Procedure for Designing a Frictional Forced Power Transmission 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 Speed ratio

$$\left(\frac{\text{Pinion revolution}}{\text{Revolution of large pulley}}\right)$$

⑥ Temporary center distance
⑦ Pulley diameter restriction
⑧ Operating environment (high temperature, low temperature, oil, water, dirt, acid, alkali)

Step 2. Calculating the design power

Calculate the design power with Formula 1.

Formula 1

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

Pd	: Design power	(kW)
Pt	: Transmission power[Note1)]	(kW)
Ko	: Load correction factor	**(Table 1 → P. 247)**
Ki	: Idler correction factor	**(Table 2 → P. 247)**
Ke	: Environment correction factor	**(Table 3 → P. 247)**

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.

Formula 2

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

Pt	: Transmission power	(kW)
n	: Revolution	(rpm)
Tr	: Load torque	(N•m)

1PS=0.7355(kW)

Step 3. Selecting a belt type

Obtain a belt type based on the design power and pinion revolution from **Fig. 1 "Belt type selection diagram" (→ P. 247 to P. 248)**.
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.

Step 4. Selecting a pulley diameter

Select an appropriate pulley diameter with Formula 3, taking the restriction of the power transmission space etc. into consideration.

■ **In the cases of V-belts, Power Ace, and Power Ace Cog**

Formula 3

$$Dp = \frac{n_1}{n_2} \times dp$$

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

dp	: Pinion pitch diameter	(mm)
Dp	: Large-pulley pitch diameter	(mm)
n_1	: Pinion revolution	(rpm)
n_2	: Large pulley revolution	(rpm)

The relationship between pulley nominal outside diameter and pulley pitch diameter is based on **Table 4 (→ P. 249)**.

■ **In the case of Rib-Ace**

Formula 3

$$Do = \frac{n_1}{n_2} \times do$$

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

do	: Pinion outside diameter	(mm)
Do	: Large-pulley outside diameter	(mm)
n_1	: Pinion revolution	(rpm)
n_2	: Large pulley revolution	(rpm)

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

- Check of the belt speed

Calculate the belt speed with Formula 4.

■ **In the cases of V-belts, Power Ace, and Power Ace Cog**

Formula 4

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

v	: Belt speed	(m/s)
dp	: Pinion pitch diameter	(mm)
n	: Pinion revolution	(rpm)

■ **In the case of Rib-Ace**

Formula 4

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

v	: Belt speed	(m/s)
do	: Pinion outside diameter	(mm)
n	: Pinion revolution	(rpm)

The belt speed needs to satisfy **Table 6 (→ P. 249)**.
If the belt speed exceeds the standard, reduce the pulley diameter.

Note 2)
If the belt speed exceeds the value in the following table, you need to take a dynamic balance of the pulley. In this case, use rolled steel for general structure or carbon steel for machine construction.

	Power Ace	Rib-Ace 2
Belt speed	30m/s	35m/s

- Check of the minimum nominal outside diameter of a pulley

Generally, when a pulley with a small diameter is used, the flex fatigue of the belt increases, reducing the belt service life. Therefore, it is ideal to at least use a pulley diameter equal to or larger than the minimum nominal outside diameter of a pulley indicated in **Table 5 "Minimum pulley diameters" (→ P. 249)**.

Step 5. Selecting an effective length

Calculate a rough effective length L' with Formula 5 and select an effective length that is closest to this value from the standard size of the respective belt.

■ **In the case of V-belts (Table of standard sizes → P. 232 to P. 233)**

Formula 5

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

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

■ **In the cases of Power Ace / Power Ace Cog / Power Ace Aramid Combo / Rib-Ace (Table of standard sizes → P. 230, P. 236)**

Formula 5

$$L' = 2C' + 1.57\,(Do + do) + \frac{(Do - do)^2}{4C'}$$

L'	: Rough effective length	(mm)
C'	: Temporary center distance	(mm)
Do	: Large-pulley nominal outside diameter (Power Ace / Power Ace Cog / Power Ace Aramid Combo)	(mm)
	Large-pulley outside diameter (Rib-Ace)	(mm)
do	: Pinion nominal outside diameter (Power Ace / Power Ace Cog / Power Ace Aramid Combo)	(mm)
	Pinion outside diameter (Rib-Ace)	(mm)

- Calculation of the center distance
From the selected effective length, backcalculate the center distance with Formula 6.

■ **In the case of V-belts**

Formula 6

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

$$B = Le - 1.57(Dp + dp)$$

C	: Center distance	(mm)
Le	: Effective length	(mm)
Dp	: Large pulley pitch diameter	(mm)
dp	: Pinion pitch diameter	(mm)

■ **In the cases of Power Ace / Power Ace Cog / Power Ace Aramid Combo / Rib-Ace**

Formula 6

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

$$B = Le - 1.57(Do + do)$$

C	: Center distance	(mm)
Le	: Effective length	(mm)
Do	: Large-pulley nominal outside diameter (Power Ace / Power Ace Cog / Power Ace Aramid Combo)	(mm)
	Large-pulley outside diameter (Rib-Ace)	(mm)
do	: Pinion nominal outside diameter (Power Ace / Power Ace Cog / Power Ace Aramid Combo)	(mm)
	Pinion outside diameter (Rib-Ace)	(mm)

Note 3) For Power Ace, Power Ace Cog, and Power Ace Aramid Combo, Le = effective outside length.

Step 6. Calculating the number of belts and the number of ribs

① Determination of the basic power rating
Obtain the basic power rating for the pinion diameter and its revolution from the **tables of basic power ratings (P. 250 to P. 270)**.
Add an "additional transmission capacity by the speed ratio" in the lower table and set it as the basic power rating per belt or per rib.

② Correction of the basic power rating
From **Table 7 (→ P. 271)**, obtain the correction factor Kl by the effective length.
From Formula 7, obtain the angle of contact of the pinion $\theta 1$ and from **Table 8 (→ P. 272)**, obtain the correction factor $K\theta 1$.

■ **In the case of V-belts**

Formula 7

$$\theta_1 = 180 - \frac{57(Dp - dp)}{C}$$

θ_1	: Angle of contact of pinion	(°)
Dp	: Large pulley pitch diameter	(mm)
dp	: Pinion pitch diameter	(mm)
C	: Center distance	(mm)

■ **In the cases of Power Ace / Power Ace Cog / Power Ace Aramid Combo / Rib-Ace**

Formula 7

$$\theta_1 = 180 - \frac{57(Do - do)}{C}$$

θ_1	: Angle of contact of pinion	(°)
Do	: Large-pulley nominal outside diameter (Power Ace / Power Ace Cog / Power Ace Aramid Combo)	(mm)
	Large-pulley outside diameter (Rib-Ace)	(mm)
do	: Pinion nominal outside diameter (Power Ace / Power Ace Cog / Power Ace Aramid Combo)	(mm)
	Pinion outside diameter (Rib-Ace)	(mm)
C	: Center distance	(mm)

③ Calculating the number of belts
Calculate the number of belts with Formula 8. Round up the figures after the decimal point to an integer.

Formula 8

$$N = \frac{Pd}{Pr \times Kl \times K\theta_1}$$

N	: No. of belts	(pcs) or (No. of ribs)
Pd	: Design power	(kW)
Pr	: Basic power rating	(kW/pc) or (kW/rib)
Kl	: Length correction factor	**(Table 7 → P. 271)**
$K\theta_1$	: Pinion contact angle correction factor	**(Table 8 → P. 272)**

Step 7. Checking the adjustment range of the center distance

From **Table 9 (→ P. 272)**, obtain the installation range and the tension range of the belt.

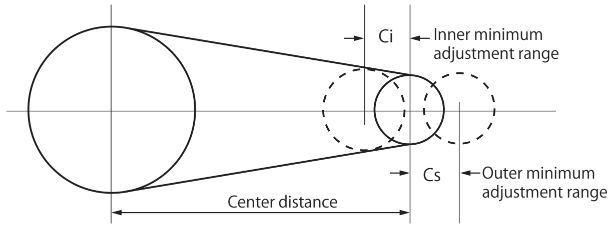

Table 1 Load correction factor (Ko)

Driven machine		Driving machine					
		Starting torque less than 300%			Starting torque 300% or more		
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.		AC motor (normal torque, squirrel-cage type, synchronous electric) DC motor (shunt-wound)			AC motor (high torque / single-phase / series-wound) DC motor (compound-wound, series-wound) Engine / line shaft / clutch		
		I	II	III	I	II	III
A	● Fluid stirring machines ● Blowers ● Exhausters ● Centrifugal pumps ● Compact compressors ● Fans of 7.5 kW or less ● Light-duty conveyors	1.0	1.1	1.2	1.1	1.2	1.3
B	● Sand and grain conveyors ● Kneading mixers ● Fans of 7.5 kW or more ● Generators ● Line shafts ● Laundry machines ● Machine tools ● Punches, presses, shearers ● Printing machines ● Rotary/vibrating sieves ● Rotary pumps	1.1	1.2	1.3	1.2	1.3	1.4
C	● Brick-processing machines ● Bucket elevators ● Exciters ● Conveyors ● Piston compressors ● Hammer mills ● Papermaking mills, heaters ● Piston pumps ● Forced portable blowers ● Pulverizers ● Saw mills, Woodworking machines ● Fabric machines	1.2	1.3	1.4	1.4	1.5	1.6
D	● Sand pumps ● Crashers ● Mills (ball, rod, tube) ● Hoists ● Rubber calenders, Extruders	1.3	1.4	1.5	1.5	1.6	1.8

Note)
I: Intermittent use (3 to 5 hrs/day or seasonal use)
II: Normal use (8 to 10 hrs/day)
III: Continuous use (16 to 24 hrs/day)

Table 2 Idler correction factor (Ki)

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 Environmental correction factors (Ke)

Environment	Ke
Frequent starts and stops (10 times or more/day)	0.2
Difficult to maintain/inspect	0.2
Dusty and likely to abrade	0.2
High ambient temperature	0.2
Oil and water adhesion	0.2 (0.3 only in the case of Rib-Ace)

Note) For environmental correction factors, add all applicable ones.

Fig. 1-1 Belt type selection diagram (V-belts)

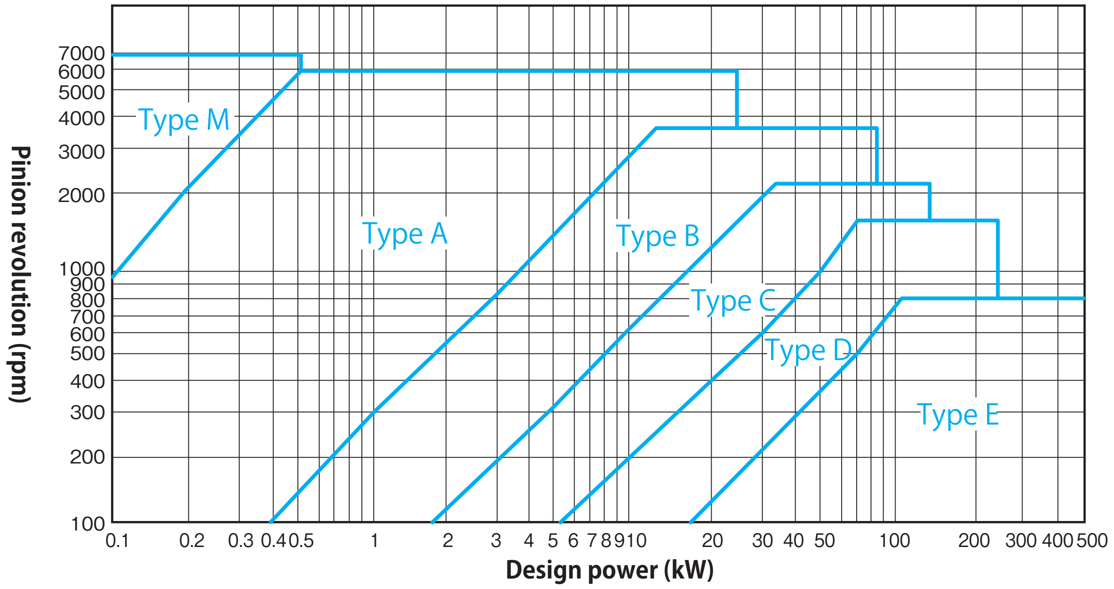

Fig. 1-2 Belt type selection diagram (Energy-Saving Power Ace / Power Ace Cog / Power Scrum)

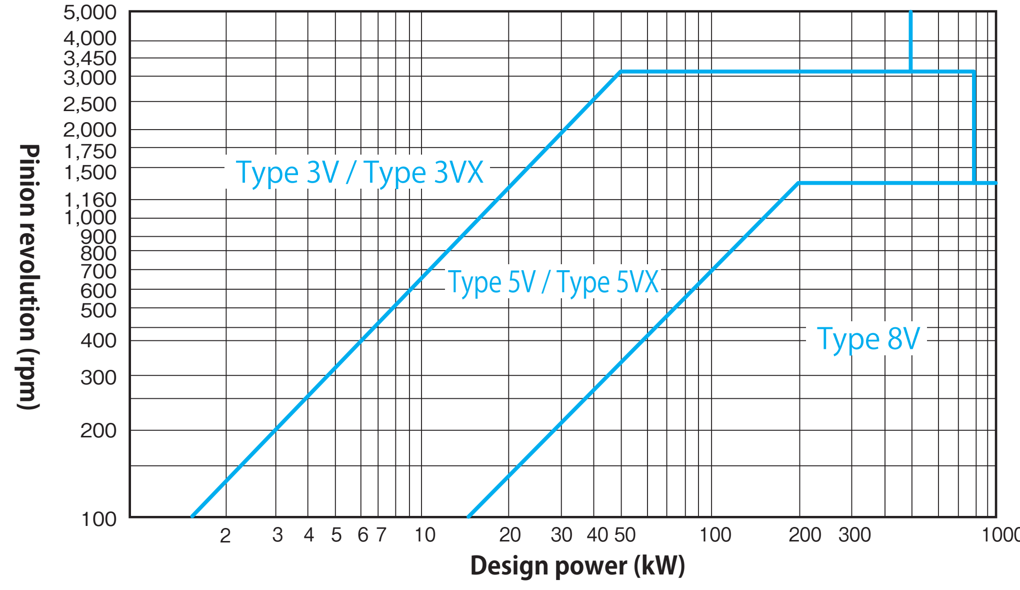

Fig. 1-3 Belt type selection diagram (Power Ace Aramid Combo)

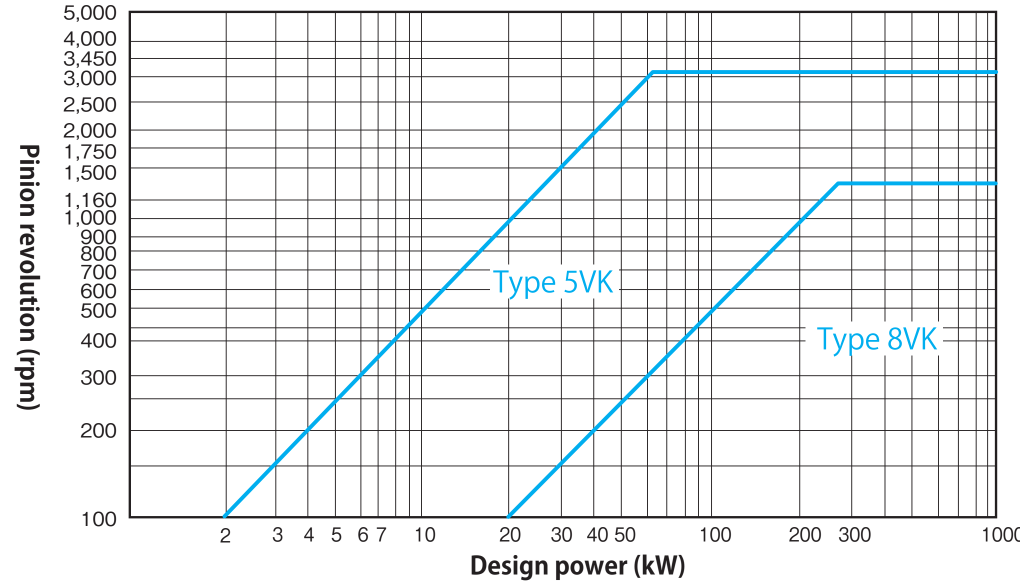

Fig. 1-4 Belt type selection diagram (Rib-Ace 2)

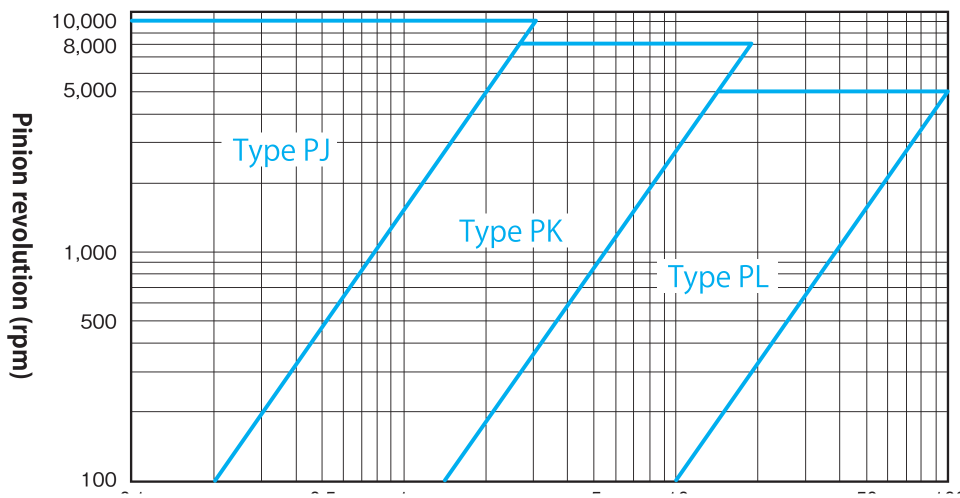

Table 4 Difference between pulley outside diameter and pitch diameter (2k)

(Unit: mm)

Belt type	M	A	B	C	D	E	3V•3VX	5V•5VK•5VX	8V•8VK
2k	5.5	9.0	11.0	14.0	19.0	25.4	1.2	2.6	5.0

Pulley outside diameter = Pulley pitch diameter + 2k

Table 5 Minimum pulley diameters

Table 5-1 V-belts

(Unit: mm)

Belt type	M	A	B	C	D	E
Minimum pulley pitch diameter	40	67	118	180	300	450

Table 5-3 Rib-Ace 2

(Unit: mm)

Belt type	PJ	PK	PL
Minimum pulley outside diameter	20	50	70

Table 5-2 Power Ace / Energy-Saving Power Ace / Power Ace Cog / Power Ace Aramid Combo / Power Scrum

(Unit: mm)

Belt type	3V	3VX	5V•5VK	5VX	8V•8VK
Minimum nominal outside diameter of pulley	67	56	150	112	300

Table 6 Design belt speed standards

Belt type	Design belt speed standard
V-belts (including Energy-Saving and Scrum types)	30 m/s or less
Power Ace (including Energy-Saving and Scrum types) / Power Ace Aramid Combo	40 m/s or less
Power Ace Cog	40 m/s or less
Rib-Ace 2	50 m/s or less

Table of basic power ratings for Type-3V Power Ace / Power Scrum

(Unit: kW)

