



Innovative Technologies for Ground Support Equipment



# Conveyor Belt Vehicle Orbiter D

7.5 D / 9 D / 12 D







Our Orbiter conveyor belt vehicles are easy to adapt to the individual demands of our customers.

# MULAG Conveyor Belt Vehicles Orbiter D

- Individually adaptable to customers needs
- Easy and fast Handling
- Long reach of boom

## Easy and effective handling is our plus

Interesting equipment details like hydraulically suspended seats adjustable to the weight of the driver/co-driver and also adjustable in longitudinal direction and height show our claim for ergonomic vehicles as well as the clearly arranged operating controls in the driver's field of vision and the adjustable steering wheel.



The design of our airport vehicles was based on an independent chassis especially developed for that purpose: Thus we achieve optimal load balance and outstanding dynamical characteristics, as well as quick and easy access to all important service points and components.

## Ground Support with worldwide standards

The MULAG conveyor belt cars Orbiter E with electrical drive are extremely well under control during maneuvering at the aircraft. Optional extras such as protection guards, load ramp, closed drivers cab, heating and preheating systems and many more guarantee an individual configuration to the customers needs. The conveyor belt cars can be delivered with closed sound-isolated cab, cab without door or with an open driver's platform.

The conveyor belt cars are ideal for the ground support of all types of aircraft – up to reaching the maindeck without problems using the Orbiter 12.

## MULAG-Quality makes an impact

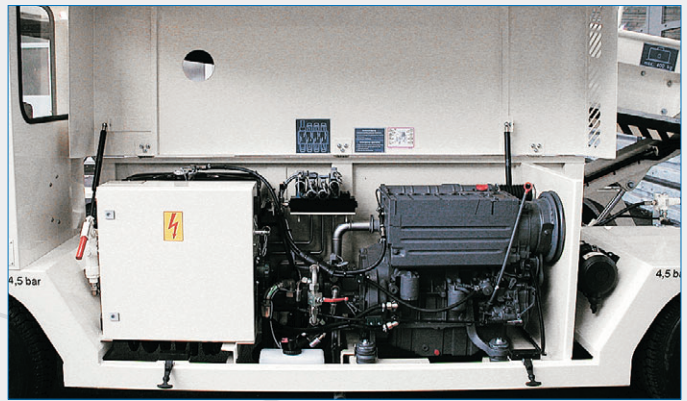
Fully developed technology and more than 30 years of experience with the manufacturing of airport vehicles combined with the latest technical know-how are complemented by the highest manufacturing quality, certified by DIN EN ISO 9001:2000. Thus we can guarantee high cost effectiveness with the use of our products:

- high availability and reliability
- low cost of maintenance

## Serial Equipment

- Triple-layer endless conveyor belt with Rufftop-surface
- Belt speed continuously adjustable through hydraulics (no motor speed change)
- Two rubber wheels as protection on front end of boom
- Step on rear belt frame
- Robust industrial Diesel-engine
- Hydrostatic drive
- Hydrostatic steering
- Dual circuit power-brake with vacuum booster
- Standard road traffic lights and horn
- Outside rear view mirrors
- hydraulically suspended drivers/co-drivers seat individually adjustable
- Safety belt
- Roof window with safety guard\*
- Wiper-washing system\*
- Sun shield for driver\*
- Fuel gauge
- Working-hour counter
- Five emergency switch-offs

\* with closed and open cabin



Convincing powerful Diesel-engine concept



Many innovative details of the Orbiter are serial equipment

## Engine and Powertrain

Engine	oil-/watercooled Deutz-Diesel, 4 cylinders / F4 L 2011* 39 kW / 53 PS at 2300 rpm
Drive	hydrostatic
Steering	Hydrostatic steering system
Brakes	Dual circuit brake system with vacuum booster
Front axle	Steering axle with disc brakes
Rear axle	wheel hub motors, flange-mounted to the frame
Electric system	12 V Battery, 88 Ah*
Wheels/tires	205 R 14
Driving speed	approx. 25 km/h

