

# Choosing the right container cranes: CentrePort Wellington updates its fleet

CentrePort Limited, Wellington, New Zealand

When CentrePort Wellington decided to upgrade its fleet of quayside container cranes, the New Zealand port embarked on a worldwide search to select the best cranes for the job.

## Future-proofing

One of the key drivers behind the upgrade was a desire to ‘future-proof’ the port, by ensuring that it was well-equipped to service whatever vessels should come its way in the foreseeable future.

Whilst New Zealand’s relatively small stature on the international trading stage makes it unlikely that it will ever host the largest class of container ships now plying the world’s waters, the South Pacific nation is nevertheless experiencing the global trend towards the use of larger cargo vessels. CentrePort Wellington was therefore keen to extend its quayside container-handling capabilities beyond its existing configuration of 13-bay panamax cranes.

The port estimated the likely size of vessels it would be required to host in the coming 10-20 years, and also took stock of the year-on-year growth it was experiencing in the container-handling arm of its business. Together, these factors led CentrePort to conclude that it would be best served by installing twin-lift, 16-bay post-panamax cranes.

## Finding the right supplier

Having determined the overall size and type of cranes it was seeking, the port then set about the task of seeking out and appraising potential suppliers. Prior to doing this, CentrePort had clearly formulated the many other factors, including infrastructural, environmental and service issues, which would also play key roles in determining the most appropriate crane and supplier for its particular situation.

Foremost amongst these factors was the requirement that the new cranes be compatible with the port’s existing rail gauge and power supply. As part of its crane upgrade project, CentrePort had decided to dispense with two of its older container cranes, but its desire to retain a third existing crane meant there was no provision to alter the current rail and power set-up.

In addition to being compatible with the port’s ‘human-made’ infrastructure, the new cranes also had to be capable of interacting with a much more elemental force prevalent at CentrePort – the wind! As the port frequently experiences strong winds up to gale force, it was essential that the new cranes be able to operate safely and effectively in these conditions.

## Acquiring first-hand information

During the planning phase of the crane upgrade project, CentrePort staff visited a number of international ports to observe various makes and models of container crane in operation. A team of four port representatives travelled to Shanghai, China, Felixstowe, UK, and Oakland and New York ports in the USA. The latter was a particularly relevant destination, given the similarity of the wind conditions experienced there to those typical of Wellington, New Zealand.



An important aspect of the international tours of inspection was the opportunity they afforded to talk to first-hand users of various types of container cranes. These front-line ‘interviews’ were an invaluable means of augmenting the information gleaned from visits the team also made to factories of selected crane manufacturers.

## Evaluating the options

Having completed all desired inspections and gathered all relevant technical specifications, CentrePort undertook a robust evaluation of the options available to it.

A critical component of this evaluation was the consideration of non-technical factors, such as the service ethic, accountability, reliability and contractual efficiency of potential suppliers, in addition to ‘nuts and bolts’ design and operating features. The reason for this was that CentrePort was not merely purchasing an extra crane to add to its existing fleet, but was essentially

replacing its core container-handling infrastructure. The ongoing productivity and reputation of the port was therefore at stake, and any compromise in this area could not be countenanced.

After suitable deliberation, CentrePort opted to purchase two P141L-Super cranes from Liebherr Container Cranes Limited, based in Killarney, Co. Kerry, Ireland. These cranes met all of the port's operational specifications, being twin-lift post-panamex cranes compatible with the port's existing rail gauge. The P141Ls' high-tensile steel framework, which allows for a lighter overall construction, and thus a reduced wind area, makes them well suited to the gusty conditions often experienced at CentrePort. Other features, such as latticed main beams to further reduce wind force effects, and advanced braking mechanisms to secure the cranes against any unwanted movement, enhance their operating capability in a high-wind environment.

As a company with a long established history and reputation for service and craftsmanship, Liebherr Cranes also met CentrePort's requirements for reliability and quality. Glowing testimonials were provided by satisfied customers of Liebherr worldwide, and importantly for CentrePort the company acts as a 'one-stop shop,' offering after sales service and support, including staff training.

## Crane specifications

An overview of the operating systems and technologies that feature in the new cranes, currently under construction and expected to be operational at CentrePort by mid 2006, follows:

Model:	Liebherr ship to shore container crane P1411 super
Location:	Wellington New Zealand
Year of manufacture:	2005
S.W.L under spreader:	50T under twin lift spreader 45T under single lift
Waterside outreach:	43m
Rail Span:	22.86m
Landside Back reach:	14.2m
Spreader height over rail:	32m
Hoist speed:	70m/175m
Trolley speed:	200m/min
Long travel speed:	45m/min
Drive:	Libherr Digivert

### ABOUT THE PORT

CentrePort Limited, at the southern tip of New Zealand's North Island, is one of the most strategically positioned ports in the South Pacific region.

It has the natural asset of an excellent deep-water harbour, and is located in Wellington – New Zealand's capital city and the focal point of an important commercial and trading region.

From its position at the very centre of the nation, CentrePort straddles international and national trade routes, and provides an excellent import-export interface with land and rail transport options.

CentrePort operates a modern port infrastructure, offering a full range of port facilities. Our flexible operations are underpinned by leading international technologies and innovative management.

One of our key objectives is to achieve fast ship turnaround times, with an extremely high level of cargo care.

### ENQUIRIES

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