

ELECTRIC CHAIN HOIST

DMK SERIES



ELECTRIC CHAIN HOIST



DMK SERIES

DMK series, the most reliable and safe way to lift loads up to 4.000 kg.

The DMK electric hoists with self-braking conical motors, have always been synonymous with quality and reliability. Designed to meet the needs of the international market, they offer a wide range of uses, long-term reliability, safety guarantees during all operating phases and excellent value for money.

DMK hoists are also known for the quality of their components, the high technology used to machine mechanical parts, finishing and surface treatments.

The special water-repellent paintwork, applied with a completely enclosed electrostatic process, guarantees durability and constant top performance, including in particularly hostile environments.



MAX

4.000 KG

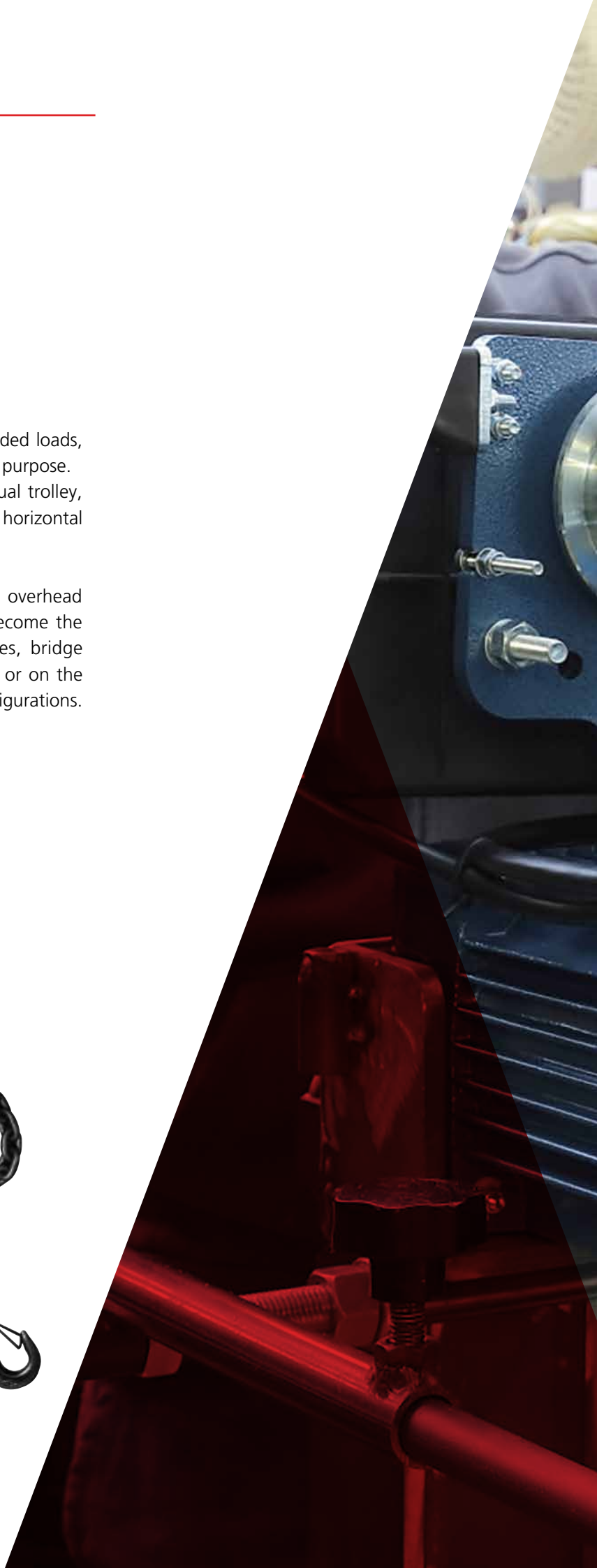
Quality and reliability
at your service



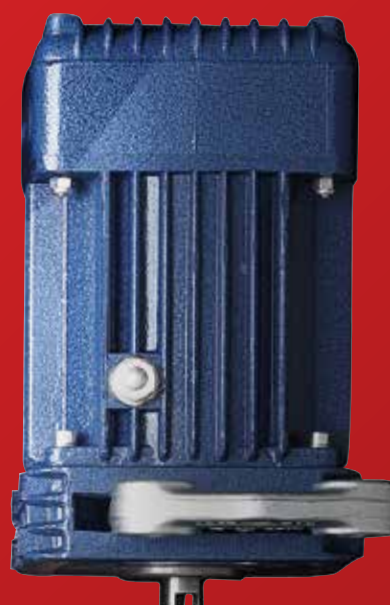
TROLLEYS

The electric chain hoist is generally used to lift un-guided loads, using a hook or handling accessories adequate for the purpose. When the hoist is combined with an electric or manual trolley, which runs on a beam, it ensures combined lifting and horizontal movement of the load.

The electric chain hoist and trolleys can be mounted overhead and fitted with monorails or be incorporated and become the completion of other lifting machines such jib cranes, bridge cranes. The electric chain hoist, positioned overhead or on the ground, can also be used in various fixed position configurations.



POWERFUL AND SAFE TROLLEYS AT YOUR SERVICE





DMK series electric chain hoists and electric trolleys are manufactured based on a modular component design, assembled together based on commercial needs, and make it possible to quickly and inexpensively create many standardised and special executions; in addition to the standard versions always available in the warehouse.

Thanks to the extreme compactness of the basic components, i.e. the motor and gearbox, they are assembled together in a coaxial line, in order to ensure the maximum use of the hook run and minimum encumbrance of the hoist.

The construction of all components is based on production processes that make it possible to create completely reliable and technically high-performing machines through economies of scale.

The high quality level is guaranteed and controlled by the company quality system certified according to the standard EN ISO9001: 2008



THE ELECTRIC CHAIN HOIST RANGE

The DMK Range – Series, Capacities and Lifting Speed.

4 BASIC SIZES

DMK 1-2-3-4, for loads from 100 to 4,000 kg, in FEM (ISO) service units 1Bm (M3) - 1Am (M4) - 2m (M5).

ONE LIFTING SPEED

Created with 1 polarity motor:

- ▶ 4, 6.3, 8 or 16 m/min 1 fall for 1 chain fall hoists
- ▶ 3.2 or 4 m/min 2 fall for 2 chain fall hoists

TWO LIFTING SPEEDS

Created with pole changing motor:

- ▶ 4/1.2, 6.3/2.1 or 8/2.5 m/min for 1 chain fall hoists
- ▶ 2.5/0.8 or 3.2/1 m/min. for 2 chain fall hoists

STANDARD HOOK PATH: up to 12 m

- ▶ over 12 m upon request

PROTECTION AND INSULATION OF ELECTRICAL PARTS

Self-braking In the lifting and travelling motors;

- ▶ IP55 protection – “F” insulation class
- ▶ DMK 1-2-3-4 brake: IP23
- ▶ Limit switch: IP65 minimum protection – 500 V maximum insulation voltage
- ▶ Cables: IEC 20/22 II 450/750 V maximum insulation voltage
- ▶ Non-standard protections and insulations are available upon request.

ELECTRICAL POWER SUPPLY

- ▶ Standard DMK electric chain hoists are designed to be powered with AC current with the following voltage:
 - three phase of 400 V - 50Hz. according to IEC 38-1
 - single phase of 230 V +/- 5% - 50 Hz. (for DMK 1-2-3 hoists at one speed and capacity up to 800 kg)
- ▶ Non-standard voltages and frequencies are available upon request.

NOMINAL USE CONDITIONS

IN THE STANDARD EXECUTION:

- ▶ Operating temperature: minimum -10°C; maximum +40°C
- ▶ Maximum relative humidity: 80%
- ▶ Maximum altitude 1000 m above sea level
- ▶ The machine must be installed indoors, in a well-ventilated place, free from corrosive fumes (acid fumes, saline mist, etc.)

NOISE LEVEL

- ▶ The sound pressure level emitted by the hoist when fully loaded is always less than 85 dB (A). The incidence of environmental characteristics such as the transmission of sound through metallic structures, reflection caused by combined machines and walls, is not included in the indicated level.



FIXED EXECUTION:

eyebolt suspension or hook suspension (upon request).



TROLLEY EXECUTION HAND-PUSHED:

horizontal movement by manually pushing the load.

ELECTRIC: movement is motorised (one or two speeds) and controlled directly from the hoist push button pendant.

CHAIN: horizontal movement by chain controlled by the operator who controls the trolley wheels.



LOW HEADROOM EXECUTION:

to use the maximum hook run, the hoist is fitted with a chain return system mounted on the trolley (electric or hand-push) with compact dimensions.



"CLIMBING" EXECUTION:

the climbing execution makes it possible to reach the installation point with just the hook and chain, without having to lift the entire weight of the hoist. It is particularly suitable for machinery installations industry, or when frequent hoist assembly/disassembly operations are required at a greater height.



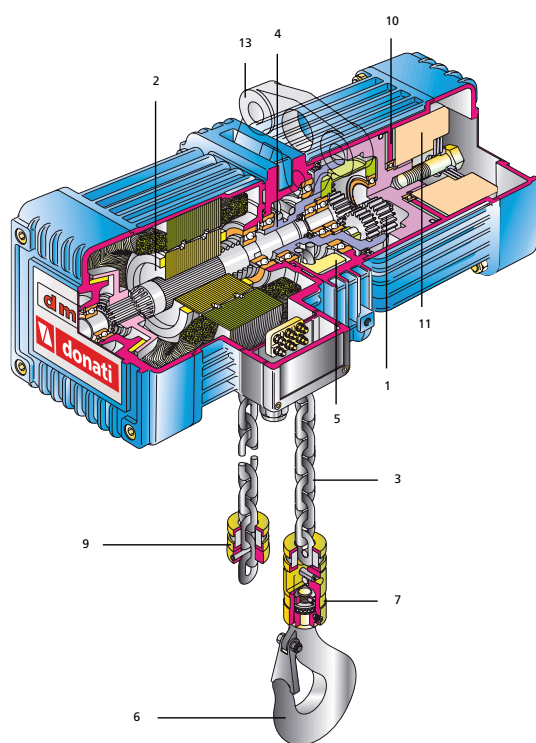
THE ELECTRIC CHAIN HOIST RANGE

FIXED EXECUTION,
ELECTRIC AND HAND-PUSHED
TROLLEY EXECUTION,
LOW HEADROOM EXECUTION AND
"CLIMBING" EXECUTION



THE HOIST IN DETAIL

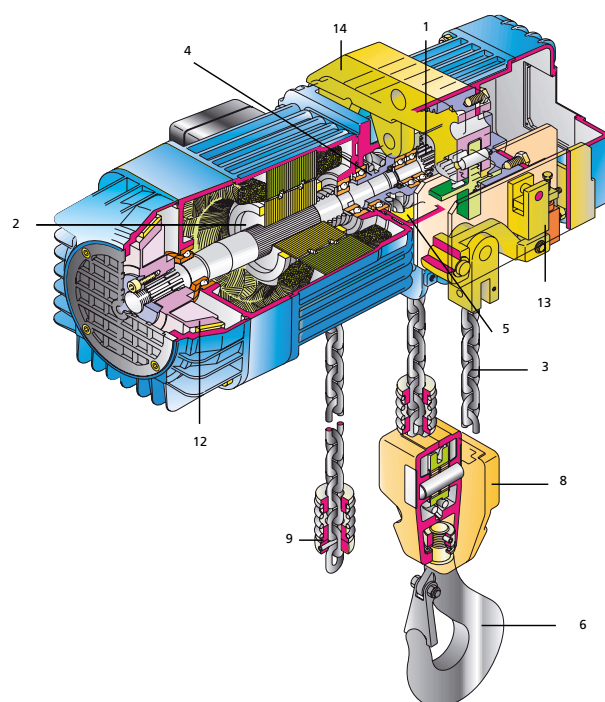
DESIGN AND CONSTRUCTION



1 CHAIN FALL UP TO 2000 kg

This is a winning technical solution that offers:

- ▶ more compact design and greater hook run since the bottom block has smaller dimensions compared to a hook block and the chain box is smaller;
- ▶ greater safety for the operator who can touch the hook and chain without the risk of being dragged in and crushed;
- ▶ greater reliability, less maintenance and lower operating costs since jamming cannot occur, the chain is not worn by the return and there are no moving parts to replace in the bottom block;
- ▶ greater use flexibility.



2 CHAIN FALLS OVER 2000 kg

This solution is aimed at the affordability of the entire system which: offers a fixed anchoring point on which to apply a sensitive load limiter that is suitable for heavy-duty applications and does not require useless overdimensioning of the weight-bearing structure; keeping the dimensions and the cost of the chain contained.

1. GEARBOX

Epicyclic reduction gear with thermally treated, high resistance steel wheels, supported on ball bearings and lubricated in oil bath. The frame is a radiating fin structure in aluminium alloy to improve heat dissipation.

2. SELF-BRAKING ELECTRIC MOTOR

The axial movement of the conical brake allows fast, reliable mechanical braking over time [RES. 4.1.2.6. c - Annex I Machinery Directive]. The brake lining is asbestos free. Asynchronous three phase with single polarity for one speed hoists, with pole changing version for two speed hoists.

3. CHAIN

The chain is gauged and made of high-strength steel rod with excellent dynamic stability, ultimate tensile strength of 80 kg/mm² and ultimate elongation no higher than 10%. The applicable safety coefficient is always greater than 5 [RES. 4.1.2.4. – Annex I Machinery Directive]. The heat and galvanising treatments applied to the chain provide high resistance to wear, aging and corrosion.

4. LOAD SPROCKET

The load sprocket is heat treated and has five pockets mechanically machined on high precision automatic machinery. The sprocket drives the chain, ensuring perfect chain movement.

5. CHAIN GUIDE (INSERTER/EXTRACTOR)

The chain guide is used to insert and extract the chain links both in and out of the pockets, both when lifting and lowering [RES. 4.1.2.4. Annex I Machinery Directive].

6. LOAD HOOK

The hook is made from high strength steel and is equipped with a safety device (spring catch) to prevent the load from unhooking [RES. 4.1.2.6. e - Annex 1 Machinery Directive] and rotates on a thrust bearing.

7. BOTTOM BLOCK (ONE CHAIN FALL HOISTS)

This connects the chain to the turning hook. It is made of steel and is equipped with a heat-treated large cross-section pin to lock the chain.

8. HOOK BLOCK (2 CHAIN FALL HOISTS)

Made of cast aluminium, completely closed, it is fitted with a high resistance steel transmission reel that is thermally treated and has pockets for housing the chain.

9. CHAIN STOPS

The stops are installed on the free descending and ascending sections of the chain on one fall hoists. They act as limit switches for hoist travel [RES. 4.1.2.6.a - Annex I Machinery Directive]; they are made of forged steel and are fitted with a shock-absorbing insert.

CHAIN BOX

The chain box is used to hold the descending section of the chain. It is available in different sizes based on the hook travel. It is made of shock-resistant plastic and is equipped with suspensions to allow free movement.

10. CLUTCH DEVICE (ONE CHAIN FALL HOISTS)

This is an emergency device, an up and down limit switch. It also acts as an overload protection [RES. 4.2.1.4. Annex I Machinery Directive]. The clutch discs are asbestos free and are preloaded with a Belleville washer system.

11. BALANCER (ONE CHAIN FALL HOISTS)

The balancer is connected to the clutch device and ensures hoist balancing. It absorbs the heat generated during clutch movement.

12. DMK 2-3-4 BRAKE

The brake shoe installed on sizes 2-3 and 4 is made with a fan which ensures cooling of the brake and the motor. The high degree of inclination of the braking surface allows perfect unlocking of the brake even in the most difficult working conditions. Brake adjustment is easily performed since it can be done from the outside using the adjusting ring.

13. OVERLOAD DEVICE (TWO CHAIN FALL HOISTS)

Electromechanical with a microswitch for one intervention threshold [RES. 4.2.1.4 - Annex I Machinery Directive]. The overload device does not allow the hoist to be loaded with an overload exceeding 20% of its maximum capacity, by blocking the lifting control circuit.

LIFTING LIMIT SWITCHES

Standard equipment for 2 chain fall hoists and available upon request for 1 chain fall hoists. They limit the hook's ascent and descent runs [RES. 4.1.2.6 a) - Annex I Machinery Directive]. They are composed of two precision microswitches which function according to the "slow positive opening" principle and work on the auxiliary circuit of the lifting motor control device.

14. SUSPENSION

It is produced with an eyebolt fitting; it can be made with a hook execution upon request or even a 90° eyebolt version for longitudinal hoist.

ELECTRICAL CONTROLS

When the hoist is supplied with electrical control, the movements can be activated, alternatively, by:

- **low voltage controls at AC 48V - 50Hz**, including: the transformer for the low voltage power supply of the control circuits, the general line contactor, the contactors for the control of the hoist and electric trolley motors, transformer protection fuses and terminal block for connections of the auxiliary and power circuits. The components are contained in a sealed box with IP 55 protection, made of shockproof thermoplastic material. The equipment is installed on the motor side of the hoist.
- **direct control**, direct control with mains voltage, solely available for the control of the electric hoist, for raise and lower functions. It is composed by a pushbutton panel that interrupts and directly switches the power line.

In both options, the controls are activated by the hanging pushbutton panel, with ergonomic shape, made of self-extinguishing, shockproof, waterproof, thermoplastic material, with IP 65 protection. The emergency stop function [RES. 1.2.4 - Annex I Machinery Directive], is produced with a mushroom-head button which, using an intentional release action, puts the control circuit in forward position [RES. 1.2.3 Annex I Machinery Directive].

The hanging push button pendant is connected to the hoist by a multipolar electrical cable supported by tear proof metallic parts.

DMT TROLLEYS

used to horizontally move the load. They are manufactured in three difference versions: **SM** type, hand-pushed; **CM** type, mechanically-operated chain and **EM** type, electrically-operated. They move on the lower flange of the beam and can be adjusted based on the flange width.

They are made of pressed steel plate (GR 2) and in pantographed sheet (GR3, 4 and 5) have anti-derail brackets [RES. 4.1.2.2. Annex I Machinery Directive] and shock-absorbing buffers.

The trolleys are equipped with forged steel machined wheels rotating on permanently lubricated ball bearings.

Gear motor with self-braking motor: provides motion to the trolley toothed wheels in the electric version, EM type [RES. 4.1.2.6. c - Annex I Machinery Directive].

Limit switch: these switches limit horizontal travel of the electric trolley on the beam [RES. 4.1.2.6. a – Annex I Machinery Directive].

Towing arm: the towing arm, which connects the trolley to the power supply, is available for all types of trolleys of the DMT series. It can be easily adjusted in all directions and is an essential part for towing the power cable without tearing the conductors.



STANDARDS AND CERTIFICATIONS

DESIGN AND CONSTRUCTION

DMK electric chain hoists and their trolleys are designed and manufactured according to the **“Essential Safety Requirements” of Annex I of Machinery Directive 2006/42/EC** and are placed on the market **equipped with the CE mark** and **CE Declaration of Conformity - Annex II A**.

In addition DMK electric chain hoists and their trolleys are in compliance with the following directives:

- ▶ **LOW VOLTAGE DIRECTIVE 2014/35/UE**
- ▶ **ELECTROMAGNETIC COMPATIBILITY DIRECTIVE 2014/30/UE**

DMK series electric chain hoists and their trolleys are also available with CSA homologation, upon request.

REFERENCE NORMATIVE FRAMEWORK

The design and construction of DMK series electric chain hoists and their trolleys comply with the following technical standards and rules:

- ▶ EN ISO 1210:2010 “Fundamental concepts, general design principles”
- ▶ EN ISO 13849-1:2008 “Safety-related parts of control systems (where required)”
- ▶ EN 12077-2:2008 “Limiting and indicating devices”
- ▶ EN 60204-32:2009 “Safety of the electrical equipment of lifting machines”
- ▶ EN 60529:1997 “IP enclosure (IP Codes)”
- ▶ ISO 4301-1:1988 “Classification of lifting equipment”
- ▶ DIN 15401 “Choice of lifting hooks”
- ▶ FEM 1.001/98 “Rules for the design of lifting equipment”
- ▶ FEM 9.511/86 “Mechanisms classification”
- ▶ FEM 9.671/88 “Quality of chains”
- ▶ FEM 9.683/95 “Choice of lifting and traverse motors”
- ▶ FEM 9.755/93 “Periods of safe work”
- ▶ FEM 9.941/95 “Control symbols”



CRITERIA OF USE AND OPERATING LIMITS

It is necessary to check the parameters which characterise the operating limits of the DMK electric chain hoists to be able to have a complete correspondence between the DMK electric chain hoists and the service they were designed for. These are the actual lifting capacities, which must always be less than or equal with respect to the nominal capacity of the hoist state of stress and average duration of daily operation.

ACTUAL LIFTING CAPACITY

This is determined by the heaviest load to be lifted.

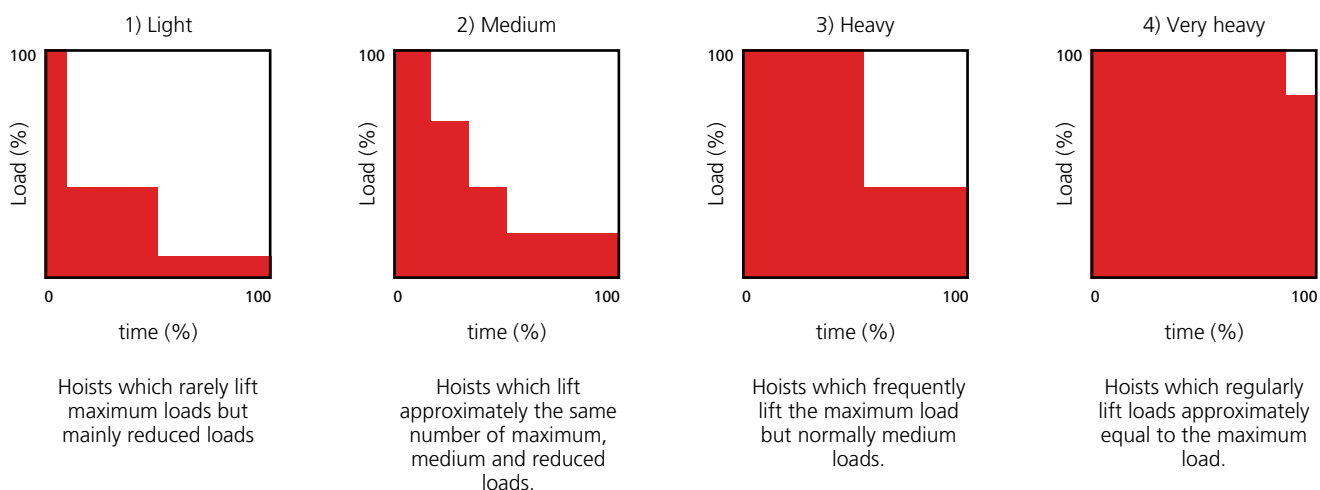
The nominal lifting capacity of the hoist must be $\geq$ the actual lifting capacity.

Lifting capacity = kg



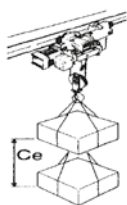
THE STATE OF STRESS

The state of stress is evaluated considering the actual entity of the loads to be lifted and it is ascribable to one of four spectrums of load shown below which determine the type of service.



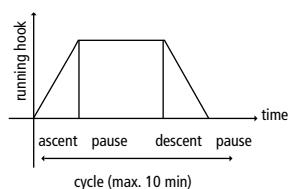
AVERAGE DURATION OF DAILY OPERATION

For LIFTING operations the average duration of operation is calculated as follows: $T_m \text{ (hours)} = (C_e \times C/h \times T_i) / (30 \times V)$



Actual hook run
 $C_e = m$

It is the average of the actual runs of the load



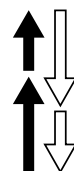
Cycles in an hour
 $C/h = N^\circ$

It is the number of complete ascents and descents carried out in an hour.



Running time
 $T_i = \text{hours}$

Hoist running time in a whole day.



Lifting speed
 $V = m/min$

It is the distance covered by the load in a minute.

OPERATING LIMITS OF DMK HOISTS IN RELATION TO THE SERVICE GROUPS OF THE MECHANISMS, ACCORDING TO FEM 9.511/86 (ISO 4301-1:1988)

GROUP FEM (ISO)	AVERAGE DURATION OF DAILY OPERATION - $T_m = \text{HOURS}$; WITH LOAD				INTERMITTENCE RATIO %	N° OF STARTS PER HOUR	N° OF CYCLES PER HOUR
	1) LIGHT	2) MEDIUM	3) HEAVY	4) VERY HEAVY			
1Bm(M3)	2	1	0,5	0,25	RI = 25%	A/h = 150	C/h = 25
1Am(M4)	4	2	1	0,5	RI = 30%	A/h = 180	C/h = 30
2m(M5)	8	4	2	1	RI = 40%	A/h = 240	C/h = 40

TECHNICAL SPECIFICATIONS AND DATA FOR DMK CHAIN HOISTS WITH DMT TROLLEYS

CHARACTERISTIC DATA FOR DMK SERIES ELECTRIC CHAIN HOISTS AND DMT TROLLEYS

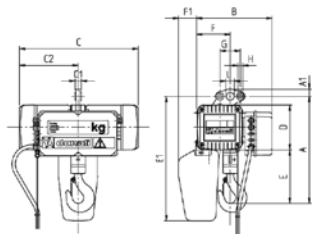
CAPACITY (kg)	FEM GROUP	DMK TYPE	CHAIN FALLS	LIFTING SPEED (m/min)		LIFTING MOTOR POWER (kW)		DMT TROLLEY TYPE FOR HOIST						TROLLEY MOTOR POWER (kW)				CHAIN TYPE	CHAIN WEIGHT PER METER
								S= MANUAL-PUSH TROLLEY C= MANUAL GEAR OPERATED TROLLEY E=ELECTRIC TROLLEY		SPEED (m/min)									
				1 SPE.	2 SPE.	1 SPE.	2 SPE.	S	C	E SPEED (m/min)				11	14	22	7/22		
125	2m	154C	1	8	/	0.2	/	SM2	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	4x12	0.38
	2m	132D	1	8	2.5	0.2	0.06	SM2	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	4x12	0.38
	2m	232C	1	16	/	0.4	/	SM2	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	5x15	0.58
250	2m	134C	1	4	/	0.2	/	SM2	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	4X12	0.38
	2m	112D	1	4	1.2	0.2	0.06	SM2	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	4X12	0.38
	2m	234C	1	8	/	0.4	/	SM2	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	5x15	0.58
	2m	234D	1	8	2.5	0.4	0.12	SM2	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	5x15	0.58
	2m	332C	1	16	/	0.8	/	SM3	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	7x21	1.16
500	2m	214C	1	4	/	0.4	/	SM2	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	5x15	0.58
	2m	214D	1	4	1.2	0.4	0.12	SM2	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	5x15	0.58
	2m	334C	1	8	/	0.8	/	SM3	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	7x21	1.16
	2m	334D	1	8	2.5	0.8	0.24	SM3	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	7x21	1.16
	2m	432C	1	16	/	1.6	/	SM4	CM4	EM4	EM4	EM4	EM4	0.12	0.18	0.25	0.08 0.25	10x28	2.42
1000	2m	314C	1	4	/	0.8	/	SM3	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	7x21	1.16
	2m	314D	1	4	1.2	0.8	0.24	SM3	CM3	EM3	EM3	EM3	EM3	0.12	0.18	0.25	0.08 0.25	7x21	1.16
	2m	434C	1	8	/	1.6	/	SM4	CM4	EM4	EM4	EM4	EM4	0.12	0.18	0.25	0.08 0.25	10x28	2.42
	2m	434D	1	8	2.5	1.6	0.5	SM4	CM4	EM4	EM4	EM4	EM4	0.12	0.18	0.25	0.08 0.25	10x28	2.42
1600	2m	424L	1	6.3	/	2.5	/	SM4	CM4	EM4	EM4	EM4	EM4	0.12	0.18	0.25	0.08 0.25	10x28	2.42
	2m	424D	1	6.3	2.1	2	0.65	SM4	CM4	EM4	EM4	EM4	EM4	0.12	0.18	0.25	0.08 0.25	10x28	2.42
2000	2m	414C	1	4	/	1.6	/	SM4	CM4	EM4	EM4	EM4	EM4	0.12	0.18	0.25	0.08 0.25	10x28	2.42
	2m	414D	1	4	1.2	1.6	0.5	SM4	CM4	EM4	EM4	EM4	EM4	0.12	0.18	0.25	0.08 0.25	10x28	2.42
2500	2m	434L.I	2	4	/	2.5	/	SM5	CM5	EM5	EM5	EM5	EM5	0.17	0.25	0.37	0.08 0.25	10x28	2.42
	2m	424D.I	2	3.2	1	2	0.65	SM5	CM5	EM5	EM5	EM5	EM5	0.17	0.25	0.37	0.08 0.25	10x28	2.42
3200	1Am	434L.J	2	4	/	2.5	/	SM5	CM5	EM5	EM5	EM5	EM5	0.17	0.25	0.37	0.08 0.25	10x28	2.42
	1Am	424D.J	2	3.2	1	2	0.65	SM5	CM5	EM5	EM5	EM5	EM5	0.17	0.25	0.37	0.08 0.25	10x28	2.42
	2m	424L.J	2	3.2	/	2.5	/	SM5	CM5	EM5	EM5	EM5	EM5	0.17	0.25	0.37	0.08 0.25	10x28	2.42
	2m	454D.J	2	2.5	0.8	2	0.65	SM5	CM5	EM5	EM5	EM5	EM5	0.17	0.25	0.37	0.08 0.25	10x28	2.42
4000	1AM	424L.K	2	3.2	/	2.5	/	SM5	CM5	EM5	EM5	EM5	EM5	0.17	0.25	0.37	0.08 0.25	10x28	2.42
	1AM	454D.K	2	2.5	0.8	2	0.65	SM5	CM5	EM5	EM5	EM5	EM5	0.17	0.25	0.37	0.08 0.25	10x28	2.42

SINGLE-PHASE VERSION

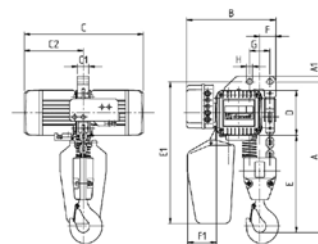
CAPACITY (kg)	FEM GROUP	DMK TYPE	CHAIN FALLS	LIFTING SPEED (m/min)		LIFTING MOTOR POWER (kW)		DMT TROLLEY TYPE FOR HOIST S= MANUAL-PUSH TROLLEY C= MANUAL GEAR OPERATED TROLLEY		CHAIN TYPE	CHAIN WEIGHT PER METER
				1 SPE.	2 SPE.	1 SPE.	2 SPE.	S	C		(kg/m)
100	1Bm	132M	1	8	/	0.2	/	SM2	CM3	4x12	0.38
200	1Bm	112M	1	4	/	0.2	/	SM2	CM3	4x12	0.38
	1Bm	234M	1	8	/	0.4	/	SM2	CM3	5x15	0.58
400	1Bm	214M	1	4	/	0.4	/	SM2	CM3	5x15	0.58
	1Bm	334M	1	8	/	0.8	/	SM3	CM3	7x21	1.16
800	1Bm	314M	1	4	/	0.8	/	SM3	CM3	7x21	1.16

DMK ELECTRIC CHAIN HOISTS – OVERALL DIMENSIONS WEIGHTS – FIXED EXECUTION

1 chain fall version



2 chain falls version



SIZE	CHAIN FALLS	DMK TYPE	*HOIST WEIGHT (kg)	OVERALL DIMENSIONS (mm)											
				**A	A1	B	C	C1	C2	D	**E	F	G	H	I
1	1	154C	23	275	23	253	385	19	207	120	128	80	70	14	27
	1	132D/M	23	275	23	253	385	19	207	120	128	80	70	14	27
	1	134C	23	275	23	253	385	19	207	120	128	80	70	14	27
	1	112D/M	23	275	23	253	385	19	207	120	128	80	70	14	27
2	1	232C	33	310	23	268	438	19	237	135	150	92	70	14	27
	1	234C/M	33	310	23	268	438	19	237	135	150	92	70	14	27
	1	234D	33	310	23	268	438	19	237	135	150	92	70	14	27
	1	214C/M	33	310	23	268	438	19	237	135	150	92	70	14	27
	1	214D	33	310	23	268	438	19	237	135	150	92	70	14	27
3	1	332C	50	378	28	293	514	25	274	160	188	114	70	14	30
	1	334C/M	50	378	28	293	514	25	274	160	188	114	70	14	30
	1	334D	50	378	28	293	514	25	274	160	188	114	70	14	30
	1	314C/M	50	378	28	293	514	25	274	160	188	114	70	14	30
	1	314D	50	378	28	293	514	25	274	160	188	114	70	14	30
4	1	432C	80	471	32	332	583	27	317	200	233	146	90	20	35
	1	434C	80	471	32	332	583	27	317	200	233	146	90	20	35
	1	434D	80	471	32	332	583	27	317	200	233	146	90	20	35
	1	424L	80	471	32	332	583	27	317	200	233	146	90	20	35
	1	414C	80	471	32	332	583	27	317	200	233	146	90	20	35
	1	414D	80	471	32	332	583	27	317	200	233	146	90	20	35
	2	434L.I	105	670	25	395	583	50	317	200	432	71	90	25	/
	2	424D.I	105	670	25	395	583	50	317	200	432	71	90	25	/
	2	434L.J	105	670	25	395	583	50	317	200	432	71	90	25	/
	2	424D.J	105	670	25	395	583	50	317	200	432	71	90	25	/
	2	424L.J	105	670	25	395	583	50	317	200	432	71	90	25	/
	2	454D.J	105	670	25	395	583	50	317	200	432	71	90	25	/
	2	424L.K	105	670	25	395	583	50	317	200	432	71	90	25	/
	2	454D.K	105	670	25	395	583	50	317	200	432	71	90	25	/

* Weight of hoist with 3m hook run and 2m push button panel cable

** With application of raise/lower electric limit switches A and E dimensions increase by: DMK1 + 45mm; DMK2 + 40mm; DMK3 + 45mm; DMK4 (1 fall) + 60mm

CHAIN BOX TYPE (C-D-E-F-G-H-I)

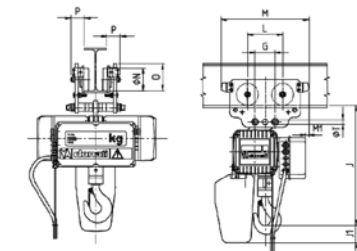
SIZE	CHAIN FALLS		C	D	E	F	G	H	I
1	1	Max hook run (m)	5	8	13	20	32	70	115
	1	E1	347	372	397	427	467	522	607
	1	F1	47	63	77	100	120	150	200
2	1	Max hook run (m)	/	4	7	12	18	30	70
	1	E1	/	385	410	440	480	535	620
	1	F1	/	56	70	92	112	142	192
3	1	Max hook run (m)	/	/	3	5	9	16	25
	1	E1	/	/	440	470	510	560	650
	1	F1	/	/	55	77	97	127	177
4	1	Max hook run (m)	/	/	/	/	4	8	13
	1	E1	/	/	/	/	560	610	700
	1	F1	/	/	/	/	80	110	160
	2	Max hook run (m)	/	/	/	/	/	3	5
	2	E1	/	/	/	/	/	628	718
	2	F1	/	/	/	/	/	130	180

NOTE With application of raise/lower limit switches on 1 chain fall hoists, the maximum capacity of the chain box decreases by 1 m of hook run and the E1 dimension increases by 25 mm.

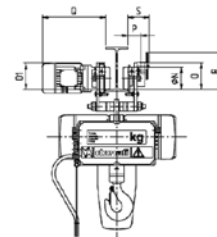
DMK ELECTRIC CHAIN HOISTS WITH DMT TROLLEYS

OVERALL DIMENSIONS – WEIGHTS

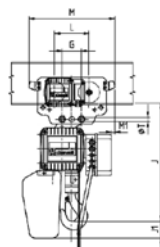
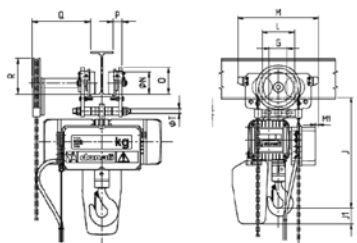
Hoist with SM hand-push trolley



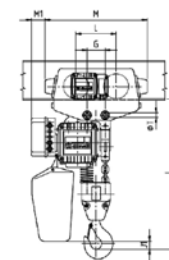
Hoist with EM electric trolley



Hoist with CM manual gear operated trolley



1 chain fall version



2 chain falls version

DMK SIZE	CHAIN FALLS	DMT TROLLEY TYPE	*HOIST TROLLEY WEIGHT (kg)	OVERALL DIMENSIONS (mm)											
				***J	L	M	M1	Ø N	O	**O1	P	**Q	R	S	Ø T
1	1	SM2	29	323	100	236	54	52	72	/	20	/	/	/	M16
	1	EM3	58	345	135	362	-10	80	98	100(108)	54	290(314)	165	90	M14
	1	CM3	41	345	135	362	-10	80	98	/	54	240	108	/	M14
2	1	SM2	39	360	100	236	58	52	72	/	20	/	/	/	M16
	1	EM3	68	380	135	362	-6	80	98	100(108)	54	290(314)	165	90	M14
	1	CM3	51	380	135	362	-6	80	98	/	54	240	108	/	M14
3	1	SM3	62	448	135	362	-3	80	98	/	54	/	/	/	M14
	1	EM3	85	448	135	362	-3	80	98	100(108)	54	290(314)	165	90	M14
	1	CM3	68	448	135	362	-3	80	98	/	54	240	108	/	M14
4	1	SM4	105	547	160	402	-15	100	120	/	60	/	/	/	M20
	1	EM4	130	547	160	402	-15	100	120	110/(118)	60	296(320)	165	96	M20
	1	CM4	115	547	165	402	-15	100	120	/	60	264	160	/	M20
	2	SM5	160	755	201	510	70	125	155	/	55	/	/	/	M24
	2	EM5	190	755	201	510	70	125	155	130(130)	55	316(316)	211	110	M24
	2	CM5	170	755	201	510	70	125	155	/	55	350	198	/	M24

* Weight referred to 3m hook-run hoist.

** Dimensions for 2 speed trolleys in brackets.

*** SM3/EM3/CM3: for width > 220 mm up to 400 mm dimension J increases by 70 mm

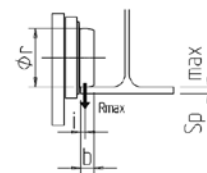
*** SM4/EM4/CM4: for width > 220 mm up to 400 mm dimension J increases by 60 mm

*** SM5/EM5/CM5: for width > 240 mm up to 400 mm dimension J increases by 75 mm

Note When the hoist is equipped with raise/lower limit switches, dimension J increases as much as dimensions A and E, page 11 and note regarding the chain box

MAXIMUM REACTIONS OF DMT TROLLEY WHEELS ON BEAM FLANGE

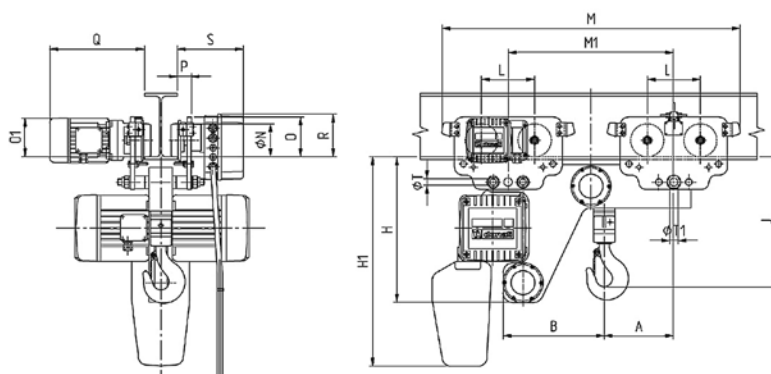
DMK SIZE	MAX CAPACITY (kg)	DMT TROLLEY TYPE	OVERALL DIMENSIONS (mm)					
			Ø R	I	B	*R MAX (kg)	SP MAX	
1	250	SM2	52	5	15	80	17	
		EM3/CM3	80	7	16	87	22	
2	500	SM2	52	5	15	154	17	
		EM3/CM3	80	7	16	161	22	
3	1000	SM3						
		EM3/CM3	80	7	16	309	22	
4	2000	SM4						
		EM4/CM4	100	9	19	608	24	
	4000	SM5						
		EM5/CM5	125	14	29	1193	20	



* Max R calculated with a dynamic coefficient of 1.15 and no "M" increasing coefficient

DMK ELECTRIC CHAIN HOISTS LOW HEAD ROOM EXECUTION

OVERALL DIMENSIONS – WEIGHTS



DMK SIZE	MAX CAPACITY (kg)	DMT TROLLEY TYPE	*HOIST TROLLEY WEIGHT (kg)	OVERALL DIMENSIONS (mm)																
				A	B	H	***H1	J	L	M	M1	Ø N	O	**Ø1	P	**Q	R	S	Ø T	Ø T1
1	250	SM3+SM3	60	170	228	317	417	233	135	742	380	80	98	/	54	/	108	/	M14	M16
		SM3+EM3	75	170	228	317	417	233	135	742	380	80	98	100/(108)	54	290/(314)	108	196	M14	M16
2	500	SM3+SM3	67	176	240	346	455	255	135	762	386	80	98	/	54	/	108	/	M14	M16
		SM3+EM3	80	176	240	346	455	255	135	762	386	80	98	100/(108)	54	290/(314)	108	196	M14	M16
3	1000	SM3+SM3	100	190	275	390	510	313	135	812	450	80	98	/	54	/	108	/	M14	M16
		SM3+EM3	115	190	275	390	510	313	135	812	450	80	98	100/(108)	54	290/(314)	108	196	M14	M16
4	2000	SM4+SM4	155	205	310	462	637	386	160	902	500	100	120	/	60	/	118	/	M20	M24
		SM4+EM4	170	205	310	462	637	386	160	902	500	100	120	110/(118)	60	296/(320)	118	202	M20	M24
	4000	UPON REQUEST	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
		UPON REQUEST	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

* Weight referred to 3m hook-run hoist.

** Dimensions for 2 speed trolleys in brackets

*** Weight referred to 3m hook-run hoist

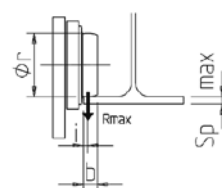
With application of an electric raise/lower limit switch dimension

H1 increases by 25mm and dimension J increases by: DMK1+45mm;

DMK2+40mm; DMK3+45mm; DMK4(1 fall)+60mm

MAXIMUM REACTIONS OF DMT TROLLEY WHEELS ON BEAM FLANGE FOR DMK LOW HEAD ROOM EXECUTION

DMK SIZE	MAX CAPACITY (kg)	DMT TROLLEY TYPE	OVERALL DIMENSIONS (mm)					
			Ø R	I	B	*R MAX (kg)	SP MAX	
1	250	SM3+SM3	80	7	16	44	18	
		SM3+EM3				87		
2	500	SM3+SM3	80	7	16	80	18	
		SM3+EM3				82		
3	1000	SM3+SM3	80	7	16	156	18	
		SM3+EM3				158		
4	2000	SM4+SM4	100	9	19	307	21	
		SM4+EM4				608		
	4000	SM5+EM5 (UPON REQUEST)	125	14	29	/	/	
		SM5+EM5 (UPON REQUEST)				/		

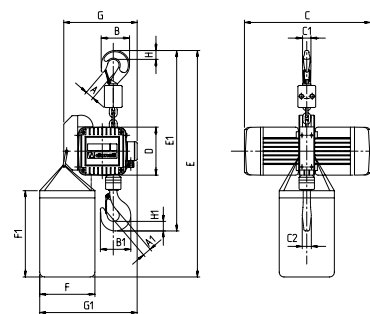


* Max R calculated with a dynamic coefficient of 1.15 and no "M" increasing coefficient

TECHNICAL SPECIFICATIONS AND DATA FOR DMK HOIST CHAIN CLIMBING EXECUTION

CAPACITY (kg)	FEM GROUP	DMK TYPE	CHAIN FALLS	LIFTING SPEED (mm)		LIFTING MOTOR POWER (kW)		*HOIST WEIGHT (kg)	CHAIN TYPE	CHAIN WEIGHT PER METER (kg/m)
				1 SPEED	2 SPEED	1 SPEED	2 SPEED			
125	2m	154C	1	8	/	0.2	/	17	4x12	0.38
250	2m	134C	1	4	/	0.2	/	17	4x12	0.38
	2m	234C	1	8	/	0.4	/	24	5x15	0.58
500	2m	214C	1	4	/	0.4	/	24	5x15	0.58
	2m	334C	1	8	/	0.8	/	38	7x21	1.16
1000	2m	314C	1	4	/	0.8	/	38	7x21	1.16
	2m	434C	1	8	/	1.6	/	65	10x28	2.42
2000	2m	414C	1	4	/	1.6	/	65	10x28	2.42

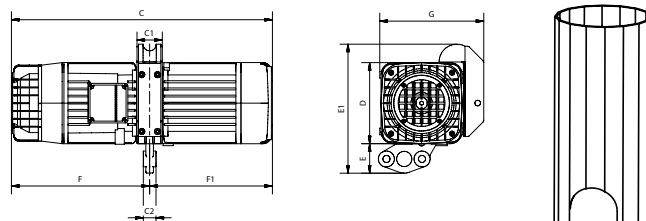
* Hoist weight without chain



CLIMBING VERSION

OVERALL DIMENSIONS - WEIGHTS

DMK SIZE	MAX CAPACITY (kg)	DMK HOIST TYPE	OVERALL DIMENSIONS (mm)															
			A	A1	B	B1	C	C1	C2	D	E	E1	F	F1	G	G1	H	H1
1	125	154C	21	24	62	67	385	22	19	120	710	400	230	360	210	310	17	19
	250	134C	21	24	62	67	385	22	19	120	710	400	230	360	210	310	17	19
2	250	234C	25	28	78	83	438	22	23	135	740	465	230	360	225	325	22	24
	500	214C	25	28	78	83	438	22	23	135	740	465	230	360	225	325	22	24
3	500	334C	30	34	96	103	514	27	30	160	800	577	230	360	250	350	29	32
	1000	314C	30	34	96	103	514	27	30	160	800	577	230	360	250	350	29	32
4	1000	434C	36	40	118	137	583	35	38	200	880	716	230	360	307	410	37	44
	2000	414C	36	40	118	137	583	35	38	200	880	716	230	360	307	410	37	44

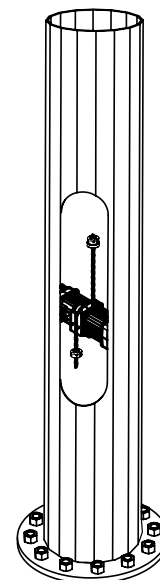


TOWER VERSION

OVERALL DIMENSIONS - WEIGHTS

DMK SIZE	MAX CAPACITY (kg)	DMK HOIST TYPE	OVERALL DIMENSIONS (mm)								
			C	C1	C2	D	E	E1	F	F1	G
1	125	154C	385	40	19	120	49	202	178	177	157
	250	134C	385	40	19	120	49	202	178	177	157
2	250	234C	438	44	19	135	48	217	201	237	172
	500	214C	438	44	19	135	48	217	201	237	172
3	500	334C	514	50	25	160	58	252	240	274	197
	1000	314C	514	50	25	160	58	252	240	274	197
4	1000	434C	583	65	27	200	70	319	266	347	255
	2000	414C	583	65	27	200	70	319	266	347	255

Suitable for incorporation into metal poles used for lighting. For assembly and maintenance, relevant chain return allows a mobile crown, fitted with lights, to be lifted and lowered along the pole itself. In order to guarantee excellent operation, the hoist is assembled in an inverted position with respect to standard applications.



SPECIFICATIONS OF MOTORS, FUSES AND POWER CABLES

TROLLEY TYPE	BEAM TYPE	GROUP 1		GROUP 2		GROUP 3		GROUP 4		*MINIMUM RADIUS OF MONORAIL INTERNAL CURVATURE (mm)
		BEAM	FLANGE	BEAM	FLANGE	BEAM	FLANGE	BEAM	FLANGE	
SM2	INP	80÷160	42÷74	180÷280	82÷119	300÷380	125÷149	400	155	1000
	IPE	80÷140	46÷73	160÷240	82÷120	270÷300	135÷150	330÷500	160÷200	
	HEA	-	-	100÷120	100÷120	140	140	160÷200	160÷200	
SM3	INP	120÷240	58÷106	260÷450	113÷170	475÷600	178÷215	-	-	1300
	IPE	120÷220	64÷110	240÷360	120÷170	400÷600	180÷220	-	-	
	HEA	-	-	140÷160	140÷160	180÷220	180÷220	-	-	
SM4	INP	160÷280	74÷119	300÷475	125÷178	500÷600	185÷215	-	-	1500
	IPE	160÷240	82÷120	270÷400	135÷180	450÷600	190÷220	-	-	
	HEA	-	-	160÷180	160÷180	200÷220	200÷220	-	-	
SM5	INP	180÷300	82÷125	320÷500	131÷185	550÷600	200÷215	-	-	1900
	IPE	180÷240	91÷120	270÷400	135÷180	450÷600	190÷220	-	-	
	HEA	-	-	180	180	200÷240	200÷240	-	-	
CM3	INP	140÷240	66÷106	260÷450	113÷170	475÷600	178÷215	-	-	1300
	IPE	140÷220	73÷110	240÷360	120÷170	400÷600	180÷220	-	-	
	HEA	-	-	140÷160	140÷160	180÷220	180÷220	-	-	
CM4	INP	180÷280	82÷119	300÷475	125÷178	500÷600	185÷215	-	-	1500
	IPE	180÷240	91÷120	270÷400	135÷180	450÷600	190÷220	-	-	
	HEA	-	-	160÷180	160÷180	200÷220	200÷220	-	-	
CM5	INP	220÷300	98÷125	320÷500	131÷185	550÷600	200÷215	-	-	1900
	IPE	220÷240	110÷120	270÷400	135÷180	450÷600	190÷220	-	-	
	HEA	-	-	180	180	200÷240	200÷240	-	-	
EM3	INP	120÷240	58÷106	260÷450	113÷170	475÷600	178÷215	-	-	1300
	IPE	120÷220	64÷110	240÷360	120÷170	400÷600	180÷220	-	-	
	HEA	-	-	140÷160	140÷160	180÷220	180÷220	-	-	
EM4	INP	160÷280	74÷119	300÷475	125÷178	500÷600	185÷215	-	-	1500
	IPE	160÷240	82÷120	270÷400	135÷180	450÷600	190÷220	-	-	
	HEA	-	-	160÷180	160÷180	200÷220	200÷220	-	-	
EM5	INP	180÷300	82÷125	320÷500	131÷185	550÷600	200÷215	-	-	1900
	IPE	180÷240	91÷120	270÷400	135÷180	450÷600	190÷220	-	-	
	HEA	-	-	180	180	200÷240	200÷240	-	-	

NOTE: For EM trolleys with electric travel limit switches, check the R dimensions on page 12

* Electric trolleys suitable to run on a bend with guide roller kit

SPECIFICATIONS OF MOTORS, FUSES AND POWER CABLES

HOIST TYPE	MOTOR TYPE	POLES	POWER (kW)	POWER FACTOR COSφ	Ia 50Hz		(In) 50	FUSES aM	POWER CABLE SECTION 400V - (ΔU20V)	
					380V A	400V A	415V A	400V A	Φmm²	L =m
134C-154C	71C4AS1/1	4	0.2	0.43	3.8		(1.4)	4	1.5	≤ 100
112D-132D	72K1AS1/1	2/6	0.2/0.06	0.6/0.5	3.3/1.8		(0.8/0.8)	4	1.5	≤ 100
232C	80C2AS2/2	2	0.4	0.45	6.5		(2.5)	4	1.5	≤ 100
214C-234C	80C4AS2/2	4	0.4	0.48	6.4		(2.1)	4	1.5	≤ 100
214D-234D	81K5AS2/2	4/12	0.4/0.12	0.6/0.6	5.2/3		(1.6/2)	4	1.5	≤ 100
332C	90C2AS3/2	2	0.8	0.6	14.5		(4.8)	6	1.5	≤ 70
314C-334C	90C4AS3/2	4	0.8	0.46	14		(5.2)	6	1.5	≤ 70
314D-334D	91K5AS3/3	4/12	0.8/0.24	0.6/0.5	14.6/4		(3.1/2.6)	6	1.5	≤ 70
432C	100C2AS4/2	2	1.6	0.7	32		(6.2)	10	2.5	≤ 50
414C-434C	100C4AS4/2	4	1.6	0.6	28		(6.5)	10	2.5	≤ 60
424L-434L	101K4AS4/2	4	2.5	0.7	38		(6.2)	10	2.5	≤ 40
414D-434D	101K5AS4/2	4/12	1.6/0.5	0.62/0.4	28/12		(5.5/6)	10	2.5	≤ 60
424D-454D	101K5AS4/4	4/12	2/0.65	0.72/0.5	28/8		(6.5/5)	10	2.5	≤ 60

SINGLE-PHASE HOIST	MOTOR TYPE	POLES	POWER (kW)	POWER FACTOR COSφ	Ia 50Hz	(In) 50	FUSES aM	POWER CABLE SECTION 230V - (ΔU20V)	
					230V A			230V A	Φmm²
132M-112M	72K2AM1/1	2	0.2	0.9	9.6	(3.2)	6	1.5	≤ 60
234M-214M	81K4AM2/1	4	0.4	0.9	11.3	(5.2)	10	1.5	≤50
334M-314M	91K4AM3/2	4	0.8	0.9	32	(12)	20	2.5	≤ 30

TROLLEY TYPE	MOTOR TYPE	POLES	POWER (kW)	POWER FACTOR $\cos\varphi$	Ia - (A) 400V - 50HZ	In - (A) 400V - 50HZ
EM3-EM4	71C4TV1/1	4	0.25	0.43	3.8	1.4
EM3-EM4	71C8TS1/1	8	0.12	0.53	2.5	1.3
EM3-EM4	72K6TS1/1	6	0.18	0.5	3	1.7
EM3-EM4-EM5	81C5AD2/1	4/12	0.25/0.08	0.54/0.7	4.5/1.8	1.4/1.2
EM5	80C4TV2/1	4	0.37	0.7	4.4	1.7
EM5	80C8TS2/1	8	0.17	0.5	2.6	1.6
EM5	80C6TS2/1	6	0.25	0.5	3.8	1.2

DONATI WEBSITE

Donati's window on the world for customer service.

Manuals and product information

The new Donati website has been designed to assist customers to they can easily find all of the updated information on Donati products at any time.

The Donati website makes it simple to consult and download product catalogues, technical manuals and product information sheets.



Donati Shop

The Donati Shop makes it possible to quickly and independently handle spare parts requests, thus reducing waiting times for customers.

Contact Section

The new contact section divided by departments lets you address your requests to the right team, so our staff can provide a faster and more accurate answer.

LEONARDO CONFIGURATION SYSTEM



Leonardo Configuration System is the Donati configurator system lets you configure and generate offers for Chain hoists, Jib cranes and Crane sets, easily and quickly; it lets you rapidly and efficiently respond to your customers' requests.

The suite is composed of two configurators:

Leonardo Product Configurator:

Used to configure chain hoists and jib cranes alone or in combination

Leonardo Crane Set Configurator:

Used to configure bridge cranes complete with all necessary accessories and Donati hoists.



visit donaticranes.com
and keep up to date

MIKT20ENCO

Donati Sollevamenti S.r.l.

Via S. Quasimodo, 17
20025 Legnano (MI) - Italy
Tel +39 0331 14811
Fax +39 0331 1481880

dvo.info@donaticranes.com
www.donaticranes.com

ELECTRIC WIRE ROPE HOIST

DRH SERIES



ELECTRIC WIRE ROPE HOIST



DRH SERIES

The most reliable and safe way to lift your loads.

The DRH electric hoist range is studied to always guarantee the maximum continuity of the job. Thanks to their strength and reliability, they allow conditions of maximum safety with loads of up to 50,000 kg.

Designed to last over the years and meet the various types of use, the DRH series has earned a prominent position internationally, allowing us to supply our customers with products that can offer a wide range of uses, long-term reliability, safety guarantees during all operating phases and excellent value for money.

DRH hoists are known for the quality of their components, high technology used to machine mechanical parts, finishing and surface treatments. The special water-repellent paintwork, applied with a completely enclosed electrostatic process, guarantees durability and constant top performance.



MAX

50.000 KG

Power and safety
at your service to guarantee
always the continuity of work

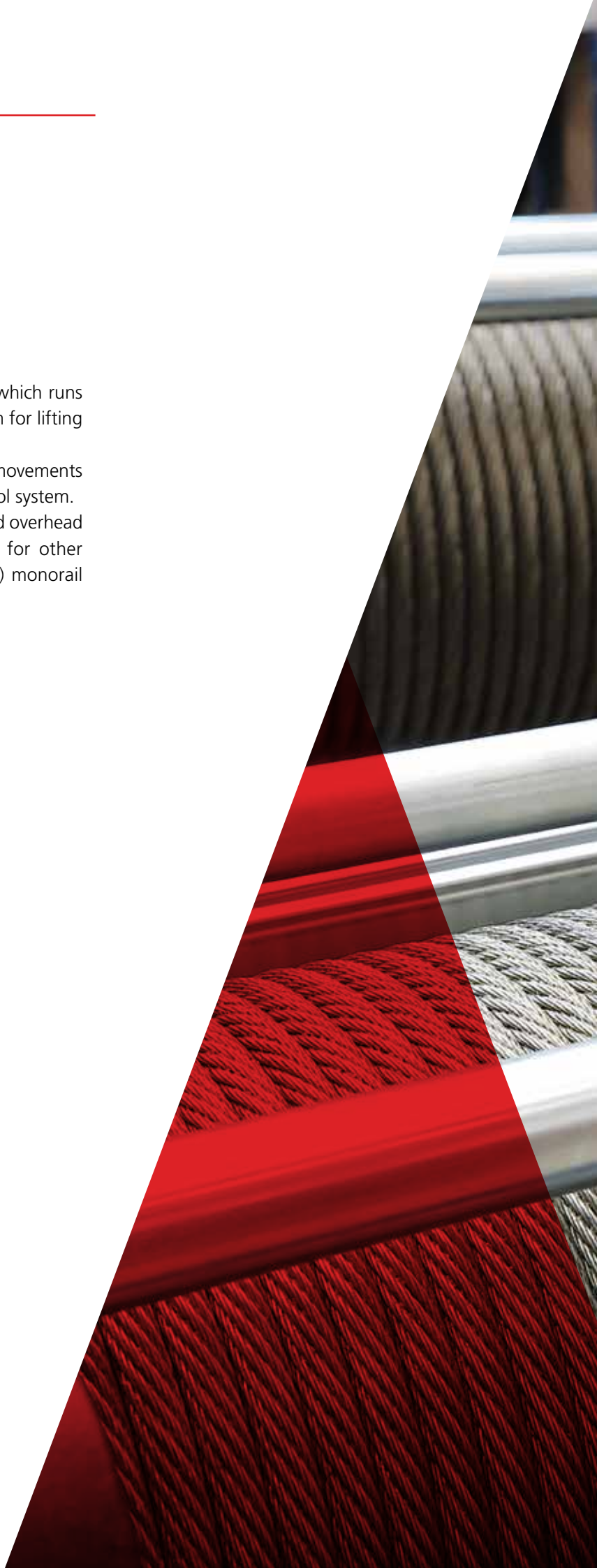


TROLLEYS

The combination of the hoist with an electric trolley, which runs on a beam, allows the creation of an integrated system for lifting and horizontal movement of the load.

All lifting (raise and lower) and traverse (right and left) movements are activated by a push button pendant or radio-control system.

The electric wire rope hoist and trolleys can be mounted overhead and fitted with monorails or act as the lifting unit for other machines, including: cranes (bridge, gantry, job, etc.) monorail and double girder.





**POWER AND
SAFETY AT
YOUR SERVICE**



DRH series electric wire rope hoists and relative electric trolleys are manufactured based on a modular component design, assembled together based on application needs and make it possible to quickly and inexpensively create many standardised and special executions.

To guarantee maximum use of the hook run and minimum overall lateral dimensions of the hoist body, the basic components, (motor, gearbox and drum) are assembled in a coaxial line, with high strength bolted connections. Each connection can be inspected and has self-locking safety nuts. The drum on the side opposite the gear motor can be connected (upon request) to a cycle counter, selectors, limits switches and encoders.

In addition, since it is perfectly symmetrical in the special execution with right and left threading, two gear motors can be installed doubling the lifting speed but maintaining the same capacity and vertical lifting axis. This solution is particularly suited for configurations with large hook runs. The construction uses the most advanced technology and manufacturing processes for the purpose of building totally reliable machines with economies of scale.

THE ELECTRIC WIRE ROPE HOIST RANGE

The DRH Range – Series, Capacities and Lifting Speed.

4 BASIC SIZES

DRH 1-2-3-4, for capacities from 800 to 50,000 kg, in the FEM (ISO) service units 1Bm (M3) - 1Am (M4) - 2m (M5) - 3m (M6).

ONE LIFTING SPEED

Created with a 4 pole motor:

- ▶ 8 or 12 m/min for 2 falls wire rope hoists
- ▶ 4 or 6 m/min for 4 falls wire rope hoists
- ▶ 2.7 or 4 m/min for 6 falls wire rope hoists
- ▶ 2 or 3 m/min for 8 falls wire rope hoists

TWO LIFTING SPEEDS 1/3 ratio created with a 4/12 pole motor:

- ▶ 8/2.6 or 12/4 m/min for 2 falls wire rope hoists
- ▶ 4/1.3 or 6/2 m/min for 4 falls wire rope hoists
- ▶ 2.7/0.9 or 4/1.3 m/min for 6 falls wire rope hoists
- ▶ 2/0.7 or 3/1 m/min for 8 falls wire rope hoists

5 STANDARD VERSIONS WITH DRUM

short (C), normal (N), long (L) and extra-long (X1) and (X2), for hook runs from 4 to 58 m.

PROTECTION AND INSULATION OF ELECTRICAL PARTS

- ▶ Hoist and trolley motors:
IP55 protection – “F” insulation class
- ▶ Motor brake IP23
- ▶ Limit switch: IP65 minimum protection
Maximum insulation voltage 500 V
- ▶ Cables: IEC 20/22 II
Maximum insulation voltage 450/750 V
- ▶ Hoist motor protected by thermal sensor
- ▶ Overload protection

ELECTRICAL POWER SUPPLY

- ▶ Standard DRH electric rope hoists are designed to be supplied with AC electrical current with three-phase voltage: 400 V - 50Hz in accordance with IEC 38-1.
- ▶ Non-standard voltages and frequencies are available upon request.

NOMINAL WORKING CONDITIONS

- ▶ Operating temperature: minimum -10°C; maximum +40°C
- ▶ Maximum relative humidity: 80%
- ▶ Maximum altitude 1000 m above sea level
- ▶ The hoist must be installed in a well-ventilated ambient, free from corrosive fumes (acid fumes, saline mist, etc.)

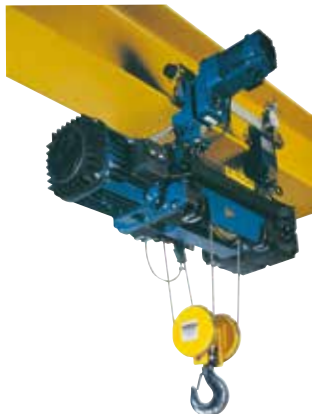
NOISE LEVEL

- ▶ The sound pressure level emitted by the hoist when fully loaded is always less than 80 dB (A). The incidence of environmental characteristics such as the transmission of sound through metallic structures, reflection caused by combined machines and walls, is not included in the indicated level.



FIXED EXECUTION

This is the universal, basic configuration, with fixing eyebolts that allow any version of DRH hoist fixing on a frame or to be adapted in a suspended execution.



ELECTRIC MONORAIL TROLLEYS, TYPE DST/N/S

The DRH hoist is supplied in suspended execution with the normal trolley or articulated trolley for curved beams, it runs on a single beam and is operated electrically.



ELECTRIC MONORAIL TROLLEY, TYPE DST/R

In this configuration the DRH hoist is supplied in low headroom execution for maximum height of lift. It is compact and runs on a single beam; it is operated electrically.



DOUBLE GIRDER TROLLEY, TYPE DRT

The DRH hoist can be fitted longitudinally on the frame or suspended, or in transversal execution, on the trolley, which runs on two beams and is operated electrically. The two girder trolley execution allows the maximum hook run of the hoist.



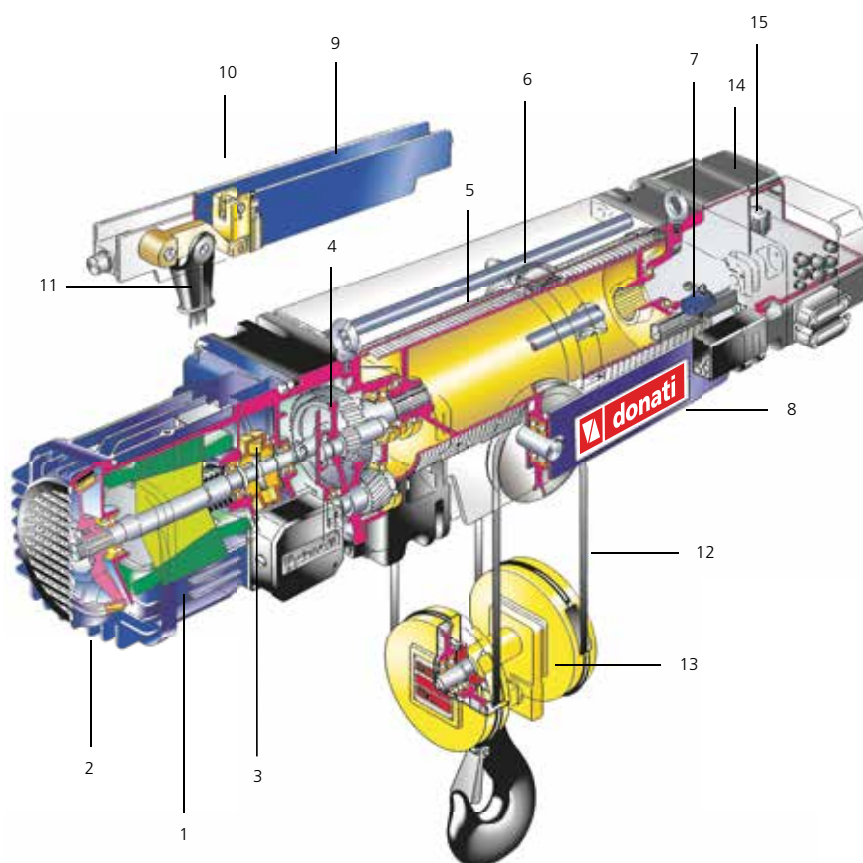
THE DRH SERIES ELECTRIC WIRE ROPE HOIST RANGE

FIXED EXECUTION
WITH ELECTRIC TROLLEY, MONORAIL,
TYPE DST/N/S AND TYPE DST/R
WITH DOUBLE GIRDER TROLLEY, TYPE DRT



THE HOIST IN DETAIL

DESIGN AND CONSTRUCTION



1. ELECTRIC MOTOR FOR LIFTING

- Asynchronous, three-phase, self-braking with tapered motor. Minimum protection IP 55 – Class F insulation. It has thermal probes for protection against overloading.
- DRH4 motor, 24 kW cylindrical, asynchronous and three phase.

2. LIFTING BRAKE

- The conical brake is fitted with asbestos free lining. The brake block, which has a fan that guarantees cooling of the brake and the motor, moves axially with the motor shaft and the braking function is activated automatically if the energy supply fails. [RES. 1.2.3 – 4.1.1.6 c) - Annex I Machinery Directive].
- DRH4 24 kW electromechanical brake.

3. COUPLING

This creates the connection between the self-braking motor and the gearbox, allowing perfect axial sliding of the motor shaft.

4. GEARBOX

Coaxial, with three stages of reduction, with cylindrical gears made of thermally treated, highly resistant steel, helical 7 teeth. Dimensioned and made to withstand the phenomena of stress and wear for life in relation to the normal FEM service group. [RES. 4.1.2.3 - Annex I Machinery Directive]. The whole machine is mounted on ball bearings lubricated for life in an oil bath.

5. DRUM

The drum in steel casing, is mechanically grooved and supported by the flange of the gearbox and the equipment side flange, with hubs with rotating broached holes on permanently lubricated bearings. The drum is dimensioned based on the standards ISO 4308-1:2003 and UNI 9466:1994 as well as the FEM rules 9.661/86. The drum support flanges are fitted with steel cylindrical pins to secure the components which suspend and support the hoist. Mechanically machined seats support the anchorage crossheads and the return pulley. The connection between the two casings is made with bolted stay bolts.

6. ROPE GUIDE

This has a threaded ring made of spheroidal cast iron and allows excellent winding of the rope on the drum. [RES. 4.1.2.4 – Annex I Machinery Directive]. An elastic system automatically registers any play or wear. The rope guide is equipped with sliding backlash arms made of brass, which, by acting on the hoist stay bolts, function as raise and lower limit switches.

7. LIFTING LIMIT SWITCH

This is a safety component which limits the run of the hook, both raising and lowering, in an emergency. [RES. 4.1.2.6 a) - Annex I Machinery Directive]. It is composed of two precision microswitches which operate according to the “positive slow opening” principle and work on the auxiliary circuit of the hoist motor control device.

8. PULLEY ASSEMBLY

Used in versions with 4 rope falls, and supported by two pivots which allow it to be oriented based on the vertical axis of the rope. It is equipped with a return pulley made of carbon steel with mechanically grooved rim and turns on permanently lubricated ball bearings.

