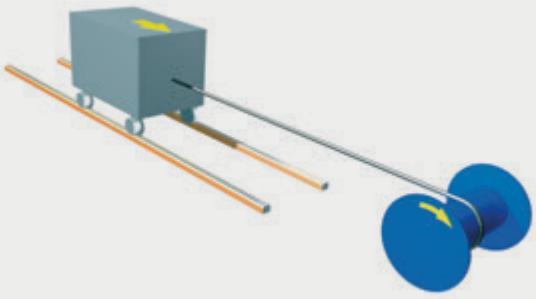

PLANETA
Hoists and winches since 1861
ROPE
WINCHES
REFERENCE
BOOK

WHAT TYPES OF ROPE WINCH ARE THERE?

Mode of application and load bearing capacity

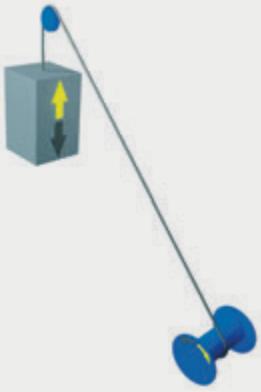
Pulling winches are designed to pull loads on a 100 % flat surface. The pulling force is calculated from the mass of the load to be pulled multiplied by the load's rolling resistance. The rolling resistances for the typical applications are around 0,150 for rubber wheels on concrete surfaces and around 0,005 for steel wheels mounted on an anti-friction bearing that are on tracks. If the load is hoisted on an angled surface, the cable winch must be designed as a hoist winch.



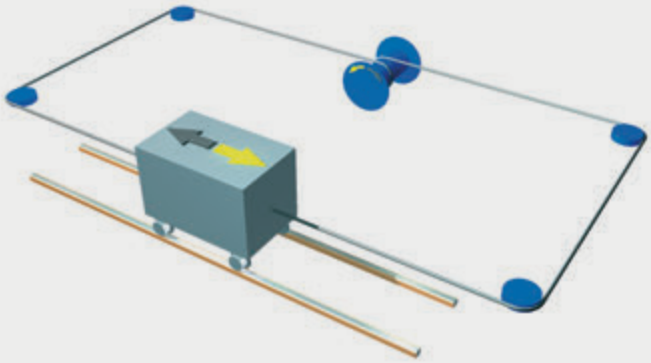
Capstan winches are endless winches that do not store the cable on a cable drum but allow the cable to run through "endlessly". A counterforce such as the operator's manual force is multiplied by winding the cable around the capstan head several times. In this way, a much larger pulling force can be achieved from manual force. For example, they stand on deck on a ship and are used to pull cables and ropes in many different directions.

Hoist winches must be used if a load is to be raised and held by the cable winch. This applies to hoisting vertically and also to pulling the load along an angled track. Cable winches for hoisting are equipped with spring-loaded brakes on the motor as standard and therefore guarantee that the load will be held securely. In addition, rope winches for hoisting are equipped with higher safety factors than rope winches that are used purely for pulling for example.

Traction winches are endless winches like the capstan winches. They work on the same principle of increasing force due to winding friction. The cable is better fed and protected thanks to their design with two traction sheaves and multiple scores. Traction winches are normally located on carriages that travel forwards and backwards. The pulling cable is stretched between the two ends of the guide rail.



A **traversing winch** can be used to move a load in two directions on a level. You can therefore move a carriage forwards and backwards for example. The cable drum is designed for two cables, is scored and winds in only one layer.



PLANETA

Hoists and winches since 1861

Quality from tradition

Consistency and innovation are in fact two sides of the same coin, because only a constant willingness to innovate makes sustainable developments possible.

Sustainability, reliability and responsibility are among the fundamental values to which we are committed.

Throughout the company's history, they have been embodied by our employees and their endeavors to make good things even better. a little better.

Trust is good - but control is better

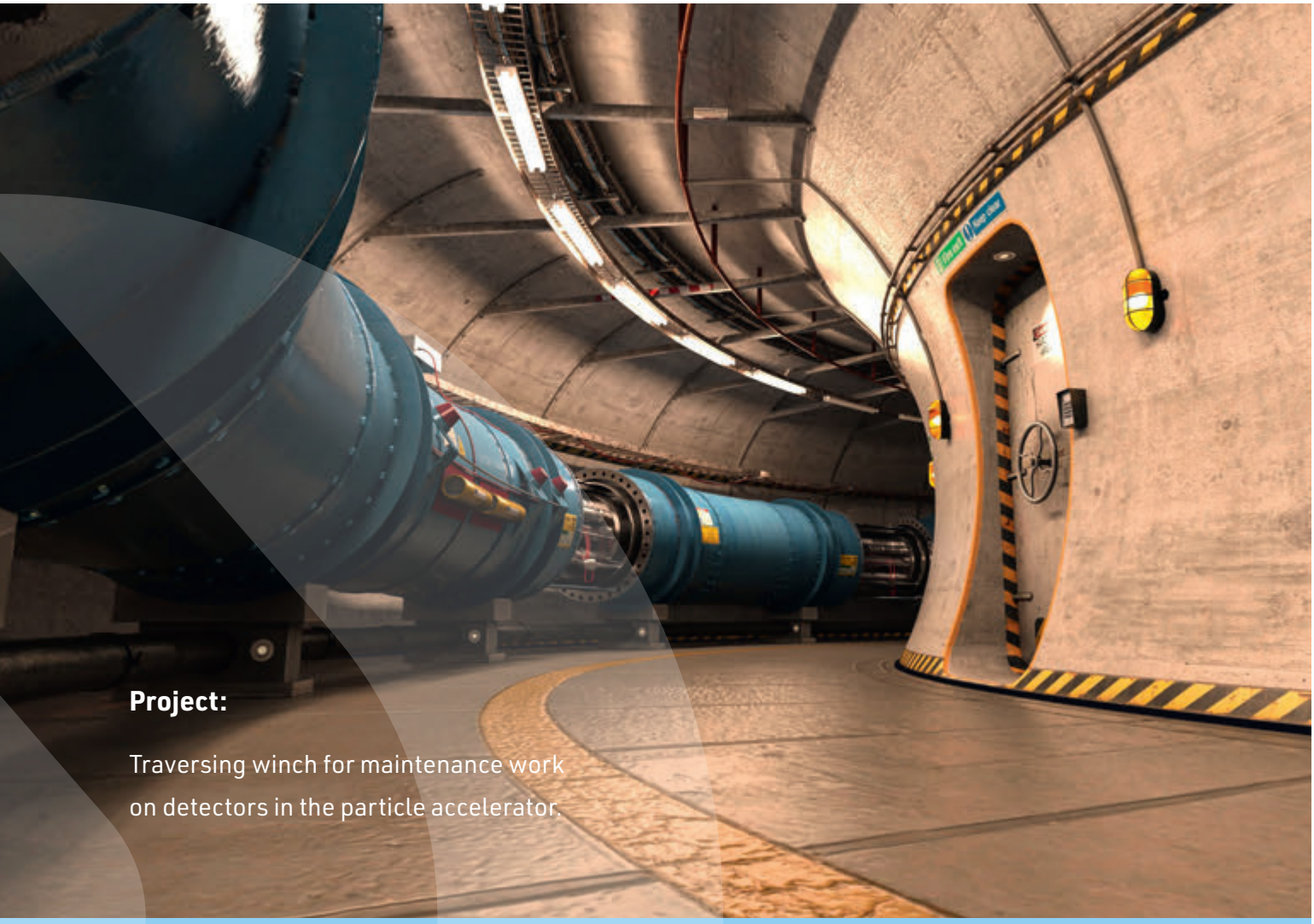
PLANETA hoists and rope winches are subject to the strictest quality controls and are designed for the toughest operating conditions with high functionality. Exclusively with appropriate overload tested quality products, in compliance with all EN standards, find their way to you.

Project:

Several 1,000 electric rope winches for the wind power industry.

Project:

Personal winch for inspection shaft in highway tunnel.



Project:

Traversing winch for maintenance work
on detectors in the particle accelerator.

WHAT`S YOUR CHALLENGE?

We have been defying gravity for over 160 years and are proud to be at home all over the world and in many industries. at home in many industries.

As a leading family business for high-quality hoists and cable winches, we have been working at the cutting edge since 1861 and always have our focus on the future.

Our wide product range, consisting of power-driven cable winches, series hoists and accessories, meets the highest quality standards. Whether it's small manual hoists for assembly or large, complex solutions in the field of lifting technology, we offer customized solutions for individual requirements. solutions for individual requirements.

From planning and project management to maintenance, we ensure that our hoists meet your highest safety standards. highest safety standards. Our reliable and efficient products help you to move heavy loads safely and effectively. Let's overcome the limits of gravity together and shape a successful future.

