



**YOUR PARTNER FOR
DESIGN &
MANUFACTURING OF
PROCESS EQUIPMENTS**

ABOUT UNIFAB

Established in 1999, **UNIFAB** identifies as a fast emerging leader in the engineering & manufacturing industry. We function with the aim of maintaining a sustained level of growth within the company while providing our clients with an unmatched level of equipment and service.



OUR DNA :

Professionalism and Excellence are the building blocks that make up the core values on which, **UNIFAB** functions. Guided by strong values established by our esteemed MD, **Mr. R.C. Dumir**, a qualified technocrat with over 35 years of experience in the Design field, we efficiently and consistently deliver quality finished equipments and maintain a high level of customer satisfaction.

Under the leadership of our dynamic director **Mr. Amit Dumir**, **UNIFAB** has constantly adapted to the changing work scenario and adopted the latest technologies needed to excel. We function with an expert team of professional and qualified design engineers employing the latest technologies and software that ensures precision and finesse in our execution and deliveries

UNIFAB employs highly trained and committed staff. With a consistent and increasing growth rate of 15% per year, our group stands tall and proudly upholds its ideals of tradition, integrity and innovation.

Having over 60,500 sqft of workspace, fitted with the latest machinery in which is a dedicated :

- 30,000 sq ft only for Stainless Steel Equipments
- 10,000 sq ft for CS Equipment
- 10,000 sq ft for Dryers Division
- 15,000 sq ft for Exotic Metal Equipments

UNIFAB`s mission is to be the best Design / Engineering / Construction company delivering innovative turnkey solutions to Chemical & Process Industry.

For the ease of doing business **UNIFAB** has headed the business in 3 verticals :

Equipment Division

UNIFAB ENGINEERING
PROJECTS PVT LTD

Design & Manufacturing of Reactors / Heat Exchangers / Columns / Tanks of Sizes varying from 0.20 KL to 150 KL as per clients / consultants specification / Code & Requirements in Stainless Steel.

Exotic Equipment Division

UNIFAB ENGINEERING
PROJECTS PVT LTD

Design & Manufacturing of Reactors / Heat Exchangers / Columns / Tanks of Sizes varying from 0.20 KL to 150 KL as per clients / consultants specification / Code & Requirements in Haste Alloy / Inconel / Alloy 904 / Duplex / Super Delux

Dryer Division

UNIFAB ULTRA
TECHNOLOGIES LLP

Design & Manufacturing of RVPD / RCVD / ANF / ANFD / Ball Mill / Blenders as per clients / consultants specification / Code & Requirements in Haste Alloy / Inconel / Alloy 904 / Duplex / Super Delux in various MOC

PRODUCT RANGE

Reactors	Gas Induction Reactors	High Speed Mixers
Autoclaves	Heat Exchangers / Reboilers	Columns / Crystallisers
Agitator Assembly	Ribbon Blenders	Tanks & Vessels
High Pressure Bullets	Silos & Storage Tanks	

ACHIEVEMENTS

Repeat Order
from More than **80% Clients**

Single Largest Order :

235 Reaction Tank To Single Client

57 Heat Exchangers To Single Client

29 Reactors To Single Client

Supplied More Than :

230 Equipments to 1 Customer

100 Equipments to 9+ Clients

50 Equipments to 12+ Clients

Certified Bodies Approval



APPROVALS OF MANUFACTURING FACILITIES:

ISO 9001 : 2015 / CCOE

EQUIPMENTS MANUFACTURED UNDER IBR

Consultants / TPI



REACTORS

- Standard Drawing for Agitator Assembly up to 180 mm Shaft Diameter
- Standard Pattern for CS casting for Bearing Housing
- Dish End Formation up to 4.2 meter x 36 mm / Rolling upto 40mm In house
- Limpid Coil Forming In house / Internal coil forming up to 125NB pipe available
- Facility for continuous Limpid coil for Shell
- In house machining Facility for Agitator components
- All measuring Instruments for accuracy up to 0.1 mm concentricity
- Shaft machining up to 12 meter long shaft
- Key way & Slotting Facility in house
- Turning of Body Flanges up to 2600 mm in house

