

Cableway Systems



Wyssen stands since 1926 for reliability, confidence and innovation. Worldwide we offer to our customer in the sector wood and material transport for mountainous area economic and reliable solutions.

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Contents

- 2 About us
- 4 Wyssen cable crane
- 5 Pictures tell stories
- 6 W-10 Cable winch
- 8 W-10 RK900 Crawler cable winch
- 10 W-24 Cable winch
- 12 W-30 and W-40 cable winches
- 14 W-40 /102HP and W-40/175HP cable winches
- 16 W-90 Cable winch
- 18 W-200 Cable winch
- 20 Valentini mobile cable crane
- 24 Slackpuller
- 25 Wyssen control system
- 25 FSI 2007
- 26 Universal carriage and Universal Compact
- 28 HY-2 Carriage
- 29 HY-2 also available with a pendulum
- 29 Wyssen carriages-
- 29 FSI control system
- 30 HY-4 and HY-7 carriages
- 32 Options for HY-4 carriages
- 34 Motorised skyline crane
- 36 MES 200/400/500 Single-line cableway
- 38 Support material
- 40 Automatic tensioning device
- 42 Cable snatch blocks

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About us

Wyssen cableway systems has been manufacturing high-quality components for material cableways since 1926. With the invention of the cable crane in 1938, a new era was heralded in the management of mountain forests.

Wyssen products are sold worldwide in over 60 countries. Today the Wyssen company is still the market leader in the sector of cable cranes and material cableways. The company is continually setting new standards in modern cable crane construction with its latest carriage and cable winch models.

Highest quality, functionality, reliability, operational safety and ease of operation are the characteristics of our “Made in Switzerland” products.

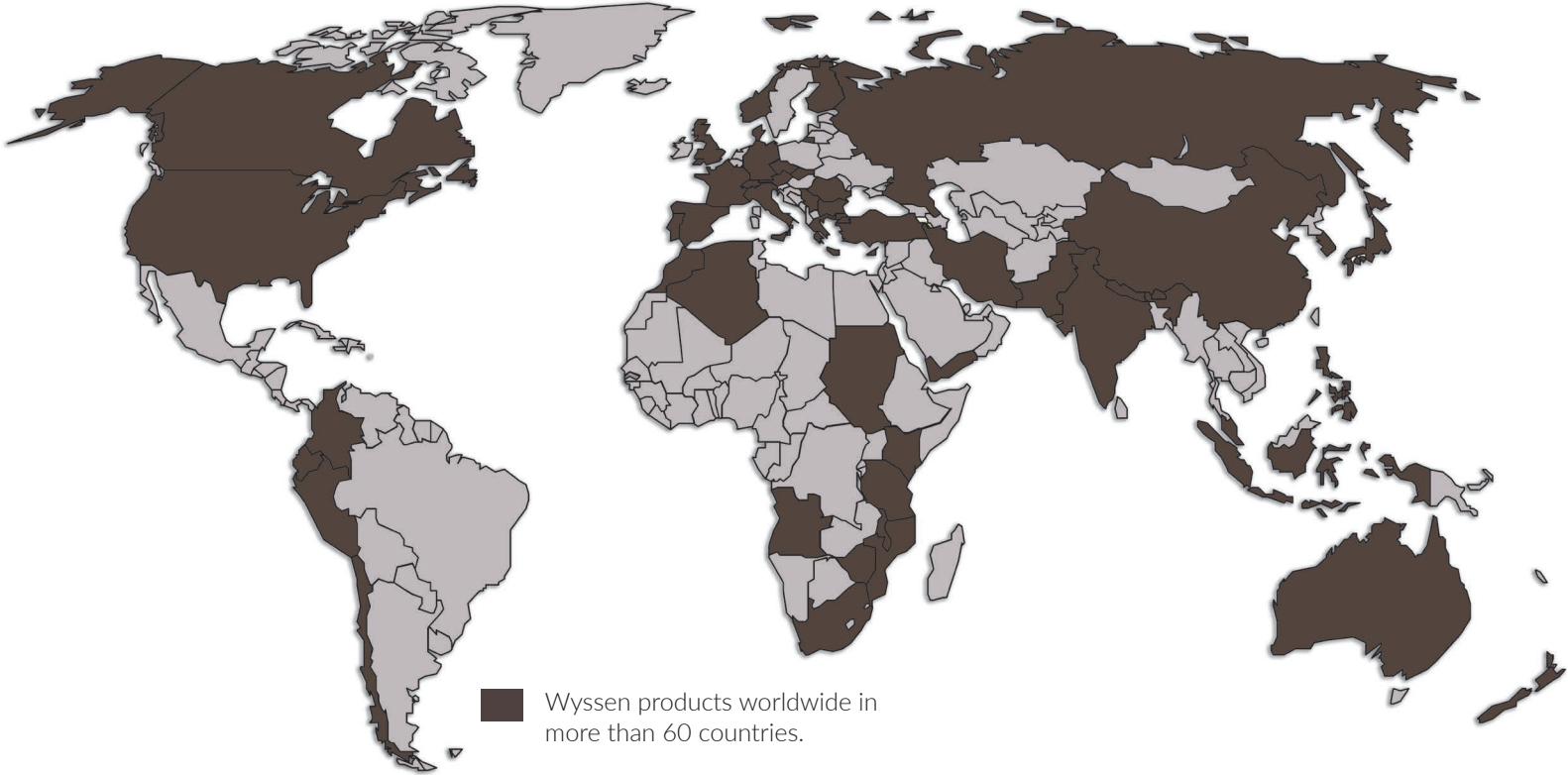
Our key strength lies in our qualified and motivated staff. The majority live in the vicinity and have been working with us for years.

Our customers are quality-conscious companies at home and abroad, for whom our flexibility, continuous innovation and the extensive know-how in cableway and machine construction are important factors. Thanks to our continuity and experience over decades in manufacturing machines and delivering spare parts, we will also be able to serve our wide

and continually expanding customer base in the future.

Forestry enterprises represent the principal part of our business. Increasingly more systems are also going to specialised cableway companies, who take on the often complex material transportation for building mountain railways, gas lines, pressure pipes and bridges etc.

Mountain railway companies order cable accessories or cable winches from us for maintenance and assembly work on their own aerial cableways and ski lifts. Owners of mountain huts will often come to us and find a cost-effective solution for access to their remote buildings.



Wyssen products worldwide in more than 60 countries.

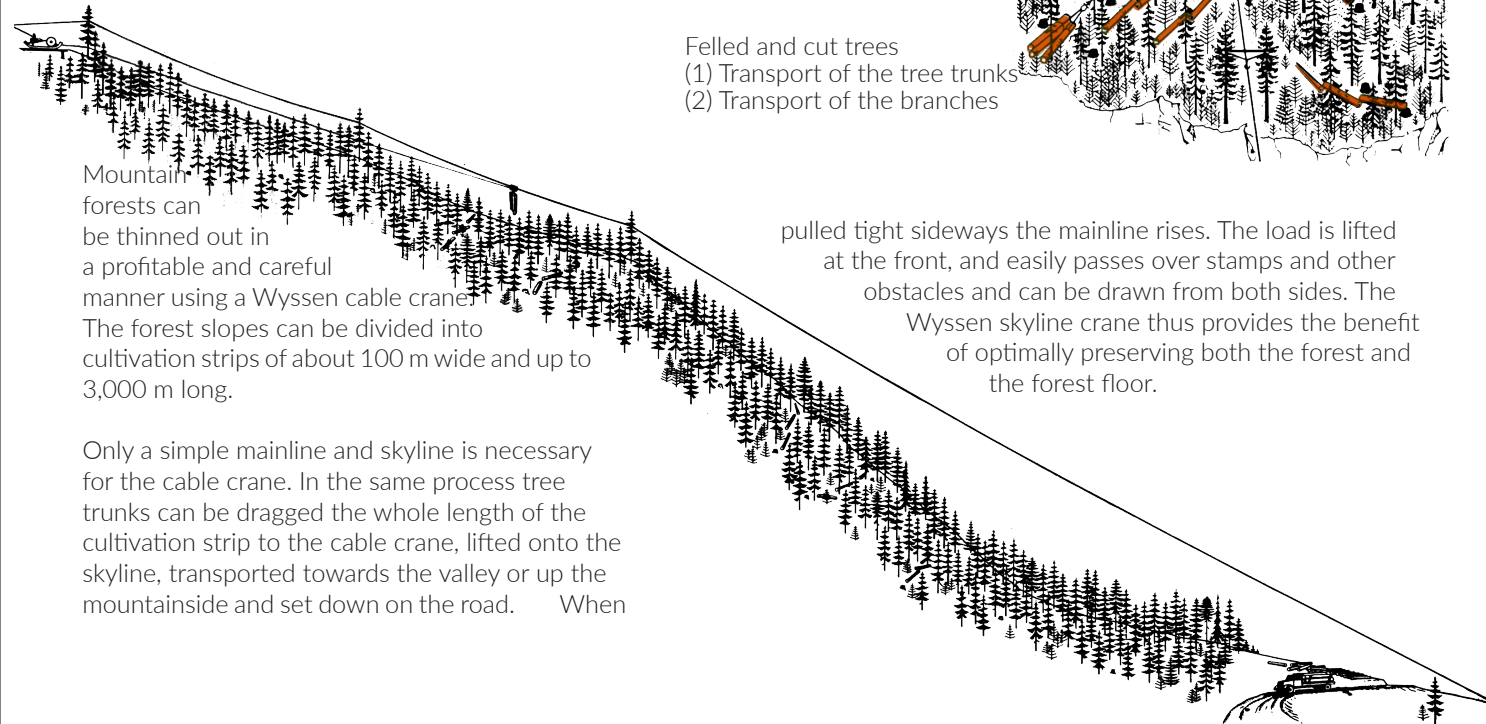
The origins of the Wyssen cableway systems goes back to 1926, when Jakob Wyssen senior, together with his brother purchased a mobile sawmill for wood and thus began to saw wood directly on location. Later a permanent sawmill was installed in Reichenbach, where today the Tropic restaurant is located.

He thought about how he could optimise the conventional wood harvesting of that time, in order to avoid damage and pollution. Thus the idea of a cable crane was created, and he developed this for his own use. Since the advantages of this ingenious new development soon interested others, he received enquiries about selling such systems. He thus shifted his production from wood processing to manufacturing cable systems. Over the years innovative new developments followed.

This led to Wyssen cable crane systems being used on all continents in over 60 countries up to now. The name Wyssen cableway systems stands for innovation, quality, customer service, wide range of products and cost-effective solutions. Wyssen has now been selling its products all over the world for over 80 years.

Wyssen cable crane

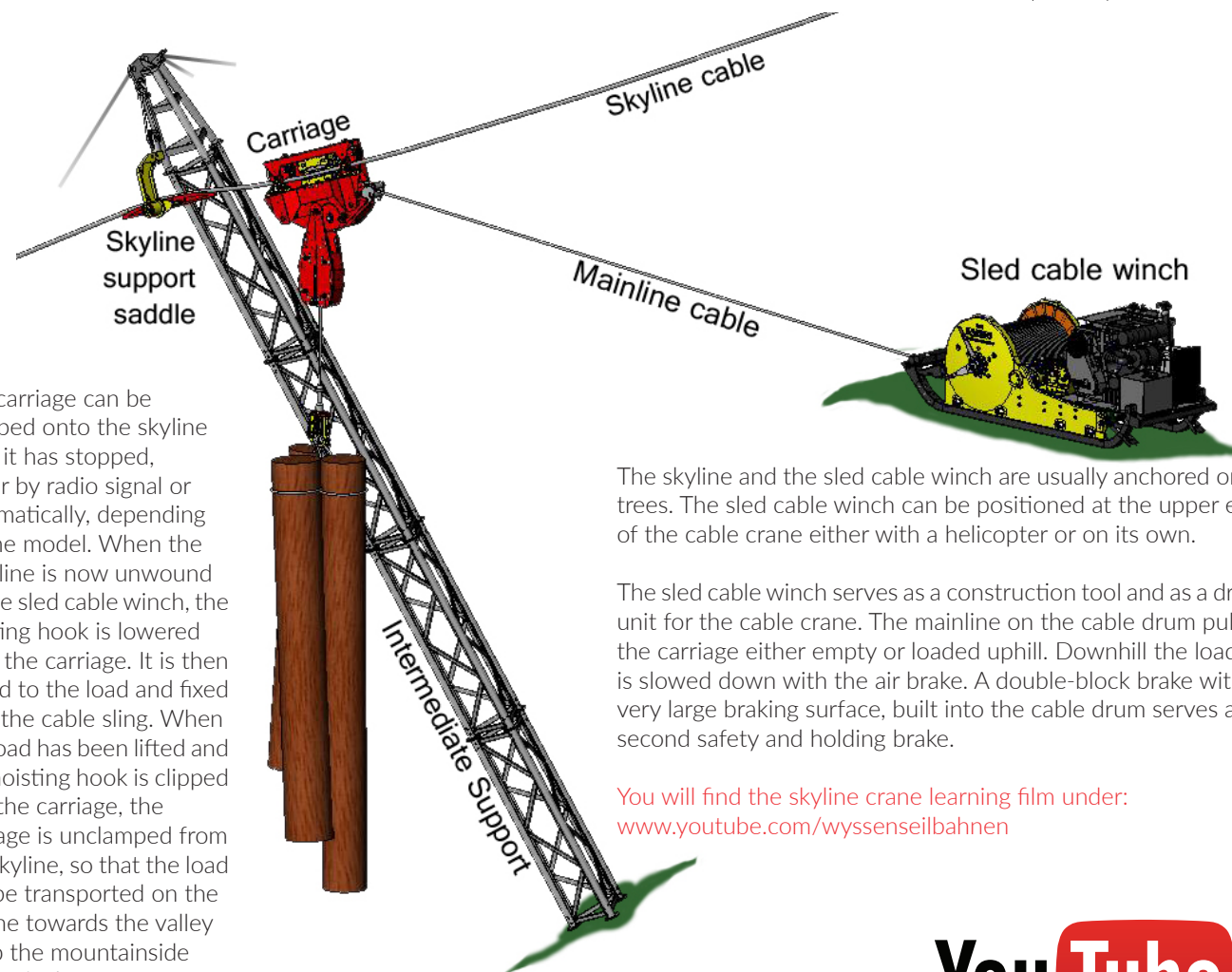
The productive, ecological management and care of mountain forests