9. ANCHORAGE CROSSHEAD

Used in versions with 2 and 4 rope falls, and supported by two pivots which allow it to be oriented based on the vertical axis of the rope. The overload device is located between the plates of the beam.

8A/9A PULLEY AND ANCHORAGE SUPPORT

Used in the 6 and 8 rope fall versions, it is composed of an electric welded metal structure and is equipped with a connection plate to be positioned on the double girder trolley. It is fitted with return pulleys made on carbon steel with a mechanically grooved rim and turns on permanently lubricated ball bearings. The overload device is positioned between the support plates on the swinging beam.

10. OVERLOAD DEVICE

All DRH series electric rope hoists have an overload device with a threshold level microswitch. [RES. 4.2.1.4 - Annex I Machinery Directive]. The electromechanical overload device, constantly measures and checks the value of the load and the dynamic and inertial effects due to its movement. When the set values are exceeded the microswitch of the device starts by opening the control circuit of the hoist motor control device.

11. WEDGE ANCHORAGE

The anchorage is made of spheroidal cast iron. The minimum coefficient of utilisation is in compliance with the FEM rule 9.661/86. The rope is secured with a wedge which keeps it from unwinding.

12. ROPE

This is made of flexible steel, highly resistant to strain and wear. The minimum coefficient of utilisation has been selected to comply with the ISO standard 4308-1:2003. Non-twist ropes are used on DRH hoists with 2 falls and long (L) and extra long, 1st size (X1) drums, and on 2 and 4 fall hoists with extra long, 2nd size (X2) drums.

13. HOOK BLOCK AND HOOK

The return pulley is made of carbon steel with mechanically grooved rim. It rotates on bearing which are permanently lubricated. The load hook is made of highly resistant drop forged steel and is mounted on a swinging cross beam. It rotates on a thrust bearing and has a safety device to prevent unhooking. [RES. 4.1.2.6 - Annex I Machinery Directive].

14. FRAME FOR ELECTRICAL CONNECTIONS

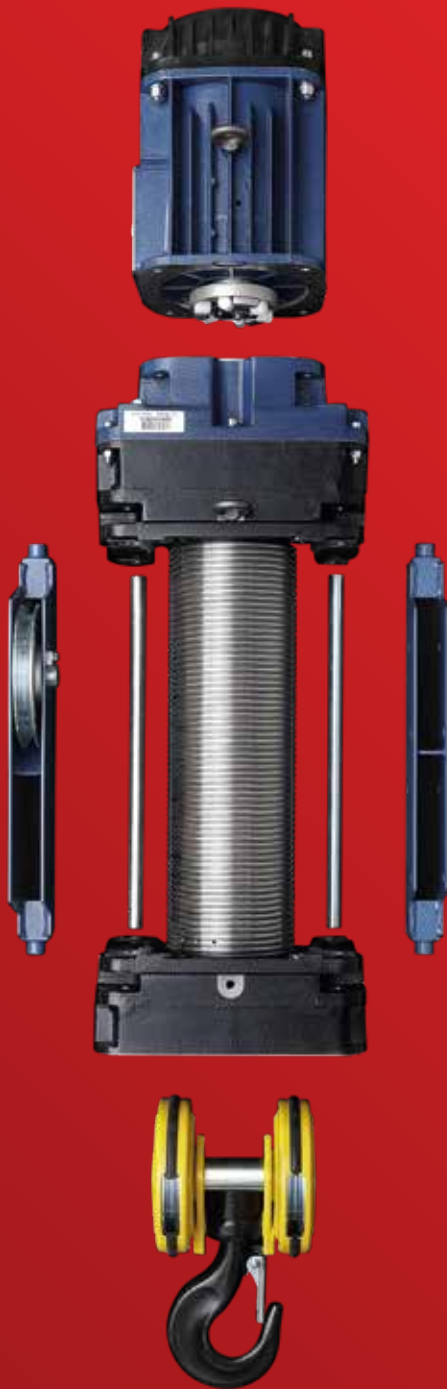
Supplied upon request. It has cable intake and allows the wiring of all the connections of the electrical equipment of the hoist and electric travel trolley, if present. The compartment for the electrical connections and/or any other low voltage control equipment, is closed with a shock resistant thermoplastic cover, IP 55 protection.

15. LOW VOLTAGE CONTROLS

When the hoist is supplied complete with electric controls, the raise and lower and/or right and left functions of the trolley are activated by electrical equipment which includes:

- ▶ The transformer for the low voltage control circuits.
- ▶ The main contactor and contactors/ reversing contactors for controlling the motors.
- ▶ The fuses for protecting the motors and transformer.
- ▶ The terminal board for connections of the auxiliary and power circuits.

The components are mounted on a hinged panel and fixed in a compartment located on the side opposite the motor. The controls are activated by a push-button panel supplied in AC at low voltage. The push-button panel is ergonomically shaped, watertight and made of self-extinguishing, shock resistant, thermoplastic material. Its protection level is IP 65. The emergency stop [RES. 1.2.4.3 - Annex I Machinery Directive], is activated by voluntarily pushing the mushroom shaped button, which starts the control circuit [RES. 1.2.3 - Annex I Machinery Directive]. The push-button panel is connected to the electrical equipment by a multipolar electrical cable with break-resistant metallic cores.



TROLLEYS

DESIGN AND CONSTRUCTION

MONORAIL ELECTRIC TROLLEY, TYPES DST/N - S - R NORMAL - ARTICULATED - LOW HEADROOM

These are normally composed of an idler unit and drive unit, each equipped with two wheels made of mechanically machined pressed steel and mounted on permanently lubricated ball bearings. The wheels of the drive unit are opposing, have a crown gear wheel and are connected to each other by a transmission bar in the normal (N) and low headroom (R) versions.

The articulated version (S), is equipped with a double gear motor, both of which directly give the wheels the movement. The steel supporting plates have anti derailment and anti-drop systems [RES. 4.1.2.2 – Annex I Machinery Directive] and rubber buffers. Travel is assured by one or two self-braking motors with tapered motor, progressive start up and braking, one or two speeds and one of two offset gear motors with gears with helicoidal teeth which are permanently lubricated in an oil bath.

ELECTRIC TROLLEY, NORMAL MONORAIL, TYPE DST/N

In the normal version the trolley has supporting bars with circular cross-sections that support the hoist by hinge and pin suspensions. The drive and idler plates can be adjusted along the bars in relation to the width of the running beam and are complete with brackets fitted with bolted joints. Both units, drive and idler, are connected to each other with strengthening plates.

ELECTRIC TROLLEY, MONORAIL, REDUCED HEADROOM, TYPE DST/R

In the low headroom version the trolley has supporting bars with a circular cross-section that support the hoist in standing position. The drive and idler plates are sliding and can be adjusted along the bars in relation to the width of the running beam with brackets fitted with bolted joints. The trolley has a counterbalance on the supporting bar with circular cross-section to balance the eccentric weight of the hoist.

ELECTRIC TROLLEY, MONORAIL, ARTICULATED, TYPE DST/S

In the articulated version the trolley has supporting bars with cross-sections and brackets with hinged joints which support the hoist. The drive and idler plates are sliding and can be adjusted along the bars in relation to the width of the running beam and are fitted with bolted joints. Both drive units are opposing on the same bar and are independent from the idler units.

ELECTRIC TROLLEY, DOUBLE GIRDER, TYPE DRT

The two driven and two idle wheels are supported by a steel frame. The wheels, pressed from carbon steel, rotate on permanently lubricated ball bearings. The double girder trolley is equipped with devices to avoid derailment and dropping [RES. 4.1.2.2 – Annex I Machinery Directive] and rubber buffers. Activation of the traverse is assured by a self-braking motor with tapered motor, progressive start up and braking, one or two speeds and an offset gear motor with gears with helicoidal teeth which permanently lubricated in an oil bath. They confer the movement to the drive wheels by a transmission bar. The hoist can be lifted on the top of the trolley or can be suspended or transversal.

TRAVERSE LIMIT SWITCHES

Upon request all trolleys can be supplied complete with limit switches [RES. 4.1.2.6 a) - Annex I Machinery Directive].

TOWING ARM

A towing arm is available upon request for all trolley types, adjustable in all directions, to connect the trolley hoist to the electricity supply and prevent breakage of the conductors.

OSCILLATING BRACKET FOR HOISTS MOUNTED ON A DST/N TROLLEY

Available upon request to allow the hoist to oscillate in relation to the vertical axis of the running beam.

CONFORMITY TO NORMS AND REGULATIONS

The hoists and their trolleys are designed and manufactured taking into consideration the **“Essential Safety Requirements”** in **Annex I of the EU Machinery Directive 2006/42/EC** and are placed on the market and **EC Declaration of Conformity**, as per **Annex IIA of the same Directive**.

In addition, DRH series hoists and their trolleys comply with the following Directives:

- LOW VOLTAGE DIRECTIVE 2014/35/UE
- ELECTROMAGNETIC COMPATIBILITY DIRECTIVE 2014/30/UE



DESIGN AND CONSTRUCTION

Donati Sollevamenti S.r.l.'s continuous focus on quality is not just seen in its careful designing, responsible choices and constant testing of materials, production phases and finished product. It involves the whole company through its quality assurance system which has been in place since 1993 and governs and controls the life of the entire company. The integrity in the design and production of all Donati products would not be complete without the careful consideration of the international regulatory framework and standards which are a guarantee of safety for the customer and user. In this light we recommend reading the CSA homologation of DRH rope hoists and relative accessories and trolleys built in a special execution for the North American market.

REGULATORY REFERENCE FRAMEWORK

The design and construction of DRH series electric wire rope hoists the following technical standards and rules were taken into consideration:

EN ISO 1210:2010 "Fundamental concepts, general design principles"

- ▶ EN ISO 13849-1:2008 "Safety-related parts of control systems"
- ▶ EN 12077-2:2008 "Limiting and indicating devices"

- ▶ EN 13001-1:2009 "General design – Part 1: General principles and requirements"
- ▶ EN 14492-2:2009 "Power driven winches and hoists – Part 2: Power driven hoists"
- ▶ EN 60204-32:2009 "Safety of the electrical equipment of lifting machines"
- ▶ EN 60529:1997 "IP enclosure (IP Codes)"
- ▶ ISO 4301-1:1988 "Classification of lifting equipment. General"
- ▶ ISO 4308-1:2003 "Selection of wire ropes – General"
- ▶ DIN 15401 "Choice of lifting hooks"
- ▶ UNI 9466:1994 "Shell drum. Design requirements"
- ▶ FEM 1.001/98 "Rules for the design of lifting equipment"
- ▶ FEM 9.511/86 "Mechanisms classification"
- ▶ FEM 9.661/86 "Dimensions and designs of rope reeving components"
- ▶ FEM 9.683/95 "Selection of lifting and traverse motors"
- ▶ FEM 9.755/93 "Periods of safe work"
- ▶ FEM 9.761/93 "Lifting force limiters"
- ▶ FEM 9.941/95 "Control symbols"



OPERATING LIMITS, OPERATING CONDITIONS AND LIFE SPAN

Correctly determine the operating limits of the hoist in order to ensure correct operation and duration as well as complete compliance of the operating system with the work for which it is intended. The ISO standard 4301-1:1988 and FEM rule 9.511/86 make it possible to classify electric rope hoists based on their use and the parameters necessary for determining the limits of use are the following:

ACTUAL LIFTING CAPACITY

This is determined by the heaviest load to be lifted.

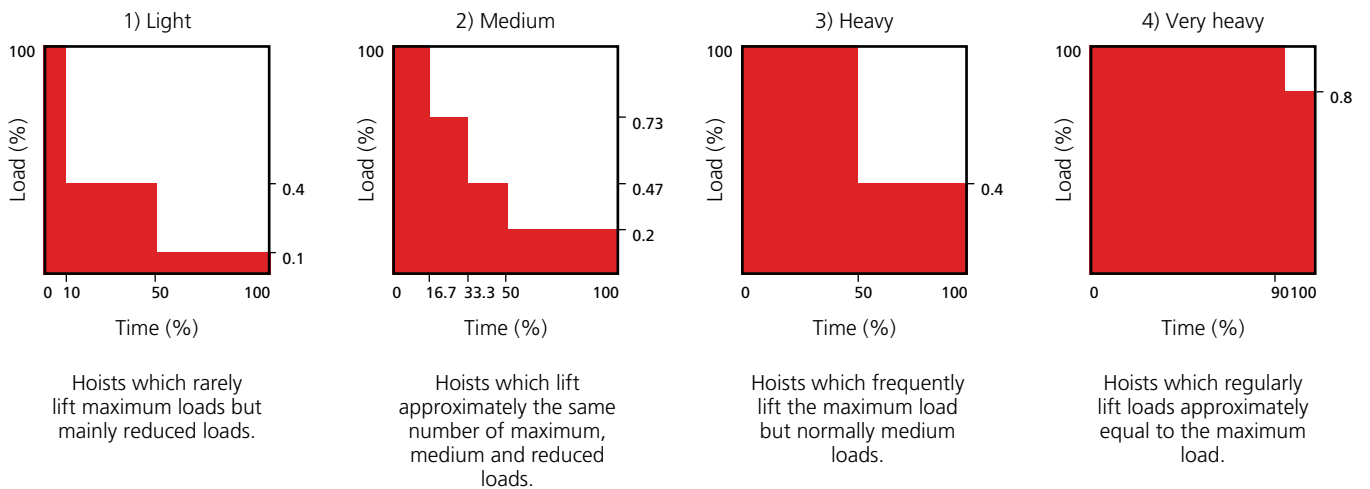
The nominal lifting capacity of the hoist must be $\geq$ the actual lifting capacity.

Lifting capacity = kg



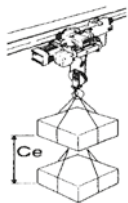
THE STATE OF STRESS

Is evaluated considering the average entity of the loads lifted and is ascribable to one of the four spectrums load shown below which determine the type of service.



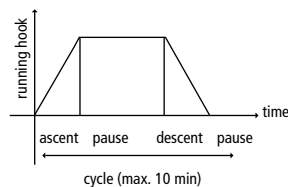
AVERAGE DURATION OF DAILY OPERATION

For LIFTING operations the average duration of operation is calculated as follows: $T_m \text{ (hours)} = (AHR \times C/h \times Rt) / (30 \times S)$



Actual hook run
 $AHR = m$

It is the average of the actual runs of the load



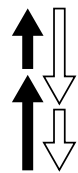
Cycles in an hour
 $C/h = N^\circ$

It is the number of complete ascents and descents carried out in an hour.



Running time
 $RT = \text{hours}$

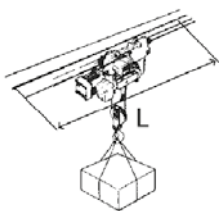
Hoist running time in a whole day.



Lifting speed
 $S = m/min$

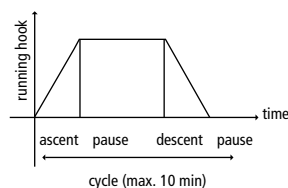
It is the distance covered by the load in a minute.

For TRAVEL operations the average duration of operation is calculated as follows: $T_m \text{ (hours)} = (Aar \times C/h \times Rt) / (30 \times S)$



Actual average run
 $Aar (m) = L/2$

It is the average length L of the trolley running beam.



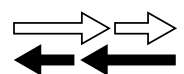
Cycles in an hour
 $C/h = N^\circ$

It is the number of complete runs (right and left) carried out in an hour.



Running time
 $RT = \text{hours}$

It is the running time of the trolley in a day.



Travel speed
 $S = m/min$

It is the distance covered by the trolley in a minute of continuous running.

SELECTION OF THE LIFTING EQUIPMENT

According to the type of use, that determines the **stress level** and calculation of **average daily use time**, for lifting and/ or travelling, the following table can be used to classify the group and the related mechanisms and select the type of hoist in relation to the **capacity**. Once the type of hoist is identified, it is important to check the related life in terms of hours of service and total number of cycles in 10 years of operation.

FOR EXAMPLE:

Capacity = 6300 kg
 Level of stress = 2) Medium Load
 Actual hook run = AHR 2.5 M
 N° of cycles per hour = C/h 8
 Daily running time = Rt 8 h
 Lifting speed = S 4 m/min (4/1 rope falls)
 N° of working days per year = D/y 220

1) Calculation of the average daily running time:

$T_m \text{ (hours)} = (AHR \times C/h \times Rt) / (30 \times S) = (2.5 \times 8 \times 8) / (30 \times 4) = 1.33 \text{ h}$

In the table on page 15, in relation to the Capacity (6300 kg), at the medium level of stress (2) and at the average duration of daily operation ($T_m = 1.2 \text{ h}$) it is possible to determine the rope hoist, with 4/1 rope falls, which is:

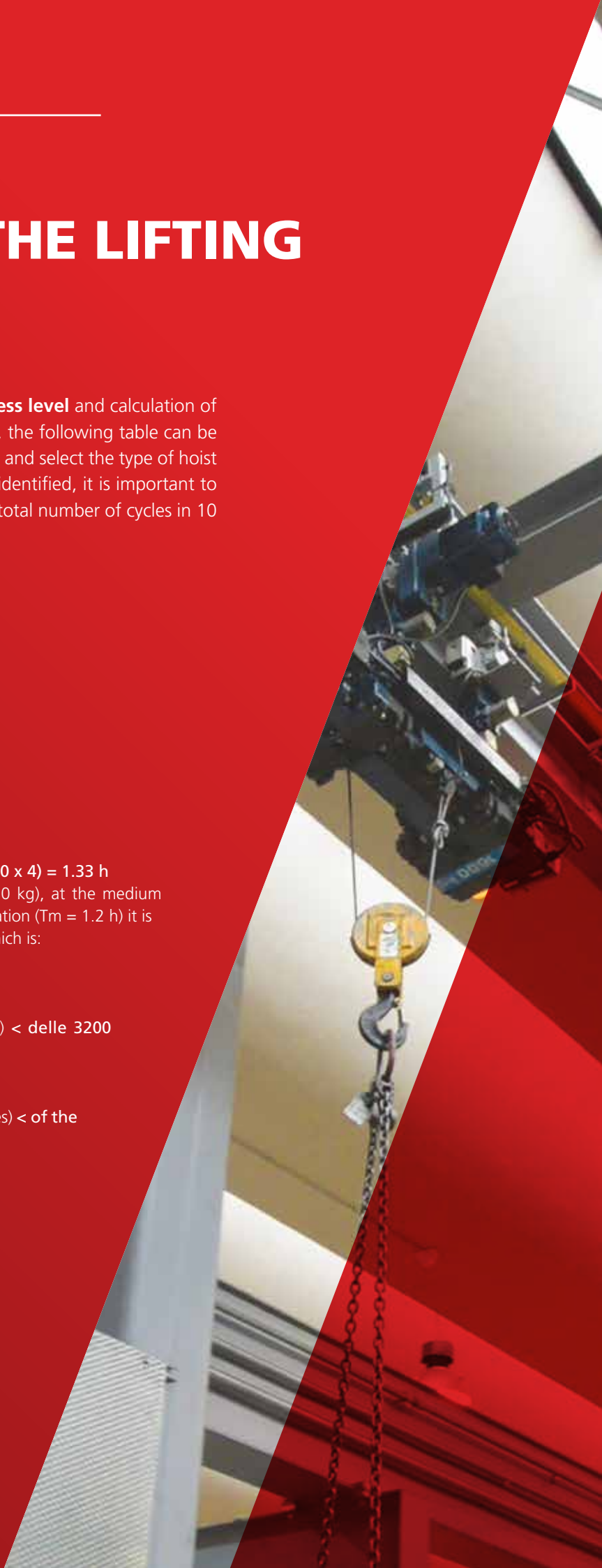
Service Group FEM 1Am – Type DRH 24L1• M

2) Test of life span: Hours of operation in 10 years

$T_m \times G/y \times 10 \text{ years} = 1.33 \times 220 \times 10 = 2933 \text{ (hours)} < \text{delle } 3200$
 (maximum hours possible) ► OK

N° operating cycles in 10 years

$C/h \times Rt \times G/y \times 10 \text{ years} = 8 \times 8 \times 220 \times 10 = 140800 \text{ (cycles)} < \text{of the } 250000$
 (maximum cycles possible) ► OK



LIFE SPAN OF THE LIFTING EQUIPMENT

The overall life span of the lifting equipment is determined from the stress level, real hours of operation of each mechanism and the number of operating cycles of the complete machine. The operating hours and the number of cycles, which depends on the lifting equipment FEM/ISO service group classification, are conventionally expected to allow safe use for a period of 10 years.

Thus, after 10 years, the machine may have finished its expected life span, i.e. completed the available operating cycles, related to its specific service group. For this reason, when the 10th year has finished the lifting equipment **SHOULD NOT** be used unless it is inspected by DONATI SOLLEVAMENTI S.r.l. or by expert technicians assigned for this purpose, aimed at checking if the equipment still has some remaining working life and is therefore able to operate safely for an additional period of time, or should undergo a general overhaul.

The classification of the hoist service group is shown on the machine plate affixed to it. DONATI SOLLEVAMENTI S.r.l. guarantees the safe use of the DRH wire rope hoist for the entire duration of its expected lifespan, only if used in compliance with the parameters corresponding to the service group and subject to correct, regular maintenance.

CLASSIFICATION AND LIMITS OF USE OF THE LIFTING EQUIPMENT ELECTROMECHANISMS

Use based on the stress level (type of duty)		Tm = Average duration of daily operation (hours)	≤ 2	≤ 4	≤ 8	≤ 16	> 16	> 16
1) Light	Life span of the mechanisms in 10 years of operation (hours)	3200	6300	12500	25000	50000	100000	
	N° max of operating cycles in 10 years of operation (Σ cycles)	250x10 ³	500x10 ³	100x10 ⁴	200x10 ⁴	400x10 ⁴	> 4x10 ⁶	
	Tm = Average duration of daily operation (hours)	≤ 1	≤ 2	≤ 4	≤ 8	≤ 16	> 16	
2) Medium	Life span of the mechanisms in 10 years of operation (hours)	1600	3200	6300	12500	25000	50000	
	N° max of operating cycles in 10 years of operation (Σ cycles)	125x10 ³	250x10 ³	500x10 ³	100x10 ⁴	200x10 ⁴	400x10 ⁴	
	Tm = Average duration of daily operation (hours)	≤ 0.5	≤ 1	≤ 2	≤ 4	≤ 8	≤ 16	
3) Heavy	Life span of the mechanisms in 10 years of operation (hours)	800	1600	3200	6300	12500	25000	
	N° max of operating cycles in 10 years of operation (Σ cycles)	63x10 ³	125x10 ³	250x10 ³	500x10 ³	100x10 ⁴	200x10 ⁴	
	Tm = Average duration of daily operation (hours)	≤ 0.25	≤ 0.5	≤ 1	≤ 2	≤ 4	≤ 8	
4) Heavy	Life span of the mechanisms in 10 years of operation (hours)	400	800	1600	3200	6300	12500	
	N° max of operating cycles in 10 years of operation (Σ cycles)	32x10 ³	63x10 ³	125x10 ³	250x10 ³	500x10 ³	100x10 ⁴	
Service group of lifting and travelling mechanisms		as per ISO standard 4301-1	M3	M4	M5	M6	M7	M8
		as per FEM rule 9.511	1Bm	1Am	2m	3m	4m	5m
Intermittent use as per FEM rule 9.683/95	Hoist mechanisms	Ratio of intermittence (RI%)	25	30	40	50	60	60
		Maximum n° of start-ups per hour (A/h)	150	180	240	300	360	360
		Maximum n° of cycles per hour (C/h)	25	30	40	50	60	60
	Trolley mechanisms	Ratio of intermittence (RI%)	20	25	30	40	50	60
		Maximum n° of start-ups per hour (A/h)	120	150	180	240	300	> 360
		Maximum n° of cycles per hour (C/h)	20	25	30	40	50	> 60
Temporary use		Operation time at main speed (min)	15	15	30	30	60	> 60
		Operation time at low speed (min)	2.5	3	3.5	4	5	6
		Maximum n° of start-ups per hour (A/h)	10	10	10	10	10	10
Two speed double polarity motors	Max n° of start-ups per hour (A/h)	Main speed	1/3 (33.3% of the total n° of start-ups per hour)					
		Low speed	2/3 (66.7% of the total n° of start-ups per hour)					
	Tm = Average duration of daily operation (hours)	Main speed	2/3 (66.7% of the average duration of daily operation)					
		Low speed	1/3 (33.3% of the average duration of daily operation)					

IDENTIFICATION OF THE HOIST AND RELATIVE TROLLEYS

ROPE FALL CONFIGURATION → (SINGLE-GROOVED DRUM)			8 FALLS (8/1)			6 FALLS (6/1)		4 FALLS (4/1)				2 FALLS (2/1)		
CAPACITY kg	ABBREVIATION		DRH TYPE IN FEM GROUP (ISO)			DRH TYPE IN FEM GROUP (ISO)		DRH TYPE IN FEM GROUP (ISO)				DRH TYPE IN FEM GROUP (ISO)		
	GEAR BOX	CAPACITY	1Bm (M3)	1Am (M4)	2m (M5)	1Am (M4)	2m (M5)	1Bm (M3)	1Am (M4)	2m (M5)	3m (M6)	1Am (M4)	2m (M5)	3m (M6)
800	L	D												12L3•D
800	V	D												12V3•D
1000	L	E									14L3•E		12L2•E	12L3•E
1000	V	E									14V3•E		12V2•E	22V3•E
1250	L	F									14L3•F	12L1•F		12L3•F
1250	V	F									14V3•F	12V1•F	22V2•F	22V3•F
1600	L	G									14L3•G	12L1•G	12L2•G	22L3•G
1600	V	G									14V3•G		22V2•G	32V3•G
2000	L	H								14L2•H	14L3•H	12L1•H	22L2•H	22L3•H
2000	V	H								14V2•H	24V3•H	22V1•H	32V2•H	32V3•H
2500	L	I							14L1•I		14L3•I	22L1•I	22L2•I	32L3•I
2500	V	I							14V1•I	24V2•I	24V3•I		32V2•I	32V3•I
3200	L	J							14L1•J	24L2•J	24L3•J	22L1•J	32L2•J	32L3•J
3200	V	J						14V0•J		34V2•J	34V3•J		32V2•J	42V3•J
4000	L	K							14L1•K	24L2•K	24L3•K	32L1•K	32L2•K	32L3•K
4000	V	K							24V1•K	34V2•K	34V3•K	32V1•K	42V2•K	42V3•K
5000	L	L							24L1•L	24L2•L	34L3•L	32L1•L	32L2•L	42L3•L
5000	V	L						24V0•L		34V2•L	34V3•L		42V2•L	
6300	L	M							24L1•M	34L2•M	34L3•M	32L1•M	42L2•M	42L3•M
6300	V	M								34V2•M	44V3•M	42V1•M		
8000	L	N							34L1•N	34L2•N	34L3•N	42L1•N	42L2•N	
8000	V	N							34V1•N	44V2•N	44V3•N			
10000	L	O							34L1•O	34L2•O	44L3•O	42L1•O		
10000	V	O						34V0•O		44V2•O	44S3•O	42S1•O		
12500	L	P							34L1•P	44L2•P	44L3•P			
12500	V	P							44V1•P	44S2•P	44S3•P			
16000	L	Q					36L2•Q		44L1•Q	44L2•Q				
16000	V	Q						44V0•Q		44S2•Q				
20000	L	R			38L2•R	36L1•R			44L1•R	44L2•R				
20000	V	R							44S1•R					
25000	L	S		38L1•S				44L0•S	44M1•S					
25000	V	S							46S2•S					
32000	L	T					46L1•T	46L2•T						
32000	V	T					46S1•T							
40000	L	U		48L1•U	48L2•U									
40000	V	U		48S1•U										
50000	L	V	48L0•V											
50000	V	V	48S0•V											
DRH Size 1			DRH Size 2			DRH Size 3		DRH Size 4				DRH 4 cylindrical motor		

KEY AND EXAMPLE OF IDENTIFYING CHARACTERISTICS OF THE HOISTS AND TROLLEYS USING CODES

DRH HOIST		DST TROLLEY		DRT TROLLEY	
2 4 L 2 • L •		D S 1 A G		D R 1 A G 0	
Size: 1 - 2 - 3 - 4					
N° of rope falls: 2 = 2 falls (2/1) 4 = 4 falls (4/1) 6 = 6 falls (6/1) 8 = 8 falls (8/1)	Hoist speed: S = 1 Speed W = 2 Speed	Configuration type Monorail suspended	Trolley speed: m/min E = 8 F = 10 G = 16 H = 20 D = 16/4 W = 20/5	Configuration type Double girder	Version: 0 = Hoist on trolley S = Suspended T = Transversal
Gearbox type: © M-Cylindrical = Slow 4 m/min with 4/1 falls © S-Cylindrical = Fast 3 m/min with 8/1 falls 4 m/min with 6/1 falls 6 m/min with 4/1 falls 12 m/min with 2/1 falls L = Slow 2 m/min with 8/1 falls 2.7 m/min with 6/1 falls 4 m/min with 4/1 falls 8 m/min with 2/1 falls V = Fast 6 m/min with 4/1 falls 12 m/min with 2/1 falls	Capacity abbreviation: L = 5000 kg	Size: 1 - 2 - 3 - 4		Size: 1 - 2 - 3 - 4	
	Type of drum: N = Standard C = Short L = Long 1 = Extra long - X1 (1st size) 2 = Extra long - X2 (2nd size) X = Special		Version: A = Normal B = Low headroom C = Articulated D = Oscillating	Gauge: mm A = 1000 B = 1200 C = 1400 D = 2240 E = 2800 X = Special	Trolley speed: m/min E = 8 F = 10 G = 16 H = 20 D = 16/4 W = 20/5
0 = 1 Bm (M3) 1 = 1 Am (M4) 2 = 2 m (M5) 3 = 3 m (M6)					

TECHNICAL SPECIFICATIONS AND DATA

CAPACITY (kg)	HOIST FEM GROUP	DRH TYPE	DATA OF DRH ELECTRIC WIRE ROPE HOISTS											TYPE OF TROLLEY ON THE HOIST	
			SPEED AT 50 HZ (m/min)		POTENZA MOTORE (kW)		HOOK RUN (m) WITH DRUM ⁽¹⁾					ROPE ⁽¹⁾		MONORAIL DST - N/R	DOUBLE GIRDER DRT
			1 SPEED	2 SPEED	1 SPEED	2 SPEED	C	N	L	X1	X2	N° OF FALLS	Ø / TYPE (mm)		
800	3m	12L3•D	8	8/2.6	3	3/1	8	12	24	34	45	2/1	7B (7B)	1	1
	3m	12V3•D	12	12/4	3	3/1	8	12	24	34	45	2/1	7B (7B)	1	1
1000	3m	14L3•E	4	4/1.3	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	3m	14V3•E	6	6/2	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	2m	12L2•E	8	8/2.6	3	3/1	8	12	24	34	45	2/1	7B (7B)	1	1
	3m	12L3•E	8	8/2.6	3	3/1	8	12	24	34	45	2/1	7B (7B)	1	1
	2m	12V2•E	12	12/4	3	3/1	8	12	24	34	45	2/1	7B (7B)	1	1
	3m	22V3•E	12	12/4	5	5/1.65	10	14	26	34	43	2/1	8M (8B)	1	1
1250	3m	14L3•F	4	4/1.3	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	3m	14V3•F	6	6/2	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	1Am	12L1•F	8	8/2.6	3	3/1	8	12	24	34	45	2/1	7B (7B)	1	1
	3m	12L3•F	8	8/2.6	3	3/1	8	12	24	34	45	2/1	7M (7A)	1	1
	1Am	12V1•F	12	12/4	3	3/1	8	12	24	34	45	2/1	7B (7B)	1	1
	2m	22V2•F	12	12/4	5	5/1.65	10	14	26	34	43	2/1	9B (9B)	1	1
1600	3m	22V3•F	12	12/4	5	5/1.65	10	14	26	34	43	2/1	8M (8B)	1	1
	3m	14L3•G	4	4/1.3	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	3m	14V3•G	6	6/2	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	1Am	12L1•G	8	8/2.6	3	3/1	8	12	24	34	45	2/1	7M (7A)	1	1
	2m	12L2•G	8	8/2.6	3	3/1	8	12	24	34	45	2/1	7M (7A)	1	1
	3m	22L3•G	8	8/2.6	5	5/1.65	10	14	26	34	43	2/1	8A (8A)	1	1
2000	2m	22V2•G	12	12/4	5	5/1.65	10	14	26	34	43	2/1	9B (9B)	1	1
	3m	32V3•G	12	12/4	10	8/2.6	10	14	28	37	47	2/1	12M (12A)	2	2
	2m	14L2•H	4	4/1.3	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	3m	14L3•H	4	4/1.3	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	2m	14V2•H	6	6/2	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	3m	24V3•H	6	6/2	5	5/1.65	5	7	10	14	18	4/1	8M (8B)	2	1
2500	1Am	12L1•H	8	8/2.6	3	3/1	8	12	24	34	45	2/1	7A (7A)	1	1
	2m	22L2•H	8	8/2.6	5	5/1.65	10	14	26	34	43	2/1	9B (9B)	1	1
	3m	22L3•H	8	8/2.6	5	5/1.65	10	14	-	-	-	2/1	8A	1	1
	1Am	22V1•H	12	12/4	5	5/1.65	10	14	26	34	43	2/1	9B (9B)	1	1
	2m	32V2•H	12	12/4	10	8/2.6	10	14	28	37	47	2/1	13B (13B)	2	2
	3m	32V3•H	12	12/4	10	8/2.6	10	14	28	37	47	2/1	12M (12A)	2	2
3200	1Am	14L1•I	4	4/1.3	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	3m	14L3•I	4	4/1.3	3	3/1	4	6	9	14	19	4/1	7M (7A)	1	1
	1Am	14V1•I	6	6/2	3	3/1	4	6	9	14	19	4/1	7B (7B)	1	1
	2m	24V2•I	6	6/2	5	5/1.65	5	7	10	14	18	4/1	9B (9B)	2	1
	3m	24V3•I	6	6/2	5	5/1.65	5	7	10	14	18	4/1	8M (8B)	2	1
	1Am	22L1•I	8	8/2.6	5	5/1.65	10	14	26	34	43	2/1	9M (9A)	1	1
4000	2m	22L2•I	8	8/2.6	5	5/1.65	10	14	26	34	43	2/1	9M (9A)	1	1
	3m	32L3•I	8	8/2.6	10	8/2.6	10	14	28	37	47	2/1	12M (12B)	2	2
	2m	32V2•I	12	12/4	10	8/2.6	10	14	28	37	47	2/1	13B (13B)	2	2
	3m	32V3•I	12	12/4	10	8/2.6	10	14	28	37	47	2/1	12M (12A)	2	2
	1Am	14L1•J	4	4/1.3	3	3/1	4	6	9	14	19	4/1	7M (7A)	1	1
	1Bm	14V0•J	6	6/2	3.5	3.5/1.1	4	6	9	14	19	4/1	7M (7A)	1	1
4000	2m	14L2•J	4	4/1.3	3	3/1	4	6	9	14	19	4/1	7M (7A)	1	1
	3m	24L3•J	4	4/1.3	5	5/1.65	5	7	10	14	18	4/1	8A (8A)	2	1
	2m	24V2•J	6	6/2	5	5/1.65	5	7	10	14	18	4/1	9B (9B)	2	1
	3m	34V3•J	6	6/2	10	8/2.6	5	7	10	14	19	4/1	12M (12A)	3	2
	1Am	22L1•J	8	8/2.6	5	5/1.65	10	14	26	34	43	2/1	9A (9A)	1	1
	2m	32L2•J	8	8/2.6	10	8/2.6	10	14	28	37	47	2/1	13B (13B)	2	2
4000	3m	32L3•J	8	8/2.6	10	8/2.6	10	14	28	37	47	2/1	12M (12A)	2	2
	2m	32V2•J	12	12/4	10	8/2.6	10	14	28	37	47	2/1	13B (13B)	2	2
	3m	42V3•J	12	12/4	16	16/5.3	12	16	32	45	58	2/1	15M (15A)	3	3
	1Am	14L1•K	4	4/1.3	3	3/1	4	6	9	14	19	4/1	7A (7A)	1	1
	2m	24L2•K	4	4/1.3	5	5/1.65	5	7	10	14	18	4/1	9B (9B)	2	1
	3m	24L3•K	4	4/1.3	5	5/1.65	5	7	10	14	-	4/1	8A	2	1
4000	1Am	24V1•K	6	6/2	5	5/1.65	5	7	10	14	18	4/1	9B (9B)	2	1
	2m	34V2•K	6	6/2	10	8/2.6	5	7	10	14	19	4/1	13B (13B)	3	2
	3m	34V3•K	6	6/2	10	8/2.6	5	7	10	14	19	4/1	12M (12A)	3	2

CAPACITY (kg)	HOIST FEM GROUP	DRH TYPE	DATA OF DRH ELECTRIC WIRE ROPE HOISTS												TYPE OF TROLLEY ON THE HOIST	
			SPEED AT 50 HZ (m/min)		POTENZA MOTORE (kW)		HOOK RUN (m) WITH DRUM ⁽¹⁾					ROPE ⁽¹⁾		MONORAIL DST - N/R	DOUBLE GIRDER DRT	
			1 SPEED	2 SPEED	1 SPEED	2 SPEED	C	N	L	X1	X2	N° OF FALLS	Ø / TYPE (mm)			
4000	1Am	32L1•K	8	8/2.6	10	8/2.6	10	14	28	37	47	2/1	13B (13B)	2	2	
	2m	32L2•K	8	8/2.6	10	8/2.6	10	14	28	37	47	2/1	13M (13B)	2	2	
	3m	32L3•K	8	8/2.6	10	8/2.6	10	14	28	37	47	2/1	12A (12A)	2	2	
	1Am	32V1•K	12	12/4	10	10/3.3	10	14	28	37	47	2/1	13B (13B)	2	2	
	2m	42V2•K	12	12/4	16	16/5.3	12	16	32	45	58	2/1	16B (16B)	3	3	
	3m	42V3•K	12	12/4	16	16/5.3	12	16	32	45	58	2/1	15M (15A)	3	3	
5000	1Am	24L1•L	4	4/1.3	5	5/1.65	5	7	10	14	18	4/1	9M (9A)	2	1	
	1Bm	24V0•L	6	6/2	5.5	5.5/1.8	5	7	10	14	18	4/1	9M (9A)	2	1	
	2m	24L2•L	4	4/1.3	5	5/1.65	5	7	10	14	18	4/1	9M (9A)	2	1	
	3m	34L3•L	4	4/1.3	10	8/2.6	5	7	10	14	19	4/1	12M (12A)	3	2	
	2m	34V2•L	6	6/2	10	8/2.6	5	7	10	14	19	4/1	13B (13B)	3	2	
	3m	34V3•L	6	6/2	10	8/2.6	5	7	10	14	19	4/1	12M (12A)	3	2	
	1Am	32L1•L	8	8/2.6	10	10/3.3	10	14	28	37	47	2/1	13M (13A)	2	2	
	2m	32L2•L	8	8/2.6	10	10/3.3	10	14	28	37	47	2/1	13M (13A)	2	2	
	3m	42L3•L	8	8/2.6	16	16/5.3	12	16	32	45	58	2/1	15M (15A)	3	3	
2m	42V2•L	12	12/4	16	16/5.3	12	16	32	45	58	2/1	16B (16B)	3	3		
6300	1Am	24L1•M	4	4/1.3	5	5/1.65	5	7	10	14	18	4/1	9A (9A)	2	1	
	2m	34L2•M	4	4/1.3	10	8/2.6	5	7	10	14	19	4/1	13B (13B)	3	2	
	3m	34L3•M	4	4/1.3	10	8/2.6	5	7	10	14	19	4/1	12M (12A)	3	2	
	2m	34V2•M	6	6/2	10	10/3.3	5	7	10	14	19	4/1	13B (13B)	3	2	
	3m	44V3•M	6	6/2	16	16/5.3	6	8	11	17	24	4/1	15M (15A)	4	3	
	1Am	32L1•M	8	8/2.6	10	10/3.3	10	14	28	37	47	2/1	13A (13A)	2	2	
	2m	42L2•M	8	8/2.6	16	16/5.3	12	16	32	45	58	2/1	16B (16B)	3	3	
	3m	42L3•M	8	8/2.6	16	16/5.3	12	16	32	45	58	2/1	15A (15A)	3	3	
	1Am	42V1•M	12	12/4	16	16/5.3	12	16	32	45	58	2/1	16B (16B)	3	3	
	1Am	34L1•N	4	4/1.3	10	10/3.3	5	7	10	14	19	4/1	13B (13B)	3	2	
8000	2m	34L2•N	4	4/1.3	10	10/3.3	5	7	10	14	19	4/1	13M (13B)	3	2	
	3m	34L3•N	4	4/1.3	10	10/3.3	5	7	10	14	19	4/1	12A (12A)	3	2	
	1Am	34V1•N	6	6/2	10	10/3.3	5	7	10	14	19	4/1	13B (13B)	3	2	
	2m	44V2•N	6	6/2	16	16/5.3	6	8	11	17	24	4/1	16B (16B)	4	3	
	3m	44V3•N	6	6/2	16	16/5.3	6	8	11	17	24	4/1	15M (15A)	4	3	
	1Am	42L1•N	8	8/2.6	16	16/5.3	12	16	32	45	58	2/1	16M (16M)	3	3	
	2m	42L2•N	8	8/2.6	16	16/5.3	12	16	32	45	58	2/1	16M (16M)	3	3	
	1Am	34L1•O	4	4/1.3	10	10/3.3	5	7	10	14	19	4/1	13M (13A)	3	2	
10000	1Bm	34V0•O	6	6/2	11	11/3.6	5	7	10	14	19	4/1	13M (13A)	3	2	
	2m	34L2•O	4	4/1.3	10	10/3.3	5	7	10	14	19	4/1	13M (13A)	3	2	
	3m	44L3•O	4	4/1.3	16	16/5.3	6	8	11	17	24	4/1	15M (15A)	4	3	
	2m	44V2•O	6	6/2	16	16/5.3	6	8	11	17	24	4/1	16B (16B)	4	3	
	3m	©44S3•O	6	6/2	24	24/7.8	6	8	11	17	24	4/1	15M (15A)	4	3	
	1Am	42L1•O	8	8/2.6	16	16/5.3	12	16	32	45	58	2/1	16A (16A)	3	3	
	1Am	©42S1•O	12	12/4	24	24/7.8	12	16	32	45	58	2/1	16A (16A)	3	3	
12500	1Am	34L1•P	4	4/1.3	10	10/3.3	5	7	10	14	19	4/1	13A (13A)	3	2	
	2m	44L2•P	4	4/1.3	16	16/5.3	6	8	11	17	24	4/1	16B (16B)	4	3	
	3m	44L3•P	4	4/1.3	16	16/5.3	6	8	11	17	24	4/1	15A (15A)	4	3	
	1Am	44V1•P	6	6/2	16	16/5.3	6	8	11	17	24	4/1	16B (16B)	4	3	
	2m	©44S2•P	6	6/2	24	24/7.8	6	8	11	17	24	4/1	16B (16B)	4	3	
	3m	©44S3•P	6	6/2	24	24/7.8	6	8	11	17	24	4/1	15A (15A)	4	3	
16000	2m	36L2•Q	2.7	2.7/0.9	10	10/3.3	—	4	8.8	11.5	15	6/1	13A1	—	3	
	1Am	44L1•Q	4	4/1.3	16	16/5.3	6	8	11	17	24	4/1	16M (16M)	4	3	
	1Bm	44V0•Q	6	6/2	18	18/5.9	6	8	11	17	24	4/1	16M (16M)	4	3	
	2m	44L2•Q	4	4/1.3	16	16/5.3	6	8	11	17	24	4/1	16M (16M)	4	3	
	1Am	©44S1•Q	6	6/2	24	24/7.8	6	8	11	17	24	4/1	16M (16M)	4	3	
	2m	©44S2•Q	6	6/2	24	24/7.8	6	8	11	17	24	4/1	16M (16M)	4	3	
20000	1Am	36L1•R	2.7	2.7/0.9	10	10/3.3	—	4	8.8	11.5	15	6/1	13A1	—	3	
	1Am	44L1•R	4	4/1.3	16	16/5.3	6	8	11	17	24	4/1	16A (16A)	4	3	
	1Am	©44S1•R	6	6/2	24	24/7.8	6	8	11	17	24	4/1	16A (16A)	4	3	
	2m	38L2•R	2	2/0.7	10	10/3.3	-	-	6	8	10.8	8/1	13A1	-	3	
	2m	44L2•R	4	4/1.3	16	16/5.3	6	8	11	17	24	4/1	16A1(16A)	4	3	

CAPACITY (kg)	HOIST FEM GROUP	DRH TYPE	DATA OF DRH ELECTRIC WIRE ROPE HOISTS												TYPE OF TROLLEY ON THE HOIST	
			SPEED AT 50 HZ (m/min)		POTENZA MOTORE (kW)		HOOK RUN (m) WITH DRUM ⁽¹⁾					ROPE ⁽¹⁾		MONORAIL DST - N/R	DOUBLE GIRDER DRT	
			1 SPEED	2 SPEED	1 SPEED	2 SPEED	C	N	L	X1	X2	N° OF FALLS	Ø / TYPE (mm)			
25000	1Bm	44L0•S	4	4/1.3	18	18/5.9	6	8	11	17	24	4/1	16A1	—	3	
	1Am	38L1•S	2	2/0.7	10	10/3.3	—	—	6	8	10.8	8/1	13A1(13A1)	—	3	
	1Am	©44M1•S	4	4/1.3	24	24/7.8	6	8	11	17	24	4/1	16.2A	—	3	
	2m	46L2•S	2.7	2.7/0.9	16	16/5.3	—	5	10	14	19	6/1	16A	—	3	
	2m	©46S2•S	4	4/1.3	24	24/7.8	—	5	10	14	19	6/1	16A	—	3	
32000	1Am	46L1•T	2.7	2.7/0.9	16	16/5.3	—	5	10	14	19	6/1	16A	—	3	
	1Am	©46S1•T	4	—	24	—	—	5	10	14	19	6/1	16A	—	3	
	2m	46L2•T	2.7	2.7/0.9	16	16/5.3	—	5	10	14	19	6/1	16A1	—	3	
40000	1Am	48L1•U	2	2/0.7	16	16/5.3	—	3	7	10	13.5	8/1	16A	—	4	
	1Am	©48S1•U	3	—	24	—	—	3	7	10	13.5	8/1	16A	—	4	
	2m	48L2•U	2	2/0.7	16	16/5.3	—	3	7	10	13.5	8/1	16A1	—	4	
50000	1Bm	48L0•V	2	2/0.7	18	18/5.9	—	3	7	10	13.5	8/1	16A1	—	4	
	1Bm	©48S0•V	3	—	27	—	—	3	7	10	13.5	8/1	16A1	—	4	

NOTES: ⁽¹⁾ The hoists with 2 falls with drum L, X1, X2 and hoists with 4 falls with drum X2 use anti-twist ropes.

The type of anti-twist rope is shown in brackets.

© DRH4 version with cylindrical motor.

BREAKING LOAD OF ROPES (MINIMUM GUARANTEED KN)

HOIST TYPE ↑ Ø ROPE (mm) ↑ STRENGTH CLASS ↑	DRH 1			DRH 2					DRH 3						DRH 4						
	Ø 7			Ø 8		Ø 9			Ø 12		Ø 13				Ø 15		Ø 16				Ø 16,2
	B	M	A	M	A	B	M	A	M	A	B	M	A	A1	M	A	B	M	A	A1	A
Normal (kN)	30.4	42.1	48.1	42.0	61.6	53.1	69.6	74.6	121.7	138.7	102.0	142.5	163.4	154.0	189.7	219.2	176.9	215.9	236.0	268.0	296.0
Anti-twist (kN)	35.3	-	48.8	46.1	60.5	58.4	-	76.6	-	136.2	121.8	-	159.8	-	-	212.7	184.4	242.1	255.0	-	

TROLLEY DATA AND MOTOR POWER (MAXIMUM THAT CAN BE SUPPLIED = KW) AT ONE AND TWO TRAVEL SPEEDS

ELECTRIC TRAVEL TROLLEY		1 SPEED: 8 OR 10 m/min ⁽¹⁾				1 SPEED: 16 OR 20 m/min ⁽¹⁾				2 SPEED: 16/4 OR 20/5 m/min ⁽¹⁾			
		REDUCER RATIO WITH m/min SPEED		TROLLEY MOTOR		REDUCER RATIO WITH m/min SPEED		TROLLEY MOTOR ⁽²⁾		REDUCER RATIO WITH m/min SPEED		TROLLEY MOTOR	
		8	10	TYPE 4 POLE	POWER kW	16	20	TYPE 2 POLE	POWER kW	16/4	20/5	TYPE 2/8 POLE	POWER kW
DST - N/R Monotrave	1 - 2	τ1	τ2	71 - 4	0.16	τ1	τ2	71 - 2	0.32	τ1	τ2	71 - D	0.40/0.09
	3	τ1	τ2	80 - 4	0.32	τ1	τ2	80 - 2	0.63	τ1	τ2	80 - D	0.50/0.12
	4	τ1	τ2	80 - 4	0.32	τ1	τ2	80 - 2	0.63	τ1	τ2	80 - D	0.63/0.15
DRT Bitrave	1	τ1	τ2	71 - 4	0.16	τ1	τ2	71 - 2	0.32	τ1	τ2	71 - D	0.40/0.09
	2	τ1	τ2	80 - 4	0.32	τ1	τ2	80 - 2	0.63	τ1	τ2	80 - D	0.50/0.12
	3	τ1	τ2	80 - 4	0.32	τ1	τ2	80 - 2	0.63	τ1	τ2	80 - D	0.63/0.15
		τ1	τ2	100 - 4	0.63	τ1	τ2	100 - 2	1.25	τ1	τ2	100 - D	1.25/0.31
	4	τ1	τ2	100 - 4	0.63	τ1	τ2	100 - 2	1.25	τ1	τ2	100 - D	1.25/0.31

NOTES: For combinations with double gear motor see page 35

⁽¹⁾ The lifting and travel speeds and powers of the related motors refer to three-phase voltage with 50Hz frequency.

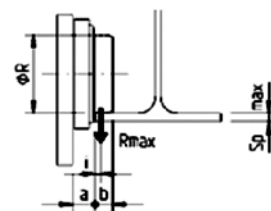
They have to be increased 20% for a frequency of 60Hz.

⁽²⁾ With 2 poles motors per inverter the powers are: 71-2 = 0.5kW; 80-2 = 0.8kW; 100-2 = 2kW

POSITION OF THE WHEELS ON THE BEAM FOR ALL DST TROLLEYS

DST N/S R	Ø R WHEEL (mm)	DIMENSIONS (mm)			MAX. THICKNESS (mm)
		I	A	B	
DST 1	100	8	35	18	20
DST 2	125	12	35	29	23
DST 3	160	17	45	34	35
DST 4	200	19	50	39	41

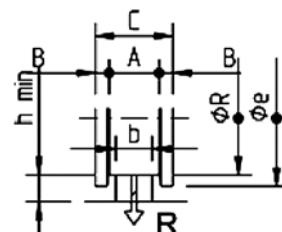
Position of
the wheels on
the beam for all
DST trolleys



DIMENSIONS OF DRT WHEELS AND RELATIVE RAILS

DRT	Ø R WHEEL (mm)	DIMENSIONS (mm)						
		WHEEL				RAIL		
		A	B	C	Ø e	h MIN.	b MIN.	b MAX
DRT 1	125	50	15	80	150	30	30	40
DRT 2	160	55	19	93	190	30	30	45
DRT 3	200	60	20	100	230	30	40	50
DRT 4	250	70	20	110	280	40	50	60

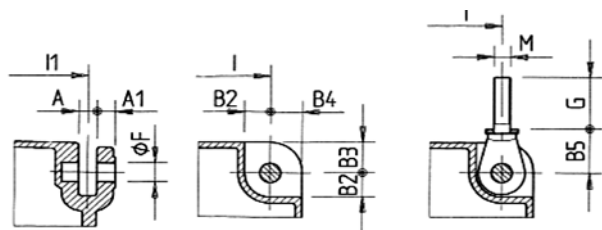
Track position
of the wheel
carts DRT



FIXING OF THE DRH WIRE ROPE HOISTS IN SUSPENDED AND STANDING EXECUTION

Fixing of 2 and 4 fall hoists in suspended execution:

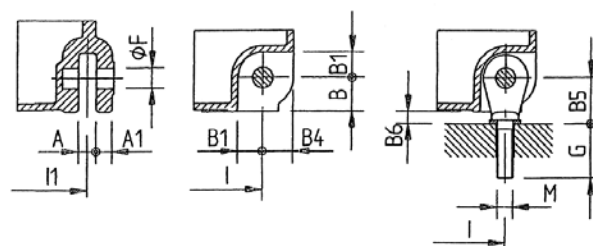
Detail of the hole and connection area of the universal eyebolt



The universal eyebolt is supplied as a standard.
For dimensions I and I1 see the DRH standing/suspended page.

Fixing of 2, 4, 6 and 8 fall hoists in standing execution:

Detail of the support foot and the connection area of the universal eyebolt (2 and 4 falls) and stay bolts (6 and 8 falls)



The universal eyebolt (2 and 4 falls) or stay bolt (6 and 8 falls) is
supplied as a standard.
For dimensions I and I1 see the DRH standing/suspended page.

N° OF ROPE FALLS	DHR TYPE	OVERALL DIMENSIONS (mm)											
		A	A1	B	B1	B2	B3	B4	B5	B6	ØF	M	G
2/1 - 4/1	1	20	20	37	21	21	35	35	50	13	20	16x2	65
	2	22	22	42	31	31	40	40	55	13	25	20x2.5	70
	3	32	32	48	36	36	55	55	76	28	35	24x3	93
	4	42	42	60	38	46	70	70	89	29	45	30x3.5	108
6/1 - 8/1	3	32	32	48	36	-	-	-	48	-	35	20x2.5	55
	4	42	42	60	38	-	-	-	60	-	45	27x3	57

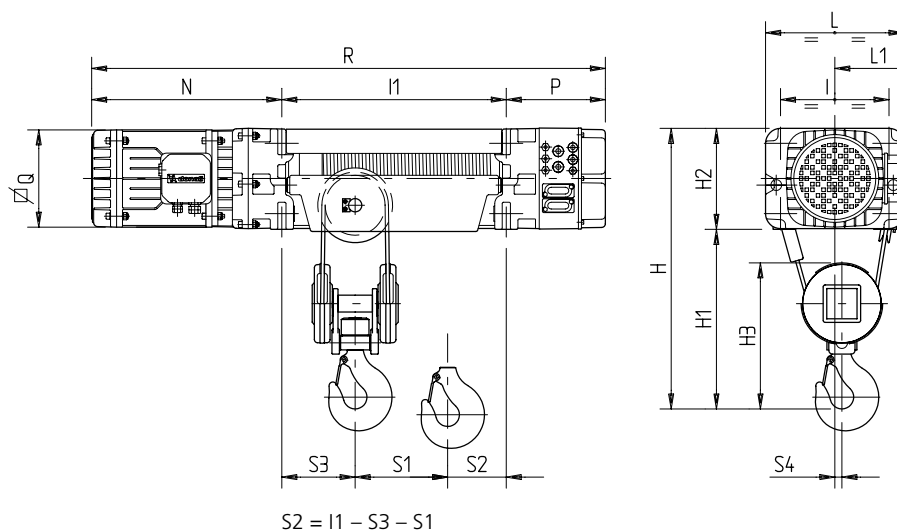
NOTES – Fixing 2, 4, 6 and 8 fall hoists in standing execution for applications on trolleys not supplied by Donati:

- With the universal eyebolt (2 and 4 falls), the headroom of the hoist (H2 DRH dimension) needs to be increased by the dimension “B6” compared to the hoist support surface.
- With the stay bolt (6 and 8 falls) the headroom does not need to be increased by the dimension “B6”.

OVERALL DIMENSIONS - WEIGHTS

DRH SERIES ELECTRIC WIRE ROPE HOISTS WITH 2 AND 4 ROPE FALLS IN STANDING OR SUSPENDED EXECUTION

Reactions on the supports, see page 35



* For DRH3 and DRH4 with L.V., dimension P becomes: DRH3 = 330; DRH4 = 360

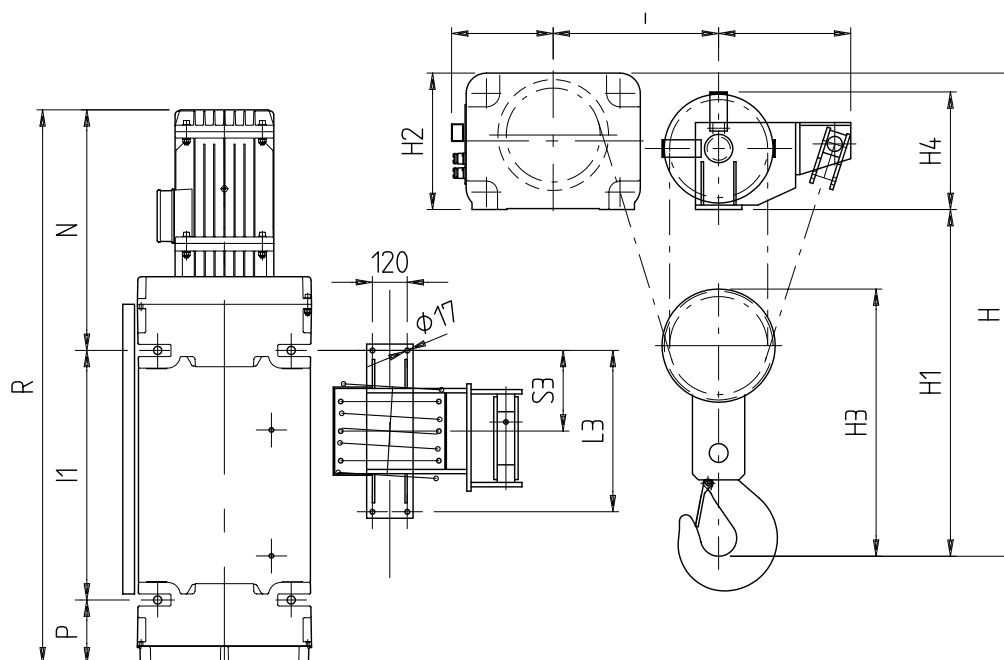
N° OF ROPE FALLS	DHR TYPE	OVERALL DIMENSIONS (mm)										
		H	H1	H2	H3	I	L	L1	N	P	Q	S4
2/1	1	690	460	230	390	250	320	210	480	255	225	28
	2	820	550	270	445	290	370	235	525	270	260	30
	3	1090	710	380	595	370	480	290	705	205	300	40
	4	1390	920	470	750	460	600	360	855	220	340	45
	⊙4	1390	920	470	750	460	600	360	1015	220	340	45
4/1	1	650	420	230	345	250	320	210	480	255	225	15
	2	750	480	270	390	290	370	235	525	270	260	19
	3	1020	640	380	540	370	480	290	705	205	300	23
	4	1320	850	470	700	460	600	360	855	220	340	25
	⊙4	1320	850	470	700	460	600	360	1015	220	340	25

N° OF ROPE FALLS	DHR TYPE	DRUM C				DRUM N				DRUM L				DRUM X1				DRUM X2				WEIGHT (kg) WITH DRUM TYPE				
		I1	R	S1	S3	I1	R	S1	S3	I1	R	S1	S3	I1	R	S1	S3	I1	R	S1	S3	C	N	L	X1	X2
2/1	1	400	1135	125	95	515	1250	185	95	890	1625	365	95	1200	1935	515	95	1530	2265	680	95	132	141	160	180	200
	2	480	1275	160	100	600	1395	220	100	1000	1795	410	100	1260	2055	530	100	1530	2325	670	100	180	195	215	260	280
	3	600	1510	195	130	740	1650	265	130	1260	2170	515	130	1550	2460	680	130	1940	2850	860	130	460	490	565	590	620
	4	722	1797	220	170	862	1937	290	170	1422	2497	570	170	1852	2927	800	170	2352	3427	1030	170	855	890	1010	1200	1250
	⊙4	722	1957	220	170	862	2097	290	170	1422	2657	570	170	1852	3087	800	170	2352	3587	1030	170	910	945	1065	1255	1305
4/1	1	400	1135	70	150	515	1250	100	150	890	1625	160	165	1200	1935	230	165	1530	2265	300	165	140	150	170	200	220
	2	480	1275	105	180	600	1395	135	180	1000	1795	210	200	1260	2055	280	200	1530	2325	350	200	195	205	235	280	300
	3	600	1510	130	240	740	1650	160	240	1260	2170	240	270	1550	2460	280	270	1940	2850	350	270	515	540	625	650	700
	4	722	1797	150	300	862	1937	180	300	1422	2497	220	300	1852	2927	310	300	2352	3427	410	300	960	1000	1140	1350	1400
	⊙4	722	1957	150	300	862	2097	180	300	1422	2657	220	300	1852	3087	310	300	2352	3587	410	300	1015	1055	1195	1405	1455

© DRH4 hoist with cylindrical motor.

DRH SERIES ELECTRIC ROPE HOISTS WITH 6 AND 8 ROPE FALLS IN STANDING EXECUTION

Reactions on the supports, see page 36



N° OF ROPE FALLS	DHR TYPE	OVERALL DIMENSIONS (mm)									
		H	H1	H3	H4	L2	L3	S4	L1	N	P
6/1	3	1435	1055	777	330	350	330	415	290	705	205
	4	1665	1195	922	410	355	360	470	360	855	220
	©4	1665	1195	922	410	355	360	470	360	1015	220
8/1	3	1435	1055	777	330	420	450	515	290	705	205
	4	1665	1195	922	410	455	556	570	360	855	220
	©4	1665	1195	922	410	455	556	570	360	1015	220

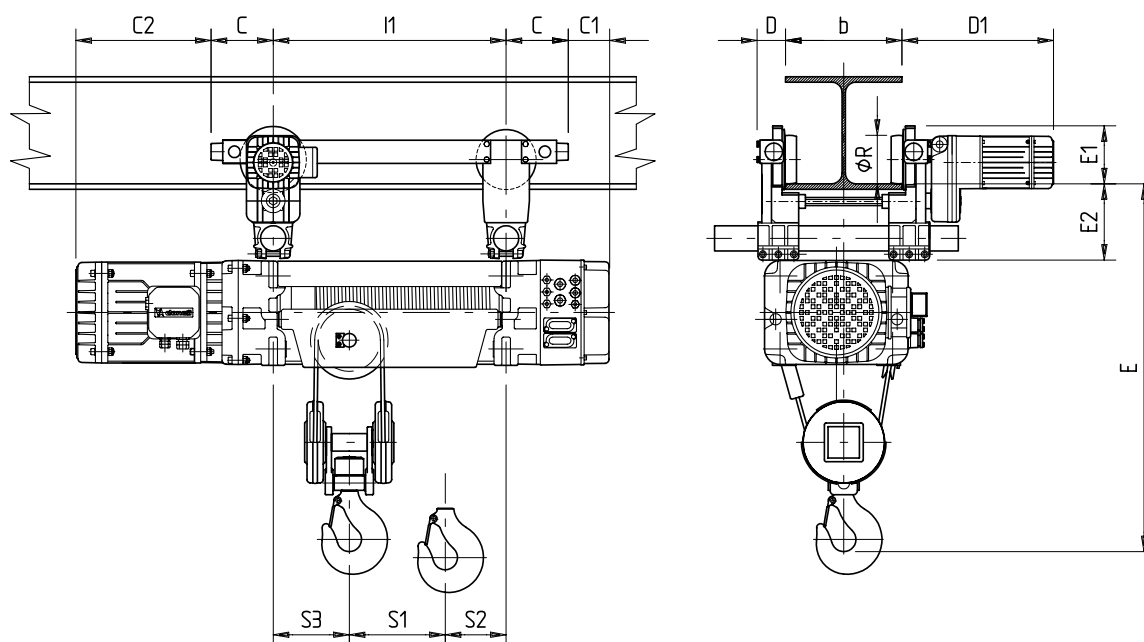
N° OF ROPE FALLS	DHR TYPE	DRUM N			DRUM L			DRUM X1			DRUM X2			WEIGHT (kg) WITH DRUM TYPE			
		I1	R	S3	I1	R	S3	I1	R	S3	I1	R	S3	N	L	X1	X2
6/1	3	740	1650	165	1260	2170	165	1550	2460	165	1940	2850	165	595	680	710	760
	4	862	1937	180	1422	2497	180	1852	2927	180	2352	3427	180	1070	1210	1420	1470
	©4	862	2097	180	1422	2657	180	1852	3087	180	2352	3587	180	1125	1265	1475	1525
8/1	3	-	-	-	1260	2170	225	1550	2460	225	1940	2850	225	-	700	730	780
	4	862	1937	278	1422	2497	278	1852	2927	278	2352	3427	278	1110	1250	1460	1510
	©4	862	2097	278	1422	2657	278	1852	3087	278	2352	3587	278	1165	1305	1515	1565

© DRH4 hoist with cylindrical motor.

DST/N MONORAIL TROLLEYS FOR DRH ELECTRIC WIRE ROPE HOISTS 2 (2/1) AND 4 (4/1) ROPE FALL VERSIONS

Reactions on the supports, see page 37

DRH series electric wire rope hoists with 2 and 4 rope falls with normal trolley N



* For dimensions l1 - S1 - S2 - S3 see page 25

N° OF ROPE FALLS	DHR TYPE	TROLLEY DST N/S	OVERALL DIMENSIONS (mm)								WEIGHT (kg) WITH DRUM TYPE				
			C	C1	C2	D	D1	E	E1	E2	C	N	L	X1	X2
2/1	1	1	140	115	340	66	393	870	130	180	215	220	240	270	290
	2	1	140	130	385	66	393	1000	130	180	260	270	295	326	346
	3	2	160	45	545	75	400	1290	148	195	575	600	675	750	826
	4	3	275	-55	580	90	460	1650	191	255	1120	1155	1270	1480	1650
	©4	3	275	-55	740	90	460	1650	191	255	1175	1210	1325	1535	1705
4/1	1	1	140	115	340	66	393	830	128	180	220	230	250	280	300
	2	2	160	110	365	75	400	950	148	195	300	310	335	380	400
	3	3	275	-70	430	90	460	1280	191	255	775	810	880	996	1070
	4	4	325	-105	530	102	468	1620	237	295	1415	1455	1590	1800	1970
	©4	4	325	-105	690	102	468	1620	237	295	1470	1510	1645	1855	2025

© DRH4 hoist with cylindrical motor.

