

UTEX INDUSTRIES, INC.

Compression Packing

C A T A L O G



UTEX INDUSTRIES, INC.
Taking Sealing Technology Beyond Tomorrow
www.utexind.com

UTEX Industries, Inc. is recognized worldwide as a quality manufacturer of fluid sealing products and solutions. Since we opened our doors in 1940, we have always put quality and service ahead of everything else. Whether the product is molded rubber, engineered plastics, mechanical seals, sheet gaskets, machined PTFE, or compression packing, UTEX Industries, Inc. produces the finest quality product available on the market today.

Compression packings are among the most versatile products used in fluid sealing. The range of products begins with flax yarns for economical services, to pure graphite yarns able to withstand the extremely high temperatures of most of the chemicals used today. UTEX braids all styles to formulations developed over years of testing in field applications and in laboratory conditions.

Our commitment is solving customer problems by offering innovative solutions based on experience in materials and equipment. This experience guarantees the best solution up front without a lot of trial and error. The result is less down-time for the customer and a high level of overall satisfaction.

In addition to the styles shown in this brochure, we are constantly researching new materials and methods of manufacturing to bring to the marketplace. Rigorous testing is conducted on yarns and lubrication systems to qualify their performance and to make sure they meet the needs demanded in the industry.

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Preparation of Equipment

Removal of the old style material and the preparation of the stuffing box to accept new compression packing is the key to successful sealing.

- Remove and discard old worn packing.
- Inspect all surfaces for wear. Badly worn shafts, sleeves, and stuffing boxes can affect the performance of the best packings.
- Inspect the bearing or guide bushings to insure that excessive run-out and end-play are not present. Replace any worn items.
- Measure the gap between the shaft and the gland housing. If excessive, either replace the gland and shaft or put a tight fitting spacer at the end of the stuffing box to close the gap.

Select the Proper Packing

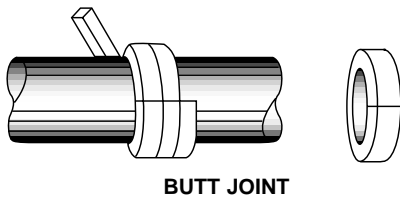
Two things must be considered when choosing a compression packing.

- The service parameters needed to properly match the ability of the packing chosen. Consult the media chart and selection guides for the best packing for your application. If there are questions, contact your factory representative.
- The correct size packing must be used to insure the proper seal. To determine the cross-section required, use this formula:

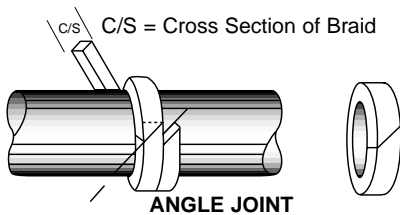
$$\frac{\text{STUFFING BOX DIAMETER} - \text{SHAFT DIAMETER}}{2} = \text{CROSS-SECTION}$$

Make sure you measure the equipment if it is worn so the correct cross-section packing is used. Worn equipment might require a larger cross-section packing to compensate for all the wear.

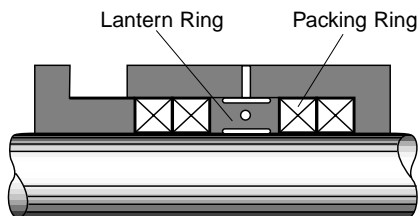
How to Cut and Install Packing Rings



BUTT JOINT



ANGLE JOINT



- Cut coil into proper ring lengths. Never attempt to determine length by winding coil into box. Rather, place the coil around a tube having the same O.D. as the shaft, holding it down firmly but not stretching it. Cut the first ring and try it out to see if it properly fills the space, and make sure there is no gap where the ring ends meet.

Cut additional rings using the first as a standard. If these cuts are to be made on a flat surface, make the cut on the coil profile so that the I.D./O.D. bevel is reproduced.

If a packing is soft and tends to fray, apply a small piece of tape where the cut is to be made and cut through the tape. Remove tape if it substantially alters the ring joiner O.D.

- Install one ring at a time, making certain that each is free of dirt or other debris. Rings may be lubricated with clean oil, as well as the shaft, if desired.

Stagger each successive ring joint 90°. Seat each ring firmly in place using a tamping tool. When enough rings have been seated that the follower can reach them, the tamping can be supplemented using the follower. Remember, the follower is only a supplement, individual tamping ensures proper seating of all rings and can avoid erratic packing performance.

- After installing rings, make bolts finger tight. **Stopping leakage at this point will cause the packing to burn up.** Adjustments should then be made by tightening the nuts one flat at a time until leakage reaches an acceptable rate.

Wherever possible a lantern ring should be used to lubricate the shaft and packing by supplying oil to the stuffing box. If the box has a lantern ring, it is important that this ring be in line with the exterior lubrication fittings.

Rotary and Reciprocating Pump Start-Up

The key to starting up a pump with compression packing is to make sure it leaks from the beginning. If you tighten compression packing to achieve zero leakage, you will burn the packing and cause immediate failure. (Note: Graphite packing such as our 686, 687 and 688 can be run virtually leak-free.)

- After installing the packing rings, make up the bolts finger tight and check to make sure the gland face is parallel to the stuffing box face. This will insure even loading once you begin to tighten the gland nuts.
- If an external lubrication source is being utilized, make sure it is functioning properly before starting up the pump.
- Start the pump allowing a high initial leakage rate. During this process, the packing is seating and beginning to function.
- After running the packing for 15-30 minutes, begin tightening the gland nuts one flat at a time until the desired leakage is obtained. Eight to ten drops per minute/per inch of shaft diameter is recommended. PTFE packings should be allowed to leak more to dissipate the heat the packings generate through thermal expansion.
- It is recommended that you check your leakage rate one hour after establishing it to make sure vibration has not caused the gland nuts to back-off which could lead to failure.

Valve Start-Up

In most cases zero leakage in valves is desired. In order for this to be achieved, you must tighten the packing completely before allowing the process pressure to seal the valve. Torque the bolts to achieve a pressure on the packing that is 25% greater than the process.

Style 240



Composite braid, high strength aramid fibers braided around 4 equally spaced silicone rubber cords forming a packing that offers excellent resilience and wear resistance. Excellent for worn glands and for large equipment with eccentricity and run-out problems. Textlok® interbraid.

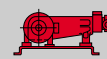
Style 240 is available in the following cross-section range:
3/16" to 1 1/2"
5.0 mm to 38.1 mm

Applications

UTEX Style 240 is suitable for water, hydraulic fluids, oils, and most general services.

Style 240 is recommended for rotary and reciprocating shafts, mixers and agitators where run-out and eccentricity are a problem.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	400/27.6/28.1	4000/276/281	4000/276/281
Temp - °F/°C	-90° to +500°F (-68° to +260°C)	-90° to +500°F (-68° to +260°C)	-90° to +500°F (-68° to +260°C)
pH Range	3 to 11	3 to 11	3 to 11
Max Speed - fpm (mps)	4500 (22.8)	300(1.5)	200(1)

Style 243



Composite braid, graphite impregnated PTFE filaments, braided around four equally spaced Aflas® rubber cords forming a packing that offers excellent resilience. Textlok® interbraid.

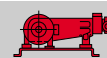
Style 243 is available in the following cross-section range:
3/16" to 1 1/2"
5.0 mm to 38.1 mm

Applications

UTEX Style 243 is suitable for water, oils, greases, most chemicals, and brine solutions.

Style 243 is recommended for rotary and centrifugal shafts, reciprocating applications, mixers and agitators. This packing is especially suited for applications involving shafts with large run-out or eccentricity problems.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	100/6.9/7	3625/250/255	3625/250/255
Temp - °F/°C	-18° to +500°F (-28° to +260°C)	-18° to +500°F (-28° to +260°C)	-18° to +500°F (-28° to +260°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	25000 (12.7)	400(2)	200(1)

Style 277



Composite braid, acrylic fibers, individually lubricated with PTFE and graphite, braided around 4 equally spaced nitrile rubber cords, surface treated with special break-in lubricants to seal all voids. General service packing designed for use in large shaft diameters or worn equipment. Textlok® interbraid.

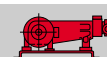
Style 277 is available in the following cross-section range:
3/16" to 1 1/2"
5.0 mm to 38.1 mm

Applications

UTEX Style 277 is suitable for alkalis, mild acids, solvents, steam, and oils.

Style 277 is recommended for large diameter rotary and reciprocating equipment which is worn or has run-out problems.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	350/24.1/24.6	1200/83/84	1200/83/84
Temp - °F/°C	0° to +500°F (-17° to 260°C)	0° to +500°F (-17° to 260°C)	0° to +500°F (-17° to 260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	4500 (22.8)	400(2)	400(2)

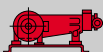
Style 278

Composite braid, made with PTFE filaments and white silicone rubber cords that comply with FDA requirements. The packing offers excellent resistance and is designed to seal in applications where large run-out or eccentricity of the shaft exists or large deformation of the packing is required. Textlok® interbraid.

Style 278 is available in the following cross-section range:
 3/16" to 1 1/2"
 5.0 mm to 38.1 mm



Performance



ROTARY

RECIPROCATING

VALVE

	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	3600/248/253	3600/248/253
Temp - °F/°C	-90° to +550°F (-68° to +288°C)	-90° to +550°F (-68° to +288°C)	-90° to +550°F (-68° to +288°C)
pH Range	3 to 10	3 to 10	3 to 10
Max Speed - fpm (mps)	1000 (5.1)	300(1.5)	300(1.5)

Applications

UTEX Style 278 is suitable for food processing services.

Style 278 is recommended for mixers, agitators, food processing equipment, and reciprocating applications where large run-out or eccentricity of the shaft exists.

Multi-Core Packings

Style 210



TexLok® interbraid*, graphite particles encapsulated in an expanded PTFE matrix.

Style 210 is available in the following cross-section range:

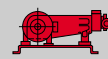
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Applications

UTEX Style 210 is suitable for boiling water or steam, oxygen, oils, solvents, acids, hydrocarbons, and alkalis. Not suitable for fuming nitric acid, potassium chlorate, and turpentine.

Especially suited for rotary applications. Also recommended for reciprocating applications, valve stems, agitators, and other general applications.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	3625/250/255	3800/262/267
Temp - °F/°C	-400° to +550°F(-240° to +288°C)	-400° to +550°F(-240° to +288°C)	-400° to +550°F(-240° to +288°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	4500 (22.8)	400(2)	200(1)

Style 244



TexLok® interbraid*, braided packing composed entirely of graphite impregnated PTFE fibers.

Style 244 is available in the following cross-section range:

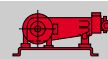
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Applications

UTEX Style 244 is suitable for a wide range of services including corrosive applications.

Style 244 is recommended for rotary and centrifugal shafts, reciprocating equipment, and valve stems.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	3625/250/255	3800/262/267
Temp - °F/°C	-100° to +500°F(-73° to +260°C)	-100° to +500°F(-73° to +260°C)	-100° to +500°F(-73° to +260°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	4000 (20.3)	400(2)	200(1)

Style 246



TexLok® interbraid*, blend of graphite impregnated PTFE hard corners with proprietary graphite PTFE composite soft fiber seams.

Style 246 is available in the following cross-section range:

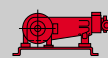
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Applications

UTEX Style 246 is suitable for a wide range of services including corrosive applications.

Style 246 is recommended for rotary and centrifugal shafts, reciprocating equipment, and valve stems.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	300/21/21	3625/250/255	3800/262/267
Temp - °F/°C	-450°F to +550°F(-268° to +288°C)	-450° to +550°F(-268° to +288°C)	-450° to +550°F(-268° to +288°C)
pH Range	0 to 4	0 to 14	0 to 14
Max Speed - fpm (mps)	4500 (22.8)	400(2)	200(1)

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 231

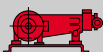
TexLok® interbraid*, pure 100% PTFE filament yarns, impregnated with PTFE suspensoid and high temperature break-in oil. It is approved by NSF for potable water applications.

Style 231 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



ROTARY

RECIPROCATING

VALVE

	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	150/10.3/10.5	1500/103/106	1500/103/106
Temp - °F/°C	-400° to +550°F (-240° to +288°C)	-400° to +550°F (-240° to +288°C)	-400° to +550°F (-240° to +288°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	3500(17.8)	300(1.5)	200(1)

Applications

UTEX Style 231 is suitable for water, steam, concentrated acids and caustics, solvents, oils, fatty acids, detergents, aggressive gasses; resistant to gamma and neutron rays, hydrogen, heat transfer oils, and most other chemicals and solvents.

