



keep clean



TRION X²⁰/₄₀

ULTRA-COMPACT WALK BEHIND SCRUBBER DRYER

TRION X²⁰₄₀

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. 340W). **The Trion X2040 scrubber dryer is intended for cleaning surfaces from 250 to 1000 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 X2040 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.

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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.

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Hygiene first!



11 Plastics in rotation: "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.



12 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.



13 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.



14 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.






Trion X 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 40l 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 | 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. | Totally new |
| 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 X2040 | TRION X2040Plus |
|------------------------------------|--|---------------------------------|---------------------------------|
| Voltage | | 54.6V | 54.6V |
| Total installed power | 1 Motor | 500 W | 500 W |
| Total power consumption | Eco-Mode / Max | 240 / 340 W | 240 / 340 W |
| Tank capacity | solution/recovery | 20 / 22 L | 20 / 22 L |
| Recommended cleaning area | | from 250 to 1,000 sq.m. | from 250 to 1,000 sq.m. |
| Theoretical / Real Productivity | | 1,624 / 1,200 m ² /h | 1,624 / 1,200 m ² /h |
| Clean surface per charging cycle | Eco-Mode / Max Pot. | 2,400 / 1,700 sq.m. | 4,800 / 3,400 sq.m. |
| OPERATOR SOUND | | | |
| PRESSURE LEVEL | Eco-Mode / Max Pot. | 64.6 / 66.6 dB(A) | 64.6 / 66.6 dB(A) |
| ENERGY CONSUMPTION | | | |
| | Eco-Mode / Max | 0.14-0.21 W/m ² | 0.14-0.21 W/m ² |
| Length | | 800 mm | 800 mm |
| Width including squeegee | | 490 mm | 490 mm |
| Height | | 1,100 mm | 1,100 mm |
| Protection level | | IPX3 | IPX3 |
| WARRANTY | | | |
| | | 36 months or 1000 h | 36 months or 1000 h |
| Cleaning | | | |
| cleaning width | | 406 mm / 2x8" | 406 mm / 2x8" |
| 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 |
| DETERGENT DOSING KIT (KiDo) | | | |
| | | pre-prepared | pre-prepared |
| SUCTION | | | |
| Suction width | | 490 mm | 490 mm |
| Turbine vacuum | Eco-Mode / Max | 600/900 mmH2O | 600/900 mmH2O |
| WEIGHT AND PACKAGING | | | |
| Dimensions | WxLxH | 960x630x1,060 mm | 960x630x1,060 mm |
| Total unpacked/packed weight | | 59 / 73 kg | 62 / 76 kg |
| BATTERY AND BATTERY CHARGER | | | |
| Li-Ion capacity |  with BMS | 54.6V/11.60Ah | 54.6V/20.30Ah |
| Autonomy | | 2h | 4h |
| 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 X2040 | | |
|-------------|--------|---|
| Code | Note | Equipment |
| G.019.0 | 445 mm | Front curved squeegee blade |
| G.020.0 | 480 mm | Rear curved squeegee blade |
| G.032.0 | 445 mm | Polyurethane-anti-oil front curved squeegee blade |
| G.033.0 | 480 mm | Polyurethane-anti-oil rear curved squeegee blade |
| D.018.0 | 8" | White toothed brush PPL 0.9 mm |
| D.019.0 | 8" | Blue toothed brush PPL 0.7mm soft |
| D.020.0 | 8" | Black toothed brush PPL 0.5mm supersonic |
| D.034.0 | 8" | Tynex Grit 320 toothed brush |
| D.021.0 | 8" | Pad holder |
| D.022.0 | 8" | Black Nylon Pads (10x) |
| D.023.0 | 8" | Green Nylon Pads (10x) |
| D.024.0 | 8" | 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



KlinMak®

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