the status of the compactor and details of the power pack components over the internet in real time.

## TANA **Proloc**®

# **EFFICIENCY ASSISTANT**

## **AVAILABLE AS AN OPTION**



When a filling plan has been inserted into the system the TANA ProLoc® displays the areas that have already been sufficiently compacted as green and the ones still needing compaction as yellow.



Quicker and more accurate support by TANA Service Center on any maintenance or troubleshooting need is provided by the real time data from TANA SMART SITE™.

## **EASIER AND BETTER OPERATION**

Covering a large area with a compactor and optimizing the number of passes can be difficult without any data gathering. Too few or too many passes lower operating efficiency.

TANA ProLoc<sup>®</sup> is the best tool for the operator on maximizing the operating efficiency.

It functions as the operator's own compaction navigator: it shows which areas need more passes and which areas are optimally compacted already.

Based on a satellite navigation system, the tracking system provides centigrade-accurate performance on compaction areas.

TANA ProLoc<sup>®</sup> is an optional feature available for all models. For more information, contact your nearest TANA distributor.



Operator designated TANA Key allows to collect data on TANA SMART SITE™ on working hours. Each key can be registered to a specific operator.

## Increased efficiency and comfort for operator

# A DESIGN MASTERPIECE

Best overall cabin visibility in its class, low noise levels and good ergonomics are the design highlights of a TANA E Series compactor from the operator's perspective.

## **DESIGN FEATURES**

- Superb ergonomics based on extensive research and experience
- Falling Object Protection Structure (FOPS) integrated with Roll-Over Protection Structure (ROPS)
- Cabin isolated from machine and engine vibration
- Cabin located on the front frame to give best visibility at the dozer blade
- Cabin located as far away from the engine as possible to reduce noise and heat effects
- The heater, ventilation and air conditioning act as the nerve centre of the cabin climate control

## **OPERATIONAL FEATURES**

- · Joysticks integrated to the operator's seat
- Air-conditioning alternatively heating
- Triple-laminated, safety glass all around
- Sun protected cabin window (optional)
- 8 halogen working lights (Xenon lights optional)
- Air-suspended seat swivels a total of 90 degrees
- Windscreen and rear window intermittent wiper-washers
- Pressurized, sound and heat isolated cabin
- Replaceable cabin air filters
- Emergency exit, lockable door

Falling Object Protection Structure (FOPS) with Roll-Over Protection Structure (ROPS).

HEPA filtering in the cabin.

Full forward visibility for accurate operation.

Good gradeability due to a low center of gravity. Safe to operate in steep conditions. Cabin noise level LpA starting from 72 dB, depending on the model. Reduced heat and noise from engine by cabin placement.

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Easy maintenance access. Well-protected from waste debris and objects.

High ground clearance of 890 mm without the need of belly pans.

#### **COMFORT FEATURES**

- Drink container holder, shelf and lockers
- Roll-down sun visor
- AM/FM radio CD player / MP3 unit
- Socket for mobile phone recharge
- Heater and A/C unit

#### **SMART FEATURES**

- The easy-to-use Tana Control System (TCS) LCD panel informs the operator of all machine functions
- TANA SMART SITE<sup>™</sup>
- TANA ProLoc<sup>®</sup> (option)



#### **SERVICE KITS**

The filters and accessories needed in any of the scheduled maintenances are packed in TANA Service Kits. When it is time for a scheduled maintenance, everything except oils and liquids are provided in a one box ready to go.

## TANA E Series

# THE TANA E SERIES OFFERS 5 WEIGHT CATEGORIES WITH 2 PRODUCT LINES

TANA E Series landfill compactors are available either with Tier 3 of Tier 4 final engine. All "eco"-labeled models are built with a Tier 4 final engine. They meet the new emission regulations and reduce fuel consumption up to 8–9 % when compared to Tier 3 engines.