Style 231 is recommended for use in valves, plunger pumps, agitators, mixers, expansion joints, etc. Specifically suited for high pressure valves.

Style 232

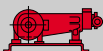
TexLok® interbraid*, pure 100% PTFE filament yarns, impregnated with PTFE suspensoid. Firm high-density braided packing. It is approved by NSF for potable water applications.

Style 232 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



ROTARY

RECIPROCATING

VALVE

	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	150/10.3/10.5	3600/248/253	2500/172/176
Temp - °F/°C	-400° to +550°F (-240° to +288°C)	-400° to +550°F (-240° to +288°C)	-400° to +550°F (-240° to +288°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	2500(12.7)	300(1.5)	200(1)

Applications

UTEX Style 232 is suitable for a wide range of process chemicals and concentrated acids.

Style 232 is recommended for valve stems, rotary shafts, reciprocating equipment, and other processing equipment.

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 245



Applications

UTEX Style 245 is suitable for food processing and meets FDA guidelines 178.3570, 177.1550 and 175.300

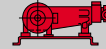
Style 245 is recommended for centrifugal equipment, homogenizers, and valve stems.

TexLok® interbraid*, with PTFE filament yarns impregnated with PTFE and treated with a special break-in lubricant. The filament yarns, PTFE and break-in lubricants comply with FDA requirements.

Style 245 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	300/21/21	1800/124/126	1800/124/126
Temp - °F/°C	-400° to +550°F (-240° to +288°C)	-400° to +550°F (-240° to +288°C)	-400° to +550°F (-240° to +288°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	3500 (17.8)	300(1.5)	200(1)

Style 276



Applications

UTEX Style 276 is suitable for oxygen and oxidizing services.

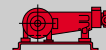
Style 276 is recommended for centrifugal and rotary shafts, reciprocating applications, and valve stems.

TexLok® interbraid*, oxygen service PTFE packing, braided from pure PTFE filaments without the use of additional lubricants or break-in oils. Thermally treated to remove all oxidants.

Style 276 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	150/10.3/10.5	3600/248/253	2500/172/176
Temp - °F/°C	-400° to +550°F (-240° to +288°C)	-400° to +550°F (-240° to +288°C)	-400° to +550°F (-240° to +288°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	2500 (12.7)	300(1.5)	200(1)

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 212

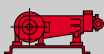
TexLok® interbraid*, pure aramid fibers coated with a high temperature lubricant and braided to produce a dense packing.

Style 212 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



ROTARY

RECIPROCATING

VALVE

	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	5500/379/387	5500/379/387
Temp - °F/°C	-320° to +500°F(-195° to +260°C)	-320° to +500°F(-195° to +260°C)	-320° to +500°F(-195° to +260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	4500 (22.8)	300(1.5)	200(1)

Applications

UTEX Style 212 is suitable for mild chemicals, oils, mild caustics, hydrocarbons, aromatic and aliphatic solvents. Especially suited for salt solutions, slurries, and other abrasive services.

Style 212 is recommended for reciprocating equipment, valves and other static applications.

Style 213

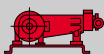
TexLok® interbraid*, texturized aramid filament, impregnated with PTFE for added lubrication.

Style 213 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



ROTARY

RECIPROCATING

VALVE

	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	2000/138/141	2000/138/141
Temp - °F/°C	-320° to +500°F(-195° to +260°C)	-320° to +500°F(-195° to +260°C)	-320° to +500°F(-195° to +260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	4500 (22.8)	300(1.5)	200(1)

Applications

UTEX Style 213 is suitable for mild chemicals, mild caustics, oils, hydrocarbons, sewage, and aromatic and aliphatic solvents. Especially suited for salt solutions, slurries, and other abrasive services.

Style 213 is recommended for rotary and centrifugal shafts, reciprocating equipment, valves and other static applications.

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 214



TexLok® interbraid, combines dual materials of aramid fibers positioned in the corners for strength and graphite impregnated PTFE lubricating fibers in the seams.

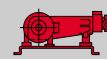
Style 214 is available in the following cross-section range:
 1/4" to 1 1/2"
 6.0 mm to 38.1 mm

Applications

UTEX Style 214 is suitable for water, waste water, oils, greases, weak acids, alkaline solutions, and paper mill applications.

Style 214 is recommended for reciprocating and rotary shafts, and applications where good sliding is required.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	5500/1800/387	5500/1800/387
Temp - °F/°C	-320° to +500°F (-195° to +260°C)	-320° to +500°F (-195° to +260°C)	-320° to +500°F (-195° to +260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	4500 (22.8)	600(3)	200(1)

Style 215



TexLok® interbraid*, high tensile strength aramid fibers and PTFE fibers diagonally positioned and braided for high performance.

Style 215 is available in the following cross-section range:
 1/8" to 1 1/2"
 3.0 mm to 38.1 mm

Applications

UTEX Style 215 is suitable for pulp and paper applications, waste water treatment, and non-FDA approved food processing.

Style 215 is recommended for rotary, centrifugal, and reciprocating applications.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	1450/100/102	1450/100/102
Temp - °F/°C	-320° to +500°F (-195° to +260°C)	-320° to +500°F (-195° to +260°C)	-320° to +500°F (-195° to +260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	4500(22.8)	600(3)	400 (2)

Style 216



TexLok® interbraid*, high tensile strength aramid fibers and graphite impregnated PTFE self-lubricating fibers diagonally positioned and braided to produce a low friction, wear-resistant packing.

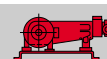
Style 216 is available in the following cross-section range:
 1/8" to 1 1/2"
 3.0 mm to 38.1 mm

Applications

UTEX Style 216 is suitable for water, waste water, oils, greases, hydrocarbons, weak acids, alkaline solutions, and abrasive applications.

Style 216 is recommended for rotary, centrifugal, and reciprocating applications.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	1450/100/102	1450/100/102
Temp - °F/°C	-320° to +500°F (-195° to +260°C)	-320° to +500°F (-195° to +260°C)	-320° to +500°F (-195° to +260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	4500(22.8)	600(3)	400/2

* Any TexLok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 217

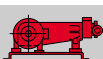
TexLok® interbraid, aramid fiber corners interbraided for added strength and anti-extrusion performance, combined with PTFE fibers in the seams.

Style 217 is available in the following cross-section range:

1/4" to 1 1/2"
6.0 mm to 38.1 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	400/27.6/28.1	4000/1000/281	4000/1000/281
Temp - °F/°C	-320° to +500°F (-195° to +260°C)	-320° to +500°F (-195° to +260°C)	-320° to +500°F (-195° to +260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	1800 (9.1)	600(3)	200(1)

Applications

UTEX Style 217 is suitable for pulp and paper, waste water treatment, petrochemical, and other general industrial applications.

Style 217 is recommended for reciprocating applications and valves.

Style 241

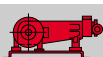
TexLok® interbraid, pure aramid filament corners interbraided for strength and abrasion resistance combined with synthetic composite filaments in the seams to produce a high performance chemically resistant packing.

Style 241 is available in the following cross-section range:

1/4" to 1 1/2"
6.0 mm to 38.1 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	400/27.6/28.1	4000/276/281	4000/276/281
Temp - °F/°C	0° to +500°F (-17° to +260°C)	0° to +500°F (-17° to +260°C)	0° to +500°F (-17° to +260°C)
pH Range	3 to 10	3 to 10	3 to 10
Max Speed - fpm (mps)	3500 (17.8)	600(3)	200(1)

Applications

UTEX Style 241 is suitable for general petrochemical and industrial applications.

Style 241 is recommended for rotary and centrifugal shafts, reciprocating applications, and valves.

Style 220



Applications

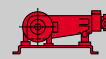
UTEX Style 220 is suitable for a wide range of chemicals, solvents, and most general plant service applications.

Style 220 is recommended for rotary and centrifugal shafts, reciprocating applications, and valves.

TexLok® interbraid*, impregnated with PTFE throughout. The PTFE suspenoid fills and seals all voids around the spun aramid packing.

Style 220 is available in the following cross-section range:
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	350/24.1/24.6	3500/241/246	3500/241/246
Temp - °F/°C	-320° to +550°F (-195° to +288°C)	-320° to +550°F (-195° to +288°C)	-320° to +550°F (-195° to +288°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	4500(22.8)	600(3)	200(1)

Style 222



Applications

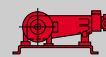
UTEX Style 222 is suitable for slurries, mild chemicals, and general plant services.

Style 222 is recommended for rotary and centrifugal shafts, reciprocating applications, and valves.

TexLok® interbraid*, spun aramid yarns thoroughly impregnated with PTFE and treated with oils and wax.

Style 222 is available in the following cross-section range:
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	350/24.1/24.6	3500/241/246	3500/241/246
Temp - °F/°C	-320° to +550°F (-195° to +288°C)	-320° to +550°F (-195° to +288°C)	-320° to +550°F (-195° to +288°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	4500(22.8)	600(3)	200(1)

Style 225



Applications

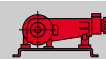
UTEX Style 225 is suitable for waste water treatment applications.

UTEX Style 225 is recommended for rotary and centrifugal shafts, reciprocating applications, and valves.

TexLok® interbraid*, spun aramid fiber, with PTFE dispersion and special lubricant of vacuum grease and graphite.

Style 225 is available in the following cross-section range:
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	200/13.8/14	3500/241/246	3500/241/246
Temp - °F/°C	-320°F to +550°F (-195° to +288°C)	-320°F to +550°F (-195° to +288°C)	-320°F to +550°F (-195° to +288°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	4500(22.8)	600(3)	200/1

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 165

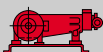
Square braid, synthetic composite yarns which are coated with wax and tallow for lubrication.

Style 165 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	50/3.4/3.5	1200/83/84	1500/103/106
Temp - °F/°C	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)
pH Range	4 to 10	4 to 10	4 to 10
Max Speed - fpm (mps)	4500(22.8)	400(2)	200(1)

Applications

UTEX Style 165 is suitable for water, brine, oils, hydraulic fluids, mild solvents, and mild acids.

Style 165 is recommended for rotary shafts, reciprocating applications, medium pressure hydraulic rams, and valves.

Style 208

TexLok® interbraid*, synthetic composite yarns individually treated with PTFE and graphite. Surface coated with special break-in lubricant for extra lubrication.

Style 208 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	100/6.9/7	1200/83/84	1500/103/106
Temp - °F/°C	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)
pH Range	1 to 13	1 to 13	1 to 13
Max Speed - fpm (mps)	3200(16)	400(2)	200(1)

Applications

UTEX Style 208 is suitable for water, solvents, steam, mild acids, and oils.

Style 208 is recommended for rotary and centrifugal equipment, agitators, reciprocating applications, and valve stems.

Style 233

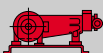
Square braid, synthetic composite yarn impregnated with special lubricant and graphite.

Style 233 is available in the following cross-section range:

1/8" to 2"
3.0 mm to 50.8 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	50/3.4/3.5	1000/69/70	1500/103/106
Temp - °F/°C	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)
pH Range	4 to 10	4 to 10	4 to 10
Max Speed - fpm (mps)	2700(13.7)	350(1.75)	200(1)

Applications

UTEX Style 233 is suitable for wide variety of moderate services such as solvents, water and mild acids.

Style 233 is recommended for rotary and reciprocating pumps, and valve stems.

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 234



Square braid, composite synthetic yarns individually coated with PTFE to fill and seal all voids and treated with a special break-in lubricant.

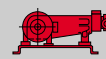
Style 234 is available in the following cross-section range:
 1/8" to 2"
 3.0 mm to 50.8 mm

Applications

UTEX Style 234 is suitable for general acids and chemicals, oils, solvents, and water.

Style 234 is recommended for rotary shafts, reciprocating applications, and valves.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	50/3.4/3.5	1500/103/106	1500/103/106
Temp - °F/°C	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	1600(8.1)	300(1.5)	200(1)

Style 235



Square braid, individual strands of synthetic composite yarns thoroughly impregnated with PTFE to provide excellent to chemical resistance. No other lubricants or oils are added.

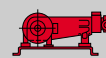
Style 235 is available in the following cross-section range:
 1/8" to 2"
 3.0 mm to 50.8 mm

Applications

UTEX Style 235 is suitable for alkalis, mild acids, solvents, steam and oils.

