



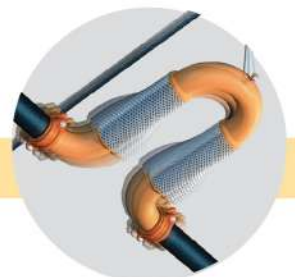
NAFFCO
FLOW CONTROL

Effective Solutions

- Firefighting
- HVAC
- Water Systems



NAFFCOFlow.com





pg. **1**

CORPORATE PROFILE

NAFFCO Flow Control provides a complete solution for construction projects.

pg. **3**

STEEL PIPING SYSTEM

SHIELD Seamless & Welded Steel Pipes
SHIELD Steel Fittings (Threaded, Grooved & Butt-Welded)
Threading & Grooving Machines

pg. **5**

HDPE PIPING SYSTEM

SHIELD HDPE Pipes & Fittings
Pre-Insulated Pipe
Butt-Fusion & Electro-Fusion Machines
Special Fabrication

pg. **7**

PREFABRICATED MEP MODULAR

MEP Modular System
Pre-Fabricated MEP Modular Applications
Fabrication Process

pg. **9**

PIPE SUPPORT

Swivel Ring Hanger & Clevis Hanger
Riser Clamps
U-strap Clamps
Pipe Clamps / Supports

pg. **11**

VALVES & SOLUTIONS

Valve Package for Fan Coil Unit
Balancing Valves
CHW/Plumbing Valves
Static Heat/Cooling Meter
DPC Valve



pg. **13**

CONDUITS & CABLES

Conduit - Pipes & Fittings
Switch & Socket Boxes
Fire Performance Cable

pg. **14**

SEISMIC PROTECTION

Flexible Sprinkler Drop
Seismic Sway Bracing
Flexible Expansion Joints
Expansion Joint / Bellow

pg. **15**

PASSIVE FIRE PROTECTION

Cable Coating, Wall/Cable Penetration
Seal, Intumescent & Cementitious Paint,
Fire Rated Boards Fire Rated, Bag &
Fabric, Fire Safe Pipe Sleeve, and more

pg. **19**

SMOKE MANAGEMENT

Fire & Smoke Dampers
CFD Analysis
Volume Control Dampers

pg. **21**

VENTILATION SYSTEM

Commercial Ventilation
Domestic Ventilation
Natural Ventilation
Smoke Vent & Louvers

pg. **23**

GALVANIZING SOLUTION

Hot Dip Galvanization
Hot Dip Galvanization Process
Steel Production List

Corporate Profile

A Complete Flow Control Solution Provider

- Piping System
- MEP Modular System
- Valves Solution
- Passive Fire
- Smoke Management & Ventilation

NAFFCO Flow Control provides a complete solution for construction projects, along with the customised system design and supply for the unique projects.

Since its inception, NAFFCO Flow Control has been continuously striving through its research and development to find out the ever changing needs of the market and cater to the same, with the help of its carefully selected vendors. The product portfolio offers a wide, unique & exclusive range of innovative, efficient and eco-friendly products.



Applus⁺



WRAS
Water Regulations Advisory Scheme

P
R
O
D
U
C
T

A
P
P
R
O
V
A
L
S



"What's measured improves!"



Corporate Profile

A Complete Flow Control Solution Provider

COMMITMENT

We are committed to provide the highest quality products and solutions therefore, we only supply globally recognised and approved products having UL, FM, Kitemark, LPCB, CE, WRAS, Applus certifications and more.

The product portfolio ranges from SHIELD's Steel & HDPE piping systems to the robust solution for the industrial ventilation, smoke management, modular system and more.

QUALITY

We always strive to better serve customers' needs by staying up-to-date with latest approved product range. Our strength relies on our quality products, services and delivery of right solutions to address your project requirements.

We supply Innovative, Efficient and Eco-friendly products in compliance with various American and European standards.

REACH

With representation in the Middle East and North Africa (MENA) region, we are capable to deliver our products and services in a short period of time. We simultaneously work on opportunities to explore new markets.

We believe in total customer satisfaction hence providing qualified and well-experienced support team.

Supplying State-of-The-Art Products to Ensure High Efficiency

As a member of NAFFCO Group, Our success is driven by our "passion to protect"; our vision is to become the world's number one provider of innovative solutions in protecting life, environment and property.

Steel Piping System

Seamless & ERW pipes with complete range of fittings



SEAMLESS STEEL PIPE

Seamless steel pipes are manufactured in compliance with ASTM, UL and FM approvals. As the seamless pipes are produced through the piercing of a solid rod of steel and does not have any welding, therefore, considered as the strongest pipes for long term applications if applied by adhering safety instructions. Seamless pipes are available in Hot Dipped Galvanized, Black and Powder Coating finish.

