

Goldhofer



**SAFE, RELIABLE
AND FLEXIBLE
AIRCRAFT RECOVERY
WITH ARTS**

AIRPORT TECHNOLOGY



MADE FOR YOUR MISSION

ARTS – THE COST-SAVING AIRCRAFT RECOVERY AND TRANSPORT SYSTEM

Every year, more and more people travel by air. This means a constant increase in air traffic volume, leading to a higher frequency of take-offs and landings that airports have to cope with.

In this situation, a damaged airplane blocking a runway not only leads to delays for passengers, but can also result in quickly accumulating extra expenses for all involved.





8



MINOR DAMAGE

12



MAJOR DAMAGE

18



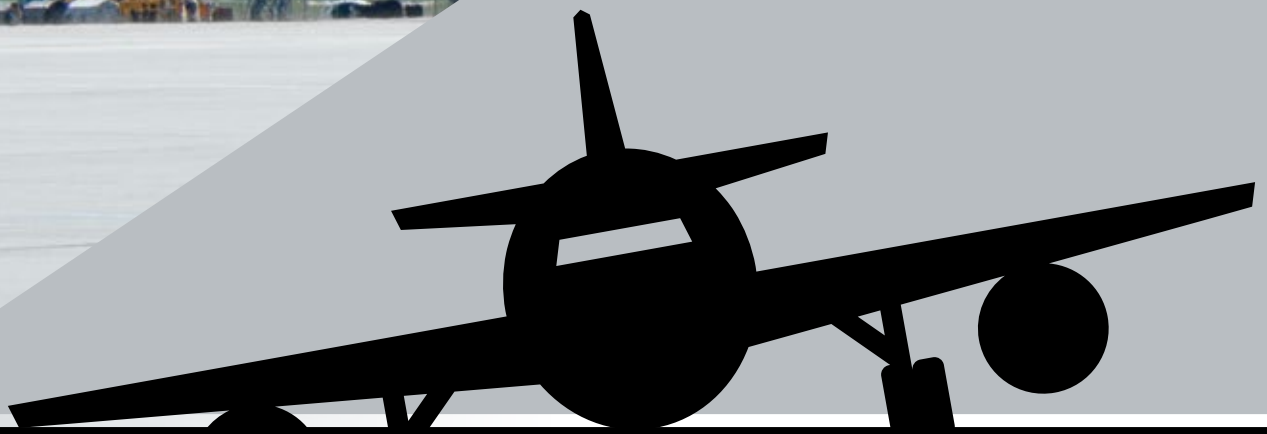
MODULAR PLATFORM

A BUSINESS CASE EMERGENCY – AND NEXT?

In an airport emergency, there is no room for mistakes. The damaged airplane must be recovered and removed as quickly as possible and without any extra damage, in order to keep costs at a minimum. This is where the Aircraft Recovery and Transport System (ARTS) comes into play. In close collaboration with international recovery specialists Goldhofer has developed ARTS as a global standard.

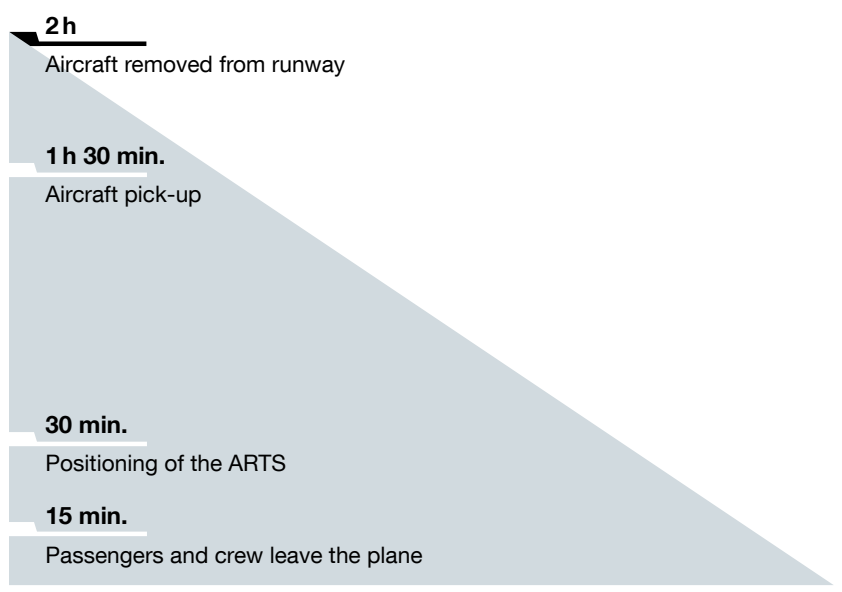
THE CASE:

