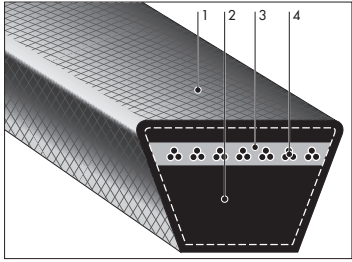


## 1. V-Belt (Red Standard) Product Introduction

### 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.

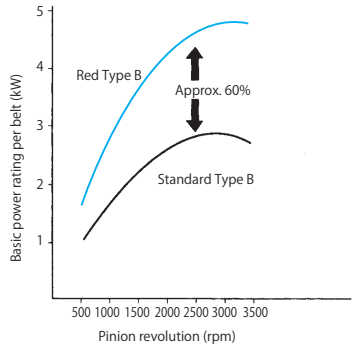
**④ Cord**

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**

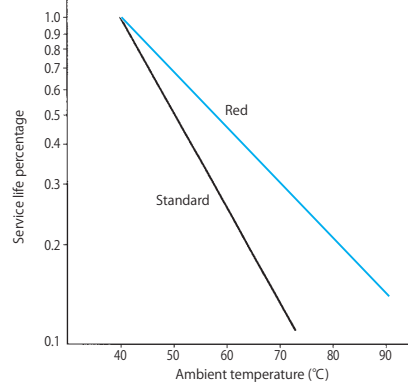
It employs polyester cords that are strong and have little elongation and a synthetic rubber compound, and has about 60% higher power than the previous Standard.



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**

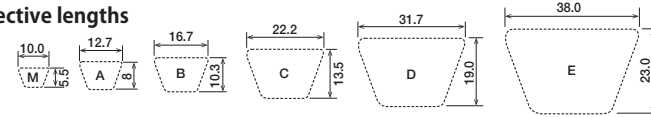
Generally, when the ambient temperature increases, the belt service life decreases as shown in the graph below. However, Bando Red has a lower reduction rate than Standard; hence, when the ambient temperature is high (normally 60 °C or more), it is recommended to use Bando Red.



**■ 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



Manufacturable range for Standard \*: Standard dimension prescribed in JIS  
 Manufacturable range for Red ○: Bando's standard dimension  
 Effective dimension: 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	2108						
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						



### 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

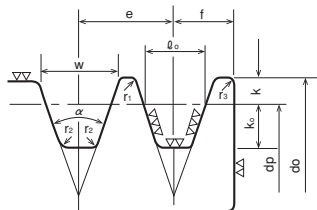


Table 1 Standard pulley groove dimensions

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

(Unit: mm)

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

Table 2 Deep pulley groove dimensions

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

(Unit: mm)

● 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**

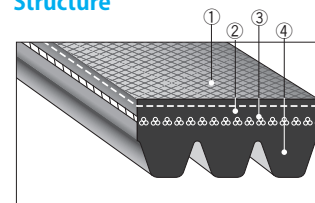
**Heat resistance:** It compounds heat-resistant rubber.

**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.

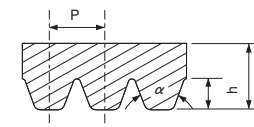
### Structure



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

### Indication

■ Belt designation example  
**4 PK 1000**



No. of ribs      Effective length (1000 mm)

Belt type (Type PK)

	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	825	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	1000	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.