PODEM™

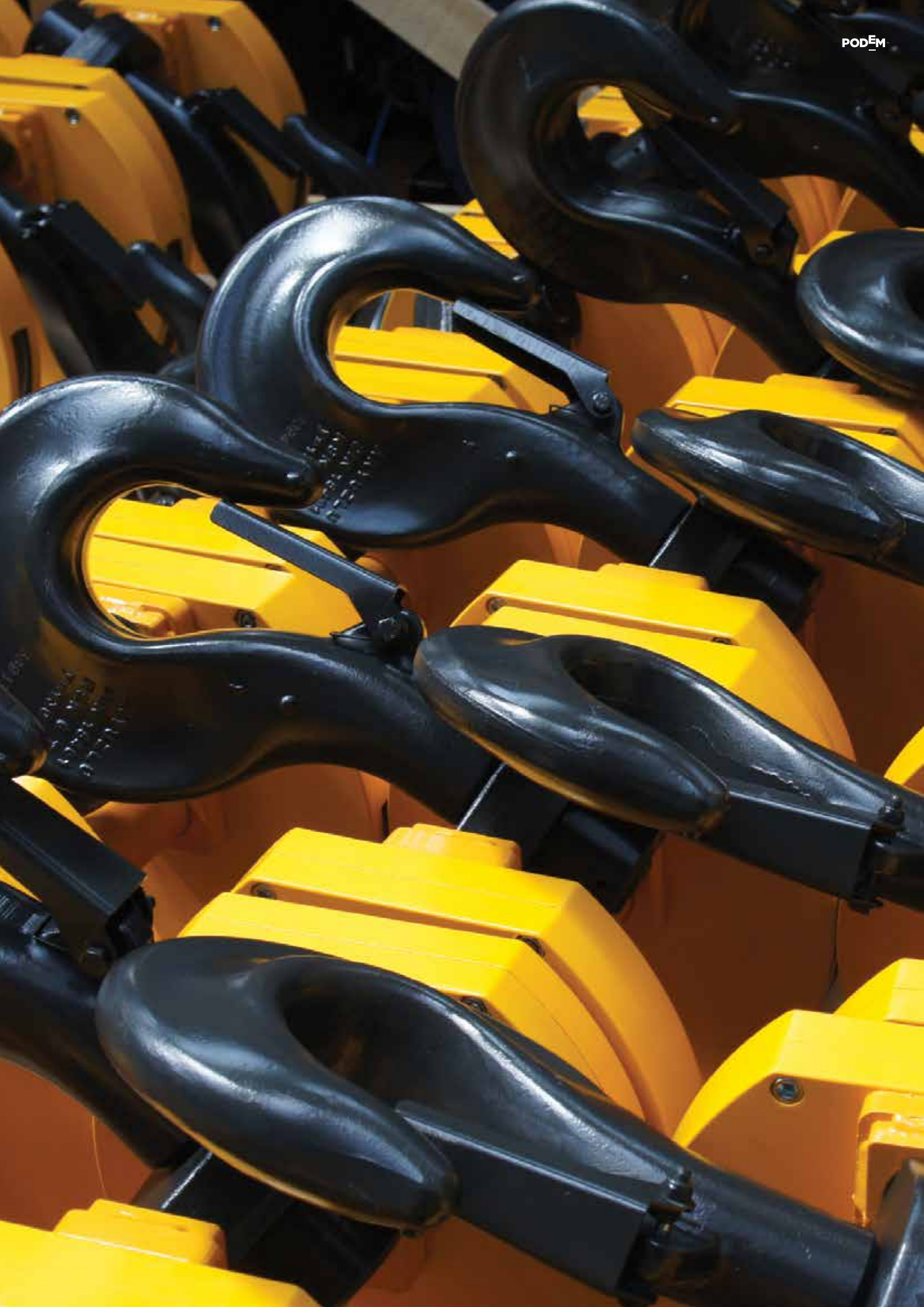
Technical Catalogue
Standard Wire Rope Hoists

60
years of experience in development and production of wire rope hoists

60 *YEARS*

PODEM™

2021



Contents

Why Choose Podem?

Podem company in few sentences:

— Arguably the most reliable rope hoist

— Reputable brand name

— 60 years' experience in the development and production of hoisting equipment

— A long-term partnership based on trust and friendship

— Reliable customer support

— Open-to-the-customer management

— An integrated quality management system

— The biggest integrated hoist manufacturing facility in Europe by number of hoists produced with modern technology and machines


TUV NORD

CERTIFICATE

Management system as per
BDS ISO 45001 : 2018

PODEMCRANE AD
1 General Nikolov Str.
5300 Gabrovo
Bulgaria

Design, production, sales, assembling, commissioning, service of electric hoists, winches, industrial cranes and relevant components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PODEM


PHILIPS









Company

Podemcrane is a trusted crane component supplier with developed worldwide distribution. We provide reliable hoisting and other crane components for most industries.

Our in-house design capabilities, internally regulated technology, production and open-to-the-customer management allow us to offer the best options for products to meet market demands and individual needs.

Podemcrane has 60 years of experience in development and production of wire rope hoists. It is the biggest manufacturer of electrical wire rope hoists in Central and Eastern Europe.

History Timeline

1961 April, 1961 – the official inauguration of electrical rope hoist manufacturing plant, later named Podem. In December 1961 the first hoist was produced. The state owned production company was created to supply the crane industries in all Eastern European countries and former Soviet Union with electrical wire rope hoists.

1968 First Gold medal prize awarding from the International Technical Fair in Plovdiv. In its history the Company has been awarded more than 10 Gold medal prizes.

1971 Podem starts international sales in 40 countries around the world including Western Europe, Middle East, Asia, Africa and Latin America through Balkancar-Podem commercial structure.

1975 Podem became the largest hoists manufacturer worldwide. Production capacity reached 100 000 wire rope hoists per year.

1977 Podem started production of new product group – the explosion proof hoists.

1981 The total number of hoists exported to Russia and the former Soviet republics reached 1 000 000.

1991 Production of hoists series T was replaced with the new series MT.

1994 The M type of hoist entered production lines covering the range up to 50 t.

1995 The Bulgarian Ministry of Economy initiated privatization of Podem AD. The state owned company was partially privatized.

1996 Production of 34 years old hoists series T was stopped. New series MT replaced T.

2000 The former state owned company was privatized. The Company started it's own distribution and promotion of its own brand Podem. The foreign trade companies were no longer part of the structure.

2002 The new company Podemcrane AD – the successor of Podem, started operation. The Company continued to promote the Podem brand along with the new one Podemcrane.

2008 The MTM type was developed, replacing the MT series. The Company started engineering and manufacturing of industrial cranes for the local market (Bulgaria, Serbia, Macedonia) under the trade mark Podemcrane and becomes market leader in the region.

2010 Podemcrane's office in Moscow (Russia) was opened.

2015 Podemcrane starts a joint venture with the German electric motors manufacturer EMGR GmbH and established its own sales representatives in Serbia and Spain. Podem's product family is enriched with chain hoists, CLF serie.

2020 As a consequence of a long term relationship Podemcrane–Vietnam has been registered in Hanoi.

2021 The first open barrel winch is produced.

Podemcrane AD – the successor of Podem, runs the biggest European based production facility in Europe for electrical wire rope hoists.

In its history the Company has sold more than 1 900 000 units of lifting equipment around the world. We have become a market leader in many markets around the globe.

Departments

Having produced hoists for the last 60 years, Podem brand stands as one of the most experienced in the world. We have implemented full expertise in hoist production as almost all parts and components are produced in-house.

Production

Having produced hoists for the last 60 years, Podem brand stands out as one of the most experienced in the industry. We have implemented years of expertise in hoist production, as almost all parts and components are produced in house. Located in Bulgaria, Podemcrane operates the biggest integrated hoist manufacturing facility in Europe by number of hoists produced. We employ modern technology and machines that guarantee high quality of produced parts and components as per EU regulations. In-house design supported and integrated production allow for a swift reaction on customer demand.

Inspired by our corporate values, we constantly improve our efficiency and find solutions to achieve competitive cost, therefore competitive pricing. All our products bear the CE mark for compliance with the health and safety regulations and requirements of the European Union — the Machinery Directive and European directives.

Quality

Our product is known as one of the most reliable in the lifting industry. The high requirements for materials and quality control with modern testing technology play an important role. Podem performs random or 100% tests of the machined details depending of the how important are they.

All products passing variety of internal tests, before packing and shipping to the customers.

Our Suppliers

Thorough process of evaluation and selection of our partners of backs smooth operation and guarantees quality. In the common case our suppliers are companies with a history and relevant certificates. The close monitoring and contact with them keeps our relationship stable and assures better understanding of the technical demands. Reliability, up-to-date technology, very competitive pricing and growing with us is our main selection criteria.

Our reliable design is proven in millions of hoists around the world, many of which operating for decades and in different environmental conditions.

Departments

Our reliable design is proven in millions of hoists around the world, many of which operating for decades in different environmental conditions.

Engineering

The experienced team of design engineers work to ensure our products correspond to the market standards and customer's reliability requirements. We work to ensure your business gets most reliable crane components at the best price. In addition, because of the robust construction, the customer gets additional safety, reliability and longer operational life-cycles.

Our reliable design is proven in millions of hoists around the world, many of which operating for decades and in different environmental conditions. We offer engineering to match the individual needs of all our customers and variety of products. Our integrated testing facilities is important part not only for new product development, but also for all products departing our facility.

Customer Support

We do approach with care your needs for standard and individual solutions. A committed sales and engineering team stands behind supporting you.

We value and develop long-term partnerships with our partners and individual customers. Support is available on product and project level and based on our experience consult marketing strategies. Our multi-cultural market presence could help develop your strategy and positioning. In all established relationships we are always present for you, no matter if you need faster reaction, planning of your recourses and availabilities or specific product modifications. Easy access to our top management.

Product Range
Wire Rope Hoists & Trolleys

Wire Rope Hoists & Trolleys

Standard technical features:
- Monorail or double-rail hoist
- Standard capacity: from 1 to 50 t
- FEM group: 1 Am – 3 m
- Optional up to 100 t

Advantages:
- Highest possible reliability levels offered in the industry
- Operational safety
- Long life
- Excellent price/performance ratio
- Easy maintenance
- Low service costs

The range provides solutions for new industrial cranes or replacement applications.


PODEM
2,5t

Product Range
End Carriages

End Carriages

Podemcrane manufactures end carriages for single or double girder cranes.

Standard technical features:
- Type: Overhead, Gantry or Underslung cranes
- Standard capacity: from 1 to 50 t
- Span: up to 32 m
- Wheel diameter: up to 500 mm

We can support individual design for different crane manufacturers.

Product Range
Motor-reducers

Motor-reducers

Developed for driving of travel mechanisms for material handling equipment (trolleys, cranes, etc.).

Standard technical features:
- From 0.37 to 3 kW
- Wheel diameter from 125 to 500 mm

Developed for driving of travel mechanisms for material handling equipment (trolleys, cranes, etc.).

Product Range
Crane Kits

Crane Kits

Components can be individually engineered to suit different requirements. All our products and components are designed, engineered and manufactured in Europe, comply with the European standards and bear the CE mark. Podemcrane crane components follow latest innovations in the field of crane building using 60-years' experience and know-how of worldwide partners.

Single Girder Crane Kits
Compact construction allowing maximum utilization of room height:
- Overhead, Suspended or Gantry Crane kits
- Standard capacity: 1 – 16 t

Double Girder Crane Kits
Applied when greater capacity and heavier operation required. In equal conditions double girder cranes offer greater lifting heights:
- Overhead or Gantry Crane kits
- Standard capacity: 2-50 t
- Standard span: 5 – 32 m

Podemcrane offers wide range of components for new cranes as well as for modernization of existing crane systems: standard and custom-built cranes.


5t

Product Range
Chain Hoists

Chain Hoists

Comprehensive range with compact design, superior quality and high standard of safety. All components are made in European Union and confirmed by the CE marks.

Standard technical features:
- Capacity: from 125 to 2 000 kg
- Available with: eye suspension, top hook or trolley
- Lifting heights: 3, 6, 9 and more. But also available "0=zero" (without chain).

The range provides solution for jib cranes or light crane systems.

Wire Rope Hoists

Podem standard wire rope hoist range covers over 90% of the market demands. The standard capacities are up to 50 t, but with using of solution "twin hoists" it could reach up to 100 t.
Most popular reevings are 2/1 and 4/1. But Podem offers also 4/2 for true vertical lifting or 8/1 and 6/1 for heavy loads.

The lifting or cross traveling could be double speed or with inverter control. For some markets the single speed option is available too.

The standard hoists cover a wide range of lifting heights: from 7 m to 26 m. With special designed series MTL we offer ready solution up to 56 m. Our engineering team is able to redesign the hoists module according to project.

A range of traveling trolleys are also available in either double or monorail version, with the option of low or standard headroom. Normal headroom trolley could be designed for curve beam.

Special features are available upon request.

Electric Hoist Types

Low-headroom Monorail Hoist

The Industrial buildings require reduction of height to save cost for building, heating or cooling. Low headroom hoist ensures maximum utilisation of the space. The hook reaches nearly under the beam and gives 30% reduction in headroom. This type of hoist could optimize the height of the building with 0.5-1 m comparing to normal headroom hoist.

Normal Headroom Monorail Hoist

For a single girder cranes where space is not an issue. The hoist operates directly under runway beam. The load and hoist weight reaction are very well balanced. There is no need of counter weight which make this type of the hoist lighter than low headroom one. Depending of the lifting height the trolleys are one or two and consists of one or two electric trolley motors with planetary gearbox. The trolley is also available as articulated version to run on curves. Two travel motors are by default.

Stationary / Foot-mounted Hoist

A full range of capacities from 1t to 50 t. Optional up to 100 t.

The application could be:
- Custom-made double-rail hoists
- Auxiliary hoist
- Goods-lift

Double Rail Hoist

This type is applied when greater capacity is required and also for all heavy-duty applications. The standard capacities are from 3.2 t to 50 t. Double girder cranes are commissioned for heavier loads, normally 16 t and up. Double rail hoist has the benefit of the optimization of the hook lifting, allowing the hook to go between the girders.

Hoist Module Features
Mechanical Components

Podem hoists range is a result of 60 years' experience in hoisting design and manufacturing. All the modules are matched to each other optimally. They assure reliable performance, long service life and easy maintenance.

Reducer

The planetary gear-boxes are developed specially for lifting mechanisms. All gears (2 or 3-stages) are made of heat-treated high-quality steel. Many transmission ratios are available for different lifting speeds. Very reliable, durable, wear-resistant and maintenance free.

Reducers for Hoist Series MT are outside the body. Gear-box series M are inside the drum – for more compact dimension. All the gear-boxes are lubricated for the hoist's life cycle for easy maintenance.

Rope Guide

The function of the rope guide is to prevent the formation of loops in the wire rope while operating the hoist. The rope guide basically consists of two parts: a guide ring and a pressure spring that properly guides the rope on the drum grooves. The guide ring maintains the rope in position during the uncoiling, preventing it to come-off the groove and, when the load swings, is guided by a fixed bar and runs on rolling bearing. The rope guide actuates an end limit switch for upper-end and bottom-end position of the hook.

Hook

The hook design has been updated in 2020. The hook covers for MT series are made by aluminium. The series M is with steel plate covers with bolted connection. The hooks are according to DIN 15401, class S or T and latest European standards. Both hook block types are durable, shock resistant and with easy maintenance.

Suspension/Trolleys

Monorail normal headroom trolleys are driven or idle. They are made by default for beam flange 130-300 mm, but with option for bigger flanges. The cross travel gear-box is with one ratio and provides the most popular nominal travel speed of 20 m/min. The low headroom suspension is always with 2 drive motors which assures a very smooth and reliable traveling of the hoists with or without load.

Hoist Body

The supporting framework is a compact welded structure made of two steel flanges jointed by profiled plates. It provides very precise alignment of the main hoist components: planetary reducer, drum and lifting motor.

Drum & Clutch

The drums are produced from a steel pipe and machined using the latest CNC technology. It is driven centrally by the output shaft of the gearbox.

Hoist Module Features
Electrical Components

— Electrical Panel

Contactor-relay Type

Contactor-relay type is a simple solution for hoist control. The conventional electrical components are with stable performance in different weather conditions and ambient temperatures. They are not sensitive to electromagnetic impact. This type of panel is with very low-cost maintenance and easy service in every part of the world. There are no high requirements for the service team technicians.

VFD (Variable Frequency Drive)

An inverter controls the frequency of power supplied to an AC motor to control the rotation speed of the motor. The use of an inverter to adjust the speed and acceleration of an AC motor increases the range of applications of the motor compared with a motor with fixed speed. Podem uses standard components which make setting of the inverter very familiar for most of the users. Maintenance and technical support are well organized worldwide. VFD is more sensitive to ambient temperatures and weather conditions.

Overload Limiter Load Cell (Dynamometric Pin)

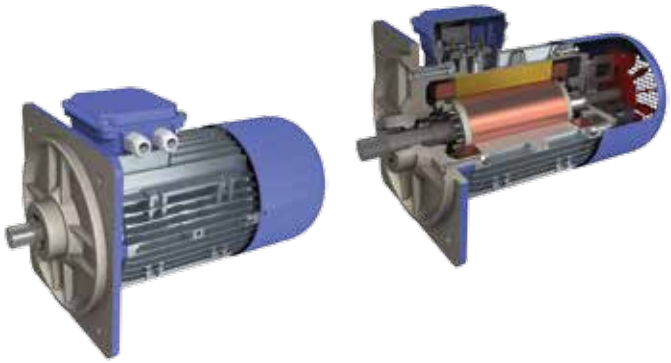
A load cell is used as an overload device. It is a transducer which converts force into a measurable electrical output which can be read and record. Made by stainless steel they are widely used because of the accuracy with which they can measure the load.

Upper/Lower Limit Switch

This safety device prevents a hoist from reaching the hook block and hoist body. The upper/lower limit switch on the Podem's hoists is rope-guide-activated. There are integrated 3 independent NC contact systems (up/down/ Emergency contact system for cutting the Main contractor).

— Lifting Motor

The three-phase electric motors with built-in brake are designed for lifting application of wire rope hoists. Thermal protection is by default for lifting motors.



Cylindrical Motor

The main features are cylindrical rotor and a built-in electromagnetic DC brake.

The direct current brakes are powered through a rectifier, usually connected to the motor terminal board. We use a high-speed rectifier.

These motors, on the nondrive end, are equipped with a electro-magnetic spring-pressure brake with negative action. In absence of power supply, under the pressure of helical springs the brake anchor gets pressed to a friction disk and stops its motion. The shafts are made by a special steel. DC brakes assure precise load positioning.

- IEC frames 90, 100, 112, 132, 160 and 180
- Poles 4 or 12/4
- Braking torque higher than 1.5 x rated torque

Conical Motor

The main features are conical rotor and integrated mechanical conical brake.

The brake uses the electromagnetic field of the motor and the opening of the brake sliding of the rotor after switching-on of the power supply. When the power is turned off, the brake automatically slides back and stops the motor. The brake itself has no independent supply and it minimalizes the braking time in a very simple and economic way.

These motors are simple, robust and reliable. The brake is with integrated fan which ensures fast dissipation of the heat energy.

The start current values are much higher than the cylindrical motors, because of mechanical brake start-release moment. Rotor brakes are suitable when no high braking torque is needed. Podem doesn't recommend VFD with them.

— Travel Motor

The motors are only cylindrical type with build-in DC brake.
Poles are 2, 8/2, 4 or 12/4.

Many motor options are available: IP65/66, force cooling ventilation, insulation class H, tropicalization, encoder, hand-brake release, etc.

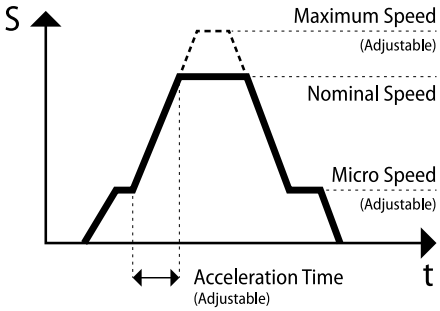
Speed Control Options

The lifting industry follows the technical developments.
The first Podem hoists were only single speed. In last 15 years
2-speed models were preferable for many of the customers.

Nowadays when inverter technology is not expensive and affordable – many requests are for VFD. Podem company still offers all speed control options for the wire rope hoists for its wide number of markets.

Inverter Control vs Speed Contactor Control

VFD Control



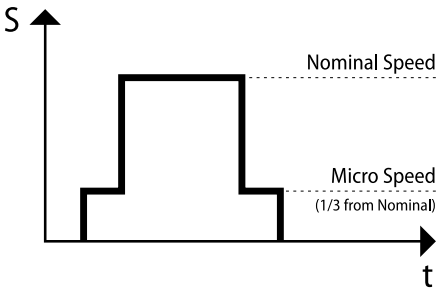
Inverter controls, called also Variable Frequency Drives (VFD), are an electrical device which controls the speed of the motor. VFD provides better performance and prolongs the equipment life. It controls the motor speed to nearly zero before the brake is released, significantly reducing brake wear. Controlled acceleration and deceleration provide smooth starts and stops and lowers starting currents, reducing gear and motor wear and structural stress on mechanical components, and reducing load swing- leading to longer equipment life and better safety.

Inverter controls give the operator the possibility to operate the crane travel smoothly.
They increase crane productivity, due to precise and faster positioning.

Low-sway movement of the load during the acceleration is more means a more safe crane operation. Cost saving for maintenance work and spare parts and an extended lifetime of the hoist or cranes and avoiding of inching. Improves the total performance of the systems – reducing the downtimes and operating cost. The inverter's high efficiency reduces the energy consumption.

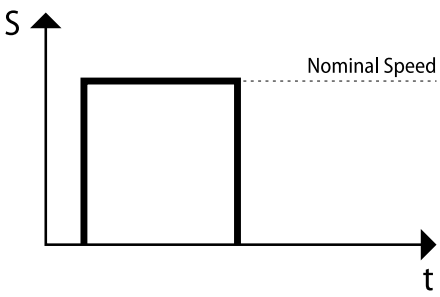
There are many options for programming:
- Micro speed. Usually it is 30% or 10% from the Nominal speed.
- The acceleration or deceleration – for optimal performance of the hoist
- Maximum speed could be up to 25% higher than the Nominal

2-Speed Control



Two-speed contactor controls do not offer the operator the ability to smoothly accelerate or decelerate between the defined speeds. The Micro speed and Nominal speed are reached almost immediately. The result is short-term overloads of the whole structure (shafts, reducer, metal construction). The brake is used to slow the crane speed – and it generates heat and brake wear in comparison with a VFD control. The positioning is not difficult when it is done with Micro speed. There is a sway of the load.

1-Speed Control



Single-speed contactor control is still available for limited Podem's markets. There is only one advantage comparing to other control types – the price. There is no smooth transition between the speeds. Run from zero to nominal speed has a big impact to all kinematics and structure. There is a big stress for rope, shafts, clutches, reducer, motor.

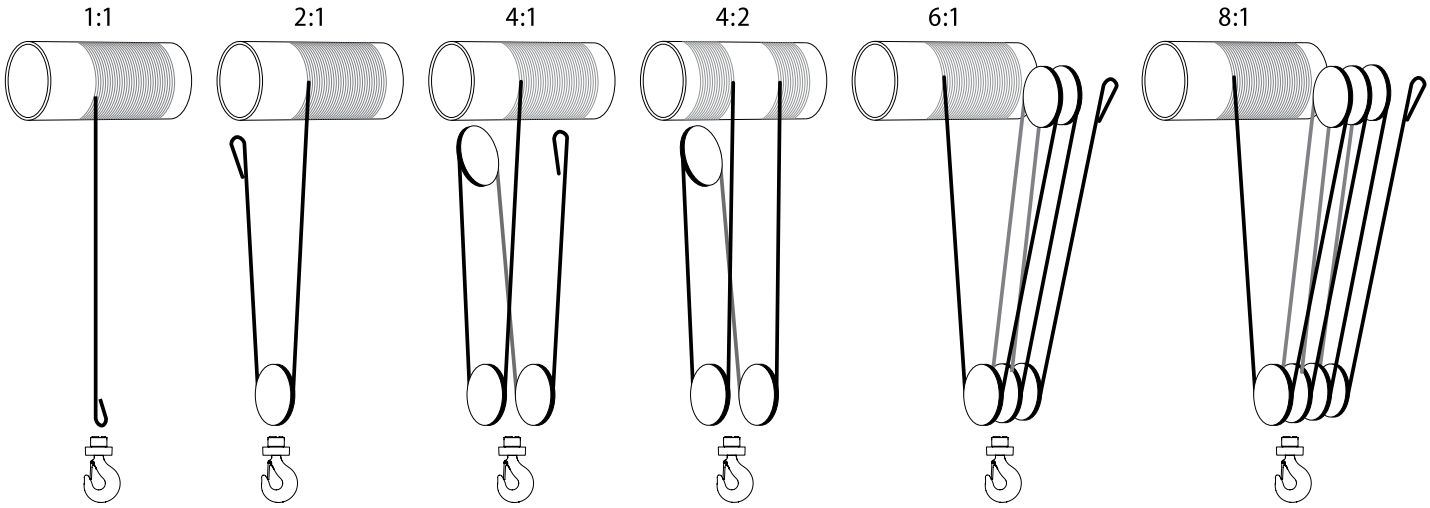
The brake wearing is very high. The brake adjustment or replacement is more often required. High-sway movement of the load during the acceleration make the system less safe.
The positioning is not accurate and provokes a lot of inching – generating a lot of heat and increase the total consumption of the system.

Hoist Reevings

It is the path a wire rope follows around the drums of sheaves. The reeving is a system consisting of rollers, ropes and a hook for hanging the load.

Different reeving 1/1, 2/1, 4/1, 4/2, etc. is done so the hoist can lift additional weight. It allows increasing the carrying capacity by 2, 4, 6 times or more, depending on the multiplicity of the reeving. But it is related to lifting speed and lifting heights too.

For example: If the reeving is double, the lifting speed and lifting height will be decreased 2 times. All relation between tension, power speed and lifting height should be considered during the choice of the suitable electric hoist.

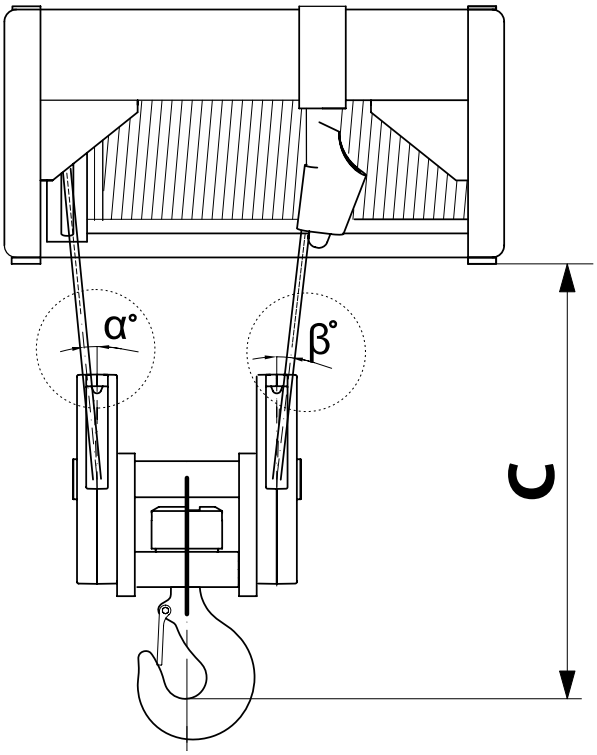


Hoist Reevings						
Reeving Type	**1/1**	**2/1**	**4/1**	**4/2**	**6/1**	**8/1**
Q = Tension in each fall	Q = W	Q = W/2	Q = W/4	Q = W/4	Q = W/6	Q = W/8
P = Power required	P = W	P = ½ W	P = ¼ W	P = ½ W	P = 1/6 W	P = 1/8 W
V = Speed	V = S	V = S/2	V = S/4	V = S/2	V = S/6	V = S/8
H = Length of the rope	H = L	H = 2xL	H = 4xL	H = 4xL	H = 6xL	H = 8xL
MA = Mechanical advantage	1	2	4	2	6	8

Reeving 4/2 is also called "true vertical lift" or "centre lift". It is a hoist ability to lift the hook straight up and down, to pick up or put down a load in an exact position with no any lateral movement. There are 2 ropes coming out of the wire rope drum – which has left and right-hand grooves. There is also an option with one rope and compensating pulley/lever.

Hoist Reevings

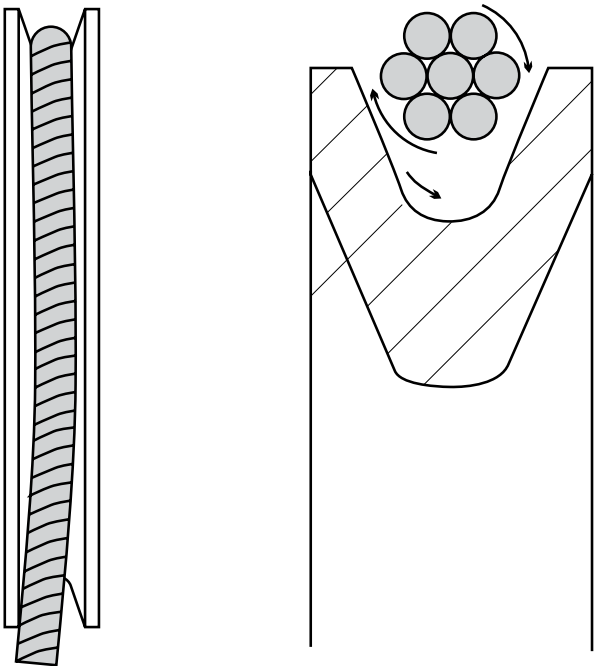
Each different reeving has a different C-dimension because the ropes must be at the proper angle at the top of the lift height



Rope exit angle (Fleet angle)

This is an angle formed by axis of the rope with median axis of the pulley. When the rope moves away from the median axis of the pulley, because of its angle of entry, it pushes on side of the groove and is subjected of rotation torque. When the rope torque reaches the friction torque (rope/pulley), the rope will rotate in the opposite directions, causing oscillatory operation.

We recommend ensuring that the rope exit angle doesn't exceed the maximum angle for the rope type and matching the rope coiling direction with the layering direction on the drum to tighten the rope lay.



As a rope is coiled onto a drum with fleet angle, it rotates on its axis before reaching the bottom of the groove of the drum or sheave.

This action changes the lay length, reducing the rope fatigue strength and causing the bad coiling, which generates structural damages such as "bird cage" and distortion.

The fleet angle must be minimized. It should not be bigger than 4° for all ropes.

Wire Rope

Podem installs only high-tension galvanized ropes with steel core and wire rope with tensile strength min 2160 N/mm2

Wire Rope Type – Left

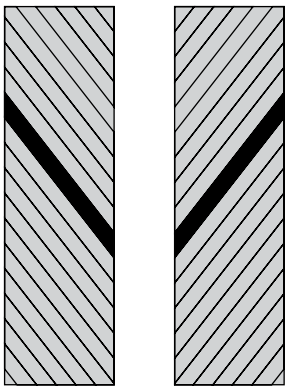
Wire Rope Type – Right

Rope Formation

The rope formation indicates the composition of the wires in the strand and the strands in the rope:

- Number of strands. The number of wires that make up each strand. According to FEM 9.661 minimum 100 individual wires.
- The composition of the central core. For hoist lifting industry it is a Steel core (WC) – core made from steel wires twisted to form a strand (WSC – Wire Strand Core) or as an independent wire rope (IWRC).

Podem always recommends using ropes with galvanized wires for improved durability since galvanised wires reduce the risk of internal core damage caused by corrosion. They also slow down external corrosion, especially during period without use. Podem uses ropes with Class B galvanized wire according to EN 10244-2.



Type S

Type Z

Rope Types

Regarding the direction of the wires and strands the ropes are 2 main types: Left (S or s) and Right (Z or z). The first letter (lowercase) indicates the direction of the strands and second letter (uppercase) indicates the direction of the strands in the rope.

If the lay direction of the stands and the outer wires that make up the stands is the same, the rope is a parallel type; if it is different the rope is a crossed type.

Podem installs rotation-resistant ropes for hoist lifting heights above 13 m. They consist of two or more layers of strands twisted in opposite direction in order to reduce the resultant torsional force.

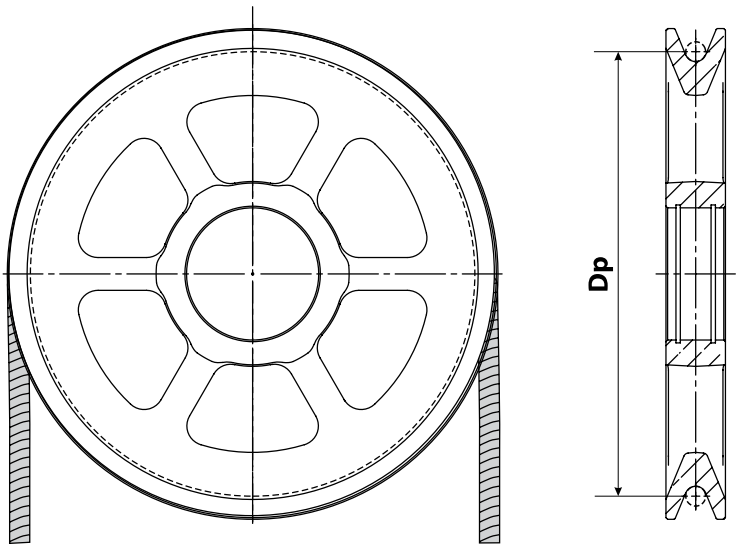
Wire Rope

Podem's ropes diameters for standard hoists are from 7 to 24 mm. The diameter must be measured on a straight position of the rope, without load and with a force no greater than 5% of the minimum breaking load in two positions at least one meter apart. The tolerance for rope with metal core strands with diameter 6-8 mm is +5% and for d>8mm = +4%.

Practical safety coefficient for the rope Zp according to FEM/ISO standard.

