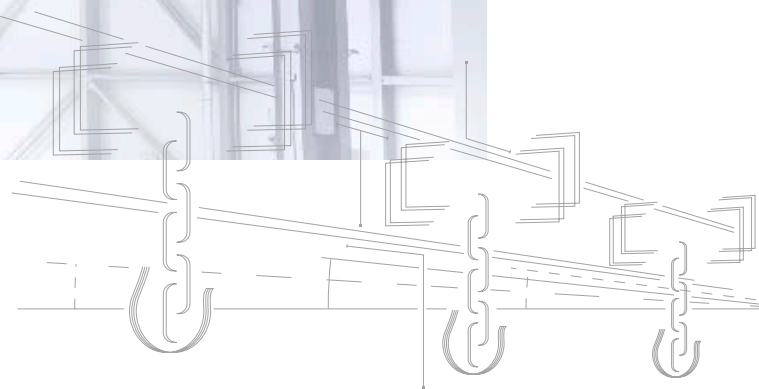


The SC chain hoist

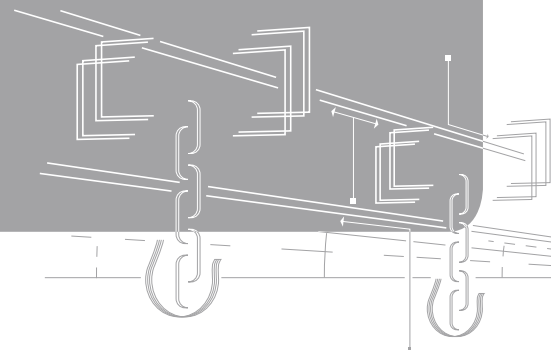
04.2014



Partner of Experts

STAHL
CraneSystems 

The SC chain hoist



STAHL CraneSystems is adding an innovative, sophisticated chain hoist programme to its tried and tested classics: the SC chain hoist. Our engineers, working in a team of experienced, practically orientated specialists, have developed the upgradable SC chain hoist, equal to the challenges posed today and in the future. Naturally it complies with the latest RoHS directives and is particularly efficient as regards energy consumption and maintenance. We are convinced that users, crane builders and systems manufacturers will appreciate this extension to the product range.

The SC chain hoist is of modular design and plug-in components make it ready for use in next to no time.

STAHL CraneSystems' SC series is at your disposal in five variants for the S.W.L. range from 63 kg to 5,000 kg.

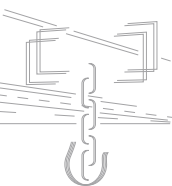
The chain hoists can be used as stationary hoists with suspension hook, eye or rigid suspension. Mobile chain hoists are equipped with fieldproven push and electric trolleys in various configurations. The technical highlight that distinguishes the SC chain hoist is the patented 5-pocket chain sprocket. An additional cog provides extra positive locking to support the vertical chain link. This reduces wear and ensures permanent safety. The chain guide is reinforced with a steel inlet.

A further advantage of the SC chain hoist is the arrangement of brake, slipping clutch and motor on one axis. The slipping clutch is not in the power flux during braking and thus has no impact when the system has come to a

standstill. In addition, a wider range of hoisting speeds is available, while the safe working load has been increased by 25 %. The impressive straight-lined design of STAHL CraneSystems' SC chain hoist and the systematic continuation of the modular construction principle form the basis for developing and manufacturing purpose-built and engineering solutions for individual customers.



SC05 chain hoist



The facts

- Innovative chain hoist programme for the S.W.L. range from 63 kg to 5,000 kg
 - Robust metal housing
 - Short, compact construction designed with straight lines
 - Chain guide reinforced with a steel inlet
 - Patented 5-pocket chain sprocket (EP 2 047 141 B1)
 - New design of the direct acting load limiter (slipping clutch)
 - High standard classification to FEM
 - Integrated hoist limit switch
 - Wider temperature range from -20°C to $+50^{\circ}\text{C}$
- For a summary of the world's most comprehensive chain hoist programme, please ask for our brochure ›The ST chain hoist.

