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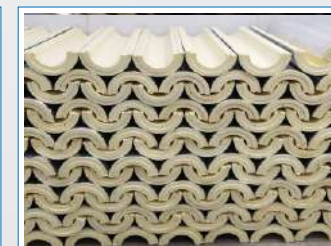
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COMPANY PROFILE

Design by  Pakwala | +92 322 4042 500


Omega
High Quality
Polyurethane Insulation



WELCOME NASIR & SONS ENGINEERING COMPANY

Nasir & Sons leadership and unparalleled research, development and manufacturing programs have put us at the forefront of industry advancement and technological breakthroughs. our professional engineers, technical and designers apply innovative state-of-the-art equipment and refrigerators to develop system that meet even the most complex refrigeration challenges.

COMPANY INTRODUCTION

Nasir & Sons has establish in May 2009, we are specialized in the field or refrigeration manufacturer of insulated sandwich panel for cold storage and walk-in-room in Pakistan. We provide customized HVACR to Both industries and commercial concerns.

We are heavily investing in HVACR for seeking opportunity to provide state of art technologies for preserving products such as daily fruits, food, beverages , vegetables, fish, ice cream, meat, pharmaceuticals, etc processing in from of vehicles and stores.

We have an excellent engineering team that comprises of professional experienced engineers, designers, modern manufacturing equipment and biggest production volume in Pakistan, having valuable clients served at their doorsteps. Our experienced professionals have the capacity to make your dream into realities.

Being a part of Pak Business group with it's global presence give us the strength so that we will use all our capabilities for ensuring a credible and sustainable market share and able ourselves to explore new markets for high quality products. We will create an environment where young people can thrive, remain energetic and ultimately understand contributions and self-worth within the company.

CORE COMPETENCIES

- ✓ Provide high quality, affordable contract solutions
- ✓ Create long term relationship with clients
- ✓ Respond immediately to the changing need of our clients
- ✓ complete customer satisfaction
- ✓ Improve our service continuously

OUR SERVICES

- ✓ In House CAD Department
- ✓ Consultation
- ✓ Turn Key Projects Management
- ✓ Sandwich Panels Installation
- ✓ Refrigeration System Installation
- After Sales Service
- Warranty Claims
- 24 Hour Emergency Local Services
- 1 Year Guarantee on Refrigeration Units
- 10 Years Guarantee on Insulated Panels

WE DEAL IN

- ✓ Cold Storage
- ✓ Commercial Refrigeration
- ✓ Blast- Freezers & Blast- Chillers
- ✓ Refrigeration Trucks
- ✓ Industrial Refrigeration
- ✓ Self-Engine Units
- ✓ Direct Driven Units
- ✓ Eutectic Plates Units
- ✓ Polyurethane Sandwich Panel
- ✓ Moisture Units





COLD STORE

Nasir & Sons is a leading Producer of Polyurethane (PU) Sandwhich for Cold Room, Blast Room and Anti Room. We Utilize Advance Technology in our Products in Pakistan. PU insulated Panels are Strong and can increase Space of Room with One-Third to One-Half the Thickness of concrete walls. PU panels are Durable, Corrosion Proff, Safe and Clean. The High Quality Insulation Creates an Excellent Barrier to Protect.



PU Insulation Panel	
PU Panel Thickness	50, 75, 100, 125, 150 mm
PU Panel Length, Max.	10.6 m
Panel with (Standard)	1168.4 mm
Surface Material	Color Coated Galvanized Steel Sheet
Sheet Thickness	0.050 mm
Joint Material for PU Panels	RAL 9016
PU Panels Joint Sealant	Polyurethane (PU) Rigid Foam
Color	Approx. 40-45 kg/m. -3
Insulation Material	0.018 Kcal/m. H C
Density (PU)	Cam Lock (Galvanized)
Thermal Conductivity	Silicone (Odorless Deoxime Type)

