

**KITO**

# Explosion-Proof Type Electric Chain Hoist



Kito conventional electric chain hoists are well accepted in various industrial fields.

In explosive atmospheres of various ignitable gases and vapors, special attention must be required.

In such special atmospheres,

Kito RES Series Electric Chain Hoists are recommended.

The hoists are authorized with the type approval

by The Ministry of Health, Labor and Welfare in Japan.

# KITO RES Series Electric Chain Hoists



## RES Model Specifications

| W.L.L. (t) | Code    | Standard Lift (m) | Push Button Cord:L(m) | Lifting Motor 3 Phase |         |                    | Lifting Speed(m/min) |         | Load chain Diameter (mm)x Chain Fall Lines | Test Load (m.ton) | Mass (Net Weight) (kg) | Mass (Weight) for Additional One Meter of Lift (kg) |      |     |     |
|------------|---------|-------------------|-----------------------|-----------------------|---------|--------------------|----------------------|---------|--|-------------------|------------------------|---|------|-----|-----|
|            |         |                   |                       | Output (kW)           | ED (%)  | No.of Starts (c/h) | 50Hz                 | 60Hz    |  |                   |                        |   |      |     |     |
| 1/2        | RES005S | 3                 | 3.1                   | 1.5                   | 25      | 250                | 8.0                  | 10.0    | ø7.1x1                                     | 0.625             | 100                    | 1.2   |      |     |     |
| 1          | RES010L |                   |                       |                       |         |                    | 3.4                  | 4.1     | ø7.1x2                                     |                   | 1.25                   | 110   | 2.3  |     |     |
|            | RES010S |                   |                       |                       |         |                    | 6.9                  | 8.3     | ø7.1x1                                     | 100               |                        | 1.2   |      |     |     |
| 1 1/2      | RES015S |                   |                       |                       |         |                    | 3.0                  | 20      | 200  | 8.7               | 10.4                   | ø10.0x1   | 1.88 | 147 | 2.3 |
| 2          | RES020L |                   |                       |                       |         |                    | 1.5                  | 25      | 250  | 3.4               | 4.1                    | ø7.1x2  | 2.5  | 110 |     |
|            | RES020S |                   | 6.6                   | 7.9                   | ø10.0x1 | 147                |                      |         |  |                   |                        |   |      |     |     |
| 2 1/2      | RES025S |                   | 5.3                   | 6.4                   | ø11.2x1 | 3.13               | 152                  | 2.9     |  |                   |                        |   |      |     |     |
| 3          | RES030S |                   | 3.0                   | 20                    | 200     | 4.3                | 5.2                  | ø10.0x2 | 3.75                                       | 165               | 4.6                    |   |      |     |     |
| 5          | RES050S |                   | 2.6                   |                       |         | 3.2                | ø11.2x2              | 6.25    | 175  | 5.9               |                        |   |      |     |     |
| 7 1/2      |         |                   | 1.8                   |                       |         | 2.1                | ø11.2x3              | 9.4     |  |                   |                        |   |      |     |     |
| 10         |         | 2.6               | 3.2                   |                       |         | ø11.2x4            | 12.5                 |         |  |                   |                        |   |      |     |     |
| 15         |         | 1.8               | 2.1                   |                       |         | ø11.2x6            | 18.8                 |         |  |                   |                        |   |      |     |     |
| 20         |         | 3.0x2             |                       |                       | 1.3     | 1.6                | ø11.2x8              | 25      |  |                   |                        |   |      |     |     |

•W.L.L.: indicates maximum load (working load limit) which a hoist is designed to support in general service.

