

TECHNICAL SPECIFICATION

VACUUM – JETTING-FLUSHING TANK SUPERSTRUCTURE

For the transport and suction of sewage, sludge, waste-water and others.

High-pressure cleaning of technology road inlets,
sewer connections and pipes (approx. N 800 mm)

Total volume of Tank: approx. 16 000 ltr.

Top Quality Product

Custom-made

100% MADE IN GERMANY

Superstructure

The “*Special Low-Torsion body mounting system*” for tank bodies is recommendable due to their strongness, torsion-resistant design, in particular for “Off-Road” operation under rough cross-country conditions.

The elastic connection between the truck chassis and the sub-frame provides a torsion-absorbing function.

This arrangement absorbs any stresses passing from chassis to tank.
The sub-frame is mounted to the truck frame in a way to ensure equal load distribution.
Otherwise mounted according to truck supplier’s “Assembling Instruction”.

Tank

Tank shape:	Cylindrical 16 000ltr.
Tank compartments:	Two (2)
	8 000 ltr. for sludge
	8 000 ltr. for fresh water

Manufactured of thick high-grade stainless steel –S235JRG2-, thickness 6 mm electrically welded throughout with accurately finished welding seams. Dished bulkheads on both sides with 6 mm thickness and appropriate nos. of baffles, 6 mm thick. Reinforcements made of U-channel, welded on the outs-side of the tank

The tank is is vacuum as well as pressure resistant, designed for:

- + 1,00bar pressure
- 0,9bar vacuum

Tank body with rear tipping system

A hydraulic cylinder is mounted in front of tank-body. At the rear of the tank body, a heavy-duty tilting bearing is mounted.

The hydraulic system is powered by a hydraulic pump and connected to the PTO of the truck chassis. Operating valve mounted in driver's cabin

Tipping angle approx. 35°

There is a safety interlock system between tipping system and rear opening.

Walkway

Open mesh walkway, 400mm wide on one side of the manhole cover, with access ladder and hinged grab rail.

Vacuum Tank with vacuum system

Full rear opening

Hydraulic operated rear opening made of 6mm dished plate and fitted with acid resistant sealing gasket.

Hydraulic operated tightening bolts to secure the rear opening absolutely tight and pressure/vacuum proofed.

The rear opening is supported by heavy-duty hinges and to be opened hydraulically with double acting hydraulic cylinders. A beaver tail is mounted for a smooth discharge after opening. At the lowest part of the rear dish-end, two (2) flanges mounted.

One (1) 4" for suction and one (1) 4" for discharge

Top fittings

One (1) 380 mm dia. opening with Vacuum valve, secured by bolts

One (1) upper manhole, vacuum and pressure sealed with hinged sealed with pad-lock

Discharge fittings

At the rear of the tank, there are two (2) out-let valves, with automatically operated knife valves mounted.

- One (1) 4" DN100 for suction which is mounted to approx. 75% inside tank height, leading downwards with 4" Perrot coupling and blind cap
- One (1) 4" DN100 for pressure/drainage with strainer and the lowest part of the rear dish-end with 4" Perrot coupling and blind cap

Pipes and fittings for suction and pressure system

All made of DN80-100, tensionless mounted and supported by flexible connections

Vacuum system

One (1) water cooled vacuum pump, type Jurop installed at the vehicle's chassis, hydraulically driven by PTO of truck engine and can be operated pneumatically from the drivers cabin The suction pipe is equipped with a suction filter. Suction and delivery connections are provided with hose coupling and cab.

Pump capacity: approx. **1200 m³/h** water cooled

Pressure gauge for vacuum and pressure, located in piping system

There is a pneumatic operated 4-way valve for suction, ventilation and pressure

Safety system

- Air chamber to prevent over suction at the top of container
- Safety chamber with ball-valve to protect the vacuum pump
- stainless steel cyclone filter in front of vacuum pump
- Automatic pressure limited valve, set to 0,7bar, mounted on piping system
- Automatic vacuum limited valve, set to 0,7bar, mounted
- Level indicator at rear of tank
- Three (3) sight glasses mounted rear part of tank
- Silencer with oil-trap
- Automatic cut-off of vacuum pump when tank is 95% fully loaded

Suction hose-reel with suction boom

Special hydraulic operated suction hose-reel, positioned horizontal at the rear top part of the tank

Hose-reel designed for DN100 4" hose with 30m length and 4" Perrot quick coupling.