Pinion revolution (rpm)	Pinion nominal outside diameter (mm)																
	67	71	75	80	85	90	100	112	125	140	160	180	200	250	280	300	315
100	0.12	0.13	0.15	0.17	0.19	0.21	0.24	0.29	0.34	0.39	0.47	0.54	0.61	0.79	0.90	0.97	1.02
200	0.21	0.24	0.27	0.31	0.35	0.38	0.46	0.54	0.64	0.74	0.88	1.02	1.16	1.50	1.70	1.84	1.94
300	0.30	0.35	0.39	0.44	0.50	0.55	0.66	0.78	0.92	1.07	1.28	1.48	1.68	2.18	2.47	2.66	2.81
400	0.38	0.44	0.50	0.57	0.64	0.71	0.85	1.01	1.19	1.39	1.66	1.92	2.18	2.83	3.21	3.46	3.65
500	0.46	0.53	0.60	0.69	0.77	0.86	1.03	1.23	1.45	1.70	2.03	2.35	2.67	3.46	3.93	4.23	4.46
600	0.54	0.62	0.70	0.80	0.91	1.01	1.21	1.45	1.71	2.00	2.39	2.77	3.15	4.08	4.62	4.99	5.25
700	0.61	0.70	0.80	0.92	1.03	1.15	1.38	1.66	1.96	2.29	2.74	3.18	3.61	4.68	5.30	5.71	6.02
800	0.68	0.79	0.89	1.03	1.16	1.29	1.55	1.87	2.20	2.58	3.08	3.58	4.07	5.26	5.96	6.42	6.76
900	0.75	0.87	0.99	1.13	1.28	1.43	1.72	2.07	2.44	2.86	3.42	3.97	4.51	5.83	6.60	7.11	7.48
1000	0.81	0.94	1.08	1.24	1.40	1.56	1.89	2.27	2.68	3.14	3.75	4.36	4.95	6.39	7.23	7.77	8.17
1200	0.94	1.09	1.25	1.44	1.64	1.83	2.21	2.66	3.14	3.68	4.40	5.10	5.79	7.46	8.41	9.03	9.48
1400	1.06	1.24	1.42	1.64	1.86	2.08	2.51	3.03	3.58	4.21	5.02	5.82	6.60	8.46	9.51	10.18	10.67
1600	1.17	1.38	1.58	1.83	2.08	2.32	2.81	3.39	4.01	4.71	5.62	6.50	7.36	9.39	10.52	11.23	11.74
1800	1.28	1.51	1.73	2.01	2.29	2.56	3.10	3.74	4.42	5.19	6.19	7.16	8.09	10.25	11.43	12.15	12.67
2000	1.39	1.63	1.88	2.19	2.49	2.79	3.38	4.08	4.82	5.66	6.74	7.77	8.77	11.03	12.23	12.95	13.45
2200	1.49	1.76	2.02	2.35	2.68	3.01	3.65	4.41	5.21	6.11	7.26	8.36	9.40	11.73	12.91	13.61	14.07
2400	1.58	1.87	2.16	2.52	2.87	3.22	3.91	4.72	5.58	6.53	7.75	8.90	9.98	12.33	13.47	14.11	14.52
2600	1.67	1.98	2.29	2.68	3.05	3.43	4.16	5.03	5.93	6.94	8.21	9.41	10.51	12.84	13.90		
2800	1.76	2.09	2.42	2.83	3.23	3.63	4.41	5.32	6.27	7.32	8.64	9.87	10.98	13.24			
3000	1.84	2.19	2.54	2.97	3.40	3.82	4.64	5.59	6.59	7.68	9.04	10.29	11.40	13.53			
3200	1.92	2.29	2.66	3.11	3.56	4.00	4.86	5.86	6.89	8.02	9.41	10.66	11.75				
3400	2.00	2.39	2.77	3.25	3.71	4.17	5.07	6.11	7.18	8.33	9.74	10.98	12.04				
3600	2.07	2.47	2.88	3.37	3.86	4.34	5.27	6.34	7.44	8.62	10.04	11.25	12.25				
3800	2.13	2.56	2.98	3.49	4.00	4.50	5.46	6.57	7.69	8.88	10.29	11.47	12.40				
4000	2.19	2.64	3.07	3.61	4.13	4.65	5.64	6.77	7.91	9.12	10.51	11.63					
4500	2.33	2.81	3.29	3.87	4.43	4.98	6.04	7.22	8.39	9.57	10.86						
5000	2.44	2.96	3.46	4.08	4.68	5.26	6.36	7.56	8.71	9.83							

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio								
	1.00～1.01	1.02～1.05	1.06～1.11	1.12～1.18	1.19～1.26	1.27～1.38	1.58～1.94	1.95～3.38	3.39 or more
200	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.03
300	0.00	0.00	0.01	0.02	0.03	0.03	0.05	0.05	0.05
400	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.07
500	0.00	0.01	0.02	0.03	0.05	0.06	0.08	0.08	0.09
600	0.00	0.01	0.02	0.04	0.06	0.07	0.09	0.10	0.10
700	0.00	0.01	0.03	0.05	0.07	0.08	0.11	0.11	0.12
800	0.00	0.01	0.03	0.06	0.08	0.09	0.12	0.13	0.14
900	0.00	0.01	0.04	0.06	0.08	0.10	0.14	0.15	0.16
1000	0.00	0.01	0.04	0.07	0.09	0.11	0.15	0.16	0.17
1200	0.00	0.02	0.05	0.08	0.11	0.14	0.18	0.20	0.21
1400	0.00	0.02	0.06	0.10	0.13	0.16	0.21	0.23	0.24
1600	0.00	0.02	0.06	0.11	0.15	0.18	0.24	0.26	0.28
1800	0.00	0.03	0.07	0.12	0.17	0.21	0.27	0.29	0.31
2000	0.00	0.03	0.08	0.14	0.19	0.23	0.30	0.33	0.35
2200	0.00	0.03	0.09	0.15	0.21	0.25	0.33	0.36	0.38
2400	0.00	0.03	0.10	0.17	0.23	0.27	0.36	0.39	0.42
2600	0.00	0.04	0.10	0.18	0.25	0.30	0.39	0.42	0.45
2800	0.00	0.04	0.11	0.19	0.26	0.32	0.42	0.46	0.49
3000	0.00	0.04	0.12	0.21	0.28	0.34	0.45	0.49	0.52
3200	0.00	0.05	0.13	0.22	0.30	0.37	0.48	0.52	0.56
3400	0.00	0.05	0.14	0.24	0.32	0.39	0.51	0.55	0.59
3600	0.00	0.05	0.14	0.25	0.34	0.41	0.54	0.59	0.63
3800	0.00	0.05	0.15	0.26	0.36	0.43	0.57	0.62	0.66
4000	0.00	0.06	0.16	0.28	0.38	0.46	0.60	0.65	0.69
4500	0.00	0.06	0.18	0.31	0.42	0.51	0.68	0.73	0.78
5000	0.00	0.07	0.20	0.35	0.47	0.57	0.75	0.81	0.87

(Shaded cells) The belt speed exceeds 30 m/s. Please use pulleys made of rolled steel for general structure or carbon steel for machine construction.

Table of basic power ratings for Type-5V Power Ace / Power Scrum

(Unit: kW)

Pinion revolution (rpm)	Pinion nominal outside diameter (mm)																
	150	160	170	180	190	200	212	224	236	250	280	315	340	355	380	400	450
100	0.83	0.93	1.04	1.15	1.26	1.36	1.49	1.62	1.74	1.89	2.20	2.56	2.82	2.97	3.23	3.43	3.93
150	1.18	1.34	1.49	1.65	1.81	1.96	2.15	2.33	2.52	2.73	3.19	3.71	4.09	4.31	4.68	4.98	5.71
200	1.51	1.72	1.93	2.13	2.33	2.54	2.78	3.02	3.26	3.54	4.14	4.83	5.31	5.61	6.09	6.47	7.43
250	1.84	2.09	2.34	2.59	2.84	3.09	3.39	3.69	3.99	4.33	5.06	5.91	6.51	6.87	7.46	7.93	9.10
300	2.15	2.45	2.75	3.05	3.34	3.64	3.99	4.34	4.69	5.10	5.97	6.97	7.67	8.10	8.80	9.35	10.73
350	2.45	2.80	3.14	3.49	3.83	4.17	4.58	4.98	5.38	5.85	6.85	8.00	8.82	9.30	10.11	10.74	12.33
400	2.74	3.14	3.53	3.92	4.30	4.69	5.15	5.61	6.06	6.59	7.72	9.02	9.93	10.48	11.39	12.11	13.89
450	3.03	3.47	3.91	4.34	4.77	5.20	5.71	6.22	6.73	7.32	8.57	10.01	11.03	11.64	12.64	13.44	15.41
500	3.31	3.80	4.28	4.75	5.23	5.70	6.26	6.83	7.38	8.03	9.41	10.99	12.11	12.77	13.87	14.75	16.89
550	3.59	4.12	4.64	5.16	5.68	6.19	6.81	7.42	8.03	8.73	10.23	11.95	13.17	13.89	15.08	16.02	18.35
600	3.86	4.43	5.00	5.56	6.12	6.68	7.34	8.00	8.66	9.42	11.04	12.90	14.20	14.98	16.26	17.27	19.76
650	4.13	4.74	5.35	5.95	6.56	7.15	7.87	8.58	9.28	10.10	11.83	13.82	15.22	16.05	17.41	18.49	21.14
700	4.39	5.04	5.69	6.34	6.98	7.62	8.39	9.15	9.90	10.77	12.62	14.73	16.22	17.10	18.54	19.69	22.48
800	4.89	5.63	6.37	7.10	7.82	8.54	9.40	10.25	11.10	12.07	14.14	16.50	18.15	19.12	20.72	21.98	25.04
900	5.38	6.21	7.02	7.83	8.63	9.43	10.38	11.32	12.26	13.33	15.61	18.19	19.99	21.05	22.79	24.15	27.43
1000	5.86	6.76	7.65	8.54	9.42	10.29	11.33	12.36	13.38	14.55	17.02	19.81	21.75	22.89	24.75	26.19	29.65
1200	6.76	7.81	8.86	9.89	10.92	11.93	13.14	14.33	15.50	16.85	19.67	22.82	24.99	26.24	28.27	29.83	33.48
1400	7.60	8.80	9.99	11.16	12.32	13.46	14.82	16.15	17.46	18.96	22.07	25.50	27.81	29.14	31.25	32.84	36.43
1600	8.38	9.71	11.03	12.33	13.61	14.88	16.36	17.82	19.25	20.87	24.20	27.80	30.18	31.52	33.60	35.13	38.38
1800	9.09	10.56	12.00	13.41	14.80	16.17	17.77	19.33	20.85	22.56	26.03	29.70	32.04	33.33	35.27	36.63	
2000	9.74	11.32	12.87	14.39	15.88	17.33	19.02	20.66	22.24	24.02	27.55	31.15	33.35	34.52	36.18		
2200	10.33	12.01	13.66	15.27	16.83	18.35	20.11	21.80	23.42	25.22	28.71	32.11	34.06				
2600	11.28	13.14	14.94	16.67	18.34	19.94	21.76	23.47	25.07	26.79	29.89						
3000	11.94	13.91	15.80	17.59	19.28	20.87	22.63	24.23	25.67	27.11							
3400	12.26	14.29	16.18	17.95	19.57	21.05	22.63	23.97									
3800	12.22	14.22	16.05	17.70	19.16	20.42											

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00～1.01	1.02～1.05	1.06～1.11	1.12～1.18	1.19～1.26	1.27～1.38	1.39～1.57	1.58～1.94	1.95～3.38	3.39 or more
100	0.00	0.01	0.02	0.04	0.05	0.06	0.08	0.09	0.09	0.10
150	0.00	0.01	0.03	0.06	0.08	0.10	0.11	0.13	0.14	0.15
200	0.00	0.02	0.04	0.08	0.11	0.13	0.15	0.17	0.18	0.20
250	0.00	0.02	0.06	0.10	0.13	0.16	0.19	0.21	0.23	0.25
300	0.00	0.02	0.07	0.12	0.16	0.19	0.23	0.26	0.28	0.30
350	0.00	0.03	0.08	0.14	0.19	0.23	0.27	0.30	0.32	0.34
400	0.00	0.03	0.09	0.16	0.21	0.26	0.30	0.34	0.37	0.39
450	0.00	0.04	0.10	0.18	0.24	0.29	0.34	0.38	0.42	0.44
500	0.00	0.04	0.11	0.20	0.27	0.32	0.38	0.43	0.46	0.49
550	0.00	0.04	0.12	0.22	0.29	0.36	0.42	0.47	0.51	0.54
600	0.00	0.05	0.13	0.24	0.32	0.39	0.45	0.51	0.55	0.59
650	0.00	0.05	0.15	0.25	0.35	0.42	0.49	0.55	0.60	0.64
700	0.00	0.06	0.16	0.27	0.37	0.45	0.53	0.60	0.65	0.69
800	0.00	0.07	0.18	0.31	0.43	0.52	0.61	0.68	0.74	0.79
900	0.00	0.07	0.20	0.35	0.48	0.58	0.68	0.77	0.83	0.89
1000	0.00	0.08	0.22	0.39	0.53	0.65	0.76	0.85	0.92	0.98
1200	0.00	0.10	0.27	0.47	0.64	0.78	0.91	1.02	1.11	1.18
1400	0.00	0.11	0.31	0.55	0.75	0.91	1.06	1.19	1.29	1.38
1600	0.00	0.13	0.36	0.63	0.85	1.03	1.21	1.36	1.48	1.57
1800	0.00	0.15	0.40	0.71	0.96	1.16	1.36	1.53	1.66	1.77
2000	0.00	0.16	0.45	0.78	1.07	1.29	1.51	1.70	1.84	1.97
2200	0.00	0.18	0.49	0.86	1.17	1.42	1.67	1.88	2.03	2.16
2600	0.00	0.21	0.58	1.02	1.39	1.68	1.97	2.22	2.40	2.56
3000	0.00	0.25	0.67	1.18	1.60	1.94	2.27	2.56	2.77	2.95
3400	0.00	0.28	0.76	1.33	1.81	2.20	2.57	2.90	3.14	3.34
3800	0.00	0.31	0.85	1.49	2.03	2.46	2.88	3.24	3.50	3.74

(shaded cells) The belt speed exceeds 30 m/s. Please use pulleys made of rolled steel for general structure or carbon steel for machine construction.

How to Design a Frictional Forced Power Transmission Belt
Table of Basic Power Ratings

Table of basic power ratings for Type-8V Power Ace / Power Scrum

(Unit: kW)

Pinion revolution (rpm)	Pinion nominal outside diameter (mm)																
	300	315	335	355	375	400	425	450	460	475	500	520	540	560	600	630	710
100	4.48	4.90	5.46	6.02	6.58	7.28	7.97	8.66	8.94	9.35	10.04	10.58	11.13	11.67	12.76	13.57	15.71
120	5.25	5.76	6.43	7.09	7.75	8.58	9.40	10.22	10.55	11.03	11.85	12.49	13.14	13.78	15.07	16.02	18.56
140	6.01	6.60	7.37	8.14	8.90	9.85	10.80	11.75	12.12	12.69	13.62	14.37	15.11	15.86	17.34	18.44	21.36
160	6.76	7.42	8.29	9.16	10.03	11.11	12.18	13.25	13.67	14.31	15.37	16.22	17.06	17.90	19.57	20.82	24.12
180	7.49	8.22	9.20	10.17	11.14	12.34	13.54	14.73	15.20	15.91	17.09	18.03	18.97	19.91	21.77	23.16	26.83
200	8.21	9.02	10.09	11.16	12.23	13.55	14.87	16.18	16.71	17.49	18.79	19.83	20.86	21.89	23.94	25.46	29.50
250	9.95	10.95	12.27	13.58	14.89	16.52	18.14	19.75	20.39	21.35	22.94	24.21	25.47	26.73	29.23	31.09	36.01
300	11.64	12.82	14.38	15.93	17.48	19.40	21.30	23.20	23.96	25.09	26.96	28.45	29.94	31.42	34.35	36.53	42.28
350	13.27	14.63	16.42	18.21	19.98	22.19	24.38	26.56	27.42	28.72	30.86	32.57	34.27	35.96	39.30	41.79	48.32
400	14.85	16.38	18.41	20.42	22.42	24.91	27.37	29.82	30.79	32.24	34.65	36.56	38.46	40.35	44.09	46.86	54.12
450	16.39	18.09	20.34	22.58	24.80	27.55	30.28	32.98	34.06	35.66	38.32	40.43	42.52	44.60	48.71	51.74	59.66
500	17.89	19.75	22.22	24.67	27.10	30.12	33.10	36.06	37.23	38.98	41.88	44.17	46.44	48.70	53.14	56.43	64.94
550	19.34	21.36	24.05	26.71	29.35	32.61	35.84	39.03	40.30	42.19	45.31	47.78	50.22	52.64	57.40	60.90	69.94
600	20.75	22.93	25.82	28.69	31.53	35.03	38.50	41.92	43.27	45.29	48.62	51.25	53.85	56.42	61.46	65.16	74.64
650	22.12	24.46	27.55	30.61	33.64	37.38	41.07	44.70	46.14	48.28	51.81	54.59	57.33	60.03	65.32	69.19	79.03
700	23.44	25.93	29.22	32.47	35.69	39.65	43.55	47.38	48.90	51.15	54.86	57.77	60.64	63.47	68.97	72.98	83.08
750	24.73	27.37	30.84	34.28	37.67	41.84	45.94	49.96	51.55	53.91	57.78	60.81	63.79	66.72	72.40	76.51	86.79
800	25.97	28.75	32.41	36.02	39.58	43.95	48.23	52.43	54.08	56.54	60.55	63.69	66.77	69.78	75.60	79.79	90.13
900	28.34	31.38	35.38	39.32	43.18	47.91	52.53	57.03	58.79	61.40	65.65	68.95	72.16	75.29	81.26	85.49	95.63
1000	30.53	33.82	38.13	42.35	46.49	51.52	56.41	61.14	62.99	65.71	70.10	73.49	76.77	79.93	85.86	89.98	99.42
1100	32.54	36.05	40.64	45.11	49.48	54.76	59.85	64.74	66.63	69.41	73.87	77.27	80.52	83.61	89.31	93.14	
1200	34.36	38.07	42.90	47.59	52.13	57.60	62.82	67.78	69.69	72.48	76.90	80.22	83.35	86.28	91.52	94.87	
1400	37.41	41.43	46.61	51.59	56.34	61.96	67.21	72.06	73.89	76.50	80.50	83.38	85.96				
1600	39.59	43.80	49.16	54.22	58.96	64.42	69.33	73.66	75.23	77.39							
1800	40.82	45.08	50.42	55.33	59.80	64.74											
2000	41.02	45.18	50.26	54.77	58.69												

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00～1.01	1.02～1.05	1.06～1.11	1.12～1.18	1.19～1.26	1.27～1.38	1.39～1.57	1.58～1.94	1.95～3.38	3.39 or more
100	0.00	0.04	0.11	0.20	0.27	0.33	0.39	0.43	0.47	0.50
120	0.00	0.05	0.14	0.24	0.33	0.39	0.46	0.52	0.56	0.60
140	0.00	0.06	0.16	0.28	0.38	0.46	0.54	0.61	0.66	0.70
160	0.00	0.07	0.18	0.32	0.43	0.53	0.62	0.69	0.75	0.80
180	0.00	0.07	0.21	0.36	0.49	0.59	0.69	0.78	0.84	0.90
200	0.00	0.08	0.23	0.40	0.54	0.66	0.77	0.87	0.94	1.00
250	0.00	0.10	0.29	0.50	0.68	0.82	0.96	1.08	1.17	1.25
300	0.00	0.12	0.34	0.60	0.81	0.99	1.16	1.30	1.41	1.50
350	0.00	0.15	0.40	0.70	0.95	1.15	1.35	1.52	1.64	1.75
400	0.00	0.17	0.46	0.80	1.09	1.32	1.54	1.73	1.88	2.00
450	0.00	0.19	0.51	0.90	1.22	1.48	1.73	1.95	2.11	2.25
500	0.00	0.21	0.57	1.00	1.36	1.64	1.93	2.17	2.34	2.50
550	0.00	0.23	0.63	1.10	1.49	1.81	2.12	2.38	2.58	2.75
600	0.00	0.25	0.69	1.20	1.63	1.97	2.31	2.60	2.81	3.00
650	0.00	0.27	0.74	1.30	1.76	2.14	2.50	2.82	3.05	3.25
700	0.00	0.29	0.80	1.40	1.90	2.30	2.70	3.03	3.28	3.50
750	0.00	0.31	0.86	1.49	2.03	2.47	2.89	3.25	3.52	3.75
800	0.00	0.33	0.91	1.59	2.17	2.63	3.08	3.47	3.75	4.00
900	0.00	0.37	1.03	1.79	2.44	2.96	3.47	3.90	4.22	4.50
1000	0.00	0.42	1.14	1.99	2.71	3.29	3.85	4.33	4.69	5.00
1100	0.00	0.46	1.26	2.19	2.98	3.62	4.24	4.77	5.16	5.50
1200	0.00	0.50	1.37	2.39	3.26	3.95	4.62	5.20	5.63	6.00
1400	0.00	0.58	1.60	2.79	3.80	4.60	5.39	6.07	6.57	7.00
1600	0.00	0.66	1.83	3.19	4.34	5.26	6.16	6.93	7.50	8.00
1800	0.00	0.75	2.06	3.59	4.88	5.92	6.93	7.80	8.44	9.00
2000	0.00	0.83	2.29	3.99	5.43	6.58	7.70	8.67	9.38	10.00

(shaded cells) The belt speed exceeds 30 m/s. Please use pulleys made of rolled steel for general structure or carbon steel for machine construction.