WELDED STEEL PIPE

Welded carbon steel pipe with Hot Rolled (HR) Coils are manufactured in compliance with ASTM and UL approvals. Continuous welding is carried out by a high frequency induction welding machine. The weld bead reinforcement (inside), is removed for certain sizes, if needed. The welded pipes, after cooling, are cut in appropriate length after attaining its roundness and specified outer diameter. Hydrostatic testing of pipes are undertaken to detect leaks prior to coating or galvanizing.

SEAMLESS STEEL PIPES

Standard	Class	From	To
ASTM A53	Grade A	3/8"	26"
	Grade B	3/8"	26"
ASTM A106	Grade A	1/8"	48"
	Grade B	1/8"	48"
	Grade C	1/8"	48"

WELDED STEEL PIPES

Standard	Class	From	To
ASTM A53	Grade A	3/8"	26"
	Grade B	3/8"	26"
Conforming to BS 1387:1985 equi. EN 10255	Light	1/2"	4"
	Medium	1/2"	6"
	Heavy	1/2"	6"
API 5L	-	3/8"	80"

Steel Piping System

Seamless & ERW pipes with complete range of fittings

GROOVED FITTING

Specialised Ductile Iron fittings recommended for fire-fighting / HVAC / Water applications. Available in Red & Galvanized finish.



Pressure	Up to 750 psi
Sizes	From 1" to 20"
Finish	Red/Galvanized

THREADED FITTING

We provide high quality threaded fittings in compliance with international approvals such as UL and FM. Suitable for fire-fighting and HVAC applications. It is available in malleable and ductile iron, with black or galvanized finish.



Pressure	Up to 500 psi
Sizes	From 1/2" to 6"
Finish	Black/Galvanized

BUTT-WELDED FITTING

Butt-welded fittings are used in a Water/HVAC piping system for changing direction, branching and to be mechanically joined into the system. Butt-welded fittings are used widely in high pressure and high temperature application.

Available in wide range of sizes from 1/2" to 48".



GROOVING MACHINE

Range from 2" - 6"
220V, 50Hz, S/Ph
With Automatic
Hydraulic Pump Foot
Switch. Supports &
Maintenance are
available.



THREADING MACHINE

Range from 1/2" - 2"
BSPT, 220V, 50Hz, S/Ph
with Foot Switch.
Supports & Maintenance
are available.



HDPE Piping System

Highly efficient & environment friendly piping solution

HDPE PIPES

All HDPE products are manufactured in compliance with global standards, according to ISO 4427/4437 (European) & AWWA C906 (American), which is also recommended for underground piping as per NFPA chapter 24 - specifically for firefighting applications. HDPE products are produced and approved as per UL & FM standards for SDR 17, SDR 11, SDR 9, SDR 7.4, DR 11, DR 9, DR 7.3 & DR 7.

The HDPE piping system is an effective solution for municipal, industrial, marine, agricultural and fire-fighting (underground) applications. SHIELD HDPE piping system are also WRAS approved, to use in portable water applications.

Its efficiency has been tested and proven for above/underground surface, buried, slip-lined, floating and sub-surface marine applications. Some key features include:

- Corrosion & Abrasion resistance
- Impact resistance
- Heat Resistance
- Low weight, flexible, and easy to install
- Ideal for prefabrication and recyclable.

HDPE FITTINGS

HDPE fittings are manufactured and approved as per the FM & WRAS directives. These fittings are available in variety of SDR 17, SDR 11, SDR 9, SDR 7.4, DR 11, DR 9, DR 7.3 & DR 7.

Fabrication variety includes Butt fusion fittings, electro fusion fittings, socket fusion fittings and moulded fittings.

HDPE fittings can be used in high pressure applications.

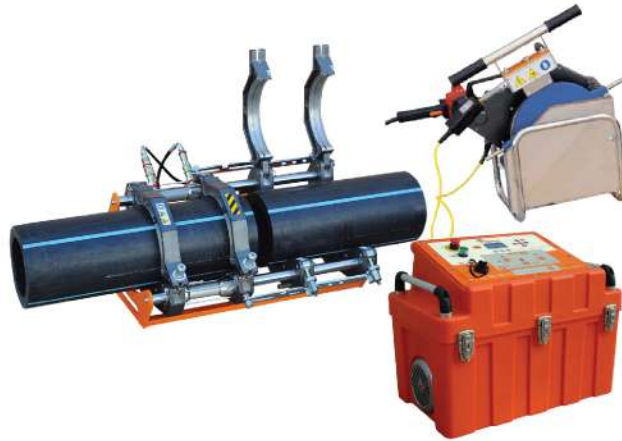


HDPE Piping System

Highly efficient & environment friendly piping solution

BUTT-FUSION MACHINE

Effective for connecting HDPE pipes & fittings at site with the highest level of accuracy. Different types of butt-fusion machines are available as per the size range of pipes & fittings.



