

**IN SAFE
HANDS**

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1_INDEX

A

ACU — Aircraft Control Unit

A unit with facilities and personnel, including controllers, for conducting aircraft control and which exercises tactical control of aircraft or a unit(s).

APU — Auxilliary Power Unit

The APU is a small jet engine that is used to start the larger jet engines. In airliners it's usually at the very rear of the aircraft, below the tail.

AVAD — Automatic Vertical Adjustment Device

The Automatic Vertical Adjustment Device allows automatic fast and precise vertical alignment of tripod-jack at any time during the tripod positioning process.

C

CSD — Constant Speed Drive

A constant speed drive is a mechanical gearbox that takes an input shaft rotating at a wide range of speeds, delivering this power to an output shaft that rotates at a constant speed, despite the varying input. It is used to drive mechanisms, typically electrical generators, that require a constant input speed.

E

EJAL — Electronic Jacking And Levelling

The EJAL system is a fully automated system for syn-chronized aircraft lifting and lowering with a tripod-jack set.

EPS — Engine Pedestal Sets

Engine Pedestal Sets (EPS) are multi-purpose systems which can be used for various engine types from different engine manufacturers for engine storage and maintenance tasks.

F

Fly-away version

Shorter and lighter version of a product, to be stored in an aircraft. This version is not intended to be used in everyday application.

H

HGPU — Hydraulic Ground Power Unit

The Hydraulic Ground Power Unit is used for maintenance and testing of mainline aircraft hydraulic systems.

I

IDG — Integrated Drive Generator

The IDG is the world standard for constant frequency power in aircrafts. It is part of the engine.

IglooMX

Patent protected aircraft maintenance shelter as "hangar-in-a-back".

L

LTS — Laser Target System

The mobile laser target system allows faster positioning of tripod-jacks for aircraft jacking. It can be universally used on all tall HYDRO tripod-jacks.

M

MLG — Main Landing Gear

The main landing gear is the undercarriage of an aircraft and will be used for either takeoff or landing. The main landing gear is located under the wing or next to the body structure.

N

NB — Narrow-Body

A narrow-body aircraft or single-aisle aircraft is an airliner arranged along a single aisle permitting up to 6-abreast seating in a cabin below 4 metres (13 ft) of width.

NLG — Nose Landing Gear

The nose landing gear is the undercarriage of an aircraft and will be used for either taxiing, towing, takeoff or landing. The nose landing gear is located under the nose of an aircraft.

R

RA-Design - Alligator axle-jack design. The RA axle-jack has been designed for removing and installation of wheels and brakes in normal conditions and rough floor movement.

RC-Design - Compact axle-jack design. This fly-away axle-jack has been specially designed for removal and installation of aircraft wheels in normal conditions.

RH-Design - Handcarry axle-jack design. The RH fly-away axle-jack has been specially designed for removal and installation of aircraft wheels in normal conditions.

RL-Design - Cantilever axle-jack design. The RL axle-jack has been designed for removing and installation of wheels and brakes in recovery conditions.

RT-Design - T-shape axle-jack design. The RT axle-jack has been designed for removing and installation of wheels and brakes in normal conditions.

S

Standard version

Special designed tool for one aircraft application.

U

Universal version

Special designed tool for a various range of aircraft application.

W

WB — Wide-Body

A wide-body aircraft is a larger airliner usually configured with multiple aisles and a fuselage diameter of more than 5 metres (16 ft) allowing at least seven-abreast seating and often more travel classes.

2_EQUIPMENT LIST

Equipment	Version	Location/Designation	Model-No.
ATA Chapter 06 — Dimensions & Areas			
STANDARD PORTFOLIO			
Aircraft Maintenance Access Stand	Standard		DF071554-06
ATA Chapter 07 — Lifting & Shoring			
STANDARD PORTFOLIO			
Tripod-Jacks	Standard FortEvo Set	Wing	FEN352
		Nose	FEN122
		Tail	FEN121
	Universal FortEvo Set	Wing	FENT354
		Nose	FENT101
		Tail	FEN15
Axle-Jacks	Standard	MLG & NLG	RA4550
		MLG	RA6050
			RA9050
			RA10050
			RT6050
			RT9050
	Fly-away	MLG & NLG	RC4509
			RC6010
			RC9002
	Recovery	NLG	RH1029
			RH1606
		MLG & NLG	RL40
	MLG & NLG	RL9004	
	MLG & NLG	RL6011	
Axle-Jack hose pressure kit	Hose pressure kit		PO-54665

Equipment	Version	Location/Designation	Model-No.
ATA Chapter 09 — Towing & Taxing			
STANDARD PORTFOLIO			
Tow-Bars	Standard	NLG	TOWB737S
	Universal	NLG	TOWUNIV3
	Fly-Away	NLG	TOWB737-AI
Load Limiter		MLG	SG224
ATA Chapter 12 — Servicing			
STANDARD PORTFOLIO			
Service Carts	Standard	Nitrogen Service Cart	NBNT-2
			NBNT-4
		Oxygen Service Cart	NBOT-2
			NBOT-4
		Service Support Trailer	NBWBT
Fluid Dispenser	Standard	Fluid Dispenser	BOB02, BOB05, BOB20
Aircraft tyre inflation	Standard	Aircraft tyre inflation	MK7ATIS
Aircraft tyre pressure gauges	Standard	Aircraft tyre pressure gauges	NTG3004
ATA Chapter 25 — Equipment / Furnishing			
STANDARD PORTFOLIO			
Cabin Interior Access Stand	Standard		DF071553-01
ATA Chapter 29 — Hydraulic Power			
STANDARD PORTFOLIO			
Hydraulic Power	Standard		HGPU50-30

Equipment	Version	Location/Designation	Model-No.
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ATA Chapter 32 — Landing Gear

STANDARD PORTFOLIO

Wheel/Brake Change Dolly	Standard	MLG & NLG	MH13-003
	Option	Brake Cradle	24010-031-000
	Brake Hoist	MLG & NLG	HG14 HG14-001
LG R/I Trolley	Standard	MLG & NLG	MLGTMULTI-1
Adapter Kit for B737		MLG	MLGFB737NG-MAX
		NLG	MLGFB737NG-MAX
Compression Tool		MLG	MLGC01
Landing Gear Change Stand	Standard	MLG	DF071559-01
Aircraft Wheel Chocks		MLG & NLG	NBWC-6 NBWC-9
Aircraft Strut & Accumulator Service Tool	Standard	MLG & NLG	SIC8000-001
Aircraft Wheel & Tyre Handling	Standard		NBWS

ATA Chapter 38 — Waste Line Cleaning

STANDARD PORTFOLIO

Waste Line Cleaning System	Standard		WLC1-A
Mobile Lavatory Vacuum Blockage Remover	Standard		VTBR2
Waste Water Trailer	Standard		WWT1500

Equipment	Version	Location/Designation	Model-No.
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ATA Chapter 49 — Auxiliary Power Unit

STANDARD PORTFOLIO

Multi-Purpose Platform Stands			DF71556-03 XP
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ATA Chapter 53 — Fuselage

STANDARD PORTFOLIO

IglooMX Fuselage Shelter	Standard	Fuselage	890121
IglooMX Nose Shelter	Standard	Nose	890135

ATA Chapter 54 — Nacelles/Pylon

STANDARD PORTFOLIO

Nose Cowl Dolly Installation Device	Standard		DF071560-01
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Equipment	Version	Location/Designation	Model-No.
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ATA Chapter 71 — Power Plant

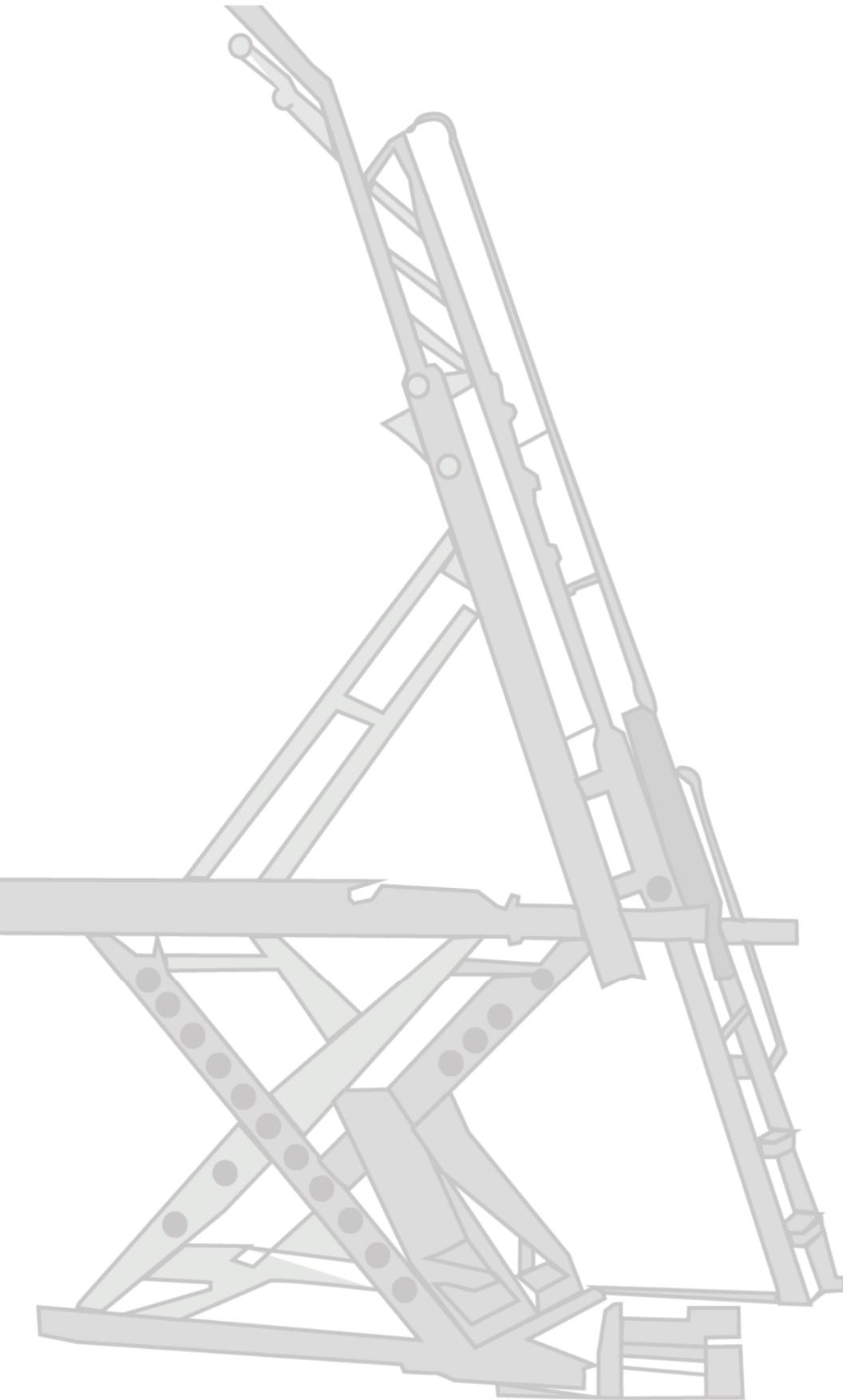
STANDARD PORTFOLIO

Engine Change System "COBRA"	All Engines	Engine	TP91G1F
COBRA Adapter Kit	CFM-56-7	Lifting Beam	TPBBC0A0
Lifting Adapter		Lifting Adapter	TPBAC0B0
Lug Secondary / Primary		Lifting Lug	TPBLA0C0
Engine Pedestal Set	Universal	Engine Pedestal Set	EPS001-002
	CFM56-3	EPS Adapter	47001-002-000
	CFM56-7B	EPS Adapter	47001-029-000
Engine Transportation	Base	CFM56-3	AM-2563-227
		CFM56-7B	
	Cradle	CFM56-7B	AM-2811-4800
Hoisting Sling	Universal	CFM56-3	HG20
		CFM56-5A/-5B/-5C	
		CFM56-7	
IglooMX Engine Change Shelter		Engine	890106

Others

STANDARD PORTFOLIO

Proof Load Fixture	Universal	Up to 50 t	PV050
	Universal	Up to 165 t	PV165
Boeing Tooling	Universal	Boeing Licensed Tooling for B737 Family	Upon request



3

DIMENSIONS & AREAS ATA CHAPTER 06

3

AIRCRAFT MAINTENANCE ACCESS STAND



DESCRIPTION

This stand is designed with an adjustable scissor lift base to give it the height required to access variable areas on the aircraft.

As the stand is designed for multiple aircraft use, for wide-body aircraft the stand facilitates safe access to nose cowls, fan cowls and pylon disconnect zones on PW, GE and RR engines, providing a safe working solution to many of the traditionally difficult under-cowling maintenance locations. The unit is also designed to safely access the same points outside of cowling, specifically forward and aft pylon service points, as well as hard to reach refuel panels and under-wing areas.



PRODUCT FEATURES

- Anti-fatigue ladder rungs rather than narrow ladder rungs (this ensures comfort when using the stands to change LRU'S, adjust components, or connect/disconnect engines and nacelles)
- Access to the B737 Empennage, avionics and aft-fuselage access points.
- The hydraulic pitch and height adjustment allows for the diverse angles and height variables.
- Extensive aluminum construction for easy movement and corrosion-resistant powder coat finish for longevity.
- For increased safety and ease of mobility, the stand comes equipped with 4 corner-levelling jacks, fold away tow-bars and lift truck fork pockets.
- Designed and tested in accordance with ANSI-ASC A14.7 and BS EN 131.7
- Adjustable Scissor Lift Base
- Padding Material Equipped
- Fall Restraint Anchor Points
- Controls: Hydraulic
- Ergonomic Design
- High-Grade Materials
- 2 Person Movement
- Powder Coated Finish
- 4 Corner-Levelling Jacks
- Fold Away Tow Bars
- Lift Truck Fork Pockets
- Foot pump

OPTIONS

- Air-powered pump
- Utilities package
- Extension
- Additional upper platform

BENEFITS

- Flexibility for use on all Boeing aircraft.
- Full use on Airbus wide-body aircraft as well as the A320 family
- Safety and Reliability
- Unrivalled quality and durability
- Rigorous inspection and testing
- B737 Access to Empennage
- Designed according to ANSI-ASC A14.7 and BS EN 131.7
- CE certified



TECHNICAL SPECIFICATION

AIRCRAFT MAINTENANCE ACCESS STAND

Model-No.	DF071554-06
Towing speed	10 kph / 6 mph
Material type	Ladder: Aluminum Frame: Steel
Certifications	ANSI-ASC A14.7, BS EN 131.7 & CE
Dimensions (shipping)	2,278 mm x 1,638 mm x 4,145 mm 89.69 inch x 64.5 inch x 163.2 inch
Weight	1,089 kg 2,400 lbs
Height	Low: 3,213 mm / 126.5 inch High: 6,077 mm / 239.25 inch
Foot print	2,278 mm x 4,145 mm 89.7 inch x 163.2 inch
Airbus applications	A300 / A310 A319neo / ceo, A320neo / ceo, A321neo / ceo, A330neo / ceo, A340, A350, A380
Boeing applications	B737 (NG and MAX) B474, B757, B767, B777, B777X, B787
Other applications	Embraer ERJ



4

LIFTING & SHORING

ATA CHAPTER 07

4.1

FORTEVO TRIPOD-JACKS

DESCRIPTION

The Fort Evo N-Series has been engineered and developed using state-of-the-art technology. The consistent modularity allows it to be configured according to customer specific requirements. Various configuration options, from the basic to the high-end versions, are available in combination with central Electronic Jacking and Levelling (EJAL) control system for safe operation. The FortEvo tripod-jack covers all of the most common narrow body aircraft.



HYDRO TRIPOD-JACKS INCLUDE

- Tripod structure
- Dual manual hydraulic pump with high- and lowpressure unit
- Overload relief valve offers protection against overpressurization
- Pressure indicator in bar and psi + conversion table for kN and metric tons
- Safety lock nut offers protection against unintended pressure relief
- Level for vertical alignment verification
- Feet with fixed ground plates
- Spring-loaded castors with locking mechanism
- Hard chromium plated cylinder tube for long and trouble-free service life
- Interchangeable adapters for additional aircraft types
- Secondary cylinder seal for protection against contaminants and to prolong life of primary seal
- Low-friction seal for uniform piston return
- Skydrol-resistant paint and galvanized plating for corrosion protection
- Movable tow-bar
- Ladder with platform or pedestal (according to jack height)
- Interface for HYDRO proof load equipment
- Factory proof load with 150 % of nominal capacity incl. proof load certificate

BENEFITS

- High quality made in Germany
- Airbus validated
- Long life-cycle
- Robust and proven design
- Secondary cylinder seal for protection against contaminants and to prolong life of primary seal
- At least 10 years spare part availability
- Durability
- Convenient maintenance



TECHNICAL SPECIFICATION

STANDARD TRIPOD-JACK SET B737

	Wing	Nose	Tail
Model-No.	FEN352	FEN122	FEN121
Capacity	35 t 38.5 tons	12 t 13.2 tons	12 t 13.2 tons
Hydr. lift	1,120 mm 44.1 inch	1,020 mm 40.2 inch	1,000 mm 39.4 inch
Screw ext.	255 mm 10.0 inch	255 mm 10.0 inch	330 mm 13.0 inch
Max. height (with fixed ground plates)	4,540 mm 178.7 inch	2,685 mm 105.7 inch	5,215 mm 205.3 inch
Max. height (with height-adjustable ground plates)	2,925 mm 115.1 inch	2,725 mm 107.3 inch	3,875 mm 152.6 inch
Boeing applications	B717 B737-200 to B-900 B737-7/ -8/ -9 MAX	B737-100 to -900 B737-7/ -8/ -9 MAX	B737-100 to -900 B737-7/-8/ -9 MAX
Other applications	Embraer 170 MD80 / MD90 Fokker 28 Fokker 100	MD90 CS100 / CS300 A220-100 / A220-300 RRJ-95 MC-21	MC-21



TECHNICAL SPECIFICATION

UNIVERSAL NARROW-BODY TRIPOD-JACK SET

	Wing	Nose	Tail
Model-No.	FENT354	FENT101	FEN15
Capacity	35 t 38.5 tons	10 t 11 tons	15 t 16.5 tons
Min. height	1,750 mm 68.9 inch	1,500 mm 59.1 inch	2,600 mm 102.4 inch
Hydr. lift	2,100 mm 82.6 inch	1,985 mm 78.1 inch	1,800 mm 70.9 inch
Screw ext.	660 mm 25.9 inch	450 mm 17.7 inch	250 mm 9.8 inch
Max. height	4,510 mm 177.5 inch	3,935 mm 154.9 inch	4,650 mm 183.0 inch
Application	A318 A319 / A319neo A320 / A320neo A321 / A321neo	A318 A319 / A319neo A320 / A320neo A321 / A321neo	A318 A319 / A319neo A320 / A320neo A321 / A321neo
Boeing application	B727 B737-100 to -900 B737 MAX -7/ -8/ -9	B707 B727 B737-100 to -900 B737 MAX -7/ -8/ -9	B707-120/ B B707-320/ B,C/ -420 B707-720/ B B737-100 to -900 B737 MAX -7/ -8/ -9 B757
Other applications	RRJ-95 Embraer 190/ 195 Embraer E190-E2 Embraer E195-E2 MC-21 MD-80/ 90 Dash 8Q-400 C919	MD-90 RRJ-95 MC-21 C919	TU-204 MC-21

AVAILABLE OPTIONS OVERVIEW

Drive Units	<ul style="list-style-type: none"> Air-hydraulic pump Electro-hydraulic pump
Safety lock nut	<ul style="list-style-type: none"> Manually operated safety lock nut Automatically operated safety lock nut*
Castors	<ul style="list-style-type: none"> Spring-loaded swivel castors Hydraulically height-adjustable swivel castors Hydraulically height-adjustable high speed outdoor castors
Transportation	<ul style="list-style-type: none"> Forklift adapter PowerCat (electrical towing unit) interface
Positioning	<ul style="list-style-type: none"> Fixed mounted laser target system Mobile laser target system
Levelling	<ul style="list-style-type: none"> Automatic Vertical Adjustment Device (AVAD)
Lifting & Lowering	<ul style="list-style-type: none"> Mechanical stroke measuring system Electronical stroke measuring system* Fast lowering system* Electronic Jacking And Levelling system (EJAL) — synchronized aircraft jacking*
Corrosion Protection	<ul style="list-style-type: none"> Hard-chromium-plated piston
Load Cell System	<ul style="list-style-type: none"> Load indication Overload warning system A/C weighing — upon request

*only in combination with electro-hydraulic pump

ELECTRONIC-HYDRAULIC PUMP

DESCRIPTION OF OPTIONS



DESCRIPTION

Electrically driven hydraulic pump unit for HYDRO tripod-jack use.

