



The Unrivalled eXcent Product

ENGINE CHANGING SYSTEM
Secures and reduces AOG time



Adaptability • Accuracy • Agility • Autonomy

EASY & FLEXIBLE CONTROL

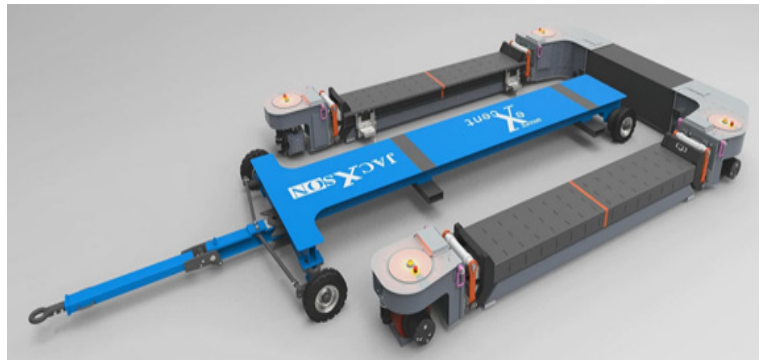


The JacXson U70 is operated by a single person thanks to a mobile panel that controls all the functions necessary for engines installation and removal operations.

The user-friendly menu system allows easy and intuitive handling manipulations. The HMI has been especially designed so that the JacXson can be controlled within 15 minutes by any new user.

ADDITIONAL EQUIPMENT: JACXSON U70'S TRAILER

- Optimize the JacXson U70 transportation within the apron area
- The JacXson U70 connects and lifts onto the trailer thanks to its own embedded functions
- Driven by a standard truck, up to 15km/h (9.3mph), overpassing floor defects and usual obstacles (cables...)



SAFETY FEATURES & REMOTE MAINTENANCE

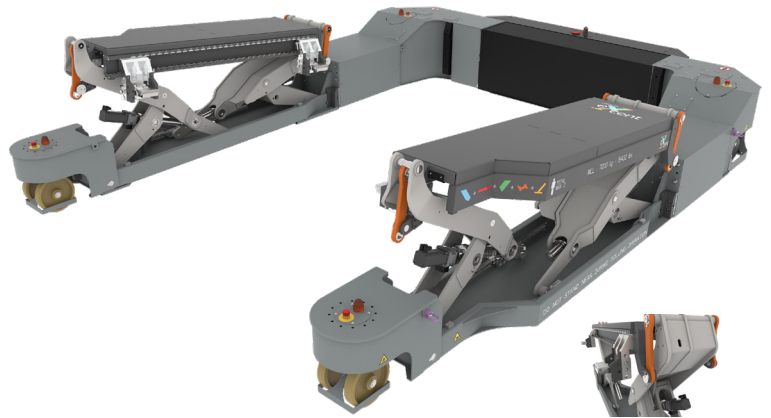
- Remote maintenance and geolocation for diagnostic / update / real time status (3G, 4G, Wifi connectivity and geolocation)
- Overload protection feature
- Control of the efforts induced at the engine-pylon interface to prevent any damage on both equipments
- Real time management of the CoG load to ensure perfect operations stability and accuracy

A SINGLE SOLUTION FOR ALL YOUR NEEDS

The JacXson U70 is a revolutionary system designed to minimize AOG time and cost of engines maintenance operations. This innovative solution allows to perform safe, fast and ergonomic operations. It avoids using cranes and auxiliary lifting or handling means.

MAIN FUNCTIONS

- Autonomous **omnidirectional** movement
- Dimensional **adaptability** (arms and forks spacing), no adaptation needed for engine handling dollies and shipping stands
- **Automatic** management of effort and position
- Support freedom (for docking operations)
- **High precision** lifting and tilting with pitch management
- **Digital control** according to a user-friendly HMI
- **Remote maintenance** (3G, 4G, Wifi connectivity and geolocation)



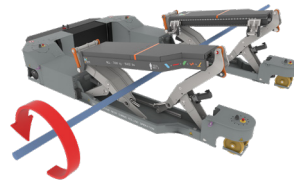
Safety features:

Support freedom (for docking operations $\pm 15\text{mm}$)
Automatic management of effort and position

TECHNICAL FEATURES

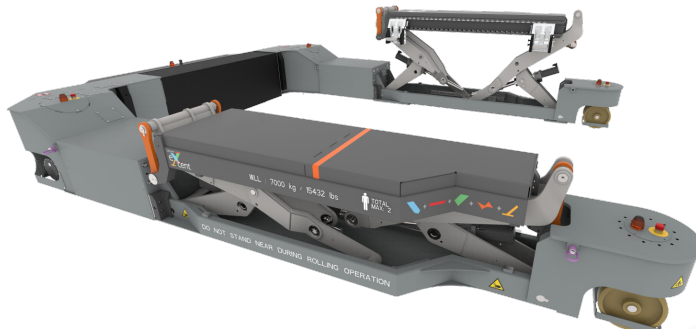
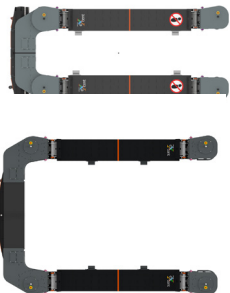
Dimensional adaptability:

Deployment: 1.9 m to 2.75 m (3.28' to 6.56')



Precision lifting and tilting with pitch management:

Angular positioning:
Roll $\pm 7^\circ$, Pitch $\pm 7^\circ$



Omnidirectional movement:

Wheels positioning accuracy:
 $< 1\text{mm}$ (0.04")
Speed from
1 mm/s to 2,2 km/h (0.04"/s to 1.36 mph)



Lifting travel 1,14 m (3.74')

Capacity 7 tons (15 400 lbs)

Accuracy $< 0,5\text{mm}$ (0.02")



Adaptability • Accuracy • Agility • Autonomy

JacXson U70 TECHNICAL DATA

Tool Weight	5,25 tons (11 500 lbs)
Dimensions	2,45 m x 5,69 m x 0,78 m (8.04' x 18.67' x 2.56')
Transportation	road / air / sea
Safe working load (capacity)	7 tons (15 400 lbs)
Battery life time	12 h
Max ground inclination	+/- 3 % Pass over/through a step or crack of 10 mm from standstill position
Mobility	4 wheels (2 driving wheels, 4 steering wheels)
Max vertical movement (and velocity)	1,14 m (0.1 mm/s to 8 mm/s) / 3,74' (0.004"/s to 0.331"/s)
Max transversal movement (and velocity)	unlimited (1 mm/s to 2,2 km/h) / (0.04"/s to 1.36 mph)
Max longitudinal movement (and velocity)	unlimited (1 mm/s to 2,2 km/h) / (0.04"/s to 1.36 mph)
Angular movement (and velocity)	360° (1 mm/s to 2,2 km/h) / (0.04"/s to 1.36 mph)
Pitch movement adjustment	+/- 7 °
Roll movement adjustment	+/- 7 °
Accuracy	< 1 mm (0.04")
Support freedom (for docking operations)	+/- 15 mm / (+/- 0.6") in 2 different directions and rotation
Deployment	1,9 m (6.2') with a maximal opening of 2,75 m (9')
Applied loads monitoring	Yes

PERFORMANCE

Example of application for A320 Program (time based on Airbus feedback)	JacXson U70	Conventional tool
Total time of engine installation / removal (excluding engine tightening / loosening operations)	45 min 2 operators	3,5 h 5 operators

The JacXson U70 is dedicated to single aisle programs.
The JacXson XL, in development progress, will be specialized in wide-bodies aircraft engines.

Adaptability • Accuracy • Agility • Autonomy

JacXson U70 AIRCRAFT APPLICATIONS

Airbus	
A 318 / 319 / 320 / 321	CFM56-5B
	IAE V2500
A 319 / 320 / 321 neo	PW1100G
	Leap 1A
A 220	PW1500G
A 340 (inboard)	CFM56-5C

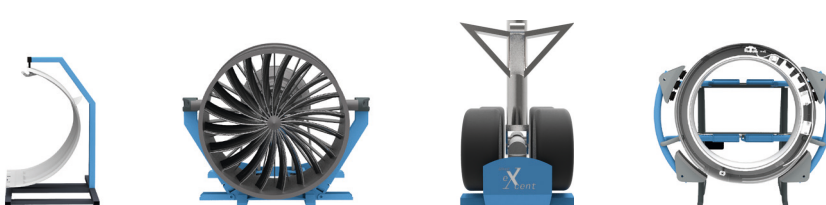
Boeing	
B 737	CFM56-7B
	CFM56-3
B 737 MAX	Leap 1B
B 757	PW2000
	RB211

Other aircrafts	
Embraer 170/195	CF34-8/-10
Irkut MC-21	PW1400G
	PD-14
Sukhoi SJ-100	SaM-146

OTHER APPLICATIONS

A support dedicated to the installation / removal of landing gears is in design process.

The JacXson suite of capability is adaptable to any business sector thanks to a generic interface system. It can handle existing product (cradles, trolleys, stands...) or customized interfaces can be developed on demand for any specific needs.



INDUSTRIAL MOBILITY BY EXCENT

JACXSON



Distributed in all America by N.A.S.



Laurent DELERIS
International Development Director
Mob. +33 634 026 833
laurent.deleris@excent.fr

Antoine JEUNET
Business Development Manager
Mob. +33 668 245 321
antoine.jeunet@excent.fr