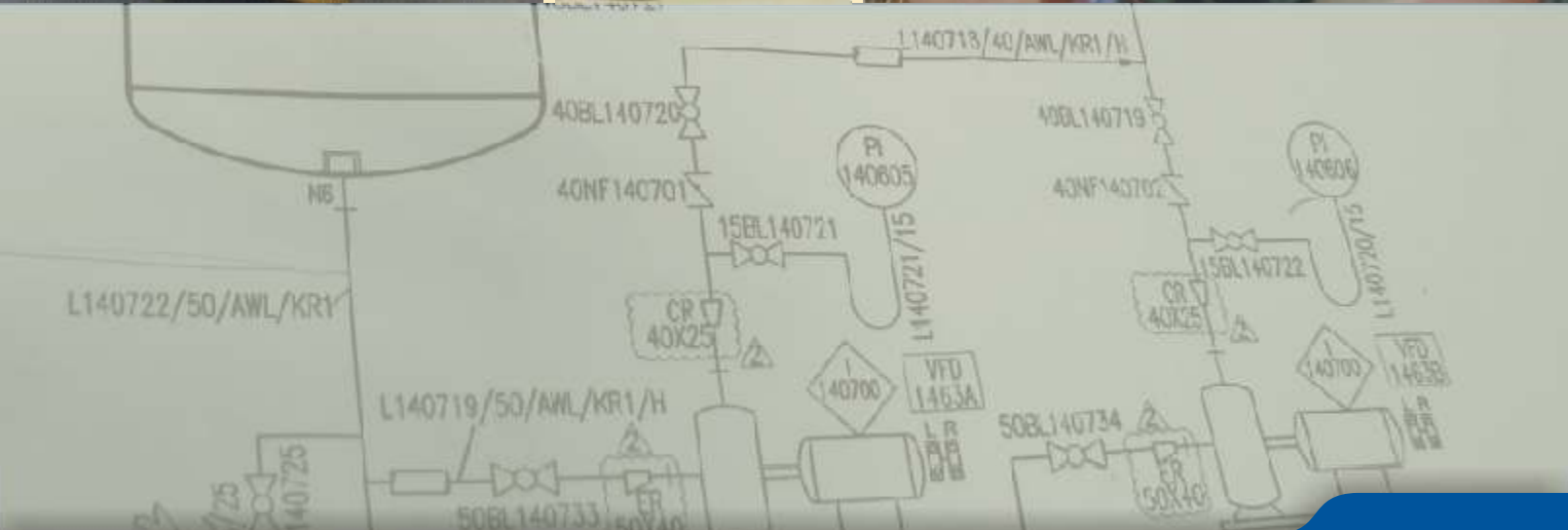


CUSTOMIZED ENGINEERING & MANUFACTURING

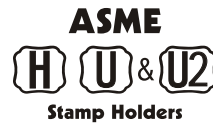


For all your Process needs....

.... We are there !



Over 25 years, Praj has established itself as a leading Company for execution of Turnkey Plants and Equipment for Fermentation and Distillation Systems, worldwide. The expertise in design and manufacturing of Static Process Equipment along with own state-of-the-art facilities for metalworking in Stainless Steel, Carbon Steel and Higher Alloys enables us to offer our services to other process industries as well. A number of projects of 'Customized Engineering & Manufacturing' have been implemented successfully in various process industries by Praj.





Engineering Services

- Design and Engineering of fabricated equipment
- Piping engineering from plot plan to isometrics
- Detail engineering : Boughtout/Packaging units
- Electrical engineering upto Layouts/MTO
- Instrumentation engineering upto PLC/Scada based control systems
- Skid Engineering

