



COMPRESSION
PACKING



Engineered Solutions since 1911

Robco Compression Packing for Heavy Industry

The "Total Cost of Ownership" is a valuable benchmark for selecting better vendors in industrial maintenance and its related procurement. At Robco, this is what we have in mind when we supply you with innovative packing, enabling your operations to be as efficient as possible.

A long history in servicing the industry

For over 100 years, Robco has manufactured compression packing in Canada to supply heavy industry with the latest technology. Our Field Technicians and Product Experts visit facilities like yours EVERY DAY, witnessing and understanding your needs and challenges. Robco packing represents a judicious balance of operations effectiveness and user-friendly product.



Innovation, innovation, innovation...

Your industry keeps changing; Robco stays ahead of the curve developing packing that will meet the toughest conditions in the industry. Our laboratory is equipped to run a wide range of tests from hot compression test, to leakage measurements, materials tear and tensile strength, oxidization measurements, etc. We keep improving so you can keep producing.



We are making it possible

Local manufacturing does have its benefits: we respond quickly, carry out custom-production with faster turn-around. With 100 years of experience, our quality workmanship and quality components blend together under ISO 9001 Quality Assurance to provide top quality products for problem-free operation.



Expert Customer Service

Our on-site Technicians, Compression packing Specialists and Customer Service departments are here to guide you and answer all your questions regarding the selection of the right product for your application.



Tradition in Innovation

Industrial processes

From strong chemicals found in the petrochemical industry, to high-speed pumps or deflection on agitators in pulp & paper, to abrasive slurry in mining, to high temperature equipment in thermal stations, or large stern tubes for marine industry, Robco develops compression packing that keeps your equipment running by using multi-fiber braiding construction and state-of-the-art materials.



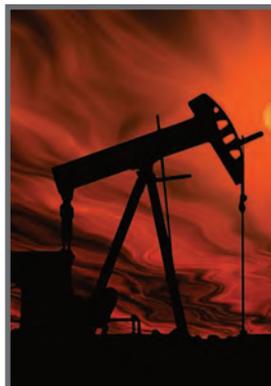
Valves and other semi-static equipment

From -400°F to 2000°F, from vacuum to 4000 psi, API (American Petroleum Institute) fire-safe tested or low emissions standards, to sealing molten metals; we have the compression packing you need, and we never stop working on tomorrow's to meet your future requirements. We are world-renowned as experts for extreme temperature sealing.



Oil & Gas

Oil exploration, traditional and alternative extraction methods such as SAGD all require specific packing to maximize efficiency. Present in Edmonton, AB since the 1950's, we understand your requirements and have developed sealing devices to suit the high pressures and temperatures found in Western Canadian oilfields.



We know packing

Over the years, we have developed superior packing for specific applications, enhancing its properties by choosing the optimal components according to the application, outperforming standard packing.



Robco 174

PTFE & Graphite

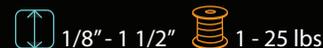
This compression packing is produced from a high tensile modulus PTFE yarn with a high percentage of micronized graphite and a small percentage of dimethylsiloxane.



Robco 174

Max. Temperature	Surface speed (fpm)	pH range
500°F / 260°C	3500	0 - 14
Components		
PTFE & graphite fibre with silicone break-in lubricant		

A good universal packing for pulp & paper applications.



Robco 290

High Temperature Rope

The 290-Series ropes are made from chemically treated glass which possess the advantages of glass filament without any of its shortcomings. These ropes last 2-3 times longer than traditional glass, silica or ceramic ropes that are often prohibited for health issues.



Robco 290

Max. Temperature	Pressure (psi)	pH range
1400°F / 760°C	300	3 - 12
Components		
Chemically treated glass		

High heat doors: Boilers, furnaces, crucibles and more...



Robco 290 HTVS

Crucible Lid Seal

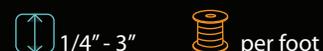
More effective than other crucible lid seals. 290 HTVS has slow compression properties yielding longer service life, maintains vacuum, is chemically resistant to cryolite and easy to remove. Molten aluminum doesn't unravel or stick to the seal.



Robco 290 HTVS

Max. Temperature	Pressure (psi)	pH range
1700°F / 925°C	300	0 - 14
Components		
Chemically treated glass with coating (Inconel wire reinforcement available)		

Designed specifically for crucible lid seals.