Developed by experts for experts



We've kept the good things, just added more of them. Our engineers, drawing on their many years of practical experience, were once more able to develop important innovations to meet your requirements. The spectrum of chain hoist types available is now even further differentiated, more flexible and adaptable. Increased operational reliability, performance and cost-effectiveness, those are the features of the new chain hoist. Here are the highlights of the new SC chain hoist:



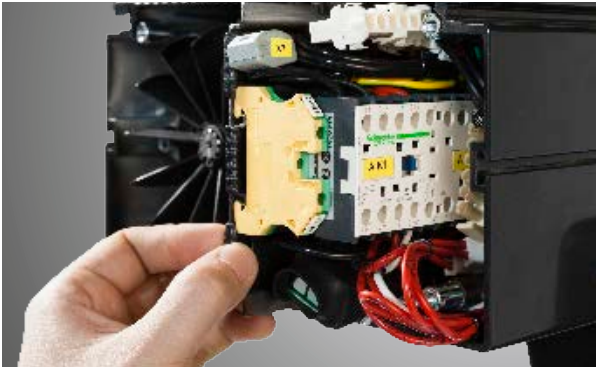
Straight lines

The up-to-date straight-lined design of the SC chain hoist signals functionality and maximum flexibility. It is the basis for customer-specific, purpose-built and engineering solutions. The clear, right-angled side faces and compact dimensions make it predestined for crane and systems building. It is particularly easy to adapt to the most varied requirements. Small, compact, straight-lined: that is not just visually attractive, but above all a direct and efficacious route to countless solutions.



All-metal

Only high-tensile powder-coated aluminium is used for the robust housing of the SC chain hoist. The special aluminium alloy is virtually as strong as steel. Plastic parts in the housing have consciously been avoided.



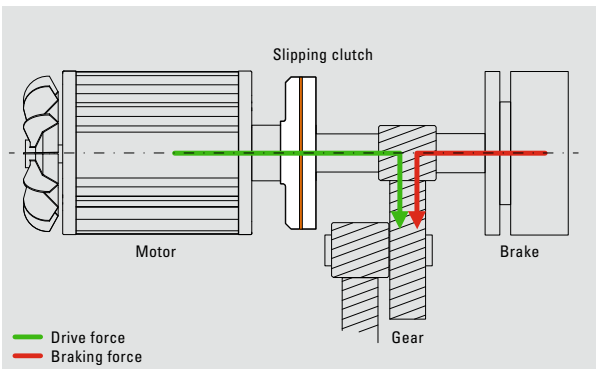
Plug-in components

The SC chain hoist is of modular design, all electrical components have plug connections. This means that this chain hoist is ready for use in short time. Modifications, retrofitting and upgrading can be carried out with minimal downtimes.



Maintenance-free brake

The asbestos-free brake is situated inside the housing and thus protected from environmental influences. The condition of the brake lining can be checked at any time through an axial drillhole. Direct action on the load is guaranteed by the new brake arrangement.



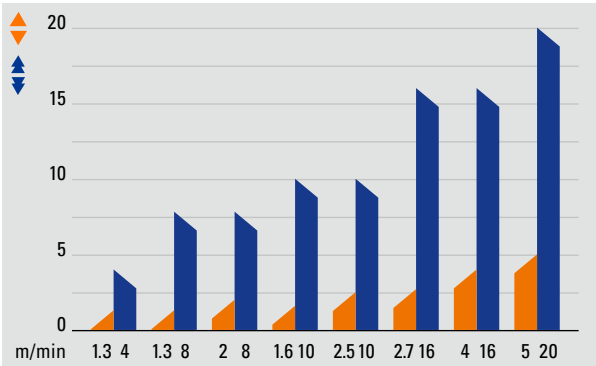
Precise slipping clutch

In the new SC chain hoist, brake, slipping clutch and motor are arranged on one axis. The slipping clutch is not in the power flux during braking and thus is not active when the system has come to a standstill. The use of partially synthetic oil keeps the friction coefficient of the clutch constant. Optimum response is reproducible thanks to precise adjustment by means of a fine thread.



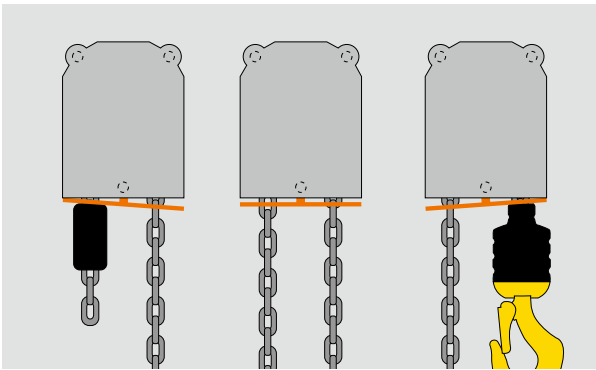
Robust gear

Flexible use in the most varied fields, that's what characterises all chain hoists from STAHL CraneSystems. You can rest assured that the gear of the SC chain hoist is designed for the most stringent requirements and demanding applications. The fully helical gearing always guarantees even, smooth running.



