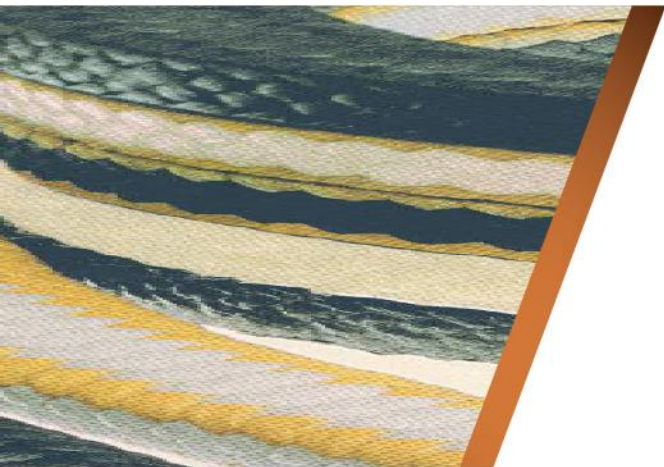




Innovations in Fluid Sealing.
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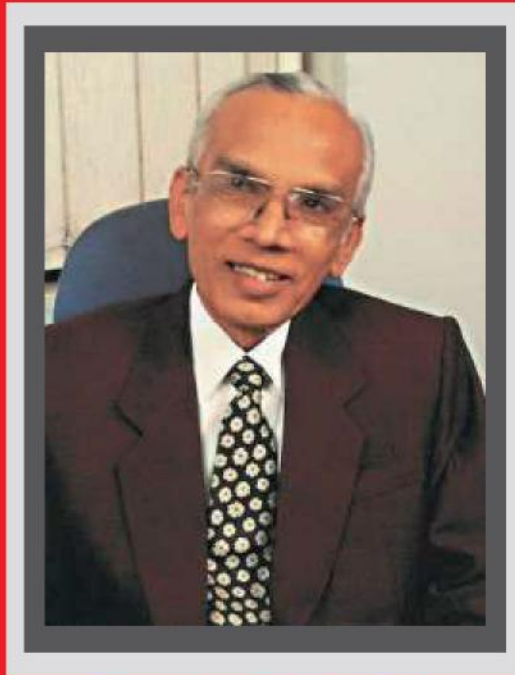
Engineered Sealing Materials



Compression
Packings



ISSUE 2 2017



R. M. DOSHI
Managing Director

Our philosophy towards 'Non-Asbestos fluid sealing products, led to the establishment of INMARCO Industries Private Ltd., in 1982. Since then, INMARCO has grown on this initiative and has dedicated itself towards the development of 'Hi-tech' industrial sealing products. All our products subscribe to the international standards & this is authenticated by several associations and clientele worldwide.

I take this opportunity to thank you for your interest in INMARCO, and we at INMARCO stand committed in serving you to your expectations.

SERVICES

Inmarco is pleased to offer 24/7 onsite technical and installation services. Inmarco is specialized in manufacture of valve sealing systems and is proud to announce that the recently developed expandable version of valve cart seal has outperformed the expected results. Certified by American Petroleum institute under standard ANSI/API standard 607 Fifth Edition – and API 589 Second Edition . We offer valve seal refurbishment and can undertake onsite jobs also.

- Construction
- Chemical Processing
- Food & Beverage
- Marine & Dry-docking
- Oil & Gas
- Pharmaceuticals
- Power Generation Desalination & Waster Water
- Paper & Pulp
- Steel & Aluminum

CERTIFICATIONS & APPROVALS



**Cartseal Fire Safe Certified
As Per Api 607**



**Packing Style 100fxi-special Conform
To Fugitive Emission Norms As Per Api 622**



**Packing Style 100fxi-special
Fire Safe Certified Asper Api 607**



Borogue



Takreer



Gasco



**Ruwais Fertilizer
Industries (Fertil)**



Adgas



Adco



**Petroleum Development
Of Oman**



Qatar Petroleum

INMARCO is one of the leading manufacturer of superior quality "Fluid Sealing Products" accepted and approved by variety of industries. Inmarco has attained market leadership in fluid sealing industry through its dedication to customer service and product development. Inmarco is committed for continuous improvement and has grown throughout three decades contributing to the environmental friendly Sealing Solutions. Non Asbestos culture has been driven and many a personnel to understand the asbestos menace in today's life. Inmarco's clientele are happy and satisfied of our untiring support for the sealing problems. Based on technological capabilities and perfection achieved over the years, Inmarco provides a wide range of products and services to the maintenance Industry. Our determinations to conduct business on a global scale is supported by and reflected in a fundamental philosophy utilization of technological expertise/ accumulation over three decades to access changes that occurred with passage of time while continuously evolving previously unexplored areas.

VALUES

With MARKET-oriented structures, new and stronger product offerings, technically skilled-employees and efficient environmental impact MANAGEMENT SYSTEM, armed with global rapport with similar manufacturing companies and access to the latest development in the industry and a resilient local spirit, we are dedicated to delivering the best results. It is our people who make the system come alive and turn these principles, policies, and procedures into reality.

MISSION & VISION

MISSION - Values - a driving force for Change...

A company rooted in unweaving values, INMARCO keeps ahead of change, reaping opportunities for growth. Striving to maintain leadership in industrial sealing products with wide manufacturing range. Providing a high quality product that combines performance with value for pricing, while establishing a successful relationship with the customers.

VISION - To be a market leader surpassing all hurdles of the industry, automate the process, systematized supplies and offer twenty-four-seven on service.

WARE HOUSING

Located in the heart of the world business hub at SAIF Zone Sharjah UAE. Equipped with State of European Machinery.

STOCKS - The Warehouse stocks varieties of exotic raw materials for ever demanding modernized applications.

STORES - The temperature control stores takes care of the wellbeing and enhances shelf life of raw materials and the finished products.

INSPECTION - We never choose cheap materials, every incoming shipment follows stringent inspections system and are stored at predefined locations.

PACKING AND DISPATCH - Latest packing methodology in use with the modern gadgets and simplified equipments to perform efficient packing.

TECHNOLOGIES & RESOURCES

INMARCO is driven by using non asbestos materials and is committed to provide superior and quality products that passed international standards and are environmental friendly. Technologies has helped develop more advance processes and has produced unwanted by-products causing pollution and deplete natural resources to the detriment of the earth and its environment that causes threat not only in the environment but also to mankind. With its philosophy in non-asbestos fluid sealing products INMARCO is able to do its part in conserving the environment.

CREDENTIALS



INMARCO GUIDELINES FOR STUFFING BOX DIMENSIONS

Rotating Shafts: Dimension A shown on this drawing is the total depth of packing including lantern gland. A standard depth of $7W$ or 7 times the packing space has been established when a lantern gland is used. A depth dimension is used where lantern gland is omitted. (Refer Fig.1).

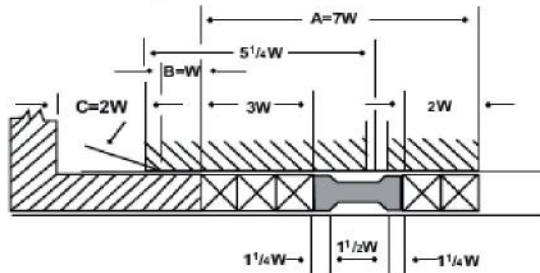


Fig.1

Lantern Gland Position: It should be noted that the illustration shows the dimension of $2W$ on the pressure side of the lantern ring and $3W$ on the gland end of the stuffing box. While this is a common practice, it should be noted that $3W$ on the pressure side and $2W$ on the gland end of the stuffing box can also be used. For proper set up consult INMARCO sales personnel.

Gland take-up: This gland take-up is limited to 40% of the packing. The reason for this limitation is to include those packings which will have the largest volume loss. Additional gland take-up is not recommended, in order to prevent galling of the shafts. This means that complete take-up will take place before equipment is damaged; therefore, packing replacement would be indicated. This is based on the theory that most damage is done during the late running of packing life.

Lantern Ring: (Also known as Seal cage) – The suggested depth or length of lantern ring is set at $2W$.

Chamfer Depth: A minimum of $1/8''$ (3mm) is recommended. It is felt that less than $1/8''$ (3mm) will not contribute to easy entry of packing.

Chamfer Angle: Wedging or guiding action is between 15 and 30 degrees.

Gland Entrance: It is recommended that a minimum of $1W$ be maintained to minimize the probability of gland cocking and allow for general variations of soft packing, molded and other types.

Size Limitation: In designing equipment with shaft below $5/8''$ (16mm) diameter, consult INMARCO regarding packing space required (W).

Clearance: Clearances should be as per acceptable machining practices, taking into consideration thermal expansion and contraction of metals.

Finishes: Finishes of rotating elements in contact with packing should be best economically possible, bearing in mind that the finer or smoother the finish, the longer the packing life expectancy.

Pressure: These standard dimensions are intended for the use up to approximately 1500psi (102bar).

Performance: Performance at various high speeds is a function of the material used rather than the stuffing box dimensions and recommendations for speed limits are not considered here. Consideration of high – speed problems should be referred to INMARCO's customer service department.

1. Install one ring at a time: make sure it is clean and has not picked up any dirt in handling. Seat rings firmly (except PTFE filament and graphite yarn packing, which should be snugged up very gently, then tightened gradually after the pump is operating). Joints of successive rings should be staggered and kept at least 90°C apart. Each individual ring should be firmly seated with a tamping tool.

2. After the last ring is installed, take-up gland bolts should be finger tight or very slightly snugged up. Do not jam the packing into place by excessive gland loading. Start the pump and tighten take up gland bolts until leakage is reduced to a tolerable minimum. Make sure gland bolts are taken up evenly. Stopping leakage entirely at this point will cause the packing to burn, harden and damage equipment.

3. Allow packing to leak freely starting up a newly packed pump. Excessive leakage during the first hour of operation will result in a better packing job over a longer period of time. Take up gradually on the gland as the packing seats, until leakage is reduced to a tolerable level, preferably 8-10 drops per minute, per inch of shaft diameter. Some packing can run virtually leak free. Contact INMARCO for specific recommendations.

4. If specified by INMARCO, provide means of lubricating the shaft and packing through the lantern ring by supplying water, oil, grease or liquid handled in the pump fittings for this purpose are standard on many pumps. Flush pressure should be minimum 15psi (-1bar) above stuffing box pressure.

