

# AutoMoor Gen2



## KEY BENEFITS

- Enhances the continuity of product transfer operations through the reduction of vessel motions caused by long period waves, inclement weather, and the effects of passing vessels.
- Optimizes vessel turnaround time and increases port throughput through rapid and secure mooring within 30 seconds during arrival, and releasing in under 15 seconds upon departure.
- Ultra-low power usage via innovative hybrid energy harvesting system that switches between passive and active damping modes for normal and extreme vessel motion events, whilst harvesting energy back to the power grid.
- Enables emissions reductions from vessels and/or tugboats during arrival and departure.
- Improves port safety by eliminating the need for mooring ropes, thereby removing the risks associated with snapback and pinchpoints.
- Lowers operational costs by minimizing the necessary mooring crew during berthing operations.
- Eliminates wharf extension or mooring dolphin investments typically required to accommodate larger vessels.
- Safeguards and extends the lifespan of existing berth assets by limiting peak loads imposed on the structures.
- Intelligently adjusts pad positioning to allow for large changes in tide/draft level while keeping vessel securely moored.
- Actively monitors vessel position and damping force via real-time situational awareness using SmartPort technology.

AutoMoor revolutionizes the mooring process through rope-free vacuum mooring technology. Expands the window of port transfer operations by increasing berth efficiencies and reducing safety risks.



\*Actual unit may differ

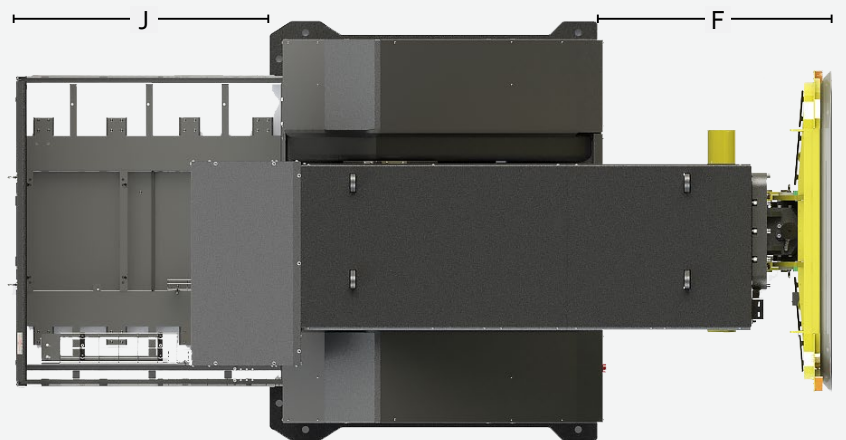
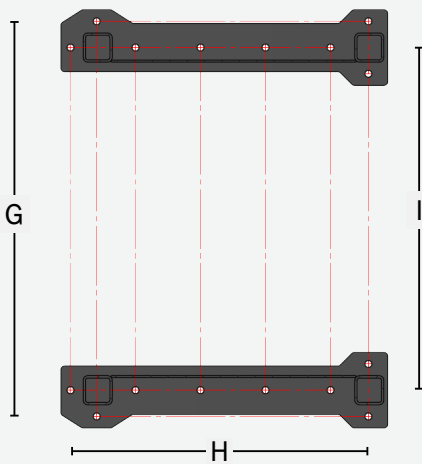
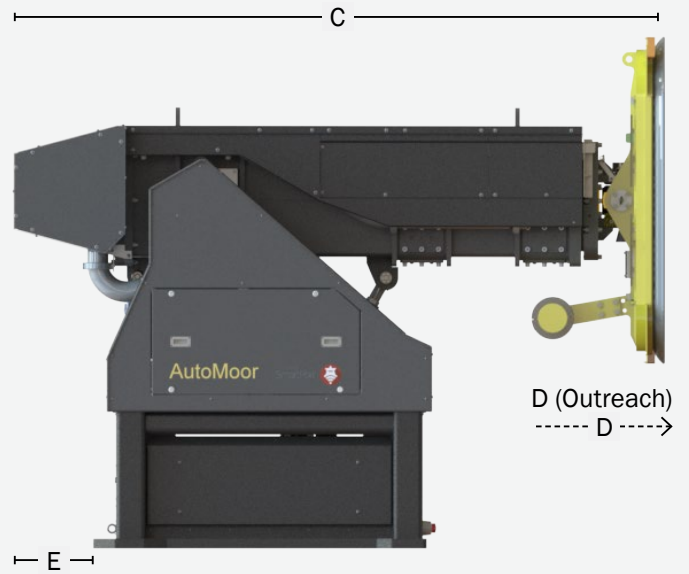
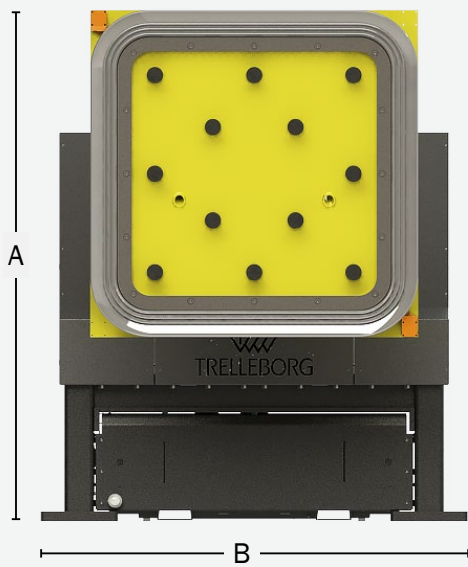
Powered By  
SmartPort®