QUALITY MEANS SAFETY.

Sustainability, reliability and responsibility are values to which we feel particularly committed.
This begins with occupational health and safety during production, through to the certification of all processes as part of the annual TÜV DIN EN ISO 9001:2015 audit or membership of the GKS.

Quality
CERTIFIED

Industrial safety
CERTIFIED

Environmental protection
CERTIFIED

PARTNERSHIPS THAT STAND FOR QUALITY AND SAFETY.

Since 2000

Certified according to DIN EN ISO 9000:2001

Since 2006

Member of the Gütegemeinschaft Kranservice e.V. (GKS)

Since 2013

Certified according to OHSAS 18001:2007

Since 2017

Full Member of Lifting Equipment Engineers Association (LEEA)

Since 2019

Certified according to ISO 9001:2015, ISO 14001:2015 and SCC**:2011

TÜVRheinland® ZERTIFIZIERT

Management System
ISO 9001:2015
ISO 14001:2015
SCC**:2011

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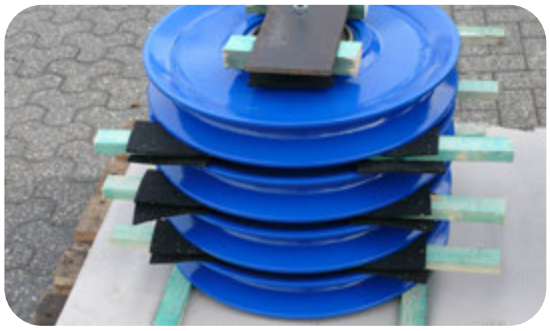
GKS RAL GÜTEZEICHEN KRANSERVICE

LEEA

Full Member



PROJECT | HYDROELECTRIC POWER STATION "WESER"

CUSTOMER: ENERCON
LOCATION: Bremen, Germany
REALIZED: 2011

APPLICATION: Lifting of 64 ton flood gates
WINCHES: 4 × PHW 315 – 132kW
TECH. DATA: 16 ton / 40 m/min / 15 m
CONTROL: Inverter, Synchronized

THE TASK:

To prevent the reservoir from running dry in an emergency, the 64-ton bulkhead gates must be closed within 60 seconds. For this purpose, one gate each was attached to 2 winches via a continuous rope. The rope sheaves were partly mounted under water for this purpose.

PLANETA advised the customer on the selection and equipment of the winches and control system and also advised on the installation options. In addition, we provided support during the installation and years afterwards as a regular maintenance partner.

PROJECT | **GASOMETER BOTTROP**

CUSTOMER:	Thyssen-Krupp / Arcelor Mittal
LOCATION:	Bottrop, Germany
REALIZED:	2012

APPLICATION:	Lifting of personal in ATEX Zone 1
WINCHES:	1 × SB 307 – 7,5 kW + 6 bar
TECH. DATA:	1 ton / 18 m/min / 90 m
CONTROL:	Inverter, Pneumatic backup

THE TASK:

During the renovation of the Oberhausen Gasometer, an old elevator system had to be replaced by a modern ATEX-compliant winch for zone 1. In addition to the extremely cramped conditions in the new machine house, a special technical feature was that the floor of the gasometer rises and falls. The winch therefore had to be equipped with an automatic floor tracking system. A pneumatic auxiliary drive was also integrated as a rescue concept.

PLANETA provided support during the design phase prior to delivery and during the installation of the winch including the car, the TÜV type examination in accordance with the EC Machinery Directive and, in addition, still carries out the maintenance and UVV inspections on the system today.

PROJECT | **VKG ESTONIA**

CUSTOMER: Thyssen-Krupp / VKG Estonia
LOCATION: Estonia
REALIZED: 2011

APPLICATION: Tensioning conveyor belts
WINCHES: 1 × SB 313 – 5,5 kW
TECH. DATA: 2 × 22kN / 7 m/min / 2 × 200 m

THE TASK:

Over a long distance of up to 50m, a conveyor belt is to be synchronously tensioned and held at 2 points. Due to the 4-fold reeving, a rope capacity of 2 × 200m had to be realized.
Due to the necessary exact synchronization of the two ropes, it was imperative that the winch be designed as a single layer. The high storage capacity resulted in a large drum, despite the comparably small rope diameter.

The cover of the open, monitored drum brake between the gearbox and the motor helps when the winch is used in the cold environment at temperatures as low as -35 °C.

In addition to the winch, PLANETA also designed and built the deflection pulleys and axles.

PROJECT | BUBBLE CURTAIN OWEA PILE DRIVING

CUSTOMER:	MENCK / BARD
LOCATION:	Germany, North-Sea
REALIZED:	2011
APPLICATION:	Synchron Lifting of hoses
WINCHES:	3 × PHW 305 – 4,6 kW 3 × PORTY 990 – 1,8 kW
TECH. DATA:	2 ton / 10 m/min / 1 × 65 m
CONTROL:	Contactor, synchronized with mobile floating control case

THE TASK:

For a research project of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, our customer, with the assistance of PLANETA, developed a bubble curtain that was intended to reduce noise emissions when hammering in the foundations during the installation of offshore wind turbines. For this purpose, hoses were synchronously lowered to the seabed via 6 winches.

In addition to the winches, PLANETA also designed and built the offshore control system, including a floatable remote control case.

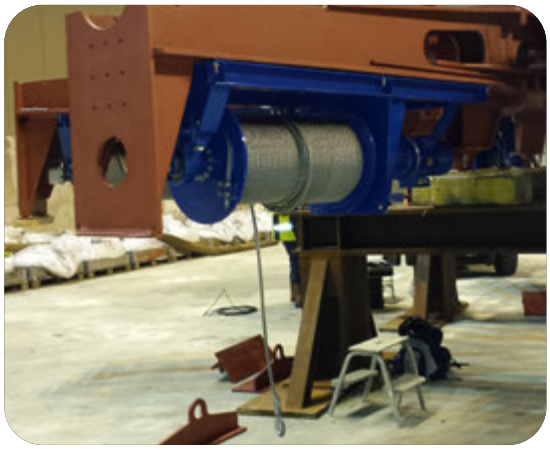
PROJECT | **SKYWIND PROTOTYPE HUSUM**

CUSTOMER:	SkyWind
LOCATION:	Germany
REALIZED:	2013
APPLICATION:	Spooling of ropes and holding the turbine during lift
WINCHES:	1 × PHW-E 307 – 18,5 kW 1 × PHW-E 311 – 11 kW
TECH. DATA:	3 ton / 25 m/min / 1 × 1320 m 12 ton / 5 m/min / 1 × 275 m
CONTROL:	Inverter, Real load measuring

THE TASK:

SkyWind is shaping the future of on- and offshore wind energy with game-changing technologies to drive down the cost of offshore wind power. SkyWind has developed a turbine solution where the owner/operator perspective has been in focus. Experience of developing and operating wind farms in Germany during the last 20 years has been a basis.

PLANETA supported the prototype construction with the development of a mobile winch solution for reeling in the main hoist ropes and holding the turbine during the hoisting process. The reel-in winch was mounted in an oscillating manner for real load measurement in the frame.



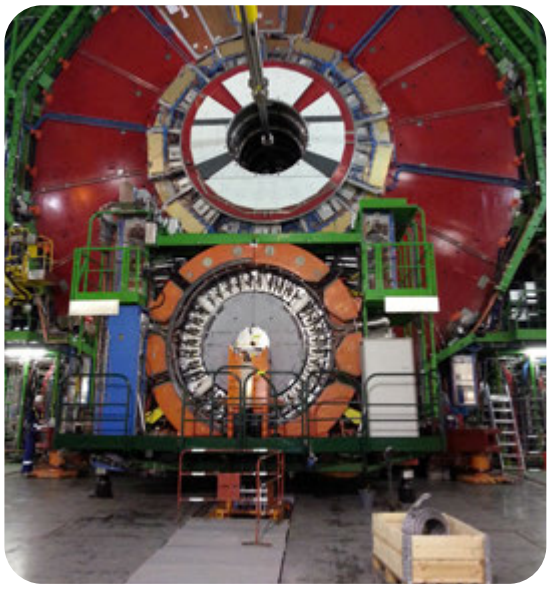
PROJECT | **INVESTIGATION AND TESTING OF HYDRO-SONIC DAMPERS (HSD)**

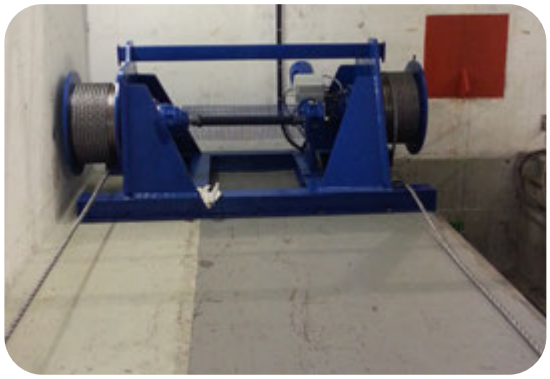
CUSTOMER:	MENCK
LOCATION:	Germany, North-Sea
REALIZED:	2014
APPLICATION:	Lifting of an offshore anti sonic device with a set of 8 winches
WINCHES:	8 × PHW-E 307 – 5,5 kW 1 × PK-E 1200 – Cable Winch
TECH. DATA:	5 ton / 6 m/min / 1 × 60 m Ø39mm cable / 130m
CONTROL:	Contactor, synchronized in Offshore-Cabinet

THE TASK:

The aim of the project was to optimize and develop the patented concept of hydro-sound dampers (HSD) as a novel sound reduction method to reduce hydro-sound emissions during the driving of foundation piles for WTGs and to develop it to market maturity. The offshore suitability as well as the sound reduction potential of the method should be proven and the system should be tested in serial application.

