

Crane Technology – comprehensive and innovative



STAHL CraneSystems | Lifting technology | Drive technology | Control technology

Competence from STAHL CraneSystems

Experienced Over 130 years of tradition, over 130 years of practical approach, competence and experience. STAHL CraneSystems can look back on a history characterised by the constant impetus to innovation and significant modernisations. Revolutionary and programmatic in many fields, always receptive to new aspects, we have amassed a wealth of experience that gives us a considerable lead today. You as our customer profit from this lead, from the know-how of one of the world's top-ranking manufacturers of components and systems for overhead transportation. As regards technology and cost-effectiveness, our products belong to the top flight internationally. Our service is individual, customer- and practice-oriented.



- 1876** | Company founded by Raphael Stahl
- 1898** | First large electric gantry crane
- 1922** | First electric hoist with wire rope and drum
- 1978** | AS series of wire rope hoists
- 1991** | Innovative process technology doubles the capacity of the Ettlingen crane factory
- 1998** | SH wire rope hoist
- 2003** | SHW 8 heavy duty winch
- 2006** | Innovative crane technology dispensing with moving cables

1876



1898



1922



1978



1998



2003



2006



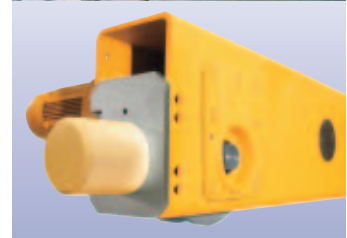
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Crane technology from STAHL CraneSystems _ a cost-effective, safe investment

Competent STAHL CraneSystems supplies all crane components for overhead material flow technology from a single source. Our high quality components can be used flexibly and thus permit particularly cost-effective overall solutions. The spectrum is broad. The S.W.L. ranges from 125 kg to 160,000 kg. From simple workplace solutions to interconnecting systems to complex automation, anything is possible depending on your requirements and ideas. Is the ambience hot, cold, damp, hazardous, or simply standard? No problem, STAHL CraneSystems has the right solution for all areas. All over the world, our engineers and technicians enjoy the trust of our many regular customers. Our engineering, our flexible crane programme and our high standard of service leave no wishes unfulfilled. Modern production techniques and certified processes guarantee the consistently high quality of crane components from STAHL CraneSystems.

- › **Competent** _ experience and expertise gained from more than 100 years of crane technology
- › **Customer oriented** _ qualified engineers work out customised solutions in a dialogue with the customer
- › **Flexible** _ modular structure of cost-effective, individual crane systems made from high quality components from STAHL CraneSystems
- › **Cost-effective** _ reliable, low maintenance and service-friendly hoists and components
- › **Customer-friendly** _ comprehensive, world-wide service network ensuring fast reaction times
- › **A safe investment** _ availability of original parts even decades after the range has been discontinued

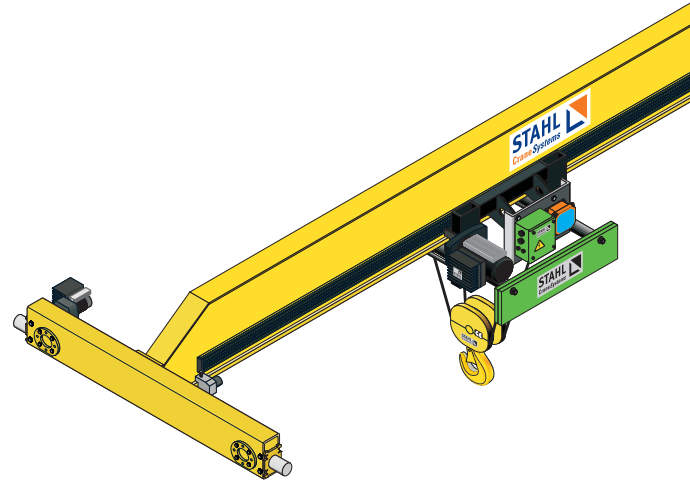




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- 1 | Maximum hook height – A single girder overhead travelling crane in a plastics moulding plant transports casting tools for retooling the machines. Maximum hook paths are possible even in low buildings with the special chain hoist “extra short headroom trolley”.
- 2 | Maximum cost-effectiveness – The adaptability of the single girder overhead travelling cranes means cost advantages even in the phase of planning and constructing the building. The space-saving construction enables the roof height to be lowered. Future heating costs can thus be reduced.

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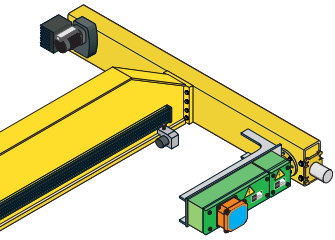


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- 3 | Maximum spans – Single girder overhead travelling crane with 10,000 kg S.W.L. and welded crane bridge.
- 4 | Optimum utilisation of space – Unwieldy loads are transported and loaded onto lorries in a low room. The height of lift is increased by using a STAHL CraneSystems cantilever crab.
- 5 | Maintenance workshop – The patented construction of the ST chain hoist range saves valuable headroom and facilitates transporting loads safely.
- 6 | Mechanical engineering – This production building has been fully equipped with single girder overhead travelling cranes and wall jib cranes from STAHL CraneSystems.