Maximum Manufacturing Capacity

Maximum Capacity	50 KL
Maximum Diameter	4200 mm
Maximum Thickness	80 mm
Maximum Pressure	120 mm
Maximum Shaft Diameter	250 mm
Maximum Weight	45 Tons

Material of Construction

- SS 304 / SS 316L / SS 317 / SS 321 / 904L
- Hastelloy C276 / Inconel 625
- Duplex UNS 31803 / Super Duplex UNS 327 & Clad's

Testing Facility

- Digital infrared thermometer for temperature
- Accelometer for Vibration Check
- Tacometer for RPM
- Radiography Testing
- Ultrasonic Testing
- PMI Testing
- Dye Penetrant Test
- Fixture for No Load Trial testing.
- Vacuum Testing



GAS INDUCTION REACTORS

Standard Capacity Model upto 35 Kg pressure

Gas Induction Reactor offers a radical change from all the conventional approaches, Instead of churning the liquid reaction mass, a hollow agitator pumps gases from the head space to the lowest part of the reactor vessel, A specially designed impeller vigorously disperses these gases into the reactor bottom, resulting in a mixture akin to a boiling liquid, Gas bubbles react with liquid/slurry as they rise; Unreacted gases are re-induced into the liquid.

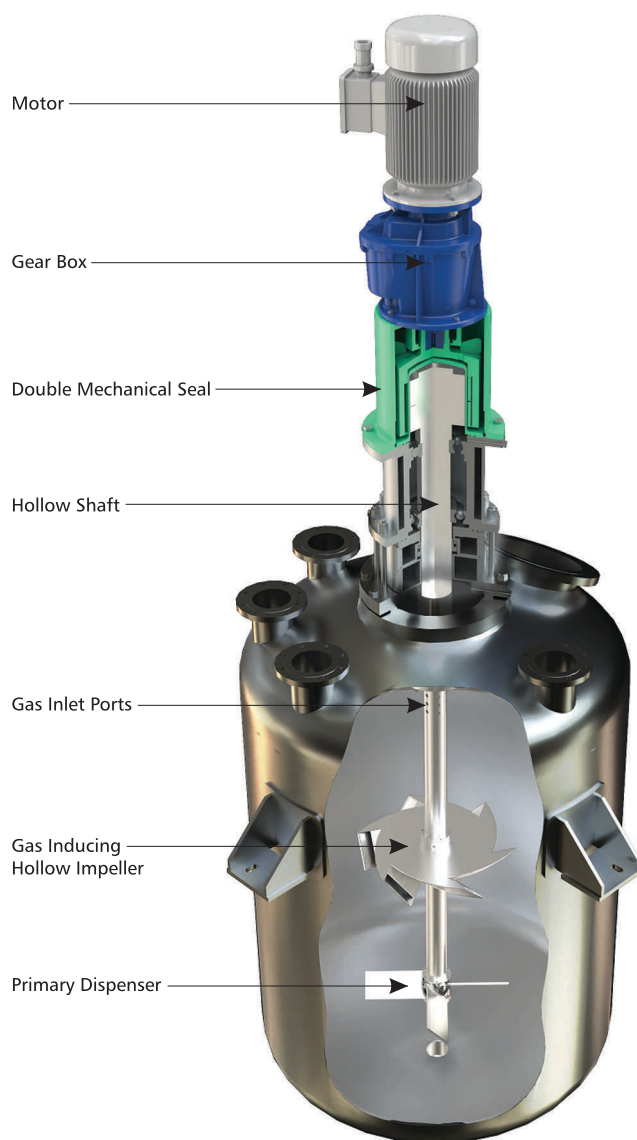
The Self-aspiration agitator of an Gas-Induction Reactor has a highly efficient design, which leads to the following advantages:

- Vigorous gas mixing.
- Through suspension of solid components (e.g., Catalyst).
- Large Gas-Liquid interfacial areas. Interfacial area is 100 to 300m³ of the operating volume.
- Enhanced gas-liquid and liquid mass transfer rates
- Very high vessel side heat transfer coefficients, which approach boiling coefficients.
- Reduced batch times.
- Minimal side reactions.
- Excellent batch to batch repeatability.

