

New Modern **ENGINEERING WORKS**



PRODUCT CATALOG

www.newmodernengcranehoistindia.com

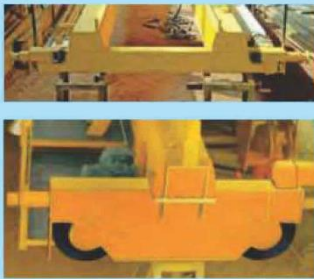
NEW MODERN ENGINEERING WORKS

**UNIT I: 443/7 PLOT NO . 8 KARWAD
(NEAR BHARAT PETROLEUM) TALUKA
VAPI , DISTRICT : VALSAD :-396195
(GUJARAT)**

Industrial Cranes

NMEW Double Girder EOT Cranes are fine examples of practical, intelligent, reliable, economical and balanced solutions for Overhead Handling of loads. Be it for a foundry shop or a godown, our cranes have been designed and manufactured for all needs. By embracing high level of standardisation and continuous evolution of our components for the past 5 decades, we have come to serve an honourable clientele, which includes, BHEL, SAIL, Tata, L&T and many more.

Read on to know why NMEW cranes are your best bet!



End Carriages

End Carriages are of standardised wheel bases in R-10 series. These Box shaped carriages are of welded construction with R-Block bearings. The fabricated end carriages are machined on a horizontal boring machine ensuring perfect axial alignment, parallelism and perpendicularity of the wheels individually and in pairs. The construction of R blocks is such that it is easy wheel maintenance/change. Rubber/spring buffers are supplied according to requirements.



Crane Wheels

The double flanged cylindrical wheels are made from high strength C55MH75 steel. Running surfaces are hardened to 26 HRC. The wheels run on self aligning antifriction roller bearings and have substantial flanges on either side of the machined running face. The wheels are shrunk fit onto their respective axles. The split housing design allow easy replacement of the wheels.



Travelling Machinery

Compact modular travelling machinery unit consists of a hollow output shaft gear box to be mounted directly on the wheel axle thus eliminating any chance of misalignment. These units are maintenance free and supplied with squirrel cage/slip ring motors with disc/electro-hydraulic thruster brakes. The gears and pinion in the travelling machinery are 100% helical, hardened achieving 99% efficiency.



Planetary Gear Boxes /Micro-Drives

Depending on customer needs the crane can be equipped with micro-drive using NMEW own well balanced planetary gear boxes for obtaining creep speeds (ratio 10:1 or 5:1) for hoisting, traveling and traversing motions. The planetary units have favourable volume to power ratio because of power sharing between gear mesh

Brakes

NMEW provides 100% Redundancy in Hoisting brakes by providing 2 brakes each of 150% of the required torque. The thruster brake are operated by an integral 3 phase squirrel cage motor. In travelling motions, electromagnetic disc brakes are mounted directly on motors. D.C brakes and other combinations for hoisting and other motions can be provided for specific application on request.

Controls

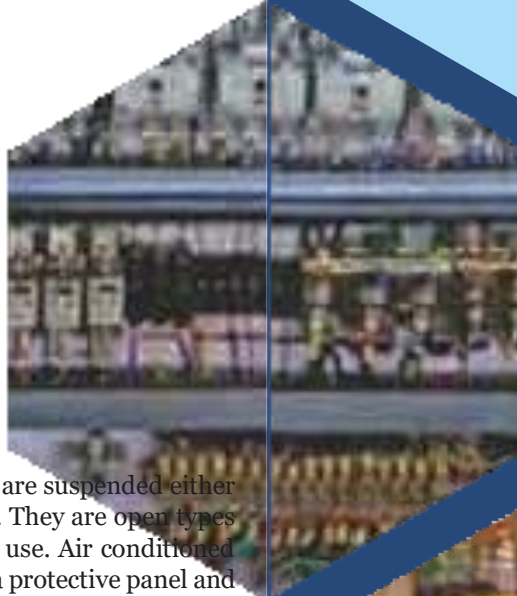
Pendant, cabin or radio remote operated cranes can be supplied in any mode or combination of modes. As a standard Trailing type Pendant is provided in Double Girder crane. Adequate protection by way of single phasing, phasing reversal, overloads, brakes are some of the standard features. Dynamic brakes suitable for slipring/squirrel cage motors for precise handling can also be supplied. The sheet steel-metal housings are constructed to accommodate the power and control circuits in a single cubicle having built-in cable trench underneath. The spacings and making are as per IS specification. Cranes with VVVF control can help achieve stepless speed variation and have various inbuilt motor protections.

