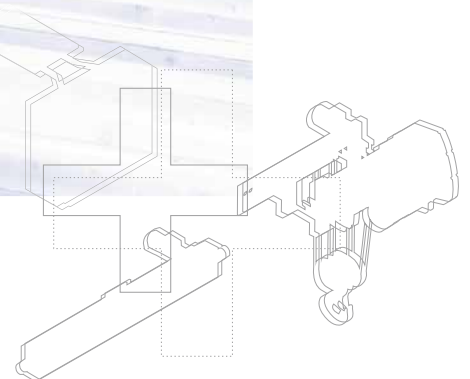


The crane components

04.2013

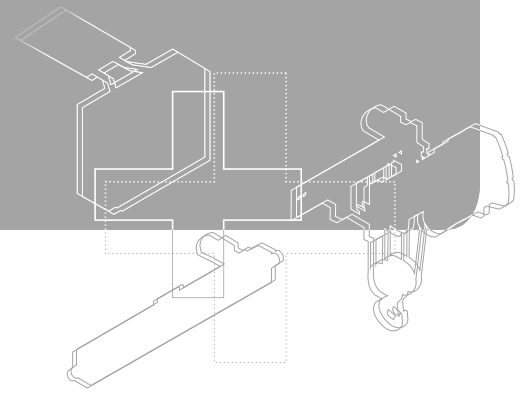


Partner of Experts

STAHL
CraneSystems

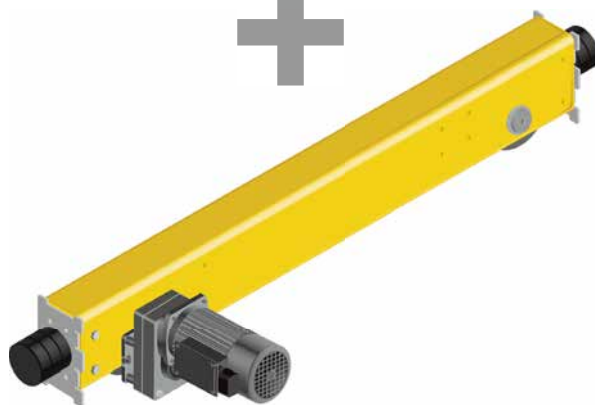
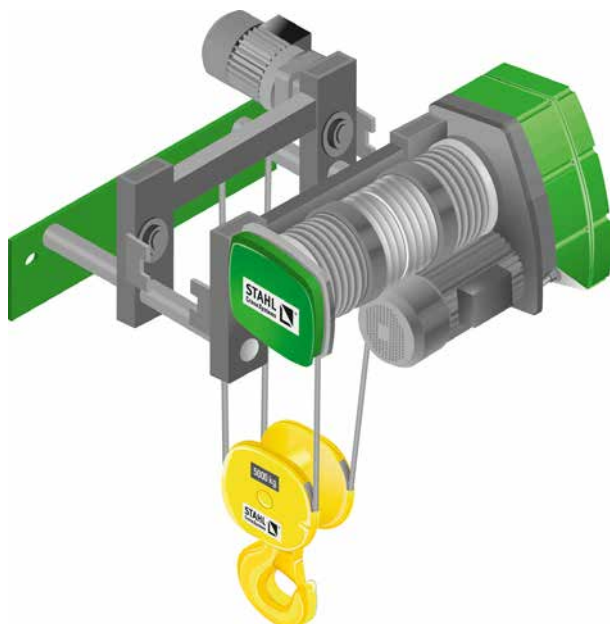


The crane components



As regards technology and cost-effectiveness, high-quality crane components from STAHL CraneSystems rank among premium products throughout the world. Thanks to our well-founded expertise and decades of experience we have on offer technically mature products, from crane endcarriages to travel drives, wheel blocks and crane electrics from simple-to-operate control pendants to complex control systems. Our customers can rely on all components meshing like precisely engineered gearwheels and working together efficiently. Nearly all components and systems are also available in explosion-protected design complying with ATEX and IECEx.