Style 235 is recommended for rotary shafts, reciprocating applications, and valves.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	300/20.7/21.1	1500/103/106	3000/207/211
Temp - °F/°C	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	2700(13.7)	300(1.5)	200(1)

Style 236



TexLok[®] interbraid*, synthetic composite yarn impregnated with special lubricant and graphite.

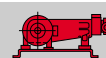
Style 236 is available in the following cross-section range:
 1/8" to 1 1/2"
 3.0 mm to 38.1 mm.

Applications

UTEX Style 236 is suitable for a wide variety of solvents, alkalis, mild acids, oils, and water.

Style 236 is recommended for rotary shafts, reciprocating applications, and valves.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	50/3.4/3.5	1000/69/70	1500/103/106
Temp - °F/°C	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)
pH Range	4 to 10	4 to 10	4 to 10
Max Speed - fpm (mps)	3150(16)	350(1.5)	200(1)

* Any Texlok[®] interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 237

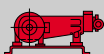
TexLok® interbraid*, synthetic composite yarns treated with PTFE suspenoid which fills and seals all voids, and a special lubricant applied for added resiliency.

Style 237 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



ROTARY

RECIPROCATING

VALVE

Max Pressure - psi bar kg/cm ²	200/13.8/14.1	1500/103/106	3000/207/211
Temp - °F/°C	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	1600(8.1)	300(1.5)	200(1)

Applications

UTEX Style 237 is suitable for most general service plant applications.

Style 237 is recommended for rotary shafts, reciprocating shafts, valve stems and agitators.

Style 238

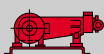
TexLok® interbraid*, synthetic composite yarn is thoroughly impregnated with PTFE to provide extra chemical resistance. No other lubricants or oils are added.

Style 238 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



ROTARY

RECIPROCATING

VALVE

Max Pressure - psi bar kg/cm ²	400/27.6/28.1	1500/103/106	3000/207/211
Temp - °F/°C	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)	0° to +500°F(-17° to +260°C)
pH Range	2 to 12	2 to 12	2 to 12
Max Speed - fpm (mps)	2700(13.7)	300(1.5)	200(1)

Applications

UTEX Style 238 is suitable for alkalis, mild acids, solvents, steam, and oils.

Style 238 is recommended for rotary shafts, reciprocating applications, and valves.

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 226



TexLok® interbraid*, unique low friction carbon yarn that wears evenly during long service life. This packing is impregnated with PTFE and graphite for added lubricity.

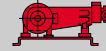
Style 226 is available in the following cross-section range:
 1/8" to 1 1/2"
 3.0 mm to 38.1 mm

Applications

UTEX Style 226 is suitable for most high temperature corrosive acid and caustic applications. It is not recommended for strong oxidizer applications.

Style 226 is recommended for high temperature rotating and centrifugal shafts, reciprocating applications, and valves.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	100/6.9/7	2500/172/176	2500/172/176
Temp - °F/°C in steam	-300° to +1200°F(-184° to +649°C)	-300° to +1200°F(-184° to +649°C)	-300° to +1200°F(-184° to +649°C)
in oxid. atm.	-300° to +850°F(-184° to +454°C)	300° to +850°F(-184° to +454°C)	-300° to +850°F(-184° to +454°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	4500(22.8)	400(2)	200(1)

Style 227



TexLok® interbraid*, braided carbon yarn, with four separate strands of inconel® wire inserted to provide added strength when removing the packing. Special graphite particle treatment is available. Style 227 is used as buffer, bull, or end rings in packing assemblies for extrusion control.

Style 227 is available in the following cross-section range:
 1/8" to 1 1/2"
 3.0 mm to 38.1 mm

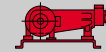
Applications

UTEX Style 227 is suitable for hydrocarbon and chemical applications.

Style 227 is recommended for high temperature valves.

Used as bull or end rings only.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	N/A	3200/221/225
Temp - °F/°C in air	N/A	N/A	-300° to +1200°F(-184° to +649°C)
in oxid.atm	N/A	N/A	-300° to +650°F(-184° to +343°C)
pH Range	N/A	N/A	0 to 14
Max Speed - fpm (mps)	N/A	N/A	200(1)

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Carbon Packings

Style 228

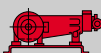
TexLok® interbraid*, carbon yarn packing treated with PTFE to prevent carbon migration and provide excellent break-in qualities with a non-silicone break-in lubricant.

Style 228 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	100/6.9/7	2000/138/141	2000/138/141
Temp - °F/°C - in inert atm.	-300° to +1200°F(-184° to +649°C)	-300° to +1200°F(-184° to +649°C)	-300° to +1200°F(-184° to +649°C)
- in oxid atm.	-300° to +650°F(-184° to +343°C)	-300° to +650°F(-184° to +343°C)	-300° to +650°F(-184° to +343°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	4500(22.8)	300(1.5)	200(1)

Applications

UTEX Style 228 is suitable for hydrocarbons, virtually all chemicals, and water services, including pulp and paper applications.

Style 228 is recommended for rotary and centrifugal shafts.

Style 249

TexLok® interbraid*, carbon packing treated with PTFE throughout to fill and seal all voids.

Style 249 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	3200/221/225	4640/320/326.2
Temp - °F/°C - in oxid. atm.	N/A	-300° to +650°F(-184° to +343°C)	-300° to +650°F(-184° to +343°C)
- in inert atm.	N/A	-300° to +1200°F(-184° to +649°C)	-300° to +1200°F(-184° to +649°C)
pH Range	N/A	0 to 14	0 to 14
Max Speed - fpm (mps)	N/A	600(3)	200(1)

Applications

UTEX Style 249 is suitable for pulp and paper applications, chemical service, hydrocarbons, hot water, and most acids.

Style 249 is recommended for reciprocating applications and valves.

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 229



TexLok® interbraid*, pure graphite yarns lubricated with PTFE and graphite lubricant.

Style 229 is available in the following cross-section range:

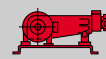
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Applications

UTEX Style 229 is suitable for most high temperature corrosive acid and caustic applications, including nuclear services.

Style 229 is recommended for rotary equipment, reciprocating applications, and valve stems.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	100/6.9/7	1450/100/102	3200/220/225
Temp - °F/°C	- in non-oxid. atm. -300° to +600°F(-184° to +3316°C) - in oxid. atm. -300° to +850°F(-184° to +454°C) - in steam -300° to +1200°F(-184° to +649°C)	-300° to +600°F(-184° to +3316°C) -300° to +850°F(-184° to +454°C) -300° to +1200°F(-184° to +649°C)	-300° to +600°F(-184° to +3316°C) -300° to +850°F(-184° to +454°C) -300° to +1200°F(-184° to +649°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	4500(22.8)	300(1.5)	200(1)

Style 230



TexLok® interbraid*, graphite filament yarns braided with a light PTFE break-in lubricant.

Style 230 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm

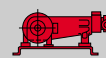
Applications

UTEX Style 230 is suitable for most chemicals and acids, especially corrosive applications.

Style 230 is recommended for rotary and centrifugal applications, valves, dryers, and blowers.

It is used only for bull or end rings.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	300/21/21.1	N/A	3500/241/246
Temp - °F/°C	- in non-oxid. atm. -300° to +600°F(-184° to +3316°C) - in oxid. atm. -300° to +850°F(-184° to +454°C) - in steam -300° to +1200°F(-184° to +649°C)	N/A N/A N/A	-300° to +600°F(-184° to +3316°C) -300° to +850°F(-184° to +454°C) -300° to +1200°F(-184° to +649°C)
pH Range	0 to 14	N/A	0 to 14
Max Speed - fpm (mps)	4500(22.8)	N/A	200(1)

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 280

TexLok® interbraid*, graphite filament yarns coated with graphite powder, and approved for nuclear service. Meets G.E. spec. NEDC-31735P Certified. Style 280 is used only as a buffer, bull, or end rings in packing assemblies for extrusion control.

Style 280 is available in the following cross-section range:
 1/8" to 1 1/2"
 3.0 mm to 38.1 mm



Chemical Composition

Carbon	99% min.	Total Fluorine (PPM)	100 max.
Ash	1.0% max.	Total Sulphur (PPM)	700 max.
Moisture	1.0% max.	Total Heavy Metals (PPM)	500 max.
Leachable Chlorides (PPM)	75 max.	Total Individual Metal (PPM)	200 max.
Total Chlorides (PPM)	100 max.		

Applications

UTEX Style 280 is suitable for nuclear plant services such as water, steam, oils, and most chemicals.

Style 280 is recommended for valves and high temperature static applications in the nuclear industry.

Used for bull or end ring only.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	N/A	2500/172/176
Temp - °F/°C - in steam	N/A	N/A	-300° to +1200°F(-184° to +649°C)
	N/A	N/A	-300° to +800°F(-184° to +454°C)
	N/A	N/A	-300° to +6000°F(-184° to +3315°C)
pH Range	N/A	N/A	0 to 14
	N/A	N/A	0 to 14
Max Speed - fpm (mps)	N/A	N/A	200(1)

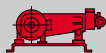
Style 686

TexFlex™ square braid, pure flexible graphite which has been expanded and made into a braidable yarn.

Style 686 is available in the following cross-section range:
 1/8" to 2"
 3.0 mm to 50.8 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	N/A	1500/103/106 4000/276/281*
Temp - °F/°C - in steam	-300° to +1200°F(-184° to +649°C)	N/A	-300° to +1200°F(-184° to +649°C)
	-300° to +850°F(-184° to +454°C)	N/A	-300° to +850°F(-184° to +454°C)
	-300° to +6000°F(-184° to +3316°C)	N/A	-300° to +6000°F(-184° to +3316°C)
pH Range	0 to 14	N/A	0 to 14
	0 to 14	N/A	0 to 14
Max Speed - fpm (mps)	4500(22.8)	N/A	200(1)

Applications

UTEX Style 686 Tex-Flex is suitable for steam, water, oil, solvents, alkalis, acids, and most chemicals. Exceptions are oleum, fuming nitric acid, aqua regia, and fluorine.

Style 686 Tex-Flex is recommended for rotary and centrifugal applications. It is also excellent for valves and other static applications.

**Will require bull rings of styles 685, 229, 226, or 230 for high pressures.*

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Graphite Packings

Style 687



TexFlex™ expanded flexible graphite center with braided carbon corners. TexLok® interbraid* construction.

Style 687 is available in the following cross-section range:

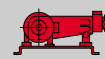
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Applications

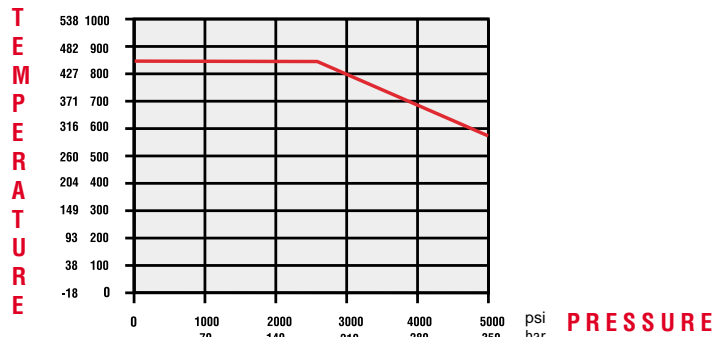
UTEX Style 687 is suitable for steam, water, oil, solvents, alkalis, acids, and most chemicals. Exceptions are oleum, fuming nitric acid, aqua regia, and fluorine.

Style 687 is recommended for rotary and centrifugal applications. It is also excellent for valves and other static applications.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	N/A	See graph below
Temp - °F/°C - in steam	-300° to +1200°F (-184° to +649°C)	N/A	-300° to +1200°F (-184° to +649°C)
	in oxid. atm	-300° to +850°F (-184° to +454°C)	-300° to +850°F (-184° to +454°C)
	in non-oxid. atm	-300° to +6000°F (-184° to +3316°C)	N/A
pH Range	0 to 14	N/A	0 to 14
Max Speed - fpm (mps)	4500(22.8)	N/A	200(1)



Style 688



Square braid, pure flexible graphite which has been expanded and made into a braidable yarn and treated with PTFE as a sealant.

Style 688 is available in the following cross-section range:

1/8" to 2"
3.0 mm to 50.8 mm

Applications

UTEX Style 688 is suitable for steam, oil, water, solvents, alkalis, acids, and most chemicals. Exceptions are oleum, fuming nitric acid, aqua regia, and fluorine.