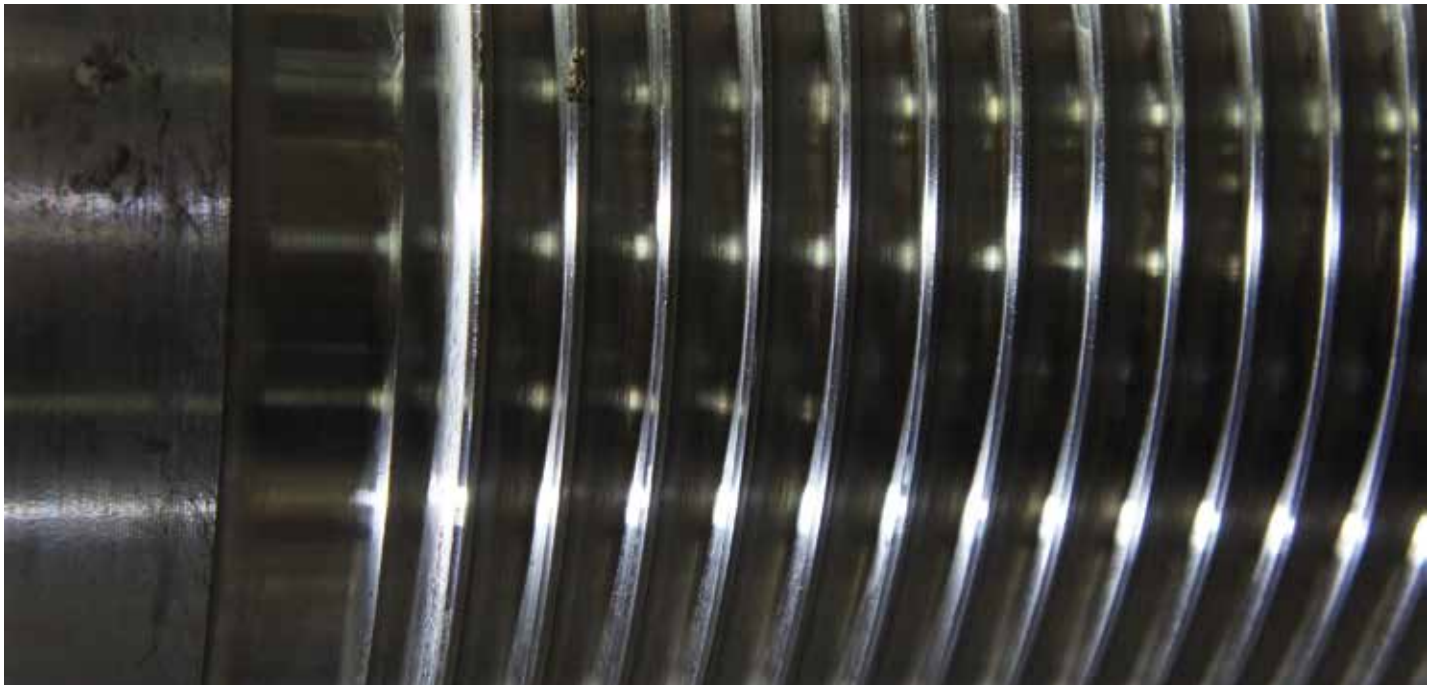
Hoist Reevings				
FEM	**ISO**	**Drum**	**Zp Transportation Normal Material**	**Zp Transportation Dangerous Material**
1 Bm	M3	14	3.55	–
1 Am	M4	16	4	–
2 m	M5	18	4.5	5.6
3 m	M6	20	5.6	7.1
4 m	M7	22.4	7.1	9

The diameters of the pulleys and drums on which the rope is coiled have a great influence on its behaviour and durability. The ratio between the diameters is indicated by standards to the mechanical class by FEM or ISO:



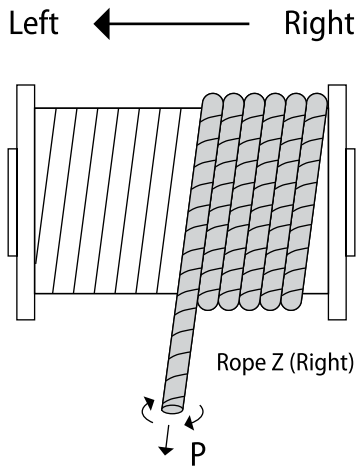
Class		K = Dp/dn (Dp>k*dn*t)		
FEM	**ISO**	**Drum**	**Sheave**	**Compensating Sheave**
1 Bm	M3	14	16	12.5
1 Am	M4	16	18	14
2 m	M5	18	20	14
3 m	M6	20	22.4	16
4 m	M7	22.4	25	16

The contact pressure is the most important indicator for the life duration of a lifting rope. It effects the wear of the wires and pulley, the imprint between the wires, the internal friction.

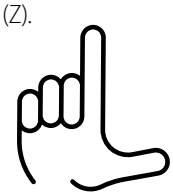


For maximum durability the rope should be coiled onto the drum in a single layer. A grooved drum ensures better winding and the rope rubs less than with a smooth drum. The coiling direction on the drum depends on the rope lay direction and it is important to obtain a tight winding. The traction "P" applied to the rope produce a gyratory torque that, when it exceeds the moment of resistance, tends to untwist the rope. This cause the coil to move on the drum, depending on whether the rope is right or left.

Correct winding of right rope guide coiling

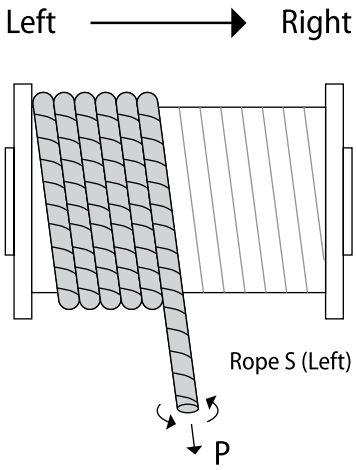


Coiling onto the drum from right to left use right rope (Z).

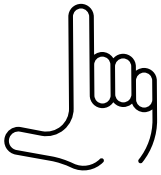


Rope starts from the right flange to the left. Right rope coiling. Grooved drums pitch left.

Correct winding of left rope guide coiling

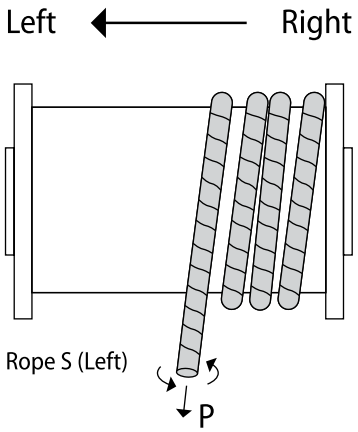


Coiling onto the drum from left to right use left rope (S).



Rope starts from the left flange to the right. Left rope coiling. Grooved drums pitch right.

Wrong winding of left rope guide coiling



Duty Mode Selection
(FEM Selection — Not Active from 2020)

According to FEM/EN standard the use of hoists is divided to duty groups: 1 Bm (M3), 1 Am (M4), 2 m (M5), 3 m (M6), 4 m (M7). 1 Bm (M3) is for lightest use of hoists. 4 m (M7) the heaviest. Generally, when no other duty requirement is indicated, class FEM 2 m/ISO M5 is frequently quoted.

The crane and hoist duty groups are determined separately and can be different. Hoists duty group are determined by following factors:
- Load spectrum Q
- Average operating time per day (t)
- Other factors

Selection criteria

When choosing the proper hoist take into account the following considerations:

1. The maximum load (capacity)
2. The maximum hook travel
3. The lifting speed needed (optional micro speed)
4. The trolley speed needed
5. The operating conditions

The general hoist model is defined in accordance with the load spectrum, the average daily operating time, the capacity and the reeving.

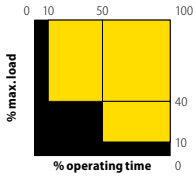
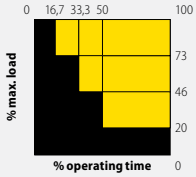
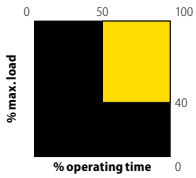
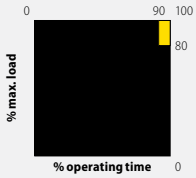
Selection example

Capacity – 6300 kg
Hook travel (H) – 7 m
Lifting speed (V) – 6 m/min
Reeving – 4/1
Load spectrum – Medium
Cycles per hour (N) – 10
Daily working time (T) – 8 h

The average daily operating time is determined by the equation:

$$T_m = \frac{2.H.N.T}{60.V} = \frac{2.7.10.8}{60.6} = 3.1h$$

To the "medium" load spectrum and 3,1 average daily operating time the 2 m (M5) duty mode corresponds as shown in the Load Spectrum/Duty Mode Table. Basing on the given values of capacity – 6 300 kg and reeving – 4/1, the Type Selection Table exhibits the MT316 hoist models group.

Selection criteria					
Load Spectrum (Operation Mode)			**Working TimeClass** (Average daily Operating Time) – Tm (h)		
Light	Mechanisms, usually subject to very light loads and in exceptional cases only tomaximum loads		2-4	4-8	8-16
Medium	Mechanisms, usually subject to light loads but more often to maximum loads		1-2	2-4	4-8
Heavy	Mechanisms, usually subject to medium loads but rather often to maximum loads		0,5-1	1-2	2-4
Very Heavy	Mechanisms usually subject to maximum or almost maximum loads		0,25-0,5	0,5-1	1-2
Duty Mode	FEM 9.511 / DIN 15 020		1 Am	2 m	3 m
	ISO 4301		M4	M5	M6
			Light/Medium duty work shop crane, single shift operation, medium average loads. Occasional lifting of max load.	Medium/Heavy duty work shop crane, 1 or 2 shift operation. Regular, medium and heavy loads.	Heavy duty crane, 2 shift operation. Nominal load regularly lifted Traverse or other dead loads below the hook.
Hoist Group			1 Am (M4)	2 m (M5)	3 m (M6)
Duty Factor			30% ED	40% ED	50% ED
Max Starts/Hour			<180/h	<240/h	<300/h

*Average daily operational time means the time that the hoisting motor is running.

Safe Working Period (SWP)

It is calculated according to actual use of the hoist in hours. The theoretical service life is based on 10 years expected SWP for new hoist. It idepends on Hoist Duty Group too.

SWP					
Hoist Group	M3 (1B m), M4 (1 Am), M5 (2 m), M6 (3 m)				
Load Spectrum	Theoretical service life (D) (hours)				
Q1-Light (kp = 0.125)	3200 t <=2	6300 2 < t <=4	12500 4 < t <=8	25000 8 < t <=16	50000 16 < t <=24
Q2-Medium (kp = 0,25)	1600 t <=1	3200 1 < t <=2	6300 2 < t <=4	12500 4 < t <=8	25000 8 < t <=16
Q3-Heavy (kp = 0,5)	800 T <=0.5	1600 0.5 < t <=1	3200 1 < t <=2	6300 2 < t <=4	12500 4 < t <=8

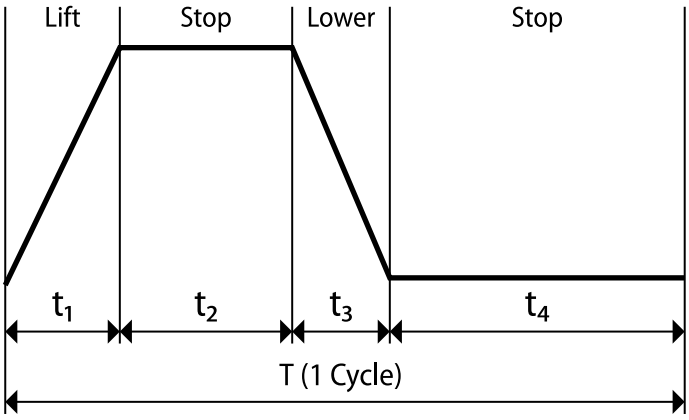
Duty Rating (ED%)
— Not Active from 2020

PODEM

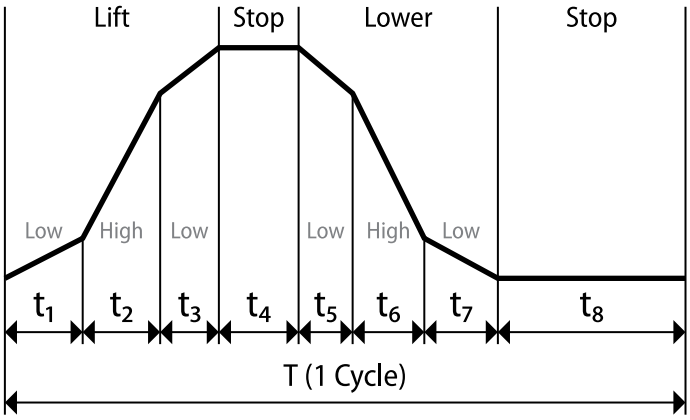
Hoist duty group also specifies the Intermittent Duty Rating (ED%) — Maximum allowed starts/h of hoisting motors

This rating relates to the rise in motor temperature that occurs during operation. It determinates how many % of a certain time (max 10min) the motor can run (fast + micro speed): 33% slow speed, 67% with fast speed. The higher of the two speeds can endure longer operation because when the motor speed is higher, the hoist cools itself more effectively.

Duty Rating (ED%)					
	1 Bm (M3)	**1 Am (M4)**	**2 m (M5)**	**3 m (M6)**	**4 m (M7)**
Duty Factor	25%	30%	40%	50%	60%
Max Starts/h for Dual Speed (FastSpeed/Micro Speed)	<150/h 100/50	<180/h 120/60	<240/h 160/80	<300/h 200/100	<360/h 240/120
Total in 10 min Period, min	2.5 min	3	4	5	6 min
Fast/ Micro Speed, min	1.7/0.8	2/1	2.7/1.3	3.3/1.7	4/2



The cycle consists of lifting/stop/lowing and another stop of duration t_4 before the cycle is repeated. The cycle is no greater than 10 min. When the single speed hoist operates in this conditions the rise in motor temperature will not exceed the maximum allowable. One cycle includes 2 motor starts %ED = (Motor on time $(t_1+t_2)/T)*100$.



The cycle consists of a low speed and high-speed periods and stops. In the case of Dual Speed ER hoists, the %ED is 40 (high speed) / 20 (Low speed). Therefore, its total %ED would be 40%+20% = 60%ED.

Hoists Lifting Height

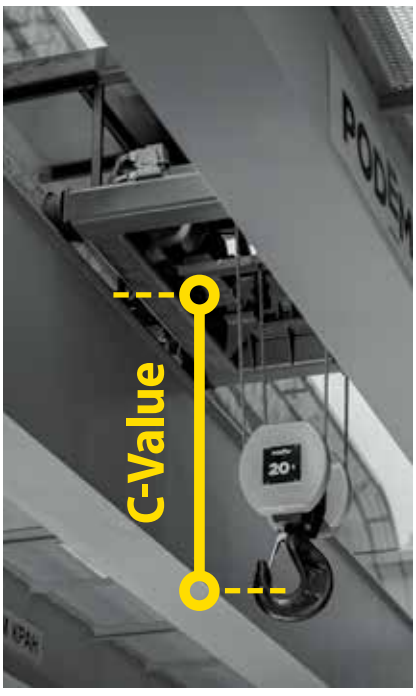
Lifting Height

Lifting Height is the distance from the floor to the saddle of the hook, when the hook is in its upper position. It is an important project parameter because it assures there is enough room to lift or position the load.

C-Value

The C-dimension is a parameter which should be considered when determining the lifting height. It is the distance between the running surface of the hoist trolley wheels to the hook saddle.

The monorail hoists are always underneath the runway beam. Low headroom type gives better C-Value than Normal Headroom one. Double girder cranes with bi-rail hoist have the benefit of the space in-between the two girders, allowing you to get some more lifting height. The reeving type has an impact to the C-Value too.



Wire Rope & Chain Hoists
Description

PODEM

New Description:

2.5 MT312 H10 V4 2/1 M LC 52 20/5 – 1111111182

Old (until 2014):
52 MT 312 H10 V1 2/1 M E K 20/5
– 11422312000000

2.5	**Capacity**	Standard value (t)	
MT	**Hoist Series**	MT – Up to 10 t MTL – Standard high lifting height M – Heavy series up to 50 t	
312	**Hoist Size**	MT/MTL Series – 2xx, 3xx, 5xx M Series – 6xx, 7xx, 8xx, 9xx, 1xxx	Drum hoisting force in kN (05, 12, 16, 25, 50, 63, 80, 110, 125, etc.)
H10	**Lifting Height**	Standard lifting height in meters	
V4	**Lifting Speed**	The main lifting speed in real value, m/min	
2/1	**Reeving**	Standard reevings – 2/1, 4/1, 4/2 (True Vertical lift)	
M	**Lifting Speed Type**	M – Double speed S – Single speed I – VFD control	
LC	**Suspension Type**	F – Foot mounted LC – Low headroom N – Normal headroom	NR – Curve path trolley KD – Double-rail trolley (hoist – parallel to main girder) KH – Double-rail trolley (hoist – perpendicular to main girder) – optional
52	**Electrical Equipment Code**	52 – Load limiter, emergency stop and thermal protection 53 – Load limiter, emergency stop, thermal protection and latch key 20 – Emergency stop and thermal protection 21 – Emergency stop, thermal protection and latch key	
20/5	**Cross-Travel Speed**	Traversing Speed in real value (m/min)	

— **Optional to Main Description:** C (Second Brake); M (Manual Brake Release); F (Special Temp. Execution –40 °C); H (Special Temp. Execution +50 °C).
— **Podemcrane's Internal Coding (1111111182):** 1. Power Supply; 2. Control Voltage; 3. Control Unit; 4. Lifting Motor Type; 5. CT Motor Type; 6. CT Rail/Girder; 7. Girder Profile; 8. Counterweight; 9. Suspension, 10. Overload Limiter.

Standard Hoists Table

Electric Wire Rope Hoists — Standard Products										
Capacity (t)	Group		Hoist Series	Rope Falls	Lifting Speed (m/min)		Hook travel (m)			
	FEM	ISO			V1	V2	H0	H1	H2	H3
1	2 m	M5	MT305	2/1	8/2.6	12/4	10	14	20	26
1.6	2 m	M5	MT308	2/1	8/2.6	12/4	10	14	20	26
2	2 m	M5	MT305	4/1	4/1.3	6/2	–	7	10	13
	3 m	M6	MT310	2/1	8/2.6	12/4	10	14	20	26
	3 m	M6	MTL310	2/1	–	12/4	32	40	48	56
2.5	3 m	M6	MT306	4/1	4/1.3	6/2	–	7	10	13
	2 m	M5	MT312	2/1	8/2.6	12/4	10	14	20	26
	2 m	M5	MTL312	2/1	–	12/4	32	40	48	56
3.2	2 m	M5	MT308	4/1	4/1.3	6/2	–	7	10	13
	2 m	M5	MT316	2/1	8/2.6	12/4	10	14	20	26
	2 m	M5	MTL316	2/1	–	12/4	32	40	48	56
4	3 m	M6	MT310	4/1	4/1.3	6/2	–	7	10	13
	3 m	M6	MT520	2/1	8/2.6	12/4	10	14	20	26
5	2 m	M5	MT312	4/1	4/1.3	6/2	–	7	10	13
	2 m	M5	MT525	2/1	8/2.6	12/4	10	14	20	26
	2 m	M5	MTL525	2/1	–	12/4	32	40	48	56
	3 m	M6	MT313	4/1	4/1.3	6/2	–	7	10	13
6.3	2 m	M5	MT316	4/1	4/1.3	6/2	–	7	10	13
8	3 m	M6	MT520	4/1	4/1.3	6/2	–	7	10	13
	2 m	M5	M640	2/1	8/2.6	–	12	17	24	31
10	2 m	M5	MT525	4/1	4/1.3	6/2	–	7	10	13
	2 m	M5	M750	2/1	8/2.6	–	13	17	24	31
12.5	3 m	M6	M632	4/1	4/1	–	6	8.5	12	15.5
16	2 m	M5	M640	4/1	4/1	–	6	8.5	12	15.5
	3 m	M6	M740	4/1	4/1	–	6	8.5	12	15.5
20	2 m	M5	M750	4/1	4/1	–	6	8.5	12	15.5
	3 m	M6	M950	4/1	2.5/0.6	4/1.2	–	9.5	15.5	23
	2 m	M5	M1100	2/1	2.6/0.6	4/0.6	22	29	36	32
25	1 Am	M4	M863	4/1	4/1.2	–	–	9.5	15.5	23
	2 m	M5	M963	4/1	2.5/0.6	4/1.2	–	9.5	15.5	23
	1 Am	M4	M1125	2/1	2.6/0.6	4/0.6	22	29	36	52
32	1 Am	M4	M980	4/1	2.5/0.6	4/1.2	–	9.5	15.5	23
	3 m	M6	M1080	4/1	1.3/0.3	2/0.6	11	14.5	18	26
40	2 m	M5	M1100	4/1	1.3/0.3	2/0.6	11	14.5	18	26
50	1 Am	M4	M1125	4/1	1.3/0.3	2/0.6	11	14.5	18	26

Cross Travel Speed for Standard Wire Rope Hoists, m/min			
Monorail hoist Low Headroom	20/5 * (double speed)	Double-rail hoist up to 20 t	20/6 (double speed)
Monorail hoist Normal Headroom	20/6 (double speed)	Double-rail hoist - 25 t and above	20-2 (VFD)

* Real speed for hoist with Normal Headroom is 20/6,5 m/min. But for product and marketing reasons this speed is shown as 20/6 in all Podem documents: technical documentation, advertising material, web site etc.

Hoist Modifications on Base of Standard Hoist

The group is determined mainly from the operating time and load spectrum. One hoist could be classified in different duty modes. Downsizing is the most popular way when one hoist is in higher duty mode, but with lower capacity.

Example: Hoist MT525 is for 10t, FEM=2 m. The same hoist, but already with another description MT520 is for 8t and FEM=3 m.

Table of Standard hoists:
Base hoists and their downsizing modifications

Hoist Modifications on Base of Standard Hoist								
Load Spectrum				**Average operating time per working day/h**				
1	Light			1–2	2–4	4–8	8–16	>16
2	Medium			0.5–1	1–2	2–4	4–8	8–16
3	Heavy			0.25–0.5	0.5–1	1–2	2–4	4–8
4	Very Heavy				0.25–0.5	0.5–1	1–2	2–4
Group of mechanisms				**1 Bm**	**1 Am**	**2 m**	**3 m**	**4 m**
Reeving arrangment								
2/1	4/1	6/1	8/1					
4/2	8/2	12/2						
Load Capacity, t				**Size**				
1.0	2.0	–	–	–	–	MT 305	MT 306	–
1.6	3.2	–	–	–	–	MT 308	–	–
2.0	4.0	–	–	–	–	–	MT 310	–
2.5	5.0	–	–	–	–	MT 312	MT 313	–
3.2	6.3	–	–	–	–	MT 316	–	–
4.0	8.0	–	–	–	–	–	MT 520	–
5.0	10.0	–	–	–	–	MT 525	–	–
6.3	12.5	–	–	–	–	–	M 632	–
8.0	16.0	–	–	–	–	M 640	M 740	–
10.0	20.0	–	40*	–	–	M 750	M 950	–
12.5	25.0	–	–	–	M 863	M 963	–	–
16.0	32.0	–	–	–	M 980	–	M 1080	–
20.0	40.0	–	–	–	–	M 1110	–	–
25.0	50.0	–	–	–	M 1125	–	–	–

40* — Only for M 750

Standard Wire Rope Hoist Features

Podem standard wire rope hoist range covers over 90% of the market demands. The standard capacities are up to 50 t, but with using of solution "twin hoists" it could reach up to 100 t.
Most popular reevings are 2/1 and 4/1. But Podem offers also 4/2 for true vertical lifting or 8/1 and 6/1 for heavy loads.

Standard Features for Podem Wire Rope Hoists:

- Two speed pole changing hoisting motor with build-in DC brake
- Travel motors with build-in DC brake. Two speed pole-changing motor up to 20 t, VFD above 20 t.
- Galvanized steel rope
- Rope-guide
- Standard power supply: 380-400 V / 50 Hz
- Control voltage: 48 V
- Motor protection IP55
- Low voltage electrical panel with transformer and On/Off contactor
- Push button pendant (6 buttons)
- Motor insulation class F
- Up/down hook limit switch
- Rotating hook with safety latch
- Standard packing

Wire Rope Hoist Documentation:

- CE declaration of conformity
- Wire rope certificate
- Hook certificate
- Hoist user manual
- Set of electrical diagrams
- Rotated hook with safety latch
- Standard packing

Wire Rope Hoists, Standard Range

Drawings & Dimensions

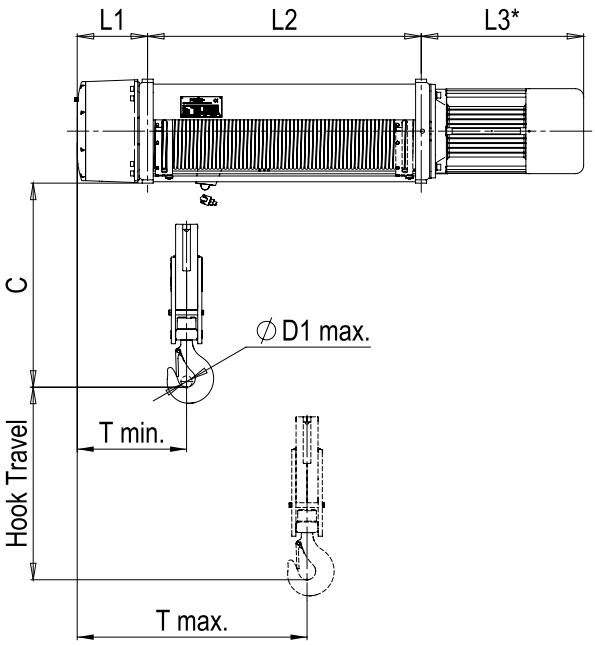
Foot-mounted Hoist (Stationary)
MT 2/1 F

Series: MT (Standard Wire Rope Hoist)
Type: MT305 / MT308 / MT312 / MT316 / MT525
Capacity: 1-5 t
Reeving: 2/1 (2 Rope Falls)
Suspension: F (Foot-mounted, Stationary)

1–5 t

2/1

Fig. 1A



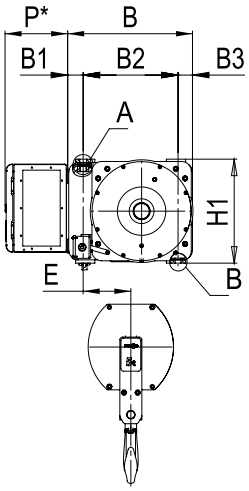
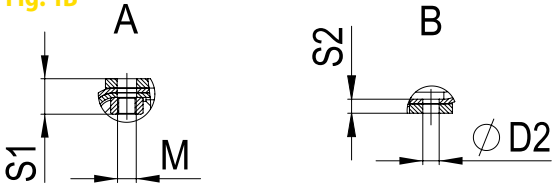
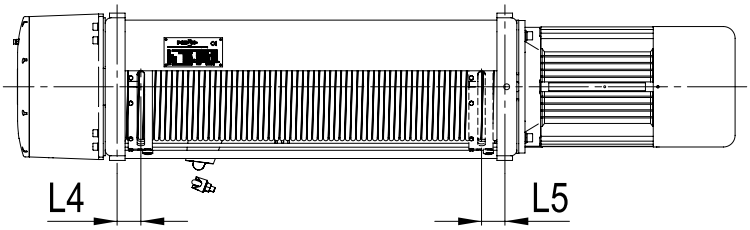


Fig. 1B





Type			Dimensions																					Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B	B1	B2	B3	C	ø D1 max.	ø D2	E	H1	M	L (V1)	L1	L2	L3* (V1)	L3* (V2)	L4	L5	S1	S2	T min. UEP	T max. DEP	kg (V1)
MT305	1	10	398	53.5	295	49.5	558	34	15	138	321	M14	976	196	395	385	385	46	45	26	13	308	460	158
	1	14	398	53.5	295	49.5	558	34	15	138	321	M14	1101	196	520	385	385	46	48	26	13	308	521	166
	1	20	398	53.5	295	49.5	558	34	15	138	321	M14	1281	196	700	385	385	46	45	26	13	308	613	178
	1	26	398	53.5	295	49.5	558	34	15	138	321	M14	1466	196	885	385	385	46	47	26	13	308	704	190
MT308	1.6	10	398	53.5	295	49.5	558	34	15	138	321	M14	976	196	395	385	483	46	45	26	13	308	460	158
	1.6	14	398	53.5	295	49.5	558	34	15	138	321	M14	1101	196	520	385	483	46	48	26	13	308	521	167
	1.6	20	398	53.5	295	49.5	558	34	15	138	321	M14	1281	196	700	385	483	46	45	26	13	308	613	178
	1.6	26	398	53.5	295	49.5	558	34	15	138	321	M14	1466	196	885	385	483	46	47	26	13	308	704	190
MT312	2.5	10	398	53.5	295	49.5	654	40	18	151	321	M20	1158	234	440	484	484	52	54	34	13	368	535	237
	2.5	14	398	53.5	295	49.5	654	40	18	151	321	M20	1288	234	570	484	484	52	50	34	13	368	602	250
	2.5	20	398	53.5	295	49.5	654	40	18	151	321	M20	1493	234	775	484	484	52	54	34	13	368	702	270
	2.5	26	398	53.5	295	49.5	654	40	18	151	321	M20	1693	234	975	484	484	52	54	34	13	368	803	290
MT316	3.2	10	398	53.5	295	49.5	654	40	18	151	321	M20	1158	234	440	484	566	52	54	34	13	368	535	237
	3.2	14	398	53.5	295	49.5	654	40	18	151	321	M20	1288	234	570	484	566	52	50	34	13	368	602	250
	3.2	20	398	53.5	295	49.5	654	40	18	151	321	M20	1493	234	775	484	566	52	54	34	13	368	702	270
	3.2	26	398	53.5	295	49.5	654	40	18	151	321	M20	1693	234	975	484	566	52	54	34	13	368	803	290
MT525	5	10	454	56.5	345	52.5	743	41	21	173	378	M24	1302	256	455	591	642	61	58	46	18	398	566	367
	5	14	454	56.5	345	52.5	743	41	21	173	378	M24	1437	256	590	591	642	61	58	46	18	398	633	386
	5	20	454	56.5	345	52.5	743	41	21	173	378	M24	1642	256	795	591	642	61	61	46	18	398	734	415
	5	26	454	56.5	345	52.5	743	41	21	173	378	M24	1842	256	995	591	642	61	60	46	18	398	835	444

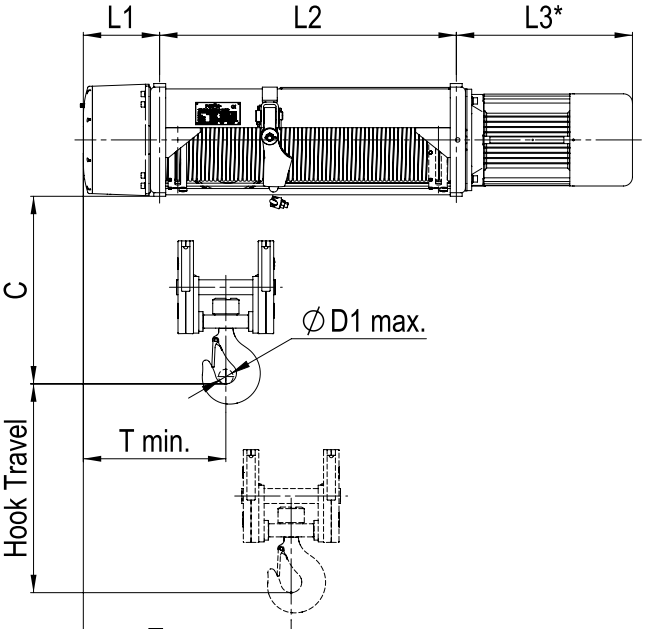
Foot-mounted Hoist (Stationary)
MT 4/1 F

Series: MT (Standard Wire Rope Hoist)
Type: MT305 / MT308 / MT312 / MT316 / MT525
Capacity: 2-10 t
Reeving: 4/1 (4 Rope Falls)
Suspension: F (Foot-mounted, Stationary)

2–10 t

4/1

Fig. 2A



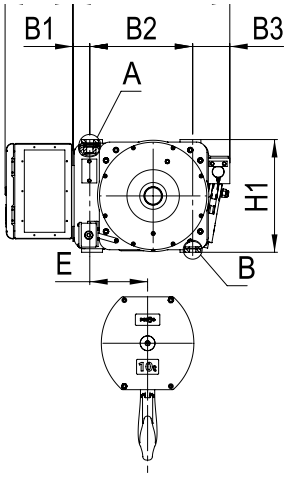
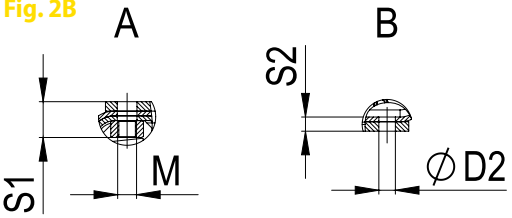
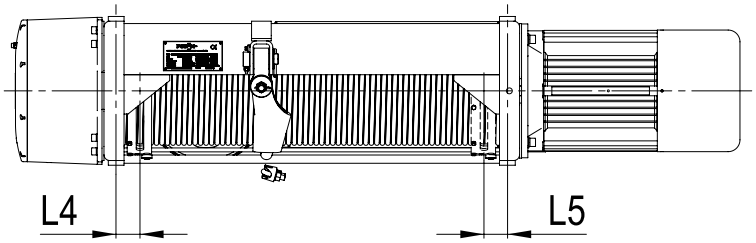


Fig. 2B





Type			Dimensions																			Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B2	B3	C	ø D1 max.	ø D2	E	H1	M	L (V1)	L1	L2	L3* (V1)	L3* (V2)	L4	L5	S1	S2	T min. UEP	T max. DEP	kg (V1)
MT305	2	7	295	122.5	489	40	15	164	321	M14	1 101	196	520	385	385	46	48	26	13	361	468	180
	2	10	295	122.5	489	40	15	164	321	M14	1 281	196	700	385	385	46	45	26	13	361	513	188
	2	13	295	122.5	489	40	15	164	321	M14	1 466	196	885	385	385	46	47	26	13	361	559	205
MT308	3.2	7	295	122.5	489	40	15	164	321	M14	1 101	196	520	385	483	46	48	26	13	372	479	185
	3.2	10	295	122.5	489	40	15	164	321	M14	1 281	196	700	385	483	46	45	26	13	372	524	193
	3.2	13	295	122.5	489	40	15	164	321	M14	1 466	196	885	385	483	46	47	26	13	372	570	209
MT312	5	7	295	122.5	569	41	18	169	321	M20	1 288	234	570	484	484	52	50	34	13	447	564	282
	5	10	295	122.5	569	41	18	169	321	M20	1 493	234	775	484	484	52	54	34	13	447	614	303
	5	13	295	122.5	569	41	18	169	321	M20	1 693	234	975	484	484	52	54	34	13	447	664	330
MT316	6.3	7	295	122.5	602	49	18	169	321	M20	1 288	234	570	484	566	52	50	34	13	447	564	284
	6.3	10	295	122.5	602	49	18	169	321	M20	1 493	234	775	484	566	52	54	34	13	447	614	305
	6.3	13	295	122.5	602	49	18	169	321	M20	1 693	234	975	484	566	52	54	34	13	447	664	332
MT525	10	7	345	124.5	630	49	21	194	378	M24	1 437	256	590	591	642	61	58	46	18	478	596	436
	10	10	345	124.5	630	49	21	194	378	M24	1 642	256	795	591	642	61	61	46	18	478	646	467
	10	13	345	124.5	630	49	21	194	378	M24	1 842	256	995	591	642	61	60	46	18	478	697	498