The facts

- Over 130 years of experience and expertise are behind each crane component
- One of the world's largest product portfolios
- A complete range of hoisting technology
- High-quality drive and control technology
- Own production
- All crane components available in explosion-protected design



An overview



Explosion-protected crane travel drives

The control technology

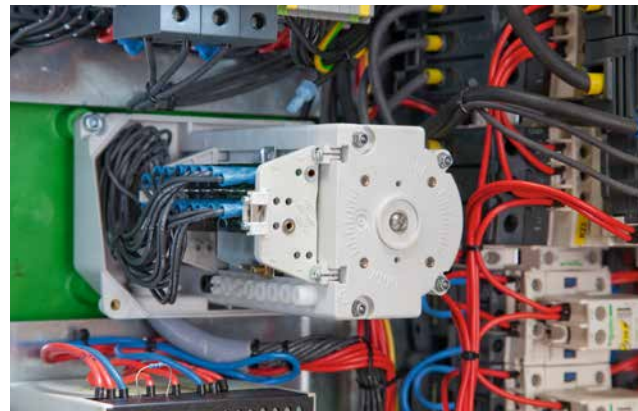


Radio remote control equipment

Overload cut-off

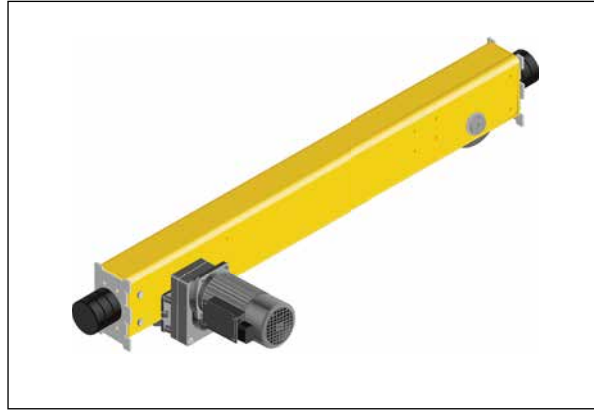


SMC Multicontroller

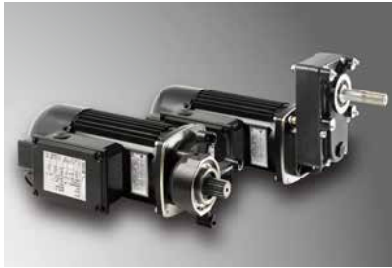


Emergency hoist limit switch (gear limit switch)