Style 688 is recommended for rotary and centrifugal applications. Also excellent for valves and other static applications.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	N/A	1500/103/106 4000/276/281
Temp - °F/°C - in steam	-300° to +1200°F (-184° to +649°C)	N/A	-300° to +1200°F (-184° to +649°C)
	in oxid. atm	-300° to +850°F (-184° to +454°C)	-300° to +850°F (-184° to +454°C)
	in non-oxid. atm	-300° to +6000°F (-184° to +3316°C)	N/A
pH Range	0 to 14	N/A	0 to 14
Max Speed - fpm (mps)	4500(22.8)	N/A	200(1)

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 689

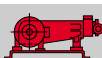
UTEX Style 689 is a TexFlex™ expanded flexible graphite yarn reinforced with Inconel® wire and fiberglass yarn. It also contains a sacrificial corrosion inhibitor. Texlok® interbraid* construction.

Style 689 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



ROTARY

RECIPROCATING

VALVE

Max Pressure - psi bar kg/cm ²	NA	N/A	5500/345/351
Temp - °F/°C - in steam	NA	NA	-300° to +1200°F(-184° to +649°C)
in oxid. atm	NA	NA	-300° to +850°F(-184° to +454°C)
in non-oxid. atm	NA	NA	-300° to +6000F(-184 to +3316°C)
pH Range	NA	N/A	0 to 14
Max Speed - fpm (mps)	NA	N/A	200(1)

Applications

UTEX Style 689 is suitable for steam, water, oil, solvents, alkalis, acids, and most chemicals. Exceptions are oleum, fuming, nitric acid, aqua regia, and fluorine.

Style 689 is recommended for both valve and some rotary applications. Typically, this packing should be used for high temperature valve and other static applications, as well as some rotary applications such as soot blowers.

Style 690

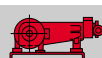
UTEX Style 690 is a braided TexFlex™ expanded low sulfur, low contaminant flexible graphite yarn. Style 690 is a nuclear grade, TexLok® interbraid* packing.

Style 690 is available in the following cross-section range:

1/8" to 1 1/2"
3.0 mm to 38.1 mm



Performance



ROTARY

RECIPROCATING

VALVE

Max Pressure - psi bar kg/cm ²	150/10/11	N/A	*5,000/345/352
Temp - °F/°C - in steam	-300° to +1200°F(-184° to +649°C)	N/A	-300° to +1200°F(-184° to +649°C)
in oxid. atm	-300° to +850°F(-184° to +454°C)	N/A	-300° to +850°F(-184° to +454°C)
in non-oxid. atm	-300° to +6000°F(-184° to +3316°C)	N/A	-300° to +6000F(-184° to +3316°C)
pH Range	0 to 14	N/A	0 to 14
Max Speed - fpm (mps)	4500(23)	N/A	200(1)

Applications

UTEX Style 690 is suitable for steam, water, oil, solvents, alkalis, acids, and most chemicals. Exceptions are oleum, fuming, nitric acid, aqua regia, and fluorine.

Style 690 is recommended for valve applications. It is also excellent for (nuclear) valves and other static applications where low sulfur, contamination specifications are required.


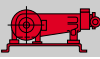

* Will require close-fitting end rings for high pressure. Consult UTEX Engineering.

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

UTEX Style 691 is a braided TexFlex™ expanded flexible graphite yarn reinforced with an Inconel® wire jacket knitted around each yarn. It also has a sacrificial corrosion inhibitor. TexLok® interbraid* braided construction.

Style 691 is available in the following cross-section range:
 1/8" to 1 1/2"
 3.0 mm to 38.1 mm



Performance			
	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	NA	N/A	10,000/689/686
Temp - °F/°C - in steam	NA	N/A	-400° to +1200°F (-240° to +649°C)
	NA	N/A	-400° to +850°F (-240° to +454°C)
	NA	N/A	-400° to +6000°F (-240° to +3316°C)
pH Range	NA	N/A	0 to 14
Max Speed - fpm (mps)	NA	N/A	200(1)

Applications

UTEX Style 691 is typically used for high temperature valve and other static applications, as well as some rotary and reciprocating applications such as soot blowers or rod packings

Style 691 is recommended for steam, water, oil, solvents, alkalis, acids, and most chemicals. Exceptions are oleum, fuming, nitric acid, aqua regia, and fluorine.

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.


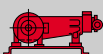

Style 242

UTEX Style 242 Spiral Unitized Packing Sets have been developed as an innovative concept in braided packing sets for use in all reciprocating equipment. Style 242 is made of pure aramid yarns interbraided with a stabilizing core. This unitized set of packings will not separate during storage or installation. The unique spiral unit eliminates the conventional leak path found in multiple ring die-formed sets and retards leakage even when the pump is idle. It is installed as a solid unit and can be used alone or in conjunction with spacers, wear rings or other items normally supplied with conventional die-formed sets.



Used in conjunction with our patented (#4991857) o-ring spring energizer. The Style 242 spiral unitized packing sets are completely non-adjustable thereby eliminating costly maintenance time.

Note: Style 242 is not available in bulk form.

Performance			
	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	NA	5500/379/387	N/A
Temp - °F/°C	NA	-320° to +500°F(-195° to +260°C)	N/A
pH Range	NA	2 to 12	N/A
Max Speed - fpm (mps)	NA	300(1.5)	N/A

Applications

UTEX Style 242 is suitable for mild chemicals, oils, mild caustics, hydrocarbons, aromatic and aliphatic solvents, salt solutions, and abrasive services.

Style 242 is recommended for all reciprocating applications and is usually furnished as an endless spiral slug used in conjunction with an elastomeric spring.

Spiral Unitized Packing Sets

Style 155



Square braid, flax fibers which is then treated with wax and marine grease for lubrication.

Style 155 is available in the following cross-section range:

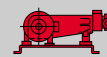
1/8" to 2"
3.0 mm to 50.8 mm

Applications

UTEX Style 155 is suitable for cold water, cold oil, and brine applications.

Style 155 is recommended for rotating equipment, reciprocating applications, general medium pressure hydraulics, stern tubes, and valves.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	250/17/18	900/62/63	1500/103/106
Temp - °F/°C	32° to +250°F(0 to +121°C)	32° to +250°F(0 to +121°C)	32° to +250°F(0 to +121°C)
pH Range	5 to 10	5 to 10	5 to 10
Max Speed - fpm (mps)	2250(11.4)	300(1.5)	200(1)

Style 200



Square braid, flax fibers treated with tallow and marine wax.

Style 200 is available in the following cross-section range:

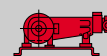
1/8" to 2"
3.0 mm to 50.8 mm

Applications

UTEX Style 200 is suitable for use in ambient water, cold oil, brine applications, and other general services.

Style 200 is recommended for reciprocating and rotary equipment, medium hydraulic rams, stern tubes, and valves.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	150/10.3/10.5	900/62/63	1500/103/106
Temp - °F/°C	32° to +250°F(0 to +121°C)	32° to +250°F(0 to +121°C)	32° to +250°F(0 to +121°C)
pH Range	5 to 10	5 to 10	5 to 10
Max Speed - fpm (mps)	2250(11.4)	300(1.5)	200(1)

Style 201



Square braid, flax fibers which are thoroughly impregnated with PTFE, and surface coated with water repellent lubricant.

Style 201 is available in the following cross-section range:

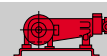
1/8" to 2"
3.0 mm to 50.8 mm

Applications

UTEX Style 201 is suitable for brine, cold water services, and cold oil services.

Style 201 is recommended for rotary equipment, reciprocating applications, stern tubes, and valves. This packing is especially suited for marine applications.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	300/20.7/21.1	900/62/63	1500/103/106
Temp - °F/°C	32° to +250°F(0 to +121°C)	32° to +250°F(0 to +121°C)	32° to +250°F(0 to +121°C)
pH Range	4 to 11	4 to 11	4 to 11
Max Speed - fpm (mps)	2500(12.7)	300(1.5)	200(1)

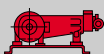
Style 204

Square braid, flax fibers thoroughly impregnated with tallow and wax, plus a graphite coat for extra lubrication.

Style 204 is available in the following cross-section range:
 1/8" to 2"
 3.0 mm to 50.8 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	100/6.9/7	900/62/63.3	1500/103/106
Temp - °F/°C	32° to +250°F(0 to +121°C)	32° to +250°F(0 to +121°C)	32° to +250°F(0 to +121°C)
pH Range	5 to 10	5 to 10	5 to 10
Max Speed - fpm (mps)	2500(12.7)	300(1.5)	200(1)

Applications

UTEX Style 204 is suitable for brine, cold water service, hydraulics, and cold oil services.

Style 204 is recommended for general hydraulics, low-pressure valves, rotary equipment, reciprocating applications, and stern tubes.

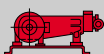
Style 206

Square braid, flax fibers impregnated throughout with PTFE to seal the fibers, surface treated with a special break- in lubricant and dry PTFE particles.

Style 206 is available in the following cross-section range:
 1/8" to 2"
 3.0 mm to 50.8 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	300/20.7/21.1	900/62/63	1500/103/106
Temp - °F/°C	32° to +250°F(0 to +121°C)	32° to +250°F(0 to +121°C)	32° to +250°F(0 to +121°C)
pH Range	4 to 11	4 to 11	4 to 11
Max Speed - fpm (mps)	3000(15.2)	300(1.5)	200(1)

Applications

UTEX Style 206 is excellent in water applications, brine applications, and light oils.

Style 206 is recommended for rotary shafts, reciprocating applications, and stern tube packing combinations.

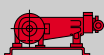
Style 253

Square braid, flax fiber and lead wire for reinforcement and strength upon removal and added load bearing characteristics. Braid is treated with marine grease and wax.

Style 253 is available in the following cross-section range:
 1/8" to 2"
 3.0 mm to 50.8 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	1500/103/106	N/A
Temp - °F/°C	N/A	+32° to +250°F(0 to +121°C)	N/A
pH Range	N/A	2 to 12	N/A
Max Speed - fpm (mps)	N/A	400(2)	N/A

Applications

UTEX Style 253 is suitable for water, oil, hydraulics, and other down hole services.

Style 253 is recommended for slow moving reciprocating polished rod applications.

Texturized Glass Packings

Style 132



Round construction, knitted packing consisting of high density texturized glass rope.

Style 132 is available in the following cross-section range:

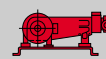
1/8" to 1 3/4"
3.0 mm to 44.5 mm

Applications

UTEX Style 132 is suitable for applications where excellent chemical resistance is needed. In addition, it is non-combustible.

Style 132 is recommended for high temperature ovens, casting molds, boiler doors, and expansion joints.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	N/A	29/2/2
Temp - °F/°C	N/A	N/A	32° to +1000°F(0 to +538°C)
pH Range	N/A	N/A	2 to 11
Max Speed - fpm (mps)	N/A	N/A	200(1)

Style 161



Twisted rope packing consisting of proprietary glass strands treated with a special lubricant and coated with graphite.

Style 161 is available in the following cross-section range:

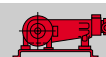
1/8" to 1/2"
3.0 mm to 25.4 mm

Applications

UTEX Style 161 is suitable for mild acids, steam, oil, brine, and other general applications.

Style 161 is recommended for low-pressure valve stems and rotary shafts.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	25/1.7/1.8	N/A	29/2/2
Temp - °F/°C	32° to +450°F(0 to +232°C)	N/A	32° to +450°F(0 to +232°C)
pH Range	2 to 11	N/A	2 to 11
Max Speed - fpm (mps)	500(2.5)	N/A	200(1)

Style 162



Twisted rope packing consisting of proprietary glass roving without any secondary lubricants added.

Style 162 is available in the following cross-section range:

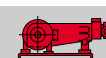
3/32" to 1/2"
2.4 mm to 12.7 mm

Applications

UTEX Style 162 is suitable for high heat general service applications.

Style 162 is recommended for low-pressure valve stems and static rods, and for heat sensitive applications.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	N/A	29/2/2
Temp - °F/°C	N/A	N/A	32° to +1000°F(0 to +538°C)
pH Range	N/A	N/A	2 to 11
Max Speed - fpm (mps)	N/A	N/A	200(1)

Style 163

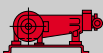
Tightly twisted multiple strands of glass fibers, with no added ingredients.