## RES Model Dimensions (mm)

| W.L.L. (t) | Code    | Minimum Distance Between Top and Bottom Hooks:C | D    | a   | d   | e   | f   | g   | h   | i   |
|------------|---------|---|------|-----|-----|-----|-----|-----|-----|-----|
| 1/2        | RES005S | 650   | 770  | 605 | 265 | 340 | 358 | 31  | 235 | 123 |
| 1          | RES010L | 765   | 870  |     |     |     | 413 | 37  | 351 | 62  |
|            | RES010S | 590   | 770  |     |     |     | 358 | 31  | 235 | 123 |
| 1 1/2      | RES015S | 725   | 870  | 679 | 304 | 375 | 470 | 34  | 309 | 161 |
| 2          | RES020L | 765   |      | 605 | 265 | 340 | 413 | 37  | 351 | 62  |
|            | RES020S | 735   |      |     |     |     |     |     |     |     |
| 2 1/2      | RES025S | 750   | 885  | 679 | 304 | 375 | 470 | 40  | 309 | 161 |
| 3          | RES030S | 895   | 935  |     |     |     | 44  | 364 | 106 |     |
| 5          | RES050S | 930   | 1040 |     |     |     | 482 | 46  | 381 | 101 |
| 7 1/2      |         |   |      |     |     |     |     | 62  |     |     |
| 10         |         |   |      |     |     |     |     | 79  |     |     |
| 15         |         |   |      |     |     |     |     |     |     |     |
| 20         |         |   |      |     |     |     |     | 86  |     |     |

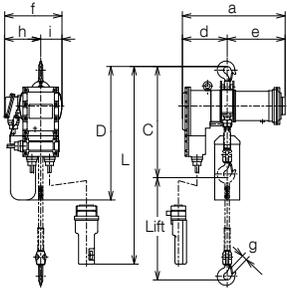
- W.L.L.: indicates maximum load (working load limit) which a hoist is designed to support in general service.
- In case of 71/2t and over capacities, trolley combined types are standard.
- Dimensions of D show the data for the hoist with standard length of lift.
- In case of 10t and over capacities, 2-hoist body construction is standard.

A canvas chain container is standard up to the maximum lifts shown in the right table.  
 A steel chain container is also available up to the maximum lifts, but in case lifts exceed the maximum lifts, a steel chain container must be installed.

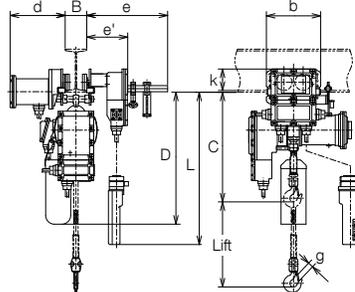
**Allowable lifting height for the Canvas Chain Container**

|              |     |     |       |   |       |    |       |
|--------------|-----|-----|-------|---|-------|----|-------|
| Capacity     | 1/2 | 1-L | 1 1/2 | — | 2 1/2 | 5  | 7 1/2 |
|              | 1-S | 2-L | 2-S   | 3 | 10    | 20 | 15    |
| Max.lift (m) | 15  | 7.5 | 18    | 9 | 12    | 6  | 8     |

