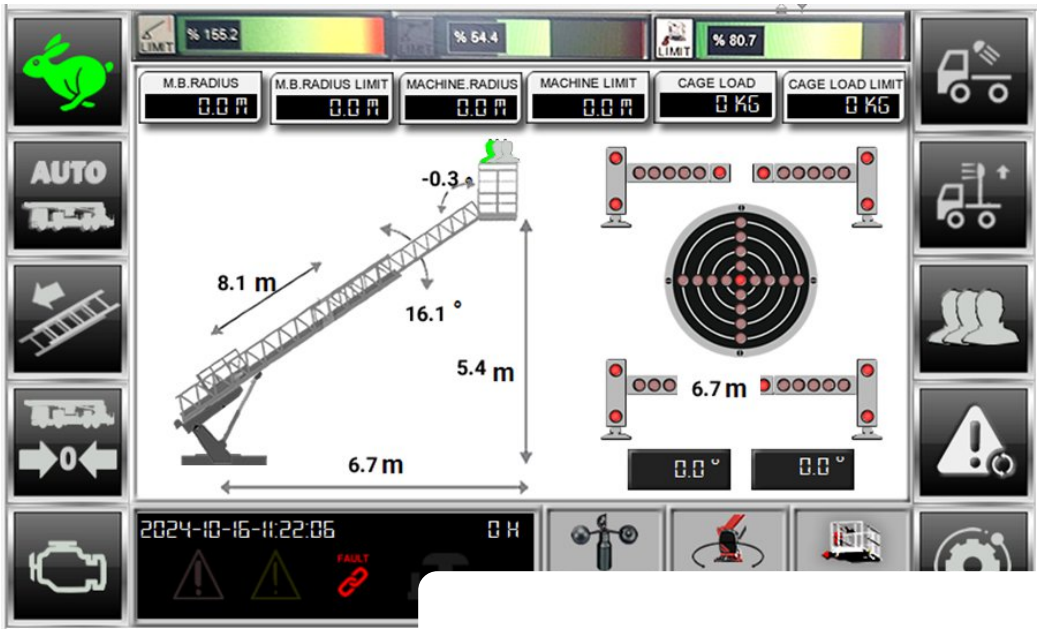
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RETROFIT PRESENTATION

Ladder Platform (LP) Control System

MOBA based geometry and load moment control, retrofitted to existing fire-fighting aerial ladders





System introduction

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01 Geometric limitation

Limitation based on the main boom length.

02 Radius limit control

Connected to the articulated boom and the jib boom.

03 Load moment control

Fits almost any elevated platform or ladder, as retrofit or OEM: 10 working tables, 4 (8) swing zones, 3 basket load limits and a 5-step outrigger spread.

04 Three-part software

Chassis, tower and basket sections communicate with each other but work independently unless needed.

