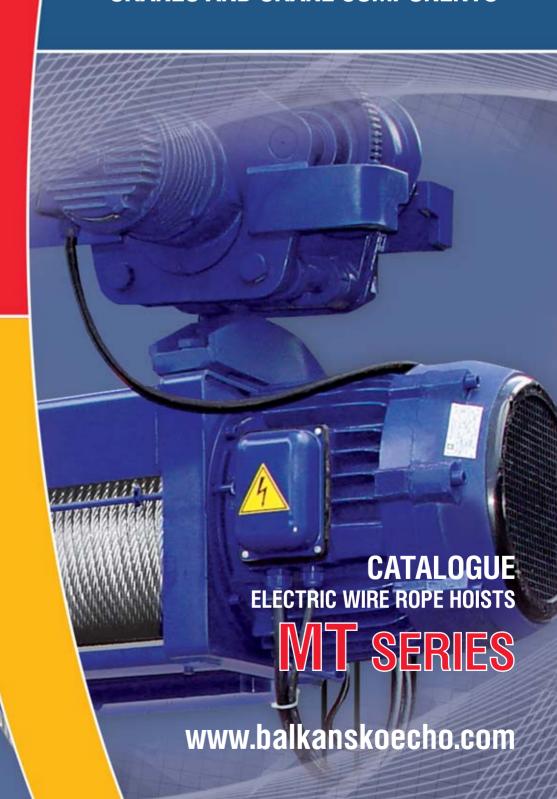


BALKANSKO BULGARIA ECHO

PRODUCTION OF ELECTRIC HOISTS, ELECTRIC MOTORS, CRANES AND CRANE COMPONENTS





BALKANSKO ECHO

CERTIFICATES







THE COMPANY

Dear customers, colleagues and friends,

In front of you is the catalogue which contains valuable and useful information about the manufacturing activity and high-quality production of one of the leading companies for travel and hoist systems worldwide.

"Balkansko Echo" company is unique with its three separate factories situated on a total manufacturing area of over 20 000 m², more than 600 metal-working machines and more than 550 dedicated and highly qualified specialists, as all this makes the company independent from outer subcontractors and cooperative deliveries.

The company is designing, constructing, manufacturing, assembling and servicing the following:

- electric wire rope hoists of "T" and "MT" series with a lifting capacity of up to 50 t and a lifting height of up to 120 m, which are to be known for their exceptional reliability and durability:
 - electric chain hoists, with a lifting capacity from 0,125 t to 2 t;
- single and double girder electric traveling cranes with a control from the cabin and from the ground with a lifting capacity of up to 100 t;
 - bracket electric cranes with a lifting capacity from 1t to 10 t and outrigger length of 10 m;
- induction cone hoist motors, single and double- speeded, with a built-in brake and a thermo-protection from 0,12 kW to 30 kW:
 - induction, mono-phase and three-phase cylindrical electric motors from 0,55 kW to 37 kW;
 - geared motors for setting in motion the running gears of travel and hoist systems;
 - lifting capacity limiting devices for all kinds of hoists and crane travel and hoist systems;
 - complete spare parts range for all products.

All company's products are manufactured in a general-industry, fire-safe and explosion-proof execution, and they can operate in different climate zones, including chemically aggressive environment.

The company's system for quality management and control has been certified according to ISO 9001:2008 by TÜV Rheinland.

The company's production has been certified according to the requirements of the countries where it is used.

By the end of 2010, "Balkansko Echo" had manufactured and sold more than 20 000 electric hoists, including 5000 explosion-proof ones, more than 600 cranes and over 50 000 general-industry and explosion-proof electric motors.

The production of "Balkansko Echo" company proves every day its high-tech qualities, security and reliability in different countries, like Russia, Kazakhstan, Belarus, Ukraine, Czech Republic, Slovakia, Turkey, Iran, etc. We are proud to announce that our goods are the only ones in the world with a 36-month warranty.

The aim of this catalogue is to provoke your interest to the goods we manufacture with great responsibility.

By this catalogue we would like to turn to you, our customers, and declare our willingness to make the most suitable product for your manufacturing, and also to assure you that you'll make the best choice.

Please use the following telephone numbers for a twenty-four-hour contact with us: +35967302220; +359885000555; +359888223344 or you can write to us at balkanskoeho@abv.bg

ELECTRIC WIRE ROPE HOISTS

The wire rope hoists of MT series are the inheritors of the world's most popular series T of wire rope hoists. By keeping the basic technical features and thanks to the use of a new body construction, contemporary steel ropes, hooks, etc., we offer our customers a series of hoists with much extended opportunities like capacity, lifting speed and conveying speed. This expands new opportunities for a more efficient operation of our products.

Technical data:

Voltage: 380- 400V (special executions- by request) Frequency: 50 Hz (special executions- by request)

Operational voltage: 24V, (42V) Class of protection IP54 (EN 60529)

Operational conditions *

- climate- normal, tropical or marine
- normal or chemically aggressive environment
- temperature of the environment
- 1) normal: from -25°C up to +40°C
- 2) low: from -40° C up to $+40^{\circ}$ C
- relative air humidity- 80% at 20°C
- in closed rooms or in the open air under a shelter by a normal fire-hazard
- * special execution by a request

STRUCTURE

The hoists are based on a module construction consisting of the following elements:

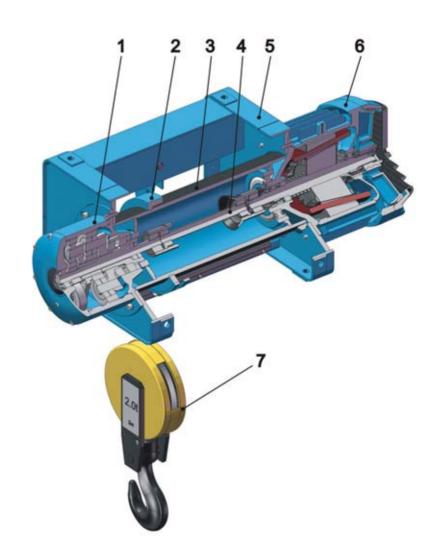
1. REDUCTION GEAR

The two-stepped planetary reduction gear is positioned out of the roll or the body of the hoist.

