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THE SOUTHERN INDIA ENGINEERING MANUFACTURERS' ASSOCIATION

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SIEMA extends its heartfelt congratulations on the historic victory in the 2026 elections and on assuming office of **Sri. C. Joseph Vijay** *as the* **Chief Minister of Tamil Nadu.**
We wish the Honourable Chief Minister every success in leading the State towards continued progress, prosperity, and inclusive development.
May your visionary leadership foster industrial growth, strengthen public welfare, and enhance the overall well-being of the people of Tamil Nadu.

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From the President's Desk

Dear Members,

Greetings from SIEMA.

The manufacturing sector today is navigating a rapidly evolving business landscape marked by technological advancements, increasing regulatory requirements, changing market dynamics, and heightened global competition. In such an environment, continuous learning, proactive engagement with policymakers, and collective industry representation have become more important than ever. Industry associations like SIEMA play a vital role in bringing stakeholders together, facilitating knowledge sharing, and ensuring that the concerns and aspirations of the manufacturing community are effectively conveyed to the authorities. With this objective, SIEMA has continued to undertake several initiatives during the month for the benefit of its members and the industry at large.

I am pleased to share with you some of the important activities undertaken by the Association during the month in our continued efforts to enhance member awareness, strengthen industry engagement, and represent the interests of the engineering and pump manufacturing sectors.

A **Workshop on Cyber Security for MSMEs** was jointly arranged for the members of SIEMA and COINDIA on **15th April 2026**. The workshop was conducted by a team from Deloitte and covered important aspects such as the overview of cyber risks faced by MSMEs, CERT-In requirements on cyber security, application security, DPDP and other compliance requirements, third-party risk management, Security Operations Centre (SOC) requirements, and strategies for prioritizing cyber security within organizations. The programme received an encouraging response, with nearly 40 members participating and benefiting from the expert guidance provided.

Further, on **20th April 2026**, SIEMA jointly with ICCIC organized a **Focused Group Discussion with officials from the Reserve Bank of India (RBI)**. The interaction provided an excellent platform for members to directly convey their concerns and suggestions relating to financial and banking matters.

The RBI team also conducted a survey to gather feedback from industry representatives and obtain a better understanding of the challenges faced by MSMEs. Such interactions are valuable in facilitating constructive dialogue between industry and regulatory authorities.

SIEMA has also continued its efforts in representing issues affecting the pump manufacturing industry before the Government. A detailed representation highlighting the challenges faced by the Pump Industry and various measures required for its growth and competitiveness was submitted to S**ri. C. Joseph Vijay, Hon'ble Chief Minister of Tamil Nadu.** The representation was sent through email as well as by registered post, seeking the Government's support for the sustainable development of the sector.

As always, SIEMA remains committed to addressing industry concerns, creating knowledge-sharing opportunities, and engaging with policymakers and stakeholders for the overall growth of our sector. I encourage all members to actively participate in our forthcoming programmes and contribute their valuable suggestions for the benefit of the Association and the industry.

With warm regards,



Mithun Ramdas
President

Mission & Vision

To enable our members to compete globally with their products and services

- *To extend support to our member industries to prosper*
- *To offer up-to-date technical support to members*
- *To train and enable members to meet the global challenges in technology and competitiveness*
- *To develop techno-commercial co-operation with international enterprises*
- *To promote programmes for enhancing the quality of life of all stake-holders*
- *To represent members on common issues with the policy makers.*

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The opinions and views expressed in this magazine are those of the respective authors.

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SIEMA Activities Corner

Workshop on Cyber Security for MSMEs - 15th April 2026

SIEMA, jointly with COINDIA, organized a Workshop on Cyber Security for MSMEs on 15th April 2026 for the benefit of its members. The workshop was conducted by a team of experts from Deloitte, who provided valuable insights into the growing cyber security challenges faced by industries, particularly MSMEs.

The presentation covered the following key areas:

- Overview of Cyber Risks for MSMEs
- CERT-In requirements on Cyber Security
- Baseline requirements relating to:
  - » Application Security
  - » DPDP and other Compliance Requirements
  - » Third-Party Risk Management
  - » Security Operations Centre (SOC)
  - » Strategies for prioritizing Cyber Security within organizations

The programme was well attended by nearly 40 members and witnessed active participation and interaction from the attendees. The workshop enabled participants to gain a better understanding of cyber security risks and the measures required to safeguard their organizations against evolving cyber threats.

SIEMA Jointly with ICCIC - Focused Group Discussion with RBI - 20th April 2026

A Focused Group Discussion with officials from the Reserve Bank of India (RBI) was organized by SIEMA jointly with ICCIC on 20th April 2026. The interaction provided an opportunity for industry representatives to directly engage with RBI officials and share their views on matters affecting MSMEs.

The discussions focused on the following subjects:

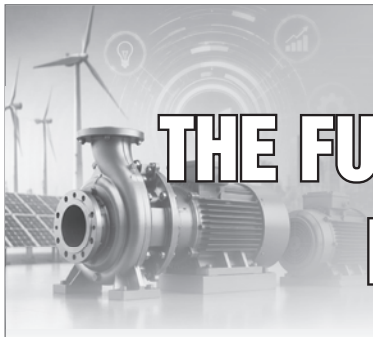
- Improving Credit Flow to MSMEs
- Issues relating to Bank Policies and Procedures

The RBI team also conducted a survey to gather feedback from participants on the above subjects. Members actively shared their experiences and suggestions, which will assist the RBI in understanding the challenges faced by MSMEs and in formulating suitable measures to improve access to finance and banking services.

Subjects Relating to Central & State Governments

SIEMA continues to represent the interests of the Pump Manufacturing Industry before various Government authorities. During the month, a detailed representation was submitted to **Sri. C. Joseph Vijay**, **Hon'ble Chief Minister of Tamil Nadu**, highlighting the challenges presently faced by the Pump Industry and proposing various measures for the growth and development of the sector.

The representation emphasized the need for Government support to enhance the competitiveness of the industry, address key operational challenges, and create a favourable environment for sustainable industrial growth. The representation was forwarded through email and also sent by Registered Post to the Hon'ble Chief Minister for his kind consideration.



THE FUTURE OF ENERGY-EFFICIENT PUMPS AND MOTORS

Part I: Driving Sustainability Through Intelligent Energy Use

Introduction

Energy has become one of the defining challenges of the twenty-first century. Growing industrialization,rapid urbanization, population expansion, and increasing standards of living have significantly increasedthe global demand for electricity. At the same time, nations across the world are striving to reducegreenhouse gas emissions and meet ambitious climate commitments. In this context, improving energyefficiency is no longer merely an option for industries; it has become a strategic imperative.

Among all industrial equipment, pumps and motors occupy a unique position. They constitute the invisibleworkhorses of modern civilization. Whether transporting water to cities, irrigating agricultural fields,circulating fluids in chemical plants, supporting mining operations, or powering manufacturing processes,pumps and motors enable countless activities that sustain economies and societies.

Yet, despite their indispensable role, these systems are also among the largest consumers of electricalenergy worldwide. Studies conducted by international agencies indicate that electric motor systemsaccount for nearly half of global electricity consumption. A substantial portion of this energy is consumedby pumps operating in industrial, commercial, agricultural, and municipal applications.

This reality presents both a challenge and an opportunity. Even modest improvements in pump and motorefficiency can result in enormous reductions in energy consumption, operating costs, and carbonemissions. Consequently, the future of pumping systems lies in intelligent design, advanced materials,optimized operation, and integrated energy management.

This article examines the emerging landscape of energy-efficient pumps and motors, explores technologicaladvancements, discusses the factors driving adoption, and highlights the opportunities that lie ahead.

The Global Energy Challenge

Global electricity demand has continued to rise steadily over the past several decades. Industrial activitiesremain among the largest contributors to this demand.

Several factors are reshaping industrial energy strategies:

- Rising electricity tariffs;
- Growing concerns over climate change;
- National commitments toward carbon neutrality;
- Increasing regulatory requirements;
- Investor emphasis on sustainability;
- Demand for competitive manufacturing.

Historically, industries focused primarily on minimizing capital expenditure when selecting equipment.Purchasing decisions often prioritized the lowest acquisition cost rather than long-term operating efficiency.

However, this perspective has undergone a dramatic transformation.

Today, decision-makers increasingly recognize that the purchase price of a pump or motor represents onlya small fraction of its total lifetime cost. Energy consumed during operation often constitutes the largestcomponent of ownership expenses.

In many applications, electricity costs account for approximately 85–90 percent of the total life-cycle cost ofpumping systems.

Consequently, improving energy efficiency has become one of the most effective strategies for enhancingprofitability while simultaneously supporting environmental stewardship.

