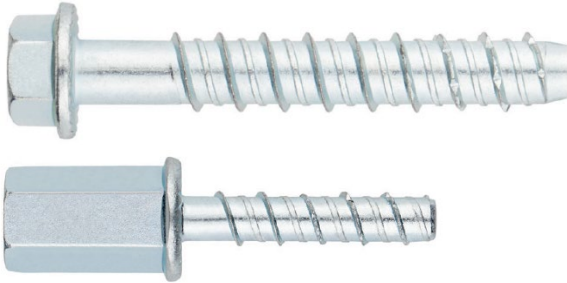


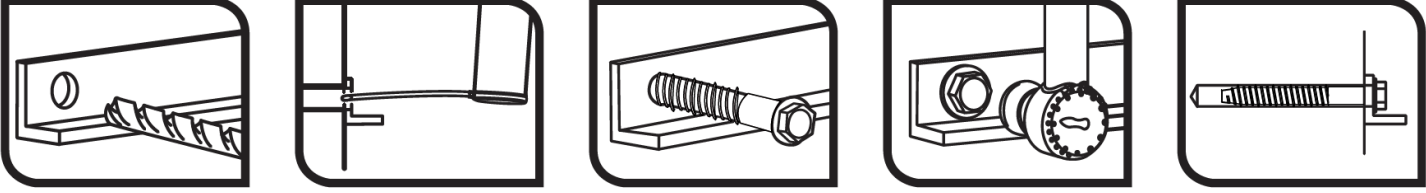
SBU Option 1 Concrete Screwbolt

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ETA APPROVED FIXINGS

TECHNICAL DATA SHEET



Zinc Plated

Characteristics	Suitable Materials
- Pilot hole in concrete needed, thread is created by the anchor during the installation process - Use for high loads. High fire resistance - Assessed for 2 installation depths and 3 for Ø10 - Use in cracked and non-cracked concrete - Comply with guideline VdS CEA 4001:2021-01(07) - Suitable when reduced edge distances or spacing required - Qualified for static and quasi-static - Easy installation - Installation through the fixture - Removable, leaving concrete surface flat - VdS available from Ø6 to Ø18	- Reinforced Concrete - Cracked Concrete - Concrete - Stone - Hollow-core Slab 
Installation	
	

UK: Harrison & Clough Ltd.,
Galleon Blvd, Crossways Bus. Park,
Dartford, Kent, DA2 6QE

EU: QFF Distribution Ltd.,
24 Magna Drive, Magna Bus. Park,
Citywest Road, Dublin, D24 FNYO

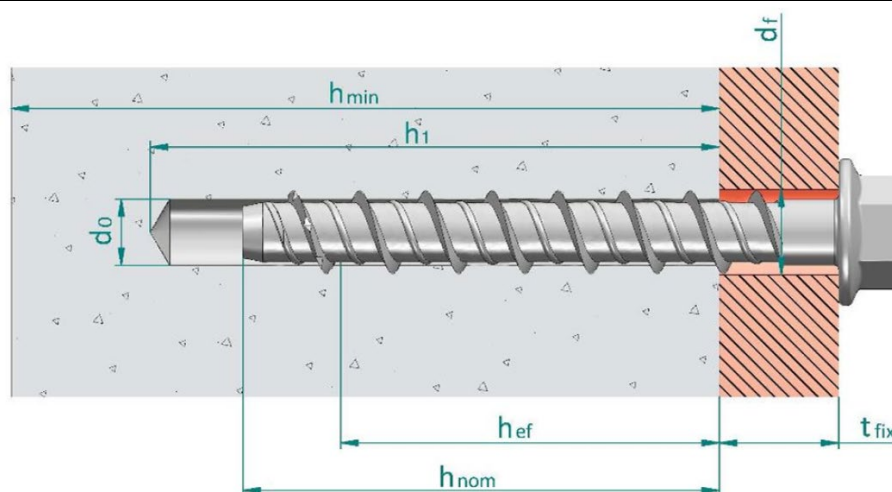
Email: masonmate@harclo.com
Web: www.materange.com

