

# Zimmerman Series Pneumatic Balancers

## The Ingersoll Rand Pneumatic 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
- ▶ **Rugged reliability** — For continuous duty with minimal maintenance

### PLUS:

- ▶ **Low air consumption** — Approximately 1/8 cfm required per cycle (one fiftieth of that of an air hoist) means very low energy costs
- ▶ **Clean, oil-free operation** — Pre-lubricated design eliminates air line lubrication and oil mist exhaust; ideal for food processing and clean manufacturing environments

*Progress is greener with Ingersoll Rand*



**Z Stop:** The optional Z Stop is a patented 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.



## Safety is standard

- ▶ Built-in overload protection — The lifted load can never exceed the unit's maximum rated capacity
- ▶ Minimal cable recoil due to loss of load — If the load is accidentally lost, a centrifugal brake (Z brake) automatically stops rapid upward cable travel

## Versatile configuration

- ▶ Wide range of capacities up to 2,000 lbs (907 kg)
- ▶ Added protection — The optional Z Stop offers protection against the drifting of loads in the event the main air supply is lost
- ▶ Cable travel — 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



### Z Brake Safety Retraction System (Patent No. 5,522,581):

Standard on all units, 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 pressed in fully.

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

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

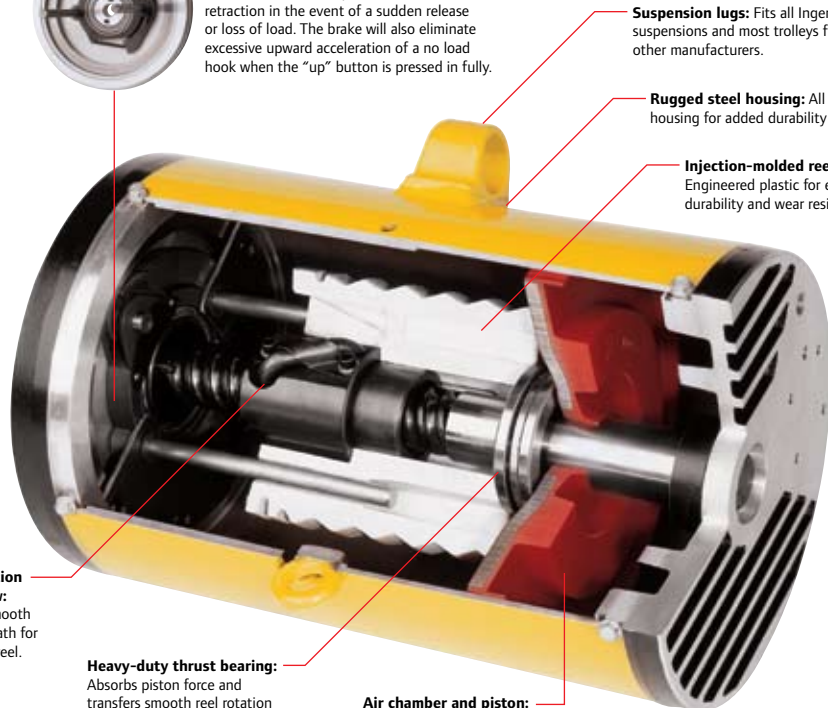
**Injection-molded reel:** Engineered plastic for excellent durability and wear resistance.

**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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50 to 2,000 lb (22 to 909 kg) capacity

## Control options:



**B**


**Basic unit, without control**

**Features:**

- ▶ Standard balancer features
- ▶ No control

**Suitable for:**

- ▶ Integration with end effector



**ZA**


**Balancer with pendant control**

**Features:**

- ▶ Ergonomic up / down pendant control
- ▶ High speed precise positioning
- ▶ 12 ft (3.7 m) standard hose length

**Suitable for:**

- ▶ Pick and place
- ▶ Precision assembly



**BA**


**Balancer with servo control**

**Features:**

- ▶ Single balance control for single load balancing
- ▶ Maintains constant tension through full range of motion

**Suitable for:**

- ▶ Tool balancing
- ▶ Weld gun suspension
- ▶ Fixture suspension



**EA**

**Balancer with high load, low load, no load control**

**Features:**

- ▶ Load balancing for 3 loads (high, low, no load)
- ▶ Pendant with rotary thumb switch to select load
- ▶ 12 ft (3.7 m) standard hose length