Turret components



Wind sensor



CANCom intercom device



MOBA HMI with 7" display



MPC113 controller



MSC113 slave unit



Turret leveling angle sensors, X and Y axis



Pressure sensors, 4 pcs



40 x 50 control box



A4U remote support unit



Ladder angle sensor



Ladder length sensor



Turret slewing encoder

Cage components



CANCom intercom device



Cage joysticks, 2 pcs + 4.3" display



Cage level angle sensor



25 x 35 control box



Ultrasonic sensors, 5 pcs



MPC113 controller

Truck and cabin components



7" truck displays, 2 pcs



CANbus joysticks, 2 pcs



MPC113 controller



40 x 50 control box



Truck leveling angle sensor



MSC113 slave unit



4.7 m length sensors, 4 pcs

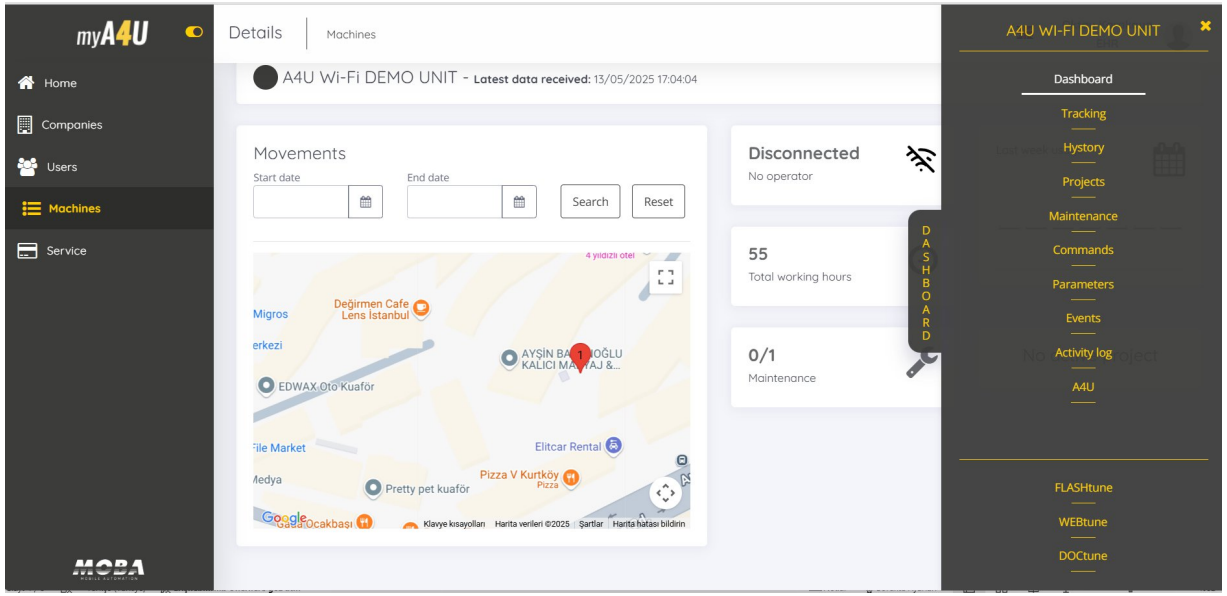


4.3" cabin display

A4U remote support (optional)

GPRS and GPS based, two-way communication from the machine to the cloud.

- A4U and the myA4U platform form an end-to-end solution for mobile machinery manufacturers.
- Machine data is collected through IoT services and followed on myA4U.
- Service teams can follow their machines remotely and improve operating efficiency.