5. If the stuffing box has a lantern ring (see fig. 2), make sure that the lantern ring is installed properly so it will remain in place as gland pressure is applied.

6. Replace packing when leakage cannot be controlled by further take-up on the gland. Do not add more packing rings.

7. On both centrifugal and reciprocating pumps, about 70% of wear is on the outer two packings nearest the gland. However, each additional ring does throttle some fluid pressure. On most pumps, there must be enough rings so if one fails, another does the sealing, and the pump need not be shutdown.

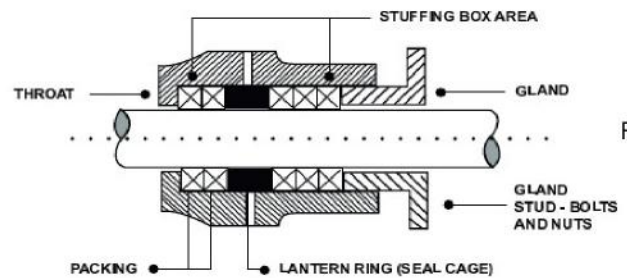


Fig.2

PACKING VALVES CORRECTLY

As with pump packing, the first step in getting the most out of valve packing is correct installation.

1. Carefully perform all operations listed under pump packing steps 1-5. Rings used on valves are cut with a butt or skive joint (illustrated in fig. 2). Be sure the first ring is cut carefully and tested on the stem.

2. Slide gland forward until it contacts the packing. Tighten the gland bolts to the point where heavy resistance to wrenching is felt. During this time, turn valve stem back and forth to determine ease of turning. Do not torque down to the point where the stem won't turn.

3. Inspect the valve after it has been on line. If leakage is observed, adjust the gland in accordance with safe maintenance procedures.

4. Live loading of valve stem packing gland: in its simplest form, live loading is the application of a spring load to the gland follower of a packed valve. A Belleville spring between the gland follower assists fastening studs and nuts to provide an effective way to establish and maintain a controlled amount of stress in the packing set. The amount of the packing stress in a live loaded system can be controlled by the size of the Belleville spring used and the extent to which it is compressed or deflected.

PACKING INSTALLATION GUIDELINES

In a live loaded packing system, the follower will continue to push against the packing even when packing volume is lost (by friction, extrusion, consolidation, etc.). The spring load will be slightly reduced as the springs expand, but this reduction in load will be much less than the load that is lost if the packing set was not live loaded. This remaining load allows the packing stress to remain at a level above the minimum sealing stress and may enable the packing to remain leak free (see fig. 3).

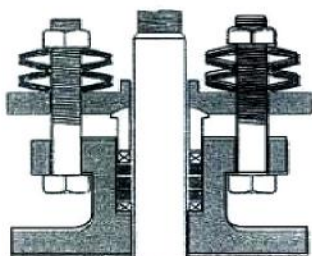


Fig.3

SELECTION OF CORRECT PACKING

To determine the packing to be used the following 6 parameters of equipment should be available, commonly known as "STAMPS".

- S** = Size / Cross section
- T** = Temperature of media (°c)
- A** = Application (type of pump/valve/equipment)
- M** = Media
- P** = Pressure (bar)
- S** = Shaft speed in RPM

PACKING SIZE SELECTION CHART

SHAFT SIZE	
16mm to and including 29mm	8mm
29mm to and including 48mm	10mm
48mm to and including 75mm	13mm
75mm to and including 120mm	16mm
120mm to and including 300mm	19mm

Table 1 w = width of packing

Selection of correct packing material according to pH value

PH Factor Determination of Correct Packing Material	
Range:	
0-1	Ptfe Fiber, Carbonaceous Fiber, Flexible Graphite
2-3	Ptfe Fiber, Carbonaceous Fiber, Flexible Graphite, Aramid Ptfe, Dispersed Acrylic, Ptfe Dispersed, Glass
4-5	Ptfe Fiber, Carbonaceous Fiber, Flexible Graphite, Lube & Graphite, Aramid Ptfe Dispersed, Lube & Graphite Acrylic Ptfe Dispersed, Lube & Graphite Glass
6-7	Ptfe Fiber, Carbonaceous Fiber, Flexible Graphite, Lube & Graphite, Aramid Ptfe Dispersed, Lube & Graphite Acrylic Ptfe Dispersed, Lube & Graphite Glass
8-9	Ptfe Fiber, Carbonaceous Fiber, Flexible Graphite, Lube & Graphite, Aramid Ptfe Dispersed, Lube & Graphite Acrylic Ptfe Dispersed, Lube & Graphite Glass
10-11	Ptfe Fiber, Carbonaceous Fiber, Flexible Graphite, Aramid Ptfe, Dispersed Acrylic Ptfe Dispersed, Glass Ptfe Dispersed
12-13	Ptfe Fiber, Carbonaceous Fiber, Flexible Graphite
14	Ptfe Fiber, Carbonaceous Fiber, Flexible Graphite

Table 2 w = width of packing

pH factor: The pH factor is a numerical measure of the intensity or severity of an acid or alkali. In table 2, pH values are given for a wide range of acid and alkali services. Distilled water is neutral at 7 (see table 3). The above table should be considered as a guide or starting point for the selection of the proper packing.

pH Chart		
14		
13	}	Highly Alkaline
12		
11		
10	}	Mild Alkaline
9		
8		
7	Neutral Distilled Water	
6	}	Mild Acidic
5		
4		
3	}	Acidic
2		
1		
0	Highly Acidic	

Table 3 w = width of packing

INSTALLATION OF INMARCO PUMP PACKINGS

The importance of packing the pump correctly cannot be overemphasized. Many failures are due to incorrect installation of packings. The following steps have been devised to ensure effective installation of packing on pumps.

1. Remove all the old packing from the stuffing box. Clean box and shaft thoroughly and examine shaft or sleeve for wearing and scoring. Replace shaft or sleeve if wear is excessive.

2. Use the correct cross-section of packing or die-formed rings. To determine the correct packing size, measure the diameter of the shaft (inside the stuffing box area if possible) and then measure the diameter of the stuffing box (to give the OD of the ring). Subtract the ID measurement from the OD measurement and divide by two. The result is required size (w).

3. When using coil or spiral packing, always cut the packing into separate rings. Never wind a coil of packing into a stuffing box. Rings can be with butt (square), skive (or diagonal) joints, depending on the method used for cutting. The following illustration shows these methods of preparing bulk packing. The best way is to cut them on a mandrel of same diameter as that of a shaft. If there is no shaft wear, rings can be cut on the shaft outside the stuffing box.

4. Hold the packing tightly on the mandrel, but do not stretch. Cut the ring and insert it into the stuffing box, making sure it fits the packing space properly. Each additional ring can be cut in the same manner.

5. When cutting diagonal joints, use a meter board so that each successive ring can be cut at the correct angle. It is necessary that the rings be cut to the correct size. Otherwise, service life is reduced. This is where die-cut rings are advantage, as they give the exact size.

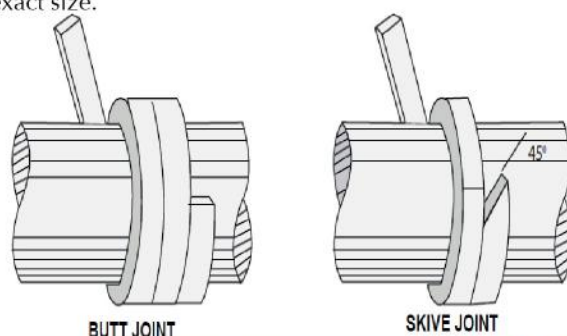


Fig.4

Product Type

Description

Operational Parameters



INM033

INMARCO STYLE 105

STYLE 105 is a dense braided combination gland packing having aramid yarn corners with PTFE yarn faces with highly resilient and high tensile core of aramid fibre. The aramid yarn is lubricated with highly anti-frictional fluoropolymer dispersions and break-in lubricant, while the PTFE faces are lubricated with high temperature resisting inert lubricant.

STYLE 105 offers excellent strength coupled with dimensional stability in service. Strong aramid fibre avoids corner failures in reciprocating plunger pump. The PTFE fibre ensures low friction, cool shaft runs eliminating wear and tear to plunger & valve stems. The strong aramid fiber core provides extremely high pressure resistance.

Advantages:

- *Dense construction & excellent sealability.
- *High pressure & compatibility.
- *Extremely durable packing for ammonia and carbamate solution.
- *Can be used as lip seals.
- *Wide chemical & abrasion resistance & high penetration.

PROPERTIES			
pH			1-13
TEMPERATURE (°C)			-200 to +280
PRESSURE (BAR)	150	500	500
VELOCITY (m/s)	25	20	---
SIZE	4mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Centrifugal reciprocating & plunger pumps, Valves, Agitators, Extruders, Mixers, Reactors etc.

Service Media:

Ammonia, Urea & Carbamate condensate in fertilizer industry, Amide, Fine slurries, Detergents, Pigments, Dyestuffs, Paints, Emulsions, Synthetic molten material, Tri sodium phosphate, Hydrazine, Sodium hexameta phosphate, Water, etc.



INM034

INMARCO STYLE 105SUT

STYLE 105SUT is a dense braided combination gland packing having aramid yarn corners with PTFE yarn faces in highly resilient but high tensile core of extruded and expanded PTFE cord. The aramid yarn is lubricated with highly anti-frictional fluoropolymer dispersions & break-in lubricant, while the PTFE faces are lubricated with high temperature resisting inert lubricant.

STYLE 105SUT excellent strength coupled with dimensional stability in service. Strong aramid fibre avoids corner failures in reciprocating plunger pump. The PTFE fibre ensures low friction, cool shaft runs eliminating wear and tear to plunger & valve stems. The strong PTFE cord core provides extremely high pressure resistance.

Advantages:

- *Dense construction & excellent sealability.
- *High pressure compatibility.
- *Extremely durable packing for ammonia and carbamate solution.
- *Can be used as lip seals.
- *Wide chemical & abrasion resistance & high penetration.

PROPERTIES			
pH			1-13
TEMPERATURE (°C)			-200 to +280
PRESSURE (BAR)	150	500	500
VELOCITY (m/s)	25	20	---
SIZE	5mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Centrifugal reciprocating & plunger pumps, Valves, Agitators, Extruders, Mixers, Reactors etc.

Service Media:

Ammonia, Urea & Carbamate condensate in fertilizer industry, Amide, Fine slurries, Detergents, Pigments, Dyestuffs, Paints, Emulsions, Synthetic molten material, Tri sodium phosphate, Hydrazine, Sodium hexameta phosphate, Water, etc.



