memo

Friction

(Frictional Transmission Belts)

List of Frictional Transmission Belt Product Systems

Classification	Name	Belt type		M	A	B	C	D	E	Product introduction page	Design calculation page
General V-belt	V-Belt Standard	Material	R		●	●	●	●	●	231	245
	V-Belt Red		R	●	●	●	●	●	●	231	
	Energy-Saving Red		R		●	●	●	●		224	
	Power Scrum (V-belt type)		R		●	●	●	●		234	

Classification	Name	Belt type			3V		5V		8V	Product introduction page	Design calculation page
Narrow V-belt	Power Ace	Material	R		●		●		●	225	245
	Power Ace Cog		R		●		●			227	
	Energy-Saving Power Ace		R		●		●		●	224	
	Power Scrum (Power Ace type)		R		●		●		●	228	
	Power Ace Aramid Combo		R				●		●	229	

Classification	Name	Belt type		H	J/PJ	PK	PL			Product introduction page	Design calculation page
V-ribbed belt	Bancollan Polybanrope	Material	U	O	O					274	276
	Rib-Ace 2		R		●	●	●			236	245

Classification	Name	Belt type			5MS	7MS	11MS			Product introduction page	Design calculation page
High-performance V-belt	Banflescrum	Material	U		O	O	O			279	282

Classification	Name	Belt type		3M	5M	7M	11M			Product introduction page	Design calculation page
High-performance V-belt	Banflex	Material	U	O	O	O	O			279	282

Classification	Name	Belt type		VC	DC					Product introduction page	Design calculation page
Light-duty belt	Bancollan V-Belt	Material	U	O	O					293	295

Classification	Name	Belt type		Φ 2	Φ 3	Φ 4	Φ 5			Product introduction page	Design calculation page
Light-duty belt	Bancollan Round Belt	Material	U	O	O	O	O			297	299

Classification	Name	Belt type	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10	11	12	15	Product introduction page	Design calculation page
Light-duty belt	Bancord Round belt	Material #480	O	O	O	O	O	O	O	O	O	O	O	O	O	O	○	302	305
		#485N				O		O	O	O									
		#485T						O	O	O									
		#485RB						O	O	O		O							
		#489	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
		#490	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
		#490 (Charge prevention)		O	O			O	O										
	Name	Belt type	M	A	B														
	Bancord V-Belt	Material U	O	O	O														

Classification	Name	List of belt specifications								Product introduction page	Design calculation page
Belt for precision conveyance (PS belt)	A-series high-speed transmission	A-1C	A-1N	A-1U	A-1H	A-4C	A-4N	A-4U	A-4H	318	327
		A-10C	A-10N	A-10U	A-10H	A-13C	A-13N	A-13U	A-13H		
	B series Light article conveyance, such as sheets and tickets	B-2C	B-2N	B-2U	B-2H						
		B-3C	B-3N	B-3U	B-3H	B-6C	B-6N	B-6U	B-6H		
	C-series Precision transmission at 100 W or less, light article conveyance	C-8C	C-8N	C-8U	C-8H	C-16C	C-16N	C-16U	C-16H		
	Z-series (for heat resistance)	Z-H250X						Z-H250X			
	E-series (light article conveyance)			E-8U				EXL-101			

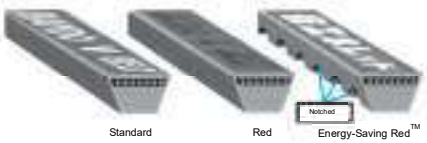
Energy-Saving V-Belt

Product Introduction

By reducing losses by belt bending stress, CO_2 emissions reduction and energy-saving effects can be expected.

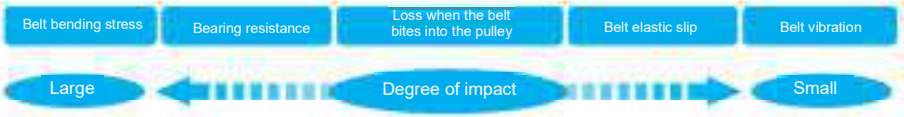
Product Features

- **Energy-saving (power-saving) and CO_2 emissions reduction can be expected.**
  Although it depends on the conditions, a maximum of approximately 6% power can be reduced.
- **No change of pulleys is necessary.**
  It can be used just by replacing the previous V-belt with Energy-Saving Red and replacing Power Ace with Energy-Saving Power Ace.
- **Long service life.** *Based on our bench tests.
  Due to the belt structure, internal heating is little, and the service life is long.
- **Cost reduction possible.**
  The cost can be reduced by the energy-saving (power-saving) effect and the reduction in the number of belts.

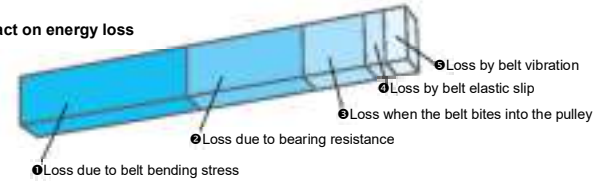


Why Can the Energy-Saving (Power-Saving) Effect Be Obtained?

- **Energy losses by a belt (explanatory drawing)**
  Any power transmission device has losses (energy losses), and belt power transmission devices have the following energy losses.



■ **Degree of impact on energy loss**



The Energy-Saving V-Belt can be bent with a small force structurally; hence, the reduction of "losses by bending stress," whose energy loss ratio is high, can provide the energy-saving (power-saving) effect.

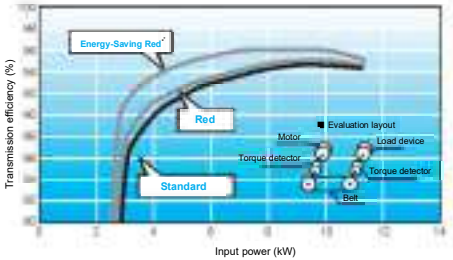
* The belt bending rigidity EI is an index of the ease of bending. The lower the value, the more easily the belt can be bent.

1.Energy-Saving Red™

Belt type	Range of manufacturable sizes
JIS Type A	20 to 360 inches
JIS Type B	25 to 360 inches
JIS Type C	35 to 360 inches
JIS Type D	100 to 360 inches

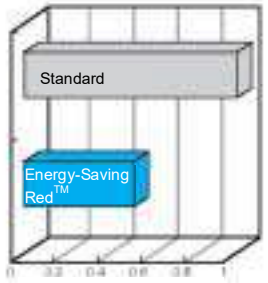
[Note] Effective length (mm) = 25.4 × size (nominal designation)

■ **Power transmission efficiency verification result**
Input power and power transmission efficiency
<Power Standard> Tension 50 kgf | B-50 | 3 belts | Φ118-Φ118



- The design transmission efficiency in the range of use of Energy-Saving Red* is 4% higher than that of the standard.

■ **Comparison of belt bending rigidities <Belt Type B>**
(When the standard is 1)



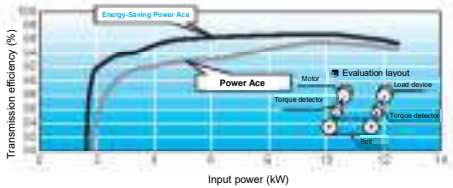
Comparison with belt bending rigidity EI

2.Energy-Saving Power Ace

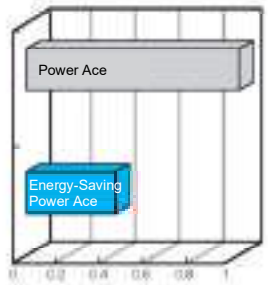
Belt type	Range of manufacturable sizes
Type 3V	250 ~ 1400
Type 5V	500 ~ 3550
Type 8V	1000 ~ 3550

* Please specify the effective length with a nominal number.
* Effective length = Effective outside length (mm) = 25.4 × Nominal No. / 10

■ **Power transmission efficiency verification result**
Input power and power transmission efficiency
<Power Standard> Tension 50 kgf | B-50 | 3 belts | Φ118-Φ118



■ **Comparison of belt bending rigidities <Belt Type 5V>**
(When the standard is 1)



Comparison with belt bending rigidity EI

3.How to Design an Energy-Saving V-Belt

The transmission capacity of the Energy-Saving V-Belt is the same as that of the standard belt.
Refer to the design calculation page for the respective standard type belt.

Energy-Saving V-Belt	Reference product	Design calculation page
Energy-Saving Power Ace	Power Ace	245 ~ 273
Energy-Saving Red	V-Belt Red	

Power Ace™ / Power Ace™ Cog / Power Scrum
Power Ace™ Aramid Combo

1. Power Ace™ Product Introduction

Power Ace is a narrow V-belt for high power transmission capability that significantly enhanced various characteristics and performance such as power transmission capability, high speed, and reliability by changing the cross-sectional structure of the previous V-belt. (Prescribed as Narrow V-belts for power transmission in JIS K 6368.)

Features

■ **Allows miniaturization and cost reduction of power transmission devices.**
Power Ace has an extremely high power transmission capability, and the space for the power transmission device is about one-third of that of the standard V-belt.
Unlike chain transmission or gear transmission, it requires no lubrication device, allowing the equipment cost and maintenance cost to be reduced.

■ **Allows high-speed operation.**
Power Ace has an extremely high power transmission capability per belt and has a reduced loss in power transmission by centrifugal force; hence, it is also suitable for high-speed operation and can be used up to a speed of 40 m/s.

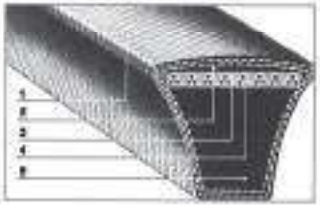
■ **Allows labor-saving in maintenance.**
Power Ace has little belt elongation during operation and rarely requires re-tensioning. Unlike chain transmission and gear transmission, it requires no lubrication, allowing significant labor-saving in maintenance.

■ **Long belt service life and excellent reliability.**
Power Ace, based on the ideal profile that was made by studying the power transmission theory as well as on the manufacturing technology on the highest standard, has a long service life and rarely incurs trouble during operation.

■ **Excellent physical characteristics.**

- Excellent heat resistance.
  Generally, the higher the ambient temperature, the shorter the belt service life becomes; however, Power Ace can with-stand high temperature compared to the standard V-belt.
- Static electricity prevention.
  It has an electric resistance performance that conforms to the U.S. RMA standard. *RMA (An abbreviation for Rubber Manufacturers Association)
- Excellent flame resistance.
  The specially compounded chloroprene rubber used in Power Ace has a self-anti-inflammation property and therefore can be used at ease.
- Excellent oil resistance.
  It can be used even with slight adhesion of oil mist, oil, or grease.
- Excellent weather resistance and ozone resistance.
  It can also be used outdoors and in coastline areas without problems. Where the belt is exposed to direct sunlight, please protect the belt with a belt cover of the like if possible.

Structure

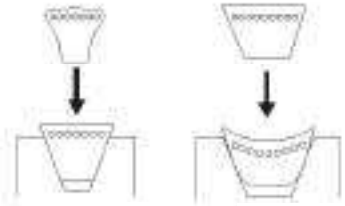


1. Cover fabric
2. Tension rubber
3. Adhesion rubber
4. Cord
5. Compression rubber

- **Cord**
  It uses a polyester cord, has extremely little elongation, and has no concern for peeling of the cord layer.
- **Compression rubber**
  The specially compounded chloroprene rubber reduces heat generation during running and increases the belt service life.
- **Cover canvas**
  The special canvas has only a little tension and strain on the fiber even when it is wound around a small-diameter pulley, reducing losses in power transmission due to bending stress.
  It is also excellent in protection of the inside of the belt.
- **Arched top**
  At the time of operation, it prevents cross-sectional deformation of the belt and maintains the group of tension members at a normal position; hence the group of tension members receives a uniform force, leading to a longer belt service life.

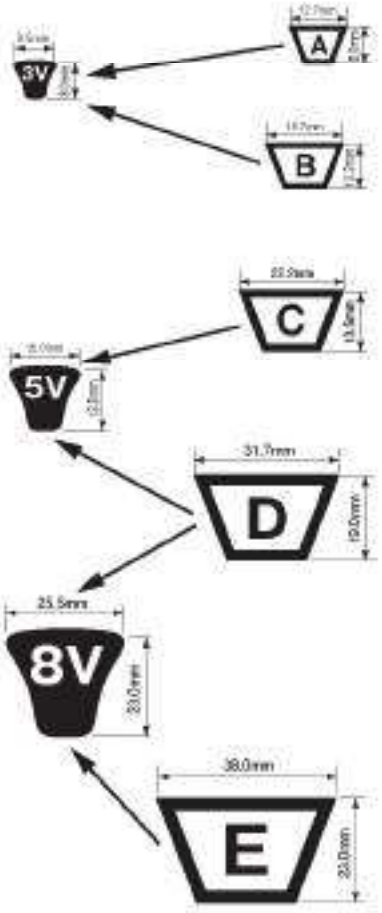
Power Ace　　Standard V-belt

- **Concave side wall**
  When the belt is wound around a pulley, the belt side face becomes straight and comes in uniform contact with the pulley, which increases the power transmission capability. The abrasion on the belt side face is uniform, which extends the belt service life.



Power Ace　　Standard V-belt

Type



(Note) The cross-sectional dimensions of Power Ace are nominal dimensions.

■ **Belt Size**

Type 3V		Type 5V		Type 8V	
Nominal No.	Effective outside length (mm)	Nominal No.	Effective outside length (mm)	Nominal No.	Effective outside length (mm)
250	635	500	1270	1000	2540
265	673	530	1346	1060	2692
280	711	560	1422	1120	2845
300	762	600	1524	1180	2997
315	800	630	1600	1250	3175
335	851	670	1702	1320	3353
355	902	710	1803	1400	3556
375	953	750	1905	1500	3810
400	1016	800	2032	1600	4064
425	1080	850	2159	1700	4318
450	1143	900	2286	1800	4572
475	1207	950	2413	1900	4826
500	1270	1000	2540	2000	5080
530	1346	1060	2692	2120	5385
560	1422	1120	2845	2240	5690
600	1524	1180	2997	2360	5994
630	1600	1250	3175	2500	6350
670	1702	1320	3353	2650	6731
710	1803	1400	3556	2800	7112
750	1905	1500	3810	3000	7620
800	2032	1600	4064	3150	8001
850	2159	1700	4318	3350	8509
900	2286	1800	4572	3550	9017
950	2413	1900	4826	3750	9525
1000	2540	2000	5080	4000	10160
1060	2692	2120	5385	4250	10795
1120	2845	2240	5690	4500	11430
1180	2997	2360	5994	4750	12065
1250	3175	2500	6350	5000	12700
1320	3353	2650	6731	5600	14224
1400	3556	2800	7112		
		3000	7620		
		3150	8001		
		3350	8509		
		3550	9017		

When using multiple belts, please specify a matched set.

