

Aircraft Mover AM210-(W)



	AVRO	F70/100	B737	DC9	MD80	B717	A319	A32x	B727	B757	A300	A310	B767	L1011	A330	A340	DC10	MD11	B777	B747	
AM210-(W)																					
Push Back			●	●	●	●	●	●	●	●	●	●	●		●	●				●	
Maintenance			●	●	●	●	●	●	●	●	●	●	●		●	●				●	

Length:	7 945 mm	313.0 in
Height:	1 650 mm	65.0 in
Width:	3 790 mm	149.2 in
Dead weight approx.:	11 700 kg	25,794 lbs
Turning Radius	9 500 mm	397.6 in
Drive Line:	Hydrostatic, 4-wheel drive	
Engine Output:	108 kW	146 hp
Speed:	30 km/h	19 mph
Nose Gear Load, max.:	280 kN / 28 t	62,950 lbf
AMOPIS: <u>A</u>ircraft <u>M</u>over <u>O</u>versteer <u>P</u>rotection and <u>I</u>ndication <u>S</u>ystem according to JAA, as option		

GHH Aircraft Mover

AM 210-(W)

(Towbarless Aircraft Towing Tractor)

Technical Information

(VA/210-003081_20001201)

Aircraft Mover

General

The GHH Aircraft Mover AM210-(W) is designed for a different aircraft towing operations such as push back and positioning of aircraft as well as maintenance towing up to maximum speed depending of aircraft weight. The AM210-(W) is capable to push, pull and tow the following types of aircraft:

Airbus	A300, A310, A319/320/321, A330/340 [#]
Boeing	B717 [#] , B727, B737 [#] , B757 [#] , B767 [#] , B777 [#]
McDonnell Douglas	DC8, DC9/MD80
[#] AMOPIS	Oversteer Protection and Indication System is required for B717, B737-600/700/800, B757-300, B767-400, B777 and A330/340

Technical Data

◦ Speeds and Forces

Tractive force, 3 (three) settings	45 / 70 / 100 kN
Brake forces, 3 (three) settings	40 / 65 / 120 KN
Anti Slip Control	ASC is standard
Speeds, push back	up to 8 km/h
maintenance tow	up to 28 km/h
unladen, max.	30 km/h

◦ Dimensions

Weight, empty	11,700 kg
Length	7,945 mm
Width	3,790 mm
Height, above cabin	1,650 mm
Ground clearance	125 mm
Wheel base	4,500 mm
Track front axle	2,640 mm
rear axle	3,400 mm
Turning radii, inner	3,600 mm
outer	9,500 mm
Max. NLG weight	28 tons

Aircraft Mover

- **Engine**

Type	CAT 3056 DIT Diesel engine, water-cooled and turbocharged
Make	CATERPILLAR (Perkins)
Power rating	108 kW / 2,400 rpm
Torque	520 Nm / 1,500 rpm

- **Drive**

Hydrostatic 4-wheel drive	via hydraulic pumps flange connected to distribution gear box.
Rear axle	Hydraulic drive motors positioned in the rear wheel housings, rigid mounted to vehicle's frame
Front axle	Hydraulic drive motor flange connected to the front drive-steering axle.

- **Axles and Suspension**

Front axle	Kessler drive-steering axle
Rear axle	Wheel-end drives with hydraulic motors, rigid mounted to the frame
Suspension	Hydraulic-pneumatic suspended front axle via two vertical mounted cylinders; suspension stroke ± 70 mm

- **Tyres**

Front	285/70 R 19.5
Rear	385/65 R 22.5

- **Steering System**

Power assisted hydraulic steering on front axle with emergency mode. Front axle steering with a maximum steering angle of 60°.

- **Braking System**

Service brake	- Hydraulic brake system - 2 circuit, wet disk brake (LCB) acting on front axle. Additionally hydrostatic retarding effect of driving hydraulic.
Parking brake	- Spring applied, acting on rear axle

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- **Electrical System**

Voltage	24 V
Generator	55 A
Battery	12 V each / 2 units
Capacity	88 Ah each

- **Tank Capacity**

Fuel	approx. 250 l
Hydraulic oil	157 l

- **Cabin**

Fully enclosed and sound isolated steel structure with two wide opening doors. Sliding windows at each door.

Cabin mounted via two (2) spring supported shock absorbers on vehicles chassis frame. This cabin suspension system is adjustable on customers demand individually.

Driver's compartment mounted on a rotating platform in vehicle's centre-line, for bi-directional operation. Complete driver dashboard with all instruments is rotating via electrical drive motor. All logic functions (e.g. steering, turn indicator, lights) will be switched with the driving direction automatically.

