

INSPIRING TRENCHLESS TECHNOLOGIES



MA FULL
SUPPLY

■ MADE
■ IN
■ GERMANY

Mixing systems

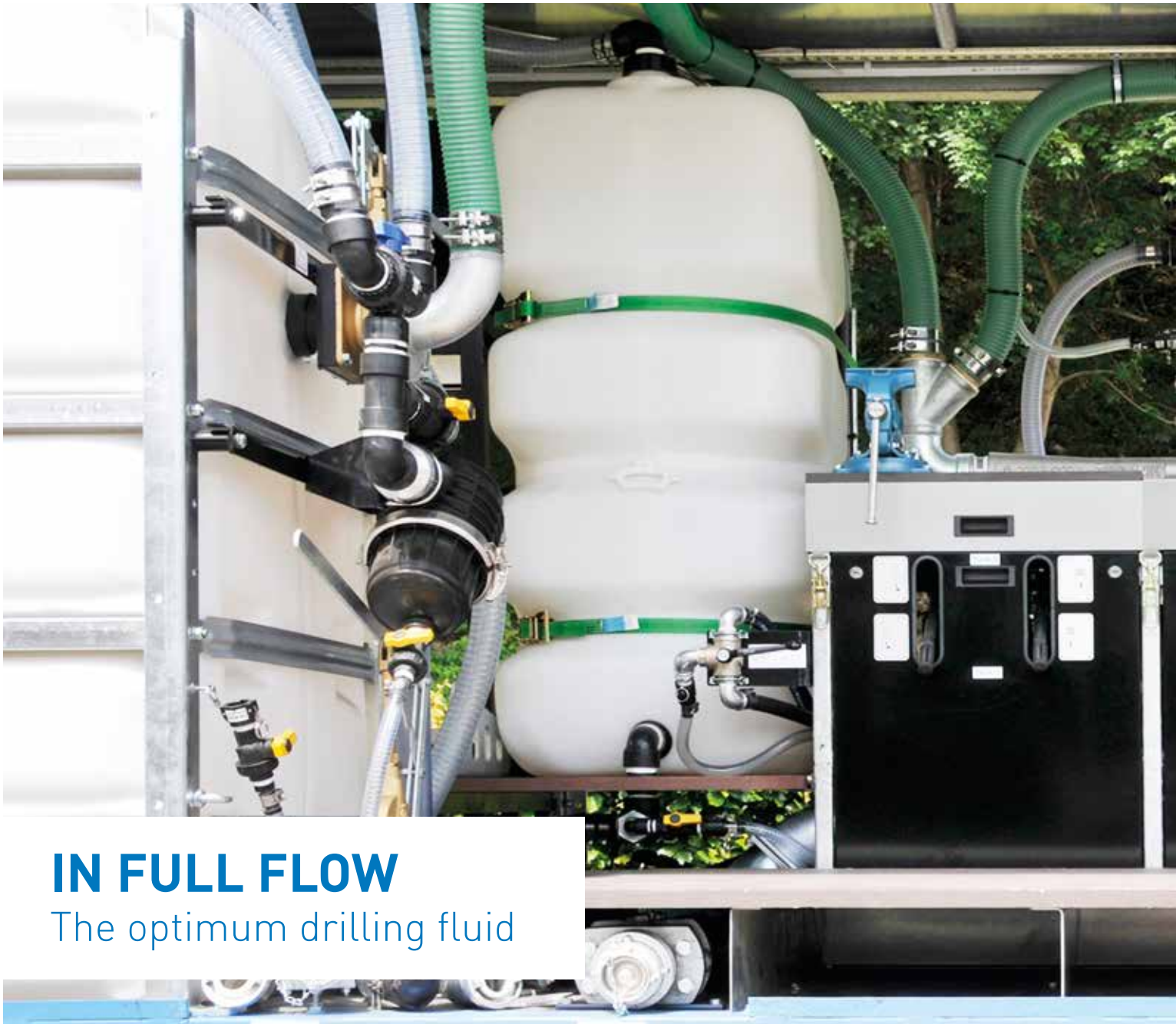
MA04

MA09

MA010

MA07





IN FULL FLOW

The optimum drilling fluid

The TT mixing systems

A first-class drilling fluid technique is a major component of successful drilling operations. Together with the drill rig and tooling, the TT drilling fluid technology enables efficient working – even in difficult soils.

Efficient mixing systems and pumps guarantee a high flow rate. To prepare drilling fluids which are perfectly adapted to the soil, professional measuring equipment and drilling fluid additives are available.

