How to Design a Synchronous Belt

Step 1. Determining conditions required for the design

① Machine type
② Transmission power, or rated power of the driving machine
③ Degree of load fluctuation
④ Daily operating hours
⑤ Pinion revolution
⑥ Speed ratio $\left(\frac{\text{No. of teeth of large pulley}}{\text{No. of teeth of pinion}}\right)$
⑦ Temporary center distance
⑧ Pulley diameter restriction
⑨ Operating environment (high temperature, low temperature, oil, water, dirt, acid, alkali)

Step 2-1 Calculating the design power

Calculate the design power with Formula 1.

Formula 1

$$Pd = Pt \times (Ko + Ki + Kr)$$

Pd	: Design power	(kW)
Pt	: Transmission power	(kW)
Ko	: Load correction factor	**(Table 1 → P. 81)**
Ki	: Idler correction factor	**(Table 2 → P. 81)**
Kr	: Speed-up ratio correction factor	**(Table 3 → P. 81)**

Note 1) For transmission power, it is ideal to use the load of the driven machine; however, if it is unknown, use the rated power of the driving machine.
If torque or horsepower is used for indication, convert it into watt or kilowatt using Formula 2.
Note 2) For use in a decelerating mechanism, Kr = 0.

Formula 2

$$Pt = \frac{Tr \times n}{9550}$$

Pt	: Transmission power	(kW)
n	: Revolution	(rpm)
Tr	: Load torque	(Nm)

1PS=0.7355(kW)

Step 2-2 Calculating the design power when there are sudden stops or sudden accelerations

Under conditions of sudden stop and sudden acceleration, an abnormal torque may be applied to the belt due to the inertial force of the machine; check with Formula 3 in advance, and if the width falls short, it needs to be corrected.
Compare the Pd calculated in **Step 2-1** and the Pdq calculated next and use the larger value as the design power.

Formula 3

$$Trq = \frac{\Sigma GD^2 \times (n_1 - n_2)}{38.2 \times t} \quad (N\cdot m)$$

From Formula 2, $Ptq = \frac{Trq \times n}{9550}$ (kW)

$$Pdq = Ptq \times Kq \quad (kW)$$

Trq	: Rotational torque at the time of a sudden stop or sudden acceleration	(N•m)
GD^2	: Flywheel effect (Sum total of GD2 on the opposite side to the brake)	($kgf\cdot m^2$)
$n_1 - n_2$	: Difference in revolution (opposite side to the brake)	(rpm)
t	: Time to change from n_1 to n_2	(S)
Pdq	: Design power	(kW)
Kq	: Correction factor(table below)	

Correction factor Kq by rotation at the time of a sudden stop or sudden acceleration

revolutions/day	1	2	3～4	5～10	11～15
Kq	1.0	1.2	1.3	1.5	1.6
revolutions/day	16～25	26～40	41～60	61～100	101～
Kq	1.7	1.8	1.9	2.0	2.1

Step 3 Selecting a belt type

Obtain a belt type based on design power and pinion revolution from **Fig. 3 "Belt type selection diagram" (→ P. 82)**.
If an obtained type is close to the line of intersection of two types, design both belt types as a trial and choose the one that matches the purpose of the design and that is the more economical.
For S4.5M and DS4.5M, please contact us.

Step 4 Selecting a pulley diameter

Select an appropriate pulley diameter from Formula 4, taking the restriction of the power transmission space etc. into consideration.

Formula 4

$$Z_2 = \frac{n_1}{n_2} \times Z_1$$

$$\text{Speed ratio} = \frac{n_1}{n_2}$$

Z_1: Number of teeth of pinion
Z2: No. of teeth of large pulley
n_1: Pinion revolution (rpm)
n2: Large pulley revolution (rpm)

For relations among the number of teeth of pulleys, pulley diameter, and pitch diameter, refer to the **"List of Pulley Diameters" (→ P. 83 to P. 99)**. Obtain an unlisted number of teeth of a pulley from Formula 5.

Formula 5

$$dp = pt(Z) / \pi$$
$$do = pt(Z) / \pi - 2a$$

dp	: Pulley pitch diameter	(mm)
do	: Pulley outside diameter	(mm)
pt	: Pulley tooth pitch	(mm)
z	: No. of teeth of pulley	
2a	: Difference between pulley pitch diameter and pulley outside diameter	**(Table 4 → P. 100)**

When you determine a pulley diameter, check the following items:

- Check of the minimum number of teeth of a pulley
Generally, when a pulley with a small number of teeth is used, the flex fatigue of the belt increases, reducing the belt service life.
Hence, please use a pulley with a larger number of teeth than the ones shown in **Table 5 "Minimum number of teeth of pulleys" (→ P. 100)** at least.

- Check on the belt speed
Check if the belt speed exceeds the value in **Table 6 "Basic Belt Speeds" (→ P. 100)**. If the belt speed exceeds it, reduce the pulley diameter. If the minimum pulley diameter is not satisfied, change and reconsider the belt type. Calculate the belt speed from Formula 6.

Formula 6

$$v = \frac{dp \times n}{19100}$$

v	: Belt speed	(m/s)
dp	: Pulley pitch diameter	(mm)
n	: Revolution	(rpm)

Step 5 Selecting an effective length

Calculate a rough effective length with Formula 7 and select an effective length L' that is closest to this value from the **"Table of standard effective lengths."**

■ **Table of standard effective lengths**

Ceptor-X → P. 43
Ceptor-VI→P.45～P.46
HP-STS→P.49～P.50
HP-HTS → P. 50
STS→P.55～P.57
Double-Sided STS → P. 59 to P. 62
TN10/TN15 → P. 66
Synchronous Belt →P.70～P.73
Double-Sided Synchronous Belt →P.77～P.78

Formula 7

$$L' = 2C + 1.57(Dp + dp) + \frac{(Dp - dp)^2}{4C}$$

L'	: Rough effective length	(mm)
C	: Center distance	(mm)
Dp	: Large pulley pitch diameter	(mm)
dp	: Pinion pitch diameter	(mm)

Backcalculate the center distance at that time from the pitch length L of the selected belt using Formula 8.

Formula 8

$$C = \frac{B + \sqrt{B^2 - 2(Dp - dp)^2}}{4}$$

$$B = Lp - 1.57\,(Dp + dp)$$

Lp: Belt pitch length (mm)

Step 6 Determining the belt width

(1) Determination of basic power rating
From the **"Table of basic power ratings"** (→ **P. 101 to P. 126**), obtain the transmission capacity per basic belt width. For the basic belt width, refer to the values listed in the "Table of basic power ratings."

(2) Mesh correction factor Km
From Formula 9, calculate the number of meshed teeth of the pinion, and from **Table 7 (→ P. 127)**, obtain the mesh correction factor Km.

Formula 9

$$Zm = Z \times \frac{\theta_1}{360}$$

$$\theta_1 = 180 - \frac{57.3(Dp - dp)}{C}$$

Zm	: Number of meshed teeth of pinion	
Z	: Number of teeth of pinion	
θ_1	: Angle of contact of pinion	(°)
Dp	: Large pulley pitch diameter	(mm)
dp	: Pinion pitch diameter	(mm)

(3) Correction factor by effective length Kl
Obtain the effective length correction factor Kl for the standard effective length obtained in **Step 5** from **Table 8 "Table of Effective Length Correction Factors" (→ P. 127)**.
Note) For STS and Synchronous Belts, Kl is unnecessary.

(4) Calculation of belt width
From Formula 10, obtain the correction factor of the belt width Kb.

Formula 10

$$Kb = \frac{Pd}{Pr \bullet Km \bullet Kl}$$

Kb	: Width correction factor	
Pd	: Design power	(kW)
Pr	: Basic power rating	(kW)
Km	: Mesh correction factor	
Kl	: Length correction factor	

From **Table 9 "Table of Belt Width Correction Factors" (→ P. 127 to P. 129)**, obtain the belt width for the width correction factor Kb obtained from Formula 10.

Step 7 Checking the adjustment range of the center distance

From **Table 10 "Table of Adjustment Ranges of Center Distance" (→ P. 129)**, obtain the installation range and the tension range of the belt.

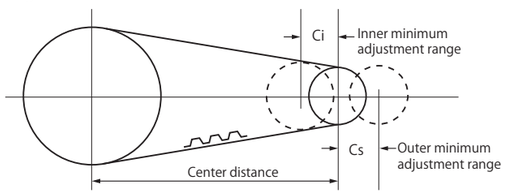


Table 1 Load Correction Factors (Ko)

Machine using the product Note 2) When your driven machine cannot be found in the table, use the load correction factor of a machine with a similar start-up load or shock load.	Driving machine					
	Those with the maximum output 300% or less of the rating			Those with the maximum output over 300% of the rating		
	AC motor (standard motor, synchronous motor) DC motor (shunt-wound) Engine with two or more cylinders			Special motor (high torque) DC motor (direct-wound) Single-cylinder engine Operation by line shaft or clutch		
	Operating hours			Operating hours		
	3~5hr/day	8~10hr/day	16~24hr/day	3~5hr/day	8~10hr/day	16~24hr/day
● Exhibition apparatuses ● Projectors ● Measuring instruments ● Medical equipment	1.0	1.2	1.4	1.2	1.4	1.6
● Vacuum cleaners ● Sewing machines ● Office machinery ● Woodworking lathes ● Band-sawing machines	1.2	1.4	1.6	1.4	1.6	1.8
● Light-duty belt conveyors ● Packaging machines ● Sieves	1.3	1.5	1.7	1.5	1.7	1.9
● Liquid stirring machines ● Drill presses ● Lathes ● Screw cutting machines ● Circular sawing machines ● Planing machines ● Laundry machines ● Papermaking machines (not including pulper) ● Printing machines	1.4	1.6	1.8	1.6	1.8	2.0
● Stirring machines (cement, viscous substances) ● Belt conveyors (ore, coal, sand) ● Grinding machines ● Shaping machines ● Boring machines ● Milling machines ● Compressors (centrifugal type) ● Vibrating sieves ● Fiber machines (warping machines, winders) ● Rotary compressors ● Compressors (reciprocating type)	1.5	1.7	1.9	1.7	1.9	2.1
● Conveyors (aprons, pans, buckets, elevators) ● Extraction pumps ● Rinsing machines ● Fans, blowers (centrifugal type, suction, exhaust) ● Generators ● Exciters ● Hoists ● Elevators ● Rubber processing machines (calenders, rolls, extruders) ● Fiber machines (weaving machines, spinning machines, yarn-twisting machines, pirn winders)	1.6	1.8	2.0	1.8	2.0	2.2
● Centrifugal separators / conveyors (flight, screw) ● Hammer mills ● Papermaking machines (pulper, beaders)	1.7	1.9	2.1	1.9	2.1	2.3
● Ceramic industry machines (bricks, clay kneading machines) ● Propellers for mines ● Forced air blowers	1.8	2.0	2.2	2.0	2.2	2.4

Table 2 Idler Correction Factors

Idler installation location	Ki
- No idlers	0.0
- Installed from the inside on the slack side	0.0
- Installed from the outside on the slack side	0.1
- Installed from the inside on the tight side	0.1
- Installed from the outside on the tight side	0.2

Table 3 Speed-up Ratio Correction Factors

Speed-up ratio	Kr
1.00~1.24	0.0
1.25~1.74	0.1
1.75~2.49	0.2
2.50~3.49	0.3
3.50 or more	0.4

Fig. 3-1 Belt type selection diagram (Ceptor-X)

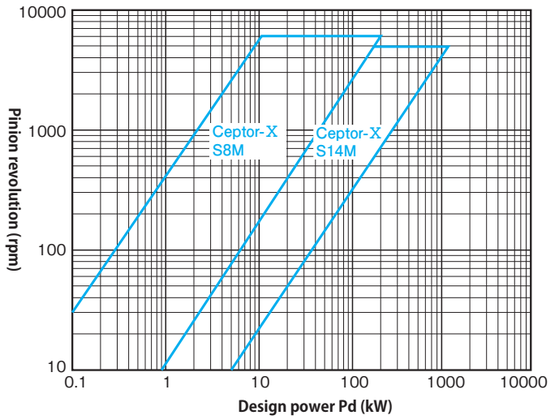


Fig. 3-2 Belt type selection diagram (Ceptor-VI)

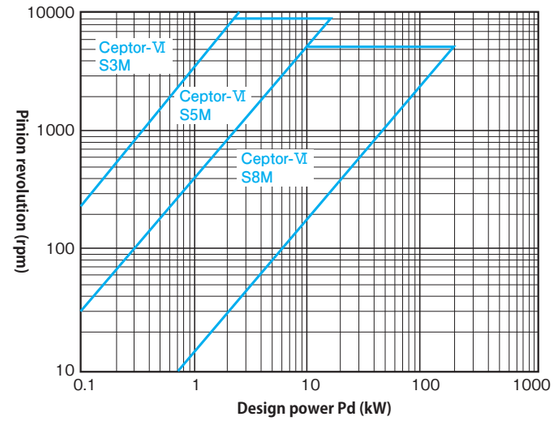


Fig. 3-3 Belt type selection diagram (HP-STS/HP-HTS)

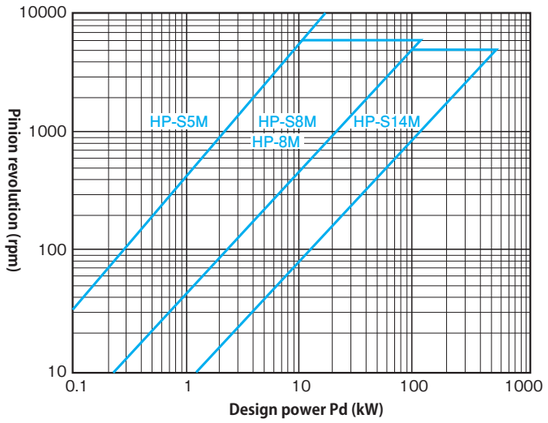


Fig. 3-4 Belt type selection diagram (STS)

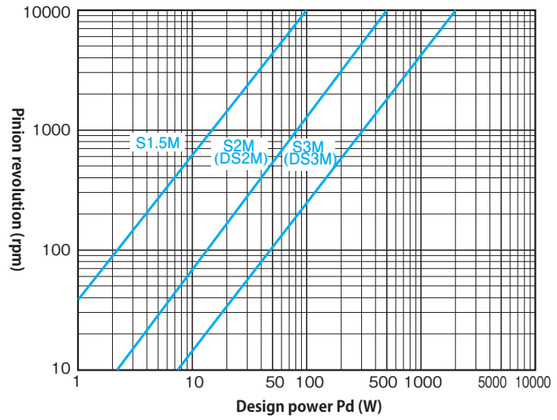
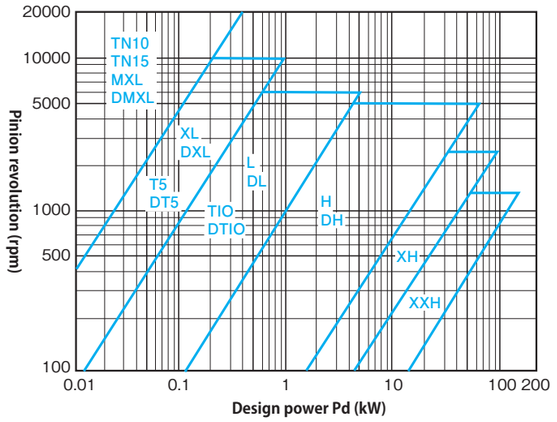


Fig. 3-5 Belt type selection diagram (Synchronous Belt)



List of Pulley Diameters

Type S1.5M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
10	4.77	4.27
11	5.25	4.75
12	5.73	5.23
13	6.21	5.70
14	6.68	6.18
15	7.16	6.66
16	7.64	7.13
17	8.12	7.61
18	8.59	8.09
19	9.07	8.57
20	9.55	9.04
21	10.03	9.52
22	10.50	10.00
23	10.98	10.48
24	11.46	10.95
25	11.94	11.43
26	12.41	11.91
27	12.89	12.39
28	13.37	12.86
29	13.85	13.34
30	14.32	13.82
31	14.80	14.30
32	15.28	14.77
33	15.76	15.25
34	16.23	15.73
35	16.71	16.21
36	17.19	16.68
37	17.67	17.16
38	18.14	17.64
39	18.62	18.12
40	19.10	18.59
41	19.58	19.07
42	20.05	19.55
43	20.53	20.03
44	21.01	20.50
45	21.49	20.98
46	21.96	21.46
47	22.44	21.94
48	22.92	22.41
49	23.40	22.89
50	23.87	23.37
51	24.35	23.85
52	24.83	24.32
53	25.31	24.80
54	25.78	25.28
55	26.26	25.76

Type S1.5M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
56	26.74	26.23
57	27.22	26.71
58	27.69	27.19
59	28.17	27.67
60	28.65	28.14
61	29.13	28.62
62	29.60	29.10
63	30.08	29.58
64	30.56	30.05
65	31.04	30.53
66	31.51	31.01
67	31.99	31.49
68	32.47	31.96
69	32.95	32.44
70	33.42	32.92
71	33.90	33.40
72	34.38	33.87
73	34.85	34.35
74	35.33	34.83
75	35.81	35.31
76	36.29	35.78
77	36.76	36.26
78	37.24	36.74
79	37.72	37.22
80	38.20	37.69
81	38.67	38.17
82	39.15	38.65
83	39.63	39.13
84	40.11	39.60
85	40.58	40.08
86	41.06	40.56
87	41.54	41.04
88	42.02	41.51
89	42.49	41.99
90	42.97	42.47
91	43.45	42.95
92	43.93	43.42
93	44.40	43.90
94	44.88	44.38
95	45.36	44.86
96	45.84	45.33
97	46.31	45.81
98	46.79	46.29
99	47.27	46.77
100	47.75	47.24

Type S2M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
10	6.37	5.86
11	7.00	6.49
12	7.64	7.13
13	8.28	7.77
14	8.91	8.40
15	9.55	9.04
16	10.19	9.68
17	10.82	10.31
18	11.46	10.95
19	12.10	11.59
20	12.73	12.22
21	13.37	12.86
22	14.01	13.50
23	14.64	14.13
24	15.28	14.77
25	15.92	15.41
26	16.55	16.04
27	17.19	16.68
28	17.83	17.32
29	18.46	17.95
30	19.10	18.59
31	19.74	19.23
32	20.37	19.86
33	21.01	20.50
34	21.65	21.14
35	22.28	21.77
36	22.92	22.41
37	23.55	23.05
38	24.19	23.68
39	24.83	24.32
40	25.46	24.96
41	26.10	25.59
42	26.74	26.23
43	27.37	26.87
44	28.01	27.50
45	28.65	28.14
46	29.28	28.78
47	29.92	29.41
48	30.56	30.05
49	31.19	30.69
50	31.83	31.32
51	32.47	31.96
52	33.10	32.60
53	33.74	33.23
54	34.38	33.87

Type S2M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
55	35.01	34.51
56	35.65	35.14
57	36.29	35.78
58	36.92	36.42
59	37.56	37.05
60	38.20	37.69
61	38.83	38.33
62	39.47	38.96
63	40.11	39.60
64	40.74	40.24
65	41.38	40.87
66	42.02	41.51
67	42.65	42.15
68	43.29	42.78
69	43.93	43.42
70	44.56	44.06
71	45.20	44.69
72	45.84	45.33
73	46.47	45.97
74	47.11	46.60
75	47.75	47.24
76	48.38	47.87
77	49.02	48.51
78	49.66	49.15
79	50.29	49.78
80	50.93	50.42
81	51.57	51.06
82	52.20	51.69
83	52.84	52.33
84	53.48	52.97
85	54.11	53.60
86	54.75	54.24
87	55.39	54.88
88	56.02	55.51
89	56.66	56.15
90	57.30	56.79
91	57.93	57.42
92	58.57	58.06
93	59.21	58.70
94	59.84	59.33
95	60.48	59.97
96	61.12	60.61
97	61.75	61.24
98	62.39	61.88
99	63.03	62.52

Type S2M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
100	63.66	63.15
101	64.30	63.79
102	64.94	64.43
103	65.57	65.06
104	66.21	65.70
105	66.85	66.34
106	67.48	66.97
107	68.12	67.61
108	68.75	68.25
109	69.39	68.88
110	70.03	69.52
111	70.66	70.16
112	71.30	70.79
113	71.94	71.43
114	72.57	72.07
115	73.21	72.70
116	73.85	73.34
117	74.48	73.98
118	75.12	74.61
119	75.76	75.25
120	76.39	75.89

Type S3M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
10	9.55	8.79
11	10.50	9.74
12	11.46	10.70
13	12.41	11.65
14	13.37	12.61
15	14.32	13.56
16	15.28	14.52
17	16.23	15.47
18	17.19	16.43
19	18.14	17.38
20	19.10	18.34
21	20.05	19.29
22	21.01	20.25
23	21.96	21.20
24	22.92	22.16
25	23.87	23.11
26	24.83	24.07
27	25.78	25.02
28	26.74	25.98
29	27.69	26.93
30	28.65	27.89
31	29.60	28.84
32	30.56	29.80
33	31.51	30.75
34	32.47	31.71
35	33.42	32.66
36	34.38	33.62
37	35.33	34.57
38	36.29	35.53
39	37.24	36.48
40	38.20	37.44
41	39.15	38.39
42	40.11	39.34
43	41.06	40.30
44	42.02	41.25
45	42.97	42.21
46	43.93	43.16
47	44.88	44.12
48	45.84	45.07
49	46.79	46.03
50	47.75	46.98
51	48.70	47.94
52	49.66	48.89
53	50.61	49.85
54	51.57	50.80

Type S3M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
55	52.52	51.76
56	53.48	52.71
57	54.43	53.67
58	55.39	54.62
59	56.34	55.58
60	57.30	56.53
61	58.25	57.49
62	59.21	58.44
63	60.16	59.40
64	61.12	60.35
65	62.07	61.31
66	63.03	62.26
67	63.98	63.22
68	64.94	64.17
69	65.89	65.13
70	66.85	66.08
71	67.80	67.04
72	68.75	67.99
73	69.71	68.95
74	70.66	69.90
75	71.62	70.86
76	72.57	71.81
77	73.53	72.77
78	74.48	73.72
79	75.44	74.68
80	76.39	75.63
81	77.35	76.59
82	78.30	77.54
83	79.26	78.50
84	80.21	79.45
85	81.17	80.41
86	82.12	81.36
87	83.08	82.32
88	84.03	83.27
89	84.99	84.23
90	85.94	85.18
91	86.90	86.14
92	87.85	87.09
93	88.81	88.05
94	89.76	89.00
95	90.76	89.96
96	91.67	90.91
97	92.63	91.87
98	93.58	92.82
99	94.54	93.78

Type S3M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
100	95.49	94.73
101	96.45	95.69
102	97.40	96.64
103	98.36	97.60
104	99.31	98.55
105	100.27	99.51
106	101.22	100.46
107	102.18	101.42
108	103.13	102.37
109	104.09	103.33
110	105.04	104.28
111	106.00	105.23
112	106.95	106.19
113	107.91	107.14
114	108.86	108.10
115	109.82	109.05
116	110.77	110.01
117	111.73	110.96
118	112.68	111.92
119	113.64	112.87
120	114.59	113.83

Type S4.5M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
12	17.19	16.43
13	18.62	17.86
14	20.05	19.29
15	21.49	20.72
16	22.92	22.16
17	24.35	23.59
18	25.78	25.02
19	27.22	26.45
20	28.65	27.89
21	30.08	29.32
22	31.51	30.75
23	32.95	32.18
24	34.38	33.62
25	35.81	35.05
26	37.24	36.48
27	38.67	37.91
28	40.11	39.35
29	41.54	40.78
30	42.97	42.21
31	44.40	43.64
32	45.84	45.07
33	47.27	46.51
34	48.70	47.94
35	50.13	49.37
36	51.57	50.80
37	53.00	52.24
38	54.43	53.67
39	55.86	55.10
40	57.30	56.53
41	58.73	57.97
42	60.16	59.40
43	61.59	60.83
44	63.03	62.26
45	64.46	63.70
46	65.89	65.13
47	67.32	66.56
48	68.75	67.99
49	70.19	69.43
50	71.62	70.86
51	73.05	72.29
52	74.48	73.72
53	75.92	75.15
54	77.35	76.59
55	78.78	78.02
56	80.21	79.45

How to Design a Synchronous Belt
List of Pulley Diameters

Type S4.5M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
57	81.65	80.88
58	83.08	82.32
59	84.51	83.75
60	85.94	85.18
61	87.38	86.61
62	88.81	88.05
63	90.24	89.48
64	91.67	90.91
65	93.11	92.34
66	94.54	93.78
67	95.97	95.21
68	97.40	96.64
69	98.84	98.07
70	100.27	99.51
71	101.70	100.94
72	103.13	102.37
73	104.56	103.80
74	106.00	105.24
75	107.43	106.67
76	108.86	108.10
77	110.29	109.53
78	111.73	110.96
79	113.16	112.40
80	114.59	113.83
81	116.02	115.26
82	117.46	116.69
83	118.89	118.13
84	120.32	119.56
85	121.75	120.99
86	123.19	122.42
87	124.62	123.86
88	126.05	125.29
89	127.48	126.72
90	128.92	128.15
91	130.35	129.59
92	131.78	131.02
93	133.21	132.45
94	134.65	133.88
95	136.08	135.32
96	137.51	136.75
97	138.94	138.18
98	140.37	139.61
99	141.81	141.05
100	143.24	142.48
101	144.67	143.91

Type S4.5M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
102	146.10	145.34
103	147.54	146.77
104	148.97	148.21
105	150.40	149.64
106	151.83	151.07
107	153.27	152.50
108	154.70	153.94
109	156.13	155.37
110	157.56	156.80
111	159.00	158.23
112	160.43	159.67
113	161.86	161.10
114	163.29	162.53
115	164.73	163.96
116	166.16	165.40
117	167.59	166.83
118	169.02	168.26
119	170.45	169.69
120	171.89	171.13

Type S5M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
10	15.92	14.96
11	17.51	16.55
12	19.10	18.14
13	20.69	19.73
14	22.28	21.32
15	23.87	22.91
16	25.46	24.50
17	27.06	26.10
18	28.65	27.69
19	30.24	29.28
20	31.83	30.87
21	33.42	32.46
22	35.01	34.05
23	36.61	35.65
24	38.20	37.24
25	39.79	38.83
26	41.38	40.42
27	42.97	42.01
28	44.56	43.60
29	46.15	45.19
30	47.75	46.79
31	49.34	48.38
32	50.93	49.97
33	52.52	51.56
34	54.11	53.15
35	55.70	54.74
36	57.30	56.34
37	58.89	57.93
38	60.48	59.52
39	62.07	61.11
40	63.66	62.70
41	65.25	64.29
42	66.85	65.89
43	68.44	67.48
44	70.03	69.07
45	71.62	70.66
46	73.21	72.25
47	74.80	73.84
48	76.39	75.43
49	77.99	77.03
50	79.58	78.62
51	81.17	80.21
52	82.76	81.80
53	84.35	83.39
54	85.94	84.98

Type S5M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
55	87.54	86.58
56	89.13	88.17
57	90.72	89.76
58	92.31	91.35
59	93.90	92.94
60	95.49	94.53
61	97.08	96.12
62	98.68	97.72
63	100.27	99.31
64	101.86	100.90
65	103.45	102.49
66	105.04	104.08
67	106.63	105.67
68	108.23	107.27
69	109.82	108.86
70	111.41	110.45
71	113.00	112.04
72	114.59	113.63
73	116.18	115.22
74	117.77	116.81
75	119.37	118.41
76	120.96	120.00
77	122.55	121.59
78	124.14	123.18
79	125.73	124.77
80	127.32	126.36
81	128.92	127.96
82	130.51	129.55
83	132.10	131.14
84	133.69	132.73
85	135.28	134.32
86	136.87	135.91
87	138.46	137.50
88	140.06	139.10
89	141.65	140.69
90	143.24	142.28
91	144.83	143.87
92	146.42	145.46
93	148.01	147.05
94	149.61	148.65
95	151.20	150.24
96	152.79	151.83
97	154.38	153.42
98	155.97	155.01
99	157.56	156.60

Type S5M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
100	159.15	158.19
101	160.75	159.79
102	162.34	161.38
103	163.93	162.97
104	165.52	164.56
105	167.11	166.15
106	168.70	167.74
107	170.30	169.34
108	171.89	170.93
109	173.48	172.52
110	175.07	174.11
111	176.66	175.70
112	178.25	177.29
113	179.85	178.89
114	181.44	180.48
115	183.03	182.07
116	184.62	183.66
117	186.21	185.25
118	187.80	186.84
119	189.39	188.43
120	190.99	190.03

Type S8M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
18	45.84	44.46
19	48.38	47.01
20	50.93	49.56
21	53.48	52.10
22	56.02	54.65
23	58.57	57.20
24	61.12	59.74
25	63.66	62.29
26	66.21	64.84
27	68.75	67.38
28	71.30	69.93
29	73.85	72.48
30	76.39	75.02
31	78.94	77.57
32	81.49	80.12
33	84.03	82.66
34	86.58	85.21
35	89.13	87.75
36	91.67	90.30
37	94.22	92.85
38	96.77	95.39
39	99.31	97.94
40	101.86	100.49
41	104.41	103.03
42	106.95	105.58
43	109.50	108.13
44	112.05	110.67
45	114.59	113.22
46	117.14	115.77
47	119.68	118.31
48	122.23	120.86
49	124.78	123.41
50	127.32	125.95
51	129.87	128.50
52	132.42	131.04
53	134.96	133.59
54	137.51	136.14
55	140.06	138.68
56	142.60	141.23
57	145.15	143.78
58	147.70	146.32
59	150.24	148.87
60	152.79	151.42
61	155.34	153.96
62	157.88	156.51
63	160.43	159.06
64	162.97	161.60
65	165.52	164.15
66	168.07	166.70
67	170.61	169.24

How to Design a Synchronous Belt
List of Pulley Diameters

Type S8M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
68	173.16	171.79
69	175.71	174.34
70	178.25	176.88
71	180.80	179.43
72	183.35	181.97
73	185.89	184.52
74	188.44	187.07
75	190.99	189.61
76	193.53	192.16
77	196.08	194.71
78	198.63	197.25
79	201.17	199.80
80	203.72	202.35
81	206.26	204.89
82	208.81	207.44
83	211.36	209.99
84	213.90	212.53
85	216.45	215.08
86	219.00	217.63
87	221.54	220.17
88	224.09	222.72
89	226.64	225.26
90	229.18	227.81
91	231.73	230.36
92	234.28	232.90
93	236.82	235.45
94	239.37	238.00
95	241.92	240.54
96	244.46	243.09
97	247.01	245.64
98	249.56	248.18
99	252.10	250.73
100	254.65	253.28
101	257.19	255.82
102	259.74	258.37
103	262.29	260.92
104	264.83	263.46
105	267.38	266.01
106	269.93	268.55
107	272.47	271.10
108	275.02	273.65
109	277.57	276.19
110	280.11	278.74
111	282.66	281.29
112	285.21	283.83
113	287.75	286.38
114	290.30	288.93
115	292.85	291.47
116	295.39	294.02
117	297.94	296.57

Type S8M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
118	300.48	299.11
119	303.03	301.66
120	305.58	304.21
121	308.12	306.75
122	310.67	309.30
123	313.22	311.84
124	315.76	314.39
125	318.31	316.94
126	320.86	319.48
127	323.40	322.03
128	325.95	324.58
129	328.50	327.12
130	331.04	329.67
131	333.59	332.22
132	336.14	334.76
133	338.68	337.31
134	341.23	339.86
135	343.77	342.40
136	346.32	344.95
137	348.87	347.50
138	351.41	350.04
139	353.96	352.59
140	356.51	355.14
141	359.05	357.68
142	361.60	360.23
143	364.15	362.77
144	366.69	365.32
145	369.24	367.87
146	371.79	370.41
147	374.33	372.96
148	376.88	375.51
149	379.43	378.05
150	381.97	380.60
151	384.52	383.15
152	387.06	385.69
153	389.61	388.24
154	392.16	390.79
155	394.70	393.33
156	397.25	395.88

Type S14M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
28	124.78	121.98
29	129.23	126.44
30	133.69	130.90
31	138.15	135.35
32	142.60	139.81
33	147.06	144.27
34	151.52	148.72
35	155.97	153.18
36	160.43	157.63
37	164.88	162.09
38	169.34	166.55
39	173.80	171.00
40	178.25	175.46
41	182.71	179.92
42	187.17	184.37
43	191.62	188.83
44	196.08	193.28
45	200.54	197.74
46	204.99	202.20
47	209.45	206.65
48	213.90	211.11
49	218.36	215.57
50	222.82	220.02
51	227.27	224.48
52	231.73	228.94
53	236.19	233.39
54	240.64	237.85
55	245.10	242.30
56	249.56	246.76
57	254.01	251.22
58	258.47	255.67
59	262.92	260.13
60	267.38	264.59
61	271.84	269.04
62	276.29	273.50
63	280.75	277.96
64	285.21	282.41
65	289.66	286.87
66	294.12	291.32
67	298.57	295.78
68	303.03	300.24
69	307.49	304.69
70	311.94	309.15
71	316.40	313.61
72	320.86	318.06

