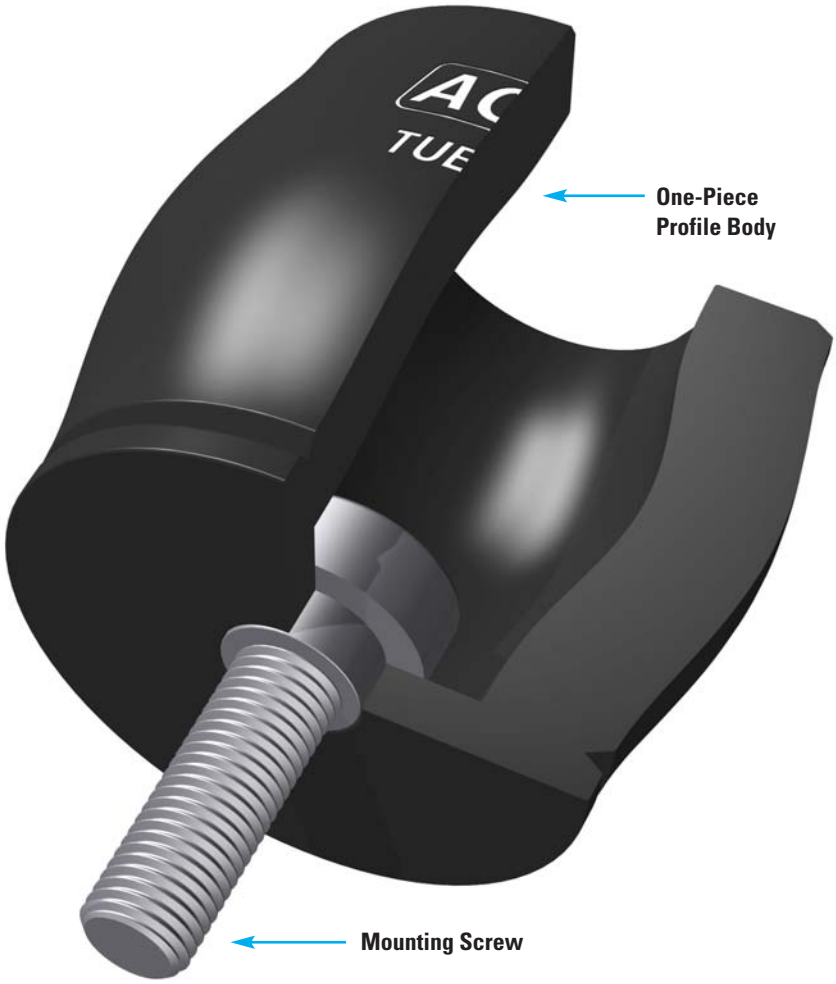
The **Profile Damper Type TA** from the innovative ACE TUBUS series is a maintenance free, self-contained damping element made from a special Co-Polyester Elastomer.
As a result of the degressive damping characteristic it provides a high energy absorption at the beginning of its stroke.
The excellent temperature characteristic of the material provides consistent damping performance over a temperature range of -40°C to 90°C.
The low installed weight, the economic price and the long operating life of up 1 million cycles make this an attractive alternative to hydraulic end position damping, if the moving mass does not have to stop in an exact datum position and it is not necessary to absorb 100 % of the incoming energy.
The **space-saving package size** ranges from ø 12 mm up to ø 116 mm and is very simply and quickly installed with the supplied specially stepped mounting screw.
The TA series have been specially developed to provide **Maximum Energy Capacity** in the **Minimum Mounting Space** in the capacity range from 2 Nm up to 2 000 Nm.

Life expectancy is extremely high; **up to twenty times** longer than for urethane dampers, up to **ten times** longer than rubber bumpers and up to **five times** longer than steel springs.



Overload capacity: For emergency use only (1 cycle) it is possible to exceed the W_3 rating by + 40%.

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

Dynamic force range: 980 N to 82 000 N

Temperature range: - 40°C to 90°C

Energy absorption: 40 % to 66 %

Material hardness rating: Shore 55D

Mounting: in any position

Impact velocity range:
up to max. 5 m/s

Mounting screw torque:
M3: 2 Nm
M4: 4 Nm
M5: 6 Nm
M6: 10 Nm
M8: 25 Nm
M12: 85 Nm
M16: 210 Nm

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

Calculation and selection to be approved by ACE.

