Technical datasheet

PU Linear T5 Aramid NTB black AS

TBPU000173

General information

Productgroup	Timing Belts, PU Linear
Industry segment	General industry; Electronics
Main product feature	Low friction back side, Low friction tooth side, Positive drive, Wear resistant

Belt construction

Tension member	Aramid
Body material	polyurethane
Tooth side surface	polyamide fabric
Back side surface	polyamide fabric

Characteristics

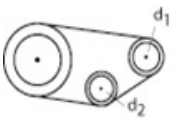
Food Grade (FG)	No
Anti-static (AS)	Yes
Oil & Fat resistance	Good

Technical data

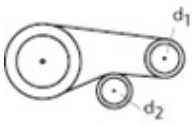
Tooth	profile		T5			
	pitch		5	mm	0.197	in.
Hardness body material	according to ISO 868		92A	Shore		
Belt thickness			2.3	mm	0.091	in.
Coefficient of friction	tooth side to steel	dynamic	0.3			
		static	0.3			
Operating temperature	continuous	from/to	-10 / 80	°C	14 / 176	°F
Minimum pulley diameter	A) without counter flexing	number of teeth, t1	10			
		d1	23.05	mm	0.907	in.
		d2	30	mm	1.181	in.
	B) with counter flexing	number of teeth, t1	15			
		d1	15.05	mm	0.593	in.
		d2	30	mm	1.181	in.
Endless length	minimum		500	mm	19.685	in.
Manufacturing length	standard		100000	mm	328.084	ft.

Reference image(s)

A) without counter flexing



B) with counter flexing



Fabrication

This information on the fabrication options is general, please contact Ammeraal Beltech for the specific fabrication possibilities of the timing belt of your choice.
Open end, prepared splice, spliced endless with mechanical fastener or a pin joint fastener.
Cleats welded or mechanically attached, metal teeth, guides welded or glued.
Covers can be welded, glued, coated or vulkanized onto the back side of the timing belt.
Thermoplastic covers can be embossed. Perforations, lateral and logitudinal slots, lateral and longitudinal profiles

Additional Information

Tooth profile according to standard: metric ISO 17396 , imperial ISO 5296-1, curvilinear ISO 13050, depending on the belt type.

The information on this data sheet apply to a temperature of approx. 20 °C (68 °F) unless otherwise stated.

Consult our specialists for further information like technical calculations. Instructions regarding joining, storage & maintenance and tracking & tensioning.

Belt load

Standard belt width [mm]	Allow. tensile load Linear open end & Torque [N]	Allow. tensile load Linear welded endless [N]	Breaking force [N]	Spring force [N]	Weight [kg/m]
10	430	215	1500	75000	0.02
16	610	305	2400	135000	0.032
25	980	490	3750	210000	0.05
32	1140	570	4675	260000	0.064
50	1800	900	7500	409000	0.1
75	2700	1350	11250	590000	0.16
100.1	3600	1800	15000	780000	0.2

Tooth load

Speed rpm [1/min]	Specific tooth force [N/mm]	Specific power [W/mm]	Specific torque [Ncm/mm]
0	2.452	0	0.195
25	2.36	0.005	0.187
50	2.274	0.009	0.181
75	2.23	0.014	0.177
100	2.175	0.018	0.173
150	2.105	0.026	0.167
200	2.05	0.034	0.163
300	1.955	0.049	0.155
400	1.867	0.062	0.148
500	1.815	0.076	0.144
750	1.697	0.106	0.135
1000	1.626	0.136	0.129
1250	1.56	0.163	0.124
1500	1.5	0.188	0.119
1750	1.448	0.211	0.115
2000	1.403	0.234	0.111
3000	1.265	0.316	0.1
4000	1.166	0.389	0.092

