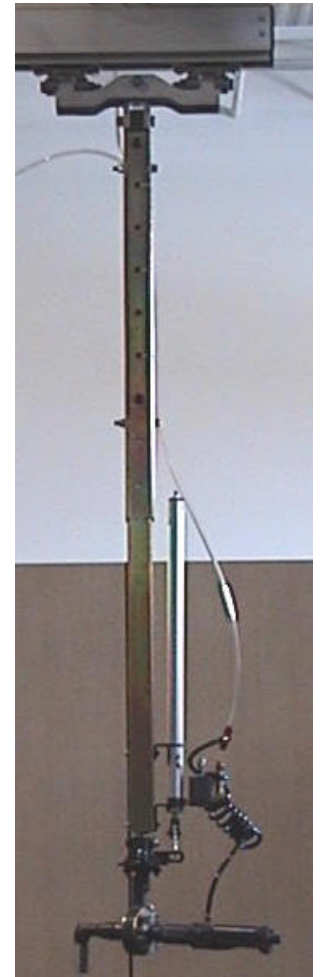
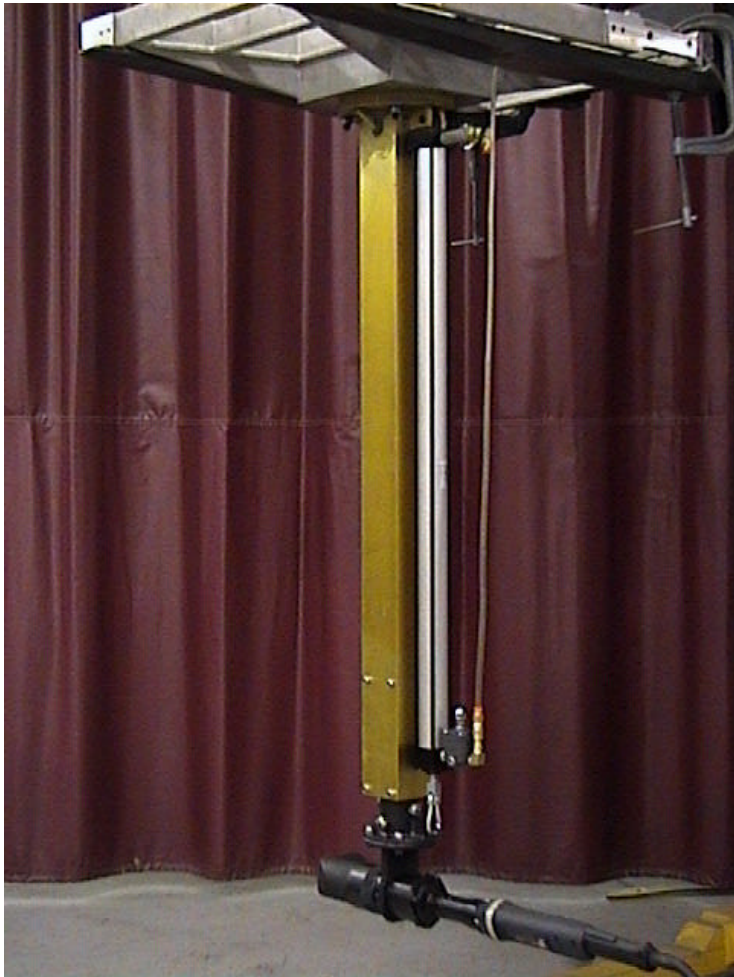


Torque Tubes



Torque Tubes

Description of Operation

The torque tube is an integrated group of components designed to maximize the interaction of man and machine.

Ease of operation minimizes operator fatigue and incorporates added safety during the performance of repetitive tasks.

The torque tube is assembled at the factory for ease of installation.

Torque Tubes

Principle of Operation

The torque tube is designed to allow vertical and/ or horizontal operational control within a specific range of motion.

During travel ensure the tool path is clear and pay attention to the direction of travel during movement.