The solid construction allows a reliable torque transmission towards the roll of the machine. The use of high-quality materials during the manufacturing process of the reduction gear is a guarantee for its reliable performance. Its positioning allows an easy service during the period of use.

2. ROPE LEAD

The rope lead ensures the correct arrangement and lead of the rope in the screw channel of the roll, and also its normal going out of it. Apart this, it also functions for operating the cut-offs of the lifting mechanism, which are fixing the end up and end down position of the hook.





3. ROLL

The roll is positioned axle-like to the reduction gear and the electric motor. It has got ball bearings at the front guards of the electric motor and the reduction gear. It has also been designed with a screw channel for positioning the rope, according to DIN 15020.

4. TOOTHED CLUTCH

A construction that allows safe transmission of the motor torque to the reduction gear shaft, with sufficient possibility for axial and angle compensation- all this guarantees a normal and safe performance of the machine.

5. BODY

It's a steel-welded construction with a prism form made of bended profiles.

The construction has got a sufficient strength and allows different kinds of reeving systems to be realized, and also different kinds of suspensions and executions without the use of additional elements.

6. LIFTING ELECTRIC MOTOR

It's a three-phase induction motor with a cone rotor and a built-in brake. Typical for it is its simple construction giving it a great reliability and maintainability. The completely automatic brake allows safe hold of the load. It is simple in service and adjustment during the process of operation.

Class of protection IP54, IP22 (EN 60529) for the brake; class of insulation F (H- by agreement with the customer). We can also offer double-speeded executions with a ratio of micro-speed: main-speed- 1:4; 1:6, or stepless ones by

request. All electric motors are equipped with a coil overheating protection.

There is a stop of the end hook positions built-in in the electro motor's terminal box.

7. HOOK

The hook construction and the roller block of the reeving are performed according to the requirements of DIN 15400.

CONTROL BLOCK

The control block has been designed as a cabinet with electro appliances and it ensures all requirements for safety and elements protection. It is mainly based on circuit closer control of the electro motors, with an option for performing radio or frequency control. Class of protection IP54.

CONTROL DESK

Contemporary design, materials ensuring high level of safety, option for a stepless control, class of protection IP65.

MONORAIL RUNNING GEAR

Normal and reduced headroom execution. They are being driven by electric motors with cone rotor and an automatic cone brake, single and double-speeded (ratio 1:3, and step-less also by request), class of protection IP54, class of insulation F. These can be driven on rectilinear and curve sections, onto single girder roads with 90...300 mm in width.

DOUBLE-GIRDER CRANE TROLLEY

Executions in a variety of lifting capacity, driven by one or two gearmotor groups, equipped with electric motors with cone rotor and an automatic cone brake, single and double-speeded (ratio 1:3, and stepless also by request), class of protection IP54, class of insulation F. Great variety of wheel-gauge (1000 -2800 mm).

STANDARD EXECUTIONS

Stationary

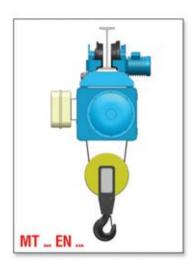
Lifting capacity: 160 – 32 000 kg special executions- up to 63 000 kg **Reeving:** 1/1; 2/1; 4/1; 2/2; 4/2

special executions- 6/1; 8/1; 2x2/1-1; 2x3/1-1; 2x4/1-1

Lift height: 4.5 - 104 m

Lift speed: 1- 32 m/min (by microscope at a rate of 1:4 and 1:6)





With a single-girder trolley (normal headroom height)

Lifting capacity: 160 - 20 000 kg

Reevin: 2/1; 4/1

special executions- 1/1; 2/2; 2x2/1-1

Lift height: 4.5 – 60 m

special executions- up to 120 m

Lift speed: 1- 32 m/min (by microscope at a rate of 1:4 and 1:6) **Conveying speed:** 8; 10; 12; 15; 20; 32; 12/4; 15/5; 20/6; 32/10 m/min

With a single-girder trolley (reduced headroom height)

Lifting capacity: 320 – 16 000 kg special executions- up to 20 000 kg

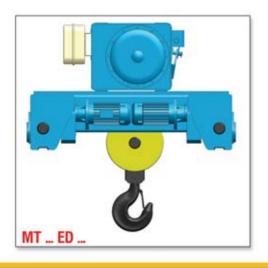
Reeving: 2/1; 4/1

special executions- 4/2 **Lift height:** 4.5 – 60 m

Lift speed: 1- 32 m/min (by microscope at a rate of 1:4 and 1:6)

Conveying speed: 8; 10; 12; 15; 20; 32; 12/4; 15/5; 20/6; 32/10 m/min





With a double-girder trolley

Lifting capacity: 1000 – 32 000 kg special executions- up to 63 000 kg

Reeving: 1/1; 2/1; 4/1; 2/2; 4/2

special executions- 6/1; 8/1; 2x2/1-1; 2x3/1-1; 2x4/1-1

Lift height: 4.5 - 60 m

special executions- up to 120m

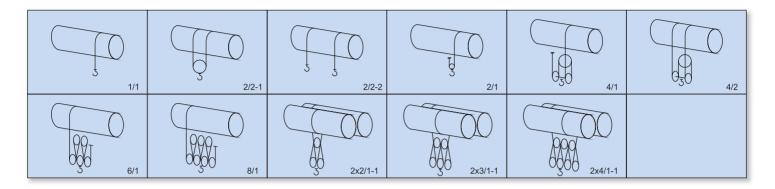
Lift speed: 1- 32 m/min (by microscope at a rate of 1:4)

Conveying speed: 8; 10; 12; 15; 20; 32; 40 m/min

(by microscope at a rate of 1:3)

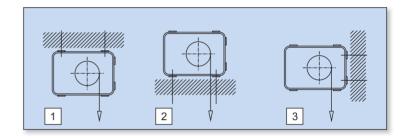
Gauge: 1 000- 2 800 mm

REEVING SYSTEM



MODE OF FIXTURE

- 1.Hung
- 2.Stand
- 3.Side-fixed



CRITERIA FOR THE CHOICE

In order to be able to make the right choice of a lifting device you need to know:

- 1. The maximum load that is going to be uplifted.
- 2. The maximum height of the lift.
- 3. The necessary speed of the lift.
- 4. The operational conditions.

