# FE Flat Expander Crease Removing Roller

## Features

- FE rollers are rubber-cord-type non-bowed and linear crease removing rollers
- Designed for removing creases from web materials such as fabrics, nonwovens, plastic films, paper and glass fibers
- Better expansion throughout full roller length is achieved since rubber slats slide motion is very light and smooth
- Designed to minimize mechanical wear on components for longer lifetime

## Applications

- Nonwoven Industry: Winders, Slitters, Coaters
- Film Industry: Winders, Slitters, Printing Machines, Coaters, Vacuum Evaporators
- Glass Fiber Industry: Winders, Weaving Machines
- Paper Industry: Winders, Slitters, Coaters
- Foil Industry: Cu/Al foil production plants

## Specifications

| Type | Roller Dia. (mm) | Roller Length (mm) | Max. Line Speed (m/min) (*1) | Rubber Expansion (mm) (*2) | Roll Inclination Angle | Applicable Web | Environment | Rubber Material |
|---|---|---|---|---|---|---|---|---|
| **FE-BB** | 100 | 150~1000 | 150~100 | 16 | 0° ~ 6° | Fabric<br>Nonwoven<br>Film<br>Paper<br>Glass fiber | Dry (*3)<br>Max. operation temp. 80°C | EPT<br>Silicone<br>Polyurethane |
| **FE-BS** | 125 | 300~2000 | 250~150 | 20 | | | | |
| **FE-BX** | 150 | 1000~3000 | 300~250 | 24 | | | | |
| **FE-BM** | 200 | 2000~4500 | 450~350 | 28 | | | | |
| **FE-BJ** | 250 | 2000~6000 | 500~350 | 30 | | | | |

(*1) Speed indicated corresponds to roller length.
(*2) Rubber expansion varies with web wrap angle.
(*3) When crease removing rollers for a wet environment are required, please contact us.

**Please contact Izumi International, Inc. for special requirements**


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## Crease Removing Principle

Figure 1: At incoming point A, rubber cord is contracted by tightening adjusting bolt. At out-going point B, it is expanded by un-tightening adjusting bolt. As the roller rotates, the web wound on the roller at point C is spread through point D. This is how creases can be removed.

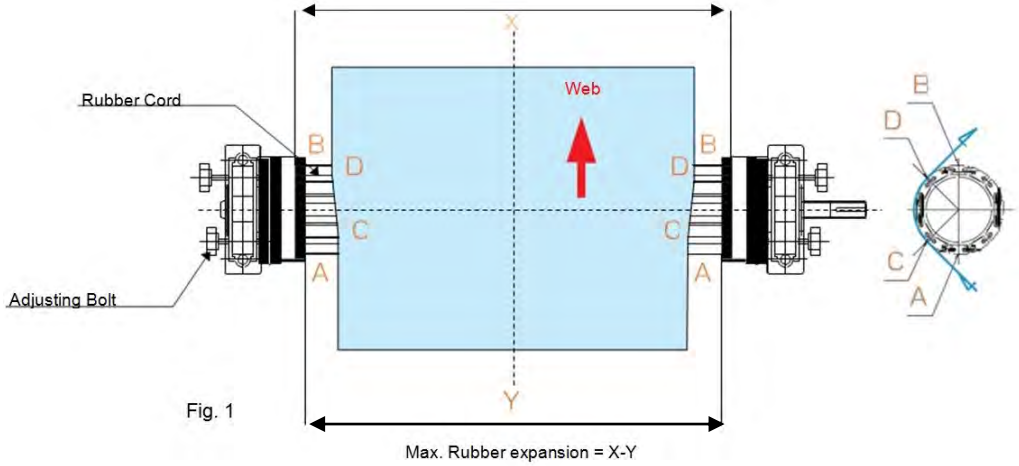


Fig. 1

## Characteristics of Available Materials

| | EPT (Black)(*) | EPT (White)(*1) | Silicone | Polyurethane |
|---|---|---|---|---|
| Max. operation temperature | 120°C (*2) | 80°C | 120°C (*2) | 80°C |
| Residual strain tolerance | Good | Good | Excellent | Excellent |
| Wear resistance | Good | Fair | Fair | Excellent |
| Tensile strength | Good | Good | Fair | Excellent |
| Electrical conductivity | Excellent | X | X | X |
| Oil resistance | X | X | Fair | Excellent |
| Water resistance | Excellent | Good | Fair | X |
| Alkali resistance | Excellent | Excellent | Excellent | X |
| Acid resistance | Excellent | Excellent | X | X |
| Ozone resistance | Good | Good | Good | Fair |

(*1) Ethylene-propylene terpolymer is also called EDPM.
(*2) This is the heat resistance temperature of rubber code itself. Recommended to use FE rollers at 80°C or below if long life operation is required. In case of operation temperature over 80°C, please contact us.

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