

Scorpion® Truck Mounted Attenuator (TMA)

The Scorpion TMA has been tested and PASSED ALL optional and mandatory requirements suggested in the NCHRP-350 Report for TL-3. Additionally, the Scorpion TMA has passed the UKTD49, 110 km/h (68 mph) test.



The Scorpion TMA is hydraulically powered and measures 13 feet long when fully extended, making it ideal for stationary and mobile construction zones.

The Scorpion is a Truck Mounted Attenuator (TMA) that is truly “different by design”.

The Scorpion TMA consists of strut and cartridge sections that are linked together on a support frame. The curved side rails are made from corrosion resistant aluminum tubes, which offer full width impact protection along the entire length of the TMA. The side rails were designed to re-direct errant vehicles away from the rear of the truck (coffin corner). Other manufacturer’s TMA models have little or no side-angle impact protection.

The aluminum boxes are filled with a moisture resistant, aluminum honeycomb material. The boxes, together with the curved side rails, absorb the energy from an impacting vehicle. The aluminum boxes are painted with a bright yellow powder-coated finish, for lasting durability.



The Scorpion TMA is fully extended, with the changeable message panel in the travel or storage position.



The Scorpion TMA and message panel in the storage or transport position.

SCORPION® TRUCK MOUNTED ATTENUATOR



SCORPION® TRUCK MOUNTED ATTENUATOR



SAVING LIVES AROUND THE WORLD





Versatility and Flexibility—TrafFix Devices Offers THREE Different Scorpion TMA Models



MODEL A

The Scorpion TMA Model A utilizes only the cartridge section providing impact protection up to 45 mph (70 km/h). It incorporates a modular design, which can be upgraded to a Model C-90 or Model C (to meet NCHRP-350, TL-3 requirements), by simply adding the strut section.



SPECIFICATIONS

MODEL A
(NCHRP-350, TL-2)
Weight 760 lbs. (346 kgs.)
Length (from back of vehicle)
Travel/Storage 3' (1 m)
Deployed 8' 8" (2.65 m)
Width 8' (2.45 m)
Height (from ground)
Travel/Storage 11' (3.35 m)
Deployed (ground clearance) 1' (.3 m)
Tests Successfully Passed
2-50, 2-51



MODEL C-90

The Scorpion TMA Model C-90 folds just to the 90-degree position (when folding over the truck bed is not desired). This feature allows for easy transit in the upright position. The Scorpion TMA Model C-90 provides TL-3 impact protection.



MODEL C-90
(NCHRP-350, TL-3)
Weight 2,350 lbs. (1070 kgs.)
Length (from back of vehicle)
Travel/Storage 3' 10" (0.94 m)
Deployed 13' 10" (4.21 m)
Width 8' (2.45 m)
Height (from ground)
Travel/Storage 13' 8" (4.20 m)
Deployed (ground clearance) 1' (.3 m)
Tests Successfully Passed*
3-50, 3-51, 3-52, 3-53
UKTD49 - 68.5 mph (110 km/h)



MODEL C

The Scorpion TMA Model C folds over the bed of flat bed, stake bed or dump trucks. The Scorpion TMA Model C provides TL-3 impact protection. Center or side mounts are also available



MODEL C
(NCHRP-350, TL-3)
Weight 2,200 lbs. (1000 kgs.)
Length (from back of vehicle)
Travel/Storage 2' 5" (.74 m)
Deployed 13' 10" (4.21 m)
Width 8' (2.45 m)
Height (from ground)
Travel/Storage 10' 6" (3.05 m)
Deployed (ground clearance) 1' (.3 m)
Tests Successfully Passed*
3-50, 3-51, 3-52, 3-53
UKTD49 - 68.5 mph (110 km/h)

**TrafFix Devices Scorpion TMA has been tested and also PASSED a "worse case" side angle re-directive impact test, that goes beyond all governmental testing requirements. Full details are available upon request.*

SCORPION® TRUCK MOUNTED ATTENUATOR



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Protecting Workers and Motorist on the Highway