Global Standards and Codes followed by Praj

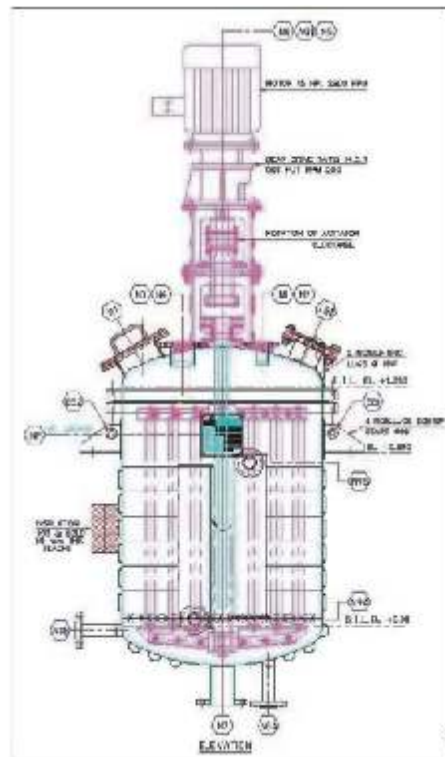
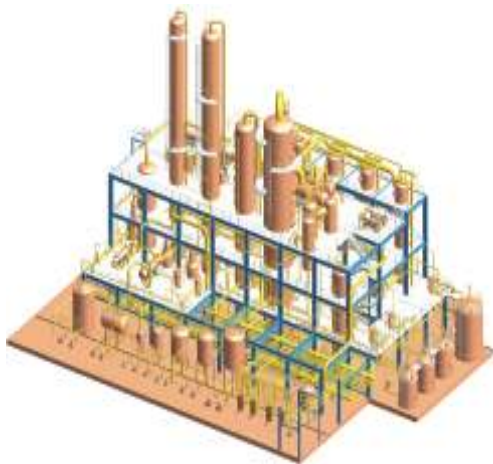
- | | |
|----------------------------------|-----------|
| • ASME Sec. VIII Div. I & Div II | • IS 2825 |
| • Ad Merkblatter | • PD 5500 |
| • TEMA | • DIN |
| • BS 5500 | |
| • Pressure Equipment Directive | |

Software in use

- | | |
|------------|------------|
| • HTRI | • AutoCAD |
| • CodeCalc | • Plant 4D |
| • ChemCAD | • PDMS |
| • PVElite | • ProPipe |

Third Party Inspection Agencies

- | | |
|------------|------------------|
| • Lloyds | • Bureau Veritas |
| • TUV | • SGS |
| • Intertek | |





Manufacturing Facility

Praj has 2 manufacturing units which are well connected by highways and ports. All the facilities are well equipped with modern metalworking machines such as :

- CNC Plasma Cutting Machine
- Pulse TIG and Microprocessor Controlled Orbital Welding Machines
- Column & Boom Automatic/SAW /Plasma Arc Welding
- Automatic Polishing Machine
- Inhouse Pressing facility of Dish end
- CNC Drilling Machine & VTL

The qualified teams at these locations are geared up with modern instruments to shape up your equipment and vessels in accordance with International Standards and Codes.

Quality Assurance Division at Praj pursues stringent testing at various stages of procurement and production.

All the manufacturing facilities are already accredited with ISO 9001 : 2008, ASME U, U2 & H stamp and can also manufacture CE marked equipments.



Renowned Third Party inspection agencies such as Lloyds, TUV, SGS and BV have appreciated our quality consciousness during the successful certification / inspection process.

Facility	Total Area	Covered Area	Open Area
Kandla Unit I	30,000 Sq.m.	15,000 Sq.m.	15,000 Sq.m.
Kandla Unit II	21,000 Sq.m	9,750 Sq.m	11,250 Sq.m
Pune	20,000 Sq.m.	10,000 Sq.m.	10,000 Sq.m.

Manufacturing Capacity

- 13500 T/year
- Maximum Dimensions handled so far :
Dia. 5.5m x Length 40m x Weight 200T

Manufacturing Capabilities

Particulars	Pune Unit	SEZ Kandla	
		Unit I	Unit II (Under Construction)
Shell Rolling Thickness	35 mm	35 mm	120 mm
Shell Diameter	5 m	6.5 m	6.5 m
Shell Length	20 m	50 m	50 m
Dishend Thickness	30 mm	30 mm	120 mm
Dishend Diameter	5 m	6 m	6 m
Tubesheet Thickness	100 mm	100 mm	100 mm
Tubesheet Diameter	1800 mm	3500 mm	3500 mm
Lifting Capacity	100 Ton	200 Ton	200 Ton





Heat Exchangers (Shell & Tube)

Types

- Floating Head
- Fixed Tube Sheets
- Heat Exchangers with Expansion Bellow
- Twin Heat Exchangers