Fully air suspended/cushioned driver seat.

Ergonomically arranged operation and control instruments.

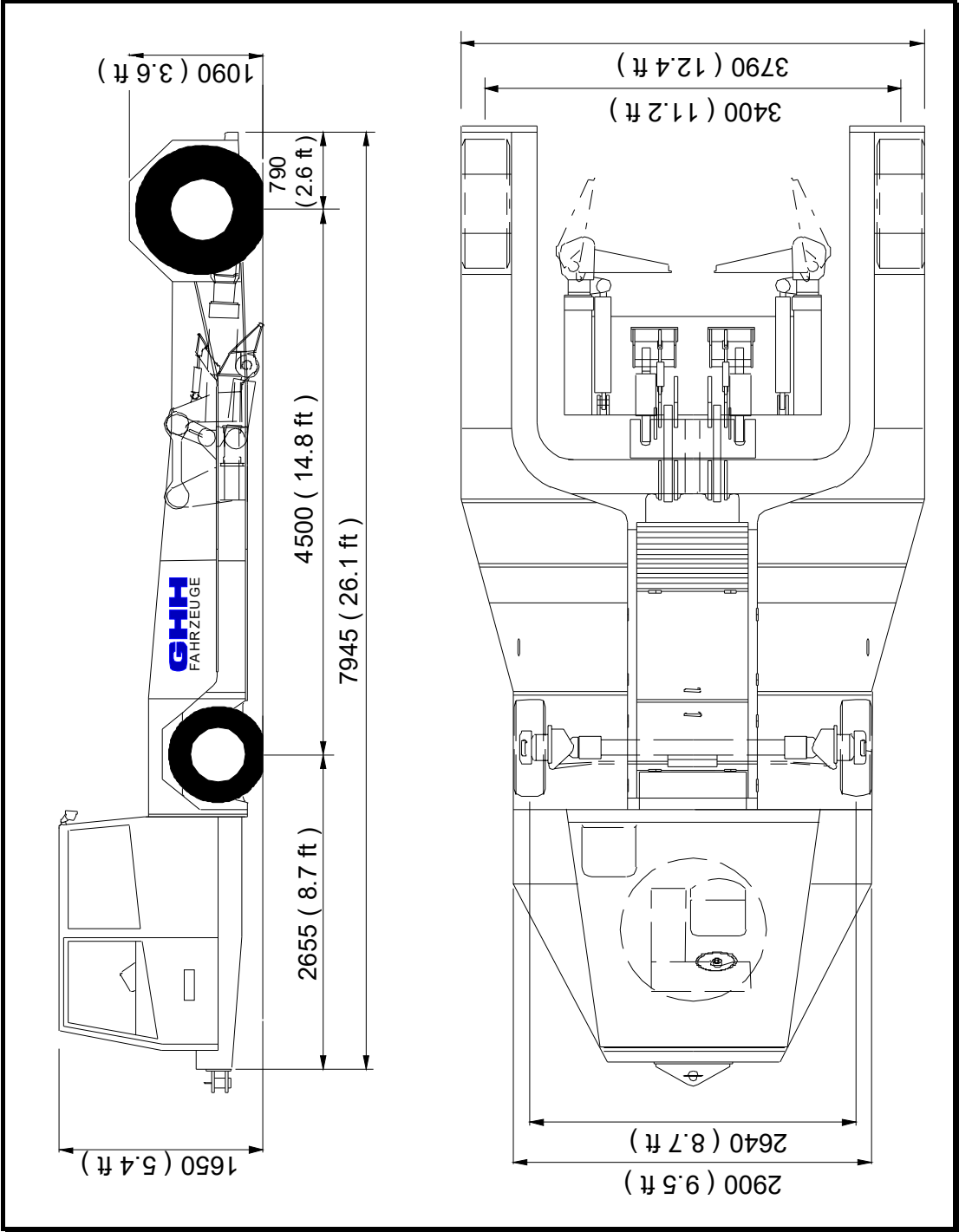
Technical Description

The AM210-(W) is equipped with a CAT 6-cylinder in-line diesel engine, water-cooled and turbocharged. The hydrostatic drive combined with the anti-slip control ensures optimum driving at all conditions. Travelling speed forward and reverse is hydrostatically infinitely variable. Tractive and braking force settings are in accordance with the different types of automatically selected aircraft.