After that you need to determine the operational rate group of the lifting device according to FEM 9.511, DIN 15020, ISO 4301 or FOCT 25835.

With regard to this you need to define in advance:

- class of loading
- class of use

The class of loading can be determined by the loading factor K, using the formula:

$$K=\sum [(\mathbf{Q}_{i} / \mathbf{Q}_{nom})^{3}. \mathbf{t}_{i} / \sum \mathbf{t}_{i}], \text{ where:}$$

Q- load being lifted by the device for a definite time ti

Q nom- the nominal (maximum) capacity of the device

t- duration of operation with load Qi

 $\sum t_i$ - sum of time for device operation with load.

After that the average machine time Tm for a day is being defined:

$T_{M} = 2.H.N.T / 60.V$, where:

H- average height of lift

N- number of cycles per hour (a cycle means: lift-pause-lift down-pause)

T- daily duration of operation

V- lift speed, m/min

The data received is used to define the operational rate group, and then you may continue with the choice of a lifting device.

EXAMPLE

Lifting capacity 2000 kg Average height of lift 3m Lift speed 8m/min Reeving 2/1 Class of loading medium Number of cycles per hour 30 Daily duration of operation Τ 8 h Explosively hazard environment acetylene

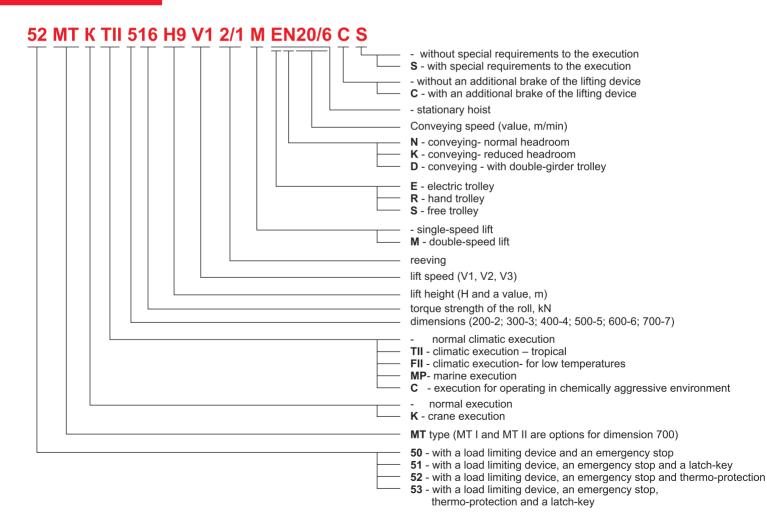
The average machine time per a day is calculated:

 $T_{M} = 2.H.N.T/60.V = 2.2.30.8/60.8 = 3 h$

Using the table for operation range, for T_M = 3h and class of loading "medium", you can define the group of operation range for the lifting device- 2 m, according to FEM 9.511.

Knowing the needed capacity of 2000 kg and using the already defined group of operation range -2m, and the type of reeving -2/1, we can define the lifting device as type MT410.