## AUTOMOOR | DETAILS & SPECIFICATIONS

MODEL (mm)	A	B	C	D	E	F
AM-T20-01	2585	2155	3290	1400	410	1205

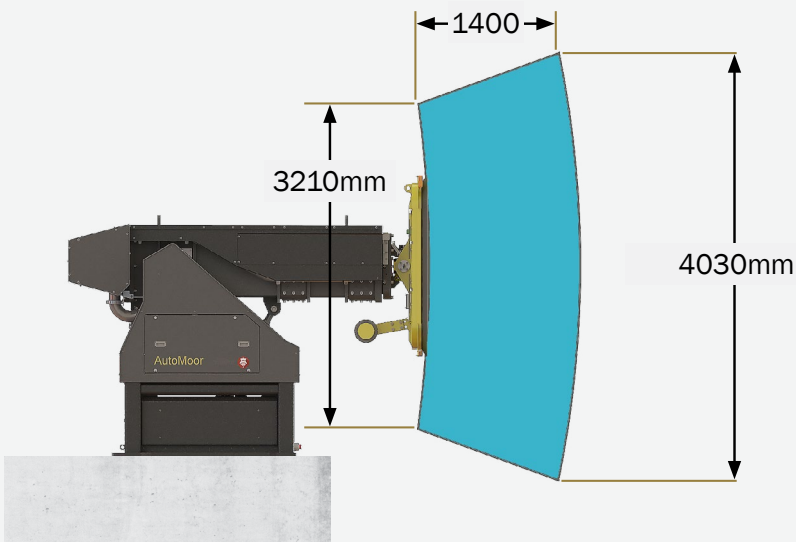
BOLT LAYOUT DIMENSIONS (mm)			SERVICES TRAY	ANCHOR BOLT SIZE (mm)	ANCHOR BOLT QTY	SHIPPING MASS (kg)
G	H	I	J			
2035	1535	1765	1295	M33 x 430 (min)	16	8450



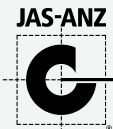
## TECHNICAL SPECIFICATIONS

1 OPERATING PARAMETERS & STRUCTURAL DETAILS		
1.1	Outward Range of Movement (Sway)	1400mm
1.2	Horizontal Range of Movement (Surge)	From -125mm to +125mm passive damping
1.3	Vertical Range of Movement (Heave)	+/-20° or +/-1190 mm at full arm extension**
1.4	Maximum Vacuum Holding Capacity	1 Vacuum Pad = 20T Sway 12T Surge (smaller pads available, POA)
1.5	Peak Power Consumption	Maximum of ~15kW per unit as vessel arrives (2-3mins). Once vessel moored and AutoMoor in passive mode: <2kW. If vessel adjustment required, max. 5kW for <1min. Max. ~11kW as vessel departs (1 min). With no vessel moored: <0.5kW.
1.6	Temperature Range	Operating -20C to +50C
1.7	Foundation Types	Suitable for installation on concrete or steel foundations
1.8	Hold Down Bolts (Anchors) Supplied with unit as standard	M33 x 430mm ISO898-1:2013 (E), Property Class 8.8 Finish: Hot-dip galvanizing (HDG) to ISO10684: 2004 (E)
1.9	Anchor Template	One mild steel template supplied per jetty
1.10	Fasteners	Where possible all fasteners used in the assembly of AutoMoor units are A4-80 stainless steel. Non-stainless steel fasteners are high strength Property Class 8.8 or 10.9 alloy steel, HDG for long-term corrosion protection.
1.11	Primary Fabrication Material	Low alloy steel grade Q355D to GB/T1591-2018 equivalent to ASTM A572 grade 50.

### VACUUM PAD ATTACHMENT AREA (mm)



\*\* Allow +/-5 degrees tolerance for vessel motion in application design.



2 SYSTEM		
2.1	Power Supply Type	3-Phase (with neutral and earth): 380 to 415 VAC @ 50 Hz or 440 to 480 VAC @ 60 Hz
2.2	AutoMoor Control	Mooring control from AutoMoor tablet or control panel at mooring unit. Remote control via user interface on workstation device (optional upgrade).
2.3	Control System & Reporting	Logging and reporting of mooring sessions via user interface. Audible and visual alarms at unit and user interfaces. Tablet connection to AutoMoor via cellular internet connection. All internet, data services and subscriptions by others.
2.4	SmartPort Enabled	Data logging & reporting: Multiple reporting levels available.
3 QUALITY & TESTING		
3.1	Welding & NDT	AWS D1.1
3.2	Testing	Each unit is individually load tested using a specially designed test rig. Each unit is functional control system tested and series tested for multiple unit orders. AutoMoor units are commissioned once installed onsite to verify factory testing and system performance requirements.
4 PROTECTIVE COATING		
4.1	Surface Treatment	Surface Preparation – Class 2.5 Blast (1). 1st Coat: Nominal 75µm DFT epoxy zinc-rich primer. 2nd Coat: Nominal 200µm DFT two-part epoxy, containing MIO. 3rd Coat: Nominal 50µm re-coatable two-part polyurethane. Colour scheme as shown in datasheet.
5 OPTIONAL SYSTEM UPGRADES (AVAILABLE AT ADDITIONAL COST)		
5.1	Vessel Warping System	AutoMoor units to reposition a vessel along a berth +/- 400mm in surge direction.
5.2	Hazardous Version	Electrical control system and motor upgrades to suit hazardous area operation.
5.3	Class Design Approval	Independent third-party inspection & certification.
5.4	Control System	Central monitoring system upgrades for redundant servers, separate data server, work stations, tablets.

#### GET IN TOUCH

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