ECO-FRIENDLY ELECTRIC DRIVE

bulmor

SideBull

Your solution for PRM boarding



Strong.
High stability
and durability

Safe.
Enabling safe
and fast boarding

Efficient.
Maximum endurance
and easy maintenance

A tradition of innovation and reliability.



Tailor-made design and production

Machinery Tradition

Since 1879

Founded as Schöberl & Söhne Motoren- und Maschinenfabrik, the company specialised in the development and production of sideloaders from the 1980s onwards, thus creating an iconic product. This significant step was followed by many more on the path to market leadership in this segment.

However, the company did not just develop internally but integrated the technology of other industry pioneers into its skill set. By doing so, BULMOR developed its strengths into clear competitive advantages for customers and users.

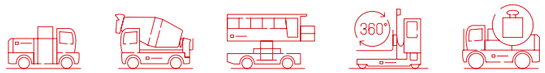
Unique transport

ROBUST

EFFICIENT

SAFE

ECONOMICAL



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GEPRÜFTE QUALITÄT · AUSTRIA · GÜTEZEICHEN · 30.126 · CERTIFIED QUALITY

Typical BULMOR: MANY YEARS OF EXPERIENCE

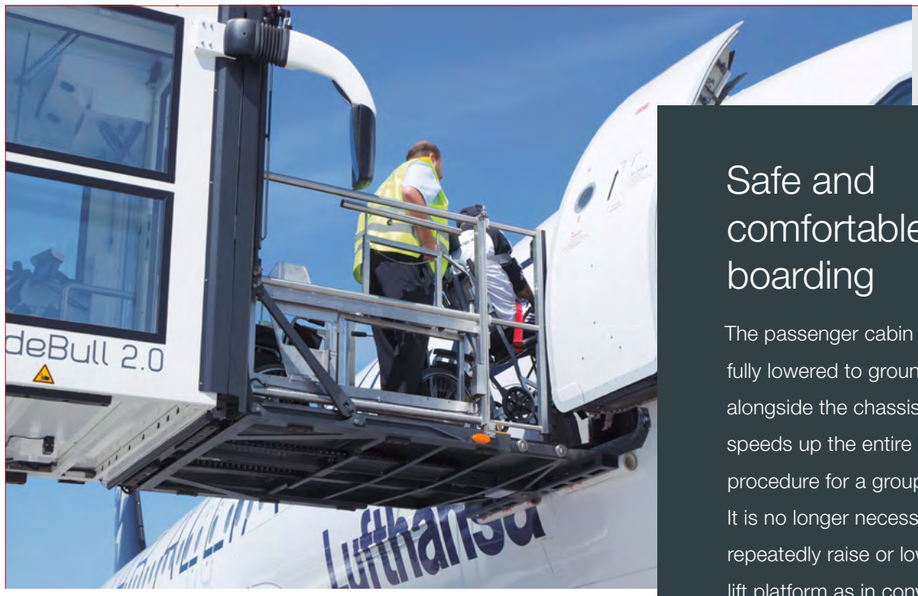
Your solution for PRM boarding

The number of air passengers with reduced mobility (PRM) who find it difficult to cover longer distances at airports and to use passenger stairs or removable boarding ramps on remote positions continues to climb around the world. This trend poses a great challenge to airports and to their PRM assistance providers. Safety, efficiency and flexibility are key factors in the ground handling process. The SideBull was developed to ensure short turn-around times as well as comfortable boarding and disembarking for air passengers. The unique, patented SideBull concept, a lift vehicle based on a sideloader chassis, was developed in collaboration with Lufthansa LEOS and was later adapted to the specific requirements of PRM handling. The SideBull Ambulift sets new standards in PRM assistance and has been used successfully for years at numerous international hubs as well as mid-sized and small airports. The SideBull is in the meantime used at 7 of the 10 busiest airports in Europe.

SideBull Safe PRM transport worldwide



Key benefits of the SideBull



Safe and comfortable boarding

The passenger cabin can be fully lowered to ground level alongside the chassis. This speeds up the entire boarding procedure for a group of PRMs. It is no longer necessary to repeatedly raise or lower a tail lift platform as in conventional scissor lift trucks.



