

FIXED AND FLOATING WIND PRODUCT SOLUTIONS

Benefitting from extensive and unrivalled global experience in the offshore energy sector, Balmoral provides a comprehensive range of mooring solutions and cable accessories to the floating and fixed wind markets supported by in-house technical, engineering, manufacturing and testing services.

- Distributed buoyancy modules
- In-line mooring buoys
- Balmoral FIBREFLEX® cable protection system (CPS)
- Midwater arches
- Mooring buoyancy
- Balmoral T-CLAMP® hold back/tether clamps
- Ballast modules
- Bend stiffeners and connectors
- Hydrostatic and mechanical test services
- PU/composite bellmouths
- Balmoral DURAGUARD® touchdown protection
- Bend restrictors
- Crossover solutions
- Surface/subsurface buoyancy

balmoraloffshore.com/renewables



BALMORAL

INTEGRATED, RELIABLE BUOYANCY AND PROTECTION SOLUTIONS FOR FIXED AND FLOATING WIND

PU / composite bellmouths

Integrated cable protection
system with stability modules

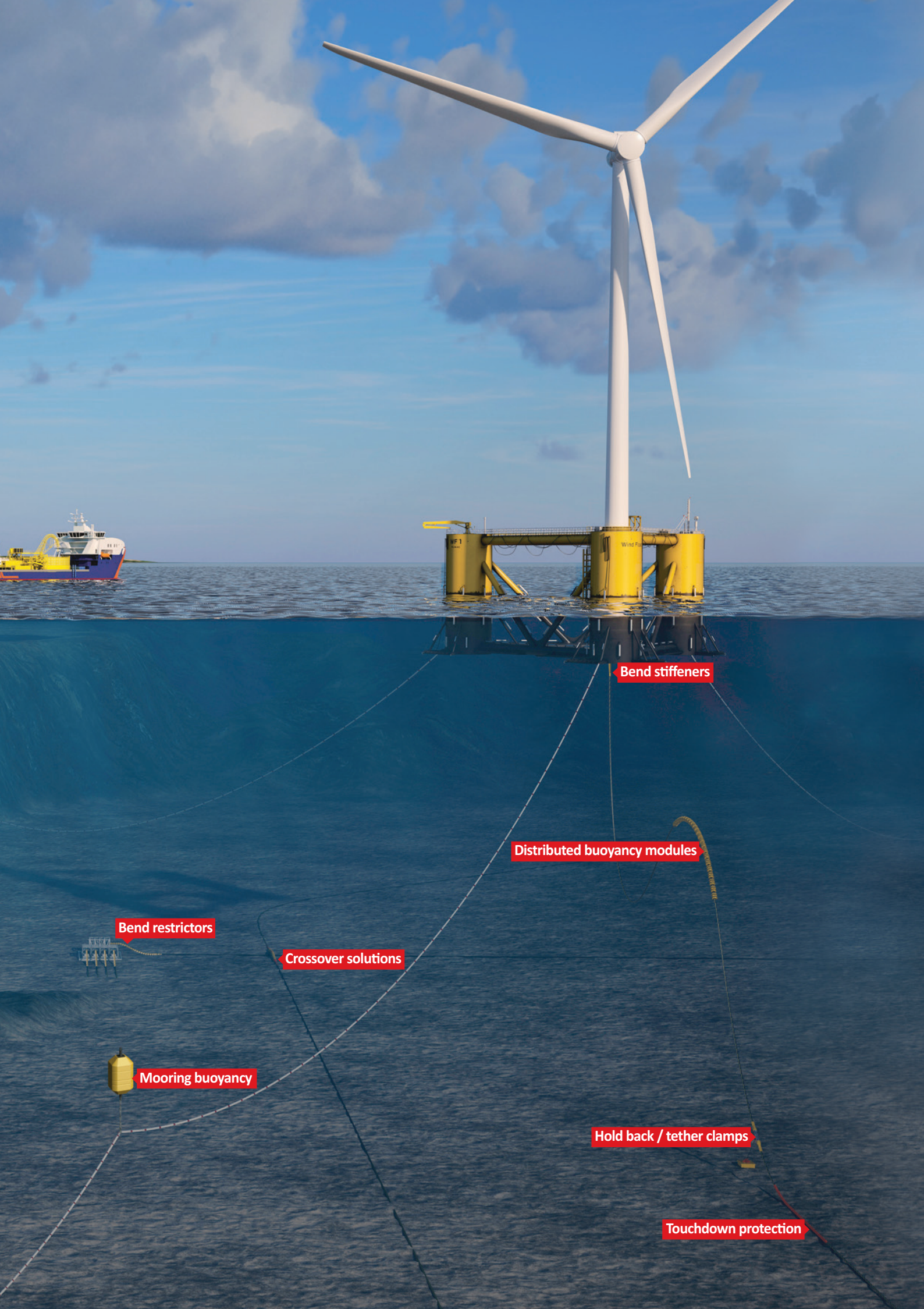
Subsurface buoyancy

Supporting solutions

- Composite covers
- Composites solutions for wave energy generators
- Composites solutions for tidal energy generators
- Subsea cable analysis (fatigue, thermal and more)
- Hydrostatic and mechanical test services

Scan for more information





Bend stiffeners

Distributed buoyancy modules

Bend restrictors

Crossover solutions

Mooring buoyancy

Hold back / tether clamps

Touchdown protection

Floating wind solutions

Balmoral has, for over four decades, provided engineered buoyancy, protection and insulation product solutions for the harshest subsea environments in the world. The experience gained in consistently delivering the highest quality products has been transferred to offshore wind where the company's patented technologies are highly suited to floating offshore wind installations.

