

# Look ahead!



ENGLISH

Electric wire rope hoists

Crane components

Controlling/Monitoring

# Look ahead!

04	12	18	30
			<b>Controlling/ Monitoring</b>
		<b>CraneKit Crane components</b>	NovaMaster TravelMaster RadioMaster Sway Control Tandem operation
	<b>CRABster Winch</b>	End carriages BLOCKster Travelling machineries	
<b>NOVA Electric wire rope hoists</b>			

## Content



SWF is one of the leading global players in crane and hoisting equipment. At all times and in all places, SWF applies to the highest and the most demanding standards – those of our customers.

Our customers are independent crane manufacturers, lifting equipment resellers and service companies. They use SWF hoists and components because they perform better, offer advantages and can do more than the average products on the market. Quick decisions and flexible acting makes it easy to deal with SWF furthermore.

Close to every SWF product there stands a reliable local partner who knows precisely what counts. In this way installations are built to perform better, systems to work and last longer – systems with first class service and optimum efficiency, ideally customized to the end users needs.

### **No one can match what we have to offer.**

SWF has one of the most comprehensive product portfolios available. In addition to that we also have a complete service package which includes seamless support, customer specific configuration software, technology and sales training, and a whole range of customer specific

services. We know you will have to offer more than just products to have a competitive edge, and SWF helps you get it.

“Special” often means special solution, special effort and thus special costs. The SWF components have been designed to be as flexible and cost-effective as possible; allowing us to do a solution adapted to your needs by using standard equipment. This keeps the individual development and the cost that comes with it at a minimum. By using standard components with a proven quality record you also minimize the number of breakdowns, as well as the costs for wear, tear, service and maintenance.

### **Development going in one direction – upwards.**

SWF was founded in 1921 in Germany and has since then been known to deliver high-quality products. Today, products from SWF are used in areas where top performance and top quality are demanded. Performance and quality that today's companies need in order to be successful and dependable.

KRAN IST FERNGESTEUERT

SWF  
KRANTECHNIK

8 t

5

KRAN IST FERNGESTEUERT

60 t

8

8 t

011110

04

05

**NOVA**  
**Electric wire rope hoists**

# NOVA

Electric wire rope hoists for loads of up to 80 t



- Optimum utilisation of space**  
 Compact installation dimensions and optimum approach dimensions, minimum hook dimensions
- Precise and safe work**  
 Minimum lateral hook movements and low load swing thanks to smooth load movement with frequency inverters
- Low maintenance costs**  
 The brake designed to extend the lifetime, the larger diameter of the rope drum to protect the load rope, the hoist gear lubricated to extend the lifetime and the smooth cross travelling with the frequency inverter reduces material wear and tear



**NOVA L**  
Single girder trolley, low headroom, up to 12,5t

**NOVA M**  
Double girder trolley, up to 80t

**NOVA N**  
Single girder trolley, normal headroom, up to 40t

**NOVA F**  
Fixed hoist for free-standing installations, up to 80t

**NOVA machinery hoist**, up to 10t

## Advantage: Maximum cost effectiveness and optimum utilisation of space

- Loads of up to 80 t
- Single hoist or as a crane kit
- Single or double girder trolley or foot-mounted hoist
- Low lateral hook movement
- Compact installation dimensions
- Optimum approach dimensions
- Stepless cross and long travelling
- Ambient temperature -10°C to +40°C

Type	Reeving	Load t / FEM classification																Design				Lifting speed m/min 50 Hz Standard	Lifting height m	
		1,6	2	2,5	3,2	5	6,3	8	10	13	16	20	25	32	40	50	63	80	F	N	L			M
NB	02	2m																	•	•	•	•	10/1.7	12 - 19
	04				3m	2m													•	•	•	•	5/0.8	6 - 9.5
NC	02		3m	2m	1Am														•	•	•	•	10/1.7	12 - 30
	04				3m	2m	1Am												•	•	•	•	5/0.8	6 - 15
ND	02	22			3m	2m	1Am												•	•	•	•	10/1.7	18 - 40
	04	24					3m	2m	1Am										•	•	•	•	5/0.8	9 - 20
	06	26						3m	2m										•	•	•	•	3.2/0.5	6 - 13
	08	28							3m	2m	1Am								•	•	•	•	2.5/0.4	4.5 - 10
NE	02	22				3m	2m	1Am											•	•	•	•	8/1.3	15.5 - 97
	04	24						3m	2m	1Am									•	•	•	•	4/0.7	7.5 - 48.5
	06	26							3m	2m									•	•	•	•	2.5/0.4	5 - 32
	08	28								3m	2m	1Am							•	•	•	•	2.0/0.3	7 - 24
NF	22								3m	2m	1Am								•		•	•	8/1.3	15.5 - 71
	24									3m	2m	1Am							•		•	•	4/0.7	10 - 35.5
	26										3m	2m							•		•	•	2.5/0.4	6.5 - 23.5
	28											2m	2m	1Am					•		•	•	2.0/0.4	6.5 - 17.5