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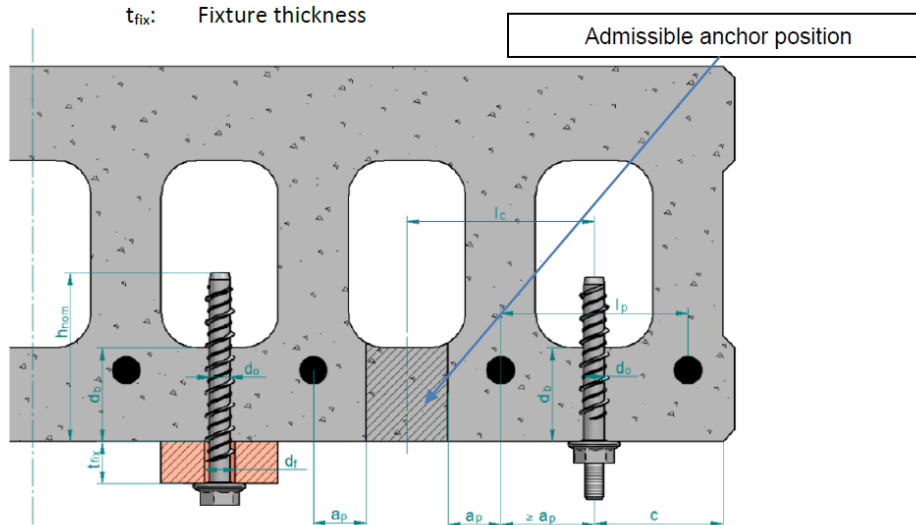
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ETA APPROVED FIXINGS

TECHNICAL DATA SHEET

Installation Data



- d_0 : Nominal diameter of drill bit
- d_b : Bottom flange thickness
- d_f : Fixture clearance hole diameter
- h_{ef} : Effective anchorage depth
- h_1 : Depth of drilled hole
- h_{nom} : Overall fastener embedment depth in the concrete
- h_{min} : Minimum thickness of concrete member
- t_{fix} : Fixture thickness



TECHNICAL DATA SHEET

Seismic Load Assessment				
Code	Size	Assessed	C1	C2
		ETA		
Hexagon Head Concrete Screwbolt				
MAMSBU06040	M6 x 40	✓	-	-
MAMSBU06050	M6 x 50	✓	-	-
MAMSBU06060	M6 x 60	✓	✓	-
MAMSBU06080	M6 x 80	✓	✓	-
MAMSBU06100	M6 x 100	✓	✓	-
MAMSBU08055	M8 x 55	✓	✓	✓
MAMSBU08080	M8 x 80	✓	✓	✓
MAMSBU08100	M8 x 100	✓	✓	✓
MAMSBU10060	M10 x 60	✓	-	-
MAMSBU10070	M10 x 70	✓	-	-
MAMSBU10080	M10 x 80	✓	-	-
MAMSBU10100	M10 x 100	✓	✓	✓
MAMSBU10120	M10 x 120	✓	✓	✓
MAMSBU10140	M10 x 140	✓	✓	✓
MAMSBU12080	M12 x 80	✓	-	-
MAMSBU12090	M12 x 90	✓	-	-
MAMSBU12110	M12 x 110	✓	✓	✓
MAMSBU12150	M12 x 150	✓	✓	✓
MAMSBU14080	M14 x 80	✓	-	-
MAMSBU14100	M14 x 100	✓	-	-
MAMSBU14120	M14 x 120	✓	✓	✓
MAMSBU14130	M14 x 130	✓	✓	✓
MAMSBU14140	M14 x 140	✓	✓	✓
MAMSBU14160	M14 x 160	✓	✓	✓
MAMSBU16100	M16 x 100	✓	-	-
MAMSBU16150	M16 x 150	✓	-	-
MAMSBU18100	M18 x 100	✓	-	-
MAMSBU18130	M18 x 130	✓	-	-
MAMSBU18160	M18 x 160	✓	✓	✓
MAMSBU18200	M18 x 200	✓	✓	✓
Rod Hanger Female Concrete Screwbolt				
MAMSBUF06035	M6 x 35	✓	-	-
MAMSBUF06055	M6 x 55	✓	-	-

TECHNICAL DATA SHEET

Installation Parameters (Concrete)

General Installation Parameters

Code	Size	Assessed	Drill Bit Diameter	Fixture Clearance Hole	Spanner	Maximum Torque	Minimum Allowable Spacing	Minimum Allowable Edge Distance
		ETA	D _o	D _f	SW/Tx	T _{inst}	S _{min}	C _{min}
			mm	mm	-	Nm	mm	mm