N.B.: For the speed, power and position of the wheel see page 24

BEAM SPECIFICATIONS TABLE FOR DST/N TROLLEYS

TROLLEY	MIN. BEAM WIDTH (mm)	MAX. THICKNESS (mm)	MIN. RADIUS (mm)
DST 1N	90	20	-
DST 2N	119	23	-
DST 3N	135	35	-
DST 4N	180	41	-

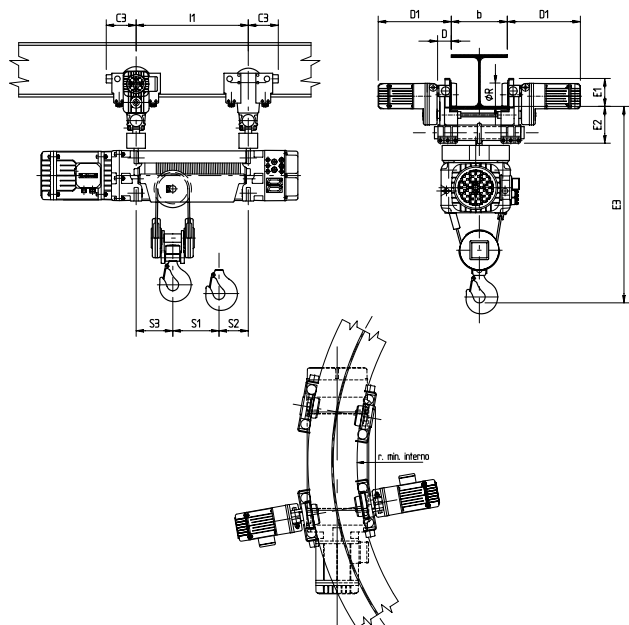
Min. beam width = minimum beam width required

Minimum radius = minimum internal radius required for curved beams

Max. thickness = maximum beam flange thickness allowed

DST/S MONORAIL TROLLEYS FOR DRH ELECTRIC WIRE ROPE HOISTS - 2 (2/1) AND 4 (4/1) ROPE FALL VERSIONS - ARTICULATED

DRH series electric wire rope hoists with 2 and 4 rope falls with articulated trolley S



* For dimensions I1 - S1 - S2 - S3 see page 25

N° OF ROPE FALLS	DHR TYPE	TROLLEY DST/S	OVERALL DIMENSIONS (mm)		
			C3	r MIN.	E3
2/1	1	1	156	1500	960
	2	1	156	1500	1090
	3	2	160	1600	1400
	4	3	280	*1600	1855
4/1	1	1	156	1500	920
	2	2	160	1600	1050
	3	3	280	1600	1485
	4	4	327	1800	1810

N.B.: For the speed, power and position of the wheel see page 24

BEAM SPECIFICATIONS TABLE FOR DST/S TROLLEYS

TROLLEY	MIN. BEAM WIDTH (mm)	MAX. THICKNESS (mm)	MIN. RADIUS (mm)
DST 1S	100	20	1500
DST 2S	135	23	1600
DST 3S	170	35	*1600
DST 4N	210	41	1800

* DST3S with DRH4 2 rope falls drum X2 Minimum radius = 1800

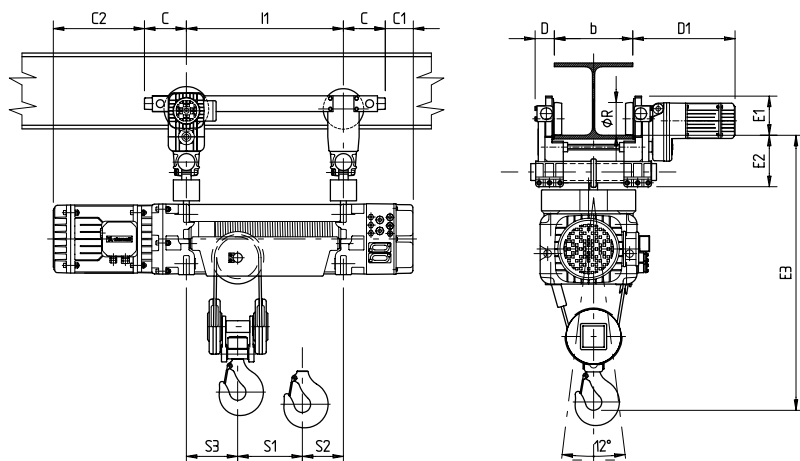
Min. beam width = minimum beam width required

Minimum radius = minimum internal radius required for curved beams

Max. thickness = maximum beam flange thickness allowed

DST/O MONORAIL TROLLEYS FOR DRH ELECTRIC WIRE ROPE HOISTS 2 (2/1) AND 4 (4/1) - OSCILLATING

DRH series electric wire rope hoists with 2 and 4 rope falls in oscillating execution



* For dimensions I1 - S1 - S2 - S3 see page 25

BEAM SPECIFICATIONS TABLE FOR DST/O TROLLEYS

TROLLEY	MIN. BEAM WIDTH (mm)	MAX. THICKNESS (mm)	MIN. RADIUS (mm)
DST 10	100	20	-
DST 20	135	23	-
DST 30	170	35	-
DST 40	210	41	-

Min. beam width = minimum beam width required

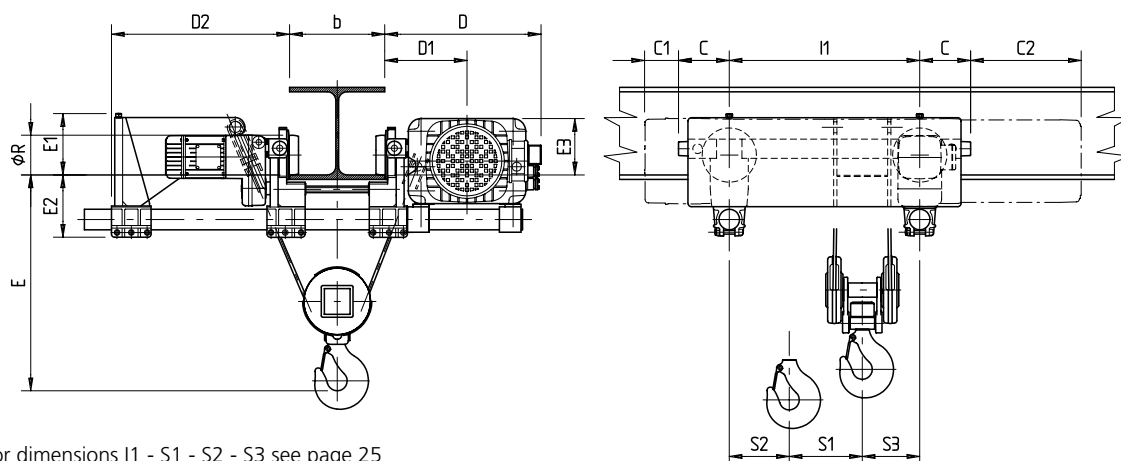
Minimum radius = minimum internal radius required for curved beams

Max. thickness = maximum beam flange thickness allowed

DST/R MONORAIL TROLLEYS FOR DRH ELECTRIC WIRE ROPE HOISTS - 2 FALL (2/1) AND 4 FALL (4/1) VERSIONS

Reactions on the supports, see page 38

DRH series electric wire rope hoists with 2 and 4 rope falls with low headroom trolley R



* For dimensions l1 - S1 - S2 - S3 see page 25

N° OF ROPE FALLS	DHR TYPE	DST-R TROLLEY	OVERALL DIMENSIONS (mm)												WEIGHT (kg) WITH DRUM TYPE				
			D	D1	D2	D2 DRUM (X1-X2)	E1	E1 DRUM (X1-X2)	E2	E3	ØR	C	C1	C2	C	N	L	X1	X2
2/1	1	1	440	230	540	393	140	143	180	145	100	140	115	340	260	270	280	360	390
	2	1	485	250	590	420	200	180	180	185	100	140	130	385	360	370	395	460	490
	3	2	605	315	655	582	317	295	195	295	125	160	45	545	740	770	870	1060	1160
	4	3	755	395	677	677	352	352	255	365	160	275	-55	580	1510	1550	1700	2120	2350
	⊙4	3	755	395	677	677	352	352	255	365	160	275	-55	740	1565	1605	1755	2175	2405
4/1	1	1	440	230	540	393	140	143	180	145	100	140	115	340	270	280	290	370	400
	2	2	495	265	560	412	195	175	195	180	125	160	110	365	415	425	450	530	560
	3	3	625	335	622	547	286	265	255	265	160	275	-70	430	985	1005	1115	1346	1446
	4	4	760	405	630	630	350	350	295	355	200	325	-105	530	1880	1930	2120	2540	2765
	⊙4	4	760	405	630	630	350	350	295	355	200	325	-105	690	1935	1985	2175	2595	2820

© DRH4 hoist with cylindrical motor.

DIMENSION E

N° OF ROPE FALLS	DHR TYPE	WIDTH (mm)											
		100	150	200	250	300	350	400	450	500	550	600	
2/1	1	630	630	670	700	770	840	890	960	1030	1090	1160	
	2	640	640	680	720	780	840	900	960	1030	1090	1160	
	3	-	680	680	720	780	840	900	970	1030	1100	1160	
	4	-	830	830	860	880	940	1000	1070	1130	1190	1260	
4/1	1	480	480	520	570	620	570	740	790	840	890	900	
	2	-	520	570	620	650	700	770	820	850	900	900	
	3	-	610	630	680	720	770	820	870	920	970	1020	
	4	-	-	900	950	1000	1070	1120	1180	1230	1290	1290	

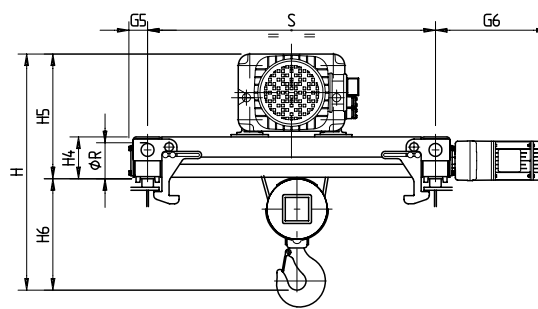
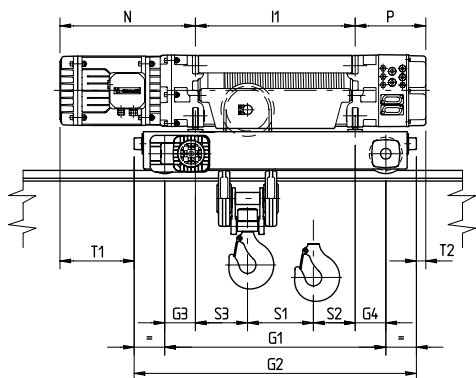
BEAM SPECIFICATIONS TABLE FOR DST/R TROLLEYS

TROLLEY	MIN. BEAM WIDTH (mm)	MAX. THICKNESS (mm)
DST 1R	90	20
DST 2R	119	23
DST 3R	135	35
DST 4R	180	41

DRT DOUBLE GIRDER TROLLEYS FOR DRH STANDING ELECTRIC ROPE HOISTS - 2 FALL (2/1) AND 4 FALL (4/1) VERSIONS

Reactions on the supports, see page 39

DRH series electric wire rope hoists with 2 and 4 rope falls with DRT double girder trolley, in standing configuration



$$H6 = H - H5$$

(*) The standard gauge is S=1000 mm, a gauge of S = 1200 mm can be supplied upon request

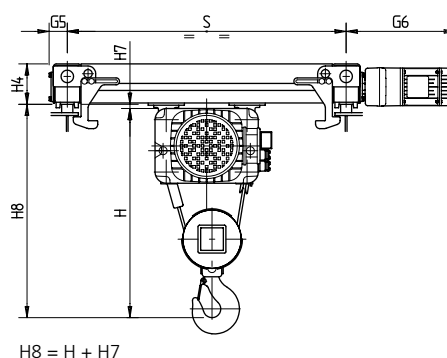
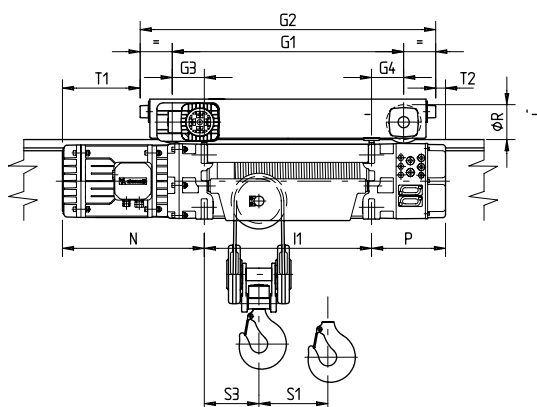
For dimensions I1 - S1 - S2 - S3 - N - P - H see page 25

N° OF ROPE FALLS	DHR TYPE	DRT TROLLEY	GAUGE TROLLEY S (mm)	TYPE OF DRUM DRH	WEIGHT DRH + DRT (kg)	OVERALL DIMENSIONS (mm)										
						G1	G2	G3	G4	G5	G6	T1	T2	Ø R	H4	H5
2/1 4/1	1	1	1000	C	236	710	940	155	155	66	392	210	-15	125	145	391
				N	250	830	1060	157,5	157,5	66	392	207,5	-17,5	125	145	391
				L	280	1230	1460	170	170	66	392	195	-30	125	145	391
				X1	306	1500	1730	150	150	66	392	215	-10	125	145	391
				X2	336	1770	2000	120	120	66	392	245	20	125	145	391
	2	1	1000	C	296	710	940	115	115	66	392	295	40	125	145	433
				N	306	830	1060	115	115	66	392	295	40	125	145	433
				L	350	1230	1460	115	115	66	392	295	40	125	145	433
				X1	376	1500	1730	120	120	66	392	290	35	125	145	433
				X2	406	1770	2000	120	120	66	392	290	35	125	145	433
	3	2	1000	C	716	890	1202	145	145	80	461	404	-96	160	190	598
				N	750	1030	1342	145	145	80	461	404	-96	160	190	598
				L	860	1550	1862	145	145	80	461	404	-96	160	190	598
				X1	946	1840	2152	145	145	80	461	404	-96	160	190	598
				X2	1000	2230	2542	145	145	80	461	404	-96	160	190	598
	4	3	1000	C	1252	1060	1446	170	170	90	520	492	-143	200	228	698
				N	1298	1200	1586	170	170	90	520	492	-143	200	228	698
				L	1492	1760	2146	170	170	90	520	492	-143	200	228	698
				X1	1675	2210	2596	180	180	90	520	482	-153	200	228	698
				X2	1865	2710	3096	180	180	90	520	482	-153	200	228	698
©4	3	1000	C	1307	1060	1446	170	170	90	520	652	-143	200	228	698	
			N	1353	1200	1586	170	170	90	520	652	-143	200	228	698	
			L	1547	1760	2146	170	170	90	520	652	-143	200	228	698	
			X1	1730	2210	2596	180	180	90	520	642	-153	200	228	698	
			X2	1920	2710	3096	180	180	90	520	642	-153	200	228	698	
TROLLEYS DRT3 WITH HOISTS DRH4 (25 t)																
4/1	4	3	1000	C	1350	1060	1446	170	170	90	520	492	-143	200	235	727
				N	1397	1200	1586	170	170	90	520	492	-143	200	235	727
				L	1617	1760	2146	170	170	90	520	492	-143	200	235	727
				X1	1822	2210	2596	180	180	90	520	482	-153	200	235	727
				X2	2055	2710	3096	180	180	90	520	482	-153	200	235	727
	©4	3	1000	C	1405	1060	1446	170	170	90	520	652	-143	200	235	727
				N	1452	1200	1586	170	170	90	520	652	-143	200	235	727
				L	1672	1760	2146	170	170	90	520	652	-143	200	235	727
				X1	1877	2210	2596	180	180	90	520	642	-153	200	235	727

DRT DOUBLE GIRDER TROLLEYS FOR DRH SUSPENDED ELECTRIC ROPE HOISTS - 2 FALL (2/1) AND 4 FALL (4/1) VERSIONS - MAX. CAPACITY 20t

Reactions on the supports, see page 39

DRH series electric wire rope hoists with 2 and 4 rope falls with DRT double girder trolley, in suspended configuration



For dimensions I1 - S1 - S2 - S3 - N - P - H see page 25

(*) The standard gauge is S = 1000 mm, a gauge of S = 1200 mm can be supplied upon request

N° OF ROPE FALLS	DHR TYPE	DRT TROLLEY	GAUGE TROLLEY S (mm)	TYPE OF DRUM DRH	WEIGHT DRH + DRT (kg)	OVERALL DIMENSIONS (mm)										
						G1	G2	G3	G4	G5	G6	T1	T2	Ø R	H4	H7
2/1 4/1	1	1	1000	C	236	710	940	155	155	66	392	210	-15	125	145	13
				N	250	830	1060	157,5	157,5	66	392	207,5	-17,5	125	145	13
				L	280	1230	1460	170	170	66	392	195	-30	125	145	13
				X1	306	1500	1730	150	150	66	392	215	-10	125	145	13
				X2	336	1770	2000	120	120	66	392	245	20	125	145	13
	2	1	1000	C	296	710	940	115	115	66	392	295	40	125	145	15
				N	306	830	1060	115	115	66	392	295	40	125	145	15
				L	350	1230	1460	115	115	66	392	295	40	125	145	15
				X1	376	1500	1730	120	120	66	392	290	35	125	145	15
				X2	406	1770	2000	120	120	66	392	290	35	125	145	15
	3	2	1000	C	716	890	1202	145	145	80	461	404	-96	160	190	11
				N	750	1030	1342	145	145	80	461	404	-96	160	190	11
				L	860	1550	1862	145	145	80	461	404	-96	160	190	11
				X1	946	1840	2152	145	145	80	461	404	-96	160	190	11
				X2	1000	2230	2542	145	145	80	461	404	-96	160	190	11
	4	3	1000	C	1252	1060	1446	170	170	90	520	492	-143	200	228	11
				N	1298	1200	1586	170	170	90	520	492	-143	200	228	11
				L	1492	1760	2146	170	170	90	520	492	-143	200	228	11
				X1	1675	2210	2596	180	180	90	520	482	-153	200	228	11
				X2	1865	2710	3096	180	180	90	520	482	-153	200	228	11
©4	3	1000	1000	C	1307	1060	1446	170	170	90	520	652	-143	200	228	11
				N	1353	1200	1586	170	170	90	520	652	-143	200	228	11
				L	1547	1760	2146	170	170	90	520	652	-143	200	228	11
				X1	1730	2210	2596	180	180	90	520	642	-153	200	228	11
				X2	1920	2710	3096	180	180	90	520	642	-153	200	228	11

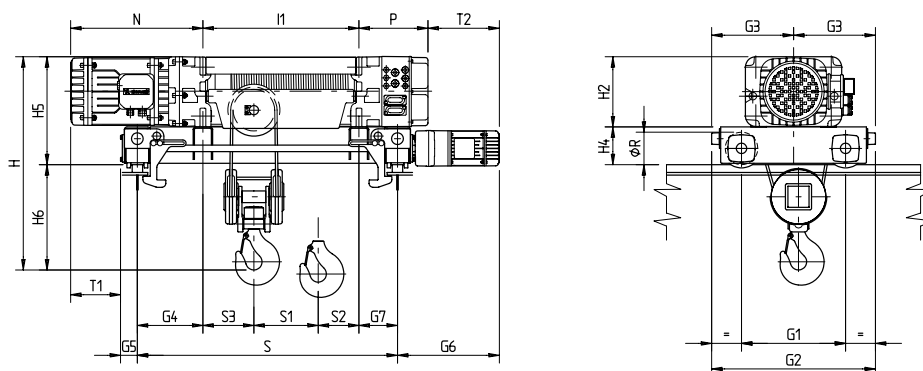
©DRH4 hoist with cylindrical motor.

N.B.: For the speed, power and dimensions of the wheels see page 24

DRT DOUBLE GIRDER TROLLEYS FOR DRH ELECTRIC ROPE HOISTS - TRANSVERSAL VERSION WITH 2 FALL (2/1) AND 4 FALL (4/1) VERSIONS

Reactions on the supports, see page 40

DRH series electric wire rope hoists with 2 and 4 rope falls with DRT double girder trolley, in transversal standing configuration



For dimensions l1 - S1 - S2 - S3 - N - P - H2 see page 25

$$H = H5 + H6$$

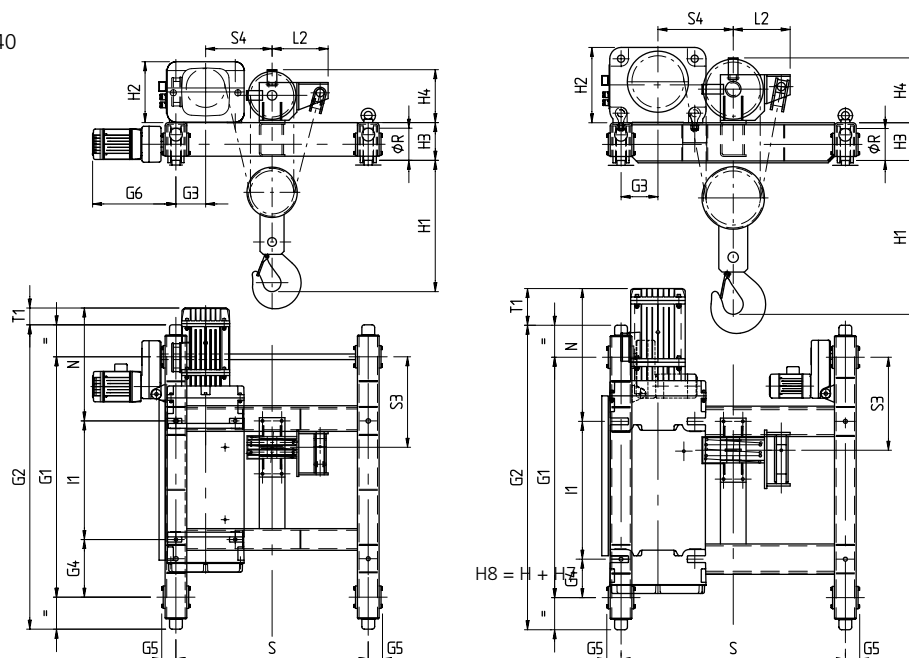
N° OF ROPE FALLS	DHR TYPE	DRT TROLLEY	GAUGE TROLLEY S (mm)	TYPE OF DRUM DRH	WEIGHT DRH + DRT (kg)	OVERALL DIMENSIONS (mm)													
						G1	G2	G3	G4	G5	G6	G7	T1	T2	Ø R	H4	H5	H6	
																		2 FALL	4 FALL
2/1 4/1	1	1	1000	C	216	400	630	315	315	66	392	285	99	422	125	145	375	405	360
				N	226	400	630	315	300	66	392	185	114	322	125	145	375	405	360
				L	270	710	940	470	110	66	392	0	304	137	125	145	375	315	275
	2	1	1000	C	276	400	630	315	267	66	392	253	192	375	125	145	415	485	425
				N	286	400	630	315	252	66	392	148	207	270	125	145	415	485	425
				L	346	710	940	470	200	66	392	0	259	122	125	145	415	405	335
	3	2	1000	C	660	500	812	406	195	80	461	205	430	461	160	190	570	630	570
				N	686	500	812	406	170	80	461	90	455	346	160	190	570	630	570
				L	830	890	1202	601	140	80	461	0	485	256	160	190	570	520	450
	4	3	1000	C	1190	600	986	493	140	90	520	140	625	440	200	228	698	768	722
				N	1240	600	986	493	200	90	520	140	565	440	200	228	698	768	722
				L	1240	600	986	493	200	90	520	140	565	440	200	228	698	768	722
©4	3	3	1000	C	1245	600	986	493	140	90	520	140	785	440	200	228	698	768	722
			1200	N	1295	600	986	493	200	90	520	140	725	440	200	228	698	768	722

© DRH4 hoist with cylindrical motor.

N.B.: For the speed, power and dimensions of the wheels see page 24

DRT DOUBLE GIRDER TROLLEYS FOR DRH ELECTRIC ROPE HOISTS - 6 FALL (6/1) VERSION

Reactions on the supports, see page 20



For dimensions I1 - N - H2 - H4 - L2 see page 20

N° OF ROPE FALLS	DHR TYPE	DRT TROLLEY	GAUGE TROLLEY S (mm)	TYPE OF DRUM DRH	WEIGHT DRH + DRT (kg)	OVERALL DIMENSIONS (mm)											
						G1	G2	G3	G4	G5	G6	S3	S4	T1	H1	H3	Ø R
6/1	3	* 3	1200	N	1120	1500	1900	185	360	90	520	565	415	105	820	235	200
			1400	N	1140	1500	1900	185	360	90	520	565	515	105	820	235	200
			1200	L	1290	2070	2470	185	400	90	520	575	415	95	820	235	200
			1400	L	1310	2070	2470	185	400	90	520	575	515	95	820	235	200
			1200	X1	1380	2500	2900	185	540	90	520	575	415	95	820	235	200
			1400	X1	1400	2500	2900	185	540	90	520	575	515	95	820	235	200
			1200	X2	1510	3000	3400	185	410	90	520	575	415	95	820	235	200
			1400	X2	1530	3000	3400	185	410	90	520	575	515	95	820	235	200
	4	** 3	1400	N	1800	1500	1900	230	240	90	-	580	470	255	960	235	200
			2240	N	2100	1500	1900	650	240	90	-	580	470	255	960	235	200
			2800	N	2400	1500	1900	930	240	90	-	580	470	255	960	235	200
			1400	L	2000	2070	2470	230	240	90	-	590	470	245	960	235	200
			2240	L	2300	2070	2470	650	240	90	-	590	470	245	960	235	200
			2800	L	2700	2070	2470	930	240	90	-	590	470	245	960	235	200
			1400	X1	2250	2500	2900	230	240	90	-	590	470	245	960	235	200
			2240	X1	2500	2500	2900	650	240	90	-	590	470	245	960	235	200
	©4	** 3	2800	X1	2800	2500	2900	930	240	90	-	590	470	245	960	235	200
			1400	X2	2390	3000	3400	230	240	90	-	590	470	245	960	235	200
			2240	X2	2650	3000	3400	650	240	90	-	590	470	245	960	235	200
			2800	X2	2950	3000	3400	930	240	90	-	590	470	245	960	235	200
			1400	N	1855	1500	1900	230	240	90	-	580	470	415	960	235	200
			2240	N	2155	1500	1900	650	240	90	-	580	470	415	960	235	200
			2800	N	2455	1500	1900	930	240	90	-	580	470	415	960	235	200
			1400	L	2055	2070	2470	230	240	90	-	590	470	405	960	235	200
			2240	L	2355	2070	2470	650	240	90	-	590	470	405	960	235	200
			2800	L	2755	2070	2470	930	240	90	-	590	470	405	960	235	200
			1400	X1	2305	2500	2900	230	240	90	-	590	470	405	960	235	200
			2240	X1	2555	2500	2900	650	240	90	-	590	470	405	960	235	200
			2800	X1	2855	2500	2900	930	240	90	-	590	470	405	960	235	200
			1400	X2	2445	3000	3400	230	240	90	-	590	470	405	960	235	200
			2240	X2	2705	3000	3400	650	240	90	-	590	470	405	960	235	200
			2800	X2	3005	3000	3400	930	240	90	-	590	470	405	960	235	200

©DRH4 hoist with cylindrical motor.

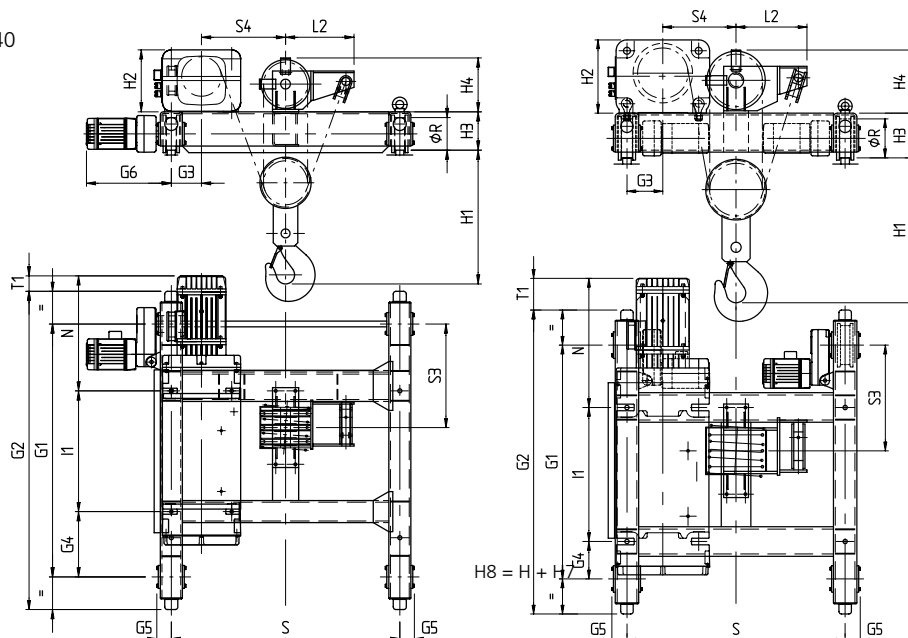
N.B.: For the speed, power and dimensions of the wheels see page 24

* The trolley is made with a single gear motor (motor 100)

** The trolley is made with double gear motor (motor 80)

DRT DOUBLE GIRDER TROLLEYS FOR DRH ELECTRIC ROPE HOISTS - 8 FALL (8/1) VERSION

Reactions on the supports, see page 40



For dimensions I1 - N - H2 - H4 - L2 see page 26

N° OF ROPE FALLS	DHR TYPE	DRT TROLLEY	GAUGE TROLLEY S (mm)	TYPE OF DRUM DRH	WEIGHT DRH + DRT (kg)	OVERALL DIMENSIONS (mm)												
						G1	G2	G3	G4	G5	G6	S3	S4	T1	H1	H3	Ø R	
8/1	3	* 3	1400	L	1400	2070	2470	185	400	90	520	635	515	95	820	235	200	
		** 3	2240		1480	2070	2470	605	400	90	-	635	515	95	820	235	200	
		** 3	2800		1730	2070	2470	885	400	90	-	635	515	95	820	235	200	
		* 3	1400	X1	1480	2500	2900	185	540	90	520	635	515	95	820	235	200	
		** 3	2240		1560	2500	2900	605	540	90	-	635	515	95	820	235	200	
		** 3	2800		1820	2500	2900	885	540	90	-	635	515	95	820	235	200	
		* 3	1400	X2	1580	3000	3400	185	650	90	520	635	515	95	820	235	200	
		** 3	2240		1750	3000	3400	605	650	90	-	635	515	95	820	235	200	
		** 3	2800		1950	3000	3400	885	650	90	-	635	515	95	820	235	200	
	4	*** 4		1400	N	2000	1500	1950	230	240	97	-	678	470	230	930	287	250
				2240		2400	1500	1950	550	240	97	-	678	570	230	930	287	250
				2800		2600	1500	1950	830	240	97	-	678	570	230	930	287	250
				1400	L	2300	2060	2510	230	240	97	-	678	470	230	930	287	250
				2240		2600	2060	2510	550	240	97	-	678	570	230	930	287	250
				2800		2800	2060	2510	830	240	97	-	678	570	230	930	287	250
				1400	X1	2500	2500	2950	230	240	97	-	688	470	220	930	287	250
				2240		2900	2500	2950	550	240	97	-	688	570	220	930	287	250
				2800		3100	2500	2950	830	240	97	-	688	570	220	930	287	250
				1400	X2	2680	3000	3450	230	240	97	-	688	470	220	930	287	250
				2240		3030	3000	3450	550	240	97	-	688	570	220	930	287	250
				2800		3270	3000	3450	830	240	97	-	688	570	220	930	287	250
	©4	*** 4		1400	N	2055	1500	1950	230	240	97	-	678	470	390	930	287	250
				2240		2455	1500	1950	550	240	97	-	678	570	390	930	287	250
				2800		2655	1500	1950	830	240	97	-	678	570	390	930	287	250
				1400	L	2355	2060	2510	230	240	97	-	678	470	390	930	287	250
				2240		2655	2060	2510	550	240	97	-	678	570	390	930	287	250
				2800		2855	2060	2510	830	240	97	-	678	570	390	930	287	250
			1400	X1	2555	2500	2950	230	240	97	-	688	470	380	930	287	250	
			2240		2955	2500	2950	550	240	97	-	688	570	380	930	287	250	
			2800		3155	2500	2950	830	240	97	-	688	570	380	930	287	250	
			1400	X2	2735	3000	3450	230	240	97	-	688	470	380	930	287	250	
			2240		3085	3000	3450	550	240	97	-	688	570	380	930	287	250	
			2800		3325	3000	3450	830	240	97	-	688	570	380	930	287	250	

© DRH4 hoist with cylindrical motor.

N.B.: For the speed, power and dimensions of the wheels see page 24

* The trolley is made with a single gear motor (motor 100)

** The trolley is made with double gear motor (motor 80)

*** The trolley is made with double gear motor (motor 100).

REACTIONS ON THE SUPPORTS

DRH SERIES ELECTRIC WIRE ROPE HOISTS WITH 2 AND 4 ROPE FALLS IN STANDING OR SUSPENDED EXECUTION

Two rope fall (2/1) version

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN									
DRH TYPE	CAPACITY (kg)	DRUM C		DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
1	800	349	117	373	97	410	69	428	62	442	58
	1000	425	141	455	115	500	79	520	70	536	64
	1250	521	170	557	138	611	93	636	80	653	72
	1600	654	212	699	171	768	111	797	93	817	83
	2000	806	260	863	207	946	133	981	109	1004	95
2	1250	555	160	586	136	634	99	662	93	677	88
	1600	693	197	732	165	792	116	823	107	841	99
	2000	852	238	898	199	972	136	1007	123	1028	112
	2500	1050	290	1107	240	1197	161	1237	143	1262	128
	3200	1327	363	1398	299	1512	196	1560	170	1589	151
3	2500	1133	347	1193	302	1309	223	1342	203	1373	187
	3200	1407	423	1482	363	1623	259	1662	233	1699	211
	4000	1721	509	1812	433	1982	300	2029	266	2073	237
	5000	2112	618	2224	521	2430	352	2487	308	2539	271
	6300	2621	759	2760	635	3013	419	3082	363	3146	314
4	4000	1813	614	1901	543	2097	407	2216	384	2272	353
	5000	2195	732	2302	642	2536	468	2670	430	2736	389
	6300	2691	886	2823	771	3109	545	3261	489	3339	436
	8000	3341	1086	3505	939	3857	647	4032	568	4127	498
	10000	4104	1323	4308	1136	4738	766	4941	660	5055	570

Four rope fall (4/1) version

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN									
DRH TYPE	CAPACITY (kg)	DRUM C		DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
1	1600	546	324	617	258	708	176	757	143	787	123
	2000	671	399	759	316	871	213	929	171	965	145
	2500	826	494	935	389	1074	260	1145	205	1189	171
	3200	1046	624	1184	491	1360	324	1447	253	1501	209
	4000	1296	774	1468	607	1686	398	1792	308	1858	252
2	2500	847	500	943	409	1078	289	1145	245	1187	213
	3200	1065	632	1188	514	1358	359	1439	301	1491	259
	4000	1315	782	1468	634	1678	439	1776	364	1839	311
	5000	1627	970	1818	784	2078	539	2197	444	2273	377
	6300	2034	1213	2273	979	2598	669	2743	547	2838	462
3	5000	1672	1086	1870	900	2172	640	2281	544	2385	465
	6300	2062	1346	2308	1112	2683	779	2818	657	2945	555
	8000	2572	1686	2882	1388	3351	961	3520	805	3677	673
	10000	3172	2086	3558	1712	4137	1175	4346	979	4537	813
	12500	3922	2586	4403	2117	5118	1444	5378	1197	5613	987
4	8000	2654	1826	2938	1561	3335	1035	3801	874	3956	744
	10000	3237	2243	3589	1910	4324	1246	4639	1036	4828	872
	12500	3966	2764	4403	2346	5310	1510	5686	1239	5919	1031
	16000	4987	3493	5543	2956	6690	1880	7153	1522	7445	1255
	20000	6154	4326	6845	3654	8268	2302	8828	1847	9190	1510
	25000	7645	5363	8502	4521	10261	2837	10944	2259	11391	1837

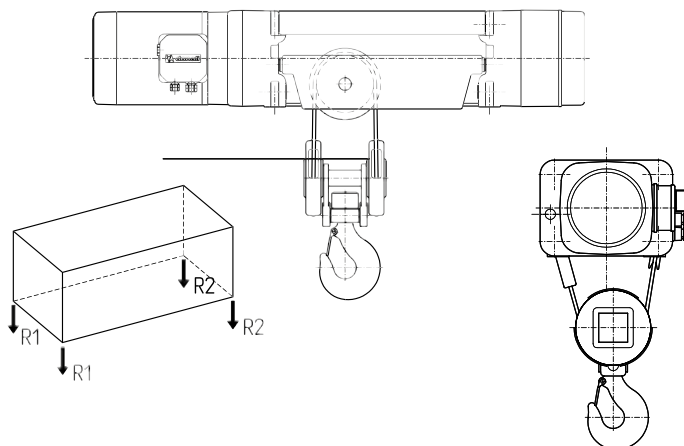
DRH SERIES ELECTRIC ROPE HOISTS WITH 6 AND 8 ROPE FALLS IN STANDING EXECUTION

Six rope fall (6/1) version

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN							
DRH TYPE	CAPACITY (kg)	DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2
3	16000	6415	1883	7179	1161	7385	970	7573	807
	20000	7968	2329	8917	1423	9172	1183	9403	977
4	25000	10246	2788	11321	1784	11758	1451	12033	1202
	32000	13015	3519	14378	2227	14918	1791	15266	1469

Eight rope fall (8/1) version

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN							
DRH TYPE	CAPACITY (kg)	DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2
3	20000	-	-	8400	1950	8750	1615	9050	1340
	25000	-	-	10501	2349	10929	1936	11310	1580
4	40000	13920	6635	16506	4118	17484	3245	18139	2616
	50000	17307	8247	20529	5096	21734	3996	22548	3207

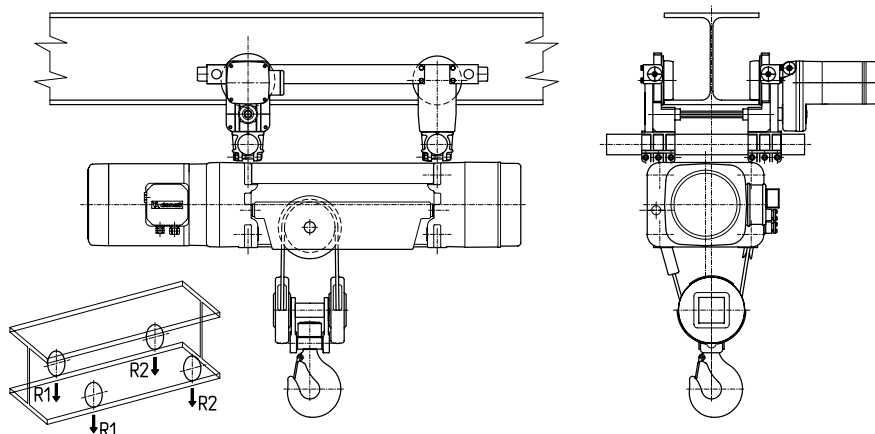


DST/N/S MONORAIL TROLLEYS FOR DRH ELECTRIC WIRE ROPE HOISTS – 2 (2/1) FALL VERSION

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN									
DRH TYPE	CAPACITY (kg)	DRUM C		DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
1	800	377	131	400	110	437	83	445	90	450	95
	1000	453	155	481	129	527	93	535	100	541	104
	1250	549	184	583	152	638	107	646	114	658	112
	1600	682	226	726	184	795	125	804	131	822	123
	2000	834	274	889	221	973	147	988	147	1010	135
2	1250	581	174	611	149	661	112	668	120	673	125
	1600	720	210	757	178	819	129	826	136	834	139
	2000	878	252	923	212	999	149	1006	156	1020	153
	2500	1076	304	1132	253	1224	174	1232	180	1255	168
	3200	1353	377	1423	312	1539	209	1554	209	1581	192
3	2500	1171	367	1230	320	1346	242	1367	258	1387	275
	3200	1445	443	1519	381	1660	278	1680	295	1700	312
	4000	1759	529	1849	451	2019	319	2040	335	2072	341
	5000	2150	638	2261	539	2467	371	2490	385	2538	375
	6300	2660	778	2797	653	3050	438	3073	452	3145	418
4	4000	1901	659	1990	588	2184	451	2242	498	2268	557
	5000	2283	777	2391	687	2624	511	2680	560	2731	594
	6300	2780	930	2913	815	3196	589	3250	640	3334	641
	8000	3429	1131	3595	983	3944	691	4002	738	4123	702
	10000	4193	1367	4397	1181	4825	810	4910	830	5050	775

CARRELLI MONOTRAVE DST/N/S PER PARANCHI ELETTRICI A FUNE DRH - VERSIONE A 4 TIRI (4/1)

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN									
DRH TYPE	CAPACITY (kg)	DRUM C		DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
1	1600	573	337	644	271	735	190	760	180	788	162
	2000	698	412	785	330	898	227	933	207	967	183
	2500	855	505	963	402	1102	273	1148	242	1190	210
	3200	1073	637	1211	504	1387	338	1450	290	1502	248
	4000	1323	787	1494	621	1713	412	1795	345	1860	290
2	2500	881	519	978	427	1112	306	1146	294	1186	264
	3200	1100	650	1223	532	1392	376	1441	349	1490	310
	4000	1350	800	1503	652	1712	456	1777	413	1838	362
	5000	1663	987	1853	802	2112	556	2198	492	2273	427
	6300	2069	1231	2308	997	2632	686	2745	595	2838	512
3	5000	1758	1130	1959	946	2258	682	2313	685	2420	615
	6300	2148	1390	2398	1157	2768	822	2850	798	2980	705
	8000	2658	1730	2973	1432	3436	1004	3552	946	3710	825
	10000	3258	2130	3648	1757	4222	1218	4377	1121	4572	963
	12500	4008	2630	4493	2162	5204	1486	5410	1338	5648	1137
4	8000	2805	1903	3090	1638	3685	1110	3801	1099	3982	1003
	10000	3389	2319	3741	1987	4474	1321	4639	1261	4855	1130
	12500	4118	2840	4555	2423	5460	1585	5686	1464	5945	1290
	16000	5139	3569	5695	3033	6840	1955	7152	1748	7471	1514
	20000	6305	4403	6997	3731	8417	2378	8828	2072	9216	1769

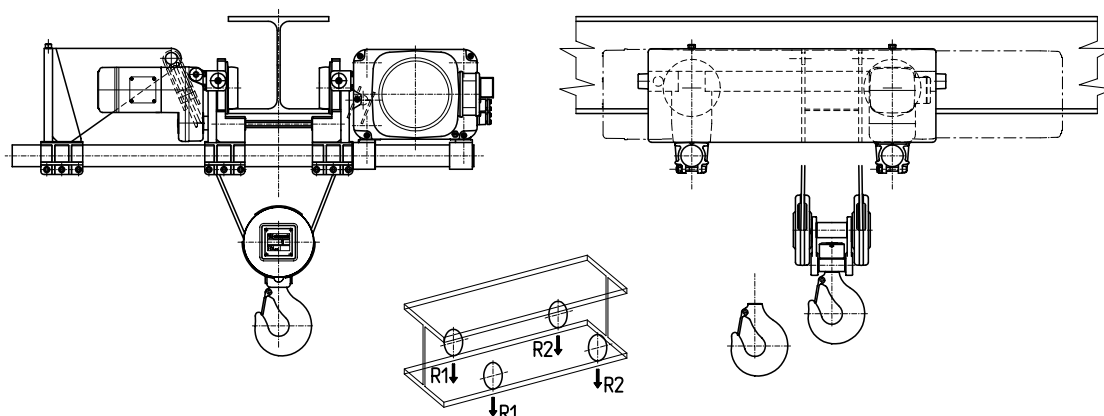


DST/R MONORAIL TROLLEYS FOR DRH ELECTRIC WIRE ROPE HOISTS – 2 (2/1) FALL VERSION

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN									
DRH TYPE	CAPACITY (kg)	DRUM C		DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
1	800	392	138	416	119	451	89	475	105	482	113
	1000	468	162	498	137	540	100	565	115	572	123
	1250	563	192	600	160	652	113	675	130	684	136
	1600	697	233	742	193	808	132	830	150	847	148
2	2000	849	281	906	229	987	153	1010	170	1035	160
	1250	615	190	644	166	695	128	710	145	716	154
	1600	753	227	790	195	852	146	870	160	877	168
	2000	912	268	957	228	1032	166	1050	180	1057	188
3	2500	1110	320	1165	270	1257	191	1275	205	1290	205
	3200	1387	393	1457	328	1572	226	1588	242	1617	228
	2500	1226	394	1287	348	1411	274	1470	310	1495	335
	3200	1500	470	1576	409	1725	310	1780	350	1805	375
4	4000	1813	557	1905	480	2084	351	2140	390	2165	415
	5000	2205	665	2317	568	2532	403	2590	440	2622	458
	6300	2714	806	2853	682	3115	470	3170	510	3228	502
	4000	2031	724	2121	654	2327	523	2450	610	2510	665
5	5000	2413	842	2522	753	2767	583	2890	670	2950	725
	6300	2910	995	3044	881	3340	660	3460	750	3510	815
	8000	3559	1196	3726	1049	4088	762	4210	850	4298	877
	10000	4323	1432	4528	1247	4968	882	5090	970	5225	950

DST/R MONORAIL TROLLEYS FOR DRH ELECTRIC WIRE ROPE HOISTS – 4 (4/1) FALL VERSION

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN									
DRH TYPE	CAPACITY (kg)	DRUM C		DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
1	1600	590	345	660	280	748	197	782	203	813	187
	2000	715	420	802	338	911	234	955	230	992	208
	2500	871	514	979	411	1115	280	1170	265	1215	235
	3200	1090	645	1227	513	1400	345	1472	313	1527	273
2	4000	1340	795	1511	629	1726	419	1818	367	1884	316
	2500	920	538	1017	446	1150	325	1184	331	1226	304
	3200	1139	669	1262	551	1430	395	1478	387	1530	350
	4000	1389	819	1542	671	1750	475	1815	450	1878	402
3	5000	1701	1007	1892	821	2150	575	2235	530	2313	467
	6300	2107	1251	2347	1016	2670	705	2782	633	2878	552
	5000	1829	1164	2024	979	2336	722	2400	773	2513	710
	6300	2219	1424	2464	1189	2847	861	2938	885	3072	800
4	8000	2729	1764	3038	1465	3515	1043	3640	1033	3804	919
	10000	3329	2164	3714	1789	4300	1258	4465	1208	4665	1058
	12500	4079	2664	4558	2195	5283	1525	5497	1425	5741	1232
	8000	2960	1980	3248	1717	3862	1198	3986	1284	4180	1203
5	10000	3543	2397	3899	2066	4650	1410	4824	1446	5052	1330
	12500	4273	2917	4713	2502	5636	1674	5871	1649	6143	1490
	16000	5293	3647	5853	3112	7017	2043	7338	1932	7670	1713
	20000	6460	4480	7155	3810	8594	2466	9013	2257	9414	1968



DRT DOUBLE GIRDER TROLLEYS FOR DRH STANDING/SUSPENDED ELECTRIC ROPE HOISTS - 2 FALL (2/1) AND 4 FALL (4/1) VERSIONS

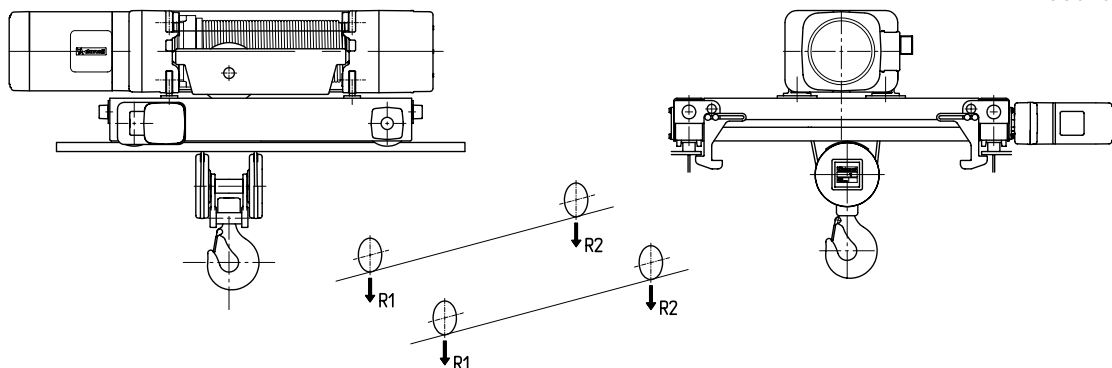
Two rope fall (2/1) version

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN									
DRH TYPE	CAPACITY (kg)	DRUM C		DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
1	800	335	179	369	162	404	131	430	113	457	101
	1000	400	214	428	193	482	153	514	129	545	113
	1250	481	258	515	231	580	180	618	150	654	129
	1600	594	320	637	284	718	217	765	178	808	150
	2000	724	390	776	345	875	260	932	211	984	174
2	1250	529	236	562	211	626	164	662	151	676	142
	1600	651	289	691	257	770	196	801	177	829	164
	2000	791	349	839	309	935	230	972	206	1004	189
	2500	955	425	1025	373	1142	273	1185	243	1223	220
	3200	1209	531	1284	464	1430	335	1484	294	1530	263
3	2500	1084	496	1146	449	1295	365	1368	340	1419	316
	3200	1326	604	1403	542	1583	417	1666	392	1726	369
	4000	1602	728	1696	649	1912	488	2006	452	2077	408
	5000	1948	882	2063	782	2323	577	2432	526	2515	470
	6300	2397	1083	2539	956	2858	692	2984	624	3085	550
4	4000	1737	831	1825	763	2064	611	2218	585	2340	558
	5000	2077	991	2184	904	2467	708	2639	664	2776	622
	6300	2518	1200	2649	1089	2991	834	3186	767	3342	706
	8000	3096	1472	3259	1329	3677	998	3902	901	4082	816
	10000	3775	1793	3975	1613	4484	1191	4743	1606	4953	945

Four rope fall (4/1) version

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN									
DRH TYPE	CAPACITY (kg)	DRUM C		DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
1	1600	535	383	587	338	675	265	734	219	783	186
	2000	649	469	713	412	821	319	892	261	960	218
	2500	792	576	870	505	1003	387	1090	313	1161	257
	3200	992	726	1090	635	1258	482	1366	387	1454	314
	4000	1220	898	1342	783	1549	591	1682	471	1790	378
2	2500	830	568	908	495	1047	378	1109	329	1159	294
	3200	1034	714	1133	620	1307	468	1384	404	1446	357
	4000	1268	880	1391	762	1605	570	1699	489	1774	429
	5000	1560	1088	1713	940	1977	698	2092	596	2183	520
	6300	1940	1368	2133	1170	2460	866	2603	735	2716	637
3	5000	1668	1200	1815	1060	2117	813	2251	722	2368	632
	6300	2026	1482	2223	1302	2593	987	2755	868	2897	753
	8000	2508	1850	2755	1620	3216	1214	3413	1060	3589	911
	10000	3076	2282	3381	1994	3948	1482	4187	1286	4403	1097
	12500	3785	2823	4164	2461	4863	1817	5155	1568	5420	1330
4	8000	2640	1980	2862	1781	3425	1315	3683	1145	3907	1016
	10000	3196	2424	3470	2173	4158	1582	4466	1362	4730	1193
	12500	3892	2978	4230	2663	5074	1916	5444	1634	5758	1415
	16000	4866	3754	5295	3348	6357	2383	6814	2014	7198	1725
	20000	5979	4641	6512	4131	7823	2917	8380	2448	8844	2079
	*25000	7426	5777	8088	5138	9720	3616	10410	3028	10990	2565

*Version only supported



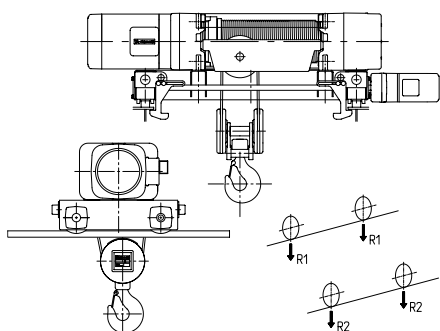
DRT DOUBLE GIRDER TROLLEYS FOR DRH ELECTRIC WIRE ROPE HOISTS – TRANSVERSAL 2 FALL (2/1) AND 4 FALL (4/1) VERSIONS

Two rope fall (2/1) version

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN					
DRH TYPE	CAPACITY (kg)	DRUM C		DRUM N		DRUM L	
		R1	R2	R1	R2	R1	R2
1	800	305	199	313	194	405	125
	1000	364	240	374	233	484	146
	1250	438	291	450	282	584	171
	1600	541	363	555	352	723	207
	2000	659	445	676	431	882	148
2	1250	482	273	494	264	577	211
	1600	593	337	607	326	709	254
	2000	720	410	737	396	859	304
	2500	878	502	899	484	1046	367
	3200	1100	630	1125	608	1309	454
3	2500	1046	507	1084	479	1266	369
	3200	1282	621	1329	584	1548	437
	4000	1552	751	1609	704	1871	514
	5000	1890	913	1959	854	2275	610
	6300	2328	1125	2414	1049	2800	735
4	4000	1802	741	1810	755	-	-
	5000	2162	881	2168	897	-	-
	6300	2630	1063	2634	1081	-	-
	8000	3242	1301	3243	1322	-	-
	10000	3962	1581	3960	1605	-	-

Four rope fall (4/1) version

HOIST		STATIC HOIST REACTIONS: R1; R2 = daN					
DRH TYPE	CAPACITY (kg)	DRUM C		DRUM N		DRUM L	
		R1	R2	R1	R2	R1	R2
1	1600	500	408	515	398	670	265
	2000	607	501	625	488	815	320
	2500	741	617	763	600	996	389
	3200	928	780	955	758	1250	485
	4000	1142	966	1175	938	1540	595
2	2500	783	605	805	588	949	474
	3200	977	761	1004	739	1182	591
	4000	1198	940	1231	912	1449	724
	5000	1475	1163	1515	1128	1782	891
	6300	1834	1454	1885	1408	2215	1108
3	5000	1633	1197	1704	1139	2045	870
	6300	2000	1480	2087	1406	2504	1061
	8000	2480	1850	2589	1754	3105	1310
	10000	3045	2285	3179	2164	3812	1603
	12500	3752	2828	3916	2677	4696	1969
4	8000	2757	1838	2847	1773	-	-
	10000	3347	2248	3455	2165	-	-
	12500	4085	2760	4215	2655	-	-
	16000	5117	3478	5280	3340	-	-
	20000	6297	4298	6497	4123	-	-



DRT DOUBLE GIRDER TROLLEYS FOR DRH ELECTRIC WIRE ROPE TROLLEYS – 6 FALL (6/1) AND 8 FALL (8/1) VERSIONS

Six rope fall (6/1) version

GAUGE TROLLEY S (mm)	CAPACITY (kg)	STATIC HOIST REACTIONS: R1; R2 = daN							
		DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2
1200	16000	5360	3200	6210	2435	6620	2070	6970	1785
	20000	6610	3950	7655	2990	8160	2530	8587	2168
1400	16000	5367	3203	6214	2441	6627	2073	6997	1788
	20000	6615	3955	7660	3000	8170	2530	8600	2170
	25000	8250	5150	9600	3900	10250	3375	10838	2857
2240	32000	10400	6500	12100	4900	12980	4150	13650	3545
	25000	8350	5200	9700	3950	10350	3400	10925	2900
2800	32000	10500	6550	12200	4950	13050	4200	13737	3588
	25000	8450	5250	9800	4050	10400	3500	11025	2950
2800	32000	10600	6600	12300	5050	13100	4300	13837	3638

Eight rope fall (8/1) version

GAUGE TROLLEY S (mm)	CAPACITY (kg)	STATIC HOIST REACTIONS: R1; R2 = daN							
		DRUM N		DRUM L		DRUM X1		DRUM X2	
		R1	R2	R1	R2	R1	R2	R1	R2
1400	25000	-	-	9085	4115	9780	3460	10380	2910
	40000	11500	9500	13850	7300	14900	6350	16325	5043
	50000	14400	11600	17550	8600	18950	7300	20150	6200
2240	25000	-	-	9159	4081	9845	3435	10437	2938
	40000	11600	9600	13950	7350	15050	6400	16442	5101
	50000	14340	11860	17280	9020	18590	7860	20295	6248
2800	25000	-	-	9242	4123	9932	3478	10504	2971
	40000	11650	9650	14000	7400	15100	6450	16522	5141
2800	25000	8450	5250	9800	4050	10400	3500	11025	2950
	32000	10600	6600	12300	5050	13100	4300	13837	3638

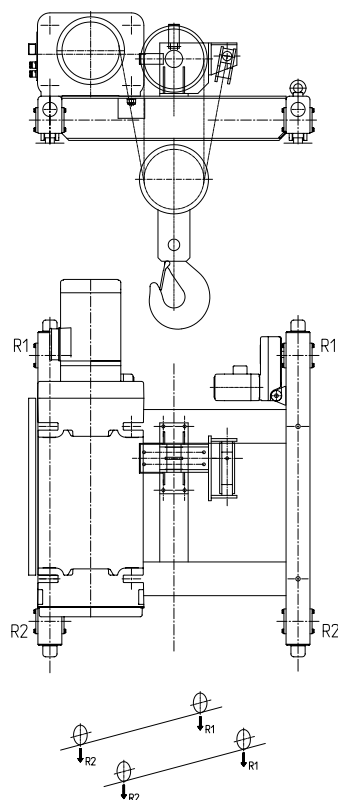


TABLE Ø DRUM AND SHEAVE PITCH DIAMETER

DHR TYPE	Ø ROPE (mm)	Ø DRUM PITCH DIAMETER (mm)	Ø SHEAVE PITCH DIAMETER (mm)
1	7	159	157
2	8	193	180
	9	194	181
3	12	242	269
	13	243	270
4	15	323	337
	16	324	338

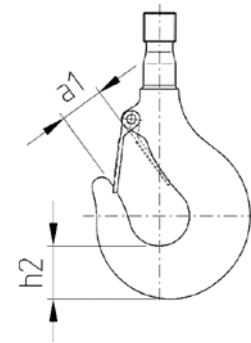


TABLE OF HOOKS FOR DRH

DRH SIZE	N° FALLS	TYPE OF HOOK IN RELATION TO THE CAPACITY (kg) AND FEM SERVICE GROUP								HOOK DIMENSIONS	
		FEM 1Bm		FEM 1Am		FEM 2m		FEM 3m		DIMENSIONS (mm)	
		CAPACITY	TYPE N°	CAPACITY	TYPE N°	CAPACITY	TYPE N°	CAPACITY	TYPE N°	a1	h2
1	2/1	-	-	1250	-	1000	-	800	-	33	37
		-	-	1600	08V	1250	08V	1000	08V		
		-	-	2000	-	1600	-	1250	-		
	4/1	-	-	1600	-	1250	-	1000	-	38	48
		-	-	2000	-	1600	-	1250	-		
		3200	1.6V	2500	1.6V	2000	1.6V	1600	1.6V		
2	2/1	-	-	3200	-	2500	-	2000	-	38	48
		-	-	4000	-	3200	-	2500	-		
		-	-	1600	1.6V	1250	1.6V	1000	1.6V		
		-	-	2000	1.6V	1600	1.6V	1250	1.6V		
	4/1	-	-	2500	-	2000	-	1600	-	43	58
		-	-	3200	-	2500	-	2000	-		
		-	-	3200	-	2500	-	2000	-		
		5000	2.5T	4000	2.5T	3200	2.5T	2500	2.5T		
		-	-	5000	-	4000	-	3200	-		
		-	-	6300	-	5000	-	4000	-		
3	2/1	-	-	2500	-	2000	-	1600	-	43	58
		-	-	3200	-	2500	-	2000	-		
		-	-	4000	2.5T	3200	2.5T	2500	2.5T		
		-	-	5000	-	4000	-	3200	-		
		-	-	6300	-	5000	-	4000	-		
		-	-	5000	-	4000	-	3200	-		
	4/1	-	-	6300	-	5000	-	4000	-	50	75
		10000	5T	8000	5T	6300	5T	5000	5T		
		-	-	10000	-	8000	-	6300	-		
		-	-	12500	-	10000	-	8000	-		
4	6/1	-	-	20000	10S	16000	10S	-	-	77	106
		-	-	25000	10S	20000	10S	-	-		
	8/1	-	-	-	-	-	-	-	-		
		-	-	-	-	-	-	-	-		
	2/1	-	-	5000	-	4000	-	3200	-	50	75
		-	-	6300	-	5000	-	4000	-		
		-	-	8000	5T	6300	5T	5000	5T		
		-	-	10000	-	8000	-	6300	-		
	4/1	-	-	10000	-	8000	-	6300	-	77	106
		-	-	10000	-	8000	-	6300	-		
		16000	10P	12500	10P	10000	10P	8000	10P		
		-	-	16000	-	12500	-	10000	-		
	6/1	-	-	20000	-	16000	-	12500	-	87	118
		-	-	25000	10T	20000	10T	-	-		
		-	-	32000	12T	25000	12T	-	-		
		-	-	-	-	32000	-	-	-		
	8/1	50000	12T	40000	12T	-	-	-	-	87	118
		-	-	-	-	40000	12T	-	-		

SPECIFICATIONS OF MOTORS, FUSES AND POWER CABLES

DRH HOIST	MOTOR TYPE	POLES	INSTALLED POWER (kW)	COS φ	I _a - (A) 400V - 50Hz	I _n - (A) 400V - 50Hz	LINE FUSE (A) 400V - 50Hz	MINIMUM POWER CABLE SECTION 400V - (ΔU_{20V})	
								$\emptyset$ mm ²	L =m
1	112K4R	4	3	0.75	40	8	16	2.5	≤ 30
	11254R	4/12	3/1	0.752/0.5	38/13	8/6.6	16	2.5	≤ 30
2	132K4R	4	5	0.75	58	12	20	4	≤ 30
	132K5R	4/12	5/1.65	0.78/0.5	50/17	12/10	20	4	≤ 30
3	160K4R	4	10	0.8	110	22	32	6	≤ 30
	160K5R	4/12	10/3.3	0.77/0.46	100/32	24/18	32	6	≤ 30
	160K5RH3	4/12	8/2.6	0.75/0.48	80/28	20/15.5	32	6	≤ 30
4	180K4R	4	16	0.82	175	34	63	10	≤ 20
	180K5R	4/12	16/5.3	0.78/0.46	170/55	38/25	63	10	≤ 20
4 Cilindrico	180C4R	4	24	0.88	330	48	80	16	≤ 20
	180C5R	4/12	24/7.8	0.88/0.5	330/80	48/32	80	16	≤ 20

TROLLEY DST / DRT	MOTOR TYPE	POLES	INSTALLED POWER (kW)	COS φ	I _a - (A) 400V - 50Hz	I _n - (A) 400V - 50Hz
DST1 DST2 DRT1	71K3P	2/8	0.4/0.09	0.75/0.6	4.4/1.2	1.2/0.9
	71C2P	2	0.32	0.72	6	1.0
	71C4P	4	0.16	0.5	4	1.0
	71K2PI	2 Inverter	0.5	0.72	5.2	1.3
DST3 DRT2	80K3P	2/8	0.5/0.12	0.85/0.6	5.5/1.6	1.3/1.1
	80K2PL	2	0.63	0.75	7.7	1.7
	80K4PL	4	0.32	0.65	3.9	1.1
	80K2PI	2 Inverter	0.8	0.8	9.7	1.9
DST4 * DRT3	80K3PL	2/8	0.63/0.15	0.82/0.57	6.8/1.9	1.6/1.3
	80K2PL	2	0.63	0.75	7.7	1.7
	80K4PL	4	0.32	0.65	3.9	1.1
	80K2PI	2 Inverter	0.8	0.8	9.7	1.9
** DRT3 *** DRT4	100K3P	2/8	1.25/0.31	0.84/0.6	16/3.6	3.1/1.8
	100K2P	2	1.25	0.83	16	2.9
	100K4P	4	0.63	0.8	8.5	1.7
	100K2PI	2 Inverter	2.0	0.86	23	4.3

- The DST trolleys articulated version are made with double gear motor. Thus the powers shown in the table need to be doubled.

* The DRT3 trolley for DRH4 hoists with 6 falls is made with double traverse gear motor.
The DRT3 trolley for DRH3 hoists with 8 falls (frame gauge 2240-2800) is made with double traverse gear motor.
Thus the powers shown in the table need to be doubled.

** The DRT3 trolley for DRH4 hoists with 4 falls, DRH3 with 6 falls (frame gauge 1200-1400) and DRH3 with 8 falls (frame gauge 1400) is made with single traverse gear motor.

*** The DRT4 trolley for DRH4 hoists with 8 falls is made with double traverse gear motor. Thus the powers shown in the table need to be doubled.

DONATI WEBSITE

Donati's window on the world for customer service.

Manuals and product information

The new Donati website has been designed to assist customers to they can easily find all of the updated information on Donati products at any time.

The Donati website makes it simple to consult and download product catalogues, technical manuals and product information sheets.



Donati Shop

The Donati Shop makes it possible to quickly and independently handle spare parts requests, thus reducing waiting times for customers.

Contact Section

The new contact section divided by departments lets you address your requests to the right team, so our staff can provide a faster and more accurate answer.

LEONARDO CONFIGURATION SYSTEM



Leonardo Configuration System is the Donati configurator system lets you configure and generate offers for Chain hoists, Jib cranes and Crane sets, easily and quickly; it lets you rapidly and efficiently respond to your customers' requests.

The suite is composed of two configurators:

Leonardo Product Configurator:

Used to configure chain hoists and jib cranes alone or in combination

Leonardo Crane Set Configurator:

Used to configure bridge cranes complete with all necessary accessories and Donati hoists.



visit donaticranes.com
and keep up to date

MKCT20ENFO

Donati Sollevamenti S.r.l.

Via S. Quasimodo, 17
20025 Legnano (MI) - Italy
Tel +39 0331 14811
Fax +39 0331 1481880

dvo.info@donaticranes.com
www.donaticranes.com

MANUAL AND ELECTRIC JIB CRANES

GBA/GBP Series
CBB/MBB Series
CBE/MBE Series
GBR/GBL Series



JIB CRANES



The most complete range for local handling of loads up to 10,000 kg.

The result of in-depth knowledge of the most wide ranging applications, Donati jib cranes offer the most complete range of solutions for local handling of loads up to 10,000 kg.

Mass production performed with consolidated industrialised processes makes it possible to create completely reliable and technically innovative cranes with an excellent price/performance ratio. The quality of the components used, and the excellent finishing of the metal structural work, as well as the EN ISO 9001 certified quality system allows us to offer a top quality product and always in line with the most modern international standards. Donati's expertise in designing and manufacturing jib cranes and wire rope and chain hoists, ensures perfect component integration, as well as always satisfying both standardised and special installation requests.



MAX

10,000 KG

The complete range for local
handling solutions





CONCEPT CONSTRUCTION AND THE RANGE

Jib cranes, with manual or electric rotation in column or wall versions, are created to locally handle goods inside a plant, on a square or along with operating stations. Studied and designed also for use in difficult environmental conditions, jib cranes become full operating machines if used and integrated into production centres, machine tools or work benches. They adopt standardised parts which make it possible to create completely standardised configurations.

Jib cranes perform three operations:

- ▶ they vertically lift the load in space, using the hook of the lifting unit, generally composed of a DMK chain hoist or DRH wire rope hoist;
- ▶ they move the load transversally in space, with the use of a hoist-carrying trolley, either electric or manual, which moves along the radial axis of the crane arm (with the exception of cranes with articulated arm where the hoist normally does not move on the trolley since it is connected in a fixed position at the end of the arm);
- ▶ they rotate the load in space, around the constrained axis of the arm, through a manual push action of the load or electrically by means of a gear motor, serving the circular area below, limited by the rotation radius of the arm.

Jib cranes are mass produced for capacities starting from 63 to 10,000 kg and jibs from 2 to 10.5 m in the following executions:

- ▶ Jib cranes with manual rotation, max. capacity 2,000 kg
 - GBA SERIES column-mounted, 300° rotation
 - GBP SERIES wall-mounted, 270° rotation
- ▶ Jib cranes with articulated arm, max. capacity 500 kg
 - CBB SERIES column-mounted, 360° manual rotation
 - MBB SERIES wall-mounted, 360° manual rotation
- ▶ Jib cranes with motorised arm, max. capacity 2,000 kg
 - CBE SERIES column-mounted, 300° electric rotation
 - MBE SERIES wall-mounted, 270° electric rotation
- ▶ Jib cranes with continuous electric rotation, max. capacity 10,000 kg
 - GBR SERIES column-mounted, 360° electric rotation
- ▶ Jib cranes with continuous electric rotation, max. capacity 5,000 kg and max. manual capacity 2,000 kg
 - GBL SERIES column-mounted, 360° continuous rotation

CONSTRUCTION CHARACTERISTICS

MODULAR COMPONENTS

Thanks to the modular components all Donati jib cranes are tailor-made for customer needs in a fast and efficient

way - as standardised as well as special configurations. Basic versions are always available in the warehouse. Because of their extreme compactness the base components, columns, brackets and arms, enable the maximum use of the hook run and, thanks to their minimum lateral headroom, allow the optimal use in the operating area.

COLUMN

The column jib crane consists of a supporting column, made of press forged steel with a tubular structure with a polygonal section. This allows a high rigidity and stability of the crane and is fixed to the base with a base plate and a system of bolts and lug bolts. In the upper part a pair of plates support the arm and allow it to rotate.

SUPPORT BRACKET

The wall-mounted jib crane consists of a bracket support structure. This is formed by a pair of plates made of press-forged steel, fixed to the wall or anchored to a pillar with staybolts or screws which act as a support to the arm and allow it to rotate.

ROTATING ARM

The arm, rotating around its own axis, consists of a supporting girder for the run of the hoist-carrying trolley. Depending on the model it can be made in profile or channel version designed by Donati.

BRAKING DEVICE OF THE ARM

The arm of the manually rotated jib crane is fitted in all models with a braking system. The brake, the clutch with asbestos-free friction material, allows the regulation of the force of rotation of the arm and ensures the stability of positioning.

FIXING SYSTEMS OF THE CRANE

- ▶ Foundation frame with lug bolts. The jib cranes are generally designed to be fixed to the ground using the foundation frame with lug bolts inserted in the foundation plinth.
- ▶ Chemical bolts. The fixing of the column to the floor can be done using chemical bolts, also with a counterplate where necessary which allows better distribution of forces.
- ▶ Brackets and staybolts unit. This is used for fixing the bracket jib crane to a supporting pillar and is fitted with a pressure screw system which guarantees a better adhesion of the staybolts to the pillar.

DONATI LIFTING EQUIPMENT

Safe, versatile DMK electric chain hoists are used and for higher loads the DRH electric wire rope hoists (installed only on GBR and GBL series cranes) with 1 or 2 lifting and moving speeds.

HEIGHT OF COLUMNS AND LENGTH OF ARMS

The range of the jib cranes is characterised by a vast availability of standard models and made-to-measure in special models. All the cranes with a column of "base" height and also in half-metre variation, the cranes up to a top height of two metres as shown in the following table are standard models:

"STANDARD" HEIGHT OF THE COLUMNS (m)							
SERIES	CRANE HEIGHT	DIMENSION	"BASE" HEIGHT	OTHER "STANDARD" HEIGHTS			
GBA CBB-CBE	R-S	H	3	3.5	4	4.5	5
	T-U	H	3.5	4	4.5	5	5.5
	V-Z	H	4	4.5	5	5.5	6
GBR	2-3-4-5-6	H	4	4.5	5	5.5	6
GBL	2-3	H	3.5	4	-	-	-
	5	H	4	4.5	-	-	-

All the cranes with columns of heights different from the standard ones with "made to measure" heights are made in special execution or exceeding two metres or of a lower height with respect to the "base" column. There are also special cranes with arms lengths other than the standard ones in the technical tables.

FINISHING

Protection from atmospheric agents (dust, etc.) is guaranteed by a painting treatment that includes the application of a coat of yellow two component acrylic polyurethane enamel with a 50 micron thickness, after preparation of the surfaces with metallic sandblasting with SA2 grade. Drying in an oven for 15 minutes at a temperature of 45/50°C concludes the cycle.

SERVICE CLASS

The structural elements of the manually or electrically rotated, column-mounted or wall-mounted, jib cranes are dimensioned in the class of service ISO A5 (according to ISO 4301-1/88).

