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## Timing-Belt Drives - Description

### General Description

Timing-belt drives enable a quiet operation and synchronous transmission of power. As they are maintenance free, these drives are very cost efficient. Due to varying requirements and consideration of the latest developments, there are a large number of different profiles, belt types and pulleys on the market. When non-positive drives (e.g. v-belt systems) are replaced, it is worth considering whether a conversion to a positive power transmission could be allowed from a safety point of view (some drives require slip at overload).

### Selection and Dimensioning

The belt material and type of timing belt must be selected considering the specific situation (e.g. required features regarding machine or surroundings). There are performance tables and a user-friendly calculation programme on the internet to help you select the correct size. Small pulley diameters reduce the service life. And at least 6 teeth should be engaged at any time. When consulting the performance tables, several application-specific operating factors must be considered.

### Mounting and Maintenance

At least one pulley must be equipped with flanges. The axes must be parallel (deviation no more than +0.5°). The belt must not be overstretched during mounting. For mounting and adjustment of the ideal belt there have to be sufficient possibilities for adjustment incorporated into the system.





### Belt Tension

Each belt needs a certain pre-tension, depending on the type of belt, pulley diameter, center distance and the tangential force to be transmitted. The overall sum of tensioning and peripheral force must not exceed the permitted tensile force of the belt. The belt tension is best adjusted by altering the center distance. Otherwise a smooth tensioning pulley mounted on the outside or a toothed one on the inside of the belt may be used for adjustment.

### Degree of degree of efficiency de

Depending on the type of belt (flexibility) and the number of teeth on the pulley (bending) the degree of efficiency can reach 98 %. Belts with tensile members of glass fibre cords (HTD and Inch) are particularly flexible.

## Timing Belt Profiles

Type	Profile	Pitch mm	Overall Height mm	Tooth Height mm	Tensile Force N*	Type	Profile	Pitch mm	Overall Height mm	Tooth Height mm	Tensile Force N*
Metric 	T2.5	2.5	1.30	0.70	120	HTD 	3M	3	2.40	1.20	100
	T5	5.0	2.20	1.20	330		5M	5	3.60	2.10	208
	T10	10.0	4.50	2.50	780		8M	8	5.60	3.40	375
Metric	AT5	5	2.70	1.20	700		14M	14	10.00	6.10	425
Metric 	AT10	10	5.00	2.50	1300	Inch 	MXL	2.032	1.10	0.51	39
							XL	5.080	2.20	1.27	56
							L	9.525	3.60	1.91	98
							H	12.700	4.30	2.29	235

\*permissible tensile force for timing belt at 10 mm belt width

## T Timing Belt Drives

- Classical, trapezoid profile in accordance with DIN 7721 with metric dimensions, pitch 2.5 mm, 5 mm and 10 mm in several widths. Pitch 20 mm and other widths available on request.
- Often used, cost-efficient, clean standard belt drive in many areas of machine building, e.g. also in the food industry. Polyurethane (PU) timing belts with tensile members of steel, little lengthening
- Little and light-coloured abrasion, good resistance against oil, fats and many chemicals. Temperature range -30° to +80°C. Good flexibility.
- PU timing belts can be welded. This means any desired length can be cut from the belts sold by the meter (on request).
- cost-efficient pulleys made from aluminium (some also made from plastic) pre-bored (custom bore etc. at extra charge).
- T timing belt drives do **not** feature little backlash (low backlash or zero backlash pulleys can be especially manufactured on request).

## HTD Timing Belt Drives

- Heavy-duty timing belt with half-round teeth profile, with metric dimensions, pitch 3 mm, 5 mm, 8 mm and 14 mm.
- Low-backlash belt drive with high efficiency used in many areas of machine building.
- Neoprene timing belts with tensile member of glass-fibre. Little, but dark abrasion. Temperature range -20° to +100°C.
- Up to medium torque quiet. At higher torques some noise due to the fast movement of air caused by the gaps between the teeth.
- Pitch-true, more expensive pulleys made from steel (pitch 3M made from aluminium, pitch 5M from 44 teeth made from aluminium).
- Pulleys pre-bored (custom bore etc. at extra charge), pitch 8M and 14M also prepared for Taper clamping bush.

## AT Timing Belt Drives

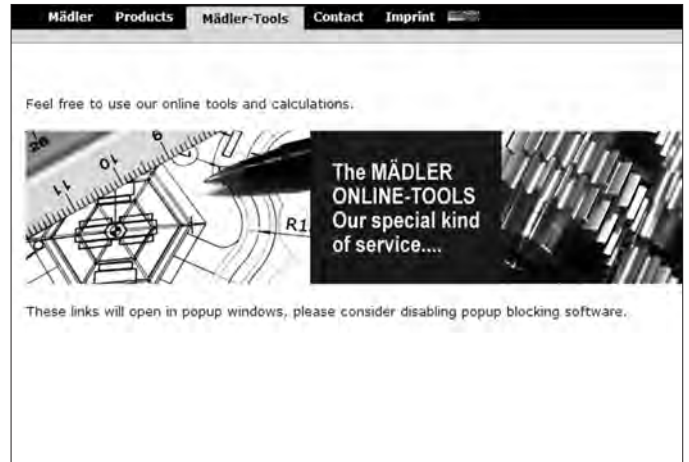
- Trapezoid profile especially designed to transmit high power, with metric dimensions, pitch 5 mm and 10 mm, in stock in several widths. Pitch 20 mm and other widths available on request.
- Clean belt drive used in many areas of machine building, e.g. also in the food industry.
- Polyurethane (PU) timing belts with tensile members of steel, little lengthening
- Little and light-coloured abrasion, good resistance against oil, fats and many chemicals. Temperature range -30° to +80°C. Good flexibility.
- PU timing belts can be welded. This means any desired length can be cut from the belts sold by the meter (on request).
- Cheap pulleys made from aluminium (some also made from plastic) pre-bored (custom bore etc. at extra charge).
- AT timing belt drives do **not** feature little backlash (low backlash or zero backlash pulleys can be especially manufactured on request).