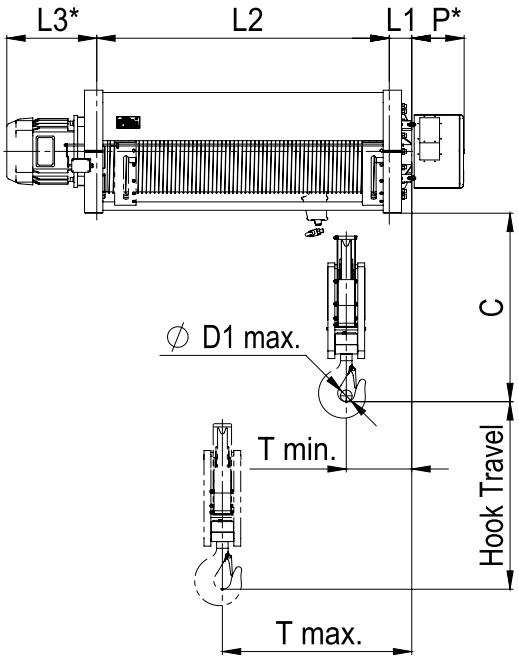
Foot-mounted Hoist (Stationary)
M 2/1 F

Series: M (Standard Wire Rope Hoist)
Type: M640 / M750 / M863 / M980 / M1100 / M1125
Capacity: 8-25 t
Reeving: 2/1 (2 Rope Falls)
Suspension: F (Foot-mounted, Stationary)

8–25 t

2/1

Fig. 3A



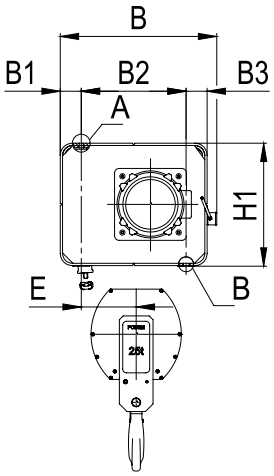
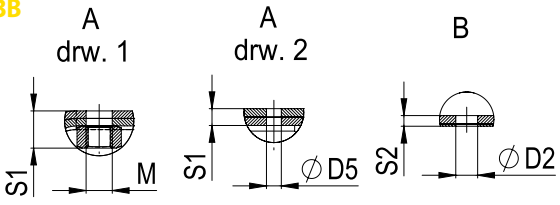
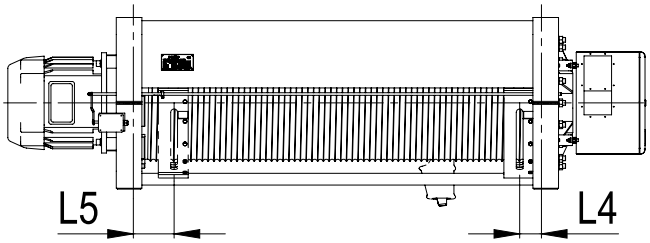


Fig. 3B





Type			Dimensions																				Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B1	B2	B3	C	ø D1 max.	ø D2	ø D5	Detail A	E	H1	M	L (V1)	L1	L2	L3* (V1)	L4	L5	S1	S2	T min. UEP	T max. DEP	kg (V1)
M640	8	12	84.5	475	80.5	890	49	27	–	Drw. 1	246	526	27	1 262	44.5	563	655	74	117	40	12	189	375	605
	8	17	84.5	475	80.5	890	49	27	–	Drw. 1	246	526	27	1 412	44.5	713	655	74	117	40	12	189	450	642
	8	24	84.5	475	80.5	890	49	27	–	Drw. 1	246	526	27	1 627	44.5	928	655	74	117	40	12	189	557	703
	8	31	84.5	475	80.5	890	49	27	–	Drw. 1	246	526	27	1 842	44.5	1 143	655	74	117	40	12	189	665	764
M750	10	12	84.5	475	86.5	890	49	27	–	Drw. 1	246	526	27	1 266	44.5	563	659	74	117	42	12	189	375	727
	10	17	84.5	475	86.5	890	49	27	–	Drw. 1	246	526	27	1 416	44.5	713	659	74	117	42	12	189	450	775
	10	24	84.5	475	86.5	890	49	27	–	Drw. 1	246	526	27	1 631	44.5	928	659	74	117	42	12	189	557	845
	10	31	84.5	475	86.5	890	49	27	–	Drw. 1	246	526	27	1 846	44.5	1 143	659	74	117	42	12	189	665	915
M1110	20	22	137.5	685	137.5	1 232	76	39	27	Drw. 2	361	804	–	1 943	147	977	819	102	190	30	19	442	785	2 423
	20	29	137.5	685	137.5	1 232	76	39	27	Drw. 2	361	804	–	2 128	147	1 162	819	102	157	30	19	442	894	2 534
	20	36	137.5	685	137.5	1 232	76	39	27	Drw. 2	361	804	–	2 368	147	1 402	819	102	179	30	19	442	1 003	2 678
	20	52	137.5	685	137.5	1 232	76	39	27	Drw. 2	361	804	–	2 878	147	1 912	819	102	191	30	19	442	1 252	2 983
M1125	25	22	137.5	685	137.5	1 232	76	39	27	Drw. 2	361	804	–	1 943	147	977	819	102	190	30	19	442	785	2 423
	25	29	137.5	685	137.5	1 232	76	39	27	Drw. 2	361	804	–	2 128	147	1 162	819	102	157	30	19	442	894	2 534
	25	36	137.5	685	137.5	1 232	76	39	27	Drw. 2	361	804	–	2 368	147	1 402	819	102	179	30	19	442	1 003	2 678
	25	52	137.5	685	137.5	1 232	76	39	27	Drw. 2	361	804	–	2 878	147	1 912	819	102	191	30	19	442	1 252	2 983

Foot-mounted Hoist (Stationary)
M 4/1 F

Series: M (Standard Wire Rope Hoist)
Type: M640 / M750 / M863 / M980 / M1100 / M1125
Capacity: 16-50 t
Reeving: 4/1 (4 Rope Falls)
Suspension: F (Foot-mounted, Stationary)

16–50 t

4/1

Fig. 4A

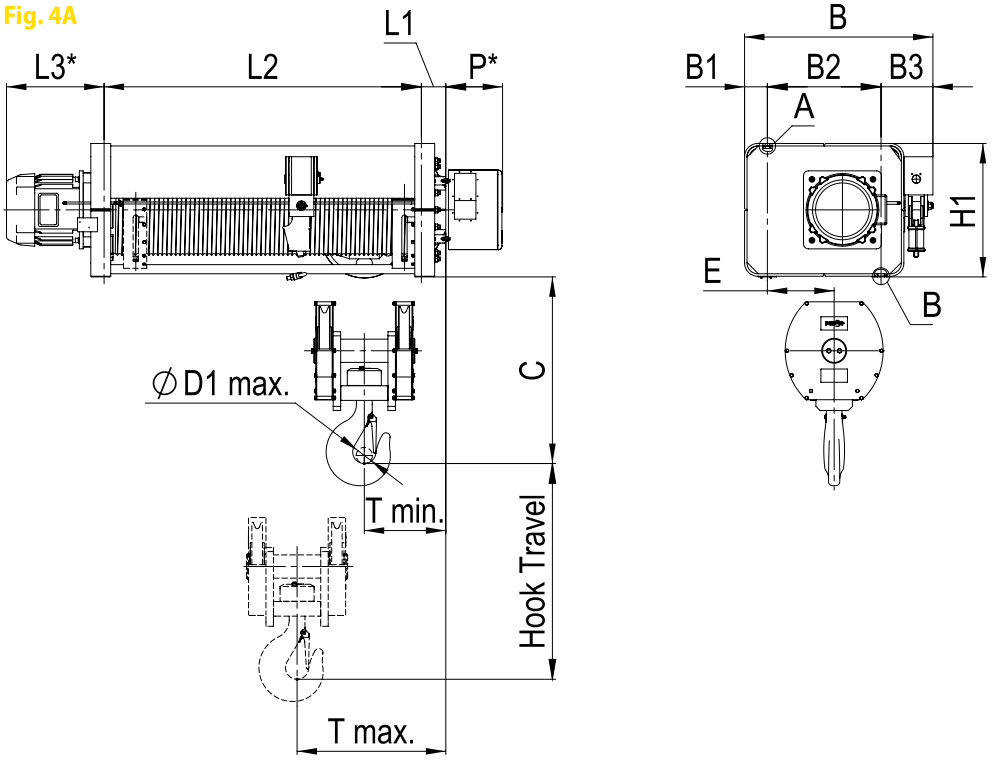
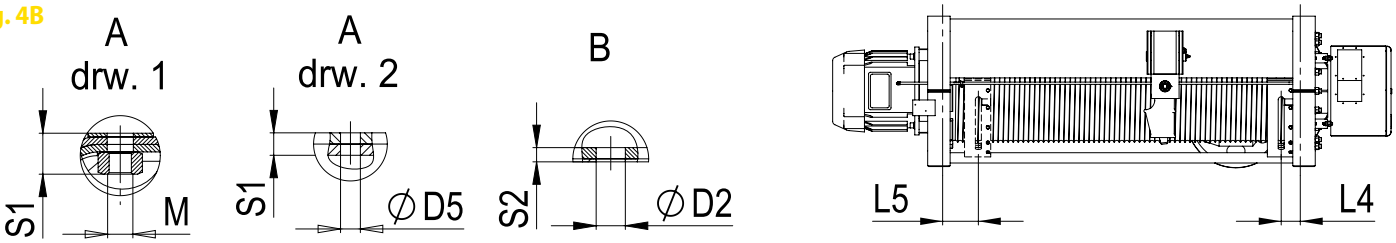


Fig. 4B



Type			Dimensions																						Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B	B1	B2	B3	C	ø D1 max.	ø D2	ø D5	Detail A	E	H1	M	L (V1)	L1	L2	L3* (V1)	L4	L5	S1	S2	T min. UEP	T max. DEP	kg (V1)
M640	16	6	640	84.5	475	80.5	825	59	27	–	drw. 1	278	526	27	656	1 262	563	655	74	88	40	12	297	390	738
	16	8.5	640	84.5	475	80.5	825	59	27	–	drw. 1	278	526	27	806	1 412	713	655	74	84	40	12	297	427	775
	16	12	640	84.5	475	80.5	825	59	27	–	drw. 1	278	526	27	1 021	1 627	928	655	74	83	40	12	297	481	837
	16	15.5	640	84.5	475	80.5	825	59	27	–	drw. 1	278	526	27	1 236	1 842	1 143	655	74	82	40	12	297	535	896
M750	20	6	646	84.5	475	86.5	880	76	27	–	drw. 1	278	526	27	656	1 266	563	659	74	88	42	12	297	390	850
	20	8.5	646	84.5	475	86.5	880	76	27	–	drw. 1	278	526	27	806	1 416	713	659	74	84	42	12	297	427	899
	20	12	646	84.5	475	86.5	880	76	27	–	drw. 1	278	526	27	1 021	1 631	928	659	74	83	42	12	297	481	969
	20	15.5	646	84.5	475	86.5	880	76	27	–	drw. 1	278	526	27	1 236	1 846	1 143	659	74	82	42	12	297	535	1 039
M863	25	9.5	724	92	540	92	940	76	39	–	drw. 2	309	612	36	975	1 668	840	757	64	109	55	24	382	541	1 274
	25	16	724	92	540	92	940	76	39	–	drw. 2	309	612	36	1 390	2 083	1 255	757	64	124	55	24	382	644	1 467
	25	23	724	92	540	92	940	76	39	–	drw. 2	309	612	36	1 890	2 583	1 755	757	64	90	55	24	382	769	1 697
M980	32	9.5	732	92	540	100	1 099	97	39	–	drw. 2	309	612	36	975	1 437	840	526	64	109	58	24	382	541	1 292
	32	16	732	92	540	100	1 099	97	39	–	drw. 2	309	612	36	1 390	1 852	1 255	526	64	124	58	24	382	644	1 506
	32	23	732	92	540	100	1 099	97	39	–	drw. 2	309	612	36	1 890	2 352	1 755	526	64	90	58	24	382	769	1 759
M1110	40	11	1 135	137.5	685	312.5	1 125	97	39	27	drw. 2	399	804	–	1 250	1 943	977	819	102	190	30	19	522	693	2 713
	40	14.5	1 135	137.5	685	312.5	1 125	97	39	27	drw. 2	399	804	–	1 435	2 128	1 162	819	102	157	30	19	522	748	2 823
	40	18	1 135	137.5	685	312.5	1 125	97	39	27	drw. 2	399	804	–	1 675	2 368	1 402	819	102	179	30	19	522	802	2 991
	40	26	1 135	137.5	685	312.5	1 125	97	39	27	drw. 2	399	804	–	2 185	2 878	1 912	819	102	191	30	19	522	927	3 308
M1125	50	11	1 135	137.5	685	312.5	1 125	97	39	27	drw. 2	399	804	–	1 250	1 943	977	819	102	190	30	19	522	693	2 713
	50	14.5	1 135	137.5	685	312.5	1 125	97	39	27	drw. 2	399	804	–	1 435	2 128	1 162	819	102	157	30	19	522	748	2 823
	50	18	1 135	137.5	685	312.5	1 125	97	39	27	drw. 2	399	804	–	1 675	2 368	1 402	819	102	179	30	19	522	802	2 991
	50	26	1 135	137.5	685	312.5	1 125	97	39	27	drw. 2	399	804	–	2 185	2 878	1 912	819	102	191	30	19	522	927	3 308

Monorail Low Headroom Hoist
MT 2/1 LC

Series: MT (Standard Wire Rope Hoist)
Type: MT305 / MT308 / MT312 / MT316 / MT525
Capacity: 1-5 t
Reeving: 2/1 (2 Rope Falls)
Suspension: LC (Low Headroom, Counterweight)

1–5 t

2/1

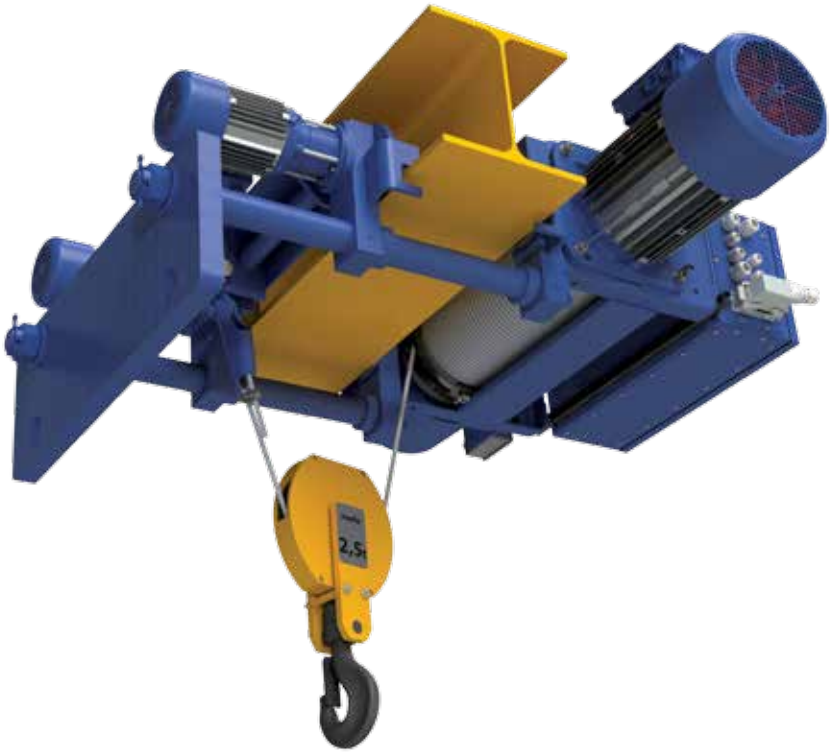
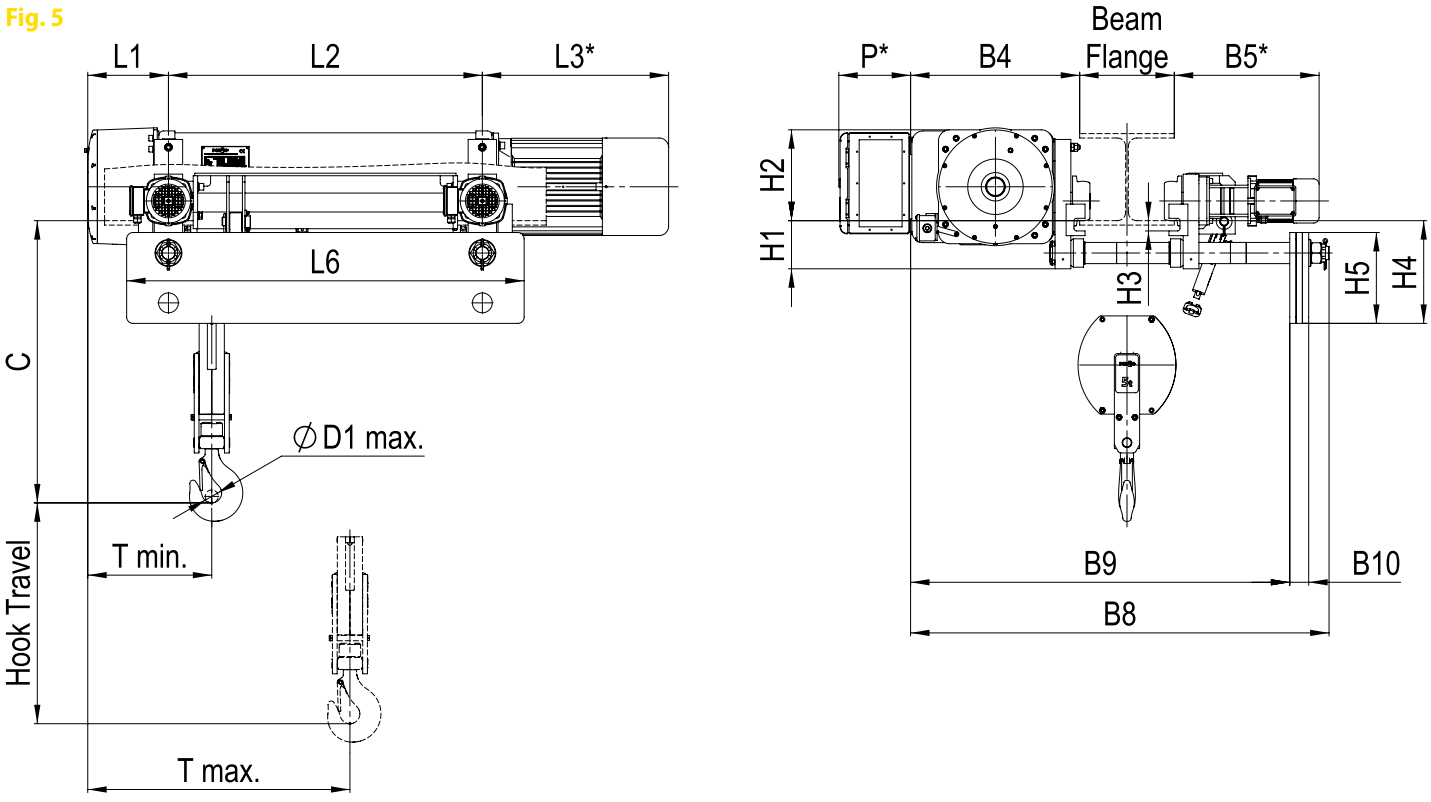


Fig. 5



Type			Dimensions																								Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B4	B5* DS	B8	B9	B10	C	ø D1 max.	Trolley Wheel Diam.	H1	H2	H3	H4	H5	L (V1)	L1	L2	L3* (V1)	L3* (V2)	L4	L5	L6	T min. UEP	T max. DEP	kg (V1)
MT305	1	10	474	402	1 150	1 235	24	706	34	125	148	242	32.5	346	288	976	196	395	385	385	46	45	600	309	461	305
	1	14	474	402	1 150	1 235	24	706	34	125	148	242	32.5	346	288	1 101	196	520	385	385	46	48	730	309	522	321
	1	20	474	402	1 150	1 235	24	706	34	125	148	242	32.5	346	288	1 281	196	700	385	385	46	45	920	309	614	345
	1	26	474	402	1 150	1 235	24	706	34	125	148	242	32.5	346	288	1 466	196	885	385	385	46	47	1 100	309	705	369
MT308	1.6	10	474	402	1 150	1 235	24	706	34	125	148	242	32.5	346	288	976	196	395	385	483	46	45	600	309	461	305
	1.6	14	474	402	1 150	1 235	24	706	34	125	148	242	32.5	346	288	1 101	196	520	385	483	46	48	730	309	522	321
	1.6	20	474	402	1 150	1 235	24	706	34	125	148	242	32.5	346	288	1 281	196	700	385	483	46	45	920	309	614	345
	1.6	26	474	402	1 150	1 235	24	706	34	125	148	242	32.5	346	288	1 466	196	885	385	483	46	47	1 100	309	705	369
MT312	2.5	10	474	402	1 138	1 235	40	802	40	125	148	242	32.5	336	288	1 158	234	440	484	484	52	54	670	354	521	413
	2.5	14	474	402	1 138	1 235	40	802	40	125	148	242	32.5	336	288	1 288	234	570	484	484	52	50	800	354	588	439
	2.5	20	474	402	1 138	1 235	40	802	40	125	148	242	32.5	336	288	1 493	234	775	484	484	52	54	1 020	354	688	482
	2.5	26	474	402	1 138	1 235	40	802	40	125	148	242	32.5	336	288	1 693	234	975	484	484	52	54	1 230	354	789	527
MT316	3.2	10	474	402	1 138	1 235	40	802	40	125	148	242	32.5	336	288	1 158	234	440	484	566	52	54	670	354	521	413
	3.2	14	474	402	1 138	1 235	40	802	40	125	148	242	32.5	336	288	1 288	234	570	484	566	52	50	800	354	588	439
	3.2	20	474	402	1 138	1 235	40	802	40	125	148	242	32.5	336	288	1 493	234	775	484	566	52	54	1 020	354	688	482
	3.2	26	474	402	1 138	1 235	40	802	40	125	148	242	32.5	336	288	1 693	234	975	484	566	52	54	1 230	354	789	527
MT525	5	10	536	460	1 327	1 202	60	896	41	125	153	288	32.5	326	288	1 302	256	455	591	642	61	58	730	398	566	641
	5	14	536	460	1 327	1 202	60	896	41	125	153	288	32.5	326	288	1 437	256	590	591	642	61	58	810	398	633	678
	5	20	536	460	1 327	1 202	60	896	41	125	153	288	32.5	326	288	1 642	256	795	591	642	61	61	1 040	398	734	710
	5	26	536	460	1 327	1 202	60	896	41	125	153	288	32.5	326	288	1 842	256	995	591	642	61	60	1 260	398	835	774

* Standard Podem hoists are adjustable for beam flange 130...300 mm

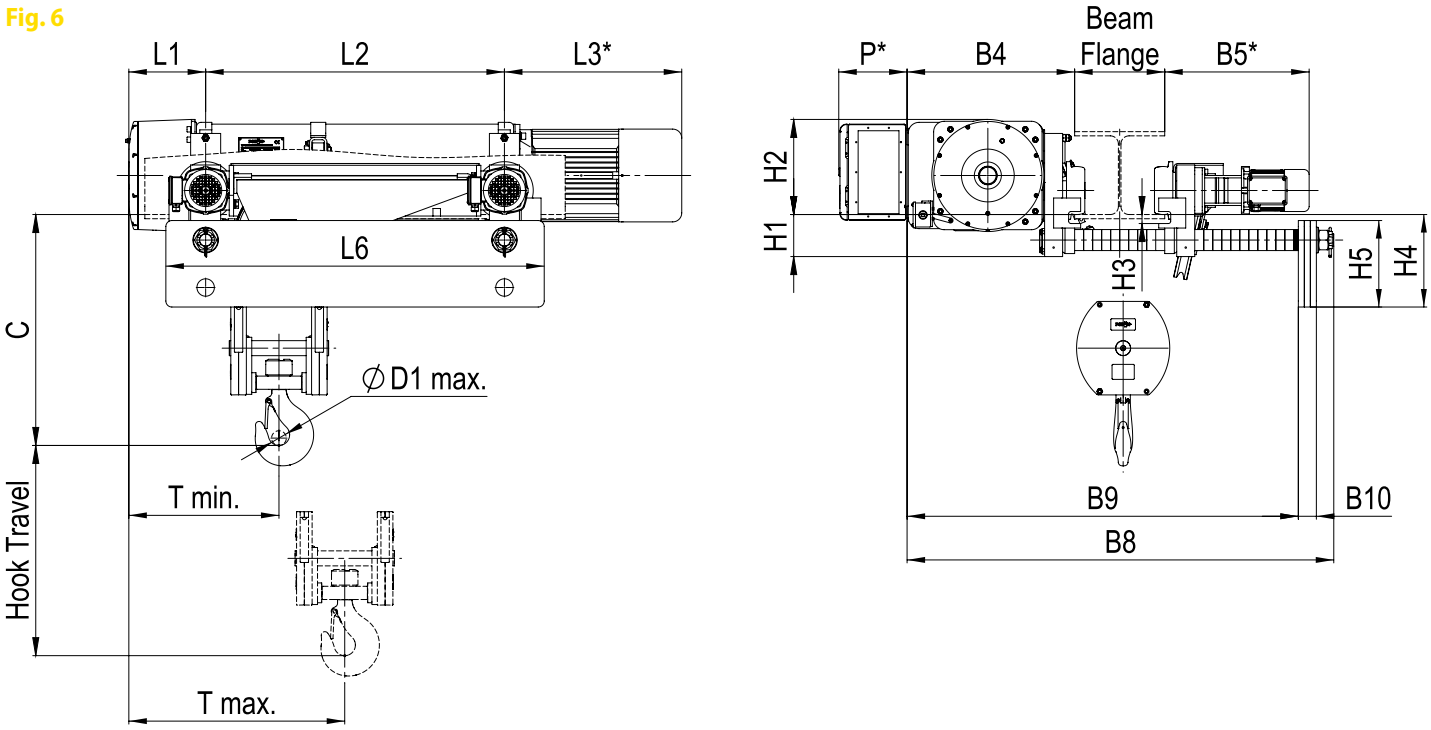
Monorail Low Headroom Hoist
MT 4/1 LC

Series: MT (Standard Wire Rope Hoist)
Type: MT305 / MT308 / MT312 / MT316 / MT525
Capacity: 2-10 t
Reeving: 4/1 (4 Rope Falls)
Suspension: LC (Low Headroom, Counterweight)

2–10 t

4/1

Fig. 6



Type			Dimensions																								Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B4	B5* DS	B5* SS	B8	B9	B10	C	ø D1 max.	Trolley Wheel Diam.	H1	H2	H3	H4	H5	L (V1)	L1	L2	L3* (V1)	L3* (V2)	L4	L5	L6	T min. UEP	T max. DEP	kg (V1)
	2	7	474	402	162	1 150	1 235	24	637	40	125	148	242	32.5	346	288	1 101	196	520	385	385	46	48	730	391	498	339
MT305	2	10	474	402	162	1 150	1 235	24	637	40	125	148	242	32.5	346	288	1 281	196	700	385	385	46	45	920	391	543	360
	2	13	474	402	162	1 150	1 235	24	637	40	125	148	242	32.5	346	288	1 466	196	885	385	385	46	47	1 100	391	589	390
	3.2	7	474	402	162	1 150	1 235	24	637	40	125	148	242	32.5	346	288	1 101	196	520	385	483	46	48	730	391	498	330
MT308	3.2	10	474	402	162	1 150	1 235	24	637	40	125	148	242	32.5	346	288	1 281	196	700	385	483	46	45	920	391	543	361
	3.2	13	474	402	162	1 150	1 235	24	637	40	125	148	242	32.5	346	288	1 466	196	885	385	483	46	47	1 100	391	589	391
	5	7	474	460	193	1 179	1 270	40	722	41	125	153	247	32.5	336	288	1 288	234	570	484	484	52	50	800	463	580	495
MT312	5	10	474	460	193	1 179	1 270	40	722	41	125	153	247	32.5	336	288	1 493	234	775	484	484	52	54	1 020	463	630	541
	5	13	474	460	193	1 179	1 270	40	722	41	125	153	247	32.5	336	288	1 693	234	975	484	484	52	54	1 230	463	680	585
	6.3	7	474	460	193	1 179	1 270	40	755	49	125	153	247	32.5	336	288	1 288	234	570	484	566	52	50	800	463	580	497
MT316	6.3	10	474	460	193	1 179	1 270	40	755	49	125	153	247	32.5	336	288	1 493	234	775	484	566	52	54	1 020	463	630	543
	6.3	13	474	460	193	1 179	1 270	40	755	49	125	153	247	32.5	336	288	1 693	234	975	484	566	52	54	1 230	463	680	587
	10	7	589	481	214	1 421	1 303	60	770	49	160	140	288	30	308	288	1 437	256	590	591	642	61	58	810	500	618	784
MT525	10	10	589	481	214	1 421	1 303	60	770	49	160	140	288	30	308	288	1 642	256	795	591	642	61	61	1 040	500	668	818
	10	13	589	481	214	1 421	1 303	60	770	49	160	140	288	30	308	288	1 842	256	995	591	642	61	60	1 260	500	719	884

* Standard Podem hoists are adjustable for beam flange 130...300 mm

Monorail Low Headroom Hoist
M 2/1 LC & M 4/1 LC

Series: M (Standard Wire Rope Hoist)
Type: M640
Capacity: 8-16 t
Reeving: 2/1 (2 Rope Falls)
Suspension: LC (Low Headroom, Counterweight)

8 t **16 t**

2/1 **4/1**

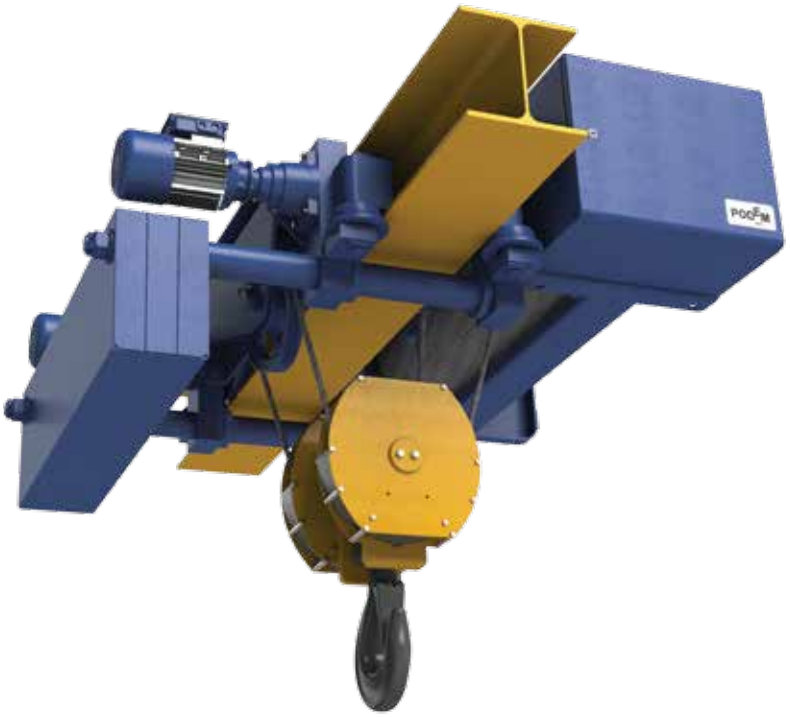
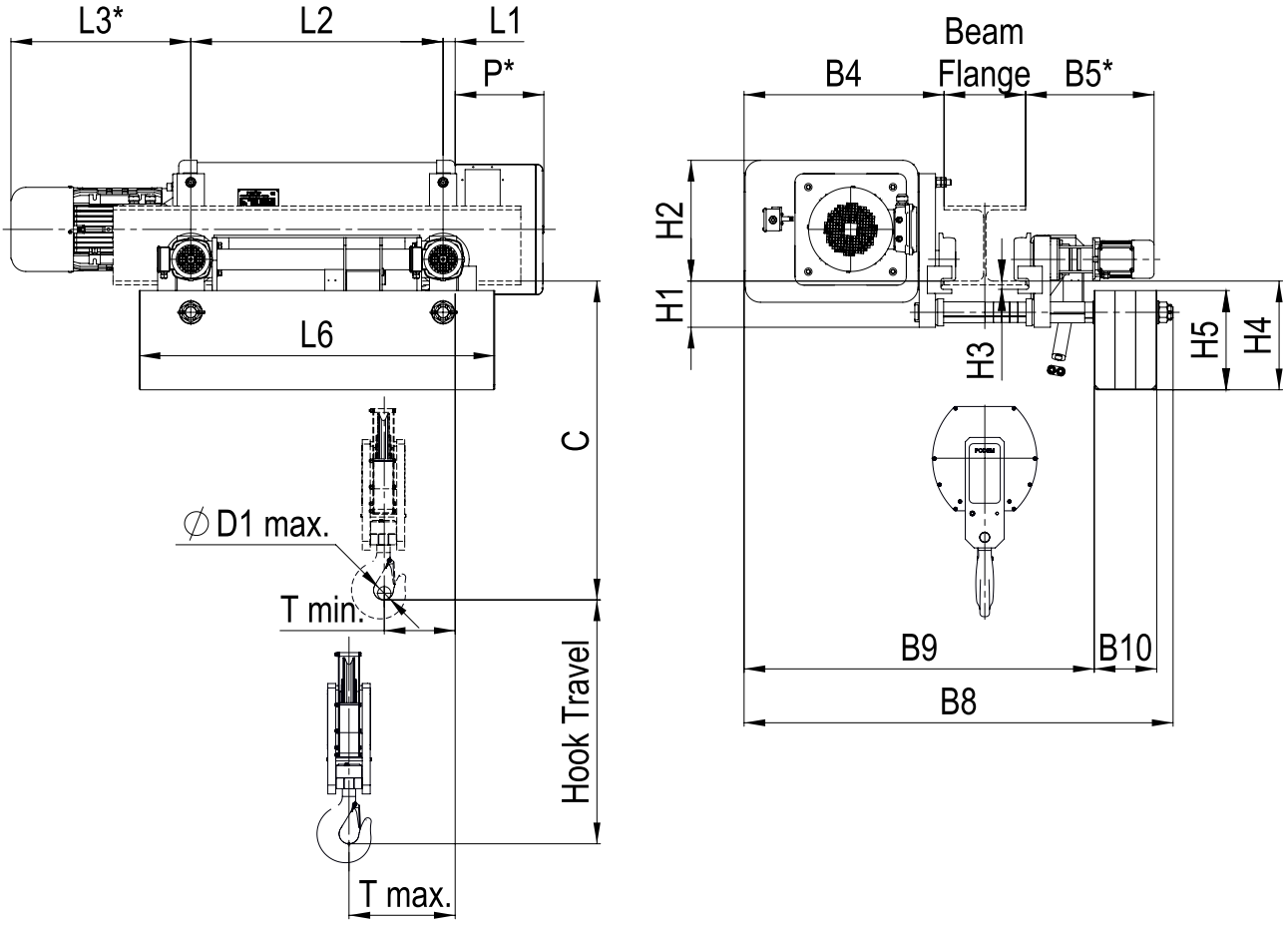


