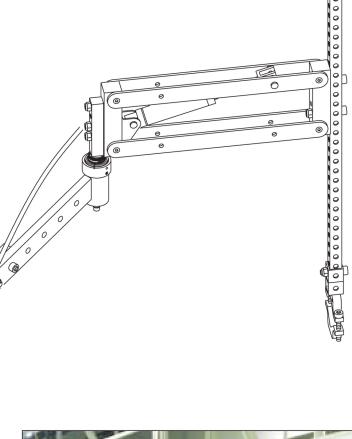
EZ Tool Articulating Arm



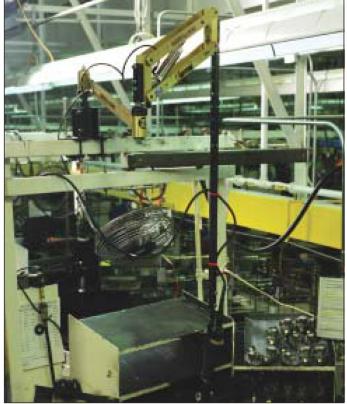
EZ tool arm features:

- Covers a 610 x 762 mm (24 x 30 inch) horizontal rectangular work envelope.
- Two piece arm with overall length adjustable from 864 to 1067 mm (34 to 42 inches).
- Anodized aluminum construction.
- · Mounting plates attach vertically or horizontally.
- First portion of the arm consists of two adjustable sections connected to the mounting plate by a 360 degree pivot.
- Second, outer portion of the arm is a dual parallel arm design that allows for 500 mm (20 inches) of vertical travel, and is connected to the first portion by a 360 degree pivot.



Additional features:

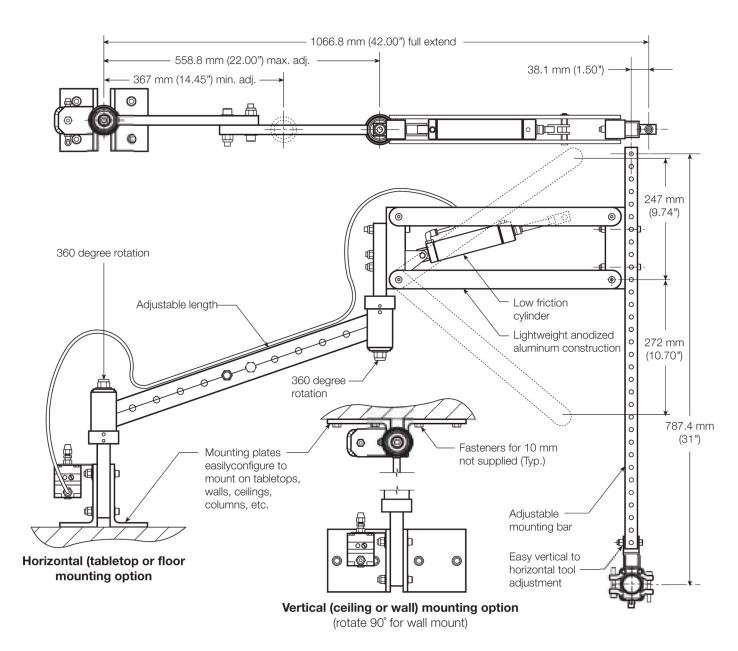
- Each pivot contains roller bearings for smooth operation and an adjustable pivot spring to return the arm to a "home" position.
- Capacity is 13.6 kg (30 lb) at 7 bar (100 psi).
- Pneumatics control system consists of a single precision pneumatic regulator to allow balance of the end of the arm Maximum torque reaction is 80 Nm (60 ft/lb).
- Fixed tool holder to handle tool diameter from 13 to 63.5 mm (.50 to 2.5 inches) is adjustable for vertical or horizontal tool orientation.



EZ Tool Arm in an assembly process

EZ Tool Articulating Arm Specifications





EZ tool arm model number EZTA080500 illustrated



| | Tool Holders |
|----------|--|
| Part no. | Description |
| 54033162 | Bi-Directional tilt / Push to start tool |
| 54033196 | Single-Directional tilt tool holder |

| | EZ Tool Arm |
|------------|---|
| Part no. | Description |
| EZTA080500 | Light weight torque arm with tool holder |
| 43146000 | Light weight articulating arm without tool holder |



Just as the name indicates, the new Ingersoll-Rand E-Z Torque® has taken the struggle out of using hand-held torque tools.