INM035

INMARCO STYLE 107

STYLE 107 is a special combination packing manufactured with a tough but smooth aramid fibre yarn at the corners and PTFE graphite solid yarn at the faces having core of aramid yarn. The aramid yarn is impregnated with highly anti-frictional fluoropolymer dispersion and special break-in-lubricant.

STYLE 107 is resistant to almost all known chemicals and also resistant to abrasion. This packing has excellent heat dissipation properties and cool run due to integral graphite on the faces. The aramid yarn at the corners avoids corner failures in reciprocating plunger pump.

STYLE 107 is compact and dimensionally stable packing which ensures longer leakage free performance.

Advantages:

- *Dense construction & excellent sealability.
- *High pressure compatibility.
- *Extremely durable packing for ammonia and carbamate solution.
- *Can be used as lip seals.
- *Wide chemical resistance, abrasion resistance & high penetration.

PROPERTIES			
pH			1-13
TEMPERATURE (°C)			-240 to +280
PRESSURE (BAR)	200	500	500
VELOCITY (m/s)	25	20	---
SIZE	6mm ² to 50mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Reactors, Autoclaves, Mixers, Agitators, etc.

Service Media:

Fine chemical slurry, Liquid ammonia & Ammonium compounds, Carbamate solutions, Fuel & lube oil, Hydrazine, Emulsions, Tri sodium phosphates, Sodium Hexamate phosphate, black & green liquor, paper pulp, Pulp diluted with water, Emulsion water etc.

Product Type

Description

Operational Parameters

STYLE 107PT is a special combination packing manufactured with a tough but smooth aramid fibre yarn at the corners and PTFE graphite solid yarn at the faces having core of high density extruded and expanded PTFE cord. The aramid yarn is impregnated with highly antifrictional fluoropolymer dispersion and special break-in-lubricant.

STYLE 107PT is resistant to almost all known chemicals and also resistant to abrasion. This packing has excellent heat dissipation properties and cool run due to integral graphite on the faces. The aramid yarn at the corners prevents corner failures in reciprocating plunger pump. The strong extruded and expanded PTFE core provides extremely high pressure resistance and resiliency.

STYLE 107PT is compact and dimensionally stable packing which ensures longer leakage free performance.

Advantages:

- * Dense construction & excellent sealability.
- *High pressure compatibility.
- *Extremely durable packing for ammonia and carbamate solution.
- *Can be used as lip seals.
- *Wide chemical & abrasion resistance & high penetration.



INM036

INMARCO STYLE 107PT

PROPERTIES			
pH	1-13		
TEMPERATURE (°C)	-240 to +280		
PRESSURE (BAR)	200	500	500
VELOCITY (m/s)	25	20	---
SIZE	6mm ² to 50mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Reactors, Autoclaves, Mixers, Agitators, etc.

Service Media:

Fine chemical slurry, Liquid ammonia & ammonium compounds, Carbamate solutions, Fuel & Lube oil, Hydrazine, Emulsions, Tri sodium phosphates, Sodium phosphates, Sodium hexameta phosphate, Slurry, Black & Green liquor, Paper pulp, Pulp diluted with water, Water contamination, etc.

STYLE 504 is a universal duplex braided packing manufactured from expanded PTFE intimately bonded with special quality graphite in a single molecular structure incorporating break-in-lubricant in a special process. This is a dense packing having high degree of resiliency and chemical properties. Presence of graphite enables the packing dissipate heat evenly leading to longer life of the packing.

STYLE 504 is highly antifrictional and hence able to safeguard shaft/sleeves from wear/ erosion. This packing is having excellent resistance to almost all known chemicals and is compatible to wide range of industrial media and is only affected by strong oxidizers, molten alkali metal & fluorine compounds.

STYLE 504 is dimensionally stable and requires minimum gland loading to effect perfect seal. This is also compatible to very high peripheral speed with extremely low leakage rate.



INM037

INMARCO STYLE 504

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-200 to +300		
PRESSURE (BAR)	100	200	350
VELOCITY (m/s)	25	10	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Centrifugal & Reciprocating pumps, Valves, Large diameter shafts, Reactor vessels, Agitators, Mixers, Autoclaves, etc.

Service Media:

Acids & Alkalis of any concentration, Solvents, Hydrocarbons, Phosphoric acids, Raw water, DM water, Condensate, Cooling water, etc.

STYLE 507 is a pure PTFE fiber yarn duplex braided packing having incorporation of special proprietary inlube break-in lubricant. The break-in-lubricant ensures extra lubrication during the complete operational life. The yarn of the packing during process undergoes a special chemical treatment.

STYLE 507 is non toxic and inert in nature, hence ensures safety and purity of the fluid media. It is dimensionally stable and ensures trouble free operation reducing maintenance cost.

STYLE 507 is suitable for dynamic as well as static application. As it is dimensionally stable it ensures leak free operational life for a longer period.



INM038

INMARCO STYLE 507

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-240 to +260		
PRESSURE (BAR)	100	150	200
VELOCITY (m/s)	10	15	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Mixers, Reactors, Agitators, Dryers, Air compressors, etc.

Service Media:

Acids & Alkalis of any concentration, Solvents, Organic / Inorganic chemicals, Dyestuffs, Paints, Pigments & Viscous fluids, Wax, Synthetic resins, etc.

Product Type

Description

Operational Parameters



INM039
INMARCO STYLE 508

STYLE 508 is a Pure PTFE Fiber yarn duplex braided packing having incorporation of special proprietary inlube break-in lubricant & also incorporating PTFE suspensoid. The break-in-lubricant ensures extra lubrication during the complete operational life and dispersion acts as blocking agent as well as antifrictional additives.

STYLE 508 is non toxic and inert in nature, hence ensures safety and purity of the fluid media. It is dimensionally stable and ensures trouble free operation reducing maintenance cost.

STYLE 508 is suitable for dynamic as well as static application. As it dimensionally stable it ensures leakage free operational life for a longer period.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-240 to +290		
PRESSURE (BAR)	150	350	300
VELOCITY (m/s)	28	24	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Mixers, Reactors, Agitators, Dryers, Air compressors, etc.

Service Media:

Acids & Alkalis of any concentration, Solvents, Organic / Inorganic chemicals, Dyestuffs, Paints, Pigments & Viscous fluids, Wax, Synthetic resins, etc.



INM040
INMARCO STYLE 509

STYLE 509 is a dry Pure PTFE Fiber yarn interlocked braided packing. This packing is manufactured without any lubricants or additives of any kind. The packing is most suitable for food & pharma industries and also for oxygen, nitrogen and hydrogen services.

STYLE 509 is a self lubricating packing with very low coefficient of friction, hence ensures easy operation. This packing needs very little gland adjustment after initial installation.

STYLE 509 is highly antifrictional and as such safeguards the parent equipments from erosion during operation.

STYLE 509 is inert to almost all known chemicals except molten alkali metals and aquarezia, hence volume loss due to chemical attack is negligible which leads to longer leakage free operational life.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-240 to +260		
PRESSURE (BAR)	100	150	300
VELOCITY (m/s)	15	20	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Mixers, Reactors, Agitators, Extruders, etc.

Service Media:

Acids & Alkalis of any concentration, Solvents, Organic / Inorganic Chemicals, Oxygen, Nitrogen & Hydrogen services, Salt slurry, Food & Pharma services, etc.



INM041
INMARCO STYLE 104

STYLE 104 is pure PTFE fiber yarns inter braided packing having incorporation of special proprietary inlube break-in-lubricant and also incorporating PTFE inflon dispersion. The break-in-lubricant ensures extra lubrication during the complete operational life and dispersion acts as blocking agent as well as anti-frictional additives.

STYLE 104 is non toxic and inert in nature, hence ensures safety and purity of the fluid media. It is dimensionally stable and ensures trouble free operation reducing maintenance cost.

STYLE 104 is suitable for dynamic as well as static application. As it is dimensionally stable it ensures leakage free operational life for a longer period.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-240 to +280		
PRESSURE (BAR)	100	150	---
VELOCITY (m/s)	10	10	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Liquid oxygen, Pumps and Valves, Air compressors, Acids, Alkalis, Solvents, Organic/inorganic chemicals equipment, Glands, Hydrogen services, Mixers, Powder Dryers.

Service Media:

Acids and alkalis of any concentration, Solvents, Organic/Inorganic chemicals, Petrochemicals, Dyestuffs, Paints, Synthetic resins, etc.

Product Type

Description

Operational Parameters



INM042
INMARCO STYLE 104S

STYLE 104S is a dry pure PTFE fiber yarns interlocked braided packing. This packing is manufactured without any lubricants or additives of any kind. The packing is most suitable for food and pharma industries and also for oxygen and hydrogen services.

STYLE 104S is a self lubricating packing with very low coefficient of friction, hence ensures easy operation. This packing needs very little gland adjustment after initial installation.

STYLE 104S is anti-frictional and as such safeguards the parent equipments from erosion during operation.

STYLE 104S is inert to almost all known chemicals except molten alkali metals and aquarezia, hence volume loss due to chemical attack is almost nil which leads to longer leakage free operational life.

PROPERTIES			
pH	1-14		
TEMPERATURE (°C)	-240 to +260		
PRESSURE (BAR)	25	100	200
VELOCITY (m/s)	10	5	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Mixers, Reactors, Agitators, etc.

Service Media:

Acids & Alkalis of any concentration, Solvents, Organic / Inorganic Chemicals, Oxygen, Nitrogen & Hydrogen services, Salt slurry, Food & Pharma services, etc.



INM043
INMARCO STYLE 104E

STYLE 104E is an expanded pure PTFE fiber yarn duplex braided packing having incorporation of special proprietary inlube break-in-lubricant. The break-in-lubricant ensures extra lubrication during the complete operational life. The yarn of the packing during process undergoes a special chemical treatment.

STYLE 104E is non toxic and inert in nature, hence ensures safety and purity of the fluid media. It is dimensionally stable & ensures trouble free operation reducing maintenance cost.

STYLE 104E is suitable for dynamic as well as static application. As it is dimensionally stable it ensures leakage free operational life for a longer period.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-240 to +260		
PRESSURE (BAR)	25	100	200
VELOCITY (m/s)	8	4	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Mixers, Reactors, Agitators, Dryers, Air compressors etc.