Scorpion® TMA FAST-TRAK SwiftConnect™ Mounting System



Fast-Trak Lowboy works on trucks with Salt Spreaders



Fast-Trak w/30" Extension and Vertical Arrowboard Lift



Fast-Trak with TL-2 Scorpion

- Quickly and securely connect the Scorpion Truck Mounted Attenuator to any heavy-duty vehicle with the Fast-Trak SwiftConnect
- Fast-Trak SwiftConnect Eliminates the need for a single, dedicated Host Vehicle
- Connection/Disconnection is the fastest in the industry
- Fast-Trak SwiftConnect allows the Scorpion TMA to connect in as little as a minute
 1. Back up truck to Fast-Trak SwiftConnect
 2. Align mounting hooks over connection bars and lower in place
 3. Plug in electrical connections
 4. Crank jacks up and rotate for storage and insert locking pins
- Additional traks allow TMA to be installed on multiple vehicles in your fleet
- Safe and secure, the Fast-Trak SwiftConnect is easy to install on any of your flat bed or dump trucks.
- All steel construction provides excellent durability while the swift connection delivers maximum flexibility for your fleet.
- Another innovative engineering advancement from TrafFix Devices, Inc.

SCORPION® TRUCK MOUNTED ATTENUATOR

Swift Connection



Back up truck to Fast-Trak SwiftConnect



Align mounting hooks over connection bars and lower in place



Plug in electrical connections



Crank jacks up and rotate for storage and insert locking pins



Scorpion® TMA Mounting and Support

SCORPION® TMA MOUNTING AND SUPPORT

Fast-Trak Mounting Choices



Fast-Trak SwiftConnect is available in 6", 12", 18", 24", 30" and 36" lengths. Other extension lengths available upon request.



Fast-Trak SwiftConnect with 30" Extender Frame

Traditional Mounting Choices



Standard Frame



12" Extension Frame



24" Extension Frame

Support Choices



Dump Truck Side Support



Flat Bed Side Support



Flat Bed Center Support



High Reach Extension Frames

Used to gain additional vertical clearance over truck bed or equipment.