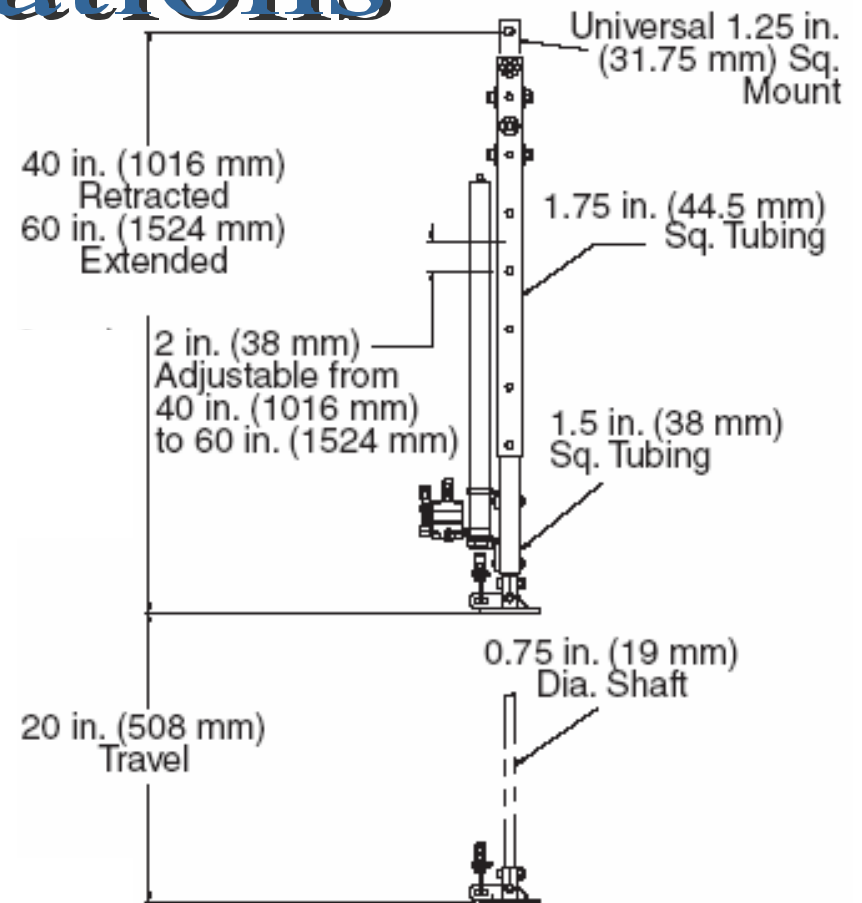
Vertical raising and lowering of the tool should be easily accomplished by exerting force on the tool.

Use the tool to move and raise or lower the torque tube.

Torque Tubes

Specifications

Model	IRZ-TT100
Maximum Torque	100Nm (74 ft. lb.)
Maximum Tool Weight	27Kg (60 lb.)
Vertical Travel	508mm (20 in.)
Minimum Dimension	1016mm (40 in.)
Maximum Dimension	1524mm (60 in.)
Adjustment	38mm (2 in.) increments
Torque Tube Weight	18Kg (40lb.)
Mounting Options	Single/ Dual Trolley

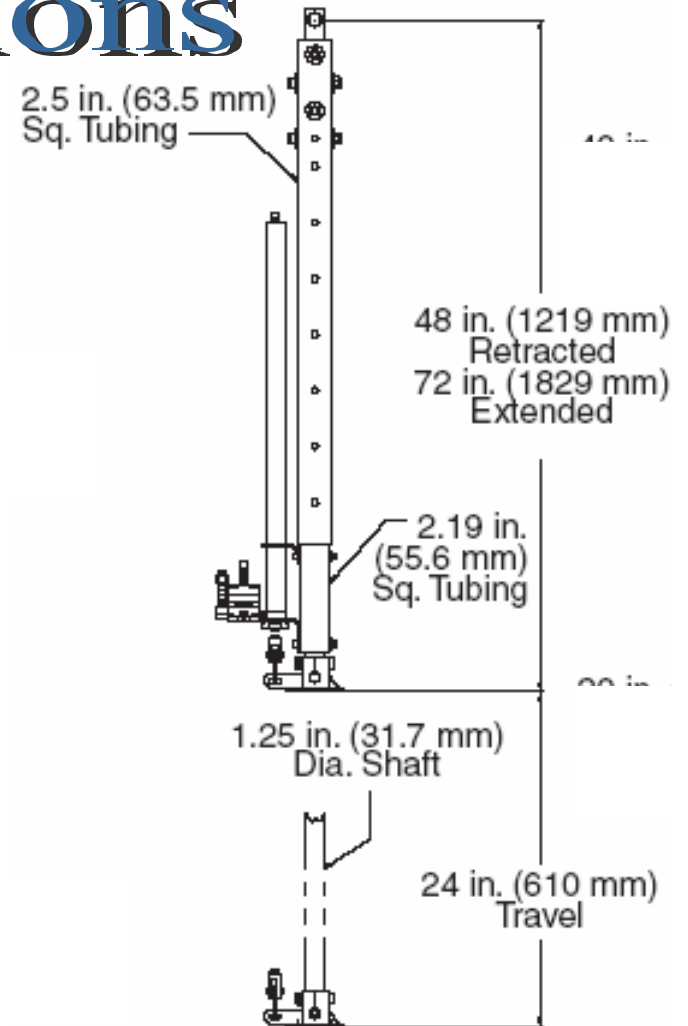


Model IRZ-TT-100
0 - 100 Nm

Torque Tubes

Specifications

Model	IRZ-TT250
Maximum Torque	250Nm (184 ft. lb.)
Maximum Tool Weight	27Kg (60 lb.)
Vertical Travel	609.5mm (24 in.)
Minimum Dimension	1219mm (48 in.)
Maximum Dimension	1829mm (72 in.)
Adjustment	38mm (2 in.) increments
Torque Tube Weight	23Kg (50lb.)
Mounting Options	Single/ Dual Trolley



