

HOW TO INSTALLATE MONTERO'S GLAND PACKINGS

1. Remove all old packing, cleaning stuffing box and shaft.
2. Choose the most suitable packing for each service and choose also the correct cross-section of packing.
3. The best way to cut packing rings is to cut them on mandrel. Wind packing around properly sized mandrel, or use MONTERO'S CALIBRATED PACKING RING CUTTER.
4. Carefully insert each ring into the stuffing box (one ring of packing at a time), and press one carefully. Stagger joints of subsequent rings a minimum of 90 degrees.
5. After the last ring is installed, take up gland bolts finger tight or very slightly snugged up, don't jam the packing by excessive gland loading. Check lantern ring, if used, correct positioning relative to port.
6. Adjust packing (pumps)
Allow packing to leak freely starting up a newly packed pump. Take it up gradually on the gland as the packing seats, until leakage is reduced to a tolerable level.
7. Adjust packing (VALVES)
Consult packing manufacturer and/or plant engenierring departament for guidance on torque specifications or percent of compression.
 - 7.1 Torque gland bolts to approximately 30% of full torque.
 - 7.2 Cycle the valve a number of times and apply full torque while valve is closed stroke position.
 - 7.3 Repeat step 2 three or four times.

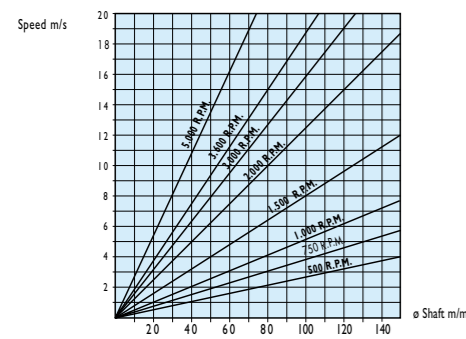


Montero

PACKINGS FOR PUMPS AND VALVES



TECHNICAL DATA



LENGTHS

inches	millimeters
1/8	3
5/32	4
3/16	5
1/4	6,35
5/16	8
3/8	9,5
7/16	11
1/2	12,7
9/16	14
5/8	16
11/16	18
3/4	19
13/16	20
7/8	22
1	25
	28
	30

PRESSURE

1 psi = 0.07 kg / cm²
1 bar = 1 kg / cm² = 14.22 psi

TEMPERATURE

°C = $\frac{°F - 32}{1.8}$

°F = 32 + (°C × 1.8)

SPEED

1 meter/second = 195 feet/minute

TOLERANCE (+/-)

	"	mm
<1/4	<6,35	1/64 0,4
(>1/4-<1")	6,35 a 25,4	1/32 0,8
>1"	>25,4	1/16 1,6

TOLERANCE WEIGHT +/- 10%

TYPES OF BRAIDING



INTERBRAID
4 TRACKS



INTERBRAID
3 TRACKS



INTERBRAID
2 TRACKS



BRAID OVER
BRAID

OTHER SEALING PRODUCTS



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MONTERO FyE, S.A. guarantees the quality of all their products not being responsible for the inadequate use of them.

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VALVE STEM SEALING RING SETS

SET OF RINGS MG 420+AGK

Sets of pure expanded mineral graphite rings combined with **MG-420** packing rings at each end give improved valve sealing over a wide range of pressures and temperatures. A range of grade is available: industrial, nuclear in both cases, with corrosion inhibitor **GRAFOIL' GTB, GTJ and GTX** marca **GRAFTECH**. with a variety of sections and densities. These sets give high value to valve manufacturers.

ECOGRAFLEX

VALVE STEM SEALING SYSTEM FOR LOW FUGITIVE EMISIONS

Ecograflex sets are die formed rings sets made of pure mineral graphite rings from pure exfoliated tape with corrosion inhibitor, combining different packings giving types of sealing system sets.

Ecograflex's geometry and density design have been developed to solve **fugitive emissions** problems, on a wide range of chemical products, even with fire safe restrictions and in cryogenic conditions.