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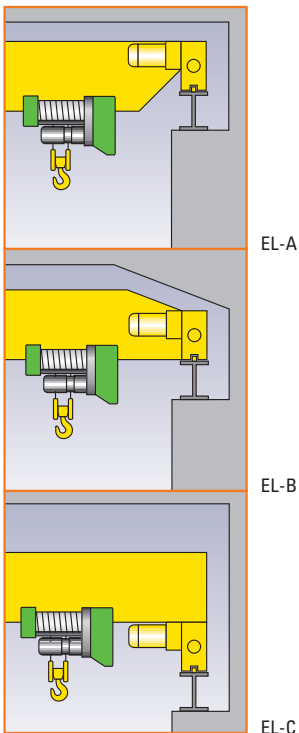


Single girder overhead travelling cranes

Adaptable The single girder overhead travelling crane from STAHL CraneSystems with an S.W.L. of up to 16,000 kg is flexible and astonishingly adaptable. Its use enables rational, cost-effective material flow solutions to be achieved even in low-ceilinged or small buildings.

- › **Flexible** _ extremely adaptable thanks to various installation variants
- › **Innovative** _ all control signals by preference transmitted by radio signal
- › **Cable-free** _ in conjunction with the radio control technology, the main power supply is designed as a conductor line, dispensing with festoon cables and cable trolley runway
- › **Resilient** _ drives with 60% DC
- › **Safe** _ HSFG bolt connection for the crane bridge with statically defined introduction of forces from crane bridge to endcarriage
- › **Convenient** _ smooth starting and braking characteristics, on request with the modern SFD frequency inverters

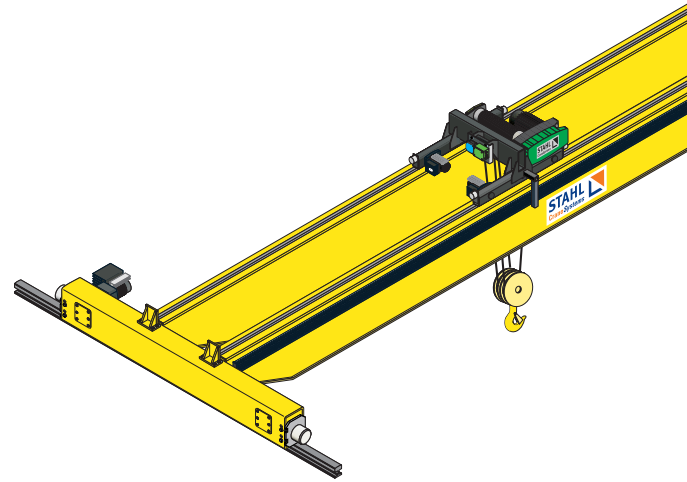
The existing space can be utilised to the full by employing various installation variants. The crane bridge girder can be individually adapted either “flush at top” (EL-A), “flush at bottom” (EL-B) or “raised” (EL-C). A further increase in height of lift is provided by the use of the “extra short headroom trolley” up to 5,000 kg. By preference, single girder overhead travelling cranes are supplied with control pendants and festoon cable supply along the crane bridge. If desired, STAHL CraneSystems will also supply overhead travelling cranes with an innovative and pioneering concept. The signals for controlling the crane are transmitted by radio, thus dispensing with cable loops and cable trolleys on the crane girder.



Type	Maximum S.W.L.	Maximum span	Hoist
Single girder overhead travelling crane EL-A	16 t	32.5 m	Chain hoist up to 6.3 t Wire rope hoist up to 16 t
EL-B	16 t	32.5 m	
EL-C	10 t	23 m	
Double girder overhead travelling crane ZL-A	160 t	32.5 m	Wire rope hoist
Single girder suspension crane EH-A	10 t	20 m	Chain hoist up to 6.3 t Wire rope hoist up to 16 t
EH-B	10 t	20 m	



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- 1 | Paper manufacture – Three original STAHL wire rope hoists are mounted on the double girder overhead travelling crane with 30,000 kg S.W.L. The true vertical lift design ensures maximum safety. The outer hoists ensure that the reels are handled without swinging, the centre hoist with a single hook is used for maintenance work on the paper machines.
- ➔ Ask for our reference brochure 'Handling paper reels'!

- 2 | Docks, Middle East – A double girder overhead travelling crane with 20,000 kg S.W.L. in rugged use, perfect corrosion protection for this damp, salt-laden atmosphere is provided by a high quality paint finish.
- 3 | BMW motor plant, Landshut – Three bridge cranes with 40,000 kg S.W.L. each in operation. Two hoists with powered rotating load hooks work on each crane. The cranes are equipped with maintenance catwalks for safe inspection work.
- 4 | Motor industry – Crane technology around the clock. The toolmaking shop has been fully equipped with STAHL double girder overhead travelling cranes. The cranes are easily accessible from integrated maintenance catwalks.

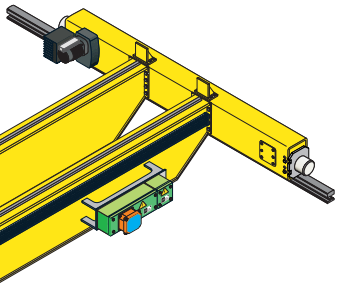
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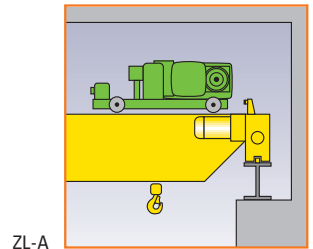
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Double girder overhead travelling cranes

Double strength

STAHL CraneSystems is the specialist for high-performance cranes in the upper S.W.L. range. This naturally includes the double girder overhead travelling crane with an S.W.L. of up to 160,000 kg and a span of up to 32.5 m. Whether in concrete manufacturing plants, in the motor industry or in power stations: technology from STAHL CraneSystems is in use wherever maximum safety and cost-effectiveness are required. The original wire rope hoists from STAHL CraneSystems with true vertical lift guarantee maximum precision when lifting loads. The double girder overhead travelling crane can be integrated into planned or existing buildings by employing special installation variants. Wide-ranging equipment packages increase productivity and ensure maximum safety in day-to-day operation. Components from the condition monitoring programme monitor the loads and record the operating conditions. Requirements such as stepless speeds, higher crane travel speeds or maintenance platforms are achieved with original components from STAHL CraneSystems.



