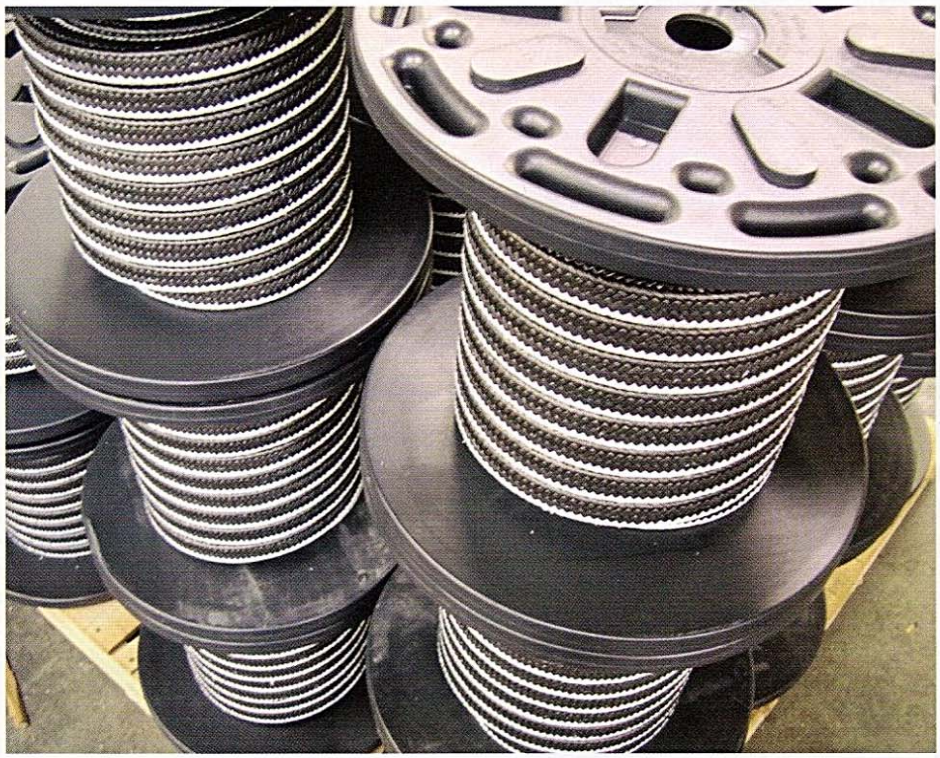
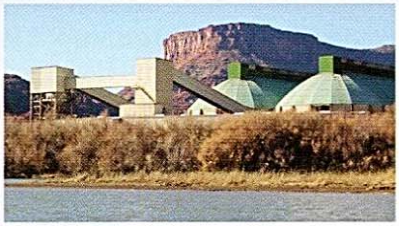
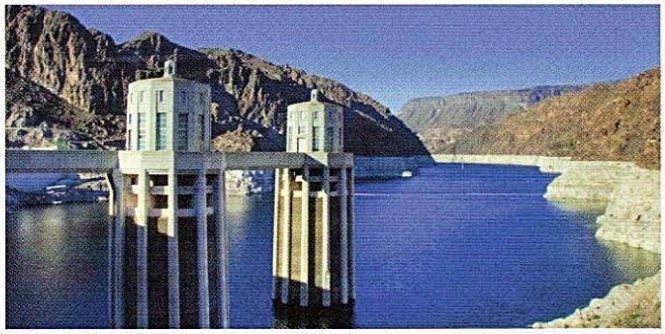
New England BRAIDING COMPANY INCORPORATED

