

# Handling Devices

*Made for the interaction of man and machine*



## **Ingersoll Rand offers:**

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- ▶ Standard and custom solutions
- ▶ Manual and powered tilt and rotation packages
- ▶ Innovative designs from the simplest to the most complex device

# Zimmerman Series Handling Devices

## The Ingersoll Rand Handling Device **ADVANTAGE**

- ▶ **Safety** — Most Ingersoll Rand handling devices come equipped with a safety interlock system that will not allow the operator to accidentally disengage the part during transfer
- ▶ **Ergonomics** — Handling devices can be designed with manual or powered tilt and rotation packages, which allow the operator to orient the part to the proper position with minimal effort
- ▶ **Flexibility** — Through a variety of pneumatic packages, each system is matched to a control package that is tailored to the lifting and positioning task



## Standard 4-cup vacuum handling device:



- ▶ Safety Interlock prevents accidental release of load
- ▶ Improve productivity through effective box or flat part pickup, orientation, transfer, and positioning
- ▶ Adjustable handle and controls reduce operator fatigue
- ▶ Protects surface quality with positive secure vacuum gripping and setdown
- ▶ Gives operator complete control throughout the handling operation

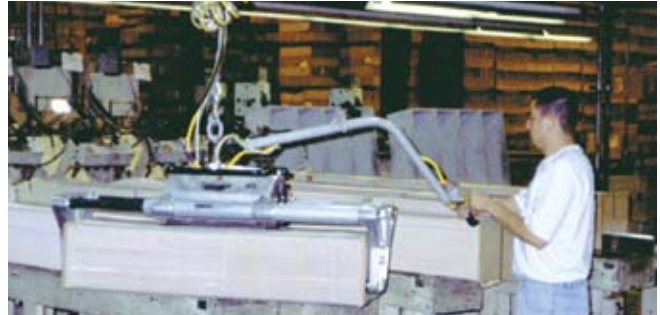
Part Number	Cup Centerline Dimensions	Lift Capacity		Cup Diameter
		Vacuum - in Hg	@ 100 psi	
87306338	5" x 7" (127 mm x 178 mm)	6 (porous)	45 lb (20.4 kg)	3" (76 mm)
		18	99 lb (44.9 kg)	3" (76 mm)
		25 (non-porous)	120 lb (54.4 kg)	3" (76 mm)
87306486	10" x 14" (254 mm X 356 mm)	6 (porous)	45 lb (20.4 kg)	3" (76 mm)
		18	99 lb (44.9 kg)	3" (76 mm)
		25 (non-porous)	120 lb (54.4 kg)	3" (76 mm)

To be used with "BW" series pneumatic balancers. Alternate layout and vacuum cup sizes available on request.  
**Note:** Vacuum cups require a flat, non-porous surface. Consult factory for applications with porous surfaces.

# Zimmerman Series Handling Devices

## Signature bundle handlers

- ▶ Designed to meet the needs of the printing industry in handling logs from 22" – 48" and up to 250 lb
- ▶ Single (10" stroke) and dual (30" stroke) air cylinders with 900 lb clamping force at 90 psi
- ▶ Safety interlock prevents accidental release of load
- ▶ Standard paddles for end boards up to 12" x 12" (extended paddle configurations available — contact factory)
- ▶ Power rotation and self-leveling packages available — contact factory for further information
- ▶ Lightweight aluminum construction



Single cylinder with top swivel handle control



Dual cylinder with top swivel handle control

Part No.	Body Style	Control	Bundle Size in (mm)	Stroke in (mm)
SBH1-1-1	Single cylinder	Single side control	24-32 (610-813)	10 (254)
SBH1-2-1	Single cylinder	Dual side control	24-32 (610-813)	10 (254)
SBH1-3-1	Single cylinder	End control	24-32 (610-813)	10 (254)
SBH1-4-1	Single cylinder	Side and end control	24-32 (610-813)	10 (254)
SBH1-5-1	Single cylinder	Top swivel handle control	24-32 (610-813)	10 (254)
SBH1-1-2	Single cylinder	Single side control	32-40 (813-1016)	10 (254)
SBH1-2-2	Single cylinder	Dual side control	32-40 (813-1016)	10 (254)
SBH1-3-2	Single cylinder	End control	32-40 (813-1016)	10 (254)
SBH1-4-2	Single cylinder	Side and end control	32-40 (813-1016)	10 (254)
SBH1-5-2	Single cylinder	Top swivel handle control	32-40 (813-1016)	10 (254)
SBH1-1-3	Single cylinder	Single side control	40-48 (1016-1219)	10 (254)
SBH1-2-3	Single cylinder	Dual side control	40-48 (1016-1219)	10 (254)
SBH1-3-3	Single cylinder	End control	40-48 (1016-1219)	10 (254)
SBH1-4-3	Single cylinder	Side and end control	40-48 (1016-1219)	10 (254)
SBH1-5-3	Single cylinder	Top swivel handle control	40-48 (1016-1219)	10 (254)

Consult factory for applications that require greater than 10" stroke, dual cylinder available.



