# FALL PROTECTION SYSTEMS

**TRAM Fall Protection Systems Catalog**Fall 2010





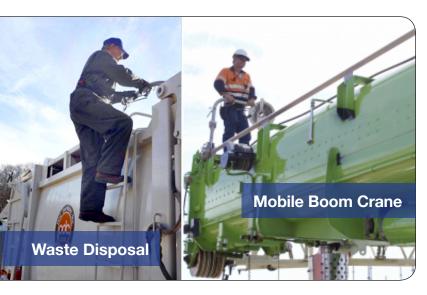
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# **SYSTEM FEATURES**

# **Features of the TRAM Height Safety System**



The TRAM system is comprised of the TRAM unit, the TRAM harness or belt and the TRAM rail. It is designed for various industrial, mining, defence, transport and domestic height safety applications to provide the user with an ideal system of mobility, stability and restraint.

As well as preventing falls on the platform or walkway, TRAM provides protection while making the transition of the user between the ladder and the platform or walkway.

# **TRAM Components**

#### **Base**

Adjustable rollers to ensure smooth operation and minimal play. Gas strut controls the pivoting action to assist the user in transition between ladder and walkway and to ensure that the arm does not drop unexpectedly.

#### Arm/Handhold

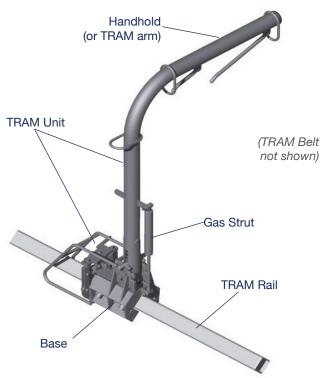
Three position settings – vertical, horizontal and 45(deg). Clutch and brake levers ensure that the arm and base remain where desired until activated by the user. Anchor points comfortably spaced and looped around the handhold for additional strength.

#### Rail

Stainless or galvanized steel 50mm or 2 inch square box tubing with welded cleats attached to the vehicle or equipment by purpose-designed welded or riveted mounting blocks.

#### Harness/Belt

Designed to ensure the user is kept in position on the walkway in the event of a slip, trip or incapacitation.



# **TRAM Data**

Weight per TRAM unit Weight of TRAM rail TRAM Base TRAM Arm TRAM Rail Approx 34 lbs. (18 kg)
Approx 3lb/ft. (4.5 kg/m)
2205 Duplex Stainless Steel
Grade 316 Stainless Steel
2"x2" 11ga or 50x50x3mm
welded square box tubing
Grade 304 Stainless Steel

# **TRAM UNITS**

#### Standard TRAM with Standard or Extended Arm

Standard TRAMs with Standard or Extended arms come in either left or right hand configurations. These units are suitable where access to the work platform or walkway is at one end and in line with the TRAM rail.

DESCRIPTION	ORDER CODE
Standard TRAM- Standard Arm - Left Hand	TR-01-01-LH
Standard TRAM- Standard Arm - Right Hand	TR-01-01-RH
Standard TRAM- Extended Arm - Left Hand	TR-01-02-LH
Standard TRAM- Extended Arm - Right Hand	TR-01-02-RH



TR-01-01 Standard TRAM Standard Arm

TRAMs shown in right hand configuration.



TR-01-02 Standard TRAM Extended Arm

## Standard TRAM with Rotating Arm & Extended Rotating Arm

Rotating and Extended Rotating Arms have a rotary joint mounted midway on the TRAM Arm. This allows the horizontal handhold to rotate 180 degrees around the arm base which provides the operator with access to work area of greater radius.

