KITO

O/M NO.SHER2-0903-CE-00

CE

ER2 Short-head Electric Chain Hoist (250kg to 5t)

Operation Manual

(SHER2M/SHER2SG/SHER2SP)

Introduction

The KITO Short-head Electric Chain Hoist is intended for effective use in the limited height of the building or in extending the lift, featuring a smaller headroom and conjunction with variations of the trolleys.

Safety Precautions

⚠ DANGER



PROHIBITED

- **Disassembly, repair, and adjustment of the electric chain hoist should be performed only by maintenance personnel.**

Failure to follow this precaution may cause serious accidents leading to serious or even fatal injury.



COMPULSORY

- **Sufficiently lubricate the load chain and idle sheave, and use the hoist within maximum frequency in relation to a load level.**
- **Even if there is no wear or damage, replace the load chain with a new one with reference to the maximum frequency on the warning label.**

Failure to follow these precautions may cause serious accidents leading to serious or even fatal injury.

⚠ CAUTION



COMPULSORY

- **This operation manual describes specific information regarding the Short-head Electric Chain Hoist.**
  Before use, read and comply with both the ER2 Series Electric Chain Hoist Owner's Manual (separate volume) and this manual.

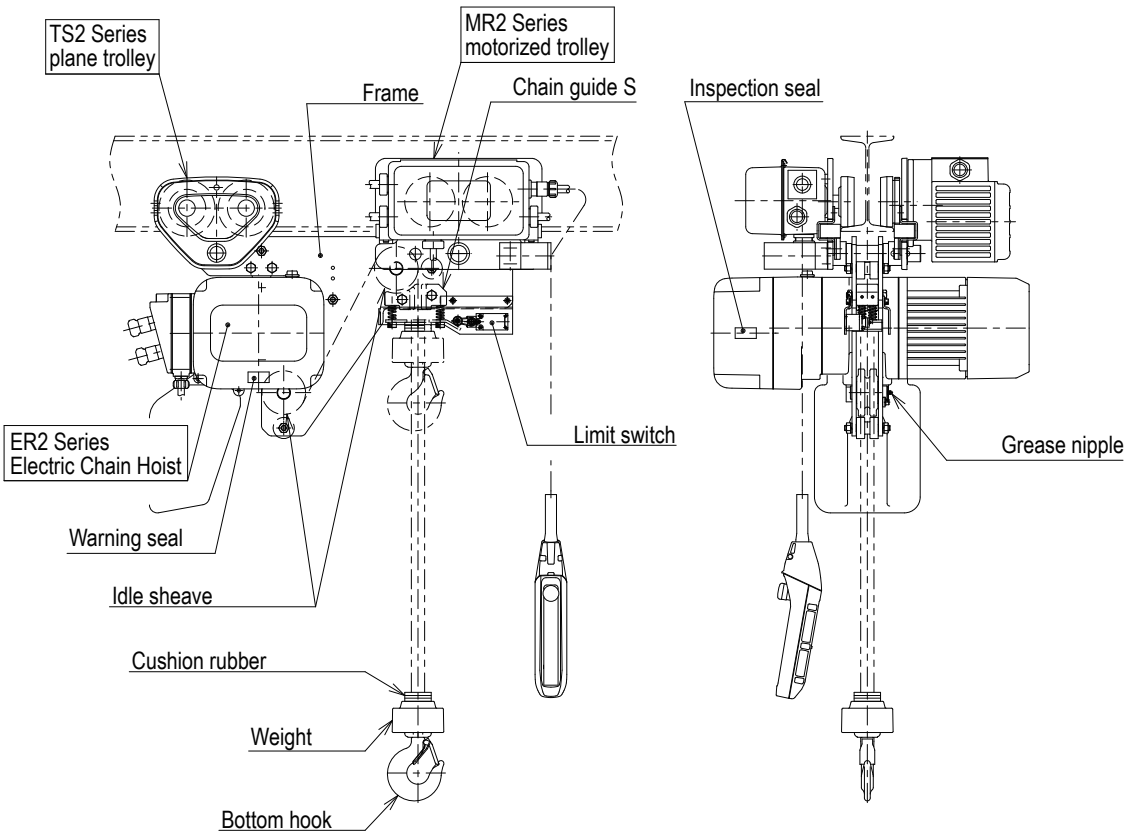
Failure to follow this caution may cause serious accidents leading to serious or even fatal injury.