Table of basic power ratings for Type-3VX Power Ace Cog

(Unit: kW)

Pinion revolution (rpm)	Pinion nominal outside diameter (mm)																				
	56	60	63	67	71	75	80	85	90	95	100	112	125	140	150	160	180	200	250	280	300	315
200	0.17	0.20	0.22	0.24	0.27	0.30	0.33	0.36	0.40	0.43	0.46	0.54	0.63	0.72	0.79	0.85	0.98	1.10	1.41	1.60	1.72	1.81
400	0.31	0.36	0.40	0.45	0.50	0.55	0.62	0.68	0.74	0.81	0.87	1.02	1.18	1.36	1.48	1.61	1.85	2.09	2.67	3.02	3.25	3.42
600	0.43	0.51	0.56	0.64	0.72	0.79	0.88	0.98	1.07	1.16	1.25	1.47	1.70	1.97	2.15	2.32	2.67	3.02	3.87	4.37	4.70	4.95
800	0.55	0.65	0.72	0.82	0.92	1.02	1.14	1.26	1.38	1.50	1.62	1.90	2.21	2.55	2.78	3.01	3.47	3.92	5.01	5.66	6.08	6.40
1000	0.66	0.78	0.87	0.99	1.11	1.23	1.38	1.53	1.68	1.83	1.97	2.32	2.69	3.12	3.40	3.68	4.24	4.78	6.11	6.89	7.40	7.78
1200	0.77	0.91	1.02	1.16	1.30	1.44	1.62	1.80	1.97	2.14	2.32	2.73	3.17	3.67	4.00	4.33	4.98	5.62	7.17	8.07	8.65	9.08
1400	0.87	1.03	1.16	1.32	1.49	1.65	1.85	2.05	2.25	2.45	2.65	3.12	3.63	4.21	4.58	4.96	5.70	6.43	8.18	9.18	9.83	10.31
1600	0.96	1.15	1.29	1.48	1.66	1.85	2.08	2.31	2.53	2.76	2.98	3.51	4.08	4.73	5.15	5.57	6.40	7.20	9.14	10.23	10.93	11.45
1800	1.06	1.27	1.43	1.63	1.84	2.04	2.30	2.55	2.80	3.05	3.30	3.89	4.52	5.23	5.70	6.16	7.07	7.95	10.04	11.21	11.96	12.49
2000	1.15	1.38	1.55	1.78	2.01	2.23	2.51	2.79	3.07	3.34	3.61	4.26	4.95	5.73	6.24	6.74	7.72	8.67	10.90	12.12	12.89	13.44
2200	1.24	1.49	1.68	1.93	2.17	2.42	2.72	3.03	3.33	3.62	3.92	4.62	5.36	6.20	6.75	7.29	8.34	9.36	11.69	12.96	13.73	14.28
2400	1.33	1.60	1.80	2.07	2.33	2.60	2.93	3.25	3.58	3.90	4.22	4.97	5.77	6.67	7.25	7.83	8.94	10.01	12.43	13.70	14.47	15.00
2600	1.41	1.70	1.92	2.21	2.49	2.78	3.13	3.48	3.83	4.17	4.51	5.31	6.16	7.12	7.74	8.34	9.51	10.62	13.10	14.36		
2800	1.49	1.80	2.03	2.34	2.65	2.95	3.33	3.70	4.07	4.43	4.79	5.65	6.55	7.55	8.20	8.84	10.05	11.20	13.70			
3000	1.57	1.90	2.15	2.47	2.80	3.12	3.52	3.91	4.30	4.69	5.07	5.97	6.92	7.97	8.65	9.31	10.57	11.73	14.22			
3200	1.64	1.99	2.26	2.60	2.94	3.28	3.70	4.12	4.53	4.94	5.34	6.28	7.27	8.37	9.08	9.76	11.05	12.23				
3400	1.72	2.09	2.36	2.73	3.09	3.45	3.89	4.32	4.76	5.18	5.60	6.59	7.62	8.76	9.48	10.18	11.49	12.68				
3600	1.79	2.18	2.47	2.85	3.23	3.60	4.07	4.52	4.97	5.42	5.86	6.88	7.95	9.13	9.87	10.58	11.91	13.09				
3800	1.86	2.27	2.57	2.97	3.36	3.76	4.24	4.72	5.19	5.65	6.10	7.17	8.27	9.48	10.24	10.96	12.28	13.44				
4000	1.93	2.35	2.67	3.08	3.50	3.90	4.41	4.90	5.39	5.87	6.34	7.44	8.58	9.81	10.58	11.30	12.63					
4200	1.99	2.43	2.76	3.20	3.63	4.05	4.57	5.09	5.59	6.09	6.58	7.71	8.87	10.12	10.90	11.62	12.93					
4400	2.05	2.51	2.86	3.31	3.75	4.19	4.73	5.26	5.79	6.30	6.80	7.96	9.14	10.41	11.19	11.91						
4600	2.11	2.59	2.95	3.41	3.87	4.33	4.89	5.43	5.97	6.50	7.01	8.20	9.41	10.68	11.46	12.17						
4800	2.17	2.67	3.03	3.52	3.99	4.46	5.04	5.60	6.15	6.69	7.22	8.43	9.65	10.93	11.70	12.40						
5000	2.23	2.74	3.12	3.62	4.11	4.59	5.18	5.76	6.33	6.88	7.42	8.65	9.88	11.16	11.92							
6000	2.48	3.06	3.50	4.06	4.62	5.16	5.83	6.47	7.09	7.69	8.26	9.54	10.77									
7000	2.67	3.32	3.80	4.42	5.03	5.62	6.33	7.01	7.66	8.27	8.85											

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00～1.01	1.02～1.03	1.04～1.06	1.07～1.09	1.10～1.13	1.14～1.18	1.19～1.25	1.26～1.35	1.36～1.57	1.58 or more
200	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03
400	0.00	0.00	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.05
600	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.07	0.08
800	0.00	0.01	0.02	0.04	0.06	0.07	0.08	0.09	0.10	0.10
1000	0.00	0.01	0.03	0.05	0.07	0.08	0.10	0.11	0.12	0.13
1200	0.00	0.01	0.04	0.06	0.08	0.10	0.12	0.13	0.15	0.15
1400	0.00	0.02	0.04	0.07	0.10	0.12	0.14	0.16	0.17	0.18
1600	0.00	0.02	0.05	0.08	0.11	0.14	0.16	0.18	0.19	0.21
1800	0.00	0.02	0.05	0.09	0.13	0.15	0.18	0.20	0.22	0.23
2000	0.00	0.02	0.06	0.10	0.14	0.17	0.20	0.22	0.24	0.26
2200	0.00	0.02	0.06	0.11	0.15	0.19	0.22	0.25	0.27	0.28
2400	0.00	0.03	0.07	0.12	0.17	0.20	0.24	0.27	0.29	0.31
2600	0.00	0.03	0.08	0.13	0.18	0.22	0.26	0.29	0.32	0.33
2800	0.00	0.03	0.08	0.14	0.20	0.24	0.28	0.31	0.34	0.36
3000	0.00	0.03	0.09	0.15	0.21	0.25	0.30	0.33	0.36	0.39
3200	0.00	0.03	0.09	0.16	0.22	0.27	0.32	0.36	0.39	0.41
3400	0.00	0.04	0.10	0.17	0.24	0.29	0.34	0.38	0.41	0.44
3600	0.00	0.04	0.11	0.18	0.25	0.30	0.36	0.40	0.44	0.46
3800	0.00	0.04	0.11	0.19	0.27	0.32	0.38	0.42	0.46	0.49
4000	0.00	0.04	0.12	0.21	0.28	0.34	0.40	0.45	0.49	0.51
4200	0.00	0.05	0.12	0.22	0.29	0.36	0.42	0.47	0.51	0.54
4400	0.00	0.05	0.13	0.23	0.31	0.37	0.44	0.49	0.53	0.57
4600	0.00	0.05	0.14	0.24	0.32	0.39	0.46	0.51	0.56	0.59
4800	0.00	0.05	0.14	0.25	0.33	0.41	0.48	0.54	0.58	0.62
5000	0.00	0.05	0.15	0.26	0.35	0.42	0.50	0.56	0.61	0.64
6000	0.00	0.06	0.18	0.31	0.42	0.51	0.59	0.67	0.73	0.77
7000	0.00	0.08	0.21	0.36	0.49	0.59	0.69	0.78	0.85	0.90

The belt speed exceeds 30 m/s. Please use pulleys made of rolled steel for general structure or carbon steel for machine construction.

Table of basic power ratings for Type-5VX Power Ace Cog

(Unit: kW)

Pinion revolution (rpm)	Pinion nominal outside diameter (mm)																						
	112	118	125	132	140	150	160	170	180	190	200	212	224	236	250	260	280	315	340	355	380	400	450
100	0.53	0.59	0.65	0.72	0.80	0.89	0.99	1.08	1.17	1.27	1.36	1.47	1.58	1.69	1.82	1.91	2.10	2.41	2.64	2.77	3.00	3.18	3.62
200	0.98	1.09	1.22	1.34	1.49	1.67	1.85	2.03	2.21	2.39	2.57	2.78	3.00	3.21	3.46	3.63	3.98	4.59	5.02	5.28	5.71	6.05	6.89
300	1.39	1.56	1.74	1.93	2.14	2.41	2.68	2.94	3.20	3.46	3.72	4.04	4.35	4.66	5.02	5.27	5.78	6.67	7.30	7.67	8.29	8.79	10.02
400	1.79	2.00	2.25	2.49	2.77	3.12	3.47	3.81	4.16	4.50	4.84	5.25	5.65	6.06	6.53	6.86	7.53	8.68	9.50	9.99	10.80	11.44	13.04
500	2.17	2.43	2.73	3.04	3.38	3.81	4.23	4.66	5.08	5.50	5.92	6.42	6.92	7.42	8.00	8.41	9.22	10.64	11.64	12.24	13.23	14.01	15.96
600	2.53	2.84	3.20	3.56	3.97	4.48	4.98	5.49	5.99	6.48	6.98	7.57	8.16	8.75	9.43	9.91	10.88	12.54	13.72	14.42	15.59	16.51	18.78
700	2.89	3.25	3.66	4.08	4.55	5.13	5.72	6.30	6.87	7.45	8.02	8.70	9.38	10.05	10.83	11.39	12.49	14.40	15.75	16.55	17.88	18.93	21.51
800	3.24	3.64	4.11	4.58	5.11	5.77	6.43	7.09	7.74	8.39	9.03	9.80	10.56	11.32	12.21	12.83	14.07	16.22	17.73	18.62	20.10	21.27	24.14
900	3.57	4.03	4.55	5.07	5.67	6.40	7.14	7.86	8.59	9.31	10.03	10.88	11.73	12.57	13.55	14.24	15.62	17.99	19.65	20.63	22.26	23.54	26.66
1000	3.90	4.40	4.98	5.55	6.21	7.02	7.83	8.63	9.42	10.21	11.00	11.94	12.87	13.79	14.86	15.62	17.12	19.71	21.51	22.58	24.34	25.72	29.08
1100	4.23	4.77	5.40	6.03	6.74	7.62	8.50	9.38	10.24	11.10	11.96	12.98	13.99	14.99	16.15	16.97	18.59	21.38	23.32	24.47	26.35	27.82	31.38
1200	4.54	5.13	5.81	6.49	7.26	8.22	9.17	10.11	11.05	11.98	12.90	13.99	15.08	16.16	17.41	18.29	20.03	23.00	25.07	26.29	28.28	29.83	33.56
1300	4.85	5.49	6.22	6.95	7.78	8.80	9.82	10.83	11.84	12.83	13.82	14.99	16.15	17.30	18.63	19.57	21.42	24.57	26.76	28.04	30.12	31.74	35.61
1400	5.15	5.83	6.62	7.39	8.28	9.38	10.46	11.54	12.61	13.67	14.72	15.97	17.20	18.42	19.83	20.82	22.77	26.09	28.38	29.71	31.88	33.56	37.52
1500	5.45	6.17	7.01	7.83	8.77	9.94	11.09	12.24	13.37	14.49	15.60	16.92	18.23	19.51	20.99	22.04	24.09	27.55	29.93	31.31	33.55	35.26	39.28
1600	5.74	6.51	7.39	8.27	9.26	10.49	11.71	12.92	14.11	15.30	16.47	17.85	19.22	20.57	22.12	23.22	25.36	28.96	31.41	32.83	35.12	36.86	40.89
1700	6.03	6.83	7.76	8.69	9.74	11.03	12.32	13.59	14.84	16.08	17.31	18.77	20.20	21.61	23.22	24.36	26.58	30.30	32.82	34.27	36.58	38.34	
1800	6.30	7.15	8.13	9.10	10.20	11.57	12.91	14.24	15.56	16.86	18.14	19.65	21.15	22.61	24.29	25.47	27.76	31.58	34.15	35.62	37.95	39.70	
1900	6.58	7.47	8.49	9.51	10.66	12.09	13.49	14.88	16.25	17.61	18.94	20.52	22.07	23.59	25.32	26.53	28.89	32.79	35.39	36.87	39.20	40.94	
2000	6.84	7.78	8.85	9.91	11.11	12.60	14.06	15.51	16.94	18.34	19.73	21.36	22.96	24.53	26.31	27.56	29.97	33.94	36.56	38.04	40.34		
2400	7.85	8.95	10.19	11.43	12.82	14.54	16.22	17.88	19.50	21.09	22.65	24.47	26.24	27.96	29.90	31.23	33.77	37.79					
2800	8.77	10.02	11.42	12.81	14.38	16.30	18.17	20.00	21.78	23.51	25.20	27.15	29.02	30.81	32.80	34.14							
3000	9.19	10.51	11.99	13.46	15.10	17.10	19.06	20.96	22.80	24.59	26.32	28.31	30.20	32.00	33.96								
3500	10.13	11.57	13.22	14.83	16.63	18.82	20.92	22.95	24.88	26.87	28.49												
4000	10.91	12.56	14.35	16.10	18.03	20.35	22.57	24.66	26.63	28.48													
4500	11.52	13.18	15.07	16.89	18.89	21.25	23.46																
5000	11.93	13.82	15.79	17.68	19.72	22.09																	

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00～1.01	1.02～1.03	1.04～1.06	1.07～1.09	1.10～1.13	1.14～1.18	1.19～1.25	1.26～1.35	1.36～1.57	1.58 or more
100	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.06	0.07
200	0.00	0.01	0.03	0.05	0.07	0.09	0.10	0.11	0.12	0.13
300	0.00	0.02	0.05	0.08	0.11	0.13	0.15	0.17	0.19	0.20
400	0.00	0.02	0.06	0.11	0.14	0.17	0.20	0.23	0.25	0.26
500	0.00	0.03	0.08	0.13	0.18	0.22	0.25	0.29	0.31	0.33
600	0.00	0.03	0.09	0.16	0.21	0.26	0.30	0.34	0.37	0.40
700	0.00	0.04	0.11	0.18	0.25	0.30	0.36	0.40	0.44	0.46
800	0.00	0.04	0.12	0.21	0.29	0.35	0.41	0.46	0.50	0.53
900	0.00	0.05	0.14	0.24	0.32	0.39	0.46	0.51	0.56	0.59
1000	0.00	0.06	0.15	0.26	0.36	0.43	0.51	0.57	0.62	0.66
1100	0.00	0.06	0.17	0.29	0.39	0.48	0.56	0.63	0.68	0.73
1200	0.00	0.07	0.18	0.32	0.43	0.52	0.61	0.69	0.75	0.79
1300	0.00	0.07	0.20	0.34	0.46	0.56	0.66	0.74	0.81	0.86
1400	0.00	0.08	0.21	0.37	0.50	0.61	0.71	0.80	0.87	0.92
1500	0.00	0.08	0.23	0.39	0.54	0.65	0.76	0.86	0.93	0.99
1600	0.00	0.09	0.24	0.42	0.57	0.69	0.81	0.91	1.00	1.05
1700	0.00	0.09	0.26	0.45	0.61	0.74	0.86	0.97	1.06	1.12
1800	0.00	0.10	0.27	0.47	0.64	0.78	0.91	1.03	1.12	1.19
1900	0.00	0.11	0.29	0.50	0.68	0.82	0.96	1.09	1.18	1.25
2000	0.00	0.11	0.30	0.53	0.72	0.87	1.02	1.14	1.24	1.32
2400	0.00	0.13	0.36	0.63	0.86	1.04	1.22	1.37	1.49	1.58
2800	0.00	0.15	0.42	0.74	1.00	1.21	1.42	1.60	1.74	1.85
3000	0.00	0.17	0.45	0.79	1.07	1.30	1.52	1.71	1.87	1.98
3500	0.00	0.19	0.53	0.92	1.25	1.52	1.78	2.00	2.18	2.31
4000	0.00	0.22	0.60	1.05	1.43	1.73	2.03	2.29	2.49	2.64
4500	0.00	0.25	0.68	1.18	1.61	1.95	2.28	2.57	2.80	2.97
5000	0.00	0.28	0.75	1.31	1.79	2.17	2.54	2.86	3.11	3.30

The belt speed exceeds 30 m/s. Please use pulleys made of rolled steel for general structure or carbon steel for machine construction.

Table of basic power ratings for Type-5VK Power Ace Aramid Combo

(Unit: kW)

Pinion revolution (rpm)	Pinion nominal outside diameter (mm)																
	150	160	170	180	190	200	212	224	236	250	260	280	315	340	355	400	450
100	1.34	1.71	2.08	2.45	2.82	3.19	3.63	4.07	4.51	5.02	5.38	6.10	7.36	8.25	8.79	10.39	12.15
150	1.84	2.39	2.93	3.48	4.02	4.56	5.20	5.85	6.49	7.24	7.77	8.83	10.68	11.99	12.78	15.12	17.71
200	2.30	3.01	3.73	4.44	5.15	5.86	6.71	7.56	8.40	9.38	10.08	11.47	13.90	15.62	16.65	19.72	23.11
250	2.71	3.60	4.48	5.37	6.24	7.12	8.17	9.21	10.25	11.46	12.33	14.04	17.04	19.16	20.43	24.22	28.41
300	3.10	4.16	5.21	6.25	7.30	8.34	9.58	10.82	12.06	13.50	14.52	16.56	20.11	22.64	24.14	28.64	33.60
350	3.47	4.69	5.90	7.11	8.32	9.52	10.96	12.40	13.83	15.49	16.67	19.03	23.14	26.05	27.79	32.99	38.71
400	3.81	5.20	6.58	7.95	9.32	10.68	12.31	13.94	15.56	17.44	18.79	21.46	26.11	29.41	31.38	37.27	43.75
450	4.14	5.69	7.23	8.76	10.29	11.81	13.64	15.45	17.26	19.37	20.87	23.85	29.04	32.73	34.93	41.49	48.71
500	4.45	6.16	7.86	9.55	11.24	12.92	14.94	16.94	18.94	21.26	22.92	26.21	31.94	36.00	38.42	45.65	53.61
550	4.75	6.62	8.48	10.33	12.17	14.01	16.21	18.41	20.59	23.13	24.94	28.54	34.79	39.23	41.88	49.77	58.44
600	5.03	7.06	9.08	11.09	13.09	15.09	17.47	19.85	22.22	24.97	26.93	30.83	37.61	42.42	45.29	53.83	63.21
650	5.30	7.49	9.66	11.83	13.99	16.14	18.71	21.27	23.82	26.79	28.90	33.10	40.40	45.57	48.65	57.84	67.92
700	5.56	7.90	10.23	12.56	14.87	17.17	19.93	22.67	25.41	28.58	30.84	35.34	43.15	48.68	51.98	61.80	72.56
800	6.05	8.70	11.34	13.97	16.59	19.20	22.32	25.42	28.52	32.11	34.66	39.75	48.57	54.80	58.52	69.57	81.67
900	6.49	9.45	12.40	15.33	18.26	21.17	24.64	28.10	31.55	35.55	38.39	44.05	53.86	60.78	64.91	77.15	90.52
1000	6.90	10.17	13.42	16.65	19.87	23.08	26.91	30.72	34.51	38.91	42.04	48.26	59.03	66.62	71.14	84.54	99.12
1200	7.62	11.48	15.33	19.15	22.96	26.74	31.26	35.76	40.23	45.41	49.09	56.39	69.00	77.88	83.14	98.70	115.51
1400	8.21	12.66	17.08	21.48	25.86	30.21	35.40	40.55	45.67	51.60	55.80	64.14	78.49	88.54	94.50	112.00	130.75
1600	8.69	13.71	18.70	23.66	28.59	33.48	39.31	45.10	50.84	57.48	62.19	71.50	87.46	98.60	105.17	124.37	144.75
1800	9.05	14.63	20.18	25.68	31.14	36.56	43.02	49.41	55.75	63.06	68.23	78.45	95.89	108.00	115.11	135.75	
2000	9.31	15.44	21.51	27.54	33.52	39.45	46.50	53.47	60.36	68.31	73.92	84.98	103.75	116.70	124.27		
2200	9.46	16.11	22.71	29.25	35.72	42.14	49.75	57.27	64.69	73.23	79.24	91.05	111.00				
2400	9.50	16.67	23.77	30.80	37.75	44.62	52.77	60.80	68.71	77.79	84.17	96.66	117.60				
2600	9.43	17.10	24.69	32.18	39.58	46.89	55.54	64.05	72.41	81.98	88.68						
2800	9.26	17.41	25.45	33.39	41.23	48.95	58.06	67.01	75.78	85.78	92.77						
3000	8.97	17.58	26.07	34.44	42.67	50.78	60.32	69.66	78.80	89.17							
3500	7.75	17.42	26.92	36.24	45.37	54.30	64.74										
3800	6.65	16.90	26.94	36.74	46.31	55.64											

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.05	1.06~1.11	1.12~1.18	1.19~1.26	1.27~1.38	1.39~1.57	1.58~1.94	1.95~3.38	3.39 or more
100	0.00	0.04	0.11	0.20	0.27	0.33	0.39	0.44	0.47	0.50
150	0.00	0.06	0.17	0.30	0.41	0.50	0.58	0.65	0.71	0.75
200	0.00	0.08	0.23	0.40	0.54	0.66	0.77	0.87	0.94	1.00
250	0.00	0.10	0.29	0.50	0.68	0.83	0.97	1.09	1.18	1.26
300	0.00	0.13	0.34	0.60	0.82	0.99	1.16	1.31	1.41	1.51
350	0.00	0.15	0.40	0.70	0.95	1.16	1.35	1.52	1.65	1.76
400	0.00	0.17	0.46	0.80	1.09	1.32	1.55	1.74	1.88	2.01
450	0.00	0.19	0.52	0.90	1.23	1.49	1.74	1.96	2.12	2.26
500	0.00	0.21	0.57	1.00	1.36	1.65	1.93	2.18	2.35	2.51
550	0.00	0.23	0.63	1.10	1.50	1.82	2.13	2.39	2.59	2.76
600	0.00	0.25	0.69	1.20	1.63	1.98	2.32	2.61	2.83	3.01
650	0.00	0.27	0.75	1.30	1.77	2.15	2.51	2.83	3.06	3.26
700	0.00	0.29	0.80	1.40	1.91	2.31	2.71	3.05	3.30	3.52
800	0.00	0.33	0.92	1.60	2.18	2.64	3.09	3.48	3.77	4.02
900	0.00	0.38	1.03	1.80	2.45	2.97	3.48	3.92	4.24	4.52
1000	0.00	0.42	1.15	2.00	2.72	3.30	3.87	4.35	4.71	5.02
1200	0.00	0.50	1.38	2.40	3.27	3.96	4.64	5.22	5.65	6.03
1400	0.00	0.58	1.61	2.80	3.81	4.62	5.41	6.09	6.59	7.03
1600	0.00	0.67	1.84	3.20	4.36	5.28	6.19	6.96	7.54	8.04
1800	0.00	0.75	2.07	3.60	4.90	5.94	6.96	7.83	8.48	9.04
2000	0.00	0.83	2.30	4.00	5.45	6.60	7.74	8.71	9.42	10.05
2200	0.00	0.92	2.53	4.40	5.99	7.26	8.51	9.58	10.36	11.05
2400	0.00	1.00	2.76	4.80	6.54	7.93	9.28	10.45	11.30	12.05
2600	0.00	1.08	2.99	5.20	7.08	8.59	10.06	11.32	12.25	13.06
2800	0.00	1.17	3.22	5.61	7.63	9.25	10.83	12.19	13.19	14.06
3000	0.00	1.25	3.45	6.01	8.17	9.91	11.60	13.06	14.13	15.07
3500	0.00	1.46	4.02	7.01	9.54	11.56	13.54	15.23	16.48	17.58
3800	0.00	1.58	4.36	7.61	10.35	12.55	14.70	16.54	17.90	19.09

(Shaded) The belt speed exceeds 30 m/s. Please use pulleys made of rolled steel for general structure or carbon steel for machine construction.

