



keep clean



# TRION X<sup>40</sup>/<sub>50</sub>

WALK BEHIND SCRUBBER DRYER

# TRION X<sup>40</sup><sub>50</sub>

This model is a further step forward in the development of the dual brush models thanks to the innovative **“Klinmak single-motor power unit”**, now able to operate both the two toothed brushes and the suction turbine. This solution allows both an incredible reduction in power consumption and a considerable increase in silence (in Eco = **64.6 dbA**).

**The significant energy savings have made it possible to use a lithium-ion battery (Li-Ion) capable of guaranteeing significant advantages in operating autonomy, charging times, as well as a very low environmental impact.** The power used, which is visible on the display together with the residual runtime, is quite low (max. 390W). **The Trion X4050 scrubber dryer is intended for cleaning surfaces from 1000 to 2000 sq.m. Its energy consumption (ratio of power consumption to hourly yield) is the lowest in the cleaning market (0.14 W/sq.m.).**

**Trion X4050 is an innovative, high performance, low power consumption, continuous cycle, easy to use, and maintenance-free scrubber dryer.**





## Superior cleaning performance



### 1. Front brush head washing system with two brushes

Guarantees excellent, uniform cleaning on various types of surfaces and greatly increases the quality of washing compared to scrubber dryers with a single brush. The high brush speed (340 rpm) also contributes to better cleaning results.



Perfectly cleans angles and corners, easily covers areas flush with the wall and operates in narrow spaces, avoiding expensive manual cleaning operations. The centered head also allows the machine's use in both directions.



### 2. Heavy-duty brush head (30 kg)

Trion can thus be used for deep, intermediate and maintenance cleaning. The squeegee can also be lifted for deep cleaning, held in place by magnets.



### 3. 3-stage turbine and squeegee behind the brushes

This combination ensures perfect drying on every surface, especially in corners.

# TRION X<sup>40</sup><sub>50</sub>



## Easy to use



Mode selection button  
Eco / Max Power / Off  
and % detergent selection

Water adjustment button from  
0.3 to 2 l/min. The same  
button also allows draining  
the solution tank.

Total power  
consumption

Residual runtime  
and hour counter



Activate washing and suction



### 4. Simple control panel

Two simple buttons control all the functions of the scrubber dryer. One button adjusts the amount of washing solution (from 0 to 2 l/min) by displaying its value; the typical waste of manual taps is avoided. A second button simultaneously activates the washing and suction functions. A display detects the battery state, cumulative runtime (in hours). The left button allows selecting between two use modes (Eco-Max), displaying the power absorbed during operation and the residual runtime before charging is necessary. **The board is already prepared for the detergent dosing system.**



### 5. Tank in tank system

The tank has an optical level indicator. The recovery tank has a wide opening for cleaning and inspection. The tanks lack any edges or areas where contaminated water could stagnate. Utmost hygiene!



### 6. 2 large wheels (250 mm) and 2 for parking and transport

Easy to move on smooth and rough surfaces.

The two rear wheels make it easy to park the machine, and all four wheels together facilitate loading and unloading water.



## Eco-sustainable production



### 7. Toothed brushes: extremely high energy efficiency and cleaning (KlinMak patent)

The toothed brushes (KlinMak patent) make it possible to use a single gearmotor, simplifying transmission and reducing the overall cost. Moreover, they increase energy efficiency, thereby increasing the scrubber dryer's runtime. The use of a single motor greatly improves the machine's energy efficiency and greatly reduces the sound level it produces, since the machine lacks an electric motor for the turbine. This greatly increases runtime and simplifies maintenance. The two-brush system greatly facilitates the scrubber dryer's traction. The use of an Li-Ion battery significantly reduces the weight and volume of the machine, and therefore substantially reduces the production of industrial waste.

### 8. Single electric motor; no electric motor needed for the turbine. Very low noise

**Its energy consumption (ratio of power consumption to hourly yield) is the lowest in the cleaning market (0.14 W/sq.m., in Eco mode).**

The sound pressure level (noise) in the operator's ear is quite low, at 64.6 dbA in Eco mode.

Trion is setting new standards in professional cleaning, following the sustainability logic indicated by the UN in point 12.5 of the Sustainable Development Goals.



