



**Zunt** ITALIANA®

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# ZUNT ITALIANA

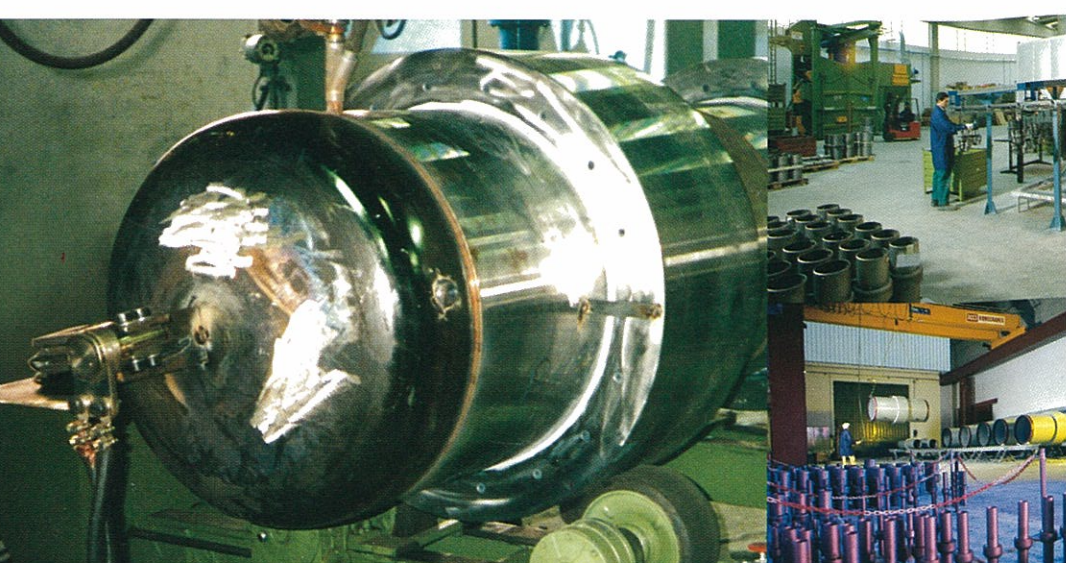
MANUFACTURER OF INSULATING JOINTS





# MONOLITHIC INSULATING JOINTS

# INSULATING JOINTS



## SINCE 1975

ZUNT ITALIANA manufactures a complete range of Monolithic Insulating Joints used for the sectioning of main pipelines, to ensure full efficiency to cathodic protection systems against corrosion.

ZUNT ITALIANA Insulating Joints are designed, manufactured and tested in full compliance with the most stringent international Standards and Clients' specifications

Thanks to its reliability, experience, tradition and continuous research & development, ZUNT ITALIANA is now one of the worldwide leader manufacturers of Insulating Joints exporting presently 70% of its annual production all over the world.

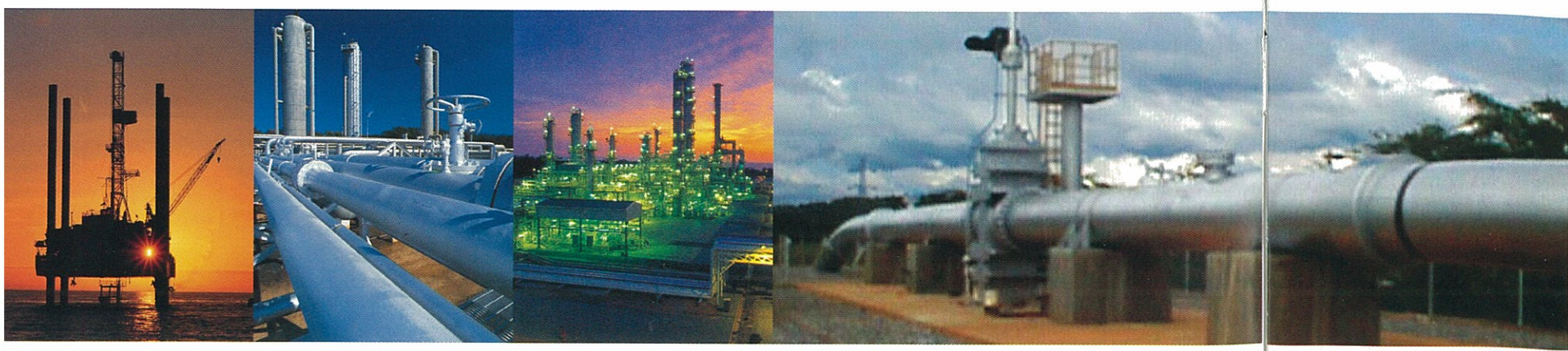
ZUNT ITALIANA is an approved supplier of the main domestic and international water, oil and gas Companies operating both offshore and onshore, such as:

ENI Group (Snam, Agip, Saipem, Snamprogetti) - British Gas/Transco - Italgas - Esso - Sonatrach - PDO Oman - Petrobras - NIGC/Kala Naft - Bechtel - Shell - ADCO - Atheer - NPCC - Enagas-Repsol - Brown & Root - SWCC - Korea Gas - EIL - Corporation Daelim - ONGC - Hyundai - Petronas - Total - BPA - Naturgas - SOC Lybia - NAOC - Petrobel - etc... updated reference list available on request.

## SINCE 1993 DESIGN AND MANUFACTURE TO ISO 9001

ZUNT ITALIANA ISO 9001 Certified Quality System covers both the design and the manufacture of its products.

- Skilled personnel
- Continuous training
- Quality oriented and custom-made production
- Customer satisfaction



On request, Tests & Inspections can be witnessed by Third Party Inspection Agencies such as: Bureau Veritas, Lloyd Register, DNV, ABS, RINA, SGS, Germanischer Lloyd, TÜV, etc.



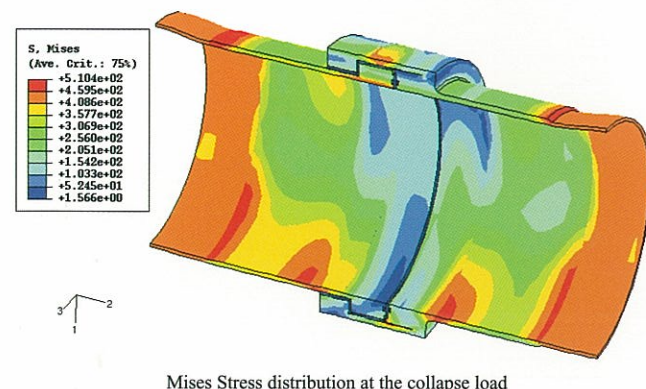
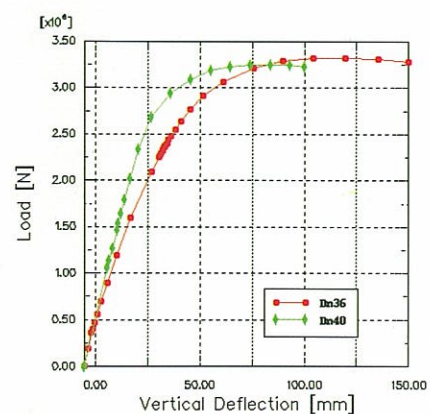


- High Pressure Monolithic Insulating Joints for water, gas, oil and petrochemical industry
- Insulating Joints for high temperature fluids, sour service applications, conductive fluids, etc.
- Monolithic Insulating Joints with flanged ends
- Isolation spools
- Low pressure service joints
- Pre-assembled insulating flanges
- Insulating kits for flanges
- Steel Polyethylene transition fittings

ZUNT ITALIANA's Insulating Joints are designed to withstand - in hydrotest conditions - a bending moment able to induce a total longitudinal stress of 75% SMYS (specified minimum yield stress) of the adjoining pipe and a torque sufficient to induce a torsional stress of 5% SMYS in the adjoining pups.

ZUNT ITALIANA's engineers and technical dept are at the client's disposal in order to design special insulating joints suitable for particularly "heavy" operating conditions, such as additional external loads, etc.