Dimensions and Weights	Orbiter 7.5 D	Orbiter 9 D	Orbiter 12 D
Dead weight	3.500 kg	3.800 kg	4.300 kg
Vehicle length	7.800 mm	9.100 mm	12.300 mm
Vehicle width	2.190 mm	2.190 mm	2.190 mm
Height over top of cab**	2.000 mm	2.000 mm	2.000 mm
Wheel base	3.100 mm	3.100 mm	4.000 mm
Turning circle	7.400 mm	7.800 mm	11.000 mm
Belt load, max.	135 kg/m	135 kg/m	135 kg/m
Single load, max.	400 kg	400 kg	400 kg
Belt speed	0 - 0,8 m/sec	0 - 0,8 m/sec	0 - 0,8 m/sec
Belt length	7.500 mm	8.800 mm	12.000 mm
Belt height front, max.	4.200 mm	4.930 mm	6.100 mm
rear, max.**	1.680 mm	1.650 mm	1.670 mm
Belt height front, Transport	1.020 mm	1.010 mm	1.000 mm
rear, Transport	730 mm	760 mm	760 mm
Inclination angle, max.	30°	30°	30°
Belt width	600 mm	600 mm	600 mm

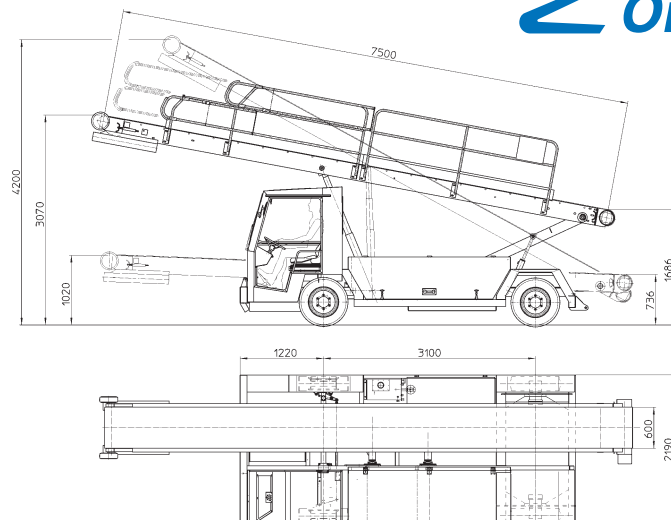
\* other technical equipment on demand

\*\* optional feature

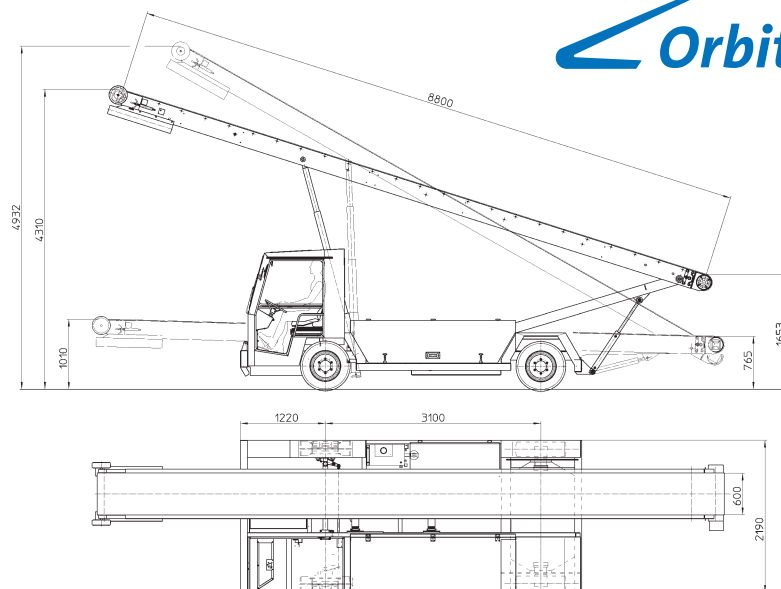
All technical dimensions are rounded values (approx.)