Hexagon Head Concrete Screwbolt

MAMSBU06040	M6 x 40	✓	6	7,5 - 9	SW 10	10	35	35
MAMSBU06050	M6 x 50	✓						
MAMSBU06060	M6 x 60	✓						
MAMSBU06080	M6 x 80	✓						
MAMSBU06100	M6 x 100	✓						
MAMSBU08055	M8 x 55	✓	8	10,5 - 12	SW 13	20	35	35
MAMSBU08080	M8 x 80	✓						
MAMSBU08100	M8 x 100	✓						
MAMSBU10060	M10 x 60	✓						
MAMSBU10070	M10 x 70	✓	10	12,5 - 14	SW 15	30	50	40
MAMSBU10080	M10 x 80	✓						
MAMSBU10100	M10 x 100	✓						
MAMSBU10120	M10 x 120	✓						
MAMSBU10140	M10 x 140	✓						
MAMSBU12080	M12 x 80	✓	12	14,8 - 16	SW 18	50	75	45
MAMSBU12090	M12 x 90	✓						
MAMSBU12110	M12 x 110	✓						
MAMSBU12150	M12 x 150	✓						
MAMSBU14080	M14 x 80	✓	14	16,9 - 18	SW 21	70	80	50
MAMSBU14100	M14 x 100	✓						
MAMSBU14120	M14 x 120	✓						
MAMSBU14130	M14 x 130	✓						
MAMSBU14140	M14 x 140	✓						
MAMSBU14160	M14 x 160	✓						
MAMSBU16100	M16 x 100	✓	16	18,9 - 20	SW 24	80	80	50
MAMSBU16150	M16 x 150	✓						
MAMSBU18100	M18 x 100	✓	18	20,9 - 22	SW 24	90	90	55
MAMSBU18130	M18 x 130	✓						
MAMSBU18160	M18 x 160	✓						
MAMSBU18200	M18 x 200	✓						

Rod Hanger Female Concrete Screwbolt

MAMSBUF06035	M6 x 35	✓	6	-	SW 13	10	35	35
MAMSBUF06055	M6 x 55	✓						

TECHNICAL DATA SHEET

Installation Parameters (Concrete)

Standard Installation Depth ($h_{ef, std}$)

Code	Size	Assessed	Minimum Concrete Thickness	Depth of Drill Hole	Installation Depth	Effective Anchorage Depth	Thickness of Fixture	Critical Spacing (concrete cone)	Critical Edge Distance (concrete cone)	Critical Spacing (splitting)	Critical Edge Distance (splitting)
		ETA	h_{min} mm	H_1 mm	h_{nom} mm	h_{ef} mm	t_{fix} mm	$S_{cr,N}$ mm	$C_{cr,N}$ mm	$S_{cr,sp}$ mm	$C_{cr,sp}$ mm
Hexagon Head Concrete Screwbolt											
MAMSBU06040	M6 x 40	✓	-	-	-	-	-	-	-	-	-
MAMSBU06050	M6 x 50	✓	-	-	-	-	-	-	-	-	-
MAMSBU06060	M6 x 60	✓	100	65	55	43,0	5	129	65	170	85
MAMSBU06080	M6 x 80	✓					25				
MAMSBU06100	M6 x 100	✓					45				
MAMSBU08055	M8 x 55	✓	-	-	-	-	-	-	-	-	-
MAMSBU08080	M8 x 80	✓	100	75	65	50,5	15	152	76	200	100
MAMSBU08100	M8 x 100	✓					35				
MAMSBU10060	M10 x 60	✓	-	-	-	-	-	-	-	-	-
MAMSBU10070	M10 x 70	✓	-	-	-	-	-	-	-	-	-
MAMSBU10080	M10 x 80	✓	-	-	-	-	-	-	-	-	-
MAMSBU10100	M10 x 100	✓	135	95	85	67,0	15	201	101	210	105
MAMSBU10120	M10 x 120	✓					35				
MAMSBU10140	M10 x 140	✓					55				
MAMSBU12080	M12 x 80	✓	-	-	-	-	-	-	-	-	-
MAMSBU12090	M12 x 90	✓	-	-	-	-	-	-	-	-	-
MAMSBU12110	M12 x 110	✓	170	120	105	83,5	5	251	126	220	110
MAMSBU12150	M12 x 150	✓					45				
MAMSBU14080	M14 x 80	✓	-	-	-	-	-	-	-	-	-
MAMSBU14100	M14 x 100	✓	-	-	-	-	-	-	-	-	-
MAMSBU14120	M14 x 120	✓	185	130	115	92,0	5	276	138	230	115
MAMSBU14130	M14 x 130	✓					15				
MAMSBU14140	M14 x 140	✓					25				
MAMSBU14160	M14 x 160	✓					45				
MAMSBU16100	M16 x 100	✓	-	-	-	-	-	-	-	-	-
MAMSBU16150	M16 x 150	✓	185	120	120	92	30	276	138	280	140
MAMSBU18100	M18 x 100	✓	-	-	-	-	-	-	-	-	-
MAMSBU18130	M18 x 130	✓	-	-	-	-	-	-	-	-	-
MAMSBU18160	M18 x 160	✓	225	160	140	112,0	20	336	168	350	175
MAMSBU18200	M18 x 200	✓					60				
Rod Hanger Female Concrete Screwbolt											
MAMSBUF06035	M6 x 35	✓	-	-	-	-	-	-	-	-	-
MAMSBUF06055	M6 x 55	✓	100	65	55	43,0	-	129	65	170	85