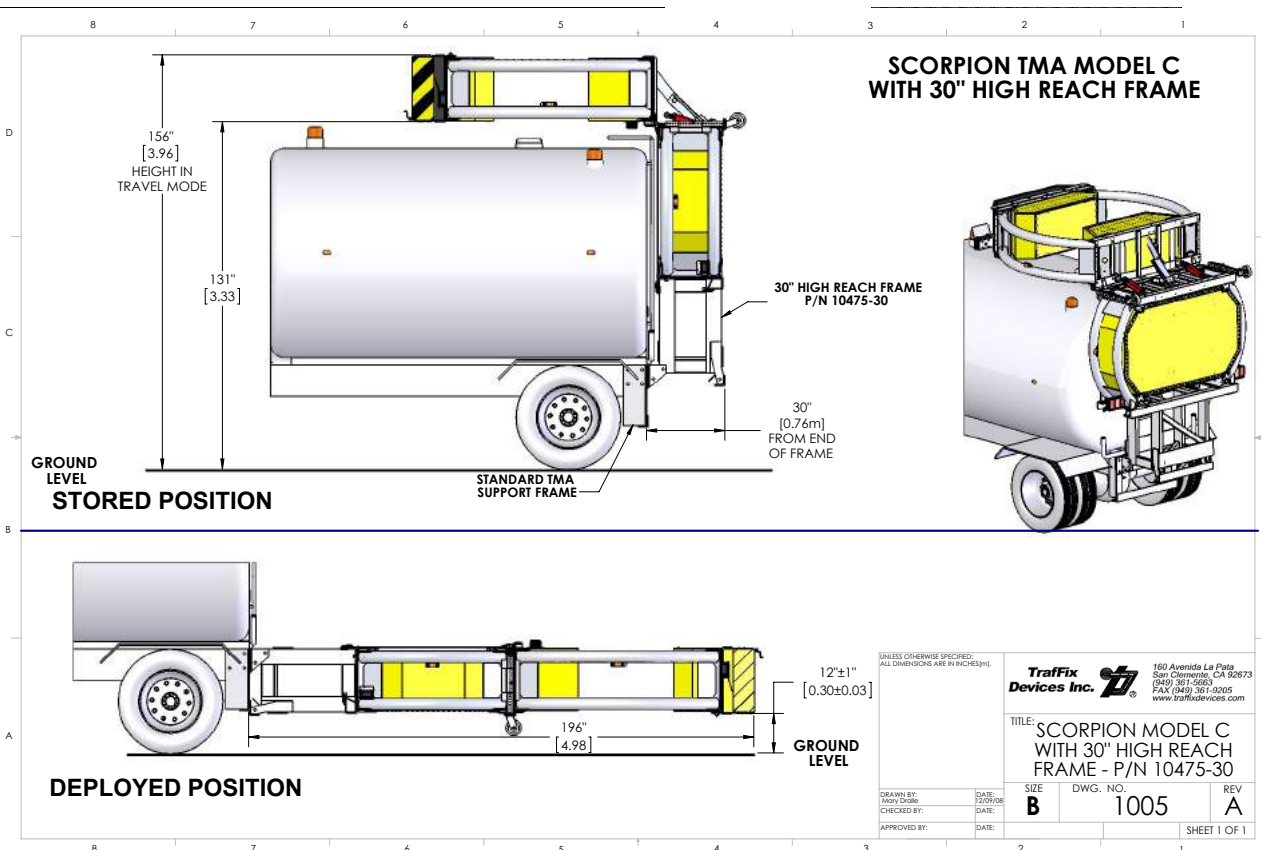


30" High Reach Extension Frame



6" High Reach Extension Frame

SPECIFICATIONS



Scorpion®

Truck Mounted Attenuator (TMA)

SCORPION® TMA ACCESSORIES



Arrow/Message Board Mounting Systems



Scorpion with 15 Light Arrow Board and Hydraulic Lift

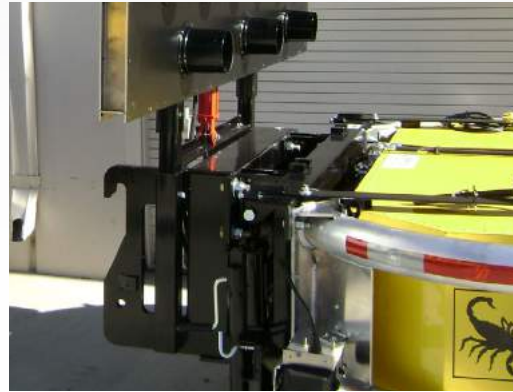


Scorpion with Message Board and Hydraulic Lift

Hydraulic Lift Options for Arrow & Message Boards



Traditional Hydraulic Vertical Lift



Fast-Track Hydraulic Vertical Lift



In-Cab Controller w/ 30' Cable Controls Scorpion™ & Hydraulic lift (Factory or Field Installation)



LED Tail Light Upgrade Kit

Other options available from TrafFix Devices, Inc. Contact your Authorized Distributor for more details.



Scorpion[®] Trailer Attenuator



Scorpion TL-3 Trailer Attenuator with optional Arrow Board and Lift easily adapts to multiple trucks for efficient fleet management - Fast to hook up, has 45 degree turning radius, and is easy to tow and back up.



Scorpion TL-3 Trailer Attenuator with Telescoping Anti-Rotational System (TARS) allows for Single Point Attachment to Pintle Hook. The Tongue keeps the cushion positioned to attenuate "real world" angled and offset impacts efficiently without Trailer Rotation.



Scorpion TL-3 Trailer Attenuator with optional Arrow Board and Lift has great visibility to oncoming drivers and is full truck width for the best protection of workers, drivers and fleet assets. NCHRP 350 tested and accepted with arrow or message board.

SCORPION[®] TRAILER ATTENUATOR



Scorpion® Trailer Attenuator

Features:

- NCHRP 350 tested and accepted for all mandatory and optional offset and angled impacts with host vehicle free standing, unblocked & unrestrained
- Only Trailer Attenuator to be tested and accepted with a 10,000 lb host vehicle
- Infinite weight tested and accepted allows the Scorpion Trailer to be used on heavy host vehicles with no upper weight limit
- During impact testing, Scorpion Trailer stayed attached to the host truck and never became detached from the pintle hook
- Single point attachment to standard 20 Ton (minimum) rated pintle hook is quick and easy
- Telescoping Anti-Rotational System (TARS™) eliminates Scorpion Trailer rotation during angled and offset impacts, preventing trailer separation from host vehicle
- Requires little or no modification or additional mounting hardware to host vehicle
- The Scorpion's proven modular design crushes in progressive stages allowing quick and economical replacement of damaged parts
- The unique curved design gives full width protection to the back of the host vehicle and shields the deadly "coffin corners" of the truck
- Rear axle placement improves trailer stability and prevents the tail from "bottoming out" on driveways or uneven surfaces
- NCHRP Tested and accepted with optional Arrow or Message Board, which can easily be attached to Scorpion Trailer Attenuator