Why Pumps and Motors Matter

Pumps and motors form the backbone of industrial infrastructure.

They are used extensively in:

Water Supply and Distribution

Municipal water systems depend on pumps to transport millions of litres of water daily from treatmentplants to consumers.

Agriculture

Irrigation pumps play a vital role in global food production, particularly in regions dependent ongroundwater extraction.

Process Industries

Chemical plants, refineries, pharmaceutical units, and food processing facilities require reliable fluidmovement throughout their operations.

HVAC Systems

Heating, ventilation, and air-conditioning systems employ pumps and motors to maintain indoor comfort incommercial buildings.

Power Generation

Thermal and renewable power facilities rely on pumping systems for cooling, feedwater circulation, andauxiliary functions.

Mining and Construction

Heavy-duty pumps enable dewatering, slurry transport, and material handling operations.

Because these systems operate continuously or for extended durations, even minor inefficiencies cantranslate into substantial energy losses.

For example, improving pump efficiency by just a few percentage points can save thousands of kilowatt-hours annually in large installations.

When multiplied across thousands of facilities worldwide, the cumulative impact becomes enormous.

Understanding Pumping System Efficiency

Energy efficiency in pumping systems extends beyond the performance of individual components.

A pumping system generally comprises:

- Electric motor;
- Pump;
- Coupling;
- Drive mechanism;
- Piping network;
- Valves and fittings;
- Control systems.

The overall efficiency of the system depends on how effectively these elements work together.

The relationship may be represented as:

System Efficiency = Motor Efficiency × Pump Efficiency × Drive Efficiency × Operational Efficiency

Inefficiencies occurring at any stage reduce overall performance.

Common sources of energy loss include:

Oversized Equipment

Pumps are frequently selected with excessive safety margins.

Oversizing often results in operation away from the Best Efficiency Point (BEP), leading to unnecessaryenergy consumption.

Throttling Losses

Flow control through partially closed valves dissipates useful energy.

Poor Piping Design

Excessive bends, restrictions, and undersized piping increase friction losses.

Mechanical Losses

Bearing friction, seal losses, and misalignment contribute to wasted energy.

Electrical Losses

Motor winding resistance and magnetic losses reduce conversion efficiency.

Improper Maintenance

Wear, cavitation, and component degradation gradually diminish performance.

Addressing these inefficiencies requires a holistic approach focused on optimizing the entire pumpingsystem rather than isolated components.

Evolution of Motor Efficiency Standards

Electric motors have undergone remarkable evolution over the past several decades.

Efficiency improvements have been driven by advances in engineering, manufacturing capabilities, andregulatory interventions.

International standards classify motor efficiencies using IE ratings.

IE1 - Standard Efficiency

These motors represented the traditional benchmark for industrial applications.

While reliable, they exhibit comparatively higher losses.

IE2 - High Efficiency

Improved magnetic materials and optimized designs enabled moderate reductions in energy consumption.

IE3 - Premium Efficiency

IE3 motors have become increasingly common due to regulatory requirements and favorable economics.

Benefits include:

- Reduced operating costs;
- Lower heat generation;
- Enhanced reliability;
- Improved service life.

IE4 – Super Premium Efficiency

These motors employ advanced technologies to further minimize losses.

Typical characteristics include:

- Improved rotor designs;
- Reduced stray load losses;
- Optimized magnetic circuits.

IE5 – Ultra Premium Efficiency

Representing the current frontier of efficiency, IE5 motors utilize cutting-edge innovations.

- Potential technologies include:
- Permanent magnet designs;
- Synchronous reluctance configurations;
- Hybrid constructions.

IE5 motors deliver significant energy savings, particularly in continuous-duty applications.

As manufacturing scales improve and costs decline, their adoption is expected to accelerate.

Life-Cycle Cost: A New Decision-Making Paradigm

Traditional procurement practices often focused on minimizing initial purchase costs.

However, the concept of Life-Cycle Cost (LCC) has fundamentally altered purchasing decisions.

Life-cycle cost includes:

Initial Investment

Purchase price, installation expenses, and commissioning costs.

Energy Consumption

Electricity expenses incurred throughout operation.

Maintenance Costs

Routine servicing, spare parts, and labor requirements.

Downtime Costs

Production losses arising from equipment failures.

Disposal Costs

End-of-life replacement and decommissioning expenses.

Studies consistently demonstrate that energy expenses dominate life-cycle costs.

A slightly more expensive high-efficiency motor may recover its additional investment within a relativelyshort period through reduced electricity consumption.

Organizations increasingly evaluate projects based on total ownership costs rather than acquisition costsalone.

This shift is accelerating the transition toward energy-efficient technologies.

Pump Hydraulic Efficiency: Small Improvements, Big Savings

Pump efficiency reflects how effectively mechanical energy is converted into hydraulic energy.

Several factors influence hydraulic performance.

Impeller Design

Modern computational tools enable precise optimization of impeller geometry.

Improved blade profiles minimize turbulence and hydraulic losses.

Volute Optimization

Enhanced casing configurations improve fluid flow characteristics.

Surface Finish

Smooth hydraulic passages reduce friction losses.

Precision Manufacturing

Tighter tolerances ensure consistent performance.

Material Selection

Advanced materials enable improved durability and dimensional stability.

Contemporary design methods increasingly employ Computational Fluid Dynamics (CFD).

CFD simulations allow engineers to visualize flow behavior and identify opportunities for improvementbefore physical prototypes are constructed.

This reduces development cycles while enhancing efficiency.

The Importance of Operating Near the Best Efficiency Point

Every pump possesses a Best Efficiency Point (BEP).

At this operating condition:

- Hydraulic losses are minimized;
- Vibration levels are reduced;
- Mechanical stresses are balanced;
- Reliability is enhanced;
- Energy consumption is optimized.

Operating significantly away from the BEP can result in:

- Increased power consumption;
- Excessive vibration;
- Premature bearing failure;
- Seal deterioration;
- Cavitation;
- Reduced equipment life.

Unfortunately, many installations routinely operate outside their optimal ranges.

This often occurs due to:

- Incorrect sizing;
- Changing process demands;
- Improper control strategies;
- System modifications.

Modern engineering practices increasingly emphasize proper selection and continuous optimization tomaintain operation near the BEP.

Energy Audits: Identifying Hidden Opportunities

Energy audits provide valuable insights into system performance.

A systematic assessment can uncover inefficiencies that remain unnoticed during routine operation.

Typical audit activities include:

Data Collection

Recording flow rates, pressures, operating hours, and power consumption.

Performance Measurement

Comparing actual performance with design expectations.

Equipment Evaluation

Assessing motor loading, pump condition, and control strategies.

System Analysis

Identifying bottlenecks and hydraulic restrictions.

Improvement Recommendations

Developing economically viable action plans.

Common recommendations emerging from energy audits include:

- Pump resizing;
- Impeller trimming;
- Motor replacement;
- Variable speed control implementation;
- Piping modifications;
- Preventive maintenance enhancement.

Many facilities achieve substantial savings with relatively modest investments following such audits.

Sustainability and Corporate Responsibility

Energy efficiency extends beyond economic considerations.

Businesses increasingly recognize their broader environmental responsibilities.

Reducing energy consumption contributes directly to:

- Lower greenhouse gas emissions;
- Reduced dependence on fossil fuels;
- Improved resource utilization;
- Enhanced corporate reputation;
- Compliance with sustainability reporting frameworks.

Environmental, Social, and Governance (ESG) considerations have become increasingly influential ininvestment decisions.

Organizations demonstrating proactive energy management often enjoy stronger stakeholder confidence.

Energy-efficient pumps and motors therefore represent both operational assets and strategic sustainabilitytools.

Emerging Drivers of Change

Several forces are accelerating the transition toward energy-efficient systems.

Rising Energy Prices

Escalating electricity costs strengthen the business case for efficiency investments.

Regulatory Pressure

Governments worldwide continue introducing stricter efficiency standards.

Technological Advancement

Innovations make efficient technologies increasingly accessible.

Customer Expectations

Consumers and industrial buyers increasingly value sustainability.

Competitive Advantage

Energy-efficient operations enhance profitability.

Climate Commitments

Organizations seek practical pathways toward emission reduction targets.

Collectively, these drivers are reshaping the future of the pump and motor industry.

Looking Ahead

The evolution of pumps and motors reflects a broader transformation in industrial thinking. The emphasisis shifting from simply moving fluids and generating motion to doing so intelligently, responsibly, andsustainably.

Energy efficiency is no longer confined to technical specifications buried within product catalogues. It hasemerged as a strategic priority influencing equipment design, procurement practices, operationalphilosophies, and corporate sustainability agendas.

