

Granite Stone

ELECTROLUX

Your Original Manufacturer & Authorized Provider
of Parts & Services for all 1984-2012 Electrolux

DONIT | Solutions

FLANGE INSULATION KITS



www.donit.eu

www.rubber-products.com.mk
www.electrolux.com.mk

FLANGE INSULATION KIT

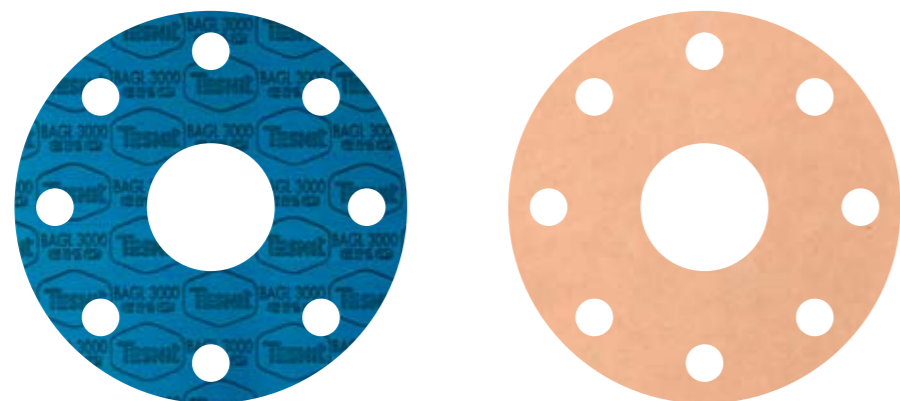
DONIT TESNIT Flange Insulation Kits are designed to ensure electric insulation and to combat the effects of corrosion often found in flanged pipe systems. By eliminating metal-to-metal contact, static current is halted to prevent corrosion and to aid in the cathodic protection of the piping system. The kits can be used to control stray electric currents in piping at oil, gas, water, refinery and chemical plants in order to increase the effectiveness of cathodic protection systems. Experience has shown that cathodic protection, together with high grade passive corrosion protection from the application of a coating on the pipeline, provides a most efficient and economical solution.



KIT CONTENTS

Each DONIT TESNIT Flange Insulation Kit contains, in addition to a gasket (see page 4), the following:

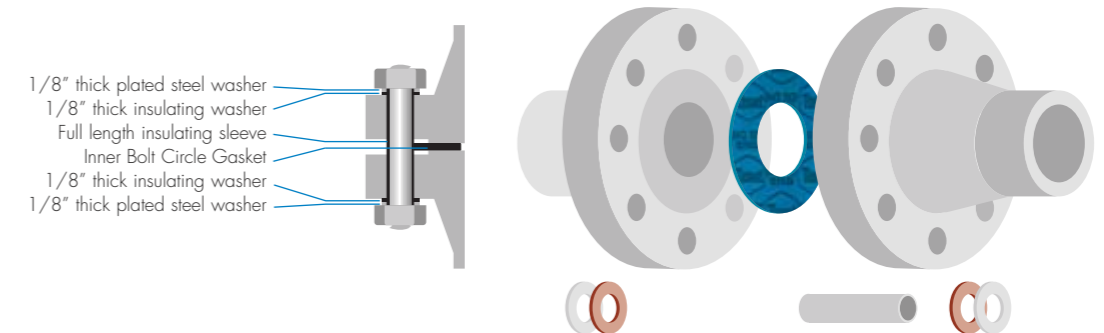
- one phenolic/GRE/mylar sleeve per bolt
- two laminated phenolic/GRE/mylar washers per bolt
- two plated steel washers per bolt



DONIT Flange Insulation Kit

TYPE F - INNER BOLT CIRCLE GASKET (IBC)

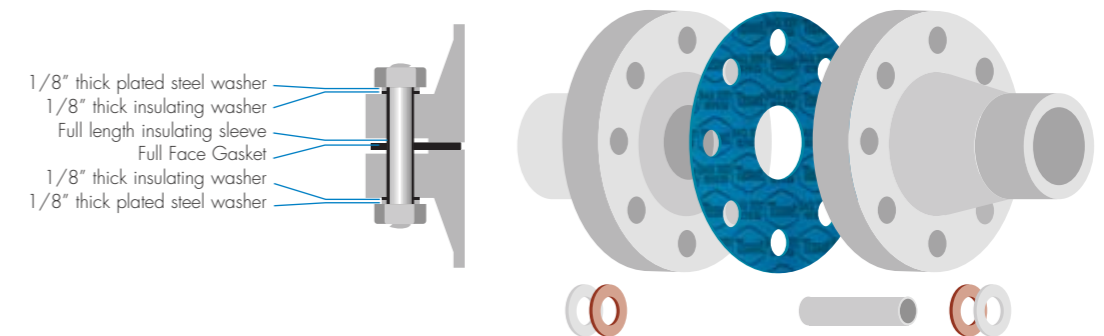
The Inside Bolt Circle insulation kit utilises a central gasket which locates within the bolts. The outer diameter of the gasket fits tightly into place assuring a well-centered position. The illustration shows clearly how the opposite flanges are totally insulated from each other. For use on full face and raised face flanges.



