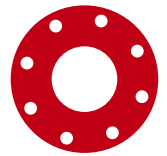
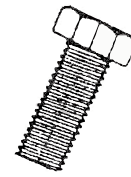


# CAIN BOLT & GASKET INC.



## Sleeves and Washers

### One-piece sleeves and washers

Tough, convenient-to-use, one-piece sleeves and washers are available molded from acetal resin. They should generally be used as single washer sets since they are molded to specific lengths and are in many instances longer than the thickness of a single flange. They are available for bolt diameters of 1/2" to 1 1/2" (12.7 mm to 38.1 mm), and are limited to applications where the flange temperature does not exceed +180°F. (+80°C.).

A special feature is a washer centering ring that positions the steel washer on the unit properly to avoid uneven pressures on the washers.

#### Specifications:

Sleeve Thickness—1/32" (0.79mm)

Washer Thickness—5/32" (3.97mm)

Dielectric Strength—1,200 V/mil.

Compressive Stress—1% @ 4,500 psi

—10% @ 16,000 psi

Water Absorption—0.22% Max.

Maximum Operating Temperature—+180°F. (+80°C.)



### Insulating Sleeves

Insulating sleeves are available in Mylar, polyethylene, phenolic and Nomex®. They are designed to fit easily over the flange bolts, and may be used with standard size bolts and bolt holes even with some misalignment. In-

insulating sleeves have a standard wall thickness of 1/32" (0.79mm) and are used with separate insulating washers. They are available for standard American bolt sizes from 1/2" (12.7mm) to 3 1/2" (88.9mm), as well as metric bolt sizes from 12mm and larger.

#### Specifications:

Dielectric strength  
volts/mil

Maximum operating  
temperature

Spiral wound Mylar®  
4000

300° F  
(150° C)

Polyethylene  
400

180° F  
(80° C)

Phenolic  
400

225° F  
(105° C)

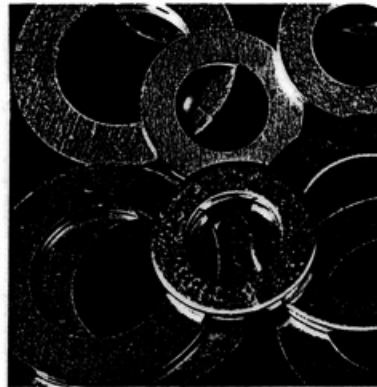
Nomex®  
400

450° F  
(230° C)



### Insulating Washers

Standard insulating washers are made of high strength phenolic and provide tough, positive insulation at temperatures to +300°F. (+150°C.). They are available for bolt sizes from 1/2" (12.7mm)



through 3 1/2" (88.9mm) and are made to fit over the insulating sleeves. Fiberglass reinforced high temperature phenolic insulating washers are available on special order in the same sizes as the standard insulating washers.

#### Specifications:

Thickness—1/8" (3.2mm)

Dielectric Strength—500 V/mil.

Compressive Strength—26,000 psi

Water Absorption—1.0% Max.

Maximum Operating Temperature—+300F. (+150C.)

High temperature washers are available for +450F. (+230C.) operating temperature.

### Steel Washers

Steel washers are designed to fit over the insulating sleeve or retainer ring on the one-piece sleeves and washers. The outside diameter is sized to fit within the bolt facing on ANSI standard flanges. They are of 1/8" (3.2mm) thick plated hot-rolled steel.

\* DuPont

Pyrox insulating sleeves and washers are also available.

DISCLAIMER: Properties and application parameters shown in this manual are presented in good faith but no warranty is expressed or implied. Failure to properly use gasket material could result in serious injury or death.

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