The lightweight E-Z Torque has been coupled with our 50 pound Balancer to provide the most innovative power tool assist system available today. Ease of operation eliminates operator fatigue problems, fights carpal tunnel syndrome and brings added safety to the workstation. E-Z Torque has been engineered to absorb the pounding reaction of air-powered or electric-driven torque tools. Constructed of cast aluminum and steel with ball bearing rollers and a 48 inch (1219.2 mm) vertical travel, the E-Z Torque eliminates spring pull back and maintains tool position with no problem.

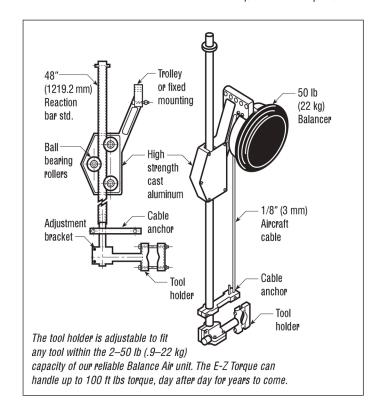
Features:

- Lightweight torque tool assist
- Ease of operation
- · Reduces operator fatigue
- · Aluminum and steel construction
- Adjustable to fit any tool

| | E-Z Torque |
|-------------------|-------------------------|
| Part no. complete | Application |
| EZTQ5060 | EZ Torque Tool Balancer |
| Suspension Kits | |
| 16520 | ZRA1 rail |
| 16525 | ZRA2 rail |
| 16530 | ZRS2/3 rail |



E-Z Torque shown with optional tool



Ergonomic Torque Reaction Products

Torque Tube



Ingersoll-Rand is proud to introduce the world's first IRZ Series of Best-In-Class Ergonomic Torque Tube Products. The new IRZ series of products relieve the operator of tool weight and torque reaction, resulting in increased work place productivity. These products are designed to prevent the long-term damaging effects of torque reaction on the human body, resulting in lower workers compensation and health care costs.

The new IRZ Series Torque Tubes allow tools to be lifted, lowered, moved and brought into optimum working position with minimal force required by the operator. Whether the products are used alone or integrated into a larger "turnkey" system, the smooth and effortless vertical motion will be the perfect solution for assembly applications. The availability of various sizes and the modularity of design provides System Integrators and Tool Builders the flexibility they need, to offer assembly solutions to customers.

Torque Tube Features

- Available in 3 torque capacities: 100 Nm, 250 Nm, and 500 Nm
- · Modular worldwide metric design
- Super linear bearings for effortless vertical travel and maintenance free operation
- 60 lb, 60 lb and 400 lb capacities
- 4 Delrin wheels for torque reaction and side loading in all four directions
- Adjustable lengths (every 2 inches/ 50.8 mm) to eliminate the need for extension tubes
- · All bolt on assemblies (Tool Holders and Suspension)
- · Lightweight construction

9" Dia. carriage mount Gold Universal 1.25" square mount Anodized **Aluminum** Self Zinc plated locking 0 hardware 0 0 Lenath Travel High adjustable Length flow from 48" to adjustable regulator 72" in 2" from 40" to increments 60" in 2' increments Low friction cylinder 11/32 Drill thru 11/32 Drill thru Typ. (4) holes Typ. (4) holes Part No. Part No. Part No. 54044417 54041819 54044227

Tool Holder Features

- Tool holder clamp is 316 stainless steel construction designed to minimize tool damage
- Accepts tools of 19 mm to 63 mm/.75 to 2.5 in. diameter
- Switches easily from horizontal to vertical orientation

360 degree tool holder features:

- Generous 66.8 mm/2.63 in. opening insures that tool head does not have to be removed for quick changes
- · Bronze bushing provides easy rotation and durability
- Rotates freely through 360 degrees or locks at 45 degree increments with indexing plunger

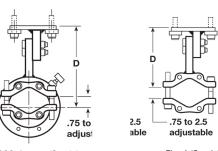
Fixed tool holder

- Fixed tool holder accepts tools of 13 to 63 mm (.50 to 2.5 inch) diameter
- · Tool holder easily changes from horizontal to vertical
- · Custom tool holders available

