



**PERFECT TO WORK WITH**

**TREPTEL**



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# TREPEL – Perfect to work with

**With decades of experience TREPEL has managed to make its equipment a successful brand valued worldwide.**

Next to a complete programme of cargo high loaders, TREPEL offers a comprehensive product range, established under the term “Ground Support Equipment” (GSE) which deals with all avenues of freight handling and aircraft movements on the airport apron such as cargo loaders, cargo transporters and aircraft tractors.

With its global organisation consisting of more than 300 people and more than 30 sales and service centres worldwide, TREPEL is fully committed to meet the demanding needs of the current market with its high quality products and outstanding service.

Many customers say today: **“TREPEL – Perfect to work with”.**

They know why!

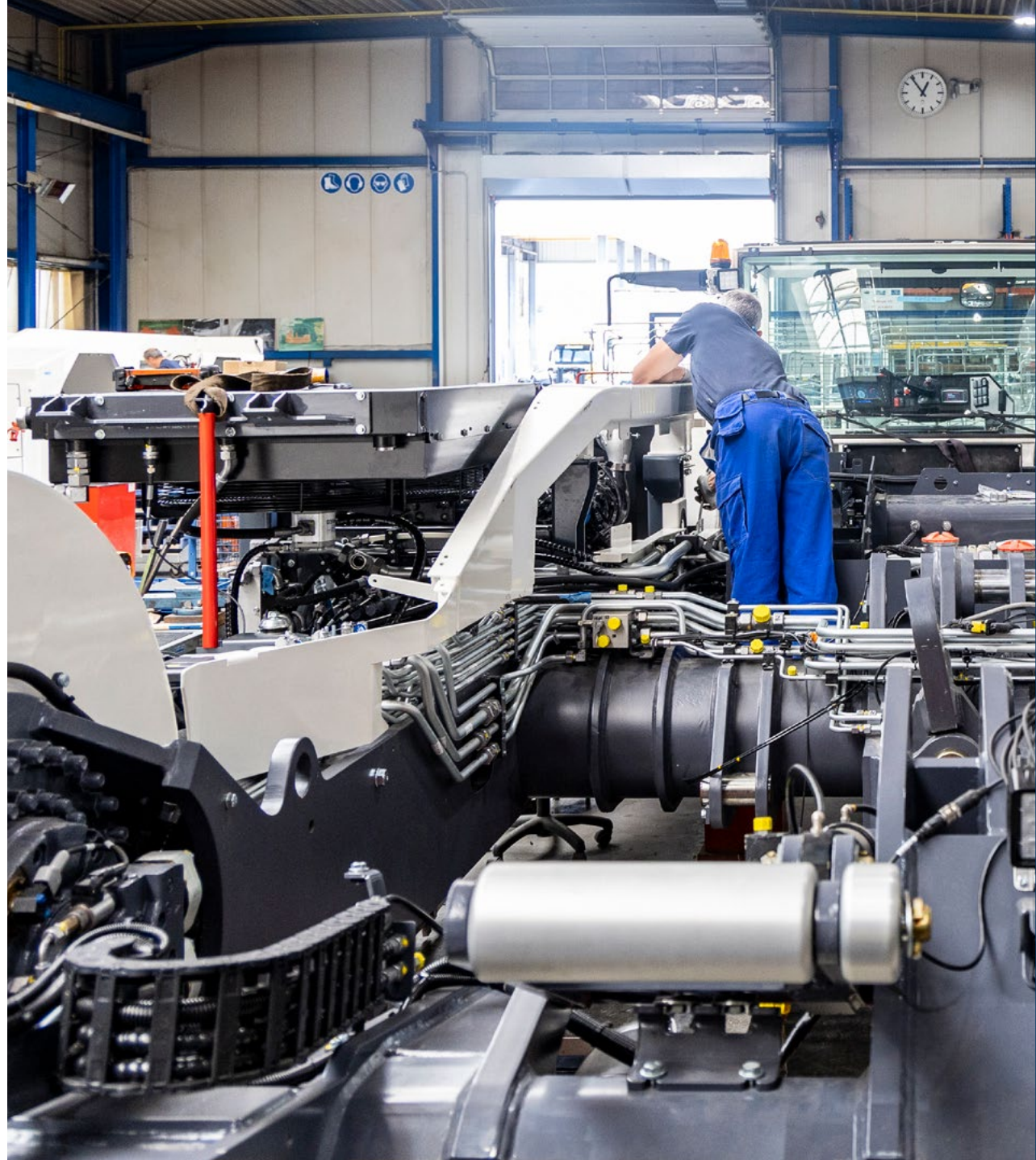


# Success on the ramp

**Reliability, speed and teamwork are the ingredients for success on the ramp - "a contest against time". Innovative technology, certified quality and exceptional service are the foundation of this success.**

TREPEL, one of the leading manufacturers in the growing GSE market, aims to provide units with maximum availability and efficiency and, at the same time, having low maintenance costs. This is "TREPEL's" philosophy.

Decades of experience, an abundance of knowledge and ideas are important elements of market leadership, but equally important is the constant intensive dialogue with our partners on the ramp. Worldwide operating sub-suppliers of components are a part of the on-time performance of TREPEL equipment.





A large industrial machine, likely a MAFI, is shown in a factory setting. It has a white upper section and a blue lower section. The number '15' is visible on the side. The machine is complex with various pipes, cables, and mechanical components.

# User-oriented concept

In the race for more economic efficiency and productivity, TREPEL is the right partner for customers worldwide. Permanent and uncompromising developments of a customer-friendly and user-oriented concept are the foundations of our success.