TECHNICAL DATA SHEET

Installation Parameters (Concrete)

Reduced Installation Depth ($h_{ef, red}$)

Code	Size	Assessed	Minimum Concrete Thickness	Depth of Drill Hole	Installation Depth	Effective Anchorage Depth	Thickness of Fixture	Critical Spacing (concrete cone)	Critical Edge Distance (concrete cone)	Critical Spacing (splitting)	Critical Edge Distance (splitting)
		ETA	h_{min} mm	H_1 mm	h_{nom} mm	h_{ef} mm	t_{fix} mm	$S_{cr,N}$ mm	$C_{cr,N}$ mm	$S_{cr,sp}$ mm	$C_{cr,sp}$ mm
Hexagon Head Concrete Screwbolt											
MAMSBU06040	M6 x 40	✓	100	45	35	26,0	5	78	39	90	45
MAMSBU06050	M6 x 50	✓					15				
MAMSBU06060	M6 x 60	✓					25				
MAMSBU06080	M6 x 80	✓					45				
MAMSBU06100	M6 x 100	✓					65				
MAMSBU08055	M8 x 55	✓	100	60	50	37,5	5	113	57	130	65
MAMSBU08080	M8 x 80	✓					30				
MAMSBU08100	M8 x 100	✓					50				
MAMSBU10060	M10 x 60	✓	100	65	55	41,5	5	125	63	140	70
MAMSBU10070	M10 x 70	✓					15				
MAMSBU10080	M10 x 80	✓					25				
MAMSBU10100	M10 x 100	✓					45				
MAMSBU10120	M10 x 120	✓					65				
MAMSBU10140	M10 x 140	✓					85				
MAMSBU12080	M12 x 80	✓	120	90	75	58,0	5	174	87	190	95
MAMSBU12090	M12 x 90	✓					15				
MAMSBU12110	M12 x 110	✓					35				
MAMSBU12150	M12 x 150	✓					75				
MAMSBU14080	M14 x 80	✓	120	90	75	58,0	5	174	87	190	95
MAMSBU14100	M14 x 100	✓					25				
MAMSBU14120	M14 x 120	✓					45				
MAMSBU14130	M14 x 130	✓					55				
MAMSBU14140	M14 x 140	✓					65				
MAMSBU14160	M14 x 160	✓					85				
MAMSBU16100	M16 x 100	✓	115	100	80	58	20	174	87	180	90
MAMSBU16150	M16 x 150	✓					70				
MAMSBU18100	M18 x 100	✓	140	110	90	69,5	10	209	105	230	115
MAMSBU18130	M18 x 130	✓					40				
MAMSBU18160	M18 x 160	✓					70				
MAMSBU18200	M18 x 200	✓					110				
Rod Hanger Female Concrete Screwbolt											
MAMSBUF06035	M6 x 35	✓	100	45	35	26,0	-	78	39	90	45
MAMSBUF06055	M6 x 55	✓	-	-	-	-	-	-	-	-	-

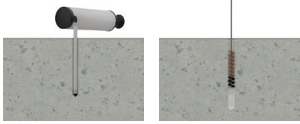
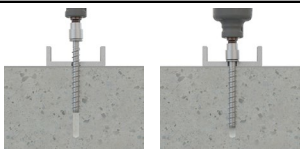
TECHNICAL DATA SHEET

Installation Parameters (Hollow Core Slabs) [Installation Depth Reduced/Intermediate/Standard]								
General Installation Parameters								
Code	Size	Assessed	Drill Bit Diameter	Fixture Clearance Hole	Spanner	Maximum Torque	Minimum Allowable Spacing	Minimum Allowable Edge Distance
		ETA	D _o	D _f	SW/Tx	T _{inst}	S _{min}	C _{min}
			mm	mm	-	Nm	mm	mm
Hexagon Head Concrete Screwbolt								
MAMSBUE06040	M6 x 40	✓	6	7,5 - 9	SW 10	10	35	35
MAMSBUE06050	M6 x 50	✓						
MAMSBUE06060	M6 x 60	✓						
MAMSBUE06080	M6 x 80	✓						
MAMSBUE06100	M6 x 100	✓						
Rod Hanger Female Concrete Screwbolt								
MAMSBUE06035	M6 x 35	✓	6	7,5 - 9	SW 13	10	35	35
MAMSBUE06055	M6 x 55	✓						

