

Konecranes Ship-to-Shore Crane (STS)



INTEGRATED E-HOUSE

Electrical and mechanical components housed in different rooms: easy access, convenient maintenance. In machinery room, double hoist rope setup, including rope reeving winch.

SIMPLIFIED MAINTENANCE

Easy access to the crane maintenance locations for minimized maintenance effort and crane downtime.

FEWER SURPRISES

Steel structure can handle 4 million fatigue cycles according to EN-standard. A rule of thumb is 1 million fatigue cycles = ten years of service.

CATENARY TROLLEY

Rope tensioning system at backreach: decreased number of rope turns and sheaves gives longer rope lifetime.

MORE RELIABLE HOISTING

Main hoist has two-rope design for quick rope replacement. Snag protection system can be reset electronically.

TROLLEY

Precise container handling with hydraulic or electromechanical trim-list-skew. Simplified maintenance.

CORE OF LIFTING

Core of Lifting from Konecranes: motors, gear reducers, control system work together seamlessly as a unit.

SAFETY FIRST

Spacious stairway access, can accommodate stretcher if needed. Maintenance jib crane access to main pulleys.



CONNECTED

The TRUCONNECT® remote service combines the relevant data for informed decision-making through a single graphical interface, yourKONECRANES.com.

For the fastest ship turnaround time

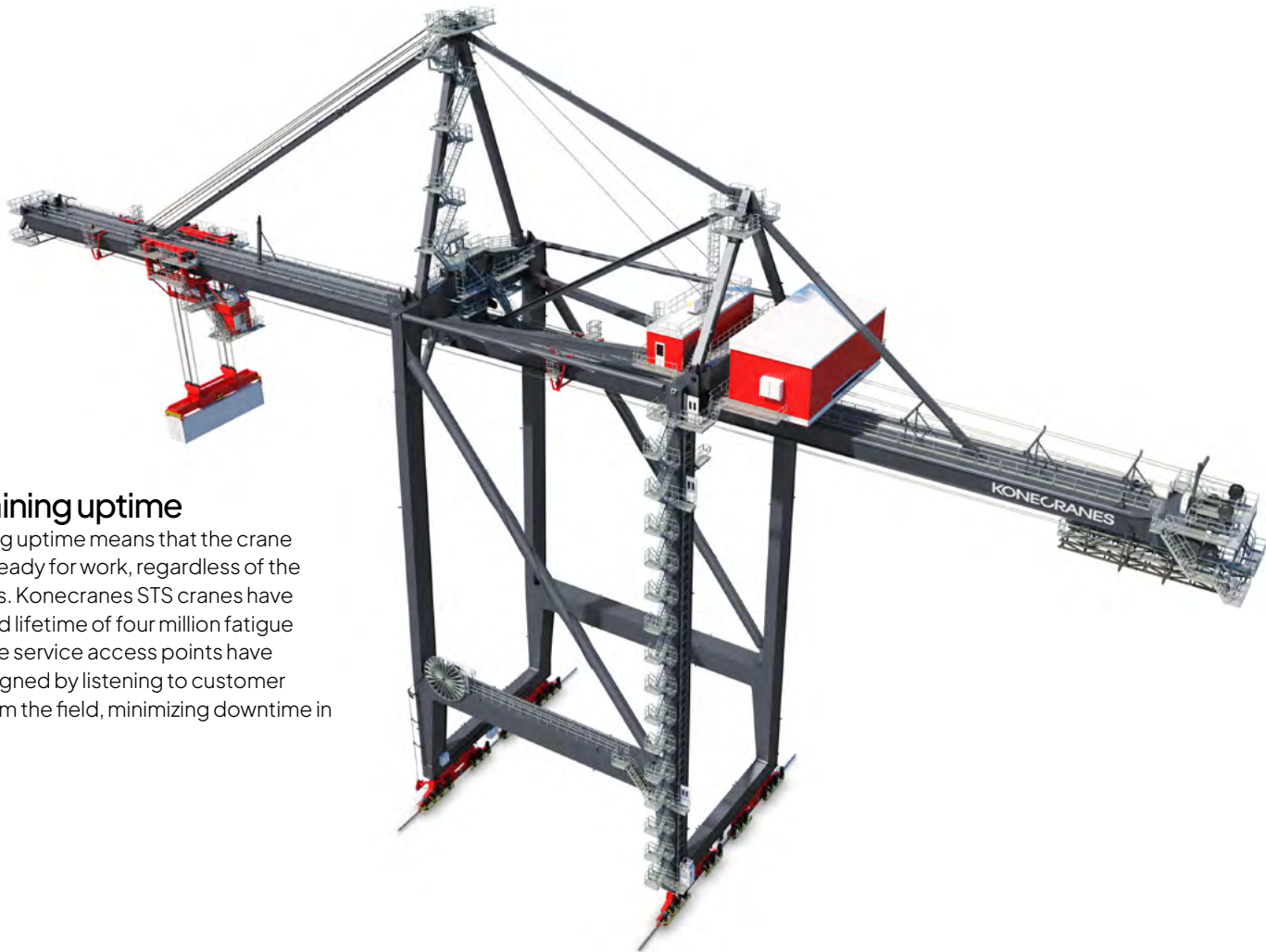
Konecranes Ship-to-Shore (STS) gantry cranes are known for their reliability and high performance. They are built around the Core of Lifting concept that incorporates Konecranes' purpose-designed and purpose-built electric motors, gears and control system. With Konecranes STS cranes you will achieve the fastest possible container ship turnaround time.