PROTECTION AND INSULATION OF ELECTRICAL PARTS

- ▶ Rotation motor: Protection IP54 (motors) IP23 (brakes); insulation class "F" (where necessary)
- ▶ Electrical panel: Minimum protection IP55 - Maximum voltage insulation 1500V (where necessary)
- ▶ Push-button panel: Protection IP65 - Maximum voltage insulation 500V (where necessary)
- ▶ Collector ring: Protection IP65 - Maximum voltage insulation 600V (where necessary)
- ▶ Rotation limit switch: Protection IP65 - Maximum voltage insulation 500V (where necessary)
- ▶ Connector blocks: Minimum protection IP65 - Maximum voltage insulation 1500V
- ▶ Cables: CEI 20/22 - Maximum power insulation 450/750V.

ELECTRIC POWER SUPPLY

The electrical jib cranes are designed to be powered with alternate electric power three-phase of: 400V according to IEC38-1. The CBE series "column" and MBE "wall" electrically rotated jib cranes must be powered with alternate electrical power with three-phase power + neutral + earth (~ 3 + N + T).

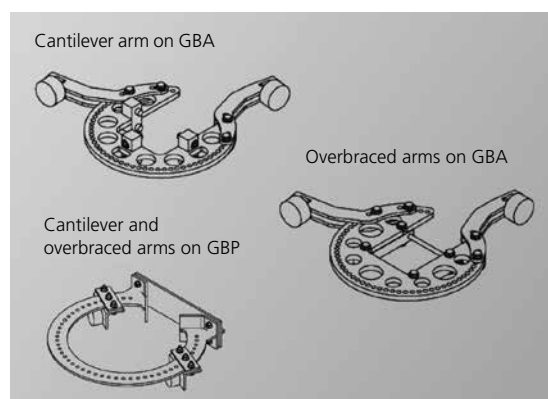
ENVIRONMENTAL CONDITIONS OF USE

Use temperatures: minimum - 10° C; maximum + 40°C Maximum relative humidity: 80% - Maximum altitude 1000 m above sea level. The standard crane must be installed in a ventilated environment, free from corrosive vapours (acid vapours, saline clouds, etc) and is designed for use in an indoor area (protected from bad weather). Special executions for outdoor service are available on request.

NOISE

The level of acoustic pressure emitted by the hoist is always lower than 85 dB (A). The incidence of environmental characteristics such as transmission of sound by metallic structures, reflection caused by combined machines and walls, is not included in the figure shown.

Rotation stops for arms on GBA and GBP



SPECIAL VERSIONS

On request the following can be supplied for jib cranes:

- ▶ Designs for outdoor service with wind speeds of up to 70 km/h (above this limit, a specific assessment by our technical service department must be carried out)
- ▶ Special anticorrosive paint.
- ▶ Protection cover for motors and control panel (GBR series).
- ▶ Hoist-trolley protection cover in standby position (GBA/GBP - CBE/MBE series).
- ▶ Gear protection guard (CBE/MBE series).
- ▶ Rotation motor with stainless steel brake blocks and / or tropicalisation (for electrically rotated cranes).
- ▶ Anti-condensation heaters.
- ▶ Rotation stops (GBA/GBP series).
- ▶ Supplementary electrical safety limit switches (for electrically rotated cranes).
- ▶ Power supply voltages different from the standard ones (for electrically rotated cranes).
- ▶ Columns with double opposite and parallel arms (GBA series).
- ▶ Customised column heights and arm lengths.
- ▶ Galvanised treatment for GBA/GBP series cranes with T and H version arm.



MANUALLY ROTATED JIB CRANES

GBA "COLUMN" SERIES

MAXIMUM ROTATION FIELD 300°
(290° IN THE T VERSION)

GBP "WALL" SERIES

MAXIMUM ROTATION FIELD 270°
(250° IN THE T VERSION)



THE MANUALLY ROTATED JIB CRANES IN THE GBA "COLUMN" SERIES AND THE GBP "WALL" SERIES

are designed for the handling of goods inside a plant, in a square or to serve operative purposes. The standard models are available for lifting capacities from 63 to 2,000 kg and jibs from 2 to 8 m. The S-T-H- versions are designed according to the three different versions of the arm.

"T" CANTILEVER VERSION FOR LIFTING CAPACITIES FROM 63 kg TO 2,000 kg AND JIBS FROM 2 TO 5 m

The arm is made using a laminated double T-beam form: the hoist carrying trolley runs on the lower flange of the T-beam. The girder is self-supporting and cantilevered, so it has no support staybolts, and it is directly integral with, via suitable reinforcements, the rotation tube. This version allows the optimum use of the available space at a height due to the absence of staybolts and allows the maximum use of the hook run. The arm allows the additional of electrical or mechanical push-trolleys.

"H" OVERBRACED VERSION FOR LIFTING CAPACITIES FROM 125 kg TO 2,000 kg AND JIBS FROM 4 TO 8 m

The arm is made using a laminated double T-beam form: the hoist carrying trolley runs on the lower flange of the T-beam. The arm is fitted with one or two staybolts to support the profile which connect it to the rotation tube. This version allows the use of the jib crane for loads and jibs superior to those possible with the S and T versions. The arm allows the addition of electrical and mechanical push-trolleys.

ELECTRICAL POWER SUPPLY

This is designed to power the hoist and/or electrical trolley, which run along the jib of the crane. It uses a connection box for the connection between the line and the power festoon cable, situated at the top of the column crane near the bracket support in the wall version. The column crane can be supplied, on request, with a main on / off line switch which can be padlocked. The distribution of energy takes place via a flame-retardant flat festoon cable which slides on specific trolleys or slides along the arm.



NEW S SERIES JIB CRANES IN CHANNEL PROFILE

For capacities from 63 to 1,000 kg and jibs from 2 to 7 m, with manual rotation.

The new S series combines tradition and innovation and is characterised by the extreme lightness of movement due to the low inertia resulting from its reduced weight. The arm is made using a sheet metal section bar inside which the trolley runs characterised by high movement fluidity thanks to the high quality components used. The combination of these elements makes the S series light, simple and easy to move. Its new channel profile used to create the jib crane arm is a special cold rolled sheet metal profile, which stands out due to its smooth surface, high rigidity and its reduced weight. Special guide surfaces and slightly inclined sliding surfaces, reduce the rolling friction of the hoist trolley travel wheels. The reduction of its weights means less movement effort by the operator for manual rotation of the jib crane arm. The new trolleys have the following advantages:

- ▶ Perfect sliding and maximum silence of the plastic wheels mounted on rolling bearings
- ▶ Connection of loads with pins, joint and without moments
- ▶ High vertical load capacity (horizontally up to 10% of the vertical load)

Upright

Designed to permit a wider rotation angle.

Column

Square column designed to maximise rigidity maintaining a reduced weight.

Bracket unit

Use to fix the wall-mounted crane. The configuration makes it possible to avoid complicated alignment operations during installation.

Trolley

High fluidity for a simple movement thanks to the low friction of the wheels.

Electric chain hoist DMK

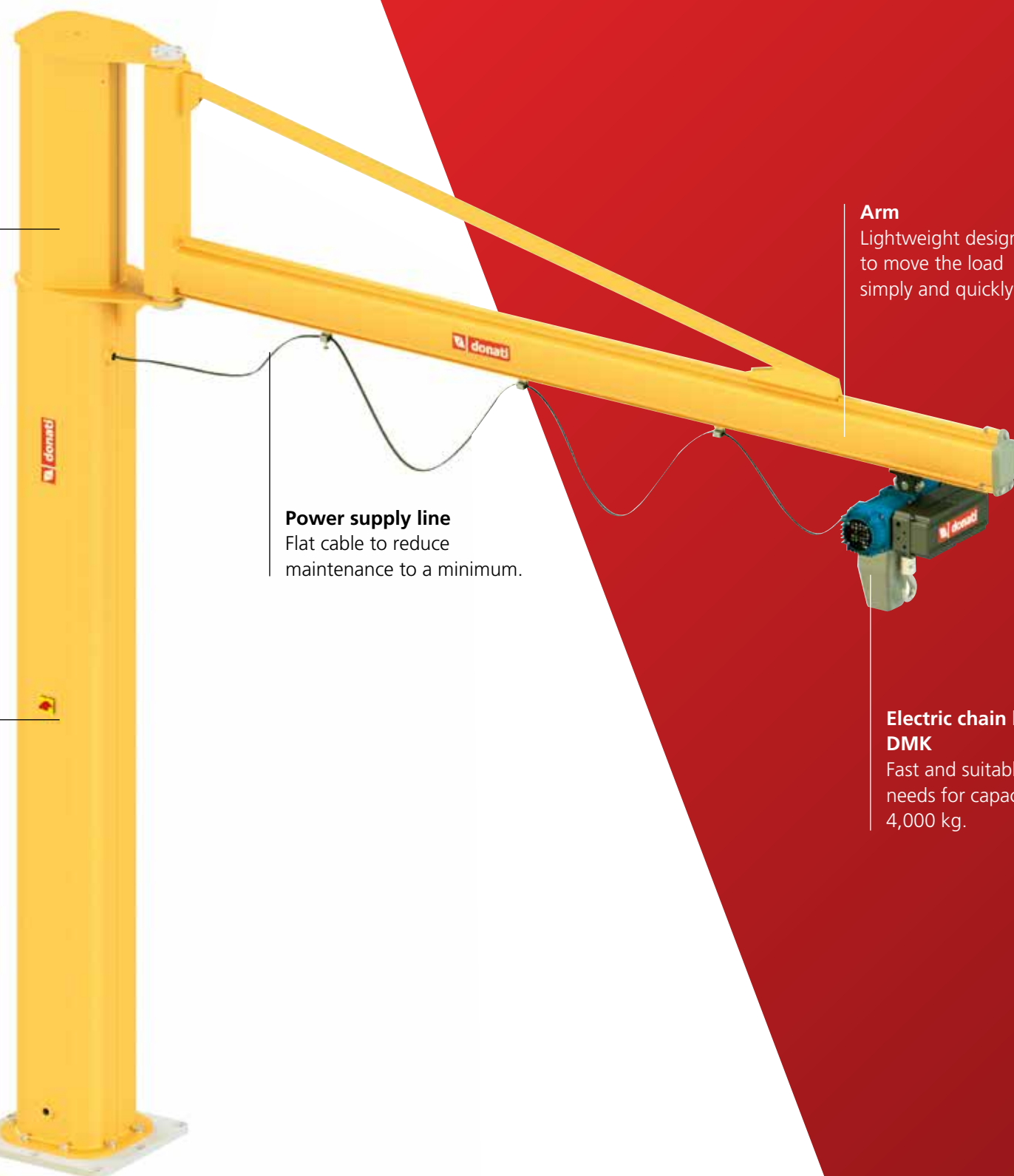
Fast and suitable for all needs for capacities up to 4,000 kg.



MAX

1,000 KG

Manual movement



Arm

Lightweight design to move the load simply and quickly.

Power supply line

Flat cable to reduce maintenance to a minimum.

Electric chain hoist

DMK

Fast and suitable for all needs for capacities up to 4,000 kg.

THE MANUALLY ROTATED JIB CRANES WITH ARTICULATED ARM IN THE CBB "COLUMN" SERIES AND THE MBB "WALL" SERIES

are designed for the handling of goods inside the plant or a building site where the presence of fixed obstacles would impede the free rotation in terms of the mobility of the arm when it is formed by one rigid element. The cranes "with an articulated arm" are fitted with an arm made of two hinged "pantograph-shaped" segments which allow it to avoid fixed obstacles during rotation. The standard models are available for capacities from 125 to 500 kg and jibs from 3 to 7 m.

ARTICULATED JIB

The jib cranes both in wall and column versions, are fitted with an "articulated arm", which rotates on its own axis.

The articulated arm is made using two cantilevered girders, which form the two hinged segments (semi-arms). The semi-arm on the "tie" side is generally made in boxed casing, while the "cantilever" side can be made using a laminated double T-beam form. The first segment (semi-arm on the tie side) rotates around the axis situated on the column or the bracket where it is fastened. The second segment (semi-arm on the cantilever side) rotates on the ends of the first segment and is fitted with a planarity regulation system. The two semi-arms can be of different lengths and are able to rotate independently of each other. Reciprocal mobility, thanks to the "pantograph" effect, allows the lifting equipment to reach any point in the area to be served, thus avoiding any obstacles to the rotation as well as increasing the surface area served behind the column or the fixing pillar of the bracket. The entire articulated arm is directly integral with, via suitable reinforcements, the rotation tube. The two-rotation arms, rotating on their own rotation axes via bearings, allow the optimal use of the available space at a height due to the absence of staybolts.

ELECTRICAL POWER SUPPLY

This powers the hoist and for the connection between the line and the power cable has: Terminal box near the support bracket in the MBB wall version. A main on / off line switch which can be padlocked on the column in the CBB version. The distribution of energy takes place via the fire retardant cable. Electrical line with round multipolar flexible cable inserted on a channel welded under the flange of the jib. Push-button panel hanging from the hoist.





JIB CRANES WITH ARTICULATED ARM

CBB SERIES

"COLUMN WITH ARTICULATED ARM"
SERIES MAXIMUM ROTATION FIELD 360°

MBB SERIES

"WALL WITH ARTICULATED ARM"
MAXIMUM ROTATION FIELD 360°





JIB CRANES WITH MOTORISED ARM

CBE "COLUMN" SERIES

MAXIMUM ROTATION FIELD 300°
(290° IN THE T VERSION)

MBE "WALL" SERIES

MAXIMUM ROTATION FIELD 270°
(250° IN THE T VERSION)



THE ELECTRICALLY ROTATED JIB CRANES WITH MOTORISED ARM IN THE CBE "COLUMN" SERIES AND THE MBE "WALL" SERIES

are designed for handling goods in areas which are difficult to reach, where the presence of fixed obstacles would impede the practicability of the working area. They are used also when the frequency of manoeuvres, the entity of the load and the push forces, could cause excessive wear and tear if carried out manually. Available in standard versions for lifting capacities from 250 to 2,000 kg and jibs from 2 to 8 m. The T and H versions are designed according to the different layouts of the arm.

"T" CANTILEVER VERSION FOR LOADS FROM 500 KG TO 2,000 KG AND JIBS FROM 3 TO 6 M

Made using a rolled steel I-beam form: the hoist carrying trolley runs on the lower flanges of the T-beam. The girder is self-supporting and cantilevered, so it has no support staybolts, and it is directly integral with, via suitable reinforcements, the rotation tube. This version allows the optimal use of the available space at a height due to the absence of staybolts and allows the maximum use of the hook run. The arm allows the additional of electrical or mechanical push-trolleys.

"H" OVERBRACED VERSION FOR LIFTING CAPACITIES FROM 250 KG TO 2,000 KG AND JIBS FROM 4 TO 8 M

Made using a laminated double T-beam form: the hoist carrying trolley runs on the lower flange of the T-beam. The arm is fitted with one or two staybolts to support the profile which connect it to the rotation tube. This version allows the use of the jib crane for lifting capacities and ranges superior to those of the T version. The arm allows the additional of electrical or mechanical push-trolleys.

ROTATING ARM

The arm, rotating around its own axis on rolling bearings, consists of a supporting girder for the run of the hoist carrying trolley.

THE ROTATION MECHANISM

Formed by a motor reducer fixed vertically in the lower part of the support bracket, made with a reducer of epicyclic type, with gears in a thermally treated oil bath and self-braking conical brake motor. The drive sprocket of the motor reducer fits together with the toothed crown integral with the arm which it powers. The progressive starting up and braking are ensured by a frequency variator (inverter) powered by alternate monophase 230V voltage. A three phase inverter is needed to supply cranes other than 400 V.

ELECTRICAL POWER SUPPLY

To power the hoist and trolley, which run along the jib of the crane as well as the rotation motor reducer- The power supply includes two electrical control panels, one for the control of the lifting and travel unit of the hoist, while the rotation control equipment is integrated with the motor reducer. Inside the panels the contactors for the control of all of the movements of the crane are positioned. The control circuits are low voltage (48V) obtained via a transformer protected by fuses. An easy-to-use connection terminal box, with numbered terminals, ensures simplicity and safety of the wiring of the cables related to all the external functions making any inspections easy to perform. The power line to power the trolley-hoist formed by flexible flat fire-retardant multipolar cables festooned on the sliding trolleys on the lower flange of the beam. The push-button control panel, suspended on the hoist, with a shockproof thermoplastic case, supported by a round multipolar cable and suspended with specific ropes. When necessary it is fitted with a rapid socket with obliged polarity to make it easier to assemble and replace. On request an independent, sliding, push-button panel can be installed along the jib of the crane, via cable-carrying trolleys inside a channel profile via multipolar cable with festoons. Acoustic alarm, when included, controlled by an "alarm" button serves the function of acoustic warning to indicate any dangerous situations during handling. Electric safety limit switch on the rotation movements, installed as standard to delineate the rotation field of the arm of the crane. Working on the auxiliary circuits at low voltage, two thresholds of intervention both in right rotation and left, also carry out the emergency function in safety if there is any fault or malfunctioning of the first threshold of intervention.

For the connections to the line, there are:

- ▶ a main on/off switch on the jib crane which can be padlocked
- ▶ a connector block on the bracket crane.

Powered by alternate electric power with three-phase voltage + neutral + earth (~ 3+N+T).



360° ELECTRICALLY ROTATED JIB CRANES GBR "COLUMN" SERIES

GBR "COLUMN" SERIES

ROTATION FIELD 360° CONTINUOUS ROTATION

THE GBR SERIES ELECTRICALLY ROTATED JIB CRANES

Are used to handle loads whose mass (high or bulky) does not allow manual handling. They are also used when fixed obstacles impede the practicability of the working surface. They are the ideal solution for handling:

- ▶ in outdoor squares and deposits
- ▶ on harfs, to load and unload materials for watercraft
- ▶ on harfs to haul boats
- ▶ on loading ramps, for handling materials for lorries
- ▶ for services of big operating units or assembling machines

Available as standard for lifting loads from 1,000 to 10,000 Kg and jibs from 4 to 10.5 m.

COLUMN

Made of press-forged steel sheet welded to the tubular structure with octagonal section it allows a high rigidity and stability; it is fixed with a base plate and a system of bolts or lug bolts. The upper part is fitted with a flange for fixing the rotation thrust bearing.

ROTATING ARM

This is formed by a supporting girder and, in relation to the lifting capacity and/or the jib length, can be made rolled steel I-beam form or box beam designed to guarantee the maximum flexotorsional stability. In the construction of the supporting box beam high quality section steel is used and welded carried out with continuous line procedure to ensure optimal safety conditions and operative reliability of the crane. It is fitted with a flange with holes for the application of the thrust bearing to which it is fixed using high resistance bolts. The rotation of the arm of the crane, which is mounted on a rotating thrust bearing, is ensured via

a motoreducer. The circular area served by the arm can, according to necessity, be limited by electrical limit switches, or allow continual rotations, without end, of the arm itself in both directions by a collector ring.

ROTATION MECHANISMS

Base bearing or thrust bearing, able to support both axial pushes, due to vertical forces and the tilting momentum due to the movement.

MOTOREDUCER

fitted on the arm, fitted with a selfbraking motor with progressive start-up and braking where the sprocket, keyed on the slow shaft, fits together with the internal toothing of the thrust bearing to which it gives movement.

FIXING SYSTEM

The foundation frame with lug bolts is supplied, on request, for fixing the column to the base (foundation plinth).

ELECTRICAL POWER SUPPLY

Made for powering the hoist and trolley which run along the arm of the crane as well as to power the rotation motoreducer and includes two electrical control panels, one to control lifting and movement unit on the trolley/hoist, while the control apparatus of the rotation motoreducer is integral with the arm. Inside the panels there are the contactors for the control of all of the movements, as well as protection fuses against short circuits. The control circuits are low voltage obtained via a transformer protected by fuses. A connection terminal box, with numbered terminals, ensures simplicity and safety of the wiring of the cables relative to all the external functions making any inspection

easy to perform. Alternatively, on request, the crane can be supplied with one electrical panel only made of press-forged sheet, which contains the contactors and the timers to control all the movements of the crane, as well as protection fuses against short circuits. The control circuits are low voltage. A connection terminal box ensures simplicity and safety of the wiring of the cables related to all the external functions making any inspections easy to perform. The electrical line to power the trolley-hoist formed by flexible flat fire-retardant multipolar cables festooned on the trolleys which slide inside a channel section. A hanging push-button control panel, with shockproof thermoplastic casing, sliding, along the crane girder, via trolleys inside a channel section using festooned flexible multipolar cable. It is supported by a round multipolar cable and

suspended by specific ropes. It is generally fitted with a rapid socket with obliged polarity to make it easier to assemble and replace. Acoustic alarm, when included, controlled by an "alarm" button serves the function of acoustic warning to indicate any dangerous situations during handling. Rotating collector ring installed when the arm of the crane is free from obstacles in every point of its rotation and the arm itself is required to rotate continuously in both directions. Electric safety limit switch on the rotation movements, installed to delineate the rotation field of the arm of the crane. Acting on the auxiliary circuits at low voltage, two thresholds of intervention both in right rotation and left, also carry out the emergency function in safety if there is any fault or malfunctioning of the first threshold of intervention.





ELECTRICALLY AND MANUALLY ROTATED JIB CRANES 360°

GBL "COLUMN" SERIES
360° ROTATION WITH
CONTINUOUS ROTATION



THE GBL SERIES ELECTRICALLY OR MANUALLY ROTATED JIB CRANES

Are the ideal solution for handling loads in internal environments. Available as standard for lifting loads from itself 1,000 to 5,000 kg and jibs from 4 to 8 m with electrical rotation and up to 2,000 kg with manual rotation.

COLUMN

Made of press-forged steel sheet welded to the tubular structure with octagonal section it allows a high rigidity and stability; it is fixed with a base plate and a system of lug bolts. The upper part is equipped with a flange for fixing the sprocket (for electrical rotation of the arm) and ball bearing for centring and rotation of the arm on the column and a rolling track.

ROTATING ARM

This is formed by a supporting girder made in rolled steel I-beam, a centring pin on the vertical axis of the column and a reaction arm with roller box which slide on the rolling track of the column.

The electrical rotation of the crane arm is ensured by a motoreducer which is connected to the arm. The circular area served by the arm can, according to necessity, be limited by electrical limit switches, or allows continual rotations in both directions through the use of a rotating collector ring.

ROTATION MECHANISMS

Composed of a motoreducer fitted on the arm, fitted with a self-braking motor with progressive start-up and braking where the sprocket, keyed on the slow shaft, fits together with the external toothing of the crown attached to the column.

FIXING SYSTEM

The foundation frame with lug bolts is supplied, on request, for fixing the column to the base (foundation plinth). For cranes with capacity up to 2,000 kg and jib up to 8 m, the fixing may also be done with the use of chemical bolts and specific counterplate.

ELECTRICAL POWER SUPPLY

Made for powering the hoist and trolley which run along the arm of the crane as well as to power the rotation motoreducer and includes two electrical control panels, one to control lifting and movement unit on the hoist/trolley, while the control apparatus of the rotation motoreducer is integral with the arm. Inside the panels there are the contactors for the control of all of the movements, as well as protection fuses against short circuits. The control circuits are low voltage obtained via a transformer protected by fuses. A connection terminal box, with numbered terminals, ensures simplicity and safety of the wiring of the cables related to all the external functions making any inspections easy to perform. The electrical line to power the trolley-hoist formed by flexible flat fire-retardant multipolar cables festooned on the trolleys which slide inside a channel section. Push-button panel hanging from the hoist/trolley control equipment. It is supported by a round multipolar cable and suspended by specific ropes. Remote control when requested as an alternative to the traditional push-button panel, in cases of bulky loads in order to remotely control all movements. Acoustic alarm, controlled by an "alarm" button serves the function of acoustic warning to indicate any dangerous situations during handling. Rotating collector ring installed when the arm of the crane is free from obstacles in every point of its rotation and the arm itself is required to rotate continuously in both directions. Electric safety limit switch on the rotation movements, when requested, installed to delineate the rotation field of the arm of the crane. Acting on the low voltage auxiliary circuits, it has two thresholds of intervention both in right rotation and left, also carry out the emergency function in safety if there is any fault or malfunctioning of the first threshold of intervention.

CRITERIA OF CHOICES AND LIMITS OF USE OF THE JIB CRANES

To obtain the complete responsiveness of the jib cranes, for the service they are intended for, it is necessary to check the parameters which characterise their limits of use and, thus, the right choice.

These are essentially the actual lifting capacity, the stress level and the functional parameters.

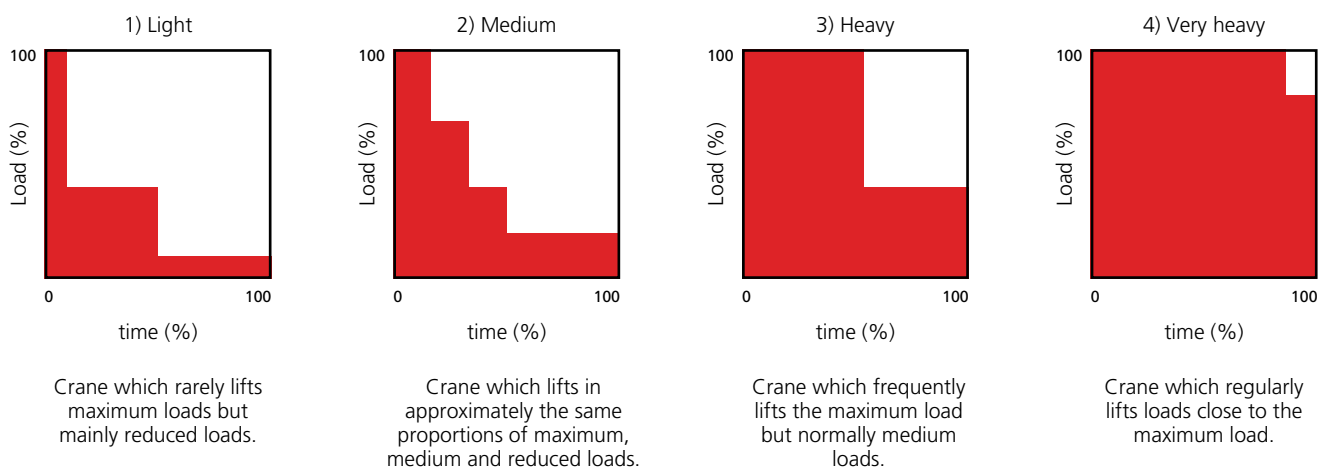
ACTUAL LIFTING CAPACITY

This is determined by the heaviest load to be lifted.



STRESS LEVEL

The stress level is determined considering the actual entity of the loads to be lifted and it is ascribable to one of the four load regimes shown below.



FUNCTIONAL PARAMETERS

The functional parameters which must be carefully considered in the choice of jib cranes are:

- ▶ **Functional dimensions:** height of the arm, which determines the hook run of the hoist, and its jib must be selected so as to guarantee the functional coverage of the area to be served in consideration of the surrounding environment.
- ▶ **Type of travel (where necessary):** manual or electric in relation to the characteristics of the mass to handle and the type of arm already selected.
- ▶ **Nature of the load:** delicate or not determines by its positioning the choice of the most suitable speeds of handling (lifting and travel). In some cases it is indispensable to use hoists with two speeds with a slow speed of positioning.
- ▶ **Area of use:** the jib crane is characterised, by its conception, by intrinsic high elasticity which becomes even more evident when it is used for handling with loads close to the maximum lifting capacity and/or with prevalent localisation at the ends of the arm.
- ▶ **Area of use:** the jib cranes are intended to be used inside and/or in a covered area, sheltered from bad weather and the wind. Measures must be taken for outdoor use for a suitable surface treatment (sandblasting - painting (as well as):
 - for manually rotated cranes: an arm parking brake system and an adequate protection cover for the hoist-trolley.
 - for electrically rotated cranes: adequate protective covers for the hoist-trolley, for the motoreducer and for the electric panel.
- ▶ **Frequency of use:** if use is very high (frequent and/or repeated manoeuvres) with loads close to the maximum load the consequent fatigue of the operator due to manual handling must be taken into consideration.

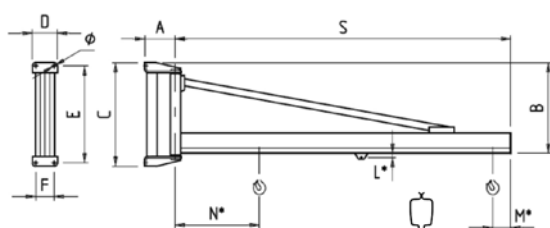
Check, on the basis of the stress level intended for the crane, that the limits of use, type of service and n° of cycles intended in 10 years of work are not in contrast with the following table.

LIMITS OF USE OF THE JIB CRANES OF THE SERVICE CLASS ISO A5 (ACCORDING TO ISO 4301-1/88)				
STRESS LEVEL	1) LIGHT	2) MEDIUM	3) HEAVY	4) VERY HEAVY
Type of service	intense irregular use	intermittent irregular use	regular light use	irregular use
Conditions of use	U 6	U 5	U 4	U 3
N° of operative cycles in 10 years	1.000.000	500.000	250.000	125.000

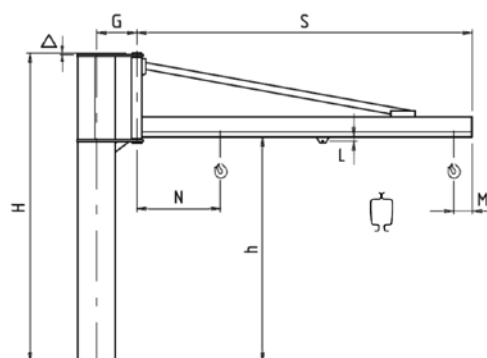
GBP/GBA SERIES JIB CRANES – S VERSION – CHANNEL PROFILE VERSION



Wall-mounted jib crane
Rotation 270°



Column-mounted jib crane
Rotation 300°



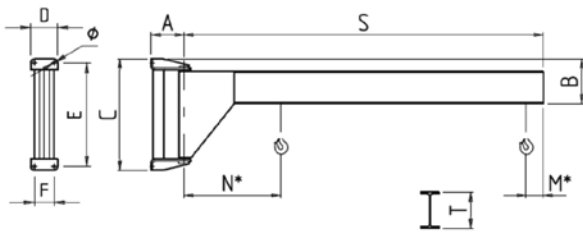
Heights L*, M* and N* for wall-mounted jib cranes. See corresponding heights relative to column-mounted jib cranes.

LIFTING CAPACITY (kg)	ARM S		SIZE OF JIB CRANE			TROLLEY TYPE	GBP SERIES WALL-MOUNTED JIB CRANES - C VERSION										GBA SERIES COLUMN-MOUNTED CRANE - VERSION C									
	ARM (m)	ARM CW COVER (mm)	BRACKET	COLUMN	COUNTERPLATE		TYPE	OVERALL DIMENSIONS (mm)							WEIGHT JIB CRANE kg	HEIGHT H m		TYPE	OVERALL DIMENSIONS (mm)						WEIGHT	
								A	B	C	D	E	F	Ø		BASE	MAX.		UNDER BEAM h	G	L	M	N	Δ	JIB CRANE kg	COLUMN BY m kg
63	4	3999	A	R	R	1	S01A41	170	552	644	200	594	150	17	60.2	3	5	S30R41	2498	228	38	100	522	12	102.3	18.2
	5	4999	A	R	R	1	S01A51	170	552	644	200	594	150	17	68.1	3	5	S30R51	2498	228	38	100	582	12	110.2	18.2
	6	5997	C	T	T	2	S02C61	210	820	930	250	870	190	22	171.3	3.5	5.5	S30T61	2740	323	35	115	730	12	266.1	35
	7	6997	C	T	T	2	S02C71	210	820	930	250	870	190	22	189.3	3.5	5.5	S30T71	2740	323	35	115	790	12	284.1	35
125	2	1999	A	R	R	1	S01A23	170	552	644	200	594	150	17	44.4	3	5	S30R23	2498	228	38	100	452	12	86.5	18.2
	3	2999	A	R	R	1	S01A33	170	552	644	200	594	150	17	52.2	3	5	S30R33	2498	228	38	100	522	12	94.3	18.2
	4	3999	B	S	S	1	S01B43	170	552	644	200	594	150	17	60.1	3	5	S30S43	2498	274	38	100	522	12	116	22.8
	5	4999	B	S	S	1	S02C53	170	552	644	200	594	150	17	73.1	3	5	S30T53	2498	274	38	100	582	12	129	22.8
	6	5997	C	T	T	2	S02C63	210	820	930	250	870	190	22	171.3	3.5	5.5	S35T63	2740	323	35	115	730	17	266.1	35
	7	6997	C	T	T	2	S02C73	210	820	930	250	870	190	22	190	3.5	5.5	S35T73	2740	323	35	115	790	17	284.8	35
250	2	1999	A	R	R	1	S01A24	170	552	644	200	594	150	17	44.7	3	5	S30R24	2498	274	38	100	452	12	86.8	18,2
	3	2999	B	S	S	1	S01B34	170	552	644	200	594	150	17	52.6	3	5	S30S34	2498	274	38	100	522	12	108.5	22.8
	4	3997	C	T	T	1	S02C44	210	820	930	250	870	190	22	90.7	3.5	5.5	S35T44	2740	323	38	100	592	17	185.5	35
	5	4999	C	T	T	2	S02C54	210	820	930	250	870	190	22	152.2	3.5	5.5	S35T54	2740	323	35	115	670	17	247	35
	6	5997	D	U	U	2	S02D64	210	820	930	250	870	190	22	171.7	3.5	5.5	S35U64	2740	386	35	115	730	17	296.3	43.5
	7	6997	D	U	U	2	S02D74	210	820	930	250	870	190	22	190	3.5	5.5	S35U74	2740	386	35	115	790	17	314.6	43.5
	2	1997	C	T	T	2	S02C25	210	820	930	250	870	190	22	94.5	3.5	5.5	S35T25	2740	323	35	115	540	17	189.3	35
500	3	2997	C	T	T	2	S02C35	210	820	930	250	870	190	22	113.6	3.5	5.5	S35T35	2740	323	35	115	600	17	225.9	35
	4	3997	D	U	U	2	S02D45	210	820	930	250	870	190	22	132.7	3.5	5.5	S35U45	2740	386	35	115	600	17	257.3	43.5
	5	4997	D	U	U	2	S02D55	210	820	930	250	870	190	22	153.2	3.5	5.5	S35U55	2740	386	35	115	670	17	277.8	43.5
	6	5997	E	V	V	2	S03E65	255	1100	1240	300	1160	220	34	240.4	4	6	S40V65	2982	443	35	115	760	20	443.9	64
	7	6997	E	V	V	2	S03E75	255	1100	1240	300	1160	220	34	269.8	4	6	S40V75	2982	443	35	115	830	20	473.3	64
	7	6997	F	Z	Z1	2D	S03F76	255	1100	1240	300	1160	220	34	296.1	4	6	S40Z76	2982	513	53	265	980	20	544.4	75.2
1000	2	1997	D	U	U	2D	S03C27	210	820	930	250	870	190	22	95.2	3.5	5.5	S35T27	2740	386	53	265	690	17	219.8	43.5
	3	2997	D	U	U	2D	S02D37	210	820	930	250	870	190	22	114.2	3.5	5.5	S35U37	2740	386	53	265	750	17	238.8	43.5
	4	3997	E	V	V	2D	S03E47	255	1100	1240	300	1160	220	34	193.5	4	6	S40V47	2982	443	53	265	780	20	397	64
	5	4997	E	V	V	2D	S03E57	255	1100	1240	300	1160	220	34	246.4	4	6	S40V57	2982	443	53	265	850	20	449.9	64
	6	5997	F	Z	Z1	2D	S03F67	255	1100	1240	300	1160	220	34	276	4	6	S40Z67	2982	513	53	265	910	20	524.3	75.2
	6	5997	F	Z	Z1	2D	S03F77	255	1100	1240	300	1160	220	34	296.1	4	6	S40Z77	2982	513	53	265	980	20	544.4	75.2

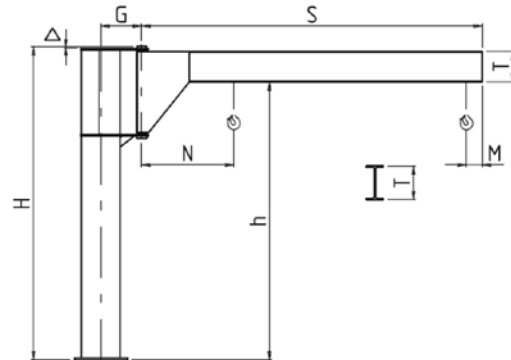
GBP/GBA SERIES JIB CRANES – T VERSION – CANTILEVER VERSION



Wall-mounted jib crane
Rotation 250°



Column-mounted jib crane
Rotation 290°



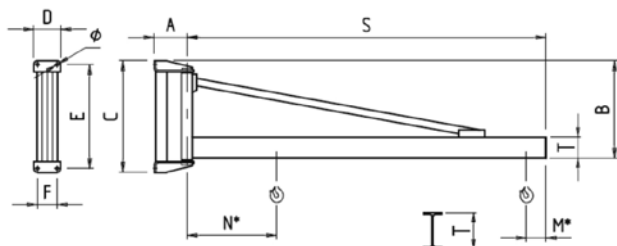
Heights M* and N* for wall-mounted jib cranes. See corresponding heights relative to column-mounted jib cranes.

LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE			GBP SERIES WALL-MOUNTED JIB CRANES - T VERSION									GBA SERIES COLUMN-MOUNTED CRANE - VERSION T										
		BRACKET	COLUMN	COUNTERPLATE	TYPE	OVERALL DIMENSIONS (mm)							WEIGHT JIB CRANE kg	HEIGHT H m		TYPE	OVERALL DIMENSIONS (mm)						WEIGHT	
						A	B	C	D	E	F	Ø		BASE	MAX.		UNDER BEAM h	G	M	N	T (IPE)	Δ	JIB CRANE kg	COLUMN BY m kg
63	4	A	R	R	T01A41	170	248	644	200	594	150	15	95	3	5	T30R41	2800	228	190	655	160	12	148	18.2
	5	A	R	R	T01A51	170	248	644	200	594	150	15	111	3	5	T30R51	2800	228	190	715	160	12	164	18.2
125	2	A	R	R	T01A23	170	248	644	200	594	150	15	63	3	5	T30R23	2800	228	190	595	160	12	116	18.2
	3	A	R	R	T01A33	170	248	644	200	594	150	15	79	3	5	T30R33	2800	228	190	655	160	12	132	18.2
	4	B	S	S	T01B43	170	288	644	200	594	150	15	125	3	5	T30S43	2760	274	190	725	200	12	200	22.8
250	5	B	S	S	T01B53	170	288	644	200	594	150	15	147	3	5	T30S53	2760	274	190	785	200	12	222	22.8
	2	B	S	S	T01B24	170	288	644	200	594	150	15	81	3	5	T30S24	2760	274	190	665	200	12	156	22.8
	3	B	S	S	T01B34	170	288	644	200	594	150	15	103	3	5	T30S34	2760	274	190	725	200	12	178	22.8
	4	C	T	T	T02C44	210	346	930	250	870	190	22	195	3.5	5.5	T35T44	3212	323	190	800	240	17	320	35
	5	C	T	T	T02C54	210	346	930	250	870	190	22	226	3.5	5.5	T35T54	3212	323	190	860	240	17	351	35
	6	D	U	U	T02D64	210	406	930	250	870	190	22	340						190	1000	300			
	6	E	V	V	T03E64	255	500	1240	300	1160	220	34	410	4	6	T40V64	3640	443	190	1065	300	20	705	64
	7	E	V	V	T03E74	255	500	1240	300	1160	220	34	555	4	6	T40V74	3580	443	190	1135	360	20	852	64
500	2	C	T	T	T02C25	210	346	930	250	870	190	22	134	3.5	5.5	T35T25	3212	323	190	740	240	17	260	35
	3	C	T	T	T02C35	210	346	930	250	870	190	22	165	3.5	5.5	T35T35	3212	323	190	800	240	17	290	35
	4	D	U	U	T02D45	210	406	930	250	870	190	22	256	3.5	5.5	T35U45	3152	386	190	880	300	17	430	43.5
	5	D	U	U	T02D55	210	406	930	250	870	190	22	298	3.5	5.5	T35U55	3152	386	190	940	300	17	472	43.5
	6	E	V	V	T03E65	255	500	1240	300	1160	220	34	482	4	5	T40V65	3580	443	190	1140	360	20	779	64
	6	F	Z	Z1										4	6	T40Z65	3580	513	190	1140	360	20	864	75.2
	7	E	V	V	T03E75	255	540	1240	300	1160	220	34	596	4	4	T40V75	3540	443	190	1270	400	20	893	64
1000	7	F	Z	Z1										4	6	T40Z75	3540	513	190	1270	400	20	978	75.2
	2	D	U	U	T02D27	210	406	930	250	870	190	22	172	3.5	5.5	T35U27	3152	386	190	820	300	17	346	43.5
	3	D	U	U	T02D37	210	406	930	250	870	190	22	214	3.5	5.5	T35U37	3152	386	190	880	300	17	388	43.5
	4	E	V	V	T03E47	255	499	1240	300	1160	220	34	381	4	6	T40V47	3580	443	190	945	360	20	678	64
	5	E	V	V	T03E57	255	499	1240	300	1160	220	34	438	4	6	T40V57	3580	443	190	1005	360	20	735	64
	6	F	Z	Z1	T03F67	255	540	1240	300	1160	220	34	530	4	4	T40Z67	3540	513	190	1190	400	20	912	75.2
1600	7	F	Z	Z1	T03F77	255	590	1240	300	1160	220	34	688						190	1270	450			
	6	F	Z	Z2	T03F68	255	590	1240	300	1160	220	34	610						190	1270	450			
2000	2	E	V	V	T03E29	255	499	1240	300	1160	220	34	267	4	6	T40V29	3580	443	210	900	360	20	564	64
	3	E	V	V	T03E39	255	499	1240	300	1160	220	34	324	4	6	T40V39	3580	443	210	960	360	20	621	64
	4	F	Z	Z2	T03F49	255	540	1240	300	1160	220	34	400	4	6	T40Z49	3540	513	210	1070	400	20	780	75.2
	5	F	Z	Z2	T03F59	255	590	1240	300	1160	220	34	535						210	1220	450			

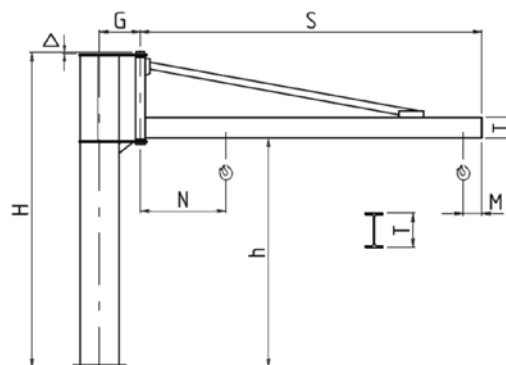
GBP/GBA SERIES JIB CRANES – H VERSION – OVERBRACED VERSION



Wall-mounted jib crane
Rotation 270°



Column-mounted jib crane
Rotation 300°



Heights M* and N* for wall-mounted jib cranes. See corresponding heights relative to column-mounted jib cranes.

LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE			GBP SERIES WALL-MOUNTED JIB CRANES - H VERSION									GBA SERIES COLUMN-MOUNTED CRANE - VERSION H											
		BRACKET	COLUMN	COUNTERPLATE	TYPE	OVERALL DIMENSIONS (mm)						WEIGHT JIB CRANE kg	HEIGHT H m		TYPE	OVERALL DIMENSIONS (mm)						WEIGHT			
						A	B	C	D	E	F		Ø	BASE		MAX.	UNDER BEAM h	G	M	N	T (IPE)	Δ	JIB CRANE kg	COLUMN BY m kg	
125	6	C	T	T	H02C63	210	820	930	250	870	190	22	160	3.5	5.5	H35T63	2738	323	190	900	160	17	285	35	
	7	C	T	T	H02C73	210	820	930	250	870	190	22	180	3.5	5.5	H35T73	2738	323	190	960	160	17	305	35	
	8	D	U	U	H02D83	210	820	930	250	870	190	22	251	3.5	5.5	H35U83	2738	386	190	1070	200	17	425	43.5	
250	4	C	T	T	H02C44	210	820	930	250	870	190	22	122	3.5	5.5	H35T44	2738	323	190	780	160	17	247	35	
	5	C	T	T	H02C54	210	820	930	250	870	190	22	141	3.5	5.5	H35T54	2738	323	190	840	160	17	266	35	
	6	D	U	U	H02D64	210	820	930	250	870	190	22	200	3.5	5.5	H35U64	2738	386	190	950	200	17	374	43.5	
	7	D	U	U	H02D74	210	820	930	250	870	190	22	226	3.5	5.5	H35U74	2738	386	190	1010	200	17	400	43.5	
	8	E	V	V	H03E84	255	1100	1240	300	1160	220	34	303	4	6	H40V84	2980	443	190	1140	200	20	620	64	
500	4	D	U	U	H02D45	210	820	930	250	870	190	22	149	3.5	5.5	H35U45	2738	386	190	830	200	17	323	43.5	
	5	D	U	U	H02D55	210	820	930	250	870	190	22	175	3.5	5.5	H35U55	2738	386	190	890	200	17	349	43.5	
	6	E	V	V	H03E65	255	1100	1240	300	1160	220	34	262	4	6	H40V65	2980	443	190	1020	200	20	559	64	
	7	E	V	V	H03E75	255	1100	1240	300	1160	220	34	293	4	6	H40V75	2980	443	190	1080	200	20	590	64	
	8	F	Z	Z1	H03F85	255	1100	1240	300	1160	220	34	389	4	6	H40Z85	2980	513	190	1240	240	20	771	75.2	
1000	4	E	V	V	H03E47	255	1100	1240	300	1160	220	34	200	4	6	H40V47	2980	443	190	900	200	20	497	64	
	5	E	V	V	H03E57	255	1100	1240	300	1160	220	34	231	4	6	H40V57	2980	443	190	960	200	20	528	64	
	6	F	Z	Z1	H03F67	255	1100	1240	300	1160	220	34	312	4	6	H40Z67	2980	513	190	1120	240	20	694	75.2	
	7	F	Z	Z1	H03F77	255	1100	1240	300	1160	220	34	351	4	6	H40Z77	2980	513	190	1180	240	20	733	75.2	
	8	F	Z	Z2	H03F87	255	1100	1240	300	1160	220	34	430	4	6	H40Z87	2980	513	190	1180	*152	20	812	75.2	
1600	6	F	Z	Z2	H03F68	255	1100	1240	300	1160	220	34	312	4	6	H40Z68	2980	513	210	1140	240	20	694	75.2	
2000	4	F	Z	Z2	H03F49	255	1100	1240	300	1160	220	34	233	4	6	H40Z49	2980	513	210	1020	240	20	615	75.2	
	5	F	Z	Z2	H03F59	255	1100	1240	300	1160	220	34	272	4	6	H40Z59	2980	513	210	1080	240	20	654	75.2	

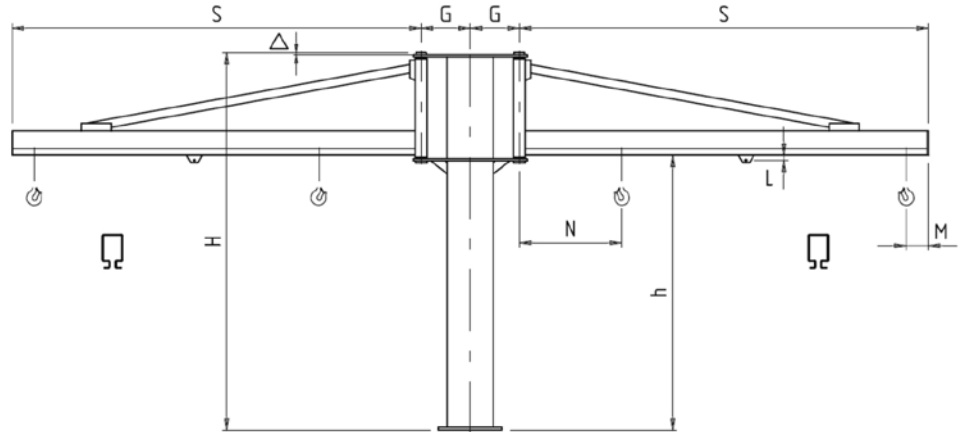
* Profiled girder type HEA160

GBA SERIES JIB CRANES WITH DOUBLE ARM

*C VERSION – PROFILED CHANNEL



Column-mounted jib crane
Rotation 260°+260°



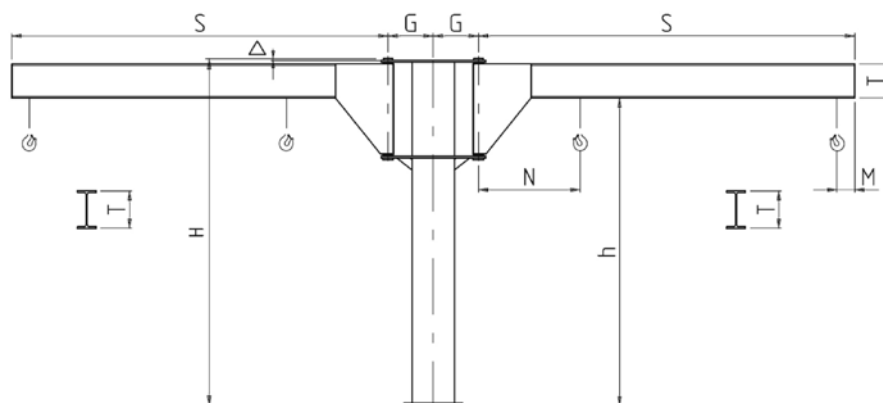
LIFTING CAPACITY (kg)	ARM S		SIZE OF JIB CRANE		TROLLEY TYPE	GBA SERIES COLUMN-MOUNTED CRANE - VERSION C										
	ARM (m)	ARM C/W COVER (mm)	COLUMN	COUNTERPLATE		HEIGHT H m		TYPE	OVERALL DIMENSIONS (mm)						WEIGHT	
						BASE	MAX.		UNDER BEAM h	G	L	M	N	Δ	JIB CRANE kg	COLUMN BY m kg
63+63	2	2056	R	R	CCP	3	5	C30G20	2496	228	34	140	525	12	139	18.2
	3	3056	R	R	CCP	3	5	C30G30	2496	228	34	140	585	12	165	18.2
	4	4056	S	S	CCP	3	5	C30H40	2496	274	34	140	585	12	215	22.8
	5	5056	S	S	CCP	3	5	C30H50	2496	274	34	140	645	12	241	22.8
	6	6066	T	T	CCP	3.5	5.5	C35I60	2738	323	34	140	785	17	376	35
	7	7066	T	T	CCP	3.5	5.5	C35I70	2738	323	34	140	845	17	406	35
125+125	2	2056	S	S	CCP	3	5	C30H20	2496	274	34	140	525	12	163	22.8
	3	3056	S	S	CCP	3	5	C30H30	2496	274	34	140	585	12	189	22.8
	4	4066	T	T	CCP	3.5	5.5	C35I40	2738	323	34	140	665	17	316	35
	5	5066	T	T	CCP	3.5	5.5	C35I50	2738	323	34	140	725	17	346	35
	6	6066	U	U	CCP	3.5	5.5	C35L60	2738	386	34	140	820	17	430	43.5
	7	7066	U	U	CCP	3.5	5.5	C35L70	2738	386	34	140	880	17	460	43.5
250+250	2	2066	T	T	CCP	3.5	5.5	C35I20	2738	323	34	140	610	17	256	35
	3	3066	T	T	CCP	3.5	5.5	C35I30	2738	323	34	140	670	17	286	35
	4	4066	U	U	CCP	3.5	5.5	C35L40	2738	386	34	140	695	17	386	43.5
	5	5066	U	U	CCP	3.5	5.5	C35L50	2738	386	34	140	755	17	418	43.5
	6	6076	V	V	CCG	4	6	C40M60	2980	443	43	156	880	20	815	64
	7	7076	V	V	CCG	4	6	C40M70	2980	443	43	156	940	20	875	64
500+500	2	2066	U	U	CCPD	3.5	5.5	C35L20	2738	386	34	265	750	17	310	43.5
	3	3066	U	U	CCPD	3.5	5.5	C35L30	2738	386	34	265	810	17	340	43.5
	4	4076	V	V	CCG	4	6	C40M40	2980	443	43	156	760	20	700	64
	5	5076	V	V	CCG	4	6	C40M50	2980	443	43	156	820	20	757	64
	6	6076	Z	Z1	CCG	4	6	C40N60	2980	513	43	156	950	20	963	75.2
	7	7076	Z	Z1	CCG	4	6	C40N70	2980	513	43	156	1000	20	1030	75.2
1000+1000	2	2076	V	V	CCGD	4	6	C40M20	2980	443	60	306	515	20	509	64
	3	3076	V	V	CCGD	4	6	C40M30	2980	443	60	306	655	20	538	64
	4	4076	Z	Z1	CCGD	4	6	C40N40	2980	513	60	306	1040	20	792	75.2
	5	5076	Z	Z1	CCGD	4	6	C40N50	2980	513	60	306	1100	20	850	75.2

* Availability subject to confirmation

GBA SERIES JIB CRANES WITH DOUBLE ARM – T VERSION – CANTILEVER PROFILED GIRDER



Column-mounted jib crane
Rotation 260°+260°

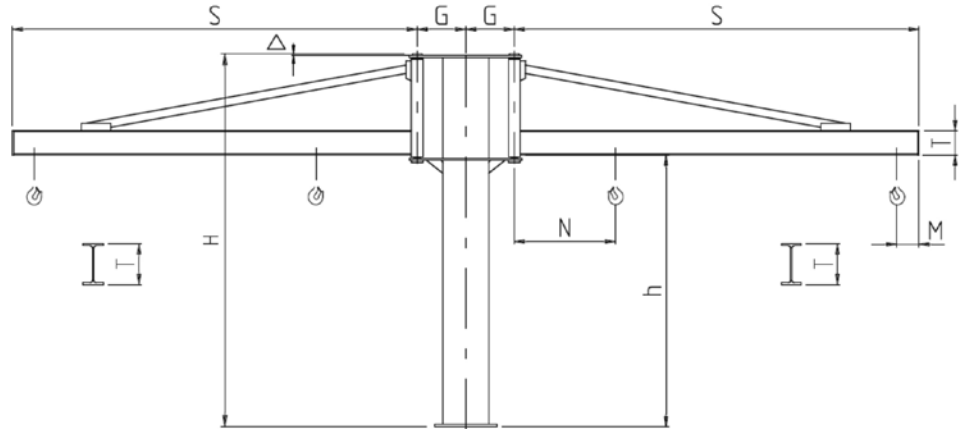


LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE		GBA SERIES COLUMN-MOUNTED CRANE - VERSION T										
		COLUMN	COUNTERPLATE	HEIGHT H m		TYPE	OVERALL DIMENSIONS (mm)						WEIGHT	
				BASE	MAX.		UNDER BEAM h	G	M	N	T (IPE)	Δ	JIB CRANE kg	COLUMN BY m kg
63+63	2	R	R	3	5	T30G21	2800	228	190	595	160	12	170	18.2
	3	R	R	3	5	T30G31	2800	228	190	655	160	12	202	18.2
	4	S	S	3	5	T30H41	2800	274	190	725	160	12	257	22.8
	5	S	S	3	5	T30H51	2800	274	190	785	160	12	290	22.8
125+125	2	S	S	3	5	T30H23	2800	274	190	595	160	12	193	22.8
	3	S	S	3	5	T30H33	2800	274	190	655	160	12	225	22.8
	4	T	T	3.5	5.5	T35I43	3212	323	190	800	240	17	496	35
	5	T	T	3.5	5.5	T35I53	3212	323	190	860	240	17	558	35
	6	V	V	4	6	T40M63	3640	443	190	1065	300	20	1092	64
	7	V	V	4	6	T40M73	3580	443	190	1135	360	20	1385	64
250+250	2	T	T	3.5	5.5	T35I24	3212	323	190	740	240	17	375	35
	3	T	T	3.5	5.5	T35I34	3212	323	190	800	240	17	436	35
	4	U	U	3.5	5.5	T35L44	3212	386	190	800	240	17	550	43.5
	5	U	U	3.5	5.5	T35L54	3212	386	190	860	240	17	612	43.5
	6	V	V	4	5	T40M64	3640	443	190	1065	300	20	1092	64
	6	Z	Z1	4	6	T40N64	3640	513	190	1065	300	20	1183	75.2
	7	V	V	4	4	T40M74	3580	443	190	1135	360	20	1385	64
	7	Z	Z1	4	6	T40N74	3580	513	190	1135	360	20	1477	75.2
500+500	2	U	U	3.5	5.5	T35L25	3212	386	190	740	240	17	428	43.5
	3	U	U	3.5	5.5	T35L35	3212	386	190	800	240	17	490	43.5
	4	V	V	4	6	T40M45	3580	443	190	945	360	20	1037	64
	5	V	V	4	6	T40M55	3580	443	190	1005	360	20	1152	64
	6	Z	Z1	4	4	T40N65	3580	513	190	1140	360	20	1332	75.2
1000+1000	2	V	V	4	6	T40M20	3587	443	190	900	360	20	809	64
	3	V	V	4	6	T40M30	3587	443	190	960	360	20	923	64
	4	Z	Z2	4	6	T40N40	3587	513	190	945	360	20	1129	75.2

GBA SERIES JIB CRANES WITH DOUBLE ARM – H VERSION – OVERBRACED VERSION



Column-mounted jib crane
Rotation 260°+260°

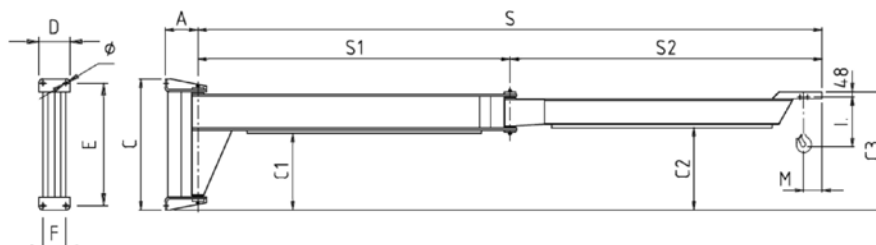


LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE		GBA SERIES COLUMN-MOUNTED CRANE - VERSION T										WEIGHT	
		COLUMN	COUNTERPLATE	HEIGHT H m		TYPE	OVERALL DIMENSIONS (mm)								
				BASE	MAX.		UNDER BEAM h	G	M	N	T (IPE)	Δ	JIB CRANE kg	COLUMN BY m kg	
125+125	4	T	T	3.5	5.5	H35I40	2738	323	190	780	160	17	350	35	
	5	T	T	3.5	5.5	H35I50	2738	323	190	840	160	17	388	35	
	6	U	U	3.5	5.5	H35L60	2738	386	190	900	160	17	480	43.5	
	7	U	U	3.5	5.5	H35L70	2738	386	190	960	160	17	520	43.5	
	8	V	V	4	6	H40M80	2980	443	190	1140	200	20	922	64	
250+250	4	U	U	3.5	5.5	H35L40	2738	386	190	780	160	17	405	43.5	
	5	U	U	3.5	5.5	H35L50	2738	386	190	840	160	17	442	43.5	
	6	V	V	4	6	H40M60	2980	443	190	1020	200	20	800	64	
	7	V	V	4	6	H40M70	2980	443	190	1080	200	20	862	64	
	8	Z	Z1	4	6	H40N80	2980	513	190	1140	200	20	1013	75.2	
500+500	4	V	V	4	6	H40M40	2980	443	190	900	200	20	675	64	
	5	V	V	4	6	H40M50	2980	443	190	960	200	20	737	64	
	6	Z	Z	4	6	H40N60	2980	513	190	945	200	20	892	75.2	
	7	Z	Z1	4	6	H40N70	2980	513	190	1005	200	20	953	75.2	
	8	Z	Z2	4	4	H40N85	2980	513	190	1240	240	20	1145	75.2	
800+800	6	Z	Z2	4	6	H40N65	2980	513	190	1120	240	20	992	75.2	
1000+1000	4	Z	Z2	4	6	H40N40	2980	513	190	900	200	20	767	75.2	
	5	Z	Z2	4	6	H40N50	2980	513	190	960	200	20	830	75.2	

WALL-MOUNTED JIB CRANES WITH ARTICULATED ARM, WITH FIXED HOIST – MBB SERIES



Wall-mounted jib crane
Rotation 360°

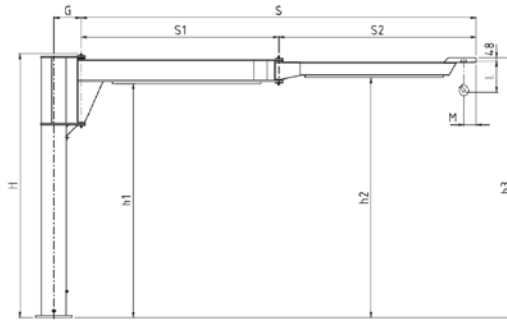


LIFTING CAPACITY (kg)	ARM 5 m	SIZE OF JIB CRANE	TYPE	WALL-MOUNTED JIB CRANES WITH ARTICULATED ARM, WITH FIXED HOIST - MBB SERIES OVERALL DIMENSIONS (mm)														WEIGHT JIB CRANE kg
																ADDED HOIST		
				S1	S2	A	C	C1	C2	C3	D	E	F	Ø	M	DMK	HEIGHT I	
125	3	A	A01A3A	1000	2000	225	644	200	373	591	200	594	150	15	180	1	275	114
			A01A3B	1500	1500	225	644	200	373	591	200	594	150	15	180	1	275	138
			A01A3C	2000	1000	225	644	200	373	591	200	594	150	15	180	1	275	160
	4	B	A01B4A	1000	3000	225	644	200	333	591	200	594	150	15	180	1	275	141
			A01B4B	1500	2500	225	644	200	333	591	200	594	150	15	180	1	275	163
			A01B4C	2000	2000	225	644	200	373	591	200	594	150	15	180	1	275	171
	5	B	A01B5A	2000	3000	225	644	200	333	591	200	594	150	15	180	1	275	198
			A01B5B	2500	2500	225	644	200	333	591	200	594	150	15	180	1	275	220
			A01B5C	3000	2000	225	644	200	373	591	200	594	150	15	180	1	275	230
	6	C	A02C6B	2500	3500	280	930	455	592	850	250	870	190	22	180	1	275	326
A02C6C			3000	3000	280	930	455	592	850	250	870	190	22	180	1	275	361	
7	C	A02C7A	3000	4000	280	930	455	572	850	250	870	190	22	180	1	275	389	
		A02C7B	3500	3500	280	930	455	592	850	250	870	190	22	180	1	275	410	
250	3	B	A01B3A	1000	2000	225	644	200	333	591	200	594	150	15	180	1-2	275-310	124
			A01B3B	1500	1500	225	644	200	333	591	200	594	150	15	180	1-2	275-310	145
	4	C	A02C4A	1000	3000	280	930	455	552	850	250	870	190	22	180	1-2	275-310	218
			A02C4C	2000	2000	280	930	455	592	850	250	870	190	22	180	1-2	275-310	258
	5	C	A02C5A	2000	3000	280	930	455	552	850	250	870	190	22	180	1-2	275-310	295
			A02C5B	2500	2500	280	930	455	552	850	250	870	190	22	180	1-2	275-310	324
	6	D	A02D6B	2500	3500	280	930	455	552	850	250	870	190	22	180	1-2	275-310	348
			A02D6C	3000	3000	280	930	455	552	850	250	870	190	22	180	1-2	275-310	380
	7	D	A02D7A	3000	4000	280	930	455	552	850	250	870	190	22	180	1-2	275-310	405
			A02D7B	3500	3500	280	930	455	552	850	250	870	190	22	180	1-2	275-310	432
500	3	C	A02C3A	1000	2000	280	930	455	592	850	250	870	190	22	180	2	310	182
			A02C3F	1000	2000	280	930	455	592	850	250	870	190	22	190	3	378	182
			A02C3B	1500	1500	280	930	455	592	850	250	870	190	22	180	2	310	215
			A02C3G	1500	1500	280	930	455	592	850	250	870	190	22	190	3	378	215
			A02D4A	1000	3000	280	930	455	552	850	250	870	190	22	180	2	310	218
			A02D4F	1000	3000	280	930	455	552	850	250	870	190	22	190	3	378	218
	4	D	A02D4C	2000	2000	280	930	455	592	850	250	870	190	22	180	2	310	258
			A02D4H	2000	2000	280	930	455	592	850	250	870	190	22	190	3	378	258
			A02D5A	2000	3000	280	930	455	552	850	250	870	190	22	180	2	310	295
			A02D5F	2000	3000	280	930	455	552	850	250	870	190	22	190	3	378	295
			A02D5B	2500	2500	280	930	455	552	850	250	870	190	22	180	2	310	324
			A02D5G	2500	2500	280	930	455	552	850	250	870	190	22	190	3	378	324
	5	D	A03E6A	2000	4000	315	1240	725	780	1118	300	1160	220	34	180	2	310	518
			A03E6F	2000	4000	315	1240	725	780	1118	300	1160	220	34	190	3	378	518
			A03E6C	3000	3000	315	1240	725	820	1118	300	1160	220	34	180	2	310	575
			A03E6H	3000	3000	315	1240	725	820	1118	300	1160	220	34	190	3	378	575
			A03E7A	3000	4000	315	1240	725	780	1118	300	1160	220	34	180	2	310	633
			A03E7F	3000	4000	315	1240	725	780	1118	300	1160	220	34	190	3	378	633
	7	E	A03E7B	3500	3500	315	1240	725	780	1118	300	1160	220	34	180	2	310	683
			A03E7G	3500	3500	315	1240	725	780	1118	300	1160	220	34	190	3	378	683

COLUMN-MOUNTED JIB CRANES WITH ARTICULATED ARM, WITH FIXED HOIST – CBB SERIES

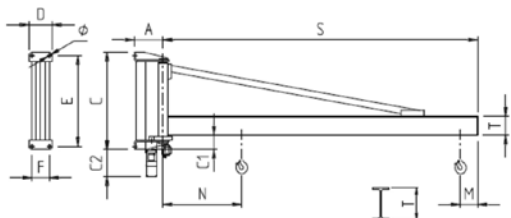


Column-mounted jib crane
Rotation 360°

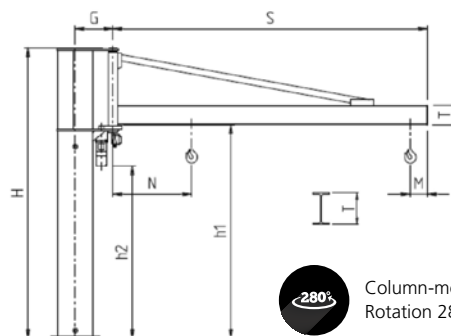


LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE	HEIGHT H mm		TYPE	COLUMN-MOUNTED JIB CRANE WITH ARTICULATED ARM, WITH FIXED HOIST - CBB SERIES OVERALL DIMENSIONS (mm)											WEIGHT	
						UNDER BEAM									ADDED HOIST			
			BASE	MAX.		h1	h2	h3	S1	S2	G	M	Δ	DMK	HEIGHT I	JIB CRANE kg	COLUMN BY m kg	
125	3	R	3020	5020	A30R3A	2603	2777	2995	1000	2000	228	180	32	1	275	166	18.2	
			3020	5020	A30R3B	2603	2777	2995	1500	1500	228	180	32	1	275	190	18.2	
			3020	5020	A30R3C	2603	2777	2995	2000	1000	228	180	32	1	275	212	18.2	
	4	S	3020	5020	A30S4A	2603	2737	2995	1000	3000	274	180	32	1	275	215	22.8	
			3020	5020	A30S4B	2603	2737	2995	1500	2500	274	180	32	1	275	237	22.8	
			3020	5020	A30S4C	2603	2777	2995	2000	2000	274	180	32	1	275	245	22.8	
	5	S	3020	5020	A30S5A	2603	2737	2995	2000	3000	274	180	32	1	275	272	22.8	
			3020	5020	A30S5B	2603	2737	2995	2500	2500	274	180	32	1	275	294	22.8	
			3020	5020	A30S5C	2603	2777	2995	3000	2000	274	180	32	1	275	304	22.8	
	6	T	3525	5525	A35T6B	3083	3220	3478	2500	3500	323	180	42	1	275	450	35	
			3525	5525	A35T6C	3083	3220	3478	3000	3000	323	180	42	1	275	485	35	
	7	T	3525	5525	A35T7A	3083	3200	3478	3000	4000	323	180	42	1	275	513	35	
			3525	5525	A35T7B	3083	3220	3478	3500	3500	323	180	42	1	275	534	35	
250	3	S	3020	5020	A30S3A	2603	2737	2995	1000	2000	274	180	32	1-2	275-310	198	22.8	
			3020	5020	A30S3B	2603	2737	2995	1500	1500	274	180	32	1-2	275-310	220	22.8	
	4	T	3525	5525	A35T4A	3083	3180	3478	1000	3000	323	180	42	1-2	275-310	342	35	
			3525	5525	A35T4C	3083	3220	3478	2000	2000	323	180	42	1-2	275-310	382	35	
	5	T	3525	5525	A35T5A	3083	3180	3478	2000	3000	323	180	42	1-2	275-310	419	35	
			3525	5525	A35T5B	3083	3180	3478	2500	2500	323	180	42	1-2	275-310	448	35	
	6	U	3525	5525	A35U6B	3083	3180	3478	2500	3500	386	180	42	1-2	275-310	520	43.5	
			3525	5525	A35U6C	3083	3180	3478	3000	3000	386	180	42	1-2	275-310	552	43.5	
	7	U	3525	5525	A35U7A	3083	3180	3478	3000	4000	386	180	42	1-2	275-310	577	43.5	
			3525	5525	A35U7B	3083	3180	3478	3500	3500	386	180	42	1-2	275-310	604	43.5	
500	3	T	3525	5525	A35T3A	3083	3220	3478	1000	2000	323	180	42	2	310	306	35	
			3525	5525	A35T3F	3083	3220	3478	1000	2000	323	190	42	3	378	306	35	
			3525	5525	A35T3B	3083	3220	3478	1500	1500	323	180	42	2	310	339	35	
			3525	5525	A35T3G	3083	3220	3478	1500	1500	323	190	42	3	378	339	35	
			3525	5525	A35U4A	3083	3180	3478	1000	3000	386	180	42	2	310	390	43.5	
	4	U	3525	5525	A35U4F	3083	3180	3478	1000	3000	386	190	42	3	378	390	43.5	
			3525	5525	A35U4C	3083	3220	3478	2000	2000	386	180	42	2	310	430	43.5	
			3525	5525	A35U4H	3083	3220	3478	2000	2000	386	190	42	3	378	430	43.5	
			3525	5525	A35U5A	3083	3180	3478	2000	3000	386	180	42	2	310	467	43.5	
	5	U	3525	5525	A35U5F	3083	3180	3478	2000	3000	386	190	42	3	378	467	43.5	
			3525	5525	A35U5B	3083	3180	3478	2500	2500	386	180	42	2	310	496	43.5	
			3525	5525	A35U5G	3083	3180	3478	2500	2500	386	190	42	3	378	496	43.5	
			4025	6025	A40V6A	3565	3620	3958	2000	4000	443	180	45	2	310	796	64	
	6	V	4025	6025	A40V6F	3565	3620	3958	2000	4000	443	190	45	3	378	796	64	
			4025	6025	A40V6C	3565	3660	3958	3000	3000	443	180	45	2	310	853	64	
			4025	6025	A40V6H	3565	3660	3958	3000	3000	443	190	45	3	378	853	64	
			4025	6025	A40V7A	3565	3620	3958	3000	4000	443	180	45	2	310	911	64	
	7	V	4025	6025	A40V7F	3565	3620	3958	3000	4000	443	190	45	3	378	911	64	
4025			6025	A40V7B	3565	3620	3958	3500	3500	443	180	45	2	310	961	64		
4025			6025	A40V7G	3565	3620	3958	3500	3500	443	190	45	3	378	961	64		

