

PRODUCT INFORMATION



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Introduces a range of insulated pipe supports for cold and cryogenic applications.

Range of pipe support assemblies include:

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- High density polyurethane insulation saddles single or multi-layer.
 - Low friction slide bearing, if required.
 - Vapor barrier.

- Any associated pipe hanger hardware or structural members, if required.
- Fabricated steel casing.
- Line stops.
- Metal jacket.

A major application for **CRAD-X** group is for insulated pipe supports where strength and insulation values are a prerequisite.

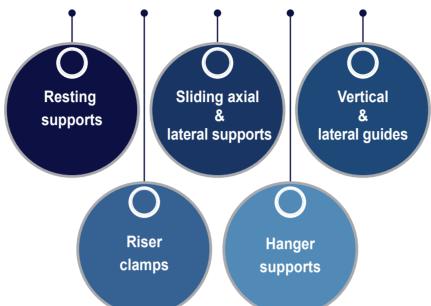
PRODUCT ADVANTAGES

- High density polyurethane insulation is manufactured from raw materials and chemical systems supplied by **DOW** which means that every component of the raw material is a **DOW** product.
- Polyurethane foam maintains dimensional stability throughout the full range of surface temperature.
- Insulated supports eliminate the condensation and associated corrosion problems at support locations for process lines.
- Supports are supplied as assembled units ready for installation.
- The service temperature for **CRAD-X** is from +120 °C to -197 °C.
- $\left(egin{array}{c} iggs \end{array}
 ight)$ High density polyurethane is CFC and HCFC free.



TYPE RANGE





RANGE OF **DENSITIES**

CRAD-X with high density polyurethane foam are supplied with a range of densities:



Density (kg/m3)	Compressive Strength (MPA)
160	2.035
240	4.20
320	5.10
500	20.20



DESIGN AND ENGINEERING

Our engineering department is available to design and review the technical issues including the support systems, heat gain, and stress analysis of the insulated supports.

RANGE OF **APPLICATIONS**

CRAD-X is a versatile insulated support that has a wide range of applications for different industries including:

- LPG, LNG, Petrochemical, Chemical and Fertilizer plants.
- Ammonia and Ethylene plants.
- HVAC- Chilled water pipes
- Food, Beverage and Pharmaceutical plants.



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APPLICABLE **STANDARDS**

CRAD-X 9 supports range is conformed to the following standards:

ASTM C585.

ANSI & ASME B31.1 & B31.1.

ASTM D 1621: Compressive strength.

ASTM C177: Thermal conductivity.

Section IX of ASME boiler and pressure vessel code.

Structural shapes and plates: ASME A-36.

ANSI & ASME B31.1 & B31.3

MSS SP58: pipe hangers and supports materials, design and manufacture.

THERMAL **PERFORMANCE**



Suitable for service temperature from -190 °C to +120 °C.

Thermal conductivity as low as 0.024 W/m.k.

Foam cradles have superior thermal efficiencies due to their closed, small and strong cell structure and high resistance to moisture absorption.

TECHNICAL **PROPERTIES**

CRAD-X range of supports exhibits the properties and characteristics indicated in the technical data sheets

QUALITY ASSURANCE

Misalla applies stringent quality control measures to ensure customer satisfaction.

CRAD-X range is manufactured to the highest quality standards under a quality control system conformed to ISO 9001:2015 and ASME codes.



PRODUCT **STORAGE**

CRAD-X to be stored at job sites in dry covered area to avoid exposure to rain, moisture and direct sunlight.

MARKING & PACKAGING

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range of products for low temperature applications are supplied, fully assembled and packed to protect the product from damage.

Each high density polyurethane pipe support assembly shall be clearly and permanently marked with the support identification number according to the company codes or as specified by the client. The mark shall be visible and readable.



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