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Introduction

In 1990, Hi-Tech Seals was founded in Edmonton, Alberta. Since its inception, we have opened an additional five locations and founded Hi-Tech Gaskets Inc. Hi-Tech Seals is a leading Canadian seal distribution company, with a longstanding commitment to customer service. Our technical sales team works side-by-side with customers to find the best solution for any problem. Customers count on our ability to source quality products at affordable prices and stock them ready for delivery.

Hi-Tech is registered under an ISO 9001 Quality Management System. As part of our quality policy we must meet the following criteria:

- Hi-Tech shall distribute and/or manufacture a quality product that will meet our customers’ requirements and expectations.
- Hi-Tech shall strive to continually improve the effectiveness of the Quality Management System.
- Hi-Tech Quality Policy shall be communicated and understood at all levels of the organization.
- Hi-Tech Quality Policy and Quality Objectives will be reviewed for effectiveness and accuracy during the Annual Management Review.
O-Rings

O-rings are available in the following materials:

- Nitrile
- Low Temp. Nitrile
- Highly Saturated Nitrile
- Kalrez® Perfluoroelastomer
- DuPont™ Genuine Viton®
- Low Temp. Fluorocarbon
- Ethylene Propylene
- PTFE
- Silicone
- Urethane
- Aflas™
- Chloroprene
- Fluorosilicone

O-rings are available in:

- Metric and Imperial Sizing
- Cord/Splice and Vulcanized
- Large Cross-Section
- Custom Sizes
- UL, NSF, AS, MIL Spec Compounds

Hi-Tech Seals also carries anti-extrusion rings in Nitrile, Fluorocarbon, PTFE and PEEK. In addition we stock quad rings, square cuts rings and PTFE encapsulated O-rings.

For more information on O-Rings, contact a sales representative or visit www.hitechseals.com.
Rod & Piston Seals

The non-symmetrical designs of rod & piston seals provide improved mating surface contact and added stability. Hi-Tech Seals carries an extensive inventory of sealing products. Popular rod and piston seals include:

- Rectangular Piston Seals
- Square Piston Seals
- AQ Seals
- Fluid Seals
- U-Cups
- T-Seals
- Crown Seals
- Wipers
- Buffer Seals

To learn more about our products request a catalogue from a sales representative or download a digital copy from: www.hitechseals.com/catalogue.asp.
Many of our seals are designed symmetrically. A symmetrical design can be used in both rod and piston applications. Symmetrical seals include:

- O-Ring Loaded U-Cups
- Symmetrical U-Cups
- Homogenous U-Cups
- Z-Seals
- Vee Packing
- Wear Rings
- Plastic Balls
Rotary Seals

Rotary seals are designed to seal through dynamic rotating motion. Common rotary seals include:

- Large Bore Oil Seals
- Oil Seals
- V-Seals
- Braided Packing
- Mechanical Seals
- Metal Cased Rotary Seals
- Swivel Seals
- Spring Energized Seals

Our sales staff has a wealth of experience with rotary applications. Please provide a sales representative with information regarding the seal and the application’s operating conditions. Information provided will help us select the appropriate products and materials, thus optimizing the seal’s performance.
Hi-Tech Seals supplies high quality metal components in standard and custom designs. Buying metal components from Hi-Tech Seals allows clients to cut one purchase order instead of sourcing from multiple supply companies. Customers trust the quality and service provide by Hi-Tech Seals for their rubber, plastic, and metal components.

Examples of metal components include:

- Carbide Parts
- Metal Balls
- Custom Steel Components
- Brass Filters, Shear Pins, Plugs
- Retaining Rings
- DU Bushings
- Spherical Plain Bearings
- Ball Bearings
- Balls
Vibration Mounts

Vibration mounts reduce the noise and vibration on equipment, thereby increasing the equipments’ reliability and reducing wear. Vibration mounts can help meet vibration and noise regulations, which will protect individuals from potentially damaging noise levels. Hi-Tech Seals carry many standard mounts and offer engineering support for any new applications.

In addition to the vibration mounts, Hi-Tech Seals distributes Paulstra foams for noise reduction, isolators, special shaft seals, and more.
Protector Products

Protector products help prevent damage during shipping and storage of various products.

Products include:

- Sleeve Mesh
- Caps & Plugs
- Tool Joint Protectors
- Sucker Rod Protectors
- EUE Protectors
- Flange Protectors

Hi-Tech Seals also carries several protectors in the following styles:

- Open Ended
- Close Ended
- Threaded
- Non-Threaded

Custom thread protectors are available through our cast urethane division.
In 2012, Hi-Tech Seals founded a subsidiary, Hi-Tech Gaskets. Hi-Tech Seals now offer our customers a full range of gasket products. Hi-Tech Gaskets stocks standard styles of gaskets, manufactures pipe flange gaskets, and manufactures custom designed gaskets (see page 16).

