



CARGO MASTER

Appealing quality for perfect aircraft handling

STAGE
ready **V**



LAWECO CARGO MASTER

Strong performance for airports all over the world

The LAWECO CARGO MASTER fleet provides our customers with an invariably high performance level based on consistent use of innovative technologies. The especially high availability and safety results from the perfect combination of the mechanical and hydraulic components and the control system. The premium workmanship and reliable service match our time-proven LAWECO slogan „In good hands“ and complete our strengths.



Sturdy design

All CARGO MASTER devices are equipped with a sturdy steel frame, stable and warp-resistant scissor systems and completely flat platforms without any tripping hazards.

Vehicle engineering

Powerful hydrostatic drive motors with an excellent dosing capability ensure ideal vehicle operation. All CARGO MASTER vehicles are characterised by their small turning circle for exact and safe positioning next to the plane. This is supported by the hydraulic steering mechanism.

Electronic motor management

The CARGO MASTER LOADER fleet contributes to an improved energy and environmental balance. State-of-the-art Deutz motors with Electronic Motor Regulation (EMR) reduce fuel consumption and costs. The performance-linked rotational speed regulation saves fuel, increases operating intervals and ensures a longer motor running time.

CAN technology

The CANopen control system concept, which was specifically developed for automotive engineering, is an integral part of the CARGO MASTER LOADER. This makes susceptible relays and approximately 90 % of electrical connections unnecessary. Reliability and availability are significantly increased while at the same time exhaust fumes and noise emissions are reduced through the use of intelligent environmentally friendly technologies.

Load-sensing hydraulic system

The load-dependent control system reduces fuel consumption and increases availability at the operating site. Soft and smooth movements in all sequences increase the service life of the assembly components and conserve pallets and containers. The freight handling systems consist of wide and intentionally over-dimensioned conveying rollers. This permits safe and problem-free freight transport across the entire roller bed.

Customised modifications


Customised quality: Of course we equip all available models according to the requirements and wishes of our customers.

LAWECO SERVICE

In good hands.

Especially on airports it is crucial that all processes are problem-free and safe.

This safety is guaranteed by the CARGO MASTER technology produced by the leading European lifting system manufacturer. Benefit from our sophisticated service network with numerous advantages for fast and cost-efficient aircraft processing:

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- General overhauling
 - Express delivery of spare parts
 - Extensive employee training
 - Refreshment training on older machines
 - etc.

GREEN LINE

Innovative development



LAWECO's CARGO MASTER GREEN LINE shows how economic and environmental aspects can be combined in a reasonable manner. The GREEN LINE makes freight handling on airports significantly more environment-friendly and supports airports in their sustainable reduction of CO2 emissions.

Environmental protection

Significantly **lower noise emissions and the elimination of soot particles** significantly improve the working situation on the airport ramp. At the same time, the lower energy consumption decreases the operating costs of the loaders.

Cutting-edge technology

The core components servo-hydraulic system, electronics and vehicle control system are coordinated in such a way that all functions are **energetically optimised** and simultaneously carried out in a quick, powerful and reliable manner. The battery service life is also increased through recovery of kinetic energy, which is exclusively converted into heat in case of diesel operation.

Efficiency

For the electrical equipment, LAWECO counts on the efficient CAN system. Through a sophisticated control system, LAWECO controls the capacity of the drive motor in only the section which is actually required. **The system recognises the actual capacity requirement** - depending on the weight of the container or pallet.

Individuality

The battery-driven vehicle is designed for airfreight containers and pallets of up to 7 t and a processing height of 3700 mm „Lower Deck“ - even a height of 5600 mm is possible with a 7 t universal loader.

TRANSPORTER CMT 7

Ideal for sensitive freight



The **CARGO MASTER TRANSPORTER CMT 7** is specifically designed for transport of heavy and sensitive airfreight. As a link between Cargo Loader and Dolly Train, these transporters notably increase the clearance capacity on large international airports.

Extremely sturdy

The CARGO MASTER TRANSPORTER CMT 7 is a diesel vehicle with a loading capacity of 7,000 kg and a transport speed of 25 km/h. The warp-resistant chassis is based on a highly sturdy steel construction and is additionally reinforced on the transfer points to prevent damage. The travel gear consists of a non-driven front axle and a driven rear axle, both

with large wheels. The height of the front axle can be re-adjusted by means of a hydraulic cylinder for ideal adjustment. The vertical lifting and lowering movement has a length of approx. 300 mm.