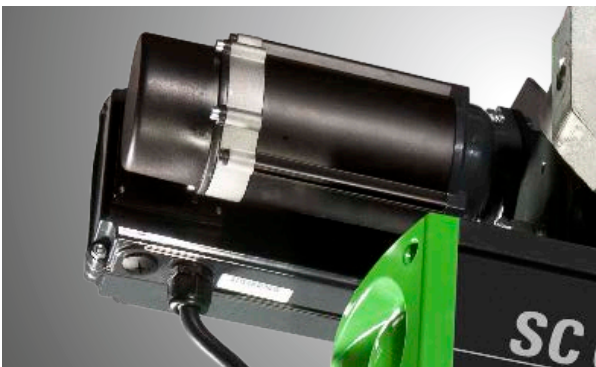
Extended range of hoisting speeds

The SC chain hoist programme is even more efficient and supplements our portfolio perfectly. A greatly extended range of hoisting speeds is available; and this in conjunction with a 25% increase in load capacity.



Hoist limiting

The SC chain hoist is equipped as standard with a hoist limit switch for top and bottom hook positions. A rocker switch integrated into the chain guide ensures that cut-off is reliable.



Frequency controlled electric trolley

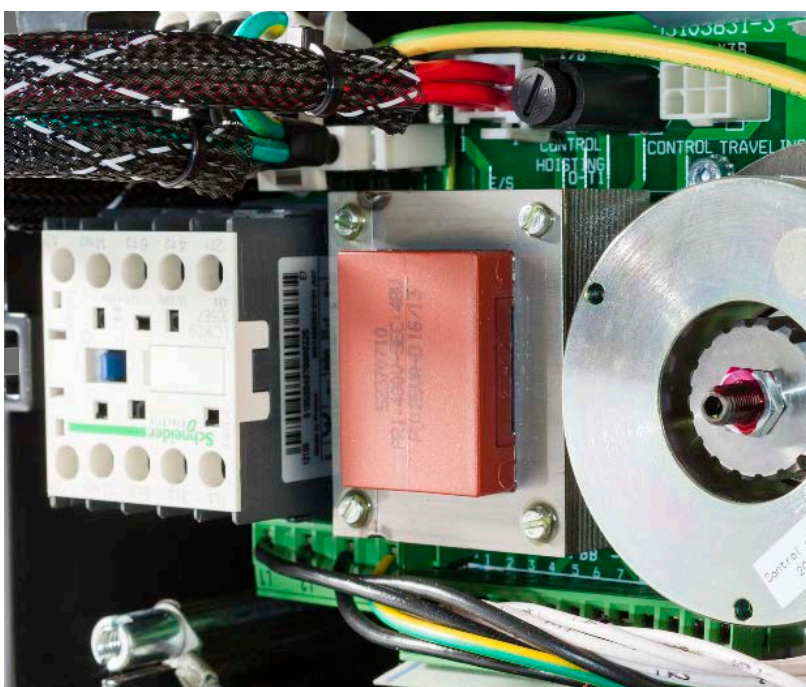
You can choose travel motions with predefined or stepless speeds for the electric trolley. Frequency control ensures smooth starting and braking characteristics.



Innovative chain drive

You will find the new patented 5-pocket chain sprocket (EP 2 047 141 B1) and the field-proven, robust chain guide reinforced with a steel inlet. They are the basis for long service life and reliable operation even under extreme conditions.

The five asymmetrically arranged cogs of the new chain sprocket provide extra positive locking. This reduces the bending stress on the vertical chain link when the chain is under load.



Flexible control

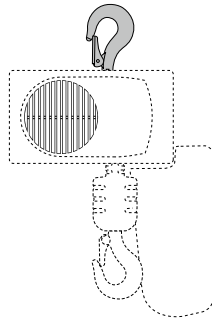
As standard, the SC chain hoist is equipped with a conventionally wired contactor control divided into a power section with main contactor and transformer and a control section. The modules are plug-in and exchangeable, facilitating simple, fast commissioning and high flexibility. In particular crane and systems builders will appreciate this characteristic.

