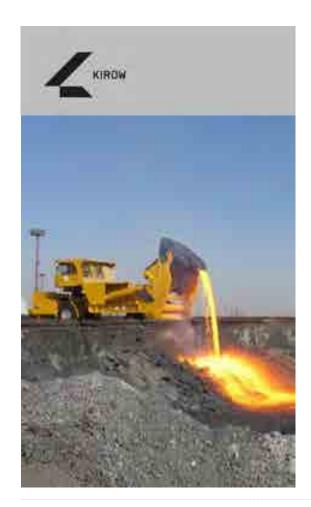


12th INTERMODAL AFRICA

KRANUNION KIROW, ARDELT AND KOCKS



THE MEMBERS OF KRANUNION



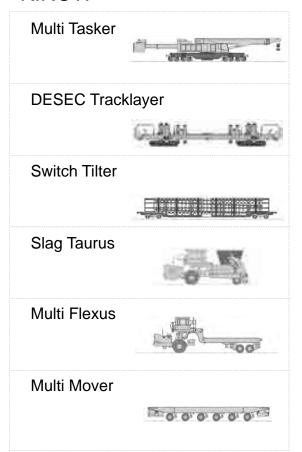




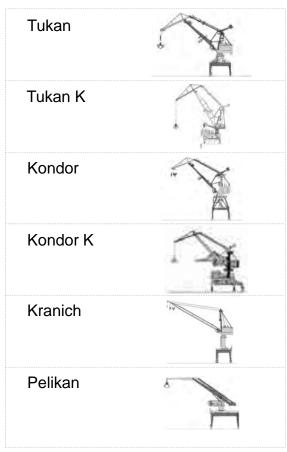


SPECIALIZED PRODUCTS

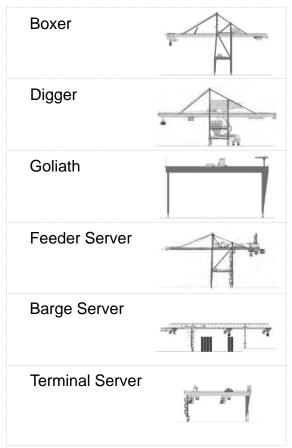
KIROW



ARDELT



KOCKS



INDUSTRY FOCUS / BETTER UNDERSTANDING OF THE LOGISTICS PROCESS





Steel mill



Shipyard



Bulk Handling



Tracklaying



Container handling



General Cargo Handling



KIROW

World Market Leader for railway cranes and slag pot carriers





12th Intermodal Africa 31.03.2014, Page 5

KIROW, ARDELT AND KOCKS ARE MEMBERS OF KRANUNION.



KOCKS

World Market Leader for Goliath cranes and Pioneer for development container cranes







ARDELT

World Market Leader for double jib level luffing crane







KRANUNION / INTERNATIONAL PRESENCE

To us customer proximity means better understanding of our customers, better expert advice and better service.



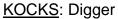




EXAMPLE BULK HANDLING

We offer the best solution according to purpose and handling capacity.







ARDELT: Tukan K

FROM ARDELT TO ARDELT



•1902 founded by Robert Ardelt & Söhne – Leichter Stahlbau und Hebezeuge



- 1920 1930 Ardeltwerke railway cranes, slewing cranes, Gantry cranes and locomotives
- •1950 -1989 VEB Kranbau Eberswalde member of TAKRAF R+D, engenering, manufacture of port handling technologies **OTHKRHF**
- 1990 Renaming to Kranbau Eberswalde GmbH
- 1994 Privatisation to Vulkan Kranbau Eberswalde GmbH
- 1997 Reorganisation and remaining in KIROW Leipzig KE Kranbau **Eberswalde AG**









