

## Job Report

# Duty Cycle Crawler Crane HS 8300 HD

## Harbour dredging: 2000 t/h with hybrid drive

“Double the turnover but only 60 l/h diesel consumption. The HS 8300 HD is a real beast!”

Machine operator from Zeta S.r.l.



# LIEBHERR

Piombino  
Italy



## Situation

The Port of Piombino in the Province of Livorno is the third largest in Italy and the only port connecting the popular island of Elba to the mainland. Ferries transport more than three million passengers per year to the Tuscan Archipelago as well as to Sardinia and Corsica. In order to allow shipping traffic to use the advantageous location between the Tyrrhenian and Ligurian Seas, the water must be sufficiently deep at the mouth of the port. In recent years the depth has been reduced to as little as 8 m through sediment. These sediments are now to be removed by the Italian dredging specialist Zeta S.r.l. in a six-month project that started in May 2017.

## Solution

Zeta S.r.l. have installed the HS 8300 HD without crawlers on their new dredger Maria Vittoria Z, on which a total of 3,000 t material can be loaded. Thanks to the large volume of the grab and also the short working cycles of only 45 seconds, the Liebherr duty cycle crawler crane handles 2,000 t of material per

## Efficiency

The duty cycle crawler crane is equipped with Liebherr's own hydraulic hybrid drive system Pactronic®, which despite higher turnover levels, enables a 50 % lower diesel consumption (60 l/h) in comparison to similar models. The Pactronic® system saves surplus energy when the grab is lowered and subsequently

Great tasks require great machines. With Liebherr's duty cycle crawler crane type HS 8300 HD, the contractor Zeta S.r.l. found a real powerhouse and a suitable solution for this dredging project. The work not only involves the removal of the sediment. The depth of the water will also be increased to 14 m in order to allow for larger vessels to run into the Port of Piombino. The challenge lies not only in the dredging of sediment but also the removal of larger stones while nevertheless achieving high levels of turnover. Material amounting to a total of 600,000 m<sup>3</sup> must be removed from the entrance to the port. For this reason Zeta S.r.l. opted for a hydraulic clamshell grab from the Italian manufacturer Rossi with a filling capacity of 22 m<sup>3</sup>.

hour meaning it requires less than two hours to fully load the Maria Vittoria Z. Close by, the dredged material is being gainfully used for the expansion of the Port of Piombino. The dredger is loaded and unloaded by the HS 8300 HD up to four times each working day between 05:00 – 20:00 hrs.

releases it again when the grab is hoisted. Mauro Boscolo, CEO of the contracted company Zeta S.r.l., is visibly delighted with the performance and fuel consumption of his "beast", the HS 8300 HD duty cycle crawler crane from Liebherr.

## Technical Data: HS 8300 HD

Engine power (incl. Pactronic®):	725 kW (1250 kW)
Grab volume:	22 m <sup>3</sup> – 75 t
Max. line pull:	2 × 50 t

Dredging radius:	22 – 43 m
Operating weight (without crawlers):	300 t
Diesel consumption (with Pactronic®):	60 l/h