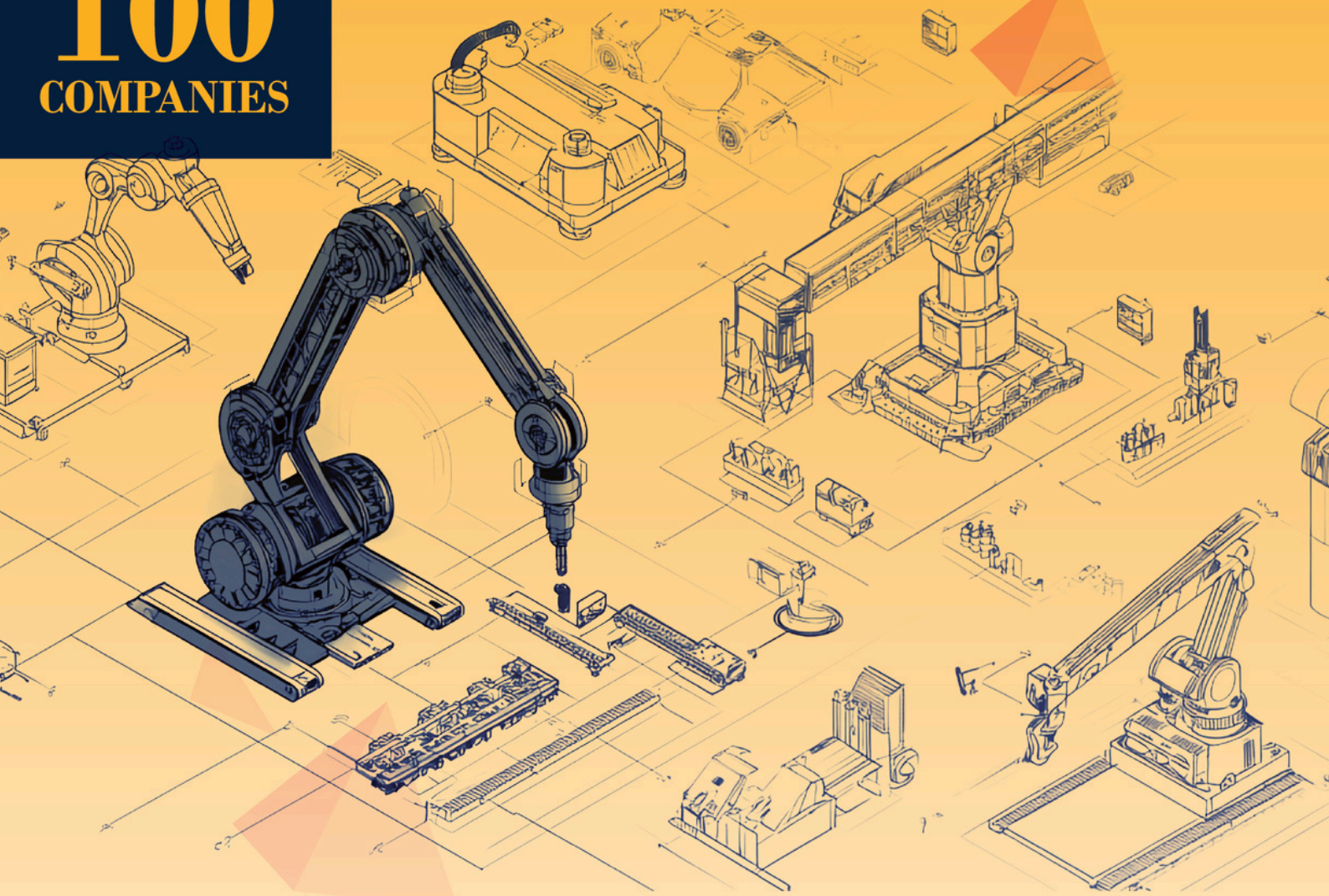
ICIS TOP 100 COMPANIES



Process Equipments

Where, Precision Engineering Meets Innovation

The Leela Corporation
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TECHNO MECH
ENGINEERS

Content

About Us

The Leela Corporation
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Founded in 2015, TLC stands as a global entity, specializing in Chemical Distribution and Hazardous Waste Management. Based in Ahmedabad, Gujarat, India, we take pride in our extensive portfolio encompassing a diverse array of products such as chemicals, strong acids, basic chemicals, inorganic chemicals, solvents, APIs, intermediates, excipients, and food colors. Our commitment to excellence is reflected in our ability to deliver these products with precision through our network of dependable channel partners.

At TLC, we have earned prestigious certifications, including ISO 9001:2015 and ISO 14001:2015, underscoring our dedication to quality and environmental stewardship. As manufacturers and exporters of acrylic-based specialty polymers catering to the pharmaceuticals, cosmetics, and personal care industries in India, TLC has rapidly evolved into a multi-product group. Our proven expertise spans the entire spectrum of various polymers and related products for our valued clients.