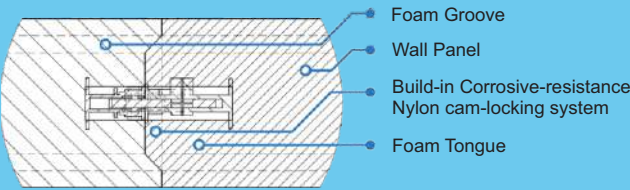
Cold Room Door			
Cold Room Door Hinge Type		Size (WxH) 34"x76"	
Door Hing	Skew Hinge (Die-Cast Zine)	Chromate	Withstood Open/Close Test. (1000,000 Repetitions)
Door Latch	Safety Latch with Lock (Die-Cast Zine)	Treatment	Should Door Lock While Inside it Can Easily be Unlocked by Pushing the inside Bar
Sealing for Doors	Synthetic Rubber		Extrusion Forming Material

Our Insulated Panels for Cold Storage, Freezer Room are Easy to install and Meet Strict Standards for Preservation of Foods. Our "Clean Room", Designed for Environment control, is suitable for food processing, Surgery Rooms, Pharmaceuticals and Electronics.

PU INSULATION PANEL

POLYURETHANE (PU) PANEL

- ✓ **Color** RAL9016
- ✓ **Panel Thickness** 50, 75, 100, 125, 150 mm
- ✓ **Wall Panel Length, Max.** 10.6 m
- ✓ **Ceiling Length (Maximum)** 10.6 m
- ✓ **Panel with (Standard)** 1168.4 mm



PANEL WEIGHT

- ✓ **Color Steel Sheet Thickness** 0.050 mm
- ✓ **Surfacing Material** Color Steel Sheet
- ✓ **Component Material** Hard Foamed Polyurethane

MAJOR MEMBER

- ✓ **Joint System** Com Lock
- ✓ **Joint** Silicone Sealant
- ✓ **Thermal Conductivity K-Value** 0.0177 Kcal/m2h 0C
- ✓ **Sound Insulation Properties** 25 DBR

COMPONENTS

Item	Material	Finish	Color	Remarks
Sealing Material (Joints)	Silicon Sealing		White	Odorless Deoxime Type
Sealing For Doors	Synthetic Rubber	Extrusion Forming Material	Black	
Door Hinge	Safety Latch With Lock (Die-Cast Zine)	Chromate Treatment		Should Door Lock While Inside It Can Easily be Unlocked by Pushing the Inside Bar
Door Hinge	Skew Hinge (Die-Cast Zine)	Chromate Treatment		Withstood Open/ Close Test. (100,000 Repetitions)

CONDENSING & REFRIGERATION UNIT

FEATURES

- ✓ High Cooling with Low Power Consumption.
- ✓ Designed for High Ambient Condition Up to 55C.
- ✓ Condensing Coil with Inner Grooved Copper Tubes & Aluminum Fins.
- ✓ Efficient Fans with External Motors for Single Phase and Three Phase.
- ✓ High & Low Pressure Cut-Out Including Mounting Brackets, Wired to Terminal Stop.
- ✓ Large Size Filter Dried, Moisture Indicator, Solenoid Valve, Oil Separator and Accumulator.

We are Suppliers of Excellent and High Quality Range of Refrigeration Units. These Refrigeration Units are Available in Various Sizes and Specifications. It includes Both Air- Cooled and Water – Cooled.

We Use The Best Quality Specially Designed With the Energy Efficient, Low Noise, Easy Maintenance and Compact Size which gives The Same High Quality Performance for Many Years.

EVAPORATOR UNIT

FEATURES

- ✓ **Fan** – High Reliability, Lower temperature Resistance and Low Noise External Rotors Fans.
- ✓ **Coil** – High Efficiency Heat Exchange With in Line Tube System for Minimum Loss of air Flow between Fans and large Surface Area for Better Cooling.
- ✓ **Defrost** – Host Gas and electrical Heating Stainless Steel Pipe, high Leak Profanes at the Anti- Electrical Leakage and Long Life.
- ✓ **Unit Body** – Galvanized Sheet, with Power Coated Painted, Corrosion Resistant and Nice Appearance Body.
- ✓ **Maintenance** – Compact, Adjustable & Easy open Able Slide Panels for Easy installation.

