

Performance Data<sup>(1)</sup>

TMSO4 Standoffs

Unified	Type	Thread Code	Test Sheet Material - .008" 304 Stainless Steel HRC 37 / HV 360			
			Installation (lbs.)	Pushout (lbs.)	Torque-out (in. lbs.)	Pull-thru (lbs.)
	TMSO4	080	2600	30	4.0 <sup>(2)</sup>	137
TMSO4	256	3000	40	4.4	193	

Metric	Type	Thread Code	Test Sheet Material - 0.2mm 304 Stainless Steel HRC 37 / HV 360			
			Installation (kN)	Pushout (N)	Torque-out (N-m)	Pull-thru (N)
	TMSO4	M1	8.2	130	0.07 <sup>(2)</sup>	440
TMSO4	M1.2	9.9	130	0.14 <sup>(2)</sup>	525	
TMSO4	M1.4	11.1	130	0.21 <sup>(2)</sup>	590	
TMSO4	M1.6	11.6	130	0.45 <sup>(2)</sup>	610	
TMSO4	M2	13.4	175	0.5	860	

MSO4 Standoffs

Unified	Type	Thread Code	Max. Rec. Tightening Torque for Mating Screw (in. lbs.)	Sheet Thickness (in.)	Test Sheet Material - 304 Stainless Steel			
					Installation (lbs.)	Pushout (lbs.)	Torque-out (in. lbs.) <sup>(2)</sup>	Pull-Thru (lbs.) <sup>(2)</sup>
	MSO4	080		.65	.013	2500	33	1.3
.017					45		2.2	
MSO4	256		1.3	.013	2500	33	2.2	110
				.017		45	2.6	

Metric	Type	Thread Code	Max. Rec. Tightening Torque for Mating Screw (N-m)	Sheet Thickness (mm)	Test Sheet Material - 304 Stainless Steel			
					Installation (kN)	Pushout (N)	Torque-out (N-m) <sup>(2)</sup>	Pull-Thru (N) <sup>(2)</sup>
	MSO4	M1		0.019	0.3	11.1	150	0.15
0.43					200		0.25	
MSO4	M1.2		0.036	0.3	11.1	150	0.15	350
				0.43		200	0.25	
MSO4	M1.6		0.057	0.3	11.1	200	0.15	350
				0.43		150	0.25	
MSO4	M1.6		0.084	0.3	11.1	200	0.15	350
				0.43		150	0.25	
MSO4	M2		0.175	0.3	11.1	150	0.25	500
				0.43		200	0.3	

MPP Pins

Type	Pin Diameter Code	Test Sheet Thickness	Installation (kN)	Pushout (N)
MPP	1MM	0.5mm stainless steel HRB 88	10	320
MPP	1.5MM	0.5mm stainless steel HRB 88	12	760
MPP	2MM	0.5mm stainless steel HRB 88	18	860

T4 Fasteners

Type	300 Series Stainless Steel			
	Installation		Pullout	
	N	lbs.	N	lbs.
T4-10-025	2020	455	200	45
T4-10-050				

TA Fasteners

Type	5052-H34 Aluminum			
	Installation		Pullout	
	N	lbs.	N	lbs.
TA-10-025	820	185	80	18
TA-10-050				
TA-10-075				

- (1) Published installation forces are for general reference. Actual set-up and confirmation of complete installation should be made by observing proper seating of fastener as described in the installation steps. Other performance values reported are averages when all proper installation parameters and procedures are followed. Variations in mounting hole size, sheet material, and installation procedure may affect performance. Performance testing this product in your application is recommended. We will be happy to provide technical assistance and/or samples for this purpose.
- (2) Performance in torque-out and pull-thru will depend on the strength and type of screw being used. In most cases the failure will be in the screw and not in the self clinching standoff. Please contact our Applications Engineering group with any questions.