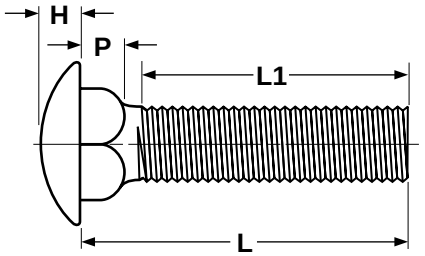
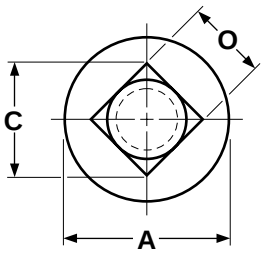
Cap Screws & Bolts — *METRIC* — *Carriage Bolts Square Neck (large)*





METRIC - CARRIAGE BOLTS

ISO 8677; DIN 603; JIS B 1171

Nominal Diameter	Pitch (mm)	O		C	P		A		H		L1		
		Square Width Across Flats		Square Width Across Corners	Square Depth		Head Diameter		Head Height		Thread Length <=125	Thread Length >125 & <=200	Thread Length >200
mm		Max	Min	Min	Max	Min	Max	Min	Max	Min	Ref	Ref	Ref
M5	0.8	5.48	4.52	5.9	4.1	2.9	13	11.9	3.1	2.5	16	-	-
M6	1	6.48	5.52	7.2	4.6	3.4	16	14.9	3.6	3	18	-	-
M8	1.25	8.58	7.42	9.6	5.6	4.4	20	18.7	4.8	4	22	28	-
M10	1.5	10.58	9.42	12.2	6.6	5.4	24	22.7	5.8	5	26	32	-
M12	1.75	12.7	11.3	14.7	8.8	7.2	30	28.7	6.8	6	30	36	-
M16	2	16.7	15.3	19.9	12.9	11.1	38	36.4	8.9	8	38	44	57
M20	2.5	20.84	19.16	24.9	15.9	14.1	46	44.4	10.9	10	46	52	65

Tolerance on Length				
	20-30mm: ±1.05	35-50mm: ±1.25	55-80mm: ±1.5	
	90-120mm: ±1.75	130-150mm: ±2.0	160-180mm: ±4.0	200mm: ±4.6

Description	A round head, self-anchoring bolt with a square neck under the head and a metric thread pitch.
Applications/ Advantages	The square neck is designed to keep the bolt from turning as a nut is tightened. Best for use in wood or thick gauge sheet metal.
Material	Class 4.6 carriage bolts shall be made from a carbon steel which conforms to the following chemical composition-- *Carbon:* 0.55% maximum; *Phosphorus:* 0.05% maximum; *Sulfur:* 0.06% maximum.
Hardness	Rockwell B 67 - 99.5 (Vickers HV 120 - 250)
Yield Strength	240 N/mm^2 minimum
Tensile Strength	400 N/mm^2 minimum
Elongation	22% minimum
Plating	See Appendix-A for plating information