

*Sichelschmidt
forklifts*

Cleanroom forklifts



Sichelschmidt^{GmbH}
material handling





Not only clean, but cleanroom clean

Cleanrooms impose high demands on the ambient air due to the set maximum particle levels. Especially in the pharmaceutical industry, in research and germ-free production of food and pharmaceuticals, as well as in nanotechnology, highest priority is given to the monitoring of these parameters.

Failing this may produce distorted measurements and/or contaminated product batches. This in turn may result in unmanageable recourse claims and rampant costs.



Since the use of stainless steel forklifts may not always be feasible due to their high initial cost, Sichel Schmidt offers for these applications an optional low cost package "RR" for all pedestrian operated vehicles. This package may also be used in combination with explosion-proof forklifts for category 3GD (Zone 2/22) and 2GD (Zone 1/21).

All GMP vehicles are equipped with a closed hydraulic system and can optionally be supplied with a closed simplex- or duplex lifting column, helping to further reduce possible sources of contamination in the working environment. The protection level of all vehicles with "RR" or "GMP" option is at least IP54 and can be increased to IP6x if required. All stainless steel components are made of stainless 1.4571 or 1.4542, with a maximum surface roughness of up to $<1.2 \mu\text{m}$. Stainless steel is the material of choice when it comes to corrosion protection, as well as, for the use in chemical and pharmaceutical applications. At our minimum protective level "RR" this begins with every component that may come into contact with a product and can be expanded to encompass the whole truck for our maximum protective level "GMP".

At the minimum protective level the vehicle chassis is coated with isopropanol proof varnish and fitted with a surrounding stainless steel bumper, protecting it effectively against mechanical damage. All plastic components are made of isopropanol resistant material and can therefore be disinfected without problem. All vehicle surfaces are largely closed and easy to clean.

At the maximum protective level all vehicles come with an all stainless steel chassis and an enclosed SMX mast (closed lifting column).

Truck types

Forklifts for clean room applications in normal and hazardous areas Zone 1/21, Zone 2/22 and Explosion Group IIC



Cleanroom application

In many production processes under cleanroom conditions, there are requirements for explosion protection that must be observed. Sichelschmidt's modular system allows for the combination of the explosion proof truck series with the modules of the cleanroom truck series. Thus, meeting all the requirements for cleanroom and ATEX applications. All cleanroom models are also available for non-Ex applications.

GMP trucks

- Chassis and mast made of stainless steel 1.4301
- System protection IP 54
- Smooth and easy to clean surfaces
- Closed battery compartment
- Closed stainless steel lifting column, DFCV mast optional
- Closed hydraulic system with expansion vessel
- Surfaces are glass bead blasted and can optionally be electrochemically polished
- All surface plastic components are isopropanol resistant
- Oils and lubricants are food grade

RR trucks

- Depending on model type, load capacities of up to 5,000 kg and lifting heights of up to 6,000 mm
- Standard DFCV or TFCV masts for high residual load capacities
- System protection IP 54
- Chassis and mast painted in RAL 9010, isopropanol resistant, chassis in stainless steel 1.4301 as option
- All stainless steel surfaces are glass bead blasted, optionally electrochemically polished
- Closed hydraulic system with expansion vessel
- Smooth and easy to clean surfaces
- All stainless steel components made from 1.4301 with max. surface smoothness
- Closed battery compartment
- All surface plastic components are isopropanol resistant
- Oils and lubricants are food grade



d100 GMP / d100 RR*

Electric pedestrian pallet truck

For the horizontal transport of pallets and containers. The vehicle chassis is made of stainless steel with easy-to-clean surfaces. The closed battery compartment and the self-contained hydraulic circuit prevent contamination of the working area.

Load capacity: GMP up to 2,000 kg, RR up to 5,000 kg.

Lifting height: GMP / RR 125 mm.

* Chassis width increase to 900 mm above 3,000 kg load capacity



d400 GMP / d400 RR

Electric pedestrian pallet stacker

For reliable storage, retrieval, lifting and transportation of pallets and containers. The d400 GMP offers a vehicle chassis with a closed lifting column and stainless steel pallet fork carrier. The closed battery compartment and the self-contained hydraulic circuit prevent contamination of the working area.

Load capacity: GMP up to 1,250 kg, RR up to 3,000 kg.

Lifting height: GMP 3,750 mm (h3 max. 2,000 mm with closed lifting column, above that an open stainless steel DFCV mast is required), RR up to 5,700 mm.



d500 GMP / d500 RR

Electric pedestrian straddle stacker

With high stability making good process e.g. in barrel handling – even under clean room conditions. The design of the d500 GMP is matched to the smallest detail for use in cleanrooms and hygienic applications.

Load capacity: GMP up to 1,250 kg, RR up to 5,000 kg.

Lifting height: GMP 3,750 mm (h3 max. 2,000 mm with closed lifting column, above that an open stainless steel DFCV mast is required), RR up to 5,700 mm.



d600 GMP / d600 RR

Electric pedestrian forklift

The specialist for transporting pallets and containers as well as for combined use with a wide variety of attachments. The vehicle chassis is designed with a closed lifting column, forks and fork carriage in stainless steel.

Load capacity: GMP / RR up to 1,250 kg.

Lifting height: GMP 3,750 mm (h3 max. 2,000 mm with closed lifting column, above that an open stainless steel DFCV mast is required), RR up to 5,000 mm.



d1200 GMP* / d1200 RR

Electric pedestrian reach truck

The self-supporting load suspension and its mast feed make the d1200 particularly flexible in use. Whether it be IBC, chemical pallets, attachments or special containers – with its high load capacity it is universally applicable.

Load capacity: GMP up to 1,250 kg, RR up to 2,000 kg.

Lifting height: GMP 3,750 mm (h3 max. 2,000 mm with closed lifting column, above that an open stainless steel DFCV mast is required), RR up to 6,000 mm

* not available with closed lifting column

Competent and prompt –

The Sichelschmidt service

- *Nationwide service stations in Germany and cooperation partners worldwide*
- *Manufacturer-independent inspection with standard-compliant certification on electrically driven Ex-vehicles and related devices*
- *Service technicians trained by TÜV Saarland according to the BSVO*



Today 20 service engineers work for Sichelschmidt at six locations. In close co-operation with the distribution partners, they mainly carry out preventive maintenance. Moreover, the Sichelschmidt customer service, for example, performs periodic inspections, which are required according to § 15 Industrial Safety Regulation (BetrSichV) for mobile electrical equipment in Ex-areas and therefore also for Ex-industrial trucks. Our service engineers are qualified not only to perform §15 inspections on Sichelschmidt equipment, but on all explosion proof forklifts, vehicles and hoisting equipment.



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