DEWALT
ENGINEERED BY *Powers*

ANCHORING & FASTENING SYSTEMS
Technical Manual for the Design Professional

MECHANICAL ANCHORS

SCREW ANCHORS

BLUE-TIP 2 SCREW-BOLTS™ &
HANGERMATE™ ROD HANGERS

TABLE OF CONTENTS

PRINTED MAY 2020

DEWALT
ENGINEERED BY **Powers**
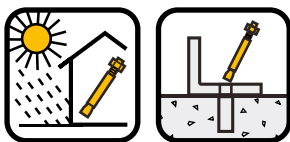
GENERAL INFORMATION

BLUE-TIP 2 SCREW-BOLTS™ & HANGERMATE™ ROD HANGERS - ETA OPTION 1

PRODUCT DESCRIPTION

The **BLUE-TIP 2 SCREW-BOLTS™ / HANGERMATE™** are a state-of-the-art range of heavy duty screw anchors which are available with a wide variety of head types. The one piece design makes it easy to install and the preferred choice for fast but reliable anchoring which is also fully removable. This anchor is designed to resist structural and non-structural loading in cracked and uncracked concrete.

Hex Head

Shank

Thread

Blue- Tip

BLUE-TIP 2 SCREW-BOLT™

Counter-sunk   Pan Head   Dome Head

HANGERMATE™

Internal Thread   External Thread

GENERAL APPLICATIONS AND USES

FEATURES AND BENEFITS

- Consistent performance in high and low strength concrete
- Nominal drill bit size is same as anchor denomination
- Quick and easy installation with a powered impact wrench
- BLUE-TIP 2 SCREW-BOLT™ anchors are available with shank diameters ranging from 6 to 16mm of variable lengths
- BLUE-TIP 2 SCREW-BOLT™ anchors are available with hex head, countersunk head, pan head and dome head. Also available as an internally threaded rod hanger and externally threaded rod hanger
- BLUE-TIP 2 SCREW-BOLTS™ are available zinc-plated with galvanised options available throughout the range
- HANGERMATE™ anchors are available zinc-plated
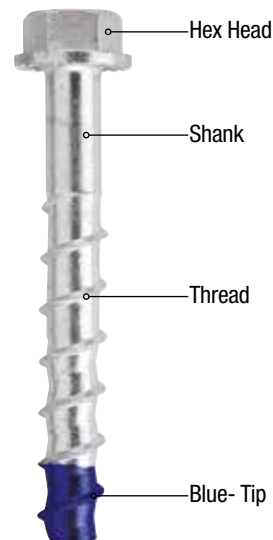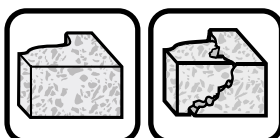- BLUE-TIP 2 SCREW-BOLTS™ are approved for 2 embedment depths, dependent on length

VERSIONS

HEAD STYLES

Hex head

Countersunk

Pan head

Dome head

Internal thread rod hanger

External thread rod hanger

PLATING / COATING

Carbon Steel, Zinc Plated

Carbon Steel, Galvanised

APPROVALS AND LISTINGS

ETA CE

F120

* Please refer to ETA-16/0867 for load capacities under fire

APPROVALS

- ETA-16/0867

LOADING CONDITIONS

STATIC   QUASI-STATIC   SEISMIC

* Please refer to ETA-16/0867 for seismic performance load data

SUITABLE BASE MATERIALS

DDA

DEWALT DESIGN ASSIST

Real-Time Anchor Design Software

anchors.dewalt.com/anchors/
tech-support-software/
dewalt_design_assist.php

INSTALLATION INFORMATION

INSTALLATION DATA

Parameter	Notation	Unit	BLUE-TIP 2 SCREW-BOLT™				
			BT2-6	BT2-8	BT2-10	BT2-12	BT2-16
Anchor diameter	d	[mm]	6	8	10	12	16
Nominal drill bit diameter	d_0	[mm]	6	8	10	12	16
Diameter of hole clearance in fixture	d_f	[mm]	9	12	14	16	20
Nominal embedment depth 1 Nominal embedment depth 2	$h_{nom,1}$ $h_{nom,2}$	[mm] [mm]	40 55	50 75	60 85	75 100	95 130
Effective embedment depth 1 Effective embedment depth 2	$h_{ef,1}$ $h_{ef,2}$	[mm] [mm]	30.5 43.3	37.9 59.1	45.1 66.3	56.7 78.0	70.9 100.7
Drill hole depth for $h_{ef,1}$ Drill hole depth for $h_{ef,2}$	$h_{1,1}$ $h_{1,2}$	[mm] [mm]	50 65	60 85	70 95	85 110	115 150
Minimum member thickness for $h_{ef,1}$ Minimum member thickness for $h_{ef,2}$	$h_{min,1}$ $h_{min,2}$	[mm] [mm]	80 100	100 120	105 140	125 160	160 195
Minimum spacing	s_{min}	[mm]	40	50	55	60	70
Minimum edge distance	c_{min}	[mm]	40	50	55	60	70
Hex Head torque wrench socket size	S_w	[mm]	10	13	17	19	24
Countersunk Torx size	-	-	T40	T45	T50	T55	-
Pan Head Torx size	-	-	T40	-			
Dome Head Torx size	-	-	T30	-			
Maximum installation torque	$T_{inst,max}$	[Nm]	23	40	71	75	120
Maximum impact wrench torque	$T_{imp,max}$	[Nm]	203	203	440	950	950

Parameter	Notation	Unit	HANGERMATE™ BT6 (Internal Thread)	HANGERMATE™ BT8 (Internal Thread)	HANGERMATE™ BT6 (External Thread)
Anchor diameter	d	[mm]	6	8	6
Nominal drill bit diameter	d_0	[mm]	6	8	6
Nominal embedment depth	h_{nom}	[mm]	40	50	55
Effective embedment depth	h_{ef}	[mm]	30.5	37.9	43.3
Drill hole depth for h_{ef}	h_1	[mm]	50	60	65
Minimum member thickness for h_{ef}	h_{min}	[mm]	80	100	100
Minimum spacing	s_{min}	[mm]	40	50	40
Minimum edge distance	c_{min}	[mm]	40	50	40
Internal / external head thread size	-	-	M10	M12	M10
Torque wrench socket size	S_w	[mm]	13	15	13
Setting Tool	-	-	HMSTM810-PWR	HMSTM12-PWR	-
Maximum installation torque	$T_{inst,max}$	[Nm]	23	40	23
Maximum impact wrench torque	$T_{imp,max}$	[Nm]	203	203	203

BLUE-TIP 2 SCREW-BOLT™

HANGERMATE™

DEWALT
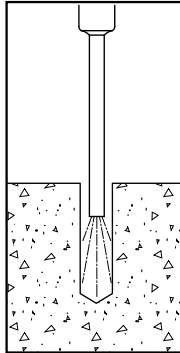ENGINEERED BY Powers
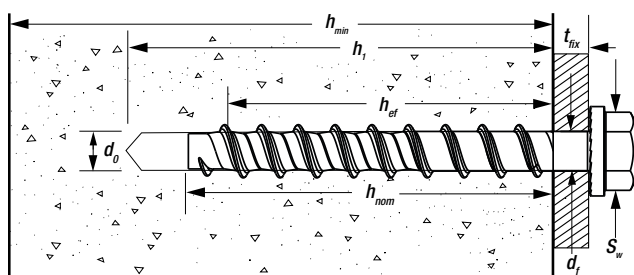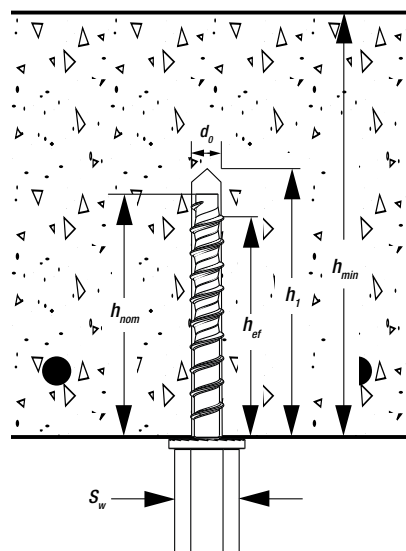
INSTALLATION INFORMATION

