



Manufacturing Excellence



Flextron was established in 2011 to serve the industry with high performance Rubber Moulding parts. We are market leaders in the Indian pump segment for supply of Rubber to metal bonded bearings, Cutlass Bearings, Wedges for Gate Valve, Diaphragms, Gaskets, Grommets & custom Moulding components.

Timeline

| 2011 | Established in 2011 to produce Oil Seals within 1800 sq ft workshop |
|------|---|
| 2013 | Installation of CNC & Rubber Moulding |
| | machines to produce pump bearings |
| 2015 | Expansion to new plant of 18000 sq ft |
| | with facility of rubber compounding |
| 2017 | Established in-house tool room with |
| | Vertical Milling Machines, SPM machines, |
| | Design team & licensed CAD/CAM softwares. |
| 2018 | Developed 100 new custom tools & |
| | moulds. ISO 9001-2015 Certification |
| 2022 | Expansion to new plant of 40,000 sq ft. |
| | Established rubber testing lab, kneader |
| | mixing & Moulding facility. |

Flextron has a team of over 100+ employees and are committed to offering our customers quality products for all critical applications. Flextron operates with Quality Management System's to the requirements of ISO 9001:2015.



Prototyping:

We can assist with initial stages of development for rapid turnaround from initial concept to provide time & cost-effective solutions. Our in-house tool room can cater to your new developments.

Qualification & Testing:

Testing capabilities for rubber to metal bonding strength, abrasion loss, tensile & angular strength with elongation, ageing tests in hot air or fuels.

Manufacturing:

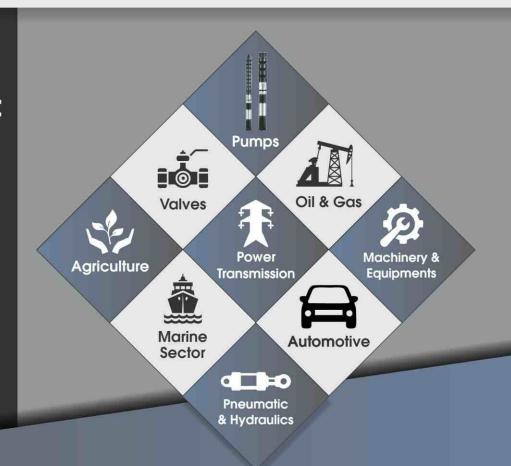
Flextron can manufacture a variety of rubber products with fast responsive delivery in high volumes as per specifications.

NEW PRODUCT TOOL DEVELOPMENT

| Feasibility Study | Design | Sampling | Production | Quality Check |
|--|---|--|---|---|
| Customer RFQ Material Requirement Product Application Process Analysis | Prototype Tool Production Tool SPM Jig / Fixtures | Part Validation Process Validation Customer Approval | Assign Time Plan Documentation & SOP Process Validation PPAP Elements | NC Summary Process Improvement Product Improvement CAPA |

Serving Industries:

- Pumps & Valves
- Oil & Gas
- Agriculture
- Power Generation
- Heavy Engineering
- Marine Sector
- Automotive
- Pneumatic & Hydraulics



Manufacturing

Capability



Flextron is committed to continual growth and investment in the manufacturing capability, combining conventional, CNC & VMC machines & Special Purpose Machines. The combination of Computer aided Design software gives us the ability to produce high quality tools & moulds as per customer's drawings. High quality Imported alloy steel is used for moulds for long life and consistency in the article's geometry & dimensions.

Our Strength:-

- Solution to your entire range of assembly spares of all kind of rubber parts
- Specialized & dedicated production lines for optimized manufacturing
- Broad based R&D for true problem solving
- Shorter lead time for new developments
- Timely Delivery as per commitments globally
- Application knowledge & market focused services

Manufacturing Equipment:-

- Rubber Mixing Kneader & Mill
- Rubber Bale & Blank Cutting Machine
- Testing Laboratory
- Vacuum Compression Moulding Press
- Transfer/Injection Moulding Press
- Post cure Ageing Oven
- SPM De-flashing Machines
- SPM Trimming
- CNC Turning Lathes
- VMC (Vertical Machining Centre)
- Vertical Milling Machines
- Surface Grinding
- Centreless Grinding
- CNC Bore Grinding
- SPM Keyway Machine
- Laser Engraving Machine
- Phosphating & Adhesive Coating Plant

Materials

| Natural Rubber | Vibration dampening & Durable |
|----------------------|---------------------------------------|
| NBR (Nitrile) | Fuel & Oil Resistance |
| SBR | Abrasion resistance & High Tensile |
| EPDM | Water Seals, Weather & |
| (Ethylene Propylene) | Ozone resistance |
| Silicone | Low & High temperature resistance |
| FKM/Viton* | High Temperature, Chemical resistance |
| Neoprene | Chemical resistance, UV Light |
| | & Heat/Flames |
| HNBR | Excellent Abrasion Resistance |
| | & Low temperature |

Viton* is a product of Chemours















Kneader / Mill

Rubber compound batches are mixed in well controlled area as per formulation. Good dispersion & distribution of the materials within the compound are achieved for good quality & uniform final products.

