

The **Coiled Tubing Downline System** is designed for efficient deployment and retrieval of coiled tubing from multi-service vessels and offshore facilities. Featuring a compact footprint and full redundancy, this system comprises a matching pair of reel skids that can be operated simultaneously or independently. Each skid is equipped with an all-electric liquid-cooled drive system, planetary gearbox, and an internal spring applied, electric released, disk brake, ensuring precise control and reliable performance. The integrated level-wind sheave is adaptable to various tubing sizes.



### Applications

- Riserless Deepwater Intervention
- Subsea Pipeline Pre-commissioning
- Subsea Pipeline Decommissioning

### Benefits

- Compact footprint
- Minimized crew requirements
- Precise deployment/recovery speeds
- Energy efficient, no hydraulic system losses
- No emissions
- Low cost of shipping and operation
- High availability/uptime

### Features

- Single lift 'Plug & Play' system
- Twist lock frame-to-deck interface
- Intuitive joystick & handheld remote control
- Electronic pay out, tension and speed visualization
- D-rings for sea fastening

### Directives & Certifications

- DNVGL-ST-E273 2016 Offshore lifting
- Machinery directive 2006/42/EC
- Low voltage directive 2014/35/EU
- Electromagnetic compatibility 2014/30/EU

The system utilizes high-power inverters and permanent magnet motors, providing high torque and efficient operation. The integrated level-wind sheave has removable inserts to adapt to the tubing size, while a sheave-mounted encoder provides accurate digital measurement of the deployed pipe length. A level-wind mounted load pin delivers precise total weight measurements, and the software-assisted spooling feature ensures controlled coiled tubing deployment.

For ease of transport and installation, the skids feature a single-lift configuration, forklift pockets, and a twist lock interface with ISO corners.

The power supply can connect to the grid or a generator set and is capable of reduced power operation, operating on current capacities between 32 A and 180 A. The secondary supply connection is used for standstill heating and control.

Each reel operates independently with a local control panel, including a push buttons, switches, and a touch screen display for sensor visualization and system setup. Additionally, a handheld remote-control allows for flexible operation.

| Reel capacity                                                                                                                                  |  | Maximum length                                                      |         | Pipe weight           | Liquid weight |
|------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------|---------|-----------------------|---------------|
| 2-3/8" OD x 0.203" WT, QT800                                                                                                                   |  | 2400 m                                                              | 7874 ft | 16830 kg              | 5440 kg       |
| 2" OD x 0.203" WT, QT800                                                                                                                       |  | 2600 m                                                              | 8530 ft | 15090 kg              | 3960 kg       |
| Flow iron connection                                                                                                                           |  | Grayloc C25                                                         |         |                       |               |
| Medium                                                                                                                                         |  | Seawater                                                            |         |                       |               |
| Performance                                                                                                                                    |  |                                                                     |         |                       |               |
| Maximum pull force outer layer                                                                                                                 |  | 16000 kg                                                            |         | 35200 lb              |               |
| Maximum pull force inner layer                                                                                                                 |  | 20000 kg                                                            |         | 44000 lb              |               |
| Maximum rotational speed                                                                                                                       |  | 4 rpm                                                               |         |                       |               |
| Maximum pipe speed inner layer                                                                                                                 |  | 20 m/min                                                            |         | 65.6 ft/min           |               |
| Maximum pipe speed outer layer                                                                                                                 |  | 40 m/min                                                            |         | 131.2 ft/min          |               |
| Maximum static brake load                                                                                                                      |  | 1,5 x Maximum pull force (reference DNVGL-RP-0232)                  |         |                       |               |
| Electrical characteristics                                                                                                                     |  |                                                                     |         |                       |               |
| Rated power                                                                                                                                    |  | 125 kW                                                              |         |                       |               |
| Electrical main power/ control supply connection                                                                                               |  | 380 – 480 V, 50 – 60 Hz, 180 A, 3PH+GND                             |         |                       |               |
| Electrical stationary supply connection                                                                                                        |  | 230 V, 50 Hz, 16 A, 1PH+GND                                         |         |                       |               |
| Signal connections                                                                                                                             |  | External signals, ethernet                                          |         |                       |               |
| Enclosure ratings                                                                                                                              |  | IP56                                                                |         |                       |               |
| Installed drive power                                                                                                                          |  | 100 kW                                                              |         |                       |               |
| Mechanical characteristics                                                                                                                     |  |                                                                     |         |                       |               |
| Structural design acc.                                                                                                                         |  | DNVGL-ST-E273 / Class R30                                           |         |                       |               |
| Lift between vessel/ platform                                                                                                                  |  | Max Hs=3m                                                           |         |                       |               |
| Design temperature                                                                                                                             |  | -20° C                                                              |         |                       |               |
| Noise level                                                                                                                                    |  | According to machinery directive                                    |         |                       |               |
| Corrosion protection                                                                                                                           |  | ISO 8501-1 and ISO 12944-9 Class CX                                 |         |                       |               |
| Over boarding sheave                                                                                                                           |  | 2410 mm, single groove with changeable inserts (2-3/8" as standard) |         |                       |               |
| Pressure sensor (2x)                                                                                                                           |  | 1600 bar                                                            |         | 23200 psi             |               |
| Pressure gauge (2x)                                                                                                                            |  | 1600 bar                                                            |         | 23200 psi             |               |
| Working pressure                                                                                                                               |  | 1034 bar                                                            |         | 15000 psi             |               |
| Dimensions & weights                                                                                                                           |  |                                                                     |         |                       |               |
| Complete Skid                                                                                                                                  |  |                                                                     |         |                       |               |
| Overall dimensions (W x L x H)                                                                                                                 |  | 3200 x 8000 x 3840 mm                                               |         | 126" x 315" x 151,2"  |               |
| Length of base                                                                                                                                 |  | 5840 mm                                                             |         | 230"                  |               |
| Length of reach 2 3/8"OD                                                                                                                       |  | 1657 mm                                                             |         | 65,2"                 |               |
| Rated maximum gross weight                                                                                                                     |  | 37500 kg                                                            |         | 82673 lb              |               |
| Tare weight without pipe and liquid                                                                                                            |  | 20500 kg                                                            |         | 45194 lb              |               |
| Reel                                                                                                                                           |  |                                                                     |         |                       |               |
| Flange diameter                                                                                                                                |  | 3670 mm                                                             |         | 144"                  |               |
| Core diameter                                                                                                                                  |  | 2410 mm                                                             |         | 95"                   |               |
| Width between flanges                                                                                                                          |  | 2200 mm                                                             |         | 87"                   |               |
| Freeboard 2 3/8"OD                                                                                                                             |  | 124 mm                                                              |         | 4,9"                  |               |
| Reel maximum load (pipe+fluid)                                                                                                                 |  | 23000 kg                                                            |         | 50700 lb              |               |
| Environmental parameters                                                                                                                       |  |                                                                     |         |                       |               |
| Operating temperature range                                                                                                                    |  | -20 to +50° C                                                       |         | -4 to +122° F         |               |
| Humidity                                                                                                                                       |  | 100% at +50° C                                                      |         | 100% at +122° F       |               |
| Vessel accelerations and angles                                                                                                                |  | Operational                                                         |         | Transit               |               |
| Vertical (including g)                                                                                                                         |  | 12,8 m/s <sup>2</sup>                                               |         | 12,8 m/s <sup>2</sup> |               |
| Transversal                                                                                                                                    |  | 4,9 m/s <sup>2</sup>                                                |         | 4,9 m/s <sup>2</sup>  |               |
| Longitudinal                                                                                                                                   |  | 4,9 m/s <sup>2</sup>                                                |         | 4,9 m/s <sup>2</sup>  |               |
| Heel angle                                                                                                                                     |  | 5°                                                                  |         | 5°                    |               |
| Trim angle                                                                                                                                     |  | 2°                                                                  |         | 2°                    |               |
| All products, product specifications and data are subject to change without notice, to improve design, reliability, functionality or otherwise |  |                                                                     |         |                       |               |