Indication example

5V 1250

Nominal No.
Effective outside length (125 inches: 3175 mm)

Belt type (Type 5V)
Top width (5/8 inches: 16 mm)

2. Power Ace™ Cog Product Introduction

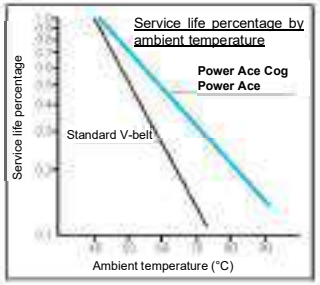
This is an additional specification of the high power transmission narrow V-belt "Bando Power Ace" and is a raw-edge cogged type narrow V-belt that can meet the requirements of high transmission capacity and miniaturization. *For other widths than the above, please contact us.

Features

- **Allows miniaturization and cost reduction of power transmission devices.**
  Power Ace Cog has a higher transmission capacity than that of Power Ace and can also be used for small pulley diameters and high-speed revolution.
- **Transmission capacity**
  Although the rate of increase of transmission capacity varies slightly depending on the pulley diameter and the revolution, in generally used operating conditions, it has 20 to 30% higher transmission capacity than that of Power Ace.
- **Minimum pulley diameters**
  Power Ace Cog has a cogged profile at the bottom of the belt and therefore can be used for small pulley diameters as well.

Belt type	Minimum pulley diameters	
	Power Ace Cog	Power Ace
Type 3V	56 (3VX)	67 (3V)
Type 5V	112 (5VX)	150 (5V)

- **Allows high-speed operation.**
  Power Ace Cog has a high power transmission capacity per belt and has a small loss in power transmission by centrifugal force; hence, it is also suitable for high-speed operation and can be used up to a speed of 40 m/s.
- **Excellent heat resistance.**



- **Excellent oil resistance.**
  As this belt uses a synthetic rubber and takes oil resistance into consideration, it can be used even with slight adhesion of oil mist, oil, or grease.

Structure

1. Top canvas
2. Cord
3. Adhesion rubber
4. Compression rubber

- **Top canvas**
  The highly elastic biased canvas protects the belt.
- **Adhesion rubber**
  While it maintains the cord at an appropriate position, it also improves the adhesion between the cord and the rubber layer.
- **Cord**
  It users a polyester cord and completely adheres to the adhesion rubber; hence, it rarely has belt elongation during running. In addition, it has no concern for peeling of the cord, allowing stable power transmission.
- **Compression rubber**
  The specially compounded synthetic rubber mitigates fatigue during running and provides high side pressure resistance.
- **Cogged profile**
  The cogged profile at the bottom of the belt allows a smaller-diameter pulley than the previous pulley diameter to be used and provides high flexibility; hence, it generates only little heat during running and has a longer belt service life.

Belt profile and size range

- **The bottom of the belt is "cogged."**
- **Because Power Ace Cog is often used in small to medium-sized machines that generally use small-diameter pulleys; hence, the types and sizes of the belt are limited.**

Type	Size
3VX	3VX250 ~ 3VX1400
5VX	5VX500 ~ 5VX2000

When using multiple belts, please specify a matched set.
For details of the size, refer to the **table on P. 230**.

For Power Ace Cog Scrum (3VX), please contact us.

3. Power Scrum Product Introduction

Bando Power Scrum is a combined belt that combines the top sections of Power Ace using tie bands.
As the cross-sectional profile of the belt is the same as Power Ace, our Power Ace pulleys can be used.

Features

- **Stable operation even under violent load fluctuations**
  Even when the machine involves shock loads and pulsating loads, the belt tied with tie bands vibrates little and can operate stably, and it does not flip over to the side or come off of a pulley.
- **Belt most suitable for vertical shaft drives**
  The tying with tie bands allows the belt to be used even in a vertical shaft drive with no detachment from the pulleys.

Structure

How to Design

Refer to Power Ace belt design **(P. 245 to P. 273)**.

Belt Indication

- **Indication example**

10 - 5V 1250

No. of ridges — Nominal No. (1250 inches: 3175 mm)
Belt type (Type 5V)

- **Belt combination**

No. of ridges	Combination	No. of ridges	Combination
—	—	11	4 + 3 + 4
2	2	12	4 + 4 + 4
3	3	13	4 + 5 + 4
4	4	14	5 + 4 + 5
5	5	15	5 + 5 + 5
6	3 + 3	16	4 + 4 + 4 + 4
7	3 + 4	17	4 + 4 + 5 + 4
8	4 + 4	18	5 + 4 + 4 + 5
9	4 + 5	19	5 + 4 + 5 + 5
10	5 + 5	20	5 + 5 + 5 + 5

Standard effective lengths

Type 3V		Type 5V		Type 8V	
Nominal No.	Effective outside length (mm)	Nominal No.	Effective outside length (mm)	Nominal No.	Effective outside length (mm)
400	1016	600	1524	1000	2540
425	1080	630	1600	1060	2692
450	1143	670	1702	1120	2845
475	1207	710	1803	1180	2997
500	1270	750	1905	1250	3175
530	1346	800	2032	1320	3353
560	1422	850	2159	1400	3556
600	1524	900	2286	1500	3810
630	1600	950	2413	1600	4064
670	1702	1000	2540	1700	4318
710	1803	1060	2692	1800	4572
750	1905	1120	2845	1900	4826
800	2032	1180	2997	2000	5080
850	2159	1250	3175	2120	5385
900	2286	1320	3353	2240	5690
950	2413	1400	3556	2360	5994
1000	2540	1500	3810	2500	6350
1060	2692	1600	4064	2650	6731
1120	2845	1700	4318	2800	7112
1180	2997	1800	4572	3000	7620
1250	3175	1900	4826	3150	8001
1320	3353	2000	5080	3350	8509
1400	3556	2120	5385	3550	9017
		2240	5690	3750	9525
		2360	5994	4000	10160
		2500	6350	4250	10795
		2650	6731	4500	11430
		2800	7112	4750	12065
		3000	7620	5000	12700
		3150	8001	5600	14224
		3350	8509		
		3550	9017		

■ **Matched set**
When using multiple belts, please specify a matched set.

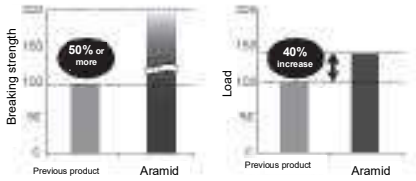
4. Power Ace™ Aramid Combo Product Introduction

Power Ace Aramid Combo is a belt that employs a high-elasticity aramid cord and has improved dimensional stability and shock resistance. It also has excellent heat resistance and electric conductivity.

Features

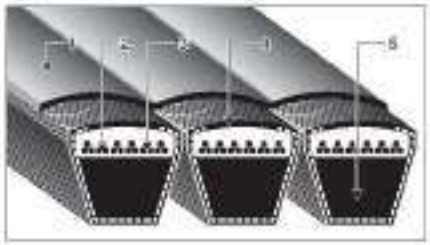
- **The new tie band structure is resistant to peeling.**
- **The high-elasticity aramid cord provides a 50% or higher breaking strength than the previous products.**
- **The belt has a 40% or higher transmission capacity than the previous products.**
- **The belt has an electric conductivity that conforms to the ARPM (RMA) standard.**

● Breaking strength ● Transmission capacity



* Pay due attention to the installation tension of the belt.

Structure



1. Tie band
2. High-elasticity aramid cord
3. Adhesion rubber
4. Cover fabric
5. Compression rubber

- **Tie band**
  A peeling-resistant new type tie band structure is employed.
- **High-elasticity aramid cord**
  The high-elasticity aramid cord provides a 50% or higher breaking strength than the previous products.
  The belt has a 40% or higher transmission capacity than the previous products.
- **Cover fabric**
  The belt has an electric conductivity that conforms to ARPM (RMA).

Belt Indication

3 - 8VK 1250

No. of ridges
Belt type (Type 8VK)
Nominal No. (1250 inches: 3175 mm)

■ Standard effective lengths

5VK				8VK			
Nominal No.	Effective outside length (mm)	Nominal No.	Effective outside length (mm)	Nominal No.	Effective outside length (mm)	Nominal No.	Effective outside length (mm)
400	1524	2120	5385	1060	2692	3750	9525
450	1658	2240	5690	1120	2845	4000	10160
475	1702	2360	5994	1180	2997	4250	10795
500	1803	2500	6350	1250	3175	4500	11430
530	1905	2650	6731	1320	3353	4750	12065
560	2032	2800	7112	1400	3556	5000	12700
600	2159	3000	7620	1500	3810	5600	14224
630	2286	3150	8001	1600	4064		
670	2413	3350	8509	1700	4318		
710	2540	3550	9017	1800	4572		
750	2692			1900	4826		
800	2845			2000	5080		
850	2997			2120	5385		
900	3175			2240	5690		
950	3353			2360	5994		
1000	3556			2500	6350		
1060	3759			2650	6731		
1120	3962			2800	7112		
1180	4166			3000	7620		
1250	4369			3150	8001		
1320	4572			3350	8509		
1400	4826			3550	9017		
1500	5080						
1600	5385						
1700	5690						
1800	5994						
1900	6350						
2000	6731						

- 5VK can be manufactured with up to 16 ridges, and 8VK can be manufactured with up to 10 ridges. (For other sizes than the indicated sizes, please contact us.)

■ Belt combination

No. of ridges	Combination	No. of ridges	Combination
—	—	11	4+3+4
2	2	12	4+4+4
3	3	13	4+5+4
4	4	14	5+4+5
5	5	15	5+5+5
6	3+3	16	4+4+4+4
7	3+4	17	4+4+5+4
8	4+4	18	5+4+4+5
9	4+5	19	5+4+5+5
10	5+5	20	5+5+5+5

For pulleys, our Power Ace pulleys can be used as with Power Ace and Power Scrum.

■ List of belt sizes of Power Ace / Power Ace Cog / Power Scrum / Power Ace Aramid Combo

	3V				5V				8V			
Belt nominal No.	Effective outside length (mm)	Power Ace	Power Scrum	Power Ace Cog 3VX	Belt nominal No.	Effective outside length (mm)	Power Ace	Power Scrum	Power Ace Cog 5VX	Power Ace Aramid Combo 5VK	Belt nominal No.	Effective outside length (mm)	Power Ace	Power Scrum	Power Ace Aramid Combo 8VK
250	635	○		○	500	1270	○		○		1000	2540	○	○	
265	673	○		○	530	1346	○		○		1060	2692	○	○	○
280	711	○		○	560	1422	○		○		1120	2845	○	○	○
300	762	○		○	600	1524	○	○	○	○	1180	2997	○	○	○
315	800	○		○	630	1600	○	○	○	○	1250	3175	○	○	○
335	851	○		○	670	1702	○	○	○	○	1320	3353	○	○	○
355	902	○		○	710	1803	○	○	○	○	1400	3556	○	○	○
375	953	○		○	750	1905	○	○	○	○	1500	3810	○	○	○
400	1016	○	○	○	800	2032	○	○	○	○	1600	4064	○	○	○
425	1080	○	○	○	850	2159	○	○	○	○	1700	4318	○	○	○
450	1143	○	○	○	900	2286	○	○	○	○	1800	4572	○	○	○
475	1207	○	○	○	950	2413	○	○	○	○	1900	4826	○	○	○
500	1270	○	○	○	1000	2540	○	○	○	○	2000	5080	○	○	○
530	1346	○	○	○	1060	2692	○	○	○	○	2120	5385	○	○	○
560	1422	○	○	○	1120	2845	○	○	○	○	2240	5690	○	○	○
600	1524	○	○	○	1180	2997	○	○	○	○	2360	5994	○	○	○
630	1600	○	○	○	1250	3175	○	○	○	○	2500	6350	○	○	○
670	1702	○	○	○	1320	3353	○	○	○	○	2650	6731	○	○	○
710	1803	○	○	○	1400	3556	○	○	○	○	2800	7112	○	○	○
750	1905	○	○	○	1500	3810	○	○	○	○	3000	7620	○	○	○
800	2032	○	○	○	1600	4064	○	○	○	○	3150	8001	○	○	○
850	2159	○	○	○	1700	4318	○	○	○	○	3350	8509	○	○	○
900	2286	○	○	○	1800	4572	○	○	○	○	3550	9017	○	○	○
950	2413	○	○	○	1900	4826	○	○	○	○	3750	9525	○	○	○
1000	2540	○	○	○	2000	5080	○	○	○	○	4000	10160	○	○	○
1060	2692	○	○	○	2120	5385	○	○		○	4250	10795	○	○	○
1120	2845	○	○	○	2240	5690	○	○		○	4500	11430	○	○	○
1180	2997	○	○	○	2360	5994	○	○		○	4750	12065	○	○	○
1250	3175	○	○	○	2500	6350	○	○		○	5000	12700	○	○	○
1320	3353	○	○	○	2650	6731	○	○		○	5600	14224	○	○	○
1400	3556	○	○	○	2800	7112	○	○		○					
					3000	7620	○	○		○					
					3150	8001	○	○		○					
					3350	8509	○	○		○					
					3550	9017	○	○		○					

V-Belt Power Scrum

1. V-Belt (Red Standard) Product Introduction

Structure

① **Cover fabric**
The cover fabric has a sufficient abrasion resistance to friction with the pulleys and is made of a strong, elastic, and bias special cloth. The further reinforcement with the abrasion-resistant rubber protects the inside sufficiently.