Learn more about it from our special in-house training courses or ask for additional information on mixing systems and truck setups.



Mixing system MA04



Mixing system MA09



Mixing system MA010



Mixing system MA07



Truck setup



Truck setup

Fresh water tank

Drive unit
7 kW Hatz Diesel engine

COMPACT MIXING

The mixing system MA04

The mixing system MA04 is a compact, self-sustaining mixing system which is mainly used for small HDD rigs. Due to the integrated drive unit which has an output of 7 kW, up to 75 l/min of Bentonite drilling fluid is provided. Within a few minutes, the drilling fluid is mixed by the mixing pump with a circulation volume of 380 l/min in a few minutes, the MA04 is also especially suitable for compact, mobile set-ups e. g. on a pick-up truck.

FEATURES

- Integrated mixing and high pressure pumps
- Due to the Venturi injector, the Bentonite fluid is produced within a few minutes
- Permanent circulation in the mixing tank prevents the Bentonite particles from settling
- Electric remote control with 15 m cable

FEED PUMP



DRIVE UNIT WITH HP PUMP





Technical data

Model MA04

Performance data mixing unit

Drive	Hatz Diesel 7 kW
L x W x H [mm]	1,824 x 1,168 x 1,143
Weight (empty) [kg]	425
Max. flow rate mixing and circulation pump [l/min]	380
Max. flow rate HP pump [l/min]	75
Diesel tank [l]	5,5
Max. Bentonite pressure [bar]	65
Tank capacity [l]	850

Mixing tank with a volume of 1,100 l
and internal distribution system

Circulation pump
mixing 500 l/min

QUICK CONNECTION

The mixing system MA09

Venturi injector

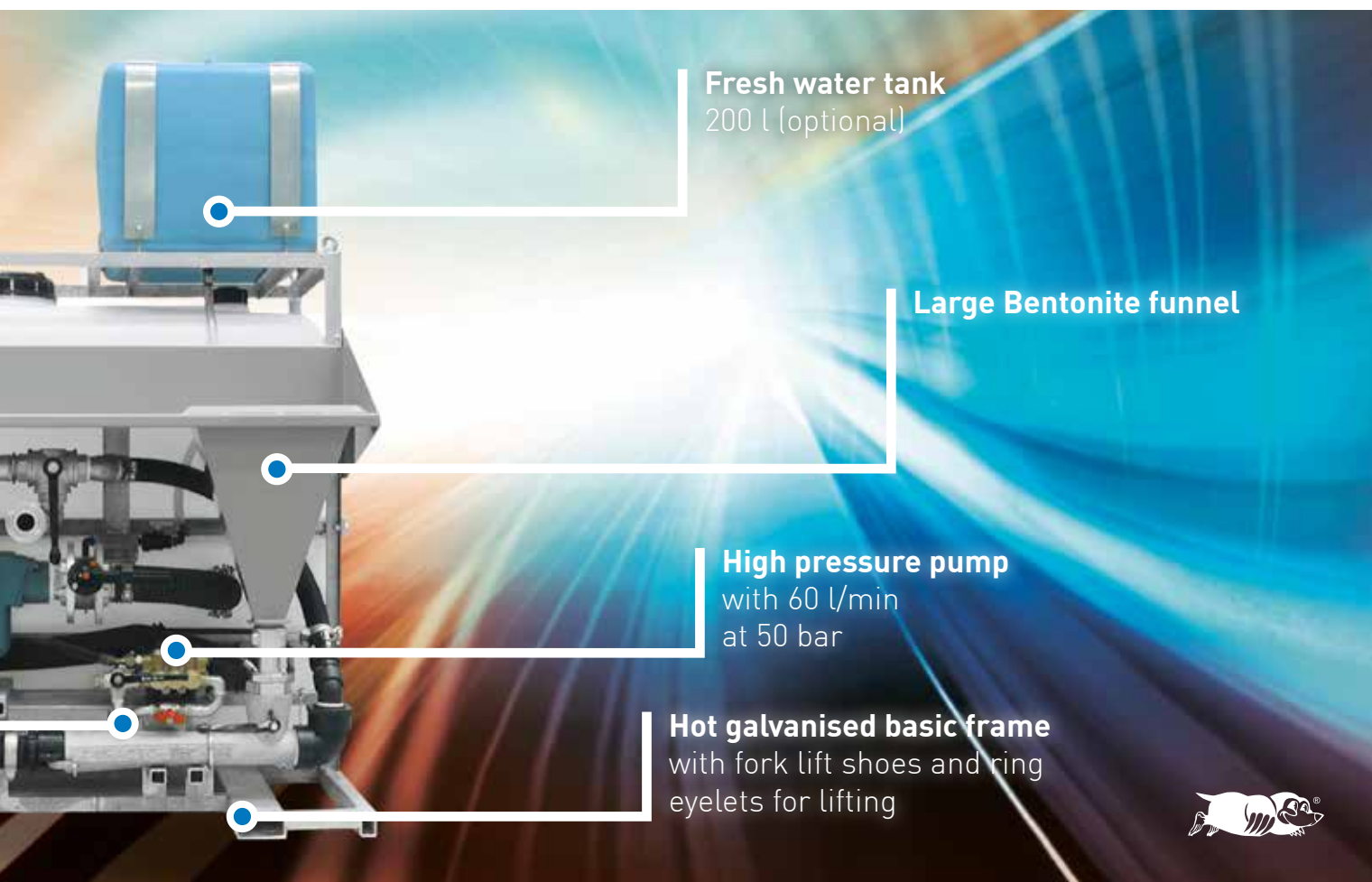
The compact and powerful Bentonite mixing system MA09 is an excellent choice for smaller fluid-assisted drill units like the GRUNDOPIT^{40/60}, GRUNDOPIT^{6V}, GRUNDODRILL^{4X} and other drill rigs. The high circulation performance of the mixing pump, 500 l/min, promises very quick mixing of the Bentonite suspension and ensures only short interruptions occur while drilling. The small footprint of the system, only 1.45 x 1.40 m, and an empty weight of only 370 kg make transportation simple.

