



Mobile Sand Filling System

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What is The Mobile Sand Filling Systems?

Mobile Sand Filling System, the railway vehicle consumes the sand for eliminating weak friction between the wheel and rail while it's running on the rail. Daily or weekly, this lost sand must be refilled. Loading sand manually causes high labor hours and costs for railway vehicle operators. That solution requirement prompts the operator companies to Mobile Sand Filling System (KDA) in order to put back the lost sand comfortably, safely, and efficiently.

Please see the following pages of the KDA catalog as the correct product/solution determination guide.

Customer Requirements Determination:

In the decision phase of purchasing a Mobile Sand Filling System (KDA) to refill brake sand into rail vehicles' sandboxes, please clearly define the below conditions for determining the correct type of Mobile Sand Filling System for your operation.

- The ground on which the sand filling system will be moved,
- Track crossings grooves and offsets, including width and height,
- Ambient conditions, where it will be stored while at a standstill,
- The distance from the inlet of the sandbox to the end wall of the sandbox,
- Power supply output in terms of voltage and amperage,
- The maximum number of vehicles that will be refilled weekly and daily,
- Any specific features that the KDA must have,
- Specifications of the brake sand,

Sand Specifications;

KDA performance largely depends on the sand specifications. According to the German DBS 918224 norm, the sand content must be as follows in the table. We test our product with sand mixed according to this norm. If your sand differs from the norm, please clearly define its content or send 55 kg of sand as a sample for conducting a performance test with the correct sand.

Grane Classes in	Grain Class in %
>2.5 mm	0.0%
2.0 – 2.5 mm	Max. 3%
1.60 – 2.0 mm	Max. 15%
0.71 – 1.6 mm	Min. 70%
0.50 – 0.71 mm	Max. 15%
0.10 – 0.50 mm	Max. 3%
<0.10 mm	Max 0.3%

KDA General Features:

- 210Ah 24V DC LiFePO4 high-capacity and long-life battery,
- Sand transfer over 5000 kg with a single charge,
- Uninterrupted operation while charging,
- 220V AC powered onboard battery charger,
- Instant tracking and customer support for the Sand Filling System over the internet,
- Forklift/pallet truck lift and transport interface,
- Access to all data on the sand filling vehicle with the touch screen,
- Battery charge rate,
- Battery charge condition,
- Fault information,
- Warnings,
- Instant pressure information,
- Machine operating hours information,
- Log information display,
- Maintenance alerts,
- Compressor performance test,
- Unblocking function,
- Manual system control,
- Manufacturer contact information
- 15 – 26 kg/min sanding rate,
- 70 dB low noise emission value,
- Start/Stop command over the filling gun,
- Filling detection system,
- User-friendly touch screen interface for control and monitoring system,
- Failure-free dust extraction system,
- Low weight,

- Almost maintenance-free oil-free compressor,
- Compact design,
- Can be filled from sand storage silos, big bags, or sandbags,
- Large sand capacity,
- Workable even under rain,
- High maneuverability,
- Very few wearing parts,
- Compliance with EU norms (CE certificated),
- Optional colors,

Painting, Mechanical Treatment, and Packaging

- Welded construction parts are normalized with the heat treatment method,
- Steel surfaces are completely sandblasted,
- All sandblasted surfaces are coated with a thick layer of durable paint by the electrostatic painting method,
- The stainless-steel parts of the vehicle are passivated by chemical treatment to protect against long-term oxidation risks,
- All Sand Filling System are dispatched in sheltered wooden crates to protect against defects during transportation,

Documentation

The following documentation is dispatched with every Sand Filling System:

- i. Operating manual (Eng.)
- ii. Maintenance manual (Eng.)
- iii. Spare part catalogue (Eng.)
- iv. Certificate of warranty (Eng.)

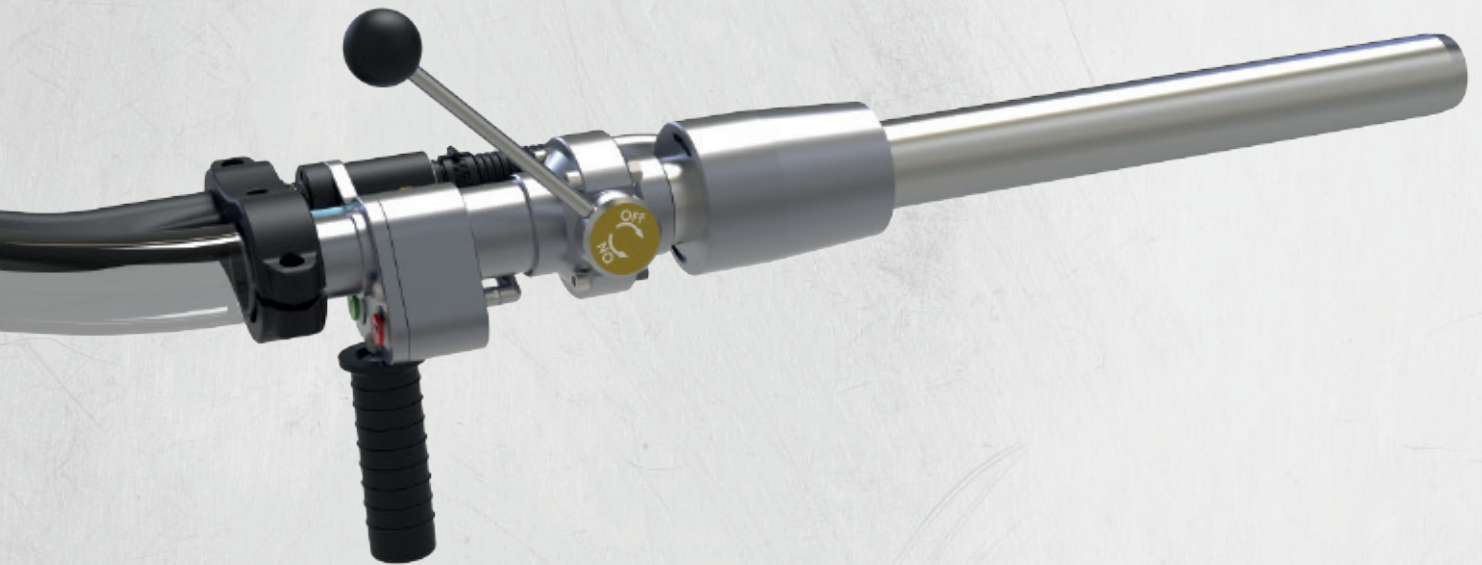
Sophisticated monitoring and diagnosis feature...