The future promises exciting developments. Advanced motor technologies, variable speed operation, digitalmonitoring, and predictive analytics are poised to redefine the capabilities of pumping systems.

In the next part of this article, we will explore how high-efficiency motor technologies, Variable FrequencyDrives (VFDs), digitalization, and smart energy management are transforming the landscape of industrialpumping and paving the way for a more efficient future.

Part II: High-Efficiency Motor Technologies, Variable Frequency-Drives, and the Rise of Smart Energy Management

Introduction

The pursuit of energy efficiency in pumping systems has evolved far beyond the traditional approach ofsimply selecting an efficient pump. Today, industrial facilities are embracing integrated solutions thatcombine advanced motor technologies, intelligent speed control, digital monitoring, and sophisticatedenergy management practices.

In this transformation, three developments stand out as game changers:

The emergence of high-efficiency motor technologies;

The widespread adoption of Variable Frequency Drives (VFDs);

The integration of smart energy management systems.

Together, these innovations are redefining how pumping systems are designed, operated, and maintained.They not only reduce electricity consumption but also enhance reliability, extend equipment life, andsupport sustainability objectives.

This article explores these transformative technologies and examines their growing role in shaping thefuture of industrial pumping systems.

High-Efficiency Motor Technologies

Electric motors convert electrical energy into mechanical energy. Even small improvements in motorefficiency can produce substantial energy savings because motors often operate continuously over manyyears.

Modern high-efficiency motors achieve superior performance through a combination of improvedmaterials, optimized designs, and advanced manufacturing processes.

Improved Magnetic Materials

Modern motors utilize high-grade electrical steel with lower core losses.

Benefits include:

- Reduced hysteresis losses;
- Lower eddy current losses;
- Improved magnetic performance;
- Enhanced efficiency.

Copper Rotor Technology

Traditional induction motors often employ aluminium rotors.

Copper rotor designs provide:

- Lower electrical resistance;
- Reduced rotor losses;
- Improved efficiency;
- Better thermal characteristics.

Although manufacturing complexity increases, the energy savings often justify the investment.

Permanent Magnet Motors

Permanent Magnet (PM) motors represent one of the most significant developments in motor technology.

Unlike conventional induction motors, PM motors utilize rare-earth magnets embedded within the rotor.

Advantages include:

- Exceptional efficiency;
- Compact design;
- Lower operating temperatures;
- Superior partial-load performance;
- Reduced maintenance requirements.

These motors are increasingly adopted in applications where energy consumption is substantial.

Synchronous Reluctance Motors

Synchronous Reluctance (SynRM) motors have gained considerable attention.

Their operating principle relies on magnetic reluctance differences rather than rotor currents.

Benefits include:

- Very high efficiencies;
- Reduced rotor losses;
- Simple construction;
- Elimination of rotor windings;
- Excellent compatibility with VFDs.

SynRM technology is expected to witness rapid growth in industrial applications.

Variable Frequency Drives: The Efficiency Revolution

One of the most influential developments in pumping systems has been the introduction of VariableFrequency Drives (VFDs).

Historically, many pumps operated at constant speed regardless of actual process requirements.

Flow regulation was commonly achieved using throttling valves.

This approach wasted considerable energy.

VFDs changed this paradigm.

How VFDs Work

A Variable Frequency Drive controls the speed of an electric motor by adjusting the frequency and voltagesupplied to it.

The process involves:

Rectification

Incoming AC power is converted into DC power.

DC Link Stabilization

Capacitors smooth the DC voltage.

Inversion

Power electronics recreate AC output at variable frequencies.

Motor Control

Motor speed changes according to process demand.

This enables pumps to operate only at the speed necessary to deliver the required output.

Understanding the Affinity Laws

The remarkable savings associated with VFDs arise from the Affinity Laws.

These relationships demonstrate that:

Flow α Speed

Reducing speed lowers flow proportionally.

Head α Speed^2

Pressure decreases according to the square of speed.

Power α Speed^3

Power consumption varies with the cube of speed.

Consequently, a modest reduction in pump speed can generate dramatic energy savings.

For example:

Reducing speed by 20 percent can reduce power consumption by nearly 50 percent.

This principle forms the foundation of modern pumping optimization.

Benefits of Variable Frequency Drives

Organizations adopting VFDs experience multiple advantages.

Significant Energy Savings

The most obvious benefit is reduced electricity consumption.

Savings of 20–50 percent are common.

Reduced Mechanical Stress

Soft starting minimizes shock loads.

Benefits include:

- Lower bearing wear;
- Reduced shaft stress;
- Longer seal life.

Improved Process Control

VFDs provide precise regulation.

Operators can maintain:

- Constant pressure;
- Desired flow rates;
- Stable operating conditions.

Lower Maintenance Costs

Reduced operating stress translates into fewer failures.

Maintenance intervals can often be extended.

Enhanced Reliability

Operating closer to optimal conditions improves equipment reliability.

Unexpected downtime decreases.

Applications of VFDs

Variable speed technology has become widespread.

Major applications include:

Water Supply Systems

Pressure fluctuations can be minimized while conserving energy.

Irrigation

Pumps can adapt to changing agricultural demands.

HVAC Systems

Flow adjustments respond dynamically to building loads.

Industrial Processing

Process consistency improves significantly.

Wastewater Treatment

Variable operating conditions can be managed efficiently.

Smart Energy Management

Energy efficiency increasingly depends upon data-driven decision-making.

Traditional systems relied heavily on periodic inspections and manual observations.

Modern facilities employ intelligent energy management systems that provide continuous visibility.

The Rise of Connected Assets

Industrial equipment is becoming increasingly connected.

Sensors continuously capture information regarding:

- Power consumption;
- Flow rates;
- Pressure;
- Temperature;
- Vibration;
- Operating hours;
- Motor current.

These data streams provide unprecedented operational insight.

Real-Time Monitoring

Energy dashboards enable operators to visualize system performance instantly.

Benefits include:

Immediate Detection of Abnormalities

Performance deviations become visible quickly.

Identification of Inefficient Operation

Operators can identify excessive energy consumption.

Enhanced Decision-Making

Data-driven insights support informed actions.

Improved Accountability

Energy performance can be monitored across departments.

Predictive Maintenance

Traditional maintenance strategies included:

Reactive Maintenance

Repair after failure.

Preventive Maintenance

Scheduled servicing.

Modern facilities increasingly employ predictive maintenance.

Sensors detect early indicators of deterioration, including:

- Bearing defects;
- Cavitation;
- Misalignment;
- Imbalance;
- Electrical anomalies.

Maintenance interventions occur precisely when required.

This approach reduces costs and minimizes downtime.

Industrial Internet of Things (IIoT)

The Industrial Internet of Things connects physical equipment to digital systems.

Pumping systems equipped with IIoT capabilities enable:

- Remote monitoring;
- Performance benchmarking;
- Automated reporting;
- Fleet management;
- Centralized diagnostics.

Organizations operating geographically dispersed assets particularly benefit from such capabilities.

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RESEARCH INITIATIVES

KELTRON's R&D is a DSIR recognized R&D Lab. KELTRON was involved in the research for the development of Supercapacitor Technology for many years in association with national research laboratories, including ISRO, DRDO/NMRL & CMET.

TECHNICAL SPECIFICATION

Type	Electric Double Layer Capacitors
Capacitance Range	3F to 500F
Rated Voltage	2.5V / 2.7V
Operating Temperature	- 40°C To 65°C
Capacitance Tolerance	-20% +30%
Reference Standard	IEC 62391-1
Safety Class	S2

PARAMETERS

Energy storage	Watt-second energy
Specific Power	2-10W/gm
Operating voltage	2.3V to 2.75V
Life	>500,000 cycles
Working temperature	-40 to +70°C

APPLICATIONS

- Electric Vehicles
- Battery Management Systems (BMS)
- Aerospace & Defense applications
- Renewable energy (Wind and Solar)
- Inverters, UPS, SSD etc.
- Smart Energy Meters
- Regenerative Braking & Jump Starters
- Drones
- Data Centers
- Medical Devices

MAKE IN INDIA · ISO · DSIR · KPP ERDC · RoHS compliant · CE

OFFICIAL CHANNEL PARTNER

JAYARAM ENTERPRISES

115, V.J. COMPLEX (1ST FLOOR), AVINASHI ROAD, COIMBATORE – 641018
CONTACT : +91 90872 18878, E-MAIL : je641018@gmail.com

KELTRON®
Keltron Component Complex Ltd.
(A Government of Kerala Undertaking)

SUPER CAPACITOR





MPP CAPACITOR



ALUMINIUM ELECTROLYTIC CAPACITOR

MPP RECTANGULAR CAPACITOR



HIGH CV (LARGE CAN) CAPACITOR





AC MOTOR START CAPACITOR

As we celebrate **50 years** of our dedicated business partnership with Keltron, we express our heartfelt appreciation to all our principals and customers for their support on this significant milestone.