Installation Parameters (Hollow Core Slabs) [Installation Depth Reduced/Intermediate/Standard]											
Standard Installation Depth (h _{ef1} / h _{ef2} / h _{ef3})											
Code	Size	Assessed	Minimum Concrete Thickness	Depth of Drill Hole	Installation Depth	Effective Anchorage Depth	Thickness of Fixture	Critical Spacing (concrete cone)	Critical Edge Distance (concrete cone)	Critical Spacing (splitting)	Critical Edge Distance (splitting)
		ETA	h _{min}	H ₁	h _{nom}	h _{ef}	t _{fix}	S _{cr,N}	C _{cr,N}	S _{cr,sp}	C _{cr,sp}
			mm	mm	mm	mm	mm	mm	mm	mm	mm
Hexagon Head Concrete Screwbolt											
MAMSBUE06040	M6 x 40	✓	25/30/40	30/40/45	30/40/45	20/22/26	10/-/-	60/66/78	30/33/39	90	45
MAMSBUE06050	M6 x 50	✓					20/10/5				
MAMSBUE06060	M6 x 60	✓					30/20/15				
MAMSBUE06080	M6 x 80	✓					50/40/35				
MAMSBUE06100	M6 x 100	✓					70/60/55				
Rod Hanger Female Concrete Screwbolt											
MAMSBUE06035	M6 x 35	✓	25/30/40	30/40/45	30/40/45	20/22/26	-/-/-	60/66/78	30/33/39	90	45
MAMSBUE06055	M6 x 55	✓									

TECHNICAL DATA SHEET

Installation Procedure

			
1. Drilling Check the concrete is well compacted and without significant porosity. Use drill in hammer mode. Drill according to specified depths in previous tables.	2. Blow and Clean Clean the drill hole from dust and concrete remains. Use blow pump and brush.	3. Install Select a powered impact wrench or a torque wrench that does not exceed the maximum torque indicated in previous tables. Attach an appropriate size hex socket to the wrench. Mount the screw anchor head in the socket.	4. Apply the Torque Drive the anchor with an impact driver or a torque wrench through the fixture and into the hole until the anchor head washer comes in contact with the fixture. The anchor must be snug after installation. Do not spin the hex socket off the anchor to disengage.

TECHNICAL DATA SHEET

Resistances (Concrete)

Characteristic Resistance (Structural Application) [kN]

Resistances in concrete class C20/C25 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

Code	Size	Assessed		Non-cracked Concrete				Cracked Concrete			
				Tension $N_{Rk, ucr}$		Shear $V_{Rk, ucr}$		Tension $N_{Rk, cr}$		Shear $V_{Rk, cr}$	
		ETA		($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)
Hexagon Head Concrete Screwbolt											
MAMSB06040	M6 x 40	✓		-	5,00	-	<u>12,53</u>	-	4,57	-	9,36
MAMSB06050	M6 x 50	✓									
MAMSB06060	M6 x 60	✓									
MAMSB06080	M6 x 80	✓		13,87	5,00	<u>12,53</u>	<u>12,53</u>	9,71	4,57	11,17	9,36
MAMSB06100	M6 x 100	✓									
MAMSB08055	M8 x 55	✓		-	11,30	-	<u>19,57</u>	-	7,91	-	14,23
MAMSB08080	M8 x 80	✓									
MAMSB08100	M8 x 100	✓		17,65	11,30	<u>19,57</u>	<u>19,57</u>	12,36	7,91	15,69	14,23
MAMSB10060	M10 x 60	✓									
MAMSB10070	M10 x 70	✓		-	13,15	-	25,65	-	9,21	-	17,95
MAMSB10080	M10 x 80	✓									
MAMSB10100	M10 x 100	✓									
MAMSB10120	M10 x 120	✓		26,98	13,15	<u>27,40</u>	25,65	18,89	9,21	<u>27,40</u>	17,95
MAMSB10140	M10 x 140	✓									
MAMSB12080	M12 x 80	✓		-	21,73	-	<u>37,24</u>	-	15,21	-	35,44
MAMSB12090	M12 x 90	✓									
MAMSB12110	M12 x 110	✓									
MAMSB12150	M12 x 150	✓		37,54	21,73	<u>37,24</u>	<u>37,24</u>	26,27	15,21	<u>37,24</u>	35,44
MAMSB14080	M14 x 80	✓		-	21,73	-	<u>52,72</u>	-	15,21	-	38,79
MAMSB14100	M14 x 100	✓									
MAMSB14120	M14 x 120	✓									
MAMSB14130	M14 x 130	✓		43,41	21,73	<u>52,72</u>	<u>52,72</u>	30,39	15,21	<u>52,72</u>	38,79
MAMSB14140	M14 x 140	✓									
MAMSB14160	M14 x 160	✓									
MAMSB16100	M16 x 100	✓		-	-	-	-	30,39	15,21	<u>52,72</u>	32,55
MAMSB16150	M16 x 150	✓		43,41	21,73	<u>57,97</u>	46,50				
MAMSB18100	M18 x 100	✓		-	28,50	-	75,82	-	19,95	-	53,07
MAMSB18130	M18 x 130	✓									
MAMSB18160	M18 x 160	✓		58,31	28,50	<u>80,78</u>	75,82	40,82	19,95	<u>80,78</u>	53,07
MAMSB18200	M18 x 200	✓									
Rod Hanger Female Concrete Screwbolt											
MAMSB06035	M6 x 35	✓		-	5,00	-	-	-	4,57	-	-
MAMSB06055	M6 x 55	✓		13,87	-	-	-	9,71	-	-	-