**Suitable for:**

- ▶ Multiple load balancing
- ▶ End effector balancing (loaded/unloaded)

<b>B</b>	<b>ZA</b>	<b>BA</b>	<b>EA</b>	<b>Capacity lb (kg)</b>	<b>Travel in (mm)</b>	<b>Net Weight lb (kg)</b>
<b>SINGLE WIRE ROPE</b>						
BW015080 <sup>1</sup>	ZAW015080 <sup>1</sup>	BAW015080 <sup>1</sup>	EAW015080 <sup>1</sup>	150 (68)	80" (2032)	50 (23)
BW020120	ZAW020120	BAW020120	EAW020120	200 (90)	120" (3048)	62 (28)
BW020120S <sup>2</sup>	ZAW020120S <sup>2</sup>	BAW020120S <sup>2</sup>	EAW020120S <sup>2</sup>	200 (90)	120" (3048)	62 (28)
BW032080S <sup>2</sup>	ZAW032080S <sup>2</sup>	BAW032080S <sup>2</sup>	EAW032080S <sup>2</sup>	325 (147)	80" (2032)	62 (28)
BW035080 <sup>1</sup>	ZAW035080 <sup>1</sup>	BAW035080 <sup>1</sup>	EAW035080 <sup>1</sup>	350 (158)	80" (2032)	62 (28)
BW050080	ZAW050080	BAW050080	EAW050080	500 (227)	80" (2032)	110 (50)
BW050080S <sup>2</sup>	ZAW050080S <sup>2</sup>	BAW050080S <sup>2</sup>	EAW050080S <sup>2</sup>	500 (227)	80" (2032)	110 (50)
<b>REEVED WIRE ROPE</b>						
BW040060	ZAW040060	BAW040060	EAW040060	400 (181)	60" (1524)	67 (30)
BW040060S <sup>2</sup>	ZAW040060S <sup>2</sup>	BAW040060S <sup>2</sup>	EAW040060S <sup>2</sup>	400 (181)	60" (1524)	67 (30)
BW065040S <sup>2</sup>	ZAW065040S <sup>2</sup>	BAW065040S <sup>2</sup>	EAW065040S <sup>2</sup>	650 (294)	40" (1016)	67 (30)
BW070040 <sup>1</sup>	ZAW070040 <sup>1</sup>	BAW070040 <sup>1</sup>	EAW070040 <sup>1</sup>	700 (317)	40" (1016)	67 (30)
BW100040	ZAW100040	BAW100040	EAW100040	1,000 (453)	40" (1016)	115 (52)
BW100040S <sup>2</sup>	ZAW100040S <sup>2</sup>	BAW100040S <sup>2</sup>	EAW100040S <sup>2</sup>	1,000 (453)	40" (1016)	115 (52)
<b>TANDEM WIRE ROPE</b>						
BW040120	ZAW040120	BAW040120	EAW040120	400 (181)	120" (3048)	124 (56)
BW040120S <sup>2</sup>	ZAW040120S <sup>2</sup>	BAW040120S <sup>2</sup>	EAW040120S <sup>2</sup>	400 (181)	120" (3048)	124 (56)
BW065080S <sup>2</sup>	ZAW065080S <sup>2</sup>	BAW065080S <sup>2</sup>	EAW065080S <sup>2</sup>	650 (294)	80" (2032)	124 (56)
BW070080 <sup>1</sup>	ZAW070080 <sup>1</sup>	BAW070080 <sup>1</sup>	EAW070080 <sup>1</sup>	700 (317)	80" (2032)	124 (56)
BW100080	ZAW100080	BAW100080	EAW100080	1,000 (453)	80" (2032)	220 (100)
BW100080S <sup>2</sup>	ZAW100080S <sup>2</sup>	BAW100080S <sup>2</sup>	EAW100080S <sup>2</sup>	1,000 (453)	80" (2032)	220 (100)
<b>TANDEM REEVED WIRE ROPE</b>						
BW080060	ZAW080060	BAW080060	EAW080060	800 (360)	60" (1524)	129 (59)
BW080060S <sup>2</sup>	ZAW080060S <sup>2</sup>	BAW080060S <sup>2</sup>	EAW080060S <sup>2</sup>	800 (360)	60" (1524)	129 (59)
BW130040S <sup>2</sup>	ZAW130040S <sup>2</sup>	BAW130040S <sup>2</sup>	EAW130040S <sup>2</sup>	1,300 (589)	40" (1016)	129 (59)
BW140040 <sup>1</sup>	ZAW140040 <sup>1</sup>	BAW140040 <sup>1</sup>	EAW140040 <sup>1</sup>	1,400 (620)	40" (1016)	129 (59)
BW200040	ZAW200040	BAW200040	EAW200040	2,000 (900)	40" (1016)	225 (102)
BW200040S <sup>2</sup>	ZAW200040S <sup>2</sup>	BAW200040S <sup>2</sup>	EAW200040S <sup>2</sup>	2,000 (900)	40" (1016)	225 (102)

