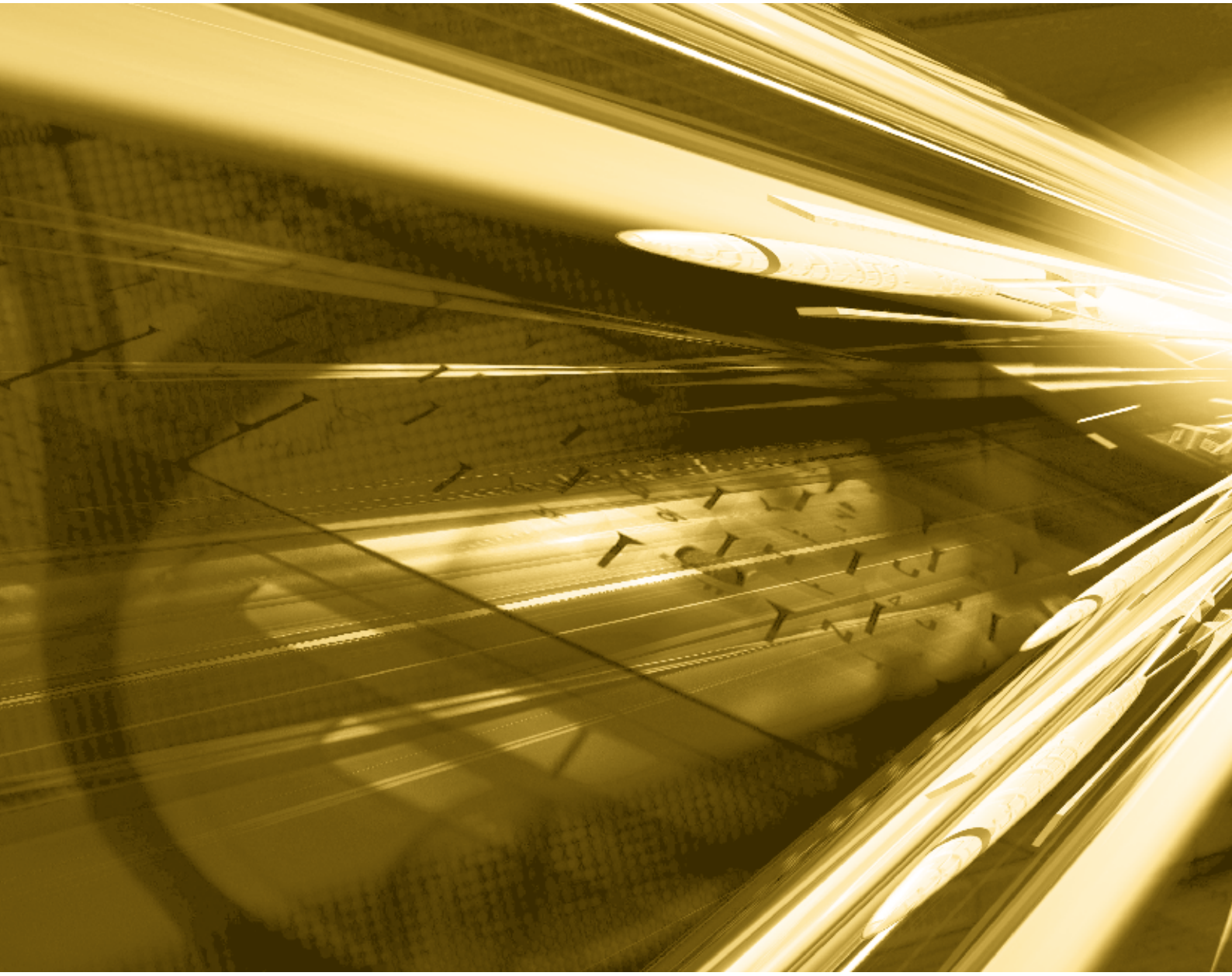
BULLETIN NO. CRGE1603-01

KITO

End Carriage, Geared Motor, Peripheral Equipment

KITO CRANE

Giving top priority to the every industrial workplace-KITO CRANES.



Cranes are widely used in the workplace to improve work efficiency,
to use limited space effectively and to help reduce costs.
To meet the diversifying demands of the industrial world,
KITO manufactures all kinds of cranes from simple manual cranes to motorized cranes with a single or double girder.
All of our products have been designed and built taking into consideration safety, operability and durability.
In addition, we have the cranes which are quiet and vibrate less and which are suitable
for a working environment where quiet operation is important.

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Note: All measurements used in this catalogue are metric (SI unit system)

KITO

CRANE TEST EQUIPMENT

At KITO, cranes are tested for durability and reliability using special equipment.

Test equipment capacity at KITO factory

Traveling crane	Hoist
Max. test load 50 t	Max. test load 100 t
Span 30 m	

KITO CRANE APPLICATIONS

[Overhead cranes]

Overhead cranes

1: 30/10 t Double girder
2: 2.8 t Single girder
3: 20/2.8 t Double girder
4: 2.8 t Single girder

KITO CRANE APPLICATIONS

[Overhead cranes]

1

Overhead cranes

1: 5 t Double girder

2: 10/5 t Double girder

2

[Low-head cranes]

3


4


5

Low-head cranes

3: 10 t Single girder
4: 1 t Single girder
5: 1 t Single girder

KITO CRANE APPLICATIONS

[Gantry cranes]

Gantry cranes

1: 20 t Gantry cranes
2: 5 t Single leg gentry crane
3: 2.8 t Gantry cranes

[Jib cranes]


4

8


5


9


6

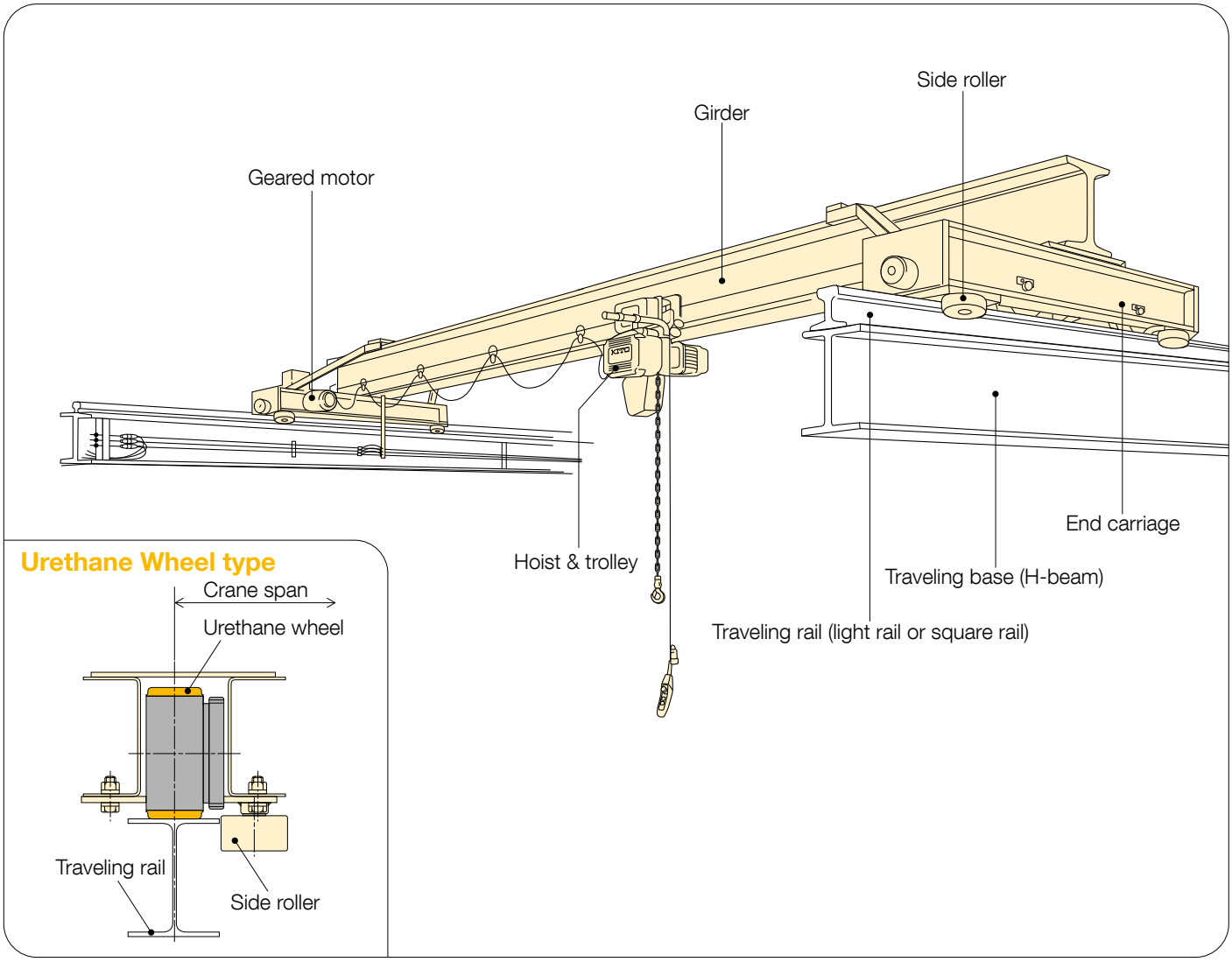

10


7

Jib cranes

4: 6t Pillar mounted jib crane - auto rotary
5: 2t Pillar mounted jib crane
6: 2t Pillar mounted jib cranes
7: 2t Wall mounted jib crane - auto rotary
8: 13t Pillar mounted jib crane - auto rotary
9: 2t Wall mounted jib crane - auto rotary
10: 1.5t Wall mounted jib cranes - electric traveling

OVERHEAD CRANE [Single Girder]



The single girder overhead crane can be installed on traveling rails on the brackets of building pillars. This type of crane has a relatively larger capacity and can utilize space below ceiling rafters, and so a wider lifting range is assured. Guiding the path using side rollers provides smooth traveling and the girders can be designed according to the rated load and span. Moreover, the shorter overall length of the end carriage and the geared-motor installation in optimum position allows for a more effective use of work space.

A dual speed type crane is available for speed- controlled operations. There is also a urethane wheel type version of this crane that effectively reduces noise and vibrations in travel. It is recommended for factories near residential areas, duplex office-homes and for operation at night. Running urethane wheels on the top flange of the H-beam reduces noise and vibration in travel. With these cranes it is not necessary to install a light rail, thus reducing installation costs and time.

Single speed crane

This crane employs geared motors specially designed by KITO to ensure smooth starts and stops. It is suited for general work.

Dual speed crane

This crane is capable of pendant button-controlled speed shift between low and high speed (reduction ratio of 4:1). It is suited for work requiring varied speed operation.

Manual geared type crane

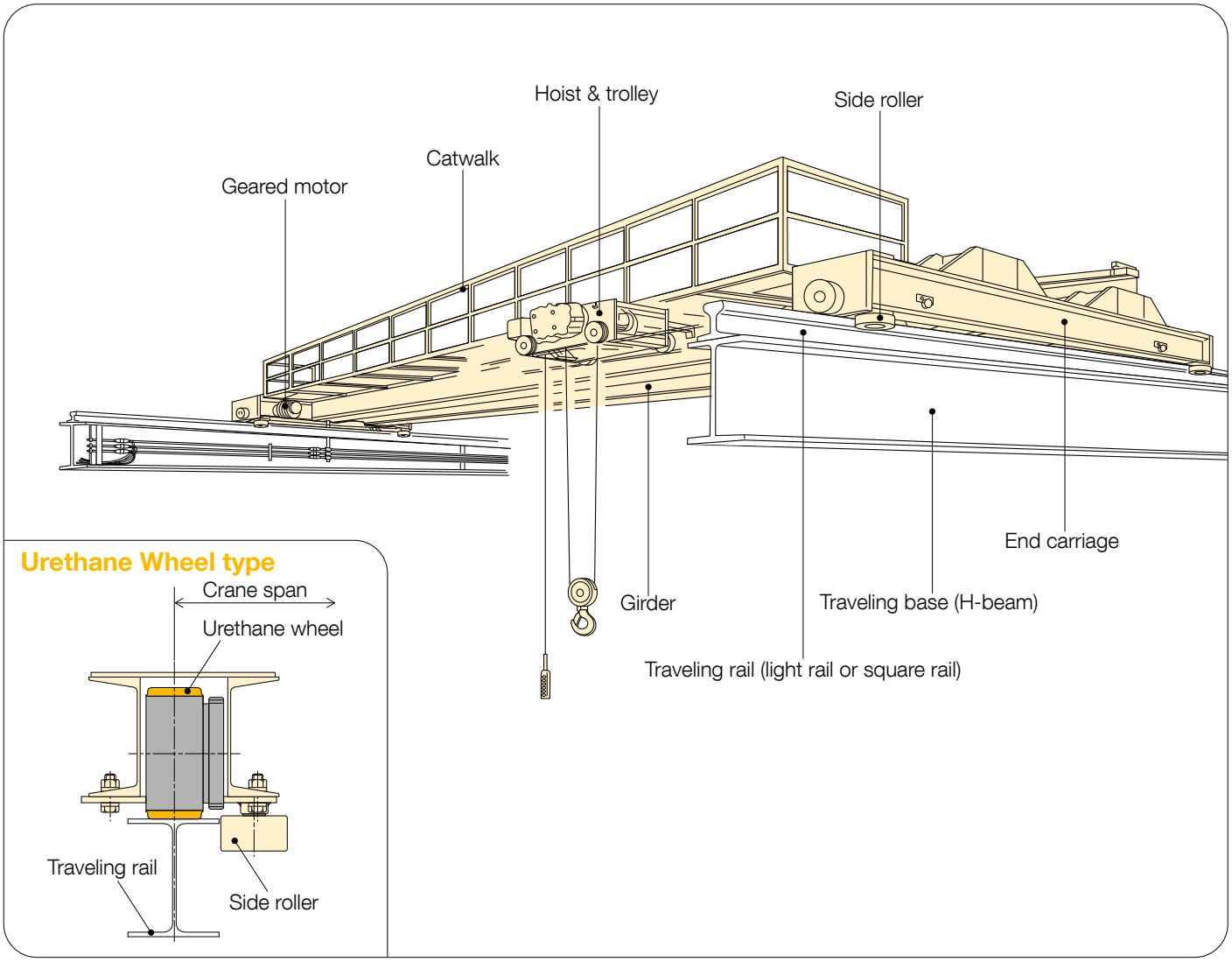
This manual geared type crane balances travel smoothly by synchronizing the driving wheels on both sides. With a relatively shorter travel distance, it is suited for low frequency work.