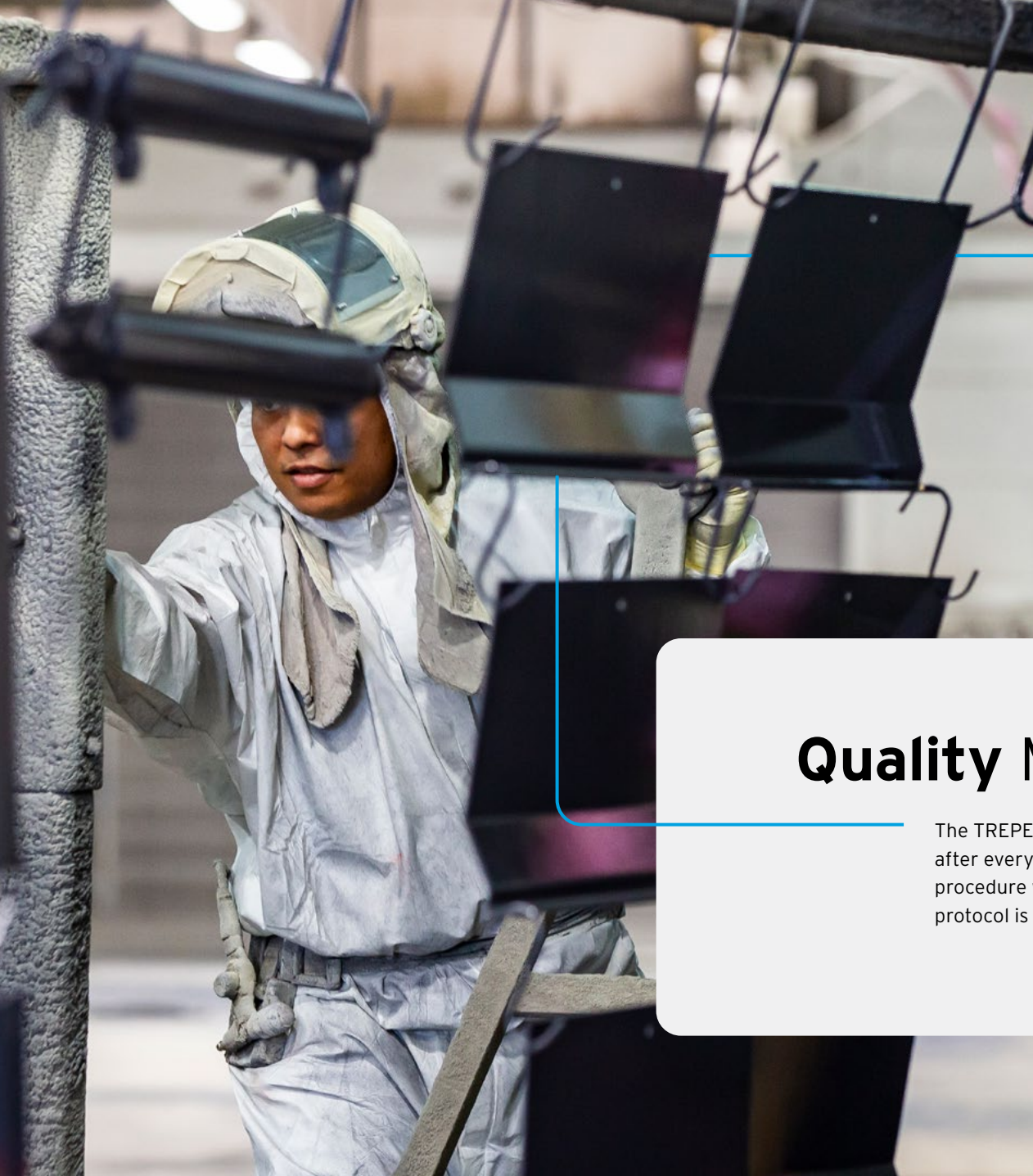
# Technology at higher level

The entire TREPEL product range is subject to a highly developed Quality Management system that goes far beyond the ISO certification and which calls for strict adherence to its guidelines and standards.

It is self-evident that these high standards also apply to the quality of the products and service. TREPEL is a synonym for high class workmanship and cost-effective products worldwide; not without reason is TREPEL one of the world market leaders for cargo loaders since many years.

Also for the product range of aircraft tractors, the same template: Efficiency and high availability are attributes that result only through top quality. Besides, new methods in engineering and technology are applied. With total 100,000 square metres space, all equipment and newly developed products are built in serial production.





## Quality Management

The TREPEL quality management calls for quality insurance. Inspections after every production step! A thorough, painstaking final inspection procedure will make sure that only top quality will be delivered. The test protocol is evidence! Quality is ensured during production process!



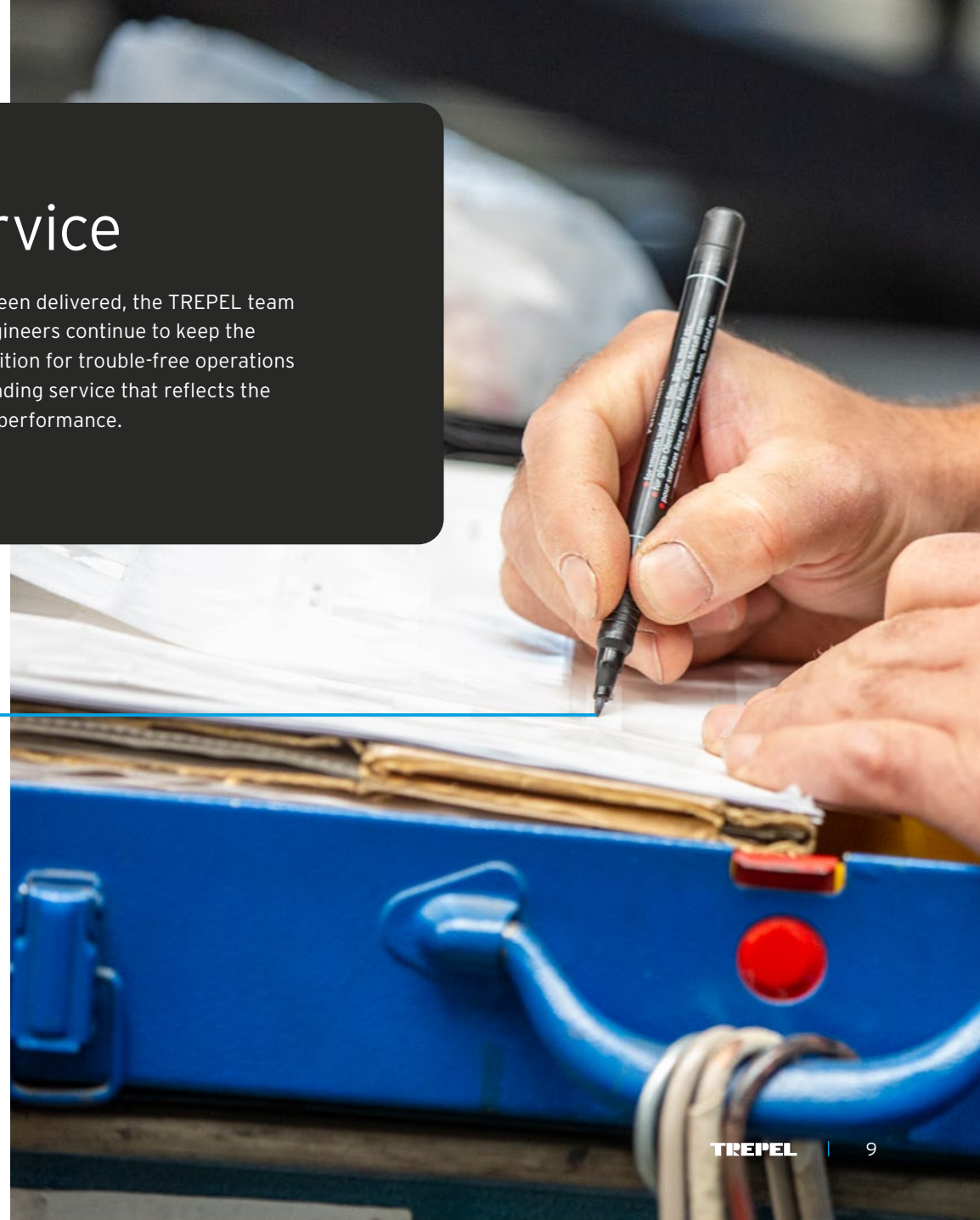
A large industrial forklift, primarily black with orange accents, is the central focus. It has 'suffel' written on its mast. In the background, two men are working at a station; one is wearing blue overalls and the other a black shirt. The setting is a well-lit industrial workshop with various equipment and a large number '10' visible on a wall panel. The entire scene is framed by a circular, metallic-looking border that resembles a large bolt or nut.

## TREPEL teamwork

The TREPEL team: Sales, Service, R&D and Workshop Management work hand in hand with material and production management to achieve the quality standard of a product that will fulfil the ever-changing requirements of today's demanding airport operations.

# Customer Service

After the equipment has been delivered, the TREPEL team of experienced service engineers continue to keep the equipment in perfect condition for trouble-free operations for many years: an outstanding service that reflects the exceptional TREPEL team performance.





# CHARGER 380

## Fast-moving power package

The CHARGER 380 towbarless tractor is the most powerful and capable in its class. Ideal to handle the B777 and A340 aircraft types, the CHARGER 380 is perfect for long distance towing as well as inter-gate servicing.