Torque Tubes

Specifications

Model **IRZ-TT500**

Maximum Torque **500Nm (368 ft. lb.)**

Maximum Tool Weight **182Kg (400 lb.)**

Vertical Travel **914.5mm (36 in.)**

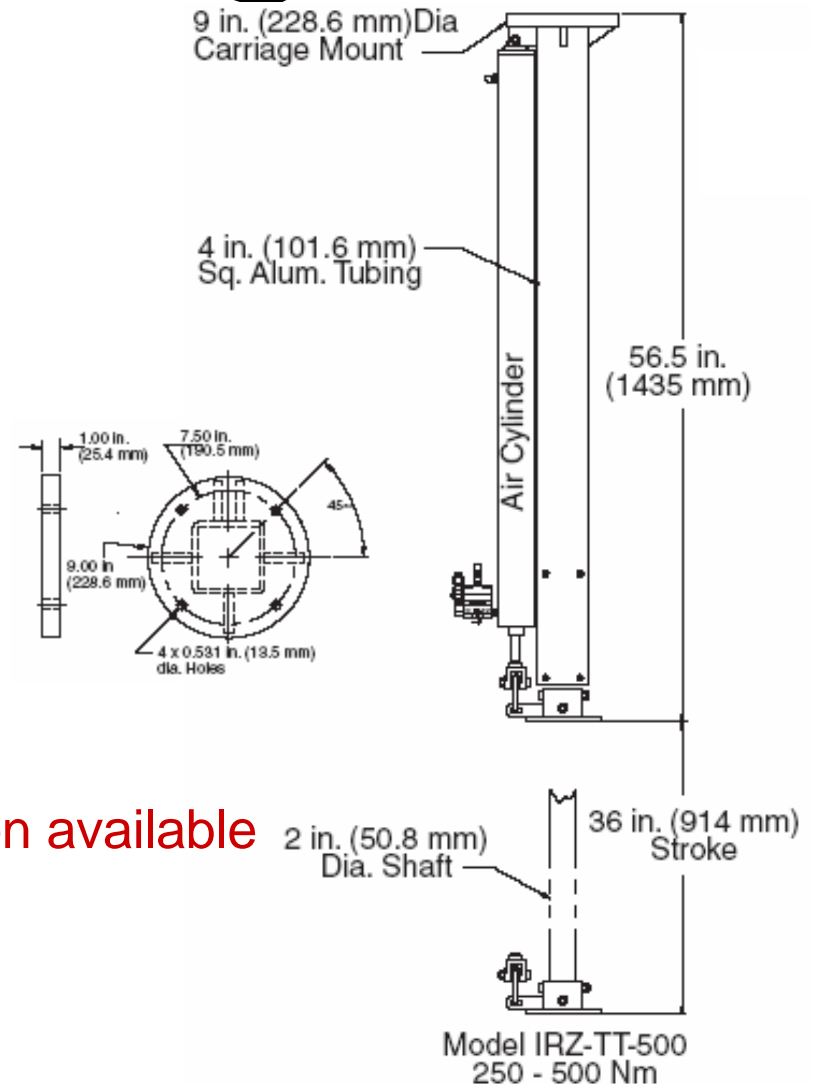
Minimum Dimension **1435mm (56.5 in.)**

Maximum Dimension **2349.5mm (92.5 in.)**

Adjustment **Fixed length; custom extension available**

Torque Tube Weight **34Kg (75lb.)**

Mounting Options **Carriage**



Torque Tubes

Features

Multiple Mounting Options- Single/ Dual Trolley &
Custom Carriage

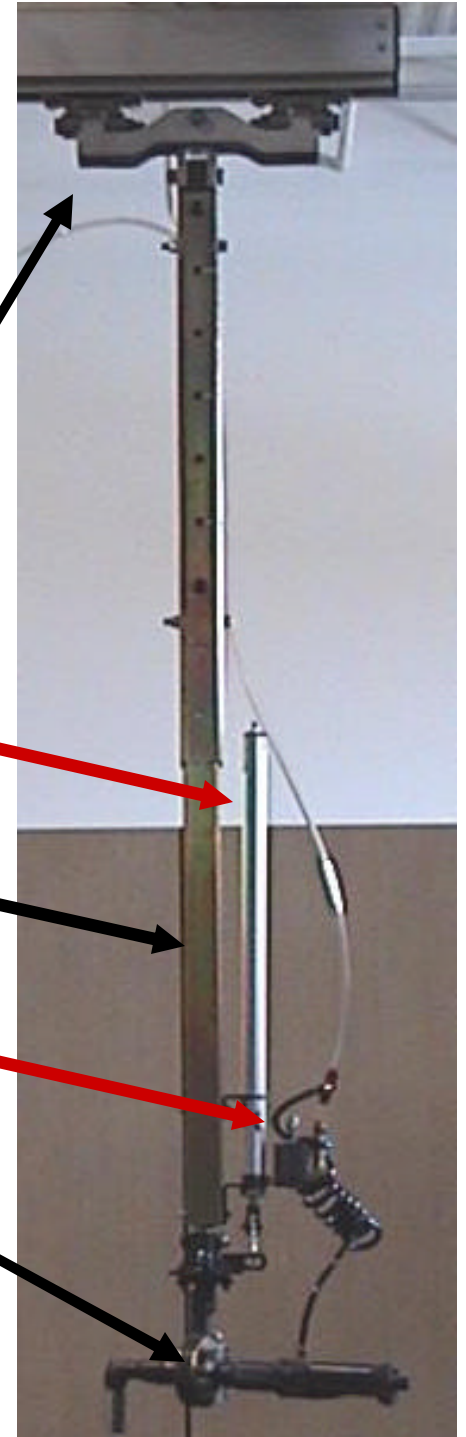
Low Friction Air Cylinder- Minimizes Effort to Raise and
Lower Tool