PRODUCT FEATURES

- Electrically driven
- Robust design
- Maximum user comfort and best view to the jacking point area during jacking operation due to the cable connected hand held controller

AVAILABILITY

- Available for all electric narrow- and wide-body HYDRO tripod-jacks

BENEFITS

- Increased operational performance
- Prepared for later update with our EJAL system and automatically operated safety lock nut
- Hand held controller

AUTOMATICALLY OPERATED SAFETY LOCK NUT

DESCRIPTION OF OPTIONS



DESCRIPTION

Electrically driven safety lock nut; specially designed for HYDRO tripod-jacks.

PRODUCT FEATURES

- Automatically operated safety lock nut during aircraft lifting and lowering operation
- Product requirement: electric driven hydraulic jack
- Electrically driven
- Robust design

AVAILABILITY

- Available for all narrow- and wide body HYDRO tripod-jacks

BENEFITS

- Cost-efficient
- Reduction of man power
- Increased operational performance
- Especially useful for tall tripod-jacks
- Absolutely recommended for tripod-jack systems with a high level of automation
- One-man operation

HYDRAULICALLY HEIGHT-ADJUSTABLE HEAVY-DUTY SWIVEL CASTORS DESCRIPTION OF OPTIONS



DESCRIPTION

Hydraulically height-adjustable swivel castors with central operation unit.

PRODUCT FEATURES

- Simple application
- Central operation of all three castors with hand pumps — close to the bubble level
- Heavy duty swivel castors with brakes for storage and swivel locks for improved towing

AVAILABILITY

- Available for all electric driven narrow- and wide-body HYDRO tripod-jacks
- Recommended for all bigger narrow- and wide-body tripod-jack models from a total weight of 700 kg upwards

BENEFITS

- Increased operational performance — time reduction for jack levelling and positioning
- Higher precision in jack levelling
- Especially useful for big and heavy tripod-jacks
- Increased ground clearance during towing

HYDRAULICALLY HEIGHT-ADJUSTABLE HIGH SPEED OUTDOOR CASTORS DESCRIPTION OF OPTIONS



DESCRIPTION

Hydraulically height-adjustable swivel castors with central operation unit, specially designed for outdoor usage and improved towing speed up to 25 km/h / 15 mph.

PRODUCT FEATURES

- Robust design
- Simple application
- Hydraulic height-adjustable via hand pumps
- Heavy duty castors; two fixed castors and one castor steerable via tow-bar

AVAILABILITY

- Available for nearly all HYDRO narrow and wide body jacks

BENEFITS

- Solid rubber wheels — maintenance free
- Greater moving speed over longer distances up to 25 km/h / 15 mph possible
- Tripod-jack towing also on bad surfaces or over gaps and cracks/snow
- Increased operational performance — time reduction for jack moving, levelling and positioning
- Higher precision in jack levelling
- Especially useful for big and heavy tripod-jacks
- Increased ground clearance during towing

FORKLIFT ADAPTER

DESCRIPTION OF OPTIONS



DESCRIPTION

Forklift adapters allow easy movement of tripod-jacks with a forklift even on bad surfaces or over gaps and cracks.

PRODUCT FEATURES

- Fast and cost-saving way for moving big and heavy tripod-jacks over long distances or onto a truck with a forklift
- Robust welded steel frame
- Simple application

AVAILABILITY

- Available for nearly all narrow- and wide-body HYDRO tripod-jack models

BENEFITS

- Movement of tripod-jack with forklift also on bad surfaces or over gaps and cracks possible
- Increased operational performance

POWERCAT (ELECTRICAL TOWING UNIT) INTERFACE

DESCRIPTION OF OPTIONS



DESCRIPTION

Fast and cost-saving way for moving and positioning of big heavy tripod-jacks or other equipment

PRODUCT FEATURES

- Max. towing capacity 14,000 kg (30,800 lbs)
- All operating elements integrated in the handle/tow-bar (similar to electric powered pallet trucks)
- Battery driven (24 V – 240 Ah)
- Battery charger (option — not part of delivery)
- Different jack adapters available
- Heavy duty rollers
- Simple application

AVAILABILITY

- Developed and recommended for A380 Main Jacks
- Applicable and adaptive for all other big and heavy HYDRO tripod-jacks

BENEFITS

- Significant reduction of manpower
- Master Mover
- Increased operational performance — time reduction for jack positioning
- Higher precision in jack positioning
- Useful for all heavy tripod-jacks

FIXED MOUNTED LASER TARGET SYSTEM

DESCRIPTION OF OPTIONS



DESCRIPTION

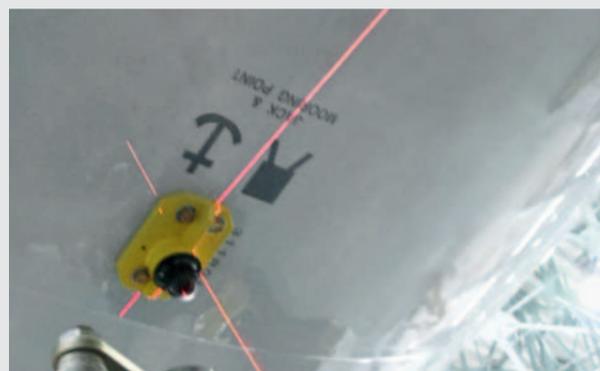
The fixed mounted laser target system allows precise and faster positioning of tripod-jacks for aircraft jacking.

PRODUCT FEATURES

- The system projects a red laser cross for easy positioning of the jack under the aircraft jacking point
- Simple application: activation by push button on jacks handheld controller

AVAILABILITY

- Laser system is available for all HYDRO narrow- and wide-body tripod-jack models
- Available only for electric powered HYDRO tripod-jack models



BENEFITS

- Increased operational performance — time reduction for aircraft jacking
- Higher precision in jack positioning
- Useful for tall tripod-jacks
- Installed on each tripod-jack

MOBILE LASER TARGET SYSTEM

DESCRIPTION OF OPTIONS



DESCRIPTION

The mobile laser target system allows precise and faster positioning of tripod-jacks for aircraft jacking. It can be universally used on all tall HYDRO tripod-jacks.

PRODUCT FEATURES

- The unit projects a laser cross for easy positioning of the jack under the aircraft jacking point
- Simple application: remove jacking adapter from the jack and replace it with LTS adapter, turn on the laser, level and position the jack under the jacking point. Universal use — system includes two adapters which cover all HYDRO narrow- and wide-body tripod-jack models (excluded optional A380 main jack adapter)
- Battery driven
- Plastic storage and carrying case with foam cushioning (includes space for optional A380 adapter)

AVAILABILITY

- System can be used in combination with all HYDRO narrow and wide-body tripod-jack models (excluded A380 main jack — optional adapter is available)

BENEFITS

- Increased operational performance — time reduction for jack levelling and positioning
- Higher precision in jack positioning
- Reduction of manpower
- Useful for tall tripod-jacks
- Universal use on all tall HYDRO tripod-jacks possible

AVAD (AUTOMATIC VERTICAL ADJUSTMENT DEVICE)

DESCRIPTION OF OPTIONS



DESCRIPTION

The Automatic Vertical Adjustment Device allows auto-matic fast and precise vertical alignment of tripod-jack at any time during the tripod positioning process.

PRODUCT FEATURES

- Fully automated vertical alignment device for the individual tripod-jacks
- Inclination sensor
- Proportional hydraulic valves
- Simple application: activation by push button on jacks handheld controller
- Robust design

AVAILABILITY

- Available for all narrow- and wide-body electric powered HYDRO tripod-jacks which are equipped with hydraulic height adjustable wheels

BENEFITS

- Automatic fast and precise vertical alignment of tripod-jack at any time during tripod positioning process
- Cost-efficient
- Increased operational performance
- Faster jack positioning
- Absolutely recommended for tripod-jack sets on a high level of automation
- Universal use on all tall HYDRO tripod-jacks possible

MECHANICAL STROKE MEASURING SYSTEM

DESCRIPTION OF OPTIONS



DESCRIPTION

The mechanical stroke measurement system monitors the working stroke of the hydraulic cylinders of tripod-jacks.

PRODUCT FEATURES

- Mounted outside of the cylinder
- Main components made of aluminum
- Robust and proven design

AVAILABILITY

- Available for all narrow- and wide-body HYDRO tripod-jacks



BENEFITS

- Different jacking levels can be reached repeatable
- Robust and proven design
- Failsafe
- Maintenance free
- Pure mechanical system
- Also usable as a simple synchronous lifting system

ELECTRONICAL STROKE MEASURING SYSTEM

DESCRIPTION OF OPTIONS



DESCRIPTION

The electrical stroke measurement system monitors the working stroke of tripod-jacks hydraulic cylinder. The measured stroke will be shown on a display.

PRODUCT FEATURES

- Measured stroke will be shown on display (if tripod-jack is equipped with) or on EJAL control desk
- Mounted outside of the cylinder
- Robust and proven design
- Only recommended for EJAL systems

BENEFITS

- Different aircraft jacking levels can be reached repeatable
- In conjunction with the EJAL system: measured stroke of each tripod-jack will be transmitted to the control desk. This enables precise synchronous control of all tripod-jacks during aircraft lifting and lowering
- Can also be used for limitation of hydraulic lift to prevent aircraft damage

AVAILABILITY

- Available for all electric narrow- and wide-body HYDRO tripod-jack

FAST LOWERING SYSTEM

DESCRIPTION OF OPTIONS



DESCRIPTION

The Fast Lowering System increases the lowering speed of the hydraulic cylinder of tripod-jacks without load.

PRODUCT FEATURES

- Pressure sensor integrated in the hydraulic system (can also be used for limitation of jacks lifting capacity)
- The fast lowering function is automatically activated when lowering movement is activated and the cylinder-/system-pressure drops under the limit value
- Fast lowering function is automatically deactivated during movement operations of loaded cylinder
- Hydraulic system pressure will be shown on display (if tripod-jack is equipped with)
- Only recommended for tripod-jacks with automatically operated safety lock nuts

BENEFITS

- Increased lowering speed of the hydraulic cylinder without load
- Reduction of process time
- Can also be used for limitation of tripod-jacks lifting capacity (maintenance panel required)

AVAILABILITY

- Available for all narrow- and wide-body HYDRO tripod-jacks

ELECTRONIC JACKING AND LEVELLING SYSTEM (EJAL)

DESCRIPTION OF OPTIONS



DESCRIPTION

The EJAL system is a fully automated system for synchronized aircraft lifting and lowering with a tripod-jack set.

PRODUCT FEATURES

- Individual operation of jacks also possible
- Electrical system — universal useable for different tripod-jack sets
- Aircraft inclination sensor
- Touch panel display
- Cable drums with spring return for power supply of tripod-jacks and for main power supply
- Heavy duty casters with brakes
- Robust design
- Simple application

AVAILABILITY

- Available for all narrow- and wide-body electric powered HYDRO tripod-jack sets.

BENEFITS

- Reduction of manpower
- Cost-efficient
- Increased operational performance
- Faster jacking operation
- Permanent control of aircraft inclination
- Minimized risk for the operator and aircraft through synchronized lifting and lowering operation
- Maximum safety
- High level of automation for aircraft lifting and lowering process

4.2

AXLE-JACKS | STANDARD AXLE-JACKS (RA-DESIGN)

DESCRIPTION

Our innovative design combines high efficiency with standard components across the series, resulting in reduced maintenance costs and increased versatility.

These jacks are perfect for both narrow and wide body aircraft and are extremely easy to use. The large castors provide increased ground clearance, making maneuverability on most types of surfaces a breeze. And with a robust build that is ideal for outdoor use, these jacks are designed to endure.

Upgrade your aircraft maintenance game with the new RA hydraulic axle-jack from HYDRO Systems KG - versatile, efficient, and built to last.



PRODUCT FEATURES

- Integrated pneumatically-driven hydraulic pump with maintenance unit
- Integrated automatic retraction system for a quick removal of the axle-jack
- Very short extension time to jacking point (full extension in less than 1 minute)
- Manual hand pump (operated by the tow-bar)
- Optimized undercarriage for easy maneuvering
- All functional parts protected by a stainless steel cover against damage during rough operation and weather

BENEFITS

- High quality made in USA
- Compatible with many aircraft
- Durable for line environment
- Very short extension time
- Long service life
- Robust and proven design
- Easy maneuvering due to optimized undercarriage
- Best handling and extreme repair-friendly due to modular design and available spare parts
- Leak-proof operation because of elements integrated into the oil tank
- Stainless steel cover — all parts are protected against dirt, harsh environment and UV-radiation
- Worldwide unique manufacturing process for the components of the hydraulic cylinder subject to high stress
- Documented verification for each manufacturing step for each part
- At least 10 years spare part availability
- On-site service
- Interface for HYDRO proof-load equipment

- Cover for cylinder
- Tow-bar for operating the jack
- Stainless steel cover: all other parts are Skydrol-resistant painted
- Label with A/C applications
- Factory proof load at 150 % of nominal capacity including proof load certificate



TECHNICAL SPECIFICATION

STANDARD AXLE-JACK (RA-DESIGN)

Model-No.	RA4550	RA6050	RA9050	RA10050
Capacity	45 t 49.6 tons	60 t 66.1 tons	90 t 99.2 tons	100 t 110.2 tons
Min. height	190 mm 7.5 inch	246 mm 9.7 inch	260 mm 10.2 inch	275 mm 10.8 inch
Hydr. lift	313 mm 12.3 inch	328 mm 12.9 inch		
Screw ext.	70 mm 2.8 inch	121 mm 4.8 inch		
Max. height	573 mm 22.6 inch	695 mm 27.4 inch	683 mm 26.8 inch	604 mm 23.7 inch
Airbus applications	<p>NLG A220-100/ -300, A300-600/ -B2/ -B4, A310-200/ -300, A319 neo/ -100, A320-200 / neo, A321 neo/ -100/ -200, A330-200 /-200F/ -300/ -800/ -900, A340-200/ -300, A340-500/ -600, A350-900/ -1000</p> <p>MLG A220-100/ -300, A300-600/ -B2/ -B4, A310-200, A310-300, A318- 100, A319 neo/ -100, A320 neo, A320-200/ -200 4-wheel-bogie, A321 neo/ -100, A321-200, A330- 200/ -200F/ -300/ -800/ -900</p> <p>CLG A340-200 /-300</p>	<p>NLG A220-100/ -300, A300-600/ -B2/ -B4, A330-200/ -200F, A330-300/ -800/ -900, A340- 200/ -300/ -500/ -600, A350-900/ -1000</p> <p>MLG A220-100/ -300, A300-600/ -B2/ -B4, A310-200, A310-300, A318- 100, A319 neo/ -100, A320 neo, A320-200/ -200 4-wheel-bogie, A321 neo/ -100, A321-200, A330- 200 /-200F/ -300/ -700L/ -800/ -900, A350-900</p> <p>CLG A340-200 /-300</p>	<p>NLG A220-100/ -300, A300-B2/ -B4, A330-200, A330- 200F/ -300/ -700L/ -800/ -900, A340- 200/ -300/ -500/ -600, A350-1000/ -900</p> <p>MLG A220-100/ -300, A300-600/ -B2/ -B4, A310-200/ -300, A319 neo A319-100, A320 neo/ -200/ -200 4-wheel-bogie, A321 neo/ -100 A321-200, A330- 200 /-200F/ -300/ -700L/ -800/ -900, A350-900</p> <p>CLG A340-200 /-300</p>	<p>NLG A330-200 /-200F/ -300/ -700L/ -800/ -900, A340- 200/ -300/ -500/ -600, A350-900/ -1000</p> <p>MLG A300-600/ -B2/ -B4, A310-200/ -300, A319 neo/ -100, A320 neo A320-200, A321 neo/ -100/ -200, A330-200/ -200F/ -300/ -700L, A330-800/ -900, A340-300, A350- 900/ -1000</p>