70% faster docking procedure

The design of the vehicle ensures quick handling during peak times, to meet the short turn-around requirements by many airlines. Stabilisers are made unnecessary due to a rugged chassis. This saves valuable time and make the docking procedure easier for the operator.



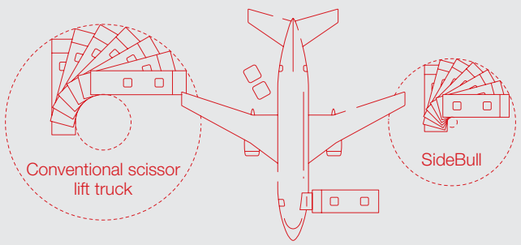
Docking on to buses

The SideBull can dock directly on to most minivans and PRM buses. Passengers neither have to surmount steps nor do they have to individually exit the bus to enter the ambulift. This simplifies the procedure and results in time savings, especially at international hubs with long driving distances.



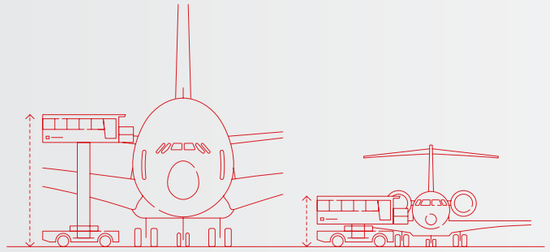
Functional one-man operation

The driver's stand is integrated into the passenger cabin of the SideBull, so there is no spatial separation between the driver and the passengers. Therefore the driver is not forced to inconveniently switch between cabins.



Manoeuvrability and usability

Since the SideBull does not have a separate driver's cabin, it is shorter than conventional scissor lift vehicles. The sideloader steering system enables a steering angle of almost 90°. The vehicle can almost fully rotate around its rear axle and needs only half the turning radius of ordinary scissor lift trucks. The SideBull needs less space, is more agile and therefore easier to manoeuvre when space is limited.



Suitable for use with all aircraft types

Due to the specially designed front platform and the absence of a separate driver's cabin (necessary in conventional scissor lift vehicles), the vehicle can dock on to all wide-body aircraft as well as all most common short-range aircraft with low door sill heights.



Advantages.

- Safety
- Process optimisation
- Performance
- Reliability
- Expertise
- Flexibility
- Comfort



Key benefits of the SideBull

Wind stability up to 100 km/h

The SideBull's robust, torsion-resistant sideloader chassis allows it to be used in winds up to 100 km/h without any additional stabilisers.

Simultaneous operation with cargo loaders

On certain aircraft types (specifically A319), the front right passenger door is very close to the cargo door. Conventional scissor lift vehicles cannot simultaneously dock to the aircraft. The SideBulls special front platform design with a 15° turning dock-tongue allows the vehicle to dock at a highly skewed angle and at the same time as a cargo loader.

Optimising the overall process

The significantly faster boarding and docking procedure, the simplified operation for the driver and the superior vehicle agility enable a substantial optimisation and improved flexibility of the overall PRM assistance process. In the medium and long term, this leads to a reduction in overall process costs.

Reduction in delay codes

Ambulifts usually are the last vehicles to approach the aircraft during outbound processes. At times their way is blocked by other GSE which can cause delay codes (PW 19) attributed to the service provider, justified or not. Due to the SideBull's superior agility and manoeuvrability, it is possible to move efficiently between other GSE and thus reduce delay codes.

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A modified sideloader is used as the chassis for the SideBull. These special-purpose side forklift trucks pick up their load from the side and have been used in intralogistics, for over 50 years. The vehicle is equipped with a hydraulic comfort suspension system for each individual wheel. The Docking Assistance System ensures an easy and safe docking procedure. The distance to fuselage is measured and shown on driver screen, a laser dot indication helps for height adjustment. The front platform tab angle automatically aligns to fuselage. A crash prevention system and alarm according to IATA AHM913 are included. All load-bearing components of the lift unit are designed with a tenfold margin of safety. The lift chains are doubled and monitored by safety sensors, check valves on the lift cylinders prevent the cabin from dropping inn the event of loss of hydraulic pressure. Between the cabin and vertical lift is a shut-off bar that serves as protection against rushing and shearing. Electric rail and door locks with an emergency opening function serve as fall protection. The SideBull has been successfully tested in winds of 100 km/h and higher. A camera system that automatically switches between various views, shows all areas that are not directly visible.