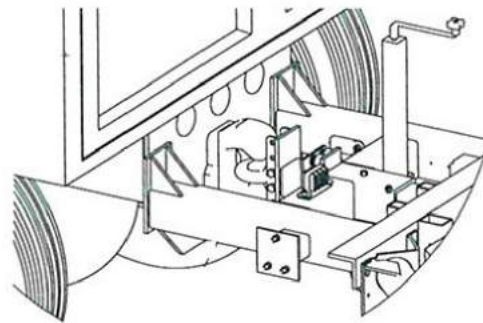
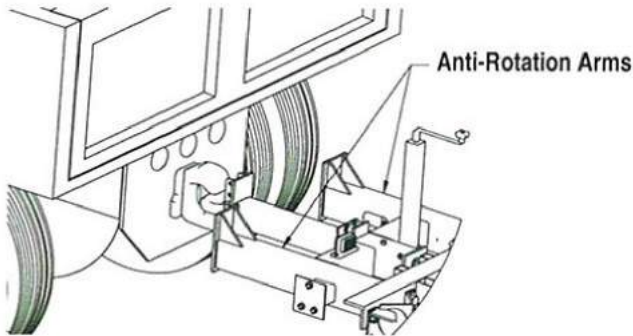




Telescoping Anti-Rotation System (TARS™)

Pre-Impact Condition

Post-Impact Condition

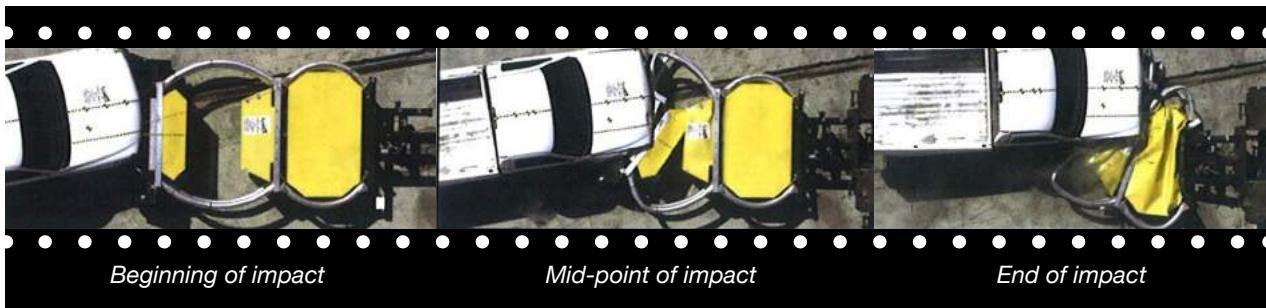


The Scorpion Trailer attaches directly to the pintle hook. It does not require additional installation, or truck modification, beyond standard factory installed pintle hook and 1/2 minimum" steel frame plate.

Upon impact, two heavy duty anti-rotation arms are driven against the frame plate, preventing angular rotation of the Scorpion Trailer during an accident.

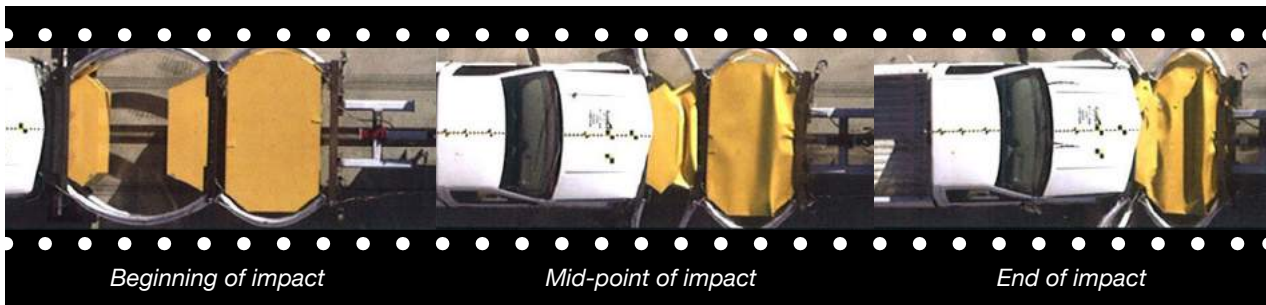
TL- 3, Test 3-52 Offset Angle Impact Test

4,500 lb vehicle impacts 20,000 lb host vehicle at 62.5 mph (100 kph)



TL- 3, Test 3-51m Inline Impact Test

4,500 lb vehicle impacts 10,000 lb host vehicle at 62.5 mph (100 kph)



