

A

-AFTER WAITING APPROPRIATE AMOUNT OF CURE TIME (REFER TO 'HILTI INSTALLATION INSTRUCTION')
TIGHTEN DOWN ALL NUTS AND WASHERS TO BASE PLATE (4 EACH PER BASE PLATE). FINALIZE BY
TIGHTENING ALL CONNECTION.

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 SPORTSFIELD SPECIALTIES 1000 Sports Highway 10, PO Box 232, Oakville, ON L7M 1Y7 TEL: 905-886-0755 FAX: 905-886-7843 Excellence from Design to Installation		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm$ BEND $\pm$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .005$	DRAWN				TITLE: Gameshade Assembly Guide	
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:			SIZE B	DWG. NO. ODO Gameshade Assembly	REV
NEXT ASSY	USED ON	FINISH				SCALE: 1:64	WEIGHT:	SHEET 1 OF 2
APPLICATION		DO NOT SCALE DRAWING						

General Information

Cavity Number
Tells which cavity used during multi-cavity production.

Size
Shank diameter in inches.

Front

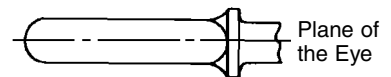
Lifting Eye Traceability Markings

Forging Code
Identifies equipment used during forging operation.

Heat Code
Refers to specific heat of steel used.

Diamond "D" Logo
Manufacturing trademark of the Edward W. Daniel Company

Back



Application:

(a) Loads should always be applied to lifting eyes in the plane of the eye, not at some angle to this plane.

(b) Shoulder lifting eyes must be properly seated (should bear firmly against the mating part) otherwise the working loads must be reduced substantially. A steel washer or spacer may be required for proper seating.

(c) No greater load should be allowed than that given under rated capacity in each of the tables of dimensional data.

(d) To obtain greatest strength from a lifting eye, it must fit reasonably tight in the hole into which it is screwed to prevent unscrewing due to twist of cable. Tightness and seating must be checked after initial load.

(e) Lifting eyes should never be painted or otherwise coated when used for lifting, as such coatings will very likely cover up flaws.

(f) To attain the rated capacity listed for regular lifting eyes, full thread engagement allowing 1/2 turn for alignment to the plane of the eye is necessary.

Physical Testing:

Each lot of standard lifting eyes is manufactured and tested according to ASTM A489-93 and ANSI B18. 15.

BREAKING STRENGTH: The threaded shank is screwed into one jaw of a testing machine and a pin secured to the other jaw passed through the eye.

BEND TEST: Unthreaded parts must be capable of being bent to pressure or blows through 45° without showing cracks or indications of failure.

TENSILE TEST: Per ASTM A489.

PLAIN & SHOULDER LIFTING EYES

Material Data:

Grade C1030
Heat Treat Quench & Draw

Mechanical Properties:

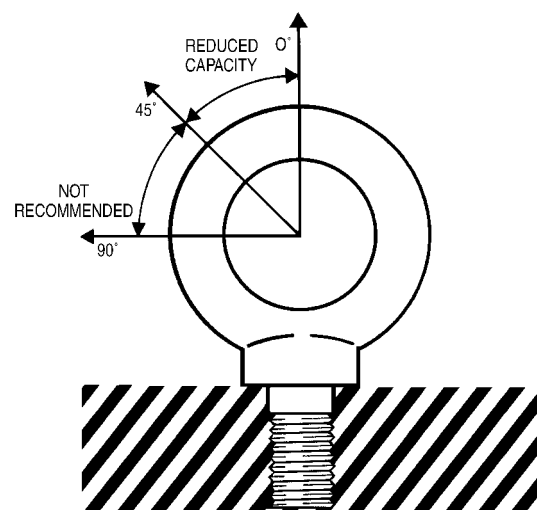
Grain Size 5 or Finer
Tensile 65,000 psi min.
Yield 30,000 psi min.
Elongation 30% min.
Reduction of Area 60% min.

Diamond "D" Lifting Eyes are processed and tested to the above requirements. Tests are performed on randomly selected lifting eyes from a given heat lot.

LIMITED WARRANTY: See page 36 .

CERTIFICATIONS: Request for certification(s) must be made at time of order entry and there will be a charge associated with the certification.

FORGING TOLERANCES: Tolerances on all forged products is 1/32".