1 kN = 100 kg

Values underlined and in italics show Steel failure, **bold** values concrete failure and other indicate pull out failure.

TECHNICAL DATA SHEET

Resistances (Concrete)

Design Resistance (Structural Application) [kN]

Resistances in concrete class C20/C25 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

Code	Size	Assessed		Non-cracked Concrete				Cracked Concrete			
				Tension $N_{Rd, ucr}$		Shear $V_{Rd, ucr}$		Tension $N_{Rd, cr}$		Shear $V_{Rd, cr}$	
		ETA		($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)
Hexagon Head Concrete Screwbolt											
MAMSBU06040	M6 x 40	✓		-	2,78	-	<u>8,35</u>	-	2,54	-	6,24
MAMSBU06050	M6 x 50	✓									
MAMSBU06060	M6 x 60	✓									
MAMSBU06080	M6 x 80	✓		9,25	2,78	<u>8,35</u>	<u>8,35</u>	6,47	2,54	7,44	6,24
MAMSBU06100	M6 x 100	✓									
MAMSBU08055	M8 x 55	✓		-	6,28	-	<u>13,05</u>	-	4,39	-	9,49
MAMSBU08080	M8 x 80	✓									
MAMSBU08100	M8 x 100	✓		11,77	6,28	<u>13,05</u>	<u>13,05</u>	8,24	4,39	10,46	9,49
MAMSBU10060	M10 x 60	✓									
MAMSBU10070	M10 x 70	✓		-	8,77	-	17,10	-	6,14	-	11,97
MAMSBU10080	M10 x 80	✓									
MAMSBU10100	M10 x 100	✓									
MAMSBU10120	M10 x 120	✓		17,99	8,77	<u>18,27</u>	17,10	12,59	6,14	<u>18,27</u>	11,97
MAMSBU10140	M10 x 140	✓									
MAMSBU12080	M12 x 80	✓		-	14,49	-	<u>24,83</u>	-	10,14	-	23,63
MAMSBU12090	M12 x 90	✓									
MAMSBU12110	M12 x 110	✓									
MAMSBU12150	M12 x 150	✓		25,02	14,49	<u>24,83</u>	<u>24,83</u>	17,52	10,14	<u>24,83</u>	23,63
MAMSBU14080	M14 x 80	✓		-	21,73	-	<u>52,72</u>	-	15,21	-	38,79
MAMSBU14100	M14 x 100	✓									
MAMSBU14120	M14 x 120	✓									
MAMSBU14130	M14 x 130	✓									
MAMSBU14140	M14 x 140	✓		43,41	21,73	<u>52,72</u>	<u>52,72</u>	30,39	15,21	<u>52,72</u>	38,79
MAMSBU14160	M14 x 160	✓									
MAMSBU16100	M16 x 100	✓		-	-	-	-	20,26	10,14	<u>38,65</u>	21,70
MAMSBU16150	M16 x 150	✓		28,94	14,49	<u>38,65</u>	31,00				
MAMSBU18100	M18 x 100	✓		-	19,00	-	50,54	-	13,30	-	35,38
MAMSBU18130	M18 x 130	✓									
MAMSBU18160	M18 x 160	✓									
MAMSBU18200	M18 x 200	✓		38,87	19,00	<u>53,85</u>	50,54	27,21	13,30	<u>53,85</u>	35,38
Rod Hanger Female Concrete Screwbolt											
MAMSBUF06035	M6 x 35	✓		-	2,78	-	-	-	2,54	-	-
MAMSBUF06055	M6 x 55	✓		9,25	-	-	-	6,47	-	-	-

1 kN = 100 kg

Values underlined and in italics show Steel failure, **bold** values concrete failure and other indicate pull out failure.