Fig. 7

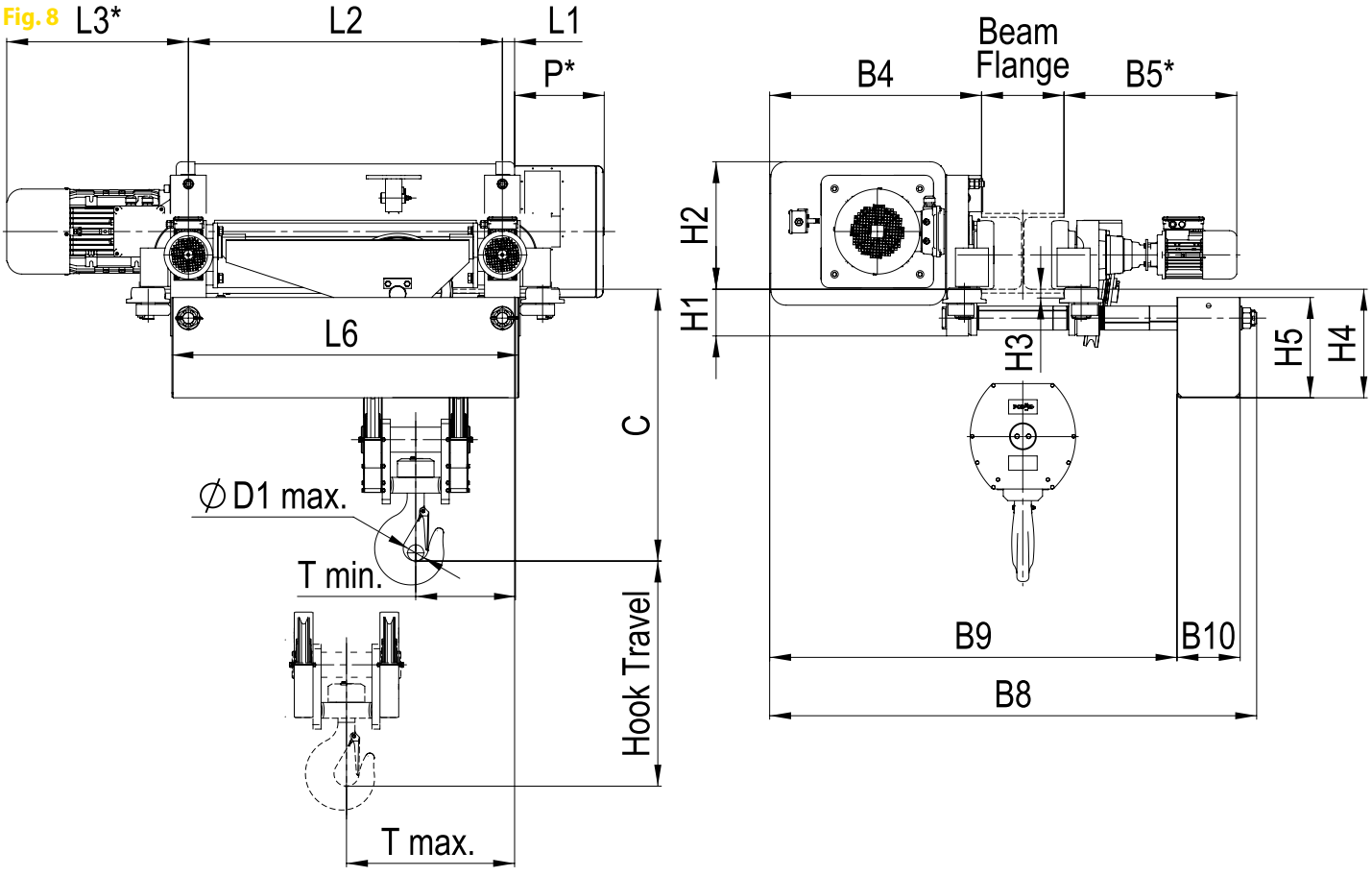


Type			Dimensions — M 2/1 LC																			Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B4	B5* DS	B8	B9	B10	C	ØD1 max.	Trolley Wheel Diam.	H1	H2	H3	H4	H5	L (V1)	L1	L2	L3* (V1)	T min. UEP	T max. DEP	kg (V1)
M640	8	12	736	460	1 578	1 288	230	1 060	49	160	170	444	30.5	400	365	1 262	44.5	563	655	238	424	1 237
	8	17	736	460	1 578	1 288	230	1 060	49	160	170	444	30.5	400	365	1 412	44.5	713	655	238	499	1 309
	8	24	736	460	1 578	1 288	230	1 060	49	160	170	444	30.5	400	365	1 627	44.5	928	655	238	606	1 429
	8	31	736	460	1 578	1 288	230	1 060	49	160	170	444	30.5	400	365	1 842	44.5	1 143	655	238	714	1 558

Type			Dimensions — M 4/1 LC																			Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B4	B5* DS	B8	B9	B10	C	ØD1 max.	Trolley Wheel Diam.	H1	H2	H3	H4	H5	L (V1)	L1	L2	L3* (V1)	T min. UEP	T max. DEP	kg
M640	16	8.5	736	630	1773	1483	230	995	59	160	170	444	30.5	395	365	1 412	44.5	713	655	353	483	1 544
	16	12	736	630	1773	1483	230	995	59	160	170	444	30.5	395	365	1 627	44.5	928	655	353	537	1 659
	16	15.5	736	630	1773	1483	230	995	59	160	170	444	30.5	395	365	1 842	44.5	1143	655	353	591	1 775

* Standard Podem hoists are adjustable for beam flange 130...300 mm

Fig. 8



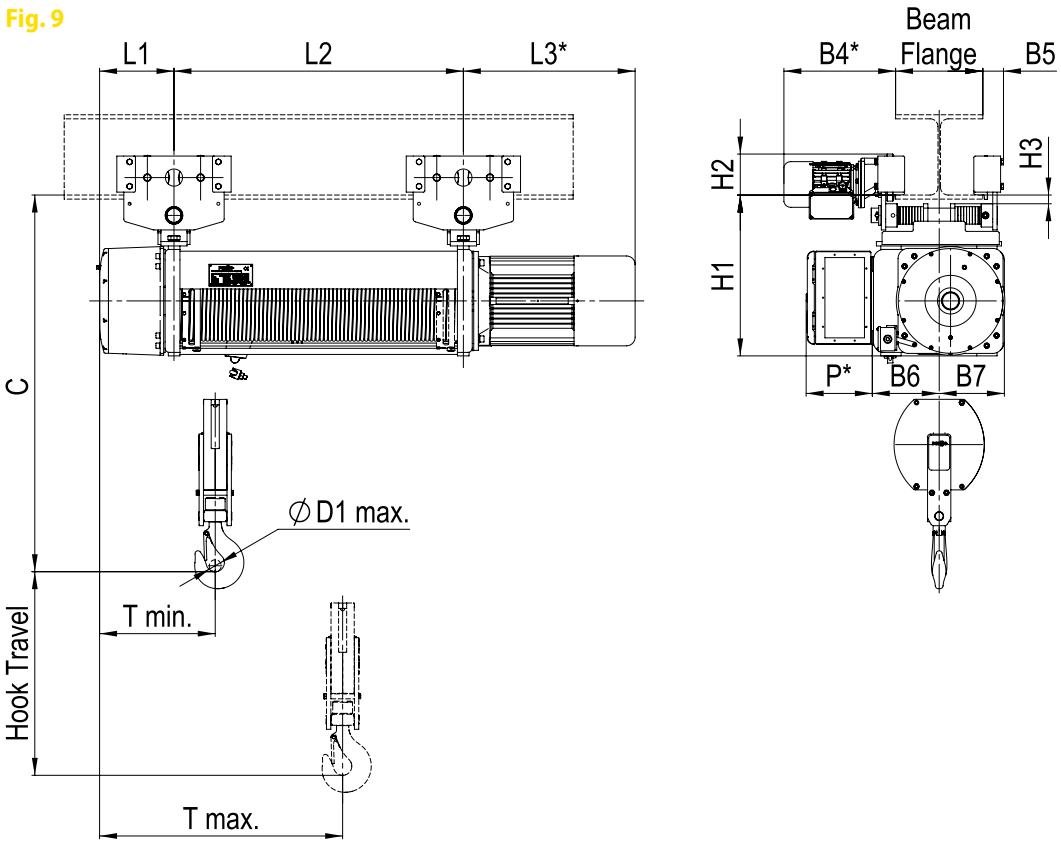
Monorail Normal Headroom Hoist
MT 2/1 N

Series: MT (Standard Wire Rope Hoist)
Type: MT305 / MT308 / MT312 / MT316 / MT525
Capacity: 1-5 t
Reeving: 2/1 (2 Rope Falls)
Suspension: N (Normal Headroom)

1–5 t

2/1

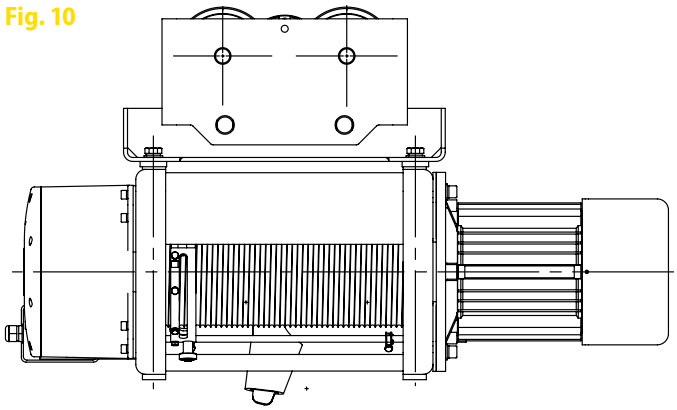
Fig. 9



Type			Dimensions																				Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B4* DS	B5	B6	B7	C	ø D1 max	Trolley Wheel Diam.	Number of Trolleys	H1	H2	H3	L (V1)	L1	L2	L3* (V1)	L3* (V2)	L4	L5	T min UEP	T max DEP	kg (V1)
MT305	1	10	304	52	192	207	996	34	100	1	438	124	29	976	196	395	385	385	46	45	308	460	210
	1	14	304	52	192	207	1 038	34	100	1+1	480	124	29	1 101	196	520	385	385	46	48	308	521	243
	1	20	304	52	192	207	1 038	34	100	1+1	480	124	29	1 281	196	700	385	385	46	45	308	613	250
	1	26	304	52	192	207	1 038	34	100	1+1	480	124	29	1 466	196	885	385	385	46	47	308	704	267
MT308	1.6	10	304	52	192	207	1 038	34	100	1+1	480	124	29	976	196	395	385	483	46	45	308	460	235
	1.6	14	304	52	192	207	1 038	34	100	1+1	480	124	29	1 101	196	520	385	483	46	48	308	521	243
	1.6	20	304	52	192	207	1 038	34	100	1+1	480	124	29	1 281	196	700	385	483	46	45	308	613	250
	1.6	26	304	52	192	207	1 038	34	100	1+1	480	124	29	1 466	196	885	385	483	46	47	308	704	267
MT312	2.5	10	384	71	205	194	1 150	40	120	1+1	496	141	30	1 158	234	440	484	484	52	54	368	535	367
	2.5	14	384	71	205	194	1 150	40	120	1+1	496	141	30	1 288	234	570	484	484	52	50	368	602	380
	2.5	20	384	71	205	194	1 150	40	120	1+1	496	141	30	1 493	234	775	484	484	52	54	368	702	400
	2.5	26	384	71	205	194	1 150	40	120	1+1	496	141	30	1 693	234	975	484	484	52	54	368	803	420
MT316	3.2	10	384	71	205	194	1 150	40	120	1+1	496	141	30	1 158	234	440	484	566	52	54	368	535	367
	3.2	14	384	71	205	194	1 150	40	120	1+1	496	141	30	1 288	234	570	484	566	52	50	368	602	380
	3.2	20	384	71	205	194	1 150	40	120	1+1	496	141	30	1 493	234	775	484	566	52	54	368	702	400
	3.2	26	384	71	205	194	1 150	40	120	1+1	496	141	30	1 693	234	975	484	566	52	54	368	803	420
MT525	5	10	384	71	230	225	1 296	41	120	1+1	553	141	30	1 302	256	455	591	642	61	58	398	566	505
	5	14	384	71	230	225	1 296	41	120	1+1	553	141	30	1 437	256	590	591	642	61	58	398	633	524
	5	20	384	71	230	225	1 296	41	120	1+1	553	141	30	1 642	256	795	591	642	61	61	398	734	553
	5	26	384	71	230	225	1 296	41	120	1+1	553	141	30	1 842	256	995	591	642	61	60	398	835	582

* Standard Podem hoists are adjustable for beam flange 130...300 mm

Fig. 10



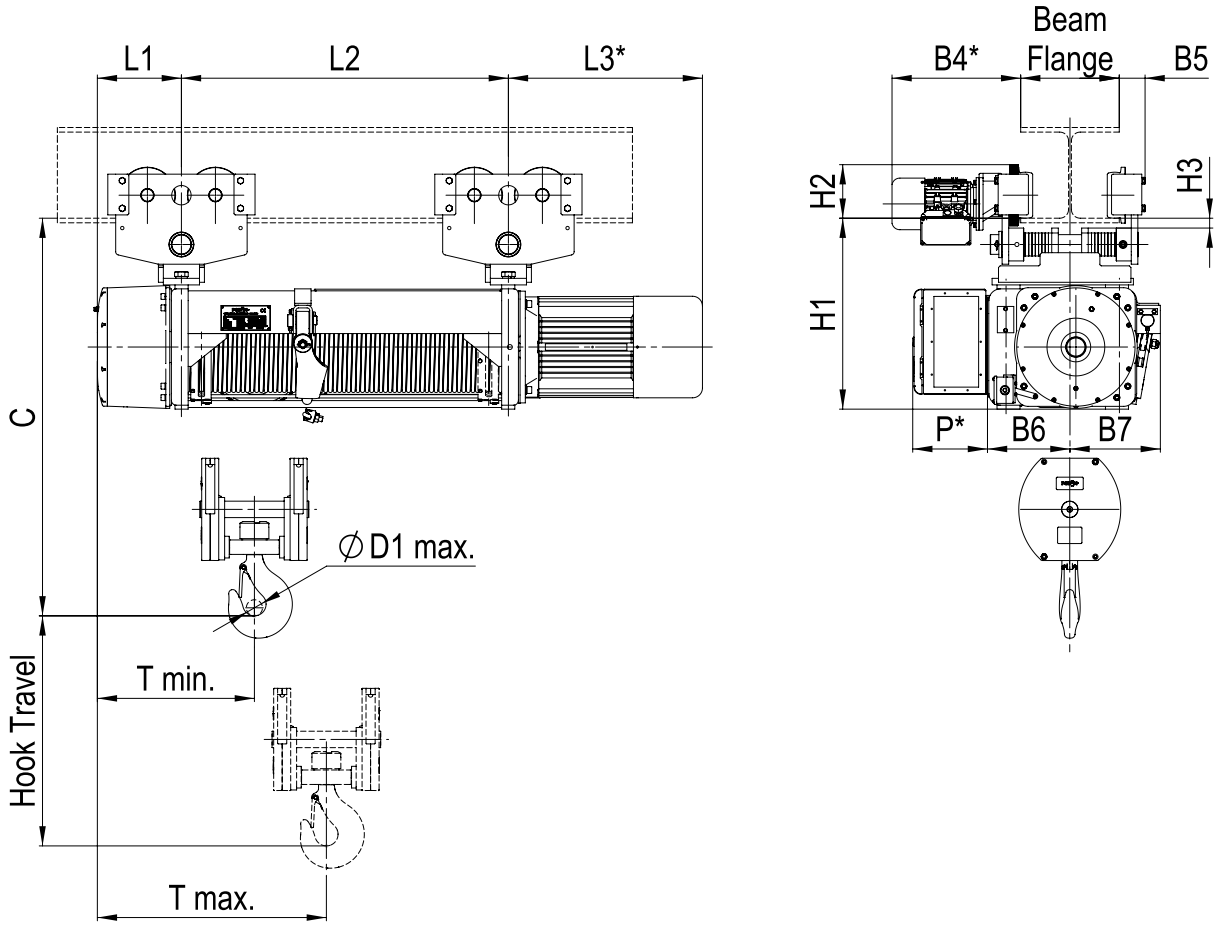
Monorail Normal Headroom Hoist
MT 4/1 N

Series: MT (Standard Wire Rope Hoist)
Type: MT305 / MT308 / MT312 / MT316 / MT525
Capacity: 2-10 t
Reeving: 4/1 (4 Rope Falls)
Suspension: N (Normal Headroom)

2–10 t

4/1

Fig. 11



Type			Dimensions																				Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B4* DS	B4* SS	B5	B6	B7	C	ø D1 max.	Trolley Wheel Diam.	Number of Trolleys	H1	H2	H3	L (V1)	L1	L2	L3* (V1)	L3* (V2)	L4	L5	T min UEP	T max DEP	kg (V1)
	2	7	384	348	52	218	254	985	40	120	1+1	496	141	30	1 101	196	520	385	385	46	48	361	468	316
MT305	2	10	384	348	52	218	254	985	40	120	1+1	496	141	30	1 281	196	700	385	385	46	45	361	513	324
	2	13	384	348	52	218	254	985	40	120	1+1	496	141	30	1 466	196	885	385	385	46	47	361	559	341
	3.2	7	384	348	52	218	254	985	40	120	1+1	496	141	30	1 101	196	520	385	483	46	48	372	479	321
MT308	3.2	10	384	348	52	218	254	985	40	120	1+1	496	141	30	1 281	196	700	385	483	46	45	372	524	329
	3.2	13	384	348	52	218	254	985	40	120	1+1	496	141	30	1 466	196	885	385	483	46	47	372	570	345
	5	7	384	348	71	223	249	1 065	41	120	1+1	496	141	30	1 288	234	570	484	484	52	50	447	564	418
MT312	5	10	384	348	71	223	249	1 065	41	120	1+1	496	141	30	1 493	234	775	484	484	52	54	447	614	439
	5	13	384	348	71	223	249	1 065	41	120	1+1	496	141	30	1 693	234	975	484	484	52	54	447	664	466
	6.3	7	384	348	71	223	249	1 098	49	120	1+1	496	141	30	1 288	234	570	484	566	52	50	447	564	433
MT316	6.3	10	384	348	71	223	249	1 098	49	120	1+1	496	141	30	1 493	234	775	484	566	52	54	447	614	454
	6.3	13	384	348	71	223	249	1 098	49	120	1+1	496	141	30	1 693	234	975	484	566	52	54	447	664	481
	10	7	392	356	71	251	276	1 211	49	140	2	581	163	30	1 437	256	590	591	642	61	58	478	596	660
MT525	10	10	392	356	71	251	276	1 211	49	140	2	581	163	30	1 642	256	795	591	642	61	61	478	646	691
	10	13	392	356	71	251	276	1 211	49	140	2	581	163	30	1 842	256	995	591	642	61	60	478	697	722

* Standard Podem hoists are adjustable for beam flange 130...300 mm

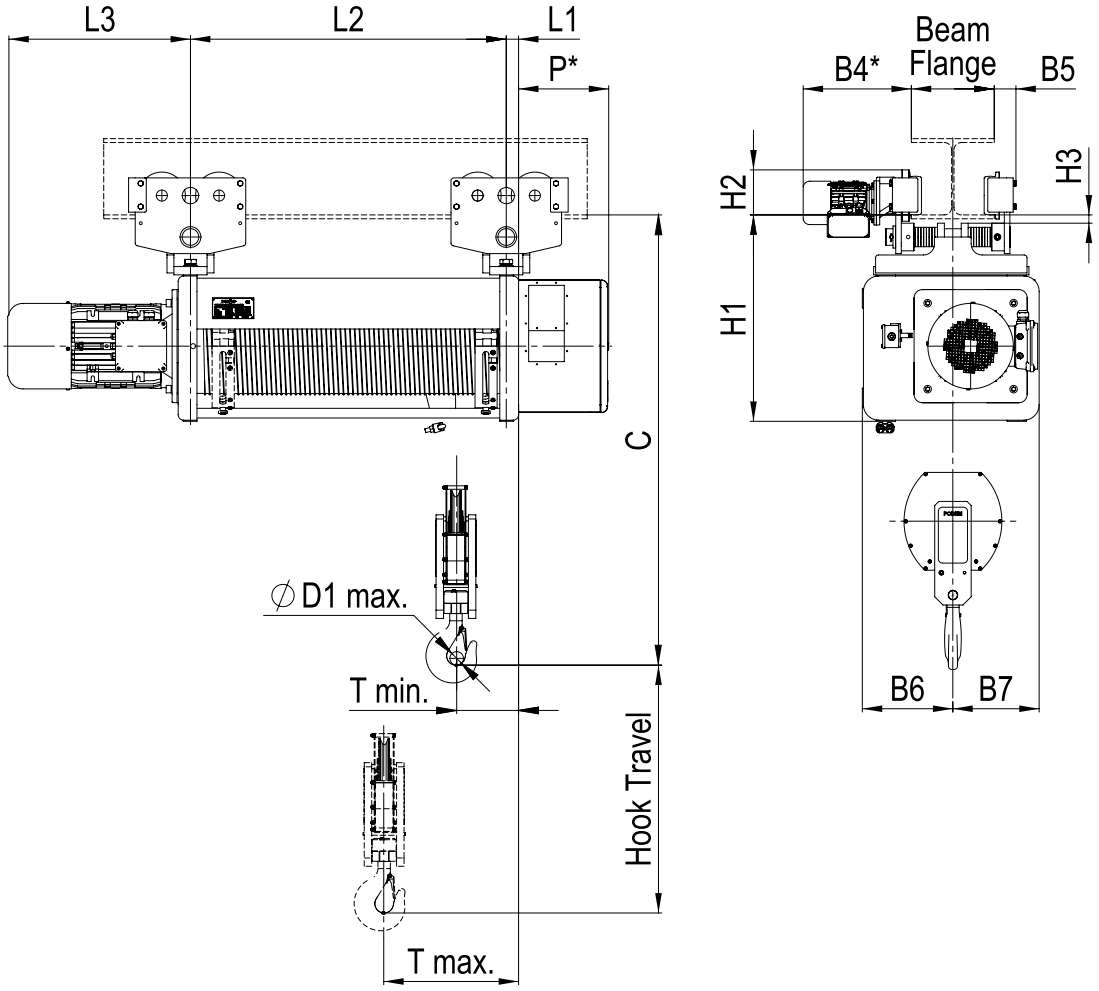
Monorail Normal Headroom Hoist
M 2/1 N & M 4/1 N

Series: M (Standard Wire Rope Hoist)
Type: M640 / M750
Capacity: 8-16 t
Reeving: 2/1 (2 Rope Falls), 4/1 (4 Rope Falls)
Suspension: N (Normal Headroom)

8–10 t **16 t**

2/1 **4/1**

Fig. 12



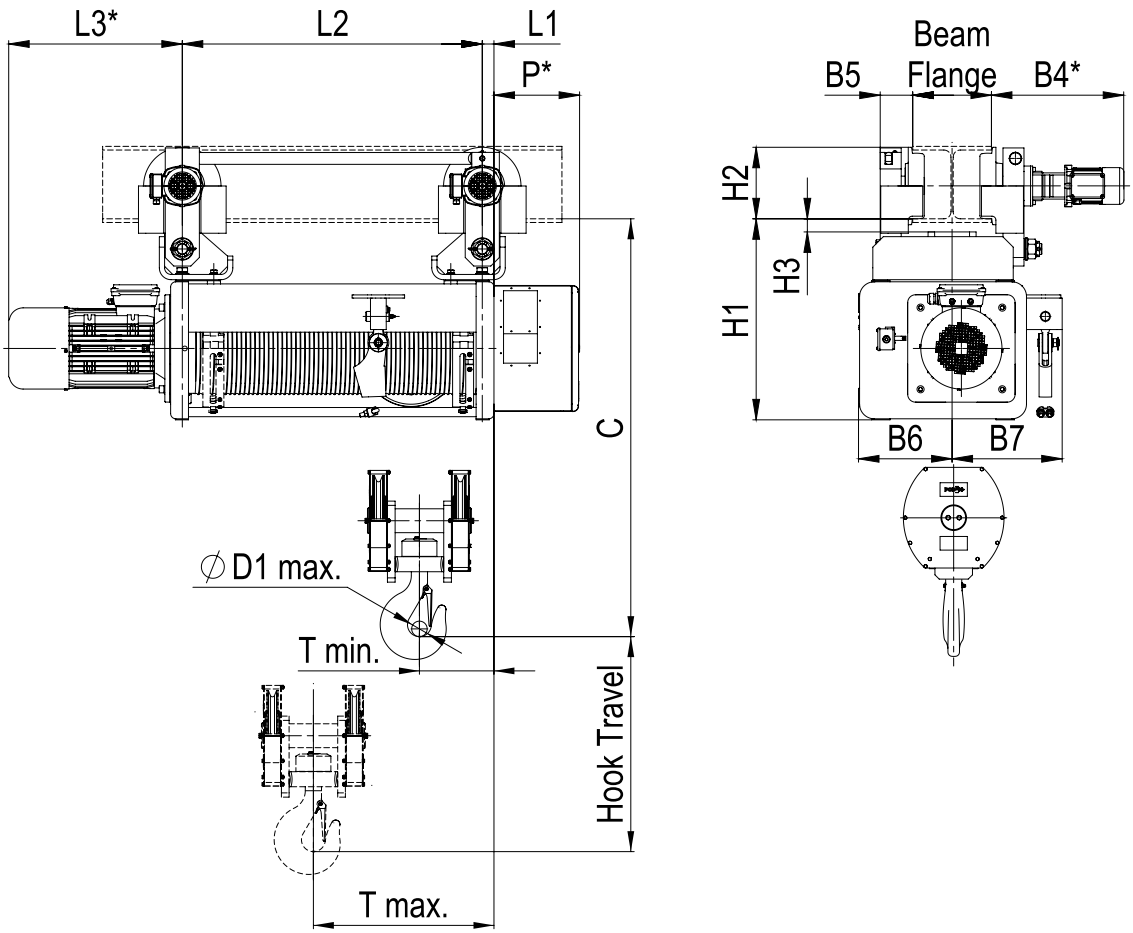
Type			Dimensions — M 2/1 N																	Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B4* DS	B5	B6	B7	C	ø D1 max.	Trolley Wheel Diam.	Number of Trolleys	H1	H2	H3	L (V1)	L1	L2	L3* (V1)	T min. UEP	T max. DEP	kg (V1)
M640	8	12	392	71	327.5	312.5	1 637	49	140	2	747	163	30	656	44.5	563	49	189	389	858
	8	17	392	71	327.5	312.5	1 637	49	140	2	747	163	30	806	44.5	713	49	189	466	895
	8	24	392	71	327.5	312.5	1 637	49	140	2	747	163	30	1 021	44.5	928	49	189	574	956
	8	31	392	71	327.5	312.5	1 637	49	140	2	747	163	30	1 236	44.5	1 143	49	189	682	1 017
M750	10	12	392	71	327.5	318.5	1 637	49	140	2	747	163	30	656	44.5	563	49	189	389	980
	10	17	392	71	327.5	318.5	1 637	49	140	2	747	163	30	806	44.5	713	49	189	466	1 028
	10	24	392	71	327.5	318.5	1 637	49	140	2	747	163	30	1 021	44.5	928	49	189	574	1 098
	10	31	392	71	327.5	318.5	1 637	49	140	2	747	163	30	1 236	44.5	1 143	49	189	682	1 168

* Standard Podem hoists are adjustable for beam flange 130...300 mm

Type			Dimensions — M 4/1 N																	Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B4* DS	B5	B6	B7	C	ø D1 max.	Trolley Wheel Diam.	Number of Trolleys	H1	H2	H3	L (V1)	L1	L2	L3* (V1)	T min. UEP	T max. DEP	kg (V1)
M640	16	6	506	71	363	413	1 572	59	250	2	747	273	50	1 262	45	563	655	297	390	1 182
	16	8.5	506	71	363	413	1 572	59	250	2	747	273	50	1 412	45	713	655	297	427	1 219
	16	12	506	71	363	413	1 572	59	250	2	747	273	50	1 627	45	928	655	297	481	1 281
	16	15.5	506	71	363	413	1 572	59	250	2	747	273	50	1 842	45	1 143	655	297	535	1 340

* Standard Podem hoists are adjustable for beam flange 150...300 mm

Fig. 13



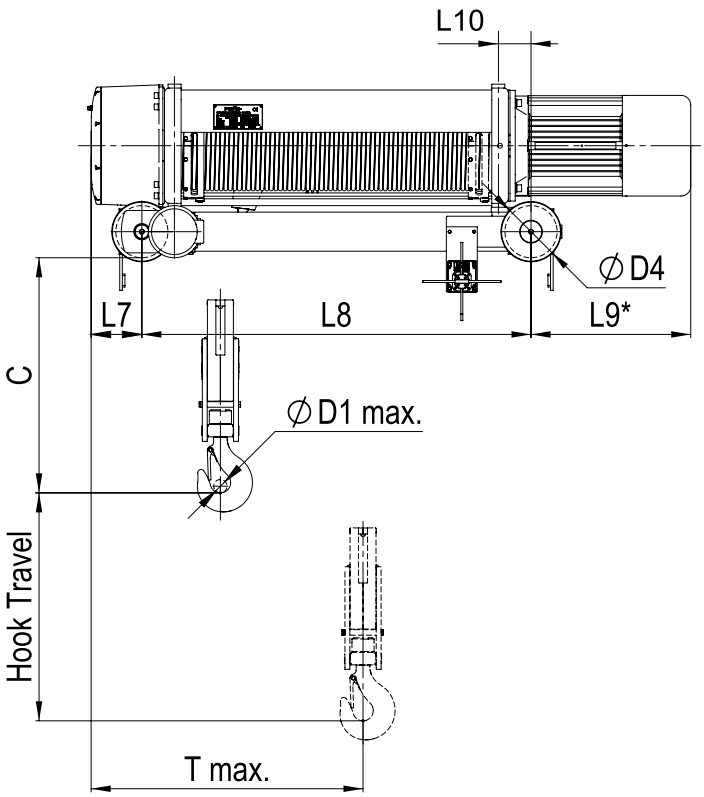
Double-rail Hoist
MT 2/1 KD

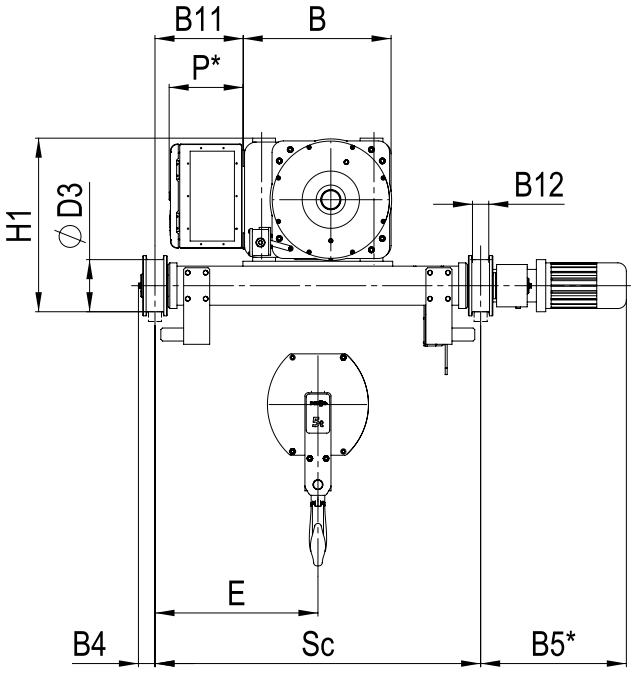
Series: MT (Standard Wire Rope Hoist)
Type: MT316 / MT525
Capacity: 3.2-5 t
Reeving: 2/1 (2 Rope Falls)
Suspension: KD (Double Rail Trolley)

3.2–5 t

2/1

Fig. 14

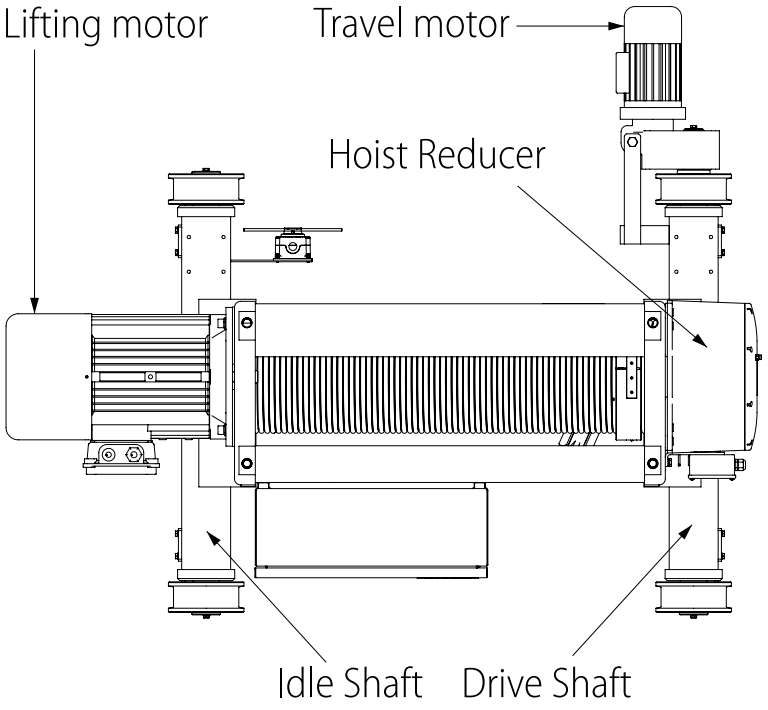




Type			Dimensions																			Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B	B4	B5* DS	B11	B12	C	ø D1 max.	ø D3	ø D4	E	H1	L7	L8	L9* (V1)	L9* (V2)	L10	Sc	T min. UEP	T max. DEP	kg (V1)
MT316	3.2	10	398	31	490	299	50	634	40	160	185	504	476	134	640	384	466	100	1000	368	535	459
	3.2	14	398	31	490	299	50	634	40	160	185	504	476	134	770	384	466	100	1000	368	602	476
	3.2	20	398	31	490	299	50	634	40	160	185	504	476	134	975	384	466	100	1000	368	702	498
	3.2	26	398	31	490	299	50	634	40	160	185	504	476	134	1175	384	466	100	1000	368	803	523
MT525	5	10	454	31	490	271	50	723	41	160	185	501	533	156	655	491	542	100	1000	398	566	594
	5	14	454	31	490	271	50	723	41	160	185	501	533	156	790	491	542	100	1000	398	633	615
	5	20	454	31	490	271	50	723	41	160	185	501	533	156	995	491	542	100	1000	398	734	648
	5	26	454	31	490	271	50	723	41	160	185	501	533	156	1195	491	542	100	1000	398	835	682

