

The No1 MASH TMA; Finally a new leader is born. BLADE, the long awaited new Truck Mounted Attenuator. Full scale crash tested according the Manual for Assessing Safety Hardware (MASH) that supersedes the 20 year old NCHRP-350.



BLADE-TMA

TECHNICAL SPECIFICATIONS

- Full scale crash tested and approved according the MASH 2016 TL-3 (3-50 | 3-51 | 3-52 | 3-53)
- Full scale crash tested and approved according the UK optional 110K test TD49/07
- Standard operation from truck with wired cabin controller
- A 175 Amps plug is mounted, to power the entire machine from the vehicle 12Vdc or 24Vdc
- Complete hydraulic unit and electronics are mounted in a closed box
- Two hydraulic rams to raise and lower the crash cushion
- Galvanized steel structure
- The aluminium crash cushion can be painted in any desired RAL color(s)
- Delivered including test certifications and CE marking
- EMC compliant
- Under ride protection standard on the steel framework
- Amazing test results!!!

NO.1 ON RESULTS

This Patented BLADE-TMA is proudly full scale crash tested according MASH 2016 at the Texas Transportation Institute (TTI), with unbelievable test results! All the ride down values were within the preferred values (MASH preferred a Longitudinal ride down of 15.0 g with a maximum of 20.49 g). The BLADE-TMA is also full scale crash tested according the UK optional 70mph / 110 kph. This TMA has the highest safety level you can get.

WHY THE BLADE AND HOW IT WORKS

Let's explain how this patented invention works. The TMA strength comes out of the composite aluminum welded profiles, this machine has 12 internal blades. During an impact the first 4 blades cut through the aluminum composite H-beams and after unlocking 8 blades cut through the welded tubes. The remaining weak aluminum parts will bend away in safe directions. The patent is based on cutting aluminum H beams and tubes using BLADES.

WHY MASH?

The safety changes are mainly necessitated by alternations made to vehicles over the past decade. Cars have greatly increased in size, so different safety regulations are required to keep the occupants safe. The average bumper height on light trucks has risen considerably since 1993, so previous highway safety designs are no longer adequate.

Table of contents and dimensions

Transport height	394 cm / 12 ft 11 in
Installation length, excluding bracket	589 cm / 19 ft 4 in
Width	230 cm / 7 ft 6,7 in
Level system	± 4 degrees
Hood to road	12"± 1"
Weight complete installation	Approx. 1043 kg / 2300 lbs

Note: all these dimensions are approximately, no rights can be derived.

WHATS THE DIFFERENCE FOR TMA'S?

the new MASH 2016 standard sets stricter criteria for Truck Mounted Attenuators's. Bigger, heavier and newer test vehicles has to be used during testing, also the shadow vehicle criteria are stricter and much heavier, upper and lower truck weights has to be tested, ballast has to be fixed and also the arrow board together with the TMA construction must have been tested. The optional offset angle tests are now required in MASH!