Operator comfort

Operator comfort is central when it comes to high productivity. Konecranes STS cranes are known for their smooth ride and predictable control – the keys to a very productive work shift.

Maintaining uptime

Maintaining uptime means that the crane is always ready for work, regardless of the conditions. Konecranes STS cranes have a designed lifetime of four million fatigue cycles. The service access points have been designed by listening to customer voices from the field, minimizing downtime in practice.



Technical data

PERFORMANCE	MONOBOX	DOUBLEBOX
Trolley type	Semi-rope trolley	Rope-towed trolley
Trolley speed	180 m/min – 244 m/min	240 m/min – 300 m/min
Hoist speed (with load)	75 or 90 m/min	90 m/min
Hoist speed (empty)	150 or 180 m/min	180 m/min
Gantry travel speed	45 m/min	45 or 55m/min
Typical wheel loads	47–70 tons/m*	52–76 tons/m*
Diagnostics and maintenance	Konecranes Crane Management System (CMS), TRUCONNECT, yourKONECRANES, Konecranes STORE, Konecranes Port Service	

* 8, 10 or 12 wheels per corner

ELECTRICAL	MONOBOX STS	DOUBLEBOX STS
Main power supply	3–20 kV, 3 phase, 50/60 Hz	3–20 kV, 3 phase, 50/60 Hz
Supply method	Cable reel on middle beam	Cable reel on middle beam
Cable length for crane travelling distance	300 – 700 m	300 – 700 m
Control method – main hoist	AC frequency control	AC frequency control
Control method – boom hoist	AC frequency control	AC frequency control
Control method – trolley travel	AC frequency control	AC frequency control
Control method – gantry travel	AC frequency control	AC frequency control
Motor power – main hoist	2 x 500 kW S3 – ED 60%	2 x 600 kW S3 – ED 60%
Motor power – boom hoist	110,1800 kW S3 – ED 40%	300,400 kW S3 – ED 40%
Motor power – trolley travel	4 x 37 kW S3 – ED 60%	1 x 355 kW S3 – ED 60%
Motor power – gantry travel	16,20,24 x 15 kW S3 – ED 40%	12,20,24 x 55 kW S3 – ED 40%

MAIN DIMENSIONS	MONOBOX STS	DOUBLEBOX STS
Rail span	30.0 m	35.5 m
Slope of dock (Landside rail is Dh higher than WS rail)	0 – 500 mm	0 – 500 mm
Outreach from waterside rail	65.0 m	75.0 m
Backreach from landside rail	25.0 m	30.0 m
Max. lift height above waterside rail to bottom of spreader	52.5 m	57.5 m
Lowering depth below waterside rail to bottom of spreader	20.0 m	20.0 m
Overall crane width over bumpers	27.0 m	27.0 m
Clearance between the legs for passage of containers	18.0 m	19.0 m
Max. width of trolley	8.9 m	7.2 m
Clearance under portal beam	14.0, 17.0 m	14.0, 17.0 m
Rail type size	A75–150	A75–120
Number of wheels / crane corner	8, 10, 12	8, 10, 12
Number of gantry parking rail brakes / rail waterside	2	2
Number of gantry parking rail brakes / rail landside	0.2	0.2

Technical data

CRANE CLASSIFICATION	MONOBOX STS	DOUBLEBOX STS
Normal container use with Fatigue Lifted Load (FLL)		4 million loading cycles
Crane classification	EN 13001-1	(FEM 1.001 eq.)
Class of utilization	U8	U8
Spectrum class	Q3	Q2
Appliance group	-	A8

MOST COMMON SMART FEATURES	
Shipside Collision Prevention	Boom Anticollision System
Quayside Collision Prevention	Bogie/Gantry Anticollision System
Quayside Auto-Truck Guiding	Trailer Positioning System
Backreach Auto-Truck Guiding	Ship Profiling System (Path Optimization for Trolley)
Ship Gate	Auto/Smart Landing & Pick-up System
Anti-sway System (Spreader)	Active Anti-skew System (Spreader)
Optical Container Recognition	Trolley Truck Lane Position System


CORE OF LIFTING COMPONENTS*	
Motors*	Konecranes
Gear reducers*	Konecranes
Drive system*	Konecranes drives
Programmable Logic Controller (PLC)	Siemens

*Extended 5-year warranty available

ENVIROMENTAL DESIGN DATA	
Operating wind speed (WLO)	20 m/s
Stowed wind speed (WLS)	60 m/s
Maximum ambient temperature	+45 °C
Minimum ambient temperature	-30 °C



Konecranes is a global leader in material handling solutions, serving a broad range of customers across multiple industries. We consistently set the industry benchmark, from everyday improvements to the breakthroughs at moments that matter most, because we know we can always find a safer, more productive and sustainable way. That's why, with around 16,600 professionals in over 50 countries, Konecranes is trusted every day to lift, handle and move what the world needs. In 2023, Group sales totalled EUR 4.0 billion. Konecranes shares are listed on Nasdaq Helsinki (symbol: KCR).

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