



COMPRESSION PACKING

Your Trusted Partner







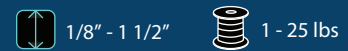
PTFE & Graphite

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.



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.



High Temperature Rope

The 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.



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

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



Crucible Lid Seal

More effective than other crucible lid seals. 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.



Max. Temperature	Surface speed (fpm)	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.



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.



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.





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.



Max. Temperature	Surface speed (fpm)	pH range
1112°F / 600°C	1000	3 - 10
Components		
Copper wire		

Used as scraper rings on knife gate valves.



Crimped Aluminum & Glass Core



Is made with a fiberglass 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.



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.



Food Grade PTFE

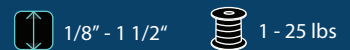


This 100% pure PTFE packing combines high tensile strength and initial modulus, a low elongation at break and high load bearing capacity without cold flowing. Is completely free of any additional treatment such as colloidal PTFE or oil. Meets FDA; 21-CFR 177.1550.



Max. Temperature	Surface speed (fpm)	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.



Dry PTFE



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



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

Intended for valve services.





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.



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.



PTFE & Graphite

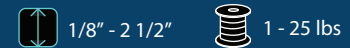


Produced from a high tensile modulus PTFE yarn with a combination of micronized graphite and silicone lubricant resulting in a packing that retains nearly all of pure PTFE's chemical resistance while operating at pump speeds up to 4300 fpm in cool liquids.



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.



Extruded PTFE Valve Packing

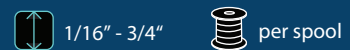


Is a remarkable advance on other PTFE based packing with noticeably increased flexibility thanks to a special extrusion process. Conforms to valve studs and used compression glands, eliminating the need for expensive repairs on older valves.



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

Ideal for small valves.



Thermograf® Flexible Graphite

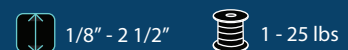


Braided from exfoliated, expanded graphite and calendered to a density of 65-70 lbs/ft3. For valve and pump services, it combines extreme self-lubricating properties, pressure bearing capability, chemical resistance and resilience.



Max. Temperature	Surface speed (fpm)	pH range
(steam) 1200°F / 260°C	2500	0 - 14
Components		
Expanded exfoliated graphite / Graphite/ Phosphorus		

Ideal replacement for HT asbestos packings.





Flexible Graphite and Inconel® Jacket



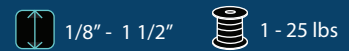
Is a compression packing produced from exfoliated, expanded graphite yarns, which are individually encapsulated by an Inconel® wire jacket that allows the packing to handle higher pressure than standard expanded graphite packings. Passes API 589 rev. II fire test.



* Inconel is a registered trademark of Special Metals Corporation

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

The ultimate packing for severe valve service.



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.



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.



Pure Graphite Filaments



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.



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.



High Purity Carbon

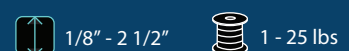


Pure filament carbon packing with good chemical resistance to concentrated alkalis encountered in the Kraft pulping process. Exceptional performance at high surface speeds. Robco 3400 is also predominantly used as end-rings in high pressure/temperature valves.




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.





Carpak

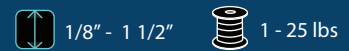


Braided from high carbon assay and PTFE, provides balanced chemical and thermal resistance making it an ideal universal packing for pulp and paper operations.




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.



The "Workhorse" Carbon Packing

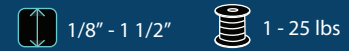


Superior yet economical alternative packing for universal application in alumina refining, mining, pulp and paper and other heavy industries. The "Workhorse" performs well at elevated temperatures with chemicals and moderate abrasion found on rotary equipment used in the above industries.




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.



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

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

Excellent heavy oil valve packing.



Carbon and Soft Core Valve Packing



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

Max. Temperature	Surface speed (fpm)	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.





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

Max. Temperature	Surface speed (fpm)	pH range
5800°F / 260°C	2000	1 - 13
Components		
Kynol® / PTFE and break-in lubricant		

Economical mill packing for low shaft speeds.



Nomex® and PTFE



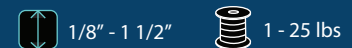
Made of polymer aromatic polyamides white fibre, it possesses excellent static and dynamic fatigue resistance as well as a negative coefficient of expansion. Well suited to abrasion under temperature changes, it is an obvious choice when colour contamination is an issue.



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

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.



Para-Aramid and PTFE

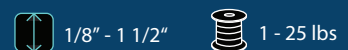


Made of all polymer aromatic para-aramid fibre, it possesses excellent abrasion and fatigue resistance. Excellent for mine tailings, slurries, sewage applications, and moderately severe acids and alkalis, it is used extensively on groundwood in the pulp and paper industry.



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.



Flax and PTFE

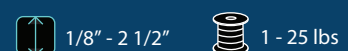


A long fibre flax yarn saturated with colloidal PTFE and break-in grease lubricant. While economical, high wet strength, low abrasion, low friction, and self-lubricating properties of the colloidal PTFE makes this packing easy on shafts and sleeves. An appropriate choice for stern tubes on ships.



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.





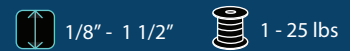
Refiner Packing

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.



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.



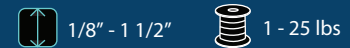
Slurry Packing

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.



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.



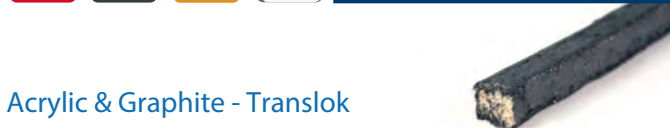
Pump Jack Packing

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.



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.



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.



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.





Acrylic & PTFE

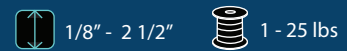


A good general purpose packing for moderate chemical applications. Produced from a high quality synthetic yarn combining strength with chemical and high temperature resistance. A high percentage of colloidal PTFE, fully saturates this stable yarn resulting in a product that retains most of its original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



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.



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.



* GFO registered trademark of W.L. Gore.

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.



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.

Max. Temperature	Surface speed (fpm)	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.



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.



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

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

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





PACKING TOOLS

For Handling Your Compression Packing

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.



HIGH PRESS.



HIGH SPEED.



HIGH TEMP.



LOW TEMP.



CHEMICAL APPS.



CROSS-SECTION



STEAM APPS.



ABRASIVE APPS.



VALVE APPS.



ROTARY APPS.



PULP & PAPER



SPOOL WEIGHT



SUGAR MILLS



HEAVY INDUSTRY



CRUCIBLE SEAL



FOOD APPS.



PETROL. INDUSTRY



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