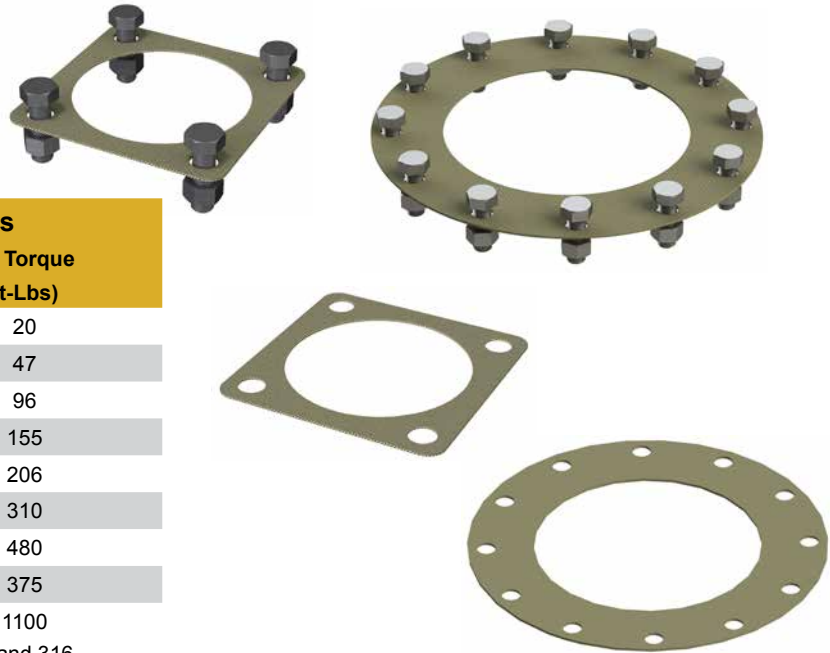


SPECIFICATIONS

M-47 and M-48 Bolt Torque and Gasket Specifications



Standard Bolt Torque Specifications

Nominal Bolt Diameter (in.)	Dry Torque (Ft-Lbs)
0.375	20
0.50	47
0.625	96
0.75	155
0.875	206
1.00	310
1.125	480
1.250	375
1.50	1100

Grade 2 Zinc plated nuts/bolts. Available in 304 and 316 stainless steel.

Fiber Full Face Gaskets, Temperature Rating: 1800° F

Physical Test Properties	Specification Range	Nominal Test Values	Test Method
Compression @ 34.5 MPa (5000psi)	25-40%	35%	ASTM F-806
Recovery @ 34.5 MPa (5000 psi)	30% Min	34%	ASTM F-806
Ignition Loss (1 hour @ 1500° F)	30% Max	27%	ASTM F-495
Air Aging 70 hrs @ 540° C (1000° F) Thickness Loss	0-10%	6%	ASTM D-573
Air Aging 70 hrs @ 540° C (1000° F) Weight Loss	20% Max	11%	

Fluid Immersions (22 hours @ 78° - 85° F)

Fluid Resistance ASTM IRM903 Oil - Thickness Change	12-20%	12%	ASTM F-146
Fluid Resistance ASTM IRM903 Oil - Weight Change	70% ▲ Max.	58%	ASTM F-146
Fluid Resistance ASTM Fuel B - Thickness Change	10-20%	15%	ASTM F-146
Fluid Resistance ASTM Fuel B - Weight Change	50% ▲ Max.	45%	ASTM F-146

- Fiber full face gaskets use a 0.008” ETP (electrolytic tin plate) low carbon steel core. The core is then laminated on two sides with a facing composed of heat resistant vermiculite and ceramic fibers chemically bonded with an NBR binder.
- This gasket is designed for hot gas applications where extreme heat is present.
- The fiber facings are mechanically bonded without the use of any adhesives, providing stability and integrity even when exposed to high heat, scrubbing, and vibration.
- Gasket is asbestos-free.
- Gasket is light brown in color.

M-47 and M-47L NBG KITS

Nut Bolt Gasket Kits

Fiber Full Face Engine Gasket Kits (1 gasket per set)

Part Number	Engine	Size	Bolt Diameter	Bolt Length	Bolts/Nuts per Set
M-47-CAT-400-FF	CAT	4	0.50	2	4
M-47-CAT-500-FF	CAT	5	0.625	2	4
M-47-CAT-600-FF	CAT	6	0.625	2	4
M-47-CAT-800-FF	CAT	8	0.375	2	8
M-47-CAT-1000-FF	CAT	10	0.375	2	12
M-47-CAT-1000-3516ULB-FF	CAT	10	0.50	2	12
M-47-CAT-1200-FF	CAT	12	0.375	2	12
M-47-CAT-1400-FF	CAT	14	0.50	2	12
M-47-CUM-600-FF	CUM	6	0.375	2	8
M-47-MTU-600-FF	MTU	6	0.375	2	6
M-47-MTU-800-FF	MTU	8	0.375	2	8
M-47-MTU-1000-FF	MTU	10	0.50	2	8



Fiber Full Face Gasket Kits (1 gasket per set)

