

Handling Devices

Made for the interaction of man and machine



Ingersoll Rand offers:

- ▶ 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

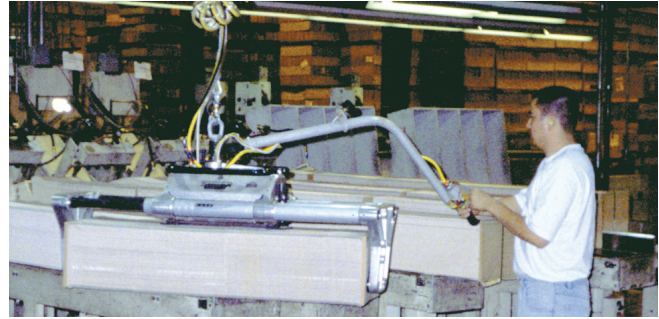
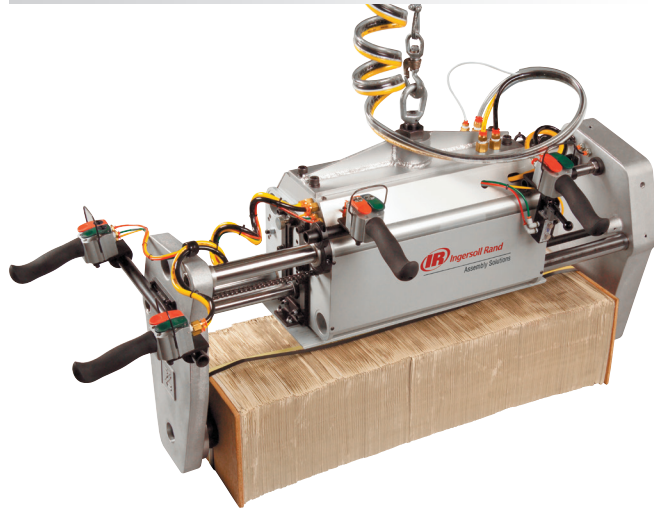
Part Number	Cup Centerline Dimensions	Lift Capacity		Cup Diameter
		Vacuum - in Hg	@ 100 psi	
87306338	5" x 7" (127 mm x 178 mm)	6 (porous)	45 lb (20.4 kg)	3" (76 mm)
		18	99 lb (44.9 kg)	3" (76 mm)
		25 (non-porous)	120 lb (54.4 kg)	3" (76 mm)
87306486	10" x 14" (254 mm X 356 mm)	6 (porous)	45 lb (20.4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



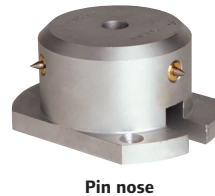
Effortless horizontal to vertical rotation

Body selection chart

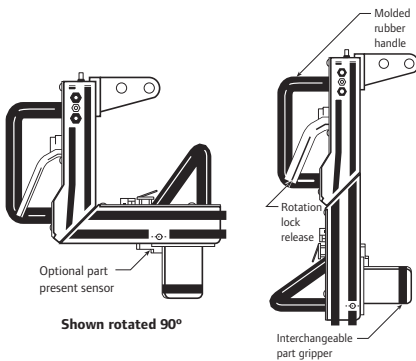
Body Material	Capacity lb (kg)	Max Core Length in (mm)	Max Core O.D. in (mm)
Aluminum	100 (45.4)	12 (305)	30 (762)
Steel	300 (136.1)	24 (310)	42 (1067)

Nose selection chart

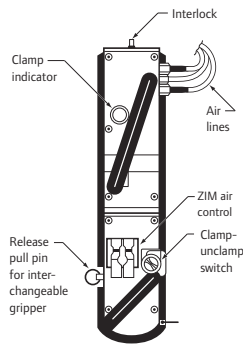
Nose Style	Capacity lb (kg)
3 Pin	100 (45.4)
6 Pin	300 (136.1)
Single band	200 (90.7)
Double band	300 (136.1)