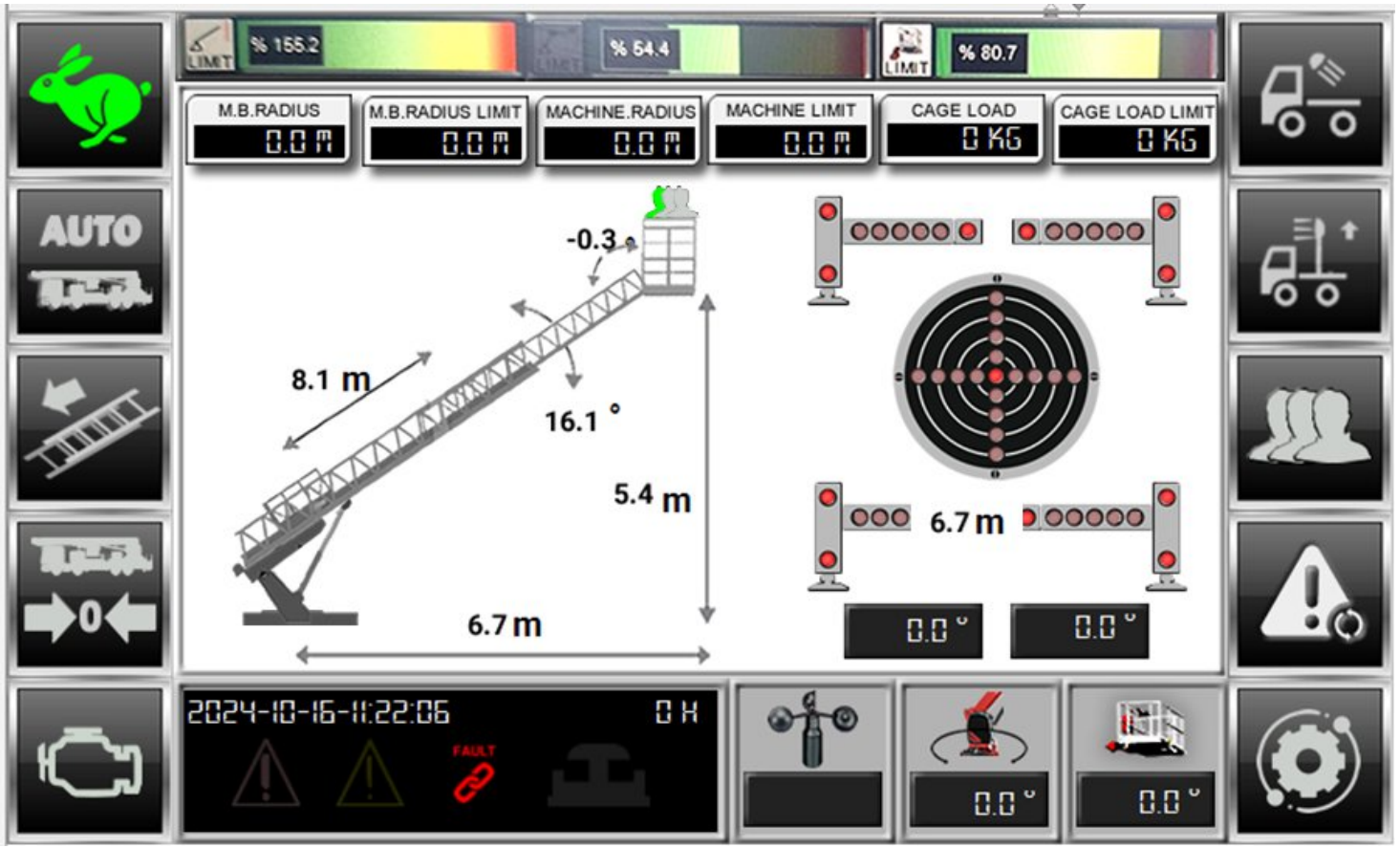


myA4U web platform



A4U unit

Operator screen

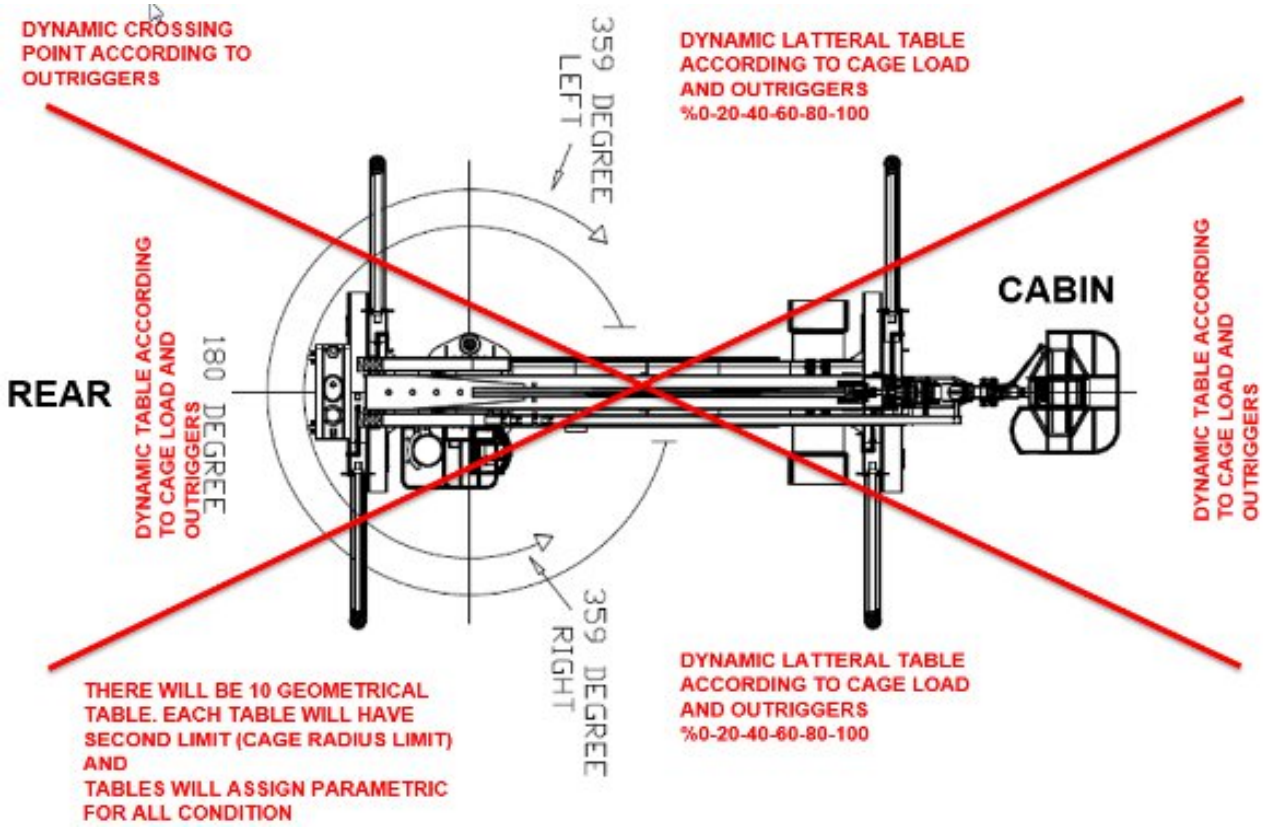


Working screen: boom length, radius, angle, cage load and outrigger status in one view