- › **Flexible** _ extremely adaptable thanks to various installation variants
- › **Innovative** _ all control signals by preference transmitted by radio signal
- › **Cable-free** _ in conjunction with the radio control technology, the main power supply is designed as a conductor line, dispensing with festoon cables and cable trolley runway
- › **Resilient** _ drives with 60% DC
- › **Safe** _ HSFSG bolt connection for the crane bridge with statically defined introduction of forces from crane bridge to endcarriage
- › **Convenient** _ smooth starting and braking characteristics, on request with the modern SFD frequency inverters

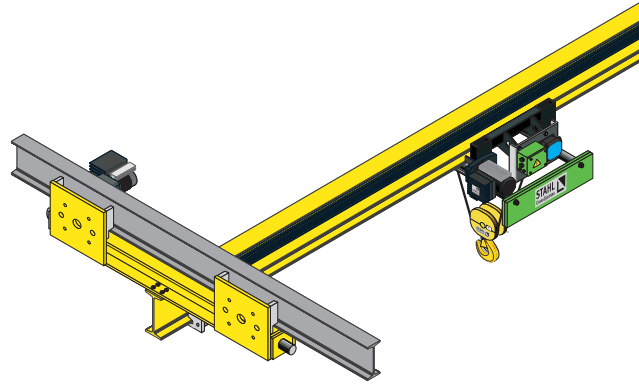
Type	Maximum S.W.L.	Maximum span	Hoist
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Single girder suspension crane EH-A	10 t	20 m	Chain hoist up to 6.3 t Wire rope hoist up to 16 t
EH-B	10 t	20 m	



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- 1 | Assembly of electrical components _ In particular in buildings with a low noise level, the particularly quiet technology of crane components from STAHL CraneSystems is a welcome advantage.
- 2 | Perfect utilisation of space _ Two single girder overhead travelling cranes, each with 5,000 kg S.W.L., make optimum use of the width of the building.

3 | Metalworking shop _ The single girder suspension crane with 3,200 kg S.W.L. works in multi-shift operation.

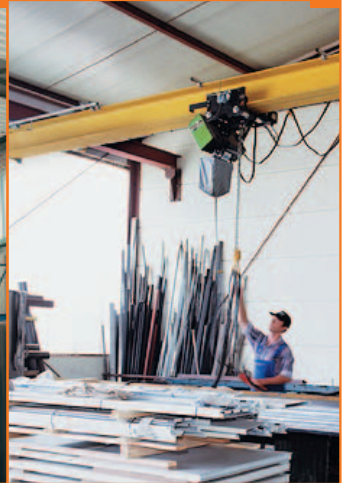
4 | Joinery shop _ The patented construction of the single-fall ST chain hoist with short headroom trolley permits the maximum hook path.

5 | Freedom _ The crane interlock permits material to be transported overhead to neighbouring sections of the building.

6 | Railway wagon construction _ Single girder suspension cranes with 7,500 kg S.W.L. ensure trouble-free processes in overhead transport.

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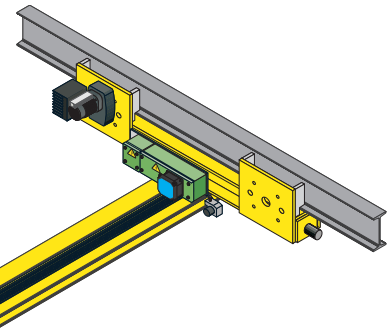


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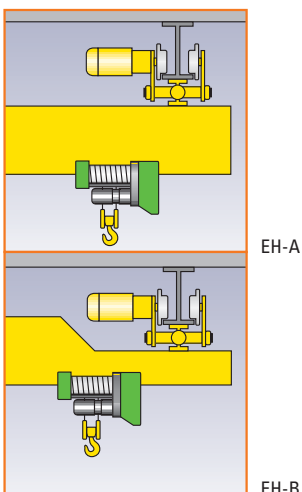


Single girder suspension cranes

The optimum

The single girder suspension crane with components from STAHL CraneSystems needs very little space. It runs on the lower flange of the crane runway which is mounted directly on the ceiling and achieves the greatest utilisation of space possible. In particular in the case of restricted production areas, this permits optimum utilisation of the width of the room. The lifting capacity of the single girder suspension cranes ranges up to 10,000 kg in the basic version. Higher capacities or versions as double girder suspension cranes can be built on request. Suspension cranes in neighbouring building sections can be connected with the aid of the crane interlock. The hoist can travel onto the neighbouring crane together with its load and can reach any destination in the interlocked system.

- › **Innovative** _ all control signals by preference transmitted by radio signal
- › **Cable-free** _ in conjunction with the radio control technology, the main power supply is designed as a conductor line, dispensing with festoon cables and cable trolley runway
- › **Compact** _ minimum approach dimensions and efficient utilisation of the width of the building
- › **Convenient** _ smooth starting and braking characteristics, on request with the modern SFD frequency inverters
- › **Low wear** _ movable trolley suspensions equalise any inaccuracy or distortion in the crane runway
- › **Wide-ranging** _ crane interlocks for overhead material transport across more than one building section



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Double girder overhead travelling crane ZL-A	160t	32.5 m	Wire rope hoist
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EH-B	10t	20 m	



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1 Foundry – Above-average demands: continuous operation, heat, dirt and loads up to 80,000 kg. The field-proven technology with integrated load display from STAHL CraneSystems ensures maximum safety when transporting molten metals.



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2 Handling paper reels – With a total of five axes of motion, paper reels up to 18,000 kg are reloaded quickly and safely at StoraEnso.

→ Ask for our reference brochure 'Handling paper reels'!