Type S14M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
73	325.31	322.52
74	329.77	326.98
75	334.23	331.43
76	338.68	335.89
77	343.14	340.34
78	347.59	344.80
79	352.05	349.26
80	356.51	353.71
81	360.96	358.17
82	365.42	362.63
83	369.88	367.08
84	374.33	371.54
85	378.79	375.99
86	383.25	380.45
87	387.70	384.91
88	392.16	389.36
89	396.61	393.82
90	401.07	398.28
91	405.53	402.73
92	409.98	407.19
93	414.44	411.65
94	418.90	416.10
95	423.35	420.56
96	427.81	425.01
97	432.26	429.47
98	436.72	433.93
99	441.18	438.38
100	445.63	442.84
101	450.09	447.30
102	454.55	451.75
103	459.00	456.21
104	463.46	460.67
105	467.92	465.12
106	472.37	469.58
107	476.83	474.03
108	481.28	478.49
109	485.74	482.95
110	490.20	487.40
111	494.65	491.86
112	499.11	496.32
113	503.57	500.77
114	508.02	505.23
115	512.48	509.68
116	516.94	514.14
117	521.39	518.60

Type S14M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
118	525.85	523.05
119	530.30	527.51
120	534.76	531.97
121	539.22	536.42
122	543.67	540.88
123	548.13	545.34
124	552.59	549.79
125	557.04	554.25
126	561.50	558.70
127	565.96	563.16
128	570.41	567.62
129	574.87	572.07
130	579.32	576.53
131	583.78	580.99
132	588.24	585.44
133	592.69	589.90
134	597.15	594.36
135	601.61	598.81
136	606.06	603.27
137	610.52	607.72
138	614.97	612.18
139	619.43	616.64
140	623.89	621.09
141	628.34	625.55
142	632.80	630.01
143	637.26	634.46
144	641.71	638.92
145	646.17	643.38
146	650.63	647.83
147	655.08	652.29
148	659.54	656.74
149	663.99	661.20
150	668.45	665.66
151	672.91	670.11
152	677.36	674.57
153	681.82	679.03
154	686.28	683.48
155	690.73	687.94
156	695.19	692.39

HTS Type 8M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
22	56.02	54.65
23	58.57	57.20
24	61.12	59.74
25	63.66	62.29
26	66.21	64.84
27	68.75	67.38
28	71.30	69.93
29	73.85	72.48
30	76.39	75.02
31	78.94	77.57
32	81.49	80.12
33	84.03	82.66
34	86.58	85.21
35	89.13	87.75
36	91.67	90.30
37	94.22	92.85
38	96.77	95.39
39	99.31	97.94
40	101.86	100.49
41	104.41	103.03
42	106.95	105.58
43	109.50	108.13
44	112.05	110.67
45	114.59	113.22
46	117.14	115.77
47	119.68	118.31
48	122.23	120.86
49	124.78	123.41
50	127.32	125.95
51	129.87	128.50
52	132.42	131.04
53	134.96	133.59
54	137.51	136.14
55	140.06	138.68
56	142.60	141.23
57	145.15	143.78
58	147.70	146.32
59	150.24	148.87
60	152.79	151.42
61	155.34	153.96
62	157.88	156.51
63	160.43	159.06
64	162.97	161.60
65	165.52	164.15
66	168.07	166.70

How to Design a Synchronous Belt
List of Pulley Diameters

HTS Type 8M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
67	170.61	169.24
68	173.16	171.79
69	175.71	174.34
70	178.25	176.88
71	180.80	179.43
72	183.35	181.97
73	185.89	184.52
74	188.44	187.07
75	190.99	189.61
76	193.53	192.16
77	196.08	194.71
78	198.63	197.25
79	201.17	199.80
80	203.72	202.35
81	206.26	204.89
82	208.81	207.44
83	211.36	209.99
84	213.90	212.53
85	216.45	215.08
86	219.00	217.63
87	221.54	220.17
88	224.09	222.72
89	226.64	225.26
90	229.18	227.81
91	231.73	230.36
92	234.28	232.90
93	236.82	235.45
94	239.37	238.00
95	241.92	240.54
96	244.46	243.09
97	247.01	245.64
98	249.55	248.18
99	252.10	250.73
100	254.65	253.28
101	257.19	255.82
102	259.74	258.37
103	262.29	260.92
104	264.83	263.46
105	267.38	266.01
106	269.93	268.55
107	272.47	271.10
108	275.02	273.65
109	277.57	276.19
110	280.11	278.74
111	282.66	281.29

HTS Type 8M (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
112	285.21	283.83
113	287.75	286.38
114	290.30	288.93
115	292.85	291.47
116	295.39	294.02
117	297.94	296.57
118	300.48	299.11
119	303.03	301.66
120	305.58	304.21
121	308.12	306.75
122	310.67	309.30
123	313.22	311.84
124	315.76	314.39
125	318.31	316.94
126	320.86	319.48
127	323.40	322.03
128	325.95	324.58
129	328.50	327.12
130	331.04	329.67
131	333.59	332.22
132	336.14	334.76
133	338.68	337.31
134	341.23	339.86
135	343.77	342.40
136	346.32	344.95
137	348.87	347.50
138	351.41	350.04
139	353.96	352.59
140	356.51	355.14
141	359.05	357.68
142	361.60	360.23
143	364.15	362.77
144	366.69	365.32
145	369.24	367.87
146	371.79	370.41
147	374.33	372.96
148	376.88	375.51
149	379.43	378.05
150	381.97	380.60

Type TN10 (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
16	5.09	4.74
17	5.41	5.06
18	5.73	5.38
19	6.05	5.70
20	6.37	6.02
21	6.68	6.33
22	7.00	6.65
23	7.32	6.97
24	7.64	7.29
25	7.96	7.61
26	8.28	7.93
27	8.59	8.24
28	8.91	8.56
29	9.23	8.88
30	9.55	9.20
31	9.87	9.52
32	10.19	9.84
33	10.50	10.15
34	10.82	10.47
35	11.14	10.79
36	11.46	11.11
37	11.78	11.43
38	12.10	11.75
39	12.41	12.06
40	12.73	12.38
41	13.05	12.70
42	13.37	13.02
43	13.69	13.34
44	14.01	13.66
45	14.32	13.97
46	14.64	14.29
47	14.96	14.61
48	15.28	14.93
49	15.60	15.25
50	15.92	15.57
51	16.23	15.88
52	16.55	16.20
53	16.87	16.52
54	17.19	16.84
55	17.51	17.16
56	17.83	17.48
57	18.14	17.79
58	18.46	18.11
59	18.78	18.43
60	19.10	18.75

Type TN10

(Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
61	19.42	19.07
62	19.74	19.39
63	20.05	19.70
64	20.37	20.02
65	20.69	20.34
66	21.01	20.66
67	21.33	20.98
68	21.65	21.30
69	21.96	21.61
70	22.28	21.93
71	22.60	22.25
72	22.92	22.57
73	23.24	22.89
74	23.55	23.20
75	23.87	23.52
76	24.19	23.84
77	24.51	24.16
78	24.83	24.48
79	25.15	24.80
80	25.46	25.11
81	25.78	25.43
82	26.10	25.75
83	26.42	26.07
84	26.74	26.39
85	27.06	26.71
86	27.37	27.02
87	27.70	27.34
88	28.01	27.66
89	28.33	27.98
90	28.65	28.30
91	28.97	28.62
92	29.29	28.94
93	29.60	29.25
94	29.92	29.57
95	30.24	29.89
96	30.56	30.21
97	30.88	30.53
98	31.19	30.84
99	31.51	31.16
100	31.83	31.48
101	32.15	31.80
102	32.47	32.12

Type TN15

(Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
20	9.55	8.91
21	10.03	9.39
22	10.50	9.86
23	10.98	10.34
24	11.46	10.82
25	11.94	11.30
26	12.41	11.77
27	12.89	12.25
28	13.37	12.73
29	13.85	13.21
30	14.32	13.68
31	14.80	14.16
32	15.28	14.64
33	15.76	15.12
34	16.23	15.59
35	16.71	16.07
36	17.19	16.55
37	17.67	17.03
38	18.14	17.50
39	18.62	17.98
40	19.10	18.46
41	19.58	18.94
42	20.05	19.41
43	20.53	19.89
44	21.01	20.37
45	21.49	20.85
46	21.96	21.32
47	22.44	21.80
48	22.92	22.28
49	23.40	22.76
50	23.87	23.23
51	24.35	23.71
52	24.83	24.19
53	25.31	24.67
54	25.78	25.14
55	26.26	25.62
56	26.74	26.10
57	27.22	26.58
58	27.69	27.05
59	28.17	27.53
60	28.65	28.01
61	29.13	28.49
62	29.60	28.96
63	30.08	29.44
64	30.56	29.92

Type TN15

(Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
65	31.04	30.40
66	31.51	30.87
67	31.99	31.35
68	32.47	31.83
69	32.95	32.31
70	33.42	32.78
71	33.90	33.26
72	34.38	33.74
73	34.85	34.21
74	35.33	34.69
75	35.81	35.17
76	36.29	35.65
77	36.76	36.12
78	37.24	36.60
79	37.72	37.08
80	38.20	37.56
81	38.67	38.03
82	39.15	38.51
83	39.63	38.99
84	40.11	39.47
85	40.58	39.94
86	41.06	40.42
87	41.54	40.90
88	42.02	41.38
89	42.49	41.85
90	42.97	42.33
91	43.45	42.81
92	43.93	43.29
93	44.40	43.76
94	44.88	44.24
95	45.36	44.72
96	45.84	45.20
97	46.31	45.67
98	46.79	46.15
99	47.27	46.63
100	47.75	47.11
101	48.22	47.58
102	48.70	48.06

How to Design a Synchronous Belt
List of Pulley Diameters

Type MXL

(Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
10	6.47	5.96
11	7.11	6.61
12	7.76	7.25
13	8.41	7.90
14	9.06	8.55
15	9.70	9.19
16	10.35	9.84
17	11.00	10.49
18	11.64	11.14
19	12.29	11.78
20	12.94	12.43
21	13.58	13.08
22	14.23	13.72
23	14.88	14.37
24	15.52	15.02
25	16.17	15.66
26	16.82	16.31
27	17.46	16.96
28	18.11	17.61
29	18.76	18.25
30	19.40	18.90
31	20.05	19.54
32	20.70	20.19
33	21.34	20.84
34	21.99	21.48
35	22.64	22.13
36	23.29	22.78
37	23.93	23.42
38	24.58	24.07
39	25.23	24.72
40	25.87	25.36
41	26.52	26.01
42	27.17	26.66
43	27.81	27.31
44	28.46	27.95
45	29.11	28.60
46	29.75	29.25
47	30.40	29.89
48	31.05	30.54
49	31.69	31.19
50	32.34	31.83
51	32.99	32.48
52	33.63	33.13
53	34.28	33.77
54	34.93	34.42
55	35.57	35.07
56	36.22	35.71
57	36.87	36.36
58	37.51	37.01
59	38.16	37.65

Type MXL

(Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
60	38.81	38.30
61	39.46	38.95
62	40.10	39.59
63	40.75	40.24
64	41.40	40.89
65	42.04	41.53
66	42.69	42.18
67	43.34	42.83
68	43.98	43.48
69	44.63	44.12
70	45.28	44.77
71	45.92	45.42
72	46.57	46.06
73	47.22	46.71
74	47.86	47.36
75	48.51	48.00
76	49.16	48.65
77	49.80	49.30
78	50.45	49.94
79	51.10	50.59
80	51.74	51.24
81	52.39	51.88
82	53.04	52.53
83	53.68	53.18
84	54.33	53.82
85	54.98	54.47
86	55.63	55.12
87	56.27	55.76
88	56.92	56.41
89	57.57	57.06
90	58.21	57.71
91	58.86	58.35
92	59.51	59.00
93	60.15	59.65
94	60.80	60.29
95	61.45	60.94
96	62.09	61.59
97	62.74	62.23
98	63.39	62.88
99	64.03	63.53
100	64.68	64.17
101	65.33	64.82
102	65.97	65.47
103	66.62	66.11
104	67.27	66.76
105	67.91	67.40
106	68.56	68.06
107	69.21	68.70
108	69.86	69.35
109	70.50	69.99

Type MXL

(Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
110	71.15	70.64
111	71.80	71.29
112	72.44	71.93
113	73.09	72.58
114	73.74	73.23
115	74.38	73.88
116	75.03	74.52
117	75.68	75.17
118	76.32	75.82
119	76.97	76.46
120	77.62	77.11
121	78.26	77.76
122	78.91	78.40
123	79.56	79.05
124	80.20	79.70
125	80.85	80.34
126	81.50	80.99
127	82.14	81.64
128	82.79	82.28
129	83.44	82.93
130	84.08	83.58
131	84.73	84.22
132	85.38	84.87
133	86.03	85.52
134	86.67	86.16
135	87.32	86.81
136	87.97	87.46
137	88.61	88.10
138	89.26	88.75
139	89.91	89.40
140	90.55	90.05
141	91.20	90.69
142	91.85	91.34
143	92.49	91.99
144	93.14	92.63
145	93.79	93.28
146	94.43	93.93
147	95.08	94.57
148	95.73	95.22
149	96.37	95.87
150	97.02	96.51

Type XL (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
10	16.17	15.66
11	17.79	17.28
12	19.40	18.90
13	21.02	20.51
14	22.64	22.13
15	24.26	23.75
16	25.87	25.36
17	27.49	26.98
18	29.11	28.60
19	30.72	30.22
20	32.34	31.83
21	33.96	33.45
22	35.57	35.07
23	37.19	36.68
24	38.81	38.30
25	40.43	39.92
26	42.04	41.53
27	43.66	43.15
28	45.28	44.77
29	46.89	46.39
30	48.51	48.00
31	50.13	49.62
32	51.74	51.24
33	53.36	52.85
34	54.98	54.47
35	56.60	56.09
36	58.21	57.70
37	59.83	59.32
38	61.45	60.94
39	63.06	62.56
40	64.68	64.17
41	66.30	65.79
42	67.91	67.41
43	69.53	69.02
44	71.15	70.64
45	72.77	72.26
46	74.38	73.87
47	76.00	75.49
48	77.62	77.11
49	79.23	78.73
50	80.85	80.34
51	82.47	81.96
52	84.08	83.58
53	85.70	85.19
54	87.32	86.81

Type XL (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
55	88.94	88.43
56	90.55	90.04
57	92.17	91.66
58	93.79	93.28
59	95.40	94.90
60	97.02	96.51
61	98.64	98.13
62	100.25	99.75
63	101.87	101.36
64	103.49	102.98
65	105.11	104.60
66	106.72	106.21
67	108.34	107.83
68	109.96	109.45
69	111.57	111.07
70	113.19	112.68
71	114.81	114.30
72	116.43	115.92
73	118.04	117.53
74	119.66	119.15
75	121.28	120.77
76	122.89	122.39
77	124.51	124.00
78	126.13	125.62
79	127.74	127.24
80	129.36	128.85
81	130.98	130.47
82	132.60	132.09
83	134.21	133.70
84	135.83	135.32
85	137.45	136.94
86	139.06	138.56
87	140.68	140.17
88	142.30	141.79
89	143.91	143.41
90	145.53	145.02
91	147.15	146.64
92	148.77	148.26
93	150.38	149.87
94	152.00	151.49
95	153.62	153.11
96	155.23	154.73
97	156.85	156.34
98	158.47	157.96
99	160.08	159.58

Type XL (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
100	161.70	161.19
101	163.32	162.81
102	164.94	164.43
103	166.55	166.04
104	168.17	167.66
105	169.79	169.28
106	171.40	170.90
107	173.02	172.51
108	174.64	174.13
109	176.25	175.75
110	177.87	177.36
111	179.49	178.98
112	181.11	180.60
113	182.72	182.21
114	184.34	183.83
115	185.96	185.45
116	187.57	187.07
117	189.19	188.68
118	190.81	190.30
119	192.42	191.92
120	194.04	193.53

How to Design a Synchronous Belt
List of Pulley Diameters

Type L (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
10	30.32	29.56
11	33.35	32.59
12	36.38	35.62
13	39.41	38.65
14	42.45	41.68
15	45.48	44.72
16	48.51	47.75
17	51.54	50.78
18	54.57	53.81
19	57.61	56.84
20	60.64	59.88
21	63.67	62.91
22	66.70	65.94
23	69.73	68.97
24	72.77	72.00
25	75.80	75.04
26	78.83	78.07
27	81.86	81.10
28	84.89	84.13
29	87.93	87.16
30	90.96	90.20
31	93.99	93.23
32	97.02	96.26
33	100.05	99.29
34	103.08	102.32
35	106.12	105.35
36	109.15	108.39
37	112.18	111.42
38	115.21	114.45
39	118.24	117.48
40	121.28	120.51
41	124.31	123.55
42	127.34	126.58
43	130.37	129.61
44	133.40	132.64
45	136.44	135.67
46	139.47	138.71
47	142.50	141.74
48	145.53	144.77
49	148.56	147.80
50	151.60	150.83
51	154.63	153.86
52	157.66	156.90
53	160.69	159.93
54	163.72	162.96

Type L (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
55	166.75	165.99
56	169.79	169.02
57	172.82	172.06
58	175.85	175.09
59	178.88	178.12
60	181.91	181.15
61	184.95	184.18
62	187.98	187.22
63	191.01	190.25
64	194.04	193.28
65	197.07	196.31
66	200.11	199.34
67	203.14	202.38
68	206.17	205.41
69	209.20	208.44
70	212.23	211.47
71	215.27	214.50
72	218.30	217.53
73	221.33	220.57
74	224.36	223.60
75	227.39	226.63
76	230.42	229.66
77	233.46	232.69
78	236.49	235.73
79	239.52	238.76
80	242.55	241.79
81	245.58	244.82
82	248.62	247.85
83	251.65	250.89
84	254.68	253.92
85	257.71	256.95
86	260.74	259.98
87	263.78	263.01
88	266.81	266.05
89	269.84	269.08
90	272.87	272.11
91	275.90	275.14
92	278.93	278.17
93	281.97	281.20
94	285.00	284.24
95	288.03	287.27
96	291.06	290.30
97	294.09	293.33
98	297.13	296.36
99	300.16	299.40

Type L (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
100	303.19	302.43
101	306.22	305.46
102	309.25	308.49
103	312.29	311.52
104	315.32	314.56
105	318.35	317.59
106	321.38	320.62
107	324.41	323.65
108	327.45	326.68
109	330.48	329.72
110	333.51	332.75
111	336.54	335.78
112	339.57	338.81
113	342.60	341.84
114	345.64	344.87
115	348.67	347.91
116	351.70	350.94
117	354.73	353.97
118	357.76	357.00
119	360.80	360.03
120	363.83	363.07
130	394.15	393.39
140	424.47	423.70
150	454.79	454.02

Type H (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
14	56.60	55.22
15	60.64	59.27
16	64.68	63.31
17	68.72	67.35
18	72.77	71.39
19	76.81	75.44
20	80.85	79.48
21	84.89	83.52
22	88.94	87.56
23	92.98	91.61
24	97.02	95.65
25	101.06	99.69
26	105.11	103.73
27	109.15	107.78
28	113.19	111.82
29	117.23	115.86
30	121.28	119.90
31	125.32	123.95
32	129.36	127.99
33	133.40	132.03
34	137.45	136.07
35	141.49	140.12
36	145.53	144.16
37	149.57	148.20
38	153.62	152.24
39	157.66	156.29
40	161.70	160.33
41	165.74	164.37
42	169.79	168.41
43	173.83	172.46
44	177.87	176.50
45	181.91	180.54
46	185.96	184.59
47	190.00	188.63
48	194.04	192.67
49	198.08	196.71
50	202.13	200.76
51	206.17	204.80
52	210.21	208.84
53	214.25	212.88
54	218.30	216.93
55	222.34	220.97
56	226.38	225.01
57	230.42	229.05
58	234.47	233.10

Type H (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
59	238.51	237.14
60	242.55	241.18
61	246.59	245.22
62	250.64	249.27
63	254.68	253.31
64	258.72	257.35
65	262.76	261.39
66	266.81	265.44
67	270.85	269.48
68	274.89	273.52
69	278.93	277.56
70	282.98	281.61
71	287.02	285.65
72	291.06	289.69
73	295.11	293.73
74	299.15	297.78
75	303.19	301.82
76	307.23	305.86
77	311.28	309.90
78	315.32	313.95
79	319.36	317.99
80	323.40	322.03
81	327.45	326.07
82	331.49	330.12
83	335.53	334.16
84	339.57	338.20
85	343.62	342.24
86	347.66	346.29
87	351.70	350.33
88	355.74	354.37
89	359.79	358.41
90	363.83	362.46
91	367.87	366.50
92	371.91	370.54
93	375.96	374.58
94	380.00	378.63
95	384.04	382.67
96	388.08	386.71
97	392.13	390.75
98	396.17	394.80
99	400.21	398.84
100	404.25	402.88
101	408.30	406.92
102	412.34	410.97
103	416.38	415.01

Type H (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
104	420.42	419.05
105	424.47	423.09
106	428.51	427.14
107	432.55	431.18
108	436.59	435.22
109	440.64	439.26
110	444.68	443.31
111	448.72	447.35
112	452.76	451.39
113	456.81	455.43
114	460.85	459.48
115	464.89	463.52
116	468.93	467.56
117	472.98	471.61
118	477.02	475.65
119	481.06	479.69
120	485.10	483.73
125	505.32	503.95
130	525.53	524.16
135	545.74	544.37
140	565.95	564.58
145	586.17	584.80
150	606.38	605.01
156	630.64	629.26

How to Design a Synchronous Belt
List of Pulley Diameters

Type XH (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
18	127.34	124.55
19	134.41	131.62
20	141.49	138.69
21	148.56	145.77
22	155.64	152.84
23	162.71	159.92
24	169.79	166.99
25	176.86	174.07
26	183.94	181.14
27	191.01	188.22
28	198.08	195.29
29	205.16	202.36
30	212.23	209.44
31	219.31	216.51
32	226.38	223.59
33	233.46	230.66
34	240.53	237.74
35	247.61	244.81
36	254.68	251.89
37	261.75	258.96
38	268.83	266.03
39	275.90	273.11
40	282.98	280.18
41	290.05	287.26
42	297.13	294.33
43	304.20	301.41
44	311.28	308.48
45	318.35	315.56
46	325.42	322.63
47	332.50	329.70
48	339.57	336.78
49	346.65	343.85
50	353.72	350.93
51	360.80	358.00
52	367.87	365.08
53	374.95	372.15
54	382.02	379.23
55	389.09	386.30
56	396.17	393.37
57	403.24	400.45
58	410.32	407.52
59	417.39	414.60
60	424.47	421.67
61	431.54	428.75
62	438.62	435.82

Type XH (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
63	445.69	442.90
64	452.76	449.97
65	459.84	457.04
66	466.91	464.12
67	473.99	471.19
68	481.06	478.27
69	488.14	485.34
70	495.21	492.42
71	502.29	499.49
72	509.36	506.57
73	516.43	513.64
74	523.51	520.71
75	530.58	527.79
76	537.66	534.86
77	544.73	541.94
78	551.81	549.01
79	558.88	556.09
80	565.95	563.16
81	573.03	570.24
82	580.10	577.31
83	587.18	584.38
84	594.25	591.46
85	601.33	598.53
86	608.40	605.61
87	615.48	612.68
88	622.55	619.76
89	629.62	626.83
90	636.70	633.91
91	643.77	640.98
92	650.85	648.05
93	657.92	655.13
94	665.00	662.20
95	672.07	669.28
96	679.15	676.35
97	686.22	683.43
98	693.29	690.50
99	700.37	697.58
100	707.44	704.65
101	714.52	711.72
102	721.59	718.80
103	728.67	725.87
104	735.74	732.95
105	742.82	740.02
106	749.89	747.10
107	756.96	754.17

Type XH (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
108	764.04	761.25
109	771.11	768.32
110	778.19	775.39
111	785.26	782.47
112	792.34	789.54
113	799.41	796.62
114	806.49	803.69
115	813.56	810.77
116	820.63	817.84
117	827.71	824.92
118	834.78	831.99
119	841.86	839.06
120	848.93	846.14
122	863.08	860.29
124	877.23	874.44
125	884.30	881.51
126	891.38	888.59
128	905.53	902.73
130	919.68	916.88
132	933.83	931.03
134	947.97	945.18
135	955.05	952.26
136	962.12	959.33
138	976.27	973.48
140	990.42	987.63
142	1004.57	1001.78
144	1018.72	1015.92
145	1025.79	1023.00
146	1032.87	1030.07
148	1047.02	1044.22
150	1061.17	1058.37

Type XXH (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
18	181.91	178.87
19	192.02	188.97
20	202.13	199.08
21	212.23	209.19
22	222.34	219.29
23	232.45	229.40
24	242.55	239.50
25	252.66	249.61
26	262.76	259.72
27	272.87	269.82
28	282.98	279.93
29	293.08	290.04
30	303.19	300.14
31	313.30	310.25
32	323.40	320.35
33	333.51	330.46
34	343.62	340.57
35	353.72	350.67
36	363.83	360.78
37	373.93	370.89
38	384.04	380.99
39	394.15	391.10
40	404.25	401.21
41	414.36	411.31
42	424.47	421.42
43	434.57	431.52
44	444.68	441.63
45	454.79	451.74
46	464.89	461.84
47	475.00	471.95
48	485.10	482.06
49	495.21	492.16
50	505.32	502.27
51	515.42	512.38
52	525.53	522.48
53	535.64	532.59
54	545.74	542.69
55	555.85	552.80
56	565.95	562.91
57	576.06	573.01
58	586.17	583.12
59	596.27	593.23
60	606.38	603.33
61	616.49	613.44
62	626.59	623.55

Type XXH (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
63	636.70	633.65
64	646.81	643.76
65	656.91	653.86
66	667.02	663.97
67	677.12	674.08
68	687.23	684.18
69	697.34	694.29
70	707.44	704.40
71	717.55	714.50
72	727.66	724.61
73	737.76	734.71
74	747.87	744.82
75	757.98	754.93
76	768.08	765.03
77	778.19	775.14
78	788.29	785.25
79	798.40	795.35
80	808.51	805.46
81	818.61	815.57
82	828.72	825.67
83	838.83	835.78
84	848.93	845.88
85	859.04	855.99
86	869.15	866.10
87	879.25	876.20
88	889.36	886.31
89	899.46	896.42
90	909.57	906.52
91	919.68	916.63
92	929.78	926.74
93	939.89	936.84
94	950.00	946.95
95	960.10	957.05
96	970.21	967.16
97	980.31	977.27
98	990.42	987.37
99	1000.53	997.48
100	1010.63	1007.59
101	1020.74	1017.69
102	1030.85	1027.80
103	1040.95	1037.90
104	1051.06	1048.01
105	1061.17	1058.12
106	1071.27	1068.22
107	1081.38	1078.33

Type XXH (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
108	1091.48	1088.43
109	1101.59	1098.54
110	1111.70	1108.65
111	1121.80	1118.76
112	1131.91	1128.86
113	1142.02	1138.97
114	1152.12	1149.07
115	1162.23	1159.18
116	1172.34	1169.29
117	1182.44	1179.39
118	1192.55	1189.50
119	1202.65	1199.61
120	1212.76	1209.71

Type T5 (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
10	15.92	15.05
11	17.51	16.65
12	19.10	18.25
13	20.69	19.85
14	22.28	21.45
15	23.87	23.05
16	25.46	24.60
17	27.06	26.20
18	28.65	27.80
19	30.24	29.40
20	31.83	31.00
21	33.42	32.70
22	35.01	34.25
23	36.61	35.85
24	38.20	37.40
25	39.79	39.00
26	41.38	40.60
27	42.97	42.20
28	44.56	43.75
29	46.15	45.35
30	47.75	46.95
31	49.34	48.55
32	50.93	50.10
33	52.52	51.70
34	54.11	53.25
35	55.70	54.85
36	57.30	56.45
37	58.89	58.05
38	60.48	59.65
39	62.07	61.25
40	63.66	62.85
41	65.25	64.40
42	66.85	66.00
43	68.44	67.60
44	70.03	69.20
45	71.62	70.80
46	73.21	72.40
47	74.80	73.95
48	76.39	75.55
49	77.99	77.15
50	79.58	78.75
51	81.17	80.35
52	82.76	81.95
53	84.35	83.50
54	85.94	85.10

Type T5 (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
55	87.54	86.70
56	89.13	88.30
57	90.72	89.90
58	92.31	91.50
59	93.90	93.05
60	95.49	94.65
61	97.08	96.25
62	98.68	97.85
63	100.27	99.45
64	101.86	101.05
65	103.45	102.65
66	105.04	104.20
67	106.63	105.80
68	108.23	107.40
69	109.82	109.00
70	111.41	110.60
71	113.00	112.20
72	114.59	113.75
73	116.18	115.35
74	117.77	116.95
75	119.37	118.55
76	120.96	120.15
77	122.55	121.75
78	124.14	123.30
79	125.73	124.90
80	127.32	126.50
81	128.92	128.10
82	130.51	129.70
83	132.10	131.30
84	133.69	132.85
85	135.28	134.45
86	136.87	136.05
87	138.46	137.65
88	140.06	139.25
89	141.65	140.85
90	143.24	142.45
91	144.83	144.00
92	146.42	145.60
93	148.01	147.20
94	149.61	148.80
95	151.20	150.40
96	152.79	152.00
97	154.38	153.55
98	155.97	155.15
99	157.56	156.75

Type T5 (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
100	159.15	158.35
101	160.75	159.95
102	162.34	161.55
103	163.93	163.10
104	165.52	164.70
105	167.11	166.30
106	168.70	167.90
107	170.30	169.50
108	171.89	171.10
109	173.48	172.65
110	175.07	174.25
111	176.66	175.85
112	178.25	177.45
113	179.85	179.05
114	181.44	180.62
115	183.03	182.21
116	184.62	183.80
117	186.21	185.39
118	187.80	186.98
119	189.39	188.56
120	190.99	190.17

Type T10 (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
10	31.83	30.00
11	35.01	33.15
12	38.20	36.35
13	41.38	39.50
14	44.56	42.70
15	47.75	45.90
16	50.93	49.05
17	54.11	52.25
18	57.30	55.45
19	60.48	58.60
20	63.66	61.80
21	66.85	65.00
22	70.03	68.15
23	73.21	71.35
24	76.39	74.55
25	79.58	77.70
26	82.76	80.90
27	85.94	84.10
28	89.13	87.25
29	92.31	90.45
30	95.49	93.65
31	98.68	96.80
32	101.86	100.00
33	105.04	103.20
34	108.23	106.40
35	111.41	109.55
36	114.59	112.75
37	117.77	115.90
38	120.96	119.10
39	124.14	122.30
40	127.32	125.45
41	130.51	128.65
42	133.69	131.85
43	136.87	135.00
44	140.06	138.20
45	143.24	141.40
46	146.42	144.55
47	149.61	147.75
48	152.79	150.95
49	155.97	154.10
50	159.15	157.30
51	162.34	160.50
52	165.52	163.65
53	168.70	166.85
54	171.89	170.05

Type T10 (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
55	175.07	173.20
56	178.25	176.40
57	181.44	179.60
58	184.62	182.75
59	187.80	185.95
60	190.99	189.10
61	194.17	192.30
62	197.35	195.50
63	200.54	198.65
64	203.72	201.85
65	206.90	205.05
66	210.08	208.20
67	213.27	211.40
68	216.45	214.60
69	219.63	217.75
70	222.82	220.95
71	226.00	224.15
72	229.18	227.30
73	232.37	230.50
74	235.55	233.70
75	238.73	236.90
76	241.92	240.05
77	245.10	243.25
78	248.28	246.40
79	251.46	249.60
80	254.65	252.80
81	257.83	255.95
82	261.01	259.15
83	264.20	262.35
84	267.38	265.50
85	270.56	268.70
86	273.75	271.90
87	276.93	275.05
88	280.11	278.25
89	283.30	281.45
90	286.48	284.60
91	289.66	287.80
92	292.85	291.00
93	296.03	294.15
94	299.21	297.35
95	302.39	300.55
96	305.58	303.70
97	308.76	306.90
98	311.94	310.10
99	315.13	313.25

Type T10 (Unit: mm)

No. of teeth	Pitch diameter	Outside diameter
100	318.31	316.45
101	321.49	319.65
102	324.68	322.80
103	327.86	326.00
104	331.04	329.20
105	334.23	332.35
106	337.41	335.55
107	340.59	338.75
108	343.77	341.90
109	346.96	345.10
110	350.14	348.30
111	353.32	351.45
112	356.51	354.65
113	359.69	357.80
114	362.87	361.01
115	366.06	364.20
116	369.24	367.38
117	372.42	370.56
118	375.61	373.75
119	378.79	376.93
120	381.97	380.11
130	413.80	411.94
140	445.63	443.77
150	477.46	475.60

■ Table 4 Difference Between Pulley Pitch Diameter and Pulley Outside Diameter (2a)

Table 4-1 S tooth profiles (Unit: mm)

Belt type	S1.5M	S2M DS2M	S3M DS3M	S4.5M DS4.5M	S5M DS5M	S8M DS8M	S14M DS14M
2a	0.508	0.508	0.762	0.762	0.960	1.372	2.794

Table 4-2 H tooth profiles (Unit: mm)

Belt type	HP-8M
2a	1.372

Table 4-3 Trapezoidal tooth profiles (Unit: mm)

Belt type	TN10	TN15	MXL	XL/DXL	L/DL	H/DH	XH	XXH	T5/DT5	T10/DT10
2a	0.35	0.64	0.51	0.51	0.76	1.37	2.79	3.05	*	*

Note) For the * mark, perform calculation with the pitch diameter and outside diameter in the list of pulley diameters.