INSTALLATION INSTRUCTIONS

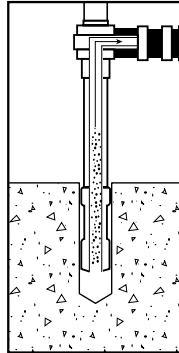### BLUE-TIP 2 SCREW-BOLT™

Standard Drill Bit
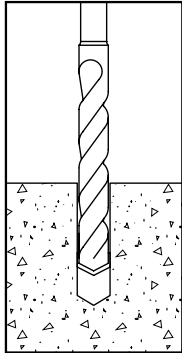
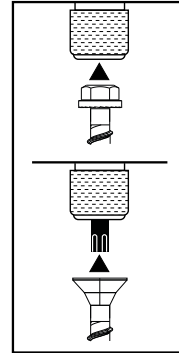1.) Using the proper drill bit size, drill a hole into the base material to the required depth.

2.) Remove dust and debris from the hole using a hand pump or compressed air.
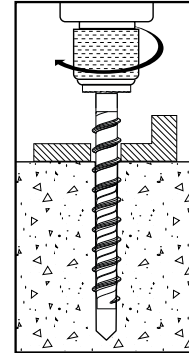
Hollow Drill Bit

1. & 2.) Connect the hollow drill bit of proper size to a vacuum, and drill a hole into the base material to the required depth while the vac is running. The dust is removed during the drilling process.
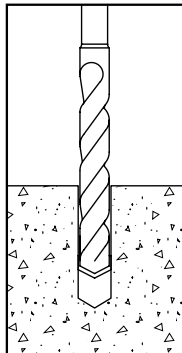

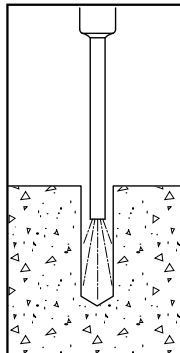3.) Select impact wrench and mount the screw anchor head onto the appropriate socket or bit.

4.) Drive the anchor through the fixture into the hole at least to the minimum required embedment depth and until the head of the anchor comes into contact with the fixture.
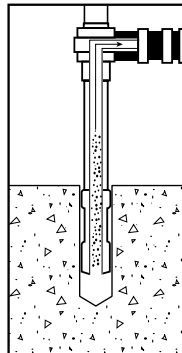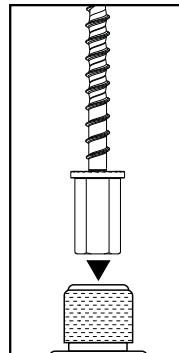
HANGERMATE™

1.) Using the proper drill bit size, drill a hole into the base material to the required depth.
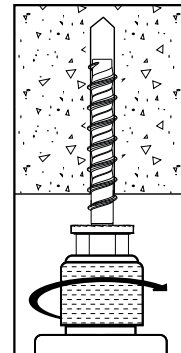

2.) Remove dust and debris from the hole using a hand pump or compressed air.
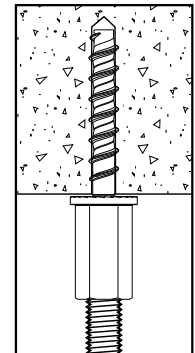

1. & 2.) Connect the hollow drill bit of proper size to a vacuum, and drill a hole into the base material to the required depth while the vac is running. The dust is removed during the drilling process.

3.) Select impact wrench and mount the screw anchor head into the hex socket.

4.) Drive the anchor into the hole at least to the minimum required embedment depth and until the head of the anchor comes into contact with the base material.

5.) Screw the threaded rod into the anchor head.

DESIGN INFORMATION

TENSION LOAD CAPACITIES – PARAMETERS FOR CALCULATION OF DESIGN STRENGTH

According to EN 1992-4 and AS 5216

	Notation	Unit	BLUE-TIP 2 SCREW-BOLT™									
			BT2-6		BT2-8		BT2-10		BT2-12		BT2-16	
			$h_{nom,1}$	$h_{nom,2}$	$h_{nom,1}$	$h_{nom,2}$	$h_{nom,1}$	$h_{nom,2}$	$h_{nom,1}$	$h_{nom,2}$	$h_{nom,1}$	$h_{nom,2}$
			40	55	50	75	60	85	75	100	95	130
Steel failure												
Characteristic resistance	$N_{Rk,s}$	[kN]	16.5		32.4		48.3		72.4		108.1	
Partial safety factor	γ_{Ms}	[-]	1.5									
Pullout failure												
Cracked concrete												
Characteristic resistance	$N^0_{Rk,p}$	[kN]	3.5	4.5	2.0	9.0	5.0	11.0	14.0	15.0	10.0	28.0
Partial safety factor	γ_{Mp}[1]	[-]	2.1[4]	1.8[3]	1.5[2]	1.8[3]	1.5[2]	1.8[3]	1.8[3]	1.5[2]	1.8[3]	2.1[4]
Uncracked concrete												
Characteristic resistance	$N^0_{Rk,p}$	[kN]	7.5	12	10	20	–[5]					
Partial safety factor	γ_{Mp}[1]	[-]	2.1[4]	1.8[3]	1.5[2]	1.8[3]	1.5[2]	1.8[3]	1.8[3]	1.5[2]	1.8[3]	2.1[4]
Increasing factor for concrete strength												
C30/37	ψ_c	[-]	1.22									
C40/50	ψ_c	[-]	1.41									
C50/60	ψ_c	[-]	1.58									
Concrete failure												
Concrete cone failure												
Effective Embedment	h_{ef}	[mm]	30.5	43.3	37.9	59.1	45.1	66.3	56.7	78.0	70.9	100.7
Characteristic spacing	$s_{cr,N}$	[mm]	$3\,h_{ef}$									
Characteristic edge distance	$c_{cr,N}$	[mm]	$1.5\,h_{ef}$									
Partial safety factor	γ_{Mc}[1]	[mm]	2.1[4]	1.8[3]	1.5[2]	1.8[3]	1.5[2]	1.8[3]	1.8[3]	1.5[2]	1.8[3]	2.1[4]
Splitting failure												
Characteristic spacing	$s_{cr,sp}$	[mm]	200	280	140	230	300	440	290	400	210	300
Characteristic edge distance	$c_{cr,sp}$	[mm]	100	140	70	115	150	220	145	200	105	150
Partial safety factor	γ_{Msp}[1]	[-]	2.1[4]	1.8[3]	1.5[2]	1.8[3]	1.5[2]	1.8[3]	1.8[3]	1.5[2]	1.8[3]	2.1[4]
Increasing factor for concrete strength												
C30/37	ψ_c	[-]	1.22									
C40/50	ψ_c	[-]	1.41									
C50/60	ψ_c	[-]	1.58									

1) In absence of other national regulations
2) The partial safety factor γ_2=1.0 is included
3) The partial safety factor γ_2=1.2 is included
4) The partial safety factor γ_2=1.4 is included
5) Pullout failure not decisive

DDA DEWALT DESIGN ASSIST — The DEWALT Design Assist is a powerful anchor design software which helps you to design simple and complex anchorages. The design data of all DEWALT anchor products is readily available. To download this software for free, go to anchors.DEWALT.com/anchors/tech-support-software/DEWALT_design_assist.php