Mr. B. Jayaraman, Managing Director, and **Mr. Sree Vardhan**, Chief Executive of M/S Jayaram Enterprises, were honored and recognized by **Shri P. Rajeev**, the Honorable Minister for Law, Industries, and Coir of the Government of Kerala along with **Shri A.P.M. Mohammed Hanish**, Principal Secretary of the Industries Department, Government of Kerala; **Shri Narayana Moorthy**, Chairman and Managing Director of KSEDC; and **Mr. K.G. Krishna Kumar,** Managing Director of KCCL, in recognition of their 50 years of dedicated business partnership with M/S KELTRON since 1975

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WRAS APPROVED MATERIAL

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CARBON SEAL RINGS

Since mechanical seals must be able to endure a wide range of application conditions, they must be designed with meticulous attention to detail and carbon graphite is the ideal solution for this industry application.

Carbon blocks and blanks befit most seal requirements in the field and are machined from resin and antimony impregnated blanks to fit the requirement at hand.

Carbon steam joints are available as single-acting and double-acting seals. Carbon graphite can cater to a broad range of applications as seal rings. They can perform under tough conditions and are blister resistant to function in dry environments as well. The high thermal conductivity and low thermal expansion coefficient allow for optimum product precision and high tolerance.

This can also be customised to size using our resin or metal impregnated methods in PTS technology. Carbon graphite also offers dimensional stability as seal rings for a range of applications.

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TUBEMANN INDIA

(UNIT OF KONGU ENGINEARS)

ISO 9001:2015, ISO 45001: 2018, IATF 16949:2016

(2,28,000 Sq.Ft Shop Floor, 110 CNC Mc's, 11 Robots)





Hydraulic Cylinder Tubes (CDS/CDW)
SRB M/c. - SIERRA, USA - 5 Lines
Metric Size - Bore Dia 38mm to 200mm
Inches Size - Bore Dia 1.50inch to 5inch
Length 8000mm Max.

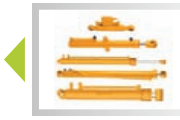
Manufacturer of

1. Precision cold rolled tubes Seamless & Welded
2. Precision Machined Tubular components
3. Stainless Steel Welded Tubes @ Own Tube Mill



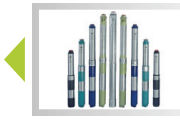


Hydraulic Cylinder S/A's





Submersible Pump Parts





Farm Equipment Parts





Motor - Housing / Body / Yoke / Frame For Automotive and Non Automotive

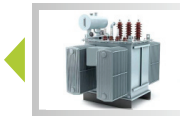


Automotive - Heavy Vehicle Parts



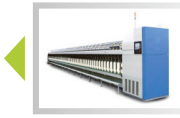


Transformer Valves





Textile Machinery Parts



Administrative Office : 5/284-C, Arasur Post, Coimbatore - 641 407, Tamilnadu India
Phone: +91 99655 72800, +91 94433 88872, +91 82701 88872
Email : info@konguindia.com, mktg@konguindia.com
website : www.konguindia.com



BRUKER, TRIMOS, MAHR &
Advanced Mechanical Laboratory with modern equipments

SIEMA, jointly with COINDIA, organized a Workshop on Cyber Security for MSMEs on 15th April 2026 for the benefit of its members.

The workshop was conducted by a team of experts from Deloitte, who provided valuable insights into the growing cyber security challenges faced by industries, particularly MSMEs.













Artificial Intelligence and Analytics

Artificial Intelligence (AI) is increasingly influencing energy management.

Machine learning algorithms can:

Predict Failures

Historical patterns reveal emerging problems.

Optimize Performance

Algorithms recommend optimal operating conditions.

Improve Scheduling

Equipment usage can be balanced intelligently.

Enhance Forecasting

Energy consumption trends become more predictable.

AI transforms data into actionable intelligence.

Digital Twins

Digital twins represent virtual replicas of physical assets.

These dynamic models continuously update using real operational data.

Applications include:

- Performance simulation;
- Scenario analysis;
- Operator training;
- Optimization studies;
- Failure investigation.

Digital twins support informed decision-making throughout the equipment lifecycle.

Cybersecurity Considerations

Connectivity introduces new risks.

Industrial systems must be protected against unauthorized access.

Important measures include:

- Secure authentication;
- Network segmentation;
- Regular software updates;
- Access control policies;
- Employee awareness training.

Cybersecurity must evolve alongside digital transformation initiatives.

Economic Justification

Although advanced technologies require investment, economic returns are frequently attractive.

Typical benefits include:

- Reduced electricity costs;
- Lower maintenance expenses;
- Increased uptime;
- Extended asset life;
- Enhanced productivity.

Payback periods of one to three years are common for many energy-efficiency projects.

Organizations increasingly view such investments as strategic rather than discretionary.

Overcoming Implementation Challenges

Despite clear advantages, adoption barriers persist.

Common challenges include:

Capital Constraints

Initial investment requirements may discourage implementation.

Skills Gaps

Technical expertise is often limited.

Resistance to Change

Traditional practices may persist.

Integration Complexity

Legacy systems can be difficult to upgrade.

Addressing these challenges requires education, collaboration, and long-term commitment.

The Future Landscape

The future of pumping systems will be characterized by intelligence, adaptability, and sustainability.

Emerging trends include:

- Wider deployment of IE5 motors;
- Expanded use of permanent magnet technologies;
- Universal adoption of VFDs;
- Increased IIoT connectivity;
- AI-driven optimization;
- Cloud-based asset management;
- Autonomous operational adjustments.

Energy efficiency will increasingly be embedded into every stage of equipment design and operation.

Organizations that embrace these technologies will gain competitive advantages through lower operatingcosts, improved reliability, and stronger environmental performance.

Conclusion

High-efficiency motor technologies, Variable Frequency Drives, and smart energy management systems are fundamentally transforming industrial pumping.

What was once viewed merely as a utility function is now recognized as a strategic opportunity to improve productivity, reduce environmental impact, and enhance profitability.

The transition toward intelligent pumping systems is no longer a vision of the future-it is already under way.

Industries that invest in these technologies today are positioning themselves to thrive in an increasingly energy-conscious world.

As digitalization accelerates and sustainability expectations intensify, the integration of efficient motors,adaptive controls, and data-driven energy management will define the next generation of industrialexcellence.

Part III: Policy Initiatives, Industry Challenges, Case Studies, Future Outlook, and Strategic Recommendations

Introduction

The global movement toward energy efficiency has reached a defining moment. Advances in motortechnologies, intelligent control systems, and digital energy management have demonstrated thatsubstantial reductions in energy consumption are both technically feasible and economically viable.However, realizing the full potential of these innovations requires more than technological progress alone.

Policies, regulations, market incentives, organizational commitment, and workforce readiness all playcritical roles in accelerating the transition toward energy-efficient pumping systems.

As industries navigate increasing energy costs, stringent environmental expectations, and evolvingcustomer demands, the ability to adapt becomes a strategic necessity. The future of the pump and motorindustry will be shaped not only by engineering excellence but also by collaboration among governments,manufacturers, utilities, consultants, and end users.

This final part of the article examines the policy landscape, explores the challenges faced by industries,presents illustrative case studies, and offers recommendations for building a sustainable future.

The Role of Public Policy in Driving Energy Efficiency

Historically, energy efficiency improvements were largely voluntary initiatives undertaken by organizationsseeking cost reductions. Over time, governments recognized that market forces alone were insufficient to achieve national energy conservation goals.

As a result, policy interventions have emerged as powerful catalysts for change.

Effective policy frameworks typically include:

- Minimum energy performance standards;
- Product labeling requirements;
- Incentive programs;
- Energy conservation regulations;
- Mandatory audits;
- Financial support mechanisms;
- Capacity-building initiatives.

Such measures encourage manufacturers and end users to adopt more efficient technologies whilecreating a level playing field.

Energy Efficiency Standards and Regulations

Minimum Energy Performance Standards (MEPS) establish baseline efficiency requirements below whichequipment cannot be marketed.

These standards serve several purposes:

Eliminating Inefficient Products

Poor-performing technologies gradually disappear from the marketplace.

Encouraging Innovation

Manufacturers invest in research and development to remain competitive.

Creating Consumer Confidence

Users gain assurance regarding product performance.

Reducing National Energy Demand

Widespread adoption delivers substantial cumulative savings.

Motor efficiency classifications such as IE2, IE3, IE4, and IE5 have emerged from these regulatory efforts.

As standards evolve, industries must continuously adapt their product portfolios and procurementpractices.