Optional SOFTRUN device

This device electrically controls motor speed which enables to accelerate smoothly in travel and minimizes load swing at start-up.

It is highly suited for handling high inertia loads or operating long span cranes.

OVERHEAD CRANE [Double Girder]



The double girder overhead crane can be installed on traveling rails on the brackets of building pillars. The double rail type trolley runs along parallel girders suitable for larger capacity cranes, and also can utilize space below ceiling rafters, and so a wider lifting range assured. Smooth traveling is obtained using a guide mechanism with side rollers, and the girder construction can be designed according to the rated load and span. Moreover, the shorter overall length of the end carriage allows for a more effective use of the work space.

A dual speed type crane is available for speedcontrolled operations. There is also a urethane wheel type crane that effectively reduces noise vibration in travel. It is recommended for factories near residential areas, duplex office-homes and for operation at night. Running urethane wheels on the top flange of the H-beam reduces noise and vibration in travel. With these cranes, it is not necessary to install a light rail thus reducing on installation costs and time.

Single speed crane

This crane employs geared motors specially designed by KITO to ensure smooth starts and stops. It is suited for general work.

Dual speed crane

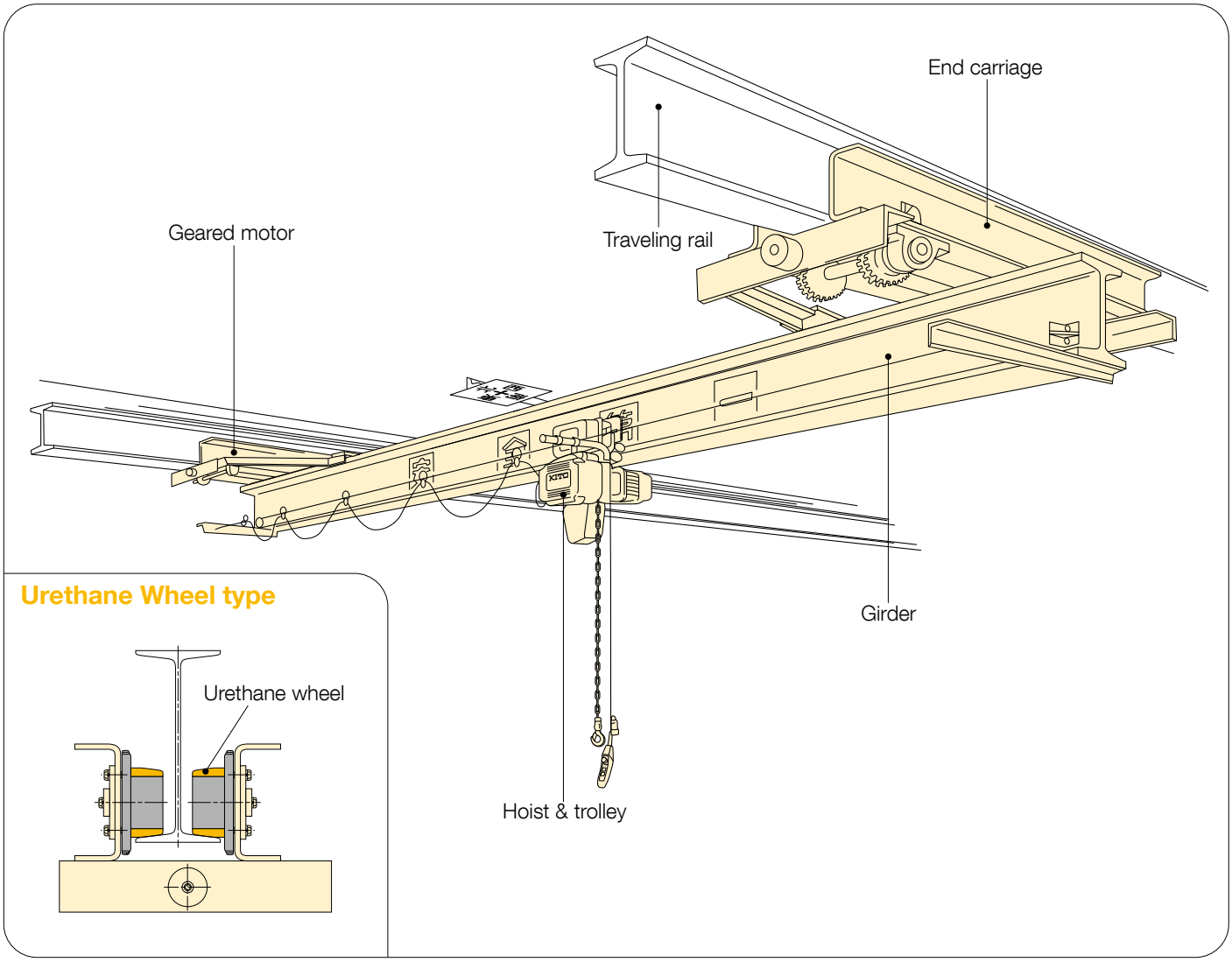
This crane is capable of pendant button-controlled speed shift between low and high speed (reduction ratio of 4:1). It is suited for work requiring varied speed operation.

Optional SOFTRUN device

This device electrically controls motor speed which enables to accelerate smoothly in travel and minimizes load swing at start-up.

It is highly suited for handling high inertia loads or operating long span cranes.

LOW-HEAD CRANES



The low-head crane is suspended from the traveling rail (I-beam) which is fixed to the ceiling rafters of the building. Because the traveling rail location and span can be freely chosen, the crane can be designed to suit production line processes. The detaching design for the track wheel and its axle reduces installation and maintenance time.

A dual speed type crane is available for speedcontrolled operation. There is also a urethane wheel type version of the crane that effectively reduces noise and vibration in travel. It is recommended for factories near residential areas, duplex office-homes, and for operation at night.

Single speed crane

This crane employs geared motors specially designed by KITO to ensure smooth starts and stops. It is suited for general work.

Dual speed crane

This crane is capable of pendant button-controlled speed shift between low and high speed (reduction ratio of 4:1). It is suited for work requiring varied speed operation.

Manual geared type

This manual geared type version of the crane balances travel smoothly by synchronizing the driving wheels on both sides. With a relatively shorter travel distance, it is suited for low frequency work.

Manual plain type (Low-head only)

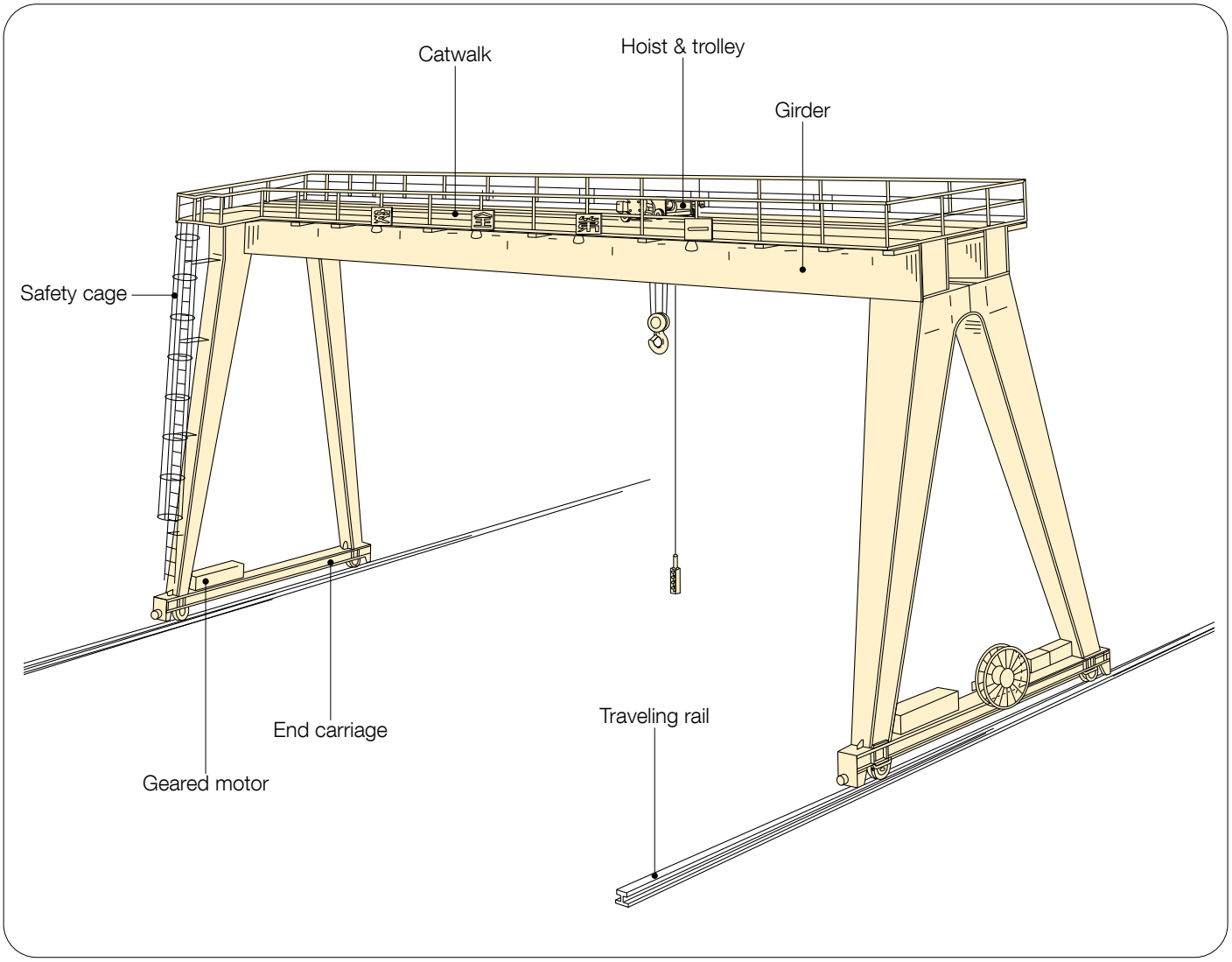
This is the simplest manual type of crane and lifting and traveling are operated by hand. It is suited for light work.

Optional SOFTRUN device

This device electrically controls motor speed which enables to accelerate smoothly in travel and minimizes load swing at start-up.

It is highly suited for handling high inertia loads or operating long span cranes.

BRIDGE CRANES



Kito's Gantry Crane Series offer "Gantry Cranes", which run on floor mounted rail by its two legs fabricated from steel sections, and "Single Leg Gantry Cranes", which have the end of the bridge supported by an end truck running on an elevated rail.

It is possible to customize this crane for the work and the installtion site. "Gantry Cranes" can be used both outside and inside, and in conbination with heavy cranes.

END CARRIAGE CAPACITY

- W.L.L.: indicates the maximum mass (working load limit) for general use.
- Traveling speeds are show on pages 18 to 23.

Type			W.L.L. (t)	Span (m)								Page
				3	6	9	12	15	18	21	27	
Motorized	Overhead		1			EO010-9	EO010-12		EO010-18	EO010-21		18
			2			EO020-9	EO020-12		EO020-18	EO020-21		
			3			EO030-9	EO030-12		EO030-18	EO030-21		
			5			EO050-9	EO050-12		EO050-18	EO050-21		
			7.5				EO075-12		EO075-18	EO075-21		
			10				EO100-12		EO100-18	EO100-21		
	Low-head		1		EL010-6	EL010-9	EL010-12	EL010-15				22
			2		EL020-6	EL020-9	EL020-12	EL020-15				
			3		EL030-6	EL030-9	EL030-12	EL030-15				
			5		EL050-6	EL050-9	EL050-12	EL050-15				
Urethane Wheel Type	Overhead		1			CEO010-9	CEO010-12	CEO010-15	CEO010-18	CEO010-21		19
			2			CEO020-9	CEO020-12	CEO020-15	CEO020-18	CEO020-21		
			3			CEO030-9	CEO030-12	CEO030-15	CEO030-18	CEO030-21		
			5			CEO050-9	CEO050-12	CEO050-15	CEO050-18	CEO050-21		
			7.5				CEO075-12		CEO075-18	CEO075-21		
			10				CEO100-12		CEO100-18	CEO100-21		
	Low-head		1			CEL010-9						23
			2			CEL020-9						
Double Girder	Overhead		3					WEO030-15		WEO030-21	WEO030-27	20
			5					WEO050-15		WEO050-21	WEO050-27	
			7.5					WEO075-15		WEO075-21	WEO075-27	
			10					WEO100-15		WEO100-21	WEO100-27	
			15					WEO150-15		WEO150-21	WEO150-27	
			20					WEO200-15		WEO200-21	WEO200-27	
	Urethane Wheel Type		3					CWEO030-15		CWEO030-21	CWEO030-27	21
			5					CWEO050-15		CWEO050-21	CWEO050-27	
			7.5					CWEO075-15		CWEO075-21	CWEO075-27	
			10					CWEO100-15		CWEO100-21	CWEO100-27	
			15					CWEO150-15		CWEO150-21	CWEO150-27	
			20					CWEO200-15		CWEO200-21	CWEO200-27	
Manual Type	Overhead	Geared	1			GO010-9	GO010-12					24
			2			GO020-9	GO020-12					
			3			GO030-9	GO030-12					
			5			GO050-9	GO050-12					
	Low-head	Plain	0.5	PL005-3	PL005-6	PL005-9						25
			1		PL010-6	PL010-9						
		Geared	1		GL010-6		GL010-12					24
			2		GL020-6		GL020-12					
			3		GL030-6		GL030-12					
			5		GL050-6		GL050-12					

- Optional SOFTRUN is recommended for color models.
- W.L.L.: Working Load Limit (t).

Features of end carriages

- To meet customer needs, we have raised performance while offering more standardized models. The track wheel is now made of a carbon steel construction and is, thus endurable and long lasting (excluding the plain type crane which is made from heat treated hot- rolled steel plates)
- Products are primer-coated which allows customers to choose the desired top coat color (KITO Yellow (Equivalent to Munsell 7.2YR6.5/14.5) is painted for plain type cranes).
- Punch-mark on end carriages for easy centering and drilling for girders.