MBE/CBE SERIES JIB CRANES – H VERSION – MOTORISED ARM OVERBRACED VERSION



Wall-mounted jib crane
Rotation 290°



Column-mounted jib crane
Rotation 280°

LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE	TYPE	MBE SERIES WALL-MOUNTED JIB CRANE - H VERSION - MOTORISED ARM OVERBRACED VERSION															MOTOR POWER kW	WEIGHT JIB CRANE kg
				OVERALL DIMENSIONS (mm)											ARM SPEED					
				A	B	C	C1	C2	D	E	F	Ø	M	N	T (IPE)	NO. OF REVOLUTIONS R.P.M.	PERIPHERAL m/min			
250	6	D	EH02D64	340	778	930	152	378	250	870	190	22	190	1080	200	0.6	23	0.4	258	
	7	D	EH02D74	340	778	930	152	378	250	870	190	22	190	1200	*152	0.6	26	0.4	340	
	8	E	EH03E84	365	1058	1240	182	348	300	1160	220	34	190	1210	*152	0.6	30	0.4	497	
500	4	D	EH02D45	340	778	930	152	378	250	870	190	22	190	960	200	1	25	0.4	207	
	5	D	EH02D55	340	778	930	152	378	250	870	190	22	190	1020	200	0.8	25	0.4	233	
	6	E	EH03E65	365	1058	1240	182	348	300	1160	220	34	190	1090	200	0.6	23	0.4	334	
	7	E	EH03E75	365	1058	1240	182	348	300	1160	220	34	190	1210	*152	0.6	26	0.4	451	
	8	F	EH03F85	365	1058	1240	182	348	300	1160	220	34	190	1210	*152	0.6	30	0.4	497	
1000	4	E	EH03E47	365	1058	1240	182	348	300	1160	220	34	190	970	200	1	25	0.4	272	
	5	E	EH03E57	365	1058	1240	182	348	300	1160	220	34	190	1030	200	0.8	25	0.4	304	
	6	F	EH03F67	365	1058	1240	182	348	300	1160	220	34	190	1090	240	0.6	23	0.4	384	
	7	F	EH03F77	365	1058	1240	182	348	300	1160	220	34	190	1210	*152	0.6	26	0.4	451	
	8	F	EH03F87	365	1058	1240	182	348	300	1160	220	34	190	1210	*152	0.6	30	0.4	497	
1600	6	F	EH03F68	365	1058	1240	182	348	300	1160	220	34	210	1170	*152	0.6	23	0.4	420	
2000	4	F	EH03F49	365	1058	1240	182	348	300	1160	220	34	210	990	240	0.8	20	0.4	306	
	5	F	EH03F59	365	1058	1240	182	348	300	1160	220	34	210	1050	240	0.6	20	0.4	344	

* Profiled girder type HEA160

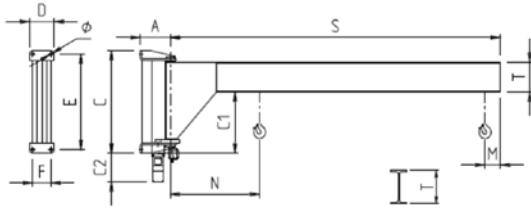
LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE	COUNTERPLATE	CBE SERIES COLUMN-MOUNTED JIB CRANE - H VERSION - MOTORISED ARM OVERBRACED VERSION															
				HEIGHT H mm		TYPE	OVERALL DIMENSIONS (mm)						ARM SPEED		MOTOR POWER kW	WEIGHT			
							UNDER BEAM		G	M	N	T (IPE)	Δ	NO. OF REVOLUTIONS R.P.M.		PERIPHERAL m/min	JIM CRANE kg	COLUMN BY m kg	
				BASE	MAX.		h1	h2											
250	6	U	U	3.5	5.5	EH35U64	2780	2250	436	190	1080	200	17	0.6	23	0.4	420	43.5	
	7	U	U	3.5	5.5	EH35U74	2780	2250	436	190	1200	*152	17	0.6	26	0.4	507	43.5	
	8	V	V	4	6	EH40V84	3022	2492	463	190	1210	*152	20	0.6	30	0.4	765	64	
500	4	U	U	3.5	5.5	EH35U45	2780	2250	436	190	960	200	17	1	25	0.4	370	43.5	
	5	U	U	3.5	5.5	EH35U55	2780	2250	436	190	1020	200	17	0.8	25	0.4	395	43.5	
	6	V	V	4	6	EH40V65	3022	2492	463	190	1090	200	20	0.6	23	0.4	600	64	
	7	V	V	4	6	EH40V75	3022	2492	463	190	1210	*152	20	0.6	26	0.4	720	64	
	8	Z	Z1	4	6	EH40Z85	3022	2492	513	190	1210	*152	20	0.6	30	0.4	850	75.2	
1000	4	V	V	4	6	EH40V47	3022	2492	463	190	970	200	20	1	25	0.4	538	64	
	5	V	V	4	6	EH40V57	3022	2492	463	190	1030	200	20	0.8	25	0.4	570	64	
	6	Z	Z1	4	6	EH40Z67	3022	2492	513	190	1090	240	20	0.6	23	0.4	737	75.2	
	7	Z	Z1	4	6	EH40Z77	3022	2492	513	190	1210	*152	20	0.6	26	0.4	805	75.2	
	8	Z	Z2	4	6	EH40Z87	3022	2492	513	190	1210	*152	20	0.6	30	0.4	850	75.2	
1600	6	Z	Z2	4	6	EH40Z68	3022	2492	513	210	1170	*152	20	0.6	23	0.4	767	75.2	
2000	4	Z	Z2	4	6	EH40Z49	3022	2492	513	210	990	240	20	0.8	20	0.4	660	75.2	
	5	Z	Z2	4	6	EH40Z59	3022	2492	513	210	1050	240	20	0.6	20	0.4	697	75.2	

* Profiled girder type HEA160

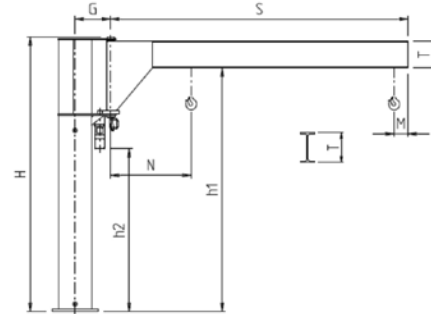
MBE/CBE SERIES JIB CRANES – T VERSION – MOTORISED ARM CANTILEVER VERSION



Wall-mounted jib crane
Rotation 290°



Wall-mounted jib crane
Rotation 290°



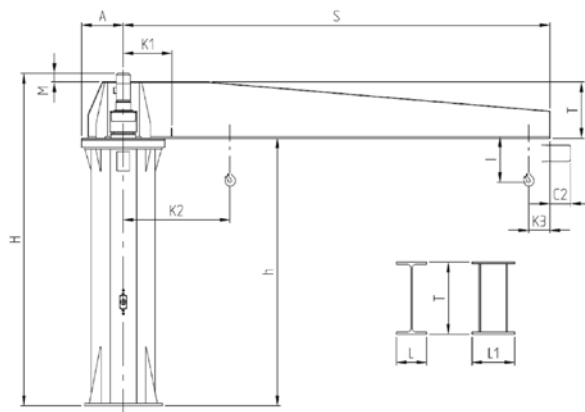
LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE	TYPE	MBE SERIES WALL-MOUNTED JIB CRANE - T VERSION - MOTORISED ARM IN CANTILEVER VERSION															MOTOR POWER kW	WEIGHT JIB CRANE kg
				OVERALL DIMENSIONS (mm)											ARM SPEED					
				A	B	C	C1	C2	D	E	F	Ø	M	N	T (IPE)	NO OF REVOLUTIONS R.P.M.	PERIPHERAL m/min			
500	4	D	ET02D45	340	406	930	524	378	250	870	190	22	190	910	300	1	25	0.4	313	
	5	D	ET02D55	340	406	930	524	378	250	870	190	22	190	970	300	0.8	25	0.4	355	
	6	E	ET03E65	365	500	1240	740	348	300	1160	220	34	190	1080	360	0.6	23	0.4	574	
	7	E	ET03E75	365	540	1240	700	348	300	1160	220	34	190	1270	400	0.6	26	0.4	680	
1000	2	D	ET02D27	340	406	930	524	378	250	870	190	22	190	850	300	1.6	20	0.4	229	
	3	D	ET02D37	340	406	930	524	378	250	870	190	22	190	910	300	1.2	23	0.4	271	
	4	E	ET03E47	365	500	1240	740	348	300	1160	220	34	190	970	360	1	25	0.4	456	
	5	E	ET03E57	365	500	1240	740	348	300	1160	220	34	190	1030	360	0.8	25	0.4	514	
1600	6	F	ET03F67	365	500	1240	740	348	300	1160	220	34	190	1080	360	0.6	23	0.4	574	
	6	F	ET03F68	365	590	1240	650	348	300	1160	220	34	210	1200	450	0.6	23	0.4	714	
2000	2	E	ET03E29	365	500	1240	740	348	300	1160	220	34	210	930	360	1.6	20	0.4	341	
	3	E	ET03E39	365	500	1240	740	348	300	1160	220	34	210	990	360	1.2	23	0.4	399	
	4	F	ET03F49	365	540	1240	700	348	300	1160	220	34	210	1080	400	0.8	20	0.4	508	
	5	F	ET03F59	365	590	1240	650	348	300	1160	220	34	210	1130	450	0.6	20	0.4	635	

LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE	COUNTERPLATE	CBE SERIES COLUMN-MOUNTED JIB CRANE - T VERSION - MOTORISED ARM IN CANTILEVER VERSION														
				HEIGHT H mm		TYPE	OVERALL DIMENSIONS (mm)						ARM SPEED		MOTOR POWER kW	WEIGHT		
							UNDER BEAM		G	M	N	T (IPE)	Δ	NO OF REVOLUTIONS R.P.M.		PERIPHERAL m/min	JIM CRANE kg	COLUMN BY m kg
				BASE	MAX.	h1	h2											
500	4	U	U	3.5	5.5	ET35U45	3152	2250	436	190	910	300	17	1	25	0.4	476	43.5
	5	U	U	3.5	5.5	ET35U55	3152	2250	436	190	970	300	17	0.8	25	0.4	518	43.5
	6	V	V	4	5	ET40V65	3580	2492	463	190	1080	360	20	0.6	23	0.4	840	64
	6	Z	Z1	4	6	ET40Z65	3580	2492	513	190	1080	360	20	0.6	23	0.4	927	75.2
	7	V	V	4	4	ET40V75	3540	2452	463	190	1270	400	20	0.6	26	0.4	945	64
	7	Z	Z1	4	6	ET40Z75	3540	2452	513	190	1270	400	20	0.6	26	0.4	1032	75.2
1000	2	U	U	3.5	5.5	ET35U27	3152	2250	436	190	850	300	17	1.6	20	0.4	392	43.5
	3	U	U	3.5	5.5	ET35U37	3152	2250	436	190	910	300	17	1.2	23	0.4	434	43.5
	4	V	V	4	6	ET40V47	3580	2492	463	190	970	360	20	1	25	0.4	722	64
	5	V	V	4	6	ET40V57	3580	2492	463	190	1030	360	20	0.8	25	0.4	780	64
	6	Z	Z1	4	6	ET40Z67	3580	2492	513	190	1080	360	20	0.6	23	0.4	927	75.2
2000	2	V	V	4	6	ET40V29	3580	2492	463	210	930	360	20	1.6	20	0.4	607	64
	3	V	V	4	6	ET40V39	3580	2492	463	210	990	360	20	1.2	23	0.4	665	64
	4	Z	Z2	4	6	ET40Z49	3540	2492	513	210	1080	400	20	0.8	20	0.4	832	75.2

GBR SERIES COLUMN-MOUNTED JIB CRANE – ELECTRICALLY ROTATED AT 360° CONTINUOUSLY



Column-mounted jib crane
Rotation 360°



GBR jib cranes with DRH electric wire rope hoist:

$K2 = K1 + (C + L1 - S3)^*$ referring to the fixed mechanical limit switch

$K3 = (C + S3)^*$ referring to fixed mechanical limit switch

L^* and $C2^* = (*)$ See commercial catalogue for DRH hoists

GBR jib cranes with DMK electrical chain hoist:

$K2 = K1 + (M/2)^*$ referring to fixed mechanical limit switch

$K3 = (M/2)^*$ referring to fixed mechanical limit switch

$L^* = (*)$ See commercial catalogue for DMK hoists

Total height H^* and dimension M^* may vary in relation to the motoreducer version

LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE	GBR SERIES COLUMN-MOUNTED JIB CRANE - ELECTRICALLY ROTATED AT 360° CONTINUOUSLY															
			TYPE	*UNDER BEAM h	OVERALL DIMENSIONS (mm)						ARM SPEED		MOTOR POWER kW	TILTING MOMENTUM kNm	MAXIMUM PULL OF THE LUG BOLT kN	WEIGHT		
					H*	K1	A	M*	T	L	L1	NO. OF REVOLUTIONS R.P.M.				PERIPHERAL m/min	JIM CRANE kg	COLUMN BY m kg
1000	4	2	2E4040	4000	4663	525	425	335	330	160	–	0.93	23.4	0.25	62	79	1100	122.5
	4.5	2	2E4540	4000	4663	525	425	305	360	170	–	0.93	26.3	0.25	71	79	1140	122.5
	5	2	2E5040	4000	4663	525	425	305	360	170	–	0.93	29.2	0.25	81	79	1170	122.5
	5.5	2	2E5540	4000	4797	525	425	385	400	180	–	0.57	19.7	0.25	90	79	1300	122.5
	6	2	2E6040	4000	4797	525	425	385	400	180	–	0.57	21.5	0.25	102	79	1335	122.5
	6.5	2	2E6540	4000	4797	525	425	220	565	–	300	0.57	23.3	0.25	112	79	1460	122.5
	7	2	2E7040	4000	4797	525	425	220	565	–	300	0.57	25	0.25	125	79	1500	122.5
	7.5	2	2E7540	4000	4797	525	425	220	565	–	300	0.57	27.3	0.25	135	79	1540	122.5
	8	3	3E8040	4000	4862	575	475	233	617	–	300	0.43	26.9	0.25	149	126	1800	141.6
	8.5	3	3E8540	4000	4862	575	475	233	617	–	300	0.43	23	0.25	160	126	1850	141.6
	9	3	3E9040	4000	4862	575	475	227	623	–	300	0.43	24.3	0.25	181	126	2280	141.6
	9.5	3	3E9540	4000	4862	575	475	227	623	–	300	0.43	25.6	0.25	195	126	2360	141.6
10	3	3E1040	4000	4862	575	475	227	623	–	300	0.43	27	0.25	208	126	2440	141.6	
10.5	3	3E1540	4000	4862	575	475	227	623	–	300	0.43	28.3	0.25	221	126	2520	176.5	
2000	4	2	2H4040	4000	4663	525	425	265	400	180	–	0.87	21.9	0.37	109	79	1160	122.5
	4.5	2	2H4540	4000	4797	525	425	335	450	190	–	0.78	22	0.37	126	79	1300	122.5
	5	2	2H5040	4000	4797	525	425	335	450	190	–	0.78	24.5	0.37	142	79	1340	122.5
	5.5	2	2H5540	4000	4797	525	425	220	565	–	300	0.78	27	0.37	161	79	1380	122.5
	6	2	2H6040	4000	4797	525	425	220	565	–	300	0.78	29.4	0.37	179	79	1530	152.6
	6.5	3	3H6540	4000	4862	575	475	227	623	–	300	0.53	21.5	0.37	202	126	1860	141.6
	7	3	3H7040	4000	4862	575	475	227	623	–	300	0.53	23.2	0.37	221	126	2045	176.5
	7.5	3	3H7540	4000	4862	575	475	177	673	–	300	0.53	24.8	0.37	241	126	2130	176.5
	8	3	3H8040	4000	4862	575	475	177	673	–	300	0.53	26.5	0.37	260	126	2185	176.5
	8.5	4	4H8540	4000	4832	588	488	147	673	–	300	0.49	26.4	0.37	282	183	2550	219.7
	9	4	4H9040	4000	4832	588	488	147	673	–	300	0.49	27.9	0.37	303	183	2590	219.7
	9.5	4	4H9540	4000	4832	588	488	97	723	–	300	0.49	29.5	0.37	326	183	2870	273.5
10	5	5H1040	4000	4832	686	586	97	723	–	300	0.4	25.4	0.37	348	183	2880	183.6	
10.5	5	5H1540	4000	4832	686	586	97	723	–	300	0.4	26.6	0.37	372	183	2925	183.6	

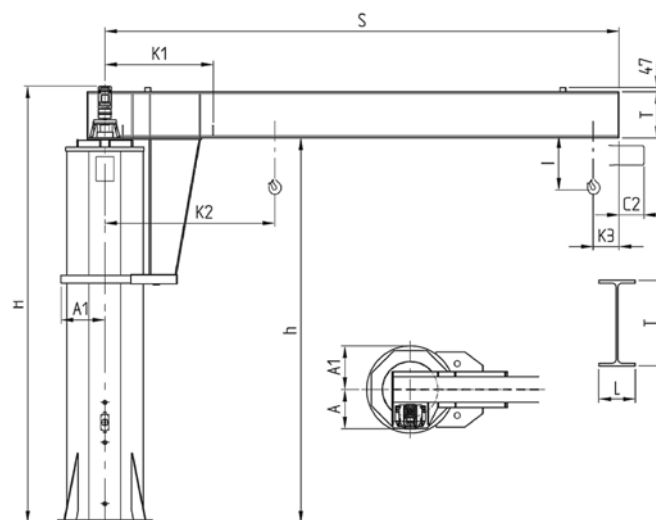
* For other standard heights see the table on page 6

LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE	GBR SERIES COLUMN-MOUNTED JIB CRANE - ELECTRICALLY ROTATED AT 360° CONTINUOUSLY															
			TYPE	*UNDER BEAM h	OVERALL DIMENSIONS (mm)						ARM SPEED		MOTOR POWER kW	TILTING MOMENTUM kNm	MAXIMUM PULL OF THE LUG BOLT kN	WEIGHT		
					H*	K1	A	M*	T	L	L1	NO. OF REVOLUTIONS R.P.M.				PERIPHERAL m/min	JIM CRANE kg	COLUMN BY m kg
3200	4	2	2J4040	4000	4797	525	425	335	450	190	—	0.93	23.4	0.37	164	79	1380	152.6
	4.5	3	3J4540	4000	4797	575	475	168	617	—	300	0.91	25.7	0.37	191	126	1490	141.6
	5	3	3J5040	4000	4797	575	475	168	617	—	300	0.91	28.6	0.37	215	126	1525	141.6
	5.5	3	3J5540	4000	4862	575	475	227	623	—	300	0.63	21.8	0.37	242	126	1755	141.6
	6	3	3J6040	4000	4862	575	475	227	623	—	300	0.63	23.8	0.37	268	126	1940	176.5
	6.5	4	4J6540	4000	4832	588	488	147	673	—	300	0.59	24.2	0.37	295	183	2330	219.7
	7	4	4J7040	4000	4832	588	488	147	673	—	300	0.49	21.8	0.37	322	183	2585	273.5
	7.5	5	5J7540	4000	4832	686	586	97	723	—	300	0.5	23.8	0.37	353	183	2575	183.6
	8	5	5J8040	4000	4832	686	586	47	773	—	300	0.5	25.4	0.37	381	183	2695	183.6
	8.5	5	5J8540	4000	4832	686	586	44	776	—	300	0.4	21.6	0.37	411	183	2990	229
	9	5	5J9040	4000	4832	686	586	44	776	—	300	0.4	22.8	0.37	440	183	3055	229
	9.5	5	5J9540	4000	4862	686	586	114	826	—	300	0.35	21	0.55	472	183	3235	229
	10	5	5J1040	4000	4862	686	586	114	826	—	300	0.35	22	0.55	502	183	3485	274
10.5	5	5J1540	4000	4862	686	586	114	826	—	300	0.35	23.2	0.55	535	183	3555	274	
4000	4	3	3K4040	4000	4797	575	475	112	673	—	300	0.91	22.9	0.37	208	126	1575	141.6
	4.5	3	3K4540	4000	4797	575	475	112	673	—	300	0.91	25.7	0.37	239	126	1770	176.5
	5	3	3K5040	4000	4797	575	475	112	673	—	300	0.91	28.6	0.37	270	126	1835	176.5
	5.5	4	4K5540	4000	4857	588	488	172	673	—	300	0.64	22.1	0.55	301	183	2415	273.5
	6	4	4K6040	4000	4857	588	488	72	773	—	300	0.64	24.1	0.55	335	183	2525	273.5
	6.5	5	5K6540	4000	4857	686	586	72	773	—	300	0.53	21.6	0.55	367	183	2510	183.6
	7	5	5K7040	4000	4857	686	586	69	776	—	300	0.53	23.3	0.55	402	183	2805	229
	7.5	5	5K7540	4000	4857	686	586	69	776	—	300	0.53	25	0.55	435	183	2860	229
	8	5	5K8040	4000	4857	686	586	19	826	—	300	0.53	26.6	0.55	471	183	2965	229
	8.5	5	5K8540	4000	4938	686	586	114	826	—	300	0.44	23.5	0.55	505	183	3280	274
	9	5	5K9040	4000	4938	686	586	114	826	—	300	0.44	24.9	0.55	540	183	3350	274
	9.5	5	5K9540	4000	4925	700	600	97	830	—	300	0.44	26.2	0.55	578	183	3575	274
	10	5	5K1040	4000	4925	700	600	97	830	—	300	0.35	22.1	0.55	619	183	3655	341.6
10.5	5	5K1540	4000	4925	700	600	97	830	—	300	0.35	23.2	0.55	648	183	3725	341.6	
5000	4	3	3L4040	4000	4797	575	475	112	673	—	300	0.91	22.9	0.37	253	126	1705	176.5
	4.5	4	4L4540	4000	4857	738	488	122	723	—	300	0.77	21.7	0.55	291	183	2105	219.7
	5	4	4L5040	4000	4857	738	488	122	723	—	300	0.77	24.1	0.55	328	183	2150	219.7
	5.5	5	5L5540	4000	4938	836	586	217	723	—	300	0.66	22.7	0.55	365	183	2415	183.6
	6	5	5L6040	4000	4938	836	586	164	776	—	300	0.66	24.8	0.55	405	183	2560	183.6
	6.5	5	5L6540	4000	4938	836	586	114	826	—	300	0.53	21.5	0.55	446	183	2850	229
	7	5	5L7040	4000	4938	836	586	114	826	—	300	0.53	23.1	0.55	485	183	2910	229
	7.5	5	5L7540	4000	4938	836	586	114	826	—	300	0.53	24.8	0.55	525	183	2980	229
	8	5	5L8040	4000	4925	850	600	97	830	—	300	0.53	26.5	0.55	567	183	3360	274
	8.5	5	5L8540	4000	4948	850	600	120	830	—	300	0.36	19.3	0.75	608	183	3715	341.6
	9	5	5L9040	4000	4948	850	600	120	830	—	300	0.36	20.4	0.75	649	183	3785	341.6
	9.5	6	6L9540	4000	4948	923	673	120	830	—	300	0.41	24.4	0.75	691	183	4025	311.5
	10	6	6L1040	4000	4948	923	673	120	830	—	300	0.33	20.6	0.75	733	183	4110	311.5
10.5	6	6L1540	4000	4948	923	673	120	830	—	300	0.33	21.6	0.75	777	183	4180	311.5	
6300	4	4	4M4040	4000	4857	738	488	122	723	—	300	0.96	24.1	0.55	327	183	2050	219.7
	4.5	5	5M4540	4000	4857	836	586	122	723	—	300	0.98	27.7	0.55	376	183	2250	183.6
	5	5	5M5040	4000	4857	836	586	72	773	—	300	0.78	24.6	0.55	425	183	2340	183.6
	5.5	5	5M5540	4000	4961	836	586	192	773	—	300	0.66	22.7	0.75	475	183	2470	183.6
	6	5	5M6040	4000	4961	836	586	189	776	—	300	0.66	24.8	0.75	526	183	2740	229
	6.5	5	5M6540	4000	4948	850	600	176	776	—	300	0.53	21.5	0.75	577	183	3045	274
	7	5	5M7040	4000	4948	850	600	126	826	—	300	0.53	23.1	0.75	630	183	3425	341.6
	7.5	6	6M7540	4000	4948	923	673	126	826	—	300	0.48	22.5	0.75	682	183	3675	311.5
	8	6	6M8040	4000	4948	923	673	122	830	—	300	0.48	24	0.75	736	183	3820	311.5
8.5	6	6M8540	4000	4948	923	673	122	830	—	300	0.48	25.5	0.75	788	183	3910	311.5	
8000	4	5	5N4040	4000	5051	736	586	179	826	—	300	0.88	22.1	1.5	401	183	2365	183.6
	4.5	5	5N4540	4000	5051	736	586	179	826	—	300	0.88	24.9	1.5	461	183	2425	183.6
	5	5	5N5040	4000	5051	736	586	175	830	—	300	0.7	22.1	1.5	522	183	2725	229
	5.5	5	5N5540	4000	5087	750	600	262	830	—	300	0.59	20.4	1.5	583	183	3130	274
	6	5	5N6040	4000	5087	750	600	262	830	—	300	0.59	22.3	1.5	644	183	3470	341.6
	6.5	6	6N6540	4000	5087	823	673	262	830	—	300	0.54	21.9	1.5	705	183	3670	311.5
10000	4	5	5O4040	4000	5083	750	600	262	830	—	300	0.88	22.2	1.5	487	183	2750	229
	4.5	5	5O4540	4000	5083	750	600	262	830	—	300	0.88	25	1.5	560	183	2985	274
	5	5	5O5040	4000	5083	750	600	262	830	—	300	0.74	23.2	1.5	633	183	3060	274
	5.5	6	6O5540	4000	5083	823	673	262	830	—	300	0.67	23.1	1.5	707	183	3540	311.5

GBL SERIES COLUMN-MOUNTED JIB CRANE – ELECTRICALLY/MANUALLY ROTATED AT 360° CONTINUOUSLY



Column-mounted jib crane
Rotation 360°



GBL jib cranes with DRH electric wire rope hoist:

$K2 = K1 + (C + I1 - S3) *$ referring to the fixed mechanical limit switch

$K3 = (C + S3) *$ referring to fixed mechanical limit switch

I and C2 = (*) See commercial catalogue for DRH hoists

GBL jib cranes with DMK electrical chain hoist:

$K2 = K1 + (M/2) *$ referring to fixed mechanical limit switch

$K3 = (M/2) *$ referring to fixed mechanical limit switch

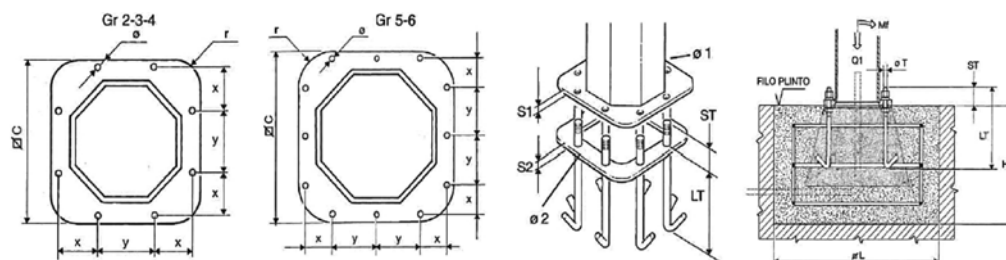
I = (*) See commercial catalogue for DMK hoists

LIFTING CAPACITY (kg)	ARM S m	SIZE OF JIB CRANE	GBL SERIES COLUMN-MOUNTED JIB CRANE - ELECTRICALLY ROTATED AT 360° CONTINUOUSLY																
			TYPE	*UNDER BEAM h	OVERALL DIMENSIONS (mm)								ARM SPEED		MOTOR POWER kW	TILTING MOMENTUM kNm	MAXIMUM PULL OF THE LUG BOLT kN	WEIGHT	
					TOTAL HEIGHT H		K1	A	A1	T	L	NO. OF REVOLUTIONS g/m	PERIPHERAL m/min	JIM CRANE kg				COLUMN BY m kg	
					ELECTRICALLY	MANUALLY													
1000	4	2	2E3540	3500	4100	3847	820	550	350	300	150	0,585	14,7	0,4/0,1	63	21	1350	92,7	
	5	2	2E3550	3500	4100	3907	820	550	350	360	170	0,585	18,4	0,4/0,1	83	28	1475	92,7	
	6	2	2E3560	3500	4100	3907	820	550	350	360	170	0,585	22	0,4/0,1	103	34	1535	92,7	
	7	2	2E3570	3500	4100	3947	820	550	350	400	180	0,585	25,7	0,4/0,1	125	42	1660	92,7	
	8	2	2E3580	3500	4100	3997	820	550	350	450	190	0,585	29,4	0,4/0,1	150	50	1825	92,7	
2000	4	2	2H3540	3500	4100	3907	820	550	350	360	170	0,585	14,7	0,4/0,1	107	36	1420	92,7	
	5	2	2H3550	3500	4100	3947	820	550	350	400	180	0,585	18,4	0,4/0,1	139	46	1530	92,7	
	6	3	3H3560	3500	4100	3997	950	550	400	450	190	0,585	22	0,4/0,1	173	50	1935	141,6	
	7	3	3H3570	3500	4100	4047	950	550	400	500	200	0,585	25,7	0,4/0,1	210	61	2113	141,6	
	8	3	3H3580	3500	4100	4097	950	550	400	550	210	0,585	29,4	0,4/0,1	250	73	2335	141,6	
3200	4	2	2J3540	3500	4100	-	870	550	350	450	190	0,585	14,7	0,4/0,1	160	53	1515	92,7	
	5	3	3J3550	3500	4100	-	950	550	400	500	200	0,585	18,4	0,4/0,1	208	60	1930	141,6	
	6	3	3J3560	3500	4100	-	950	550	400	550	210	0,585	22	0,4/0,1	258	75	2123	141,6	
	7	5	5J4070	4000	4647	-	1265	550	510	600	220	0,585	25,7	0,63/0,15	320	48	3247	183,6	
4000	4	3	3K3540	3500	4100	-	950	550	400	450	190	0,585	14,7	0,4/0,1	198	58	1780	141,6	
	5	3	3K3550	3500	4100	-	950	550	400	550	210	0,585	18,4	0,4/0,1	258	75	2017	141,6	
	6	5	5K4060	4000	4647	-	1265	550	510	600	220	0,585	22	0,63/0,15	327	50	3125	183,6	
	7	5	5K4070	4000	4647	-	1265	550	510	600	220	0,585	25,7	0,63/0,15	389	59	3247	183,6	
5000	4	3	3L3540	3500	4100	-	950	550	400	550	210	0,585	14,7	0,4/0,1	243	71	1910	141,6	
	5	5	5L4050	4000	4647	-	1265	550	510	600	220	0,585	18,4	0,63/0,15	320	49	3005	183,6	
	6	5	5L4060	4000	4647	-	1265	550	510	600	220	0,585	22	0,63/0,15	393	60	3125	183,6	
	7	5	5L4070	4000	4615	-	1265	550	510	490	300	0,585	25,7	0,63/0,15	474	72	3475	183,6	

Attention: manually rotated jib cranes available for capacity up to 2000 Kg

* For other standard heights see the table on page 6

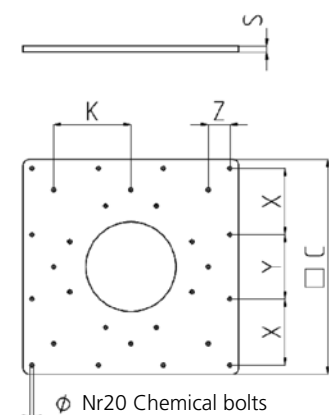
BASE PLATES, FOUNDATION FRAMES AND PLINTHS FOR GBR/GBL SERIES COLUMN-MOUNTED CRANES



SIZE OF JIB CRANE		2	3	4	5	6
Base plate and foundation frame (mm)	∅ C	750	860	910	1100	1220
	S1	20	25	30	35	40
	S2	10	10	10	10	10
	x	199	230	241	185	215
	y	281	325	341	320	350
	Ø 1	27	33	39	39	39
	Ø 2	25	31	37	37	37
	r	150	170	180	220	240
Anchorage bolts (mm)	Ø T	M 24x3	M 30x3.5	M 36x4	M 36x4	M 36x4
	LT	600	700	800	800	800
	ST	90	105	125	130	135
Bolt clamping torque (Nm)		350	680	1200	1200	1200
Weight of frame with lug bolts (kg)		34.5	52.5	80	113	120
Foundation plinth (mm) (see warnings on the previous page)	∅ L	2500	3000	3200	4000	4200
	H	1150	1300	1300	1300	1300
Max jib crane weight (kg) (without hoist and trolley)	Q1	1540/1825	2520/2335	2870	3785/3475	4180
Maximum tilting movement allowed (kNm)	Mf	179/160	270/258	335	649/474	788

COUNTERPLATES FOR FIXING TO THE FLOOR WITH CHEMICAL BOLTS OF THE GBR-GBL SIZE

2-3 COLUMN-MOUNTED CRANES



SIZE		2	3	
Counterplate code		GBR250140	GBR350140	
Counterplate dimensions (mm)	☒ C	1200	1400	
	X	370	430	
	Y	360	440	
	Z	120	170	
	K	430	480	
	S	35	45	
	Ø	25	25	
Counterplate weight (kg)		340	600	
Maximum tilting movement allowed (kNm)		Mf*	200	300
Fixing characteristics	Type of concrete of the floor: Minimum Fck/Rck class (N/mm2)		C20/25	C20/25
	Type of chemical bolts (e.g.: HILTI HVU with threaded bars HILTI HAS)		M 20	M20
	Minimum thickness of floor block (mm)		220	220
	Diameter of hole in the floor (mm)		24	24
	Depth of the hole of the concrete in the floor (mm)		170	170
	Clamping torques of the bolts (Nm)		150	150
	Project resistance of traction of one bolt (kN)		74,6	74,6

Fixing of column with chemical bolts, requires a scrupulous verification of suitability in relation to type of support flooring. The suitability checks are the responsibility of the user and must be carried out by expert, qualified technicians who will evaluate the feasibility and formally assume the relative responsibilities.

* For the clamping torques of the bolts between the column and counterplate, see the relative clamping torques for the lug bolts on page 36.

FIXING SYSTEMS FOR JIB CRANES

BRACKET AND STAYBOLTS UNIT FOR GBP/MBB/MBE SERIES WALL-MOUNTED CRANES

SIZE	A	B	C	D	E	F	
Reactions (kN)	Q2	2.95	5	9.2	16.85	26.10	28.2
	R	11.9	21.75	27.05	49	66.8	120

TYPE OF BRACKET	01	02	03
Ø Staybolts/screws	M16	M20	M30
Clamping torques (Nm)			
Staybolts	128	250	857
Screws	205	400	1370

	Code	GBK010110	GBP020110	GBP030110
Bracket Type: Short (mm)	U	50	60	80
	V	420	490	532
	Z	75	90	135
Weight (kg)		21	36	75

Pillar dimensions (mm)	x	min	200	250	300
		max	330	400	400
	y	max	850	810	750

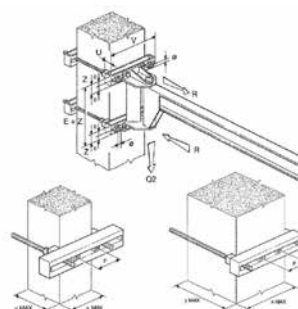
	Code	GBK010120	GBP020120	GBP030120
Bracket Type: Medium (mm)	U	50	80	100
	V	550	640	682
	Z	75	120	145
Weight (kg)		26	60	96

TYPE OF BRACKET	01	02	03
-----------------	----	----	----

Ø Staybolts/screws			M16	M20	M30
Pillar dimensions (mm)	x	min	200	250	400
		max	460	550	550
	y	max	850	770	710

	Code	GBK010130	GBP020130	GBP030130
Bracket Type: Long (mm)	U	60	80	120
	V	740	840	882
	Z	85	120	155
Weight (kg)		40	74	132

Pillar dimensions (mm)	x	min	460	550	550
		max	650	750	750
	y	max	830	770	670



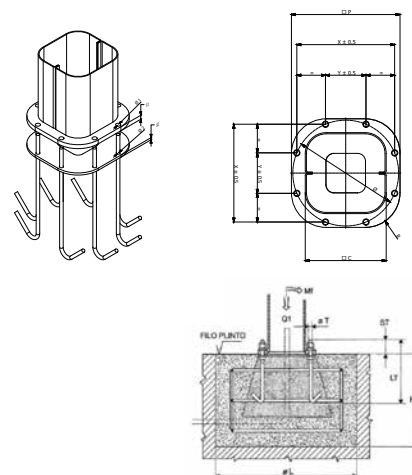
N.B.: The bracket and staybolts unit, used in the wall-mounted version for fixing the bracket to a pillar, is available on request.

BASE PLATES, FOUNDATION FRAMES AND PLINTHS FOR GBA/CBB/CBE SERIES COLUMN-MOUNTED CRANES

SIZE		R	S	T	U	V	Z
Code foundation set		GBK1R0260	GBK1S0260	GBK1T0260	GBK1U0260	GBK1V0260	GBK1Z0260
Base plate and foundation frame (mm)	☑C	205	258	296	372	435	515
	☑P	275	340	380	475	555	660
	S1	15	15	15	20	20	25
	S2	8	8	8	8	8	8
	x	247	305	345	432	506	599
	y	103	126	143	179	210	248
	Ø	268	330	373	468	548	648
	r	88	104	116	145	165	197
	Ø1	16	20	20	25	29	35
	Ø2	13	17	17	21	25	31
Lug bolts (mm)	Ø T	M12	M16	M16	M20	M24	M30
	LT	400	450	450	550	600	700
	ST	40	45	45	55	60	75
Clamping torques (Nm)		45	105	105	200	350	680
Frame/bolt weight (kg)		8	13	14	23	35	61
Foundation plinth (mm)	☑L	1200	1300	1400	1700	2000	2400
	H	800	800	900	900	1100	1100
Reaction (kN)	Q1	3.3	5.7	10.15	18.4	28.7	29.35
Momentum (kNm)	MF	12	21	31	57	107	164

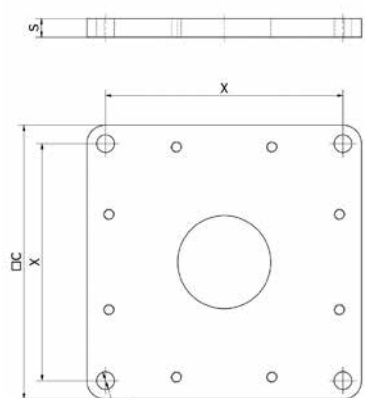
The dimensions of the plinths are purely indicative!

The plinth must be dimensioned by expert, qualified technicians considering the real consistency of the ground and the maximum pressure it can withstand.



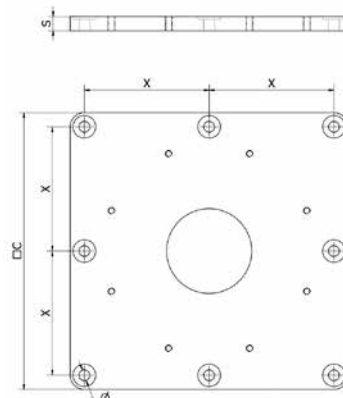
N.B.: The foundation frames with lug bolts, used in the column-mounted version for fixing the column itself to the foundation plinth is supplied on request.
* M= 1,11; ψ= 1,15

COUNTERPLATES FOR FIXING TO THE FLOOR WITH CHEMICAL BOLTS OF THE GBA/CBB/CBE COLUMN-MOUNTED CRANES



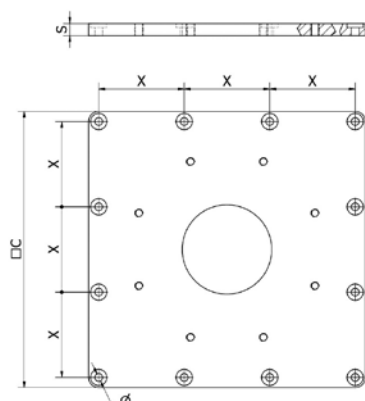
Nr. 4 Chemical bolts

COUNTERPLATES R - S



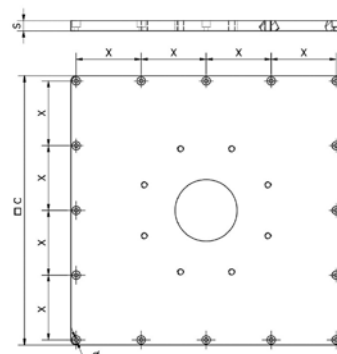
Nr. 8 Chemical bolts

COUNTERPLATES T



Nr. 12 Chemical bolts

COUNTERPLATES U - V - Z1



Nr. 16 Chemical bolts

COUNTERPLATES Z2

The fixing of the column using chemical bolts, needs a scrupulous check of suitability in relation to the type of support flooring. The suitability checks are the responsibility of the user and must be carried out by expert, qualified technicians who will evaluate the feasibility and formally undertake the relative responsibilities.

SIZE		R	S	T	U	V	Z1	Z2
Counter plate and chemical bolts code		GBA2R0KPS	GBA2S0KPS	GBA2T0KPS	GBA2U0KPS	GBA2V0KPS	GBA2Z1KPS	GBA2Z2KPS
Counterplate dimensions (mm)	☑ C	295	445	490	680	995	1130	1310
	S	20	20	25	30	40	40	50
	x	255	395	220	210	315	360	315
	Nr x Ø	4x19	4x19	8x19	12x19	12x19	12x19	16x19
Counterplate weight (kg)		15	30	45	100	285	375	640
Maximum tilting movement allowed (kNm)		Mf*	11,8	20,7	31,2	56,7	107,3	164
Fixing characteristics	Type of concrete of the floor: Class Fck/Rck minimum (N/mm ²)	C20/25	C20/25	C20/25	C20/25	C20/25	C20/25	C20/25
	Minimum floor thickness (mm)	170	170	170	170	170	170	170
	Diameter of hole in the floor (mm)	18	18	18	18	18	18	18
	Depth of the hole in floor's concrete (mm)	135	135	135	135	135	135	135
	Clamping torque of the bolts (Nm)	60	60	60	60	60	60	60
	Dowel height from top plate surface (mm)	45	45	40	35	25	25	15

* For the clamping torques of the bolts between the column and counterplate, see the relative clamping torques for the lug bolts on page 36.

REGULATIONS COMPLIANCE

REGULATORY REFERENCE FRAMEWORK

In the designing and construction of the manually and electrically rotated, column and wall-mounted jib cranes, the following standards and main technical rules have been taken into consideration:

- ▶ EN ISO 12100:2010 "General principles for design"
- ▶ EN ISO 13849-1:2008 "Safety-related parts of control systems (where required)"
- ▶ EN 12077-2:2008 "Limiting and indicating devices"
- ▶ EN 60204-32:2009 "Safety of machinery. Electrical equipment of machines. Requirements for hoisting machines"
- ▶ EN 60529:1997 "Degrees of protection provided by enclosures (IP Code)"
- ▶ ISO 4301-1:1988 "Cranes and lifting appliances Classification"
- ▶ FEM 1.001/98 "Rules for the design of hoisting appliances"

LEGISLATIVE REFERENCE FRAMEWORK

The manually or electrically rotated column and wall-mounted jib cranes are designed and produced in consideration of the "Essential Safety Requirements" of Annex I of Machinery Directive 2006/42/EC and are put on the market with the CE mark and CE Declaration of Conformity - Annex II A.

In addition the jib cranes are in compliance with the following directives:

- ▶ **LOW VOLTAGE DIRECTIVE 2014/35/UE**
- ▶ **ELECTROMAGNETIC COMPATIBILITY DIRECTIVE 2014/30/UE**



DONATI WEBSITE

Donati's window on the world for customer service.

Manuals and product information

The new Donati website has been designed to assist customers so they can easily find all of the updated information on Donati products at any time.

The Donati website makes it simple to consult and download product catalogues, technical manuals and product information sheets.



Donati Shop

The Donati Shop makes it possible to quickly and independently handle spare parts requests, thus reducing waiting times for customers.

Contact Section

The new contact section divided by departments lets you address your requests to the right team, so our staff can provide a faster and more accurate answer.

LEONARDO CONFIGURATION SYSTEM



Leonardo Configuration System is the Donati configurator system lets you configure and generate offers for Chain hoists, Jib cranes and Crane sets, easily and quickly; it lets you rapidly and efficiently respond to your customers' requests.

The suite is composed of two configurators:

Leonardo Product Configurator:

Used to configure chain hoists and jib cranes alone or in combination

Leonardo Crane Set Configurator:

Used to configure bridge cranes complete with all necessary accessories and Donati hoists.



visit donaticranes.com
and keep up to date

MKCT20ENBO

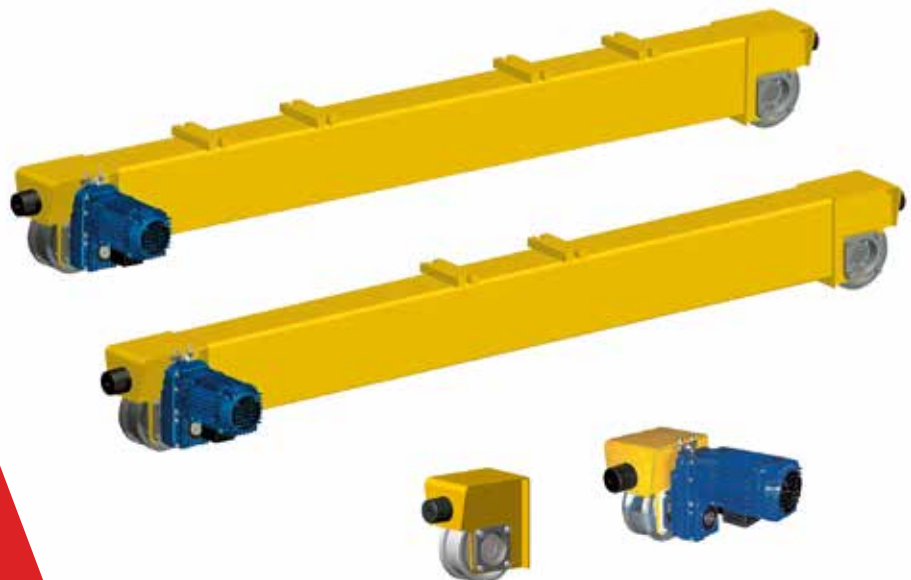
Donati Sollevamenti S.r.l.

Via S. Quasimodo, 17
20025 Legnano (MI) - Italy
Tel +39 0331 14811
Fax +39 0331 1481880

dvo.info@donaticranes.com
www.donaticranes.com

END-CARRIAGES FOR BRIDGE CRANES

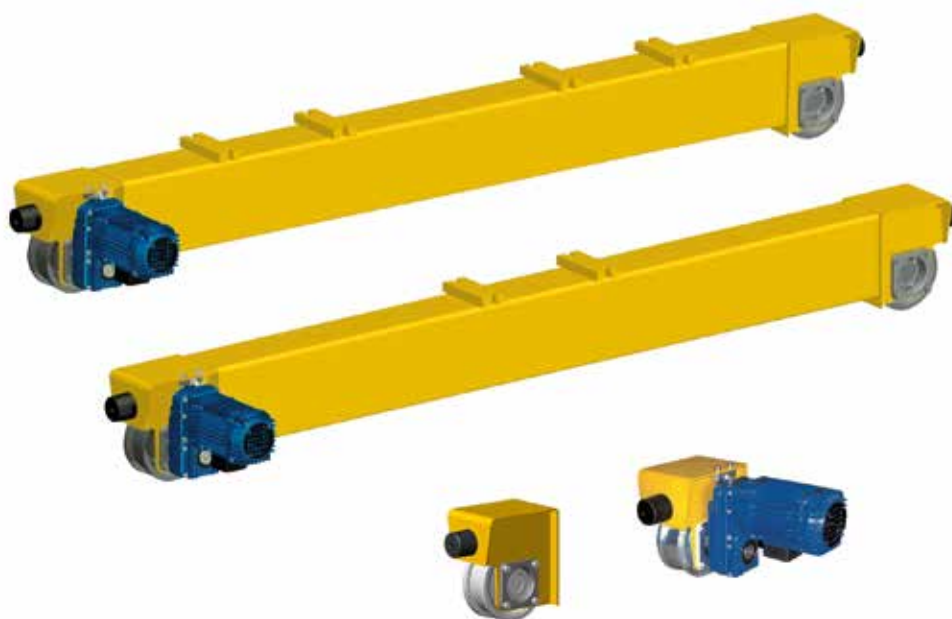
Wheel groups
DGT SERIES
Offset geared-motor
DGP SERIES



END-CARRIAGES FOR BRIDGE CRANES

The bridge crane end-carriages, equipped with “DGT” series wheel groups, coupled with “DGP” series offset geared motors, represent the most convenient offer for worldwide market requirements for handling masses up to 66,000 kg.

The bridge crane end-carriages, a completion of the range of DRH series electric wire rope hoists and DMK electric chain hoists, appreciated worldwide, complete the range and solutions offered by Donati Sollevamenti, with a view to always supplying the best solution to its customers while safeguarding the quality / price / performance ratio.



MAX

66.000 KG

The offer most in line with the worldwide market's needs for handling masses up to 66,000 kg protecting the customer's convenience



CONFORMITY TO NORMS AND REGULATIONS

APPLICABLE LEGISLATION

The bridge crane end-carriages are designed and produced by DONATI SOLLEVAMENTI S.r.l. in compliance with the "Essential Safety Requirements" stated in Attachment I of the Machinery Directive 2006/42/CE and are introduced onto the market accompanied by the Declaration of incorporation found in Attachment II B of the Directive.

APPLICABLE NORMS AND REGULATIONS

The following norms and technical principles have also been taken into consideration in the design and manufacturing of the **end-carriages for bridge cranes**:

- ▶ EN ISO 12100/2010 "Fundamental concepts on general engineering principles"
- ▶ EN ISO 13849-1/2008 "General principles for design"
- ▶ EN 60529/97 "Degrees of protection for casings (IP Codes)"
- ▶ ISO 4301-1/88 "Classifications for lifting equipment"
- ▶ ISO 8306/85 "Tolerances for cranes and tracks"
- ▶ FEM 1.001/98 "Calculations for lifting equipment"
- ▶ FEM 9.511/86 "Classification of mechanisms"
- ▶ FEM 9.683/95 "Criteria of choice for lifting and travel motors"
- ▶ FEM 9.755/93 "Safety work periods"



SERVICE CLASSIFICATION:

The structural elements and mechanisms on the **end-carriages for bridge cranes** are classified in various service groups, in conformity with specifications stipulated under ISO 4301.

PROTECTION AND SHEATHING OF ELECTRICAL PARTS:

- ▶ Sliding motors: protection IP55 (motor) - IP23 (brake); class "F" insulation
- ▶ Limit switch: minimum protection IP65; max. insulation voltage 500 V
- ▶ Protections and insulations differing from the standard, which can be supplied on request.

ELECTRICAL POWER:

- ▶ The **end-carriages for bridge cranes** are designed to be powered through three-phase alternating current: 400 V - 50Hz in accordance with IEC 38-1.
- ▶ Different voltage and frequency specifications from the standard can be supplied on request.

ENVIRONMENTAL CONDITIONS FOR STANDARD USAGE:

- ▶ Operating temperature: minimum - 10° C; maximum + 40°C
- ▶ Maximum relative humidity: 80% - Maximum altitude 1000 m above sea level
- ▶ Standard **end-carriages for bridge cranes** must be installed in a well-ventilated working environment, free of corrosive steams (acidic steams, saline mists, etc.), and are designed to operate in a covered environment, protected from atmospheric elements.
- ▶ Special machine models designed for non-standard environmental conditions, or for operation outdoors, can be supplied on request.

NOISE EMISSIONS - VIBRATIONS:

- ▶ Noise emission levels emanating from the **end-carriages** during running operations, whether empty or fully loaded, are in all cases inferior to a value of **80 dB (A)**, as measured at a distance of 1 m and 1.6 m from the ground. The incidence of environmental characteristics such as the transmission of sound through metallic structures, reflection caused by combined machinery and surrounding walls, is not taken into consideration in the value indicated.
- ▶ Vibrations produced by the **end-carriages** during running operations are not considered dangerous for the health and wellbeing of personnel operating the lifting equipment on which the units are installed.



END-CARRIAGES FOR BRIDGE CRANES

DONATI **end-carriages** are designed for handling operations on bridge crane rails:

- ▶ at single running speed from 3.2 to 25 m/min;
- ▶ at two running speeds, from 12.5/3.2 to 80/20 m/min;

Operating on:

- ▶ single girder, with a capacity of up to 20,000 kg and gauge of up to 25 m;
- ▶ double girder, with a capacity of up to 40,000 kg and gauge of up to 27 m.

Designed and built on the principle of modular components assembled together in relation to their specific use, they are equipped with **drive units** comprising “DGT” series wheel groups, which are combined with “DGP” series offset geared motors.

They are configured in 6 sizes, where the basic components are:

- ▶ 6 “DGT” series drive wheel group sizes
(Ø 125, Ø 160, Ø 200, Ø 250, Ø 315 and Ø 400/400 R)
- ▶ 4 “DGP” series offset reducers sizes
(DGP 0, DGP 1, DGP 2 and DGP 3)
- ▶ 4 self-braking motors sizes
(motor 71, motor 80, motor 100 and motor 112)



OPERATING LIMITATIONS FOR END-CARRIAGES ON SINGLE GIRDER OR DOUBLE GIRDER BRIDGE CRANES, IN RELATION TO SPAN

END-CARRIAGES TYPE			SPAN (m) SINGLE GIRDER M OR DOUBLE GIRDER B BRIDGE CRANE																											
SIZE "DGT"	WHEEL																													
	Ø R (mm)	BASIS PR (mm)	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27						
1	125	1800	M																											
		2400	B										M	B																
		3300																		M	B									
2	160	1800	M																											
		2400	B										M	B																
		3300																		M	B									
3	200	2100	M																											
		2700	B												M	B														
		3600																		M	B									
4	250	2100	M																											
		2700	M	B	B								M	B																
		3600																		M	B									
		3600 R																		M										
5	315	2400	M																											
		3900																	B											
6	400	3900																		B										
	400R	3900 R		B																										

"DGT" WHEELS		"DGP" SERIES OFFSET GEARED MOTORS			
SIZE	Ø (mm)	"DGP" REDUCERS SIZE 0	"DGP" REDUCERS SIZE 1	"DGP" REDUCERS SIZE 2	"DGP" REDUCERS SIZE 3
1	125	Motor size 71		=	=
2	160			=	=
3	200	=	Motor size 71	Motor size 80	=
4	250	=			=
5	315	=	=	Motor size 80	Motor size 100
6	400	=	=	=	Motor size 112
	400R	=	=	=	

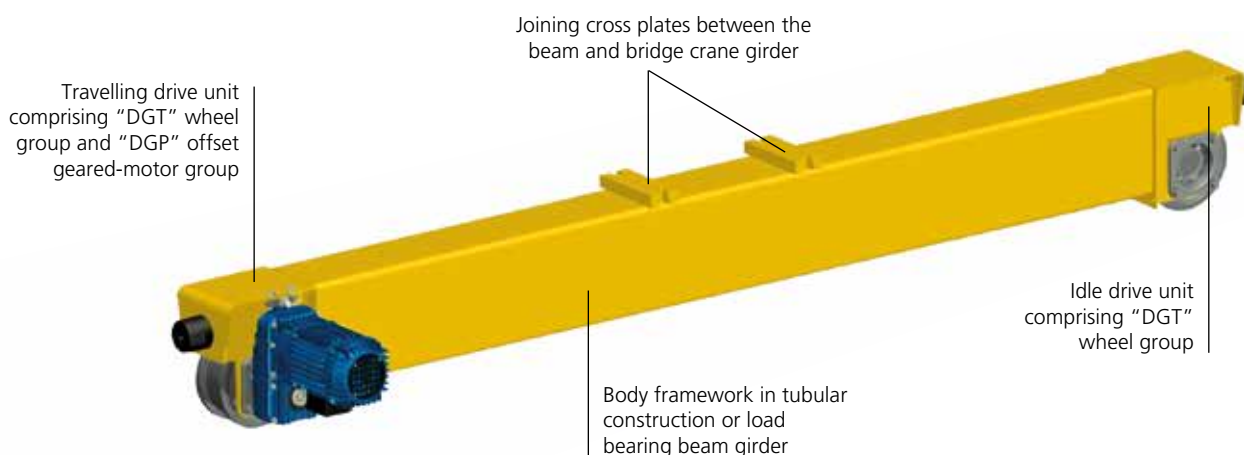
COMPONENTS ON END-CARRIAGES FOR BRIDGE CRANES

THE MAIN COMPONENTS ON END-CARRIAGES FOR BRIDGE CRANES ARE THE:

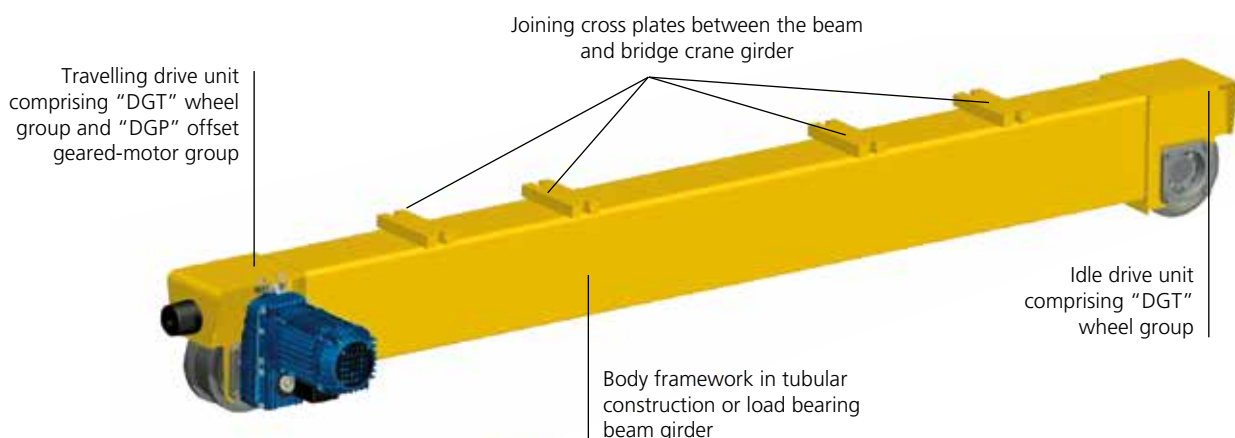
END-CARRIAGE FRAMEWORK:

- The load-bearing structure is made from a rectangular tubular section.
- The bridge crane girders are fixed to the end-carriage structure using a system of high-resistance bolts and a pin centring system.

END-CARRIAGE FOR SINGLE GIRDER BRIDGE CRANE

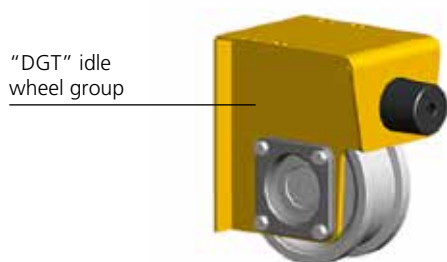


END-CARRIAGE FOR DOUBLE GIRDER BRIDGE CRANE



"DGT" SERIES WHEEL GROUPS

- ▶ Drive wheels Ø 125, Ø 160, Ø 200, Ø 250 and Ø 315 are carbon steel moulded. Sliding wheels Ø 400 and Ø 400 R are in spheroidal cast iron.
- ▶ All wheels groups revolve on permanently lubricated radial bearings, with the exception of the extra load capacity Ø 400 R wheel group, which is fitted with roller bearings.
- ▶ Available in idle operation or ready for drive operation combined with an offset geared-motor.
- ▶ In drive operation, the direct connection is coaxial between the offset geared-motor output shaft and the grooved hub on the drive wheel ensures a high level of operating safety and reliability.
- ▶ The wheel group is available as standard with a doubleflange version and can, on request, be supplied with different sliding band widths depending on the type of rail it runs on.
- ▶ Both in idle and drive operation, the wheel groups are supported and contained within an electro-welded steel structure that acts as a support casing for the entire group, and as a joining element between the end carriage frame on which the wheel group is assembled.

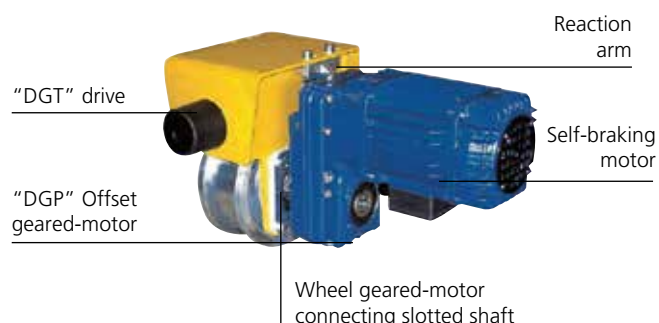


THE CONNECTION PLATE (SINGLE GIRDER) OR PLATES (DOUBLE GIRDER) FIX THE END-CARRIAGE TO THE CRANE'S GIRDER OR GIRDERS:

Specially designed connection plates fix the end-carriages to the girder/s of the bridge crane. Built in steel plating in different sizes, they are welded to the bridge crane girders, whether tubular or plated sectioned, laterally joined or fixed to the travelling beam structures.

"DGP" SERIES OFFSET GEARED-MOTORS

- ▶ **Reducers** are designed as an "offset geared-motor" type with a concave shaft, featuring parallel axes with two or three stages of reduction, and permanent oil-bath lubrication.
- ▶ Engineered with cylindrical high resistance steel gears, featuring spiral teething, heat-treated, entirely supported on ball bearings.
- ▶ Sized to resist a lifetime of stress and wear, in accordance to the pertinent ISO service group.
- ▶ The connection between the geared-motor and drive wheel is guaranteed by a slotted shaft connecting the holes on both parts, while the geared-motor fastened to the wheel group makes use of a system comprising a reaction arm fastened to the wheel group, and an elastic counter bearing with rubber buffers and a setscrew. The entire geared-motor-wheel connection system guarantees both high quality running operation and maximum duration over time with low maintenance, thanks to the elimination of rigid connections.
- ▶ **The electric motors** are asynchronous, featuring progressive start-up, with standard ventilation, selfbraking with axial shifting of the rotor guaranteeing fast, reliable mechanical braking.
- ▶ Conical brakes are fitted with asbestos-free brake lining, featuring an extended braking surface.
- ▶ The brake block comprises a fan which ensures proper cooling for the brake and motor, shifting axially with the motor shaft; the brake function is activated automatically in the case of a power outage.
- ▶ The connection between the motor and offset gearedmotor features a joint contained within a couplinghousing.



ACCESSORIES (limit switches, towing arms, etc.):

The travel limit switch on the end-carriages, when supplied, is a rotating type with a double cross-rod ensuring for two-speed cranes a dual function of pre-deceleration and stopping in both directions, and is housed on the DGT drive unit.

TECHNICAL SPECIFICATIONS AND OPERATING LIMITATIONS FOR END-CARRIAGES FOR BRIDGE CRANES

For complete technical specifications on the end-carriages for bridge cranes, in relation to their intended operation, check and match the parameters limiting their operation.

The tables below provide a suitable means of verifying operating limits and specifications for end-carriages with wheel groups in combination with offset geared-motors and self-braking motors, in relation to the following user specifications for the bridge crane the end-carriages are installed on.

Operating parameters required for selecting end-carriages:

- ▶ type of bridge crane (single girder or double girder);
- ▶ load bearing capacity;
- ▶ span;
- ▶ ISO / FEM service group
- ▶ inflection point, with a nominal load on the beam's midsection;
- ▶ loads on the wheels;
- ▶ width and shape of the rail;
- ▶ running speed.

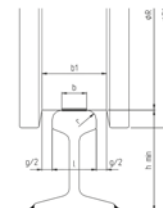
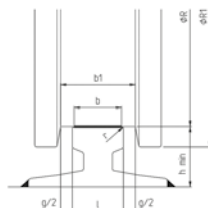
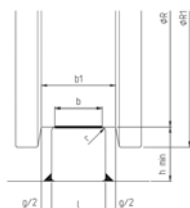


SPECIFICATIONS FOR RAILS AND MAXIMUM CONTACT AREA

Square laminated rail UNI 6013 - DIN 1013
Flat laminated rail UNI 6014 - DIN 1017

Burbak type rail - DIN 536

Vignole type rail - UNI 3141



WHEEL SPECIFICATIONS				RAIL			TYPE OF RUNNING RAIL AND MAXIMUM OPERATING CONTACT SURFACE - B (mm)							
TYPE Ø R	MAXIMUM REACTION RX. MAX.	INTERNAL WIDTH (mm)		WIDTH b (mm)		h (mm)	SQUARE LAMINATED - UNI 6013 - DIN 1013 FLAT LAMINATED - UNI 6014 - DIN 1017		BURBAK - DIN 536			VIGNOLE - UNI 3141		
(mm)	(kg)	TIPO	b1	MAX.	MIN.	MIN.	l	b = l - 2r	TIPO	l	b = l - 2r	TIPO	l	b = l - 4/3r
125	3.670 36 kN	standard	50	40	35	30	40	38	=	=	=	=	=	=
		maximum	60	50	45	30	50	48	A 45	45	37	21 - 27	50	34
		special	70	60	55	30	60	58	A 55	55	45	36	60	44
160	4.893 48 kN	standard	55	45	40	30	40	38	A 45	45	37	=	=	=
		maximum	65	55	50	30	50	48	A 55	55	45	21 - 27	50	34
		special	80	70	65	30	70	68	A 65	65	53	46 50	65 67	46 49
200	7.340 72 kN	standard	60	50	45	30	50	48	A 45	45	37	21 - 27	50	34
		maximum	70	60	55	30	60	58	A 55	55	45	30 36	56 60	40 44
		special	90	80	75	30	80	78	A 75	75	59	60	72 ⁽¹⁾	55
250	10.805 106 kN	standard	70	60	55	30	60	58	A 55	55	45	30 36	56 60	40 44
		maximum	80	70	65	30	70	68	A 65	65	53	46 50	65 67	46 49
		special	100	90	85	30	90	88	A 75	75 ⁽¹⁾	59	=	=	=
315	14.679 144 kN	standard	75	65	60	40	60	58	A 65	65	53	36 46	60 65	44 47
		maximum	85	75	70	40	70	68	A 75	75	59	50 60	67 ⁽¹⁾ 72	48 55
		special	110	100	95	40	100	98	A 100	100	80	=	=	=
400	18.960 186 kN	standard	85	75	70	40	70	68	A 75	75	59	50 60	67 ⁽¹⁾ 72	48 55
400R	30.580 ⁽²⁾ 300 kN	maximum	95	85	80	40	80	78	=	=	=	=	=	=
		special	115	100	95	40	100	98	A 100	100	80	=	=	=

The clearance between the internal width of the wheel and the maximum rail width must be contained within: slack ≥ 10 mm and ≤ 15 mm

(1) wheel with increased clearance = 18 mm

(2) the Ø 400 R wheel is sized identical to the Ø 400 wheel but allows for an increased reaction due to its roller bearings

Recommended rails appear in red, together with operating contact surface values, verified in relation to maximum static reaction

OPERATING LIMITS FOR WHEELS IN RELATION TO THE RAIL'S OPERATING CONTACT SURFACE AND RUNNING SPEED

The following diagrams (pages 12, 13 and 14) illustrate average admissible reactions $R_{ave.}$ (expressed in kg) on drive unit wheels, in relation to the running speed and to the operating width "b", as specified in the table on page 11. The correct choice of wheel is based on the average effective reaction $R_{ave.}$ effettiva, exerted on the wheel.

