Limit Switch



Limit Switch Air Balancer Series



Main view – Limit Switch Balancer



KBA-LS – Cutaway view

Limit Switch Air Balancers

Series: KBA / KBC / RKBA / RKBC / TKBA / TKBC – LS

Knight external limit switch balancers incorporate up to **two (2) spring-loaded plunger assemblies**, two (2) limit switches and an external retract control — allowing a pneumatic pilot signal to be sent when a preset height is reached. A 5-way pneumatic valve is mounted on the bracket and is tripped by a position flag as the balancer travels upward.

The external retract control is an adjustable safety feature that controls vertical travel speed. It applies resistance to the thrust bearing so the cable or chain retracts slowly into the balancer, ensuring that a runaway load is **stopped immediately and completely**.

Air balancer sizing formula:
We recommend using **80%** of capacity for lifting applications (to compensate for plant pressure fluctuations).
Example: 60 psi pressure, 350 lbs balancer → 0.60 × 350 × 0.80 = **168 lbs working capacity**

Single LS Cable: KBA150-076-LS1/2 · KBA225-073-LS1/2 · KBA225-110-LS1/2 · KBA350-073-LS1/2 · KBA450-054-LS1/2 · KBA500-080-LS1/2 · KBA700-052-LS1/2

Single LS Chain: KBC150-070-LS1/2 · KBC200-110-LS1/2 · KBC225-067-LS1/2 · KBC350-067-LS1/2 · KBC450-052-LS1/2 · KBC500-080-LS1/2 · KBC700-052-LS1/2

Dual Chain SDS / RL Cable & Chain / Tandem: See the detailed specification tables below ↓

Features

- CE compliant
- Cable or chain type
- Hands-free operation
- Standard "Float" mode
- Requires clean, dry, non-lubricated air
- Maximum load: up to **1,400 lbs [635 kg]**
- Standard travel: up to **110 in. [2,794 mm]**

Benefits & Options

- Sends a pilot signal at a preset height
- Adjustable external retract control
- Stops runaway loads immediately and completely
- Optional High Relieving and Feathertouch controls
- Multiple suspension kits available

Specifications – Single LS Cable

LS series single-cable air balancers

Model	Rated load lbs [kg]	Max. travel in. [mm]
KBA150-076-LS1	150 [68]	76 [1,930]
KBA150-076-LS2	150 [68]	76 [1,930]
KBA225-073-LS1	225 [102]	73 [1,854]
KBA225-073-LS2	225 [102]	73 [1,854]
KBA225-110-LS1	225 [102]	110 [2,794]
KBA225-110-LS2	225 [102]	110 [2,794]
KBA350-073-LS1	350 [159]	73 [1,854]

Model	Rated load lbs [kg]	Max. travel in. [mm]
KBA350-073-LS2	350 [159]	73 [1,854]
KBA450-054-LS1	450 [204]	54 [1,371]
KBA450-054-LS2	450 [204]	54 [1,371]
KBA500-080-LS1	500 [227]	80 [2,032]
KBA500-080-LS2	500 [227]	80 [2,032]
KBA700-052-LS1	700 [317]	52 [1,320]
KBA700-052-LS2	700 [317]	52 [1,320]

Specifications – Single LS Chain

LS series single-chain air balancers

Model	Rated load lbs [kg]	Max. travel in. [mm]
KBC150-070-LS1	150 [68]	70 [1,778]
KBC150-070-LS2	150 [68]	70 [1,778]
KBC200-110-LS1	200 [91]	110 [2,794]
KBC200-110-LS2	200 [91]	110 [2,794]
KBC225-067-LS1	225 [102]	67 [1,701]
KBC225-067-LS2	225 [102]	67 [1,701]
KBC350-067-LS1	350 [159]	67 [1,701]
KBC350-067-LS2	350 [159]	67 [1,701]
KBC450-052-LS1	450 [204]	52 [1,320]
KBC450-052-LS2	450 [204]	52 [1,320]
KBC500-080-LS1	500 [227]	80 [2,032]
KBC500-080-LS2	500 [227]	80 [2,032]
KBC700-052-LS1	700 [317]	52 [1,320]
KBC700-052-LS2	700 [317]	52 [1,320]

Specifications – Dual Chain SDS LS

LS series dual-chain (SDS) air balancers

Model	Rated load lbs [kg]	Max. travel in. [mm]
KBC250S-054-LS1	250 [113]	54 [1,371]
KBC250S-054-LS2	250 [113]	54 [1,371]
KBC450S-052-LS1	450 [204]	52 [1,320]
KBC450S-052-LS2	450 [204]	52 [1,320]

