

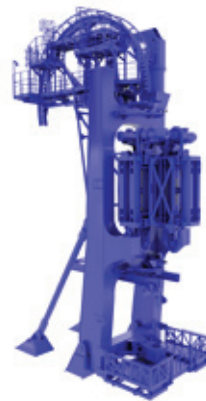
# Vertical Flex Lay Systems



## Your partner for a Lifetime of Lifting

Whatever your pipelay or cable lay requirements, NOV can provide the right solution for you. With many years of experience delivering large turnkey projects under the Remacut brand we have the engineering expertise and project management skills to ensure you get the right equipment on schedule and within budget. Our global support network ensures that you receive purpose built solutions you can rely on for the lifetime of your equipment.

Our Vertical Lay Systems (VLS) is part of the flex lay system range and are used for the installation of flexible flowlines, umbilicals and power cables. VLS units are commonly used in shallow to deep water where the outboard tension is greater than 50Te.



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## Vertical Flex Lay Systems

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The VLS is a simple and efficient method of deploying and recovering flexible flowlines, umbilicals, and power cables in a safe and environmentally friendly manner. The VLS is fixed in the vertical position by two struts and houses the tensioner(s) that support the product and control the lay tension and speed. The product is typically stored on the vessel in either a basket carousel, top hat carousel or on standard product reels accommodated in a Reel Drive System (RDS). The product is guided from its storage system around the deck via product guides/tables, up and over the radius controller (Aligner) at the top of the VLS, down through the tensioner(s), and then through the deployment bellmouth located on the work platform doors or the moonpool doors. The VLS is typically mounted over a moonpool or midships over the side of the vessel, however they can be positioned anywhere on the vessel to suit deck space or specific hard points.

A VLS can be supplied as a simple device housing only a tensioner and clamp or as a fully stand-alone system with tensioner, clamp, tower top crane, product centralizers, A&R system, gantry hoists and work platform with integrated strong points, and tugger winches.

### Key Features

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- Modular design to suit vessel of convenience with mob/demob in 24 to 48 hours
- Permanent installations for construction vessels
- Suitable for shallow or deep water operations
- Maximum product care (reduced product fatigue as bends are all under low tension)
- Suitable for single lift installation
- Regenerated power can be supplied back into the vessels power system or burned off through resistor banks
- Global aftermarket support

#### VLS components:

- Lay tower
- Radius controller (aligner)
- A&R sheave unit
- Tower crane
- Alignment roller box
- Tensioner(s)
- Gantry hoists
- Hang Off Clamp (HOC)
- Work platform & bellmouth
- A&R system and winch
- Power units
- Control cabin & control system

#### VLS associated equipment:

- Storage system (carousel, reel or RDS)
- Product deck guides/roller tables
- Compensator