CONTROL PANEL

FEATURES

- ✓ High Quality Galvanized Power Coated, Water Proof
- ✓ Electrical Panel Box
- ✓ Digital Temperature Controlled
- ✓ Indication Lights
- ✓ Magnet Contactor
- ✓ Phase Failure
- ✓ HP – LP
- ✓ Protect Over Current Thermal Relay (Only Fan Motors)



REEFER CONTAINER

WALL THICKNESS:

Insulated wall thickness 75mm (Small Vehicle), 100mm (Mini Truck) & 125mm (Heavy Loading Truck). Type of Construction Heavy Structure Frame with Pre-Fabricated Polyurethane Insulation, so Container Becomes Airtight.

SURFACE MATERIAL:

Outside pre coated GI sheet Skin Thickness 0.8mm, inside pre Coated GI Sheet Skin Thickness 0.8mm or S.S Grade 304, Thickness 0.5mm.

TYPE OF FLOOR:

we are providing outside pre Coated GI Sheet, thickness 0.8mm & inside S.S Grade 304, Thickness 1.5mm.

Option – 1: Aluminum T Profile for easy moving & air Rotation.

Option – 2: Aluminum Checkered Plate.

Option – 3: S.S 202 Rectangle Pipe Structure for Better easy moving & air Rotation

FEATURES

- ✓ Long-Term weather resistance enables many years of outdoor use.
- ✓ Low weight is particularly advantageous for refrigeration transportation with Low Payload and Low operating Cost.

SPECIAL FEATURES

- ✓ LOW WEIGHT
- ✓ HIGH STRENGTH
- ✓ BETTER INSULATION

Smooth interior and Exterior Surfaces makes NS container easy to clean. To transport from producer/ Supplier to the Distributor, we have an entire fleet of Transpiration with Temperature (+12 to -40 C) for all Perishable foods. We provide superior Ranges of insulated container/ Van to Transport all perishable foods. We are also the manufacturers of eutectic Mobile Container for Deliveries, Available for all Vehicles.

NS is manufacturer of excellent Quality insulated Container for Transportation with Temperature (+12 Degree to -40 Degree) for all Perishable foods, Such as Ice Cream/ Candy, Fruits/ Vegetables, Frozen Bakery Products.





MORTUARY REFRIGERATOR

“NS” Mortuary Refrigerator the Products with so Much Advanced Technology and Level. We Continue to Improve Our Products More and More. The Mortuary Coolers are a Series of Products for Hospital, Funeral Parlor and Postmortem Examination Department to Store the

TECHNICAL PARAMETERS

Model numbers	NS-01BU-12CL	NS-02BU-12CL	NS-03BU-12CL	NS-04BU-12CL	NS-06BU-12CL
Outer size (LxWxH)	104"x32"x26"	104"x34"x48"	104"x34"x70"	104"x64"x48"	104"x64"x70"
Inner size (LxWxH)	78"x26"x18"	78"x26"x18"	78"x26"x18"	78"x26"x18"	78"x26"x18"
Opening size (WxH)	26"x18"	26"x18"	26"x18"	26"x18"	26"x18"
Stretcher size (LxW)	77"x25"	77"x25"	77"x25"	77"x25"	77"x25"
Rated temperature	10 ~ -10℃	10 ~ -10℃	10 ~ -10℃	10 ~ -10℃	10 ~ -10℃
Power supply	220V, 50HZ	220V, 50HZ	220V, 50HZ	220V, 50HZ	220V, 50HZ
Refrigerant	R404A	R404A	R404A	R404A	R404A

