

## FLANGEINSULATION

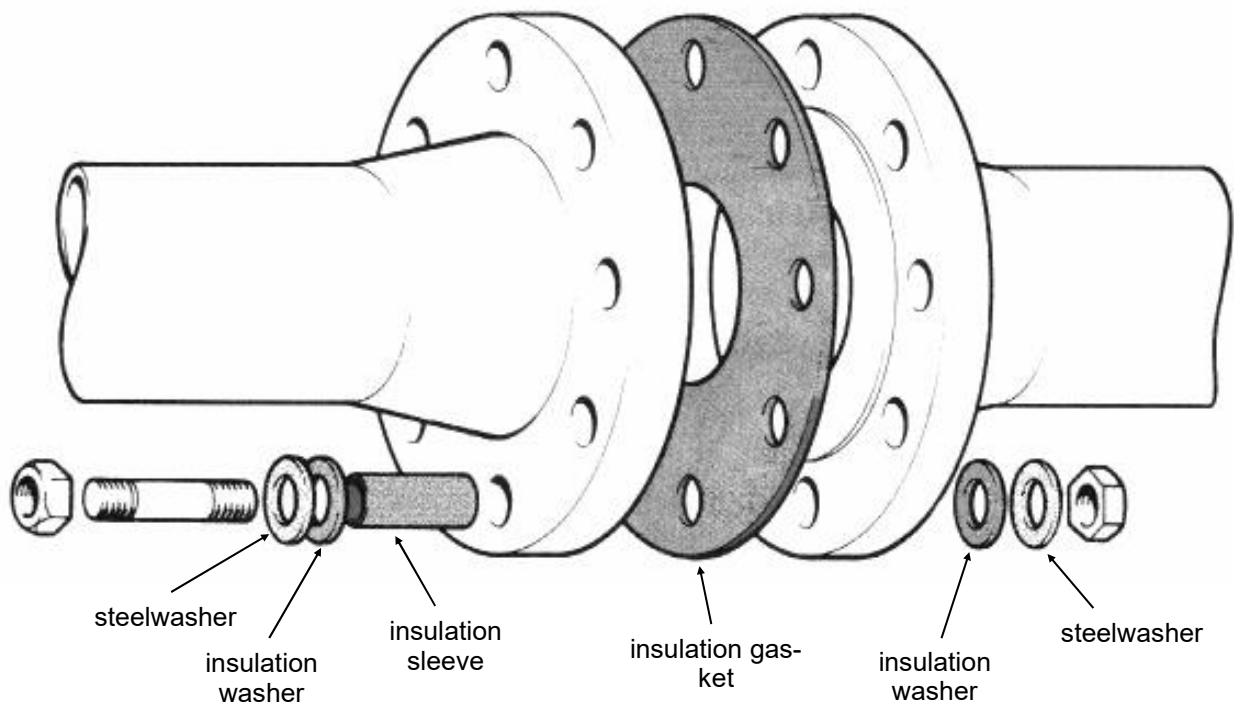
**COBALCH Flange Insulation** provides a possibility to convert a normal flange connection to an

*ELECTRICALLY INSULATION Flange Connection*

**COBALCH Flange Insulation** is not only suitable for new flange connections, but may also be used to convert existing connections to *ELECTRICALLY* insulation connections.

Insulation connections are required in pipe systems with cathodic protection type but may also be used to separate two different materials e.g. stainless steel and galvanic steel to prevent galvanic corrosion.

Replacement of flanges is not required.



**COBALCH Flange Insulation** are produced to all flange standards and pressure classes.

ANSI B 16.9	DN ½"	to	DN 48"	Class 150 to class 2500
DIN	DN 15	to	DN 1000	Class PN 10 to class PN 400
ISO	DN 15	to	DN 1000	Class PN 10 to class PN 400
BS	DN ½"	to	DN 48"	Class 2,5 bar to class 400 bar

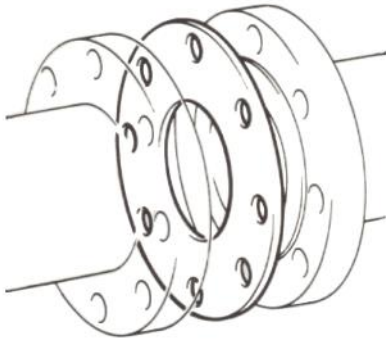
**COBALCH Flange Insulation** can also be produced to special applications with specified dimensions on gasket, sleeves and washers.

**COBALCH Flange Insulation** consists of insulation gasket, insulation sleeves, insulation washers and steel washers.

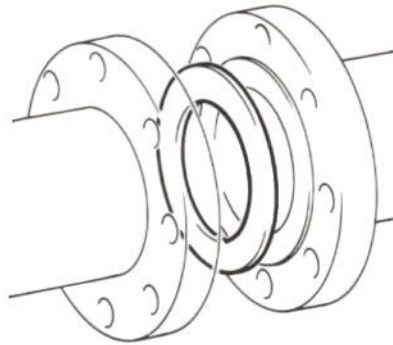
**N.B !!!**

It is not required to rebores the bolt holes!