Model-No.	RA4550	RA6050	RA9050	RA10050
Boeing applications	<p>NLG B707-120B/ -220/ -320/ -420/ -131B/ -320B/C/ -720/B, B727-100/ -200, B737-10/ -100/ -200/ -200C/ -300, B737- 400/ -500/ -600/ -7/ -700/ -8/ -8200/ -800/ -9, B737-900/ -900ER, B757-200/ -300, B767-200/ -300, B767-300ER/ -400ER, B777-200/ -200ER, B777- 200LR/ -200F/ -300/ -300ER/ -8/ -9, B787-8/ -9/ -10</p> <p>MLG B707-120B/ -220/ -320/ -420/ -131B/ -320B/C/ -720/B, B717, B727-100/ -200, B737-10/ -100/ -200/ -200C/ -300/ -400/ -500/ -600, B737-7/ -8/ -8200/ -800/ -9/ -900/ -900ER, B747-100/ -200/ -200C/ -300/ B757* -200/ -300, B767-200/ -300/ -300ER, B767- 400ER, B787-10/ -8/ -9</p>	<p>NLG B707-120B/ -220/ -320/ -420/ -131B/ -320B/C, B707- 720/B, B727-100/ -200/ -300, B747- 400/ -400ER/ -8F/ -8I/ SP, B757-200/ -300, B767-200/ -300/ -400ER, B777-200/ -200ER, B777-200/ -200F, B777-300/ -300ER/ -8/ -9, B787-8/ -9/ -10</p> <p>MLG B707-120B/ -220/ -320/ -420/ -131B/ -320B/C/ -720/B, B717, B727-100/ -200, B737-10/ -100/ -200/ -200C/ -300/ -400/ -500/ -600, B737-7/ -8/ -8200/ -800/ -9/ -900/ -900ER, B747-100/ -200/ -200C/ -300/ B757* -200/ -300, B767-200/ -300/ -300ER, B767- 400ER, B787-10/ -8/ -9</p>	<p>NLG B727-100/ -200, B747-100/ -200/ -300/ -400, B747- 400ER/ -8F/ -8I/ SP, B757-200/ -300, B767-200/ -300/ -300ER/ -400ER, B777-200/ -200ER/ -200LR/ -200F, B777-300/ -300ER/ -8/ -9, B787-8/ -9/ -10</p> <p>MLG B707-120B/ -220/ -320/ -420/ -131B/ -320B/C/ -720/B, B727-100, B727- 200, B737-10/ -100/ -200/ -200C/ -300/ -400/ -500/ -600, B737-7/ -8/ -8200/ -800/ -9/ -900/ -900ER, B747-100/ -200, B747-200C/ -300/ -400/ -400ER/ -8F/ -8I/ SP, B757-200/ -300, B767-200/ -300/ -300ER/ -400ER, B777-200/ -200ER, B777- 200LR/ -200F/ -300/ -300ER/ -8/ -9, B787-8/ -9/ -10</p>	<p>NLG B727-100/ -200, B767-200/ -300/ -300ER/ -400ER, B777-200/ -200ER/ -300/ -200LR/ -200F/ -300ER/ -8/ -9, B787-8/ -9/ -10</p> <p>MLG B707-120B/ -220/ -320/ -420/ -131B/ -320B/C/ -720/B, B727-100/ -200, B737-10/ -100/ -200/ -200C/ -300/ -400/ -500, B737-600/ -7/ -700/ -8 /-8200/ -800/ -9/ -900/ -900ER, B747- 100/ -200/ -200C/ -300/ -400/ -400ER/ -8F/ -8I/ SP, B757-200/ -300, B767-200/ -300/ -300ER/ -400ER/ B777- 200, B777-200ER/ -300/ -200LR/ -200F/ -300ER/ -8/ -9, B787-8/ -9/ -10</p>
Other applications	<p>NLG DC-10 Series 10/ 15/ 30/ 40, EMBRAER 170/ 175, EMBRAER 190/ 195, L-1011-01/ -100/ -200/ -500, MC-21, MD-11</p> <p>MLG C919, DC-10 Series 10/ 15, EMBRAER 170/ 175/ 190/ 195, Fokker 100/ 50, MC-21, MD-80/ -90, RRJ-95</p>	<p>NLG L-1011-01/ -100/ -200</p> <p>MLG DC-10 Series 10/ 15/ 30/ 40, EMBRAER 190/ 195, L-1011-01/ -100/ -200/ -500, MC-21, MD-11</p>	<p>MLG DC-10 Series 10/ 15/ 30/ 40 L-1011-01/ -100/ -200/ -500 MC-21, MD-11</p>	<p>MLG DC-10 Series 10/ 15/ 30/ 40 L-1011-01/ -100/ -200/ -500 MC-21, MD-11</p>

4.3

AXLE-JACKS | UNIVERSAL AXLE-JACKS (RC-DESIGN)

DESCRIPTION

Our fly-away axle-jack series called "RC" has been engineered primarily for use in aircraft maintenance.

The series can be used with most common narrow-body and wide-body aircraft types. The RC axle-jacks have a compact and modular design used throughout that allows them to be configured according to your specific requirements. Our products are built to withstand harsh environmental conditions and rugged use. Safety and "Made in Germany" quality have the highest priority. The RC axle-jacks offer optimum performance for professional use.



PRODUCT FEATURES

- Hand pump with low and high pressure unit
- Nitrated cylinders and rams to guarantee a long and trouble-free life
- With two wheels and a handle bar, for transportation on the ground (not for all models)
- All non-painted parts galvanized
- Factory proof load at 150 % of nominal capacity including Proof Load Certificate
- Skydrol-resistant paint; all other parts are plated for corrosion protection
- Label with A / C applications
- Interface for HYDRO proof load equipment

AVAILABLE ACCESSORIES

Drive Units

- Air-hydraulic pump

Castors

- Spring loaded castors with dampened tow-bar
- Spring loaded castors with tow-bar

Safety lock nut

- Manually operated safety lock nut

Transportation

- Wooden box
- Aluminium box

BENEFITS

- High quality made in Germany
- Long service life
- Robust and proven design
- Easy maneuvering by one person
- At least 10 years spare part availability
- On-site service



TECHNICAL SPECIFICATION

UNIVERSAL AXLE-JACK (RC-DESIGN)

Model-No.	RC4509	RC6010	RC9002
Capacity	45 t 50 tons	60 t 66.1 tons	90 t 99 tons
Min. height	190 mm 7.5 inch	246 mm 9.7 inch	261 mm 10.2 inch
Hydr. lift	313 mm 12.3 inch	328 mm 12.9 inch	324 mm 12.7 inch
Screw ext.	70 mm 2.8 inch	121 mm 4.8 inch	112 mm 4.4 inch
Max. height	573 mm 22.6 inch	695 mm 27.4 inch	697 mm 27.4 inch
Applications	A300 / A310 (NLG & MLG) A320 Family incl. NEO (NLG & MLG) A330-200 / -300 / A350-900 (NLG) A340-200 to -600 B707 / B727 / (NLG & MLG) B717 / B737-100 / -200 (MLG) B737-300 to -900 incl. MAX 7/8/9 (NLG & MLG) B757-200 / -300 (NLG & MLG) B767-200/ -300/ -400ER (NLG) B777-200 / -200ER / -300 / -200LR / -300ER (NLG) B787-8/ -9 (NLG) MD-80 / MD-90 (MLG) Embraer 170 / 175 / 190 / 195 (NLG & MLG) DC-10 / MD-11 / L-1011 (NLG) MC-21 (MLG) C919 (MLG)	A220-100/ -300 (NLG & MLG) A300 / A310 (NLG & MLG) A320 Family (MLG) A330 (NLG & MLG) A340-200 / -300 (NLG & MLG & CLG) A340-500 / -600 (NLG & CLG) A380 NLG B707 / B727 (NLG & MLG) B717 / B737-100 to -900 incl. MAX (MLG) B747-8 / B777 (NLG) B747-100 to -400 (NLG & MLG) B757 / B767 / B787-8 / -9 (NLG & MLG) DC-10 / MD-11 / L1011 (NLG & MLG) CS100 / CS300 (NLG & MLG) Embraer 190 / 195 (MLG) MC-21 (MLG)	A220-100/ -300 (NLG & MLG) A300 / A310 / A320 Family incl. NEO (MLG) A330-200 / -300 (NLG & MLG) A340-200 / -300 (NLG & MLG & CLG) A340-500 / -600 (NLG & MLG & CLG) A350-900 (NLG & MLG) B707 / B737-100 to -900 incl. MAX (MLG) B727 (NLG & MLG) B747-100 / -200 / -300 (NLG & MLG) B747-400 / -400ER / -8 (NLG & MLG) B767-200 / -300 / -400ER (NLG & MLG) B777-200 / -200ER / -300 / -200LR / -300ER (NLG & MLG) B787-8 / -9 / (NLG & MLG) CS100 / CS300 (NLG & MLG) DC-10 / MD-11 / MC-21 / L-1011 (MLG)

4.4

AXLE-JACKS | FLY-AWAY AXLE-JACKS (RH-DESIGN)

DESCRIPTION

Our hand-carry axle-jack series called "RH" has been engineered primarily for use in aircraft maintenance. The series can be used with most common narrow-body and wide-body aircraft types.

The RH axle-jacks are a smaller version of the RC axle-jacks and designed for carrying by one person. Our products are built to withstand harsh environmental conditions and rugged use. Safety and "Made in Germany" quality have the highest priority. The RH axle-jacks offer optimum performance for professional use.



PRODUCT FEATURES

- Single manual hand pump
- Nitrated cylinders and rams to guarantee a long and trouble-free life
- Grab handle for hand transportation
- Fixed undercarriage for easy manoeuvring
- With two wheels and handle bar, for transportation on the ground
- Skydrol-resistant paint; all other parts are galvanized for corrosion protection
- Label with A/C applications
- Interface for HYDRO proof load equipment

AVAILABLE ACCESSORIES

- Wooden box
- Aluminium box
- Air-hydraulic pump

BENEFITS

- High quality made in Germany
- Long life-cycle
- Robust and proven design
- Easy maneuvering by one person
- At least 10 years spare part availability
- On-site service



TECHNICAL SPECIFICATION

FLY-AWAY AXLE-JACK (RH-DESIGN)

Model-No.	RH1606	RH1029
Capacity	16 t 17.6 tons	10 t 11.0 tons
Min. height	158 mm 6.2 inch	145 mm 5.7 inch
Hydraulic lift	172 mm 6.8 inch	265 mm 10.4 inch
Screw ext.	60 mm 2.4 inch	40 mm 1.6 inch
Max. height	390 mm 15.4 inch	450 mm 17.7 inch
Airbus applications	NLG A220 A318 A319 A319neo A320 A320neo A321 A321neo	NLG A220 A320 A320neo A321
Boeing applications	NLG B737 all B737 MAX	NLG B717, B737-600 to -900 B737 MAX (-7/-8/-8200/-9)
Other applications	NLG Embraer 170 to 195 RRJ-95 AN-140 Fokker 50 Fokker 100 DC-9 Falcon 6X/7X/8X MLG CRJ-100/200 YAK-152 Falcon 6X/7X/8X	NLG BAe146, AVRO RJ CRJ-700/-900, Dash8-Q400 CS100,CS300, DC9 Embraer 170 to175 Embraer 190 to 195 Fokker 28/50/100 MC-21, MD80, MD90 RRJ-95 MLG AN-140 ATR 42 CRJ-100/-200 Fokker F50 YAK-152

4.5

AXLE-JACKS | RECOVERY AXLE-JACK (RL-DESIGN)

DESCRIPTION

Our recovery axle-jack series called "RL" has been engineered primarily for use in aircraft recovery maintenance tasks. The series can be used with most common narrow-body and wide-body aircraft types. The key feature of the RL axle-jack is the extremely low lifting point. Our products are built to withstand harsh environmental conditions and rugged use. Safety and "Made in Germany" quality have the highest priority. The RL recovery jacks offer optimum performance for professional use.



PRODUCT FEATURES

- Hand pump with low and high pressure unit
- Ram set salt-bath nitrided and polished
- Manually operated safety lock nut
- Force indicator, e.g. bar/kN, bar, psi
- Tow-bar
- Interface for HYDRO proof load equipment
- Height-adjustable undercarriage
- Skydrol-resistant paint
- Label with A/C applications
- Interface for HYDRO proof load equipment
- Factory proof load at 150 % of nominal capacity, including proof load certificate

BENEFITS

- High quality made in Germany
- Long life-cycle
- Robust and proven design
- Easy maneuvering due to optimized undercarriage
- At least 10 year spare part availability



TECHNICAL SPECIFICATION

Model-No.	RL9004	RL3015	RL6011
Capacity	90 t 99.2 tons	30 t 33.1 tons	60 t 66 tons
Min. height	70 mm 2.8 inch	73 mm 2.9 inch	67 mm 2.64 inch
Hydr. lift	580 mm 22.8 inch	564 mm 22.2 inch	613 mm 24.1 inch
Max. height	650 mm 25.6 inch	637 mm 25.1 inch	680 mm 26.77 inch

Model-No.	RL9004	RL3015	RL6011
Airbus applications	<p>NLG A330 / A340 A380</p> <p>MLG A300/A310 A330/A340 A350-900/-1000</p> <p>CLG A340-500/600</p> <p>WLG A380</p>	<p>NLG A220-100 /-300, A300-600 /-B2 /-B4, A310-200 /-300, A318-100, A319 neo /-100 / CJ, A320 neo /-200, A321 neo /-100 /-200, A330-200 /-200F /-300 /-800 /-900, A340-300</p> <p>MLG A220-100 /-300, A310-200 /-300</p>	<p>NLG A220-100 /300, A300-600 /-B2 /-B4, A310-200 /300, A318-100, A319 neo /-100, A320-200 / neo, A321 neo, A321-100 -200, A330-200 /-200F /-300 /-800 /-900, A340-200 /-300, /-500, /-600, A350-1000 /-900</p> <p>MLG A220-100 /-300, A300-600 /-B2 /-B4, A310-200 /-300, A318-100, A319 neo /-100, A320 neo /-200 /-200 4-wheel-bogie, A321 neo /-100 /-200, A330-200 /-200F /-300 /-800 /-900</p> <p>CLG A340-200 /-300</p>
Boeing applications	<p>NLG B727, B747, B767, B787</p> <p>MLG B707, B727, B737, B747, B767, B777, B787</p> <p>WLG B747</p>	<p>NLG B707-720/B, B737-100 /-200 /-200C /-300, B737-500, B757-200 /-300</p>	<p>NLG B707-120B /-220 /-320 /-420 /-131B /-320B/C/-720/B, B727-100 /-200, B737-100 /-200 /-200C /-300 /-400 /-500, B747-100 /-200 /-300 /-400 /-400ER /-8F, B747-8I /-SP, B767-200 /-300 /-300ER /-8 /-9, B787-8 /-9 /-10</p> <p>MLG B707-120B /-220 /-320 /-420 /-131B /-320B /C /-720 /B, B727-100 /-200, B737-100 /-200 /-200C /-300 /-400 /-500, B747-400 /-400ER /-SP, B757-200 /-300, B767-200 /-300 /-300ER /-400ER, B787-8 /-9 /-10</p>
Other applications	<p>MLG MD-11</p>	<p>NLG An-140, ATR-42, C919, CN-235, CRJ-100 /-200 (all Series), DC-10 Series 10/15, DC-9, Dornier 328/328 Jet, Embraer 170 /175 /190 /195, Eurofighter, L-1011-01 /-100 /-200, L-1011-500, MC-21, MD-11, MD-80, RRJ-95, TU-204 /-214</p> <p>MLG ATR-42, CN-235, CRJ-100 /-200 (all Series), Dornier 328/328 Jet, Embraer 170 /175 /190 /195, Fokker 28 /50 /100, Pilatus PC-24, RRJ-95, TU-204 /-214</p>	<p>NLG ARJ21 ER, ARJ21 STD, Embraer 170 /175 /190 /195, Dash 7, MC-21</p> <p>MLG DC-10 Series 10/25, DC-10 Series 30/40, Embraer 170 /175 /190 /195, L-1011-01 /-100 /-200 /-500, MC-21, MD-11, RRJ-95</p>

4.6

AXLE-JACKS | STANDARD AXLE-JACKS (RT-DESIGN)

DESCRIPTION

Our standard axle-jack series called "RT" has been engineered primarily for use in aircraft maintenance. The series can be used with most common narrow-body and wide-body aircraft types.

The RT axle-jacks have been developed with the latest state of technology. Our axle-jacks are built to withstand the harshest environmental conditions and rugged use. Safety and "Made in Germany" quality have the highest priority.

The RT axle-jacks offer optimum performance for professional use.