Lifting Eye Capacities

DIAMETER		RATED CAPACITY				over 45°
		0°		45°		
IN.	MM	LBS.	KGS	LBS.	KGS	
¼	(M6)	500	(210)	125	(52)	N
⅕	(M7)	900	(370)	225	(92)	O
⅜	(M8)	1,300	(500)	325	(125)	T
7/16	(M10)	1,800	(740)	450	(185)	
½	(M12)	2,400	(1,030)	600	(257)	
9/16	(M14)	3,200	(1,600)	800	(400)	R
5/8	(M16)	4,000	(1,810)	1,000	(452)	E
¾	(M18)	5,000	(2,140)	1,250	(535)	C
7/8	(M20)	7,000	(2,860)	1,750	(715)	O
1	(M24)	9,000	(3,850)	2,250	(962)	M
1-⅛	(M27)	12,000	(5,200)	3,000	(1,300)	M
1-¼	(M30)	15,000	(6,400)	3,750	(1,600)	E
1-½	(M36)	21,000	(8,970)	5,250	(2,242)	N
1-¾	(M45)	28,000	(11,960)	7,000	(2,990)	D
2	(M52)	38,000	(16,230)	9,500	(4,057)	E
2-½	(M65)	56,000	(24,200)	14,000	(6,000)	D
(Metric in Parenthesis)						

(Metric in Parenthesis)

NOTE ON LIFTING EYE & NUT EYE BOLT RATED CAPACITIES
All rated lifting capacities included in the product charts are based on full sized shank and eye unaltered, and unaltered threading.

Lifting Eye Capacities & Safety information

Rated Capacity: The maximum recommended load that should be exerted on the item at zero degree vertical pull. All rated load values are for pulls exerted in the plane of the eye.

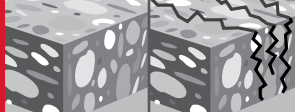
Ultimate Strength: As defined in the machinist's handbook is: the stress at which a material in tension, compression, or shear will rupture or fracture.

Yield Strength: The maximum stress that can be applied to a material without permanent deformation of the material.

Safety Factor: An industry term denoting **theoretical capability**. Lifting eye rated capacity is figured with a 5 to 1 safety factor for a zero degree straight vertical pull

Dimensions in Inches • Weight in Pounds
Please include stock number and size when ordering

HILTI

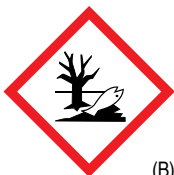


Hilti HIT-HY 200-A Hilti HIT-HY 200-R

Instruction for use	en
Mode d'emploi	fr
Manual de instrucciones	es
Instruções de utilização	pt



(A, B)



(B)

Warning



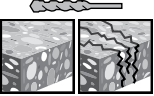
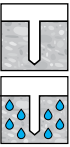
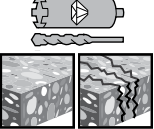
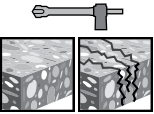
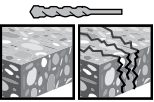
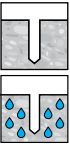
Contains: hydroxypropylmethacrylate, (A)
dibenzoyl peroxide (B)

May cause an allergic skin reaction. (A, B)
Causes serious eye irritation. (B)
Very toxic to aquatic life. (B)





en	Adhesive anchoring system for rebar and anchor fastenings in concrete. Read the safety precautions, safety data sheet, and the product information before use. Read the safety precautions and the product information of the accessories before use.	
fr	Mortier de scellement pour ancrage d'armatures métalliques et de tiges filetées dans le béton. Avant utilisation, bien lire les prescriptions de sécurité, la fiche de données de sécurité ainsi que la fiche d'information produit. Avant d'utiliser l'accessoire, bien lire les prescriptions de sécurité ainsi que la fiche d'information produit.	
es	Resina de inyección para barras corrugadas y varilla roscada. Lea las indicaciones de seguridad, la hoja de datos de seguridad y la información del producto antes de utilizarlo. Lea las indicaciones de seguridad y la información del producto antes de utilizar los accesorios.	
pt	Buchas químicas para ferros de armadura e barras roscadas em betão. Antes de utilizar, ler as regras de segurança, a ficha técnica de segurança e os dados informativos sobre o produto. Antes de utilizar os acessórios, ler as regras de segurança e os dados informativos sobre o produto.	