Suspension crane endcarriages



The drive technology



Crane travel drives



Frequency inverter for ›Hoist‹ and for ›Cross/long travel‹



Overhead travelling crane endcarriages



STH control pendant

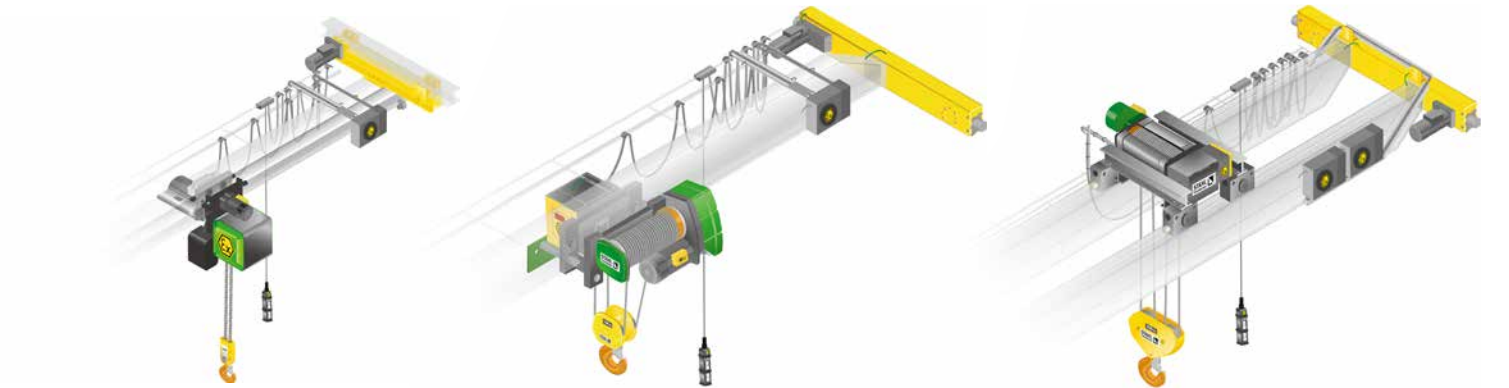
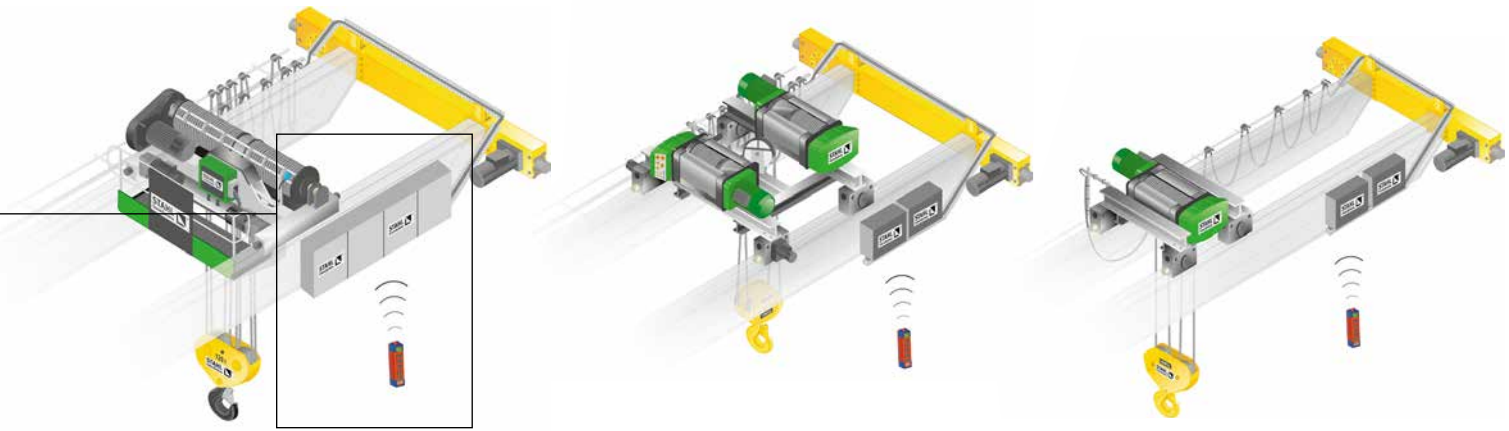
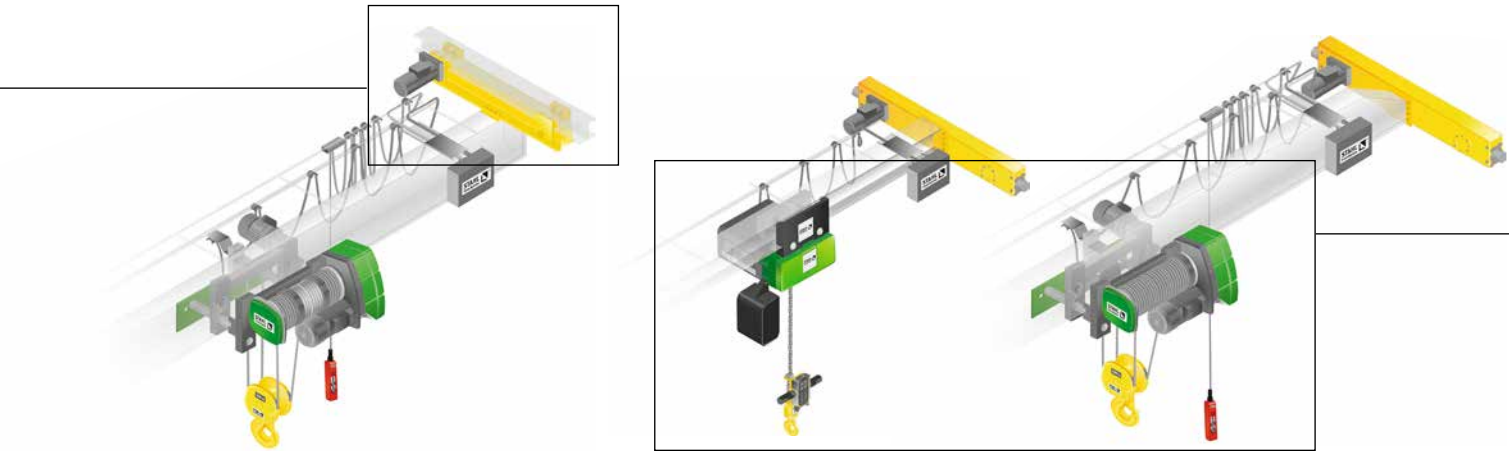
Travel limit switches for ›Cross/long travel‹



