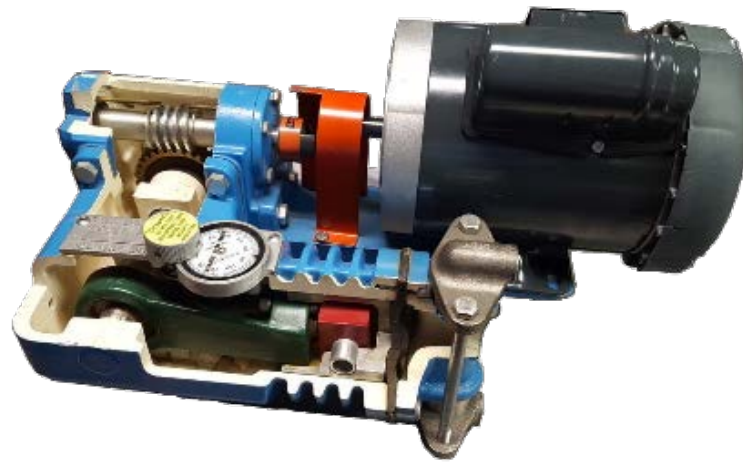


MADDEN PUMP

TORQUE SPEC'S & GENERAL GUIDE FOR MADDEN METERING PUMP SOLUTION HEADS



MF Series



JN Series



MH Series

MADDEN PUMP, RECOMMENDED TORQUE SPEC' CHART

The following chart is Madden's recommended torque specifications for sealing our diaphragm metering pumps' wetted ends. Madden pump diaphragms are the thickest and most durable in the industry. They are reinforced with nylon threads to be as strong as a tire. As a result, our pumps have a longer creeping/break in period than other diaphragm pumps. This can occasionally require clients to retighten the solution head bolts once or twice after initial startup or after diaphragm replacement, in order to reseal the wetted end.

Due to changes in the pumps' surrounding environment from our shop to the client's project site, the many wetted end combinations available, and generally light torquing spec's required for sealing, to this point Madden had simply provided a rule of thumb - snug each solution head bolt a half turn in a star pattern until any visible leaking seals. Making sure not to overtighten, which could crush the diaphragm and cause the interior piston to push/stretch the diaphragm further forward than intended.

POINT BEING, the process is a bit of a "feel", it is not an exact science. The following table should be used as a guide, if the bolts are above the maximum torque spec', this is a sign something else is causing the leak. Likely from the discharge line assembly.

If torquing to these specifications does not remove leaking, please call the factory.

Madden Pump Series	Solution Head Material	Diaphragm Type	Recommended Ft/Lbs to seal wetted end assembly	Maximum Ft/Lbs (Do NOT overtighten)
JN	Plastic	Teflon faced Elastomer	8	10
JN	Plastic	Elastomer Only	7	10
JN	Metal	Teflon faced Elastomer	8	10
JN	Metal	Elastomer Only	7	10
MF	Plastic	Teflon faced Elastomer	26	29
MF	Plastic	Elastomer Only	9	11
MF	Metal	Teflon faced Elastomer	27	30
MF	Metal	Elastomer Only	9	12
MH	Plastic	Teflon faced Elastomer	26	35
MH	Plastic	Elastomer Only	20	22
MH	Metal	Teflon faced Elastomer	30	35
MH	Metal	Elastomer Only	20	22

Reminder! - Always tighten solution head bolts in crossing/star pattern. Tightening bolts above the maximum ft/lbs can potentially push the entire wetted end assembly 'back' far enough to stretch the diaphragm over the piston. After which, during operation the stroke can then cause the diaphragm to cut itself against the solution head, especially metal heads.

For further assistance or additional details please do not hesitate to contact our factory.



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