The models and trolley variants

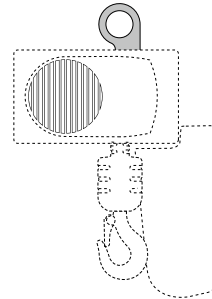
Different construction types and trolley variants for the SC chain hoist open up the most varied applications in crane and systems building. Individually tailored to your specific requirements as stationary hoist or for use with a trolley. The trolleys are equipped as standard with two travel speeds, as an option the frequency-controlled motors can also be supplied with stepless travelling speeds. Our chain hoists are known worldwide for their flexible and versatile use. Compact dimensions and extremely short approach dimensions help to make optimum use of the production shop.

Suspension for stationary version

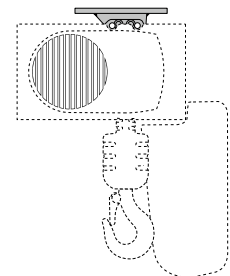
The standard stationary SC chain hoist has hook suspension. However you can also choose eye suspension or rigid suspension. Eye suspension is used when the stationary chain hoist is never or only rarely moved to a different location, while the low headroom permits long hook paths even in low-ceilinged rooms. If the SC chain hoist is to be permanently mounted, for example in systems building, we recommend rigid suspension. Here too the extremely short headroom is of advantage. The rigid mounting also prevents the chain hoist swinging on the trolley.



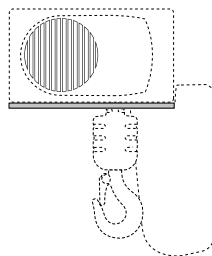
Hook



Eye



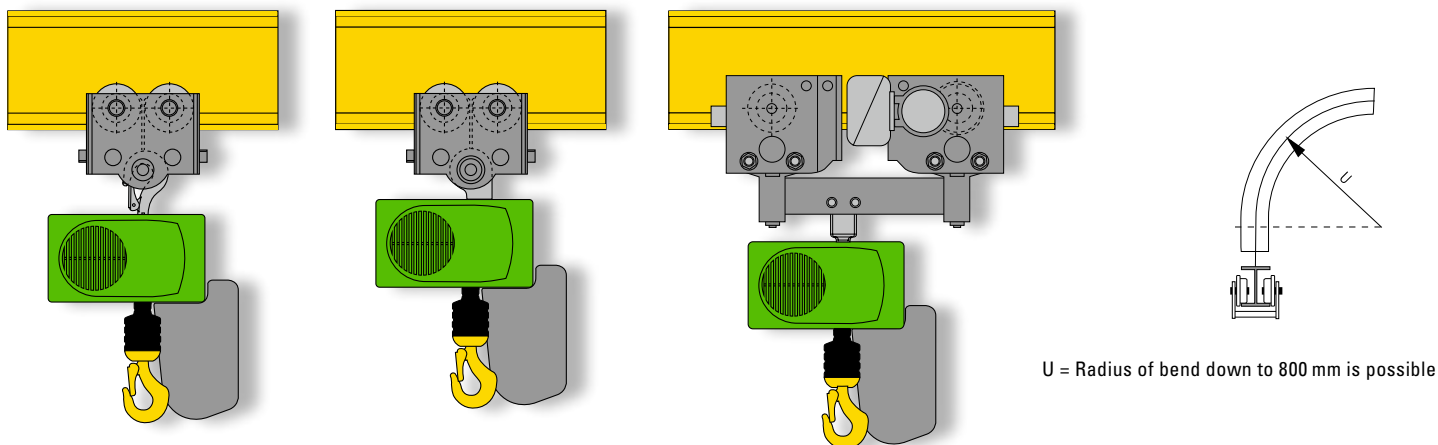
Rigid suspension



Foot mounting

Foot mounting for stationary version

In order to utilise space optimally in low-ceilinged rooms the SC chain hoist can be bolted from below onto a foot mounting.



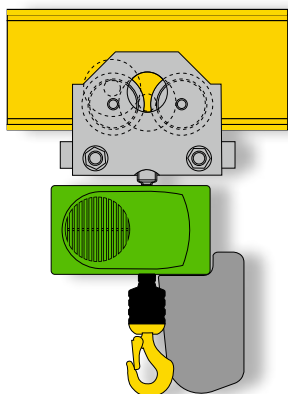
U = Radius of bend down to 800 mm is possible

CTP push trolley

In standard version, the SC chain hoists are suspended by eye or hook from the smooth-running push trolleys. The push trolley does not increase the low headroom of the hoist.