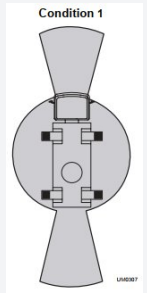


Cage control console with 7" HMI

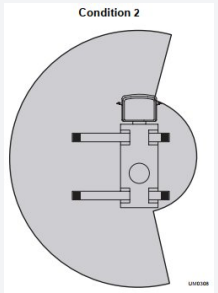
Top view working conditions for LMI logic



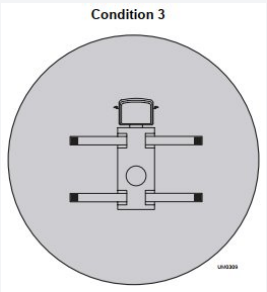
Condition 1



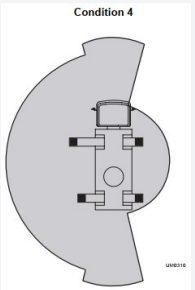
Condition 2



Condition 3

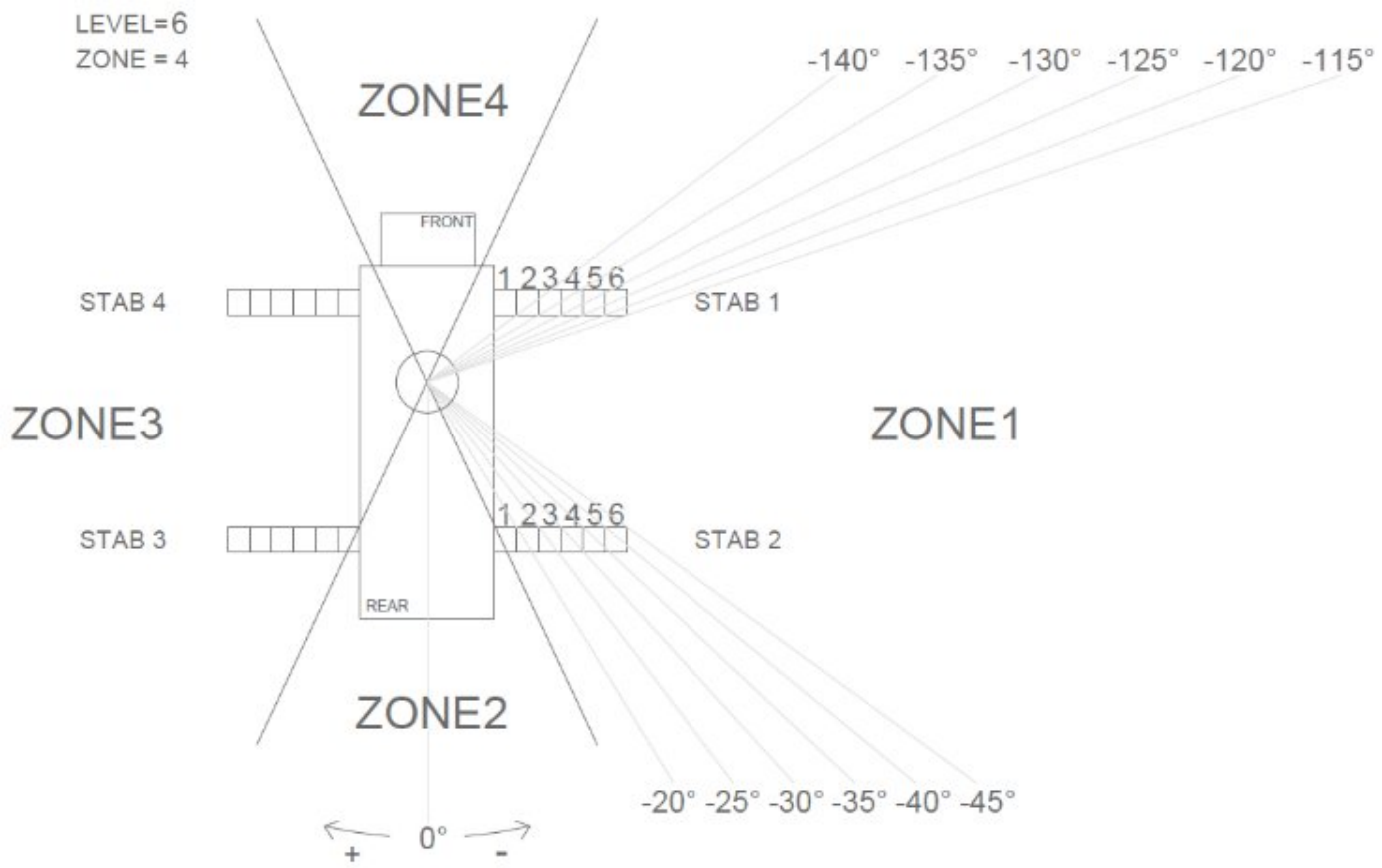


Condition 4



Dynamic lateral tables follow cage load and outrigger position. Each of the 10 geometric tables has a second limit (cage radius limit).

Zoning example



4 swing zones

Four zones around the turret, defined relative to the cab front.

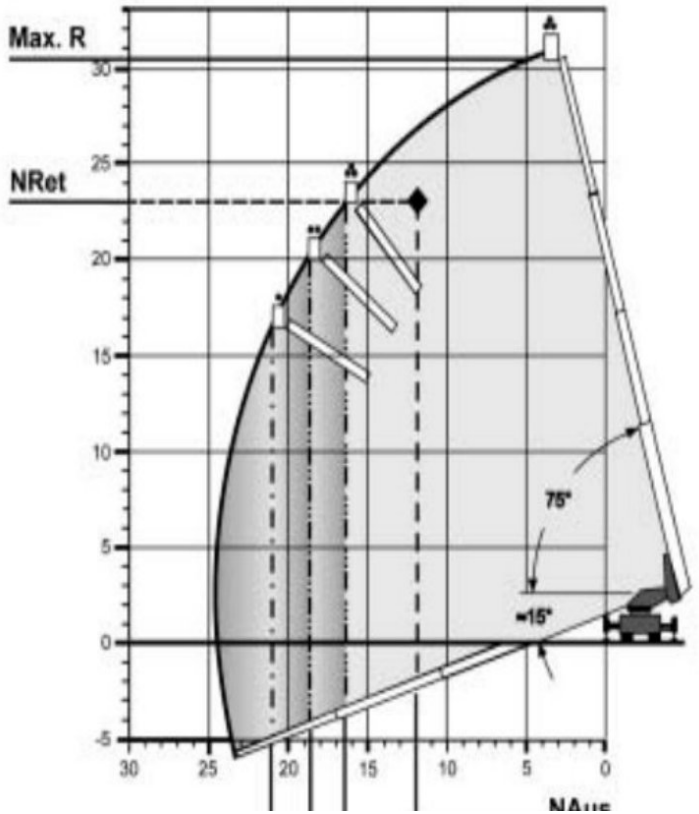
Outrigger based

Zone borders follow the position of the four outriggers.

6 levels

Each zone border moves in 6 steps with the outrigger spread.

Side view working conditions for LMI logic



100 KG					
Cage Load	Sector	Table Number	Main Boom	Fly radius	Total radius
Latteral	Outriggers %0	0	3600	3600	7200
	Outriggers %20	1	6400	3600	10000
	Outriggers %40	4	8100	6900	15000
	Outriggers %60	5	8100	9500	17600
	Outriggers %80	6	8100	12700	20800
	Outriggers %100	9	12650	13350	26000
Front	Outriggers %0	0	3600	3600	7200
	Outriggers %20	1	6400	3600	10000
	Outriggers %40	3	8100	4400	12500
	Outriggers %60	4	8100	6900	15000
	Outriggers %80	5	8100	9500	17600
	Outriggers %100	6	8100	12700	20800
Rear	Outriggers %0	0	3600	3600	7200
	Outriggers %20	1	6400	3600	10000
	Outriggers %40	2	8100	3800	11900
	Outriggers %60	3	8100	4400	12500
	Outriggers %80	4	8100	6900	15000
	Outriggers %100	5	8100	9500	17600

100 / 300 / 500 kg

The same table combination is used for 300 kg and 500 kg cage loads.

Example: 100 kg cage load, table numbers and radius limits for lateral, front and rear sectors

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Thank you

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