PLANETA supported the design of the winches including control and transfer of the cables and assisted the customer during the commissioning of the prototype.





PROJECT | **CERN DETECTOR MOVING**

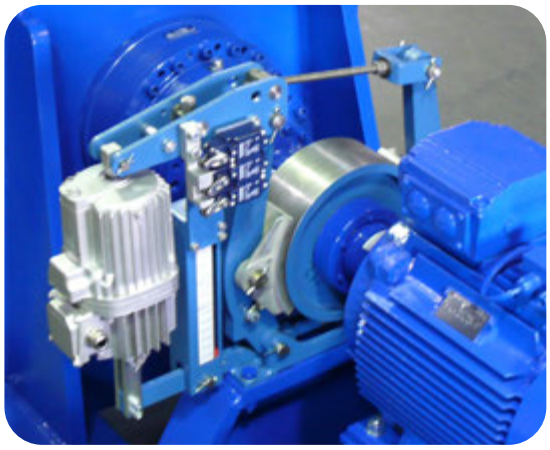
CUSTOMER: CERN
LOCATION: Switzerland
REALIZED: 2012

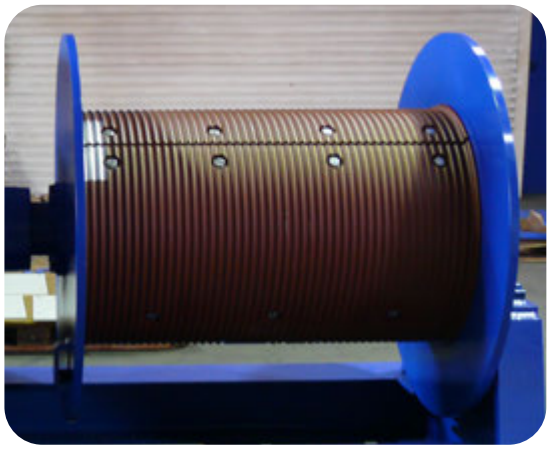
APPLICATION: Traversing of 300 ton detector
WINCHES: 1 × PHW-E 310 – 4,0 kW
TECH. DATA: 10 ton / 1,8 m/min / 2 × 14 m
CONTROL: Inverter, Contra-rotation

THE TASK:

As part of the CMS experiment at CERN, maintenance work involved moving a detector up or down an inclined plane for 18m. With a weight of 300 tons and a determined friction, a necessary force of approx. 10 ton was determined when moving uphill.

PLANETA adapted the very limited space available and designed a special traversing winch with counter-rotating drums including mechanical coupling. Our supervisors assisted the customer during commissioning.





PROJECT | **HIGH FLARE ERECTING**

CUSTOMER: INEOS
LOCATION: Germany
REALIZED: 2013

APPLICATION: Lifting parts of high flare
WINCHES: 1 × PHW-E 313 – 18,5 kW
TECH. DATA: 12,7 ton / 10 m/min / 1 × 820 m

THE TASK:

A winch system with high-precision spooling was needed to erect a high flare. The enormously large rope take-up was used for multiple reeving to erect the extreme loads of the steel structure. By using exchangeable LEBUS half shells,
the customer was able to equip the winches with a different rope after the initial use for a later change in the application situation.

The open drum brake enabled the best possible control during controlled emergency lowering and allowed a quick view of the condition of the brake technology.

PROJECT | **NEW CONSTRUCTION OF "BAB A4" JAGDBERG TUNNEL: INSPECTION SHAFT DRIVE-ON SYSTEM**

CUSTOMER:	Schachtbau Nordhausen
LOCATION:	Germany
REALIZED:	2014

APPLICATION:	Personal lifting winch for revision
WINCHES:	1 × PHW-E 309 – 9,2 kW
TECH. DATA:	4,3 ton / 9 m/min / 2 × 140 m
CONTROL:	Safety-Inverter-Control, Offshore-Cabinet

THE TASK:

During the secondary construction of the highway tunnel, a drive-in facility for the exhaust shaft was required. The platform was also used for inspection and maintenance work on the shaft and therefore had to be able to transport a large payload in addition to the maintenance personnel.

For this purpose, the platform hangs unguided in the shaft and is secured by inclination sensors, slack rope detectors and real load measurements of both ropes as well as by a position monitoring system on the drum. A safety disc brake on the drum, monitored for overspeed, serves to protect personnel.

PLANETA designed and built a multi-layer winch for the transport of persons, including the control system, and provided support during the EC type testing as well as the assembly, acceptance and commissioning on site.

PROJECT | DISMANTLING HARD COAL MINING

CUSTOMER:	RAG
LOCATION:	Germany
REALIZED:	2012 / 2013 / 2016 / 2018
APPLICATION:	Mobile winches for lowering probes into mine shafts
WINCHES:	2 × PHW-E 301 – 1,1 kW in cars 6 × PHW-E 306 – 5,5 kW Container
TECH. DATA:	0,1 ton / 50 m/min / 1 × 1550 m 0,7 ton / 60 m/min / 1 × 1900 m
CONTROL:	Inverter-Control load and cable distance measuring

THE TASK:

During the dismantling of the coal mines, our customer's task was to probe the shafts with modern gas and video measurement technology to ensure safe dismantling.

Over the years, PLANETA supplied various systems for mobile shaft probing and helped to test and operate the systems at various locations throughout Germany.

PLANETA not only built the winches, but also complete container systems for mobile connection to the various construction sites, as well as mobile systems for installation in service vehicles.

On the last day of the German colliery closure on 18.12.2018, PLANETA delivered the last 3 systems for the planned ‚dismantling.

PROJECT | DEWATERING COAL MINE CAROLINENGLÜCK

CUSTOMER: RAG
LOCATION: Germany
REALIZED: 2015

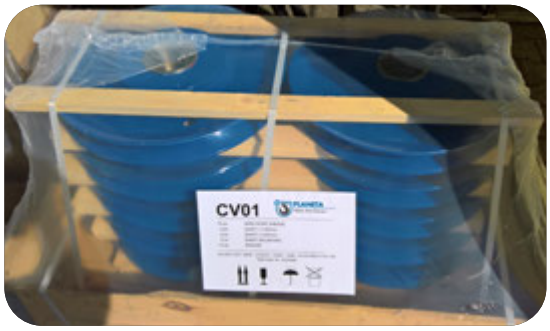
APPLICATION: Construction of a winding tower for the discharge of pumped liquids
WINCHES: 1 × PHW-E 315 – 90 kW
1 × Traction winch – 30kW
TECH. DATA: 15,8 ton / 40 m/min / 1 × 330 m
2,4 ton / 70 m/min / Traction
CONTROL: Inverter-Control
Real load measuring, synchronized traction winch with main lift winch

THE TASK:

Our plant engineering customer had the task of lowering pump strings consisting of pipe segments together with a high-performance pump with a total weight of 250 tons into the mine shaft in order to ensure the pumping out of mine water.

For this purpose, PLANETA developed a winch with high load capacity and rope storage capacity, which spooled the rope with preload onto a LEBUS drum via a synchronized traction sheave winch to realize the 24-fold reeving.

PLANETA supported the installation and commissioning on site and still regularly supports the system in operation today. Years afterwards as a regular maintenance partner.



PROJECT | **APATIT IPCC**

CUSTOMER:	Thyssen Krupp Industrial Solution
LOCATION:	Russia, Kirovsk, Murmansk
REALIZED:	2016
APPLICATION:	Tensioning conveyor belts
WINCHES:	1 × PHW-E 310 – 5,5 kW
	1 × PHW-E 311 – 11,0 kW
	1 × PHW-E 311 – 7,5 kW
TECH. DATA:	2 × 39 kN / 4 m/min / 2 × 26 m
	2 × 55 kN / 4 m/min / 2 × 73 m
	2 × 54 kN / 4 m/min / 2 × 20 m

THE TASK:

Different conveyor belts have to be tensioned and held synchronously at 2 points.

