Safety Drop Stop









Safety drop stop "SDS"



KBC250S-054



KBC500S-084



Safety chain shackle



Safety chain hook

The world's safest air balancer

Series: KBC250S / KBC450S / KBC500S / KBC700S

The Knight Global **Safety Drop Stop "SDS"** air balancer is the **world's safest** balancer, thanks to its ability to **prevent the load from dropping** if the main chain breaks. The "SDS" design provides complete protection and prevents operator injury.

Air balancers are used in applications that require **"float" mode** – allowing final positioning of the load **hands-free**. Lifting and lowering are faster than with a conventional hoist, allowing fine adjustment ("feathering") when positioning the load. The ergonomic control handle has color-coded thumb levers.

Knight balancer chains use **special Grade 80 chain** with a proprietary surface treatment that extends chain life by up to **300%** compared with standard Grade 80 chain.

***Note:** The SDS series includes models KBC250S-054, **KBC450S-052 (NEW)**, KBC500S-084 and KBC700S-052. All feature a redundant dual-chain design and are CE compliant upon request.

Features & benefits

Features

- CE compliant upon request
- Redundant dual-chain design for maximum operating safety
- Load chain: carries the main load
- Safety chain: backup if the main chain breaks
- Hands-free operation
- Standard "Float" mode
- Internal centrifugal retract control
- Requires clean, dry, non-lubricated air
- Maximum balancing capacity: **700 lbs [318 kg]**
- Standard travel: up to **84 in [2,133 mm]**

Benefits & options

- Optional external retract control
- Optional travel limit switch
- Optional High Relieving & Feathertouch controls
- Wide choice of suspension kits
- Easy integration with Knight aluminum rails (RAD4110/6110/7510)
- Supports pneumatic rotary union connection
- Special Grade 80 chain – up to 300% longer life
- High operator safety – load drop protection

SDS series specifications

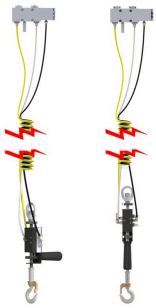
***Note:** The specifications below apply to the standard configuration. FULLSHARP can advise on custom configurations for specific applications (rail mounting, multi-axis motion, vacuum gripper integration, etc.).

Model	Capacity		Travel		Product weight	
lbs	kg	in	mm	lbs	kg	
KBC250S-054	250	113	54	1,371	63	28
KBC450S-052 NEW	450	204	52	1,321	81	37
KBC500S-084	500	227	84	2,133	115	52
KBC700S-052	700	318	52	1,321	95	43

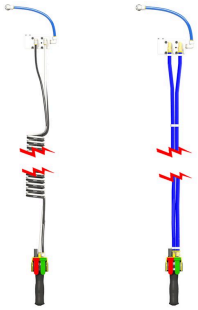
Pneumatic controls



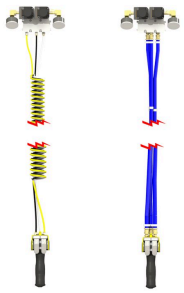
Knight pneumatic rotary union 7 ports 1/8" NPT – 1 MPa BPA2001 / BPA2002 1,000 lbs [454 kg] Rotary



Feather-Touch control handle Horizontal / vertical handle BCS2213 / BCS2214 12.4 lbs [5.64 kg] 100lbs



Up/down pendant + manifold kit Straight / coiled hose 10 ft [3 m] BCS3017 / BCS3320 2 buttons Standard



Dual control handle Supports 2 zero-gravity weight settings BCS2215 / BCS2323 10.2 lbs [4.63 kg] Dual



Single control module Ideal for tightening tools BCS2018 2.2 lbs [0.99 kg] 150lbs

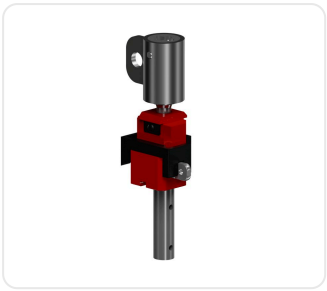


Module High Relieving 2090: ≤250 lbs / 2322: ≤500 lbs BCS2090 / BCS2322 10 ft [3 m] Heavy