Overhead end carriages	◎Track wheel maintenance is easy because of the open frame construction. ◎Travel is smooth because of a guide mechanism with side rollers.
Overhead urethane wheel type end carriages	◎Durability has been improved with our own developed urethane wheels. ◎The urethane wheels run directly over the top flange of the H-beam, thus reducing noise and vibration in travel. It is not necessary to install a light rail thus reducing installation costs and time. ◎Travel is smooth because of a guide mechanism with side rollers.
Low-head end carriages	◎Both the track wheel and track wheel axle are designed for easy detaching thus reducing installation and maintenance time. ◎Anti-drop plates are equipped on the carriage (for CSA).
Low-head urethane wheel type end carriages	◎This end carriage employs durable urethane wheels developed by KITO and an idling gear in reinforced nylon resin and reduces noise and vibrations in travel. ◎Both the track wheel and track wheel axle are designed for easy detaching thus reducing installation maintenance time.
Manual plain type end carriage	◎The hand pulling operation has become smoother and easier with a pressed metal wheel (0.5 t span 3 m and 1 t span 6 m) and side rollers (1 t span 9 m).
Manual geared type end carriage	◎Pulling the hand chain makes both wheels move at the same time for balanced smooth traveling.

How to read carriage types

EL 010 9 S

WEO 150 27 H

Types

EO	Motorized overhead end carriages
EL	Motorized low-head end Carriages
CEO	Urethane wheel motorized overhead end carriages
CEL	Urethane wheel motorized low-head end carriages
WEO	Motorized overhead double girder end carriages
CWEO	Urethane wheel motorized overhead double girder end carriages
GO	Geared type manual overhead end carriages
GL	Geared type manual low-head and carriages
PL	Plain type manual low-head end carriages

Rated load

Ex.: 010 = 1 t, 150 = 15 t

Span

Ex.: 9 = 9 m, 27= 27 m

Speed

Ex.: L	=10/12 m/min
S	=20/24 m/min
H	=30/36 m/min
SD	=20:5/24:6 m/min

GEARED MOTOR CAPACITY

Type		W.L.L. (t)	Span (m)							
			3	6	9	12	15	18	21	27
Motorized	Overhead	1	G1MO025□-□				G1MO025□-□		G1MO025□-□	
		2	G1MO025□-□				G1MO025□-□		G1MO040T-□	
		3	G1MO025□-□ G1MO040T-□				G1MO025□-□ G1MO040T-□			
		5	G1MO025□-□ G1MO040T-□			G1MO040□-□ G1MO075T-□				
		7.5	G1MO075□-□ G1MO150T-□				G1MO075□-□		G1MO075□-□	
		10					G1MO150T-□		G1M150T-□	
	Low-head	1	G1ML025□-□		G1ML025□-□	G1ML025□-□	G1ML040□-□	Available on your request		
		2	G1ML025□-□		G1ML025□-□	G1ML025□-□				
		3	G1ML025□-□		G1ML025□-□ G1ML040T-□					
		5	G1ML040□-□ G1ML075T-□			G1ML075□-□				
Urethane Wheel Type	Overhead	1	G1MO025□-□				G1MO040□-□		G1MO075□-□	
		2	G1MO040□-□					G1MO075□-□		
		3	G1MO075□-□							
		5	G1MO075□-□ G1MO150T-□				G1MO150□-□		G1MO150□-□	
		7.5	G1MO150□-□				G1MO150□-□			
		10					G1MO150□-□ G1MO150□-□×2			
	Low-head	1	G1ML025□-□			Available on your request				
		2	G1ML040□-□ G1ML075T-□							
Double Girder	Overhead	3	G1MO025□-□ G1MO040T-□							G1MO040□-□ G1MO075T-□
		5	G1MO040□-□ G1MO075T-□					G1MO075□-□ G1MO150T-□		G1MO075□-□ G1MO150T-□
		7.5	G1MO075□-□							G1MO075□-□ G1MO150T-□
		10	G1MO150T-□					G1MO075□-□ G1MO150T-□		G1MO150□-□
		15	G1MO150□-□							
		20	G1MO150□-□ G1MO150□-□×2					G1MO150□-□ G1MO150□-□×2		
	Urethane Wheel Type	3	G1MO075□-□ G1MO150T-□							G1MO150□-□
		5	G1MO150□-□							
		7.5	G1MO150□-□							
		10	G1MO150□-□×2					G1MO150□-□×2		
		15	G1MO150□-□×2					G1MO150□-□×2		
		20	G1MO150□-□×2 *					G1MO150□-□×2 *		G1MO150□-□×2

- 1.5 kW×2 means 2 geared motors are used on 1 end carriage (on side): 4 driving motor type.
- For dual listings, models on the upper line are the low, standard and dual speeds end carriages, whereas models on the lower line are the high speed end carriages. Single listings show the low, standard, high and dual speed end carriages.
- *Available on request (2.2 kW×2 for 30/36 m/min. speed).
- W.L.L.: Working Load Limit (t).

Features of geared motors

- KITO cranes employ a geared motor with an electromagnetic brake. Brake torque is adjustable from 0 to 50% (for 0.25 kW :from 30 to 80%) of the rated torque of the motor, thus the load swing can be minimized by adjusting the brake torque.
- The motor uses a helical gear, which reduces noise during operation.
- SOFTRUN devices are available to provide smooth starts and minimize swing.
- Motors are available in three different single speed (10/12, 20/24, and 30/36 m/min 50/60 Hz) types and one dual speed (20/5 24/6 m/min 50/60 Hz) type (reduction ratio of 4:1) and they make work more efficient.

How to read types (example)

G1MO 025 L-E

- **Types of end carriages**
  - O: Overhead
  - L: Low-head
- **Motor outputs (50/60Hz)**
  - 025: 0.21/0.25 kW
  - 040: 0.34/0.4 kW
  - 075: 0.63/0.75 kW
  - 150: 1.25/1.5 kW
- **Speed (50/60Hz)**
  - L: 10/12 m/mim (Low speed)
  - S: 20/24 m/mim (Standard speed)
  - SD: 20/5 24/6 m/mim (Dual speed)
  - H: 30/36 m/mim (High speed)
- **Power sources**
  - E: 200 V/50 Hz, 200-220 V/60 Hz
  - Z: 380-415 V/50 Hz, 440-460 V/60 Hz
  - B: 220 V/50 Hz, 208-230 V/60 Hz
380 V/50 Hz, 380-460 V/60 Hz
- **Types of geared motors**

G1MO 040 T-Z

- **Types of end carriages**
  - O: Overhead
  - L: Low-head
- **Motor outputs**
  - 040: (0.25)+0.34/0.4 kW
  - 075: (0.4)+0.63/0.75 kW
  - 150: (0.75)+1.25/1.5 kW
- **Speed (50/60Hz)**
  - T: 30/36 m/mim (High speed)
- **Power sources**
  - E: 200 V/50 Hz, 200-220 V/60 Hz
  - Z: 380-415 V/50 Hz, 440-460 V/60 Hz
  - B: 220 V/50 Hz, 208-230 V/60 Hz
380 V/50 Hz, 380-460 V/60 Hz
- **Types of geared motors**

How to order end carriages (example)

When ordering an end carriage and geared motor separately

Ex. Overhead end carriage 1 t span 12 m.
Geared motor for traveling speed 20 m/min, motor output 0.25 kW, and electric voltage 380 V 50 Hz.

- **End carriage** EO010-12 shown on page 18
- **Geared motor** G1MO025S-Z shown on page 26
  - Overhead
  - Standard speed 20 m/min
  - Voltage 380 V

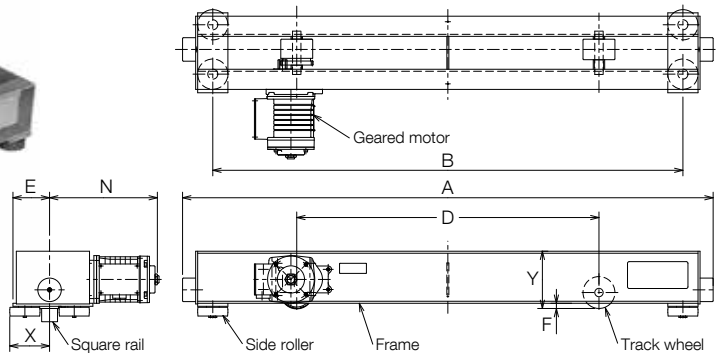
When ordering an end carriage and geared motor as a complete unit

Ex. Overhead end carriage 1 t span 12 m, traveling speed 20 m/min and electric voltage 380 V 50 Hz.

- **Complete unit** EO010-12-S-Z shown on page 18
  - Traveling speed 20 m/min
  - Voltage 380 V

END CARRIAGE SPECIFICATIONS

Motorized Overhead End Carriage Specifications

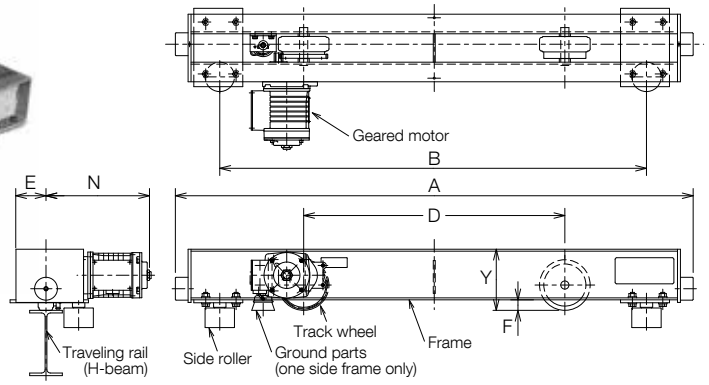


Ex. Above photo shows EO030-12
Some types of motors are mounted in parallel on the frames.

W.L.L. (t)	Max. span (m)	Type	Traveling motor output (kWx2) 50/60 Hz (m/min)				Applicable square rail (mm)	Max. wheel pressure (kN)	Wheel diameter (mm)	Dimensions (mm)								Mass (kg/set)
			L	S	H	SD				A	B	D	E *1	F	N *2	X	Y	
			10/12	20/24	30/36	20:5/24:6												
1	9	EO010- 9						9.31	95	1580	1400	900	109	15.5	321			132
	12	☆EO010-12			0.21/0.25		□32·□40 □38·□45									119	171	
	18	EO010-18						17.6	125	2280	2100	1200	124		325		191	197
	21	EO010-21			0.34/0.4		□45·□50	31.4	175	2691	2505	1400	144		326	123	221	380
2	9	EO020- 9								1580	1400	900	114				176	146
	12	☆EO020-12			0.21/0.25		□32·□40 □38·□45	17.6	125						325	119		
	18	EO020-18	0.21/0.25	0.21/0.25		0.21:0.053/ 0.25:0.063				2280	2100	1200	124	20.5			221	212
	21	EO020-21						31.4	175	2691	2505	1400	144		326			380
3	9	EO030- 9						20.6	140	1580	1400	900	114				176	150
	12	☆EO030-12			0.34/0.4		□45·□50								325	123		
	18	EO030-18						23.5	155	2280	2100	1200	149				221	252
	21	EO030-21						31.4	175	2691	2505	1400	144		326			380
5	9	☆EO050- 9								1490	1300	800	124		323			197
	12	EO050-12					□50			2296	2100	1200	138			143	224	374
	18	EO050-18	0.34/0.4	0.34/0.4	0.63/0.75	0.34:0.084/ 0.4:0.1		44.1	210						376			
	21	EO050-21								2696	2500	1400	163				264	496
7.5	12	☆EO075-12						73.5	250	1645	1405	900	138				224	384
	18	EO075-18						79.4	300	2345	2105	1200	163	23.5			264	586
	21	EO075-21								2745	2505	1400	183				324	724
10	12	☆EO100-12	0.63/0.75	0.63/0.75	1.25/1.5	0.63:0.16/ 0.75:0.19	□55·□60	73.5	250	1645	1405	900	138		445	162	224	384
	18	EO100-18						79.4	300	2345	2105	1200	163				264	586
	21	EO100-21								2745	2505	1400	183				324	724

•W.L.L.: Working Load Limit (t).
*1: The size including the projection of the side roller plate.
*2: The size with the standard speed (s) geared motor.
☆: Geared motors installed in diagonal positions as shown in the above photo.
•When planning a girder or cart, contact your nearest Kito distributor.

Urethane Wheel Motorized Overhead End Carriage Specifications



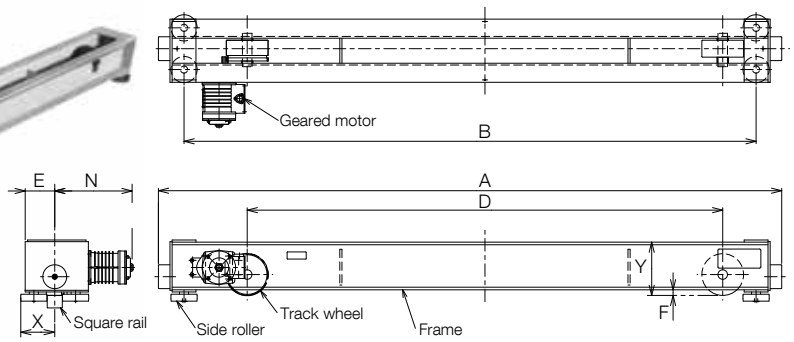
Ex. Above photo shows EO030-15
Some types of motors are mounted in parallel on the frames.