Cabin

Constructed from sheet-metal the cabins are suspended either on one side of the crane or in the middle. They are open types for indoor use or close types for outdoor use. Air conditioned cabins are also available. All cabins have a protective panel and controls are ergonomically placed for maximum comfort to the operator. Emergency switches too are provided.

Rope System

The drums are made of seamless steel pipes or pipes fabricated from plates tested as per ATSM/IS. The drum is coupled to the gearbox and this facilitates easy removal and maintenance. Wire rope is fixed with double slot camps. Nonrotating, high strength special Hyflex wire ropes, manufactured for use on hoisting equipment, are used with safety as per IS standards



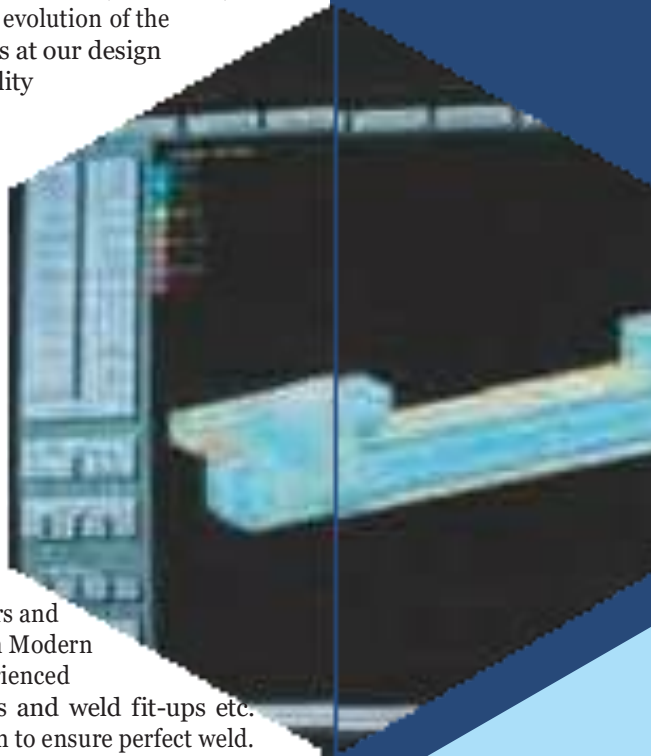
Design

The strength of any product is ensured by its design. At NMEW, we lay special emphasis on the all aspects of design - functional, structural, aesthetic and economic. There is a continuous evolution of the components and of the production processes at our design department, to give you improved functionality and new features in the product line.

We are fully equipped with CIM facility and dynamic design programmes which allow optimised designs for different requirements.

We are abreast with latest international standards and practices in material handling. Renowned academic institutions also help in upgrading the products.

FEM technique is used to design the structures of the crane. Alongside is the picture of the behaviour of the traverser end-carriage with the application of load.



Structure

Tested steel plates to IS:2062 Gr. A or B are obtained directly from the main steel producers and cut to needed sizes. All weldings are done with Modern day welding machines and qualified and experienced welders ensuring proper edge preparations and weld fit-ups etc. Further radiography is used for weld in tension to ensure perfect weld. Certain percentage of tillet weld is subjected to DPT (dye penetrant test). We have used techniques to avoid distortion and reduce stress concentrations. Proper comber is provided for long life of the girders.

Gear Boxes

Gear boxes and couplings are the heart of any crane and are responsible for the reliability factor. NMEW therefore, chose to manufacture vital crane components in house, ensuring their quality, compatibility and serviceability. The gear unit use hardened helical gears in R 20 series, which run silently with good lubrication and are vibration-free steel fabricated stress relieved or graded cast iron housing. The gear units have long life and are almost maintenance free. All gears, pinions in gear boxes conform to DIN-8/AGMA-12 tolerances.

The design of gears and pinions is verified with the help of the software from CMTI based on the Buckingham Method of Gear design.

The weight/power ratio is optimised by the use of case hardened low carbon-alloy steel of high strength (58-62 HRC).

The gear reduction efficiency is as high as 99% per reduction.