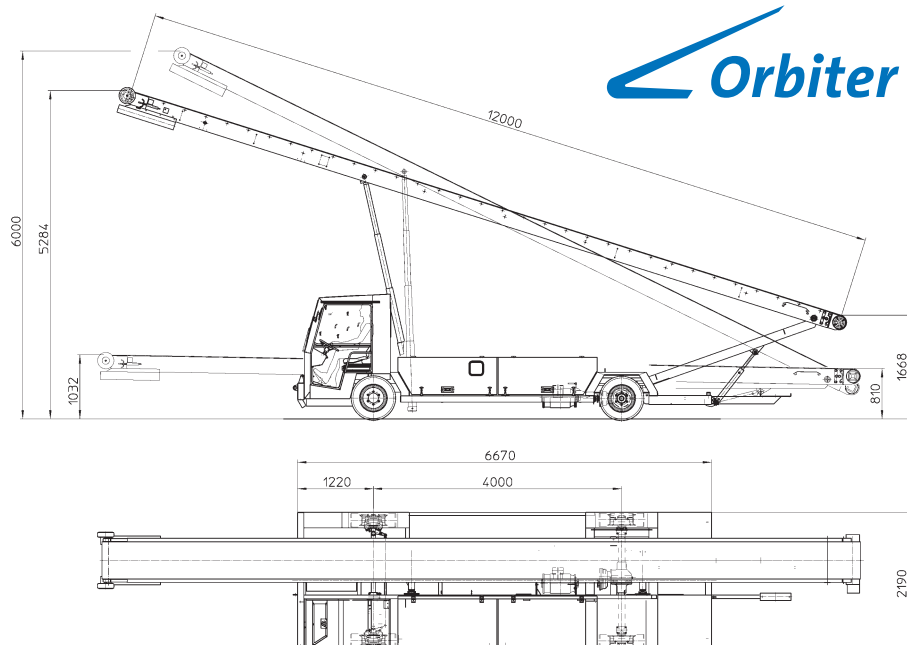
## Orbiter 7.5 D

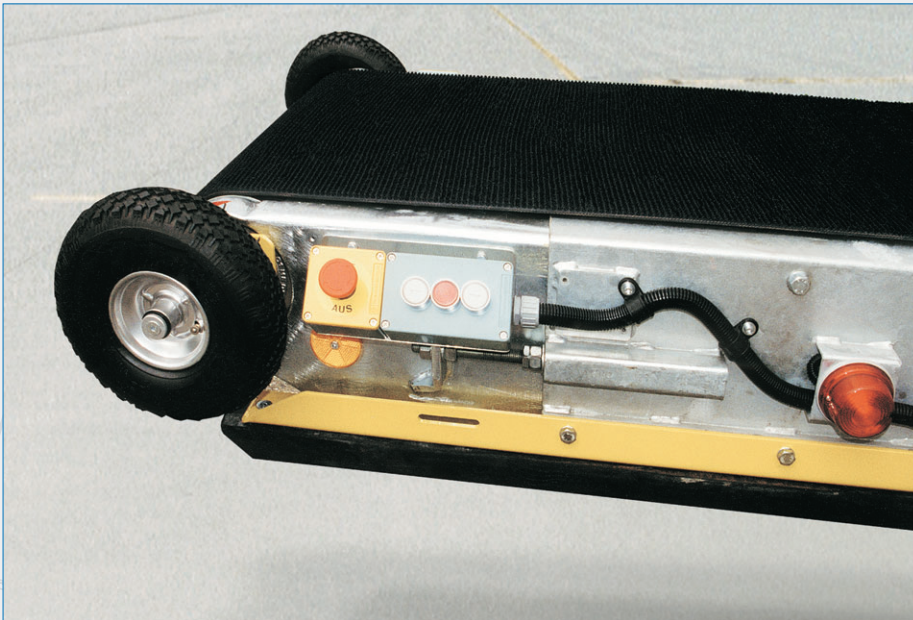


## Orbiter 9 D



## Orbiter 12 D



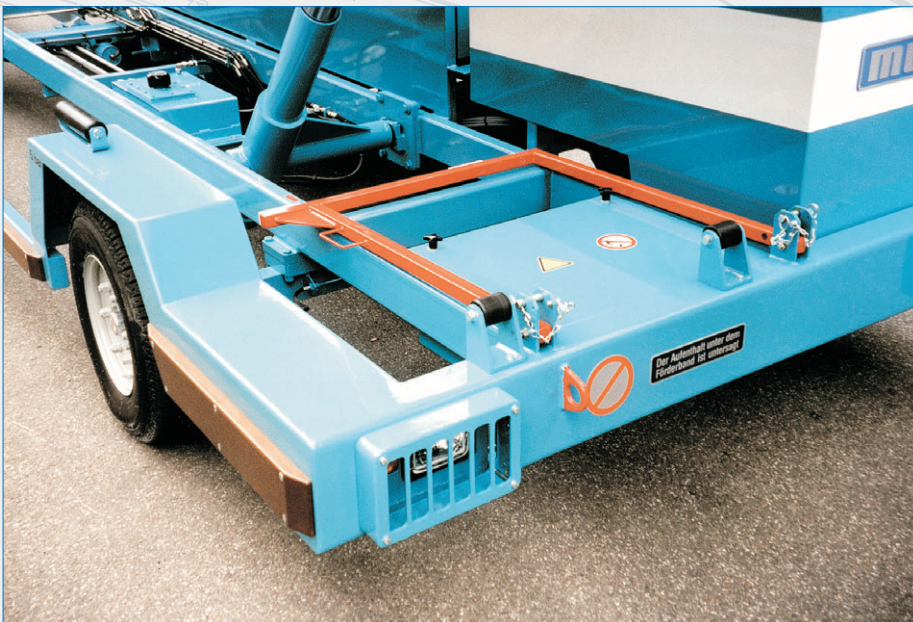


## MULAG-Quality is at the bottom of every detail

### Maneuvering protection

At the front end of the boom rubber tires help to avoid damage to aircraft during the positioning of the belt car. At every end of the boom there are two emergency swith-offs.

Optional: Belt movement control at the front end (also detachable).



### Safety first!

For the safety of the operation and maintenance personnel we optimized many details of our conveyor belt car concept – for example the erectable-security hoop.



### Double-telescopic Railing

The upper and the lower part of the telescopic railing at the front of the boom can be adjusted independently.



# Orbiter

7.5 D / 9 D / 12 D

## Orbiter D – the Diesel-Solution for Ground Support at airports

The Orbiter conveyor belt vehicles provide professional ground support: Their use is extremely economical – efficiently and fast all loading/unloading tasks of aircrafts are accomplished.

Through the high quality of workmanship long down times and service cycles are reduced to a minimum – efficiency and economy at duty on airports!



### At MULAG service comes first

Even the best vehicle design is of no avail without a strong and efficient after-sales service during the whole lifetime of the vehicle. This is where MULAG comes into play, with the reliable and quick supply of information and spare parts for our customers – you can count on us!

### High-Tech is our crucial advantage!

The use of high-grade industrial components instead of standard components is crucial for the reduction of down times and need for service of our vehicles to a minimum! Overdimensioned power and loading capacities result in high reliability and safety – well known to our customers worldwide as MULAG Quality.

### Our achievements in Ground Support are convincing!



Efficient use under all working conditions – simply unbeatable!



Maximally lifted – conveyor in its highest working position



Baggage loading gets fast – even with large baggage quantities!

# MULAG

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