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FUKE Technology, World Quality

RAIL-MOUNTED

CONTAINER GANTRY CRANE

INTELLIGENT & EFFICIENT

1 New torque anti-sway system(1)

Through proper arrangement of guide pulleys in the horizontal and vertical direction, the movement of the four wire ropes can effectively prevent the swing of the spreader, greatly improving container hoisting efficiency.

3 Container Auto-tracking and auto-hoisting system

Based on the data stored from the mechanism positions and the containers on the yard as well as database management, automatic tracking operation and the most optimized tracking control of the mechanisms can be realized, increasing the working efficiency and ensuring safety.



2 New torque anti-sway system (2)

The new-developed four rope anti-sway system (Patent number: Z8201228568848.4) effectively achieve bidirectional anti-sway of the spreader. This system allows a $\pm 250\text{mm}$ movement of spreader in the gantry or trolley direction, greatly improving container hoisting efficiency.

SAFE & RELIABLE

1 Soft landing of spreader onto the container

Software intelligent deceleration technology and hardware inspection protection device are applied to adjust the time and position of deceleration dynamically. This helps decrease crush and wheel load, thus increasing service life and stability of the crane.



2 Anti-wind anchor system

Equipped with two independent sets of anchoring device resisting horizontal force, four sets of ropes resisting overturning torque, four sets of anti-creeper or wheel clamp resisting gust, the system ensures the stability of the whole machine. Optional electric iron wedge, wheel clamp, rail clamp, rail jack and other wind proof devices are convenient and reliable.

3 Intelligent rectification technology of gantry

Deflection of bogie relative to the rail is detected in real-time as the control signal for the transducer to control motor speed. The bogie deflection can be corrected manually (or automatically) to prevent rail gnawing, thus ensuring safe operation, reducing wearing between wheel and rail, and span service life of crane.



**ENERGY-SAVING,
ENVIRONMENT-FRIENDLY**

Power factor reached more than **0.9**

the amount of harmonics has greatly decreased, and energy saving effect is obvious



1 Energy Recycling technology

Active inverter technology is applied to transfer the stored dynamic power and potential power into electricity and be recycled to the grid. At the same time, it can resist the pollution to grid from higher harmonic voltage, thus increasing the power factor of the equipment.

2 Intelligent low voltage capacitor compensation

Full automatic resonance eliminating reactive power compensation device is configured to achieve the average power factor above 0.9 or more, which improves electricity efficiency and reduces wire consumption.

TECHNICAL PARAMETERS



FK-MG5508



Parameters for standard models

Based on our study in lots of domestic and international terminals, analyzing the characteristics of new and old terminals, combining the handling process and demands, sorting out in the RMG, we developed two standard models with lifting height range from 15.3-18.2meter. The combination of standard model and modularization design greatly the span of design and manufacturing. We will develop the customized device for you in shortest time.

Project		FK-MG5508	FK-MG5530S	FK-MG5540S	Recommended parameter	Optional range
Hoisting capacity under spreader(t)		40	41	41	35、41、50、65	10~65
Rail span(m)		35	30	40	30、40	15~50
Arm length(m)		3/0	5/5	7.5/7.5	4、5、7.5	4~18
Hoisting height(m)		21	15.3	18.2	12.4(3 over 1) 15.3(4 over 1) 18.2(5 over 1)	9.5~21.1
Hoisting speed(m/min)	full load	25	22	20	15、20、25、30	10~40
Hoisting speed(m/min)	empty load	50	40	40	30、40、50	20~80
Trolley speed (m/min)	full load	70	70	80	60、70、80、90	
Trolley speed (m/min)	empty load	70	100	100	60、70、80、90	30~150
Gantry speed (m/min)	full load	40	50	50	40、50、60	30~120
Gantry speed (m/min)	empty load	40	50	50	40、50、60、70、80、90	30~120
Rotary speed of trolley(r/min)		/	/	/	1.0、1.1、1.2、1.3、1.4、1.5	This item applies to the gantry and trolley's mechanism
Rotary angle of spreader(°)		± 5	± 5	± 5	-10~+270或-5~+5	-10~+270或-5~+5
Power supply		cable reel	cable reel	cable reel	cable reel, trolley conductor	As per client's wharf' condition
Voltage		6.6KV	380V	380V	380V、10KV	380V~10KV

Remark: Due to the persistent innovation of technology, partial parameters may be varied. Apart from the parameters above, we have more bespoke parameters, so welcome for your consultation.

MANUFACTURING & DELIVERY

1

The preparation process

Complete processing equipment for steel pretreatment, cutting, bevel cutting, bending forming and other material processing are applied to provide a powerful guarantee on welding quality.

2

The welding process

As the launching of the first semi-automatic welding assembly line for heavy port machinery, the box beam welding cycle has been shortened by 15%. By applying semi-automatic car welding of H-beam, the welding cycle of stay bar system and M-house base has been shortened by over 30%. Large structures including boom and girder can be welded complete in the factory, and the UT qualification rate is over 99%.

3

The coating & pressemble

As the launching of new industrial park, super-large parts blasting, component painting, and assembling can be processed in the factory. We have ended the past era of outdoor processing to guarantee the production cycle and product quality.

4

Delivery cycle

The whole delivery cycle of RMG (from receiving order to delivery status) is above average in the industry. The manufacture cycle (from material preparation to delivery status) is currently shortened by 30 days than previously.