The pick-up system mainly consists of a swivel-lifting-ramp with fixed mounted telescopes, swivelling gripping arms with mechanically / hydraulically locking devices and two bars (down holders), holding the nose wheels in position. The swivel-lifting-ramp oscillates within the vehicles frame.

Aircraft Mover

AM 210 - (W)



Subject to revision without notice !

Aircraft Mover

Standard AM210-(W)

Cabin:

- fully glazed driver's cabin
- cabin mounted to the chassis frame via two (2) shock absorbers with spring, adjustable individually on customer's demand
- 2 (two) doors with sliding windows
- door arrester, mechanical
- storage option in the cabin doors
- dual stage heat blower with heat changer, 2 (two) each front/ rear
- 2 (two) sun protection shields
- sun roof
- 2 (two) rear view mirrors inside
- 2 (two) outer mirrors
- air cushioned driver seat
- co- driver seat
- windscreen wiper
 - 2 (two) wipers front side
 - 2 (two) wipers rear side
 - wiper and washer system reserve, mounted outside
 - 2 (two) speeds for wiper
 - interval for wipers, front/ rear with separate switch
- turntable dashboard, rotating
- cabin light inside
- lightning dashboard

operating:

- lever for Aircraft pick up and release
- switch for parking brake, electric
- emergency stop for driving hydraulic
- switch for driving, forward/ reverse
- pitman switch:
 - high beam
 - flash of headlights
 - turn indicator right/ left
 - horn
- ignition:
 - switch on electrical power
 - parking light mode
 - preheating diesel engine
 - start/ stop diesel engine
- power up switch for MD DC8
- power up switch for heavy Aircraft
- switch for working lights
- switch for turning dashboard
- switch; dashboard turning

indication:

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- Multi- Function- Modul "MFA10":
 - revolution diesel engine
 - oil pressure in "bar"
 - cooling- water temperatures in °C
 - operating hours counter
 - battery power in "volt"
 - clock
 - speedometer
 - fuel reserve
 - indicator total drive distance
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- service brake pressure via 2 (two) manometer

warning:

- speed > 30 km/h, visual
- diesel reserve < 38 litre, visual
- cooling- water temperature > 98°C, visual and audio
- battery power < 22 volt, visual
- oil pressure < 0,8 bar, visual and audio

control and warning:

- battery charge indicator
- pump charge pressure of driving hydraulic
- suctionfilter indicator, hydraulic
- brake pressure indicator
- **A**nti- **S**lip- **C**ontrol for optimum traction
- warning of wrong/defect aircraft pick up
- Electrical- gas indicator
- signal lamp high beam
- signal lamp direction
- signal lamp parking brace
- signal lamp "platform not lifted"
- signal lamp "platform lifted"
- signal lamp "driving hydraulic control"
- signal lamp "preheating diesel engine"

lightning:

Automatic light changing according to driving direction

- passing light rear, 2 (two) headlamps
- passing light front, 4 (four) headlamps
- turning indicator front/ rear
- high beam front/ rear
- position lights front/ rear
- position lights at side
- brake lights front/ rear
- rear lights front/ rear
- 2 (two) working lights, mounted at cabins rear side

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- **Special equipment and accessories included**
 - Higher cabin (200mm)
 - Cabin suspension with adjustable spring/shock absorbers
 - rest pedal for left driver foot
 - tinted windows , green
 - heated windows (front-, side- and rear window)
 - heated door- windows (sliding windows)
 - electrical adjustable and heated outer mirrors
 - electric generator A 80 (at window heater installation or additional consumer)
 - **HELLA** Strobe- Light- System (Anti collision)
 - 2 (two) rotating beacon, mounted on driver cabin
 - external power supply connection 24 V, stand by SABENA/TCR
 - battery main switch, stand by SABENA/TCR
 - cooling- water level control with “Re- start blocking” and signal lamp
 - engine oil level control with “Re- start blocking” and signal lamp
 - hydraulic oil level indicator via signal lamp
 - separate flap for diesel engine oil dipstick
 - AMOPIS-System (Oversteer System) for B717, B737, A330/340, B757, B767
 - Fire extinguisher holders, stand by SABENA/TCR
 - Storage for 2 Aircraft brake blocks
 - Steering PIN storage rear left
 - tow- bar coupling rear, left/right each
 - towbar for emergency case, steel made, mounted on front wheel house
 - 2 (two) additional working lights for the pick up area (platform)
 - Switch for emergency stop
 - Diesel prefilter system, stand by TCR/SABENA
 - Quit-switch for pick up procedure
 - Protection of lightning system, steel made