3 Ship outfitting – This double girder overhead travelling crane with two hoists of 20,000 kg S.W.L. each was equipped with rack-and-pinion drives and special paint to make it suitable for marine use.

4 Loading crane bridges – A custom-built crane with slewing gear and an S.W.L. of 10,000 kg is used in crane manufacture. Two load hooks lift the completed crane and rotate it by 90° for loading onto a lorry. The crane driver controls all motions by radio from a safe distance.



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System solutions

Practical experience STAHL CraneSystems enjoys every customer-specific challenge. Only when your individual solution needs to be planned, from a single hoist to custom-built cranes to computer-controlled automation, do we really have to extend ourselves. Then all our flexibility and dynamism are brought to bear. The highly motivated, experienced engineers and technicians at STAHL CraneSystems combine their concerted, comprehensive know-how with your specifications and ideas. Our versatile hoist programme and cost-effective series-produced crane components form the basis of every system solution with components from STAHL CraneSystems. The crane systems are equipped individually with high-performance condition monitoring equipment, ensuring maximum safety and cost-effectiveness. With your input, in a constructive process a solution is achieved that is practical, individual and precisely adapted to your application.

Competent Numerous examples both in Germany and abroad prove the competence of STAHL CraneSystems in the field of system solutions. We provide detailed information on these technically demanding projects in separate reference brochures. Just ask for them at → www.stahlcranes.com

- **High-performance** _ experience and expertise gained from more than 100 years of crane technology
- **Innovative** _ continuing development of the hoists and crane components
- **Individual** _ customer-specific system solutions
- **Partnership** _ joint planning in consultation with our customers
- **Safe** _ top quality ensured by certified processes
- **Consistent** _ statics and engineering complying with the latest DIN and EN standards

5 | Railway wagon construction _ The three cranes with 51 m span have room to move in the large production building measuring 52 m x 85 m. All six load hooks can be operated synchronously from a single radio remote control if required.

➔ Ask for our reference brochure 'Railway wagon construction'!

6 | Waste reloading station _ Multi-hook operation, automatic load positioning and loads up to 38,000 kg: STAHL CraneSystems supplied the whole system including the free-standing crane runway.

➔ Ask for our reference brochure 'Waste reloading station'!

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- 1 | SH Ex wire rope hoists are available for gas explosion protection Zone 1 and Zone 2, and for dust explosion protection Zone 21 and Zone 22. They safely meet the technical, normative and practical requirements made of them by ATEX.
- 2 | Chemical plant _ Here a single girder suspension crane with 1,600 kg S.W.L. is used for transporting components during maintenance work outdoors. The construction of the explosion-protected chain hoist enables the whole crane bridge to be utilised to the full.
- 3 | Chemical plant _ A single girder overhead travelling crane with 5,000 kg S.W.L. is operated by radio remote control in a hazardous area. It transports goods through a shaft over several floors.

Application	Category	Protection against	Explosion protection class
Zone 1	II 2 G	Gas	Ex de IIB T4 or Ex de IIC T4
Zone 2	II 3 G	Gas	Exn de A IIB T3
Zone 21	II 2 D	Dust	Ex tD A21 IP66 T 120°C
Zone 22	II 3 D	Dust	Ex tD A22 IP66 T 120°C

Explosion-protected cranes



ATEX

Extremes

When it is a question of the safety of man and machine in hazardous areas, STAHL CraneSystems is pioneering, forceful and systematic. With our experience and our know-how from many decades, our own fundamental research and our own R&D, with approvals from the Federal Physico-Technical Institute (PTB) and other test institutes in many countries, STAHL CraneSystems occupies a special position in this field. All components of a crane or hoist are strictly from our own production, from motor and brake to control and switchgear. This ensures optimum, high-quality explosion protection. The new rigorous ATEX regulations on mech-

anical explosion protection are of course met. STAHL CraneSystems was the first manufacturer of overhead material flow technology to implement the ATEX 95a directive 94/9/EC in its production programme.

- › **Experienced** _ the world's leading specialist for explosion protection engineering
- › **Strict** _ everything from one supplier and from our own production
- › **Pioneering** _ design in compliance with ATEX in certified quality
- › **High quality** _ extremely safe and accurate
- › **Comprehensive** _ technology for use in Zone 1, Zone 2, Zone 21 and Zone 22

References

- › Linde AG, Höllriegelskreuth
- › Wacker-Chemie GmbH, Burghausen
- › BASF AG, Ludwigshafen
- › Bayer AG, Leverkusen
- › Hoechst AG, Frankfurt
- › Degussa AG, Hanau und Frankfurt
- › Clariant, Burgkirchen
- › InfraServ, Burgkirchen
- › Qatar Gas, Qatar



Components and equipment from STAHL CraneSystems _ consistent variety

Individual Profit from the know-how of one of the world's leading manufacturers of components and systems for material handling and material flow technology. The high quality components from STAHL CraneSystems belong to the top flight from international manufacturers, from both a technical and cost point of view. Acquiring the whole crane technology from a single supplier, from STAHL CraneSystems, means perfectly matched systems, consistent quality and competent contacts on the spot. The components, equipment and parts complement each other perfectly both in standard cranes and in individual, custom-built system

solutions. Technical safety and decisive cost-effectiveness, this is what the name STAHL CraneSystems stands for.