Signalling devices

Load display





The hoisting technology



STD Vario



SH wire rope hoist



ST chain hoist



SW winch



SC chain hoist



STK chain hoist



AS 7 wire rope hoist



Hoisting technology

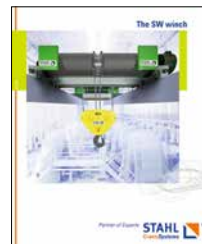
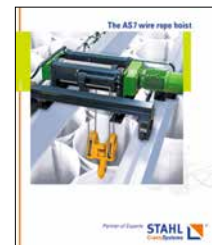
The wire rope hoist programme

Behind the attractive design of STAHL CraneSystems' wire rope hoists lies a compact, robust and largely low-maintenance construction. They are reliable, powerful and long-lived.

The wire rope hoists are manufactured in systematically modular design and dimensioned for the safe working load range from 500 kg to 160,000 kg. The versatile SH is available in five frame sizes with 26 S.W.L. variants for the safe working load range from 500 kg to 25,000 kg. The upper safe working load range from 125,000 kg is covered by the field-proven AS model. The SW winch programme extends the range of application into the heavy lifting range up to 250,000 kg. Off-standard applications and customised solutions can be achieved cost-effectively thanks to the modular design of the standard components.

All wire rope hoists are also available in explosion-protected design complying with ATEX and IECEx.

→ Please order our brochures on:
SH wire rope hoist, AS 7 wire rope hoist,
SW winch





■ Standard
□ Option

Type	S.W.L. up to [kg]	Stationary	OE double rail crab	Monorail trolleys		
				KE	UE	DKE
SH 3	3,200	■	■	■	■	■
SH 4	6,300	■	■	■	■	■
SH 5	10,000	■	■	■	■	■
	12,500	■	■	■	■	□
SHR 6	16,000	■	■	■	■	□
SH 6	25,000	■	■	□	■	□
AS 7	80,000	■	■	□	□	□
AS 7 ZW	125,000	■	■	□	□	□
SW 10	100,000	■	■	□	□	□
SW 16	160,000	■	■	□	□	□
SW 25	250,000	■	■	□	□	□

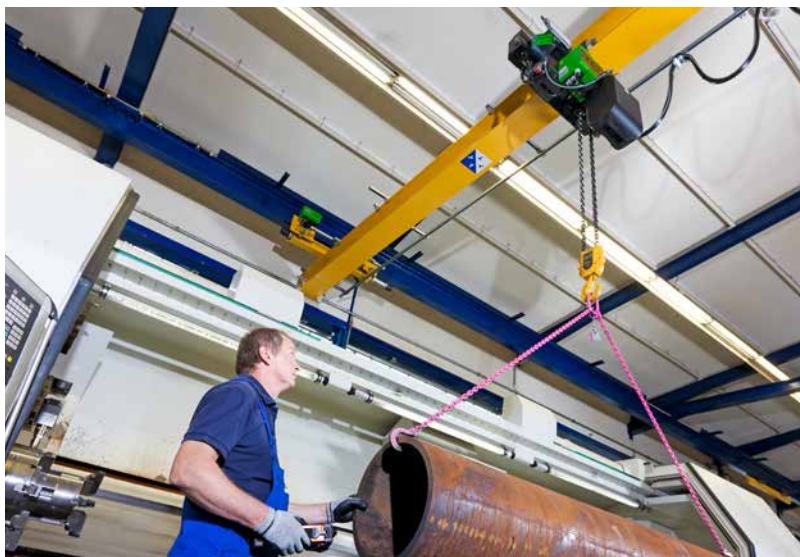
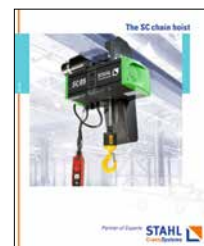
The chain hoist programmes

The ST and SC chain hoist programmes from STAHL CraneSystems rank among the most distinctive and comprehensive on offer in the world. The robust classic ST, tried and tested day for day, proves its efficiency in 13 variants for the safe working load range from 125 kg to 6,300 kg. The whole programme is available in explosion-protected design complying with ATEX and IECEx.

The SC chain hoist supplements the ST chain hoist programme, its technically mature design, one of the most up-to-date constructions available at present, is convincing. It is available in three variants for the safe working load range from 63 kg to 2,500 kg.

The innovative and pioneering chain hoist design offers great economic advantages and is suitable for rugged use in industry. The different configurations and various suspensions permit numerous possible combinations. Over and over again new, practical off-standard designs are developed, such as the dual chain hoist with fixed or variable distance between hooks.