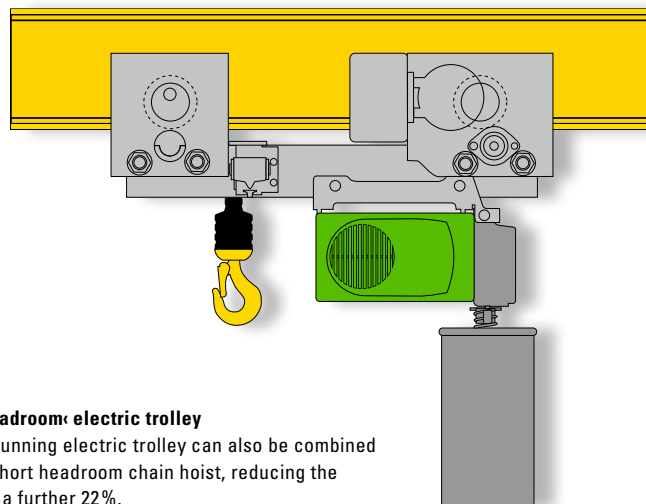
CTA articulated trolley

The CTA articulated trolley is available for frequent travel around bends and narrow radii. Depending on radius of bend, runway flange width or application it is equipped with one or two travel motors. The lateral guide rollers cause minimum wear.



CTN ›standard headroom‹ electric trolley

Even with the smooth-running electric trolley the extremely short headroom permitting long hook paths is typical.



CTL ›short headroom‹ electric trolley

The smooth-running electric trolley can also be combined with the SC short headroom chain hoist, reducing the headroom by a further 22%.

■ Standard
□ Option

Type	Load capacity up to [kg]	Stationary	Push trolley CTP	Electric trolley CTN	Articulated trolley CTA	Short headroom trolley CTL	Extra short headroom trolley CTS	Dual chain hoists CTD
SC 02	320	■	■	■	■*	■*	□	■*
SC 05	630	■	■	■	■*	■*	□	■*
SC 10	2,500	■	■	■	■*	■*	□	■*
SC 16	3,200	■	■	■	■*	■*	□	■*
SC 25	5,000	■	■	■	■*	■*	□	■*

* Not available yet, on request.

The technology

It's reassuring to know what convincing technology is concealed in the innovative SC chain hoist. The largely maintenance-free components of the modular chain hoist are optimally matched to each other. They guarantee constant performance, high efficiency and long service life. An important feature of the SC chain hoist is the new arrangement of brake, slipping clutch and motor on one axis. This means that the slipping clutch is not in the power flux during braking. A further innovation is the patented 5-pocket chain sprocket which greatly reduces the bending stress on the vertical chain links under load and thus extends the service life of the chain.

2 Motor



- High standard classification in accordance with FEM
- Powerful motors with high duty cycle and number of switching operations
- Standard fan cooling
- Two hoisting speeds as standard permitting the load to be positioned accurately
- Bimetal temperature control

4 Brake



- Low-maintenance, asbestos-free electromagnetic disc brake with extremely long service life
- Oversized braking torque
- Brake wear can be measured through axial drillhole
- Safe in inching operation
- Brake within housing, protected from environmental influences

1 Chain drive



- Innovative patented chain sprocket, manufactured with state of the art production technology (EP 2 047 141 B1)
- Simple inspection and replacement of the chain sprocket thanks to over-mounted shaft bearing
- Enclosed chain guide
- Reliable functioning even in demanding applications