DEWALT
ENGINEERED BY **Powers**

SHEAR LOAD CAPACITIES - PARAMETERS FOR CALCULATION OF DESIGN STRENGTH

According to EN 1992-4 and AS 5216

	Notation	Unit	BLUE-TIP 2 SCREW-BOLT™*									
			BT2-6		BT2-8		BT2-10		BT2-12		BT2-16	
			$h_{nom,1}$	$h_{nom,2}$	$h_{nom,1}$	$h_{nom,2}$	$h_{nom,1}$	$h_{nom,2}$	$h_{nom,1}$	$h_{nom,2}$	$h_{nom,1}$	$h_{nom,2}$
			40	55	50	75	60	85	75	100	95	130
Steel failure												
Steel failure without level arm												
Characteristic resistance	$V_{Rk,s}$	[kN]	4.2	6.6	9.1	13.3	14.6	20.3	31.4	35.2	64.9	64.9
Factor taking into account the ductility	k_7	[-]	0.8									
Partial safety factor	γ_{Ms}[1]	[-]	1.25									
Steel failure with level arm (bending)												
Characteristic resistance	$M^0_{Rk,s}$	[Nm]	16.9		41.4		78.2		139.6		262.4	
Partial safety factor	γ_{Ms}[1]	[-]	1.25									
Concrete failure												
Pry-out failure												
Factor for pry-out failue	k_8	[-]	1	1	1	1	1	2	2	2	2	2
Partial safety factor	γ_{Mc}[1]	[-]	1.5[2]									
Edge failure												
Effective length of anchor	l_f	[mm]	30.5	43.3	37.9	59.1	45.1	66.3	56.7	78	70.9	100.7
Outside diameter of anchor	d_{nom}	[mm]	6		8		10		12		16	
Partial safety factor	γ_{Mc}[1]	[mm]	1.5[2]									

1) In absence of other national regulations
2) The partial safety factor γ_2=1.0 is included

* HANGERMATE™ anchors are only recommended for tension loads. The bending moment shall be considered based on the location of the applied shear force (if any) to the anchor and the resultant bending capacity shall be checked for the applied shear force to the HANGERMATE™ anchor

DDA
DeWALT DESIGN ASSIST

The DEWALT Design Assist is a powerful anchor design software which helps you to design simple and complex anchorages.
The design data of all DEWALT anchor products is readily available. To download this software for free, go to
anchors.DeWALT.com/anchors/tech-support-software/DeWALT_design_assist.php

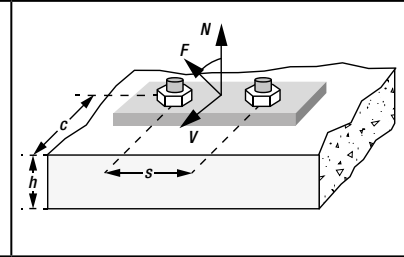# TENSION LOAD CAPACITIES - PARAMETERS FOR CALCULATION OF DESIGN STRENGTH

According to EN 1992-4 and AS 5216

	Notation	Unit	HANGERMATE™ BT6 (Internal Thread) h_{nom} 40	HANGERMATE™ BT8 (Internal Thread) h_{nom} 50	HANGERMATE™ BT6 (External Thread) h_{nom} 55
Steel failure					
Characteristic resistance	$N_{Rk,s}$	[kN]	16.5	32.4	16.5
Partial safety factor	γ_{Ms}	[-]	1.5		
Pullout failure					
Cracked concrete					
Characteristic resistance ($h_{ef,1}$)	$N^0_{Rk,p}$	[kN]	3.5	2.0	4.5
Partial safety factor	γ_{Mp}[1]	[-]	2.1[4]	1.5[2]	1.8[3]
Uncracked concrete					
Characteristic resistance ($h_{ef,1}$)	$N^0_{Rk,p}$	[kN]	7.5	10	12
Partial safety factor	γ_{Mp}[1]	[-]	2.1[4]	1.5[2]	1.8[3]
Increasing factor for concrete strength					
C30/37	ψ_c	[-]	1.22		
C40/50	ψ_c	[-]	1.41		
C50/60	ψ_c	[-]	1.58		
Concrete failure					
Concrete cone failure					
Effective Embedment	h_{ef}	[mm]	30.5	37.9	43.3
Characteristic spacing	$s_{cr,N}$	[mm]	$3\,h_{ef}$		
Characteristic edge distance	$c_{cr,N}$	[mm]	$1.5\,h_{ef}$		
Partial safety factor	γ_{Mc}[1]	[mm]	2.1[4]	1.5[2]	1.8[3]
Splitting failure					
Characteristic spacing	$s_{cr,sp}$	[mm]	200	140	280
Characteristic edge distance	$c_{cr,sp}$	[mm]	100	70	140
Partial safety factor	γ_{Msp}[1]	[-]	2.1[4]	1.5[2]	1.8[3]
Increasing factor for concrete strength					
C30/37	ψ_c	[-]	1.22		
C40/50	ψ_c	[-]	1.41		
C50/60	ψ_c	[-]	1.58		

1) In absence of other national regulations
2) The partial safety factor γ_2=1.0 is included
3) The partial safety factor γ_2=1.2 is included
4) The partial safety factor γ_2=1.4 is included
5) Pullout failure not decisive

* The steel capacity of the threaded rods used with HANGERMATE™ anchors, shall be checked and the anchor loaded within the minimum capacity of the threaded rod and anchor

DDA DeWALT DESIGN ASSIST The DEWALT Design Assist is a powerful anchor design software which helps you to design simple and complex anchorages.
The design data of all DEWALT anchor products is readily available. To download this software for free, go to
anchors.DeWALT.com/anchors/tech-support-software/DeWALT_design_assist.php

DeWALT ENGINEERED BY **Powers**

PRECALCULATED TENSION AND SHEAR CAPACITIES
According to EN 1992-4 and AS 5216

- Every reasonable effort has been applied to ensure the accuracy of the tabulated data.
- The tables are intended to aid the user in the preliminary design process. It is the user's responsibility to interpret the data and to select, design and specify the correct product suitable for the application and its intended use.
- The given values are valid for normal concrete C20/25 and static/quasi-static loads with the exact dimensional information given. For any other conditions, the use of DDA is recommended.
- The values in the table below are design level loads. This assumes a safety factor is included both on the loading and the resistance.
- For cracked concrete, splitting failure is not considered assuming that a reinforcement is present which limits the crack width to 0.3 mm.
- For further details and background information please see the introduction of this manual.

BT6 — Embedment Depth 1

	C20/25	Anchoring located far from any edge					Anchoring located close to an edge				
Embedment depth	h_{ef} [mm]	30.5									
Member thickness	h [mm]	80									
Edge distance	c [mm]	-	-	-	-	-	40.0	40.0	40.0	40.0	40.0
Anchor spacing	s [mm]	-	40.0	91.5	40.0	91.5	-	40.0	91.5	40.0	91.5
N_{Rd} [kN]		1.7	3.3	3.3	5.7	6.7	1.7	3.3	3.3	5.2	6.7
$F_{Rd}^{45°}$ [kN]		1.9	3.5	3.7	5.6	7.4	1.5	2.4	2.8	2.9	3.8
V_{Rd} [kN]		3.4	5.6	6.7	8.0	13.4	1.9	2.5	3.3	2.5	3.3
N_{Rd} [kN]		3.6	5.7	7.1	8.1	14.3	2.1	2.5	3.0	3.2	4.9
$F_{Rd}^{45°}$ [kN]		2.9	5.1	5.7	8.1	11.5	2.0	2.5	3.1	2.8	4.1
V_{Rd} [kN]		3.4	6.7	6.7	11.4	13.4	2.7	3.6	4.7	3.6	4.7

■ - Steel strength controls ■ - Concrete strength controls ■ - Anchor pullout strength controls
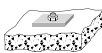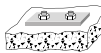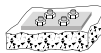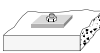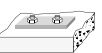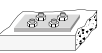
BT6 — Embedment Depth 2