The Patent for the Double Level Luffing Crane







The Patent for the Double Level Luffing Crane



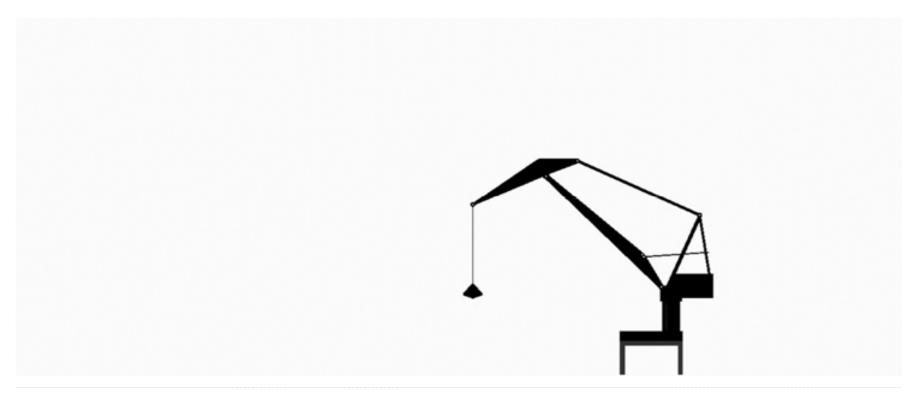






DOUBLE JIB LEVEL LUFFING CRANE

Construction double jib system





THE EFFICIENT CRANE THE TUKAN KANGAROO



TUKAN K THE STRONGEST SLEWING CRANE TO UNLOAD BULK



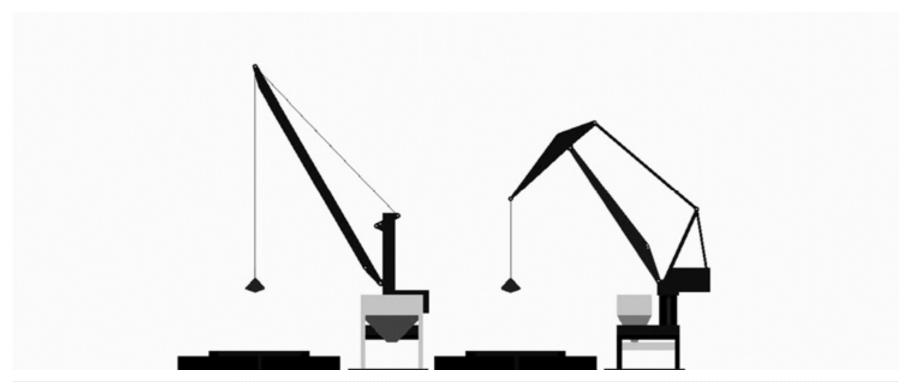
- 2012 commissioning of two TUKAN-K
 Cranes with integrated hopper at
 Niedersachsenbrücke/Germany for discharge of coal
- Lifting capacity 63 t
- Outreach 55 m
- Performance over 2300t/h







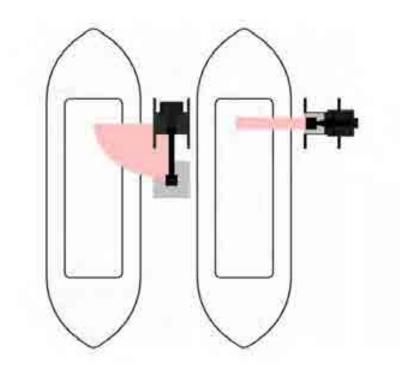
THE DOUBLE JIB LEVEL LUFFING SYSTEM WITH INTEGRATED HOPPER





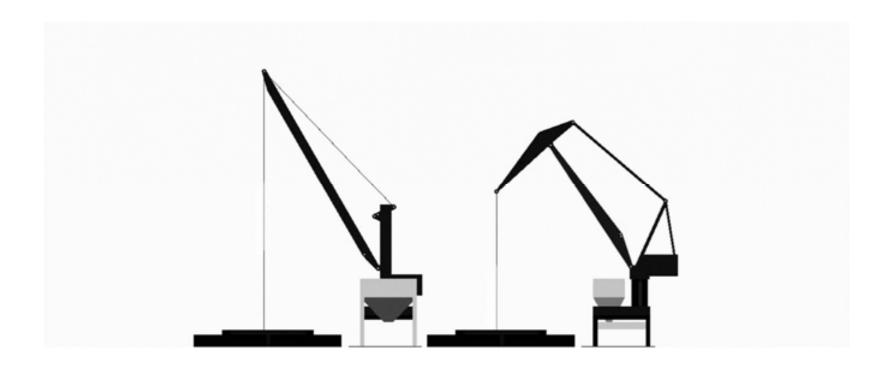
THE DOUBLE JIB LEVEL LUFFING SYSTEM WITH INTEGRATED HOPPER

Comparison concepts discharge





THE DOUBLE JIB LEVEL LUFFING SYSTEM WITH INTEGRATED HOPPER





INDUSTRY FOCUS

EXAMPLE: SHIP BUILDING

We offer the best solution according to purpose and production philosophy.









KOCKS FEEDER SERVER

A perfect crane system for container handling on feeder vessels.





OPTIMIZED CONFIGURATION OF LOGISTICS CHAIN

<u>EXAMPLE:</u> Handling and transport of scrap in steel mills

The cooperation of the Kirow Multi Mover M and the Ardelt Pelikan increase the efficiency and decrease the overall cost.





KIROW: Multi Mover

ARDELT: Pelikan



KRANUNION IN NIGERIA





KIROW has delivered 2 Railway Cranes to the Nigerian Railways



KRANUNION IN AFRICA





ARDELT/KIROW have delivered cranes:

- 3 Tunesia
- 2 South Africa
- 78 Morocco
- 18 Ethiopia
- 16 Angola











