



Hold Down Details In Blockwork

Introduction

Details on this sheet provide fixing arrangements and capacities for hold-down details in blockwork designed in MiTek software. Table 1 gives maximum allowable uplift forces for each hold-down fixing arrangement to single, double and triple truss heel joints.

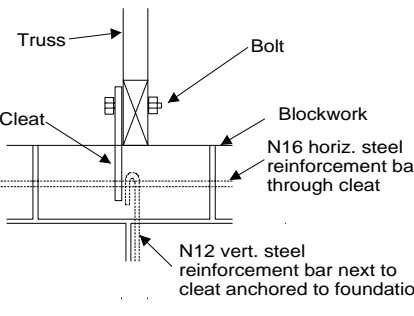
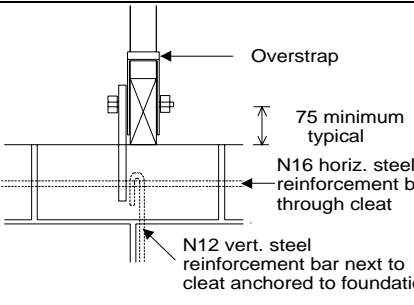
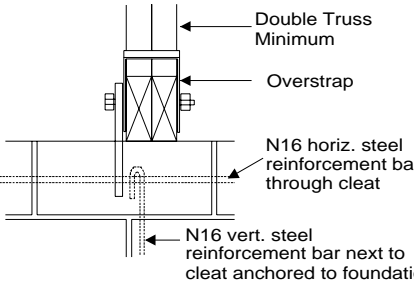
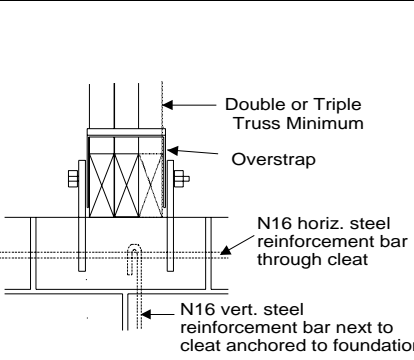
Reading the Chart

1. Use MiTek software to design the truss and bracket fixing required based on fixing arrangements listed in Table 1.

For further assistance with Hold down details in Blockwork, contact your nearest MiTek Engineering Design Office.

Hold Down Details In Blockwork

Table 1: Truss Hold Details to Blockwork

Bracket Type in MiTek 20/20	Joint Type	Fixing Type	Fixing Description	Design Capacity (kN)					
				Joint Group					
				J2 JD2 JD3	J3	J4	JD4	JD5	JD6
MIUG25		1A	1/200x50x5mm cleat 1/12mm cuphead bolt J4-JD6	-	-	10	16	11	8
		1B	1/200x50x5mm cleat 1/16mm cuphead bolt J2-J3, JD2-JD3	20	15	-	-	-	-
		1C	1/200x50x5mm cleat 1/M12 Bolt with 50mm washers for all joint groups	20	15	10	16	11	8
MIUG25		2A	1/200x50x5mm cleat 1/M16 bolt for J2 & J3, JD2-JD3	34	25	-	-	-	-
		2B	1/200x50x5mm cleat 1/M12 HS Bolt for J4 to JD6 50x3mm overstrap	-	-	16	23	18	15
MIUG25		3A	1/200x65x5mm cleat 1/M16 HS Bolt 50x3mm overstrap Pack overstrap tightly with non-compressive material. Double 35mm truss Min.	49	44	28	44	36	28
MIUG25		4A	2/200x65x5mm cleats 1/M16 HS Bolt 50x3mm overstrap Pack overstrap tightly with non-compressive material. Double 35mm truss Min.	76	54	-	-	-	-
		4B	2/200x65x5mm cleats 1/M16 HS Bolt 50x3mm overstrap Pack overstrap tightly with non-compressive material. Triple 35mm truss Min.	-	-	34	54	43	34



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Notes:

1. Bolt through or above truss heel plate.
2. For girder trusses in commercial buildings, multiply the design capacity by 0.85.

References:

1. An Investigation of Truss Hold Down. TR No.44, James Cook University, Cyclone Testing Station October 1996.
2. An Investigation of Bond Beam Truss Hold Down Connections. TR No. 49, Cyclone Testing Station, February 2003.
3. AS 1720.1 Timber Structures Code. Standards Australia 1997.