Mountain forests can be thinned out in a profitable and careful manner using a Wyssen cable crane. The forest slopes can be divided into cultivation strips of about 100 m wide and up to 3,000 m long.

Only a simple mainline and skyline is necessary for the cable crane. In the same process tree trunks can be dragged the whole length of the cultivation strip to the cable crane, lifted onto the skyline, transported towards the valley or up the mountainside and set down on the road. When

pulled tight sideways the mainline rises. The load is lifted at the front, and easily passes over stamps and other obstacles and can be drawn from both sides. The Wyssen skyline crane thus provides the benefit of optimally preserving both the forest and the forest floor.



The carriage can be clamped onto the skyline after it has stopped, either by radio signal or automatically, depending on the model. When the mainline is now unwound by the sled cable winch, the hoisting hook is lowered from the carriage. It is then pulled to the load and fixed with the cable sling. When the load has been lifted and the hoisting hook is clipped into the carriage, the carriage is unclamped from the skyline, so that the load can be transported on the skyline towards the valley or up the mountainside respectively.

The skyline and the sled cable winch are usually anchored onto trees. The sled cable winch can be positioned at the upper end of the cable crane either with a helicopter or on its own.

The sled cable winch serves as a construction tool and as a drive unit for the cable crane. The mainline on the cable drum pulls the carriage either empty or loaded uphill. Downhill the load is slowed down with the air brake. A double-block brake with a very large braking surface, built into the cable drum serves as a second safety and holding brake.

You will find the skyline crane learning film under:
www.youtube.com/wyssenseilbahnen



Pictures tell stories



W-10 Cable winch

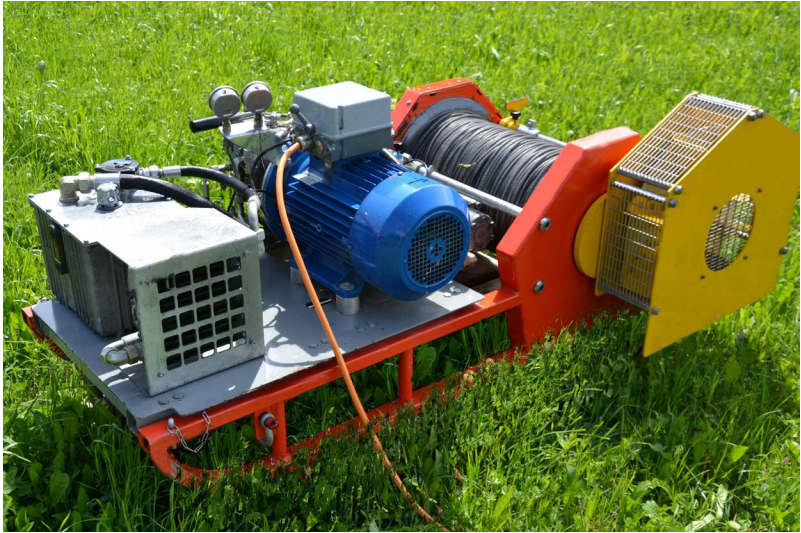
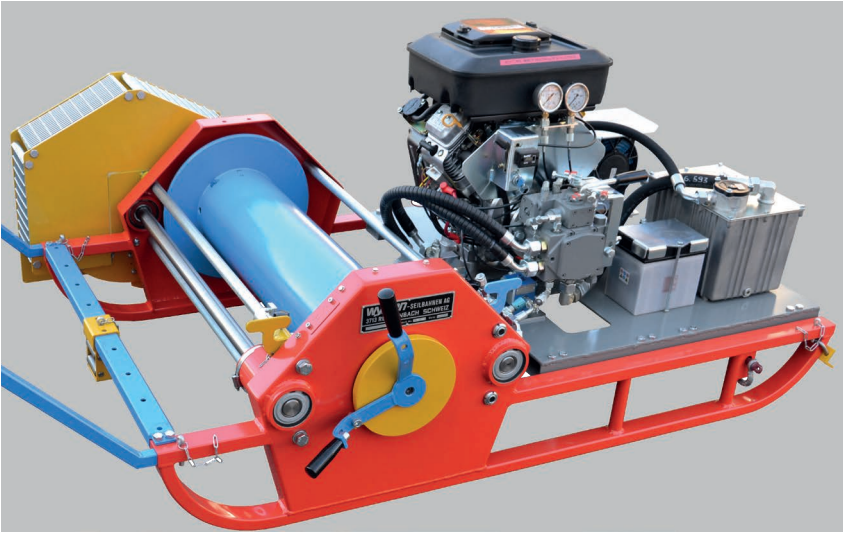
The cable winch for installations and small cableways

The WYSEN cable winch has been tried and tested for over 80 years and is characterised by its mobility, excellent quality, high performance, safety and long operating life.

Thanks to its lightweight design, the W-10 cable winch can be used in many applications in the wood and forest industries as well as in the construction industry. It is principally used as a drive engine for small cableways, but also

as a hoisting device for skylines and as a drive unit for inclined lifts. The W-10 cable winch does valuable work with a grooved pulley or capstan ring fitted, either as a circular drive wheel for a material cableway or as a cable crane.

The sled runners give it all-terrain mobility, so that it is also ideally suited as a mounting winch. The roller fairlead at the front serves a steering mechanism in terrain and the mountain stabilisers at the rear prevent the cable winch sliding backwards. The large drum diameter ensures a very long service life of the mainline.



Technical data

Main dimensions W-10 Cable winch

	Standard model	Wide model
Length	1'700 mm	1'700 mm
Width	750 mm	1'100 mm
Height (petrol/electric)	820/700 mm	820/700 mm
Drum-ø	220 mm	220 mm
Drum width	500 mm	850 mm
Total weight	345 kg	430 kg

Cable drum capacity

	Standard model	Wide model
Cable ø 5.0 mm	1'130 m	1'920 m
Cable ø 6.0 mm	730 m	1'250 m
Cable ø 7.0 mm	580 m	980 m
Cable ø 8.0 mm	400 m	680 m
Cable ø 9.0 mm	310 m	530 m
Cable ø 10.0 mm	280 m	480 m

W-10 tractive forces and speeds

Drum	empty	medium	full
Type hydr. motor	max.	max.	max.
80 ccm fast	1.26 m/s	1.60 m/s	1.94 m/s
	900 kg	700 kg	580 kg
100 ccm medium	1.01 m/s	1.28 m/s	1.56 m/s
	1'100 kg	886 kg	727 kg
160 ccm strong	0.63 m/s	0.80 m/s	0.97 m/s
	1'800 kg	1'417 kg	1'169 kg

The speeds of the electric motor are approx. 20% lower than those of the petrol motor.

With just one control lever the speed, tractive force and direction of rotation of the cable drum can be adjusted to the particular conditions. Loads can thus be drawn, lifted, transported up the mountainside and lowered. Transport downhill is usually carried out with the air brake (optionally available). This high performance brake, without any wear, permits a rapid descent with heavy loads. The W-10 cable winch is modular in construction, as are all Wyssen cable winches, so that it can be adapted to the individual requirements of each customer. The Wyssen cable spool drive or other hydraulic devices can also be connected to the W-10 cable winch.

W-10 Cable crane

The W-10 cable winch is also available in the cable crane version. This is fitted with a traction drive and a hoist drum.

Main dimensions

W-10 Cable crane winch

Length	1'700 mm
Width	750 mm
Height (petrol/electric)	820/700 mm
Drum ø	220 mm
Drum width	409 mm
Total weight	400 kg

Cable drum capacity

Cable ø 5.0 mm	925 m
Cable ø 6.0 mm	600 m
Cable ø 7.0 mm	475 m
Cable ø 8.0 mm	325 m
Cable ø 9.0 mm	255 m
Cable ø 10.0 mm	230 m

Tractive forces and speeds of traction drive

Type hydraulic motor	max.
80 ccm fast	2.06 m/s
	607 kg
100 ccm medium	1.63 m/s
	761 kg
160 ccm strong	1.02 m/s
	1'224 kg

The speeds of the electric motor are approx. 20% lower than those of the petrol motor.

Tractive forces and speeds of the cable winch

Identical to those of the W-10 standard

Models

Motors

- Petrol 13 kW/18 HP electric and manual start
- Petrol 27 kW/35 HP electric start
- Electric motor 11 kW

Power transmission

- Hydraulic motor 80 ccm
- Hydraulic motor 100 ccm
- Hydraulic motor 160 ccm
- 2 Stage hydraulic motor (wide version only)

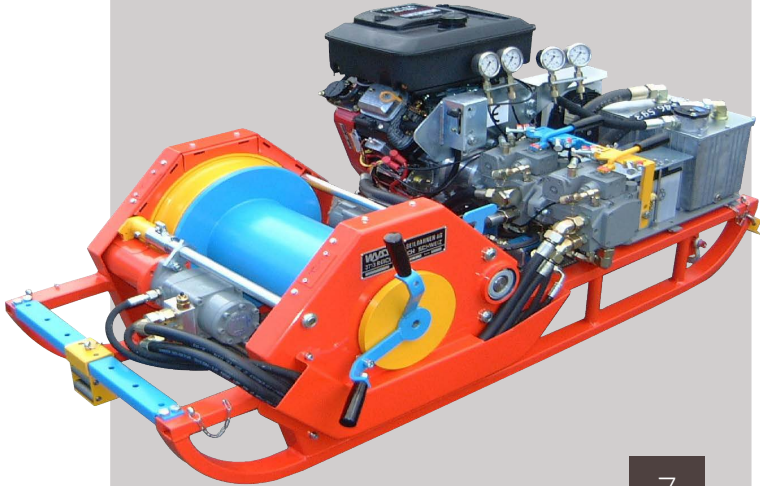
Brake systems

Holding brake:

- Dead man's brake integrated in the hydraulic motor
- Dead man's brake acting directly on the drum

Driving brake optional:

- Air brake
- Centrifugal brake



W-10 RK900 Crawler cable winch

The perfect cable winch for construction work

Thanks to its lightweight design, the W-10 crawler cable winch can be used in many applications in the wood and forest industries as well as in the construction industry.

The crawler cable winch is excellently suited for construction and as a hoisting device for a wide variety of applications.

The hydrostatic drive unit allows the crawler cable winch to be very easily and safely operated. Its speed and agility in rough terrain is another feature of the winch, thanks to its hydraulic caterpillar drive. The simple and light construction of the crawler cable winch permits it to be quickly and easily converted into a caterpillar tipper and for transporting diverse materials.

The Wyssen cable spool drive or other hydraulic devices can also be connected to the W-10 crawler cable winch.

The modular construction means that the crawler cable winch can be adapted to the individual requirements of each customer.