Service Media:

Acids and alkalis of any concentration, Solvents, Organic / Inorganic chemicals, Dyestuffs, Paints, Pigments & Viscous Fluids, Wax, Synthetic resins, etc.



INM044
INMARCO STYLE 106SSW

STYLE 106SSW an excellent abrasion/brine resistant packing manufactured from copolymer fiber yarn thoroughly impregnated with PTFE based inlfon dispersion which is further impregnated with break-in-lubricant and a surface run-in-lubricant.

STYLE 106SSW this packing also is very good resistant to corrosive/acidic reaction. The run-in-lubricant ensures improvement of antifrictional property of the packing leading to avoid erosion of sleeves/shaft.

Advantages:

- *The basic co-polymer yarn is highly abrasion resistant so also corrosion.
- *Incorporation of break-in-lubricant and run-in-lubricant ensures extremely low friction.
- *The tough co-polymer yarn construction enables dimensional stability and resistance to deformation on arduous duties.
- *Excellent performance against turbid saline water.

PROPERTIES	VALUES
pH	1-13
TEMPERATURE (°C)	-200 to +300
PRESSURE (BAR)	500
VELOCITY (m/s)	25
SIZE	6mm ² to 50mm ² *

*Other sizes possible on request

Typical Application:

Pumps, Valves, Mixers, Reactors, Clinker Grinder, Autoclaves, Door seals, Agitators, Blenders, Extruders, Rotary vacuum dryer, etc.

Service Media:

Ash slurry, Fly ash water, Chemical slurries, Wood pulp, Coolant, Coal dust, Dry powdered chemicals, Turbid water, Surface water, Saline sea water, Brines, Crude oil, Fuel oil, etc.

Product Type

Description

Operational Parameters



INM045

INMARCO STYLE 607

STYLE 607 is an excellent abrasion/corrosion resistant packing manufactured from co polymer technora fibre yarn thoroughly impregnated with PTFE dispersion and lubricated with silicone oil.

STYLE 607 is highly anti-frictional and hence, does not damage sleeves/shaft. This is extremely high tensile packing and the tensile strength of this packing is eight times stronger than steel. This is extremely good resistance to fatigue.

STYLE 607 is highly resistant to acids, alkalis, organic solvents and also is highly insulating and fire retardant.

Advantages:

*The basic co-polymer technora yarn is highly resistant to abrasion and corrosion.

*This packing is anti-frictional and incorporation of PTFE dispersion & silicone oil makes it extremely low coefficient of friction.

*This is highly dimensionally stable packing & resistance to deformation on arduous duties.

*As the packing is highly resilient and anti-frictional it does not erode the sleeve.

PROPERTIES	VALUES
pH	1-13
TEMPERATURE (°C)	-200 to +300
PRESSURE (BAR)	300
VELOCITY (m/s)	25
SIZE	6mm ² to 50mm ² *

*Other sizes possible on request

Typical Application:

Pumps, Valves, Agitators, Mixers, Reactors, Blenders, Extruders, Rotary vacuum dryers etc.

Service Media:

Chemical slurry, Ash slurry, Acids, Alkalis, Organic solvents, Crude oil, Fuel Oil, Paper pulp, Turbid water, etc.



INM046

INMARCO STYLE 175

STYLE REBACKLON 175 is a combination of duplex braided packing with innalon yarn and expanded PTFE intimately bonded with special quality graphite yarn incorporating break-in-lubricant in a special process. This is a dense packing having high degree of resiliency and chemical properties.

STYLE REBACKLON 175 the presence of graphite enables the packing dissipate heat accurately leading to longer life of the packing. The break-in-lubricant ensures extra lubrication during the complete operational life.

STYLE REBACKLON 175 is highly anti-frictional and hence able to safeguard shaft/sleeves from wear/erosion. This packing is having excellent resistance to almost all known chemicals and is compatible to wide range of industrial media and is only affected by strong oxidizers, molten alkali metal, fluorine compounds, concentrated fuming acids.

STYLE REBACKLON 175 is suitable for dynamic as well as static application. As it is dimensionally stable it ensures leakage free operational life for a longer period.

PROPERTIES	↻	↔	⌘
pH			3-14
TEMPERATURE (°C)			-200 to 280
PRESSURE (BAR)	150	200	350
VELOCITY (m/s)	25	35	*
SIZE	5mm ² to 50mm ²		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Mixers, Reactors, etc.

Service Media:

Raw water, Surface water, DM water, Industrial water, Hydrocarbon, Paints, Caustic, Synthetic Resins, Emulsions and general purpose applications.



INM047

INMARCO STYLE 606

STYLE ALDEHYDE 606 is an excellent abrasion/corrosion resistant packing manufactured from aldehyde fibre yarn thoroughly impregnated with PTFE based inflon dispersion which is further impregnated with break-in-lubricant and a surface run-in-lubricant having core of red innalon yarn.

STYLE ALDEHYDE 606 is a packing which has a very good resistant to corrosive/acidic reaction. The run-in-lubricant ensures improvement of anti-frictional property of the packing leading to avoid erosion of sleeves/shaft.

Advantages:

*The basic aldehyde yarn is highly abrasion resistant so also corrosion.

*Incorporation of break-in-lubricant & run-in-lubricant ensure extremely low friction.

*The tough aldehyde yarn construction enables dimensional stability and resistance to deformation on arduous duties.

*The core of red innalon yarn makes the packing highly resilient.

*Excellent performance against turbid saline water.

PROPERTIES	VALUES
pH	1-13
TEMPERATURE (°C)	-200 to +300
PRESSURE (BAR)	300
VELOCITY (m/s)	25
SIZE	6mm ² to 50mm ² *

*Other sizes possible on request

Typical Application:

Pumps, Valves, Agitators, Mixers, Reactors, Clinker grinder, Autoclave, Door seals, Blenders, Extruders, Rotary vacuum dryers etc.

Service Media:

Sea water, Saline water, Ash slurry, Iron slurry, Fly ash water, Chemical slurries, Paper pulp, Pulp with water, Coolant, Coal dust, Dry powdered chemicals, Turbid water, Surface water, Brines, Crude oil, Fuel oil, etc.

Product Type

Description

Operational Parameters



INM048

INMARCO STYLE 400

STYLE DECILON 400 is a combination cross braided packing with fluoropolymer based blue inmalon yarn and pure PTFE yarn thoroughly impregnated with PTFE based infilon dispersion further incorporating a special proprietary inlube break-in-lubricant in a special process.

STYLE DECILON 400 is a dense packing having high degree of resiliency and chemical properties. The break-in-lubricant ensures extra lubrication during the complete operational life.

STYLE DECILON 400 is highly anti-frictional and corrosion resistant and hence able to safeguard shaft/sleeves from wear/erosion. The yarn construction enables dimensional stability and resistance to deformation on arduous duties. Also ensures leakage free operational life for a longer period.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-200 to 280		
PRESSURE (BAR)	150	200	300
VELOCITY (m/s)	15	25	---
SIZE	5mm ² to 50mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Mixers, Reactors, Dyers, Agitators, etc.

Service Media:

Organic/Inorganic chemicals, Acids and Alkalis, Dyestuffs, Paints, Synthetic resins, Emulsions, etc.



INM049

INMARCO STYLE 200

STYLE BLUELON 200 is a duplex braided packing manufactured from fluoropolymer based blue inmalon yarn. It is further impregnated with PTFE dispersion having a core of high density expanded PTFE extruded cord. PTFE dispersions ensure extra lubrication during the complete operational life.

STYLE BLUELON 200 is soft yarn packing hence suitable for dynamic application. The packing is dimensionally stable and performs extremely well in solvent application.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-200 to 300		
PRESSURE (BAR)	100	150	250
VELOCITY (m/s)	15	20	---
SIZE	3mm ² to 50mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Reactors, Mixers, Blender, etc.

Service Media:

Solvents, Dyestuffs, Organic/Inorganic Acids & Chemicals, Synthetic resins, Emulsions, etc.



INM050

INMARCO STYLE 499

STYLE 499 is a special new generations synthetic packing impregnated with fluoropolymer dispersion. Unlike the first generation of synthetic packing.

STYLE 499 does not suffer from limitation that prevents general service use. It does not cause shaft scoring like many other synthetic packing does.

STYLE 499 lacks the stiffness of conventional synthetics and thus readily conforms to stuffing box configuration, can be installed easily and requires minimal gland torque and very less adjustments. This packing has extremely good resistance to extrusions.

PROPERTIES			
pH	1-13		
TEMPERATURE (°C)	-150 to +260		
PRESSURE (BAR)	150	250	500
VELOCITY (m/s)	15	20	---
SIZE	5mm ² to 50mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Reactors, Agitators, Mixers, etc.

Service Media:

Abrasive slurries, Chemical slurries, Wood pulp, Bagasse pulp, Bamboo pulp, etc.

Product Type

Description

Operational Parameters

STYLE 411 is a dense braided combination gland packing having novoloid yarn corners with PTFE yarn faces with highly resilient but high tensile core of extruded and expanded PTFE cord. The novoloid yarn is lubricated with highly anti-frictional fluoropolymer dispersion & break-in-lubricant, while the PTFE faces are in totally dry condition without any additives.

STYLE 411 offers excellent strength coupled with dimensional stability in service. Strong novoloid fiber avoids corner failures in pumps.

STYLE 411 the PTFE fibers ensures low friction, cool shaft runs eliminating wear & tear to sleeve and valve stems. The strong PTFE cord core provides extremely high pressure resistance and resiliency.

Advantages:

- *Dense construction & excellent sealability.
- *High pressure & compatibility.
- *Extremely durable packing for dry powdered chemicals.
- *Can be used as lip seals.
- *Wide chemical & abrasion resistance and high penetration.
- *No erosion on metallic sleeves.



INM051

INMARCO STYLE 411

PROPERTIES			
pH	1-13		
TEMPERATURE (°C)	-200 to +280		
PRESSURE (BAR)	150	500	500
VELOCITY (m/s)	25	20	---
SIZE	5mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Centrifugal, Reciprocating & Plunger Pump, Valves, Agitators, Extruders, Mixers, Reactors, etc.

Service Media:

Amide, Fine slurries, Dtergents, Pigments, Dyestuffs, Paints, Emulsions, Synthetic molten materials, Fine & cores, Powdered chemicals, etc.

STYLE 103 is manufactured from a premium graphite PTFE yarn impregnated with proprietary inblend dispersion in high density braiding.

