TUBUS TR-H

Compact size with soft deceleration and high energy absorption

Radial Damping, Hard Version
Energy capacity 2.7 Nm/Cycle to 427 Nm/Cycle
Maximum stroke 15 mm bis 56 mm

Harder mixture of materials for higher energy absorption: The maintenance-free and ready-to-install TR-H-Series profile dampers, are stressed radially in the same way as the basic TR model. With almost the same dimensions, they also decelerate with a very long and soft action. The harder co-polyester elastomer mixture leads to significantly high energy absorption of 2.7 Nm to 427 Nm in these models. Easy to mount due to the supplied special screw.

The TR-H-Series is space-saving with dimensions of Ø 30 mm to Ø 102 mm. It complements the TUBUS range between the progressive TR and almost linear TS models. Users are therefore provided with a full range of deceleration curves within the ACE TUBUS family.

The TUBUS TR-H products are suitable end position dampers in linear axes, in toolmaking and tool machines and in hydraulic, pneumatic and handling equipment as well as other applications.

Technical Data

Energy capacity: 2.7 Nm/Cycle to 427 Nm/Cycle

Energy absorption: 39 % to 62 %

Dynamic force range: 550 N to 21,200 N

Operating temperature range: -40 °C to +90 °C

Construction size: 30 mm to 102 mm

Mounting: In any position

Material hardness rating: Shore 55D

Material: Profile body: Co-Polyester Elastomer

Environment: Resistant to microbes, seawater or chemical attack. Excellent UV and ozone resistance. Material does not absorb water or swell.

Impact velocity range: Max. 5 m/s

Torque max.:
M5: 3 Nm
M6: 6 Nm
M8: 20 Nm

Application field: Furniture industry, Sports equipment, Linear slides, Pneumatic cylinders, Handling modules, Machines and plants, Stacking units, Electro-mechanical drives, Conveyor systems

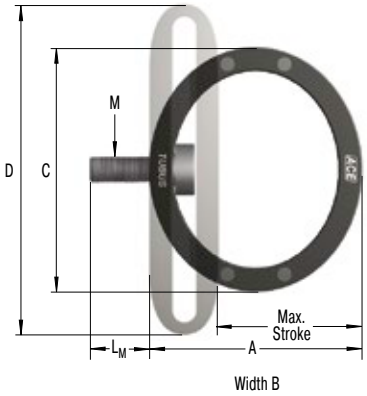
Note: Suitable for emergency stop applications and for continous use. For applications with preloading and increased temperatures please consult ACE.

Safety instructions: Mounting screw should additionally be secured with Loctite.

On request: Special strokes, -characteristics, -spring rates, -sizes and -materials.

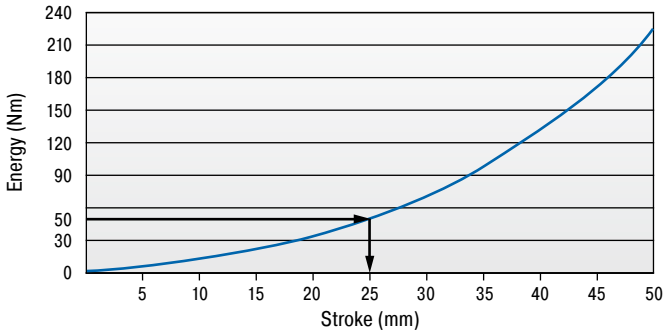
Issue 07.2017 – Specifications subject to change

TR-H

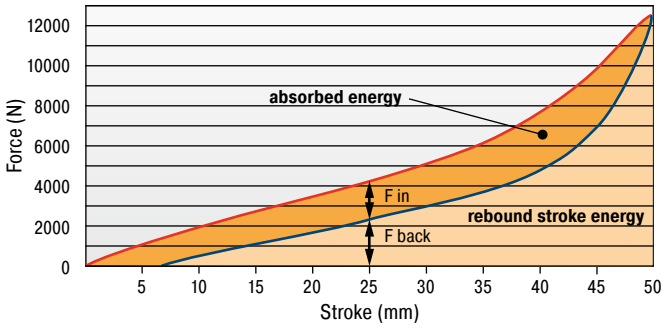


Characteristics

Type TR95-50H
Energy-Stroke Characteristic (dynamic)
(with impact velocity over 0.5 m/s)



Type TR95-50H
Force-Stroke Characteristic (dynamic)
(with impact velocity over 0.5 m/s)



With the aid of the characteristic curves above you can estimate the proportion of the total energy that will be absorbed.
Example: With impact energy of 50 Nm the Energy-Stroke diagram shows that a stroke of about 25 mm is needed.
On the Force-Stroke diagram you can estimate the proportion of absorbed energy to rebound energy at this stroke length.
Dynamic (v > 0.5 m/s) and static (v ⩽ 0.5 m/s) characteristics of all types are available on request.

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

Ordering Example **TR95-50H**

TUBUS Radial
Outer-Ø 95 mm
Stroke 50 mm
Hard Version

Performance and Dimensions

TYPES	[1] W_3 Nm/cycle	Emergency Stop W_3 Nm/cycle	Stroke max. mm	A mm	B mm	C mm	D mm	L_M mm	M	Weight kg
TR30-15H	2.7	5.7	15	23	13	30	38	5	M5	0.009
TR39-19H	6.0	18.0	19	30	19	39	50	5	M5	0.013
TR45-23H	8.7	24.0	23	36	20	45	58	5	M5	0.019
TR52-32H	11.7	20.0	32	42	34	52	68	5	M5	0.030
TR64-41H	25.0	46.0	41	53	43	64	87	5	M5	0.054
TR68-37H	66.5	98.0	37	56	46	68	88	5	M5	0.095
TR79-42H	81.5	106.0	42	64	46	79	102	6	M6	0.107
TR86-45H	124.0	206.0	45	69	51	86	109	6	M6	0.152
TR87-46H	158.0	261.0	46	68	67	86	111	8	M8	0.188
TR95-50H	228.0	342.0	50	77	82	95	124	8	M8	0.281
TR102-56H	290.0	427.0	56	84	81	102	133	8	M8	0.334

[1] Max. energy capacity per cycle for continous use.