Technical data

Main dimensions W-10 cable winch RK900	
Length	1'975 mm
Width	975 mm
Drum ø	220 mm
Drum width	500 mm
Total weight with winch	876 kg

Cable drum capacity	
Cable ø 5.0 mm	1'130 m
Cable ø 6.0 mm	730 m
Cable ø 7.0 mm	580 m
Cable ø 8.0 mm	400 m
Cable ø 9.0 mm	310 m
Cable ø 10.0 mm	280 m

Tractive forces and speeds with Briggs & Stratton Vanguard 2 cyl. 18 HP				
Drum	empty	medium	full	
Type hydr. motor	max.	max.	max.	
80 ccm fast	1.26 m/s	1.60 m/s	1.94 m/s	
	900 kg	700 kg	580 kg	
100 ccm medium	1.01 m/s	1.28 m/s	1.56 m/s	
	1'100 kg	886 kg	727 kg	
160 ccm strong	0.63 m/s	0.80 m/s	0.97 m/s	
	1'800 kg	1'417 kg	1'169 kg	

Models

- Motors**
- Petrol 13 kW/18 HP, electric and manual start
- Power transmission**
- Hydraulic motor 80 ccm
 - Hydraulic motor 100 ccm
 - Hydraulic motor 160 ccm

- Brake systems**
- Holding brake:**
- Dead man's brake integrated in the hydraulic motor
 - Dead man's brake acting directly on the drum

- Driving brake optional:**
- Air brake
 - Centrifugal brake

Caterpillar tipper

The W-10/RK900 crawler cable winch can be converted from a winch to a tipper in about 10 minutes.

Dimensions of the caterpillar tipper

Load capacity:	900 kg
Tipper contents:	450 liter
Tipper contents:	980 mm
Total length:	1'975 mm
Total height:	1'170 mm
Total weight with tipper-box:	835 kg

Technical data

Turning circle:	turning on the spot
Drive:	Continuous fully hydrostatic
Driving speed	
Forward/reverse:	0 - 5.2 km/h
Breaking system:	fully automatic electro-hydraulic
Hydraulic tank capacity:	8 l
Cooling system:	Air-cooled
Battery:	12V, 30A

Motor

Brand:	Briggs + Stratton Vanguard
Fuel:	Petrol
Cylinders:	2
Power:	13 kW / 18 HP
Start:	electrical



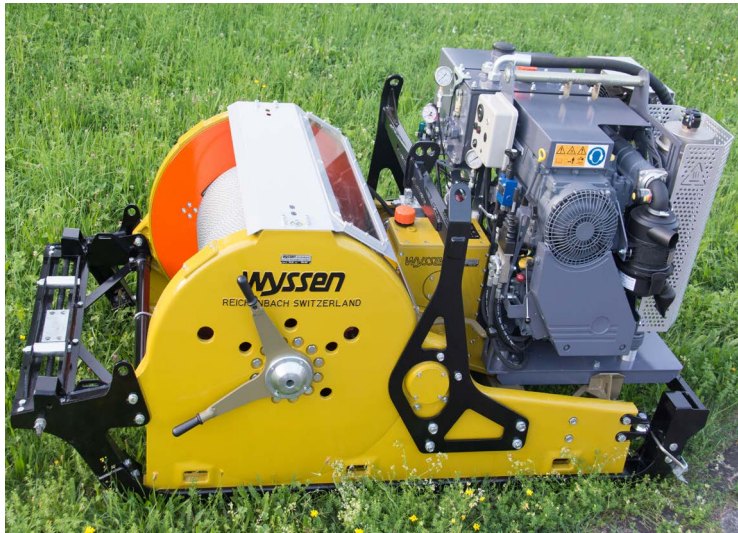
W-24 Cable winch

The extremely compact and powerful cable winch for assembly work

The W-24 Cable winch has been developed as the successor to the tried and tested compact W-20 together with the W-40 drum size that reduces cable wear. The main features are the compact construction and the high tractive forces, specially designed for all types of assembly work. The cable winch is driven by a Deutz 3-cylinder diesel motor with a particle filter, which meets the current emission standards and is approved for all European and Swiss construction sites. The W-24 Cable winch is also fitted with the necessary

safety brake (hydraulic spring-powered brake/dead man's brake). The winch runs both forwards and backwards with a continuously variable hydrostatic drive unit. The additional 2-speed transmission allows the cable winch to be driven either with higher traction or at a faster speed. Optionally the W-24 cable winch also has a mooring system, which can be connected at any time with a lever. The Mars and Jupiter air brakes as well as the eddy-current brake can be mounted on demand. The cable winch can easily and quickly be dismantled into 2 parts for transportation with a small helicopter.

Special guides on the sled ensure the motor is automatically aligned when set down, so that the units can be quickly and easily screwed together. The complete cable winch can also be lifted up with just one specially provided suspension point. The very similar construction to the W-30 and W-40 cable winches permit any option such as distance indicators, Unimat drive, continuous drive, air brake, etc. (see options and accessories) to be used from these cable winches.



Technical data

Cable winch main dimensions

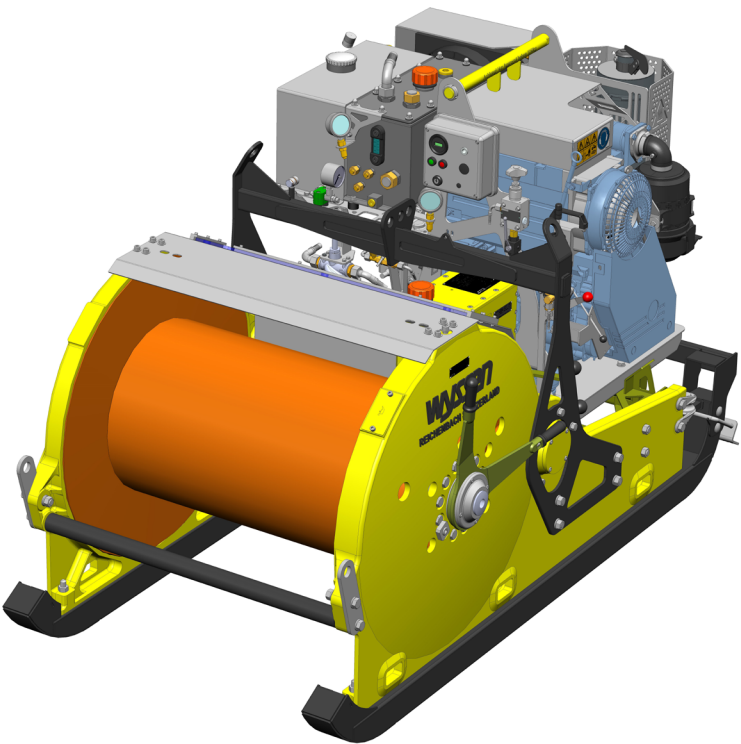
Length	2'320 mm
Width	1'270 mm
Height	1'315 mm
Drum ø	476 mm
Drum width	832 mm
Total weight	1'605 kg
Motor unit	545 kg
Chassis	960 kg

Cable drum capacity

Cable-ø 9.0 mm	3'250 m
Cable-ø 9.5 mm	2'740 m
Cable-ø 10.0 mm	2'580 m
Cable-ø 10.5 mm	2'300 m
Cable-ø 11.0 mm	2'030 m
Cable-ø 12.0 mm	1'850 m
Cable-ø 13.0 mm	1'480 m
Cable-ø 14.0 mm	1'250 m
Cable-ø 15.0 mm	1'080 m
Cable-ø 16.0 mm	1'000 m

Traction and speeds

	Drum empty	Drum half-full	Drum full
Power speed	0.5 m/s	0.65 m/s	0.79 m/s
	5'000 kg	3'864 kg	3'148 kg
Fast speed	1.8 m/s	2.33 m/s	2.86 m/s
	1'500 kg	1'159 kg	944 kg



W-24 cable winch - models

Motors

- Deutz 3-cylinder diesel motor with particle filter 46.6 PS / 34.3kW

Power transmission

- Forwards and backwards with a continuously variable hydrostatic drive unit and additional 2 speeds (fast/slow)
- Mooring system (Mooring operation connectible)

Brake systems

Holding brake:

- Shoe brake incorporated directly in the drum with 0.7m² braking surface

Driving brake optional:

- Air brake, Mars or Jupiter
- Eddy-current brake

Options and accessories

- Electronic distance indicator
- Splash guard
- Protective cover
- Unimat drive (circular drive with primary roller and a swivelling snatch block)
- Circular drive wheel with Becorit lining or parabolic pulley
- Free-wheel for wind turbine brake
- Cable guide block
- Overfill protection
- Slack cable safety device
- Moveable roller cable guide (steering mechanism when running in sloping terrain)
- Mountain stabilisers (prevents sliding backwards in sloping terrain)
- etc.

W-30 and W-40 cable winches

The proven power-house for the forestry and construction industries

Thanks to its lightweight construction from high-quality aluminium casting, the Wyssen cable winch can be used in many applications in the wood and forest industries as well as in the construction industry. It is primarily used as a drive unit for skyline crane systems, as a hauling device for heavy skyline cables and as a drive unit for inclined lifts. When fitted with a grooved pulley or a capstan ring, it performs valuable work with the circular drive wheel on material cableways.

The sled runners, which are supplied depending on the winch type either in narrow or wide versions, give it good all-terrain mobility, and for this reason it is also very suitable as a mounting winch. The continuously adjustable roller fairlead at the front serves a steering mechanism in terrain and the mountain stabilisers at the rear prevent the cable winch sliding backwards. The large drum diameters ensure a very long service life of the mainline.

With just one control lever the speed, tractive force and direction of rotation of the cable drum can be adjusted to the particular conditions.

Loads can thus be drawn, lifted, transported up the mountainside and lowered. Transport downhill is usually carried out with the air brake. This high performance brake, without any wear, permits a rapid descent with heavy loads.

Wyssen cable winches are modular in construction, so that they can be adapted to the individual requirements of each customer. All spare parts are available from stock.



Technical data

Main dimensions cable winch

	W-30/74	W-40/74
Length	2'900 mm	2'990 mm
Width	1'175 mm	1'175 mm
Height	1'220 mm	1'220 mm
Drum ø	476 mm	476 mm
Drum width	832 mm	832 mm
Total weight	1'572 kg	1'680 kg

Cable drum capacity

	W-30/74	W-40/74
Cable-ø 9.0 mm	1'960 m	3'250 m
Cable-ø 9.5 mm	1'880 m	2'740 m
Cable-ø 10.0 mm	1'630 m	2'580 m
Cable-ø 10.5 mm	1'390 m	2'300 m
Cable-ø 11.0 mm	1'340 m	2'030 m
Cable-ø 12.0 mm	1'110 m	1'850 m
Cable-ø 13.0 mm	890 m	1'480 m
Cable-ø 14.0 mm	840 m	1'250 m
Cable-ø 15.0 mm	675 m	1'080 m
Cable-ø 16.0 mm	604 m	1'000 m

W-30/74 tractive forces and speeds

	Drum empty	Drum half-full	Drum full
Gearbox model A	9.42 m/s 2'980 kg	11.30 m/s 2'555 kg	13.19 m/s 2'129 kg
Gearbox model B	8.29 m/s 3'500 kg	9.95 m/s 3'000 kg	11.61 m/s 2'500 kg
Gearbox model C	7.86 m/s 3'690 kg	9.43 m/s 3'163 kg	11.01 m/s 2'636 kg
Gearbox model D	6.92 m/s 4'192 kg	8.30 m/s 3'593 kg	9.69 m/s 2'994 kg
Gearbox model E *	6.09 m/s 4'762 kg	7.30 m/s 4'082 kg	8.53 m/s 3'402 kg
Gearbox model F	5.78 m/s 5'023 kg	6.93 m/s 4'305 kg	8.09 m/s 3'588 kg
Gearbox model G	5.08 m/s 5'522 kg	6.10 m/s 4'733 kg	7.12 m/s 3'944 K

* Standard model

W-40/74 tractive forces and speeds

	Drum empty	Drum half-full	Drum full
Gearbox model A	8.19 m/s 3'544 kg	10.64 m/s 2'880 kg	13.10 m/s 2'215 kg
Gearbox model B	7.20 m/s 4'025 kg	9.36m/s 3'270 kg	11.53 m/s 2'515 kg
Gearbox model C	6.83 m/s 4'245 kg	8.88 m/s 3'449 kg	10.93 m/s 2'653 kg
Gearbox model D	6.02 m/s 4'823 kg	7.82 m/s 3'918 kg	9.62 m/s 3'014 kg
Gearbox model E *	5.30m/s 5'478 kg	6.84 m/s 4'450 kg	8.47 m/s 3'423 kg
Gearbox model F	5.02 m/s 5'780 kg	6.53 m/s 4'696 kg	8.03 m/s 3'612 kg
Gearbox model G	4.42 m/s 6'565 kg	5.75 m/s 5'334 kg	7.07 m/s 4'103 kg

* Standard model

W-40 Cable winch models

Motors

- 4 cylinder Deutz turbo diesel 55 kW/75 HP
- Electric motor

Power transmission

- Hydrostatic drive, continuously adjustable
- Mechanical 6-speed gearbox
- With fluid turbo coupling (with mechanical 6 speed gearbox)

Brake systems

Holding brake:

- Shoe brake incorporated directly in the drum with 0.7m² braking surface

Driving brake optional:

- Air brake
- Eddy-current brake
- Dead man's brake (hydraulic spring-loaded)

Options and accessories

- Wide sled runners
- Electronic distance indicator
- Splash protector
- Protective cover
- Luggage rack
- Suspension gear
- Unimat drive (circular drive with primary roller and swivelling deflecting rollers)
- Circular drive wheel with Becorit lining or parabolic pulley
- Free-wheel for air brake
- Cable guide roller
- Overfill safety device
- Slack cable safety device
- Remote control
- Radio control with automatic guidance system
- Operator cabin
- Transport trailer
- Oil-cooled gearbox and filtration
- etc.