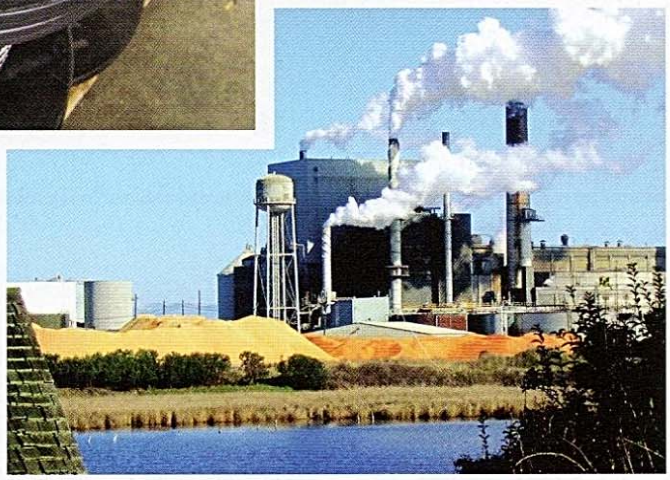
Mechanical Compression Packings

Founded in 1979, New England Braiding Company, Inc. is dedicated to providing the highest quality mechanical packings to industries worldwide.









ANTI-KEYSTONE ® II

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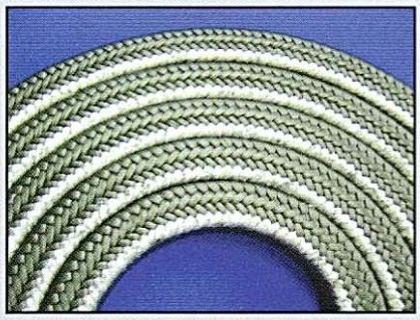
ANTI-KEYSTONE® PACKING

STYLE 274 ANTI-KEYSTONE® II PACKING
GNOME™ TFE FIBER HYDROPACKING™

- **GNOME™ Alone Meets All Your Pump Packing Needs**
- **High Speed Operation**
- **Low Leak Rates**
- **Built-in extrusion resistance**



Style 274 GNOME™ Hydropacking™ provides the highest performance specification of any general service packing we have ever offered! Proven in years of service, GNOME™ Hydropacking™ has demonstrated the ability to be operated in rotating applications with the lowest leakage levels of any TFE based packing. Our patented Hydropacking™ construction provides extrusion resistance while ANTI-KEYSTONE® II PACKING Technology creates a labyrinth like seal.

Applications include reciprocating and rotating pumps, agitators, blenders, mixers, bleach and brown stock washers, and knife gates and rising and rotating stem valves.

Services include general services such as acids, bases, gasses, oils, black, green, red and white pulping liquors, paper stock and other water based fluids (except strong oxidizers such as aqua regia, red fuming, nitric acid, oleum, free halides and molten alkali metals).

pH 1-13
surface speeds to 4200 fpm (21.4 M/sec)
pressures to 6000 psi (408 BAR) reciprocating - to 500 psi (34 BAR) rotating
temperatures -400˚F (-230˚C) to + 500˚F (+260˚C)

Style 274-SC Vibradamp™ Packing is intended for milder general services where vibration and shaft stability is a problem. The silicone cores act in concert with ANTI-KEYSTONE® II PACKING Technology℠ to reduce leakage to a minimum.

Applications include all equipment listed for Style 274 GNOME™ Packing within the limits listed below.

pH 5-10
surface speeds to 4200 fpm (21.4 M/sec)
pressures to 6000 psi (408 BAR)
temperatures -40˚F to + 400˚F (-40˚C to + 204˚C)

NOMEX®, the DuPont Company.

WHAT IS HYDROPACKING™?

Hydropacking™ combines two yarns into one packing. The secondary yarn provides extrusion resistance on one pair of diagonally opposed corners while maximizing the benefits of the primary yarn that forms the bulk of the packing. Typical installations in pump, rod (rams) and valve services are shown below.