TECHNICAL CONFIGURATION

Model Numbers	NS-01BU-12CL	NS-02BU-12CL	NS-03BU-12CL	NS-04BU-12CL	NS-06BU-12CL
Doors	1 PC	2 PC	3 PC	4 PC	6 PC
Compressor	1 PC	2 PC	3 PC	4 PC	6 PC
Stretchers	1 PC	2 PC	3 PC	4 PC	6 PC
LED Lights	1 PC	2 PC	3 PC	4 PC	6 PC
Control panels	1 PC	2 PC	3 PC	4 PC	6 PC

Refrigeration
Quick refrigeration, Stable Keep the Temperature with 5 C to -15 C.



Door Sealing
One Built Heavy cabinet door, thickness: 50mm. High quality and un-deformable during normal using. Replaceable door seal close to the surface to make sure stable the temperature



Material
High Quality Stainless steel with the mirror surface polishing. Panasonic Robotic ensure 360 full smooth welding surface.



Body Tray
High Quality Stainless steel tray with high stability and load capacity.



Temperature control
High precision digital display of control panel with the sound and light alarm of over temperature.



Omega

Polyurethane Pipe Insulation

TYPICAL PROPERTIES

Property	Test	Unit	Value
Density	ASTM D 1622	kg/ m ³	50
Compressive Strength At10% Deflection	ASTM D 1622	kN/ m ²	200±50
Thermal Conductivity	ASTM C 518	W/m ⁰ K	0.020
Water Vapour Perm	ASTM C 355	Perm-In	1.5
Working Temperature		°C	-180 to +120
Water Absorption	ASTM D 2842	% Vol.	2.0
Dimensional Stabilitly	ASTM D 2126	% Change	2.0
Coeff. Of Linear Exp.	BS 4370	m/m ⁰ K	7x10
Flammability Class	DIN 4102		B1, B2, B3
Closed Cell Content	ASTM D 2856	%	90-95

ADVANTAGES

- ✓ Excellent Heat deflection temperatures, with a relatively low coefficient of thermal insulation property.
- ✓ High surface hardness.
- ✓ High flexural rigidity and high impact strength, Very easy to transport, handle and install.
- ✓ Exhibit good resistance to alkalis, organic and inorganic acids, and excellent resistance to hydrocarbon solvents, oils and greases.
- ✓ Rot proof, mildew resistant, antiseptic, almost completely without odour and are physiologically suitable for most applications.

FACINGS

- ✓ Glass yarn reinforced Aluminum foil and Kraft paper is factory applied over the insulation.
- ✓ Especially recommended for the insulation of cold pipes running through warm and humid spaces, to prevent vapour condensation over the pipes.
- ✓ Longitudinal and transverse joints are wrapped with self-adhesive tape.

PACKING

Omega Pipe Insulation are packed in corrugated cardboard boxes resistant to impact.

DESCRIPTION

Omega Pipe Insulation are manufacture from Rigid Polyurethane Foam, which is characterized by its chemical synthesis, its closed cell structure, its low density and excellent thermal stability The product ranges to fit for Pipe of A1 to 22” N.P.B. and from 25mm to 50mm insulation thickness. The Standard of omega Pipe Insulation is 1 Meter. The Product is I Two Longitudinal Sections.