Robco 380

Flax-Tallow

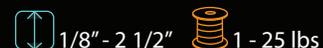
A superior quality packing made from long line flax yarn, lubricated by a process that retards extraction. Stock type is made with a tallow compound. For moderate temperatures and pressures, water, reciprocating or rotary equipment and stern glands on ships.



Robco 380

Max. Temperature	Surface speed (fpm)	pH range
194°F / 90°C	1885	6 - 8
Components		
Long flax fibre with petroleum lubricant		

Ideal packing for liquids close to neutrality on the pH scale.



Robco 399

Copper Wire

Produced from a tightly braided copper wire to form a solid, high-density packing suitable for water, steam or gases at high temperatures. It can be used on rods or plungers, particularly in heavy-duty hydraulic service. Generally used as end rings in combination with other packing to prevent extrusion.



Robco 399

Max. Temperature	Pressure (psi)	pH range
500°F / 260°C	1000	3 - 10
Components		
Copper Wire		

Used as scraper rings on knife gate valves.



Robco 871

Crimped Aluminum & Glass Core

Robco 871 is made with a fibreglass core, encased in lubricated and graphited crimped aluminum foil and die formed to shape and size. Available with either dry or lubricated core in round, square or rectangular shapes.



Robco 871

Max. Temperature	Surface speed (fpm)	pH range
1000°F / 535°C	1500	4 - 10
Components		
Aluminum foil / Fibreglass core / Heat conductive lubricant		

For superheated steam, gas, oil, tar, asphalt and valves.



Robco 1120

Food Grade PTFE

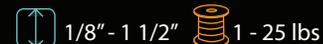
This 100% pure PTFE packing combines high tensile strength and initial modulus, a low elongation at break and high load bearing capacity without cold flowing. ROBCO 1120 is completely free of any additional treatment such as colloidal PTFE or oil. Meets FDA; 21-CFR 177.1550.



Robco 1120

Max. Temperature	Pressure (psi@400°F)	pH range
500°F / 260°C	1000	0 - 14
Components		
PTFE fibre in a Translok braid		

Intended for use where 100% virgin PTFE yarn is required.



Robco 1121

Dry PTFE

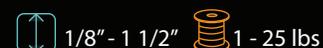
The only additional treatment to the pure PTFE yarn consists of an aqueous dispersion of polytetrafluoroethylene. ROBCO 1121 is intended for valve services. Thermally stable and chemically resistant, no hardening or shrinking will occur.



Robco 1121

Max. Temperature	Pressure (psi)	pH range
500°F / 260°C	1000	0 - 14
Components		
PTFE fibre in a Translok braid		

Intended for valve services.



Robco 1123

PTFE & Oil

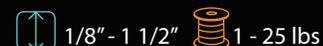
This pure PTFE packing combines high tensile strength and initial modulus, a low elongation at break and outstanding load bearing capacity without cold flowing. Other properties include: near universal chemical inertness, self-lubrication, and will deform under minimum gland follower compression. (also available: 1123 Washer Strips)



Robco 1123

Max. Temperature	Surface speed (fpm)	pH range
500°F / 260°C	1500	0 - 14
Components		
PTFE fibre in a Translok braid / Silicone		

An excellent choice for most chemical processes.



Robco 1140 GFO®

PTFE & Graphite

Produced from a high tensile modulus PTFE yarn with a combination of micronized graphite and silicone lubricant resulting in a packing that retains nearly all of pure PTFE's chemical resistance while operating at pump speeds up to 4300 fpm in cool liquids.



Pack It and Forget It

Robco 1140 GFO®

Max. Temperature	Surface speed (fpm)	pH range
550°F / 285°C	4300	0 - 14
Components		
GFO® yarn / Graphite, silicone and PTFE		

An excellent universal mill compression packing.



Robco 1175

Extruded PTFE Valve Packing

ROBCO 1175 is a remarkable advance on other PTFE based packing with noticeably increased flexibility thanks to a special extrusion process. Robco 1175 conforms to valve studs and used compression glands, eliminating the need for expensive repairs on older valves.



Robco 1175

Max. Temperature	Pressure (psi)	pH range
550°F / 288°C	600	0 - 14
Components		
Expanded PTFE wire		

Ideal for small valves.