TECHNICAL DATA

Load bearing capacity	7,000 kg
Transport speed	18 m/min.
Travel speed	max. 25 km/h
Turning radius	8,000 mm
Motor	Deutz Diesel TD2011 L4 with EMR 2, 56 kW
Drive system	hydrostatic drive on back wheels
Brakes	dual-circuit brake system and parking brake

DIMENSIONS

Transport dimensions	5,930 x 3,860 x 2,200 mm (LxWxH)
Weight	7,900 kg





CMLT 3.7 - 3.6

Two in one: Loader and transporter

The extremely flexible and manoeuvrable CARGO MASTER LOADER TRANSPORTER CMLT 3.7-3.6 can be used both as a loader for aircraft loading and as a container or pallet transporter.

The powerful solution for flexible handling

With a load bearing capacity of 3,700 kg, the CMLT 3.7-3.6 is a reliable multifunctional machine for **quick and flexible handling**. The CMLT 3.7-3.6 meets the highest standards concerning loading safety, as the

space between the loading transporter and the aircraft outline is very generously dimensioned. The small turning radius permits fast and safe manoeuvring.



One model for many types

The CMLT 3.7 - 3.6 is designed for the following airplane types, among others:

- Airbus A 300
- Airbus A 310
- Airbus A 319
- Airbus A 320
- Airbus A 321
- Boeing 737
- Boeing 747
- Boeing 767
- Boeing 777

TECHNICAL DATA

Load bearing capacity	3,700 kg
Stroke heights	490 – 3,600 mm
Transport speed	18 m/min.
Travel speed max.	max. 25 km/h
Turning radius	7,990 mm
Front axle	hydraulic steering support
Rear axle	hydrostatic drive motors MCR
Tyres	large-dimensioned solid rubber / air tyres
Lifting system	sturdy scissor system with reinforced bearings
Motor	Deutz Diesel D2011 L4 with EMR 2, 46 kW
Drive system	hydrostatic drive on back wheels
Brakes	dual-circuit brake system and parking brake
Hydraulic system	driving, conveying, lifting, steering, braking

DIMENSIONS

Transport dimensions	7,104 x 3,297 x 1,600 mm (LxWxH)
Weight	8,900 kg



CML 7

A brand-new generation of loading technology

The tried and tested CARGO MASTER LOADER CML 7 generation is one of the most innovative, efficient and safe container and pallet loaders on the market. LAWECO has consistently adapted loaders of this type to current challenges.

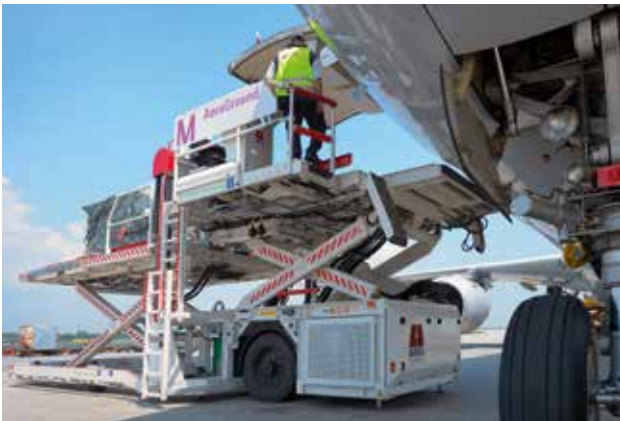
Added high-tech for the drive and the environment

A driving characteristic that is usual in the automotive sector: Our current loader model is the first vehicle with a closed hydraulic circuit specifically designed for the special requirements of aircraft handling.

The combination of hydraulic components and diesel engine capacity regulation significantly reduces fuel consumption and noise emission, **increasing environmental protection.**

The improved cold starting feature has a positive effect, especially on airports in areas subject to a harsh winter.

Three different basic models are manufactured for the version 7 fleet. As the CARGO MASTER LOADER CML 7 is designed both for Lower Deck and Main Deck handling, it fulfils high handling demands for practically all passenger and freight aircrafts up to the Boeing 747.



Reliability of the highest standard

It goes without saying that we use materials and technology of the best possible quality for our CARGO MASTER LOADER CML 7.

LAWECO's experienced technicians have made additional developments on all elementary components of the current generation. For example, the complete drive system of the diesel-driven vehicles has been carefully reworked and optimised to meet the demands of the future.