Tool Holders for IRZ-TT-100 and IRZ-TT-250

| Part | | Description | "D" Dimension | | Weight | |
|------|-------|--------------------------------|---------------|-------|--------|------|
| | No. | | in. | mm | lbs | kg |
| | 52000 | Fixed (2 axis) horiz./vertical | 4.82 | 122 | 2.30 | .90 |
| | 52100 | 360 degree (3 axis) swivel | 5.38 | 136.7 | 5.00 | 2.27 |

Note: IRZ-TT-500 requires custom tool holder



360 degree (3 axis) swivel tool holder

Fixed (2 axis) Horizontal/vertical tool holder



Torque Tube

| Part | | Torque C | apacity | Lift C | apacity | We | ight | Tra | avel |
|-------------------------|-------------|----------|---------|---------------|----------------|-----|------|-----|------|
| No. | Description | ft-lbs | Nm | lbs @ 100 psi | lbs @ 7 kg/cm² | lbs | kg | in. | mm |
| 54044227 | IRZ-TT-100 | 74 | 100 | 60 | 27 | 40 | 18 | 20 | 508 |
| 54041819 | IRZ-TT-250 | 184 | 250 | 60 | 27 | 50 | 23 | 24 | 610 |
| 54044417 ^{1,2} | IRZ-TT-500 | 368 | 500 | 400 | 182 | 75 | 75 | 36 | 914 |

Air cylinder and regulator are included in these part numbers.

- (1) Carriage mount option only.
- (2) Custom tool holder required contact factory.





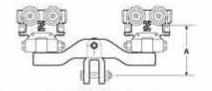
Suspension Kits - Single and Dual Trolleys

| Model No. | Part | "A" Dir | mension | Wei | ght |
|---------------------|--------------------|--------------|---------|-------|------|
| Dual Trolley | ⁽¹⁾ No. | in. | mm | lbs | kg |
| Single – Use | for 80nm or | less applica | tions | | |
| 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 | 5.8 |
| Dual - Up to | 150nm appli | cations | | | |
| 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 |
| Gorbel | 16707 | 6.13 | 156.0 | 10.50 | 4.76 |

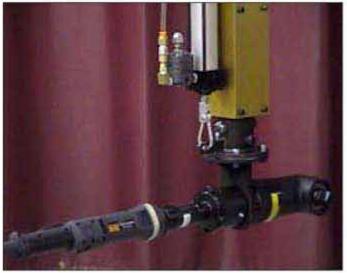
Note: For use on torque tube part no. 54044227 and 54041819.



Suspension kit, Single trolley Use for 80nm or less



Suspension kit, Dual trolley Use for 150nm or less



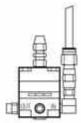
Cylinder Air Supply

| Part No. | Description |
|----------|-----------------------------|
| 90050 | Cylinder air supply package |

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



| Part | Vertical Travel | | |
|----------|-----------------|-----|--|
| No. | in. | mm | |
| 54044342 | 20 | 508 | |
| 54041751 | -24 | 610 | |
| 54044516 | 36 | 914 | |

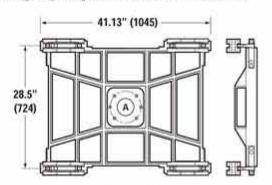


Carriages

| ** | Description | Part No. |
|----|--|----------|
| NT | Carriage-Basic, no trolleys | 40710 |
| TR | Carriage Assembly - T-Rail / I-Beam | 40709 |
| A2 | Carriage Assembly - ZRA2 (reaction trolley) | 30028-1 |
| S2 | Carriage Assembly - ZRS2 / ZRS3 | 30028-2 |
| A3 | Carriage Assembly - ZRA1 | 30028-3 |
| E8 | Carriage Assembly - ETA-8 (reaction trolley) | 30028-4 |
| K2 | Carriage Assembly - KBK2 | 30028-5 |

Note: For use on part no: 54044417

Lightweight ALMAG casting. Basic carriage weighs 60.0 lbs (27,3 kg) Each Carriage Ass y drawing has info for both Hi & 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.

 $B = 27.25^{\circ}$

C = 37.5''



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