FEATURES

- Circulation pump for mixing 500 l/min
- Mixing tank with a volume of 1,100 l and internal distribution system
- Venturi injector
- High pressure pump with 60 l/min or, as options, 25 l/min and 42 l/min at 50 bar
- Large Bentonite funnel for simple filling up
- Hot galvanised basic frame with fork lift shoes and ring eyelets for transportation
- 200 l fresh water tank (option), HP pump can be used for washing by switching over from suction to fresh water



Hydraulic drive unit TT HP-031



Fresh water tank
200 l (optional)

Large Bentonite funnel

High pressure pump
with 60 l/min
at 50 bar

Hot galvanised basic frame
with fork lift shoes and ring
eyelets for lifting



TECHNICAL DATA

Model MA09

Performance data mixing unit

Drive	Hydraulic drive unit TT HP-031
L x W x H [mm]	1,400 x 1,380 x 2,055
Weight (empty) [kg]	400
Max. flow rate mixing and circulation pump [l/min]	1,100
Max. flow rate transfer pump [l/min]	60 at 50 bar
Fresh water tank [l]	200
Tank capacity [l]	1,100

**Central, rust-proof
distribution system**

Bentonite funnel incl. scribing
grid for 50 kg of Bentonite,
**processing 25 kg
in only 25 sec.**

HIGH-PRESSURE FILL-UP

The mixing system MA010

Cleaning flap

The Bentonite mixing system MA010-D is suitable for all drill rigs with their own Bentonite high pressure pumps on board. The tank system is available with one or two mixing tanks, the 1,300 l/min mixing and circulating pump means that the Bentonite fluid is provided in a flash and can be conveyed to the drill rig at 650 l/min.

FEATURES

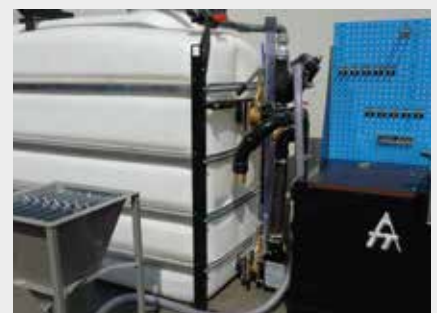
- Self-priming, completely maintenance-free, 1,300 l/min mud pump
- A mixing ratio of 6 % is possible
- Distributing system
- 4 bar max. final pressure (for long conveying paths)
- Soiling indicator for air filter
- Electric temperature monitoring
- Fuel flow pump for diesel tank of the truck
- Operating time meter
- Infinitely variable torque adjustment
- Sound power level L_{PA} mixing process – only 80.5 dbA
- Sound power level L_{PA} flowing process – only 67.5 dbA