What sets TLC apart is not just our products, but our commitment to finding innovative solutions to industry-specific challenges. We take pride in being recognized among the top 100 Companies by ICIS, a testament to our unwavering dedication to excellence. As we ascend to new heights, we remain steadfast in our mission to provide tailored solutions, uphold the highest industry standards, and contribute as “Your partner in Progress”

Our
Vision & Mission

VISION

To be a leading, sustainable, customer-centric Chemicals Company globally by providing world-class products & integrated services based on changing market needs.

MISSION

To provide world-class products & exceptional service to customers with sustainable, cost-efficient, highest quality chemicals.

To create a working environment which provides continuous learning, job satisfaction, respect & growth opportunities for our employees across the globe.

To diversify the Company's product and service offering to meet regional and international market demands.

Our
Core Values

ACCOUNTABILITY

We demonstrate wisdom and experience, yet embrace responsibility for any errors or necessary changes in our processes. Through continuous improvement and a culture of accountability, we are dedicated to advancing every day.

CUSTOMER CENTRICITY

At the core of our philosophy lies customer centricity, propelling our organization to consistently prioritize and surpass customer expectations. We cultivate enduring partnerships through personalized solutions, innovation, and exceptional service.

ENVIRONMENT & SOCIETY

Committed to environmental stewardship and societal well-being, we integrate sustainability and community engagement into all facets of our operations.

INTEGRITY

Integrity is the guiding principle in every aspect of our company's operations, ensuring the highest standards of ethics, transparency, and environmental responsibility.

QUALITY

Quality is our hallmark, propelling excellence across all our operations. From meticulous processes to rigorous standards, we are devoted to delivering products that not only meet but exceed expectations, ensuring customer satisfaction and trust.

TEAMWORK

Internally, we collaboratively work towards common goals, extending our partnership beyond corporate walls to include our customers as integral members of our team. We strive to structure every business relationship as a win-win.

Our
Managing Director

Our most valuable asset goes beyond mere numbers; it lies in the exceptional individuals who bring passion and dedication to our shared vision. In this journey towards success, I don't merely have employees; I have 'MY PEOPLE.'

Ujas Patel
Managing Director

LEAP EMB & Leadership Skill
IIM-Ahmedabad

Meet Our
SBU Directors

Nishant Shah
Director - India Business

Abhishek Panchal
Director - International Business

Rajesh Patel
Director - Finance

About
The Manufacturer

Company Overview & Technical Excellence

Techno Mech Engineers was founded in 1990 and expanded in 2016, our company brings decades of expertise in chemical engineering and industrial machinery solutions. With a deep understanding of chemical reactions, we specialize in selecting and customizing machinery for optimal performance.

Certifications & Compliance

- ISO 9001 Certified, ensuring strict adherence to Standard Operating Procedures (SOPs) and Good Manufacturing Practices (GMP).
- Use of high-quality certified raw materials and superior Material of Construction (MOC) for durability and efficiency.

Our Unique Selling Proposition (USP)

- Strong chemical engineering expertise for precise machinery customization.
- Advanced rubber-lined centrifuge designs for enhanced durability and longer lifespan.
- Efficient, cost-effective services with 24-hour emergency support in case of breakdowns.

Quality Assurance (QA) & Testing Protocols

We ensure top-notch quality with rigorous testing and inspection processes, guaranteeing operational reliability and safety.

Non-Destructive Testing (NDT) for Machinery Reliability

- Radiographic Testing (RT) – Ensures welding joint integrity.
- Deep Penetration Joint Testing (Pinhole Inspection) – Detects micro-defects in welded joints.
- Hydrostatic & Pressure Testing – Verifies structural strength, leakage prevention, and capacity validation.
- Ultrasonic Testing (UT) for Nozzles – Identifies internal flaws for precision engineering.

Surface Finishing

- Buffing & Mirror Finishing for enhanced corrosion resistance and aesthetic appeal, customized for industry-specific applications.

Our commitment to technical excellence, quality assurance, and customer satisfaction makes us a trusted partner in industrial machinery solutions.