						
1		HIT-Z 		$\frac{7}{16}'' \dots \frac{7}{8}''$ 10 ... 22 mm	$2\frac{3}{8}'' \dots 8\frac{1}{2}''$ 60 ... 220 mm	
2		HIT-Z 		$\frac{7}{16}'' \dots \frac{7}{8}''$ 10 ... 22 mm	$2\frac{3}{8}'' \dots 8\frac{1}{2}''$ 60 ... 220 mm	
3		HIT-Z HIT-V HAS HIS-N Rebar 		$\frac{1}{2}'' \dots 1\frac{1}{8}''$ 12 ... 32 mm	$2\frac{3}{8}'' \dots 39\frac{3}{8}''$ 60 ... 1000 mm	
4		HIT-V HAS HIS-N Rebar 		$\frac{7}{16}'' \dots 1\frac{1}{2}''$ 10 ... 40 mm	$2\frac{3}{8}'' \dots 75\frac{1}{2}''$ 60 ... 1920 mm	



en

Dry concrete

Water saturated concrete

Waterfilled borehole in concrete

fr

Béton sec

Béton saturé d'eau

Trou dans le béton rempli d'eau

es

Hormigón seco

Hormigón saturado de agua

Taladro lleno de agua en hormigón

pt

Betão seco

Betão saturado de água

Furo em betão cheio de água



en

HIT-Z
HIT-Z-R

Threaded rod
Threaded sleeve

Rebar

fr

HIT-Z
HIT-Z-R

Tige filetée
Douille filetée

Armature métallique

es

HIT-Z
HIT-Z-R

Varilla roscada
Manguito roscado

Barras corrugadas para armado

pt

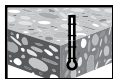
HIT-Z
HIT-Z-R

Barra roscada
Casquilho roscado

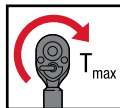
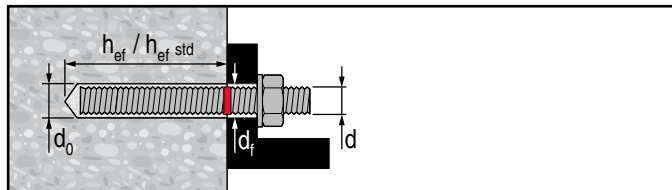
Ferros de armadura



en	Uncracked concrete	Cracked concrete	Hammer drilling	Hollow drill bit	Diamond coring
fr	Béton non lézardé	Béton lézardé	Perçage avec percussion	Foret creux	Forage au diamant
es	Hormigón no fisurado	Hormigón fisurado	Taladro con percusión	Taladro con broca hueca y aspiración	Taladro con diamante
pt	Betão não fissurado	Betão fissurado	Perfurar de martelo	Broca de coroa oca	Perfurar com equipamento diamantado



en	Temperature of concrete	cartridge temperature	Working time	Curing time
fr	Température du béton	Température de la cartouche	Temps de manipulation	Temps de durcissement
es	Temperatura del hormigón	Temperatura del cartucho	Tiempo de ajuste	Tiempo de fraguado
pt	Temperatura do betão	Temperatura do cartucho	Tempo de trabalho	Tempo de cura total

HAS/HIT-V


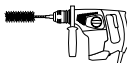
 Ø d [inch]	Ø d ₀ [inch]	h _{ef} std [inch]	h _{ef} [inch]	h _{ef} [mm]	T _{max} [ft-lb]	T _{max} [Nm]
3/8	7/16	3 3/8	2 3/8 ... 7 1/2	60...191	15	20
1/2	9/16	4 1/2	2 3/4 ... 10	70...254	30	41
5/8	3/4	5 5/8	3 1/8 ... 12 1/2	79...318	60	81
3/4	7/8	6 3/4	3 1/2 ... 15	89...381	100	136
7/8	1	7 7/8	3 1/2 ... 17 1/2	89...445	125	169
1	1 1/8	9	4 ... 20	102...508	150	203
1 1/4	1 3/8	11 1/4	5 ... 25	127...635	200	271

d _i [inch]	HAS/HIT-V	3/8	1/2	5/8	3/4	7/8	1	1 1/4
d _{f1}		1/2	5/8	13/16*	15/16*	1 1/8*	1 1/4*	1 1/2*
d _{f2}		7/16	9/16	11/16	13/16	15/16	1 1/8	1 3/8