This state-of-the-art tractor includes oversteer protection - with anti-collision and obstacle detection protection options - as well as superior comfort attributable to hydro-pneumatic suspension.



## Options

Air conditioning, auxiliary heating system, 90 kVA GPU, central greasing station, overtorque protection system, anti-collision and obstacle detection, Tire Pressure Monitoring System, 3<sup>rd</sup> seat, LED strobe lights.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.



## Performance

Capacity	Towing / Pushing up to 380 tons · Lifting up to 41.2 tons
Dimensions (L x W x H)	7.985 x 4.075 x 1.800 mm (standard configuration)
Drawbar pull	130 kN (calculated theoretical value, dependent on loaded weight and adhesion factor)
Driving speed	32 km/h (depends on aircraft weight)
Turning radius	9.700 mm

## Design

Engine	CUMMINS QSB6.7 diesel, COM IIIA / EPA - TIER 3 · Other engines or emission classes on request
Transmission	Hydrostatic transmission, hydraulic wheelmotors on rear wheels
Axle	Front axle with hydro-pneumatic suspension, rear drive axle rigid
Tyres	Front steering axle: 385/65 R22.5 · Rear drive axle: 325/95 R24 twinwheels
Steering	Hydraulic power steering with emergency steering pump · Steering axle equipped with angle sensor
Braking system	Dual circuit hydraulic brake system, multi-disc brakes at rear, drum brakes at front wheels, safety brake pressure accumulators for emergency braking in case of engine failure, parking brake on rear axle
Electric system	24V DC for vehicle electric system
Driver's cab	Liftable, closed cabin with doors and 2 seats
Safety features	Quick aircraft release, manual emergency operation of each function of the pick-up device, TAPS (TREPEL Aircraft Protection System against oversteering)



# CHALLENGER 150

## Cost optimized small tractor

The CHALLENGER 150 is the perfect solution for customers who need to handle in particular the B737 and A320 fleets.

What's more is: The fully ballasted CHALLENGER 150 is also able to push out the B767-200/300 at Maximum Ramp Weight. The hydro-pneumatic front axle suspension provides best driving comfort for the operator.



## Options

Doors with sliding windows or open driver's cab, air conditioning, central greasing station, park heating system, front axle steering.

With STAGE-IIIIB/TIER4i engines the drawbar pull (DBP), the engine power and the top speed may vary.

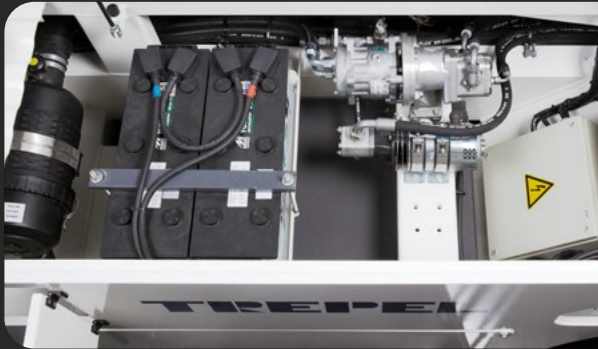
Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

## Performance

Capacity	Aircraft weight up to 160 tons
Dimensions (L x W x H)	5.490 x 2.240 x 2.155 mm (standard configuration w/o couplings)
Drawbar pull	101 kN (calculated theoretical value, dependent on ballasted weight and adhesion factor)
Driving speed	Max. 30 km/h (depends on ballasted weight)
Turning radius	4.700 mm
Weight	9 tons (without ballast) up to 15 tons (ballasted)

## Design

Engine	Deutz 4-cylinder diesel TD 2011 LO4W (COM IIIA / EPA-TIER3) · Other engines or emission class on request
Transmission	Power shift transmission, torque converter, 5 speed forward, 3 speed reverse
Axle	Front axle with hydro pneumatic suspension, rear axle rigid
Tyres	275/70 R22.5
Steering	Hydraulic powered steering, direct via Orbitrol · All wheel steering
Braking system	Dual circuit hydraulic multiple wet disc brakes, spring loaded parking brake
Electric system	24V DC for vehicle electric system
Driver's cab	Not liftable, cabin w/o doors with 2 seats





# CHALLENGER 150 **e** //

## The new, narrow-body aircraft workmate

The Challenger 150e electric tractor is the ideal machine for towing/pushing narrow-body aircraft types like the B737 and A320.

With simple to use controls and a clean, crisp dash panel layout the CHALLENGER 150e electric with hydro-pneumatic suspension, LED lighting, comfortable seating and heating/air conditioning options is as perfect to work with as with its Diesel brother.



## Options

Cabin with doors with sliding windows or open driver's cab, central lubrication system, air conditioning, front axle steering, solid rubber tires, 2 on-board battery chargers, driving speed 25 km/h.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

## Performance

Capacity

Aircraft weight up to 160 tons

Dimensions (L x W x H)

5.510 x 2.270 x 2.153 mm (standard configuration w/o couplings)

Drawbar pull

101 kN (calculated theoretical value, dependent on ballasted weight and adhesion factor)

Driving speed

20 km/h (depends on ballasted weight)

Turning radius

4.700 mm

Weight

11 tons (without ballast, with 3 traction batteries) up to 16 tons (ballasted, with 3 traction batteries)

## Design

Engine

3 electric motors · Motors for drive: 2 motors, each 31 kW · Motor for steering and braking: 7 kW  
Traction batteries: 3 lead acid batteries (each 80V 300 Ah)

Transmission

DANA 2 speed forward and reverse transmission system

Axle

Front axle with hydro-pneumatic suspension, rear axle rigid

Tyres

275/70 R22.5

Steering

Hydraulic powered steering, direct via Orbitrol · All wheel steering

Braking system

Dual circuit hydraulic brake, disc brakes on each wheel, fail-safe emergency and parking brake at the rear axle

Electric system

24V DC, combination of common relays and PLC controllers. Where possible, control logic functions processed by the PLC

Driver's cab

Not liftable, cabin w/o doors with 2 seats



# CHALLENGER 280

## The workhorse for B787 and A350

The CHALLENGER 280 is the perfect solution for mid-size pushback operations, also for the upcoming Airbus A350 and Boeing B787 aircraft.

The versatile range of operational applications makes the CHALLENGER 280 the ideal workhorse. The durable quality components built in the drive train ensures low Total Cost of Ownership.



## Options

Doors with sliding windows or open driver's cab, air conditioning, central greasing station, park heating system, front axle steering.

With STAGE-IIIB/TIER4i or STAGE-IV/TIER-4F engines the drawbar pull (DBP), the engine power and the top speed may vary.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

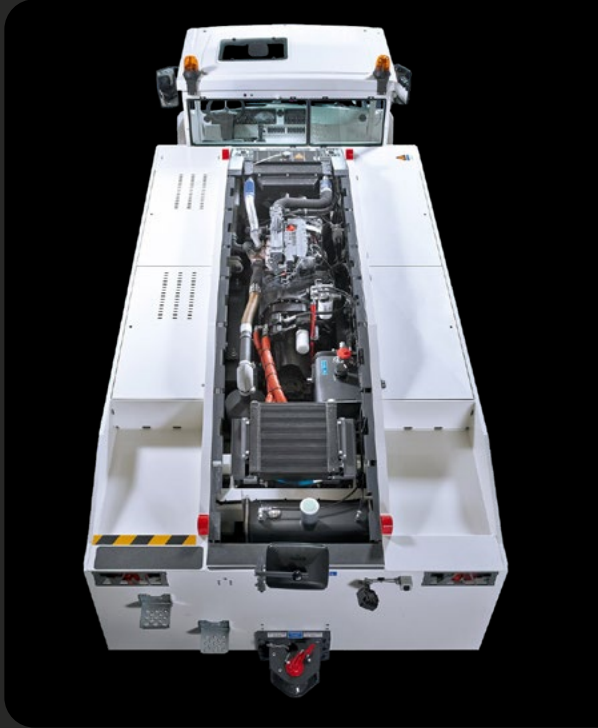


## Performance

Capacity	Aircraft weight up to 300 tons
Dimensions (L x W x H)	5.930 x 2.400 x 2.110 mm (standard configuration w/o couplings)
Drawbar pull	209 kN (calculated theoretical value, dependent on ballasted weight and adhesion factor)
Driving speed	28 km/h (depends on ballasted weight)
Turning radius	5.600 mm
Weight	24 tons (without ballast) up to 28 tons (ballasted)