NOTATION



CLASSIFICATION OF THE LIFTING DEVICES

Class of loading	Loading factor, K	Perfor	mance		Class	of use	
			0 10 50 100		Тм,	h 1)	
		Operation with	2	2-4	4-8	8-16	>16
LIGHT	< 0.125	Operation with loads less than the	apacil		Тмо	, h 2)	•
LIGITI	V 0.125	nominal ones	Appended a fulfill with the fulfill of the fulfill	6 300	12 500	25 000	50 000
			0 16.7 33.3 50 100			л, h	
		Operation with medium and	73	1-2	2-4	4-8	8-16
MEDIUM	0.125 - 0.25	nominal loads	73 46 20 % machine time	3 200	6 300	12 500	25 000
		Operation with	0 50 100		ΤΛ	л, h	
		Operation with nominal or close to	4	0,5-1	1-2	2-4	4-8
HEAVY	0.25 - 0.5	nominal loads	apacii		Тм	io, h	•
TILAVI	0.23 - 0.3	nonina idago	Appended of the state of the st	1 600	3 200	6 300	12 500
		Repeated	0 90 100			л, h	
\ (ED) (operation with	oity 80	0,25-0,5	0,5-1	1-2	2-4
VERY	0.5 - 1	nominal or close to	capae		Тм	o, h	
HEAVY		nominal loads	% Intitude capacity. % machine time	800	1 600	3 200	6 300
duration of sv	witching, %			30	40	50	60
frequency of	switching h ⁻¹			180	240	300	360
maquamay ar			I	100	240	000	000
			FEM 9.511 / DIN15020	1Am	2m	3m	4m
	Onerational rate	group	FEM 9.511 / DIN15020	1Am M4	2m M5	3m M6	4m M7
(Operational rate	group	ISO 4301	M4	M5	M6	M7
(Operational rate	group					
1/1	REEVING		ISO 4301 FOCT 25835	M4	M5 3M	M6 4M	M7
1/1 2/2	REEVING	4/1	ISO 4301	M4	M5 3M	M6	M7
1/1 2/2	REEVING	4/1	ISO 4301 FOCT 25835	M4	M5 3M	M6 4M	M7
1/1 2/2	REEVING	4/1	ISO 4301 FOCT 25835	M4	M5 3M	M6 4M	M7
1/1 2/2 L	REEVING 2/1 4/2 IFTING CAPAC 320 400	4/1	ISO 4301 FOCT 25835	M4 2M	M5 3M	M6 4M	M7 5M
1/1 2/2 L 160 200 250	REEVING 2/1 4/2 IFTING CAPAC 320 400 500	4/1 TY, kg - - -	ISO 4301 FOCT 25835 DIMENSIONS	M4 2M	M5 3M	M6 4M PE	M7 5M
1/1 2/2 L 160 200 250 320	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630	4/1 TY, kg - - - 1250	ISO 4301 FOCT 25835 DIMENSIONS MT200	M4 2M	M5 3M TY	M6 4M PE - MT201 -	M7 5M
1/1 2/2 L 160 200 250 320 400	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800	4/1 TY, kg 1250 1600	ISO 4301 FOCT 25835 DIMENSIONS	M4 2M	M5 3M TY MT202	M6 4M PE	M7 5M MT200*
1/1 2/2 L 160 200 250 320 400 500	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000	4/1 TY, kg 1250 1600 2000	ISO 4301 FOCT 25835 DIMENSIONS MT200	M4 2M	M5 3M TY	M6 4M PE - MT201 -	M7 5M MT200* - MT303* -
1/1 2/2 L 160 200 250 320 400 500 630	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250	4/1 TY, kg 1250 1600 2000 2500	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300	M4 2M	M5 3M TY MT202	M6 4M PE 	M7 5M MT200*
1/1 2/2 L 160 200 250 320 400 500 630 800	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600	4/1 TY, kg 1250 1600 2000 2500 3200	ISO 4301 FOCT 25835 DIMENSIONS MT200	M4 2M	M5 3M TY MT202 - MT305	M6 4M PE - MT201 -	M7 5M MT200* MT303* - MT406*
1/1 2/2 L 160 200 250 320 400 500 630 800 1000	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600 2000	4/1 TY, kg 1250 1600 2000 2500 3200 4000	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300		M5 3M TY MT202	M6 4M PE - MT201 - - MT304 - - MT408	M7 5M MT200* - MT303* -
1/1 2/2 L 160 200 250 320 400 500 630 800 1000 1250	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600 2000 2500	4/1 TTY, kg 1250 1600 2000 2500 3200 4000 5000	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300 MT400	M4 2M	M5 3M TY MT202 MT305 - MT410 -	M6 4M PE 	M7 5M MT200* - MT303* - MT406* - MT510*
1/1 2/2 L 160 200 250 320 400 500 630 800 1000 1250 1600	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600 2000 2500 3200	4/1 TY, kg 1250 1600 2000 2500 3200 4000 5000 6300	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300		M5 3M TY MT202 - MT305	M6 4M PE	M7 5M MT200* MT303* - MT406*
1/1 2/2 L 160 200 250 320 400 500 630 800 1000 1250 1600 2000	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000	4/1 TY, kg 1250 1600 2000 2500 3200 4000 5000 6300 8000	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300 MT400		M5 3M TY MT202 MT305 MT410 - MT516 -	M6 4M PE - MT201 - - MT304 - - MT408	M7 5M MT200* MT303* - MT406* - MT510* - MT616*
1/1 2/2 L 160 200 250 320 400 500 630 800 1000 1250 1600 2000 2500	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000 5000	4/1 TY, kg 1250 1600 2000 2500 3200 4000 5000 6300 8000 10000	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300 MT400 MT500		M5 3M TY MT202 MT305 - MT410 -	M6 4M PE	M7 5M MT200* - MT303* - MT406* - MT510*
1/1 2/2 L 160 200 250 320 400 500 630 800 1000 1250 1600 2000 2500 3200	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000 5000 6300	4/1 TY, kg 1250 1600 2000 2500 3200 4000 5000 6300 8000 10000 12500	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300 MT400 MT500	M4 2M	M5 3M TY MT202 MT305 MT410 - MT516 - MT625	M6 4M PE	M7 5M MT200* - MT303* - MT406* - MT510* - MT616* - MT725
1/1 2/2 L 160 200 250 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000 5000 6300 8000	4/1 TY, kg 1250 1600 2000 2500 3200 4000 5000 6300 8000 10000 12500 16000	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300 MT400 MT500 MT600		M5 3M TY MT202 MT305 - MT410 - MT516 - MT625 - MT740	M6 4M PE	M7 5M MT200* MT303* MT406* - MT510* - MT616* - MT725
1/1 2/2 L 160 200 250 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000 5000	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000 5000 6300 8000 10000	4/1 TY, kg 1250 1600 2000 2500 3200 4000 5000 6300 8000 10000 12500 16000 20000	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300 MT400 MT500	M4 2M	M5 3M TY MT202 MT305 - MT410 - MT516 - MT625 - MT740 MT750	M6 4M PE	M7 5M MT200* MT303* - MT406* - MT510* - MT616* - MT725
1/1 2/2 L 160 200 250 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000 5000 6300	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000 5000 6300 8000 10000 12500 10000 12500	4/1 TY, kg 1250 1600 2000 2500 3200 4000 5000 6300 8000 10000 12500 16000 20000 25000	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300 MT400 MT500 MT600	M4 2M	M5 3M TY MT202 MT305 - MT410 - MT516 - MT625 - MT740	M6 4M PE	M7 5M MT200* MT303* - MT406* - MT510* - MT616*
1/1 2/2 L 160 200 250 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000 5000 6300 8000	REEVING 2/1 4/2 IFTING CAPAC 320 400 500 630 800 1000 1250 1600 2000 2500 3200 4000 5000 6300 8000 10000	4/1 TTY, kg 1250 1600 2000 2500 3200 4000 5000 6300 8000 10000 12500 16000 20000 25000 32000	ISO 4301 FOCT 25835 DIMENSIONS MT200 MT300 MT400 MT500 MT600	M4 2M	M5 3M TY MT202 MT305 MT410 - MT516 - MT625 - MT740 MT750 MT763 -	M6 4M PE	M7 5M MT200* MT303* - MT406* - MT510* - MT616* - MT725