Bale Cutter/ Blank Cutting

SPM Machines for repetitive blank shape and mass production

Rubber Moulding

State of the art integrated Moulding capabilities to meet the changing needs of our customers. Transfer Moulding & Vacuum compression Moulding Facility.

Tool Room

Quality moulds produce Quality Parts. Our tool-room is equipped with shrink-fit tooling to perform machining within 3 microns. Integrated CAD & CAM Softwares to efficiently design & manage mould making with the shortest lead times & at the lowest cost.

Deflashing & Trimming

Special purpose machines for consistency and repeatability to finish the moulded components for right fitment.

Adhesive & Phosphating

We take at most care by using world-class Lead Free chemicals & adhesives for our rubber to metal/plastic bonding components. Viscosity, bond strength & surface coating thickness are strictly controlled with Ford cup & DFT meter.

CNC Turning & CNC Bore Grinding

Our state of the art special purpose CNC Turning machining capability enable high quality, cost effective & precision components.

Our special purpose machine for bore grinding allows us to keep close tolerance on rubber bushes to achieve concentricity within 10 microns.















Quality Control



ISO 9001-2015 Certified Facility

Flextron operates under strict guidance of ISO 9001-2015 Quality Management System. Our in-house quality control team ensure thorough in-process inspection from incoming raw material to finished goods dispatch. Conformity of all in-house processes is ensured through destructive & non-destructive testing, bond testing for rubber to metal parts & rubber profiles through projector.



Testing Facility with compound traceability

Flextron's lab features a wide variety of instruments to meet our specific requirements for rubber compound parameters.

- Tensile Strength
- Elongation
- Specific Gravity
- Swell Test
- Durometer Testing
- Compression Set
- Angular Tear Strength
- Abrasion Loss
- Hot air ageing
- Ash content
- Bond strength





ASTM Testing Methods:

| ASTM D2240 | Durometer Hardness |
|------------|---------------------------------------|
| ASTM D573 | Deterioration in an Air Oven |
| ASTM D624 | Tear strength of Conventional |
| | Vulcanized Rubber & |
| | Thermoplastic Rubbers |
| ASTM D1817 | Standard test method for |
| ē | Rubber Chemicals – Density |
| ASTM D2228 | Relative Abrasion Resitance by |
| ÷ | the PICO Abrader Method |
| ASTM D395 | Compression Set Test, Rubber Products |
| ASTM D412 | Tension properties for Vulcanised |
| | Rubber & Thermoplastic Rubbers |



Documentation & Certification Packages

Flextron can provide with the necessary documentation, inspection report and certification with every order. Any special requirements for tailor-made documentation & certification packages can be supplied upon request.

- Certificate of Conformity
- First-off inspection reports
- Process Flow Chart
- Control Plan
- Capability Study







Rubber Products Pump Parts



Rubber to metal bonded Bearing Bush

Bearing bush is the core product of Flextron as we produce over 1.5 million pcs annually. Thousands of OEM's, repair shops of pumps use our bearings around the world. We design & manufacture the entire range of water lubricated bearings from high tensile strength rubber bonded with steel, brass, bronze or plastics.

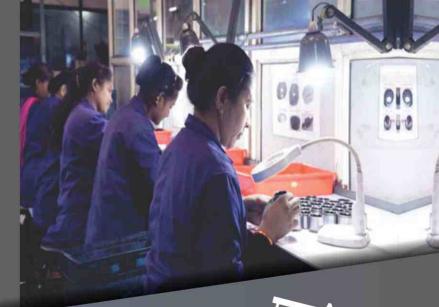
Why Flextron Bearings?

- Proven & tested product in the field for the last 13 years.
- Each flute of bearing in even thickness & width to eliminate vibrations & noise in pumps.
- Optimum Concentricity inside microns to minimise uneven wear & friction.
- Internal processing and bore grinding as per specifications
- Minimal tolerance for swelling when submerged under water, oils or chemical applications.
- We conduct regular inspections on the creation of our products, and carefully examine and authorize each order prior to shipping.
- Long Wear Life & Abrasion Resistance
- Fully Customizable for any shaft & housing



Benefits to Pump Manufacturers:-

- Quality Assurance
- Competitive Pricing
- Ready to stock items & Kanban quantity to avoid seasonal delays
- Reduced Friction & Ultimately Energy Efficient
- Enhanced Vibration Damping for smoother & quieter performance.
- Guaranteed bond strength -Zero bond failure
- No water swelling
- Elevate your brand value whilst saving on product failure at field
- Consistent Performance leading to reduced downtime, minimal maintenance & Lower cost of ownership.













Rubber Products Pump Parts

Wear - Rings

Rubber Wear-rings in pumps offer several benefits, making them an essential component in pump applications.

• Improve efficiency of pumps by reducing internal leakage

• Create tight seal between impeller & casing to prevent backflow & recirculation of fluid.

Protect critical component from abrasion & wear
 Reduce vibration & noise
 Lower operating cost



Diaphragm

Manufactured to customer specification to compensate the pressure built within the pumps, built to withstand upto 100 PSI.