Pulley load

Number of teeth	outer Ø [mm]	Effective Ø [mm]	Ø with flanges [mm]	Max. bore [mm]	Number of teeth	outer Ø [mm]	Effective Ø [mm]	Ø with flanges [mm]	Max. bore [mm]
10	15.05	15.92	20	6	66	104.17	105.04	109	86
11	16.64	17.51	22	6	67	105.76	106.63	111	88
12	18.23	19.01	23	6	68	107.36	108.23	112	90
13	19.82	20.69	25	8	69	108.95	109.82	114	90
14	21.41	22.28	26	8	70	110.54	111.41	115	90
15	23.05	23.87	28	10	71	112.13	113.00	117	92
16	24.59	25.46	30	12	72	113.72	114.59	119	94
17	26.19	27.06	31	14	73	115.31	116.18	120	96
18	27.78	28.65	33	16	74	116.90	117.77	122	96
19	29.37	30.24	34	16	75	118.50	119.37	123	98
20	30.96	31.83	36	18	76	120.09	120.96	125	100
21	32.55	33.42	37	20	77	121.68	122.55	127	102
22	34.14	35.01	39	22	78	123.27	124.14	128	104
23	35.74	36.61	41	24	79	124.86	125.73	130	104
24	37.33	38.20	42	24	80	126.45	127.32	131	106
25	38.92	39.79	44	25	81	128.05	128.92	133	108
26	40.51	41.38	45	25	82	129.64	130.51	135	110
27	42.10	42.97	47	27	83	131.23	132.01	136	110
28	43.69	44.56	49	29	84	132.82	133.69	138	112
29	45.29	46.16	50	31	85	134.41	135.28	139	114
30	46.88	47.75	52	33	86	136.00	136.87	141	116
31	48.47	49.34	53	35	87	137.59	138.46	143	119
32	50.06	50.93	55	37	88	139.19	140.06	144	120
33	51.65	52.52	57	39	89	140.78	141.65	146	120
34	53.24	54.11	58	39	90	142.37	143.24	147	122
35	54.83	55.70	60	40	91	143.96	144.83	149	124
36	56.43	57.30	61	42	92	145.55	146.42	150	126
37	58.02	58.89	63	43	93	147.14	148.01	152	126
38	59.61	60.48	65	45	94	148.74	149.61	154	129
39	61.20	62.07	66	45	95	150.33	151.20	155	130
40	62.79	63.66	68	47	96	151.92	152.79	157	130
41	64.38	65.25	69	48	97	153.51	154.38	158	132
42	65.98	66.85	71	50	98	155.10	155.97	160	132
43	67.57	68.44	72	52	99	156.69	157.56	162	134
44	69.16	70.03	74	52	100	158.29	159.16	163	136
45	70.75	71.62	76	54	101	159.88	160.75	165	139
46	72.34	73.21	77	56	102	161.47	162.34	166	140
47	73.93	74.80	79	58	103	163.06	163.93	168	140
48	75.52	76.39	80	60	104	164.65	165.52	170	140
49	77.12	77.99	82	60	105	166.24	167.11	171	142
50	78.71	79.58	84	60	106	167.83	168.70	173	146
51	80.30	81.17	85	62	107	169.43	170.30	174	146
52	81.89	82.76	87	64	108	171.02	171.89	176	148
53	83.48	84.35	88	66	109	172.61	173.48	178	150
54	85.07	85.94	90	66	110	174.20	175.07	179	150
55	86.67	87.54	92	68	111	175.79	176.66	181	152
56	88.26	89.13	93	70	112	177.38	178.25	182	152
57	89.85	90.72	95	72	113	178.98	179.85	184	152
58	91.44	92.31	96	74	114	180.57	181.44	185	154
59	93.03	93.90	98	74	115	182.16	183.03	187	154
60	94.62	95.49	100	76	116	183.75	184.62	189	154
61	96.21	97.08	101	79	117	185.34	186.21	190	154
62	97.81	98.68	103	80	118	186.93	187.80	192	156
63	99.40	100.27	104	82	119	188.52	189.39	193	156
64	100.99	101.86	106	82	120	190.12	190.99	195	156
65	102.58	103.45	108	84					

Standard