Articulating Servo Arms





KSHFA floor – floor mounted

Model: KSHCA / KSHFA – 500 / 1000 / 1500-2301

Knight **KSHCA** (overhead rail mounted) and **KSHFA** (floor mounted) are **Intelligent Assist Devices (IAD)** that let operators reach beyond the area directly beneath the rail system and precisely position loads in the "Z" (vertical) axis with high speed and outstanding reliability.

Knight servo hoist technology becomes an extension of the operator natural motion, significantly improving accuracy, responsiveness and repeatability – raising safety, productivity and overall quality. Key benefits: no wasted motion, shorter response time and minimal inertia effects with heavy loads.

Overhead carriage mounted series: KSHCA500-2301 | KSHCA1000-2301 | KSHCA1500-2301

Floor mounted series: KSHFA500-2301 | KSHFA1000-2301 | KSHFA1500-2301

General specifications

Mechanical

- Speed: up to 98 ft/min [30 m/min]
- Maximum reach: up to 48 in [1,219 mm] (excluding boom/end effector)
- Floor pedestal height: 2.4 m – 3.0 m
- Safety factor: 125%
- Fail-safe brake
- Heavy-duty roller chain
- Chain length: 12 ft [365 cm] – 20 ft [609 cm]
- Sealed worm-style gearbox
- H5 class – continuous duty cycle

Electrical

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

Specifications – KSHCA series (overhead rail mounted)

Model number	Capacity lbs. [kg]	Max speed fpm. [mpm]	Voltage / Phase
KSHCA500-2301	500 lbs. [226 kg]	98.43 fpm. [30.0 mpm]	240V / 1-phase
KSHCA1000-2301	1,000 lbs. [453 kg]	82.02 fpm. [25.0 mpm]	240V / 1-phase
KSHCA1500-2301	1,500 lbs. [680 kg]	65.62 fpm. [20.0 mpm]	240V / 1-phase

Specifications – KSHFA series (floor mounted)

Model number	Capacity lbs. [kg]	Max speed fpm. [mpm]	Voltage / Phase
KSHFA500-2301	500 lbs. [226 kg]	98.43 fpm. [30.0 mpm]	240V / 1-phase
KSHFA1000-2301	1,000 lbs. [453 kg]	82.02 fpm. [25.0 mpm]	240V / 1-phase
KSHFA1500-2301	1,500 lbs. [680 kg]	65.62 fpm. [20.0 mpm]	240V / 1-phase

Configuration guide

KSH servo hoist – application definition process

When selecting a Knight servo control system, several factors must be defined before choosing the right configuration. Please contact the FULLSHARP engineering team for detailed advice:

1. **System configuration:** The KSHAEA series comes with an inline or remote handle – choose one type only; they cannot be used together.
2. **Lifting capacity:** Include the weight of the fixture and the load when selecting the model.
3. **System type:** Single chain.
4. **Coiled cable length:**
5. **Trolley:** The suspension cannot be a single point. If you already have trolleys, the EBD1127 adapter plate is supplied free of charge.
6. **Lift controls:**
7. **Plant power supply:** The servo runs on 230 VAC 1-phase. If only 480 VAC is available, order an additional 480/240 VAC transformer.

Accessories

Servo controls



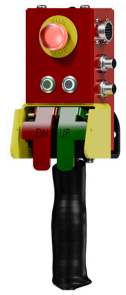
Inline handle with trigger KLCA1000 Weight: 6.81 kg | Capacity: 750–2,000 lbs Integrated LMM & OCI module.; Programmable 750 lb load cell.; Illuminated Float/Lift & Run-Stop buttons.; Up to four M12 4-pin ports.



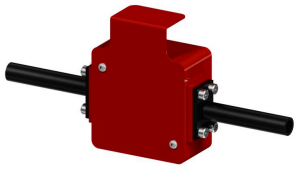
LMM + OCI module KLCA1002 Used with a pendant handle / fixture handle Programmable load sensor.; Ethernet programming port.; Up to three M12 4-pin I/O ports.; Includes KSAA1004 shackle.



Pass-through LMM module KLCA1004 For use when the operator cannot reach the Run-Stop Ethernet programming port.; 19-pin M23 input & output connectors.; Includes KSAA1004 shackle.; Used with a separate OCI (KCA1015).



Dual speed handle + OCI KCA1033 Weight: 2.29 kg Dual speed control.; 9-pin D-Sub programming port.; Illuminated Float/Lift & Run-Stop buttons.; Optional trigger configuration.



Fixture-mounted load cell handle KCA1071 Weight: 4.96 kg Amplified 500 lbs load cell.; No buttons to press – just hold the handle.; Response force < 0.68 kg.; 8-pin M12 cable included.



Wireless remote control KCA1004 / 1005 / 1006 FCC Part-15 & CE compliant Signal range: 900 ft [300 m].; 62 programmable channels; AA batteries > 100 hours.; KCA1004: 4 buttons | 1005: 6 buttons | 1006: 8 buttons.