- Design calculations to ASME VIII Div. 1 App. 2
- WPS, PQR, WPO to ASME IX (Other Codes on request)
- Finite Element Analysis by means of ASME NQA-1 certified software available on request



## FERROUS MATERIALS

to ASME, API 5L, ASTM, DIN, UNI, EN, MSS-SP, NACE

- Carbon Steel in various grades
- Stainless Steel, Duplex Steel
- Inconel Steel/Incoloy Cladding

## NON FERROUS MATERIALS

- Insulating spacers: fiber glass epoxy resin ASTM D709 G10-G11
- Sealing System: elastomeric materials suitable to meet any specified design conditions
- Filling materials: epoxy resins
- Coating & lining: epoxy resins - special epoxy resin for drinkable water (other paint systems on Client's request)
- Accessories: cable lugs, lifting lugs, spark gaps, emergency sealing - on request

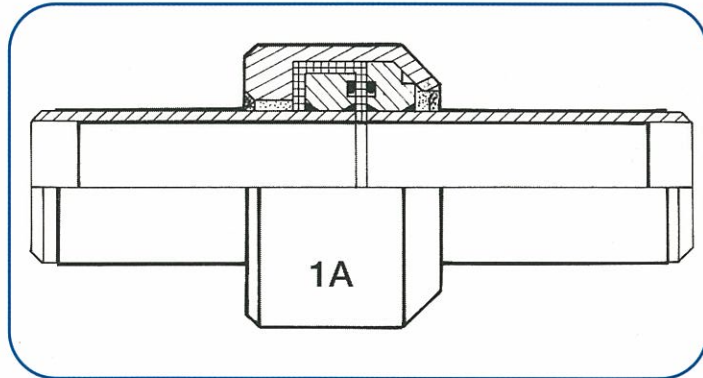




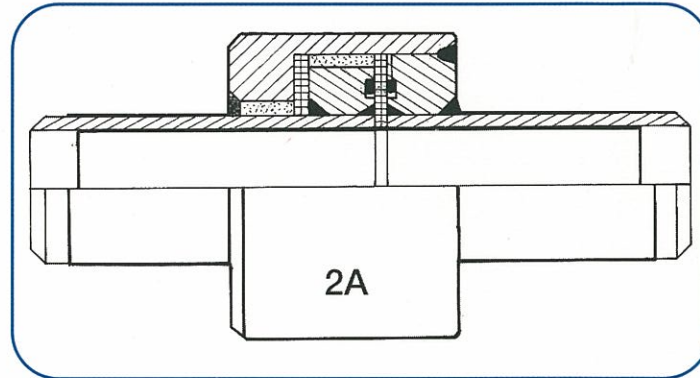
# MAINLINE JOINTS FOR GAS-WATER-OIL

## PRODUCTION RANGE

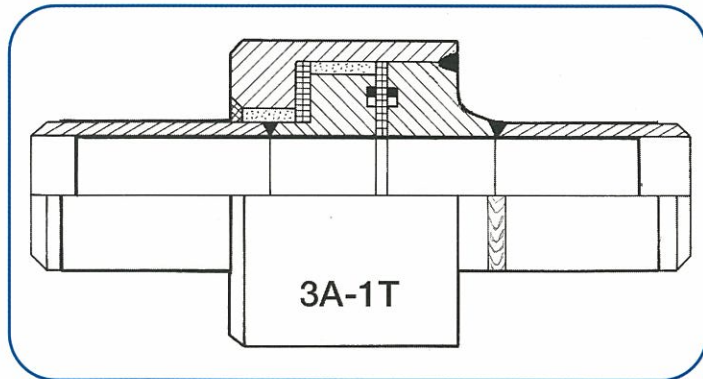
- SIZE : from 1/2" up to 100" and over
- RATING : from ANSI 150 up to ANSI 2500 and over