Financial Incentives and Support Mechanisms

Although energy-efficient technologies often deliver attractive returns, initial capital costs can hinderadoption.

Governments and utilities frequently address this challenge through incentive programs.

Examples include:

Capital Subsidies

Partial reimbursement of project costs.

Tax Benefits

Accelerated depreciation and investment allowances.

Low-Interest Loans

Improved access to financing.

Performance-Based Incentives

Rewards linked to demonstrated savings.

Utility Rebate Programs

Support for replacing inefficient equipment.

These mechanisms reduce investment barriers and accelerate technology deployment.

The Role of Utilities

Electric utilities increasingly recognize that helping customers reduce consumption can be more economicalthan expanding generation capacity.

Demand-side management initiatives may include:

- Energy assessments;
- Technical guidance;
- Financial incentives;
- Awareness campaigns;
- Training workshops.

Utilities thereby become active partners in efficiency improvement.

Challenges Facing Industry

Despite growing awareness and proven benefits, the transition toward energy-efficient pumping systems isnot without obstacles.

High Initial Investment

Organizations often prioritize short-term financial considerations.

Higher upfront costs associated with advanced technologies may delay decisions.

Limited Awareness

Many users remain unaware of:

- Life-cycle costing principles;
- Available technologies;
- Potential savings opportunities.

Awareness gaps frequently lead to underinvestment.

Technical Capability Constraints

Successful implementation requires specialized expertise.

Challenges include:

- System analysis;
- Equipment selection;
- Data interpretation;
- Digital integration.

Insufficient skills can undermine project outcomes.

Organizational Resistance

Established operating practices are often difficult to change.

Personnel may perceive new technologies as disruptive or risky.

Leadership commitment becomes essential.

Legacy Infrastructure

Older facilities may present compatibility challenges.

Integrating modern technologies into existing systems often requires careful planning.

Case Study 1: Municipal Water Supply Optimization

A rapidly growing city experienced escalating energy costs associated with its water distribution network.

Key issues included:

- Oversized pumps;
- Constant-speed operation;
- Frequent pressure fluctuations;
- High maintenance expenses.

Actions Taken

The utility implemented:

- System-wide energy audits;
- Installation of Variable Frequency Drives;
- Pressure optimization strategies;
- Performance monitoring systems.

Results

Within the first year:

- Electricity consumption decreased substantially;
- Pump failures declined;
- Customer complaints related to pressure fluctuations reduced;
- Maintenance costs improved.

This example illustrates how integrated solutions can simultaneously enhance efficiency and service quality.

Case Study 2: Manufacturing Facility Modernization

A manufacturing plant operating continuously sought to improve competitiveness through energyreduction.

Initial assessments revealed:

- Aging motors;
- Inefficient control practices;
- Limited operational visibility.

Improvement Measures

The facility introduced:

- Premium-efficiency motors;
- Variable speed control;
- Energy monitoring dashboards;
- Predictive maintenance programs.

Outcomes

- Benefits included:
- Lower energy intensity;
- Increased equipment availability;
- Improved production consistency;
- Reduced unplanned downtime.

The project achieved payback within a relatively short period.

Case Study 3: Agricultural Irrigation Transformation

Agriculture represents one of the largest users of pumping systems globally.

A farming cooperative struggled with:

- Excessive energy bills;
- Variable water requirements;
- Frequent motor failures.

Interventions

The cooperative adopted:

- Proper pump sizing;
- High-efficiency motors;
- Variable speed irrigation control;
- Operator training.

Benefits

The initiative resulted in:

- Reduced energy consumption;
- Improved water utilization;
- Lower maintenance expenses;
- Enhanced crop productivity.

This case demonstrates that efficiency gains extend well beyond industrial settings.

The Human Dimension

Technology alone cannot transform organizations.

People remain central to successful implementation.

Workforce development should therefore focus on:

Building Awareness

Employees must understand the value of efficiency initiatives.

Technical Training

Skills related to diagnostics, digital systems, and optimization require continuous development.

Cross-Functional Collaboration

Operations, maintenance, procurement, and management teams should work toward shared objectives.

Recognition and Incentives

Celebrating achievements reinforces positive behaviors.

Organizations that cultivate an energy-conscious culture are more likely to sustain improvements.

Emerging Technologies Shaping the Future

Several technological developments are expected to redefine pumping systems in the coming years.

Ultra-Premium Efficiency Motors

IE5 motors will continue gaining prominence.

Their superior performance aligns with increasingly stringent efficiency expectations.

Rare-Earth Alternatives

Research efforts seek to reduce dependence on critical materials while maintaining performance.

Artificial Intelligence

AI applications will expand from predictive maintenance to autonomous optimization.

Systems may increasingly self-adjust in response to changing conditions.

Advanced Sensors

Sensor technologies are becoming more affordable and sophisticated.

Enhanced measurement capabilities support improved decision-making.

Edge Computing

Local processing of operational data reduces latency and strengthens reliability.

Real-time optimization becomes increasingly practical.

Cloud-Based Platforms

Centralized monitoring enables fleet-wide management across multiple sites.

Benchmarking and knowledge sharing become easier.

Digital Twins

Virtual representations of assets will evolve from analytical tools into integral components of operations.

They may eventually guide automated decision-making.

Sustainability and the Net-Zero Transition

Many nations and corporations have committed to achieving net-zero emissions.

Energy-efficient pumping systems can contribute significantly to these objectives.

Their benefits include:

- Reduced electricity demand;
- Lower carbon emissions;
- Enhanced resource productivity;
- Improved resilience;
- Greater operational transparency.

Efficiency improvements often represent the most cost-effective pathway toward emission reduction.

Unlike certain mitigation strategies, they frequently generate positive financial returns.

Strategic Recommendations for Industry

Organizations seeking to enhance pumping efficiency should consider the following actions.

Adopt a Systems Approach

Evaluate the entire pumping system rather than isolated components.

Optimization opportunities often emerge through holistic analysis.

Prioritize Life-Cycle Costing

Procurement decisions should emphasize total ownership costs.

Energy savings frequently justify higher initial investments.

Conduct Regular Energy Audits

Periodic assessments identify inefficiencies before they become entrenched.

Continuous improvement depends on accurate information.

Invest in Workforce Development

Training programs should equip personnel with relevant technical competencies.

Knowledge remains a critical enabler of success.

Embrace Digitalization

Monitoring technologies and analytics provide actionable insights.

Data-driven management enhances responsiveness.

Strengthen Collaboration

Manufacturers, consultants, utilities, and end users should share experiences and best practices.

Collective learning accelerates progress.

Plan for Future Regulations

Organizations should anticipate evolving standards rather than merely reacting to them.

Proactive adaptation minimizes disruption.

The Road Ahead

The future of pumps and motors will not be defined solely by incremental efficiency gains.

It will be characterized by convergence.

Mechanical engineering, power electronics, digital technologies, analytics, and sustainability principles aremerging to create intelligent ecosystems capable of delivering unprecedented value.

The pumps of tomorrow will not simply move fluids.

They will communicate.

They will diagnose.

They will adapt.

They will optimize themselves in real time.

Most importantly, they will help industries reconcile two objectives once perceived as conflicting: economicgrowth and environmental responsibility.

Conclusion

Energy efficiency has evolved from a niche engineering consideration into a global strategic priority.

High-efficiency motors, Variable Frequency Drives, digital energy management systems, supportive policies,and informed leadership collectively offer a pathway toward a more sustainable future.

The transition will require investment, collaboration, and perseverance. Challenges undoubtedly remain,but the opportunities are even greater.

Organizations that embrace efficiency today will enjoy lower operating costs, enhanced competitiveness,stronger resilience, and improved environmental performance.

The future of energy-efficient pumps and motors is not merely about doing the same work with less energy.It is about reimagining how industrial systems operate—making them smarter, cleaner, more reliable, andmore responsive to the needs of a rapidly changing world.

As industries prepare for the decades ahead, one principle stands clear: energy efficiency is no longer anoption. It is the foundation upon which the next era of industrial excellence will be built.

References and Further Reading

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3. International Electrotechnical Commission (IEC) – Motor Efficiency Standards.
4. International Energy Agency (IEA) – Energy Efficiency Reports.
5. IEEE Publications on Advanced Motor Technologies.
6. Research papers on Variable Frequency Drives and Smart Energy Management.
7. Industry studies on predictive maintenance and digital twins.
8. Sustainability frameworks related to industrial decarbonization.

The Lost Art of Slowing Down Finding Joy in the Simple Moments of Life

In today's world, speed has become a measure of success. We race against deadlines, juggle multiple responsibilities, respond instantly to messages, and strive continuously to achieve more. In the midst of this constant motion, many of us have forgotten a simple truth: life is not merely about reaching destinations; it is also about experiencing the journey.