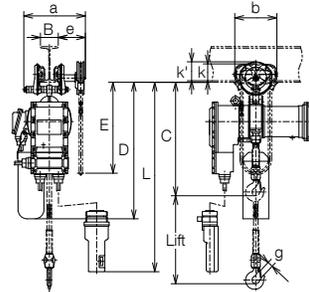
**RES**



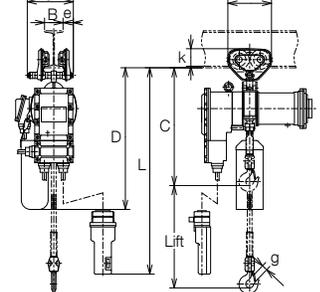
**RESM**



**RESSG**



**RESSP**



**RESM Model Specifications & Dimensions (mm)**

| W.L.L. (t) | Code       | Standard Lift (m) | Traversing Motor 3 Phase |        |                     | Traversing Speed (m/min) |          | Standard I-Beam Width: B (mm) | Minimum Radius for Curve (mm) | Mass (Net Weight) (kg) | Mass (Weight) for Additional One Meter of Lift (kg) | Dimensions (mm)                                   |     |      |     |     |     |     |     |      |     |      |      |     |     |      |      |      |     |     |     |     |
|------------|------------|-------------------|--------------------------|--------|---------------------|--------------------------|----------|-------------------------------|-------------------------------|------------------------|---|---|-----|------|-----|-----|-----|-----|-----|------|-----|------|------|-----|-----|------|------|------|-----|-----|-----|-----|
|            |            |                   | Output (kW)              | ED (%) | No. of Starts (c/h) | 50Hz                     | 60Hz     |                               |                               |                        |   | Minimum Distance from Bottom of I-Beam to Hook: C | D   | L    | b   | d   | e   | e'  | k   |      |     |      |      |     |     |      |      |      |     |     |     |     |
| 1/2        | RESM005S-S | 3                 | 0.4                      | 25     | 250                 | 10 or 20                 | 12 or 24 | 800                           | 2000                          | 190                    | 1.2   | 640   | 760 | 3300 | 325 | 324 | 515 | 240 | 120 |      |     |      |      |     |     |      |      |      |     |     |     |     |
| 1          | RESM010L-S |                   |                          |        |                     |                          |          |                               |                               | 200                    | 2.3   | 740   | 840 |      |     |     |     |     |     |      |     |      |      |     |     |      |      |      |     |     |     |     |
|            | RESM010S-S |                   |                          |        |                     |                          |          |                               |                               | 190                    | 1.2   | 580   | 760 |      |     |     |     |     |     |      |     |      |      |     |     |      |      |      |     |     |     |     |
| 1 1/2      | RESM015S-S |                   |                          |        |                     |                          |          |                               |                               | 245                    | 2.3   | 695   | 840 |      |     |     |     |     |     |      |     |      |      |     |     |      |      |      |     |     |     |     |
| 2          | RESM020L-S |                   |                          |        |                     |                          |          |                               |                               | 205                    |   | 740   |     |      |     |     |     |     |     |      |     |      |      |     |     |      |      |      |     |     |     |     |
|            | RESM020S-S |                   |                          |        |                     |                          |          |                               |                               | 245                    |   | 705   |     |      |     |     |     |     |     |      |     |      |      |     |     |      |      |      |     |     |     |     |
| 2 1/2      | RESM025S-S |                   |                          |        |                     |                          |          |                               |                               | 265                    | 2.9   | 725   | 855 |      |     |     |     |     |     | 3400 | 340 | 326  | 520  | 242 | 132 |      |      |      |     |     |     |     |
| 3          | RESM030S-S |                   |                          |        |                     |                          |          |                               |                               | 275                    | 4.6   | 870   | 910 |      |     |     |     |     |     |      |     |      |      |     |     |      |      |      |     |     |     |     |
| 5          | RESM050S-S |                   |                          |        |                     |                          |          |                               |                               | 0.75                   | 0.75x2  | 25  | 250 |      |     |     |     |     |     | 10   | 12  | 2000 | 2500 | 310 | 5.9 | 925  | 935  | 3800 | 400 | 333 | 229 | 145 |
| 7 1/2      | RESM075S-L |                   |                          |        |                     |                          |          |                               |                               |                        |   |   |     |      |     |     |     |     |     |      |     |      |      | 460 | 8.8 | 1210 | 1230 |      |     |     |     |     |
| 10         | RESM100S-L | 630               | 12                       | 1180   | 1030                | 500                      | 337      | 525                           | 242                           |                        |   |   |     |      |     |     |     |     |     |      |     |      |      |     |     |      |      |      |     |     |     |     |
| 15         | RESM150S-L | 860               | 18                       | 1370   | 1300                |                          |          |                               |                               |                        |   |   |     |      |     |     |     |     |     |      |     |      |      |     |     |      |      |      |     |     |     |     |
| 20         | RESM200S-L | 930               | 25                       | 1400   | 1300                | 1020                     | 241      | 175                           |                               |                        |   |   |     |      |     |     |     |     |     |      |     |      |      |     |     |      |      |      |     |     |     |     |

- W.L.L.: indicates maximum load (working load limit) which a hoist is designed to support in general service.
- Data for lifting motor, lifting speed, load chain and test for RESM are the same data for RES.
- Dimensions of D show the data for the hoist with standard lift.