	C20/25	Anchoring located far from any edge					Anchoring located close to an edge				
Embedment depth	h_{ef} [mm]	43.3									
Member thickness	h [mm]	100									
Edge distance	c [mm]	-	-	-	-	-	40.0	40.0	40.0	40.0	40.0
Anchor spacing	s [mm]	-	40.0	129.9	40.0	129.9	-	40.0	129.9	40.0	129.9
N_{Rd} [kN]		2.5	5.0	5.0	9.3	10.0	2.5	5.0	5.0	7.0	10.0
$F_{Rd}^{45°}$ [kN]		2.8	5.4	5.6	8.6	11.3	1.9	3.0	3.9	3.3	5.0
V_{Rd} [kN]		5.3	8.6	10.6	11.2	21.1	2.0	2.7	4.2	2.7	4.2
N_{Rd} [kN]		6.7	10.2	13.3	13.3	26.7	3.4	3.8	4.9	4.7	8.5
$F_{Rd}^{45°}$ [kN]		4.8	8.5	9.7	12.3	19.3	2.6	3.2	4.6	3.5	5.9
V_{Rd} [kN]		5.3	10.6	10.6	16.0	21.1	2.8	3.8	5.9	3.8	5.9

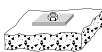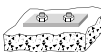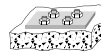■ - Steel strength controls ■ - Concrete strength controls ■ - Anchor pullout strength controls
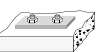
BT8 — Embedment Depth 1

	C20/25	Anchoring located far from any edge					Anchoring located close to an edge				
Embedment depth	h_{ef} [mm]	37.9									
Member thickness	h [mm]	100									
Edge distance	c [mm]	-	-	-	-	-	50.0	50.0	50.0	50.0	50.0
Anchor spacing	s [mm]	-	50.0	113.7	50.0	113.7	-	50.0	113.7	50.0	113.7
N_{Rd} [kN]		1.3	2.7	2.7	5.3	5.3	1.3	2.7	2.7	5.3	5.3
$F_{Rd}^{45°}$ [kN]		1.8	3.4	3.6	6.1	7.2	1.5	2.6	2.9	3.7	4.3
V_{Rd} [kN]		5.4	7.7	10.7	11.1	21.4	2.8	3.7	4.9	3.7	4.9
N_{Rd} [kN]		6.7	11.0	13.3	15.9	26.7	5.2	7.1	9.5	10.0	18.4
$F_{Rd}^{45°}$ [kN]		5.6	9.3	11.2	13.5	22.3	3.8	5.1	6.7	5.8	8.5
V_{Rd} [kN]		7.3	11.0	14.6	15.9	29.1	3.9	5.2	6.9	5.2	6.9

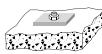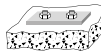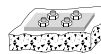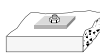■ - Steel strength controls ■ - Concrete strength controls ■ - Anchor pullout strength controls
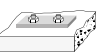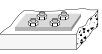
DDA DeWALT DESIGN ASSIST

The DEWALT Design Assist is a powerful anchor design software which helps you to design simple and complex anchorages.
The design data of all DEWALT anchor products is readily available. To download this software for free, go to anchors.DeWALT.com/anchors/tech-support-software/DeWALT_design_assist.php

BT8 — Embedment Depth 2 — C20/25

		Anchoring located far from any edge					Anchoring located close to an edge				
Embedment depth	h_{ef} [mm]	59.1									
Member thickness	h [mm]	120									
Edge distance	c [mm]	-	-	-	-	-	50.0	50.0	50.0	50.0	50.0
Anchor spacing	s [mm]	-	50.0	177.3	50.0	177.3	-	50.0	177.3	50.0	177.3
	N_{Rd} [kN]	5.0	10.0	10.0	14.3	20.0	5.0	7.6	10.0	10.3	20.0
	$F_{Rd}45°$ [kN]	5.6	9.7	11.3	13.2	22.5	3.2	4.4	6.7	4.9	8.3
	V_{Rd} [kN]	10.4	13.4	20.9	17.1	41.7	3.0	4.0	6.5	4.0	6.5
	N_{Rd} [kN]	11.1	15.9	22.2	20.4	44.4	6.6	8.1	11.7	10.5	24.3
	$F_{Rd}45°$ [kN]	8.9	14.7	17.7	18.9	35.4	4.4	5.6	8.7	6.2	11.3
	V_{Rd} [kN]	10.6	19.1	21.3	24.5	42.6	4.2	5.6	9.2	5.6	9.2

■ - Steel strength controls ■ - Concrete strength controls ■ - Anchor pullout strength controls

BT10 — Embedment Depth 1 — C20/25

		Anchoring located far from any edge					Anchoring located close to an edge				
Embedment depth	h_{ef} [mm]	45.1									
Member thickness	h [mm]	105									
Edge distance	c [mm]	-	-	-	-	-	55.0	55.0	55.0	55.0	55.0
Anchor spacing	s [mm]	-	55.0	135.3	55.0	135.3	-	55.0	135.3	55.0	135.3
	N_{Rd} [kN]	3.3	6.7	6.7	13.3	13.3	3.3	6.7	6.7	12.1	13.3
	$F_{Rd}45°$ [kN]	3.8	6.7	7.6	11.5	15.3	2.8	4.5	5.4	5.5	7.1
	V_{Rd} [kN]	7.0	9.8	13.9	13.8	27.8	3.3	4.5	6.1	4.5	6.1
	N_{Rd} [kN]	9.9	14.0	19.9	19.7	39.7	5.5	6.5	8.0	8.3	13.2
	$F_{Rd}45°$ [kN]	8.4	11.9	16.8	16.7	33.7	4.3	5.4	7.0	6.1	8.8
	V_{Rd} [kN]	9.9	14.0	19.9	19.7	39.7	4.7	6.3	8.6	6.3	8.6
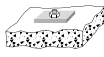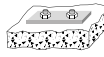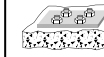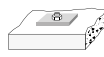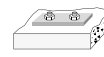
■ - Steel strength controls ■ - Concrete strength controls ■ - Anchor pullout strength controls

BT10 — Embedment Depth 2 — C20/25

		Anchoring located far from any edge					Anchoring located close to an edge				
Embedment depth	h_{ef} [mm]	66.3									
Member thickness	h [mm]	140									
Edge distance	c [mm]	-	-	-	-	-	55.0	55.0	55.0	55.0	55.0
Anchor spacing	s [mm]	-	55.0	198.9	55.0	198.9	-	55.0	198.9	55.0	198.9
	N_{Rd} [kN]	6.1	12.2	12.2	16.8	24.4	6.1	8.9	12.2	12.0	24.4
	$F_{Rd}45°$ [kN]	7.4	14.7	14.7	20.2	29.4	3.8	5.3	8.2	5.8	10.1
	V_{Rd} [kN]	16.2	31.6	32.5	40.4	65.0	3.6	4.8	7.9	4.8	7.9
	N_{Rd} [kN]	14.8	18.8	29.5	24.0	59.0	7.1	8.0	10.4	9.6	17.9
	$F_{Rd}45°$ [kN]	12.6	19.6	25.1	28.8	50.3	5.0	6.2	9.1	6.7	11.7
	V_{Rd} [kN]	16.2	32.5	32.5	57.7	65.0	5.1	6.8	11.2	6.8	11.2
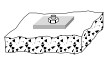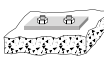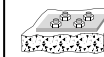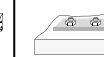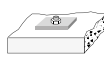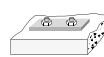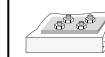
■ - Steel strength controls ■ - Concrete strength controls ■ - Anchor pullout strength controls

DDA DEWALT DESIGN ASSIST — The DEWALT Design Assist is a powerful anchor design software which helps you to design simple and complex anchorages. The design data of all DEWALT anchor products is readily available. To download this software for free, go to anchors.DEWALT.com/anchors/tech-support-software/DEWALT_design_assist.php