Product Specifications & Operation

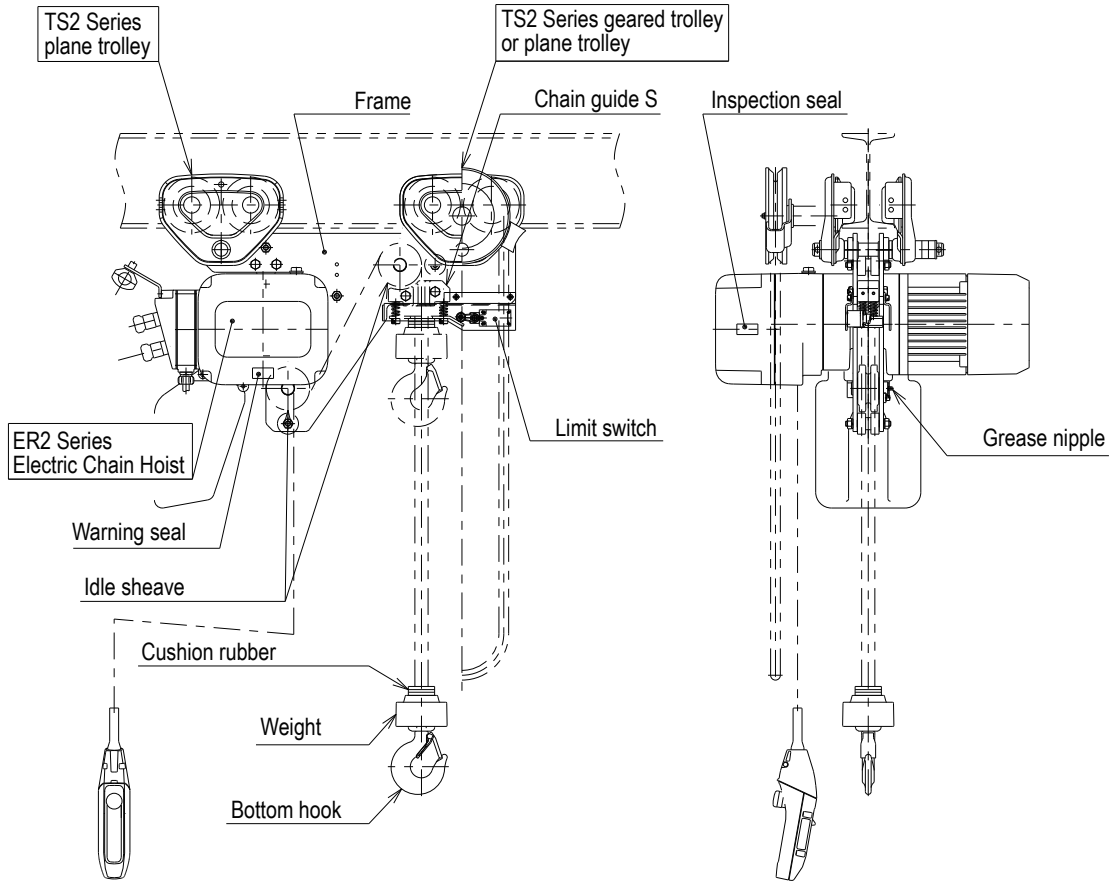
This short-head electric chain hoist is designed and operated the same as a standard hoist. Please refer to the sections of "Product Specifications" and "How to Use" in "ER2 Series Electric Chain Hoist Owner's Manual" (separate volume).

Trolley Configurations & Name

■SHER2M



■SHER2SG/SHER2SP



Assembly

The Short-head Electric Chain Hoist was pre-adjusted at the time of shipment to the beam width of the customer on site. Depending on installation and space conditions, if the trolley frame needs to be rearranged, please disassemble and assemble in accordance with the following instructions.
For disassembly/assembly of the trolley, please refer to the section of "Combination with the Trolley" in ER2 Series Electric Chain Hoist Owner's Manual (separate volume).

■Trolley Width Adjustment

The trolley width was pre-adjusted at the time of shipment. The re-arrangement of the width requires changing the installed number and position of the spacers. The trolley adjustment can vary in the trolley variation and (nominal) capacity and therefore please make proper adjustments in accordance with the tables shown in P8-15. For the order specifying the trolley width in advance, some cases can not allow you to readjust the width even by changing the spacers.

⚠ DANGER



COMPULSORY

- **Make sure of assembling properly the trolley by checking the number of the spacers suitable for the beam width.**

An assembly not corresponding to your beam may cause the trolley to drop and result in serious accidents leading to serious or even fatal injury.

Installation

For installation of the Short-head Electric Chain Hoist, refer to "Installation" in the ER2 Series Electric Chain Hoist Owner's Manual (separate volume). With reference to the trolley mount, mounting the trolley at the end of the beam is the best method from the structural point of view.