DESCRIPTION	ORDER CODE
Standard TRAM - Rotating Arm	TR-01-03
Standard TRAM - Extended Rotating Arm	TR-01-04



TR-01-03 Standard TRAM Rotating Arm



TR-01-04 Standard TRAM Extended Rotating Arm

## Fixed Base TRAM with Standard & Extended Arm

The Fixed Base TRAM (or FBT) consists of a pivoting TRAM Arm without a TRAM Rail. When used with a standard or extended arm it protects the operator during access and egress from a ladder to a platform where movement by the operator along a rail is not required. These units come in either left or right handed configurations.

DESCRIPTION	ORDER CODE
Fixed Base TRAM- Standard Arm - Left Hand	TR-02-01-LH
Fixed Base TRAM- Standard Arm - Right Hand	TR-02-01-RH
Fixed Base TRAM – Extended Arm - Left Hand	TR-02-02-LH
Fixed Base TRAM – Extended Arm - Right Hand	TR-02-02-RH



TR-02-01 Fixed Base TRAM Standard Arm

TRAMs shown in right hand configuration.



TR-02-02 Fixed Base TRAM Extended Arm

# TRAM UNITS

# Fixed Base TRAM with Rotating & Extended Rotating Arm



TR-02-04 Fixed Base TRAM Extended Rotating Arm

Fixed Base TRAMs with rotating & extended rotating arms give the operator the access & egress benefits of the FBT but increase the size of the work area the operator can access or allow the operator to rotate the arm out of their way while performing tasks.

DESCRIPTION	ORDER CODE
Fixed Base TRAM- Rotating Arm	TR-02-03
Fixed Base TRAM- Extended Rotating Arm	TR-02-04

## Rotating Base TRAM with Standard or Shortened Arm



TR-03-31 Rotating Base TRAM Shortened Arm

The Rotating Base TRAM has a rotary joint mounted in the TRAM base allowing the arm to pivot perpendicular to the rail. This allows TRAM to be used where the access point is to the side of the walkway or work platform. These TRAMs can be outfitted with standard or shortened arms.

DESCRIPTION	ORDER CODE
Rotating Base TRAM - Standard Arm - Left Hand	TR-03-30-LH
Rotating Base TRAM - Standard Arm - Right Hand	TR-03-30-RH
Rotating Base TRAM - Shortened Arm - Left Hand	TR-03-31-LH
Rotating Base TRAM - Shortened Arm - Right Hand	TR-03-31-RH





**Straight Arm** 

# **Specialty TRAM Arms**



TR-00-06 Rotating XL Arm

Both the XL & Rotating XL arms can be used on either Standard & Fixed Base TRAMs. With their extended reach in the down position and higher handhold these arms can solve unusual installation issues. The Standard TRAM with Straight Arm mounts on a wall along the walkway and can be used where a foot level TRAM rail cannot be installed.

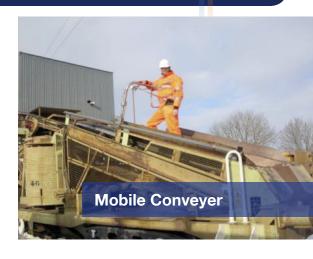
DESCRIPTION	ORDER CODE
TRAM XL Arm	TR-00-05
TRAM Rotating XL Arm	TR-00-06
Standard TRAM Straight Arm	TR-01-07

# TRAM APPLICATIONS

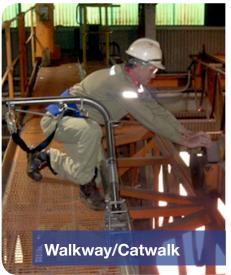
TRAM is almost limitless in its applications. It is suitable for use on refuelling gantries, ship loaders, cranes, all types of trailers, static tanks and most elevated walkways and platforms. Facilities can be fitted with one or more TRAM units, allowing flexibility in the number of workers who can use the system with total protection.

#### SAFETY SYSTEM SOLUTIONS

Our team of engineers, operations staff and safety experts consult with client management and workers to design systems to suit their needs.







#### **CONTACT US**

Fixed location TRAM installations are purpose-designed to suit your needs. Please contact us to arrange for an initial no-obligation consultation with our experienced engineers.