TECHNICAL DATA

CARGO MASTER LOADER	CML 7 - 3.7 S STANDARD	CML 7 - 3.7 W WIDE	CML 7 - 5.6 U UNIVERSAL
Load bearing capacity, main platform	7,000 kg	7,000 kg	7,000 kg
Load bearing capacity, bridge platform	7,000 kg	7,000 kg	7,000 kg
Stroke height, main platform	490 – 3,700 mm	490 – 3,700 mm	490 – 3,700 mm
Stroke height, bridge platform	1,850 – 3,700 mm	1,850 – 3,700 mm	1,880 – 5,600 mm
Guide rail operating width	1,600 – 2,480 mm	1,600 – 3,260 mm	1,600 – 3,260 mm
Turning radius	8,500 mm	8,500 mm	8,500 mm
Weight	15.8 t	18.8 t	21.0 t
Transport speed	18 m/min.	18 m/min.	18 m/min.
Lifting / lowering time	15 – 22 sec.	15 – 22 sec.	15 – 22 sec.
Travel speed	max. 15 km/h	max. 15 km/h	max. 15 km/h

DESIGN

Front axle	steering axle with planetary gear
Rear axle	non-driven
Tyres	front axle / rear axle Large-dimensioned air tyres / solid rubber tyres
Support	6 double-acting hydraulic cylinders
Motor	Deutz Diesel TD2011 M4 with EMR
Brake system	hydraulic multiple disc brake and spring-loaded parking brake



CML 14 - CML 35

Performance on a truly grand scale

The CARGO MASTER MAIN-DECK-LOADER CML 14 and CML 35 loaders are ideal for problem-free handling of wide-body aircraft. After all, there is a good reason why they have become one of the preferred solutions for nose loading of the Boeing 747.

Perfect loading for up to 14 tons

The CML 14-5.6 has a number of assembly components and characteristics in common with its little brother in the 7-t series.

The CARGO MASTER MAIN-DECK-LOADER boasts **an above-average service life** due to precisely defined and calculated components for lifting and transport.

Furthermore, its precisely dimensioned front platform makes it perfectly equipped for the respective cargo load.

CANbus technology and the electronic motor management set standards of efficiency and safety. Due to its compact design, the CARGO MASTER LOADER can also be used for Lower Deck handling.



Sturdy technology for Big Business

The CARGO MASTER LOADER CML 35 – 5.6 can show its premium qualities wherever there is a high demand for loading **especially heavy loads**.

Sturdily designed steel constructions and hydraulic and mechanical drive elements which have proven their quality in continuous operation, guarantee that the CARGO MASTER LOADER CML 35 can meet the highest safety standards on all airports in the world without any problems.

TECHNICAL DATA CARGO MASTER LOADER

CML 14 - 5.6

Load bearing capacity, main platform	14,000 kg
Load bearing capacity, bridge platform	14,000 kg roll-over load
Stroke height, main platform	495 – 5,600 mm
Stroke height, bridge platform	1,880 – 5,600 mm
Guide rail work width	1,500 – 3,400 mm
Transport speed	18 m/min.
Lifting / lowering time	25 – 45 sec.
Travel speed max.	max. 15 km/h
Turning radius	13,800 mm

DESIGN

Front axle	steering axle with planetary gear
Rear axle	non-driven
Tyres	front axle / rear axle Large-dimensional air tyres / solid rubber tyres
Support	8 double-acting hydraulic cylinders
Lifting system	sturdy scissor system with hydraulic cylinders and re-enforced bearings
Motor	Deutz Diesel TCD2012 M4 with EMR 3 / 74 kW - 86 kW
Drive system	hydrostatic drive on front axle
Brake system	hydraulic multiple disc brake and spring-loaded parking brake

DIMENSIONS

Transport dimensions	11,970 x 4,560 x 3,970 mm (LxWxH)
Weight	32,000 kg

LAWECO – In good hands



It is the sum total of details that makes LAWECO first choice – no matter which lifting solution is required.

Put your trust in Europe's leading manufacturer of individual lifting solutions. In cutting edge technology, made in Germany, setting standards in precision, safety and functionality. In over 30 years of experience of our highly motivated and specialised team. In consistent customer and service orientation, reflected in the large proportion of repeat business and an extremely high level of satisfaction.

In special products tailored to your requirements right down to the last detail. And of course, in the proverbial Westphalian honesty and reliability that you can always depend on as our customer.

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