⚠ DANGER

PROHIBITED

- **Installation or uninstallation should be performed only by personnel who are professional or competent.**
  (Consult your dealer or KITO; otherwise make a request of professional or competent personnel for installation.)

Failure to follow this precaution may cause serious injury or property damage.

⚠ CAUTION

COMPULSORY

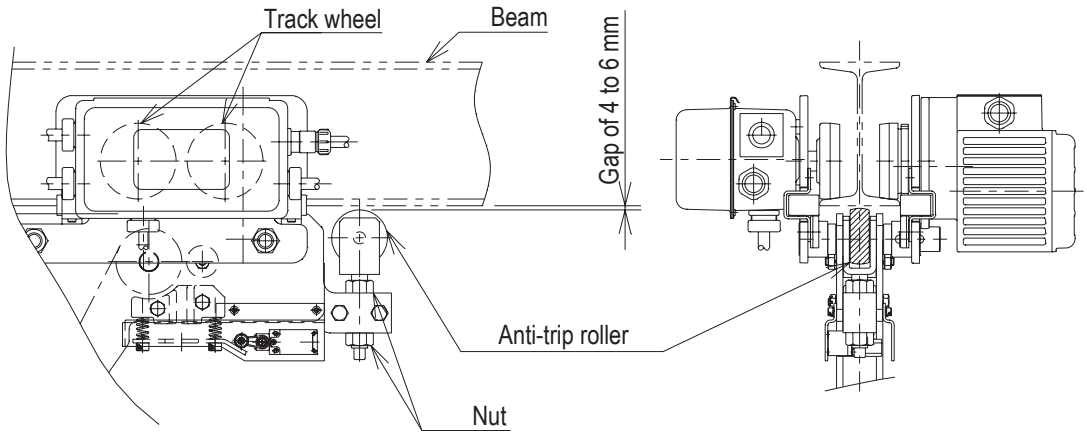
- **At the time of installation, make sure that the load chain properly engages with the idle sheave without being twisted or slack. In mounting the trolley onto the beam by extending the trolley width, make sure that the trolley does not derail.**

Failure to follow this precaution may cause serious injury or property damage.

■Adjusting Anti-trip Roller

For use on the beam curve in conjunction with the MR2 motorized trolley, the anti-trip roller is required to be installed. Please make adjustments in accordance with the following steps.

1) Lift the load and make sure that all the track wheels attach to the beam.
2) Align the anti-trip roller in parallel with the beam.
3) Adjust the anti-trip roller by turning the two nuts so that the gap between the roller and the bottom of the beam is measured between 4 mm and 6 mm.
4) In order to fix the gap, tighten the nut.



Maintenance

■Inspection and Maintenance of Load Chain

⚠ DANGER

COMPULSORY

- **Sufficiently lubricate the load chain and the idle sheave, and use the hoist within maximum frequency in relation to a load level.**
- **Even if there is no wear or damage, replace the load chain with a new one with reference to the maximum frequency on the warning label.**
- **Before use, check if the limit switch properly works.**

Failure to follow these precautions may cause serious accidents leading to serious or even fatal injury.

⚠ CAUTION

COMPULSORY

- **Periodically lubricate the needle bearing in the idle sheave by using the grease gun through two grease nipples.**
- **Fasten the bolts and screws with the proper torque.**

Failure to follow these precautions may cause serious injury or property damage.

To ensure that the load chain is periodically replaced, at the time of unpacking, please fill in the spaces on the inspection sticker on the hoist body as shown below for necessary inspection and maintenance, and renew the sticker when the chain is replaced. (A new sticker is available at your dealer.)

Inspection sticker

W.L.L	kg t
Operating cycle per day	cycle / day
Date on putting in use	year month day
Date for the following chain-replacement	year month day

Warning label

DANGER

•Failure to replace periodically the load chain may cause chain breakage.

•Maximum service load & operation count before replacement

Service load	100%	75%	50%	25%
Operation count	20,000	60,000	2×10^5	4×10^5

(To be continued)

■Daily Inspection and Periodic Inspection

⚠ CAUTION

COMPULSORY

- **Use properly the hoist in accordance with operational instructions as carrying out the daily and periodic inspections.**