W.L.L. (t)	Max. span (m)	Type	Traveling motor output (kWx2) 50/60 Hz (m/min)				Applicable traveling rail (mm) *1	Max. wheel pressure (kN) *2	Recommended wheel pressure (kN) *3	Wheel diameter (mm)	Dimensions (mm)							Mass (kg/set)
			L	S	H	SD					A	B	D	E *4	F	N *5	Y	
			10/12	20/24	30/36	20:5/24:6												
1	9	☆CEO010- 9	0.21/0.25	0.21/0.25	0.21/0.25	0.21:0.053/ 0.25:0.063	100·125·150	7.8	7.4	155	1586	1307	800	110		317	188	156
	12	☆CEO010-12	0.34/0.4	0.34/0.4	0.34/0.4	0.34:0.084/ 0.4:0.1		14.7	13.9	175	1696	1445	900		32	383		202
	15	CEO010-15									2356	2105	1200				233	265
	18	CEO010-18																
	21	CEO010-21	0.63/0.75	0.63/0.75	0.63/0.75	0.63:0.16/ 0.75:0.19		33.3	25.0	220	2792	2499	1400	155	39	460	239	502
2	9	CEO020- 9	0.34/0.4	0.34/0.4	0.34/0.4	0.34:0.084/ 0.4:0.1		14.7	13.9	175	1696	1445	900	131	32	383	188	202
	12	☆CEO020-12																
	15	CEO020-15									2082	1761	1000					384
	18	CEO020-18									2422	2101	1200					398
	21	CEO020-21									2792	2499	1400					502
3	9	CEO030- 9	0.63/0.75	0.63/0.75	0.63/0.75	0.63:0.16/ 0.75:0.19	150·175·200	33.3	25.0	220	2082	1761	1000	155		460	239	384
	12	CEO030-12																
	15	CEO030-15																
	18	CEO030-18									2422	2101	1200					398
	21	CEO030-21									2792	2499	1400					502
5	9	CEO050- 9									1852	1531	900		39			355
	12	☆CEO050-12																
	15	CEO050-15						41.2	31.0	260	2402	2106	1200	153		559		543
	18	CEO050-18																
	21	CEO050-21			1.25/1.5						2821	2506	1400	184			279	665
7.5	12	☆CEO075-12	1.25/1.5	1.25/1.5		—		61.7	46.2	340	2081	1766	900	177			239	525
	18	CEO075-18									2421	2106	1200	184		553	279	627
	21	CEO075-21									2821	2506	1400					665
10	12	☆CEO100-12									2081	1766	900	177			239	525
	18	CEO100-18			1.25/1.5x2		200·250	81.3	60.0	440	2849	2509	1400	234	46	592	346	1027 (1220)
	21	☆CEO100-21																

•W.L.L.: Working Load Limit (t). •Weight in parentheses is for high speed (H). *1: Contact your nearest Kito distributor for sizes other than listed above.
*2: Wheel pressure under the W.L.L. beneath the end carriage with standard girder and maximum span to verify endurance of the structure.
*3: In case of regular use of more than 80% of W.L.L. or frequent operation at a particular position,
select an end carriage to make the wheel pressure the same as or less than the recommended wheel pressure.
*4: The size including the projection of the side roller plate. *5: The size with the standard speed (s) geared motor.
☆: Geared motors installed in diagonal positions as shown in the above photo. •When planning a girder or cart, contact your nearest Kito distributor.

END CARRIAGE SPECIFICATIONS

Motorized Overhead Double Girder End Carriage Specifications

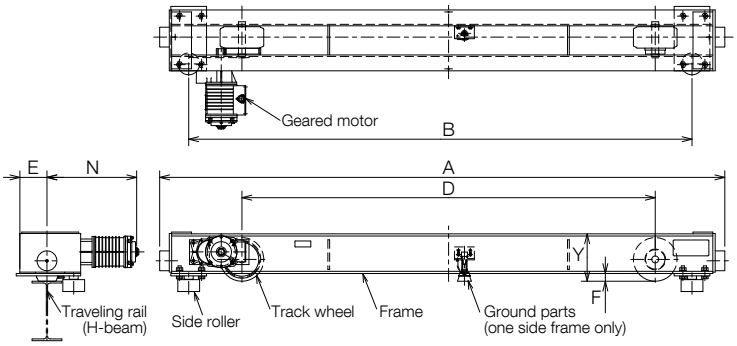


W.L.L. (t)	Max. span (m)	Type	Traveling motor output (kWx2) 50/60 Hz (m/min)				Applicable square rail (mm)	Max. wheel pressure (kN)	Wheel diameter (mm)	Dimensions (mm)								Mass (kg/set)
			L	S	H	SD				A	B	D	E*1	F	N*2	X	Y	
			10/12	20/24	30/36	20:5/24:6												
3	15	WEO030-15	0.21/0.25	0.21/0.25	0.34/0.4	0.21:0.053/ 0.25:0.063	□50	31.4	175	2615	2400	1995	124		325	143		382
	21	WEO030-21				0.34:0.084/ 0.4:0.1				2845	2630	2195						449
	27	WEO030-27	0.34/0.4	0.34/0.4	0.63/0.75			44.1	210	3395	3180	2140	128		375		224	504
5	15	WEO050-21								2845	2630	2195						449
	21	WEO050-21								3095	2855	2390	134		444			554
	27	WEO050-27						73.5		3425	3185	2590		23.5				736
7.5	15	WEO075-15			1.25/1.5	0.63:0.16/ 0.75:0.19	□55·□60		250	3098	2855	2395	138		445	162	274	686
	21	WEO075-21	0.63/0.75	0.63/0.75														
	27	WEO075-27						79.4		3478	3235	2740					324	799
10	15	WEO100-15						73.5		3098	2855	2395					274	686
	21	WEO100-21						82.3	300	3288	3045	2540					324	828
	27	WEO100-27						100	350	3698	3430	2840			529		328	1136
15	15	WEO100-15																
	21	WEO150-21			1.25/1.5x2													
	27	WEO150-27	1.25/1.5	1.25/1.5		—	□55·□60·□65	131	400	4028	3760	3150	150	27.5	530	189		1448 (1588)
20	15	WEO200-15															408	
	21	WEO200-21						162	450	4528	4260	3500			531			1945 (2083)
	27	WEO200-27																

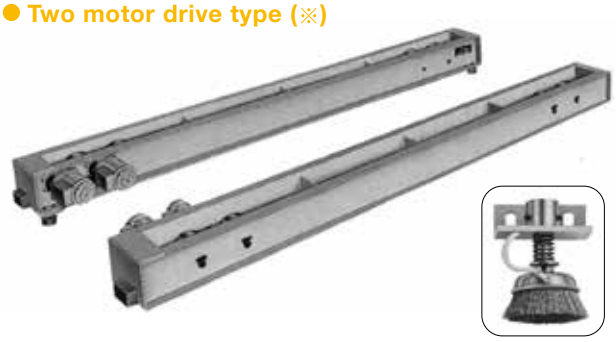
•W.L.L.: Working Load Limit (t).
•Weights in parentheses are for high speed (H).
*1: The size including the projection of the side roller plate.
*2: The size with the standard speed (s) geared motor.
•When planning a girder or cart, contact your nearest Kito distributor.

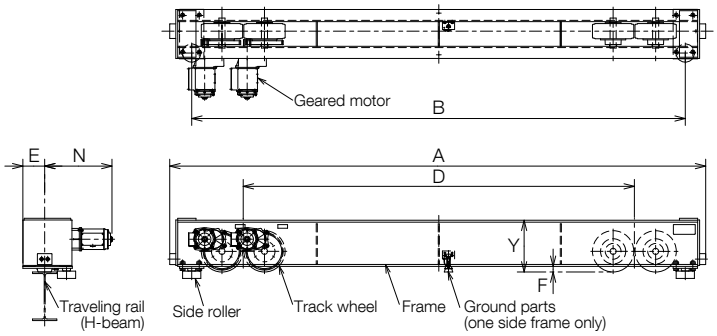
Urethane Wheel Motorized Overhead Double Girder End Carriage Specifications

● One motor drive type



● Two motor drive type (※)



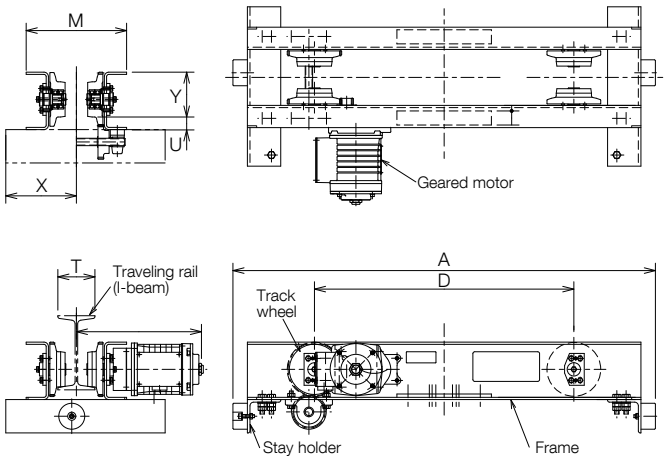


W.L.L. (t)	Max. span (m)	Type	Traveling motor output (kWx2) 50/60 Hz (m/min)				*1 Applicable square rail (mm)	*2 Max. wheel pressure (kN)	*3 Recommended wheel pressure (kN)	Wheel diameter (mm)	Dimensions (mm)							Mass (kg/set)
			L	S	H	SD					A	B	D	*4 E	F	*5 N	Y	
			10/12	20/24	30/36	20:5/24:6												
3	15	CWEO030-15	0.63/0.75	0.63/0.75		0.63:0.16/ 0.75:0.19		33.3	25.0	220	2851	2539	2085	155		459	239	524
	21	CWEO030-21	1.25/1.5	1.25/1.5	1.25/1.5		150·175·200	41.2	31.0	260	3111	2796	2295	153		560		653
	27	CWEO030-27						43.1	32.3	300	3211	2896	2140	163		564	289	881
5	15	CWEO050-15						41.2	31.0	260	3111	2796	2295	153	39	560	239	653
	21	CWEO050-21						61.7	46.2	340	3091	2776	2230	177		553		930
	27	CWEO050-27	1.25/1.5x2	1.25/1.5x2	1.25/1.5x2		175·200	41.2	31.0	260x2	3771	3456	2700	149		559	289	1160
7.5	15	CWEO075-15	1.25/1.5	1.25/1.5	1.25/1.5		150·175·200	61.7	46.2	340	3091	2776	2230	177		553		930
	21	CWEO075-21						41.2	31.0	260x2	3771	3456	2700	149		559		1160
	27	CWEO075-27					175·200	43.1	32.3	300x2	4059	3701	2900	159	46	564	346	1438
10	15	CWEO100-15						41.2	31.0	260x2	3771	3456	2700	149	39	559	289	1160
	21	CWEO100-21	1.25/1.5x2	1.25/1.5x2	1.25/1.5x2			43.1	32.3	300x2	4059	3701	2900	159		564	346	1438
	27	CWEO100-27				–					4412	4063	3220				426	1672
15	15	CWEO150-15					200·250	61.7	46.2	340x2	3992	3643	2790	180		554	346	1378
	21	CWEO150-21									4412	4063	3220					1672
	27	CWEO150-27			–						5172	4823	3800			593		2575
	27	CWEO150-27H	–	–	2.2x2						5292	4943	3840		46	709		2696
20	15	CWEO200-15	1.25/1.5x2	1.25/1.5x2	–						4742	4393	3380			593		2214
	15	CWEO200-15H	–	–	2.2x2		250·300	81.3	60.0	440x2	4872	4523	3420	212		709	426	2332
	21	CWEO200-21	1.25/1.5x2	1.25/1.5x2	–						5172	4823	3800			593		2575
	21	CWEO200-21H	–	–	2.2x2						5292	4943	3840			709		2696
	27	CWEO200-27	1.25/1.5x2	1.25/1.5x2	–						5422	5073	4070			593		2944
	27	CWEO200-27H	–	–	2.2x2						5552	5203	4110			709		3067

•W.L.L.: Working Load Limit (t).
*1: Contact your nearest Kito distributor for sizes other than listed above.
*2: Wheel pressure under the W.L.L. beneath the end carriage with standard girder and maximum span to verify the endurance of the structure.
*3: In case of regular use of more than 80% of W.L.L. or frequent operation at a particular position, select an end carriage to make the wheel pressure the same as or less than the recommended wheel pressure.
*4: The size including the projection of the side roller plate.
*5: The size with the standard speed (s) geared motor.
•When planning a girder or cart, contact your nearest Kito distributor.

END CARRIAGE SPECIFICATIONS

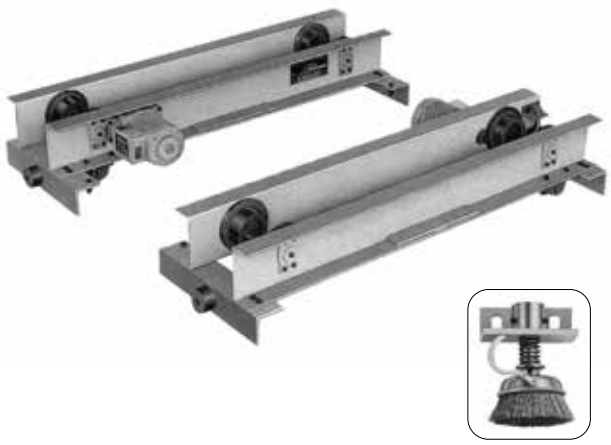
Motorized Low-head End Carriage Specifications

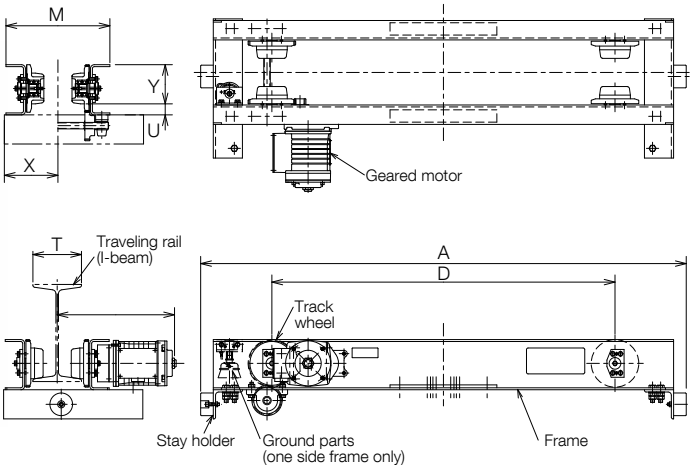


W.L.L. (t)	Max. span (m)	Type	Traveling motor output (kWx2) 50/60 Hz (m/min)				Applicable traveling rail (mm)	Max. wheel pressure (kN)	Wheel diameter (mm)	Dimensions (mm)							Mass (kg/set)
			L	S	H	SD				A	D	M	U	N *1	X	Y *2	
			10/12	20/24	30/36	20:5/24:6											
1	6	EL010- 6	0.21/0.25	0.21/0.25	0.34/0.4(B) 0.21/0.25(E,Z)	0.21:0.053/ 0.25:0.063	75·100·125·150	4.51	95	1140	700	T+171	34	288+T/2	241-T/2	121	132
	9	EL010- 9								1500	1060						150
	12	EL010-12								1840	1400						164
	15	EL030-15	0.34/0.4	0.34/0.4	0.63/0.75(B,Z) 0.34/0.4(E)	0.34:0.084/ 0.4:0.1	125·150	15.7	140	2200	1760	T+231	40	336+T/2		174	340
2	6	EL020- 6	0.21/0.25	0.21/0.25	0.34/0.4(B) 0.21/0.25(E,Z)	0.21:0.053/ 0.25:0.063	100·125·150	9.31	110	1140	700	T+191	36	288+T/2		138	152
	9	EL020- 9								1500	1060						172
	12	EL020-12								1840	1400					165	202
	15	EL030-15	0.34/0.4	0.34/0.4	0.63/0.75(B,Z) 0.34/0.4(E)	0.34:0.084/ 0.4:0.1	125·150	15.7	140	2200	1760	T+231	40	336+T/2		174	340
3	6	EL030- 6	0.21/0.25	0.21/0.25	0.34/0.4(B) 0.21/0.25(E,Z)	0.21:0.053/ 0.25:0.063	100·125·150	9.31	110	1140	700	T+191	36	288+T/2	281-T/2	165	160
	9	EL030- 9			0.34/0.4			10.5	125	1840	1400	T+241	38			162	234
	12	EL030-12															
	15	EL030-15			0.63/0.75(B,Z) 0.34/0.4(E)					2200	1760	T+231					340
5	6	EL050- 6	0.34/0.4	0.34/0.4	0.63/0.75	0.34:0.084/ 0.4:0.1	125·150	15.7	140	1500	1060	T+211	40	336+T/2		174	270
	9	EL050- 9															
	12	EL050-12	0.63/0.75	0.63/0.75	0.63/0.75(E)	0.63:0.16/ 0.75:0.19(E,Z)		17.6	155	2200	1760	T+279	39	399+T/2	290-T/2	201	432
	15	EL050-15															