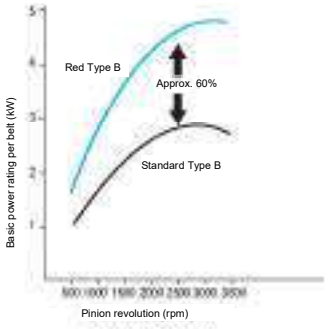
② **Compression rubber**
It keeps the normal belt cross-sectional profile, has extremely little heat generation against bending, and is very flexible.

③ **Adhesion rubber**
While it maintains the cord layer at an appropriate position, it also improves the adhesion between the cord layer and the rubber layer.

④ **Cord**
It is the main part that transmits power and uses a polyester cord that has a high strength, has little elongation, and has little flex fatigue. It strongly adheres to and is integrated with the rubber layer; hence, in power transmission, each cord receives uniform force and can perform stable power transmission.

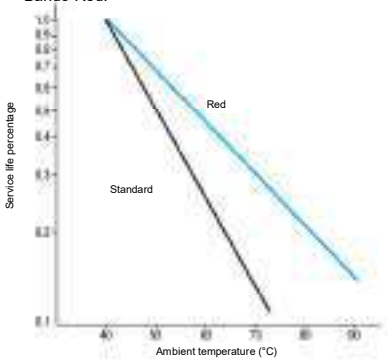
Features/Red

■ **High-quality and high-power-transmission V-belt**
It employs polyester cords that are strong and have little elongation and a synthetic rubber compound, and has about 60% higher power than the previous Standard.



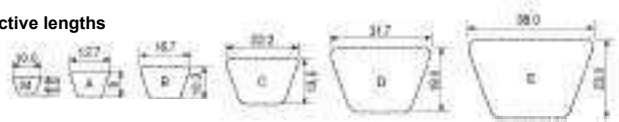
This graph plots the transmission power per belt as compared to revolution when a Type-B 125-mm-dia. pulley is used.

■ **Excellent heat resistance**
Generally, when the ambient temperature increases, the belt service life decreases as shown in the graph below. However, Bando Red has a lower reduction rate than Standard; hence, when the ambient temperature is high (normally 60°C or more), it is recommended to use Bando Red.



■ **Excellent flame resistance.**
Because it does not have a self-burning property, the risk of ignition due to excessive slipping is low.

Table of effective lengths



Standard Manufacturable range
Red Manufacturable range

*: Standard dimension prescribed in JIS
○: Bando's standard dimension

Effective length: Represents effective outside length for Type M and effective pitch length for Types A, B, C, D, and E.

Nominal No.	Effective dimension (mm)	Belt type M	A	B	C	D	E
11	279						
12	305						
13	330						
14	356						
15	381						
16	406						
17	432						
18	457						
19	483						
20	508	○	○	○			
21	533	○	○	○			
22	559	○	○	○			
23	584	○	○	○			
24	610	○	○	○			
25	635	○	○	○			
26	660	○	○	○			
27	686	○	○	○			
28	711	○	○	○			
29	737	○	○	○			
30	762	○	○	○	○	○	
31	787	○	○	○	○	○	
32	813	○	○	○	○	○	
33	838	○	○	○	○	○	
34	864	○	○	○	○	○	
35	889	○	○	○	○	○	
36	914	○	○	○	○	○	
37	940	○	○	○	○	○	
38	965	○	○	○	○	○	
39	991	○	○	○	○	○	
40	1016	○	○	○	○	○	
41	1041	○	○	○	○	○	
42	1067	○	○	○	○	○	
43	1092	○	○	○	○	○	
44	1118	○	○	○	○	○	
45	1143	○	○	○	○	○	○
46	1168	○	○	○	○	○	
47	1194	○	○	○	○	○	
48	1219	○	○	○	○	○	○
49	1245	○	○	○	○	○	
50	1270	○	○	○	○	○	○
51	1295		○	○	○	○	
52	1321		○	○	○	○	○
53	1346		○	○	○	○	
54	1372		○	○	○	○	○
55	1397		○	○	○	○	○
56	1422		○	○	○	○	
57	1448		○	○	○	○	
58	1473		○	○	○	○	○
59	1499		○	○	○	○	
60	1524		○	○	○	○	○
61	1549		○	○	○	○	
62	1575		○	○	○	○	○
63	1600		○	○	○	○	
64	1626		○	○	○	○	
65	1651		○	○	○	○	○
66	1676		○	○	○	○	
67	1702		○	○	○	○	
68	1727		○	○	○	○	○
69	1753		○	○	○	○	
70	1778		○	○	○	○	○
71	1803		○	○	○	○	
72	1829		○	○	○	○	○
73	1854		○	○	○	○	

Nominal No.	Effective dimension (mm)	Belt type M	A	B	C	D	E
74	1880		○	○	○		
75	1905		○	○	○	○	
76	1930		○	○	○		
77	1956		○	○	○		
78	1981		○	○	○	○	
79	2007		○	○	○		
80	2032		○	○	○	○	
81	2057		○	○	○	○	
82	2083		○	○	○	○	
83	2109		○	○	○		
84	2134		○	○	○		
85	2159		○	○	○	○	
86	2184		○	○	○		
87	2210		○	○	○		
88	2235		○	○	○	○	
89	2261		○	○	○		
90	2286		○	○	○	○	
91	2311		○	○	○		
92	2337		○	○	○	○	
93	2362		○	○	○		
94	2388		○	○	○		
95	2413		○	○	○	○	
96	2438		○	○	○		
97	2464		○	○	○		
98	2489		○	○	○	○	
99	2515		○	○	○		
100	2540		○	○	○	○	○
101	2565			○	○	○	○
102	2591			○	○	○	○
103	2616						
104	2642						
105	2667			○	○	○	○
106	2692			○	○	○	○
107	2718			○	○	○	○
108	2743			○	○	○	○
109	2769						
110	2794			○	○	○	○
111	2819			○	○	○	○
112	2845			○	○	○	○
113	2870						
114	2896						
115	2921			○	○	○	○
116	2946			○	○	○	○
117	2972			○	○	○	○
118	2997			○	○	○	○
119	3023						
120	3048			○	○	○	○
121	3073			○	○	○	○
122	3099			○	○	○	○
123	3124						
124	3150						
125	3175			○	○	○	○
126	3200			○	○	○	○
127	3226			○	○	○	○
128	3251			○	○	○	○
129	3277						
130	3302			○	○	○	○
131	3327			○	○	○	○
132	3353				○	○	○
133	3378						
134	3404						
135	3429			○	○	○	○
136	3454			○	○	○	○

Table of effective lengths

Standard Manufacturable range
Red Manufacturable range

*: Standard dimension prescribed in JIS
○: Bando's standard dimension

Effective length: Represents effective outside length for Type M and effective pitch length for Types A, B, C, D, and E.

Nominal No.	Effective dimension (mm)	Belt type M	A	B	C	D	E
130	3480			○	○	○	○
131	3505			○	○	○	○
132	3531			○	○	○	○
133	3556		○	○	○	○	○
134	3581		○	○	○	○	○
135	3607				○	○	
136	3632				○	○	
137	3658				○	○	
138	3683		○	○	○	○	○
139	3708		○	○	○	○	○
140	3734				○	○	
141	3759				○	○	
142	3785				○	○	
143	3810		○	○	○	○	○
144	3835		○	○	○	○	○
145	3861				○	○	
146	3886				○	○	
147	3912				○	○	
148	3937		○	○	○	○	○
149	3962		○	○	○	○	○
150	3988				○	○	
151	4013				○	○	
152	4039				○	○	
153	4064		○	○	○	○	○
154	4089		○	○	○	○	○
155	4115				○	○	
156	4140				○	○	
157	4166				○	○	
158	4191			○	○	○	○
159	4216			○	○	○	○
160	4242				○	○	
161	4267				○	○	
162	4293				○	○	
163	4318		○	○	○	○	○
164	4343		○	○	○	○	○
165	4369				○	○	
166	4394				○	○	
167	4420				○	○	
168	4445				○	○	
169	4470				○	○	
170	4496				○	○	
171	4521				○	○	
172	4547				○	○	
173	4572		○	○	○	○	○
174	4597		○	○	○	○	○
175	4623				○	○	
176	4648				○	○	
177	4674				○	○	
178	4699				○	○	
179	4724				○	○	
180	4750				○	○	
181	4775				○	○	
182	4801				○	○	
183	4826			○	○	○	○
184	4851			○	○	○	○
185	4877				○	○	
186	4902				○	○	
187	4928				○	○	
188	4953				○	○	
189	4978				○	○	
190	5004				○	○	
191	5029				○	○	
192	5055				○	○	
193	5080				○	○	
194	5105				○	○	
195	5131				○	○	
196	5156				○	○	
197	5182				○	○	
198	5207				○	○	
199	5232				○	○	
200	5258			○	○	○	◇
201	5283			○	○	○	◇
210	5334			○	○	○	○

Nominal No.	Effective dimension (mm)	Belt type M	A	B	C	D	E
215	5461				○	○	
220	5588				○	○	○
225	5715				○	○	○
230	5842				○	○	○
235	5969				○	○	○
240	6096				○	○	○
245	6223				○	○	○
250	6350				○	○	○
255	6477				○	○	○
260	6604				○	○	○
265	6731					○	○
270	6858					○	○
275	6985					○	○
280	7112					○	○
285	7239					○	○
290	7366					○	○
295	7493					○	○
300	7620					○	○
305	7747					○	○
310	7874					○	○
315	8001					○	○
320	8128					○	○
325	8255					○	○
330	8382					○	○
335	8509					○	○
340	8636					○	○
345	8763					○	○
350	8890					○	○
355	9017					○	○
360	9144					○	○
365	9271					○	○
370	9398					○	○
375	9525					○	○
380	9652					○	○
385	9779					○	○
390	9906					○	○
395	10033					○	○
400	10160					○	○
410	10414					○	○
420	10668					○	○
430	10922					○	○
440	11176					○	○
450	11430					○	○
460	11684					○	○
470	11938					○	○
480	12192						○
490	12446						○
500	12700						○
510	12954						○
520	13208						○
530	13462						○
540	13716						○
550	13970						○
560	14224						○
570	14478						○
580	14732						○
590	14986						○
600	15240						○
610	15494						○
620	15748						○
630	16002						○
640	16256						○
650	16510						○

When using multiple belts, please specify a matched set.

2. Power Scrum Product Introduction

Bando Power Scrum is a combined belt that combines the top sections of V-Belt Red using tie bands. As the cross-sectional profile of the belt is the same as V-belts, JIS V-grooved pulleys can be used.

Structure (V-Belt Type)

1. Tie band 2. Cord 3. Adhesion rubber
4. Cover fabric 5. Compression rubber

Features

- **Stable operation even under violent load fluctuations**
  Even when the machine involves shock loads and pulsating loads, the belt tied with tie bands vibrates little and can operate stably, and it does not flip over to the side or come off of a pulley.
- **Belt most suitable for vertical shaft drives**
  The tying with tie bands allows the belt to be used even in a vertical shaft drive with no detachment from the pulleys.
- **Allows V-flat power transmission.**
  Deceleration at a high speed ratio is possible with V-flat power transmission, allowing inexpensive power transmission.
- **Can also be used for conveyance.**

- **Manufacturable range for Power Scrum**

Belt type	P (mm)	Nominal No.*
A	15.0	60 ~ 200
B	19.0	60 ~ 350
C	25.5	100 ~ 350
D	37.0	100 ~ 350

* The nominal numbers for V-belt type represent the effective pitch length of the belt in units of inches.

● The V-belt type is made to order. Please use the Power Ace type if possible.

Belt Indication

- **Indication example**

5 - C 100

No. of ridges — Nominal No. (100 inches: 2540 mm)
Belt type (Type C)

Standard Combination by the Number of Ridges

A single Power Scrum belt consists of a combination of two, three, four, and/or five ridges. For six ridges or more, the standard combinations are shown in the following table.

No. of ridges	Standard combination	No. of ridges	Standard combination
6	3+3	13	4+5+4
7	3+4	14	5+4+5
8	4+4	15	5+5+5
9	4+5	16	4+4+4+4
10	5+5	17	4+4+5+4
11	4+3+4	18	5+4+4+5
12	4+4+4	19	5+4+5+5

When using multiple belts, please specify a matched set.

Pulley

For pulleys for Power Scrum, the groove pitch is especially important. Use JIS pulleys.

3. V-grooved pulley groove dimensions

The pulley groove profile is shown in Fig. 1. Use Table 1 Standard pulley groove dimensions. For horizontal power transmission or vertical power transmission, use Table 2 Deep pulley groove dimensions.

Fig. 1. Pulley groove cross section

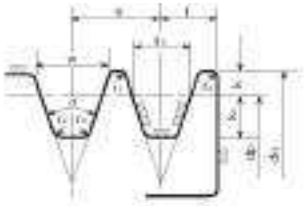


Table 1 Standard pulley groove dimensions

(Unit: mm)

Type	Pulley pitch diameter (dp)	α (°)	f ≥	(w)	k	ko	e	f	r1	r2	r3	(Reference) Belt thickness
M	50 ~ 71 72 ~ 90 91 or more	34 36 38	8.0	9.65 9.75 9.86	2.7	6.3	8	9.5	0.2 ~ 0.5	0.5 ~ 1.0	1 ~ 2	5.5
A	71 ~ 100 101 ~ 125 126 or more	34 36 38	9.2	11.95 12.12 12.30	4.5	8.0	15.0	10.0	0.2 ~ 0.5	0.5 ~ 1.0	1 ~ 2	8
B	125 ~ 160 161 ~ 200 201 or more	34 36 38	12.5	15.86 16.07 16.29	5.5	9.5	19.0	12.5	0.2 ~ 0.5	0.5 ~ 1.0	1 ~ 2	10.3
C	200 ~ 250 251 ~ 315 316 or more	34 36 38	16.9	21.18 21.45 21.72	7.0	12.0	25.5	17.0	0.2 ~ 0.5	1.0 ~ 1.6	2 ~ 3	13.5
D	355 ~ 450 451 or more	36 38	24.6	30.77 31.14	9.5	15.5	37.0	24.0	0.2 ~ 0.5	1.6 ~ 2.0	3 ~ 4	19
E	500 ~ 630 631 or more	36 38	28.7	36.95 37.45	12.7	19.3	44.5	29.0	0.2 ~ 0.5	1.6 ~ 2.0	4 ~ 5	23

(Note) For Type M, only one belt should be used in principle.