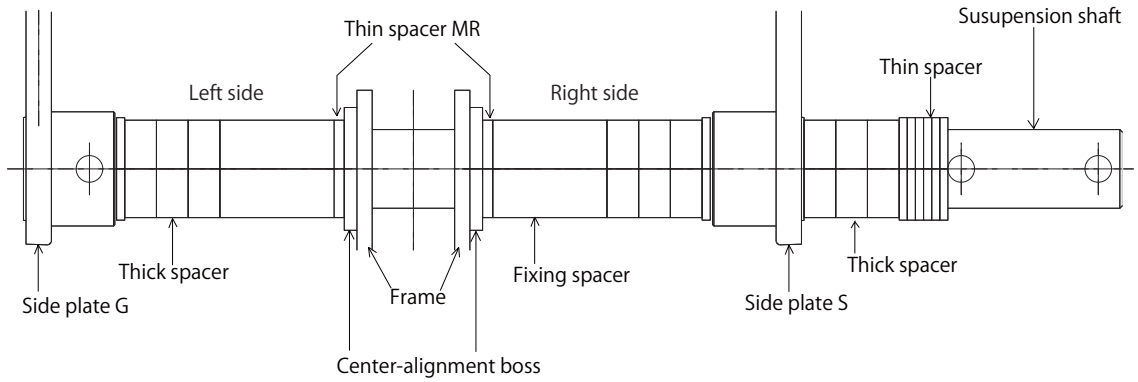
Failure to follow this precaution may cause serious injury or property damage.

In addition to the inspection items in the ER2 Series Electric Chain Hoist Owner's Manual (separate volume), please check the Short-head Electric Chain Hoist on the following items for the daily and periodic inspections.

Short-head Electric Chain Hoist Inspection Items

Item	Inspection period		Inspection method	Criteria	When failed
	Daily	Periodic			
Appearance	○	○	Visual check	There is no damage, deformation, or remarkable corrosion.	Replace damaged parts.
Limit switch	○	○	Check the operation with no load.	Make sure that the hook stops at the upper-limit position and can be lowered.	Contact your dealer.
Bolts and nuts	○	○	Visual check	There is no loose or dropped-out bolt or nut.	Fasten securely.
Load chain	○	○	Daily inspection: Visual check of appearance Periodic inspection: Check the number of starts with a CH meter.	Sufficiently lubricate. The time from the last replacement does not pass over the next: •Number of starts on warning label •Date for the following chain-replacement	Replace the load chain.
Idle sheave	○	○	Visual check Daily inspection: Operation with no load Periodic inspection: Operation with a rated load	Sufficiently lubricate. Smoothly rotating without irregular sound.	Lubricate through grease nipples. Replace damaged parts.
Chain guide S		○	Visual check	There is no remarkable damage, deformation, or wear.	Replace damaged parts.
Each hole of frame		○	Measurement using a slide caliper	The amount of wear is 5% or less (the difference between vertical and horizontal diameters of each hole is 5% or less).	Replace damaged parts.

■Quantity and Dimensions of Spacers for MR2 Series Motorized Trolley



Spacer thickness (Unit: mm)

	250kg	500kg	1t	1.6t 2t	3.2t	5t
Thin spacer	3.2					
Thick spacer	12.5					
Fixing spacer	50.0			37.5		
Thin spacer MR	4.0		-	-	-	-
Center-alignment boss	-	-	-	-	-	6.5

