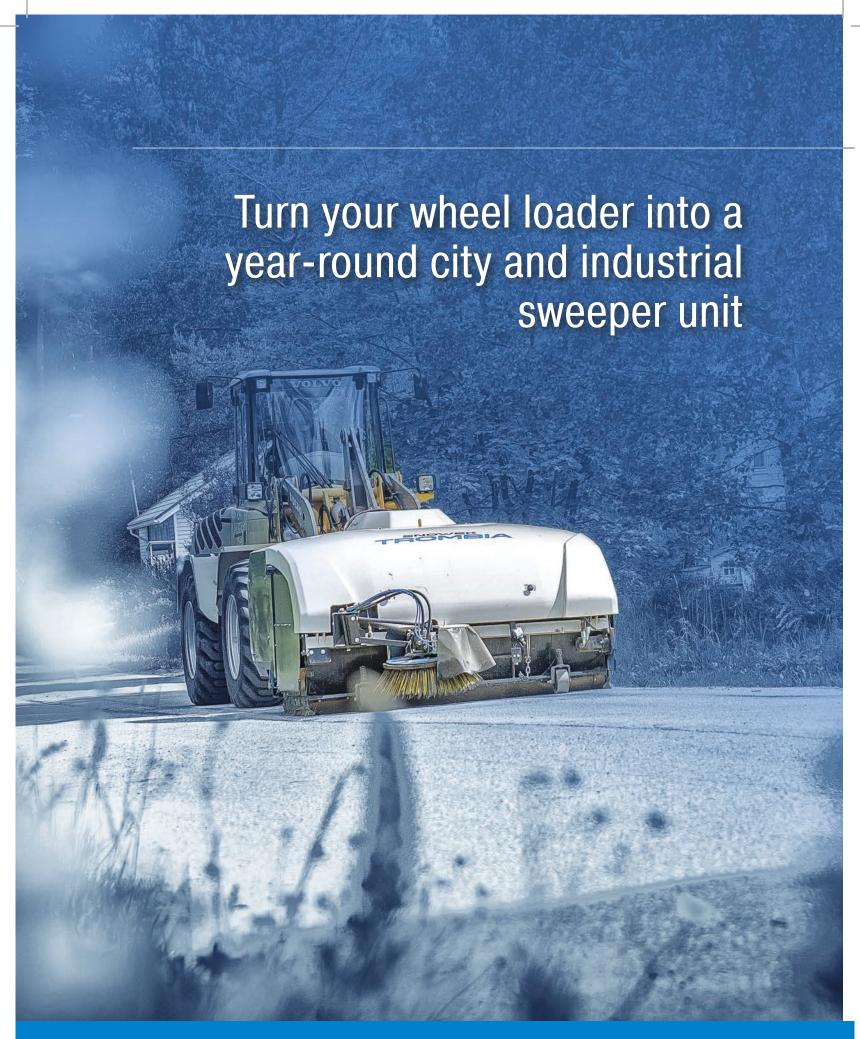
# TROMBIA

SWEEPING REBORN





## TROMBIA

### **SWEEPING REBORN**

**Trombia** is a revolutionary sweeping attachment developed to turn your wheel loader into a year-round area and street sweeper unit. Trombia provides superior cleaning result, PM10 certified cyclone-based dust control system, exceptional operating speed and easy serviceability. A global-wide patent is pending for the unique Trombia sweeping technology.

In addition to the exceptional sweeping performance Trombia is a step to the modern world. The device is equipped with modern Smart Trombia automation system, that takes care of the optimal sweeping position and height, and provides the operator with crucial data on the operations.

Investment costs for Trombia products are marginal compared to the likes of self propelled vacuum sweepers or large road sweeping trucks, but the cleaning efficiency is superior.

Trombia – a must-have to any loader contractor, industrial contractor or a city vehicle park with excessive numbers of idle-loitering loaders.

#### **SUPERIOR CLEANING RESULT**

Trombia combines the best functionalities of mechanical sweeping attachments and self propelled vacuum-sweepers and vacuum-sweeping trucks – but with waterless cleaning!