### Selection Tips:

- ▶ Actual operating capacity is determined by available plant air pressure. Operating capacity decreases 1% for every 1 psi below 100 psi inlet air pressure. For example: at 50 psi, a 350 lb capacity balancer has a 175 lb operating capacity (350 X 50%)
- ▶ For lifting applications, working load should not exceed 80% of operating capacity
- ▶ Working load includes part weight and handling device weight

<sup>1</sup> Not available with Z-Stop safety device.

<sup>2</sup> Model delivered with Z-Stop as standard.

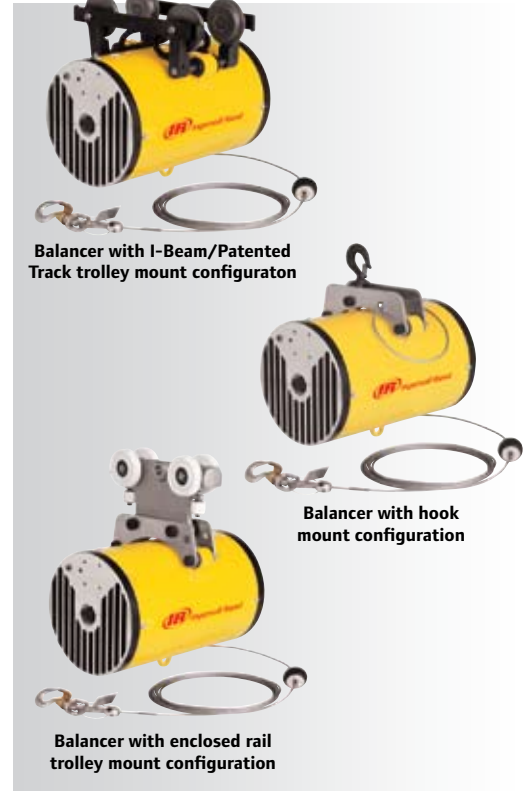
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50 to 2,000 lb (22 to 909 kg) capacity

Suspension options:

Option Code	Description	6.5" Dia. 150 lb Unit	10" Dia. >150 lb Units	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	16345	16445	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-kickback	16345	16445	Knight
K6	4" Steel	16325	16425*	Knight
K7	6" Steel	16315	16415	Knight
K8	7" Steel	16315	16415	Knight

Note:  
\* NOT compatible with tandem balancers



Example: BW020120SS2

### Pneumatic Balancers model driver

Control B	Type W	Capacity 020	Travel 120	Z-Stop Option S	Suspension Option S2
<b>B = Basic, no controls</b> ZA = Pendant control BA = Servo control EA = High, low, no load control	W = Wire rope	020 = 200 lb (91 kg) For available capacities, refer to model number tables	120 = 120 inches (3048 mm) For available travel, refer to model number tables	S = Z-stop	S2 = ZRS2 steel rail For available suspension options, refer to suspension option table

### Replacement part numbers

Z-Stop Option Code	Description	Part No.
S	Z-Stop, 200 lb capacity	13301
S	Z-Stop, 325 lb capacity	13311
S	Z-Stop, 500 lb capacity	13321
Control Options Code	Description	Part No.
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	High, low, no load control	15310-12