Anodized Steel Tube Construction- Minimizes Corrosion

Self Relieving Regulator- Balance Multiple Tool
Weights

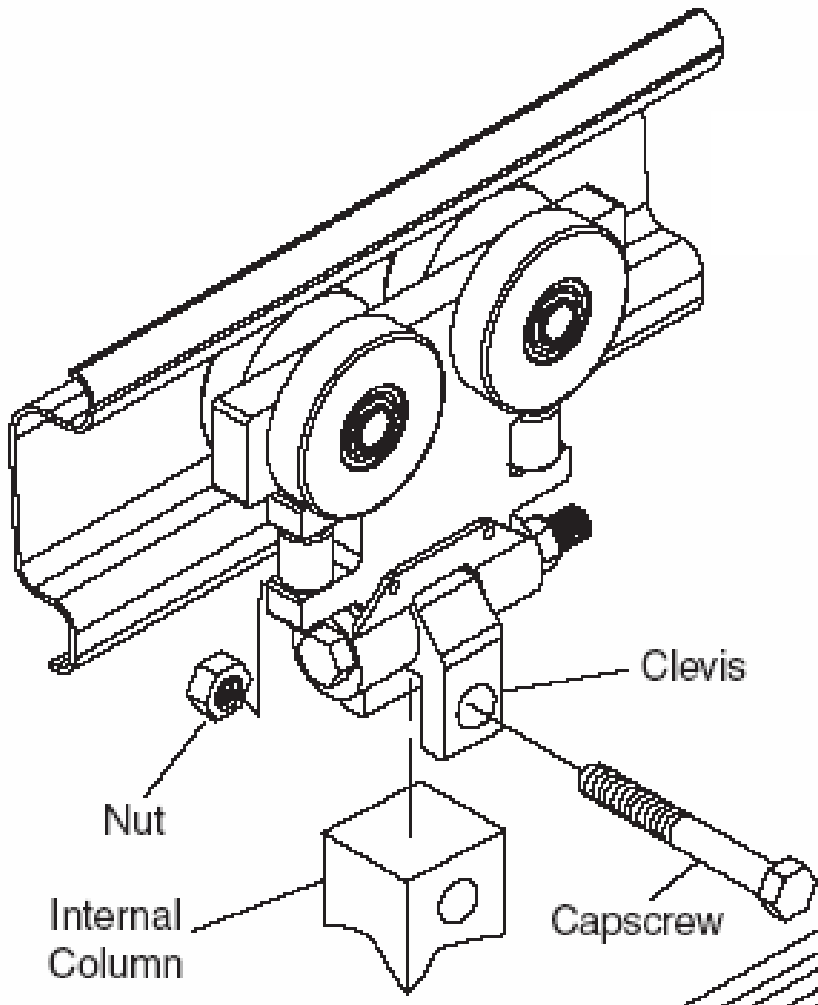
Multiple Tool Holder Options & Custom Designs

