

Kaiser. Performance counts.



Tornado

Great performance and high comfort



**COMBINED
SEWER CLEANING**

Tornado

Powerful performance with high comfort

The Tornado is the KAISER MORO vehicle for use in industrial cleaning; it is characterised by the very high performance of the vacuum pumps and high-pressure pumps installed, in addition to exclusive design. Key features include the soundproof box for the pump housing and the rounded shape of the side tanks, which make the Tornado unique among wet vacuum vehicles used to clean sewage and industrial pipelines.

The Tornado is available with different models of high-vacuum positive displacement blower with flow rates up to 10,500 m³/h and is equipped with an air injection cooling system that enables continuous operation even at high temperatures.

The quiet operation of the equipment is the basic requirement to ensure the right comfort for the operator and a high-standard working environment. The equipment is driven by means of the power take-off on the carrier vehicle or a separate intermediate gearbox.

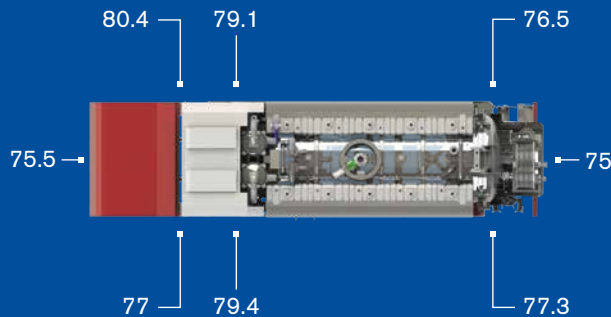
Safety and ease of use

The Tornado is based on vehicles with 3 or 4 axes. The side tanks for clean water are produced both in polyethylene and stainless steel versions, thus enabling the layout of the equipment to be defined to suit specific needs of the customer.

Although the Tornado is designed to work at very high performance in exceptionally heavy-duty operations, controlling the equipment is secured by an operator interface which ensures ease of use. A wide range of additional options are available as well as different suction boom versions and jetting hose reels. The Tornado is also manufactured in an ADR and an ATEX version.

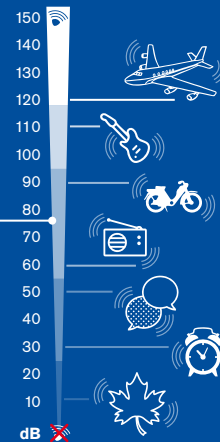


MINIMUM NOISE EMISSIONS



**NOISE LEVEL 77.5 DBA
(MEAN VALUE)**

**SPECIALY DESIGN TO
MINIMISE NOISE EMISSIONS
FOR THE COMFORT OF
THE OPERATOR AND THE
SURROUNDING AREAS.**



DETAILS AT A GLANCE



Top-mounted suction hose reel



Attractively designed side panels with side-mounted water tanks



Sound-absorbing pump power kit



High-pressure reel for large hose capacities



Approvals



Additional feed pump



Drainage control



Radio remote control



Street washing bar

TECHNICAL SPECIFICATIONS AND EQUIPMENT

Tank capacity	3-Axle Truck (26 ton)	4-Axle Truck (32 ton)
Sludge tank capacity (l)	9000 - 12000	10000 - 14000
Water tank capacity (l)	3500 - 4500	4500 - 5500
Wheelbase (mm)	3500 - 4500	4100 - 6100

Operation and controls

- › Control panel towards the rear of the vehicle
- › Radio remote control with all the relevant operating functions
- › Memory function for performance parameters (option)

High-pressure water system

- › High-pressure pumps with flow rates of 290 l/min and 200 bar up to 410 l/min and 170 bar
- › Jetting hose reel at side with manual or hydraulic drive for HP hoses of 1/2" to 3/4", with manual or forced winding
- › Jetting hose reel at rear with hydraulic drive for HP hoses of 3/4" to 1 1/4"; with hydraulically slewable or fixed mounting including forced winding
- › Jetting hose reel model KSA for the combination of HP jetting hose and suction hose
- › Winter protection for temperatures of -5 °C to -20° C

Vacuum system

- › Rotary piston vacuum pumps with air flow rates of 3900 m³/h to 10500 m³/h
- › Suction hose reel on tank with hose boom, for suction hoses with a diameter of 100, 120, 150 or 200 mm
- › Various hydraulic suction boom types in 4", 5", 6", 8" with extendable telescopic arm

Tank structure

- › Tank in carbon steel or stainless steel
- › Tank structure with individual tank layout
- › Tipping system for complete emptying of the tank

SUPERSTRUCTURE DESIGN AND OPTIONS

Modular superstructure design

The Tornado line offers different versions for the ideal combination of fresh water and sludge tank, while simultaneously ensuring optimal axle load distribution and maximum payload.



High-pressure and vacuum pumps



Rotary piston vacuum pump



Triplex high-pressure pumps

Suction boom



Combined suction/jetting boom



Telescopic suction boom



Spiral suction boom



Twin spiral suction boom

Jetting hose reel



Slewable reel



Fixed reel

Accessories



Winter protection



Metre counter



**KAISER MORO TORNADO, POWERFUL AND SILENT,
COMBINED WITH TOP DESIGN**

FOR YOUR APPLICATION THE SUITABLE KAISER PRODUCT

RECYCLING VEHICLES



Top performance and reliability under the most difficult sewer conditions.

- AquaStar
- Eco 3.0
- EcoCycler
- CityCycler
- EcoCombi
- CityCleaner

WATER TREATMENT VEHICLES



Water treatment by means of flocculation.

- AquaStar WT
- KoIDry

COMBINATION VEHICLES



Flexibility to handle a wide range of applications.

- Elegance 2.0
- AquaStar
- Combi Eur-Mark
- Tornado
- BasicLine

JETTING AND VACUUM VEHICLES



Designed to meet the highest performance requirements in the respective field.

- Tornado
- Elegance 2.0
- Twister
- Special vehicles

DRY VACUUM VEHICLES



High-performance vacuuming of dry and wet materials.

- Cerberus
- Hercules

HYDROVACS



High productivity with a rugged and reliable technology.

- CV-Series
- Urban X

MOBILE-WALKING EXCAVATOR



Impressive technology to master tough challenges.

- S12 Allroad
- S12 4x4
- S10
- S2

ROAD-RAIL EXCAVATOR



Perfectly matched to the application of the railway environment.

- S22RR

Subject to change without notice. Technical specifications may change, depending on the chosen options and accessories. All photos and diagrams are for illustration only.