■ Table 5 Minimum Number of Teeth of Pulleys

Table 5-1 Ceptor-X/Ceptor-VI

Belt type	No. of teeth (pitch diameter mm)
Ceptor-X S8M	22 (ϕ56.02)
Ceptor-X S14M	28 (ϕ124.78)
Ceptor-VI S3M	14 (ϕ13.37)
Ceptor-VI S5M	14 (ϕ22.28)
Ceptor-VI S8M	22 (ϕ56.02)

Table 5-3 HP-STS

Belt type	No. of teeth (pitch diameter mm)
HP-S5M	14 (ϕ22.28)
HP-S8M	22 (ϕ56.02)
HP-S14M	28 (ϕ124.78)

Table 5-4 HP-STS

Belt type	No. of teeth (pitch diameter mm)
HP-8M	22 (ϕ56.02)

Table 5-2 STS (Pitch diameter unit: mm)

Pinion revolution (rpm)	S1.5M		S2M/DS2M		S3M/DS3M		S4.5M/DS4.5M	
	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter
870 or less	16	ϕ7.64	14	ϕ8.91	14	ϕ13.37	12	ϕ17.19
Over 870 to 1160 or less	18	ϕ8.59	14	ϕ8.91	14	ϕ13.37	14	ϕ20.05
Over 1160 to 1750 or less	20	ϕ9.55	16	ϕ10.19	16	ϕ15.28	16	ϕ22.92
Over 1750 to 3500 or less	22	ϕ10.50	18	ϕ11.46	18	ϕ17.19	18	ϕ25.78
Over 3500 to 4500 or less	24	ϕ11.46	20	ϕ12.73	20	ϕ19.10	18	ϕ25.78
Over 4500 to 5500 or less	-	-	-	-	-	-	18	ϕ25.78
5500 or more	-	-	-	-	-	-	18	ϕ25.78

Table 5-5 Synchronous Belts (Pitch diameter unit: mm)

Pinion revolution (rpm)	TN10		TN15		MXL		XL/DXL		L/DL		H/DH		XH		XXH		T5/DT5		T10/DT10	
	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter	No. of teeth	Pitch diameter
900 or less	16	ϕ5.09	20	ϕ9.55	—	—	10	ϕ16.17	12	ϕ36.38	14	ϕ56.60	22	ϕ155.64	22	ϕ222.34	12	ϕ19.10	14	ϕ44.56
Over 900 to 1200 or less	16	ϕ5.09	20	ϕ9.55	12	ϕ7.76	10	ϕ16.17	12	ϕ36.38	16	ϕ64.68	24	ϕ169.79	24	ϕ242.55	12	ϕ19.10	16	ϕ50.93
Over 1200 to 1800 or less	18	ϕ5.73	22	ϕ10.50	14	ϕ9.06	12	ϕ19.40	14	ϕ42.45	18	ϕ72.77	26	ϕ183.94	26	ϕ262.76	14	ϕ22.28	18	ϕ57.30
Over 1800 to 3600 or less	24	ϕ7.64	24	ϕ11.46	16	ϕ10.35	12	ϕ19.40	16	ϕ48.51	20	ϕ80.85	30	ϕ212.23			16	ϕ25.46	20	ϕ63.66
Over 3600 to 4800 or less	24	ϕ7.64	29	ϕ13.85	18	ϕ11.64	15	ϕ24.26	18	ϕ54.57	22	ϕ88.94					20	ϕ31.83	22	ϕ70.03

■ Table 6 Basic Belt Speeds

Belt specification	Belt speed (m/s)
Ceptor-X	33
Ceptor-VI	33
HP-STS	33
STS	33
HP-HTS	33
Synchronous Belt	30

Table of basic power ratings for Ceptor-X Type S8M (per width of 60 mm and length of 1200 mm) (Unit: kW)

No. of teeth of pinion		20	22	24	26	28	30	32	34	36	40	44	48	50	60	72	84	96	120
Pitch diameter (mm)		50.93	56.02	61.12	66.21	71.30	76.39	81.49	86.58	91.67	101.86	112.05	122.23	127.32	152.79	183.35	213.90	244.46	305.58
Pinion revolution (rpm)	50	1.12	1.34	1.55	1.77	2.01	2.27	2.50	2.75	3.00	3.47	3.96	4.42	4.64	5.66	6.76	7.78	8.79	10.8
	100	2.13	2.54	2.93	3.36	3.81	4.29	4.73	5.19	5.68	6.55	7.47	8.35	8.76	10.7	12.7	14.6	16.5	20.2
	200	4.02	4.79	5.54	6.34	7.19	8.08	8.92	9.79	10.7	12.3	14.1	15.7	16.5	20.0	23.9	27.5	31.0	37.9
	300	5.82	6.94	8.02	9.17	10.4	11.7	12.9	14.1	15.5	17.8	20.3	22.7	23.8	28.9	34.4	39.6	44.6	54.5
	400	7.6	9.01	10.4	11.9	13.5	15.2	16.7	18.4	20.1	23.1	26.3	29.4	30.8	37.5	44.6	51.2	57.7	70.5
	500	9.3	11.0	12.7	14.6	16.5	18.6	20.5	22.5	24.5	28.3	32.2	36.0	37.7	45.8	54.5	62.5	70.5	86.0
	600	10.9	13.0	15.0	17.2	19.5	21.9	24.1	26.5	28.9	33.3	37.9	42.4	44.4	53.9	64.1	73.6	82.9	101.1
	700	12.6	15.0	17.3	19.8	22.4	25.2	27.7	30.4	33.2	38.2	43.6	48.6	51.0	61.9	73.6	84.4	95.0	115.9
	800	14.2	16.9	19.5	22.3	25.2	28.4	31.3	34.3	37.4	43.1	49.1	54.8	57.4	69.7	82.8	95.0	107.0	130.3
	900	15.8	18.8	21.7	24.8	28.1	31.5	34.8	38.1	41.6	47.9	54.5	60.9	63.8	77.4	92.0	105.5	118.7	144.6
	1000	17.3	20.6	23.8	27.2	30.8	34.6	38.2	41.9	45.7	52.6	59.9	66.8	70.1	85.0	100.9	115.7	130.2	158.6
	1100	18.9	22.5	25.9	29.6	33.6	37.7	41.6	45.6	49.7	57.3	65.2	72.7	76.2	92.5	109.8	125.9	141.6	172.4
	1200	20.4	24.3	28.0	32.0	36.3	40.8	44.9	49.2	53.8	61.9	70.4	78.6	82.3	99.8	118.5	135.9	152.8	186.0
	1300	21.9	26.1	30.1	34.4	39.0	43.8	48.2	52.9	57.7	66.4	75.6	84.3	88.4	107.1	127.2	145.7	163.9	199.4
	1400	23.4	27.9	32.2	36.7	41.6	46.7	51.5	56.5	61.6	70.9	80.7	90.0	94.3	114.3	135.7	155.5	174.8	212.6
	1500	24.9	29.6	34.2	39.1	44.2	49.7	54.7	60.0	65.5	75.3	85.7	95.6	100.2	121.5	144.1	165.1	185.6	225.7
	1600	26.4	31.4	36.2	41.4	46.8	52.6	58.0	63.5	69.3	79.7	90.7	101.2	106.0	128.5	152.5	174.6	196.3	238.6
	1700	27.8	33.1	38.2	43.6	49.4	55.5	61.1	67.0	73.1	84.1	95.7	106.7	111.8	135.5	160.7	184.0	206.9	251.4
	1800	29.2	34.8	40.2	45.9	51.9	58.3	64.3	70.4	76.9	88.4	100.6	112.2	117.5	142.4	168.8	193.3	217.3	264.0
	1900	30.7	36.5	42.1	48.1	54.5	61.2	67.4	73.9	80.6	92.7	105.4	117.6	123.2	149.2	176.9	202.5	227.6	276.5
	2000	32.1	38.2	44.1	50.3	57.0	64.0	70.5	77.2	84.3	96.9	110.2	122.9	128.8	156.0	184.9	211.6	237.8	288.8
	2200	34.9	41.5	47.9	54.7	61.9	69.5	76.6	83.9	91.5	105.2	119.7	133.5	139.8	169.3	200.6	229.6	257.9	313.1
	2400	37.6	44.8	51.6	59.0	66.7	75.0	82.5	90.4	98.6	113.4	129.0	143.8	150.6	182.3	216.0	247.1	277.6	336.8
	2600	40.3	48.0	55.3	63.2	71.5	80.3	88.4	96.9	105.6	121.5	138.1	153.9	161.2	195.1	231.1	264.3	296.8	360.1
	2800	43.0	51.1	59.0	67.3	76.2	85.5	94.2	103.2	112.5	129.3	147.0	163.9	171.6	207.6	245.9	281.1	315.7	382.8
	3000	45.6	54.2	62.5	71.4	80.8	90.7	99.8	109.3	119.3	137.1	155.8	173.6	181.8	219.9	260.4	297.6	334.1	405.0
	3200	48.2	57.2	66.0	75.4	85.3	95.7	105.4	115.4	125.9	144.6	164.4	183.2	191.8	231.9	274.5	313.8	352.1	
	3400	50.7	60.2	69.5	79.3	89.7	100.7	110.8	121.4	132.3	152.1	172.8	192.5	201.6	243.7	288.4	329.5	369.7	
	3600	53.1	63.2	72.8	83.1	94.0	105.5	116.2	127.2	138.7	159.3	181.1	201.7	211.2	255.2	301.9	344.9	386.9	
	3800	55.6	66.0	76.1	86.9	98.3	110.3	121.4	132.9	144.9	166.5	189.1	210.7	220.6	266.5	315.2	360.0	403.7	
	4000	57.9	68.8	79.4	90.6	102.4	114.9	126.5	138.5	151.0	173.5	197.0	219.5	229.8	277.5	328.1	374.7		
	4500	63.7	75.6	87.2	99.4	112.4	126.2	138.8	152.0	165.7	190.2	216.0	240.5	251.8	303.9	359.1			
	5000	69.1	82.1	94.5	107.8	121.9	136.7	150.4	164.7	179.4	205.9	233.8	260.2	272.4	328.6	387.9			
	5500	74.2	88.1	101.5	115.7	130.7	146.6	161.3	176.5	192.3	220.6	250.4	278.6	291.6	351.4				
	6000	78.9	93.7	107.9	123.0	139.0	155.8	171.3	187.5	204.2	234.2	265.7	295.5	309.2	372.4				

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Table of basic power ratings for Ceptor-X Type S14M (per width of 120 mm and length of 1400 mm) (Unit: kW)

No. of teeth of pinion		28	30	32	34	36	40	42	44	48	50	54	60	64	72	84	96	120	144
Pitch diameter (mm)		124.78	133.69	142.60	151.52	160.43	178.25	187.17	196.08	213.90	222.82	240.64	267.38	285.21	320.86	374.33	427.81	534.76	641.71
Pinion revolution (rpm)	20	4.27	4.81	5.31	5.83	6.37	7.36	7.87	8.40	9.40	9.86	10.7	12.0	12.9	14.4	16.6	18.7	23.0	27.1
	40	8.10	9.12	10.1	11.0	12.1	13.9	14.9	15.9	17.8	18.7	20.2	22.7	24.4	27.1	31.3	35.3	43.3	51.1
	50	9.94	11.2	12.4	13.6	14.8	17.1	18.3	19.5	21.8	22.9	24.8	27.9	29.9	33.3	38.3	43.3	53.0	62.6
	60	11.8	13.2	14.6	16.0	17.5	20.2	21.6	23.1	25.8	27.1	29.3	33.0	35.3	39.3	45.2	51.1	62.6	73.8
	80	15.3	17.2	19.0	20.9	22.8	26.3	28.1	30.0	33.5	35.2	38.1	42.8	45.9	51.1	58.8	66.3	81.2	95.8
	100	18.8	21.1	23.3	25.6	28.0	32.2	34.5	36.8	41.1	43.1	46.7	52.5	56.2	62.6	71.9	81.2	99.3	117.1
	150	27.2	30.6	33.7	37.0	40.5	46.6	49.9	53.2	59.4	62.3	67.5	75.8	81.2	90.3	103.8	117.1	143.1	168.6
	200	35.3	39.8	43.8	48.1	52.5	60.6	64.7	69.0	77.1	80.9	87.6	98.3	105.3	117.1	134.5	151.7	185.3	218.1
	250	43.3	48.7	53.7	58.9	64.3	74.1	79.2	84.5	94.3	98.9	107.1	120.2	128.7	143.1	164.4	185.3	226.2	266.2
	300	51.1	57.4	63.3	69.4	75.8	87.4	93.4	99.6	111.2	116.6	126.2	141.6	151.6	168.5	193.5	218.1	266.1	313.0
	350	58.7	66.0	72.8	79.8	87.1	100.4	107.3	114.4	127.7	133.9	145.0	162.6	174.1	193.5	222.1	250.2	305.2	358.9
	400	66.2	74.4	82.1	90.0	98.3	113.2	121.0	128.9	144.0	150.9	163.4	183.3	196.2	218.0	250.1	281.7	343.6	403.8
	450	73.6	82.8	91.2	100.1	109.2	125.8	134.4	143.3	160.0	167.7	181.5	203.6	217.9	242.1	277.7	312.8	381.3	448.0
	500	80.9	91.0	100.3	110.0	120.1	138.3	147.7	157.5	175.8	184.2	199.4	223.7	239.3	265.8	304.9	343.3	418.4	491.6
	600	95.3	107.1	118.1	129.5	141.3	162.7	173.8	185.3	206.8	216.7	234.5	263.0	281.3	312.4	358.2	403.2	491.1	576.7
	700	109.4	122.9	135.5	148.5	162.1	186.6	199.4	212.4	237.1	248.4	268.9	301.4	322.4	357.9	410.3	461.7	562.0	659.7
	800	123.2	138.4	152.5	167.2	182.5	210.0	224.4	239.1	266.7	279.5	302.4	339.0	362.6	402.4	461.2	518.8	631.3	740.7
	900	136.7	153.6	169.3	185.5	202.5	233.0	248.9	265.2	295.9	310.0	335.4	375.8	401.9	446.0	511.0	574.7	699.1	819.9
	1000	150.0	168.6	185.7	203.6	222.1	255.6	273.0	290.8	324.4	339.9	367.7	412.0	440.5	488.8	559.9	629.5	765.4	897.4
	1100	163.1	183.3	201.9	221.3	241.4	277.8	296.7	316.0	352.5	369.3	399.4	447.5	478.5	530.8	607.8	683.3	830.4	973.3
	1200	176.0	197.7	217.8	238.7	260.4	299.6	319.9	340.8	380.1	398.2	430.6	482.3	515.7	572.0	654.8	736.0	894.2	1047.7
	1300	188.7	212.0	233.4	255.8	279.1	321.0	342.8	365.1	407.2	426.6	461.3	516.6	552.2	612.4	701.0	787.7	956.7	1120.6
	1400	201.2	225.9	248.8	272.7	297.5	342.1	365.3	389.1	433.8	454.4	491.4	550.2	588.2	652.1	746.3	838.5	1018.0	1192.0
	1500	213.5	239.7	264.0	289.3	315.5	362.8	387.4	412.6	460.0	481.8	521.0	583.2	623.4	691.1	790.7	888.2	1078.0	1262.0
	1600	225.5	253.3	278.9	305.6	333.3	383.2	409.1	435.7	485.7	508.8	550.0	615.7	658.1	729.4	834.3	937.1	1136.9	
	1700	237.4	266.6	293.5	321.6	350.8	403.2	430.5	458.4	511.0	535.2	578.6	647.5	692.1	767.0	877.1	984.9	1194.6	
	1800	249.1	279.7	307.9	337.3	367.9	422.9	451.5	480.8	535.8	561.2	606.6	678.8	725.4	803.8	919.1	1031.8	1251.1	
	1900	260.6	292.6	322.1	352.8	384.8	442.2	472.1	502.7	560.2	586.7	634.1	709.5	758.1	840.0	960.2	1077.8		
	2000	271.9	305.2	336.0	368.0	401.3	461.2	492.3	524.2	584.1	611.7	661.0	739.6	790.2	875.4	1000.5	1122.8		
	2200	293.8	329.8	363.0	397.6	433.5	498.1	531.6	566.0	630.5	660.3	713.4	797.9	852.4	944.0	1078.5	1209.9		
	2400	315.0	353.5	389.0	426.0	464.5	533.5	569.3	606.1	675.1	706.8	763.6	853.8	912.0	1009.6	1152.9			
	2600	335.3	376.2	414.0	453.3	494.1	567.4	605.5	644.4	717.7	751.3	811.5	907.2	968.8	1072.2	1223.8			
	2800	354.7	397.9	437.8	479.3	522.4	599.7	639.9	681.0	758.2	793.7	857.1	957.9	1022.8	1131.6				
	3000	373.2	418.6	460.5	504.1	549.3	630.5	672.6	715.8	796.7	833.9	900.3	1005.9	1073.8	1187.6				
	3200	390.7	438.2	482.0	527.5	574.8	659.6	703.5	748.6	833.0	871.9	941.0	1051.1	1121.9					
	3400	407.3	456.7	502.3	549.6	598.8	686.9	732.6	779.4	867.1	907.4	979.2	1093.3	1166.7					
	3600	422.9	474.1	521.3	570.3	621.3	712.4	759.7	808.1	898.9	940.5	1014.7	1132.6						
	3800	437.4	490.3	539.0	589.6	642.1	736.1	784.8	834.7	928.2	971.1	1047.4	1168.6						
	4000	450.8	505.2	555.3	607.3	661.3	757.8	807.9	859.1	955.0	999.0								
	4500	479.3	536.8	589.7	644.6	701.6	803.2	855.9	909.8	1010.5	1056.6								
	5000	500.0	559.7	614.4	671.2	730.1	835.0	889.2	944.7										

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Table of basic power ratings for Ceptor-VI Type S3M (per width of 6 mm and length of 300 mm)

(Unit: W)

No. of teeth of pinion		14	15	16	18	20	22	24	26	28	30	32	34	36	40	44	48	50	60
Pitch diameter (mm)		13.37	14.32	15.28	17.19	19.10	21.01	22.92	24.83	26.74	28.65	30.56	32.47	34.38	38.20	42.02	45.84	47.75	57.30
Pinion revolution (rpm)	50	5	6	6	7	8	9	10	11	12	12	13	14	15	17	19	21	22	26
	100	10	11	12	14	15	17	19	20	22	23	25	27	29	32	36	39	41	49
	200	19	21	22	26	29	32	35	38	41	44	47	51	54	61	67	73	76	91
	300	28	30	33	37	42	46	50	55	59	64	68	73	78	87	96	105	110	131
	400	36	39	42	48	54	60	65	71	77	83	89	95	101	113	125	136	143	170
	500	45	48	52	59	66	73	80	87	94	101	108	116	123	138	152	166	174	207
	600	53	57	61	69	78	86	94	103	111	119	128	136	145	163	179	196	205	244
	700	61	65	70	80	90	99	108	118	127	137	147	157	167	187	206	225	235	280
	800	68	74	79	90	101	112	122	133	143	154	165	176	188	211	232	253	265	315
	900	76	82	88	100	113	124	136	147	159	171	184	196	208	234	257	281	294	349
	1000	83	90	97	110	124	136	149	162	175	188	202	215	229	257	282	308	323	383
	1100	91	98	105	120	135	148	162	176	190	205	219	234	249	279	307	335	351	416
	1200	98	106	114	129	146	160	175	190	206	221	237	253	269	301	331	362	379	449
	1300	106	114	122	139	156	172	188	204	221	237	254	271	288	323	355	388	406	482
	1400	113	121	130	148	167	184	201	218	236	253	271	289	308	345	379	414	433	514
	1500	120	129	138	158	177	195	213	232	250	269	288	307	327	366	403	439	460	546
	1600	127	137	147	167	188	207	226	245	265	285	305	325	346	387	426	465	487	577
	1700	134	144	155	176	198	218	238	259	279	300	321	343	364	408	449	490	513	608
	1800	141	152	163	185	208	229	250	272	293	315	338	360	383	429	472	514	538	638
	1900	148	159	170	194	218	240	262	285	308	331	354	377	401	450	494	539	564	668
	2000	154	166	178	203	228	251	274	298	321	346	370	394	419	470	516	563	589	698
	2100	161	173	186	211	238	262	286	311	335	360	386	411	437	490	538	587	614	728
	2200	168	180	194	220	248	272	298	323	349	375	401	428	455	509	560	610	639	757
	2300	174	188	201	229	257	283	309	336	362	389	417	444	472	529	581	634	663	785
	2400	181	195	209	237	267	294	321	348	376	404	432	461	490	548	602	657	687	814
	2500	187	201	216	246	276	304	332	360	389	418	447	477	507	567	623	679	711	842
	2600	194	208	223	254	285	314	343	372	402	432	462	493	523	586	644	702	735	870
	2700	200	215	231	262	295	324	354	384	415	446	477	508	540	605	664	724	758	897
	2800	206	222	238	270	304	334	365	396	428	459	491	524	557	623	684	746	781	924
	2900	212	228	245	278	313	344	376	408	440	473	506	539	573	642	704	768	803	951
	3000	218	235	252	286	322	354	387	419	453	486	520	554	589	660	724	789	826	977
	3200	230	248	266	302	339	373	408	442	477	513	548	584	621	695	763	831	870	1029
	3400	242	261	279	317	357	392	428	464	501	538	576	613	652	729	800	872	913	1079
	3600	254	273	293	332	373	411	448	486	524	563	602	642	682	763	837	912	954	1128
	3800	265	285	305	347	390	429	468	507	547	588	628	669	711	796	873	951	995	1175
	4000	276	297	318	361	406	446	487	528	569	611	654	696	739	827	907	988	1034	1221
	4200	287	308	330	375	421	463	505	548	591	634	678	722	767	858	941	1024	1072	1265
	4400	297	319	342	389	436	479	523	567	612	656	702	748	794	888	973	1060	1108	1308
	4600	307	330	354	402	451	495	540	586	632	678	725	772	820	916	1005	1093	1144	1349
	4800	317	341	365	414	465	511	557	604	651	699	747	795	844	944	1035	1126	1178	1389
	5000	326	351	376	427	479	526	574	622	670	719	768	818	868	971	1064	1157	1211	1427
	5500	349	375	401	455	511	561	612	663	714	766	818	871	924	1032	1131	1230	1286	1515
	6000	369	397	425	481	540	592	646	699	753	808	863	918	974	1087	1190	1294	1353	1591
	6500	387	416	445	504	565	620	676	731	787	844	901	959	1017	1134	1241	1349	1409	
	7000	403	433	463	524	587	644	701	759	816	875	934	993	1053	1174	1283	1393	1456	
	7500																		
	8000																		
	8500																		
	9000																		

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for Ceptor-VI Type S5M (per width of 10 mm and length of 800 mm)

(Unit: kW)

No. of teeth of pinion		14	16	18	20	22	24	25	26	28	30	32	34	36	40	42	44	48	50	60
Pitch diameter (mm)		22.28	25.46	28.65	31.83	35.01	38.20	39.79	41.38	44.56	47.75	50.93	54.11	57.30	63.66	66.85	70.03	76.39	79.58	95.49
Pinion revolution (rpm)	50	0.04	0.05	0.05	0.06	0.07	0.08	0.08	0.09	0.09	0.10	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.19	0.22
	100	0.08	0.09	0.10	0.12	0.13	0.15	0.16	0.16	0.18	0.19	0.21	0.23	0.25	0.29	0.30	0.31	0.34	0.35	0.42
	200	0.14	0.17	0.20	0.22	0.25	0.27	0.30	0.31	0.34	0.37	0.40	0.43	0.47	0.54	0.56	0.59	0.64	0.66	0.78
	300	0.21	0.24	0.28	0.32	0.36	0.40	0.43	0.44	0.49	0.53	0.58	0.63	0.67	0.78	0.82	0.85	0.92	0.96	1.13
	400	0.27	0.32	0.37	0.42	0.47	0.52	0.56	0.58	0.63	0.69	0.75	0.81	0.88	1.01	1.06	1.10	1.20	1.24	1.46
	500	0.33	0.39	0.45	0.51	0.57	0.63	0.68	0.71	0.77	0.84	0.92	1.00	1.07	1.24	1.30	1.35	1.46	1.52	1.79
	600	0.40	0.46	0.53	0.60	0.67	0.75	0.80	0.83	0.91	0.99	1.09	1.17	1.26	1.46	1.53	1.59	1.72	1.79	2.10
	700	0.45	0.53	0.61	0.69	0.77	0.86	0.92	0.96	1.05	1.14	1.25	1.35	1.45	1.68	1.75	1.83	1.98	2.05	2.42
	800	0.51	0.60	0.69	0.78	0.87	0.97	1.04	1.08	1.18	1.29	1.41	1.52	1.64	1.89	1.98	2.06	2.23	2.31	2.72
	900	0.57	0.66	0.77	0.87	0.97	1.08	1.16	1.20	1.31	1.43	1.57	1.69	1.82	2.10	2.20	2.29	2.48	2.57	3.02
	1000	0.63	0.73	0.84	0.95	1.07	1.18	1.27	1.32	1.44	1.57	1.72	1.86	2.00	2.31	2.41	2.52	2.72	2.82	3.32
	1100	0.68	0.79	0.92	1.04	1.16	1.29	1.39	1.44	1.57	1.71	1.87	2.02	2.17	2.52	2.63	2.74	2.96	3.07	3.61
	1200	0.74	0.86	0.99	1.12	1.26	1.39	1.50	1.55	1.70	1.85	2.03	2.19	2.35	2.72	2.84	2.96	3.20	3.32	3.90
	1300	0.80	0.92	1.07	1.21	1.35	1.50	1.61	1.67	1.82	1.99	2.18	2.35	2.52	2.92	3.05	3.18	3.43	3.56	4.19
	1400	0.85	0.99	1.14	1.29	1.44	1.60	1.72	1.78	1.95	2.12	2.32	2.51	2.69	3.12	3.25	3.39	3.67	3.80	4.47
	1500	0.90	1.05	1.21	1.37	1.53	1.70	1.83	1.89	2.07	2.25	2.47	2.66	2.86	3.31	3.46	3.61	3.90	4.04	4.75
	1600	0.96	1.11	1.29	1.45	1.62	1.80	1.94	2.00	2.19	2.39	2.61	2.82	3.03	3.51	3.66	3.82	4.12	4.28	5.03
	1700	1.01	1.17	1.36	1.53	1.71	1.90	2.04	2.12	2.31	2.52	2.76	2.98	3.20	3.70	3.86	4.03	4.35	4.51	5.30
	1800	1.06	1.23	1.43	1.61	1.80	2.00	2.15	2.22	2.43	2.65	2.90	3.13	3.36	3.89	4.06	4.23	4.57	4.74	5.57
	1900	1.12	1.29	1.50	1.69	1.89	2.09	2.25	2.33	2.55	2.78	3.04	3.28	3.53	4.08	4.26	4.44	4.79	4.97	5.84
	2000	1.17	1.35	1.57	1.77	1.98	2.19	2.36	2.44	2.67	2.90	3.18	3.43	3.69	4.26	4.45	4.64	5.01	5.20	6.10
	2100	1.22	1.41	1.64	1.85	2.06	2.29	2.46	2.55	2.79	3.03	3.32	3.58	3.85	4.45	4.64	4.84	5.23	5.42	6.37
	2200	1.27	1.47	1.71	1.92	2.15	2.38	2.56	2.65	2.90	3.16	3.46	3.73	4.01	4.63	4.84	5.04	5.44	5.64	6.63
	2300	1.32	1.53	1.77	2.00	2.23	2.48	2.66	2.76	3.02	3.28	3.59	3.88	4.16	4.81	5.03	5.24	5.65	5.86	6.88
	2400	1.37	1.59	1.84	2.08	2.32	2.57	2.76	2.86	3.13	3.40	3.73	4.02	4.32	4.99	5.21	5.43	5.87	6.08	7.14
	2500	1.42	1.65	1.91	2.15	2.40	2.66	2.86	2.96	3.24	3.53	3.86	4.16	4.48	5.17	5.40	5.63	6.07	6.30	7.39
	2600	1.47	1.70	1.97	2.23	2.49	2.75	2.96	3.07	3.35	3.65	3.99	4.31	4.63	5.35	5.58	5.82	6.28	6.51	7.64
	2700	1.52	1.76	2.04	2.30	2.57	2.84	3.06	3.17	3.46	3.77	4.13	4.45	4.78	5.52	5.77	6.01	6.49	6.72	7.89
	2800	1.57	1.82	2.10	2.37	2.65	2.93	3.16	3.27	3.57	3.89	4.26	4.59	4.93	5.70	5.95	6.20	6.69	6.93	8.14
	2900	1.62	1.87	2.17	2.44	2.73	3.02	3.25	3.37	3.68	4.00	4.38	4.73	5.08	5.87	6.13	6.38	6.89	7.14	8.38
	3000	1.66	1.93	2.23	2.52	2.81	3.11	3.35	3.47	3.79	4.12	4.51	4.87	5.23	6.04	6.30	6.57	7.09	7.35	8.62
	3200	1.76	2.04	2.36	2.66	2.97	3.29	3.54	3.66	4.00	4.35	4.76	5.14	5.52	6.37	6.65	6.93	7.48	7.75	9.09
	3400	1.85	2.15	2.48	2.80	3.12	3.46	3.72	3.85	4.21	4.58	5.01	5.40	5.81	6.70	7.00	7.29	7.87	8.15	9.56
	3600	1.94	2.25	2.60	2.94	3.28	3.63	3.90	4.04	4.42	4.80	5.26	5.67	6.09	7.03	7.33	7.64	8.24	8.54	10.02
	3800	2.03	2.36	2.72	3.07	3.43	3.80	4.08	4.22	4.62	5.02	5.49	5.92	6.36	7.34	7.66	7.98	8.61	8.93	10.46
	4000	2.12	2.46	2.84	3.20	3.57	3.96	4.25	4.40	4.81	5.23	5.73	6.17	6.63	7.65	7.99	8.32	8.97	9.30	10.90
	4200	2.21	2.56	2.96	3.33	3.72	4.12	4.43	4.58	5.01	5.44	5.96	6.42	6.89	7.96	8.30	8.65	9.33	9.67	11.32
	4400	2.29	2.66	3.07	3.46	3.86	4.27	4.59	4.75	5.20	5.65	6.18	6.66	7.15	8.25	8.61	8.97	9.67	10.02	11.74
	4600	2.38	2.75	3.18	3.58	4.00	4.43	4.76	4.92	5.38	5.85	6.40	6.90	7.41	8.54	8.92	9.28	10.01	10.37	12.15
	4800	2.46	2.85	3.29	3.71	4.13	4.58	4.92	5.09	5.56	6.05	6.61	7.13	7.65	8.83	9.21	9.59	10.34	10.71	12.54
	5000	2.54	2.94	3.40	3.83	4.27	4.72	5.08	5.25	5.74	6.24	6.82	7.35	7.89	9.10	9.50	9.89	10.66	11.05	12.93
	5500	2.73	3.16	3.65	4.11	4.58	5.07	5.45	5.64	6.16	6.69	7.32	7.89	8.47	9.76	10.18	10.60	11.43	11.84	13.84
	6000	2.91	3.37	3.89	4.38	4.88	5.40	5.80	6.00	6.56	7.12	7.79	8.39	9.00	10.38	10.82	11.26	12.14	12.57	14.69
	6500	3.08	3.56	4.11	4.63	5.16	5.70	6.13	6.34	6.92	7.52	8.22	8.85	9.49	10.94	11.41	11.87	12.79	13.24	15.46
	7000	3.24	3.74	4.32	4.86	5.41	5.98	6.43	6.65	7.25	7.88	8.61	9.27	9.94	11.45	11.94	12.42	13.38	13.85	16.16
	7500	3.38	3.90	4.50	5.07	5.64	6.23	6.70	6.93	7.56	8.20	8.96	9.65	10.35	11.91	12.41	12.91	13.90	14.39	16.77
	8000	3.51	4.05	4.67	5.25	5.85	6.46	6.94	7.17	7.82	8.49	9.27	9.98	10.70	12.31	12.83	13.34	14.36	14.86	17.30
	8500	3.62	4.18	4.82	5.42	6.03	6.66	7.15	7.39	8.06	8.74	9.54	10.26	11.00	12.65	13.18	13.71	14.74	15.25	17.74
	9000	3.72	4.29	4.95	5.55	6.18	6.82	7.32	7.57	8.25	8.95	9.77	10.50	11.25	12.93	13.47	14.00	15.05	15.57	18.09

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Table of basic power ratings for Ceptor-VI Type S8M (per width of 60 mm and length of 1200 mm)

(Unit: kW)