W-40 /102HP and W-40/175HP cable winches

The modern power-houses for the forestry and construction industries

The electronically-controlled high-performance Wyssen W-40 cable winches excel with their high performance and low weight. They are optimally suited for transporting heavy loads uphill or downhill at high speeds and performances on long-distance cableways. The W-40/102HP cable winch stands out particularly with its low weight of only 1690 kg.

Both cable winches can be quickly and easily separated into two parts (chassis and engine), so

that the cable winches can also be transported with smaller helicopters. The chassis is identical to the conventional W-40 cable winch on both types. The W-40/102 HP cable winch is driven by the powerful VW turbo diesel engine and the W-40/175 HP cable winch by an even more powerful Deutz 4-cylinder turbo diesel engine with the continuously adjustable Rexroth hydraulic system. In comparison with the conventional W-40 cable winch, they have a significantly higher travelling speed with heavy loads. The cable winches have a high cable capacity and are predominantly used as a drive unit in the wood and forest industries as well as in the construction industry and like all Wyssen cable winches they can also be used as a continuous drive for material

cableways. The W-40 cable winch also has a modular construction and can be adapted according to the requirements of the customer. The electronically-controlled cable winches are fitted with the in-house developed control system and equipped with a colour display. Supports and end-points can be entered easily, so that the carriage automatically slows down when crossing the supports and stops at the end-points. For special applications, the cable winches can optionally be fitted with remote control.



Technical data

Main dimensions W-40 Cable winch

	W-40/102	W-40/175
Length	2'990 mm	3'450 mm
Width	1'355 mm	1'335 mm
Height	1'360 mm	1'360 mm
Drum-ø	476 mm	480 mm
Drum width	832 mm	832 mm
Total weight	1'690 kg	2'490 kg

Cable drum capacity

	W-40/102	W-40/175
Cable-ø 9.0 mm	3'250 m	3'250 m
Cable-ø 9.5 mm	2'740 m	2'740 m
Cable-ø 10.0 mm	2'580 m	2'580 m
Cable-ø 10.5 mm	2'300 m	2'300 m
Cable-ø 11.0 mm	2'030 m	2'030 m
Cable-ø 12.0 mm	1'850 m	1'850 m
Cable-ø 13.0 mm	1'480 m	1'480 m
Cable-ø 14.0 mm	1'250 m	1'250 m
Cable-ø 15.0 mm	1'080 m	1'080 m
Cable-ø 16.0 mm	1'000 m	1'000 m

Tractive forces and speeds (W-40/102)

	Drum empty	Drum half-full	Drum full
Gearbox model A	9.25 m/s 3'544 kg	12.02 m/s 2'880 kg	14.80 m/s 2'215 kg
Gearbox model B	8.13 m/s 4'025 kg	10.57 m/s 3'270 kg	13.02 m/s 2'515 kg
Gearbox model C	7.72 m/s 4'245 kg	10.03 m/s 3'449 kg	12.35 m/s 2'653 kg
Gearbox model D	6.79 m/s 4'823 kg	8.83 m/s 3'918 kg	10.87 m/s 3'014 kg
Gearbox model E *	5.98 m/s 5'478 kg	7.73 m/s 4'450 kg	9.57 m/s 3'423 kg
Gearbox model F	5.67 m/s 5'780 kg	7.37 m/s 4'696 kg	9.07 m/s 3'612 kg
Gearbox model G	4.99 m/s 6'565 kg	6.49 m/s 5'334 kg	7.99 m/s 4'103 kg

* Standard model

Tractive forces and speeds (W-40/175)

	Drum empty	Drum half-full	Drum full
Gearbox model A	9.82 m/s 4'866 kg	12.77 m/s 3'953 kg	15.72 m/s 3'041 kg
Gearbox model B	8.64 m/s 5'526 kg	11.24 m/s 4'491 kg	13.83 m/s 3'454 kg
Gearbox model C	8.20 m/s 5'830 kg	10.65 m/s 4'736 kg	13.14 m/s 3'643 kg
Gearbox model D	7.22 m/s 6'622 kg	9.38 m/s 5'380 kg	11.54 m/s 4'139 kg
Gearbox model E	6.35 m/s 7'524 kg	8.26 m/s 6'113 kg	10.16 m/s 4'702 kg
Gearbox model F	6.02 m/s 7'935 kg	7.82 m/s 6'423 kg	9.63 m/s 4'910 kg
Gearbox model G *	5.30 m/s 9'015 kg	6.89 m/s 7'324 kg	8.48 m/s 5'633 kg

* Standard model

Design

Motors

- 4 Cylinder VW turbodiesel 75 kW / 102 HP water and intercooled with active exhaust particle filter
- 4 Cylinder Deutz turbodiesel 129 kW/175 PS

Power transmission

- Rexroth continuously adjustable hydrostatic drive

Brake systems

Holding brake:

- Shoe brake incorporated directly in the drum with 0.7m² braking surface

Driving brake optional:

- Wind turbine brake
- Eddy-current brake
- Hydraulic spring-powered brakes (dead man's brake)

Options and accessories

- Wide sled runners
- Protective cover
- Luggage rack
- Unimat drive (circular drive with primary roller and a swivelling snatch block)
- Circular drive wheel with Becorit lining or parabolic pulley
- Free-wheel for wind turbine brake
- Cable guide block
- Overfill protection
- Slack cable safety device
- Remote control
- Radio control with automatic guidance system
- Operator cabin
- Transport trailer
- Oil-cooled gearbox and filtration
- etc.

W-90 Cable winch

The cable winch for high load capacities

The W-90 cable winch is primarily used as a drive unit for cableways on building sites where high tractive forces are required. When fitted with a grooved pulley or a capstan ring, the cable winch can be used as a circular drive wheel for a material cableway.

The grooved pulley or the capstan ring can be easily fitted or removed.

The W-90 cable winch is fitted with a charge-air cooled 4 cylinder Deutz turbo-diesel motor with 129 kW or for higher performance, the 6 cylinder Deutz turbo-diesel motor with 194 kW, also charge-air cooled. The cable winch is ideally suitable for our MSK 2 and MSK 3 motorised skyline cranes and also for our carriages, with or without trailers, for heavy load capacities. Due to the large cable drum the W-90 has a significantly larger cable capacity than the W-30 and the W-40. The W-90 cable winches are equipped with the same modern control system for automatic operation on the W-40/175

Furthermore the separate diesel connection on the cable winch allows it to be connected to an external diesel tank. The W-90 cable winch is also modular in construction, as are all Wyssen cable winches, so that it can be adapted to the individual requirements of each customer.



Technical data

Main dimensions W-90 Cable winch

	W-90/175	W-90/263
Length	3'450 mm	3'450 mm
Width	1'550 mm	1'550 mm
Height	1'360 mm	1'360 mm
Drum ø	484 mm	484 mm
Drum width	1'152 mm	1'138 mm
Total weight	2'770 kg	2'900 kg

Cable drum capacity

	W-90/175	W-90/263
Cable ø 9.5 mm	3'830 m	3'830 m
Cable ø 10.0 mm	3'320 m	3'320 m
Cable ø 10.5 mm	3'200 m	3'200 m
Cable ø 11.0 mm	2'830 m	2'830 m
Cable ø 12.0 mm	2'560 m	2'560 m
Cable ø 13.0 mm	2'050 m	2'050 m
Cable ø 14.0 mm	1'730 m	1'730 m
Cable ø 15.0 mm	1'680 m	1'680 m
Cable ø 16.0 mm	1'390 m	1'390 m
Cable ø 18.0 mm	1'110 m	1'110 m

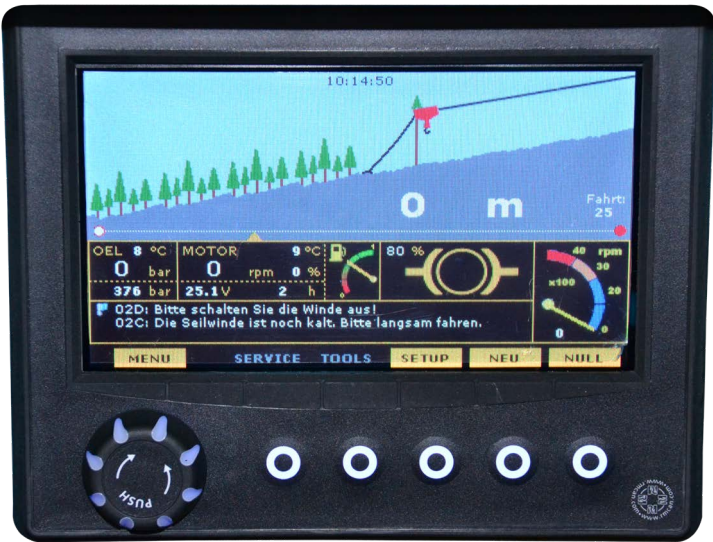
Tractive forces and speeds (W-90/175 + W-90/263)

	Drum empty	Drum half-full	Drum full
Gearbox model A	9.82 m/s 4'866 kg	12.77 m/s 3'953 kg	15.72 m/s 3'041 kg
Gearbox model B	8.64 m/s 5'526 kg	11.24 m/s 4'491 kg	13.83 m/s 3'454 kg
Gearbox model C	8.20 m/s 5'830 kg	10.65 m/s 4'736 kg	13.14 m/s 3'643 kg
Gearbox model D	7.22 m/s 6'622 kg	9.38 m/s 5'380 kg	11.54 m/s 4'139 kg
Gearbox model E	6.35 m/s 7'524 kg	8.26 m/s 6'113 kg	10.16 m/s 4'702 kg
Gearbox model F	6.02 m/s 7'935 kg	7.82 m/s 6'423 kg	9.63 m/s 4'910 kg
Gearbox model G *	5.30 m/s 9'015 kg	6.89 m/s 7'324 kg	8.48 m/s 5'633 kg

* Standard model

State-of-the-art control system

The cable winch W-90 is equipped with our in-house developed control system. The system can be operated semi- and full automatically.



W-90 Cable winch models

Motors

- 4 cylinder turbo diesel 129 kW / 175 HP charge air cooled
- 6 cylinder turbo diesel 194 kW / 263 HP charge air cooled
- Electric motor

Power transmission

Hydrostatic drive, continuously adjustable

Brake systems

Holding brake:

- Shoe brake mounted directly in the drum

Driving brake optional:

- Air brake
- Eddy-current brake
- Dead man's brake (hydraulic spring-loaded)

Options and accessories

- Wide sled runners
- Electronic distance indicator
- Splash protector
- Protective cover
- Luggage rack
- Suspension gear
- Unimat drive (circular drive with primary roller and swivelling deflecting rollers)
- Circular drive wheel with Becorit lining or parabolic pulley
- Free-wheel for air brake
- Cable guide roller
- Overfill safety device
- Slack cable safety device
- Remote control
- Radio control with automatic guidance system
- Operator cabin
- Transport trailer
- Oil-cooled gearbox and filtration
- etc.

W-200 Cable winch

The cable winch to meet the most extreme demands

The W-200 is the biggest and strongest cable winch in our range. It is ideally suitable for very long cableways with very high load capacities. The cable winch is available with different diesel and electrical motors.