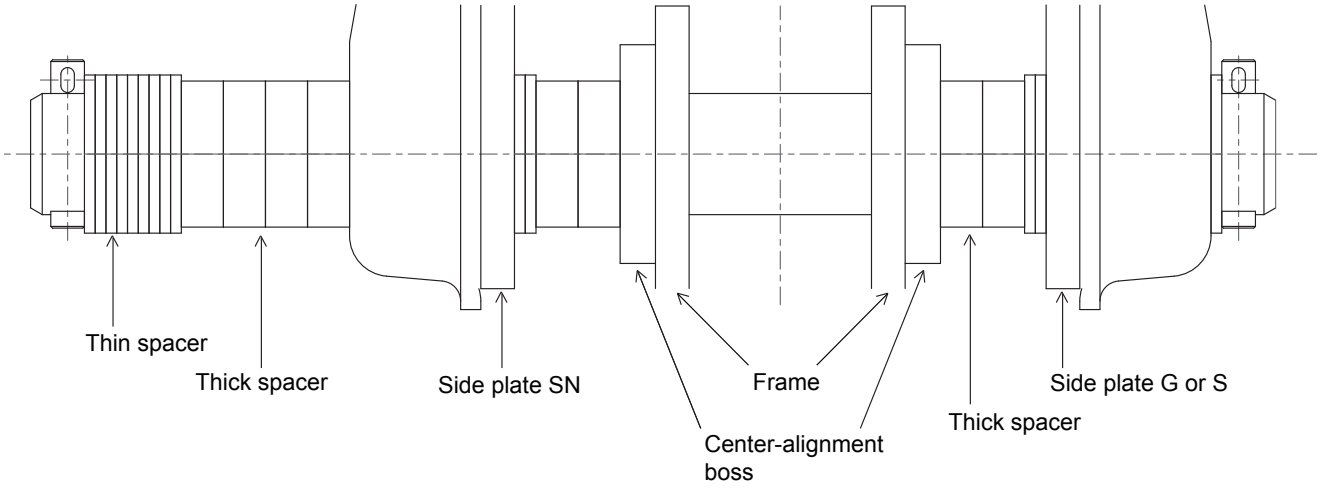
Capacity	Position	Part name	Spacer	Beam width (mm)																														
			thickness	58	66	74	82	90	91	98	106	113	119	125	131	137	143	144	149	155	163	170	178	185	200	201	204	210	220	240	260	280	300	305
250kg	Inner left (Frame G side)	Thick spacer	12.5			0	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	3	3	0	0	1	1	1	1	2	3	4	4	4
		Thin spacer	3.2			0	1	2	2	0	1	2	3	4	5	2	3	3	4	5	6	3	4	2	4	0	1	2	3	2	2	1	4	5
		Fixing spacer	50			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
		Thick spacer MR	4			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Center-alignment boss	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Inner right (Frame S side)	Thick spacer	12.5			0	0	0	0	1	1	1	1	1	2	2	2	2	2	2	3	4	4	0	0	1	1	1	1	2	3	4	5	5
		Thin spacer	3.2			0	2	3	3	0	1	3	4	4	1	2	3	3	4	5	2	0	1	2	4	1	1	2	4	3	2	1	1	1
		Fixing spacer	50			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
		Thick spacer MR	4			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Center-alignment boss	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Outer	Thick spacer	12.5			5	5	5	5	3	3	3	3	3	2	1	1	1	1	1	0	2	2	9	9	7	7	7	7	5	3	1	0	0
		Thin spacer	3.2			11	8	6	6	11	9	6	4	3	5	7	5	5	3	1	3	5	3	4	0	7	6	4	1	3	4	6	3	2
		Fixing spacer	50			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0
		Thick spacer MR	4			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
500kg	Inner left (Frame G side)	Thick spacer	12.5			0	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	3	3	0	0	1	1	1	1	2	3	4	4	4
		Thin spacer	3.2			0	1	2	2	0	1	2	3	4	5	2	3	3	4	5	6	3	4	2	4	0	1	2	3	2	2	1	4	5
		Fixing spacer	50			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
		Thick spacer MR	4			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Center-alignment boss	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Inner right (Frame S side)	Thick spacer	12.5			0	0	0	0	1	1	1	1	1	2	2	2	2	2	2	3	4	4	0	0	1	1	1	1	2	3	4	5	5
		Thin spacer	3.2			0	2	3	3	0	2	3	4	4	1	2	3	3	4	5	2	0	1	2	4	1	1	2	4	3	2	1	1	1
		Fixing spacer	50			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
		Thick spacer MR	4			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
		Center-alignment boss	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Outer	Thick spacer	12.5			5	5	5	5	3	3	3	3	3	2	1	1	1	1	1	0	2	2	9	9	7	7	7	7	5	3	1	0	0
		Thin spacer	3.2			11	8	6	6	11	8	6	4	3	5	7	5	5	3	1	3	5	3	4	0	7	6	4	1	3	4	6	3	2
		Fixing spacer	50			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0
		Thick spacer MR	4			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Capacity	Position	Part name	Spacer	Beam width (mm)																																						
			thickness	58	66	74	82	90	91	98	106	113	119	125	131	137	143	144	149	155	163	170	178	185	200	201	204	210	220	240	260	280	300	305								
1t	Inner left (Frame G side)	Thick spacer	12.5							0	1	1	1	1	2	2	2	2	2	2	3	3	3	3	0	0	1	1	1	2	3	4	4	4								
		Thin spacer	3.2							3	0	1	2	3	0	1	2	2	3	4	1	2	4	5	3	3	0	1	2	1	1	0	3	4								
		Fixing spacer	50							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1								
		Thick spacer MR	10							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
		Center-alignment boss	0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
	Inner right (Frame S side)	Thick spacer	12.5							0	1	1	1	1	2	2	2	2	2	2	2	3	4	4	0	1	1	1	1	2	3	4	5	5								
		Thin spacer	3.2							3	0	2	3	3	0	1	2	2	3	4	6	3	0	1	3	0	0	1	3	2	1	0	0	0								
		Fixing spacer	50							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1								
		Thick spacer MR	10							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
		Center-alignment boss	0							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
	Outer	Thick spacer	12.5							5	3	3	3	3	1	1	1	1	1	1	0	3	2	2	9	8	7	7	7	5	3	1	0	0								
		Thin spacer	3.2							3	9	6	4	3	9	7	5	5	3	1	2	1	2	0	0	3	6	4	1	3	4	6	3	2								
		Fixing spacer	50							0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0								
		Thick spacer MR	10							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
1.6t 2t	Inner left (Frame G side)	Thick spacer	12.5											0	0	0	0	0	1	1	1	1	2	3	3	3	3	1	1	2	2	3	3	4								
		Thin spacer	3.2											2	3	4	5	5	2	3	4	5	3	0	2	2	3	0	1	1	4	3	6	3								
		Fixing spacer	37.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1								
		Thick spacer MR	8.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
		Center-alignment boss	0											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
	Inner right (Frame S side)	Thick spacer	12.5											0	1	1	1	1	1	2	2	2	2	3	3	3	3	1	1	1	2	4	4	4								
		Thin spacer	3.2											3	0	1	2	2	3	0	1	2	3	0	3	3	3	0	2	5	4	0	3	4								
		Fixing spacer	37.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1								
		Thick spacer MR	8.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
		Center-alignment boss	0											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
	Outer	Thick spacer	12.5											6	5	5	5	5	4	3	3	3	2	0	0	0	0	6	6	5	4	1	1	0								
		Thin spacer	3.2											4	6	4	2	2	4	6	4	2	3	9	4	4	3	9	6	3	1	6	0	2								
		Fixing spacer	37.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
		Thick spacer MR	8.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								