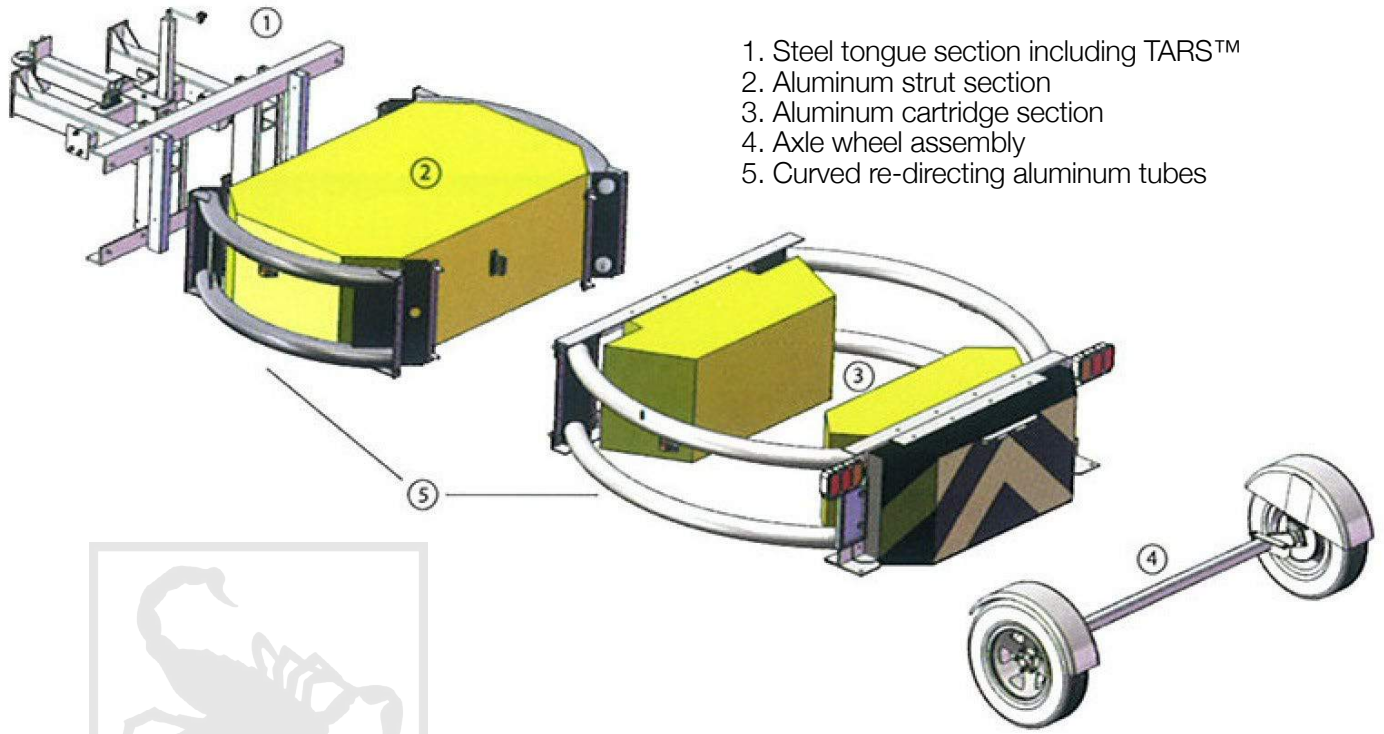
SCORPION® TRAILER ATTENUATOR



Scorpion[®] Trailer Attenuator

SPECIFICATIONS

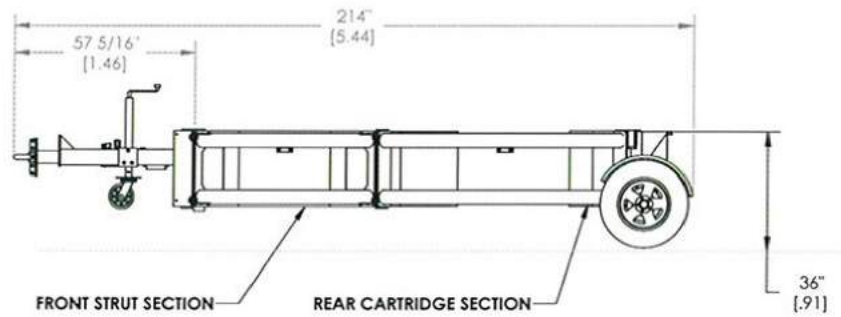
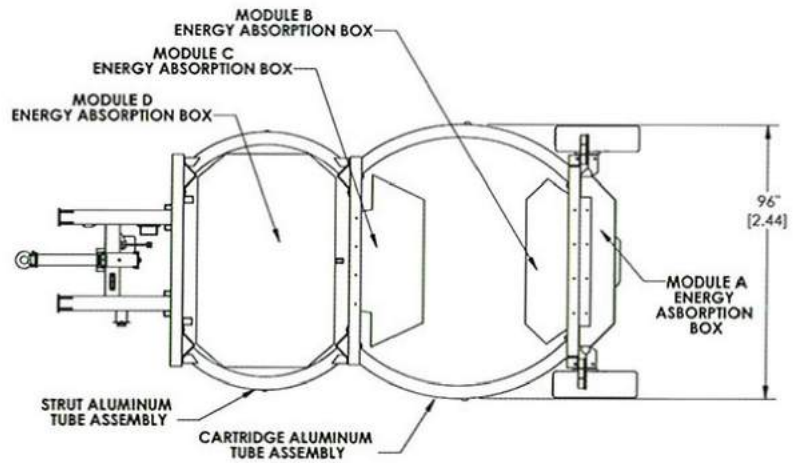
SCORPION[®] TRAILER ATTENUATOR