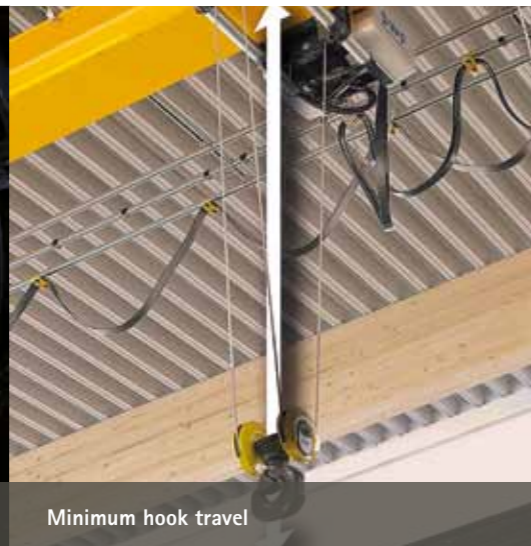
Subject to change without prior notice. You will find further technical information in our manuals and dimensional drawings.

# NOVA

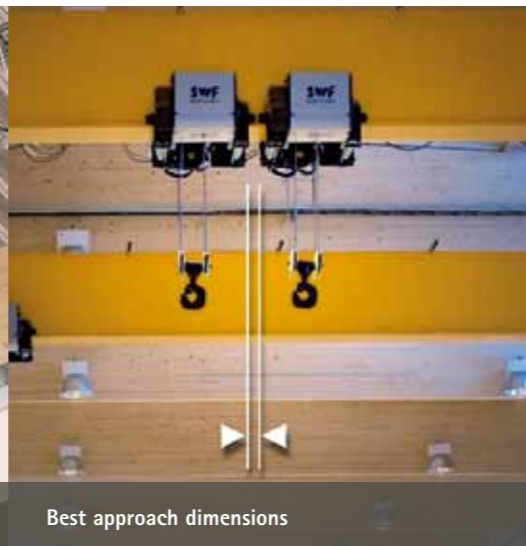
Perfect utilisation of space and almost vertical lifting guarantee so that work is carried out precisely and safely.



Rope guide



Minimum hook travel



Best approach dimensions



Hoisting gear limit switch



Contactor control with NovaMaster



Stainless steel hoist panel

We have increased the size of the drum, making everything else smaller.

The main feature of our NOVA electric wire rope hoist is the extremely large diameter of the rope drum, which provides first-class protection of the rope, but there are also other features which guarantee safe and very cost-effective use.

**NOVA does away with load swinging and lateral hook movement, for example.**

NOVA lifts the load with virtually no lateral hook movement at all. Swinging of the load is prevented and secure handling is guaranteed. At the same time, this can help to reduce the costs for the crane design.

**NOVA adapts itself to your building.**

NOVA offers the best approach dimensions and the smallest installation dimensions in the electric wire rope hoist sector. This ensures the optimum utilisation of space and reduces building costs.