These products, which form the core of the business, are tried, tested and supported by an extensive track record and industry leading installation times, focusing on vessel deployment optimisation and total cost of ownership.

Fixed wind solutions

The company offers a range of cable protection systems (CPS) with a unique integrated stability option for fixed offshore wind inter array and export cables. Balmoral's patented **FIBREFLEX®** CPS solution predominantly comprises standard dynamic units (SDU's) specifically designed for the active environment within the dynamic section of the cable installation. Solutions are provided for varying monopile apertures as well as J-tube and I-tube options for jacket structures.

Balmoral Subsea Test Centre

Hydrostatic testing

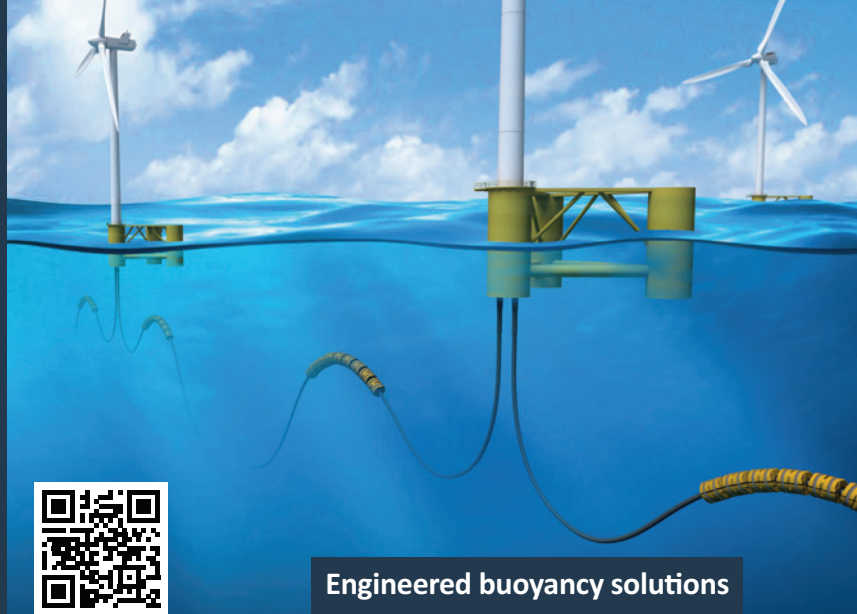
The Balmoral Subsea Test Centre offers 23 test vessels most of which allow tests to be monitored remotely.

Ranging from 1010mm (3'3") to 10,400mm (35'6") in length, with internal diameters of 360mm (14") to 2500mm (98") and pressures to 700bar, allowing us to perform testing to ensure subsea components are qualified for use in deepwater environments reaching depths of 7000msw.

Test rig

A fully comprehensive test rig for offshore wind-related products comprises winches, tower, monopile and J-tube entry options designed to simulate subsea interfaces and varying installation parameters.

Routine testing includes bending and axial stiffness, load, curvature, axial, operational and safety performance.



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