TECHNICAL DATA

			REEVING	1/1 – 2/2 1)			
LIFTING CAPACITY	TYPE	DIN 15020	LIFTING HEIGH	⊣T, m	LIFTIN	IG SPEED,	m/min
kg	TIFE	FEM 9.511	1/1	2/2	V1	V2	V3
200	MT201	3m	12;20;28;42;56;74;84	1	16; 4/16	24; 4/24	32; 5/32
250	MT202	2m	12;20;28;42;56;74;84 -		16; 4/16	24; 4/24	32; 5/32
400	MT304	3m	12;20;26;40;54;76;84	8;12.5;22;31	16; 4/16	24; 4/24	32; 5/32
500	MT305	2m	12;20;26;40;54;76;84	8;12.5;22;31	16; 4/16	24; 4/24	32; 5/32
800	MT408	3m	11;18;24;40;52;68;78	5;12;18;26	16; 4/16	24; 4/24	32; 5/32
1 000	MT410	2m	11;18;24;40;52;68;78	5;12;18;26	16; 4/16	24; 4/24	32; 5/32
1 250	MT512	3m	11;18;24;36;50;64;76	10;17;24	16; 4/16	24; 4/24	32; 5/32
1 600	MT516	2m	11;18;24;36;50;64;76	10;17;24	16; 4/16	24; 4/24	32; 5/32
2 000	MT620	3m	9;16;22;34;46;60;70;80	7;15;22;32; 37;44	16; 4/16	24; 4/24	32; 5/32
	MT625	2m	9;16;22;34;46;60;70;80	7;15;22;32; 37;44	16; 4/16	24; 4/24	32; 5/32
2 500	MTZOE	4m	18.5;29;40;54;68;81;92; 108;120.5	13;20;27;34; 39;47;53	16; 4/16	24; 4/24	32; 5/32
	MT725	3m	16;24;34;46;58;70;80 94;104	13;20;27;34; 39;47;53	16; 4/16	24; 4/24	32; 5/32
3 200	MT732	3m	16;24;34;46;58;70;80 94;104	13;20;27;34; 39;47;53	16; 4/16	24; 4/24	32; 5/32
4 000	MT I 750	3m	16;24;34;46;58;70;80 94;104	13;20;27;34; 39;47;53	16; 4/16	24; 4/24	-
4 000	MT740	2m	16;24;34;46;58;70;80 94;104	13;20;27;34; 39;47;53	16; 4/16	24; 4/24	32; 5/32
F 000	MT II 750	3m	16;24;34;46;58;70;80 94;104	13;20;27;34; 39;47;53	12; 3/12	8; 3/18	-
5 000	5 000 MT I 750 2m		16;24;34;46;58;70;80 94;104	13;20;27;34; 39;47;53	16; 4/16	24; 4/24	-
6 300	MT II 763	2m	16;24;34;46;58;70;80 94;104	13;20;27;34; 39;47;53	12; 3/12	18; 3/18	-
8 000	MT780 1Am		16;24;34;46;58;70;80 94;104	13;20;27;34; 39;47;53	8; 2/8	12; 2/12	-

¹⁾ Refers only to stationary wire rope hoists, without any limit of load







			REEVING	G 2/1 – 4/2			
LIFTING CAPACITY	TYPE	DIN 15020	LIFTING HEIG	HT, m	LIFTIN	NG SPEED,	m/min
kg	ITPE	FEM 9.511	2/1	4/2	V1	V2	V3
400	MT201	3m	6;10;14;21;28;37;42	-	8; 2/8	12; 2/12	16; 2.5/16
500	MT202	2m 6;10;14;21;28;37;42 -		8; 2/8	12; 2/12	16; 2.5/16	
800	MT304	3m	6;10;13;20;27;38;42	6.5;11;15.5	8; 2/8	12; 2/12	16; 2.5/16
1 000	MT305	2m	6;10;13;20;27;38;42	6.5;11;15.5	8; 2/8	12; 2/12	16; 2.5/16
1 600	MT408	3m	5.5;9;12;20;26;34;39; 47;52;60	6;9;13	8; 2/8	12; 2/12	16; 2.5/16
2 000	MT410	2m	5.5;9;12;20;26;34;39; 47;52;60	6;9;13	8; 2/8	12; 2/12	16; 2.5/16
2 500	MT512	3m	5.5;9;12;18;25;32;38 43;49	5;8.5;12	8; 2/8	12; 2/12	16; 2.5/16
3 200	MT516	2m	5.5;9;12;18;25;32;38 43;49	5;8.5;12	8; 2/8	12; 2/12	16; 2.5/16
4 000	MT620	3m	4.5;8;11;17;23;30;35; 40;46;54;60	3.6;8.5;11; 16;18.5;22	8; 2/8	12; 2/12	16; 2.5/16
	MT625	2m	4.5;8;11;17;23;30;35; 40;46;54;60	3.6;8.5;11; 16;18.5;22	8; 2/8	12; 2/12	16; 2.5/16
5 000	MTZOE	4m	9;14.5;20;27;34;40.5; 46;54;60	6.5;10;13.5;17; 19.5; 23.5;26.5	8; 2/8	12; 2/12	16; 2.5/16
	MT725	3m	8;12;17;23;29;35;40; 47;52	6.5;10;13.5;17; 19.5; 23.5;26.5	8; 2/8	12; 2/12	16; 2.5/16
6 300	MT732	3m	8;12;17;23;29;35;40; 47;52	6.5;10;13.5;17; 19.5; 23.5;26.5	8; 2/8	12; 2/12	16; 2.5/16
8 000	MT I 740	3m	8;12;17;23;29;35;40; 47;52	6.5;10;13.5;17; 19.5; 23.5;26.5	8; 2/8	12; 2/12	-
8 000	MT740	2m	8;12;17;23;29;35;40; 47;52	6.5;10;13.5;17; 19.5; 23.5;26.5	8; 2/8	12; 2/12	16; 2.5/16
10,000	MT II 750	3m	8;12;17;23;29;35;40; 47;52	4.5;7.5;10.5 15.5;19.5; 22	6; 1.5/6	9; 1.5/9	-
10 000	10 000 MT I 750 2m		8;12;17;23;29;35;40; 47;52	6.5;10;13.5;17; 19.5; 23.5;26.5	8; 2/8	12; 2/12	-
12 500	MT II 763	2m	8;12;17;23;29;35;40; 47;52	4.5;7.5;10.5 15.5;19.5; 22	6; 1.5/6	9; 1.5/9	-
16 000	MT780	1Am	8;12;17;23;29;35;40; 47;52	4.5;7.5;10.5 15.5;19.5; 22	4; 1/4	6; 1/6	-