➔ Please order our brochures on:
ST chain hoist, SC chain hoist





■ Standard
□ Option

Type	S.W.L. up to [kg]	Stationary	Push trolley	Electric trolley	Articulated trolley	Short head-room trolley	Extra short headroom trolley	Dual chain hoists	
								STD	STD Vario
ST 05	125 – 630	■	■	■	■	■	■	■	□
ST 10	500 – 1,000	■	■	■	■	■	□	■	□
ST 20	1,000 – 2,000	■	■	■	■	■	□	□	□
ST 30	1,250 – 3,200	■	■	■	■	■	■	■	□
ST 50	2,500 – 5,000	■	■	■	■	■	■	■	□
ST 60*	3,200 – 6,300	■	■*	■	■	■	□	■	□

* The ST 60 is only available with 1/1 reeving in the standard programme.

■ Standard
□ Option

Type	S.W.L. up to [kg]	Stationary	Push trolley	Electric trolley	Articulated trolley	Short head-room trolley	Extra short headroom trolley	Dual chain hoist
SC 02	320	■	■	■	■	■		
SC 05	630	■	■	■	■	■	■	■
SC 10	2,500	■	■	■	■	■	□	□
SC 16*	3,200	■	■	■	■	■	■	■
SC 25*	5,000	■	■	■	■	■	■	■

* Chain hoist types SC16 and SC25 are still under development and will be available from 2013.

The drive technology

The crane endcarriages and travel drives

The robust crane endcarriages from STAHL Crane-Systems are manufactured in up-to-date series production. Mounting them on both suspension cranes and overhead travelling cranes is simplicity itself. The various wheel diameters permit suitable solutions to be found for all applications.

The precisely controlled travel drives set your crane in motion and help to position the load quickly and precisely without troublesome swinging. The integrated centrifugal mass and low-noise gears ensure smooth starting, steady acceleration and braking. High operational reliability and a long service life are guaranteed.



Overhead travelling crane endcarriages



- 8 different wheel diameters from 90 mm to 400 mm
- Spans up to 40 m
- Safe working loads from 125 kg to 50,000 kg
- Higher safe working loads on request

Suspension crane endcarriages



- 4 different wheel diameters from 80 mm to 200 mm
- Spans up to 32 m
- Safe working loads from 125 kg to 20,000 kg

Crane travel drives



- Low-maintenance crane travel drive
- In standard version, two speeds at a ratio of 4:1, or with stepless frequency control at a ratio of 1:10
- Integrated disc brake

Frequency inverter for ›Hoist‹ and for ›Cross/long travel‹



- Stepless acceleration and braking extend system life
- Smooth starting and braking ensures minimum load swing

The control technology

The electrical components

Standard contactor controls are available for all common control voltages. Fundamental electrical components are supplied with plug connections as far as is technically possible and meets requirements. However the standard equipment can be effectively supplemented by options to suit your specific application. You can choose from different control and monitoring components and optional frequency inverters for hoists and travel drives.

This equipment will increase safety in material handling and extend the system service life.

Radio remote control equipment



- micron push-button device with belt clip, with optional signal feedback from crane
- spectrum joystick transmitter with harness
- Automatic battery chargers with replacement batteries

Control pendants



- Robust control pendant with EMERGENCY STOP palm button and control cable
- Two-step switching elements for hoist, trolley and crane
- IP 65 protection
- Additional buttons, for example for activating a horn, can easily be added.
- With optional load display. The operating data can be read out via an interface on the control pendant.

Travel limit switches for ›Cross/long travel«



- Switchover ›fast/slow« (pre-switching) and limiting in both directions of travel
- Obstacle avoidance from one or both directions of travel
- IP 66 protection

SLE and SMC evaluation devices



- Constant monitoring of load even when hoist is at a standstill
- Monitoring of motor temperature of hoist and travel motor
- Recording of operating data, e.g. operating hours, motor management
- Output relay for additional functions

SMC offers in addition

- Programming/read-out by means of laptop
- Suitable for use with frequency inverter
- Slack rope monitoring
- Calculation of full load operating hours, load spectrum and motor switching operations
- Load display can be connected

Overload cut-off



- Dual channel load recording at rope anchorage (LCD) or gear torque support (LSD)
- Data evaluated by SLE, SMC or safety PLC
- The ST chain hoist has an adjustable slipping clutch

Hoist limit switch



Wire rope hoist

- A gear limit switch for top and bottom hook position and an operational hoist limit switch for top hook position are fitted as standard.
- As an option, the switch can be equipped with up to eight switching elements. This permits for example additional stopping positions and operational limiting in bottom hook position.