Standard Product/ Standard Price/ Standard Delivery



Torque Tubes

Mounting Options



Single Trolley

100Nm Capacity

Cast Aluminum Alloy Trolley

High Strength Delrin Wheels

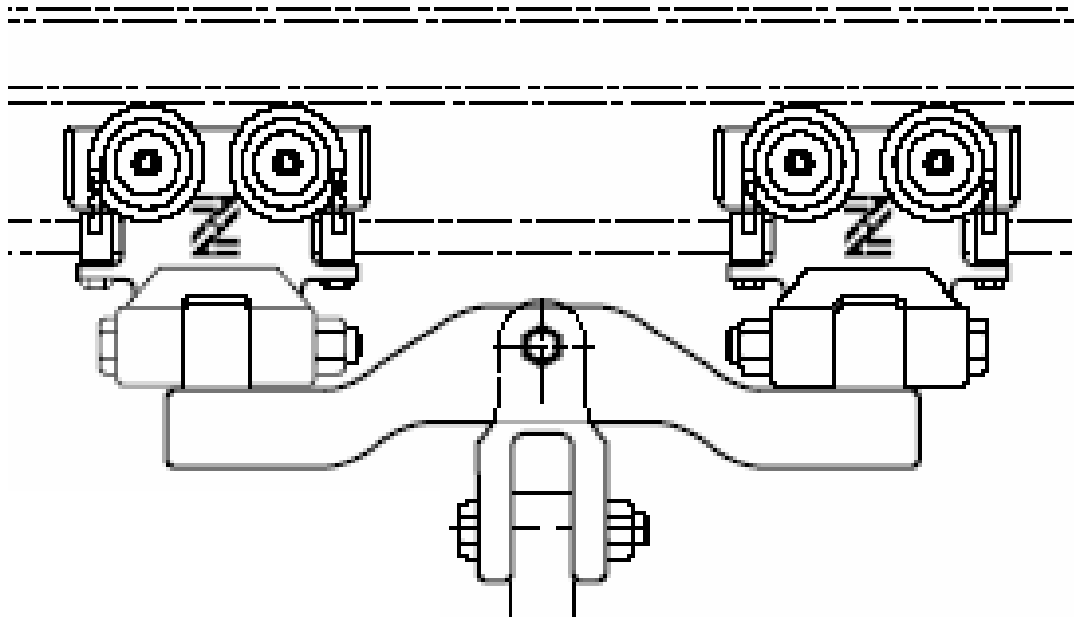
Sealed Wheel bearing; life lubricated

Low tolerance side guide roller to absorb reaction

Kits available for most competitor rail

Torque Tubes

Mounting Options



Dual Trolley

250Nm Capacity

Cast Aluminum Alloy Trolley

High Strength Delrin Wheels

Sealed Wheel bearing; life lubricated

Low tolerance side guide roller to absorb reaction

Kits available for most competitor rail

Torque Tubes

Mounting Options

Carriage

500Nm Capacity

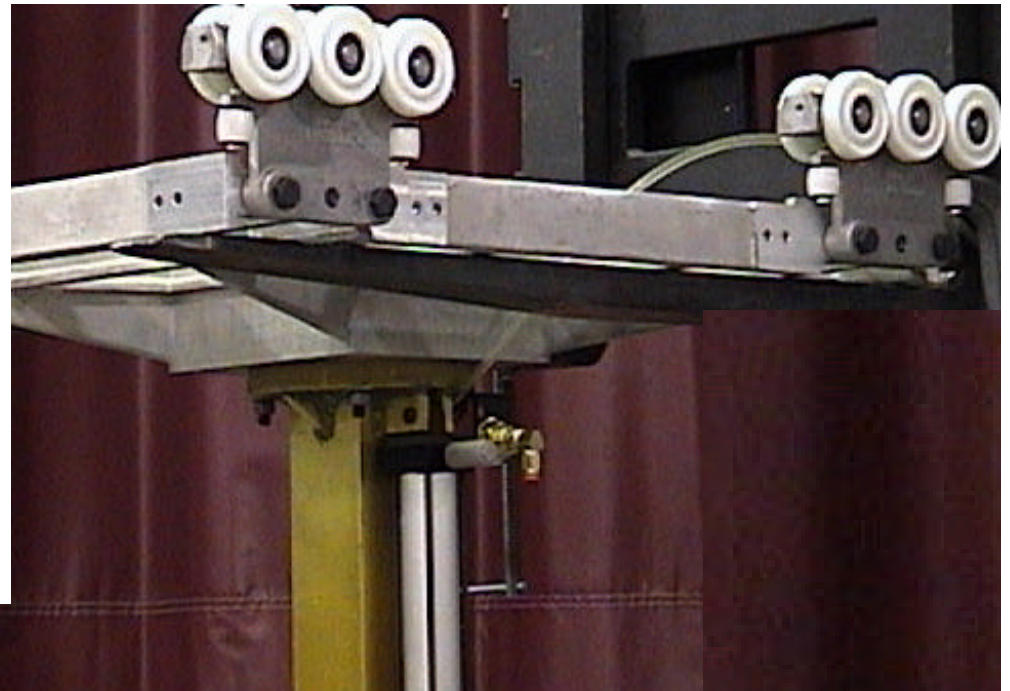
Cast Aluminum Alloy Frame &
Trolleys

High Strength Delrin Wheels

Sealed Wheel bearing; life lubricated

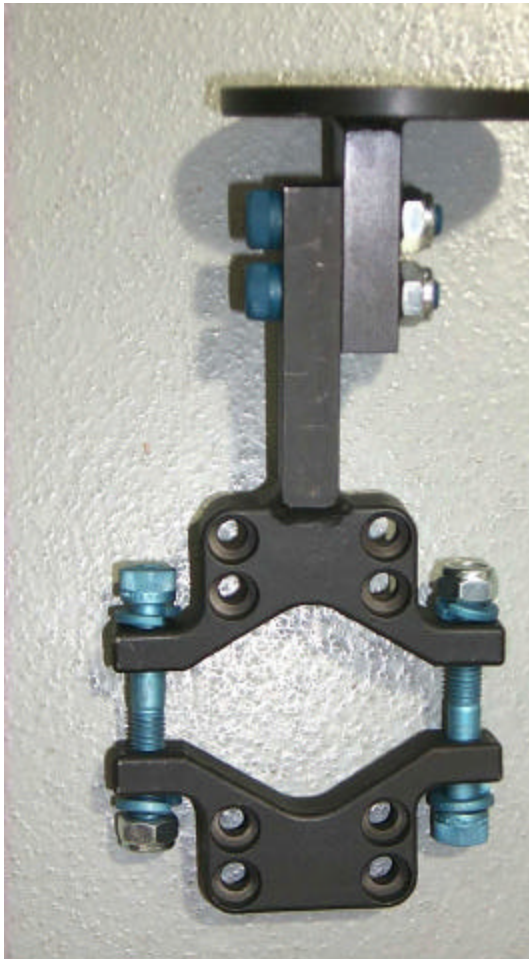
Low tolerance side guide roller to
absorb reaction

Kits available for most competitor rail



Torque Tubes

Tool Holders Options



PN ZHS52000

Fixed Axis Tool Holder

Applications

Right Angle & In-line Tools

Maximum Capacity

100Nm (74 ft. lb.)