This value is derived from the following equation:

$$R_{ave.} = \frac{2 * R_{max.} + R_{min.}}{3}$$

where **R max.** is the most unfavourable load condition, equal to:

$$R_{max.} = \frac{M1}{4} + \left(\frac{M2+P}{2} \right) * \left(1 - \frac{a}{s} \right)$$

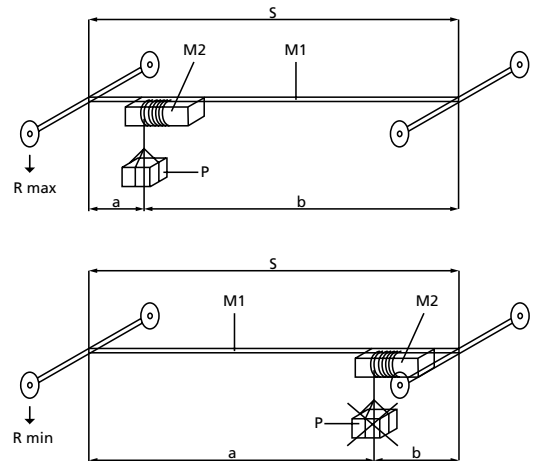
while the minimum reaction **R min.** is:

$$R_{min.} = \frac{M1}{4} + \frac{M2}{2} * \frac{a}{s}$$

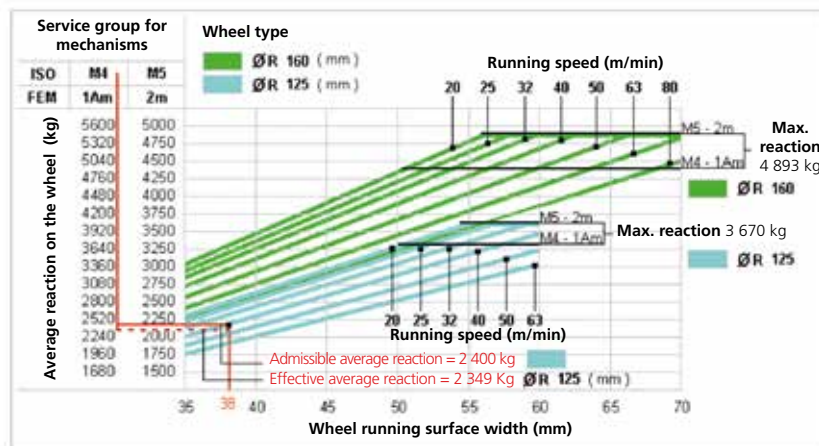
where: **M1** = crane mass, i.e. its proper weight (crane's weight including accessories), expressed in kg

M2 = hoist/trolley mass, i.e. their proper weight, expressed in kg

P = nominal crane capacity, expressed in kg



ADMISSIBLE AVERAGE REACTIONS OF WHEELS Ø 125 AND 160, IN RELATION TO THE RAIL WIDTH AND RUNNING SPEED



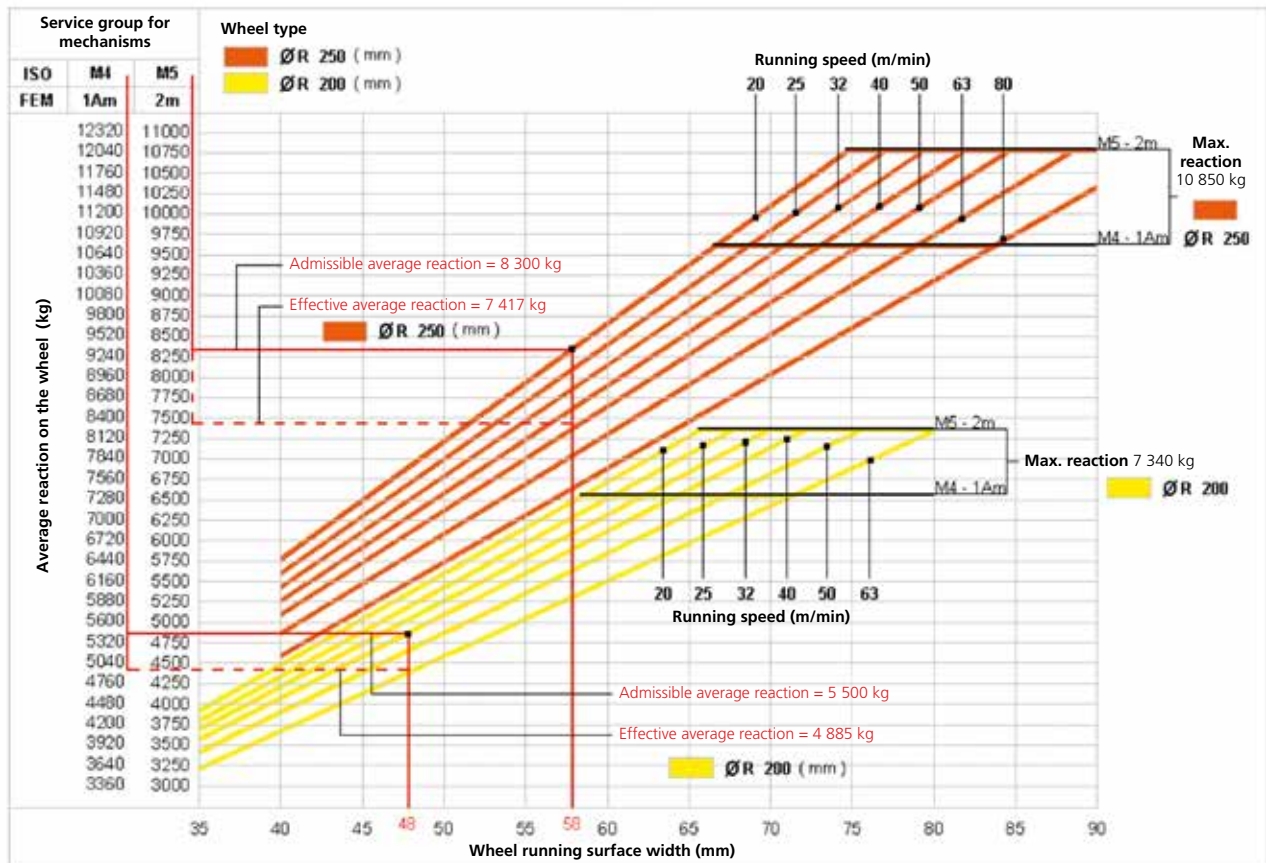
Example of verification of suitability for a Ø 125 wheel
(see example 1 on page 36)

Data calculated:

- ▶ Rail operating width: $b = 38$ mm
- ▶ Travelling speed: 40/10 m/min;
- ▶ Service group: ISO M4 (FEM 1Am)
- ▶ Average effective reaction: $R_{ave.} = 2.349$ kg
- ▶ Maximum effective reaction: $R_{max. eff.} = 3.203$ kg

The average admissible reaction is ≈ 2.400 kg > than the average effective reaction of 2.349 kg the wheel is subjected to;
The maximum admissible reaction is ≈ 3.670 kg > than the maximum effective reaction of 3.203 kg

AVERAGE ADMISSIBLE REACTIONS FROM WHEELS Ø 200 AND 250, IN RELATION TO THE OPERATING WIDTH AND TRAVELLING SPEED



Example of verification of suitability for a Ø 200 wheel (see example 2 on page 26)

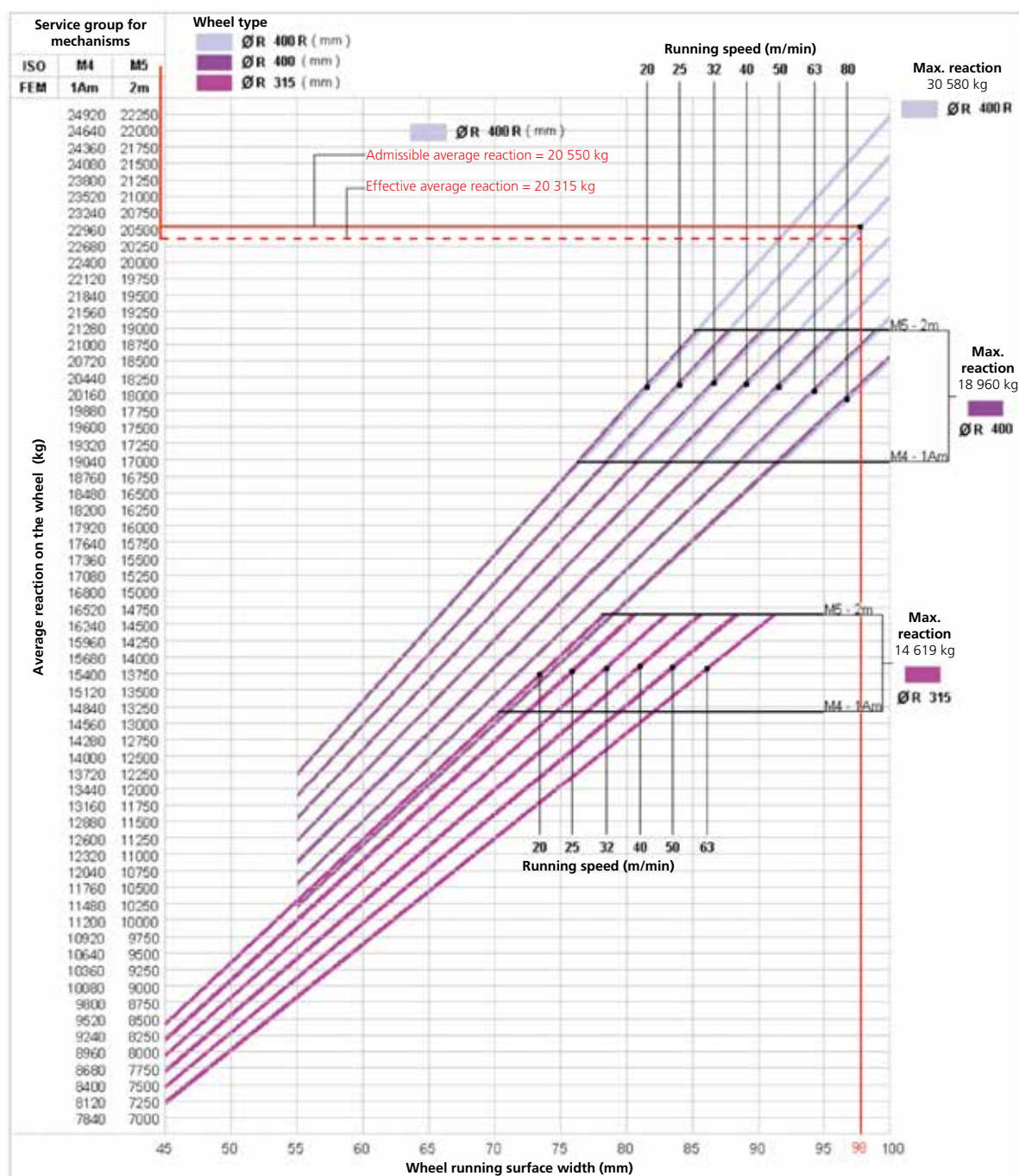
Data calculated:

- ▶ Rail operating width: $b = 48$ mm
- ▶ Travelling speed: 40/10 m/min;
- ▶ Service group: ISO M4 (FEM 1Am)
- ▶ Average effective reaction: $R_{ave.} = 4.885$ kg
- ▶ Maximum effective reaction: $R_{max. eff.} = 6.581$ kg

The average admissible reaction is ≈ 5.500 kg > than the average effective reaction of 4.885 kg the wheel is subjected to;

The maximum admissible reaction is $= 7.340$ kg > than the maximum effective reaction of 6.581 kg

AVERAGE ADMISSIBLE REACTIONS FROM WHEELS Ø 315 AND 400, IN RELATION TO THE RAIL WIDTH AND TRAVELLING SPEED



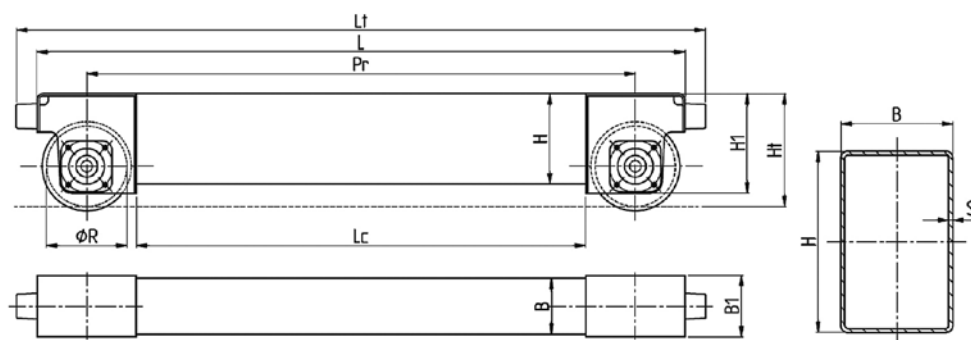
Example of verification of suitability for a Ø 315 wheel (see example 1 on page 26)

Data calculated:

- ▶ Rail operating width: $b = 58 \text{ mm}$
- ▶ Travelling speed: $40/10 \text{ m/min}$;
- ▶ Service group: ISO M5 (FEM 2m)
- ▶ Average effective reaction: $R_{\text{ave.}} = 9.202 \text{ kg}$
- ▶ Maximum effective reaction: $R_{\text{max. eff.}} = 11.963 \text{ kg}$

The average admissible reaction is $9.900 \text{ kg} >$ than the average effective reaction of 9.202 kg the wheel is subjected to;
The maximum admissible reaction is $14.679 \text{ kg} >$ than the maximum effective reaction of 11.963 kg

GEOMETRICAL SPECIFICATIONS BASED ON END-CARRIAGE FOR SINGLE OR DOUBLE GIRDER BRIDGE CRANES



End-carriage construction

Tubular end-carriage
section

END-CARRIAGE TYPE			END-CARRIAGE DIMENSIONAL DATA (mm)									INERTIAL DATA ON TUBULAR SECTION						
SIZE "DGT"	WHEEL		Lc	L	Lt	S	B	H	B1	H1	Ht	WT	JX	WX	JY	WY	AREA	WEIGHT
	Ø R (mm)	BASIS PR (mm)										cm³	cm⁴	cm³	cm⁴	cm³	cm²	kg/m
1	125	1800	1630	1970	2030	5						231.8	2067.0	187.9	811.7	135.3	32.23	25.3
		2400	2230	2570	2630	8	120	220	160	225	233	343.0	3200.0	291.0	1230.0	205.0	51.2	40.2
		3300	3130	3470	3530													
2	160	1800	1590	2010	2110													
		2400	2190	2610	2710	6.3	180	260	180	260	275	524.0	5170.0	397.0	2930.0	325.0	53.4	41.9
		3300	3090	3510	3610													
3	200	2100	1840	2360	2490	6.3						524.0	5170.0	397.0	2930.0	325.0	53.4	41.9
		2700	2440	2960	3090	10	180	260	200	290	315	775.0	7740.0	595.0	4350.0	483.0	82.9	65.1
		3600	3340	3860	3990													
4	250	2100	1790	2410	2540	6.3						681.0	7830.0	522.0	4190.0	419.0	61.0	47.9
		2700	2390	3010	3140	10	200	300	230	335	370	1020.0	11820.0	788.0	6280.0	628.0	94.9	74.5
		3600	3290	3910	4040													
		3600 R	3290	3910	4040	16						1470.0	17390.0	1160.0	9110.0	911.0	147.0	115
5	315	2400	2010	2790	2950	8						1250.0	16450.0	940.0	9800.0	784.0	92.8	72.8
		3900	3510	4290	4450	12.5	250	350	260	385	437	1840.0	24420.0	1400.0	14440.0	1160.0	142.0	112.0
6	400	3900	3430	4370	4570	12.5	300	400	290	440	495	2590.0	38450.0	1920.0	24610.0	1640.0	167.0	131.0
	400R	3900 R	3430	4370	4570	16	300	*410	290	440	495	3180.0	56183.4	3015.0	31187.5	2079.0	234.2	183.8

* Reinforced tubular

END-CARRIAGES FOR SINGLE GIRDER CRANES

OPERATING LIMITATIONS FOR END-CARRIAGES ON SINGLE GIRDER BRIDGE CRANES BASED ON: CAPACITY - ISO/FEM GROUP - SPAN

CAPACITY (kg)	ISO/FEM GROUP	SPAN (m)																						
		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
1000	M4/1Am																							
	M5/2m																							
1250	M4/1Am																							
	M5/2m																							
1600	M4/1Am																							
	M5/2m																							
2000	M4/1Am																1 – 125 – 3300							
	M5/2m																							
2500	M4/1Am																							
	M5/2m																							
3200	M4/1Am																							
	M5/2m																							
4000	M4/1Am																							
	M5/2m																							
5000	M4/1Am																							
	M5/2m																							
6300	M4/1Am																							
	M5/2m																							
8000	M4/1Am																							
	M5/2m																							
10000	M4/1Am																							
	M5/2m																							
12500	M4/1Am																							
	M5/2m																							
16000	M4/1Am																							
	M5/2m																							
20000	M4/1Am																							

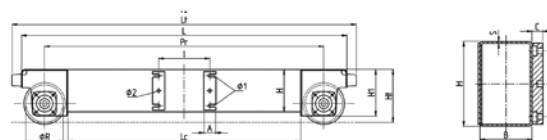
Admissible travelling mass for end-carriages on SINGLE GIRDER bridge crane [Travelling mass (kg) = capacity + crane weight + weight of trolley/hoist]

1-125			2-160			3 – 200			4 – 250				5 – 315
1800	2400	3300	1800	2400	3300	2100	2700	3600	2100	2700	3600	3600 R	2400
8.400	7.400	11.100	9.800	15.800	14.800	22.000	24.400	19.000	24.800	28.600			

Note: operating limitations determined using Donati components (hoist, trolley, etc.) and sectioned beams sized as per arrow a = Span / 750

END-CARRIAGES FOR SINGLE GIRDER CRANES WITH CONNECTION PLATES TO "BRIDGE GIRDER"

Connection of beam-girder "Lateral" configuration



END-CARRIAGE TYPE	BEAM CODES IN RELATION TO MAX. WIDTH SPAN(mm) OF BRIDGE GIRDER									DIMENSIONS (mm) (FOR OTHER DIMENSIONS SEE PAGE 15)					WEIGHT (kg)
	WIDTH MAX.	DIMENSION I	BEAM CODE	WIDTH MAX.	DIMENSION I	BEAM CODE	WIDTH MAX.	DIMENSION I	BEAM CODE	A	C	D	Ø1	Ø2	
1 – 125 – 1800			S118H1..			S118H2..			=						78
1 – 125 – 2400	305	360	S124H1..	370	430	S124H2..	450	510	S124H3..	60	25	165	17	20	126
1 – 125 – 3300			S133H1..			S133H2..			S133H3..						163
2 – 160 – 1800			S218H1..			S218H2..			=						120
2 – 160 – 2400	305	360	S224H1..	370	430	S224H2..	450	510	S224H3..	60	25	190	19	20	146
2 – 160 – 3300			S233H1..			S233H2..			S233H3..						185
3 – 200 – 2100			S321H1..			S321H2..			S321H3..						162
3 – 200 – 2700	360	420	S327H1..	410	480	S327H2..	500	560	S327H3..	80	30	195	21	25	235
3 – 200 – 3600			S336H1..			S336H2..			S336H3..						308
4 – 250 – 2100			S421H1..			S421H2..			S421H3..						210
4 – 250 – 2700	410	480	S427H1..	490	560	S427H2..	565	640	S427H3..	80	30	235	25	25	305
4 – 250 – 3600			S436H1..			S436H2..			S436H3..						373
4 – 250 – 3600 R			S437H1..			S437H2..			S437H3..						507
5 – 315 – 2400	410	500	S524H1..	490	580	S524H2..	615	710	S524H3..	100	40	270	29	32	340

Referred partial codes are applied to couples of end-carriages without counterplates. In case of couples of end-carriages with counterplates, replace letter **H**, in fifth position, with letter **G**. The weights given in the table refer to the individual end-carriage.

END-CARRIAGES FOR DOUBLE GIRDER CRANES

OPERATING LIMITATIONS FOR END-CARRIAGES ON DOUBLE GIRDER BRIDGE CRANES BASED ON:
CAPACITY - ISO/FEM GROUP - SPAN

CAPACITY (kg)	ISO/FEM GROUP	SPAN (m)																					
		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1000	M4/1Am																						
	M5/2m																						
1250	M4/1Am																						
	M5/2m																						
1600	M4/1Am																						
	M5/2m																						
2000	M4/1Am																						
	M5/2m																						
2500	M4/1Am																						
	M5/2m																						
3200	M4/1Am																						
	M5/2m																						
4000	M4/1Am																						
	M5/2m																						
5000	M4/1Am																						
	M5/2m																						
6300	M4/1Am																						
	M5/2m																						
8000	M4/1Am																						
	M5/2m																						
10000	M4/1Am																						
	M5/2m																						
12500	M4/1Am																						
	M5/2m																						
16000	M4/1Am																						
	M5/2m																						
20000	M4/1Am																						
	M5/2m																						
25000	M4/1Am																						
	M5/2m																						
32000	M4/1Am																						
	M5/2m																						
40000	M4/1Am																						
	M5/2m																						

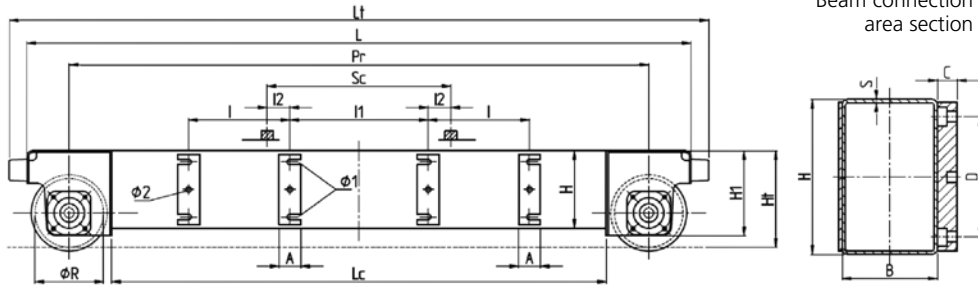
Admissible travelling mass from beams on DOUBLE GIRDER bridge crane [Travelling mass (kg) = capacity + crane weight + weight of trolley/hoist]

1-125		2-160		3 - 200		4 - 250		5 - 315	6 - 400	6 - 400R
2400	3300	2400	3300	2700	3600	2700	3600	3900	3900	3900 R
9.300	10.400	11.500	13.200	17.100	18.800	25.000	25.500	35.900	46.000	62.000

Note: operating limitations determined using Donati components (hoist, trolley, etc.) and sectioned beams sized as per arrow a = Span / 750

END-CARRIAGES FOR DOUBLE GIRDER CRANES WITH CONNECTION PLATES TO "BRIDGE GIRDERS" "LATERAL" EXECUTION

Joining of beam girders in "Lateral" configuration



END-CARRIAGES TYPE	BEAM CODES BASED ON THE GAUGE OF THE DOUBLE GIRDER TROLLEY, TYPE OF GIRDERS ON THE BRIDGE CRANE AND MAX. GIRDER SPAN					DIMENSION (mm)								WEIGHT
	DOUBLE GIRDER TROLLEY GAUGE	BRIDGE CRANE GIRDERS		BEAM CODE	(FOR OTHER DIMENSIONS SEE PAGE 15)									
	Sc (mm)	TYPE	MAX. SPAN (mm)		I	I1	I2	A	C	D	Ø1	Ø2	(kg)	
1 - 125 - 2400	1000		Box Girder	305	W124H1..	360	870	65	60	25	165	17	20	132
				370	W124H2..	430	865	67.5						
			HE	300	W124HA..	360	640	180						
	1200		Box Girder	305	W124H4..	360	1070	65						
				370	W124H5..	430	1065	67.5						
		HE	300	W124HD..	360	840	180							
1 - 125 - 3300	1000		Box Girder	305	W133H1..	360	870	65	60	25	165	17	20	170
				370	W133H2..	430	865	67.5						
				450	W133H3..	510	805	97.5						
			HE	300	W133HA..	360	640	180						
	1200		Box Girder	305	W133H4..	360	1070	65						
				370	W133H5..	430	1065	67.5						
				450	W133H6..	510	1005	97.5						
			HE	300	W133HD..	360	840	180						
1400		Box Girder	305	W133H7..	360	1270	65							
			370	W133H8..	430	1265	67.5							
			450	W133H9..	510	1205	97.5							
		HE	300	W133HG..	360	1040	180							
2 - 160 - 2400	1000		Box Girder	305	W224H1..	360	870	65	60	25	190	19	20	152
				370	W224H2..	430	865	67.5						
				HE	300	W224HA..	360	640						
			Box Girder	305	W224H4..	360	1070	65						
				370	W224H5..	430	1065	67.5						
				HE	300	W224HD..	360	840						
	1200		Box Girder	370	W233H2..	430	865	67.5						
				450	W233H3..	510	816	92						
				HE	300	W233HA..	360	640						
			Box Girder	370	W233H5..	430	1065	67.5						
				450	W233H6..	510	1016	92						
				HE	300	W233HD..	360	840						
1400		Box Girder	370	W233H8..	430	1265	67.5							
			450	W233H9..	510	1216	92							
			HE	300	W233HG..	360	1040	180						
3 - 200 - 2700	1000		Box Girder	360	W327H1..	420	830	85	80	30	195	21	25	243
				410	W327H2..	480	846	77						
				HE	300	W327HA..	420	580						
			Box Girder	360	W327H4..	420	1030	85						
				410	W327H5..	480	1046	77						
				HE	300	W327HD..	420	780						
	1200		Box Girder	360	W327H7..	420	1230	85						
				410	W327H8..	480	1246	77						
				HE	300	W327HG..	420	980						

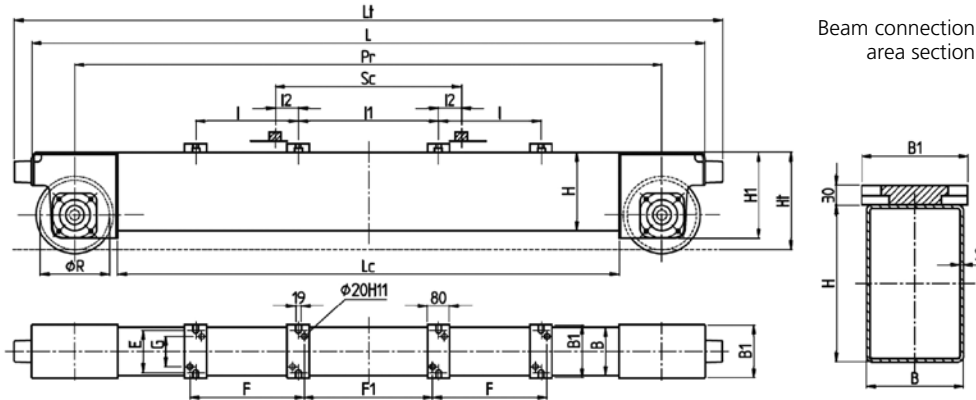
END-CARRIAGES FOR DOUBLE GIRDER CRANES WITH CONNECTION PLATES TO “BRIDGE GIRDERS” - “LATERAL” EXECUTION

END-CARRIAGES TYPE	BEAM CODES BASED ON THE GAUGE OF THE DOUBLE GIRDER TROLLEY, TYPE OF GIRDERS ON THE BRIDGE CRANE AND MAX. GIRDER SPAN					DIMENSION (mm)								WEIGHT	
	DOUBLE GIRDER TROLLEY GAUGE	BRIDGE CRANE GIRDERS		BEAM CODE	(FOR OTHER DIMENSIONS SEE PAGE 15)										
		TYPE	MAX. SPAN (mm)		I	I1	I2	A	C	D	Ø1	Ø2		(kg)	
	Sc (mm)														
3 - 200 - 3600	1000		Box Girder	360	W336H1..	420	830	85							
				410	W336H2..	480	846	77							
				500	W336H3..	560	846	77							
	1200		HE	300	W336HA..	420	580	210							
				360	W336H4..	420	1030	85							
				410	W336H5..	480	1046	77	80	30	195	21	25	310	
	1400		Box Girder	500	W336H6..	560	1046	77							
				360	W336HD..	420	780	210							
				360	W336H..	420	1230	85							
	1400		HE	410	W336H8..	480	1246	77							
				500	W336H9..	560	1246	77							
				300	W336HG..	420	980	210							
4 - 250 - 2700	1000		Box Girder	410	W427H1..	480	846	77							
				490	W427H2..	560	846	77							
				300	W427HA..	480	520	240							
	1200		Box Girder	410	W427H4..	480	1046	77							
				490	W427H5..	560	1046	77							
				300	W427HD..	480	720	240							
4 - 250 - 3600	1000		Box Girder	490	W436H2..	560	846	77							
				565	W436H3..	640	841	79.5	80	30	235	25	25		
				300	W436HA..	480	520	240							
	1200		Box Girder	490	W436H5..	560	1046	77							
				565	W436H6..	640	1041	79.5							
				300	W436HD..	480	720	240							
	1400		Box Girder	490	W436H8..	560	1246	77							
				565	W436H9..	640	1241	79.5							
				300	W436HG..	480	920	240							
5 - 315 - 3900	1000		Box Girder	410	W539H1..	500	826	87							
				490	W539H2..	580	826	87							
				615	W539H3..	710	805	97.5							
	1200		HE	300	W539HA..	500	500	250							
				410	W539H4..	500	1026	87							
				490	W539H5..	580	1026	87	100	40	270	29	32	607	
	1400		Box Girder	615	W539H6..	710	1005	97.5							
				300	W539HD..	500	700	250							
				410	W539H7..	500	1226	87							
	1400		HE	490	W539H8..	580	1226	87							
				615	W539H9..	710	1205	97.5							
				300	W539HG..	500	900	250							
6 - 400 - 3900	1000		Box Girder	410	W639H1..	500	826	87							
				490	W639H2..	580	826	87							
				615	W639H3..	710	805	97.5							
	1200		HE	300	W639HA..	500	500	250							
				410	W639H4..	500	1026	87							
				490	W639H5..	580	1026	87							
	1400		Box Girder	615	W639H6..	710	1005	97.5							
				300	W639HD..	500	700	250	100	40	310	34	32		
				410	W639H7..	500	1226	87							
6 - 400 - 3900 R	1400		Box Girder	490	W639H8..	580	1226	87							
				615	W639H9..	710	1205	97.5							
				300	W639HG..	500	900	250							
				300	W640HG..	500	900	250							

Referred partial codes are applied to couples of end-carriages without counterplates. In case of couples of end-carriages with counterplates, replace letter **H**, in fifth position, with letter **G**. The weights given in the table refer to the individual end-carriage.

END-CARRIAGES FOR DOUBLE GIRDER CRANES WITH CONNECTION PLATES TO "BRIDGE GIRDERS" - "ON THE TOP" EXECUTION

Joining of beam girders in "On the top" execution



END-CARRIAGES TYPE	BEAM CODES BASED ON THE GAUGE OF THE DOUBLE GIRDER TROLLEY, TYPE OF GIRDERS ON THE BRIDGE CRANE AND MAX. GIRDER SPAN					DIMENSION (mm)								WEIGHT	
	DOUBLE GIRDER TROLLEY GAUGE	BRIDGE CRANE GIRDERS		BEAM CODE	(FOR OTHER DIMENSIONS SEE PAGE 15)									(kg)	
	Sc (mm)	TYPE	MAX. SPAN (mm)		I	I1	I2	F	F1	A	E	G			
1 - 125 - 2400	1000		Box Girder	305	W124V1..	360	870	65	402	828	60	120	78	138	
				370	W124V2..	430	865	67.5	472	823					
			HE	300	W124VA..	360	640	180	402	598					
	1200		Box Girder	305	W124V4..	360	1070	65	402	1028					
				370	W124V5..	430	1065	67.5	472	1023					
			HE	300	W124VD..	360	840	180	402	798					
	1000		Box Girder	305	W133V1..	360	870	65	402	828					
				370	W133V2..	430	865	67.5	472	823					
			HE	300	W133V3..	510	805	97.5	552	763					
1 - 125 - 3300	1200		Box Girder	305	W133VA..	360	640	180	402	598					
				370	W133V4..	360	1070	65	402	1028					
			HE	300	W133V5..	430	1065	67.5	472	1023					
	1200		Box Girder	450	W133V6..	510	1005	97.5	552	963					
				300	W133VD..	360	840	180	402	798					
			HE	300	W133V7..	360	1270	65	402	1228					
	1400		Box Girder	370	W133V8..	430	1265	67.5	472	1223					
				450	W133V9..	510	1205	97.5	552	1163					
			HE	300	W133VG..	360	1040	180	402	998					
2 - 160 - 2400	1000		Box Girder	305	W224V1..	360	870	65	402	828	60	140	98	158	
				370	W224V2..	430	865	67.5	472	823					
			HE	300	W224VA..	360	640	180	402	598					
	1200		Box Girder	305	W224V4..	360	1070	65	402	1028					
				370	W224V5..	430	1065	67.5	472	1023					
			HE	300	W224VD..	360	840	180	402	798					
	2 - 160 - 3300	1000		Box Girder	370	W233V2..	430	865	67.5	472					823
					450	W233V3..	510	816	92	552					774
				HE	300	W233VA..	360	640	180	402					598
1200			Box Girder	370	W233V5..	430	1065	67.5	472	1023					
				450	W233V6..	510	1016	92	552	974					
			HE	300	W233VD..	360	840	180	402	798					
1400			Box Girder	370	W233V8..	430	1265	67.5	472	1223					
				450	W233V9..	510	1216	92	552	1174					
			HE	300	W233VG..	360	1040	180	402	998					
3 - 200 - 2700	1000		Box Girder	360	W327V1..	420	830	85	462	788	80	160	118	238	
				410	W327V2..	480	846	77	522	804					
			HE	300	W327VA..	420	580	210	462	538					
	1200		Box Girder	360	W327V4..	420	1030	85	462	988					
				410	W327V5..	480	1046	77	522	1004					
			HE	300	W327VD..	420	780	210	462	738					

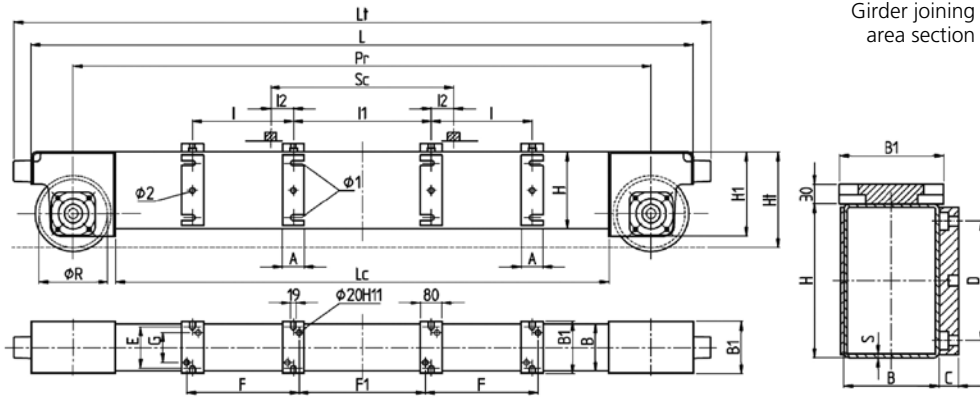
END-CARRIAGES FOR DOUBLE GIRDER CRANES WITH CONNECTION PLATES TO "BRIDGE GIRDERS" - "ON THE TOP" EXECUTION

END-CARRIAGES TYPE	BEAM CODES BASED ON THE GAUGE OF THE DOUBLE GIRDER TROLLEY, TYPE OF GIRDERS ON THE BRIDGE CRANE AND MAX. GIRDER SPAN					DIMENSION (mm)									WEIGHT
	DOUBLE GIRDER TROLLEY GAUGE	BRIDGE CRANE GIRDERS		BEAM CODE	(FOR OTHER DIMENSIONS SEE PAGE 15)										
		TYPE	MAX. SPAN (mm)		I	I1	I2	F	F1	A	E	G			
	Sc (mm)														(kg)
3 - 200 - 2700	1400		Box Girder	360	W327V7..	420	1230	85	462	1188	80	160	118	238	
			HE	410	W327V8..	480	1246	77	522	1204					
			HE	300	W327VG..	420	980	210	462	938					
3 - 200 - 3600	1000		Box Girder	360	W336V1..	420	830	85	462	788	80	160	118	306	
		410		W336V2..	480	846	77	522	804						
		500		W336V3..	560	846	77	602	804						
			HE	300	W336VA..	420	580	210	462	538					
				Box Girder	360	W336V4..	420	1030	85	462					988
		410			W336V5..	480	1046	77	522	1004					
	1200		Box Girder		500	W336V6..	560	1046	77	602					1004
				HE	300	W336VD..	420	780	210	462					738
					Box Girder	360	W336V7..	420	1230	85					462
		410	W336V8..			480	1246	77	522	1204					
		500	W336V9..	560		1246	77	602	1204						
			HE	300	W336VG..	420	980	210	462	938					
4 - 250 - 2700	1000		Box Girder	410	W427V1..	480	846	77	522	804	80	190	148	320	
		490		W427V2..	560	846	77	602	804						
				HE	410	W427VA..	480	520	240	522					478
			Box Girder	410	W427V4..	480	1046	77	522	1004					
		490		W427V5..	560	1046	77	602	1004						
				HE	300	W427VD..	480	720	240	522					678
	1200		Box Girder	490	W436V2..	560	846	77	602	804					
		565		W436V3..	640	841	79.5	682	799						
				HE	410	W436VA..	480	520	240	522					478
		1400		Box Girder	490	W436V5..	560	1046	77	602					1004
			565		W436V6..	640	1041	79.5	682	999					
					HE	410	W436VD..	480	720	240					522
4 - 250 - 3600	1200			Box Girder	490	W436V8..	560	1246	77	602	1204				
			565		W436V9..	640	1241	79.5	682	1199					
					HE	300	W436VG..	480	920	240	522	878			
		1400		Box Girder	410	W539V1..	500	826	87	542	784				
			490		W539V2..	580	826	87	622	784					
			615		W539V3..	710	805	97.5	752	763					
	5 - 315 - 3900		1000		HE	300	W539VA..	500	500	250	542	458			
						Box Girder	410	W539V4..	500	1026	87	542	984		
				490			W539V5..	580	1026	87	622	984			
		615		W539V6..	710		1005	97.5	752	963					
		1200			HE	300	W539VD..	500	700	250	542	658			
						Box Girder	410	W539V7..	500	1226	87	542	1184		
490			W539V8..	580			1226	87	622	1184					
615			W539V9..	710	1205		97.5	752	1163						
			HE	300	W539VG..	500	900	250	542	858					
6 - 400 - 3900			1000		Box Girder	410	W639V1..	500	826	87	542	784			
		490		W639V2..		580	826	87	622	784					
		615		W639V3..		710	805	97.5	752	763					
		HE		300	W639VA..	500	500	250	542	458					
				Box Girder	410	W639V4..	500	1026	87	542	984				
	490				W639V5..	580	1026	87	622	984					
	1200		Box Girder		615	W639V6..	710	1005	97.5	752	963				
				HE	300	W639VD..	500	700	250	542	658				
					Box Girder	410	W639V7..	500	1226	87	542	1184			
		490	W639V8..			580	1226	87	622	1184					
		615	W639V9..	710		1205	97.5	752	1163						
			HE	300	W639VG..	500	900	250	542	858					
6 - 400 - 3900 R	1400		Box Girder	410	W640V7..	500	1226	87	542	1184					
		490		W640V8..	580	1226	87	622	1184						
		615		W640V9..	710	1205	97.5	752	1163						
			HE	300	W640VG..	500	900	250	542	858					

Referred partial codes are applied to couples of end-carriages without counterplates. In case of couples of end-carriages with counterplates, replace letter **V**, in fifth position, with letter **T**. The weights given in the table refer to the individual end-carriage.

END-CARRIAGES FOR DOUBLE GIRDER CRANES WITH CONNECTION PLATES TO "BRIDGE GIRDERS" - "LATERAL + ON THE TOP" EXECUTION

Girder-end-carriage joining in "Lateral+On the top" execution



END-CARRIAGES TYPE	BEAM CODES BASED ON THE GAUGE OF THE DOUBLE GIRDER TROLLEY, TYPE OF GIRDERS ON THE BRIDGE CRANE AND MAX. GIRDER SPAN			DIMENSION (mm)														WEIGHT
	DOUBLE GIRDER TROLLEY GAUGE Sc (mm)	BRIDGE CRANE GIRDERS MAX. SPAN BOX GIRDER (mm)	BEAM CODE	(FOR OTHER DIMENSIONS SEE PAGE 15)														(kg)
				I	I1	I2	F	F1	A	C	D	E	G	Ø1	Ø2			
1 - 125 - 2400	1000	305	W124N1..	360	870	65	402	828										
		370	W124N2..	430	865	67.5	472	823										
	1200	305	W124N4..	360	1070	65	402	1028										
		370	W124N5..	430	1065	67.5	472	1023										
	1 - 125 - 3300	1000	305	W133N1..	360	870	65	402	828									
			370	W133N2..	430	865	67.5	472	823									
1200		450	W133N3..	510	805	97.5	552	763	60	25	165	120	78	17	20			
		305	W133N4..	360	1070	65	402	1028										
		370	W133N5..	430	1065	67.5	472	1023										
		450	W133N6..	510	1005	97.5	552	963										
	1400	305	W133N7..	360	1270	65	402	1228										
		370	W133N8..	430	1265	67.5	472	1223										
2 - 160 - 2400	1000	450	W133N9..	510	1205	97.5	552	1163										
		305	W224N1..	360	870	65	402	828										
	1200	370	W224N2..	430	865	67.5	472	823										
		305	W224N4..	360	1070	65	402	1028										
2 - 160 - 3300	1000	370	W224N5..	430	1065	67.5	472	1023										
		370	W233N2..	430	865	67.5	472	823	60	25	190	140	98	19	20			
	1200	450	W233N3..	510	816	92	552	774										
		370	W233N5..	430	1065	67.5	472	1023										
	1400	450	W233N6..	510	1016	92	552	974										
		370	W233N8..	430	1265	67.5	472	1223										
3 - 200 - 2700	1000	450	W233N9..	510	1216	92	552	1174										
		360	W327N1..	420	830	85	462	788										
	1200	410	W327N2..	480	846	77	522	804										
		360	W327N4..	420	1030	85	462	988										
	1400	410	W327N5..	480	1046	77	522	1004										
		360	W327N7..	420	1230	85	462	1188										
3 - 200 - 3600	1000	410	W327N8..	480	1246	77	522	1204										
		360	W336N1..	420	830	85	462	788										
	1200	410	W336N2..	480	846	77	522	804	80	30	195	160	118	21	25			
		500	W336N3..	560	846	77	602	804										
	1400	360	W336N4..	420	1030	85	462	988										
		410	W336N5..	480	1046	77	522	1004										
3 - 200 - 2700	1000	500	W336N6..	560	1046	77	602	1004										
		360	W336N7..	420	1230	85	462	1188										
	1200	410	W336N8..	480	1246	77	522	1204										
		500	W336N9..	560	1246	77	602	1204										

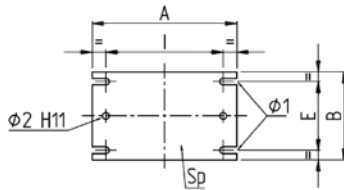
END-CARRIAGES FOR DOUBLE GIRDER CRANES WITH CONNECTION PLATES TO “BRIDGE GIRDERS” “LATERAL + ON THE TOP” EXECUTION

END-CARRIAGES TYPE	BEAM CODES BASED ON THE GAUGE OF THE DOUBLE GIRDER TROLLEY, TYPE OF GIRDERS ON THE BRIDGE CRANE AND MAX. GIRDER SPAN			DIMENSION (mm)														WEIGHT
	DOUBLE GIRDER TROLLEY GAUGE Sc (mm)	BRIDGE CRANE GIRDERS MAX. SPAN BOX GIRDER (mm)	BEAM CODE	(FOR OTHER DIMENSIONS SEE PAGE 15)														
				I	I1	I2	F	F1	A	C	D	E	G	Ø1	Ø2	(kg)		
4 - 250 - 2700	1000	410	W427N1..	480	846	77	522	804										
		490	W427N2..	560	846	77	602	804										
	1200	410	W427N4..	480	1046	77	522	1004										
		490	W427N5..	560	1046	77	602	1004										
4 - 250 - 3600	1000	490	W436N2..	560	846	77	602	804	80	30	235	190	148	25	25			
		565	W436N3..	640	841	79.5	682	799										
	1200	490	W436N5..	560	1046	77	602	1004										
		565	W436N6..	640	1041	79.5	682	999										
	1400	490	W436N8..	560	1246	77	602	1204										
		565	W436N9..	640	1241	79.5	682	1199										
5 - 315 - 3900	1000	410	W539N1..	500	826	87	542	784										
		490	W539N2..	580	826	87	622	784										
		615	W539N3..	710	805	97.5	752	763										
	1200	410	W539N4..	500	1026	87	542	984										
		490	W539N5..	580	1026	87	622	984	100	40	270	220	178	29	32			
		615	W539N6..	710	1005	97.5	752	963										
	1400	410	W539N7..	500	1226	87	542	1184										
		490	W539N8..	580	1226	87	622	1184										
		615	W539N9..	710	1205	97.5	752	1163										
6 - 400 - 3900	1000	410	W639N1..	500	826	87	542	784										
		490	W639N2..	580	826	87	622	784										
		615	W639N3..	710	805	97.5	752	763										
	1200	410	W639N4..	500	1026	87	542	984										
		490	W639N5..	580	1026	87	622	984										
		615	W639N6..	710	1005	97.5	752	963	100	40	310	250	208	34	32			
	1400	410	W639N7..	500	1226	87	542	1184										
		490	W639N8..	580	1226	87	622	1184										
6 - 400 - 3900 R	1400	615	W639N9..	710	1205	97.5	752	1163										
		410	W640N7..	500	1226	87	542	1184										
		490	W640N8..	580	1226	87	622	1184										
		615	W640N9..	710	1205	97.5	752	1163										

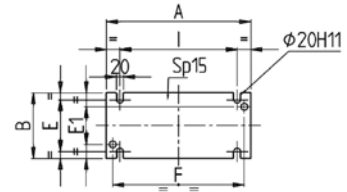
Referred partial codes are applied to couples of end-carriages without counterplates. In case of couples of end-carriages with counterplates, replace letter **N**, in fifth position, with letter **M**. The weights given in the table refer to the individual end-carriage.

GEOMETRIC SPECIFICATIONS FOR "GIRDER - BEAM" CONNECTION PLATES FOR SINGLE AND DOUBLE GIRDER BRIDGE CRANES

Connection plate for girder
positioned laterally to the beam



Connection plate for girder
on the top of the beam



END-CARRIAGE TYPE		MAX. BEAM WIDTH	PLATE POSITIONED Laterally TO THE BEAM									PLATE SUPPORTED ON THE TOP OF THE BEAM								
SIZE "DGT"	Ø WHEEL (mm)		TYPE	DIMENSIONS (mm)							WEIGHT (kg)	TYPE	DIMENSIONS (mm)							WEIGHT (kg)
		L (mm)		A	I	B	Ø1	E	Ø2	Sp			F	A	I	B	E	E1		
1	125	305	L11	420	360						8.4	A 11	402	440	360				8.0	
		370	L12	490	430	220	18	165	20	12	9.9	A 12	472	510	430	160	120	78	9.3	
		450	L13	570	510						11.6	A 13	552	590	510				10.8	
2	160	305	L21	420	360						9.6	A 21	402	440	360				9.0	
		370	L22	490	430	250	20	190	20	12	11.2	A 22	472	510	430	180	140	98	10.5	
		450	L23	570	510						13.1	A 23	552	590	510				12.2	
3	200	360	L31	500	420						14.7	A 31	462	500	420				11.5	
		410	L32	560	480	260	22	195	25	15	16.5	A 32	522	560	480	200	160	118	13.0	
		500	L33	640	560						19.0	A 33	602	640	560				14.7	
4	250	410	L41	560	480						19.1	A 41	522	560	480				14.8	
		490	L42	640	560	300	26	235	25	15	21.9	A 42	602	640	560	230	190	148	17.0	
		565	L43	720	640						24.7	A 43	682	720	640				19.2	
5	315	410	L51	600	500						31.6	A 51	542	580	500				17.4	
		490	L52	680	580	350	30	270	32	20	36.0	A 52	622	660	580	260	220	178	20.0	
		615	L53	810	710						43.2	A 53	752	790	710				23.8	
6	400	410	L61	600	500						36.0	A 61	542	580	500				19.5	
	-	490	L62	680	580	400	36	310	32	20	41.1	A 62	622	660	580	290	250	208	22.2	
	400R	615	L63	810	710						49.2	A 63	752	790	710				26.6	

SAMPLE GUIDELINES FOR SELECTING END-CARRIAGES FOR BRIDGE CRANES

To make the correct choice of overhead travelling units, firstly establish all operating parameters which determine operating limitations, defining and/or verifying the following factors (see sample guidelines for various "limit" cases listed below, purely by way of example):

1. Define the crane's operating data: load capacity (kg), ISO service group (FEM), span (m) and travelling speed (m/min);
2. Define: the mass (weight = kg) of the crane in question and any accessories (frame, electrical system, etc.);
3. Define: the weight (kg) of the lifting and travel unit, i.e. of the hoist + trolley (or trolley/winch);
4. Calculate: the total mass to be travelled, i.e. the nominal load + the weight of the crane + the weight of trolley/hoist (or trolley/winch);
5. Select: the type of beams from the "Operating limitations" diagrams on pages 16 and 18, based on the: capacity, ISO service group (FEM) and gauge;
6. Verify: that the mass to be travelled is $\leq$ of the travelling mass, as indicated in the "Operating limitations" on pages 16 and 18;
7. Verify: the maximum, minimum and average reactions on the wheels, considering load juxtapositions/eccentricities;
8. Verify: the congruency of the operating width in contact, in relation to the type of rail on which the wheels slide;
9. Select: the electro-mechanical driving components (choice of offset geared-motor group) from the tables on pages 27 to 35.
10. Determine: the beam code, based on the type selected and construction configuration for the connection with the bridge girder/s, using: for a SINGLE GIRDER crane, the tables on pages 16 - 17, and for a DOUBLE GIRDER crane, the tables on pages 18 to 24;
11. Determine: the type of "girder-beam" joining cross plates using the "Geometric specifications" table on page 25.

1st Example: Double girder travelling bridge crane - Capacity 16 t - Span 27 m

1. nominal load $P = 16.000$ kg; ISO service group M5 (FEM 2m); gauge 27 m; 2 crane running speeds = 40/10 m/min
2. weight of crane + accessories: $M1 \approx 14.600$ kg
3. weight of hoist + trolley: $M2 \approx 1.400$ kg
4. total travelling mass: $16.000 + 14.600 + 1.400 = 32.000$ kg
5. from the diagram on page 18, with a capacity of 16.000 kg; ISO group M5 (FEM 2m) and gauge 27 m, select the beams:
Type 5 – 315 – 3900 or: DGT size 5 Wheel Ø (mm) 315 Wheel basis (mm) 3900
6. from the diagram on page 18, we can deduce that the beams 5 – 315 – 3900 admit masses of up to 35.900 kg $>$ of the 32.000 kg to haul.
7. at this point, check the suitability of the wheel Ø 315 for the selected beams, in relation to its admissible reactions and the type of rail, calculated as illustrated on page 12 for span "S" = 27.000 mm and supposing a juxtaposition "a" = 1.200 mm:
 - $R_{max} = 14.600/4 + [(1.400 + 16.000)/2] \cdot (1 - 1.200/27.000) \approx 11.963$ kg
 - $R_{min} = 14.600/4 + 1.400/2 \cdot 1.200/27.000 \approx 3.681$ kg
 - $R_{ave} = (2 \cdot R_{max} + R_{min})/3 = (2 \cdot 11.963 + 3.681)/3 \approx 9.202$ kg $<$ 14.679 kg, corresponding to the admissible R_{max} .
8. supposing a flat laminated rail, with $l = 60$ and operating band $b = 58$ (see table on page 11), from the diagram on page 14 we can deduce that, for a Ø 315 wheel with a standard sheave width, considering the factors (speed and operating bandwidth), the average admissible reaction for the service group M5 (2m) is: R_{ave} admissible ≈ 9.900 kg $>$ of the ~ 9.202 kg the wheel is subject to (example on page 14).
9. based on the selected speed and calculation of mass to be travelled for each drive wheel, derive the following components from the table on page 33:

NOMINAL SPEED (m/min)	THE TRAVELLING MASS (kg) FROM EACH GEARED-MOTOR IN THE SERVICE GROUP ISO M5 (FEM 2M) IS IN kg	"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTOR		SELF-BRAKING MOTOR SPECS		"DGP" GEARED-MOTOR CODE
			GEARED-MOTOR TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	
40/10	18.400 $>$ di 16.000 to be hauled	315	234	100K3C	2/8	1.25 / 0.31	P2M5B43AA0

10. supposing a "Supported" connected girder-beam configuration with a double girder trolley gauge of 1.200 mm and a girder span width > 410 and ≤ 490 , from the table on page 22, we can deduce that the beams type 5 – 315 – 3900 have a code: W539V5..
11. from the "Geometric specifications" table on page 25, we can deduce that, for the beams in question with a "Supported" connected girder-beam configuration and a girder span width > 410 and ≤ 490 , the type of "girder-beam" joining cross plates is: A52

2nd Example: Double girder travelling bridge crane - Capacity 10 t - Span 20 m

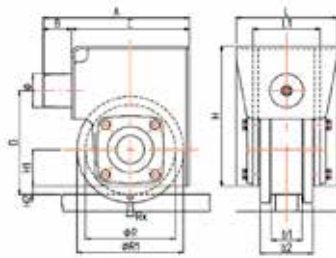
1. nominal load $P = 10.000$ kg; ISO service group M4 (FEM 1Am); gauge 20 m; 2 crane running speeds = 40/10 m/min
2. weight of crane + accessories: $M1 = 5.900$ kg
3. weight of hoist + trolley: $M2 = 750$ kg
4. total travelling mass: $10.000 + 5.900 + 750 = 16.650$ kg
5. from the diagram on page 18, with a capacity of 10.000 kg; ISO group M4 (FEM 1Am) and gauge 20 m, select the end-carriages:
Type 3 – 200 – 3600 or: DGT size 3 Wheel Ø (mm) 200 Wheel basis (mm) 3600
6. from the diagram on page 18, we can deduce that the beams 3 – 200 – 3600 admit masses of up to 18.800 kg $>$ the 16.650 kg to haul.
7. at this point, check the suitability of the wheel Ø 200 for the selected beams, in relation to its admissible reactions and the type of rail, calculated as illustrated on page 13 for span "S" = 20.000 mm and supposing a juxtaposition "a" = 1.000 mm:
 - $R_{max} = 5.900/4 + [(750 + 10.000)/2] \cdot (1 - 1.000/20.000) \approx 6.581$ kg
 - $R_{min} = 5.900/4 + 750/2 \cdot 1.000/20.000 \approx 1.494$ kg
 - $R_{ave} = (2 \cdot R_{max} + R_{min})/3 = (2 \cdot 6.581 + 1.494)/3 \approx 4.885$ kg $<$ 7.340 kg, corresponding to the admissible R_{max} .
8. supposing a flat laminated rail, with $l = 50$ and operating band $b = 48$ (see table on page 11), from the diagram on page 13 we can deduce that, for a Ø 200 wheel with a standard sheave width, considering the factors (speed and operating bandwidth), the average admissible reaction for the service group M4 (1Am) is: R_{ave} admissible ≈ 5.500 kg $>$ of the ~ 4.885 kg the wheel is subject to (example on page 13)
9. based on the selected speed and calculation of mass to be travelled for each drive wheel, derive the following components from the table on page 33:

NOMINAL SPEED (m/min)	THE TRAVELLING MASS (kg) FROM EACH GEARED-MOTOR IN THE SERVICE GROUP ISO M5 (FEM 2M) IS IN kg	"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTOR		SELF-BRAKING MOTOR SPECS		"DGP" GEARED-MOTOR CODE
			GEARED-MOTOR TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	
40/10	9.400 $>$ di 8.325 to be hauled	200	134	80K3C	2/8	0.63 / 0.15	P1M3B43KA0

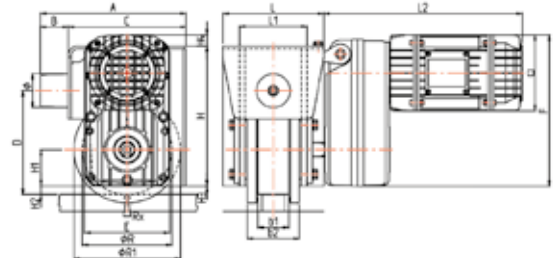
10. supposing a "Lateral + Supported" connected girder-beam configuration with a double girder trolley gauge of 1200 mm and a girder span width > 360 and ≤ 410 , from the table on page 23, we can deduce that the beams type 3 – 200 – 3600 have a code: W336N5..
11. from the "Geometric specifications" table on page 25, we can deduce that, for the beams in question with a "Lateral + Supported" connected girder-beam configuration and a girder span width > 360 and > 410 , the type of "girder-beam" joining cross plates are: L32 + A32

CLEARANCE REQUIREMENTS FOR WHEEL GROUPS BASED ON COMBINATIONS WITH RELATED OFFSET GEARED-MOTORS

Idler drive units



Driven units



WHEEL SPECIFICATIONS			WHEEL GROUP CLEARANCE (mm)														SIZE		GEARED-MOTOR CLEARANCE (mm)					
TYPE Ø Ø R (mm)	MAX. RX (kg)	INTERNAL WIDTH					Ø									GEARED-MOTOR	MOTOR							
			b1	b2	L1	L	R1	A	B	C	D	Ø	H	H1	H2			L2	□	E	F	H3	H4	
125	3.670 36 kN	standard	50	80	100											0	71	332	135	138	223	0	3	
		maximum	60			160	150	200	30	170	145	50	220	55	7.5	1	71	368	135	152	270	10.5	39.5	
		special	70	90	110												1	80	383	150	152	278	10.5	47.5
160	4.893 48 kN	standard	55	93	120											0	71	332	135	138	223	-10	-17	
		maximum	65			180	190	260	50	210	185	60	250	65	15	1	71	368	135	152	270	0.5	19.5	
		special	80	105	130												1	80	383	150	152	278	0.5	27.5
200	7.340 72 kN	standard	60													1	71	356	135	152	270	-9.5	-10.5	
		maximum	70	100	135												1	80	372	150	152	278	-9.5	-2.5
		special	90	120	145	200	230	325	65	260	230	80	290	75	25	2	80	398	150	227	357	26	41	
																2	100	436	190	227	376	26	60	
250	10.805 106 kN	standard	70													1	71	356	135	152	270	-24.5	-40.5	
		maximum	80	110	149												1	80	372	150	152	278	-24.5	-32.5
		special	100	135	165	230	280	375	65	310	275	80	335	90	35	2	80	398	150	227	357	11	11	
																2	100	436	190	227	376	11	30	
315	14.679 144 kN	standard	75													2	80	368	150	227	357	-4	-24	
		maximum	85	120	159												2	100	406	190	227	376	-4	-5
		special	110	150	180	260	350	470	80	390	335	100	385	105	52.5	3	112	500	225	265	456	15	56	
																2	80	362	150	227	357	-44	-39	
400	18.960 186 kN	standard	85													2	100	400	190	227	376	-44	-20	
		maximum	95	135	170												2	100	400	190	227	376	-44	-20
		special	115	152	190	290	440	570	100	470	385	125	440	145	55	3	112	500	225	265	456	-25	41	

Quotes L2 in red refer to wheels operating with a "standard" and "maximum" sheave:

For Ø 315 and Ø 400 wheels with a "special" sheave, the dimension L2 increases by 10 mm, with respect to the values listed in the table

TYPES AND REDUCTION RATIOS FOR "DGP" OFFSET GEARED-MOTORS

"DGP" OFFSET GEARED-MOTORS		3 REDUCTION STAGES (TORQUES)				2 REDUCTION STAGES (TORQUES)			
Size 0	Type	031	032	033	034	021	022	023	024
	Reduction ratio	87.85	70.35	57.61	45.20	34.49	28.10	23.46	18.94
Size 1	Type	131	132	133	134	121	122	123	124
	Reduction ratio	89.45	69.98	56.35	44.35	35.10	28.87	22.77	18.50
Size 2	Type	231	232	233	234	221	222	223	224
	Reduction ratio	140.65	109.45	88.10	72.57	55.42	43.24	35.66	29.50
Size 3	Type	331	332	333	334	=			
	Reduction ratio	88.67	70.36	56.65	44.33				

Determining the geared-motors type: E.g. geared-motors 132, where:

1 = geared-motors size 1; 3 = No. of reduction stages (torques); 2 = reduction ratio 69.98.

