

KlinMak[®]

keep clean



TRION⁴⁰₅₀

WALK BEHIND SCRUBBER DRYER

TRION⁴⁰₅₀

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 Trion4050 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.).**

Trion4050 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.

TRION⁴⁰₅₀



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. 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.**


TRION⁴⁰₅₀



The Trion Range. Absolute green!

Characteristics	Benefits	Green aspect	Note
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 40I has an overall volume of less than 0.5 m ³), 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	Very low maintenance
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	No wasted water or detergent

Technical characteristics

Description	Note	TRION4050-e	TRION4050	TRION4050 Plus
Voltage		230V/50Hz	54.6V	54.6V
Total installed power	1 Motor	500 W	500 W	500 W
Total power consumption	Eco-Mode / Max	290 / 390 W	290 / 390 W	290 / 390 W
Tank capacity	solution/recovery	40 / 45 L	40 / 45 L	40 / 45 L
Recommended cleaning area		from 500 to 1,000 sq.m.	from 1,000 to 2,000 sq.m.	from 1,000 to 2,000 sq.m.
Theoretical / Real Productivity		2,030 / 1,500 m ² /h	2,030 / 1,500 m ² /h	
Clean surface per charging cycle Eco-Mode / Max Pot.		3,000 / 2,250 sq.m.	6,000 / 4,500 sq.m.	
OPERATOR SOUND PRESSURE LEVEL	Eco-Mode / Max Pot.	64.6 - 66.6 dB(A)	64.6 - 66.6 dB(A)	64.6 - 66.6 dB(A)
ENERGY CONSUMPTION	Eco-Mode / Max	0.14-0.19 W/m ²	0.14-0.19 W/m ²	0.14-0.19 W/m ²
Length		900 mm	900 mm	900 mm
Width including squeegee		590 mm	590 mm	590 mm
Height		1,100 mm	1,100 mm	1,100 mm
Protection level		IPX3	IPX3	IPX3
WARRANTY		36 months or 1000 h	36 months or 1000 h	36 months or 1000 h
WASHING				
Cleaning width		508 mm / 2x10"	508 mm / 2x10"	508 mm
Brush rotation speed	Empty/loaded	340/300 rpm	340/300 rpm	340/300 rpm
Load on brushes/pads	30 kg	30 kg	30 kg	
Adjustable water flow rate	0-2 l/min	0-2 l/min	0-2 l/min	
DETERGENT DOSING KIT (KiDo)		pre-prepared	pre-prepared	pre-prepared
SUCTION				
Suction width		590 mm	590 mm	590 mm
Turbine vacuum	Eco-Mode / Max	600/900 mmH2O	600/900 mmH2O	600/900 mmH2O
WEIGHT AND PACKAGING				
Dimensions	WxLxH	960x630x1,060 mm	960x630x1,060 mm	960x630x1,060 mm
Total unpacked / packed weight		65 / 81 kg	69 / 83 kg	72 / 86 kg
BATTERY AND BATTERY CHARGER				
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

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

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

Optional equipment

TRION 4050

Code	Description
H.052.0	KI-DO (Detergent dosing kit)



Trion 4050 can be 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 the precise calibration of the amount of chemical product 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.

Consumables

TRION 4050

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)

Available tank colors



Emerald green

Blue

Red



Grey

Black

Tank colors on request



Lemon green

Light blue

Yellow



Orange

Fuchsia

Minimum order 12 machines

Partner



KlinMak®

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