Table of basic power ratings for Type-8VK Power Ace Aramid Combo

(Unit: kW)

Pinion revolution (rpm)	Pinion nominal outside diameter (mm)																
	300	315	335	355	375	400	425	450	460	475	500	520	540	560	600	630	710
50	2.68	3.22	3.94	4.66	5.38	6.28	7.17	8.07	8.42	8.96	9.85	10.57	11.28	11.99	13.42	14.48	17.32
60	3.18	3.83	4.69	5.55	6.40	7.48	8.55	9.62	10.04	10.69	11.75	12.61	13.46	14.31	16.02	17.29	20.69
70	3.67	4.42	5.42	6.42	7.42	8.67	9.91	11.16	11.66	12.40	13.64	14.64	15.63	16.62	18.60	20.09	24.04
80	4.15	5.01	6.15	7.29	8.43	9.85	11.27	12.69	13.26	14.11	15.53	16.66	17.79	18.92	21.18	22.87	27.38
90	4.63	5.59	6.88	8.16	9.43	11.03	12.63	14.22	14.86	15.81	17.40	18.67	19.94	21.21	23.75	25.64	30.70
100	5.11	6.17	7.60	9.02	10.43	12.20	13.97	15.74	16.44	17.50	19.27	20.68	22.08	23.49	26.30	28.41	34.02
110	5.58	6.75	8.31	9.87	11.43	13.37	15.31	17.25	18.03	19.19	21.13	22.67	24.22	25.77	28.85	31.17	37.33
120	6.05	7.32	9.02	10.72	12.42	14.53	16.65	18.76	19.61	20.87	22.98	24.67	26.35	28.03	31.40	33.92	40.62
130	6.51	7.89	9.73	11.57	13.40	15.69	17.98	20.27	21.18	22.55	24.83	26.65	28.48	30.30	33.93	36.66	43.92
140	6.97	8.46	10.44	12.41	14.38	16.85	19.31	21.77	22.75	24.22	26.67	28.64	30.60	32.55	36.47	39.40	47.20
150	7.43	9.02	11.14	13.25	15.36	18.00	20.63	23.26	24.31	25.89	28.51	30.61	32.71	34.80	38.99	42.13	50.48
200	9.69	11.80	14.61	17.41	20.21	23.71	27.20	30.69	32.08	34.17	37.65	40.44	43.22	46.00	51.55	55.71	66.78
300	14.08	17.22	21.40	25.57	29.74	34.94	40.14	45.34	47.41	50.52	55.71	59.85	63.99	68.12	76.39	82.58	99.05
400	18.34	22.50	28.04	33.57	39.10	46.00	52.90	59.78	62.53	66.66	73.53	79.02	84.51	89.99	100.95	109.15	130.99
500	22.50	27.68	34.57	41.46	48.34	56.93	65.51	74.08	77.50	82.64	91.19	98.02	104.85	111.67	125.30	135.50	162.67
600	26.58	32.77	41.01	49.25	57.48	67.75	78.00	88.25	92.34	98.48	108.70	116.86	125.02	133.18	149.46	161.66	194.12
700	30.59	37.79	47.38	56.96	66.53	78.47	90.39	102.31	107.07	114.20	126.08	135.58	145.06	154.54	173.47	187.64	225.36
800	34.55	42.75	53.68	64.60	75.50	89.11	102.70	116.27	121.69	129.82	143.35	154.17	164.97	175.77	197.33	213.47	256.40
900	38.45	47.66	59.92	72.17	84.40	99.67	114.92	130.14	136.22	145.34	160.52	172.65	184.77	196.87	221.04	239.14	287.26
1000	42.30	52.51	66.10	79.68	93.24	110.16	127.06	143.93	150.67	160.77	177.59	191.03	204.45	217.86	244.63	264.67	317.94
1100	46.11	57.32	72.24	87.14	102.02	120.59	139.12	157.63	165.03	176.11	194.56	209.30	224.02	238.73	268.08	290.05	
1200	49.88	62.08	78.32	94.54	110.74	130.95	151.12	171.26	179.31	191.37	211.44	227.48	243.49	259.48	291.40	315.28	
1300	53.60	66.80	84.36	101.89	119.40	141.25	163.05	184.82	193.51	206.54	228.23	245.55	262.85	280.12			
1400	57.29	71.47	90.35	109.19	128.01	151.48	174.91	198.30	207.64	221.64	244.93	263.53	282.10				
1500	60.95	76.11	96.30	116.45	136.57	161.66	186.71	211.70	221.69	236.65	261.54						
1600	64.57	80.71	102.20	123.66	145.07	171.79	198.44	225.04	235.66	251.58							
1800	71.70	89.80	113.89	137.94	161.93	191.86	221.71										
2000	78.70	98.74	125.42	152.03	178.59												

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.05	1.06~1.11	1.12~1.18	1.19~1.26	1.27~1.38	1.39~1.57	1.58~1.94	1.95~3.38	3.39 or more
50	0.00	0.08	0.21	0.37	0.50	0.61	0.71	0.80	0.86	0.92
60	0.00	0.09	0.25	0.44	0.60	0.73	0.85	0.96	1.04	1.11
70	0.00	0.11	0.29	0.51	0.70	0.85	0.99	1.12	1.21	1.29
80	0.00	0.12	0.34	0.59	0.80	0.97	1.13	1.28	1.38	1.47
90	0.00	0.14	0.38	0.66	0.90	1.09	1.28	1.44	1.55	1.66
100	0.00	0.15	0.42	0.73	1.00	1.21	1.42	1.60	1.73	1.84
110	0.00	0.17	0.46	0.81	1.10	1.33	1.56	1.76	1.90	2.03
120	0.00	0.19	0.51	0.88	1.20	1.45	1.70	1.92	2.07	2.21
130	0.00	0.20	0.55	0.95	1.30	1.57	1.84	2.08	2.25	2.40
140	0.00	0.22	0.59	1.03	1.40	1.70	1.99	2.24	2.42	2.58
150	0.00	0.23	0.63	1.10	1.50	1.82	2.13	2.40	2.59	2.76
200	0.00	0.31	0.84	1.47	2.00	2.42	2.84	3.19	3.46	3.68
300	0.00	0.46	1.26	2.20	3.00	3.63	4.26	4.79	5.18	5.53
400	0.00	0.62	1.69	2.94	4.00	4.85	5.67	6.39	6.91	7.37
500	0.00	0.77	2.11	3.67	5.00	6.06	7.09	7.98	8.64	9.21
600	0.00	0.93	2.53	4.41	6.00	7.27	8.51	9.58	10.37	11.05
700	0.00	1.08	2.95	5.14	7.00	8.48	9.93	11.18	12.09	12.90
800	0.00	1.24	3.37	5.87	8.00	9.69	11.35	12.77	13.82	14.74
900	0.00	1.39	3.79	6.61	9.00	10.90	12.77	14.37	15.55	16.58
1000	0.00	1.55	4.21	7.34	9.99	12.11	14.19	15.97	17.28	18.42
1100	0.00	1.70	4.63	8.08	10.99	13.32	15.61	17.56	19.00	20.27
1200	0.00	1.86	5.06	8.81	11.99	14.54	17.02	19.16	20.73	22.11
1300	0.00	2.01	5.48	9.55	12.99	15.75	18.44	20.76	22.46	23.95
1400	0.00	2.16	5.90	10.28	13.99	16.96	19.86	22.35	24.19	25.79
1500	0.00	2.32	6.32	11.01	14.99	18.17	21.28	23.95	25.92	27.64
1600	0.00	2.47	6.74	11.75	15.99	19.38	22.70	25.55	27.64	29.48
1800	0.00	2.78	7.58	13.22	17.99	21.80	25.54	28.74	31.10	33.16
2000	0.00	3.09	8.43	14.69	19.99	24.23	28.37	31.93	34.55	36.85

(Shaded) The belt speed exceeds 30 m/s. Please use pulleys made of rolled steel for general structure or carbon steel for machine construction.

Table of basic power ratings for Type-A Standard

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	67	71	75	80	85	90	95	100	106	112	118	125	132	140	155
200	0.12	0.14	0.16	0.18	0.20	0.22	0.25	0.27	0.29	0.32	0.34	0.37	0.40	0.44	0.50
400	0.20	0.24	0.27	0.31	0.35	0.40	0.44	0.48	0.53	0.57	0.62	0.68	0.73	0.80	0.91
600	0.27	0.32	0.37	0.43	0.49	0.55	0.61	0.67	0.74	0.81	0.88	0.96	1.04	1.13	1.29
800	0.33	0.40	0.46	0.54	0.61	0.69	0.77	0.84	0.93	1.02	1.11	1.21	1.32	1.43	1.65
1000	0.39	0.46	0.54	0.63	0.73	0.82	0.91	1.01	1.12	1.23	1.33	1.46	1.58	1.72	1.99
1200	0.43	0.52	0.61	0.73	0.84	0.95	1.05	1.16	1.29	1.42	1.54	1.69	1.84	2.00	2.30
1400	0.48	0.58	0.68	0.81	0.94	1.06	1.19	1.31	1.46	1.60	1.74	1.91	2.07	2.26	2.60
1600	0.51	0.63	0.75	0.89	1.03	1.17	1.31	1.45	1.61	1.77	1.93	2.11	2.30	2.50	2.87
1800	0.55	0.68	0.81	0.96	1.12	1.27	1.43	1.58	1.76	1.93	2.11	2.31	2.50	2.72	3.12
2000	0.58	0.72	0.86	1.03	1.20	1.37	1.53	1.70	1.89	2.08	2.27	2.48	2.69	2.93	3.35
2200	0.61	0.76	0.91	1.09	1.28	1.46	1.64	1.81	2.02	2.22	2.42	2.65	2.87	3.12	3.56
2400	0.63	0.79	0.95	1.15	1.35	1.54	1.73	1.92	2.13	2.35	2.56	2.80	3.03	3.28	3.73
2600	0.65	0.82	0.99	1.20	1.41	1.61	1.81	2.01	2.24	2.47	2.68	2.93	3.17	3.43	3.89
2800	0.66	0.85	1.03	1.25	1.47	1.68	1.89	2.10	2.34	2.57	2.79	3.05	3.29	3.55	4.01
3000	0.67	0.87	1.06	1.29	1.52	1.74	1.96	2.17	2.42	2.66	2.89	3.15	3.39	3.65	4.10
3200	0.68	0.88	1.08	1.33	1.56	1.80	2.02	2.24	2.49	2.74	2.97	3.23	3.47	3.73	4.15
3400	0.69	0.90	1.10	1.36	1.60	1.84	2.07	2.30	2.55	2.80	3.03	3.29	3.53	3.78	4.18
3600	0.69	0.91	1.12	1.38	1.63	1.88	2.11	2.34	2.60	2.85	3.08	3.33	3.56	3.80	4.16
3800	0.68	0.91	1.13	1.40	1.66	1.91	2.14	2.37	2.64	2.88	3.11	3.35	3.57	3.80	
4000	0.67	0.91	1.13	1.41	1.67	1.92	2.17	2.40	2.66	2.90	3.12	3.35	3.56	3.76	
4500	0.63	0.88	1.12	1.40	1.68	1.93	2.17	2.40	2.64	2.87	3.06	3.25			
5000	0.57	0.82	1.07	1.36	1.63	1.88	2.11	2.31	2.53	2.72					
5500	0.47	0.73	0.97	1.26	1.52	1.75	1.96	2.14							
6000	0.34	0.60	0.84	1.11	1.35	1.56	1.73								
6500	0.17	0.43	0.65	0.90	1.12										
7000		0.21	0.42	0.64											

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.04	1.05~1.08	1.09~1.12	1.13~1.18	1.19~1.24	1.25~1.34	1.35~1.51	1.52~1.99	2.00 or more
200	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03
400	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
600	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08
800	0.00	0.01	0.02	0.03	0.04	0.06	0.07	0.08	0.09	0.10
1000	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
1200	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
1400	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
1600	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.16	0.18	0.20
1800	0.00	0.03	0.05	0.08	0.10	0.13	0.15	0.18	0.20	0.23
2000	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.22	0.25
2200	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.25	0.28
2400	0.00	0.03	0.07	0.10	0.13	0.17	0.20	0.23	0.27	0.30
2600	0.00	0.04	0.07	0.11	0.15	0.18	0.22	0.25	0.29	0.33
2800	0.00	0.04	0.08	0.12	0.16	0.20	0.23	0.27	0.31	0.35
3000	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.29	0.33	0.38
3200	0.00	0.04	0.09	0.13	0.18	0.22	0.27	0.31	0.36	0.40
3400	0.00	0.05	0.09	0.14	0.19	0.24	0.28	0.33	0.38	0.43
3600	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45
3800	0.00	0.05	0.11	0.16	0.21	0.27	0.32	0.37	0.42	0.48
4000	0.00	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.45	0.50
4500	0.00	0.06	0.13	0.19	0.25	0.31	0.38	0.44	0.50	0.56
5000	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63
5500	0.00	0.08	0.15	0.23	0.31	0.38	0.46	0.54	0.61	0.69
6000	0.00	0.08	0.17	0.25	0.33	0.42	0.50	0.59	0.67	0.75
6500	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.73	0.82
7000	0.00	0.10	0.20	0.29	0.39	0.49	0.59	0.68	0.78	0.88

Table of basic power ratings for Type-B Standard

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	118	125	132	140	155	160	170	180	190	200	212	224	236	250	265
100	0.25	0.27	0.30	0.33	0.39	0.41	0.45	0.49	0.53	0.57	0.61	0.66	0.70	0.76	0.81
200	0.43	0.48	0.54	0.59	0.71	0.74	0.81	0.89	0.96	1.03	1.12	1.20	1.29	1.39	1.49
300	0.59	0.67	0.74	0.83	0.99	1.04	1.15	1.25	1.36	1.46	1.58	1.71	1.83	1.97	2.12
400	0.74	0.84	0.94	1.05	1.26	1.32	1.46	1.60	1.73	1.86	2.02	2.18	2.34	2.52	2.72
500	0.88	1.00	1.12	1.26	1.51	1.59	1.76	1.92	2.09	2.25	2.44	2.64	2.83	3.05	3.28
600	1.01	1.15	1.29	1.45	1.75	1.85	2.04	2.24	2.43	2.62	2.85	3.07	3.29	3.55	3.83
700	1.13	1.30	1.46	1.64	1.98	2.09	2.31	2.54	2.75	2.97	3.23	3.49	3.74	4.03	4.34
800	1.25	1.43	1.61	1.82	2.20	2.33	2.58	2.82	3.07	3.31	3.60	3.88	4.17	4.49	4.83
900	1.36	1.56	1.76	1.99	2.41	2.55	2.83	3.10	3.37	3.64	3.95	4.26	4.57	4.93	5.30
1000	1.46	1.69	1.91	2.15	2.61	2.77	3.07	3.36	3.66	3.95	4.29	4.62	4.96	5.34	5.73
1100	1.56	1.80	2.04	2.31	2.81	2.97	3.30	3.62	3.93	4.24	4.61	4.97	5.32	5.72	6.14
1200	1.66	1.92	2.17	2.46	2.99	3.17	3.51	3.86	4.19	4.52	4.91	5.29	5.66	6.08	6.52
1300	1.75	2.02	2.30	2.60	3.17	3.36	3.72	4.08	4.44	4.78	5.19	5.59	5.98	6.42	6.87
1400	1.83	2.12	2.41	2.74	3.34	3.53	3.92	4.30	4.67	5.03	5.46	5.87	6.27	6.72	7.18
1500	1.91	2.22	2.52	2.87	3.50	3.70	4.11	4.50	4.89	5.26	5.70	6.13	6.54	6.99	7.46
1600	1.98	2.31	2.63	2.99	3.65	3.86	4.28	4.69	5.09	5.48	5.93	6.36	6.78	7.24	7.70
1700	2.05	2.39	2.73	3.10	3.79	4.01	4.44	4.87	5.28	5.67	6.13	6.57	6.99	7.45	7.91
1800	2.12	2.47	2.82	3.21	3.92	4.15	4.59	5.03	5.45	5.85	6.32	6.76	7.17	7.62	8.07
1900	2.18	2.54	2.90	3.31	4.04	4.27	4.73	5.18	5.60	6.01	6.48	6.91	7.32	7.77	8.19
2000	2.23	2.61	2.98	3.40	4.15	4.39	4.86	5.31	5.74	6.15	6.61	7.05	7.45	7.87	8.27
2200	2.32	2.72	3.12	3.55	4.33	4.58	5.06	5.52	5.95	6.36	6.81	7.22	7.59	7.96	
2400	2.39	2.81	3.22	3.67	4.48	4.73	5.22	5.67	6.09	6.48	6.90	7.27	7.58		
2600	2.43	2.87	3.29	3.76	4.57	4.82	5.30	5.74	6.15	6.50	6.88				
2800	2.45	2.90	3.33	3.80	4.62	4.86	5.33	5.74	6.11	6.43					
3000	2.45	2.90	3.34	3.81	4.61	4.84	5.28	5.66	5.98						
3500	2.31	2.77	3.19	3.63	4.33	4.52									
4000	1.99	2.42	2.79	3.15											

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.04	1.05~1.08	1.09~1.12	1.13~1.18	1.19~1.24	1.25~1.34	1.35~1.51	1.52~1.99	2.00 or more
100	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03
200	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07
300	0.00	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.10
400	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
500	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.16
600	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.15	0.18	0.20
700	0.00	0.03	0.05	0.08	0.10	0.13	0.15	0.18	0.20	0.23
800	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.20	0.23	0.26
900	0.00	0.03	0.07	0.10	0.13	0.16	0.20	0.23	0.26	0.30
1000	0.00	0.04	0.07	0.11	0.15	0.18	0.22	0.26	0.29	0.33
1100	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36
1200	0.00	0.04	0.09	0.13	0.18	0.22	0.26	0.31	0.35	0.40
1300	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43
1400	0.00	0.05	0.10	0.15	0.20	0.26	0.31	0.36	0.41	0.46
1500	0.00	0.05	0.11	0.16	0.22	0.27	0.33	0.38	0.44	0.49
1600	0.00	0.06	0.12	0.18	0.23	0.29	0.35	0.41	0.47	0.53
1700	0.00	0.06	0.12	0.19	0.25	0.31	0.37	0.44	0.50	0.56
1800	0.00	0.07	0.13	0.20	0.26	0.33	0.39	0.46	0.53	0.59
1900	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63
2000	0.00	0.07	0.15	0.22	0.29	0.37	0.44	0.51	0.59	0.66
2200	0.00	0.08	0.16	0.24	0.32	0.40	0.48	0.56	0.64	0.72
2400	0.00	0.09	0.18	0.26	0.35	0.44	0.53	0.61	0.70	0.79
2600	0.00	0.10	0.19	0.29	0.38	0.48	0.57	0.67	0.76	0.86
2800	0.00	0.10	0.21	0.31	0.41	0.51	0.61	0.72	0.82	0.92
3000	0.00	0.11	0.22	0.33	0.44	0.55	0.66	0.77	0.88	0.99
3500	0.00	0.13	0.26	0.38	0.51	0.64	0.77	0.90	1.02	1.15
4000	0.00	0.15	0.29	0.44	0.59	0.73	0.88	1.02	1.17	1.32