Style 163 is available in the following cross-section range:

1/8" to 2"
3.0 mm to 50.8 mm



Performance



ROTARY

RECIPROCATING

VALVE

	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	N/A	29/2/2
Temp - °F/°C	N/A	N/A	32° to +1000°F(0 to +538°C)
pH Range	N/A	N/A	2 to 11
Max Speed - fpm (mps)	N/A	N/A	200(1)

Applications

UTEX Style 163 has excellent chemical resistance.

Style 163 is recommended for low-pressure valve applications, expansion joints, high temperature pipe fittings, and molds.

Style 167

Tightly twisted rope of alumina-silica ceramic strands with no added ingredients.

Style 167 is available in the following cross-section range:

1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1 1/2", 2"
5mm, 8mm, 11mm, 16mm, 18mm, 20mm, 38.1mm, 50.8mm



Performance



ROTARY

RECIPROCATING

VALVE

	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	N/A	29/2/2
Temp - °F/°C	N/A	N/A	2300°F(+1260°C)
pH Range	N/A	N/A	0 to 14
Max Speed - fpm (mps)	N/A	N/A	200(1)

Applications

UTEX Style 167 has excellent chemical resistance and is resistant to all chemicals except strong caustics such as sodium hydroxide and potassium hydroxide, and strong acids such as phosphoric acid and hydrofluoric acid.

Style 167 is recommended for low-pressure valve applications, expansion joints, high temperature pipe fittings, and molds.

Style 683



Applications

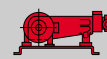
UTEX Style 683 is suitable for water, steam, aqueous alkaline, and most acid solutions.

Style 683 is recommended for valve stems, expansion joints, and other static applications.

This braided synthetic packing contains a special core of flake graphite, corrosion inhibitors, composite fillers and organic binders with an Inconel® wire inserted in a carbon, glass and aramid jacket treated with graphite and corrosion inhibitors which help protect stainless steel parts against galvanic corrosion.

Style 683 is available in the following cross-section range:
1/8" to 2"
3.0 mm to 50.8 mm

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	N/A	3500/241/246
Temp - °F/°C - in air	N/A	N/A	-32° to +650°F(0 to +343°C)
- in steam	N/A	N/A	-32° to +850°F(0 to +454°C)
pH Range	N/A	N/A	2 to 12
Max Speed - fpm (mps)	N/A	N/A	200(1)

Style 684



Applications

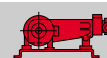
UTEX Style 684 is suitable in high temperature applications of water, steam, aqueous alkaline, and most acid solutions.

Style 684 is recommended for valve stems, expansion joints, and other static applications.

A high temperature packing that features a special core made up of flake graphite, corrosion inhibitors, composite fillers and organic binders surrounded by a braided outer jacket. The outer jacket consists of Inconel® wire inserted in carbon/glass fibers treated with graphite and corrosion inhibitors. The Inconel® wire is completely encapsulated in the outer jacket to eliminate shaft scoring.

Style 684 is available in the following cross-section range:
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	N/A	4000/276/281
Temp - °F/°C - in air	N/A	N/A	-32° to +650°F(0 to +343°C)
- in steam	N/A	N/A	-32° to +1200°F(0 to +650°C)
pH Range	N/A	N/A	1 to 12
Max Speed - fpm (mps)	N/A	N/A	200(1)

Style 685



Applications

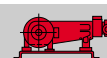
UTEX Style 685 is resistant to most chemicals and solvents in demanding service conditions.

Style 685 is recommended for valve stems, soot blowers, control valves, and other high temperature valve applications.

High-temperature packing made of high purity TexLok® interbraid* carbon yarn core with overbraid of inconel® wire reinforced carbon/glass jacket. Special corrosion inhibitors are incorporated to guard against galvanic corrosion.

Style 685 is available in the following cross-section range:
1/8" to 1 1/2"
3.0 mm to 50.8 mm

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	N/A	N/A	5100/352/359
Temp - °F/°C - in air	N/A	N/A	-300° to +650°F(-184 to °+343°C)
- in steam	N/A	N/A	-300° to +1200°F(-184° to +649°C)
pH Range	N/A	N/A	0 to 14
Max Speed - fpm (mps)	N/A	N/A	200/1

* Any TexLok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 609

Metallic packing comprising layers of a lead alloy foil treated with a special lubricant and graphite and then twisted and crimped around a nitrile rubber core.

Style 609 is available in the following cross-section range:

1/4" to 1"
6.0 mm to 25.4 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	500/34.5/35.1	2500/172/176	2500/172/176
Temp - °F/°C	-300° to +250°F(-184° to +121°C)	-300° to +250°F(-184° to +121°C)	-300° to +250°F(-184° to +121°C)
pH Range	4 to 10	4 to 10	4 to 10
Max Speed - fpm (mps)	4500(22.8)	300(1.5)	200(1)

Applications

UTEX Style 609 is suitable for water, oils, steam, hydraulic fluids, and mild chemicals.

Style 609 is recommended for centrifugal oil pumps, boiler feed pumps, condensate pumps, reciprocating applications, and valves.

Style 610

Metallic packing comprising layers of a lead alloy foil treated with a special lubricant and graphite and then twisted and crimped.

Style 610 is available in the following cross-section range:

1/8" to 1"
3.0 mm to 25.4 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	500/34.5/35.1	3000/207/211	3000/207/211
Temp - °F/°C	-300° to +500°F(-184° to +260°C)	-300° to +500°F(-184° to +260°C)	-300° to +500°F(-184° to +260°C)
pH Range	4 to 10	4 to 10	4 to 10
Max Speed - fpm (mps)	4500(22.8)	300(1.5)	200(1)

Applications

UTEX Style 610 is suitable for ammonia, water, salt water, oils, steam, gasolines, heat transfer fluids, and mild chemicals.

Style 610 is recommended for rotary and reciprocating pumps, valve stems, and most other general sealing applications. It should be used as end rings in combination with braided packing.

Metallic Packings

Style 616



Metallic packing composed of thin layers of lead alloy foil wrapped, layer over layer, around a proprietary fiber core to provide added resilience. Treated with high temperature oil and graphite.

Style 616 is available in the following cross-section range:

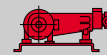
1/4" to 1"
6.0 mm to 25.4 mm

Applications

UTEX Style 616 is suitable for oils, distillates, water, salt water, and other general services.

Style 616 is recommended for centrifugal and rotary shafts, reciprocating equipment, and valves. It can also be used as end rings to prevent softer packing from extruding.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	500/34.5/35.1	3000/207/211	3000/207/211
Temp - °F/°C	-300° to +500°F (-184° to +260°C)	-300° to +500°F (-184° to +260°C)	-300° to +500°F (-184° to +260°C)
pH Range	4 to 10	4 to 10	4 to 10
Max Speed - fpm (mps)	4500/22.8	300(1.5)	200(1)

Style 631



Metallic packing composed of aluminum foil layers treated with a special lubricant and graphite. The aluminum foil is twisted and crimped around a fiberglass core producing a flexible, resilient packing.

Style 631 is available in the following cross-section range:

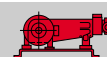
1/4" to 1"
6.0 mm to 25.4 mm

Applications

UTEX Style 631 is suitable for oil, water, steam, ammonia, heat transfer fluids, and mild chemicals.

Style 631 is recommended for hot oil charge pumps, boiler feed pumps, centrifugal equipment, reciprocating equipment, and valves.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	250/17.2/17.6	1000/69/70	2500/172/176
Temp - °F/°C	-300° to +1000°F (-184° to +538°C)	-300° to +1000°F (-184° to +538°C)	-300° to +1000°F (-184° to +538°C)
pH Range	4 to 10	4 to 10	4 to 10
Max Speed - fpm (mps)	4500(22.8)	300(1.5)	200(1)

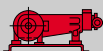
Style 632

Metallic packing composed of aluminum foil ribbons, thoroughly lubricated and graphited, twisted and crimped to form a square cross section packing.

Style 632 is available in the following cross-section range:
 1/8" to 1"
 3.0 mm to 25.4 mm



Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	250/17.2/17.6	2500/172/176	2500/172/176
Temp - °F/°C	-300° to +1000°F (-184° to +538°C)	-300° to +1000°F (-184° to +538°C)	-300° to +1000°F (-184° to +538°C)
pH Range	4 to 10	4 to 10	4 to 10
Max Speed - fpm (mps)	4500(22.8)	300(1.5)	200(1)

Applications

UTEX Style 632 is suitable for hot oil, steam, condensate, heat transfer fluids, and mild chemicals.

Style 632 is recommended for centrifugal oil charge pumps, boiler feed pumps, centrifugal equipment, reciprocating applications, and valves.

Metallic Packings

Style 248



TexLok® interbraid*, composed entirely of Novoloid fibers treated with PTFE throughout and a non-silicone break-in lubricant. Excellent where non-staining, and non-abrasive packing is required.

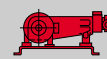
Style 248 is available in the following cross-section range:
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Applications

UTEX Style 248 is suitable for water, oils, hydrocarbons, most chemicals, and the pulp and paper industry. It is non-staining and non-abrasive.

Style 248 is recommended for rotary and centrifugal shafts, reciprocating applications, and valves.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	250/17.2/17.6	2500/172/176	2500/172/176
Temp - °F/°C	-150° to +500°F(-100° to +260°C)	-150° to +500°F(-100° to +260°C)	-150° to +500°F(-100° to +260°C)
pH Range	1 to 14*	1 to 14*	1 to 14*
Max Speed - fpm (mps)	3500(17.8)	400(2)	200(1)

*Except in concentrated hot sulfuric or nitric acid.

Style 251



TexLok® interbraid*, PTFE impregnated proprietary fiber with a proprietary blocking agent and a non-silicone break-in lubricant.

Style 251 is available in the following cross-section range:
1/8" to 1/2"
3.0 mm to 38.1 mm

Applications

UTEX Style 251 is suitable for water, hydrocarbons, mild chemicals, and mild solvents.

Style 251 is recommended for rotary and centrifugal equipment, pulp and paper equipment, reciprocating applications, and valve stems.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	300/20/21	3200/221/225	3200/221/225
Temp - °F/°C	0 to +500°F(-17° to +260°C)	0 to +500°F(-17° to +260°C)	0 to +500°F(-17° to +260°C)
pH Range	1 to 14	1 to 14	1 to 14
Max Speed - fpm (mps)	3500(17.8)	200(1)	200(1)

Style 279



TexLok® Interbraid*, Novoloid fibers individually treated with PTFE and graphite, then braided and surface coated with special break-in lubricant.

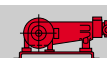
Style 279 is available in the following cross-section range:
1/8" to 1 1/2"
3.0 mm to 38.1 mm

Applications

UTEX Style 279 is suitable for water, oils, hydrocarbons, most chemicals, and other general applications.

Style 279 is recommended for rotary and centrifugal shafts, reciprocating equipment, and valves.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	450/31/31.6	2500/172/176	2500/172/176
Temp - °F/°C	-150° to +500°F(-100° to +260°C)	-150° to +500°F(-100° to +260°C)	-150° to +500°F(-100° to +260°C)
- short term	-150° to +750°F(-100° to +400°C)	-150° to +750°F(-100° to +400°C)	-150° to +750°F(-100° to +400°C)
pH Range	1 to 14*	1 to 14*	1 to 14*
Max Speed - fpm (mps)	4500(22.8)	400(2)	200(1)

* Except in concentrated hot sulfuric or nitric acid

* Any Texlok® interbraid smaller than 1/4" (6.0 mm) will be square braided construction.

Style 256



TexLok® interbraid, E-PTFE packing, with inert lubricant particles encapsulated in an expanded PTFE matrix.

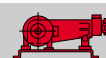
Style 256 is available in the following cross-section range:
 1/4" (6mm) to 1 1/2"
 6 mm to 38.1 mm

Applications

UTEX Style 256 is suitable for boiling water or steam, oxygen, oils, solvents, acids, hydrocarbons, and alkalis. Not suitable for fuming nitric acid, aqua regia and concentrated sulfuric acid.

Style 256 is recommended for rotary applications. Also recommended for reciprocating applications, valve stems, agitators, and other general services.