PRODUCT FEATURES

- Integrated pneumatically-driven hydraulic pump with maintenance unit
- Integrated automatic retraction system for a quick removal of the axle-jack
- Very short extension time to jacking point (full extension in less than 1 minute)
- Manual hand pump (operated by the tow-bar)
- Optimized undercarriage for easy maneuvering
- All functional parts protected by a stainless steel cover against damage during rough operation and weather
- Cover for cylinder
- Tow-bar for operating the jack
- Stainless steel cover: all other parts are Skydrol-resistant painted
- Label with A/C applications
- Factory proof load at 150 % of nominal capacity including proof load certificate

BENEFITS

- High quality made in Germany
- Long service life
- Robust and proven design
- Easy maneuvering due to optimized undercarriage
- Best handling and extreme repair-friendly due to modular design and available spare parts
- Leak-proof operation because of elements integrated into the oil tank
- Stainless steel cover — all parts are protected against dirt, harsh environment and UV-radiation
- Worldwide unique manufacturing process for the components of the hydraulic cylinder subject to high stress
- Documented verification for each manufacturing step for each part
- At least 10 years spare part availability
- On-site service
- Interface for HYDRO proof-load equipment

AVAILABLE ACCESSORIES TRANSPORT TROLLEY



Single Transport Trolley SG158

Wheel Refill Unit

Tire inflation gauge RFM940RF80-25

Hose lines:

- for small tire valves VG8 - NB A/C's (00180-104-000)
- for big tire valves VG12 - WB A/C's (00180-106-000)

Maintenance

Interface for HYDRO proof load equipment



Twin Transport Trolley SG169
(Only necessary for 3 axis landing gears)

Fly-Away Version

Shorter and lighter version of the standard RT axle-jack model



TECHNICAL SPECIFICATION

STANDARD AXLE-JACK (RT-DESIGN)

Model-No.	RT4550	RT6050	RT9050	RT15050
Capacity	45 t 50 tons	60 t 66 tons	90t 99.2 tons	150 t 165 tons
Min. height	190 mm 7.5 inch	246 mm 9.7 inch	260 mm 10.2 inch	276 mm 10.8 inch
Hydr. lift	313 mm 12.3 inch	328 mm 12.9 inch	324 mm 12.8 inch	275 mm 10.8 inch
Screw ext.	70 mm 2.8 inch	121 mm 4.8 inch	112 mm 4.4 inch	42 mm 1.7 inch
Max. height	573 mm 22.6 inch	695 mm 27.4 inch	698 mm 27.5 inch	593 mm 23.3 inch
Applications	A340 - 200 / - 300 / - 500 / - 600 (NLG, MLG & CLG) A350 - 900 / - 1000 (MLG & NLG) A300 / A310 (NLG & MLG) A320 Family incl. NEO (NLG & MLG) A330 - 200 / - 300 (NLG) A350 - 900 / - 1000 (NLG) B707 (MLG) B727 (NLG & MLG) B737 - 100 to - 900 incl. MAX (MLG) B717 (MLG) B737-300 to -900 incl. B737 MAX -7/ -8/ -9 (NLG & MLG) B757-200/ -300 (NLG & MLG) B767 -200/ -300/ -400ER (NLG) B777-200 /-200ER /-200LR /-300/ -300ER (NLG) B787-8 /-9 (NLG) Embraer 170/ 175/ 190/ 195 (NLG & MLG) DC-10/ MD-11 (NLG) MD-80/ MD-90 (MLG) L-1011 (NLG) CS100 / CS300 (NLG) MC-21 (NLG & MLG) A220-100/ -300 (NLG) C919 (MLG)	A300 / A310 (NLG & MLG) A320 Family incl. NEO (MLG) A330 - 200 / - 300 (NLG & MLG) A340 - 200 / - 300 (NLG & MLG & CLG) A340 - 500 / - 600 (NLG & CLG) A340 - 200 / - 300 (NLG & MLG & CLG) A340 - 500 / - 600 (NLG & CLG) A340 - 500 / - 600 (NLG & CLG) A350 - 900 (NLG) B727 (NLG & MLG) B707 / B717 / B737- 100 to -900 incl. MAX (MLG) B727 (NLG & MLG) B707/ B717/ B737 - 300 to - 900 incl. MAX (MLG) B747 - 100 / - 200 / -300 / -400 /-400ER (NLG & MLG) B747-8 (NLG) B757 - 200 / - 300 (NLG & MLG) B767-200/ -300/ -400ER (NLG & MLG) B777-200/ -200ER/ -200LR/ -300/ -300ER (NLG) B787-8/ -9 (NLG & MLG) DC-10 (NLG & MLG) MD-11 (NLG & MLG & CLG) MD-80/ MD-92/ MC-21 (MLG) L-1011 (NLG & MLG) CS100 / CS300 (NLG & MLG) A220-100 / -300 (NLG)	A300 / A310 (MLG) A320 Family (MLG) A330 (NLG & MLG) A340 (NLG & MLG & CLG) A350-900 (NLG & MLG) A350-1000 (MLG) A340-500/ -600 (MLG) B727 (NLG & MLG) B707 / B737-100 to -900 incl. MAX (MLG) B747 / B767 / B777 / B787 (NLG & MLG) DC-10 / MD-11 (MLG) L-1011 (MLG)	A380 (BLG,WLG) A380 (NLG) A300 / A310 (MLG) A320 Family (MLG) A330-300 (MLG) A340-200 /-300 (MLG) A340-500 / -600 (NLG & MLG) B707 / B787 / B737- 100 to -900 incl. MAX (NLG & MLG) B727 (NLG & MLG) B767-200/ -300/ -300ER/ -400ER (MLG) B777-200/ -200ER/ -300/ -300ER (MLG) L-1011 (MLG) DC-10 / MD-11 (MLG)

4.7

AXLE-JACK HOSE PRESSURE KIT



DESCRIPTION

The axle-jack hose pressure kit is primarily designed to allow the aircraft tyre gas to operate the axle jack.

The axle-jack hose kit features an overall length of 4-meters to allow good flexibility around the aircraft when changing the wheel and operating the axle jack as well as allowing a safe working distance for the operator.

Equipped with an integrated isolation valve, the operator can accurately control the gas flow from the wheel to the axle jack making for a safe operation. The hose features a safe screw-on valve adapter which interfaces with the aircraft wheel offering added safety to the user when working with high pressure gases.



PRODUCT FEATURES

- 4-meter length hose
- Isolation valve to control gas flow
- Double braided hose with rubber covering
- Safe screw-on tyre valve adapter

AVAILABLE ACCESSORIES

- Fitment to 8 V size tire valves and axle-jack
- Fitment to 12 V size tire valves and axle-jack
- Fitment to 8 V and 12 V size tire valves and axle-jack

BENEFITS

- Optimal efficiency
- Accurate gas flow control
- Allows the operator flexibility when in use



TECHNICAL SPECIFICATION

AXLE-JACK HOSE PRESSURE KIT

Model-No.	PO-54665	PO-54665-1	PO-54665-SL
Variant	Small tyre valve to axle-jack hose kit	Large tyre valve to axle-jack hose kit	Small and large size tyre valves to axle-jack kit



5

TOWING & TAXING ATA CHAPTER 09

5.1

TOW BAR (STANDARD)

DESCRIPTION

Our standard tow-bar series for most common commercial, business and military aircraft is called "TOW". It has been engineered primarily for use in aircraft maintenance.

This standard tow-bar covers one dedicated aircraft type. Our tow-bars are designed in accordance with the requirements from aircraft manufacturers and the applicable norms and standards.

They fit perfectly to the operator's needs. The free-floating axle enables easy connection to the NLG. The maintenance-free hand pump with integrated spring and dead man's circuit guarantees high safety and outstanding accuracy. Customers all over the world trust in the outstanding quality made in Germany.



PRODUCT FEATURES

- Revolving tow-head
- Rigid tow eye diameter 3 inch / 76.2 mm
- Main tube made of high strength steel
- Maintenance free hand pump with integrated spring and dead man circuit for high safety
- Shear pin for push / pull and torque and retaining pin for maximum safety
- Hydraulically height-adjustable undercarriage with floating axle system and pneumatic tires
- Tube-mounted spare shear pin holder incl. four spare shear pins and two retaining pins
- Skydrol-resistant paint
- Label with A/C applications

BENEFITS

- High quality made in Germany
- Designed to norms
- Long life-cycle
- Ergonomic design
- Worldwide unique new hand pump system
- All in one system (integrated cylinder, hand pump, oil reservoir and return spring)
- Encapsulated hydraulic system (no rubber hoses, no fittings)
- Death man circuit
- Maintenance free
- Fast and easy replacement of the hand pump
- Wide range of available options
- Easy maneuvering due to optimized undercarriage with integrated floating axle system
- Tow-head design integrated shear pins and retaining pin
- At least 10 year spare part availability
- On-site service

OPTIONS

Tow Head

- Revolving tow head

Tow Eye

- Revolving tow eye
- Revolving tow eye with shock absorber

Undercarriage

- Height-adjustable undercarriage with solid rubber tires



TECHNICAL SPECIFICATION

TOW-BAR (STANDARD)

Model-No.	TOWB737S	TOWUNIV3
Length	5,219 mm 205.5 inch	5,309 mm 209.0 inch
Weight	241,4 kg 532.2 lbs	258 kg 568.8 lbs
Application	B737-300 to -900 B737-7 / -8 / -9 MAX	A320 Family incl. NEO B737-300 to -900 B737-7 / -8 / -9 MAX

5.2

TOW-BAR (FLY-AWAY)**DESCRIPTION**

Our fly-away tow-bar series has been designed for most common commercial, business and military aircraft. It has been engineered primarily for use in aircraft maintenance. This fly-away tow-bar covers one dedicated aircraft type, is weight optimized and easily to disassemble.

Our tow-bars are designed in accordance with the requirements from aircraft manufacturers and the applicable norms and standards. They fit perfectly to the operator's needs. Customers all over the world trust in the outstanding quality made in Germany.

**PRODUCT FEATURES**

- Rigid tow head
- Rigid tow eye diameter 3 inch / 76.2 mm
- Main tube made of aluminum
- Shear pin for push/pull and torque and retaining pin for maximum safety
- Convertible undercarriage for easy handling
- Skydrol-resistant paint
- Label with A/C applications

AVAILABLE ACCESSORIES**Transportation Box**

- Aluminium Box (00181-151-000)

BENEFITS

- High quality made in Germany
- Designed to norms
- Long service life
- Ergonomic and light design
- Easy maneuvering due to convertible undercarriage
- Tow-head design integrated shear pins and retaining pin
- At least 10 years spare part availability
- On-site service

**TECHNICAL SPECIFICATION****TOW-BAR (FLY-AWAY)**

Model-No.	TOWB737-AI
Length	3,131 mm 123.3 inch
Weight	70 kg 154.3 lbs
Towing speed with A/C	15 km/h
Applications	B737-100 to -900 B737-7 / -8 / -9 MAX

5.3

TOW-BAR (MULTI CONCEPT)

DESCRIPTION

Our multi tow-bar series for most common commercial, business and military aircraft is called "TOWMULTI". It has been engineered primarily for use in aircraft maintenance. The TOWMULTI system allows you to handle different types of aircraft by simply replacing the tow-head.

All tow-bar components such as the tube, undercarriage and tow eye are bolted rather than welded. This modular concept provides maximum flexibility and radically simplifies equipment maintenance.

Our tow-bars are designed in accordance to the requirements from aircraft manufacturers and the applicable norms and standards. They perfectly match the operator's needs and fit various aircraft types. Customers all over the world trust in the outstanding quality made in Germany.



PRODUCT FEATURES

- Main tube made of high strength steel without tow head
- Rigid tow eye diameter 3" (76.2 mm)
- Hydraulically height adjustable undercarriage with floating axle system and pneumatic tires
- Tube-mounted spare shear pin holder
- Skydrol-resistant paint
- Label with A / C applications
- Tow head design integrated shear pins and retaining pin

BENEFITS

- High quality made in Germany
- Designed to norms
- Long life-cycle
- CE-marked
- Ergonomic and light design
- Easy maneuvering due to convertible undercarriage
- At least 10 year spare part availability
- On-site service

AVAILABLE ACCESSORIES

Interchangeable Tow Head

- TOWHEAD-2B Clamp type tow head for B737-300 to -900 incl. MAX



Interchangeable Tow Head

- TOWHEAD-2C Clamp type tow head for A320 Family incl. NEO



OPTIONS

Tow Head

- Revolving tow head

Tow Eye

- Revolving tow eye
- Revolving tow eye with shock absorber

Undercarriage

- Height-adjustable undercarriage with floating axle system and solid rubbertires



TECHNICAL SPECIFICATION

TOW-BAR (MULTI CONCEPT)

Model-No.	TOWMULTI-2	TOWHEAD-2B
Length	4,710 mm 185.4 inch	490 mm 19.3 inch
Weight	181 kg 399 lbs	28 kg 61.7 lbs
Applications	Depending on the mounted tow head	B737-300 to -900 B737-7 / -8 / -9 MAX

5.4

RECOVERY LOAD LIMITER

DESCRIPTION

For debugging purpose we offer an electro-hydraulic load limiter. Recovery kits are used to pull an aircraft back on the runway. They are usually mounted at the main landing gears. It is recommended to use the Recovery kit in combination with a load limiter. This mechanical load disconnection is resettable, with no need to replace destroyed parts after max. traction power.



PRODUCT FEATURES

- Precise load measuring with a strain gauge based dynamometer
- Mechanical load release at a pre-set load point (electro-hydraulic principle)
- Radio controlled
- Integrated power supply (standard battery)

OPTIONS

- Card reader for data storage and documentation
- Radio controlled handheld receiver for monitoring of the current load

BENEFITS

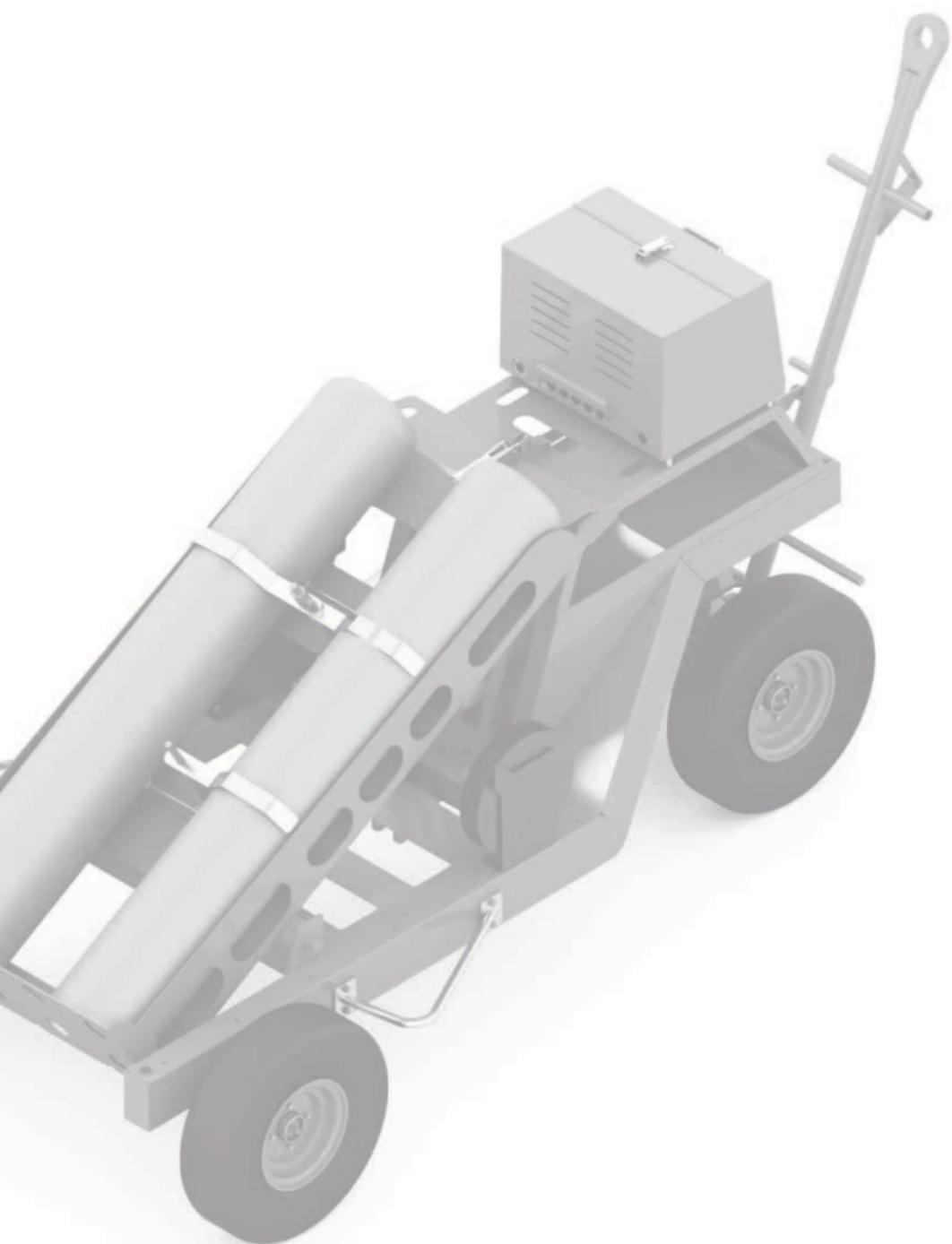
- High quality made in Germany
- Fully controlled operation
- Long life-cycle
- CE-marked
- Ergonomic and light design
- At least 10 year spare part availability
- On-site service



TECHNICAL SPECIFICATION

RECOVERY LOAD LIMITER

Model-No.	SG224
Length	861 mm 33.9 inch
Weight	55 kg 121.3 lbs
Height	299 mm 11.8 inch
Width	299 mm 11.8 inch
Max. Capacity	30 t



6

SERVICING

ATA CHAPTER 12

6.1

NITROGEN SERVICE CART



DESCRIPTION

The Nitrogen service cart is available as two or four bottle variants, the unique design allows all nitrogen cylinders to be loaded or off-loaded simultaneously by a single person. This specific design incorporates all relevant occupational health and safety requirements for manual handling and allows operators to undertake their desired tasks safely and efficiently.

The dual use colour coded low and high pressure certified nitrogen charging panel housed within a waist-height weather-proof cabinet features one calibrated inlet pressure gauge, one calibrated low outlet pressure gauge and one calibrated high outlet pressure gauge.

The low pressure 330 psi and high pressure, 3,300 psi nitrogen charging configuration is operated by self-venting regulators, secondary isolation valves and features built-in excess pressure relief valves, allowing for optimum pressure settings to be achieved when undertaking nitrogen servicing and replenishment tasks.



PRODUCT FEATURES

- Self-venting regulators and secondary isolation valves
- Auto retractable hose reels each with 9-metre hose
- Easy load cylinder stowage tray (manual operation for 2-bottle variant and hydraulic operation for 4-bottle variant)
- 50 mm towing eye
- Ground Support Equipment BS EN compliant
- Spare parts and components readily available
- Finish: Zinc phosphate primer with top layer powder-coat finish
- Modular charging system
- Easy-load system
- Safety and reliability
- Unrivalled quality
- Ergonomic design
- On-site service

OPTIONS

- 2-bottle variant or 4-bottle variant
- Fully fitted gas booster allows intensified outlet pressure & full cylinder consumption
- In-situ cylinder re-fill port - Integrated re-fill port allows cylinder refill without removing cylinders
- Any color paint finish - RAL code is required to allow for different paint color
- Different size towing eye
- Weather-proof cover

AVAILABLE ACCESSORIES

Country compatible cylinder connectors

- UK Nitrogen bottle connection
- German Nitrogen bottle connection
- French Nitrogen bottle connection
- USA/North America/Singapore bottle connection

BENEFITS

- Modular charging system
- Dual use charging system; Low pressure and high pressure charging systems are integrated inside a single box
- Easy-load system
- Pressure relief and isolation valves
- Safety and reliability
- Unrivalled quality
- Ergonomic design
- On-site service



TECHNICAL SPECIFICATION

NITROGEN SERVICE CART

Model-No.	NBNT-2 (two bottle cart)
	NBNT-4 (four bottle cart)
Lenght	2,700 mm 106.3 inch
Width	1,324 mm 52.1 inch
Height	1,441 mm 56.7 inch

6.2

OXYGEN SERVICE CART



DESCRIPTION

The Oxygen service cart is available as two or four bottle variants, the unique design allows all oxygen cylinders to be loaded or off-loaded simultaneously by a single person. This specific design incorporates all relevant occupational health and safety requirements for manual handling and allows operators to undertake their desired tasks safely and efficiently.