## Low cost in use



### 9. Li-Ion battery with BMS, increased runtime up to 16 h/day

There are innumerable advantages to using lithium-ion batteries (Li-NCA): lightness, small size, no memory effect, low self-discharge rate, much higher charge cycles (1,000) than traditional AGM or Gel batteries, and above all the possibility of being able to count on very low charging times. The battery charger with double setting is offered as standard: 5/8A. The advanced BMS (single-cell control system) entirely designed in Italy manages the battery's operation, transmitting its parameters to the main board of the machine and storing infinite data. Start-up is through a special bistable button located next to the battery charging socket. The use of Li-Ion batteries allows the machine to be used **up to 16 hours a day**, an unthinkable amount of time with traditional batteries.

### 10. Quick charge

The reduced consumption of total power allows the use of lithium batteries. Beyond its very limited size, lithium batteries have the enormous advantage of being able to be charged in just two hours allowing high machine use during the day in the same or different worksites. In addition, the possibility of recharging the batteries for more than 1,000 cycles means being able to work more than 4,000 hours without having to change the battery. This results in considerable overall savings.

# TRION X<sup>40</sup>/<sub>50</sub>



## Hygiene first!



### 12 Rotationally molded plastic: "antibacterial"

Bacterial proliferation inside the scrubber dryer tank is avoided, also avoiding returning the bacteria to the environment in the suction phase.

The tanks and covers are made of admixed plastic material that can greatly reduce the bacterial load, avoiding its re-entry into the environment during suction.



### 13 Detergent Dosing System Kit (KiDo)

Trion X is equipped as standard with the detergent dosing system whose percentage (fixed with four values: 0.2%-0.5%-1%-1.5%) is set from the display with a simple operation. This allows precisely calibrating the amount of chemical product used according to the application. Therefore, both the waste of detergent compared to manual dosing in water tanks and product stagnation in the tank are avoided.



### 14 Use of anti-corrosion stainless steel

All the metal parts in contact with water (frame, squeegee, brackets, brush plate, etc.) are strictly made of AISI 304 stainless steel. This ensures lower sensitivity when subjected to strongly corrosive substances (salts, etc.), thereby improving the overall longevity of the machine.