Table of basic power ratings for Type-C Standard

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	180	190	200	212	224	236	250	265	280	300	315	335	355	375	400
50	0.37	0.41	0.45	0.50	0.54	0.59	0.64	0.69	0.75	0.82	0.87	0.95	1.02	1.09	1.18
100	0.66	0.73	0.80	0.89	0.97	1.05	1.15	1.25	1.36	1.50	1.60	1.73	1.87	2.00	2.17
150	0.91	1.01	1.12	1.24	1.36	1.48	1.62	1.77	1.92	2.12	2.27	2.46	2.66	2.85	3.09
200	1.14	1.28	1.41	1.57	1.73	1.88	2.07	2.26	2.46	2.71	2.90	3.16	3.41	3.66	3.97
250	1.36	1.53	1.69	1.88	2.08	2.27	2.49	2.73	2.97	3.28	3.51	3.82	4.13	4.43	4.81
300	1.57	1.76	1.95	2.18	2.41	2.64	2.90	3.18	3.46	3.83	4.10	4.46	4.82	5.18	5.63
350	1.77	1.99	2.21	2.47	2.73	2.99	3.29	3.62	3.93	4.36	4.67	5.08	5.50	5.90	6.41
400	1.95	2.20	2.45	2.75	3.04	3.34	3.68	4.04	4.39	4.87	5.22	5.69	6.15	6.60	7.17
450	2.14	2.41	2.69	3.02	3.34	3.67	4.04	4.44	4.84	5.36	5.75	6.27	6.78	7.28	7.90
500	2.31	2.61	2.92	3.28	3.64	3.99	4.40	4.84	5.27	5.85	6.27	6.83	7.38	7.93	8.61
550	2.48	2.81	3.14	3.53	3.92	4.30	4.75	5.22	5.69	6.31	6.77	7.38	7.97	8.56	9.29
600	2.64	3.00	3.35	3.77	4.19	4.61	5.09	5.60	6.10	6.76	7.26	7.90	8.54	9.17	9.94
650	2.80	3.18	3.56	4.01	4.46	4.90	5.41	5.96	6.49	7.20	7.72	8.41	9.08	9.75	10.56
700	2.95	3.35	3.76	4.24	4.71	5.19	5.73	6.31	6.88	7.62	8.17	8.90	9.61	10.30	11.16
750	3.09	3.52	3.95	4.46	4.96	5.46	6.04	6.64	7.24	8.03	8.61	9.37	10.11	10.84	11.72
800	3.23	3.68	4.14	4.67	5.20	5.73	6.33	6.97	7.60	8.42	9.03	9.82	10.59	11.34	12.25
850	3.36	3.84	4.32	4.88	5.44	5.99	6.62	7.28	7.94	8.80	9.42	10.24	11.04	11.82	12.75
900	3.49	3.99	4.49	5.08	5.66	6.23	6.89	7.59	8.27	9.16	9.81	10.65	11.47	12.27	13.22
950	3.61	4.14	4.66	5.27	5.87	6.47	7.16	7.88	8.58	9.50	10.17	11.04	11.88	12.69	13.65
1000	3.73	4.28	4.82	5.45	6.08	6.70	7.41	8.15	8.88	9.82	10.51	11.40	12.25	13.08	14.05
1200	4.15	4.77	5.39	6.11	6.82	7.52	8.31	9.13	9.93	10.95	11.68	12.61	13.49	14.31	15.25
1400	4.48	5.17	5.85	6.64	7.42	8.17	9.01	9.88	10.71	11.76	12.49	13.40	14.22	14.96	15.76
1600	4.71	5.46	6.19	7.03	7.85	8.63	9.50	10.38	11.21	12.22	12.90	13.71	14.40		
1800	4.85	5.64	6.40	7.27	8.11	8.89	9.76	10.61	11.38	12.29	12.86				
2000	4.88	5.69	6.47	7.35	8.17	8.94	9.76	10.53	11.21						
2500	4.45	5.24	5.97	6.74	7.42										
3000	3.19	3.82													

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.04	1.05~1.08	1.09~1.12	1.13~1.18	1.19~1.24	1.25~1.34	1.35~1.51	1.52~1.99	2.00 or more
50	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
100	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
150	0.00	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14
200	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
250	0.00	0.03	0.05	0.08	0.10	0.13	0.15	0.18	0.20	0.23
300	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27
350	0.00	0.04	0.07	0.11	0.14	0.18	0.21	0.25	0.28	0.32
400	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.33	0.37
450	0.00	0.05	0.09	0.14	0.18	0.23	0.27	0.32	0.37	0.41
500	0.00	0.05	0.10	0.15	0.20	0.25	0.31	0.36	0.41	0.46
550	0.00	0.06	0.11	0.17	0.22	0.28	0.34	0.39	0.45	0.50
600	0.00	0.06	0.12	0.18	0.24	0.31	0.37	0.43	0.49	0.55
650	0.00	0.07	0.13	0.20	0.26	0.33	0.40	0.46	0.53	0.59
700	0.00	0.07	0.14	0.21	0.28	0.36	0.43	0.50	0.57	0.64
750	0.00	0.08	0.15	0.23	0.31	0.38	0.46	0.53	0.61	0.69
800	0.00	0.08	0.16	0.24	0.33	0.41	0.49	0.57	0.65	0.73
850	0.00	0.09	0.17	0.26	0.35	0.43	0.52	0.60	0.69	0.78
900	0.00	0.09	0.18	0.27	0.37	0.46	0.55	0.64	0.73	0.82
950	0.00	0.10	0.19	0.29	0.39	0.48	0.58	0.68	0.77	0.87
1000	0.00	0.10	0.20	0.30	0.41	0.51	0.61	0.71	0.81	0.92
1200	0.00	0.12	0.24	0.37	0.49	0.61	0.73	0.85	0.98	1.10
1400	0.00	0.14	0.29	0.43	0.57	0.71	0.85	1.00	1.14	1.28
1600	0.00	0.16	0.33	0.49	0.65	0.81	0.98	1.14	1.30	1.46
1800	0.00	0.18	0.37	0.55	0.73	0.92	1.10	1.28	1.46	1.65
2000	0.00	0.20	0.41	0.61	0.81	1.02	1.22	1.42	1.63	1.83
2500	0.00	0.25	0.51	0.76	1.02	1.27	1.53	1.78	2.03	2.29
3000	0.00	0.31	0.61	0.91	1.22	1.53	1.83	2.14	2.44	2.75

How to Design a Frictional Forced Power Transmission Belt
Table of Basic Power Ratings

Table of basic power ratings for Type-D Standard

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	300	315	335	355	375	400	425	450	475	500	530	560	600	630	670
20	0.58	0.63	0.69	0.76	0.83	0.91	0.99	1.07	1.15	1.23	1.33	1.43	1.55	1.65	1.78
40	1.02	1.11	1.24	1.36	1.49	1.64	1.80	1.95	2.10	2.25	2.44	2.62	2.85	3.03	3.27
60	1.41	1.55	1.73	1.91	2.09	2.32	2.54	2.76	2.98	3.20	3.46	3.72	4.07	4.33	4.67
80	1.78	1.96	2.19	2.43	2.66	2.95	3.24	3.53	3.82	4.10	4.44	4.78	5.23	5.56	6.01
100	2.13	2.34	2.63	2.92	3.21	3.56	3.92	4.27	4.62	4.97	5.38	5.80	6.35	6.75	7.30
150	2.93	3.24	3.66	4.07	4.49	5.00	5.51	6.02	6.52	7.02	7.62	8.22	9.00	9.59	10.37
200	3.66	4.07	4.61	5.15	5.68	6.34	7.00	7.66	8.31	8.96	9.73	10.50	11.51	12.26	13.26
250	4.34	4.83	5.50	6.15	6.80	7.61	8.42	9.21	10.01	10.79	11.73	12.65	13.88	14.79	15.99
300	4.97	5.56	6.33	7.10	7.87	8.82	9.76	10.69	11.62	12.53	13.62	14.70	16.12	17.18	18.56
350	5.57	6.24	7.13	8.01	8.88	9.96	11.04	12.10	13.15	14.19	15.42	16.64	18.24	19.43	20.98
400	6.13	6.88	7.88	8.87	9.84	11.05	12.25	13.43	14.60	15.76	17.13	18.47	20.24	21.54	23.24
450	6.66	7.49	8.59	9.68	10.76	12.09	13.40	14.70	15.98	17.24	18.73	20.20	22.11	23.50	25.33
500	7.15	8.06	9.26	10.45	11.62	13.07	14.49	15.90	17.28	18.64	20.23	21.80	23.83	25.32	27.23
550	7.62	8.60	9.90	11.18	12.44	13.99	15.52	17.02	18.49	19.94	21.63	23.28	25.42	26.96	28.95
600	8.05	9.11	10.49	11.86	13.21	14.86	16.48	18.07	19.62	21.14	22.92	24.64	26.85	28.44	30.46
650	8.46	9.58	11.05	12.50	13.93	15.67	17.38	19.04	20.67	22.25	24.09	25.86	28.12	29.73	31.75
700	8.83	10.02	11.57	13.09	14.59	16.42	18.20	19.94	21.62	23.25	25.14	26.94	29.22	30.82	32.82
750	9.17	10.42	12.05	13.64	15.21	17.11	18.96	20.75	22.47	24.14	26.05	27.87	30.14	31.71	33.64
800	9.48	10.78	12.48	14.14	15.76	17.73	19.64	21.47	23.23	24.92	26.84	28.65	30.87	32.39	34.20
850	9.76	11.11	12.88	14.59	16.27	18.29	20.24	22.10	23.88	25.57	27.48	29.26	31.40	32.83	34.50
900	10.00	11.40	13.22	15.00	16.71	18.78	20.76	22.64	24.42	26.10	27.98	29.70	31.72	33.04	
1000	10.39	11.87	13.79	15.64	17.42	19.54	21.54	23.41	25.16	26.76	28.50	30.03			
1200	10.71	12.30	14.32	16.24	18.03	20.11	21.99	23.66	25.11						
1400	10.39	12.00	13.99	15.82	17.47	19.27									
1600	9.35	10.87	12.69	14.26											
1800	7.52	8.84													

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.04	1.05~1.08	1.09~1.12	1.13~1.18	1.19~1.24	1.25~1.34	1.35~1.51	1.52~1.99	2.00 or more
20	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.06
40	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
60	0.00	0.02	0.04	0.06	0.09	0.11	0.13	0.15	0.17	0.19
80	0.00	0.03	0.06	0.09	0.12	0.14	0.17	0.20	0.23	0.26
100	0.00	0.04	0.07	0.11	0.14	0.18	0.22	0.25	0.29	0.32
150	0.00	0.05	0.11	0.16	0.22	0.27	0.32	0.38	0.43	0.49
200	0.00	0.07	0.14	0.22	0.29	0.36	0.43	0.50	0.58	0.65
250	0.00	0.09	0.18	0.27	0.36	0.45	0.54	0.63	0.72	0.81
300	0.00	0.11	0.22	0.32	0.43	0.54	0.65	0.76	0.87	0.97
350	0.00	0.13	0.25	0.38	0.51	0.63	0.76	0.88	1.01	1.14
400	0.00	0.14	0.29	0.43	0.58	0.72	0.87	1.01	1.15	1.30
450	0.00	0.16	0.33	0.49	0.65	0.81	0.97	1.14	1.30	1.46
500	0.00	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.44	1.62
550	0.00	0.20	0.40	0.59	0.79	0.99	1.19	1.39	1.59	1.79
600	0.00	0.22	0.43	0.65	0.87	1.08	1.30	1.51	1.73	1.95
650	0.00	0.23	0.47	0.70	0.94	1.17	1.41	1.64	1.88	2.11
700	0.00	0.25	0.51	0.76	1.01	1.26	1.51	1.77	2.02	2.27
750	0.00	0.27	0.54	0.81	1.08	1.35	1.62	1.89	2.16	2.44
800	0.00	0.29	0.58	0.87	1.15	1.44	1.73	2.02	2.31	2.60
850	0.00	0.31	0.61	0.92	1.23	1.53	1.84	2.15	2.45	2.76
900	0.00	0.32	0.65	0.97	1.30	1.62	1.95	2.27	2.60	2.92
1000	0.00	0.36	0.72	1.08	1.44	1.80	2.16	2.52	2.89	3.25
1200	0.00	0.43	0.87	1.30	1.73	2.16	2.60	3.03	3.46	3.90
1400	0.00	0.51	1.01	1.51	2.02	2.53	3.03	3.53	4.04	4.55
1600	0.00	0.58	1.16	1.73	2.31	2.89	3.46	4.04	4.62	5.19
1800	0.00	0.65	1.30	1.95	2.60	3.25	3.89	4.54	5.19	5.84

Table of basic power ratings for Type-E Standard

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	450	475	500	530	560	600	630	670	710	750	800	850	900	950	1000
20	1.33	1.45	1.56	1.71	1.85	2.03	2.17	2.36	2.54	2.72	2.95	3.17	3.40	3.62	3.84
40	2.37	2.59	2.82	3.08	3.34	3.69	3.95	4.30	4.64	4.99	5.41	5.84	6.26	6.68	7.09
60	3.32	3.64	3.96	4.34	4.72	5.23	5.61	6.11	6.60	7.10	7.71	8.32	8.93	9.53	10.13
80	4.20	4.62	5.04	5.53	6.03	6.68	7.17	7.82	8.47	9.11	9.90	10.69	11.48	12.26	13.04
100	5.04	5.55	6.06	6.67	7.28	8.08	8.68	9.47	10.26	11.04	12.01	12.98	13.93	14.89	15.83
120	5.85	6.45	7.05	7.77	8.48	9.42	10.13	11.06	11.99	12.91	14.05	15.18	16.31	17.43	18.54
140	6.62	7.31	8.00	8.83	9.65	10.73	11.54	12.60	13.67	14.72	16.03	17.32	18.61	19.89	21.15
160	7.37	8.15	8.93	9.85	10.78	11.99	12.90	14.10	15.30	16.48	17.95	19.40	20.84	22.27	23.69
180	8.09	8.96	9.82	10.85	11.87	13.23	14.23	15.56	16.89	18.20	19.82	21.42	23.01	24.59	26.14
200	8.80	9.75	10.70	11.82	12.95	14.43	15.53	16.99	18.43	19.86	21.63	23.39	25.12	26.83	28.52
220	9.48	10.52	11.55	12.77	13.99	15.60	16.79	18.37	19.94	21.48	23.40	25.29	27.16	29.00	30.82
240	10.14	11.26	12.37	13.69	15.00	16.74	18.02	19.72	21.40	23.06	25.11	27.14	29.13	31.09	33.03
260	10.79	11.99	13.18	14.59	15.99	17.85	19.22	21.03	22.82	24.59	26.78	28.92	31.04	33.12	35.16
280	11.42	12.70	13.96	15.47	16.96	18.93	20.39	22.31	24.21	26.08	28.39	30.65	32.88	35.06	37.20
300	12.03	13.38	14.73	16.32	17.90	19.98	21.52	23.55	25.55	27.52	29.95	32.32	34.65	36.93	39.15
320	12.63	14.05	15.47	17.15	18.81	21.00	22.62	24.76	26.85	28.92	31.45	33.93	36.35	38.71	41.01
340	13.20	14.71	16.19	17.96	19.70	22.00	23.70	25.92	28.12	30.27	32.90	35.47	37.98	40.41	42.78
360	13.77	15.34	16.90	18.74	20.57	22.97	24.73	27.06	29.33	31.57	34.29	36.95	39.53	42.03	44.44
380	14.31	15.96	17.58	19.51	21.41	23.90	25.74	28.15	30.51	32.82	35.63	38.36	41.00	43.55	46.00
400	14.84	16.55	18.25	20.25	22.22	24.81	26.71	29.20	31.64	34.02	36.90	39.70	42.39	44.98	47.46
450	16.10	17.97	19.82	22.00	24.15	26.94	29.00	31.67	34.27	36.78	39.82	42.72	45.49	48.12	50.60
500	17.25	19.27	21.26	23.60	25.90	28.88	31.05	33.87	36.59	39.20	42.32	45.27	48.03	50.61	52.98
600	19.24	21.52	23.74	26.35	28.87	32.11	34.45	37.43	40.24	42.89	45.96	48.74	51.22	53.38	
700	20.78	23.25	25.64	28.41	31.07	34.42	36.78	39.73	42.43	44.88	47.56				
800	21.84	24.43	26.91	29.74	32.40	35.68	37.93	40.63	42.97						
900	22.38	25.00	27.48	30.25	32.79	35.80	37.76								

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.04	1.05~1.08	1.09~1.12	1.13~1.18	1.19~1.24	1.25~1.34	1.35~1.51	1.52~1.99	2.00 or more
20	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.12
40	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.19	0.22	0.25
60	0.00	0.04	0.08	0.12	0.17	0.21	0.25	0.29	0.33	0.37
80	0.00	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.44	0.50
100	0.00	0.07	0.14	0.21	0.28	0.34	0.41	0.48	0.55	0.62
120	0.00	0.08	0.17	0.25	0.33	0.41	0.50	0.58	0.66	0.74
140	0.00	0.10	0.19	0.29	0.39	0.48	0.58	0.68	0.77	0.87
160	0.00	0.11	0.22	0.33	0.44	0.55	0.66	0.77	0.88	0.99
180	0.00	0.12	0.25	0.37	0.50	0.62	0.74	0.87	0.99	1.12
200	0.00	0.14	0.28	0.41	0.55	0.69	0.83	0.96	1.10	1.24
220	0.00	0.15	0.30	0.45	0.61	0.76	0.91	1.06	1.21	1.36
240	0.00	0.17	0.33	0.50	0.66	0.83	0.99	1.16	1.32	1.49
260	0.00	0.18	0.36	0.54	0.72	0.90	1.07	1.25	1.43	1.61
280	0.00	0.19	0.39	0.58	0.77	0.96	1.16	1.35	1.54	1.74
300	0.00	0.21	0.41	0.62	0.83	1.03	1.24	1.45	1.65	1.86
320	0.00	0.22	0.44	0.66	0.88	1.10	1.32	1.54	1.76	1.98
340	0.00	0.23	0.47	0.70	0.94	1.17	1.41	1.64	1.87	2.11
360	0.00	0.25	0.50	0.74	0.99	1.24	1.49	1.74	1.98	2.23
380	0.00	0.26	0.52	0.79	1.05	1.31	1.57	1.83	2.09	2.36
400	0.00	0.28	0.55	0.83	1.10	1.38	1.65	1.93	2.20	2.48
450	0.00	0.31	0.62	0.93	1.24	1.55	1.86	2.17	2.48	2.79
500	0.00	0.34	0.69	1.03	1.38	1.72	2.07	2.41	2.76	3.10
600	0.00	0.41	0.83	1.24	1.65	2.07	2.48	2.89	3.31	3.72
700	0.00	0.48	0.97	1.45	1.93	2.41	2.89	3.38	3.86	4.34
800	0.00	0.55	1.10	1.65	2.21	2.76	3.31	3.86	4.41	4.96
900	0.00	0.62	1.24	1.86	2.48	3.10	3.72	4.34	4.96	5.58