SPECIFICATIONS AND CODES FOR SELF-BRAKING MOTORS WHICH CAN BE COMBINED WITH “DGP” OFFSET GEARED-MOTORS

MOTOR SIZE	TYPE	POLES (n°)	RPM (g/min)	POWER (kW)	TORQUE (Nm)	I _a (A)	I _n (A)	COS φ	MOTOR CODE
71 M 21 series	71K8C	8	645	0.08	1.09	1.20	0.90	0.45	M21AP80050
	71K4CB	4	1370	0.20	1.36	2.70	1.00	0.55	M21AP40051
	71K2CB	2	2700	0.40	1.36	4.50	1.30	0.70	M21AP20051
	71K2L	2	2740	0.50	1.70	5.20	1.30	0.72	M21AP2I050
	71K3L	2/8	2760/630	0.40/0.09	1.36	4.40/1.20	1.20/0.90	0.75/0.60	M21AP30051
80 M 31 series	80K8L	8	630	0.16	2.18	2.20	1.30	0.48	M31AP80051
	80K4CB	4	1370	0.32	2.18	3.90	1.10	0.65	M31AP40051
	80K2CB	2	2750	0.63	2.18	7.70	1.70	0.75	M31AP20051
	80K2L	2	2770	0.80	2.73	9.70	1.90	0.80	M31AP2I050
	80K3C	2/8	2740/650	0.50/0.12	1.70	5.20/1.60	1.30/1.10	0.85/0.60	M31AP30050
	80K3L	2/8	2760/650	0.63/0.15	2.18	6.70/1.90	1.60/1.30	0.82/0.57	M31AP30051
100 M 51 series	100K8L	8	670	0.40	5.46	5.40	2.50	0.45	M51AP80051
	100K4CB	4	1390	0.80	5.46	8.90	2.00	0.80	M51AP40051
	100K2CB	2	2800	1.60	5.46	21.00	3.70	0.80	M51AP20051
	100K2L	2	2780	2.00	6.82	23.00	4.30	0.86	M51AP2I050
	100K3C	2/8	2820/680	1.25/0.31	4.36	15.70/3.60	3.10/1.80	0.84/0.60	M51AP30050
	100K3L	2/8	2790/660	1.60/0.39	5.46	21.00/4.00	3.50/2.30	0.86/0.60	M51AP30051
112 M 61 series	112K8L	8	690	0.63	8.72	8.60	3.40	0.50	M61AP80050
	112K4C	4	1430	1.25	8.72	20.50	3.60	0.65	M61AP40050
	112K2L	2	2800	3.20	10.92	39.00	6.50	0.88	M61AP2I050
	112K3L	2/8	2850/690	2.50/0.62	8.72	33.00/7.30	5.60/3.40	0.85/0.50	M61AP30050

Specifications for self-braking motors are related to the M4 service group (1Am) – RI 4 0% – Power voltage 400 V

CODES FOR “DGT” DRIVE WHEEL GROUPS READY FOR MATCHING WITH “DGP” OFFSET GEARED-MOTORS

“DGP” OFFSET GEARED-MOTORS	“DGT” DRIVE WHEEL GROUP Ø (mm)						
	125	160	200	250	315	400	400 R
Size 0	DGT1A0M10	DGT2A0M10	=	=	=	=	=
Size 1	DGT1A0M30	DGT2A0M30	DGT3A0M10	DGT4A0M12	=	=	=
Size 2	=	=	DGT3A0M30	DGT4A0M32	DGT5A0M12 (rh) DGT5A0M22 (lh)	DGT6A0M12 (rh) DGT6A0M22 (lh)	DGT6A0M62 (rh) DGT6A0M72 (lh)
Size 3	=	=	=	=	DGT5A0M32 (rh) DGT5A0M42 (lh)	DGT6A0M32 (rh) DGT6A0M42 (lh)	DGT6A0M82 (rh) DGT6A0M92 (lh)

The configuration (r) = right and (l) = left, for wheel groups Ø 315 and Ø 400 refers to the positioning of the welded reaction arm. The codes refer to drive wheels with a standard sheave width. In the case of wheels with different sheave widths, replace the letter **M** in the code with the letter **P** for wheels with a maximum sheave width, or **S** for wheels with a special sheave width

MAX. WEIGHTS FOR “DGT” DRIVEN WHEEL UNITS COUPLED WITH “DGP” OFFSET GEARED-MOTORS

“DGT” DRIVE WHEEL GROUP	“DGP” OFFSET GEARED-MOTORS					
	“DGP” GEARED-MOTORS SIZE 0	“DGP” GEARED-MOTORS SIZE 1		“DGP” GEARED-MOTORS SIZE 2		“DGP” GEARED-MOTORS SIZE 3
	“DGP” MOTORS SIZE 71	“DGP” MOTORS SIZE 71	“DGP” MOTORS SIZE 80	“DGP” MOTORS SIZE 80	“DGP” MOTORS SIZE 100	“DGP” MOTORS SIZE 112
125	max. 32 kg	max. 36 kg	max. 38 kg	=	=	=
160	max. 40 kg	max. 44 kg	max. 48 kg	=	=	=
200	=	max. 54 kg	max. 58 kg	max. 75 kg	max. 83 kg	=
250	=	max. 73 kg	max. 75 kg	max. 94 kg	max. 102 kg	=
315	=	=	=	max. 125 kg	max. 133 kg	max. 172 kg
400	=	=	=	max. 197 kg	max. 205 kg	max. 236 kg
400 R	=	=	=	max. 197 kg	max. 205 kg	max. 236 kg

CODES AND WEIGHTS FOR “DGT” IDLER WHEEL UNITS

“DGT” IDLE WHEEL GROUP Ø (mm)	CODE	WEIGHT (kg)
125	DGT1A0M00	15.5
160	DGT2A0M00	23.5
200	DGT3A0M00	37.5
250	DGT4A0M00	57.0
315	DGT5A0M00	88.0
400	DGT6A0M00	152.0
400 R	DGT6A0M50	152.0

The codes refer to idle wheels with a standard sheave width. In the case of wheels with different sheave widths, replace the letter **M** in the code with the letter **P** for wheels with a maximum sheave width, or **S** for wheels with a special sheave width

TRAVELLING MASSES AT 1 SPEED, BASED ON THE COMBINATION OF COMPONENTS

NOMINAL SPEED (m/min)	TRAVELLING MASS (kg) ISO SERVICE GROUP (FEM)		"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTORS		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS	
	M4 (1Am)	M5 (2m)		REDUCER TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	"DGT" DRIVE WHEEL GROUP	"DGP" GEARED-MOTOR
3.2	7.400	7.400	125	031	71K8C	8	0.08	DGT1A0M10	P0M2B18AA0
	14.700	14.700	200	231	80K8C	8	0.12	DGT3A0M30	P2M3B18AA0
4	7.400	7.400	125	032	71K8C	8	0.08	DGT1A0M10	P0M2B28AA0
	9.800	8.000	160	031	71K8C	8	0.08	DGT2A0M10	P0M2B18AA0
	14.700	14.700	200	232	80K8L	8	0.16	DGT3A0M30	P2M3B28KA0
	21.600	21.600	250	231	80K8L	8	0.16	DGT4A0M32	P2M3B18KA0
	6.700	5.360	125	033	71K8C	8	0.08	DGT1A0M10	P0M2B38AA0
	7.400	7.400	125	133	80K8L	8	0.16	DGT1A0M30	P1M3B38KA0
5	8.000	6.400	160	032	71K8C	8	0.08	DGT2A0M10	P0M2B28AA0
	9.800	9.800	160	132	80K8L	8	0.16	DGT2A0M30	P1M3B28KA0
	9.600	7.600	200	131	71K8C	8	0.08	DGT3A0M10	P1M2B18AA0
	14.700	14.700	200		80K8L	8	0.16		P1M3B18KA0
	21.600	18.000	250	232	80K8L	8	0.16	DGT4A0M32	P2M3B28KA0
	21.600	21.600	250		100K8L	8	0.40		P2M5B28KA0
	23.300	18.600	315	231	80K8L	8	0.16	DGT5A0M12 (rh)	P2M3B18KA0
	29.400	29.400	315		100K8L	8	0.40	DGT5A0M22 (lh)	P2M5B18KA0
	7.400	7.400	125	031	71K4CB	4	0.20	DGT1A0M10	P0M2B14KA0
	6.400	5.100	160	033	71K8C	8	0.08	DGT2A0M10	P0M2B38AA0
6.3	9.800	8.000	160	133	80K8L	8	0.16	DGT2A0M30	P1M3B38KA0
	14.700	14.700	200	231	80K4CB	4	0.32	DGT3A0M30	P2M3B14KA0
	9.000	7.200	250	131	71K8C	8	0.08	DGT4A0M12	P1M2B18AA0
	18.000	14.400	250		80K8L	8	0.16		P1M3B18KA0
	21.600	21.600	315	233	100K8L	8	0.40	DGT4A0M32	P2M5B38KA0
	18.600	14.900	315	232	80K8L	8	0.16	DGT5A0M12 (rh)	P2M3B28KA0
	29.400	29.400	315		100K8L	8	0.40	DGT5A0M22 (lh)	P2M5B28KA0
	20.800	16.600	400	231	80K8L	8	0.16	DGT6A0M12 (rh)	P2M3B18KA0
	41.400	33.100	400		100K8L	8	0.40	DGT6A0M22 (lh)	P2M5B18KA0
	41.400	33.100	400 R	231	100K8L	8	0.40	DGT6A0M62 (rh)	P2M5B18KA0
	51.700	41.400	400 R		100K8L	8	0.40	DGT6A0M72 (lh)	
	7.400	6.658	125	032	71K4CB	4	0.20	DGT1A0M10	P0M2B24KA0
8	9.800	8.000	160	031	71K4CB	4	0.20	DGT2A0M10	P0M2B14KA0
	9.800	9.800	160	131		4	0.20	DGT2A0M30	P1M2B14KA0
	6.000	4.800	200	133	71K8C	8	0.08	DGT3A0M10	P1M2B38AA0
	12.000	9.600	200		80K8L	8	0.16		P1M3B38KA0
	14.700	14.700	250	232	80K4CB	4	0.32	DGT3A0M30	P2M3B24KA0
	13.800	11.000	250	132	80K8L	8	0.16	DGT4A0M12	P1M3B28KA0
	21.600	21.600	315	231	80K4CB	4	0.32	DGT4A0M32	P2M3B14KA0
	14.600	11.700	315	233	80K8L	8	0.16	DGT5A0M12 (rh)	P2M3B38KA0
	29.400	29.400	315		100K8L	8	0.40	DGT5A0M22 (lh)	P2M5B38KA0
	16.300	13.000	400	232	80K8L	8	0.16	DGT6A0M12 (rh)	P2M3B28KA0
	41.400	33.100	400		100K8L	8	0.40	DGT6A0M22 (lh)	P2M5B28KA0
	41.400	33.100	400 R	232	100K8L	8	0.40	DGT6A0M62 (rh)	P2M5B28KA0
			400 R		100K8L	8	0.40	DGT6A0M72 (lh)	

The specifications refer to a single geared-motor; in case of two or more geared-motors, multiply the travelling mass by the number of geared-motors used. Verify that in relation to the rail's running surface width (b), average reaction (R ave) is compatible with the values listed in diagram pages 12, 13 and 14. The values for travelling mass in red require a verification of average reaction (R ave.) on each wheel, which must not exceed the following Rx. max. values:

Ø 125 R ave. ≤ Rx max. ≤ 3.670 kg (36 kN)	Ø 160 R ave. ≤ Rx max. ≤ 4.893 kg (48 kN)	Ø 200 R ave. ≤ Rx max. ≤ 7.340 kg (72 kN)	Ø 250 R ave. ≤ Rx max. ≤ 10.805 kg (106 kN)	Ø 315 R ave. ≤ Rx max. ≤ 14.679 kg (144 kN)	Ø 400 R ave. ≤ Rx max. ≤ 18.960 kg (186 kN)	Ø 400 R R ave. ≤ Rx max. ≤ 30.580 kg (300 kN)
--	--	--	--	--	--	--

TRAVELLING MASSES AT 1 SPEED, BASED ON THE COMBINATION OF COMPONENTS

NOMINAL SPEED	TRAVELLING MASS (kg) ISO SERVICE GROUP (FEM)		“DGT” WHEEL GROUP	“DGP” GEARED-MOTORS		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS	
	M4 (1Am)	M5 (2m)		REDUCER TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	“DGT” DRIVE WHEEL GROUP	“DGP” GEARED-MOTOR
(m/min)			Ø (mm)						
10	7.400	6.720	125	033	71K4CB	4	0.20	DGT1A0M10	P0M2B34KA0
	9.800	8.000	160	032	71K4CB	4	0.20	DGT2A0M10	P0M2B24KA0
	9.800	9.800		132	80K4CB	4	0.32	DGT2A0M30	P1M3B24KA0
	12.000	9.600	200	131	71K4CB	4	0.20	DGT3A0M10	P1M2B14KA0
	14.700	14.700		80K4CB	4	0.32	P1M3B14KA0		
	11.200	8.900	250	133	80K8L	8	0.16	DGT4A0M12	P1M3B38KA0
	21.600	18.000		232	80K4CB	4	0.32	DGT4A0M32	P2M3B24KA0
	21.600	21.600			100K4CB	4	0.80		P2M5B24KA0
	23.300	18.600	315	231	80K4CB	4	0.32	DGT5A0M12 (rh)	P2M3B14KA0
	29.400	29.400			100K4CB	4	0.80	DGT5A0M22 (lh)	P2M5B14KA0
	33.100	26.500	400	233	100K8L	8	0.40	DGT6A0M12 (rh) DGT6A0M22 (lh)	P2M5B38KA0
	42.800	41.300		331	112K8L	8	0.63	DGT6A0M32 (rh) DGT6A0M42 (lh)	P3M6B18AA0
	33.100	=		233	100K8L	8	0.40	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B38KA0
	51.600	41.300	400 R	331	112K8L	8	0.63	DGT6A0M82 (rh) DGT6A0M92 (lh)	P3M6B18AA0
12,5	7.400	7.400	125	031	71K2CB	2	0.40	DGT1A0M10	P0M2B12KA0
	8.000	6.400	160	033	71K4CB	4	0.20	DGT2A0M10	P0M2B34KA0
	9.800	9.800		133	80K4CB	4	0.32	DGT2A0M30	P1M3B34KA0
	9.600	7.600	200	132	71K4CB	4	0.20	DGT3A0M10	P1M2B24KA0
	14.700	12.200		80K4CB	4	0.32	P1M3B24KA0		
	14.700	14.700		231	80K2CB	2	0.63	DGT3A0M30	P2M3B12KA0
	11.200	9.000	250	131	71K4CB	4	0.20	DGT4A0M12	P1M2B14KA0
	18.000	14.400			80K4CB	4	0.32		P1M3B14KA0
	21.600	21.600		233	100K4CB	4	0.80	DGT4A0M32	P2M5B34KA0
	18.600	14.900	315	232	80K4CB	4	0.32	DGT5A0M12 (rh)	P2M3B24KA0
	29.400	29.400			100K4CB	4	0.80	DGT5A0M22 (lh)	P2M5B24KA0
	20.800	16.600	400	231	80K4CB	4	0.32	DGT6A0M12 (rh)	P2M3B14KA0
	41.400	33.100			100K4CB	4	0.80	DGT6A0M22 (lh)	P2M5B14KA0
	52.600	42.100	400 R	231	100K4CB	4	0.80	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B14KA0
10	7.400	6.656	125	032	71K2CB	2	0.40	DGT1A0M10	P0M2B22KA0
	9.800	8.000	160	031	71K2CB	2	0.40	DGT2A0M10	P0M2B12KA0
	9.800	9.800		131				DGT2A0M30	P1M2B12KA0
	7.500	6.000	200	133	71K4CB	4	0.20	DGT3A0M10	P1M2B34KA0
	12.000	9.600			80K4CB	4	0.32		P1M3B34KA0
	14.700	14.700		232	80K2CB	2	0.63	DGT3A0M30	P2M3B22KA0
	13.800	11.000	250	132	80K4CB	4	0.32	DGT4A0M12	P1M3B24KA0
	21.600	21.600		231	80K2CB	2	0.63	DGT4A0M32	P2M3B12KA0
	14.600	11.600		233	80K4CB	4	0.32	DGT5A0M12 (rh)	P2M3B34KA0
	29.400	29.400	315		100K4CB	4	0.80	DGT5A0M22 (lh)	P2M5B34KA0
	16.300	13.000	232	80K4CB	4	0.32	DGT6A0M12 (rh)	P2M3B24KA0	
	41.400	33.100		100K4CB	4	0.80	DGT6A0M22 (lh)	P2M5B24KA0	
	41.400	33.100	400 R	232	100K4CB	4	0.80	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B24KA0

The specifications refer to a single geared-motor; in case of two or more geared-motors, multiply the travelling mass by the number of geared-motors used. Verify that in relation to the rail's running surface width (b), average reaction (R ave) is compatible with the values listed in diagram pages 12, 13 and 14. The values for travelling mass in red require a verification of average reaction (R ave.) on each wheel, which must not exceed the following Rx. max. values:

Ø 125 R ave. ≤ Rx max. ≤ 3.670 kg (36 kN)	Ø 160 R ave. ≤ Rx max. ≤ 4.893 kg (48 kN)	Ø 200 R ave. ≤ Rx max. ≤ 7.340 kg (72 kN)	Ø 250 R ave. ≤ Rx max. ≤ 10.805 kg (106 kN)	Ø 315 R ave. ≤ Rx max. ≤ 14.679 kg (144 kN)	Ø 400 R ave. ≤ Rx max. ≤ 18.960 kg (186 kN)	Ø 400 R R ave. ≤ Rx max. ≤ 30.580 kg (300 kN)
--	--	--	--	--	--	--

TRAVELLING MASSES AT 1 SPEED, BASED ON THE COMBINATION OF COMPONENTS

NOMINAL SPEED (m/min)	TRAVELLING MASS (kg) ISO SERVICE GROUP (FEM)		"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTORS		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS	
	M4 (1Am)	M5 (2m)		REDUCER TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	"DGT" DRIVE WHEEL GROUP	"DGP" GEARED-MOTOR
20	7.400	6.720	125	033	71K2CB	2	0.40	DGT1A0M10	P0M2B32KA0
	9.800	8.000	160	032	71K2CB	2	0.40	DGT2A0M10	P0M2B22KA0
	9.800	9.800		132	71K2L	2 with inv.	0.50	DGT2A0M30	P1M2B21KA0
	12.000	9.600			71K2CB	2	0.40		P1M2B12KA0
	14.700	12.200	200	131	71K2L	2 with inv.	0.50	DGT3A0M10	P1M2B11KA0
	14.700	14.700			80K2CB	2	0.63		P1M3B12KA0
	11.200	8.900		133	80K4CB	4	0.32	DGT4A0M12	P1M3B34KA0
	21.600	17.200	250	232	80K2CB	2	0.63	DGT4A0M32	P2M3B22KA0
	21.600	21.600			80K2L	2 with inv.	0.80		P2M3B21KA0
	23.300	18.600			80K2CB	2	0.63		P2M3B12KA0
	29.400	23.700	315	231	80K2L	2 with inv.	0.80	DGT5A0M12 (rh) DGT5A0M22 (lh)	P2M3B11KA0
	29.400	29.400			100K2CB	2	1.60		P2M5B12KA0
	33.100	26.500		233	100K4CB	4	0.80	DGT6A0M12 (rh) DGT6A0M22 (lh)	P2M5B34KA0
	42.800	41.300	400	331	112K4C	4	1.25	DGT6A0M32 (rh) DGT6A0M42 (lh)	P3M6B14AA0
	33.100	26.500	400 R	233	100K4CB	4	0.80	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B34KA0
	51 700	41 300		331	112K4C	4	1.25	DGT6A0M82 (rh) DGT6A0M92 (lh)	P3M6B14AA0
25	6.700	5.360	125	034	71K2CB	2	0.40	DGT1A0M10	P0M2B42KA0
	7.400	6.700			71K2L	2 with inv.	0.50		P0M2B41KA0
	7.400	6.700		134	80K2CB	2	0.63	DGT1A0M30	P1M3B42KA0
	8.000	6.400	160	033	71K2CB	2	0.40	DGT2A0M10	P0M2B32KA0
	9.800	8.000			71K2L	2 with inv.	0.50		P0M2B31KA0
	9.800	9.800		133	80K2CB	2	0.63	DGT2A0M30	P1M3B32KA0
	9.600	7.600	200		71K2CB	2	0.40		P1M2B22KA0
	12.000	9.600		132	71K2L	2 with inv.	0.50	DGT3A0M10	P1M2B21KA0
	14.700	12.000			80K2CB	2	0.63		P1M3B22KA0
	14.700	14.700			80K2L	2 with inv.	0.80		P1M3B21KA0
	11.200	8.900			71K2CB	2	0.40		P1M2B12KA0
	13.800	11.000	250	131	71K2L	2 with inv.	0.50	DGT4A0M12	P1M2B11KA0
	17.200	13.800			80K2CB	2	0.63		P1M3B12KA0
	21.600	21.600		233	100K2CB	2	1.60	DGT4A0M32	P2M5B32KA0
	18.600	14.900	315		80K2CB	2	0.63		P2M3B22KA0
	23.700	18.900		232	80K2L	2 with inv.	0.80	DGT5A0M12 (rh) DGT5A0M22 (lh)	P2M3B21KA0
	29.400	29.400			100K2CB	2	1.60		P2M5B22KA0
	20.800	16.600	400		80K2CB	2	0.63		P2M3B12KA0
	26.500	21.200		231	80K2L	2 with inv.	0.80	DGT6A0M12 (rh) DGT6A0M22 (lh)	P2M3B11KA0
	41.400	33.100			100K2CB	2	1.60		P2M5B12KA0
	53 000	42 400		231	100K2CB	2	1.60	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B12KA0
	66 200	53 000	400 R		100K2L	2 with inv.	2.00		P2M5B11KA0

The specifications refer to a single geared-motor; in case of two or more geared-motors, multiply the travelling mass by the number of geared-motors used. Verify that in relation to the rail's running surface width (b), average reaction (R ave) is compatible with the values listed in diagram pages 12, 13 and 14.

The values for travelling mass in red require a verification of average reaction (R ave.) on each wheel, which must not exceed the following Rx. max. values:

Ø 125 R ave. ≤ Rx max. ≤ 3.670 kg (36 kN)	Ø 160 R ave. ≤ Rx max. ≤ 4.893 kg (48 kN)	Ø 200 R ave. ≤ Rx max. ≤ 7.340 kg (72 kN)	Ø 250 R ave. ≤ Rx max. ≤ 10.805 kg (106 kN)	Ø 315 R ave. ≤ Rx max. ≤ 14.679 kg (144 kN)	Ø 400 R ave. ≤ Rx max. ≤ 18.960 kg (186 kN)	Ø 400 R R ave. ≤ Rx max. ≤ 30.580 kg (300 kN)
--	--	--	--	--	--	--

TRAVELLING MASSES AT 2 SPEEDS, BASED ON THE COMBINATION OF COMPONENTS

NOMINAL SPEED (m/min)	TRAVELLING MASS (kg) ISO SERVICE GROUP (FEM)		"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTORS		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS	
	M4 (1Am)	M5 (2m)		REDUCER TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	"DGT" DRIVE WHEEL GROUP	"DGP" GEARED-MOTOR
12.5/3.2	7.400	7.400	125	031	71K3L	2/8	0.40/0.09	DGT1A0M10	P0M2B13KA0
	7.400	7.400			71K2L	2 with inv.	0.50		P0M2B11KA0
	14.700	14.700	200	231	80K3C	2/8	0.50/0.12	DGT3A0M30	P2M3B13AA0
16/4	7.400	6.656	125	032	71K3L	2/8	0.40/0.09	DGT1A0M10	P0M2B23KA0
	7.400	6.656			71K2L	2 with inv.	0.50		P0M2B21KA0
	9.800	8.000	160	031	71K3L	2/8	0.40/0.09	DGT2A0M10	P0M2B13KA0
	9.800	9.800			131	71K2L	2 with inv.		P1M2B13KA0
	14.700	14.700	200	232	80K3C	2/8	0.50/0.12	DGT3A0M30	P2M3B23AA0
	21.600	17.200	250	231	80K3C	2/8	0.50/0.12	DGT4A0M32	P2M3B13AA0
	21.600	21.600			80K3L	2/8	0.63/0.15		P2M3B13KA0
	7.400	6.720	125	033	71K3L	2/8	0.40/0.09	DGT1A0M10	P0M2B33KA0
	7.400	6.720			71K2L	2 with inv.	0.50		P0M2B31KA0
20/5	9.800	8.000	160	032	71K3L	2/8	0.40/0.09	DGT2A0M10	P0M2B23KA0
	9.800	9.800			132	71K2L	2 with inv.		P1M2B21KA0
	12.000	9.600	200	131	71K3L	2/8	0.40/0.09	DGT3A0M10	P1M2B13KA0
	14.700	12.000			71K2L	2 with inv.	0.50		P1M2B11KA0
	14.700	12.000	250	232	80K3C	2/8	0.50/0.12	DGT4A0M32	P1M3B13AA0
	14.700	14.700			80K3L	2/8	0.63/0.15		P1M3B13KA0
	17.200	13.700	315	231	80K3C	2/8	0.50/0.12	DGT5A0M12 (rh) DGT5A0M22 (lh)	P2M3B23AA0
	21.600	17.200			80K3L	2/8	0.63/0.15		P2M3B23KA0
	21.600	21.600	400	231	80K2L	2 with inv.	0.80	DGT6A0M12 (rh) DGT6A0M22 (lh)	P2M3B21KA0
	18.500	14.800			80K3C	2/8	0.50/0.12		P2M3B13AA0
	23.300	18.600	400 R	231	80K3L	2/8	0.63/0.15	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M3B13KA0
	29.400	23.700			80K2L	2 with inv.	0.80		P2M3B11KA0
	29.400	29.400	400 R	231	100K3C	2/8	1.25/0.31	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B13AA0
	6.700	5.360			71K3L	2/8	0.40/0.09		P0M2B43KA0
	7.400	6.700	125	034	71K2L	2 with inv.	0.50	DGT1A0M10	P0M2B41KA0
	7.400	6.700			134	80K3C	2/8		P1M3B43AA0
25/6.3	8.000	6.400	160	033	71K3L	2/8	0.40/0.09	DGT2A0M10	P0M2B33KA0
	9.800	8.000			71K2L	2 with inv.	0.50		P0M2B31KA0
	9.800	9.800	200	133	80K3C	2/8	0.50/0.12	DGT2A0M30	P1M3B33AA0
	9.600	7.600			71K3L	2/8	0.40/0.09		P1M2B23KA0
	12.000	9.600	250	132	71K2L	2 with inv.	0.50	DGT3A0M10	P1M2B21KA0
	12.000	9.600			80K3C	2/8	0.50/0.12		P1M3B23AA0
	14.700	12.000	315	131	80K3L	2/8	0.63/0.15	DGT4A0M12	P1M3B23KA0
	14.700	14.700			80K2L	2 with inv.	0.80		P1M3B21KA0
	11.200	9.000	400	233	71K3L	2/8	0.40/0.09	DGT4A0M32	P1M2B13KA0
	13.800	11.000			71K2L	2 with inv.	0.50		P1M2B11KA0
	13.800	11.000	400 R	233	80K3C	2/8	0.50/0.12	DGT5A0M12 (rh) DGT5A0M22 (lh)	P1M3B13AA0
	17.200	13.800			80K3L	2/8	0.63/0.15		P1M3B13KA0
	21.600	21.600	400 R	233	100K3C	2/8	1.25/0.31	DGT6A0M12 (rh) DGT6A0M22 (lh)	P2M5B33AA0
	14.800	11.900			80K3C	2/8	0.50/0.12		P2M3B23AA0
	18.600	14.900	400 R	232	80K3L	2/8	0.63/0.15	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M3B23KA0
	23.700	18.900			80K2L	2 with inv.	0.80		P2M3B21KA0
	29.400	29.400	400 R	231	100K3C	2/8	1.25/0.31	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B23AA0
	20.800	16.600			80K3L	2/8	0.63/0.15		P2M3B13KA0
	26.500	21.200	400 R	231	80K2L	2 with inv.	0.80	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M3B11KA0
	41.400	33.100			100K3C	2/8	1.25/0.31		P2M5B13AA0
	41.400	33.100	400 R	231	100K3C	2/8	1.25/0.31	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B13AA0
	53 000	42 400			100K3L	2/8	1.60/0.39		P2M5B13KA0
	66 200	53 000	400 R	231	100K2L	2 with inv.	2.00		P2M5B11KA0

The specifications refer to a single geared-motor; in case of two or more geared-motors, multiply the travelling mass by the number of geared-motors used. Verify that in relation to the rail's running surface width (b), average reaction (R ave) is compatible with the values listed in diagram pages 12, 13 and 14. The values for travelling mass in red require a verification of average reaction (R ave.) on each wheel, which must not exceed the following Rx. max. values:

Ø 125 R ave. ≤ Rx max. ≤ 3.670 kg (36 kN)	Ø 160 R ave. ≤ Rx max. ≤ 4.893 kg (48 kN)	Ø 200 R ave. ≤ Rx max. ≤ 7.340 kg (72 kN)	Ø 250 R ave. ≤ Rx max. ≤ 10.805 kg (106 kN)	Ø 315 R ave. ≤ Rx max. ≤ 14.679 kg (144 kN)	Ø 400 R ave. ≤ Rx max. ≤ 18.960 kg (186 kN)	Ø 400 R R ave. ≤ Rx max. ≤ 30.580 kg (300 kN)
--	--	--	--	--	--	--

TRAVELLING MASSES AT 2 SPEEDS, BASED ON THE COMBINATION OF COMPONENTS

NOMINAL SPEED	TRAVELLING MASS (kg)		"DGT" WHEEL GROUP	"DGP" GEARED-MOTORS		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS		
	ISO SERVICE GROUP (FEM)			REDUCER TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	"DGT" DRIVE WHEEL GROUP	"DGP" GEARED-MOTOR	
(m/min)	M4 (1Am)	M5 (2m)	Ø (mm)							
32/8	5.200	4.160	125	021	71K3L	2/8	0.40/0.09	DGT1A0M10	P0M2A13KA0	
	6.500	5.200		121	71K2L	2 with inv.	0.50	DGT1A0M30	P1M2A11KA0	
	6.500	5.200			80K3C	2/8	0.50/0.12		P1M3A13AA0	
	7.400	6.656			80K3L	2/8	0.63/0.15		P1M3A13KA0	
	7.400	6.656			80K2L	2 with inv.	0.80		P1M3A11KA0	
	6.300	5.000		034	71K3L	2/8	0.40/0.09	DGT2A0M10	P0M2B43KA0	
	7.900	6.300			71K2L	2 with inv.	0.50		P0M2B41KA0	
	7.900	6.300			80K3C	2/8	0.50/0.12		P1M3B43AA0	
	9.800	8.000	160	134	80K3L	2/8	0.63/0.15	DGT2A0M30	P1M3B43KA0	
	9.800	9.800			80K2L	2 with inv.	0.80		P1M3B41KA0	
	7.600	6.000			71K3L	2/8	0.40/0.09	DGT3A0M10	P1M2B33KA0	
	9.600	7.600			71K2L	2 with inv.	0.50		P1M2B31KA0	
	9.600	7.600		133	80K3C	2/8	0.50/0.12		P1M3B33AA0	
	12.000	9.600			80K3L	2/8	0.63/0.15		P1M3B33KA0	
	14.700	12.000			80K2L	2 with inv.	0.80		P1M3B31KA0	
	14.700	14.700	200	221	100K3C	2/8	1.25/0.31	DGT3A0M30	P2M5A13AA0	
	10.800	8.600			71K2L	2 with inv.	0.50		P1M2B21KA0	
	10.800	8.600			80K3C	2/8	0.50/0.12	DGT4A0M12	P1M3B23AA0	
	13.500	10.800			80K3L	2/8	0.63/0.15		P1M3B23KA0	
	17.200	13.700	250	132	80K2L	2 with inv.	0.80		P1M3B21KA0	
	21.600	21.600			100K3C	2/8	1.25/0.31	DGT4A0M32	P2M5B43AA0	
	14.600	11.600			80K3L	2/8	0.63/0.15		P2M3B33KA0	
	18.500	14.800			315	233	80K2L	2 with inv.	0.80	DGT5A0M12 (rh) DGT5A0M22 (lh)
	28.900	23.100	100K3C	2/8			1.25/0.31	P2M5B33AA0		
	29.400	29.400	100K3L	2/8			1.60/0.39	P2M5B33KA0		
	20.700	16.500	400	232		80K2L	2 with inv.	0.80	DGT6A0M12 (rh) DGT6A0M22 (lh)	P2M3B21KA0
	32.300	25.800				100K3C	2/8	1.25/0.31		P2M5B23AA0
	41.400	33.100			100K3L	2/8	1.60/0.39	P2M5B23KA0		
	32.300	=			400 R		100K3C	2/8	1.25/0.31	DGT6A0M62 (rh) DGT6A0M72 (lh)
	41.400	33.100	100K3L	2/8			1.60/0.39	P2M5B23KA0		
	51.700	41.300	125	022	100K2L	2 with inv.	2.00	P2M5B21KA0		
	4.200	3.360			71K3L	2/8	0.40/0.09	DGT1A0M10	P0M2A23KA0	
5.250	4.200	71K2L			2 with inv.	0.50	P0M2A21KA0			
5.250	4.200	122	122		80K3C	2/8	0.50/0.12	DGT1A0M30	P1M3A23AA0	
6.695	5.356			80K3L	2/8	0.63/0.15	P1M3A23KA0			
7.400	6.720			80K2L	2 with inv.	0.80	P1M3A21KA0			
5.000	4.000	160	021	71K3L	2/8	0.40/0.09	DGT2A0M10	P0M2A13KA0		
6.300	5.000			71K2L	2 with inv.	0.50		P1M2A11KA0		
6.300	5.000			121	80K3C	2/8	0.50/0.12	DGT2A0M30	P1M3A13AA0	
7.900	6.300				80K3L	2/8	0.63/0.15		P1M3A13KA0	
10.000	8.000	80K2L	2 with inv.		0.80	P1M3A11KA0				
7.600	6.000	200	134	71K2L	2 with inv.	0.50	DGT3A0M10	P1M2B41KA0		
7.600	6.000			80K3C	2/8	0.50/0.12		P1M3B43AA0		
9.400	7.600			80K3L	2/8	0.63/0.15		P1M3B43KA0		
12.000	9.600			80K2L	2 with inv.	0.80	P1M3B41KA0			
14.700	14.700	250	222	100K3C	2/8	1.25/0.31	DGT3A0M30	P2M5A23AA0		
10.800	8.600			80K3L	2/8	0.63/0.15		DGT4A0M12	P1M3B33KA0	
13.500	10.800			80K2L	2 with inv.	0.80	DGT4A0M32		P1M3B31KA0	
21.600	17.200			315	221	100K3C		2/8	1.25/0.31	DGT4A0M32
21.600	21.600	100K3L	2/8			1.60/0.39		P2M5A13KA0		
11.600	9.300	80K3L	2/8			0.63/0.15	DGT5A0M12 (rh) DGT5A0M22 (lh)	P2M3B43KA0		
14.800	11.900	80K2L	2 with inv.			0.80		P2M3B41KA0		
23.000	18.400	400	234	100K3C	2/8	1.25/0.31		DGT5A0M12 (rh) DGT5A0M22 (lh)	P2M5B43AA0	
29.400	23.700			100K3L	2/8	1.60/0.39			P2M5B43KA0	
29.400	29.400			100K2L	2 with inv.	2.00	DGT6A0M12 (rh) DGT6A0M22 (lh)	P2M5B41KA0		
13.000	10.400			80K3L	2/8	0.63/0.15		P2M3B33KA0		
16.500	13.200	400 R	233	80K2L	2 with inv.	0.80		P2M3B31KA0		
25.800	20.600			100K3C	2/8	1.25/0.31	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B33AA0		
33.100	26.400			100K3L	2/8	1.60/0.39		P2M5B33KA0		
41.300	33.100			100K2L	2 with inv.	2.00		P2M5B31KA0		
42.800	41.300	400 R	331	112K3L	2/8	2.50/0.62	DGT6A0M32 (rh) DGT6A0M42 (lh)	P3M6B13KA0		
33.100	26.400			100K3L	2/8	1.60/0.39		P2M5B33KA0		
41.300	33.100			100K2L	2 with inv.	2.00	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B31KA0		
51.600	41.300			112K3L	2/8	2.50/0.62		P3M6B13KA0		
66.000	52.800		112K2L	2 with inv.	3.20	P3M6B11KA0				

The specifications refer to a single geared-motor; in case of two or more geared-motors, multiply the travelling mass by the number of geared-motors used. Verify that in relation to the rail's running surface width (b), average reaction (R ave) is compatible with the values listed in diagram pages 12, 13 and 14. The values for travelling mass in red require a verification of average reaction (R ave.) on each wheel, which must not exceed the following Rx. max. values:

Ø 125 R ave. ≤ Rx max. ≤ 3.670 kg (36 kN)	Ø 160 R ave. ≤ Rx max. ≤ 4.893 kg (48 kN)	Ø 200 R ave. ≤ Rx max. ≤ 7.340 kg (72 kN)	Ø 250 R ave. ≤ Rx max. ≤ 10.805 kg (106 kN)	Ø 315 R ave. ≤ Rx max. ≤ 14.679 kg (144 kN)	Ø 400 R ave. ≤ Rx max. ≤ 18.960 kg (186 kN)	Ø 400 R R ave. ≤ Rx max. ≤ 30.580 kg (300 kN)
--	--	--	--	--	--	--

TRAVELLING MASSES AT 2 SPEEDS, BASED ON THE COMBINATION OF COMPONENTS

NOMINAL SPEED (m/min)	TRAVELLING MASS (kg) ISO SERVICE GROUP (FEM)		"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTORS		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS	
	M4 (1Am)	M5 (2m)		REDUCER TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	"DGT" DRIVE WHEEL GROUP	"DGP" GEARED-MOTOR
50/12.5	3.300	2.640	125	023	71K3L	2/8	0.40/0.09	DGT1A0M10	P0M2A33KA0
	4.125	3.300			71K2L	2 with inv.	0.50		P0M2A31KA0
	4.125	3.300			80K3C	2/8	0.50/0.12		P1M3A33AA0
	5.197	4.157		123	80K3L	2/8	0.63/0.15	DGT1A0M30	P1M3A33KA0
	6.600	5.280			80K2L	2 with inv.	0.80		P1M3A31KA0
	5.000	4.000	160	022	71K2L	2 with inv.	0.50	DGT2A0M10	P0M2A21KA0
	5.000	4.000			80K3C	2/8	0.50/0.12		P1M3A23AA0
	6.300	5.000			80K3L	2/8	0.63/0.15		P1M3A23KA0
	8.000	6.300		122	80K2L	2 with inv.	0.80	DGT2A0M30	P1M3A21KA0
	6.000	4.800			71K2L	2 with inv.	0.50		P1M2A11KA0
	7.600	6.000	200	121	80K3L	2/8	0.63/0.15	DGT3A0M10	P1M3A13KA0
	9.400	7.600			80K2L	2 with inv.	0.80		P1M3A11KA0
	14.700	12.000			100K3C	2/8	1.25/0.31		P2M5A33AA0
	14.700	14.700		223	100K3L	2/8	1.60/0.39	DGT3A0M30	P2M5A33KA0
	8.600	6.900			80K3L	2/8	0.63/0.15		P1M3B43KA0
	10.800	8.600	250	134	80K2L	2 with inv.	0.80	DGT4A0M12	P1M3B41KA0
	17.200	13.800			100K3C	2/8	1.25/0.31		P2M5A23AA0
	21.600	17.200			100K3L	2/8	1.60/0.39		P2M5A23KA0
	21.600	21.600		222	100K2L	2 with inv.	2.00	DGT4A0M32	P2M5A21KA0
	9.200	7.400			80K3L	2/8	0.63/0.15		P2M3A13KA0
	11.800	9.400	315	221	80K2L	2 with inv.	0.80	DGT5A0M12 (rh) DGT5A0M22 (lh)	P2M3A11KA0
	18.400	14.700			100K3C	2/8	1.25/0.31		P2M5A13AA0
	23.600	18.900			100K3L	2/8	1.60/0.39		P2M5A13KA0
	29.400	29.400		333	112K3L	2/8	2.50/0.62	DGT5A0M32 (rh) DGT5A0M42 (lh)	P3M6B33KA0
	20.700	16.600			100K3C	2/8	1.25/0.31		P2M5B43AA0
	26.500	21.200	400	234	100K3L	2/8	1.60/0.39	DGT6A0M12 (rh) DGT6A0M22 (lh)	P2M5B43KA0
	33.000	26.400			100K2L	2 with inv.	2.00		P2M5B41KA0
	41.200	33.000			112K3L	2/8	2.50/0.62		P3M6B23KA0
	42.800	42.200		332	112K2L	2 with inv.	3.20	DGT6A0M32 (rh) DGT6A0M42 (lh)	P3M6B21KA0
	33.000	26.400			100K2L	2 with inv.	2.00		P2M5B41KA0
	41.200	33.000	400 R	332	112K3L	2/8	2.50/0.62	DGT6A0M82 (rh) DGT6A0M92 (lh)	P3M6B23KA0
	52.700	42.100			112K2L	2 with inv.	3.20		P3M6B21KA0
63/16	2.600	2.080	125	024	71K3L	2/8	0.40/0.09	DGT1A0M10	P0M2A43KA0
	3.250	2.600			71K2L	2 with inv.	0.50		P0M2A41KA0
	3.250	2.600			80K3C	2/8	0.50/0.12		P1M3A43AA0
	4.095	3.276		124	80K3L	2/8	0.63/0.15	DGT1A0M30	P1M3A43KA0
	5.200	4.160			80K2L	2 with inv.	0.80		P1M3A41KA0
	5.000	4.000	160	123	80K3L	2/8	0.63/0.15	DGT2A0M30	P1M3A33KA0
	6.300	5.000			80K2L	2 with inv.	0.80		P1M3A31KA0
	6.000	4.800			80K3L	2/8	0.63/0.15		P1M3A23KA0
	7.600	6.000		122	80K2L	2 with inv.	0.80	DGT3A0M10	P1M3A21KA0
	12.000	9.600			100K3C	2/8	1.25/0.31		P2M5A43AA0
	14.700	12.000	200	224	100K3L	2/8	1.60/0.39	DGT3A0M30	P2M5A43KA0
	6.900	5.500			80K3L	2/8	0.63/0.15		P1M3A13KA0
	8.600	6.900			80K2L	2 with inv.	0.80		P1M3A11KA0
	13.500	10.800		223	100K3C	2/8	1.25/0.31	DGT4A0M12	P2M5A33AA0
	17.200	13.800			100K3L	2/8	1.60/0.39		P2M5A33KA0
	21.600	17.200	250	222	100K2L	2 with inv.	2.00	DGT4A0M32	P2M5A31KA0
	14.600	11.700			100K3C	2/8	1.25/0.31		P2M5A23AA0
	18.700	14.900			100K3L	2/8	1.60/0.39		P2M5A23KA0
	23.400	18.700		334	100K2L	2 with inv.	2.00	DGT5A0M12 (rh) DGT5A0M22 (lh)	P2M5A21KA0
	29.300	23.500			112K3L	2/8	2.50/0.62		P3M6B43KA0
	29.400	29.400	315	333	112K2L	2 with inv.	3.20	DGT5A0M32 (rh) DGT5A0M42 (lh)	P3M6B41KA0
	16.400	13.100			100K3C	2/8	1.25/0.31		P2M5A13AA0
	21.000	16.800			100K3L	2/8	1.60/0.39		P2M5A13KA0
	32.800	26.200		221	112K3L	2/8	2.50/0.62	DGT6A0M12 (rh) DGT6A0M22 (lh)	P2M5A13AA0
	42.000	33.600			112K2L	2 with inv.	3.20		P3M6B33KA0
	32.800	26.200	400	333	112K3L	2/8	2.50/0.62	DGT6A0M32 (rh) DGT6A0M42 (lh)	P3M6B31KA0
	42.000	33.600			112K2L	2 with inv.	3.20		P3M6B31KA0
	32.800	26.200	400 R	333	112K3L	2/8	2.50/0.62	DGT6A0M82 (rh) DGT6A0M92 (lh)	P3M6B33KA0
	42.000	33.600			112K2L	2 with inv.	3.20		P3M6B31KA0

The specifications refer to a single geared-motor; in case of two or more geared-motors, multiply the travelling mass by the number of geared-motors used. Verify that in relation to the rail's running surface width (b), average reaction (R ave) is compatible with the values listed in diagram pages 12, 13 and 14. The values for travelling mass in red require a verification of average reaction (R ave.) on each wheel, which must not exceed the following Rx. max. values:

Ø 125 R ave. ≤ Rx max. ≤ 3.670 kg (36 kN)	Ø 160 R ave. ≤ Rx max. ≤ 4.893 kg (48 kN)	Ø 200 R ave. ≤ Rx max. ≤ 7.340 kg (72 kN)	Ø 250 R ave. ≤ Rx max. ≤ 10.805 kg (106 kN)	Ø 315 R ave. ≤ Rx max. ≤ 14.679 kg (144 kN)	Ø 400 R ave. ≤ Rx max. ≤ 18.960 kg (186 kN)	Ø 400 R R ave. ≤ Rx max. ≤ 30.580 kg (300 kN)
--	--	--	--	--	--	--

TRAVELLING MASSES AT 2 SPEEDS, BASED ON THE COMBINATION OF COMPONENTS

NOMINAL SPEED (m/min)	TRAVELLING MASS (kg) ISO SERVICE GROUP (FEM)		"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTORS		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS	
	M4 (1Am)	M5 (2m)		REDUCER TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	"DGT" DRIVE WHEEL GROUP	"DGP" GEARED-MOTOR
80/20	2.500	2.000	160	024	71K3L	2/8	0.40/0.09	DGT2A0M10	P0M2A43KA0
	3.200	2.500			71K2L	2 with inv.	0.50		P0M2A41KA0
	3.200	2.500			80K3C	2/8	0.50/0.12		P1M3A43AA0
	4.000	3.200		124	80K3L	2/8	0.63/0.15	DGT2A0M30	P1M3A43KA0
	5.000	4.000			80K2L	2 with inv.	0.80		P1M3A41KA0
	5.400	4.300			80K3L	2/8	0.63/0.15		P1M3A23KA0
	6.900	5.500	250	122	80K2L	2 with inv.	0.80	DGT4A0M12	P1M3A21KA0
	10.800	8.600			100K3C	2/8	1.25/0.31		P2M5A43AA0
	13.500	10.800			100K3L	2/8	1.60/0.39		P2M5A43KA0
	17.200	13.800		224	100K2L	2 with inv.	2.00	DGT4A0M32	P2M5A41KA0
	16.500	13.200			100K3L	2/8	1.60/0.39		P2M5A23KA0
	20.600	16.500			100K2L	2 with inv.	2.00		P2M5A21KA0
	25.800	20.600	400	222	112K3L	2/8	2.50/0.62	DGT6A0M32 (rh)	P3M6B43KA0
	33.000	26.400			112K2L	2 with inv.	3.20	DGT6A0M42 (lh)	P3M6B41KA0
				334					
	33.600	26.900	400 R	334	112K2L	2 with inv.	3.20	DGT6A0M82 (rh) DGT6A0M92 (lh)	P3M6B41KA0

The specifications refer to a single geared-motor; in case of two or more geared-motors, multiply the travelling mass by the number of geared-motors used. Verify that in relation to the rail's running surface width (b), average reaction (R ave) is compatible with the values listed in diagram pages 12, 13 and 14. The values for travelling mass in **red** require a verification of average reaction (R ave.) on each wheel, which must not exceed the following Rx. max. values:

Ø 125 R ave. ≤ Rx max. ≤ 3.670 kg (36 kN)	Ø 160 R ave. ≤ Rx max. ≤ 4.893 kg (48 kN)	Ø 200 R ave. ≤ Rx max. ≤ 7.340 kg (72 kN)	Ø 250 R ave. ≤ Rx max. ≤ 10.805 kg (106 kN)	Ø 315 R ave. ≤ Rx max. ≤ 14.679 kg (144 kN)	Ø 400 R ave. ≤ Rx max. ≤ 18.960 kg (186 kN)	Ø 400 R R ave. ≤ Rx max. ≤ 30.580 kg (300 kN)
--	--	--	--	--	--	--

SAMPLE GUIDELINES FOR SELECTING DRIVE UNITS FOR CRANES

To make the correct choice of drive unit, firstly establish all operating parameters which determine its operating limitations, defining and/or verifying the following factors (see sample guidelines for various "limit" cases listed below, purely by way of example):

1. Define operating data: nominal load, running speed (1 or 2 speed) and ISO service group (FEM);
2. Define: the mass (weight) of the crane or trolley in question and any accessories (frame, electrical system, etc.);
3. Define: in the case of a crane, the weight of the hoist/trolley or trolley/winch, or any movable masses (blocks, etc.) in the case of trolleys;
4. Calculate: the total mass to be traversed, i.e. the nominal load + all equipment masses (weight of crane, trolley, etc.);
5. Define: the no. of motor drive units, necessities for the running of the total mass to be travelled;
6. Calculate: the mass each drive wheel must travel (i.e. the ratio between the total mass and the no. of wheel drive groups);
7. Verify: the maximum, minimum and average reactions on the wheels, considering the load approach/eccentricities;
8. Verify: the congruency of the rail running surface width, in relation to the type of rail on which the wheels will run on.

1st Example: Single girder crane - Capacity 5 t - Span 16 m

1. nominal load P = 5000 kg; 2 crane running speeds = 40/10 m/min; ISO service group M4 (FEM 1Am)
2. weight of crane + accessories: M1 ≈ 2500 kg
3. weight of hoist + trolley: M2 ≈ 500 kg
4. total mass to travel: 5000 + 2500 + 500 = 8000 kg
5. Motor drive units: no. 2
6. mass to travel for each motor drive wheel: 8000 / 2 = 4000 kg

Based on the selected speed and calculation of mass to be travelled for each drive wheel, derive the following components from the table on page 33:

NOMINAL SPEED (m/min)	TRAVELLING MASS (kg) IN SERVICE GROUP ISO M4 (FEM 1Am) IS IN kg	"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTOR		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS	
			GEARED-MOTOR TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	"DGT" DRIVE WHEEL GROUP	"DGP" GEARED-MOTOR
40/10	4.200 > di 4.000 to be traversed	125	022	71K3L	2/8	0.40/0.09	DGT1A0M10	P0M2A23KA0

At this point, verify the suitability of the Ø 125 wheel selected, in relation to its admissible reactions and type of rail:

7. reactions on the wheels, calculated as illustrated on page 12, for gauge "S" = 16,000 mm and supposing an approach "a" = 1000 mm:
 $R_{max} = 2.500/4 + [(500 + 5.000)/2] \cdot (1 - 1.000/16.000) \approx 3.203 \text{ kg}$
 $R_{min} = 2.500/4 + 500/2 \cdot 1.000/16.000 \approx 641 \text{ kg}$
 $R_{ave} = (2 \cdot R_{max} + R_{min})/3 = (2 \cdot 3.203 + 641)/3 \approx 2.349 \text{ kg} < 3.670 \text{ kg}$, corresponding to max. R admissible
8. supposing a flat laminated rail, with l = 40 and a running surface b = 38 (see table on page 11), from the diagram on page 12 we can deduce that, for a Ø 125 wheel with a **standard sheave** width, considering the factors (speed and rail running surface), the average admissible reaction for service group M4 (1Am) is:
 $R_{ave. admissible} \approx 2400 \text{ kg} > \text{of the } 2349 \text{ kg}$ the wheel is subject to.

2nd Example: Double girder crane - Capacity 10 t - Span 20 m

1. nominal load P = 10.000 kg; 2 crane sliding speeds = 40/10 m/min; ISO service group M4 (FEM 1Am)
2. weight of crane + accessories: M1 ≈ 5,900 kg
3. weight of hoist + trolley: M2 ≈ 750 kg
4. total mass to travel: 10,000 + 5,900 + 750 = 16,650 kg
5. Motor drive units: no. 2
6. mass to travel for each motor drive wheel: 16,650 / 2 = 8325 kg

Based on the selected speed and calculation of mass to be traversed for each drive wheel, derive the following components from the table on page 33:

NOMINAL SPEED (m/min)	MASSA TRASLABILE (kg) GRUPPO DI SERVIZIO ISO M4 (FEM 1Am) È DI kg	"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTOR		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS	
			GEARED-MOTOR TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	"DGT" DRIVE WHEEL GROUP	"DGP" GEARED-MOTOR
40/10	9.400 > di 8.325 da traslare	200	134	80K3L	2/8	0.63/0.15	DGT3A0M10	P1M3B43KA0

At this point, verify the suitability of the Ø 200 wheel selected, in relation to its admissible reactions and type of rail:

7. reactions on the wheels, calculated as illustrated on page 12, for gauge "S" = 20000 mm and supposing a juxtaposition "a" = 1000 mm:
 $R_{max} = 5.900/4 + [(750 + 10.000)/2] \cdot (1 - 1.000/20.000) \approx 6.581 \text{ kg}$
 $R_{min} = 5.900/4 + 750/2 \cdot 1.000/20.000 \approx 1.494 \text{ kg}$
 $R_{ave} = (2 \cdot R_{max} + R_{min})/3 = (2 \cdot 6.581 + 1.494)/3 \approx 4.885 \text{ kg} < 7.340 \text{ kg}$, corresponding to the admissible R max.
8. supposing a flat laminated rail, with l = 50 and operating band b = 48 (see table on page 11), from the diagram on page 13 we can deduce that, for a Ø 200 wheel with a **standard sheave** width, considering the factors (speed and operating bandwidth), the average admissible reaction for the service group M4 (1Am) is:
 $R_{ave. admissible} \approx 5.500 \text{ kg} > \text{of the } 4.885 \text{ kg}$ the wheel is subject to.

3rd Example: Trolley for winch - Capacity 40 t – Gauge 2.4 m

1. nominal load $P = 40.000$ kg; 2 trolley running speeds = 20/5 m/min; ISO service group M5 (FEM 2m)
2. weight of crane + accessories: $M1 \approx 2.600$ kg
3. weight of block + ropes: $M2 \approx 400$ kg
4. total mass to travel: $40.000 + 2.600 + 400 = 43.000$ kg
5. motor drive units: $n^\circ 2$
6. mass to travel for each drive wheel: $43.000 / 2 = 21.500$ kg

Based on the selected speed and calculation of mass to be travelled for each drive wheel, derive the following components from the table on page 32:

NOMINAL SPEED (m/min)	TRAVELLING MASS (kg) IN SERVICE GROUP ISO M5 (FEM 2m) IS IN kg	"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTOR		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS	
			GEARED-MOTOR TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	"DGT" DRIVE WHEEL GROUP	"DGP" GEARED-MOTOR
20/5	21.600 > di 21.500 to be traversed	250	232	80K2L	2 con inverter	0.80	DGT4A0M32	P2M3B2IKA0

At this point, verify the suitability of the Ø 250 wheel selected, in relation to its admissible reactions and type of rail:

7. reactions on the wheels, calculated as illustrated on page 12, for gauge "S" = 2.400 mm and supposing the centred hook "a" = 1.200 mm:
 $R_{max} = 2.600/4 + [(400 + 40.000)/2] \cdot (1 - 1.200/2.400) \approx 10.750$ kg
 $R_{min} = 2.600/4 + 400/2 \cdot 1.200/2.400 \approx 750$ kg
 $R_{ave} = (2 \cdot R_{max} + R_{min})/3 = (2 \cdot 10.750 + 750)/3 \approx 7.417$ kg < 10.805 kg, corresponding to max. R admissible
8. supposing a flat laminated rail, with $l = 60$ and operating band $b = 58$ (see table on page 11), from the diagram on page 13 we can deduce that, for a Ø 250 wheel with a **standard sheave** width, considering the factors (speed and rail running surface), the average admissible reaction for the service group M5 (2m) is:
 $R_{ave. admissible} \approx 8.300$ kg > of the 7.417 the wheel is subject to.

4th Example: Gantry crane - Capacity 40 t - Span 27 m

1. nominal load $P = 40.000$ kg; 2 crane running speeds = 32/8 m/min; service group ISO M5 (FEM 2m)
2. weight of crane + accessories: $M1 \approx 27.000$ kg
3. Weight of trolley + hoist: $M2 \approx 3.000$ kg
4. total mass to travel: $40.000 + 27.000 + 3.000 = 70.000$ kg
5. motor drive units: no. 2
6. mass to travel for each drive wheel: $70.000 / 2 = 35.000$ kg

Based on the selected speed and calculation of mass to be travelled for each drive wheel, derive the following components from the table on page 33:

NOMINAL SPEED (m/min)	TRAVELLING MASS (kg) IN SERVICE GROUP ISO M5 (FEM 2m) IS IN kg	"DGT" WHEEL GROUP Ø (mm)	"DGP" GEARED-MOTOR		SELF-BRAKING MOTOR SPECS		CODES FOR COMPONENTS	
			GEARED-MOTOR TYPE	MOTOR TYPE	POLES (N°)	POWER (kW)	"DGT" DRIVE WHEEL GROUP	"DGP" GEARED-MOTOR
32/8	41.300 > 35.000 to be traslated	400 R	232	100K2L	2 con inverter	2.00	DGT6A0M62 (rh) DGT6A0M72 (lh)	P2M5B2IKA0

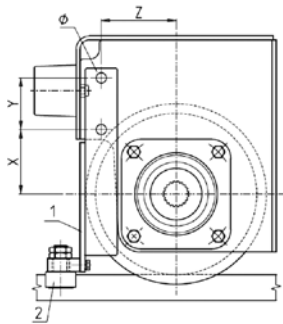
At this point, verify the suitability of the Ø 400 wheel selected, in relation to its admissible reactions and type of rail:

7. reactions on the wheels, calculated as illustrated on page. 12, for span "S" = 27.000 mm nd supposing a position "a" = 1.500 mm:
 $R_{max} = 27.000/4 + [(3.000 + 40.000)/2] \cdot (1 - 1.500/27.000) \approx 27.056$ kg
 $R_{min} = 27.000/4 + 3.000/2 \cdot 1.500/27.000 \approx 6.834$ kg
 $R_{ave} = (2 \cdot R_{max} + R_{min})/3 = (2 \cdot 27.056 + 6.834)/3 \approx 20.315$ kg < 30.580 kg, corresponding to max R admissible
8. supposing a flat laminated rail, with $l = 100$ and operating band $b = 98$ (see table on page 11), from the diagram on page 14 we can deduce that, for a Ø 400 R with **special sheave** width, considering the factors (speed and rail running surface), the average admissible reaction for the service group M5 (2m), is:
 $R_{ave. admissible} \approx 20.550$ kg > of the 20.315 kg the wheel is subject to.

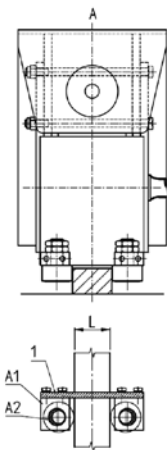
ACCESSORY COMPONENT OF THE BRIDGE CRANE END-CARRIAGES

GUIDE ROLLS

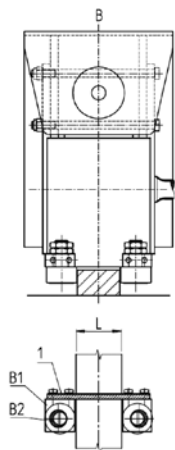
1: Load-bearing frame
2: Idle pin bearing



Layout A:
A1: Idle pin bearing support
A2: Idle pin eccentric



Layout B:
B1: Idle pin bearing support
B2: Idle pin eccentric



DGT	CODE	WHEEL BOX PERFORATION (mm)				TRACK WIDTH L (mm)			
						LAYOUT A		LAYOUT B	
		X	Y	Z	Ø	MIN	MAX	MIN	MAX
1	DGT1A0F10	52	50	63	9	35	45	50	60
2	DGT2A0F10	70	50	77	11	40	50	55	65
3	DGT3A0F10	85	60	96	13	45	55	60	70
4	DGT4A0F10	100	80	116	13	55	65	70	80
5	DGT5A0F10	122,5	75	141	17	60	70	75	85
6	DGT6A0F10	152	80	178	21	70	80	85	95

DONATI WEBSITE

Donati's window on the world for customer service.

Manuals and product information

The new Donati website has been designed to assist customers so they can easily find all of the updated information on Donati products at any time.

The Donati website makes it simple to consult and download product catalogues, technical manuals and product information sheets.



Donati Shop

The Donati Shop makes it possible to quickly and independently handle spare parts requests, thus reducing waiting times for customers.

Contact Section

The new contact section divided by departments lets you address your requests to the right team, so our staff can provide a faster and more accurate answer.

LEONARDO CONFIGURATION SYSTEM



Leonardo Configuration System is the Donati configurator system lets you configure and generate offers for Chain hoists, Jib cranes and Crane sets, easily and quickly; it lets you rapidly and efficiently respond to your customers' requests.

The suite is composed of two configurators:

Leonardo Product Configurator:

Used to configure chain hoists and jib cranes alone or in combination

Leonardo Crane Set Configurator:

Used to configure bridge cranes complete with all necessary accessories and Donati hoists.



visit donaticranes.com
and keep up to date

MKCT20ENT0

Donati Sollevamenti S.r.l.

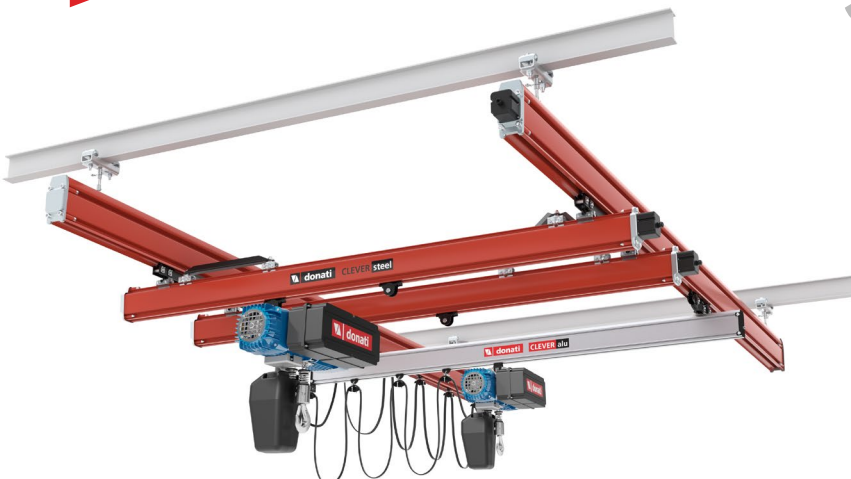
Via S. Quasimodo, 17
20025 Legnano (MI) - Italy
Tel +39 0331 14811
Fax +39 0331 1481880

dvo.info@donaticranes.com
www.donaticranes.com



MODULAR LIGHT CRANE SYSTEM

CLEVER STEEL
CLEVER ALU



 **donati**
CLEVER CONVENIENCE



CLEVER STEEL
CLEVER ALU

FLEXIBILITY
FOR LIFTING
EVERY NEED



The **CLEVER STEEL** and **CLEVER ALU** systems by **Donati Sollevamenti** are the ideal choice for **efficient, safe and customizable handling**.

Realized with **modular systems**, they adapt easily to any production area and ensure **quick installation** thanks to compatible components and optimised suspensions.

Designed for **loads up to 2,000 kg**, CLEVER systems can be **expanded** or **modified** over time to meet specific new local requirements, thus minimising production downtime.

With **15 profile types** and **6 available solutions**, CLEVER STEEL and CLEVER ALU offer **maximum versatility** for any load capacity and runways suspension distances.

Why choose CLEVER systems? Greater flexibility, greater efficiency.

MODULAR DESIGN: easy to configure and expand to suit the customer's needs

SMOOTH AND SAFE HANDLING: precision with minimal effort

QUICK INSTALLATION: reduced assembly times and lower costs

OPTIMISED DESIGN: reduced lateral approach spaces and long suspensions distances

TAILOR-MADE SOLUTIONS: every system can be tailored to the customer's working area



LIGHTWEIGHT
**MODULAR
SYSTEMS**



LOAD CAPACITY UP TO

2,000 kg



7

TYPES OF
**STEEL
PROFILES**



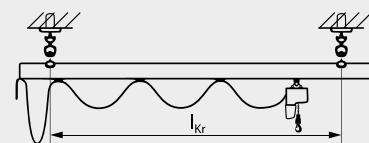
8

TYPES OF
**ALUMINIUM
PROFILES**



CLEVER steel

LOAD CAPACITY (kg)	l_{Kr} [m]
125	10.50
250	10.50
500	9.30
1,000	6.60
1,600	5.25
2,000	4.65



CLEVER STEEL CLEVER ALU SINGLE-GIRDER

A wide range of suspension configurations for every type of load

A lightweight yet sturdy structure thanks to its optimised profile system

Manual handling with maximum flexibility

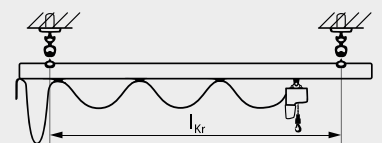
Compatible with all Donati DMK series electric chain hoists

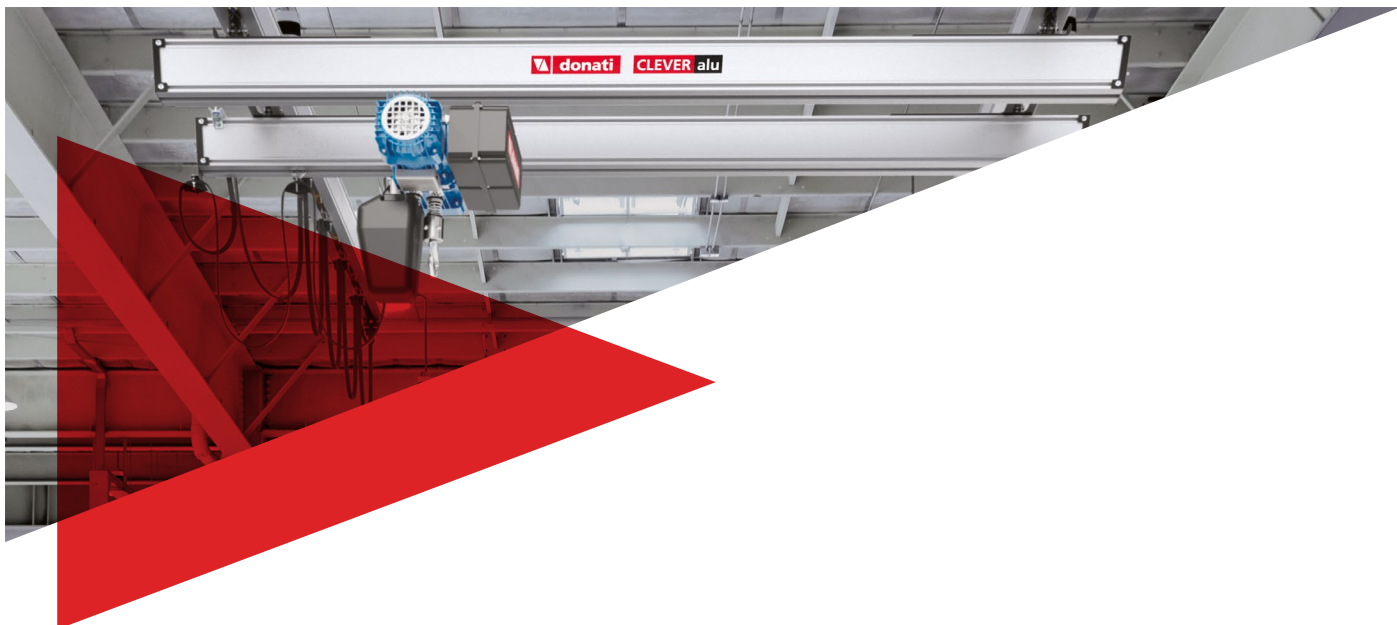
Load capacity up to 2,000 kg



CLEVER alu

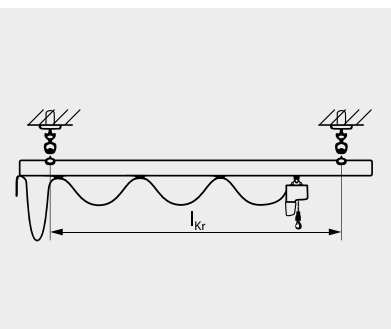
LOAD CAPACITY (kg)	l_{Kr} [m]					
125					7.75	
250					7.75	
500					7.75	
1,000				5.75		
1,600			4.75			
2,000		3.75				





CLEVER steel

LOAD CAPACITY (kg)	l_{Kr} [m]									
125										10.50
250										10.50
500										10.50
1,000										8.90
1,600										7.15
2,000										6.45



CLEVER STEEL CLEVER ALU DOUBLE-GIRDER

Safe and precise manual handling, even in case of heavy loads and wide spans

Modular system for customized solutions

Quick and easy installation, compact design

Maximum space efficiency

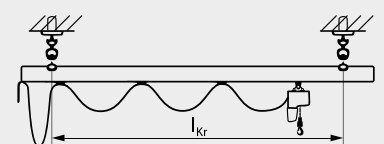
Load capacity up to 2,000 kg

Compatible with all DMK series Donati electric chain hoists



CLEVER alu

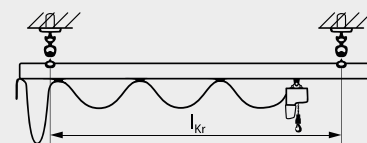
LOAD CAPACITY (kg)	l_{Kr} [m]				
125				7.75	
250				7.75	
500				7.75	
1,000				7.75	
1,600				6.90	
2,000				6.25	





CLEVER steel

LOAD CAPACITY (kg)	l_{Kr} [m]									
125										10.50
250										10.50
500										8.90
1,000										6.70
1,600										5.65
2,000										4.80



CLEVER STEEL

CLEVER ALU

MONORAIL

Tailor made solutions for suspended straight monorail

A wide range of options in aluminium and steel profiles

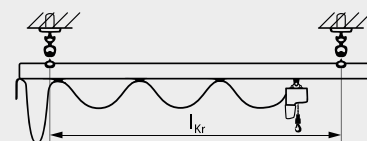
Load capacity up to 2,000 kg

Manual handling



CLEVER alu

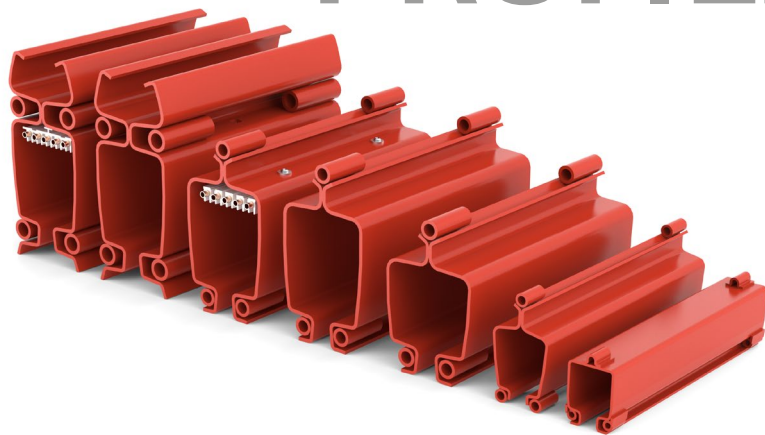
LOAD CAPACITY (kg)	l_{Kr} [m]									
125										8.75
250										8.75
500										8.65
1,000										6.20
1,600										4.90
2,000										4.45





CLEVER STEEL CLEVER ALU

PROFILES

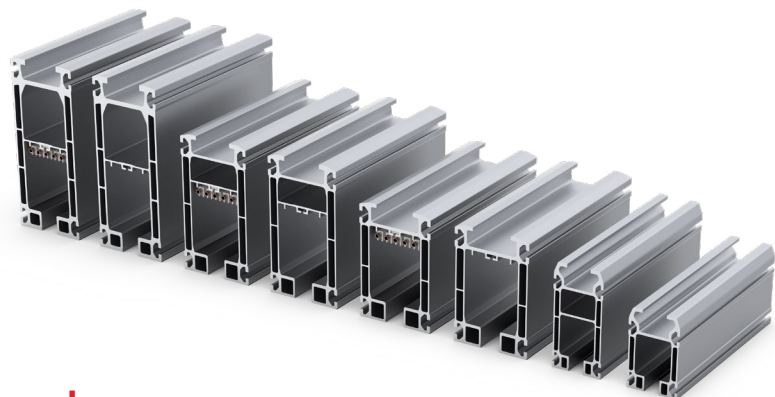


CLEVER steel

Dual protection

The system is built upon a cold-rolled profile designed to deliver superior quality and high performance. Its perfectly smooth surface, combined with high structural rigidity and a light weight, guarantees a reliable performance in every application. Slightly inclined sliding surfaces and guide

sections ensure smooth, low-effort trolley travel. In the profiles designed for light and medium load capacities, the “internal flange” design provides dual protection: it shields the trolley and safeguards the integrated power supply line, which results in a longer service life and a cleaner, streamlined look.



CLEVER alu

The perfect profile for every need

You can choose from eight aluminium profiles in five different sizes, designed to precisely accommodate all configurations of lightweight lifting systems. Thanks to their special adapters, the profiles can be easily integrated into existing systems, ensuring continuity and maximum flexibility for future upgrades. The extremely low weight, combined

with high structural rigidity, results in structures that are lightweight and robust, making assembly and handling easier. Clever Alu also allows for long suspension spans — up to 11 metres — without compromising stability or performance, making it the ideal solution for modern, high-efficiency applications.

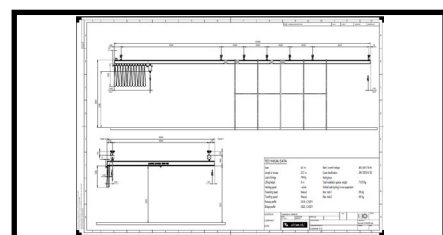
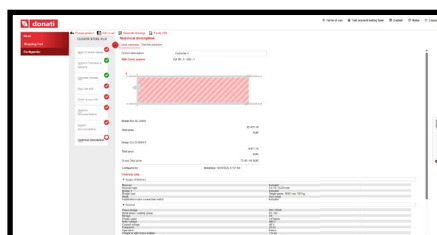
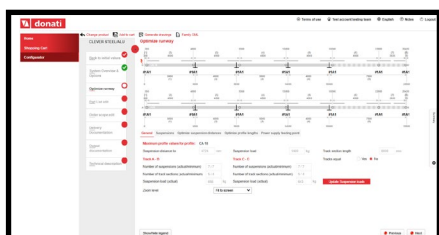
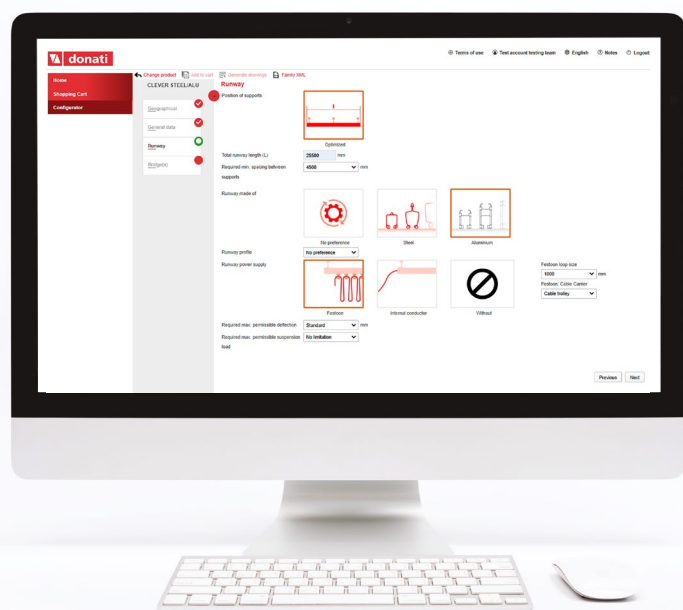


LEONARDO CLEVER STEEL/ALU CONFIGURATOR

The web-based design tool allows you to configure your modular system quickly and easily in just a few steps.

You will always receive the best possible solution for your needs.