DEWALT
ENGINEERED BY Powers

BLUE-TIP 2 SCREW-BOLTS™ & HANGERMATE™ ROD HANGERS SCREW ANCHOR

BT12 Embedment Depth 1 — C20/25

		Anchoring located far from any edge					Anchoring located close to an edge				
Embedment depth	h_{ef} [mm]	56.7									
Member thickness	h [mm]	125									
Edge distance	c [mm]	-	-	-	-	-	60.0	60.0	60.0	60.0	60.0
Anchor spacing	s [mm]	-	60.0	170.1	60.0	170.1	-	60.0	170.1	60.0	170.1
	N_{Rd} [kN]	7.8	11.0	15.6	14.9	31.1	6.3	8.6	12.7	12.1	27.6
	$F_{Rd}^{45°}$ [kN]	7.4	10.2	14.7	13.8	29.4	4.2	5.6	8.2	6.3	10.3
	V_{Rd} [kN]	19.6	26.5	39.2	35.9	78.4	4.0	5.4	7.8	5.4	7.8
	N_{Rd} [kN]	11.7	15.8	23.3	21.4	46.7	6.8	8.2	10.8	10.6	19.7
	$F_{Rd}^{45°}$ [kN]	10.8	14.6	21.6	19.8	43.2	5.2	6.7	9.3	7.5	12.0
	V_{Rd} [kN]	25.1	37.9	50.2	51.2	100.5	5.7	7.6	11.0	7.6	11.0

■ - Steel strength controls ■ - Concrete strength controls ■ - Anchor pullout strength controls

BT12 Embedment Depth 2 — C20/25

		Anchoring located far from any edge					Anchoring located close to an edge				
Embedment depth	h_{ef} [mm]	78									
Member thickness	h [mm]	160									
Edge distance	c [mm]	-	-	-	-	-	60.0	60.0	60.0	60.0	60.0
Anchor spacing	s [mm]	-	60.0	234.0	60.0	234.0	-	60.0	234.0	60.0	234.0
	N_{Rd} [kN]	10.0	19.9	20.0	25.0	40.0	10.0	12.8	20.0	17.2	40.0
	$F_{Rd}^{45°}$ [kN]	12.3	22.5	24.6	28.2	49.3	5.1	6.7	11.2	7.3	13.4
	V_{Rd} [kN]	28.2	39.7	56.3	49.9	112.6	4.3	5.7	9.9	5.7	9.9
	N_{Rd} [kN]	22.6	28.4	45.2	35.7	90.4	11.6	13.3	18.4	16.4	34.9
	$F_{Rd}^{45°}$ [kN]	20.7	31.4	41.4	40.3	82.8	6.8	8.5	13.4	9.2	16.9
	V_{Rd} [kN]	28.2	56.3	56.3	71.3	112.6	6.1	8.1	13.9	8.1	13.9

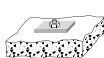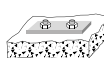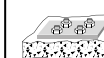■ - Steel strength controls ■ - Concrete strength controls ■ - Anchor pullout strength controls

BT16 Embedment Depth 1 — C20/25

		Anchoring located far from any edge					Anchoring located close to an edge				
Embedment depth	h_{ef} [mm]	70.9									
Member thickness	h [mm]	160									
Edge distance	c [mm]	-	-	-	-	-	70.0	70.0	70.0	70.0	70.0
Anchor spacing	s [mm]	-	70.0	212.7	70.0	212.7	-	70.0	212.7	70.0	212.7
	N_{Rd} [kN]	5.6	11.1	11.1	20.2	22.2	5.6	11.1	11.1	15.8	22.2
	$F_{Rd}^{45°}$ [kN]	7.8	14.4	15.7	24.2	31.4	4.6	7.4	9.3	8.4	12.4
	V_{Rd} [kN]	27.4	36.4	54.8	48.4	109.6	5.4	7.2	10.8	7.2	10.8
	N_{Rd} [kN]	16.3	21.7	32.6	28.8	65.3	12.1	16.1	24.3	22.5	53.6
	$F_{Rd}^{45°}$ [kN]	19.5	26.0	39.1	34.5	78.2	7.9	10.6	15.9	11.9	20.2
	V_{Rd} [kN]	39.2	52.0	78.3	69.2	156.6	7.6	10.1	15.3	10.1	15.3

■ - Steel strength controls ■ - Concrete strength controls ■ - Anchor pullout strength controls

PRINTED MAY 2020

BT16 — Embedment Depth 2

BT16 Embedment Depth 2	C20/25	Anchoring located far from any edge					Anchoring located close to an edge				
Embedment depth	h_{ef} [mm]	100.7									
Member thickness	h [mm]	195									
Edge distance	c [mm]	-	-	-	-	-	70.0	70.0	70.0	70.0	70.0
Anchor spacing	s [mm]	-	70.0	302.1	70.0	302.1	-	70.0	302.1	70.0	302.1
(cracked)	N_{Rd} [kN]	13.3	20.4	26.7	25.1	53.3	10.2	12.5	20.3	16.5	48.2
(cracked)	$F_{Rd}^{45°}$ [kN]	17.6	25.5	35.2	31.4	70.3	6.3	8.1	14.2	9.0	18.6
(cracked)	V_{Rd} [kN]	46.4	57.1	92.8	70.4	185.6	5.8	7.8	14.2	7.8	14.2
(uncracked)	N_{Rd} [kN]	23.7	29.2	47.3	35.9	94.7	14.5	17.9	29.1	23.6	68.8
(uncracked)	$F_{Rd}^{45°}$ [kN]	27.6	36.5	55.2	44.9	110.4	8.9	11.6	20.2	12.7	26.4
(uncracked)	V_{Rd} [kN]	51.9	81.6	103.8	100.6	207.7	8.2	11.0	20.1	11.0	20.1

■ - Steel strength controls   ■ - Concrete strength controls   ■ - Anchor pullout strength controls

DDA DeWALT DESIGN ASSIST — The DEWALT Design Assist is a powerful anchor design software which helps you to design simple and complex anchorages.
The design data of all DEWALT anchor products is readily available. To download this software for free, go to anchors.DEWALT.com/anchors/tech-support-software/DEWALT_design_assist.php

	Concrete C20/25	HANGERMATE™ BT6 Anchoring located far from any edge	HANGERMATE™ BT8 Anchoring located far from any edge	HANGERMATE™ BT6 (External Thread) Anchoring located far from any edge
Embedment depth	h_{ef} [mm]	30.5	37.9	43.3
Member thickness	h [mm]	80	100	100
Edge distance	c [mm]	-	-	-
Anchor spacing	s [mm]	-	-	-
(cracked)	N_{Rd} [kN]	1.7	1.3	2.5
(uncracked)	N_{Rd} [kN]	3.6	6.7	6.7

NOTE: The above capacities are for HANGERMATE™ anchor only. Steel design capacities of the threaded rod shall be checked based on size, grade and strength of the rod used.
The anchor shall be loaded to the minimum value from the rod and HANGERMATE™ load capacities

MATERIAL INFORMATION

MATERIAL SPECIFICATION
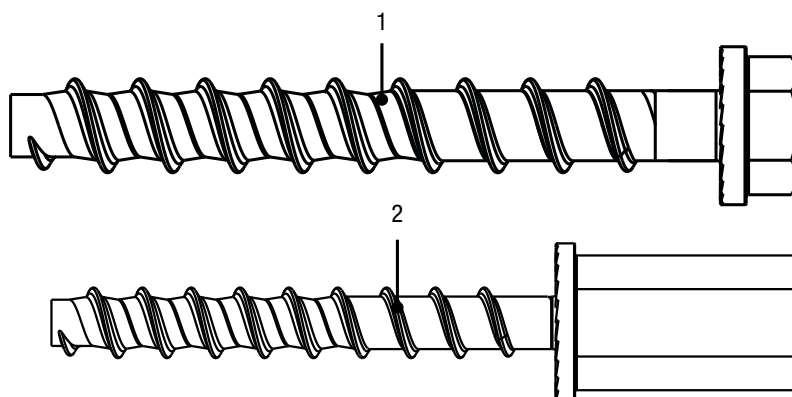
Part no.	Designation	Material	Protection
1	BLUE-TIP 2 SCREW-BOLT™	Special hardened C-steel	Zinc plated 5 µm
1	BLUE-TIP 2 SCREW-BOLT™	Special hardened C-steel	Galvanised 50 µm
2	HANGERMATE™	Special hardened C-steel	Zinc plated 5 µm