Technical details



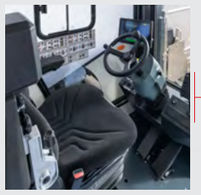
Strong auxiliary heating system and AC for continuous operation

Triplex lift mast – all load-bearing components with a tenfold margin of safety



Easily accessible maintenance and emergency operation panels





Driver‘s stand with air suspension comfort seat, joystick and colour touch screen





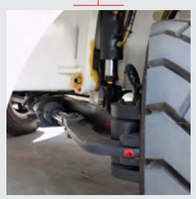
Mast traverse with crossed-over cylinders



Extendable front platform with turning dock-tongue and swivelling/ telescoping side rails



Integrated vertical lift with inward-opening front rails



Robust sideloader steering system with almost 90° steering angle + Innovative hydraulic single-wheel suspension system

SPECIFICATIONS	
Lifting capacity	1.500 kg / 15 persons
Number of wheelchairs	4–5, fixed with restraint system
Number of seats	4–10 (depending on type and position)
Lifting height	5,700 / 8,100 mm (A380 UD)
Engine / drive	100kW (Diesel) / hydrostatic drive or electrically powered with Li-Ion technology
Length × width × height	8.3 × 2.7 × 3.4 m
Vehicle suspension	Single-wheel suspension, hydraulic
Speed	25–30 km/h, 2 km/h (crawling speed)
Chassis	Sideloader DQ70/19/57TV
Lifting unit	Triplex mast
Standards/directives	EU Machinery Directive, EN1915, EN12312-14
EC type examination/ certification	By DGUV (notified body 0417)

Typical BULMOR: ENGINEERED TO PERFECTION



Ready for Airbus A380!

Lifting operations are possible up to 8m to the A380 UD. Yet it is not a problem for the SideBull 2.1, small and agile, to serve all other mid-sized and short-range aircraft. The vehicle can optionally be equipped with a higher lift mast.

The docking procedure







When the cabin is being lifted while approaching the aircraft, the vehicle speed is automatically reduced to 2 km/h. The distance to the aircraft and lifting height are indicated on the display. The driver has an unobstructed view of the closed aircraft door, eliminating the need for repeated reversing and re-positioning. An adjustable automatic drive shut-off places the vehicle in neutral if it gets too close to the aircraft. The remaining distance can be closed by the 700 mm extendable front platform. A 15° turning dock-tongue compensates any skewed docking position. The maximum possible contact pressure between the rubber bumpers and the fuselage is limited. As soon as the vehicle is docked to the aircraft, the side rails can be swivelled in for easier opening of the aircraft door by the cabin crew. Then, the side rails are telescoped forward and the front-end fall protection is opened.

Safety first!

The vehicle is designed and built in accordance with the EU Machinery Directive, EN1915 1-4 as well as EN12312-14 and has undergone an EC type examination by the independent testing and certification body DGUV (notified body 0417).



Passenger experience

Together with safety, comfort is of highest importance. The tinted panoramic windows are opaque from the outside. From the inside they offer a perfect view onto tarmac. The new interior lighting creates a pleasant atmosphere. The innovative comfort suspension system and high-quality comfort swivel seats, offers a first class ride both for the passengers and the driver.

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Typical BULMOR -

more than others.

The machines in the BULMOR fleet stand for power and robustness, as well as efficiency and safety.
Every machine is created using the experience and genes of more than 45 years of experience in the field of forklift construction.
With this strength, coupled with today's modern technical know-how, **we build smart solutions for strong operations.**

Bulmor airground technologies GmbH
Fabianistraße 8
A-1110 Vienna
AUSTRIA

p: +43 7262 58397
e: mail@bulmor-airground.com

mobility partner of:

Österreichisches Paralympisches Committee

www.bulmor-airground.com