TECHNICAL DATA

			REEVING 4/1			
LIFTING CAPACITY	TYPE	DIN 15020	LIFTING HEIGHT, m	LIFTIN	IG SPEED,	m/min
kg	TIPE	FEM 9.511	Ell Tilled HEIGHT, III	V1	V2	V3
1 600	MT304	3m	6.5;10;13.5	4; 1/4	6; 1/6	8; 1.25/8
2 000	MT305	2m	6.5;10;13.5	4; 1/4	6; 1/6	8; 1.25/8
3 200	MT408	3m	6;10;13	4; 1/4	6; 1/6	8; 1.25/8
4 000	MT410	2m	6;10;13	4; 1/4	6; 1/6	8; 1.25/8
5 000	MT512	3m	6;9;12.5	4; 1/4	6; 1/6	8; 1.25/8
6 300	MT516	2m	6;9;12.5	4; 1/4	6; 1/6	8; 1.25/8
8 000	MT620	3m	5.5;8.5;11.5;15;17.5;20	4; 1/4	6; 1/6	8; 1.25/8
	MT625	2m	5.5;8.5;11.5;15;17.5;20	4; 1/4	6; 1/6	8; 1.25/8
10 000	MT725	4m	10;13.5;17;20; 23; 27; 30	4; 1/4	6; 1/6	8; 1.25/8
	1011723	3m	8.5;11.5;14.5;17.5; 20; 23.5; 26	4; 1/4	6; 1/6	8; 1.25/8
12 500	MT732	3m	8.5;11.5;14.5;17.5; 20; 23.5; 26	4; 1/4	6; 1/6	8; 1.25/8
16 000	MT I 740	3m	8.5;11.5;14.5;17.5; 20; 23.5; 26	4; 1/4	6; 1/6	-
16 000	MT740	2m	8.5;11.5;14.5;17.5; 20; 23.5; 26	4; 1/4	6; 1/6	8; 1.25/8
20 000	MT II 750	3m	8.5;11.5;14.5;17.5; 20; 23.5; 26	3; 0.75/3	4.5; 1.25/4.5	-
20 000	MT I 750	2m	8.5;11.5;14.5;17.5; 20; 23.5; 26	4; 1/4	6; 1/6	-
25 000	MT II 763	2m	8.5;11.5;14.5;17.5; 20; 23.5; 26	3; 0.75/3	4.5; 1.25/4.5	-
32 000	MT780	1Am	8.5;11.5;14.5;17.5; 20; 23.5; 26	2; 0.5/2	3; 0.5/3	-

TECHNICAL DATA - SPECIAL EXECUTIONS

LIETING	REEVING 6/1										
LIFTING CAPACITY	TVDE	DIN 15020	LIFTING HEIGHT, m	LIFTI	NG SPEED, r	m/min					
kg	kg TYPE	FEM 9.511	Ell Tilled HEIGHT, III	V1	V2	V3					
25 000	MT I 740	3m	5.5; 7.5; 9.5; 11.5; 13; 15.5; 17	2.5; 0.6/2.5	4; 0.6/4	-					
22,000	MT II 750	3m	5.5; 7.5; 9.5; 11.5; 13; 15.5; 17	2; 0.5/2	3; 0.5/3	-					
32 000	MT I 750	2m	5.5; 7.5; 9.5; 11.5; 13; 15.5; 17	2.5; 0.6/2.5	4; 0.6/4	-					
40 000	MT II 763	2m	5.5; 7.5; 9.5; 11.5; 13; 15.5; 17	2; 0.5/2	3; 0.5/3	-					
50 000	MT780	1Am	5.5; 7.5; 9.5; 11.5; 13; 15.5; 17	1.3; 0.3/1.3	2; 0.3/2	-					

TECHNICAL DATA - SPECIAL EXECUTIONS

			REEVING	G 8/1				
LIFTING CAPACITY	TYPE	DIN 15020		LIFTI	LIFTING SPEED, m/min			
kg	1111	FEM 9.511	Ell TINO FIEIGITT, III	V2	V3			
32 000	MT I 740	3m	6; 7.5; 9; 10; 12; 13;	2.0; 0.5/2.0	3; 0.5/3	-		
32 000	MT 740	2m	6; 7.5; 9; 10; 12; 13;	2.0; 0.5/2.0	3; 0.5/3	4; 0.6/4		
40 000	MT II 750	3m	6; 7.5; 9; 10; 12; 13;	1.5; 0.32/1.5	2.25; 0.32/2.25	-		
40 000	MT I 750	2m	6; 7.5; 9; 10; 12; 13;	2.0; 0.5/2.0	3; 0.5/3	-		
50 000	MT II 763	2m	6; 7.5; 9; 10; 12; 13;	1.5; 0.32/1.5	2.25; 0.32/2.25	-		
63 000	MT 780	1Am	6; 7.5; 9; 10; 12; 13;	1.0; 0.25/1.0	1.5; 0.25/1.5	-		