Performance



	ROTARY	RECIPROCATING	VALVE
Max Pressure - psi bar kg/cm ²	500/34.5/35	3625/250/255	3800/262/267
Temp - °F/°C	-400° to +550°F (-240° to +288°C)	-400° to +550°F (-240° to +288°C)	-400° to +550°F (-240° to +288°C)
pH Range	0 to 14	0 to 14	0 to 14
Max Speed - fpm (mps)	4500(22.5)	400(2.0)	200(1)

Technical Specialties

Cross Section Ft/Lb

Style	1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	3/4"	7/8"	1.0"
132	115.34	86.21	46.88	40.00	23.33	18.75	13.23	--	9.37	7.61	5.49	4.35
155	136.36	60.60	34.09	21.82	15.15	11.13	8.52	6.73	5.45	3.79	2.78	2.13
161	100.00	40.00	26.67	18.18	12.50	--	7.27	--	4.76	3.13	2.56	1.89
162	164.00	--	54.00	39.50	29.00	--	12.90	--	--	--	--	--
163	233.00	103.55	55.00	37.28	24.50	20.00	13.50	11.50	9.00	6.50	4.50	3.65
165	149.72	66.54	37.43	23.96	16.64	12.22	9.36	7.39	5.99	4.16	3.06	2.34
167	--	--	68.00	43.52	30.21	22.19	16.19	13.43	10.88	7.56	5.56	4.25
200	116.41	45.13	32.54	20.82	14.46	10.62	8.13	6.43	5.21	3.62	2.66	2.03
201	90.80	47.86	26.92	17.23	11.97	8.79	6.73	5.32	4.31	2.99	2.20	1.68
204	116.41	45.13	32.54	20.82	14.46	10.62	8.13	6.43	5.21	3.62	2.66	2.03
206	126.81	56.36	31.70	20.29	14.09	10.35	7.93	6.26	5.07	3.52	2.59	1.98
208	85.02	42.02	23.64	15.13	10.51	7.72	5.91	4.67	3.78	2.63	1.93	1.48
210	59.19	41.37	23.27	14.89	10.34	7.60	5.82	4.60	3.72	2.59	1.90	1.45
212	88.67	46.19	25.98	16.63	11.55	8.48	6.50	5.13	4.16	2.89	2.12	1.62
213	84.86	44.19	24.85	15.91	11.05	8.12	6.21	4.91	3.98	2.76	2.03	1.55
214	--	--	25.24	16.15	11.22	8.24	6.31	4.99	4.04	2.80	2.06	1.58
215	80.57	40.27	22.65	14.50	10.07	7.40	5.66	4.47	3.62	2.52	1.85	1.42
216	68.11	35.34	19.88	12.72	8.84	6.49	4.97	3.93	3.18	2.21	1.62	1.24
217	--	--	23.38	14.96	10.39	7.63	5.84	4.62	3.74	2.60	1.91	1.46
220	97.41	43.29	24.35	15.59	10.82	7.95	6.09	4.81	3.90	2.71	1.99	1.52
222	97.10	43.15	24.27	15.54	10.79	7.93	6.07	4.79	3.88	2.70	1.98	1.52
225	128.18	56.97	32.05	20.51	14.24	10.46	8.01	6.33	5.13	3.56	2.62	2.00
226	106.82	56.92	24.32	20.49	14.23	10.46	8.00	6.32	5.12	3.56	2.61	2.00
227	134.43	59.75	26.18	21.51	14.94	10.97	8.40	6.64	5.38	3.73	2.74	2.10
228	94.89	42.17	23.72	15.18	10.54	7.75	5.93	4.69	3.80	2.64	1.94	1.48
229	97.42	63.00	35.44	22.68	15.75	11.57	8.86	7.00	5.67	3.94	2.89	2.21
230	173.28	77.01	43.32	27.72	19.25	14.14	10.83	8.56	6.93	4.81	3.54	2.71
231	74.79	38.96	21.91	14.02	9.74	7.16	5.48	4.33	3.51	2.43	1.79	1.37
232	67.36	43.76	24.61	15.75	10.94	8.04	6.15	4.86	3.94	2.73	2.01	1.54
233	119.47	68.38	38.47	24.62	17.10	12.56	9.62	7.60	6.15	4.27	3.14	2.40
234	84.07	57.62	32.41	20.74	14.40	10.58	8.10	6.40	5.19	3.60	2.65	2.03
235	84.07	44.73	25.16	16.10	11.18	8.22	6.29	4.97	4.03	2.80	2.05	1.57
236	144.49	64.22	36.16	23.14	16.07	11.81	9.04	7.14	5.79	4.02	2.95	2.26
237	143.07	63.59	35.81	22.92	15.91	11.69	8.95	7.07	5.73	3.98	2.92	2.24
238	86.40	38.40	21.62	13.84	9.61	7.06	5.41	4.27	3.46	2.40	1.77	1.35
240	--	46.03	25.89	16.57	11.51	8.45	6.47	5.11	4.14	2.88	2.11	1.62
241	--	--	24.85	15.91	11.05	8.12	6.21	4.91	3.98	2.76	2.03	1.55
243	--	42.90	24.13	15.44	10.72	7.88	6.03	4.77	3.86	2.68	1.97	1.51
244	76.95	40.23	22.63	14.48	10.06	7.39	5.66	4.47	3.62	2.51	1.85	1.41
245	70.61	36.87	20.74	13.27	9.22	6.77	5.18	4.10	3.32	2.30	1.69	1.30
246	80.21	41.93	23.59	15.10	10.48	7.70	5.90	4.66	3.77	2.62	1.93	1.47
248	111.57	49.58	27.89	17.85	12.40	9.11	6.97	5.51	4.46	3.10	2.28	1.74
249	117.45	52.20	23.89	18.79	13.05	9.59	7.34	5.80	4.70	3.26	2.40	1.84
251	133.61	59.38	33.40	21.38	14.85	10.91	8.35	6.60	5.34	3.71	2.73	2.09
253	70.61	31.38	17.65	11.30	7.85	5.76	4.41	3.49	2.82	1.96	1.44	1.10
256	--	--	20.03	12.82	8.90	6.54	5.01	3.96	3.20	2.23	1.63	1.25
276	67.36	43.76	24.61	15.75	10.94	8.04	6.15	4.86	3.94	2.73	2.01	1.54
277	--	51.41	28.92	18.51	12.87	9.45	7.24	5.72	4.63	3.22	2.26	1.81
278	--	38.33	21.59	13.82	9.59	7.05	5.40	4.26	3.45	2.40	1.76	1.35
279	114.32	50.81	28.58	18.29	12.70	9.33	7.15	5.65	4.57	3.18	2.33	1.79
280	173.28	77.01	43.32	27.72	19.25	14.14	10.83	8.56	6.93	4.81	3.54	2.71
609	--	--	5.99	3.20	2.42	1.90	1.66	1.51	1.26	0.97	0.71	0.54
610	Low 12.33	6.93	5.59	3.39	2.49	1.94	1.41	1.23	0.98	0.71	0.52	0.48
	High 12.33	5.28	4.77	2.49	1.69	1.28	0.99	0.79	0.70	0.52	0.38	0.29
616	--	--	7.23	3.69	2.90	2.38	1.84	1.56	1.34	1.07	0.79	0.60
631	--	--	29.97	14.13	11.42	7.23	5.47	4.98	4.51	3.02	2.94	2.53
632	49.34	33.28	23.31	10.28	8.50	6.69	5.47	4.79	4.22	3.38	3.18	2.79
683	90.68	40.30	22.67	14.51	10.08	7.40	5.67	4.48	3.63	2.52	1.85	1.42
684	89.37	39.72	22.34	14.30	9.93	7.30	5.59	4.41	3.57	2.48	1.82	1.40
685	98.49	43.77	24.62	15.76	10.94	8.04	6.16	4.86	3.94	2.74	2.01	1.54
686	130.24	57.89	32.56	20.84	14.47	10.63	8.14	6.43	5.21	3.62	2.66	2.04
687	108.42	48.19	27.11	17.35	12.05	8.85	6.78	5.35	4.34	3.01	2.21	1.69
688	134.15	59.63	33.54	21.47	14.90	10.95	8.38	6.62	5.37	3.73	2.74	2.10
689	130.24	57.89	32.56	20.84	14.47	10.63	8.14	6.43	5.21	3.62	2.66	2.04
690	108.42	48.19	27.11	17.35	12.05	8.85	6.78	5.35	4.34	3.01	2.21	1.69
691	83.78	37.24	20.95	13.41	9.31	6.84	5.24	4.14	3.35	2.33	1.71	1.31

Yields are plus or minus 7% spread. -- Not Available.