**RESSG (RESSP) Model Specifications & Dimensions (mm)**

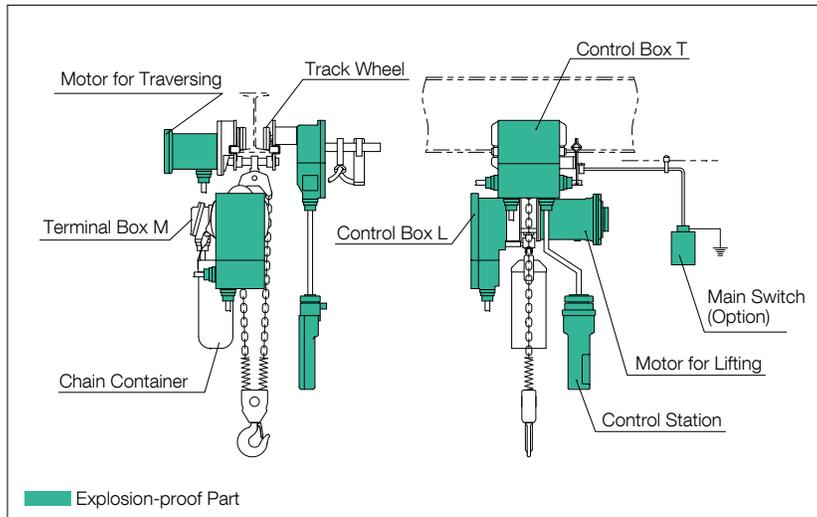
| W.L.L. (t) | Code             | Standard Lift (m) | Standard I-Beam Width: B (mm) | Minimum Radius for Curve (mm) | Mass (Net Weight) (kg) | Mass (Weight) for Additional One Meter of Lift (kg) | Dimensions (mm)                                   |          |      |      |          |     |         |    |     |          |      |      |          |          |         |         |     |     |
|------------|------------------|-------------------|-------------------------------|-------------------------------|------------------------|---|---|----------|------|------|----------|-----|---------|----|-----|----------|------|------|----------|----------|---------|---------|-----|-----|
|            |                  |                   |                               |                               |                        |   | Minimum Distance from Bottom of I-Beam to Hook: C | D        | E    | L    | a        | b   | e       | k  | k'  |          |      |      |          |          |         |         |     |     |
| 1/2        | RESSG(RESSP)005S | 3                 | 66 to 127                     | 1300                          | 115(110)               | 2.1(1.2)  | 640   | 760      | 2700 | 3100 | 345(249) | 236 | 152(56) | 95 | 106 |          |      |      |          |          |         |         |     |     |
| 1          | RESSG(RESSP)010L |                   |                               |                               | 125(120)               | 3.2(2.3)  | 740   | 840      |      |      |          |     |         |    |     |          |      |      |          |          |         |         |     |     |
|            | RESSG(RESSP)010S |                   |                               |                               | 115(110)               | 2.1(1.2)  | 580   | 760      |      |      |          |     |         |    |     |          |      |      |          |          |         |         |     |     |
| 1 1/2      | RESSG(RESSP)015S |                   |                               |                               | 82 to 153              | 1500  | 170(165)  | 3.2(2.3) |      |      |          |     |         |    |     | 695      | 840  |      |          |          |         |         |     |     |
| 2          | RESSG(RESSP)020L |                   |                               |                               |                        |   |   |          |      |      |          |     |         |    |     | 740      |      |      |          |          |         |         |     |     |
|            | RESSG(RESSP)020S |                   |                               |                               |                        |   |   |          |      |      |          |     |         |    |     | 170(165) |      | 705  |          |          |         |         |     |     |
| 2 1/2      | RESSG(RESSP)025S |                   |                               |                               | 98 to 153              | 1700  | 185(180)  | 3.9(2.9) |      |      |          |     |         |    |     | 725      | 860  | 3200 | 398(320) | 324      | 157(79) | 134     | 114 |     |
| 3          | RESSG(RESSP)030S |                   |                               |                               |                        |   | 210(205)  | 5.5(4.6) |      |      |          |     |         |    |     | 870      | 910  |      |          |          |         |         |     |     |
| 5          | RESSG(RESSP)050S |                   |                               |                               | 100 to 178             | 2300  | 235(230)  | 6.8(5.9) |      |      |          |     |         |    |     | 925      | 935  | 3200 | 3300     | 401(297) | 400     | 156(53) | 144 | 131 |
| 7 1/2      | RESSG075S        |                   |                               |                               | 150 to 220             | 3000  | 380   | 9.9      |      |      |          |     |         |    |     | 1210     | 1230 |      |          |          |         |         |     |     |
| 10         | RESSG100S        | 555               | 13                            | 1180                          |                        |   | 1030  |          |      |      |          |     |         |    |     |          |      |      |          |          |         |         |     |     |
| 15         | RESSG150S        | 730               | 20                            | 1370                          |                        |   | 1300  |          |      |      |          |     |         |    |     |          |      |      |          |          |         |         |     |     |
| 20         | RESSG200S        | 790               | 27                            | 1400                          |                        |   |   | 3800     | 963  | 480  | 288      | 171 | 165     |    |     |          |      |      |          |          |         |         |     |     |