LIETING			REEVING 2X2/1-1					
LIFTING CAPACITY	TYPE	DIN 15020	LIFTING HEIGHT, m	LIFTI	m/min			
kg	IIFE	FEM 9.511	Ell Tillo HEIGHT, III	V1	V2 V3			
16 000	MT I 740	3m	8;12;17;23;29;35;40; 47;52	8; 2/8	12; 2/12	-		
10 000	MT 740	2m	8;12;17;23;29;35;40; 47;52	8; 2/8	12; 2/12	16; 2.5/16		
20 000	MT II 750	3m	8;12;17;23;29;35;40; 47;52	6; 1.5/6	9; 1.5/9	-		
20 000	MT I 750	2m	8;12;17;23;29;35;40; 47;52	8; 2/8	12; 2/12	-		
25 000	MT II 763	2m	8;12;17;23;29;35;40; 47;52	6; 1.5/6	9; 1.5/9	-		
32 000	MT 780	1Am	12;17;23;29;35;40; 47;52	4; 1/4	6; 1/6	-		

LIETING			REEVING 2X3/1-1			
LIFTING CAPACITY	TYPE	DIN 15020	LIFTING HEIGHT, m	LIFTI	n/min	
kg	ITPE	FEM 9.511	LIFTING FILIGITI, III	V1	V2	V3
25 000	MT I 740	3m	5.5; 8.5; 11.5; 13; 15.5; 19.5; 23.5; 26.5; 31; 35	5; 1.2/5	8; 1.2/8	-
32 000	MT II 750	3m	5.5; 8.5; 11.5; 13; 15.5; 19.5; 23.5; 26.5; 31; 35	4; 1/4	6; 1/6	-
32 000	MT I 750	2m	5.5; 8.5; 11.5; 13; 15.5; 19.5; 23.5; 26.5; 31; 35	5; 1.2/5	8; 1.2/8	-
40 000	MT II 763	2m	5.5; 8.5; 11.5; 13; 15.5; 19.5; 23.5; 26.5; 31; 35	4; 1/4	6; 1/6	-
50 000	MT780	1Am	5.5; 8.5; 11.5; 13; 15.5; 19.5; 23.5; 26.5; 31; 35	2.6; 0.6/2.6	4; 0.6/4	-

LIFTING			REEVING 2X4/1-1			
CAPACITY	TYPE	DIN 15020	LIFTING HEIGHT, m	LIFTING SPEED, m/r		n/min
kg	IIFL	FEM 9.511		V1	V3	
32,000	MT I 740	3m	8.5;11.5;14.5;17.5; 20; 23.5; 26	4; 1/4	6; 1/6	-
32 000	MT 740	2m	8.5;11.5;14.5;17.5; 20; 23.5; 26	4; 1/4	6; 1/6	8; 1.25/8
40 000	MT II 750	3m	8.5;11.5;14.5;17.5; 20; 23.5; 26	3; 0.75/3	4.5; 1.25/4.5	-
40 000	MT I 750	2m	8.5;11.5;14.5;17.5; 20; 23.5; 26	4; 1/4	6; 1/6	-
50 000	MT II 763	2m	8.5;11.5;14.5;17.5; 20; 23.5; 26	3; 0.75/3	4.5; 1.25/4.5	-
63 000	MT 780	1Am	8.5;11.5;14.5;17.5; 20; 23.5; 26	2; 0.5/2	3; 0.5/3	-

ELECTRIC MOTOR PARAMETERS

PARAMETERS OF THE LIFTING ELECTRIC MOTORS WITH A BUILT-IN BRAKE (400 V, 50 HZ)

Suc	sions ng y, kg o by 1.511			S	ingle- s	speed I	ift				Double-	speed lift		
ensic	isi iii d. 6.9.		5 \ \V1		V2		٧	/3	V1		\	/2	V3	
Dim	cap	Grou	Рн, kW	Iн, А	Рн, kW	lн, А	Рн, kW	Iн, А	Рн, kW	Iн, А	Рн, kW	Iн, А	Рн, kW	Iн, А
MT202	500		0.75	3.3	1.1	3.6	4.5	12.0	0.16/0.75	3.0/3.4	0.16/1.1	3.0/3.5	0.7/4.5	6.0/9.5
MT305	1000		1.5	5.8	2.3	6.0	4.5	12.0	0.33/1.5	3.7/5.0	0.33/2.2	3.7/6.2	0.7/4.5	6.0/9.5
MT410	2000		3.0	11.0	4.5	12.0	12.0	28.0	0.7/3.0	6.0/7.5	0.7/4.5	6.0/9.5	1.7/12.5	15.0/23.0
MT516	3200	2m	4.5	12.3	7.5	17.0	12.0	28.0	1.0/4.8	11.0/12.0	1.0/7.5	11.0/15.0	1.7/12.5	15.0/23.0
MT625	5000	2111	8.0	24.5	12.0	28.0	15.5	29.5	1.7/8.0	15.0/18.0	1.7/12.5	15.0/23.0	4.0/24.0	70.0/48.0
MT740	8000		12.5	36.0	22	49	22	49	3.0/13.0	40.0/30.0	4.0/24.0	70.0/48.0	4.0/24.0	70.0/48.0
MT750	10000		16	36	22	49	-	-	4.0/16	70/36	4.0/24.0	70.0/48.0	-	-
MT763	12500		16	36	22	49	-	-	4.0/16	70/36	4.0/24.0	70.0/48.0	-	-
MT780	16000	1Am	12.5	36	22	49	-	-	3.0/13.0	40.0/30.0	4.0/24.0	70.0/48.0	-	-

PARAMETERS OF THE ELECTRIC MOTORS WITH A BUILT-IN BRAKE FOR MONORAIL HOIST RUN-**NING GEARS (400 V, 50 HZ)**

Suc	Lift	ting	by 511	Lifting hoig	ht m			Conveying	speed, m/r	nin	
nsic	capac	city, kg	<u>අ</u> ල	Lifting height, m		8.10.12, 20		15,	, 32	32 4/12, 5/15, 6	
Dimensions	2/1	4/1	Grou	2/1	4/1	Рн, kW	Iн, А	Рн, kW	Iн, А	Рн, kW	Iн, А
MT202	500	-		6,10,14	-	0.12	0.82	0.18	0.75	0.06/0.18	1.4/1.2
MT20F	1000	-		6,10,13	-	0.12	0.02	0.16	0.75	0.00/0.16	1.4/1.2
MT305	-	2000		-	6.5						
MT410	2000	4000	2m	5.5,9,12	6	0.25	1.2	0.37	1.5	0.11/0.37	1.7/1.4
MT516	3200	-		5.5,9,12	-						
INITSTO	-	6300		-	6	0.37	1.8	0.55	2.1	0.11/0.37	1.7/1.4
MT625	5000	-		4.5,8,11	-	0.37	1.0	0.55	۷.۱	0.11/0.37	1.7/1.4
* except	exceptional for MT 516 (4x1) and MT625										