Fixture-mounted OCI KCA1014 / KCA1015 Weight: 1.59 kg / 3.1 kg Mounts directly to the fixture.; Illuminated LIFT, FLOAT & RUN-STOP buttons.; KCA1014: rear cable | KCA1015: side cable.



Dual speed handle (non-programmable) EPDA9600 Weight: 1.13 kg Two thumb levers – 4 switches.; Half press = speed 1 | full press = speed 2.; IP67 | UL Listed, CE Approved.

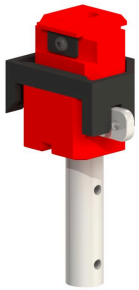


Dual speed handle + trigger EPDTA9600 Weight: 1.27 kg Two thumb levers + one trigger.; Five switches in total.; IP67 | UL Listed, CE Approved.

General accessories



Replacement roller chain kit KSHD1021 Max load: 2,000 lbs [908 kg] Standard ANSI 50-2 double-strand chain.; KSHD1021-12: 12 ft | -20: 20 ft.; Average tensile strength: 12,200 lbs [5,534 kg].



Quick connect / quick release hook KSAA1001 / KSAA1002 Max load: 680–907 kg Quick release via release pin.; KSAA1001: 16mm | KSAA1002: 20mm.; Heat-treated alloy steel.



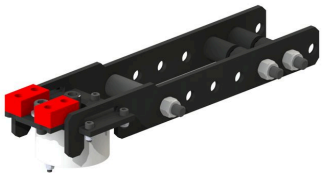
Shackle KSAA1004 Max load: 453 kg [1,000 lbs] 4140 steel housing, heat-treated to Rock C 38-42.; Secured by two M6 steel pins.; Mounts below the load cell.



Swivel hook shackle KSAA1007 Weight: 2.08 kg | Capacity: 1,000 lbs Large connection hole for the swivel hook.; Includes KSAD1022 swivel hook.; Heat-treated 4140 steel.



Locking swivel hook KSAD1022 Weight: 0.72 kg | Capacity: 1,451 kg Grade 100 – 20% stronger than Grade 80.; Self-locking under load.; Anti-friction bearing, 360° swivel.



Servo hoist rail brake KSAA1011 Weight: 2.72 kg Locks the hoist against travel along the rail.; Pneumatic brake – front or rear mounting.; Replaceable brake pads.

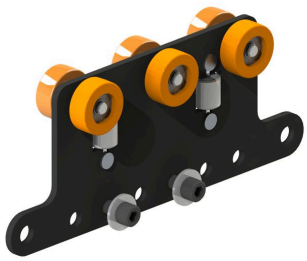
Load trolleys



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



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



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

Electrical cables



Coiled electrical cable KCA1040 Manufactured exclusively for Knight Global Wraps around the servo hoist chain.; 19-pin military bayonet connectors.; Length: 2–20 ft (KCA1040-2 → -20).



Straight electrical cable KCA1041 Manufactured exclusively for Knight Global Connects the handle to the servo hoist.; 19-pin military bayonet connectors.; Length: 2–15 ft (KCA1041-2 → -15).



4 & 8-pin micro switch cable CALL Contact FULLSHARP to order Gray PVC, 22 AWG, 4A, 300V.; Straight or 90° right-angle connector.; Length: 1–6 m.

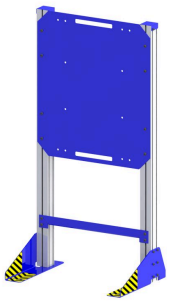
Electrical enclosures & disconnects



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



5KVA disconnect enclosure KCA1055
Converts 480VAC → 240VAC.; Finger-safe 5KVA transformer.; 25A primary & secondary breakers.; For dual/triple servo systems.



Disconnect enclosure stand KCA1001
Holds the enclosure at an ergonomic height.; Multiple height adjustments.; M10×1.5 Nylock bolts.

Technical documents

Catalogs

- Arms Brochure – Servo Arms PDF
- Servo Systems Brochure PDF
- Industry 4.0 Capabilities PDF

Spec sheets

- KSHCA Servo Arm – Spec Sheet / CAD PDF
- KSHFA Servo Arm – Spec Sheet / CAD PDF

Installation guides

- Eye Bolt Safety Cable – Installation Guide PDF
- Safety Cable – End Trucks, Hangers, Trolleys PDF
- Servo System Checklist PDF

Software

- Knight Servo Configuration Software ZIP

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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

Vietnam factory: Workshop A1-1, VSIP Hai Phong, Nam Trieu Ward, Hai Phong City · +84 817 888 198
Taiwan factory: Zhongli District, Taoyuan City · +886 3-451-8806
Email: sales@fullsharp.com.vn · **Website:** www.fullsharp.com

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