Twin Chain



Twin Chain Servo Hoist



Twin chain servo hoist overview



KSHTC – Twin chain servo



KSHTCDM – Dual motor

Twin chain / dual motor servo hoist

Model: KSHTC250S-2401 | KSHTC500S-2401 | KSHTCDM700S–4000S-4803

The Knight **KSHTC** twin chain hoist and **KSHTCDM dual motor** hoist are **Intelligent Assist Devices (IAD)** that let operators precisely position or float loads in the **"Z"** (vertical) axis with high speed and reliability. The design is especially suited to controlling bulky or long parts.

Both series include the **"SDS" (Safety Drop Stop)** feature. On the KSHTC, the two chains are mechanically linked and operate as a single unit. On the KSHTCDM, each motor is electronically synchronized, with the option of an LMM module with OCI or LMM with pass-through.

Knight servo technology lets the operator **simply grip the handle and move the load without pressing any buttons**, improving accuracy, responsiveness, repeatability, safety and productivity. Inherent benefits include eliminating wasted motion, reducing reaction time and minimizing inertia effects with heavy loads.

Twin chain servo hoist series: KSHTC250S-2401 | KSHTC500S-2401

Twin chain dual motor hoist series: KSHTCDM700S-4803 | KSHTCDM1500S-4803 | KSHTCDM2000S-4803 | KSHTCDM4000S-4803

See custom servo applications in the Knight Global photo gallery

General information

Mechanical

- Speed: up to 196 ft/min [60 m/min]
- KSHTCDM – Dual motor control
- Standard chain center distance: 24" [609mm] – 36" [914mm]
- 125% safety factor
- Fail-safe brake
- Knight patented chain – long service life
- Unlimited chain length (18 ft standard)
- Fully sealed worm-style gearbox
- H5 rated (continuous duty cycle)

Software

- Programming and diagnostics port
- Virtual travel limits
- Programmable slow-down zones
- Impact limiting
- Active damping
- Standard float mode
- Programmable overload settings

Electrical

- Auxiliary 24 VDC, 2A power for custom tooling (grippers, suction cups, sensors, lights...)
- Illuminated Run/Stop button
- 240 VAC, 1-phase, 50/60 Hz
- Load sensing: payload & handle load
- I/O capability:
- Status LED; illuminated green/blue push buttons
- Fault LED; Run-Stop button, twist to release
- Optional remote pendant or remote handle

Twin chain servo hoist specifications

Model number	Capacity lbs. [kg]	Max speed fpm [mpm]	Voltage / Phase
KSHTC250S-2401	250 lbs. [113 kg]	196.85 fpm [60 mpm]	240V / 1-phase
KSHTC500S-2401	500 lbs. [226 kg]	Contact FULLSHARP	240V / 1-phase

Twin chain dual motor specifications

Model number	Capacity lbs. [kg]	Max speed fpm [mpm]	Voltage / Phase
KSHTCDM700S-4803	700 lbs. [317 kg]	Contact FULLSHARP	480V / 3-phase
KSHTCDM1500S-4803	1,500 lbs. [680 kg]	123.03 fpm [37.5 mpm]	480V / 3-phase
KSHTCDM2000S-4803	2,000 lbs. [907 kg]	41.01 fpm [12.5 mpm]	480V / 3-phase
KSHTCDM4000S-4803	4,000 lbs. [1,814 kg]	Contact FULLSHARP	480V / 3-phase

Configuration options

KSHTC / KSHTCDM servo hoist

When selecting a Knight servo control system, several factors must be defined before choosing the right configuration. Contact the **FULLSHARP VN** engineering team for advice and help defining the correct configuration for your application.

Application definition process

1. **System configuration** – The KSHTC / KSHTCDM series comes with an inline handle or a remote handle. Choose one only.
2. **Lifting capacity** – Include the weight of both the fixture and the part when sizing.
3. **System type** – SDS (safety and load chain)
4. **Coiled cable length:**
5. **Trolley** – Define the suspension points (cannot be a single point) and select a suitable trolley.
6. **Up/down control setup:**
7. **Power supply** – The servo runs on 230VAC 1-phase. If the plant only has 480VAC, a 480VAC/240VAC transformer is required.

Accessories

Servo controls



Load monitoring module with OCI KLCA1002 For use with a dual speed handle or fixture handle.; Ethernet programming port.; Red illuminated Run-Stop; green illuminated FLOAT/LIFT.; Includes KSAA1004 shackle.



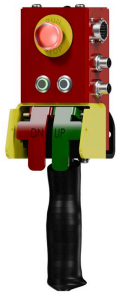
Pass-through load monitoring module KLCA1004 Ethernet programming port.; 19-pin M23 male + female connectors.; Includes KSAA1004 shackle.



Dual speed control handle EPDA9600 Weight: 2.5 lbs [1.13 kg] No programming required.; Two UP/DOWN thumb levers.; UL Listed, CE Approved.



Dual speed handle with trigger EPDTA9600 Weight: 2.8 lbs [1.27 kg] No programming required.; Two thumb levers + one trigger.; UL Listed, CE Approved.



Dual speed handle with OCI KCA1033 Weight: 5.04 lbs [2.29 kg] Integrated OCI interface.; Safety Run-Stop button.; 9-pin D-Sub programming port.



Fixture-mounted OCI KCA1014 / KCA1015 Weight: 3.5–6.75 lbs [1.59–3.1 kg] Illuminated LIFT & FLOAT buttons.; Ethernet programming port.; Side or rear cable entry.