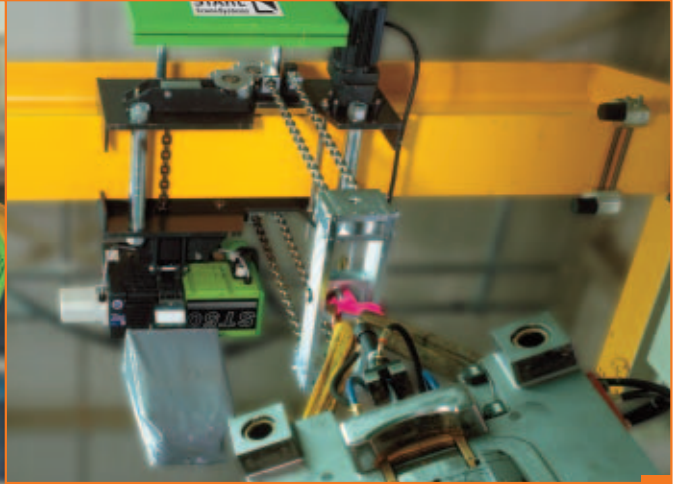
- › **Competent** _ original crane components from a single supplier for perfectly matched system solutions
- › **Individual** _ adapted to specific customer demands and requests
- › **Cost-effective** _ series production ensures economical standards
- › **Impressive** _ the world's widest range of hoists, a wide selection of high quality crane components and crane equipment

Original Hoists

Original crane components

- › Crane endcarriages
- › Travel drives
- › Control pendants and radio transmitters
- › Crane controls

Crane equipment

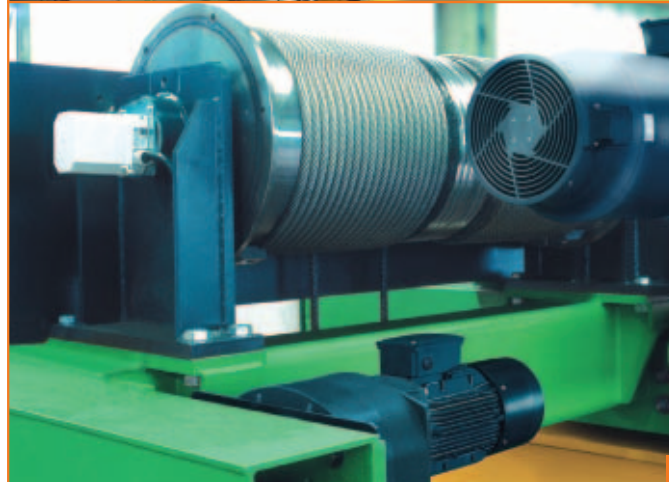


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- 1 | The ST chain hoist with an S.W.L. of up to 6,300 kg, shown here with a 'short headroom' trolley.
- 2 | Extra short headroom trolley – The STAHL STK 50 chain hoist with an S.W.L. of up to 5,000 kg. In this version, the headroom is reduced by more than 60% so that the room's height can be utilised to the full.

3

- 3 | KE monorail trolleys with wire rope hoists from the SH series are used in suspension cranes and single girder overhead travelling cranes up to 16,000 kg.
- 4 | SH wire rope hoist with double rail crab – In conjunction with double girder overhead travelling cranes, the SH is used up to an S.W.L. of 25,000 kg.



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- 5 | The innovative SHW8 heavy duty winch is used for loads up to 160,000 kg. Maximum safety is offered by the brakes, on request in redundant design.
- 6 | The AS7 wire rope hoist supplements the SH series in the upper S.W.L. range up to 100,000 kg. On request, it is supplied in a true vertical lift version.

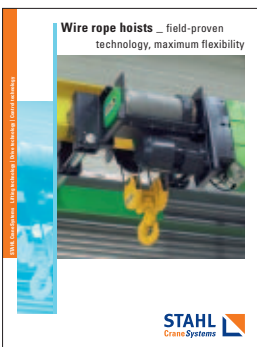
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Hoists

Flexible

The core of a crane system is the high quality hoist from STAHL CraneSystems. With our wide range of wire rope and chain hoists, we offer you the greatest variety of hoists in the world. That means flexibility for your logistics tasks. Every material flow requirement, however unconventional, can be solved individually, and that at a particularly favourable ratio of performance and cost-effectiveness. The adaptable wire rope hoists and winches are available as a modular system and designed for an S.W.L. range of 500 kg to 160,000 kg. The reliable chain hoists can be used universally in the S.W.L. range of 125 kg to 6,300 kg. The attractive design of the wire rope and chain hoists from STAHL CraneSystems masks a compact, robust construction that requires extremely little maintenance. The hoists are extremely reliable and powerful. The particularly high mechanism group classification in accordance with FEM is proof of the well above average life-time, of safety and quality. All hoists from STAHL CraneSystems are also available in explosion-protected design.

- **Original** _ hoists from STAHL CraneSystems from our own production in Germany
- **Meeting requirements** _ the most extensive hoist range for the optimum design of your crane
- **Safe** _ generously dimensioned hoist and travel motors for long service life
- **Efficient** _ all hoists with two hoisting and two travel speeds
- **Quiet** _ extremely smooth running, very low noise level



➔ Ask for our extensive hoist brochures.

■ Standard □ Option

Hoist	S.W.L. up to [kg]	Monorail trolley			Double rail crab OE
		UE	KE	STK	
ST chain hoist	6,300	■	■	□	□
SH wire rope hoist	25,000	□	■		■
AS wire rope hoist	50,000	□	□		■
AS wire rope hoist	100,000				■
SHW winch	160,000				■



- 1 The cost-efficient STH control pendants can be equipped on request with a load display.
- 2 Radio remote control – Three ergonomic radio transmitters are available: the compact cubix pushbutton transmitter for one-hand operation, the micron pushbutton transmitter with its soft-touch buttons can be used while wearing gloves, and the spectrum joystick transmitter.
- 3 Main power supply – By preference, a four-pole conductor line is used as main power supply along the crane bridge, thus no moving cables are installed on the crane.
- 4 Crane control – In conjunction with radio technology, the control with standard plug connections is laid out clearly in a panel box on the crane bridge.
- 5 SF crane travel drives – The low maintenance drives are equipped as standard with two speeds. The integrated centrifugal masses ensure smooth starting and braking. 60% DC means that power reserves are available.