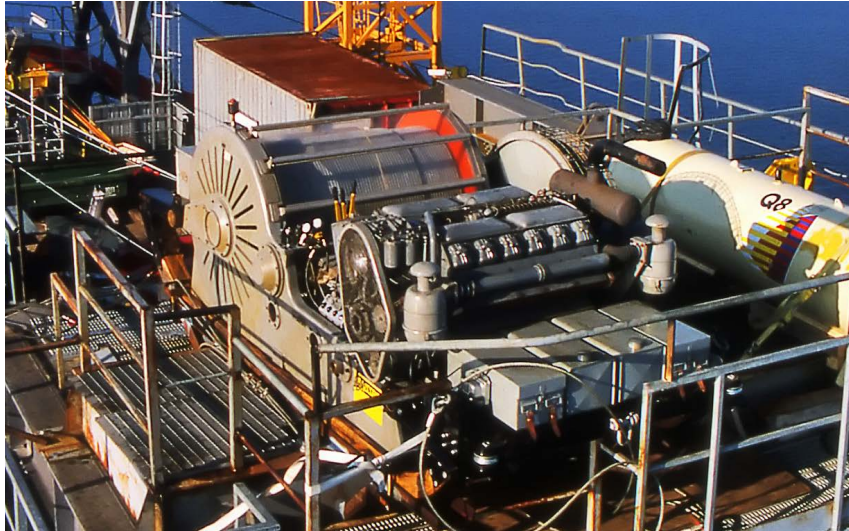
The cable winch has a hydraulically controlled safety brake in the drum, which closes with a spring action with approx. 15 t braking force. The

high-performance air eddy current brake has a braking performance of 400 to 2'000 HP, which is continuously adjustable during operation. The large gearwheel and the external bearing of the vane are lubricated by means of automatic central lubrication with an indicator light.

The very big cable drum with a diameter of 966 mm reduces wear when winding long mainlines with large diameters. Like all Wyssen cable winches, the W-200 has a large-dimensioned fine-acting two-shoe brake

in the drum, which has a braking area of 1.6m² in all.

The W-200 cable winch is predominantly used with the MSK 2 and MSK 3 motorised skyline crane with high load capacities and long runways.



Technical data

Main dimensions

Length	4'900 mm
Width	2'300 mm
Height	1'600 mm
Drum ø	966 mm
Drum width	1'545 mm
Total weight	approx. 6'800 kg

Cable drum capacity

Cable ø 16.0 mm	3'640 m
Cable ø 18.0 mm	2'960 m
Cable ø 20.0 mm	2'390 m
Cable ø 22.0 mm	1'920 m
Cable ø 25.0 mm	1'730 m

Tractive forces and speeds

	Drum empty	Drum half-full	Drum full
1st forward gear	0.90 m/s 13'500 kg	1.05 m/s 11'500 kg	1.20 m/s 10'200 kg
2nd forward gear	1.20 m/s 10'000 kg	1.40 m/s 8'700 kg	1.60 m/s 7'600 kg
3rd forward gear	1.70 m/s 7'100 kg	1.95 m/s 6'100 kg	2.25 m/s 5'350 kg
4th forward gear	2.25 m/s 5'350 kg	2.60 m/s 4'600 kg	3.00 m/s 4'000 kg
5th forward gear	2.80 m/s 4'250 kg	3.30 m/s 3'650 kg	3.75 m/s 3'200 kg
6th forward gear	3.75 m/s 3'200 kg	4.35 m/s 2'800 kg	4.95 m/s 2'400 kg
7th forward gear	5.30 m/s 2'250 kg	6.20 m/s 1'950 kg	7.05 m/s 1'700 kg
8th forward gear	7.05 m/s 1'700 kg	8.20 m/s 1'450 kg	9.35 m/s 1'300 kg

Tractive forces and speeds

	Drum empty	Drum half-full	Drum full
Reverse gear 1	1.35 m/s 8'900 kg	1.55 m/s 7'700 kg	1.80 m/s 6'700 kg
Reverse gear 2	2.55 m/s 4'750 kg	2.95 m/s 4'100 kg	3.35 m/s 3'600 kg
Reverse gear 3	4.25 m/s 2'800 kg	4.95 m/s 2'400 kg	5.60 m/s 2'100 kg
Reverse gear 4	8.00 m/s 1'500 kg	9.25 m/s 1'300 kg	10.60 m/s 1'100 kg

W-200 Cable winch models

Motors

- Various diesel engine
- Electric motor

Power transmission

- Mechanical 8-speed gearbox plus 4 reverse speeds
- Hydrostatic drive, continuously adjustable

Brake systems

Holding brake:

- Shoe brake mounted directly in the drum

Driving brake optional:

- Air brake
- Eddy-current brake
- Dead man's brake (hydraulic spring-loaded)

Options and accessories

- Wide sled runners
- Electronic distance indicator
- Splash protector
- Protective cover
- Luggage rack
- Suspension gear
- Circular drive wheel with Becorit lining or parabolic pulley
- Free-wheel for air brake
- Cable guide roller
- Overfill safety device
- Slack cable safety device
- Remote control
- Radio control with automatic guidance system
- Oil-cooled gearbox and filtration
- etc.

Valentini mobile cable crane

The mobile cable crane manufacturer is a medium-sized workshop that since 1979 has specialised in the project planning and construction of mobile cable crane equipment for timber and material transport, and since 1987 has been represented by us.

The Valentini mobile cable crane installations are characterised by extremely robust construction,

high reliability and safety, simple operation and maintenance, the latest drive and control system technology and optimal cost-effectiveness. The product range includes installation with cable capacities from 400 to 1'500 m and possible towing capacities up to 6'500 kg, mounted on a 3-point suspension on the tractor or on trailer, lorry and crawler.

The company structure and the manufacturing facilities of the machine manufacturer Valentini also enable the company to respond to customers' special wishes.

Thanks to continuous development and direct contact and in cooperation with its customers, Valentini's mobile skyline crane installations are continually being updated.

After many years of close cooperation, we are now able to supply most of the spare parts from our warehouse in Reichenbach.

V-400 Mobile cable crane installation

Advantages

- 2-drum version (skyline and mainline)
- Assembly on the tractor's three point suspension (min. 100 HP)
- p.t.o. shaft operation
- Hydrostatic drive unit (REXROTH hydraulics) all winches with their own hydraulic motors
- Tiltable tower, total achievable height 10 m (in transportation position approx. 3.3 m high)
- Remote control with 20 m cable
- Radio controlled on request
- Short assembly times
- Low maintenance costs
- Low space requirement
- Extremely maneuverable in difficult forest tracks



Technical data

Mobile skyline crane	V-400	V400/M/2	V400/3	V550/M/2	V600/M/2/1000	V600/M/3/2012	V600/M/3/1000/B10	V850/M/3/2012	V1000/M/3
Skyline cable capacity	400 m	400 m	400 m	550 m	830 m	600 m	1000 m	850 m	1100 m
Skyline cable diameter	17 mm	17 mm	17 mm	18 mm	22 mm	20 mm	22 mm	22 mm	24 mm
Skyline tractive force	7 t	7 t	7 t	8.4 t	11 t	11 t	13.3 t	13 t	18 t
Skyline speed	1.4 m/s	1.4 m/s	1.4 m/s	1.2 m/s	1.2 m/s	0.9 m/s	1.2 m/s	1 m/s	1.5 m/s
Skyline cable capacity	400 m	400 m	400 m	550 m	900 m	650 m	1100 + magazine 600 m	850 m	1100 m
Mainline cable diameter	10 mm	10 mm	10 mm	10 mm	12 mm	11 mm	12 mm	12 mm	13 mm
Mainline tractive force	2.1 - 3.1 t	2.1 - 3.1 t	2.1 - 3.1 t	2.2 - 3.4 t	3.2 - 5.6 t	2.6 - 3.8 t	3.8 - 5.7 t	3.9 - 5.84 t	5 - 6.1 t
Mainline speed	3 - 4.5 m/s	3 - 4.5m/s	3 - 4.5 m/s	4 - 5 m/s	4 - 6 m/s	4.8 - 7 m/s	5.1 - 7.8 m/s	6.3 - 8.6 m/s	4.7 - 6.1 m/s
Haul-back line capacity	-	-	900 m	-	-	1400 m	2000 m	1800 m	2000 m
Haul-back line-ø	-	-	9 mm	-	-	10 mm	11 mm	11 mm	12 mm
Haul-back line tractive force	-	-	2.1-3.1 t	-	-	2.6-3.8 t	3.3 - 5.4 t	3.9 - 5.84 t	5 - 6.1 t
Haul-back line speed	-	-	3-4 m/s	-	-	4.8 - 7m/s	5.1 - 7.8 m/s	6.3 - 8.6 m/s	4.7 - 6.1 m/s
Mounting cable winch	On request	On request	On request	On request	Standard	Standard	Standard	Standard	
Mounting cable capacity	1400	1400	1400	1400	1400	1800 m	2000 m	1800 m	2100 m
Mounting cable-ø	5	5	5	5	5	6 mm	5 mm	6 mm	6mm
Mounting cable tractive force	1.1 - 1.4 t	1.1 - 1.4 t	1.1 - 1.4 t	1.1 - 1.4 t	1.1 - 1.4 t	1.1 - 1.4 t	1.1 - 1.4 t	1.1 - 1.4 t	1.8 - 2.5 t
Mounting cable speed	2 speeds	2 speeds	2 speeds	2 speeds	2 speeds	3.9 - 4.8 m/s	2 speeds	3.9 - 4.8m/s	5.6 - 8 m/s
Anchoring cable	4x70 m ø14 mm	5x70m ø14 mm	5x70 m ø14 mm	4x60 m ø14 mm	4x80 m ø16 mm	4x80 m ø16 mm	4x80 m ø18 mm	4x80 m ø18mm	5x90 m ø18 mm 5x70 m ø20 mm
Motor diesel	-	89kW	-	104 kW	104 kW	134kW	177 kW	177 kW	lorry
Tower height (total height)	10 m	10 m	10 m	9 m	12.5 m	12.5 m	12.5 m	12.5 L 17m	lorry~17 m
Width	1.5 m	1.5 m	1.5 m	2.3 m	2.1 m	according to construction	2.3 m	according to construction	lorry (2.5 m)
Length	0.8 m	1.8 m	0.8 m	5.8 m	5 m	according to construction	4.7 m	according to construction	lorry (10.5m)
Height (transport position)	3.4 m	3.4 m	3.4 m	3 m	3.5 m	according to construction	3.45 m	according to construction	lorry (4 m)
Weight incl. cable	3.8 t	5.2 t	5.1 t	8 t	11 t	12 t	19 t	according to construction	according to lorry
Construction on:	Tractor	Tractor for transport	Tractor	Trailer	Trailer	Trailer and crawler	Crawler	Trailer/crawler/lorry	Lorry





seilbahnen



Slackpuller

The motorised slackpuller is designed for long-distance cableways and mobile cableways.

The extremely compact and remote-controlled slack-puller is predominantly used for long-distance cableways and mobile skyline cranes. The chassis of the carriage is made of high-tensile steel that is 4 times stronger than conventional steel.

Thanks to the remote control, the operator in the forest can stop and secure the carriage at the exactly right location. The spooling procedure starts automatically (needs

no radio-controlled command). The mainline clamp allows the slackpuller to be released while the load is raised or lowered, permitting movement to a new location and re-clamping to the cable. This facilitates the sideways pulling of the load and protects the remaining timber growth from damage.

As soon as the hook is drawn tight into the carriage, the skyline grip automatically releases. During travel of the unit, the hook is secured against rotation, preventing damage to the mainline.

The slack-puller is available with or without a pendulum. The pendulum can be retrofitted at any time (recommended for long-distance cableways).

The carriage travels over the popular heavy-duty Wyssen support saddle. The mechanical mainline safety feature activates an emergency stop if the mainline is ruptured.



Advantages

Compared to carriages with integrated lifting winch:

- Lifting height is not limited since there is no drum
- Higher lifting force due to direct hoisting from the mobile cable crane/cable winch
- Faster lifting speed due to direct hoisting from the mobile cable crane/cable winch
- Up to 50% lower weight
- Environmentally friendly 10 HP diesel motor which is economical in consumption
- No cutting of the mainline in the hoist-drum is possible
- Shortening the mainline does not alter the lifting height
- If the mainline ruptures, the clamping mechanism activates immediately
- Thanks to the clamping device the carriage does not shift position when pulling a load
- No change in lifting force (whether the drum is full or empty)
- Diesel fuel tank goes for 3 days without refilling
- Hook is protected against rotation
- Angular to horizontal pulling is possible without any problem
- No switching on or off is necessary in the morning or evening (automatic standby)
- After clamping the slackpuller works fully automatically without any commands

Advantages

Compared to conventional spooling out carriages

- Hook comes out on its own even for horizontal runways
- Clamping/opening by radio signal, spooling procedure starts automatically
- The pump is power-regulated and is always spooled at max. speed
- Mainline is always under tension up to the mobile cable crane/cable winch, so that the cable is always wound cleanly
- Faster lifting of the load due to less slack in the cable

Wyssen control system

FSI 2007

Universally in operation in cable winches, slack-pullers and Universal carriages, as well as in motorised skyline cranes.