- W.L.L.: indicates maximum load (working load limit) which a hoist is designed to support in general service.
- Data for lifting motor, lifting speed, load chain and test for RESSG(RESSP) are the same data for RES.
- Figures in parentheses show the data for the hoist combined with a plain trolley.
- Smaller min. radius for curve than the standard is available upon request.
- Dimensions of D show the data for the hoist with standard lift.

# This is the INFORMATION that you are looking for.

You can find the Details of Classification of Construction, Explosion Grade and Ignitability.

## Construction (Type d: Flameproof enclosures)



The section        in the left figure shows the explosion-protected construction. Accordingly, electric parts have sufficient strength to withstand the internal pressure indicated in JIS C 0903; other detailed specifications such as gaps, depths of gaps and locking constructions are also made to meet the below standards.

### Relative Standards

#### JIS C 0903

Electrical Apparatus for Explosive Atmospheres in General Industry.

#### JIS C 0905

Supplementary Requirements for Construction of Electrical Apparatus for Explosive Atmospheres in General Industry.

## Range of Ignitable Gases and Vapors

| Explosion Grade :d |   | Ignitability   | G1  | G2   | G3              | G4                       | G5               |
|--------------------|---|----------------|---|--|-----------------|--------------------------|------------------|
|                    |   |                | Over 450°C  | 300°C to 450°C   | 200°C to 300°C  | 135°C to 200°C           | 100°C to 135°C   |
| 1                  | Dimension of gap with the depth of 25mm through which the internal flame is able to escape. | over 0.6mm     | Acetone Ammonia Benzene Carbon-monoxide Ethane Acetic-acid Ethyl-acetate Methane Toluene Propane Methanol | Ethanol Isoamyl-acetate I-butanol Butan Acetic-anhydride | Gasoline Hexane | Acetaldehyde Ethyl-ether |                  |
| 2                  |   | 0.6mm to 0.4mm | Coal gas  | Ethylene Ethylene-oxide                                  |                 |                          |                  |
| 3                  |   | Up to 0.4mm    | Water gas Hydrogen  | Acetylene  |                 |                          | Carbon-disulfide |

KITO Explosion-Proof Type Electric Chain Hoists are classified in   group.

## Common Specifications

|   |   |
|---|---|
| Power source                            | 200V(50/60Hz), 220V(60Hz), 380V(50Hz), 400V(50Hz), 415V(50Hz), 440V(60Hz), 3 phase.<br>Other voltages are available upon request.   |
| Operation voltage                       | 48V   |
| Operation method                        | Pendant type push button cord (floor operation)<br>(2-push-button-system for both hook suspension type and manual operated type trolley.<br>4-push-button-system for motorized trolley type.) |
| Power supply method                     | Cable power supply system   |
| Push button cord and power supply cable | Rubber insulated flexible cable (3RNCT)   |
| Insulation of motor                     | E class   |
| Braking system for lifting and lowering | Pull-rotor motor brake  |
| Braking system for traversing           | Motor brake construction  |
| Working temperature range               | -20°C (-4°F) to +40°C (+104°F)  |

- The functions and performance of the products mentioned in the catalog have been designed based on the related regulations and standards. If they are used for other than their intended purposes such as being integrated into your equipment, we will not take any responsibility for accidents attributable to their unintended usages as well as guarantee their performance and functions. Never remodel our products.
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