Model	Rated load lbs [kg]	Max. travel in. [mm]
KBC500S-084-LS1	500 [226]	84 [2,133]
KBC500S-084-LS2	500 [226]	84 [2,133]
KBC700S-052-LS1	700 [317]	52 [1,320]
KBC700S-052-LS2	700 [317]	52 [1,320]

RL Reeved Cable LS

Model	Load lbs [kg]	Travel in. [mm]
RKBA450-036-LS*	450 [204]	36 [914]
RKBA450-033-LS*	450 [204]	33 [818]
RKBA700-036-LS*	700 [318]	36 [914]
RKBA1000-040-LS*	1,000 [454]	40 [1,016]
RKBA1400-027-LS*	1,400 [635]	27 [685]

*When ordering, specify LS1 (1 switch) or LS2 (2 switches)

RL Reeved Chain LS

Model	Load lbs [kg]	Travel in. [mm]
RKBC400-055-LS*	450 [204]	55 [1,397]
RKBC450-33-LS*	450 [204]	33 [818]
RKBC700-033-LS*	700 [318]	33 [818]
RKBC1000-040-LS*	1,000 [454]	40 [1,016]
RKBC1400-026-LS*	1,400 [635]	26 [685]

Tandem Cable LS

Model	Load lbs [kg]	Travel in. [mm]
TKBA700-073-LS*	700 [318]	73 [1,854]
TKBA1000-080-LS*	1,000 [454]	80 [2,032]
TKBA1400-054-LS*	1,400 [635]	54 [1,371]

*When ordering, specify LS1 or LS2

Tandem Chain LS

Model	Load lbs [kg]	Travel in. [mm]
TKBC700-067-LS*	700 [318]	67 [1,701]
TKBC1000-080-LS*	1,000 [454]	80 [2,032]

Model	Load lbs [kg]	Travel in. [mm]
TKBC1400-052-LS*	1,400 [635]	52 [1,320]

Technical Documents (Brochure / Manual / Installation Guides)

Brochure

- Knight Global Air Balancer Catalog (2026)

Manuals & Operating Instructions

- Balancer Operation Manual 2019 (English)
- Troubleshooting Guide 2021
- Troubleshooting Guide 2017
- Periodic Inspection Form

Installation & Connection Guides

- Air Connection Diagram – Logic Box
- Air Connection Diagram – Manifold
- External Safety Retract Control Information (2023)
- Eye Bolt Safety Cable Installation Guide
- Safety Cable Installation – End Truck, Trolley & Hanger Bar

Accessories

General Accessories



Chain Wear Gauge For 4mm & 5mm chain KSAA1003 0.87 lbs [0.39 kg] Gauge



Safety Chain Shackle 360° swivel, quick connection BPA2410 2.7 lbs [1.23 kg] Shackle



Air Balancer Chain Hook Crosby® self-closing, 360° swivel BPA2113 2.4 lbs [1.08 kg] Hook



Quick-Disconnect Swivel 360° swivel, alloy steel BPA2035 4.8 lbs [2.22 kg] 700 lbs

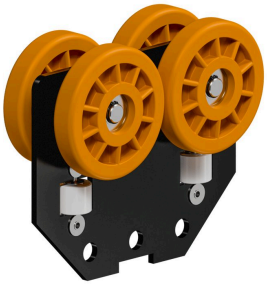


Hook with Bail Lock & Latch Lif-Lok®, for KBA BPA2020 0.8 lbs [0.36 kg] 2000 lbs

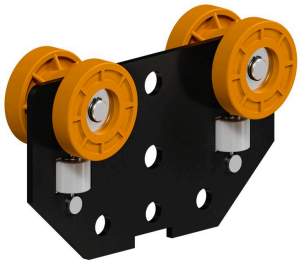


Reeved Cable Pulley Doubles lifting capacity BPA2065 4.4 lbs [2.0 kg] Reeved

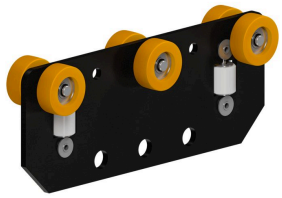
Load Trolleys



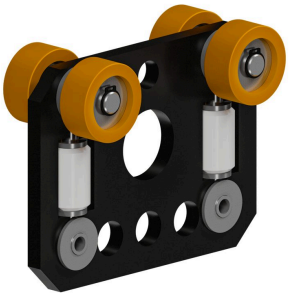
Load Trolley – Rail RAD7510 MRTA7706 9 lbs [4.08 kg] RAD7510 · 3000lbs