5

6 KEL endcarriage – Available with five wheel diameters, the endcarriage is used for single girder overhead travelling cranes up to 16,000 kg S.W.L. The HSFG joint ensures the safe introduction of forces from the crane bridge.

7 KZL endcarriage – Double girder cranes are equipped with this field-proven model with five optimised wheel diameters. Here too, the forces are from the crane bridge is by means of a safe HSFG joint.



6

Crane components

Modular The perfect complement to STAHL CraneSystems hoists are crane components from our own production. Functionality and performance of a crane system are developed by STAHL CraneSystems down to the last detail. Forward-looking, high quality components complement each other in the system and offer safety and economical use. With the aid of the modular components, the crane system is individually adapted to customer-specific requirements and wishes. Mature, cost-effective electronics, drive technology for the most demanding requirements, innovative components and field-proven, robust standard components are available. Competent staff, engineers and sales partners will provide you with advice and active support to assemble your individual crane system.

Optimised crane endcarriages

- › KEL for single girder overhead travelling cranes, 5 wheel diameters and 5 wheelbases
- › KZL for double girder overhead travelling cranes, 5 wheel diameters and 6 wheelbases
- › KEH for single girder suspension cranes, 4 wheel diameters and 3 wheelbases

Versatile SF crane travel drives

- › As standard with two speeds 20/5 m/min or 40/10 m/min, other speeds on request
- › As an option, with stepless speed control

Flexible operation

- › STH control pendant with cable connection
- › cubix pushbutton transmitter
- › micron pushbutton transmitter
- › spectrum joystick transmitter

Power supply along crane bridge

- › Conductor line
(in combination with radio technology)
- › Festoon cable
(in combination with control pendant)

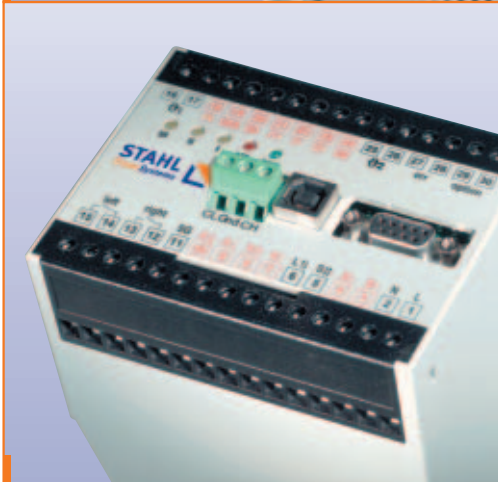
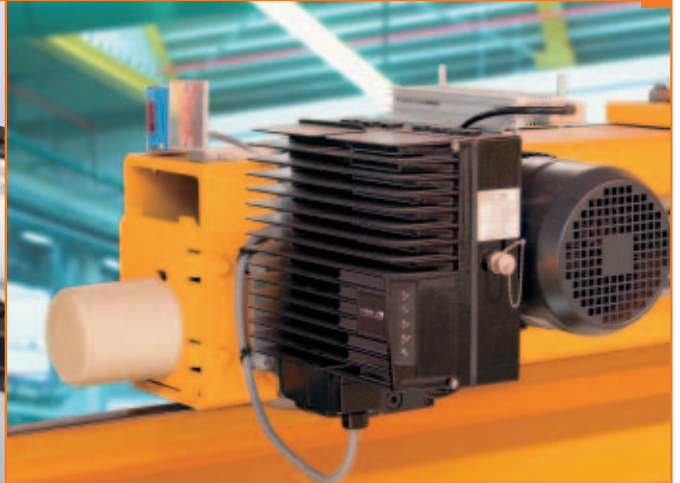
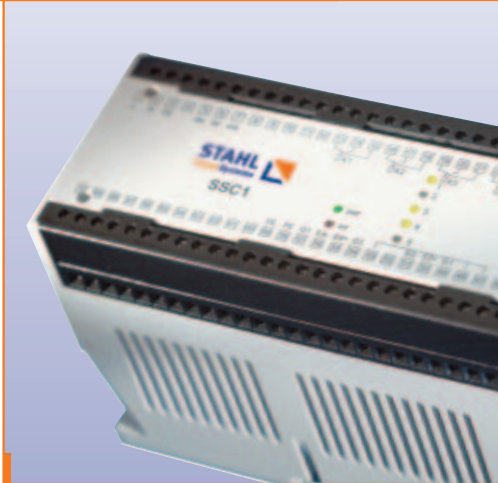
Crane control

- › Panel box with plug connections
(in combination with radio technology)
- › Panel box with terminal connections





- 1 Large format four-digit load display installed here on two hoists. The integrated load summation monitors the total load on the two hooks.
- 2 The crane catwalk with grating, rails on both sides and electrically monitored access doors at the ends permits fast and safe access to all the crane components.
- 3 The signal feedback from crane to crane operator on an LC display available as an option comprises for example the current load display, information on operating conditions, load spectrum and calculated remaining service life.
- 4 The SSC cumulated load controller adds up the loads suspended on a maximum of four load hooks and disconnects the hoist motion when the permissible limit load is exceeded.