ELECTRO-FUSION MACHINE

A handy tool to connect pipes & fittings with high precision. Joining pipes with the Electro-fusion machine, is easy and flexible.

HDPE/STEEL PRE-INSULATED PIPE

Specialised HDPE/Steel pipes covered with highly insulated material to maintain the temperature of the fluid flowing through the pipes and fittings.

They are widely used for District Cooling/Chilled Water applications.

- Energy and long run cost saving
- Longer operating life
- Lower maintenance cost.



SPECIAL FABRICATION

Customised and special fabrication to suit project requirements are available upon request.

Pre-Fabricated MEP Modular

Improve efficiency and proper control into project operations

Pre-Fabricated MEP Modular Systems are pre-assembled and ready to install system with same materials as traditional method of installing single items one by one.

We have developed in-house MEP Pre-Fabrication capability to improve efficiency and proper control into the project operations by using BIM Technology.

The operational and output performance are exactly as per the design intent. The delivery methodology is fast and quick.



THE FEATURES



Fast and efficient project completion



Clash resolution services



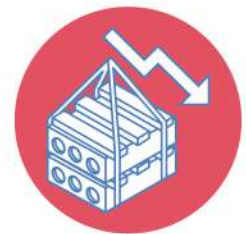
Enhanced workplace safety



Improved environmental performance



Higher quality control & assurance



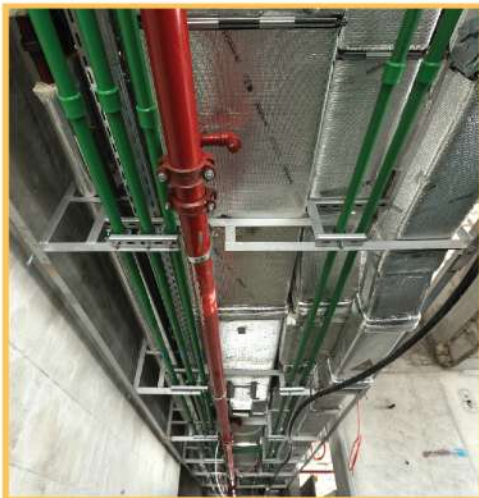
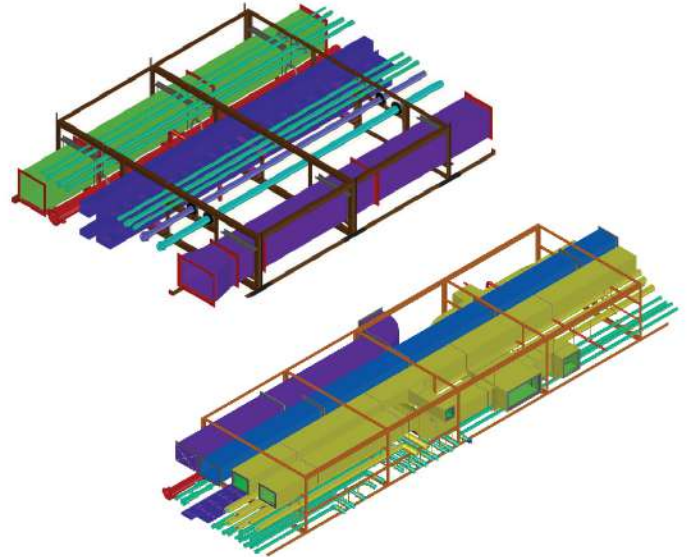
Reduced material handling & logistics

Pre-Fabricated MEP Modular

Improve efficiency and proper control into project operations

PREFABRICATED MEP MODULAR APPLICATIONS

- Horizontal Modules
- Kitchen Rack
- Apartment Rack / Valve package
- Riser Modules
- Plantroom Modules / Water Meter
- Pre-Fabricated Pipe Assemblies
- Cable Tray System



