



Tamperproof - Hexagon Drive Countersunk (HSA) 12mm

UPDATED: 29/01/2017

PLEASE NOTE

From time to time, materials and specifications are changed to improve performance, please check for the latest information.

For additional technical data please call the Sales Desk:

01702 206 962 / 01702 207 909

HSA 12mm Options

Screwbolt Diameter	Head Diameter	Allen Key Size	Clearance Hole Diameter	Max Fixing Thickness 'A'	Thread Length 'B'	Clearance Depth 'C'	Box Quantity	Order code:
12mm	28mm	10mm	15mm	20mm	75mm	24mm	50	HSA 12 / 075
12mm	28mm	10mm	15mm	46mm	100mm	24mm	50	HSA 12 / 100
12mm	28mm	10mm	15mm	96mm	150mm	24mm	50	HSA 12 / 150
12mm	Plug For converting HSA & DSA Screwbolts into Tamperproof Anchors						50	PL / 12

Drill Bit Diameter	Concrete and Brick	12.0mm
	Soft Materials	11.0mm

HSA Ultimate & Safe Load Characteristics based on 3:1 Ratio

Material	Embedment Depth (mm)	Tensile Load kN.		Shear Load kN.		Maximum Torque Nm. **
		Ultimate	Safe	Ultimate	Safe	
Concrete	60 N/mm ²	60	38.70	12.90	-	-
	60 N/mm ²	90	69.00	23.00	59.80	19.93
Concrete	30 N/mm ²	60	26.50	8.83	-	-
	30 N/mm ²	90	43.00	14.33	59.80	19.93
Engr. Brick	100 N/mm ²	45	20.00	6.67	-	-
Semi.Engr.	70 N/mm ²	45	15.00	5.00	-	-
Fletton	20 N/mm ²	45	15.80	5.27	-	-
Butterly	20 N/mm ²	45	5.10	1.70	-	-
Hemelite	3.5 N/mm ²	75	12.10	4.03	-	-
Topcrete	7.0 N/mm ²	75	18.90	6.30	-	-

**With softer materials, care should be taken not to exceed the maximum recommended torque, as this may result in the de-grading of the matrix.

HSA 12mm Technical Data

Material	Boron Steel BS3111/9/2.1.A
Finish	Mechanical Zinc as standard, or Zinc & Yellow passivated
Other finishes	Other platings & finishes are available to special order subject to quantity
Tensile strength	800N/mm ² Case hardened
Other sizes	Other lengths of all diameters are available to special order subject to quantity
Embedment concrete and brick	Minimum recommended is 4.5 × bolt diameter
Soft block	Minimum recommended is 75mm
Edge distance	For Edge distances between 5 dia. and 10 dia. see reduction factors

HSA 12mm Countersunk Head Dimensions

Screwbolt Size	Head Diameter - D		Head depth - E nom.	Hex socket size - F		Hex socket depth - G		Radius - R nom.
	min.	max.		min.	max.	min.	max.	
12mm	26.67	30.23	9.15	10.03	10.20	4.65	-	3.5

All dimensions in millimetres (mm)