Size	3 mm	4 mm	5 mm	6 mm	8 mm	10mm	11mm	12 mm	14 mm	16 mm	18 mm	20 mm	22 mm	25 mm
132	86.81	--	31.25	21.70	12.21	7.81	6.46	5.43	--	3.05	--	--	1.61	1.25
155	102.51	57.66	--	25.63	14.42	9.23	7.48	6.41	4.71	3.60	2.85	2.31	1.91	1.48
161	75.26	42.34	27.09	18.82	10.58	6.77	--	4.70	--	2.65	2.09	1.69	1.40	1.08
162	123.43	--	--	30.86	17.36	11.11	--	7.71	--	--	--	--	--	--
163	175.36	--	63.13	43.84	24.66	15.78	13.44	10.96	8.05	6.17	--	--	3.26	2.53
165	112.55	63.31	40.52	28.14	15.83	10.13	8.21	7.03	5.17	3.96	3.13	2.53	2.09	1.62
167	--	--	--	51.18	28.79	18.42	--	12.79	9.40	7.20	5.69	4.61	3.81	2.95
200	97.84	55.03	35.22	24.46	13.76	8.81	7.14	6.11	4.49	3.44	2.72	2.20	1.82	1.41
201	80.96	45.54	29.14	20.24	11.38	7.29	5.91	5.06	3.72	2.85	2.25	1.82	1.51	1.17
204	97.84	55.03	35.22	24.46	13.76	8.81	7.14	6.11	4.49	3.44	2.72	2.20	1.82	1.41
206	95.33	53.62	34.32	23.83	13.41	8.58	6.96	5.96	4.38	3.35	2.65	2.14	1.77	1.37
208	71.08	39.98	25.59	17.77	10.00	6.40	5.19	4.44	3.26	2.50	1.97	1.60	1.32	1.02
210	69.98	39.37	25.19	17.50	9.84	6.30	5.11	4.37	3.21	2.46	1.94	1.57	1.30	1.01
212	78.14	43.95	28.13	19.53	10.99	7.03	5.20	4.88	3.59	2.75	2.17	1.76	1.45	1.13
213	74.74	42.04	26.91	18.68	10.51	6.73	5.45	4.67	3.43	2.63	2.08	1.68	1.39	1.08
214	--	--	--	18.97	10.67	6.83	5.54	4.74	3.48	2.67	2.11	1.71	1.41	1.09
215	68.11	38.31	24.52	17.03	9.58	6.13	4.97	4.26	3.13	2.39	1.89	1.53	1.27	0.98
216	59.78	33.63	21.52	14.95	8.41	5.38	4.36	3.74	2.75	2.10	1.66	1.35	1.11	0.86
217	--	--	--	17.57	9.89	6.33	5.13	4.39	3.23	2.47	1.95	1.58	1.31	1.01
220	73.23	41.19	23.36	18.31	10.30	6.59	5.34	4.58	3.36	2.57	2.03	1.65	1.36	1.05
222	72.99	41.06	26.28	18.25	10.26	6.57	5.33	4.56	3.35	2.57	2.03	1.64	1.36	1.05
225	96.36	54.20	34.69	24.09	13.55	8.67	7.03	6.02	4.42	3.39	2.68	2.17	1.79	1.39
226	96.28	54.16	34.66	24.07	13.54	8.67	7.03	6.02	4.42	3.38	2.67	2.17	1.79	1.39
227	101.06	56.85	36.38	25.27	14.21	9.10	7.37	6.32	4.64	3.55	2.81	2.27	1.88	1.46
228	71.34	40.13	25.68	17.83	10.03	6.42	5.21	4.46	3.28	2.51	1.98	1.61	1.33	1.03
229	106.57	59.94	38.36	26.64	14.99	9.59	7.78	6.66	4.89	3.75	2.96	2.40	1.98	1.53
230	130.26	73.27	46.89	32.57	18.32	11.72	9.50	8.14	5.98	4.58	3.62	2.93	2.42	1.88
231	65.89	37.07	23.72	16.47	9.27	5.93	4.81	4.12	3.03	2.32	1.83	1.48	1.23	0.95
232	74.01	41.63	26.64	18.50	10.41	6.66	5.40	4.63	3.40	2.60	2.06	1.67	1.38	1.07
233	115.67	65.06	41.64	28.92	16.27	10.41	8.44	7.23	5.31	4.07	3.21	2.60	2.15	1.67
234	97.46	54.82	35.09	24.36	13.71	8.77	7.11	6.09	4.48	3.43	2.71	2.19	1.81	1.40
235	75.66	42.56	27.24	18.92	10.64	6.81	5.52	4.73	3.47	2.66	2.10	1.70	1.41	1.09
236	108.75	61.17	39.15	27.19	15.29	9.79	7.93	6.80	4.99	3.82	3.02	2.45	2.02	1.57
237	107.68	60.57	38.76	26.92	15.14	9.69	7.86	6.73	4.94	3.79	2.99	2.42	2.00	1.55
238	65.03	36.58	23.41	16.26	9.14	5.85	4.74	4.06	2.99	2.29	1.81	1.46	1.21	0.94
240	--	--	28.03	19.46	10.95	7.01	5.68	4.87	3.58	2.74	2.16	1.75	1.45	1.12
241	--	--	--	18.68	10.51	6.73	5.45	4.67	3.43	2.63	2.08	1.68	1.39	1.08
243	--	--	26.12	18.14	10.20	6.53	5.29	4.53	3.33	2.55	2.02	1.63	1.35	1.04
244	68.05	38.28	24.50	17.01	9.57	6.12	4.97	4.25	3.12	2.39	1.89	1.53	1.27	0.98
245	62.36	35.08	22.45	15.59	8.77	5.61	4.55	3.90	2.86	2.19	1.73	1.40	1.16	0.90
246	70.93	39.90	25.53	17.73	9.97	6.38	5.18	4.43	3.26	2.49	1.97	1.60	1.32	1.02
248	83.87	47.18	30.19	20.97	11.79	7.55	6.12	5.24	3.85	2.95	2.33	1.89	1.56	1.21
249	88.30	49.67	31.79	22.07	12.42	7.95	6.44	5.52	4.05	3.10	2.45	1.99	1.64	1.27
251	100.45	56.50	36.16	25.11	14.13	9.04	7.33	6.28	4.61	3.53	2.79	2.26	1.87	1.45
253	53.08	29.86	19.11	13.27	7.47	4.78	3.87	3.32	2.44	1.87	1.47	1.19	0.99	0.76
256	--	--	--	15.05	8.46	5.42	4.39	3.76	2.76	2.12	1.67	1.35	1.12	0.87
276	74.01	41.63	26.64	18.50	10.41	6.66	5.40	4.63	3.40	2.60	2.06	1.67	1.38	1.07
277	--	--	31.34	21.76	12.24	7.84	6.35	5.44	4.00	3.06	2.42	1.96	1.62	1.25
278	--	--	23.37	16.23	9.13	5.84	4.74	4.06	2.98	2.28	1.80	1.46	1.21	0.93
279	85.94	48.34	30.94	21.49	12.09	7.73	6.27	5.37	3.95	3.02	2.39	1.93	1.60	1.24
280	130.26	73.27	46.89	32.57	18.32	11.72	9.50	8.14	5.98	4.58	3.62	2.93	2.42	1.88
609	--	--	--	3.82	2.12	1.48	1.28	1.25	1.03	0.84	0.73	0.59	0.49	0.38
610 Low	9.28	6.60	4.23	3.56	2.24	1.52	1.31	1.12	0.86	0.65	0.53	0.43	0.36	0.33
610 High	9.28	5.03	3.22	3.04	1.65	1.03	0.86	0.74	0.55	0.46	0.39	0.32	0.26	0.20
616	--	--	--	4.61	2.44	1.97	1.60	1.37	1.09	0.89	0.81	0.65	0.54	0.40
631	--	--	--	19.09	9.35	6.96	4.86	4.12	3.49	2.98	2.28	1.84	1.82	1.79
632	37.13	20.89	20.29	14.85	6.80	5.18	4.50	3.86	3.35	2.90	2.55	2.35	2.18	1.94
683	68.17	38.35	24.54	17.04	9.59	6.14	4.97	4.26	3.13	2.40	1.89	1.53	1.27	0.98
684	67.19	37.79	24.19	16.80	9.45	6.05	4.90	4.20	3.09	2.36	1.87	1.51	1.25	0.97
685	74.64	41.65	26.65	18.51	10.41	6.66	5.40	4.63	3.40	2.60	2.06	1.67	1.38	1.07
686	97.91	55.08	35.25	24.48	13.77	8.81	7.14	6.12	4.50	3.44	2.72	2.20	1.82	1.41
687	81.51	45.85	29.34	20.38	11.46	7.34	5.95	5.09	3.74	2.87	2.26	1.83	1.52	1.17
688	100.85	56.73	36.31	25.21	14.18	9.08	7.36	6.30	4.63	3.55	2.80	2.27	1.88	1.45
689	97.91	55.08	35.25	24.48	13.77	8.81	7.14	6.12	4.50	3.44	2.72	2.20	1.82	1.41
690	81.51	45.85	29.34	20.38	11.46	7.34	5.95	5.09	3.74	2.87	2.26	1.83	1.52	1.17
691	62.94	35.41	22.66	15.74	8.85	5.66	4.68	3.93	2.89	2.21	1.75	1.42	1.17	0.91

Yields are plus or minus 7% spread. -- Not Available.

Chemical Compatibility

	Reciprocating		Rotary		Valve	
	Premium	Standard	Premium	Standard	Premium	Standard
Acetic Acid, Glacial	242	217	226	231	686-226	232
Hot	217	232	226	210	686-226	226
5%	217	232	226	210	686-226	232
Acetone	242	217	226	231	686-226	232
Amines, Mixed	242	217	226	210	686-226	217
Ammonia, Gas, Cold	242	217	210	238	686-226	226
Gas, Hot	242	217	226	210	686-226	226
Liquid	242	217	210	238	686-226	226
Anhydrous Ammonia	242	217	210	238	686-226	226
Ash Slurry	242	217	226	214	686-226	217
Benzene	232	232	226	231	686-226	232
Black Sulfate Liquors	242	217	226	279	686-226	248
Brown Stock	242	217	226	279	686-226	248
Butadiene	242	217	226	210	686-226	226
Butane 3	242	217	226	210	686-226	217
Butylene	242	217	226	210	686-226	217
Calcium Liquors	242	217	279	279	686-226	248
Calcium Carbonate	242	212	279	208	686-226	220
Calcium Chloride	242	212	279	208	686-226	220
Calcium Cyanide	242	212	226	210	686-226	220
Calcium Hydroxide	242	212	210	208	686-226	220
Calcium Hypo Chloride	242	212	226	214	686-226	220
Calcium Hypo Chlorite	242	212	226	214	686-226	220
Calcium Nitrate	242	212	226	214	686-226	220
Calcium Stearate	232	232	210	231	686-226	217
Carbolic Acid	217	232	210	208	686-226	237
Carbon Dioxide, Dry	242	217	226	210	686-226	217
Wet	242	217	226	210	686-226	217
Carbon Monoxide	242	217	226	210	686-226	217
Carbon Tetrachloride	242	217	210	231	686-226	232
Carbonic Acid	242	212	210	208	686-226	226
Caustic Soda	242	217	226	214	686-226	226
Chlorinated Salt Brine	242	217	226	214	686-226	226
Chlorinated Solvents, Dry	242	232	214	217	686-226	217
Wet	242	232	214	217	686-226	217
Chlorine, Anhydrous	232	232	226	231	686-226	232
Chlorine, Dry	242	217	210	231	686-226	217
Chlorine Dioxide, 8% CL as NACLO ₂	242	217	226	210	686-226	217
Chlorine, Wet	242	217	226	210	686-226	217
Citric Acid	242	238	210	208	686-226	217
Condensate, Acid <250°F	242	217	226	210	686-226	217
Condensate Evaporator <250°F	242	217	229	226	686-226	217
Condensate Steam <250°F	242	217	229	226	686-226	217
Copper Sulfate, 10%	242	217	214	217	686-226	226
50%	242	217	214	217	686-226	226
Crude Oil	242	217	279	208	686-226	217
Defoamers, Oil Base	242	212	279	208	686-226	220
Denatured Alcohol	242	217	210	231	686-226	217
Detergent , H ₂ O Solution	242	217	226	210	686-226	217
Diesel Oil	242	242	279	208	686-226	217
Diethyl Amine (DEA)	242	232	226	210	686-226	217
Diisobutylene	242	217	226	226	686-226	217
Diethylene Glycol	242	217	279	208	686-226	238
Diisopropyl Keytone	242	232	226	231	686-226	217

	Reciprocating		Rotary		Valve	
	Premium	Standard	Premium	Standard	Premium	Standard
Ethane	242	212	226	210	686-226	217
Ethanol	242	212	226	210	686-226	226
Etanol Amine	242	217	210	231	686-226	226
Ethers	242	217	226	210	686-226	226
Ethyl Benzene	217	232	226	231	686-226	217
Ethyl Chloride	242	217	226	210	686-226	217
Ethylene Chloride	217	232	226	210	686-226	217
Ethylene Glycol	242	217	279	208	686-226	238
Ethylene Trichloride	242	217	226	210	686-226	226
Fatty Acids	242	217	279	208	686-226	217
Fluorine	242	217	226	210	686-226	226
Fluosilicic Acid	242	217	226	214	686-226	217
Formaldehyde	242	217	226	231	686-226	226
Formic Acid <160° F	249	232	226	231	686-226	217
Fuel Oil, Acidic #6	242	217	226	210	686-226	217
Fuming Sulfuric Acid	249	232	226	231	686-226	232
Gasoline	242	217	279	208	686-226	217
Glycols	242	217	279	208	686-226	238
Green Sulphate Liquor	242	217	226	279	686-226	248
Hydraulic Oil (Pet. Base)	242	212	226	210	686-226	238
Hydrochloric Acid > 20% (Well Service)	212	217	226	210	686-226	217
Hydrofluoric Acid, >65%	217	232	226	210	686-226	217
Cold >65%	217	232	226	210	686-226	217
Hot <65%	217	232	229	226	686-226	217
Hot >65%	217	232	229	226	686-226	217
Hydrogen Peroxide 90%	242	217	210	208	686-226	217
H ₂ S, Dry, Cold	217	232	226	231	686-226	232
Dry, Hot	217	232	226	231	686-226	232
Wet, Cold	217	232	226	231	686-226	232
Wet, Hot	217	232	226	231	686-226	232
Iodine	242	217	226	210	686-226	217
Iron Sulphate	242	217	214	217	686-226	217
ISO Butane	242	217	279	208	686-226	217
Isobutyl Alcohol	242	217	279	208	686-226	217
Isopropyl Alcohol	242	217	279	208	686-226	217
Jet Fuel	242	217	226	210	686-226	217
Kerosene	242	217	279	208	686-226	238
Ketones	242	217	279	231	686-226	238
Latex Emulsion	242	212	226	214	686-226	238
Levulinic Acid, <200° F	217	232	226	231	686-226	238
Lime Slurry	242	217	226	214	686-226	217
Linoleic Acid	217	232	226	210	686-226	217
LPG	242	217	279	208	686-226	238
Magnesium Hydroxide	242	217	226	214	686-226	229
MEA (Mono Ethyl Amine)	242	217	226	210	686-226	217
Melamine Resin	249	232	226	210	686-226	229
Methanol	242	217	226	210	686-226	232
Methyl Ethyl Ketone (MEK)	242	217	210	231	686-226	217
Methyl Tertiary Butyl Ether (MTBE)	242	217	210	231	686-226	217
Milk	245	245	245	245	686-226	245
Naptha	242	217	279	208	686-226	238
Natural Gas	242	217	279	208	686-226	217
Nickel Chloride	242	217	214	208	686-226	217