Due to the necessary exact synchronization of the two ropes, it was imperative to design the winch as a single layer. The high storage capacity resulted in very large drums, despite the comparatively small rope diameter.

The cover of the open, monitored drum brake between the gearbox and the motor helps when using the winch in the cold environment at temperatures as low as -40°C.

PROJECT | **YAMAMA**

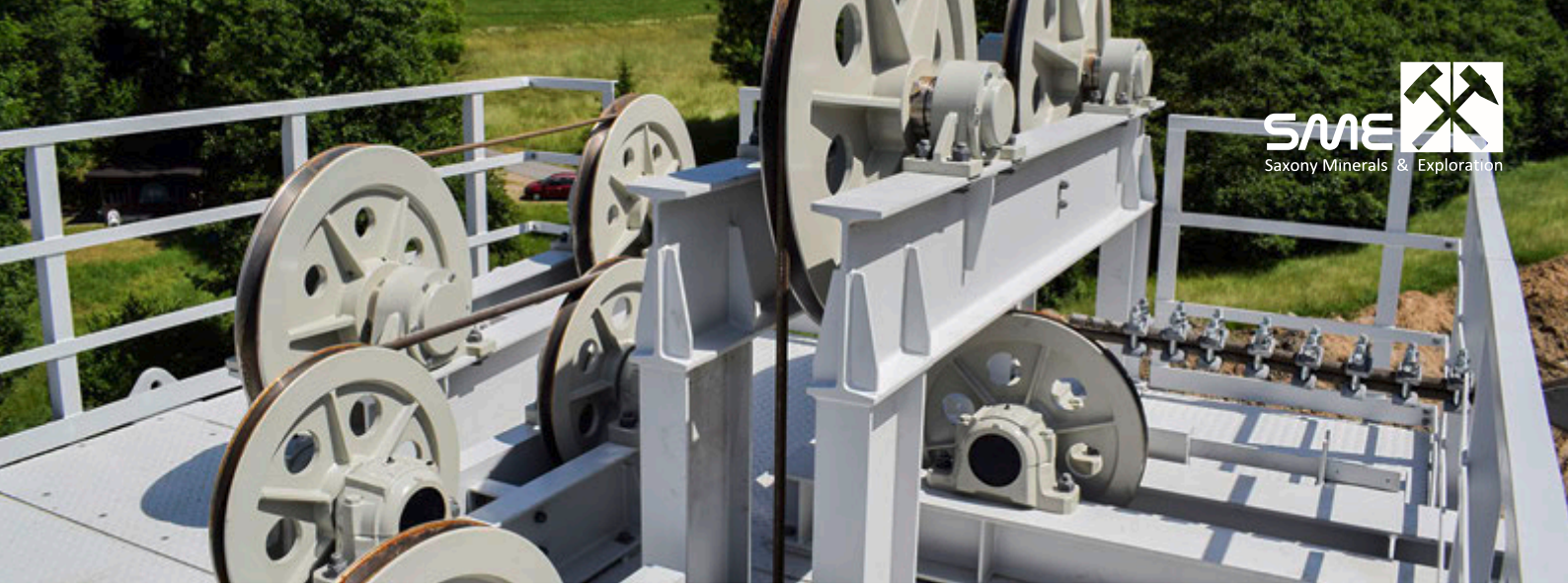
CUSTOMER: Thyssen Krupp Industrial Solution
LOCATION: Saudi Arabia
REALIZED: 2017

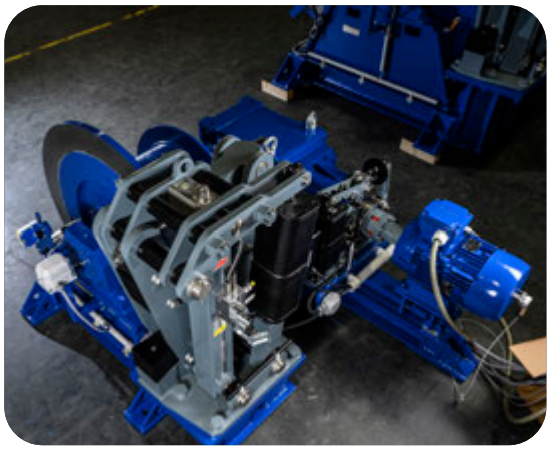
APPLICATION: Tensioning conveyor belts
WINCHES: 2 × PHW-E 311 – 7,5 kW
TECH. DATA: 2 × 26 kN / 6 m/min / 2 × 60 m

THE TASK:
Two large conveyor belts for cement production have to be tensioned and held synchronously at 2 points.

Due to the necessary exact synchronization of the two ropes, it was imperative to design the winch as a single layer.
The high storage capacity resulted in very large drums, despite the comparatively small rope diameter.

Special measures for cooling the drives and special coatings helped when using the winch in the very dusty and hot environment at temperatures up to +55 °C.





PROJECT | **HOISTING MACHINE PÖHLA**

CUSTOMER:	SME
LOCATION:	Germany
REALIZED:	2018
APPLICATION:	Carriage of miners and material
WINCHES:	1 × Man Rider TAS 3 – 30 kN
	1 × Man Rider TAS 8 – 15 kN
TECH. DATA:	1 × 30 kN / 117 m/min / 1 × 180 m
	1 × 15 kN / 48 m/min / 1 × 180 m
CONTROL:	Inverter-Safety-Control
	With machine platform control seat

THE TASK:

In exploratory mining for rare earths, a shaft was sunk for which a modern access system including an emergency access system was required.

The system transports a simple man basket into the exploration shaft and is also used to remove the overburden.

PLANETA designed and built the winches, including the safety-related control system, in accordance with the TAS mining standard and carried out the type testing at the DMT.

The winch is controlled from a machine platform with a chair for the operator via joystick.

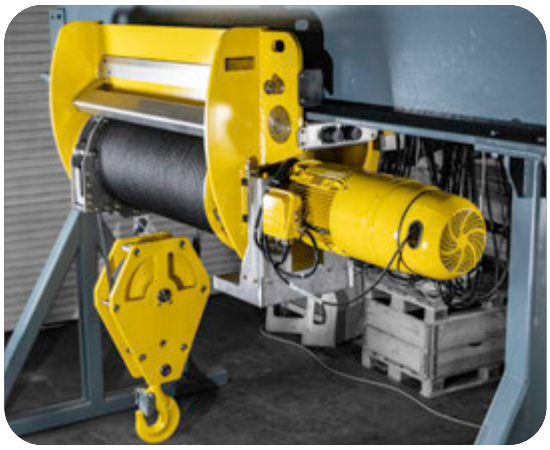
PROJECT | BLADE CHANGE ON WIND TURBINE

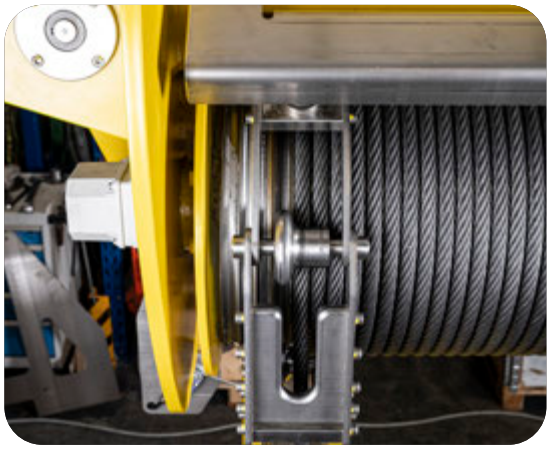
CUSTOMER:	GFW (Fuhrländer)
LOCATION:	Germany
REALIZED:	2019
APPLICATION:	Lifting and lowering rotor blades
WINCHES:	4 × PHW-E 311 – 15 kW
	4 × PHW-E 306 – 4,0 kW
TECH. DATA:	1 × 14 ton / 5 m/min / 1 × 310 m
	1 × 2 ton / 9 m/min / 1 × 155 m
CONTROL:	Central Inverter -Control

THE TASK:

For the replacement of rotor blades on wind turbines, a combination of rope winches is used instead of cost-intensive mobile cranes. Two winches lift and lower the rotor blades and two other winches stabilize the lifting and lowering process. All systems are mounted on a mobile concrete foundation and can be transported from site to site.

PLANETA assisted with the design, built the winches including a central control unit for 2 sets of winches each and also supported the customer during the initial commissioning on site.