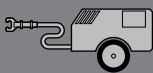


	HAS HIT-V	HIS-N	Rebar	HIT-Z	 HIT-RB	 HIT-SZ	HIT-DL	HIT-OHC
d_0 [inch]	d [inch]				[inch]	[inch]	[inch]	Art. No.
$\frac{7}{16}$	$\frac{3}{8}$	—	—	$\frac{3}{8}$	$\frac{7}{16}$	—	—	387551
$\frac{1}{2}$	—	—	#3	—	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{2}$	
$\frac{9}{16}$	$\frac{1}{2}$	—	10M	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{9}{16}$	$\frac{9}{16}$	
$\frac{5}{8}$	—	—	#4	—	$\frac{5}{8}$	$\frac{5}{8}$	$\frac{9}{16}$	
$\frac{11}{16}$	—	$\frac{3}{8}$	—	—	$\frac{11}{16}$	$\frac{11}{16}$	$\frac{11}{16}$	
$\frac{3}{4}$	$\frac{5}{8}$	—	15M #5	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	387552
$\frac{7}{8}$	$\frac{3}{4}$	$\frac{1}{2}$	#6	$\frac{3}{4}$	$\frac{7}{8}$	$\frac{7}{8}$	$\frac{7}{8}$	
1	$\frac{7}{8}$	—	20M #6 #7	—	1	1	1	
$1\frac{1}{8}$	1	$\frac{5}{8}$	#7 #8	—	$1\frac{1}{8}$	$1\frac{1}{8}$	1	
$1\frac{1}{4}$	—	$\frac{3}{4}$	25M #8	—	$1\frac{1}{4}$	$1\frac{1}{4}$	1	
$1\frac{3}{8}$	$1\frac{1}{4}$	—	#9	—	$1\frac{3}{8}$	$1\frac{3}{8}$	$1\frac{3}{8}$	
$1\frac{1}{2}$	—	—	30M #10	—	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{3}{8}$	

HIT-DL: $h_{ef} > 10"$

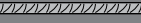
HIT-RB: $h_{ef} > 20d$


	HIT-RE-M		HIT-OHW
	Art. No.		Art. No.
Hilti VC	337111	HDM 330 HDM 500 HDE 500-A18	387550

			
d_0 [inch]	[inch]	Art. No. 381215	
$\frac{7}{16}$ "... $1\frac{1}{8}$ "	$2\frac{3}{8}$ "... 20"	✓	≥ 6 bar/90 psi @ 6 m³/h
$1\frac{1}{4}$ "... $1\frac{1}{2}$ "	4"... 25"	—	≥ 140 m³/h / ≥ 82 CFM

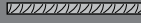


HIT-HY 200-A

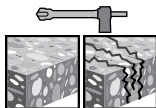
		HIT-V, HAS  HIS-N  Rebar 		HIT-Z 	
[°C]	[°F]	 t _{work}	 t _{cure}	 t _{work}	 t _{cure}
-10...-5	14...23	1,5 h	7 h	—	—
-4...0	24...32	50 min	4 h	—	—
1...5	33...41	25 min	2 h	—	—
6...10	42...50	15 min	75 min	15 min	75 min
11...20	51...68	7 min	45 min	7 min	45 min
21...30	69...86	4 min	30 min	4 min	30 min
31...40	87...104	3 min	30 min	3 min	30 min



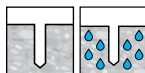
HIT-HY 200-R

		HIT-V, HAS  HIS-N  Rebar 		HIT-Z 	
[°C]	[°F]	 t _{work}	 t _{cure}	 t _{work}	 t _{cure}
-10...-5	14...23	3 h	20 h	—	—
-4...0	24...32	2 h	8 h	—	—
1...5	33...41	1 h	4 h	—	—
6...10	42...50	40 min	2,5 h	40 min	2,5 h
11...20	51...68	15 min	1,5 h	15 min	1,5 h
21...30	69...86	9 min	1 h	9 min	1 h
31...40	87...104	6 min	1 h	6 min	1 h

