

# Title: RECOMMENDED ACTUATOR MOUNTING SCREW TIGHTENING TORQUES

NOTE: This chart is provided for guidance only. If in doubt, refer to screw manufacturer's data.

## METRIC UNITS

Actuator Size	Thread Size (mm)	No. of Screws	PCD (mm)	Recommended Tightening Torque (Nm)	
				@ 5.5 Bar	@ 7 Bar
024	4	4	25.50	1.7	2.4
034	5	4	31.10	4.0	5.0
054	5	6	34.90	4.6	6.0*
074	8	4	50.90	18.0	23.0
084	8	4	70.00	20.9	26.3
094	10	4	65.00	35.7	45.0
103	10	4	102.00	36.3	46.0
124	12	4	77.80	83.5	104.0*
144	16	4	98.80	200.0	220.0*
154	16	4	140.00	200.0	220.0*
164	24	4	152.70	455.0	570.0*
184	30+	4	226.30	840.0	1050.0
204	30+	8	226.30	778.0	980.0
304	30+	8	226.30	1170.0	1170.0

## ENGLISH UNITS

Actuator Size	Thread Size	No. of Screws	PCD (inches)	Recommended Tightening Torque (lbf.in)	
				@ 80 psi	@ 100 psi
027	8-32 UNC	4	1.00	17	21
037	10-24 UNC	4	1.22	32	40
057	10-24 UNC	6	1.37	38	48*
077	5/16 UNC	4	2.00	157	197
087	5/16 UNC	4	2.76	180	225
097	3/8 UNC	4	2.56	310	390
107	3/8 UNC	4	4.02	316	395
127	1/2 UNC	4	3.06	770	980*
147	5/8 UNC	4	3.89	1770	1950*
157	5/8 UNC	4	5.51	1770	1950*
167	7/8 UNC	4	6.01	3660	4600
187	1 1/8 UNC+	4	8.91	7090	8870
207	1 1/8 UNC+	8	8.91	6560	8195
307	1 1/8 UNC+	8	8.91	9834	9834

- The above data assumes that the mounting surfaces are flat and exhibit a coefficient of friction 0.2 (e.g. two painted surfaces) and provides a safety factor of 2 to allow for shock loading.
- Screw thread engagement should be at least 75% of the maximum available.
- The torques stated assume full double acting actuator torque at the air pressures specified. For spring return or reduced air supply pressures, these torques can be reduced in proportion to the reduction in actuator output torque.
- The type of screw (i.e. Hexhead or socket head) does not affect the recommended torque. For sizes marked thus "\*" use high tensile steel screws (minimum grade 8.8 BS3692) or high tensile stainless steel screws (minimum grade A4 ISO3506). For M30 or 1 1/8 UNC marked thus "+" use carbon steel only. Ensure that if zinc plating is applied to screws, it does not suffer from "hydrogen embrittlement". For all other sizes use Grade 8.8 carbon steel, A2 or A4 stainless steel specification screws.

Issue	Signed	Date	KINETROL Trading Estate Farnham Surrey England	Doc.No. TD111
K	T.L.	04/06/15		Page 1 of 1