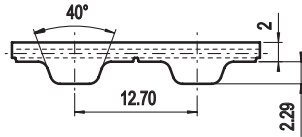


H



Belt characteristics

- Polyurethane timing belt with trapezoidal tooth profile according to DIN/ISO 5296 with steel tension cords
- Imperial pitch 1/2" = 12,7 mm
- Allow to use small diameter pulley
- Mainly used in applications where inch pitch is an advantage (USA / UK)

- Width tolerance: $\pm 0,5$ [mm]
- Length tolerance: $\pm 0,5$ [mm/m]
- Thickness tolerance: $\pm 0,2$ [mm]

Technical data

Belt width b	Allowable tensile load Type M F_{Tzul} [N]	Allowable tensile load Type V F_{Tzul} [N]	Breaking load Type M F_{Br} [N]	Specific spring rate C_{spez} [N]	Weight [kg/m]
Code / mm					
050 / 12,7	1270	635	4620	317500	0,05
075 / 19,1	1960	980	7140	490000	0,08
100 / 25,4	2760	1380	10080	690000	0,11
150 / 38,1	4140	2070	15120	1035000	0,16
200 / 50,8	5640	2820	20580	1410000	0,22
300 / 76,2	8510	4255	31080	2127500	0,32
400/101,6	11390	5695	41580	2847500	0,43
600/152,4	17250	8625	63000	4312500	0,65
800/203,2	11390	5695	41580	2847500	0,56

Other widths are available on request.

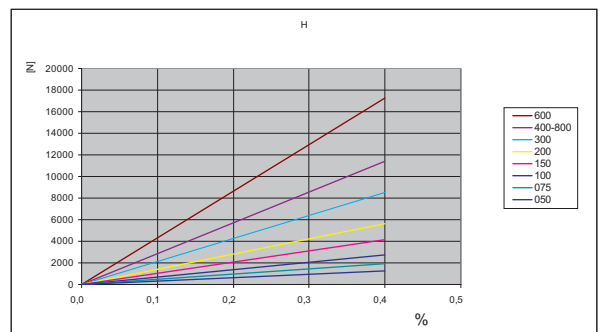
Tooth shear strength

rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]	rpm	F_{Uspez} [N/cm]
0	45,30	800	29,04	1900	23,11	4500	16,88
20	43,95	900	28,26	2000	22,74	5000	16,11
40	42,78	1000	27,55	2200	22,07	5500	15,41
60	41,77	1100	26,90	2400	21,44	6000	14,76
80	40,88	1200	26,31	2600	20,87	6500	14,17
100	40,11	1300	25,76	2800	20,34	7000	13,62
200	37,22	1400	25,25	3000	19,84	7500	13,11
300	35,07	1440	25,05	3200	19,37	8000	12,63
400	33,41	1500	24,77	3400	18,93	8500	12,18
500	32,05	1600	24,32	3600	18,51	9000	11,75
600	30,90	1700	23,89	3800	18,12	9500	11,35
700	29,91	1800	23,49	4000	17,75	10000	10,96

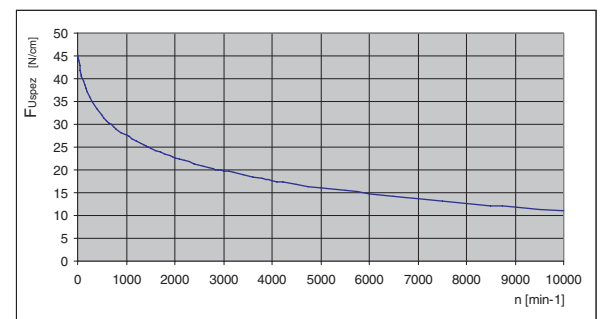
The specific load F_{Uspez} is the maximum load which one single belt tooth 1 cm wide can withstand in all operating conditions. This force is related to the drive rpm. The total load F_u transmissible by the belt in the drive is calculated by:

$$F_u [N] = F_{Uspez} \cdot Z_e \cdot b$$

Load / Elongation [%]