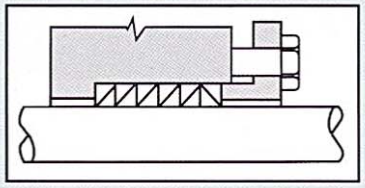


FIGURE 1
"Clean media Service"
(conventional shaft, rod or stem)

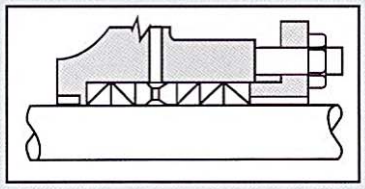


FIGURE 2
"Seal water injection"
(Shaft or rod with lantern ring and seal water injection)

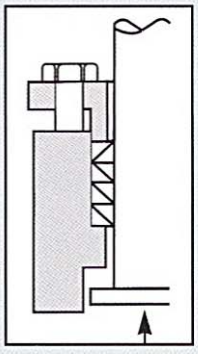


FIGURE 3
"Reciprocating Service"
(ram, rod conventional valve or gate)

HYDROPACKING™
U.S. PATENT
#4,802,398
CANADIAN PATENT
#1,337,206

STYLE 106 ANTI-KEYSTONE® II PACKING WHITE NOMEX FIBER

- **Natural Conformity To The Shaft**
- **Higher Thermal Conductivity Than White TFE Fiber Packing**
- **Extended pH Range 1 to 13 Inclusive**
- **Resists Hydrolysis In Hot/Wet Services**
- **White Non-Contaminating • Abrasion Resistant**
- **Fray Resistant • Die Molds Readily**

STYLE 106 WHITE NOMEX® PACKING combines superior temperature, chemical and hydrolytic resistance in one non-contaminating naturally white packing material.

Manufactured from texturized continuous filament NOMEX® fiber impregnated with PTFE dispersion and treated with an inert break-in lubricant. Style 106 possesses superior fiber enlongation to reduce equipment wear. The PTFE dispersion reduces friction and provides interstitial bulk to prevent wicking. The improved ANTI-KEYSTONE® II PACKING Technology℠ incorporated into Style 106 provides greater shaft conformability and faster start-ups.

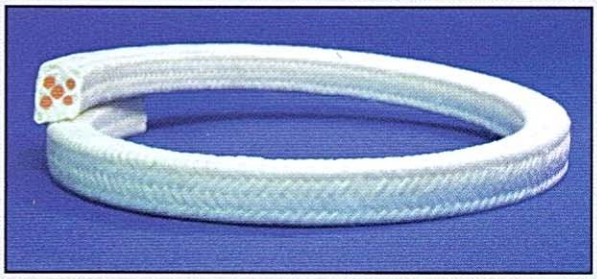
Applications for Style 106 White Aramid include equipment with rotating shafts and reciprocating rods, rams, and presses, as well as valves with either rotating or rising stems.

Services Style 106 White Aramid may be used in water based solutions, oils, solvents, refined products, and crudes in the Petroleum Industry; and chemicals (within pH range), pulp and paper stocks, caustics, and pulping and bleach liquors in the Pulp & Paper Industry. Especially suitable for the mining industry.

pH 1-13
surface speeds to 2250 fpm (11.5 M/sec)
pressures to 2000 psi (137 BAR)
temperatures -40°F to +500°F (-40°C to +260°C)

STYLE 106-SC provides non-contaminating white NOMEX® IT packing yarn braided about Vibradamp™ red silicone rubber for use in mild services. Reduces leakage where vibration is a problem. ANTI-KEYSTONE® II PACKING Technology℠ is available in all standard sizes.

pH 5-10
surface speeds to 2100 fpm (10.7 M/sec)
pressures to 2000 psi (137 BAR)
temperatures -40°F to + 400°F (-40°C to + 204°C)



STYLE 106-AF, with Chemstop™ AFLAS® rubber cores, is available on special order for use where the pH range of 1-13 is required. Other specifications are the same as Style 106-SC. Call for minimum quantity requirement.

NOMEX®, the DuPont Company.
AFLAS®, Asahi Glass Company, Inc.