- + Small passenger airport with a single runway.
- + A 330/154,000lbs, right tire bursted during the landing
- + The plane blocked the only runway for 5h
Since there was no suitable equipment





ARTS COULD HAVE SAVED \$ 600,000 INCLUDING THE INVESTMENT THE SYSTEM WOULD PAYED OF THE FIRST TIME!



FINANCIAL DAMAGE WITOUT ARTS
\$ 1,000,000

FINANCIAL DAMAGE WITH ARTS
\$ 400,000





MINOR AIRCRAFT DAMAGE A JOB FOR OUR DOLLIES!

A damaged airplane blocking a runway or the airport apron can have various causes, ranging, for example, from tire failure to a broken axle, a damaged rim or a locked brake.

Even in many of these minor-damage cases, however, spare parts are often not readily available and repairs cannot be carried out in a matter of minutes.



TIRE FAILURE DAMAGED RIMS BROKEN AXLES LOCKED BRAKES



Especially at highly frequency airports or airports with only one runway, a swift and efficient reaction to this situation is essential in order to prevent runway closure.

Our dollies ensure that operations are able to resume as quickly as possible, making them a musthave for airports around the world.

DOLLY 26,000 lbs

NLG/MLG* WITH ONE TIRE

- + Hydraulic hand pump to lift platform



DOLLY 66,000 lbs

NLG/MLG* WITH ONE AXLE

- + Choice of wear plates for easier recovery
- + Hydraulic hand pump for aircraft pick-up



DOLLY 110,000 lbs

NLG/MLG* WITH ONE AXLE

- + Choice of wear plates for easier recovery
- + Power pack for aircraft pick-up and steering
- + Remote control for steering



DOLLY 220,000 lbs

MLG* WITH TWO OR MORE AXLES

- + 2x dolly 110,000 lbs combined
- + Choice of wear plates for easier recovery
- + Power pack for aircraft pick-up and steering
- + Remote control for steering







MAJOR AIRCRAFT DAMAGE REQUIRES AN EFFICIENT RECOVERY SOLUTIONS

Major airplane damage, such as collapsed landing gears, often result in long runway closures – especially if the recovery equipment on the ground is insufficient or not readily available.

In most cases, this means time-consuming and cost-intensive recovery work that not only ties up both capital and human resources.



COLLAPSED NOSE LANDING GEAR





DOLLY + TURNTABLE

80 % of all damages on aircraft involves the nose landing gear.

With Goldhofer, you are optimally equipped for all situations. While the basic package allows for on-tarmac recovery, the professional and premium solutions are ideal for off-tarmac recovery and can be extended with additional modules.