The modern professional often wears busyness as a badge of honour. A packed calendar, overflowing inbox, and endless commitments are viewed as signs of productivity. Yet, beneath this relentless pace lies an unspoken reality—fatigue, stress, and the gradual erosion of our ability to appreciate life's simple pleasures.

Perhaps what we need today is not another productivity hack, but a gentle reminder to slow down.

The Beauty of Ordinary Moments

Think about some of the happiest memories in your life. They are rarely associated with boardroom meetings or completed spreadsheets. Instead, they are often found in ordinary moments—a family dinner filled with laughter, an evening walk under a cool breeze, sharing stories with old friends, watching a child discover something new, or enjoying a quiet cup of coffee before the day begins.

These moments do not demand wealth or status. They ask only for our attention.

The philosopher Seneca once observed that life is long enough if we know how to use it wisely. Often, wisdom lies in being fully present. When we rush through every experience, we miss the richness hidden within everyday life.

Rediscovering the Joy of Reading

Before smartphones occupied every idle minute, people turned to books, magazines, and newspapers not merely for information but for companionship and reflection. Reading allows us to travel through different worlds, understand unfamiliar perspectives, and reconnect with our imagination.

Even dedicating fifteen or twenty minutes each day to reading can become a powerful form of relaxation. It slows the mind, reduces anxiety, and provides an escape from the constant stimulation of digital screens.

A good book is not just a source of knowledge; it is a quiet conversation across generations.

Nature: The World's Greatest Healer

Modern science increasingly confirms what our grandparents instinctively understood: spending time in nature benefits both body and mind.

The sight of trees, the sound of birdsong, the rhythm of ocean waves, or the freshness of early morning air can significantly reduce stress levels. Nature invites us to pause and observe without urgency.

You do not need an elaborate vacation to experience this healing effect. A short walk in a park, tending to a small garden, watching the sunrise, or simply noticing the changing colours of the sky can restore a sense of balance.

Nature teaches patience. Seasons change gradually, flowers bloom in their own time, and rivers flow without haste. Perhaps there is wisdom in that rhythm for all of us.

The Forgotten Power of Hobbies

Many people abandon hobbies as adulthood progresses. Activities once pursued purely for enjoyment are set aside in favour of responsibilities. Yet hobbies provide more than entertainment; they nourish creativity and emotional well-being.

Gardening, painting, photography, music, cooking, writing, woodworking, collecting stamps, learning a language, or even solving crossword puzzles can become meaningful outlets for relaxation.

The purpose of a hobby is not excellence. It is enjoyment.

When we engage in activities without the pressure to perform or compete, we rediscover the simple pleasure of doing something because it makes us happy.

Conversations That Matter

Technology has made communication instantaneous, but meaningful conversations have become increasingly rare. We exchange countless messages while struggling to find genuine connection.

Some of life's greatest comforts arise from heartfelt conversations—with parents, spouses, children, colleagues, neighbours, or lifelong friends. Listening attentively and sharing honestly strengthen relationships and foster emotional resilience.

A ten-minute conversation without distractions can often achieve what hours of digital interaction cannot.

Human connection remains one of the most powerful antidotes to stress and loneliness.

Laughter: The Universal Medicine

Laughter requires no prescription and carries no side effects. It lightens burdens, strengthens relationships, and reminds us not to take ourselves too seriously.

Remember the joy of old comedy films, humorous anecdotes shared among friends, or playful moments with children and grandchildren. Such experiences create memories that endure far longer than many professional accomplishments.

Finding reasons to smile each day is not trivial—it is essential.

As the saying goes, "A day without laughter is a day wasted."

Gratitude: Appreciating What We Already Have

In a culture that constantly encourages us to seek more, gratitude invites us to notice what is already present.

Good health, supportive families, trusted colleagues, loyal friends, opportunities to learn, and the ability to contribute meaningfully to society are blessings often overlooked in the pursuit of future goals.

Keeping a simple gratitude journal or mentally acknowledging three positive aspects of each day can gradually shift our perspective from scarcity to abundance.

Gratitude does not ignore life's difficulties. Rather, it helps us recognise that even amid challenges, there remains much to value and cherish.

Learning the Art of Doing Nothing

The idea of doing nothing often makes people uncomfortable. Yet periods of rest are not signs of laziness; they are necessary for renewal.

Moments of stillness allow the mind to process experiences, generate creativity, and regain clarity. Whether through quiet reflection, meditation, prayer, or simply sitting without constant stimulation, intentional pauses help restore inner balance.

Great ideas often emerge not during frantic activity, but during moments of calm.

Just as machines require maintenance to function efficiently, human beings require rest to perform at their best.

Success Redefined

Professional achievement undoubtedly brings satisfaction. Building businesses, creating employment, solving problems, and contributing to economic growth are meaningful pursuits. However, success becomes truly fulfilling only when accompanied by health, relationships, peace of mind, and a sense of purpose.

A balanced life is not one in which every day unfolds perfectly. Rather, it is one in which we make room for both ambition and appreciation, productivity and rest, achievement and joy.

The measure of a life well lived may ultimately be found not in how busy we were, but in how deeply we experienced the moments entrusted to us.

Life will always present demands, responsibilities, and ambitions. There will always be another meeting to attend, another target to achieve, and another task awaiting completion.

Yet amid these obligations, may we remember to notice the fragrance of morning coffee, the laughter of loved ones, the beauty of a sunset, the comfort of a favourite book, and the satisfaction of an unhurried conversation.

These simple moments are not interruptions to life.

They are life itself.

Perhaps the greatest luxury in our fast-paced age is not having more time, but learning to be fully present in the time we already have.

And in that presence, we may discover what relaxation truly means—not escaping from life, but embracing it more completely.

What the Media says?



THE COVAI MAIL

Pump prices to rise as raw material costs increase

Industry seeks GST relief from 18% to 5%

The Covai Mail

Leading pump manufacturing associations — Indian Pump Manufacturers Association (IPMA), Southern India Engineering Manufacturers Association (SIEMA), and Rajkot Engineering Association (REA) — have expressed serious concern over the unprecedented rise in raw material, logistics, energy, and compliance costs, which is placing severe pressure on pump manufacturers, particularly MSMEs.

Prices of key inputs such as copper, aluminium, stainless steel, silicon steel, cast iron, cables, and allied components have increased sharply over the past year.

Despite phased price revisions up to 31 May 2026, manufacturers have been unable to fully absorb the escalation, making further price increases from 1 June 2026 unavoidable.

The associations estimate that, despite the price revisions implemented so far, pumps continue to be under-priced by up to 10% relative to the increase in manufacturing costs.

The associations pointed out that while the cost of other components in a pumping system — such as pipes, cables, ropes, starter panels, valves, and fittings — has increased by over 30%, the pump itself now accounts for only 15–20% of the total system cost, compared to nearly 30% earlier.

Consequently, a reasonable correction in pump prices will have only a limited impact on the overall project cost.

The industry also warned that rising costs are widening the gap between quality-compliant products and lower-cost alternatives.

Organised manufacturers are committed to delivering reliable, energy-efficient pumping solutions in compliance with BIS and BEE requirements, whereas inferior products frequently achieve lower prices by compromising on quality, efficiency, and long-term performance.

To support farmers and consumers while promoting energy-efficient products, the associations have urged the Government of India to reduce GST on pumps from 18% to 5%.

Such a measure would encourage the adoption of quality pumps, reduce power consumption, support national energy efficiency goals, and strengthen India's organised manufacturing sector.

The resulting energy savings from widespread adoption of energy-efficient pumps would substantially reduce the agricultural power subsidy burden borne by State Governments.

With electricity for agricultural pumping being provided free across the country, the savings accrued through lower power consumption are expected to significantly outweigh the revenue impact of reducing GST on pumps from 18% to 5%, making it a fiscally prudent, farmer-friendly, and environmentally sustainable policy measure.

The associations reaffirmed their commitment to supplying reliable, energy-efficient, and high-quality pumping solutions for agriculture, drinking water, irrigation, and infrastructure development.

"Prices of key inputs such as copper, aluminium, stainless steel, silicon steel, cast iron, cables, and allied components have increased sharply over the past year."

K.V.Karthik, President, IPMA

Mithun Ramadas, President, SIEMA

Narendrabhai Adroja, Director, REA



தினத்தந்தி

மூலப்பொருளின் கட்டணம் அதிகரிப்பு:

மோட்டார் பம்ப் விலை 10 சதவீதம் உயர்வு

கோவை, ஜூன் 4-

மூலப்பொருள் விலை அதிகரிப்பால், கோவையில் உற்பத்தியாகும் மோட்டார் பம்புகளின் விலை 10 சதவீதம் உயர்த்தப்பட்டு உள்ளது.