## Inch Timing Belt Drives

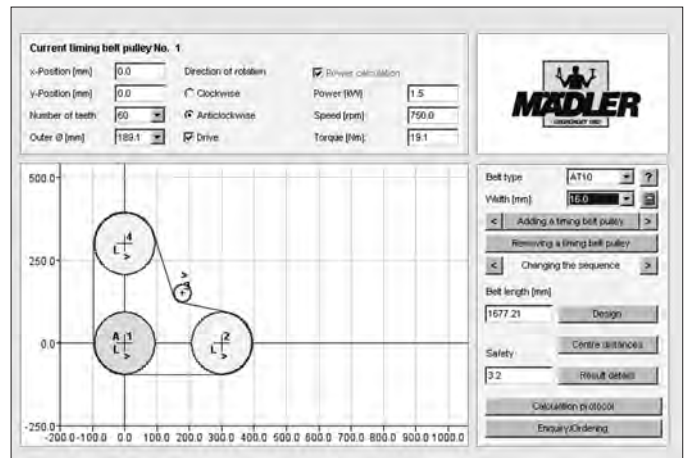
- Classical trapezoid profile in accordance with DIN 5296 with inch dimensions, profile MXL, XL, L and H (pitch 0.08" = 2.032 mm to 1/2" = 12.7 mm), in several widths. Other sizes on request.
- Classical timing-belt drive which is, apart from the favoured MXL-profile, usually not used in newly designed systems anymore.
- Neoprene timing belts with tensile member of glass-fibre. Low noise, little, but dark abrasion. Temperature range -20° to +100°C.
- Pulleys made from steel or cast iron (pitch MXL and XL made from aluminium), pre-bored (custom bore, etc. at extra charge).
- Inch timing belt drives do **not** feature little backlash.

## Timing Belts: Online – Calculation Program on the Internet

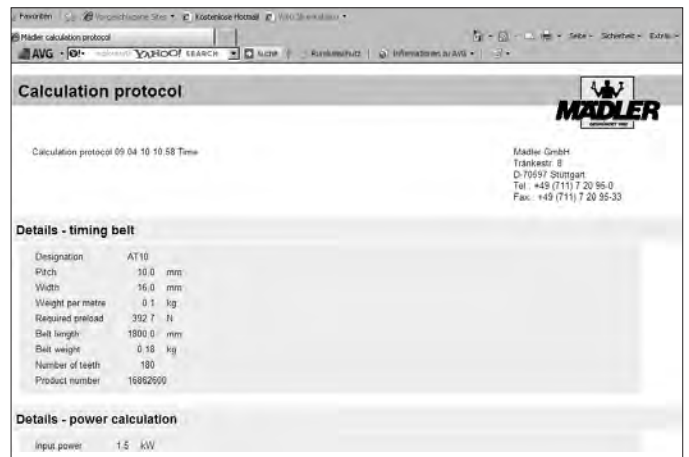
At [www.maedler.de](http://www.maedler.de) (Germany) or [www.maedler.ch](http://www.maedler.ch) (Switzerland) in the internet you click at the button **Mädler-Tools** and you get to a comfortable online calculation programme. This programme contains all common sizes and ensures a fast and safe set up of timing belt drives.



The number and location of the pulleys can be altered. Select the profile and the number of teeth. Enter your performance data and let the system work out the required belt width. **ATTENTION:** The performance data either has to be entered for every single pulley or the performance calculation has to be turned off for the output pulleys. The determination of the belt length is simplified through the use of a scroll-window listing the standard belt lengths. In a next step please check whether the stated safety factor is sufficient. If the system is over or under dimensioned, choose larger or smaller timing belt profile respectively.



For your own documentation you can print out a calculation report with all parameters and results of your drive set up. If a pop-up blocker is activated in your Internet Explorer, it has to be turned off first.



The parts list contains all selected products and simplifies the ordering process. You can print, export or save the parts list. By clicking on the Product No. you get to the internet page of the respective product group. On these pages you can get collect information, even look at 2D and 3D CAD drawings.



## Timing belt drives – dimensioning and calculation factors

### Calculation of the Power $P_B$

$$P_B = P_N \times (K_1 + K_2 + K_3 + C_1)$$

$P_B$ : Selection Power

$P_N$ : Nominal Power Driving Motor

$K_1$ : Load Factor (Table 1)

$K_2$ : Tensioning Pulley Factor (Table 2)

$K_3$ : Transmission Ratio Allowance (Table 3)

$C_1$ : Teeth Meshing Factor (Table 4)

### Notes Regarding the Calculation

The corrective factors below are in particular fitting for T and AT timing belt drives. This means that the calculations below only render exact results for these belt types. The formulas are however generally valid, which means the results are roughly correct for HTD and Inch belt types. For an exact and comfortable calculation please use our online calculation programme at [www.maedler.de](http://www.maedler.de) (Germany) or [www.maedler.ch](http://www.maedler.ch) (Switzerland), see page 112.

**Table 1: Corrective Factor for Load  $K_1$**

Examples for machines used: Machines that are not mentioned below have to be matched to a group with similar load.	Example for Driving Units					
	Starting Torque up to 3 times Nominal Torque			Starting Torque over 3 times Nominal Torque		
	AC Motors (standard and synchronous motors) DC Shunt-Wound Motor Combustion engines with two or more cylinder			Electric motors (with high starting and breaking torque) DC Compound Motors Combustion engines with one cylinder		
	Daily Operating Time (hours)					
	up to 5	up to 12	up to 24	up to 5	up to 12	up to 24
Office Machines, Household Machines Counting Machines	1.0	1.2	1.4	1.2	1.4	1.6
Wood-working Machines, Printing Machines Fans and Blowers	1.2	1.4	1.6	1.4	1.6	1.8
Machine Tools, Textile Machines Laundry Machines	1.3	1.5	1.7	1.5	1.7	1.9
Paper Machines, Reciprocating Engines Hoisting Devices	1.4	1.6	1.8	1.6	1.8	2.0

**Table 2: Corrective Factor for Tens. Pulley  $K_2$**

Mounting Position of Tensioning Pulley $K_2$	
Inner Side Slack Length	0.0
Outer Side Slack Length	0.1
Inner Side Tight Length	0.1
Outer Side Tight Length	0.2

**Table 3: Corrective Factor for Ratio  $K_3$**

Transmission Ratio	$K_3$
1.00 - 1.24	0.4
1.25 - 1.74	0.3
1.75 - 2.49	0.2
2.50 - 3.49	0.1
over 3.50	0.0

**Table 4: Teeth-in-Mesh Factor  $C_1$**

Teeth in mesh					
No. of Teeth in Mesh:	≥ 6	5	4	3	2
Teeth-in-Mesh Factor $C_1$ :	0	0.25	0.7	1.5	4

### Selection of Belt Type

For the calculation of  $P_B$  select belt type, pitch, width and pulley diameter by looking at the Performance Table page 114 - 119. Please consider the width factors mentioned in the table.

### Selection of Pulley

Use the largest pulley diameter possible. A larger diameter leads to a reduction of the bending load and of the required belt width. We recommend the standard pulleys listed in the catalogue. The respective permissible torques can be found in the Performance Tables page 114 to 119.

### Checking the Belt Speed

Belt speeds above 30 m/s require an exact balancing of the pulleys. The belt speed is calculated with the formula below:

$$v = (d_w \times n) / 19100$$

$v$ : belt speed (m/s)

$d_w$ : effective diameter of the pulley (mm)

$n$ : torque of the pulley (min<sup>-1</sup>)

### Selecting the Belt Length

When selecting the belt length, always consider the lengths listed in the catalogue. The belt length for a simple drive with two toothed pulleys and a transmission ratio of 1:1 can be easily calculated from the effective diameter of the toothed pulley and the centre distance:

Effective length of the belt = effective circumference of the toothed pulley plus twice the centre distance

The effective length of a belt and the centre distance for drives with a ratio other than 1:1 or with more than two toothed pulleys can be determined from a drawing or, even simpler, by using the online tool at [www.maedler.de](http://www.maedler.de), Mädlar-Tools (see page 112).