STYLE 7800 ANTI-KEYSTONE® II PACKING
EXFOLIATED GRAPHITE PACKING

- **Only One Packing Required for High Temp Services**
- **Highest Purity Exfoliated Graphite** • **Maximum Conformability**
- **Easier Installation** • **Flush Free Capability***
- **Graphite Filament Reinforced Corners Prevent Extrusion**

STYLE 7800 is the one packing that is nearly universal. Corner reinforcement with the highest purity continuous filament graphite yarn provides extrusion resistance when clearances are excessive. Style 7800 out-performs virtually all other packings - service for service, except where strong oxidizers must be sealed, or color is a concern.

In pumps or valves, our patented ANTI-KEYSTONE® PACKING Technology℠ naturally creates the maximum shaft conformability and uniformity of density when installed. Thus both installation and removal are far easier than competitive packings made with similar materials.

The high purity of Style 7800 provides rapid heat dissipation in rotating service, while its conformability reduces inter-ring product entrapment in valves. Style 7800 and its cousin, Style 7800-SC can run flush free without any seal water or outboard leakage in well maintained equipment.

pH 0-14(except strong oxidizers)
maximum surface speed exceeds 4200 fpm (21.4 M/sec.)
pressures to 5000 psi (341 BAR)
temperatures Steam: to 1800˚F (1000˚C), Non-oxidizing fluids: to 5000˚F (3000˚C)

STYLE 7800-SC VIBRADAMP™ PACKING provides the flush-free solution for Successful Sealing℠ where shaft stability has been a problem. Within its limits, agitators, blenders and pumps can be reliably operated without seal water.

pH 5-10
surface speeds exceed 4200 fpm (21.4 M/sec.)
pressures to 5000 psi (341 BAR)
temperatures -40˚F to 400˚F (-40˚C to 204˚C)

STYLE 702 ANTI-KEYSTONE® II PACKING
CONTINUOUS GRAPHITE FILAMENT YARN/PTFE

STYLE 702 is densely braided from a continuous filament graphite ribbon form yarn lubricated with PTFE and graphite. The ribbon yarn form used in Style 702 provides a "flat" footprint of the packing of the shaft. This lowers the gland pressure required to control leakage. Unlike other PTFE lubricated graphite filament packings, the yarn used in 702 is impregnated prior to braiding. Because the yarn has complete uniformity, it has the highest capability for transferring heat away from the shaft of any packing using these two materials. This heat transferability, coupled with the chemical resistance of these materials and our patented ANTI-KEYSTONE® PACKING TECHNOLOGY℠ creates a long lived compliant packing that can be used in all but the most severe corrosive.

Applications for Style 702 include rotating equipment such as agitators, mixers and pumps, and reciprocating equipment. Style 702 is appropriate as a valve stem packing or as a bullring or anti-extrusion device in abrasive service.

Services for Style 702 include acids, bases, oils, solvents, and water based solutions that are not strong oxidizers (such as aqua regia, oleum or red fuming nitric acid) or in solutions containing free halides. Style 702 should not be used with molten alkali metals.

pH 0-14
surface speed to 5100 fpm (25.9 M/sec)
pressures to 3000 psi (250 BAR)
temperatures -400˚F to +800˚ (230˚C to +427˚C)