NEW Ecograflex X1000R combines GRAFOIL© GTX (Shell MESC SPE 85/203) shaped rings with NEW MG-1000 R packing rings to offer low fugitive emission service at high temperature and pressures. (TA LUFT in process)




Ecograflex 420 combines GRAFOIL© shaped rings with MG-420 rings to offer low fugitive emission service at high pressures.

Ecograflex 780 R combines GRAFOIL© shaped rings with MG-780 R rings to give low emissions service in cryogenic and high temperature conditions (fire safe test certified packing as per API 589:607).

Ecograflex 250 combines GRAFOIL© shaped rings with MF-250 rings for use on chemical services such as alkylation.






MG-520 MG-420 MG-410 MG-880 R MG-787

MG-520			
			
T(°C)	700		
P(Bar)	200	100	50
V(m/sg)	1	3	30
pH	0-14		




This packing manufactured from continuous filaments of pure graphite, coated with graphite powder. Due to the high purity of the graphite, this packing can work at the highest speeds and temperatures.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
4	0,5	33	2 tracks
5	0,5	25	
6	0,5	16,5	3 tracks
8	1	20	
10	1	12	4 tracks
12	1	8	
14	2	12,5	
16	2	9	
19	3	10	7,5
22	3	7,5	
25	3	6	

MG-420			
			
T(°C)	600		
P(Bar)	200	100	50
V(m/s)	1,5	2	25
pH	0-14		




A packing produced from continuous filaments of high purity carbon, coated with graphite powder, it has a high thermal conductivity and can operate at high temperatures and speeds. It is also available with inconel wire Ref. **MG-420 I** or PTFE Ref. **MG 420 P**.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
4	0,5	33	2 tracks
5	0,5	25	
6	0,5	12,5	3 tracks
8	1	18	
10	1	12	4 tracks
12	1	8	
14	2	12,5	
16	2	9,5	
19	3	10	7,5
22	3	7,5	
25	3	6	

MG-410			
			
T(°C)	550		
P(Bar)	200	100	50
V(m/sg)	1,5	1,5	20
pH	0-14		




Packing manufactured from high quality carbon fibres and with a special graphite powder impregnation. This packing resists absorption, avoiding penetration of the fluid in the packing core, and has excellent elasticity properties and adaptability to the stuffing box. This braid is used in centrifugal pumps, boiler feed pumps, agitators, ball valves, rod (spindle), globe.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
4	0,5	36	2 tracks
5	0,5	22	
6	0,5	16	3 tracks
8	1	17	
10	1	11	4 tracks
12	1	8	
14	2	11,5	
16	2	9	
19	3	10	7,5
22	3	7,5	
25	3	5,5	

MG-780 R			
			
T(°C)	-200 a +650		
P(Bar)	310		
V(m³/g)			
pH	0-14		




This packing is prepared using pure, expanded, mineral graphite with inconel wire core for work at high pressures. It combines the exceptional properties of graphite with simplicity of use and opportunity to minimise stocks. **MG-780 R** has got corrosion inhibitor and **Fire Safe test approval (API 607: 589)**. Also available with special high temperature impregnation. Ref **MG 780 RSM**.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
4	0,5	20	2 tracks
5	0,5	15	
6	0,5	11,5	3 tracks
8	1	10	
10	1	7	4 tracks
12	1	5,5	
14	2	10	
16	2	8,5	
19	3	7	6
20	3	6	
25	3	4	

MG-787			
			
T(°C)	-200 a +650		
P(Bar)	350		
V(m/sg)			
pH	0-14		




Packing made of pure expanded mineral graphite yarns with corrosion inhibitor. In order to obtain a greater pressure resistance for use in valves, each strand is reinforced with a wire mesh cover, and braided by the diagonal system, giving excellent mechanical properties and reducing the possibility of braid extrusions. This packing can work at the highest pressures and temperatures and it can be used in all kind of valves.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
4	0,5	22	2 tracks
5	0,5	14	
6	0,5	10	3 tracks
8	1	11	
10	1	7	4 tracks
12	1	5	
14	2	8	
16	2	6,5	
19	3	7	6,5
22	3	5	
25	3	4	