## T Timing Belt Drives (Metric Pitch)

### Profile T 2.5 Performance Figures in W/10 mm Timing Belt Width

Speed of small pulley min <sup>-1</sup>	Teeth No. of Small Pulley											
	12	14	16	18	20	24	28	30	36	40	48	60
	Effective Diameter (mm)											
	9.56	11.14	12.73	14.32	15.92	19.15	22.35	23.95	28.75	31.90	38.30	47.85
100	2.3	2.5	3.0	3.3	3.8	4.5	5.0	5.5	6.5	7.3	8.8	11.0
200	4.5	5.0	5.8	6.5	7.3	8.8	10.3	11.0	13.3	14.5	17.5	22.0
400	8.8	10.3	11.8	13.3	14.5	17.5	20.5	22.0	26.3	29.3	35.0	43.8
500	11.0	12.8	14.5	16.5	18.3	22.0	25.5	27.5	32.8	36.5	43.8	54.8
600	13.3	15.3	17.5	19.8	22.0	26.3	30.8	32.8	39.5	43.8	52.5	65.8
800	17.5	20.5	23.5	26.3	29.3	35.0	41.0	43.8	52.5	58.5	70.0	87.5
1000	22.0	25.5	29.3	32.8	36.5	43.8	51.0	54.8	65.8	73.0	87.5	109.3
1400	-	35.8	41.0	46.0	51.0	61.3	71.5	76.8	92.0	102.0	122.5	152.8
1800	-	46.0	52.5	59.3	65.8	78.8	92.0	98.5	118.0	131.0	157.0	195.8
2400	-	-	70.0	78.8	87.5	105.0	122.5	131.0	157.0	174.3	208.8	259.5
2800	-	-	81.8	92.0	102.0	122.5	142.5	152.8	183.0	203.0	242.8	301.3
3000	-	-	87.5	98.5	109.3	131.0	152.8	163.5	195.8	217.3	259.5	322.0
3600	-	-	105.0	118.0	131.0	157.0	183.0	195.8	234.3	259.5	309.8	382.8
4000	-	-	116.5	131.0	145.5	174.3	203.0	217.3	259.5	287.5	342.5	422.3
4800	-	-	139.8	157.0	174.3	208.8	242.8	259.5	309.8	342.5	406.5	498.3

### Profile T 5 Performance Figures in kW/10 mm Timing Belt Width

Speed of small pulley min <sup>-1</sup>	Teeth No. of Small Pulley											
	12	14	16	18	20	24	28	30	36	40	48	60
	Effective Diameter (mm)											
	19.10	22.28	25.46	28.65	31.83	38.20	44.56	47.75	57.30	63.66	76.39	95.49
100	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06	0.07
200	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.07	0.09	0.11
400	0.04	0.05	0.05	0.06	0.06	0.08	0.09	0.10	0.12	0.13	0.16	0.19
500	0.05	0.06	0.06	0.07	0.08	0.10	0.11	0.12	0.14	0.16	0.19	0.24
600	0.06	0.07	0.08	0.08	0.09	0.11	0.13	0.14	0.17	0.19	0.23	0.28
800	0.07	0.09	0.10	0.11	0.12	0.15	0.17	0.18	0.22	0.24	0.29	0.36
1000	0.09	0.10	0.12	0.13	0.15	0.18	0.20	0.22	0.26	0.29	0.35	0.44
1400	0.12	0.13	0.15	0.17	0.19	0.23	0.27	0.29	0.35	0.38	0.46	0.58
1800	0.14	0.16	0.19	0.21	0.23	0.28	0.33	0.35	0.42	0.47	0.56	0.70
2400	0.17	0.20	0.23	0.26	0.29	0.35	0.40	0.43	0.52	0.58	0.69	0.86
3000	0.20	0.23	0.27	0.30	0.34	0.40	0.47	0.50	0.60	0.67	0.81	1.01
4000	0.24	0.28	0.32	0.37	0.41	0.49	0.57	0.61	0.73	0.81	0.97	1.22
5000	0.28	0.33	0.37	0.42	0.47	0.56	0.65	0.70	0.84	0.93	1.12	1.40
6000	-	-	0.42	0.47	0.52	0.63	0.78	0.78	0.94	1.04	1.25	1.56
7000	-	-	0.46	0.51	0.57	0.69	0.80	0.86	1.03	1.14	1.37	-

### Profile T 10 Performance Figures in kW/10 mm Timing Belt Width

Speed of small pulley min <sup>-1</sup>	Teeth No. of Small Pulley											
	12	14	16	18	20	24	28	30	36	40	48	60
	Effective Diameter (mm)											
	38.20	44.56	50.93	57.30	63.66	76.39	89.13	95.49	114.59	127.32	152.79	190.99
100	0.04	0.05	0.06	0.06	0.07	0.08	0.10	0.10	0.12	0.14	0.17	0.21
200	0.07	0.08	0.10	0.11	0.12	0.15	0.17	0.18	0.22	0.24	0.29	0.36
400	0.13	0.15	0.17	0.20	0.22	0.26	0.31	0.33	0.39	0.44	0.52	0.65
600	0.19	0.22	0.25	0.28	0.31	0.37	0.43	0.47	0.56	0.62	0.74	0.93
800	0.24	0.28	0.32	0.36	0.40	0.48	0.56	0.59	0.71	0.79	0.85	1.19
1000	0.29	0.33	0.38	0.43	0.48	0.57	0.67	0.72	0.86	0.95	0.95	1.43
1400	0.38	0.44	0.50	0.56	0.63	0.75	0.88	0.94	1.14	1.25	1.33	1.88
1800	0.46	0.53	0.61	0.68	0.76	0.91	1.06	1.14	1.37	1.52	1.67	2.28
2200	0.53	0.62	0.70	0.79	0.88	1.06	1.23	1.32	1.59	1.76	1.97	2.64
2800	0.63	0.73	0.84	0.94	1.05	1.26	1.46	1.57	1.88	2.09	2.38	3.14
3000	-	0.77	0.88	0.99	1.10	1.32	1.54	1.65	1.98	2.20	2.51	3.29
3500	-	0.89	0.99	1.12	1.24	1.49	1.74	1.86	2.24	2.49	2.63	-
4000	-	-	1.07	1.20	1.33	1.60	1.87	2.00	2.40	2.67	2.98	-
5000	-	-	1.23	1.39	1.54	1.85	2.16	2.31	2.77	-	-	-
6000	-	-	1.38	1.55	1.73	2.07	2.42	2.59	-	-	-	-

The permissible performance figures for any timing belt width can be calculated by multiplying the figures in the table above with the respective width factors on page 115.