The certified charging panel is housed within a waist-height weatherproof cabinet and features one calibrated inlet pressure gauge and one calibrated outlet pressure gauge. To minimize static and heat-build up from fast flowing oxygen bottle gas, the charging panel inlet features heavy-duty brass heat-soak stems along with oxygen grade hose and piping.

The charging configuration (2,400 psi) is operated by a self-venting regulator, secondary isolation valve and features a built-in excess pressure relief valve allowing optimum pressure settings to be achieved. All components associated with the oxygen service cart are oxygen cleaned, certified and traceable. The 4-bottle easy load oxygen cart features inert, oxygen safe fluid within the hydraulic cylinder tray operating system.



PRODUCT FEATURES

- Self-venting regulator and secondary isolation valve
- Auto retractable hose reel with 9-metre hose
- Easy load cylinder stowage tray (manually operation for 2-bottle variant and hydraulic operation for 4-bottle variant)
- Earth grounding reel and cable
- 50 mm towing eye
- Ground Support Equipment BS EN Compliant Spare parts and components readily available
- Finish; Zinc phosphate primer with top layer powder-coat finish in RAL1028 (yellow)
- Modular charging system
- Self-venting regulator
- Easy-load system
- Pressure relief and isolation valves
- Heat soak
- Safety and reliability
- Unrivalled quality
- Ergonomic design
- On-site service

OPTIONS

- 2-bottle variant or 4-bottle variant
- Fully fitted gas booster allows intensified outlet pressure & full cylinder consumption
- In-situ cylinder re-fill port: Integrated re-fill port allows cylinder refill without removing cylinders
- Any color paint finish: RAL code is required to allow for different paint color
- Different size towing eye
- Weather-proof cover
- Powder fire extinguisher: 3 kg powder fire extinguisher and retaining bracket

AVAILABLE ACCESSORIES

Country compatible cylinder connectors

- UK Oxygen bottle connection
- German Oxygen bottle connection
- French Oxygen bottle connection
- USA/North America/Singapore bottle connection

BENEFITS

- Modular charging system
- Self-venting regulator
- Easy-load system
- Pressure relief and isolation valves
- Heat soak
- Safety and reliability
- Unrivalled quality
- Ergonomic design
- On-site service



TECHNICAL SPECIFICATION

OXYGEN SERVICE CART

Model-No.	NBOT-2 (two bottle cart)	NBOT-4 (four bottle cart)
Lenght	2,700 mm 106.3 inch	
Width	1,324 mm 52.1 inch	
Height	1,441 mm 56.7 inch	

6.3

AIRCRAFT WHEEL AND BRAKE CHANGE TRAILER



DESCRIPTION

The aircraft wheel and brake change service support trailers have been primarily designed to aid with fast, safe and effective wheel and brake change operations on the ramp, around the airport and even within the hangar.

Designed to accommodate any two aircraft wheels (up to A380 size), one wheel and brake change dolly, one axle-jack and a multitude of aircraft tooling, the wheel and brake change trailer is the ultimate aviation mobile service support center. The trailer is accessed via the spring balanced rear ramp door that offers a minimal gradient, which allows one person to easily load and off-load large aircraft wheels and the axle-jack. Inside the trailer is a centrally mounted (removable) workbench that allows operators to undertake any additional tasks.



The front mounted towing arm features an integrated double acting parking brake. The operator can manually engage the parking brake when pushing the towing arm to the vertical position or automatic engagement when towing arm is free hanging in the horizontal position.

The complete trailer consists of a primer and 2-pack paint finish, offering skydrol resilience and added longevity. For optimum efficiency during aircraft turn-around and maintenance cycles, the aircraft wheel and brake change trailer can be offered with a fully certified nitrogen charging system which is externally located at the front of the trailer.

PRODUCT FEATURES

- Fully enclosed or open top
- Spring assisted low gradient rear ramp door
- Towing arm with integrated double acting parking brake
- Front axle and enclosed turntable assembly
- 2-pack paint finish, skydrol resilient
- Operational payload 1000 kg as standard
- Storage for 2 x wheels, 1 x axle-jacks
- Brake pack, 1 x wheel dolly & tooling
- Front mounted tool box or nitrogen
- Charging system
- Internal workbench (removable)
- Ground Support Equipment BS EN and H&S compliant
- Serviceable
- Fully traceable
- Reliable, robust and safe
- NBWBCT-70280 & 70275 feature (extra side ramp door)
- NBWBCT-70280 & 70275 can store additional contents
- Optional modular nitrogen system
- Side and rear access ramps
- Adjustable ride height rear suspension
- Overrun braking system with braked hubs

The nitrogen system consists of a modular weather-proof charging cabinet featuring a calibrated low and high pressure configuration, two auto-retractable hose reels, a cylinder connection manifold and two gas cylinder stowage points and restraints. In addition, the aircraft wheel and brake change trailers can be fully customized ahead of manufacture to meet any individual and operator requirements.

In association with our strategic partner network, global re-calibration, service, repair and overhaul of the nitrogen cabinet is offered along with a charging system exchange scheme.

OPTIONS

- Standard or nitrogen configuration
- Any colour paint finish
- Customer corporate logos possible
- Fully customized solutions available

AVAILABLE ACCESSORIES

- Country compatible gas cylinder connections (N2 option)
- Mobile wheel mover

BENEFITS

- Ground Support Equipment BSEN compliant
- Ergonomic design
- Easy loading and off-loading



TECHNICAL SPECIFICATION

AIRCRAFT WHEEL AND BRAKE CHANGE TRAILER

Trailer	Length	Width	Height
NBWBCT-70280	4,666 mm 183.7 inch	2,400 mm 94.5 inch	2,102 mm 82.8 inch
NBWBCT-70275	4,666 mm 183.7 inch	2,400 mm 94.5 inch	2,102 mm 82.8 inch
NBWBCT	3,486 mm 137.2 inch	2,336 mm 92 inch	1,997 mm 78.6 inch
NBWBCT-N2	3,486 mm 137.2 inch	2,336 mm 92 inch	1,997 mm 78.6 inch
NBWBCT-70281 (Open top)	3,486 mm 137.2 inch	2,336 mm 92 inch	1,384 mm 54.5 inch
NBWBCT-70282 (Open top)	3,486 mm 137.2 inch	2,336 mm 92 inch	1,384 mm 54.5 inch

Trailer	Rear ramp door	Side ramp door	Override brake system for assisted braking during towing	Adjustable ride (height rear suspens)	Dual use nitrogen system	Hose reels and bottle holder
NBWBCT-70280	x	x	x	x		
NBWBCT-70275	x	x	x	x	x	x
NBWBCT	x		optional	optional		
NBWBCT-N2	x		optional	optional	x	x
NBWBCT-70281	x		x	x		
NBWBCT-70282	x		x	x	x	x

6.4

FLUID DISPENSER

DESCRIPTION

The fluid dispenser allows serving aircraft hydraulic reservoirs, engines, APU, IDG, CSD, landing gear struts, thrust reversers, actuators and many more.



PRODUCT FEATURES

- Translucent specially formulated polyethylene reservoir, compatible, for all fluids
- Easy fluid level control
- Screwed filler cap, big size
- Colored fluid placard
- Galvanized steel handle
- Hand pump, stainless steel shaft and laminated aluminum handle
- Double sealed with relief valve

OPTIONS

Dispenser sizes

- 2 US gallon (7.6 litres)

Fluid Designation & Placard

- A - EXXON 2380
- B - ENGINE OIL
- C - MOBIL 254
- D - 5606
- E - MOBIL JET II
- F - 2197
- G - SKYDROL
- H - HYDRAULIC OIL
- K - HYJET IV
- L - CSD/IDG

BENEFITS

- Ergonomic design
- On-site service



TECHNICAL SPECIFICATION

FLUID DISPENSER

Model-No.	BOB02	BOB05	BOB20
Reservoir capacity	7.6 litres (2 US gallon)	19 litres (5 US gallon)	76 litres (20 US gallon)
Pump outlet pressure	175 psi 79–83 kPA	175 psi 79–83 kPA	175 psi 79–83 kPA
Volume per stroke	7.2 cubic inch/120 cc	7.2 cubic inch/120 cc	7.2 cubic inch/120 cc
Hose length	2,200 mm 7 inch	4,500 mm 15 inch	2,200 mm 7 inch
Net weight (empty)	14 lbs/ 6.4 kg	48 lbs/ 21.8 kg	74 lbs/ 33.6 kg
Filter rating	10 Micron (nominal)	10 Micron (nominal)	10 Micron (nominal)
Total height	428 mm 16.8 inch	1,028 mm 40.5 inch	1,028 mm 40.5 inch
Total length	314 mm 12.4 inch	603 mm 23.8 inch	603 mm 23.8 inch
Width	267 mm 10.5 inch	464 mm 18.3 inch	464 mm 18.3 inch

6.5

AIRCRAFT TYRE PRESSURE CHECKING GAUGES



DESCRIPTION

The aircraft tyre pressure checking gauges are offered in a wide range of configurations allowing coverage of all make and model aircraft.

Each tyre pressure gauge is calibrated to an accuracy of $\pm 1\%$ allowing optimum aircraft tyre pressure settings to be achieved.

The 100 mm pressure gauge dial face allows instant visibility of the tyre pressure making the operators task very efficient in any environment.

The wide range of push-on tyre valve adapters are designed to interface with 8 V and 12 V tyre valves and cover any tyre aircraft in service.



PRODUCT FEATURES

- Calibrated accuracy $\pm 1\%$
- EN837-1 compliant
- Single scale dial
- 260 psi, 300 psi, 400 psi, 450 psi, 500 psi ranges available
- Shatter proof lens
- 100 mm dial for easy visibility
- Protective rubber cover
- 450 mm air hose assembly
- Wide range of adapter to interface with the tyre valve
- Released with calibration test certificate
- "night glow" dial face which automatically illuminates the dial during dark environments
- Dual scale dial, psi & bar

BENEFITS

- Accurate tyre pressure setting
- Easy to use
- Ergonomic design
- Instant pressure visibility
- Suitable for any aircraft



TECHNICAL SPECIFICATION

AIRCRAFT TYRE PRESSURE CHECKING GAUGES

Model-No.	260 PSI	300 PSI	400 PSI	450 PSI	500 PSI
Pressure gauge with INLINE adapter for 8 V size tyre valves	NTG2604-S	NTG3004-S	NTG4004-S	NTG4504-S	NTG5004-S
Pressure gauge with INLINE adapter for 12 V size tyre valves	NTG2604-L	NTG3004-L	NTG4004-L	NTG4504-L	NTG5004-L
Pressure gauge with ANGLED adapter for 8 V size tyre valves	NTG2604-HH1	NTG3004-HH1	NTG4004-HH1	NTG4504-HH1	NTG5004-HH1
Pressure gauge with ANGLED adapter for 12 V size tyre valves	NTG2604-HH1L	NTG3004-HH1L	NTG4004-HH1L	NTG4504-HH1L	NTG5004-HH1L
Pressure gauge with 90 degree universal adapter for 8 V and 12 V size tyre valves	NTG2604-D	NTG3004-D	NTG4004-D	NTG4504-D	NTG5004-D
Pressure gauge with 2 x inline adapters for 8 V and 12 V size tyre valves	NB2604-D	NB3004-D	NB4004-D	NB4504-D	NB5004-D

6.6

AIRCRAFT TYRE INFLATION



DESCRIPTION

The aircraft tyre inflation tools and kits are offered in a wide range of configurations allowing coverage of all make and model aircraft.

The 350 psi inflation tool allows accurate inflation of the aircraft tyre as well as vent capability. An optional excess pressure relief valve can be integrated allowing automatic venting of inflation gas, factory pre-set to vent between 0 psi and 350 psi. The tyre inflation kits can be provided with a range of inflation hoses each at a two-metre length to allow a safe working distance for the operator. The inflation hoses all feature safe screw-on thread type inflation adapters offering added safety during the tyre inflation procedure.



PRODUCT FEATURES

- Calibrated accuracy $\pm 1.5\%$
- EN837-1 compliant
- Single scale dial
- 350 psi working pressure
- Shatter proof lens
- Inflation & deflation capability
- Pre-use accuracy check
- 2-meter length inflation hoses
- Compatible inflation tool and hoses
- Released with calibration test certificate

OPTIONS

- "Night glow" dial face which automatically illuminates the dial during dark environments
- Excess pressure relief valve fitted to the inflation tool body

BENEFITS

- Accurate tyre inflation
- Dead-man level for operator safety
- Easy to use
- Compatible inflation tool and hoses
- 2-meter hose allows safe working distance
- Released with calibration test certificate



TECHNICAL SPECIFICATION

AIRCRAFT TYRE INFLATION

Model-No.	Inflation Tool 0-350 psi	Inflation Tool 0-350 psi with excess pressure relief valve	Inflation Hose with fill adapter for 8 V size tyre valve	Inflation Hose with fill adapter for 12 V size tyre valve	Inflation hose with long reach fill adapter for 8 V size tyre valve	Inflation hose with long reach fill adapter for 12 V size tyre valve
MK7ATISGBC-GH	x					
MK7ATISGBC-EPRV		x				
MK7ATIS-001	x		x			
MK7ATIS-002	x		x	x		
MK7ATIS-003	x			x		
MK7ATIS-001EL	x				x	
MK7ATIS-002EL	x				x	x
MK7ATIS-003EL	x					x



7

EQUIPMENT / FURNISHING ATA CHAPTER 25

7

CABIN INTERIOR ACCESS STAND



DESCRIPTION

This Cabin Interior Access Stand is ideal for use in the economy aisle and is designed to fit over most economy and some business class seats. It has been designed as a single worker unit with a capacity of 149.7 kg (330 lbs). It is collapsible for easy carrying and storage. The ladder is of durable construction made primarily of structural aluminum with stainless steel hardware and a self-weight of only 11.3 kg (25 lbs).

Anti-slip ladder rungs ensure maintenance staff and employee safety during operation. The Cabin Interior Access Stand is ideal for ramp use and can easily be carried up ramp stairs. The ladder is designed and tested in accordance with ANSI-ASC A14.7 and BS EN 131.7.

PRODUCT FEATURES

- Padding material
- One person movement
- Material type: Polished aluminum
- Collapsible
- Anti-slip ladder rungs
- High grade materials
- Rigorous inspection and testing

BENEFITS

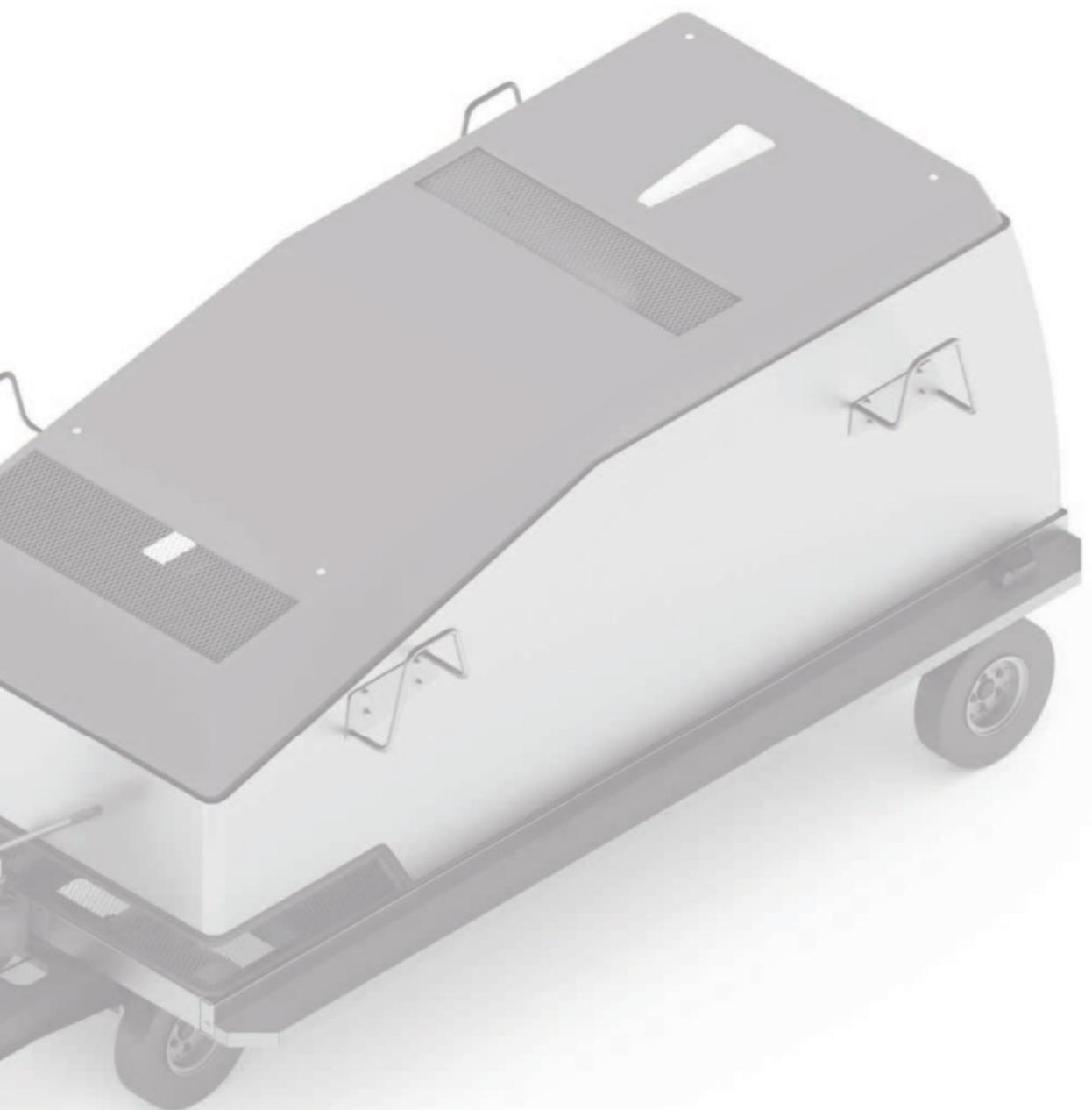
- Avoiding damages at passenger seats during maintenance
- Safety and reliability
- Ergonomic design
- Unrivalled quality and durability



TECHNICAL SPECIFICATION

CABIN INTERIOR ACCESS STAND

Model-No.	DF071553-01
Certifications	ANSI-ASC A14.7, BS EN 131.7
Dimensions (shipping)	419 mm x 1,209 mm x 918 mm x 55 kg 16.5 inch x 47.6 inch x 36.125 inch x 25 lbs
Height	lowered: 1,209 mm 47.6 inch
Footprint	419 mm x 918 mm 16.5 inch x 36.1 inch
Weight	11.3 kg 25 lbs



8

HYDRAULIC POWER ATA CHAPTER 29

8

HYDRAULIC GROUND POWER UNITS



DESCRIPTION

Hydraulic Ground Power Units are mainly used inside the hangar. A crucial factor for these operators is the noise. With a noise level of 72 dB, full load, at a distance of 1 meter makes communication hassle-free.