Table 2 Deep pulley groove dimensions

(Unit: mm)

Type	Pulley pitch diameter (dp)	α (°)	f ≥	(w)	k	ko	e	f	r1	r2	r3
A	71 ~ 100 101 ~ 125 126 or more	34 36 38	9.2	14.40 14.72 15.05	8.5	8.0	18	12	0.2 ~ 0.5	0.5 ~ 1.0	1 ~ 2
B	125 ~ 160 161 ~ 200 201 or more	34 36 38	12.5	18.61 19.00 19.39	10.0	9.5	22	14.5	0.2 ~ 0.5	0.5 ~ 1.0	1 ~ 2
C	200 ~ 250 251 ~ 315 316 or more	34 36 38	16.9	25.46 26.00 26.54	14.0	12.0	31.5	20	0.2 ~ 0.5	1.0 ~ 1.6	2 ~ 3
D	355 ~ 450 451 or more	36 38	24.6	37.27 38.03	19.5	15.5	45	29	0.2 ~ 0.5	1.6 ~ 2.0	3 ~ 4
E	500 ~ 630 631 or more	36 38	28.7	44.10 45.02	23.7	19.3	52.5	34	0.2 ~ 0.5	1.6 ~ 2.0	4 ~ 5

- **Pulley material**

  JIS G 5501 “Gray Iron Castings” FC200 to 250

Rib-Ace™ 2

It is generally called V-ribbed belt and is a belt that combines a flat belt and a V-belt to make use of the features of both. Previously, the application of this belt was limited to driving of auxiliary machinery for automobiles; however, even for general-purpose machinery, it is a power transmission belt that can meet such requirements as miniaturization, machinery functional improvement, and labor-saving in maintenance.

1. Product Introduction

Features

Already from around 1980, “Bando Rib-Ace Auto” started to be used as a belt for automobiles, and it has been providing such features as pulley miniaturization, labor-saving in belt maintenance, and belt service life extension for such purposes as weight reduction, space-saving, and energy-saving of automotive engines.

- **Allows miniaturization of power transmission devices.**
  It can be used with small-diameter pulleys and allows compact designs.
- **Allows high-speed operation.**
  It has little losses in power transmission by centrifugal force, is suitable for high-speed operation, and can be used up to a belt speed of 50 m/s.
- **It has high rotation accuracy and has little belt vibration.**
  The rib section is combined with the belt and is ground, it has little rotation non-uniformity during each rotation of the belt in running, allowing you to expect smooth operation.
- **High transmission efficiency (little power loss).**
  The belt is thinner than V-belts and has little loss from bending, which provides high transmission efficiency.
- **Advantageous in tension retention and maintenance.**
  Compared to V-belts, it has less belt deformation and has less sink into the pulley groove due to abrasion, allowing the maintenance period, such as re-tensioning, to be extended.
- **Characteristics**

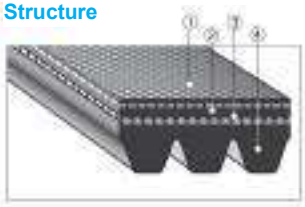
  Heat resistance ····· It compounds heat-resistant rubber.

  Oil resistance ····· It can be used even with slight adhesion of oil or grease. (Be careful that adhesion of dispersed cutting oil etc. can cause slipping.)

  Water resistance ····· Be careful that slip tends to occur when water splashes over directly or when the belt is constantly used in a high-temperature condition.

  Static electricity prevention ····· When you need static electricity prevention, please contact us.

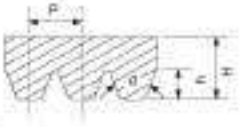
Structure



1. Top canvas
2. Adhesion rubber
3. Cord
4. Rib rubber

Indication

■ Belt designation example



4 PK 1000

No. of ribs — Belt type (Type PK) — Effective length (1000 mm)

	p	H	h	α
	mm	mm	mm	
Type PJ	2.34	3.4	1.3	40
Type PK	3.56	4.3	2.0	40
Type PL	4.70	6.0	3.3	40

■ Standard size

(Unit: mm)

Effective length					
Type PJ		Type PK		Type PL	
273	887	600	1220	540	1520
294	911	615	1250	605	1555
332	937	630	1280	655	1645
353	962	650	1320	700	1720
401	988	670	1360	730	1750
454	1013	690	1400	835	1850
480	1089	710	1450	850	1900
502	1140	730	1500	870	1975
530	1165	750	1550	875	2065
556	1191	775	1600	880	2115
567	1201	800	1650	905	2190
594	1242	825	1700	915	2360
607	1318	850	1750	950	2470
619	1343	875	1800	975	2575
634		900	1850	1060	2695
657		925	1900	1035	2840
704		950	1950	1050	3045
708		975	2000	1055	
759		1000	2120	1070	
777		1030	2240	1190	
797		1060	2360	1240	
817		1090	2500	1305	
835		1120	2650	1340	
852		1150	2800	1365	
861		1180	3000	1445	

■ Standard No. of ribs

Type PJ	3PJ ~ 18PJ
Type PK	3PK ~ 12PK
Type PL	3PL ~ 12PL

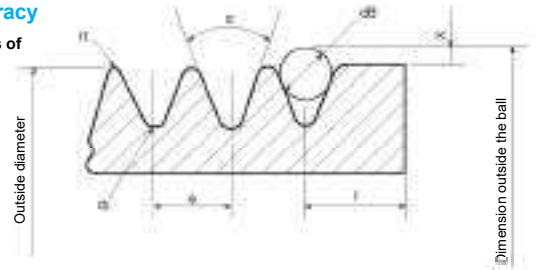
* When using multiple belts, please specify a matched set. However, please note that Rib-Ace is used in a multiple quantity with the same number of ribs.

2. Rib-Ace™ 2 pulley

We standardize Rib-Ace Type-PK pulleys (bushing type) for you to be able to use Rib-Ace (Type PK) more conveniently. Please make use of them. (→ **See P.243 to P.244)**

Dimensional accuracy

■ **Profile and dimensions of the groove section**



(Unit: mm)

Unit	e	f (minimum)	α	rt (minimum)	rb (maximum)	dB	2X
	mm	mm	°	mm	mm	mm	mm
PJ	2.34 ± 0.03	1.6	40 ± 0.5	0.20	0.4	1.50 + 0.01	0.23
PK	3.56 ± 0.05	2.5	40 ± 0.5	0.25	0.5	2.50 + 0.01	0.99
PL	4.70 ± 0.05	3.3	40 ± 0.5	0.40	0.4	3.50 + 0.01	2.36

Note 1) A cumulative pitch error is ± 0.3 mm or less.

■ **Outside diameter**

(Unit: mm)

Nominal outside diameter	Tolerance
74 or less	± 0.25
74 to 200 or less	± 0.50
200 or more	± {0.50 + [(pulley diameter - 200) × 0.002]}

■ **Groove outside diameter of a single pulley Tolerance of (the dimension outside the ball)**

(Unit: mm)

Range of nominal outside diameter and No. of grooves	Maximum dimension outside the ball	
74 or less and 6 grooves or less	0.10	When 6 grooves are exceeded, add 0.003 per groove.
74 to 500 or less and 10 grooves or less	0.15	When 10 grooves are exceeded, add 0.005 per groove.

■ **Circumferential run-out**

(Unit: mm)

Nominal outside diameter	Run-out tolerance (TIR) (Note 2)
74 or less	0.13
74 to 250 or less	0.25
250 or more	0.25 with 0.0004 added per outside diameter of 1.0 over 250

Note 2) TIR is an abbreviation for Total Indicator Reading and refers to a difference between the maximum value and the minimum value in readings of run-out measurement.

■ **Run-out of rim side face**

(Unit: mm)

Nominal outside diameter	Tolerance of run-out of rim side face
125 or less	0.15
Over 125 to 315 or less	0.20
Over 315	0.30

■ **About balance**

Cases with a peripheral speed of 35 m/s or less and cases with a peripheral speed over 35 m/s need to be separated.

① Standard pulley (use up to a peripheral speed of 35 m/s)

For an unbalanced mass at the periphery, the larger of ⓐ or ⓑ is used as the tolerance.

ⓐ 0.001kg

ⓑ 0.1% of the total mass of the pulley and the bushing

The value of ⓑ corresponds to G16 of JIS B0905 "Balance quality of rotating machines" at a peripheral speed of 15 m/s.

② When a peripheral speed of 35 m/s is exceeded

When 35 m/s is exceeded, a dynamic balance is required.

● **Finish accuracy**

The finish accuracy of the groove section that contacts with the belt is 3.2a or less (10•S (JIS)).

● **Material**

FC200 (former FC20) or more of JIS-G-5501 "Gray Iron Castings."

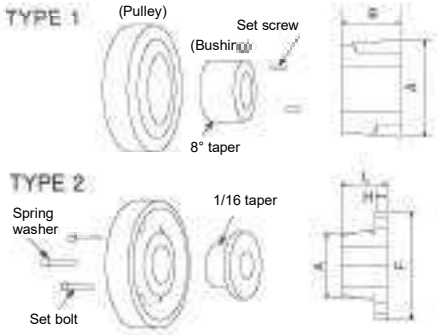
Rib-Ace™ 2
Pulley Data

Bushing System

The pulley for Rib-Ace is a bushing system that consists of a combination of the pulley body and a bushing.
It employs "ISOMEC™ Bushing" (hereinafter referred to as bushing), does not require machining of the shaft hole or keyway, and allows installation on, removal from, and positioning on a shaft to be performed with a single hex key. It has an equivalent fastening force with shrinkage fit and guarantees safe and reliable power transmission.

Features

- **Allows simple and speedy installation on, removal from, and positioning on a shaft.**
- **No need for additional machining such as shaft hole machining.**
- **Safe and reliable fastening system.**
- **Easy responses to design changes.**
- **Design standardization by the bushing system leads to cost reduction.**
- **The same standard with major European and American manufacturers provides compatibility.**
- **Can be applied to any rotating power transmission devices.**



■ **About balance**

Pulley (example) PK - 80 - 4
- PK: Type PK
- 80: Pulley nominal diameter (80 mm)
- 4: No. of grooves

Bushing (example) 1210 - 20 - N
- 1210: Bushing part number
- 20: Shaft hole diameter (20 mm)
- N: Keyway for new JIS keys

■ **Table of applicable part numbers**

Pulley nominal diameter (mm)	No. of pulley grooves					
	4	5	6	8	10	12
63						
71			1108			
80				1210		
90	1208					
100						
112			2610			
125						
140						
160						
180						
200						
224	2012			2517		
250						
280						
315					3020	
355						
400						3535
450						
500						
560						4535
630						

■ **Table of Type 1 ISOMEC Bushing dimensions**

(Unit: mm)

Bushing part number	Maximum shaft hole dia.Note1 (mm)	A	B	Set screw				Mass Note2 (kg)	Allowable transmission torque (N·m)
				Nominal (inch)	Length (inch)	Quantity	Hex key Nominal (mm)		
1108	28 (35)	38.48	22	W1/4	1/2	2	3	0.33	132
1210	32 (38)	47.80	25	W3/8	5/8	2	5	0.53	280
1310	35 (42)	50.77	25	W5/8	5/8	2	5	0.77	330
1610	42 (48)	57.12	25	W3/8	5/8	2	5	0.82	480
2012	50 (60)	64.82	32	W7/16	7/8	2	5	0.99	600
2517	60 (70)	85.20	45	W1/2	1	2	6	3.23	1,180
3020	75 (80)	102.92	51	W3/8	1 1/4	2	8	2.41	1,600

■ **Table of Type 2 ISOMEC Bushing dimensions**

Bushing part number	Maximum shaft hole dia.Note1 (mm)	A	B	F	L	H	Set bolt				Mass Note2 (kg)	Allowable transmission torque (N·m)
							Nominal (mm)	Length (mm)	Quantity	Socket wrench Nominal (mm)		
3526	75 (75)	90.98	—	152	67	19	M12	65	3	10	3.92	1,200
4035	95 (95)	112.01	—	168	92	21	M14	90	3	12	6.43	1,600

(Note 1) Maximum shaft hole diameter when the new JIS parallel key or shallow key is applied. However, the values within the parentheses ( ) are maximum shaft hole diameters when the previous JIS parallel key is applied.
(Note 2) Mass with the intermediate size of the standard shaft hole diameter.

■ List of standard shaft hole diameters

(Unit: mm)

Bushing part number	Standard shaft hole dia.
1108	● ● ● ● ● ● ● ● ● ● ● ● △
1210	◇ ○ ○ ○ ○ ○ ○ ● ● ● ● ● ● ● ○ △
1310	○ ○ ○ ● ● ● ● ● ● ● ● △
1610	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● △ △
2012	○ ○ ○ ○ ○ ○ ○ ○ ● ● ● ● ● ● ● ● ● ● △
2517	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ● ● ● ● ● ● ● ● ● ●
3020	○ ○ ○ ● ● ● ● ● ● ● ● ● ● ○
3535	● ● ● ● ● ● ● ● ● ● ●
4040	● ● ● ● ● ● ● ● ● ● ○ △

Bushing part number	10	11	12	14	15	16	17	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	60	65	70	75	80	85	90	95
1108	●	●	●	●	●	●	●	●	●	●	●	●	●	△																		
1210	◇	○	○	○	○	○	○	●	●	●	●	●	●	●	○	△																
1310				○	○	○	○	●	●	●	●	●	●	●	●	△																
1610				●	●	●	●	●	●	●	●	●	●	●	●	●	●	△	△													
2012				○	○	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●	●	△									
2517						○	○	○	○	○	○	○	○	○	●	●	●	●	●	●	●	●	●	●								
3020													○	○	○	●	●	●	●	●	●	●	●	●	●	●	○					
3535																		●	●	●	●	●	●	●	●	●	●					
4040																				●	●	●	●	●	●	●	●	●	●	○	△	

●, ○, and △ are all standard stock products.
Applicable keys are as follows.
● - Parallel key of the new JIS and previous JIS
○ - Parallel key of the new JIS
△ - Shallow key (a special standard key, equipped with the bushing)

(Reference) About shaft diameters and keys used

- **Shaft diameter**
  When a bushing is applied, the shaft diameter tolerance can be increased from the previous one; for the diameter tolerance, refer to the following table.