Dual cylinder with side control



# Zimmerman Series Handling Devices

## Rotary action handlers

- ▶ Provides effortless 90-degree manual rotation of rolls up to 300 lb
- ▶ Non-destructive rubber band style as well as pin style noses engage the ID of the core
- ▶ Safety interlock prevents accidental release of load
- ▶ Offered in both lightweight aluminum and rugged steel construction
- ▶ Integrated up/down controls work seamlessly with Ingersoll Rand Pneumatic Balancer



Effortless horizontal to vertical rotation

### Body selection chart

Body Material	Capacity lb (kg)	Max Core Length in (mm)	Max Core O.D. in (mm)
Aluminum	100 (45.4)	12 (305)	30 (762)
Steel	300 (136.1)	24 (310)	42 (1067)

### Nose selection chart

Nose Style	Capacity lb (kg)
3 Pin	100 (45.4)
6 Pin	300 (136.1)
Single band	200 (90.7)
Double band	300 (136.1)



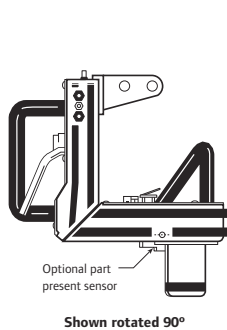
Band nose



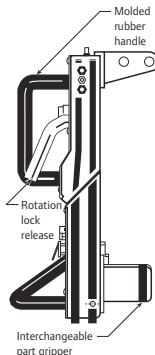
Pin nose



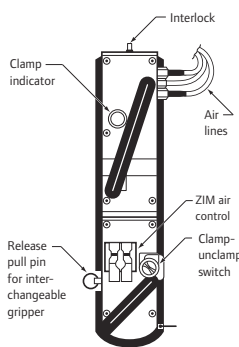
Custom power tilt



Shown rotated 90°



Wide variety of interchangeable part grippers available



Rotates and locks 90° right and left

### Other options available upon request:

- ▶ Stepped nose for multiple cores
- ▶ "V" groove for pin cart applications
- ▶ Special paint / plating
- ▶ Spindle end locator
- ▶ Adjustable bail
- ▶ Heavy duty pivot for steel rotary action handler offers capacity up to 450 lb



Stepped nose

Example: RAHA020030TP

### Rotary Action Handler model driver

Device Type RAH	Body Material A	Core ID 020	Core Length 030	Nose Style T	Options P
RAH = Rotary Action Handler	A = Aluminum S = Steel	020 = 2" 075 = 75 mm 030 = 3" 094 = 94 mm 040 = 4" 110 = 110 mm 050 = 5" 140 = 140 mm 060 = 6" 143 = 143 mm 080 = 8"	030 = 3" 070 = 7" 035 = 3.5" 075 = 7.5" 040 = 4" 080 = 8" 045 = 4.5" XXX = Length 050 = 5" 12" Max for aluminum 055 = 5.5" 24" Max for steel 060 = 6" 065 = 6.5"	T = 3 Pin S = 6 Pin B = Single band D = Double band	P = Part present C = Side clamp (available only w/ steel body) I = Interchangeable nose w/ quick-release pins
To be used with "BW" series Pneumatic Balancers. Consult factory for applications with rolls prone to telescoping.					

# Zimmerman Series Handling Devices

## Custom devices

Ingersoll Rand is a world leader in the manufacture of ergonomic, in-process, manual and powered custom material handling systems. We offer a complete range of handling devices, from the simplest to the most complex custom device. We specialize in providing turnkey solutions utilizing our complete line of standard and custom products to create a combination that empowers individuals to work more comfortably and effectively.



Motor vehicle



Agricultural equipment



Furniture / household

### CLAMP



Cheese — food processing

### HOOK / TRAP



Gaming table

### VACUUM



Box — general industry

### PROBE



Steel roll



Box — general industry



Beverage handling



Toilet tank



Ceramic steel funnel



Floor scrubber



Vehicle transmission



Glass



HVAC — copper coil

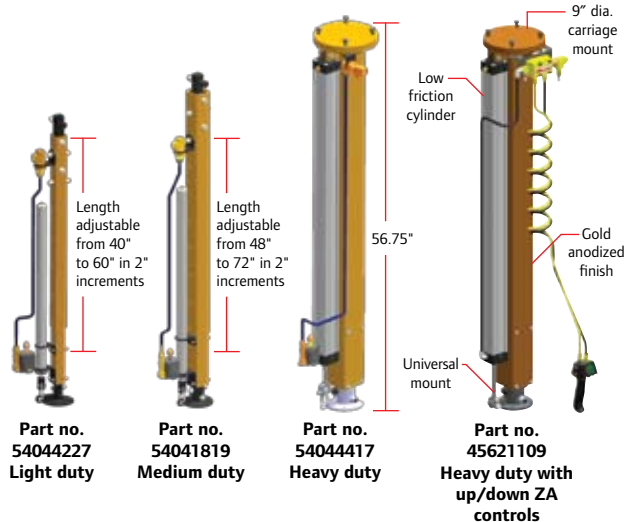
Contact factory for thousands more application photos and videos. E-mail requests to [asbu\\_proposal@irco.com](mailto:asbu_proposal@irco.com).

