# TUBUS TI

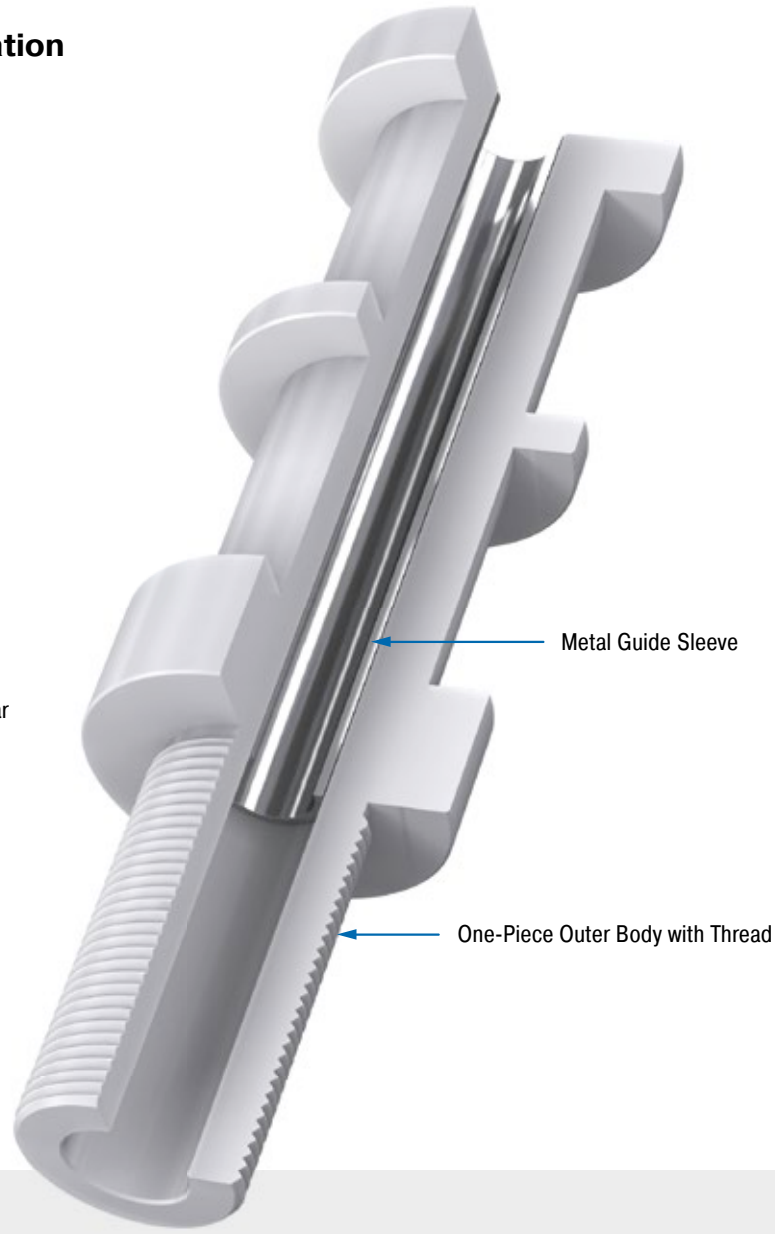
## Safety Dampers

### Compact one-off deceleration

Once only, but safely: ACE now offers these innovative single use TUBUS TI absorbers for emergency stop applications as an alternative to the successful TUBUS profile dampers. In comparison to standard elastomer absorbers, these safety dampers ensure energy absorption of up to 96 % without a recoil effect. The dampers are deformed in the impact and cannot be reused afterwards.

The easy to assemble and maintenance-free single hit damper are also a cost-effective alternative to the hydraulic safety shock absorbers from ACE. They are made of a high quality synthetic with an inside metal core and absorb up to 4,510 Nm energy.

The TUBUS TI is mainly used as emergency stop damping in linear axes, tool machines, servo drives with high speeds and other similar areas.