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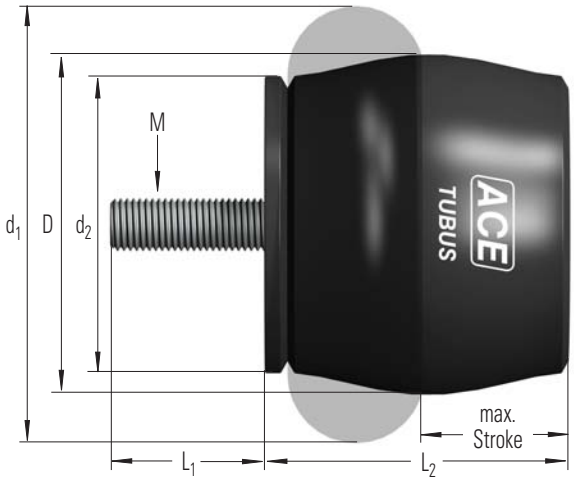
Ordering Example TA 37-16

TUBUS axial
Outer-ø 37 mm
Stroke 16 mm



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

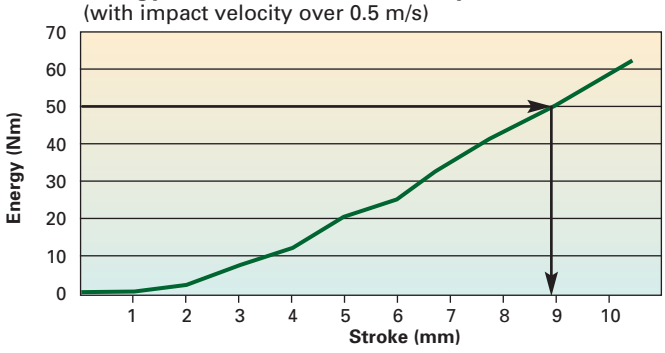
Dimensions and Capacity Chart

Type	*W_3 Nm/cycle	max Stroke mm	D	L_1	M	L_2	d_1	d_2	Weight in gm
TA 12-5	2	5	12	3	M3	11	15	11	3
TA 17-7	6	7	17	4	M4	16	22	15	4
TA 21-9	10	9	21	5	M5	18	26	18	5
TA 22-10	15	10	22	6	M6	19	27	19	5
TA 28-12	30	12	28	6	M6	26	36	25	10
TA 34-14	50	14	34	6	M6	30	43	30	20
TA 37-16	65	16	37	6	M6	33	48	33	25
TA 40-16	80	16	40	8	M8	35	50	34	30
TA 43-18	100	18	43	8	M8	38	55	38	40
TA 47-20	130	20	47	12	M12	41	60	41	50
TA 50-22	160	22	50	12	M12	45	64	44	60
TA 54-22	190	22	54	12	M12	47	68	47	65
TA 57-24	230	24	57	12	M12	51	73	50	90
TA 62-25	280	25	62	12	M12	54	78	53	105
TA 65-27	350	27	65	12	M12	58	82	57	130
TA 70-29	400	29	70	12	M12	61	86	60	145
TA 72-31	500	31	72	16	M16	65	91	63	175
TA 80-32	600	32	80	16	M16	69	100	69	225
TA 82-35	700	35	82	16	M16	74	105	72	260
TA 85-36	800	36	85	16	M16	76	110	75	300
TA 90-38	900	38	90	16	M16	80	114	78	335
TA 98-40	1200	40	98	16	M16	86	123	85	425
TA 116-48	2000	48	116	16	M16	101	146	98	740

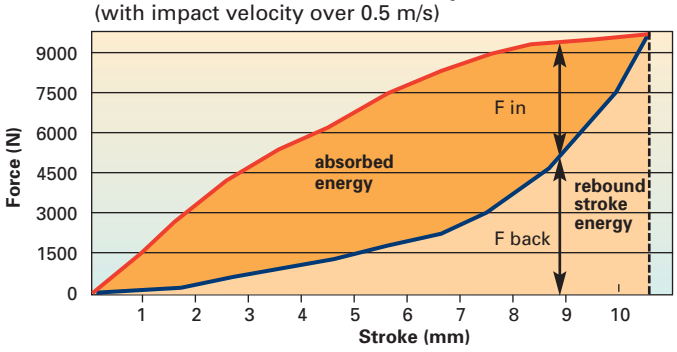
* Max. Energy capacity per cycle for continuous use. For emergency use only (1 cycle) it is possible to exceed this rating by +40 %.

Characteristics of Type TA 37-16

Energy - Stroke Characteristic (dynamic)
(with impact velocity over 0.5 m/s)



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 8.8 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.

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