MG-980			
			
T(°C)	600		
P(Bar)	200	75	35
V(m/sg)	1,5	2	30
pH	0-14		




This packing is manufactured from a combination of high purity carbon filaments in corners and pure expanded mineral graphite yarns with a corrosion inhibitor in core and sides. The incorporation of the carbon filament reinforcement at the corners enables this new universal packing to be applied in both static and dynamic applications, where the special thermal and chemical properties and the low friction coefficient of graphite are needed. It is also available with industrial quality grade Ref. **MG-970** and with inconel insertion **MG-970 I**.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
6	0,5	12	3 tracks
8	1	8	
10	1	7	4 tracks
12	1	5,5	
14	2	11	
16	2	8,5	
19	3	7	6,5
22	3	5,5	
25	3	4	

MG-780 C			
			
T(°C)	-200 a +650		
P(Bar)	310	50	20
V(m³/s)	0,5	1	10
pH	0-14		




Packing made of pure expanded mineral graphite (99.85%) with synthetic carbon yarn insertion in order to widen the range of use of the expanded mineral graphite, not only in valves but in equipments with centrifugal and alternative movements too.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
4	0,5	24	2 tracks
5	0,5	15	
6	0,5	11,5	3 tracks
8	1	12	
10	1	8	4 tracks
12	1	5,5	
14	2	10	
16	2	8,5	
19	3	7	6,5
22	3	6,5	
25	3	4	

MG-880 R				
				
T(°C)	-200 a +650			
P(Bar)	310			
V(m/sg)				
pH	0-14			

This packing is prepared using pure, expanded, mineral graphite nuclear grade with a Inconel wire core for work at high pressures. It combines the exceptional properties of graphite with simplicity of use and opportunity to minimise stocks.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
4	0,5	20	2 tracks
5	0,5	15	
6	0,5	11,5	3 tracks
8	1	10	
10	1	7	4 tracks
12	1	5,5	
14	2	10	
16	2	8,5	
19	3	7	6
20	3	6	
25	3	4	

MG-1000 R				
				
T(°C)	650			
P(Bar)	450			
V(m/sg)	2			
pH	0-14			

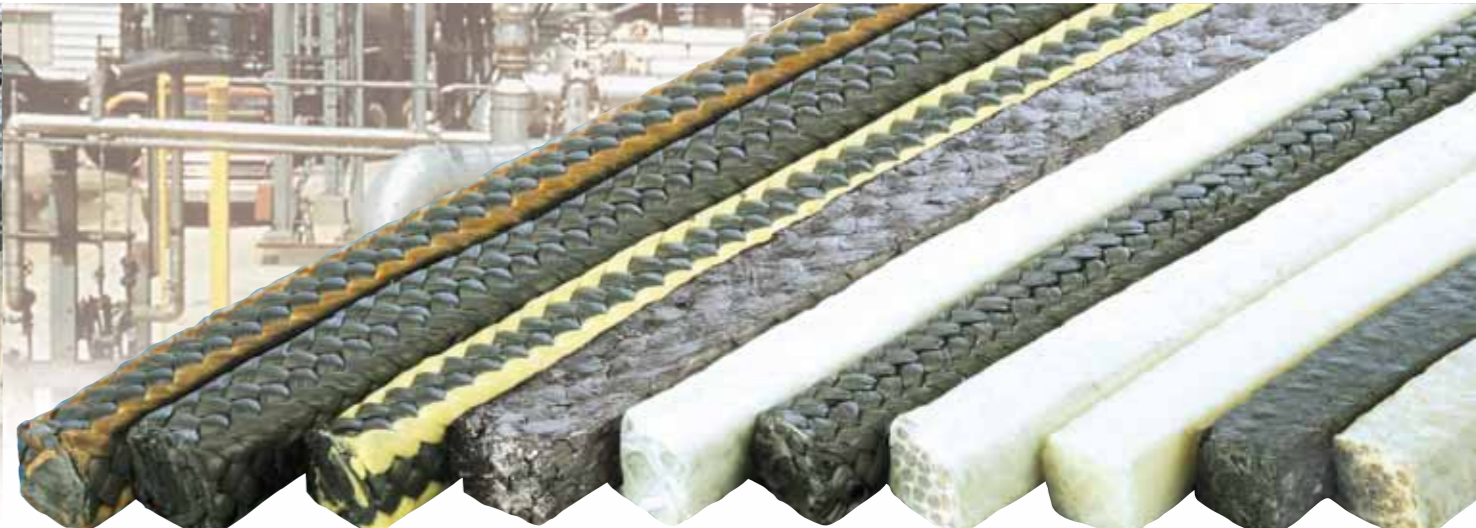
Gland packing made of high purity expanded graphite material (C-content > 99 %) over knitted with Inconel wire. It has got a special high temperature lubrication for high temperature and corrosion inhibitor as well. It is recommended for high pressure applications due its wire content and it has an excellent sealing effect and it fulfills fugitive emission and TA-Luft requirements.