STYLE 103 is premium graphite PTFE yarns ensure excellent self lubrication to control frictional heat and to eliminate shaft galling, so common in other PTFE graphite yarns. Moreover, this results in overall inert packing.

STYLE 103 graphite in inblend ensures excellent heat dissipation without hardening thus limiting shaft wear.



INM052

INMARCO STYLE 103

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-240 to +300		
PRESSURE (BAR)	120	100	300
VELOCITY (m/s)	25	10	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Equipments like mixers, agitators, autoclaves, reactor vessels etc., pain stocks, centrifugal/rotary pumps, pumps with damaged shafts and stuffing boxes, valves with grooved stem and pitted glands, flange grooves.

Service Media:

Acids, Alkalis, Solvents, Resins, Effluents, etc.

STYLE 117 Graphited PTFE Fiber packing with carbonaceous aramid core and corners.

Advantages:

- *High compressive & tensile strengths ensure effective sealing.
- *Due to the intherm sealer & the carbon fibers, the packing exhibits superior heat dissipation.
- *The Graphited PTFE fibers reduce the packing & the shaft wear.
- *Universal replacement to Asbestos in arduous operating conditions.



INM053

INMARCO STYLE 117

PROPERTIES			
pH	1-13		
TEMPERATURE (°C)	-240 to +280		
PRESSURE (BAR)	150	500	375
VELOCITY (m/s)	25	3	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Equipment relevant to paper water treatment, power, chemical, distillery & petrol chemical industries. Screw pumps handling powdered slurries. Fomenters, Reactors, Mixers and Agitators. Application involving slurry, sand, gritty media and as a 'Bull Ring'.

Product Type

Description

Operational Parameters



INM054

INMARCO STYLE 125 F/T

STYLE 125F is a premium grade economical packing braided from extremely strong acrylic fiber and further impregnated with proprietary inflon PTFE dispersion to enhance the chemical resistance property of the packing.

STYLE 125T packing is impregnated with graphite based intherm dispersion which is for better heat dissipation.

Advantages:

- *Proprietary inflon/intherm dispersion enhances the density and sealing ability.
- *Safe and stays under clean water application.
- *Comparatively better mechanical strength as against natural and vegetable fibers.
- *Excellent lubrication leading to minimal shaft wear.
- *An economical choice for fluid handling equipment.
- *Intehrm dispersion enhances the thermal conductivity of the packing.

PROPERTIES			
pH	4-10		
TEMPERATURE (°C)	Ambient to +260		
PRESSURE (BAR)	50	125	150
VELOCITY (m/s)	7	4	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Reactors, Agitators, Mixtures, etc.

Service Media:

Water handling equipments, application involving salt solutions. Equipment handling mild acid and alkalis.



INM055

INMARCO STYLE 109

STYLE 109 an excellent abrasion & corrosion resistant packing manufactured from copolymer fiber yarn thoroughly impregnated with PTFE suspensiod. This packing is in interlock construction. The PTFE suspensiod ensures improvement of anti-frictional property of the packing which avoids erosion of sleeves/shaft.

Advantages:

- *The rich lubrication of co-polymer fiber and PTFE helps lowering friction even when sealing abrasive or viscous media, pigments & molten synthetic formulations.
- *The tough construction enables dimensional stability and resistance to deformation on arduous duties. This packing has excellent resistance to penetration and fatigue by abrasive particles during service. Moreover, this packing is non-contaminating and has excellent slip on properties to protect shafts/sleeves.

PROPERTIES			
pH	1-13		
TEMPERATURE (°C)	-200 to +300		
PRESSURE (BAR)	350	500	500
VELOCITY (m/s)	20	25	---
SIZE	6mm ² to 50mm ²		

Typical Application:

Pumps, Valves, Mixers, Dryers, Reactors, Autoclaves, Extruders, Clinker grinder, etc.

Service Media:

Viscous organic & inorganic media, chemical slurries, ash slurry, fly ash, fly ash water, powdered dry chemicals, coolant, turbid river water, sea water, brines and any other abrasive media.



INM056

INMARCO STYLE ARAGRAPH 575

STYLE ARAGRAPH 575 is a special combination packing manufactured with a tough but smooth Aramid Fibre yarn at the corners & PTFE Graphite Solid yarn with break-in lubricant at the faces having core of high density extruded special elastomeric solid core. The aramid yarn is impregnated with highly anti-frictional fluoropolymer dispersion and special break-in lubricant.

STYLE ARAGRAPH 575 is resistant to almost all known chemicals and also resistant to abrasion. This packing has excellent heat dissipation properties & cool run due to integral graphite on the faces. The Aramid yarn at the corners avoids corner failures in reciprocating plunger pump. The strong extruded elastomeric cord core provides extremely high pressure resistance and resiliency.

STYLE ARAGRAPH 575 is compact & dimensionally stable packing which ensures longer leakage free performance.

Advantages:

- *Dense construction & excellent sealability.
- *High pressure compatibility.
- *Extremely durable packing for Ammonia and Carbamate solution.
- *Can be used as lip seals.
- *Wide chemical & abrasion resistance & high penetration.

PROPERTIES			
pH	1-13		
TEMPERATURE (°C)	-240 to +280		
PRESSURE (BAR)	200	500	500
VELOCITY (m/s)	25	20	---
SIZE	6mm ² to 50mm ²		

Typical Application:

Pumps, Valves, Reactors, Autoclaves, Hydraulic Press and Hammer, Mixers, Refiners, Agitators, Piston, etc.

Service Media:

Fine Chemical Slurry, Liquid Ammonia and Ammonium Compounds, Oxidizing & Non-Oxidizing Liquids & Gases, Carbamate Solutions, Fuel & Lube Oil, Hydrazine, Emulsions, Tri-Sodium Phosphates, Sodium Hexamate Phosphate, Black & Green Liquor, Paper Pulp, Pulp Diluted with Water, Acids & Alkalies, etc.

FOR CENTRIFUGAL PUMPS

Product Type

Description

Operational Parameters



INM057

INMARCO STYLE 112

STYLE 112 inter braided from Expanded PTFE Graphite Fiber which is a single molecular combination of PTFE & Graphite offers excellent inertia to chemical attack and enhance heat conduction, helping to reduce friction.

STYLE 112 the graphite entrapment in expanded PTFE matrixes provides excellent lubrication & resistance to hardening unlike the conventional PTFE packings. The sealing performance is the best among any other PTFE Graphite packings.

Advantages:

- *Easy to cut and fit.
- *Very low friction and high heat conduction.
- *Low thermal expansion.
- *No static charge build up.
- *Easy on shafts and help cool runs.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-240 to +300		
PRESSURE (BAR)	125	100	250
VELOCITY (m/s)	25	5	---
SIZE	3mm ² to 35mm ²		

Typical Application:

Pumps, Agitators, Reactors, Valves, etc.

Service Media:

Acids, Alkalis, Organic Chemicals, Hot Water, DM water, Hydrocarbons, Thermic Fluids, etc.

FOR REACTORS



INM058

INMARCO STYLE 101

STYLE 101 is a special packing manufactured from carbon fibre yarn. The packing is thoroughly impregnated with naturally cured graphite based intherm dispersion to act as blocking agent. The interbraid construction and the blocking agent prevents body leakage of any gaseous or liquid material. To prevent galvanic corrosion on the steam, molybdenum based metal corrosion inhibitor also is incorporated in the packing.

Advantages:

- *Adequate lubrication for low friction runs.
- *No embrittlement or abrasion to metallic parent equipment.
- *Strong but pliant without brittleness.
- *Excellent heat dissipation for cooler shaft runs without wear to packing volume to ensure excellent sealing service.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-200 to +650		
PRESSURE (BAR)	200	300	200
VELOCITY (m/s)	25	25	---
SIZE	3mm ² to 50mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Agitators, Dryers, Mixers, Soot blowers, etc.

Service Media:

Acids, Alkalis, Solvent, Organic chemicals, Gases, Steam, Thermic fluids, etc.



INM059

INMARCO STYLE 102

STYLE 102 interbraided from goretex expanded PTFE + graphite fiber, which is a single molecular combination of PTFE and graphite, offers excellent inertia to chemical attack and enhance heat conduction, helping to reduce friction.

STYLE 102 graphite entrapment in expanded PTFE matrixes provides excellent lubrication & resistance to hardening unlike the conventional PTFE packings. The sealing performance is the best among any other PTFE graphite packings.

Advantages:

- *Easy to cut and fit.
- *Very low friction and high heat conduction.
- *Low thermal expansion.
- *No static charge builds up.
- *Easy on shafts and help cool runs.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-240 to +300		
PRESSURE (BAR)	150	125	300
VELOCITY (m/s)	25	10	---
SIZE	3mm ² to 35mm ² *		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Reactors, Agitators, etc.

Service Media:

Acids, Alkalis, Organic Chemicals, Hot water, DM water, Hydrocarbons, Thermic fluids, etc.

Product Type	Description	Operational Parameters
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INM060
INSEAL-AR

INSEAL-AR is a combination of inert fibers and self lubricating sealing materials. Available in "cake or stick" form.

Advantages:

Abrasion resistant flexible IN SITU sealing sticks. For pumps, valves, mixers, agitators, autoclaves, dryers, reaction vessels.

PROPERTIES			
pH		3-11	
TEMPERATURE (°C)		-240 to +260	
PRESSURE (BAR)		400	
VELOCITY (m/s)		15mtr/sec.	

Typical Application:

Moderate acidic and alkaline slurries, ash slurries, dry powder and abrasive fluids or powders.



INM061
INSEAL-CR

INSEAL-CR a blend of high temperature inert fibrils, solid lubrications and sealing aids.

Advantages:

High chemical resistant flexible IN SITU sealing sticks for pumps, valves, mixers, agitators, autoclaves, dryers, reaction vessels.

PROPERTIES			
pH		0-14	
TEMPERATURE (°C)		-240 to +250	
PRESSURE (BAR)		400	
VELOCITY (m/s)		30mtr/sec.	

Typical Application:

Aggressive chemical, acid & alkalis, volatile organic chemical, oils, boiler feed water, emissive gases, thermic fluids, ash slurries.



INM062
INSEAL-FG

INSEAL-FG a blend of injectible food/pharma grade, inert fibrils, lubricants and sealing acids. Available in cake & stick form

Advantages:

Food grade IN SITU sealing sticks for pumps, valves, mixers, agitators, autoclaves, dryers, reaction vessels.