Computer aided design based on Buckingham dynamic load equation is adopted by NMEW for pinions and gears for compact and robust gear boxes with

safety factor > 1.25. The pinions are integral with shafts for better strength characteristics ensuring life of 40000 hours or more.



Couplings

NMEW flexible geared couplings meets the acceptance norms, set forth in IPSS:1-01-005-86 specification followed the Indian Steel Industry.

The couplings are known for the highest possible torque transmission capability, great mechanical flexibility and ease of compensation for angular, parallel and axial misalignments of connected shafts with minimum power loss.

Gear Hubs and outer sleeves are manufactured from medium carbon steel. The teeth are induction hardened to 30 HRC for longer life and are generated by an involute system with 30 degree pressure angle, making a quantum breakthrough in coupling design and performance. The coupling parts and gears are interchangeable.



The MEW Advantage

MEW Heavy Duty Industrial Cranes

- In-house manufacturing of 100% crane components ensure high performance reliability
- Standardised modular components and assemblies, permit easy replaceability and save on expensive down time
- In-house testing of components and assemblies done as per QAP to ensure safety and reliability
- Lower headrooms with optimised construction and lighter weight cranes
- Cranes conforming to FEM, DIN and BS Standards can also be delivered.

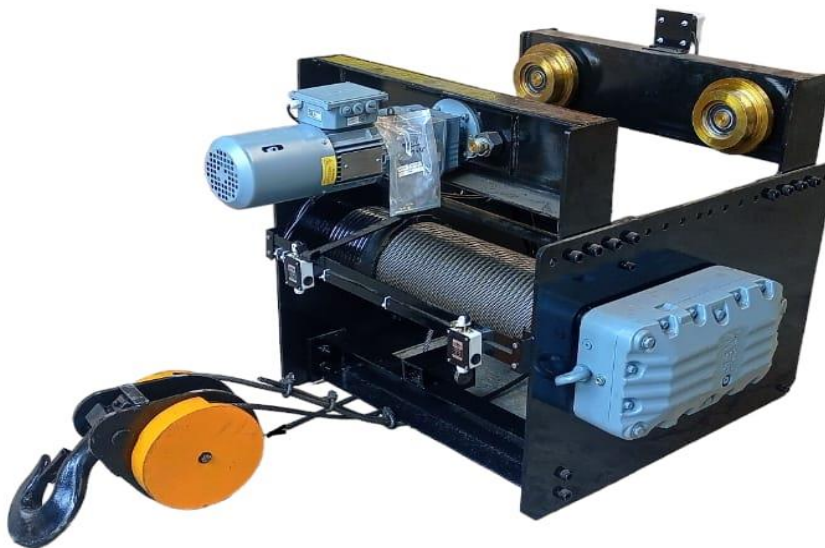
ELECTRIC WIRE ROPE HOISTS

➤ HOISTS

STANDARD.WITH PRECISION MACHINED COMPONENTS.WITH STANDARD BOUGHT OUT FITMENTS.VARIOUS MODELS FOR VARIOUS APPLICATIONS.

FOR LIGHT/ MEDIUM/ HEAVY DUTY APPLICATIONS WITH A CAPACITY OF 0.5 TONS TO 100 TONS.CAN BE MOUNTED ON ALL KINDS OF CRANES.

OPTION : FLAMEPROOF / NON-FLAMEPROOF



TECHNICAL SPECIFICATIONS

1	CAPACITY (T)	(0.5-100)
2	HEIGHT OF LIFT (M)	(3-50)
3	LOCATION	INDOOR & OUTDOOR
4	AMBIENT TEMP (DEGREE CELSIUS)	UPTO 50
5	MOTIONS (M/MN)	MAIN HOIST SPEED - (1 - 10) CROSS TRAVEL SPEED - (5-50)
6	CRANE CONTROL	PENDANT RADIO REMOTE CONTROL

ELECTRIC ELEVATORS

➤ LIFTS/ ELEVATORS/ SCISSOR LIFT

CAN BE USED FOR SOLELY GOODS OR GOODS CUM PASSENGER APPLICATION. TYPICALLY USED FOR PHARMA, PAINT AND CHEMICAL PLANTS.WITH FDA REGULATIONS.ROBUST AND STRONG DESIGNS. THE CABIN CAN CARRY UPTO 10 TONS AND CAN HAVE A CROSS SECTION UPTO 5M X 5M.