No. of teeth of pinion		20	22	24	26	28	30	32	34	36	40	44	48	50	60	72	84	96	120
Pitch diameter (mm)		50.93	56.02	61.12	66.21	71.30	76.39	81.49	86.58	91.67	101.86	112.05	122.23	127.32	152.79	183.35	213.90	244.46	305.58
Pinion revolution (rpm)	50	0.84	1.00	1.16	1.33	1.51	1.70	1.88	2.06	2.25	2.60	2.97	3.32	3.48	4.24	5.07	5.84	6.59	8.08
	100	1.60	1.90	2.20	2.52	2.86	3.22	3.55	3.90	4.26	4.91	5.60	6.26	6.57	8.00	9.55	10.98	12.40	15.18
	200	3.01	3.59	4.15	4.75	5.39	6.06	6.69	7.34	8.02	9.24	10.54	11.78	12.35	15.03	17.91	20.59	23.23	28.40
	300	4.36	5.20	6.01	6.88	7.80	8.77	9.67	10.61	11.59	13.36	15.23	17.01	17.84	21.69	25.83	29.67	33.46	40.87
	400	5.67	6.76	7.81	8.93	10.12	11.38	12.55	13.77	15.04	17.33	19.75	22.06	23.12	28.11	33.45	38.41	43.29	52.85
	500	6.94	8.27	9.56	10.93	12.39	13.93	15.36	16.84	18.39	21.19	24.14	26.96	28.26	34.34	40.85	46.89	52.83	64.46
	600	8.19	9.76	11.27	12.89	14.60	16.42	18.10	19.85	21.67	24.97	28.44	31.75	33.28	40.42	48.07	55.16	62.13	75.76
	700	9.41	11.21	12.95	14.81	16.78	18.86	20.79	22.80	24.89	28.66	32.64	36.45	38.20	46.38	55.13	63.25	71.22	86.82
	800	10.62	12.64	14.60	16.69	18.91	21.26	23.43	25.69	28.05	32.30	36.78	41.05	43.03	52.23	62.06	71.18	80.14	97.65
	900	11.80	14.05	16.23	18.55	21.01	23.62	26.03	28.54	31.16	35.87	40.84	45.59	47.78	57.97	68.87	78.98	88.90	108.27
	1000	12.97	15.44	17.83	20.38	23.08	25.94	28.59	31.35	34.22	39.39	44.84	50.05	52.45	63.63	75.57	86.64	97.50	118.72
	1100	14.12	16.81	19.41	22.19	25.13	28.24	31.12	34.12	37.24	42.86	48.79	54.44	57.06	69.20	82.17	94.18	105.97	128.99
	1200	15.26	18.17	20.98	23.97	27.14	30.50	33.61	36.85	40.21	46.28	52.68	58.78	61.60	74.69	88.67	101.61	114.31	139.10
	1300	16.39	19.50	22.52	25.73	29.14	32.74	36.07	39.54	43.15	49.66	56.52	63.06	66.07	80.10	95.08	108.94	122.53	149.05
	1400	17.50	20.83	24.04	27.47	31.10	34.94	38.50	42.20	46.05	52.99	60.31	67.28	70.49	85.45	101.40	116.16	130.63	158.86
	1500	18.60	22.13	25.55	29.19	33.05	37.13	40.90	44.83	48.92	56.29	64.05	71.44	74.86	90.72	107.63	123.28	138.62	168.52
	1600	19.68	23.42	27.03	30.88	34.97	39.28	43.27	47.43	51.75	59.54	67.74	75.56	79.16	95.92	113.78	130.30	146.49	178.05
	1700	20.76	24.70	28.50	32.56	36.86	41.41	45.61	49.99	54.55	62.75	71.39	79.62	83.42	101.05	119.85	137.23	154.25	187.44
	1800	21.82	25.96	29.96	34.22	38.74	43.51	47.93	52.53	57.31	65.92	74.99	83.63	87.61	106.12	125.84	144.06	161.91	196.70
	1900	22.87	27.21	31.40	35.86	40.59	45.59	50.22	55.03	60.04	69.05	78.55	87.59	91.76	111.12	131.75	150.80	169.47	205.82
	2000	23.91	28.44	32.82	37.48	42.42	47.65	52.48	57.51	62.74	72.15	82.06	91.50	95.85	116.06	137.58	157.45	176.91	214.81
	2200	25.95	30.86	35.61	40.66	46.02	51.68	56.92	62.36	68.03	78.22	88.95	99.17	103.89	125.74	149.00	170.47	191.50	232.41
	2400	27.94	33.23	38.33	43.77	49.53	55.62	61.25	67.10	73.19	84.15	95.68	106.65	111.71	135.17	160.12	183.14	205.66	249.49
	2600	29.89	35.54	41.00	46.80	52.96	59.46	65.47	71.72	78.23	89.92	102.22	113.93	119.32	144.34	170.92	195.43	219.41	266.04
	2800	31.79	37.79	43.59	49.76	56.30	63.21	69.58	76.22	83.12	95.53	108.59	121.01	126.73	153.24	181.41	207.36	232.74	282.07
	3000	33.64	39.99	46.12	52.64	59.55	66.85	73.59	80.60	87.89	100.99	114.77	127.88	133.92	161.89	191.57	218.91	245.64	297.57
	3200	35.44	42.13	48.58	55.44	62.71	70.39	77.47	84.85	92.52	106.29	120.78	134.55	140.89	170.26	201.41	230.09	258.11	312.52
	3400	37.19	44.20	50.96	58.16	65.78	73.82	81.25	88.98	97.00	111.43	126.59	141.01	147.64	178.36	210.92	240.87	270.13	
	3600	38.90	46.22	53.28	60.79	68.75	77.15	84.90	92.97	101.35	116.39	132.21	147.25	154.16	186.17	220.08	251.25	281.70	
	3800	40.54	48.17	55.52	63.34	71.63	80.37	88.44	96.83	105.54	121.19	137.64	153.26	160.45	193.70	228.89	261.23	292.79	
	4000	42.14	50.06	57.69	65.81	74.41	83.48	91.84	100.55	109.59	125.81	142.86	159.05	166.50	200.93	237.34	270.78		
	4500	45.88	54.48	62.77	71.57	80.90	90.73	99.80	109.22	119.01	136.56	155.00	172.49	180.53	217.65	256.83	292.76		
	5000	49.25	58.46	67.32	76.74	86.70	97.21	106.89	116.95	127.40	146.10	165.74	184.36	192.90	232.32	273.85			
	5500	52.22	61.96	71.32	81.26	91.78	102.87	113.07	123.67	134.67	154.35	174.99	194.55	203.52	244.81				
	6000	54.77	64.95	74.72	85.10	96.07	107.63	118.26	129.30	140.75	161.21	182.66	202.95	212.24	254.97				

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Table of basic power ratings for HP-STS Type S5M (per width of 10 mm and length of 800 mm)

(Unit: kW)

No. of teeth of pinion		14	16	18	20	22	24	25	26	28	30	32	34	36	40	42	44	48	50	60
Pitch diameter (mm)		22.28	25.46	28.65	31.83	35.01	38.20	39.79	41.38	44.56	47.75	50.93	54.11	57.30	63.66	66.85	70.03	76.39	79.58	95.49
Pinion revolution (rpm)	50	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.08	0.09	0.10	0.11	0.11	0.12	0.12	0.15
	100	0.05	0.06	0.07	0.08	0.09	0.10	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.19	0.20	0.21	0.23	0.23	0.28
	200	0.10	0.11	0.13	0.15	0.17	0.18	0.20	0.20	0.22	0.24	0.27	0.29	0.31	0.36	0.38	0.39	0.43	0.44	0.52
	300	0.14	0.16	0.19	0.21	0.24	0.26	0.29	0.30	0.32	0.35	0.39	0.42	0.45	0.52	0.54	0.57	0.61	0.64	0.75
	400	0.18	0.21	0.25	0.28	0.31	0.34	0.37	0.38	0.42	0.46	0.50	0.54	0.58	0.68	0.71	0.74	0.80	0.83	0.97
	500	0.22	0.26	0.30	0.34	0.38	0.42	0.45	0.47	0.51	0.56	0.61	0.66	0.71	0.83	0.86	0.90	0.97	1.01	1.19
	600	0.26	0.31	0.35	0.40	0.45	0.50	0.54	0.55	0.61	0.66	0.72	0.78	0.84	0.97	1.02	1.06	1.15	1.19	1.40
	700	0.30	0.35	0.41	0.46	0.52	0.57	0.62	0.64	0.70	0.76	0.83	0.90	0.97	1.12	1.17	1.22	1.32	1.37	1.61
	800	0.34	0.40	0.46	0.52	0.59	0.64	0.69	0.72	0.79	0.86	0.94	1.01	1.09	1.26	1.32	1.37	1.49	1.54	1.81
	900	0.38	0.44	0.51	0.58	0.65	0.72	0.77	0.80	0.87	0.95	1.04	1.13	1.21	1.40	1.46	1.53	1.65	1.71	2.02
	1000	0.42	0.49	0.56	0.64	0.72	0.79	0.85	0.88	0.96	1.05	1.15	1.24	1.33	1.54	1.61	1.68	1.81	1.88	2.21
	1100	0.46	0.53	0.61	0.69	0.78	0.86	0.92	0.96	1.05	1.14	1.25	1.35	1.45	1.68	1.75	1.83	1.97	2.05	2.41
	1200	0.49	0.57	0.66	0.75	0.85	0.93	1.00	1.03	1.13	1.23	1.35	1.46	1.57	1.81	1.89	1.97	2.13	2.21	2.60
	1300	0.53	0.62	0.71	0.80	0.91	1.00	1.07	1.11	1.22	1.32	1.45	1.56	1.68	1.95	2.03	2.12	2.29	2.37	2.79
	1400	0.57	0.66	0.76	0.86	0.97	1.07	1.15	1.19	1.30	1.41	1.55	1.67	1.80	2.08	2.17	2.26	2.44	2.53	2.98
	1500	0.60	0.70	0.81	0.91	1.03	1.13	1.22	1.26	1.38	1.50	1.65	1.78	1.91	2.21	2.31	2.40	2.60	2.69	3.17
	1600	0.64	0.74	0.86	0.97	1.10	1.20	1.29	1.34	1.46	1.59	1.74	1.88	2.02	2.34	2.44	2.54	2.75	2.85	3.35
	1700	0.67	0.78	0.91	1.02	1.16	1.27	1.36	1.41	1.54	1.68	1.84	1.98	2.13	2.47	2.57	2.68	2.90	3.01	3.53
	1800	0.71	0.82	0.95	1.07	1.22	1.33	1.43	1.48	1.62	1.77	1.93	2.09	2.24	2.59	2.71	2.82	3.05	3.16	3.71
	1900	0.74	0.86	1.00	1.13	1.28	1.40	1.50	1.56	1.70	1.85	2.03	2.19	2.35	2.72	2.84	2.96	3.19	3.31	3.89
	2000	0.78	0.90	1.05	1.18	1.33	1.46	1.57	1.63	1.78	1.94	2.12	2.29	2.46	2.84	2.97	3.09	3.34	3.46	4.07
	2100	0.81	0.94	1.09	1.23	1.39	1.52	1.64	1.70	1.86	2.02	2.21	2.39	2.57	2.97	3.10	3.23	3.49	3.61	4.24
	2200	0.85	0.98	1.14	1.28	1.45	1.59	1.71	1.77	1.93	2.10	2.30	2.49	2.67	3.09	3.22	3.36	3.63	3.76	4.42
	2300	0.88	1.02	1.18	1.33	1.51	1.65	1.78	1.84	2.01	2.19	2.40	2.58	2.78	3.21	3.35	3.49	3.77	3.91	4.59
	2400	0.91	1.06	1.23	1.38	1.57	1.71	1.84	1.91	2.09	2.27	2.49	2.68	2.88	3.33	3.48	3.62	3.91	4.05	4.76
	2500	0.95	1.10	1.27	1.43	1.62	1.77	1.91	1.98	2.16	2.35	2.57	2.78	2.98	3.45	3.60	3.75	4.05	4.20	4.93
	2600	0.98	1.14	1.32	1.48	1.68	1.84	1.97	2.04	2.24	2.43	2.66	2.87	3.09	3.57	3.72	3.88	4.19	4.34	5.10
	2700	1.01	1.17	1.36	1.53	1.73	1.90	2.04	2.11	2.31	2.51	2.75	2.97	3.19	3.68	3.84	4.00	4.32	4.48	5.26
	2800	1.05	1.21	1.40	1.58	1.79	1.96	2.10	2.18	2.38	2.59	2.84	3.06	3.29	3.80	3.96	4.13	4.46	4.62	5.42
	2900	1.08	1.25	1.45	1.63	1.84	2.02	2.17	2.24	2.45	2.67	2.92	3.15	3.39	3.91	4.08	4.25	4.59	4.76	5.59
	3000	1.11	1.29	1.49	1.68	1.90	2.08	2.23	2.31	2.53	2.75	3.01	3.24	3.49	4.03	4.20	4.38	4.73	4.90	5.75
	3200	1.17	1.36	1.57	1.77	2.00	2.19	2.36	2.44	2.67	2.90	3.18	3.42	3.68	4.25	4.44	4.62	4.99	5.17	6.06
	3400	1.23	1.43	1.65	1.87	2.11	2.31	2.48	2.57	2.81	3.05	3.34	3.60	3.87	4.47	4.66	4.86	5.24	5.43	6.37
	3600	1.30	1.50	1.74	1.96	2.21	2.42	2.60	2.69	2.94	3.20	3.50	3.78	4.06	4.68	4.89	5.09	5.50	5.70	6.68
	3800	1.36	1.57	1.82	2.05	2.31	2.53	2.72	2.82	3.08	3.35	3.66	3.95	4.24	4.90	5.11	5.32	5.74	5.95	6.97
	4000	1.41	1.64	1.89	2.14	2.41	2.64	2.84	2.94	3.21	3.49	3.82	4.12	4.42	5.10	5.32	5.55	5.98	6.20	7.27
	4200	1.47	1.70	1.97	2.22	2.51	2.74	2.95	3.05	3.34	3.63	3.97	4.28	4.60	5.31	5.54	5.77	6.22	6.44	7.55
	4400	1.53	1.77	2.05	2.31	2.61	2.85	3.06	3.17	3.46	3.77	4.12	4.44	4.77	5.50	5.74	5.98	6.45	6.68	7.83
	4600	1.58	1.83	2.12	2.39	2.70	2.95	3.17	3.28	3.59	3.90	4.27	4.60	4.94	5.70	5.94	6.19	6.68	6.92	8.10
	4800	1.64	1.90	2.19	2.47	2.79	3.05	3.28	3.39	3.71	4.03	4.41	4.75	5.10	5.89	6.14	6.39	6.89	7.14	8.36
	5000	1.69	1.96	2.26	2.55	2.88	3.15	3.38	3.50	3.83	4.16	4.55	4.90	5.26	6.07	6.33	6.59	7.11	7.36	8.62
	5500	1.82	2.11	2.43	2.74	3.10	3.38	3.63	3.76	4.11	4.46	4.88	5.26	5.64	6.51	6.79	7.07	7.62	7.89	9.23
	6000	1.94	2.25	2.59	2.92	3.30	3.60	3.87	4.00	4.37	4.75	5.19	5.59	6.00	6.92	7.21	7.51	8.09	8.38	9.79
	6500	2.05	2.37	2.74	3.09	3.48	3.80	4.09	4.23	4.61	5.01	5.48	5.90	6.33	7.29	7.61	7.91	8.53	8.83	10.31
	7000	2.16	2.49	2.88	3.24	3.65	3.99	4.28	4.43	4.84	5.25	5.74	6.18	6.63	7.64	7.96	8.28	8.92	9.23	10.77
	7500	2.25	2.60	3.00	3.38	3.81	4.16	4.46	4.62	5.04	5.47	5.98	6.43	6.90	7.94	8.28	8.61	9.27	9.59	11.18
	8000	2.34	2.70	3.11	3.50	3.95	4.31	4.62	4.78	5.22	5.66	6.18	6.65	7.13	8.21	8.55	8.90	9.57	9.90	11.54
	8500	2.42	2.79	3.21	3.61	4.07	4.44	4.76	4.93	5.37	5.83	6.36	6.84	7.34	8.44	8.79	9.14	9.83	10.17	11.83
	9000	2.48	2.86	3.30	3.70	4.17	4.55	4.88	5.05	5.50	5.96	6.51	7.00	7.50	8.62	8.98	9.33	10.03	10.38	12.06

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Table of basic power ratings for HP-STS Type S8M / HP-HTS Type 8M (per width of 60 mm and length of 1200 mm) (Unit: kW)

Pinion revolution (rpm) \ No. of teeth of pinion	20	22	24	26	28	30	32	34	36	40	44	48	50	60	72	84	96	120
Pitch diameter (mm)	50.93	56.02	61.12	66.21	71.30	76.39	81.49	86.58	91.67	101.86	112.05	122.23	127.32	152.79	183.35	213.90	244.46	305.58
50	0.56	0.67	0.77	0.89	1.01	1.13	1.25	1.37	1.50	1.73	1.98	2.21	2.32	2.83	3.38	3.89	4.40	5.39
100	1.06	1.27	1.47	1.68	1.90	2.14	2.37	2.60	2.84	3.27	3.73	4.18	4.38	5.34	6.36	7.32	8.27	10.12
200	2.01	2.39	2.77	3.17	3.59	4.04	4.46	4.89	5.34	6.16	7.03	7.85	8.24	10.02	11.94	13.73	15.48	18.93
300	2.91	3.47	4.01	4.58	5.20	5.85	6.45	7.07	7.73	8.91	10.15	11.34	11.89	14.46	17.22	19.78	22.30	27.25
400	3.78	4.50	5.21	5.95	6.75	7.59	8.37	9.18	10.03	11.55	13.16	14.70	15.42	18.74	22.30	25.61	28.86	35.23
500	4.63	5.52	6.37	7.29	8.26	9.29	10.24	11.23	12.26	14.13	16.09	17.97	18.84	22.89	27.23	31.26	35.22	42.97
600	5.46	6.50	7.51	8.59	9.73	10.94	12.06	13.23	14.45	16.64	18.96	21.17	22.19	26.95	32.04	36.77	41.42	50.51
700	6.28	7.47	8.63	9.87	11.18	12.57	13.86	15.20	16.59	19.11	21.76	24.30	25.47	30.92	36.75	42.17	47.48	57.88
800	7.08	8.43	9.74	11.13	12.61	14.17	15.62	17.13	18.70	21.53	24.52	27.37	28.69	34.82	41.38	47.46	53.43	65.10
900	7.87	9.37	10.82	12.37	14.01	15.74	17.35	19.03	20.77	23.91	27.23	30.39	31.85	38.65	45.92	52.65	59.26	72.18
1000	8.65	10.29	11.89	13.59	15.39	17.30	19.06	20.90	22.81	26.26	29.90	33.37	34.97	42.42	50.38	57.76	65.00	79.14
1100	9.42	11.21	12.94	14.79	16.75	18.83	20.74	22.74	24.82	28.57	32.53	36.30	38.04	46.13	54.78	62.79	70.65	85.99
1200	10.17	12.11	13.98	15.98	18.10	20.33	22.41	24.56	26.81	30.86	35.12	39.19	41.06	49.79	59.11	67.74	76.21	92.73
1300	10.92	13.00	15.01	17.15	19.42	21.82	24.05	26.36	28.77	33.11	37.68	42.04	44.05	53.40	63.39	72.62	81.69	99.37
1400	11.67	13.88	16.03	18.31	20.74	23.30	25.67	28.13	30.70	35.33	40.20	44.85	47.00	56.96	67.60	77.44	87.09	105.91
1500	12.40	14.75	17.03	19.46	22.03	24.75	27.27	29.89	32.61	37.52	42.70	47.63	49.90	60.48	71.75	82.18	92.41	112.35
1600	13.12	15.61	18.02	20.59	23.31	26.19	28.85	31.62	34.50	39.69	45.16	50.37	52.78	63.95	75.85	86.87	97.66	118.70
1700	13.84	16.46	19.00	21.71	24.58	27.61	30.41	33.33	36.36	41.83	47.59	53.08	55.61	67.37	79.90	91.48	102.84	124.96
1800	14.55	17.31	19.97	22.81	25.83	29.01	31.95	35.02	38.21	43.95	49.99	55.75	58.41	70.75	83.89	96.04	107.94	131.13
1900	15.24	18.14	20.93	23.91	27.06	30.40	33.48	36.69	40.03	46.04	52.36	58.39	61.17	74.08	87.83	100.53	112.98	137.21
2000	15.94	18.96	21.88	24.99	28.28	31.76	34.98	38.34	41.82	48.10	54.71	61.00	63.90	77.37	91.72	104.97	117.94	143.21
2200	17.30	20.57	23.74	27.11	30.68	34.46	37.94	41.58	45.35	52.15	59.30	66.12	69.26	83.83	99.34	113.65	127.66	154.94
2400	18.63	22.15	25.56	29.18	33.02	37.08	40.83	44.74	48.80	56.10	63.78	71.10	74.47	90.11	106.75	122.09	137.11	166.32
2600	19.92	23.69	27.33	31.20	35.31	39.64	43.65	47.82	52.15	59.94	68.15	75.95	79.55	96.22	113.95	130.29	146.28	177.36
2800	21.19	25.20	29.06	33.17	37.53	42.14	46.39	50.82	55.42	63.69	72.39	80.67	84.49	102.16	120.94	138.24	155.16	188.05
3000	22.43	26.66	30.75	35.09	39.70	44.57	49.06	53.73	58.59	67.33	76.52	85.26	89.28	107.92	127.72	145.94	163.76	198.38
3200	23.63	28.09	32.38	36.96	41.81	46.93	51.65	56.57	61.68	70.86	80.52	89.70	93.93	113.51	134.28	153.39	172.07	208.34
3400	24.80	29.47	33.98	38.77	43.85	49.22	54.17	59.32	64.67	74.28	84.39	94.00	98.43	118.90	140.61	160.58	180.09	
3600	25.93	30.81	35.52	40.53	45.83	51.43	56.60	61.98	67.57	77.60	88.14	98.16	102.78	124.11	146.72	167.50	187.80	
3800	27.03	32.12	37.02	42.23	47.75	53.58	58.96	64.55	70.36	80.79	91.76	102.18	106.97	129.13	152.59	174.15	195.19	
4000	28.09	33.37	38.46	43.87	49.60	55.65	61.23	67.03	73.06	83.87	95.24	106.04	111.00	133.95	158.23	180.52		
4500	30.59	36.32	41.84	47.71	53.93	60.49	66.53	72.82	79.34	91.04	103.33	114.99	120.35	145.10	171.22	195.17		
5000	32.83	38.97	44.88	51.16	57.80	64.81	71.26	77.97	84.93	97.40	110.49	122.91	128.60	154.88				
5500	34.81	41.31	47.55	54.17	61.19	68.58	75.38	82.45	89.78	102.90	116.66	129.70	135.68	163.21				
6000	36.51	43.30	49.81	56.73	64.05	71.76	78.84	86.20	93.83	107.47	121.77	135.30	141.49	169.98				

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Table of basic power ratings for HP-STS Type S14M (per width of 120 mm and length of 1400 mm) (Unit: kW)

Pinion revolution (rpm) \ No. of teeth of pinion	28	30	32	34	36	40	42	44	48	50	54	60	64	72	84	96	120	144
Pitch diameter (mm)	124.78	133.69	142.60	151.52	160.43	178.25	187.17	196.08	213.90	222.82	240.64	267.38	285.21	320.86	374.33	427.81	534.76	641.71
20	2.16	2.43	2.68	2.95	3.22	3.72	3.98	4.25	4.75	4.98	5.41	6.08	2.56	7.26	8.37	9.46	11.61	13.72
40	4.09	4.61	5.08	5.58	6.10	7.04	7.53	8.04	8.99	9.43	10.22	11.49	5.11	13.72	15.79	17.84	21.86	25.81
50	5.02	5.66	6.24	6.85	7.49	8.64	9.24	9.86	11.03	11.57	12.54	14.10	6.39	16.82	19.36	21.86	26.79	31.61
60	5.94	6.69	7.38	8.10	8.85	10.21	10.92	11.65	13.03	13.67	14.82	16.65	7.67	19.86	22.86	25.81	31.61	37.29
80	7.74	8.71	9.60	10.54	11.52	13.29	14.21	15.16	16.95	17.78	19.27	21.65	10.23	25.81	29.69	33.52	41.03	48.38
100	9.49	10.68	11.78	12.93	14.13	16.29	17.42	18.58	20.77	21.78	23.61	26.52	12.78	31.61	36.35	41.03	50.20	59.17
150	13.74	15.46	17.05	18.71	20.44	23.57	25.20	26.87	30.03	31.49	34.12	38.31	19.16	45.63	52.45	59.16	72.32	85.19
200	17.86	20.08	22.15	24.30	26.55	30.60	32.71	34.88	38.96	40.86	44.26	49.68	25.52	59.15	67.96	76.63	93.61	110.20
250	21.87	24.59	27.12	29.75	32.49	37.44	40.02	42.67	47.66	49.97	54.12	60.74	31.87	72.29	83.03	93.59	114.27	134.46
300	25.79	29.00	31.98	35.08	38.31	44.14	47.18	50.29	56.17	58.89	63.77	71.55	38.19	85.13	97.75	110.15	134.42	158.11
350	29.65	33.33	36.75	40.31	44.02	50.71	54.19	57.77	64.51	67.63	73.23	82.15	44.49	97.71	112.16	126.36	154.15	181.25
400	33.44	37.60	41.44	45.46	49.63	57.17	61.10	65.12	72.71	76.22	82.52	92.57	50.75	110.07	126.32	142.28	173.50	203.94
450	37.18	41.80	46.07	50.53	55.17	63.54	67.89	72.36	80.79	84.68	91.68	102.82	56.98	122.23	140.24	157.93	192.52	226.23
500	40.87	45.94	50.63	55.53	60.62	69.81	74.59	79.50	88.75	93.03	100.70	112.92	63.17	134.21	153.95	173.34	211.24	248.16
600	48.11	54.07	59.59	65.34	71.33	82.13	87.74	93.50	104.37	109.38	118.38	132.72	75.40	157.68	180.80	203.51	247.87	291.05
700	55.19	62.02	68.34	74.93	81.79	94.15	100.58	107.18	119.61	125.35	135.64	152.04	87.41	180.56	206.97	232.90	283.51	332.76
800	62.12	69.81	76.91	84.32	92.03	105.92	113.14	120.55	134.51	140.96	152.51	170.92	99.17	202.91	232.52	261.58	318.28	373.41
900	68.92	77.43	85.31	93.52	102.06	117.44	125.44	133.65	149.10	156.24	169.02	189.39	110.63	224.76	257.49	289.59	352.21	413.06
1000	75.58	84.92	93.55	102.54	111.89	128.74	137.50	146.48	163.40	171.20	185.19	207.47	121.77	246.15	281.92	316.99	385.36	451.78
1100	82.13	92.26	101.62	111.38	121.53	139.81	149.31	159.06	177.40	185.87	201.03	225.17	132.54	267.08	305.81	343.77	417.76	489.59
1200	88.54	99.46	109.55	120.06	130.99	150.66	160.89	171.38	191.13	200.23	216.54	242.51	142.91	287.56	329.18	369.97	449.41	526.51
1300	94.84	106.52	117.32	128.57	140.26	161.31	172.25	183.47	204.58	214.31	231.74	259.49	152.84	307.61	352.05	395.58	480.34	562.56
1400	101.02	113.45	124.94	136.91	149.35	171.73	183.37	195.30	217.75	228.10	246.62	276.12	162.29	327.23	374.41	420.61	510.54	597.73
1500	107.08	120.25	132.41	145.08	158.25	181.95	194.27	206.90	230.65	241.59	261.19	292.38	171.23	346.41	396.26	445.06	540.02	632.04
1600	113.02	126.90	139.73	153.09	166.98	191.95	204.94	218.24	243.27	254.80	275.43	308.28	179.63	365.15	417.60	468.93	568.77	
1700	118.83	133.42	146.90	160.93	175.51	201.74	215.37	229.34	255.61	267.71	289.36	323.82	187.44	383.45	438.43	492.21	596.79	
1800	124.52	139.80	153.91	168.60	183.86	211.31	225.57	240.19	267.67	280.33	302.96	338.99	194.63	401.31	458.73	514.90	624.06	
1900	130.09	146.04	160.76	176.09	192.02	220.66	235.54	250.78	279.44	292.64	316.23	353.79	201.16	418.71	478.51	536.98		
2000	135.53	152.13	167.46	183.41	199.99	229.78	245.26	261.12	290.92	304.64	329.17	368.21	207.00	435.65	497.75	558.45		
2200	146.02	163.88	180.36	197.51	215.33	247.34	263.96	280.99	312.99	327.71	354.02	395.87	216.44	468.13	534.58			
2400	155.97	175.02	192.58	210.86	229.85	263.94	281.64	299.77	333.82	349.48	377.44	421.93	222.67	498.65	569.14			
2600	165.36	185.52	204.10	223.43	243.51	279.54	298.24	317.40	353.36	369.89	399.39	446.31	225.40	527.13	601.32			
2800	174.16	195.35	214.88	235.19	256.29	294.11	313.74	333.84	371.55	388.88	419.79	468.93	224.32	553.49				
3000	182.35	204.49	224.89	246.10	268.12	307.59	328.06	349.03	388.34	406.39	438.57	489.72	219.15	577.62				
3200	189.90	212.91	234.09	256.12	278.98	319.93	341.16	362.90	403.65	422.35	455.66	508.59						
3400	196.77	220.56	242.45	265.21	288.83	331.08	352.99	375.42	417.43	436.69	470.98	525.46						
3600	202.94	227.42	249.93	273.33	297.60	340.99	363.49	386.51	429.59	449.34	484.45	540.23						
3800	208.39	233.46	256.50	280.44	305.26	349.61	372.59	396.10	440.08	460.22	496.00	552.82						
4000	213.07	238.63	262.11	286.49	311.77	356.88	380.25	404.15	448.83	469.27	505.54							
4500	221.23	247.56	271.68	296.71	322.65	368.79	392.66	417.06	462.57	483.33								
5000	223.94	250.30	274.40	299.38	325.22	371.04	394.70	418.86										

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Table of basic power ratings for rubber Type S1.5M (per width of 4 mm)

(Unit: W)

No. of teeth of pinion		16	18	20	22	24	26	28	30	32	34	36	40
Pitch diameter (mm)		7.64	8.59	9.55	10.50	11.46	12.41	13.37	14.32	15.28	16.23	17.19	19.10
Pinion revolution (rpm)	50	1	1	1	1	1	1	1	1	2	2	2	2
	100	1	1	2	2	2	2	2	3	3	3	3	3
	200	2	2	3	3	3	4	4	4	5	5	6	6
	300	3	3	4	4	5	5	6	6	7	7	8	9
	400	3	4	5	5	6	7	7	8	8	9	10	11
	500	4	5	5	6	7	8	9	9	10	11	12	13
	600	4	5	6	7	8	9	10	11	12	13	13	15
	700	5	6	7	8	9	10	11	12	13	14	15	17
	800	5	6	8	9	10	11	12	14	15	16	17	19
	900	6	7	8	10	11	12	14	15	16	17	18	21
	1000	6	8	9	10	12	13	15	16	17	19	20	23
	1100	6	8	10	11	13	14	16	17	19	20	21	24
	1200	7	9	10	12	14	15	17	18	20	21	23	26
	1300	7	9	11	13	14	16	18	19	21	23	24	28
	1400	7	9	11	13	15	17	19	21	22	24	26	29
	1500	8	10	12	14	16	18	20	22	23	25	27	31
	1600	8	10	12	15	17	19	21	23	25	26	28	32
	1700	8	11	13	15	17	19	22	24	26	28	30	34
	1800	9	11	13	16	18	20	22	25	27	29	31	35
	1900	9	11	14	16	19	21	23	26	28	30	32	36
	2000	9	12	14	17	19	22	24	27	29	31	33	38
	2100	9	12	15	17	20	23	25	27	30	32	35	39
	2200	10	12	15	18	21	23	26	28	31	33	36	40
	2300	10	13	16	18	21	24	27	29	32	34	37	42
	2400	10	13	16	19	22	25	27	30	33	35	38	43
	2500	10	13	17	19	22	25	28	31	34	36	39	44
	2600	10	14	17	20	23	26	29	32	35	37	40	45
	2700	11	14	17	20	24	27	30	33	35	38	41	47
	2800	11	14	18	21	24	27	30	33	36	39	42	48
	2900	11	15	18	21	25	28	31	34	37	40	43	49
	3000	11	15	18	22	25	28	32	35	38	41	44	50
	3200	12	15	19	23	26	30	33	36	40	43	46	52
	3400	12	16	20	23	27	31	34	38	41	45	48	55
	3600	12	16	20	24	28	32	36	39	43	46	50	57
	3800	12	17	21	25	29	33	37	41	44	48	52	59
	4000	12	17	21	26	30	34	38	42	46	50	53	61
	4200	13	17	22	26	31	35	39	43	47	51	55	63
	4400	13	18	22	27	32	36	40	44	49	53	57	64
	4600	13	18	23	28	32	37	41	46	50	54	58	66
	4800	13	18	23	28	33	38	42	47	51	56	60	68
	5000	13	19	24	29	34	39	43	48	52	57	61	70
	5500	13	19	25	30	35	41	46	51	55	60	65	74
	6000	14	20	26	31	37	43	48	53	58	63	68	78
	6500	14	20	26	32	38	44	50	55	61	66	71	81
	7000	14	20	27	33	40	46	52	58	63	69	74	85
	7500												
	8000												
	8500												
	9000												

Table of basic power ratings for Types S2M/DS2M (per width of 4 mm)

(Unit: W)