Due to its special combination of materials it can be used with expanded graphite rings, in set of rings, or also alone.




MG 1000R is suitable for all kind of valves specially designed for fugitive emission applications :TA luft in process.



MG-974 MF-250 MS-315 MF-360 MF-260 MG-980 MG-780 C MG 880 R MG-1000 R






MF-940 MF-261 MS-360 MG-780 MF-350 MF-262 MS-320 MF-355 MF-333 MV-500

MF-262			
			
T(°C)	250		
P(Bar)	150	150	15
V(m/s)	2	3	15
pH	0-14		




This packing is manufactured with braided yarns of PTFE and graphite. PTFE yarns give the packing a good resistance to chemical attack. Packing suitable for all kinds of stuffing boxes in alternative and rotary equipment, and valves in general.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
4	1	45	2 tracks
5	1	29	
6	1	20	3 tracks
8	2	22	
10	2	14	4 tracks
12	2	10	
14	4	15	
16	4	12	
19	5	10	8
22	5	8	
25	5	6	

MS-320			
			
T(°C)	250		
P(Bar)	100	70	20
V(m/sg)	1	1,5	15
pH	2-12		




Packing made of aramid spun yarn impregnated with PTFE and lubricants. MS 320 packing is a reliable and economic option for several types of equipment, with the possibility of making a graphite finished version, Ref. **MS-320 G**.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
4	1	45	2 tracks
5	1	29	
6	1	20	3 tracks
8	2	23	
10	2	15	4 tracks
12	2	10	
14	4	15	
16	4	12	
19	5	10	8
22	5	7,5	
25	5	6	

MF-355			
			
T(°C)	250		
P(Bar)	80	60	20
V(m/sg)	1	5	15
pH	2-12		

Packing manufactured from white synthetic filament that is impregnated with P.T.F.E. dispersion. The finished braid is given a final, external treatment with P.T.F.E. and special lubricants in order to make easier the start. Packing for moderate working conditions with a great flexibility and adaptability. It is also available with graphite impregnation Ref. **MF-357**.

SUPPLIED			
mm.	Kgs. box	mt/box ap. rox.	Type of braiding
4	1	44	2 tracks
5	1	27	
6	1	20	3 tracks
8	2	23	
10	2	15	4 tracks
12	2	10	
14	4	16	
16	4	12	
19	5	11	10,5
22	5	8	
25	5	6	

MF-333			
			
T(°C)	120		
P(Bar)	100	60	40
V(m/sg)	1	2	17
pH	5-11		

This packing is manufactured with high quality natural fibre yarns with PTFE. The finished braid is given a final, external treatment with PTFE to give a packing with a low coefficient of friction, which has flexibility and is suitable for use in moderate working conditions.

SUPPLIED			
mm.	Kgs. box	mt/box ap rox.	Type of braiding
4	1	44	2 tracks
5	1	28	
6	1	20	3 tracks
8	2	23	
10	2	15	Capa s/ Capa
12	2	10	
14	4	16	
16	4	12	
19	5	11	
20	5	10	
25	5	6	