## Design

Engine	Deutz 4-cylinder diesel TCD 2012 LO4 (COM IIIA / EPA-TIER3) · Other engines or emission class on request
Transmission	Power shift transmission, torque converter, 5 speed forward, 3 speed reverse
Axle	Front axle with hydro pneumatic suspension, rear axle rigid
Tyres	300/80 R22.5 TL
Steering	Hydraulic powered steering, direct via Orbitrol · All wheel steering
Braking system	Dual circuit hydraulic multiple wet disc brakes, spring loaded parking brake
Electric system	24V DC for vehicle electric system
Driver's cab	Not liftable, cabin w/o doors with 2 seats



# CHALLENGER 280 *e* //

## The workhorse for the majority of widebody aircrafts

The CHALLENGER 280e electric conventional tractor is designed to handle a wide range of aircraft types up to B787 and A350.

Just like its Diesel brother the CHALLENGER 280e electric is equipped with hydro-pneumatic suspension, comfortable seating and heating / air conditioning options. World-class components ensure low maintenance costs and optimum life-time



## Options

Cabin with doors with sliding windows or open driver's cabin, central lubrication system, air conditioning, front axle steering, 2 on-board battery chargers.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

## Performance

Capacity

Aircraft weight up to 300 tons

Dimensions (L x W x H)

5.940 x 2.440 x 2.135 mm (standard configuration w/o couplings)

Drawbar pull

200 kN (calculated theoretical value, dependent on ballasted weight and adhesion factor)

Driving speed

18 km/h (depends on ballasted weight)

Turning radius

5.600 mm

Weight

24 tons (without ballast, with 2 traction batteries) up to 28 tons (ballasted, with 2 traction batteries)

## Design

Engine

3 electric motors · Motors for drive: 2 motors, each 46 kW · Motor for steering and braking: 11.5 kW  
Traction batteries: 2 lead acid batteries (each 96V 875 Ah)

Transmission

DANA 2 speed forward and reverse transmission system

Axle

Front axle with hydro-pneumatic suspension, rear axle rigid

Tyres

300/80 R22.5 TL

Steering

Hydraulic powered steering, direct via Orbitrol · All wheel steering

Braking system

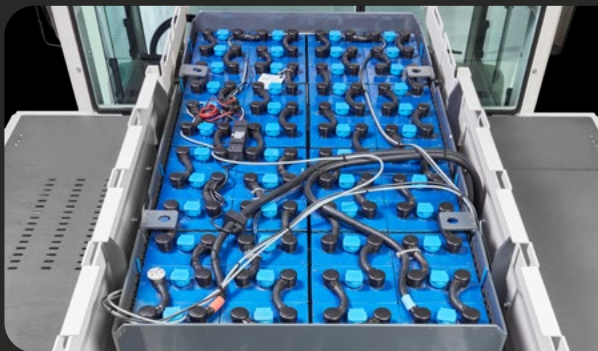
Dual circuit hydraulic brake, disc brakes on each wheel, fail-safe emergency and parking brake at the rear axle

Electric system

24V DC, combination of common relays and PLC controllers. Where possible, control logic functions processed by the PLC

Driver's cab

Not liftable, cabin w/o doors with 2 seats





# CHALLENGER 430

## Adaptable medium-size aircraft tractor

The CHALLENGER 430 is a conventional aircraft tractor that is capable to handle push-back, repositioning and maintenance towing of aircraft up to a fully loaded Boeing B777.

The hydro-pneumatic front axle suspension provides best possible driving comfort for the operator. The crane-liftable power-pack compartment minimizes downtime of the tractor and reduces maintenance costs.



## Options

Integrated hydraulic jacks, open or closed rear driver's stand, air conditioning, park heating system, GPU 90 kVA, central greasing station, PREMIUM cab.

With STAGE-IIIB/TIER4i or STAGE-IV/TIER-4F engines the drawbar pull (DBP), the engine power and the top speed may vary.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

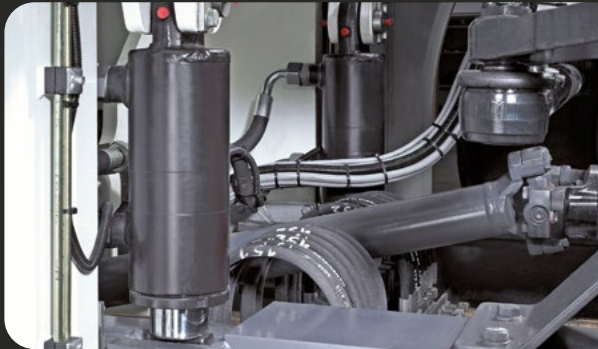
## Performance

Capacity	Aircraft weight up to 380 tons
Dimensions (L x W x H)	6.910 x 2.700 x 2.060 mm (standard configuration w/o couplings)
Drawbar pull	304 kN (calculated theoretical value, dependent on ballasted weight and adhesion factor)
Driving speed	30 km/h (depends on ballasted weight)
Turning radius	6.400 mm
Weight	27 tons (without ballast) up to 43 tons (ballasted)

## Design

Engine	Deutz 6-cylinder diesel TCD 2013 L6 (COM IIIA / EPA-TIER3) · Other engines or emission class on request
Transmission	ZF-power shift transmission, converter gear, 6 speed forward, 3 speed reverse
Axle	Kessler front axle with hydro pneumatic suspension, Kessler rear axle rigid
Tyres	14.00-24 ContainerMaster28PR E4 TT
Steering	Hydraulic powered steering, (operational) front axle steering via Orbitrol, (operational) rear axle steered electronically, 4 steering modes: Front axle steering, rear axle steering, diagonal steering, all wheel steering
Braking system	Dual circuit hydraulic disc brakes, spring loaded parking brake
Electric system	24V DC for vehicle electric system
Driver's cab	Standard cab, liftable, closed with 2 seats

## CHALLENGER 430



# CHALLENGER 550

## Ideal solution for the new Jumbo

The CHALLENGER 550 has a lot of technical features built in its big brother, the CHALLENGER 700.

With its gross vehicle weight of up to 60 tons, the CHALLENGER 550 is designed in particular for push-back and maintenance towing of aircraft up to the size of a Boeing B747-8. A robust tow tractor at an economic price with low maintenance costs.



## Options

Integrated hydraulic jacks, open or closed rear driver's stand, air conditioning, park heating system, GPU 90 kVA, central greasing station, PREMIUM cab.