APPLICATION FIELDS

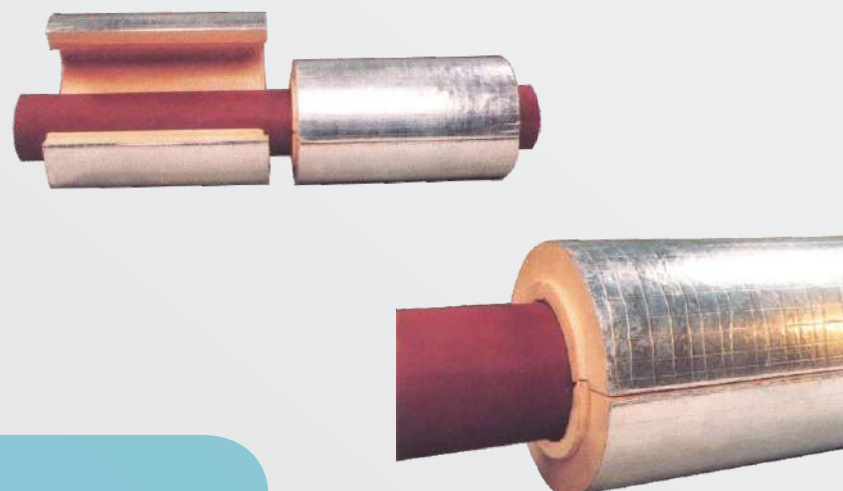
- ✓ Within the temperature range of - 180 C to + 120 C.
- ✓ Indoor or outdoor concealed or exposed uses.
- ✓ In commercial and institutional buildings, housing Complexes, industrial facilities and plants.

SALIENT FEATURES

Rigid Polyurethane foam is a combination of strength, it is the most versatile insulation material for building industry.

These Thermal strength include are:

- ✓ High thermal insulation.
- ✓ High structural rigidity.
- ✓ High water-vapour resistance.
- ✓ High dimensional stability.
- ✓ Light weight.



OMEGA PIPE INSULATION

Nominal Bore Pipe Sizes	Outer Diameter of Pipes	Insulation Thickness (inch)		
inch	mm	1"	1½"	2"
½"	21	✓	✓	✓
¾"	27	✓	✓	✓
1"	33	✓	✓	✓
1¼"	42	✓	✓	✓
1½"	48	✓	✓	✓
2"	60	✓	✓	✓
2½"	73	✓	✓	✓
3"	89	✓	✓	✓
4"	114	✓	✓	✓
5"	141	✓	✓	✓
6"	168	✓	✓	✓
8"	219	✓	✓	✓
10"	273		✓	✓
12"	324		✓	✓
14"	355			✓
16"	406			✓
18"	457			✓
20"	508			✓
22"	558			✓

For pipe thickness above 2” plese contact our company.

THERMAL CONDUCTIVITY

Economical insulation is one of the main requirements made in the building industry, in technical insulation and in refrigeration etc. The most important condition for this economy is a high insulation capacity. Rigid Polyurethane foam is characterised by its unrivalled insulating effect. The closed cells of the finished foam are filled with the Vapprised blowing agent, which has an extremely low thermal conductivity. Static gas largely eliminates the possibility of Omega migration the rigid polyurethane foam, which is enclosed and impervious to diffusion, calculated values of 0.020 W/mK or lesser, could be established.

TECHNICAL COMPARISON

Following is a detailed comparison showing the performance of different insulating materials in terms of density, strength and thermal conductivity.

Insulant	Density kg/m ³	Therm Con. W/m ² K @10°C	Comp. Stren. KPa	Shear Stren. KPa	Rel. Moisture Absorption
EPS	15	0.040	35	100	Medium
EPS	30	0.037	110	N/A	Medium
XPS	32	0.027	300	170	Low
PUR	32	0.020	200	150	Medium
Phenolic Foam	32	0.027	170	50	High/Med
Cellular Glass	125	0.041	700	150	Low
Mineral/Galss Fibre	20	0.045	N/A	N/A	High

EPS-Expanded Polystyrene,XPS- Extruded
ploystyrene,PUR-Polyurenthane

Material	Calorific Value (HU)		
	MJ/kg	MJ/m³	kg/m³
Rigid PU Foam	27.0	~ 800	30
Polychloroprem rubber	19.5	~ 1000	50
Rubber	44.0	~ 2200	50
Cotton	15.5	~ 700	45
Wood	16.5	~ 8250	500

The Calorific Value of PU foams in accordance with
DIN 51900

CHARACTERISTIC PARAMETERS OF THE FIRE BEHAVIOUR OF POLYURETHANE

IGNITABILITY

When exposed to Omega Polyurethane Foam remain stable up to temperature of 190oC to 200oC, longer exposure to elevated temperature may result in melting and decomposition. The flash ignition value of 290oC - 300oC was obtained using the Setckin apparatus in accordance with ASTM D 1920(53).