3

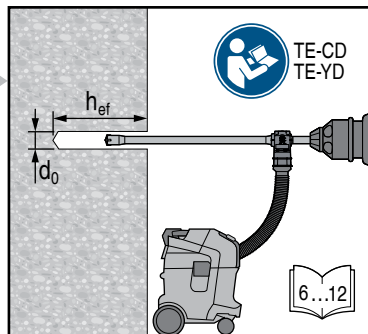


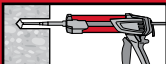
HIT-Z
HAS/HIT-V
HIS-N
Rebar



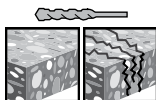
d_0 :
 $\frac{1}{2}'' \dots 1 \frac{1}{8}''$
12 ... 32 mm

h_{ef} :
 $2 \frac{3}{8}'' \dots 39 \frac{3}{8}''$
60 ... 1000 mm



	B	C	D
			
	$2 \frac{3}{8}'' \dots 9 \frac{7}{8}''$ 60 ... 250 mm	$2 \frac{3}{8}'' \dots 75 \frac{1}{2}''$ 60 ... 1920 mm	$2 \frac{3}{8}'' \dots 75 \frac{1}{2}''$ 60 ... 1920 mm
			

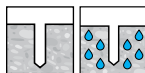
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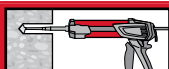
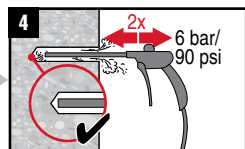
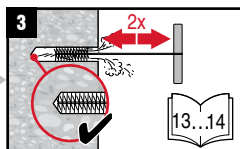
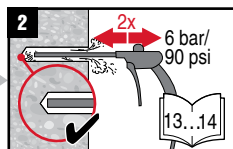
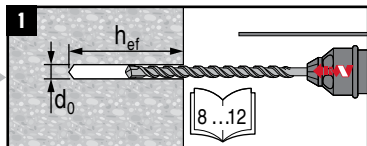
HIT-V
HAS

HIS-N



Rebar

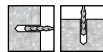

 d_0 :
 $7/16" \dots 1 1/2"$
 10 ... 40 mm

 h_{ef} :
 $2 3/8" \dots 75 1/2"$
 60 ... 1920 mm


B

C

D


 $2 3/8" \dots 9 7/8"$
 60 ... 250 mm

 $2 3/8" \dots 75 1/2"$
 60 ... 1920 mm

 $2 3/8" \dots 75 1/2"$
 60 ... 1920 mm


B

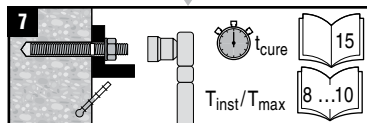
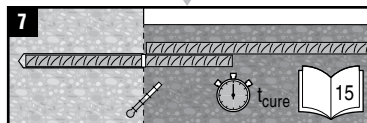
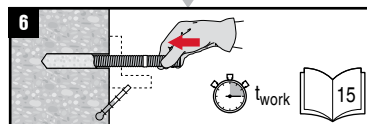
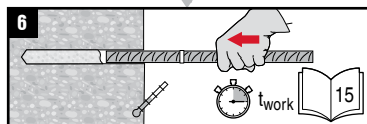
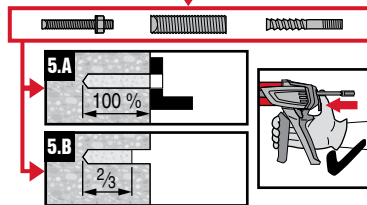
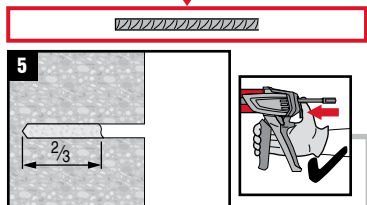
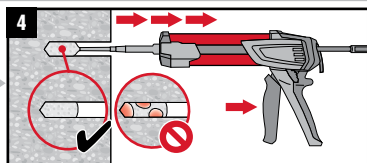
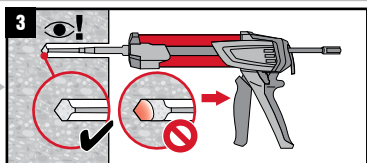
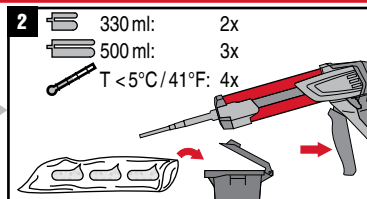
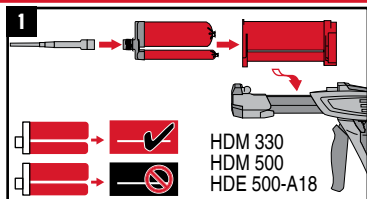
h_{ef} :
 $2\frac{3}{8}'' \dots 9\frac{7}{8}''$
 60...250 mm