Tool Diameter

13- 63mm (0.5- 2.5in.)

Features

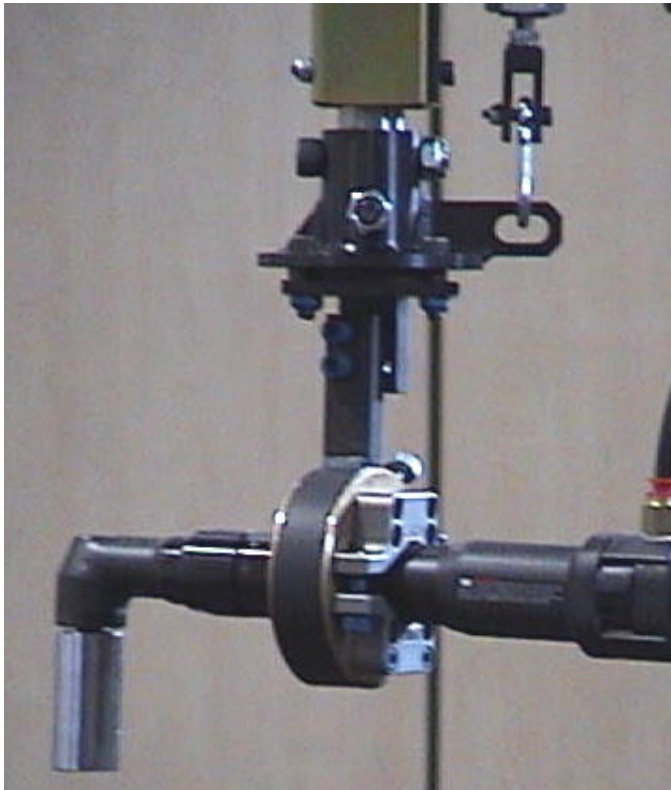
Fixed Axis control to prevent misalignment of tool to part
Installed tool secured in specified orientation

Torque Tubes

Tool Holders Options

PN ZHS52100

360° Axis Tool Holder



Applications

Right Angle & In-line Tools

Maximum Capacity

250Nm (184 ft. lb.)

Tool Diameter

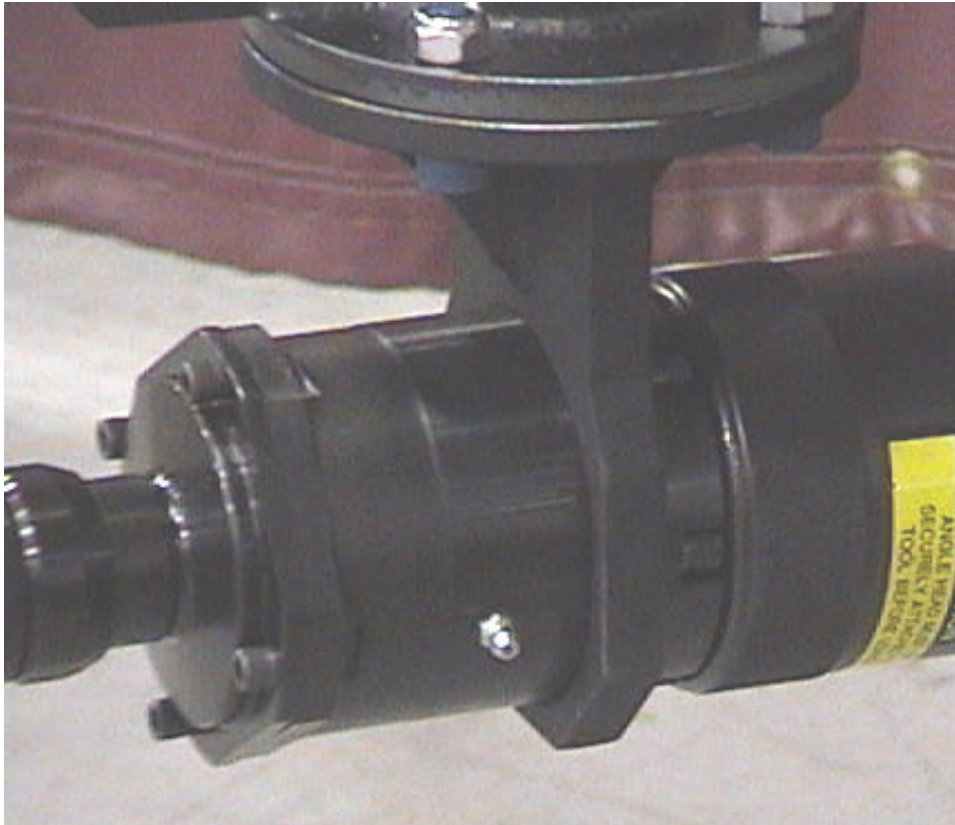
13- 63mm (0.5- 2.5in.)