| Reel capacity, pipe 2-3/8" OD | Pipe length per layer | Total pipe length on reel | Pipe length per layer | Total pipe length on reel |
|-------------------------------|-----------------------|---------------------------|-----------------------|---------------------------|
| Layer 1                       | 264 m                 | 264 m                     | 866 ft                | 866 ft                    |
| Layer 2                       | 277 m                 | 541 m                     | 908 ft                | 1774 ft                   |
| Layer 3                       | 290 m                 | 830 m                     | 950 ft                | 2724 ft                   |
| Layer 4                       | 303 m                 | 1133 m                    | 993 ft                | 3716 ft                   |
| Layer 5                       | 315 m                 | 1448 m                    | 1035 ft               | 4751 ft                   |
| Layer 6                       | 332 m                 | 1780 m                    | 1089 ft               | 5840 ft                   |
| Layer 7                       | 341 m                 | 2121 m                    | 1119 ft               | 6960 ft                   |
| Layer 8 (27 wraps)            | 279 m                 | 2400 m                    | 914 ft                | 7874 ft                   |
| Reel capacity, pipe 2" OD     | Pipe length per layer | Total pipe length on reel | Pipe length per layer | Total pipe length on reel |
| Layer 1                       | 317 m                 | 317 m                     | 1040 ft               | 1040 ft                   |
| Layer 2                       | 330 m                 | 647 m                     | 1083 ft               | 2123 ft                   |
| Layer 3                       | 343 m                 | 990 m                     | 1126 ft               | 3249 ft                   |
| Layer 4                       | 356 m                 | 1346 m                    | 1169 ft               | 4417 ft                   |
| Layer 5                       | 369 m                 | 1716 m                    | 1212 ft               | 5629 ft                   |
| Layer 6                       | 382 m                 | 2098 m                    | 1255 ft               | 6883 ft                   |
| Layer 7                       | 395 m                 | 2494 m                    | 1298 ft               | 8181 ft                   |
| Layer 8 (11 wraps)            | 105 m                 | 2600 m                    | 349 ft                | 8530 ft                   |

Note: Layer diameters based on stacked pipe.