Position of Cross Travel Motor-reducer for MT Series

Fig. 15



Double-rail Hoist
MT 4/1 KD

Series: MT (Standard Wire Rope Hoist)
Type: MT308 / MT312 / MT316 / MT525
Capacity: 3.2-10 t
Reeving: 4/1 (4 Rope Falls)
Suspension: KD (Double Rail Trolley)

3.2–10 t

4/1

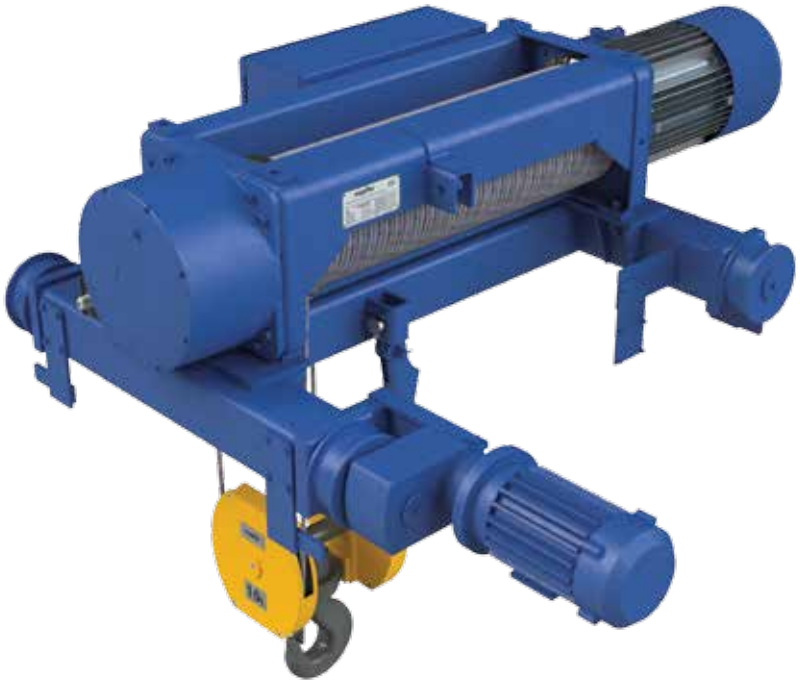
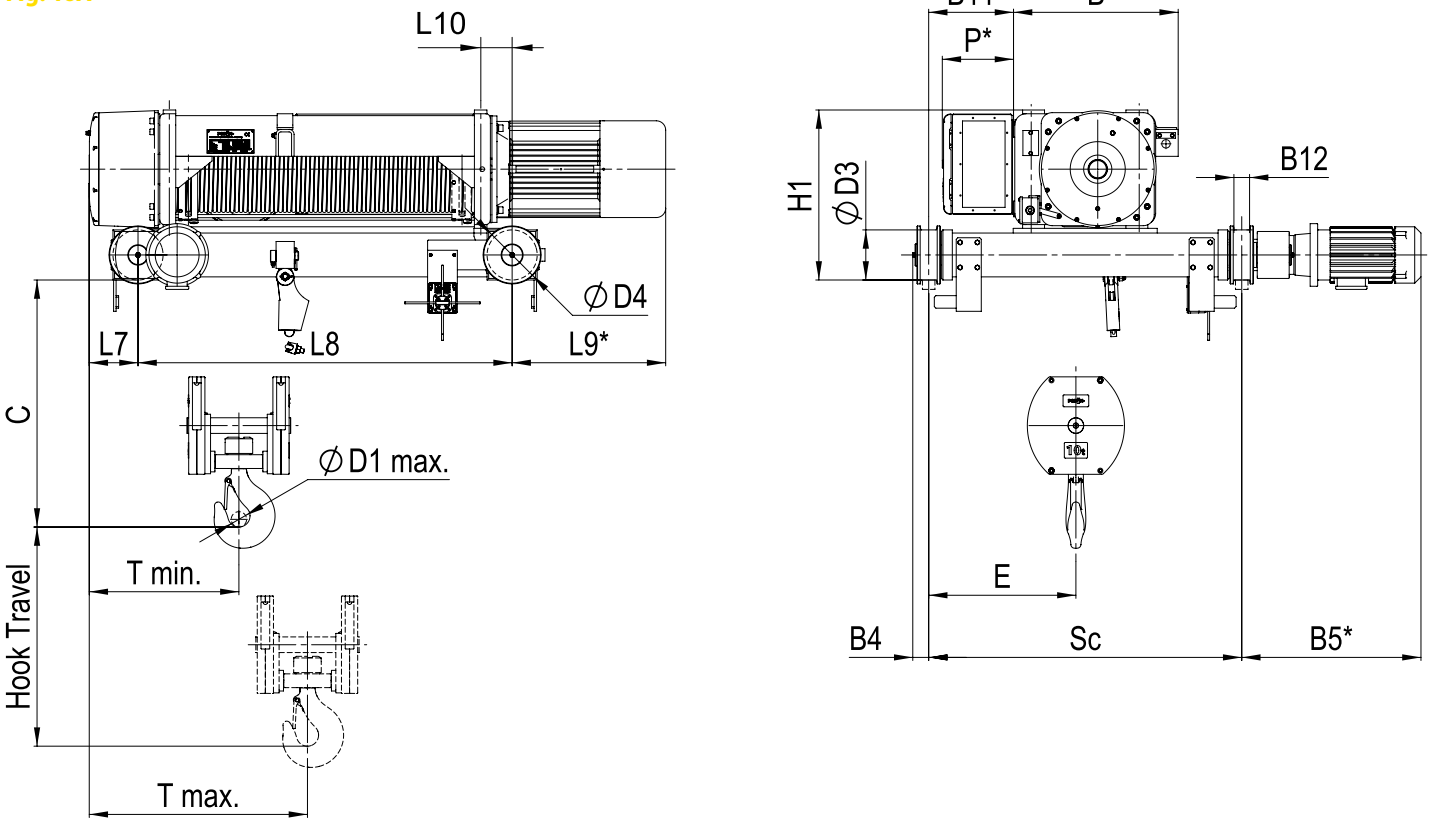


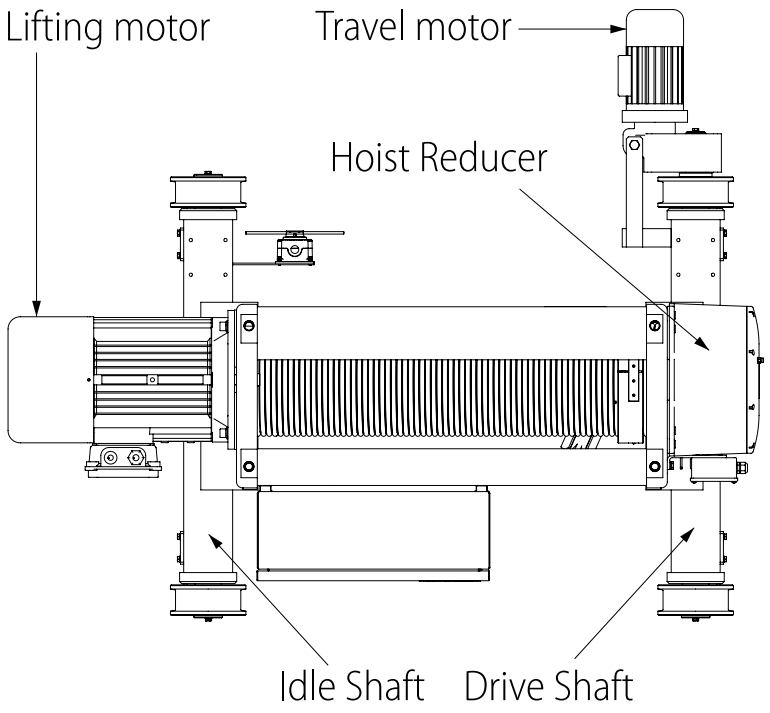
Fig. 16A



Type			Dimensions																				Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B	B4	B5* DS	B5* SS	B11	B12	C	ø D1 max.	ø D3	ø D4	E	H1	L7	L8	L9* (V1)	L9* (V2)	L10	Sc	T min. UEP	T max. DEP	kg (V1)
	3.2	7	398	31	490	416	299	50	469	40	160	185	481	476	96	720	285	383	100	1000	372	479	421
MT308	3.2	10	398	31	490	416	299	50	469	40	160	185	481	476	96	900	285	383	100	1000	372	524	433
	3.2	13	398	31	490	416	299	50	469	40	160	185	481	476	96	1085	383	383	100	1000	372	570	453
	5	7	398	31	490	416	299	50	549	41	160	185	479	476	134	770	384	384	100	1000	447	564	556
MT312	5	10	398	31	490	416	299	50	549	41	160	185	479	476	134	975	384	384	100	1000	447	614	573
	5	13	398	31	490	416	299	50	549	41	160	185	479	476	134	1175	384	384	100	1000	447	664	576
	6.3	7	398	31	490	416	299	50	582	49	160	185	479	476	134	770	384	466	100	1000	447	564	543
MT316	6.3	10	398	31	490	416	299	50	582	49	160	185	479	476	134	975	384	466	100	1000	447	614	560
	6.3	13	398	31	490	416	299	50	582	49	160	185	479	476	134	1175	384	466	100	1000	447	664	563
	10	7	454	31	522	463	271	50	620	49	160	185	470	543	156	790	491	542	100	1000	478	596	709
MT525	10	10	454	31	522	463	271	50	620	49	160	185	470	543	156	995	491	542	100	1000	478	646	745
	10	13	454	31	522	463	271	50	620	49	160	185	470	543	156	1195	491	542	100	1000	478	697	782

Position of Cross Travel Motor-reducer for MT Series

Fig. 16B



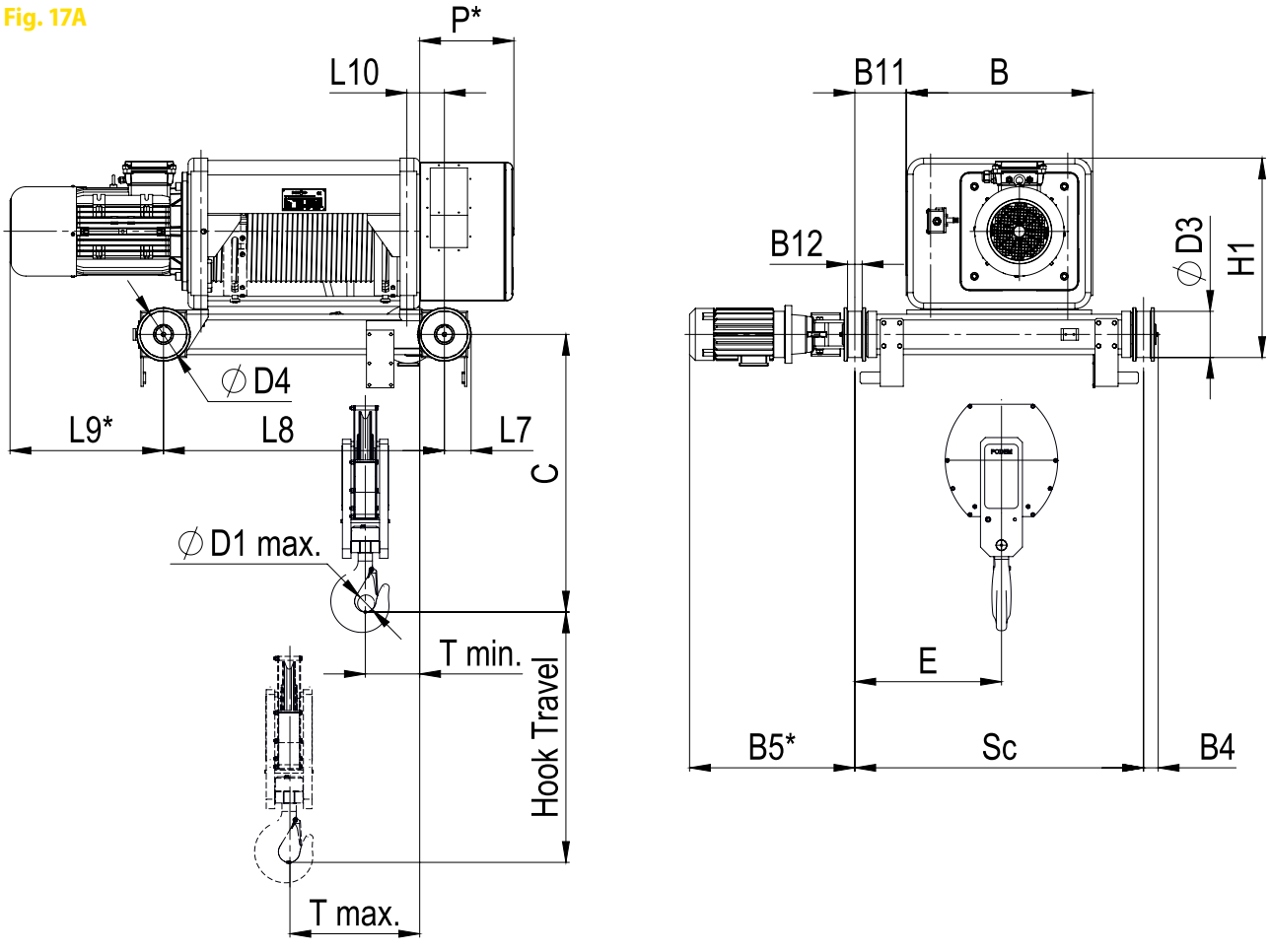
Double-rail Hoist
M 2/1 KD

Series: M (Standard Wire Rope Hoist)
Type: M640 / M750
Capacity: 8-10 t
Reeving: 2/1 (2 Rope Falls)
Suspension: KD (Double Rail Trolley)

8–10 t

2/1

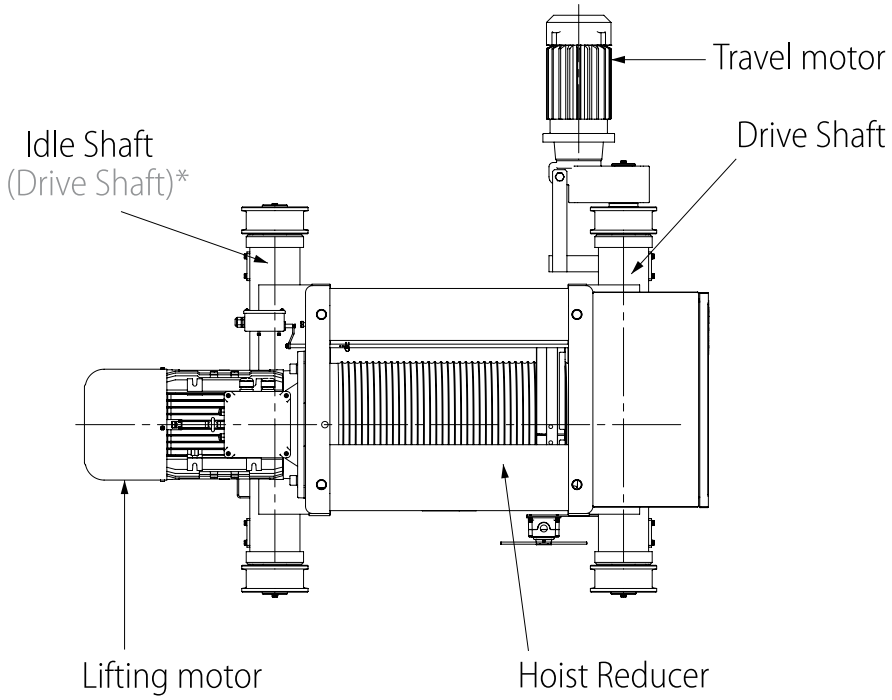
Fig. 17A



Type			Dimensions																		Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B	B4	B5* DS	B11	B12	C	ø D1 max.	ø D3	ø D4	E	H1	L7	L8	L9* (V1)	L10	Sc	T min. UEP	T max. DEP	kg
M640	8	12	640	31	504	178	50	870	49	160	185	509	691	93	823	525	130	1000	367	553	822
	8	17	640	31	504	178	50	870	49	160	185	509	691	93	973	525	130	1000	367	628	865
	8	24	640	31	504	178	50	870	49	160	185	509	691	93	1188	525	130	1000	367	735	932
	8	31	640	31	504	178	50	870	49	160	185	509	691	93	1403	525	130	1000	367	843	998
M750	10	12	646	31	504	178	50	870	49	160	185	509	691	93	823	529	130	1000	367	553	944
	10	17	646	31	504	178	50	870	49	160	185	509	691	93	973	529	130	1000	367	628	998
	10	24	646	31	504	178	50	870	49	160	185	509	691	93	1188	529	130	1000	367	735	1074
	10	31	646	31	504	178	50	870	49	160	185	509	691	93	1403	529	130	1000	367	843	1149

Position of Cross Travel Motor-reducer for M Series

Fig. 17B



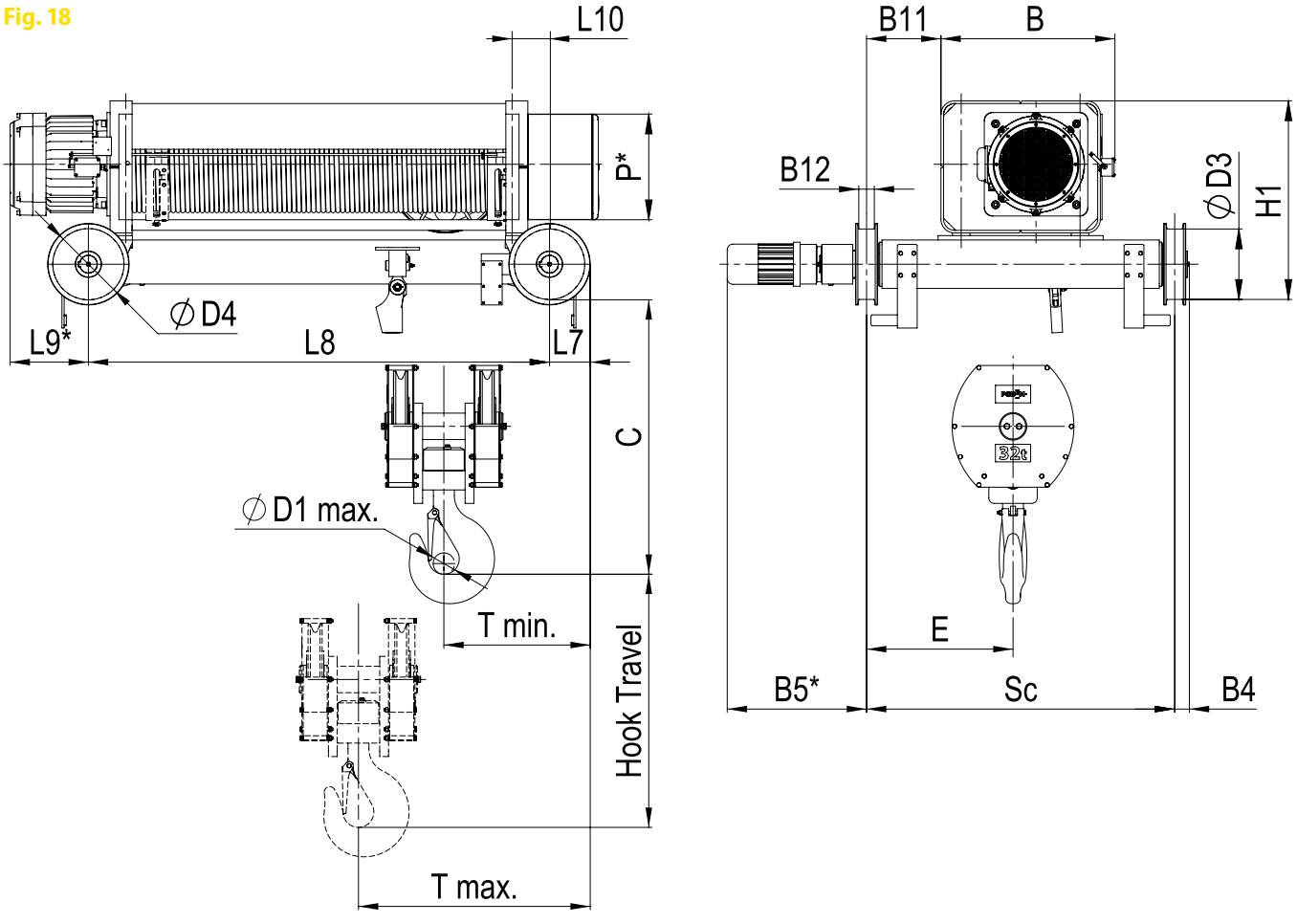
Double-rail Hoist
M 4/1 KD

Series: M (Standard Wire Rope Hoist)
Type: M640 / M750 / M863 / M980 / M1100 / M1125
Capacity: 16-50 t
Reeving: 4/1 (4 Rope Falls)
Suspension: KD (Double Rail Trolley)

16–50 t

4/1

Fig. 18



Type			Dimensions																			Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B	B4	B5*	B11	B12	C	ø D1 max.	ø D3	ø D4	E	H1	L (V1)	L7	L8	L9* (V1)	L10	Sc	T min. UEP	T max. DEP	kg
640	16	6	640	60	651	278	60	800	59	200	240	641	731	1 122	120	843	515	140	1200	512	605	1 136
	16	8,5	640	60	651	278	60	1045	59	200	240	571	731	1 272	120	993	515	140	1200	512	643	1 207
	16	12	640	60	651	278	60	1045	59	200	240	571	731	1 487	120	1208	515	140	1200	512	696	1 257
	16	15,5	640	60	651	278	60	1045	59	200	240	571	731	1 702	120	1423	515	140	1200	512	750	1 328
750	20	6	646	60	674	376	60	855	76	250	290	739	766	1 116	145	863	509	150	1400	547	640	1 376
	20	8,5	646	60	674	376	60	1075	76	250	290	669	766	1 266	145	1013	509	150	1400	547	678	1 439
	20	12	646	60	674	376	60	1075	76	250	290	669	766	1 481	145	1228	509	150	1400	547	731	1 520
	20	15,5	646	60	674	376	60	1075	76	250	290	669	766	1 696	145	1443	509	150	1400	547	785	1 600
863	25	9,5	1 027	60	596	338	60	1135	76	250	290	665	852	1 508	145	1160	597	160	1400	615	774	1 849
	25	16	1027	60	596	338	60	1135	76	250	290	665	852	1 923	145	1575	597	160	1400	615	878	2 079
	25	23	1027	60	596	338	60	1135	76	250	290	665	852	2 423	145	2075	597	160	1400	615	1003	2 340
980	32	9,5	1027	67	604	338	70	1259	97	320	370	665	902	1 267	185	1180	356	170	1400	665	824	2 290
	32	16	1027	67	604	338	70	1259	97	320	370	665	902	1 682	185	1595	356	170	1400	665	928	2 535
	32	23	1027	67	604	338	70	1259	97	320	370	665	902	2 182	185	2095	356	170	1400	665	1053	2 822
1100	40	11	1027	77	619	470	90	1285	97	320	370	925	1130	1 711	185	1437	589	230	1900	759	930	4 308
	40	14,5	1027	77	619	470	90	1285	97	320	370	925	1134	1 896	185	1622	589	230	1900	759	985	4 432
	40	18	0	77	619	470	90	1285	97	320	370	925	1134	2 136	185	1862	589	230	1900	759	1039	4 618
	40	26	0	77	619	470	90	1285	97	320	370	925	1134	2 646	185	2372	589	230	1900	759	1164	4 972
1125	50	11	0	77	619	470	90	1285	97	320	370	925	1134	1 711	185	1437	589	230	1900	759	930	4 308
	50	14,5	0	77	619	470	90	1285	97	320	370	925	1134	1 896	185	1622	589	230	1900	759	985	4 432
	50	18	0	77	619	470	90	1285	97	320	370	925	1134	2 136	185	1862	589	230	1900	759	1039	4 618
	50	26	0	77	619	470	90	1285	97	320	370	925	1134	2 646	185	2372	589	230	1900	759	1164	4 972

Position of Cross Travel Motor-reducer for M Series

Fig. 19A

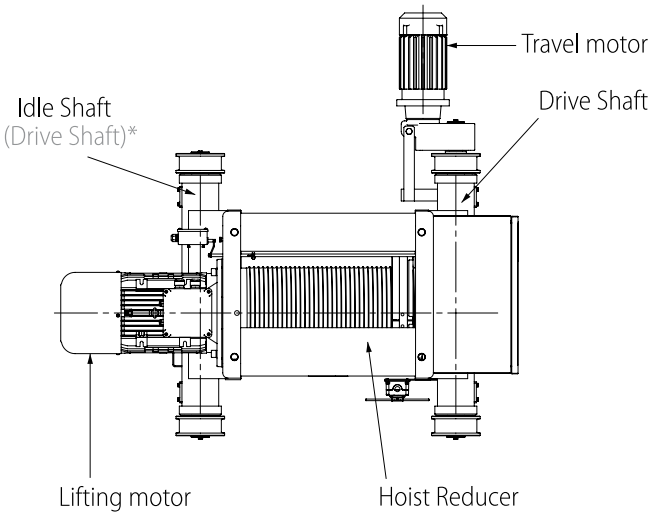
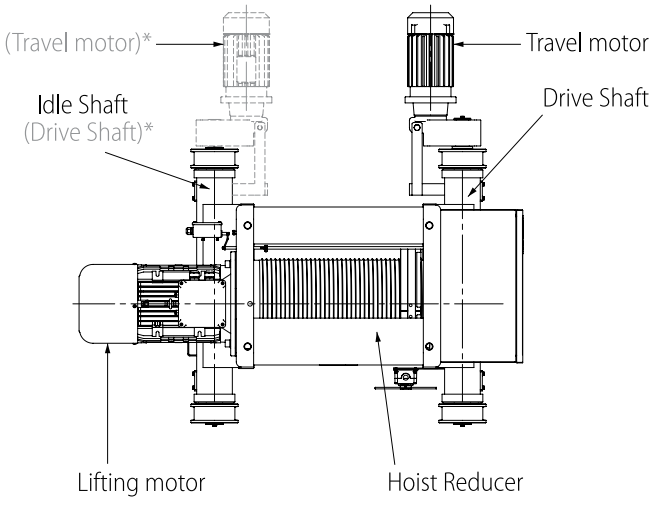


Fig. 19B 32 t hoists and above



Foot-mounted Hoist (Stationary)
MTL 2/1 F

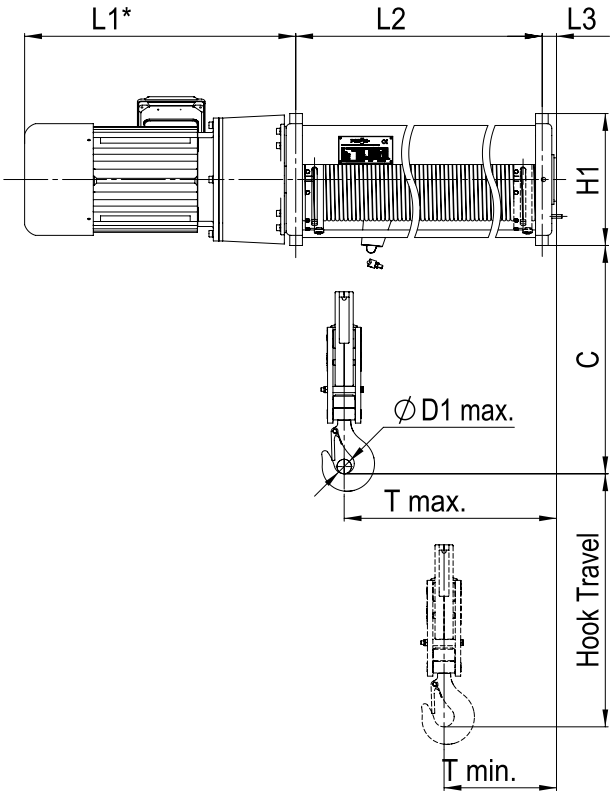
Series: MTL (Standard Wire Rope Hoist)
Type: MTL312 / MTL316 / MTL525
Capacity: 2.5-5 t
Reeving: 2/1 (2 Rope Falls)
Suspension: F (Foot-mounted, Stationary)

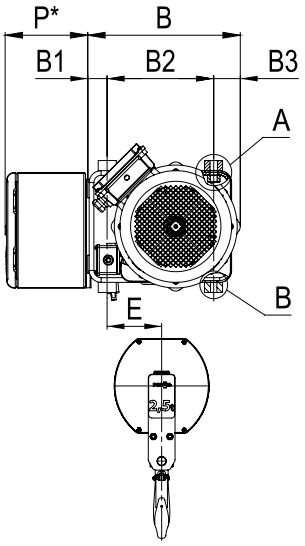
2.5–5 t

2/1

Hight Lifting Heights
Hoist Series

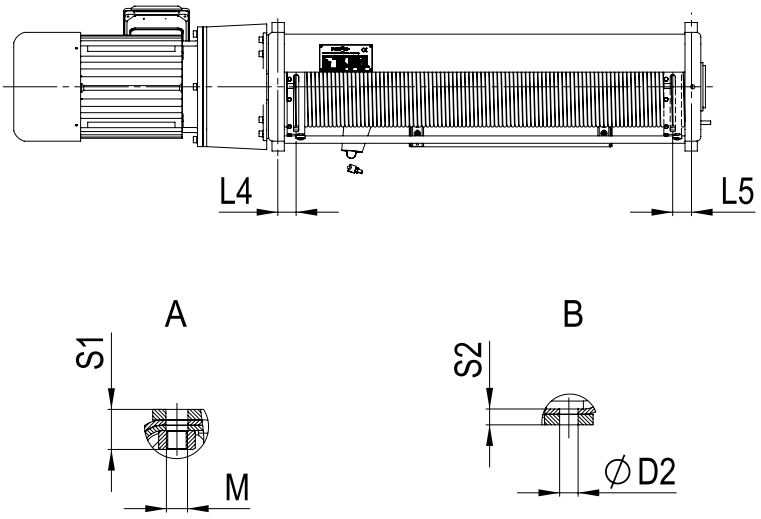
Fig. 20A





Type			Dimensions																				Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B	B1	B2	B3	C	ø D1 max.	ø D2	E	H1	M	L (V2)	L1* (V1)	L1* (V2)	L2	L3	L4	L5	S1	S2	T min UEP	T max DEP	kg
MTL312	2.5	32	422	53.5	295	73.5	630	40	18	151	365	M20	1 698	484	484	1 175	40	52	53	60	33	1081	546	389
	2.5	40	422	53.5	295	73.5	630	40	18	151	365	M20	1 968	484	484	1 445	40	52	56	60	33	1351	682	432
	2.5	48	422	53.5	295	73.5	630	40	18	151	365	M20	2 233	484	484	1 710	40	52	53	60	33	1616	813	476
	2.5	56	422	53.5	295	73.5	630	40	18	151	365	M20	2 503	484	484	1 980	40	52	56	60	33	1886	949	518
MTL316	3.2	32	422	53.5	295	73.5	630	40	18	151	365	M20	1 780	484	566	1 175	40	52	53	60	33	1081	546	389
	3.2	40	422	53.5	295	73.5	630	40	18	151	365	M20	2 050	484	566	1 445	40	52	56	60	33	1351	682	432
	3.2	48	422	53.5	295	73.5	630	40	18	151	365	M20	2 315	484	566	1 710	40	52	53	60	33	1616	813	476
	3.2	56	422	53.5	295	73.5	630	40	18	151	365	M20	2 585	484	566	1 980	40	52	56	60	33	1886	949	518
MTL525	5	32	476	56.5	345	74.5	718	41	21	173	428	M24	1 885	591	642	1 200	44	61	63	71	43	1102	563	620
	5	40	476	56.5	345	74.5	718	41	21	173	428	M24	2 155	591	642	1 470	44	61	64	71	43	1372	699	668
	5	48	476	56.5	345	74.5	718	41	21	173	428	M24	2 425	591	642	1 740	44	61	65	71	43	1642	834	716
	5	56	476	56.5	345	74.5	718	41	21	173	428	M24	2 695	591	642	2 010	44	61	66	71	43	1912	970	763