# Zimmerman Series Torque Tubes

## The Ingersoll Rand Torque Tube

### ADVANTAGE

- ▶ **Guided lifting** — Cylinder guides up/down motion, preventing load from swinging
- ▶ **Effortless vertical travel** — Super linear bearings provide smooth, effortless motion
- ▶ **Versatility** — Four models available for both torque reaction and lifting applications
- ▶ **Torque reaction** — 4 Delrin® wheels for torque reaction and side loading in all four directions
- ▶ **Adaptable** — Universal mounting plate for bolt-on integration of tool holders and handling devices



Torque tube with integrated vacuum handling device

## Torque tube models

Part No.	Description	Torque Capacity ft-lbs (Nm)	Lift Capacity		Weight lb (kg)	Travel in (mm)	Control
			lbs @ 100 psi	kg @ 7 kg/cm <sup>2</sup>			
54044227	IRZ-TT-100	74 (100)	60	27	40 (18)	20 (508)	BA regulator
54041819	IRZ-TT-250	184 (250)	60	27	50 (23)	24 (610)	BA regulator
54044417 <sup>1</sup>	IRZ-TT-500	368 (500)	100	45	75 (34)	36 (914)	BA regulator
45621109 <sup>1,2</sup>	IRZ-ZA-500	368 (500)	150	68	80 (36)	36 (914)	ZA Up/Down

## Optional cylinder air supply

Part No.	Description
90050	Cylinder air supply package

Includes regulator assembly and all required hose fittings to supply cylinder.

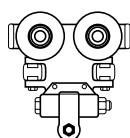
<sup>1</sup> Carriage mount option only.  
<sup>2</sup> Accommodates offset loads to 24" (609 mm). Consult factory for special applications.

## Suspension options:

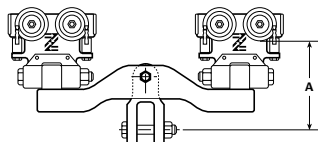
### Suspension kits – single and dual trolleys

Rail Profile	Part No.	"A" Dimension in (mm)	Weight lb (kg)
<b>SINGLE TROLLEY – USE FOR 80 NM OR LESS APPLICATIONS</b>			
ZRA2	16610	4.75 (120)	4.50 (2)
ZRAS2/3	16600	4.75 (120)	4.50 (2)
KBK-II/III	16615	4.75 (120)	4.50 (2)
ETA-8	16635	4.75 (120)	4.50 (2)
T-Rail	16620	3 (76.2)	15 (6.8)
<b>DUAL TROLLEY – UP TO 150 NM APPLICATIONS</b>			
ZRAT	16755	6.48 (165.0)	10.50 (4.76)
ZRA1	16705	6.13 (156.0)	10.50 (4.76)
ZRA2	16710	6.76 (172.0)	10.50 (4.76)
ZRAS2/3	16700	6.76 (172.0)	10.50 (4.76)
KBK-I	16725	6.13 (156.0)	10.50 (4.76)
KBK-II/III	16715	6.76 (172.0)	10.50 (4.76)
ETA-4	16744	6.13 (156.0)	10.50 (4.76)
ETA-8	16735	6.76 (172.0)	10.50 (4.76)

Note: For use on torque tube part no. 54044227 and 54041819.



Suspension kit, Single trolley  
Use for 80 Nm or less

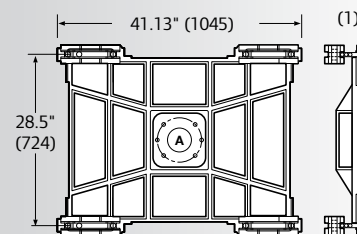


Suspension kit, Dual trolley  
Use for 150 Nm or less

## Carriages

Description	Part No.
Carriage — basic, no trolleys	40710
Carriage assembly — T-rail / I-beam	40709
Carriage assembly — ZRA2 (reaction trolley)	30028-1
Carriage assembly — ZRS2 / ZRS3	30028-2
Carriage assembly — ZRA1	30028-3
Carriage assembly — ETA-8 (reaction trolley)	30028-4
Carriage assembly — KBK2	30028-5

Note: For use on part no. 54044417 and 45621109  
 Lightweight ALMAG casting. Basic carriage weighs 60.0 lb (27.3 kg)  
 Each carriage ass'y drawing has info for both high and low profile assemblies.



A = 1/2" bolts (6), Holes on a 7.5" bolt circle as shown  
 9/16 drill thru on a 7.5" bolt circle.

Standard tool holders available.  
 Refer to assembly catalog: IRPS-1007-052