26 TONSTANA E260<br/>TANA E260eco32 TONSTANA E320<br/>TANA E320eco38 TONSTANA E380<br/>TANA E380eco45 TONSTANA E450<br/>TANA E450eco52 TONSTANA E520<br/>TANA E520eco

# **OVER 1500 LANDFILLS AROUND THE WORLD ARE USING TANA COMPACTORS**







## **Technical specifications**

	E260	E260eco	E320	E320eco	E380	E380eco
Operating weight	26 000 kg	26 000 kg	32 000 kg	32 000 kg	38 000 kg	38 000 kg
Crushing force	127 kN	127 kN	157 kN	157 kN	186 kN	186 kN
Engine	Cummins QSL9- C250	Cummins QSL9-C265	Cummins QSL9 - C325	Cummins QSL9 - C320	Cummins QSM11 - C375	Cummins QSX15-C450
Power rating (SAE J1995)	250 bhp (186 kW)@ 2000 rpm	265 bhp (198 kW)@2000 rpm	325 bhp (242 kW)@ 2100 rpm	320 bhp (239 kW)@2200 rpm	375 bhp (280 kW)@2100rpm	450 bhp (336 kW)@2100 rpm
Displacement	8,91	8,91	8,91	8,91	10,81	15
No. of cylinders	6	6	6	6	6	6
Aspiration	Turbocharger and aftercooler					
Cooling	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Emission limits	EU STAGE III A	EU STAGE IV	EU STAGE III A	EU STAGE IV	EU STAGE III A	EU STAGE IV
	US EPA & CARB TIER 3	US EPA TIER 4 (f), CARB TIER 4	US EPA & CARB TIER 3	US EPA TIER 4 (f), CARB TIER 4	US EPA & CARB TIER 3	US EPA TIER 4 (f), CARB TIER 4
Hydrostatic transmission	Sauer-Danfoss	Sauer-Danfoss	Bosch Rexroth	Bosch Rexroth	Bosch Rexroth	Bosch Rexroth
Pumps	1 tandem pump: variable					
	displacement axial piston pumps					
	with electrical proportional control					
Fuel tank	760	760 1	760	760	760	760 1
Urea tank	n/a	56 1	n/a	56 1	n/a	56 1
Cabin air filtration grade	Replacable cabin air filters					
g	-pre-filter grade EU3					
	-micro filter grade EU7, grade EU14					
	(option)	(option)	(option)	(option)	(option)	(option)
	-active carbon filter (option)					
Service brakes	Hydrostatic transmission acts					
	as service brakes, separate circuits for					
	both drums					
Parking brakes, dual circuit	Yes	Yes	Yes	Yes	Yes	Yes
Compaction drums	TANA full-width					
Width in front	2 660 mm					
Width in rear	2 660 mm	2 660 mm	2 660 mm	2 660 mm	3 800 mm	3 800 mm
Diameter	1 620 mm					
No. of feet front/rear	80/80 pcs	80/80 pcs	80/80 pcs	80/80 pcs	80/110 pcs	80/110 pcs
Height of feet	200 mm					
Footprints/m <sup>2</sup>	26	26	26	26	26	26
No. of scraper bars (front/rear)	14/14 pcs	14/14 pcs	14/14 pcs	14/14 pcs	14/20 pcs	14/20 pcs
No. of wirecutters (front/rear)	2/4 pcs					
Dozer blade	TANA straight					
Width	3 660 mm	3 660 mm	3 660 mm	3 660 mm	4 500 mm	4 500 mm
Height	1 750 mm					
Movement above ground level	1 170 mm					
Movement below ground level	150 mm					
Inner turning radius	3 880 mm	3 880 mm	3 880 mm	3 880 mm	3 310 mm	3 310 mm
Ground clearance	890 mm					

Weights and measurements are given within normal tolerances limits. The manufacturer reserves the right for any changes. See the latest updates for the E Series at www.tana.fi.