# **Certification & Testing**

The TRAM range of products – including standard, rotating and fixed base variants and the various arm options has been tested to and conforms with the relevant test requirements of:

- ✓ ANSI/ASSE Z359.1-2007 Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components
- ✓ EN795:1997 Protection against falls from a height Anchor devices Requirements and testing
- ✓ AS/NZS 1891.2:2001 Industrial fall-arrest systems and devices, Part 2: Horizontal lifeline and rail systems
- ✓ SABS EN 795:1996 Protection against falls from a height

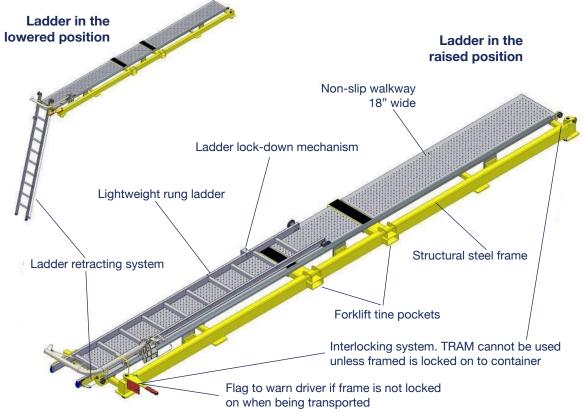
The TRAM restraint belt with integrated twin lanyards has been tested to and conforms to the relevant test requirements of:

- ✓ ANSI/ASSE A10.32.7-2004 Fall Protection Systems American National Standard for Construction and Demolition Operations
- ✓ EN358:2000 Personal protective equipment for work positioning and prevention of falls from a height - Belts for work positioning and restraint and work positioning lanyards
- √ EN354: 2002 Personal protective equipment against falls from a height Lanyards
- √ AS/NZS 1891.1:1995, Industrial fall arrest systems and devices, Part 1: Safety belts and harnesses (superseded)
- ✓ SABS EN 795:1996 Protection against falls from a height

# **ISOTRAM**







The ISOTRAM consists of a rail-mounted TRAM unit fixed to a transportable frame especially designed for fitting onto ISO containers. The frame is lifted into place by a light forklift and then locked into position at the ISO connections. It can be supplied with or without a ladder and walkway.

DESCRIPTION	ORDER CODE	
20 ft. ISOTRAM with Walkway and Ladder	IS-01-01	
20 ft. ISOTRAM without Walkway or Ladder	IS-01-02	
Note: 40-ft. and low profile versions are also available. Contact your TRA	AM representative.	7

# **TRAM ACCESSORIES**

#### **TRAM Belts and Harnesses**

TRAM Belt
(Available Small, Medium, Large)

TRAM Belt w/adjustable lanyards
(Available Medium, Large)

TRAM Full Body Harness
(Available Small, Medium, Large)

TRAM Lanyards

(to be used with full body harness with D-rings)

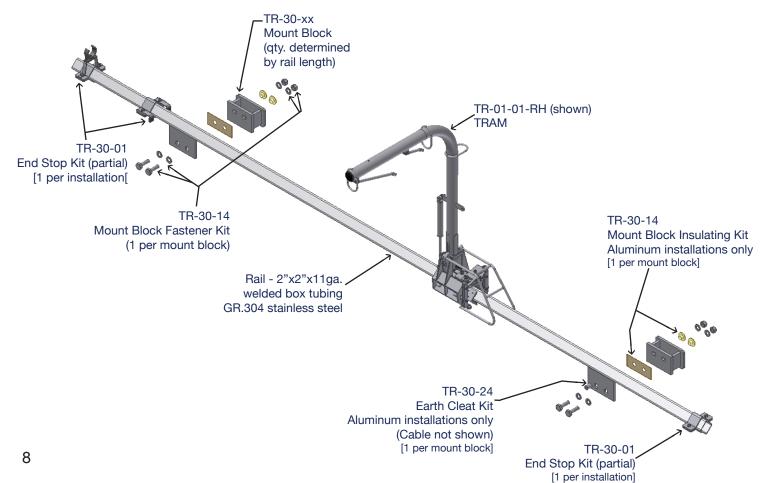
Contact your TRAM rep for ordering information.





