

TECHNICAL DESCRIPTION
RESCUE ROD'S AIR DISPLACEMENT UNIT
MODEL MEGAVAC LOADER 8000 EVO
WET & DRY VACUUM

PRESSURE/VACUUM TANK

- Volume : approx. 13.400 litres, incl. the filter room.
- Diameter : Ø 1.900 mm.
- Material : stainless steel AISI 304 grade.
- Suction connections : 6" block flange, provided with 6" connection with coupling as desired on the left hand side, as close to the front as possible, equipped with bended inner rising tube, pointed to the rear, with interchangeable Hardox 400 wear plate.

- Provisions : opening rear door with hydraulically operated clamps, tipping angle 100°,
: manhole size Ø 500, with manually operated clamps, which can easily and quickly be opened/closed,
: cylinder for opening the rear door, provided with hose rupture safety valve,
: chute at the rear end till approx. 50% of the tank height, as far to the rear as possible, on behalf of free unloading.

- Including : level indicator.

PED APPROVAL

- Direction : Pressure Equipment Directive according to EN 97/23/EG.
- On behalf of : all pressure equipment with a positive pressure over 0,5 bar.

- Purpose : elimination of technical trade impediments by harmonization of legislation of the EU member countries (by CE marks),
: replacement of Dutch laws with regard to pressure equipment in the construction phase,
: preservation of the present safety level.

AIR FILTER SYSTEM

- Execution : closed vacuum/pressure resistant filter system, integrated in the front part of the pressure/vacuum tank, provided with a quickly removable filter kit with separately removable filter bags made of polyester needle felt, total filter surface 40 m²,

- Execution : Air Shock system for cleaning the filter bags, controlled by a pulse time interval switch, adjustable on the control panel.

- Filter cover : to be opened hydraulically and to be locked manually.
- Including : level detector model soliphant on a Clampstuz flange.
- Model : cylindrical.

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FILTER CARRIER FRAME

- Material : galvanized steel.

CONTAINER FRAME

- External dimensions : in accordance with standard 20" ISO container frame.
- Length : 6.000 mm.
- Width : 2.440 mm.
- Including : container handling system.

DIESEL ENGINE

- Brand/model : Caterpillar C9 ACERT® DIT ATAAC IND.
- Emission standard : TIER 3.
- Execution : 6-cylinder, 4-stroke engine.
- Power : 241 kW (328 HP at 1.800-2200 r.p.m.).
- Provisions : fuel filter system,
: exhaust, provided with spark arrestor,
: engine supports,
: electric system 24 Volt,
: cooling system with safety device,
: oil lubrication system with safety device,
: gel batteries,
: crankshaft flange.

FUEL TANK

- Volume : approx. 300 litres.
- Including : level indicator on the control box.
- Location : on the left hand body side.

SOUND INSULATED HOOD

- Material : stainless steel AISI 430 grade, internally provided with insulating material.
- Provisions : access door on two or more sides.
- Blower provisions : inlet/cooling air and exhaust silencer, on behalf of optimal sound-proofing.
- Location : in front of the pressure/vacuum tank.

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MAX. LEVEL CONTROL/SHUT OFF SYSTEM

- Execution : pneumatically operated butterfly valve.
- Action : when reaching the maximum level in the pressure/ vacuum tank and when disengaging the blower, the butterfly valve will be shut automatically.
- Signal : by means of a claxon when the maximum level is reached. By pushing a bridging button, the control system is bypassed, so the suction hoses can be sucked empty.
- Level detector : electronic.

TIPPING CYLINDER

- Location : in front of the pressure/vacuum tank.
- Tipping angle : approx. 45°.

BLOWING COVER

- Model : high pressure vessel head with reinforcement frame,
: fully opening with adjustable hinges.
- Opening : hydraulically.
- Opening angle : 125°.
- Tightening : absolutely tight against the rubber profile at a groove at the tank rear end.
- Blowing system : welded construction, provided with 5" Perrot spout and a removable stirring cone.
- Provisions : ejector,
: 3 butterfly valves for air dosing,
: 6" ball valve,
: 3-way proportioning valve,
: separable Perrot coupling,
: cleaning openings with Storz coupling on behalf of flushing the whirl cone internally,
: removable stirring plate,
: hatch on the lower end, which can be combined with a DN 300 unloading valve (optional equipment),
: hose rupture safety valve.
- Including : free air inhaling butterfly valve in the piping, which opens during blowing,
: shut off valve for the cooling air inlet in the piping on behalf of blowing activities.
- Remark : faced to the left.

VACUUM PUMP

- Type: Kaeser full vacuum 3-wing Roots type blower with pre-inlet.

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- Capacity : max. 8100 m³/h.
- Positive pressure : max. 1.050 mbar at 1500 r.p.m. ± 10%.
- Negative pressure : 0,9 bar.
- Power consumption : approx. 212 kW.
- Drive : mechanical from the diesel engine by means of a crankshaft with bearing blocks and tensioner, heavy coupling sleeve.
- Provisions : silencers for inlet, outlet and cooling (pre-inlet) air, with stainless steel inside,
: sound insulating housing,
: electronic temperature protection switch,
: mechanical under and over pressure protection,
: safety filter in the suction damper.
- Location : on top of the diesel engine.

PIPING

- Size : DN 200 (8").
- Provisions : mechanical overpressure protection,
: mechanic underpressure protection,
: free air butterfly valve, which opens during blowing,
: shutoff valve cooling air inlet on behalf of blowing.