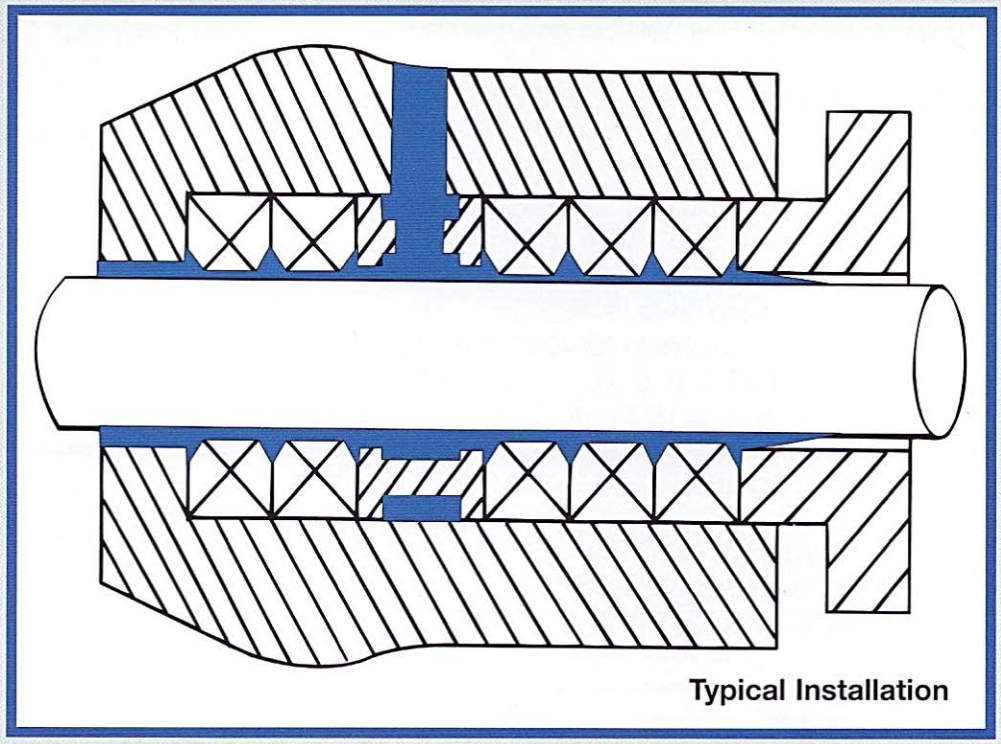
Evolutionary!

U.S. Patent #5,419,568

ANTI-KEYSTONE® II PACKING

The Braided Labyrinth Seal℠

You can't afford to be without it.



Typical Installation

Independent tests show that ANTI-KEYSTONE II® PACKING provides:

- Lower energy costs, cooler running equipment.
- Reduced water consumption compared to conventionally braided packings.
- Significantly extended shaft sleeve service life.
- Resistance to spinning in the stuffing box at start-up.
- Improved performance over conventional and first generation trapezoidal compression packing.

Unique, patented, value-added packing, available only through authorized NEBCO distributors worldwide.

ANTI-KEYSTONE® PACKING

New England BRAIDING COMPANY INCORPORATED

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CUSTOM RING SET PROGRAM

All of our braided packing styles can be die molded into pre-sized and pre-packaged ring sets.

Even though our exclusive ANTI-KEYSTONE® PACKING Technology℠ eliminates some of the reasons for using ring sets, five major reasons for their use remain:

- **Eliminate Waste:**

  The right amount of packing for the equipment, no incorrectly cut rings.

- **Speed Installation:**

  Easy reliable ring seating with no time wasted in cutting rings from bulk packing.

- **Reduce Misapplication:**

  The correct set for a specific piece of equipment identified by store codes and equipment information minimizing time spent on purchasing, receiving, and storeroom administration.

- **Reduce Inventory:**

  Common stores codes for multiple pieces of equipment create interchangeable replacement sets for more that one piece of equipment.

- **Track Costs:**

  Ring sets become standard parts for the equipment and can be used to track the equipment operating costs more efficiently and effectively.

NEBCO Ring Sets are pre-labeled by style, size, number of rings, and stores codes (when supplied). In addition, all ring sets have skive (angled) joints whenever suitable for the style of packing to give the most reliable sealing possible.

Standard pump stuffing boxes are available, along with many "special" sizes such as the 41/64" and 49/64" cross section dies required for Warren Thick Stock Pumps or the metric cross section dies for Ahlstrom Pumps or other metric standard equipment.

To order, supply:

1. NEBCO Style number desired.
2. ID. x OD. x Number of Rings
3. Make, model and size of equipment.
4. Stores (inventory) code (optional).
5. Choice of wrap. Plastic shrink wrap or optional paper.

Exclusively Manufactured by:

New England BRAIDING COMPANY INCORPORATED

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Other patents pending worldwide.

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