Material of Construction

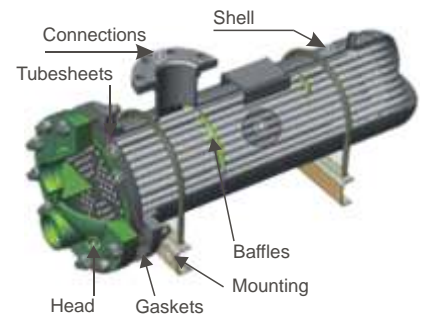
- SS316L, SS316, SS304L, SS304
- Dow Copper
- SA515, SA516 Gr. 60-70

Max Dimensions Handled so far

Diameter (mm)	Length (mm)	Shell Thick (mm)	Weight (ton)	Stamp	Customer
1950	14000	10	36	CE	Vivergo Bio-fuels, UK

Partial References

- GE Oil & Gas
- Deepak Nitrite
- Lupin Limited
- BHEL
- Indo Gulf Fertilizers
- Cargill India (P) Ltd.
- CEP, Puerto Rico, USA
- Gulf Stabilizers Ltd, Jubail, KSA
- JANA, KSA
- Polypex Ltd, Thailand
- BARC





Reactors, Separators & Pressure Vessels

Material of Construction

- SS316L, SS316, SS304L, SS304, SS316 Ti, 904 & 347
- Carbon Steel (SA515/516 Gr. 60-70)
- Hastelloy

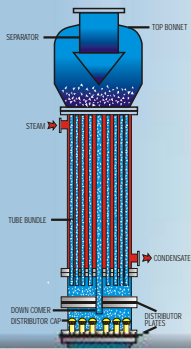
Max Dimension Handled so far

Diameter (mm)	Length (mm)	Shell Thick (mm)	Weight (ton)	Customer
3000	25000	28	22	Polyplex Ltd., Thailand

Partial References

- Polyplex Ltd., Thailand
- BASF
- Lupin Ltd.
- Occidental of Oman
- Biocon
- RCF
- SGS Plastibends Ltd.
- Solvay
- Alok Industries
- CEP, Puerto Rico, USA
- Gujarat Flurochemicals Ltd.
- Cadbury India Ltd.
- HEMRL
- BARC
- Deepak Nitrite
- GE Oil & Gas, Italy
- Nirvana Biosys
- Piramal Healthcare Associates Capsules





Evaporators

Types

- Falling Film
- Forced Circulation
- Thin Film Evaporator
- Self-Cleaning Flubex® Evaporator

Maximum Dimension Handled so far

Diameter (mm)	Length (mm)	Shell Thick (mm)	Weight (ton)	Customer
2730	14020	10	58	IGL, India

Material of Construction

SS316L, SS316, SS304L, SS304

Partial References

- Shaw Wallace Gelatines Ltd.
- Asian Peroxides Ltd.
- Unicorn Organics Ltd.
- Kerala Chemicals & Proteins Ltd.
- Orchid Chemicals & Pharmaceutical
- Crescent Biotech
- Riddhi Siddhi Starch
- Warkem Biotech
- Gujarat Ambuja Exports Ltd.
- Deepak Nitrite
- Biocon
- Piramal Healthcare Ltd.

Columns

Maximum Dimension Handled so far

Diameter (mm)	Length (mm)	Shell Thick (mm)	Weight (ton)	Stamp	Customer
5100	39750	16	184	CE	Biowanze, Belgium

Material of Construction

SS316L, SS316, SS304L, SS304 & Copper

Partial References

- BARC
- SRF Ltd.
- Arcoy Bio-refinery Ltd., Biocon
- JBF Ind. Ltd.
- Polyplex Ltd., Thailand
- CEP, Puerto Rico, USA
- Deepak Nitrite
- Piramal Health Care





Praj Serves

- Reactors / Fermentors
- Pressure Vessels
- Separators
- Jacketed Vessels
- Heat Exchangers
- Evaporators
- Distillation Columns
- Formulation Tanks / Mixers
- Hygienic Equipment
- Skid Mounted Units
- Fruit Processing Equipment
- Dairy Equipment

Advantage Praj

- Mechanical Engineering and Manufacturing capability assiduously developed over 25 years.
- Competitive manufacturing cost
- Locations : Proximity to Ports (Mumbai & Kandla)
- ASME U, U2 & H certified
- Can supply Equipment with CE Certification
- ISO 9001:2008 Quality Management System
- Well Established Contemporary HSE Policy
- Proven track record in terms of cost, quality and delivery.
- A number of satisfied references in more than 55 countries across all continents.

Network

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