Rohan Shah
Director - Techno Mech Engineers

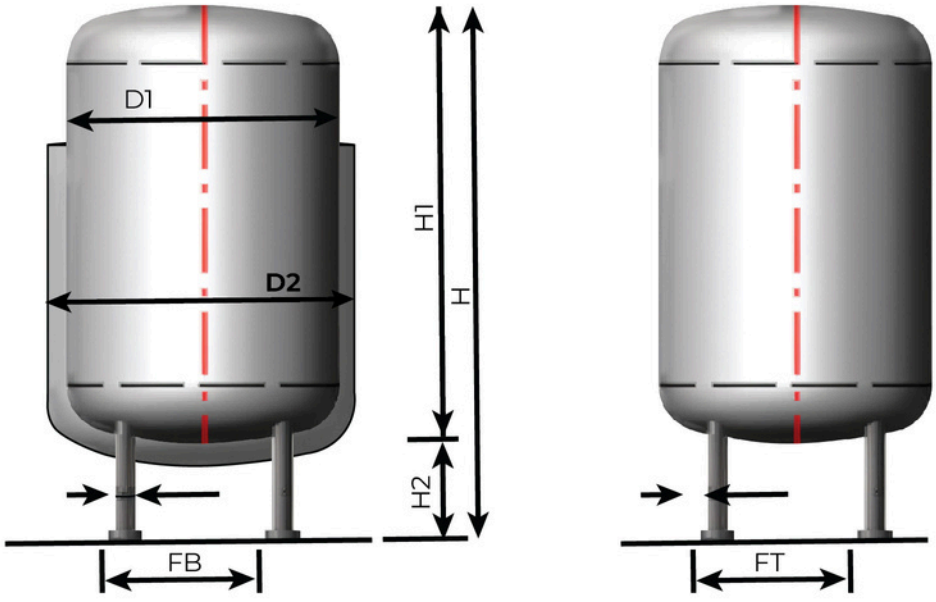
STORAGE TANKS

What are storage tanks:

Storage tanks are engineered containers used for storing liquids, gases, or semi-solids under controlled conditions. They are designed to withstand operational pressures, temperature variations, and environmental conditions. Their structural integrity, material selection, and design parameters are critical for ensuring safety and compliance with industrial regulations. They are widely used in industries such as petroleum, chemical processing, water treatment, food and beverage & pharmaceuticals.

STORAGE TANK SPECIFICATIONS

DIMENSIONS	SPECIFICATIONS										
Gross Vol. (Ltr).	250	500	1080	1600	2000	3000	5000	6300	10000	12500	20000
Total Vol. (Ltr).	340	730	1470	2300	2580	3800	6800	8250	11770	15065	22632
Jacket Vol. (Ltr).	95	150	210	287	340	455	560	630	900	1050	1306
Mini Stirrable Vol. V1 (With ANC) Ltr.	15	32	35	60	60	69	117	158	345	536	536
Mini Sensible Vol. V2 (With ANC) Ltr.	90	204	305	465	465	634	773	1185	2043	2043	2653
Mini Stirrable Vol. V3 (With ANC) Ltr.	32	62	78	150	150	126	242	242	252	252	272
Mini Sensible Vol. V4 (With ANC) Ltr.	85	87	102	215	215	282	1132	1000	1000	1142	1162
Approx Heat Surface (Sq. Mtr.)	1.8	2.7	4.6	6.2	7.3	9.2	13.0	16.1	20.7	25.2	34.0
d1 (mm)	800	1000	1200	1400	1400	1600	2000	2000	2400	2400	2800
d2 (mm)	900	1100	1300	1500	1500	1700	2100	2100	2500	2500	2900
h1 (mm)	2190	2395	2798	3272	3472	3753	4476	4976	5429	6029	6730
h2 (mm)	1004	1155	1560	1560	1560	1560	1560	1560	1560	1560	1560
Drain Valve	80	80	80	80	80	80	100	100	100	100	100
Approx Wgt (kg.)	1038	1532	2122	2835	3014	3801	5572	6924	9527	10747	15202



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TECHNO MECH ENGINEERS

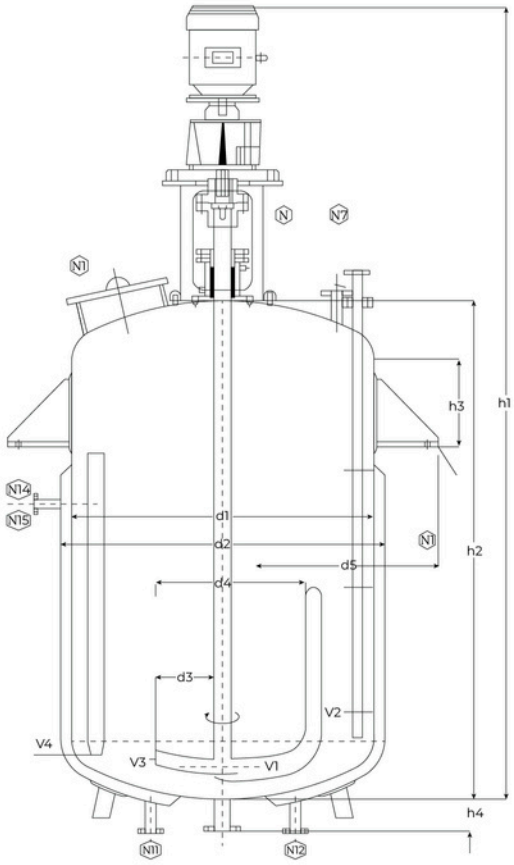
REACTORS

What are Reactors?
Batch reactor vessels are closed, pressurized or atmospheric containers designed to facilitate controlled chemical reactions, phase change, or mixing processes under precise temperature, pressure, and agitations conditions. These reactors operate in a cyclic manner, where reactants are charged, undergo reaction over a specified residence time, and are then discharged before the next batch cycle begins,

Engineered with materials such as **stainless steel (SS304, SS316), glass-lined steel, Hastelloy or titanium**, batch reactors are equipped with **jacketed or internal coil heat transfer systems** for thermal regulation, ensuring optimal reaction kinetics. **Agitation mechanisms**, including anchor, turbine, or helical coil agitators, ensure homogeneous mixing and mass transfer efficiency.