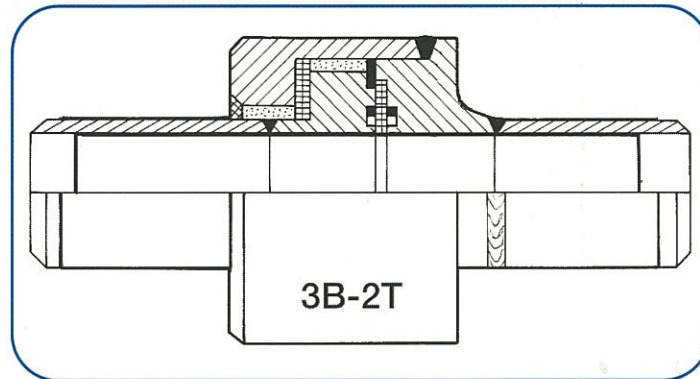
FILLET WELD



FILLET WELD



BUTT WELD



BUTT WELD

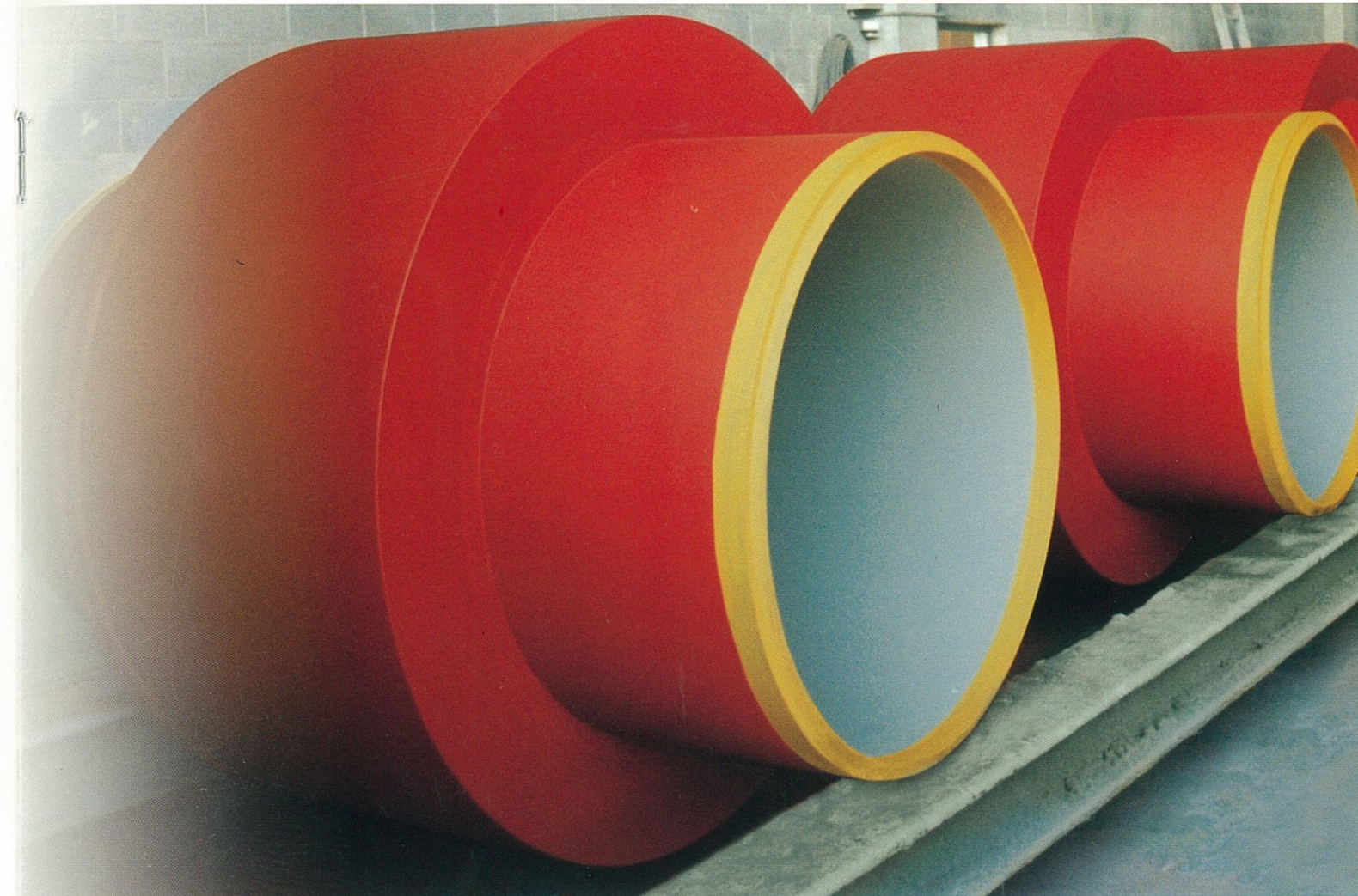
## SEALING SYSTEM

Sealing provided by O-Ring

ZUNT ITALIANA's patented double independent sealing system is included in the 3B-2T design (over ANSI 600) However, it can be provided also on types 2A and 3A in particular design conditions of ANSI Class and on client's request.