In this area of the table the service life is affected!

## AT Timing Belt Drives (Metric Pitch)

### Profile AT 5 Performance Figures in kW/10 mm Timing Belt Width

Speed of small pulley min <sup>-1</sup>	Teeth No. of Small Pulley											
	12	14	16	18	20	24	28	30	36	40	48	60
	Effective Diameter (mm)											
	19.10	22.28	25.46	28.65	31.83	38.20	44.56	47.75	57.30	63.66	76.39	95.49
100	0.02	0.05	0.05	0.05	0.05	0.07	0.07	0.09	0.09	0.12	0.14	0.16
200	0.05	0.05	0.07	0.07	0.09	0.09	0.12	0.12	0.14	0.16	0.21	0.26
400	0.09	0.12	0.12	0.14	0.14	0.19	0.21	0.23	0.28	0.30	0.37	0.44
500	0.12	0.14	0.14	0.16	0.19	0.23	0.26	0.28	0.32	0.37	0.44	0.56
600	0.14	0.16	0.19	0.19	0.21	0.26	0.30	0.32	0.39	0.44	0.53	0.65
800	0.16	0.21	0.23	0.26	0.28	0.35	0.39	0.42	0.51	0.56	0.67	0.84
1000	0.21	0.23	0.28	0.30	0.35	0.42	0.46	0.51	0.60	0.67	0.81	1.02
1400	0.28	0.30	0.35	0.39	0.44	0.53	0.63	0.67	0.81	0.88	1.07	1.35
1800	0.32	0.37	0.44	0.49	0.53	0.65	0.77	0.81	0.97	1.09	1.30	1.62
2400	0.39	0.46	0.53	0.60	0.67	0.81	0.93	1.00	1.21	1.35	1.60	2.00
3000	0.46	0.53	0.63	0.70	0.79	0.93	1.09	1.16	1.39	1.55	1.88	2.34
4000	0.56	0.65	0.74	0.86	0.95	1.14	1.32	1.42	1.69	1.88	2.25	2.83
5000	0.65	0.77	0.86	0.97	1.09	1.30	1.51	1.62	1.95	2.16	2.60	3.25
6000	-	-	0.97	1.09	1.21	1.46	1.81	1.81	2.18	2.41	2.90	3.62
7000	-	-	1.07	1.18	1.32	1.60	1.86	2.00	2.39	2.64	3.18	-

### Profile AT 10 Performance Figures in kW/10 mm Timing Belt Width

Speed of small pulley min <sup>-1</sup>	Teeth No. of Small Pulley								
	18	20	24	28	30	36	40	48	60
	Effective Diameter (mm)								
	57.30	63.66	76.39	89.13	95.49	114.59	127.32	152.79	190.99
100	0.16	0.19	0.22	0.27	0.27	0.32	0.38	0.46	0.57
200	0.30	0.32	0.41	0.46	0.49	0.59	0.65	0.78	0.97
400	0.54	0.59	0.70	0.84	0.89	1.05	1.19	1.40	1.76
600	0.76	0.84	1.00	1.16	1.27	1.51	1.67	2.00	2.51
800	0.97	1.08	1.30	1.51	1.59	1.92	2.13	2.30	3.21
1000	1.16	1.30	1.54	1.81	1.94	2.32	2.57	2.57	3.86
1400	1.51	1.70	2.03	2.38	2.54	3.09	3.38	3.59	5.08
1800	1.84	2.05	2.46	2.86	3.08	3.70	4.10	4.51	6.16
2200	2.13	2.38	2.86	3.32	3.56	4.29	4.75	5.32	7.13
2600	2.40	2.67	3.21	3.75	4.02	4.83	5.37	6.08	8.05
3000	2.67	2.97	3.56	4.16	4.46	5.35	5.94	6.78	8.88
3500	3.02	3.35	4.02	4.70	5.02	6.05	6.72	7.10	-
4000	3.24	3.59	4.32	5.05	5.40	6.48	7.21	8.05	-
5000	3.75	4.16	5.00	5.83	6.24	7.48	-	-	-
6000	4.19	4.67	5.59	6.53	6.99	-	-	-	-

The permissible performance figures for other timing belt widths can be calculated by multiplying the figures in the table above with the respective width factors.