Standard Part Number	Size	Bolt Diameter	Bolt/Nuts per Set	Bolt Length	Long Part Number	Bolt Length
M-47-FF-200	2	0.625	4	2	M-47L-FF-200	3
M-47-FF-250	2.5	0.625	4	2	M-47L-FF-250	3
M-47-FF-300	3	0.625	4	2	M-47L-FF-300	3
M-47-FF-350	3.5	0.625	8	2	M-47L-FF-350	3
M-47-FF-400	4	0.625	8	2	M-47L-FF-400	3
M-47-FF-500	5	0.75	8	2	M-47L-FF-500	3
M-47-FF-600	6	0.75	8	2	M-47L-FF-600	3
M-47-FF-800	8	0.75	8	2	M-47L-FF-800	3
M-47-FF-1000	10	0.875	12	2.5	M-47L-FF-1000	3.5
M-47-FF-1200	12	0.875	12	2.5	M-47L-FF-1200	3.5
M-47-FF-1400	14	1.00	12	2.5	M-47L-FF-1400	3.5
M-47-FF-1600	16	1.00	16	2.5	M-47L-FF-1600	3.5
M-47-FF-1800	18	1.125	16	3	M-47L-FF-1800	4
M-47-FF-2000	20	1.125	20	3	M-47L-FF-2000	4
M-47-FF-2200	22	1.250	20	3	M-47L-FF-2200	4
M-47-FF-2400	24	1.250	20	3	M-47L-FF-2400	4
M-47-FF-2600	26	1.250	24	3	M-47L-FF-2600	4
M-47-FF-2800	28	1.250	28	3	M-47L-FF-2800	4
M-47-FF-3000	30	1.250	28	3	M-47L-FF-3000	4
M-47-FF-3400	34	1.50	32	4	M-47L-FF-3400	4.5
M-47-FF-3600	36	1.50	32	4	M-47L-FF-3600	4.5



- All dimensions are in inches.
- Other sizes available, call for details.
- Grade 2 Zinc plated nuts/bolts. Available in 304 and 316 stainless steel.
- Fiber gasket rated up to 1,800° F for continuous use, 2,300° F maximum temperature.
- One (1) gasket per set. Sizes 26" and up gaskets will come in two pieces.



M-48 GASKETS

Full Fiber Face Gaskets

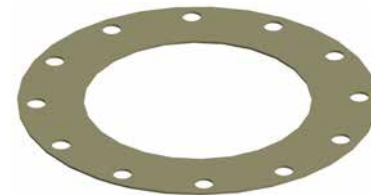
Fiber Full Face Engine Gaskets

Part Number	Engine	Size	ID	OD	THK
M-48-CAT-400-FF	CAT	4	4.1	5.5	0.0625
M-48-CAT-500-FF	CAT	5	5.1	6.5	0.0625
M-48-CAT-600-FF	CAT	6	6.1	7.8	0.0625
M-48-CAT-800-FF	CAT	8	8.1	11	0.0625
M-48-CAT-1000-FF	CAT	10	10.1	13.5	0.0625
M-48-CAT-1000-3516ULB-FF	CAT	10	10.3	14	0.0625
M-48-CAT-1200-FF	CAT	12	12.1	16	0.0625
M-48-CAT-1400-FF	CAT	14	16.93	18.5	0.0625
M-48-CUM-600-FF	CUM	6	6	8	0.0625
M-48-MTU-600-FF	MTU	6	6.1	10.5	0.0625
M-48-MTU-800-FF	MTU	8	8.5	12.5	0.0625
M-48-MTU-1000-FF	MTU	10	10	13	0.0625



Fiber Full Face Gaskets

Part Number	Size	ID	OD	THK
M-48-FF-200	2	2	6	0.0625
M-48-FF-250	2.5	2.5	7	0.0625
M-48-FF-300	3	3	8.5	0.0625
M-48-FF-350	3.5	3.5	8.5	0.0625
M-48-FF-400	4	4.5	9	0.0625
M-48-FF-500	5	5.6	10	0.0625
M-48-FF-600	6	6.6	11	0.0625
M-48-FF-800	8	8.6	13.5	0.0625
M-48-FF-1000	10	10.8	16	0.0625
M-48-FF-1200	12	12.8	19	0.0625
M-48-FF-1400	14	14	21	0.0625
M-48-FF-1600	16	16	23.5	0.0625
M-48-FF-1800	18	18	25	0.0625
M-48-FF-2000	20	20	27.5	0.0625
M-48-FF-2200	22	22	29.5	0.0625
M-48-FF-2400	24	24	32	0.0625
M-48-FF-2600	26	26	34.5	0.0625
M-48-FF-2800	28	28	36.5	0.0625
M-48-FF-3000	30	30	38.8	0.0625
M-48-FF-3400	34	34	43.8	0.0625
M-48-FF-3600	36	36	46	0.0625



- All dimensions are in inches.
- Other sizes available, call for details.
- Fiber gasket rated up to 1,800° F for continuous use, 2,300° F maximum temperature.
- Sizes 26" and up gaskets will come in two pieces.