(Unit: mm)

Shaft diameter	Tolerance
10 ~ 30	+0.01 −0.06
32 ~ 125	+0.03 −0.12

- **Key used**
  When a key is used for a bushing, use the parallel key of the nominal dimension indicated in the following table for the respective standard shaft hole diameter.
  Do not use a taper key.
  Although the bushings with the shaft hole diameters to which a shallow key is applied (△ mark in the table above) are all equipped with a shallow key, perform keyway machining on the shaft to the same dimensions as those of the new JIS parallel key.

■ Bushing for the new JIS parallel key groove

(Unit: mm)

Standard shaft hole dimension d	Key nominal dimension b × h	Standard shaft hole dimension d	Key nominal dimension b × h
10	3 × 3	32	
11		35	10 × 8
12	4 × 4	38	
14		40	
15	5 × 5	42	12 × 8
16		45	
17		48	14 × 9
18		50	
19	6 × 6	55	16 × 10
20		60	18 × 11
22		65	
24		70	
25	8 × 7	75	20 × 12
28			
30			

• The tolerance of width b of the keyway of the bushing is Js9.

■ Bushing for the previous-JIS parallel key groove

(Unit: mm)

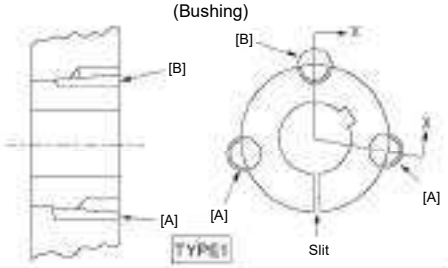
Standard shaft hole dimension d	Key nominal dimension b × h	Standard shaft hole dimension d	Key nominal dimension b × h
10		32	
11	4 × 4	35	10 × 8
12		38	
14		40	
15		42	
16		45	12 × 8
17	5 × 5	48	
18		50	
19		55	12 × 10
20		60	
21		65	20 × 12
22		70	
24	7 × 7	75	20 × 15
25			
28			
30			

• The tolerance of width b of the keyway of the bushing is F7.

Note) Distinction of the new and previous JIS keyways. Previous-JIS product: with an inscribed "K" mark, contained in a box with a blue label, New-JIS product: Without an inscribed "K" mark, contained in a box with a red label.

Handling Method and Precautions for the Bushing System (Type 1)

The bushing has a total of three holes, two half drilled holes and one half threaded hole. The pulley side has threaded holes at positions corresponding to the drilled holes in the bushing and a drilled hole at a position corresponding to the threaded holes in the bushing TYPE 1.
Installation and removal are performed by tightening set screws into these holes and utilizing their jacking effect.



■ Installation Procedure (Type 1)

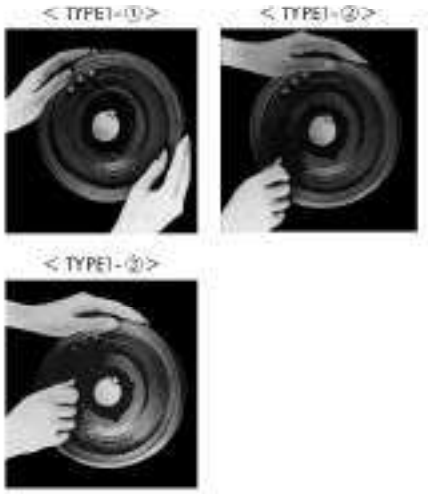
① Clean the bushing, the taper holes in the pulley, and the shaft. Adhesion of oil or dust is not allowed.

② Gently fit the bushing in the taper hole in the pulley, insert set screws in two holes Ⓐ (a combination of drilled holes for the bushing and threaded taper holes in the pulley) of Type 1, and temporarily tighten them to about one-third of the entire length. Be sure to use provided set screws.

③ Slide the bushing in with the bushing floating off the taper holes in the pulley and set the bushing at a desired position **(Type 1-①)**.
The bushing can be slid in more easily by inserting a slotted screwdriver or the like into the slit in the bushing and widening the slit. When using a key, use a parallel key **(→ See P. 239)** and with this key embedded in the keyway in the shaft in advance, set the pulley and the bushing. Do not use a taper key.

④ Uniformly tighten the set screws alternately and gradually using the hex key **(Type 2-②)**. The propulsive force of the screw attracts the pulley in the direction of the bushing, and the wedge effect of the taper and the spring effect of the slit contract the shaft hole, completely fastening the pulley, bushing, and shaft. When the set screws are difficult to tighten, lightly hit the hub section of the pulley and the bushing with a wooden or plastic hammer. For the tightening torque of the set screws, follow the table below. Be careful that non-uniform tightening can cause run-out.

⑤ Measure the run-out of the rim side face and the outer periphery of the pulley and check that they are equal to or less than the tolerance. Perform a loaded trial operation for about ten minutes and check the fastening condition and the tightening condition of the set screws.



■ Tightening torques of Type-1 set screws

Bushing part number	Set screw nominal (inch)	Tightening torque (N·m)	Bushing part number	Set screw nominal (inch)	Tightening torque (N·m)
1108	W1/4	5.6	**2012**	W7/16	31
1210	W3/8	20	**2517**	W1/2	48
1310	W3/8	20	**3020**	W5/8	90
1610	W3/8	20			

■ Tightening torques of Type-2 set bolts

Bushing part number	Set bolt nominal (mm)	Tightening torque (N·m)	Bushing part number	Set bolt nominal (mm)	Tightening torque (N·m)
3526	M12	81	**4036**	M14	102

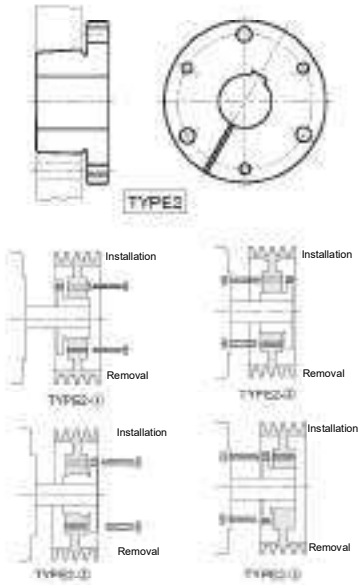
■ Installation Procedure (Type 1)

① Remove the set screws from the holes Ⓐ of TYPE 1.

② Apply oil on the tips of the set screws and insert and tighten them in the holes Ⓑ (a combination of the threaded hole in the bushing and the drilled taper hole in the pulley) of TYPE 1 **(Type 1-③)**.
The jacking effect of the set screws separates the pulley, bushing, and shaft, allowing them to be easily removed.

Handling Method and Precautions for the Bushing System (Type 2)

The Type-2 ISOMEC Bushing has three threaded holes and three drilled holes alternately at equal intervals. As with Type 2, the pulley also has three threaded holes and three drilled holes.
Although installation and removal are performed in the same way as Type 1 by inserting set bolts into these holes, there are four methods depending on the combination of the direction of the bushing in relation to the shaft and the direction of insertion of the set bolts.
TYPE2-① TYPE2-② TYPE2-③ TYPE2-④ .



■ Installation Procedure - In the case of Type 2-①

① Clean the bushing, the taper holes in the pulley, and the shaft. Adhesion of oil or dust is not allowed.

② Set the pulley and the bushing aligning the drilled hole position of the pulley with the threaded hole position of the bushing, insert a set bolt from the pulley side, and slightly tighten the set bolt. Do not lubricate the threaded section. Be sure to use provided set bolts.

③ Slide the pulley and the bushing assembled in ② onto the shaft and set them at a desired position.
When using a key, use a parallel key and with this key embedded in the keyway in the shaft in advance, set the pulley and the bushing. Do not use an inclined key.

④ Uniformly tighten the set bolts alternately and gradually using the socket wrench. Check that at the time of completion of tightening, there is a clearance between the flange section of the bushing and the hub section of the pulley. When the set bolts are difficult to tighten, lightly hit the hub section of the pulley and the bushing with a wooden or plastic hammer.
For the tightening torque of the set bolts, follow the separate table. Non-uniform tightening can cause run-out.

⑤ Measure the run-out of the rim side face and the outer periphery of the pulley and check that they are equal to or less than the tolerance. Perform a loaded trial operation for about ten minutes and check the fastening condition and the tightening condition of the set bolts.

■ Removal - In the case of Type 2-①

① Remove all set bolts.

② Insert the set bolts into the threaded holes in the pulley and tighten them alternately. The set bolts come in contact with the flange section of the bushing, and pushing this separates the pulley, bushing, and shaft, allowing them to be easily removed.

The same as above applies to installation and removal indicated in TYPE 2-② , TYPE 2-③ , and TYPE 2-④
A tip for installation is to set the bushing and the pulley so that the drilled holes come to the side to which the set bolts are inserted and the threaded holes come to the opposite side.

■ Precautions

The Bushing System uses fastening using taper and therefore has a centering function that automatically matches the shaft center with the rotation center, causing the run-out of the outer periphery and side face of the pulley to be extremely smaller compared to the previous fastening method. However, an inappropriate installation method may inhibit this self-centering function and cause run-out.
In particular, pay attention to the following three points at the time of installation.

- **Clean the outer peripheral taper surface of the bushing, the taper holes in the pulley, threaded holes, and drilled holes in the pulley.**
  Completely remove foreign objects such as dust.
- **Tighten set screws (set screws for the bushing) uniformly, alternately, and gradually.**
- **When you use a key, use a parallel key. In this case, make the key work in the axial direction and make sure that there is a clearance between the top of the keyway and the key in the depth (height) direction.**

(Note) Do not use a taper key.
When a run-out is still large even after taking care of the above three points, further tighten a specific or all set screws while measuring them with a dial gauge, or remove the bushing and re-install it.

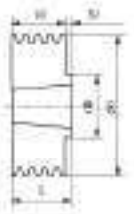
Table of Rib-Ace 2 (Type PK) pulley standard dimensions

4PK

(Pulley Profile)

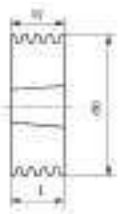
Types 10U/10Y/10Z

Type 11U



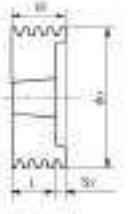
Types 30U/30Y/30Z

Type 31U

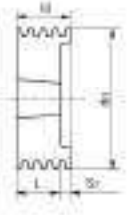


Types 40U/40Z

Type 41U



Type 41UR



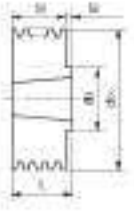
Explanation of symbols
U: Flat-plate solid type
Y: Six-arm type
Z: Flat-plate round-window type
R: Bushing insertion direction

4PK・5PK・6PK・8PK・10PK・12PK

(Pulley Profile)

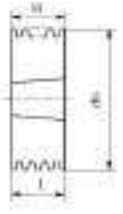
Types 10U/10Y/10Z

Type 11U



Types 30U/30Y/30Z

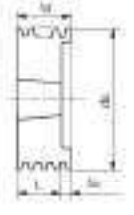
Type 31U



Types 40U/40Z

Type 41U

Type 41UR



Explanation of symbols
U: Flat-plate solid type
Y: Six-arm type
Z: Flat-plate round-window type
R: Bushing insertion direction

PK-4 (for belts with four ribs)

(Unit: mm)

Nominal outside diameter do	Profile drawing number	Bushing		Hub				Rim		Mass Note 1) (kg)
		Product No.	Maximum shaft hole dia.	Dia. db	Length L	Projection Si	Recess S_2	Width W	Height H	
		Shaft-hole type Shaft-hole type								

PK-5 (for belts with five ribs)

(Unit: mm)

Nominal outside diameter do	Profile drawing number	Bushing		Hub				Rim		Mass Note 1) (kg)
		Product No.	Maximum shaft hole dia.	Dia. db	Length L	Projection Si	Recess S_2	Width W	Height H	
		Shaft-hole type								

PK-6 (for belts with six ribs)

(Unit: mm)

Nominal outside diameter do	Profile drawing number	Bushing		Hub				Rim		Mass Note 1) (kg)
		Product No.	Maximum shaft hole dia.	Dia. db	Length L	Projection Si	Recess S_2	Width W	Height H	
		Shaft-hole type Shaft-hole type								

Note 1) The mass is only of the pulley body. When you include the mass of the bushing, add **the bushing mass** on **P. 238**.

Rib-Ace™ 2
Pulley Data

PK-8 (for belts with eight ribs)

(Unit: mm)

Nominal outside diameter do	Profile drawing number	Bushing		Hub				Rim		Mass Note 1) (kg)
		Product No.	Maximum shaft hole dia.	Dia. db	Length L	Projection Si	Recess S_2	Width W	Height H	
		Shaft-hole type Shaft-hole type								

PK-10 (for belts with ten ribs)

(Unit: mm)

Nominal outside diameter do	Profile drawing number	Bushing		Hub				Rim		Mass Note 1) (kg)
		Product No.	Maximum shaft hole dia.	Dia. db	Length L	Projection Si	Recess S_2	Width W	Height H	

PK-12 (for belts with 12 ribs)

(Unit: mm)

Nominal outside diameter do	Profile drawing number	Bushing		Hub				Rim		Mass Note 1) (kg)
		Product No.	Maximum shaft hole dia.	Dia. db	Length L	Projection Si	Recess S_2	Width W	Height H	

Note 1) The mass is only of the pulley body. When you include the mass of the bushing, add **the bushing mass** on **P. 238**.

