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»**BISON**« **FAMILY** THE FUTURE PROOF PUSHBACK

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CONVENTIONAL TRACTORS



MADE FOR YOUR MISSION

1-20/2

BISON FAMILYFUTURE-PROOF AIRCRAFT TRACTORS

The »BISON« family consists of a comprehensive range of aircraft tow tractors capable of handling passenger and cargo aircraft of 50t to 600t MTOW.

Because the product family is modular, customers can choose between diesel and electric power trains. In addition, a wide range of options allows for customization for your operating conditions.

With minimal maintenance and a wide range of components that are identical across the entire product family, you benefit from low inventory requirements and low TCO.



GOLDHOFER »SAFETY«



MODULAR PLATFORM



INDIVIDUAL VALUE



ALWAYS AHEAD.

Goldhofer has established itself as a leading provider of sustainable and highly efficient aircraft and cargo towing the 1980s, Goldhofer has established solutions, aligning with global "Green Initiatives" and "Blue Sky Policies" adopted by airports worldwide. However nowadays, aircraft belong to the most secure means of travel due to extremely high safety standards, extensive staff training, advanced engineering and strict maintenance procedures. To ensure that these high standards are met, as part of the "airport machinery" vehicles and employees on the apron must also contribute to making air travel and cargo movements safe and sustainable. deeply rooted in the company. This is where Goldhofer is always one step ahead and synonymous with »SAFETY« on the apron. With a history

of building aircraft tractors dating back to the 1960s and electric vehicles in itself as one of the pioneers within the industry. During this time, Goldhofer has amassed extensive expertise and unrivaled experience.

Today, among others, this is reflected in an extremely high ratio of employees in R&D. This continuous competence build-up has led to numerous groundbreaking products, such as the »PHOENIX« series or the »IonMaster« high-voltage technology for E-vehicles. For Goldhofer, »SAFETY« is not just a theoretical concept but a culture that is

GOLDHOFER SAFETY EXPERIENCE, COMPETENCE, CONTINUITY

EXCEPTIONAL SERVICE

- + Goldhofer provides maintenance plans, general overhauls and modifications
- + Spare parts: 15-year supply at least or provisioning of alternatives (equivalent parts, overhaul, etc.)
- + High-quality components from long-term partnerships with suppliers
- + Remote error detection enables fast, time- and resource-saving help for minimum TCO

EXTRAORDINARY EXPERIENCE

- + Highest experience for both, towbarless and conventional tractors in the market
- + One of the pioneers in E-vehicles starting 1986 with the Schopf F356
- + Pioneer in high voltage technology with the »IonMaster« Technology
- + Long standing employees with outstanding advisory competence

GOLDHOFER »LINK«

- + The tool for digitization on the apron
- + Enables continuous monitoring and
- condition-based maintenance
- + With »LINK«, long-term investments are more likely to pay off: Higher efficiency due to reduced downtime.
- + Tracking and evaluation of operating and usage data enables optimal consulting and optimization of the fleet





»BISON« **SERIES:** THE SAFEST CONVENTIONAL **TOW TRACTOR** IN THE MARKET

»SAFETY« AT ITS BEST

+ UNBEATABLE RELIABILITY + SOPHISTICATED TECHNOLOGY

With thousands of conventional aircraft tow tractors, millions of aircraft have been moved safely and reliable all over the globe. Well thought-out technology helps preventing damage on both humans and machines. Constant optimization, innovation, research and development improve Goldhofer tractors in an ongoing process to make them the most reliable tugs. The human interface provides relevant information for the respective operation and an extremely good 360° visibility makes the »BISON« a safe and ergonomic working place while the uniform operating concept makes it easy to operate any type of the series once trained.

AIRPORT TECHNOLOGY

»SAFETY«

+ ERGNONOMICS AND OPERATOR SAFETY



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MODULAR PLATFORM OVERVIEW

Adapt your vehicles to your individual needs!

Different sizes, power trains, performance classes, and cabin variants make the »BISON« family a sophisticated overall package that promises maximum safety and operating comfort.