Table of basic power ratings for Type-M Red

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	40	42	45	47	50	53	56	60	63	67	71	75	80	85	90
200	0.02	0.03	0.03	0.04	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.08	0.08	0.09	0.10
400	0.04	0.05	0.06	0.06	0.07	0.08	0.09	0.10	0.10	0.12	0.13	0.14	0.15	0.16	0.17
600	0.06	0.06	0.08	0.08	0.10	0.11	0.12	0.14	0.15	0.16	0.18	0.19	0.21	0.23	0.25
800	0.07	0.08	0.10	0.11	0.12	0.14	0.15	0.17	0.19	0.21	0.23	0.24	0.27	0.29	0.32
1000	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.22	0.25	0.27	0.29	0.32	0.35	0.38
1200	0.09	0.11	0.13	0.14	0.17	0.19	0.21	0.24	0.26	0.29	0.31	0.34	0.38	0.41	0.44
1400	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.29	0.32	0.36	0.39	0.43	0.47	0.50
1600	0.11	0.13	0.16	0.18	0.20	0.23	0.26	0.30	0.32	0.36	0.40	0.43	0.47	0.52	0.56
1800	0.12	0.14	0.17	0.19	0.22	0.25	0.28	0.32	0.35	0.39	0.43	0.47	0.52	0.57	0.61
2000	0.12	0.15	0.18	0.21	0.24	0.27	0.31	0.35	0.38	0.43	0.47	0.51	0.56	0.61	0.66
2200	0.13	0.16	0.19	0.22	0.26	0.29	0.33	0.38	0.41	0.46	0.50	0.55	0.60	0.66	0.71
2400	0.14	0.16	0.21	0.23	0.27	0.31	0.35	0.40	0.44	0.49	0.53	0.58	0.64	0.70	0.75
2600	0.14	0.17	0.22	0.24	0.29	0.33	0.37	0.42	0.46	0.51	0.56	0.61	0.67	0.73	0.79
2800	0.15	0.18	0.22	0.25	0.30	0.34	0.39	0.44	0.48	0.54	0.59	0.64	0.71	0.77	0.82
3000	0.15	0.18	0.23	0.26	0.31	0.36	0.40	0.46	0.51	0.56	0.62	0.67	0.73	0.80	0.85
3200	0.16	0.19	0.24	0.27	0.32	0.37	0.42	0.48	0.52	0.58	0.64	0.69	0.76	0.82	0.88
3400	0.16	0.19	0.25	0.28	0.33	0.38	0.43	0.50	0.54	0.60	0.66	0.72	0.78	0.84	0.90
3600	0.16	0.20	0.25	0.29	0.34	0.39	0.45	0.51	0.56	0.62	0.68	0.73	0.80	0.86	0.92
3800	0.16	0.20	0.26	0.30	0.35	0.40	0.46	0.52	0.57	0.63	0.69	0.75	0.81	0.87	0.93
4000	0.16	0.20	0.26	0.30	0.36	0.41	0.47	0.53	0.58	0.65	0.71	0.76	0.82	0.88	0.93
4500	0.16	0.21	0.27	0.31	0.37	0.43	0.48	0.55	0.60	0.67	0.72	0.78	0.83	0.88	0.92
5000	0.16	0.20	0.27	0.31	0.38	0.44	0.49	0.56	0.61	0.67	0.72	0.77	0.82	0.85	0.88
5500	0.15	0.20	0.27	0.31	0.37	0.43	0.49	0.56	0.60	0.65	0.70	0.74	0.77	0.79	0.79
6000	0.14	0.19	0.26	0.30	0.36	0.42	0.47	0.54	0.58	0.62	0.65	0.68	0.69	0.68	0.65
6500	0.12	0.17	0.24	0.28	0.34	0.40	0.45	0.50	0.53	0.57	0.58	0.59	0.57	0.53	
7000	0.09	0.14	0.21	0.25	0.31	0.36	0.40	0.45	0.47	0.49	0.49	0.47	0.42		
8000	0.03	0.07	0.14	0.17	0.22	0.25	0.28	0.29	0.28	0.26	0.20				

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.04	1.05~1.08	1.09~1.12	1.13~1.18	1.19~1.24	1.25~1.34	1.35~1.51	1.52~1.99	2.00 or more
200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
600	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
800	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02
1000	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
1200	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03
1400	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03
1600	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04
1800	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
2000	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
2200	0.00	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05
2400	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.06
2600	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.06
2800	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07
3000	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.06	0.07
3200	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08
3400	0.00	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08
3600	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
3800	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
4000	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10
4500	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.08	0.10	0.11
5000	0.00	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.12
5500	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
6000	0.00	0.02	0.03	0.05	0.06	0.08	0.10	0.11	0.13	0.14
6500	0.00	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.14	0.16
7000	0.00	0.02	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17
8000	0.00	0.02	0.04	0.06	0.09	0.11	0.13	0.15	0.17	0.19

Table of basic power ratings for Type-A Red / Power Scrum

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	67	71	75	80	85	90	95	100	106	112	118	125	132	140	155
200	0.19	0.22	0.25	0.29	0.33	0.37	0.41	0.44	0.49	0.54	0.58	0.63	0.69	0.75	0.86
400	0.31	0.37	0.43	0.50	0.58	0.65	0.72	0.79	0.88	0.96	1.05	1.15	1.25	1.36	1.56
600	0.41	0.50	0.58	0.69	0.79	0.90	1.00	1.10	1.23	1.35	1.47	1.61	1.75	1.91	2.21
800	0.49	0.60	0.71	0.85	0.99	1.12	1.26	1.39	1.55	1.71	1.87	2.05	2.23	2.43	2.81
1000	0.56	0.70	0.83	1.00	1.17	1.33	1.49	1.66	1.85	2.04	2.23	2.45	2.67	2.92	3.38
1200	0.62	0.78	0.94	1.14	1.33	1.52	1.71	1.91	2.13	2.36	2.58	2.84	3.09	3.38	3.91
1400	0.67	0.86	1.04	1.26	1.48	1.70	1.92	2.14	2.40	2.65	2.90	3.20	3.49	3.81	4.41
1600	0.72	0.92	1.12	1.37	1.62	1.87	2.12	2.36	2.65	2.93	3.21	3.54	3.86	4.22	4.88
1800	0.75	0.98	1.20	1.48	1.75	2.03	2.30	2.56	2.88	3.19	3.50	3.86	4.21	4.60	5.32
2000	0.78	1.03	1.27	1.58	1.88	2.17	2.47	2.76	3.10	3.44	3.77	4.15	4.53	4.95	5.72
2200	0.80	1.07	1.34	1.66	1.99	2.31	2.62	2.93	3.30	3.67	4.02	4.43	4.83	5.28	6.09
2400	0.82	1.11	1.39	1.74	2.09	2.43	2.77	3.10	3.49	3.88	4.26	4.69	5.11	5.58	6.42
2600	0.83	1.13	1.44	1.81	2.18	2.54	2.90	3.25	3.67	4.07	4.47	4.92	5.36	5.85	6.72
2800	0.83	1.16	1.48	1.87	2.26	2.65	3.02	3.39	3.82	4.25	4.66	5.13	5.59	6.09	6.98
3000	0.83	1.17	1.51	1.93	2.34	2.74	3.13	3.51	3.97	4.41	4.84	5.32	5.79	6.30	7.19
3200	0.82	1.18	1.54	1.97	2.40	2.82	3.23	3.63	4.09	4.55	4.99	5.48	5.96	6.48	7.37
3400	0.81	1.18	1.55	2.01	2.45	2.89	3.31	3.72	4.20	4.67	5.12	5.62	6.10	6.62	7.50
3600	0.79	1.18	1.56	2.03	2.49	2.94	3.38	3.80	4.30	4.77	5.23	5.73	6.21	6.72	7.58
3800	0.76	1.17	1.57	2.05	2.53	2.99	3.44	3.87	4.37	4.85	5.31	5.82	6.29	6.79	
4000	0.73	1.15	1.56	2.06	2.55	3.02	3.48	3.92	4.43	4.91	5.37	5.87	6.34	6.83	
4500	0.62	1.07	1.51	2.04	2.56	3.05	3.52	3.97	4.49	4.97	5.41	5.89			
5000	0.47	0.95	1.41	1.96	2.49	3.00	3.47	3.92	4.42	4.87					
5500	0.29	0.78	1.26	1.82	2.35	2.86	3.32	3.75							
6000	0.05	0.56	1.04	1.61	2.14	2.62	3.06								
6500		0.29	0.77	1.32	1.83										
7000			0.43	0.96											

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~ 1.01	1.02~ 1.03	1.04~ 1.06	1.07~ 1.08	1.09~ 1.12	1.13~ 1.16	1.17~ 1.22	1.23~ 1.32	1.33~ 1.50	1.51 or more
200	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03
400	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07
600	0.00	0.01	0.02	0.03	0.04	0.06	0.07	0.08	0.09	0.10
800	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
1000	0.00	0.02	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17
1200	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.16	0.18	0.20
1400	0.00	0.03	0.05	0.08	0.10	0.13	0.16	0.18	0.21	0.23
1600	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27
1800	0.00	0.03	0.07	0.10	0.13	0.17	0.20	0.23	0.27	0.30
2000	0.00	0.04	0.07	0.11	0.15	0.19	0.22	0.26	0.30	0.33
2200	0.00	0.04	0.08	0.12	0.16	0.20	0.25	0.29	0.33	0.37
2400	0.00	0.04	0.09	0.13	0.18	0.22	0.27	0.31	0.36	0.40
2600	0.00	0.05	0.10	0.15	0.19	0.24	0.29	0.34	0.39	0.43
2800	0.00	0.05	0.10	0.16	0.21	0.26	0.31	0.36	0.42	0.47
3000	0.00	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.45	0.50
3200	0.00	0.06	0.12	0.18	0.24	0.30	0.36	0.42	0.48	0.53
3400	0.00	0.06	0.13	0.19	0.25	0.32	0.38	0.44	0.51	0.57
3600	0.00	0.07	0.13	0.20	0.27	0.33	0.40	0.47	0.54	0.60
3800	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.64
4000	0.00	0.07	0.15	0.22	0.30	0.37	0.45	0.52	0.59	0.67
4500	0.00	0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75
5000	0.00	0.09	0.19	0.28	0.37	0.46	0.56	0.65	0.74	0.84
5500	0.00	0.10	0.20	0.31	0.41	0.51	0.61	0.71	0.82	0.92
6000	0.00	0.11	0.22	0.33	0.45	0.56	0.67	0.78	0.89	1.00
6500	0.00	0.12	0.24	0.36	0.48	0.60	0.72	0.84	0.97	1.09
7000	0.00	0.13	0.26	0.39	0.52	0.65	0.78	0.91	1.04	1.17

How to Design a Frictional Forced Power Transmission Belt
Table of Basic Power Ratings

Table of basic power ratings for Type-B Red / Power Scrum

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	118	125	132	140	155	160	170	180	190	200	212	224	236	250	265
100	0.38	0.42	0.47	0.52	0.61	0.64	0.71	0.77	0.83	0.89	0.96	1.04	1.11	1.19	1.28
200	0.67	0.76	0.84	0.93	1.11	1.17	1.29	1.40	1.52	1.63	1.77	1.90	2.04	2.20	2.36
300	0.93	1.05	1.17	1.31	1.56	1.65	1.82	1.98	2.15	2.31	2.51	2.71	2.90	3.13	3.37
400	1.17	1.32	1.48	1.66	1.99	2.10	2.31	2.53	2.74	2.96	3.21	3.46	3.71	4.01	4.31
500	1.39	1.58	1.77	1.99	2.39	2.52	2.79	3.05	3.31	3.57	3.88	4.18	4.49	4.84	5.22
600	1.59	1.82	2.04	2.30	2.77	2.93	3.24	3.54	3.85	4.15	4.52	4.87	5.23	5.64	6.08
700	1.79	2.04	2.30	2.59	3.13	3.31	3.67	4.02	4.37	4.72	5.13	5.54	5.94	6.41	6.90
800	1.97	2.26	2.55	2.88	3.48	3.68	4.08	4.48	4.87	5.25	5.71	6.17	6.62	7.14	7.69
900	2.14	2.47	2.78	3.15	3.82	4.04	4.48	4.91	5.34	5.77	6.28	6.78	7.27	7.84	8.44
1000	2.31	2.66	3.01	3.41	4.14	4.38	4.86	5.33	5.80	6.27	6.81	7.36	7.89	8.50	9.15
1100	2.46	2.85	3.23	3.65	4.45	4.71	5.23	5.74	6.24	6.74	7.33	7.91	8.48	9.13	9.82
1200	2.61	3.02	3.43	3.89	4.74	5.02	5.58	6.12	6.66	7.19	7.82	8.44	9.04	9.73	10.45
1300	2.75	3.19	3.63	4.12	5.03	5.32	5.91	6.49	7.06	7.62	8.29	8.93	9.57	10.29	11.04
1400	2.89	3.35	3.81	4.34	5.30	5.61	6.23	6.84	7.44	8.03	8.73	9.40	10.06	10.81	11.59
1500	3.01	3.50	3.99	4.54	5.55	5.88	6.54	7.18	7.81	8.42	9.14	9.85	10.53	11.30	12.10
1600	3.13	3.65	4.16	4.74	5.80	6.14	6.83	7.49	8.15	8.79	9.53	10.26	10.96	11.75	12.56
1700	3.24	3.78	4.32	4.92	6.03	6.39	7.10	7.79	8.47	9.13	9.89	10.64	11.35	12.15	12.97
1800	3.34	3.91	4.47	5.10	6.25	6.62	7.35	8.07	8.77	9.44	10.23	10.98	11.71	12.51	13.33
1900	3.44	4.03	4.61	5.26	6.45	6.84	7.59	8.33	9.04	9.74	10.53	11.30	12.03	12.83	13.64
2000	3.53	4.14	4.74	5.42	6.64	7.04	7.82	8.57	9.30	10.00	10.81	11.58	12.31	13.11	13.89
2200	3.68	4.33	4.97	5.69	6.98	7.40	8.21	8.99	9.74	10.46	11.27	12.03	12.75	13.51	
2400	3.80	4.49	5.17	5.92	7.27	7.70	8.53	9.33	10.08	10.80	11.60	12.34	13.01		
2600	3.90	4.62	5.32	6.10	7.49	7.93	8.77	9.57	10.32	11.02	11.79				
2800	3.96	4.71	5.43	6.23	7.65	8.09	8.94	9.73	10.45	11.12					
3000	3.98	4.76	5.50	6.32	7.74	8.18	9.01	9.78	10.47						
3500	3.90	4.70	5.47	6.28	7.66	8.07									
4000	3.58	4.38	5.12	5.89											

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~ 1.01	1.02~ 1.03	1.04~ 1.06	1.07~ 1.08	1.09~ 1.12	1.13~ 1.16	1.17~ 1.22	1.23~ 1.32	1.33~ 1.50	1.51 or more
100	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04
200	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07
300	0.00	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11
400	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
500	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.19
600	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.20	0.22
700	0.00	0.03	0.06	0.09	0.12	0.15	0.17	0.20	0.23	0.26
800	0.00	0.03	0.07	0.10	0.13	0.17	0.20	0.23	0.27	0.30
900	0.00	0.04	0.07	0.11	0.15	0.19	0.22	0.26	0.30	0.34
1000	0.00	0.04	0.08	0.12	0.17	0.21	0.25	0.29	0.33	0.37
1100	0.00	0.05	0.09	0.14	0.18	0.23	0.27	0.32	0.36	0.41
1200	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45
1300	0.00	0.05	0.11	0.16	0.22	0.27	0.32	0.38	0.43	0.48
1400	0.00	0.06	0.12	0.17	0.23	0.29	0.35	0.41	0.46	0.52
1500	0.00	0.06	0.12	0.19	0.25	0.31	0.37	0.43	0.50	0.56
1600	0.00	0.07	0.13	0.20	0.27	0.33	0.40	0.46	0.53	0.60
1700	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63
1800	0.00	0.07	0.15	0.22	0.30	0.37	0.45	0.52	0.60	0.67
1900	0.00	0.08	0.16	0.24	0.31	0.39	0.47	0.55	0.63	0.71
2000	0.00	0.08	0.17	0.25	0.33	0.41	0.50	0.58	0.66	0.75
2200	0.00	0.09	0.18	0.27	0.36	0.46	0.55	0.64	0.73	0.82
2400	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90
2600	0.00	0.11	0.22	0.32	0.43	0.54	0.65	0.75	0.86	0.97
2800	0.00	0.12	0.23	0.35	0.46	0.58	0.70	0.81	0.93	1.04
3000	0.00	0.12	0.25	0.37	0.50	0.62	0.75	0.87	1.00	1.12
3500	0.00	0.15	0.29	0.44	0.58	0.73	0.87	1.01	1.16	1.31
4000	0.00	0.17	0.33	0.50	0.66	0.83	1.00	1.16	1.33	1.49

Table of basic power ratings for Type-C Red / Power Scrum

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	180	190	200	212	224	236	250	265	280	300	315	335	355	375	400
50	0.54	0.59	0.64	0.71	0.77	0.84	0.91	0.99	1.07	1.17	1.25	1.35	1.45	1.56	1.68
100	0.97	1.07	1.17	1.29	1.41	1.53	1.67	1.82	1.97	2.16	2.31	2.50	2.70	2.89	3.13
150	1.36	1.51	1.65	1.83	2.00	2.18	2.38	2.59	2.80	3.09	3.30	3.58	3.86	4.13	4.48
200	1.72	1.91	2.10	2.33	2.56	2.78	3.04	3.32	3.60	3.97	4.24	4.60	4.96	5.32	5.77
250	2.07	2.30	2.53	2.81	3.09	3.36	3.68	4.02	4.36	4.81	5.14	5.59	6.03	6.46	7.00
300	2.39	2.67	2.94	3.27	3.60	3.92	4.30	4.70	5.10	5.62	6.02	6.54	7.05	7.56	8.20
350	2.71	3.02	3.34	3.72	4.09	4.46	4.89	5.35	5.81	6.41	6.86	7.45	8.04	8.63	9.35
400	3.01	3.37	3.72	4.14	4.57	4.98	5.47	5.99	6.50	7.18	7.68	8.35	9.01	9.66	10.47
450	3.30	3.70	4.09	4.56	5.03	5.49	6.03	6.60	7.17	7.92	8.48	9.21	9.94	10.66	11.56
500	3.58	4.01	4.45	4.96	5.48	5.98	6.57	7.20	7.82	8.64	9.25	10.05	10.85	11.63	12.60
550	3.85	4.32	4.79	5.35	5.91	6.46	7.10	7.78	8.45	9.34	10.00	10.87	11.73	12.57	13.62
600	4.11	4.62	5.13	5.74	6.33	6.93	7.62	8.35	9.07	10.02	10.73	11.66	12.58	13.48	14.59
650	4.37	4.91	5.46	6.10	6.75	7.38	8.12	8.90	9.67	10.68	11.43	12.42	13.40	14.36	15.54
700	4.61	5.20	5.78	6.46	7.15	7.82	8.60	9.43	10.25	11.33	12.12	13.17	14.19	15.21	16.44
750	4.85	5.47	6.08	6.81	7.54	8.25	9.08	9.95	10.81	11.95	12.78	13.88	14.96	16.02	17.31
800	5.08	5.73	6.38	7.15	7.91	8.67	9.54	10.45	11.36	12.55	13.43	14.57	15.70	16.80	18.14
850	5.30	5.99	6.67	7.48	8.28	9.07	9.98	10.94	11.89	13.13	14.05	15.24	16.41	17.55	18.94
900	5.52	6.24	6.95	7.80	8.64	9.46	10.41	11.42	12.40	13.69	14.64	15.88	17.09	18.26	19.69
950	5.73	6.48	7.23	8.11	8.98	9.84	10.83	11.87	12.90	14.24	15.22	16.49	17.74	18.94	20.40
1000	5.93	6.72	7.49	8.41	9.32	10.21	11.24	12.32	13.38	14.76	15.77	17.08	18.35	19.59	21.07
1200	6.67	7.57	8.46	9.51	10.54	11.55	12.71	13.92	15.10	16.62	17.72	19.14	20.49	21.77	23.28
1400	7.29	8.30	9.29	10.45	11.58	12.69	13.95	15.25	16.51	18.11	19.25	20.70	22.04	23.29	24.70
1600	7.80	8.89	9.96	11.22	12.43	13.61	14.93	16.29	17.58	19.19	20.32	21.71	22.96		
1800	8.18	9.35	10.49	11.80	13.07	14.29	15.64	17.00	18.27	19.83	20.87				
2000	8.44	9.66	10.84	12.20	13.49	14.71	16.05	17.37	18.57						
2500	8.48	9.75	10.93	12.25	13.45										
3000	7.56	8.71													

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.03	1.04~1.06	1.07~1.08	1.09~1.12	1.13~1.16	1.17~1.22	1.23~1.32	1.33~1.50	1.51 or more
50	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
100	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
150	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
200	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.17
250	0.00	0.02	0.05	0.07	0.10	0.12	0.15	0.17	0.19	0.22
300	0.00	0.03	0.06	0.09	0.12	0.15	0.17	0.20	0.23	0.26
350	0.00	0.03	0.07	0.10	0.14	0.17	0.20	0.24	0.27	0.31
400	0.00	0.04	0.08	0.12	0.16	0.19	0.23	0.27	0.31	0.35
450	0.00	0.04	0.09	0.13	0.17	0.22	0.26	0.31	0.35	0.39
500	0.00	0.05	0.10	0.15	0.19	0.24	0.29	0.34	0.39	0.44
550	0.00	0.05	0.11	0.16	0.21	0.27	0.32	0.37	0.43	0.48
600	0.00	0.06	0.12	0.18	0.23	0.29	0.35	0.41	0.47	0.52
650	0.00	0.06	0.13	0.19	0.25	0.32	0.38	0.44	0.51	0.57
700	0.00	0.07	0.14	0.20	0.27	0.34	0.41	0.48	0.54	0.61
750	0.00	0.07	0.15	0.22	0.29	0.36	0.44	0.51	0.58	0.66
800	0.00	0.08	0.16	0.23	0.31	0.39	0.47	0.54	0.62	0.70
850	0.00	0.08	0.17	0.25	0.33	0.41	0.50	0.58	0.66	0.74
900	0.00	0.09	0.18	0.26	0.35	0.44	0.52	0.61	0.70	0.79
950	0.00	0.09	0.18	0.28	0.37	0.46	0.55	0.65	0.74	0.83
1000	0.00	0.10	0.19	0.29	0.39	0.49	0.58	0.68	0.78	0.87
1200	0.00	0.12	0.23	0.35	0.47	0.58	0.70	0.82	0.93	1.05
1400	0.00	0.14	0.27	0.41	0.54	0.68	0.82	0.95	1.09	1.22
1600	0.00	0.16	0.31	0.47	0.62	0.78	0.93	1.09	1.24	1.40
1800	0.00	0.18	0.35	0.53	0.70	0.87	1.05	1.22	1.40	1.57
2000	0.00	0.19	0.39	0.58	0.78	0.97	1.17	1.36	1.56	1.75
2500	0.00	0.24	0.49	0.73	0.97	1.21	1.46	1.70	1.94	2.19
3000	0.00	0.29	0.58	0.88	1.17	1.46	1.75	2.04	2.33	2.62