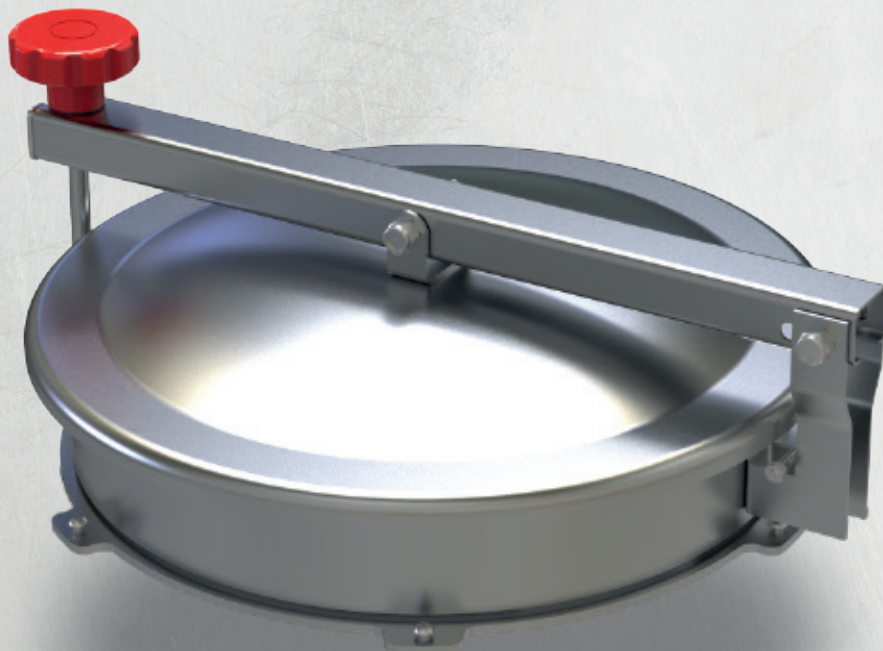
Compact controlling system...



**Start and stop feature on the gun. Fully mechanical,
failure-free dust suction system.**



**Like watertight, stainless steel sand-filling cap;
most of the other component is tight for water so
KDA can run under rain.**



Overview of KDA's



BK□□□, EK□□□, BH□□□ Front View



BH□□□ Back View



EK□□□ Back View



Motorized Sand Refilling Vehicle

L x W x H
3890 x 1000 x 2110
Turning radius: approx. 3560mm
Inclination: empty 20%, loaded 10%
Speed: empty 25km/h / loaded 18 km/h

KDA Feature	Parameter and Explanation
Sand Flow Rate With Internal Pressure Generator (1 Compressor)	15 kg/mn
Sand Flow Rate With Internal Pressure Generator (2 Compressors)	30 kg/mn
Sand Flow Rate With External Pressure Generator	30 kg/mn
Automatic External Pressure Generator Connection and Dis-Connection Detection System	Special Pressure Switch and SW
Dust Suction System	Fail-Safe Mechanical System
Dimensions Approx. (LxWxH) in mm	(1200X700X1400) mm
Tare Weight Approx.	325 kg
Full Load Weight Approx. (Higher capacities are available)	625 kg
Sand Carrying Capacity (Higher capacities are available)t	200 lt (300Kg)
Operating Voltage	24V DC
Battery Type	LiFePO4
Battery Capacity	Ah
Power Consumption	96 Ah
Power Consumption	52,5 Ah
Power Consumption	4,5 Ah
Integrated Inverter 220 VAC to 24VDC	160 Ah
External Power Supply Voltage	220V AC
Noise Emission Level	<70DbA
Integrated Battery Charger	30Ah (5,5 hours charging time)
Integrated Battery Charger	45Ah (4,5 hours charging time)
Integrated Battery Charger	60Ah (3,5 hours charging time)
Cable Drum	15m
House Drum	15m
Operation Under Rain	Special Sealing Systems
UV Resistance In Case Of Outdoor Run	Special Paint, House, Screen etc.
Start / Stop Command Over The Filling Gun	Start Stop Button On the Gun
Sand Tank Automatic Filling Detection	Smart Sensor
Customer Support Via Internet	Remote WIFI Connection
Forklift/Truck Lifting Interface	Mechanical Interface
Smart Diagnose and Monitoring System	Computerized System With Touch Screen
In Case Of Sand-Filling Hose Blockage, Clearing System	Special Pneumatic System and Sophisticated Software
Sand-Filling Performance Measurement System	Special Pneumatic System and Sophisticated Software
Maintenance Tracking System	Sophisticated Software on Board

info@kaaf.com.tr
www.kaaf.com.tr
+90 (352) 502 85 96