No. of teeth of pinion		14	15	16	18	20	22	24	26	28	30	32	34	36	40	44	48	50	60
Pitch diameter (mm)		8.91	9.55	10.19	11.46	12.73	14.01	15.28	16.55	17.83	19.10	20.37	21.65	22.92	25.46	28.01	30.56	31.83	38.20
Pinion revolution (rpm)	50	1	1	1	2	2	2	2	2	3	3	3	3	3	4	4	5	5	6
	100	2	2	2	3	3	4	4	4	5	5	6	6	6	7	8	8	9	11
	200	4	4	4	5	6	7	7	8	9	9	10	11	11	13	14	15	16	19
	300	5	5	6	7	8	9	10	11	12	13	14	15	16	18	19	21	22	26
	400	6	7	8	9	10	11	13	14	15	16	18	19	20	22	25	27	28	33
	500	7	8	9	11	12	14	15	17	18	20	21	23	24	27	29	32	33	40
	600	8	9	10	12	14	16	18	19	21	23	24	26	28	31	34	37	39	46
	700	9	10	12	14	16	18	20	22	24	26	28	29	31	35	39	42	44	52
	800	10	12	13	15	17	20	22	24	26	28	31	33	35	39	43	47	49	58
	900	11	13	14	16	19	22	24	26	29	31	34	36	38	43	47	51	53	63
	1000	12	14	15	18	21	23	26	29	31	34	36	39	41	46	51	55	58	69
	1100	13	14	16	19	22	25	28	31	34	36	39	42	44	50	55	60	62	74
	1200	14	15	17	20	24	27	30	33	36	39	42	45	47	53	58	64	66	79
	1300	14	16	18	22	25	28	32	35	38	41	44	47	50	56	62	68	71	84
	1400	15	17	19	23	26	30	33	37	40	44	47	50	53	60	66	72	75	89
	1500	16	18	20	24	28	31	35	39	42	46	49	53	56	63	69	75	79	94
	1600	17	19	21	25	29	33	37	41	44	48	52	55	59	66	73	79	82	98
	1700	17	19	22	26	30	34	39	43	46	50	54	58	62	69	76	83	86	103
	1800	18	20	22	27	32	36	40	44	48	52	56	60	64	72	79	86	90	107
	1900	18	21	23	28	33	37	42	46	50	55	59	63	67	75	82	90	94	111
	2000	19	22	24	29	34	39	43	48	52	57	61	65	69	78	85	93	97	115
	2100	20	22	25	30	35	40	45	49	54	59	63	67	72	80	89	97	101	120
	2200	20	23	26	31	36	41	46	51	56	61	65	70	74	83	92	100	104	124
	2300	21	24	26	32	37	43	48	53	58	63	67	72	77	86	95	103	107	128
	2400	21	24	27	33	38	44	49	54	59	64	69	74	79	88	97	106	111	131
	2500	22	25	28	34	39	45	50	56	61	66	71	76	81	91	100	109	114	135
	2600	22	25	28	35	40	46	52	57	63	68	73	79	84	93	103	112	117	139
	2700	23	26	29	35	41	47	53	59	64	70	75	81	86	96	106	115	120	143
	2800	23	26	30	36	42	49	55	60	66	72	77	83	88	98	109	118	123	146
	2900	24	27	30	37	43	50	56	62	68	73	79	85	90	101	111	121	126	150
	3000	24	28	31	38	44	51	57	63	69	75	81	87	92	103	114	124	129	153
	3200	25	29	32	39	46	53	60	66	72	79	85	91	96	108	119	130	135	160
	3400	26	30	33	41	48	55	62	69	75	82	88	94	100	112	124	135	140	167
	3600	26	30	34	42	50	57	64	71	78	85	92	98	104	117	129	140	146	173
	3800	27	31	35	44	51	59	67	74	81	88	95	102	108	121	133	145	151	179
	4000	28	32	36	45	53	61	69	76	84	91	98	105	112	125	138	150	156	185
	4200	28	33	37	46	55	63	71	79	86	94	101	108	115	129	142	155	161	191
	4400	29	34	38	47	56	65	73	81	89	97	104	112	119	133	147	160	166	196
	4600	30	34	39	48	58	66	75	83	91	99	107	115	122	137	151	164	171	201
	4800	30	35	40	50	59	68	77	85	94	102	110	118	126	140	155	168	175	206
	5000	31	36	41	51	60	70	79	88	96	105	113	121	129	144	159	173	179	211
	5500	32	37	43	53	64	73	83	93	102	111	120	128	136	152	168	183	190	223
	6000	33	38	44	56	66	77	87	97	107	117	126	135	143	160	176	192	199	233
	6500	33	40	46	58	69	80	91	102	112	122	132	141	150	168	184	200	208	243
	7000	34	41	47	60	72	83	95	106	116	127	137	147	156	175	192	208	216	251

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for Types S3M/DS3M (per width of 6 mm)

(Unit: W)

No. of teeth of pinion		14	15	16	18	20	22	24	26	28	30	32	34	36	40	44	48	50	60
Pitch diameter (mm)		13.37	14.32	15.28	17.19	19.10	21.01	22.92	24.83	26.74	28.65	30.56	32.47	34.38	38.20	42.02	45.84	47.75	57.30
Pinion revolution (rpm)	50	5	5	6	6	7	8	8	9	10	11	11	12	13	14	15	17	17	20
	100	9	9	10	12	13	14	15	17	18	19	21	22	23	25	28	30	31	37
	200	16	17	18	21	23	26	28	30	33	35	37	39	42	46	50	54	56	67
	300	22	24	26	29	33	36	39	43	46	49	52	55	58	65	71	76	79	94
	400	28	31	33	37	42	46	50	54	58	62	66	70	74	82	90	97	101	119
	500	34	37	39	45	50	55	60	65	70	75	80	85	89	99	108	117	121	143
	600	39	43	46	52	58	64	70	76	82	87	93	98	104	114	125	135	140	165
	700	45	48	52	59	66	73	79	86	92	99	105	111	118	130	142	153	159	187
	800	50	54	58	66	73	81	89	96	103	110	117	124	131	145	158	171	177	208
	900	55	59	64	72	81	89	97	105	113	121	129	137	144	159	173	187	194	228
	1000	60	64	69	79	88	97	106	115	123	132	140	149	157	173	188	204	211	248
	1100	64	69	75	85	95	105	114	124	133	142	151	160	169	186	203	220	228	267
	1200	69	74	80	91	102	112	122	133	143	152	162	172	181	200	218	235	244	286
	1300	73	79	85	97	108	119	130	141	152	162	173	183	193	212	232	250	260	304
	1400	78	84	90	103	115	127	138	150	161	172	183	194	204	225	245	265	275	322
	1500	82	89	95	108	121	134	146	158	170	182	193	204	216	238	259	280	290	340
	1600	86	93	100	114	127	141	154	166	179	191	203	215	227	250	272	294	305	357
	1700	90	98	105	119	134	147	161	174	187	200	213	225	238	262	285	308	319	373
	1800	94	102	110	125	140	154	168	182	196	209	222	235	248	273	298	322	333	390
	1900	98	106	114	130	146	161	175	190	204	218	232	245	259	285	310	335	347	406
	2000	102	110	119	135	151	167	182	198	212	227	241	255	269	296	322	348	361	421
	2100	106	115	123	140	157	173	189	205	220	235	250	265	279	307	334	361	374	437
	2200	110	119	128	146	163	180	196	212	228	244	259	274	289	318	346	374	387	452
	2300	113	123	132	150	168	186	203	220	236	252	268	284	299	329	358	386	400	466
	2400	117	127	136	155	174	192	210	227	244	260	277	293	309	340	369	398	413	481
	2500	121	131	141	160	179	198	216	234	251	269	285	302	318	350	381	411	425	495
	2600	124	135	145	165	185	204	223	241	259	277	294	311	328	360	392	422	437	509
	2700	128	138	149	170	190	210	229	248	266	284	302	320	337	370	403	434	449	523
	2800	131	142	153	174	195	215	235	255	274	292	311	328	346	380	413	446	461	536
	2900	135	146	157	179	200	221	242	261	281	300	319	337	355	390	424	457	473	549
	3000	138	150	161	184	205	227	248	268	288	308	327	345	364	400	434	468	484	562
	3200	145	157	169	193	215	238	260	281	302	322	342	362	381	419	455	490	507	587
	3400	151	164	176	201	225	249	272	294	316	337	358	378	398	437	475	511	528	612
	3600	157	171	184	210	235	259	283	306	329	351	373	394	415	455	494	531	549	635
	3800	164	177	191	218	244	270	294	318	342	365	387	409	431	473	513	551	570	658
	4000	170	184	198	226	253	280	305	330	355	378	402	424	447	490	531	570	589	679
	4200	175	191	205	234	262	290	316	342	367	392	416	439	462	506	549	589	609	700
	4400	181	197	212	242	271	299	327	353	379	405	429	453	477	522	566	607	627	720
	4600	187	203	219	250	280	309	337	364	391	417	443	467	491	538	582	624	645	739
	4800	193	209	226	257	288	318	347	375	403	430	456	481	506	553	598	641	662	757
	5000	198	215	232	265	296	327	357	386	414	442	468	494	520	568	614	658	679	774
	5500	211	230	248	283	317	349	381	412	442	471	499	526	553	603	651	696	717	813
	6000	224	243	263	300	336	370	404	436	468	498	528	556	584	636	685	731	753	848
	6500	236	257	277	316	354	390	426	460	492	524	555	584	613	667	717	763	784	876
	7000	247	269	291	332	371	410	446	482	516	549	580	611	640	695	745	791	812	900
	7500																		
	8000																		
	8500																		
	9000																		

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for rubber Types S4.5M/DS4.5M (per width of 15 mm)

(Unit: kW)

No. of teeth of pinion		12	14	16	18	20	22	24	26	28	32	36	40	44	48	50	60	72
Pitch diameter (mm)		17.19	20.05	22.92	25.78	28.65	31.51	34.38	37.24	40.11	45.84	51.57	57.30	63.03	68.75	71.62	85.94	103.13
Pinion revolution (rpm)	50	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04
	100	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.07	0.08
	200	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08	0.09	0.10	0.11	0.11	0.13	0.16
	300	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.20	0.24
	400	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.11	0.12	0.14	0.16	0.18	0.19	0.21	0.22	0.26	0.32
	500	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.15	0.18	0.20	0.22	0.24	0.26	0.27	0.33	0.40
	600	0.08	0.09	0.11	0.12	0.13	0.15	0.16	0.17	0.18	0.21	0.24	0.26	0.29	0.32	0.33	0.40	0.47
	700	0.09	0.11	0.12	0.14	0.15	0.17	0.18	0.20	0.22	0.25	0.28	0.31	0.34	0.37	0.38	0.46	0.55
	800	0.11	0.12	0.14	0.16	0.18	0.19	0.21	0.23	0.25	0.28	0.32	0.35	0.39	0.42	0.44	0.53	0.63
	900	0.12	0.14	0.16	0.18	0.20	0.22	0.24	0.26	0.28	0.32	0.36	0.40	0.44	0.47	0.49	0.59	0.71
	1000	0.13	0.15	0.18	0.20	0.22	0.24	0.26	0.29	0.31	0.35	0.40	0.44	0.48	0.53	0.55	0.66	0.79
	1100	0.15	0.17	0.19	0.22	0.24	0.27	0.29	0.31	0.34	0.39	0.44	0.48	0.53	0.58	0.60	0.72	0.87
	1200	0.16	0.18	0.21	0.24	0.26	0.29	0.32	0.34	0.37	0.42	0.47	0.53	0.58	0.63	0.66	0.79	0.94
	1300	0.17	0.20	0.23	0.26	0.29	0.31	0.34	0.37	0.40	0.46	0.51	0.57	0.63	0.68	0.71	0.85	1.02
	1400	0.18	0.22	0.25	0.28	0.31	0.34	0.37	0.40	0.43	0.49	0.55	0.61	0.68	0.74	0.77	0.92	1.10
	1500	0.20	0.23	0.26	0.30	0.33	0.36	0.40	0.43	0.46	0.53	0.59	0.66	0.72	0.79	0.82	0.98	1.18
	1600	0.21	0.25	0.28	0.32	0.35	0.39	0.42	0.46	0.49	0.56	0.63	0.70	0.77	0.84	0.88	1.05	1.25
	1700	0.22	0.26	0.30	0.34	0.37	0.41	0.45	0.49	0.52	0.60	0.67	0.75	0.82	0.89	0.93	1.11	1.33
	1800	0.24	0.28	0.32	0.36	0.40	0.44	0.47	0.51	0.55	0.63	0.71	0.79	0.87	0.94	0.98	1.18	1.41
	1900	0.25	0.29	0.33	0.38	0.42	0.46	0.50	0.54	0.58	0.67	0.75	0.83	0.91	1.00	1.04	1.24	1.48
	2000	0.26	0.31	0.35	0.40	0.44	0.48	0.53	0.57	0.61	0.70	0.79	0.88	0.96	1.05	1.09	1.30	1.56
	2100	0.28	0.32	0.37	0.42	0.46	0.51	0.55	0.60	0.65	0.74	0.83	0.92	1.01	1.10	1.14	1.37	1.63
	2200	0.29	0.34	0.39	0.44	0.48	0.53	0.58	0.63	0.68	0.77	0.87	0.96	1.06	1.15	1.20	1.43	1.71
	2300	0.30	0.35	0.40	0.45	0.51	0.56	0.61	0.66	0.71	0.81	0.91	1.00	1.10	1.20	1.25	1.49	1.78
	2400	0.32	0.37	0.42	0.47	0.53	0.58	0.63	0.68	0.74	0.84	0.94	1.05	1.15	1.25	1.30	1.56	1.85
	2500	0.33	0.38	0.44	0.49	0.55	0.60	0.66	0.71	0.77	0.88	0.98	1.09	1.20	1.30	1.36	1.62	1.93
	2600	0.34	0.40	0.46	0.51	0.57	0.63	0.68	0.74	0.80	0.91	1.02	1.13	1.24	1.35	1.41	1.68	2.00
	2700	0.36	0.42	0.47	0.53	0.59	0.65	0.71	0.77	0.83	0.94	1.06	1.18	1.29	1.41	1.46	1.74	2.07
	2800	0.37	0.43	0.49	0.55	0.61	0.68	0.74	0.80	0.86	0.98	1.10	1.22	1.34	1.46	1.51	1.80	2.14
	2900	0.38	0.45	0.51	0.57	0.64	0.70	0.76	0.83	0.89	1.01	1.14	1.26	1.38	1.51	1.57	1.86	2.21
	3000	0.40	0.46	0.53	0.59	0.66	0.72	0.79	0.85	0.92	1.05	1.18	1.30	1.43	1.56	1.62	1.93	2.28
	3200	0.42	0.49	0.56	0.63	0.70	0.77	0.84	0.91	0.98	1.12	1.25	1.39	1.52	1.66	1.72	2.05	2.42
	3400	0.45	0.52	0.60	0.67	0.75	0.82	0.89	0.97	1.04	1.18	1.33	1.47	1.61	1.75	1.82	2.16	2.56
	3600	0.47	0.55	0.63	0.71	0.79	0.87	0.94	1.02	1.10	1.25	1.41	1.56	1.71	1.85	1.93	2.28	2.69
	3800	0.50	0.58	0.67	0.75	0.83	0.91	1.00	1.08	1.16	1.32	1.48	1.64	1.80	1.95	2.03	2.40	2.82
	4000	0.53	0.61	0.70	0.79	0.88	0.96	1.05	1.13	1.22	1.39	1.56	1.72	1.89	2.05	2.13	2.51	2.94
	4200	0.55	0.65	0.74	0.83	0.92	1.01	1.10	1.19	1.28	1.46	1.63	1.80	1.97	2.14	2.22	2.62	3.07
	4400	0.58	0.68	0.77	0.87	0.96	1.06	1.15	1.24	1.34	1.52	1.71	1.89	2.06	2.23	2.32	2.73	3.19
	4600	0.61	0.71	0.81	0.91	1.00	1.10	1.20	1.30	1.40	1.59	1.78	1.97	2.15	2.33	2.42	2.84	3.30
	4800	0.63	0.74	0.84	0.94	1.05	1.15	1.25	1.35	1.46	1.66	1.85	2.05	2.23	2.42	2.51	2.94	3.41
	5000	0.66	0.77	0.88	0.98	1.09	1.20	1.30	1.41	1.51	1.72	1.93	2.13	2.32	2.51	2.60	3.05	3.52
	5500	0.72	0.84	0.96	1.08	1.20	1.31	1.43	1.55	1.66	1.89	2.11	2.32	2.53	2.73	2.83	3.29	3.77
	6000	0.79	0.92	1.05	1.18	1.30	1.43	1.56	1.68	1.80	2.05	2.28	2.51	2.73	2.94	3.05	3.52	3.99
	6500	0.85	0.99	1.13	1.27	1.41	1.55	1.68	1.81	1.95	2.20	2.45	2.69	2.93	3.15	3.25	3.73	4.18
	7000	0.92	1.07	1.22	1.37	1.51	1.66	1.80	1.95	2.09	2.36	2.62	2.87	3.11	3.34	3.45	3.92	4.34
	7500	0.98	1.14	1.30	1.46	1.62	1.77	1.93	2.08	2.22	2.51	2.79	3.05	3.29	3.52	3.63	4.09	4.46
	8000	1.05	1.22	1.39	1.56	1.72	1.89	2.05	2.20	2.36	2.66	2.94	3.21	3.46	3.69	3.80	4.24	4.54
	8500	1.11	1.29	1.47	1.65	1.82	2.00	2.16	2.33	2.49	2.80	3.10	3.37	3.62	3.85	3.95	4.36	4.57
	9000	1.18	1.37	1.56	1.74	1.93	2.11	2.28	2.45	2.62	2.94	3.24	3.52	3.77	3.99	4.09	4.46	4.56

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for rubber Types S5M/DS5M (per width of 10 mm)

(Unit: kW)

No. of teeth of pinion		14	16	18	20	22	24	25	26	28	30	32	34	36	40	42	44	48	50	60
Pitch diameter (mm)		22.28	25.46	28.65	31.83	35.01	38.20	39.79	41.38	44.56	47.75	50.93	54.11	57.30	63.66	66.85	70.03	76.39	79.58	95.49
Pinion revolution (rpm)	50	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.08
	100	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.06	0.07	0.07	0.08	0.08	0.09	0.10	0.10	0.11	0.12	0.12	0.15
	200	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.11	0.12	0.13	0.14	0.15	0.16	0.18	0.19	0.20	0.22	0.22	0.27
	300	0.07	0.09	0.10	0.12	0.13	0.15	0.15	0.16	0.17	0.19	0.20	0.21	0.23	0.25	0.27	0.28	0.30	0.32	0.38
	400	0.09	0.11	0.13	0.15	0.17	0.19	0.19	0.20	0.22	0.24	0.26	0.27	0.29	0.32	0.34	0.36	0.39	0.40	0.48
	500	0.11	0.13	0.16	0.18	0.20	0.22	0.23	0.24	0.27	0.29	0.31	0.33	0.35	0.39	0.41	0.43	0.47	0.49	0.58
	600	0.13	0.16	0.18	0.21	0.23	0.26	0.27	0.28	0.31	0.33	0.36	0.38	0.41	0.45	0.48	0.50	0.54	0.57	0.68
	700	0.15	0.18	0.21	0.24	0.27	0.29	0.31	0.32	0.35	0.38	0.41	0.43	0.46	0.51	0.54	0.57	0.62	0.64	0.77
	800	0.16	0.20	0.23	0.26	0.30	0.33	0.34	0.36	0.39	0.42	0.45	0.48	0.51	0.57	0.60	0.63	0.69	0.72	0.86
	900	0.18	0.22	0.25	0.29	0.33	0.36	0.38	0.40	0.43	0.47	0.50	0.53	0.57	0.63	0.66	0.70	0.76	0.79	0.94
	1000	0.19	0.23	0.28	0.32	0.35	0.39	0.41	0.43	0.47	0.51	0.54	0.58	0.62	0.69	0.72	0.76	0.83	0.86	1.02
	1100	0.21	0.25	0.30	0.34	0.38	0.42	0.45	0.47	0.51	0.55	0.59	0.63	0.67	0.74	0.78	0.82	0.89	0.93	1.11
	1200	0.22	0.27	0.32	0.36	0.41	0.46	0.48	0.50	0.54	0.59	0.63	0.67	0.71	0.80	0.84	0.88	0.96	1.00	1.18
	1300	0.23	0.29	0.34	0.39	0.44	0.49	0.51	0.53	0.58	0.63	0.67	0.72	0.76	0.85	0.89	0.93	1.02	1.06	1.26
	1400	0.25	0.30	0.36	0.41	0.46	0.51	0.54	0.56	0.61	0.66	0.71	0.76	0.81	0.90	0.95	0.99	1.08	1.12	1.34
	1500	0.26	0.32	0.38	0.43	0.49	0.54	0.57	0.60	0.65	0.70	0.75	0.80	0.85	0.95	1.00	1.05	1.14	1.19	1.41
	1600	0.27	0.34	0.40	0.46	0.51	0.57	0.60	0.63	0.68	0.74	0.79	0.84	0.90	1.00	1.05	1.10	1.20	1.25	1.48
	1700	0.29	0.35	0.42	0.48	0.54	0.60	0.63	0.66	0.72	0.77	0.83	0.89	0.94	1.05	1.10	1.15	1.26	1.31	1.55
	1800	0.30	0.37	0.43	0.50	0.56	0.63	0.66	0.69	0.75	0.81	0.87	0.93	0.98	1.10	1.15	1.21	1.31	1.37	1.62
	1900	0.31	0.38	0.45	0.52	0.59	0.65	0.69	0.72	0.78	0.84	0.91	0.97	1.03	1.14	1.20	1.26	1.37	1.42	1.69
	2000	0.32	0.40	0.47	0.54	0.61	0.68	0.71	0.75	0.81	0.88	0.94	1.00	1.07	1.19	1.25	1.31	1.42	1.48	1.75
	2100	0.33	0.41	0.49	0.56	0.63	0.70	0.74	0.77	0.84	0.91	0.98	1.04	1.11	1.23	1.30	1.36	1.48	1.54	1.82
	2200	0.35	0.43	0.50	0.58	0.66	0.73	0.77	0.80	0.87	0.94	1.01	1.08	1.15	1.28	1.34	1.41	1.53	1.59	1.88
	2300	0.36	0.44	0.52	0.60	0.68	0.75	0.79	0.83	0.90	0.98	1.05	1.12	1.19	1.32	1.39	1.45	1.58	1.64	1.94
	2400	0.37	0.45	0.54	0.62	0.70	0.78	0.82	0.86	0.93	1.01	1.08	1.15	1.23	1.36	1.43	1.50	1.63	1.69	2.00
	2500	0.38	0.47	0.55	0.64	0.72	0.80	0.84	0.88	0.96	1.04	1.12	1.19	1.26	1.41	1.48	1.54	1.68	1.74	2.05
	2600	0.39	0.48	0.57	0.66	0.74	0.83	0.87	0.91	0.99	1.07	1.15	1.23	1.30	1.45	1.52	1.59	1.73	1.79	2.11
	2700	0.40	0.49	0.59	0.68	0.76	0.85	0.89	0.94	1.02	1.10	1.18	1.26	1.34	1.49	1.56	1.63	1.77	1.84	2.16
	2800	0.41	0.51	0.60	0.69	0.79	0.87	0.92	0.96	1.05	1.13	1.21	1.29	1.37	1.53	1.60	1.68	1.82	1.89	2.22
	2900	0.42	0.52	0.62	0.71	0.81	0.90	0.94	0.99	1.07	1.16	1.25	1.33	1.41	1.57	1.64	1.72	1.86	1.94	2.27
	3000	0.43	0.53	0.63	0.73	0.83	0.92	0.97	1.01	1.10	1.19	1.28	1.36	1.44	1.61	1.68	1.76	1.91	1.98	2.32
	3200	0.45	0.56	0.66	0.76	0.87	0.96	1.01	1.06	1.15	1.25	1.34	1.43	1.51	1.68	1.76	1.84	1.99	2.07	2.41
	3400	0.47	0.58	0.69	0.80	0.90	1.01	1.06	1.11	1.21	1.30	1.40	1.49	1.58	1.75	1.84	1.92	2.08	2.15	2.50
	3600	0.48	0.60	0.72	0.83	0.94	1.05	1.10	1.15	1.26	1.36	1.45	1.55	1.64	1.82	1.91	1.99	2.15	2.23	2.58
	3800	0.50	0.63	0.75	0.86	0.98	1.09	1.14	1.20	1.30	1.41	1.51	1.61	1.70	1.89	1.98	2.06	2.23	2.30	2.66
	4000	0.52	0.65	0.77	0.89	1.01	1.13	1.19	1.24	1.35	1.46	1.56	1.66	1.76	1.95	2.04	2.13	2.30	2.37	2.73
	4200	0.53	0.67	0.80	0.92	1.05	1.17	1.23	1.28	1.40	1.51	1.61	1.72	1.82	2.01	2.10	2.19	2.36	2.44	2.79
	4400	0.55	0.69	0.82	0.95	1.08	1.20	1.27	1.32	1.44	1.55	1.66	1.77	1.87	2.07	2.16	2.25	2.42	2.50	2.84
	4600	0.57	0.71	0.85	0.98	1.11	1.24	1.30	1.36	1.48	1.60	1.71	1.82	1.93	2.12	2.22	2.31	2.48	2.56	2.89
	4800	0.58	0.73	0.87	1.01	1.15	1.28	1.34	1.40	1.53	1.64	1.76	1.87	1.98	2.18	2.27	2.36	2.53	2.61	2.93
	5000	0.59	0.75	0.90	1.04	1.18	1.31	1.38	1.44	1.57	1.69	1.80	1.92	2.02	2.23	2.32	2.41	2.58	2.66	2.96
	5500	0.63	0.79	0.95	1.10	1.25	1.39	1.46	1.53	1.66	1.79	1.91	2.02	2.13	2.34	2.43	2.52	2.68	2.75	3.01
	6000	0.66	0.83	1.00	1.16	1.32	1.47	1.54	1.61	1.75	1.88	2.00	2.12	2.23	2.43	2.52	2.61	2.75	2.82	3.01
	6500	0.69	0.87	1.05	1.22	1.38	1.54	1.61	1.68	1.82	1.96	2.08	2.20	2.31	2.51	2.59	2.67	2.80	2.85	2.95
	7000	0.72	0.91	1.09	1.27	1.44	1.60	1.68	1.75	1.89	2.03	2.15	2.27	2.38	2.56	2.64	2.71	2.81	2.84	2.84
	7500	0.74	0.94	1.14	1.32	1.49	1.66	1.73	1.81	1.95	2.09	2.21	2.32	2.43	2.60	2.66	2.72	2.79	2.80	2.66
	8000	0.76	0.97	1.17	1.36	1.54	1.71	1.79	1.86	2.01	2.14	2.26	2.37	2.46	2.61	2.66	2.70	2.73	2.72	2.42
	8500	0.78	1.00	1.21	1.40	1.58	1.75	1.83	1.91	2.05	2.18	2.29	2.39	2.48	2.60	2.64	2.66	2.64	2.60	2.12
	9000	0.80	1.03	1.24	1.44	1.62	1.79	1.87	1.94	2.08	2.21	2.31	2.40	2.48	2.57	2.58	2.58	2.51	2.44	1.74

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Use within the range of this mark results in a shorter belt service life.

How to Design a Synchronous Belt
Table of Basic Power Ratings

Table of basic power ratings for rubber Types S8M/DS8M (per width of 60 mm)

(Unit: kW)

No. of teeth of pinion		20	22	24	26	28	30	32	34	36	40	44	48	50	60	72	84	96	120
Pitch diameter (mm)		50.93	56.02	61.12	66.21	71.30	76.39	81.49	86.58	91.67	101.86	112.05	122.23	127.32	152.79	183.35	213.90	244.46	305.58
Pinion revolution (rpm)	50	0.37	0.40	0.44	0.48	0.51	0.55	0.59	0.62	0.66	0.73	0.81	0.88	0.92	1.10	1.32	1.54	1.76	2.20
	100	0.73	0.81	0.88	0.95	1.03	1.10	1.17	1.25	1.32	1.47	1.61	1.76	1.83	2.20	2.64	3.08	3.52	4.40
	200	1.47	1.61	1.76	1.91	2.05	2.20	2.35	2.49	2.64	2.94	3.23	3.52	3.67	4.40	5.28	6.16	7.04	8.79
	300	2.20	2.42	2.64	2.86	3.08	3.30	3.52	3.74	3.96	4.40	4.84	5.28	5.50	6.60	7.92	9.23	10.54	13.16
	400	2.94	3.23	3.52	3.82	4.11	4.40	4.69	4.99	5.28	5.87	6.45	7.04	7.33	8.79	10.54	12.29	14.03	17.49
	500	3.67	4.03	4.40	4.77	5.13	5.50	5.87	6.23	6.60	7.33	8.06	8.79	9.16	10.98	13.16	15.33	17.49	21.78
	600	4.40	4.84	5.28	5.72	6.16	6.60	7.04	7.48	7.92	8.79	9.67	10.54	10.98	13.16	15.76	18.35	20.93	26.01
	700	5.13	5.65	6.16	6.67	7.18	7.70	8.21	8.72	9.23	10.25	11.27	12.29	12.80	15.33	18.35	21.35	24.33	30.18
	800	5.87	6.45	7.04	7.62	8.21	8.79	9.38	9.96	10.54	11.71	12.87	14.03	14.61	17.49	20.93	24.33	27.69	34.26
	900	6.60	7.26	7.92	8.57	9.23	9.89	10.54	11.20	11.85	13.16	14.46	15.76	16.41	19.64	23.48	27.27	31.00	38.26
	1000	7.33	8.06	8.79	9.52	10.25	10.98	11.71	12.43	13.16	14.61	16.05	17.49	18.21	21.78	26.01	30.18	34.26	42.15
	1100	8.06	8.86	9.67	10.47	11.27	12.07	12.87	13.67	14.46	16.05	17.64	19.21	20.00	23.91	28.52	33.05	37.47	45.93
	1200	8.79	9.67	10.54	11.42	12.29	13.16	14.03	14.90	15.76	17.49	19.21	20.93	21.78	26.01	31.00	35.87	40.61	49.59
	1300	9.52	10.47	11.42	12.36	13.30	14.25	15.19	16.12	17.06	18.93	20.79	22.63	23.55	28.10	33.45	38.65	43.68	53.11
	1400	10.25	11.27	12.29	13.30	14.32	15.33	16.34	17.35	18.35	20.36	22.35	24.33	25.31	30.18	35.87	41.38	46.67	56.48
	1500	10.98	12.07	13.16	14.25	15.33	16.41	17.49	18.57	19.64	21.78	23.91	26.01	27.06	32.23	38.26	44.06	49.59	59.70
	1600	11.71	12.87	14.03	15.19	16.34	17.49	18.64	19.79	20.93	23.20	25.45	27.69	28.80	34.26	40.61	46.67	52.41	62.74
	1700	12.43	13.67	14.90	16.12	17.35	18.57	19.79	21.00	22.21	24.61	26.99	29.35	30.52	36.27	42.92	49.23	55.15	65.61
	1800	13.16	14.46	15.76	17.06	18.35	19.64	20.93	22.21	23.48	26.01	28.52	31.00	32.23	38.26	45.18	51.72	57.79	68.28
	1900	13.88	15.26	16.63	18.00	19.36	20.71	22.07	23.41	24.75	27.41	30.04	32.64	33.93	40.22	47.41	54.13	60.32	70.75
	2000	14.61	16.05	17.49	18.93	20.36	21.78	23.20	24.61	26.01	28.80	31.55	34.26	35.61	42.15	49.59	56.48	62.74	73.00
	2200	16.05	17.64	19.21	20.79	22.35	23.91	25.45	26.99	28.52	31.55	34.53	37.47	38.91	45.93	53.79	60.93	67.23	76.82
	2400	17.49	19.21	20.93	22.63	24.33	26.01	27.69	29.35	31.00	34.26	37.47	40.61	42.15	49.59	57.79	65.05	71.22	79.65
	2600	18.93	20.79	22.63	24.47	26.29	28.10	29.90	31.69	33.45	36.94	40.35	43.68	45.31	53.11	61.54	68.79	74.65	81.39
	2800	20.36	22.35	24.33	26.29	28.24	30.18	32.09	33.99	35.87	39.57	43.17	46.67	48.38	56.48	65.05	72.13	77.47	81.96
	3000	21.78	23.91	26.01	28.10	30.18	32.23	34.26	36.27	38.26	42.15	45.93	49.59	51.36	59.70	68.28	75.03	79.65	81.26
	3200	23.20	25.45	27.69	29.90	32.09	34.26	36.41	38.52	40.61	44.68	48.62	52.41	54.25	62.74	71.22	77.47	81.14	79.21
	3400	24.61	26.99	29.35	31.69	33.99	36.27	38.52	40.74	42.92	47.16	51.25	55.15	57.03	65.61	73.84	79.42	81.88	
	3600	26.01	28.52	31.00	33.45	35.87	38.26	40.61	42.92	45.18	49.59	53.79	57.79	59.70	68.28	76.14	80.83	81.84	
	3800	27.41	30.04	32.64	35.20	37.73	40.22	42.66	45.06	47.41	51.95	56.26	60.32	62.25	70.75	78.08	81.69	80.96	
	4000	28.80	31.55	34.26	36.94	39.57	42.15	44.68	47.16	49.59	54.25	58.64	62.74	64.67	73.00	79.65	81.96		
	4500	32.23	35.27	38.26	41.19	44.06	46.86	49.59	52.24	54.81	59.70	64.20	68.28	70.15	77.63	81.83	79.85		
	5000	35.61	38.91	42.15	45.31	48.38	51.36	54.25	57.03	59.70	64.67	69.13	73.00	74.71	80.66	81.26			
	5500	38.91	42.47	45.93	49.29	52.53	55.65	58.64	61.49	64.20	69.13	73.36	76.82	78.25	81.93				
	6000	42.15	45.93	49.59	53.11	56.48	59.70	62.74	65.61	68.28	73.00	76.82	79.65	80.66	81.26				

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for rubber Types S14M/DS14M (per width of 120 mm)

(Unit: kW)

