



DESIGNERS, MANUFACTURERS AND SUPPLIERS OF
AIRCRAFT GROUND SUPPORT EQUIPMENT

Motorised Passenger Stairs

'Eurostair'

**Middle Range (MR)
High Range (HR)**



Picture of Eurostair MR at Airport Nuremberg, Germany

CONTENT

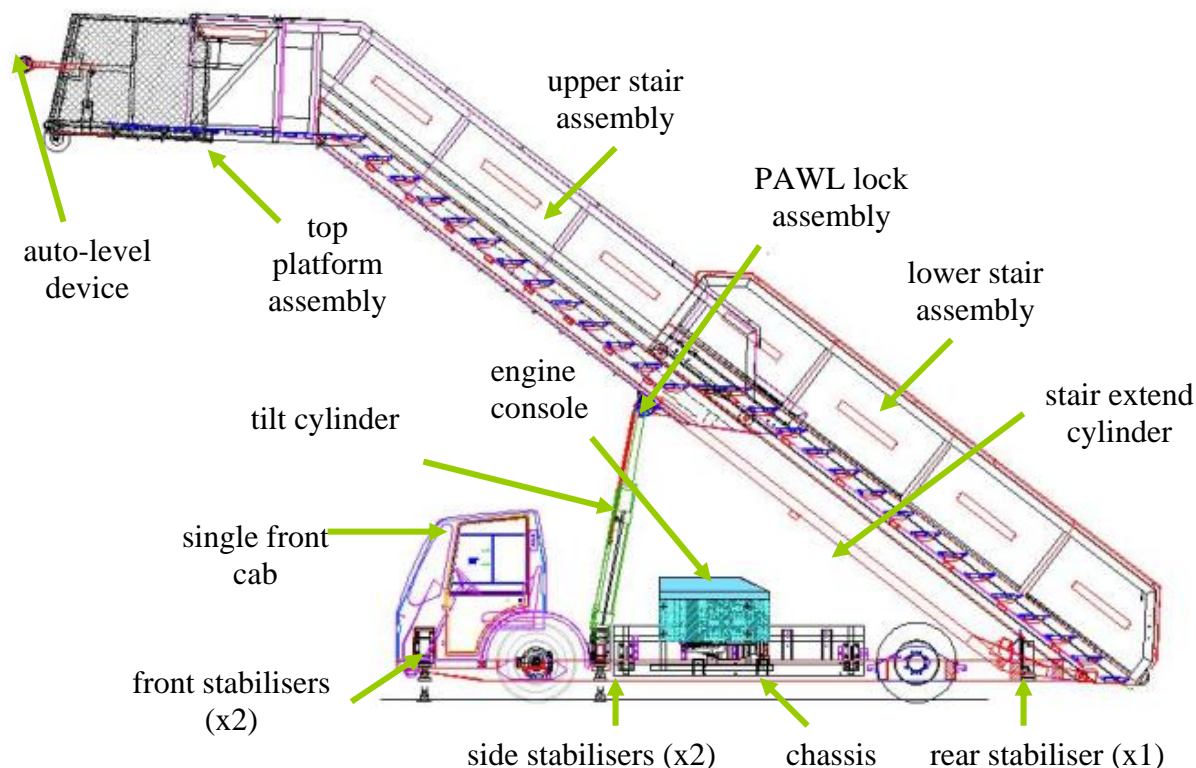
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1. Technical Specification

Specification Data		
Height Ranges		
Eurostair MR		From 1800 mm – 4200 mm
Eurostair HR		From 2200 mm – 5800 mm
Aircraft Types	For example	B727-737, B757, A319-A321,A340
Dimensions		
Length/Width/Height	MR	7088mm/2906mm/3233mm
	HR	8536mm/3180mm/3835mm
Wheelbase	MR	2800mm
	HR	3800mm
Inside Stair Width	MR/HR	Lower - 1500mm Upper – 1700mm
Standard Platform Width	MR	2900mm (outside)
	HR	3180mm (outside)
Step Riser Height	MR/HR	195mm
Step Riser Depth	MR	300mm
	HR	312mm
Platform Handrail Height	MR/HR	1100mm

2. General Specification & Chassis

Figure below: General Assembly Drawing of Eurostair 'HR' models



As Standard

- ✚ Purpose built and manufactured using structural steel sections to ensure long life during rugged airport operations
- ✚ Incorporates 'Deutz' diesel engine, drivers cab, stair section, 'Linde' hydrostatic drive system, and associated hydraulics