### EZ Grip Ergonomic Control Handle

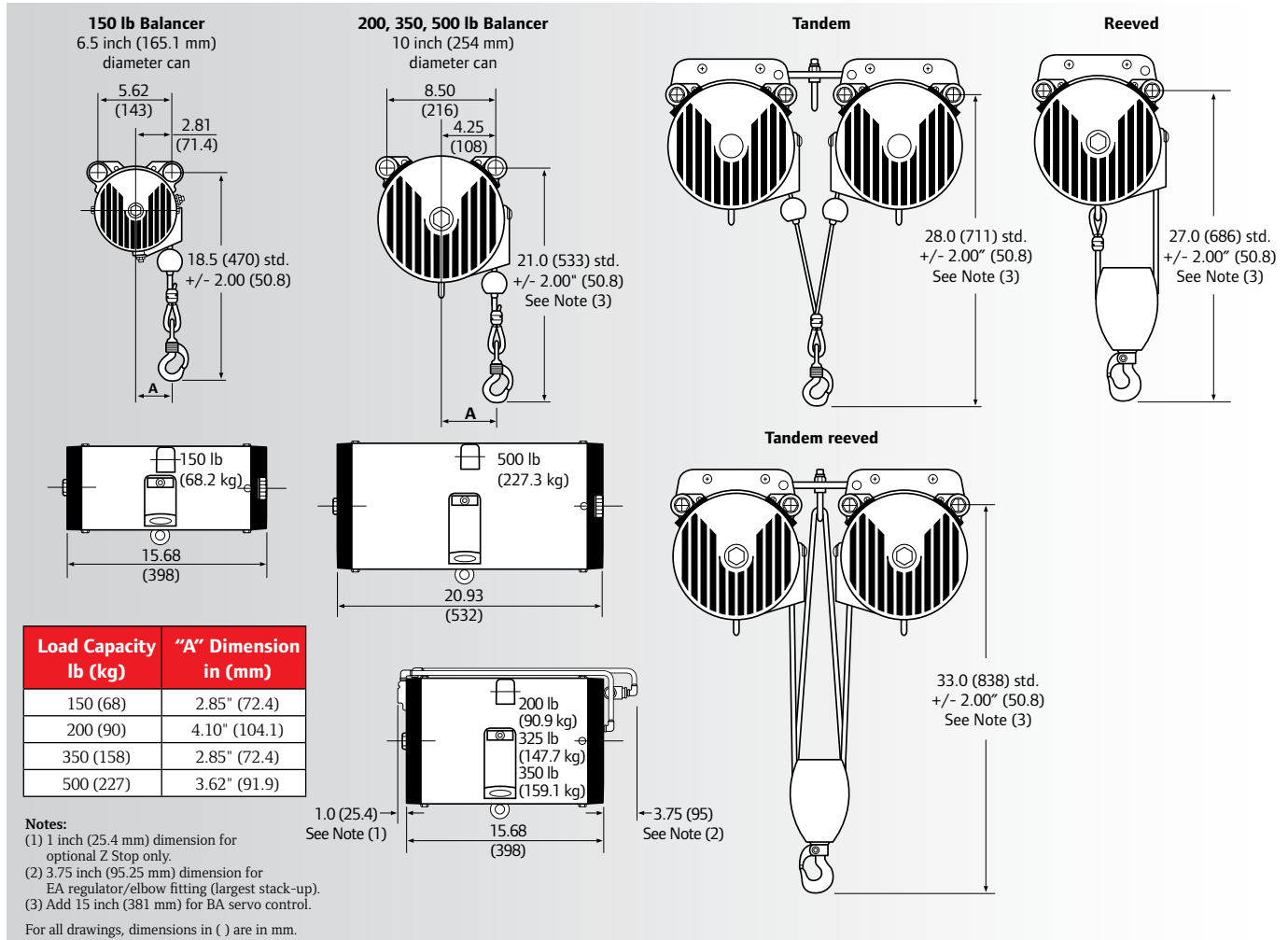
Quality handle manufactured by Ingersoll Rand, the world leader in ergonomically sound material handling equipment.



ZA Pendant Control (15300-12)

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## Dimensions:



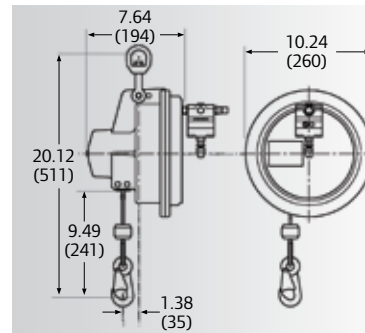
## Also available:

### BAW series tool balancer

This air unit offers an incredible 2 to 50 pound (0.9 to 22 kg) load capacity and 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



Part No.	Capacity lb (kg)	Travel in (mm)	Net Weight lb (kg)
<b>SINGLE WIRE ROPE</b>			
BAW005060	2 - 50 (0.9 - 22)	59" (1500)	19.8 (9)