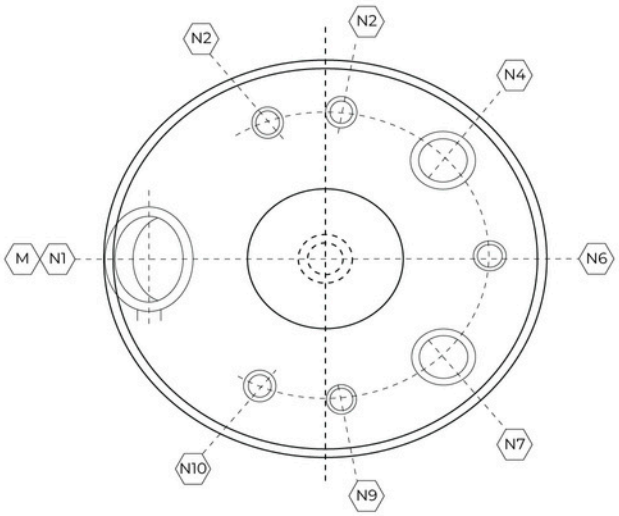
Batch reactors are widely used in the pharmaceutical, chemical, food and specialty polymer industries, where precise control over reaction parameters such as temperature, pressure, pH, and mixing speed is critical.

General Specifications: Capacity, Pressure, Temperature
Capacity: 20 to 50,000 Ltrs
Pressure: up to 32 kg/cm²
Temperature: range up to 320 °C



For - Diameter

1000 - 3000



REACTORS SPECIFICATIONS

DIMENSIONS	SPECIFICATIONS														
Gross Vol. (Ltr).	25	50	100	160	250	500	1080	1600	2000	3000	5000	6300	10000	12500	20000
Total Vol. (Ltr).	35	93	135	250	340	730	1470	2300	2580	3800	6800	8250	11770	15065	22632
Jacket Vol. (Ltr).	15	22	33	71	95	150	210	287	340	455	560	630	900	1050	1306
Mini Stirrable Vol. V1 (With ANC) Ltr.	5	6	6	15	15	32	35	60	60	69	117	158	345	536	536
Mini Sensible Vol. V2 (With ANC) Ltr.	15	34	34	72	90	204	305	465	465	634	773	1185	2043	2043	2653
Mini Stirrable Vol. V3 (With ANC) Ltr.	8	12	12	32	32	62	78	150	150	126	242	242	252	252	272
Mini Sensible Vol. V4 (With ANC) Ltr.	12	19	19	64	85	87	102	215	215	282	1132	1000	1000	1142	1162
Approx Heat Surface (Sq. Mtr.)	0.5	0.8	0.9	1.2	1.8	2.7	4.6	6.2	7.3	9.2	13.0	16.1	20.7	25.2	34.0
d1 (mm)	200	508	508	800	800	1000	1200	1400	1400	1600	2000	2000	2400	2400	2800
d2 (mm)	300	600	600	900	900	1100	1300	1500	1500	1700	2100	2100	2500	2500	2900
d3 (mm)	150	300	300	480	480	600	720	840	840	960	1100	1100	1300	1300	1500
d4 (mm)	175	420	420	670	670	880	1060	1250	1250	1440	1630	1810	2618	2618	3200
d5 (mm)	375	756	756	1056	1056	1355	1559	1780	1780	1980	2414	2414	2800	2800	2818
h1 (mm)	1000	1558	1758	1993	2190	2395	2798	3272	3472	3753	4476	4976	5429	6029	6730
h2 (mm)	400	590	790	812	1004	1155	1560	1810	2010	2225	2560	3060	3384	3384	3795
h3 (mm)	200	300	300	320	360	405	432	475	475	485	640	640	3180	3780	4385
h4 (mm)	70	70	70	70	70	78	76	80	80	80	86	86	84	84	84
Drain Valve	40	50	50	80	80	80	80	80	80	80	100	100	100	100	100
Drive Power (H.P.)	1	1	1	2	2	3	3		5	5	15	15	15	20	25
Approx Wgt (kg.)	380	445	500	935	1038	1532	2122	2835	3014	3801	5572	6924	9527	10747	15202

NOZZELS	SPECIFICATIONS													
Gross Vol. (Ltr).	63	100	160	250	500	1000	1600	2000	3000	5000	6300	10000	12500	20000
N1	100	100	150	150	250	450	450	450	450	500	500	500	500	500
N2, N10	40	40	50	50	100	100	100	100	100	150	150	-	-	-
N3	-	-	-	-	-	100	100	100	100	150	150	250	250	250
N4	80	80	80	80	100	100	-	-	-	-	-	200	200	200
N5, N7	-	-	-	-	-	200	200	200	200	250	250	300	300	300
N6	80	80	80	80	150	100	100	100	100	150	150	200	200	200
N8	50	50	80	80	100	-	-	-	-	-	-	250	250	250
N9	-	-	-	-	-	100	100	100	100	150	150	200	200	200
M	50	50	80	80	125	125	150	150	150	200	200	250	250	250
L	80	80	100	100	100	100	100	100	100	100	150	150	150	150
N11	40	40	40	40	50	50	50	50	50	80	50	50	50	50
N12	-	-	-	-	-	-	50	50	50	80	80	80	80	80
N14	40	40	40	40	50	50	50	50	50	80	80	80	80	80
N15	-	-	-	-	-	-	50	50	50	80	80	80	80	80
N13, T11	½"BSP	½"BSP	½"BSP	½"BSP	½"BSP	½"BSP	½"BSP	½"BSP	½"BSP	½"BSP	½"BSP	½"BSP	½"BSP	½"BSP