## **TRAM Covers**

DESCRIPTION	ORDER CODE
Standard TRAM, TR-01, Cover	TR-50-01
Fixed base TRAM, TR-02, Cover	TR-50-02
Rotating Joint Cover	TR-50-03



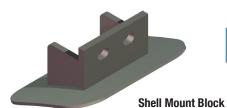
# TRAM MOUNT BLOCKS



## **Non-Adjustable Cooming Mount Blocks**

Non-Adjustable **Cooming Mount Block** 

DESCRIPTION	ORDER CODE
Mild Steel	TR-30-30
Stainless Steel	TR-30-32



## **Shell or Barrel Mount Blocks**

DESCRIPTION	ORDER CODE
Mild Steel	TR-30-34
Stainless Steel	TR-30-35
Aluminum	TR-30-36



# **Adjustable Mount Blocks**

DESCRIPTION	ORDER CODE
Mild Steel (0-39 deg)	TR-30-42
Stainless Steel (0-39 deg)	TR-30-40
Aluminum (-5-17 deg)	TR-30-37
Aluminum (17-39 deg)	TR-30-41

TR-30-20 TRAM Rail Cleat

Steel Adjustable **Mount Block** 

Note: If none of these mount blocks works in your application, please contact your TRAM representative. They will be happy to assist you with a custom block that will meet your needs.

# **TRAM Mounting Hardware**





TR-30-24 TRAM Earth
Cleat Kit

DESCRIPTION	ORDER CODE
End Stop Kit	TR-30-01
Mount Block Fastener Kit	TR-30-13
Mount Block Insulation Kit	TR-30-14
Fixed Base Fastener Kit	TR-30-15
Rail Cleat	TR-30-20
Earth Cleat Kit	TR-30-24
Rail Joiner	TR-30-90

# TRAM SPARE PARTS KITS

## **Wheel Kits**

DESCRIPTION	ORDER CODE
Lower (Small) Wheel Kit	TR-40-01
Upper (Large) Wheel Kit	TR-40-02

TR-40-01 Lower (Small) Wheel Kit

TR-40-02 Upper (Large) Wheel Kit

## **Brake & Lever Kits**

DESCRIPTION	ORDER CODE
Brake Shoe Kit	TR-40-11
Brake Lever Kit	TR-40-13
Rotating Joint & Latch (clutch) Lever Kit	TR-40-14



TR-40-11 Brake Shoe Kit



TR-40-14 Rotating Joint & Latch (clutch) Lever Kit



TR-40-13 Brake Lever Kit





# **TRAM PARTS AND KITS**



## **Gas Strut Kit**

DESCRIPTION	ORDER CODE
Gas Strut Kit	TR-40-03

## **Clutch Cable Kits**

TR-40-04 TRAM Standard Arm Cable Clutch Kit

DESCRIPTION	ORDER CODE
Standard Arm (for TR-00-01, 03, 30)	TR-40-04
Shortened Rotating Base Arm (for TR-00-31)	TR-40-05
Extended Arm (for TR-00-02, 04)	TR-40-06

## **Brake Cable Kits**



DESCRIPTION	ORDER CODE
Standard Arm (for TR-00-01, 03)	TR-40-07
Extended Arm (for TR-00-02, 04)	TR-40-08
Rotating Base TRAM Arm (for TR-00-30)	TR-40-09
Shortened Rotating Base TRAM Arm (for TR-00-31)	TR-40-12







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2502 N. Clark Street Chicago IL 60614 1-877-850-TRAM (8726)

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