## TECHNICAL FEATURES for standard insulating joints

- Design Factor : 0.6
- Temperature range : -10°C / +70°C
- Hydrotest pressure : 1.5 times the Design Pressure
- Dielectric Strength test : > 3 kV for 1 min. - 50 Hz a.c.
- Electrical resistance test : in dry conditions >5MΩ 1000 Volt d.c.
- Coating/lining : epoxy resin
- N.D.E. : MPI, UT, X-Rays, Dye Penetrant on welds carried out according to the Client is requirements



## SEALING SYSTEM

ZUNT ITALIANA shall design Insulating Joints with special characteristics in order to meet the client's specifications requirements, e.g.:

- Low temperature : down to - 50°C
- High temperature : up to + 160°C
- Dielectric Strength Test : up to 20 kV for 1 min. 50 Hz a.c.
- Electrical Resistance Test : in dry conditions > 200 MΩ 1000 Volt D.C.

## EXTRA TESTINGS ON REQUEST

- Helium leak test
- Air leak test
- Hydraulic fatigue test
- Hydro-thermo-bending test
- Torsional test
- Vacuum test
- Electrolytic immersion test
- Tests on coating and lining





## PN 10 JOINTS FOR GAS - WATER

### TECHNICAL FEATURES

SIZE : from 1/2" up to 3"