- Operable with radio
- Can be adapted for the existing radio remote control on the mobile cable crane
- Automatically switches off when not in use
- Clamping with a radio signal during the journey via set speed no longer possible
- Automatic emergency stop if the programmed speed limit is exceeded
- Display for setting the parameters
- All parameters can be individually adjusted (speed, clamping and delay times)
- Battery status display
- CAN-Bus interface
- Integrated 3D inclination sensor
- Resistant against moisture, vibration and impact due to completely enclosed electronics
- Plug is secured with screws
- Software updates with improvements and upgrading is possible at any time

Technical data

60, 1, 350 mm	
Width	660 mm
Height	975 mm
Spooling force	approx. 350 kg
Diesel motor	Hatz approx. 7 kW/10 HP
Skyline-ø	16 - 36 mm
Mainline-ø	9 - 13 mm
Unladen weight	approx. 650 kg
Load capacity	3'000 kg



Universal carriage and Universal Compact

The carriage for mobile skyline cranes in 2- and 3-cable operation

The Universal carriage and Universal compact can be utilised for either 2- or 3-cable systems operating uphill, downhill or horizontally. The extremely robust Universal carriage is made out of high-strength steel, as are all Wyssen carriages. The Universal carriage impresses with its remarkable spool-out length of 136 m for a haul-back line diameter of 11 mm. This carriage is principally utilised with large mobile skyline

cranes. The small compact Universal Compact carriage is synonymous with its compact construction and is predominantly used for small and medium-sized mobile skyline cranes. Both carriages have two cable breakage safety devices which immediately clamp the traction or haul-back line and stops the carriage in case of a cable breakage. The cable breakage safety device can also be deactivated depending on the type of operation. The carriages are fitted with the proven slack-pulling device pendulum and like all Wyssen carriages up to now, are controlled using the normal portable radio-telephone. All necessary parameters can be

appropriately adapted as required using the in-house developed control system (identical with the slack-puller control system). For clamping, the carriage is stopped at or slowly driven (low speed of < 2 m/sec) to the desired position and the carriage can then be clamped to the skyline cable by pressing a button on the radio-telephone. The hook must first be raised slightly for safety reasons before the load can be lowered.



The carriage also has a mainline clamp, so that it can be driven anywhere at will with a half-lowered load. If the hook has been completely retracted, the clamp on the skyline opens automatically. The carriage is equipped a large high-performance 12V battery with 50 Ah. The current battery status can be checked at any time on the carriage display.

The storage drum can be refilled at any time during the lowering of the load. Coiling the storage drum is activated by an additional button on the radio. If there is too little cable on the storage drum or if it is being overfilled, the operator is made aware of this by a warning signal!

The universal carriage is extremely well-suited for your mobile cable crane, whether in 2- or 3-cable operation.

Advantages

- Mechanical coiling of the storage drum
- Hook comes out automatically even for horizontal or downhill transport.
- Very large storage drum for the haul-back line
- Large lowering heights permitted
- Cable safety brake for mainline and haul-back line
- Warning tone in case of full or empty storage drum
- Operable with radio
- Can be flexibly integrated with the mobile cable crane control system
- Can be adapted for the existing radio remote control on the mobile cable crane

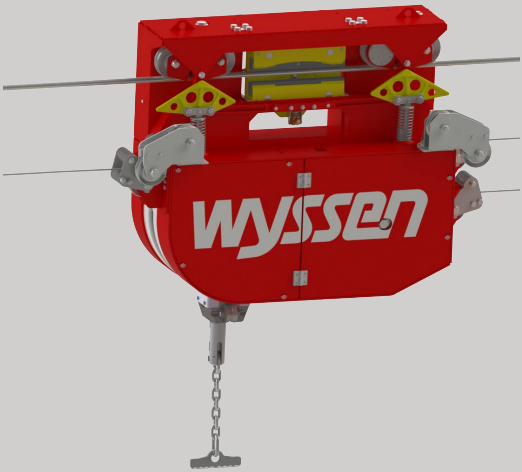
Controlling the carriage with the portable radio-telephone



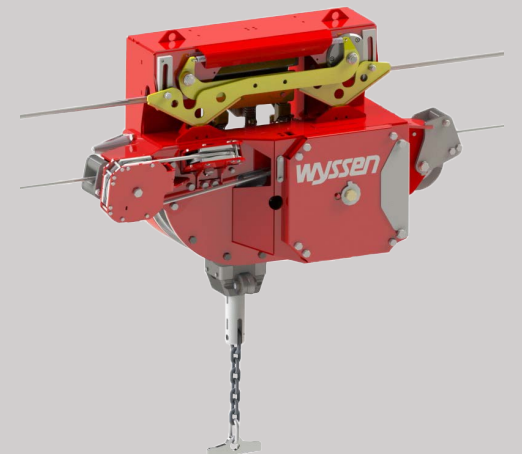
Technical data

	Universal	Universal Compact
Load capacity	3'000 kg	3'000 kg
Skyline-ø	20 - 36 mm	14 - 32 mm
Mainline-ø	9 - 13 mm	7 - 13 mm
Haul-back line - ø	8 - 13 mm	7 - 12.5 mm
(Mechanical winding via radio signal)		
Length:	1'690 mm	1'395 mm
Width:	470 mm	444 mm
Height:	1'133 mm	861 mm
Lifting height ø 8 mm	248 m	160 m
Lifting height ø 9 mm	204 m	130 m
Lifting height ø 10 mm	167 m	100 m
Lifting height ø 11 mm	136 m	80 m
Lifting height ø 12 mm	111 m	60 m
Lifting height ø 13 mm	89 m	-
Unladen weight	680 kg	560 kg
Control system	remote radio control or conventional with timer switch	

Universal



Universal Compact



HY-2 Carriage

The carriage for your mobile cable crane

The Wyssen remote controlled HY-2 carriage is extremely compact.

The patented system is fabricated from high strength steel, four times stronger than conventional steel.

Thanks to the remote control, the operator in the forest can stop and secure the carriage at the exact right location. The mainline clamp allows

the carriage to be released while the load is raised, permitting movement to a new location and re-clamping to the cable. This facilitates the sideways pulling of the load and protects the remaining timber growth from damage.

As soon as the hook is drawn tight into the carriage, the skyline grip automatically releases, allowing travel of the unit.

As soon as the hook is drawn into the carriage, the hook is secured against rotation, preventing damage to the mainline. The carriage travels over the normal Wyssen support saddles.

The cable safety brake activates an emergency stop if the mainline is ruptured. In the event that severe swinging motion causes the grip to clamp outside the skyline, the clamping process would be repeated until the carriage stops.



The HY-2 carriage for mobile skyline cranes and with a pendulum also for long-distance cableways

- Advantages
- Extremely compact and robust
 - Remote control using a normal radio
 - Mainline clamp
 - Very rapid switching
 - Cable safety brake with automatic gripping
 - Control system monitors the driving speed
 - Large maintenance-free dry battery for weeks of operation without recharging
 - Pendulum can be retrofitted at any time

Technical data HY-2

Length	900 mm
Width	290 mm
Height	800 mm
Hydraulics	100 bar
Skyline	14 – 32 mm
Mainline	7 – 13 mm
Unladen weight	approx. 385 kg
Load capacity	3'000 kg

HY-2 also available with a pendulum



Wyssen carriages- FSI control system

In operation in the HY-2, HY-4 and HY-7 Wyssen carriages.

- Operable with radio
- Conventional timer switch possible (without radio signal)
- Automatically switches off when not in use
- Erroneous clamping after passing a support is prevented
- Clamping with a radio signal during the journey via set speed not possible
- Automatic emergency stop if the programmed speed limit is exceeded
- All parameters can be individually adjusted (speed, clamping and delay times)
- depending on the mode set, it is also possible to start/stop the diesel motor or to wind in the haul-back line
- Protected against clamping if the battery is discharged
- Battery status display
- Resistant against moisture, vibration and impact due to completely enclosed electronics
- Software updates with improvements and upgrading are possible at any time, latest micro-computer control system



HY-4 and HY-7 carriages

The carriage for long-distance cableways

The HY-4 carriage is used principally as a long-distance cable crane in the forestry and construction industries. It has four distinguishing guide pulleys to conserve the skyline and for gentler transit over the supports. The load pendulum is available with or without a large-dimensioned mainline clamp. In both versions the load hook is incorporated into the pendulum and the mainline is relieved of the weight during

the run, so that the mainline will not be damaged, even by the heaviest impacts of long timber loads during rapid descents. The suspended load is also protected against the cable twisting, so that damage to the steel wire cable is also prevented. Like the HY-2 type, the HY-4 carriage is also equipped with the Wyssen FSI carriage control system. It is operated using specially programmed buttons on the radio, as are all of our carriages. It can, however, be switched over at any time to the conventional timer switch, so that the system can be operated without remote radio control.

In addition to the standard version, the HY-4 carriage can be fitted with various options, such as a trailer carriage with transport bars or a mainline clamp. (see options for HY-4 carriages on the following page)

The HY-7 carriage is technically identical to the HY-4 carriage and is mostly used in the construction industry. The difference is that the HY-7 is significantly larger and stronger and is designed for load capacities of up to 7 tonnes. The HY-7 carriage is also available with trailer carriages and transport bars.



HY-4 and HY-7 carriages are available with trailer carriages

Advantages

- Novel concept with very few moving parts
- Self-contained compact construction with moving parts on the inside
- Easy to service
- Minimum wear to mainline due to 4 large guide pulleys
- The large lifting pulley causes minimum wear to mainline
- Plenty of room for the simplified pulling-in of the mainline
- Smooth passage over the supports thanks to the 4 guide pulleys
- Passes over large and small Wyssen support saddles
- Complete construction made from high-grade steel
- Chrome-molybdenum steel safety guards prevent derailment from the skyline, allowing fast travel over the supports.
- Large swinging angle of pendulum
- Very low wear on the mainline thanks to the special clamping
- Cable safety brake standard
- Screwed construction, allowing the chassis to be dismantled into small replaceable parts

HY-4 Technical data

Length	1'270 mm
Width	280 mm
Height	900 mm
Hydraulics	100 bar
Skyline	16 - 36 mm
Mainline	9 - 16 mm
Unladen weight	approx. 350 kg
Load capacity	4'000 kg

HY-7 Technical data

Length	1'560 mm
Width	390 mm
Height	1'116 mm
Hydraulics	100 bar
Skyline-ø	up to a max 45 mm
Mainline-ø	up to a max. 20 mm
Unladen weight (depending on model)	approx. 630 kg
Load capacity	7'000 kg

Load hooks for HY-4

Model

1	normal hoisting hook	cables up to ø 12mm	18 kg
2	light hoisting hook	cables up to ø 12mm	8 kg
3a	normal choker spindle	cables up to ø 12mm	10 kg
3b	light Alu choker spindle	cables up to ø 12mm	10 kg
4	large hoisting hook	cables up to ø 16mm	35 kg



1 2 3a / 3b 4

Remote radio control

Advantages

- Precise clamping and release at the touch of a button
- Hook swings out by clamping during slow descent
- Does not have to be raised when clamping during slow uphill driving, even with load
- Hand-held radio serves at the same time as remote control
- Can be retrofitted to any HY-4
- Electronic time release can be activated if the wireless communication is interrupted
- Protected against clamping when travelling too fast
- Protected against clamping if the battery is discharged



Options for HY-4 carriages

The multi-functional carriage

In addition to the standard version, the HY-4 carriage can be fitted with various options, including mainline clamp and trailer carriage with transport bar. The trailer carriage with transport bar option can be quickly coupled and uncoupled.

The mainline clamp in the pendulum allows a repeated procedure for loads lowered at any height. It is operated with the portable radio equipment and can also be used with trailer

carriages with transport bar. The especially large mainline clamps in the load pendulum reduce wear on the mainline cable and in addition the load is locked in the load pendulum when the hook is completely retracted. Thus the mainline cable will not be damaged, even by the heaviest impacts of long timber loads during rapid descents.

The trailer carriage with transport bars is used mainly in the construction industry for lifting, transporting, lowering and moving of long and heavy parts such as e.g. pressure pipes and gas pipelines, or also for transporting concrete and gravel. The transport bars also prevents

the load twisting and twisting of the mainline cable is also not possible even if the lowered load is left hanging for some time. The retracted load is locked in both the carriage and in the trailer carriage, so that the load is doubly protected against falling during the run.

