



Automation and electrification for stacking cranes References

Reliable and safe handling of containers

Automation provides the way to meet today's quay and yard productivity requirements. Faster and more productive ship-to-shore (STS) cranes utilizing automation and remote control demand highly efficient yard systems. Fully automatic, intelligent stacking cranes have become crucial for efficient yard operations. To date, already nearly 400 automatic stacking cranes have been equipped with ABB's automation solutions.

Intelligent stacking cranes

Efficient terminals depend on reliable and safe handling of containers. ABB's automation solutions make stacking cranes intelligent, allowing them to deliver higher productivity, improve land utilization and save energy. As an example, intelligent stacking cranes are capable of scheduling and optimizing movements of containers to minimize traveling with an empty spreader. This minimizes the amount of time and energy consumed in the process. Intelligent cranes can also utilize low activity periods for automated housekeeping in a yard to increase block productivity.



End loading ASC references



TTI Terminal in Algeciras, Spain.



Euromax Terminal in Rotterdam, the Netherlands.

In operation

Container Terminal Altenwerder (CTA)

Location: Hamburg, Germany
Operator: Hamburger Hafen und Logistik AG (HHLA)
Year: 2002
Equipment: 52 ASCs, Height: 4-5, Width: 10,
Waterside transportation: AGVs

TTI Terminal

Location: Algeciras, Spain
Operator: Hanjin Shipping
Year: 2010
Equipment: 32 ASCs, Height: 5, Width: 8,
Waterside transportation: Shuttle carriers

Busan Newport 2-3 Terminal

Location: Busan, Korea
Operator: Busan New Container Terminal (BNCT Co., Ltd)
Year: 2012
Equipment: 38 ASCs, Height: 5, Width: 10,
Waterside transportation: Shuttle carriers

Euromax Terminal

Location: Rotterdam, the Netherlands
Operator: Hutchison Port Holdings (HPH)
Year: 2008
Equipment: 58 ASCs, Height: 5, Width: 10,
Waterside transportation: AGVs

Projects under delivery

APMT Maasvlakte 2

Location: Rotterdam, the Netherlands
Operator: APM Terminals
Year: 2014
Equipment: 26 ASCs, Height: 5, Width: 9,
Waterside transportation: AGVs

Long Beach Container Terminal

Location: Long Beach, USA
Operator: Long Beach Container Terminal (LBCT)
Year: 2013
Equipment: 32 ASCs, Height: 6, Width: 9 and 10,
Waterside transportation: AGVs

Side-loading cantilever ARMG references



KaoMing Container Terminal in Kaohsiung, Taiwan.

In operation

Busan Newport 2-1 Terminal

Location: Busan, Korea
Operator: Hanjin Shipping
Year: 2009
Equipment: 42 ARMGs, Height: 6, Width: 10,
Waterside transportation: Chassis

Busan Newport 1-2 Terminal

Location: Busan, Korea
Operator: Pusan Newport Company (PNC)
Year: 2009
Equipment: 31 ARMGs, Height: 5, Width: 10,
Waterside transportation: Chassis

Evergreen Terminal

Location: Kaohsiung, Taiwan
Operator: Evergreen Marine Corporation
Year: 2007
Equipment: 6 ARMGs, Height: 5, Width: 11,
Waterside transportation: Chassis

KaoMing Container Terminal

Location: Kaohsiung, Taiwan
Operator: KaoMing Container Terminal Corporation (KMTC)
Year: 2010
Equipment: 22 ARMGs, Height: 5, Width: 14,
Waterside transportation: Chassis

Taipei port 1-2

Location: Taipei, Taiwan
Operator: Taipei Port Container Terminal (TPCT)
Year: 2008/2010
Equipment: 40 ARMGs, Height: 5, Width: 13,
Waterside transportation: Chassis

OHI Terminal Number 5

Location: Tokyo, Japan
Operator: Wan Hai Lines
Year: 2001/2006
Equipment: 8 ARMGs, Height: 6, Width: 12,
Waterside transportation: Chassis

Projects under delivery

Jebel Ali Container Terminal 3

Location: Dubai
Operator: DP WORLD
Year: 2013
Equipment: 50 ARMGs, Height: 6, Width: 10,
Waterside transportation: Chassis

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Our advanced positioning system uses sensor technology to measure the exact position of each container and vehicle. The data obtained enables cranes to stack containers more than five units high with the maximum levels of precision even with difficult ground and rail conditions. The advanced positioning system also ensures safety through anti-collision scanning and verification of the block map.

About our offering

ABB's systems for electrification and automation provide terminal operators with the full benefits of automation. Using ABB's solutions for intelligent automatic stacking cranes frees crane operators from routine tasks and allows them to supervise the process and take immediate action when something unexpected occurs to enable reliable and efficient yard operation.

CTA Terminal in Hamburg, Germany.



Contact us

ABB AB

Crane Systems

SE-721 59 Västerås, Sweden

Phone: +46 21 32 50 00

Fax: +46 21 34 02 90

e-mail: cranes.sales@se.abb.com

www.abb.com/cranes

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