ENDS:	Weld/Weld Male/Male	Male/Weld Male/Female	Female/Female
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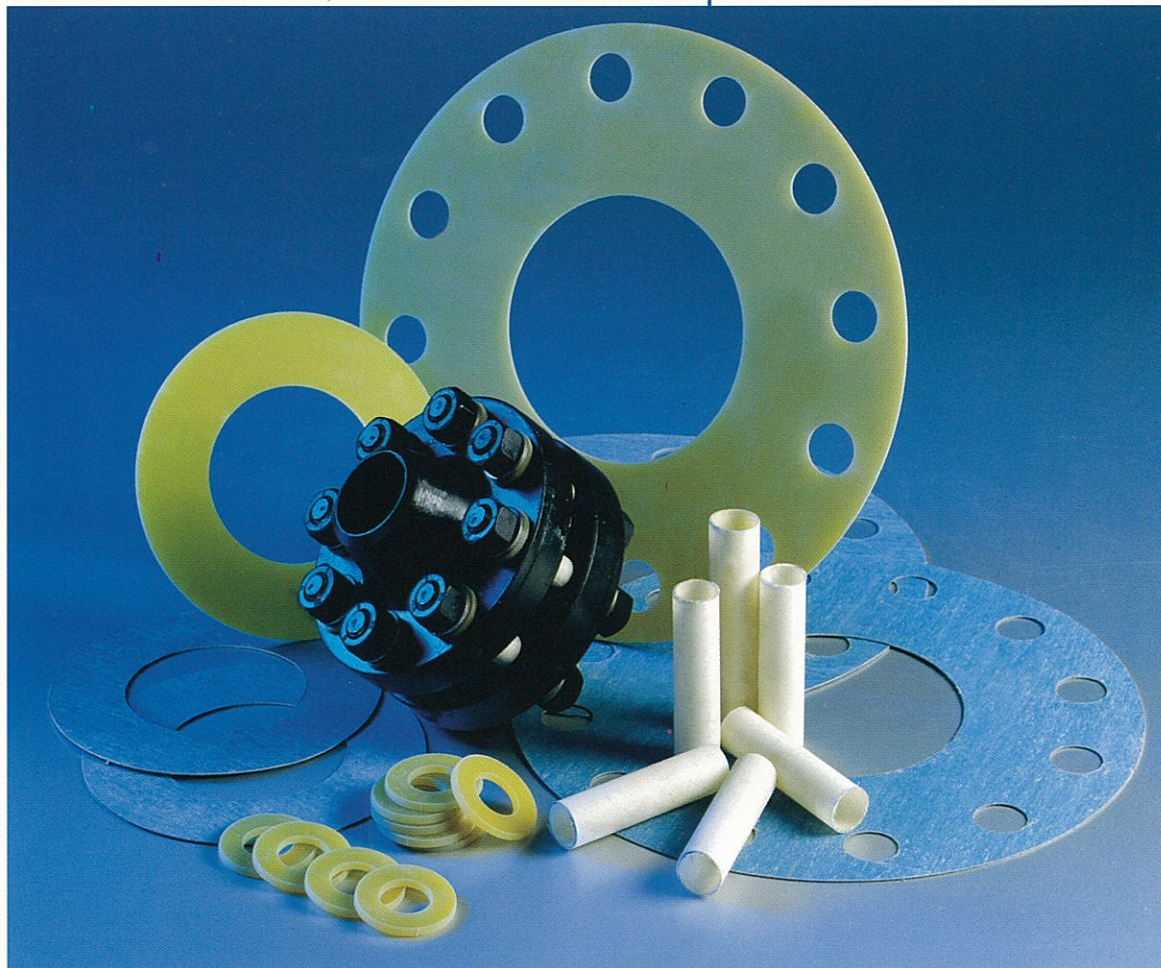
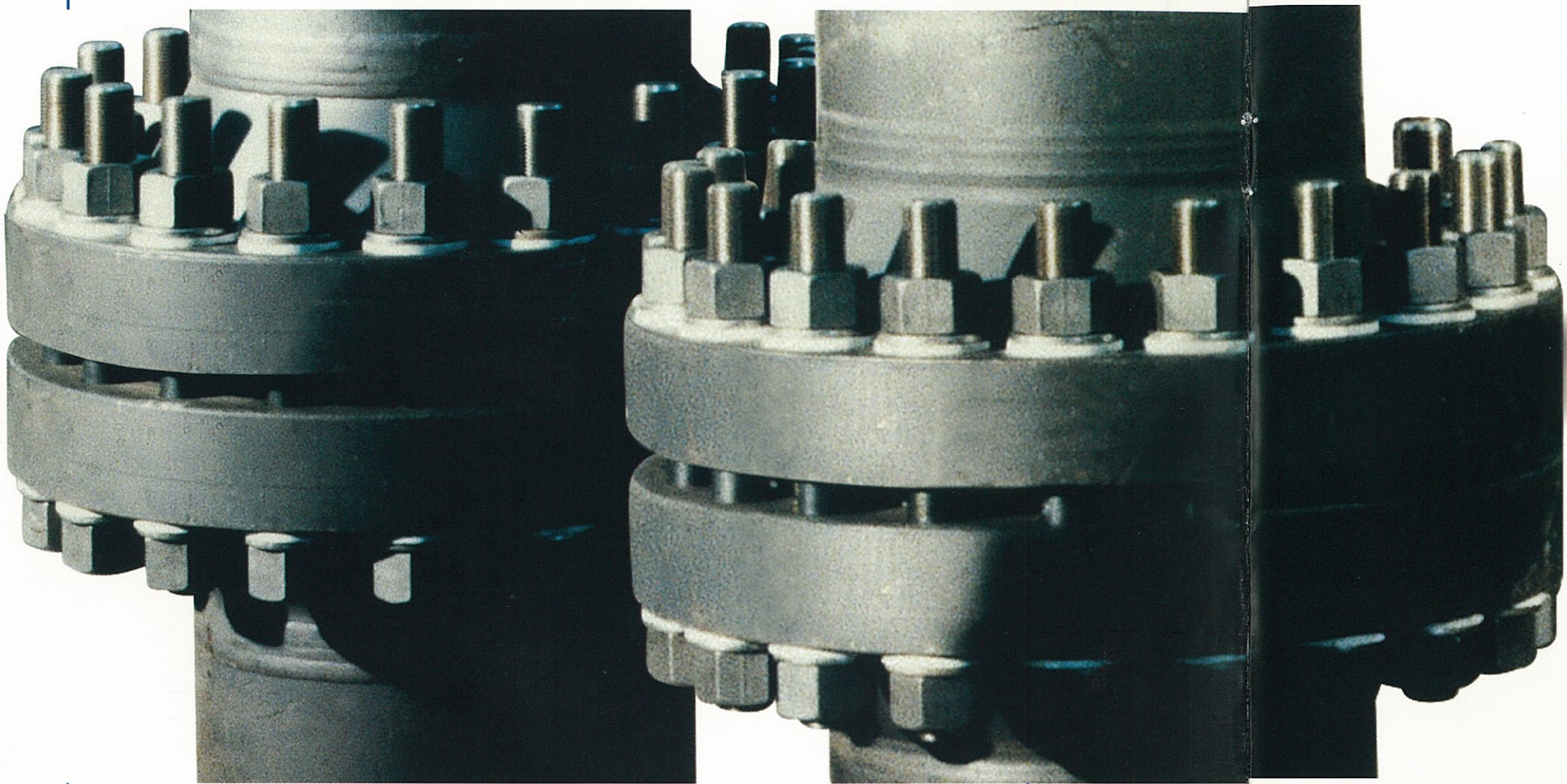
- Design Temperature : -10°C / +70°C
- Design Pressure : 10 bar
- Hydrotest Pressure : 15 bar
- Air Leak Test : 5 bar for 10 seconds
- Coating/Lining : Epoxy primer / Epoxy resin \*\*
- Dielectrical Strength Test : >3 kV for 1 min. 50 Hz a.c.
- Electrical Resistance Test : 5 MOhm 1000 V d.c.