மோட்டார் பம்ப் உற்பத்தி

முன்னணி பம்ப் உற்பத்தி சங்கங்களான இந்திய பம்ப் உற்பத்தியாளர்கள் சங்க தலைவர் கே.விகார்த்திக், தென்னிந்திய பொறியியல் உற்பத்தியாளர்கள் சங்க தலைவர் மிதுன் ராமதாஸ், ராஜ்கோட் பொறியியல் சங்க தலைவர் நரேந்திரபாய் அட்ரோஜா ஆகியோர் வெளியிட்ட அறிக்கையில் கூறியிருப்பதாவது:-

ஆண்டில் கடுமையாக அதிகரித்து உள்ளன. 10 சதவீதம் விலை உயர்வு

கடந்தமாதம் 31-ந்தேதி வரை படிப்படியாக விலை திருத்தம் செய்யப்பட்டன. ஆனாலும் உற்பத்தியாளர்களால் இந்த விலை உயர்வை முழுமையாக ஈடு செய்ய முடியவில்லை. மேலும் விலை உயர்வு தவிர்க்க முடியாததாகி விட்டது. இதுவரை செலவிடுத்தப்பட்ட விலை இருந்தங்கள் இருந்தும் உற்பத்தி செலவு டன் ஒப்பிடுகையில், பம்புகள் வோருக்கும் ஆதாவளிக்கும் அதே வேளையில், ஆற்றல் திறன் கொண்ட தயாரிப்புகளை ஊக்குவிப்பதற்காக, மோட்டார் பம்ப் மீதான ஜி.எஸ்.டி. வரியை 18 சதவீதத்தில் இருந்து 5 சதவீதமாக குறைக்க வேண்டும் என்று மத்திய அரசை வலியுறுத்துகிறோம். இத்தகைய நட-வ



தினமணி கோவை 5

வியாழக்கிழமை, 4 ஜூன் 2026

கோவை/மாவட்டங்கள்

பம்ப்செட் விலை மீண்டும் 10 சதவீதம் உயர்வு

உற்பத்தியாளர்கள் அறிவிப்பு

உதவைக்கு வந்த நடிகர் ரஜினி

Dinamani-Coimbatore-04-06-2026



அர்ப்பணிப்பு உணர்வுடன் செயல்படுங்கள்



சிந்தனைக் கவிஞர்
டாக்டர் கவிதாசன்
இயக்குனர் மற்றும் தலைவர்,
மனிதவள மேம்பாட்டுத் துறை
ரூட்ஸ் நிறுவனங்கள், கோவை

"அர்ப்பணிப்புடன் செய்யும் பணியில் அழகும் தரமும் நின்றொளிரும்! தன்னிகரில்லாத வெற்றிகளுக்கு அடித்தளமாக அதுவே அமையும்."

ஒருவருடைய வெற்றிக்கும் தோல்விக்கும் அவருடைய செயல்களே மூலகாரணமாக அமைகின்றது. எல்லோருக்கும் அவர்களுடைய திறமைகளை வெளிக்காட்டுவதற்கான வாய்ப்புகள் கிடைப்பதில்லை. அவ்வாறு கிடைத்தாலும் அவர்களுடைய மனப்பான்மைக்கும் ஆர்வத்திற்கும் ஏற்றவாறு அவை அமைந்து விடுவதுமில்லை.

மேலும், எல்லோருக்கும் அவரவர்களுக்குப் பிடித்த வேலை கிடைக்கும் என்ற உத்திரவாதமில்லை. ஆகவே கிடைத்த வேலையைப் பிடித்த வேலையாக்கிக் கொள்ளும் மனப்பக்குவத்தை வளர்த்துக் கொள்ள வேண்டுமே தவிர அது சரியில்லை; இது சரியில்லை என்று புலம்புவதால் எந்தப் பயனுமில்லை வெறுப்பும் விரக்தியும்தான் மிஞ்சும். அது தோல்விக்குத்தான் துணை நிற்கும். எந்த வேலையையும் சிறந்ததாக மாற்றுவது அதைச் செய்பவர்களே. நீங்கள் செய்யும் பணியில் உங்களுடைய அறிவாற்றலும் ஆன்மாவும் கலந்திருக்க வேண்டும். எந்தப் பணியையும் விரும்பிச் செய்தால் அதில் வெற்றிகள் குவியும். மேலும் "இது என்னுடைய வேலை; இதைச் சிறப்பாகச் செய்வதுதான் எனது முதற்கடமை" என்ற உணர்வுடன் பணியாற்ற வேண்டும்.

எதையும் அரையும் குறையுமாகச் செய்தால் வெற்றியின் விலாசம் கிடைக்காது. அத்துடன் செய்யும் வேலையைச் செம்மையாகச் செய்து முடிப்பதற்குத் தேவையான நுட்பங்களை கற்றுக் கொண்டே இருக்க வேண்டும். 'எல்லாம் எனக்குத் தெரியும்' என்ற மனநிலையை மாற்றி 'அறிய வேண்டியது ஆயிரம் கோடி' என்ற ஆர்வத்துடன் கற்றுக் கொண்டே இருக்க வேண்டும். ஆம்! புதுவெள்ளம் வரவில்லை என்றால் கடல் கூடக் காய்ந்து விடும்.

நீங்கள் செய்யும் செயலில் உங்களுடைய தனித்திறன் ஒளிர வேண்டும். உடலால் மட்டுமே செய்தால் வேலை (Work); உடலும் அறிவும் சேர்ந்து செய்யும்போது திறன் (Skill) வெளிப்படுகிறது. உடல், மனம், ஆன்மா ஆகிய மூன்றும் இணையும் போது செய்யும் பணியில் தரமும் அழகும் மிளிரும். அவ்வாறு உடல், மனம், ஆன்மா ஆகிய மூன்றும் கைகோர்க்க அர்ப்பணிப்புடனும் செய்யும் வேலையில் வெற்றி காண்பது எளிது.

ஆம்! அர்ப்பணிப்புடன் செய்யும் பணியில் தான் உங்களுடைய முழுத்திறனும் வெளிப்படத் தொடங்கும். அத்துடன் உங்களுடைய மனம் ஆனந்தப் பொழிவில் நனையத் தொடங்கும். அர்ப்பணிப்புடன் செய்யும் வேலை வாடிக்கையாளர்களுக்கு வெற்றியைத் தருவதுடன், அதை செய்பவருக்கும் வெற்றியைப் பெற்றுத் தரும் என்பது உறுதி.

எவ்வாறு அர்பணிப்புடன் செய்வது என்று சிலர் என்னிடம் கேட்டதுண்டு. ஒரு வேலையை அர்ப்பணிப்புடன் செய்வதற்கு:

1. முதலில் நீங்கள் செய்யும் வேலையை நேசிக்க வேண்டும். செய்யும் தொழிலே தெய்வம் என்பது நமது மரபு.
2. எந்த வேலை என்றாலும் அந்த வேலையை செய்வதற்கான மனப்பக்குவத்தை (Attitude) வளர்த்துக் கொள்ள வேண்டும்.
3. செய்யும் வேலை சம்பந்தமான தொடர் முன்னேற்றங்களை (Continuous improvement) யும் தொழில் நுட்ப மேம்பாடுகளையும் கற்றுக் கொள்ள வேண்டும்.
4. என் வேலை; என் பெருமை (My work, my pride) என்ற ஆக்க மனப்பான்மையுடன் செயல்பட வேண்டும்.
5. வேலையைத் தேவையாகச் செய்யாமல், சேவையாகச் செய்ய வேண்டும்.

மேற்கண்டவாறு உங்களுடைய பணியை அணுகினால், பணியால் உங்களுக்கும்; உங்களால் பணிக்கும் பெருமையும் மதிப்பும் கூடும் என்பது உறுதி.

மேலும், வேலையை வணங்கிச் செய்தால் எல்லோரும் உங்களை வணங்கிச் செல்வார்கள்.

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Coimbatore Industrial Infrastructure Association (COINDIA) - Complete Tooling Solution

Introduction

COINDIA was established in the year 2005 and registered as a registered society under the Tamil Nadu Societies Registration Act 1975. It is Special Purpose Vehicle (SPV) implementing Pump, Motor, and Foundry cluster development projects under the GoI Industrial Infrastructure Upgradation Scheme (IIUS) - 2003.

COINDIA Modern Tool Room (CMTR)

Over 18 years' experience in design and manufacturing of complex, precision, multi-cavity moulds for various applications and industries, including Pump & Motor industry. We provide Hot runners, unscrewing moulds, and 3D printing inserts, manufactured using latest design software's and machines. Availability of high technology equipment, skilled manpower, practical approach and mentorship aids us to deliver standard and non-standard job orders to the satisfaction of the customer.