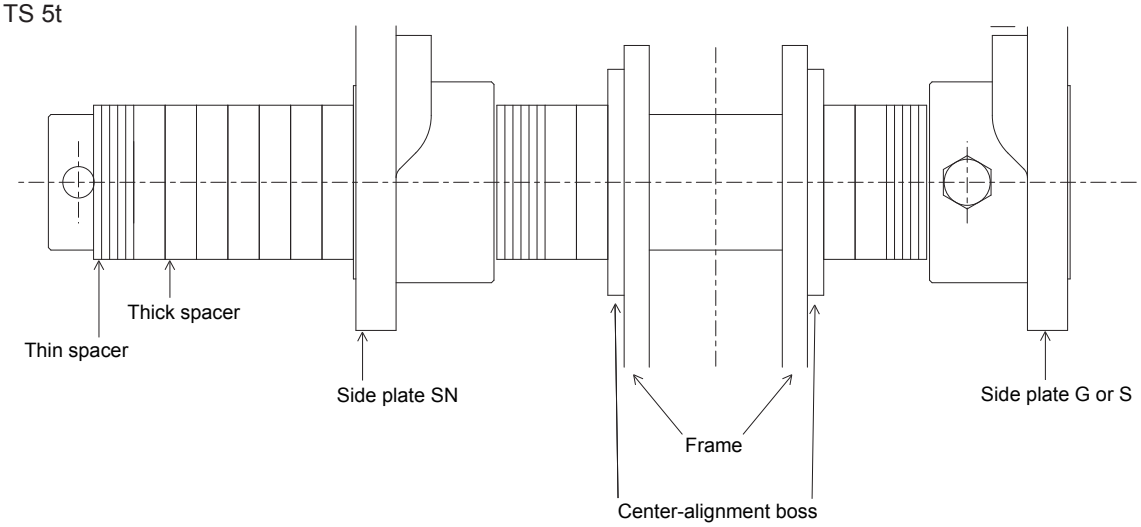
Capacity	Position	Part name	Spacer thickness	Beam width (mm) 58	66	74	82	90	91	98	106	113	119	125	131	137	143	144	149	155	163	170	178	185	200	201	204	210	220	240	260	280	300	305
3.2t	Inner left (Frame G side)	Thick spacer	12.5											0	1	1	1	1	1	2	2	2	3	3	3	3	3	1	1	2	2	4	4	4
		Thin spacer	3.2											3	0	1	2	2	3	0	1	2	0	1	3	3	4	1	2	1	4	0	3	4
		Fixing spacer	37.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
		Thick spacer MR	9											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	0											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Inner right (Frame S side)	Thick spacer	12.5											0	1	1	1	1	1	2	2	2	2	3	3	4	4	1	1	2	3	4	4	5
		Thin spacer	3.2											3	0	1	2	2	3	0	1	3	3	1	3	0	0	1	3	2	1	0	3	0
		Fixing spacer	37.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
		Thick spacer MR	9											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	0											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Outer	Thick spacer	12.5											7	5	5	5	5	5	3	3	3	2	1	1	0	0	7	7	5	4	1	1	0
		Thin spacer	3.2											0	6	4	2	2	0	6	4	1	3	4	0	3	2	4	1	3	1	6	0	2
		Fixing spacer	37.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Thick spacer MR	9											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SHER2M050S	Inner left (Frame G side)	Thick spacer	12.5																0	1	1	1	1	2	2	2	2	3	3	4	5	6	6	6
		Thin spacer	3.2																4	1	2	3	4	2	4	4	5	2	3	2	2	1	4	5
		Fixing spacer	0																0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Thick spacer MR	0																0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	6.5																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner right (Frame S side)	Thick spacer	12.5																1	1	1	2	2	2	2	3	3	3	3	4	5	6	7	7
		Thin spacer	3.2																0	1	3	0	1	2	4	1	1	2	4	3	2	1	0	1
		Fixing spacer	0																0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Thick spacer MR	0																0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	6.5																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Outer	Thick spacer	12.5																4	3	3	2	2	1	1	0	0	7	7	5	3	1	0	0
		Thin spacer	3.2																4	6	3	5	3	4	0	3	2	4	1	3	4	6	4	2
		Fixing spacer	0																0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Thick spacer MR	0																0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