Construction & testing according to UNI CIG 10284 available on request

\*\* Service joints internally lined for water or with oven cured epoxy powder on request



# PRE-ASSEMBLED INSULATING FLANGES & INSULATING KITS FOR FLANGES



## PRODUCTION RANGE

- **SIZE** : from 1/2" up to 100" and over
- **RATING** : from ANSI 150 up to ANSI 2500, API 10000
- **FLANGES** : WN RF or RJ flanges of any type
- **MATERIALS & COMPONENTS** selected to match the specified operating conditions, the fluids conveyed, etc., in accordance with the client's requirements

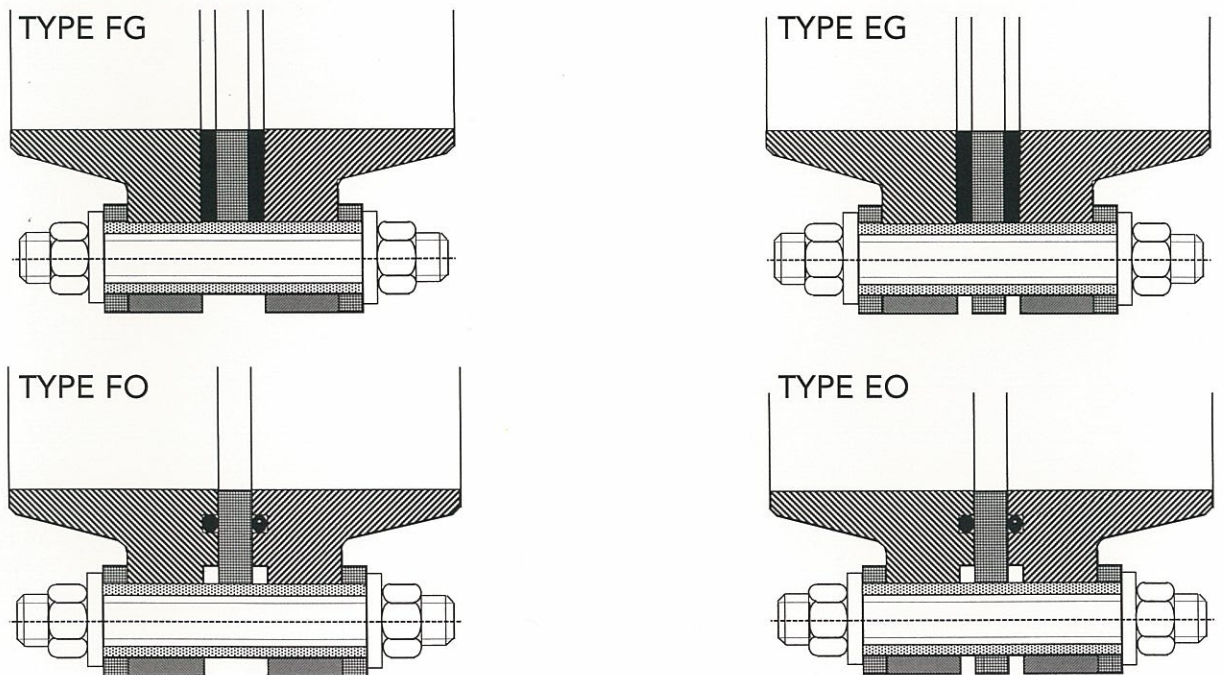
## TECHNICAL RANGE

- **Design Temperature** : 10°C/+70°C
- **Dielectric Strength Test** : > 3 kV for 1 min. 50 Hz a.c.
- **Electrical Resistance Test** : > 5 MOhm 1000 V d.c.

## SPECIAL FEATURES

Low/high temperature and higher electrical characteristics available on request

## TYPICAL ASSEMBLY OF INSULATING FLANGES



- The type of seal, either flat gasket or O-Ring seal, the material for insulating gasket, washer, sleeves and bolting will be selected by ZUNT based on the application requested, considering the type of fluids, the Ansi Class and the flange sizes
- Insulating kits can also be supplied without flanges and bolting