TECHNICAL DATA SHEET

Resistances (Concrete)

Maximum Recommended Loads (Structural Application) [kN] (con $\gamma_F=1.4$)

Resistances in concrete class C20/C25 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

Code	Size	Assessed		Non-cracked Concrete				Cracked Concrete			
				Tension $N_{Rec, ucr}$		Shear $V_{Rec, ucr}$		Tension $N_{Rec, cr}$		Shear $V_{Rec, cr}$	
		ETA		($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)	($h_{ef, std}$)	($h_{ef, red}$)
Hexagon Head Concrete Screwbolt											
MAMSBU06040	M6 x 40	✓		-	1,98	-	<u>5,97</u>	-	1,81	-	4,46
MAMSBU06050	M6 x 50	✓		-	1,98	-	<u>5,97</u>	-	1,81	-	4,46
MAMSBU06060	M6 x 60	✓		-	1,98	-	<u>5,97</u>	-	1,81	-	4,46
MAMSBU06080	M6 x 80	✓		6,61	1,98	<u>5,97</u>	<u>5,97</u>	4,62	1,81	5,32	4,46
MAMSBU06100	M6 x 100	✓		-	1,98	-	<u>5,97</u>	-	1,81	-	4,46
MAMSBU08055	M8 x 55	✓		-	4,48	-	<u>9,32</u>	-	3,14	-	6,78
MAMSBU08080	M8 x 80	✓		8,41	4,48	<u>9,32</u>	<u>9,32</u>	5,88	3,14	7,47	6,78
MAMSBU08100	M8 x 100	✓		-	4,48	-	<u>9,32</u>	-	3,14	-	6,78
MAMSBU10060	M10 x 60	✓		-	6,26	-	12,21	-	4,38	-	8,55
MAMSBU10070	M10 x 70	✓		-	6,26	-	12,21	-	4,38	-	8,55
MAMSBU10080	M10 x 80	✓		-	6,26	-	12,21	-	4,38	-	8,55
MAMSBU10100	M10 x 100	✓		12,85	6,26	<u>13,05</u>	12,21	8,99	4,38	<u>13,05</u>	8,55
MAMSBU10120	M10 x 120	✓		-	6,26	-	<u>13,05</u>	-	4,38	-	8,55
MAMSBU10140	M10 x 140	✓		-	6,26	-	<u>13,05</u>	-	4,38	-	8,55
MAMSBU12080	M12 x 80	✓		-	10,35	-	<u>17,73</u>	-	7,24	-	16,88
MAMSBU12090	M12 x 90	✓		-	10,35	-	<u>17,73</u>	-	7,24	-	16,88
MAMSBU12110	M12 x 110	✓		17,87	10,35	<u>17,73</u>	<u>17,73</u>	12,51	7,24	<u>17,73</u>	16,88
MAMSBU12150	M12 x 150	✓		-	10,35	-	<u>17,73</u>	-	7,24	-	16,88
MAMSBU14080	M14 x 80	✓		-	10,35	-	<u>25,10</u>	-	7,24	-	18,47
MAMSBU14100	M14 x 100	✓		-	10,35	-	<u>25,10</u>	-	7,24	-	18,47
MAMSBU14120	M14 x 120	✓		20,67	10,35	<u>25,10</u>	<u>25,10</u>	14,47	7,24	<u>25,10</u>	18,47
MAMSBU14130	M14 x 130	✓		-	10,35	-	<u>25,10</u>	-	7,24	-	18,47
MAMSBU14140	M14 x 140	✓		-	10,35	-	<u>25,10</u>	-	7,24	-	18,47
MAMSBU14160	M14 x 160	✓		-	10,35	-	<u>25,10</u>	-	7,24	-	18,47
MAMSBU16100	M16 x 100	✓		-	-	-	-	14,47	7,24	<u>27,60</u>	15,50
MAMSBU16150	M16 x 150	✓		20,67	10,35	<u>27,60</u>	22,14	-	-	-	-
MAMSBU18100	M18 x 100	✓		-	13,57	-	36,10	-	9,50	-	25,27
MAMSBU18130	M18 x 130	✓		-	13,57	-	36,10	-	9,50	-	25,27
MAMSBU18160	M18 x 160	✓		27,77	13,57	<u>38,47</u>	36,10	19,44	9,50	<u>38,47</u>	25,27
MAMSBU18200	M18 x 200	✓		-	13,57	-	36,10	-	9,50	-	25,27
Rod Hanger Female Concrete Screwbolt											
MAMSBUF06035	M6 x 35	✓		-	1,98	-	-	-	1,81	-	-
MAMSBUF06055	M6 x 55	✓		6,61	-	-	-	4,62	-	-	-

1 kN = 100 kg

Values underlined and in italics show Steel failure, **bold** values concrete failure and other indicate pull out failure.