Tooth shear strength / rpm



F_u [N] = peripheral force
 F_{Uspez} [N/cm] = specific load
 Z_e = number of teeth in mesh in the small pulley
 Z_{emax} = max. no of teeth in mesh to be considered for the calculation of the drive
 Z_{emax} = 12 for ELATECH® M
 Z_{emax} = 6 for ELATECH® V
 b [cm] = belt width in cm

Specialties

PROFILE	Belt width b Code /mm	ARAMID CORD		STAINLESS STEEL	
		F _{Tzul} [N] M type	F _{Br} [N]	F _{Tzul} [N] M type	F _{Br} [N]
H	050 / 12,7	1210	4950	830	3300
	075 / 19,1	1870	7650	1280	5100
	100 / 25,4	2640	10800	1800	7200
	150 / 38,1	3960	16200	2700	10800
	200 / 50,8	5390	22050	3680	14700
	300 / 76,2	8140	33300		
	400/101,6	10890	44550		
	600/152,4	16500	67500		
	800/203,2	11000	45000		

Flexibility

Minimum pulley number of teeth and minimum idler diameter				
H		TYPE OF CORD		
		STANDARD	ARAMID	STAINLESS
Drive without reverse bending 	Timing pulley z _{min}	14	14	15
	Idler running on belt teeth d _{min}	60 mm	60 mm	65 mm
Drive with reverse bending 	Timing pulley z _{min}	20	20	20
	Idler running on belt back d _{min}	80 mm	80 mm	80 mm

Timing pulleys

z	da	dw	z	da	dw	z	da	dw	z	da	dw
14	55,23	56,60	43	172,46	173,82	72	289,68	291,05	101	406,92	408,28
15	59,27	60,64	44	176,50	177,86	73	293,72	295,10	102	410,96	412,34
16	63,31	64,68	45	180,54	181,90	74	297,78	299,14	103	415,00	416,38
17	67,35	68,72	46	184,58	185,96	75	301,82	303,18	104	419,04	420,42
18	71,40	72,76	47	188,62	190,00	76	305,86	307,22	105	423,08	424,46
19	75,44	76,80	48	192,67	194,04	77	309,90	311,26	106	427,14	428,50
20	79,48	80,84	49	196,71	198,08	78	313,94	315,32	107	431,18	432,54
21	83,52	84,88	50	200,75	202,13	79	317,98	319,36	108	435,22	436,58
22	87,57	88,94	51	204,80	206,17	80	322,02	323,40	109	439,26	440,62
23	91,61	92,98	52	208,84	210,21	81	326,06	327,44	110	443,30	444,68
24	95,65	97,02	53	212,88	214,25	82	330,12	331,48	111	447,34	448,72
25	99,69	101,06	54	216,92	218,29	83	334,16	335,52	112	451,38	452,76
26	103,73	105,10	55	220,96	222,33	84	338,20	339,56	113	455,42	456,80
27	107,77	109,14	56	225,00	226,37	85	342,24	343,60	114	459,48	460,84
28	111,81	113,18	57	229,04	230,41	86	346,28	347,66	115	463,52	464,88
29	115,85	117,22	58	233,10	234,47	87	350,33	351,70	116	467,56	468,92
30	119,91	121,28	59	237,14	238,51	88	354,37	355,74	117	471,60	472,96
31	123,95	125,32	60	241,18	242,55	89	358,41	359,78	118	475,64	477,02
32	127,99	129,36	61	245,22	246,59	90	362,45	363,82	119	479,68	481,06
33	132,03	133,40	62	249,26	250,63	91	366,50	367,86	120	483,72	485,10
34	136,07	137,44	63	253,30	254,67	92	370,54	371,90			
35	140,11	141,48	64	257,34	258,71	93	374,58	375,94			
36	144,15	145,52	65	261,38	262,75	94	378,62	380,00			
37	148,20	149,56	66	265,44	266,81	95	382,66	384,04			
38	152,24	153,62	67	269,48	270,85	96	386,70	388,08			
39	156,28	157,66	68	273,52	274,89	97	390,74	392,12			
40	160,32	161,70	69	277,56	278,93	98	394,80	396,16			
41	164,36	165,74	70	281,60	282,97	99	398,84	400,20			
42	168,42	169,78	71	285,64	287,01	100	402,88	404,24			