PROPERTIES			
pH		0-14	
TEMPERATURE (°C)		-240 to +260	
PRESSURE (BAR)		250	
VELOCITY (m/s)		15mtr/sec.	

Typical Application:

Food pumps, alcoholic beverages, purified water, paints and pigments, chocolate slurries, juices, pharmaceutical formulations, aggressive chemicals, acids & alkalis, VOC, oils, emissive gases.



INM063
INSEAL-GP

INSEAL-GP a blend of chemical resistant fibrils, inert fibrils, inert lubrications and sealing aids. Available in cake & stick form

Advantages:

General purpose IN SITU sealing sticks for pumps, agitators, dryers, mixers & reaction vessels.

PROPERTIES			
pH		3-12	
TEMPERATURE (°C)		-240 to +260	
PRESSURE (BAR)		300	
VELOCITY (m/s)		30mtr/sec.	

Typical Application:

Hot & cold water, boiler feed, mild acids & alkalis, organic chemicals and low temperature steam.



INM064
INSEAL-GPL

INSEAL-GPL a blend of chemical resistant fibrils, inert fibrils, inert lubrications and sealing aids. Available in cake & stick form.

Advantages:

General purpose IN SITU sealing sticks for pumps, agitators, dryers, mixers & reaction vessels.

PROPERTIES			
pH		3-12	
TEMPERATURE (°C)		-240 to +260	
PRESSURE (BAR)		300	
VELOCITY (m/s)		30mtr/sec.	

Typical Application:

Hot & cold water, boiler feed, mild acids & alkalis, organic chemicals and low temperature steam.

COMPRESSION PACKINGS

BULK SEALING COMPOUNDS

Product Type

Description

Operational Parameters



INM065
INSEAL-HT

INSEAL-HT a blend of high temperature fibrils, solids & lubrications and proprietary sealing aids. Available in cake & stick form.

Advantages:

High temperature flexible IN SITU sealing sticks.

Three Grades:

*HT – sticks for dynamic & static equipments.

*HTA – sticks for online leak sealing.

*HT – HTF – flakes for valves sealing.

PROPERTIES	↻	↔	⊘
pH		0-14	
TEMPERATURE (°C)		-240 to +650	
PRESSURE (BAR)		400	
VELOCITY (m/s)		30mtr/sec.	

Typical Application:

High temperature steam, thermic fluids, high temperature gases and chemicals, hot air, flue gases.



INM066
INSEAL-SUPPER

INSEAL-SUPPER a blend of 100% inert fibrils, solid lubrications and sealing aids. Available in cake & stick form.

Advantages:

High performance universal flexible IN SITU sealing sticks for pumps, valves, mixers, agitators, autoclaves, dryers, reaction vessels.

PROPERTIES	↻	↔	⊘
pH		0-14	
TEMPERATURE (°C)		-240 to +288	
PRESSURE (BAR)		200	
VELOCITY (m/s)		30mtr/sec.	

Typical Application:

Aggressive chemicals, acid & alkalis, volatile organic chemicals, oils, boiler feed water, emissive gases.

FOR MARINE APPLICATIONS



INM067
INMARCO STYLE 151

STYLE 151 is a special Vegetable Fiber (FLAX) Yarn interlocked Braided Packing impregnated with special proprietary Inflon Dispersion based on PTFE with incorporation of sacrificial oil lubricant. During the process of manufacturing, each yarn is impregnated with Inflon dispersion then braided and final treatment is done on the surface again with Inflon dispersion and sacrificial oil.

STYLE 151 is made of Vegetable Fiber born in water, hence this is highly compatible to water and resistant to wrought. Because of incorporation of Inflon Dispersion the packing becomes highly anti-frictional, hence no scoring on sleeves/shafts.

PROPERTIES	↻	↔	⊘
pH		5-10	
TEMPERATURE (°C)		+150	
PRESSURE (BAR)	35	80	100
VELOCITY (m/s)	5	3	---
SIZE	3mm ² to 35mm ²		

*Other sizes possible on request

Typical Application:

Pumps, Valves, Water Wheel, Stern Glands, Radar Post, etc.

Service Media:

River Water, Sea Water, Sewage Water, Surface Water, etc.



INM068
INMARCO STYLE 120AR

STYLE 120AR is specially developed ramie fibre packing with a highly tenacious synthetic reinforcement which enhances the tensile strength, increases operational life of packing. This packing is dispersed with pure PTFE and does excellent sealing in stern tubes.

Advantages:

*Proprietary Inflon® dispersion enhances the density and the sealing ability. Safe & stays clean under operation.

*Highest quality Ramie Fibre with Aramid reinforcement.

*Comparatively better mechanical strength.

*Excellent lubrication leading to minimal shaft wear.

*Special water absorption capabilities of Ramie fibre enhance the sealing capabilities.

*Better resistance to mechanical wear as against cotton fiber packing.

Lower friction & wear.

*High density construction enables optimum amount of the dispersant leading to superior sealing.

*Economical replacement to synthetic packings.

PROPERTIES	↻	↔	⊘
pH		6 - 11	
TEMPERATURE (°C)		-40 to +150	
PRESSURE (BAR)	50	100	200
VELOCITY (m/s)	10	2	---
SIZE	3mm ² to 50mm ²		

*Other sizes possible on request

Typical Application:

Stern tubes, Water handling equipment, Equipment handling crystallizing fluids, marine applications including stern tubes, Rudder post, Bilge pumps, Water wheel glands in hydroelectric power stations, etc.

Product Type

Description & Operational Parameters

STYLE INGRAF® 300 is a high purity (99% to 99.9% carbon) self lubricating and anti-frictional die moulded pre-formed gland packing ring manufactured from Flexible Pure graphite Foil. These rings are manufactured in endless form or in 2 halves in oblique cut containing no Oil or grease or Binder/ Additives of any kind. The packing however is incorporated with sacrificial metal corrosion inhibitor to avoid Galvanic Corrosion on parent body.

STYLE INGRAF®300 is manufactured from flexible pure graphite tape vertically placed into the die and then pressed in hydraulic press and the pressure is calculated on the basis of required density. As the tapes are placed vertically & the compression also is vertical in a closed die there are chances of crimping of tape on OD & ID of the ring which are normally mistaken as cracks. These are not cracks but crimping of tape and this crimping provides resiliency in the sealing ring which is most important for perfect sealing against pressure surge.

STYLE INGRAF®300 is totally free from any kind of contamination. For compression resistance and retention of size & shape Style 300 is manufactured with accurate specific density suitable to the working condition. These packing rings are having high thermal and dimensional stability and extremely low gas/liquid permeability, very low thermal expansion and extremely high chemical resistance. These rings are having low co-efficient of friction (0.08 to 0.1 against steel) and hence, with continuous operation it polishes the stem/shaft and also non abrasive in nature.

STYLE INGRAF® 300 Flexible pure graphite rings adjusts to any irregularities under moderate pressure and has resistance to pressure surge and thermal shock. These packing rings are chemically inert and also fire safe.



INM069

INMARCO STYLE 300

STYLE INGRAF® 300 packing ring is having inherent characteristics of basic graphite and hence having high degree of flexibility, compatibility, conformity & resiliency. These rings expand radially to form perfect seal against the shaft and housing. Graphite is an extremely good thermal conductor & as such the packing dissipates heat away from the body leading to a longer life of the packing.

STYLE INGRAF® 300 is also manufactured for nuclear applications with slightly improved chemical properties. These packing's are stable even under exposure to high doses of nuclear radiation.

PROPERTIES	↻	↔	⌘
pH		0-14	
TEMPERATURE (°C)		-200 to +600	
PRESSURE (BAR)	150	250	300
VELOCITY (m/s)	---	---	---
SIZE	---	---	---

Technical Specification:

Carbon Content	99% to 99.9%
Ash Content	2% (max.)
Leachable Chloride	35ppm to 50 ppm
Density	1.4 – 1.8 gms/cc
Corrosion Inhibitor	4% (max.)

Typical Application:

Valves & Pumps.

Service Media:

Super-Heated & Saturated Steam, Hydrocarbon, Fuel Oil, Lube Oil, All Non- Oxidizing liquids and gases, Dies and Chemicals but not recommended for use in Aquarigia, Fuming nitric acid, Oleum and strong oxidizing media.

CART SEAL is a carefully & sequentially designed set of assorted sealing ring set, keeping in mind the application parameters and the media to be installed in.

CART SEAL is a concept and not a single product. The set consist of top and bottom molded rings and intermediate braided rings as per the requirement.

CART SEAL is a combination of various sealing aids which enables optimum sealing by maintaining lower levels of friction, high degree of heat dissipation and excellent blocking of body or shaft leakage which may not be possible with a single fiber or a hybrid packing.

CART SEAL is able to replace mechanical seal in any kind of application reducing cost of sealing drastically.

Advantages:

*Performance beyond set standards for volatile organic compound & hazardous chemicals.

*Friction reduces by 15% to 25% than flat rings.

*Self-adjustments to thermal & pressure cycling.

*Conforms API 589 & 607 also API 622 standards with ISO 15848 Certification for Fugitive Emission Control Norms



INM070

CARTSEAL

PROPERTIES	↻	↔	⌘
pH		0-14	
TEMPERATURE (°C)		-240 to +650	
PRESSURE (BAR)	200	500	500
VELOCITY (m/s)	25	30	---
SIZE	OD x ID x Total Length of Stuffing Box is to be mentioned.		

Typical Application:

Pumps, Valves, Reactors, Mixers, Agitators etc.

Service Media:

Acids, Alkalis, Solvent, Amide, Aldehyde, Alcohol, Detergents, Pigments, Dyestuffs, paints, Emulsions, Synthetic molten materials, Fine chemicalslurry, Liquid ammonia & Ammonium compounds, Carbamate solutions, Fuel & Lube oil, hydrazine, Emulsions, Tri sodium phosphate, Sodium Hexamate phosphate, Black & Green liquor, Paper pulp, Pulp diluted with water, Emulsion water and any other fluid media.

VALVE SEALING (BONNET SEAL RINGS)

Product Type

Description & Operational Parameters

STYLE 310 INMARCO FLEXIBLE PURE GRAPHITE SELF SEALING RING/PRESSURE SEALING GASKET is made from flexible pure graphite foil, die moulded to required cross sectional profile reinforced with SS wire net/SS strip. The reinforcement of SS wire net/SS strip increases the mechanical strength of the ring/gasket which leads to extremely high pressure surge resistance.