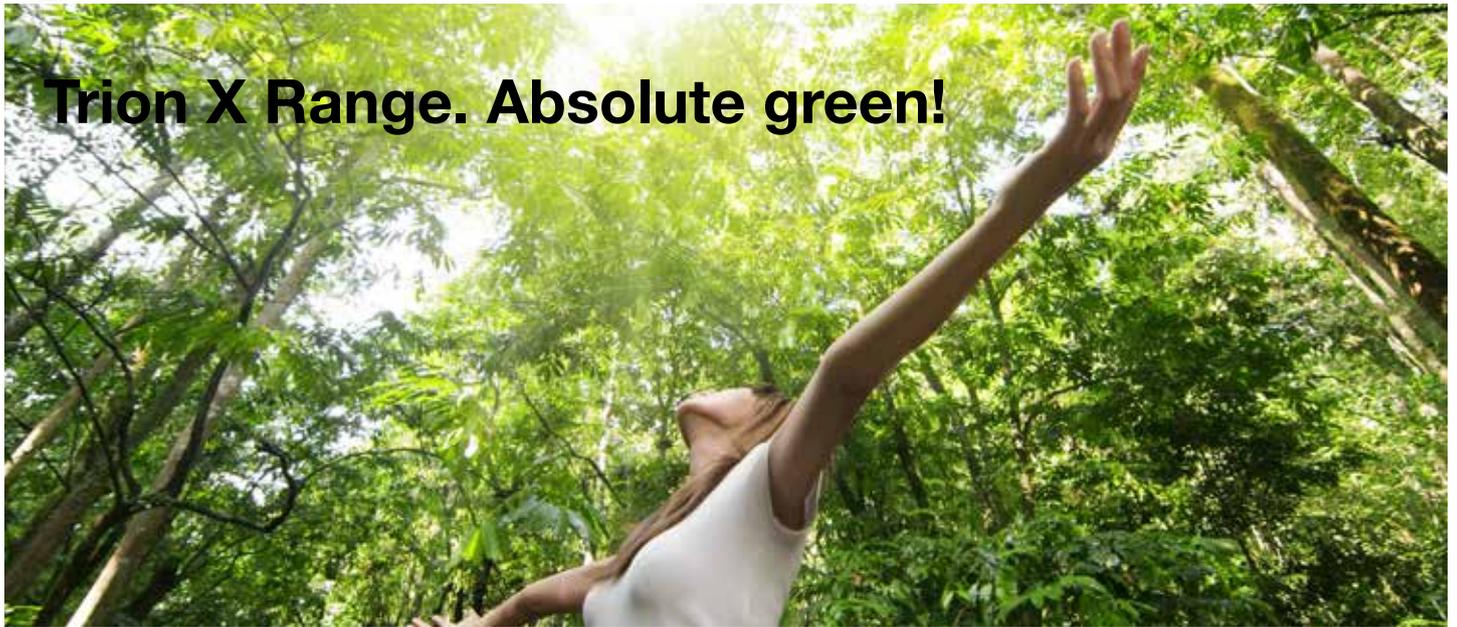


### 15 Hepa H13 Filtration of air from the squeegee

The contaminated air from the squeegee is properly conveyed and passed through a Hepa H13 filter before being released into the environment.

A simple door allows access for cleaning or replacing the filter.





<i>Characteristics</i>	<i>Benefits</i>	<i>Green aspect</i>	<i>Note</i>
Single-motor power unit able to operate the two washing brushes (the second through Klinmak patent) and suction turbine for drying.	The use of a single motor, compared to other machines which use three for the same functions, greatly reduces the scrubber dryer's energy requirements in the form of power consumed. Trion's display shows the power consumption in the two operating modes: Eco and Max, selectable by the operator.	Less electrical power consumed and less use of materials due to the smaller size of the machines (a Klinmak 40l has an overall volume of less than 0.5 m <sup>3</sup> ), much lower than any competitor. The reduction in overall dimensions allows better operator maneuverability and consequently less fatigue.	Energy efficiency understood as the ratio of power consumption and clean square meters. Klinmak measured values between the Eco and Max conditions equal to 0.14 - 0.21 watts/clean sq.m.
Use of lithium batteries (made possible by the previous point)	Increase in charging cycles, compared to the use of traditional batteries, by at least three times (from 350 to 1,000 cycles). Hence the very strong reduction in overall volumes, especially that of the battery compartment. Lastly, charging times are greatly reduced from 10/12 to two hours. Trion machines can be used up to 16 hours every day.		At least three PB battery packs are used during the lifetime of a single Li-Ion battery pack.
No electric motor for operating the suction turbine	Noise reduction	Less noise impact on the operator	Eliminates one of the biggest Problems with washer scrubbers
Timely display of residual runtime	Operators are aware of the remaining runtime so they can best organize the cleaning work to be done.	Optimization of working times	Total control of operations
Water amounts adjustable from the display	Easy to use and precise control of the amount of water used in relation to the type of floor and dirt.	Typical water wastage in manual tap adjustments avoided	Absolute comfort
Use of a Hepa filter for filtering the contaminated air from the turbine outlet and from the squeegee.	Reduction of bacterial contamination from cleaning the floors which is then released into the environment.	Filtered air released into the environment.	<b>Totally new</b>
Use of (rotational) plastic with antibacterial additive.	Less bacterial stagnation on walls.	Prevents the proliferation of bacteria inside the scrubber dryer, which would then release the bacteria back into the environment in the suction phase.	Essential for cleaning sanitary environments.
Use of stainless steel.	Longevity in more and less aggressive environments.	Longer machine life.	Possible use in aggressive environments.
Standard detergent dosing kit.	Precise calibration of the percentage of chemical product according to the application (four values 0.2-0.5-1-1.5%).	Waste of detergent compared to traditional manual dosing is avoided.	Rare feature with small capacities.