FABRICATION PROCESS



Framework
Fabrication



MEP Service
Installation



Water & Air
Leakage Testing



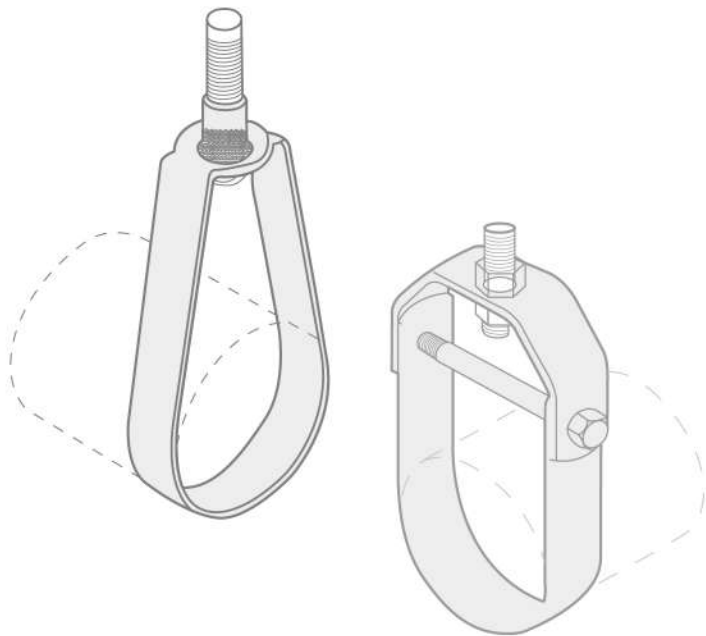
Module
Inspection

Pipe Support System

Hangers, supports, clamps, threaded rods & fasteners

SWIVEL RING HANGER

Designed for the suspension of non-insulated stationary pipe lines. The insert nut allows a vertical adjustment after installation, is tapped to NFPA reduced rod size standards. SD-HBF has a layer of felt which separates the pipe from the hanger to reduce vibration and sound.



Factory Mutual System

CLEVIS HANGER

These hangers are heavy duty designed for the suspension control in non-insulated stationary pipe lines. They can have a layer of felt which separates the pipe from the hanger to reduce vibration and sound.



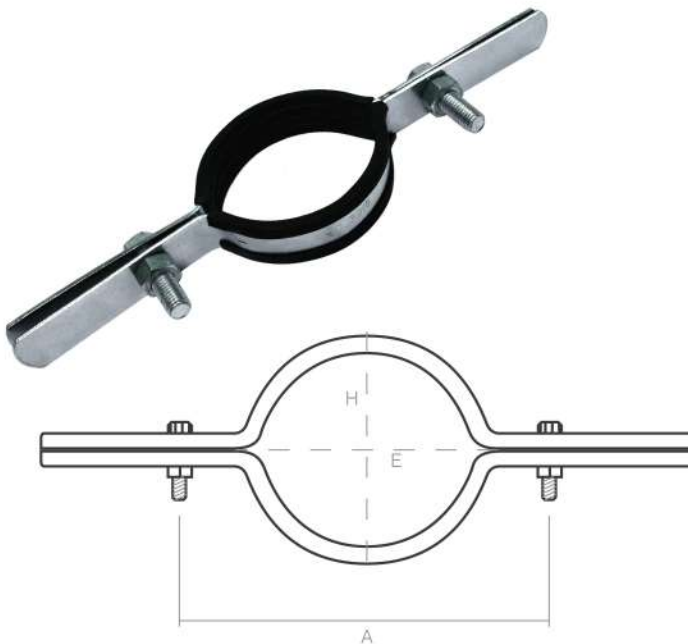
Pipe Support System

Hangers, supports, clamps, threaded rods & fasteners

U-STRAP CLAMP

The U strap is used to mount plain or insulated pipes, these straps are available with and without EPDM lining. Also available in electro-galvanized and hot dipped galvanized.

Vibration and Sound Control tested & verified with highly elastic lining.



RISER CLAMP

Designed to act as a rigid support for vertical pipes to control the suspension in pipeline. Equally useable in most of the pipe types. Available with or without EPDM lining. Also available in electro-galvanized and hot dipped galvanized.

PIPE CLAMP / SUPPORT

Provide heavy duty pipe clamps with and without lining to suit your project requirements. Also available in electro-galvanized and hot dipped galvanized.



Valves & Solutions

High efficiency flow control valves from accredited suppliers

INDUSTRIAL VALVES

Full Range of water valves, actuators and related products for industrial applications which are capable of accommodating the demands for high pressure, high temperature and highly abrasive or corrosive application efficiently.



BALANCING VALVES

Balancing valves are designed for automatic balancing of heating and cooling systems, regardless of fluctuating pressure conditions of the system.

Our range of valves includes, Ball valves, Gate valves, Check valves, Globe valves, Butterfly valves, Y-Strainers and more.



VALVE PACKAGE FOR FAN COIL UNIT

A valve package consists of various isolation and control valves which are factory tested & assembled.

- Nominal pressure PN25 with Minimal pressure drop.
- Working temperature: from -20 °C TO 120 °C.
- Full bore ball valve for easier flushing.
- Designed to provide flexible configuration of the system. (Use of either manual or automatic balancing valves)
- Easy for maintenance due to union connections.



*Conditions apply

Valves & Solutions

High efficiency flow control valves from accredited suppliers

CHW/PLUMBING VALVES

Manufactured in accordance with the highest standards, meeting all requirements suitable for a wide range of applications. Generally used in sectors such as heating, air-conditioning, water, sanitary systems, oil pipelines, gasoline networks, etc.



PICV

(Pressure Independent Control Valve)

Pressure Independent Control Valve makes a significant contribution to efficient energy usage and offers cost saving by preventing over- or under-supply of heating or cooling energy.