TECHNICAL DATA SHEET

Pull Out Increasing Factors for Tension Loads In High Resistance Concrete ψ_c

Diameter	M5		M6		M8		M10			M12		M14		M18	
Installation Depth	($h_{ef,red}$)	($h_{ef,std}$)	($h_{ef,red}$)	($h_{ef,std}$)	($h_{ef,red}$)	($h_{ef,std}$)	($h_{ef,1}$)	($h_{ef,2}$)	($h_{ef,3}$)	($h_{ef,red}$)	($h_{ef,std}$)	($h_{ef,red}$)	($h_{ef,std}$)	($h_{ef,red}$)	($h_{ef,std}$)
C30/37	1,00	1,00	1,16	1,22	1,21	1,22	1,22	1,17	1,22	1,16	1,22	1,21	1,20	1,22	1,17
C40/50	1,00	1,00	1,28	1,41	1,39	1,41	1,41	1,30	1,41	1,29	1,41	1,39	1,37	1,40	1,32
C50/60	1,00	1,00	1,39	1,58	1,54	1,58	1,58	1,42	1,58	1,40	1,58	1,55	1,51	1,57	1,42

Resistances (Hollow Core Slabs)

Characteristic Resistance (Non-Structural Application) [kN]

Resistances in hollow core slab class C30/C37 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

Code	Size	Assessed		Tension N _{Rk}			Shear V _{Rk}		
				(h _{ef1})	(h _{ef2})	(h _{ef3})	(h _{ef1})	(h _{ef2})	(h _{ef3})
Hexagon Head Concrete Screwbolt									
MAMSBUE06040	M6 x 40	✓		5,39	-	-	5,39	-	-
MAMSBUE06050	M6 x 50	✓			6,22	7,99		6,22	7,99
MAMSBUE06060	M6 x 60	✓							
MAMSBUE06080	M6 x 80	✓							
MAMSBUE06100	M6 x 100	✓							
Rod Hanger Female Concrete Screwbolt									
MAMSBUEF06035	M6 x 35	✓		5,39	6,22	7,99	5,39	6,22	7,99
MAMSBUEF06055	M6 x 55	✓							
1 kN = 100 kg Values <i>underlined and in italics</i> show Steel failure, bold values concrete failure and other indicate pull out failure.									

1 kN = 100 kg

Values underlined and in italics show Steel failure, **bold** values concrete failure and other indicate pull out failure.

TECHNICAL DATA SHEET

Resistances (Hollow Core Slabs)

Design Resistance (Non-Structural Application) [kN]

Resistances in hollow core slab class C30/C37 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

Code	Size	Assessed		Tension N _{Rd}			Shear V _{Rd}		
				(h _{ef1})	(h _{ef2})	(h _{ef3})	(h _{ef1})	(h _{ef2})	(h _{ef3})
Hexagon Head Concrete Screwbolt									
MAMSBUE06040	M6 x 40	✓		2,99	-	-	3,39	-	-
MAMSBUE06050	M6 x 50	✓			3,45	4,44		4,14	5,33
MAMSBUE06060	M6 x 60	✓							
MAMSBUE06080	M6 x 80	✓							
MAMSBUE06100	M6 x 100	✓							
Rod Hanger Female Concrete Screwbolt									
MAMSBUE06035	M6 x 35	✓		2,99	3,45	4,44	3,59	4,14	5,33
MAMSBUE06055	M6 x 55	✓							
1 kN = 100 kg Values <i>underlined and in italics</i> show Steel failure, bold values concrete failure and other indicate pull out failure.									

Resistances (Hollow Core Slabs)

Maximum Recommended Loads (Non-Structural Application) [kN] (con $\gamma_F=1.4$)

Resistances in hollow core slab class C30/C37 for an isolated anchor without spacing or concrete edge distance effects are indicated in the following table:

Code	Size	Assessed		Tension N _{rec}			Shear V _{rec}		
				(h _{ef1})	(h _{ef2})	(h _{ef3})	(h _{ef1})	(h _{ef2})	(h _{ef3})
Hexagon Head Concrete Screwbolt									
MAMSBUE06040	M6 x 40	✓		2,14	-	-	2,57	-	-
MAMSBUE06050	M6 x 50	✓			2,47	3,17		2,96	3,80
MAMSBUE06060	M6 x 60	✓							
MAMSBUE06080	M6 x 80	✓							
MAMSBUE06100	M6 x 100	✓							
Rod Hanger Female Concrete Screwbolt									
MAMSBUE06035	M6 x 35	✓		2,14	2,47	3,17	2,57	2,96	3,80
MAMSBUE06055	M6 x 55	✓							
1 kN = 100 kg Values <i>underlined and in italics</i> show Steel failure, bold values concrete failure and other indicate pull out failure.									