DEWALT
ENGINEERED BY **Powers**

BLUE-TIP 2 SCREW-BOLTS™ & HANGERMATE™ ROD HANGERS SCREW ANCHOR

ORDERING INFORMATION

Hex Head Screw-Bolt

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
PBT650-PWR	PBTG650-PWR	BT2 Hex Head Screw-Bolt 6x50mm	6	50	40	10	100	800
PBT680-PWR	PBTG680-PWR	BT2 Hex Head Screw-Bolt 8x80mm	6	80	40 / 55	25 / 40	50	400
PBT6100-PWR	PBTG6100-PWR	BT2 Hex Head Screw-Bolt 6x100mm	6	100	40 / 55	45 / 60	50	400
PBT855-PWR	PBTG855-PWR	BT2 Hex Head Screw-Bolt 8x55mm	8	55	50	5	50	400
PBT865-PWR	PBTG865-PWR	BT2 Hex Head Screw-Bolt 8x65mm	8	65	50	15	50	400
PBT875-PWR	PBTG875-PWR	BT2 Hex Head Screw-Bolt 8x75mm	8	75	50	25	50	200
PBT8100-PWR	PBTG8100-PWR	BT2 Hex Head Screw-Bolt 8x100mm	8	100	50 / 75	25 / 50	25	100
-	PBTG8140-PWR	BT2 Hex Head Screw-Bolt 8x140mm	8	140	50 / 75	65 / 90	25	100
PBT1080-PWR	PBTG1080-PWR	BT2 Hex Head Screw-Bolt 10x80mm	10	80	60	20	25	200
PBT10100-PWR	PBTG10100-PWR	BT2 Hex Head Screw-Bolt 10x100mm	10	100	60 / 85	15 / 40	25	100
PBT10120-PWR	PBTG10120-PWR	BT2 Hex Head Screw-Bolt 10x120mm	10	120	60 / 85	35 / 60	25	100
-	PBTG10140-PWR	BT2 Hex Head Screw-Bolt 10x140mm	10	140	60 / 85	55 / 80	25	100
PBT1280-PWR	PBTG1280-PWR	BT2 Hex Head Screw-Bolt 12x80mm	12	80	75	5	25	100
PBT12100-PWR	PBTG12100-PWR	BT2 Hex Head Screw-Bolt 12x100mm	12	100	75	25	25	100
PBT12150-PWR	PBTG12150-PWR	BT2 Hex Head Screw-Bolt 12x150mm	12	150	75 / 100	50 / 75	20	80
PBT16100-PWR	PBTG16100-PWR	BT2 Hex Head Screw-Bolt 16x100mm	16	100	95	5	10	40
PBT16150-PWR	PBTG16150-PWR	BT2 Hex Head Screw-Bolt 16x150mm	16	150	95 / 130	20 / 55	10	40

Countersunk Screw-Bolt

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
-	PBTCSKG680-PWR	BT2 CSK Screw-Bolt 6x80mm	6	80	40 / 55	25 / 40	50	400
-	PBTCSKG875-PWR	BT2 CSK Screw-Bolt 8x75mm	8	75	50	25	50	200
-	PBTCSKG8100-PWR	BT2 CSK Screw-Bolt 8x100mm	8	100	50 / 75	25 / 50	50	200
-	PBTCSKG1075-PWR	BT2 CSK Screw-Bolt 10x75mm	10	75	60	15	25	200
-	PBTCSKG10100-PWR	BT2 CSK Screw-Bolt 10x100mm	10	100	60 / 85	15 / 40	25	100
-	PBTCSKG12100-PWR	BT2 CSK Screw-Bolt 12x100mm	12	100	75	25	25	100

ORDERING INFORMATION

Dome Head Screw-Bolt

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
-	PBTDG650-PWR	BT2 Dome Head Screw-Bolt 6x50mm	6	50	40	10	100	800
-	PBTDG660-PWR	BT2 Dome Head Screw-Bolt 6x60mm	6	60	40 / 55	5 / 20	50	400
-	PBTDG680-PWR	BT2 Dome Head Screw-Bolt 6x80mm	6	80	40 / 55	25 / 40	50	400

Pan Head Screw-Bolt

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
PBTP660-PWR	-	BT2 Pan Head Screw-Bolt 6x60mm	6	60	40 / 55	5 / 20	50	400
PBTP6100-PWR	-	BT2 Pan Head Screw-Bolt 6x100mm	6	100	40 / 55	45 / 60	50	400

HANGERMATE™ Internal Thread

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
HM6M1040-PWR	-	BT2 HANGERMATE™ Internal Thread 6x40mm	6	40	40	-	100	800
HM6M1040KIT-PWR	-	BT2 HANGERMATE™ Internal Thread Kit 6x40mm	6	40	40	-		500
HM8M1250-PWR	-	BT2 HANGERMATE™ Internal Thread 8x50mm	8	50	50	-	100	400
HM8M1250KIT-PWR	-	BT2 HANGERMATE™ Internal Thread Kit 8x50mm	8	50	50	-		300

• HM6M1040KIT-PWR (500 anchors, 2 XLR Drill-Bits and 1 setting tool)

• HM8M1250KIT-PWR (300 anchors, 2 XLR Drill-Bits and 1 setting tool)

HANGERMATE™ External Thread

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
HMEM10635-PWR	-	BT2 HANGERMATE™ External Thread 6x35mm	6	35	35	-	50	400
HMEM10655-PWR	-	BT2 HANGERMATE™ External Thread 6x55mm	6	55	55	-	50	400

DEWALT
ENGINEERED BY **Powers**

GENERAL INFORMATION

BLUE-TIP 2 SCREW-BOLTS™ & HANGERMATE™ ROD HANGERS - FOR REDUNDANT NON-STRUCTURAL APPLICATIONS

PRODUCT DESCRIPTION

With an EAD 330747 approval the 6 mm **BLUE-TIP 2 SCREW-BOLTS™ / HANGERMATE™** is a small-size screw anchor for multiple connections in nonstructural applications. It requires only a shallow installation depth and is available with various head types. The one piece design makes it is easy to install and the preferred choice for fast but reliable anchoring which is also fully removable.