OPTION : FLAMEPROOF / NON-FLAMEPROOF



TECHNICAL SPECIFICATIONS

1	CAPACITY (T)	(1-10)
2	CABIN SIZE	UPTO 5M X 5M
3	HEIGHT OF LIFT (M)	(3-30)
4	LOCATION	INDOOR & OUTDOOR
5	AMBIENT TEMP (DEGREE CELSIUS)	UPTO 50
6	MOTIONS (M/MN)	TRAVEL SPEED - (3-10)
7	CRANE CONTROL	PENDANT
8	POWER SOURCE	CABLING

ELECTRIC JIB CRANE

➤ JIB CRANES

BEST SUITED FOR MEDIUM DUTY APPLICATIONS IN A SPECIFIED SMALL AREA.
CANTILEVER DESIGN ALLOWS MOVEMENT UPTO 360 DEGREES OF ROTATION.
TYPICALLY USED UPTO 20 TONS CAPACITY.

CAN HAVE A RADIUS OF 8 M.

OPTION : FLAMEPROOF / NON-FLAMEPROOF



TECHNICAL SPECIFICATIONS

1	CAPACITY (T)	(0.5-20)
2	ROTATION	360 ⁰
3	RADIUS (M)	(UPTO 8)
4	HEIGHT OF LIFT (M)	(3-20)
5	LOCATION	INDOOR & OUTDOOR
6	AMBIENT TEMP (DEGREE CELSIUS)	UPTO 50
7	MOTIONS (M/MN)	MAIN HOIST SPEED - (1-10)TRAVEL SPEED - (5-50)
8	CRANE CONTROL	PENDANT RADIO REMOTE CONTROL
9	POWER SOURCE	FESTOON CABLING & SHROUDED DSL

GANTRY CRANE

- Overhead Bridge controls and festooning complete a quality crane package.
- Adjustable torque magnetic disc / shoe brake for smooth operation.
- Forged steel crane wheels for long life.
- Top quality hoists matched to the duty required.
- Custom engineered to your application.
- Electric hoist conforms to
- Safety, easy operation, reduced maintenance and long life.
- Modular system design
- Smooth and reliable handling
- Smooth manual travel
- Cost-effective implementation
- Customer-specific configuration to meet individual requirements

OPTION : FLAMEPROOF / NON-FLAMEPROOF



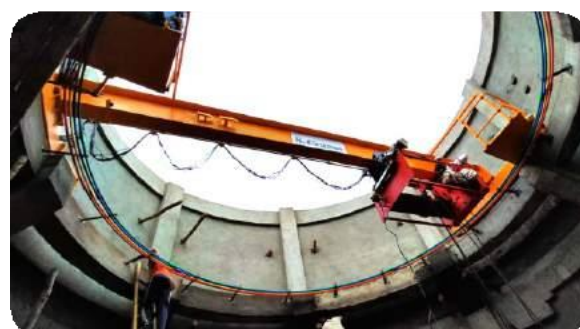
TECHNICAL SPECIFICATIONS

1	CAPACITY (T)	(0.5-50)
2	RADIUS (M)	(UPTO 8)
3	HEIGHT OF LIFT (M)	(3-20)
4	LOCATION	INDOOR & OUTDOOR
5	AMBIENT TEMP (DEGREE CELSIUS)	UPTO 50
6	MOTIONS (M/MN)	MAIN HOIST SPEED - (1-10) TRAVEL SPEED - (5-50)
7	CRANE CONTROL	PENDANT RADIO REMOTE CONTROL
8	POWER SOURCE	FESTOON CABLING & SHROUDED DSL



- **SINGLE GIRDER EOT CRANES BEST SUITED FOR MEDIUM DUTY APPLICATIONS. GREAT COVERAGE OF FLOOR AREA.**

**TYPICALLY USED UPTO 20 TONS CAPACITY.
CAN ALSO BE USED TO WORK DIAMETRICALLY ON CIRCULAR PATH.**



OPTION : FLAMEPROOF / NON-FLAMEPROOF

TECHNICAL SPECIFICATIONS

1	CAPACITY (T)	(0.5-20)
2	SPAN (M)	(3-50)
3	HEIGHT OF LIFT (M)	(3-50)
4	LOCATION	INDOOR & OUTDOOR
5	AMBIENT TEMP (DEGREE CELSIUS)	UPTO 50
6	MOTIONS (M/MN)	MAIN HOIST SPEED - (1-10) CROSSTRAVEL SPEED - (10-50) LONG TRAVEL SPEED - (10-50)
7	CRANE CONTROL	PENDANT RADIO REMOTE CONTROL
8	POWER SOURCE	SHROUDED DSL



➤ DOUBLE GIRDER EOT CRANES

BEST SUITED FOR HEAVY DUTY APPLICATIONS.