#### Width Factors, Profile T 2.5

Belt Width	4	6	8	10	12
Width Factor	0.36	0.44	0.62	1.0	1.08

#### Width Factors, Profile T 5 and AT 5

Belt Width	6	10	16	20	25	50
Width Factor	0.58	1.0	1.42	1.83	2.33	4.98

#### Width Factors, Profile T 10 and AT 10

Belt Width	10	16	20	25	32	50	75
Width Factor	1.0	1.58	1.88	2.33	3.05	4.98	7.48

## HTD Timing-Belt Drives (Metric Pitch)

### Profile 3M, Performance Figures in kW/25 mm Timing Belt Width

Speed of small pulley (min <sup>-1</sup> )	Teeth No. of Small Pulley														
	10	12	16	20	24	28	32	36	40	44	48	56	64	72	80
	Effective Diameter mm														
20	9.55	11.46	15.28	19.10	22.92	26.74	30.56	34.38	38.20	42.02	45.84	53.48	61.12	68.75	76.39
20	0.005	0.006	0.009	0.012	0.015	0.017	0.020	0.022	0.025	0.028	0.030	0.035	0.040	0.045	0.050
40	0.009	0.012	0.017	0.022	0.027	0.032	0.037	0.042	0.047	0.052	0.056	0.066	0.075	0.084	0.093
60	0.013	0.017	0.024	0.032	0.039	0.046	0.054	0.061	0.068	0.075	0.082	0.095	0.109	0.122	0.135
100	0.020	0.026	0.038	0.050	0.062	0.074	0.085	0.096	0.107	0.118	0.129	0.151	0.172	0.193	0.214
200	0.036	0.048	0.071	0.093	0.115	0.137	0.158	0.179	0.200	0.220	0.240	0.280	0.320	0.358	0.397
400	0.065	0.087	0.130	0.171	0.212	0.252	0.291	0.330	0.369	0.406	0.444	0.517	0.590	0.660	0.730
600	0.091	0.122	0.184	0.244	0.302	0.359	0.415	0.471	0.525	0.579	0.632	0.736	0.838	0.937	1.035
800	0.115	0.155	0.235	0.312	0.387	0.461	0.533	0.604	0.674	0.742	0.810	0.942	1.070	1.194	1.315
1000	0.13	0.19	0.28	0.38	0.47	0.56	0.64	0.73	0.81	0.89	0.98	1.13	1.29	1.43	1.57
1400	0.18	0.24	0.37	0.50	0.62	0.74	0.86	0.97	1.08	1.18	1.29	1.49	1.67	1.85	2.01
1600	0.20	0.27	0.42	0.56	0.69	0.83	0.96	1.08	1.20	1.32	1.43	1.64	1.84	2.02	2.19
2000	0.23	0.33	0.59	0.67	0.84	0.99	1.14	1.29	1.43	1.56	1.69	1.92	2.13	2.31	2.45
2400	0.32	0.41	0.59	0.76	0.92	1.08	1.22	1.36	1.51	1.64	1.77	2.02	2.26	2.49	2.71
2850	0.35	0.46	0.67	0.86	1.04	1.22	1.39	1.55	1.71	1.86	2.00	2.29	2.55	2.81	3.06
3600	0.41	0.54	0.79	1.02	1.23	1.44	1.64	1.83	2.01	2.19	2.36	2.69	3.00	3.29	3.58
4000	0.44	0.58	0.85	1.09	1.33	1.55	1.765	1.97	2.16	2.35	2.54	2.89	3.22	3.53	3.83
5000	0.51	0.67	0.98	1.27	1.55	1.81	2.05	2.29	2.52	2.73	2.95	3.35	3.72	4.07	4.41
6000	0.56	0.75	1.11	1.44	1.75	2.04	2.32	2.58	2.84	3.08	3.31	3.76	4.17	4.56	4.93
8000	0.80	1.03	1.46	1.84	2.19	2.52	2.82	3.09	3.34	3.57	3.77	4.12	4.39	4.57	4.66
10000	0.89	1.16	1.65	2.09	2.48	2.83	3.15	3.43	3.68	3.89	4.07	4.34	4.47	4.47	4.33
12000	0.97	1.27	1.81	2.29	2.71	3.07	3.39	3.66	3.88	4.06	4.19	4.30	4.21	-	-
14000	1.03	1.36	1.94	2.45	2.88	3.24	3.50	3.78	3.96	4.07	4.11	3.99	-	-	-

### Profile 5M, Performance Figures in kW/25 mm Timing Belt Width

Speed of small pulley (min <sup>-1</sup> )	Teeth No. of Small Pulley														
	14	16	18	20	24	28	32	36	40	44	48	56	64	72	80
	Effective Diameter mm														
20	22.28	25.46	28.65	31.83	38.20	44.56	50.93	57.30	63.66	70.03	76.39	89.13	101.86	114.59	127.32
20	0.016	0.020	0.024	0.028	0.036	0.044	0.051	0.059	0.066	0.074	0.081	0.095	0.110	0.124	0.138
40	0.031	0.038	0.046	0.053	0.068	0.082	0.097	0.111	0.125	0.139	0.153	0.180	0.207	0.234	0.261
60	0.044	0.055	0.065	0.076	0.098	0.119	0.140	0.160	0.181	0.201	0.221	0.261	0.300	0.339	0.377
100	0.068	0.085	0.103	0.120	0.154	0.188	0.221	0.254	0.286	0.319	0.351	0.414	0.476	0.538	0.599
300	0.171	0.219	0.266	0.313	0.406	0.497	0.587	0.675	0.762	0.848	0.934	1.101	1.266	1.426	1.584
400	0.216	0.278	0.340	0.401	0.521	0.638	0.754	0.868	0.980	1.091	1.200	1.413	1.621	1.823	2.020
600	0.299	0.388	0.477	0.564	0.736	0.903	1.068	1.229	1.386	1.540	1.691	1.984	2.263	2.528	2.779
800	0.374	0.490	0.604	0.716	0.936	1.149	1.357	1.559	1.756	1.946	2.131	2.481	2.805	3.101	3.366
1000	0.44	0.58	0.72	0.86	1.12	1.38	1.62	1.86	2.09	2.31	2.51	2.90	3.23	3.52	3.75
1400	0.68	0.84	0.98	1.14	1.43	1.71	1.98	2.25	2.51	2.77	3.02	3.51	3.99	4.44	4.89
1600	0.76	0.90	1.10	1.26	1.59	1.90	2.21	2.51	2.80	3.08	3.36	3.91	4.43	4.93	5.41
2000	0.89	1.10	1.31	1.51	1.90	2.27	2.64	2.99	3.34	3.68	4.01	4.65	5.25	5.83	6.37
2400	1.03	1.27	1.50	1.74	2.19	2.62	3.04	3.45	3.85	4.24	4.61	5.33	6.00	6.63	7.21
2850	1.16	1.44	1.71	1.98	2.50	2.99	3.47	3.94	4.38	4.82	5.23	6.02	6.74	7.40	7.99
3600	1.37	1.70	2.04	2.36	2.98	3.57	4.13	4.67	5.19	5.68	6.15	7.01	7.75	8.39	8.90
4000	1.48	1.84	2.20	2.54	3.21	3.85	4.46	5.03	5.58	6.09	6.57	7.44	8.17	8.74	9.17
5000	1.71	2.14	2.57	2.98	3.76	4.49	5.18	5.81	6.40	6.94	7.42	8.22	8.77	9.05	9.04
6000	1.97	2.42	2.89	3.36	4.23	5.04	5.77	6.44	7.02	7.53	7.95	8.52	8.69	8.42	8.26
8000	2.63	3.14	3.53	4.00	4.92	5.62	6.38	6.65	6.96	7.12	7.12	7.02	-	-	-
10000	2.92	3.49	4.03	4.51	5.33	5.95	6.36	6.53	6.46	6.12	6.00	-	-	-	-
12000	3.32	3.73	4.27	4.74	5.46	5.86	5.93	5.62	-	-	-	-	-	-	-
14000	3.62	3.93	4.35	4.76	5.27	5.30	4.83	-	-	-	-	-	-	-	-

The permissible performance figures for any timing belt width can be calculated by multiplying the figures in the table above with the respective width factors.

### Width Factors 3M and 5M

Timing Belt Width	6	8	9	12	15	19	22	25	32	40	50
Width Factor	0.18	0.25	0.29	0.42	0.54	0.72	0.86	1.0	1.32	1.69	2.14

In this area of the table the service life might be shortened with increasing torque and a ratio close to 1 : 1. Please ask for more information.

Refers to cases where both circumstance come together. (shorter service life and no pulleys made from cast iron).

Speeds higher than 30 m/s.  
Cast iron pulleys cannot be used in this range.