With STAGE-IIIB/TIER4i or STAGE-IV/TIER-4F engines the drawbar pull (DBP), the engine power and the top speed may vary.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

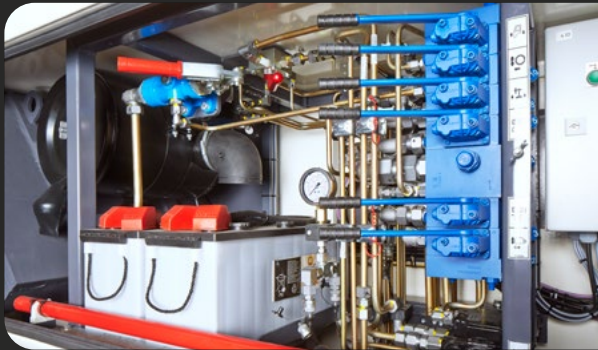


## Performance

Capacity	Aircraft weight up to 450 tons
Dimensions (L x W x H)	7.760 x 3.000 x 2.060 mm (standard configuration w/o couplings)
Drawbar pull	369 kN (calculated theoretical value, dependent on ballasted weight and adhesion factor)
Driving speed	30 km/h (depends on ballasted weight)
Turning radius	6.900 mm
Weight	50 tons (without ballast) up to 60 tons (ballasted)

## Design

Engine	Deutz 6-cylinder diesel TCD 2013 L6 (COM IIIA / EPA-TIER3) · Other engines or emission class on request
Transmission	ZF-power shift transmission, torque converter, 6 speed forward, 3 speed reverse
Axle	Kessler front axle with hydro pneumatic suspension, Kessler rear axle rigid
Tyres	16.00 R25
Steering	Hydraulic powered steering, (operational) front axle steering via Orbitrol, (operational) rear axle steered electronically, 4 steering modes: Front axle steering, rear axle steering, diagonal steering, all wheel steering
Braking system	Dual circuit hydraulic disc brakes, spring loaded parking brake
Electric system	24V DC for vehicle electric system
Driver's cab	Standard cab, liftable, closed with 2 seats



A white Trepel Charger 380 industrial vehicle is parked on a blue grid-patterned floor in a large, empty warehouse. The vehicle has "CHARGER 380" and "TREPTEL" written on its side. The warehouse has high ceilings with exposed steel beams and fluorescent lighting. The floor is a dark blue with a light blue grid pattern.

# CHARGER 380





**fast.  
strong.  
comfortable.**



# CHAMP 35

## The compact solution for handling all 61" ULD containers

The most compact CHAMP 35 with an even more efficient power pack. The CHAMP 35 is especially designed for the handling of small containers like LD2 or LD3.

Its extremely narrow transfer width makes it ideal to handle all 61" cargo doors at lower deck level, also capable to clear the front and rear doors of the A319. Extremely fast lifting, lowering and transporting speeds reflect this lower deck loader's high acceptance with turnaround times at an absolute minimum.



## Options

Side loading of LD containers on rear of main platform.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

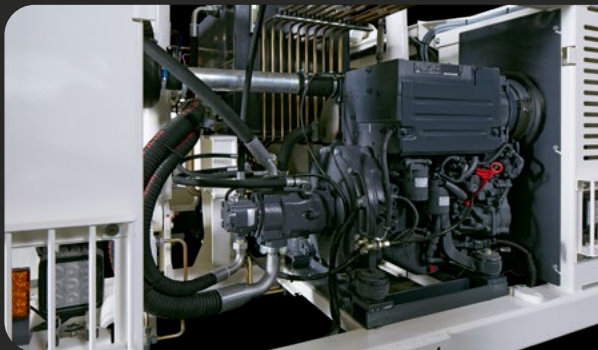
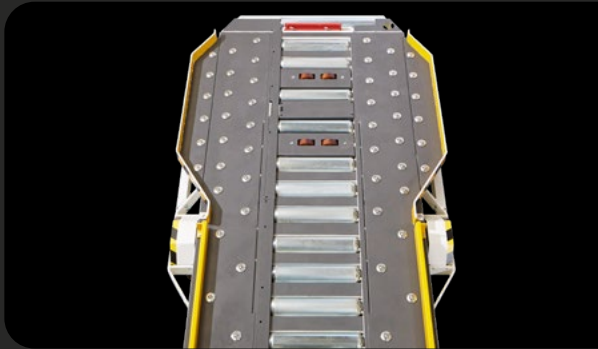
## Performance

Dimensions (L x W x H)	8.300 x 2.820 x 3.150 mm (standard configuration)
Capacity (both platforms lift and transfer)	3.500 kg
Lifting height front / main platform	1.900 to 3.500 mm / 485 to 3.500 mm
Loading width (between guide rails)	1.620 mm
Driving speed	15 km/h
Gradability	5 %
Turning radius	7.800 mm

## Design

Engine	Deutz 3-cylinder diesel D 2011 LO3i (COM IIIA / EPA-TIER3) · Other engines or emission class on request
Transmission / axles	Open circuit hydrostatic drive system on steering front axle
Steering	Hydraulic power steering
Braking system	Dual circuit hydraulic multiple wet disc brake, additional spring-loaded emergency parking brake, dynamic brake system
Stabilisers	5 hydraulically operated stabilisers
Conveying system	Zinc-plated steel rollers for longitudinal transfer, rotating system on rear of main platform, hydraulically adjustable guide rails on front platform
Hydraulic system	Central hydraulic valve block, valves fitted with control light, 70 % of hydraulic lines rigid piping
Electric system	24V, relay controlled

## CHAMP 35



# CHAMP 35 **e** ///

## Green 3,5 ton loader

CHAMP 35e, the electric version of the most compact CHAMP 35, offers environmental friendly operation without affecting the performance.

The extremely narrow design is ideal to handle all 61" cargo doors at lower deck level, also capable to clear the forward and rear doors of the A319. The CHAMP 35e can be fitted with a 375 Ah lead / acid battery.



## Options

Electrically powered hydraulic emergency system to lower platforms and lift stabilisers, etc.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.



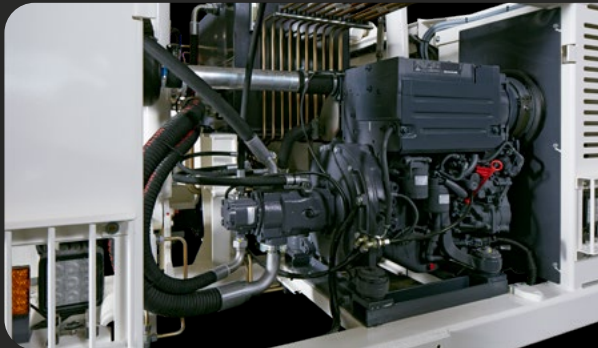
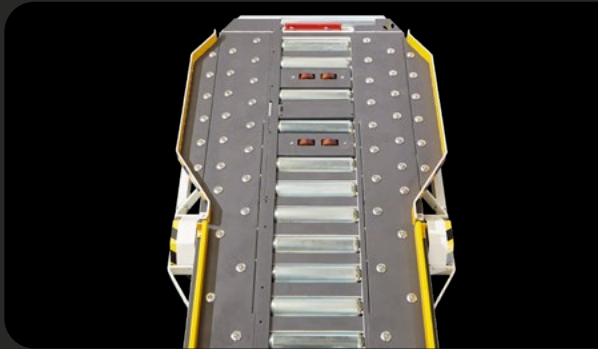
## Performance

Dimensions (L x W x H)	8.300 x 2.820 x 3.150 mm (standard configuration)
Capacity (both platforms lift and transfer)	3.500 kg
Lifting height front / main platform	1.900 to 3.500 mm / 485 to 3.500 mm
Loading width (between guide rails)	1.620 mm
Driving speed	13 km/h
Gradability	5 %
Turning radius	7.800 mm

## Design

Engine / Propulsion	80V AC, S2 5 min 20 kW, S2 60 min 17 kW · 80V 550 A Inverter, 80V 375 Ah lead battery
Transmission / axles	Open circuit hydrostatic drive system on front axle
Steering	Hydraulic power steering
Braking system	Dual circuit hydraulic multiple wet disc brake, additional spring-loaded emergency parking brake
Stabilisers	5 hydraulically operated stabilisers
Conveying system	Zinc-plated steel rollers for longitudinal transfer, rotating system on rear of main platform, hydraulically adjustable guide rails on front platform
Hydraulic system	Central hydraulic valve block, valves fitted with control light
Electric system	24V, relay controlled

## CHAMP 35



# CHAMP 70

## Freight handling with outstanding reliability

The CHAMP 70, TREPEL's 7 ton cargo high loader range, combines highest availability with extremely low operation and maintenance costs, making this versatile Pallet and Container high loader a real CHAMP.

