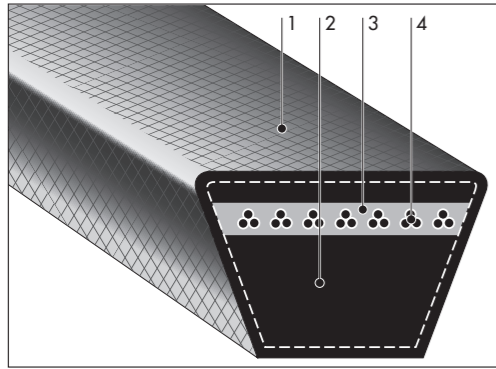


## 1. V-Belt (Red Standard) Product Introduction

### 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.

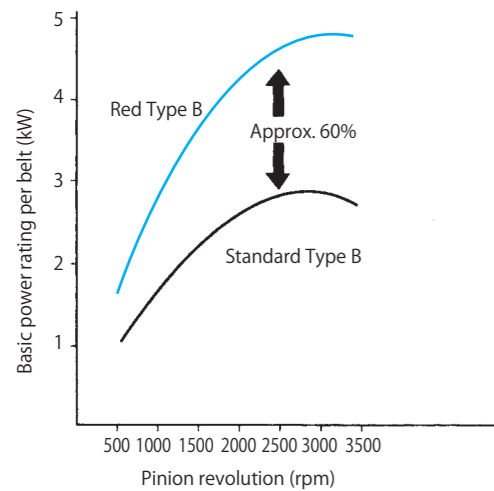
#### ④ Cord

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

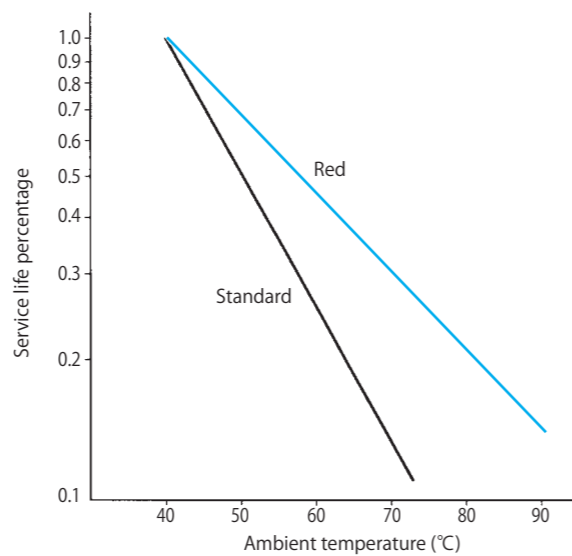
It employs polyester cords that are strong and have little elongation and a synthetic rubber compound, and has about 60% higher power than the previous Standard.



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

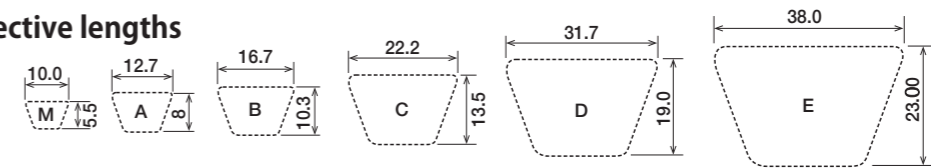
Generally, when the ambient temperature increases, the belt service life decreases as shown in the graph below. However, Bando Red has a lower reduction rate than Standard; hence, when the ambient temperature is high (normally 60 °C or more), it is recommended to use Bando Red.



#### ■ 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

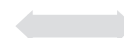
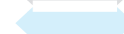


Manufacturable range for Standard \*: Standard dimension prescribed in JIS  
 Manufacturable range for Red ○: Bando's standard dimension  
 Effective dimension: Represents effective outside length for Type M and effective pitch length for Types A, B, C, D, and E.

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						

## Table of effective lengths

 Manufacturable range for Standard    \*: Standard dimension prescribed in JIS    Effective dimension: Represents effective outside length for Type M and effective pitch length for Types A, B, C, D, and E.  
 Manufacturable range for Red    ○: Bando's standard dimension

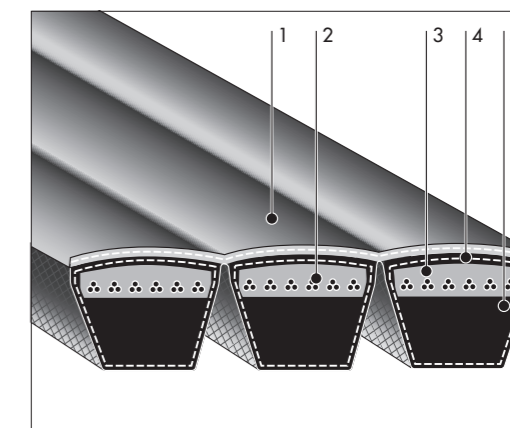
Nominal No.	Effective dimension (mm)	Belt type					
		M	A	B	C	D	E
137	3480						
138	3505						
139	3531						
140	3556						
141	3581						
142	3607						
143	3632						
144	3658						
145	3683						
146	3708						
147	3734						
148	3759						
149	3785						
150	3810						
151	3835						
152	3861						
153	3886						
154	3912						
155	3937						
156	3962						
157	3988						
158	4013						
159	4039						
160	4064						
161	4089						
162	4115						
163	4140						
164	4166						
165	4191						
166	4216						
167	4242						
168	4267						
169	4293						
170	4318						
171	4343						
172	4369						
173	4394						
174	4420						
175	4445						
176	4470						
177	4496						
178	4521						
179	4547						
180	4572						
181	4597						
182	4623						
183	4648						
184	4674						
185	4699						
186	4724						
187	4750						
188	4775						
189	4801						
190	4826						
191	4851						
192	4877						
193	4902						
194	4928						
195	4953						
196	4978						
197	5004						
198	5029						
199	5055						
200	5080						
205	5207						
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

### Structure (V-Belt Type)



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

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.

### 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

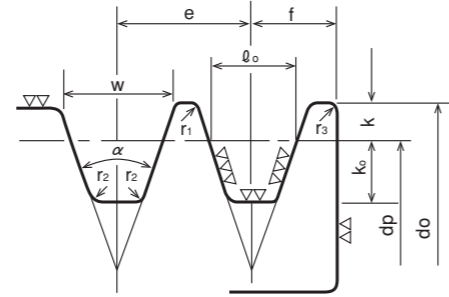


Table 1 Standard pulley groove dimensions

(Unit: mm)

Type	Pulley pitch diameter (dp)	$\alpha$ (°)	$\ell o$	(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								

(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)	$\alpha$ (°)	$\ell o$	(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							

● Pulley material

JIS G 5501 "Gray Iron Castings" FC200 to 250