## HTD Timing Belt Drives (Metric Pitch)

### Profile 8M, Performance Figures in kW/25 mm Timing Belt Width

Speed of small pulley (min <sup>-1</sup> )	Teeth No. of small pulley														
	20	22	24	26	28	30	32	36	40	44	48	56	64	72	80
	Effective Diameter mm														
	50.93	56.02	61.12	66.21	71.30	76.39	81.49	91.67	101.86	112.05	122.23	142.60	162.97	183.35	203.72
10	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.13	0.14
20	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.12	0.14	0.15	0.19	0.22	0.25	0.28
50	0.10	0.12	0.14	0.16	0.18	0.20	0.22	0.26	0.30	0.34	0.38	0.46	0.54	0.62	0.70
100	0.19	0.23	0.27	0.31	0.35	0.39	0.43	0.51	0.59	0.67	0.75	0.91	1.07	1.22	1.38
200	0.38	0.46	0.54	0.62	0.70	0.77	0.85	1.01	1.17	1.32	1.48	1.79	2.10	2.41	2.72
400	0.74	0.89	1.05	1.21	1.36	1.52	1.67	1.98	2.29	2.59	2.90	3.51	4.11	4.72	5.32
500	0.91	1.11	1.30	1.49	1.69	1.88	2.07	2.46	2.84	3.22	3.60	4.35	5.10	5.85	6.59
600	1.09	1.32	1.55	1.78	2.01	2.24	2.47	2.93	3.38	3.84	4.29	5.18	6.07	6.97	7.84
800	1.43	1.74	2.04	2.35	2.65	2.95	3.26	3.86	4.46	5.05	5.64	6.81	7.97	9.14	10.28
1000	1.76	2.14	2.52	2.90	3.28	3.65	4.03	4.77	5.51	6.24	6.96	8.39	9.79	11.24	12.60
1200	2.09	2.55	3.00	3.45	3.89	4.34	4.78	5.66	6.53	7.39	8.24	9.91	11.53	13.24	14.80
1450	2.50	3.04	3.58	4.12	4.65	5.18	5.71	6.75	7.78	8.79	9.79	11.72	13.58	15.59	17.35
1800	3.05	3.71	4.37	5.03	5.68	6.32	6.96	8.21	9.44	10.64	11.81	14.05	16.14	18.54	20.45
2000	3.36	4.09	4.82	5.53	6.24	6.95	7.64	9.01	10.34	11.64	12.89	15.26	17.43	20.02	21.94
2500	4.10	4.99	5.88	6.74	7.60	8.44	9.27	10.88	12.43	13.91	15.30	17.84	19.98	22.94	24.62
2850	4.60	5.59	6.58	7.54	8.49	9.41	10.32	12.07	13.72	15.27	16.70	19.19	21.10	24.23	25.45
3000	4.80	5.94	6.87	7.87	8.85	9.81	10.75	12.54	14.23	15.79	17.22	19.64	21.39	24.56	25.52
3500	5.88	7.16	8.03	8.90	9.76	10.62	11.47	13.14	14.78	16.39	17.94	20.91	23.66	26.15	26.35
4000	7.07	8.16	9.15	10.13	11.10	12.06	13.01	14.88	16.69	18.45	20.14	23.29	26.11	27.55	-
4500	8.04	9.15	10.25	11.34	12.41	13.47	14.51	16.55	18.51	20.39	22.17	25.42	27.18	-	-
5000	8.91	10.12	11.33	12.52	13.68	14.83	15.96	18.14	20.22	22.18	24.02	27.05	-	-	-
6000	10.60	12.02	13.41	14.78	16.11	17.41	18.67	21.07	23.28	25.30	27.08	-	-	-	-

### Profile 14M, Performance Figures in kW/25 mm Timing Belt Width

Speed of small pulley (min <sup>-1</sup> )	Teeth No. of small pulley														
	28	29	30	32	34	36	38	40	44	48	52	56	64	72	80
	Effective Diameter mm														
	124.78	129.23	133.69	142.60	151.51	160.43	169.34	178.25	196.08	213.90	231.73	249.55	285.21	320.86	356.51
10	0.12	0.13	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.32	0.34	0.36	0.41	0.46	0.50
20	0.24	0.25	0.27	0.32	0.36	0.41	0.46	0.50	0.55	0.59	0.68	0.73	0.82	0.91	1.00
40	0.50	0.55	0.59	0.64	0.73	0.82	0.91	0.96	1.10	1.19	1.32	1.42	1.64	1.83	2.05
60	0.73	0.78	0.87	1.00	1.10	1.23	1.37	1.46	1.64	1.83	2.01	2.15	2.47	2.74	3.06
100	1.23	1.32	1.42	1.64	1.87	2.15	2.28	2.42	2.74	3.01	3.29	3.56	4.11	4.61	5.11
200	2.47	2.65	2.88	3.29	3.74	4.25	4.61	4.89	5.43	6.03	6.62	7.17	8.17	9.18	10.23
300	3.33	3.61	3.93	4.52	5.11	5.80	6.26	6.62	7.40	8.17	8.90	9.68	11.23	12.83	14.52
400	4.15	4.52	4.84	5.57	6.35	7.17	7.72	8.17	9.09	10.05	10.96	11.83	13.70	15.62	17.58
500	4.89	5.30	5.71	6.57	7.44	8.40	9.09	9.60	10.64	11.69	12.74	13.74	15.89	17.99	20.18
600	5.57	6.03	6.53	7.49	8.49	9.54	10.27	10.87	12.01	13.20	14.34	15.48	17.81	20.09	22.47
700	6.21	6.72	7.23	8.29	9.41	10.57	11.35	12.01	13.23	14.52	15.75	16.96	19.40	21.75	24.29
800	6.85	7.35	7.94	9.09	10.32	11.60	12.47	13.15	14.47	15.84	17.17	18.45	21.00	23.56	26.12
1000	7.94	8.54	9.18	10.55	11.92	13.38	14.34	15.07	16.57	18.04	19.45	20.82	23.52	26.12	28.68
1200	8.90	9.59	10.32	11.78	13.29	14.89	15.94	16.76	18.31	19.86	21.32	22.69	25.39	27.90	30.27
1450	9.99	10.70	11.47	13.11	14.79	16.50	17.66	18.49	20.00	21.69	23.10	24.41	26.86	29.09	30.86
1600	10.55	11.32	12.15	13.84	15.57	17.35	18.54	19.36	20.96	22.51	23.88	25.11	27.40	29.18	30.55
2000	11.83	12.69	13.56	15.39	17.21	19.13	20.32	21.10	22.56	23.88	24.98	25.80	27.03	27.40	26.94
2400	13.74	14.16	14.61	16.44	18.36	20.27	21.37	22.00	23.15	24.00	24.57	24.75	24.25	--	--
2850	15.82	16.37	16.76	17.62	18.85	20.73	21.54	22.09	22.56	22.45	22.42	22.42	-	--	--
3000	16.65	17.12	17.54	18.40	19.02	20.82	21.60	21.83	22.10	22.33	22.46	22.19	-	--	--
3500	18.54	19.00	19.41	20.18	20.87	21.42	21.87	22.24	22.42	22.19	-	-	-	--	--
4000	20.18	20.59	20.91	21.60	22.05	22.33	22.47	22.42	22.19	-	-	-	-	--	--

The permissible performance figures for any timing belt width can be calculated by multiplying the figures in the table above with the respective width factors.