Chain hoist

- Cut-off in top hook position or cut-off in top and bottom hook position.
- As an option, the chain hoist can also be equipped with a gear limit switch with up to eight switching elements.

Load display



- SLD (Stahl load display) four-figure 7-segment load display, large-format, luminescent, red digits, is available with various interfaces including CAN.
- Height of digits can be chosen from 60, 100 or 150 mm
- No additional sensor required as standard load sensor is used

Signalling devices



- Visual and acoustic signalling devices such as horn and flashing light can be mounted on hoists and trolleys.
- The signalling devices can be activated by a button on the control pendant.

Expertise in explosion technology

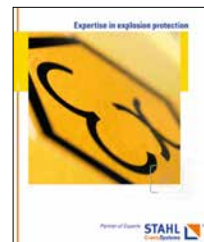


STAHL CraneSystems is known internationally as an explosion protection specialist and is regarded as world market leader in explosion protection technology. The safety of people and machines in areas subject to gas and dust explosion hazards is our top priority. Here we make no compromises. As developer of numerous innovations in this field we have had palpable influence on crane technology. Experience and expertise from many decades, our own fundamental research and development, approvals from the Federal Physico-Technical Institute (PTB) and other test institutes in many countries underline our expertise. Hoist and crane technology from STAHL CraneSystems ranks among the safest technology on the market in the chemical, petrochemical and pharmaceutical industries, the food processing industry, power supply, shipbuilding, offshore and natural gas liquefaction industries (LNG).

Without exception, the explosion-protected hoist and crane components and their supplementary equipment are based on our standard programmes. All components come from our own production with certified quality assurance systems, from motor and brake to controls and control pendant. For this ensures the complete, high-quality explosion protection on which users, crane manufacturers and system manufacturers all over the world have relied for decades. The strict ATEX directives and IECEX regulations on mechanical and electrical explosion protection are of course met.

The facts

- Internationally leading specialist for explosion protection technology
 - One of the world's most comprehensive product portfolios for Zone 1, Zone 2, Zone 21 and Zone 22
 - All additional equipment available in explosion-protected design
 - Design and maintenance to ATEX and IECEX in certified quality
- Please order our basic brochure on:
Expertise in explosion protection





Application	Category	Protection against	Explosion protection
Zone 1	Ex II 2 G	Gas	Ex de IIB T4 or Ex de IIC T4
Zone 2*	Ex II 3 G	Gas	Ex de nA IIB T3 (T4) or Ex de nA IIC T3 (T4)
Zone 21	Ex II 2 D	Dust	Ex tD A21 IP 66 T 120 °C
Zone 22	Ex II 3 D	Dust	Ex tD A22 IP 66 T 120 °C

* Versions for Zone 2 are only available as standard in the wire rope hoist programme.

Quality from a single supplier

Engineering

Engineering means innovation and individuality. Constantly redefining the lifting and transporting of loads for complex requirements even in hazardous areas is a job for STAHL CraneSystems' experts. Drawing on one of the widest product ranges of standard components, they regularly develop modern, individual off-standard and customised solutions which meet all national and international directives and laws.

Hardly any other manufacturer of lifting and crane technology can offer you this diversity of precisely designed top quality customised solutions in conjunction with maximum cost-effectiveness.

The facts

- Perfectly adapted to your project
- Short development period
- Modular system ensures cost-effectiveness
- Engineering support from STAHL CraneSystems experts
- Assistance from customer service for complicated problems



Manufacture and production

From carefully selected basic material to accurate manufacture of components to high-quality final product: every product from STAHL CraneSystems is characterised by uncompromising quality, high reliability and maximum performance. The precisely coordinated individual components are manufactured in our own production plants using ultra-modern manufacturing methods; demanding production steps are performed by hand. In our production plants in Europe, experienced skilled workers assemble and thoroughly test the entire hoists and all crane components. Our integrated quality management system meets national and international verification requirements.