	E450	E450eco	E520	E520eco
Operating weight	45 000 kg	45 000 kg	52 000 kg	52 000 kg
Crushing force	221 kN	221 kN	255 kN	255 kN
Engine	Cummins QSX15 - C535	Cummins QSX15-C535	Cummins QSX15 - C535	Cummins QSX15-C535
Power rating (SAE J1995)	535 bhp (399 kW)@2100rpm	535 bhp (399 kW)@2100 rpm	535 bhp (399 kW)@2100rpm	535 bhp (399 kW)@2100rpm
Displacement	15	15	15	15
No. of cylinders	6	6	6	6
Aspiration	Turbocharger and aftercooler	Turbocharger and aftercooler	Turbocharger and aftercooler	Turbocharger and aftercooler
Cooling	Liquid	Liquid	Liquid	Liquid
Emission limits	EU STAGE III A	EU STAGE IV	EU STAGE III A	EU STAGE IV
	US EPA & CARB TIER 3	US EPA TIER 4 (f), CARB TIER 4	US EPA & CARB TIER 3	US EPA TIER 4 (f), CARB TIER 4
Hydrostatic transmission	Bosch Rexroth	Bosch Rexroth	Bosch Rexroth	Bosch Rexroth
Pumps	1 tandem pump: variable			
	displacement axial piston pumps			
	with electrical proportional control			
Fuel tank	760	760 I	7601	7601
Urea tank	n/a	56 I	n/a	56 I
Cabin air filtration grade	Replacable cabin air filters			
	-pre-filter grade EU3	-pre-filter grade EU3	-pre-filter grade EU3	-pre-filter grade EU3
	-micro filter grade EU7, grade EU14			
	(option)	(option)	(option)	(option)
	-active carbon filter (option)			
Service brakes	Hydrostatic transmission acts	Hydrostatic transmission acts	Hydrostatic transmission acts	Hydrostatic transmission acts
	as service brakes, separate circuits for			
	both drums	both drums	both drums	both drums
Parking brakes, dual circuit	Yes	Yes	Yes	Yes
Opening officers designed	TANA 6.0	TANA 6.11	TANA 6.11	TANA 6.11
Compaction drums	TANA full-width	TANA full-width	TANA full-width	TANA full-width
Width in front	3 800 mm	3 800 mm	3 800 mm	3 800 mm
Width in rear	3 800 mm	3 800 mm	3 800 mm	3 800 mm 1 620 mm
Diameter	1 620 mm	1 620 mm	1 620 mm	
No. of feet front/rear	110/110 pcs	110/110 pcs	110/110 pcs	110/110 pcs
Height of feet	200 mm	200 mm	200 mm 26	200 mm
Footprints/m <sup>2</sup>	26	26		26
No. of scraper bars (front/rear) No. of wirecutters (front/rear)	20/20 pcs	20/20 pcs	20/20 pcs	20/20 pcs
No. of wireculters (front/rear)	2/4 pcs	2/4 pcs	2/4 pcs	2/4 pcs
Dozer blade	TANA straight	TANA straight	TANA straight	TANA straight
Width	5 000 mm	5 000 mm	5 000 mm	5 000 mm
Height	1 960 mm	1 960 mm	1 960 mm	1 960 mm
Movement above ground level	1 230 mm	1 230 mm	1 230 mm	1 230 mm
Movement below ground level	150 mm	150 mm	150 mm	150 mm
novement below ground level				
Inner turning radius	3 310 mm	3 310 mm	3 310 mm	3 310 mm
Ground clearance	890 mm	890 mm	890 mm	890 mm
	030 11111	030 1111	030 1111	030 1111



The swing frame construction (pat.) by TANA protects the final drive gearbox, thus increasing reliability and maximizing uptime of the machine.



Simplicity in design provides a high uptime for TANA compactors. Easy access to the power pack from the rear saves time on routine maintenance operations and checkups. The optional ladders add usability for daily use.

# TANA SERVICE CENTER

Machine reliability and uptime are our customers' key concerns and hence ours, too. We build maximum machine uptime and have our eyes on all the Tana machines around the world through TANA Service Center.

Together with our distributors we are aiming at preventative maintenance by following early signals of possible malfunctions and getting in touch with the customer to solve the situation before any problems occur.

The purpose is to improve the response time and quality to our customers by helping them to keep the productivity high. Your Tana dealer, along with TANA Service Center, is ready to assist you with any possible situations to ensure high efficiency at minimum operating costs.







# FUTURE WITH US

At Tana we want to help our customers to improve their businesses and increase their profits. Our slogan, From Waste to Value, crystallizes that.

Since designing the world's first landfill compactor in 1971, Tana has continued to manufacture and develop the only full-width twin drum landfill compactor in the world.

Many revolutionary R&D and engineering breakthroughs have been adapted for TANA compactors over the decades. Latest, the high technology TANA SMART SITE<sup>™</sup> solutions for even better operations management.

Our customers have grown accustomed to receiving the best possible compaction performance and reliability from Tana compactors.

These are key elements for the highly demanding tasks required by landfill operations around the globe.





#### Tana Oy

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#### Your local TANA distributor: