Pneumatic Balancers

50 to 1000 lbs (22 to 453 kg) Capacity

The Strength Behind Material Handling Technology

Meeting the needs of today's material handling applications requires an ergonomic lift assist that interacts with the operator. The Balancer offers lifting solutions to meet these needs through float and built in safety features.

Balancer Advantage

Precise, strain-free positioning – Float leaves both hands free to raise, lower, or shift the load with virtually no resistance. No more "hoist control" hit-and-miss spotting.
Simple adjustment – Clear access to air-flow calibration controls allows quick, easy adjustment of the float.
Low air consumption – Approximately 1/8 cfm required per cycle (50 times less than an air hoist), means very low energy costs.
Clean, oil-free operation – Pre-lubricated design – Eliminates air line lubrication and oil mist exhaust. It's ideal for food processing and clean manufacturing environments.
Rugged reliability – for continuous duty with minimal maintenance, the Balance Air delivers cost effective performance.

Safety is Standard

Built-in overload protection – The load being lifted can never exceed the unit's maximum rated capacity for a given air pressure. Maximum capacity is rated at 100 psig and actual capacity is linearly proportional to actual pressure. For example, at 70 psig the unit can only lift up to 70% of its maximum capacity.
Minimal cable recoil due to loss of load – If the load is accidentally lost, a spring-loaded centrifugal brake (Z brake) automatically stops rapid upward cable travel.

Versatile configuration

Wide range of capacities – Balancers are rated from 50 to 2,000 pounds (22 to 909 kg) maximum, with lower capacity units adjustable for loads as low as 2 pounds (.9 kg). Tandem units handle larger loads.
Added protection – The optional Z Stop offers protection against the drifting of loads in the event the main air supply is lost.
Cable travel – The range of up/down movement varies from 40 to 120 inches, (1016 to 3048 mm) depending on the model.
Controls – ZA (pendant) controls let you handle varying loads; a BA (single) balance control is ideal for a constant load, and an EA for 2 loads.
Mounting – Suspension kits for Ingersoll-Rand and other enclosed track manufacturers as well as I-Beam, patented track, and hook mount.
CE Certification – Meets the requirements for the European Community.

Balancer with ZA pendent control

Z Stop: The optional Z Stop is a patent pending device that will eliminate the down-drift of suspended loads or tools during shut down or at night when the air supply is shut off. The Z Stop will stop drift within 6 inches (152.4 mm) and put the Balance Air into a mechanically locked position preventing damage to tools or objects below the suspended load. Available for use on all 10 inch (254 mm) diameter units.

Available in 6.5 inch (165.1 mm) and 10 inch (254 mm) can sizes

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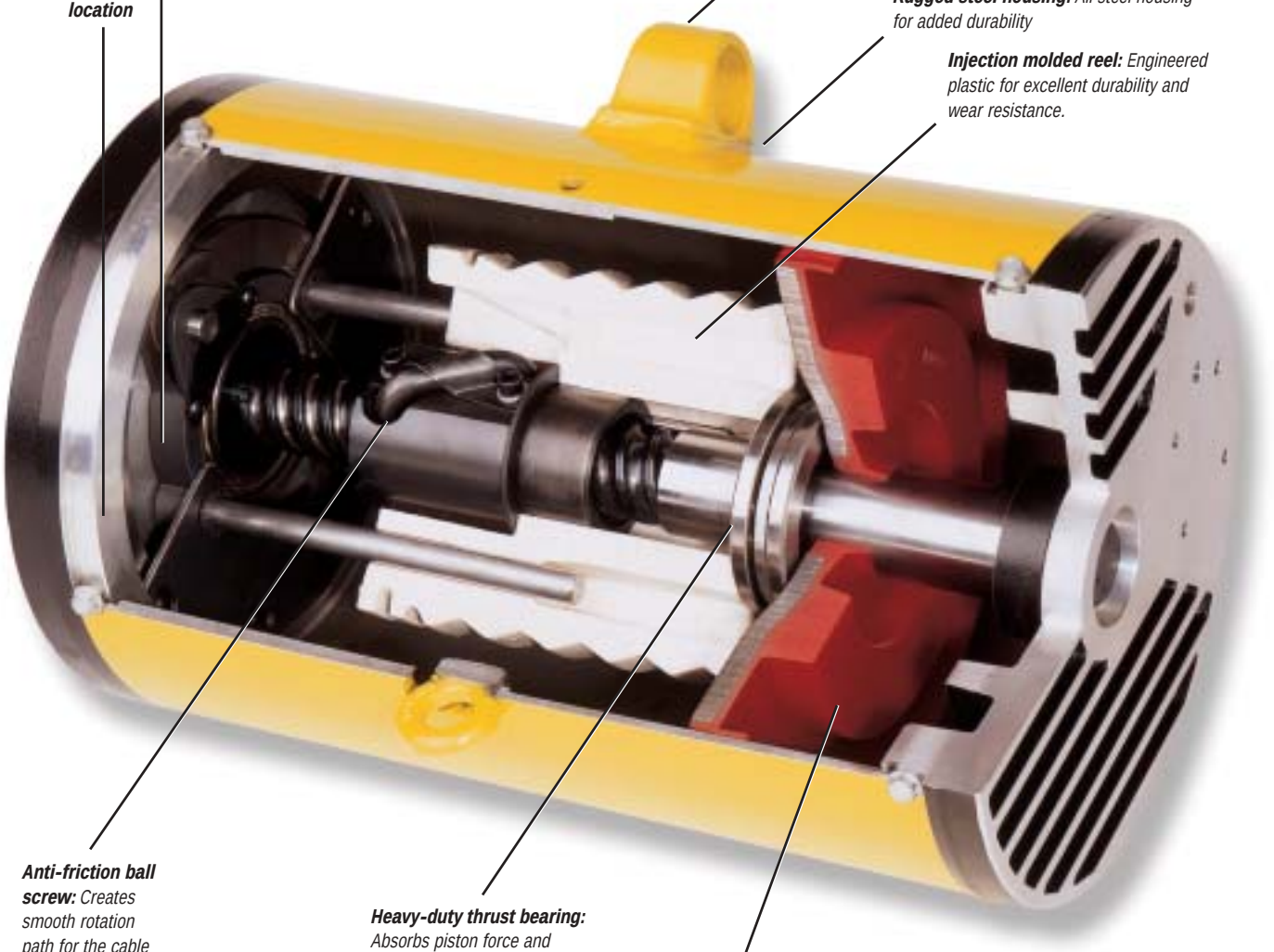
Z Brake Safety Retraction System:
(Patent No. 5,522,581)
Prevents violent retraction in the event of a sudden release or loss of load. The brake will also eliminate excessive upward acceleration of a no load hook when the "up" button is employed to full depression. This system is available on all units (except 50 lb/22 kg units) equipped with either cable or chain.

Optional Z Stop location

Suspension lugs: *Fits all Ingersoll-Rand suspensions and most trolleys from other manufacturers.*

Rugged steel housing: *All steel housing for added durability*

Injection molded reel: *Engineered plastic for excellent durability and wear resistance.*



Anti-friction ball screw: *Creates smooth rotation path for the cable reel.*

Heavy-duty thrust bearing: *Absorbs piston force and transfers smooth reel rotation over the ball screw.*

Low-friction cable guide *(not shown): Ensures smooth cable feed on and off the reel.*

Air chamber and piston: *Forms the heart of the unit. Air entering the chamber pushes the piston to rotate the spool, wind the cable, and lift the load. Exhausting air lowers the load. Regulating this flow balances the load, creating a zero gravity float.*

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Control and Suspension Options

(BA) Single Balance Control: A Balancer equipped with the (BA) Single Balance control is an excellent alternative to traditional spring balancers.The balance range of a single capacity Balancer is equivalent to that of 10 different capacity spring balancers with the main difference being that the Balancer maintains constant tension throughout its full range of travel.

Suitable for:

- Tool Balancing
- Weld Gun Suspension
- Fixture Suspension

(ZA) Pendent Control: The (ZA) Pendent Control is designed for high speed precision handling of variable weight loads. Up/Down movement is accomplished through the use of an ergonomically designed pendent with low-effort, color-coded thumb levers. After positioning the load with the pendent control, the unit defaults into a balance float condition allowing the operator up to 18 inches (457.2 mm) of movement by pushing the cord up or down by hand.

(EA) Hi, Lo, Un Load Control: Balancers equipped with the (EA) control are designed to excel in high speed, constant weight, repetitive parts handling operations. The control positions are thumb actuated and are used to switch the unit to accommodate different load modes as required.

These are as follows:

HILOAD: Used to pick up or balance the maximum weight load.
LOLOAD: Used to balance, lower, and precisely position the load.
UNLOAD: Used to release and balance the empty hook.

Balancer with BA Z-Servo control

Balancer with ZA pendent control

Balancer with EA Hi load, Lo load, No load control

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Balancer with I-Beam/Patented Track trolley mount configuraton

Balancer with hook mount configuration

Balancer with enclosed rail trolley mount configuration

The 50 lb Tool Series

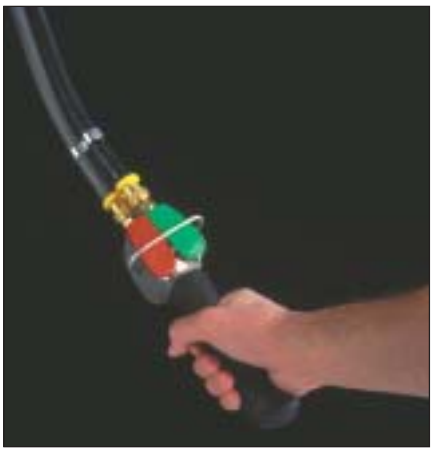
This air unit offers an incredible 2 to 50 pound (.9 to 22 kg) load capacity. A range our competitors achieve only with numerous models designed for individual load weight. Designed and manufactured in the United States, the 50 lb Balancer offers numerous other benefits over spring operated units, including our exclusive flotation feature.

Standard Features

Performance – Float action provides ease of vertical travel, eliminating tension on load making positioning capability far superior.
Versatility – No need to change model when making tool change; one model (BAW005060) covers entire 50 lb (22 kg) range.
Headroom – Requires only 20 inches (508 mm) from bottom of rail to bottom of hook.
Adjustment – Simple adjustment in seconds by means of external regulator.
Sequencing – Can be sequenced via air signal to perform timed or "stepped" operation.
Maintenance – Virtually maintenance-free. Normal maintenance can be done in place on the rail.
Installation – Requires air hookup (can be tied into tooling air supply).

EZ Grip Ergonomic Handle

Quality manufactured handle by Ingersoll-Rand, the world leader in ergonomically sound material handling equipment. Rugged, durable construction handle with three mounting options. The handle can be used as a pendent control, rigid mount. This handle can be used on most air actuated devices, including air hoists, and can be operated with or without gloves.



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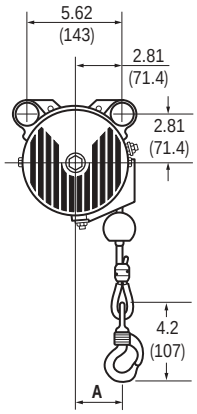
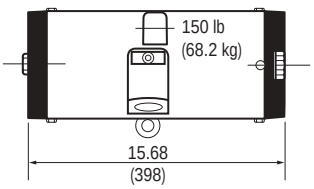
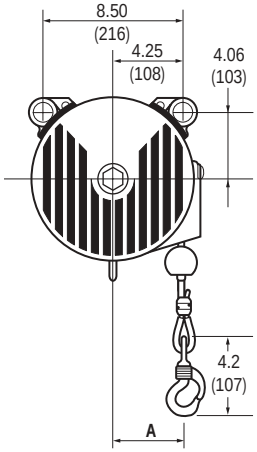
Dimensions

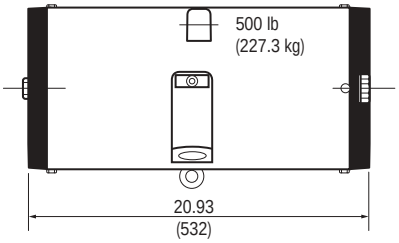
6.5 inch (165.1 mm) Diameter Can



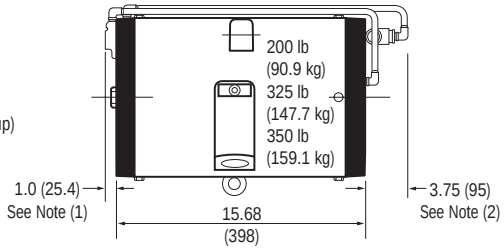


10 inch (254 mm) Diameter Can

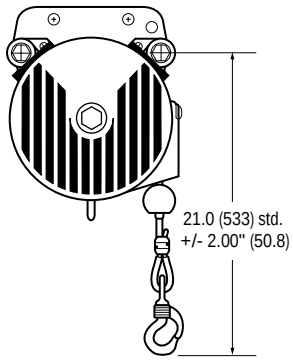




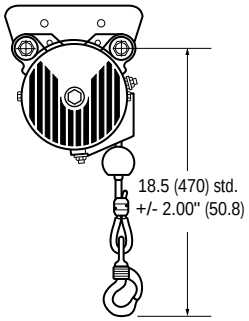
Note:
(1) 1 inch (25.4 mm) dimension for optional Z Stop only.
(2) 3.75 inch (95.25 mm) dimension for EA regulator/elbow fitting (largest stack-up)



200, 350 and 500 lb Balancer



150 lb Balancer



Note:
For all drawings, dimensions in ( ) are in mm

Dimensions

Load capacity		Type	"A" Dimensions	
lbs	kg		in.	mm
150	68	W	2.85	72.4
200	90	W	4.10	104.1
350	158	W	2.85	72.4
350	158	C	2.79	70.9
500	227	W	3.62	91.9
500	227	C	3.51	89.2

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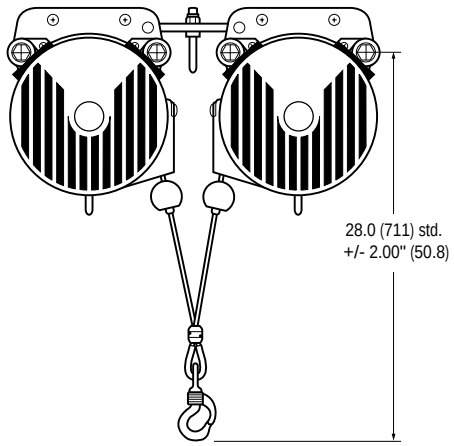
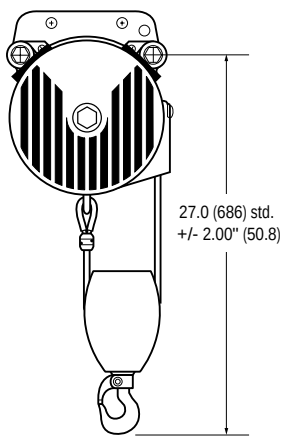
Dimensions

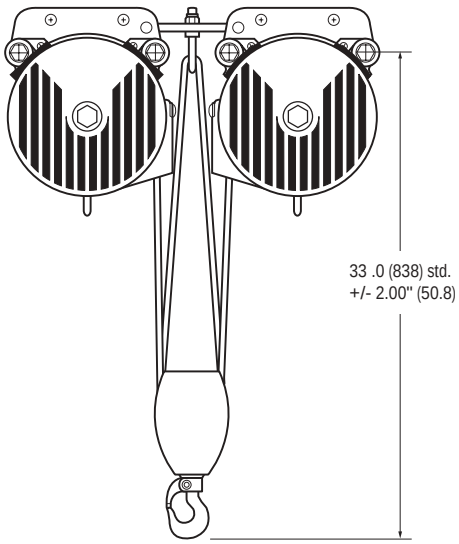
Tandem



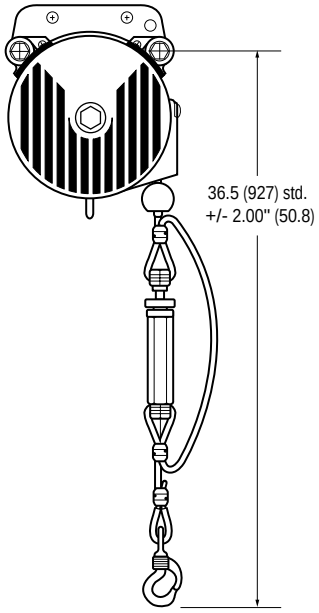
Reeved



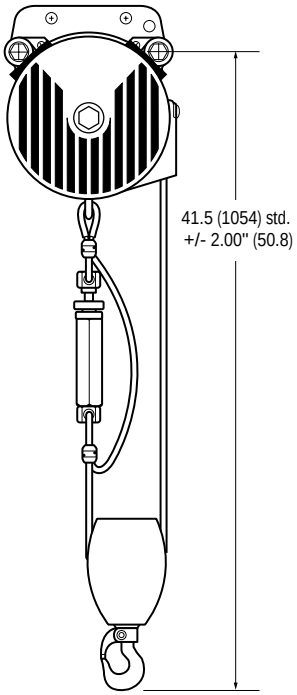
Tandem Reeved



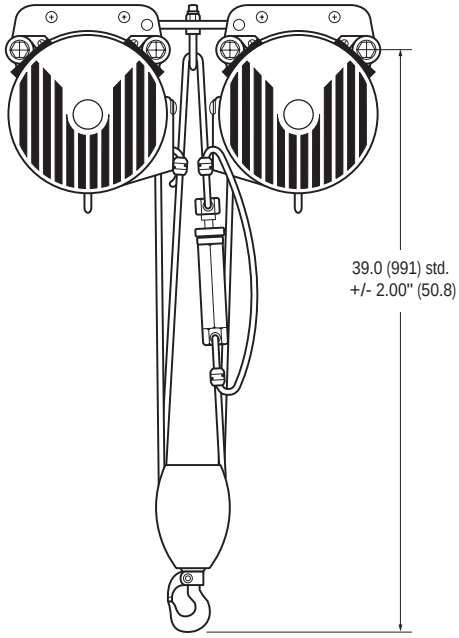
Single with Servo



Reeved with Servo



Tandem Reeved with Servo



Note:
For all drawings, dimensions in ( ) are in mm

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Ingersoll Rand

Specifications								
Model no.	Capacity		Vertical travel		Diameter of positioner		Net weight	
	lbs	kg	in.	mm	in.	mm	lbs	kg
Single Wire Rope Units								
BW005060[1]	50	22	60	1524	–	–	20	9
BW015080[1]	150	68	80	2032	6.5	165	50	23
BW020120	200	90	120	3048	10	254	62	28
BW032080[2]	325	147	80	2032	10	254	62	28
BW035080[1]	350	158	80	2032	10	254	62	28
BW050080	500	227	80	2032	10	254	110	50
Reeved Wire Rope Units								
BW040060	400	181	60	1524	10	254	67	30
BW065040[2]	650	294	40	1016	10	254	67	30
BW070040[1]	700	317	40	1016	10	254	67	30
BW100040	1000	453	40	1016	10	254	115	52
Tandem Wire Rope Units								
BW040120	400	181	120	3048	10	254	124	56
BW065080[2]	650	294	80	2032	10	254	124	56
BW070080[1]	700	317	80	2032	10	254	124	56
BW100080	1000	453	80	2032	10	254	220	100

(1) Not available with Z Stop option
(2) Only available with Z Stop option

Options		
Option code	Description	Part no.
S	Z-Stop, 300/350 lb Capacity	13301
S	Z-Stop, 500 lb Capacity	13321
Control Options code		
B	Basic–no controls	N/A
ZA	Pendant control	15300–12
BA	Single balance control–6.5" unit	15320
BA	Single balance control–10" unit	15330
EA	Hi, low, no load control	15310–12

Note:
ZA and EA control packages standard hose length 12'-0" (3.7 m).

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Suspension Options [1]				
Option code	Description	6.5”	10”	Competitor Product
00	No suspension	–	–	NA
S2	ZRS2 steel rail	16300	16400	NA
S3	ZRS3 steel rail	16300	16400	NA
HM	Hook mount	16360	16460	NA
TR	T-Rail / I-Beam	16320	16420	NA
AT	ZRAT aluminum rail	16355	16455	NA
A1	ZRA1 aluminum rail	16305	16405	NA
A2	ZRA2 aluminum rail	16310	16410	NA
E4	ETA-4 aluminum rail	16344	16444	Unified
E8	ETA-8 aluminum rail	16335	16435	Unified
K1	KBK1 steel rail	16325	16425	Demag
K2	KBK2 steel rail	16315	16415	Demag
G1	Gorbel 1000# Alum. Series Track	16307	16407	Gorbel
G2	Gorbel 1000# Steel Series Track	16307	16407	Gorbel
K3	4” Aluminum	16344	16444	Knight
K4	8” Aluminum	16345	16445	Knight
K5	8” Aluminum Anti Kick Back	16345	16445	Knight
K6	4” Steel	16325	16245	Knight
K7	6” Steel	16315	16415	Knight
K8	7” Steel	16315	16415	Knight

Note:
(1) Tandem units require two suspension kits.

How to order

Pneumatic Balancers Model Driver

Control *B*

B = Basic, no controls
ZA = Pendent control
BA = Single balance control
EA = Hi, Low, No load control

Type *W*

W = Wire Rope

Capacity *020*

Wire	lbs	kg
005[1] =	50	22
015[1] =	150	68
020 =	200	90
032[2] =	325	147
035[1] =	350	158
040 =	400	181
050 =	500	227
065[2] =	650	294
070[1] =	700	317
080 =	800	362
100 =	1000	453

Travel *120*

120 = 120 inches
Travel distance is determined by series and capacity, and is not a variable option.
See model no. in specifications chart.
Example: BW020120

Options *S*

S = Z-Stop

Suspension *S2*

00 = No suspension
S2 = ZRS2 steel rail
S3 = ZRS3 steel rail
HM = Hook mount
TR = T-Rail / I-Beam
AT = ZRAT aluminum rail
A1 = ZRA1 aluminum rail
A2 = ZRA2 aluminum rail
E4 = ETA-4 aluminum rail
E8 = ETA-8 aluminum rail
K1 = KBK1 steel rail
K2 = KBK2 steel rail
G1 = Gorbel 1000# Alum. Series Track
G2 = Gorbel 1000# Steel Series Track
K3 = 4” Aluminum
K4 = 8” Aluminum
K5 = 8” Aluminum Anti Kick Back
K6 = 4” Steel
K7 = 6” Steel
K8 = 7” Steel

Notes:
(1) Not available with Z-Stop option
(2) Only available with Z-Stop option