THIS IS WHY YOU WANT THE NO.1 MASH TMA

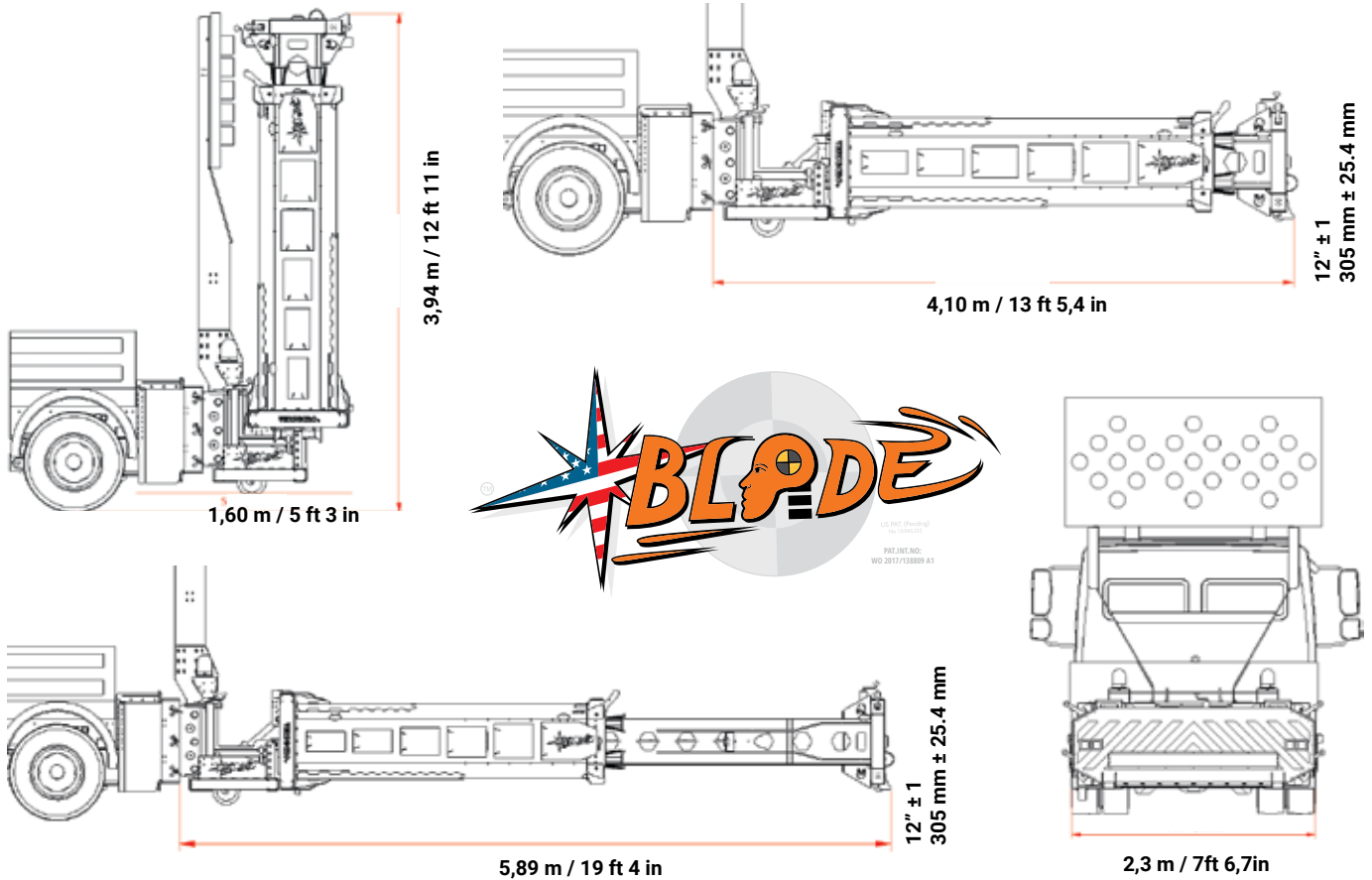
- Only available MASH TMA within the preferred values of 15G acc. MASH!
- The No.1 MASH TMA with the highest safety level.
- Optional tested and passed TD49/07 at 70 mph / 110kph
- Protect your workers with the safest, most innovative and highest safety level, Truck Mounted Attenuator available
- Safely protects and redirects the impacting vehicle away from the "coffin corner" area at the rear of the truck
- FHWA eligible and DOT approved in most states within the US and Canada
- Available with optional Dr. Airbrake automatic braking system, instantly locks brakes of host vehicle upon impact
- Tested on a host vehicle from 7262 kg (16.010 lbs) with an upper weigh limit of 10.033 kg (22.160 lbs). Tested how it is used in real life! Additional tested up to 18.000 kg / 40.000 lbs
- Useable on all boxtrucks
- Best service available by the Verdegro service team
- Fully assembled BLADE-TMA attenuators shipped and easy to install using the truck bracket, no additional assembly (labor) costs!
- Optional truck bracket for quick and easy installation without any welding or fabrication costs (crash tested truck bracket, required by MASH)
- Innovating new and patented design to absorb energy in retracted position
- Fast deployment within 20 seconds from transport position to full operation mode. Can be deployed while driving at a speed of 50 mph / 80 kph
- Modular design, which results in lower repair costs and easy parts replacement
- No need for an expensive hydraulic raised arrow board frame
- The optional arrow board is mounted on top of the attenuator
- Swap your attenuator + arrow board over to another truck in 10 minutes
- Hydraulic powerpack located in the attenuator.
- Vertical position. Not losing any space on the truck bed as with a fold over attenuator.
- The open design and vertical transport position creates less wind resistance and vibration while driving
- No hydraulic hoses or extra pivot points in the impact absorbing area
- No need to install a bracket on your truck body or flatbed
- Keep your loading space for what it is meant for

MASH TESTED, PASSED, FHWA ELIGIBLE AND DOT APPROVED

Options:

- Bolt able truck bracket including fenders:
- Arrow board bracket
- Jockey wheels
- Chevrons/Reflective foil;
- Truck body

BLADE-TMA MASH TL-3

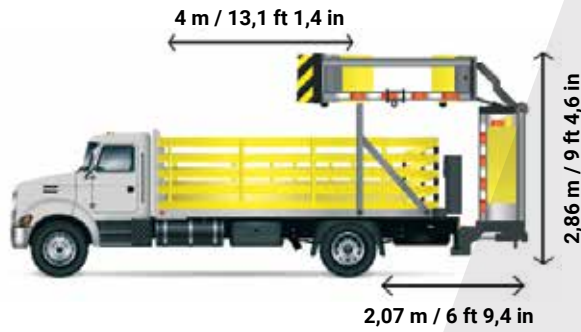


Comparison MASH TMA results

		MASH Test 3-50*	MASH Test 3-51*	MASH Test 3-52*	MASH Test 3-53*
Max. G-force by MASH ferred:	Pre-	15.0G	15.0G	15.0G	15.0G
	Max:	20.49G	20.49G	20.49G	20.49G
BLADE-TMA G-force (ride down)		12.0G	15.0G	13.8G	11.5G
Other MASH available TMA G-force (ride down)		19.2G	20.1G	18.6G	12.5G
Roll-ahead BLADE-TMA					
Roll-ahead other MASH TMA					
		4420mm			5121mm
BLADE-TMA G-force reduction compared to another brand!		± 37,5%	± 24,9%	± 25,8%	± 8%

*FHWA Website

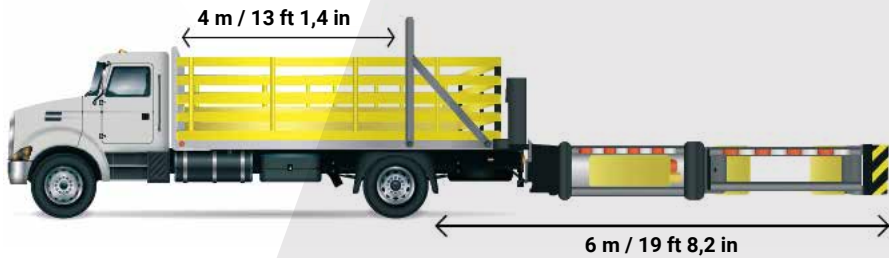
ATTENUATOR TRUCK BENEFITS



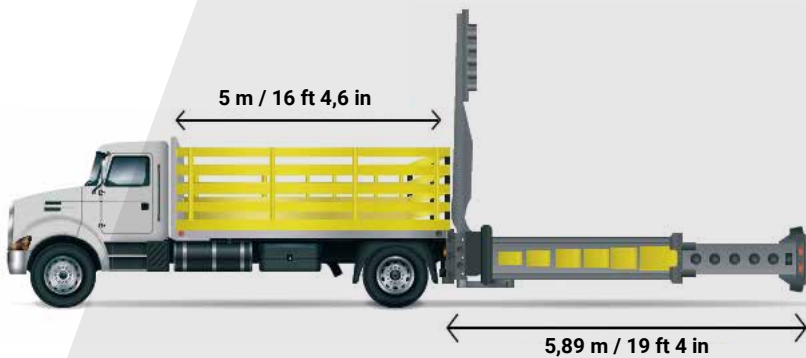
OTHER TMA



BLADE-TMA



OTHER TMA



BLADE-TMA

ACCESSOIRES



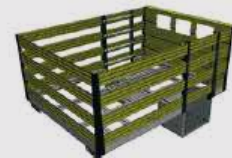
(standard) Quick connect + level system



Truck bracket



Arrow board bracket



Truck body



Jockey wheels



Foil



**INCLUDING
THE CABIN
CONTROL UNIT**

PROUDLY TESTED IN THE U.S.A.

The first and only TMA with all crash test movies shown public

**Texas A&M
Transportation
Institute
Proving Ground**


Test Report No. 490902-VER1-4
Test Report Date: January 2017

MASH-16 TL-3 Evaluation of the Verdegro BLADE TMA

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Contract No.: 1606275
Test No.: 690902-VER1/VER2/VER3/VER4
Test Date: 2016-12-12/12-13/12-14/12-15

Sponsored by
Verdegro Holding BV

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THE 39 CRASH TESTS