Available on the donaticranes/configurators website





Donati Sollevamenti S.r.l.
Via S. Quasimodo, 17 - 20025 Legnano (MI) - Italy
Tel +39 0331 14811 - Fax +39 0331 1481880

dvo.info@donaticranes.com
www.donaticranes.com





NEW
GRL
JIB CRANE
360°
CONTINUOUS REVOLUTION

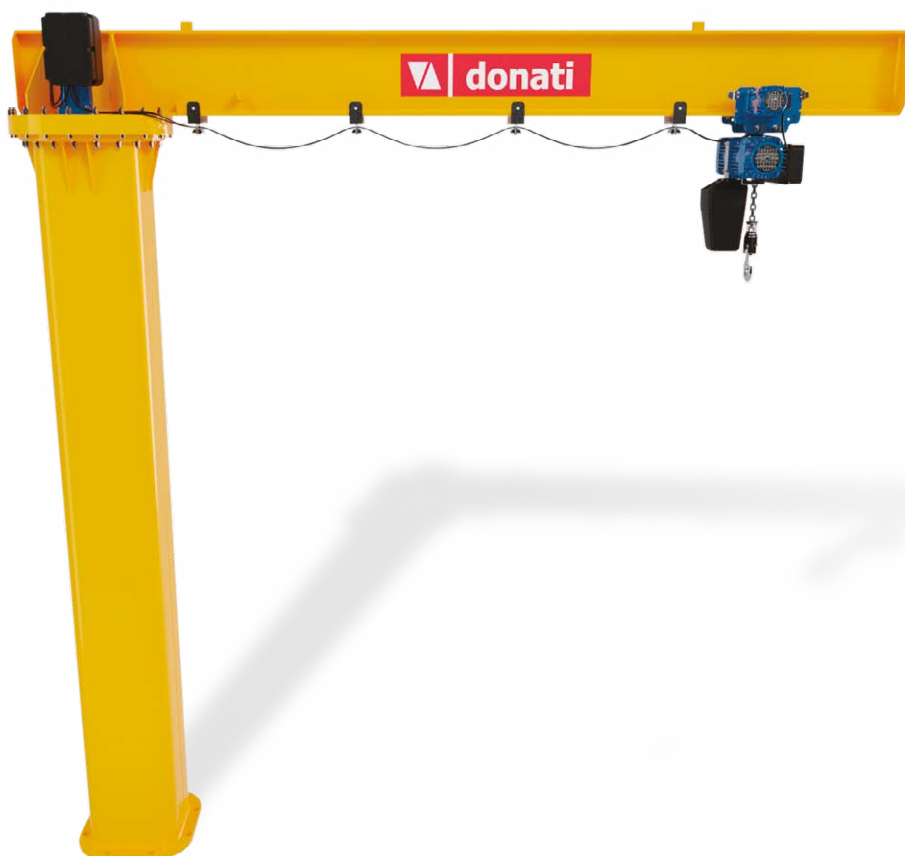


 **donati**
CLEVER CONVENIENCE



NEW GRL THE JIB CRANE THAT CAN BE CONVERTED FROM MANUAL TO ELECTRIC

Ideal for providing a 360° load handling service.
Perfect for indoor or outdoor applications, loading lorries,
serving machines or assembling equipment.





It is designed to fit a slip ring collector inside the column to enable continuous rotation.



The use of a thrust bearing with internal gearing ensures smoother rotation and a higher level of safety.



GRL CRANE USEFUL AT 360°

The new Donati GRL Jib Crane is able to make a **360° continuous rotation** with a **maximum capacity of 2,000 kg** and an **outreach up to 7 metres**

It can be converted from Manual to Electric, even after it has been purchased, with an adapter kit available on request.



MAX. CAPACITY
2000 kg

ROTATION
 **360°**

OUTREACH UP TO
 **7 m**

The GRL is Donati Sollevamenti's innovative response to the demands of a highly specific and challenging market that requires lightness and versatility in a single product.

MAIN CHARACTERISTICS

COLUMN

Made in press forged steel with a tubular structure for high stability.

MOTOREDUCTOR

Highly reliable, it consists of an epicyclical reducer in an oil bath combined with a self-braking conical motor. Attached vertically in the upper part of the outreach, progressive starting up and braking are ensured by a frequency inverter powered by three-phase 380-480 V voltage.

ROTATING ARM

Allows maximum use of the hook run of the hoist/trolley installed.

ROTATION MECHANISM

The bearing ring or thrust bearing supports both the vertical forces and the tilting momentum due to movement.

FIXING SYSTEM

With two options: foundation with anchor bolts or counter plate with chemical anchor bolts.

ELECTRICAL POWER SUPPLY

The power line to power the trolley-hoist is formed by flexible flat fire-retardant multipolar cables festooned on sliding trolleys on the lower flange of the beam.

PRODUCT RANGE

CAPACITY: 250, 500, 1000 and 2000 kg

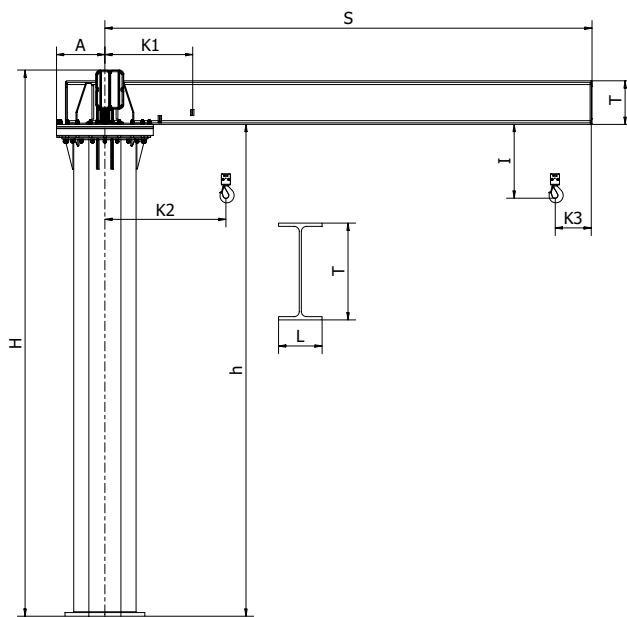
OUTREACH: up to 7 m





TECHNICAL DATA SHEETS

GRL series Column-Mounted Manual | Electric Jib Crane 360° continuous rotation



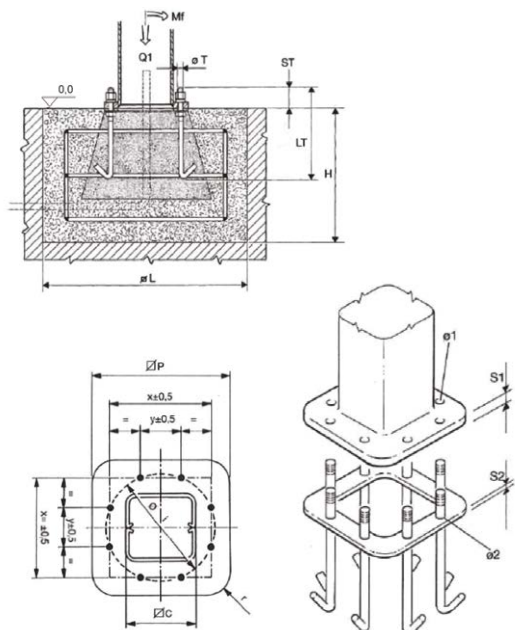
360°
360° rotation
Manual | Electric

GRL Jib Crane with DMK electric chain hoist
 $K2 = K1 + (M/2)$ → referring to the fixed mechanical limit switch
 $K3 = (M/2)$ → referring to the fixed mechanical limit switch
 I and M = See DMK commercial catalogue

For the limits of use, please refer
to the general Jib Crane Catalogue

Lifting capacity	Outreach	Jib Crane size	Counterplate	Code	Under beam	Maximum under beam	Total height H		Overall dimensions (mm)				Arm speed		Motor power	Jib Crane weight	Column weight
kg	m	S			h minimum mm	h maximum mm	Electric	Manual	K1 mm	A mm	T mm	L mm	rpm r/min	Peripheral m/min	kW	kg	kg/m
250	4	U	U	E30544	2810	4810	3260	3100	676	318	240	120	0.75	18	0.4	480	43.5
	5	U	U	E30554	2810	4810	3260	3100	676	318	240	120	0.6	19	0.4	510	43.5
	6	U	U	E30564	2810	4810	3260	3100	676	318	300	150	0.5	20	0.4	620	43.5
	7	V	V	E30674	3060	5060	3510	3465	758	400	360	170	0.5	22	0.4	960	64
500	2	U	U	E30525	2810	4810	3260	3100	676	318	240	120	1	13	0.4	415	43.5
	3	U	U	E30535	2810	4810	3260	3100	676	318	240	120	1	19	0.4	450	43.5
	4	U	U	E30545	2810	4810	3260	3160	676	318	300	150	0.75	18	0.4	540	43.5
	5	U	U	E30555	2810	4810	3260	3160	676	318	300	150	0.6	19	0.4	580	43.5
	6	V	V	E30665	3060	5060	3510	3465	758	400	360	170	0.5	20	0.4	910	64
	7	Z	Z1	E30775	3060	5060	3510	3505	758	400	400	180	0.5	22	0.4	1080	75.2
1000	2	U	U	E30527	2810	4810	3260	3100	676	318	300	150	1	13	0.4	450	43.5
	3	U	U	E30537	2810	4810	3260	3100	676	318	300	150	1	19	0.4	490	43.5
	4	V	V	E30647	3060	5060	3510	3465	758	400	360	170	0.7	18	0.4	800	64
	5	Z	Z1	E30757	3060	5060	3510	3465	758	400	360	170	0.6	20	0.4	900	75.2
	6	Z	Z1	E30767	3060	5060	3510	3465	758	400	400	180	0.5	20	0.4	1010	75.2
	7	Z	Z1	E30777	3060	5060	3510	3465	758	400	450	190	0.5	22	0.4	1170	75.2
2000	2	V	V	E30629	3060	5060	3510	3465	758	400	360	170	1	13	0.4	680	64
	3	Z	Z1	E30739	3060	5060	3510	3465	758	400	360	170	1	19	0.4	770	75.2
	4	Z	Z2	E30749	3060	5060	3510	3505	758	400	400	180	0.7	18	0.4	870	75.2
	5	Z	Z2	E30759	3060	5060	3555	3555	758	400	450	190	0.5	16	0.4	1100	75.2

Base Plates, Foundation Frames and Plinths for GRL Jib Cranes



ATTENTION!

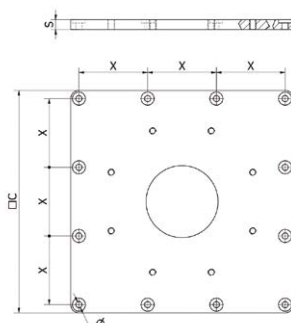
The dimensions of the foundation plinths are purely indicative. The foundation plinth must be dimensioned by expert, qualified technicians considering the real consistency of the ground and the maximum pressure it can withstand.

Size		U	V	Z
Base plate and foundation frame (mm)	Ø C	372	435	515
	Ø P	475	555	660
	S1	20	20	25
	S2	8	8	8
	x	432	506	599
	y	179	210	248
	Ø	468	548	248
	r	145	165	197
	Ø1	25	29	35
Anchor bolts (mm)	Ø2	21	25	31
	ØT	M20	M24	M30
	LT	550	600	700
Tightening torque (Nm)		200	350	680
Frame/anchor bolt weight (kg)		17	26	47
Foundation plinth (mm)	Ø L	1700	2000	2400
	H	900	1100	1100
Reaction (kN)		Q1*	18.4	28.7
Momentum (kNm)		Mf*	57	107

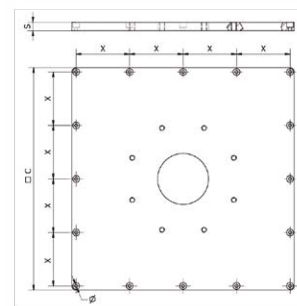
Note: the foundation frame with anchor bolts, used in the column-mounted version for fixing the column itself to the foundation plinth is supplied on request.

* M = 1.71; $\psi = 1.75$

Counterplates for fixing to the floor with chemical bolts of the GRL Jib Crane



Nr 12 Chemical bolts for
COUNTERPLATE U - V - Z1



Nr 16 Chemical bolts for
COUNTERPLATE Z2

ATTENTION!

Fixing of column with chemical bolts requires a scrupulous verification of suitability in relation to type of support flooring. The suitability checks are the responsibility of the user and must be carried out by an expert, qualified technicians who will evaluate the feasibility and formally assume the relative responsibilities.

Size		U	V	Z1	Z2
Counterplate and chemical bolts code		GBA2U0KPS	GBA2V0KPS	GBA2Z1KPS	GBA2Z2KPS
Counterplate dimensions (mm)	C	680	995	1130	1310
	S	30	40	40	50
	x	210	315	360	315
	Nr x Ø	12x19	12x19	12x19	16x19
Counterplate weight (kg)		100	285	375	640
Maximum tilting momentum allowed (kNm)		Mf*	56.7	107.3	135.6
Fixing characteristics	Type of concrete floor: minimum Fck/Rck class (N/mm ²)	C20/25	C20/25	C20/25	C20/25
	Minimum concrete floor thickness (mm)	170	170	170	170
	Diameter of hole in the floor (mm)	18	18	18	18
	Depth of hole in concrete floor (mm)	135	135	135	135
	Tightening torque of the bolts (Nm)	60	60	60	60
	Bolt height from top plate surface (mm)	35	25	25	15

For the tightening torque of the bolts between the column and counterplate, see the relative tightening torques for the anchor bolts in the table alongside.





Donati Sollevamenti S.r.l.
Via S. Quasimodo, 17 - 20025 Legnano (MI) - Italy
Tel +39 0331 14811 - Fax +39 0331 1481880

dvo.info@donaticranes.com
www.donaticranes.com





CRANE SET

COMPONENTS

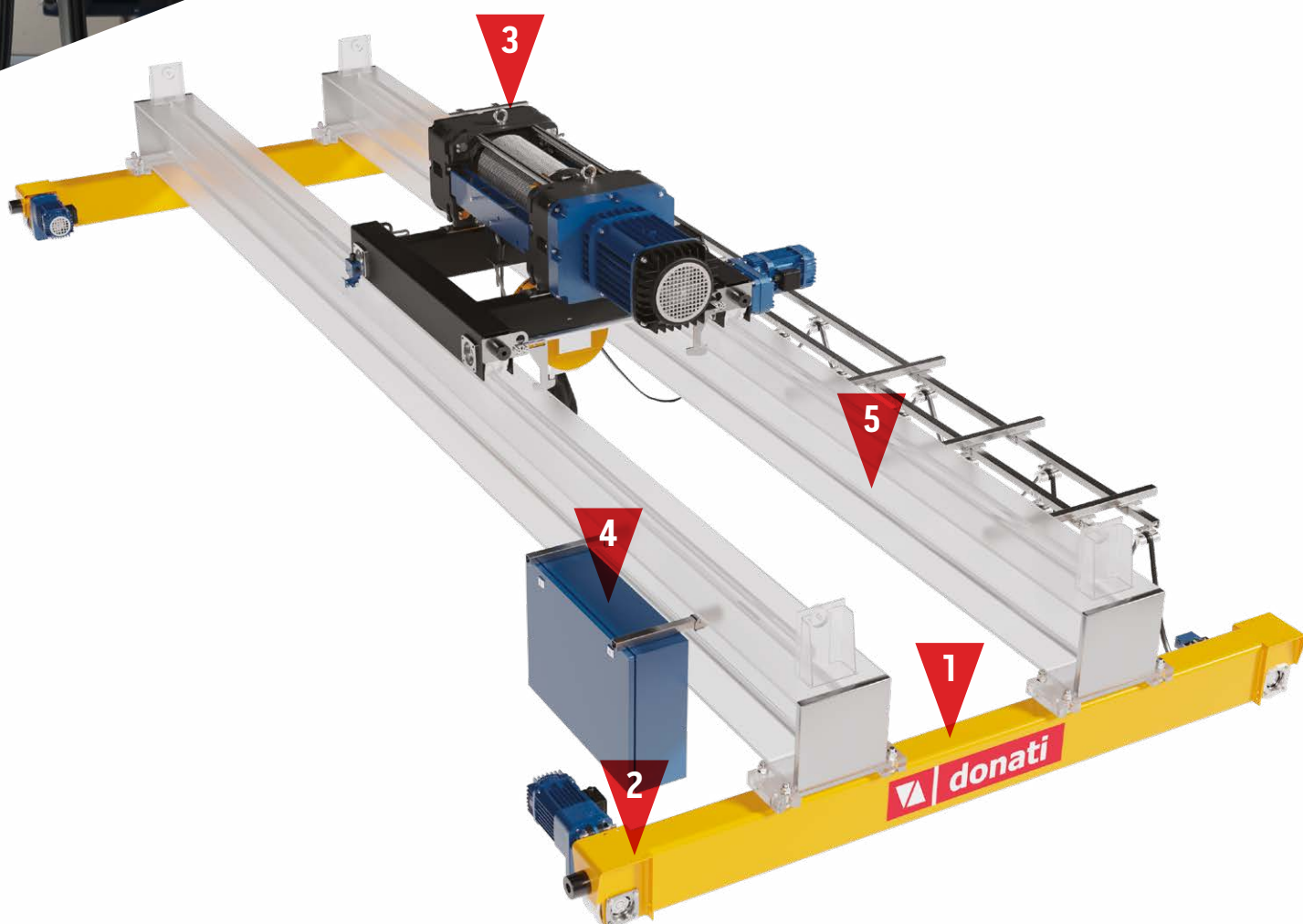
FOR BRIDGE CRANES



 **donati**
CLEVER CONVENIENCE



SUPPORTED BRIDGE CRANE COMPONENTS



- 1.** Motorised sliding end carriages with DGT series wheel units
- 2.** DGT series wheel units with DGP series pendulum gearmotors
- 3.** DRH series wire rope hoists (shown) - DMK series chain hoists
- 4.** Electrical control panels
- 5.** Bridge girders excluded from the scope of Donati supply



SLIDING END CARRIAGES

FOR SUPPORTED BRIDGE CRANES

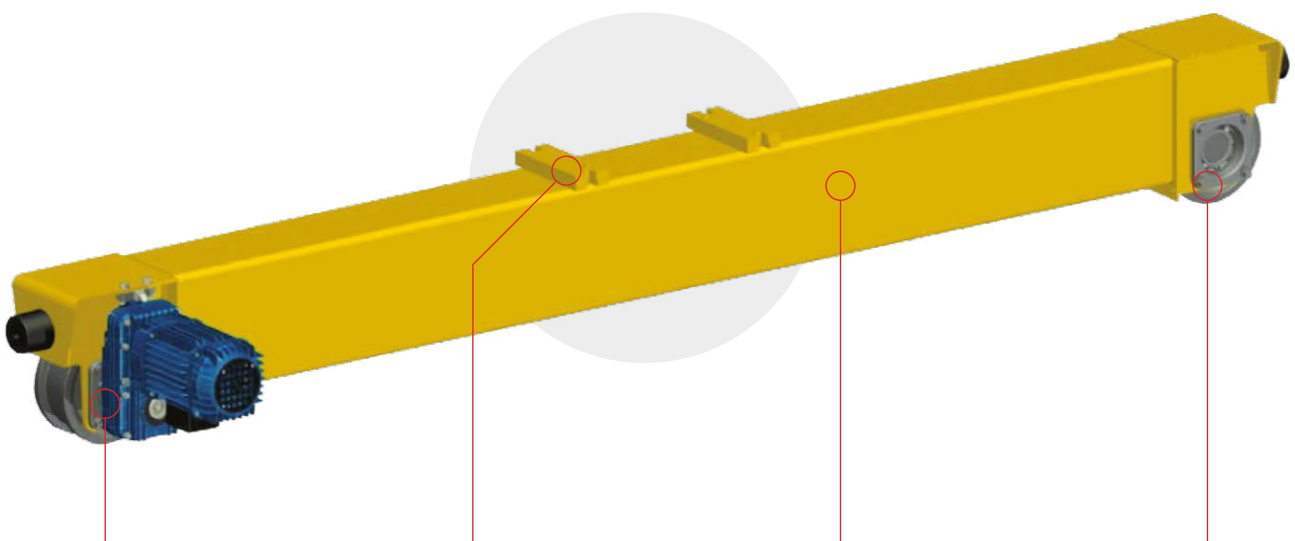
The main components of bridge crane sliding end carriages are therefore:

END CARRIAGE STRUCTURAL FRAMEWORK

- The supporting structure is made up of a rectangular tube.
- The bridge girders are mounted onto the sliding end carriage structure by a system of high-strength bolts and a pin centring system.



END CARRIAGE IN OPERATION FOR CRANE SINGLE-GIRDER



Drive sliding unit consisting of the DGT wheel unit

Connecting plates between the end carriage and the girder of the bridge crane

Tubular profile framework or end carriage bearing girder

Idler sliding unit consisting of the DGT wheel unit

SLIDING END CARRIAGES

The **sliding end carriages** are designed to allow movement on **bridge cranes** rails:

- **at a sliding speed, from 3.2 to 25 m/min;**
- **with two sliding speeds, from 12.5/3.2 to 80/20 m/min.**

In operation:

- **single-girder, with load capacity of up to 20,000 kg and gauge of up to 25 m;**
- **double-girder, with load capacity of up to 40,000 kg and gauge of up to 27 m.**

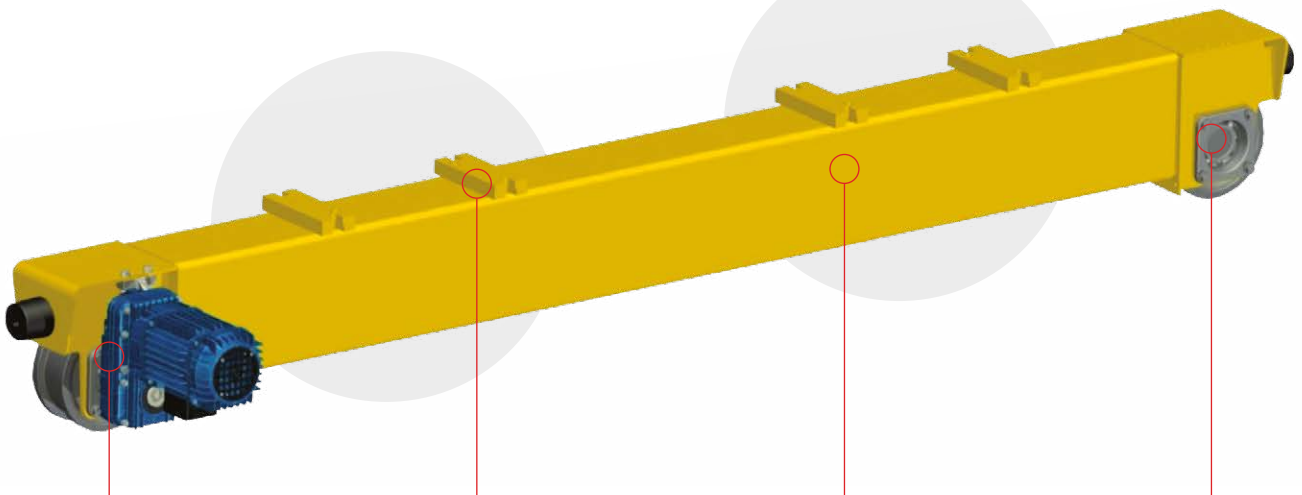
Designed and built on the principle of modular components assembled together in relation to usage requirements, they are equipped with **sliding units** made up of **DGT series wheel units** combined with **DGP series pendulum gearmotors**.

They are configured in 6 production sizes, for which the basic components are:

- **No. 6 sizes of DGT series sliding wheel units**
(Ø 125, Ø 160, Ø 200, Ø 250, Ø 315 and Ø 400/400 R);
- **No. 4 sizes of DGP series pendulum gearboxes**
(DGP 0, DGP 1, DGP 2 and DGP 3);
- **4 sizes of self-braking motors**
(motor 71, motor 80, motor 100 and motor 112).



END CARRIAGE IN OPERATION FOR CRANE DOUBLE-GIRDER



Drive sliding unit consisting of the DGT wheel unit combined with the DGP pendulum motor reducer

Connecting plates between the end carriage and the girder of the bridge crane

Tubular profile framework or end carriage bearing girder

Idler sliding unit consisting of the DGT wheel unit





LIMITS OF USE OF SINGLE-GIRDER END CARRIAGES BASED ON: LOAD CAPACITY - ISO/FEM UNIT - GAUGES

LOAD CAPACITY (kg)	UNIT ISO / FEM	GAUGE (m)																							
		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25				
1000	M4 / 1Am																								
	M5 / 2m																								
1250	M4 / 1Am																								
	M5 / 2m																								
1600	M4 / 1Am																								
	M5 / 2m																								
2000	M4 / 1Am																								
	M5 / 2m																								
2500	M4 / 1Am																								
	M5 / 2m																								
3200	M4 / 1Am																								
	M5 / 2m																								
4000	M4 / 1Am																								
	M5 / 2m																								
5000	M4 / 1Am																								
	M5 / 2m																								
6300	M4 / 1Am																								
	M5 / 2m																								
8000	M4 / 1Am																								
	M5 / 2m																								
10000	M4 / 1Am																								
	M5 / 2m																								
12500	M4 / 1Am																								
	M5 / 2m																								
16000	M4 / 1Am																								
	M5 / 2m																								
20000	M4 / 1Am																								
	M5 / 2m																								
Permissible movable mass from the end carriages of the SINGLE-GIRDER bridge crane [Movable mass (kg) = load capacity + crane weight + trolley / hoist weight]																									
1 - 125		2 - 160			3 - 200			4 - 250			5 - 315														
1800	2400	3300	1800	2400	3300	2100	2700	3600	2100	2700	3600	3600 R	2400												
8400		7400		11100		9800		15800		14800		22000		24400		19000		24800		28600					
Note: limits of use determined using Donati components (hoist, trolley, etc.) and load body girder sized with deflection f = Gauge / 750																									
FOR FURTHER DIMENSIONAL / CONSTRUCTION DATA, CONSULT THE RELATED TECHNICAL SALES CATALOGU																									

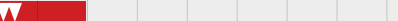


LIMITS OF USE OF DOUBLE-GIRDER END CARRIAGES BASED ON: LOAD CAPACITY - ISO/FEM UNIT - GAUGES

LOAD CAPACITY (kg)	UNIT ISO / FEM	GAUGE (m)																									
		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27				
1000	M4 / 1Am																										
	M5 / 2m																										
1250	M4 / 1Am																										
	M5 / 2m																										
1600	M4 / 1Am																										
	M5 / 2m																										
2000	M4 / 1Am																										
	M5 / 2m																										
2500	M4 / 1Am																										
	M5 / 2m																										
3200	M4 / 1Am																										
	M5 / 2m																										
4000	M4 / 1Am																										
	M5 / 2m																										
5000	M4 / 1Am																										
	M5 / 2m																										
6300	M4 / 1Am																										
	M5 / 2m																										
8000	M4 / 1Am																										
	M5 / 2m																										
10000	M4 / 1Am																										
	M5 / 2m																										
12500	M4 / 1Am																										
	M5 / 2m																										
16000	M4 / 1Am																										
	M5 / 2m																										
20000	M4 / 1Am																										
25000	M4 / 1Am																										
	M5 / 2m																										
32000	M4 / 1Am																										
40000	M4 / 1Am																										
Permissible movable mass from the end carriages of the DOUBLE-GIRDER bridge crane [Movable mass (kg) = load capacity + crane weight + trolley / hoist weight]																											
1 - 125		2 - 160		3 - 200		4 - 250		5 - 315		6 - 400		6 - 400 R															
2400	3300	2400	3300	2700	3600	2700	3600	3900	3900	3900	3900	3900 R															
9300	10400	11500	13200	17100	18800	25000	25500	35900	46000	62000																	
Note: limits of use determined using Donati components (hoist, trolley, etc.) and load body girder sized with deflection f = Gauge / 750																											
FOR FURTHER DIMENSIONAL / CONSTRUCTION DATA, CONSULT THE RELATED TECHNICAL SALES CATALOGUE																											



LIMITS OF USE OF END CARRIAGES FOR SINGLE-GIRDER AND DOUBLE-GIRDER BRIDGE CRANES, IN RELATION TO THE GAUGE

END CARRIAGE TYPE			GAUGE (M) OF THE  SINGLE-GIRDER OR  DOUBLE-GIRDER BRIDGE CRANE																							
DGT SIZE	WHEEL		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27		
	Ø R mm	PR STEP mm																								
1	125	1800																								
		2400																								
		3300																								
2	160	1800																								
		2400																								
		3300																								
3	200	2100																								
		2700																								
		3600																								
4	250	2100																								
		2700																								
		3600																								
		3600 R																								
5	315	2400																								
		3900																								
6	400	3900																								
	400R	3900 R																								

DGT WHEELS		DGP PENDULAR GEARMOTORS																							
SIZE	Ø mm	DGP REDUCERS SIZE 0				DGP REDUCERS SIZE 1				DGP REDUCERS SIZE 2								DGP REDUCERS SIZE 3							
1	125	Motors size 71				Motors size 71				Motors size 80															
2	160	Motors size 71				Motors size 71				Motors size 80															
3	200					Motors size 71				Motors size 80				Motors size 80				Motors size 100							
4	250					Motors size 71				Motors size 80				Motors size 80				Motors size 100							
5	315													Motors size 80				Motors size 100				Motors size 112			
6	400													Motors size 80				Motors size 100				Motors size 112			
	400 R																	Motors size 100				Motors size 112			



LEONARDO CRANE SET CONFIGURATOR

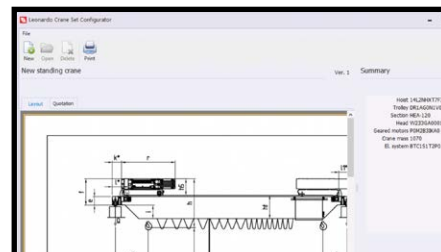
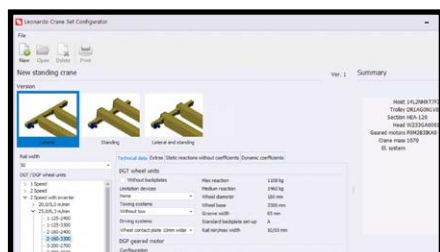
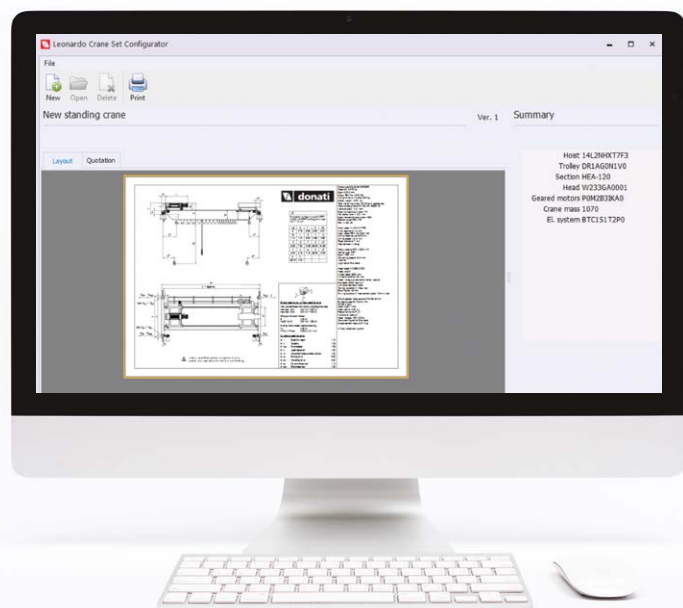
SOFTWARE FOR SELECTING STANDARD COMPONENTS FOR SUPPORTED BRIDGE CRANES

A configurator dedicated to bridge crane manufacturers that sizes bridge structures complete with end carriages, trolleys and hoists.

The highly versatile nature of this system means it can satisfy the needs of the customer at the design phase, and can also provide a detailed quote, including all the components and accessories.

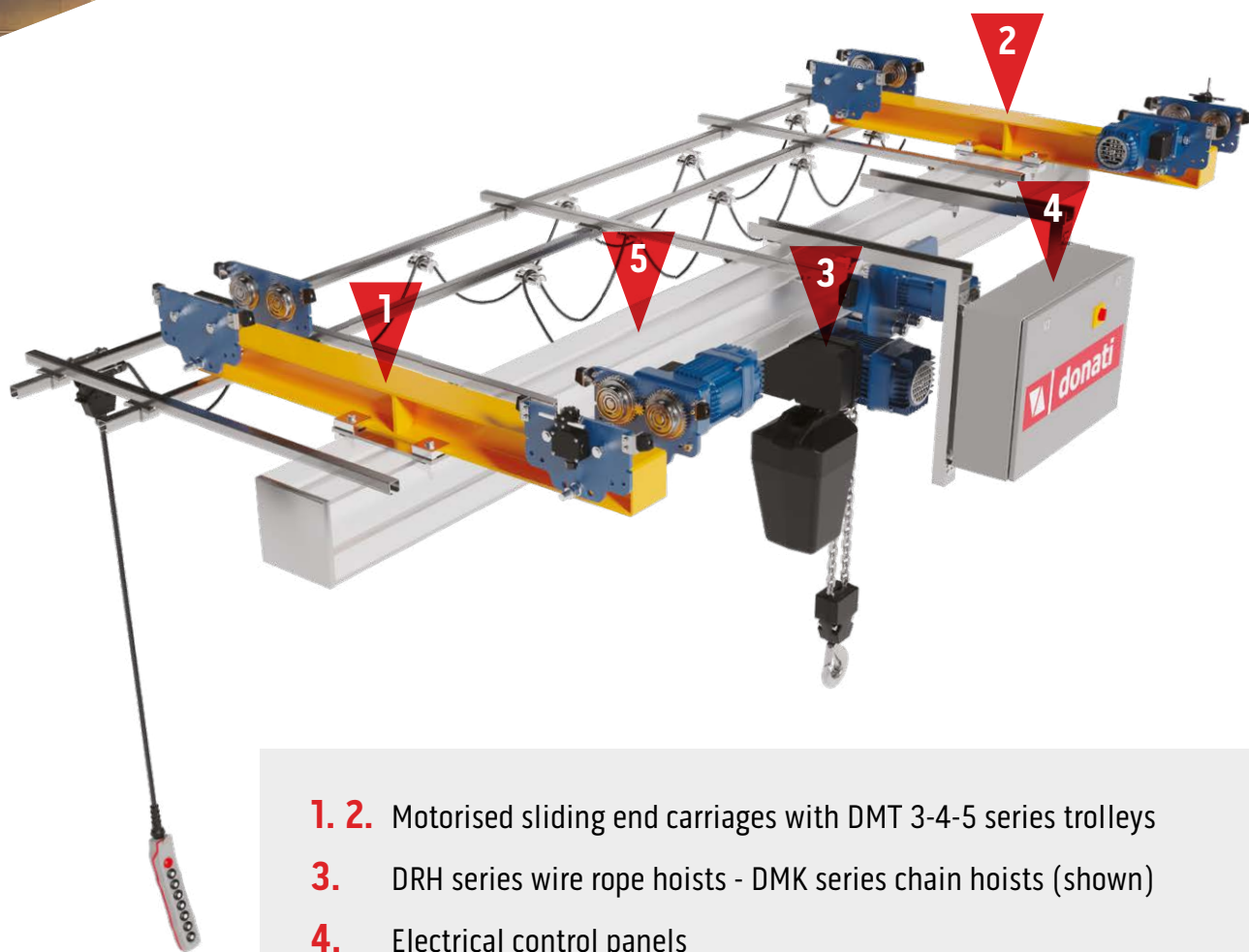
The Leonardo Crane Set configurator can also provide the customer with the information he requires for calculating the **dimensions of the girders**.

Available on the **Donati cranes/configurators** website





SUSPENDED BRIDGE CRANES DPS SERIES KIT



- 1. 2.** Motorised sliding end carriages with DMT 3-4-5 series trolleys
- 3.** DRH series wire rope hoists - DMK series chain hoists (shown)
- 4.** Electrical control panels
- 5.** Profile bridge girders excluded from the scope of Donati supply

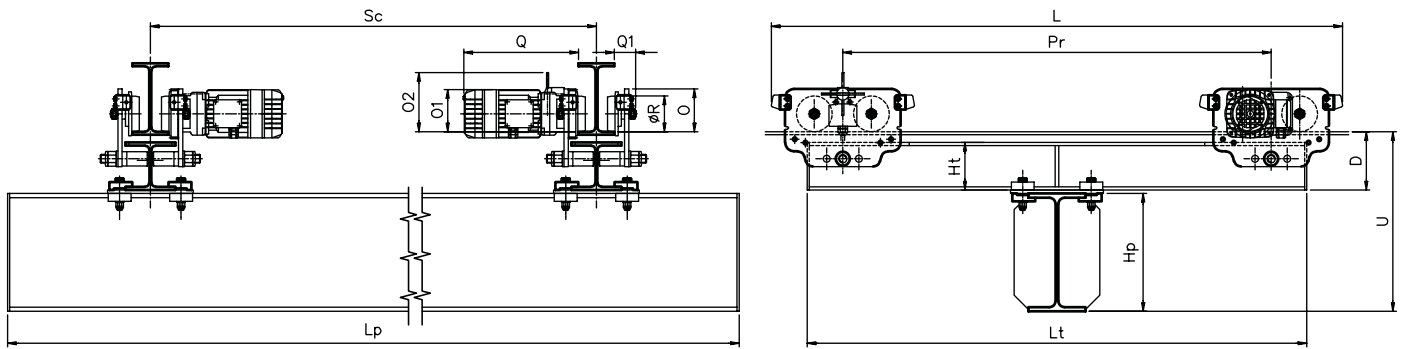
The Crane Set includes all the components needed to assemble a single-girder bridge crane.

The bridge girder is not included in the KIT but the recommended and verified IPE or HEA girder is shown in the catalogue.

The catalogue provides for the use of HEA girders for the end carriages and IPE or HEA girders for the bridge girders.

The trolleys and the end carriages can have different combinations based on the load capacity and width of the track flange; in general, for each end carriage there is a driving trolley and an idler trolley.

TECHNICAL FEATURES AND DATA - DIMENSIONS - WEIGHTS (SINGLE END CARRIAGE)



DPS1 SUSPENSION BRIDGE - CAPACITY 1000 KG - DMK HOIST

Sc m	Pr	END CARRIAGE DIMENSIONS mm											WEIGHT kg	END CARRIAGE TORQUE CODE	BRIDGE DIMENSIONS mm			
		HEA GIRDER TYPE	Ht	Lt	L	D	Ø R	O	O1	O2	Q	Q1			GIRDER TYPE	Hp	Lp	U
3	1200	100	96	1400	1562	125	80	98	108	165	316	54	73	T112I03	IPE200	200	3600	335
														T112H03	HEA220	210		345
4	1200	100	96	1400	1562	125	80	98	108	165	316	54	73	T112I04	IPE240	240	4800	375
														T112H04	HEA220	210		345
5	1200	100	96	1400	1562	125	80	98	108	165	316	54	73	T112I05	IPE240	240	6000	375
														T112H05	HEA220	210		345
6	1200	100	96	1400	1562	125	80	98	108	165	316	54	73	T112I06	IPE240	240	7000	375
														T112H06	HEA220	210		345
7	1200	100	96	1400	1562	125	80	98	108	165	316	54	73	T112I07	IPE270	270	8000	405
														T112H07	HEA220	210		345
8	1500	120	114	1700	1862	143	80	98	108	165	316	54	84	T115I08	IPE300	300	9000	453
														T115H08	HEA220	210		363
9	1500	120	114	1700	1862	143	80	98	108	165	316	54	84	T115I09	IPE330	330	10000	483
														T115H09	HEA240	230		383
10	1500	120	114	1700	1862	143	80	98	108	165	316	54	84	T115I10	IPE360	360	11000	513
														T115H10	HEA260	250		403
11	1800	140	133	2000	2162	162	80	98	108	165	316	54	100	T118I11	IPE360	360	12000	532
														T118H11	HEA260	250		422
12	1800	140	133	2000	2162	162	80	98	108	165	316	54	100	T118I12	IPE400	400	13000	572
														T118H12	HEA280	270		422

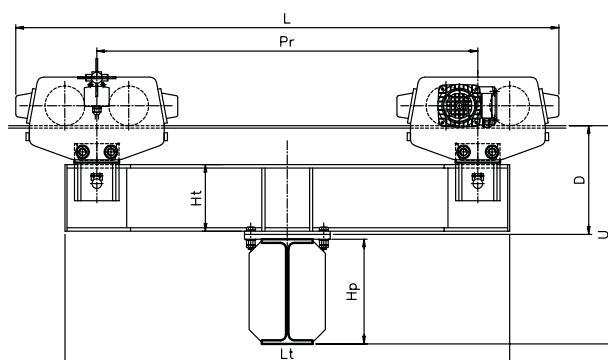
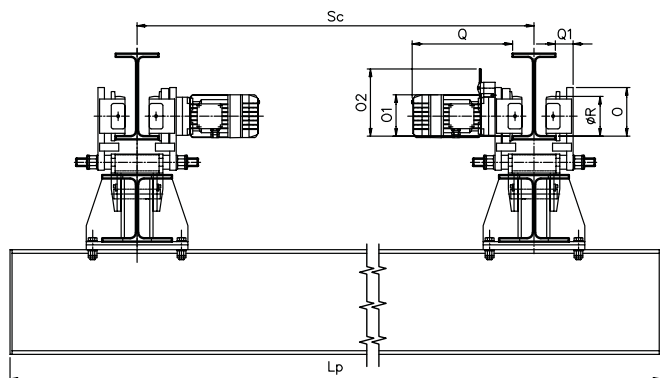
For VdCs with a flange greater than 220 mm, increase the D and U dimensions by 60 mm with end carriage 1200, by 42 mm with end carriage 1500 and by 23 mm with end carriage 1800

DPS2 SUSPENSION BRIDGE - CAPACITY 2000 KG - DMK HOIST

Sc m	Pr	END CARRIAGE DIMENSIONS mm											WEIGHT kg	END CARRIAGE TORQUE CODE	BRIDGE DIMENSIONS mm			
		HEA GIRDER TYPE	Ht	Lt	L	D	Ø R	O	O1	O2	Q	Q1			GIRDER TYPE	Hp	Lp	U
3	1200	120	114	1400	1602	145	100	120	118	165	322	60	98	T212I03	IPE270	270	3600	425
														T212H03	HEA220	210		365
4	1200	120	114	1400	1602	145	100	120	118	165	322	60	98	T212I04	IPE330	330	4800	485
														T212H04	HEA220	210		365
5	1200	120	114	1400	1602	145	100	120	118	165	322	60	98	T212I05	IPE330	330	6000	485
														T212H05	HEA220	210		365
6	1200	140	133	1400	1602	164	100	120	118	165	322	60	105	T212I06	IPE330	330	7000	504
														T212H06	HEA240	230		404
7	1200	140	133	1400	1602	164	100	120	118	165	322	60	105	T212I07	IPE330	330	8000	504
														T212H07	HEA240	230		404
8	1500	160	152	1700	1902	183	100	120	118	165	322	60	123	T215I08	IPE360	360	9000	553
														T215H08	HEA260	250		443
9	1500	160	152	1700	1902	183	100	120	118	165	322	60	123	T215I09	IPE400	400	10000	593
														T215H09	HEA280	270		463
10	1500	160	152	1700	1902	183	100	120	118	165	322	60	123	T215I10	IPE450	450	11000	643
														T215H10	HEA300	290		483
11	1800	160	152	2000	2202	183	100	120	118	165	322	60	132	T218I11	IPE450	450	12000	643
														T218H11	HEA320	310		503
12	1800	160	152	2000	2202	183	100	120	118	165	322	60	132	T218I12	IPE500	500	13000	693
														T218H12	HEA320	310		503

For VdCs with a flange greater than 220 mm, increase the D and U dimensions by 37 mm with end carriage 1200 and girder HEA120 and by 18 mm with end carriage 1200 and girder HEA140

TECHNICAL FEATURES AND DATA - DIMENSIONS - WEIGHTS (SINGLE END CARRIAGE)



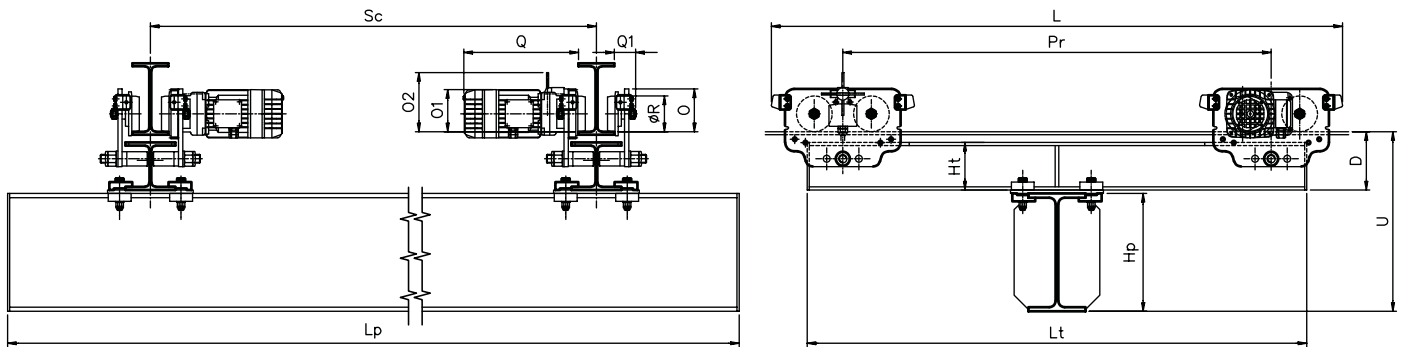
DPS3 SUSPENSION BRIDGE - CAPACITY 3200 KG - DMK HOIST

Sc m	Pr	END CARRIAGE DIMENSIONS mm											WEIGHT kg	END CARRIAGE TORQUE CODE	BRIDGE DIMENSIONS mm			
		HEA GIRDER TYPE	Ht	Lt	L	D	Ø R	O	O1	O2	Q	Q1			GIRDER TYPE	Hp	Lp	U
3	1200	220	210	1400	1700	343	125	155	130	211	316	55	240	T312I03	IPE270	270	3500	628
														T312H03	HEA240	230		588
4	1200	220	210	1400	1700	343	125	155	130	211	316	55	240	T312I04	IPE330	330	4700	688
														T312H04	HEA240	230		588
5	1200	220	210	1400	1700	343	125	155	130	211	316	55	240	T312I05	IPE330	330	5800	688
														T312H05	HEA240	230		588
6	1200	220	210	1400	1700	343	125	155	130	211	316	55	240	T312I06	IPE360	360	7000	718
														T312H06	HEA260	250		608
7	1200	220	210	1400	1700	343	125	155	130	211	316	55	240	T312I07	IPE400	400	8000	758
														T312H07	HEA280	270		628
8	1500	240	230	1700	2010	363	125	155	130	211	316	55	272	T315I08	IPE450	450	9000	828
														T315H08	HEA300	290		668
9	1500	240	230	1700	2010	363	125	155	130	211	316	55	272	T315I09	IPE450	450	10000	828
														T315H09	HEA320	310		688
10	1500	240	230	1700	2010	363	125	155	130	211	316	55	272	T315I10	IPE500	500	11000	878
														T315H10	HEA340	330		708
11	1800	240	230	2000	2310	363	125	155	130	211	316	55	292	T318I11	IPE550	550	12000	928
														T318H11	HEA360	350		728
12	1800	240	230	2000	2310	363	125	155	130	211	316	55	292	T318I12	IPE600	600	13000	978
														T318H12	HEA400	390		768

DPS4 SUSPENSION BRIDGE - CAPACITY 4000 KG - DMK HOIST

Sc m	Pr	END CARRIAGE DIMENSIONS mm											WEIGHT kg	END CARRIAGE TORQUE CODE	BRIDGE DIMENSIONS mm			
		HEA GIRDER TYPE	Ht	Lt	L	D	Ø R	O	O1	O2	Q	Q1			GIRDER TYPE	Hp	Lp	U
3	1200	220	210	1400	1710	343	125	155	130	211	316	55	240	T412I03	IPE330	330	3500	688
														T412H03	HEA240	230		588
4	1200	220	210	1400	1710	343	125	155	130	211	316	55	240	T412I04	IPE330	330	4700	688
														T412H04	HEA240	230		588
5	1200	220	210	1400	1710	343	125	155	130	211	316	55	240	T412I05	IPE360	360	5800	718
														T412H05	HEA260	250		608
6	1200	240	230	1400	1710	363	125	155	130	211	316	55	255	T412I06	IPE360	360	7000	738
														T412H06	HEA280	270		648
7	1200	240	230	1400	1710	363	125	155	130	211	316	55	255	T412I07	IPE400	400	8000	778
														T412H07	HEA300	290		668
8	1500	260	250	1700	2010	383	125	155	130	211	316	55	288	T415I08	IPE450	400	9000	848
														T415H08	HEA320	310		708
9	1500	260	250	1700	2010	383	125	155	130	211	316	55	288	T415I09	IPE500	500	10000	898
														T415H09	HEA340	330		728
10	1500	260	250	1700	2010	383	125	155	130	211	316	55	288	T415I10	IPE550	450	11000	948
														T215H10	HEA360	350		748
11	1800	260	250	2000	2310	383	125	155	130	211	316	55	310	T418I11	IPE600	600	12000	998
														T418H11	HEA400	390		788
12	1800	260	250	2000	2310	383	125	155	130	211	316	55	310	T418I12	IPE600	600	13000	998
														T418H12	HEA400	390		788

TECHNICAL FEATURES AND DATA - DIMENSIONS - WEIGHTS (SINGLE END CARRIAGE)



DPS1 SUSPENSION BRIDGE - CAPACITY 1000 KG - DRH1 HOIST

Sc m	Pr	END CARRIAGE DIMENSIONS mm												WEIGHT kg	END CARRIAGE TORQUE CODE	BRIDGE DIMENSIONS			
		HEA GIRDER		Lt	L	D	Ø R	O	O1	O2	Q	Q1	GIRDER			Lp	U		
TYPE	Ht																		
3	1800	100	96	2000	2162	125	80	98	108	165	316	54	83	T118J03	IPE240	240	3600	375	
														T118K03	HEA240	230		365	
4	1800	100	96	2000	2162	125	80	98	108	165	316	54	83	T118J04	IPE240	240	4800	375	
														T118K04	HEA240	230		365	
5	1800	100	96	2000	2162	125	80	98	108	165	316	54	83	T118J05	IPE240	240	6000	375	
														T118K05	HEA240	240		365	
6	1800	120	114	2000	2162	143	80	98	108	165	316	54	90	T118J06	IPE240	240	7000	393	
														T118K06	HEA240	230		383	
7	1800	120	114	2000	2162	143	80	98	108	165	316	54	90	T118J07	IPE270	270	8000	423	
														T118K07	HEA240	230		383	
8	1800	120	114	2000	2162	143	80	98	108	165	316	54	90	T118J08	IPE330	330	9000	483	
														T118K08	HEA240	230		383	
9	1800	120	114	2000	2162	143	80	98	108	165	316	54	90	T118J09	IPE330	330	10000	483	
														T118K09	HEA240	230		383	
10	1800	120	114	2000	2162	143	80	98	108	165	316	54	90	T118J10	IPE360	360	11000	513	
														T118K10	HEA260	250		403	
11	1800	140	133	2000	2162	162	80	98	108	165	316	54	100	T118J11	IPE400	400	12000	572	
														T118K11	HEA280	270		442	
12	1800	140	133	2000	2162	162	80	98	108	165	316	54	100	T118J12	IPE400	400	13000	572	
														T118K12	HEA300	290		462	

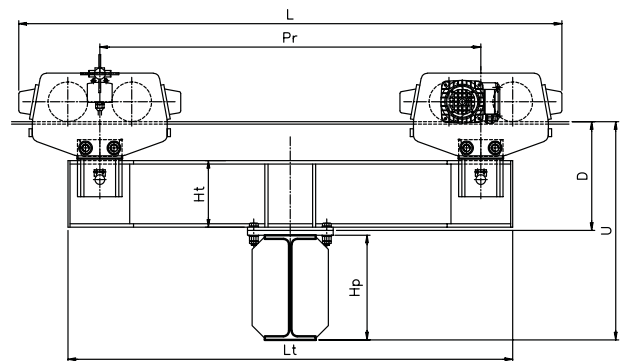
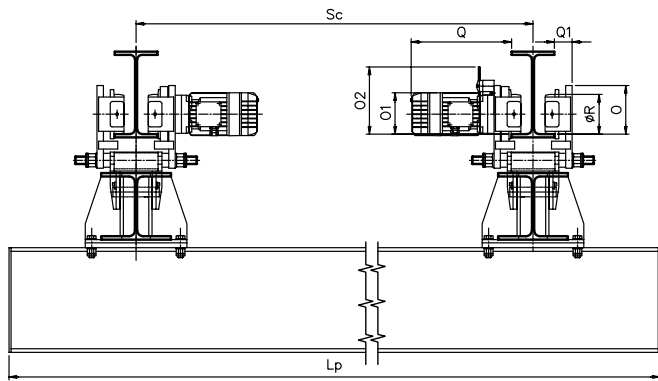
For VdCs with a flange greater than 220 mm, increase the D and U dimensions by 60 mm with end carriage HEA100, by 42 mm with end carriage HEA120 and by 23 mm with end carriage HEA180

DPS2 SUSPENSION BRIDGE - CAPACITY 2000 KG - DRH1 HOIST

Sc m	Pr	END CARRIAGE DIMENSIONS mm												BRIDGE DIMENSIONS mm				
		HEA GIRDER		Lt	L	D	Ø R	O	O1	O2	Q	Q1	WEIGHT kg	END CARRIAGE TORQUE CODE	GIRDER		Lp	U
TYPE	Ht	TYPE	Hp															
3	1800	120	114	2000	2202	145	100	120	118	165	322	60	110	T218J03	IPE300	300	3600	455
														T218K03	HEA240	230		385
4	1800	120	114	2000	2202	145	100	120	118	165	322	60	110	T218J04	IPE330	330	4800	485
														T218K04	HEA240	230		385
5	1800	140	133	2000	2202	164	100	120	118	165	322	60	120	T218J05	IPE330	330	6000	504
														T218K05	HEA240	230		404
6	1800	140	133	2000	2202	164	100	120	118	165	322	60	120	T218J06	IPE330	330	7000	504
														T218K06	HEA240	230		404
7	1800	140	133	2000	2202	164	100	120	118	165	322	60	120	T218J07	IPE330	330	8000	504
														T218K07	HEA260	250		424
8	1800	160	152	2000	2202	183	100	120	118	165	322	60	132	T218J08	IPE360	360	9000	553
														T218K08	HEA280	270		463
9	1800	160	152	2000	2202	183	100	120	118	165	322	60	132	T218J09	IPE400	400	10000	593
														T218K09	HEA300	290		483
10	1800	160	152	2000	2202	183	100	120	118	165	322	60	132	T218J10	IPE450	400	11000	643
														T218K10	HEA300	290		483
11	1800	160	152	2000	2202	183	100	120	118	165	322	60	132	T218J11	IPE500	500	12000	693
														T218K11	HEA320	310		503
12	1800	160	152	2000	2202	183	100	120	118	165	322	60	132	T218J12	IPE500	500	13000	693
														T218K12	HEA340	330		523

For VdCs with a flange greater than 220 mm, increase the D and U dimensions by 37 mm with end carriage HEA120 and by 18 mm with end carriage HEA180

TECHNICAL FEATURES AND DATA - DIMENSIONS - WEIGHTS (SINGLE END CARRIAGE)



DPS3 SUSPENSION BRIDGE - CAPACITY 3200 KG - DRH1 HOIST

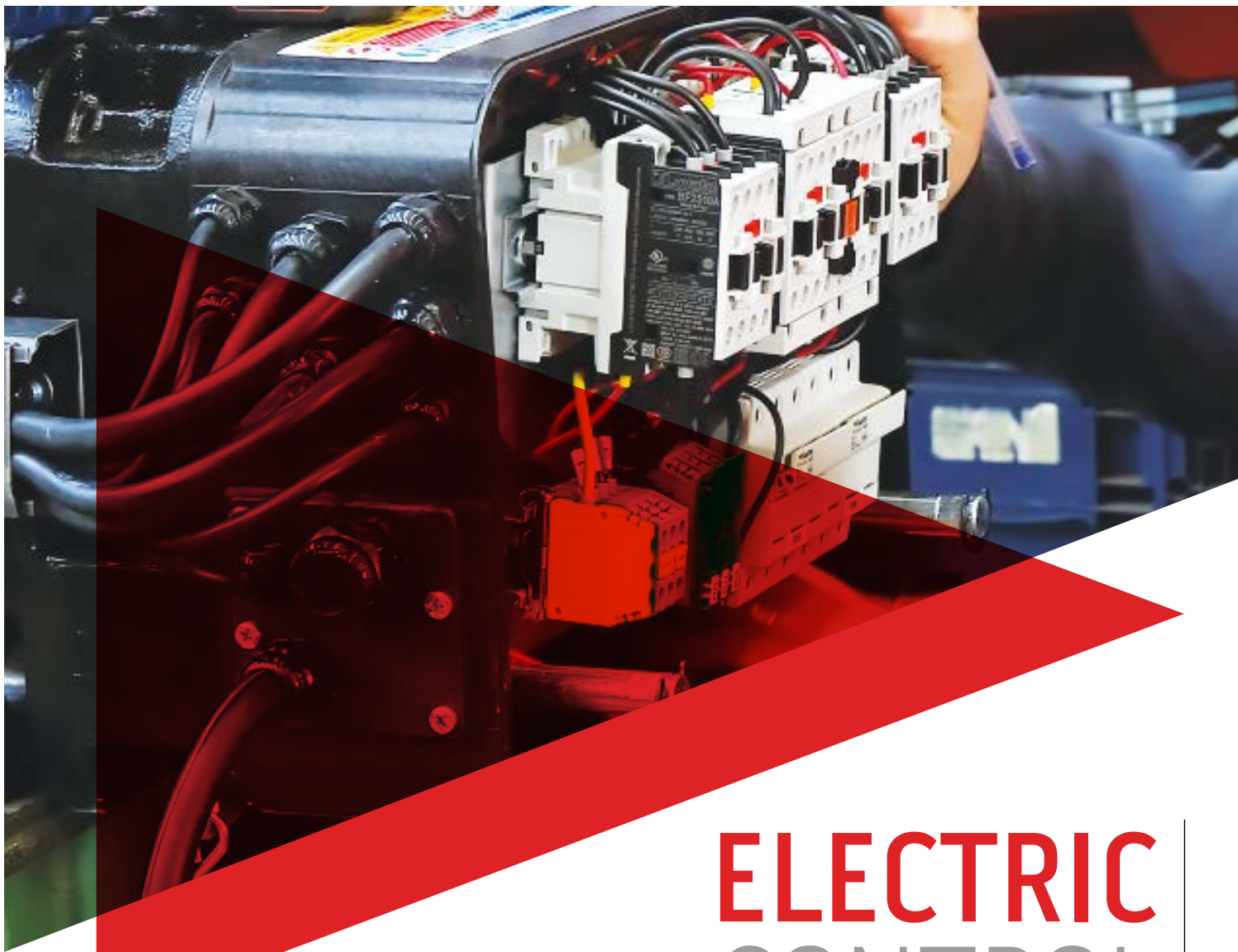
Sc m	Pr	END CARRIAGE DIMENSIONS mm												WEIGHT kg	END CARRIAGE TORQUE CODE	BRIDGE DIMENSIONS mm			
		HEA GIRDER TYPE		Ht	Lt	L	D	Ø R	O	O1	O2	Q	Q1			GIRDER TYPE		Hp	Lp
3	1800	220	210	2000	2310	343	125	155	130	211	316	55	270	T318J03	IPE360	360	3500	718	
														T318K03	HEA300	290		648	
4	1800	220	210	2000	2310	343	125	155	130	211	316	55	270	T318J04	IPE360	360	4700	718	
														T318K04	HEA300	290		648	
5	1800	220	210	2000	2310	343	125	155	130	211	316	55	270	T318J05	IPE360	360	5800	718	
														T318K05	HEA300	290		648	
6	1800	220	210	2000	2310	343	125	155	130	211	316	55	270	T318J06	IPE360	330	7000	718	
														T318K06	HEA300	290		648	
7	1800	220	210	2000	2310	343	125	155	130	211	316	55	270	T318J07	IPE400	400	8000	758	
														T318K07	HEA300	290		648	
8	1800	240	230	2000	2310	363	125	155	130	211	316	55	293	T318J08	IPE450	450	9000	828	
														T318K08	HEA300	290		668	
9	1800	240	230	2000	2310	363	125	155	130	211	316	55	293	T318J09	IPE450	450	10000	828	
														T318K09	HEA320	310		688	
10	1800	240	230	2000	2310	363	125	155	130	211	316	55	293	T318J10	IPE500	500	11000	878	
														T318K10	HEA340	330		708	
11	1800	240	230	2000	2310	363	125	155	130	211	316	55	293	T318J11	IPE550	550	12000	928	
														T318K11	HEA360	350		728	
12	1800	240	230	2000	2310	363	125	155	130	211	316	55	293	T318J12	IPE600	600	13000	978	
														T318K12	HEA400	390		768	

For bridge gauges from 3 to 10 m, possibility of end carriages with wheel pitch 1500, but only with DST1 normal hoist trolley (end carriage torque code T315...)

DPS4 SUSPENSION BRIDGE - CAPACITY 4000 KG - DRH1 HOIST

Sc m	Pr	END CARRIAGE DIMENSIONS mm												BRIDGE DIMENSIONS mm				
		HEA GIRDER		Lt	L						Q	Q1	WEIGHT kg	END CARRIAGE TORQUE CODE	GIRDER		Lp	U
TYPE	Ht	D	Ø R			O	O1	O2	TYPE	Hp								
3	1800	220	210	2000	2310	343	125	155	130	211	316	55	270	T418J03	IPE500	500	3500	858
														T418K03	HEA320	310		668
4	1800	220	210	2000	2310	343	125	155	130	211	316	55	270	T418J04	IPE500	500	4700	858
														T418K04	HEA320	310		668
5	1800	220	210	2000	2310	343	125	155	130	211	316	55	270	T418J05	IPE500	500	5800	858
														T418K05	HEA320	310		668
6	1800	240	230	2000	2310	363	125	155	130	211	316	55	293	T418J06	IPE500	500	7000	878
														T418K06	HEA320	310		688
7	1800	240	230	2000	2310	363	125	155	130	211	316	55	293	T418J07	IPE500	500	8000	878
														T418K07	HEA320	310		688
8	1800	260	250	2000	2310	383	125	155	130	211	316	55	310	T418J08	IPE500	500	9000	898
														T418K08	HEA320	310		708
9	1800	260	250	2000	2310	383	125	155	130	211	316	55	310	T418J09	IPE500	500	10000	898
														T418K09	HEA340	330		728
10	1800	260	250	2000	2310	383	125	155	130	211	316	55	310	T418J10	IPE550	550	11000	948
														T418K10	HEA360	350		748
11	1800	260	250	2000	2310	383	125	155	130	211	316	55	310	T418J11	IPE600	600	12000	998
														T418K11	HEA400	390		788
12	1800	280	270	2000	2310	403	125	155	130	211	316	55	320	T418J12	IPE600	500	13000	1018
														T418K12	HEA450	440		858

For bridge gauges from 3 to 10 m, possibility of end carriages with wheel pitch 1500, but only with DST1 normal hoist trolley (end carriage torque code T415...)



ELECTRIC CONTROL PANELS

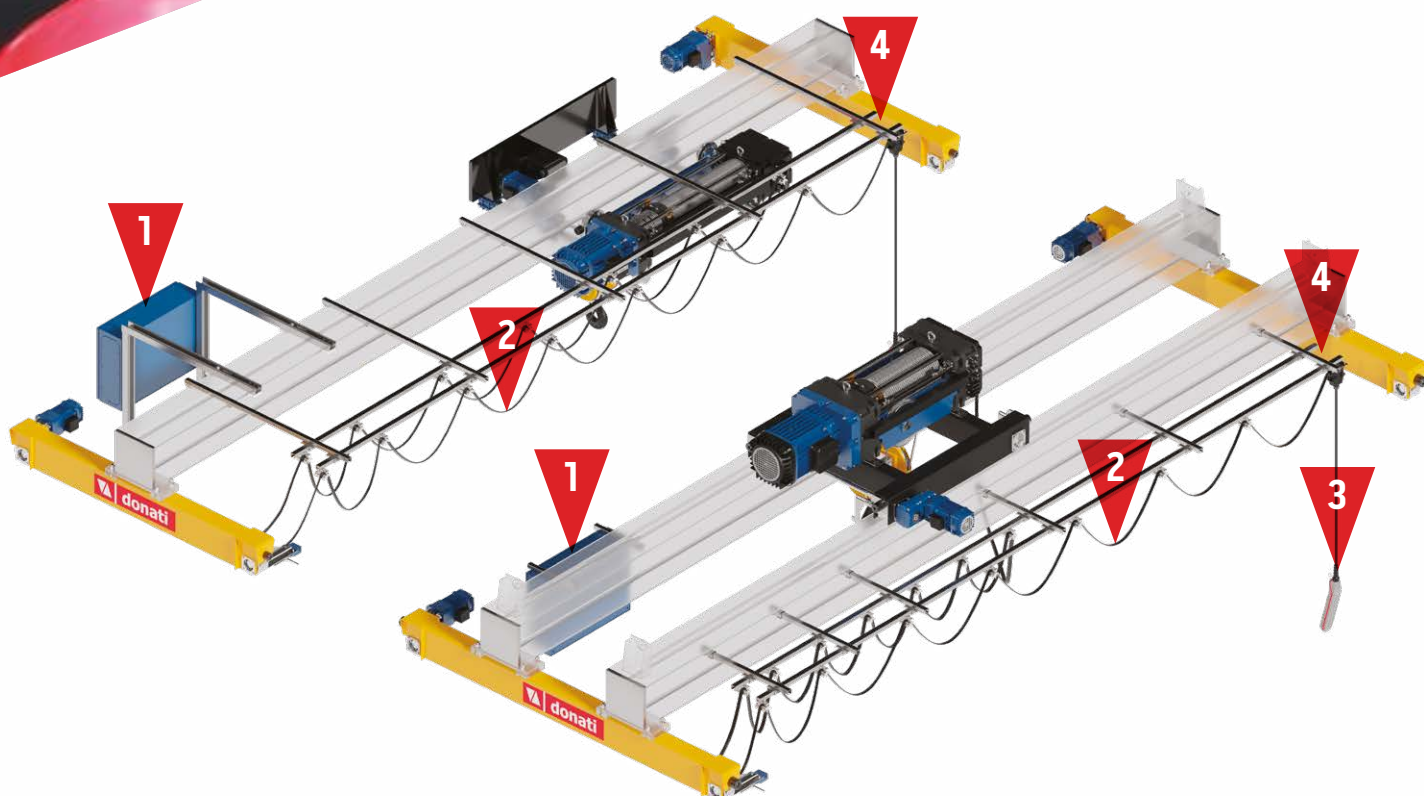
1. 48 V LOW VOLTAGE CONTROL PANEL

Consisting of a watertight case with IP 55 protection complete with key lock for safe opening, main line on/off switch with door lock safety device, siren controlled via the “start-alarm” button on the keypad. The control panel houses the transformer for the low voltage power supply of the control circuits, the general line contactor, the contactor-inverters used to control the hoist, trolley and bridge motor, the terminal block for the connections of the auxiliary circuits and power and motor protection uses and transformer; there is

also the option to fit the electrical panel with quick-set connectors. Upon request, the electrical control panel can be equipped with an “Inverter” to activate the various movements. The electrical diagrams for the connection are placed inside it.

The wiring diagrams include:

- topographic diagrams;
- functional, control and power diagrams;
- terminal block diagrams;
- All utilities and cables are indicated and numbered on the components.



2. FESTOON POWER LINE FOR POWER SUPPLY AND CONTROL OF HOIST, TROLLEY AND BRIDGE

Consisting of flexible flat-form multi-core cables, suspended on trolleys sliding within a C-shaped steel sheet profile, fixed along the bridge crane girder using brackets and clamps. On request, the electrical line can be made with quick-set connectors to be connected to the hoist and the electrical panel.

3. HANGING CONTROL PANEL AND RELATED FESTOON CABLE

Equipped with a shockproof thermoplastic case and provided with buttons for activating all operating

functions as well as the “warning alarm” button and the red mushroom emergency stop button. The push-button panel is designed to slide along the load-bearing girder of the bridge crane, using a festoon suspended on trolleys within a C-shaped steel sheet profile. The “Radio Control” can be supplied on request.

4. ELECTRIC LIMIT SWITCH FOR BRIDGE SLIDING MOVEMENTS

Acting on low-voltage auxiliary circuits, it is of the cross-type and can be single- and double-shot for two sliding speeds where the first shot generates pre-loosening and the second generates a stop, depending on the system configuration. Upon request and when required, i.e. when two or more bridge cranes are operating in the same span, anti-collision systems are available.



DGT SERIES

WHEEL UNITS

WITH DGP SERIES
PENDULAR GEARMOTORS

DGT SERIES WHEEL UNITS

- The sliding wheels Ø 125, Ø 160, Ø 200, Ø 250 and Ø 315 are made of carbon steel stamping.
- The Ø 400 and Ø 400 R wheels, on the other hand, are made of spheroidal cast iron.
- All wheels rotate on permanently lubricated radial ball bearings with the exception of the Ø 400 R wheel, with increased capacity, which is equipped with roller bearings.
- They are available to operate in idler mode or equipped to be made motorised by combining them with the pendulum motor reducer.
- In the drive version, the direct and coaxial connection between the output shaft of the pendulum gear reducer and the splined hub of the drive wheel ensures a high level of safety and operational reliability.
- The wheel is available as standard in a double-edged version and can be supplied, upon request, with different sliding band widths in relation to the type of track on which it will be required to slide.
- The wheels, both in the idler and drive versions, are supported and contained within an electro-welded sheet metal structure which acts as a support box for the entire unit and as a connecting element between the end carriage framework where the wheel unit itself is intended to be assembled.

THE PLATE (SINGLE-GIRDER) OR THE PLATES (DOUBLE-GIRDER) CONNECTING THE END CARRIAGE AND THE BRIDGE CRANE GIRDER OR GIRDERS

To allow the sliding end carriages to connect to the bridge crane girder(s), special connection plates are available. Manufactured from sheet steel in various sizes and dimensions, they are intended to be welded to the bridge girders, whether as a boxed structure load body or with a HE-rolled profile, and are equipped with perforations to be connected to the sliding end carriages, operating in either side-fixed or supported format.

The connection between the motor and the pendulum gear reducer is made via a joint contained within a coupling lantern.



DGT idler
wheel unit



Donati Sollevamenti S.r.l.
Via S. Quasimodo, 17 - 20025 Legnano (MI) - Italy
Tel +39 0331 14811 - Fax +39 0331 1481880

dvo.info@donaticranes.com
www.donaticranes.com