GENERAL APPLICATIONS AND USES

FEATURES AND BENEFITS

• 6 mm anchor screw especially suitable for non-structural overhead application

• Price competitve anchoring for all kind of ceiling and suspended installation

• Anchor can be easily installed through attachments or directly in contact with concrete surface

• Quick and easy installation with a powered impact wrench

• Consistent performance in high and low strength concrete

• Screw-bolts are available with hex head, countersunk head, pan head and dome head. Also available as internally or externally threaded rod-hangers

• Nominal drill bit size is same as anchor denomination

APPROVALS AND LISTINGS

ETA CE

F120

* Please refer to ETA-15/0810 for load capacities under fire

LOADING CONDITIONS
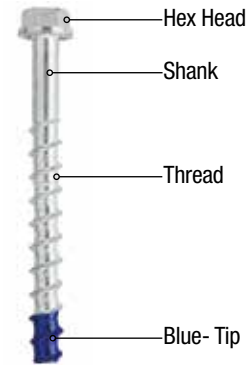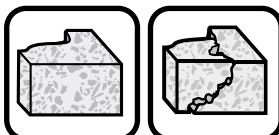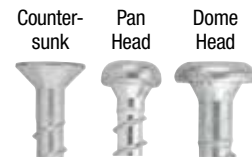
STATIC   QUASI-STATIC

SUITABLE BASE MATERIALS

Hex Head
Shank
Thread
Blue- Tip

BLUE-TIP 2 SCREW-BOLT™

Counter-sunk   Pan Head   Dome Head

HANGERMATE™

Internal Thread   External Thread

VERSIONS

HEAD STYLES

Hex head
Countersunk
Pan head
Dome head
Internal thread rod hanger
External thread rod hanger

PLATING / COATING

Carbon Steel, Zinc Plated
Carbon Steel, Galvanised

APPROVALS

• ETA-15/0810

DDA
DEWALT DESIGN ASSIST

Real-Time Anchor Design Software

anchors.dewalt.com/anchors/
tech-support-software/
dewalt_design_assist.php

INSTALLATION INFORMATION

INSTALLATION DATA

| Parameter	Notation	Unit	BLUE-TIP 2 SCREW-BOLT™ - BT2-6			
			HH (Hex Head)	CSK (Countersunk)	Pan Head	Dome Head
Anchor diameter	d	[mm]	6	6	6	6
Nominal drill bit diameter	d_0	[mm]	6	6	6	6
Diameter of hole clearance in fixture	d_f	[mm]	9	9	9	9
Nominal embedment depth	h_{nom}	[mm]	35	35	35	35
Effective embedment depth	h_{ef}	[mm]	27.4	27.4	27.4	27.4
Drill hole depth	h_1	[mm]	45	45	45	45
Minimum member thickness	h_{min}	[mm]	80	80	80	80
Minimum spacing	s_{min}	[mm]	35	35	35	35
Minimum edge distance	c_{min}	[mm]	35	35	35	35
Hex Head Torque wrench socket size	S_w	[mm]	10	-	-	-
Torx size	-	-	-	T40	T40	T30
Maximum installation torque	$T_{inst, max}$	[Nm]	< 15			
Maximum impact wrench torque	$T_{imp, max}$	[Nm]	205			

Parameter	Notation	Unit	HANGERMATE™ BT6 (Internal Thread)	HANGERMATE™ BT6 (External Thread)
Anchor diameter	d	[mm]	6	
Nominal drill bit diameter	d_0	[mm]	6	
Diameter of hole clearance in fixture	d_f	[mm]	9	
Nominal embedment depth	h_{nom}	[mm]	35	
Effective embedment depth	h_{ef}	[mm]	27.4	
Drill hole depth	h_1	[mm]	45	
Minimum member thickness	h_{min}	[mm]	80	
Minimum spacing	s_{min}	[mm]	35	
Minimum edge distance	c_{min}	[mm]	35	
Torque wrench socket size	S_w	[mm]	10	13
Maximum installation torque	$T_{inst, max}$	[Nm]	< 15	
Maximum impact wrench torque	$T_{imp, max}$	[Nm]	205	

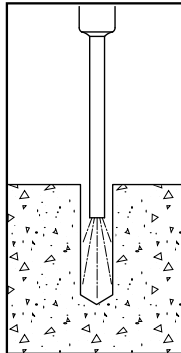**BLUE-TIP 2 SCREW-BOLT™**
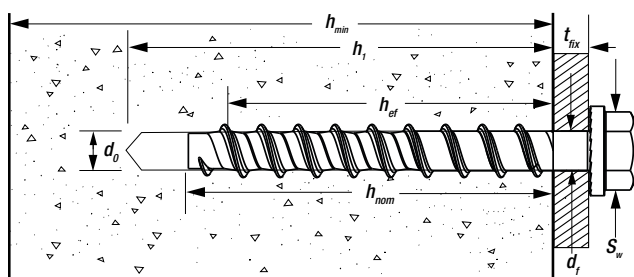
HANGERMATE™
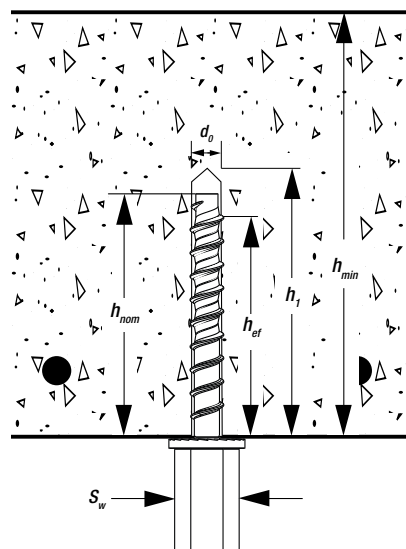
INSTALLATION INFORMATION
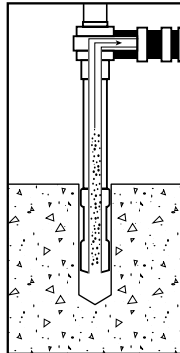
INSTALLATION INSTRUCTIONS

BLUE-TIP 2 SCREW-BOLT™

1.) Using the proper drill bit size, drill a hole into the base material to the required depth.

2.) Remove dust and debris from the hole using a hand pump or compressed air.

1. & 2.) Connect the hollow drill bit of proper size to a vacuum, and drill a hole into the base material to the required depth while the vac is running. The dust is removed during the drilling process.

3.) Select impact wrench and mount the screw anchor head onto the appropriate socket or bit.

4.) Drive the anchor through the fixture into the hole at least to the minimum required embedment depth and until the head of the anchor comes into contact with the fixture.
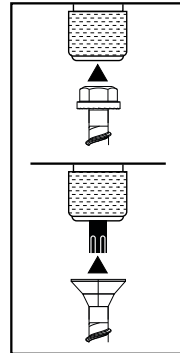
HANGERMATE™

1.) Using the proper drill bit size, drill a hole into the base material to the required depth.

2.) Remove dust and debris from the hole using a hand pump or compressed air.

1. & 2.) Connect the hollow drill bit of proper size to a vacuum, and drill a hole into the base material to the required depth while the vac is running. The dust is removed during the drilling process.

3.) Select impact wrench and mount the screw anchor head into the hex socket.

4.) Drive the anchor into the hole at least to the minimum required embedment depth and until the head of the anchor comes into contact with the base material.

5.) Screw the threaded rod into the anchor head.

DESIGN INFORMATION

LOAD CAPACITIES

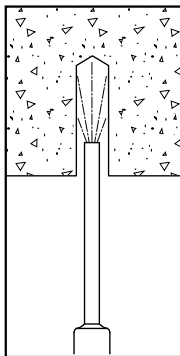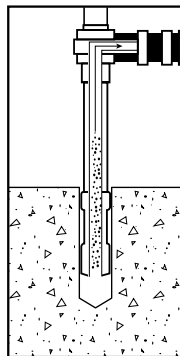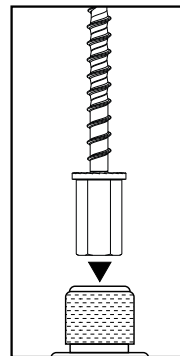| Parameter for calculation of ultimate strength	Notation	Unit	BLUE-TIP 2 SCREW-BOLT™ / HANGERMATE™*		
			BT2-6	HANGERMATE™ BT6 (Internal Thread)	HANGERMATE™ BT6 (External Thread)
Capacity for all directions and faillure modes					
Uncracked and cracked concrete					
Characteristic resistance C20/25 to C50/60	F^0_{Rk}	[kN]	3.5		
Partial safety factor	γ_{Mp}[1]	[-]	2.1[2]		
Design resistance C20/25 to C50/60	F_{Rd}	[kN]	1.7		
Characteristic spacing	s_{cr}	[mm]	200		
Characteristic Edge Distance	c_{cr}	[mm]	100		
Steel failure with lever arm					
Steel failure with lever arm (bending)					
Characteristic resistance	$M^0_{Rk,s}$	[Nm]	13.3		
Partial safety factor	γ_{Ms}[1]	[-]	1.5		