Fig. 20B



Monorail Hoist (Normal Headroom)
MTL 2/1 N

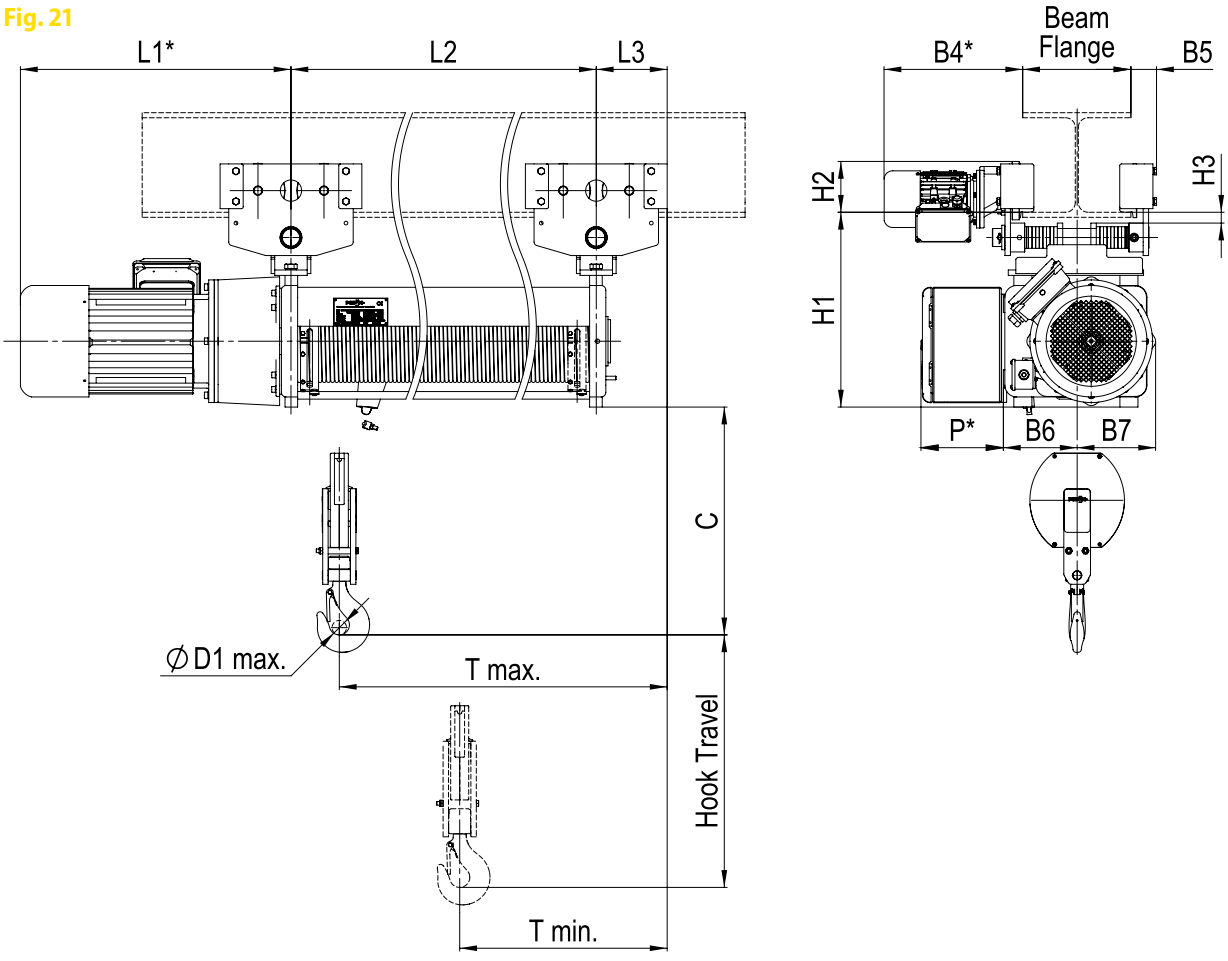
Series: MTL (Standard Wire Rope Hoist)
Type: MTL312 / MTL316 / MTL525
Capacity: 2.5-5 t
Reeving: 2/1 (2 Rope Falls)
Suspension: N (Normal Headroom, Monorail)

2.5–5 t

2/1

Hight Lifting Heights
Hoist Series

Fig. 21



Type			Dimensions																				Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B4* DS	B5	B6	B7	C	ø D1 max.	ø D2	E	H1	H2	H3	M	L (V2)	L1* (V1)	L1* (V2)	L2	L3	L4	L5	T min UEP	T max DEP	kg
MTL312	2.5	32	384	71	205	218	630	40	18	151	540	141	30	M20	1 856	484	484	1 175	197	52	53	1238	703	536
	2.5	40	384	71	205	218	630	40	18	151	540	141	30	M20	2 126	484	484	1 445	197	52	56	1508	839	579
	2.5	48	384	71	205	218	630	40	18	151	540	141	30	M20	2 391	484	484	1 710	197	52	53	1773	971	623
	2.5	56	384	71	205	218	630	40	18	151	540	141	30	M20	2 661	484	484	1 980	197	52	56	2043	1107	665
MTL316	3.2	32	384	71	205	218	630	40	18	151	540	141	30	M20	1 938	484	566	1 175	197	52	53	1238	703	536
	3.2	40	384	71	205	218	630	40	18	151	540	141	30	M20	2 208	484	566	1 445	197	52	56	1508	839	579
	3.2	48	384	71	205	218	630	40	18	151	540	141	30	M20	2 473	484	566	1 710	197	52	53	1773	971	623
	3.2	56	384	71	205	218	630	40	18	151	540	141	30	M20	2 743	484	566	1 980	197	52	56	2043	1107	665
MTL525	5	32	384	71	230	247	719	41	21	173	603	141	30	M24	2 042	591	645	1 200	197	61	63	1255	717	789
	5	40	384	71	230	247	719	41	21	173	603	141	30	M24	2 312	591	645	1 470	197	61	64	1525	852	837
	5	48	384	71	230	247	719	41	21	173	603	141	30	M24	2 582	591	645	1 740	197	61	65	1795	988	885
	5	56	384	71	230	247	719	41	21	173	603	141	30	M24	2 852	591	645	2 010	197	61	66	2065	1123	932

* Standard Podem hoists are adjustable for beam flange 130...300 mm

Foot-mounted Hoist (True Vertical Lift)
MT 4/2 F

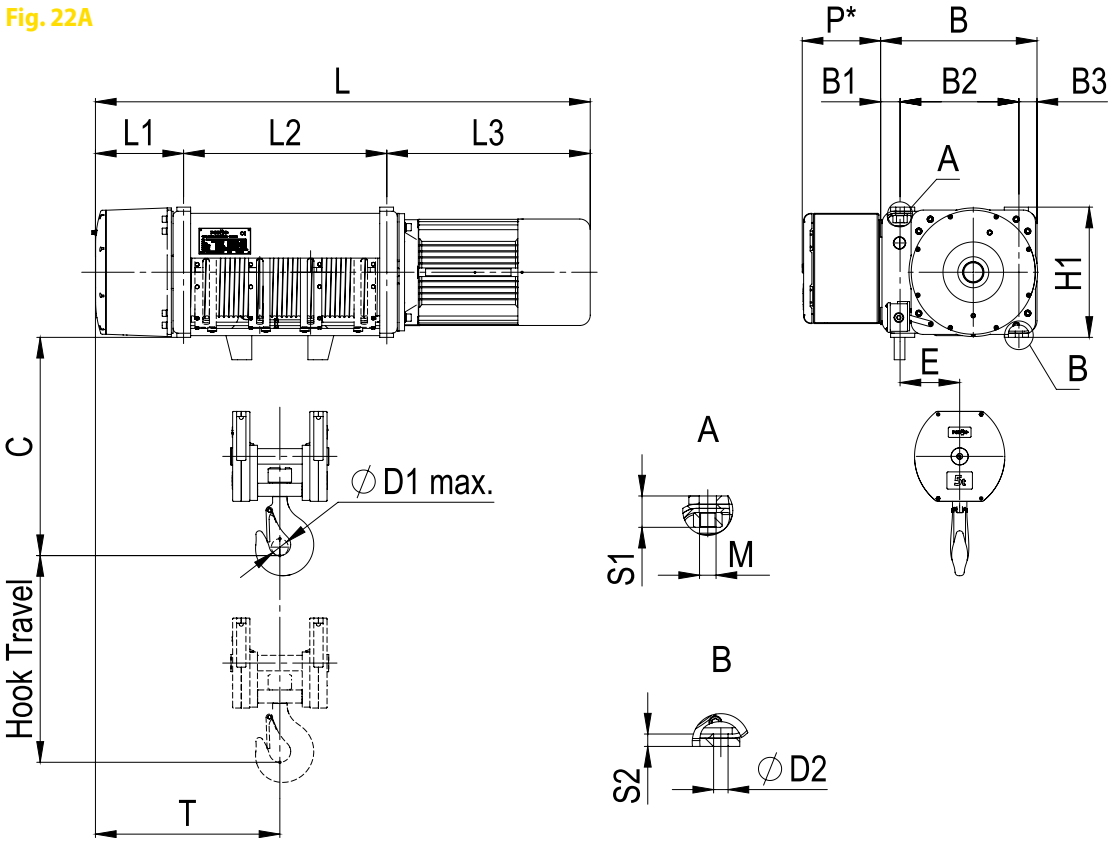
Series: MT
Type: MT305 / MT308 / MT312 / MT316 / MT525
Capacity: 1-5 t
Reeving: 4/2 (True Vertical Lift)
Suspension: F (Foot-mounted, Stationary)

1–5 t

4/2

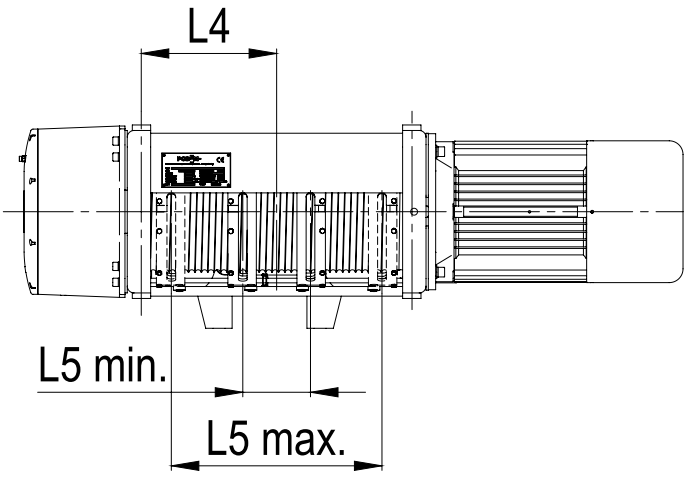
True Vertical Lifting Hoist Series

Fig. 22A



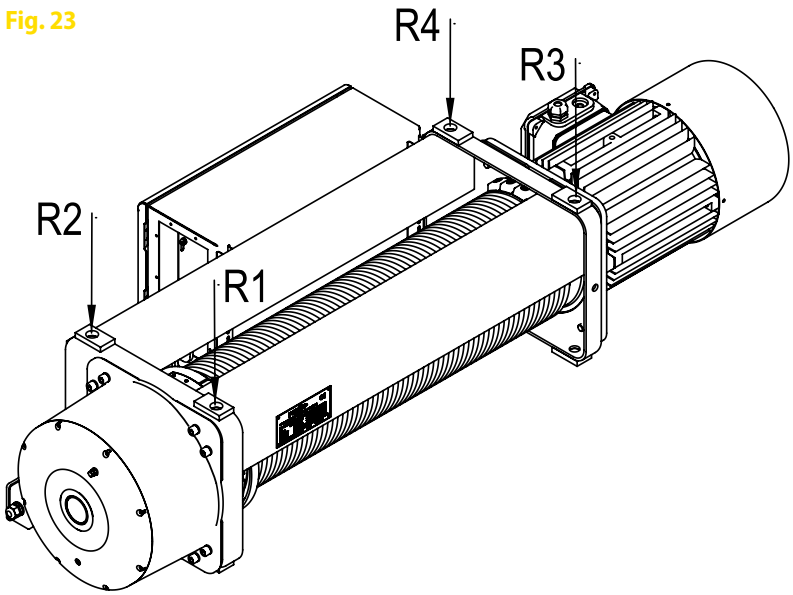
Type			Dimensions																					Weight
Hoist Type	Capacity (t)	Hook Travel (m)	B	B1	B2	B3	C	ø D1 max.	ø D2	E	H1	M	L (V8)	L1*	L2	L3* (V8)	L3* (V12)	L4	L5 min. UEP	L5 max. UEP	S1	S2	T	kg
MT305	1	6	398	53.5	295	49.5	489	40	15	138	321	M14	1 101	196	520	385	385	260	98	418	26	13	456	165
	1	10	398	53.5	295	49.5	489	40	15	138	321	M14	1 281	196	700	385	385	350	98	632	26	13	546	173
	1	13	398	53.5	295	49.5	489	40	15	138	321	M14	1 466	196	885	385	385	443	98	792	26	13	639	190
MT308	1.6	6	398	53.5	295	49.5	489	40	15	138	321	M14	1 101	196	520	385	483	260	98	418	26	13	456	170
	1.6	10	398	53.5	295	49.5	489	40	15	138	321	M14	1 281	196	700	385	483	350	98	632	26	13	546	178
	1.6	13	398	53.5	295	49.5	489	40	15	138	321	M14	1 466	196	885	385	483	443	98	792	26	13	639	194
MT312	2.5	7	398	53.5	295	49.5	489	40	18	151	321	M20	1 288	234	570	484	484	285	116	442	34	13	519	267
	2.5	12	398	53.5	295	49.5	489	40	18	151	321	M20	1 493	234	775	484	484	388	116	674	34	13	622	288
	2.5	16	398	53.5	295	49.5	489	40	18	151	321	M20	1 693	234	975	484	484	488	116	860	34	13	722	315
MT316	3.2	7	398	53.5	295	49.5	489	40	18	151	321	M20	1 288	234	570	484	566	285	116	442	34	13	519	269
	3.2	12	398	53.5	295	49.5	489	40	18	151	321	M20	1 493	234	775	484	566	388	116	674	34	13	622	290
	3.2	16	398	53.5	295	49.5	489	40	18	151	321	M20	1 693	234	975	484	566	488	116	860	34	13	722	317
MT525	5	6	454	56.5	345	52.5	569	41	21	173	378	M24	1 437	256	590	591	642	295	148	480	46	18	551	421
	5	10	454	56.5	345	52.5	569	41	21	173	378	M24	1 642	256	795	591	642	398	148	701	46	18	654	452
	5	14	454	56.5	345	52.5	569	41	21	173	378	M24	1 842	256	995	591	642	498	148	922	46	18	754	483

Fig. 22B



Static Reactions Stationary Hoists
MT 2/1 F

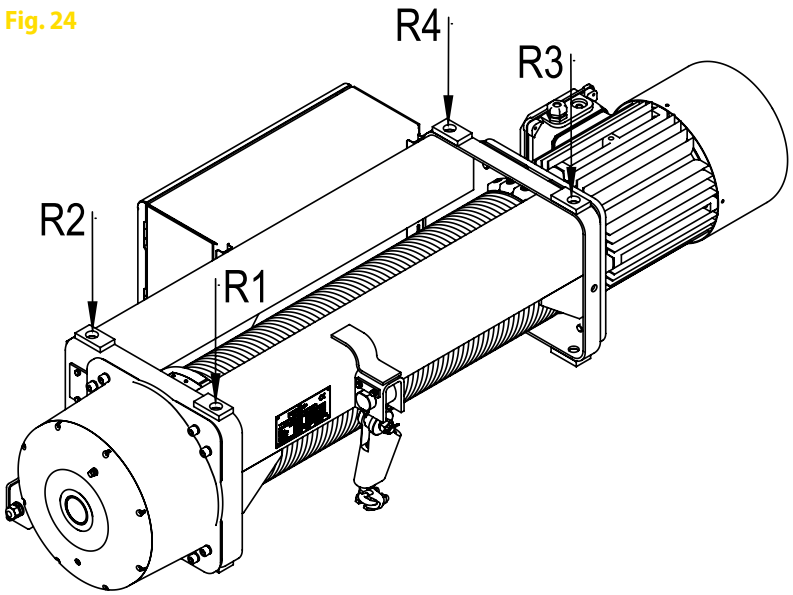
Fig. 23



Type				Reactions – UEP				Reactions – DEP			
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1	R2	R3	R4	R1	R2	R3	R4
MT305	1	10	158	375	421	172	191	194	215	353	396
	1	14	166	409	459	142	156	217	241	334	375
	1	20	178	438	492	119	130	234	260	323	362
	1	26	190	456	512	107	115	247	274	316	353
MT308	1.6	10	158	576	650	252	281	287	321	541	610
	1.6	14	167	629	710	203	225	322	360	510	575
	1.6	20	178	673	760	164	181	347	389	490	552
	1.6	26	190	701	791	142	155	366	410	478	537
MT312	2.5	10	237	949	908	449	431	463	444	935	894
	2.5	14	250	1 041	996	363	349	516	495	889	850
	2.5	20	270	1 126	1 077	289	278	574	550	841	805
	2.5	26	290	1 176	1 125	248	240	606	581	819	784
MT316	3.2	10	237	1 198	1 145	558	535	576	552	1 180	1 128
	3.2	14	250	1 315	1 257	447	430	643	616	1 120	1 071
	3.2	20	270	1 422	1 359	351	337	716	686	1 057	1 011
	3.2	26	290	1 485	1 420	297	287	755	723	1 028	983
MT525	5	10	367	1 816	1 806	874	870	890	885	1 801	1 791
	5	14	386	2 000	1 989	700	696	1 000	995	1 700	1 691
	5	20	415	2 163	2 151	552	549	1 102	1 097	1 612	1 603
	5	26	444	2 260	2 248	469	467	1 159	1 153	1 570	1 562

Static Reactions Stationary Hoists
MT 4/1 F

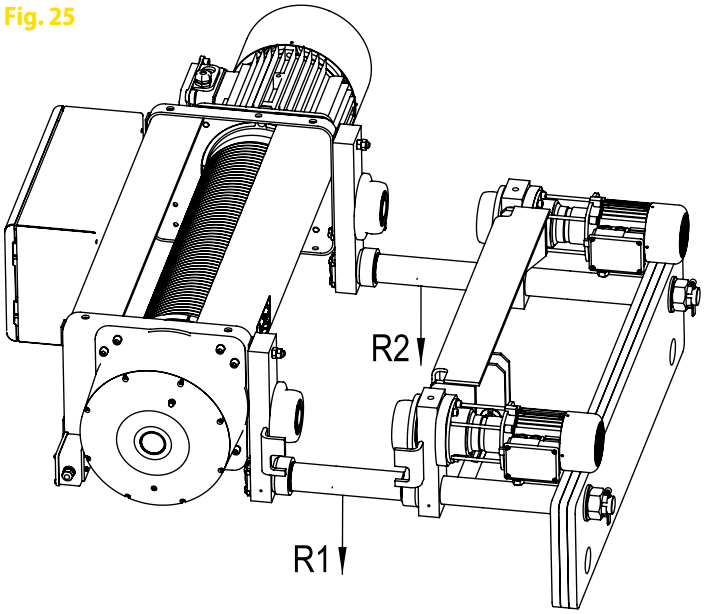
Fig. 24



Type				Reactions – UEP				Reactions – DEP			
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1	R2	R3	R4	R1	R2	R3	R4
MT305	2	7	180	804	651	398	327	576	469	626	509
	2	10	188	897	726	309	256	655	532	551	450
	2	13	205	956	774	258	217	707	575	508	416
MT308	3.2	7	185	1 223	986	648	527	858	695	1 014	819
	3.2	10	193	1 380	1 112	496	406	992	802	883	715
	3.2	13	209	1 477	1 191	406	335	1 079	872	805	653
MT312	5	7	282	1 864	1 408	1 141	869	1 277	970	1 729	1 307
	5	10	303	2 153	1 624	863	663	1 535	1 164	1 481	1 123
	5	13	330	2 321	1 752	708	549	1 683	1 276	1 347	1 025
MT316	6.3	7	284	2 331	1 756	1 420	1 077	1 591	1 204	2 161	1 629
	6.3	10	305	2 693	2 028	1 068	816	1 915	1 447	1 847	1 396
	6.3	13	332	2 904	2 186	871	671	2 099	1 586	1 676	1 271
MT525	10	7	436	3 616	2 839	2 225	1 756	2 494	1 966	3 347	2 629
	10	10	467	4 170	3 271	1 687	1 339	2 980	2 346	2 876	2 265
	10	13	498	4 493	3 525	1 379	1 101	3 258	2 563	2 615	2 063

Static Reactions Low Headroom Hoists
MT 2/1 LC

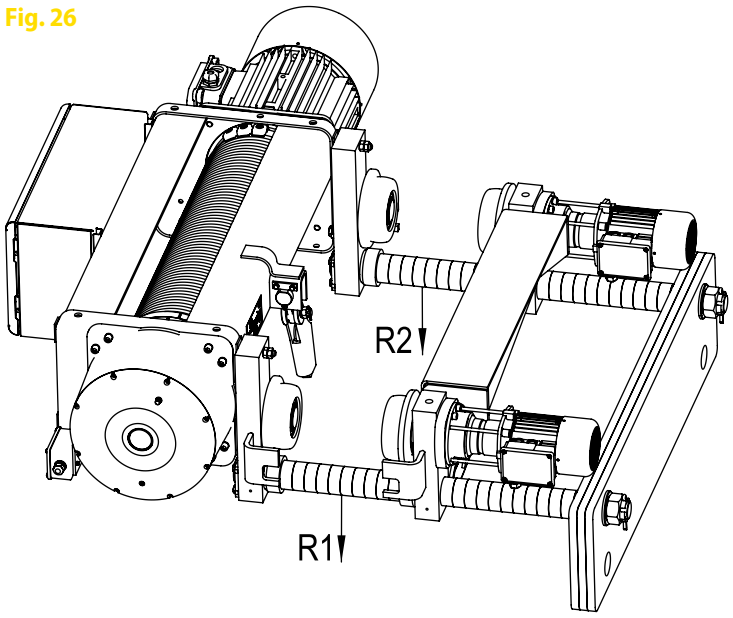
Fig. 25



Type				Reactions – UEP		Reactions – DEP	
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1 (max. Wheel Load x 2)	R2 (max. Wheel Load x 2)	R1 (max. Wheel Load x 2)	R2 (max. Wheel Load x 2)
MT305	1	10	305	433	219	240	412
	1	14	321	472	189	266	394
	1	20	345	506	167	288	385
	1	26	369	529	156	305	380
MT308	1.6	10	305	647	305	339	614
	1.6	14	321	706	254	378	583
	1.6	20	345	757	215	409	564
	1.6	26	369	790	194	432	553
MT312	2.5	10	413	1 012	444	537	919
	2.5	14	439	1 096	373	583	886
	2.5	20	482	1 177	314	638	853
	2.5	26	527	1 228	285	671	843
MT316	3.2	10	413	1 267	539	659	1 147
	3.2	14	439	1 373	446	716	1 103
	3.2	20	482	1 473	368	782	1 058
	3.2	26	527	1 535	329	822	1 042
MT525	5	10	641	1 880	940	956	1 864
	5	14	678	2 068	771	1 070	1 769
	5	20	710	2 231	624	1 173	1 682
	5	26	774	2 337	550	1 238	1 649

Static Reactions Low Headroom Hoists
MT 4/1 LC

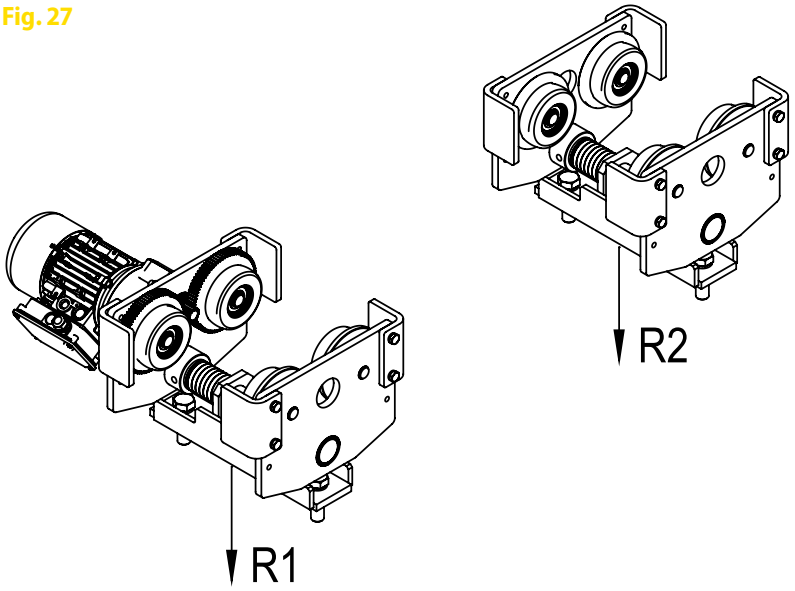
Fig. 26



Type				Reactions – UEP		Reactions – DEP	
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1 (max. Wheel Load x 2)	R2 (max. Wheel Load x 2)	R1 (max. Wheel Load x 2)	R2 (max. Wheel Load x 2)
MT305	2	7	339	710	460	504	665
	2	10	360	811	369	594	586
	2	13	390	877	318	653	542
MT308	3.2	7	330	1 083	683	754	1 011
	3.2	10	361	1 245	536	896	884
	3.2	13	391	1 345	450	987	809
MT312	5	7	495	1 619	1 128	1 106	1 641
	5	10	541	1 897	874	1 357	1 413
	5	13	585	2 059	733	1 502	1 291
MT316	6.3	7	497	2 009	1 390	1 362	2 036
	6.3	10	543	2 355	1 066	1 676	1 746
	6.3	13	587	2 557	887	1 855	1 589
MT525	10	7	784	3 128	2 264	2 131	3 261
	10	10	818	3 670	1 739	2 612	2 797
	10	13	884	3 995	1 447	2 896	2 546

Static Reactions Normal Headroom Hoists
MT 2/1 N

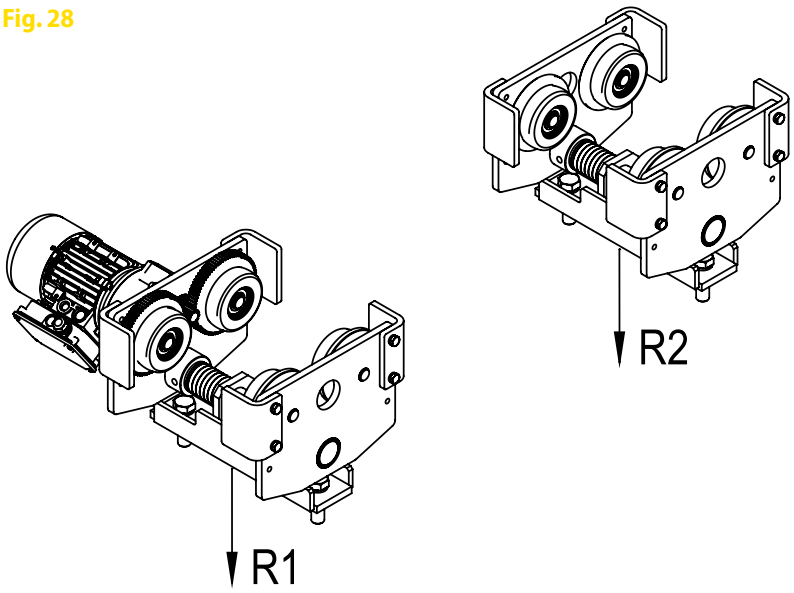
Fig. 27



Type				Reactions – UEP		Reactions – DEP	
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1* (max. Wheel Load x 4)	R2* (max. Wheel Load x 4)	R1* (max. Wheel Load x 4)	R2* (max. Wheel Load x 4)
MT305	1	10	210	1 210	–	1 210	–
	1	14	243	906	337	496	748
	1	20	250	965	285	530	721
	1	26	267	1 007	260	559	708
MT308	1.6	10	235	1 264	571	646	1 189
	1.6	14	243	1 377	466	720	1 123
	1.6	20	250	1 469	381	772	1 078
	1.6	26	267	1 531	336	814	1 053
MT312	2.5	10	367	1 922	945	972	1 894
	2.5	14	380	2 102	777	1 076	1 804
	2.5	20	400	2 267	632	1 189	1 710
	2.5	26	420	2 366	553	1 252	1 668
MT316	3.2	10	367	2 409	1 158	1 193	2 373
	3.2	14	380	2 637	942	1 324	2 256
	3.2	20	400	2 846	753	1 466	2 133
	3.2	26	420	2 970	650	1 544	2 076
MT525	5	10	505	3 692	1 813	1 844	3 661
	5	14	524	4 058	1 465	2 063	3 460
	5	20	553	4 383	1 169	2 268	3 285
	5	26	582	4 577	1 004	2 380	3 202

Static Reactions Normal Headroom Hoists
MT 4/1 N

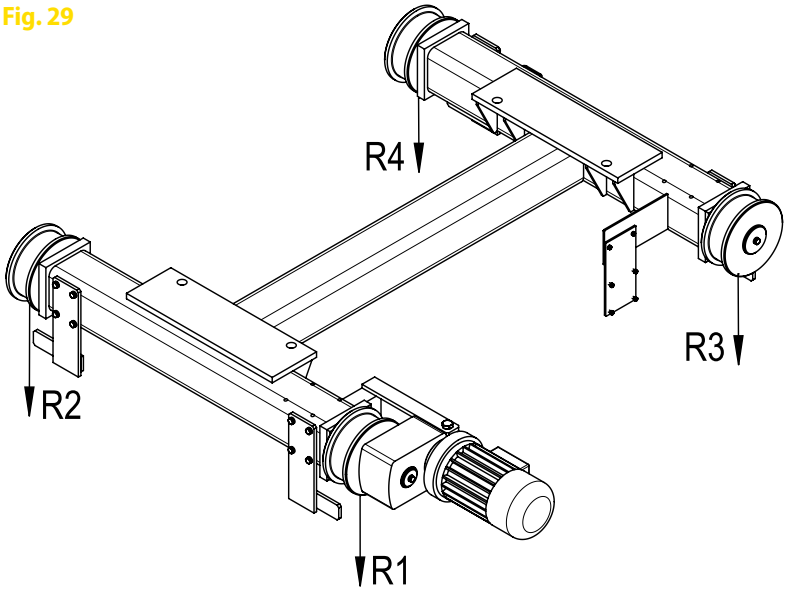
Fig. 28



Type				Reactions – UEP		Reactions – DEP	
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1* (max. Wheel Load x 4)	R2* (max. Wheel Load x 4)	R1* (max. Wheel Load x 4)	R2* (max. Wheel Load x 4)
MT305	2	7	316	1 523	793	1 113	1 203
	2	10	324	1 690	633	1 255	1 069
	2	13	341	1 798	543	1 350	991
MT308	3.2	7	321	2 277	1 244	1 621	1 900
	3.2	10	329	2 560	969	1 863	1 666
	3.2	13	345	2 736	809	2 019	1 526
MT312	5	7	418	3 341	2 077	2 314	3 104
	5	10	439	3 845	1 594	2 767	2 672
	5	13	466	4 141	1 325	3 026	2 440
MT316	6.3	7	433	4 162	2 571	2 869	3 864
	6.3	10	454	4 795	1 958	3 437	3 317
	6.3	13	481	5 164	1 617	3 760	3 021
MT525	10	7	660	6 567	4 093	4 572	6 088
	10	10	691	7 553	3 138	5 438	5 253
	10	13	722	8 130	2 592	5 933	4 789

Static Reactions Double Rail Hoists
MT 2/1 KD N

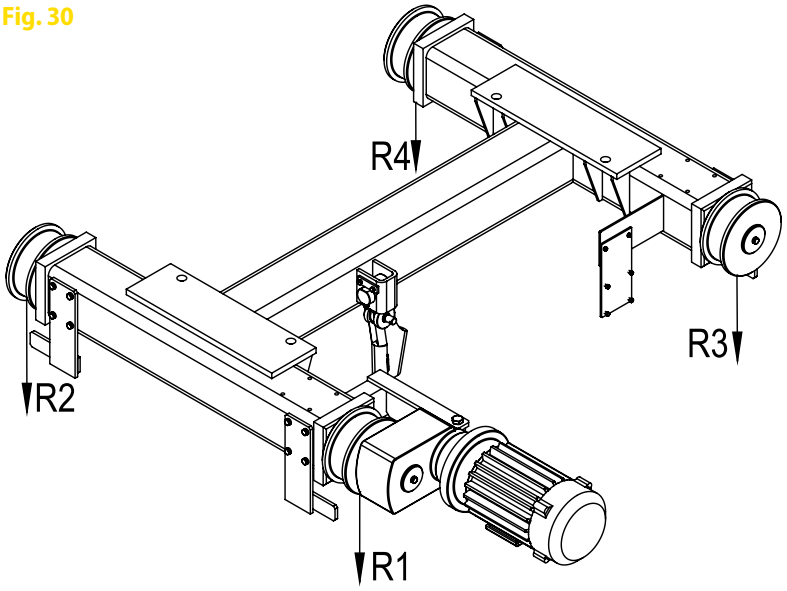
Fig. 29



Type				Reactions – UEP				Reactions – DEP			
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1	R2	R3	R4	R1	R2	R3	R4
MT316	3.2	10	459	1 137	1 123	704	696	716	708	1 125	1 111
	3.2	14	476	1 241	1 225	609	602	751	742	1 098	1 085
	3.2	20	498	1 349	1 332	511	506	797	787	1 064	1 051
	3.2	26	523	1 421	1 403	452	447	825	815	1 047	1 035
MT525	5	10	594	1 726	1 723	1 073	1 071	1 084	1 082	1 716	1 712
	5	14	615	1 890	1 886	920	919	1 144	1 142	1 666	1 663
	5	20	648	2 056	2 052	771	769	1 210	1 208	1 617	1 614
	5	26	682	2 166	2 162	677	676	1 251	1 248	1 593	1 590

Static Reactions Double Rail Hoists
MT 4/1 KD N

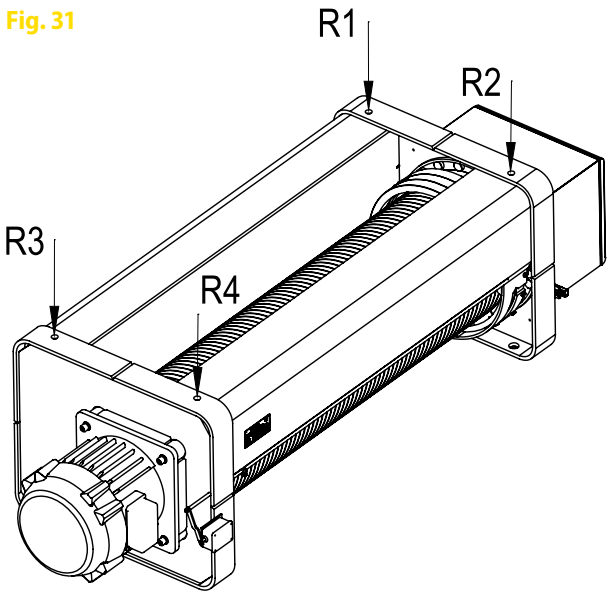
Fig. 30



Type				Reactions – UEP				Reactions – DEP			
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1	R2	R3	R4	R1	R2	R3	R4
MT308	3.2	7	421	1 054	1 129	695	742	826	883	923	988
	3.2	10	433	1 175	1 260	580	618	915	978	841	899
	3.2	13	453	1 261	1 352	505	536	980	1 048	786	839
MT312	5	7	556	1 560	1 685	1 113	1 198	1 196	1 289	1 476	1 594
	5	10	573	1 769	1 912	912	979	1 359	1 465	1 323	1 426
	5	13	576	1 901	2 055	782	838	1 458	1 573	1 225	1 320
MT316	6.3	7	543	1 927	2 084	1 362	1 470	1 468	1 585	1 821	1 969
	6.3	10	560	2 189	2 369	1 109	1 194	1 672	1 806	1 626	1 756
	6.3	13	563	2 355	2 549	945	1 015	1 796	1 942	1 503	1 622
MT525	10	7	709	2 962	3 317	2 093	2 338	2 261	2 527	2 793	3 127
	10	10	745	3 365	3 771	1 707	1 901	2 571	2 875	2 502	2 797
	10	13	782	3 629	4 067	1 462	1 624	2 769	3 098	2 322	2 593