Gaskets for pipe flanges:

- Ring Joint Type Gaskets
- Spiral Wound Gaskets
- Kammprofile
- Isolation Kits
- Urethane Test Gaskets

Isolation Kits

Isolation gaskets are designed to prevent leakage while protecting your system from corrosion caused by electricity. Kits are available with insulating sleeves, washers, as well as studs and nuts.
Other products offered by Hi-Tech Gaskets include:

- Studs & Nuts
- Bolts Protectors
- Redline Gauge Glass
- Mud Plug Kits
- Boiler Gaskets
- Fibre Glass Rope
- Tank Stripping Gaskets
- Chime Lap Gaskets
- Fillet Strip
- Joint Sealant

To learn more about these and other products now available through Hi-Tech Gaskets, request a catalogue from your sales representative.
Manufacturing

Rapid Seal

Rubber & Plastic Machining

Since 1993, Hi-Tech Seals has offered in-house rubber & plastic machining services. Our machining facilities are located in Edmonton, AB and Winnipeg, MB. Customers can select from one of our pre-programmed seal profiles, or create a custom seal by providing a sample or drawing. With the help of our experienced machining, sales, drafting, and engineering staff, we can quickly design and manufacture new prototype parts in a matter of hours without expensive tooling charges.

Optical Measurement Inspection

At Hi-Tech Seals, we employ an optical measurement device called the Micro-Vu Matrix. The Micro-Vu provides us with the capability to quickly and reliably measure components to within an accuracy of six decimal places. Hi-Tech Seals utilizes the Micro-Vu for inspection and replication purposes.

Inspection

Hi-Tech Seals’ quality control department uses the Micro-Vu to inspect newly arrived parts against the supplied drawings. The Micro-Vu is also used to confirm tolerances of machined parts to the highest standard in the industry.

Replication

Using the Micro-Vu, Hi-Tech Seals can accurately determine seal ID, OD, C/S, heights, angles, and even areas and volumes.
Hi-Tech Seals has several CNC lathes, multiple NC machines, milling and live tooling capabilities at our disposal. Hi-Tech Seals is capable of creating custom parts with profiles ranging from ¼” (6mm) inside diameter and up to as large as 29” (737mm) outside diameter.

Materials

Hi-Tech Seals stocks rod and tubes of plastic and elastomer materials for production and direct for sale.

Plastics:
- Nylon
- Acetal
- Hytrel®
- UHMW
- Torlon®
- PEEK
  - Virgin
  - Carbon Filled
  - Glass Filled

Elastomers:
- Ekonol®
- PTFE
  - Virgin
  - Bronze Filled
  - Carbon Filled
  - Carbon/Graphite Filled
  - Glass Filled
  - Moly/Glass Filled
- Nitrile
- Highly Saturated Nitrile
- Ethylene Propylene
- Fluorocarbon
- Aflas®
- Chloroprene
- Polyurethane

Standard Profiles

Our Computer Aided Manufacturing (CAM) software has over 120 pre-programmed seal profiles. Our team can help you select the correct profile from our Rapid Seal brochure.

To view pre-programmed profiles, request a copy of our Rapid Seal brochure or visit us online at www.hitechseals.com.
Cast Urethane

Hi-Tech Seals’ cast urethane division is centrally located in Winnipeg, Manitoba. Cast urethane parts are utilized as a replacement for previously used plastic, rubber or metal components. This versatile material can allow for lighter, quieter and longer lasting products. Polyurethane’s excellent physical characteristics can save you money by increasing wear resistance, providing less down-time and by having less product breakage.

Mould Making

Our cast urethane division utilizes a 3D printer to create scaled models of components. The process allows us to have full control of our mould development and allows us to reduce expensive tooling charges.
Types of Urethane

When creating a customized urethane product there are two main types of Polyurethane, Polyether and Polyester.

**Polyester:**
- Oil & Fuel Resistance
- Wear Resistance
- Dynamic Properties

**Polyether:**
- More Flexibility Over Polyesters
- Better Hydrolysis Resistance

**Durometer**

Hi-Tech Seals can maintain the urethanes toughness and resilience while producing a polyurethane as soft as 30 Shore A to as hard as 87 D.

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**Custom Colours**

Black, red, yellow, orange, green, blue, white or custom corporate colours.

**Logo & Part Numbers**

Hi-Tech Seals can mould your logo and part numbers onto components. Moulded identification marks will help create brand awareness and identify proprietary parts.
Rapid Gasket

LaserQC®

Hi-Tech Gaskets employs a Virtek LaserQC® 1200 machine. The LaserQC® assists in reverse engineering, quality inspection/control and statistical process control. It captures over 500 data points a second, while maintaining a tolerance within ± 0.05mm (0.002”). Our drafting department can manipulate the scanned data to remove flaws and optimize the tolerances for production. Our drafting team can then export the file directly to our Flashcutter or water jet for rapid gasket production.