•W.L.L.: Working Load Limit (t).
*1: The size with the standard speed (s) geared motor.
*2: The height from the track surface of the traveling rail to the top of the end carriage.
•To reinforce a connecting part of the rails with a plate on the rail web, make sure that the plate has a clearance for the end carriage.
(Do not install the plate for 75 mm width rails or on the rail track.)
•**Use I-beam for the traveling rail.**
•When planning a girder or cart, contact your nearest Kito distributor.
•E: 200V/50Hz, 200-220V/60Hz
•Z: 380-415V/50Hz, 440-460V/60Hz
•B: 220V/50Hz, 208-230V/60Hz
380V/50Hz, 380-460V/60Hz

Urethane Wheel Motorized Low-head End Carriage Specifications



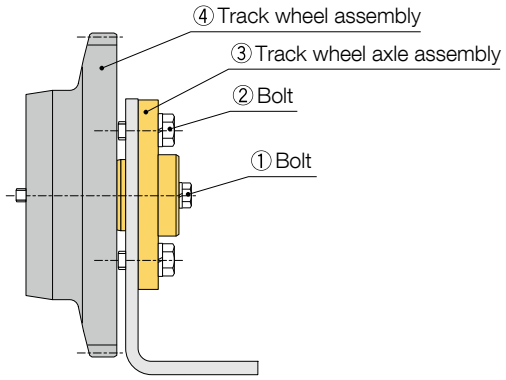


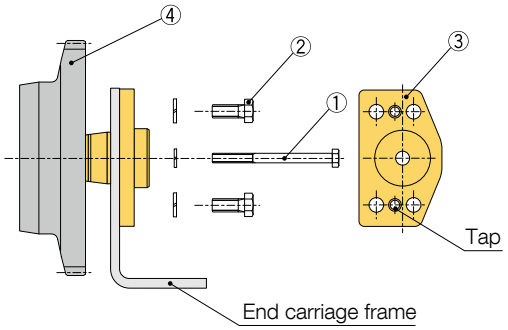
W.L.L. (t)	Max. span (m)	Type	Traveling motor output (kWx2) 50/60 Hz (m/min)				Applicable traveling rail (mm)	Max. wheel pressure (kN) *1	Recommended wheel pressure (kN) *2	Wheel diameter (mm)	Dimensions (mm)							Mass (kg/set)
			L	S	H	SD					A	D	M	U	N *3	X	Y *4	
			10/12	20/24	30/36	20:5/24:6												
1	9	CEL010-9	0.21/0.25	0.21/0.25	0.34/0.4(B) 0.21/0.25(E,Z)	0.21:0.053/ 0.25:0.063	125·150	3.8	3.6	95	1500	1060	T+171	34	T/2+288	241-T/2	121	143
2	9	CEL020-9	0.34/0.4	0.34/0.4	0.63/0.75	0.34:0.084/ 0.4:0.1		6.7	6.3	125			T+211	35	T/2+336	281-T/2	165	231

•W.L.L.: Working Load Limit (t).
*1: Wheel pressure under the W.L.L. beneath the end carriage with standard girder and maximum span to verify the endurance of the structure.
*2: In case of regular use of more than 80% of W.L.L. or frequent operation at a particular position, select an end carriage to make the wheel pressure the same as or less than the recommended wheel pressure.
*3: The size including the projection of the side roller plate.
*4: The size with the standard speed (s) geared motor.
•To reinforce a connecting part of the rails with a plate on the rail web, make sure that the plate has a clearance for the end carriage. (Do not install the plate for 75 mm width rails or on the rail track.)
•Use I-beam for the traveling rail.
•When planning a girder or cart, contact your nearest Kito distributor.
•E: 200V/50Hz, 200-220V/60Hz
•Z: 380-415V/50Hz, 440-460V/60Hz
•B: 220V/50Hz, 208-230V/60Hz
380V/50Hz, 380-460V/60Hz

Track wheel and track wheel axle construction

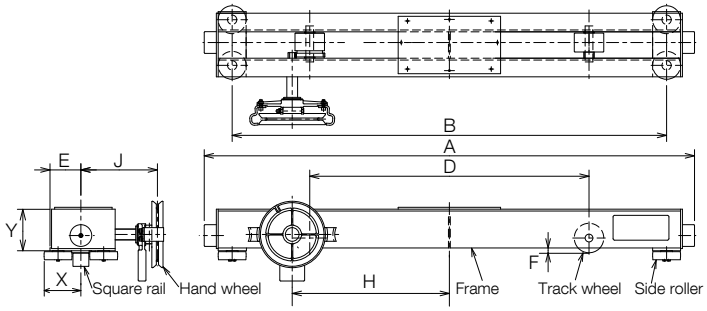
With respect to a low-head end carriage, both the track wheel and track wheel axle are designed for easy detaching, thus reducing installation and maintenance time.





END CARRIAGE SPECIFICATIONS

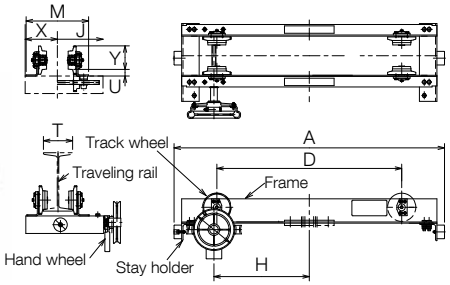
Geared Overhead End Carriage Specifications



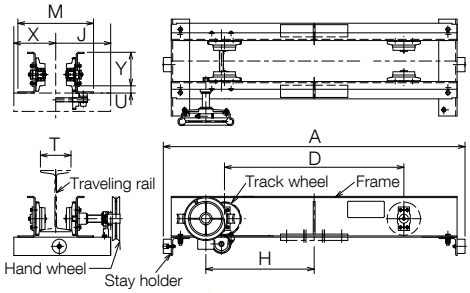
W.L.L. (t)	Max. span (m)	Type	Applicable square rail (mm)	Max. wheel pressure (kN)	Wheel diameter (mm)	Dimensions (mm)									Mass (kg/set)
						A	B	D	E *1	F	H	J	X	Y *2	
1	9	GO010- 9	□32·□38 □40·□45	9.31	95	1580	1400	900	100	15.5	507	247	119	147	99
	12	GO010-12													
2	9	GO020- 9		17.6	125				120		509	252		172	130
	12	GO020-12													
3	9	GO030-9	□45·□50	20.6	140				135		521		123	202	156
	12	GO030-12													
5	9	GO050-9	□50	44.1	210	1590			119	18.5	561	257	143	205	224
	12	GO050-12													

•W.L.L.: Working Load Limit (t).
*1: The size including the projection of the side roller plate.
*2: The height from the track surface of the traveling rail to the top of the end carriage.
•When planning a girder or cart, contact your nearest Kito distributor.

Geared Low-head End Carriage Specifications



● 1 to 2 t



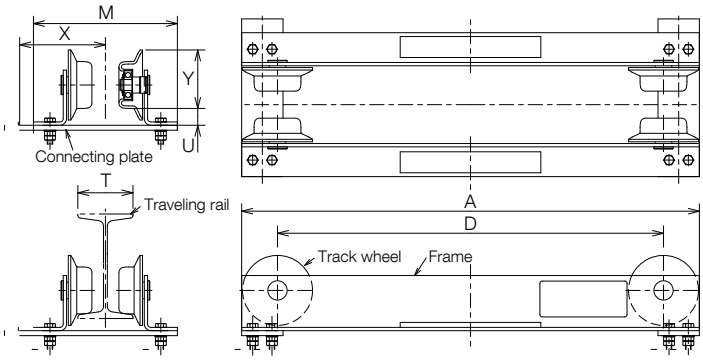
● 3 to 5 t

W.L.L. (t)	Max. span (m)	Type	Applicable traveling rail (mm)	Max. wheel pressure (kN)	Wheel diameter (mm)	Dimensions (mm)								Mass (kg/set)
						A	D	H	J	M	U	J	Y *1	
1	6	GL010- 6	75·100·125·150	4.5	95	1390	950	490	T/2+228	T+171	34	241-T/2	121	106
	12	GL010-12				1840	1400	715		T+211				139
2	6	GL020- 6	100·125·150	9.31	110	1480	1030	530		T+191	36	281-T/2	138	142
	12	GL020-12				1840	1400	715		T+201			145	166
3	6	GL030- 6				1480	880	531.3	T/2+221	T+221			165	162
	12	GL030-12		10.78	125	1840	1400	599.2	T/2+222	T+231	38		177	202
5	6	GL050- 6	125·150	15.7	140	1480	850	539	T/2+225	T+211	40		174	226
	12	GL050-12		17.6	155	1840	1400	579	T/2+234	T+249	39	315-T/2	188	292

•W.L.L.: Working Load Limit (t).
*1: The height from the track surface of the traveling rail to the top of the end carriage.
•To reinforce a connecting part of the rails with a plate on the rail web, make sure that the plate has a clearance for the end carriage.
(Do not install the plate for 75 mm width rails or on the rail track.)
•Use I-beam for the traveling rail.
•When planning a girder or cart, contact your nearest Kito distributor.

Plain Low-head End Carriage Specifications

● **No side rollers for 0.5 t (max. span 6 m) and 1 t (max. span 6 m)**

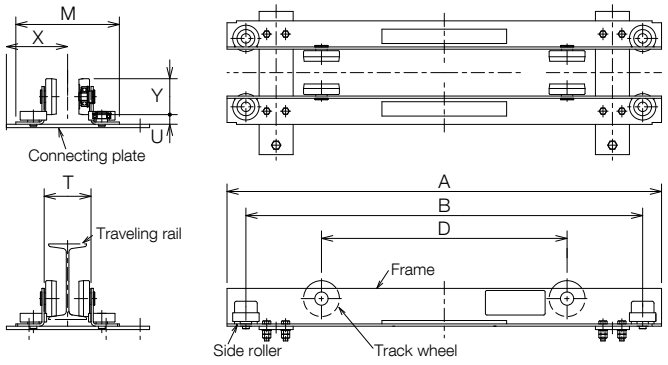


W.L.L. (t)	Max. span (m)	Type	Applicable traveling rail (mm)	Max. wheel pressure (kN)	Wheel diameter (mm)	Dimensions (mm)							Mass (kg/set)
						A	B	D	M	U	X	Y *	
0.5	3	PL005-3	75·100	1.76	71	470	—	350	T+157	25	206-T/2	89	27
	6	PL010-6	75·100·125	3.5	85	830		700	T+161	31		106	45
1	6	PL010-6											

•W.L.L.: Working Load Limit (t).
*: The hieght from the track surface of the traveling rail to the top of the end carriage.
•To reinforce a connecting part of the rails with a plate on the rail web, make sure that the plate has a clearance for the end carriage.
(Do not install the plate for 75 mm width rails or on the rail track.)
•Use I-beam for the traveling rail except the size, 100 × 75 × 5.
•When planning a girder or cart, contact your nearest Kito distributor.

Plain Low-head End Carriage Specifications

● **Side rollers for 0.5 t and 1 t (max. span 6 m)**

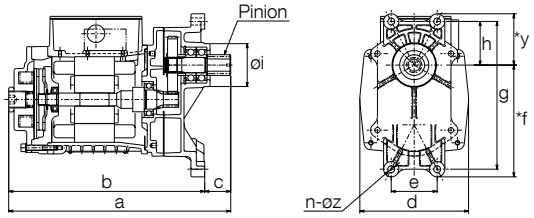


W.L.L. (t)	Max. span (m)	Type	Applicable traveling rail (mm)	Max. wheel pressure (kN)	Wheel diameter (mm)	Dimensions (mm)							Mass (kg/set)
						A	B	D	M	U	X	Y *	
0.5	9	PL010-9	75·100·125	3.92	95	1150	1050	650	T+174	26	212-T/2	95	71
1	9	PL010-9											

•W.L.L.: Working Load Limit (t).
*: The hieght from the track surface of the traveling rail to the top of the end carriage.
•To reinforce a connecting part of the rails with a plate on the rail web, make sure that the plate has a clearance for the end carriage.
(Do not install the plate for 75 mm width rails or on the rail track.)
•Use I-beam for the traveling rail except the size, 100 × 75 × 5.
•When planning a girder or cart, contact your nearest Kito distributor.

GEARED MOTOR SPECIFICATIONS

■ Dimensions

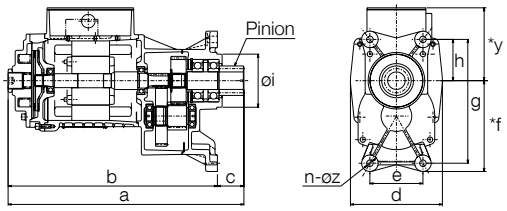


*Flange thickness of the Geared motor at the fixing holes (n-øz) are 18 mm.

*f and y show distances from pinion center to both ends.