MIXING SYSTEM CONFIGURATIONS

- 1 mixing tank 4,000 l
- 1 mixing tank 4,000 l + 1 fresh water tank 4,000 l
- 2 mixing tanks 4,000 l each

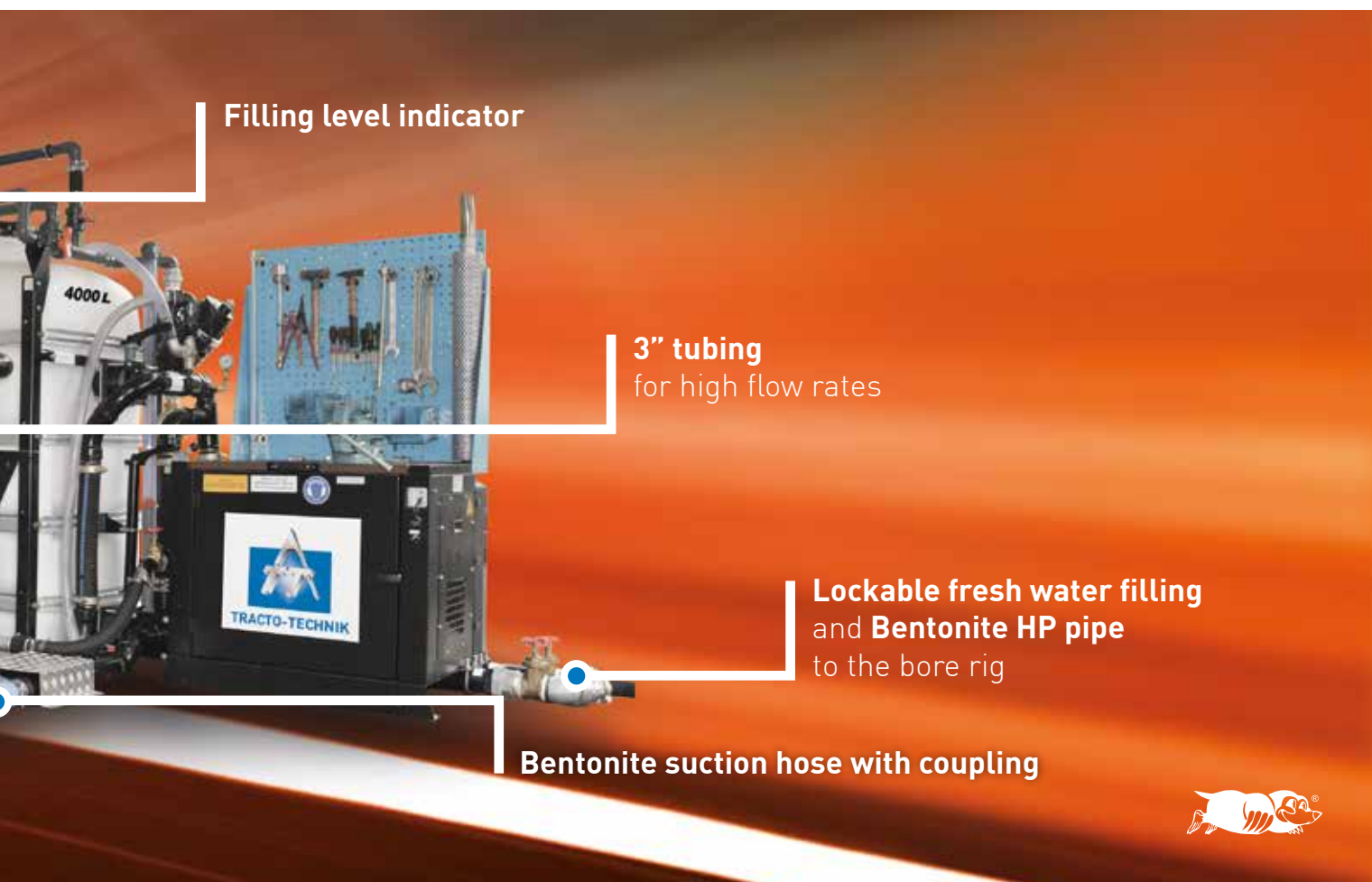


Drive unit



Mixing systems

Ask for further options and configurations



TECHNICAL DATA

Model MA010

Performance data mixing unit

Drive	Hatz Diesel 1D90Z 10.9 kW at 3,000 rpm
L x W x H [mm]	1,100 x 800 x 1,080
Weight (empty) [kg]	454
Max. flow rate mixing and transfer pump [l/min]	650 at 3.0 bar, max 1,200
Diesel tank [l]	10
Sound power level [LWA]	95