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

$$\text{Speed ratio} = \frac{\text{Pinion revolution}}{\text{Revolution of large pulley}}$$

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[Note 1] (kW)
Ko : Load correction factor **(Table 1 → P. 247)**
Ki : Idler correction factor **(Table 2 → P. 247)**
Ke : Environmental 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

$$Dp = \frac{n_1}{n_2} \times dp \qquad \text{Speed ratio} = \frac{n_1}{n_2}$$

dp: Pinion pitch diameter (mm)
Dp: Large pulley pitch diameter (mm)
n_1: Pinion revolution (rpm)
n_2: Revolution of large pulley (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

$$Do = \frac{n_1}{n_2} \times do \qquad \text{Speed ratio} = \frac{n_1}{n_2}$$

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

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

• Check of the belt speed

Calculate the belt speed from 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	30 m/s	35 m/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**).

How to Design a Frictional Forced Power Transmission Belt

Design Procedure

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)

• Calculating 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 5

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

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

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 $K\ell$ by the effective length.
From Formula 7, obtain the angle of contact of the pinion θ_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

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

N: Number of belts (pcs) or (No. of ribs)
Pd: Design power (kW)
Pr: Basic power rating (kW/pc) or (kW/rib)
$K\ell$: 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. 276)**, obtain the installation range and the tension range of the belt.

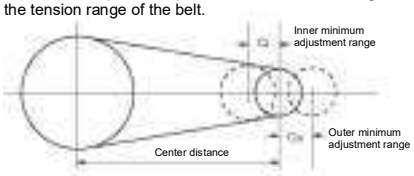


Table 1 Load correction factor (Ko)

	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)

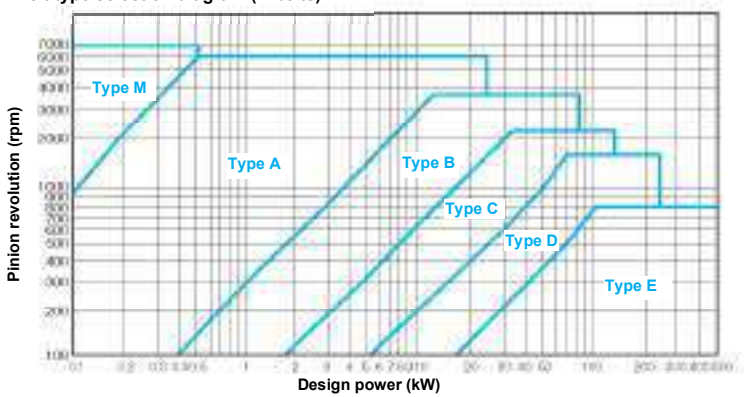


Fig. 1-2 Belt type selection diagram (Energy-Saving Power Ace / Power Ace Cog / Power Scrum)

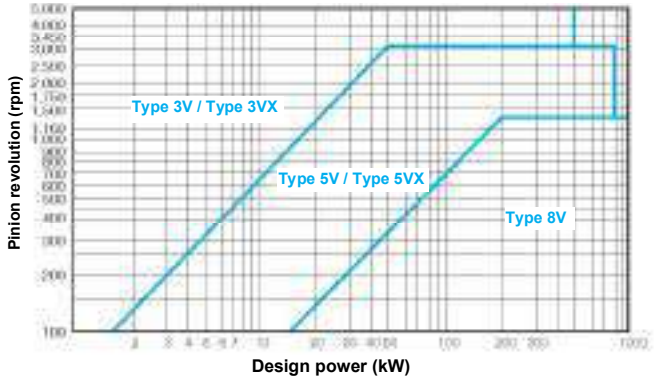


Fig. 1-3 Belt type selection diagram (Power Ace Aramid Combo)

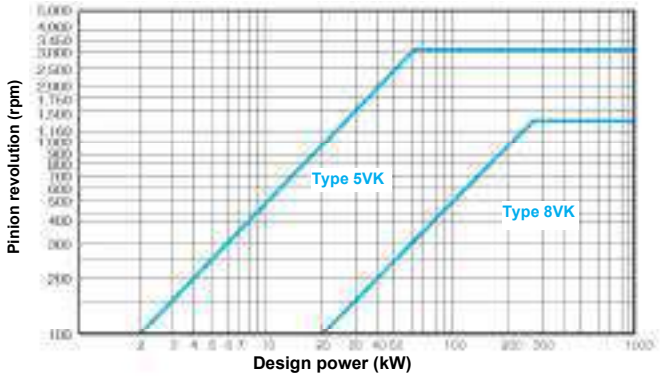


Fig. 1-4 Belt type selection diagram (Power Ace Aramid Combo)

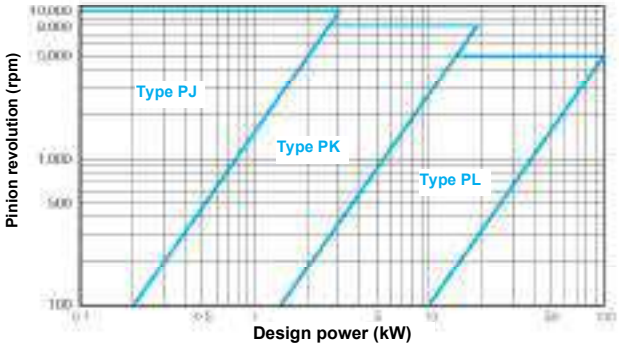


Table 4 Difference between pulley outside diameter and pitch diameter (2k)

(Unit: mm)

Belt type	M	A	B	C	D	E	3V・3VX	5V・5VX・5VX	8V・8VX
2k	5.3	9.0	11.0	14.0	19.0	25.0	1.2	2.0	3.0

Pulley outside diameter = Pulley pitch diameter + 2k

■ Table 5 Minimum pulley diameters

Table 5-1V-Belt (Unit: mm)

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

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

(Unit: mm)

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

Table 5-3 Rib-Ace 2 (Unit: mm)

Belt type	Minimum pulley outside diameter
PJ	20
PK	50
PL	71

■ Table 6 Maximum belt speed

Belt specification	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	0.14	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	0.56	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	1.18	1.39	1.66	1.92	2.18	2.85	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	4.98	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	0.83	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	8.43	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	1.36	1.58	1.83	2.08	2.32	2.81	3.39	4.01	4.71	5.62	6.51	7.39	9.39	10.53	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	1.65	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	13.49
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	8.23	9.41	10.51	12.84	13.94		
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	2.28	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	2.38	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	2.94	3.46	4.07	4.68	5.26	6.36	7.56	8.71	9.81							

(Unit: mm)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.09 — 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	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02
200	0.00	0.00	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.03
300	0.00	0.00	0.01	0.02	0.03	0.03	0.04	0.05	0.05	0.05
400	0.00	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.07
500	0.00	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.08	0.09
600	0.00	0.01	0.02	0.04	0.06	0.07	0.08	0.09	0.10	0.10
700	0.00	0.01	0.03	0.05	0.07	0.08	0.09	0.11	0.11	0.12
800	0.00	0.01	0.03	0.06	0.08	0.09	0.11	0.13	0.13	0.14
900	0.00	0.01	0.04	0.06	0.08	0.10	0.12	0.14	0.15	0.16
1000	0.00	0.01	0.04	0.07	0.09	0.11	0.13	0.15	0.16	0.17
1200	0.00	0.02	0.05	0.08	0.11	0.14	0.16	0.18	0.20	0.21
1400	0.00	0.02	0.06	0.10	0.13	0.16	0.19	0.21	0.23	0.24
1600	0.00	0.02	0.08	0.11	0.15	0.18	0.21	0.24	0.26	0.28
1800	0.00	0.03	0.07	0.12	0.17	0.21	0.24	0.27	0.29	0.31
2000	0.00	0.03	0.08	0.14	0.19	0.23	0.27	0.30	0.33	0.35
2200	0.00	0.03	0.09	0.15	0.21	0.25	0.29	0.33	0.36	0.38
2400	0.00	0.03	0.10	0.17	0.23	0.27	0.32	0.36	0.39	0.43
2600	0.00	0.04	0.10	0.18	0.25	0.30	0.35	0.39	0.43	0.45
2800	0.00	0.04	0.11	0.19	0.26	0.32	0.37	0.42	0.46	0.49
3000	0.00	0.04	0.12	0.21	0.28	0.34	0.40	0.45	0.49	0.52
3200	0.00	0.05	0.13	0.22	0.30	0.37	0.43	0.48	0.52	0.56
3400	0.00	0.05	0.14	0.24	0.32	0.39	0.45	0.51	0.55	0.59
3600	0.00	0.05	0.14	0.25	0.34	0.41	0.48	0.54	0.59	0.63
3800	0.00	0.05	0.15	0.26	0.36	0.43	0.51	0.57	0.62	0.66
4000	0.00	0.06	0.16	0.28	0.38	0.46	0.54	0.60	0.65	0.69
4500	0.00	0.06	0.18	0.31	0.42	0.51	0.60	0.68	0.73	0.78
5000	0.00	0.07	0.20	0.35	0.47	0.57	0.67	0.75	0.81	0.87

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	0.91	1.04	1.15	1.26	1.38	1.49	1.62	1.74	1.89	2.20	2.56	2.82	2.97	3.25	3.43	3.91
150	1.18	1.34	1.49	1.65	1.81	1.96	2.15	2.35	2.52	2.73	3.19	3.71	4.08	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	3.28	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	4.31	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	5.21	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	12.89	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	6.33	7.03	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	7.63	8.51	9.42	10.25	11.33	12.36	13.38	14.56	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	11.95	13.14	14.33	15.50	16.85	19.67	22.82	24.99	26.24	28.27	29.83	33.68
1400	7.61	8.88	9.99	11.06	12.12	13.16	14.42	15.71	17.46	18.96	22.07	25.50	27.81	29.14	31.23	32.84	36.83
1600	8.38	9.71	11.01	12.23	13.61	14.88	16.36	17.82	19.25	20.82	24.20	27.80	30.16	31.52	33.69	35.13	38.98
1800	9.09	10.64	12.00	13.41	14.80	16.13	17.77	18.31	20.85	22.54	26.03	29.80	32.04	33.33	35.27	36.62	
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	33.55	34.52	36.38		
2200	10.35	12.01	13.66	15.27	16.83	18.35	20.11	21.80	23.47	25.22	28.71	32.11	34.06				
2600	11.78	13.14	14.84	16.67	18.34	19.94	21.76	23.47	25.03	26.79	29.89						
3000	11.04	13.01	15.00	17.59	19.28	20.87	22.63	24.23	25.63	27.13							
3400	12.26	14.29	16.38	17.95	19.52	21.03	22.63	23.97									
3800	12.23	14.22	16.05	17.50	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 — 1.52	1.53 — 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	0.14	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	0.28	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	1.38	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	2.01	2.46	2.88	3.24	3.50	3.74

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 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	4.98	4.99	5.40	6.02	6.58	7.28	7.97	8.66	8.94	9.35	10.04	10.58	11.11	11.67	12.76	13.57	15.71
120	5.26	5.76	6.43	7.09	7.75	8.58	9.40	10.22	10.55	11.03	11.85	12.48	13.14	13.78	15.07	16.03	18.56
140	6.03	6.63	7.37	8.14	8.89	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	6.78	7.43	8.29	9.16	10.01	11.11	12.18	13.25	13.67	14.31	15.37	16.22	17.08	17.90	19.57	20.82	24.12
180	7.49	8.22	9.20	10.17	11.14	12.38	13.54	14.73	15.21	15.91	17.09	18.03	18.92	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	25.48	29.50
250	9.95	10.95	12.27	13.58	14.89	16.52	18.16	19.75	20.39	21.35	22.96	24.21	25.47	26.75	29.22	31.09	36.01
300	11.64	12.82	14.38	15.91	17.48	19.40	21.30	23.25	23.96	25.09	26.96	28.43	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	26.58	27.42	28.72	30.86	32.57	34.27	35.96	39.32	41.78	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	46.84	54.12
450	16.39	18.09	20.34	22.58	24.80	27.55	30.28	33.00	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	57.48	60.90	69.94
600	20.75	22.93	25.82	28.69	31.53	35.03	38.50	41.93	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	30.63	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	25.95	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	72.48	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	60.53	63.69	66.77	69.78	75.69	79.79	90.15
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	81.25	85.49	95.63
1000	30.75	22.95	25.82	28.69	31.53	35.03	38.50	41.93	43.27	45.29	48.62	51.25	53.85	56.42	61.46	65.16	74.64
1100	32.56	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	34.56	38.07	42.90	47.59	52.13	57.60	62.82	67.78	69.69	72.48	76.90	80.22	83.31	86.28	91.52	94.87	
1400	37.41	41.43	46.61	51.59	56.34	61.98	67.21	72.06	73.89	76.50	80.91	83.88	85.84				
1600	39.59	43.83	49.16	54.22	58.96	64.42	69.53	73.66	75.23	77.09							
1800	40.92	45.08	50.42	55.33	59.88	64.79											
2000	41.10	45.18	50.26	54.77	58.64												

(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 — 1.52	1.53 — 1.94	1.95 — 3.38	3.39 or more
100	0.01	0.04	0.11	0.20	0.27	0.35	0.39	0.43	0.47	0.50
120	0.01	0.05	0.14	0.24	0.33	0.39	0.46	0.52	0.56	0.60
140	0.01	0.06	0.16	0.28	0.38	0.46	0.54	0.61	0.66	0.70
160	0.01	0.07	0.18	0.32	0.43	0.53	0.62	0.69	0.75	0.80
180	0.01	0.07	0.21	0.36	0.49	0.58	0.69	0.78	0.84	0.90
200	0.00	0.08	0.23	0.40	0.54	0.64	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	0.01	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	0.01	0.17	0.46	0.80	1.09	1.32	1.54	1.73	1.88	2.00
450	0.01	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	5.41	6.58	7.70	8.67	9.38	10.00