HBC hook up to 20t

DIN RSN hook up to 80t

## Standard equipment:

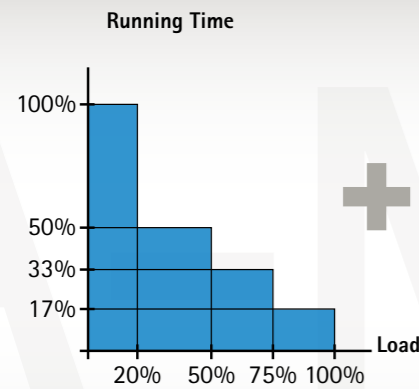
- 2-speed hoisting motors (6/1)
- Hoist condition monitoring system NovaMaster with Safe Working Period Counter (NOVA NE/NF)
- 4-step hoisting limit switch with slow-down function and phase mismatch protection
- Mechanical overload protection
- Thermal protection for hoisting and travelling motors
- Travelling machinery with frequency inverter, 2-step or stepless
- Standard 3-phase voltages 380/400/415 V 50 Hz; 440/460/480 V 60 Hz
- 48 V contactor control
- IP 55 protection, duty factor 60 %
- IP65 control pendant with plug adapter and Emergency-Stop
- Electrical assembly and wiring in accordance with IEC standards
- Robust rope guide made of cast iron
- Epoxy paint, 60 µm

## Options:

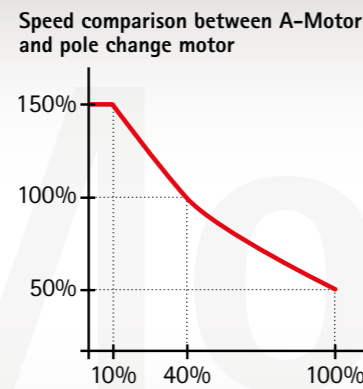
- Radio remote control
- Hoist condition monitoring system NovaMaster with Safe Working Period Counter (NOVA NB/NC/ND)
- Load summation for max. 4 hoists with NovaMaster
- Hoisting inverter with ESR
- 2-step trolley travel limit switch
- External fan for hoisting motor
- Standby heating for bridge panels and motors
- Special operating voltage 208 - 690 V 50/60 Hz
- IP66 protection
- Ambient temperature -20°C - +55°C
- Explosion proof version
- Stainless steel hoist panel
- Rain covers
- Articulated trolley for curved track
- Drum brake
- Lockable hook/ramshorn hook
- Cable reel and much more

## Frequency inverter technology for efficient hoisting

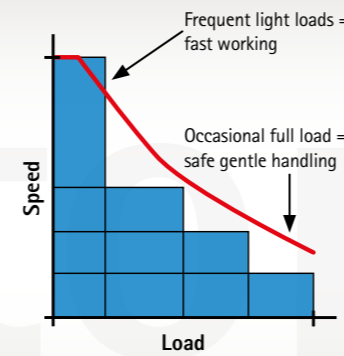
## An innovation which sets economical standards



Average capacity utilisation of an industrial crane



A motor characteristics



Double girder trolley



S-motor with encoder and external fan



Hoisting inverter HoistMaster 4

The use of frequency inverters for the hoisting process increases productivity. This leads to an extended lifetime of motors and brakes as well as cost savings for maintenance work and spare parts. Furthermore, the hoist works in a far more energy efficient manner than a conventional contactor-controlled solution.

- Safe hoist speeds for the smooth handling of heavy loads
- Quick hoist speeds with low loads increase productivity
- Reduced energy consumption
- Working time is reduced thanks to more effective and quicker working with load-dependent speed regulation
- Less wear and tear due to reduced mechanical load
- Reduced downtimes
- Reduced operating costs

### Standard equipment:

- Load-dependent speed regulation (ESR)
- Duty cycle 60%
- Overheat protection
- Insulation class H
- Protection rating IP55
- Bearing sensor to monitor the rotating speed (A motor) or encoder to regulate rotating speed, closed loop control (S motor)
- External fan (S motor)

### A-motor with HoistMaster 2p or HoistMaster 4

When using an A-motor in combination with a HoistMaster 2p the hoist inverter is installed in the bridge panel. In some hoists the hoist inverter HoistMaster 4 can be directly integrated into the hoist panel.

An A-motor operates, compared to polemotors, with only 50% lifting motor power and thus reduces energy costs by around half. Despite the halved hoist motor power, the load-dependent speed regulation (ESR) enables work to be carried out more effectively and quicker with an average industrial crane workload:

- Triple the nominal speed at 10% partial load
- Double the nominal speed at 40% partial load
- Standard nominal speed at 100% full load

The A-motor technology is a cost-effective solution, because of its favourable acquisition costs and savings in operation, which pay for themselves very quickly.