Performance data tank system

L x W x H [mm]	1,800 x 800 x 1,080
Tank capacity [l]	1 x 4,000 or 2 x 4,000 or 2 x 4,000 + 1 x 800
Weight (empty) [kg]	370

Continuous operation with simultaneous mixing and conveying in two 4,000 l tanks

Central, rust-proof distribution system

LONG-TERM SUPPLY

The mixing system MA07

Transfer pump
conveying the drilling fluid
at 650 l/min

The mixing system MA07 is a permanent Bentonite mixing and storing system for all fluid-assisted HDD rigs. The special tank and pumping system allows continuous simultaneous mixing and provision of Bentonite fluid. The MA07 is available in three drive variants: **MA07-D (diesel operation)** and **MA07-E (electric operation)** for all fluid-assisted HDD rigs with a HP Bentonite pump at the drill rig. **MA07-H (hydraulic operation)** for all HDD rigs without a HP Bentonite pump at the drill rig.

FEATURES

- Continuous operation with simultaneous mixing and conveying of the fluid in two tanks of 4,000 l each is possible
- Two independent self-priming mud pumps, completely maintenance-free, with axial slide ring seal for mixing and conveying the fluid simultaneously

- Tanks with level indicator
- Filling-up filters (eddy current filters)
- The Bentonite funnel with powerful Venturi injector processes more than 25 kg/min of dry Bentonite
- The 1,500 l/min mixing and circulation pump provides 4,000 l of drilling fluid suspension in a short period
- The transfer pump conveys the drilling fluid suspension to the drill rig at 650 l/min
- Fast and problem free cleaning
- MA07-D: driven by a 28 kW 3-cyl. Kubota Diesel

MIXING SYSTEM CONFIGURATIONS

- 2 mixing tanks 4,000 l each
- 2 mixing tanks 4,000 l each
+ 1 fresh water tank 800 l

VARIANT MA07-H (HYDRAULIC DRIVE)



With 200 l fresh water tank



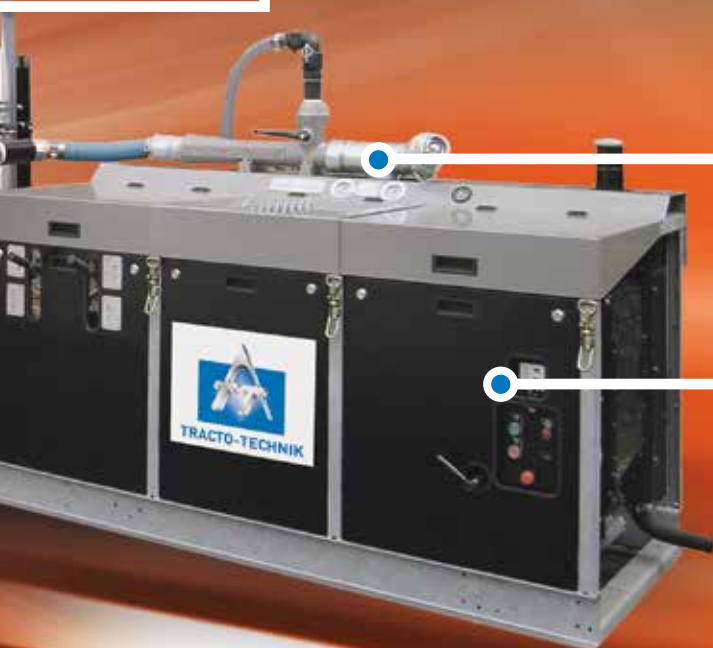
Hydraulic drive TT HP-055

VARIANT MA07-E (ELECTRIC DRIVE)



Power generator 45 kVA

Central **tank distributor system** allowing for **maximum circulation** and turbulence of the drilling fluid – even in the corners of the mixing tanks



2,000 l/min **mixing and circulation pump** quickly providing the drilling fluid

Drive unit with super-silenced **28 kW Kubota Diesel engine**



TECHNICAL DATA

Model MA07

Performance data mixing unit

Drive (3 options)	(EU standard 3a resp. EPA TierIV cert.) 3 cyl. Kubota 28 kW Electric drive* Hydraulic drive**
L x W x H [mm]	2.300 x 1.120 x 1.820 / 2.200 x 1.120 x 1.780**
Weight (empty) [kg]	1,160/790*/1,000**
Max. flow rate mixing and circulation pump [l/min]	1,500 at 4.0 bar
Max. flow rate transfer pump [l/min]	650 at 3.0 bar
Diesel tank [l]	60/-*/-**
HP pump (only with hydr. drive):	
HP pump P 62 [l/min] or	160 at 80 bar
HP pump P 72 [l/min]	240 at 80 bar