Type	Motor output (kW)		Pole	Power source		Dimensions (mm)														Mass (kg/set)
						a		b	c		d	e	f	y	g	h	øi	n	øz	
	50 Hz	60 Hz		Overhead	Low-head	Overhead	Low-head		Overhead	Low-head										
G1M□025L-□				B,E,Z	B,E,Z									67						
G1M□025S-□	0.21	0.25	4			290	281	256						82.2						11
G1M□025H-□				E	E,Z									67						
G1M□025SD-□	0.21:0.053	0.25:0.063	2/8			324	315	290		25	142	60	146	70.6	193	57	$56^{0}_{-0.046}$			17.5
						339		305						72						19
G1M□040T-□				B,E,Z	B,E,Z	300	291	266	34					75.2				4	9	15.5
G1M□040L-□	0.34	0.4	4											78						15
G1M□040S-□						335	330	301						92.6						14
G1M□040H-□				E	E					29	156	70	161		215	66	$74^{0}_{-0.046}$			15
G1M□040SD-□	0.34:0.084	0.4:0.1	2/8	B,E,Z	B,E,Z									78						16.5
G1M□075T-□	0.63	0.75	4			346	341	312												17

●Brake: DC Disk Brake. ●Brake Torque: From 0 to 50% (for 0.25 kW:30 to 80%) of motor rated Torque. ●Dust and water protection: IP55 (Specified by I.E.C.)



*Flange thickness of the Geared motor at the fixing holes (n-øz) are 17 mm.

*f and y show distances from pinion center to both ends.

Type	Motor output (kW)		Pole	Power source		Dimensions (mm)														Mass (kg/set)
						a		b	c		d	e	f	y	g	h	øi	n	øz	
	50 Hz	60 Hz		Overhead	Low-head	Overhead	Low-head		Overhead	Low-head										
G1M□075L-□				B,E,Z	E															
G1M□075S-□	0.63	0.75	4		B,E,Z	400	393	355												26
G1M□075H-□				E,Z	E															
G1M□075SD-□	0.63:0.16	0.75:0.19	2/8	B,E,Z	E,Z				45	38	156	90	154	122.6	210	70	$90^{0}_{-0.054}$	4	11	27
						415		370												30
G1MO150T-□						433	426	388												36
G1MO150L-□	1.25	1.5	4	E	—															
G1MO150S-□				B,E,Z		484	—	419	65	—	190	110	177	132.6	242	80	$115^{0}_{-0.054}$		13	45
G1MO150H-□				E,Z																

●Brake: DC Disk Brake. ●Brake Torque: From 0 to 50% of motor rated Torque. ●Dust and water protection: IP55 (Specified by I.E.C.)

How to read types (example)

G1MO 025 L-E

- Types of end carriages
  - O: Overhead
  - L: Low-head
- Motor outputs (50/60Hz)
  - 025: 0.21/0.25 kW
  - 040: 0.34/0.4 kW
  - 075: 0.63/0.75 kW
  - 150: 1.25/1.5 kW
- Speed (50/60Hz)
  - L: 10/12 m/mim (Low speed)
  - S: 20/24 m/mim (Standard speed)
  - SD: 20/5 24/6 m/mim (Dual speed)
  - H: 30/36 m/mim (High speed)
- Power sources
  - E: 200 V 50 Hz, 200-220 V 60 Hz
  - Z: 380-415 V 50 Hz, 440-460 V 60 Hz
  - B: 220 V 50 Hz, 208-230 V 60 Hz 380 V 50 Hz, 380-460 V 60 Hz
- Types of geared motors

G1MO 040 T-E

- Types of end carriages
  - O: Overhead
  - L: Low-head
- Motor outputs
  - 040: (0.25)+0.34/0.4
  - 075: (0.4)+0.63/0.75
  - 150: (0.75)+1.25/1.5
- Speed (50/60Hz)
  - T: 30/36 m/mim (High speed)
- Power sources
  - E: 200 V 50 Hz, 200-220 V 60 Hz
  - Z: 380-415 V 50 Hz, 440-460 V 60 Hz
  - B: 220 V 50 Hz, 208-230 V 60 Hz 380 V 50 Hz, 380-460 V 60 Hz
- Types of geared motors

■ Specifications of Geared Motor Pinions

Type	Motor output (kW)		*Traveling speed (m/min)		*Motor revolutions (r.p.m)		Pinion					
							*Revolutions (r.p.m)		Tooth surface strength (kg)			
									Overhead		Low-head	
	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
G1M□025L-□	0.21	0.25	10	12	1410	1650	155	181	158	134	105	90
G1M□025S-□			20	24			314	367	78	66	52	44
G1M□025H-□			30	36			463	541	53	45	35	30
G1M□040T-□	0.34	0.4			1430	1700	469	557	83	70	59	47
G1M□025SD-□	0.053	0.063	5	6	730	870	80	91	77	67	51	45
	0.21	0.25	20	24	2960	3530	325	387	75	63	50	42
G1M□040L-□	0.34	0.4	10	12	1430	1700	132	156	247	208	165	139
G1M□040S-□			20	24			255	302	128	107	85	72
G1M□040H-□			30	36			382	453	86	72	57	48
G1M□075T-□	0.63	0.75			1415	1670	378	445	162	137	108	92
G1M□040SD-□	0.084	0.1	5	6	730	860	68	79	121	103	81	68
	0.34	0.4	20	24	2890	3420	266	314	123		82	69
G1M□075L-□	0.63	0.75	10	12	1415	1670	77	91	527	446	323	255
G1M□075S-□			20	24			146	173	278	235	158	134
G1M□075H-□			30	36			224	253	182	160	104	92
G1M□150T-□	1.25	1.5			1440	1700	218	256	372	317	—	—
G1M□075SD-□	0.16	0.19	5	6	720	860	39	47	263	219	161	125
	0.63	0.75	20	24	2890	3440	157	187	259	217	159	124
G1MO150L-□	1.25	1.5	10	12	1440	1700	65	77	1022	862		
G1MO150S-□			20	24			127	149	522	446	—	—
G1MO150H-□			30	36			192	227	345	292		

*Figures in the table are approximate values.

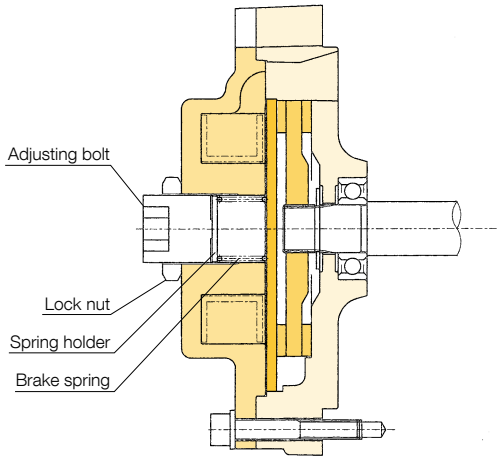
■ Details of Pinions

Type	Motor output (kW) 50/60Hz	Pole	Pinion (mm)			
			Module	Number of teeth	X	Outside diameter
G1MO025□-□	0.21/0.25	4	2.5	8	0.452	27.1 $^{0}_{-0.1}$
G1MO025□-□				12	0.294	36.5 $^{0}_{-0.2}$
	0.21:0.053/0.25:0.063	2/8				
G1MO040T-□	0.34/0.4	4		8	0.452	27.1 $^{0}_{-0.1}$
G1ML040T-□				12	0.294	36.5 $^{0}_{-0.2}$
G1MO040□-□	0.34/0.4	4	3	8	0.460	32.8 $^{0}_{-0.2}$
G1ML040□-□				12	0.294	43.8 $^{0}_{-0.2}$
	0.34:0.084/0.4:0.1	2/8				
G1MO075T-□	0.63/0.75	4		8	0.460	32.8 $^{0}_{-0.2}$
G1ML075T-□				12	0.294	43.8 $^{0}_{-0.2}$
G1MO075□-□	0.63/0.75	4	4.5	8	0.550	50 $^{0}_{-0.2}$
G1ML075□-□			3	21	-0.04	68.8 $^{0}_{-0.2}$
	0.63:0.16/0.75:0.19	2/8				
G1MO150T-□	1.25/1.5	4	4.5	8	0.550	50 $^{0}_{-0.2}$

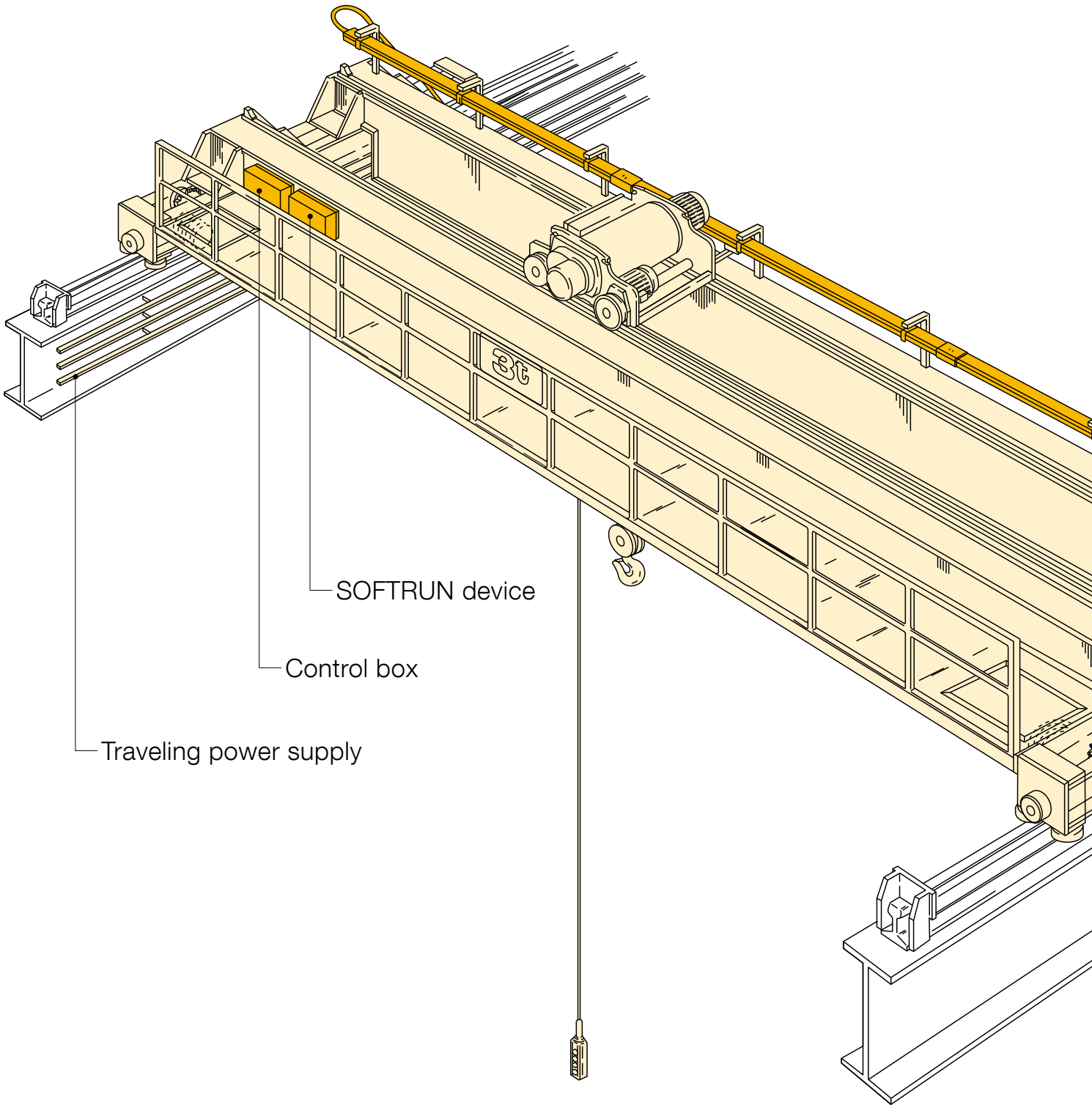
•Heat treatment: Case hardened HRC: 57 to 63.
•X: Addendum modification coefficient.

■ Brake Torque Adjustment

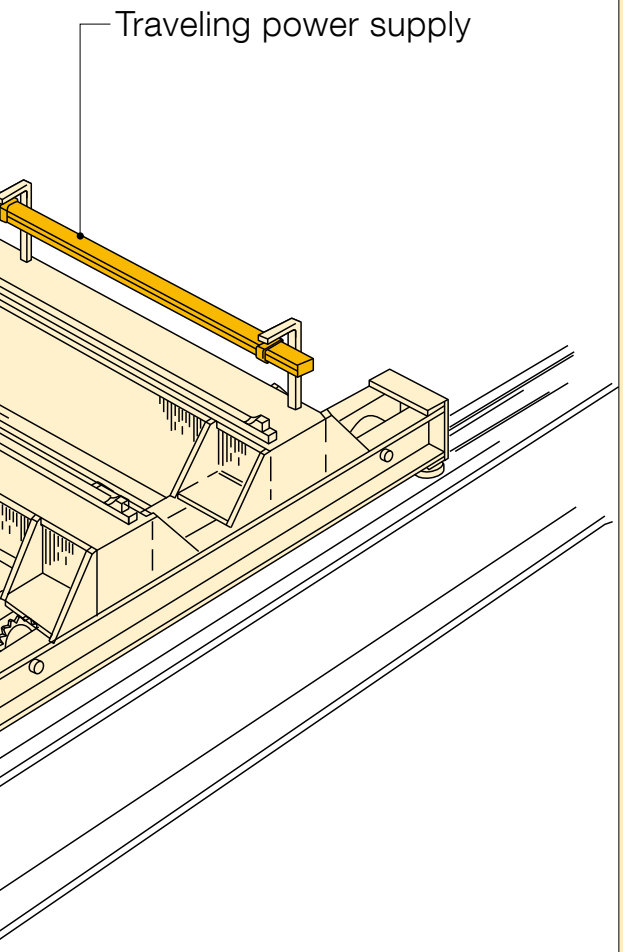
Torque can be adjusted within a range of 30 to 80% for a 0.25 kW motor and 0 to 50% for motors exceeding 0.4 kW of the rated torque by loosening the lock nut and setting the height of the adjusting bolt. Be sure to tighten the nut and fix the bolt after adjustment. Adjustment is the set-less type.