- + Uniform operating system with high operating comfort
- + Find the perfect size and performance for your applications
- + The flexible ballasting enables custom configuration











AIRPORT TECHNOLOGY

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CLOSED CAB

CABINS

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INDIVIDUAL VALUE THE »BISON« D



DIAGNOSTICS AND MAINTENANCE

- + Information and error messages as plain text in the multifunction display
- + Sophisticated maintenance access
- + Time-saving operations and 1,000 h maintenance intervals
- + Optimized hydraulic system with reliable gear pumps for long-term use

CONCEPT FOR SUCCESS

- + In use on every continent and in all environmental conditions, from -30 °C to +52 °C [1]
- + Three cabin variants: Cabless, open cab, closed cab
- + Uniform operation through a consistent vehicle concept with carry-over parts strategy
- + Environmentally friendly and cost-effective



VARIETY OF

DIESEL ENGINES



CABIN OPTIONS FOR FLEXIBLE CONFIGURATION

CARRY-OVER PART STRATEGY

»BISON« D 370 $75 \,\text{kW} \mid 105 \,\text{kN} \mid \text{MTOW} \le 125 \,\text{t}$ EU STAGE IIIA | EU STAGE IV | EU STAGE V



»BISON« D 620 $115 \,\text{kW} \mid 205 \,\text{kN} \mid \text{MTOW} \le 250 \,\text{t}$ EU STAGE IIIA | EU STAGE IV | EU STAGE V

»BISON« D 1000 $200 \,\text{kW} \mid 305 \,\text{kN} \mid \text{MTOW} \le 400 \,\text{t}$ EU STAGE IIIA | EU STAGE IV | EU STAGE V

- + Lubrication-free drive shaft
- + Minimal-effort fluid change
- + Separate hydraulic oil tanks for steering and brakes

\mathbf{O} VEHICLE-SPECIFIC BENEFITS

- Various engine power classes +
- Suspension concept specially optimized for the »BISON« +
- 360° view from the hoist cabin +
- No lubrication necessary +



»BISON« D 1500 $298 \text{ kW} \mid 460 \text{ kN} \mid 2 \mid \text{MTOW} \leq 600 \text{ t}$ EU STAGE V



INDIVIDUAL VALUE THE »BISON« E



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MODULAR EXPANDABLE

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FOR FLEXIBLE CONFIGURATION

GOLDHOFER TECHNOLOGY

»BISON« E

CHARGING AND INFRASTRUCTURE

»IONMASTER« TECHNOLOGY

+ Modularly expandable battery system, configurable

+ Commercial vehicle industry tried-and-tested lithiumion batteries for certified, maximum safety, ultimate performance, and service life

Heating and cooling for optimal temperature conditions,

+ Active thermal management for cabins and all

even during charging, for long battery life

for individual deployment requirements

high-voltage components:

- + All standard charging plugs available: CCS Typ 1, CCS Typ 2 and GB/T
- + Infrastructure consulting on charging points
- + Intermediate charging enables multi-shift operation
- + Rapid DC charging and intermediate charging at up to 70kW
- + Optional AC charging at up to 22 kW



»BISON« E 370 $75 \,\text{kW} \mid 105 \,\text{kN} \mid \text{MTOW} \le 125 \,\text{t}$ 80 kWh | 120 kWh | 160 kWh

- + Electric power train, electric engine, battery, inverter and thermo module are maintenance-free
- + Second-life applications for battery systems possible, e.g. as stationary storage systems



- + Three cabin designs: Cabless, open cab, closed cab
- + Can be used in all climate conditions in temperatures ranging between -30 °C and +52 °C [1]
- 360° view for the driver
- High-voltage components cooled by environmentally + sustainable water glycol mixture: Consistent performance, even under extreme environmental conditions







»**BISON« FAMILIE** CONTACT US!

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TECHNICAL DATASHEETS











»BISON« D 370

»BISON« E 370

»BISON« D 620

»BISON« D 1000

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