Table of basic power ratings for Type-D Red / Power Scrum

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	300	315	335	355	375	400	425	450	475	500	530	560	600	630	670
20	0.74	0.80	0.88	0.97	1.05	1.15	1.25	1.35	1.45	1.55	1.67	1.79	1.94	2.06	2.21
40	1.35	1.47	1.63	1.78	1.94	2.13	2.32	2.51	2.70	2.89	3.11	3.33	3.63	3.85	4.15
60	1.92	2.09	2.32	2.54	2.77	3.04	3.32	3.60	3.87	4.14	4.47	4.79	5.22	5.54	5.97
80	2.46	2.68	2.97	3.26	3.56	3.92	4.28	4.64	4.99	5.35	5.77	6.19	6.75	7.17	7.72
100	2.97	3.24	3.60	3.96	4.32	4.76	5.20	5.64	6.08	6.51	7.03	7.55	8.23	8.74	9.42
150	4.17	4.57	5.09	5.61	6.12	6.76	7.40	8.03	8.66	9.29	10.04	10.78	11.76	12.50	13.47
200	5.29	5.80	6.48	7.15	7.82	8.65	9.48	10.29	11.11	11.92	12.88	13.84	15.11	16.05	17.29
250	6.35	6.98	7.80	8.62	9.44	10.45	11.45	12.45	13.44	14.42	15.59	16.75	18.29	19.43	20.93
300	7.36	8.09	9.06	10.03	10.98	12.17	13.35	14.51	15.67	16.82	18.18	19.54	21.32	22.64	24.38
350	8.32	9.16	10.27	11.37	12.46	13.82	15.16	16.49	17.81	19.11	20.66	22.19	24.21	25.70	27.65
400	9.23	10.18	11.42	12.66	13.88	15.40	16.90	18.38	19.85	21.30	23.02	24.72	26.95	28.59	30.74
450	10.11	11.15	12.53	13.89	15.25	16.92	18.57	20.20	21.80	23.39	25.27	27.12	29.54	31.31	33.63
500	10.95	12.09	13.59	15.08	16.55	18.37	20.16	21.93	23.67	25.38	27.40	29.39	31.97	33.87	36.32
550	11.75	12.98	14.61	16.21	17.80	19.75	21.68	23.57	25.43	27.26	29.42	31.52	34.25	36.24	38.80
600	12.51	13.83	15.58	17.29	18.99	21.08	23.12	25.13	27.11	29.04	31.30	33.51	36.35	38.41	41.06
650	13.24	14.65	16.50	18.33	20.12	22.33	24.49	26.61	28.68	30.70	33.06	35.35	38.28	40.39	43.08
700	13.93	15.42	17.38	19.30	21.20	23.52	25.78	27.99	30.15	32.25	34.69	37.04	40.03	42.16	44.85
750	14.59	16.15	18.21	20.23	22.21	24.63	26.99	29.29	31.51	33.67	36.17	38.56	41.58	43.71	46.36
800	15.20	16.85	19.00	21.10	23.17	25.68	28.12	30.48	32.77	34.97	37.51	39.92	42.92	45.02	47.60
850	15.78	17.50	19.73	21.92	24.06	26.65	29.16	31.58	33.91	36.14	38.69	41.09	44.06	46.09	48.54
900	16.33	18.10	20.42	22.68	24.88	27.55	30.11	32.57	34.93	37.17	39.72	42.09	44.97	46.91	
1000	17.29	19.19	21.65	24.03	26.33	29.10	31.74	34.24	36.60	38.81	41.26	43.49			
1100	18.10	20.09	22.66	25.13	27.50	30.32	32.97	35.44	37.74	39.84					
1200	18.74	20.80	23.45	25.97	28.37	31.18	33.78	36.16	38.30						
1400	19.48	21.61	24.30	26.81	29.13	31.74									
1600	19.44	21.54	24.11	26.42											
1800	18.54	20.48													

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.03	1.04~1.06	1.07~1.08	1.09~1.12	1.13~1.16	1.17~1.22	1.23~1.32	1.33~1.50	1.51 or more
20	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
40	0.00	0.01	0.02	0.03	0.04	0.06	0.07	0.08	0.09	0.10
60	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
80	0.00	0.02	0.04	0.07	0.09	0.11	0.13	0.16	0.18	0.20
100	0.00	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.22	0.25
150	0.00	0.04	0.08	0.13	0.17	0.21	0.25	0.29	0.33	0.38
200	0.00	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.45	0.50
250	0.00	0.07	0.14	0.21	0.28	0.35	0.42	0.49	0.56	0.63
300	0.00	0.08	0.17	0.25	0.33	0.42	0.50	0.59	0.67	0.75
350	0.00	0.10	0.20	0.29	0.39	0.49	0.59	0.68	0.78	0.88
400	0.00	0.11	0.22	0.34	0.45	0.56	0.67	0.78	0.89	1.00
450	0.00	0.13	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13
500	0.00	0.14	0.28	0.42	0.56	0.70	0.84	0.98	1.12	1.26
550	0.00	0.15	0.31	0.46	0.61	0.77	0.92	1.07	1.23	1.38
600	0.00	0.17	0.34	0.50	0.67	0.84	1.00	1.17	1.34	1.51
650	0.00	0.18	0.36	0.54	0.73	0.91	1.09	1.27	1.45	1.63
700	0.00	0.20	0.39	0.59	0.78	0.98	1.17	1.37	1.56	1.76
750	0.00	0.21	0.42	0.63	0.84	1.05	1.26	1.46	1.67	1.88
800	0.00	0.22	0.45	0.67	0.89	1.12	1.34	1.56	1.79	2.01
850	0.00	0.24	0.47	0.71	0.95	1.19	1.42	1.66	1.90	2.13
900	0.00	0.25	0.50	0.75	1.00	1.26	1.51	1.76	2.01	2.26
1000	0.00	0.28	0.56	0.84	1.12	1.40	1.67	1.95	2.23	2.51
1100	0.00	0.31	0.61	0.92	1.23	1.53	1.84	2.15	2.46	2.76
1200	0.00	0.33	0.67	1.01	1.34	1.67	2.01	2.34	2.68	3.01
1400	0.00	0.39	0.78	1.17	1.56	1.95	2.34	2.73	3.13	3.51
1600	0.00	0.45	0.89	1.34	1.78	2.23	2.68	3.12	3.57	4.02
1800	0.00	0.50	1.01	1.51	2.01	2.51	3.01	3.51	4.02	4.52

Table of basic power ratings for Type-E Red / Power Scrum

(Unit: kW)

Pinion revolution (rpm)	Pinion pitch diameter (mm)														
	450	475	500	530	560	600	630	670	710	750	800	850	900	950	1000
20	1.64	1.78	1.91	2.08	2.24	2.45	2.61	2.83	3.04	3.25	3.51	3.78	4.04	4.29	4.55
40	3.03	3.29	3.55	3.85	4.16	4.57	4.87	5.28	5.68	6.08	6.57	7.07	7.56	8.05	8.54
60	4.32	4.69	5.07	5.52	5.96	6.55	6.99	7.58	8.16	8.74	9.46	10.17	10.88	11.59	12.29
80	5.55	6.03	6.52	7.10	7.68	8.45	9.02	9.78	10.54	11.29	12.22	13.15	14.07	14.99	15.90
100	6.72	7.32	7.92	8.63	9.34	10.28	10.98	11.91	12.84	13.75	14.90	16.03	17.15	18.27	19.39
120	7.86	8.57	9.28	10.12	10.95	12.06	12.88	13.98	15.07	16.15	17.49	18.82	20.15	21.46	22.77
140	8.97	9.78	10.59	11.56	12.52	13.79	14.74	15.99	17.24	18.48	20.02	21.54	23.05	24.56	26.05
160	10.05	10.96	11.88	12.96	14.05	15.48	16.54	17.96	19.36	20.75	22.48	24.19	25.89	27.57	29.24
180	11.10	12.12	13.13	14.34	15.54	17.13	18.31	19.88	21.43	22.97	24.88	26.77	28.64	30.50	32.34
200	12.12	13.24	14.35	15.68	17.00	18.74	20.04	21.75	23.45	25.14	27.22	29.29	31.33	33.35	35.35
220	13.12	14.34	15.55	16.99	18.42	20.32	21.72	23.58	25.43	27.25	29.51	31.74	33.94	36.12	38.27
240	14.11	15.42	16.73	18.28	19.82	21.86	23.37	25.38	27.36	29.32	31.74	34.13	36.49	38.81	41.11
260	15.07	16.48	17.87	19.54	21.19	23.37	24.99	27.13	29.24	31.33	33.91	36.45	38.96	41.42	43.85
280	16.01	17.51	19.00	20.77	22.53	24.85	26.57	28.84	31.08	33.30	36.03	38.71	41.35	43.95	46.50
300	16.93	18.52	20.10	21.98	23.84	26.30	28.12	30.51	32.88	35.21	38.09	40.91	43.67	46.39	49.05
320	17.83	19.52	21.18	23.17	25.13	27.71	29.63	32.15	34.63	37.08	40.08	43.03	45.92	48.74	51.50
340	18.72	20.49	22.24	24.32	26.38	29.10	31.10	33.74	36.34	38.89	42.02	45.09	48.08	51.00	53.85
360	19.59	21.44	23.28	25.46	27.61	30.45	32.54	35.29	38.00	40.65	43.90	47.08	50.17	53.17	56.10
380	20.43	22.37	24.29	26.57	28.81	31.77	33.94	36.80	39.61	42.36	45.72	48.99	52.17	55.25	58.23
400	21.26	23.28	25.28	27.65	29.99	33.05	35.31	38.27	41.17	44.01	47.47	50.83	54.08	57.23	60.26
450	23.26	25.48	27.66	30.25	32.80	36.12	38.57	41.76	44.87	47.90	51.57	55.09	58.48	61.72	64.80
500	25.15	27.54	29.90	32.69	35.42	38.98	41.58	44.97	48.25	51.42	55.22	58.85	62.28	65.52	68.55
550	26.92	29.48	32.00	34.96	37.86	41.62	44.35	47.88	51.28	54.54	58.42	62.05	65.45	68.59	71.46
600	28.57	31.29	33.95	37.07	40.10	44.02	46.85	50.49	53.96	57.25	61.11	64.68	67.93	70.86	
700	31.52	34.48	37.37	40.73	43.96	48.07	51.00	54.70	58.14	61.31	64.89				
800	33.95	37.09	40.12	43.61	46.92	51.05	53.92	57.45	60.61						
900	35.83	39.07	42.15	45.64	48.89	52.83	55.48								

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00~1.01	1.02~1.03	1.04~1.06	1.07~1.08	1.09~1.12	1.13~1.16	1.17~1.22	1.23~1.32	1.33~1.50	1.51 or more
20	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
40	0.00	0.02	0.04	0.06	0.08	0.10	0.11	0.13	0.15	0.17
60	0.00	0.03	0.06	0.09	0.11	0.14	0.17	0.20	0.23	0.26
80	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.27	0.31	0.34
100	0.00	0.05	0.10	0.14	0.19	0.24	0.29	0.33	0.38	0.43
120	0.00	0.06	0.11	0.17	0.23	0.29	0.34	0.40	0.46	0.52
140	0.00	0.07	0.13	0.20	0.27	0.33	0.40	0.47	0.54	0.60
160	0.00	0.08	0.15	0.23	0.31	0.38	0.46	0.54	0.61	0.69
180	0.00	0.09	0.17	0.26	0.34	0.43	0.52	0.60	0.69	0.77
200	0.00	0.10	0.19	0.29	0.38	0.48	0.57	0.67	0.77	0.86
220	0.00	0.11	0.21	0.32	0.42	0.53	0.63	0.74	0.84	0.95
240	0.00	0.11	0.23	0.34	0.46	0.57	0.69	0.80	0.92	1.03
260	0.00	0.12	0.25	0.37	0.50	0.62	0.75	0.87	1.00	1.12
280	0.00	0.13	0.27	0.40	0.54	0.67	0.80	0.94	1.07	1.20
300	0.00	0.14	0.29	0.43	0.57	0.72	0.86	1.00	1.15	1.29
320	0.00	0.15	0.31	0.46	0.61	0.77	0.92	1.07	1.22	1.38
340	0.00	0.16	0.33	0.49	0.65	0.81	0.98	1.14	1.30	1.46
360	0.00	0.17	0.34	0.52	0.69	0.86	1.03	1.20	1.38	1.55
380	0.00	0.18	0.36	0.55	0.73	0.91	1.09	1.27	1.45	1.64
400	0.00	0.19	0.38	0.57	0.77	0.96	1.15	1.34	1.53	1.72
450	0.00	0.22	0.43	0.65	0.86	1.08	1.29	1.51	1.72	1.94
500	0.00	0.24	0.48	0.72	0.96	1.20	1.44	1.67	1.91	2.15
550	0.00	0.26	0.53	0.79	1.05	1.32	1.58	1.84	2.10	2.37
600	0.00	0.29	0.57	0.86	1.15	1.44	1.72	2.01	2.30	2.58
700	0.00	0.34	0.67	1.01	1.34	1.67	2.01	2.34	2.68	3.01
800	0.00	0.38	0.77	1.15	1.53	1.91	2.30	2.68	3.06	3.44
900	0.00	0.43	0.86	1.29	1.72	2.15	2.58	3.01	3.44	3.87

Table of basic power ratings for Type-PJ Rib-Ace

(Unit: kW)

Pinion revolution (rpm)	Pinion outside diameter (mm)														
	20	25	30	35	40	45	50	55	60	70	80	90	100	120	150
100		0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.05
200		0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.05	0.06	0.06	0.08	0.10
300	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.14
400	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.06	0.08	0.09	0.10	0.11	0.14	0.18
500	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.12	0.14	0.17	0.22
600	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.13	0.15	0.16	0.20	0.25
700	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.10	0.12	0.15	0.17	0.19	0.23	0.29
800	0.01	0.02	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.14	0.16	0.19	0.21	0.26	0.33
900	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.11	0.13	0.16	0.18	0.21	0.24	0.29	0.36
1000	0.01	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.17	0.20	0.23	0.26	0.32	0.40
1100	0.01	0.03	0.05	0.07	0.08	0.10	0.12	0.14	0.15	0.18	0.22	0.25	0.28	0.34	0.43
1200	0.01	0.03	0.05	0.07	0.09	0.11	0.13	0.15	0.16	0.20	0.23	0.27	0.30	0.37	0.47
1300	0.01	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.25	0.29	0.33	0.40	0.50
1400	0.01	0.04	0.06	0.08	0.10	0.12	0.15	0.17	0.19	0.23	0.27	0.31	0.35	0.42	0.53
1500	0.01	0.04	0.06	0.09	0.11	0.13	0.15	0.18	0.20	0.24	0.28	0.33	0.37	0.45	0.57
1600	0.01	0.04	0.07	0.09	0.11	0.14	0.16	0.19	0.21	0.26	0.30	0.35	0.39	0.48	0.60
1700	0.02	0.04	0.07	0.09	0.12	0.15	0.17	0.20	0.22	0.27	0.32	0.36	0.41	0.50	0.63
1800	0.02	0.04	0.07	0.10	0.13	0.15	0.18	0.21	0.23	0.28	0.33	0.38	0.43	0.53	0.66
1900	0.02	0.05	0.07	0.10	0.13	0.16	0.19	0.22	0.24	0.30	0.35	0.40	0.45	0.55	0.69
2000	0.02	0.05	0.08	0.11	0.14	0.17	0.20	0.22	0.25	0.31	0.36	0.42	0.47	0.57	0.72
2500	0.02	0.05	0.09	0.13	0.17	0.20	0.24	0.27	0.31	0.37	0.44	0.50	0.57	0.69	0.86
3000	0.02	0.06	0.10	0.15	0.19	0.23	0.27	0.32	0.36	0.43	0.51	0.59	0.66	0.79	0.98
3500	0.01	0.07	0.12	0.17	0.22	0.26	0.31	0.36	0.40	0.49	0.58	0.66	0.74	0.89	1.08
4000	0.01	0.07	0.13	0.18	0.24	0.29	0.35	0.40	0.45	0.55	0.64	0.73	0.82	0.97	1.16
6000		0.09	0.17	0.25	0.32	0.40	0.47	0.54	0.61	0.73	0.85	0.95	1.03	1.16	1.22
8000		0.10	0.20	0.30	0.39	0.48	0.57	0.64	0.72	0.85	0.96	1.03	1.08		
10000		0.10	0.22	0.33	0.44	0.54	0.63	0.71	0.78	0.89	0.95	0.96			

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00	1.01~1.03	1.04~1.07	1.08~1.11	1.12~1.17	1.18~1.23	1.24~1.33	1.34~1.50	1.51~1.98	1.99 or more
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
1000	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
1100	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
1200	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
1300	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
1400	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
1500	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
1600	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
1700	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
1800	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
1900	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
2000	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02
2500	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02
3000	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
3500	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03
4000	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03
6000	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
8000	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.06
10000	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08

The belt speed exceeds 35 m/s. Please take a dynamic balance of the pulley before use.

Table of basic power ratings for Type-PK Rib-Ace

(Unit: kW)

Pinion revolution (rpm)	Pinion outside diameter (mm)												
	50	56	63	71	80	90	100	112	125	140	160	180	200
200	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.31	0.36	0.41
400	0.07	0.10	0.14	0.18	0.22	0.27	0.31	0.37	0.43	0.49	0.58	0.67	0.76
600	0.10	0.14	0.19	0.25	0.31	0.38	0.44	0.52	0.61	0.71	0.84	0.97	1.09
800	0.12	0.18	0.24	0.31	0.39	0.48	0.57	0.67	0.79	0.91	1.08	1.24	1.41
1000	0.14	0.21	0.29	0.38	0.48	0.58	0.69	0.82	0.95	1.11	1.31	1.51	1.71
1200	0.16	0.24	0.33	0.44	0.55	0.68	0.81	0.96	1.12	1.30	1.54	1.77	2.00
1400	0.18	0.27	0.38	0.50	0.63	0.78	0.92	1.09	1.27	1.48	1.75	2.02	2.28
1600	0.19	0.30	0.42	0.55	0.70	0.87	1.03	1.22	1.43	1.66	1.96	2.25	2.54
1800	0.21	0.32	0.46	0.61	0.77	0.96	1.14	1.35	1.57	1.83	2.16	2.48	2.79
2000	0.22	0.35	0.49	0.66	0.84	1.04	1.24	1.47	1.72	1.99	2.35	2.70	3.03
2200	0.23	0.37	0.53	0.71	0.91	1.12	1.34	1.59	1.85	2.15	2.53	2.90	3.25
2400	0.24	0.39	0.56	0.76	0.97	1.20	1.43	1.70	1.99	2.30	2.71	3.10	3.46
2600	0.25	0.41	0.60	0.80	1.03	1.28	1.53	1.81	2.11	2.45	2.87	3.28	3.65
2800	0.26	0.43	0.63	0.85	1.09	1.36	1.62	1.92	2.23	2.59	3.03	3.44	3.83
3000	0.27	0.45	0.66	0.89	1.15	1.43	1.70	2.02	2.35	2.72	3.18	3.60	3.99
3200	0.27	0.47	0.69	0.93	1.21	1.50	1.79	2.12	2.46	2.84	3.31	3.74	4.13
3400	0.28	0.48	0.71	0.97	1.26	1.57	1.87	2.21	2.57	2.96	3.44	3.87	4.25
3600	0.29	0.50	0.74	1.01	1.31	1.63	1.94	2.30	2.67	3.07	3.55	3.98	4.35
3800	0.29	0.51	0.77	1.05	1.36	1.69	2.02	2.38	2.76	3.17	3.66	4.08	4.42
4000	0.29	0.53	0.79	1.09	1.41	1.75	2.09	2.46	2.85	3.26	3.75	4.16	4.48
4250	0.30	0.54	0.82	1.13	1.46	1.82	2.17	2.56	2.95	3.37	3.84	4.23	4.52
4500	0.30	0.55	0.85	1.17	1.52	1.89	2.24	2.64	3.04	3.46	3.92	4.28	4.52
4750	0.30	0.57	0.87	1.20	1.57	1.95	2.31	2.72	3.12	3.53	3.98	4.30	4.48
5000	0.30	0.58	0.89	1.24	1.61	2.01	2.38	2.79	3.19	3.59	4.01	4.29	
6000	0.29	0.60	0.96	1.35	1.76	2.19	2.57	2.98	3.35	3.67			
7000	0.25	0.60	1.00	1.41	1.85	2.28	2.65	3.01	3.29				
8000	0.20	0.58	0.99	1.43	1.86	2.27	2.60	2.86					

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00	1.01~ 1.03	1.04~ 1.07	1.08~ 1.11	1.12~ 1.17	1.18~ 1.23	1.24~ 1.33	1.34~ 1.50	1.51~ 1.98	1.99 or more
200	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
400	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
600	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03
800	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
1000	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.06
1200	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07
1400	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08
1600	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
1800	0.00	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.10
2000	0.00	0.01	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11
2200	0.00	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13
2400	0.00	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14
2600	0.00	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15
2800	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.12	0.14	0.16
3000	0.00	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17
3200	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
3400	0.00	0.02	0.04	0.06	0.09	0.11	0.13	0.15	0.17	0.19
3600	0.00	0.02	0.05	0.07	0.09	0.11	0.14	0.16	0.18	0.21
3800	0.00	0.02	0.05	0.07	0.10	0.12	0.14	0.17	0.19	0.22
4000	0.00	0.03	0.05	0.08	0.10	0.13	0.15	0.18	0.20	0.23
4250	0.00	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.22	0.24
4500	0.00	0.03	0.06	0.09	0.11	0.14	0.17	0.20	0.23	0.26
4750	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27
5000	0.00	0.03	0.06	0.09	0.13	0.16	0.19	0.22	0.25	0.28
6000	0.00	0.04	0.08	0.11	0.15	0.19	0.23	0.27	0.30	0.34
7000	0.00	0.04	0.09	0.13	0.18	0.22	0.27	0.31	0.35	0.40
8000	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.46

The belt speed exceeds 35 m/s. Please take a dynamic balance of the pulley before use.