PROJECT | HINKLEY POINT C NUCLEAR POWER STATION

CUSTOMER: APCO / epc
LOCATION: Switzerland / UK
REALIZED: 2020

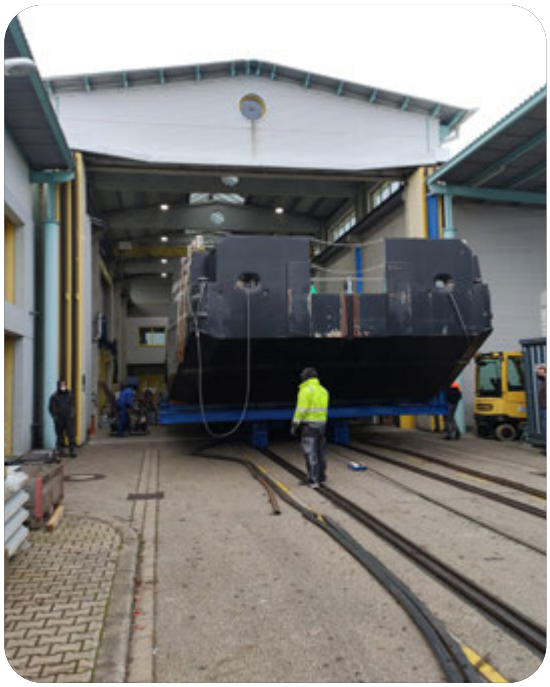
APPLICATION: Lifting and lowering access stairways
Maintenance of main hoist of polar crane within the dome of HPC reactor
WINCHES: 2 × Customized Rope hoist
4 × PHW-E 305
4 × PHW-M 305
TECH. DATA: 12.5 ton / 9 m/min / 1 × 31 m
2 × 2,2 ton / 5 m/min / 2 × 5 m
CONTROL: Inverter control

THE TASK:

For the two polar cranes of the HPC 2 reactor domes, winches were required for lifting and lowering the stair units. The winches have an emergency lowering function and mechanical speed limitation and were built in mechanical and electrical variants. For maintenance on the main hoist, a wire rope hoist was needed to meet the customer's requirements. The focus was on a planned service life of up to 60 years with corresponding spare parts availability.

In addition to extremely high demands on materials, paintwork and quality standards as well as documentation, this project required immense project management and intensive monitoring of all production steps and the upstream suppliers.

PLANETA developed its own wire rope hoist including control system and power supply and various special options for the PHW series according to the customer's wishes.



PROJECT | **SLIP WINCH SYSTEM IFFEZHEIM**

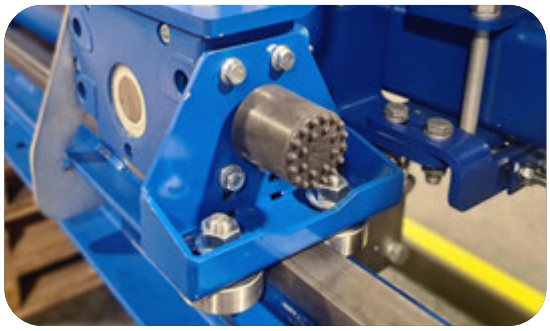
CUSTOMER:	WSV
LOCATION:	Germany
REALIZED:	2020
APPLICATION:	Slipping ships into dock
WINCHES:	1 × PHW-E 316 – 45 kW
	1 × PHW-E 306 – 4,0 kW
TECH. DATA:	1 × 37 ton / 9 m/min / 1 × 150 m
	1 × 18 ton / 9 m/min / 1 × 150 m
CONTROL:	Inverter –Control
	With manual and automatic mode for combined tension hoisting

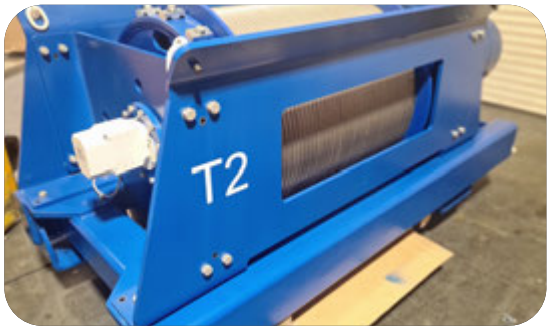
THE TASK:

For maintenance and repair, large boats are pulled ashore at the Iffezheim construction yard of the "Wasser und Schiffahrtsamt".

Especially for this application, a main winch was designed via automated torque control with a retrieval winch, which together can transport the vessel to the dock, but also lower it back into the water in a controlled manner.

PLANETA designed the entire system, built the winches including the control system and supported its customers during installation and commissioning.





PROJECT | THE FACTORY THEATER MANCHESTER

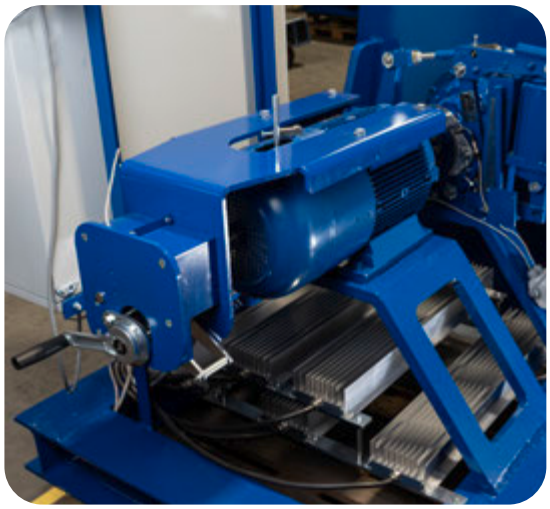
CUSTOMER:	Booth
LOCATION:	UK
REALIZED:	2021
APPLICATION:	Lifting of acoustic doors
WINCHES:	2 × PPW-E 309 – 55 kW
	2 × PPW-E 309 – 37 kW
TECH. DATA:	6,1 ton / 48 m/min / 1 × 195 m
	4,4 ton / 48 m/min / 1 × 200 m
CONTROL:	Central Inverter -Control

THE TASK:

Manchester's new arts center and theater features a stunning design that allows the 84-ton, or 60-ton, acoustic doors connecting the auditorium to the auditorium to be completely lifted away.

PLANETA developed special winches for this purpose, which were then built to suit the extremely cramped conditions for this project, complete with central control. PLANETA's design team was involved in the planning of the complicated roller mimicry from the very beginning and supported the customer in the final design and the most sensible arrangement of the rollers.

The winches for the so-called warehouse doors were designed to be self-propelled and, thanks to this spooling technology, enable a non-migrating rope departure in order to always run straight onto the deflection pulleys.



PROJECT | **MAST ASSEMBLY**

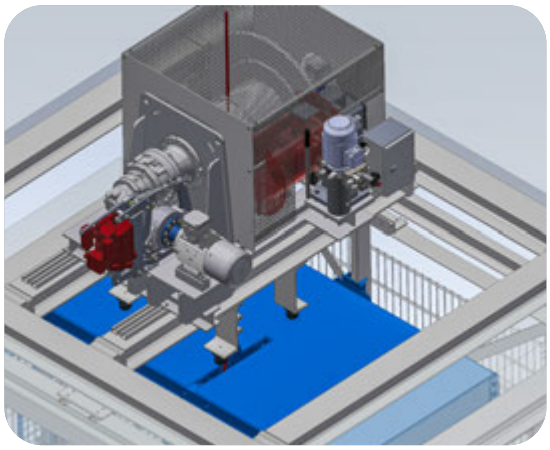
CUSTOMER: Turmbau Steffens & Nölle
LOCATION: Germany
REALIZED: 2020

APPLICATION: Hauling rope
WINCH: 2 × PHW 314 -15 kW

TECH. DATA: 5,0 ton / 20 m/min / 1 × 1530 m

CONTROL: Safety Inverter Control with emergency operation

THE TASK:
For the installation and maintenance of masts, it is essential that the installation personnel can reach the installation site. PLANETA has built winches for the special tower construction company Steffens & Nölle for their access system concept. In addition to a very high rope capacity via LEBUS half shells, the winches include high-performance safety controls and emergency operation concepts.