3 Control

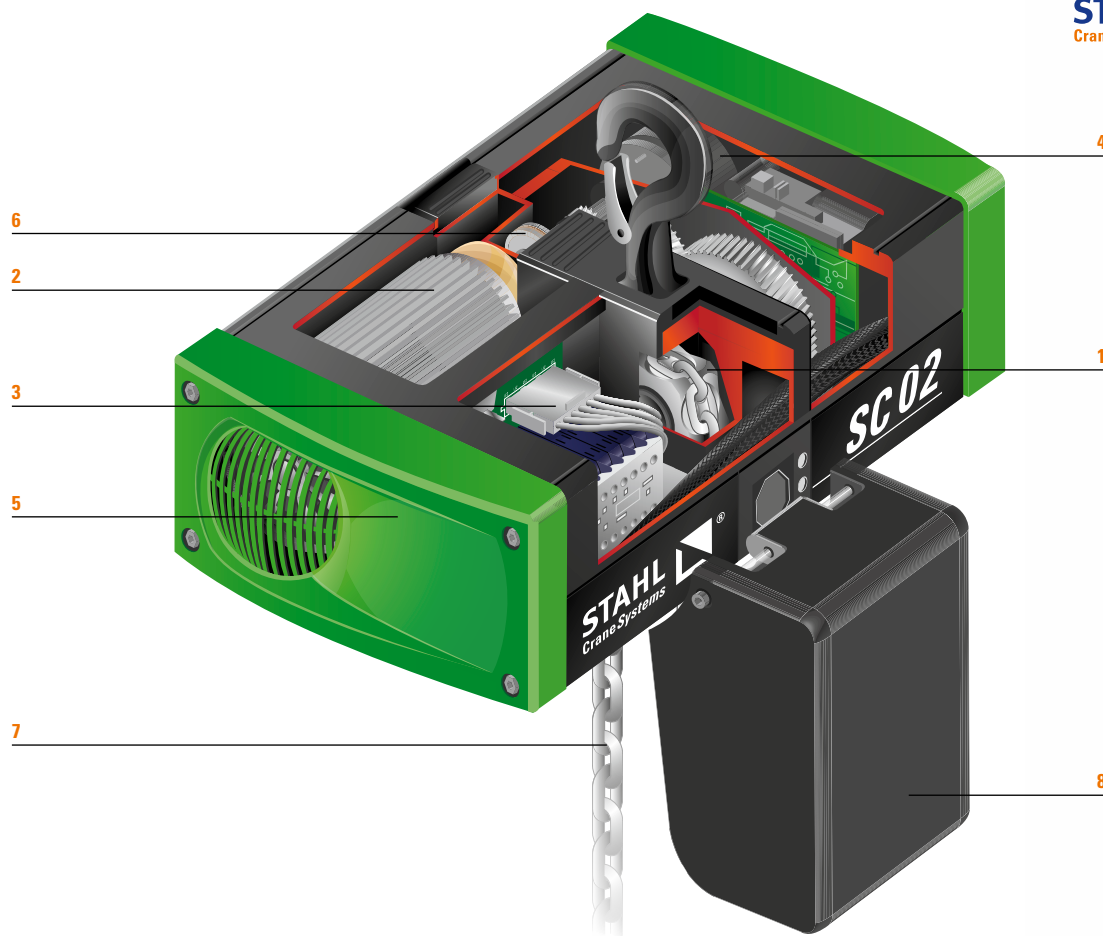


- Conventionally wired contactor control
- Power and control section separated
- All customary connecting and control voltages are available
- Plug connection of control pendant and travel motor
- As an option, available without control pendant
- Available with crane control

5 Paint



- Standard paint treatment as per RAL 6018 yellow-green and RAL 7021 greyish black
- Weather-resistant, impact-resistant powder coating
- Various treatment systems for outdoor use or corrosive ambient conditions
- Shade as per customer's requirement
- Coat thickness 70 µm



6 Overload slipping clutch and gear



- Slipping clutch in oil bath
- Slipping clutch outside power flux
- Precise adjustment by means of fine thread
- Accurate response
- No electronic limiting necessary
- Large dimensioned helical gear

7 Chain



- Tempered, galvanized and large dimensioned load chain
- Increased stress at working load thanks to higher elongation at break
- High FEM classification
- Stainless steel load chains are available as an option

8 Chain box



- Large selection of chain boxes in plastic, sheet steel or textile
- Optionally available without chain box

The equipment

There's always room for improvement. Although it is already first-class in the standard version, you have the option of making your SC chain hoist even safer, more cost-effective, more convenient with numerous mechanical, electrical and electronic features. The supplementary equipment will boost the performance of the chain hoist and adapt it to your individual requirements. Here we show you just a small selection of supplementary equipment and options. If you need further detailed information, please contact us directly.

Vibration damper



- Minimises the vibrations produced by operating the chain hoist and transmitted to the load chain by the chain sprocket (polygon effect).

FMD1 slipping clutch test device



- Robust all-metal design
- Modern electronic test apparatus with field-proven sensor technology, high degree of accuracy $\pm 2\%$
- Test range up to 4,000 kg on one chain fall, suitable for chains up to 11.3 mm link thickness
- Protector for evaluation device and internal test program
- Simple intuitive handling

STH control pendant



- Robust control pendant with EMERGENCY STOP palm button and control cable
- All switching elements for hoist, cross and long travel are 2-step.
- IP 65 protection
- Additional buttons, for example to activate a horn, can easily be fitted.