The well-engineered design of the hydraulic cart has many advantages. One of the highlights is its clean functioning.

The hydraulic installations and the cooling are separated. Therefore it is impossible that Skydrol contaminates the environment.

Neither the aircraft nor the operator will suffer from oil contamination, saving a lot of time and hassle in cleaning processes.



PRODUCT FEATURES

- Electric or Diesel power
- Single or dual circuit
- Easy pressure control using the 0psi, 3000 psi/ 5000 psi push buttons as applicable
- Free from Skydrol vapours
- Automatic over-temp protection
- Separate low pressure circuit for anti-cavitation
- Entire life cycle support and spares
- Special low pressure circuit guarantees constant cleaning and cooling of hydraulic medium
- Very suitable hydraulic supply for "Ram Air Test Ground Checks"
- Simple but sophisticated design
- Ramp function for soft pressure build-up
- Pressure and flow rates are infinitely variable and limitable
- Waterproof cover made of GRP, Skydrol resistant OEM quick disconnect couplings available
- Leakage measurement 0.08 to 5.3 US gpm (0.32 to 20 lpm)
- Change the filter only upon indication
- Customer specific color options
- Maximum towing speed is 15 mph (25km/h)
- The customer can choose whatever matches his requirements:
 - A wide range of options and accessories are available
 - In addition, any customer special wishes will be respected
- Digital Display
- Overview the status of your unit at one glance
- Userfriendly menu-guided operation
- Switch between different measuring units (e.g celsius or fahrenheit, liter or gallon)
- Switch easily between different languages
- Take advantage of different user privileges
- Errors are displayed in comprehensive text
- Collect error alarms and create alarm-lists

OPTIONS

FLOW MEASUREMENT WITH DIGITAL INDICATOR

- Single system 2 to 66 US gpm (10 to 250 l/min), ±1 % of full scale
- Dual system (independent) 1.3 to 42 gpm (5 to 160 l/min)

LEAKAGE MEASUREMENT

- 0.08 to 5.3 US gpm (0.32 to 20 l/min), ±1 % of full scale
- 0.11 to 10.6 US gpm (0.40 to 40 l/min), ±1 % of full scale

BENEFITS

- User friendly ergonomic setup and operation
- Worldwide support locations
- Expert support
- On-hand spares
- Extended warranty
- Fleet support programs available
- Easy calibration
- World-wide universal connection (compatible with multiple voltages)
- For hangar and outdoor usage
- Certified for all Airbus aircraft



TECHNICAL SPECIFICATION HYDRAULIC GROUND POWER UNITS

Model-No.	Electric Motor driven	Diesel engine driven
Dimension	3,800 mm x 1,800 mm x 1,700 mm 149.6 inch x 70.9 inch x 66.9 inch	4,600 mm x 1,800 mm x 2,100 mm 181.1 inch x 70.9 inch x 82.7 inch
Weight	2,500 kg	3,200 kg
Operating ambient temperature	-25 to +45 °C -13 to +113 °F	-25 to +45 °C -13 to +113 °F
Noise emission	max. 75 dB at 1 m distance	Approx. 84 dB (A) at control panel
Electrical supply	3/PE AC 50-60 Hz 400 V	-
Power	Approx. 86-104 kVA	-
Measurement accuracy		
Supply pressure (analog)	0-5,800 psi (0-400 bar), cl. 1 (EN 837)	
Return pressure (analog)	0-145 psi (0-10 bar), cl. 1.6 (EN 837)	
Oil temperature indicator	0-100 °C	
Flow measurement	single circuit 0.08-66 gpm (0.32-250 lpm) ±1 % of full scale dual circuit 0.08-42 gpm (0.32-160lpm) ± 1% of full scale	
Filter	3 micron in filling circuit, 6 micron in each low and high pressure circuit, 25 micron in return	
Depending on the type of equipment, the following hydraulic oils can be used	Phosphate-ester hydraulic Oil ("Skydrol" or "Hyjet") or mineral oil based hydraulic oil ("MIL-H-5606", "MIL-H-83282", "MIL-H-87257)	



9

LANDING GEAR ATA CHAPTER 32

9.1

WHEEL AND BRAKE CHANGE EQUIPMENT (UNIVERSAL)

DESCRIPTION

The HYDRO hydraulic wheel trolley for removal of wheels and brake drums on aircraft is an accessory from the HYDRO Service Cart and is therefore part of a complete service unit. It allows unloading of the aircraft wheels or brakes which are carried along on the service cart. A special adapter at the back of the service cart is designed to carry along the wheel/brake changer on the service cart.



PRODUCT FEATURES

- Movable frame with lifting unit
- High lifting height makes it ideal for lifting
- Manually adjustable lifting arms for wheel sizes \varnothing 650 – 1500 mm
- Swivelling crane for easy installation of slings
- 2 swivel castors and 2 360° revolving castors
- Skydrol-resistant paint; standard color: yellow RAL 1028

AVAILABLE ACCESSORIES



Bracket support assembly [24010-031-000]

BENEFITS

- User friendly ergonomic setup and operation
- Universal application
- On-site service



TECHNICAL SPECIFICATION

WHEEL AND BRAKE CHANGE EQUIPMENT (UNIVERSAL)

Model-No.	MH13 - 003
Nominal load	260 kg 570 lbs
Max. width	1,420 mm 55.9 inch
Max. length	921 mm 36.3 inch
Min. height	980 mm 38.6 inch
Admissible operating temperature	-20°C to +60°C -4°F to +140°F
Weight	170 kg 375 lbs
Applications	B737 incl. MAX A318 / A319 / A320 / A321 A319neo / A320neo / A321neo RRJ-95

9.2

BRAKE HOIST

DESCRIPTION

The Brake Hoist HG14-001 is designed for simple changes or transportation of aircraft brakes.

The Brake Hoist is an accessory unit of wheel/brake changers type MH and is therefore part of a complete service unit. It allows simple changes or transportation of aircraft brakes.

PRODUCT FEATURES

- Clevis
- 2 clamping elements for holding the brakes
- Hand wheel for easy operation
- Threaded rod



BENEFITS

- User friendly ergonomic setup and operation
- On-site service
- Universal application



TECHNICAL SPECIFICATION

HOISTING SLING

Model-No.	HG14	HG14-001
Nominal load	200 kg 440 lbs	200 kg 440 lbs
Max. width	741 mm 29.2 inch	786 mm 31.0 inch
Max. length	558 mm 22.0 inch	592 mm 23.3 inch
Max. height	125 mm 4.9 inch	125 mm 4.9 inch
Admissible operating temperature	-20°C to +60°C -4°F to +140°F	-20°C to +60°C -4°F to +140°F
Weight	12 kg 26.4 lbs	13 kg 28.6 lbs
Application	B737-100 to -500	B737-600 to -900

9.3

AIRCRAFT WHEEL & TYRE HANDLING



DESCRIPTION

The mobile aircraft wheel handling dolly is designed to facilitate the storage and transportation of aircraft wheels or tyres.

Offered as a single or double bay unit, the operator can easily place one or two wheels inside the frame for safe handling and maneuvering. Equipped with four castor wheels (rear swivelling with foot brake) and a heavy duty low-level loading tray, the task can be undertaken by a single person.

The aircraft wheels can be fully secured into the frame by positioning the drop-fit bar into the locators. Additional straps and restraints are not required. The unit is suited to the hangar or airport environment and offers additional user health & safety compliance when handling heavy aircraft wheels or tyre.



PRODUCT FEATURES

- Safe & efficient handling and moving of aircraft wheels & tyres
- Available as a single or double bay unit
- Fully mobile
- Heavy-duty low-level loading tray for one person use
- Castor wheels (rear swivelling with foot brake)
- Powder coat finish (RAL 1028 standard)
- Available to cover all size aircraft wheels and tyres
- Single or double wheel handling
- Manual handling is health and safety compliant



TECHNICAL SPECIFICATION

AIRCRAFT WHEEL & TYRE HANDLING

Model-No.	Variant	Measurement
NBWS-2WB	2-Bay wide-body wheels	1,540 mm x 1,390 mm x 1,200 mm 60.6 inch x 54.7 inch x 47.2 inch
NBWS-1WB	1-Bay wide-body wheel	1,540 mm x 720 mm x 1,200 mm 60.6 inch x 28.3 inch x 47.2 inch
NBWS-2NB	2-Bay narrow-body wheels	1,440 mm x 1,190 mm x 1,200 mm 56.7 inch x 24.4 inch x 47.2 inch
NBWS-1NB	1-Bay narrow-body wheel	1,440 mm x 620 mm x 1,200 mm 56.7 inch x 24.4 inch x 47.2 inch

9.4

MAIN LANDING GEAR INSTALLATION TROLLEY

DESCRIPTION

HYDRO has developed a new and innovative multi-purpose Main Landing Gear Trolley, the MLGTMULTI-1.

The MLGTMULTI-1 is a one-base platform that efficiently uses changeable adapter kits, to replace the main landing gears without wheels and brakes of various narrow body aircraft.

This one-base platform makes the MLGTMULTI-1 a versatile, convenient, and cost-saving trolley choice for servicing the main landing gears on the most popular small aircraft in the world.



PRODUCT FEATURES

- Base unit without A/C specific landing gear adapter kit
- Longitudinal frame
- Hand wheel for vertical, transversal or longitudinal movement
- Hand wheel for pitch or yaw movement

STANDARD OPTIONS

- **MLGTMULTI-1-AC:**
Electrically driven lifting
Supply voltage: 3/ PE AC 380 - 240 V, 50 Hz or 3/ PC AC 440 - 480 V, 60 Hz, Cable length: 30 m

- **MLGTMULTI-1-AB:**
Pneumatically driven lifting
Explosion proofed according to NEC500: CI I DIV 2 GP D T3

ACCESSORIES

Adapter Kit

- for A320 Family incl. neo:
 - MLGFA320 for MLG
 - NLGFA320 for NLG
- for B737NG-600 to 900:
 - MLGFB737NG for MLG
 - NLGFB737NG-MAX for NLG
- for B737 MAX-7/-8/-9:
 - MLGFB737NG-MAX* for MLG
 - NLGFB737NG-MAX* for NLG

- for Embraer E1 (E170/175, E190/195):
 - MLGFE1 for MLG
- for Embraer E2 (E190/195):
 - MLGFE2 for MLG
 - NLGFE2 for NLG

Scissors pallet truck

For transportation, storage and installation of adapter kits. The MLGC01 also serves as strut compression tool for B737.

*Validation ongoing

BENEFITS

- User friendly ergonomic setup and operation
- Outstanding accuracy
- Universal application
- Operational safety
- Low total cost of ownership
- CRAS certified by LHT



TECHNICAL SPECIFICATION

MAIN LANDING GEAR INSTALLATION TROLLEY

Model-No.	MLGTMULTI-1	MLGFB737NG	NLGFB737NG-MAX
Capacity	1000 kg 10 kN	700 kg 7 kN	250 kg 2.5 kN
Weight	950 kg 2,094 lbs	38 kg 83.8 lbs	approx. 62 kg approx. 136.7 lbs
Width	1,882 mm 74.1 inch	98 mm 3.9 inch	
Length	2,893 mm 113.9 inch	1,102 mm 43.4 inches	
Min. height	1,793 mm 70.6 inch	615 mm 25.6 inches	
Longitudinal movement	± 175 mm ± 6.9 inch		
Transverse movement	± 125 mm ± 4.9 inch		
Yaw (rotation around)	± 4 °		+/- 45°
Pitch (rotation around)	+ 7 ° [- 3 ° / + 4 °]		
Total lift	800 mm 31.5 inch		
Towing speed with MLG	3 km/h 1.9 mph		
Towing speed without MLG	6 km/H 3.73 mph		
Admissible operating temperature	0 °C to + 40 °C 32 °F to + 104 °F		
Boeing application	Universal	B737 NG -600 to -900 B737-7/ -8/ -8200/ -9 MAX*	B737 NG -600 to -900 B737-7/ -8/ -8200/ -9 MAX*

The MLGTMULTI-1 is an one-base platform. It can be used in conjunction with additionally available adapter kits that are specifically tailored to each type of aircraft.

Manufacturer	Aircraft	Base platform	Adapter kit MLG	Adapter kit NLG
Airbus	A318, A319, A320, A321, A319neo, A320neo, A321neo	MLGTMULTI-1	MLGFA320	NLGFA320
Boeing	B737	MLGTMULTI-1	MLGFB737NG	
Embraer	170/175, 190/195	MLGTMULTI-1	MLGFE1	

9.5

LANDING GEAR CHANGE STAND



DESCRIPTION

This stand is the safest, most efficient solution in accessing the landing gear and wheel wells areas. The Landing Gear Change Stand is an adjustable-height maintenance platform designed for service on landing gear struts and wheel bay access positions. The platform can be used either as a set or separately, based on the work to be performed. This unit also works as a daily maintenance stand.

The freestanding modules are designed for regular maintenance and inspection of your aircraft.



PRODUCT FEATURES

- Easily maneuvered with telescoping handrails
- Fully compliant with global standards and regulations
- Caster Details: 10" with Brakes & Swivel
- Freestanding Modules
- Platforms Can be used Alone or Linked Together and used as One Large Platform
- High-Grade Materials
- Rigorous Inspection
- Padding Material
- 1 Person Movement and Testing
- Polished Aluminum
- Fall Restraint Anchor Points Equipped

BENEFITS

- Safety and Reliability
- Ergonomic Design
- Unrivalled Quality and Durability
- Designed and tested in accordance with ANSI-ASC A14.7 and BS EN 131.7
- CE certified



TECHNICAL SPECIFICATION

LANDING GEAR CHANGE STAND

Model-No.	DF071559-01
Towing Speed	10 KPH / 6 MPH
Material Type	Ladder - Aluminium Frame - Aluminium
Certifications	ANSI-ASC A14.7, BS EN 131.7 & CE
Dimensions (shipping)	73 5/16" x 36 1/16" x 96" x 1,058lbs x 2 stands
Height	Lowered : 36 1/10" to 50 1/2"
Foot Print	73 5/16" x 196 1/4"

9.6

AIRCRAFT WHEEL CHOCKS

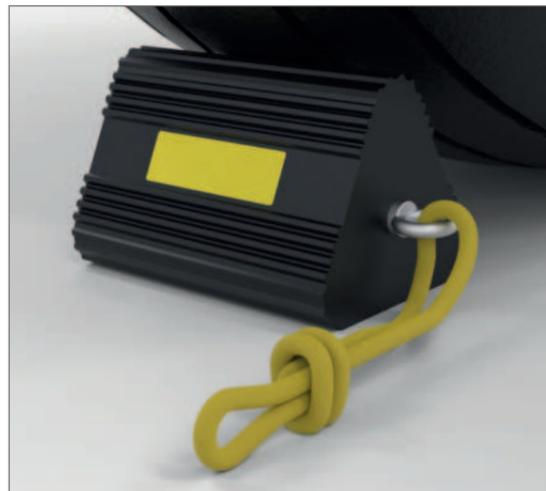


DESCRIPTION

The aircraft wheel chocks are manufactured from a solid rubber extrusion and feature a weather-resistant hand rope along with high visibility strips on each face of the chock.

PRODUCT FEATURES

- Solid rubber
- Heavy duty
- 1-metre hand rope
- High visibility strip on all three sides
- None slip design



BENEFITS

- Easy to handle
- Visible at night
- Solid rubber extrusion
- Suitable for all wheel sizes



TECHNICAL SPECIFICATION

AIRCRAFT WHEEL CHOCKS

Model-No.	NBWC-6	NBWC-9
	12 kg wheel chock	6 kg wheel chock
Variant	Suitable for medium / large wheels	Suitable for small / medium size wheels
Dimensions	250 mm x 220 mm x 235 mm 9.8 inch x 8.7 inch x 9.3 inch	250 mm x 170 mm x 150 mm 9.8 inch x 6.7 inch x 5.9 inch

9.7

AIRCRAFT STRUT & ACCUMULATOR SERVICE TOOL



DESCRIPTION

The aircraft strut and accumulator service tool is fully universal and can be used with any make and model aircraft.

The 800 psi and 3500 psi gauges features a pre-use accuracy check, perspex lens and protective rubber cover.

Equipped with a 2-meters length inflation hose, witch allows the operator to undertake the desired high-pressure inflation task whilst remaining at a safe and secure working distance.

The unit consists of an inlet flow isolation valve with none return valve and an additional excess pressure valve, allowing optimum inflation pressures to be achieved.