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Crane equipment

Performance-enhancing

In addition to the crane components, a great deal of additional mechanical, electrical and electronic equipment is available from STAHL Crane-Systems. This increases the performance of your crane system still further and makes working with it particularly convenient. However what is much more important is that modern equipment such as condition monitoring systems increase process safety and safety at work and secure the investment of the whole crane system. The wide spectrum of crane equipment permits practical, safe solutions with extremely high cost-effectiveness. Robust and long-lived, they meet the well-known consistent quality of all STAHL Crane-Systems products. And if more than just a hook is required, sling equipment and spreader beams from STAHL Crane-Systems make lifting and transporting loads easier. STAHLplus is ready for this, the mail order programme for accessories and material flow technology. Just ask for our STAHLplus catalogue at

→ www.stahlplus.com

- 5 SFD1 frequency inverter ... For stepless speeds and maximum convenience in operation, the modern inverters are mounted directly on the crane and cross travel drives.
- 6 The SMC Multicontroller is used when exact operating data and maximum safety are required in crane operation.
- 7 Extra safety from reflected light barriers, cranes are reliably kept "at a distance" from each other.

The 10 most frequent features

- › Crane and cross travel limit switches
- › Radio remote control with push-button or joystick transmitter
- › Load monitoring and calculation of service life for wire rope hoists by means of SMC
- › Stepless speed control
- › Special corrosion protection systems
- › Maintenance platforms along crane bridge
- › Crane spacing with light barriers
- › Equipment for outdoor applications
- › Load display with large figure LCD
- › Spreader beams and sling equipment





Service from STAHL CraneSystems _ your powerful partner

Convincing

STAHL CraneSystems has been an innovative and highly performing company for over 130 years. Our standpoint is a practical approach, our forte is competence and our obligation is to you, our customer. Service, consulting and maintenance have thus always been elements in the spectrum of our products. Our service has developed from simple after-sales service in the early years to a modern comprehensive service concept. For example the all-embracing engineering relating to crane technology has grown with our experience and our expertise and is now made available to you directly or indirectly by STAHL CraneSystems' qualified, motivated engineers. Specialists all around the world, trained by us, offer continuous service and an optimistic partnership over the whole lifetime of your system right from the initial discussion.

- › **On the spot** _ 13 subsidiaries and over 100 partner companies world-wide
- › **Qualified** _ regular training courses for service technicians by STAHL CraneSystems in our own training centre
- › **Certified** _ external review of the quality of our training courses and standard service
- › **Informative** _ training courses, basic and advanced seminars, extensive information material

**Consulting, engineering,
commissioning**

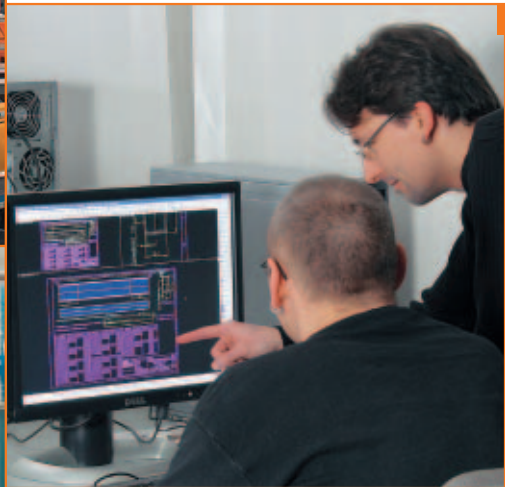
Service

**Training courses and
seminars**

Training courses and seminars, in which we make our know-how available unrestrictedly for the further training of your staff, also form part of the wide-ranging services offered by STAHL CraneSystems.



1



2



3



4



6

7

- 1 | The STAHL CraneSystems erection team setting a double girder overhead travelling crane down on the crane runway. All erection work was scheduled and performed in consultation with client and architects.
- 2 | Our team of engineers and specialist consultants ensures that the crane system is optimally adapted to your individual building project.
- 3 | ISO 9001, CAD and regular training courses and continuing education of our staff guarantee the success of your projects.
- 4 | Expertise in consultation – The long experience of our engineers is brought to bear particularly in demanding projects.
 - ➔ Ask for our reference brochure 'Waste reloading station'!
- 5 | Safety concept implemented – In collaboration with the Employers' Liability Insurance Association and the operator of this system, measures were developed to permit safe working in restricted space.
 - ➔ Ask for our reference brochure 'Paper reel handling'!
- 6 | Acceptance test of a crane with high-load test weights. Testing is always performed with 25% overload. Safe operation of the crane system is guaranteed from the first day.
- 7 | On request we will also coordinate the use of heavy vehicles (mobile crane) on your site.

Consulting – engineering – commissioning

Constructive

STAHL CraneSystems supplies more than just crane components. We offer you our constructive cooperation to optimise your future or existing overhead material flow chain. Experienced engineers and technicians, trained by us, elaborate individual solutions in a dialogue with you. An extensive engineering package is included in the services we offer. This comprises scale drawings including electrics and matched documentation. Our precise, on-schedule delivery is a reliable basis for punctual completion of your project. On site, our fitters and technicians, also trained by STAHL CraneSystems, will take care of the whole electrical and technical erection procedure. Immediately after erection an independent crane expert will test the new system for correct functioning and safety. This acceptance test is performed precisely according to national regulations. Your crane system can then start operation immediately.

The advantages for you

- › Secure investment and optimising of costs
- › Reliable consulting and punctual completion of the project
- › Optimum utilisation of space thanks to compact dimensions
- › Perfect integration of the crane technology into your factory processes
- › Safety for the future thanks to the manufacturer's expertise arising from many years of experience
- › Comprehensive service programme

- › **Perfect** _ everything from a single qualified supplier, STAHL CraneSystems
- › **Comprehensive** _ consulting, engineering and manufacture by STAHL CraneSystems
- › **Complete** _ extremely versatile, flexible range of technically mature crane components
- › **Reliable** _ on-schedule logistics



1

- 1 | Central spare parts warehouse in the Künzelsau-Hofratsmühle plant.
- 2 | Modern diagnosis apparatus assists service engineers during inspection and maintenance work.
- 3 | The “Mobile Inspection Service” will check and maintain your load suspension equipment on site. This ensures that your production will be spared frequent downtimes.
- 4 | The electronic spare parts catalogue is a new medium for ordering spare parts.