Radio remote control units



- One-hand joystick operation for crane and hoist control
- IP 65 protection
- Ambient temperature -20 °C to $+70\text{ °C}$
- Multi-function key, selector switch, start and horn
- Powerful rechargeable li-ion battery ($\rightarrow 16\text{h}$) with charger and spare battery

RMI RadioMOVEit radio remote control



- Ergonomic one-hand pushbutton radio remote control with emergency stop function for all chain hoists
- Suitable for right- and left-handed operators
- Covers the whole load capacity range
- Spiral cable does not restrict the height of lift
- The remote control unit can be positioned anywhere on the chain fall independent of chain size
- Load is guided directly with the non-slip handles

		Standard	Options
Ambient temperature		-20 °C to +50 °C	Space heaters for motor and electrics
Protection to EN 60529		IP 55	IP 66
Paint	Colour	Greyish black/yellow-green RAL 7021/6018	All other colours from RAL colour chart
	D.F.T.	70 µm	120 µm to 240 µm
	Paint	Powder coating	Epoxy-resin base (240 µm)
Control pendants		STH 1 control pendant with EMERGENCY STOP palm button	Radio remote control in pushbutton or joystick version MOVEit one-hand control switch
Control		Contactor control including main contactor	For crane builders, contactor control without transformer and without crane switch contactor
Hoist motor control		Pole-changing	–
Travel motor control		20/5 m/min	–
		10/2,5 m/min	frequency-controlled
Motor supply voltage	50 Hz/60 Hz	380–415 V	All voltages possible
Chain	grade 8 to DIN 5684	Hardened and tempered	Stainless steel chain
	Safety factor	≥ 5,0	–
Chain guide		Reinforced with steel inlet	Sandwich chain guide made of hardened spring steel plates
Chain box		Plastic	Sheet steel, textile
Load lifting elements		Load hook in bottom hook block	Thread bar, VAGH safety load hook
			Galvanised load hook
Limit switches		Hoist limit switch (top and bottom hook position)	–
	Travel limit switch	–	For up to four switching functions – pre- and end limiting in both directions of travel
Overload cut-off		Slipping clutch	–
Temperature control of travel motors		Bimetal	–
Mechanical safety devices		–	Wheel arresters
		Guide rollers for wide flange widths dependent on trolley type	Guide rollers for narrow flange widths
Hoist brake		Dual surface magnetic brake with asbestos-free brake linings manual and release brake	Second brake

The engineering

Engineering means innovation and individuality. Constantly redefining the lifting and transporting of loads for complex requirements is a job for our experts. Drawing on one of the widest product ranges of standard components, they regularly develop modern, individual off-standard and customised solutions. Hardly any other manufacturer of lifting and crane technology can offer you this diversity of precisely designed top quality customised solutions combined with maximum cost-effectiveness.

The modular SC chain hoist programme forms the basis for the most varied solutions. Compact construction, extremely low headroom, twin chain hoists or multi-reeved chain hoists, SCB big bag hoist, coupled chain hoists for four-point load pick-up. Various trolleys are available for all chain hoists. Customised system solutions individually adapted to your precise requirements are our forte. The experience and knowledge gained from over 135 years of crane technology give us the flexibility to develop and produce the optimum solution for your project in short time.

The facts

- Perfectly matched to your project
- Every hoist is the result of over 135 years of experience and expertise
- Short development time
- Cost-effective thanks to modular system
- Technically mature thanks to the use of field-proven standard components
- High quality and reliability ensured by in-house production