## Technical characteristics

Description	Note	TRION X4050	TRION X4050 Plus
Voltage		54.6V	54.6V
Total installed power	1 Motor	500 W	500 W
Total power consumption	Eco-Mode / Max	290 / 390 W	290 / 390 W
Tank capacity	solution/recovery	40 / 45 L	40 / 45 L
Recommended cleaning	area	from 1000 to 2000 sq.m.	from 1000 to 2000 sq.m.
Theoretical	Real Productivity	2,030 / 1,500 m <sup>2</sup> /h	2,030 / 1,500 m <sup>2</sup> /h
Clean surface per charging cycle	Eco-Mode / Max Pot.	3,000 / 2,250 sq.m.	6,000 / 4,500 sq.m.
<b>OPERATOR SOUND</b>			
<b>PRESSURE LEVEL</b>	Eco-Mode / Max Pot.	64.6 - 66 dB(A)	64.6 - 66 dB(A)
<b>ENERGY CONSUMPTION</b>			
	Eco-Mode / Max	0.14-0.19 W/m <sup>2</sup>	0.14-0.19 W/m <sup>2</sup>
Length		900 mm	900 mm
Width including squeegee		590 mm	590 mm
Height		1,100 mm	1,100 mm
Protection level		IPX3	IPX3
<b>WARRANTY</b>			
		36 months or 1000 h	36 months or 1000 h
<b>WASHING</b>			
Cleaning width		508 mm / 2x10"	508 mm / 2x10"
Brush rotation speed	Empty/full	340/300 rpm	340/300 rpm
Load on brushes/pads		30 kg	30 kg
Adjustable water flow rate		0-2 l/min	0-2 l/min
<b>DETERGENT DOSING KIT (KiDo)</b>	pre-prepared	pre-prepared	
<b>SUCTION</b>			
Suction width		590 mm	590 mm
Turbine vacuum	Eco-Mode / Max	600/900 mmH2O	600/900 mmH2O
<b>WEIGHT AND PACKAGING</b>			
Dimensions	WxLxH	960x630x1,060 mm	960x630x1,060 mm
Total unpacked / packed weight	69 / 83 kg	72 / 86 kg	
<b>BATTERY AND BATTERY CHARGER</b>			
Li-Ion capacity	 with BMS	54.6V/11.60Ah	54.6V/20.30Ah
Autonomy		1.5 h	3h
UL certified	charger	54.6V - 5/8A	54.6V - 5/8A
Charging time		2h (setting 5A)	2.5h (setting 8A)
Charging cycles		1000	1000

## Consumables

TRION X4050		
Code	Note	Equipment
G.021.0	560 mm	Front curved squeegee blade
G.022.0	600 mm	Rear curved squeegee blade
G.034.0	560 mm	Polyurethane-anti-oil front curved squeegee blade
G.035.0	600 mm	Polyurethane-anti-oil rear curved squeegee blade
D.025.0	10"	White toothed brush PPL 0.9 mm
D.026.0	10"	Blue toothed brush PPL 0.7mm soft
D.027.0	10"	Black toothed brush PPL 0.5mm supersoft
D.035.0	10"	Tynex Grit 320 toothed brush
D.028.0	10"	Pad holder
D.029.0	10"	Black Nylon Pads (10x)
D.030.0	10"	Green Nylon Pads (10x)
D.031.0	10"	Red Nylon Pads (10x)



### Ultra-high productivity and incredibly low maintenance costs

Trion optimizes consumption and operating costs. Eco mode (ideal on hard surfaces such as ceramic, marble and the like) further reduces consumption and noise levels. All routine maintenance tasks, such as cleaning and replacing the squeegee rubber, cleaning the clean-water filter, and replacing the brushes are simple and fast.

The wide opening in the upper part of the recovery tank makes it quite easy to clean effortlessly and without wasting any time. The standard diagnostics and hourly runtime counter also facilitate scheduled and extraordinary maintenance. **All Trion models come with a three-year warranty or 1,000 hours of runtime.**

## Accessories supplied

Washing	
	Solution flow rate adjustment via proportional solenoid valve
	Water filter with integrated tap
	Self-leveling splash guard
	Optical solution level indicator
	Clean water drain from the steering wheel
	Recovery tank level sensor for total stop
	Detergent dosing kit pre-prepared (KiDo)

Suction	
	3-stage suction turbine without electric motor

## Partner

Controls and Adjustments	
	Operation with two power consumption levels (Eco-Mode/Max)
	Hour counter
	Battery charge state
	Diagnostics
	Optical power consumption indicator
	Residual runtime indicator in minutes

Driving comfort	
	Comfortable steering wheel with simultaneous brush and turbine motor start-up functions
	4-wheel transport and parking position



keep clean

**KlinMak Srl**  
 Via della Levata 1 | 20084 Lacchiarella, MI | Italy  
 Tel. +39 02 892929.1 | Fax +39 02 892929.90  
 info@klinmak.com | www.klinmak.com