ELECTRIC CONTROL

- Location : in the tool box, integrated on the left hand body side.
- Material : stainless steel.
- Safety class : IP 65.
- Purpose : protection of the blower,
: switching from suction to blowing,
: mechanical rpm control of the blower by means of electronic throttle control.
- Wiring : double insulated with protective pipe.
- Remark : switch by means of SPS control.
- Including : multiple socket.

HYDRAULIC SYSTEM

- Location : on the left hand body side, as far to the rear as possible.
- On behalf of : tipping the pressure/vacuum tank,
: opening/closing the rear door and filter cover,
: hydraulically operated rear door clamps.
- Provisions : hydraulic pump directly onto the p.t.o. connection on the diesel engine,
: oil tank, provided with return filter, filling/bleeding cap, sight glass and drain valve.

PNEUMATIC SYSTEM

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- Tank inspection : Pressure Equipment Directive (PED) (97/23/EC).
- Body inspection : taken care of by Koks Special Products.
- Manuals : operating instructions, drawings, schedules.



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SAFETY PROVISIONS:

BEACON LIGHT

- Location : at the rear.
- Operation : from the control panel.

EMERGENCY STOP

- On behalf of : bleeding/aerating the vacuum system in case of an emergency.
- Execution : pneumatically operated shutoff valve in the piping,
: push button on the control panel.
- Including : "BELUCHTEN" switch on the control panel.

HOSE RUPTURE SAFETY VALVES

- On behalf of : rear door, filter cover and tipping cylinder.

SNAP-OFF PLATE SAFETY DEVICE

- Location : on top of the pressure/vacuum tank.
- Provisions : rupture disc, size 65 mm, 1,5 bar,
: safety relief valve, size 1½", 1,5 bar,
: pressure gauge 0/+4 bar.

EARTH REEL

- Execution : manually operated.
- Cable length : approx. 25 metres.
- Provision : earth clip.
- Location : to be agreed in consultation.

WALKWAYS/NAMEPLATES

- Location : on both sides of the upper part of the pressure/vacuum tank.
- Including : walkway on the left hand body side, on behalf of access to the filter room and manhole.

LIQUID KIT (included):

DISCHARGE HATCH

- On behalf of : unloading the dust settlings into the pressure/vacuum tank.
- Shape : elliptical.
- Size : adequately sized.
- Control : hydraulically from the outside.
- Including : double electronic level switch for detecting the max. dust settlings level (liquids and solids) in the pressure/ vacuum tank and air filter system.

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ADDITIONAL PROVISIONS:

DISCHARGE VALVE

- On behalf of : unloading in BigBags.
- Execution : mounted on the blowing cover.
- Provisions : pneumatic DN 300 slide valve, on the bottom side.

DISCHARGE ASSISTANCE KIT:

PNEUMATIC VIBRATORS

- On behalf of : improved discharge of the (dry) substances.
- Quantity : 4 pieces.
- Location : 2 pieces on the pressure/vacuum tank,
: 2 pieces on the filter room.
- Control : pneumatic.
- Including : piping, control valves, etc.

SIR KIT FOR HANDLING DRY SUBSTANCES

GENERAL

- Attention : various SIR provisions have already been included in the standard quotation, however in order to clarify these subjects they are mentioned once again.

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- Purpose : decontrolling technical trade by harmonization of the legislation of the EU member countries (by CE marking),
: replacement of the Dutch laws with regard to pressure equipment in construction stage,
: maintaining the present safety level.
- Remark : mandatory with the application of a SIR kit in case the vehicle is not ADR approved.

REAR DOOR CLAMP PROTECTION

- Remark : the rear door clamps can only be opened when the pressure/vacuum tank is ventilated/aerated.
- Operation : through an indicator on the clamp.

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- Signal : by means of a green light on the control box.

REMOTE CONTROL

- On behalf of : the vacuum system.
- Provisions : control box with emergency stop function,
: cable, length 25 metres, with plug.

CLOSING THE REAR DOOR

- Purpose : operating the rear door closing function from such a location, that the operator will always be able to survey the vehicle rear completely.
- Including : two hands control for opening as well as closing.

EMERGENC STOP

- On behalf of : ventilating/aerating the vacuum system in case of an emergency.
- Execution : pneumatically operated shut-off valve in the piping,
: push button on the control panel,
: socket on the control panel.
- Remarks : the approaching switch near the ball valve of the suction connection lapses,
: "TANK VENTILATION" switch on the control panel.

REAR DOOR BOLTING

- Clamps : hydraulically operated.
- Including : two hands control for opening as well as closing.

REAR DOOR SAFETY PIN

- On behalf of : protecting the opened rear door from falling to shut.
- Execution : 1 position.
- Provisions : pin with air cylinder,
: control button.

REPAIR CROSS BEAM

- On behalf of : safe repair jobs below the pressure/vacuum tank in tipped position.
- Location : underneath the pressure/vacuum tank.

TIP WARNING LIGHT

- Location : in the cab.
- Purpose : indication that the tank is in tipped position.

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EARTH GROUNDING DEVICE

- Provisions : amplifier,
: green warning light "ready for use",
: red warning light "supply",
: output on behalf of switch relay.

WARNING LIGHT

- On behalf of : earth grounding device.
- Colour : green.

EARTH REEL

- Execution : manually operated.
- Cable length : approx. 25 metres.
- Provision