Chemical Compatibility

	Reciprocating		Rotary		Valve	
	Premium	Standard	Premium	Standard	Premium	Standard
Nitric Acid, 3 Molar Solution	217	232	210	208	686-226	217
Concentrated	217	232	210	208	686-226	217
Red Fuming	249	232	226	210	686-226	232
Oleic Acid	242	217	210	208	686-226	238
Oxalic Acid	242	217	210	208	686-226	238
Palmitic Acid	242	217	210	231	686-226	226
Paperstock	242	212	226	279	686-226	226
Paraffin Wax, Molten	249	249	226	210	686-226	226
Phenol, 70%/30% H ₂ O	238	217	214	208	686-226	217
85%/15% H ₂ O	217	232	214	217	686-226	217
Phosphoric Acid,						
3 Molar Solution	249	232	229	210	686-226	217
Concentrated	249	232	226	210	686-226	217
Polyvinyl Acetate Emulsion	242	217	214	217	686-226	217
Polyvinyl Alcohol	242	217	210	231	686-226	217
Potassium Carbonate	242	212	214	208	686-226	238
Potassium Chloride	217	212	210	208	686-226	238
Potassium Cyanide	217	232	210	208	686-226	238
Potassium Hydroxide	242	217	210	208	686-226	238
Produced Water	242	212	279	220	686-226	217
Propane	242	217	226	210	686-226	217
Propionic Acid <150°F	242	217	226	210	686-226	217
Propylene	242	217	226	210	686-226	217
Propylene Glycol	242	217	210	220	686-226	220
Sea Water	242	217	279	220	217	201
Sewage	242	217	279	208	217	201
Soda Ash	242	217	214	217	686-226	217
Sodium Aluminate	242	217	226	214	686-0226	217
Sodium Bicarbonate	242	217	226	214	686-226	217
Sodium Bisulfite <200°F	242	217	279	231	686-226	217
Sodium Carbonate	242	217	214	208	686-226	238
Sodium Carbonate <200°F	242	217	226	214	686-226	226
Sodium Chloride	242	217	226	210	686-226	217
Sodium Chloride <200°F	242	217	214	217	686-226	217
Sodium Hydroxide,						
3 Molar Solution	242	217	687	229	686-0226	226
Sodium Hydrosulfite <200°F	249	232	226	217	686-226	217
Sodium Hypochlorite 20%	249	232	279	208	686-226	238
Sodium Sulfate	249	232	279	208	686-226	238
Sodium Sulfide	242	217	210	208	686-226	238
Sodium Thiosulfate	242	217	210	208	686-226	238
Sour Crude Oil	242	217	226	210	686-226	217
Sour Natural Gas	242	217	226	210	686-226	217
Starch, Unmodified	242	212	214	217	686-226	217
Starch, Modified	242	212	214	217	686-226	217
Steam, <350°F	249	249	226	210	686-226	684
>350°F	249	249	226	210	686-226	684
>900°F	NR	NR	686-230	229	686-230	685
Stearic Acid	210	232	210	208	686-226	238
Styrene	242	217	226	231	686-226	217
Sulfite Cooking Liquor	217	232	226	210	686-226	217
Ammonia Base	217	232	226	210	686-226	217
Calcium Base	217	232	226	210	686-226	217
Magnesium Base	217	232	226	210	686-226	217
Sodium Base	249	232	226	210	686-226	217

	Reciprocating		Rotary		Valve	
	Premium	Standard	Premium	Standard	Premium	Standard
Sulfur, Molten	249	249	229	226	686-226	226
Sulfur Dioxide, Wet	242	217	226	210	686-226	217
Dry	242	217	210	208	686-226	217
Sulfuric Acid, 3 Molar Solution	217	232	210	208	686-226	226
Concentrated	217	232	226	210	686-226	226
Sulfurous Acid	217	232	210	208	686-226	238
Tall Oil <450°F	242	212	226	210	686-226	226
Tetrachoroethane	242	217	226	214	686-226	217
Titanium Dioxide Slurry 10°F	242	212	226	214	686-226	217
<10°F	242	212	226	214	686-226	217
Toluene	242	217	226	210	686-226	217
Turpentine	242	217	279	208	686-226	238
Urea-Formaldehyde Design	249	249	226	210	686-226	229
Vinyl Acetate	217	232	226	231	686-226	229
Vinyl Chloride	217	232	226	279	686-226	231
Water	242	217	208	201	686-226	238
Water, Boiler	249	249	229	226	686-226	217
Brackish	242	212	229	208	686-226	217
Chlorinated	242	212	229	208	686-226	217
Condensate	242	212	229	201	686-226	217
Deionized	242	212	229	201	686-226	217
Demineralized	242	212	229	201	686-226	217
White Liquor	217	232	226	279	686-226	248
White Spirit	242	217	226	279	686-226	248
Xylene	242	217	226	231	686-226	217
Zinc Chloride	242	217	226	231	686-226	217

Chemical Compatibility

Comparative Chart

Style	American Braiding	Anchor	Carvera	Chemstar	Chesterton	Jim Clipper	John Crane	Durametallic	Garlock	Industrial Packing	Marlo	Slade	New England Braiding	Style
132						C48								132
155	921*	1320, 380*		528*	80*	CW-1*, CW-2*, C-68*	863*		31,18,740*	180*	812*		29*, 180*	155
161				1415*										161
162														162
163	1011F								Thermo-Sil	252			252	163
165		313, 317G*		1430, 1415*					8909*		259*			165
167									ThermoCeram					167
200	921	1320, 380		528	80	CW-1*, CW-2*, C-68*	863		31,18,740*	180	812		29, 180	200
201	345*	381	R4804	525T			867	FLX-TL	5413	185	889		185	201
204	921G	386		531	81	C-240	861, 866		90, 745*					204
206	345				329					186*	829*, 847, 827*		186*	206
208				1420*, 1418*										208
210	8000T		GF7700	165	1750	C-26	1065	TGF	5100	102	462		102	210
212	300	1335			1740*		K1730*		5200	150	188		150	212
213			K6600C	170	1740	C-17	K1730	KT	5200*	152			152	213
214			GF7600K	165K, 3165K*		C-27	C1064	TKF*	20/01*	104			104	214
215				170ST*				KF*						215
216														216
217			PT5600K											217
220		1334	B1204*	182	1774	C-67*	K1760		8904	162			162	220
222														222
225		1333*					K1761		8911					225
226	4000G	1332*	C8100*	90	370, 477-1	C-45, C-19	1650CF	CG	98	705	311		705	226
227														227
228	4000	1328*		50	1738	C-44	1655C		5000, 20/50	706	315		706	228
229	8000	1342	GR8888	160	1, 2	C-1	1625G*		G100*, G200	707	300		707	229
230									G700*	707T*	302		707-T*	230
231	344BIL	1123	T5504L	154S	328*	CX-1	C1050	TL66	5889	98S, 100	400		98S, 100	231
232	344	1121	T5504S	154	324*, 1724	VX-1	C1045		5888	98	420		98	232
233		313, 317G*		1430, 1415*					8909		259			233
234											250			234
235		313T												235
236	3000G	1337	N2207*	1398		C-51	1340	SG	8913					236
237		1338	N3404*			C-49*, C-52	1335		1925					237
238	3000T	1339		1152	412-W*	C-47	1330	FT*, ST	8922					238
240														240
241		1338K	P3500*	1152K					8921K		270*			241
242														242
243														243
244	8100BIL	1288T*, 128B*		3165	1760		1065			102*	472		102*	244
245		1165			1725		715	TE	5900	110	425		110	245
246	8100		GF4770*											246
248	320				1727						2000			248
249			C8104L*											249
251		1326*	B1204*						20/20AL					251
253														253
256	8000T		GF7700	165	1750	C-26	1065	TGF	5100	102	462		102	256
276	344	1168					C1030		5898	980X			980X	276
277														277
278			PT5504*											278
279									20/10					279
280		1343				C-2	1630G	DDG	G700	708	303		708	280
609							100M							609
610	8012	811					100	B	632	1411*			1411*	610
616	8010	851			555		110G	B10	631					616
631	8011	864			666		100AL	D10	633					631
632	8013					S-395	124	D	634	1511			1511	632
683		809GL												683
684		809GHP	C8300R	1414*	1800		287-1	HPW	127AFP					684
685	40001*, 30301NA*	814, 8140	GR8807*			V-50*			1298*		333*			685
686	5000				1400				1300				3300C*	686
687													3300G*	687
688														688
689														689
690														690
691				1600					1303					691

*FUNCTIONAL EQUIVALENT. CONSTRUCTION OR MATERIALS

Style 482



Application

UTEX Style 482 is suitable for steam, hydrocarbons, waste liquids, sewage, air, gases and other types of fluids.

Style 482 is recommended for all steel and some composite pipe flanges, fume ducts, lids, heat exchangers, as well as other types of housing and vessel flanges.

UTEX Style 482 Thermex™ Gasket Tape and Joint Sealant is manufactured using exfoliated graphite yarns that have been individually wrapped with a reinforcement of inconel® wire. These yarns are braided to provide a high-strength, high pressure, continuous length of gasketing. This gasketing is surrounded by an additional layer of knitted 300 series stainless steel to provide a dual armor jacketed gasket tape. This tape is also treated with a proprietary mixture of sealing lubricant and sacrificial corrosion inhibitor. This process provides a high-strength, sure-sealing gasket tape that resists blow-out in high-temperature flanges and resists galvanic corrosion with stainless flanges.

Performance

Pressure Limit - psi bar kg/cm ²	2500/172/175.8
Max Pressure@ Temp. - psi bar kg/cm ²	500 psi @500°/34.5@260°/34.15@260°
Temp - °F/°C - in steam	1200°F (649°C)
in air	850° (454°C)
pH Range	1 to 14
Max Speed - fpm (mps)	NA
Density lbs./ft ³ (g/cc)	109 lbs./cu.ft. (1.76 g/cm ³)

UTEX Style 482 is recommended in the following sizes:

FLANGE SIZE	STYLE 482 SIZE
Pipes up to 1" diameter	3/16" x 1/8"
1" to 2"	1/4" x 1/8"
2" to 4"	5/16" x 3/16"
4" to 8"	3/8" x 3/16"
8" to 16"	1/2" x 3/16"
16" to 24"	5/8" x 1/4"
24" to 48"	3/4" x 1/4"

Style 488



Application

UTEX Style 488 is essentially inert because of its 100% pure PTFE composition. It is chemically resistant to all chemicals except molten alkali metals and fluorine and some halogen compounds.

Style 488 is recommended for steel, glass-lined PVC and fiberglass pipe flanges, fume ducts, concrete lids, heat exchangers, fiberglass reinforced plastic vessels, pump housing flanges, compressor housing flanges, steam vessel flanges, manhole and handhole covers, ceramic joints, ventilation ducts, hydraulic and pneumatic systems, water supply systems, and turbine cases.

UTEX Style 488 gasket tape is manufactured from 100% virgin PTFE which is expanded in a proprietary method to obtain a uniform low-density multipurpose gasket. This gasket tape is soft and pliable, allowing it to easily conform to all surface irregularities and to compress to a thin sheet under pressure. It is supplied with an adhesive back for ease of installation.

Performance

Max Pressure - psi/bar/MPa/kg/cm ²	2,900/199/19.9/203
Temp Max - F°(C°)	-400°F to +590°F(-240° to +310°C)
pH Range	0 to 14
Max Speed - fpm (mps)	N/A
Density lbs./ft ³ (g/cc)	39 lbs./cu. ft. , (.63g/cm ³)

UTEX Style 488 is recommended in the following sizes:

FLANGE SIZE	STYLE 488 WIDTH
Pipes up to 1/2" diameter (12.7mm)	1/8" (3.7mm)
2/3" to 1/2"(16.9 to 38.1mm)	3/16" (4.76 mm)
2" to 4" (40.8 mm to 38.1mm)	1/4" (6.35 mm)
5" to 8" (127 to 203.2mm)	3/8" (9.52mm)
10" to 16" (254 to 406.4mm)	1/2" (12.7mm)
18" to 24" (457.2 to 609.6mm)	5/8" (15.87mm)
24" to 48" (609.6 to 1219.2mm)	3/4" (19.05mm)
48" & above (1219.2mm & above)	1" or 2" (24.5mm or 50.8 mm)

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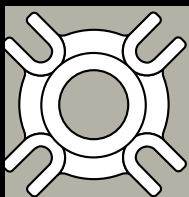


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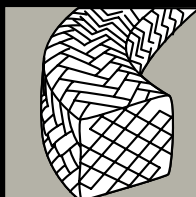
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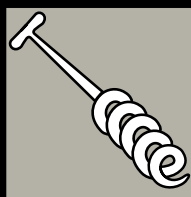
Mechanical Seals



**Compression
Packing**



Sheet Packing



Packing Tools



Molded Products



Industrial Chemicals