

Profile Dampers TA, Axial Damping

Material: Co-Polyester Elastomer.

Maintenance-free, self-contained damping elements. Due to the degressive damping characteristics it provides a very high energy absorption at the beginning of the 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 to 1 million cycles makes this an attractive alternative to hydraulic end position damping, if the moving mass does not need to stop in an exact datum position and it is not necessary to absorb 100% of the incoming energy. The life cycle is up to 20 times longer than for urethane dampers, up to ten times longer than for rubber.

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: 870 N to 90,000 N.

Temperature Range: -40°C to +90°C.

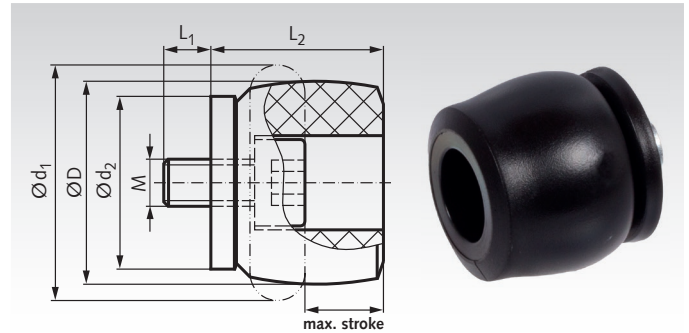
Energy Absorption: 58% to 73%.

Material Hardness: Shore 55.D

Ordering Details: e.g.: Product No. 691 012 00, Profile Damper TA 12-5

Product No.	Type mm	$W_3^{1)}$ Nm/Stroke	$W_{3\max}^{2)}$ Nm/Stroke	max. Stroke mm	D mm	d_1 mm	d_2 mm	L_1 mm	L_2 mm	M Thread	Weight g
691 012 00	12-5	2	3	5	12	15	11	3	11	M3	1
691 017 00	17-7	6	9	7	17	22	15	4	16	M4	4
691 021 00	21-9	10	16	9	21	26	18	5	18	M5	7
691 022 00	22-10	11,5	21	10	22	27	19	6	19	M6	8
691 028 00	28-12	29	46	12	28	36	25	6	26	M6	16
691 034 00	34-14	48	87	14	34	43	30	6	30	M6	24
691 037 00	37-16	65	112	16	37	48	33	6	33	M6	30
691 040 00	40-16	82	130	16	40	50	34	8	35	M8	40
691 043 00	43-18	112	165	18	43	55	38	8	38	M8	51
691 047 00	47-20	140	173	20	47	60	41	12	41	M12	70
691 050 00	50-22	170	223	22	50	64	44	12	45	M12	85
691 054 00	54-22	201	334	22	54	68	47	12	47	M12	100
691 057 00	57-24	242	302	24	57	73	50	12	51	M12	116
691 062 00	62-25	304	361	25	62	78	53	12	54	M12	132
691 065 00	65-27	374	468	27	65	82	57	12	58	M12	153
691 070 00	70-29	421	524	29	70	86	60	12	61	M12	174
691 072 00	72-31	482	559	31	72	91	63	16	65	M16	257
691 080 00	80-32	570	831	32	80	100	69	16	69	M16	311
691 082 00	82-35	683	921	35	82	105	72	16	74	M16	350
691 085 00	85-36	797	1043	36	85	110	75	16	76	M16	391
691 090 00	90-38	934	1249	38	90	114	78	16	80	M16	414
691 098 00	98-40	1147	1555	40	98	123	85	16	86	M16	513
691 099 00	116-48	2014	2951	48	116	146	98	16	101	M16	803

¹⁾ Max. energy capacity per cycle for continuous use. ²⁾ For a single cycle, e.g. an emergency stop.



Mounting: in any position. **Impact Velocity range:** up to max. 5 m/s.

Mounting Bolt Torque:

M3: 1 Nm M8: 20 Nm

M4: 2 Nm M12: 50 Nm

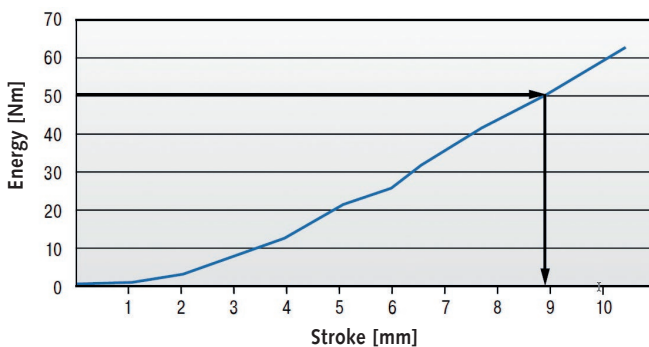
M5: 4 Nm M16: 120 Nm

M6: 6 Nm

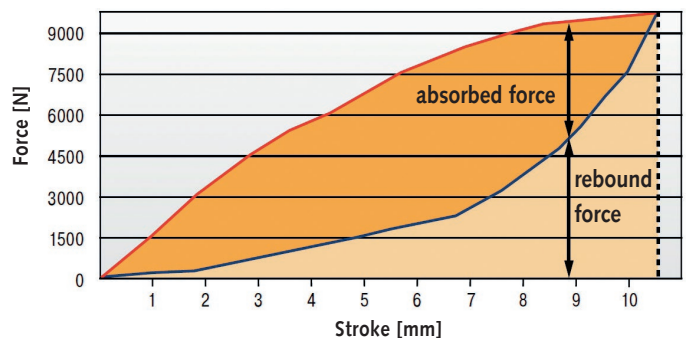
On request: special strokes, characteristics, spring rates, sizes and materials.

Characteristics of Product No. 691 037 00

Energy-Stroke Characteristics (dynamic)



Force-Stroke Characteristics (dynamic)



With aid of the characteristics curves above you can determine the amount of energy that will be absorbed.

Example: Energy to be absorbed 50 Nm = stroke needed 8.8 mm see chart energy-stroke characteristic. The energy stroke chart serves to determine the absorbed or rebound energy at a given stroke length.

Dynamic ($v > 0.5$ m/s) and static ($v \leq 0.5$ m/s) characteristics for all types available on request.