### S-motor with HoistMaster 2p

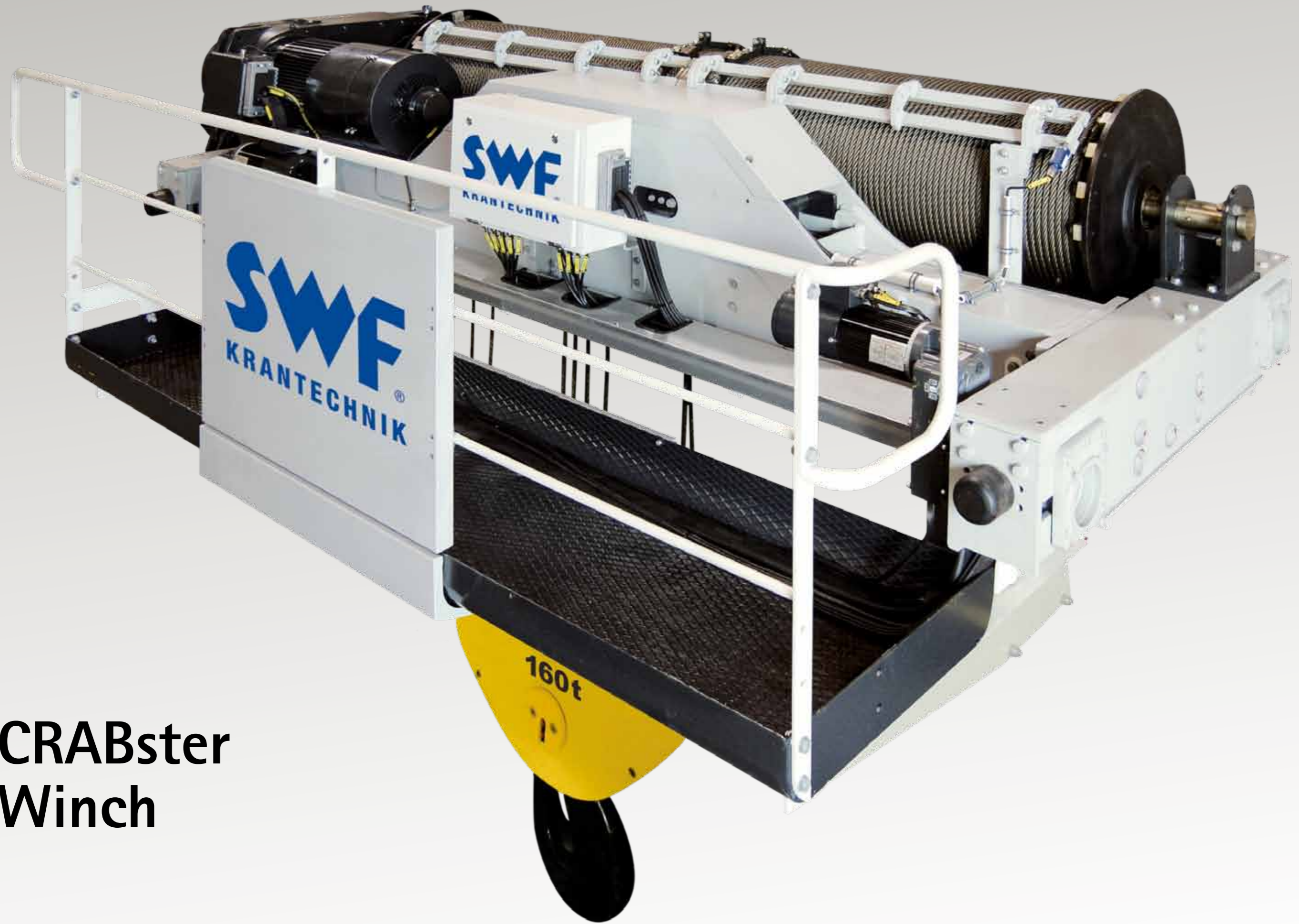
When using an S-motor in combination with a hoist inverter HoistMaster 2p, the hoist speed and hoist motor performance are comparable with the standard speeds. Thanks to the separate fan that comes as standard on the hoist motor, the hoist can also be operated at full load for a very long time at a slower hoisting speed.