2



3



4

Service in detail

Responsible

Our obligation is to you, our customer. The lasting safety and economical operation of the crane components and thus your crane system is important to us at STAHL CraneSystems. That is why competent service experts, trained by us, take care of your system throughout its service life, round the clock. The scope ranges from world-wide prompt original parts delivery to individual maintenance with modern diagnosis equipment geared to your system, to the annual tests to meet national accident prevention regulations. In addition, in STAHL CraneSystems you have the right partner when comes to modernising your crane system. We make sure the service technicians on the spot are kept up to date. They will modernise your system and tap its full potential or adapt it to the changed requirements of your production chain. You will not only save on capital expenditure and downtimes, but profit from a huge value appreciation.

- › **World-wide** _ wide area service network with 13 subsidiaries and over 100 partners
- › **Right around the clock** _ Online-Service
→ www.web.stahlcranes.com
- › **Guaranteed** _ supply of original parts even decades after the series has been discontinued
- › **Fast** _ the electronic spare parts catalogue is a new medium for ordering spare parts
- › **Progressive** _ condition monitoring devices from STAHL CraneSystems ensure safe operation, modern diagnosis apparatus permits customised servicing to be offered

Service packages

- › Parts service
- › Preventive maintenance
- › Inspection and repairs

Modernisation packages

- › Radio remote control
- › Load displays
- › Obstacle avoidance facility
- › Crane spacing
- › Stepless speed control
- › General overhaul



- 1 Successful knowledge transfer is supported by the use of electronic media in customised seminars.
- 2 Training on many functional exhibits ensures that the theoretical knowledge acquired is converted into practical skills.
- 3 Instructions on using modern diagnostic equipment are a sensible complement to the basic training courses.
- 4 Questionnaires are used to check that the seminar content has been successfully imparted which is then documented by a certificate.

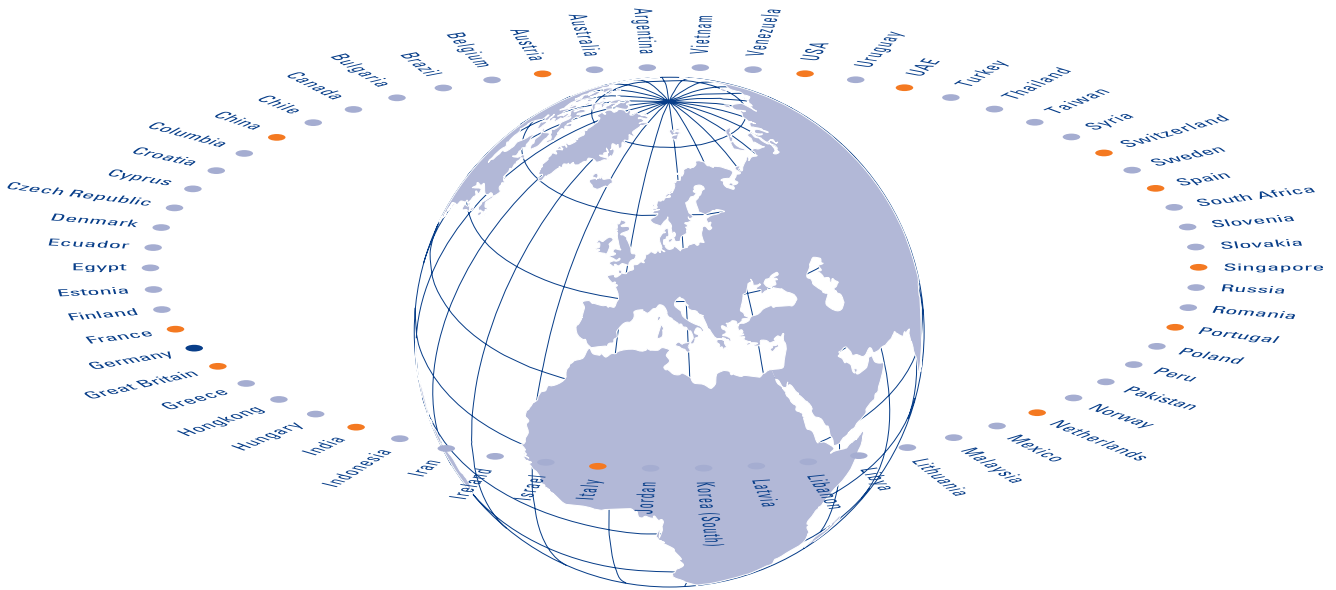
Training courses and seminars

Important People are a company's most valuable capital and an important link in a trouble-free production chain. So why not invest in the qualification of your staff. In STAHL CraneSystems you have a competent partner at your side. You can have unlimited confidence in our many years of know-how and our hands-on approach. For the knowledge that you gain from us comes directly from a manufacturer of hoists and crane components. In our own

modern training centre or on your premises we convey theoretical knowledge and practical skills on which you can draw in your work routine. The seminars on offer as individual, basic and advanced courses cover all the main product groups. However we would also be pleased to offer a special programme oriented on your individual guidelines and requirements. A certificate is issued at the end of every seminar.

Training courses and seminars

- › Our own training centre at company headquarters in Künzelsau
- › On request, on-site training, on your premises
- › Modern training methods measuring learning results
- › Many exhibits from four hoist generations
- › Training courses for current models and previous ranges
- › Crane operator training
- › Fork-lift truck operator training
- › Beginners' seminars
- › Advanced seminars
- › Individually customised training courses



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● **Sales partners**

You will find the addresses of over 100 sales partners on the Internet at www.stahlcranes.com under Contact.

➔ www.stahlcranes.com

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