KITO CRANES can be fitted with peripheral equipment for greater durability, higher performance and greater

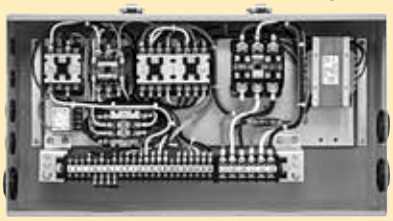


operational efficiency.

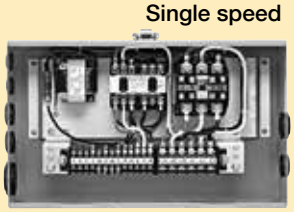


Control Boxes

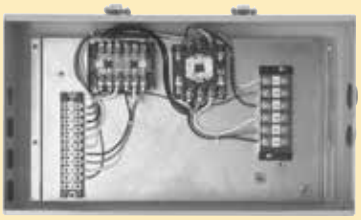
Dual speed



Single speed



For an electric chain hoist
with an emergency stop device.



For a rope hoist
with an emergency stop device.

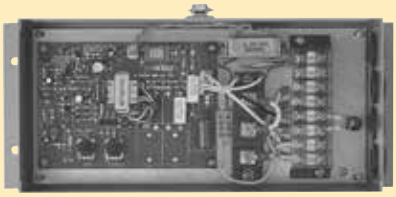
For a rope hoist
with an emergency stop device.

Emergency Stop Device

For
an electric
chain hoist

For
a rope hoist
(option)

SOFTRUN Device (option)

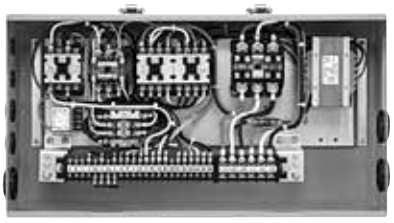


CONTROL BOXES

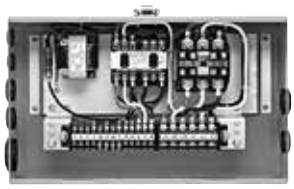
For electric chain hoist (ER2M)

This control box includes a built-in electromagnetic contactor and a transformer with control voltage of 24V. Other control voltages are available as an option. All models are equipped with an emergency stop device as standard.

Dual speed



Single speed



With an emergency stop device

Fig.A

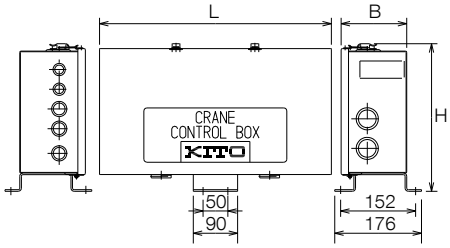
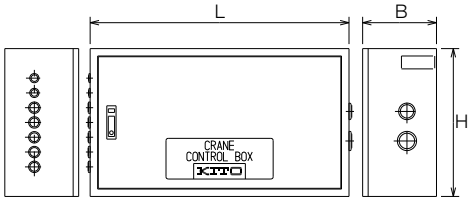


Fig.B

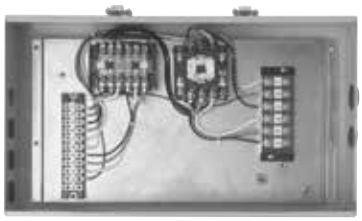


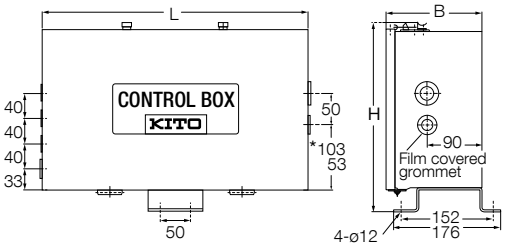
	Type	Geared motor output	Power supply		Pendant control voltage	Rated current		Outline	Dimensions (mm)			Mass (kg/set)
			Rated voltage	Working voltage range		Control box	Traveling		H	B	L	
Single speed	SBE015SN	~0.75kWx2	200V 50Hz 200~220V 60Hz	±10%	24~26.4V	40A	11A	Fig.A	256	128	348	7
	SBE015SNZ		380~415V 50Hz 440V 60Hz			38A	7A					
	SBE030SN	~1.5kWx2	200V 50Hz 200~220V 60Hz			70A	16A		300	133	470	9
Dual speed	SBE015SDN	~0.75kWx2	200V 50Hz 200~220V 60Hz	±10%	24~26.4V	40A	11A	Fig.A	300	133	470	11
	SBE015SDNZ		380~415V 50Hz 440V 60Hz			38A	7.5A					
	SBE030SDN	~1.5kWx2	200V 50Hz 200~220V 60Hz			70A	16A					

- Available on your request.
- Environment: Ambient temperature: -20 to 40°C (No freezing) Installation site: Indoor, free of dust and corrosive gases.
- Protection class : IP20
- Color: Munsell 6YR6/14

For wire rope hoist

This control box contains a built-in electromagnetic contactor for controlling travel. Two series (with and without emergency a stop device) are available with a built-in electromagnetic contactor.



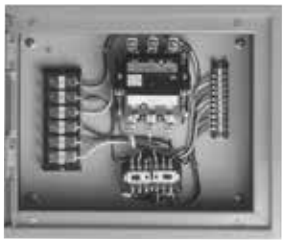


*With an emergency stop device

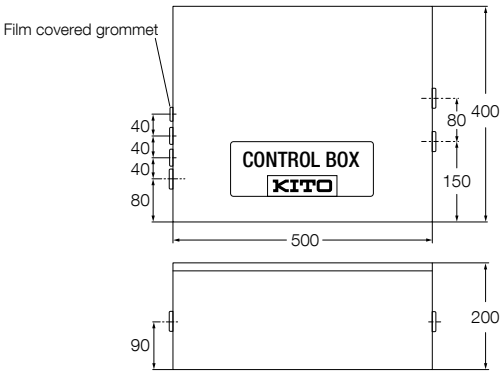
Type		Emergency stop device	Geared motor output	Power supply		Pendant control voltage	Rated current		Dimensions (mm)			Mass (kg/set)
				Rated voltage	Working voltage range		Control box	Traveling	H	B	L	
Single speed	SBH008S-H	Without	0.25 kWx2	220 V 60 Hz	±10%	220 V	50 A	11 A	256	128	348	7
	SBH008S-X		0.4 kWx2	380,415 V 50 Hz		48 V		7 A				
	SBH008SN-H	With		220 V 60 Hz		220 V		11 A	300	158	440	8
	SBH008SN-X			380,415 V 50 Hz		48 V		7 A				
	SBH015S-H	Without	0.75 kWx2	220 V 60 Hz	±10%	220 V	70 A	11 A	256	128	348	7
	SBH015S-X			380,415 V 50 Hz		48 V		7 A				
	SBH015SN-H	With		220 V 60 Hz		220 V		11 A	300	158	440	9
	SBH015SN-X			380,415 V 50 Hz		48 V		7 A				
	SBH030S-H	Without	1.5 kWx2	220 V 60 Hz	±10%	220 V	100 A	20 A	300	133	390	8
	SBH030S-X			380,415 V 50 Hz		48 V		10 A				
*Dual speed	SBH008SD-H	Without	0.25 kWx2	220 V 60 Hz	±10%	220 V						
	SBH008SD-X		0.4 kWx2	380,415 V 50 Hz		48 V						
	SBH008SDN-H	With		22 V 60 Hz		220 V						
	SBH008SDN-X			380,415 V 50 Hz		48 V						
	SBH015SD-H	Without	0.75 kWx2	220 V 60 Hz	±10%	220 V	—	—	—	—	—	—
	SBH015SD-X			380,415 V 50 Hz		48 V						
	SBH015SDN-H	With		220 V 60 Hz		220 V						
	SBH015SDN-X			380,415 V 50 Hz		48 V						
	SBH030SD-H	Without	1.5 kWx2	220 V 60 Hz	±10%	220 V						
	SBH030SD-X			380,415 V 50 Hz		48 V						

*Available on request.

- Environment: Ambient temperature: -10 to 40 ℃ (No freezing) Installation site: Indoor, free of dust and corrosive gases.
- Dust and water protection: IP20 (Specified by I.E.C.)
- Color: Munsell 6YR6/14



With an emergency stop device



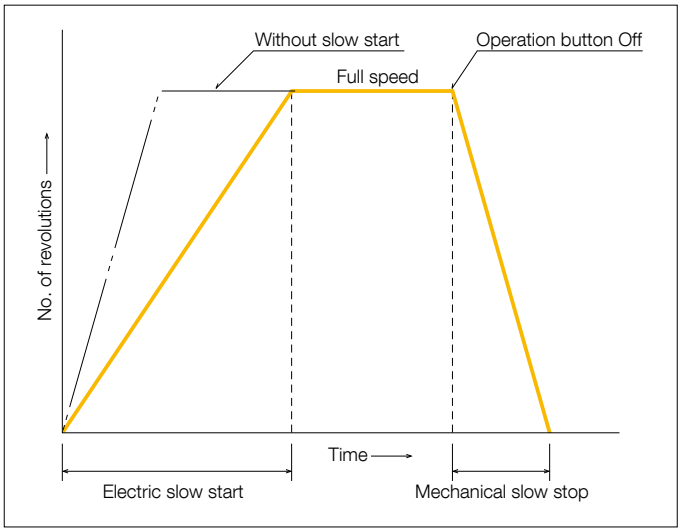
Type		Emergency stop device	Geared motor output	Power supply		Pendant control voltage	Rated current		Mass (kg/set)
				Rated voltage	Working voltage range		Control box	Traveling	
Single speed	SBH008S-H	With	1.5 kWx2	220 V 60 Hz	±10%	220 V	100 A	20 A	17
	SBH008S-X			380,415 V 50 Hz		48 V		10 A	

- Environment: Ambient temperature: -10 to 40 ℃ (No freezing) Installation site: Indoor, free of dust and corrosive gases.
- Dust and water protection: IP20 (Specified by I.E.C.)
- Color: Munsell 6YR6/14

SOFTRUN DEVICE (Option)

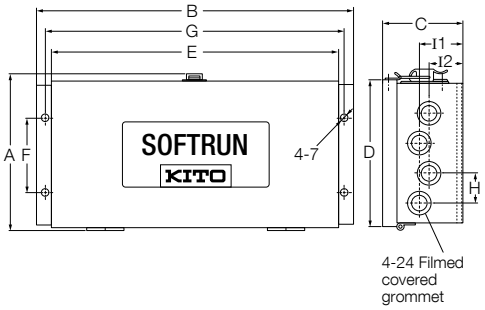
This device electrically controls motor speed which enables the crane to accelerate smoothly in travel and minimizes load swing at start-up.
It is highly suited for handling high inertia loads or operating long span cranes.

- Easily installed between the control box and geared motor. Wiring connections are simple.
- Applicable for all models of motorized end carriages.



SOFTRUN

SOFTRUN uses a phase control system to adjust torque and the timer. The cushion time can be freely set between 1 and 5 seconds. It enables smooth start-up and operation without load swing. SOFTRUN uses a highly reliable semiconductor to maintain a long life.



Type	Geared motor output	Rated current	Torque setting range	Timer range	Power supply		Dimensions (mm)										Mass (kg/set)
					Rated voltage	Working voltage range	A	B	C	D	E	F	G	H	I1	I2	
SR150S-S	0.25 kW×2	7.5 A			200 V												
SR150S-Y	0.4 kW×2				400 V												2.5
SR150S-A	0.75 kW×2				500 V												
SR300S-S					200 V												
SR300S-Y	1.5 kW×2		0 to 10	1 to 5 sec	400 V	±10%	152	330	90	147	299	75	310	30	45	35	
SR300S-A		15 A			500 V												
SR300S-SX2					200 V												3
SR300S-SY2	1.5 kW×4				400 V												
SR300S-SA2					500 V												

- Control method: Voltage drop start-up using T-phase control.
- Environment: Ambient temperature: -10 to 40 ℃ (No freezing) Installation site: Indoor, free of dust and corrosive gases.
- Dust and water protection: IP20 (Specified by I.E.C.)
- Color: Munsell 6YR6/14
- 220.440 V and 575 V / 60 Hz(for CSA) boxes available on request.

POWER SUPPLY CABLES AND ACCESSORIES

Power supply cable

Wiresx cross-sectional area	3Cx2□	4Cx2□	4Cx3.5□	6Cx2□	8Cx2□	4Cx5.5□	4Cx8□	4Cx14□	4Cx22□	4Cx30□
Cable diameter	ø11	ø12.3	ø14.2	ø14.5	ø16.8	ø17.5	ø19.5	ø24	ø30	ø36
Part No.	CTC3C x 2	CTC4C x 2	CTC4C x 3.5	CTC6C x 2	CTC8C x 2	CTC4C x 5.5	CTC4C x 8	CTC4C x 14	CTC4C x 22	CTC4C x 30
Type	Vinyl power supply cable (VCT)							Rubber power supply cable (2CT)		

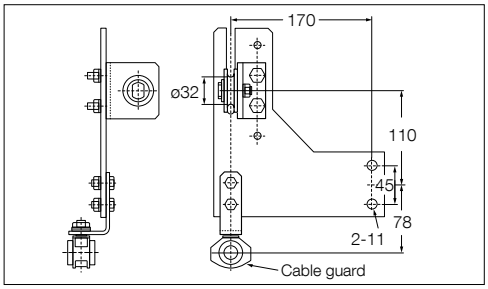
Junction cable for electric chain hoist (ER2M) and rope hoist

Junction cable connecting the crane contral box to the electric chain hoist. It is used for the power supply and operation circuits.

Wiresx cross-sectional area	7C composite cable (4C x 3.5□ + 3C x 0.75□)	9C composite cable (4C x 3.5□ + 5C x 0.75□)
Cable diameter	ø17.9	ø22.3
Part No.	CTC4C + 3C	CTC4C + 5C
Type	Vinyl power supply cable (VCT)	

Wire guide L

This guide is used to power the supply cable system (for low-head end carriage).

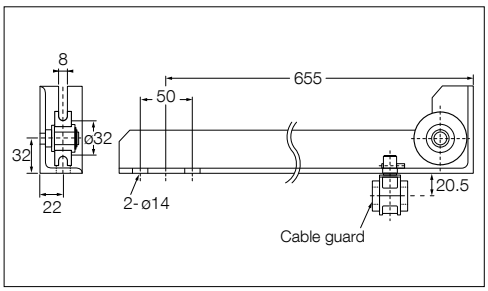


Type	Cable size		Cable guard
	Outer diameter	Wiresx cross-sectional area	
WGL16	ø14.2	4C x 3.5□	CG16
WGL19	*ø17.0 to ø19.0	4C x 5.5□ 4C x 8□	CG19

* Option

Wire guide O

This guide is used to power the supply cable system (for both overhead and low-head types).