The encoder constantly regulates the rotating speed of the hoist motor and thus guarantees that the load is transported safely and accurately even at very low hoisting speeds (only 1% of the nominal speed).

The load-dependent speed regulation (ESR) enables:

- 1.5 times the nominal speed at 25% partial load
- Standard nominal speed at 100% full load

The S-motor together with hoist inverter HoistMaster 2p offers the possibility of connecting up to 4 hoists together via the CANbus and to synchronise the joint hoist lifting process.



# CRABster Winch

# CRABster

Winch for loads up to 250 t



CRABster

- **Precise and safe operation**  
Hoist condition monitoring system NovaMaster as overload protection with strain gauge load measuring, hoisting frequency inverter with closed loop, hoisting motor with encoder, frequency inverter controlled travelling machineries
- **Optimal usage of space and equal wheel load distribution**  
Compact design and optimal approach dimensions, no horizontal hook movement
- **Various design options**  
Well thought-out construction based on standardised components, calculation support via CraneMaster software

- Loads up to 250 t
- Four frame sizes
- Available as a solo winch or with a crane kit
- Double girder trolley or fixed hoist
- True vertical lift – no horizontal hook movement
- Compact design
- Optimal approach dimensions
- Stepless crane and trolley travelling
- Ambient temperatures from -10 °C up to +40 °C

- **Lower maintenance costs and short downtimes**  
New hook block design with tilted sheaves for reduced rope wear, easy accessible central lubrication, just one type of hoisting motor, gear and frequency inverter per frame size

**Advantage: highest possible efficiency and optimal usage of space**



CRABster M double girder trolley up to 250 t



CRABster F fixed hoist for free-standing installations up to 250 t

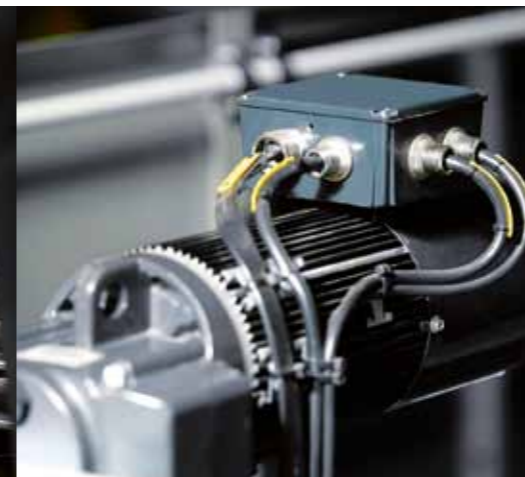
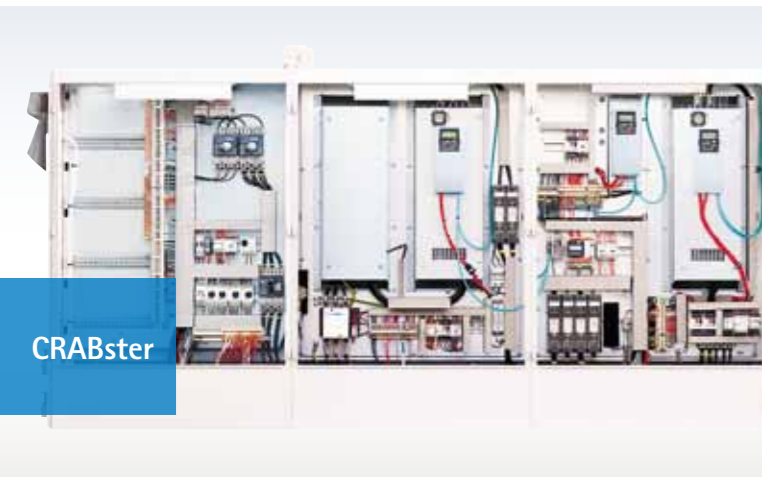
Type	Reeving	Load t / FEM classification / Lifting speed m/min 50 Hz												Lifting height m		
		16	20	25	32	40	50	63	80	100	125	160	200		250	
CT18	22	3m 0-19,5	2m 0-14,4													38,6 - 80,3
	23			3m 0-12,5	2m 0-8,8											25,7 - 53,6
	24				3m 0-9,0	2m 0-7,2	1Bm 0-6,4									19,3 - 40,2
	25					3m 0,7,0	2m 0-5,6	1Bm 0-5,0								15,4 - 32,1
	26						3m 0-6,0	2m 0-4,5	1Bm 0-4,0							12,9 - 26,8
	28								2m 0-3,6	1Bm 0-3,2						9,7 - 20,1
CT19	22			3m 0-20,0	2m 0-14,4											42,6 - 104
	23					3m 0-12,8	2m 0-9,0									28,4 - 69
	24						3m 0-9,0	2m 0-7,2	1Bm 0-6,4							21,3 - 51,8
	25							3m 0-7,0	2m 0-5,6	1Bm 0-5,0						17 - 41,4
	26								3m 0-5,6	2m 0-4,4	1Bm 0-4,0					14,2 - 34,4
	28									2m 0-3,6	1Bm 0-3,2					10,6 - 25,9
CT20	22					3m 0-10,0	2m 0-9,0									55,6 - 129
	23							3m 0-6,4	2m 0-5,7							37,1 - 85,8
	24								3m 0-5,0	2m 0-4,5	1Bm 0-4,0					27,8 - 64,3
	25									3m 0-4,0	2m 0-3,6	1Bm 0-3,2				22,2 - 51,5
	26										3m 0-3,2	2m 0-2,8				18,5 - 42,9
	28											3m 0-2,6	2m 0-2,2	1Bm 0-2,0		13,9 - 32,2