General accessories



Precision chain wear gauge KSAA1003 Weight: 0.87 lbs [0.39 kg] Measures wear on Knight 4mm & 5mm zinc-plated chain.; Durable steel construction.



SDS replacement chain kit KDSA1010 / KDSA1011 KDSA1010 (4mm): 200–500 lbs capacity.; KDSA1011 (5mm): 350–1,000 lbs capacity.; High-strength, heat-treated, zinc-plated steel.



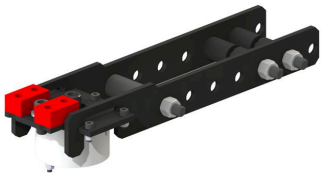
Quick connect / quick disconnect hook KSAA1001 / KSAA1002 Forged, heat-treated alloy steel.; Pin-type quick connect/disconnect.; Max load: 1,500 lbs [680 kg].



Chain shackle KSAA1004 4140 steel, heat-treated to Rock C 38–42.; Secured by two M6 steel pins.; Max load: 1,000 lbs [453 kg].



Chain shackle with swivel hook KSAA1007 Weight: 4.6 lbs [2.08 kg] 4140 steel, enlarged connection hole.; Includes KSAD1022 swivel hook.; Max load: 1,000 lbs [453 kg].



Servo hoist rail brake KSAA1011 Weight: 6.0 lbs [2.72 kg] Pneumatic brake – front or rear mounting.; Works as a parking brake or drag brake.; Replaceable brake pads.

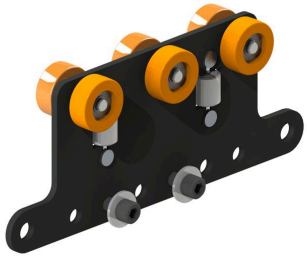
Load trolleys



Load trolley – RAD7510 rail KSAA1050 Max load: 2,500 lbs [1,134 kg] | Weight: 9.5 lbs [4.31 kg] High-impact glass-filled nylon wheels.; Double-shielded bearings, no lubrication required.; -29°C to +120°C at 100% load.



Load trolley – RAD6110 rail KSAA1059 Max load: 1,600 lbs [725 kg] | Weight: 7.6 lbs [3.45 kg] High-impact glass-filled nylon wheels.; Double-shielded bearings, no lubrication required.; -29°C to +120°C at 100% load.



Load trolley – RAD4110 rail KSAA1048 Max load: 900 lbs [408 kg] | Weight: 4.5 lbs [2.04 kg] High-impact glass-filled nylon wheels.; Double-shielded bearings, no lubrication required.; -7°C to +120°C at 100% load.

Electrical cables



Coiled electrical cable KCA1040 19-pin military bayonet connectors.; Wraps around the servo chain.; Length 2–20 ft [60–610 cm].



Straight electrical cable KCA1041 19-pin military bayonet connectors.; Connects the OCI to the LMM.; Length 2–15 ft [61–457 cm].



4-pin / 8-pin micro cable Contact for quote Gray PVC, 22 AWG, 300V.; Straight or 90° right-angle connector.; Length 1–6 m.

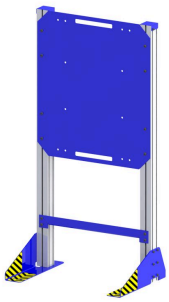
Transformer disconnect enclosures



3KVA disconnect enclosure KCA1018 Converts 480VAC → 240VAC.; For KSH250S–KSH1000S.; 15A primary & secondary breakers.



Dual 5KVA disconnect enclosure KCA1056 Powers two servo systems.; Dual 25A secondary breakers.; Dual 480VAC → 240VAC conversion.



Disconnect enclosure stand KCA1001 Multiple height adjustments.; For KCA1018 & KCA1055.; Floor mounted, M10×1.5 Nylock bolts.



I-beam mounting bracket KCA1100 Mounts directly to an I-beam column.; No drilling of the column required.; For KCA1018, KCA1055, KCA1056.



7.5KVA disconnect enclosure EBA1289 For KSHXXYZ and KSHXYZR.; Converts 480VAC → 240VAC.; Two 25A primary & secondary breakers.

***Note:** All accessories are compatible with the KSHTC / KSHTCDM twin chain servo hoist series. Contact FULLSHARP VN for help selecting the right accessories for your application.

Technical documents

Catalogs & brochures

- Servo Systems Brochure PDF
- Industry 4.0 Capabilities PDF

Spec sheets

- KSHTC – Twin Chain Servo Hoist Spec Sheet PDF
- KSHTCDM – Twin Chain Dual Motor Spec Sheet PDF

Manuals

- SDS Servo System Operation Manual – Rev002.2025 PDF

Installation guides

- Eye Bolt Safety Cable Guide PDF
- Sieb & Meyer Servo Drive Replacement PDF

- Safety Cable – End Trucks, Hangers, Trolleys PDF
- Servo System Checklist PDF
- Knight Servo Configuration Software (Knight Servo Studio) ZIP

FULL-SHARP AUTOMATIZED VN CO., LTD (FULLSHARP)
Authorized distributor of Knight Global lifting equipment in Vietnam — VSIP Hai Phong
Contact FULLSHARP for a quotation and advice on the right system configuration for your project.

Contact us for consultation and a quotation

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Specifications may vary with the ordered configuration. Please contact FullSharp for exact details.