Load Trolley – Rail RAD6110 MRTA6106 6 lbs [2.72 kg] RAD6110 · 1600lbs



Load Trolley – Rail RAD4110 MRTA4442 5 lbs [2.26 kg] RAD4110 · 1100lbs

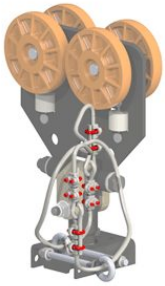


Load Trolley – Rail TR2000 TRT2001 2 lbs [0.90 kg] TR2000 · 550lbs



Load Trolley – W/I/Patented Beam RTA2013 23 lbs [10.4 kg] W-Beam · I-Beam

Safety Cable Kits



Eye Bolt Safety Cable Kit 4 Crosby® clips + 2 thimbles FDA4133 6mm / 10 ft [3.048m] Eye Bolt



Oval Sleeve Safety Cable Kit 2 copper sleeves + 2 thimbles NICORWA4133 2 lbs [0.91 kg] Oval

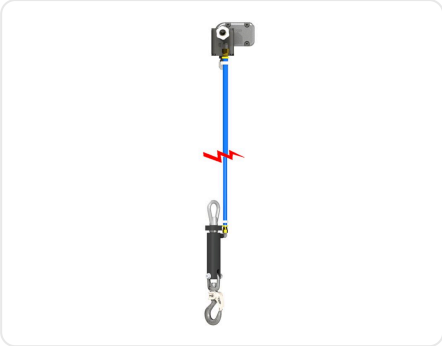


Standard Safety Cable Kit Knight standard kit RWA4133 6mm / 6 ft [1.8m] Standard

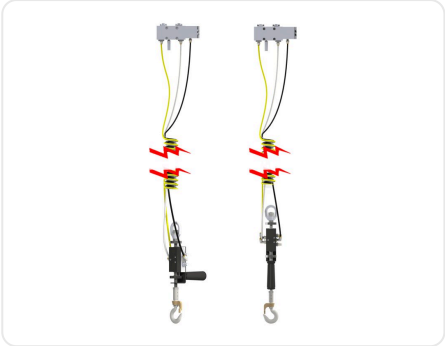
Pneumatic Controls



Single Balance Module Supports the load at zero-g BCS2018 2.2 lbs [0.99 kg] 150lbs



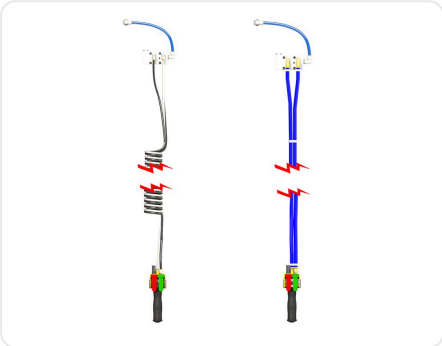
High Relieving Module 2090: ≤250 lbs / 2322: ≤500 lbs BCS2090 & BCS2322 10 ft [3m] Heavy



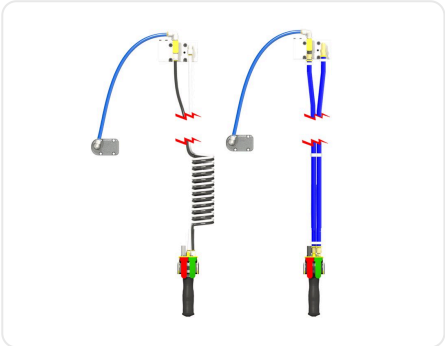
Feather-Touch Handle Horizontal (2213) / Vertical (2214) BCS2213 & BCS2214 12.4 lbs [5.64 kg] 100lbs



Dual Balance Control Handle Supports 2 zero-g weights BCS2215 & BCS2323 10.2 lbs [4.63 kg] Dual



Up/Down Pendant + Manifold Kit Straight (3017) / coiled (3320) BCS3017 & BCS3320 10 ft [3m] Standard



Tandem Up/Down Pendant For Tandem & Dual balancers BCS2326 & BCS3330 10 ft [3m] Tandem

FULL-SHARP AUTOMATIZED VN CO., LTD (FULLSHARP)

Authorized distributor of Knight Global air balancers and lifting equipment in Vietnam

For help selecting the right LS model (load capacity, travel, number of limit switches), please contact a FULLSHARP representative for a quotation and detailed drawings.

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.