Static Reactions Stationary Hoists
M 2/1 F

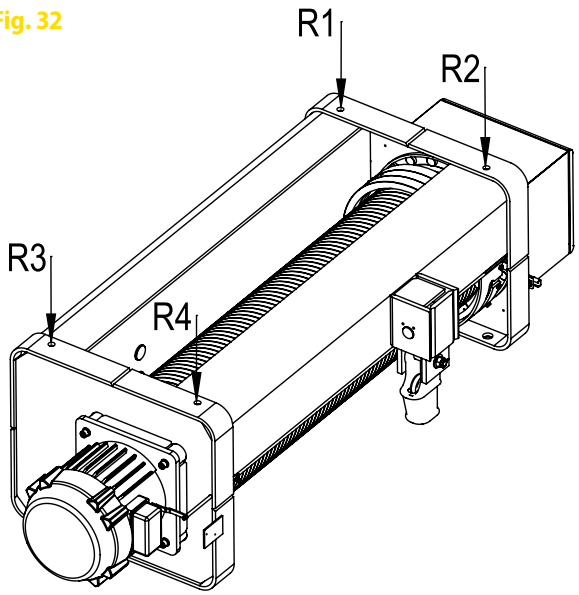
Fig. 31



Type				Reactions – UEP				Reactions – DEP			
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1	R2	R3	R4	R1	R2	R3	R4
M640	8	12	605	3 235	3 022	1 211	1 138	1 872	1 753	2 573	2 406
	8	17	642	3 467	3 238	997	939	1 943	1 820	2 521	2 358
	8	24	703	3 676	3 434	819	774	2 023	1 895	2 471	2 313
	8	31	764	3 812	3 562	713	677	2 079	1 948	2 446	2 290
M750	10	12	727	4 036	3 770	1 506	1 415	2 333	2 185	3 209	3 000
	10	17	775	4 327	4 041	1 240	1 167	2 422	2 268	3 144	2 940
	10	24	845	4 586	4 284	1 015	959	2 520	2 361	3 081	2 882
	10	31	915	4 755	4 442	881	836	2 588	2 425	3 048	2 853
M1110	20	22	2 423	7 963	7 209	3 788	3 462	4 268	3 893	7 483	6 779
	20	29	2 534	8 498	7 692	3 309	3 035	4 402	4 016	7 405	6 711
	20	36	2 678	8 992	8 139	2 887	2 660	4 778	4 357	7 101	6 442
	20	52	2 983	9 660	8 746	2 372	2 205	5 196	4 740	6 835	6 211
M1125	25	22	2 423	9 803	8 860	4 584	4 176	5 184	4 714	9 203	8 322
	25	29	2 534	10 464	9 456	3 978	3 635	5 344	4 861	9 098	8 230
	25	36	2 678	11 072	10 006	3 442	3 157	5 805	5 279	8 709	7 885
	25	52	2 983	11 888	10 746	2 778	2 570	6 309	5 739	8 357	7 577

Static Reactions Stationary Hoists
M 4/1 F

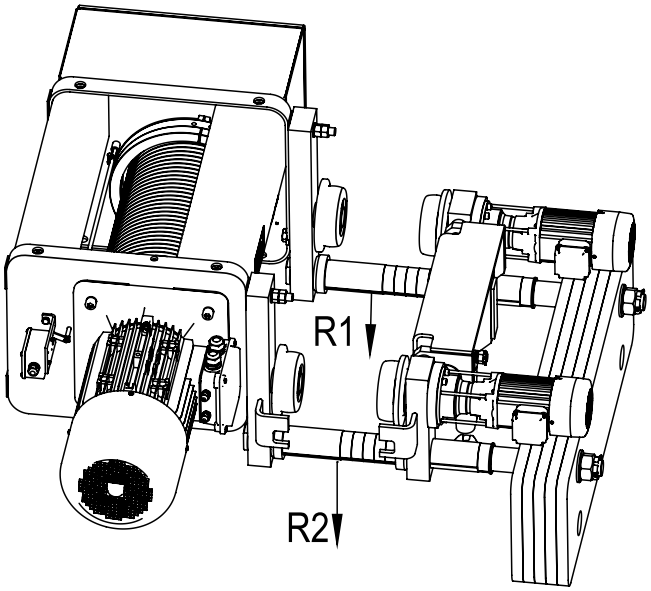
Fig. 32



Type				Reactions – UEP				Reactions – DEP			
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1	R2	R3	R4	R1	R2	R3	R4
M640	16	6	738	5 357	3 850	4 376	3 155	3 818	2 759	5 915	4 245
	16	8.5	775	6 248	4 484	3 503	2 539	4 526	3 264	5 225	3 759
	16	12	837	7 030	5 043	2 752	2 011	5 163	3 719	4 620	3 335
	16	15.5	896	7 524	5 397	2 288	1 687	5 565	4 009	4 247	3 075
M750	20	6	850	6 678	4 794	5 452	3 925	4 754	3 431	7 376	5 289
	20	8.5	899	7 793	5 588	4 362	3 156	5 640	4 062	6 514	4 682
	20	12	969	8 769	6 284	3 421	2 495	6 434	4 630	5 755	4 149
	20	15.5	1 039	9 384	6 726	2 840	2 088	6 936	4 991	5 289	3 823
M863	25	9.5	1 307	9 353	7 074	5 606	4 273	6 651	5 054	8 300	6 286
	25	16	1 485	11 143	8 424	3 905	3 013	8 102	6 150	6 946	5 286
	25	23	1 710	12 206	9 233	2 954	2 316	9 081	6 897	6 081	4 654
M980	32	9.5	1 292	11 876	8 960	7 081	5 375	8 480	6 436	10 590	8 013
	32	16	1 506	14 164	10 684	4 899	3 758	10 329	7 831	8 849	6 725
	32	23	1 759	15 516	11 711	3 674	2 858	11 572	8 776	7 732	5 906
M1110	40	11	2 713	15 034	10 969	9 621	7 088	10 950	8 041	13 705	10 016
	40	14.5	2 823	16 486	12 017	8 225	6 095	11 959	8 772	12 751	9 340
	40	18	2 991	17 815	12 981	6 980	5 215	13 158	9 643	11 637	8 553
	40	26	3 308	19 556	14 252	5 397	4 102	14 624	10 716	10 329	7 638
M1125	50	11	2 713	18 624	13 541	11 857	8 691	13 518	9 882	16 962	12 350
	50	14.5	2 823	20 431	14 844	10 105	7 443	14 772	10 789	15 763	11 499
	50	18	2 991	22 082	16 040	8 538	6 331	16 260	11 867	14 359	10 504
	50	26	3 308	24 239	17 608	6 539	4 921	18 073	13 189	12 705	9 341

Static Reactions Low Headroom Hoists
M 2/1 LC

Fig. 33

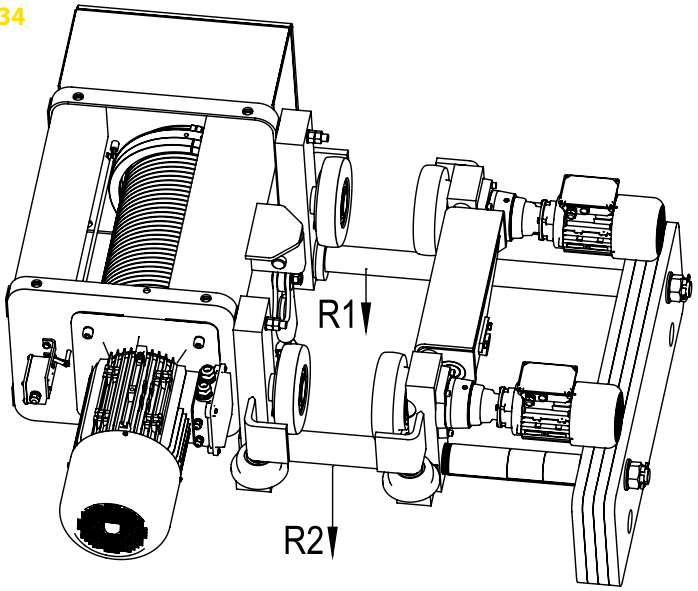


Type				Reactions – UEP		Reactions – DEP	
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1*	R2*	R1*	R2*
M640	8	12	1 237	5 876	3 361	3 246	5 991
	8	17	1 309	6 489	2 820	3 547	5 762
	8	24	1 429	7 051	2 378	3 859	5 570
	8	31	1 558	7 428	2 130	4 081	5 477

* Max. wheel load x 2

Static Reactions Low Headroom Hoists
M 4/1 LC

Fig. 34

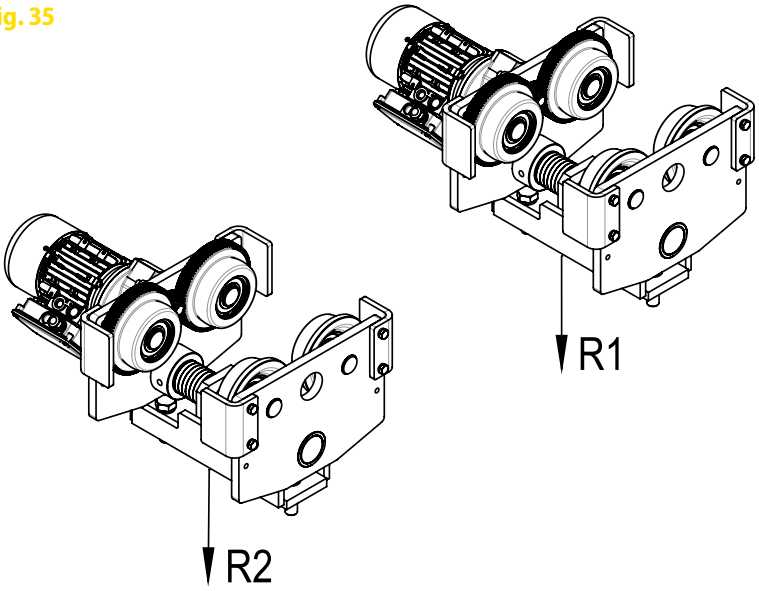


Type				Reactions – UEP		Reactions – DEP	
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1*	R2*	R1*	R2*
M640	16	8.5	1544	4 930	3 842	3 459	5 313
	16	12	1659	5 760	3 070	4 164	4 666
	16	15.5	1775	6 288	2 599	4 615	4 273

* Max. wheel load x 2

Static Reactions Normal Headroom Hoists
M 2/1 N

Fig. 35

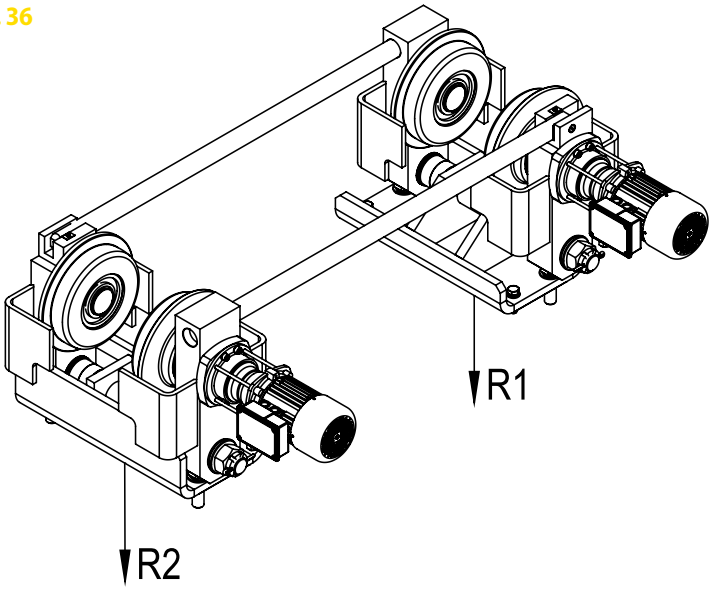


Type				Reactions – UEP		Reactions – DEP	
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1*	R2*	R1*	R2*
M640	8	12	858	6 383	2 475	3 740	5 118
	8	17	895	6 832	2 063	3 903	4 991
	8	24	956	7 236	1 719	4 060	4 896
	8	31	1 017	7 500	1 516	4 169	4 848
M750	10	12	980	7 932	3 047	4 628	6 351
	10	17	1 028	8 494	2 533	4 834	6 194
	10	24	1 098	8 997	2 100	5 026	6 071
	10	31	1 168	9 324	1 844	5 159	6 008

* Max. wheel load x 2

Static Reactions Normal Headroom Hoists
M 4/1 N

Fig. 36

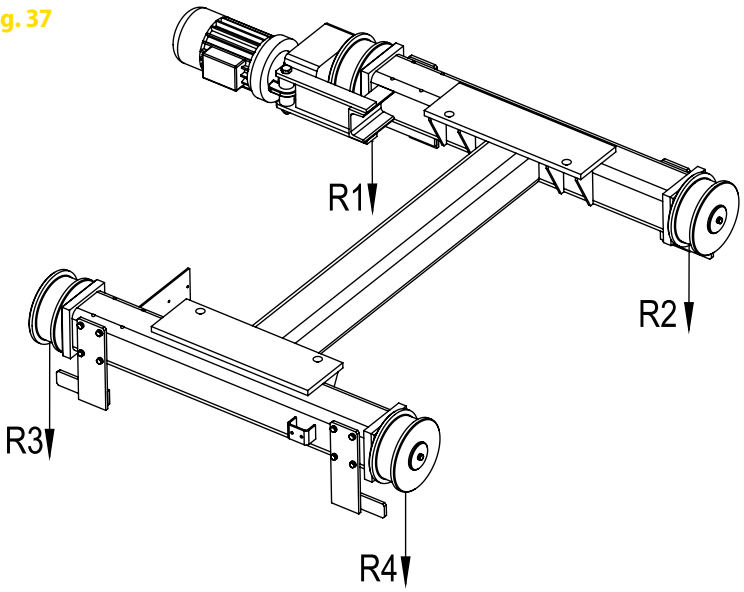


Type				Reactions – UEP		Reactions – DEP	
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1*	R2*	R1*	R2*
M640	16	6	1 182	9 429	7 753	6 786	10 396
	16	8.5	1 219	10 955	6 264	8 026	9 193
	16	12	1 281	12 296	4 985	9 119	8 162
	16	15.5	1 340	13 142	4 198	9 811	7 529

* Max. wheel load x 2

Static Reactions Double Rail Hoists
M 2/1 KD

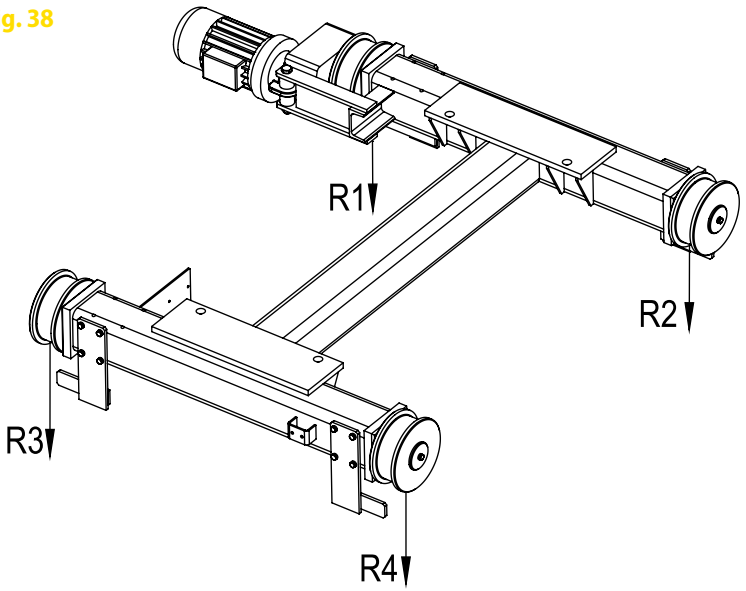
Fig. 37



Type				Reactions – UEP				Reactions – DEP			
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1	R2	R3	R4	R1	R2	R3	R4
M640	8	12	822	2 467	3 281	1 334	1 740	1 641	2 157	2 160	2 864
	8	17	865	2 652	3 528	1 171	1 514	1 684	2 213	2 138	2 830
	8	24	932	2 841	3 780	1 015	1 296	1 741	2 283	2 115	2 793
	8	31	998	2 977	3 959	912	1 150	1 785	2 337	2 104	2 772
M750	10	12	944	3 063	4 080	1 647	2 154	2 030	2 676	2 679	3 559
	10	17	998	3 294	4 389	1 443	1 872	2 085	2 745	2 652	3 517
	10	24	1074	3 529	4 702	1 246	1 598	2 153	2 831	2 621	3 468
	10	31	1149	3 697	4 924	1 115	1 413	2 206	2 897	2 606	3 440

Static Reactions Double Rail Hoists
M 4/1 KD

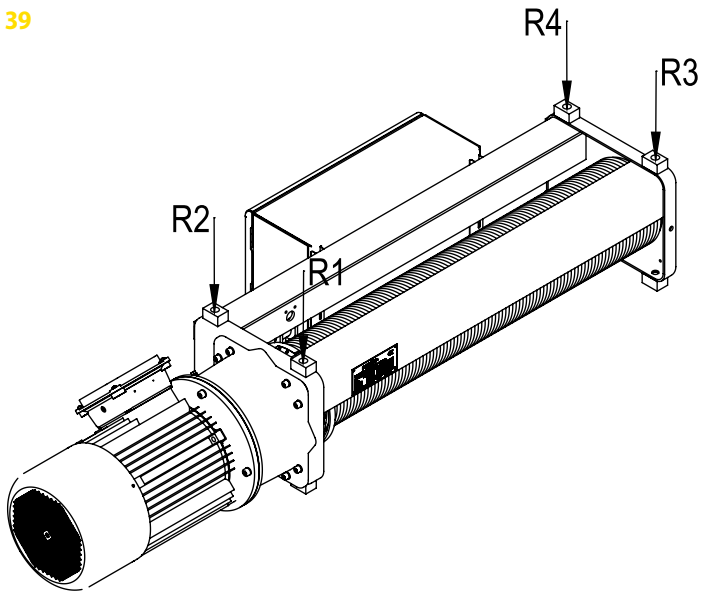
Fig. 38



Type				Reactions – UEP				Reactions – DEP			
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1	R2	R3	R4	R1	R2	R3	R4
M640	16	6	1 136	4 853	4 275	4 255	3 753	3 915	3 456	5 193	4 572
	16	8.5	1 207	4 905	5 382	3 304	3 615	3 901	4 273	4 309	4 723
	16	12	1 257	5 452	5 984	2 783	3 038	4 287	4 698	3 948	4 324
	16	15.5	1 328	5 843	6 413	2 427	2 644	4 565	5 003	3 705	4 054
M750	20	6	1 376	5 980	5 392	5 258	4 746	4 848	4 378	6 390	5 759
	20	8.5	1 439	6 120	6 663	4 149	4 507	4 884	5 310	5 386	5 859
	20	12	1 520	6 804	7 409	3 506	3 801	5 364	5 834	4 946	5 376
	20	15.5	1 600	7 289	7 939	3 060	3 311	5 707	6 207	4 643	5 043
M863	25	9.5	1 849	7 526	8 269	5 274	5 780	5 904	6 477	6 895	7 572
	25	16	2 079	8 851	9 728	4 063	4 436	6 840	7 505	6 075	6 660
	25	23	2 340	9 770	10 737	3 275	3 558	7 576	8 311	5 469	5 984
M980	32	9.5	2 290	9 590	10 539	6 756	7 406	7 549	8 284	8 796	9 662
	32	16	2 535	11 259	12 378	5 208	5 689	8 717	9 568	7 750	8 499
	32	23	2 822	12 423	13 656	4 188	4 555	9 641	10 581	6 970	7 630
M1100	40	11	4 308	12 766	13 410	8 851	9 280	10 446	10 963	11 171	11 728
	40	14.5	4 432	13 683	14 377	7 996	8 376	10 974	11 519	10 705	11 234
	40	18	4 618	14 618	15 360	7 154	7 485	11 688	12 269	10 084	10 576
	40	26	4 972	15 996	16 810	5 953	6 213	12 675	13 305	9 274	9 717
M1125	50	11	4 308	15 688	16 494	10 795	11 331	12 788	13 434	13 694	14 391
	50	14.5	4 432	16 827	17 694	9 718	10 192	13 441	14 121	13 104	13 765
	50	18	4 618	17 983	18 912	8 654	9 068	14 322	15 048	12 316	12 932
	50	26	4 972	19 684	20 702	7 130	7 455	15 532	16 321	11 282	11 836

Static Reactions Stationary Hoists
MTL 2/1 F

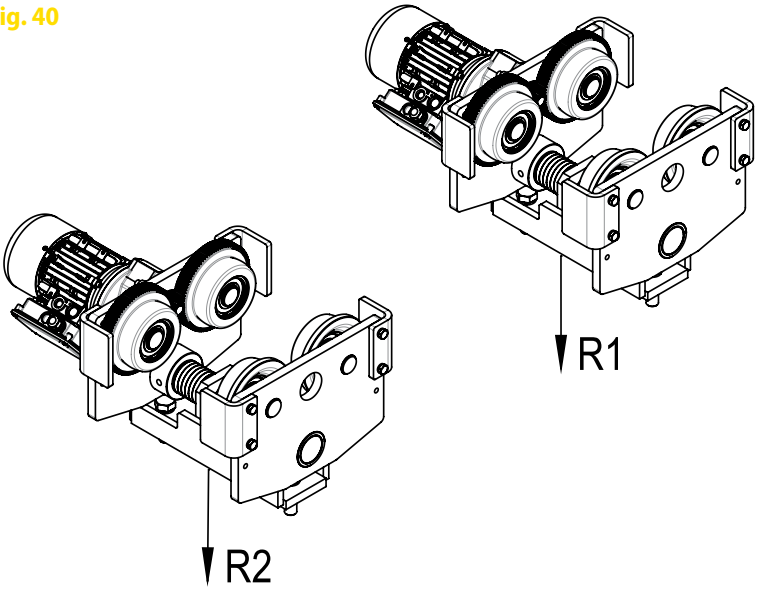
Fig. 39



Type				Reactions – UEP				Reactions – DEP			
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1	R2	R3	R4	R1	R2	R3	R4
MT312	2,5	32	389	1 274	1 222	200	193	648	623	826	792
	2,5	40	432	1 312	1 258	183	178	677	651	819	786
	2,5	48	476	1 342	1 287	176	171	698	671	820	787
	2,5	56	518	1 366	1 310	173	169	718	690	821	789
MT316	3,2	32	389	1 592	1 524	241	232	803	770	1 030	986
	3,2	40	432	1 637	1 568	217	210	836	802	1 018	976
	3,2	48	476	1 672	1 602	204	198	860	826	1 016	974
	3,2	56	518	1 700	1 629	197	192	882	847	1 015	974
MT525	5	32	620	2 427	2 414	390	389	1 241	1 235	1 576	1 568
	5	40	668	2 493	2 480	348	346	1 285	1 278	1 556	1 548
	5	48	716	2 543	2 530	322	321	1 319	1 312	1 547	1 539
	5	56	763	2 582	2 569	307	306	1 346	1 340	1 543	1 535

Static Reactions Monorail Hoists
MTL 2/1 N

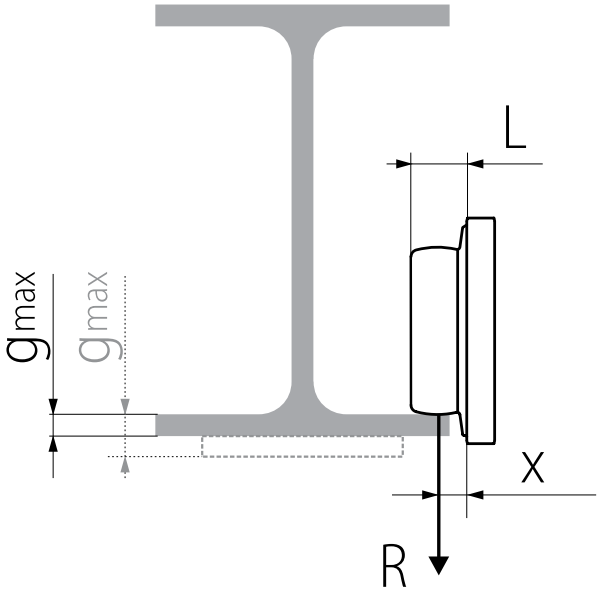
Fig. 40



Type				Reactions – UEP		Reactions – DEP	
Hoist Type	Capacity (t)	Hook Travel (m)	Hoist Weight (kg)	R1	R2	R1	R2
MT312	2,5	32	536	2 569	466	1 431	1 604
	2,5	40	579	2 644	435	1 487	1 592
	2,5	48	623	2 702	421	1 529	1 594
	2,5	56	665	2 750	415	1 568	1 597
MT316	3,2	32	536	3 189	546	1 733	2 003
	3,2	40	579	3 279	500	1 799	1 980
	3,2	48	623	3 347	476	1 846	1 977
	3,2	56	665	3 402	462	1 890	1 975
MT525	5	32	789	4 925	864	2 683	3 106
	5	40	837	5 058	779	2 770	3 067
	5	48	885	5 157	728	2 837	3 048
	5	56	932	5 235	697	2 893	3 039

Monorail Cross Travel Wheels & Beam / Beam Flange

Fig. 41



Normal Headroom Trolley			
Wheel diameter (mm)	**x (mm)**	**L (mm)**	**g max (mm)**
60	20	40	25
80	20	40	25
100	20	40	25
120	20	40	25
140	20	40	25

Low Headroom Trolley			
Wheel diameter (mm)	**x (mm)**	**L (mm)**	**g max (mm)**
125	20	40	28
155	22	45	28
180	20	40	28

Rope & Roller Elements

MT Series

Type			Dimensions & Weights					
Hoist Type	Reeving	Capacity (t)	Rope Diameter (mm)	Drum Diameter (mm)	Pulley Diameter (mm)	Bottom Block Pulley Diameter (mm)	Bottom Block Weight (kg)	Hook Number DIN 15401 – RSN
Reeving 2/1								
MT305	2/1	1	7	167	–	157	16	1 – S
MT308	2/1	1.6	7	167	–	157	16	1 – S
MT312 / MTL312	2/1	2.5	10	219	–	224	30	1.6 – S
MT316 / MTL316	2/1	3.2	10	219	–	224	35	1.6 – S
MT525 / MTL525	2/1	5	12	265	–	269	50	2.5 – S
Reeving 4/1								
MT305	4/1	2	7	167	140	157	16	1.6 – S
MT308	4/1	3.2	7	167	202	157	16	1.6 – S
MT312	4/1	5	10	219	243	224	30	2.5 – S
MT316	4/1	6.3	10	219	243	224	35	4 – S
MT525	4/1	10	12	265	288	269	50	4 – T

M Series

Type			Dimensions & Weights					
Hoist Type	Reeving	Capacity (t)	Rope Diameter (mm)	Drum Diameter (mm)	Pulley Diameter (mm)	Bottom Block Pulley Diameter (mm)	Bottom Block Weight (kg)	Hook Number DIN 15401 – RSN
Reeving 2/1								
M640	2/1	8	15	357	–	365	55	4 – S
M750	2/1	10	15	357	–	365	90	4 – T
M1110	2/1	20	24	552	–	480	254	10 – S
M1125	2/1	25	24	552	–	480	254	10 – S
Reeving 4/1								
M640	4/1	16	15	357	330	365	130	6 – T
M750	4/1	20	15	357	330	365	150	10 – S
M863	4/1	25	20	420	450	448	194	10 – S
M980	4/1	32	20	420	450	448	332	16 – S
M1110	4/1	40	24	552	480	480	434	16 – T
M1125	4/1	50	24	552	480	480	434	16 – T

Lifting Electrical Motors
for Standard Wire Rope Hoist Range

Hoist Parameter				Double Speed				Single Speed				VFD 2-speed (1:10)*			VFD 2-speed (1:3)		
Capacity (t)	Group FEM	Hoist Series	Rope Reeving	Motor Type	Lifting Speed (m/min)	Motor Power (max KW*)	Nominal Current (Amps, A)	Motor Type	Lifting Speed (m/min)	Motor Power (max KW*)	Nominal Current (Amps, A)	Lifting Speed (m/min)	Motor Power (max KW*)	Nominal Current (Amps, A)	Lifting Speed (m/min)	Motor Power (max KW*)	Nominal Current (Amps, A)
1	2 m	MT305	2/1	CT112M	8/2.6	2.5/0.83	6/6.5	CT100LA	8	2.5	5.4	8–0.8	2.5	5.4	8–2.6	2.5	5.4
	2 m	MT305	2/1	CT112M	12/4	2.5/0.83	6/6.5	CT100LA	12	2.5	5.4	12–1.2	2.5	5.4	12–4	2.5	5.4
1.6	2 m	MT308	2/1	CT112M	8/2.6	2.5/0.83	6/6.5	CT100LA	8	2.5	5.4	8–0.8	2.5	5.4	8–2.6	2.5	5.4
	2 m	MT308	2/1	CT132MA	12/4	4.0/1.33	8.9/7.7	CT112M	12	4.0	9.1	12–1.2	4.0	9.1	12–4	4.0	9.1
2	2 m	MT305	4/1	CT112M	4/1.3	2.5/0.83	6/6.5	CT100LA	4	2.5	5.4	4–0.4	2.5	5.4	4–1.3	2.5	5.4
	2 m	MT305	4/1	CT112M	6/2	2.5/0.83	6/6.5	CT100LA	6	2.5	5.4	6–0.6	2.5	5.4	6–2	2.5	5.4
	3 m	MT310	2/1	CT132MA	8/2.6	4.0/1.33	8.9/7.7	CT112M	8	4.0	9.1	8–0.8	4.0	9.1	8–2.6	4.0	9.1
	3 m	MT310	2/1	CT132MB	12/4	6.0/2.0	13/10	CT132S	12	6.0	13.8	12–1.2	6.0	13.8	12–4	6.0	13.8
	2 m	MTL312	2/1	CT132MB	12/4	6.0/2.0	13/10	CT132S	12	6.0	13.8	12–1.2	6.0	13.8	12–4	6.0	13.8
2.5	2 m	MT306	4/1	CT112M	4/1.3	2.5/0.83	6/6.5	CT100LA	4	2.5	5.4	4–0.4	2.5	5.4	4–1.3	2.5	5.4
	2 m	MT306	4/1	CT132MA	6/2	4.0/1.33	8.9/7.7	CT112M	6	4.0	9.1	6–0.6	4.0	9.1	6–2	4.0	9.1
	2 m	MT312	2/1	CT132MA	8/2.6	4.0/1.33	8.9/7.7	CT112M	8	4.0	9.1	8–0.8	4.0	9.1	8–2.6	4.0	9.1
	2 m	MT312	2/1	CT132MB	12/4	6.0/2.0	13/10	CT132S	12	6.0	13.8	12–1.2	6.0	13.8	12–4	6.0	13.8
	2 m	MTL312	2/1	CT132MB	12/4	6.0/2.0	13/10	–	–	–	–	–	–	–	–	–	–
3.2	2 m	MT308	4/1	CT112M	4/1.3	2.5/0.83	6/6.5	CT100LA	4	2.5	5.4	4–0.4	2.5	5.4	4–1.3	2.5	5.4
	2 m	MT308	4/1	CT132MA	6/2	4.0/1.33	8.9/7.7	CT112M	6	4.0	9.1	6–0.6	4.0	5.4	6–2	4.0	5.4
	2 m	MT316	2/1	CT132MB	8/2.6	5.0/1.66	11/9.1	CT132S	8	5.0	–	8–0.8	5.0	–	8–2.6	5.0	–
	2 m	MT316	2/1	MB132M	12/4	7.0/2.3	17.5/14.7	MT132M	12	7	–	12–1.2	7	–	12–4	7	–
	2 m	MTL316	2/1	CT160M	12/4	8.5/2.7	18/14	–	–	–	–	–	–	–	–	–	–
4	2 m	MT310	4/1	CT132MA	4/1.3	4.0/1.33	8.9/7.7	CT112M	4	4.0	9.1	4–0.4	4.0	9.1	4–1.3	4.0	9.1
	2 m	MT310	4/1	CT132MB	6/2	6.0/2.0	11/9.1	CT132S	6	6.0	–	6–0.6	6.0	–	6–2	6.0	–
	3 m	MT520	2/1	MB160M	8/2.6	8.0/2.6	17.4/18.7	MT132M	8	8.0	15.8	8–0.8	8.0	15.8	8–2.6	8.0	15.8
	3 m	MT520	2/1	MB160L	12/4	11.8/3.9	25.2/18.6	MT160M	12	12	24	12–1.2	12	24	12–4	12	24
5	2 m	MT312	4/1	CT132MA	4/1.3	4.0/1.33	8.9/7.7	CT112M	4	4.0	9.1	4–0.4	4.0	9.1	4–1.3	4.0	9.1
	2 m	MT312	4/1	CT132MB	6/2	6.0/2.0	11/9.1	CT132S	6	6.0	13.8	6–0.6	6.0	13.8	6–2	6.0	13.8
	2 m	MT525	2/1	MB160M	8/2.6	8.0/2.6	17.4/18.7	MT132M	8	8.0	15.8	8–0.8	8.0	15.8	8–2.6	8.0	15.8
	2 m	MT525	2/1	MB160L	12/4	11.8/3.9	25.2/18.6	MT160M	12	12	–	12–1.2	12		12–4		
	2 m	MTL525	2/1	CT160L	12/4	12/4	29/18	–	–	–	–	–	–	–	–	–	–
	3 m	MT313	4/1	CT132MB	4/1.3	5.0/1.66	8.9/7.7	CT132S	4	5.0	–	4–0.4	5.0	–	4–1.3	–	–
	3 m	MT313	4/1	MB132M	6/2	7.0/2.3	17.5/14.7	MT132M	6	7	–	6–0.6	7	–	6–2	–	–
6.3	2 m	MT316	4/1	CT132MB	4/1.3	5.0/1.66	8.9/7.7	CT132S	4	5.0	–	4–0.4	5.0	–	4–1.3	–	–
	2 m	MT316	4/1	MB132M	6/2	7.0/2.3	17.5/14.7	MT132M	6	7	–	6–0.6	7	–	6–2	–	–
8	3 m	MT520	4/1	MB160M	4/1.3	8.0/2.6	17.4/18.7	MT132M	4	8.0	15.8	4–0.4	8.0	15.8	4–1.3	8.0	15.8
	3 m	MT520	4/1	MB160L	6/2	11.8/3.9	25.2/18.6	MT160M	6	12	–	6–0.6	12	–	6–2	–	–
	2 m	M640	2/1	MB160L	8/2.6	11.8/3.9	25.2/18.6	–	–	–	–	–	–	–	–	–	–
10	2 m	MT525	4/1	MB160M	4/1.3	8.0/2.6	17.4/18.7	MT132M	4	8.0	15.8	4–0.4	8.0	15.8	4–1.3	8.0	15.8
	2 m	MT525	4/1	MB160L	6/2	11.8/3.9	25.2/18.6	MT160M	6	12	–	6–0.6	12	–	6–2	–	–
	2 m	M750	2/1	MB160L	8/2	15/5	30.3/24.1	–	–	–	–	–	–	–	–	–	–
1.2	3 m	M632	4/1	MB160L	4/1	11.8/3.9	25.2/18.6	MT160L	4	12	24	4–0.4	12	24	4–1	12	24
16	2 m	M640	4/1	MB160L	4/1	11.8/3.9	25.2/18.6	MT160L	4	12	24	4–0.4	12	24	4–1	12	24
20	2 m	M750	4/1	MB160L	4.1/1.3	15/5	30.3/24.1	–	–	–	–	–	–	–	–	–	–
	2 m	M1100	2/1	MB180	4/1.2	36.1/30.7	36.1/30.7	–	–	–	–	–	–	–	–	–	–
25	1 Am	M863	4/1	MB180	4/1.22	20/6.5	40.3/32.6	–	–	–	–	–	–	–	–	–	–
	2 m	M963	4/1	K3517	2.5/0.6	13/3	30/40	–	–	–	–	–	–	–	–	–	–
	1 Am	M1125	2/1	MB180	4/1.2	20/6.5	40.3/32.6	–	–	–	–	–	–	–	–	–	–
32	1 Am	M980	4/1	K3518*	2.5/0.6	16/4	36/70	–	–	–	–	–	–	–	–	–	–
	1 Am	M980	4/1	K3518*	4/1.2	24/4	48/71	–	–	–	–	–	–	–	–	–	–
40	2 m	M1100	4/1	K3517	1.3/0.3	13/3	30/40	–	–	–	–	–	–	–	–	–	–
	2 m	M1100	4/1	MB180	2/0.6	16/5.3	36.1/30.7	–	–	–	–	–	–	–	–	–	–
50	1 Am	M1125	4/1	K3517	1.3/0.3	13/3	30/40	–	–	–	–	–	–	–	–	–	–
	1 Am	M1125	4/1	MB180	2/0.6	20/6.5	40.3/32.6	–	–	–	–	–	–	–	–	–	–