Patented innovation of collaboration between vacuum, closed air circulation, air knife and a sweeper roller ensures a cleaning result superior to any technology in the market. When cleaning is carried out dry, the technology avoids hard-to-vacuum street dust sludge – again guaranteeing the cleanest surfaces.

#### **INDUSTRY-DISRUPTIVE COST EFFICIENCY**

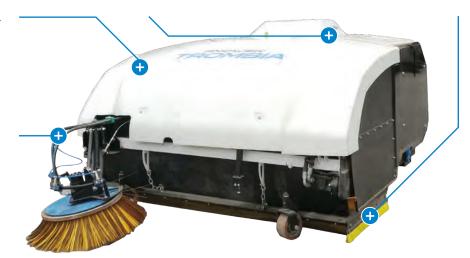
The cleaning efficiency of Trombia allows cities, maintenance contractors and industrial companies to use wheel loaders year-round for street, urban and industrial area maintenance, while traditionally loaders are in daily use only for snow maintenance work. Trombia investment is marginal compared to large street sweepers and self propelled vacuum sweepers, but delivers unrivalled cleaning efficiency and working speed.

	TROMBIA	COMMON SWEEPER UNITS IN THE MARKET
Sweeping width (min)	7.20ft	6.5ft - 8.2ft
Sweeping width (max)	8.20ft	7.21ft - 9.00ft
Operating speed max	10-12 mph	5 - 10 mph
Efficient sweeping speed	1.0 - 10 mph	1 - 1.8mph
Hopper capacity	2.35 <sup>yd3</sup>	1.3 <sup>vd3</sup> - 9 <sup>vd3</sup>
Water tank	18.5 gal	58 gal - 150 gal
Water consumption	0 - 26gal / h	100 gal - 260 gal / h
Main dust suppression	Waterless Trombia Cyclone Water sprinkling	
Dust control below zero degrees	YES	NO
Dust suppression, extreme conditions	Trombia Extra Dust Control	Water sprinkling
PM2,5/10 Eunited Rating	4 stars	Zero - 4 stars

## TROMBIA PRODUCTS

Organic vacuum created by the Trombia Airknife fan and the rotational airflow of the main broom takes care of the dust movement towards the Trombia Cyclone and the dust hopper. **Trombia** Cyclone takes care of the air separation before the clean air is blasted back to the Trombia Airknife. **Trombia Airknife** dust removal technology operates on dry surfaces and blasts the harmful PM10 and PM2,5 dust off the ground to the sweeping process to deliver the finest sweeping result in the market.

Main broom inside the chamber with rotational speed up to 450rpm ensures that Trombia can sweep also the heavier and larger debris. With Trombia you'll sweep from the finest dust to larger stones, leaves, wood and cultural waste.



## The combination of the patented Trombia ® sweeping technology with modern Smart Trombia automation is designed to enable:

- Superior sweeping result
- · Exceptional working speed
- Waterless street sweeping\*
- · Easy-to-drive functionality
- Dust control up to the highest European Union standards (Eunited PM2,5/PM10)



### Smart Trombia

## **TOUCHSCREEN**

- Optimal sweeping height indicator
- Trombia Extra Dust Control function
- Main broom and Airknife RPM indicator
- 4 Tilt and floating indicator
- 5 Activate/deactivate sidebroom
- 6 Sidebroom speed control7 Sideshifting function
- 8 Open/close dust hopper
- 9 Right-side sidecurb camera view

#### USEYOUR TROMBIA FOR MULTIPLE DEMANDING MISSIONS....



Road and street sweeping



Industrial areas, recycling centers, millings

Military bases, harbors and airports and

### ...THROUGHOUT THE YEAR



Spring time sand and dust cleaning after winter



Summer-time cleaning and city festival waste



Leaves sweeping and collection in the autumn



Sweeping in sub-zero temperatures. Trombia uses no water that can freeze the ground!

#### **SMART TROMBIA - EASY TO USE**

All functions of Trombia are steered from the touch screen inside the cabin. Rotation speed, side-shifting and opening and closing the dust bin are only one touch away behind the 7 inches touch screen!

## SMART TROMBIA – AUTOMATION

Every Trombia product is equipped with ground height sensors, which allows Smart Trombia automation to adjust the device height from the ground depending on the changes in the surface. The driver shall only set Trombia down at the beginning of the work day and the automation takes care of the rest! Enjoy.