We Design & Manufacture :

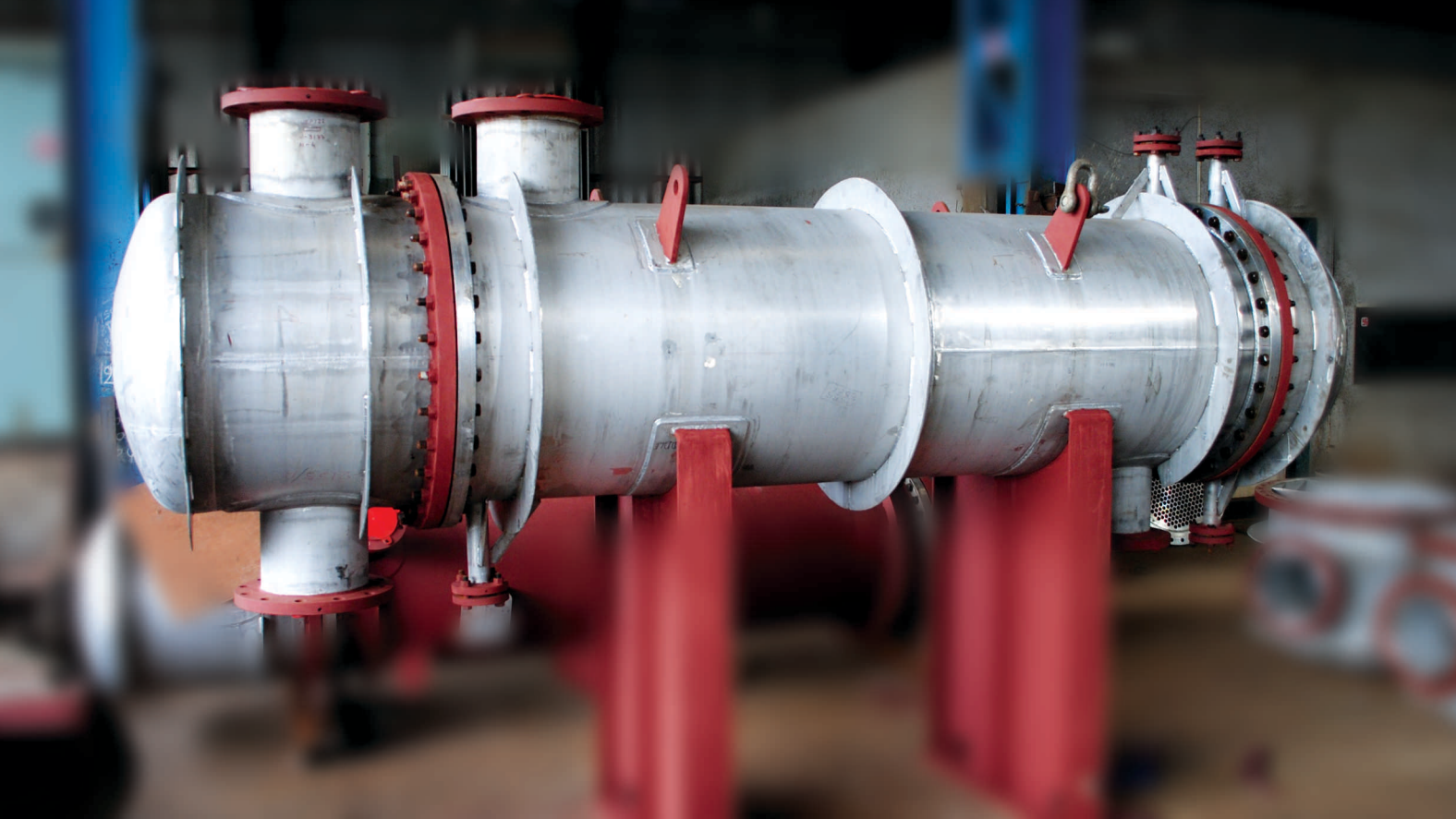
Gas-liquid reactions are very common in Chemical Process Industry and contribute to more than 30% of all the chemical commercial reactions. In all these cases the gas phase is expensive and complete utilization of the solute gas is desired. Gas liquid Reaction is used in following process :