PRODUCT FEATURES

- Calibrated accuracy $\pm 1\%$
- EN837-1 compliant
- Single scale dial
- Up to 3500 psi working pressure
- 100 mm diameter gauge

OPTIONS

- "Night glow" dial face which automatically illuminates the dial during dark environments



- Shatter proof lens
- Inflation & deflation capability
- Pre-use accuracy check
- Released with calibration test certificate

- Customer specific inflation hose lengths can be offered

BENEFITS

- Accurate strut inflation
- Accurately adjustable pressures
- Easy operator visibility when in use
- Safe working distance



TECHNICAL SPECIFICATION

AIRCRAFT STRUT & ACCUMULATOR SERVICE TOOL

Model-No.	SIC8000-001	SIC3500-001
Variant	Low Pressure Strut & Accumulator Service Tool	High Pressure Strut & Accumulator Tool
Pressure Range	0-800 psi	0-3500 psi



10

WASTE LINE CLEANING

ATA CHAPTER 38

10.1

MOBILE LAVATORY VACUUM BLOCKAGE REMOVER



DESCRIPTION

No more grounding of the A/C - The Vacuum Toilet Blockage Remover is an all-purpose equipment to clear and remove pipeline blockage of vacuum-lavatory systems on aircraft. It has been developed for daily use after the aircraft returns from a flight and reports a blockage. By negative pressure the blockage in the waste line can be sucked out. The system requires short time and reduces the downtime of aircraft.



PRODUCT FEATURES

- All-purpose equipment to clear and remove pipeline blockage of vacuum-lavatory systems on A/C
- By negative pressure the blockage in the waste line will be removed
- Flexible by setup on a car trailer
- Connection for tank drainage with waste service truck
- For indoor and outdoor use
- Unit prepared for worldwide operation (universal motor)
- Big reservoir for several applications
- Unit can be used either in electric mode or diesel mode
- Diesel aggregate gives independence of electric supply
- Simple, manual operation

STANDARD ACCESSORIES

Included in the scope of delivery:

Accessory adapter waste tank drain:

- Adapter 4 inch waste drain and 2 x 2 m 4 inch suction hose with DN100 integration

OPTIONS

Transport options:

- Standard chassis
- Trailer platform
- Installation into van

BENEFITS

- Cleaning during overnight stops is possible
- User friendly ergonomic setup and operation
- Environmental friendliness
- Fully automatic cleaning process
- Minimized service time
- On-site service
- Everything needed is included/ stowed on the WLC1
- Certified for the use on A320 (all), A330/ A340 (all), A350 (all), A380 (all)



TECHNICAL SPECIFICATION

MOBILE LAVATORY VACUUM BLOCKAGE REMOVER

Model-No.	VTBR2	
Dimensions	4,200 mm x 1,860 mm x 2,050 mm 165.4 inch x 73.2 inch x 80.7 inch	
Weight	approx. 1350 kg / 2.976 lbs	
Operating ambient temperature	5 to 40 °C 41 to 104 °F	
Storage temperature	0 to 60 °C 32 to 140 °F	
Air humidity	5 to 90 % (non-condensing)	
Altitude	max. 2,600 mmSL (8,530 ft)	
Mains supply	3/Pe AC 50/60Hz 380-480 V	
Power	3.7 kVA	
Performance of vacuum pumps	-0.3 to -0.85 bar	
Tank volume	300 l 79 USgal	
Diesel-engine electrical generator	Stroke	4,340 mm 170.9 inch
	Rotation Speed	Rot. Speed 3000 U/min
	Consumption	Approx. 1.94 l/h (0.5 gal)
Tank content	24 l 6 gal	
Performance	5.6 kVA	

10.2

WASTE LINE CLEANING



DESCRIPTION

The importance of proper vacuum waste tube maintenance is obvious; to avoid unscheduled events and lavatory malfunctions.

The Waliclean has been developed as full automatic vacuum waste line cleaning systems for a wide range of aircraft types. WALICLEAN is the outcome of a joint development project of Austrian Airlines (Lufthansa Group), vacuum waste tube maintenance technicians (inventors) with decades of specific work experience and TEST-FUCHS a leading manufacturer of high-tech GSE and aerospace test equipment.

The main targets of the development have been a very cost effective operation (without the need of costly special chemicals), a easy and fast processing and in a safe and predictable way (best possible cleaning results independent of operator experience).

After pushing "start" no further action required until cleaning is completed - A cleaning during overnight stops is possible.



AVAILABLE ACCESSORIES

- Dust cover
- Additional waste water hose 10 m (33 ft) with couplings and caps, stored in a separate shelf between the fork lift access points

PRODUCT FEATURES

- Fully automatic cleaning process (no monitoring required)
- Automatic leakage test of vacuum waste line system before cleaning process start-up
- Implementation during standard maintenance tasks (e.g. Line Maintenance Check)
Preselectable cleaning time enables high flexibility, perfect cleanliness is provided within a few hours
- Implementation for already significantly clogged waste lines as well as for preventive cleaning
- Environmental friendliness is ensured by usage of water and citric acid as cleaning agents
- 2 electronically controlled pumps
- 2 pressure sensors (supply and return)
- Large heated reservoir (100 gal)
- Permanent automatic observation and regulation of the pressure (vacuum)
- Automatic change of flow direction (wide-body)
- Concurrent cleaning of two systems (wide-body)
- Heated HEPA (High-efficiency particulate absorption) filter for reservoir air vent

OPTIONS

- Extended functionality for upper deck and simultaneous cleaning of two systems
- Continuous-flow heater (Option B)
- Motor drive for hose reel (Option C)
- Tool box with drawer and storage shelf for citric acid (Option D)
- Spring-loaded chassis (Option E)
- Cover paint alternative to standard (Option F)
- Connection for waste service truck (Option G)
- Drain pump (Option H)

BENEFITS

- Cleaning during overnight stops is possible
- User friendly ergonomic setup and operation
- Environmental friendliness
- Fully automatic cleaning process
- Minimized service time
- On-site service
- Everything needed is included/ stowed on the WLC1
- Certified for the use on A320 (all), A330/ A340 (all) A350 (all), A380 (all)



TECHNICAL SPECIFICATION

WASTE LINE CLEANING

Model-No.	WLC1	
Operating conditions	Ambient temperature	5 to 40°C (41 to +104 °F)
	Storage temperature	0 to 60°C (32 to +140 °F)
	Noise emission	max. 63dB (A) in 1 m distance
Electrical supply	Mains supply	3/PE AC 50/60 Hz 380–480 V
	Nominal current	max. 21 A (max. 32 A with option B)
	Power	14.6 kVA (max. 22.1 kVA with option B)
	Preliminary fuse (electricity- and performance characteristics at 400V 50 Hz)	25 A gL (max. 32 A gL with option B)
Dimensions and weight	Dimension	3,514 mm (3,700 mm with option G) x 1,413 mm x 1,654 mm 138.3 inch (145.7 inch with option G) x 55.6 inch x 65.1 inch
	Weight	approx. 1,200 kg (approx. 2,645.5 lbs)



11

AUXILIARY POWER UNIT ATA CHAPTER 49

11

MULTI-PURPOSE PLATFORM STAND



DESCRIPTION

The Aviation Platform Stand has been designed for maintenance access points for a multitude of aircraft, as well as the possibility of a safe platform for two person use. For the B737 this stand allows access to APU, in case of multi-aircraft use, the lowered position is designed to clear wheel well entry points and has been tested and is operational on both Airbus and Boeing wide-body aircraft. The unit is in service at a multitude of operators, MRO's and manufacturers.



PRODUCT FEATURES

- Telescopic side rails ensure safety compliant access to the forward and aft lower cargo holds
- Powder coat finish ensures corrosion resistance maintaining the longevity of the stand
- Hydraulically actuated via an ergonomically positioned foot pump
- Collapsible guardrails
- Anti-fatigue ladder steps ensuring the safety of your maintenance staff
- Anti-fatigue ladder rungs
- Padding material equipped
- Fall Restraint Anchor Points
- Controls: Hydraulic Foot Pump
- High-Grade Materials
- Rigorous Inspection and Testing
- DF071556-03 XP has a safe platform for two person use
- 1 Person Movement and Testing
- Fall Restraint Anchor Points Equipped
- Designed according to ANSI-ASC A14.7 and BS EN 131.7

BENEFITS

- Safety and Reliability
- Ergonomic Design
- Unrivalled Quality and Durability
- Flexibility for use on all wide-body Boeing aircraft
- Full use on Airbus wide-body aircraft as well as the A320 family
- Small Footprint and Greater Geometry
- Rigorous inspection and testing
- CE certified



TECHNICAL SPECIFICATION

MULTI-PURPOSE PLATFORM STAND

Model-No.	DF071556-03	DF071556-03 XP
Towing Speed	10 KPH / 6 MPH	10 KPH / 6 MPH
Material Type	Ladder - Aluminium Frame - Aluminium	Ladder - Aluminium Frame - Steel
Certifications	ANSI-ASC A14.7, BS EN 131.7 & CE	ANSI-ASC A14.7, BS EN 131.7 & CE
Dimensions (shipping)	79 3/4" x 80 1/4" x 105 1/2" x 1,200lbs	92" x 80" x 105 1/2" x 1,400 lbs
Height	Low: 73" High: 103"	Low: 73" High: 103"
Foot Print	79 3/4" x 105 1/2"	792" x 105 1/2"



12

FUSELAGE

ATA CHAPTER 53

12.1

IGLOOMX FUSELAGE SHELTER



DESCRIPTION

The patent protected IglooMX Fuselage Shelter is the ideal tool for fuselage repair tasks. This shelter can be “docked” to the damaged portion of the fuselage to create a fully controlled environment. It is also a very useful tool when any maintenance work is being undertaken in the cargo bay or for repairs around the door entry areas.

The IglooMX Fuselage Shelter is designed to provide a “hand-in-glove” fit against the fuselage. It is supplied with flexible fabric flanges that can be taped to the body of the aircraft to prevent any ingress of dust or moisture. A similar seal is created between the base tubes of the shelter and the ground.

Optional accessories include air-filtration, dehumidification and temperature control. Positive pressure control is also available if required. Ducts are provided as standard to cater for the necessary air-conditioning equipment.

A lighting kit is available on request; however, this is generally only required for night time work as the shelter fabric allows for very good light transmission. In addition, to composite repair work, the fuselage shelter may be used for window repairs, paint work and aircraft livery.

These shelters feature specially designed fabrics that are both lightweight and tough, providing excellent abrasion and tear resistance. The unique materials are also fire retardant and resistant to hydraulic fluid and fuels, ensuring that they remain functional for many years.

The IglooMX is supplied in a storage bag on wheels, making it easy to move around on the apron or in the hangar. In the unlikely event that the shelter becomes damaged while in use, an on-site repair kit is supplied as part of the package.

The IglooMX kit can be inflated in under 5 minutes and deflated and stored away in approximately 20 minutes.



PRODUCT FEATURES

- Installation Crew: Four persons
- Inflation time: Five minutes
- Folding and re-packing time: 20 minutes
- Strong but lightweight for easy handling
- Fire retardant and resistant to fuels, oils and hydraulic fluids
- Unique patented design
- Can withstand windspeeds of up to 25 knots
- 20 years proven track record with leading airlines, airframers and MRO’s

AVAILABLE ACCESSORIES

- Air-conditioning
- Air-filtration package
- Lighting set on tripods
- Dehumidifier
- Water filled ballast bag kit

BENEFITS

- Can be branded with airline logo
- No previous training required
- Provides privacy from passengers during maintenance
- Can be powered using a 5 kVA generator



TECHNICAL SPECIFICATION

IGLOOMX FUSELAGE SHELTER

Model-No.	890121
Dimensions inflated (maximal)	6,500 mm x 5,400 mm x 6,100 mm 255.9 inch x 212.6 inch x 240.2 inch
Dimensions (stored)	1,400 mm x 5,400 mm x 6,100 mm 55.1 inch x 212.6 inch x 240.2 inch
Packaged weight	172 kg 379.2 lbs
Temperature ranges	can be used from -30 °C to +70 °C (-22 °F to +158 °F)
Inflation device	2 H.P. Electric Blower
Power supply	110 V or 220 V models available

12.2

IGLOOMX NOSE SHELTER



DESCRIPTION

When your aircraft has been damaged by a bird-strike, lightning-strike or a collision on the apron, it can take a considerable amount of time to source an available hangar to undertake the necessary repairs. The patent protected IglooMX Inflatable Nose Shelter system provides the ideal solution for such events.

This “hangar-in-a-bag” system reduces downtime to a minimum and saves time and money on hangar space rental and towing charges. The Nose Shelter may be used for multiple purposes including windshield replacement, radome composite repairs and nose landing gear maintenance or replacement.

The IglooMX is small enough to ship as part of the fly-away kit. It is inflated and “docked” around the front of the aircraft by following the simple installation instructions provided. Inflation takes less than five minutes with a crew of four to six people.

The Nose Shelter has plenty of space internally for scaffolding, scissors-lift or boom-lift and is supplied complete with heating and filtration ducts. Once in place, the shelter system will boost your maintenance team’s productivity by providing a warm and safe environment in which to work.

These shelters feature specially designed fabrics that are both lightweight and tough, providing excellent abrasion and tear resistance. The unique materials are also fire retardant and resistant to hydraulic fluid and fuels, ensuring that they remain functional for many years.

The IglooMX kit can be deflated and stored away in approximately 20 minutes.

PRODUCT FEATURES

- Installation Crew: Four to six persons
- Inflation time: Five minutes
- Folding and re-packing time: 20 minutes
- Strong but lightweight for easy handling
- Fire retardant and resistant to fuels, oils and hydraulic fluids
- Unique patented design
- Can withstand windspeeds of up to 25 knots
- 20 years proven track record with leading airlines, airframers and MRO’s

AVAILABLE ACCESSORIES

- Ramp heater
- Air-conditioning
- Lighting set on tripods
- Reusable shipping crate
- Water filled ballast bag kit
- Camcleaner Air-Filtration package
- Dehumidifier package

BENEFITS

- Can be branded with airline logo
- No previous training required
- Provides privacy from passengers during maintenance
- Can be powered by using a 5 kVA generator



TECHNICAL SPECIFICATION

IGLOOMX NOSE SHELTER

Model-No.	890135
Dimensions inflated (maximal)	6,500 mm x 9,800 mm x 7,400 mm 255.9 inch x 385.8 inch x 291.3 inch
Dimensions (stored)	1,500 mm x 1,100 mm x 1,100 mm 59 inch x 43.3 inch x 43.3 inch
Packaged weight	200 kg 440.9 lbs
Temperatures ranges	can be used from -30 °C to +70 °C (-22 °F to +158 °F)
Inflation device	2 H.P. Electric Blower
Power supply	110 V or 220 V models available



13

NACELLES / PYLONS ATA CHAPTER 54

13

NOSE COWL DOLLY AND INSTALLATION DEVICE



DESCRIPTION

This new and innovative unit will allow for the safe removal and installation of the nose cowl without the need for an overhead crane.

The Nose Cowl Dolly is able to handle the aircraft nose cowls on a variety of aircraft engines.



PRODUCT FEATURES

- Ready to ship AOG unit
- Lightweight and compact shipping configuration
- Caster details: 10 inch with brakes and swivel
- High-grade materials
- Padding material
- One Person movement
- Material type: Aluminum
- Powder coated finish

BENEFITS

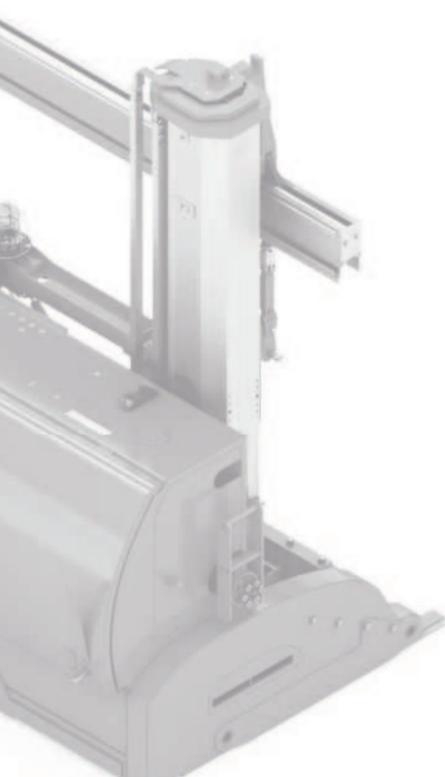
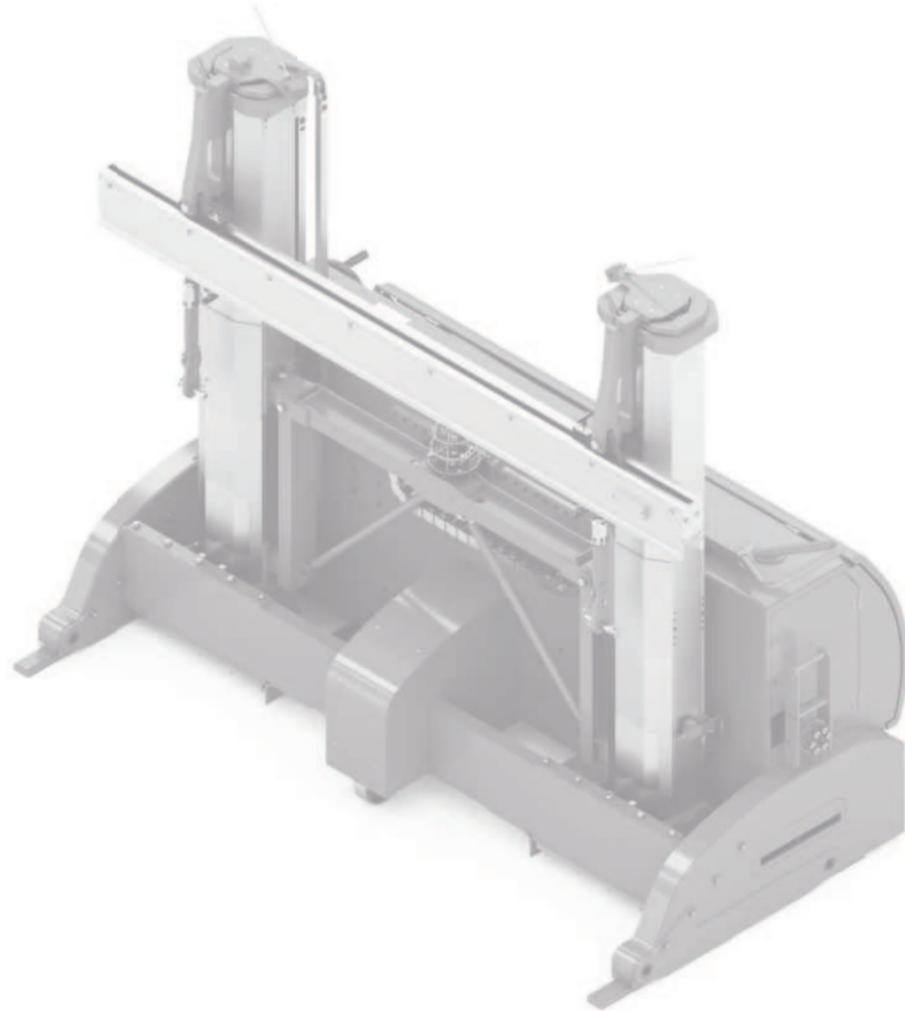
- Safety and reliability
- Ergonomic design
- Unrivalled quality and durability



TECHNICAL SPECIFICATION

NOSE COWL DOLLY AND INSTALLATION DEVICE

Model-No.	DF071560-01
Material	Aluminum
Footprint	2,134 mm x 2,737 mm 84.0 inch x 107.75 inch
Height	Variable
Weight	68 kg 150 lbs
Shipping Dimensions	447 mm x 699 mm x 2,417 mm 17.56 inch x 27.5 inch x 95.125 inch
Certifications	ANSI-ASC A14.7, BS EN 131.7 & CE



14

POWER PLANT

ATA CHAPTER 71

12.1

ENGINE CHANGE SYSTEM

DESCRIPTION

The COBRA Engine Change System has been designed to ensure a fast engine change and to minimize operational failure and technical risks.