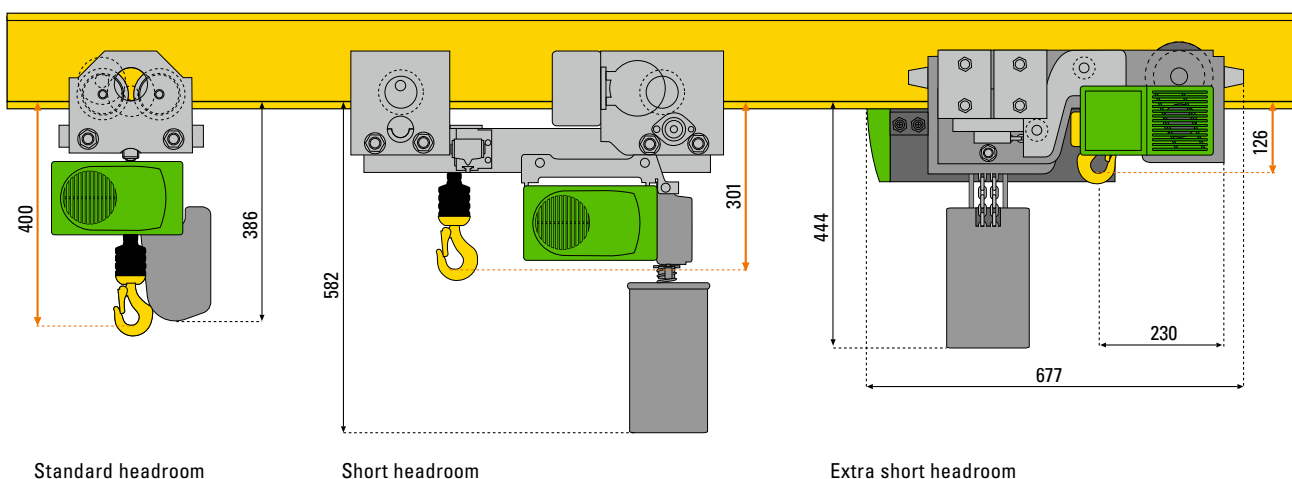
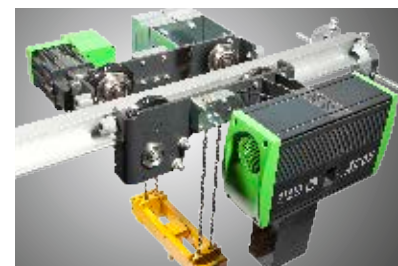
SCK chain hoist as [extra] short headroom trolley

If you do not want to lose even a millimetre of lifting height, STAHL CraneSystems' SCK extra short headroom trolley is just the thing for you. The construction of the short headroom trolley itself saves a tremendous amount of space and reduces the headroom by 33%. The extra short headroom trolley with its headroom reduced by 60% achieves maximum hook paths particularly in extremely low-ceilinged rooms and fully deserves its name. The distance from the underside of the beam to the bed of the hook, just 210 mm at a load capacity of 5,000 kg and 185 at 3,200 kg, is extremely low and unique at present. The chain hoists used here, mounted vertically, are based on standard components of STAHL CraneSystems' SC chain hoist programme.

The patented chain drive is unique. Two separate chains running in synch act on a single bottom hook block. The load is lifted and positioned without swinging or vibrating.

The facts

- Compact dimensions achieving maximum height of lift
- Specially developed for low-ceilinged rooms
- Low deadweight
- Load is lifted steadily and without swinging
- Largely maintenance-free
- Trolleys with no projecting edges for steady cross travel



The 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 maximum care following our well-known standard of quality. All around the world, many companies from various fields have decided on maximum safety and quality, on products from STAHL CraneSystems.

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 CraneSystems 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 building 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

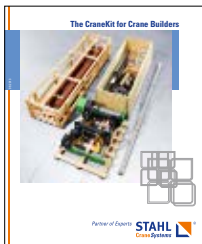
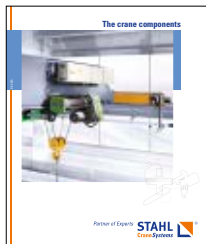
Our customer service centre is a service for our customers: wherever you are we assist your crane or systems builder with our experience and expertise whenever he needs us. Up-to-date diagnostic apparatus and condition monitoring systems stand by to support professional service and maintenance work. 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.
and you can reach our customer service centre on customer.service@stahlcranes.com.

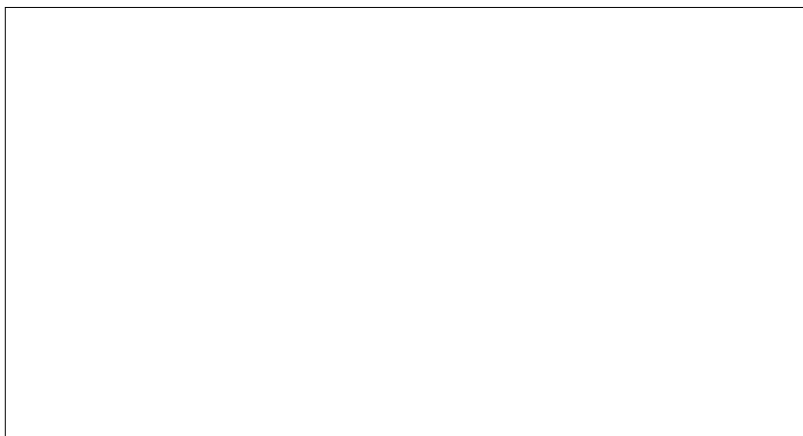




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Partner of Experts

