

(II) Energy-Conserving RED® Possible Types and Ranges of Dimensions

Product Introduction

By cutting down on losses resulting from bending-related stress, this product is able to realize energy conservation.

Features

● **No need to redesign equipment**

There is no need to perform any redesign of traditional standard V-pulleys, as this product can be used directly with such equipment.

● **Long service life**

Due to the belt's structure, not much heat is released internally, meaning a longer service life.

● **Able to realize miniaturization**

Even with the same transmission capacity as other "RED" products, the number of belts to be used can be reduced by 30%.

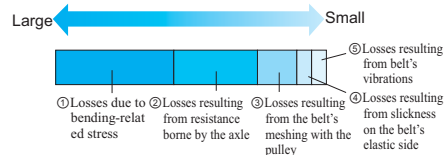
● **Lowering costs**

Conserving energy and cutting down on the number of belts used means that costs are lowered.

Principles behind the Product's Energy Saving Effects

Loss (energy loss) is a phenomenon that is present in all transmission equipment, and has the following effects:

■ **Effects of Energy Loss**

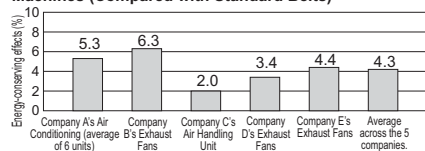


The energy-conserving RED guarantees the realization of bending with relatively little force, cutting down on losses resulting from bending-related stress, which generally constitute a relatively large proportion of energy losses. At the same time, this product itself is also able to conserve a certain degree of energy.

※EI, which represents the difficulty in bending a belt, is an index which indicates the relative ease or difficulty by which a belt is able to bend around pulleys or other objects. Smaller values indicate greater ease.

Results of Tests on the Energy-Conserving RED

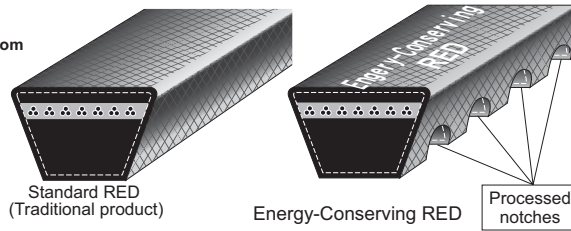
■ **Example Results from Tests of Energy Conservation in Machines (Compared with Standard Belts)**



If you provide details on the conditions of use, we will be able to perform a simulation to calculate the amount of energy that will be saved with this product. Please contact our company for more information.

Also inquire with our company if you would like more information on our testing methods.

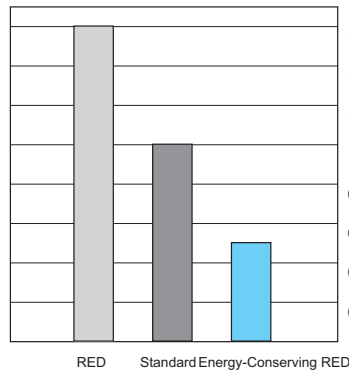
Note) · Energy conservation effects differ across belts with different tensions. For more information on the conditions of tension, please inquire with our company.
· Using a Bando tension meter is a convenient way to control a belt's tension. Please inquire with our company if you have any questions, or if there are any items that require further clarification.



Belt types	Possible range of dimensions
JIS A type	34~360
JIS B type	34~360
JIS C type	36~360
JIS D type	100~360

※1. Belt length (mm) = 25.4 × dimensions
※2. Please consult with our company regarding the proper sizes.

■ **A Comparison of the Difficulty of Bending Belts (B-Type Belts) (The standard value is 1).**

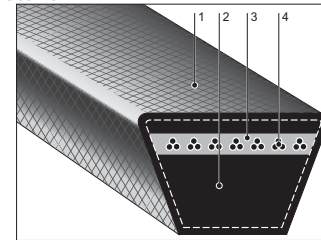


	Driving motor	Energy-conserving effects (%)	Inferred Annual Energy Conservation (kWh)
Company A's Air Conditioning (6 units)	5.5~37kW	5.3	37,600 (Total for all 6 units)
Company B's Exhaust Fans	37kW	6.3	16,700
Company C's Air Handling Unit	22kW	2.0	3,700
Company D's Exhaust Fans	1.5kW	3.4	260
Company E's Exhaust Fans	5.5kW	4.4	1,200

(III) V-Belt · Power Scram

1. An Introduction to V-Belts (RED · Standard)

Structure



(1) **Outer Layer (Canvas)**

The outer layer is made of special canvas with a criss-cross design, providing strong resistance to wear from pulleys, high resilience, and strong elasticity. Another layer of wear-resistant rubber has also been added for further strengthening, so as to fully protect the belt's interior.

(2) **Rubber Tooth (Cushioning Rubber)**

Besides preserving the belt's regular shape, this tooth minimizes the amount of heat released during bending, and shows outstanding flexibility.

(3) **Insulating Rubber**

Besides keeping the tensile members in their proper place, this rubber layer also guarantees smooth interactions between the tensile members and the other rubber layers.

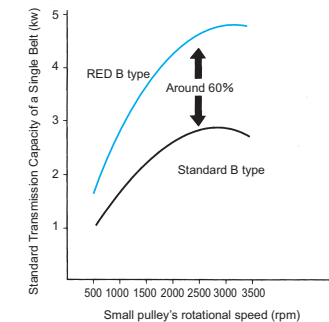
(4) **Tensile Members**

This is the core part which determines the belt's transmission power. Cable cords are used, which stand out due to their strength, low degree of elongation, and relatively small incidence of bending fatigue. Integrated closely, as one, with the layer of rubber, force is exerted evenly across these tensile members during power transmission, thereby realizing stable transmission.

Features

■ **High-Quality, High-Power-Transmission V-Belts**

Thanks to the combination of high-strength, low-elongation cable cords and synthetic rubber, this belt's transmission performance is about 60% greater than that of standard traditional belts.



This image shows the relationship between a single belt's transmission capacity and its rotational speed, when using a B-type, 125mmφ pulley.

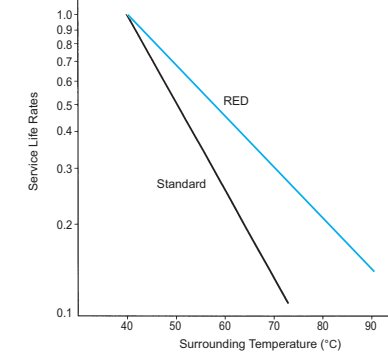
■ **Anti-Static Electricity**

This product's anti-static electricity performance meets R.M.A. standards.

R.M.A. standards are implemented upon rubber products in the United States. These standards state that static electricity must be kept below 6MΩ.

■ **Outstanding Resistance to Heat**

Generally, rises in the temperature of the working environment mean drops in a belt's service life, as shown in the graph below. Compared to traditional belts, the Bando RED does not show as significant of a drop. In high-temperature situations (regularly above 60°C), a Bando RED is recommended.



■ **Outstanding Resistance to Fire**

Not prone to spontaneous combustion, thereby lowering the risk of fire resulting from excess sliding.