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	0.31	0.36	0.40	0.42	0.46	0.54	0.60	0.72	0.79	0.85	0.96	1.10	1.41	1.60	1.72	1.81
400	0.31	0.36	0.40	0.45	0.50	0.55	0.60	0.68	0.74	0.81	0.87	1.02	1.15	1.35	1.45	1.61	1.89	2.05	2.67	3.02	3.25	3.41
600	0.43	0.51	0.56	0.64	0.72	0.79	0.86	0.98	1.07	1.16	1.25	1.47	1.70	1.97	2.13	2.32	2.67	3.07	3.87	4.37	4.75	4.93
800	0.55	0.65	0.72	0.82	0.92	1.01	1.14	1.26	1.38	1.50	1.62	1.90	2.21	2.55	2.78	3.01	3.40	3.92	5.01	5.66	6.05	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	3.13	3.40	3.66	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	4.03	4.31	4.96	5.62	7.17	8.07	8.69	9.06
1400	0.87	1.03	1.14	1.32	1.48	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	9.80	10.31
1600	0.96	1.13	1.28	1.46	1.66	1.85	2.08	2.31	2.53	2.76	2.98	3.51	4.08	4.75	5.11	5.57	6.40	7.23	9.14	10.25	10.88	11.43
1800	1.06	1.27	1.41	1.63	1.84	2.04	2.30	2.56	2.80	3.05	3.30	3.88	4.52	5.22	5.70	6.16	7.07	7.98	10.04	11.21	11.90	12.46
2000	1.15	1.38	1.53	1.78	2.01	2.23	2.51	2.79	3.07	3.34	3.61	4.24	4.93	5.73	6.24	6.74	7.72	8.67	10.90	12.12	12.86	13.44
2200	1.24	1.48	1.66	1.92	2.17	2.41	2.72	3.02	3.33	3.62	3.92	4.62	5.36	6.22	6.77	7.24	8.34	9.36	11.65	12.96	13.73	14.28
2400	1.33	1.60	1.78	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	12.40	13.75	14.47	15.00
2600	1.41	1.70	1.90	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	14.50		
2800	1.49	1.80	2.02	2.34	2.65	2.96	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	2.13	2.47	2.80	3.13	3.52	3.91	4.30	4.68	5.07	5.97	6.92	7.97	8.65	9.31	10.57	11.73	14.22			
3200	1.64	1.99	2.24	2.60	2.94	3.29	3.70	4.12	4.53	4.94	5.34	6.29	7.27	8.37	9.08	9.76	11.06	12.21				
3400	1.72	2.09	2.34	2.73	3.09	3.45	3.88	4.32	4.76	5.18	5.60	6.59	7.62	8.75	9.49	10.18	11.50	12.66				
3600	1.79	2.18	2.45	2.85	3.23	3.60	4.07	4.52	4.97	5.42	5.86	6.89	7.95	9.12	9.87	10.58	11.91	13.08				
3800	1.86	2.27	2.55	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	2.36	2.65	3.08	3.50	3.90	4.41	4.90	5.39	5.87	6.34	7.45	8.58	9.81	10.58	11.30	12.62					
4200	1.99	2.44	2.75	3.20	3.63	4.05	4.57	5.08	5.59	6.09	6.58	7.71	8.87	10.12	10.90	11.62	12.90					
4400	2.05	2.51	2.84	3.31	3.75	4.19	4.73	5.26	5.79	6.30	6.80	7.96	9.14	10.41	11.19	11.89						
4600	2.11	2.59	2.93	3.41	3.87	4.33	4.89	5.43	5.97	6.50	7.01	8.20	9.41	10.68	11.46	12.13						
4800	2.17	2.67	3.01	3.52	3.99	4.46	5.04	5.60	6.15	6.69	7.22	8.43	9.65	10.93	11.70	12.34						
5000	2.22	2.74	3.09	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	3.09	3.50	4.06	4.62	5.16	5.85	6.47	7.09	7.69	8.26	9.56	10.77									
7000	2.67	3.32	3.80	4.42	5.05	5.62	6.31	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	0.79	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	265	280	315	335	355	375	400	450
100	0.62	0.66	0.69	0.72	0.80	0.89	0.94	1.06	1.17	1.27	1.36	1.47	1.58	1.68	1.82	1.91	2.10	2.41	2.64	2.77	3.01	3.38	3.62
200	0.98	1.09	1.22	1.34	1.49	1.67	1.85	2.05	2.21	2.39	2.57	2.79	3.00	3.21	3.46	3.62	3.96	4.38	5.03	5.26	5.71	6.35	6.89
300	1.35	1.55	1.74	1.92	2.14	2.41	2.68	2.94	3.21	3.46	3.72	4.04	4.35	4.66	5.02	5.27	5.78	6.67	7.38	7.65	8.24	8.79	10.02
400	1.74	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	9.59	9.99	10.80	11.44	13.04
500	2.13	2.45	2.75	3.04	3.38	3.81	4.23	4.66	5.08	5.50	5.92	6.42	6.90	7.42	8.00	8.41	9.22	10.64	11.64	12.26	13.21	14.01	15.96
600	2.51	2.88	3.23	3.58	3.99	4.48	4.99	5.49	5.99	6.48	6.98	7.57	8.16	8.75	9.43	9.91	10.86	12.54	13.72	14.42	15.59	16.31	18.76
700	2.86	3.31	3.68	4.08	4.55	5.13	5.72	6.30	6.87	7.42	8.02	8.70	9.38	10.05	10.84	11.39	12.48	14.40	15.75	16.58	17.88	18.86	21.51
800	3.24	3.64	4.11	4.58	5.11	5.77	6.43	7.09	7.74	8.36	8.99	9.81	10.56	11.32	12.21	12.83	14.07	16.22	17.75	18.62	20.10	21.27	24.14
900	3.57	4.03	4.55	5.07	5.67	6.40	7.14	7.84	8.58	9.31	10.01	10.88	11.73	12.57	13.55	14.24	15.62	17.98	19.68	20.62	22.34	23.54	26.66
1000	3.90	4.40	4.98	5.55	6.21	7.02	7.82	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	24.24	25.72	28.88
1100	4.23	4.77	5.40	6.03	6.74	7.62	8.58	9.36	10.24	11.10	11.96	12.98	13.99	14.99	16.15	16.97	18.59	21.38	23.32	24.47	26.15	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	23.08	25.07	26.29	28.28	29.85	33.56
1300	4.85	5.48	6.22	6.95	7.76	8.80	9.82	10.83	11.84	12.83	13.82	14.99	16.15	17.30	18.63	19.57	21.42	24.62	26.79	28.08	30.12	31.74	35.91
1400	5.15	5.82	6.62	7.39	8.28	9.38	10.46	11.54	12.61	13.67	14.72	15.97	17.20	18.42	19.82	20.82	22.77	26.09	28.38	29.71	31.80	33.56	37.93
1500	5.45	6.17	7.01	7.83	8.77	9.94	11.09	12.24	13.37	14.49	15.60	16.93	18.23	19.51	20.99	22.04	24.08	27.55	29.93	31.31	33.53	35.38	39.87
1600	5.74	6.51	7.39	8.27	9.26	10.49	11.71	12.92	14.11	15.30	16.47	17.86	19.22	20.57	22.12	23.22	25.36	28.96	31.41	32.82	35.12	37.06	41.74
1700	6.03	6.85	7.76	8.69	9.74	11.03	12.31	13.59	14.84	16.08	17.31	18.77	20.19	21.61	23.21	24.36	26.58	30.31	32.83	34.29	36.58	38.54	
1800	6.30	7.16	8.13	9.10	10.20	11.57	12.91	14.24	15.56	16.86	18.14	19.65	21.13	22.59	24.27	25.47	27.76	31.65	34.13	35.62	37.98	39.93	
1900	6.58	7.47	8.48	9.51	10.66	12.08	13.48	14.86	16.25	17.61	18.94	20.52	22.03	23.54	25.25	26.53	28.84	32.89	35.38	36.83	39.22	40.94	
2000	6.84	7.78	8.84	9.90	11.11	12.60	14.06	15.51	16.90	18.31	19.70	21.36	22.94	24.52	26.31	27.64	29.97	33.98	36.44	38.00	40.13		
2400	7.88	8.98	10.19	11.43	12.82	14.50	16.22	17.86	19.50	21.09	22.66	24.47	26.24	27.94	29.96	31.23	33.72	37.35					
2800	8.77	10.02	11.42	12.81	14.38	16.30	18.17	20.00	21.78	23.51	25.20	27.13	28.93	30.64	32.58	34.14							
3000	9.16	10.51	11.94	13.40	15.10	17.10	19.04	20.96	22.80	24.58	26.28	28.21	30.00	31.70	33.56								
3500	10.13	11.47	13.22	14.85	16.65	18.82	20.90	22.93	24.90	26.77	28.48												
4000	10.96	12.58	14.25	16.10	18.01	20.38	22.55	24.60	26.55	28.40													
4500	11.58	13.18	15.07	16.89	18.89	21.28	23.46																
5000	11.97	13.62	15.62	17.60	19.61	22.06																	

(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	0.05	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	1.53	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	265	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	5.58	6.10	7.36	8.25	8.79	10.39	12.35
150	1.84	2.34	2.93	3.48	4.03	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	3.75	4.44	5.19	5.86	6.71	7.56	8.40	9.38	10.08	11.42	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	12.35	14.04	17.04	19.16	20.45	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	14.57	16.56	20.11	22.64	24.16	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	5.21	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	7.25	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	19.81	22.23	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	10.25	12.56	14.87	17.17	19.95	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	25.43	28.52	32.11	34.66	39.75	48.57	54.80	58.53	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	59.05	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	40.25	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	40.53	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	50.86	57.48	62.19	71.50	87.46	98.60	105.17	124.37	146.15
1800	9.05	14.63	20.18	25.68	31.14	36.54	43.07	49.41	55.75	63.06	68.23	78.45	95.89	108.08	115.10	136.25	
2000	9.31	15.44	21.51	27.54	33.52	39.45	46.58	53.47	60.36	68.31	73.92	84.98	103.75	116.78	124.27		
2200	9.46	16.11	22.71	29.25	35.72	42.14	49.75	57.09	64.44	73.03	79.04	91.05	111.00				
2400	9.50	16.62	23.77	30.80	37.75	44.63	52.79	60.60	68.41	77.79	84.17	96.66	117.60				
2600	9.43	17.00	24.69	32.18	39.58	46.89	55.54	64.05	72.43	82.58	89.68						
2800	9.26	17.21	25.45	33.39	41.29	48.95	58.06	67.01	75.78	86.58	93.77						
3000	8.92	17.26	26.07	34.44	42.67	50.78	60.32	69.66	78.84	89.57							
3500	7.75	17.42	26.92	36.24	45.37	54.30	64.74										
3800	6.63	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	0.30	0.37	0.53	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	1.33	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	0.40	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	0.56	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	0.81	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	1.21	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

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	10.52	11.28	11.94	13.42	14.48	17.12
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	6.03	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	33.93	40.67
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	36.68	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	36.45	39.40	47.20
150	7.43	9.02	11.14	13.25	15.36	18.00	20.65	23.28	24.31	25.89	28.51	30.61	32.71	34.80	38.98	42.13	50.48
200	9.89	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	14.88	17.22	21.40	25.57	29.74	34.94	40.14	45.34	47.41	50.52	55.71	59.83	63.99	68.12	76.39	82.58	99.05
400	18.34	22.50	28.04	33.57	39.10	46.10	52.99	59.78	62.53	66.66	73.53	79.02	84.51	89.99	100.95	109.15	130.90
500	22.50	27.68	34.52	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	26.38	32.77	41.01	49.23	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	126.04	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	102.78	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	99.62	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	93.26	110.16	127.16	144.03	150.67	160.73	177.59	191.02	204.45	217.86	244.63	264.67	317.94
1100	46.11	57.32	72.24	87.14	102.02	120.58	139.12	157.63	165.03	176.11	194.56	209.30	224.02	238.73	268.08	290.05	
1200	49.88	62.09	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	101.80	119.40	141.25	163.05	184.82	193.53	206.54	228.23	245.56	262.85	280.12			
1400	57.28	71.47	90.35	109.01	128.01	151.48	174.91	198.30	207.64	221.64	244.93	263.53	282.10				
1500	60.95	76.10	96.30	116.16	136.52	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	198.43	225.04	235.66	251.58							
1800	71.79	89.80	113.89	137.94	161.83	191.86	221.71										
2000	78.98	98.74	125.42	152.05	178.39												

(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	12.89
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	17.03	19.16	20.73	22.11
1300	0.00	2.01	5.48	9.55	12.98	15.75	18.44	20.76	22.46	23.95
1400	0.00	2.16	5.90	10.28	13.98	16.96	19.86	22.35	24.19	25.79
1500	0.00	2.32	6.32	11.01	14.98	18.17	21.28	23.95	25.92	27.64
1600	0.00	2.47	6.74	11.75	15.98	19.38	22.70	25.55	27.64	29.48
1800	0.00	2.78	7.58	13.22	17.98	21.80	25.54	28.74	31.10	33.16
2000	0.00	3.09	8.43	14.69	19.98	24.23	28.37	31.93	34.55	36.85

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 nominal outside 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	0.35	0.40	0.46	0.54	0.61	0.69	0.77	0.84	0.93	1.02	1.11	1.21	1.32	1.45	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	2.51	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	1.83	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	1.31	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	3.23			
5000	0.57	0.82	1.07	1.36	1.63	1.88	2.11	2.31	2.53	2.72					
5500	0.49	0.75	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	0.12	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	0.38	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 nominal outside 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	0.45	0.48	0.54	0.59	0.71	0.74	0.81	0.89	0.96	1.03	1.12	1.20	1.28	1.38	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	2.43	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	1.15	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	1.45	1.61	1.82	2.20	2.33	2.58	2.82	3.07	3.31	3.60	3.88	4.17	4.48	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	5.31
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	3.41	4.15	4.39	4.86	5.31	5.74	6.15	6.61	7.03	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	2.45	2.87	3.29	3.76	4.57	4.82	5.30	5.74	6.15	6.50	6.88				
2800	2.49	2.90	3.33	3.80	4.62	4.86	5.33	5.74	6.11	6.43					
3000	2.49	2.90	3.34	3.81	4.61	4.84	5.28	5.66	5.98						
3500	2.31	2.72	3.19	3.61	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	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.09	0.10
400	0.01	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	0.01	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	0.01	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	0.23	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 nominal outside diameter (mm)															
	180	190	200	212	224	236	250	265	280	300	315	335	355	375	400
50	0.39	0.41	0.43	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	0.75	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	1.93	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	3.19	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	3.03	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	5.68	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	6.48	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	6.10	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	14.43		
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	3.15	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	0.03	0.05	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	0.05	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27
350	0.00	0.06	0.07	0.11	0.14	0.18	0.21	0.25	0.28	0.32
400	0.00	0.06	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.37
450	0.00	0.06	0.09	0.14	0.18	0.23	0.27	0.32	0.37	0.41
500	0.00	0.06	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	0.66	0.73
850	0.00	0.09	0.17	0.26	0.35	0.43	0.52	0.61	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	0.38	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	0.28	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	1.31	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