GREAT COVERAGE OF FLOOR AREA AND OVERHEAD SPACE.

TYPICALLY USED UPWARDS OF 10 TONS AND UPTO 100 TONS IN CAPACITY.HAS SAFETY MAINTENANCE PLATFORMS WHICH REDUCE REPAIRING TIME.CAN ALSO BE USED TO WORK DIAMETRICALLY ON CIRCULAR PATH.

OPTION : FLAMEPROOF / NON-FLAMEPROOF

TECHNICAL SPECIFICATIONS

1	CAPACITY (T)	(2-100)
2	SPAN (M)	(3-50)
3	HEIGHT OF LIFT (M)	(3-50)
4	LOCATION	INDOOR & OUTDOOR
5	AMBIENT TEMP (DEGREE CELSIUS)	UPTO 50
6	MOTIONS (M/MN)	MAIN HOIST SPEED - (1-10) CROSS TRAVEL SPEED - (10-50) LONG TRAVEL SPEED - (10-50)
7	CRANE CONTROL	PENDANT RADIO REMOTE CONTROL
8	OPERATION CABIN	(OPEN/CLOSED/AC CABIN)
9	POWER SOURCE	SHROUDED DSL, MS ANGLE DSL, DRAGCHAIN

Frame

Fabricated from steel plates and made of rugged construction, our frames are machined and bolted with special fixtures.

Gear Cases

Gear cases in graded cast iron or fabricated are duly shotpeened and stress relieved.

Gear & Pinions

NMEW is known for in house design & manufacturing of gear and pinions, thereby ensuring their quality, compatibility and serviceability. All Helical gears and pinions integral with shafts are made from hardening low-carbon alloy steels and hardened to 55-60 HRC. High-speed gears and pinions are profile ground and are well lubricated to make noiseless movement with maximum efficiency, which helps save electricity. Gears and pinions conform to DIN8/AGMA-12 standard.

Rope Drum

Rope drum made from seamless steel pipe, revolves on heavy duty self-aligning roller bearings. The CNC machined spiral grooves accommodate the rope in one layer, allowing 2 full turns of the rope on the drum, when the hook is at its lowest position. Drum size corresponds to Class IV of IS, ensuring lower head rooms and high rope life.

Rope Guide & Retainer

Rope guide leads the rope into the spiral grooves in the drum and retains it in the groove, preventing overlapping or loosening off the drum.

Wire Rope

Non-rotating type wire ropes brought from reputed manufacturers, made of best plough steel, conforming to IS: 2266, are used with every Wire Rope Hoist. Safety quotient is appropriate to the class of duty.

Hook Block

Standard forged trapezoidal section hooks of IS: 15560 are used. Hooks are carried on a steel cross head on thrust ball bearing. The sheaves, supported on ball bearings, have dimensions corresponding to relevant IS.

Motors

High starting torque, crane duty, totally enclosed squirrel cage induction motors in international frame sizes of reputed make are used. Motors conform to IS :

325. All motors used are suitable for $415 \pm 10\%$ V, $50 \pm$

5% Hz 40% CDF and are derated for higher duties, 50 degrees C Amb temperature. Motors suitable for different voltages and frequencies can be provided.

Brakes

Fail Safe D.C Disc brakes is a standard feature for hoisting. The brakes are fitted with Asbestos-Free lining. The motor fan on the rear of the brakes keeps the motor and brake cool. A manual release lever is provided in case of emergency or power failure. Cross Travel is provided with A.C./D.C. brakes.

Mechanical

All Gears, Pinions, Rope Drums, Wheels, Sheaves are manufactured in state-of-the-art turning centres, which ensure dimensional accuracies, consistency, repeatability and above all perfect profile and contours; thus leading to higher fatigue life.

Wheels

Closed die forged from medium carbon Alloy steels, these wheels are produced on CNC turning centre for accurate bore and tread profile. Two large dia ball bearings are used for better rolling effect and stability.