Pinion revolution (rpm) \ No. of teeth of pinion	28	30	32	34	36	40	42	44	48	50	54	60	64	72	84	96	120	144
Pitch diameter (mm)	124.78	133.69	142.60	151.52	160.43	178.25	187.17	196.08	213.90	222.82	240.64	267.38	285.21	320.86	374.33	427.81	534.76	641.71
20	1.12	1.20	1.28	1.36	1.44	1.60	1.68	1.76	1.92	2.00	2.16	2.40	2.56	2.88	3.36	3.84	4.79	5.75
40	2.24	2.40	2.56	2.72	2.88	3.20	3.36	3.52	3.84	4.00	4.31	4.79	5.11	5.75	6.71	7.67	9.59	11.50
50	2.80	3.00	3.20	3.40	3.60	4.00	4.20	4.39	4.79	4.99	5.39	5.99	6.39	7.19	8.39	9.59	11.98	14.38
60	3.36	3.60	3.84	4.08	4.31	4.79	5.03	5.27	5.75	5.99	6.47	7.19	7.67	8.63	10.07	11.50	14.38	17.25
80	4.47	4.79	5.11	5.43	5.75	6.39	6.71	7.03	7.67	7.99	8.63	9.59	10.23	11.50	13.42	15.33	19.16	22.98
100	5.59	5.99	6.39	6.79	7.19	7.99	8.39	8.79	9.59	9.99	10.78	11.98	12.78	14.38	16.77	19.16	23.93	28.70
150	8.39	8.99	9.59	10.19	10.78	11.98	12.58	13.18	14.38	14.97	16.17	17.96	19.16	21.55	25.13	28.70	35.82	42.92
200	11.18	11.98	12.78	13.58	14.38	15.97	16.77	17.56	19.16	19.95	21.55	23.93	25.52	28.70	33.45	38.19	47.63	56.98
250	13.98	14.97	15.97	16.97	17.96	19.95	20.95	21.94	23.93	24.93	26.91	29.89	31.87	35.82	41.74	47.63	59.31	70.84
300	16.77	17.96	19.16	20.35	21.55	23.93	25.13	26.32	28.70	29.89	32.27	35.82	38.19	42.92	49.97	56.98	70.84	84.43
350	19.56	20.95	22.34	23.73	25.13	27.91	29.29	30.68	33.45	34.84	37.60	41.74	44.49	49.97	58.14	66.24	82.19	97.71
400	22.34	23.93	25.52	27.11	28.70	31.87	33.45	35.03	38.19	39.77	42.92	47.63	50.75	56.98	66.24	75.40	93.32	110.63
450	25.13	26.91	28.70	30.48	32.27	35.82	37.60	39.38	42.92	44.69	48.21	53.48	56.98	63.94	74.26	84.43	104.22	123.13
500	27.91	29.89	31.87	33.85	35.82	39.77	41.74	43.70	47.63	49.58	53.48	59.31	63.17	70.84	82.19	93.32	114.85	135.17
600	33.45	35.82	38.19	40.56	42.92	47.63	49.97	52.31	56.98	59.31	63.94	70.84	75.40	84.43	97.71	110.63	135.17	157.62
700	38.98	41.74	44.49	47.23	49.97	55.43	58.14	60.85	66.24	68.93	74.26	82.19	87.41	97.71	112.75	127.20	154.04	177.58
800	44.49	47.63	50.75	53.87	56.98	63.17	66.24	69.31	75.40	78.42	84.43	93.32	99.17	110.63	127.20	142.91	171.23	194.63
900	49.97	53.48	56.98	60.47	63.94	70.84	74.26	77.67	84.43	87.78	94.43	104.22	110.63	123.13	140.99	157.62	186.50	208.34
1000	55.43	59.31	63.17	67.01	70.84	78.42	82.19	85.92	93.32	96.98	104.22	114.85	121.77	135.17	154.04	171.23	199.59	218.31
1100	60.85	65.09	69.31	73.50	77.67	85.92	90.01	94.06	102.06	106.01	113.80	125.17	132.54	146.68	166.27	183.61	210.28	224.12
1200	66.24	70.84	75.40	79.93	84.43	93.32	97.71	102.06	110.63	114.85	123.13	135.17	142.91	157.62	177.58	194.63	218.31	225.35
1300	71.60	76.54	81.44	86.30	91.11	100.62	105.30	109.93	119.02	123.48	132.21	144.80	152.84	167.94	187.91	204.17	223.46	221.59
1400	76.91	82.19	87.41	92.59	97.71	107.80	112.75	117.63	127.20	131.88	140.99	154.04	162.29	177.58	197.16	212.10	225.47	212.41
1500	82.19	87.78	93.32	98.81	104.22	114.85	120.05	125.17	135.17	140.03	149.47	162.86	171.23	186.50	205.25	218.31	224.12	197.41
1600	87.41	93.32	99.17	104.94	110.63	121.77	127.20	132.54	142.91	147.93	157.62	171.23	179.63	194.63	212.10	222.67	219.15	
1700	92.59	98.81	104.94	110.99	116.94	128.54	134.19	139.71	150.40	155.54	165.42	179.12	187.44	201.93	217.64	225.06	210.32	
1800	97.71	104.22	110.63	116.94	123.13	135.17	140.99	146.68	157.62	162.86	172.85	186.50	194.63	208.34	221.76	225.35	197.41	
1900	102.78	109.57	116.24	122.79	129.21	141.63	147.62	153.44	164.58	169.87	179.88	193.33	201.16	213.82	224.40	223.42		
2000	107.80	114.85	121.77	128.54	135.17	147.93	154.04	159.97	171.23	176.55	186.50	199.59	207.00	218.31	225.47	219.15		
2200	117.63	125.17	132.54	139.71	146.68	159.97	166.27	172.31	183.61	188.84	198.39	210.28	216.44	224.12	222.58	203.08		
2400	127.20	135.17	142.91	150.40	157.62	171.23	177.58	183.61	194.63	199.59	208.34	218.31	222.67	225.35	212.41			
2600	136.48	144.80	152.84	160.56	167.94	181.64	187.91	193.76	204.17	208.67	216.19	223.46	225.40	221.59	194.31			
2800	145.43	154.04	162.29	170.14	177.58	191.11	197.16	202.69	212.10	215.94	221.76	225.47	224.32	212.41				
3000	154.04	162.86	171.23	179.12	186.50	199.59	205.25	210.28	218.31	221.26	224.87	224.12	219.15	197.41				
3200	162.29	171.23	179.63	187.44	194.63	207.00	212.10	216.44	222.67	224.49	225.35	219.15	209.59					
3400	170.14	179.12	187.44	195.06	201.93	213.26	217.64	221.09	225.06	225.49	223.02	210.32	195.36					
3600	177.58	186.50	194.63	201.93	208.34	218.31	221.76	224.12	225.35	224.12	217.70	197.41						
3800	184.58	193.33	201.16	208.01	213.82	222.08	224.40	225.44	223.42	220.24	209.22	180.15						
4000	191.11	199.59	207.00	213.26	218.31	224.49	225.47	224.96	219.15	213.71								
4500	205.25	212.54	218.31	222.46	224.87	224.12	220.74	215.23	197.41	184.89								
5000	215.94	221.26	224.49	225.49	224.12	213.71	204.39	192.15										

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Use within the range of this mark results in a shorter belt service life.

The value with this mark varies between the above two types; use them only when a special design is necessary.

Table of basic power ratings for polyurethane Type TN10 (per width of 6 mm)

(Unit: W)

Pinion revolution (rpm) \ No. of teeth of pinion	16	18	20	22	24	26	28	30	32	34	36	40	44	48	52	56	60
Pitch diameter (mm)	5.09	5.73	6.37	7.00	7.64	8.28	8.91	9.55	10.19	10.82	11.46	12.73	14.01	15.28	16.55	17.83	19.10
100	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6
150	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8
200	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.9	1.0	1.0	1.1
250	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.3	1.4
300	0.4	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.5	1.6	1.7
350	0.5	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.6	1.7	1.8	2.0
400	0.6	0.7	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.3	1.5	1.6	1.8	1.9	2.1	2.2
450	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.4	1.5	1.7	1.8	2.0	2.2	2.3	2.5
500	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.6	2.8
550	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	2.0	2.3	2.5	2.7	2.9	3.1
600	0.9	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.9	2.0	2.2	2.5	2.7	2.9	3.1	3.4
650	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8	1.9	2.1	2.2	2.4	2.7	2.9	3.1	3.4	3.6
700	1.0	1.2	1.3	1.4	1.6	1.7	1.8	2.0	2.1	2.2	2.3	2.6	2.9	3.1	3.4	3.7	3.9
750	1.1	1.3	1.4	1.5	1.7	1.8	2.0	2.1	2.2	2.4	2.5	2.8	3.1	3.4	3.6	3.9	4.2
800	1.2	1.3	1.5	1.6	1.8	1.9	2.1	2.2	2.4	2.5	2.7	3.0	3.3	3.6	3.9	4.2	4.5
850	1.3	1.4	1.6	1.7	1.9	2.1	2.2	2.4	2.5	2.7	2.9	3.2	3.5	3.8	4.1	4.4	4.7
900	1.3	1.5	1.7	1.8	2.0	2.2	2.3	2.5	2.7	2.9	3.0	3.4	3.7	4.0	4.4	4.7	5.0
950	1.4	1.6	1.8	1.9	2.1	2.3	2.5	2.7	2.8	3.0	3.2	3.5	3.9	4.2	4.6	5.0	5.3
1000	1.5	1.7	1.9	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.7	4.1	4.5	4.8	5.2	5.6
1100	1.6	1.8	2.0	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.7	4.1	4.5	4.9	5.3	5.7	6.1
1200	1.8	2.0	2.2	2.5	2.7	2.9	3.1	3.4	3.6	3.8	4.0	4.5	4.9	5.4	5.8	6.3	6.7
1300	1.9	2.2	2.4	2.7	2.9	3.1	3.4	3.6	3.9	4.1	4.4	4.8	5.3	5.8	6.3	6.8	7.3
1400	2.1	2.3	2.6	2.9	3.1	3.4	3.7	3.9	4.2	4.4	4.7	5.2	5.7	6.3	6.8	7.3	7.8
1500	2.2	2.5	2.8	3.1	3.4	3.6	3.9	4.2	4.5	4.7	5.0	5.6	6.1	6.7	7.3	7.8	8.4
1600	2.4	2.7	3.0	3.3	3.6	3.9	4.2	4.5	4.8	5.1	5.4	6.0	6.6	7.1	7.7	8.3	8.9
1700	2.5	2.9	3.2	3.5	3.8	4.1	4.4	4.7	5.1	5.4	5.7	6.3	7.0	7.6	8.2	8.9	9.5
1800	2.7	3.0	3.4	3.7	4.0	4.4	4.7	5.0	5.4	5.7	6.0	6.7	7.4	8.0	8.7	9.4	10.0
1900	2.8	3.2	3.5	3.9	4.2	4.6	5.0	5.3	5.7	6.0	6.4	7.1	7.8	8.5	9.2	9.9	10.6
2000	3.0	3.4	3.7	4.1	4.5	4.8	5.2	5.6	6.0	6.3	6.7	7.4	8.2	8.9	9.7	10.4	11.1
2100	3.1	3.5	3.9	4.3	4.7	5.1	5.5	5.9	6.3	6.6	7.0	7.8	8.6	9.4	10.1	10.9	11.7
2200	3.3	3.7	4.1	4.5	4.9	5.3	5.7	6.1	6.6	7.0	7.4	8.2	9.0	9.8	10.6	11.4	12.2
2300	3.4	3.9	4.3	4.7	5.1	5.6	6.0	6.4	6.8	7.3	7.7	8.6	9.4	10.3	11.1	12.0	12.8
2400	3.6	4.0	4.5	4.9	5.4	5.8	6.3	6.7	7.1	7.6	8.0	8.9	9.8	10.7	11.6	12.5	13.3
2500	3.7	4.2	4.7	5.1	5.6	6.0	6.5	7.0	7.4	7.9	8.4	9.3	10.2	11.1	12.1	13.0	13.9
2600	3.9	4.4	4.8	5.3	5.8	6.3	6.8	7.3	7.7	8.2	8.7	9.7	10.6	11.6	12.5	13.5	14.4
2700	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	10.0	11.0	12.0	13.0	14.0	15.0
2800	4.2	4.7	5.2	5.7	6.3	6.8	7.3	7.8	8.3	8.9	9.4	10.4	11.4	12.5	13.5	14.5	15.5
2900	4.3	4.9	5.4	5.9	6.5	7.0	7.6	8.1	8.6	9.2	9.7	10.8	11.8	12.9	14.0	15.0	16.1
3000	4.5	5.0	5.6	6.1	6.7	7.3	7.8	8.4	8.9	9.5	10.0	11.1	12.2	13.3	14.4	15.5	16.6
3100	4.6	5.2	5.8	6.3	6.9	7.5	8.1	8.6	9.2	9.8	10.4	11.5	12.7	13.8	14.9	16.1	17.2
3200		5.4	6.0	6.6	7.1	7.7	8.3	8.9	9.5	10.1	10.7	11.9	13.1	14.2	15.4	16.6	17.7
3300		5.5	6.1	6.8	7.4	8.0	8.6	9.2	9.8	10.4	11.0	12.2	13.5	14.7	15.9	17.1	18.3
3400		5.7	6.3	7.0	7.6	8.2	8.9	9.5	10.1	10.7	11.4	12.6	13.9	15.1	16.3	17.6	18.8
3500		5.9	6.5	7.2	7.8	8.5	9.1	9.8	10.4	11.0	11.7	13.0	14.3	15.5	16.8	18.1	19.4
3600		6.0	6.7	7.4	8.0	8.7	9.4	10.0	10.7	11.4	12.0	13.3	14.7	16.0	17.3	18.6	19.9
3700		6.2	6.9	7.6	8.3	8.9	9.6	10.3	11.0	11.7	12.4	13.7	15.1	16.4	17.8	19.1	20.4
3800		6.4	7.1	7.8	8.5	9.2	9.9	10.6	11.3	12.0	12.7	14.1	15.5	16.9	18.2	19.6	21.0
3900		6.5	7.3	8.0	8.7	9.4	10.1	10.9	11.6	12.3	13.0	14.4	15.9	17.3	18.7	20.1	21.5
4000		6.7	7.4	8.2	8.9	9.7	10.4	11.1	11.9	12.6	13.3	14.8	16.3	17.7	19.2	20.6	22.1
4100		6.9	7.6	8.4	9.1	9.9	10.7	11.4	12.2	12.9	13.7	15.2	16.7	18.2	19.6	21.1	22.6
4200		7.0	7.8	8.6	9.4	10.1	10.9	11.7	12.5	13.2	14.0	15.5	17.1	18.6	20.1	21.6	23.1
4300		7.2	8.0	8.8	9.6	10.4	11.2	12.0	12.8	13.6	14.3	15.9	17.5	19.0	20.6	22.1	23.7
4400		7.4	8.2	9.0	9.8	10.6	11.4	12.2	13.1	13.9	14.7	16.3	17.9	19.5	21.1	22.6	24.2
4500		7.5	8.4	9.2	10.0	10.9	11.7	12.5	13.3	14.2	15.0	16.6	18.3	19.9	21.5	23.1	24.7
4600		7.7	8.6	9.4	10.3	11.1	12.0	12.8	13.6	14.5	15.3	17.0	18.7	20.3	22.0	23.6	25.2
4700		7.9	8.7	9.6	10.5	11.3	12.2	13.1	13.9	14.8	15.7	17.4	19.1	20.8	22.4	24.1	25.8
4800		8.0	8.9	9.8	10.7	11.6	12.5	13.3	14.2	15.1	16.0	17.7	19.5	21.2	22.9	24.6	26.3
4900		8.2	9.1	10.0	10.9	11.8	12.7	13.6	14.5	15.4	16.3	18.1	19.9	21.6	23.4	25.1	26.8
5000		8.4	9.3	10.2	11.1	12.1	13.0	13.9	14.8	15.7	16.6	18.5	20.3	22.1	23.8	25.6	27.4
5500		9.2	10.2	11.2	12.2	13.3	14.3	15.3	16.3	17.3	18.3	20.3	22.2	24.2	26.1	28.0	29.9
6000		10.0	11.1	12.2	13.3	14.4	15.5	16.6	17.7	18.8	19.9	22.1	24.2	26.3	28.4	30.5	32.5

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for polyurethane Type TN15 (per width of 10 mm)

(Unit: W)

No. of teeth of pinion		20	22	24	26	28	30	34	38	42	46	50	55	60	64	72	80	88	96
Pitch diameter (mm)		9.55	10.50	11.46	12.41	13.37	14.32	16.23	18.14	20.05	21.96	23.87	26.26	28.65	30.56	34.38	38.20	42.02	45.84
Pinion revolution (rpm)	100	1.1	1.2	1.3	1.4	1.5	1.6	1.8	2.0	2.3	2.5	2.7	3.0	3.2	3.5	3.9	4.3	4.7	5.2
	200	2.2	2.4	2.6	2.8	3.0	3.2	3.7	4.1	4.5	5.0	5.4	5.9	6.5	6.9	7.8	8.6	9.5	10.4
	300	3.2	3.6	3.9	4.2	4.5	4.9	5.5	6.1	6.8	7.4	8.1	8.9	9.7	10.4	11.6	12.9	14.2	15.5
	400	4.3	4.7	5.2	5.6	6.0	6.5	7.3	8.2	9.1	9.9	10.8	11.9	12.9	13.8	15.5	17.3	19.0	20.7
	500	5.4	5.9	6.5	7.0	7.6	8.1	9.2	10.2	11.3	12.4	13.5	14.8	16.2	17.3	19.4	21.6	23.7	25.9
	600	6.5	7.1	7.8	8.4	9.1	9.7	11.0	12.3	13.6	14.9	16.2	17.8	19.4	20.7	23.3	25.9	28.5	31.0
	700	7.6	8.3	9.1	9.8	10.6	11.3	12.8	14.3	15.9	17.4	18.9	20.8	22.6	24.2	27.2	30.2	33.2	36.2
	800	8.6	9.5	10.4	11.2	12.1	12.9	14.7	16.4	18.1	19.8	21.6	23.7	25.9	27.6	31.0	34.5	37.9	41.4
	900	9.7	10.7	11.6	12.6	13.6	14.6	16.5	18.4	20.4	22.3	24.3	26.7	29.1	31.0	34.9	38.8	42.6	46.5
	1000	10.8	11.9	12.9	14.0	15.1	16.2	18.3	20.5	22.6	24.8	26.9	29.6	32.3	34.5	38.8	43.1	47.4	51.6
	1100	11.9	13.1	14.2	15.4	16.6	17.8	20.2	22.5	24.9	27.3	29.6	32.6	35.6	37.9	42.6	47.4	52.1	56.8
	1200	12.9	14.2	15.5	16.8	18.1	19.4	22.0	24.6	27.2	29.7	32.3	35.6	38.8	41.4	46.5	51.6	56.8	61.9
	1300	14.0	15.4	16.8	18.2	19.6	21.0	23.8	26.6	29.4	32.2	35.0	38.5	42.0	44.8	50.4	55.9	61.5	67.0
	1400	15.1	16.6	18.1	19.6	21.1	22.6	25.7	28.7	31.7	34.7	37.7	41.5	45.2	48.2	54.2	60.2	66.2	72.1
	1500	16.2	17.8	19.4	21.0	22.6	24.3	27.5	30.7	33.9	37.2	40.4	44.4	48.4	51.6	58.1	64.5	70.8	77.2
	1600	17.3	19.0	20.7	22.4	24.2	25.9	29.3	32.8	36.2	39.6	43.1	47.4	51.6	55.1	61.9	68.7	75.5	82.3
	1700	18.3	20.2	22.0	23.8	25.7	27.5	31.1	34.8	38.5	42.1	45.8	50.3	54.9	58.5	65.7	73.0	80.2	87.3
	1800	19.4	21.4	23.3	25.2	27.2	29.1	33.0	36.8	40.7	44.6	48.4	53.2	58.1	61.9	69.6	77.2	84.8	92.4
	1900	20.5	22.5	24.6	26.6	28.7	30.7	34.8	38.9	43.0	47.0	51.1	56.2	61.3	65.3	73.4	81.4	89.5	97.4
	2000	21.6	23.7	25.9	28.0	30.2	32.3	36.6	40.9	45.2	49.5	53.8	59.1	64.5	68.7	77.2	85.7	94.1	102.5
	2100	22.6	24.9	27.2	29.4	31.7	33.9	38.5	43.0	47.5	52.0	56.5	62.1	67.7	72.1	81.0	89.9	98.7	107.5
	2200	23.7	26.1	28.5	30.8	33.2	35.6	40.3	45.0	49.7	54.4	59.1	65.0	70.8	75.5	84.8	94.1	103.3	112.4
	2300	24.8	27.3	29.7	32.2	34.7	37.2	42.1	47.0	52.0	56.9	61.8	67.9	74.0	78.9	88.6	98.3	107.9	117.4
	2400	25.9	28.5	31.0	33.6	36.2	38.8	43.9	49.1	54.2	59.3	64.5	70.8	77.2	82.3	92.4	102.5	112.4	122.4
	2500	26.9	29.6	32.3	35.0	37.7	40.4	45.8	51.1	56.5	61.8	67.1	73.8	80.4	85.7	96.2	106.6	117.0	127.3
	2600	28.0	30.8	33.6	36.4	39.2	42.0	47.6	53.1	58.7	64.2	69.8	76.7	83.6	89.0	99.9	110.8	121.5	132.2
	2700	29.1	32.0	34.9	37.8	40.7	43.6	49.4	55.2	60.9	66.7	72.4	79.6	86.7	92.4	103.7	114.9	126.1	137.1
	2800	30.2	33.2	36.2	39.2	42.2	45.2	51.2	57.2	63.2	69.1	75.1	82.5	89.9	95.8	107.5	119.1	130.6	142.0
	2900	31.3	34.4	37.5	40.6	43.7	46.8	53.0	59.2	65.4	71.6	77.7	85.4	93.0	99.1	111.2	123.2	135.1	146.8
	3000	32.3	35.6	38.8	42.0	45.2	48.4	54.9	61.3	67.7	74.0	80.4	88.3	96.2	102.5	114.9	127.3	139.5	151.6
	3200		37.9	41.4	44.8	48.2	51.6	58.5	65.3	72.1	78.9	85.7	94.1	102.5	109.1	122.4	135.5	148.4	161.2
	3400		40.3	43.9	47.6	51.2	54.9	62.1	69.4	76.6	83.8	90.9	99.8	108.7	115.8	129.7	143.6	157.2	170.6
	3600		42.6	46.5	50.4	54.2	58.1	65.7	73.4	81.0	88.6	96.2	105.6	114.9	122.4	137.1	151.6	165.9	180.0
	3800		45.0	49.1	53.1	57.2	61.3	69.4	77.4	85.5	93.5	101.4	111.3	121.1	128.9	144.4	159.6	174.5	189.2
	4000		47.4	51.6	55.9	60.2	64.5	73.0	81.4	89.9	98.3	106.6	117.0	127.3	135.5	151.6	167.5	183.0	198.3
	4200		49.7	54.2	58.7	63.2	67.7	76.6	85.5	94.3	103.1	111.8	122.7	133.4	142.0	158.8	175.3	191.5	207.2
	4400		52.1	56.8	61.5	66.2	70.8	80.2	89.5	98.7	107.9	117.0	128.3	139.5	148.4	165.9	183.0	199.8	216.1
	4600		54.4	59.3	64.2	69.1	74.0	83.8	93.5	103.1	112.7	122.2	133.9	145.6	154.8	173.0	190.7	208.0	224.7
	4800		56.8	61.9	67.0	72.1	77.2	87.3	97.4	107.5	117.4	127.3	139.5	151.6	161.2	180.0	198.3	216.1	233.3
	5000		59.1	64.5	69.8	75.1	80.4	90.9	101.4	111.8	122.2	132.4	145.1	157.6	167.5	186.9	205.8	224.0	241.6
	5500		65.0	70.8	76.7	82.5	88.3	99.8	111.3	122.7	133.9	145.1	158.8	172.4	183.0	203.9	224.0	243.3	261.8
	6000		70.8	77.2	83.6	89.9	96.2	108.7	121.1	133.4	145.6	157.6	172.4	186.9	198.3	220.4	241.6	261.8	280.8

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for polyurethane Type MXL (per width of 10 mm)

(Unit: W)

No. of teeth of pinion		12	14	16	18	20	24	28	32	36	40	44	48	52	56	60	64	68	72
Pitch diameter (mm)		7.76	9.06	10.35	11.64	12.94	15.52	18.11	20.70	23.29	25.87	28.46	31.05	33.63	36.22	38.81	41.40	43.98	46.57
Pinion revolution (rpm)	100	0.9	1.0	1.2	1.3	1.5	1.8	2.0	2.3	2.6	2.9	3.2	3.5	3.8	4.1	4.4	4.7	5.0	5.3
	200	1.8	2.0	2.3	2.6	2.9	3.5	4.1	4.7	5.3	5.8	6.4	7.0	7.6	8.2	8.8	9.4	9.9	10.5
	300	2.6	3.1	3.5	3.9	4.4	5.3	6.1	7.0	7.9	8.8	9.6	10.5	11.4	12.3	13.1	14.0	14.9	15.8
	400	3.5	4.1	4.7	5.3	5.8	7.0	8.2	9.4	10.5	11.7	12.9	14.0	15.2	16.4	17.5	18.7	19.9	21.0
	500	4.4	5.1	5.8	6.6	7.3	8.8	10.2	11.7	13.1	14.6	16.1	17.5	19.0	20.4	21.9	23.4	24.8	26.3
	600	5.3	6.1	7.0	7.9	8.8	10.5	12.3	14.0	15.8	17.5	19.3	21.0	22.8	24.5	26.3	28.0	29.8	31.5
	700	6.1	7.2	8.2	9.2	10.2	12.3	14.3	16.4	18.4	20.4	22.5	24.5	26.6	28.6	30.7	32.7	34.7	36.8
	800	7.0	8.2	9.4	10.5	11.7	14.0	16.4	18.7	21.0	23.4	25.7	28.0	30.4	32.7	35.0	37.3	39.7	42.0
	900	7.9	9.2	10.5	11.8	13.1	15.8	18.4	21.0	23.7	26.3	28.9	31.5	34.1	36.8	39.4	42.0	44.6	47.2
	1000	8.8	10.2	11.7	13.1	14.6	17.5	20.4	23.4	26.3	29.2	32.1	35.0	37.9	40.8	43.7	46.6	49.5	52.4
	1100	9.6	11.3	12.9	14.5	16.1	19.3	22.5	25.7	28.9	32.1	35.3	38.5	41.7	44.9	48.2	51.3	54.5	57.6
	1200	10.5	12.3	14.0	15.8	17.5	21.0	24.5	28.0	31.5	35.0	38.5	42.0	45.5	49.0	52.4	55.9	59.4	62.8
	1300		13.3	15.2	17.1	19.0	22.8	26.6	30.4	34.1	37.9	41.7	45.5	49.3	53.0	56.8	60.5	64.3	68.0
	1400		14.3	16.4	18.4	20.4	24.5	28.6	32.7	36.8	40.8	44.9	49.0	53.0	57.3	61.1	65.1	69.2	73.2
	1500		15.3	17.5	19.7	21.9	26.3	30.7	35.0	39.4	43.7	48.1	52.4	56.8	61.1	65.4	69.7	74.0	78.3
	1600		16.4	18.7	21.0	23.4	28.0	32.7	37.3	42.0	46.6	51.3	55.9	60.5	65.1	69.7	74.3	78.9	83.5
	1700		17.4	19.9	22.3	24.8	29.8	34.7	39.7	44.6	49.5	54.5	59.4	64.3	69.2	74.0	78.9	83.7	88.6
	1800		18.4	21.0	23.7	26.3	31.5	36.8	42.0	47.2	52.4	57.6	62.8	68.0	73.2	78.3	83.5	88.6	93.7
	1900			22.2	25.0	27.7	33.3	38.8	44.3	49.8	55.3	60.8	66.3	71.7	77.2	82.6	88.0	93.4	98.8
	2000			23.4	26.3	29.2	35.0	40.8	46.6	52.4	58.2	64.6	69.7	75.5	81.2	86.9	92.6	98.2	103.8
	2100			24.5	27.6	30.7	36.8	42.9	49.0	55.0	61.1	67.1	73.2	79.2	85.2	91.1	97.1	103.0	108.9
	2200			25.7	28.9	32.1	38.5	44.9	51.3	57.6	64.0	70.3	76.6	82.9	89.1	95.4	101.6	107.8	113.9
	2300			26.9	30.2	33.6	40.3	46.9	53.6	60.2	66.9	73.5	80.0	86.6	93.1	99.6	106.1	112.5	118.9
	2400			28.0	31.5	35.0	42.0	49.0	55.9	62.8	69.7	76.6	83.5	90.3	97.1	103.8	110.5	117.2	123.9
	2500			29.2	32.8	36.5	43.7	51.0	58.2	65.4	72.6	79.8	86.9	94.0	101.0	108.0	115.0	121.9	128.8
	2600			30.4	34.1	37.9	45.5	53.0	60.5	68.0	75.5	82.9	90.3	97.6	104.9	112.2	119.4	126.6	133.7
	2700			31.5	35.5	39.4	47.2	55.0	62.8	70.6	78.3	86.0	93.7	101.3	108.9	116.4	123.9	131.3	138.6
	2800			32.7	36.8	40.8	49.0	57.1	65.1	73.2	81.2	89.1	97.1	104.9	112.8	120.5	128.3	135.9	143.5
	2900			33.9	38.1	42.3	50.7	59.1	67.4	75.8	84.0	92.3	100.5	108.6	116.7	124.7	132.6	140.5	148.3
	3000			35.0	39.4	43.7	52.4	61.1	69.7	78.3	88.0	95.4	103.8	112.2	120.5	128.8	137.0	145.1	153.1
	3200			37.3	42.0	46.6	55.9	65.1	74.3	83.5	92.6	101.6	110.5	119.4	128.3	137.0	145.6	154.2	162.6
	3400			39.7	44.6	49.5	59.4	69.2	78.9	88.6	98.2	107.8	117.2	126.6	135.9	145.1	154.2	163.2	172.0
	3600			42.0	47.2	52.4	62.8	73.2	83.5	93.7	103.8	113.9	123.9	133.7	143.5	153.1	162.6	172.0	181.3
	3800			44.3	49.8	55.3	66.3	77.2	88.0	98.8	109.4	120.0	130.4	140.8	151.0	161.1	171.0	180.8	190.4
	4000			46.6	52.4	58.2	69.7	81.2	92.6	103.8	115.0	126.1	137.0	147.8	158.4	168.9	179.2	189.4	199.3
	4200			49.0	55.0	61.1	73.2	85.2	97.1	108.9	120.5	132.1	143.5	154.7	165.8	176.7	187.4	197.8	208.1
	4400			51.3	57.6	64.0	76.6	89.1	101.6	113.9	126.1	138.1	149.9	161.6	173.1	184.3	195.3	206.2	216.7
	4600			53.6	60.2	66.9	80.0	93.1	106.1	118.9	131.5	144.0	156.3	168.4	180.3	191.9	203.2	214.3	225.1
	4800			55.9	62.8	69.7	83.5	97.1	110.5	123.9	137.0	149.9	162.6	175.1	187.4	199.3	210.9	222.3	233.3

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for rubber Type MXL (per width of 6.4 mm)

(Unit: W)

