Sustainable
Safe
Cost-efficient
AutoMooring Solutions (AMS) is a spin-off of Mampaey Offshore Industries. AMS is a technology driven, independent AutoMooring specialist and provides top notch mooring solutions all over the world. We aim to continuously incorporate the latest innovations and improve our systems' ease of use. Years of maritime experience and an established engineering team guarantee the quality of our products.

Conventional Mooring: a high-risk operation
Mooring lines are inherently dangerous. The loads they support and the risk of entanglement are constant hazards. Changes in wind, tides and currents can affect the ship’s movement, making mooring a high-risk operation. Lines may break under too much strain, snap back wildly and potentially cause serious injury.

Modular systems, designed to operate under extreme weather conditions
AMS's modular solutions ensure a safe, sustainable and efficient mooring process and reduce shipborne emissions. We aim to make mooring an operation that can be performed in nearly all weathers and controlled from the wheelhouse. Our modular systems are designed for 30 years of operation under extreme weather conditions with only limited maintenance.

Autonomous mooring
Our systems can be managed from the comfort of a bridge or shore and are suitable for SEMI and FULL Autonomous mooring. They are modular, with a reach that accommodates nearly any mooring situation.
AMS Rope Picker Robot (AMS RPR)

Our AMS Rope Picker Robot is a state-of-the-art, industry 4.0 ready robot arm, with a reach of up to 15 meters over height differences of up to 8 meters. This arm will recognize any bollards mounted on the ship or quayside using Artificial Intelligence (AI) software. It can be operated from a (mobile) tablet or bridge display. The RPR will move into action when the mooring command is given, automatically placing the mooring rope's eye over your chosen bollard. A built-in RPR mooring winch makes it possible to control the mooring process from the comfort and safety of the wheelhouse. The RPR makes mooring safer and easier, avoids the need to be on deck in bad weather or climb onto the quayside. It also keeps people out of the snap back zone during mooring.

Self-learning system

If the system fails to recognize a bollard, this bollard is easily added and confirmed by the operator. Next time, the arm will recognize the bollard and identify it as a mooring point, using a stereo camera to calculate the exact distance to the bollard.
StS 4

One of the major challenges in Ship-to-Ship (StS) operations is the actual mooring operation. AMS reduces mooring hazards with our AMS 4.0 modular automooring system. This system has a hydraulic telescopic arm and (patent pending) surge force control system. It is suitable for 'Yokohama' type fenders with diameters from 1.5 to 4.0 meters and differences in motion of up to 3.5 meters between vessels. Thanks to special vacuum mooring pads, it can control mooring forces up to 1,000 kN per tandem mooring arm. For higher mooring forces, a specially designed system is available that uses hybrid mooring pads, each pad containing both a vacuum pad and a permanent magnet.

Shift mooring pads both horizontally and vertically

Another unique feature is the ability to shift mooring pads either horizontally or vertically while moored by 'stepping' the pads. This makes it possible to adjust the mooring position after attachment. In extreme conditions or for greater safety, the AMS mooring system can also be combined with conventional mooring ropes. Once the AMS system is attached, additional conventional ropes may be safely added, allowing for a fully controlled operation.

StS 8

The AMS 8 is presently under development and is partially based on the same technology as the AMS 4. This innovative system has built-in hydraulic dampening and is designed to enable mooring of vessels without need for fenders. It gently attaches mooring pads to a receiving vessel, dampening motion differences and surge and sway forces through the use of hydraulics. This dampening is dependent on the displacement speed and forces on the mooring pad. The StS 8 XXL has a maximum reach of up to 8 meters, for when larger distances between StS vessels are required.

The system is modular and suitable for mounting to the side of a ship with a Hydraulic Power Unit (HPU) either below or on deck. Custom-made arms can deal with surge, sway and heave forces and hold ships together with vacuum, magnetic or hybrid pads.

AMS StS mooring systems make bunkering and ship-to-ship mooring operations efficient, sustainable, and safe. Breakthrough innovations and technology make mooring both low-risk and efficient.