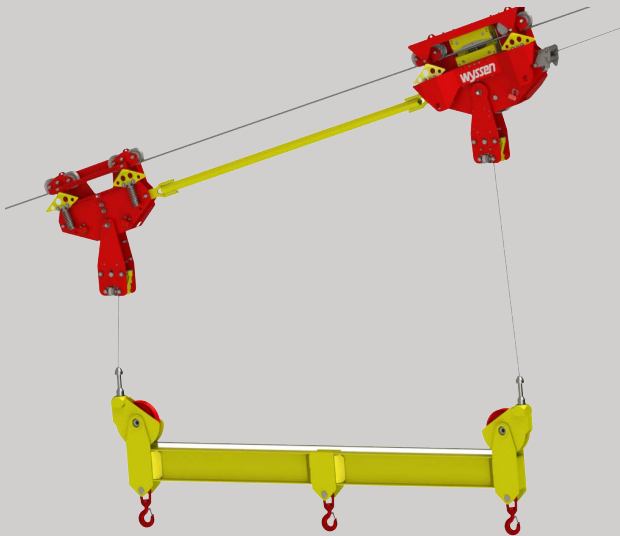


Trailer carriage for HY-4

The transport bar is available in two different lengths, 2.5 m and 3.5 m.

Advantages

- The trailer carriage is directly controlled from the carriage
- Increased safety through 2-fold hoisting when raising and lowering
- Increased safety during the run though locked load on the carriage and trailer carriage when the hook is completely retracted
- Higher load capacities – 5 tonnes for the trailer carriage with transport bar
- Long and heavy loads can be transported, lifted and lowered horizontally



HY-4Z Carriage with mainline clamp

Advantages

- repeatable procedure for loads lowered at any height.
- exact placement of the load (e.g. placing of high pressure pipes)
- large mainline clamp in the load pendulum that reduces cable wear
- when the hook is completely retracted the load is locked in the load pendulum (minimum wear to mainline cable)
- large swinging angle of pendulum

Technical data

Length	1'270 mm
Width	280 mm
Height of pendulum mainline clamp	1'010 mm
Hydraulics	100 bar
Main cable	16 - 36 mm
Traction cable	9 - 16 mm
Unladen weight	approx. 428 kg
Load capacity	4'000 kg

Mainline clamp

The mainline clamp can be retrofitted to the standard HY-4 at any time.



trailer carriages and transport bars for the HY-7 carriage are available for load capacities up to 10 t.

Motorised skyline crane

More pulling force, more capacity, more performance

The Wyssen motorised skyline crane models are equipped with one or two cable winches with increased capacity and lifting force. The remote radio control can be extended from two to a maximum of 10 transmitters. The hydrostatic drive is powered by a diesel engine. The cable drum is locked at standstill using a spring-loaded hydraulic brake and additionally protected with a positive locking mechanism for the MKS 2 and a band brake in the MSK2DT. The hoist-drums are each fitted with a

hydraulically-driven spooling pulley, whereby the lifting cable is always wound in under tension without danger of rupturing. The minimum and maximum filling levels of the drums are monitored with limit switches. The carriage is equipped with cable derailment guards. The upper end position is controlled by a hoist limit switch and a counter with entry slowdown. The carriage travels over the Wyssen 5 ton skyline cable support and curve saddles. The transport bar can also be used without a trailer carriage.

For practical purposes, the operation of simple maintenance (filling of diesel, oil check, access to display and control system) is accessible from one side. The cover to the motor housing is made out of chequer plate, so that service work can be carried out on it safely and easily. For extremely heavy or very long transport the motorised skyline crane can also be operated with a trailer carriage. Depending on the steepness of the cableway, the whole motor housing can be set at the corresponding angle.



Technical data

Drive

	MSK 2	MSK 2 DT
Motor type	Deutz 4 cyl	Deutz 4 cyl
Power	74 PS / 54 kW	122 PS / 90 kW
Hydraulic system	Rexroth/Poclain	Rexroth/Poclain

Lifting force

	MSK 2	MSK 2 DT
Direct	up to 4 t	2 x 4 t
2-Fold	up to 8 t	2 x 8 t (max. 12 t)
4-Fold with trailer	up to 16 t	
Lifting speed when:		
Drum full	2.2 m/s	2.2 m/s
Drum empty	1.5 m/s	1.5 m/s

Motorised skyline crane main dimensions

	MSK 2	MSK 2 DT
Length	2'935 mm	3'585 mm
Width	673 mm	950 mm
Height	dep. on carriage	dep. on carriage
Drum ø	470 mm	470 mm
Total weight	approx. 1'200 kg*	approx. 2'600 kg*

*depending on carriage

Cable drum capacity

	MSK 2	MSK 2 DT
Cable-ø 11.0 mm	240 m	2 x 240 m
Cable-ø 12.0 mm	200 m	2 x 200 m
Cable-ø 13.0 mm	160 m	2 x 160 m
Cable-ø 14.0 mm	150 m	2 x 150 m
Cable-ø 15.0 mm	125 m	2 x 125 m
Cable-ø 16.0 mm	115 m	2 x 115 m

MSK 2 DT

The hoist-drums on the MSK 2 DT can be operated either synchronously or independently, so that lowering of loads such as pressure pipes can be aligned with the slope of the terrain. Furthermore for example, skips containing large pieces of rock can also be tipped and thus quickly emptied.

Other features

- If there is no oil pressure in the motor, it automatically switches off
- If the motorised skyline crane is not used over a period of 5 minutes, the motor automatically switches off
- The lifting force can be directly set as requested on the radio transmitter, so that there is no possibility of overloading. (The cable winch stops automatically in case of overloading).
- In case of overloading, lowering is always possible
- The possibility exists of fitting load measuring pins, in order to make exact measurements of loads.
- On request the lifting force can also be limited using load measuring pins.
- The electronic counter automatically reduces the speed when lifting and a beep sounds at the final 2 m, whereupon the system can be stopped with the control system or it can be stopped automatically using an end switch.
- The motorised skyline crane is also available without a chassis.
- The chassis is also available for 2 skyline cables (dual track).
- A curve chassis is also available.
- The sloping position to the horizontal of the lifting beam on the MSK 2 DT as well as the load distribution are monitored and limited. In this way, lifting of incorrectly attached loads is avoided.

Radio transmitter

There is a display with 4x11 characters on the radio transmitter
All conditions and error messages are displayed.

Variable machine parameters

- Oil pressure (maximum and minimum -> supply pressure)
- Tractive force
- Lifting speed
- Speed per button
- Drive-in speed
- Length of the run-in zone
- Cooler control temperatures
- Hydraulic ramps
- Motor speeds
- Automatic motor switch-off time

Conditions and error messages

- Machine status
- Machine status
- Motor speed
- Operating hours
- Lifting height in m
- Error messages
- Battery voltage
- Diesel reserve
- Hydraulic-oil minimum
- Load in t (only with load measuring pins)
- Transmission strength/reception quality
- Hook switch pressed (top)
- Under-winding/over-winding – status
- Hydraulic-oil overheating
- Change air filter
- Charge controller
- Battery voltage



MES 200/400/500 Single-line cableway

The solution for your transport problem

It is particularly suitable for material transportation to remote farms, alpine huts, clubhouses, holiday homes, construction sites, avalanche guards, forest planting, exploratory sites, guard posts, orchards, vineyards and other similar objects. Very easy to operate!

For uphill or downhill trips, just start the engine and engage the gear. The carriage drives to the

opposite station on its own, stops automatically at the adjustable buffer stop on the cable, turns off the engine and activates the brake. Passenger transport is strictly forbidden. Any number supports can also be passed over with the single-line cableway. In addition, the installation can be run over constantly changing terrain, i.e. uphill and downhill. The single-line cableway is independent of gravitation, unlike conventional winch cableways! By directly tensioning of the skyline with a come-along clamp, the single-line cableway can be installed very quickly and easily.

The MES 500HY/2 is the Wyssen's transport solution for plantations. The carriage travels over intermediate supports, support saddles for curves with an angle of up to 9° and hold-down saddles (for intermediate stations). In addition to the standard loading deck, the MES 500 (see illustration) is also available with a bridge that automatically unloads when it runs into the buffer stop. The switching on the chassis can be set so that when it runs into the buffer stop, the return run is automatically started and only stops at the starting buffer stop.



Technical data

	MES 200	MES 400	MES 500HY/2
Load capacity	200 kg	400 kg	500 kg
Unladen weight	approx. 263 kg	575 kg	455 kg
Main cable	ø 11 mm 6x19	ø 16 mm 6x31	ø 20 mm
Driving speed	0.7 m/s	0.7 m/s	0.7 m/s
Petrol motor	9.5 kW/13 HP	13 kW/18 HP	9.5kW/13 HP
	3'600 U/min	3'600 U/min	3'600 U/min
Max. slope	100%	100%	horizontal only
Loading deck dimensions l x w x h (cm)	135x75x75	200x86x100	200x86x100

Advantages of MES 200 / 400

- User-friendly
- Low operating costs
- Assembled quickly
- One skyline
- No mainline
- Self-propelled
- Runs horizontally and in changing gradients
- Automatic stops at intermediate stations can be switched on at the MES

Advantages of MES 500HY/2

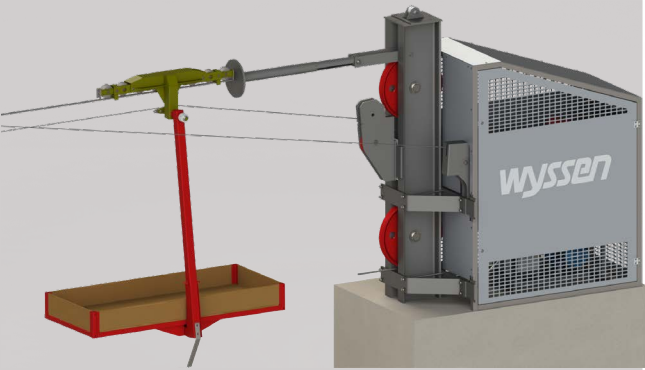
- Hydraulic gearbox
- Two driven rollers
- 2 automatic spring-powered brakes
- Can be stopped or started manually or automatically at any position.

Circular cableway

The Wyssen circulating cableway was specially designed for cableways where the MES 200 and the MES 400 were no longer sufficient. Larger load capacities and longer distances, also in changing terrain, can be handled with fewer supports.

Features:

- Runs fully automatically like the single-line cableway
- Sent from the loading or unloading station by pressing a button
- It drives to the opposite station on its own
- The carriage stops automatically at the opposite station
- It can be switched over to manual operation at any time
- Both electrical and petrol/diesel versions of the continuous drives are available
- Several intermediate stations are possible
- Curves are possible
- Larger distances can be handled without supports
- Higher load capacities are possible
- Faster speed



Support material

We have all the material you need for your support

In a our range we can offer all supports and support material – assembly materials for cableways up to 10 tonnes load capacity in stock (customisation available up to 20 tonnes). Available in various sizes are the following: intermediate support saddles, special shackles, mainline pulley blocks, support balances, terminal tower saddles and blocks, support saddles, cable carriers, support material and the appropriate saddle straps.

The tried and tested Wyssen intermediate

support saddle has been used for several years worldwide, where it has excelled through its extreme high strength and at the same time its light weight. In addition to the intermediate support saddle, special shackles are also available, which make assembly and pulling up of the intermediate support saddle considerably easier. Mainline pulleys can also optionally be assembled on the Wyssen intermediate support saddle.

Additionally in our range we have various sizes of support balances, which are used for large cable angles of more than 30° (under highest loading), so that the cable angle and the saddle pressure are distributed

over two intermediate support saddles. This results in increased safety and a smoother passage over the support, which means the system can be run at a higher speed.

For terminal towers there are terminal tower saddles and blocks available in different sizes. The terminal tower block is used if the skyline tension is on the side of the terminal tower, otherwise the terminal tower saddle can be used. In addition, the skyline cable can be clamped in the terminal tower roller, so that movement and wear and tear of the skyline cable can be prevented.

The Wyssen DQT lattice supports are available as a stand-alone or A-support in single to triple versions in various lengths. Thus you get with us the complete support with all necessary accessories in your desired lengths and strengths.

The saddle straps in various lengths and diameters are available from stock.

Cable carrier with brake

In order to increase safety at the landing place, we have developed a new cable carrier with an automatic brake. The cable carrier holds the mainline cable up and close to the skyline cable so that wood can be safely transported away at the landing place, thus the danger of the mainline cable getting caught on the wood or on the gripper of the excavator or processor can be excluded. The cable carrier is furnished with hardened pulleys, ball-bearings and an automatic brake that prevents movement away if there is any loading on the mainline cable pulley. The cable carrier is especially recommended to increase safety in mobile skyline cranes.