Pinion revolution (rpm) \ No. of teeth of pinion	12	14	16	20	24	28	32	40	48	52	60	64	72	80	88	96	100
Pitch diameter (mm)	7.76	9.06	10.35	12.94	15.52	18.11	20.70	25.87	31.05	33.63	38.81	41.40	46.57	51.74	56.92	62.09	64.68
100	1.0	1.1	1.3	1.6	1.9	2.2	2.5	3.2	3.8	4.1	4.8	5.1	5.7	6.4	7.0	7.6	7.9
150	1.4	1.7	1.9	2.4	2.9	3.3	3.8	4.8	5.7	6.2	7.1	7.6	8.6	9.5	10.5	11.4	11.9
200	1.9	2.2	2.5	3.2	3.8	4.4	5.1	6.4	7.6	8.3	9.5	10.2	11.4	12.7	14.0	15.2	15.9
250	2.4	2.8	3.2	4.0	4.8	5.6	6.4	7.9	9.5	10.3	11.9	12.7	14.3	15.9	17.5	19.0	19.8
300	2.9	3.3	3.8	4.8	5.7	6.7	7.6	9.5	11.4	12.4	14.3	15.2	17.1	19.0	21.0	22.9	23.8
350	3.3	3.9	4.4	5.6	6.7	7.8	8.9	11.1	13.3	14.4	16.7	17.8	20.0	22.2	24.4	26.7	27.8
400	3.8	4.4	5.1	6.4	7.6	8.9	10.2	12.7	15.2	16.5	19.0	20.3	22.9	25.4	27.9	30.5	31.7
450	4.3	5.0	5.7	7.1	8.6	10.0	11.4	14.3	17.1	18.6	21.4	22.9	25.7	28.6	31.4	34.3	35.7
500	4.8	5.6	6.4	7.9	9.5	11.1	12.7	15.9	19.0	20.6	23.8	25.4	28.6	31.7	34.9	38.1	39.6
600	5.7	6.7	7.6	9.5	11.4	13.3	15.2	19.0	22.9	24.8	28.6	30.5	34.3	38.1	41.9	45.7	47.6
700	6.7	7.8	8.9	11.1	13.3	15.6	17.8	22.2	26.7	28.9	33.3	35.5	40.0	44.4	48.8	53.2	55.5
800	7.6	8.9	10.2	12.7	15.2	17.8	20.3	25.4	30.5	33.0	38.1	40.6	45.7	50.7	55.8	60.8	63.3
900	8.6	10.0	11.4	14.3	17.1	20.0	22.9	28.6	34.3	37.1	42.8	45.7	51.3	57.0	62.7	68.4	71.2
1000	9.5	11.1	12.7	15.9	19.0	22.2	25.4	31.7	38.1	41.2	47.6	50.7	57.0	63.3	69.6	75.9	79.1
1100	10.5	12.2	14.0	17.5	21.0	24.4	27.9	34.9	41.9	45.3	52.3	55.8	62.7	69.6	76.5	83.4	86.9
1200	11.4	13.3	15.2	19.0	22.9	26.7	30.5	38.1	45.7	49.5	57.0	60.8	68.4	75.9	83.4	90.9	94.7
1300	12.4	14.4	16.5	20.6	24.8	28.9	33.0	41.2	49.5	53.6	61.8	65.9	74.0	82.2	90.3	98.4	102.5
1400	13.3	15.6	17.8	22.2	26.7	31.1	35.5	44.4	53.2	57.7	66.5	70.9	79.7	88.4	97.2	105.9	110.2
1500	14.3	16.7	19.0	23.8	28.6	33.3	38.1	47.6	57.0	61.8	71.2	75.9	85.3	94.7	104.0	113.3	118.0
1600	15.2	17.8	20.3	25.4	30.5	35.5	40.6	50.7	60.8	65.9	75.9	80.9	90.9	100.9	110.9	120.7	125.7
1700	16.2	18.9	21.6	27.0	32.4	37.7	43.1	53.9	64.6	69.9	80.6	85.9	96.6	107.1	117.7	128.1	133.3
1800	17.1	20.0	22.9	28.6	34.3	40.0	45.7	57.0	68.4	74.0	85.3	90.9	102.2	113.3	124.4	135.5	141.0
1900	18.1	21.1	24.1	30.1	36.2	42.2	48.2	60.2	72.1	78.1	90.0	95.9	107.8	119.5	131.2	142.8	148.6
2000	19.0	22.2	25.4	31.7	38.1	44.4	50.7	63.3	75.9	82.2	94.7	100.9	113.3	125.7	137.9	150.1	156.2
2100	20.0	23.3	26.7	33.3	40.0	46.6	53.2	66.5	79.7	86.3	99.4	105.9	118.9	131.8	144.6	157.4	163.7
2200	21.0	24.4	27.9	34.9	41.9	48.8	55.8	69.6	83.4	90.3	104.0	110.9	124.4	137.9	151.3	164.6	171.2
2300	21.9	25.5	29.2	36.5	43.8	51.0	58.3	72.8	87.2	94.4	108.7	115.8	130.0	144.0	158.0	171.8	178.6
2400	22.9	26.7	30.5	38.1	45.7	53.2	60.8	75.9	90.9	98.4	113.3	120.7	135.5	150.1	164.6	178.9	186.0
2500	23.8	27.8	31.7	39.6	47.6	55.5	63.3	79.1	94.7	102.5	118.0	125.7	141.0	156.2	171.2	186.0	193.4
2600	24.8	28.9	33.0	41.2	49.5	57.7	65.9	82.2	98.4	106.5	122.6	130.6	146.5	162.2	177.7	193.1	200.7
2700	25.7	30.0	34.3	42.8	51.3	59.9	68.4	85.3	102.2	110.5	127.2	135.5	151.9	168.2	184.2	200.1	207.9
2800	26.7	31.1	35.5	44.4	53.2	62.1	70.9	88.4	105.9	114.6	131.8	140.4	157.4	174.1	190.7	207.0	215.1
2900	27.6	32.2	36.8	46.0	55.1	64.3	73.4	91.6	109.6	118.6	136.4	145.2	162.8	180.1	197.2	214.0	222.2
3000	28.6	33.3	38.1	47.6	57.0	66.5	75.9	94.7	113.3	122.6	141.0	150.1	168.2	186.0	203.6	220.8	229.3
3200	30.5	35.5	40.6	50.7	60.8	70.9	80.9	100.9	120.7	130.6	150.1	159.8	178.9	197.7	216.3	234.4	243.3
3400	32.4	37.7	43.1	53.9	64.6	75.3	85.9	107.1	128.1	138.5	159.2	169.4	189.5	209.4	228.8	247.8	257.1
3600	34.3	40.0	45.7	57.0	68.4	79.7	90.9	113.3	135.5	146.5	168.2	178.9	200.1	220.8	241.1	260.9	270.6
3800	36.2	42.2	48.2	60.2	72.1	84.1	95.9	119.5	142.8	154.3	177.1	188.4	210.5	232.2	253.2	273.7	283.7
4000	38.1	44.4	50.7	63.3	75.9	88.4	100.9	125.7	150.1	162.2	186.0	197.7	220.8	243.3	265.2	286.4	296.6
4200	40.0	46.6	53.2	66.5	79.7	92.8	105.9	131.8	157.4	170.0	194.8	207.0	231.0	254.3	276.9	298.7	309.2
4400	41.9	48.8	55.8	69.6	83.4	97.2	110.9	137.9	164.6	177.7	203.6	216.3	241.1	265.2	288.4	310.7	321.5
4600	43.8	51.0	58.3	72.8	87.2	101.5	115.8	144.0	171.8	185.4	212.2	225.4	251.1	275.9	299.7	322.5	333.4
4800	45.7	53.2	60.8	75.9	90.9	105.9	120.7	150.1	178.9	193.1	220.8	234.4	260.9	286.4	310.7	333.9	345.0

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for Types XL/DXL (per width of 25.4 mm)

(Unit: kW)

Pinion revolution (rpm) \ No. of teeth of pinion	10	12	14	16	18	20	22	24	28	30	34	38	40	45	50	60	72
Pitch diameter (mm)	16.17	19.40	22.64	25.87	29.11	32.34	35.57	38.81	45.28	48.51	54.98	61.45	64.68	72.77	80.85	97.02	116.43
100	0.02	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	0.08	0.09	0.11
200	0.03	0.04	0.04	0.05	0.06	0.06	0.07	0.07	0.09	0.09	0.11	0.12	0.12	0.14	0.15	0.19	0.22
300	0.05	0.06	0.06	0.07	0.08	0.09	0.10	0.11	0.13	0.14	0.16	0.18	0.19	0.21	0.23	0.28	0.33
400	0.06	0.07	0.09	0.10	0.11	0.12	0.14	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.31	0.37	0.44
500	0.08	0.09	0.11	0.12	0.14	0.15	0.17	0.19	0.22	0.23	0.26	0.29	0.31	0.35	0.39	0.46	0.55
600	0.09	0.11	0.13	0.15	0.17	0.19	0.20	0.22	0.26	0.28	0.31	0.35	0.37	0.42	0.46	0.55	0.66
700	0.11	0.13	0.15	0.17	0.19	0.22	0.24	0.26	0.30	0.32	0.37	0.41	0.43	0.49	0.54	0.65	0.77
800	0.12	0.15	0.17	0.20	0.22	0.25	0.27	0.30	0.35	0.37	0.42	0.47	0.49	0.55	0.62	0.74	0.88
900	0.14	0.17	0.19	0.22	0.25	0.28	0.31	0.33	0.39	0.42	0.47	0.53	0.55	0.62	0.69	0.83	0.99
1000	0.15	0.19	0.22	0.25	0.28	0.31	0.34	0.37	0.43	0.46	0.52	0.58	0.62	0.69	0.77	0.92	1.10
1100	0.17	0.20	0.24	0.27	0.31	0.34	0.37	0.41	0.47	0.51	0.58	0.64	0.68	0.76	0.84	1.01	1.20
1200	0.19	0.22	0.26	0.30	0.33	0.37	0.41	0.44	0.52	0.55	0.63	0.70	0.74	0.83	0.92	1.10	1.31
1300	0.20	0.24	0.28	0.32	0.36	0.40	0.44	0.48	0.56	0.60	0.68	0.76	0.80	0.90	0.99	1.19	1.41
1400	0.22	0.26	0.30	0.35	0.39	0.43	0.47	0.52	0.60	0.65	0.73	0.82	0.86	0.96	1.07	1.27	1.51
1500	0.23	0.28	0.32	0.37	0.42	0.46	0.51	0.55	0.65	0.69	0.78	0.87	0.92	1.03	1.14	1.36	1.62
1600	0.25	0.30	0.35	0.39	0.44	0.49	0.54	0.59	0.69	0.74	0.83	0.93	0.98	1.10	1.21	1.45	1.72
1700	0.26	0.31	0.37	0.42	0.47	0.52	0.58	0.63	0.73	0.78	0.88	0.99	1.04	1.16	1.29	1.53	1.81
1800	0.28	0.33	0.39	0.44	0.50	0.55	0.61	0.66	0.77	0.83	0.94	1.04	1.10	1.23	1.36	1.62	1.91
1900	0.29	0.35	0.41	0.47	0.53	0.58	0.64	0.70	0.82	0.87	0.99	1.10	1.16	1.29	1.43	1.70	2.01
2000	0.31	0.37	0.43	0.49	0.55	0.62	0.68	0.74	0.86	0.92	1.04	1.16	1.21	1.36	1.50	1.78	2.10
2100	0.32	0.39	0.45	0.52	0.58	0.65	0.71	0.77	0.90	0.96	1.09	1.21	1.27	1.42	1.57	1.86	2.19
2200	0.34	0.41	0.47	0.54	0.61	0.68	0.74	0.81	0.94	1.01	1.14	1.27	1.33	1.49	1.64	1.94	2.28
2300	0.35	0.43	0.50	0.57	0.64	0.71	0.78	0.85	0.98	1.05	1.19	1.32	1.39	1.55	1.71	2.02	2.37
2400	0.37	0.44	0.52	0.59	0.66	0.74	0.81	0.88	1.03	1.10	1.24	1.38	1.45	1.62	1.78	2.10	2.46
2500	0.39	0.46	0.54	0.62	0.69	0.77	0.84	0.92	1.07	1.14	1.29	1.43	1.50	1.68	1.85	2.18	2.54
2600	0.40	0.48	0.56	0.64	0.72	0.80	0.88	0.95	1.11	1.19	1.34	1.49	1.56	1.74	1.92	2.25	2.62
2700	0.42	0.50	0.58	0.66	0.75	0.83	0.91	0.99	1.15	1.23	1.39	1.54	1.62	1.80	1.98	2.33	2.70
2800	0.43	0.52	0.60	0.69	0.77	0.86	0.94	1.03	1.19	1.27	1.43	1.59	1.67	1.86	2.05	2.40	2.78
2900	0.45	0.54	0.62	0.71	0.80	0.89	0.97	1.06	1.23	1.32	1.48	1.65	1.73	1.92	2.11	2.47	2.85
3000	0.46	0.55	0.65	0.74	0.83	0.92	1.01	1.10	1.27	1.36	1.53	1.70	1.78	1.98	2.18	2.54	2.92
3200	0.49	0.59	0.69	0.79	0.88	0.98	1.07	1.17	1.35	1.45	1.63	1.80	1.89	2.10	2.30	2.67	3.05
3400	0.52	0.63	0.73	0.83	0.94	1.04	1.14	1.24	1.43	1.53	1.72	1.91	2.00	2.22	2.42	2.80	3.18
3600	0.55	0.66	0.77	0.88	0.99	1.10	1.20	1.31	1.51	1.62	1.81	2.01	2.10	2.33	2.54	2.92	3.28
3800	0.58	0.70	0.82	0.93	1.04	1.16	1.27	1.38	1.59	1.70	1.91	2.11	2.20	2.43	2.65	3.03	3.38
4000	0.62	0.74	0.86	0.98	1.10	1.21	1.33	1.45	1.67	1.78	2.00	2.20	2.30	2.54	2.76	3.14	3.46
4200	0.65	0.77	0.90	1.03	1.15	1.27	1.39	1.51	1.75	1.86	2.09	2.30	2.40	2.64	2.86	3.23	3.53
4400	0.68	0.81	0.94	1.07	1.20	1.33	1.46	1.58	1.83	1.94	2.17	2.39	2.49	2.74	2.96	3.32	3.58
4600	0.71	0.85	0.98	1.12	1.26	1.39	1.52	1.65	1.90	2.02	2.26	2.48	2.58	2.83	3.05	3.39	3.62
4800	0.74	0.88	1.03	1.17	1.31	1.45	1.58	1.72	1.98	2.10	2.34	2.57	2.67	2.92	3.14	3.46	3.63
5000	0.77	0.92	1.07	1.21	1.36	1.50	1.64	1.78	2.05	2.18	2.42	2.65	2.76	3.00	3.22	3.52	3.63
5500				1.33	1.49	1.64	1.80	1.94	2.23	2.36	2.62	2.85	2.96	3.20	3.39	3.61	3.55
6000				1.45	1.62	1.78	1.94	2.10	2.40	2.54	2.80	3.03	3.14	3.36	3.52	3.63	3.34
6500				1.56	1.74	1.92	2.09	2.25	2.56	2.71	2.97	3.19	3.29	3.48	3.60	3.57	3.00
7000				1.67	1.86	2.05	2.23	2.40	2.72	2.86	3.12	3.33	3.42	3.57	3.64	3.43	2.50
7500				1.78	1.98	2.18	2.36	2.54	2.86	3.00	3.25	3.45	3.52	3.63	3.61	3.19	1.84
8000				1.89	2.10	2.30	2.49	2.67	3.00	3.14	3.37	3.54	3.59	3.63	3.54	2.85	1.01
8500					2.22	2.42	2.62	2.80	3.12	3.25	3.47	3.60	3.63	3.60	3.40	2.40	
9000					2.33	2.54	2.74	2.92	3.23	3.36	3.54	3.63	3.63	3.51	3.19	1.84	
9500					2.43	2.65	2.85	3.03	3.33	3.45	3.60	3.63	3.60	3.38	2.91	1.16	
10000					2.54	2.76	2.96	3.14	3.42	3.52	3.63	3.60	3.54	3.19	2.56	0.35	

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for Types L/DL (per width of 25.4 mm)

(Unit: kW)

No. of teeth of pinion		10	12	14	16	18	20	22	24	28	30	35	40	45	50	60	72	84
Pitch diameter (mm)		30.32	36.38	42.45	48.51	54.57	60.64	66.70	72.77	84.89	90.96	106.12	121.28	136.44	151.60	181.91	218.30	254.68
Pinion revolution (rpm)	50	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.10	0.12	0.14	0.16
	100	0.04	0.05	0.05	0.06	0.07	0.08	0.09	0.09	0.11	0.12	0.14	0.16	0.17	0.19	0.23	0.28	0.33
	200	0.08	0.09	0.11	0.12	0.14	0.16	0.17	0.19	0.22	0.23	0.27	0.31	0.35	0.39	0.46	0.56	0.65
	300	0.12	0.14	0.16	0.19	0.21	0.23	0.26	0.28	0.33	0.35	0.41	0.46	0.52	0.58	0.70	0.83	0.97
	400	0.16	0.19	0.22	0.25	0.28	0.31	0.34	0.37	0.43	0.46	0.54	0.62	0.70	0.77	0.93	1.11	1.29
	500	0.19	0.23	0.27	0.31	0.35	0.39	0.43	0.46	0.54	0.58	0.68	0.77	0.87	0.96	1.15	1.38	1.60
	600	0.23	0.28	0.33	0.37	0.42	0.46	0.51	0.56	0.65	0.70	0.81	0.93	1.04	1.15	1.38	1.64	1.90
	700	0.27	0.33	0.38	0.43	0.49	0.54	0.60	0.65	0.76	0.81	0.94	1.08	1.21	1.34	1.60	1.90	2.20
	800	0.31	0.37	0.43	0.50	0.56	0.62	0.68	0.74	0.86	0.93	1.08	1.23	1.38	1.53	1.82	2.16	2.49
	900	0.35	0.42	0.49	0.56	0.63	0.70	0.76	0.83	0.97	1.04	1.21	1.38	1.54	1.71	2.03	2.41	2.76
	1000	0.39	0.46	0.54	0.62	0.70	0.77	0.85	0.93	1.08	1.15	1.34	1.53	1.71	1.89	2.24	2.65	3.03
	1100	0.43	0.51	0.60	0.68	0.76	0.85	0.93	1.02	1.18	1.27	1.47	1.67	1.87	2.07	2.45	2.88	3.28
	1200	0.46	0.56	0.65	0.74	0.83	0.93	1.02	1.11	1.29	1.38	1.60	1.82	2.03	2.24	2.65	3.10	3.51
	1300	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20	1.39	1.49	1.73	1.96	2.19	2.41	2.84	3.31	3.73
	1400	0.54	0.65	0.76	0.86	0.97	1.08	1.18	1.29	1.50	1.60	1.85	2.10	2.35	2.58	3.03	3.51	3.93
	1500	0.58	0.70	0.81	0.93	1.04	1.15	1.27	1.38	1.60	1.71	1.98	2.24	2.50	2.75	3.21	3.70	4.12
	1600	0.62	0.74	0.86	0.99	1.11	1.23	1.35	1.47	1.70	1.82	2.10	2.38	2.65	2.90	3.38	3.88	4.28
	1700	0.66	0.79	0.92	1.05	1.18	1.30	1.43	1.56	1.80	1.93	2.23	2.52	2.79	3.06	3.55	4.04	4.42
	1800		0.83	0.97	1.11	1.24	1.38	1.51	1.64	1.90	2.03	2.35	2.65	2.94	3.21	3.70	4.19	4.53
	1900		0.88	1.02	1.17	1.31	1.45	1.59	1.73	2.00	2.14	2.46	2.78	3.07	3.35	3.85	4.32	4.62
	2000		0.93	1.08	1.23	1.38	1.53	1.67	1.82	2.10	2.24	2.58	2.90	3.21	3.49	3.99	4.43	4.69
	2100		0.97	1.13	1.29	1.44	1.60	1.75	1.90	2.20	2.35	2.70	3.03	3.34	3.63	4.12	4.53	4.73
	2200		1.02	1.18	1.35	1.51	1.67	1.83	1.99	2.30	2.45	2.81	3.15	3.46	3.75	4.23	4.61	4.74
	2300		1.06	1.24	1.41	1.58	1.75	1.91	2.08	2.39	2.55	2.92	3.27	3.59	3.87	4.34	4.67	4.72
	2400		1.11	1.29	1.47	1.64	1.82	1.99	2.16	2.49	2.65	3.03	3.38	3.70	3.99	4.43	4.72	4.67
	2500		1.15	1.34	1.53	1.71	1.89	2.07	2.24	2.58	2.75	3.13	3.49	3.81	4.10	4.52	4.74	4.58
	2600		1.20	1.39	1.59	1.77	1.96	2.15	2.33	2.67	2.84	3.24	3.60	3.92	4.20	4.59	4.74	4.46
	2700		1.24	1.44	1.64	1.84	2.03	2.22	2.41	2.76	2.94	3.34	3.70	4.02	4.29	4.65	4.71	4.31
	2800		1.29	1.50	1.70	1.90	2.10	2.30	2.49	2.85	3.03	3.44	3.80	4.12	4.37	4.69	4.67	4.12
	2900		1.33	1.55	1.76	1.97	2.17	2.37	2.57	2.94	3.12	3.53	3.90	4.20	4.45	4.72	4.60	3.89
	3000		1.38	1.60	1.82	2.03	2.24	2.45	2.65	3.03	3.21	3.63	3.99	4.29	4.52	4.74	4.50	3.62
	3200			1.70	1.93	2.16	2.38	2.60	2.80	3.20	3.38	3.80	4.16	4.43	4.63	4.72	4.23	2.96
	3400			1.80	2.05	2.28	2.52	2.74	2.95	3.36	3.55	3.97	4.31	4.55	4.70	4.65	3.85	2.12
	3600			1.90	2.16	2.41	2.65	2.88	3.10	3.51	3.70	4.12	4.43	4.65	4.74	4.50	3.36	1.09
	3800			2.00	2.27	2.53	2.78	3.02	3.24	3.66	3.85	4.25	4.54	4.71	4.73	4.28	2.73	
	4000			2.10	2.38	2.65	2.90	3.15	3.38	3.80	3.99	4.37	4.63	4.74	4.68	3.99	1.98	
	4200				2.49	2.76	3.03	3.28	3.51	3.93	4.12	4.48	4.69	4.73	4.58	3.62	1.09	
	4400				2.60	2.88	3.15	3.40	3.64	4.06	4.23	4.57	4.73	4.69	4.44	3.16	0.06	
	4600				2.70	2.99	3.27	3.52	3.76	4.17	4.34	4.64	4.74	4.62	4.24	2.62		
	4800				2.80	3.10	3.38	3.64	3.88	4.28	4.43	4.69	4.72	4.50	3.99	1.98		
	5000				2.90	3.21	3.49	3.75	3.99	4.37	4.52	4.72	4.68	4.34	3.69	1.25		
	5500				3.15	3.46	3.75	4.01	4.23	4.57	4.67	4.72	4.44	3.77	2.67			
	6000				3.38	3.70	3.99	4.23	4.43	4.69	4.74	4.58	3.99	2.90	1.25			

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Use within the range of this mark results in a shorter belt service life.

How to Design a Synchronous Belt
Table of Basic Power Ratings

Table of basic power ratings for rubber Types H/DH (per width of 25.4 mm)

(Unit: kW)

No. of teeth of pinion		14	16	18	20	22	24	26	28	30	35	40	45	50	60	72	84	96
Pitch diameter (mm)		56.60	64.68	72.77	80.85	88.94	97.02	105.11	113.19	121.28	141.49	161.70	181.91	202.13	242.55	291.06	339.57	388.08
Pinion revolution (rpm)	100	0.18	0.21	0.24	0.26	0.29	0.32	0.34	0.37	0.40	0.46	0.53	0.59	0.66	0.79	0.95	1.11	1.26
	200	0.37	0.42	0.47	0.53	0.58	0.63	0.69	0.74	0.79	0.92	1.05	1.19	1.32	1.58	1.89	2.21	2.52
	300	0.55	0.63	0.71	0.79	0.87	0.95	1.03	1.11	1.19	1.38	1.58	1.78	1.97	2.37	2.83	3.30	3.77
	400	0.74	0.84	0.95	1.05	1.16	1.26	1.37	1.47	1.58	1.84	2.10	2.37	2.63	3.15	3.77	4.38	4.99
	500	0.92	1.05	1.19	1.32	1.45	1.58	1.71	1.84	1.97	2.30	2.63	2.95	3.28	3.92	4.69	5.44	6.19
	600	1.11	1.26	1.42	1.58	1.74	1.89	2.05	2.21	2.37	2.76	3.15	3.53	3.92	4.69	5.59	6.48	7.35
	700	1.29	1.47	1.66	1.84	2.03	2.21	2.39	2.57	2.76	3.21	3.66	4.11	4.56	5.44	6.48	7.49	8.48
	800	1.47	1.68	1.89	2.10	2.31	2.52	2.73	2.94	3.15	3.66	4.18	4.69	5.19	6.19	7.35	8.48	9.55
	900	1.66	1.89	2.13	2.37	2.60	2.83	3.07	3.30	3.53	4.11	4.69	5.25	5.82	6.92	8.20	9.42	10.57
	1000	1.84	2.10	2.37	2.63	2.89	3.15	3.41	3.66	3.92	4.56	5.19	5.82	6.43	7.64	9.02	10.32	11.54
	1100	2.03	2.31	2.60	2.89	3.17	3.46	3.74	4.02	4.30	5.00	5.69	6.37	7.04	8.34	9.81	11.18	12.43
	1200		2.52	2.83	3.15	3.46	3.77	4.07	4.38	4.69	5.44	6.19	6.92	7.64	9.02	10.57	11.99	13.26
	1300		2.73	3.07	3.41	3.74	4.07	4.41	4.74	5.07	5.88	6.68	7.46	8.22	9.68	11.30	12.75	14.00
	1400		2.94	3.30	3.66	4.02	4.38	4.74	5.09	5.44	6.31	7.16	7.99	8.79	10.32	11.99	13.45	14.65
	1500		3.15	3.53	3.92	4.30	4.69	5.07	5.44	5.82	6.74	7.64	8.51	9.35	10.94	12.65	14.08	15.21
	1600		3.35	3.77	4.18	4.58	4.99	5.39	5.79	6.19	7.16	8.11	9.02	9.90	11.54	13.26	14.65	15.67
	1700		3.56	4.00	4.43	4.86	5.29	5.72	6.14	6.56	7.58	8.57	9.52	10.43	12.11	13.82	15.15	16.03
	1800		3.77	4.23	4.69	5.14	5.59	6.04	6.48	6.92	7.99	9.02	10.01	10.94	12.65	14.34	15.57	16.27
	1900		3.97	4.46	4.94	5.42	5.89	6.36	6.82	7.28	8.39	9.46	10.48	11.44	13.16	14.80	15.91	16.38
	2000		4.18	4.69	5.19	5.69	6.19	6.68	7.16	7.64	8.79	9.90	10.94	11.92	13.64	15.21	16.16	16.38
	2100			4.91	5.44	5.97	6.48	6.99	7.49	7.99	9.19	10.32	11.39	12.38	14.08	15.57	16.32	16.23
	2200			5.14	5.69	6.24	6.77	7.30	7.82	8.34	9.57	10.74	11.83	12.82	14.50	15.86	16.39	15.95
	2300			5.37	5.94	6.51	7.06	7.61	8.15	8.68	9.95	11.14	12.24	13.24	14.87	16.10	16.36	15.52
	2400			5.59	6.19	6.77	7.35	7.92	8.48	9.02	10.32	11.54	12.65	13.64	15.21	16.27	16.23	14.93
	2500			5.82	6.43	7.04	7.64	8.22	8.79	9.35	10.69	11.92	13.03	14.01	15.51	16.37	15.99	14.19
	2600			6.04	6.68	7.30	7.92	8.52	9.11	9.68	11.04	12.29	13.40	14.36	15.77	16.40	15.64	13.27
	2700			6.26	6.92	7.57	8.20	8.82	9.42	10.01	11.39	12.65	13.75	14.69	15.99	16.35	15.17	12.19
	2800			6.48	7.16	7.82	8.48	9.11	9.73	10.32	11.73	12.99	14.08	14.99	16.16	16.23	14.58	10.92
	2900			6.70	7.40	8.08	8.75	9.40	10.03	10.64	12.06	13.32	14.40	15.27	16.29	16.03	13.86	9.46
	3000			6.92	7.64	8.34	9.02	9.68	10.32	10.94	12.38	13.64	14.69	15.51	16.37	15.75	13.02	7.81
	3200			7.35	8.11	8.84	9.55	10.24	10.90	11.54	12.99	14.23	15.21	15.92	16.38	14.93	10.92	3.90
	3400			7.78	8.57	9.33	10.07	10.78	11.46	12.11	13.56	14.75	15.65	16.21	16.17	13.75	8.24	
	3600				9.02	9.81	10.57	11.30	11.99	12.65	14.08	15.21	15.99	16.37	15.75	12.19	4.96	
	3800				9.46	10.28	11.06	11.81	12.50	13.16	14.56	15.60	16.23	16.39	15.09	10.21	1.03	
	4000				9.90	10.74	11.54	12.29	12.99	13.64	14.99	15.92	16.37	16.27	14.19	7.81		
	4200				10.32	11.18	11.99	12.75	13.45	14.08	15.37	16.16	16.39	15.99	13.02	4.96		
	4400				10.74	11.61	12.43	13.19	13.88	14.50	15.69	16.32	16.30	15.56	11.58	1.63		
	4600				11.14	12.03	12.85	13.61	14.28	14.87	15.95	16.39	16.09	14.96	9.84			
	4800				11.54	12.43	13.26	14.00	14.65	15.21	16.16	16.38	15.75	14.19	7.81			
	5000				11.92	12.82	13.64	14.36	14.99	15.51	16.30	16.27	15.28	13.23	5.47			
	5500				12.82	13.71	14.50	15.16	15.69	16.08	16.37	15.56	13.49	10.00				
	6000				13.64	14.50	15.21	15.77	16.16	16.37	15.99	14.19	10.75	5.47				

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for rubber Type XH (per width of 25.4 mm)

(Unit: kW)

No. of teeth of pinion		18	20	22	24	26	30	35	40	45	50	60	72	84	96	120
Pitch diameter (mm)		127.34	141.49	155.64	169.79	183.94	212.23	247.61	282.98	318.35	353.72	424.47	509.36	594.25	679.15	848.93
Pinion revolution (rpm)	100	0.57	0.63	0.69	0.75	0.82	0.94	1.10	1.26	1.41	1.57	1.88	2.26	2.63	3.01	3.75
	200	1.13	1.26	1.38	1.51	1.63	1.88	2.20	2.51	2.82	3.13	3.75	4.48	5.21	5.93	7.33
	300	1.70	1.88	2.07	2.26	2.45	2.82	3.28	3.75	4.21	4.67	5.57	6.63	7.67	8.68	10.58
	400	2.26	2.51	2.76	3.01	3.25	3.75	4.36	4.97	5.57	6.16	7.33	8.68	9.97	11.18	13.34
	500	2.82	3.13	3.44	3.75	4.05	4.67	5.42	6.16	6.90	7.62	9.01	10.58	12.03	13.34	15.44
	600	3.38	3.75	4.12	4.48	4.85	5.57	6.46	7.33	8.18	9.01	10.58	12.31	13.82	15.08	16.71
	700	3.93	4.36	4.79	5.21	5.63	6.46	7.47	8.46	9.41	10.33	12.03	13.82	15.26	16.31	16.99
	800	4.48	4.97	5.45	5.93	6.40	7.33	8.46	9.55	10.58	11.56	13.34	15.08	16.31	16.95	16.12
	900	5.03	5.57	6.11	6.63	7.16	8.18	9.41	10.58	11.68	12.71	14.48	16.05	16.90	16.91	13.92
	1000	5.57	6.16	6.75	7.33	7.90	9.01	10.33	11.56	12.71	13.74	15.44	16.71	16.99	16.12	
	1100	6.11	6.75	7.39	8.01	8.62	9.81	11.20	12.49	13.64	14.65	16.19	17.01	16.51	14.47	
	1200		7.33	8.01	8.68	9.33	10.58	12.03	13.34	14.48	15.44	16.71	16.91	15.41		
	1300		7.90	8.62	9.33	10.02	11.32	12.81	14.12	15.22	16.08	16.98	16.39	13.62		
	1400		8.46	9.22	9.97	10.68	12.03	13.54	14.82	15.84	16.56	16.99	15.41			
	1500		9.01	9.81	10.58	11.32	12.71	14.21	15.44	16.34	16.88	16.71	13.92			
	1600		9.55	10.38	11.18	11.94	13.34	14.82	15.96	16.71	17.02	16.12				
	1700		10.07	10.93	11.75	12.53	13.93	15.36	16.39	16.94	16.96	15.19				
	1800		10.58	11.47	12.31	13.09	14.48	15.84	16.71	17.02	16.71	13.92				
	1900			11.99	12.84	13.62	14.98	16.24	16.92	16.95	16.24					
	2000			12.49	13.34	14.12	15.44	16.56	17.02	16.71	15.54					
	2100			12.96	13.82	14.59	15.84	16.80	16.99	16.29	14.60					
	2200			13.42	14.27	15.02	16.19	16.96	16.84	15.70						
	2300			13.86	14.69	15.41	16.48	17.02	16.55	14.91						
	2400				15.08	15.76	16.71	16.99	16.12	13.92						
	2500				15.44	16.08	16.88	16.86	15.54							
	2600				15.76	16.35	16.98	16.63	14.81							
	2700				16.05	16.58	17.02	16.29								
	2800				16.31	16.76	16.99	15.85								
	2900				16.53	16.90	16.89	15.28								
	3000				16.71	16.98	16.71									
	3200				16.95	17.01	16.12									
	3400				17.02	16.81	15.19									
	3600				16.91	16.39	13.92									

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Use within the range of this mark results in a shorter belt service life.

The value with this mark varies between the above two types; use them only when a special design is necessary.

Table of basic power ratings for rubber Type XXH (per width of 25.4 mm)

(Unit: kW)

No. of teeth of pinion		18	20	22	24	26	28	30	32	34	36	40	42	44	48	50	60
Pitch diameter (mm)		181.91	202.13	222.34	242.55	262.76	282.98	303.19	323.40	343.62	363.83	404.25	424.47	444.68	485.10	505.32	606.38
Pinion revolution (rpm)	100	0.99	1.10	1.21	1.32	1.43	1.54	1.65	1.76	1.87	1.98	2.20	2.31	2.42	2.64	2.75	3.29
	200	1.98	2.20	2.42	2.64	2.86	3.07	3.29	3.51	3.73	3.94	4.38	4.59	4.81	5.24	5.45	6.51
	300	2.97	3.29	3.62	3.94	4.27	4.59	4.91	5.24	5.56	5.87	6.51	6.82	7.13	7.75	8.06	9.57
	400	3.94	4.38	4.81	5.24	5.66	6.09	6.51	6.93	7.34	7.75	8.57	8.97	9.37	10.15	10.54	12.40
	500	4.91	5.45	5.98	6.51	7.03	7.55	8.06	8.57	9.07	9.57	10.54	11.02	11.48	12.40	12.84	14.92
	600	5.87	6.51	7.13	7.75	8.37	8.97	9.57	10.15	10.73	11.30	12.40	12.93	13.44	14.44	14.92	17.05
	700	6.82	7.55	8.26	8.97	9.67	10.35	11.02	11.67	12.31	12.93	14.11	14.68	15.22	16.25	16.72	18.72
	800	7.75	8.57	9.37	10.15	10.92	11.67	12.40	13.10	13.78	14.44	15.67	16.25	16.79	17.78	18.22	19.85
	900	8.67	9.57	10.44	11.30	12.13	12.93	13.70	14.44	15.15	15.82	17.05	17.60	18.11	18.99	19.36	20.36
	1000	9.57	10.54	11.48	12.40	13.27	14.11	14.92	15.67	16.39	17.05	18.22	18.72	19.16	19.85	20.09	20.17
	1100	10.44	11.48	12.49	13.44	14.36	15.22	16.04	16.79	17.48	18.11	19.16	19.57	19.90	20.31	20.38	19.22
	1200		12.40	13.44	14.44	15.38	16.25	17.05	17.78	18.43	18.99	19.85	20.13	20.31	20.34	20.17	17.41
	1300		13.27	14.36	15.38	16.32	17.18	17.95	18.62	19.20	19.67	20.26	20.37	20.35	19.89	19.43	
	1400		14.11	15.22	16.25	17.18	18.00	18.72	19.32	19.79	20.13	20.38	20.27	20.00	18.93	18.11	
	1500		14.92	16.04	17.05	17.95	18.72	19.36	19.85	20.18	20.36	20.17	19.80	19.22	17.41		
	1600		15.67	16.79	17.78	18.62	19.32	19.85	20.20	20.37	20.34	19.63	18.93	17.98			
	1700		16.39	17.48	18.43	19.20	19.79	20.18	20.37	20.33	20.05	18.71	17.63	16.25			
	1800		17.05	18.11	18.99	19.67	20.13	20.36	20.34	20.05	19.47	17.41					
	1900		17.66	18.67	19.47	20.02	20.33	20.36	20.09	19.51	18.60						
	2000		18.22	19.16	19.85	20.26	20.38	20.17	19.63	18.71	17.41						
	2100		18.72	19.57	20.13	20.37	20.27	19.80	18.93	17.63							
	2200		19.16	19.90	20.31	20.35	20.00	19.22	17.98	16.25							
	2300		19.54	20.15	20.38	20.19	19.55	18.42	16.77								
	2400		19.85	20.31	20.34	19.89	18.93	17.41									
	2500		20.09	20.38	20.17	19.43	18.11										
	2600		20.26	20.35	19.89	18.82	17.10										
	2700		20.36	20.23	19.47	18.05	15.89										
	2800		20.38	20.00	18.93	17.10	14.46										
	2900		20.32	19.66	18.24	15.98	12.81										
	3000		20.17	19.22	17.41	14.68	10.94										

Use within the range of this mark causes a belt speed of 33 m/s or more; use the belt by taking the dynamic balance with the pulleys.