Controls

The operation is through Pendant Push Button Station, having control voltage of 24V/110V for maximum safety of operator through flush type hold on push button housed in IP: 55 enclosure. Electricals of reputed make such as Siemens, L & T are used. Individual motors are protected by HRC fuses/MCBs and overload relays.

Limit Switches

A standard limit switch is used for max up and max down and cross travel motion as a standard feature.

Overload Limiter

NMEW RH Series Hoists can be fitted with an overload protection device, including a micro switch with single cut-in that measures the amount of applied load and dynamic, inertial effects of load handling. When the set calibration values are exceeded, the load limiter microswitch cuts in and opens the control circuit of the hoisting controls as an option.

Trolley

Electric Wire Rope Hoists can be supplied for fixed mounting; with geared trolley for manual operation or with trolleys suitable for curved path of travel are also supplied as optional electric driven trolleys, according to customer's requirements.

Ultra Low Head Room

Ultra Low Headroom hoists are available for capacities up to 25 tonnes.

Low Read Room BI- Rail Hoists

25 tonne capacity trolleys are used double girder cranes.

Options:

- VVVF A.C. Drives for stepless speed control
- Radio Remote Control
- Overload Limiter
- Trolley suitable for curved path
- Customized Hoisting & travel speeds
- High lift Hoists

- **Advantages**

- Energy Efficiency
- Saving on infrastructure with lower head rooms
- Quality Consistency
- High gearing life with Helical gearing
- Perfect balancing of Load
- Adjustable trolley to suit different beam widths
- Pro-engineered on Pro-E software
- giving optimisation, safety and reliability

○ **STANDARD FEATURES**

- **LIMIT SWITCHES EMERGENCY**
LIMIT SWITCH
- **IP 42 PROTECTION FOR PANELS**
- **GALVANIZE / UNGALVANIZE FMC CORE WIRE ROPESSEALED**
BEARING LUBRICATED FOR LIFE
- **ENERGY EFFICIENT MOTORS**

○ **OPTIONAL FEATURES**

- **EMOTE FOR REMOTE MONITORING OF CRANE LOAD**
INDICATOR WITH OR WITHOUT DISPLAY CRANE
SYNCHRONISATION FOR TANDEM OPERATION
- **TWO OR MORE HOISTS ON SAME GIRDER WITH/WITHOUT SYNCHRONISATION ANTI**
SWAY/SWAY CONTROL SYSTEMS
- **UNDER BRIDGE LIGHT**
- **AUTOMATION FOR TARGET POSITIONING (PLC)VFD -**
VARIABLE FREQUENCY DRIVE
- **UNDER BRIDGE LIGHTS CRANE**
ANTI-COLLISION
- **DRAG CHAIN FOR CROSS TRAVERSE MOTIONS**
JOYSTICK - RCC FOR MOTIONS
- **MOVABLE CABIN AVAILABLE**
LUBRICATION SYSTEM ACCESS
PLATFORMS
- **ENHANCED SPEED RANGE AVAILABLE**

▪ **OUR SERVICES**

- **WE BELIEVE WE ARE HERE TO HELP PEOPLE WITH OUR SPECIALISED SKILLS. WE**
OFFER ADDITIONAL SERVICES:
- **HEALTH CHECK-UP OF CRANES AND LIFTS.**
- **SUPPLYING AND FIXING OF SPARES ON CRANES AND LIFTS.**
MODIFICATION OR REFURBISHMENT OF CRANES AND LIFTS.
BREAKDOWN MAINTENANCE OF CRANES AND LIFTS.
- **AMCS FOR PREVENTIVE MAINTENANCE**

• **OUR CUSTOMER CARE PORTAL**

- **THIS IS AN INDUSTRY FIRST.**

- ONE ONLINE PLACE TO LOG IN ANY REQUEST FOR ANY SERVICE RELATED TO OUR PRODUCTS. QUICK RESPONSE.
- AN EASY ACCESS OF THE TECHNICIAN ASSIGNED.
- AN EASY ACCESS OF THE TECHNICIANS LOCATION ON GOOGLE MAPS. UPDATES TILL THE TICKET IS CLOSED.
- MAINTAINS HISTORY OF REPAIRS IN ALL OUR PRODUCTS. HELPS US IDENTIFY AND RECTIFY ROOT CAUSES OF CHRONIC ISSUES.
- ACCESS THE PORTAL AT ANYTIME FROM ANYWHERE.

Some of our Clients



Manufacturing Plant



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