Materials:

**Rubber and Plastic Sheet**

Red Rubber (SBR), Chloroprene, Silicone, White Nitrile, Nitrile, Highly Saturated Nitrile, Cork/Nitrile, Fluorocarbon, EPDM, Neo-Nylon, PTFE, expanded PTFE, UHMW-PE, Vegetable fibre/plant fibre, Gum Rubber

**Thickness:** 1/64", 1/32", 1/16", 1/8", 3/16", 1/4"

**Sheet Size:** 5' x 66'

**Composite Non-Asbestos**

BA-U, BA-50, BA-CF, BACF-4000

**Thickness:** 1/64", 1/32", 1/16", 1/8"

**Sheet Size:** 3’ x 3’, 5’ x 5’, 5’ x 15’

**Composite Flexible Graphite**

Grafilit® SF, Grafilit® SL, Grafilit® SP

**Thickness:** 1/64", 1/32", 1/16", 1/8

**Sheet Size:** 5’ x 5’

**Metal**

Mild Steel, Stainless Steel 304, Stainless Steel 316L, Aluminum, Copper


**Sheet Size:** 4’ x 8’, 5’ x 10’
Manufacturing

Equipment

Flashcutter

Hi-Tech Gaskets’ flashcutter is capable of utilizing CAD renderings to quickly produce gaskets in rubber, plastic and composite materials. The flashcutter’s surface area can accommodate material up to 5' x 10' (1550 mm x 3050 mm).

Gaskets are cut through a rapid vertical reciprocating motion. The cutting motion produces a cleaner finished part, avoiding compression marks found on die-cut gaskets. The flashcutter’s vacuum surface holds the sheet material in place preventing the movement of parts during production. This enables the flashcutter to maintain exceptional tolerances during production.

Waterjet

The Omax waterjet further expands our manufacturing capabilities. The waterjet cuts the standard composite and rubber materials, but also allows us to manufacture metal gaskets up to 2” thick. The waterjet working surface area is 60” x 135”. Gaskets that require a larger diameter can be manufactured by using an interlocking dovetail configuration.

Die Cut

Hi-Tech Gaskets utilizes both a clicker press and roller press to produce die cut gaskets. Dies are manufactured locally and stored in house.

Die Cut - Round Gaskets - up to 48”
Die Cut - Oblong Gaskets - up to 33” x 66”

Hand Cut

For cost effective small runs, Hi-Tech Gasket produces hand cut gaskets. Dimensional capabilities include:

Hand Cut - Round Gaskets - up to 36”
Hand Cut - Oblong Rubber Gaskets - up to 48” x virtually endless
Hand Cut - Oblong Non-asbestos Gaskets - up to 60” x 180”
Hi-Tech Seals’ sales staff can help create the appropriate replacement part at an affordable price. We can create parts based on metal dimensions, product samples or customer-supplied drawings.

Products can be created in any rubber material used by the seal manufacturing industry. Our knowledgeable sales staff can help select the best material or visit our chemical compatibility guide on our website www.hitechseals.com.

Capabilities include:

- Metal-to-Rubber Bonding
- Fabric Reinforcement

Common Materials:

- Nitrile
- Highly Saturated Nitrile
- Fluorocarbon
- EPDM
- Aflas™
- Silicone
- Perfluoroelastomer
- Fluorosilicone
Services & Accessories

Services

Hi-Tech Seals continues to excel because of our commitment to quality products and excellent service. To better serve our customers we have added services such as:

- Optical Measurement Inspection – Measurement of parts to within six decimal places
- Kit Creation Program - Custom labels & packaging service
- Laser Engraving - Engrave part numbers or brand names
- PTFE Colour Coating on Parts
- Drafting Services
- Vendor Managed Inventory (VMI)
- 24 Hour, On-Call Service

To learn more about the services we offer, visit our website: www.hitechseals.com.

Accessories

Hi-Tech Seals O-ring selection tools:

- O-Ring Wall Charts
- O-Ring Size Selection Charts
- PI Tapes
- O-Ring Cones

Other products include:

- High Performance Adhesives
- UV Resistant Black Bags
- Brass O-Ring Picks
- Seal Installation Tools
- O-Ring Lubricants
- Polyimide Tapes
- PTFE Tapes
Hi-Tech Seals Branches:

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1180 Kerrisdale Blvd; Unit #8  |  Newmarket, ON  |  L3Y 8Z9  |  Ph: 905.953.9666  |  Fax: 905.953.8739
1450 Rue Nobel, Suite #20  |  Boucherville, QC  |  J4B SH3  |  Ph: 450.655.7325  |  Fax: 450.655.7359
105 Gladstell St.  |  Conroe, TX  |  77301  |  Ph: 936.206.3124  |  Fax: 936.756.0538

Hi-Tech Gaskets:

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