DONIT Flange Insulation Kit

TYPE E - FULL FACE GASKET (FF)

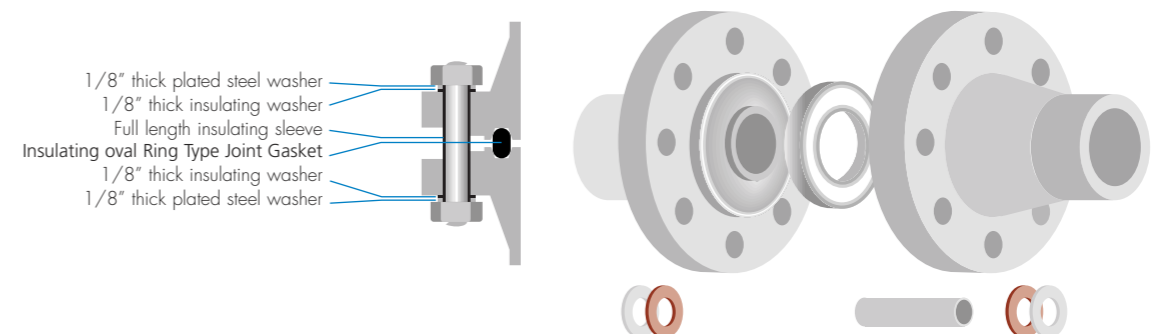
Full Face insulation kits are suitable for flat face and raised face flanges. This assembly minimises the ingress of conductive foreign matter between the portions of the flanges outside the raised faces and reduces the risk of bridging. The illustration shows clearly how the opposite flanges are totally insulated from each other. For use on full face and raised face flanges.



DONIT Flange Insulation Kit

TYPE D - RING TYPE JOINT GASKET (RTJ)

Ring Type Joint insulation kits comprise of an oval insulating ring type joint gasket and are suitable for standard RTJ flanges. The illustration shows clearly how the opposing flanges are totally insulated from each other. For use on standard ring type joint flanges.



INSULATING GASKET MATERIALS

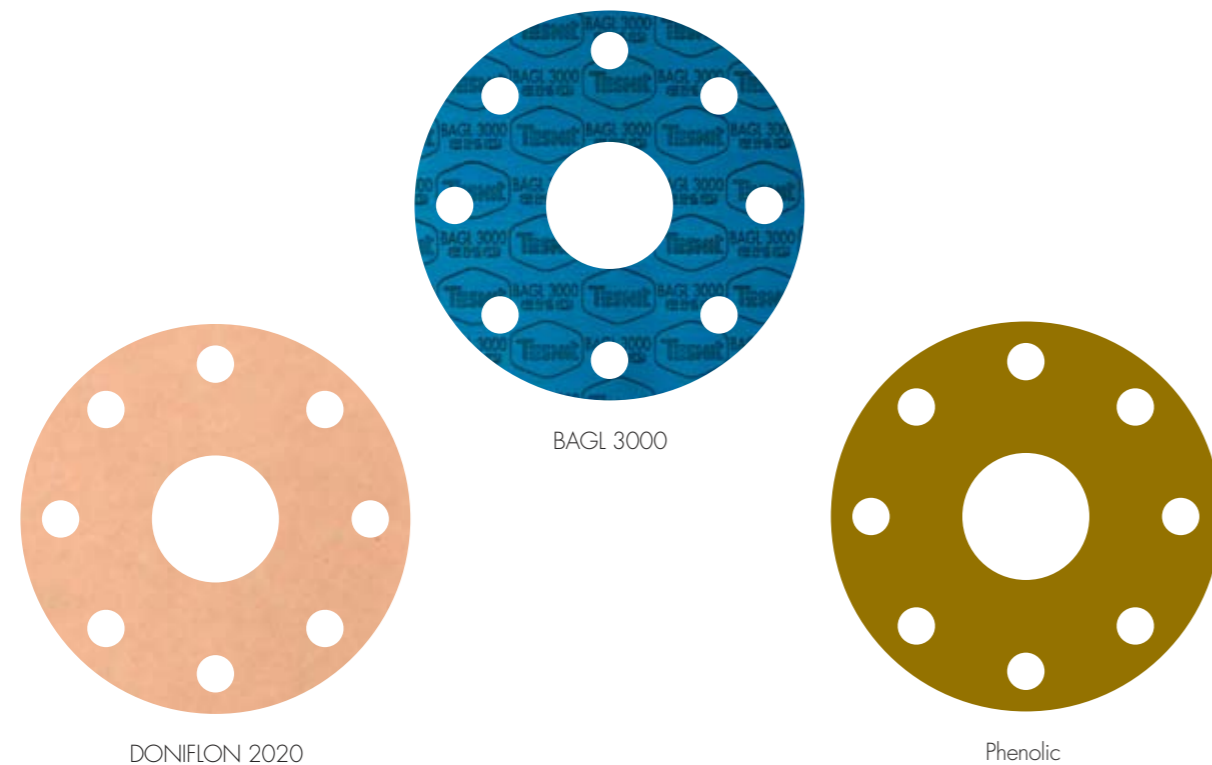
Materials suitable for the main gasket in the insulation kit