Suspension – Rigid

Maximum Speed – 25km/h

Ground Clearance – 160mm

Steering – Full Power

Electric voltage – 24Volts

Transmission – Automatic/Hydrostatic

As Options

- ✚ Fully enclosed all weather canopy with bellows
- ✚ Aluminum step profiles i.e. Alu Suisse 'Zingen'
- ✚ Stair lights with sensor and timer



Sample: Allu Suisse 'Zingen' profile

3. Drivers Cab

As Standard

- ✚ Suspension Seats
- ✚ Maximum visibility (All round vision)
- ✚ Conventional driver controls and lighting



Sample: Double Driver Cab

As Options

- ✚ Single or Double driver cab
- ✚ Enclosed or Open style
- ✚ Reversing Camera system



Standard driver controls

4. Top Platform



Eurostair MR with 3m wide platform (optional)



Sample: Platform Control Panel

As Standard

- ✚ Spring loaded platform with swivel type nose
- ✚ Swivel type nose allows for a misalignment of up to 10° on either side
- ✚ hydraulically operated tilting from control box sited on platform
- ✚ Rubber Bumper is fitted on the nose piece for aircraft protection
- ✚ Floor surface has aluminum non-slip chequer plate covering
- ✚ Sliding handrails on both sides of platform; manually extendable and 1100mm high

As Options

- ✚ 3 meter wide platform
- ✚ Automatic Platform leveling system including Safety Shoe
- ✚ Hydraulic Platform Extension

5. Canopy (Optional)



Fully enclosed all weather canopy

As Standard

- ✚ The stair can be fitted with a fully covered canopy with aluminum framed polycarbonate sheets
- ✚ The polycarbonate sheets are shatter proof and UV protected
- ✚ Full size accordion bellows colour the aircraft and give complete weather protection to the passenger

6. Auto-Levelling System (Optional)

As Standard

- ✚ The stair can be fitted with Mallaghan's advanced Auto Levelling System which consists of the following components:

- 1) Levelling wheel
- 2) Control System with functional display
- 3) Tensa Barrier for activation purposes
- 4) Safety Shoe



1. Auto Levelling wheel



2. Installed Auto Levelling Function Display



3. Safety Shoe as integral part of the Mallaghan System

7. Stability and Safety of Stairs



- ✚ 4 hydraulically operated stabilizers incorporating Dual Pilot Operated Check Valves
- ✚ A safety interlock is provided to prevent movement of the vehicle while the stabilizers are extended
- ✚ Electrical as well as manual Emergency Hand pumps are provided for operation of all services in case of system failure
- ✚ The vehicle can be used in its highest position at wind speed of up to 40knots / 74km/h

8. Mallaghan Standard Services

PAINT FINISH

All fabricated items will be shot blasted, and treated against rust with long life primer
 All the equipment will receive Two (2) coats of undercoat Paint
 The equipment will receive Two (2) coats of finish Paint to the customer's specification as advised.

TESTS

Mallaghan Engineering Limited will carry out full functional tests prior to dispatch.

INSPECTIONS

Pre-delivery tests and inspections can be arranged between the customer and Mallaghan Engineering Limited.

MANUALS

Supplied with the unit will be 2 sets of manuals (Language: English/Destination Language) to include the following;

- 1) Operation 2) Maintenance 3) Electrical Circuits 4) Hydraulic Circuits 5) Chassis Manual

SPARE PARTS

Mallaghan guarantee to supply spare parts for a minimum period of 15 year.

Owen McKenna

Mr. Owen Mc Kenna
Export Sales Manager
Mallaghan Engineering Ltd

Appendix 1

Safety Features

Special attention will be paid to the safety aspects of this machine:

1. Pressure relief valves are fitted to all hydraulic circuits.
2. Safety 'check valves' are installed at the ports of the twin hydraulic lift cylinders and stabilizers.
3. Vehicle will not drive until stabilizers are fully retracted. **(Interlock)**
4. Reversing lights are fitted.
5. Intermittent sounding horn when in reverse mode.
6. Intermittent sounding horn when stabilizers are extended.
7. Flashing Amber beacon fitted to the highest point of the vehicle.
8. Emergency stop buttons 2 no (red mushroom type) fitted in 1) operators cabin control console and on 2) platform control panel.
9. Emergency stair lower/stabilizer raise/brake deactivation capability in case of mechanical or electrical failure.
10. Electrical and manual 'Emergency Hand pumps' in case of system failure.
11. Front and rear Tow Hooks.
12. Control panels are fully sealed and protected.
13. Mechanical lock for stair extension at each step.
14. Full cushioning bumper protection around platform.
15. Starting is disabled unless gear change is in 'neutral position'.
16. Warning lights to indicate all necessary functions.
17. Pictographs used where possible and all replenishment points clearly marked.
18. Hazard points all marked with suitable warnings.
19. Reversing Camera **(Option)**