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TECHNO MECH ENGINEERS

MoC Offered

MoC offered:

Mild Steel (MS) - Economical and strong, used for non-corrosive liquids like water and fuels.

MS Rubber Lined - Provides chemical resistance, ideal for storing acids & corrosive chemicals.

Stainless Steel 304 (SS304) - Corrosion-resistant, widely used for food, beverage, and mild chemical storage.

Stainless Steel 316 (SS316) - Superior corrosion resistance, preferred for marine, pharmaceutical, and chemical applications.

Stainless Steel 304L (SS304L) - Low-carbon variant of SS304, used for weld-critical applications to prevent carbide precipitation.

Stainless Steel 316L (SS316L) - Low-carbon SS316, ideal for high-purity applications in pharmaceuticals and biotech.

Inconel - High temperature and oxidation-resistant, used in aerospace and extreme chemical environments.

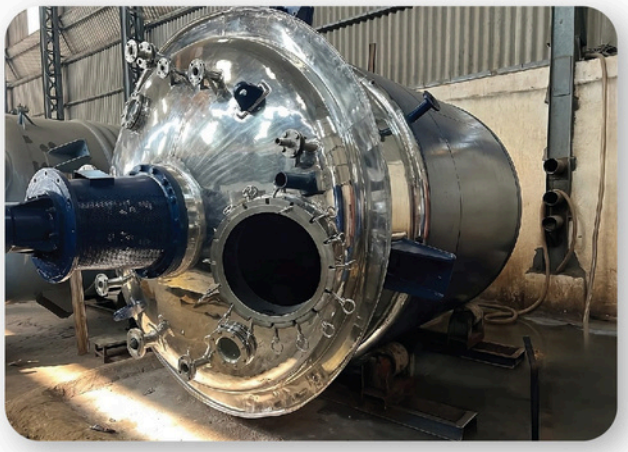
Monel - Nickel-copper alloy, excellent for seawater and acidic environments in marine and chemical industries.

Hastelloy - Exceptional resistance to highly aggressive chemicals, used in acid processing and extreme conditions.

Titanium - Lightweight and highly corrosion-resistant, best for seawater, and medical applications.

Aluminium - Lightweight and corrosion-resistant, used for portable water and fuel storage.

High-Density Polymer (HDP/HDPE/PPE) - Chemically resistant and cost-effective. Used for acids, alkalis, and water storage.



The MoCs offered are same for storage tanks & reactors .

JACKETS

1. **Conventional Single Jacket** - Simple external jacket for moderate heating or cooling applications using steam or water.

2. **Limpet Jacket** - Partial wrap-around jacket with high transfer efficiency, used for heating with steam or oil in chemical reactors.

3. **Double Limpet Jacket** - Dual-channel limpet jacket for enhanced thermal control, ideal for processes requiring precise temperature regulation.

4. **Inner Coil Jacket** - Internally placed coil for efficient heat exchange, commonly used in high-viscosity fluid processing.

We provide glass wool fabric insulation on top of storage tanks for effective thermal protection. The jackets are constructed from mild steel, ensuring durability and optimal heat transfer.

The jackets offered are same for storage tanks & reactors .

Conventional Single Jacket

Limpet Jacket

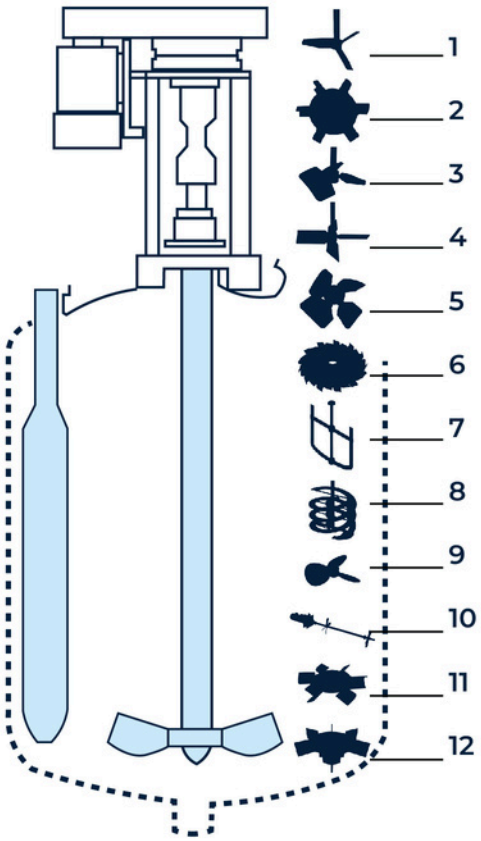
Double Limpet Jacket

Inner Coil Jacket

AGITATORS

Unlimited Impeller Options

Impeller and baffle configurations can be adapted to serve all basis process operations. In addition, other factors, such as drive speed and baffle arrangement, can be altered to enable most impellers to be used in more than one of the five basic unit operations.