DPCV

(Differential Pressure Control Valve)

A DPCV contains a diaphragm that separates the upper / lower chambers of the valve and a spring-loaded piston. The piston is connected to the cartridge, and opens the valve when differential pressure rises and closes it as the differential pressure falls.



BTU METER

Static Heat / Cooling Meter

BTU Meter is used for measuring the flow and energy in a heat or cold exchanger circuit with water using the ultrasonic principle.



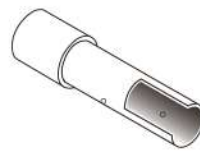
Conduits & Cables

Complete collection of pipes, fittings, cables & accessories

CONDUIT - PIPES & FITTINGS

Conduits have been recognized as one of the most reliable system to protect the wiring across the building structure. The wall thickness and strength of steel makes metal conduit the most mechanical protection to the enclosed conductors.

Flexible metal conduits can also be used for cable and wire protective system in industrial machines & plants.



Conduit Pipes (Steel & PVC)



Fittings & Accessories



Support Channel & Accessories

STEEL & PVC CONDUITS

Conduits are available as galvanized Steel Rigid/Flex Conduits, PVC Rigid/Flex Conduits along with the wide range of Socket Boxes, Support Channels & Accessories.



FIRE PERFORMANCE CABLE

Full range of Fire Performance cables for fire alarm system are manufactured using the latest technology complying to:

- BS 5839-1:2002+A2:2008 clause 26.2d
- BS EN 50200:2006 PH120



Certificate No. 682c-(cl-2)
Cert/LPCB ref. 2013



Seismic Protection

Complete range of high-end seismic products

FLEXIBLE EXPANSION JOINTS

SHIELD U-Flex and V-Flex, Flexible Expansion Joints are used to absorb the movements in 3 directions caused by potential vibrations or earthquake.



FLEXIBLE SPRINKLER DROP

Manufactured and tested as per UL/FM directive. Pressure measurements 175 psi for Unbraided & 200 psi for Braided. Available Sizes are 1/2" or 3/4" NPT outlet.

- Fast & easy to install
- Saves time & labour
- Easy to move
- Help the site engineer to move as per requirements.

Compatible with major domestic and commercial ceilings.



SEISMIC SWAY BRACING

Sway Bracing is manufactured in compliance with UL and FM Approvals conforming to NFPA to protect piping system during earthquake.

Available in Rigid Sway Bracing (Lateral & Longitudinal). Also Cable Bracing can be provided (for elongated drops) and equipments.



EXPANSION JOINT / BELLOWS

An Expansion joint alternately known as Bellows, is shaped like sealed springs required to contain the fluid pressure. It is available in stainless steel and rubber material.



Passive Fire Protection

A definitive toolkit to fight with fire before it happens



CABLE COATING

Fire resistant cable coating is applied to avoid fire spread on electrical equipments and to encapsulate fire loads.

Features:

- Elastic, non hygroscopic
- Protects release of toxic fumes
- Tested against Gamma radiation
- Ageing resistant
- No maintenance required



Water
Resistant



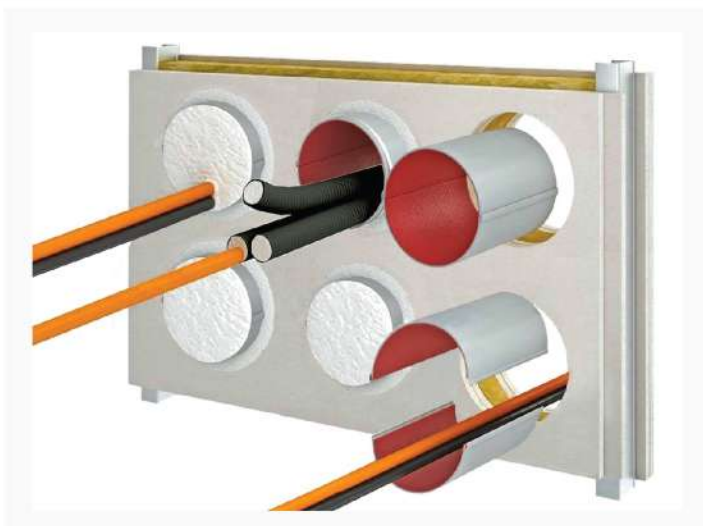
UV
Resistant



Halogen
Free



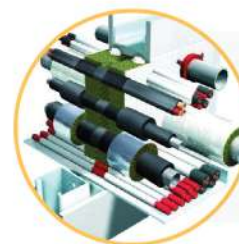
Solvent
Free



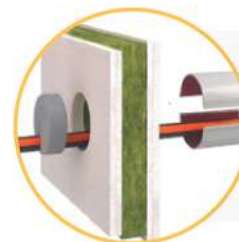
WALL/CABLE PENETRATION SEAL

Fire resistant and smoke tight, High-quality system for penetrations through massive walls and plasterboard walls as well as for floors.