PROJECT | **KAOLIN MINE MEISSEN**

CUSTOMER: Schachtbau Nordhausen
LOCATION: Germany
REALIZED: 2022

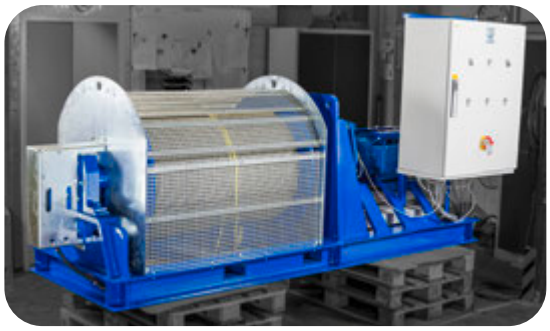
APPLICATION: Mine winch
WINCH: 1 × PHW 20 kN acc. TAS 10

TECH. DATA: 2,0 ton / 8 m/min / 1 × 20 m

CONTROL: Semi-Automatic Inverter -Control from different shaft floors

THE TASK:

PLANETA designed and delivered the new hoisting winch for the mine shaft of the new kaolin mine in Seilitz, Saxony - Germany's smallest active mine, not far from the world-famous porcelain town of Meissen. Together with the mining experts from Schachtbau Nordhausen, a semi-automatic system was developed in accordance with TAS guidelines, which today handles the extraction of the material used to make each of the finely crafted plates, cups, and porcelain items from Meissen.



PROJECT | **PARDUNE ACCESS SYSTEM**

CUSTOMER: Mastbau FN
LOCATION: Germany
REALIZED: 2020-2023

APPLICATION: Pardune winches
WINCH: 1 × PHW 307 -7,5 kW
2 × PHW 309 – 15 kW
1 × PHW 313 – 22 kW

TECH. DATA: 3,6 ton / 14 m/min / 1 × 1050 m
6,0 ton / 18 m/min / 1 × 600 m
14,0 ton / 13 m/min / 1 × 835 m

CONTROL: Safety Inverter Control

THE TASK:

High masts are secured with ropes, known as "pardunes." These must be checked and maintained regularly. PLANETA has supplied various winch systems to enable the specialist company Mastbau FN to carry out this task. The winches not only transport heavy components to great heights, but also tension the travel ropes for the gondolas used by the fitters to inspect the ropes at dizzying heights.

PROJECT | **SLAYKALIY MINE**

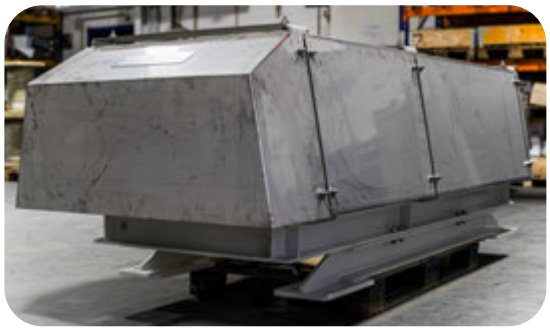
CUSTOMER: OLKO Maschinentechnik
LOCATION: Belarus
REALIZED: 2020

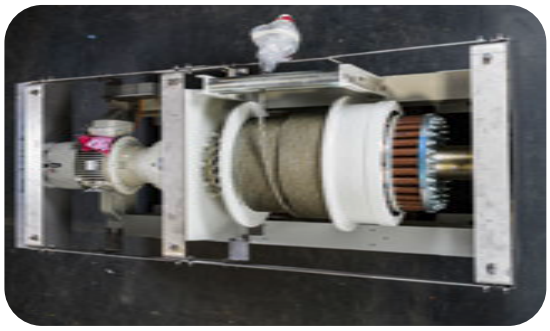
APPLICATION: Transport trolley system in ATEX area
WINCH: 3 × PHW 305 -7,5 kW ATEX
2 × PHW 305 – 4,0 kW ATEX
2 × PHW 305 – 5,5 kW
8 × Rope guiding bollards

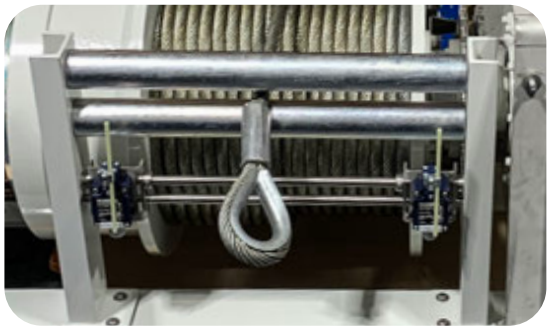
TECH. DATA: 3,6 ton / 11 m/min / 1 × 60 m
4,0 ton / 8 m/min / 1 × 230 m

CONTROL: ATEX Contactor Control

THE TASK:
Transfer cars must be moved in the mine to transport materials. PLANETA winches with manual free-spooling clutches and special ATEX components were built for this task to meet the prevailing conditions. In addition to the certified ATEX winches, PLANETA also supplies the appropriate ATEX controls and specially developed deflection pulley systems.







PROJECT | **SUKHODOL SEA PORT**

CUSTOMER: Koch Solutions
LOCATION: Russia
REALIZED: 2020

APPLICATION: Take up winch for belt conveyor in port area
WINCH: 2 × PHW 307 -7,5 kW Slip Clutch

TECH. DATA: 6,5 ton / 5,5 m/min / 1 × 20 m

CONTROL: Contactor Control for deep temperature

THE TASK:

The winches were tasked with tensioning conveyor belts within a high temperature range of -40 °C. A special requirement here was to equip the drums on the load side with slip clutches capable of transmitting the high load torque. A real piece of custom engineering from PLANETA.

PROJECT | **HOLMENKOLLEN SKI JUMP**

CUSTOMER: City of Oslo
LOCATION: Norway
REALIZED: 2020

APPLICATION: Track milling winch in snow and ice
WINCH: 1 × PHW 309 - 22 kW

TECH. DATA: 5,5 ton / 28 m/min / 1 × 240 m

CONTROL: Inverter control

THE TASK:

Records require good tracks. The PLANETA PWH winch with integrated automatic reeling device is used to drive the track groomer and snow groomer up and down the ski jump. Thanks to its high-precision reeling, the winch works reliably even in snow and ice, enabling athletes to set new records time and time again.

PROJECT | **WATER TREATMENT PLANT**

CUSTOMER: Mourik

LOCATION: The Netherlands

REALIZED: 2019 & 2024

APPLICATION: Water treatment

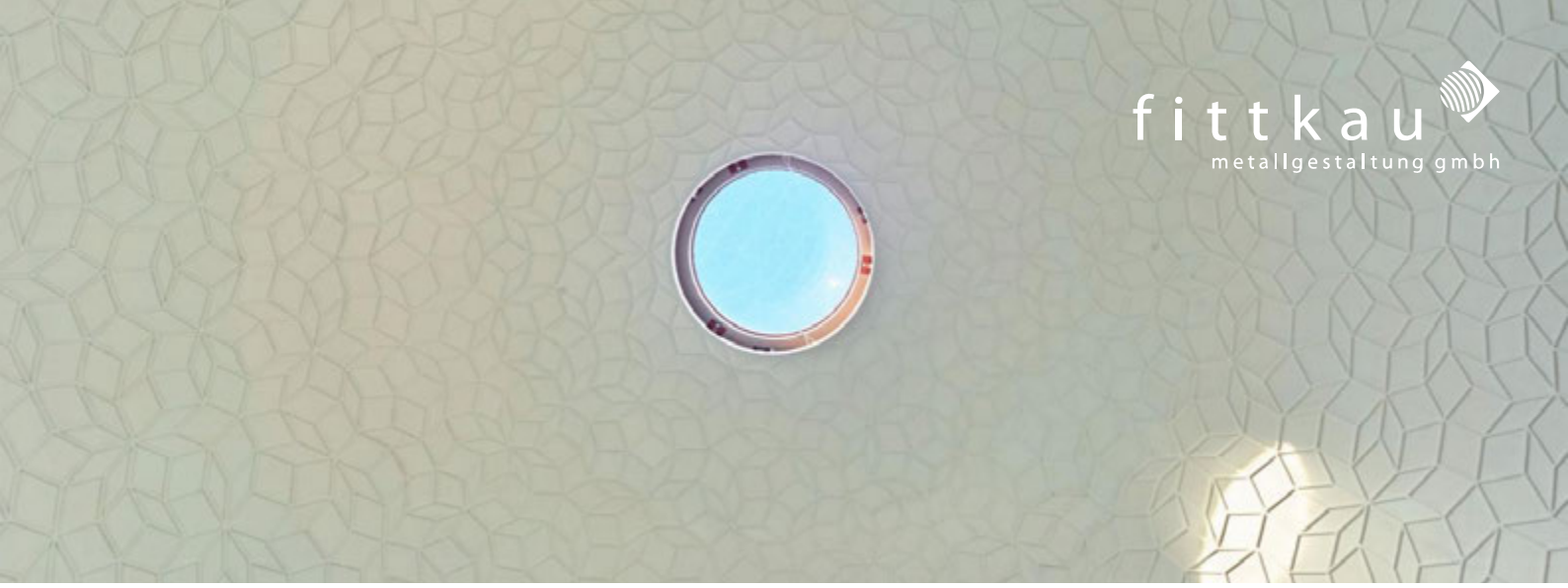
WINCH:
4 × PHW 305 -5,5 kW Double
4 × PFW 3000 – 3,0 kW Single
2 × PHW 307 – 22,0 kW Tripple
10 × Stainless Steel Rope Guides
8 × Coupling system