Performance data tank system

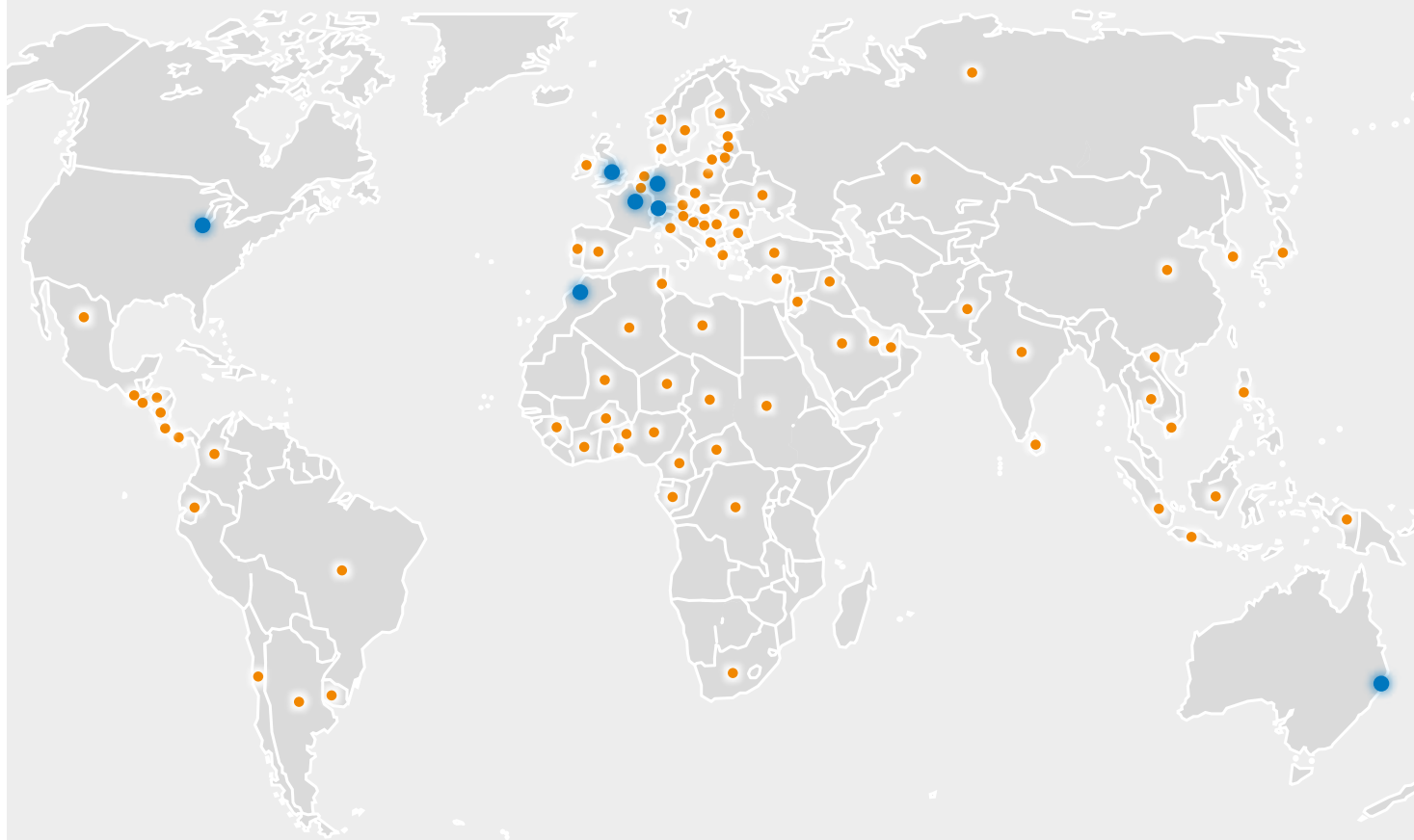
L x W x H [mm]	2,500 x 2,000 x 2,000
Tank capacity [l]	2 x 4,000
Weight (empty) [kg]	1,000

* driven by power generator 45 kWA

** driven by hydraulic unit TT HP-055

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