Table of basic power ratings for Type-PL Rib-Ace

(Unit: kW)

Pinion revolution (rpm)	Pinion outside diameter (mm)														
	75	80	85	90	95	100	110	120	130	140	150	180	200	250	300
100	0.08	0.09	0.09	0.10	0.11	0.12	0.14	0.15	0.17	0.19	0.20	0.25	0.28	0.36	0.44
200	0.14	0.15	0.17	0.18	0.20	0.22	0.25	0.28	0.31	0.34	0.37	0.46	0.52	0.67	0.81
300	0.19	0.21	0.24	0.26	0.28	0.31	0.35	0.40	0.44	0.48	0.53	0.66	0.74	0.95	1.16
400	0.24	0.27	0.30	0.33	0.36	0.39	0.45	0.51	0.56	0.62	0.68	0.85	0.96	1.23	1.50
500	0.29	0.33	0.36	0.40	0.43	0.47	0.54	0.61	0.68	0.75	0.82	1.03	1.17	1.50	1.82
600	0.33	0.38	0.42	0.46	0.51	0.55	0.63	0.72	0.80	0.88	0.97	1.21	1.37	1.76	2.13
700	0.38	0.43	0.48	0.53	0.58	0.62	0.72	0.82	0.91	1.01	1.10	1.38	1.56	2.01	2.44
800	0.42	0.48	0.53	0.59	0.64	0.70	0.81	0.92	1.02	1.13	1.24	1.55	1.75	2.25	2.73
900	0.46	0.52	0.59	0.65	0.71	0.77	0.89	1.01	1.13	1.25	1.37	1.71	1.94	2.49	3.01
1000	0.50	0.57	0.64	0.71	0.77	0.84	0.97	1.11	1.24	1.37	1.50	1.87	2.12	2.72	3.28
1200	0.58	0.66	0.74	0.82	0.90	0.98	1.13	1.29	1.44	1.59	1.74	2.18	2.47	3.15	3.79
1400	0.65	0.74	0.83	0.93	1.02	1.11	1.29	1.46	1.64	1.81	1.98	2.48	2.80	3.56	4.26
1600	0.72	0.82	0.93	1.03	1.13	1.23	1.43	1.63	1.83	2.02	2.21	2.76	3.11	3.93	4.67
1800	0.78	0.90	1.01	1.13	1.24	1.35	1.57	1.79	2.01	2.22	2.42	3.02	3.40	4.27	5.02
2000	0.84	0.97	1.10	1.22	1.35	1.47	1.71	1.95	2.18	2.41	2.63	3.27	3.67	4.57	5.31
2200	0.90	1.04	1.18	1.31	1.45	1.58	1.84	2.10	2.34	2.59	2.83	3.50	3.92	4.83	5.54
2400	0.96	1.11	1.26	1.40	1.54	1.69	1.96	2.24	2.50	2.76	3.01	3.71	4.14	5.05	5.69
2600	1.02	1.17	1.33	1.49	1.64	1.79	2.08	2.37	2.65	2.92	3.18	3.91	4.34	5.22	5.76
2800	1.07	1.24	1.40	1.57	1.73	1.89	2.20	2.50	2.79	3.07	3.34	4.08	4.51	5.34	5.75
3000	1.12	1.29	1.47	1.64	1.81	1.98	2.30	2.62	2.92	3.21	3.48	4.23	4.65	5.40	5.65
3200	1.16	1.35	1.53	1.71	1.89	2.06	2.40	2.73	3.04	3.33	3.62	4.36	4.77	5.41	
3400	1.21	1.40	1.59	1.78	1.97	2.15	2.50	2.83	3.15	3.45	3.73	4.47	4.85	5.36	
3600	1.25	1.45	1.65	1.85	2.04	2.22	2.58	2.93	3.25	3.55	3.84	4.55	4.89	5.25	
3800	1.29	1.50	1.70	1.91	2.10	2.29	2.66	3.01	3.34	3.64	3.92	4.60	4.91	5.07	
4000	1.32	1.54	1.75	1.96	2.16	2.36	2.74	3.09	3.42	3.72	3.99	4.63	4.88		
4500	1.40	1.63	1.86	2.08	2.29	2.50	2.89	3.24	3.56	3.85	4.09	4.57	4.65		
5000	1.46	1.70	1.94	2.17	2.39	2.60	2.99	3.33	3.63	3.88	4.07	4.31			

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00	1.01~ 1.03	1.04~ 1.07	1.08~ 1.11	1.12~ 1.17	1.18~ 1.23	1.24~ 1.33	1.34~ 1.50	1.51~ 1.99	2.00 or more
100	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
200	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02
300	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
400	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03
500	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
600	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05
700	0.00	0.01	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.06
800	0.00	0.01	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.06
900	0.00	0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.06	0.07
1000	0.00	0.01	0.02	0.03	0.04	0.04	0.05	0.06	0.07	0.08
1200	0.00	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10
1400	0.00	0.01	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11
1600	0.00	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13
1800	0.00	0.02	0.03	0.05	0.06	0.08	0.10	0.11	0.13	0.15
2000	0.00	0.02	0.04	0.05	0.07	0.09	0.11	0.13	0.14	0.16
2200	0.00	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18
2400	0.00	0.02	0.04	0.06	0.09	0.11	0.13	0.15	0.17	0.19
2600	0.00	0.02	0.05	0.07	0.09	0.12	0.14	0.16	0.19	0.21
2800	0.00	0.03	0.05	0.08	0.10	0.13	0.15	0.18	0.20	0.23
3000	0.00	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.22	0.24
3200	0.00	0.03	0.06	0.09	0.12	0.14	0.17	0.20	0.23	0.26
3400	0.00	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.28
3600	0.00	0.03	0.06	0.10	0.13	0.16	0.19	0.23	0.26	0.29
3800	0.00	0.03	0.07	0.10	0.14	0.17	0.20	0.24	0.27	0.31
4000	0.00	0.04	0.07	0.11	0.14	0.18	0.22	0.25	0.29	0.32
4500	0.00	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36
5000	0.00	0.04	0.09	0.13	0.18	0.22	0.27	0.31	0.36	0.40

The belt speed exceeds 35 m/s. Please take a dynamic balance of the pulley before use.

Table 7 Length correction factors (Kl)

Table 7-1 V-belts

Nominal No.	Belt type A	B	C	D	E
20～25	0.80	0.78			
26～30	0.81	0.79			
31～34	0.84	0.80			
35～37	0.87	0.81			
38～41	0.88	0.83			
42～45	0.90	0.85	0.78		
46～50	0.92	0.87	0.79		
51～54	0.94	0.89	0.80		
55～59	0.96	0.90	0.81		
60～67	0.98	0.92	0.82		
68～74	1.00	0.95	0.85		
75～79	1.02	0.97	0.87		
80～84	1.04	0.98	0.89		
85～89	1.05	0.99	0.90		
90～95	1.06	1.00	0.91		
96～104	1.08	1.02	0.92	0.83	
105～111	1.10	1.04	0.94	0.84	
112～119	1.11	1.05	0.95	0.85	
120～127	1.13	1.07	0.97	0.86	
128～144	1.14	1.08	0.98	0.87	
145～154	1.15	1.11	1.00	0.90	
155～169	1.16	1.13	1.02	0.92	
170～179	1.17	1.15	1.04	0.93	
180～194	1.18	1.16	1.05	0.94	0.91
195～209		1.18	1.07	0.96	0.92
210～239		1.19	1.08	0.98	0.94
240～269			1.11	1.00	0.96
270～299			1.14	1.03	0.99
300～329			1.16	1.05	1.01
330～359			1.19	1.07	1.03
360～389			1.21	1.09	1.05
390～419			1.23	1.11	1.07
420～479			1.24	1.12	1.09
480～539				1.16	1.12
540～600				1.18	1.14

Table 7-2 Power Ace / Energy-Saving Power Ace / Power Ace Cog / Power Ace Aramid Combo

Nominal No.	Belt type 3V•3VX	5V•5VK•5VX	8V•8VK	Nominal No.	Belt type 3V•3VX	5V•5VK•5VX	8V•8VK
250	0.83			1180	1.12	0.99	0.89
265	0.84			1250	1.13	1.00	0.90
280	0.85			1320	1.14	1.01	0.91
300	0.86			1400	1.15	1.02	0.92
315	0.87			1500		1.03	0.93
335	0.88			1600		1.04	0.94
355	0.89			1700		1.05	0.94
375	0.90			1800		1.06	0.95
400	0.92			1900		1.07	0.96
425	0.93			2000		1.08	0.97
450	0.94			2120		1.09	0.98
475	0.95			2240		1.09	0.98
500	0.96	0.85		2360		1.10	0.99
530	0.97	0.86		2500		1.11	1.00
560	0.98	0.87		2650		1.12	1.01
600	0.99	0.88		2800		1.13	1.02
630	1.00	0.89		3000		1.14	1.03
670	1.01	0.90		3150		1.15	1.03
710	1.02	0.91		3350		1.16	1.04
750	1.03	0.92		3550		1.17	1.05
800	1.04	0.93		3750			1.06
850	1.06	0.94		4000			1.07
900	1.07	0.95		4250			1.08
950	1.08	0.96		4500			1.09
1000	1.09	0.96	0.87	4750			1.09
1060	1.10	0.97	0.88	5000			1.10
1120	1.11	0.98	0.88	5600			1.12

Table 7-3 Rib-Ace 2

Type PJ Effective length (mm)	Kl	Effective length (mm)	Kℓ	Type PK Effective length (mm)	Kℓ	Effective length (mm)	Kℓ	Type PL Effective length (mm)	Kℓ	Effective length (mm)	Kℓ
273	0.71	887	0.97	600	0.81	1220	0.96	540	0.70	1520	0.93
294	0.73	911	0.98	615	0.81	1250	0.96	605	0.72	1555	0.93
332	0.76	937	0.98	630	0.82	1280	0.97	655	0.74	1645	0.94
353	0.77	962	0.99	650	0.82	1320	0.97	700	0.75	1720	0.95
401	0.80	988	1.00	670	0.83	1360	0.98	730	0.76	1750	0.96
454	0.82	1013	1.00	690	0.83	1400	0.98	825	0.79	1850	0.97
480	0.84	1089	1.02	710	0.84	1450	0.99	850	0.80	1900	0.98
502	0.85	1140	1.03	730	0.85	1500	1.00	870	0.80	1975	0.98
530	0.86	1165	1.03	750	0.85	1550	1.01	875	0.80	2065	0.99
556	0.87	1191	1.04	775	0.86	1600	1.02	880	0.81	2115	1.00
567	0.87	1201	1.04	800	0.87	1650	1.02	905	0.81	2190	1.01
594	0.88	1242	1.05	825	0.88	1700	1.03	915	0.81	2360	1.02
607	0.89	1318	1.06	850	0.88	1750	1.04	950	0.82	2470	1.03
619	0.89	1343	1.06	875	0.89	1800	1.05	975	0.83	2575	1.04
634	0.90			900	0.90	1850	1.06	1000	0.83	2695	1.05
657	0.91			925	0.90	1900	1.06	1035	0.84	2840	1.06
704	0.92			950	0.91	1950	1.07	1050	0.84	3045	1.08
708	0.92			975	0.91	2000	1.08	1055	0.85		
759	0.94			1000	0.92	2120	1.09	1070	0.85		
777	0.94			1030	0.92	2240	1.10	1190	0.87		
797	0.95			1060	0.93	2360	1.11	1240	0.88		
817	0.95			1090	0.93	2500	1.12	1305	0.89		
835	0.96			1120	0.94	2650	1.13	1340	0.90		
852	0.96			1150	0.94	2800	1.14	1365	0.90		
861	0.97			1180	0.95	3000	1.16	1445	0.91		

Table 8 Pinion contact angle correction factors $K\theta_1$

$\frac{Do-do}{C}$	Angle of contact of pinion θ_1 (°)	$K\theta_1$	$\frac{Do-do}{C}$	Angle of contact of pinion θ_1 (°)	$K\theta_1$	$\frac{Do-do}{C}$	Angle of contact of pinion θ_1 (°)	$K\theta_1$
0.00	180	1.00	0.60	145	0.91	1.20	106	0.77
0.10	174	0.99	0.70	139	0.89	1.30	99	0.73
0.20	169	0.97	0.80	133	0.87	1.40	91	0.70
0.30	163	0.96	0.90	127	0.85	1.50	83	0.65
0.40	157	0.94	1.00	120	0.82			
0.50	151	0.93	1.10	113	0.80			

Table 9 Adjustment range of center distance (Ci/Cs)

Table 9-1 V-belts

(Unit: mm)

Nominal No.	Inner minimum adjustment range (Ci) M	A	B	C	D	E	Outer minimum adjustment range (Cs)
20～ 25	15	20	25				25
26～ 38	15	20	25				25
39～ 60	15	20	25	38			38
61～ 90		20	32	38			51
91～120		25(40)	32(55)	38(60)	51(75)		64
121～158		25(40)	32(55)	38(60)	51(75)		76
159～195		25	32(58)	51(75)	51(75)	64	89
196～240			38(60)	51(75)	51(100)	64	102
241～270				51(75)	64(100)	64	114
271～330				51	64(100)	76	127
331～420				64	64(100)	76	152

Note) The values in the parentheses ( ) indicate the case of Power Scrum.

Table 9-2 Power Ace / Energy-Saving Power Ace / Power Ace Cog / Power Ace Aramid Combo

(Unit: mm)

Nominal No.	Inner minimum adjustment range (Ci) 3V•3VX	5V•5VK•5VX	8V•8VK	Outer minimum adjustment range (Cs)
250～ 475	13(38)			25
500～ 710	20(39)	25(61)		31
750～ 1060	20(41)	25(63)	38(102)	38
1120～ 1250	20(42)	25(64)	38(103)	46
1320～1700	20(43)	25(66)	38(105)	56
1800～2000		25(68)	46(107)	64
2120, 2240		31(70)	46(109)	71
2360		31(71)	46(110)	76
2500～2650		31(72)	46(111)	82
2800～3000		31(74)	46(113)	89
3150		31(76)	46(115)	102
3350, 3550		31(78)	51(117)	102
3750			51(118)	114
4000～5000			51(126)	140
5600			51(128)	152

Note) The values in the parentheses ( ) indicate the case of Power Scrum.

Table 9-3 Rib-Ace 2

(Unit: mm)

Type PJ Effective length	Inner minimum adjustment range (Ci)	Outer minimum adjustment range (Cs)	Type PK Effective length	Inner minimum adjustment range (Ci)	Outer minimum adjustment range (Cs)	Type PL Effective length	Inner minimum adjustment range (Ci)	Outer minimum adjustment range (Cs)
273～ 710	8	5	600～ 710	15	15	540～ 730	18	10
730～ 759	10	8	730～1090	15	20	825～1035	20	12
777～1013	12	10	1120～1500	20	25	1050～1240	20	14
1089～1343	16	14	1550～1900	20	30	1305～1520	22	16
			1950～2500	25	35	1555～1750	22	20
			2650～3000	30	40	1850～2360	24	25
						2470～3045	28	35

Step 1. Determining conditions required for the design

- Driving machine: Induction motor 45 kW/1160 rpm
- Driven machine: Piston pump (24-hour/day continuous operation)
- Driven pulley 600 rpm/ϕ520 mm (do)
- Center distance 1150mm
- Minimum maintenance and inspection

Step 2. Calculating the design power

① Obtain the load correction factor from **Table 1 (→ P. 247)**.
Ko=1.4

② Obtain the idler correction factor and the environmental correction factor from **Table 2** and **Table 3 (→ P. 247)**.
Ki=0.0 Ke=0.2

③ Therefore, the design power is 72 kW.
$Pd = 45 \times (1.4 + 0.0 + 0.2) = 72kW$

Step 3. Selecting a belt type

From the design power of 72 kW and the pinion revolution of 1160 rpm from **Fig. 1 Belt type selection diagram (→ P. 248)**, select Type 5V.

Step 4. Selecting a pulley diameter

① The speed ratio is 1160 / 600 = 1.93

② Assuming the large-pulley nominal outside diameter is 520 mm, from the speed ratio calculation, set the pinion nominal outside diameter to 270 mm.

$$\frac{520 - 2.6}{1.93} + 2.6 \fallingdotseq 270 \text{ mm}$$

③ Satisfy the minimum nominal outside diameter of a pulley of 150 mm for Type 5V.

④ The belt speed satisfies 40 m/s or less.

$$\frac{(270 - 2.6) \times 1160}{19100} = 16.2\text{m/s}$$

Step 5. Selecting an effective length

① The effective length calculation results in 3554 mm, and from the **list of belt sizes (→ P. 230)**, select 5V1400(effective outside length 3556 mm).

$$2 \times 1150 + 1.57(520 + 270) + \frac{(520 - 270)^2}{4 \times 1150} = 3554\text{mm}$$

② From the effective outside length of the selected belt, the center distance is 1151 mm.

$B = 3556 - 1.57(520 + 270) = 2316$

$$C = \frac{2316 + \sqrt{2316^2 - 2(520 - 270)^2}}{4}$$

$= 1151\text{mm}$

Step 6. Determining the number of belts

① In the **Table of basic power ratings for 5V (→ P. 251)**, obtain the transmission capacity for the pinion revolution of 1160 rpm and the pinion nominal outside diameter of 270 mm by proportional distribution as shown below, and add an additional capacity by the speed ratio to obtain the transmission capacity.

Pinion revolution (rpm)	Pinion nominal diameter (mm)		Transmission capacity added depending on the speed ratio (kW/pc)
	260	280	1.58 ~ 1.94
1160	17.34	19.16	0.99

② Obtain the effective length correction factor Kl from **Table 7 (→ P. 271)**.
Kl = 1.02

③ Obtain the contact angle correction factor $K\theta_1$ from **Table 8 (→ P. 272)**.
$K\theta_1 = 0.97$

④ Therefore, the number of belts is 4.

$$N = \frac{72}{19.24 \times 0.97 \times 1.02} = 3.8 \rightarrow 4 \text{ belts}$$

Step 7. Checking the adjustment range of the center distance

From **Table 9 (→ P. 272),** obtain Ci and Cs.

Ci=25mm
Cs=56mm

Examination result

- Belt 5V1400 × 4
- Pinion (driving pulley) nominal outside diameter: 270 mm
- Large (driven) pulley nominal outside diameter: 520 mm
- Center distance 1151 mm
  - Inner minimum adjustment range: 25 mm
  - Outer minimum adjustment range: 56 mm

Design power: 72 kW

Belt type: 5 V

Large-pulley nominal outside diameter: 520 mm
Pinion nominal outside diameter: 270 mm

Effective length: 5V1400

Center distance: 1151mm

Basic power rating = 19.24 kW/pc

$K\ell = 1.02$

$K\theta_1 = 0.97$

Number of belts = 4 belts

Inner minimum adjustment range (Ci) = 25 mm
Outer maximum adjustment range (Cs) = 56 mm