1) In absence of other national regulations
2) The partial safety factor of γ_{inst}=1.4 is included

* The steel capacity of the threaded rods used with HANGERMATE™ anchors, shall be checked and the anchor loaded within the minimum capacity of the threaded rod and anchor

DDA DEWALT DESIGN ASSIST

The DEWALT Design Assist is a powerful anchor design software which helps you to design simple and complex anchorages.
The design data of all DEWALT anchor products is readily available. To download this software for free, go to
anchors.DEWALT.com/anchors/tech-support-software/DEWALT_design_assist.php

MECHANICAL ANCHORS

BLUE-TIP 2 SCREW-BOLTS™ & HANGERMATE™ ROD HANGERS
SCREW ANCHOR

PRINTED MAY 2020

DEWALT
ENGINEERED BY Powers

MATERIAL INFORMATION

MATERIAL SPECIFICATION
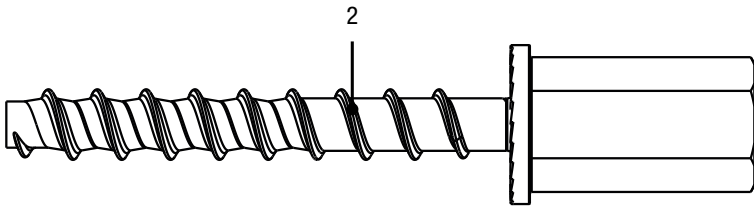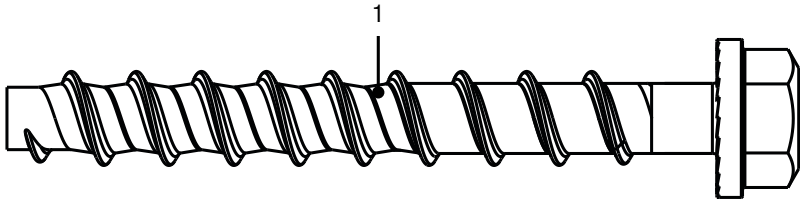
Part no.	Designation	Material	Protection
1	Screw bolt	Special hardened C-steel	Zinc plated 5 µm
1	Screw bolt	Special hardened C-steel	Zinc plated 50 µm
2	HANGERMATE™	Special hardened C-steel	Zinc plated 5 µm

ORDERING INFORMATION

Hex Head Screw-Bolt

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
PBT650-PWR	PBTG650-PWR	BT2 Hex Head Screw-Bolt 6x50mm	6	50	40	10	100	800
PBT680-PWR	PBTG680-PWR	BT2 Hex Head Screw-Bolt 8x80mm	6	80	40 / 55	25 / 40	50	400
PBT6100-PWR	PBTG6100-PWR	BT2 Hex Head Screw-Bolt 6x100mm	6	100	40 / 55	45 / 60	50	400

Countersunk Screw-Bolt

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
-	PBTCSKG680-PWR	BT2 CSK Screw-Bolt 6x80mm	6	80	40 / 55	25 / 40	50	400

ORDERING INFORMATION

Dome Head Screw-Bolt

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
-	PBTDG650-PWR	BT2 Dome Head Screw-Bolt 6x50mm	6	50	40	10	100	800
-	PBTDG660-PWR	BT2 Dome Head Screw-Bolt 6x60mm	6	60	40 / 55	5 / 20	50	400
-	PBTDG680-PWR	BT2 Dome Head Screw-Bolt 6x80mm	6	80	40 / 55	25 / 40	50	400

Pan Head Screw-Bolt

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
PBTP640-PWR	-	BT2 Pan Head Screw-Bolt 6x40mm	6	40	35	5	50	400
PBTP660-PWR	-	BT2 Pan Head Screw-Bolt 6x60mm	6	60	40 / 55	5 / 20	50	400
PBTP6100-PWR	-	BT2 Pan Head Screw-Bolt 6x100mm	6	100	40 / 55	45 / 60	50	400

HANGERMATE™ Internal Thread

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
HM6M635-PWR	-	BT2 HANGERMATE™ Internal Thread 6x35mm	6	35	35		100	800
HM6M1040-PWR	-	BT2 HANGERMATE™ Internal Thread 6x40mm	6	40	40		100	800
HM6M1040KIT-PWR	-	BT2 HANGERMATE™ Internal Thread Kit 6x40mm	6	40	40			500

HANGERMATE™ External Thread

Zinc Part No	Galvanised Part No	Description	Dia. [mm]	Length [mm]	$h_{nom,1}$ /$h_{nom,2}$ [mm]	Max. t_{fix} [mm]	Box qty.	Carton qty.
HMEM10635-PWR	-	BT2 HANGERMATE™ External Thread 6x35mm	6	35	35	-	50	400
HMEM10655-PWR	-	BT2 HANGERMATE™ External Thread 6x55mm	6	55	55	-	50	400

MECHANICAL ANCHORS

BLUE-TIP 2 SCREW-BOLTS™ & HANGERMATE™ ROD HANGERS
SCREW ANCHOR

PRINTED MAY 2020

DEWALT
ENGINEERED BY Powers

TECHNICAL SUPPORT CONTACT INFORMATION

Australia

Stanley Black & Decker, Inc. ANZ

Level 2, 810 Whitehorse Road, Box Hill, VIC 3128, Australia

T: 1800 338 002

F: 1800 080 898

New Zealand

Stanley Black & Decker, Inc. ANZ

39 Business Parade North, East Tamaki, Auckland 2013

T: (09) 265 6714

F: (09) 273 3392

Disclaimer for Recommendations, Information and Use of Data

The recommendations, information and data contained in this manual are put together with the greatest care and accuracy possible. It is based on principles, equations and safety factors set out in the technical documentation of Stanley Black & Decker that are believed to be correct and current as of October 2019. The information and data is subject to change after such date as Stanley Black & Decker reserves the right to change the designs, materials and specifications of the products in this manual without notice.

It is the responsibility of the design professional to ensure that a suitable product is selected, properly designed and used in the intended application. This includes that the selected product and its use is compliant with the applicable building codes and other legal requirements and will satisfy durability and performance criteria and margins of safety which they determine are applicable. The products must be used, handled, applied and installed strictly in accordance with all current instructions for use published by Stanley Black & Decker.

The performance data given in this manual are the result of the evaluation of tests conducted under laboratory conditions. It is the responsibility of the designer and installer in charge to consider the conditions on site and to ensure the performance data given in the manual is applicable to the actual conditions. In particular the base material and environmental conditions have to be checked prior to installation. In case of doubt, contact the technical support of Stanley Black & Decker.

Limitation of Liability

Stanley Black & Decker offers a limited product warranty to customers or end users that the product meets its applicable specifications. Except for the express warranty in the immediately preceding sentence, Stanley Black & Decker grants no other warranties, express or implied, regarding the products, their fitness for any purpose, their quality, their merchantability or otherwise. Further, Stanley Black & Decker shall have no liability with respect to changes in the design, materials and specifications in the products presented in this manual, nor with respect to any product which has been modified or installed improperly, regardless of any specific instructions to

the installer. The responsible designer and installer shall indemnify, defend, and hold harmless Stanley Black & Decker for any and all claimed loss or damage occasioned, in a whole or in part, by the modified products or deviation in product installation procedures.

Limitation of Damages

Stanley Black & Decker or its affiliates or their respective officers, members, managers, directors, representatives, agents or employees are not obligated for direct, indirect, incidental or consequential damages, losses or expenses in connection with, or by reason of, the use of, or inability to use the products for any purpose. Implied warranties of merchantability or fitness for a particular purpose are specifically excluded.

Stanley Black & Decker, Inc. ANZ
Level 2, 810 Whitehorse Road
Box Hill, VIC 3128
Australia