Features

Index plunger to adjust at 45° increments

Torque Tubes

Tool Holders Options



Custom Designs
Fixed Axis Tool Holder

Applications
Right Angle & In-line Tools

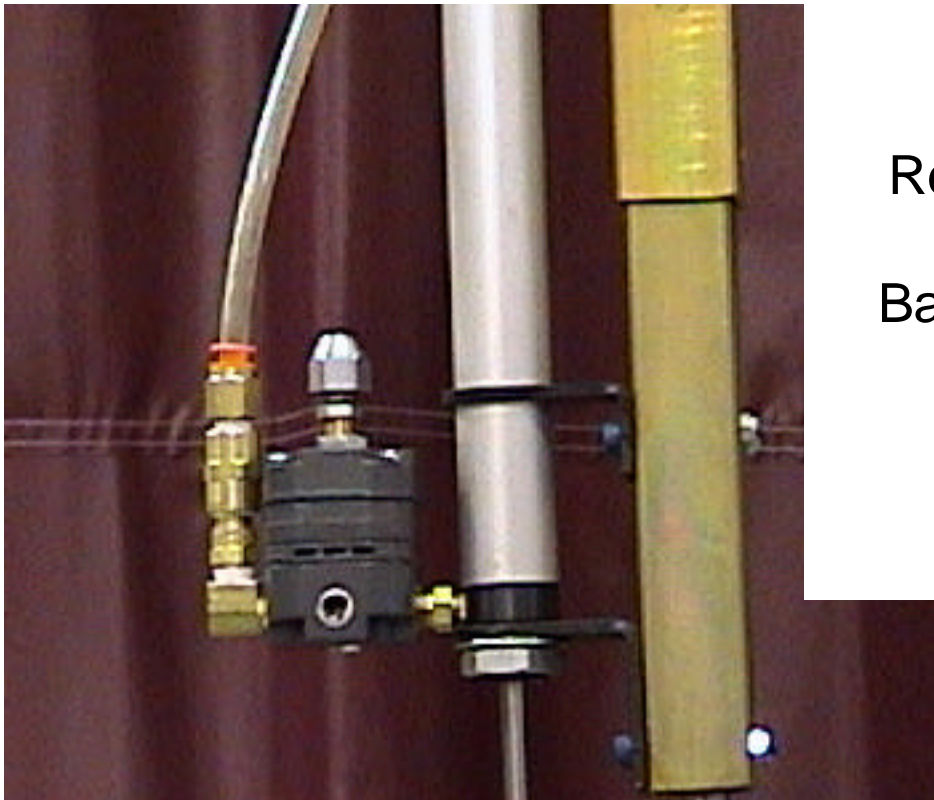
Maximum Capacity
500Nm (368 ft. lb.)