Chain attachments & gauges



Chain wear gauge for 4mm & 5mm chain KSAA1003 0.87 lbs [0.39 kg] Gauge



Quick disconnect 360° swivel, with safety chain pin BPA2035 4.8 lbs [2.22 kg] 700lbs



Safety chain shackle 360° swivel, connects the safety chain BPA2410 2.7 lbs [1.23 kg] Shackle

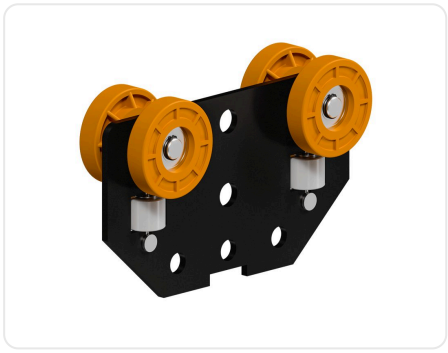


Balancer chain hook Crosby® Bullard self-closing BPA2113 2.4 lbs [1.08 kg] Hook

Load trolleys



Load trolley – RAD4110 rail Glass-fiber reinforced nylon wheels MRTA4442 5 lbs [2.26 kg] RAD4110



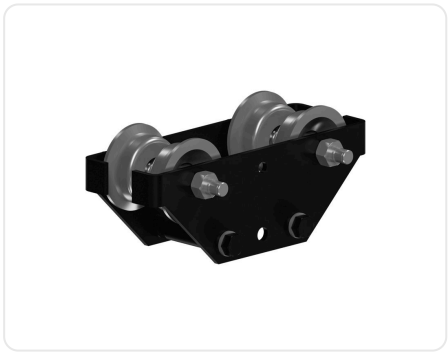
Load trolley – RAD6110 rail Max. load 1,600 lbs [725 kg] MRTA6106 6 lbs [2.72 kg] RAD6110



Load trolley – RAD7510 rail Max. load 3,000 lbs [1,360 kg] MRTA7706 9 lbs [4.08 kg] RAD7510



Load trolley – TR2000 rail Max. load 550 lbs [250 kg] TRT2001 2 lbs [0.90 kg] TR2000

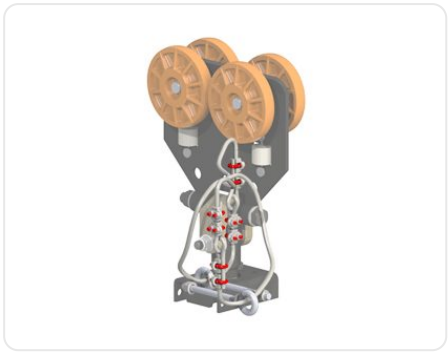


W-beam load trolley Steel wheels, double-sealed bearings RTA2013 23 lbs [10.4 kg] W-Beam · I-Beam

Safety cable kits



Standard safety cable 4 Crosby® clips + 2 thimbles RWA4133 6 ft [1.8 m] / 6mm Standard



Safety cable with eye bolt eye bolt safety cable kit FDA4133 10 ft [3 m] / 6mm Eye Bolt



Safety cable with oval sleeves 2 copper oval sleeves + 2 thimbles NICORWA4133 2 lbs [0.91 kg] Oval

Technical documents

Brochures

- Knight Global Air Balancer Brochure PDF
- Knight Rotary Union Brochure PDF

Spec sheets & CAD drawings

- Spec Sheet KBCS "SDS" Balancers PDF
- CAD Drawings KBCS Series (.zip) ZIP

Manuals & operating instructions

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

Installation & connection guides

- Air Connection Diagram – Logic Box PDF
- Air Connection Diagram – Manifold PDF
- Eye Bolt Safety Cable Installation Guide PDF
- External Safety Retract Control Information PDF

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Authorized distributor of Knight Global air balancers and lifting equipment in Vietnam
For advice on the right SDS balancer configuration for your project, please contact a FULLSHARP representative for a quotation and detailed design drawings.

Contact us for consultation and a quotation

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