Robco 1200

Thermograf® Flexible Graphite

Braided from exfoliated, expanded graphite and calendered to a density of 65-70 lbs/ft³. For valve and pump services, it combines extreme self-lubricating properties, pressure bearing capability, chemical resistance and resilience. We suggest using style 1200 with braided fibre end rings.



Robco 1200

Max. Temperature	Pressure (psi)	pH range
(Steam) 1200°F / 650°C	2500	0 - 14
Components		
Expanded exfoliated graphite / Graphite / Phosphorus		

Ideal replacement for HT asbestos packings.



Robco 1220

Flexible Graphite and Inconel® Jacket

ROBCO 1220 is a compression packing produced from exfoliated, expanded graphite yarns, which are individually encapsulated by an Inconel® wire jacket that allows the packing to handle higher pressure than standard expanded graphite packings. Passes API 589 rev. II fire test.



® Inconel is a registered trademark of Special Metals Corporation



Robco 1220

Max. Temperature	Pressure (psi)	pH range
(Steam) 1200°F / 650°C	4000	1 - 14
Components		
Expanded exfoliated graphite / Inconel® wire		

The ultimate packing for severe valve service.



Robco 1250

Flexible Graphite with Carbon Corners

Universal mill packing that operates with minimal cooling water. Easy to install, it reduces dilution, improves process temperature and does not extrude from stuffing box. Operates at very high speeds and tolerates more wear and tear than other packing. Requires minimal adjustments after start-up.



Robco 1250

Max. Temperature	Surface speed (fpm)	pH range
600°F / 316°C	4000	1 - 14
Components		
Expanded exfoliated graphite / Carbon		

Universal mill packing for low cooling water consumption.



Robco 1342

Pure Graphite Filaments

ROBCO 1342, a graphitic filament packing with a 99% plus carbon assay, combines chemical resistance with exceptional resilience and heat conductivity. An excellent choice for boiler feed, condensate, high speed rotary applications and end rings on high pressure/temperature valves.



Robco 1342

Max. Temperature	Surface speed (fpm)	pH range
1200°F / 650°C	5000	4 - 10
Components		
Graphitic Yarn / Graphite and PTFE		

Performs well under severe chemical conditions.



Robco 3400

High Purity Carbon

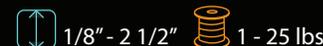
Pure filament carbon packing with good chemical resistance to concentrated alkalis encountered in the Kraft pulping process. Exceptional performance at high surface speeds. ROBCO 3400 is also predominantly used as end-rings in high pressure/temperature valves.



Robco 3400

Max. Temperature	Surface speed (fpm)	pH range
600°F / 316°C	4000	1 - 14
Components		
Carbon yarn / Graphite and other lubricants.		

Ideal for a very broad range of chemical applications.



Robco 3425

Carpak

Braided from high carbon assay and PTFE, Robco 3425 provides balanced chemical and thermal resistance making it an ideal universal packing for pulp and paper operations.



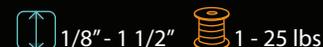
(also avail. Robco 3425 standard, without Silicone)



Robco 3425

Max. Temperature	Surface speed (fpm)	pH range
600°F / 316°C	3000	1 - 14
Components		
Carbon yarn / Colloidal PTFE and Silicone		

Suitable for bleaching agents used in pulp & paper.



Robco 3440

The "Workhorse" Carbon Packing

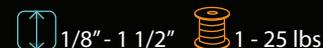
Superior yet economical alternative packing for universal application in alumina refining, mining, pulp and paper and other heavy industries. The "Workhorse" performs well at elevated temperatures with chemicals and moderate abrasion found on rotary equipment used in the above industries.



Robco 3440

Max. Temperature	Surface speed (fpm)	pH range
600°F / 316°C	3500	1 - 14
Components		
High carbon assay fibre / PTFE and other lubricant		

Suitable for high velocity as well as elevated temperatures.



Robco 3450

Carbon and Inconel® Valve Packing

This stiff wire-reinforced carbon packing is a good choice for high pressure, moderate temperature static and semi-static valve applications. Used widely in heavy oil extraction operations.



® Inconel is a registered trademark of Special Metals Corporation



Robco 3450

Max. Temperature	Pressure (psi)	pH range
600°F / 316°C	2500	1 - 13
Components		
Carbon yarn with Inconel® wire insert / Graphite		

Excellent heavy oil valve packing.