Tested and approved according to national and international standards as e.g.: DIN 4102, EN 1366, BS 476 and other standards on request.



Installation and handling permitted only in accordance with the installation instruction/finished drawings and the approval of trained specialists.



The subsequent installation of cables and pipes are (according to the approval) easy to handle and possible with a basic tool kit at any time.



A high-quality system made of special mortar for penetrations through massive walls and floors.

Passive Fire Protection

A definitive toolkit to fight with fire before it happens

INTUMESCENT PAINT



Load-bearing capacity of steel decreases above 550 °C. Beam lose their strength to the extent that the structure can suffer damage and if the worst happens, the structure could collapse.

Our Intumescent paint coating start to swell at about 180-200 °C and forms a foam layer which stops the critical heating of steel. It is available as water and solvent base paints.



CEMENTITIOUS COATING



Cementitious fire protection coating is normally a spray applied using special equipment to protect structural steel or concrete from the effects of fire for a nominal fire resistance period.

The fireproofing Cementitious coating has excellent physical properties for interior/architectural uses and Cementitious coat can give up to 4 hours fire protection.



Protecting Steel Elements via spray mortar guarantee the bearing capacity of the metal structures from R30 to R240. It is tested under UNE ENV 13381-4.



Mix Concrete/profile sheet protection quick and economical solution for the protection of this type of slabs up to REI 120. Tests carried out under UNE ENV 13381-5 & 13381-4.



Large Format Partition Wall is protected to gain extensive fire resistance capabilities to the separation walls to comply the structure with UNE EN 1364-1.

Passive Fire Protection

A definitive toolkit to fight with fire before it happens



FIRE RATED BOARDS

These boards are composed of magnesium oxide, silicates and other additives. These boards are especially predestined for the implementation of various types of fire protection solutions.

These boards are classified as A1 (non combustible) board pursuant to European Standard EN 13501-1.



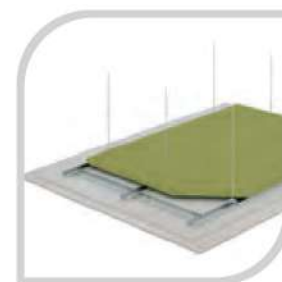
Sanded or Smooth



Indoor & Outdoor Applications



Tunnels & Pathways



Floors and Suspended Ceilings

Features:



Water Resistant



Fire Insulation



Impact Resistance



Environment Friendly



No Toxic Discharge



Insect & Bacteria Free



Thermal Insulation



Sound Insulation

Passive Fire Protection

A definitive toolkit to fight with fire before it happens



Fire Rated Fabric Elastic fire protection sealing for non-combustible pipe penetrations in walls and floors. It is made of Fire Protection fabric & Wrap which is used as a cable bandage.



Fire Safe Pipe Sleeve is Detachable steel-sheet enclosures available in different sizes, with internal layers of highly efficient Intumescent material.



Fire Rated Bag is made of high temperature resistant mineral wool with a covering of non-flammable glass fibre; reusable, flexible, aging resistant and dust-free installation.



Fire Rated Sealant is actually an Elastic-fire-protection sealant which is mostly used in building joints.



Fire Safe Packing for dilatation gaps consists of layers of fire-retarding foam and layers of fire-protection laminates in gaps, fire-protection packings can be fixed very quickly and effectively.



Fire Protection for Wooden Structure are quite inflammable and cause the spread of fire. The Intumescent fire preventive paints impede this and makes the structures fire resistance.

Smoke Management System

System design, selection & implementation for smoke control



Fire Rated Fans are designed to blow off a large amount of smoke through ducts and are capable to withstand the fire heat temperature up to a certain degree.



Smoke Vents are designed to meet fire and life safety building codes, used for Natural or venting smoke from large enclosures such as malls, atriums, warehouses, etc.



Combination Fire and Smoke Dampers are fabricated as per UL555 & UL555S standards. These dampers utilise both as fire and smoke damper. These dampers help to contain Fire & Smoke both.



Motorized Smoke Dampers are designed to block spread of Smoke through ducts & also engineered extraction of smoke through shafts.



Curtain Fire Dampers are designed to block the spread of fire and smoke through ducts, walls, corridors or floors. They are suitable for installation in walls & ceilings having Fire resistance of up-to 2 hours.



GI ducts are factory fabricated & assembled as per SMACNA or DW144 standard. UL Listed GI fire rated ducts are fabricated as per BS476 part 24 standard with 2 hrs fire resistance suitable for smoke extraction & basement car-park.



Smoke/Fire Curtains are self-sustained for heat, smoke and fire provides restrictions for fire & smoke spreading. Available with fixed and adjustable panels.



