

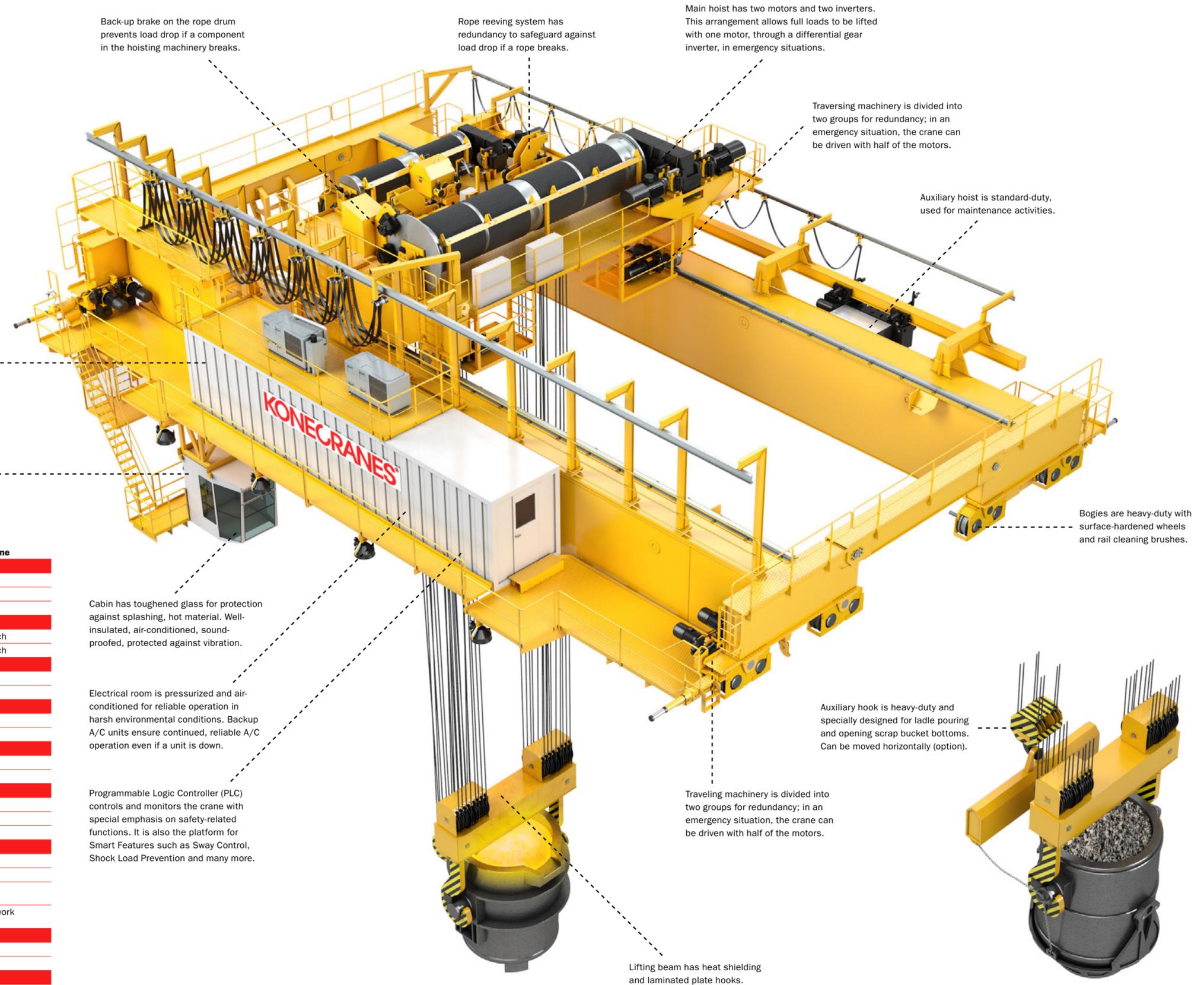
DOUBLE-GIRDER LADLE HANDLING CRANES

The ladle handling crane transports ladles filled with molten iron to the basic oxygen furnace (BOF), or molten steel from the BOF and electric arc furnace to the continuous casting machine. It can also be used for teeming and casting. As with the charging crane, safety and reliability come first with this crane since it is used to transport molten steel.

Provided optionally: wireless communication with factory control system. Crane Management System (CMS) has remote service capability, ensuring fast problem-solving and advance information for maintenance planning.

Areas that are close to sources of radiated heat have heat shielding: control locations, critical electrical devices, cables.

	Tailored heavy-duty crane	Single trolley crane	Double trolley crane
Classification			
Working cycles (EN13001-1)	Up to 8 million	1–2 million	1–2 million
Load spectrum (EN13001-1)	Up to Q5	Q4–Q5	Q4–Q5
FEM 1.001 3rd edition / year 1998	Up to M8	M7–M8	M7–M8
Trolley			
Main trolley	Tailored open winch	Tailored open winch	Tailored open winch
Auxiliary trolley	Tailored open winch		Tailored open winch
Main hoist lifting devices			
Attached with hook	Hook beam		
Attached with rope	Hook beam	Hook beam	Hook beam
Lifting capacity			
Main hoisting capacity	Tailored	40–340 tons	100–540 tons
Auxiliary hoisting capacity	Tailored	10–100 tons	40–140 tons
Main dimensions			
Span	Tailored	20–30 m	20–30 m
Lifting height	Tailored	10–30 m	10–30 m
Speeds			
Bridge travel speeds	Tailored	60–80 m/min	60–80 m/min
Trolley traversing speeds	Tailored	30–40 m/min	30–40 m/min
Hoisting speed with nominal load	Tailored	7–10 m/min	7–10 m/min
Electrical systems			
Bridge power supply	Conductors	Conductors	Conductors
Trolley power supply	Festoon	Festoon	Festoon
Motor control system	Konecranes Variable Frequency Drives (VFD)	Konecranes VFD	Konecranes VFD
Electrical braking	Regenerative network braking units/Resistors optional	Regenerative network braking units	Regenerative network braking units
Control			
Manual	Cabin/Radio	Cabin	Cabin
Automated	Option		
Monitoring			
Event history recorder in Programmable Logic Controller (PLC)	Standard	Standard	Standard
Crane Monitoring System	Option	Option	Option



Back-up brake on the rope drum prevents load drop if a component in the hoisting machinery breaks.

Rope reeving system has redundancy to safeguard against load drop if a rope breaks.

Main hoist has two motors and two inverters. This arrangement allows full loads to be lifted with one motor, through a differential gear inverter, in emergency situations.

Traversing machinery is divided into two groups for redundancy; in an emergency situation, the crane can be driven with half of the motors.

Auxiliary hoist is standard-duty, used for maintenance activities.

Bogies are heavy-duty with surface-hardened wheels and rail cleaning brushes.

Cabin has toughened glass for protection against splashing, hot material. Well-insulated, air-conditioned, sound-proofed, protected against vibration.

Electrical room is pressurized and air-conditioned for reliable operation in harsh environmental conditions. Backup A/C units ensure continued, reliable A/C operation even if a unit is down.

Programmable Logic Controller (PLC) controls and monitors the crane with special emphasis on safety-related functions. It is also the platform for Smart Features such as Sway Control, Shock Load Prevention and many more.

Auxiliary hook is heavy-duty and specially designed for ladle pouring and opening scrap bucket bottoms. Can be moved horizontally (option).

Traveling machinery is divided into two groups for redundancy; in an emergency situation, the crane can be driven with half of the motors.

Lifting beam has heat shielding and laminated plate hooks.