#### **WATERLESS CLEANING**

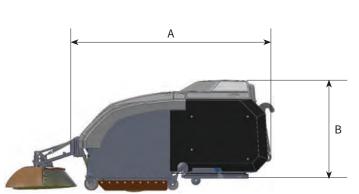
Patent-protected Trombia method allows cleaning to be carried out fully dry without watering the streets. Dry cleaning ensures the optimal cleaning result as the air-knife, vacuum and mechanical brushes operate on a dry surface. The ecological water-saving Trombia method will soon be a must-have everywhere!

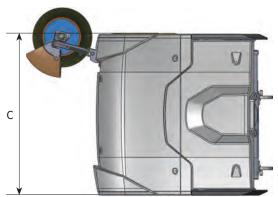
### **EASY TO MAINTAIN**

"In the end of the day, Trombia is a simple hydraulic attachment with high end performance - this saves your time & money with minimised downtime!"

- NO SEPARATE FILTERS THAT REQUIRE CONSTANT WASHING AND REPLACEMENT
- NO AUXILIARY ENGINES TO MAINTAIN
- NO EASILY BREAKING SUCTION NOZZLES, ELEVATORS OR CONVEYOR BELTS
- FAN LIFETIME 5+ YEARS (BLOWERS OPERATE CLEAN AIR)
- BRISTLE LIFETIME FROM 100 UP TO 600 HOURS

## TECHNICAL SPECIFICATIONS





MODEL: TROMBIA 220

#### TECHNICAL SPECIFICATIONS

A (ft)	8,0 ft	
B (ft)	4,1 ft	
C (ft)	7,4 ft	
Theoretical hopper capacity	2,35 <sup>yd3</sup>	
Efficient hopper capacity	320 gal	
Empty weight	3090 lbs	
Minimum hydraulics output needed	21 gal per min	
Hydraulics working pressure (min-max)	2600psi - 3335psi	
Machine recommendation, operating weight	19 500 lbs upwards	



## Trombia sweepers are the frontrunners in street dust and silica dust sweeping (PM10 & PM2,5)

In May 2018 **Trombia sweepers** were granted 4 -stars out of 4, in the globally recognised high end street sweeper test the EUnited PM Test. Trombia is the world's only sweeper attachment focused on waterless cleaning that meets the highest standard of requirements alongside with the premium caliber suction and regenerative sweepers and city street scrubbers!

The EUnited PM test has been the unquestionable European reference for the assessment of the fine particulate behaviour of road sweepers for several years. With the publication of DIN EN 15429-3 in May 2015, the EUnited PM Assessment became a recognized standard in Europe.

Fine particles have become a serious threat to the residents in many cities. Through the European Air Quality Directive 2008/50 / EC, cities and municipalities must ensure that emission limit values for fine particles are only exceeded on a limited number of days per year. Improving air quality has become a daily challenge for the local authorities and the use of sweepers to curb the amount of dust in public areas is common practice.

Waterless cleaning is the most efficient way to remove harmful dust emissions from the paved areas, streets and roads.

## In extreme conditions Trombia Cyclone can be assisted with additional Trombia Extra Dust Control function.

To support the cyclone operations Trombia devices are equipped with an extra dust control functionality that can be activated from the touch screen when entering an extreme fine dust area, such as a construction site, or roads associated with construction dust. Extra dust control is based on tailor-made fine mist sprinkler system inside the dust hopper to manage excessive dust flow inside the cyclone, while the sweeping and airknife operations are kept waterless to deliver the superior cleaning result.

Expand your knowledge on PM10 and PM2,5 street dust sweeping literature under PM10 Knowledge base:

#### www.trombiaglobal.com





Trombia Cyclone separates the finest PM10 and PM2,5 dust at the bottom of the dust hopper.



## FIND YOUR DEALER WWW.TROMBIAGLOBAL.COM

#### Trombia® is a trademark owned by Snowek Oy, Finland

Trombia® sweeping technology is a technology owned, developed and designed by the patent-holder Snowek Oy, a limited liability company. All rights to the Trombia sweeping technology and the Trombia trademark are reserved by Snowek Oy.



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