■Quantity and Dimensions of Spacers for TS2 Series Manual (Geared) Trolley

TS 250kg to 3.2t



TS 5t



Spacer thickness

(Unit: mm)

	250kg	500kg	1t	1.6t 2t	3.2t	5t
Thin spacer	3.2					
Thick spacer	12.5					
Fixing spacer	80.5			41.5	64.5	37.5
Center-alignment boss	9.5			12.5	10.5	6.5

Capacity	Position	Part name	Spacer thickness	Beam width (mm) 58	66	74	82	90	91	98	106	113	119	125	131	137	143	144	149	155	163	170	178	185	200	201	204	210	220	240	260	280	300	305
250kg	Outer left (Frame S side)	Thin spacer	3.2			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner left (Frame S side)	Thick spacer	12.5			0	0	0	0	1	1	1	1	2	2	2	2	2	3	3	3	4	4	4	5	5	5	5	6	6	7	8	8	8
		Thin spacer	3.2			0	1	3	3	0	1	2	3	0	1	2	3	3	0	1	2	0	1	2	0	1	1	2	0	3	2	1	4	5
		Fixing spacer	80.5			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	9.5			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner right (Frame SN side)	Thick spacer	12.5			0	0	0	0	1	1	1	1	2	2	2	3	3	3	3	3	4	4	4	5	5	5	5	6	6	7	8	8	8
		Thin spacer	3.2			1	2	3	3	0	2	3	4	1	2	3	0	0	1	2	3	0	1	3	1	1	2	3	0	3	3	2	5	6
		Fixing spacer	80.5			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	9.5			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Outer right (Frame SN side)	Thick spacer	12.5			6	6	6	6	4	4	4	4	2	2	2	1	1	0	0	0	8	8	8	6	6	6	6	4	4	2	0	0	0
		Thin spacer	3.2			7	5	2	2	8	5	3	1	7	5	3	5	5	7	5	3	13	11	8	12	11	10	8	13	7	8	10	4	2
500kg	Outer left (Frame S side)	Thin spacer	3.2			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner left (Frame S side)	Thick spacer	12.5			0	0	0	0	1	1	1	1	2	2	2	2	2	3	3	3	4	4	4	5	5	5	5	6	6	7	8	8	8
		Thin spacer	3.2			0	1	3	3	0	1	2	3	0	1	2	3	3	0	1	2	0	1	2	0	1	1	2	0	3	2	1	4	5
		Fixing spacer	80.5			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	9.5			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner right (Frame SN side)	Thick spacer	12.5			0	0	0	0	1	1	1	1	2	2	2	3	3	3	3	3	4	4	4	5	5	5	5	6	6	7	8	8	8
		Thin spacer	3.2			1	2	3	3	0	2	3	4	1	2	3	0	0	1	2	3	0	1	3	1	1	2	3	0	3	3	2	5	6
		Fixing spacer	80.5			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	9.5			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Outer right (Frame SN side)	Thick spacer	12.5			6	6	6	6	4	4	4	4	2	2	2	1	1	0	0	0	8	8	8	6	6	6	6	4	4	2	0	0	0
		Thin spacer	3.2			7	5	2	2	8	5	3	1	7	5	3	5	5	7	5	3	13	11	8	12	11	10	8	13	7	8	10	4	2