Fire Control Panels are manufactured as per the UL standards. Used for manual or automatic operation of the Smoke Vents, Dampers, Curtains, Extract Fans, CO Detection System and Smoke/Fire Alarm System.

Smoke Management System

System design, selection & implementation for smoke control

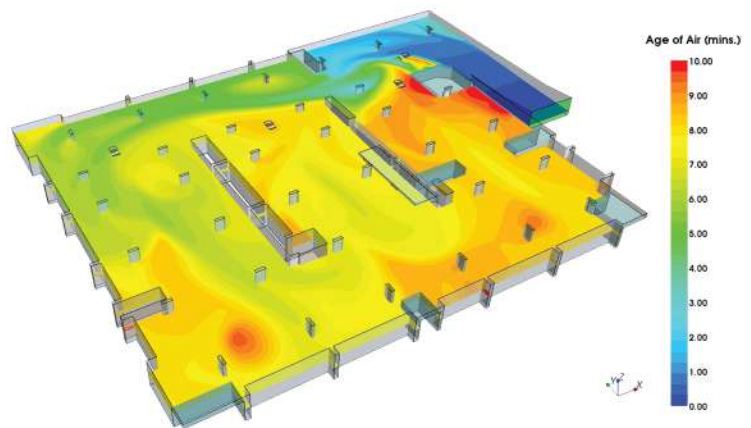
COMPUTATIONAL FLUID DYNAMICS (CFD) ANALYSIS

For developing effective Smoke Management design conditions, we use in-house internationally approved computational fluid dynamic software (CFD) to simulate airflows and fire scenarios within buildings.

CFD enables us to analyze various parameters and perform different design approaches to improve tenability conditions. It verifies and validates smoke management design proposals also helps in value engineering.

The CFD Analysis Reports Consists:

- Smoke Distribution
- Visibility Levels
- Temperature Distribution
- Velocity Profile
- Smoke Layer Heights



FIRE & SMOKE DAMPERS

Dampers are required by International Uniform Building Code (IUBC) to maintain the Integrity and fire resistance rating of walls, partitions and floors.

These are used to block the spread of fire and smoke through ducts, walls, corridors or floors.



VOLUME CONTROL DAMPERS

Our high quality Volume Control Dampers are designed for quiet, efficient and reliable air volume control in HVAC systems. These dampers allow even distribution and control of airflow under conditions of high duct pressures.



Ventilation System

A comprehensive solution for normal and smoke ventilation

COMMERCIAL VENTILATION / SMOKE MANAGEMENT

Total ventilation systems solution for commercial use such as malls, hospitals, airports, car parking lots, fire exits, staircase, elevators, etc.

All major types of flame-proof/explosion proof fans are available for multiple applications.

Cold smoke test can be performed as a part of testing & confirming activity for smoke management applications.



DOMESTIC VENTILATION

A well designed and installed ventilation system offers the convenience of good ventilation by continuously replacing air.

A complete range of high quality ventilation systems for the domestic and light commercial building sectors. Can be used for decorative wall/windows and ceilings mounted fans with/without auto shutters.



Ventilation System

A comprehensive solution for normal and smoke ventilation



NATURAL VENTILATION

Natural Ventilators remove heat, fumes, steam and dust naturally. No operating costs. Full design support up-to 6 air changes per hour.

They improve productivity & save energy. They support Fresh air in buildings to alleviate smoke, to provide oxygen for respiration, and to increase thermal comfort.

SMOKE VENTS & LOUVERS

Smoke Vents are designed to the finest aesthetics with a unique locking device for closed and open positions. They are used for natural venting of smoke from large enclosures such as malls, atriums, warehouses, etc.

Stationary Louver is designed to provide air intake and air exhaust openings in building exterior walls consumption of the louver is made to protect against the direct ingress of rain.



Galvanizing Solution

We are providing galvanizing services to different industries worldwide

HOT DIP GALVANIZATION

The process of immersing iron, steel or ferrous materials with a layer of molten zinc.

Due to the fact that the pieces are totally immersed in the liquid metal, the surface is completely covered and protected from possible corrosive effects which could be caused by the atmosphere, water or surface.

Our Galvanizing service applies to different products of the industry, such as:

- Industrial Grating
- Engineered Steel Items
- Channels/Angles
- Pipes & Tubing
- Beams
- Railings and many more...

THE PROCESS



Caustic
Cleansing



Rinsing



Pickling



Rinsing



Flux
Solution



Molten
Zinc Bath



Cooling
& Cleaning

STEEL PRODUCTION LIST - HOT DIP GALVANIZING

MS ANGLES

Size	Length	Coating
40x40x4mm/ 5mm thick	4.5 to 7.0 m	Zinc Coating as per Standard
50x50x4mm/ 5mm thick	4.5 to 7.0 m	
60x60x6mm	4.5 to 7.0 m	

MS 'C' CHANNELS

Size	Length	Coating
100x50x5mm	4.5 to 7.0 m	Zinc Coating as per Standard
100x75x5mm	4.5 to 7.0 m	
100x40x4mm	4.5 to 7.0 m	

WHY HOT DIP GALVANIZING?