Tool Diameter
Specified at purchase

Features
High capacity

Torque Tubes

Control Option



Adjustable Self- relieving regulator

Regulator- same as Balancer BA control

Balances tool or can be set to raise when
work is complete

Feature

Normally stock item

Torque Tubes

Control Option

Check Valve

Air Fitting

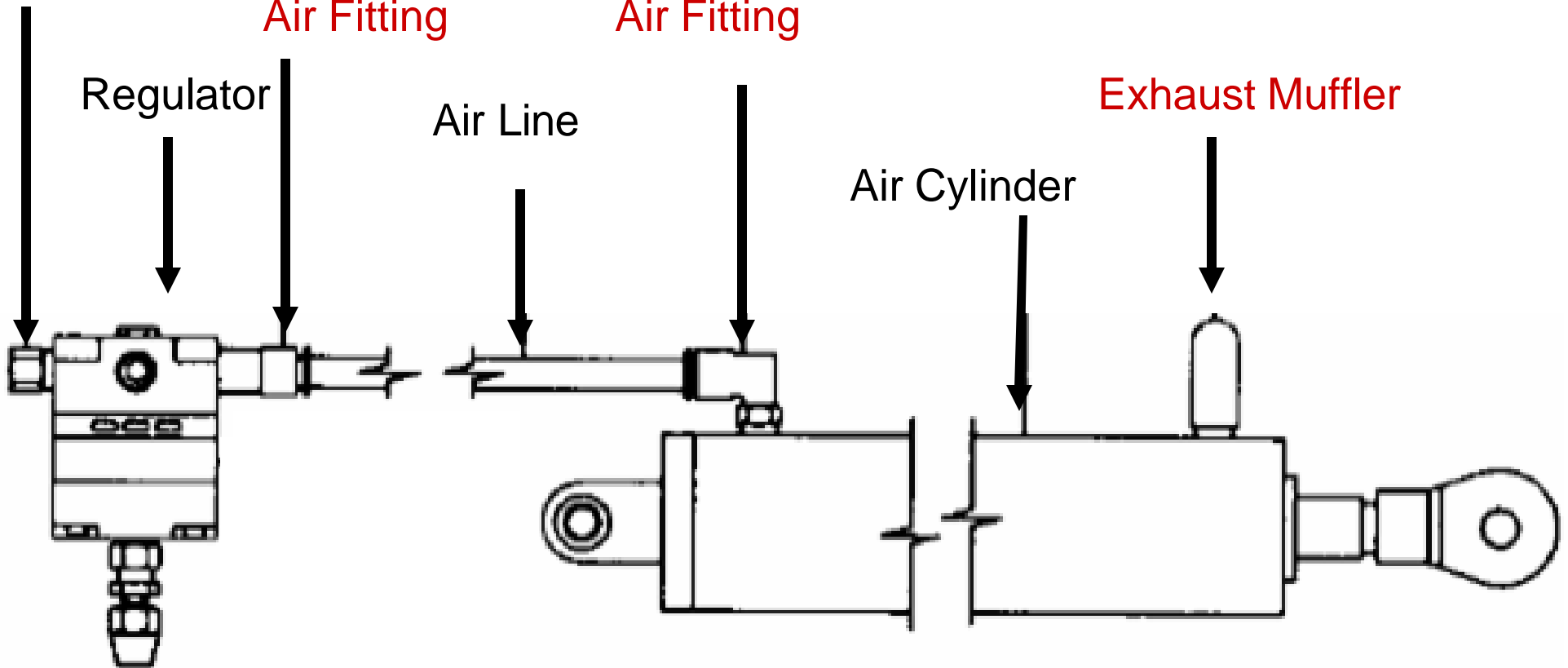
Air Fitting

Regulator

Air Line

Air Cylinder

Exhaust Muffler



Torque Tubes

Troubleshooting

COMPONENT	SYMPTOM	REMEDY
Pivot Assemblies	Movement is not smooth, or may be binding.	Inspect pivot assembly. Repair or replace as necessary to ensure pivot assembly movement is smooth and does not bind. Check spring retract adjustment.
	Fasteners are loose.	Ensure fasteners are tightened to rated torque specifications.
	Lack of lubrication in pivot assembly.	Lubricate pivot assembly.
Control Hoses	Hose leaks at fittings or along length of hose.	Replace worn, leaking or damaged hoses and fittings.
	Hose binding at connections.	Ensure swivel connections operate correctly without sticking or binding. Replace fittings that stick or bind.
Cylinder	Effort to extend or retract Tool Arm is not equal.	Check regulator adjustment.
		Ensure cylinder vent is clean and unrestricted.
Parallel Links	Movement up and down is restricted.	Inspect flanged bushings. Replace flanged bushings if worn or damage.

Complete instructions in MHD56262, Torque Tube Service and Installation Manual

Torque Tubes

Maintenance & Inspections

Beginning of shift

Operator should test torque tube to ensure smooth and unrestricted movement

Check for loose fasteners

Check tool is secure in tool holder

Check air system for leaks and arm for drifting down

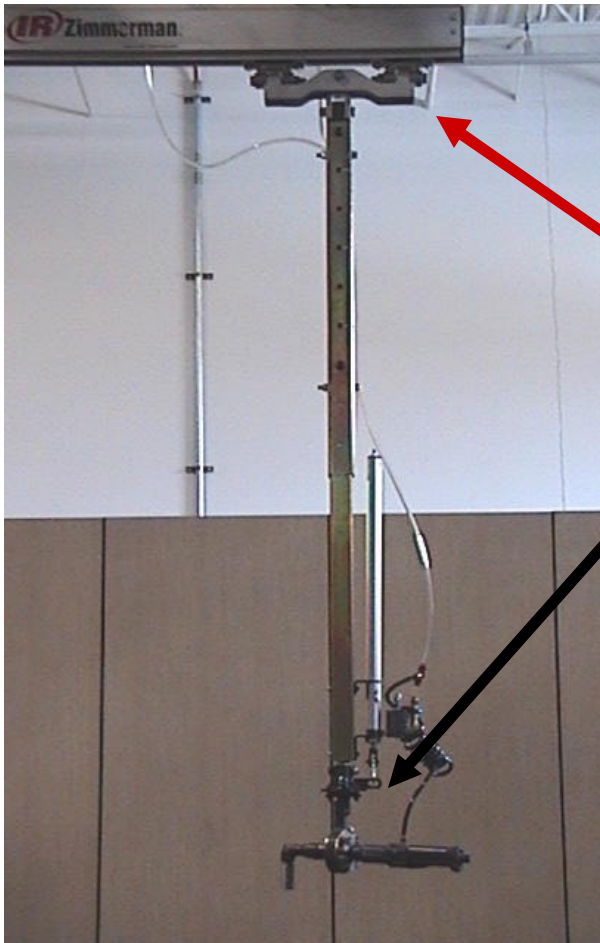
Annual Inspections

Inspect all components for wear

Maintenance personnel should torque fasteners

Torque Tubes

Applications



Trolley Reacts Against Rail/ Support- **ALWAYS**

Torque **NEVER** in Direction of Rail/ Support

Right Angle Tools- Mount Horizontal

In-Line Tools- Mount Vertical or Horizontal



Torque Tubes

Review

3 Models with ratings up to 500Nm (368 Ft. Lb.)

Low Friction Air Cylinders for Minimal Effort to Move Tool

Multiple Mounting Options to Install on Competitor Rail

Multiple Tool Holder Options to Accept Competitor Tools

Adjustable Self Relieving Regulator to Support Multiple Tool Weights

Application/ Engineering Support if Purchased as Complete System
(I-R Tool/ I-R Torque Tube/ I-R Rail System)