Capacity	Position	Part name	Spacer thickness	Beam width (mm)																																			
				58	66	74	82	90	91	98	106	113	119	125	131	137	143	144	149	155	163	170	178	185	200	201	204	210	220	240	260	280	300	305
1t	Outer left (Frame S side)	Thin spacer	3.2							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner left (Frame S side)	Thick spacer	12.5							0	0	0	0	1	1	1	1	1	2	2	2	3	3	3	4	4	4	4	5	6	7	7	8	8
		Thin spacer	3.2							2	3	4	5	2	3	4	5	5	2	3	4	2	3	4	2	3	3	4	2	1	0	3	2	3
		Fixing spacer	80.5							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	9.5							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner right (Frame SN side)	Thick spacer	12.5							0	0	0	0	1	1	1	2	2	2	2	2	3	3	3	4	4	4	4	5	6	7	7	8	8
		Thin spacer	3.2							2	4	5	6	3	4	5	2	2	3	4	5	2	3	4	3	3	3	4	2	1	1	4	3	4
		Fixing spacer	80.5							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	9.5							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Outer right (Frame S side)	Thick spacer	12.5							4	4	4	4	2	2	2	1	1	0	0	0	10	10	10	8	8	8	8	6	4	2	2	0	0
		Thin spacer	3.2							8	5	3	1	7	5	3	5	5	7	5	3	5	3	1	4	3	3	1	5	7	8	2	4	2
1.6t 2t	Outer left (Frame S side)	Thin spacer	3.2											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner left (Frame S side)	Thick spacer	12.5											0	0	0	0	0	1	1	1	2	2	2	2	2	2	3	3	4	5	6	7	7
		Thin spacer	3.2											0	1	2	3	3	0	1	2	0	1	2	4	5	5	2	4	3	2	1	0	1
		Fixing spacer	41.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	12.5											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner right (Frame SN side)	Thick spacer	12.5											0	0	0	1	1	1	1	1	2	2	2	3	3	3	3	3	4	5	6	6	6
		Thin spacer	3.2											1	2	3	0	0	1	2	3	0	1	2	1	1	1	2	4	3	2	2	5	6
		Fixing spacer	41.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	12.5											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Outer right (Frame SN side)	Thick spacer	12.5											5	5	5	4	4	3	3	3	1	1	1	0	0	0	7	7	5	3	1	0	0
		Thin spacer	3.2											8	6	4	6	6	8	6	4	9	7	5	4	3	3	5	1	3	5	6	4	2

Capacity	Position	Part name	Spacer thickness	Beam width (mm)																																		
				58	66	74	82	90	91	98	106	113	119	125	131	137	143	144	149	155	163	170	178	185	200	201	204	210	220	240	260	280	300	305
3.2t	Outer left (Frame S side)	Thin spacer	3.2											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner left (Frame S side)	Thick spacer	12.5											2	2	2	2	2	3	3	3	4	4	4	4	4	4	5	5	6	7	8	8	8
		Thin spacer	3.2											0	1	2	3	3	0	1	2	0	1	2	4	5	5	2	4	3	2	1	4	5
		Fixing spacer	64.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	10.5											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner right (Frame SN side)	Thick spacer	12.5											2	2	2	2	2	3	3	3	4	4	4	4	4	4	5	5	6	7	8	8	9
		Thin spacer	3.2											1	2	3	4	4	1	2	3	0	1	3	5	5	5	2	4	3	2	2	5	2
		Fixing spacer	64.5											0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	10.5											1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Outer right (Frame SN side)	Thick spacer	12.5											4	4	4	4	4	2	2	2	0	0	0	0	0	0	7	7	5	3	1	1	0
		Thin spacer	3.2											12	10	8	6	6	12	10	8	13	11	8	4	3	3	5	1	3	5	6	0	2
5t	Inner left (Frame S side)	Thick spacer	12.5																1	1	1	1	2	2	2	2	2	2	2	3	4	5	5	6
		Thin spacer	3.2																0	1	2	3	0	2	4	4	5	5	7	6	5	5	8	5
		Fixing spacer	37.5																0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	6.5																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Inner right (Frame SN side)	Thick spacer	12.5																1	1	1	1	2	2	2	2	2	2	2	3	4	5	5	5
		Thin spacer	3.2																0	1	3	4	1	2	4	5	5	6	8	7	6	5	8	9
		Fixing spacer	37.5																0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Center-alignment boss	6.5																1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Outer right (Frame SN side)	Thick spacer	12.5																2	2	2	2	0	0	0	0	0	7	7	5	3	1	1	0
		Thin spacer	3.2																12	10	7	5	11	8	4	3	2	5	1	3	5	6	0	2

< Memo >