

EXTRUSION AND TAP – VERSUS - A PEM NUT

PEM NUT

PEM NUT MATERIAL IS (CRS)
 THREADS ARE PUT IN THE PEM NUT WITH ROLL FORM TAPS
 PEM NUT CAN ONLY BE PULLED FROM ONE SIDE
 LOCATION OF PEM NUT IS WITHIN .006
 CUSTOMER IS RELYING ON THE OPERATOR TO INSTALL THE PEM NUT.
 PEM NUT COULD BE INSTALLED WRONG, UPSIDE DOWN, SIDE WAYS,
 OR NO PEM NUT AT ALL.
 PEM NUT PRESSED IN WITHOUT ENOUGH TONNAGE COULD FALL OUT IN ASSEMBLY.

EXTRUSION AND TAP

MATERIAL CRS SAME AS A PEM NUT
 ROLL FORM TAPS SAME AS A PEM NUT 30% STRONGER THAN CUTTING TAPS.
 THREADS CAN BE PULLED FROM BOTH SIDES
 LOCATION OF EXTRUSION IS BASED ON MACHINE LOCATION APPROX .003
 MACHINE INSTALLS THREAD
 THREADS WILL ALWAYS BE GOOD IF PROGRAM IS CORRECT.
 OPERATOR ONLY NEEDS TO CHECK LAST TAPPED HOLE.

UN THREADS

TEST	TYPE OF THREADS	SIZE	SCREW TYPE	IN/LB WHEN SCREW FAILED	IN/LB WHEN THREAD FAILED	RECOMMEND TORQUE
1	12 GA CRS	10-32	160,000 PSI S.H.C.S		81 IN/LB	20-29 IN/LB
1	PEM NUT	10-32	60,000 PSI LOW CARBON PHILUPS	48 IN/LB		20-29 IN/LB
1A	EXTRUSION 16 GA CRS	10-32	60,000 PSI LOW CARBON PHILUPS	42 IN/LB		20-29 IN/LB
2	PEM NUT	10-32	160,000 PSI S.H.C.S		96 IN/LB	20-29 IN/LB
2A	EXTRUSION 16 GA CRS	10-32	160,000 PSI S.H.C.S		76 IN/LB	20-29 IN/LB
3	PEM NUT	8-32	60,000 PSI LOW CARBON PHILUPS	33 IN/LB		16-19 IN/LB
3A	EXTRUSION 16 GA CRS	8-32	60,000 PSI LOW CARBON PHILUPS	32 IN/LB		16-19 IN/LB
4	PEM NUT	8-32	160,000 PSI S.H.C.S		72 IN/LB	16-19 IN/LB
4A	EXTRUSION 16 GA CRS	8-32	160,000 PSI S.H.C.S		53 IN/LB	16-19 IN/LB
5	PEM NUT	4-40	60,000 PSI LOW CARBON PHILUPS	6.5 IN/LB		4.4-4.7 IN/LB
5A	EXTRUSION 18 GA CRS	4-40	60,000 PSI LOW CARBON PHILUPS	6 IN/LB		4.4-4.7 IN/LB
6	PEM NUT	4-40	160,000 PSI S.H.C.S		28 IN/LB	4.4-4.7 IN/LB
6A	EXTRUSION 18 GA CRS	4-40	160,000 PSI S.H.C.S		27 IN/LB	4.4-4.7 IN/LB

Metric Threads

TEST	TYPE OF THREADS	SIZE	SCREW TYPE	IN/LB WHEN SCREW FAILED	IN/LB WHEN THREAD FAILED	RECOMMEND TORQUE
1	PEM NUT	M5	60,00 PSI LOW CARBON PHILUPS	5.4 N.m	0	2.25 N.m - 3.27 N.M
1	PEM NUT	M4	60,00 PSI LOW CARBON PHILUPS	3.95 N.m	0	1.8 N.m - 2.15 N.m
2	PEM NUT	M5	60,00 PSI LOW CARBON PHILUPS	5.6 N.m	0	2.25 N.m - 3.27 N.M
2	PEM NUT	M4	60,00 PSI LOW CARBON PHILUPS	2.73 N.m	0	1.8 N.m - 2.15 N.m
1A	EXTUSTION	M5	60,00 PSI LOW CARBON PHILUPS	4.75 N.m	0	2.25 N.m - 3.27 N.M
1B	EXTUSTION	M4	60,00 PSI LOW CARBON PHILUPS	3.62 N.m	0	1.8 N.m - 2.15 N.m
2A	EXTUSTION	M5	60,00 PSI LOW CARBON PHILUPS	4.9 N.m	0	2.25 N.m - 3.27 N.M
2B	EXTUSTION	M4	60,00 PSI LOW CARBON PHILUPS	3.52 N.m	0	1.8 N.m - 2.15 N.m