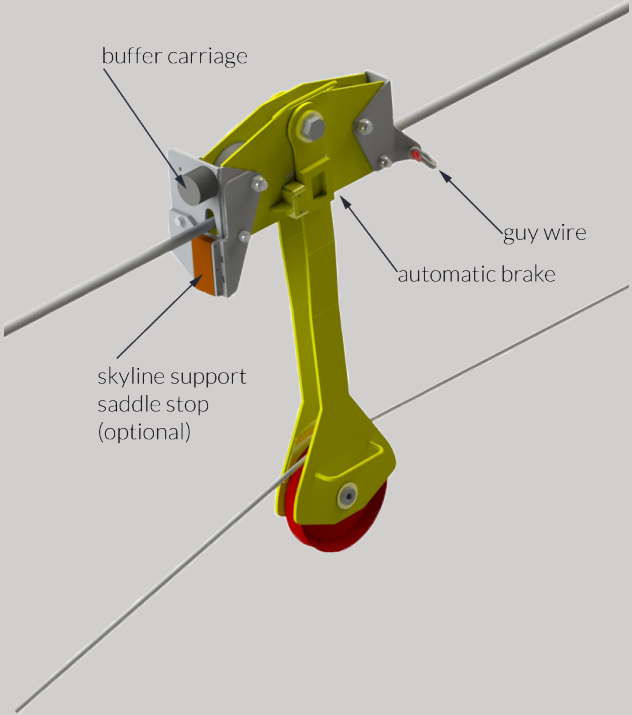
Cable carriers are available in different versions, such as mobile or traversable.



Technical data

Type	for carriage	cable-ø *	Weight	Cable deflection	max. pressure
Intermediate support saddle 2.5 t	HY-2, HY-4, Slackpuller, Universal, LW 2.5 t	16 - 32 mm	23 kg	30°	6 t
Intermediate support saddle 5 t	HY-7, MSK 2, MSK 3, LW 5 t, HY-4, Slackpuller, Universal	32 - 44 mm	80 kg	30° (20° HY-4, SP, Universal)	12 t
Intermediate support saddle 10 t	LW 10 t	on request	284 kg	30°	on request
Terminal tower roller 2.5 t	HY-2, HY-4, Slackpuller, Universal, 2.5 t	24 mm	24 kg	60°	15 t
Terminal tower roller 5 t	HY-7, MSK 2, MSK 3, HY-4, Slackpuller, Universal, LW 5 t	34 mm	47 kg	60°	25 t
Terminal tower roller 10 t	HY-7, MSK 2, MSK 3, LW 10 t	48 mm	100 kg	60°	50 t
Terminal tower saddle 2.5 t	HY-2, HY-4, Slackpuller, Universal, LW 2.5 t	max. 28 mm	8 kg	60°	15 t
Terminal tower saddle 5 t	HY-7, MSK 2, MSK 3, HY-4 Slackpuller, Universal, LW 5 t	max. 32 mm	20 kg	60°	22 t
Terminal tower saddle 10 t	HY-7, MSK 2, MSK 3, LW 10 t	max. 48 mm	36 kg	60°	65 t
Support balance for saddle 2.5 t	HY-2, HY-4, Slackpuller, Universal, LW 2.5 t	-	78 kg	-	12 t
Support balance for saddle 5 t	HY-7, MSK 2, MSK 3, HY-4, Slackpuller, Universal, LW 5 t	-	291 kg	-	32 t
Support balance for saddle 10 t	LW 10 t	-	294 kg	-	32 t

* other cable ø are possible on request



Automatic tensioning device

The quick and safe way to tension the cable

It is used for tensioning the skyline of a transport cableway.

There are five different sizes of the tensioning device for tensions between 8 and 48 tonnes and for cable diameters between 12 – 60 mm. It can be used for most types for steel wire cables in aerial cableways.

Clamping is automatically effected by wedge effect, without any elaborate bolting. High tension on the skyline is achieved with low tension on the tensioning cable by means of an eightfold block and tackle system. The sheaves are ball-bearing mounted with lifetime lubrication. Clamping jaws are available for different cable diameters and can be replaced at any time.

The tensioning device type A is available especially for use with several cableways, which is then used respectively as an anchor clamp for

the braced cableway, so that the same device can be used for several cableways.

We can also offer different types of tension measuring instruments for the tensioning device as well as suitable rock anchor plates.

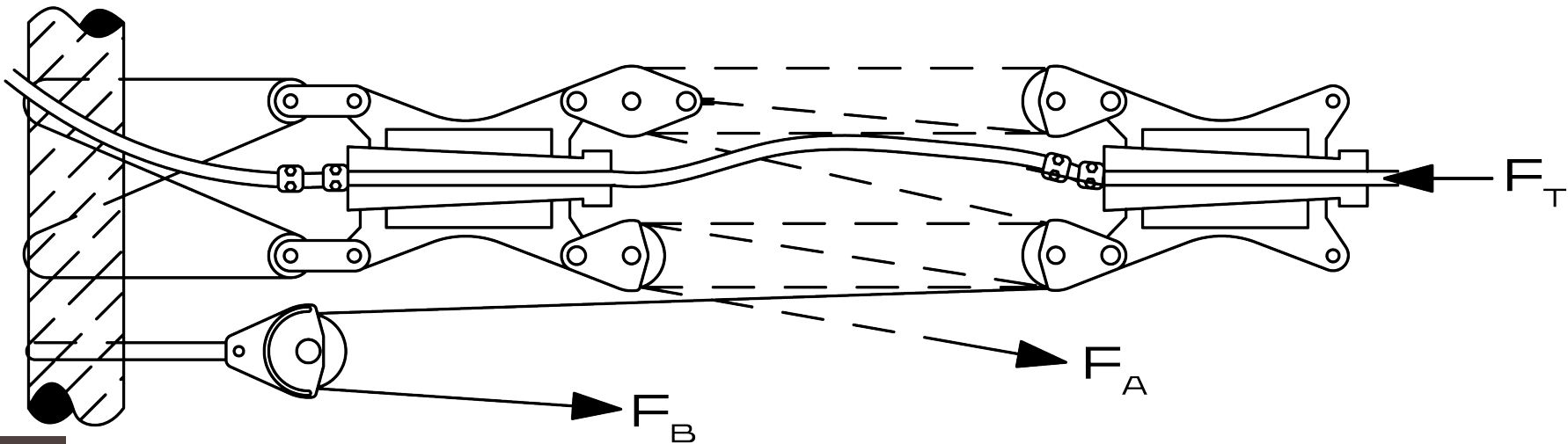


Technical data

Type	Block system (n-fold)	Permitted load FT	Permitted load ($F_A + F_B$)	Tensioning cable - \varnothing	Skyline cable- \varnothing	Weight	Bolt cap type / Nm
8 t	4	80 kN / 8 t	20 kN / 2 t	11 mm	12 - 20 mm *	61 kg	M12x35-8.8 / 71 Nm
12 t	8	120 kN / 12 t	15 kN / 1.5 t	11 mm	16 - 32 mm *	107 kg	M12x70-8.8 / 71 Nm
22 t	8	220 kN / 22 t	27.5 kN / 2.75 t	16 mm	20 - 44 mm *	199 kg	M16x80-8.8 / 170 Nm
32 t	8	320 kN / 32 t	40 kN / 4 t	16 mm	20 - 44 mm *	208 kg	M16x80-8.8 / 170 Nm
48 t	8	480 kN / 48 t	60 kN / 6 t	22 mm	40 - 60 mm *	625 kg	M18x50-12.9 / 410 Nm **

* The clamp sizes are available in 2 mm intervals, for odd-numbered cable diameters the next largest clamp diameter must be used respectively

** Allen screw



Tension measurement devices

We can offer various types of tension measurement devices which are suitable for the automatic tensioning device.

The electronic measuring and display instrument is manufactured entirely in-house at Wyssen and can be used for both the measuring bolts as well as the measuring shackles. The included 10 m cable enables remote reading, so that during tensioning and operation the measurement can be read off outside the danger zone.

Wyssen electronic tension gauge with load measuring pins (Picutre 1)

- Electronic measurement with load measuring pins directly in the skyline clamp.
- Effective tension in the skyline cable is displayed (the displayed value does not need to be multiplied)
- 10 m cable for remote reading
- Measurement can be permanently read off during tensioning and operation outside the danger zone
- available for measurements of 12/22/32 tonnes

Wyssen electronic tension gauge with measuring shackles (Picutre 2)

- electronic measurement using measuring shackles 7 / 8°
- for tension measurements up to a max. of 6.5 t
- Suitable (in the tensioning cable) for tensioning with the automatic Wyssen skyline clamp 12 t / 22 t / 32 t
- very wide range of applications
- 10 m cable for remote operation
- works with a conventional 1.5V AM3 / AA type battery
- all spare parts are available from stock.

PIAB tension measurement device (Picutre 3)

- analogue measuring instrument (needs no batteries)
- measurement made in tensioning cable (sheave block, pay attention to the multiplication factor)
- measurement can only be carried out when at a standstill
- available for measurements of 1/2/3/5 tonnes

Cable snatch blocks

The high quality Wyssen cable snatch blocks have been specially developed for cableways construction and operation, but today they are used for all types of hoisting and ground traction work.

All our cable snatch blocks have been calculated with a safety factor of 5. The steel models are ideally suitable for fast-running cables with high loads. The aluminium/plastic models are ideally

suitable for assembly work due to their light weight. The permanently lubricated ball-bearings and the high-strength materials guarantee a longevity. The pulleys are also equipped with cable derailing protection, so that derailing or any damage to the wire cable is not possible. The snatch blocks can be opened up in a hanging position and the cable can be simply inserted. Various models are available in a wide range, so that e.g. sleeves or cable connections can be drawn through when threading the cable. Individual spares are available for all pulleys.



Technical data

Article no.	Pulley diameter	Material plate / pulley	Max. traction on the bold	Max. cable pull at 180°	Cable-ø up to max.	Weight
34.700	100 mm	Steel / steel	3'200 kg	1'600 kg	ø 11 mm	2.7 kg
34.700A	100 mm	Alu / plastic	3'200 kg	1'600 kg	ø 11 mm	1.2 kg
34.500B	140 mm	Steel / steel	3'200 kg	1'600 kg	ø 10 mm	4.5 kg
34.600B	180 mm	Steel / steel	4'000 kg	2'000 kg	ø 11 mm	8.0 kg
34.600BH	180 mm	Steel / hardened steel	4'000 kg	2'000 kg	ø 11 mm	8.0 kg
34.100A	240 mm	Alu / steel	5'000 kg	2'500 kg	ø 12 mm	8.5 kg
34.100B	240 mm	Steel / steel	5'000 kg	2'500 kg	ø 12 mm	12 kg
34.100-500	500 mm	Steel / steel	4'000 kg	2'000 kg	ø 12 mm	38 kg
34.1000	240 mm, wide	Steel / steel	5'000 kg	2'500 kg	ø 24 mm	21 kg
34.200B	320 mm	Steel / steel	10'000 kg	5'000 kg	ø 16 mm	31 kg
34.200BH	320 mm	Steel / hardened steel	10'000 kg	5'000 kg	ø 16 mm	31 kg
34.2000	320 mm, wide	Steel / steel	10'000 kg	5'000 kg	ø 16 mm	45 kg
34.300B	400 mm	Steel / steel	20'000 kg	10'000 kg	ø 24 mm	59 kg
34.3000B	400 mm, wide	Steel / steel	20'000 kg	10'000 kg	ø 24 mm	94 kg
34.800	600 mm	Steel / steel	20'000 kg	10'000 kg	ø 18 mm	100 kg

Cable snatch blocks
especially for rear cable winches

The extremely light and strong aluminium-plastic cable snatch block has been specially developed for tough use with forestry cable winches for ground traction. The snatch blocks are predominantly used with any forestry cable winches for ground traction such as e.g. tractor and hauler cable winches and is available in two different sizes for winches with tractive forces of max. 9 t and max. 16 t.

- Advantages:
- optimised for maximum load with minimum weight
 - side plates and bolt made out of high-tensile aircraft aluminium, roller plastic
 - ergonomic carrier handle
 - hollow axle for suspending or fixing
 - nut fixed to side plate
 - secure fixation with threaded bolt
 - specially wide to accept round slings or straps
 - large block diameter (>10 times the cable diameter)
 - Safety factor 2.5
 - all spares available individually from stock

Technical data		
Cable snatch block	10 t	16 t.
max. cable tension at 180°	10 t	16 t
max. bolt tension	20 t	32 t
max. cable diameter	14 mm	16 mm
weight	6.5 kg	11 kg
roller diameter	180 mm	240 mm





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For our customers, our General Terms of Contract and Delivery are applicable; they are available on our website.

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