### Width Factors 8M and 14 M

Belt Width	10	15	20	25	30*	30	40	50	65	85	100	115
Width Factor	0.35	0.56	0.77	1.0	1.14	1.21	1.46	2.1	2.76	3.66	4.32	4.98

\* only for profile 14M

In this area of the table the service life might be shortened with increasing torque and a ratio close to 1 : 1. Please ask for more information.

Refers to cases where both circumstance come together. (shorter service life and no pulleys made from cast iron).

Speeds higher than 30 m/s.  
Cast iron pulleys cannot be used here.

## Standard Timing-Belt Drives (Inch Pitch)

### Pitch MXL, Performance Figures in W for 1" Timing Belt Width

Speed of small pulley (min <sup>-1</sup> )	Teeth No. of Small Pulley													
	16	18	20	22	24	28	30	32	36	40	42	44	48	
	10.35	11.64	12.94	14.23	15.52	Effective Diameter mm	18.11	19.40	20.70	23.29	25.87	27.17	28.46	31.05
100	9	19	11	12	13	16	17	18	20	22	24	25	27	
200	18	20	22	25	27	31	34	36	40	45	47	49	54	
400	36	40	45	49	54	63	67	72	81	90	94	99	108	
600	54	61	67	74	81	94	101	108	121	135	142	148	162	
800	72	81	90	99	108	126	135	144	162	180	189	198	216	
1000	90	101	112	124	135	157	169	180	202	225	236	247	270	
1200	108	121	135	148	162	189	202	216	243	270	283	297	324	
1400	126	142	157	173	189	220	236	252	283	315	331	346	378	
1600	144	162	180	198	216	252	270	288	324	360	378	396	432	
2000	180	202	225	247	270	315	337	360	405	450	472	495	540	
2500	225	253	281	309	337	394	422	450	506	562	590	618	675	
3000	270	305	335	370	405	472	505	540	605	675	710	740	810	
4000	360	405	450	495	540	630	675	720	810	899	944	989	1079	
6000	540	605	675	742	810	945	1015	1078	1215	1350	1415	1485	1620	
8000	720	810	900	990	1080	1260	1350	1440	1620	1800	1890	1980	2160	
12000	1080	1215	1350	1485	1620	1890	2025	2160	2430	2700	2835	2970	3240	
16000	1440	1620	1800	1980	2160	2520	2700	2880	3240	3555	3660	3760	4015	
20000	1800	2025	2250	2475	2700	3150	3375	3555	3810	4020	4110	4190	4320	

### Pitch XL, Performance Figures in kW for 1" Timing Belt Width

Speed of small pulley (min <sup>-1</sup> )	Teeth No. of Small Pulley														
	10	12	14	16	18	20	22	24	28	30	32	36	40	44	48
	16.17	19.40	22.64	25.87	29.11	32.34	35.57	38.81	45.28	48.51	51.74	58.21	64.88	71.15	77.62
100	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07
200	0.03	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.10	0.11	0.13	0.13	0.14
400	0.06	0.07	0.08	0.10	0.10	0.12	0.13	0.14	0.17	0.18	0.19	0.22	0.24	0.26	0.28
600	0.09	0.10	0.13	0.14	0.16	0.18	0.20	0.21	0.25	0.27	0.29	0.33	0.37	0.40	0.44
800	0.12	0.14	0.17	0.19	0.22	0.24	0.26	0.29	0.34	0.36	0.39	0.44	0.49	0.54	0.58
1000	0.15	0.18	0.21	0.24	0.27	0.30	0.33	0.36	0.42	0.45	0.49	0.54	0.60	0.67	0.73
1200	0.18	0.21	0.25	0.29	0.32	0.36	0.40	0.43	0.50	0.54	0.58	0.65	0.73	0.80	0.87
1400	0.21	0.25	0.29	0.34	0.38	0.42	0.46	0.50	0.59	0.63	0.68	0.76	0.85	0.93	1.01
1600	0.24	0.29	0.34	0.39	0.43	0.48	0.53	0.58	0.67	0.72	0.77	0.87	0.96	1.06	1.15
2000	0.30	0.36	0.42	0.48	0.54	0.60	0.66	0.72	0.85	0.90	0.96	1.08	1.20	1.31	1.43
2400	0.36	0.43	0.50	0.58	0.65	0.72	0.79	0.87	1.01	1.08	1.15	1.29	1.43	1.56	1.69
2800	0.42	0.51	0.59	0.68	0.76	0.85	0.93	1.01	1.17	1.26	1.34	1.49	1.65	1.80	1.95
3200	0.48	0.58	0.67	0.77	0.87	0.96	1.05	1.15	1.33	1.43	1.51	1.69	1.86	2.03	2.19
3600	0.54	0.65	0.76	0.87	0.97	1.07	1.18	1.29	1.49	1.59	1.69	1.88	2.07	2.25	2.42
4000	0.60	0.72	0.85	0.96	1.07	1.20	1.31	1.43	1.64	1.75	1.86	2.07	2.27	2.45	2.63
4400	0.66	0.79	0.92	1.05	1.18	1.31	1.43	1.56	1.80	1.92	2.03	2.25	2.46	2.65	2.83
5000	0.75	0.90	1.04	1.20	1.34	1.48	1.62	1.77	2.02	2.15	2.27	2.50	2.72	2.92	3.10
6000	0.90	1.08	1.26	1.43	1.59	1.76	1.92	2.07	2.38	2.51	2.63	2.88	3.10	3.27	3.41

The permissible performance figures for any timing belt width can be calculated by multiplying the figures in the table above with the respective width factors.

### Width Factors, Inch Pitch

Timing Belt Width 1/4"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"	
Width Factor	0.22	0.28	0.35	0.42	0.57	0.71	0.86	1.00	1.29	1.56	1.84	2.14

In this area of the table the service life might be shortened with increasing torque and a ratio close to 1 : 1. Please ask for more information.