Subject to change without prior notice. You will find further technical information in our manuals and dimensional drawings. Excerpt from the entire supply range. Type CT17 is not listed here.

# CRABster

Winch for loads up to 250 t

Well thought-out technology and powerful components guarantee maximum safety and efficiency.



CRABster

17

State-of-the-art electrics

Gentle inclination

Trolley travelling motor with PLIOTEX type wire marking

Central lubrication

Free accessible pulleys and hook operated ultimate hoisting limit switch

The CRABster winch is delivered complete with control panels, all of which are pre-bolted and pre-wired accordingly. Standardised modules are used depending upon the performance features of the crane or of the individual winch. In the case of an individual winch, one control panel remains free for the individual equipment. The main components of the control panel are the frequency inverters for crane and trolley travelling, as well as lifting and lowering, the hoist condition monitoring system NovaMaster, the main contactor and the control transformer. There is also space for an optional radio remote control. Each control panel is equipped with 15W interior lighting. A 230V socket can be found on the narrow outer side of the standing unit.

Standard PLIOTEX cable markings guarantee a sustainable and quick overview of the wiring.

Stainless steel control panels, rain protection covers, heaters and air conditioning systems for operation in adverse conditions are available as optional extras.

The standard rope drive of our CRABster winch with its thought-out rope angles and tilted sheaves in the newly constructed hook block, ensures a considerably longer lifetime of the load rope and the sheaves. In addition, the rope guides are made of cast iron, which also have a positive effect on the service life. Maintenance costs and downtimes are noticeably reduced.

Due to the use of two ropes, CRABster lifts without horizontal hook movement. The low C-dimension is the result of the optimised headroom of the winch and enables the user to efficiently use space with respect to the lifting height. The innovative design of the CRABster makes access to the upper sheaves and the overload protection easier.

## Standard equipment:

- Robust rope guides made of cast iron
- Central lubrication
- 4-step gear limit switch
- Additional safeguard by hook operated ultimate hoisting limit switch
- Hoist condition monitoring system NovaMaster
- 2-step trolley travel limit switch
- Frequency inverter for travelling machineries
- Hoisting inverter with closed loop technology, hoisting motor with encoder
- Thermal protection for hoisting and travel motors
- High duty time
- "Ready to use" bridge panels
- PLIOTEX type wire marking
- Bridge panels with inner light, 230V plug outside
- Horn 108 dB
- IP55 protection
- Epoxy paint, 120 µm

## Options:

- Radio remote control
- Maintenance platform
- ESR overspeed for faster lifting speeds with lower loads
- Second hoisting brake
- Ramshorn hook
- Rope pressure roller
- Guide rollers for trolley frame
- Standby heating for bridge panels and motors
- Air condition for bridge panels
- Stainless steel bridge panel
- Rain protection covers
- Crane lights
- Horn, 120 dB
- Derailment catches and storm locks for hoist and crane
- Ambient temperature -20°C - +55°C and much more