1. **TM302 Hydrofoil** A high - efficiency axial flow impeller designed for low shear mixing and high pumping capacity.

2. **CBT601** – A curved blade turbine providing excellent radial and axial flow for gas dispersion and blending.

4. **Pitched Blade Turbine** – A widely used impeller with pitched blades for both axial and radial flow mixing.

3. **TM304** – An axial flow impeller designed for efficient mixing of high-viscosity fluids with minimal shear.

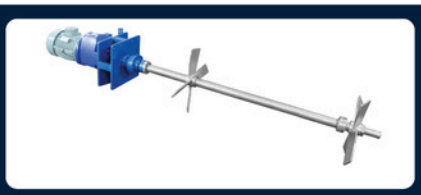
5. **TM405** – A specialized impeller designed for improved turbulence and enhanced mixing in various applications.

6. **Cowls Disc** – A high-shear dispersing disc ideal for emulsification and suspension of solids.

7. **Anchor** – A low-speed agitator suited for high-viscosity fluids, preventing settling and ensuring uniform mixing.

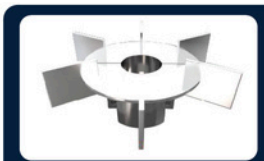
8. **Spiral Helix** – A helical agitator designed for efficient mixing of viscous and non - Newtonian fluids.

9. **Marine Propeller** A standard axial flow impeller delivering strong pumping action for blending and circulation.



10. **CBT-602** – A modified curved blade turbine with enhanced efficiency for high-viscosity applications.

11. **Double Twist DB-1** – A specialized impeller with twisted blades for improved turbulence and shear.



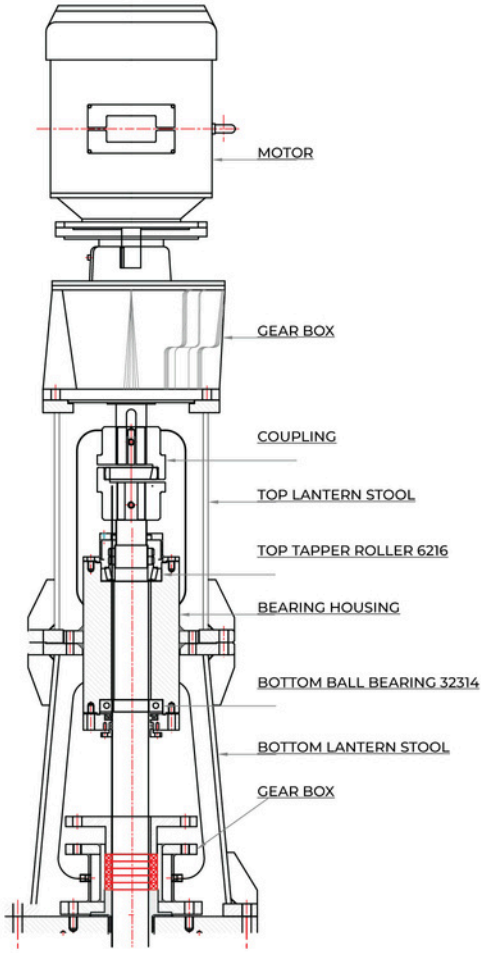
12. **FBT-101** – A flat blade turbine designed for high shear and effective gas dispersion.

TYPES OF SEALS

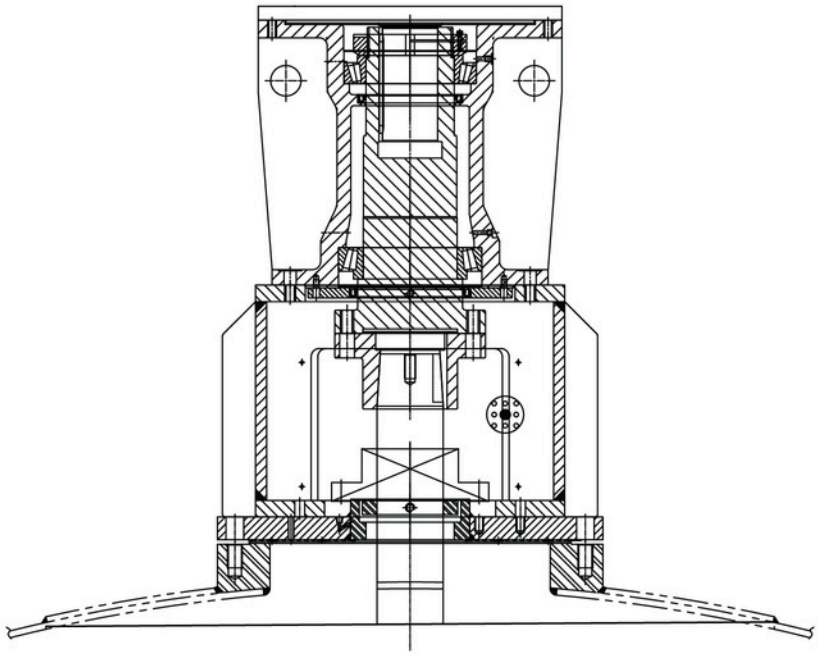
1. **Gland Pusher Seal** - A conventional stuffing box seal using compressed packing rings to minimize leakage, suitable for low-pressure applications.