STYLE 310 INMARCO FLEXIBLE PURE GRAPHITE SELF SEALING RING/PRESSURE SEALING GASKET is manufactured from corrugated flexible pure graphite tape vertically placed into the die and then pressed in hydraulic press and the pressure is calculated on the basis of required density. As the tapes are placed vertically and the compressions also are vertical in a closed die there are chances of crimping of tapes on OD & ID of the ring which are normally mistaken as cracks. These are not cracks but crimping provides resiliency in the sealing ring which is most important for perfect sealing against pressure surge.

STYLE 310 INMARCO FLEXIBLE PURE GRAPHITE SELF SEALING RING/PRESSURE SEALING GASKET is having carbon content 99.5% to 99.9%. These are manufactured in angular TOA cross sectional profile, square or rectangular cross sectional profile and BHEL ("V" on angle) cross sectional profile with high density. These are dimensionally stable under extreme pressure surge, highly thermal conductive and thermally stable. It is a better substitute of soft iron pressure seal gasket because of very good compressibility and recovery factor.

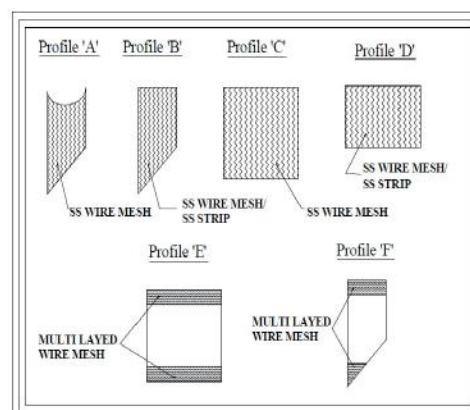
STYLE 310 INMARCO FLEXIBLE PURE GRAPHITE SELF SEALING RING/PRESSURE SEALING GASKET is also highly resistant to chemicals and can work in the entire PH range.

PROPERTIES	VALUES
Ph Range	0-14
Temperature (°C)	-200 to +600
Pressure (BAR)	300
Velocity (m/s)	---
Size	---

Technical Specification:

Carbon Content	99.5% to 99.9%
Ash Content	0.5% max.
Leachable Chloride Content	<50 ppm
Density	1.8 – 2 gsm/cc

Cross Sectional Profiles:



Service Media:

Super heated & Saturated steam, Hydrocarbon, Thermic fluid, Acids, Alkalis, Lube oil, etc.

Typical Application:

Valve bonnet, Metallic flanges, etc.



INM071

INMARCO STYLE 310



INM072

**EXPANDABLE VALVE
CARTSEAL**

Fugitive emissions are hazardous and costly, as large process costs are involved in fluid or gas handling. VOC's find leak paths in valves along the stem. The steam leakages prove extremely costly on control of turbine valves, due to pressure and thermal fluctuations.

EVCS is a state of the art new generation seal designed specifically to conform to fugitive emission norms. V shape design permits effective sealings at all times due to radial expansion of tips under live loadings. These seals have high performance capabilities and give excellent results in critical fluid and gas applications. These are custom built and manufactured to custom orders.

Advantages:

- *Performance beyond set standards for VOC, hazardous chemicals.
- *Friction reduces by 15-25%.
- *Slf adjustments to thermal and pressure cycles.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-240 to +650		
PRESSURE (BAR)	350	350	---
VELOCITY (m/s)	25	25	---
SIZE	Customary sizes made to order		

Typical Application:

The variable densities of selected packing rings, adjust to wide range of chemicals including fluids, gases, VOC's or solids at variable temperature and pressure. The excellent sealability of valve cartseal enables total leak free performance over long runs. The costly on-line leak sealing can be eliminated.

Service Media:

Superheated & Saturated Steam, Hydrocarbon, Thermic Fluid, Acids and Alkalis, Solvent, Gases, Petrochemicals, etc.

Product Type

Description

Operational Parameters



INM073

INMARCO STYLE 100FXI

STYLE 100FXI is manufactured from premium expanded graphite fibre yarn having minimum carbon content 98% reinforced with inconel wire. This is braided and thoroughly impregnated with proprietary Hitherm dispersion based on fine graphite and also incorporated with sacrificial metal corrosion inhibitor to prevent equipment from galvanic corrosion which leads to pitting on the stem & body.

STYLE 100FXI the soft expanded graphite fibers are secured by strong but resilient inconel wire which ensures high pressure resistance. On demand the yarns can also be reinforced with multiple inconel wire to resist pressure surge.

Advantages:

- *Self generating lubrication accommodates and aids self adjustment on tightening of the gland.
- *Hi-therm lubrication developed by us, in-house R & D prevents the body and shaft leakage on static or dynamic equipments.

PROPERTIES	VALUES
pH	0-14
TEMPERATURE (°C)	-240 to +650 in oxidizing media (3315°C in non oxidizing media)
PRESSURE (BAR)	500
VELOCITY (m/s)	---
SIZE	3mm ² to 90mm ²

Typical Application:

Valves, Autoclaves, Rotary Kiln, etc.

Service Media:

Superheated and Saturated steam, Hydrocarbon, Thermic fluid, Petrochemical, Hot oil, etc.



INM074

INMARCO STYLE 800

STYLE 800 is a Premium Grade Expanded Graphite fibre yarn packing reinforced with Inconel/SS Wire having a core of bunch of carbonised filament. The packing is also impregnated with proprietary Hitherm dispersion based on fine Graphite and Sacrificial metal Corrosion Inhibitor.

STYLE 800 is an improved Hi-Tech packing basically designed for Valves gland rating from 150 to 3000 class. This packing is also able to withstand extreme Pressure Surge and ensures a longer leakage free life.

Advantages:

- *The Soft expanded graphited fibre is secured by strong but resilient inconel wire which ensures flexibility for wrapping around small diameter Shaft & Spindle.
- *The core of bunch of carbonised yarn increases the tensile strength to withstand high pressure at the same time high temperature.
- *Self generating lubrication accommodates and aids self adjustment on tightening of the gland.
- *Hi-therm lubrication developed by us, in-house R&D prevents the body and shaft leakage on static or dynamic equipment.

PROPERTIES	VALUES
pH	0 - 14
TEMPERATURE (°C)	-240 TO 650 (1200°C in Non oxidizing media)
PRESSURE (BAR)	300
VELOCITY (m/s)	---
SIZE	6mm ² to 50mm ²

Typical Application:

Valves, Dryers, Autoclaves, etc.

Service Media:

Superheated & Saturated Steam, Hydrocarbon, gases, Ammonia, Hydrogen, Petrochemicals, etc.



INM075

INMARCO STYLE 100FX

STYLE 100FX Expanded flexible pure graphite fibre (purity 99% minimum) braided packing reinforced with non metallic filament. The packing is extrusion resistant and capable of withstanding higher pressure both in dynamic and static condition.

STYLE 100FX packing is also impregnated with proprietary hitherm dispersion to fill the leak paths between the braids. Under gland pressure it becomes a homogeneous mass.

Advantages:

- *Self generating lubrication accommodates and aids self adjustment on stem upon tightening of gland.
- *Most effective sealing performance & no scoring of sleeve, plunger or stem.
- *Hitherm lubrication developed by us, in-house R & D prevents the body and shaft leakage on static or dynamic equipment.
- *Suits for high mechanical & cylindrical load.
- *Excellent sealing during long duration.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-200 to +650 (2700°C in non oxidizing media)		
PRESSURE (BAR)	35	80	100
VELOCITY (m/s)	20	10	---
SIZE	3mm ² to 50mm ²		

*not suitable for valves beyond class 300

Typical Application:

Pumps, Valves, Dryers, Reactors, etc.

Service Media:

Superheated & Saturated steam, Gases, Petrochemicals, Hydrocarbon, Thermic fluid, Hot oil, Acids & Alkalis, Solvents, Organic chemicals, Emissive fluids, etc.

Product Type

Description

Operational Parameters



INM076

INMARCO STYLE 100FXI SPECIAL

STYLE 100FXI SPECIAL is a premium expanded pure graphite (carbon content 99.5 to 99.9%) fibre yarn braided packing, each yarn of which is reinforced with multiple inconel wire, thoroughly incorporated with inorganic passive corrosion inhibitor & special lubricating agents. This passive corrosion inhibitor safeguards parent equipment from galvanic corrosion and also reduction of loss on ignition. Each yarn is jacketed with inconel wire mesh. Reinforcement & jacketing with inconel wire mesh in each yarn enables the packing to withstand extreme mechanical stress and cyclic loads.

Advantages:

- *Excellent sealing under mechanical & thermal stress or cyclic loads.
- *Low wear and tear means long sealing life.
- *Emission much below the EPI limits.
- *Highly resistant to pressure and extrusion.

Approved Fire safe under clause Api 589/607 and Confirms to Fugitive Emission Norms as per API 622

PROPERTIES	VALUES
pH	0-14
TEMPERATURE (°C)	-240 to +650
PRESSURE (BAR)	500
SIZE	3mm ² to 50mm ²

Typical Application:

Valves, Screw conveyers, Dryers, etc.

Service Media:

All non oxidising liquids & gases, Super heated & Saturated steam, Hot dry ash, Flue gases, Dyes & Chemicals, Emissive fluids, Fuel Oil & Lube oil,

Thermic fluid, Hydrocarbons, etc.

Benefits:

*A special lubricating agent reduces stem friction & corrosion inhibitor prevents pitting due to galvanic corrosion.

*Very high sealing efficiency even on oscillating valve stems without much wear and tear.

*The reinforcement & jacketing of inconel wire enhances the strength of packing & withstand high temperature & pressure.



INM077

INMARCO STYLE 900

STYLE 900 is a premium flexible expanded graphite fiber packing with high carbon content impregnated with proprietary thermolube® dispersion reinforced with Inconel wire/SS wire in each strand. The packing also incorporates of inorganic passive corrosion inhibitor to safeguard parent body from galvanic corrosion and reduce loss on ignition.

STYLE 900 is a soft expanded graphite Fiber packing secured by strong but resilient Inconel wires/ SS wires which ensures flexibility for wrapping around small diameter shaft and spindle. Moreover, reinforcement of Inconel wire of special grade enhances the mechanical strength of the packing which increases the resistance to pressure surge.