- Hot dip galvanizing process is performed as specified by ASTM & BS standards and protect steel with zinc coating.

Standard Measurements

Metric Measurements and Equivalents

Length		
Inches	x 25.40	= Millimeters (mm)
Inches	x 2.540	= Centimeters (cm)
Inches	x 0.0254	= Meters (m)
Feet	x 0.305	= Meters (m)
Yards	x 0.91	= Meters (m)
Miles	x 1.61	= Kilometers (km)

Area		
Square Inches	x 6.45	= Square Centimeters (cm ²)
Square Feet	x 0.093	= Square Meters (m ²)
Square Yards	x 0.836	= Square Meters (m ²)
Acres	x 4,047	= Square Meters (m ²)
Square Miles	x 2.59	= Square Kilometers (Km ²)

Volume		
Cubic Inches	x 16.4	= Cubic Centimeters (cm ³)
Cubic Feet	x 0.028	= Cubic Meters (m ³)
Cubic Yards	x 0.765	= Cubic Meters (m ³)
Gallons (U.S.)	x 3.8	= Liters (L)
Gallons (U.S.)	x 0.0038	= Cubic Meters (m ³)
Gallons (U.K.)	x 4.54	= Liters (L)
Acre-feet	x 1,233	= Cubic Meters (m ³)

Mass		
Ounces (avdp)	x 28.35	= Grams (gms)
Pounds (avdp)	x 0.4536	= Kilograms (Kgs)
Tons (short)	x 907.2	= Kilograms (Kgs)
Tons (metric)	x 1,000	= Kilograms (Kgs)

Force		
Pounds (force)	x 4.45	= Newtons (N)
Kilograms	x 9.81	= Newtons (N)

Weight		
Pounds	x 16	= Ounces (oz)
Ounces	x 0.0625	= Pounds (lbs)
Pounds	x 0.0005	= Ton

Metric Prefixes			
Prefix	Abbr.	Meaning	Example
Giga	G	10 ⁹	1 gigameter (Gm) = 1 x 10 ⁹ m
Mega	M	10 ⁶	1 megameter (Mm) = 1 x 10 ⁶ m
Kilo	k	10 ³	1 kilometer (km) = 1 x 10 ³ m
Deci	d	10 ⁻¹	1 decimeter (dm) = 0.1 m
Centi	c	10 ⁻²	1 centimeter (cm) = 0.01 m
Milli	m	10 ⁻³	1 millimeter (mm) = 0.001 m
Micro	μ	10 ⁻⁶	1 micrometer (μm) = 1 x 10 ⁻⁶ m
Nano	n	10 ⁻⁹	1 nanometer (nm) = 1 x 10 ⁻⁹ m

Pressure		
Pounds/ Square Inch	x 6,895	= Pascals (Pa)
Pounds/ Square Foot	x 47.88	= Pascals (Pa)
Newtons/ Square Meter	x 1.00	= Pascals (Pa)
Mega Pascal (MPa)	x 10.00	= Bar
Bar	x 14.5	= Pounds/ Square Inch (psi)
Pounds/ Square Inch	x 0.0689	= Bar

Flow		
Gallons (U.S.)/ Minute	x 0.0038	= Cubic Meters/ Minute (m ³ /min)
Gallons (U.S.)/ Minute	x 0.06309	= Liters/ Second (L/s)
Cubic Feet/ Second	x 28.317	= Liters/ Second (L/s)

Velocity		
Miles/Hour	x 1.609	= Kilometers/ Hour (km/hr)
Miles/Hour	x 0.4470	= Meters/ Second (m/s)
Feet/Second	x 0.3048	= Meters/Second (m/s)

Temperature		
°F to °C	$[(°F - 32) \times 5] \div 9$	= Celsius (°C)
°C to °F	$[(°C \times 9) \div 5] + 32$	= Fahrenheit (°F)

Time		
Millisecond	x 1000	= microseconds (μs)
Second	x 1000	= milliseconds (ms)
Minute	x 60	= seconds (s)
Hour	x 60	= minutes (min)
Day	x 24	= hours (hrs)

* Abbr. = Abbreviation

* μ = This is Greek letter 'mu' (pronounced "mew")



Serving Over 100 Countries Worldwide



NAFFCO
FLOW CONTROL

Email: info@naffcoflow.com
www.naffcoflow.com

In line with NAFFCO Flow Control policy for continuous product development, NAFFCO Flow Control has the right to change specifications without prior notice.