Robco 3451

Carbon and Soft Core Valve Packing

ROBCO 3451 made from wire-reinforced carbon with a malleable core is commonly used for semi-static applications requiring a packing that will deform easily under compression at moderate temperatures and pressures.



® Inconel is a registered trademark of Special Metals Corporation



Robco 3451

Max. Temperature	Pressure (psi)	pH range
500°F / 260°C	2500	1 - 13
Components		
Carbon Yarn with Inconel® Wire Insert, semi-inorganic extruded core / Graphite, Corrosion Inhibitor		

Soft and malleable for semi-static applications.



Robco 4010

Kynol® and PTFE

Produced from Kynol™ novoloid pretreated with a break-in lubricant and then saturated with PTFE. Broad chemical resistance to acids, bases, solvents, fuel and steam. Recommended for moderately abrasive environments where contamination of graphite particles in the fluid process is unacceptable.



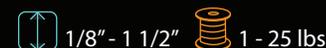
© Kynol is a registered trademark of Kynol Europa GmbH



Robco 4010

Max. Temperature	Surface speed (fpm)	pH range
500°F / 260°C	2000	1 - 13
Components		
Kynol® / PTFE and break-in lubricant		

Economical mill packing for low shaft speeds.



Robco 4025

Nomex® and PTFE

Made of polymer aromatic polyamides white fibre, it possesses excellent static and dynamic fatigue resistance as well as a negative coefficient of expansion. Well suited to abrasion under temperature changes, it is an obvious choice when colour contamination is an issue.



© Nomex is a registered trademark of E.I. du Pont de Nemours & Co.



Robco 4025

Max. Temperature	Surface speed (fpm)	pH range
500°F / 260°C	2500	2 - 12
Components		
Meta-Aramid yarn / Colloidal PTFE and silicone oil		

Excellent packing for mining, sewage and pulp and paper.



Robco 4029

Para-Aramid and PTFE

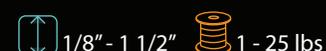
Made of all polymer aromatic para-aramid fibre, it possesses excellent abrasion and fatigue resistance. Excellent for mine tailings, slurries, sewage applications, and moderately severe acids and alkalis, it is used extensively on groundwood in the pulp and paper industry.



Robco 4029

Max. Temperature	Surface speed (fpm)	pH range
500°F / 260°C	2500	3 - 12
Components		
Para-aramid fibre filament yarn / Colloidal PTFE and silicone oil		

Ultimate abrasion resistance on dynamic services.



Robco 4040

Flax and PTFE

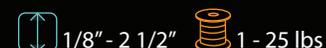
A long fibre flax yarn saturated with colloidal PTFE and break-in grease lubricant. While economical, Robco 4040's high wet strength, low abrasion, low friction, and self-lubricating properties of the colloidal PTFE makes this packing easy on shafts and sleeves. An appropriate choice for stern tubes on ships.



Robco 4040

Max. Temperature	Surface speed (fpm)	pH range
275°F / 135°C	2250	6 - 8
Components		
Long fibre flax yarn / PTFE		

A traditional choice for the marine industry.



Robco 4257

Refiner Packing

Developed specifically for wood pulp refiners, this high vibration/high surface velocity resistant packing with exceptional resilience will not damage shafts or sleeves under normal conditions, even at elevated speeds. Resists elevated temperatures and steam.



Robco 4257

Max. Temperature	Surface speed (fpm)	pH range
500°F / 260°C	4000	1 - 14
Components		
Special proprietary fibre blend		

Developed for Refiners: conical, disc, deflakers, defibrators.



Robco 4259

Slurry Packing

This packing is specifically engineered to handle slurries in high abrasion/high surface velocity environments in presence of vibration, pressure and steam without damaging pump shafts or sleeves. Retaining its mechanical integrity at high shaft speeds and performing well with mild chemicals or steam where it will not hydrolyze.


Robco 4259

Max. Temperature	Surface speed (fpm)	pH range
500°F / 260°C	3000	2 - 10
Components		
Special composite with silicone break-in lubricant		

For bauxite-alumina, pulp, potash, mining and other slurries.

1/8" - 1 1/2" 1 - 25 lbs

Robco 4777

Pump Jack Packing

Robco 4777 offers better heat dissipation than regular PTFE packing, better abrasion resistance and longer packing life and integrity. It retains its chemical resistance with improved thermal stability using a specific braiding pattern and density. Exceptional non-oxidizing lubricant provides minimal friction even at high temperatures.