Advantages:

- *The thermolube dispersion acts as a blocking agent and fill up the hair gap between the yarns to ensure zero leakage.
- *Self-generating lubrication accommodates and aids self-adjustment on tightening of the gland.
- *There is no volume loss due to loss on ignition.

PROPERTIES	VALUES
pH	0-14
TEMPERATURE (°C)	-200 to +650
PRESSURE (BAR)	500
VELOCITY (m/s)	---
SIZE	3mm ² to 50mm ²

Typical Application:

Valves, Dryers, Rotary Kiln, etc.

Service Media:

Superheated & Saturated Steam, Hydrocarbon, Thermic Fluid, Acids and Alkalis, Solvent, Gases, Petrochemicals, etc.



INM078

INMARCO STYLE 1300/1310

STYLE 1300/1310 Joint Sealant (flat) & valve Stem Packing (round) are made from 100% pure expanded PTFE designed to be used as gap filling dependable sealants for flanges & valve glands. Flexible & heat stabilized Inmatex sealant eliminates the disadvantages associated with embrittlement & heat retention of gasket and made from conventional PTFE. Inmatex is a reliable seal due to its inertness to most chemicals and is also cost effective alternative on most flanges and valve glands.

Construction:

Flat tapes for flange joints, with or without adhesive backing. Round cords for valve stems.

Advantages:

- *Due to its excellent resilience property, Inmatex could withstand high compressive loads.
- *Resistant to creep, hot & cold flow.
- *Safe & clean for food & pharmaceutical applications.
- *Fast assembly, easy compression.

PROPERTIES	↔	↔
pH	0-14	
TEMPERATURE (°C)	-260 to +300	
PRESSURE (BAR)	100	Vacuum to 200
P x T	2 x 10 ⁵	
Sizes for Joint Sealants (width x thickness in mm)	3 x 1.5, 5 x 2, 7 x 2.5, 10 x 3, 12 x 4, 14 x 5, 17 x 6, 20 x 7 & 25 x 10	
Sizes for Valve Stem Packing (width x thickness in mm)	2, 2.5, 3, 4, 6, 8, 10, 12, 13, 16, 17, 19 & 20	

Typical Application:

Ideal for fragile glass, FRP, Ceramic, Plastic flanges & Lined pipe joints. Flanges involving all kinds of chemical fluids & gaseous mediums. Graphite flanges in HCL, PVC & Nuclear plants.

Product Type

Description

Operational Parameters



INGRAF FJ Gasket Tape is made from 100% pure flexible graphite, specially corrugated to enable ease of installation over flanges with circular or with complex sealing area. The tape has a unique self adhesive backing for overhead or vertical flange surfaces. At high temperature, the adhesive would integrate itself with the graphite by carbonizing. This tape is also available without adhesive.

Construction:

Corrugated foil with or without adhesive backing. Chloride content: less than 50ppm. Ash content: max. 0.5%.

Ingraf tapes are available in 2 basic versions: Ingraf FJ generally used for Flange Joints and Ingraf BF used for Box Foil

Advantages:

*Can be used in tandem as a complete gasket with conventional gasket types such as PTFE, Spiral Wound, metallic etc.

*Can be used to form gaskets from a small diameter as 1" to every large diameters.

*Nuclear compatibility, radiation resistance – 1.5 x 100 rads conforms to surface irregularities. *Non sticking while dismantling.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-200 to +450		
PRESSURE (BAR)	Vacuum 28" hg to 300		
VELOCITY (m/s)	---	---	---
SIZE	¼" x 25ft., ½" x 25ft., ¾" x 50ft. & 1" x 50ft.		

Typical Application:

Heat Exchangers, Reactors, Pumps, Valves, bonnets and for various service conditions. As a filler to spiral wound and metallic gaskets. Flanges made from fragile material like glass. To encapsulate & enhance the sealing efficiency of other gasketing materials, such as PTFE & other gasketing materials.



INGRAF[®] Box Foil Gasket Tape is made from 100% pure flexible graphite with knurled surface. Simply wind around valve stem and top..

Advantages:

*Could be used by itself or in combination with other packings for effective sealing and possible nuclear compatibility.

*Wide range of pressure and thermal compatibility.

*Low friction & permeability, eliminates wear and associated risks in equipment ensuring plant safety.

*Emergency replacement packing for virtually any equipment.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-200 to +300, -200 to +650 in steam		
PRESSURE (BAR)	Vacuum 28" hg to 250		
VELOCITY (m/s)	30	3	---
SIZE	¼" x 25ft., ½" x 25ft., ¾" x 50ft. & 1" x 50ft.		

Typical Application:

Pumps and valve glands, Mixers, Agitators, Autoclaves handling variety of fluids & gases.



STYLE 114V is a pure PTFE fibre yarn duplex braided packing manufactured from extruded trim tape having incorporation of special proprietary INLUBE break-in-lubricant. The break-in-lubricant ensures extra lubrication during the complete operational life.

STYLE 114V is non toxic and inert in nature, hence ensures safety and purity of the fluid media. It is dimensionally stable and ensures trouble free operation reducing maintenance cost.

STYLE 114V is suitable for dynamic as well as static application. As it is dimensionally stable it ensures leakage free operational life for a longer period.

Typical Application:

Valves, Mixers, Reactors, Agitators, Dryers, Air compressors, etc.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-240 to +280		
PRESSURE (BAR)	25	100	200
VELOCITY (m/s)	8	4	---
SIZE	3mm ² to 35mm ²		

Service Media:

Acids & Alkalis of any concentration, Solvents, Organic/Inorganic chemicals, Dyestuffs, Paints, Synthetic resins, etc.



STYLE 326 is a state of the art high tech next generation gland packing specially developed for frequent operated control valve. The core of the packing is manufactured with high structural carbon filament yarn heavily lubricated with special fluoropolymer dispersion. The outer jacket of the packing is manufactured with pure PTFE yarn lubricated with PTFE suspensoid.

STYLE 326 is a specially designed high tech gland packing to operate under difficult conditions requiring high resilience, high mechanical strength & high tensile strength. The recovery factor of the packing is very high and as such after opening the valve, the packing recovers its volume and there is no gap between gland followers and the packing which leads to leakage free performance for a longer time.

STYLE 326 is mechanically & thermally highly stable and there is no deformation during operation. No extrusion ring is required for this packing. This particular packing can also be used in dynamic applications like pumps, reactors & mixers.

Advantages:

This packing does not disintegrate on cutting.

PTFE dispersion acts as a blocking agent.

Dissipates heat without chemical hardening.

Extremely smooth removal during shutdown.

PROPERTIES			
pH	0-14		
TEMPERATURE (°C)	-200 to +300		
PRESSURE (BAR)	150	250	300
SIZES	6mm ² to 50mm ²		

Typical Application:

Valves, Specially Control Valve, Pumps, Mixers, etc.

Service Media:

Hydrocarbon, Super-heated & Saturated steam, Thermic Fluid, Hydrogen, Hydrogen Sulphide, Ammonia, Fuel Oil, Lube Oil, Non oxidizing Liquids & Gases, Amides, Dyes, Chemicals & Acids, Alkalis, Solvents, Gasoline, Organic/Inorganic Chemicals, Petrochemicals, Dyestuffs, Paints, Synthetic resins, etc.

CONTROL VALVE

STYLE 503 is a unique combination packing of expanded graphite yarn and carbon fibre yarn. This is one of the best solutions of sealing for all type of high pressure and high temperature valves specially in Control Valves.

STYLE 503 is also extremely suitable for soot blower application.

STYLE 503 is having a core consist of expanded graphite yarn reinforced with multiple inconel wire further jacketed with fine inconel wire mesh. The outer cover of the packing is braided with high strength-low friction-nonscoringcarbonyarn.

STYLE 503 is finally incorporated with INORGANIC PASSIVE CORROSION INHIBITOR and graphite based proprietary HITHERM dispersion. This passive corrosion inhibitor safeguards parent equipment from galvanic corrosion and also reduction of LOSS ON IGNITION.

Advantages:

- *This packing does not disintegrate on cutting.
- *HITHERM dispersion acts as a blocking agent.
- *This packing adapts to worn out surface and pitting with smooth running.
- *Dissipates heat without chemical hardening.
- *Extremely smooth removal during shutdown.

PROPERTIES	VALUES
pH	0-14
TEMPERATURE (°C)	-250 to +650
PRESSURE (BAR)	500
VELOCITY	---
SIZE	3mm ² to 50mm ²

Typical Application:

All types of Valves and Soot blowers, Specially Control Valve.

Service Media:

Hydrocarbon, Super heated & Saturated steam, Thermic fluid, Ammonia, Fuel oil, Lube oil, Non oxidizing liquids & gases, Amides, Dyes, Chemicals & Acids, Gasoline, etc.



INMARCO STYLE 503

TROUBLESHOOTING PACKING FAILURES

Besides improper installation, packing failures are often due to worn out faulty equipment, shaft misalignment, uneven take-up on the gland bolts and other causes. If you are having trouble, carefully remove and examine the old packing set. Do not throw the set away, because it often gives clues as to the condition of the equipment and may be the means of solving the problem. The following common clues and possible causes were identified by INMARCO FZC.

Clue 1 : Excessive reduction in cross-section of packing directly beneath shaft or plunger.
Possible Cause : Misalignment of shaft, worn-out shaft or worn-out stuffing box area.

Clue 2 : Excessive reduction in the thickness of the packing directly over the shaft.
Possible Cause : Misalignment of shaft or worn-out bearings.

Clue 3 : A whole ring or part of a ring is missing from set.
Possible Cause : Bottom of stuffing box worn, with packing being extruded into the system.

Clue 4 : Wear on the outside of one or more rings.
Possible Cause : Rings rotating with shaft or loose in the box. Packing size too small.

Clue 5 : Axial bulge in one or more rings.
Possible Cause : Adjacent rings cut too short or too long, depending on the style of material used, causing packing under pressure to be deformed.

Clue 6 : Packing show tendency to extrude between shaft and the gland follower.
Possible Cause : Excessive gland bolt pressure and/or too much clearance between shaft and the gland follower.

Clue 7 : Rings next to gland follower badly damaged, with bottom rings in fair condition.
Possible Cause : Improper installation of packings and excessive gland bolt pressure.

Clue 8 : Wearing surface of rings dried & charged with rest of packings in good conditions.
Possible Cause : High temperature and lack of adequate lubrication.

Clue 9 : Innermost ring deteriorated.
Possible Cause : Packing incompatible with fluid handle.



Innovations in Fluid Sealing.

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