Gasket Materials	Description	Max. operating temperature [°C]	Dielectric strength ¹ [kV/mm]	Water absorption ² [%]
BAGL 3000	Compressed gasket material	350	18	1.8
DONIFLON 2020	Modified PTFE with silica	250	8.9	0.65
PHENOLIC GASKET	Plain faced phenolic	100	17.9	1.1

¹ Test according to ASTM D149 in transformer oil.

² Test according to ASTM D570.

* Operating temperatures depend on gasket thickness.



SERVICE RECOMMENDATIONS

Besides temperature, the pressure rating should be taken into consideration when selecting the appropriate gasket insulating material.

Gaskets should be assembled in accordance with the parameters shown here (EN 13555):

Surface pressure

Gasket Materials	Q _{Smax} [MPa]		Q _{min} – 40 bar [MPa]	
	at RT	at 100 °C	L 0.1 mg/s·m	L 0.01 mg/s·m
BAGL 3000	220	200	18	35
DONIFLON 2020	150	90	19	27
PHENOLIC GASKET	220	220		

FLANGE SURFACE FINISH

The surface of the flange must be absolutely clean.

LOW TEMPERATURE SERVICE

Insulation kits with elastomeric materials should not be used below -40°C. For lower temperatures, we recommend Doniflon 2020 as the main gasket.

RECOMMENDED INSTALLATION PROCEDURES:

- Check that all components have arrived and that they have not been damaged.
- Inspect the pipe flange surface and clean it, if necessary.
- Install the gasket and align the flanges so that the bolt holes will be centered.
- Use alignment pins in two diametrically opposite bolt holes whenever possible to assure proper alignment of flanges and gasket.
- Insert insulating sleeves into the bolt holes taking care not to use additional force which could damage the sleeve material.
- Insert the bolt with both insulating washers against the flanges followed by the steel washer and nut.
- Tighten two diametrically opposite bolts to 30% of the total torque.
- Replace the two alignment pins with bolts and tighten the remaining bolts to 30% of the total torque.
- Tighten all bolts to 50%, then to 100% of the final torque.
- Bolts should be of sufficient length to extend through the nut approximately 1/4".

FLANGE INSULATION KITS - ASME DIMENSIONS

Nominal Pipe Diameter	Gasket Inside Diameter	Class Rating LBS	GASKETS				Ring No. Type D	BOLTS			SLEEVES				WASHERS			
			Outside Dia. Type E (inches)	Outside Dia. Type E (mm)	Outside Dia. Type F (inches)	Outside Dia. Type F (mm)		Number of Bolts	Size of Bolts (inches)	Size of Bolts (mm)	Inside Dia. (inches)	Inside Dia. (mm)	Length (inches)	Length (mm)	Inside Dia. (inches)	Inside Dia. (mm)	Outside Dia. (inches)	Outside Dia. (mm)
1/2 15mm	1/2 15mm	150	3.1/2	88.90	1.11/16	42.86	-	4	1/2	12.70	1/2	12.70	1.1/16	26.99	9/16	14.29	1.1/8	28.58
		300	3.3/4	95.25	1.15/16	49.21	R11	4	1/2	12.70	1/2	12.70	1.5/16	33.34	9/16	14.29	1.1/8	28.58
		4/600	3.3/4	95.25	1.15/16	49.21	R11	4	1/2	12.70	1/2	12.70	1.13/16	46.04	9/16	14.29	1.1/8	28.58
		9/1500	4.3/4	120.65	2.5/16	58.74	R12	4	3/4	19.05	3/4	19.05	2.7/16	61.91	13/16	20.64	1.9/16	39.69
		2500	5.1/4	133.35	2.9/16	65.09	R13	4	3/4	19.05	3/4	19.05	3.1/16	77.79	13/16	20.64	1.9/16	39.69