## Technical Data

**Energy capacity:** 562 Nm/Cycle to 4,510 Nm/Cycle

**Energy absorption:** 91 % to 96 %

**Dynamic force range:** 37,100 N to 121,100 N

**Operating temperature range:**
-40 °C to +90 °C, Co-polyester Elastomer
-25 °C to +50 °C, Polymer

**Construction size:** 32 mm to 50 mm

**Material:** Profile body: Co-Polyester elastomer or polymer; Guide sleeve: Metal

**Mounting:** In any position

**Environment:** Resistant to lubricants and chemical attack according to resistance list. No UV resistance.

**Impact velocity range:** Max. 5 m/s

**Torque max.:** Finger tight

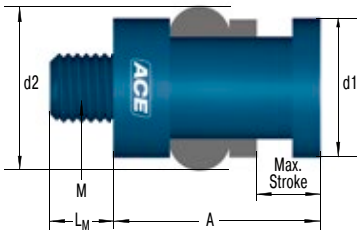
**Application field:** Emergency stop damping in linear axes, Portal systems, Test stations, Electro-mechanical drives

**Note:** The single-use damper must be replaced after each impact.

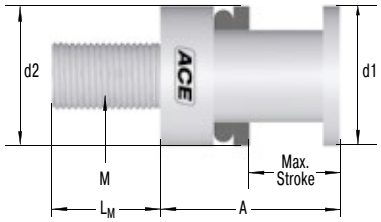
**On request:** Other construction sizes on request.

Issue 08.2016 – Specifications subject to change

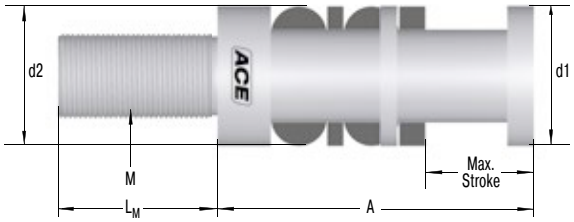
## TI16




## TI24

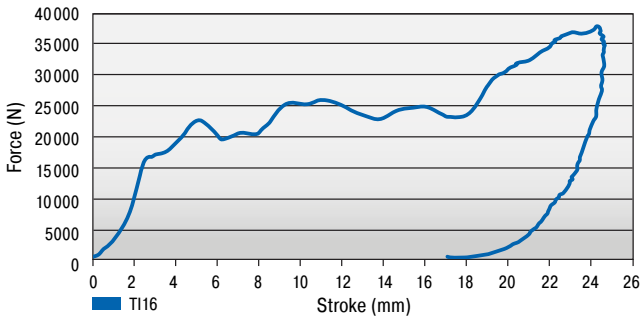



## TI30



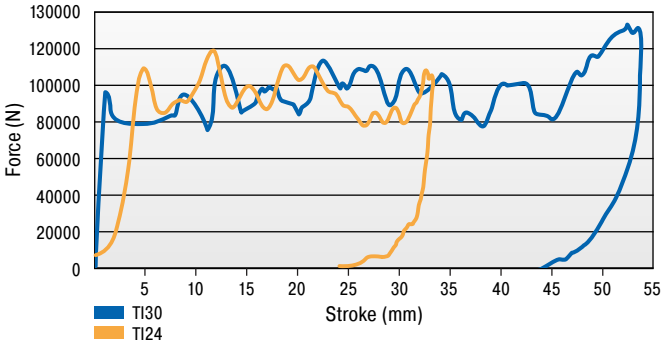

## Characteristics

**Force-Stroke TI16**
**Dynamic trials on a drop test rig**




Total energy: 562 Nm
Absorbed energy: 511 Nm
Efficiency: 91 %

**Force-Stroke TI30 and TI24**
**Dynamic trials on a drop test rig**




Total energy: 4,510 Nm
Absorbed energy: 4,309 Nm
Efficiency: 96 %

Total energy: 2,701 Nm
Absorbed energy: 2,545 Nm
Efficiency: 94 %

The characteristic values have been established under dynamic load.

**The calculation and selection of the most suitable damper should be carried out or be approved by ACE.**

**Ordering Example** **TI16-25-1**

TUBUS irreversible
Thread Size M 16
Stroke 25 mm
Number of bellows

### Performance and Dimensions

| TYPES | Energy capacity emergency use Nm/cycle | Stroke max. mm | Reacting force N | A mm | d1 mm | d2 mm | $L_M$ mm | M | Depth thread hole min. mm | Weight kg |
|---|---|---|---|---|---|---|---|---|---|---|
| TI16-25-1 | 562 | 25 | 37,138 | 48 | 32 | 38 | 15 | M16x2 | 25 | 0.050 |
| TI24-33-1 | 2,701 | 33 | 113,590 | 64.5 | 50 | 50 | 40 | M24x3 | 40 | 0.140 |
| TI30-52-2 | 4,510 | 52 | 121,130 | 113 | 50 | 50 | 57 | M30x3.5 | 63 | 0.248 |

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