

EN

---

# CAL 45000 & CAL 64000

---

Job report – Installation of  
monopiles and wind turbines

[www.liebherr.com](http://www.liebherr.com)

## LIEBHERR

Offshore cranes



# CAL for monopiles and wind turbines



## Situation

The “Saint Nazaire” Offshore Wind Park, a €2bn (\$2.21bn) project that provides around 20% of the required electrical power of the Loire-Atlantique region, has been growing approximately 12-20km offshore the Normandy coast since the site kick-off in 2019. Liebherr Heavy Lift Crane Around the Leg models (CAL) were utilised for both commissioning ends of the installation campaign – monopiles and wind turbine component installation.

## Task

The challenge for the VOLE AU VENT, which features the CAL 45000, were less the sheer size or weight of the turbine components, rather the tight schedule and the changing weather conditions. Prior to the installation of monopiles in water depths ranging from 12-25 metres, Deme’s INNOVATION, equipped with a CAL 64000, was tasked with utilising its optimised processes, along with the world’s first Offshore Foundation Drill (OFD®), to prepare 73 out of 80 seabed locations.

## Solution

The VOLE AU VENT, which was the fastest turbine installation vessel in the 2021 competition with an average installation rate of approximately 1.8 days per turbine, benefited from several factors during the installation phase from April to September 2022. These included the moderate weight and size of the turbine components, favorable weather conditions, well-rehearsed processes on board, and the outstanding performance and durability of Liebherr’s CAL 45000 model.

To overcome the challenging layers of Calcarenite Rock in the seabed, the CAL 64000 on board the INNOVATION served as a powerful “overall integrator” for Deme’s Monopile Drilling, Installation and Grouting system (MODIGA), and HERRENKNECHT’s revolutionary Offshore Foundation Drilling unit (OFD®), seamlessly integrating them into one efficient installation system.

## Overview INNOVATION

Year of construction	2012
Vessel location	Off the coast of Saint Nazaire
Crane type	CAL 64000
Max. SWL	1,500 t
Boom length	105 m
Monopile weight	up to 620 t
Monopile length	up to 65 m
Monopile diameter	5.9/7.0 m
TP weight	307 t
TP length	28.6 m
TP diameter	6/6.98 m
OFD® Particulars	D = 7.7m / W = 350 t / H ~ 13 m
MODIGA Particulars	W = 1,200 t / H = 60 m

## Overview VOLE AU VENT

Year of construction	2013
Vessel location	Off the coast of Saint Nazaire
Crane type	CAL 45000
Max. SWL (t)	1,500 t
Boom length (m)	100 m
Turbine Spec.	GE Haliade 150-6MW

## CAL series