Equipment

Tool room has over 25 equipment. Apart from conventional equipment, few unique equipment available with CMTR are mentioned below: -

- Mazak 510 I VMC
- DMG 60U 5 Axis,
- Charmillies WEDM
- FA20S WEDM
- Makino Sinker EDM,
- Shibaura Moulding Machine

Deliverables

- Mould Flow analysis
- Jigs and fixtures
- Tool & Product design and manufacturing
- Die casting
- Testing & Commissioning
- 40 Moulds and 160 New products per year
- Noryl, PP, PC, ABS, PET, Nylon, LDPE, HDPE, PMMA Components

SF. NO.771/B, E&E Industrial Estate Campus, Civil Aerodrome Post,
Kalapatti Village, Coimbatore- 641 014 Phone: 0422-4270797, 9677729001
Email: unitheadcmtr@coindia.in, Website:- www.Coindia.in

SIEMA Jointly with ICCIC had a Focused Group Discussion with RBI on 20th April 2026

A Focused Group Discussion with officials from the Reserve Bank of India (RBI) was organized by SIEMA jointly with ICCIC on 20th April 2026. The interaction provided an opportunity for industrial representatives to directly engage with RBI officials and share their views on matters affecting MSMEs.















Business growth

Business growth is the process of improving and expanding your organization to increase its long-term success. Sustainable scaling relies on optimizing key pillars: data-driven customer retention, robust operational processes, strategic market expansion, and continual performance tracking. [1, 2, 3]

Reviewing the following focus areas can help you identify opportunities for expansion and build a reliable strategy:

1. Customer Retention & Acquisition

- **Boost Loyalty:** Acquiring a new customer costs significantly more than retaining an existing one. Consider implementing Customer Loyalty Programs to reward repeat buyers and boost Customer Lifetime Value.
- **Optimize the Funnel:** Review your Customer Acquisition Strategies to identify where potential buyers drop off. Personalizing your engagement using data ensures marketing budgets deliver better returns.

2. Operational Systems

- **Build Scalability:** Ensure your internal workflows can handle increased volume. If your operations fall apart as you grow, your reputation will suffer.
- **Implement Technology:** Use tools like CRM Software and marketing automation to streamline lead management and maintain consistent service quality at scale.

3. Market Expansion & Innovation

- **Analyze Your Position:** Conduct regular Competitive Analysis to understand where you stand in the market.
- **Diversify and Expand:** Evaluate whether it is time for Market Development by targeting new demographics, or Product Development by rolling out new features.
- **Diversify Channels:** Don't rely on just one or two traffic sources for leads.

4. Financial Health & Pricing

- **Track Meaningful Metrics:** Monitor critical measurements like Customer Churn Rates, Profit Margins, and Monthly Recurring Revenue (MRR).
- **Review Pricing Strategies:** Your prices directly impact profitability. Ensure your pricing accurately reflects your value proposition

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TERMINAL CONFIGURATIONS



DOUBLE FAST-ON



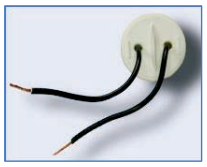
SINGLE FAST-ON



CABLE



BI-POLAR SLEEVE INSULATED



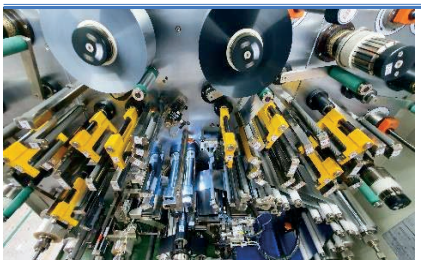
BIPOLAR



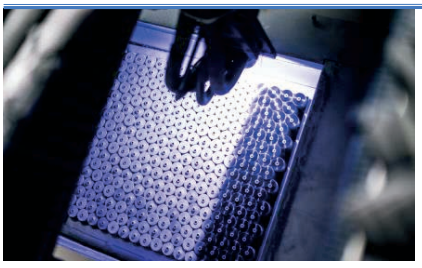
UNIPOLAR

DESCRIPTION	DEFAULT PARAMETERS
DIELECTRIC	Metallized Polypropylene Film
DUTY FREQUENCY	50 / 60 / 120 Hz
CLIMATIC CATEGORY	40/85/56
CAPACITANCE TOLERANCE	±5 %, ±10 %, ±15 %
VOLTAGE TEST BETWEEN TERMINALS	2.0 Times Rated Voltage (10 seconds)
VOLTAGE TEST BETWEEN TERMINAL AND CASE	2.0 kV (2 seconds)
ANGLE OF LOSS Dv/dt – Tan Delta	≤20 X 10-4 / 20 (V/µs)
CLASS OF SAFETY PROTECTION	P0, P1, P2 / S0, S1, S2, S3
CLASS OF OPERATION	CLASS A / B / C / D
ENCAPSULATION	Dry Type – Bio-Degradable Polyurethane Resin
TESTED ACCORDING TO	IEC / BIS / UL STANDARDS
CERTIFIED	BIS, CE, RoHS
COMPLIANCE	REACH, UL 810

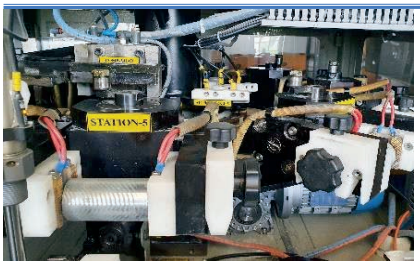
INFRASTRUCTURE



AUTOMATED WINDING



ROBOTIC-SPRAY METALLISATION



AUTOMATED ROUTINE AND TYPE TESTERS



ROBOTIC ASSEMBLY OPERATIONS

PRODUCT CERTIFICATIONS

IS : 2993
CM/L – 6500052005

Central Power Research Institute
CPRI APPROVED

CE

RoHS 3 COMPLIANT EU 2015/863

REACH COMPLIANCE

MANAGEMENT CERTIFICATIONS

TÜV INDIA

- ISO 9001
- ISO 14001*
- ISO 45001*

Products have been Routine, Type and Endurance Tested at CPRI- Central Power Research Institute – Bangalore for Conformity to Applicable standards and Design requirements.

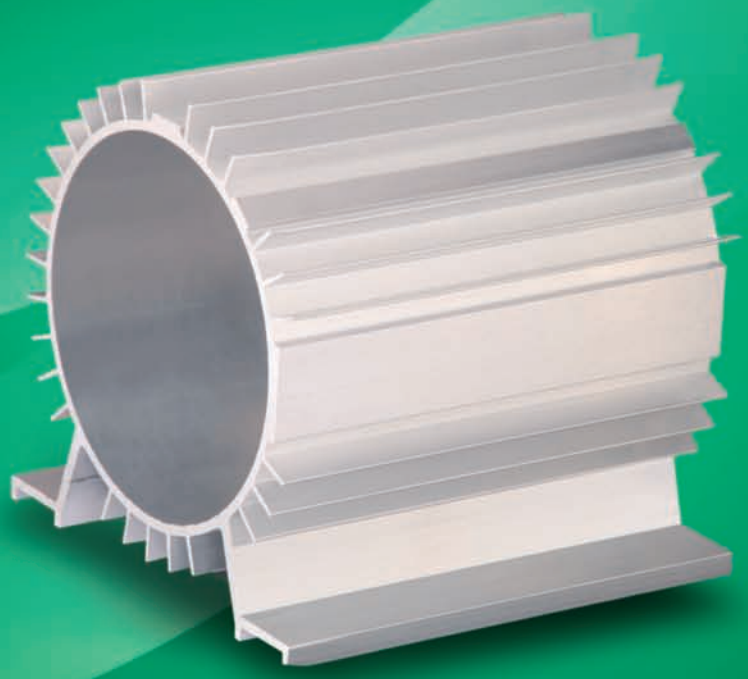
B J ELECTRONICS PRIVATE LIMITED

S.F. No. 426/1A, Texpark Road, Nethra Nagar, Coimbatore Civil Aerodrome Post, Coimbatore – 641 014.
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The leading supplier of high quality aluminium motor bodies to a majority of Pump manufacturers nationwide, for the past 30 years.

Our vast experience has enabled us to develop long term relationship with our customers to provide total customer satisfaction and on time delivery.

- Advanced design & development capability
- Precise high speed reliable cutting and machining of aluminium motor bodies
- Competitive pricing
- A variety of value added services to our clientele
- Ready stock of wide range of motor bodies

ALUMINIUM MOTOR BODY

Ganga Engineering Corporation

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