Fast lifting speed as well as accurate freight transfer under all climatic conditions are true operational advantages. The design of the CHAMP 70 offers maximum safety for operating personnel, aircraft and loader. These performances bring freight handling to higher level.



## Options

Side loading and rotation on rear of main platform (standard on 70W and 70U), electrically powered hydraulic emergency system to lower platforms and lift stabilisers, etc.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

## Performance

	CHAMP 70S	CHAMP 70W	CHAMP 70U
Dimensions (L x W x H)	9.200 x 3.600 x 3.100 mm	9.200 x 4.300 x 3.100 mm	9.200 x 4.300 x 3.200 mm
Capacity (both platforms lift and transfer)	7.000 kg	7.000 kg	7.000 kg
Lifting height front platform	1.800 to 3.700 mm	1.800 to 3.700 mm	1.900 to 5.600 mm
Lifting height main platform	485 to 3.700 mm	485 to 3.700 mm	485 to 3.700 mm
Loading width (between guide rails)	2.520 mm	3.300 mm	3.300 mm
Driving speed	15 km/h	15 km/h	15 km/h
Gradability	5 %	5 %	5 %
Turning radius	8.700 mm	8.700 mm	8.700 mm

## Design

Engine / Propulsion	Deutz 4-cylinder diesel TD 2011 L04 (COM IIIA / EPA-TIER3) · Other engines or emission class on request		
Transmission / axles	Open circuit hydrostatic drive system on front axle		
Steering	Hydraulic power steering		
Braking system	Dual circuit hydraulic multiple disc brake, additional spring-loaded emergency parking brake, dynamic brake system		
Stabilisers	6 hydraulically operated stabilisers		
Conveying system	Zinc-plated steel rollers for longitudinal transfer, transversal drive units on front platform, hydraulically adjustable guide rails on front platform		
Hydraulic system	Central hydraulic valve block, valves fitted with control light		
Electric system	24V, relay controlled		





# CHAMP 70 *e* NEO

## The full-performance 7 ton loader

The CHAMP 70e Neo is based on a new concept of an electro-hydraulically operating power system. This power system is divided into 3 working and auxiliary functions.

The split system allows to purposefully direct energy to the corresponding function, allowing longer use of battery power. Cutting-edge technology makes it possible to recuperate energy when lowering the main platform. The durable electric components of the powertrain ensure low maintenance cost.



## Options

Solid tires, on-board charger, spring-driven cable reels, Li-ion battery.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

## Performance

Dimensions (L x W x H)	CHAMP 70S <b>e</b> <b>NEO</b>	CHAMP 70W <b>e</b> <b>NEO</b>
	9.200 x 3.600 x 3.100 mm	9.200 x 4.300 x 3.100 mm
Capacity (both platforms lift and transfer)	7.000 kg	7.000 kg
Lifting height front platform	1.800 to 3.700 mm	1.800 to 3.700 mm
Lifting height main platform	485 to 3.700 mm	485 to 3.700 mm
Loading width (between guide rails)	2.520 mm	3.270 mm
Driving speed	12 km/h	12 km/h
Gradability	6 %	6 %
Turning radius	9.200 mm	9.200 mm

## Design

Engine / Propulsion	3 electric motors · Electric motor for drive 22 kW · Main platform lifting 32 kW Operating hydraulic system 12 kW · Traction batteries: 3 different 80V lead batteries sizes available (625 Ah / 810 Ah / 1.125 Ah)	
Transmission / axles	Direct electric drive on front axle	
Steering	Hydraulic power steering	
Braking system	Dual circuit hydraulic brake system, multiple wet disc brakes	
Stabilisers	6 hydraulically operated stabilisers	
Conveying system	Zink-plated steel rollers for longitudinal transfer, transversal drive units on front platform, hydraulically adjustable guide rails on front platform, side loading and ULD rotation on rear of main platform	
Hydraulic system	Priority valve for steering and brakes circuit, valves with control light	
Electric system	24V DC, combination of common relays and PLC controllers. Where possible, control logic functions processed by the PLC	