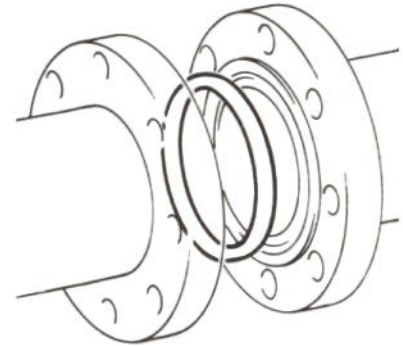
**GASKETS TYPES**



Type "E"  
Laminated execution  
Manufactured up to 900 mm/36"



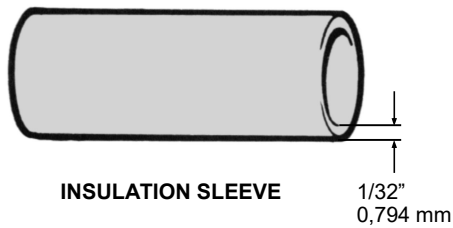
Type "F"  
Laminated execution  
Manufactured up to 1200 mm/48"



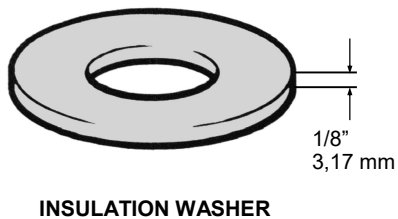
Type "D"  
Ring joints for RTJ-flanges

Technical data for material	Nitrile laminated CE-canvas base phenolic "B"	High temperature C4430
Dielectric strength V/mm	45 KV ASTM D229 A	
Compressive strength N/cm <sup>2</sup>	39000 psi ASTM D229 A	
Compressibility i %		9% ASTM F36J
Tensile strength N/cm <sup>2</sup>	11000 psi ASTM D229 A	
Water absorption in % 1/8" (3,2 mm) thick	1,2% ASTM 570	
Recommended max. temperature for continuous use	Max. -50 - +107° C	Max. +400° C

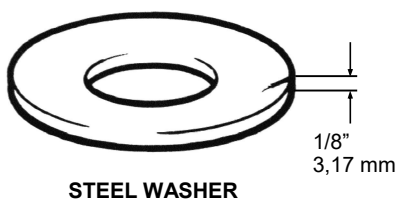
**Components for bolts insulation**



<b>SLEEVE</b>	
<b>Standard version</b>	<b>Spiral wound polyester MYLAR</b>
<u>Dielectric strength</u> kV/mm material Waterabsorption Temperature range	160 kV/mm 0,8% -60° to +150° C
<b>High temp. version</b>	<b>Cheramic MICA</b>
<u>Dielectric strength</u> kV/mm material Waterabsorption Temperature range	25 kV/mm IEC243 0,5% +23° to +600° C



<b>INSULATION WASHER</b>	
<b>Standard version</b>	<b>Phenol</b>
<u>Dielectric strength</u> kV/mm material Waterabsorption Temperature range Dimension	8 kV/mm Max. 1% -50° til +150° C Fit the outside of sleeve
<b>Special version</b>	<b>Epoxy EP11</b>
<u>Dielectric strength</u> kV/mm material Waterabsorption Temperature range Dimension	60 kV/mm ASTM D149 0,1% -273° to +180° C Fit the outside of sleeve
<b>High temp. version</b>	<b>Cheramic MICA</b>
<u>Dielectric strength</u> kV/mm material Waterabsorption Temperature range Dimension	25 kV/mm IEC243 0,5% +23° to +600° C Fit the outside of sleeve



<b>STEEL WASHER</b>	
<b>Standard version</b>	<b>Din 125 - Zinc plated/ Hot rolled steel</b>
Dimension	Fit the outside of sleeve
<b>Special version</b>	<b>Stainless steel 1.4571/V4A</b>
Dimension	Fit the outside of sleeve

## TECHNICAL DATA

The thickness of all gaskets are 3.2 mm (1/8"). An insulation flange connection will have a breakdown voltage of at least 5.000 volts in dry conditions.

If the flanges and a part of the adjoining pipes are internally coated, the electrical insulation will be improved depending on the characteristics of the characteristics of the coated material.

*COBALCH Flange insulation* type "E" and "F" can be supplied in 3 different executions.

ONLY package: Only the gasket

SW package: Gasket sleeve and single washers

DW package: Gasket sleeve and double washers

We are stocking type "E" execution "DW" in DIN 2632 in dimensions DN 15mm/1/2" to DN 32", and of course also other dimensions according to customers demands.

## ORDERING EXAMBLE

The following information is needed:

1. flange dimension
2. flange norm
3. pressure class
4. type "E" or "F"
5. material "B" or "D"
6. package "ONLY", "SW" or "DW"

e.g.: 50 set DN 200 - E/B - DIN 2633 - DW

## REMARKS !

The leaflet is based on the experience from our material suppliers.  
Our guaranty is restrict to supply of new material only.

We reserve the right to technical changes without notice!