Custom power tilt



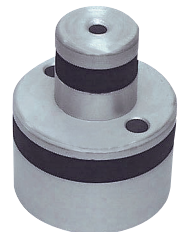
Wide variety of interchangeable part grippers available



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

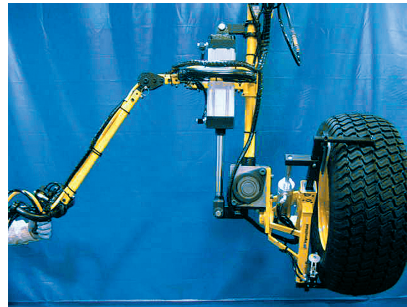
Zimmerman Series Handling Devices

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

<p>CLAMP</p> <p>Cheese — food processing</p>	<p>HOOK / TRAP</p> <p>Gaming table</p>	<p>VACUUM</p> <p>Box — general industry</p>	<p>PROBE</p> <p>Steel roll</p>
<p>Box — general industry</p>	<p>Beverage handling</p>	<p>Toilet tank</p>	<p>Ceramic steel funnel</p>
<p>Floor scrubber</p>	<p>Vehicle transmission</p>	<p>Glass</p>	<p>HVAC — copper coil</p>

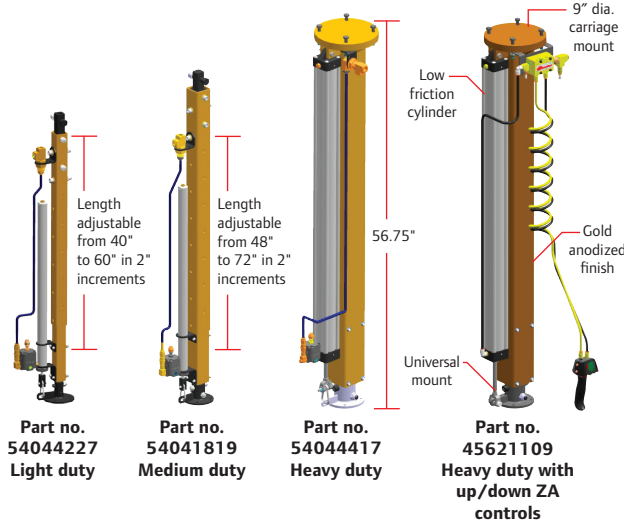
Contact factory for thousands more application photos and videos. E-mail requests to asbu_proposal@irco.com.

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 ²			
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 ¹	IRZ-TT-500	368 (500)	100	45	75 (34)	36 (914)	BA regulator
45621109 ^{1,2}	IRZ-ZA-500	368 (500)	150	68	80 (36)	36 (914)	ZA Up/Down

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

Optional cylinder air supply

Part No.	Description
90050	Cylinder air supply package

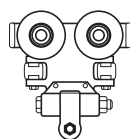
Includes regulator assembly and all required hose fittings to supply cylinder.

Suspension options:

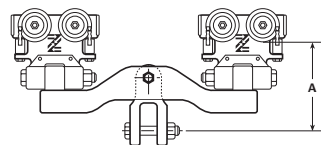
Suspension kits – single and dual trolleys

Rail Profile	Part No.	"A" Dimension in (mm)	Weight lb (kg)
SINGLE TROLLEY – USE FOR 80 NM OR LESS APPLICATIONS			
ZRA2	16610	4.75 (120)	4.50 (2)
ZRAS2/3	16600	4.75 (120)	4.50 (2)
KBK-II/IIL	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)
DUAL TROLLEY – UP TO 150 NM APPLICATIONS			
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/IIL	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

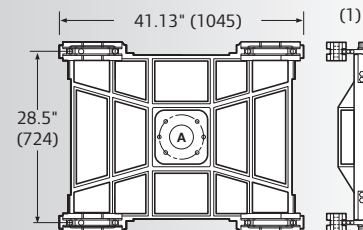


Suspension kit, Dual trolley
Use for 150 Nm or less

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