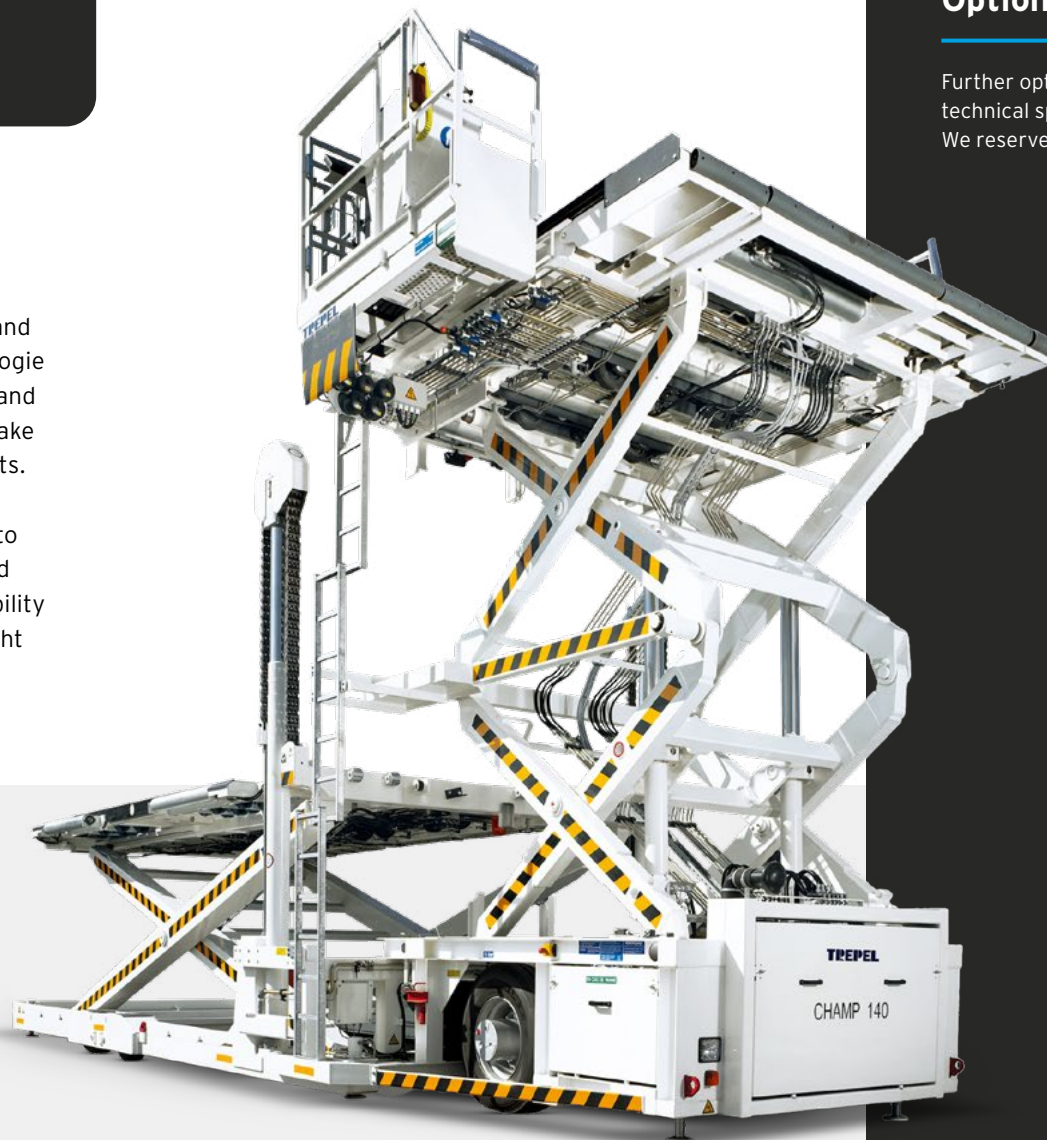


# CHAMP 140

## Universal main deck loader

The CHAMP 140 combines the advantages of a lower and main deck loader with excellent reliability. Due to its bogie wheel system on its rear axle, the CHAMP 140 is easy and safe to manoeuvre. Additional features and options make sure the CHAMP 140 meets all customers' requirements.

The CHAMP 140 handles all pallets and containers up to a weight of 14 tons and a length of 20 feet at lower and main deck level. With its high performance and availability the CHAMP 140 runs for top handling procedure. Freight handling with higher quality.



## Options

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.



## Performance

Dimensions (L x W x H)	11.400 x 4.400 x 3.900 mm (standard configuration)
Capacity	14.000 kg main platform lift and transfer · 14.000 kg front platform transfer
Lifting height front / main platform	1.900 to 5.600 mm / 485 to 5.600 mm
Loading width (between guide rails)	3.250 mm
Driving speed	15 km/h
Gradability	5 %
Turning radius	13.000 mm

## Design

Engine	Deutz 4-cylinder diesel TCD 2012 L04 2V (COM IIIA / EPA-TIER3) · Other engines or emission class on request
Transmission / axles	Open circuit hydrostatic drive system on steering front axle, bogie wheel system on rear axle
Steering	Hydraulic power steering
Braking system	Dual circuit hydraulic multiple disc brake, additional spring-loaded emergency parking brake, dynamic brake system
Stabilisers	6 hydraulically operated stabilisers
Conveying system	Zinc-plated steel rollers for longitudinal transfer, side loading and rotating on rear of main platform, side loading on front of main platform, hydraulically operated stops and guide rails on main platform
Hydraulic system	Central hydraulic valve block, valves fitted with control light, electrically powered hydraulic emergency system to lower platforms and lift stabilisers
Electric system	24V, relay controlled



# CHAMP 140 **e**

## The electric-powered all-rounder

With a total propulsion of around 150 kW distributed over 3 asynchronous electric motors dedicated and dimensioned for specific tasks such as driving or lifting, the CHAMP 140e is one of the most effective and versatile electric-powered main deck loaders on the market.

Equivalent to its Diesel brother regarding handling and operating, the CHAMP 140e is the perfect emission-free complement for your GSE fleet.



## Options

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

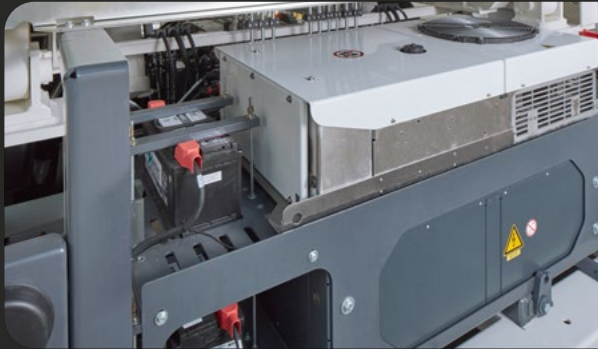
## Performance

Dimensions (L x W x H)	11.400 x 4.400 x 3.900 mm (standard configuration)
Capacity	14.000 kg main platform lift and transfer · 14.000 kg front platform transfer
Lifting height front / main platform	1.900 to 5.600 mm / 485 to 5.600 mm
Loading width (between guide rails)	3.272 mm (FPF) / 3.286 mm (MPF)
Driving speed	13 km/h
Gradability	7 %
Turning radius	14.000 mm

## Design

Engine / Propulsion	3 electric motors · Drive 60 kW* · MPF lifting 60 kW* · FPF lifting and operating hydraulic system 36 kW* · Traction battery: 400 V liquid-cooled lithium-ion battery
Transmission / axles	Direct electric drive on front axle
Steering	Hydraulic power steering
Braking system	Dual circuit hydraulic brake system, multiple wet disc brakes
Stabilisers	6 hydraulically operated stabilisers
Conveying system	Zink-plated steel rollers for longitudinal transfer, transversal drive units on front platform, hydraulically adjustable guide rails on front platform, side loading and ULD rotation on rear of main platform
Hydraulic system	Priority valve for steering and brakes circuit, valves with control light
Electric system	24V DC, combination of common relays and PLC controllers. Where possible, control logic functions processed by the PLC

\*Effective power





# CHAMP 350

## The one and only real 35 ton loader in the world

The unique load capacity of 35 tons on the main and front platform makes the CHAMP 350 the most capable high loader in the world.

Its diversity and adaptability to specific market requirements, available tailor-made ex factory, make this model an absolute champion in air cargo operations.



## Options

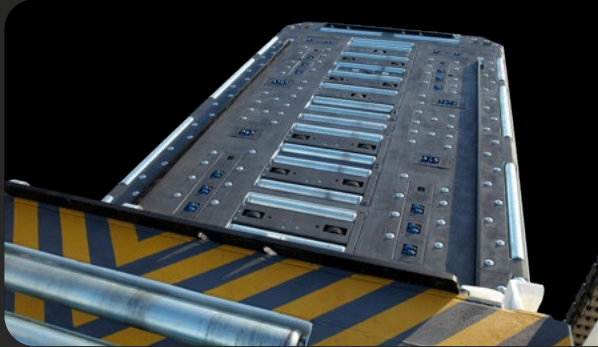
Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

## Performance

Dimensions (L x W x H)	13.100 x 4.500 x 3.870 mm (standard configuration)
Capacity (both platforms lift and transfer)	35.000 kg
Lifting height front / main platform	2.100 to 5.600 mm / 490 to 5.600 mm
Loading width (between guide rails)	3.310 mm
Driving speed	10-13 km/h
Gradability	5 %
Turning radius	16.000 mm

## Design

Engine	Deutz 4-cylinder diesel TCD 2012 L04 2V (COM IIIA / EPA-TIER3) · Other engines or emission class on request
Transmission / axles	Open circuit hydrostatic drive system on steering front axle, bogie wheel system on rear axle
Steering	Hydraulic power steering
Braking system	Dual circuit hydraulic multiple wet disc brake, additional spring-loaded emergency parking brake, dynamic brake system
Stabilisers	6 hydraulically operated stabilisers
Conveying system	Zinc-plated steel rollers for longitudinal transfer, side loading and rotating on rear of main platform, side loading on front of main platform, hydraulically operated stops and guide rails on main platform
Hydraulic system	Central hydraulic valve block, valves fitted with control light, electrically powered hydraulic emergency system to lower platforms and lift stabilisers
Electric system	24V, relay controlled



# CHAMP 350 **e** ///

## The electric-powered all-rounder

With a total propulsion of around 270 kW distributed over 3 synchronous liquid cooled electric motors dedicated and dimensioned for specific tasks such as driving or lifting, the CHAMP 350e is one of the most powerful and versatile electric-powered main deck loaders on the market.