Sandguard

Using sandguard can provide a reliable shield against sand particles, preventing clogs, abrasion & potential damage to critical components.

Manufactured with high abrasion resistance rubber & additional PTFE washer for long-life.



Diffuser Bush

Custom built bearing bush for variety of housing & impeller casings. They can be fitted manually by push effect with interlocking design based on application.



Stainless Steel Pump Parts

We have an entire range of SP Series parts from 4 " to 10 " pump sets consisting set of Wear-rings, Diffuser Bush, NRV Ring & Diaphragm.



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Cutlass Bearings Engineered Excellence In Motion

FLEXTRON RUBBER PVT. LTD.

At Flextron, Cutlass Bearings are manufactured from bespoke materials to withstand highly demanding environments in deep sea, power generation electric propulsion & industrial machinery applications. Our specially formulated Nitrile Rubber compound are proven and exceed all requirements of the USA Military specification MIL-DTL-17901C. Our state of the art Tool room, Precision CNC Turning & Grinding capability produce the bearings in strict tolerances as per USA Navy Standard BuShips Plan 810-1385664.



Advanced Materials

We can provide material certificates & other NDT analysis report upon requirements.
Our range of Shell materials include:

- Naval Brass Centrifugal Casted
- Brass
- Copper
- SS316L
- Monel
- Aluminium
- Aluminium Bronze
- Phosphor Bronze
- Gunmetal LTB2/LTB4
- GRP or Phenolic
- PTFE











Performance

The bond strength between the shell & metal exceeds industrial requirements of more than 200 PSI. The surface preparation of shell and application of adhesive coating thickness are monitored through DFT. Precision grinding & inspection are carried out through Plug Gauges. Our CNC bore grinding achieves better concentricity within microns during inspection with reference of internal diameter to outside diameter.

Quality Assurance

Over 13 years of our expertise in the science & technology of interacting surfaces in relative motion for friction, wear & lubrication. Our in-house testing lab continue to innovate and conduct rigorous destructive & non-destructive testing upon components to ensure guaranteed performance. All bearings are inspected with Plug Go-No Gauges for internal diameter and outer diameter is ground to achieve better concentricity and produce perfectly circular & straight bearing for better performance. Our quality team manages entire in-process inspection& operate Quality Management Systems to the requirements of ISO 9001:2015. Our rubber compound exceeds all specifications of USA Military MIL-DTL-17901C Class II classification & Tolerances as per BuShips.

Proven Benefits of using FLEXTRON® Cutlass Bearings:

ENERGY SAVING - Low coefficient of friction by slick lubrication between water & rubber.

VIBRATION ABSORPTION - Precision concentric dimensions, high compression set properties, equally sized bearing flutes to eliminate irregular spinning of shafts

SHAFT PROTECTION - Elastic rubber enable grit and dirt to press into its substrate until its flushed out, shielding the shaft from marking and minimal water.

DURABILITY - High quality materials make for robust & long lasting.

Highly resistant to oils, grease & chemicals.

Long wear life and lower maintenance costs

Pollution free high performance bearings which do not require any oil or grease for lubrication Fully Customizable to suit any shaft & housing combination

Sizes available from Shaft Diameter: 25mm to 400 mm

Our in-house Tool Room enable for quick developments of custom sizes with lowest possible cost and quick turnaround for delivery.



Custom **Moulded Parts**

Customer Focused to quickly meet your need. Specialized in rubber compounds for critical applications. Rapid turn-around from initial concept for prototyping to mass production.

Valve Rubber Wedges





NSF. WRAS Approved EPDM





Gaskets

O-Rings

Custom Moulded Parts

Automotive Parts

























Why Choose Flextron As Your Rubber Parts Supplier?

"Maximize Savings With High Quality Rubber Parts"

DURABILITY

High Quality rubber parts are built to last. They can withstand wear & tear, harsh environments & extreme temperatures. This means fewer replacements & less downtime, ultimately reducing maintenance cost.

PERFORMANCE

When your equipment operates efficiently, you save money. Premium rubber parts can enhance the performance of your machinery, leading to increased productivity & lower energy consumption.

REDUCED REPAIRS

Inferior rubber parts can lead to breakdowns & unexpected repairs. High Quality components are less likely to fail prematurely, saving you on repair costs emergency maintenance & product brand image.

IMPROVED SAFETY

Safety should never be compromised. Using top-notch rubber parts ensures the safety of your workforce and minimizes the risk of accidents or injuries, which can result in costly <u>litigation and compensation claims</u>

CONSISTENCY

High-quality rubber parts offer consistent performance, helping maintain product quality and reducing waste. This can be especially crucial in industries where precision matters.

LONG-TERM SAVINGS

Although high-quality rubber parts may have a higher upfront cost, their longer lifespan and reliability translate into significant savings over time. Think of it as an investment that pays off in the long term.





"Rubber Precision,
Performance & Perfection"

Global Reach



Member of:













Manufacturing Plant:

FLEXTRON RUBBER PVT LTD

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AN ISO 9001:2015 CERTIFIED COMPANY