- Hydrogenation
- Oxidation
- Carboxylation
- Ethoxylation
- Similar Gas - Slurry Reactions



Material of Construction

- SS 304 / SS 316L / SS 317 / SS 321 / 904L
- Hastelloy C276 / Inconel 625
- Duplex UNS 31803 / Super Duplex UNS 327



HEAT EXCHANGER

- Good Source of Raw Material
- Tie up with Reputed Forging Mfg. for Early Delivery
- Deep Hole Drilling facility - up to 400 mm Tube sheet
- Drilling Diameter up to 3200 mm on CNC Machine
- Dish End Formation up to 4.2 meter x 25mm In house
- Bellow formation In House
- Turning of Tube sheet up 2600 mm in house



Maximum Manufacturing Capacity

Heat Transfer Area	900 m ²
Tube Sheet Diameter	3200 mm
Tube Sheet Thickness	300 mm
Length of Heat Exchangers	9000 mm
No of tubes	3000 Nos
Pressure	120 bar
Weight	28 tons

Material of Construction

- SS 304 / SS 316L / SS 317 / SS 321
- Hastelloy C276
- Titanium SB 265 Gr1/2
- Inconel 625 / Duplex UNS 31803
- Super Duplex UNS 32750 etc.
- Cupro-Nickel

Testing Facility

- Radiography / Ultrasonic Testing
- PMI Testing / Vacuum Testing
- Manufacturing done under IBR

COLUMNS

- Infrastructure to Assemble Column up to 50 meters.
- Dish End Formation up to 5.20 meter x 36 mm / Rolling upto 40 mm In house
- Columns Body Flange machining up to 2600 mm in- house & up to 4500 mm outsourced
- Machining of column piece after welding of Body Flanges up to 2600 mm x 12000 mm In house
- Reliable + Reputed Sourcing of Forged Flanges up to 3300 mm Diameter within stipulated time period



Maximum Manufacturing Capacity

Maximum Diameter	5200 mm
Maximum Length	50 m
Maximum Weight	90 Tons
Maximum Thickness	110 mm



Material of Construction

- SS 304 / SS 316L / SS 321 / 904L
- Hastelloy / Inconel
- Duplex UNS 31803 / Super Duplex UNS 327
- CS SA516 / SA587
- Impact tested Material upto - 65°



Testing Facility

- Dumpy Level for leveling
- Digital Inclinator / Angle Measurer
- Radiography Testing
- Ultrasonic Testing
- PMI Testing



SS & ALLOY STEEL PROCESS EQUIPMENTS

- Supplied / Manufactured & Transported Tanks up to 500 m³
- Dish End Formation up to 4.8 meter x 70 mm and Rolling upto 80 mm
- Limpid Coil Forming In house / Internal coil forming up to 125NB pipe available
- Facility for continuous Limped coil for Shell
- Solution Annealing Facility at 1 km Radius
- Tank Rotators up to 100 tons Capacity
- CNC profile cutting machine for Smaller components nesting & cutting

Maximum Manufacturing Capacity

Maximum Capacity	500 m ³
Maximum Diameter	5800 mm
Maximum Length	40 mt
Maximum Thickness	110 mm
Maximum Pressure	80 mm
Maximum Weight	110 Tons

Material of Construction

- SS 304 / SS 316L / SS 317 / SS 321 / 904L
- Hastelloy C276 / Inconel 625
- Duplex UNS 31803 / Super Duplex UNS

Testing Facility

- Radiography Testing
- Ultrasonic Testing
- PMI Testing
- Dye Penetrant Test
- Vacuum Box Testing