Suc	Lift	ting	by 511	Lifting boi	ight m			Conveying	speed, m/r	nin		
ınsic	capac	city, kg	მ. ც	Litting fier	ng height, m 8,10,12, 20		12, 20	15,	32	4/12, 5/15, 6	5.5/20, 10/32*	
Dimensions	2/1	4/1	Grou	2/1	4/1	Рн, kW	Iн, А	Рн, kW	Iн, А	Рн, kW	Iн, А	
MT202	500	-		21,28,37,42	-							
MT305	1000	-		20,27,38,42	-	2x0.12	0.82	2x0.18	0.75	2x0.06/0.18	1.4/1.2	
W 1 303	-	2000		-	10,13.5							
MT410	2000	4000		20,26,34,39 47,52,60	10,13			2x0.37				
MT516	3200	6300	2	18,25,32 38,43,49	9,12.5	2x0.25	1.2		1.5	2x0.11/0.37	1.7/1.4	
MT625	5000	-	2m	17,23,30,35 40,46,54,60	-							
W11025	-	10000		- 5.5,8.5,11.5 15,17.5,20								
MT740	8000			0 40 47 00 00		2x0.37	1.8	2x0.55	2.1	2x0.11/0.37	1.7/1.4	
MT750	10000	-		8,12,17,23,29 35,40,47,52	-	2.0.01	1.0					
MT763	12500			00, 10, 47,02								
* exception	onal for M	T625 (4/1)	and MT7	40, MT750 and	MT763							



ELECTRIC MOTOR PARAMETERS

Dimensions	Lifting capacity, kg	Group by FEM 9.511	Lifting height, m	Conveying speed, m/min									
				8, 10,12		15,18		4/12, 5/15		20		6.5/20	
	4/1		4/1	Рн, kW	Iн, А	Рн, kW	Iн, А	Рн, kW	Iн, А	Рн, kW	Iн, А	Рн, kW	Iн, А
MT740	16000	2m	8.5,11.5,14.5 17.5,20,23.5,26	2x0.37	1.8	2x0.55	2.1	2x0.11/0.37	1.7/1.4	4x0.37	1.8	4x0.11/0.37	1.7/1.4

WE ALSO MANUFACTURE

T- wire rope hoists

The electric wire rope hoists T series are the most famous and well-sold electric hoists worldwide. More than 1 800 000 pieces have already been produced and sold in more than 40 countries. Their main advantages are: high reliability, durability, simple maintenance. These advantages in combination with the broad range of weight lifting capacity, lift and convey speeds, construction executions, and ability to be used in different conditions, make the hoists of this series preferred to the other executions despite their 30-year-old history.

BT- explosion-proof electric wire rope hoists

Based on the basic construction decisions of electric wire rope hoists series T and keeping its technical features, series BT electric explosion-proof wire rope hoists is intended to operate in an explosion hazardous environment.

The electrical equipment included in these goods, such as: electric motors, electric appliances panel, control panel, overtravel limit switches, etc., is manufactured in the so called "explosion-proof" execution, and it is marked by: (Ex) d IIB T5 and (Ex) d IIC T5.

BMT- explosion-proof electric wire rope hoists

The electric wire rope hoists BMT series are based on the basic technical solutions being used in BT and MT series. Based on the higher technical parameters of MT series and the already proven technical decisions of BT series regarding explosion proof, we have created an electric explosion-proof wire rope hoist having much better operational features, such as lifting capacity, lift speed and conveying speed. The electrical equipment is identical to BT series, which presupposes the identical explosion-proof execution and marking: (Ex) d IIB T5 and (Ex) d IIC T5.

Induction electro-motors

- 1. With built-in brakes, for the main lift of electric chain and wire rope hoists and other running gears from 0.75 kW up to 30 kW. Explosion-proof execution as an option.
- 2. With built-in brakes, for running gears of electric chain hoists and wire rope hoists and other lifting parts from 0.12 kW to 3 kW. Explosion-proof execution as an option.
- 3. Electric motors for general purposes, executions of IM B3, IM B5, IM B3, IM B14, etc., with or without a built-in brake from 0.55 kW to 37 kW.

Weight-lifting cranes

- 1. Single-girder underslung traveling cranes lifting capacity from 1 to 16 t and a span from 3 to 25 m.
- 2. Single-girder stationary traveling cranes lifting capacity from 1 to 16 t and a span from 4.5 to 25.5 m.
- 3. Double-girder stationary traveling cranes lifting capacity from 5 to 100 t and a span from 10.5 to 50 m.
- 4. Bracket stationary and wall-mounted cranes- lifting capacity from 1 to 10 t and an outrigger spread from 3 to 10 m. Ground and cabin control. Explosion-proof execution as an option.

Crane components

- 1.Reduction gears and geared motor groups intended for driving the running gears of girder cranes and other lifting equipment. These are available in a great variety of output revolutions and torques. They are driven by electric motors with built-in cone brakes. Explosion-proof execution as an option.
- 2. Front girders for stationary traveling cranes diameters of traveling wheels from 160 to 400 mm, load of the traveling wheel from 4000 to 19 500 kg, conveying speeds from 8 to 32 m/min. Explosion-proof execution as an option.
- 3.Cable trolleys intended for carrying supply and operation cables of traveling cranes. Available in executions for traveling onto profile or straight steel rope. Explosion-proof execution as an option.