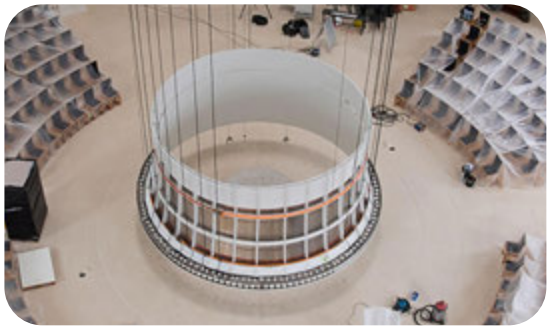
TECH. DATA:
4,2 ton / 10 m/min / 2 × 2 m
1,4 ton / 18 m/min / 1 × 4 m
7,5 ton / 28 m/min / 3 × 16 m

CONTROL: Inverter Control with absolute positioning system

THE TASK:

The winches are used in two water treatment plants to close and open flaps and traverse cleaning rakes via multi-rope synchronized winches. The stainless steel rope guides and stainless steel enclosures around the winches, as well as high-quality C5 paint finishes, provide the machines with long-lasting protection against the highly corrosive environment.





PROJECT | **NEW OPAION RING CEILING**

CUSTOMER: Church of Sankt-Hedwig Berlin
LOCATION: Germany
REALIZED: 2024

APPLICATION: Maintenance winches for lowering the church ceiling and lighting systems

WINCH: 3 x PFW 1000 D8+ Spooling
3 x PFW 1500 D8+ Spooling

TECH. DATA: 200 kg / 15 m/min / 1 x 33 m
500 kg / 10 m/min / 1 x 33 m

CONTROL: Synchronized group contactor control with radio remote

THE TASK:

After six years of renovation, the Catholic Cathedral of St. Hedwig in Berlin reopened on November 24, 2024. The interior has been completely redesigned – bright, simple, light-flooded, and modern.

A central element is the new Opaion Ring, a large ring of lights under the dome, which is considered a technical and design highlight. Six PLANETA rope winches are used for this complex construction: Three winches hold the floating Opaion ring securely under the 33-meter-wide dome and enable it to be lowered regularly for maintenance. Three additional rope winches are used for flexible applications, such as hanging an Advent wreath.

The PLANETA winches ensure precise movement, safe positioning, and reliable operation in this demanding architectural environment.

PROJECT | **KOLUBARA OPENCAST LIGNITE MINE**

CUSTOMER: Elektroprivreda Srbije (EPS)
LOCATION: Serbia
REALIZED: 2024

APPLICATION: Changing conveyor belts

WINCH: 1 × Belt Winder 15 kW
1 × Belt Winder 4kW
1 × Traction Amplifier 45kW

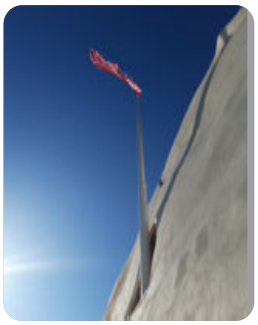
TECH. DATA: 7,5 ton / 11 m/min / 1 × 220 m
2,0 ton / 10 m/min / 1 × 200 m
25,0 ton / 10 m/min

CONTROL: Synchronized Inverter Control with Torque Vectoring

THE TASK:

The conveyor belt systems of a bulk material conveyor must be replaced regularly. Our service customer specializes in this maintenance work worldwide. For this purpose, we have developed two special conveyor belt winders that work in tandem with a traction force amplifier via synchronized torque control to ensure the fastest and most efficient replacement possible on site. The highly specialized folding bearings enable the customer to change full winding cores in record time.

BREGENZER FESTSPIELE



PROJECT | BREGENZ FESTIVAL MADAM BUTTERFLY

CUSTOMER: Bregenz Festival
LOCATION: Austria
REALIZED: 2022

APPLICATION: Synchronized lowering and raising of the flagpole with the American flag

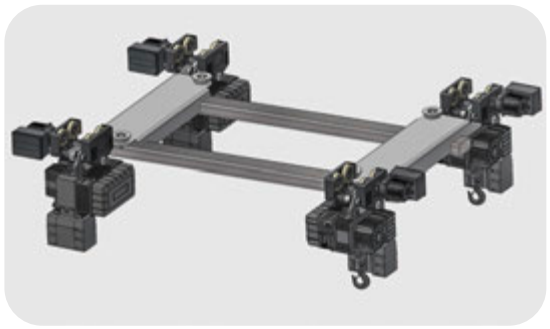
WINCH: 1 × PCW 307 -11 kW
2 × PFW 750 – 2,1 kW

TECH. DATA: 5,1 ton / 12 m/min / 1 × 14 m
220 kg / 56 m/min / 1 × 24 m

CONTROL: Synchronized Stage Application Control with Torque Vectoring

THE TASK:

Powerful PLANETA rope winches were used in the staging of Puccini's Madame Butterfly. Their task: to dynamically set the scene for the 23-meter-high stage set with its striking flagpole. Three PLANETA winches moved the mast and the flag attached to it precisely via an adaptive torque control system. The flag could be moved synchronously or independently of the mast – always with optimally tensioned rope guidance. The system was controlled via a central triple frequency inverter control in the control cabinet. The PLANETA team carried out the complete commissioning and programming directly on site in Bregenz.



PROJECT | NEW CONSTRUCTION OF THE GOTTLEUBATAL BRIDGE

CUSTOMER: ARGE BEMO
LOCATION: Germany
REALIZED: 2025

APPLICATION: Traversing winch system & Customized crane system

WINCH: 2 × PHW 314 - 22 kW
4 × PITCH PF16 Crane
Crane track System

TECH. DATA: 2 × 22 ton / 7 m/min / 1 × 510 m
4 × 1,25 ton / 4/1 m/min / 1 × 3 m

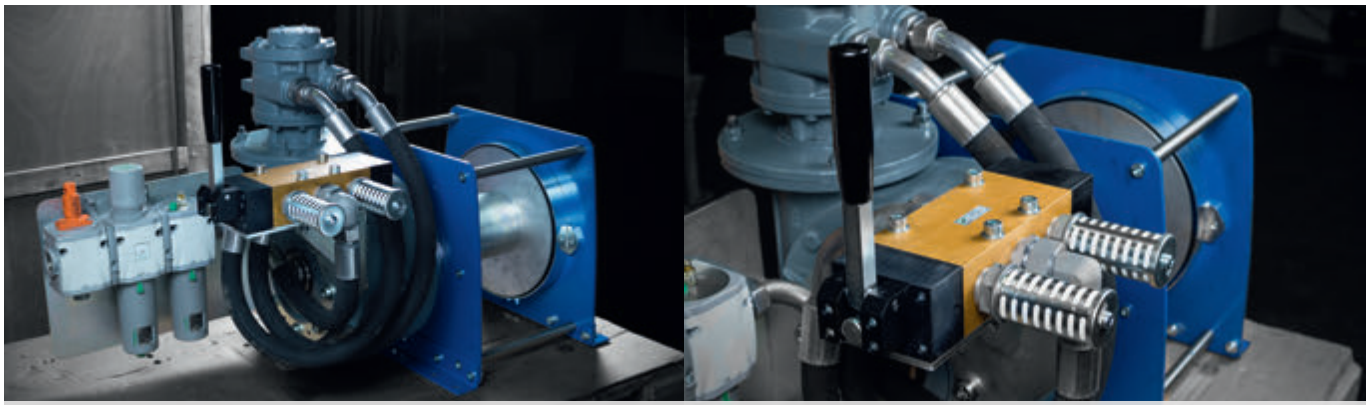
CONTROL: Frequency inverter control with torque vectoring and high distance radio remote control

THE TASK:

PLANETA is supplying precise lifting and drive technology for the challenging new construction of the Gottleubatal Bridge. The PLANETA wire rope winches, each with a lifting capacity of 22 tons, move the plate transport car synchronously over 500 meters – frequency-controlled and precisely controllable.

At the installation site, a specially designed PLANETA special crane with four coupled PITCH hoists takes over the plate handling. The integrated crane runway moves with the PERI scaffolding system, enabling continuous construction progress.