Robco 4777

Max. Temperature	Surface speed (fpm)	pH range
500°F / 260°C	2500	3 - 12
Components		
PTFE, Hybrid aramid fibre yarns / Non-oxidizing lubricant		

Specifically Developed for pump jack oil extraction units.

1/8" - 1" 1 - 25 lbs

Robco 5019

Acrylic & Graphite - Translok

A general purpose packing that can service mild chemical applications without becoming vulnerable to excessive deformation under high operating pressures and performs at moderate speeds without glazing, carbonizing or becoming abrasive.


Robco 5019

Max. Temperature	Surface speed (fpm)	pH range
400°F / 205°C	2250	2 - 12
Components		
Synthetic yarn, flake graphite / Graphite, break-in lubricant		

Economical general purpose packing.

1/8" - 2 1/2" 1 - 25 lbs

Robco 5050

Acrylic & PTFE

A good general purpose packing for moderate chemical applications. Produced from a high quality synthetic yarn combining strength with chemical and high temperature resistance. A high percentage of colloidal PTFE, fully saturates this stable yarn resulting in a product that retains most of its original modulus up to 500°F.


Robco 5050

Max. Temperature	Surface speed (fpm)	pH range
500°F / 260°C	2250	2 - 12
Components		
PTFE & graphite fibre with silicone break-in lubricant		

Economical white non-staining general purpose packing.

1/8" - 2 1/2" 1 - 25 lbs

Robco 5079

PTFE, Graphite and Para-Aramid

Braided GFO® fibre yarns with para-aramid corners to achieve optimal sealing results in abrasive applications under high temperature and pressure conditions. Ideal for reciprocating applications.


Robco 5079

Max. Temperature	Surface speed (fpm)	pH range
500°F / 260°C	3000	3 - 12
Components		
GFO® and para-aramid fibre / Silicone, PTFE and break-in lubricant		

Resistant to many classifications of chemical products.

1/8" - 1" 1 - 25 lbs

Carboform™

Valve Packing Ring

Carboform™ moulded rings consist of a unique mixture of inorganic fibres, graphite and an elastomeric binder combining thermal and chemical stability. Used by OEM's to efficiently seal bronze valve stems, it is designed for easy factory assembly and quick installation with one ring required per unit.



™ Carboform is a registered trademark of Robco Inc.



Robco Carboform™

Max. Temperature	Pressure (psi)	pH range
500°F / 260°C	670	2 - 13
Components		
Inorganic fibres and graphite / Elastomeric binder		

Quick installation valve stem moulded rings for OEM's.

Moulded part per unit

Graph-Tape™

High Pressure Valve Packing Precursor

This exfoliated expanded graphite tape is wound into a circular shape and die-formed into solid packing rings. Ideal as middle rings for high temperature valves operating up to 1200°F in steam environment. Often used in conjunction with Robco 1220, 1342 or 3400 end-rings.



™ Graph-Tape is a registered trademark of Robco Inc.



Robco Graph-Tape™

Max. Temperature	Pressure (psi)	pH range
850°F / 455°C	2500	1 - 14
Components		
Expanded graphite		

Graph-Tape™ is available in tape, sheet or die-form rings.

3/16" - 40" per roll

Packing Tools

For Handling Your Compression Packing

Robco offers a complete line of tools designed to handle your packing maintenance with ease. Plated for corrosion protection, these tools meet or exceed government specifications.



1 Rigid Packing Tools

These tools are made from high quality steel with an oil finish and warranted not to break, when used as directed, in removing packing from stuffing boxes.

2 Flexible Packing Tools

These tools are made of tempered steel with two flexible spiral steel shafts, one inside the other, wound in opposite directions that make up the shank. The handle is die cast for durability and the point is tempered.

3 Flexible Packing Tools with Removable Tips

The interchangeability of tips allows great versatility. Worn or damaged tips may be replaced at minimal cost rather than sacrificing the entire tool. Woodscrews are used for hardened packing while corkscrews handle most other applications.

4 Bruno Packing Tools

These packing extractors are designed to access the most difficult areas. The Bruno specialty tool is made strong and tough to enable removal of old hardened packing. Unique angles allow you to navigate around various shafts with ease.