THE BASIC PACKAGE

- + For on-tarmac recovery
- + Towing vehicle needed



TOWED HEAVY-DUTY MODULE + TURNTABLE

THE PROFESSIONAL SOLUTION

- + For on- and off-tarmac recovery
- + Towing vehicle needed
- + Hydraulic axle suspension
- + Small power pack for steering, braking and lifting



SELF-PROPELLED HEAVY-DUTY MODULE + TURNTABLE

THE PREMIUM SOLUTION

- + For on- and off-tarmac recovery
- + Self-propelled (no towing vehicle needed)
- + Hydraulic axle suspension
- + Big power pack for driving, steering, braking and lifting





NOSE LANDING GEAR AND ONE MAIN LANDING GEAR



Increase the risk coverage by adding a wing support module to the front module of the professional or premium solution. This system allows you to recover aircraft with a damaged nose landing gear and one damaged main landing gear.



TURNTABLE + WING SUPPORT ON TOWED HEAVY-DUTY MODULE

THE PROFESSIONAL SOLUTION

- + For on- and off-tarmac recovery
- + Towing vehicle needed
- + Hydraulic axle suspension
- + One single system for narrow- and widebody aircraft
- + Two small power packs for steering, braking and lifting



TURNTABLE + WING SUPPORT ON SELF-PROPELLED HEAVY-DUTY MODULE

THE PREMIUM SOLUTION

- + For on- and off-tarmac recovery
- + Self-propelled (no towing vehicle needed)
- + Hydraulic axle suspension
- + One single system for narrow- and widebody aircraft
- + Two big power packs for driving, steering, braking and lifting





NOSE LANDING GEAR AND TWO MAIN LANDING GEARS



The full recovery system is our recommended solution. Why? Because it offers full risk coverage and ensures that you are prepared for any kind of incident on the runway. Consisting of a front module and two wing support modules, it allows for a safe and fast recovery even with all landing gears damaged or torn off.



FULL RECOVERY SYSTEM ON TOWED HEAVY-DUTY MODULE

THE PROFESSIONAL SOLUTION

- + For on- and off-tarmac recovery
- + Towing vehicle needed
- + Hydraulic axle suspension
- + One system for narrow- and widebody aircraft
- + Three small power packs for steering, braking and lifting



FULL RECOVERY SYSTEM ON SELF-PROPELLED HEAVY-DUTY MODULE

THE PREMIUM SOLUTION

- + For on- and off-tarmac recovery
- + Self-propelled (no towing vehicle needed)
- + Hydraulic axle suspension
- + One system for narrow- and widebody aircraft
- + Three big power packs for driving, steering, braking and lifting





MODULAR PLATFORM FOR YOUR SPECIFIC NEEDS

The individual systems can be expanded as required to cover even larger claims.

CONFIGURATION EXAMPLE

TOWED HEAVY-DUTY MODULE + TURNTABLE



WING SUPPORT +
SIMPLE BEAM



2 WING SUPPORTS +
COMPLETE BEAM SET



TURNTABLE + WING SUPPORT
ON TOWED HEAVY-DUTY MODULE

» More information on page 15



FULL RECOVERY SYSTEM
ON TOWED HEAVY-DUTY MODULE

» More information on page 17





26,000 lbs

66,000 lbs

110,000 lbs

220,000 lbs

DOLLIES



TOWED MODULE

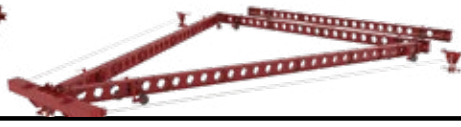


SELF-PROPELLED MODULE

HEAVY-DUTY MODULES



SIMPLE BEAM



COMPLETE BEAM SET

CONNECTION BEAMS

10° TILT ANGLE

TURNTABLE

WING SUPPORT

18-15° TILT ANGLE



66,000 lbs

NARROW-BODY AIRCRAFT



NARROW-BODY AIRCRAFT

110,000 lbs



110,000 lbs

NARROW-AND WIDEBODY AIRCRAFT



NARROW-AND WIDEBODY AIRCRAFT

220,000 lbs



110,000 lbs

NARROW-AND WIDEBODY AIRCRAFT INCL. A380



NARROW-AND WIDEBODY AIRCRAFT INCL. A380

220,000 lbs



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