This offers tremendous benefits by reducing costs through minimal aircraft downtimes.



STANDARD CHARACTERISTICS

- Universal, innovative engine change system
- Applicable to aircraft with wing-mounted engines
- Interchangeable adapters for flexible and universal handling of engine dollies, cradles and shipping stands
- Accessories available for multi-purpose applications
- Suitable for a wide range of aircraft

PRODUCT FEATURES

- Consists of primary and secondary unit
- Semi-automatic lifting of engine, dolly and cradle or shipping stand
- 4 pillars: each pillar can be controlled independently
- Movement possible in 3 axes

AVAILABLE ACCESSORIES

- Transportation trailer with or without diesel power unit
- Spare part kit
- Load cell calibration kit
- Diesel power unit
- Lift adapters for a wide range of aircraft, e.g. TPAA1A2A0A0B0 for A350 XWB with RRT089139 stand

BENEFITS

- OEM approved
- Up to 70% time saving for engine changes (compared to bootstrap)
- Short amortization period on investment cost
- Protects the aircraft, engine and operator with various safety features
- Easy operation
- On-site service



TECHNICAL SPECIFICATION

ENGINE CHANGE SYSTEM

Model-No.	TP91G1A	TP91G1F	
Performance	Nominal capacity	16.3 t (36,000 lbs)	16.3 t (36,000 lbs)
	Max. lift stroke	2,800 mm 110.2 inch	1,700 mm 67 inch
	Lifting speed	5 mm/sec or 10 mm/sec [fast mode] 0.2 inch/sec or 0.4 inch/sec [fast mode]	5 mm/sec or 10 mm/sec [fast mode] 0.2 inch/sec or 0.4 inch/sec [fast mode]
	Power supply	3/PE AC 50 Hz 380-420 V or 3/PE AC 60 Hz 440-480 V	3/PE AC 50 Hz 380-420 V or 3/PE AC 60 Hz 440-480 V
Movability	Max. longitudinal movement	± 120 mm ± 4.7 inch	± 120 mm ± 4.7 inch
	Max. transversal movement	± 150 mm ± 5.9 inch	± 150 mm ± 5.9 inch
	Max. inclination	10°	10°
Weight	Weight primary unit	1,200 kg (2,645 lbs)	1,200 kg (2,645 lbs)
	Weight secondary	1,100 kg (2,425 lbs)	1,000 kg (2,200 lbs)

Manufacturer	Aircraft Applications	Engine Applications
Airbus	A220	PW1500G
	A320	CFM56-5, PW1100G
	A330	CF6-80, PW4000, Trent 700, Trent 7000
	A340	CFM56-5, Trent 500
	A350	Trent XWB
	A380	GP7200, Trent 900
Boeing	B737	CFM56 -3/-7
	B747	GEnX, CF6-80
	B757	PW20000, RB2111
	B767	CF6-80, PW4000
	B777	GE90, PW4000, Trent 800
	B787	GEnX, Trent 1000

12.2

ENGINE PEDESTAL SET

DESCRIPTION

HYDRO Engine Pedestal Sets (EPS) are multi-purpose systems which can be used for various engine types from different engine manufacturers.

For each new engine combination only a new adapter set is required while the pedestals are universal and used for any combination.

The basic set consists of 2 pedestals used at the front and 2 pedestals used at the rear of the engine. Due to the universal application of the basic set less storage space is required.



PRODUCT FEATURES

- Consists of 2 pedestals used at the front and 2 pedestals used at the rear engine

AVAILABLE ACCESSORIES

- Spring loaded ball castors for easy positioning of pedestals

OPTIONS

Engine Adapter Kit

Engine adapter kits are available separately for each engine type and are attached to the basic set. Each engine adapter kit includes 2 rear adaptors and 2 front adaptors. E.g. 47001-026-000 for A350 — Trent XWB (Please note that additionally 1 x RRT059450-1 is required).

BENEFITS

- Universal application
- Cost savings
- Space savings
- On-site service



TECHNICAL SPECIFICATION

ENGINE PEDESTAL SET

Model-No.	EPS001-002
Nominal capacity	9 t
Weight basic set	514 kg (1133.2 lbs)
Application	CFM56-3 with EPS adapter 47001-002-000 CFM56-7B with EPS adapter 47001-029-000

12.3

COBRA COMPATIBLE CFM56-7B ENGINE STAND

DESCRIPTION

The AM-2811/2563 Engine Handling System is designed to transport and or store the CFM International CFM56-7 engine in QEC configuration. The Engine handling system is compliant with CFMI specification 9970-957-889 (Air/Road shipping stand, CFM56-7 engine). It is capable of being shipped (with engine) in the cargo bays of the B-747 , B747F Transall CL44 Guppy, L100 Hercules, C130, DC9, B707, B720, B727, B737 and C130 aircraft. Engine pins securely into place quickly and easily. Bootstrapping capabilities have been incorporated for all engines and aircraft types specified. A document container is secured to the base for all manuals and documents. The Cradle is designed to collapse for shipping.



The transport base unit consists of a frame weldment supported by four wheel caster assemblies. Each caster assembly offers a 5" wide by 10" diameter wheel for easy mobility and a weight capacity of 5000 Lbs. each. Shock absorbing polyurethane tread wheels, position locks and face brakes are standard. All four caster assemblies are designed to pin in an elevated position for air/truck transport of the entire unit, with engine. Tow bar stows on base frame when not in use. Maximum towing speed of unit is 5 km/h (3 MPH). Built-in shock absorbing mounts cushion all transport movements. A series of Tie-down rings (14) offer secure retainment during long distant hauling of unit.

Please see also AM-2563-227 for a base with wide forklift pockets!

BENEFITS

- Transportation and Storage Solution
- Air transportability
- OEM validated
- COBRA compatible



TECHNICAL SPECIFICATION

COBRA COMPATIBLE CFM56-7B ENGINE STAND

Model-No.	Base AM-2563-227 with Cradle AM-2811-4800
Dimensions Casters up	169.5 x 196 x 99
Dimensions Casters down	171.5 x 196 x 99
Weight	514 kg (1133.2 lbs)
Assembled	4,620
Preassembled	2,210 (Cradle) 2,410 (Base)
Application	CFM56-7B

12.4

HOISTING SLING

DESCRIPTION

Universal sling for CFM56 engines.

PRODUCT FEATURES

- Basic beam
- The basic beam consists of an I-beam and an adjustable suspension unit, which can be adjusted by means of a hand wheel
- Engine adapters
- The front (FWD) and rear (AFT) adapters, which are attached to the basic beam by means of levers, are used to receive and attach CFM56 engines
- Wooden storage box
- All adapters, connection- and moving parts are either galvanized or nitrated
- Operation and maintenance manual, including spare parts list
- Test certificate



TECHNICAL SPECIFICATION

HOISTING SLING

Model-No.	HG49
Lifting Capacity	4000 kg 8,818.5 lbs
Weight basic beam w/o adapter	305 kg 672.4 lbs
Applications	A320 Family CFM56-5A/ -5B A320neo Family PW1100G A340 CFM56-5C B737 Classic/NG CFM56-3 and CFM56-7B

BENEFITS

- User friendly ergonomic setup and operation
- On-site service
- Universal application

12.5

IGLOOMX ENGINE CHANGE SHELTER



DESCRIPTION

AOG incidents can lead to costly delays and scheduling difficulties for operators. The patent protected IglooMX Inflatable Engine Change Shelter system provides the ideal solution for such events.

This “hangar-in-a-bag” system reduces downtimes to a minimum and enables the AOG team to get the aircraft back in the air in the least possible time, thereby saving on costly hangar rentals and lost man hours.

The IglooMX Shelter system is small enough to ship as part of the fly-away kit. It may be set up on either engine to encapsulate both engine and pylon. By following the simple installation instructions provided, this kit can be installed in a matter of minutes by a crew of three to four people.

Once in place, the shelter system will boost your maintenance team’s productivity by providing a warm and safe environment in which to work. These shelters feature specially designed fabrics that are both lightweight and tough, providing excellent abrasion and tear resistance. The unique materials are also fire retardant and resistant to hydraulic fluid and fuels, ensuring that they remain functional for many years.

The IglooMX is supplied in a storage bag on wheels, making it easy to move around on the apron. In the unlikely event that the shelter becomes damaged while in use, an on-site repair kit is supplied as part of the package.

The IglooMX kit can be deflated and stored away in around 15 minutes.



PRODUCT FEATURES

- Installation Crew: Three to four Persons
- Inflation Time: Five minutes
- Folding and re-packing time: 15 minutes
- Strong but lightweight for easy handling
- Fire retardant and resistant to fuels, oils and hydraulic fluids
- Unique patented design
- Can withstand windspeeds of up to 25 knots
- 20 years proven track record with leading airlines, airframers and MRO’s

AVAILABLE ACCESSORIES

- Ramp heater
- Air-conditioning
- Lighting set on tripods
- Reusable shipping crate
- Water filled ballast bag kit

BENEFITS

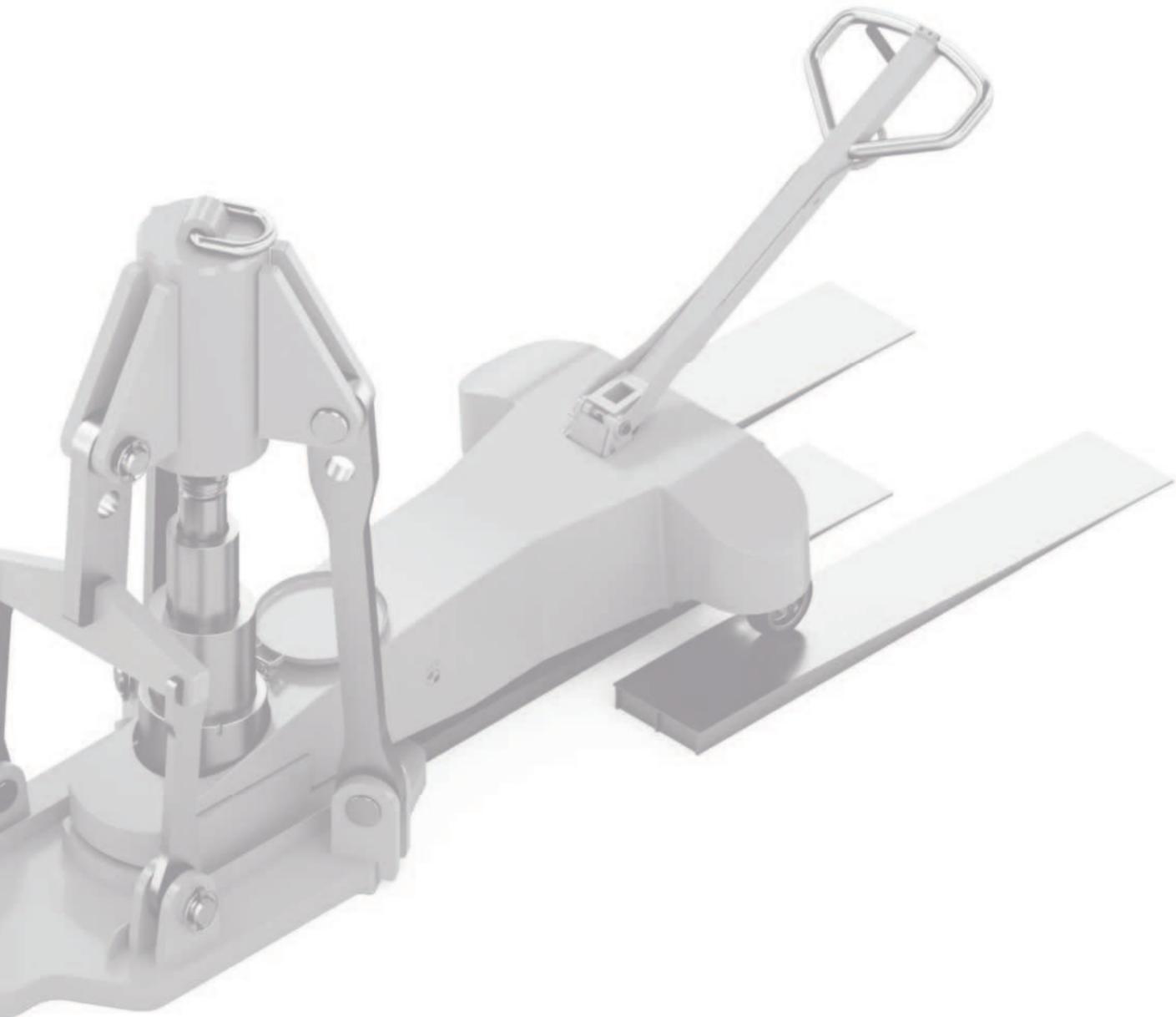
- Can be branded with airline logo
- No previous training required
- Provides privacy from passengers during maintenance
- Models available for use with HYDRO COBRA Engine Change System
- Airbus approved
- Can be powered using a 5 kVA generator



TECHNICAL SPECIFICATION

IGLOOMX ENGINE CHANGE SHELTER

Model-No.	890106	890167
Dimensions inflated (maximal)	9,600 mm x 6,800 mm x 4,000 mm 377.95 inch x 267.72 inch x 157.48 inch	6,800 mm x 8,100 mm x 4,600 mm 267.72 inch x 318.9 inch x 181.1 inch
Dimensions (stored)	1,400 mm x 1,000 mm x 1,000 mm 55.12 inch x 39.37 inch x 39.37 inch	1,400 mm x 1,000 mm x 1,100 mm 55.12 inch x 39.37 inch x 43.31 inch
Packaged weight	170 kg 374.8 lbs	175 kg 385.8 lbs
Temperatures ranges	Can be used from -30 °C to +70 °C -22 °F to +158 °F	Can be used from -30 °C to +70 °C -22 °F to +158 °F
Inflation device	2 H.P. Electric Blower	
Power supply	110 V 60 Hz or 220 V 50 Hz models available	110 V 60 Hz or 220 V 50 Hz models available
Airbus applications	-	A220-100/-300 A318 A319ceo/A319neo A320ceo/A320neo A321ceo/A321neo
Boeing applications	B737-300/400/500 B737-600/700/800/900/900ER	B737 Classic B737 NG B737 MAX
Other applications	E170/E175/E2190/E195 E175-E2/E190-E2/E195-E2	E170/E175 E190/E195 E175-E2 E190/195-E2



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OTHERS

13.1 PROOF LOAD TEST FIXTURE

DESCRIPTION

The HYDRO proof load test fixture has been designed for testing of lifting devices.

The HYDRO proof load test fixtures are used for

- Checking: the hydraulic lift cylinder and hydraulic circuit of tripod- and axle-jacks for leakage
- Controlling: the preciseness of the load indicator of tripod- and axle-jacks testing: the adjustment of pressure relief valves of the hydraulic circuit of tripod- and axle-jacks

STANDARD CHARACTERISTICS OF PV165 AND PV250

- Load cell
- Adapter pieces (male \varnothing 19 mm and \varnothing 32 mm, female \varnothing 44.5 mm)
- Laptop with testing software "HyCat" and case
- Color printer for test certificates with case
- Measuring cable
- Storage box
- Power supply AC 240 V/ 0.04 kVA/ 50 Hz

STANDARD CHARACTERISTICS OF PV050

- Hydraulic load cell (PV165 load cell also usable)
- Adapter pieces (male \varnothing 19 mm and \varnothing 32 mm)
- Storage box



AVAILABLE ACCESSORIES

- Individual braces for each tripod-jack
- Measuring amplifier and LED-display (instead of laptop with testing software)
- Special cradle designed to operate and ship PV165 in pre-installed position

BENEFITS

- User friendly ergonomic setup and operation
- On-site service
- Universal application

TECHNICAL SPECIFICATION PROOF LOAD TEST FIXTURE

Model-No.	PV050	PV165	PV250
Max. test force	50 t 55.0 tons	165 t 181.5 tons	250 t 275.0 tons
Application	For all HYDRO tripod-jacks and axle-jacks with a test capacity up to 50 t	For all HYDRO tripod-jacks and axle-jacks with a test capacity up to 165 t	For all HYDRO tripod-jacks and axle-jacks with a test capacity up to 250 t

13.2 BOEING TOOLING

DESCRIPTION

We have a long standing business relationship with Boeing. In 1990 the first license contract was established for make-to-print tooling. We are a strategic supplier for proprietary/make-to-print tooling and aftermarket services regarding all civil programs.

- 25 years of Boeing Tooling experience and knowledge
- Large stock of B737 tools
- Tool Change Bulletin support program for tool revision changes
- Specialist tooling sales team in Seattle, USA

SCOPE OF SUPPLY

Global supply of make-to-print tooling for civil manufacturing programs as well as after sales programs. HYDRO offers a large stock of Boeing Licensed Tooling for the majority of aircraft programs, including a heavy emphasis on the 737 programs. A specialist tooling sales team located in Seattle, USA, are in daily contact with Boeing's Maintenance & Ground Operations System team.

BENEFITS

- Short lead times
- High quality products
- Competitive pricing
- Global customer sales and service support