Suction boom with approx. 270° around the tank, mounted at the rear part on top of the tank, with approx. 6,00m outreach.

Operation of hose-reel and suction boom via operation panel

Operation panel

The control panel is located at the rear right-hand side of the chassis and made of water splash-proof panel and consists of:

- Joy-stick system
- ON/OFF for vacuum pump
- ON/OFF for high-pressure pump
- ON/OFF for engine
- Adjustment of RPM
- Emergency cut-off
- Pressure gauge for suction and pressure
- Pressure gauge for hydraulic system
- Hour counter for vacuum pump and high-pressure pump
- Control of suction boom and suction hose-reel
- OPEN/CLOSE for discharge valve sludge water
- Working lights switch

In addition, there is a remote control for following operations:

- Suction/Pressure switch
- Adjustment of RPM
- Emergency cut-off

Clean water-tank with Jetting-Sewer system

Water tank

8 000ltr water-tank integrated in main-tank, manufactured of thick high-grade stainless steel –S235JRG2-, thickness 6 mm electrically welded throughout with accurately finished welding seams.

Upper man-hole cover DN550 with ventilation valve.

Side-filling and side discharge via STORZ C coupling.

Level indicator with colour ball for measure the water level, mounted on the right-hand side

Access ladder with walkway.

Water-pump

One (1) water-pump made of stainless steel with approx. 170ltr/min.

Pipe connection 2" with filter and shut-off valve from clean water-tank to pump with 2" discharge connection.

Pump operation next to pump at appropriate position

High pressure system

One (1) high-pressure water pump, hydraulically driven by PTO of truck chassis. Hydraulic system with oil-cooler and fan.

Capacity, approx.: approx. 150ltr/min at 130bar

Equipment

- safety valve and independent circuit for water filling
- complete water distribution with bulk filter
- regulation valve with manual controlling
- dividing water distributor with independent outlet for manual gun
- hand gun with extension 500mm and changeable nozzle + hose 7m
- independent cock for hand washing

Large hose-reel

- located on the rear deck with manual hose guiding
- hydraulic turning with reversal and adjustable speed of unwinding
- positioning approx.. 180° towards the right-hand side
- manual turning with pneumatic securing of turn angle
- Hose-type: 80m of 3/4" high-pressure hose with operating pressure of 150bar

Small hose-reel

- located at the rear right-hand side
- manual turning and hose guiding
- Hose-type: 60m of DN13, 1/2" high pressure with operating pressure of 250bar

Hydraulic system

The hydraulic system consists of:

- oil-tank with oil-cooler, fan and return filter
- hydraulic pump
- control valves with integrated pressure relief valves for all hydraulic operations

Cleaning heads

- One (1) standard cleaning 1/2"
- One (1) standard cleaning 1"
- One (1) perforating 1"
- One (1) rotary 1"

Hose-carrier with hoses

Two (2) lockable fitting boxes left- and right side along tank body

Four (4) rubber suction and pressure hoses NW 100, with Perrot 4" ball coupling, length approx. 2,00 m

One (1) oil suction hose, NW50 with Perrot ball coupling 2", length approx. 20,00 m

One (1) filling hose, 20m

Standard accessories

Wheel chokes (provided by TRUCK supplier) mounted with brackets

One (1) spare wheel carrier with winch mounted on chassis

PVC mudguards with rubber mud-flaps

Two (2) large lockable tool boxes mounted on chassis

One (1) beacon light mounted at rear

Two (2) working lights are mounted at the rear

Additional equipment

- Two (2) fire extinguishers, 6kg each
- One (1) set of standard mechanic tools
- Fast moving parts for water-pump
- One (1) electric safety lamp with extension cable
- Steel sheet mudguards with rubber mud-flaps
- Two (2) mechanic gloves
- One (1) tool-box with standard mechanic tools
- Towing hook at rear and front
- One (1) standard tube for hydrant joining
- Two (2) torch lamps
- Three (3) shovels
- Two (2) sweeping brushes
- Two (2) portable flushing beacons
- Six (6) breathing masks with forty (40) replaceable filters
- First aid kit for four (4) workers
- 20m of line-rope with three (3) safety belts

Paintwork and finishing

All steel parts are sand-blasted and prime-coated.