* Force cooling fan recommended

Travel Electrical Motors
for Standard Wire Rope Hoist Range

Hoist Parameter				Monorail Hoist — Low Headroom			Monorail Hoist — Normal Headroom			Double Rail Hoist		
Capacity (t)	Group FEM	Hoist Series	Rope Reeving	Motor Type	Quantity (pc)	Motor Power (max KW*)	Motor Type	Quantity (pc)	Motor Power (max KW*)	Motor Type	Quantity (pc)	Motor Power (max KW*)
1	2 m	MT305	2/1	DAS71K	2	0.24/0.06	KT71A	1	0.15/0.03	n.a.	n.a.	n.a.
1.6	2 m	MT308	2/1	DAS71K	2	0.24/0.06	KT71A	1	0.15/0.03	n.a.	n.a.	n.a.
2	2 m	MT305	4/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	n.a.	n.a.	n.a.
	3 m	MT310	2/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	n.a.	n.a.	n.a.
	2 m	MTL310	2/1	DAS71K	2	0.24/0.06	DAS80SX	2	0.37/0.12	n.a.	n.a.	n.a.
2.5	2 m	MT306	4/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	n.a.	n.a.	n.a.
	2 m	MT312	2/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	n.a.	n.a.	n.a.
	2 m	MTL312	2/1	DAS71K	2	0.24/0.06	DAS80SX	2	0.37/0.12	n.a.	n.a.	n.a.
3.2	2 m	MT308	4/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	T80B	1	0.37/0.12
	2 m	MT316	2/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	T80B	1	0.37/0.12
	2 m	MTL316	2/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	T80B	1	0.37/0.12
4	2 m	MT310	4/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	T80B	1	0.37/0.12
	3 m	MT520	2/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	T80B	1	0.37/0.12
5	2 m	MT312	4/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	T80B	1	0.37/0.12
	2 m	MT525	2/1	DAS71K	2	0.24/0.06	DAS80SX	1	0.37/0.12	T80B	1	0.37/0.12
	2 m	MTL525	2/1	DAS71K	2	0.24/0.06	DAS80SX	2	0.37/0.12	T80B	1	0.37/0.12
	3 m	MT313	4/1	DAS71K	2	0.24/0.06	DAS80SX	2	0.37/0.12	T80B	1	0.37/0.12
6.3	2 m	MT316	4/1	DAS71K	2	0.24/0.06	DAS80SX	2	0.37/0.12	T80B	1	0.37/0.12
8	3 m	MT520	4/1	DAS71G	2	0.30/0.075	DAS80SX	2	0.37/0.12	T90S	1	0.55/0.18
	2 m	M640	2/1	DAS71G	2	0.30/0.075	DAS80SX	2	0.37/0.12	T90S	1	0.55/0.18
10	2 m	MT525	4/1	DAS71G	2	0.30/0.075	DAS80SX	2	0.37/0.12	T90S	1	0.55/0.18
	2 m	M750	2/1	n.a.	n.a.	n.a.	DAS80SX	2	0.37/0.12	T90S	1	0.55/0.18
12.5	3 m	M632	4/1	KT80B	2	0.55/0.13	KT80B	2	0.55/0.12	T100LA	1	1.1/0.37
16	2 m	M640	4/1	KT80B	2	0.55/0.13	KT80B	2	0.55/0.12	T100LA	1	1.1/0.37
20	2 m	M750	4/1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	T100LA	1	1.1/0.37
25	1 Am	M863	4/1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	DAS80K	1	1.5
	2 m	M963	4/1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	DAS80K	1	1.5
32	1 Am	M980	4/1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	DAS80SX	2	1.1
40	2 m	M1100	4/1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	T100LA	2	2.2
50	1 Am	M1125	4/1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	T100LA	2	2.2

* More data about the motors is available in brochure "Podem Electrical Motors"

Electrical Panels for Standard Hoists

Podem low voltage panels are specially designed with optimized design to be flexible and universal for a wide range of applications. The modular technology allows for easy implementation of any customer request.

The panels are made of steel with colour of the hoist.

Board plate for easy components assembly.

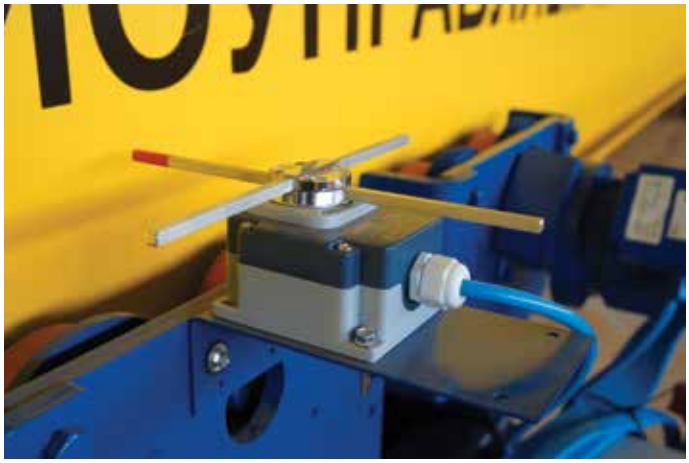
7 type of side plates giving a flexibility for different type of connections: cable glands, fast connection, etc.

Contactors, Relays, Motor protection MCB, Main switch, Transformers, Terminals, Invertor (VFD), Phase failure relay, Panel preheat, Cooling Fans, Radio Remote Control, Monitoring system.

Electrical panel for Standard Hoists		
Hoist type	**Low-voltage panel**	**Fuse box/ Wiring box**
Stationary	Option	By default
Monorail	By default	Option
Double-rail	By default	Option

Cross Limit Switch

Cross travel limit switches designed for controlling the movement of overhead travelling cranes, hoists and complex machine tools. It prevents collisions between the trolley and the fixed end stopper.



Designed to guarantee excellent performance in the most challenging operating conditions.

- NC contacts for safety functions
- IP65 protection degree
- Long mechanical life of switches: 1 million operations

Industrial connectors marked according to the electrical diagram.

Monitoring Systems

ALP-200

The electronic load limiter ALP-200 is designed to control overload and to provide monitoring information to the service team.

Data Logging:
- Safe Working Period (FEM 9.755)
- Number of manoeuvres
- Number of overloads
- Number of motor overheating
- Record of the 1000 overloads last date and time

ALM-100N

The electronic load limiter ALM-100N is designed to control overload, the slack cable and other desired points, and to register the spectrum of loads of elevation devices.

The electronic load limiter Model ALM-100N manufactured according the Norm EN 62061 and EN 14492-2 2010, designed to control overload, the slack cable and other desired points, as well as to register the spectrum of loads of elevation devices (Hoist) according the Norm UNE 58919. It can control up to two devices realizing the sum of both. It can be connected on any kind of weight sensor placed in: Fixed spur, retrieving pulley, trolley, rope, etc.

Besides the control of the Safe Working Period (SWP) established by the Norm, it has several registers for the control of:
- Number of maneuvers of elevation
- Number of maneuvers to impulses
- Time of maneuvers of elevation
- Number of overloads
- Number of bypassed overloads
- Registration from the last 500 overloads, with date, hour, value from the overload and duration of the overload
- Activation of the revision by number of hour or date

Device designed for compliance of Category 2 and PLC according to ISO 13849-1.

Control Devices

Pendant

Podem's pendant controls cover wide field of light and medium duty control applications. They are very reliable, with ergonomic compact design and easy for handling and operation.

Application:
Cranes, hoists, power lifts of truck, electric lift and other moving equipments.

Advantages:
- Excellent price-quality level
- Various push buttons pendant models (from 2 to 6 buttons plus optional accessories)
- Made of the ABS copolymer with an excellent mechanical intensity and electrical features
- Light weight

Standard Emergency switch for cut OFF the operation power.
Durable contact units, which provides to select frequently and reliably the controlling load. Two position contact unit has mechanical lock-up feature for additional safety.

Radio-remote Control

Podem offers RRC from well-known European RRC producers.

The models are compact-size, ergonomic handsets for the control of lifting, automation and material handling applications. The main advantages of this series include safety functions, and easy installation.

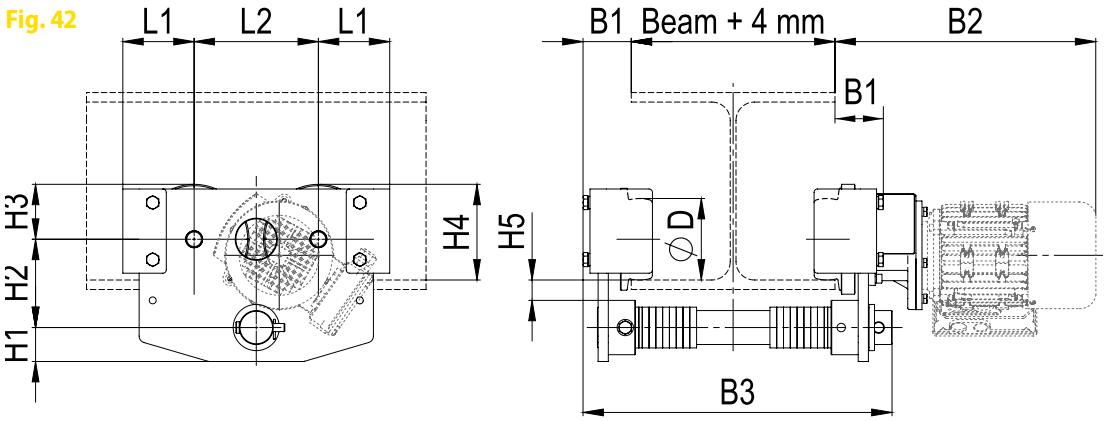
Application:
The lifting market for radio remote control is a big and diverse market:
- EOT and Gantry cranes
- Electric hoists
- Mobile cranes
- Tower cranes

Advantages:
Using radio equipment, you can control several crane motors independently or at the same time in tandem.
Remote controlled use is safer for the operator who can position his or herself away from moving loads.

Monorail Trolleys

Monorail trolleys have different applications. The main one is suspension of hoists. Furthermore, they can be used as modules of underslung end-carriages, top-sliding gates, conveyors.

Fig. 42

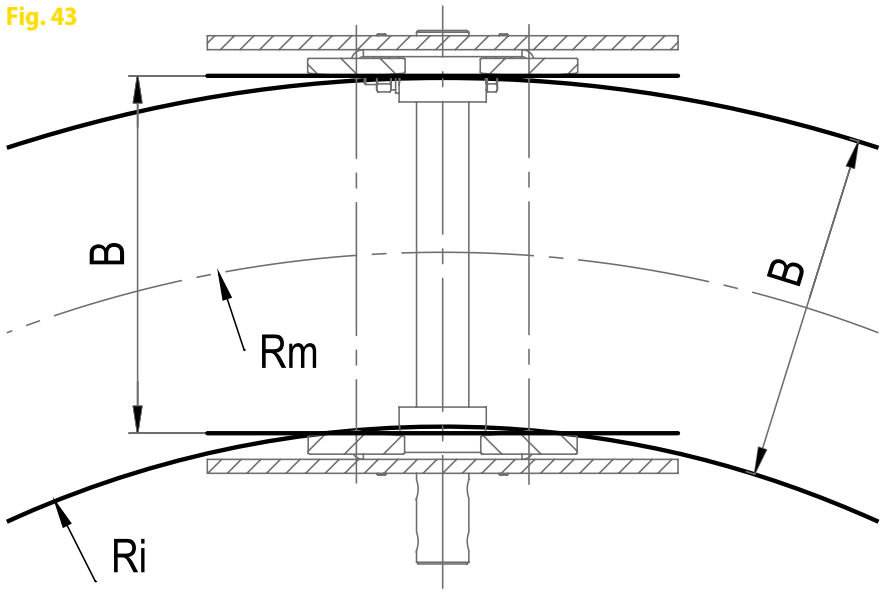


Trolley		Parameters				Dimensions												Weight
Max. Capacity (kg)	Designation	Wheel Profile	Travel Speed (m/min)	Power (kW)	Travel Motor	Beam (mm)	B1 (mm)	B2 (mm)	B3 (mm)	øD (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	L1 (mm)	L2 (mm)	kg
1 000	KC 0601	8° + 0°	–	–	–	60…200 60…300*	29	–	331* 431**	60	30.0	105.0	60.0	90.0	47.0	128.5	99.0	13.2
1 000	KM 0601 V20/5	8° + 0°	20/5	0.1/0.03 kW	DAS 63G	60…200 60…300*	29	298	331* 431**	60	30.0	105.0	60.0	90.0	47.0	128.5	99.0	24.2
1 700	KC 1001	Universal	–	–	–	130…300	35	–	415	100	30.0	104.0	64.0	114.0	19.0	91.5	187.0	27.8
1 700	KM 1001	Universal	20/6	0.15/0.03 kW	KT71A	130…300	35	301	415	100	30.0	104.0	74.0	124.0	19.0	91.5	187.0	38.0
1 700	KM 1001-01	Universal	20	0.12 kW	KT63A	130…300	35	300	415	100	30.0	104.0	74.0	124.0	19.0	91.5	187.0	38.3
2 000	KC 0801	8° + 0°	–	–	–	65…200 65…300*	40	–	348* 448**	80	34.0	107.5	83.5	123.5	34.5	121.0	124.5	25.6
2 000	KM 0801 V20/5	8° + 0°	20/5	0.18/0.045 kW	DAS 63L	65…200 65…300*	40	303	348* 448**	80	34.0	107.5	83.5	123.5	34.5	121.0	124.5	35.0
5 400	KC 1201-02	Universal	–	–	–	130…300	69	–	455	120	50.0	130.0	75.0	135.0	30.0	105.0	183.0	50.0
5 400	KM 1201-03	Universal	20	0.37 kW	T71B	130…300	69	348	455	120	50.0	130.0	81.0	141.0	30.0	105.0	183.0	62.0
5 400	KM 1201-03	Universal	20	0.37 kW	DAS71SX	130…300	69	351	455	120	50.0	130.0	81.0	141.0	30.0	105.0	183.0	61.0
5 400	KM 1201-04	Universal	20/6	0.37/0.12 kW	T80B	130…300	69	384	455	120	50.0	130.0	81.0	141.0	30.0	105.0	183.0	68.0
5 400	KM 1201-04	Universal	20/6	0.37/0.12 kW	DAS80SX	130…300	69	404	455	120	50.0	130.0	81.0	141.0	30.0	105.0	183.0	65.5
10 000	KC 1401-02	Universal	–	–	–	130…300	77	–	471	140	60.0	150.0	75.0	155.0	30.0	120.5	207.0	76.0
10 000	KM 1401-03	Universal	20	0.37 kW	T71B	130…300	77	355	471	140	60.0	150.0	93.0	173.0	30.0	120.5	207.0	90.0
10 000	KM 1401-04	Universal	20/6	0.37/0.12 kW	T80B	130…300	77	391	471	140	60.0	150.0	93.0	173.0	30.0	120.5	207.0	95.0

Curve Trolley Path

Articulated standard headroom monorail hoist units:
- Lifting capacity up to 4 t (minimum radius 1500 mm).
- Lifting capacity up to 10 t (minimum radius 2500 mm).

Fig. 43



Curve Radius	
	Ri min, (mm)
Kx 060x	600
Kx 080x	800
Kx 100x	1 000
Kx 120x	1 500
Kx 140x	2 500

* Beam flange dimension is important.

Double-rail Trolleys

Podem offers double-rail hoists. It is an option to be provided only a double-rail trolley. Tube frame body design. One motor-reducer (up to 25 t) and an intermediate shaft for 2 drive wheels.

Advantages:

- Cost-effective simple design
- Good traction with the rail
- Easy maintenance
- The trolley gauge could be modified according to the project request
- It is possible to order different trolley gauges on request

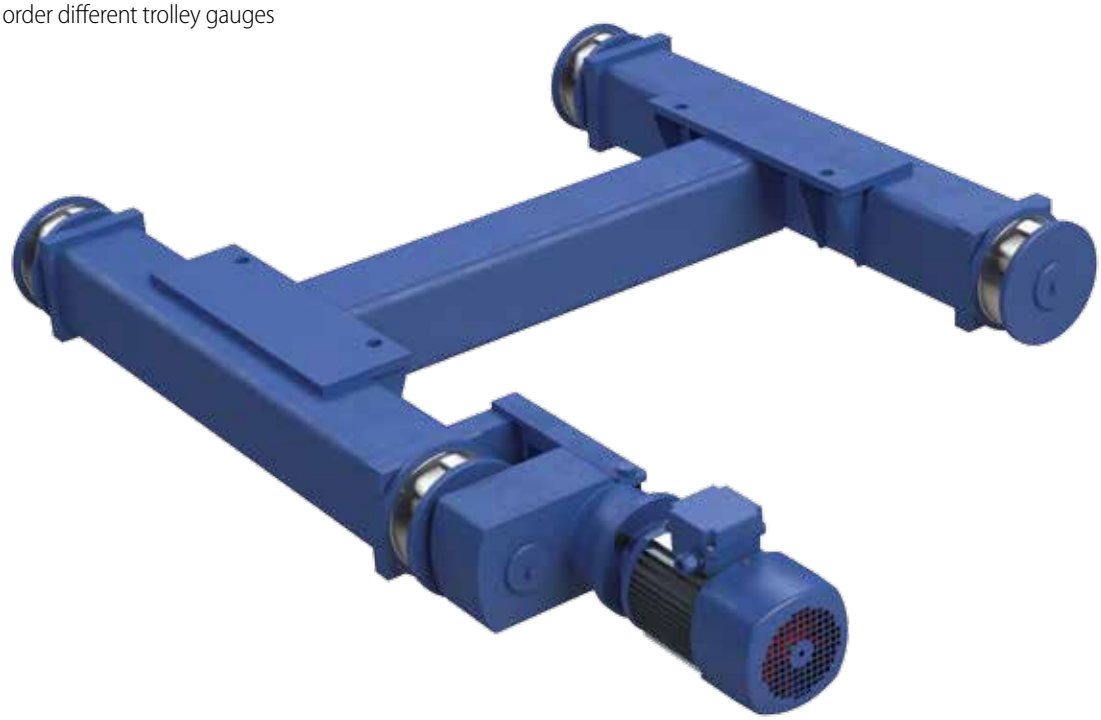


Fig. 44A

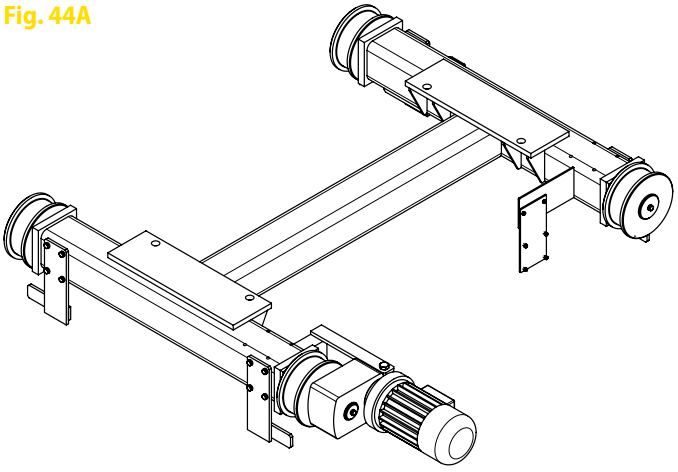
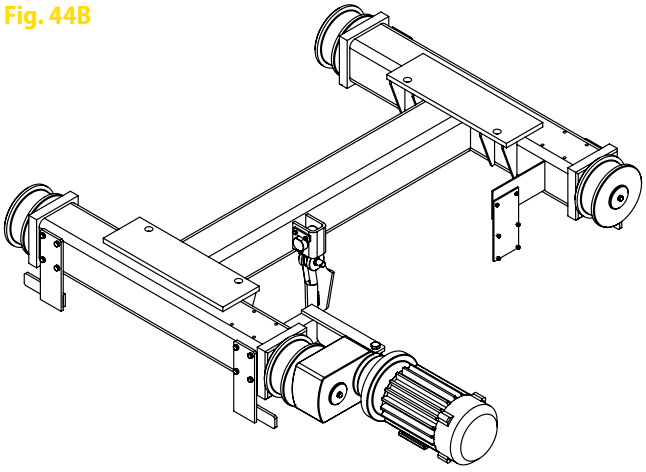


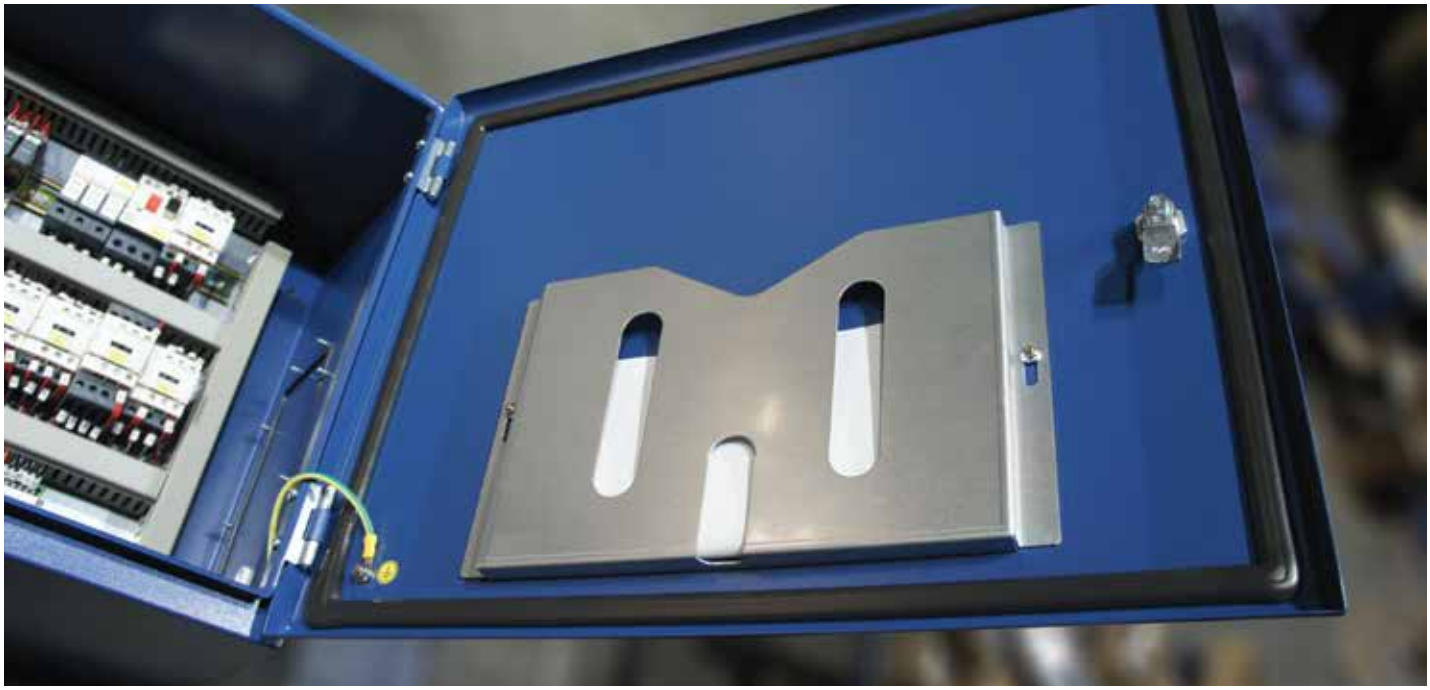
Fig. 44B



Documentation

With respect to the International norms and end-users Podem provides:

- Wire Rope Hoist passport
- Hook certificate
- Rope certificate
- User manual for Wire Rope hoists
- Electrical diagrams
- Spare parts catalogue (available for downloading from the web site)



Special holder for documentation in the electrical cabinet.

Hoist Packing

Standard packing is a wooden case or Euro-pallet.

The options could be packing for:
– Airfreight – completely closed packing
– Sea transport – special anti-rust protection

Standard packing of hoist (monorail or stationery)

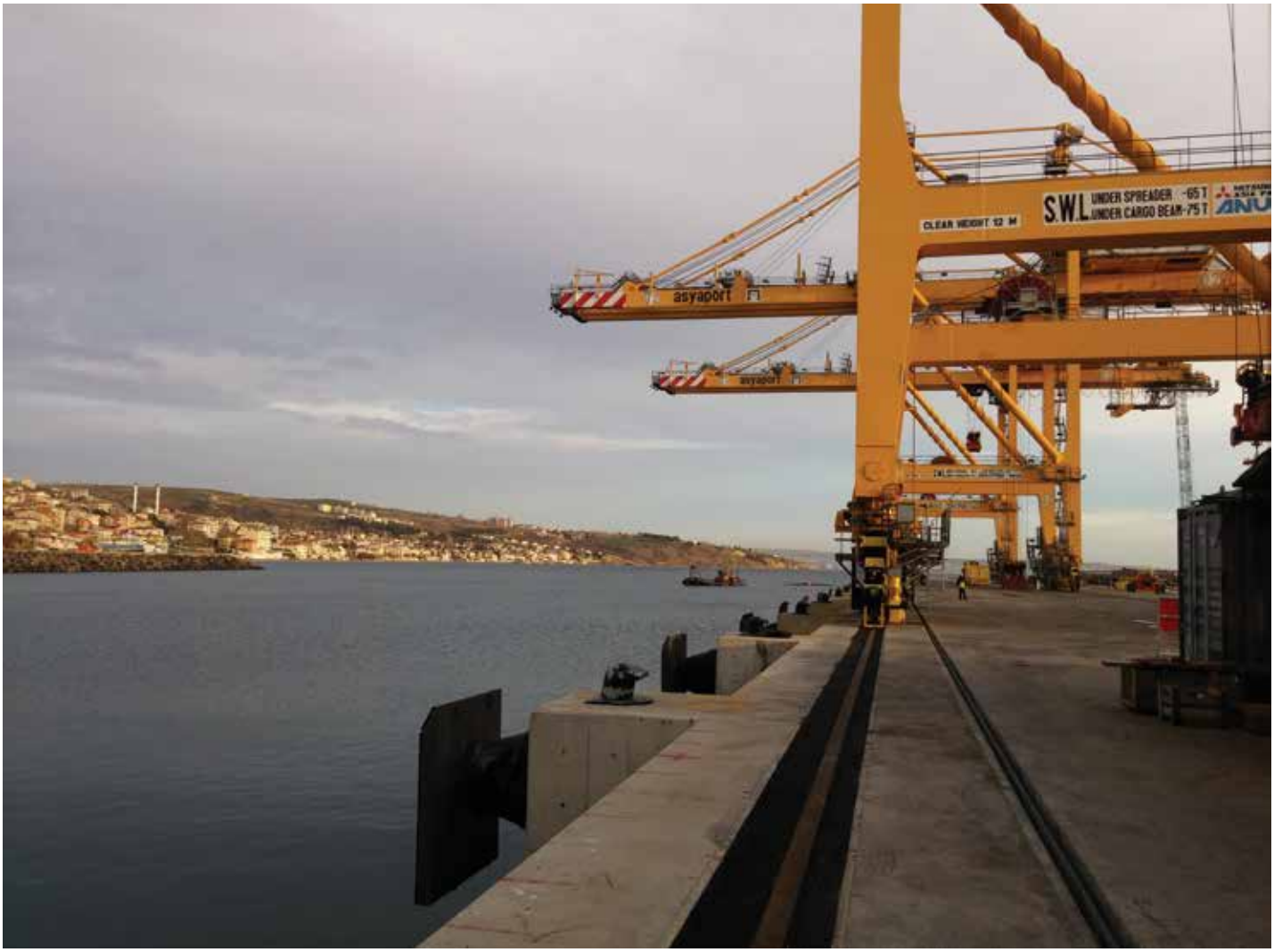
- Wooden Case
- Hoist
- Hook
- Documentation (hard copy or USB flash card)

Standard packing of double-rail hoist

- Wooden Platform
- Hoist
- Hook
- Documentation (hard copy or USB flash card)

Reference Projects

Reference Projects

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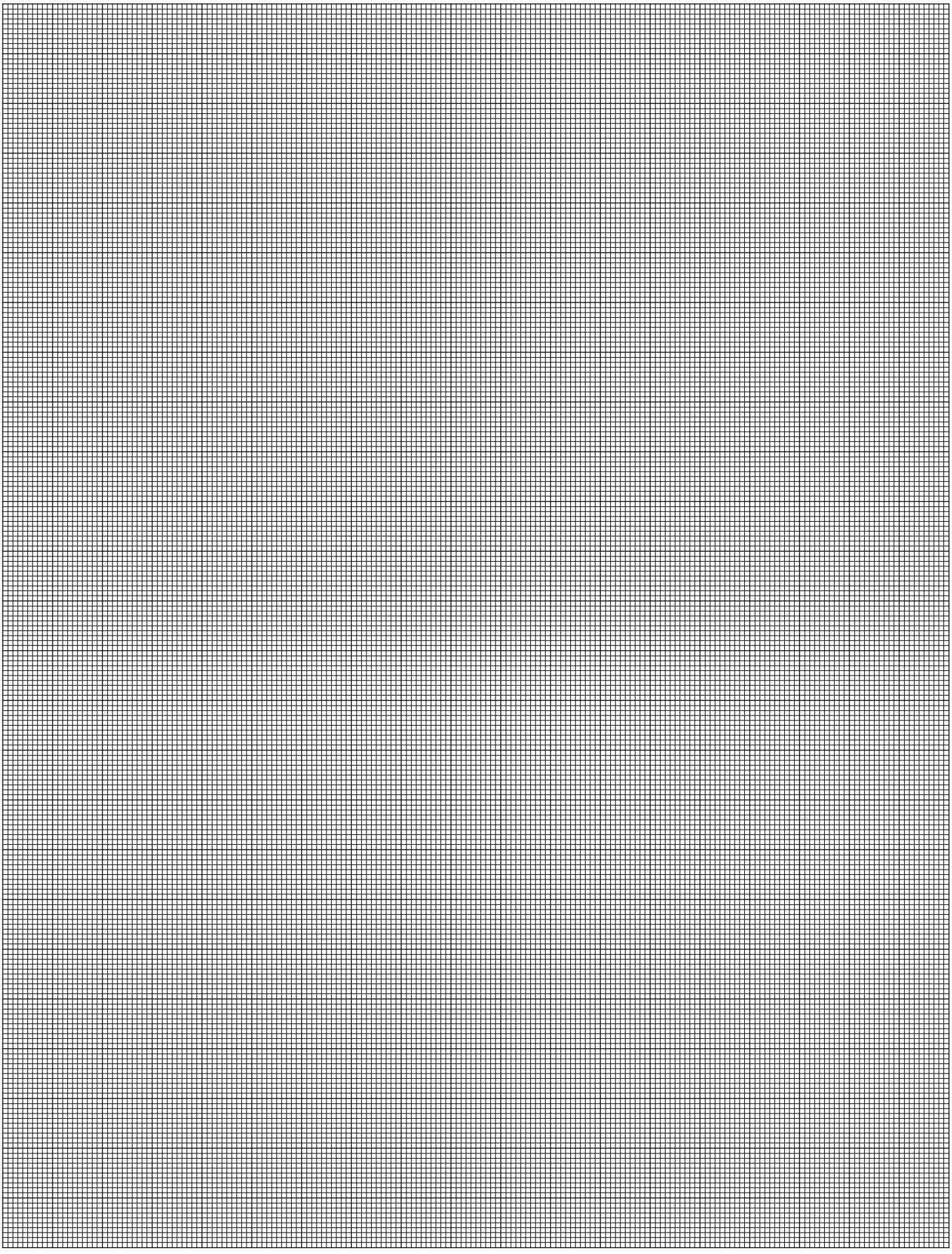


PODEM

PODEM™

Technical Catalogue
Standard Wire Rope Hoists

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September 2021

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