

## Toothed belts by the meter

### T profile



#### Material:

Polyurethane (PU) with steel cord reinforcement.

#### Sample order:

nIm 22054-0510X0500  
(include length L)

#### Note:

Toothed belt with trapezoidal profile to DIN 7721 T1. Intended especially for drives subject to high bending loads. May be used for pulleys with a very small diameter. Generally used for linear drives, low-power transmission and transport applications. Polyurethane belts may be welded. The power transmission rating of welded belts drops by about 50%.

Width tolerance:  $\pm 0.5$  mm

Thickness tolerance:  $\pm 0.2$  mm

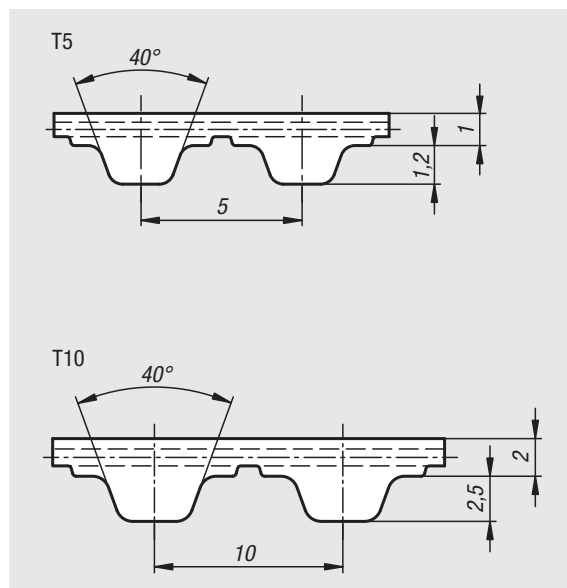
#### On request:

Other lengths.

With T5 pitch, in 5 mm increments.

With T10 pitch, in 10 mm increments.

Maximum belt length 100 metres.



Order No.	Profile	belt width	Tension max. N	Length	matching clamp plate
22054-0510X	T5	10	320	500/1000/1500/2000/2500/3000/3500/4000/5000	22012-05101
22054-0516X	T5	16	540	500/1000/1500/2000/2500/3000/3500/4000/5000	22012-05161
22054-0525X	T5	25	900	500/1000/1500/2000/2500/3000/3500/4000/5000	22012-05251
22054-1016X	T10	16	1610	500/1000/1500/2000/2500/3000/3500/4000/5000	22012-10161
22054-1025X	T10	25	2650	500/1000/1500/2000/2500/3000/3500/4000/5000	22012-10251
22054-1032X	T10	32	3450	500/1000/1500/2000/2500/3000/3500/4000/5000	22012-10321

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## Specific tooth force

The specific tooth force  $F_{Uspez}$  is the maximum force that a single engaged belt tooth 1 cm wide can transmit.

This force depends on the speed of the drive pulley. To calculate the transmissible longitudinal force  $F_U$  for the belt cross-section, the number  $z_e$  of engaged teeth is multiplied by the specific tooth force  $F_{Uspez}$  and the belt width  $b$ .

$$F_U = F_{Uspec} \cdot z_e \cdot b$$

$F_U$  = transmissible longitudinal force

$F_{Uspec}$  = specific tooth force

$z_e$  = number of engaged teeth

$z_{emax}$  = for the calculation, perm. maximum number of engaged teeth = 12

$b$  = belt width in cm

## Pitch T5

rpm	$F_{Uspec}$ (N/cm)	rpm	$F_{Uspec}$ (N/cm)	rpm	$F_{Uspec}$ (N/cm)	rpm	$F_{Uspec}$ (N/cm)
0	24,70	800	17,02	1900	14,21	4500	11,25
20	24,07	900	16,65	2000	14,03	5000	10,88
40	23,53	1000	16,32	2200	13,71	5500	10,55
60	23,05	1100	16,01	2400	13,42	6000	10,24
80	22,64	1200	15,73	2600	13,14	6500	9,96
100	22,28	1300	15,47	2800	12,89	7000	9,70
200	20,90	1400	15,22	3000	12,65	7500	9,46
300	19,89	1440	15,13	3200	12,43	8000	9,23
400	19,10	1500	15,00	3400	12,22	8500	9,01
500	18,45	1600	14,78	3600	12,03	9000	8,81
600	17,91	1700	14,58	3800	11,84	9500	8,62
700	17,44	1800	14,39	4000	11,66	10000	8,44

## Pitch T10

rpm	$F_{Uspec}$ (N/cm)	rpm	$F_{Uspec}$ (N/cm)	rpm	$F_{Uspec}$ (N/cm)	rpm	$F_{Uspec}$ (N/cm)
0	51,80	800	33,34	1900	26,53	4500	19,40
20	50,32	900	32,44	2000	26,12	5000	18,51
40	49,04	1000	31,63	2200	25,34	5500	17,70
60	47,92	1100	30,89	2400	24,63	6000	16,97
80	46,95	1200	30,21	2600	23,97	6500	16,29
100	46,11	1300	29,58	2800	23,36	7000	15,66
200	42,75	1400	28,99	3000	22,78	7500	15,07
300	40,28	1440	28,76	3200	22,25	8000	14,52
400	38,36	1500	28,44	3400	21,74	8500	14,00
500	36,80	1600	27,92	3600	21,27	9000	13,51
600	35,49	1700	27,43	3800	20,81	9500	13,05
700	34,35	1800	26,97	4000	20,39	10000	12,61