Table of basic power ratings for Type D Standard

(Unit: kW)

Pinion revolution (rpm)	Pinion nominal outside 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	1.48	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	1.75	1.93	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	2.95	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	4.01	4.61	5.13	5.68	6.34	7.00	7.66	8.31	8.96	9.75	10.50	11.51	12.26	13.26
250	4.34	4.85	5.50	6.15	6.80	7.61	8.42	9.21	10.01	10.79	11.75	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	11.63	12.53	13.62	14.70	16.13	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	14.48	15.90	17.28	18.64	20.25	21.80	23.83	25.32	27.25
550	7.62	8.60	9.90	11.18	12.44	13.99	15.52	17.03	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	8.85	10.02	11.57	13.09	14.59	16.42	18.20	19.94	21.63	23.25	25.14	26.94	29.23	30.82	32.82
750	9.17	10.42	12.03	13.64	15.21	17.11	18.96	20.73	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	26.89	28.65	30.87	32.39	34.20
850	9.76	11.11	12.88	14.58	16.23	18.29	20.24	22.14	23.88	25.53	27.48	29.26	31.40	32.83	34.51
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	31.77	33.04	
1000	10.39	11.80	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	0.48
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	1.58	1.78
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 nominal outside diameter (mm)														
	450	475	500	530	560	600	630	670	710	750	800	850	900	950	1000
20	1.30	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	9.91	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	11.06	12.01	12.98	13.93	14.88	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	25.93	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	36.93	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	44.80	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 nominal outside 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	0.09	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	0.33	0.35	0.39	0.43	0.47	0.53	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	0.83
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	0.74	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	0.79	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	0.83	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	0.08	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	0.08	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 nominal outside diameter (mm)															
	67	71	75	80	85	90	95	100	106	112	118	125	132	140	150
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	0.80
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	2.45	2.81
1000	0.56	0.70	0.83	1.00	1.17	1.33	1.49	1.66	1.85	2.06	2.24	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	2.95	3.23	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	2.94	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	1.15	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	1.91	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	2.51	2.98	3.44	3.87	4.37	4.85	5.31	5.81	6.28	6.75	
4000	0.73	1.15	1.56	2.06	2.53	3.00	3.48	3.93	4.41	4.91	5.37	5.87	6.34	6.81	
4500	0.62	1.07	1.51	2.04	2.56	3.05	3.52	3.97	4.48	4.97	5.41	5.89			
5000	0.43	0.95	1.41	1.96	2.49	3.00	3.47	3.92	4.42	4.87					
5500	0.20	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	0.05
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

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

(Unit: kW)

Pinion revolution (rpm)	Pinion nominal outside 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	1.12	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	4.86	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	3.65	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	4.93	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	8.06	8.77	9.44	10.23	10.98	11.71	12.51	13.33
1900	3.44	4.01	4.61	5.26	6.45	6.84	7.59	8.33	9.04	9.73	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	4.35	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	9.59	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	10.42						
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	0.13	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	0.19	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 nominal outside 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	3.31	3.58	3.86	4.15	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	8.65	9.38
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	13.63
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	11.31	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	13.89	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	12.41	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	12.33	13.38	14.76	15.77	17.08	18.35	19.58	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	17.04	18.27	19.83	20.87				
2000	8.44	9.66	10.84	12.20	13.49	14.71	16.05	17.37	18.52						
2500	8.48	9.75	10.93	12.35	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 ~ 1.05	1.06 ~ 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	0.38	0.48	0.58	0.68	0.78	0.87
1200	0.00	0.12	0.23	0.33	0.47	0.58	0.70	0.82	0.93	1.03
1400	0.00	0.14	0.27	0.41	0.54	0.68	0.82	0.95	1.08	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 nominal outside 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	1.56	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	3.61	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	5.23	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	12.43	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	13.33	14.51	15.67	16.82	18.18	19.54	21.33	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	24.73	26.95	28.58	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	25.41	27.20	29.42	31.52	34.23	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	31.39	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	14.58	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	46.56	
800	15.20	16.85	19.00	21.10	23.17	25.68	28.12	30.48	32.77	34.97	37.51	39.97	42.97	45.02	47.90	
850	15.78	17.50	19.73	21.92	24.08	26.65	29.16	31.58	33.91	36.14	38.69	41.08	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	18.78	20.80	23.45	25.97	28.37	31.18	33.78	36.16	38.36							
1400	19.48	21.61	24.30	26.83	29.13	31.79										
1600	19.66	21.54	24.17	26.42												
1800	18.56	20.48														

(Unit: kW)

Pinion revolution (rpm)	Transmission capacity added depending on the speed ratio									
	1.00 ~ 1.01	1.02 ~ 1.05	1.06 ~ 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	0.04	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	0.23	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	0.11	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	1.13	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 nominal outside 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	3.08	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	5.56	6.05	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	8.99	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	10.09	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	46.38	49.05
320	17.83	19.52	21.18	23.17	25.13	27.71	29.63	32.15	34.63	37.06	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	19.58	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	38.29	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	62.03	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	54.90	58.14	61.11	64.89				
800	33.95	37.09	40.12	43.63	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 ~ 1.05	1.06 ~ 1.08	1.09 ~ 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	0.35	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	1.23	1.38
340	0.00	0.16	0.33	0.49	0.65	0.81	0.98	1.14	1.31	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	1.73
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	1.06	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 nominal 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	0.04	0.04	0.06
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	0.23	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	0.33	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	1.04		
10000		0.10	0.22	0.33	0.44	0.54	0.63	0.71	0.79	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 ~ 1.58	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	0.01	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 nominal outside diameter (mm)												
	50	56	63	71	80	90	100	112	125	140	160	180	200
200	0.01	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	1.58	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	2.58	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	1.08	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	4.03	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	2.66	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 ~ 1.58	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	0.23
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	0.31	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 nominal 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	0.29	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	0.53	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	0.79	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	1.48	1.64	1.79	2.08	2.37	2.66	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	5.73
3000	1.12	1.29	1.47	1.64	1.81	1.98	2.30	2.63	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	2.38	2.60	2.99	3.33	3.63	3.89	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 ~ 1.58	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	0.13	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-Belt

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	0.85			
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 5V·5VX	5V·5VX 5VX·5VX	8V·8VX	Nominal No.	Belt type 3V·3VX	5V·5VX·5VX	8V·8VX
250	0.83			1180	1.02	0.99	0.89
265	0.84			1250	1.03	1.00	0.90
280	0.85			1320	1.04	1.01	0.91
300	0.86			1400	1.05	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	0.95
298	0.73	913	0.98	635	0.81	1250	0.96	605	0.72	1555	0.95
332	0.76	937	0.98	638	0.82	1280	0.97	655	0.74	1645	0.96
353	0.77	962	0.99	650	0.82	1320	0.97	700	0.75	1720	0.96
401	0.80	988	1.00	670	0.83	1360	0.98	730	0.76	1750	0.96
454	0.82	1013	1.01	690	0.83	1400	0.98	825	0.79	1850	0.97
480	0.84	1089	1.02	710	0.84	1450	0.99	830	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	2260	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	1.06
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	1435	0.91		

■ Table 8 Pinion contact angle correction factors (Kθ1)

(Do − dp)/C	Angle of contact of pinion θ1 (°)	Kθ1	(Do − dp)/C	Angle of contact of pinion θ1 (°)	Kθ1	(Do − dp)/C	Angle of contact of pinion θ1 (°)	Kθ1
0.00	180	1.00	0.60	145	0.91	1.20	106	0.77
0.10	174	0.98	0.70	138	0.89	1.30	99	0.75
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-Belt

(Unit: mm)

Nominal No.	Inner mini-mum adjustment range (Ci) M	A	B	C	D	E	Outer minimum adjustment range (Cs)
20 ~ 25	15	20	25				25
26 ~ 30	15	20	25				25
31 ~ 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 mini-mum adjustment range (Ci) 3V·5VX	5V·5VX·5VX	8V·8VX	Outer minimum adjustment range (Cs)
250 ~ 475	13 (38)			35
500 ~ 710	20 (38)	25 (63)		33
750 ~ 1060	20 (43)	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 mini-mum adjustment range (Ci)	Outer minimum adjustment range (Cs)	Type PK Effective length	Inner mini-mum adjustment range (Ci)	Outer minimum adjustment range (Cs)	Type PL Effective length	Inner mini-mum adjustment range (Ci)	Outer minimum adjustment range (Cs)
273 ~ 718	8	5	600 ~ 710	15	15	540 ~ 730	18	13
730 ~ 759	10	8	730 ~ 1090	15	20	825 ~ 1035	20	17
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

How to Design a Frictional Forced Power Transmission Belt

Power Ace Design Example

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: 1150 mm
- Minimum maintenance and inspection

Examination result

- Belt: 5V1400 × 4
- Small (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

Step 2. Calculating the design power

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

$K_0 = 1.4$

② Obtain the idler correction factor and the environmental correction factor **from Table 2** and **Table 3 (→ P. 247)**.

$K_I = 0.0 \quad K_E = 0.2$

③ Therefore, the design power is 72 kW.

$Pd = 45 \times (1.4 + 0.0 + 0.2) = 72\text{kW}$

Design power: 72 kW

Step 3. Selecting a belt type

From the design power of 72 kW and the pinion revolution of 1160 rpm from **Fig. 1-2** Belt type selection diagram **(→ P. 248)**, select Type 5V.

Belt 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 calcu\lation, set the pinion nominal outside diameter to 270 mm.

$\frac{520 - 26}{1.93} + 2.6 \fallingdotseq 270\text{mm}$

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

$\frac{\pi(270 - 2.6) \times 1160}{19100} = 16.8\text{m/s}$

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).

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

Effective length: 5V1400

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

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

$C = \frac{2316 + \sqrt{2316^2 - 25(520 - 270)^2}}{8}$

$= 1151\text{mm}$

Center distance: 1151 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) 260	280	Transmission capacity added depending on the speed ratio (kW/pc) 1.58 ↕ 1.94
1160	17.34	19.16	0.99

Basic power rating = 19.24 kW/pc

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

$K\ell = 1.02$

③ Obtain the contact angle correction factor Kθ_1 from **Table 8 (→ P. 272)**.

$K\theta_1 = 0.97$

④ Therefore, the number of belts is 4.

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

Number of belts = 4 belts

Step 7. Checking the adjustment range of the center distance

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

Ci = 25mm
Cs = 56mm

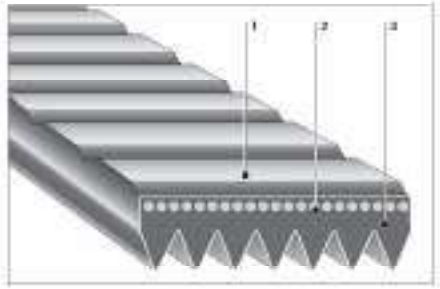
Inner minimum adjustment range (Ci) = 25 mm
Outer maximum adjustment range (Cs) = 56 mm

Bancollan™ Polybanrope™

1. Product Introduction

Bancollan™ Polybanrope™ is a polyurethane light-duty belt that combines the flexibility of flat belts and the high power transmission capability of V-belts. Many light-duty machines are generally assembled in a line and require simple belt installation and a high transmission capacity. Bancollan™ Polybanrope™ is an easily installable and tough belt that exactly meets these requirements.

Structure and Features



1. **Tension rubber** (polyurethane rubber)
2. **Cord** (polyamide cord)
3. **V-rib** (polyurethane rubber)

Bancollan™ Polybanrope™ provides the following features due to its unique structure.

■ **Installable with a fixed center distance**
It uses polyamide cords, and the belt has appropriate elasticity. When this elasticity is used, the belt can be installed with the pulleys fixed to the center distance in accordance with the initial stretch rate (normally 1.3%). Because pulley relocation and tension adjustment are unnecessary, the installation cost can be reduced.

■ **Shock resistance**
The polyamide cords have instantaneous elasticity, which has an effect of absorbing shock loads.

■ **Clean transmission**
The use of abrasion-resistant polyurethane rubber in the V-ribs prevents most of rubber dropping. Therefore, the transmission system and its peripheral areas can be kept clean.

■ **High speed ratio**
Because Type H can be used with a small pulley outside diameter of 13 mm and Type J can be used with a small pulley diameter of 23 mm, a high speed ratio is available within a fixed space.

■ **High transmission capacity**
The large friction surface and the uniform arrangement of the cords in the upper section of the V-ribs provide a high transmission capacity.

■ **Excellent high-speed revolution**
The light belt and the uniform arrangement of the cords allow smooth transmission even with Φ23 / 14000 rpm (Type J) φ13 / 16000 rpm (Type H).

Major Applications

Electric tools
Electric planes, compact grinders, belt sanders, groove-cutting machines

Office machines and automatization equipment
Blowers for computers, vending machines, automatic ticket gate, financial system terminal machines, line printers, typewriters, card-making machines, bill-processing machines, paper-cutting machines

Fiber machines
Temporary twisting machines, high-speed winders, spinning machines

Rotary electric equipment
Electric rice-cake-making machines, noodle-making machines, juicers/mixers, electric cooking apparatuses, electric grass cutters, electric massage machines, hemming machines, industrial sewing machines, projectors

Compact machine tools
Desktop lathes, riveters, punching machines, marking presses, mini drill presses, spindle units

Others
Food cutters (ham/bread slicers), compact winding machines, wrapping machines