At Amar PRESSURE and FLOW is our religion

Pressure Reactor Specialist®
Flow Chemistry Specialist®
High Pressure Autoclaves
• Pressures up to 350 bar at 500 °C
• SS316/316L, Hastelloy B/C, Monel, Inconel, Nickel, Titanium, Tantalum, etc.
• Ex-proof / ATEX / CE / PED / ASME U, U2 / CRN / CSA / UL certified systems

50 ml - 100 ltrs. volume

100 ltrs - 2000 ltrs. volume

100 ltrs - 1000 ltrs. volume

Pressures up to 100 bar at 350 °C

SS-316/316L, Hastelloy B/C, Monel, Inconel, Titanium, Zirconium, etc.

High mass transfer gas induction impeller
PBT impeller for liquid-liquid reactions

50 ml - 750 ml, 4 or 6 nos. parallel reactors

Fully automated with SCADA software

For high throughput catalyst screening

25 ml - 6 nos, 10 ml - 24 nos. bottom stirred parallel eco catalyst screening system

High Pressure Reactors

Catalyst Screening System

Automated Multiple Autoclaves
• 4 nos or 6 nos parallel reactors
• 25 ml - 2 ltrs. for high throughput testing
• Fully automated with SCADA software
• Bottom stirred or overhead stirring

Glass - Metal / PEEK Autoclaves
• 100ml-2ltrs volume glass autoclaves
• MOC: SS316 / Hastelloy / PEEK / glass
• Upto 10 bar pressure @ 200 °C
• Interchangeable metal & glass reactors

Magnetic Drive Couplings / Stirrers
• For reactor volumes from 50ml to 10,000L
• For high vacuum distillation in RBF
• Full vacuum to 690 bar pressures
• MOC: SS-316, Hastelloy C, PEEK, etc.
• Mixer with inline motor & coupling
• High torque coupling upto 600 Nm

High Pressure Vessels

Acid Digestion Bombs
• 25 ml - 2000 ltrs. volume
• Pressures up to 689 bar & 600°C
• Can be used with bottom magnetic stirrer
• For gas / liquid storage
• For Hydrogen Induced disbonding tests
• For soaking of diamonds / precious stones

High Pressure Vessels

Acid Digestion Bombs
• 50 ml to 750 ml volume
• Teflon lined, SS316 & microwavable hydrothermal acid digestion bomb
• Pressures up to 200 bar & upto 250°C.

Shaker Hydrogenators
• 100 ml to 2 liters volume in glass & metal interchangeable vessels.
• 20 bar for metal vessel & 3 bar for glass vessel
• Used to study catalyst activity or hydrogenation
HPHT Corrosion Testing System

Gas Hydrate Formation System

Reaction Calorimeter

- For static, dynamic, loop & electrochemical corrosion studies
- 450 ml to 25 ltr. volume
- Pressures upto 350 bar & 600°C
- MOC: SS316, Hastelloy C, Inconel, Titanium

Gas Hydrate Formation System

- For production & study of artificial gas hydrates
- 50 ml to 2000 ltrs.
- Pressures upto 350 bar and 100°C.
- Glass window with camera to observe gas hydrate formation

- For heat flow, isothermal & non-isothermal calorimetry
- Fully automated to measure heat flow, reaction enthalpy, adiabatic temperature rise, specific heat
- 500ml to 5 ltrs.
- Interchangeable glass & high pressure metal reactors

Supercritical Fluid Extraction Technology (SCFE)

Continuous Stirred Tank Reactors (CSTR)

- 100 ml to 1000 ltr. extractors
- Pressures upto 689 bar
- For extraction of herbs, spices, essential oil, oleoresins, flavours, fragrance, colours
- Decaffeination of tea & coffee
- Textile dyeing of fabrics, drying of aerogels

- Single or multiple reactors connected in series.
- Multiple inlets and outlets for addition & transfer / removal of gases & liquids.
- Stirred tank reactors of 50 ml to 2000 ltrs.
- Pressures upto 350 bar & 500°C

Packed Bed Tubular Reactors

- Tubular micro reactors with packed catalyst
- Fixed, fluidized & trickle bed reactors
- Pressures upto 350 bar & 1000°C
- For catalyst testing / screening, oxidation, reforming, hydrogenation, liquefaction, fischer tropsch process, hydro-cracking etc.

Continuous Flow Microreactors

Continuous Flow Reactors

- Modular metal microchannel reactors from 1 ml (AMaR-1) to 2 litres. (AMaR-2) volume
- Glass microreactors from LTF, Germany
- Flow rates upto 240 lph
- For liquid-liquid, gas-liquid, homogeneous & multi phase reactions

- 3D flow reactor (AMaR-3) with volumes upto 1 ltr. & flow rates upto 360 lph
- Pinch tube reactor (AMaR-4P) with volumes upto 16 ltr. & flow rates upto 500 lph
- MOC SS316, Hastelloy C, Inconel, Titanium
- Reactor system with pump, process control & automation

Photochemical Reactors

- UV transparent Chemically inert tubes
- Reactor volume 12, 50, 200, 1000 & 2000 ml
- Flow rate up to 240 lph
- Pressure up to 35 bar & temperature 175°C
- For photochlorination, photobromination, photo alkylation etc.
High pressure automated / ex-proof / customised systems

100 ltr. ex-proof hydrogenation pilot plant with catalyst charging, catalyst filter with recycle, auto cooling system, vacuum pump & catch pot

10 ltr. fully automated ex-proof alkoxylation pilot plant

High pressure polytest reactor system

Continuous emulsion polymerisation pilot plant

100 ltr. polymerization reactor for 2 million cP viscous polymer with hydraulic vessel raising lowering & tilting mechanism

Phase transfer catalyst continuous reactor system with simultaneous 3 different impeller speeds at 3 different levels
High pressure automated / exproof / customised systems

- 500 Ltr. hydrogenation pilot plant with catalyst filter & recycle
- 100 ltr reactor with hydraulic lid lifting arrangement
- Multipurpose pressure reactor with column & distillation assembly
- Multiple glass & metal autoclaves
- Ex-proof autoclave with load cell arrangement
- Ex-proof pilot plant for EO-PO reactions
- Fully automated & semi continuous pilot plant for styrene butadiene emulsion polymerisation with pneumatic vessel raising, lowering & tilting
- High pressure automated / ex-proof / customised systems
About AMAR

Serving Industry Since 1974

ISO, CE-PED, ASME U/U2, CSA, UL, Ex-Proof, ATEX certification

Largest manufacturer & exporter of reactors in India

Inline with government's MAKE IN INDIA campaign

Exports to over 50 countries worldwide

More than 40 distributors worldwide for local support

Over 5000 successful installations worldwide

More than 2000 delighted customers globally

Unmatched quality & safety standards

Manufacturing on CNC/VMC & automated machines

Prompt & efficient after sales service

Expertise in custom designing high pressure & flow systems

Highly skilled & trained team of more than 100 people
Some of our valued customers

Our motto, customer’s delight & not mere satisfaction

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- High Pressure Autoclaves • Multiple Reactor Systems • Gas Induction Reactors
- Ex-Proof & Automated Pilot Plants • Glass Autoclaves • Super Critical Fluid Extraction
- HPHT Corrosion Testing • Magnetic Drive Couplings & Agitators
- Metal Micro Reactors • Glass Flow Reactors • Photochemical Reactors
- Packed Bed Tubular Reactors • Continuous Stirred Tank Reactors