

HEAVE COMPENSATION & CONSTANT TENSION

Holding the load steady while the vessel moves.

Active and passive motion control, constant tension and overload protection — engineered as one system. New-build or retrofit, hydraulic or electric.

THE PRINCIPLE

A drill string, a basket being landed, an AUV coming out of the water, a structure pulled off the seabed — the control problem is the same. Hold the **force**, hold the **position**, or control how weight transfers between the two.

CONTROLS FORCE

CT

Constant tension

Held by the pressure differential across the winch motor. Robust and reliable, with no electronics in the control loop — well suited to wire rope and heavy lifts.

PHC

Passive heave compensation

A gas spring in the load path. No external power and no control loop — inherently fail-safe, and the load sees a far steadier force than the deck does.

CONTROLS POSITION

AHC

Active heave compensation

MRU-referenced. Drives the winch or cylinder against the heave to hold a suspended load at constant depth or position.

OUR OWN TECHNOLOGY

ACT — LIGHT LOADS

Active constant tension

Closed loop on load measured at the sheave — not motor pressure or torque. That resolves and holds the very low tensions umbilicals, hoses and cables need, on hydraulic or electric winches.

THE BRIDGE — PASSIVE + ACTIVE

AHA · AWOB

Active heave assist

The two combined: an active layer added on top of a working passive system rather than replacing it — the fail-safe gas spring, plus MRU-referenced control. AWOB then adds weight transfer: the operator sets a target load and rate for soft landings, controlled release onto a structure or the seabed, and controlled break-out. Reverts to pure passive at 0 %.

OLPS™ — OVER ALL OF IT

Overload protection, two independent layers. Sustained overload monitors line load and pays out automatically when the limit is exceeded; hydraulic shock-load protection relieves snatch peaks and re-sets itself. New-build or retrofit.



ACTIVE HEAVE ASSIST CONTROL SYSTEM INTERFACE



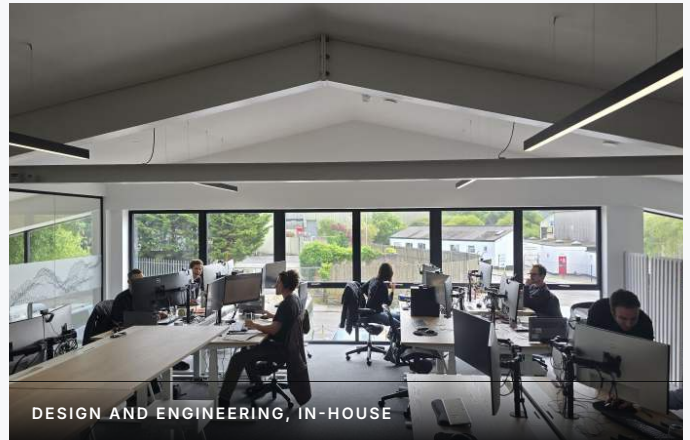
ASSEMBLY, INTEGRATION AND COMMISSIONING

Where the same control discipline is applied.

One motion-control platform across the deck spread — compensation, constant tension and overload protection specified together rather than bolted on afterwards.



OUR FACILITY IN PENRYN



DESIGN AND ENGINEERING, IN-HOUSE

01

Line tensioners

Self-contained passive compensators, reeved inline or at the dead end, single or multiple fall — with load-loss, overload relief, tension-set and lock-off built in.

02

Winches

The full control range on hydraulic and electric winches, with the offshore interlocks: auto pay-out, slack-line, over-tension, over-wind and fail-safe braking.

03

Drilling systems

Controlled advance and controlled weight transfer, where a passive system alone leaves enough residual error to disturb a core in soft or layered ground.

04

Deployment

Launch, recovery and over-boarding — holding the load steady through the splash zone, the most damaging part of any deployment.

05

Subsea landing & recovery

Soft landing of baskets, frames and structures, and controlled break-out when pulling something heavy off the bottom.

06

Umbilical & hose tensioning

Constant-tension reeling through changing drum diameter and vessel motion, with bend-radius protection and guided routing over the side.

RETROFIT

Fitted to the equipment you already own.

Most of this range retrofits as readily as it integrates into a new build — AHA converts an existing passive system on the existing HPU power, in roughly a three-day installation.

- Constant-tension and compensation control added to existing winches
- OLPS fitted to winches, draw-works and line tensioners already in service
- Instrumented sheaves and load pins built into an existing reeving
- Upgrade and repair of bought-in compensators that don't perform
- Performance verification before deeper water or heavier payloads

ACTUATION & POWER

Whatever moves the load, we can control it.

Compensation is applied through whichever actuator the spread already has — circuit, control system and structural interface engineered together, and verified before it goes offshore.

- **Winch** — drum paid in and out against the heave
- **Cylinder** — line tensioner, inline compensator or crane boom
- **Hydraulic or electric** — HPUs and manifolds in-house, or electric drives
- **Energy recovery** — energy captured on pay-out and returned, cutting installed power
- **Single-party accountability** — design to commissioning, from our facility in Penryn

Tell us the duty — we'll tell you which system fits.

Specifications are set to the actuator, the load and the sea states. Send us the operation and we will size and configure the package around it.

MintMech Ltd

Kernick Industrial Estate, Penryn, Cornwall TR10 9EP

+44 1326 369469 · hello@mintmech.com · mintmech.com