Speeds higher than 30 m/s.  
Cast iron pulleys cannot be used here

## Standard Timing-Belt Drives (Inch Pitch)

### Pitch L, Performance Figures in kW for 1" Timing Belt Width

Speed of small pulley (min <sup>-1</sup> )	Teeth No. of Small Pulley													
	10	12	14	16	18	20	22	26	30	32	36	40	44	48
	30.32	36.38	42.45	48.51	54.57	60.64	66.70	78.83	90.96	97.02	109.15	121.28	133.40	145.53
100	0.04	0.04	0.05	0.06	0.07	0.07	0.09	0.10	0.12	0.13	0.14	0.15	0.17	0.18
200	0.07	0.10	0.11	0.13	0.14	0.15	0.17	0.20	0.23	0.24	0.28	0.31	0.34	0.37
300	0.12	0.14	0.16	0.18	0.21	0.23	0.25	0.30	0.35	0.37	0.41	0.46	0.51	0.55
400	0.15	0.18	0.21	0.24	0.28	0.31	0.34	0.40	0.46	0.49	0.55	0.61	0.68	0.74
500	0.19	0.23	0.27	0.31	0.35	0.38	0.42	0.50	0.57	0.61	0.69	0.76	0.84	0.91
600	0.23	0.27	0.32	0.37	0.41	0.46	0.51	0.60	0.70	0.74	0.82	0.91	1.00	1.10
700	0.27	0.32	0.38	0.43	0.49	0.54	0.59	0.70	0.80	0.85	0.96	1.07	1.17	1.27
800	0.31	0.37	0.43	0.49	0.55	0.61	0.68	0.79	0.91	0.97	1.10	1.21	1.33	1.45
1000	0.38	0.46	0.54	0.61	0.69	0.76	0.84	0.99	1.14	1.21	1.36	1.51	1.65	1.79
1200	0.46	0.55	0.65	0.74	0.82	0.91	1.00	1.18	1.36	1.45	1.63	1.79	1.96	2.13
1400	0.54	0.64	0.75	0.85	0.96	1.07	1.17	1.38	1.58	1.68	1.88	2.07	2.27	2.46
1600	0.61	0.74	0.85	0.97	1.10	1.21	1.33	1.57	1.79	1.91	2.13	2.35	2.56	2.76
1800	0.69	0.82	0.96	1.10	1.23	1.36	1.49	1.75	2.01	2.13	2.38	2.61	2.84	3.06
2000	0.76	0.91	1.07	1.21	1.36	1.51	1.65	1.93	2.21	2.35	2.62	2.86	3.11	3.39
2400	0.92	1.10	1.27	1.45	1.63	1.79	1.96	2.29	2.62	2.76	3.07	3.34	3.60	3.83
2600	0.99	1.18	1.38	1.57	1.75	1.93	2.12	2.47	2.80	2.96	3.26	3.55	3.80	4.03
3000	1.15	1.36	1.58	1.79	2.01	2.21	2.42	2.80	3.16	3.34	3.65	3.93	4.18	4.37
3200	1.22	1.45	1.68	1.91	2.13	2.35	2.56	2.96	3.34	3.51	3.82	4.10	4.32	4.49
3600	1.37	1.63	1.86	2.13	2.38	2.61	2.84	3.27	3.65	3.83	4.13	4.38	4.54	4.64
4000	1.51	1.79	2.08	2.35	2.62	2.86	3.11	3.55	3.93	4.10	4.37	4.57	4.65	4.64
4600	1.74	2.05	2.37	2.67	2.95	3.22	3.48	3.93	4.28	4.42	4.60	4.67	4.58	4.33
5000	1.88	2.21	2.55	2.88	3.17	3.44	3.71	4.14	4.46	4.56	4.66	4.60	4.35	3.90

### Pitch H, Performance Figures in kW for 1" Timing Belt Width

Speed of small pulley (min <sup>-1</sup> )	Teeth No. of Small Pulley													
	14	16	18	20	22	24	26	28	30	32	36	40	44	48
	56.60	64.68	76.81	80.85	88.94	97.02	105.11	113.19	121.28	129.36	145.53	161.70	177.87	194.04
100	0.18	0.21	0.24	0.25	0.29	0.31	0.34	0.37	0.39	0.42	0.47	0.52	0.57	0.63
200	0.37	0.42	0.47	0.52	0.57	0.63	0.68	0.73	0.78	0.83	0.93	1.04	1.15	1.25
300	0.54	0.63	0.71	0.78	0.86	0.93	1.01	1.10	1.17	1.25	1.40	1.56	1.71	1.87
400	0.73	0.83	0.93	1.04	1.15	1.25	1.35	1.46	1.56	1.66	1.87	2.07	2.28	2.49
500	0.91	1.04	1.17	1.30	1.43	1.56	1.69	1.82	1.95	2.07	2.33	2.59	2.85	3.10
600	1.10	1.25	1.40	1.56	1.71	1.87	2.02	2.18	2.33	2.48	2.79	3.10	3.41	3.71
700	1.27	1.46	1.64	1.82	2.00	2.18	2.37	2.54	2.72	2.90	3.26	3.61	3.97	4.32
800	1.46	1.66	1.87	2.07	2.28	2.49	2.69	2.90	3.10	3.31	3.71	4.12	4.52	4.92
900	1.64	1.87	2.10	2.33	2.57	2.79	3.02	3.26	3.49	3.71	4.17	4.63	5.07	5.51
1000	1.82	2.07	2.33	2.59	2.85	3.10	3.36	3.61	3.87	4.12	4.63	5.12	5.61	6.10
1100	2.00	2.28	2.57	2.85	3.13	3.41	3.69	3.97	4.24	4.52	5.07	5.61	6.15	6.68
1200	2.18	2.49	2.79	3.10	3.41	3.71	4.01	4.32	4.63	4.92	5.51	6.10	6.68	7.25
1400	2.55	2.90	3.26	3.61	3.96	4.32	4.67	5.02	5.37	5.72	6.39	7.06	7.71	8.35
1600	2.92	3.31	3.71	4.12	4.52	4.92	5.32	5.71	6.10	6.49	7.25	7.99	8.71	9.41
1800	3.29	3.71	4.17	4.62	5.07	5.51	5.96	6.39	6.82	7.25	8.08	8.89	9.67	10.43
2000	3.65	4.12	4.62	5.12	5.61	6.10	6.58	7.05	7.53	7.99	8.90	9.76	10.59	11.37
2400	4.38	4.92	5.51	6.10	6.68	7.24	7.81	8.36	8.89	9.41	10.43	11.37	12.25	13.06
2800	5.08	5.71	6.39	7.05	7.71	8.35	8.98	9.60	10.18	10.74	11.83	12.80	13.68	14.43
3200	5.79	6.49	7.24	7.98	8.71	9.40	10.09	10.76	11.37	11.96	13.07	14.01	14.81	15.43
3600	6.48	7.25	8.08	8.88	9.68	10.41	11.14	11.83	12.46	13.05	14.13	14.98	15.62	16.01
4000	7.15	7.99	8.89	9.74	10.59	11.35	12.10	12.82	13.43	14.00	15.00	15.67	16.05	16.10
4600	8.15	9.07	10.05	10.96	11.86	12.63	13.40	14.09	14.63	15.13	15.87	16.12	15.93	15.24

The permissible performance figures for any timing belt width can be calculated by multiplying the figures in the table above with the respective width factors.

### Width Factors, Inch Pitch

Timing Belt Width	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"
Width Factor	0.28	0.35	0.42	0.57	0.71	0.86	1.00	1.29	1.56	1.84	2.14

In this area of the table the service life might be shortened with increasing torque and a ratio close to 1 : 1. Please ask for more information.

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