CONTRIBUTION TO FLAME SPREAD

The contribution to Flame Spread of rigid Polyurethane foam is considerably reduced if they are provided with non-combustible facings such as Aluminium foil. Composite building materials of this sort attain a favourable fire safety classification such as Dn4102, NEN 338, BS 476 etc.

CONTRIBUTION TO HEAT GENERATION

In addition to the ignition risk and contribution to flame spread, the hazardous nature of combustible material is also characterised by their contribution to the overall Calorific Balance of the fire.



PU PANELS PREFABRICATED WAREHOUSE BUILDINGS

PU sandwich panel is made of hot galvanized steel and PU Insulation. The inner and Outer Sheet molded in roll forming machine and the Polyurethane foam is injected and solidified and Joined in the inner part between the inner and outer sheet under high pressure. The Polyurethane Material has stable physical performance, it can combine with pre-painted Hot Galvanized Steel Sheets or Stainless Steel Sheet. The surface is smooth and the performance is Excellent. The Polyurethane Foam Sandwich Panel is fit for projects which have serious require of keeping Warm.

Polyurethane Sandwich Panel is an Environmental Protection and Fir proof Panel, Metal PUR Sandwich Panels have been widely used for Roofs, Walls and Door in the areas of large scale workshop, warehouse, super market, Office Building, Stadium, Waiting Room etc.



NS (Nasir & Sons) PUR Sandwich roof and wall panel are a totally new model and specially design for Industrial and commercial buildings. All part of the panel are closely linked together with a high intensity. The inner wrapped fastener not only reduces the panel dependence of auxiliary structure, but also makes the buildings a more magnificent.



Double layer waterproof design enables the outer wall panel excellent waterproof performance. The microwave design of external layer increases the aesthetic appearance. Various designing greatly enrich the building effectiveness and the buildings appearance will be improved by using different types of panel. The high-qualified colorful panel makes buildings more fashionable and graceful, which make it first choice modern construction include residential and commercial building, industrial plants and warehouse, prefabricate house and public building.

PREFABRICATE INUSLATER HOUSE

NASECO Prefab Home is the largest and most diverse manufacturer of factory-built accommodation in Pakistan. The company has been building a wide variety of units for more than 10 years to many parts of Pakistan, supplying customers in the industrial, commercial and government sectors. We're driven by innovation and we live in it. The Leading Manufacturer of Prefabricated houses in Pakistan & Offices in Pakistan We are specialized in designing, manufacturing and construction of the prefabricated house, steel structure. Prefab Home is a leading manufacturer of prefabricated/ mobile homes, offices, labor camps, temporary site offices, guard rooms Etc.

FEATURES

- ✓ Light Weight
- ✓ The weight per square meter of Polyurethane Sandwich Panel is only 10 ~ 14 KG
- ✓ Excellent Heat insulation Performance
- ✓ Thermal Conductivity is as Low as 0.0185 W/mK
- ✓ Excellent Fir proof B2
- ✓ Simple and Quick Connection, Reduce the installation and cost.

SPECIFICATIONS

- ✓ Roof Panel width: 970mm, 1000mm
- ✓ Wall Panel Width: 950mm, 1000mm, 1150mm
- ✓ PUR Thickness: 50mm, 75mm, 100mm, 150mm, 200mm
- ✓ PUR Density: 30kgs/m3 - 45kgs/m3
- ✓ Steel Thickness: 0.4mm, 0.5mm, 0.6mm, 0.7mm
- ✓ Steel Colors: White, Grey, Blue, Red, any other color are available based on order on Quantity