Robco also offers Packing Tool Sets. They include flexible hooks, rigid hooks, removable tip sets and Bruno tools of various sizes.

Rigid Packing Tools

Sizes Available
Cork screw: 6", 8", 10", 14", 18", 20" Single end hook: 8", 10", 12", 14" Double end hook: 6", 8", 10", 12" Offset tool: 14"

Flexible Packing Tools

Sizes Available
6 1/4", 10 5/8", 14.25", 18", 22", 30"

Flexible Packing Tools / Removable Tips

Sizes Available
7.5", 11", 14.5"

Bruno Packing Tools

Sizes Available
3/16"x 8", 3/16" x 11", 1/4" x 13", 5/16" x 13"

This brochure only shows the most commonly used standard models.

Custom made packing is available upon request.



Compression Packing

	Style Number	 Rotating Equipment	 Valves or Semi-static	 Abrasion Resistant	 Cryogenic	 Strong acids	 Strong Alkalies	 Petroleum	 Steam	 Maximum Speed	 Maximum Pressure	 Maximum Temperature
ACRYLIC	5019									2250	300	400°F / 205°C
	5050									2250	500	500°F / 260°C
CARBON	3425									3000	500 / 1000	600°F / 315°C
	3440									3500	500 / 1000	600°F / 315°C
	3450									Static	2500	600°F / 315°C
	3451									Static	1500	500°F / 260°C
COMPOSITE	4257									4000	500	500°F / 260°C
	4259									3000	500	500°F / 260°C
	4777									2500	600	500°F / 260°C
	5079									3000	300	500°F / 260°C
	Carboform									Static	670	500°F / 260°C
GLASS	290									Static	300	1400°F / 760°C
	290HTVS									Static	300	1700°F / 925°C
GRAPHITE	1200									4000	2500	1200°F / 650°C
	1220									Static	4000	1200°F / 650°C
	1250									4000	500 / 2500	600°F / 315°C
	1342									5000	500 / 2500	1200°F / 650°C
	3400									4000	500 / 4000	1200°F / 650°C
	Graph-Tape									Static	2500	1200°F / 650°C
METAL	399									Static	1000	500°F / 260°C
	871									1500	1000	1000°F / 535°C
NATURAL FIBRES	380									1885	150	194°F / 90°C
	4040									2250	300	275°F / 135°C
POLYMER	4010									2000	500	500°F / 260°C
	4025									2500	500	500°F / 260°C
	4029									2500	500	500°F / 260°C
PTFE	1120									1000	300	500°F / 260°C
	1121									1000	300 / 3000	500°F / 260°C
	1123									1500	300	500°F / 260°C
	1175									Static	600	550°F / 285°C
PTFE + GRAPHITE	174									3500	300	500°F / 260°C
	1140GFO									4300	300	550°F / 285°C

 Can be used for this application

 Denotes Best Choices

 Except for high concentrations of nitric or sulphuric acids, aqua regia, etc.

Compression Packing Specialists

Robco's Compression Packing Division supplies high performance packing to meet the extreme operating conditions found in pulp & paper, oil & gas, petrochemical, mining, metal transformation, power generation and general industry to maximize operation efficiency. Robco's specialists take pride in the performance of our standard and custom made compression packing.

Since 1911, Robco products are used everywhere in heavy industry as components of original equipment and in aftermarket maintenance and repair.

ISO 9001 and ISO 14001 Certified, our commitment to focusing on engineered solutions has fostered an alignment between our customers' satisfaction and our success while caring for our environment.



Total Cost of Ownership

Our T.C.O. approach to problem-solving often results in our customers saving substantially more than their total maintenance budgets for the products that we supply.



Made in Canada

Robco Compression Packing is braided at our Montreal, Quebec facility, thus ensuring unsurpassed quality control and quick turnaround times for our North American customers.



Engineered Solutions since 1911

www.robco.com

MONTREAL
MISSISSAUGA
EDMONTON

Tel.: 514.367.2252
Tel.: 905.564.6555
Tel.: 780.469.0601

Fax: 514.367.1144
Fax: 905.564.6901
Fax: 780.469.0765

Email: info@robco.com

Heat Resistant Materials - Engineered Plastics - Rubber Products - Metallic Gaskets
Soft Gaskets - Mechanical Seals - Compression Packing - Lubricants & GreaseS