1. Steel tongue section including TARSTM
2. Aluminum strut section
3. Aluminum cartridge section
4. Axle wheel assembly
5. Curved re-directing aluminum tubes



	TL-2	TL-3
• Length	12' 7"	17' 5"
• Width	96"	96"
• Height	36"	36"
• Weight	1,460 lbs	1,900 lbs





Traffix Big Sandy® Impact Attenuator Sand Barrels

Now there is an Impact Attenuator Sand Barrel that is easy to move and provides external verification of the barrels correct weight of sand.



#48210
2100 lbs./953 kg.

#48140
1400 lbs./635 kg.

#48247S (top half barrel)
#48247P (pedestal only)
700 lbs./318 kg.
400 lbs./181 kg.
200 lbs./91 kg.



Big Sandy® barrels in use.

Features:

- Three barrels are used to create all of the weights used in current standard array setups (200, 400, 700, 1400 & 2100 lbs (90, 180, 320, 640 & 960 kg)
- Combination barrel utilizes a pedestal base and 200, 400, 700 lbs. (90, 180, 320 kgs) top half barrel to obtain weights without using shelves or cone inserts – eliminates leaking sand.
- Simply fill the sand to the molded-in fill line to obtain the correct weight. The molded-in fill line makes external verification of weights easy.
- Reinforced lip prevents barrels from deforming when filled and provides a quick and secure fit of reinforced lid.
- All three Big Sandy Sand Barrel sizes are easily lifted, moved and emptied with the optional Traffix Lifting Ring.
- NCHRP 350 tested and accepted
- Big Sandy barrels stack tightly, allowing you to put more on a truck than other competing brands.
- Big Sandy's wide stance allows for more stable barrel without becoming top heavy or tipping



BIG SANDY®

TrafFix
Devices Inc.

Big Sandy® Lifting Ring



#48001-LR

Features:

- Engineered to safely lift filled TrafFix "Big Sandy" Sand Barrels
- Adjusts to lift 200, 400 & 700 lb combination barrel and the 1400 & 2100 lb barrel (90, 180, 320, 640 & 960 kg)
- Easily lifts with a forklift, truck mounted crane or a knuckle boom
- Lightweight (62 pounds) aluminum construction
- Designed for TrafFix "Big Sandy" Barrels only



Typical Sand Barrel Arrays for Different Posted Speeds

25 mph 40 kph	21	14	14										
30 mph 48 kph	21	14	14	14									
35 mph 56 kph	21	14	14	14	7								
40 mph 64 kph	21	14	14	14	7	4							
45 mph 72 kph	21	14	14	14	14	7	4						
50 mph 80 kph	21	14	14	14	14	7	4	2					
55 mph 89 kph	21	14	14	14	7	7	4	2	2				
** 62 mph 100 kph	21	14	7	7	7	4	4	2					
65 mph 105 kph	21	14	14	7	4	4	2	4	2	2	2	2	2
70 mph 113 kph	21	14	14	14	7	4	2	4	2	2	2	2	2

** NCHRP 350 Tested 12 Barrel Array

Key: Numbers indicate weights in hundreds of pounds required for each sand barrel in the array.

- 21 2100 lb. = 953 kg.
- 14 1400 lb. = 635 kg.
- 7 700 lb. = 318 kg.
- 4 400 lb. = 181 kg.
- 2 200 lb. = 91 kg.

This drawing is an example of a typical array plan and should in no way override what is specified by your Local or State Traffic Engineer. Contact your Local or State Traffic Engineer for specific site recommendations for each situation and location.