The facts

- High quality and reliability thanks to manufacture by ourselves
- Production plants in Europe
- Manufactured using ultra-modern technology
- Integrated quality management
- All components tested before delivery



Support

Quality right down to the most minor detail is the standard STAHL CraneSystems is committed to. Not only in the field of crane technology, but also on the subject of support. You will find lifting and crane technology from STAHL CraneSystems all around the world. Developed by engineers and experts, manufactured with the greatest care conforming to our well-known quality standard. All around the world, many companies from various fields have decided on superlative safety and quality, on products from STAHL Crane-Systems.

When it comes to sales, we are committed exclusively to capable, professional crane manufacturing partners. You can expect optimum support from them when your individual crane system with components from STAHL Crane-Systems is at stake. Consulting and erection of a new system, system-oriented testing and maintenance, modernisation, spare parts supply and training courses. Together with our subsidiaries and crane manufacturing partners we offer you perfectly coordinated support all over the world.





Spare parts – accessible right around the clock

Our own subsidiaries and numerous partners around the world ensure reliable spare parts supply and expert assistance in your area. Even decades after a series has been discontinued, spare parts are available all over the world right around the clock.



Training courses

We constantly keep our regional crane manufacturing partners up to date with training courses, seminars and information material. You too can profit directly from our expertise. We impart practical and theoretical knowledge in our own training centre or on your premises. The seminars on offer in the form of individual, basic and advanced courses cover all main product groups. However we would also be pleased to match a special programme to your individual specifications and requirements. You will find our current seminar programme at

www.stahlcranes.com/en/support



Customer service centre – in action all over the world

Our customer service centre is a service for our customers: wherever you are, whenever we are needed we assist your crane or systems manufacturer and your fitters with our experience and expertise. Up-to-date diagnostic apparatus and condition monitoring systems stand by to support professional service and maintenance work. Not only you, but your system, are in safe hands. You can rely on us.

You will find our online service at

www.web.stahlcranes.com.

You can reach our customer service centre on customer.service@stahlcranes.com.

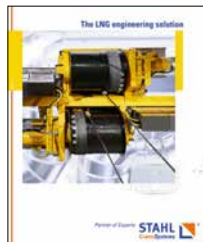
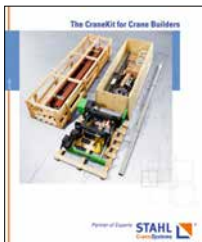
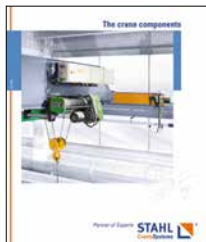
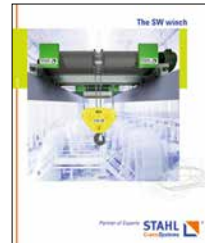
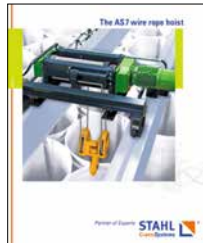
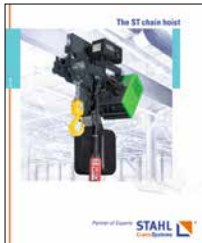
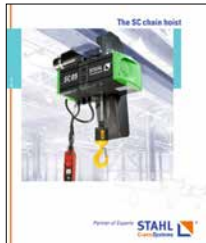


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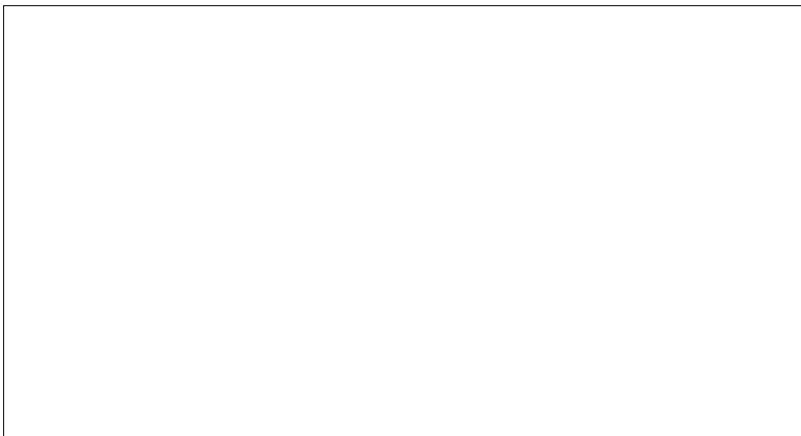
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Presented by



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Partner of Experts

STAHL
CraneSystems 