Equivalent to its Diesel brother regarding handling and operating, the CHAMP 350e is the perfect emission-free complement for your GSE fleet.



## Options

On-board charger, wallbox charging station, lithium iron-phosphate (LFP) battery.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.



## Performance

Dimensions (L x W x H)	13.100 x 4.500 x 3.870 mm (standard configuration)
Capacity (both platforms lift and transfer)	35.000 kg
Lifting height front / main platform	2.100 to 5.600 mm / 490 to 5.600 mm
Loading width (between guide rails)	3.310 mm
Driving speed	10-12 km/h
Gradability	6 %
Turning radius	16.000 mm

## Design

Engine / Propulsion	3 electric motors · Driving motor 94.4 kW* · MPF lifting 108 kW* · FPF lifting and operating hydraulic system 65.9 kW* · Traction battery: 400 V liquid-cooled lithium-ion battery · Inverter liquid cooled, 1 inverter per electric motor · On-board battery charger liquid cooled, 22 kW
Transmission / axles	Direct electric drive on front axle
Steering	Hydraulic power steering
Braking system	Dual circuit hydraulic multiple wet disc brake, additional spring-loaded emergency parking brake
Stabilisers	6 hydraulically operated stabilisers
Conveying system	Zinc-plated steel rollers for longitudinal transfer, rotating system on rear of main platform, hydraulically adjustable guide rails on front platform
Hydraulic system	Priority valve for steering and brakes circuit, valves with control light
Electric system	24V DC, combination of common relays and PLC controllers. Where possible, control logic functions processed by the PLC

\*Nominal power



# CCL 35 S

## An adaptive vehicle as transporter and loader for containers

The CCL 35 S combines two vehicles in one - cargo high loader and transporter. Developed in the nineties for handling the A320 family, the CCL 35 S today is able to handle freight on all lower decks of commercial aircraft. The dolly train with containers can be parked anywhere around the aircraft allowing the CCL 35 S to act as a junction to transfer containers between the dollies and the aircraft.

This is a user-friendly and manoeuvrable loader-transporter allowing quick and economical freight loading and unloading. With several options available, the CCL 35 S is one of the most popular pieces of equipment on the apron today. Freight service on a faster level.



## Options

Dolly finger system on rear end, differential lock, etc.

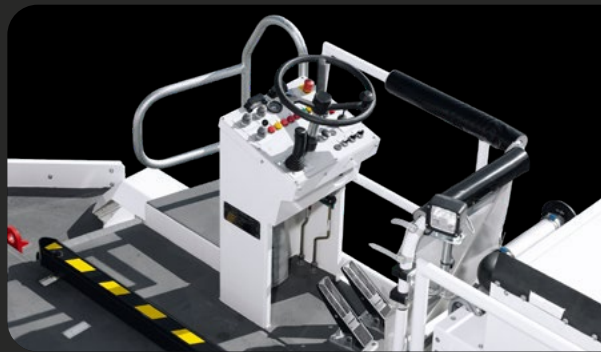
Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

## Performance

Dimensions (L x W x H)	6.520 x 2.900 x 1.600 mm (standard configuration)
Capacity (both platforms lift and transfer)	3.500 kg
Lifting height platform	485 to 3.500 mm
Loading width (between guide rails)	1.620 mm
Driving speed	15 km/h
Gradability	5 %
Turning radius	8.500 mm

## Design

Engine	Deutz 4-cylinder diesel D 2011 LO4 (COM IIIA / EPA-TIER3) · Other engines or emission class on request
Transmission	Closed circuit hydrostatic drive system on rear wheel hub motors
Steering	Hydraulic power steering
Braking system	Dual circuit hydraulic operated drum brakes on rear wheels, additional spring-loaded multiple disk emergency parking brake
Platform system	Single platform with tilting system
Conveying system	Zinc-plated steel rollers for longitudinal transfer, side shift system on front of platform, hydraulically adjustable guide rails
Hydraulic system	Central hydraulic valve block, valves fitted with control light
Electric system	24 V, relay controlled





# TRANS 70

## Fast, efficient and adaptive

The TRANS 70 is a most versatile Container and Pallet Transporter. The modern concept of the TRANS 70 is designed to encounter all operational modes with the best performance. A dolly finger system can be added to adapt the TRANS 70 to your existing fleet of dollies. The small turning radius allows perfect manoeuvrability on the congested airport apron. The large wheels allow a comfortable drive on all kinds of road surfaces at a high driving speed.

The TRANS 70 is designed in a modular way that allows every customer to configure it according to their specific requirements. For example, the driving station can be fitted on either side of the vehicle.



## Options

Driver stand on left or right hand side, dolly finger configuration on front and/or rear end, side shifting of LD containers, solid tyres, three sides closed canopied driver's cabin, etc.

Further options on request. Please consult the technical specification for more information. We reserve the right of technical alterations.

## Performance

Dimensions (L x W x H)	5.560 x 3.890 x 1.500 mm (standard configuration)
Capacity	7.000 kg
Loading height front / rear	450 to 690 mm / 450 to 540 mm
Loading width (between guide rails)	2.500 mm
Loading length (between stops)	3.285 mm
Ground clearance (driving position)	150 mm
Driving speed	32 km/h
Gradability	8 %
Turning radius	6.700 mm

## Design

Engine	Deutz 4-cylinder diesel TD 2011 LO4 (COM IIIA / EPA-TIER3) · Other engines or emission class on request
Transmission	On the rear wheels, closed circuit hydrostatic drive system with automotive actuation
Steering	Hydraulic power steering
Braking system	Hydrostatic, dual circuit hydraulically powered disc brake, additional spring-loaded emergency parking brake
Hydraulic system	Central hydraulic valve block, valves fitted with control light
Electric system	24V, relay controlled

## TRANS 70



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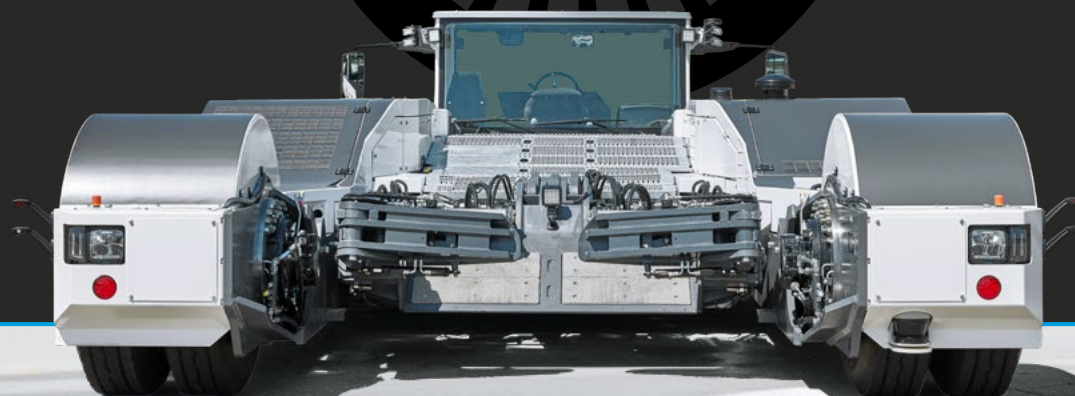
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