CS PROCESS EQUIPMENTS

- Dish End Formation up to 5.2 meter x 36 mm / Rolling upto 40 mm In house
- Limpid Coil Forming In house / Internal coil forming upto 125NB pipe available
- Facility for continuous Limped coil for Shell
- All measuring Instruments for accuracy up to 0.1 mm concentricity

Approved by CCOE

- Tank Rotators up to 100 tons Capacity
- Heat Treatment – Annealing / Stress Relieving Facility available
- Submerged Arc Welding Machine
- CNC profile cutting machine for Smaller components nesting & cutting

▶ Maximum Manufacturing Capacity

Maximum Capacity	200 m ³
Maximum Diameter	5800 mm
Maximum length	40 mts
Maximum Thickness	110 mm
Maximum Pressure	80 mm
Maximum Weight	90 Tons

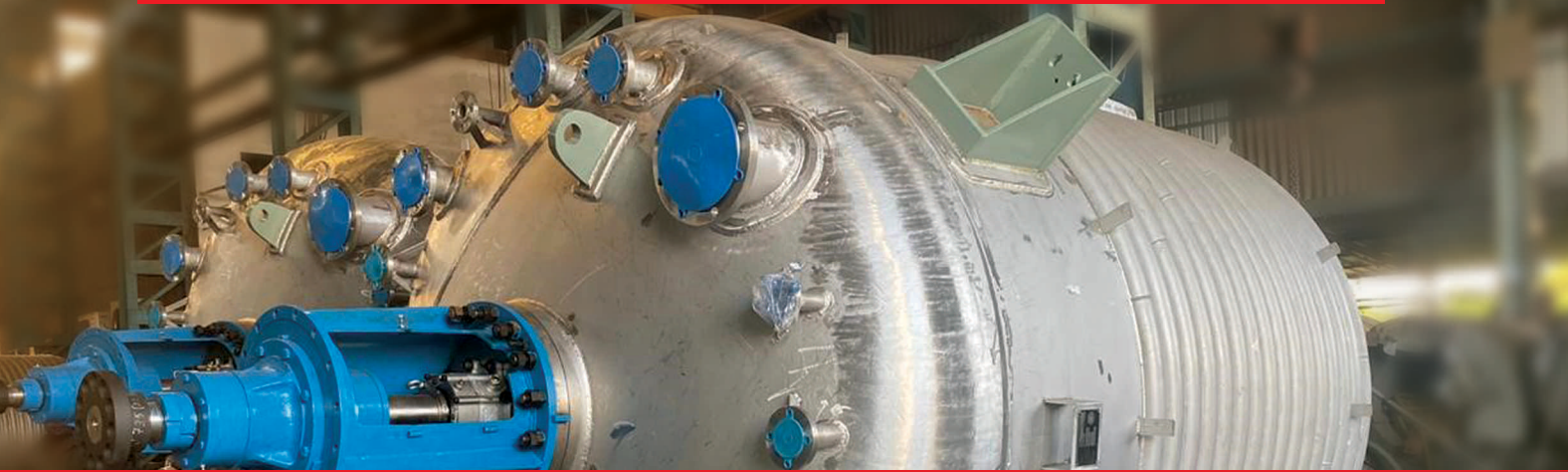
▶ Material of Construction

- SS 304 / SS 316L / SS 321 / 904L
- Hastelloy / Inconel
- Duplex UNS 31803 / Super Duplex UNS 327

▶ Equipments

- Autoclave
- Reactors
- Columns
- Bullets
- Heat Exchanger
- Re-Boilers

UNIFAB : EXOTIC EQUIPMENT DIVISION



Design & Manufacturing of Reactors / Heat Exchangers / Columns / Tanks of Sizes varying from 0.20 KL to 150 KL as per Clients / Consultants Specification / Code & Requirements in Haste Alloy / Inconel / Alloy 904 / Duplex / Super Delux.