2. **Single Mechanical Seal** - A precision-engineered seal with one sealing interface, used for moderate-pressure applications to prevent leakage with minimal maintenance.

3. **Double Mechanical Seal** - A dual-barrier seal offering enhanced leak protection, ideal for handling hazardous, high-pressure, or vacuum processes with an external flushing system.



Gland Pusher Seal



Mechanical Seal

CENTRIFUGE

What are Centrifuge?
A centrifuge is a high-speed rotating equipment designed for the separation of solids & liquids or immiscible liquid phases based on density differences using centrifugal force. It operates by subjecting a mixture to high rotational speeds, generating centrifugal acceleration that forces denser components outward while lighter components move inward, enabling efficient phase separation.

Industrial centrifuges are classified based on operational principles, including **sedimentation (decanter, tabular bowl) and filtration (peeler, basket, pusher-type)** designs.

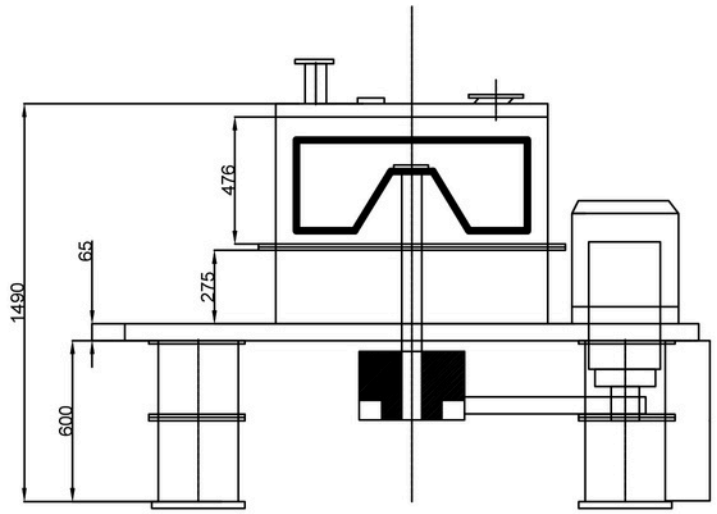
Centrifuges are widely used in the **chemical, pharmaceutical, food processing and wastewater treatment industries** for dewatering, clarification, and product recovery. Their performances depends on factors such as **rotational speed (RPM), G-force, feed rate, and filtration media**, with automation systems enabling precise control over separation efficiency and process consistency.

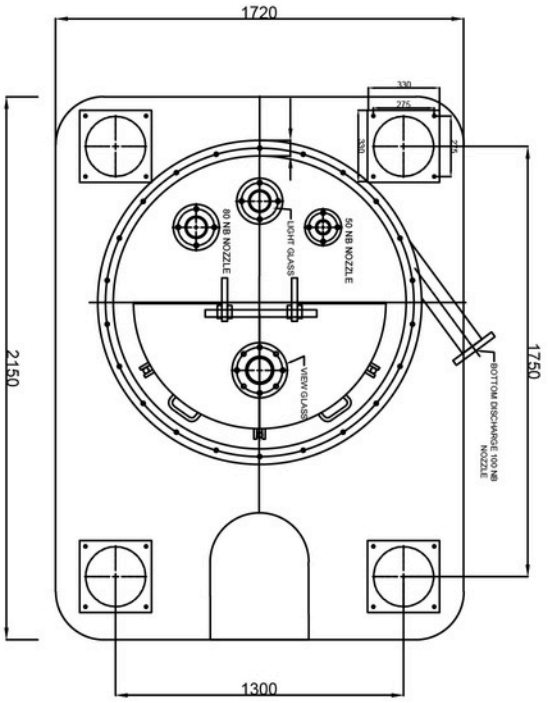
Basket Type Centrifuge: A **basket-type centrifuge** is a filtration-based centrifugal separator designed to remove solid particles from liquid slurries. It operates by rotating a perforated basket, which holds a filter medium. When a slurry is introduced, centrifugal force pushes the liquid through the filter media, leaving the solids behind. The filtrate is discharged through an outlet, while the collected solids remain in the basket, which is periodically emptied.