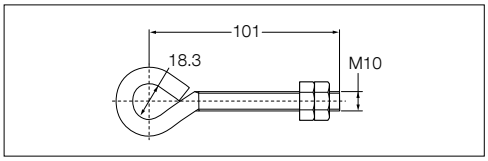


Type	Cable size		Cable guard
	Outer diameter	Wiresx cross-sectional area	
WGO16	ø14.2	4C x 3.5□	CG16
WGO19	*ø17.0 to ø19.5	4C x 5.5□ 4C x 8□	CG19

* Option

Wire bolt assembly

This bolt is used to fix messenger wires.



Type	With ø4 to ø6 wire clip
WB	

Allowable length (m) of power supply cable (200V)

IA	Cross-Section area (mm²)						
	2□	3.5□	5.5□	8□	14□	22□	38□
10	25	45	71	103			
15	17	30	47	69	121		
20	12	22	35	51	90		
25		18	28	41	72	114	
30			23	34	60	95	
35			20	29	51	81	111
40				25	45	71	97
45				23	40	63	86
50					36	57	77
60					30	47	64
70						40	55
80						35	48
90							43
100							38

How to identify allowable power supply cable

- Internal wiring specification JEAC8001-1995 120-1 Voltage drop

The voltage drop in low voltage lines is, as a rule, to be kept within 2% of the standard voltage of the trunk line and the branch circuit.

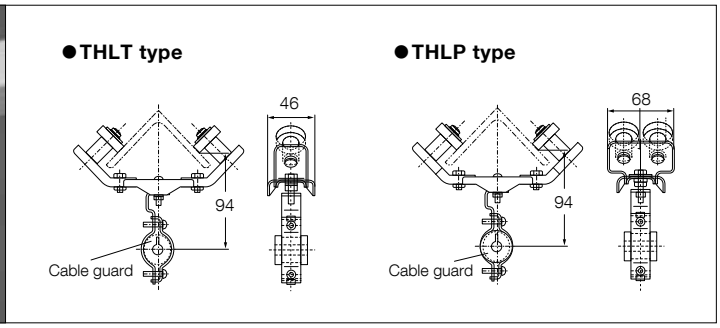
$$\text{Allowable length (m)} = \frac{1000}{30.8} \times \frac{\text{Cross-sectional area of single wire (mm}^2\text{)} \times \text{rated voltage} \times 0.02}{I_A}$$

I_A : Electric chain hoist or rope hoist
Rated current + Rated current of travel motor x 2

CABLE HANGERS

Angled hanger

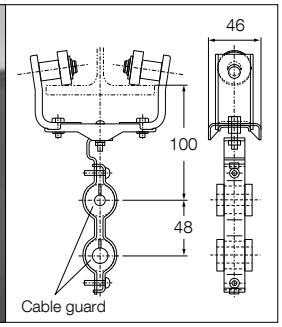
This hanger uses an angle steel to hang power supply cables. The THLP type is used to hang push-button cord.



Type	Angle steel width	Cable size
THLT26S-75	L-50x50x6 to L-75x75x9	ø10 to ø26
THLP26S-75		

T-type hanger for wire rope hoists

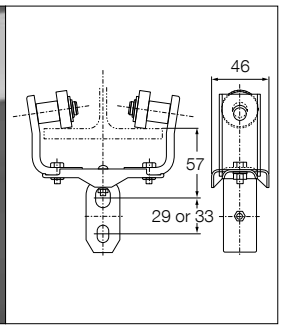
This hanger is used to hang power supply cables and is suited for all sizes of cable and rails.
•Suited for hanging dynamic and operation cables for rope hoists.



Type	Rail width	Cable size	
		Upper	Lower
THI19W-100	75 to 100	ø10 to ø22	
THI19W-150	125 to 150		
THI19W-175	175		
THI26W-100	75 to 100	ø22.1 to ø26	ø10 to ø22
THI26W-150	125 to 150		
THI26W-175	175		

T-type hanger for electric chain hoist (ER2M)

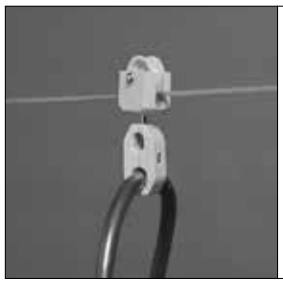
This hanger is used to hang power supply cables. It is applicable for all sizes of cable and rail widths, and is suited for compound cables.

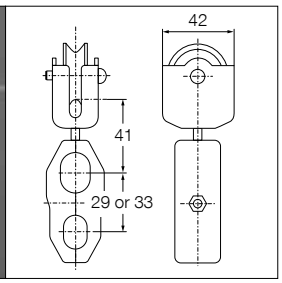


Type	Rail width	Cable size
TTH14S-100V	75 to 150	ø11 or ø12.3 to ø14.5
TTH14S-175V	175	
TTH17S-100V	75 to 150	ø17.5 to ø17.9
TTH17S-175V	175	
TTH19S-100V	75 to 150	ø16.8 or ø19.4 to ø19.5
TTH19S-175V	175	
TTH21S-100V	75 to 150	ø16.8 or ø22.3
TTH21S-175V	175	

Cable hanger

This hanger is used to hang power supply cables with messenger wires.

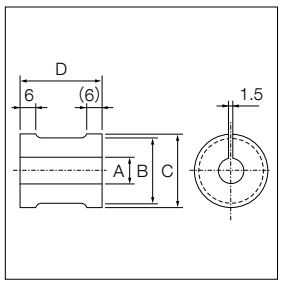




Type	Messenger wire	Cable size
CH14S	ø4 to ø6	ø11 or ø12.3 to ø14.5
CH17S		ø17.5 to ø17.9
CH19S		ø16.8 or ø19.4 to ø19.5
CH21S		ø16.8 or ø22.3

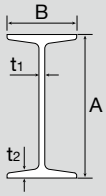
Cable guard

This guard is used to protect cables strung from T-type and angled hangers.



Type	Cable size	øA	øB	øC	D
CG13	ø10 to ø13	10	25	28	32
CG16	ø13.1 to ø16	13	26		
CG19	ø16.1 to ø19	16			
CG22	ø19.1 to ø22	19			
CG26	ø22.1 to ø26	22	34	37	

CRANE GIRDER ALLOWABLE SPAN
Single Rail (JIS)

Girder section	Dimensions A x B x t_1 x t_2	(kg/m)	Allowable span (m)								
			500 kg	1.0 t	1.5 t	2.0 t	2.5 t	3.0 t	5.0 t	7.5 t	10 t
 I-beam	I-200 x 100 x 7 x 10	26	6.0	4.6							
			6.0	4.6							
	I-250 x 125 x 7.5 x 12.5	38.3	8.6	6.7	5.5	4.5	4.0				
			8.3	6.1							
	I-250 x 125 x 10 x 19	55.5	11.2	8.2	6.9	6.0	5.4	4.9			
			11.2	8.2	6.9	6.0	5.4	4.9			
	I-300 x 150 x 8 x 13	48.3	10.2	9.0	6.8	6.1	5.6	4.9			
			10.0	7.6							
	I-300 x 150 x 10 x 18.5	65.5	11.6(11.2)	10.2	8.5	7.7	6.8	6.2	3.8		
			11.6(11.2)	10.2	8.5	7.4	6.7	6.4	4.3		
	I-300 x 150 x 11.5 x 22	76.8	11.6(11.2)	11.2	9.4	8.2	7.5	6.9	5.4		
			11.6(11.2)	11.2	9.4	8.2	7.5	6.9	5.0		
	I-350 x 150 x 9 x 15	58.5	11.2	9.4	7.8	6.9	6.4	6.0	3.6		
			11.0	9.0	7.7						
	I-350 x 150 x 12 x 24	87.2	11.6(11.2)	11.6(11.2)	11.3(11.2)	9.9	9.0	8.3	6.6	4.5	
			11.6(11.2)	11.6(11.2)	11.3(11.2)	9.9	9.0	8.3	6.1	4.2	3.1
	I-400 x 150 x 10 x 18	72	11.6(11.2)	11.0	9.3	8.3	7.6	7.2	5.6		
			11.6(11.2)	10.6	8.7	8.1	7.5	7.1	5.1		
	I-400 x 150 x 12.5 x 25	95.8	11.6(11.2)	11.6(11.2)	11.6(11.2)	11.3(11.2)	10.3	9.2	6.8	5.2	3.9
				11.6(11.2)	11.6(11.2)	11.2	9.4	8.7	6.6	4.8	3.6
	I-450 x 175 x 11 x 20	91.7	11.6(11.2)	11.6(11.2)	11.6(11.2)	10.5	9.6	8.8	6.8	5.6	
				11.6(11.2)	11.0	10.7	9.9	9.3	6.8		
	I-450 x 175 x 13 x 26	115	11.6(11.2)	11.6(11.2)	11.6(11.2)	11.6(11.2)	11.6(11.2)	11.1	8.5	6.8	5.4
						11.6(11.2)	11.4(11.2)	10.5	8.1	6.5	4.8

: For kito electric hoist.

: For kito wire rope hoist.

- The above data is calculated according to the crane standard in Japan: Deflection=Within 1/1000 x span. Allowable bending stress=Within 1390 kg/cm^2
- A stop drawing for the girder available on request.
- The figures in parentheses are data for Low-head cranes.

PERIPHERAL EQUIPMENT COVERAGE

■ Table of Control Box for Electric Chain Hoist (Single speed)

Type		W.L.L. (t)	Span (m)								
			3	6	9	12	15	18	21	24	27
Motorized	Overhead	1	SBM015S,SN								
		2									
		3									
		5									
		7.5	SBM015S,SN (SBM030S,SN)								
		10									
	Low-head	1	SBM015S,SN								
		2									
		3									
		5									
Urethane Wheel Type	Overhead	1	SBM015S,SN								
		2									
		3									
		5	SBM015S,SN (SBM030S,SN)								
		7.5	SBM030S,SN								
		10					SBM030S,SN (*SBM060S,*SN)				
	Low-head	1	SBM015S,SN								
		2									
Double Girder	Overhead	3	SBM015S,SN								
		5									
		7.5	SBM015S,SN (SBM030S,SN)								
		10								SBM030S,SN	
		15	SBM030S,SN								
		20	SBM030S,SN (*SBM060S,*SN)								
	Urethane Wheel Type	3	SBM015S,SN (SBM030S,SN)								
		5	SBM030S,SN								
		7.5									
		10	*SBM060S,*SN								
		15									
		20	*SBM060S,*SN (*SBM120S,*SN)								

•S: Without emergency stop device. SN: With emergency stop device.
Types in parentheses show high speed type.
*Available on request.

■ Table of Control Box for Electric Chain Hoist (Dual speed)

Type		W.L.L. (t)	Span (m)								
			3	6	9	12	15	18	21	24	27
Motorized	Overhead	1	SBM015SD,SDN								
		2									
		3									
		5									
		7.5									
		10									
	Low-head	1									
		2									
		3									
		5									
Urethane Wheel Type	Overhead	1	SBM015SD,SDN								
		2									
		3									
		5									
		7.5	SBM030SD,*SDN								
		10									
	Low-head	1	SBM015SD,SDN								
		2									
Double Girder	Overhead	3	SBM015SD,SDN								
		5									
		7.5									
		10									
		15	SBM030SD,*SDN								
		20									
	Urethane Wheel Type	3	SBM015SD,SDN								
		5	SBM030SD,*SDN								
		7.5									
		10	*SBM060SD,*SDN								
		15									
		20									

•SD: Without emergency stop device. SDN: With emergency stop device.
*Available on request.

■ Table of Control Box for Wire Rope Hoist (Single speed)

Type		W.L.L. (t)	Span (m)								
			3	6	9	12	15	18	21	24	27
Motorized	Overhead	1	SBH008S,SN								
		2									
		3									
		5				SBH008S,SN (SBH015S,SN)					
		7.5	SBH015S,SN (SBH030S,*SN)								
		10									
	Low-head	1	SBH008S,SN								
		2									
		3									
		5	SBH008S,SN (SBH015S,SN)			SBH015S,SN					
Urethane Wheel Type	Overhead	1	SBH008S,SN								
		2									
		3	SBH015S,SN								
		5	SBH015S,SN (SBH030S,*SN)								
		7.5	SBH030S,*SN								
		10					SBH030S,*SN (*SBH060S,*SN)				
	Low-head	1	SBH008S,SN								
		2	SBH008S,SN (SBH015S,SN)								
Double Girder	Overhead	3	SBH008S,SN					SBH008S,SN (SBH015S,SN)			
		5	SBH008S,SN (SBH015S,SN)								
		7.5	SBH015S,SN (SBH030S,*SN)								
		10								SBH030S,*SN	
		15	SBH030S,*SN								
		20	SBH030S,*SN (*SBH060S,*SN)								
	Urethane Wheel Type	3	SBH015S,SN (SBH030S,*SN)								
		5	SBH030S,*SN								
		7.5									
		10	*SBH060S,*SN								
		15									
		20	*SBH060S,*SN (*SBH120S,*SN)								

•S: Without emergency stop device. SN: With emergency stop device.
Types in parentheses show high speed type.
*Available on request.

■ Table of Control Box for Electric Chain Hoist (Dual speed)

Type		W.L.L. (t)	Span (m)								
			3	6	9	12	15	18	21	24	27
Motorized	Overhead	1	SR150S								
		2									
		3									
		5									
		7.5	SR150S (SR300S)								
		10									
	Low-head	1	SR150S								
		2									
		3									
		5									
Urethane Wheel Type	Overhead	1	SR150S								
		2									
		3									
		5	SR150S (SR300S)								
		7.5	SR300S								
		10					SR300S (SR300SX2)				
	Low-head	1	SR150S								
		2									
Double Girder	Overhead	3	SR150S								
		5									
		7.5	SR150S (SR300S)								
		10								SR300S	
		15	SR300S								
		20	SR300S (SR300SX2)								
	Urethane Wheel Type	3	SR150S (SR300S)								
		5	SR300S								
		7.5									
		10	SR300SX2								
		15									
		20	SR300SX2 (SR300SX4)								

•Types in parentheses show high speed type.

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