Under the leadership of our dynamic Director Mr. Amit Dumir, **UNIFAB** has constantly adapted to the changing work scenario and adopted the latest technologies needed to excel. We function with an expert team of professional and qualified design engineers & especially for the **EXOTIC EQUIPMENT DIVISION**,

To overcome the production demands & Delivery expectations - coming up with additional manufacturing facility at Ambernath :

- 18,000 sq. ft. covered area over head crane.
- Overhead crane 2 Nos. - 15 tons with 9 mtrs clear under hook.
- Dust free room: 6 mtrs X 6 mtrs X 12 mtrs long with 5 ton crane.



UNIFAB has all qualification of WPS/PQR under Bureau Veritas [BVIS] in place for the following material :

- Hastelloy C276
- Titanium SB 265 Gr1/2
- Inconel 625,
- Duplex UNS 31803
- Super Duplex UNS 32750 etc.
- Cladding with various Combination

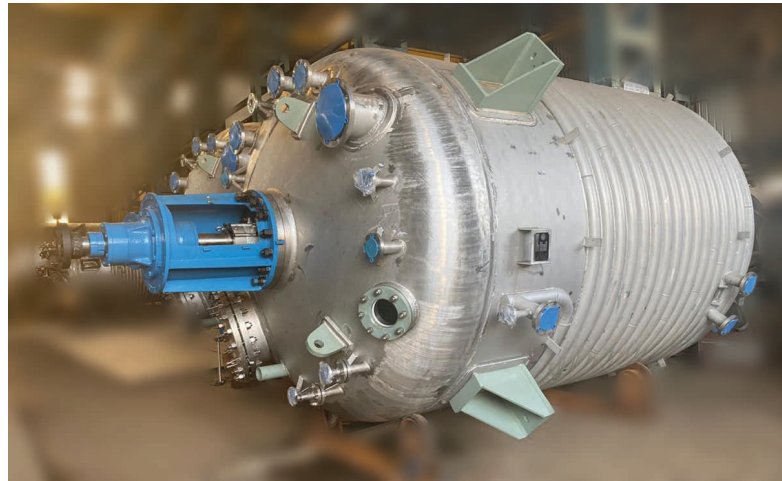
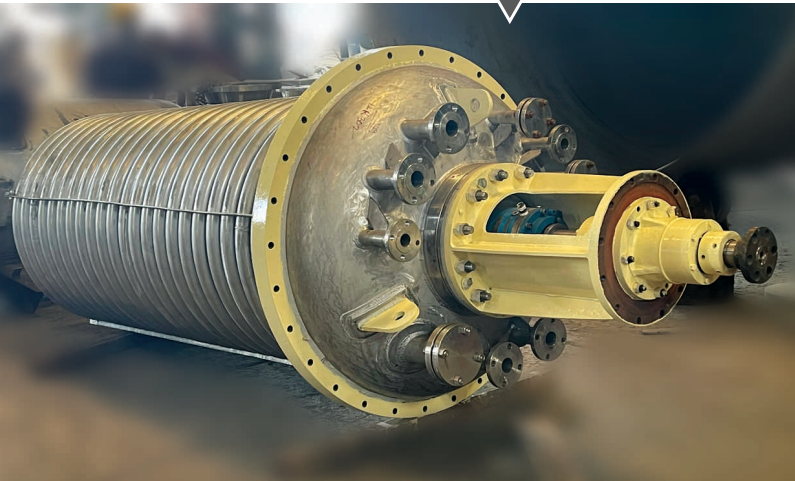
Material of Construction

- | | |
|-------------|-------------------|
| • Hastelloy | • Alloy 20 |
| • Inconel | • Alloy 904L |
| • Incoloy | • Duplex |
| • Nickel | • Super Duplex |
| • Monel | • Stainless Steel |
| • Titanium | |

PRODUCT RANGE

Reactors	Heat Exchangers	Columns
Autoclaves	Mixers	Tanks & vessels
Agitator Assembly	Cladded Reactors & Vessels	Agitator Assembly
High Pressure Bullets	Heaters	Agitator Blades

EQUIPMENT DIVISION



DRYER DIVISION



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