1. **Top Discharge Centrifuge:** In a **top discharge basket centrifuge**, the separated solids are removed from the centrifuge basket through an opening at the top of the unit. This design allows for efficient and clean removal of the collected solids after the separation process is complete. However, discharging the solids may have to be done manually in some cases, which can be time - consuming. The top discharge configuration reduces the need for manual handling in automated setups and enhances safety by allowing the solids to be discharged directly into a container or conveyor system. This setup is commonly used for processes requiring **high - volume solid discharge** and is beneficial in applications where the discharge needs to be quick and automated.

2. Bag Lifting Top Discharge Centrifuge: A **bag lifting top discharge basket centrifuge** integrates a **bag lifting mechanism** that facilitates the removal of solids by lifting the filter bag from the centrifuge basket. This design is often used for applications where the separated solids need to be collected in a **filter bag**, simplifying disposal or further processing. The **bag lifting mechanism** allows for easy removal and replacement of the bag without manual handling, improving process hygiene and reducing labor costs. It is typically employed in industries where **cleanliness** and **minimal product loss** are critical, such as in the **pharmaceutical** or **food processing** sectors.

CENTRIFUGE SPECIFICATIONS





Technical Specifications of modes currently being manufactured										
Sr. No.	**MODEL NO. ACE**		**30-5**	**45-5**	**60-5**	**75-5**	**90-5**	**100-5**	**120-5**	**150-4**
01	Basket Diameter	mm	300	450	600	750	900	1000	1200	1500
02	Basket Mouth Diameter	mm	250	325	425	550	600	700	800	1000
03	Height of Basket Shelf	mm	250	250	325	325	480	480	480	600
04	Rated Charge of Basket	kg	07	18	45	75	187	211	330	660
05	Max. Cake Capacity of Basket	ltr	06	20	44	66	170	192	300	600
06	Filter Area of Basket	sq.m	0.24	0.35	0.6	0.76	1.35	1.5	1.8	2.82
07	Basket Speed	RPM	1400	1400	1220	1100	1000	950	900	700
08	Acceleration a Basket Periphery	'G' Units	330	500	499	507	503	500	540	400
09	Power of Motor	HP KW	1 0.75	2 1.5	3 2.20	5 3.70	7.5 5.5	10 7.5	15 11.25	20 15.00
10	Machine Area (Approx.)	mtr	0.6X0.8	0.9X1	1.2X1.5	1.5X1.7	1.7X1.9	1.9X2.2	2.2X2.5	2.5X2.8
11	Machine Weight (Approx.)	kg	225	650	950	1150	1800	2000	3000	4000

Note: The maximum cake capacity of basket is based on the mechanical design calculations. Other restrictions such as density, viscosity, and other characteristics of the material handled may result in lower outputs.

Note: Dimensions and specification are subject to change without prior notice.

Type of support for centrifuge:

- 3 leg
- 4 leg

Feature	3-Leg Support	4-Leg Support
Stability	Moderate, less stable under high loads.	High, better for uneven or high-load conditions.
Cost	Lower cost, simpler design.	Higher cost, more complex design.
Space Requirement	Compact, requires less space.	Requires more space due to additional leg.
Maintenance	Easier to maintain with fewer components	More complex maintenance with extra cost.
Load Distribution	Uneven, can stress base in high speed operations.	Even distribution, better for high-speed operations.
Vibration Dampening	Less effective.	Better dampening, smoother operation.
Design Complexity	Simpler, fewer structural elements.	More complex with extra components.
Installation	Quick, but needs ground space and immovable.	Time-consuming but movable, no ground support needed.

3-Leg Centrifuge

4-Leg Centrifuge

Operational Type:

- Variable Frequency Drive (VFD)
- Clutch Pulley Drive (CPD)

Feature	Variable Frequency Drive	Clutch Pulley Drive
Speed Control	Provides precise, continuous speed control by adjusting frequency.	Provides discrete speed changes by engaging/disengaging the clutch.
Energy Efficiency	More energy-efficient as speed adjusts according to load.	Less efficient due to mechanical power transfer and losses.
Start/Stop	Smooth acceleration and deceleration, reducing stress.	Abrupt starts and stops, causing higher mechanical stress.
Complexity	More complex with electronic control systems.	Simpler mechanical system with basic components.
Cost	Higher initial cost due to advanced electronics.	Lower cost, simpler design.
Maintenance	Requires regular maintenance of electronic components.	Easier to maintain with fewer electronic parts.
Wear & Tear	Minimal wear on motor components.	More wear on clutch and pulley components from mechanical engagement.

MoC of centrifuge

MS rubber line

SS304

SS316

SS with halar coating

Service Offerings

- Annual Maintenance Contracts (AMC).
- One-year free AMC, covering three scheduled services.
- Renewal from the second year at minimal costs.
- Machine Modification & AMC Services: Available for both in-house and third-party (non-Technomech) machinery.
- ***We also provide Turn-Key Projects.***

The Leela Corporation
Your Partner in Progress

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TECHNO MECH ENGINEERS

Manufactured by **Techno Mech Engineers**
Marketed by **The Leela Corporation**

Get In Touch

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