Use within the range of this mark results in a shorter belt service life.

The value with this mark varies between the above two types; use them only when a special design is necessary.

Table of basic power ratings for polyurethane Types T5/DT5 (per width of 10 mm)

(Unit: kW)

No. of teeth of pinion		12	14	16	18	20	22	24	26	28	30	35	40	45	50	60	72
Pitch diameter (mm)		19.10	22.28	25.46	28.65	31.83	35.01	38.20	41.38	44.56	47.75	55.70	63.66	71.62	79.58	95.49	114.59
Pinion revolution (rpm)	100	0.014	0.017	0.019	0.021	0.024	0.026	0.029	0.031	0.033	0.036	0.042	0.048	0.054	0.060	0.072	0.086
	200	0.021	0.025	0.028	0.032	0.035	0.039	0.043	0.046	0.050	0.053	0.062	0.071	0.080	0.089	0.106	0.128
	300	0.030	0.035	0.040	0.045	0.050	0.055	0.060	0.065	0.070	0.075	0.087	0.100	0.112	0.125	0.150	0.180
	400	0.039	0.045	0.052	0.058	0.065	0.071	0.078	0.084	0.091	0.097	0.113	0.130	0.146	0.162	0.194	0.233
	500	0.048	0.056	0.064	0.072	0.080	0.088	0.095	0.103	0.111	0.119	0.139	0.159	0.179	0.199	0.239	0.286
	600	0.056	0.066	0.075	0.084	0.094	0.103	0.113	0.122	0.131	0.141	0.164	0.188	0.211	0.235	0.282	0.338
	700	0.065	0.075	0.086	0.097	0.108	0.119	0.129	0.140	0.151	0.162	0.189	0.215	0.242	0.269	0.323	0.388
	800	0.073	0.085	0.097	0.109	0.121	0.133	0.145	0.157	0.170	0.182	0.212	0.242	0.272	0.303	0.363	0.436
	900	0.080	0.094	0.107	0.121	0.134	0.147	0.161	0.174	0.188	0.201	0.234	0.268	0.301	0.335	0.402	0.482
	1000	0.088	0.102	0.117	0.132	0.146	0.161	0.176	0.190	0.205	0.220	0.256	0.293	0.329	0.366	0.439	0.527
	1100	0.095	0.111	0.127	0.143	0.158	0.174	0.190	0.206	0.222	0.238	0.277	0.317	0.357	0.396	0.475	0.570
	1200	0.102	0.119	0.136	0.153	0.170	0.187	0.204	0.221	0.238	0.255	0.298	0.340	0.383	0.425	0.510	0.612
	1300	0.109	0.127	0.145	0.163	0.181	0.200	0.218	0.236	0.254	0.272	0.317	0.363	0.408	0.453	0.544	0.653
	1400	0.115	0.135	0.154	0.173	0.192	0.212	0.231	0.250	0.269	0.289	0.337	0.385	0.433	0.481	0.577	0.692
	1500	0.122	0.142	0.162	0.183	0.203	0.223	0.244	0.264	0.284	0.304	0.355	0.406	0.457	0.507	0.609	0.731
	1600	0.128	0.149	0.171	0.192	0.213	0.235	0.256	0.277	0.299	0.320	0.373	0.427	0.480	0.533	0.640	0.768
	1700	0.134	0.156	0.179	0.201	0.223	0.246	0.268	0.290	0.313	0.335	0.391	0.447	0.503	0.559	0.670	0.804
	1800	0.140	0.163	0.187	0.210	0.233	0.257	0.280	0.303	0.327	0.350	0.408	0.466	0.525	0.583	0.700	0.840
	1900	0.146	0.170	0.194	0.219	0.243	0.267	0.291	0.316	0.340	0.364	0.425	0.486	0.546	0.607	0.728	0.874
	2000	0.151	0.177	0.202	0.227	0.252	0.277	0.303	0.328	0.353	0.378	0.441	0.504	0.567	0.630	0.757	0.908
	2100	0.157	0.183	0.209	0.235	0.261	0.287	0.314	0.340	0.366	0.392	0.457	0.523	0.588	0.653	0.784	0.941
	2200	0.162	0.189	0.216	0.243	0.270	0.297	0.324	0.351	0.378	0.405	0.473	0.541	0.608	0.676	0.811	0.973
	2300	0.167	0.195	0.223	0.251	0.279	0.307	0.335	0.363	0.391	0.419	0.488	0.558	0.628	0.698	0.837	1.004
	2400	0.173	0.201	0.230	0.259	0.288	0.316	0.345	0.374	0.403	0.431	0.503	0.575	0.647	0.719	0.863	1.035
	2500	0.178	0.207	0.237	0.266	0.296	0.326	0.355	0.385	0.414	0.444	0.518	0.592	0.666	0.740	0.888	1.066
	2600	0.183	0.213	0.243	0.274	0.304	0.335	0.365	0.395	0.426	0.456	0.532	0.608	0.685	0.761	0.913	1.095
	2700	0.187	0.219	0.250	0.281	0.312	0.344	0.375	0.406	0.437	0.468	0.547	0.625	0.703	0.781	0.937	1.124
	2800	0.192	0.224	0.256	0.288	0.320	0.352	0.384	0.416	0.448	0.480	0.560	0.640	0.721	0.801	0.961	1.153
	2900	0.197	0.230	0.262	0.295	0.328	0.361	0.394	0.426	0.459	0.492	0.574	0.656	0.738	0.820	0.984	1.181
	3000	0.201	0.235	0.269	0.302	0.336	0.369	0.403	0.436	0.470	0.504	0.587	0.671	0.755	0.839	1.007	1.208
	3200	0.210	0.245	0.280	0.316	0.351	0.386	0.421	0.456	0.491	0.526	0.614	0.701	0.789	0.877	1.052	1.262
	3400	0.219	0.256	0.292	0.329	0.365	0.402	0.438	0.475	0.511	0.548	0.639	0.730	0.821	0.913	1.095	1.314
	3600	0.227	0.265	0.303	0.341	0.379	0.417	0.455	0.493	0.531	0.569	0.663	0.758	0.853	0.948	1.137	1.365
	3800	0.236	0.275	0.314	0.353	0.393	0.432	0.471	0.510	0.550	0.589	0.687	0.785	0.883	0.982	1.178	1.414
	4000	0.244	0.284	0.325	0.365	0.406	0.446	0.487	0.528	0.568	0.609	0.710	0.812	0.913	1.015	1.218	1.461
	4200	0.251	0.293	0.335	0.377	0.419	0.461	0.502	0.544	0.586	0.628	0.733	0.837	0.942	1.047	1.256	1.507
	4400	0.259	0.302	0.345	0.388	0.431	0.474	0.518	0.561	0.604	0.647	0.755	0.863	0.970	1.078	1.294	1.553
	4600	0.266	0.310	0.355	0.399	0.443	0.488	0.532	0.577	0.621	0.665	0.776	0.887	0.998	1.109	1.330	1.597
	4800	0.273	0.319	0.364	0.410	0.455	0.501	0.546	0.592	0.638	0.683	0.797	0.911	1.025	1.139	1.366	1.639
	5000	0.280	0.327	0.374	0.420	0.467	0.514	0.560	0.607	0.654	0.701	0.817	0.934	1.051	1.168	1.401	1.681
	5500			0.396	0.446	0.495	0.545	0.594	0.644	0.693	0.743	0.866	0.990	1.114	1.238	1.485	
	6000			0.417	0.469	0.522	0.574	0.626	0.678	0.730	0.782	0.913	1.043	1.174	1.304	1.565	
	6500			0.438	0.492	0.547	0.602	0.656	0.711	0.766	0.820	0.957	1.094	1.231	1.367		
	7000			0.457	0.514	0.571	0.628	0.685	0.742	0.800	0.857	0.999	1.142	1.285	1.428		
	7500			0.475	0.535	0.594	0.654	0.713	0.773	0.832	0.891	1.040	1.189				
	8000				0.555	0.617	0.678	0.740	0.802	0.863	0.925	1.079	1.233				
	8500				0.574	0.638	0.702	0.766	0.829	0.893	0.957	1.117	1.276				
	9000				0.593	0.659	0.725	0.790	0.856	0.922	0.988	1.153	1.317				
	9500				0.611	0.679	0.747	0.814	0.882	0.950	1.018	1.188					
	10000				0.628	0.698	0.768	0.838	0.907	0.977	1.047	1.222					

Use within the range of this mark results in a shorter belt service life.

Table of basic power ratings for polyurethane Types T10/DT10 (per width of 10 mm)

(Unit: kW)

No. of teeth of pinion		12	14	16	18	20	22	24	26	28	30	35	40	45	50	60	72
Pitch diameter (mm)		38.20	44.56	50.93	57.30	63.66	70.03	76.39	82.76	89.13	95.49	111.41	127.32	143.24	159.15	190.99	229.18
Pinion revolution (rpm)	100	0.04	0.04	0.05	0.06	0.06	0.07	0.07	0.08	0.09	0.09	0.11	0.12	0.14	0.16	0.19	0.22
	200	0.07	0.08	0.09	0.10	0.11	0.13	0.14	0.15	0.16	0.17	0.20	0.23	0.26	0.29	0.34	0.41
	300	0.10	0.11	0.13	0.15	0.16	0.18	0.20	0.21	0.23	0.25	0.29	0.33	0.37	0.41	0.49	0.59
	400	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.28	0.30	0.32	0.37	0.42	0.48	0.53	0.64	0.76
	500	0.16	0.18	0.21	0.23	0.26	0.28	0.31	0.34	0.36	0.39	0.45	0.52	0.58	0.65	0.78	0.93
	600	0.18	0.21	0.24	0.27	0.30	0.33	0.36	0.39	0.43	0.46	0.53	0.61	0.68	0.76	0.91	1.09
	700	0.21	0.24	0.28	0.31	0.35	0.38	0.42	0.45	0.49	0.52	0.61	0.70	0.78	0.87	1.04	1.25
	800	0.23	0.27	0.31	0.35	0.39	0.43	0.47	0.51	0.55	0.59	0.68	0.78	0.88	0.98	1.17	1.40
	900	0.26	0.30	0.35	0.39	0.43	0.47	0.52	0.56	0.60	0.65	0.75	0.86	0.97	1.08	1.29	1.55
	1000	0.28	0.33	0.38	0.42	0.47	0.52	0.57	0.61	0.66	0.71	0.82	0.94	1.06	1.18	1.41	1.70
	1100	0.31	0.36	0.41	0.46	0.51	0.56	0.61	0.66	0.71	0.76	0.89	1.02	1.15	1.27	1.53	1.84
	1200	0.33	0.38	0.44	0.49	0.55	0.60	0.66	0.71	0.77	0.82	0.96	1.09	1.23	1.37	1.64	1.97
	1300	0.35	0.41	0.47	0.53	0.58	0.64	0.70	0.76	0.82	0.88	1.02	1.17	1.31	1.46	1.75	2.10
	1400	0.37	0.43	0.50	0.56	0.62	0.68	0.74	0.81	0.87	0.93	1.08	1.24	1.39	1.55	1.86	2.23
	1500	0.39	0.46	0.52	0.59	0.65	0.72	0.78	0.85	0.92	0.98	1.14	1.31	1.47	1.63	1.96	2.35
	1600	0.41	0.48	0.55	0.62	0.69	0.76	0.83	0.89	0.96	1.03	1.20	1.38	1.55	1.72	2.06	2.48
	1700	0.43	0.50	0.58	0.65	0.72	0.79	0.86	0.94	1.01	1.08	1.26	1.44	1.62	1.80	2.16	2.59
	1800	0.45	0.53	0.60	0.68	0.75	0.83	0.90	0.98	1.05	1.13	1.32	1.51	1.69	1.88	2.26	2.71
	1900	0.47	0.55	0.63	0.71	0.78	0.86	0.94	1.02	1.10	1.18	1.37	1.57	1.76	1.96	2.35	2.82
	2000	0.49	0.57	0.65	0.73	0.81	0.90	0.98	1.06	1.14	1.22	1.43	1.63	1.83	2.04	2.44	2.93
	2100	0.51	0.59	0.68	0.76	0.84	0.93	1.01	1.10	1.18	1.27	1.48	1.69	1.90	2.11	2.53	3.04
	2200	0.52	0.61	0.70	0.79	0.87	0.96	1.05	1.14	1.22	1.31	1.53	1.75	1.97	2.19	2.62	3.15
	2300	0.54	0.63	0.72	0.81	0.90	0.99	1.08	1.17	1.26	1.35	1.58	1.81	2.03	2.26	2.71	3.25
	2400	0.56	0.65	0.75	0.84	0.93	1.02	1.12	1.21	1.30	1.40	1.63	1.86	2.10	2.33	2.79	3.35
	2500	0.58	0.67	0.77	0.86	0.96	1.06	1.15	1.25	1.34	1.44	1.68	1.92	2.16	2.40	2.88	3.45
	2600	0.59	0.69	0.79	0.89	0.99	1.09	1.18	1.28	1.38	1.48	1.73	1.97	2.22	2.47	2.96	
	2700	0.61	0.71	0.81	0.91	1.01	1.11	1.22	1.32	1.42	1.52	1.77	2.03	2.28	2.53	3.04	
	2800	0.62	0.73	0.83	0.94	1.04	1.14	1.25	1.35	1.46	1.56	1.82	2.08	2.34	2.60	3.12	
	2900		0.75	0.85	0.96	1.07	1.17	1.28	1.39	1.49	1.60	1.87	2.13	2.40	2.66	3.20	
	3000		0.76	0.87	0.98	1.09	1.20	1.31	1.42	1.53	1.64	1.91	2.18	2.46	2.73	3.27	
	3200		0.80	0.91	1.03	1.14	1.26	1.37	1.48	1.60	1.71	2.00	2.28	2.57	2.85		
	3400		0.83	0.95	1.07	1.19	1.31	1.43	1.55	1.67	1.78	2.08	2.38	2.68	2.97		
	3600		0.87	0.99	1.11	1.24	1.36	1.48	1.61	1.73	1.85	2.16	2.47	2.78	3.09		
	3800		0.90	1.03	1.15	1.28	1.41	1.54	1.67	1.80	1.92	2.24	2.56	2.88			
	4000			1.06	1.19	1.33	1.46	1.59	1.72	1.86	1.99	2.32	2.65	2.98			
	4200			1.10	1.23	1.37	1.51	1.64	1.78	1.92	2.05	2.40	2.74				
	4400			1.13	1.27	1.41	1.55	1.69	1.84	1.98	2.12	2.47	2.82				
	4600			1.16	1.31	1.45	1.60	1.74	1.89	2.03	2.18	2.54					
	4800			1.20	1.34	1.49	1.64	1.79	1.94	2.09	2.24	2.61					
	5000			1.23	1.38	1.53	1.69	1.84	1.99	2.15	2.30	2.68					
	5500			1.30	1.47	1.63	1.79	1.95	2.12	2.28	2.44						
	6000			1.38	1.55	1.72	1.89	2.06	2.23	2.41	2.58						

Use within the range of this mark results in a shorter belt service life.

Table 7 Mesh correction factor (Km)

Number of meshed teeth Zm	Km
6 or more	1.00
5	0.80
4	0.60
3	0.40
2	0.20

Table 8 Table of Effective Length Correction Factors (Kl)

Table 8-1 Ceptor-VI S3M

Effective length	Length correction factor Kl
93～195	0.96
198～276	0.98
279～363	1.00
366～450	1.02
453～534	1.04
537～630	1.06
633～702	1.08
720～801	1.10
804～1587	1.12

Table 8-2 Ceptor-VI S5M

Effective length	Length correction factor Kl
225～425	0.96
435～555	0.98
560～855	1.00
860～980	1.02
1000～1300	1.04
1350～1590	1.06
1595～1710	1.07
1715～1795	1.10
1800～2000	1.12

Table 8-3 Ceptor-VI/X S8M

Effective length	Length correction factor Kl
480～624	0.94
632～792	0.96
800～1024	0.98
1032～1264	1.00
1272～1640	1.02
1648～2032	1.04
2040～2792	1.06
2800～3592	1.08
3600～4392	1.10
4400	1.12

Table 8-4 Ceptor-X S14M

Effective length	Length correction factor Kl
1008～1176	0.98
1190～1526	1.00
1540～1876	1.02
1890～2356	1.04
2380～3136	1.06
3150～3836	1.08
3850～4998	1.10
5012	1.12

Table 8-5 HP-S5M

Effective length	Length correction factor Kl
225～425	0.96
435～555	0.98
560～855	1.00
860～980	1.02
1000～1300	1.04
1350～1590	1.06
1595～1710	1.07
1715～1795	1.10
1800～2000	1.12

Table 8-6 HP-S8M / HP-8M

Effective length	Length correction factor Kl
352～400	0.90
408～512	0.92
520～624	0.94
632～792	0.96
800～1024	0.98
1032～1267	1.00
1275～1640	1.02
1648～2032	1.04
2040～2792	1.06
2800～3592	1.08
3600～4392	1.10
4400	1.12

Table 8-7 HP-S14M

Effective length	Length correction factor Kl
1008～1176	0.98
1190～1526	1.00
1540～1876	1.02
1890～2356	1.04
2380～3136	1.06
3150～3836	1.08
3850～4998	1.10
5012	1.12

Table 9 Table of Belt Width Correction Factors (Kb)

Table 9-1 Ceptor-VI S3M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.62	4	40
0.63～0.81	5	50
0.82～1.00	6	60
1.01～1.19	7	70
1.20～1.38	8	80
1.39～1.58	9	90
1.59～1.79	10	100
1.80～2.20	12	120
2.21～2.62	14	140
2.63～2.84	15	150
2.85～3.49	18	180
3.50～4.86	20	200

Table 9-2 Ceptor-VI S5M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.45	5	50
0.46～0.56	6	60
0.57～0.78	8	80
0.79～0.89	9	90
0.90～1.00	10	100
1.01～1.23	12	120
1.24～1.59	15	150
1.60～2.20	20	200
2.21～2.84	25	250
2.85～3.50	30	300
3.51～4.17	35	350
4.18～4.86	40	400
4.87～6.26	50	500
6.27～7.71	60	600

Table 9-3 Ceptor-VI/X S8M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.21	15	150
0.22～0.29	20	200
0.30～0.37	25	250
0.38～0.45	30	300
0.46～0.63	40	400
0.64～0.81	50	500
0.82～1.00	60	600
1.01～1.19	70	700
1.20～1.39	80	800
1.40～1.79	100	1000
1.80～2.31	125	1250
2.32～2.84	150	1500
2.85～3.95	200	2000
3.96～6.26	300	3000

Table 9-4 Ceptor-X S14M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.21	30	300
0.22～0.29	40	400
0.30～0.37	50	500
0.38～0.45	60	600
0.46～0.63	80	800
0.64～0.81	100	1000
0.82～1.00	120	1200
1.01～1.19	140	1400
1.20～1.39	160	1600
1.40～1.79	200	2000
1.80～2.31	250	2500
2.32～2.84	300	3000

Table 9-5 HP-S5M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.45	5	50
0.46～0.56	6	60
0.57～0.78	8	80
0.79～0.89	9	90
0.90～1.00	10	100
1.01～1.23	12	120
1.24～1.59	15	150
1.60～2.20	20	200
2.21～2.84	25	250
2.85～3.50	30	300
3.51～4.17	35	350
4.18～4.86	40	400
4.87～6.26	50	500
6.27～7.71	60	600

Table 9-6 HP-S8M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.21	15	150
0.22～0.29	20	200
0.30～0.37	25	250
0.38～0.45	30	300
0.46～0.63	40	400
0.64～0.81	50	500
0.82～1.00	60	600
1.01～1.19	70	700
1.20～1.39	80	800
1.40～1.79	100	1000
1.80～2.31	125	1250
2.32～2.84	150	1500
2.85～3.95	200	2000
3.96～6.26	300	3000

Table 9-7 HP-S14M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.21	30	300
0.22～0.29	40	400
0.30～0.37	50	500
0.38～0.45	60	600
0.46～0.63	80	800
0.64～0.81	100	1000
0.82～1.00	120	1200
1.01～1.19	140	1400
1.20～1.39	160	1600
1.40～1.79	200	2000
1.80～2.31	250	2500
2.32～2.84	300	3000

Table 9-8 HP-8M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.29	20	20
0.30～0.37	25	25
0.38～0.45	30	30
0.46～0.63	40	40
0.64～0.81	50	50
0.82～1.00	60	60
1.01～1.49	85	85

Table 9-9 Rubber S1.5M/S2M/DS2M

Width correction factor Kb	Belt width (mm)	Nominal width
～1.00	4	40
1.01～1.28	5	50
1.29～1.58	6	60
1.59～1.89	7	70
1.90～2.20	8	80
2.21～2.52	9	90
2.53～2.84	10	100
2.85～3.49	12	120
3.50～4.17	14	140
4.18～4.51	15	150
4.52～5.55	18	180
5.56～6.26	20	200

Table 9-10 Rubber S3M/DS3M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.62	4	40
0.63～0.81	5	50
0.82～1.00	6	60
1.01～1.19	7	70
1.20～1.38	8	80
1.39～1.58	9	90
1.59～1.79	10	100
1.80～2.20	12	120
2.21～2.62	14	140
2.63～2.84	15	150
2.85～3.49	18	180
3.50～4.86	20	200

Table 9-11 Rubber S4.5M/DS4.5M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.29	5	50
0.30～0.35	6	60
0.36～0.42	7	70
0.43～0.49	8	80
0.50～0.63	10	100
0.64～0.78	12	120
0.79～1.00	15	150
1.01～1.39	20	200
1.40～1.79	25	250
1.80～2.20	30	300
2.21～2.63	35	350
2.64～3.06	40	400
3.07～3.33	50	500
3.34～4.86	60	600

Table 9-12 Rubber S5M/DS5M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.45	5	50
0.46～0.56	6	60
0.57～0.78	8	80
0.79～0.89	9	90
0.90～1.00	10	100
1.01～1.23	12	120
1.24～1.59	15	150
1.60～2.20	20	200
2.21～2.84	25	250
2.85～3.50	30	300
3.51～4.17	35	350
4.18～4.86	40	400
4.87～6.26	50	500
6.27～7.71	60	600

Table 9-13 Rubber S8M/DS8M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.21	15	150
0.22～0.29	20	200
0.30～0.37	25	250
0.38～0.45	30	300
0.46～0.63	40	400
0.64～0.81	50	500
0.82～1.00	60	600
1.01～1.19	70	700
1.20～1.39	80	800
1.40～1.79	100	1000
1.80～2.31	125	1250
2.32～2.84	150	1500
2.85～3.95	200	2000
3.96～6.26	300	3000

Table 9-14 Rubber S14M/DS14M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.21	30	300
0.22～0.29	40	400
0.30～0.37	50	500
0.38～0.45	60	600
0.46～0.63	80	800
0.64～0.81	100	1000
0.82～1.00	120	1200
1.01～1.19	140	1400
1.20～1.39	160	1600
1.40～1.79	200	2000
1.80～2.31	250	2500
2.32～2.84	300	3000

Table 9-15 Polyurethane S2M

Width correction factor Kb	Belt width (mm)	Nominal width
～0.33	2	20
0.34～0.66	3	30
0.67～1.00	4	40
1.01～1.33	5	50
1.34～1.66	6	60
1.67～2.00	7	70
2.01～2.33	8	80
2.34～2.66	9	90
2.67～3.00	10	100
3.01～3.66	12	120
3.67～4.33	14	140
4.34～4.66	15	150
4.67～5.66	18	180
5.67～6.33	20	200

Table 9 Table of Belt Width Correction Factors (Kb)

Table 9-17 Polyurethane S3M

Width correction factor Kb	Belt width (mm)	Nominal width
~0.33	3	30
0.34~0.54	4	40
0.55~0.75	5	50
0.76~1.00	6	60
1.01~1.16	7	70
1.17~1.37	8	80
1.38~1.58	9	90
1.59~1.79	10	100
1.80~2.21	12	120
2.22~2.63	14	140
2.64~2.84	15	150
2.85~3.47	18	180
3.48~3.88	20	200
3.89~4.93	25	250

Table 9-18 XL/DXL/L/DL/H/DH/XH/XXH

Width correction factor Kb	Belt width (mm)	Nominal width
~0.15	6.4	025
0.16~0.21	7.9	031
0.22~0.28	9.5	037
0.29~0.42	12.7	050
0.43~0.71	19.1	075
0.72~1.00	25.4	100
1.01~1.56	38.1	150
1.57~2.14	50.8	200
2.15~3.36	76.2	300
3.37~4.76	101.6	400
4.77~6.15	127.0	500
6.16~7.50	152.4	600

Table 9-19 Polyurethane T5/DT5/T10/DT10

Width correction factor Kb	Belt width (mm)	Nominal width
~0.35	5.0	5
0.36~1.00	10.0	10
1.01~1.60	15.0	15
1.61~2.30	20.0	20
2.31~2.90	25.0	25
2.91~3.50	30.0	30
3.51~4.60	40.0	40
4.61~5.80	50.0	50

Table 9-20 Polyurethane TN10

Width correction factor Kb	Belt width (mm)	Nominal width
~0.10	1.0	1.0
0.11~0.31	2.0	2.0
0.32~0.45	3.0	3.0
0.46~0.58	4.0	4.0
0.59~0.75	5.0	5.0
0.76~1.00	6.0	6.0

Table 9-21 Polyurethane TN15

Width correction factor Kb	Belt width (mm)	Nominal width
~0.17	3.0	3.0
0.18~0.39	5.0	5.0
0.40~0.61	7.0	7.0
0.62~1.00	10.0	10.0
1.01~1.35	13.0	13.0

Table 9-22 Polyurethane MXL

Width correction factor Kb	Belt width (mm)	Nominal width
~0.21	3.2	3.2
0.22~0.35	4.8	4.8
0.36~0.55	6.4	6.4
0.56~0.90	9.6	9.6
0.91~1.35	12.7	12.7

Table 9-23 Rubber MXL

Width correction factor Kb	Belt width (mm)	Nominal width
~0.45	3.2	3.2
0.46~0.72	4.8	4.8
0.73~1.00	6.4	6.4
1.01~1.56	9.5	9.5
1.57~2.18	12.7	12.7

Table 10 Table of Adjustment Ranges of Center Distance

Table 10-1 Type S/H teeth (Unit: mm)

		Size	Effective length			
			500 or less	501~990	991~2000	2001 or more
Minimum adjustment range	Cs	S1.5M	2	3	5	10
		S2M/DS2M	2	3	5	10
		S3M/DS3M	2	3	5	10
		S4.5M/DS4.5M	3	5	10	15
		S5M/DS5M	3	5	10	15
		S8M/DS8M	3	5	10	15
		S14M/DS14M	3	5	10	15
		HP-S5M	3	5	10	15
		HP-S8M/8M	3	5	10	15
		HP-S14M	3	5	10	15
		Ceptor-VI S3M	2	3	5	10
		Ceptor-VI S5M	3	5	10	15
		Ceptor-VI S8M	3	5	10	15
		Ceptor-X S8M	3	5	10	15
		Ceptor-X S14M	3	5	10	15
	Ci	S1.5M	5			
		S2M/DS2M	5			
		S3M/DS3M	5			
		S4.5M/DS4.5M	5			
		S5M/DS5M	10			
		S8M/DS8M	15			
		S14M/DS14M	15			
		HP-S5M	10			
		HP-S8M/8M	15			
		HP-S14M	15			
		Ceptor-VI S3M	5			
		Ceptor-VI S5M	10			
		Ceptor-VI S8M	15			
		Ceptor-X S8M	15			
		Ceptor-X S14M	15			

Table 10-2 Trapezoidal teeth / triangular teeth (Unit: mm)

		Size	Effective length				
			508.0 or less	508.1~990.60	990.61~2032.00	2032.01~3048.00	3048.01 or more
Minimum adjustment range	Cs	TN10/TN15 MXL	2	3	5	10	-
		XL/DXL T5/DT5 L/DL T10/DT10 H/DH XH/XXH	3	5	10	15	25
	Ci	TN10/TN15 MXL	5				
		XL/DXL/ T5/DT5	5				
		L/DL T10/DT10	10				
		H/DH	15				
		XH	40				
		XXH	50				

Ceptor-X design example

Step 1. Determining conditions required for the design

- Driving machine AC motor 3.75 kW / 1700 rpm
- Driven machine: Compressor (8-hours/day operation)
- Revolution of driven shaft: 850 rpm
- Center distance 290 mm ± 15 mm

Step 2. Calculating the design power

① Obtain the load correction factor from **Table 1 (→ P. 81)**.
② From Formula 1**(→ P. 79)**, calculate the design power.
Pd = 3.75 × (1.7 + 0.0) = 6.38

Step 3. Selecting a belt type

From the design power of 6.38 kW and the pinion revolution of 1,700 rpm from **Fig. 1 Belt type selection diagram (→ P. 82)**, select Ceptor-X Type S8M.

Step 4. Selecting a pulley diameter

① From **Table 5 (→ P. 100)**, select 22 as the minimum number of teeth of a pulley for Ceptor-X Type S8M and use this as the driving pulley.
② From Formula 4**(→ P. 79)**, calculate the number of teeth of the driven pulley and the speed ratio.

$$Z_2 = \frac{1700}{850} \times 22 = 44$$

$$\text{Speed ratio} = \frac{1700}{850} = 2$$

Step 5. Selecting an effective length

① Calculate a rough effective length with Formula 7 **(→ P. 80)** and select an effective length that is closest to this value from the **"Table of standard effective lengths" (→ P. 43)**.

$$L' = 2 \times 290 + 1.57(112.05 + +56.02) + \frac{(112.05-56.02)^2}{4 \times 290}$$
$$= 846.58 \rightarrow 848$$

② From the belt pitch length of 848 and Formula 8 **(→ P. 80)**, backcalculate the center distance at that time.

$$C = \frac{584.13 + \sqrt{584.13^2 - 2\,(112.05-56.02)^2}}{4}$$
$$= 290.72$$

$$B = 848 - 1.57(112.05 - 56.02) \approx 584.13$$

Step 6. Determining the belt width

① From **"Table of basic power ratings for Ceptor-X S8M (per width of 60 mm)" (→ P. 101)**, obtain the basic power rating with 22 teeth of the pinion and at 1,700 rpm.
② From Formula 9 **(→ P. 80)**, calculate the angle of contact of the pulley and from **Table 7 (→ P. 127)**, obtain the mesh correction factor Km.

$$\Theta_1 = 180 - \frac{57.3\,(112.05-56.02)}{290.72} = 168.96$$

$$Z_m = 22 \times \frac{168.96}{360} = 10$$

③ Obtain the effective length correction factor Kl from **Table 8 (→ P. 127)**. Kl = 0.98
④ From Formula 10 **(→ P. 80)**, calculate the width correction factor, and from **Table 9-3 "Table of S8M belt width correction factors" (→ P. 127)**, obtain the belt width.

$$K_b = \frac{6.38}{33.1 \times 1.0 \times 0.98} = 0.20$$

Step 7. Checking the adjustment range of the center distance

From **Table 10 (→ P. 129)**, obtain the inner and outer adjustment ranges of the center distance.

Examination result

- Belt 150 Ceptor-X S8M 848
- Driving pulley 22 S8M 150
- Driven pulley 44 S8M 150
- Center distance 290.72 mm
  - Inner adjustment range: 15 mm
  - Outer adjustment range: 5 mm

Load correction factor Ko = 1.7
Design power Pd = 6.38 kW

Belt type: Ceptor-X S8M

No. of teeth of driving pulley: 22
Driven pulley pitch diameter: 56.02 mm

No. of teeth of driven pulley: 44
Driven pulley pitch diameter: 112.05 mm

Effective length: Ceptor-X S8M 848
(Pitch length 848 mm)

Center distance: 290.72 mm

Basic power rating Pr = 33.1 kW

Angle of contact of pinion $\theta_1 = 168.96°$

Number of meshed teeth Zm = 10
Mesh correction factor Km = 1.00
Length correction factor Kl = 0.98

Belt width correction factor Kb = 0.20
Belt width: 15 mm
Belt nominal width: 150

Inner adjustment range (Ci): 15 mm
Outer adjustment range (Cs): 5 mm