Tank body completely 100% hot- galvanized in and out-side

Substructure, spare-wheel carrier, painted in chassis colour

Tank body painted in one (1) RAL colour outside

Acceptance test

Hydro-pressure test of tank 1,50 bar

NDT of tank

Functional test

Documentation

One (1) spare part list (Paper and USB-Stick)

One (1) operating manual (Paper and USB-Stick)

All instruction plaques, lists, manuals and signs in English language.

Reserve the right to modify or change Specification at any time!

Delivery time, ex works: Start of delivery approx. 10 - 12 weeks after receipt of written order confirmation and clarification of all technical and commercial issues and approx. 6-8 weeks after delivery of truck chassis.

Then 2 units per week.

Delivery conditions: Ex factory Germany

Terms of payment: 35 % Down-payment / 65 % with irrevocable and confirmed L/C (DZ-Bank)

Validity Offer: 3 month

Warranty: Start from date of vehicle taking over, 12 months unconditional warranty on body and welded construction. The warranty is limited to the repair or replacement of broken parts due to construction faults and does not cover damage caused by improper use

Please do not hesitate to contact us for further information and your [special requirements](#).
All superstructures are custom-made.

Examples and Option:



Truck chassis (6x6). Wheel base 4500 mm. M- or S-Cabin. **40 tons. Version** (9/16/16 tons. axles)



Hydraulic operated **full rear opening** of the vacuum tank



Vacuum Tank Truck 20 000 ltr. capacity



Vacuum tank truck 16 000 ltr. with small (grey) fresh water tank (120 ltr.) behind, for hand cleaning etc.

OPTION



Rear view. Man hole 600 mm. Lockable control box (white color) on the right. Rotating beacon and two working lights. Subframe hot-dip galvanized.



Rear view. Man hole 600 mm. Open control box on the right.

OPTION



VACUUM – JETTING – **FLUSHING** – TANK – TRUCK.
Capacity: 180000 ltr. (17 000 ltr. vacuum tank and 1 000 ltr. fresh water)

OPTION



VACUUM – **JETTING** – TANK – TRUCK.
Capacity: 18 000 ltr. (17 000 ltr. vacuum tank and 1 000 ltr. fresh water)
[Description on page 15](#)

OPTION



Vacuum Tank Version without hydraulic rear opening, but incl. manhole 600 mm = [Less cost](#)

Information: Off-loading of Vac trucks is always by pressure.

Lockable control box on the right (black color).

OPTION



Vacuum Tank Version with [Telescopic Tipping Cylinder](#) (HYVA, Germany).
Including [Pneumatic Interlock System](#) (PIS) for additional safety.

OPTION



Rotating beacons and working lights



Spray bar front or/and rear
(also available with adjustable nozzles)

OPTION

Fresh-water-tank with Jetting System

Water tank

1 000 ltr. water-tank integrated in main-tank, completed hot-deep galvanised
Upper man-hole cover DN550 with ventilation valve,
Side-filling via STORZ C coupling
Side discharge pipe 2"
Level indicator with colour ball for measure the water level, mounted on the right-hand side
Access ladder with walkway

High pressure system

One (1) high-pressure pump, hydraulically driven by PTO of truck chassis. Hydraulic system with oil-cooler and fan.
Capacity, approx.: approx. 50ltr. / min at 150bar

Equipment

- Safety valve and independent circuit for water filling
- Regulation valve with manual controlling
- Independent cock for hand washing

Hose-reel

- Located at the rear end of truck chassis, left or right-hand side
- Manual turning and hose guiding
- **Hose-type:** 40 m of DN13, 1/2" high pressure with operating pressure of 150 bar
- One (1) standard cleaning nozzle 1/2"
- 10m HD hose DN13 with high-pressure cleaning nozzle for general cleaning

Hydraulic system

The hydraulic system consists of:

- Oil-tank with oil-cooler and fan
- Hydraulic pump
- Return filter
- Control valves with integrated pressure relief valves for all hydraulic operations



High pressure system with hose reel can be mounted RHS or LHS

Of course, **smaller and bigger** vacuum tank trucks and **trailers** are available.



Vacuum tank truck 10 000 ltr. on IVECO 4x4 truck chassis (rear view)



Vacuum tank truck 10 000 ltr. on IVECO 4x4 off-road truck chassis (side view)

Some views of our production site







We are in the position to work very individually and by any means we will satisfy your specific requirements and needs.

All trucks are custom-made in accordance with your specific requirements.

Please contact ask us any time