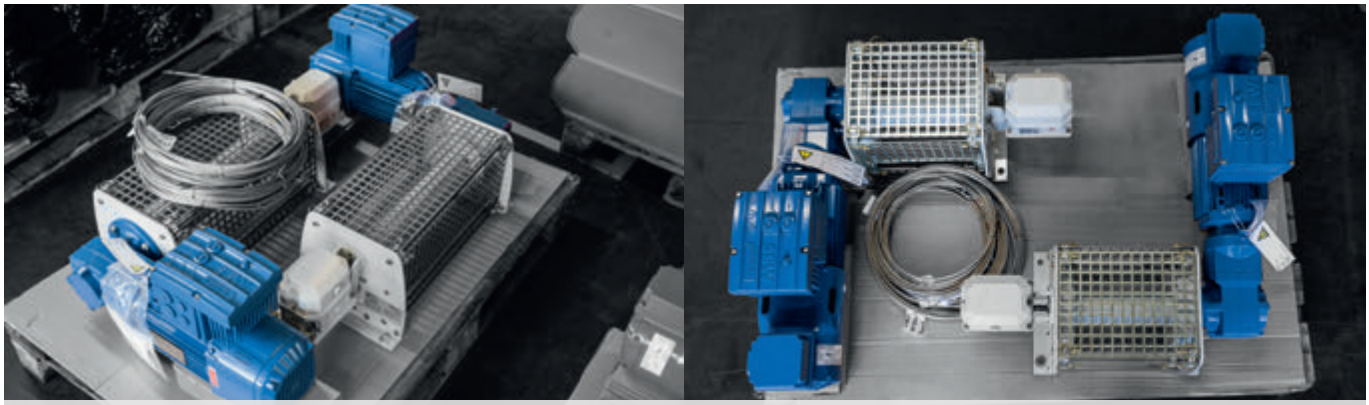
A specially developed radio system with battery repeaters ensures reliable control under the toughest construction site conditions.



PFW-L 1500 V12 as a pulling winch for the steel industry

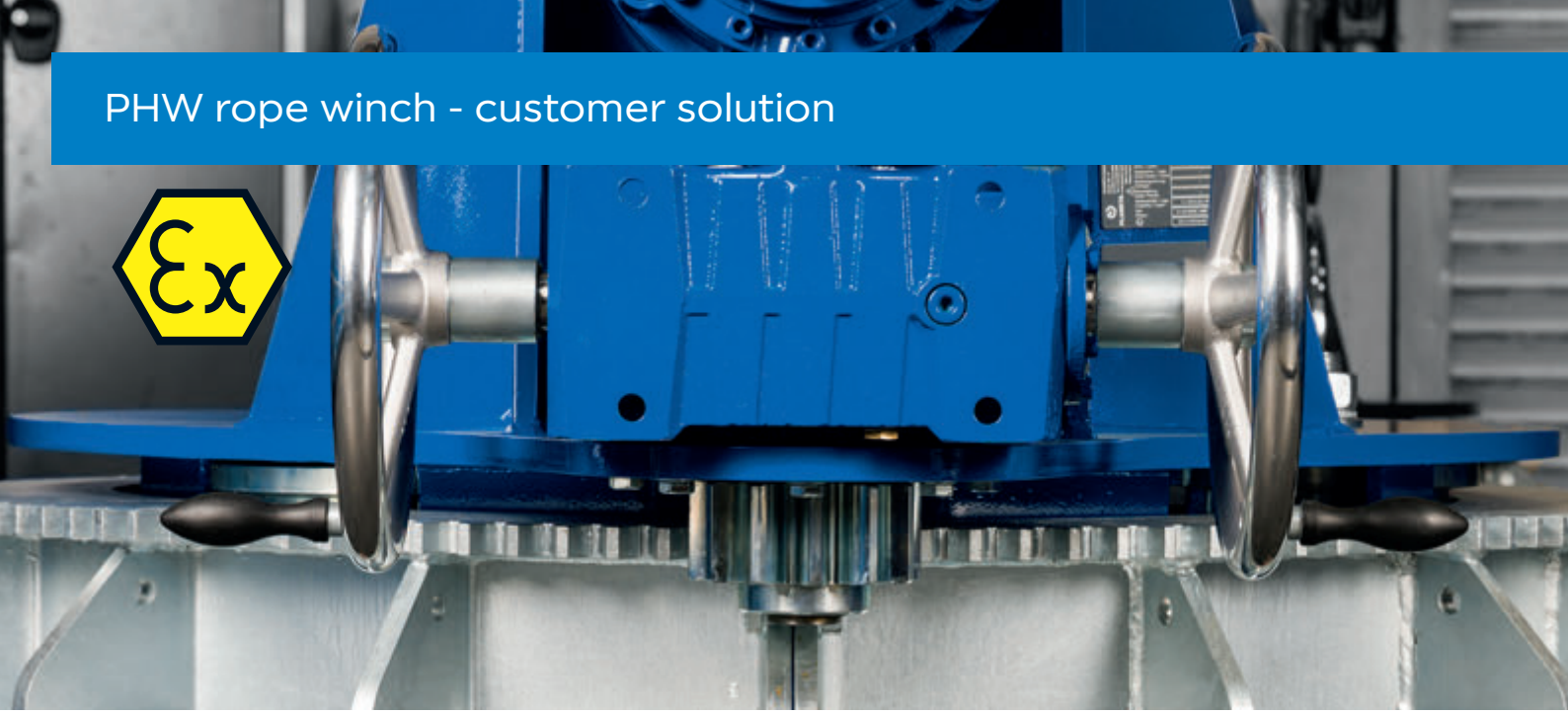
PKW-E 1500 V04 as hatch opener inside a cruise ship

Mobile rope winch and spooling device for probing sewers



PKW-E 500 as traversing winches on conveyor belts for container loading

PHW rope winch - customer solution



PHW-E 315 electric wire rope winch equipped for use in potentially explosive atmospheres, with a lifting force of 25 tonnes and a lifting distance of 550 metres. In addition, two PHW-M 306 with a holding force of 4 tonnes and rope lengths of 100 m, as manually operated winches for guiding the load. They can follow the fixed point on the load because they are rotatably mounted in the base frame.

Enquiry form for rope winches

1. Kind of drive and quantity*

☐ manually

☐ electric, operating voltage ___ phases / ___ V AC / ___ Hz

☐ pneumatic, flow volume ___ l/sek ___ bar

☐ hydraulic, flow volume ___ l/min ___ bar

Requested quantity ___

2. Site of Operation and capacity*

☐ Pulling winch

___ daN pulling force and ___ m rope length

☐ Lifting winch

___ kg Hublast and ___ m rope length

☐ Traversing winch

___ daN pulling force and ___ m rope length

If the pulling or lifting capacity is not known, please describe your application with the length of the path, weight of load and rolling conditions for your pulling applications. For lifting applications please also describe the angle or slope of the path.

___

___

___

___

___

3. Rope speed

☐ slow (1-5m/min) ☐ medium (5-15m/min)

☐ fast (>15m/min) ☐ exactly ..... m/min

☐ adjustable from ___ m/min up to ___ m/min

☐ 2-speed ___ m/min and ___ m/min

4. Site of Operation

Distance to the first reeving ___ m

☐ inside ☐ outside ☐ outside with seawater

5. Load type

☐ Goods ☐ Pending goods above people

☐ Goods to be moved above people ☐ People

☐ Load guided ☐ Load not guided

6. Winch options

☐ Rope ___ m ☐ Rope enclosed loose

☐ Rope coiled ☐ Rope-end, plain

☐ Rope-end with thimble ☐ Load hook

☐ Grooved drum ☐ Drum pressure roller

☐ Spindle limit switch ☐ Slack wire switch

☐ Disengaging clutch ☐ Spooling gear

☐ Drum guard

☐ Second brake acting on drum

☐ mechanic ☐ automatic

☐ Emergency crank ☐ Manual brake release

☐ Two rope exits with ___ m distance

☐ More rope exits like shown on sketch

☐ **Explosion-proof protection class:** ___

7. Steuerung

☐ Low voltage control box

☐ Panel mounted on winch frame

☐ for mounting on walls, with ___ m distance to winch

☐ Frequency inverter

☐ mounted on winch frame

☐ for mounting on walls, with ___ m distance to winch

8. Operation

☐ Push buttons in the control panel door

☐ Pendant control with ___ m control cable

☐ Radio Remote control

☐ Wall-mounted push-button

☐ Food pedal

☐ Several with selector switch in the control panel door

9. Options for control

☐ Panel mounting appliance inlet

☐ Power supply cable with ___ m cable

☐ Power shut-off switch

☐ Electric overload protection

☐ Full motor protection (Temperature monitoring)

10. Other requirements

___

___

___

___

11. Please sketch your application as required on a DIN A4 sheet of paper

* Please note the required fields!

Company ___

Contact person ___

Adress ___

Phone ___

E-Mail ___

Company stamp / Signature ___

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