FLANGE INSULATION KITS - ASME DIMENSIONS (CONTINUED)

Nominal Pipe Diameter	Gasket Inside Diameter	Class Rating LBS	GASKETS				Ring No. Type D	BOLTS			SLEEVES				WASHERS			
			Outside Dia. Type E (inches)	Outside Dia. Type E (mm)	Outside Dia. Type F (inches)	Outside Dia. Type F (mm)		Number of Bolts	Size of Bolts (inches)	Size of Bolts (mm)	Inside Dia. (inches)	Inside Dia. (mm)	Length (inches)	Length (mm)	Inside Dia. (inches)	Inside Dia. (mm)	Outside Dia. (inches)	Outside Dia. (mm)
6 150mm	6 150mm	150	11	279.40	8.9/16	217.49	R43	8	3/4	19.05	3/4	19.05	2.3/16	55.56	13/16	20.64	1.9/16	39.69
		300	12.1/2	317.50	9.11/16	246.06	R45	12	3/4	19.05	3/4	19.05	3.1/16	77.79	13/16	20.64	1.9/16	39.69
		400	12.1/2	317.50	9.9/16	242.89	R45	12	7/8	22.23	7/8	22.23	3.5/16	84.14	15/16	23.81	1.3/4	44.45
		600	14	355.60	10.5/16	261.94	R45	12	1	25.40	1	25.40	4.7/16	112.71	1.1/16	29.63	2	50.80
		900	15	381.00	11.13/16	300.04	R45	12	1.1/8	28.58	1.1/8	28.58	5.1/16	128.59	1.3/16	30.16	2.3/16	55.56
		1500	15.1/2	393.70	10.15/16	277.81	R46	12	1.3/8	34.93	1.3/8	34.93	7.3/16	182.56	1.7/16	36.51	2.5/8	66.68

Above 24", please provide the specifications of your flange using our product worksheet. Technical assistance is available upon request.



About us:

Donit Tesnit® was founded in 1946 and is today one of the world's leading producers of sealing materials, gasket products and solutions serving all major markets. We provide integrated solutions for our customers' challenging environments and supply various custom made applications. With our own infrastructure we have gained extensive knowledge and experience in the sealing business. We produce technologically advanced products that are more environment-friendly. Our products are used globally in the chemical-, oil-, automotive-, food-, mechanical- and shipbuilding industry, in power plants and construction.

One of our biggest assets is the experience we have in building relationships and assuring quality. This generates trust which is embedded in the our brand. Through sustaining relationships with existing customers and expanding local presence, we align our business with that of our customers - a true partner for success.

Our Markets:

Our headquarters is in Medvode, Slovenia directly in the heart of Europe. From Slovenia we have direct access to a logistic infrastructure that enables us to provide fast and direct response to our customers. With more than 250 customers worldwide, our production is exported into more than 60 countries on all continents.

Our extensive worldwide network of distributors, agents and other clients enables us to provide real-time high quality tangible solutions around the globe, with special focus on Europe, USA and Asia. We

believe in supreme customer focus – listening keenly, then using our global presence and experience to provide solutions is what makes us the preferred partner in success stories all over the world.

Us as Partner:

We produce a wide range of high quality products. What makes us different is our genuine interest in what our customers really need. This makes us a true partner in transforming ideas into actions. Our high quality products enable our customers to lead an environmentally safe business and decrease the possibility of environmental cost. We act responsibly because we are in it for the long haul. The wide range of products and services make Donit a one-stop shop for our customers' diverse needs. This makes our customers' day-to-day business easier. We advise and consult with our customers in order give them the confidence to face change and keep their business sustainable and safe.

Our Personality:

THE CURIOUS GUY WITH EXPERIENCE.

We have the eagerness of an engineer - following the latest trends in the industry, asking questions and listening to our customer. When it is time to execute, the wisdom of a seasoned professional takes over. We demonstrate our deep knowledge about the industry in a way that is innovative and to-the-point. We engage with our customers and know that keeping promises matters more than big words.

Donit – A perfect fit.