HIT-Z
 HAS/HIT-V
 HIS-N
 Rebar



HIT-RE-M →

13...14



Adhesive anchoring system for rebar and anchor fastenings in concrete.**Hilti HIT-HY 200-A****Contains:** Hydroxypropylmethacrylat (A), Dibenzoylperoxid (B)

(A, B)



(B)

**Warning**

H317 May cause an allergic skin reaction. (A, B)

H319 Causes serious eye irritation. (B)

H400 Very toxic to aquatic life. (B)

P262 Do not get in eyes, on skin or on clothing.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+313 If skin irritation or rash occurs: Get medical advice/attention.

P337+313 If eye irritation persists: Get medical advice/attention.

Disposal considerations**Empty packs:**► Leave the mixer attached and dispose of via the local Green Dot recovery system 

► or EAK waste material code: 150102 plastic packaging

Full or partially emptied packs:

► Must be disposed of as special waste in accordance with official regulations.

– EAK waste material code: 08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances.

– or EAK waste material code: 20 01 27* paint, inks, adhesives and resins containing dangerous substances.

Content: 330 ml / 11.1 fl.oz. 500 ml / 16.9 fl. oz **Weight:** 590 g / 20.8 oz 890 g / 31.4 oz

Failure to observe these installation instructions, use of non-Hilti anchors, poor or questionable base material conditions, or unique applications may affect the reliability or performance of the fastenings.

Product Information

- Always keep these instructions together with the product even when given to other persons.
- **Material Safety Data Sheet:** Review the MSDS before use.
- **Check expiration date:** See imprint on foil pack manifold (month/year). Do not use expired product.
- **Foil pack temperature during usage:** 0 °C to 40 °C / 32 °F to 104 °F.
- **Base material temperature at time of installation:**
HAS/HIT-V, HIS, Rebar: between -10 °C and 40 °C / 14 °F and 104 °F.
HIT-Z: between +5 °C and 40 °C / 41 °F and 104 °F.
- **Conditions for transport and storage:** Keep in a cool, dry and dark place between 5 °C and 25 °C / 41 °F and 77 °F.
- For any application not covered by this document / beyond values specified, please contact Hilti.
- **Partly used foil packs must remain in the cassette** and has to be used within **4 weeks**. Leave the mixer attached on the foil pack manifold and store within the cassette under the recommended storage conditions. If reused, attach a new mixer and discard the initial quantity of anchor adhesive.

NOTICE

▲ The surface of the HIT-Z anchor rod must not be altered in any way.

▲ Improper handling may cause mortar splashes.

- Always wear safety glasses, gloves and protective clothes during installation.
- Never start dispensing without a mixer properly screwed on.
- Attach a new mixer prior to dispensing a new foil pack (ensure snug fit).
- Use only the type of mixer (HIT-RE-M) supplied with the adhesive. Do not modify the mixer in any way.
- Never use damaged foil packs and/or damaged or unclean foil pack holders (cassettes).

▲ Poor load values / potential failure of fastening points due to inadequate borehole cleaning.

- The boreholes must be free of debris, dust, water, ice, oil, grease and other contaminants prior to adhesive injection.
- For blowing out the borehole – blow out with oil free air until return air stream is free of noticeable dust.
- For flushing the borehole – flush with water line pressure until water runs clear.
- For brushing the borehole – only use specified wire brush. The brush must resist insertion into the borehole – if not the brush is too small and must be replaced.

▲ Ensure that boreholes are filled from the back of the borehole without forming air voids.

- If necessary use the accessories / extensions to reach the back of the borehole.
- For overhead applications use the overhead accessories HIT-SZ and take special care when inserting the fastening element. Excess adhesive may be forced out of the borehole. Make sure that no mortar drips onto the installer.

▲ Not adhering to these setting instructions can result in failure of fastening points!

Mortier de scellement pour ancrage de chevilles et d'armatures dans le béton.

Hilti HIT-HY 200-A

Contient : hydroxypropylmethacrylate (A), peroxyde de dibenzoyle (B)



(A, B)



(B)



Attention

- H317 Peut provoquer une allergie cutanée. (A, B)
H319 Provoque une sévère irritation des yeux. (B)
H400 Très toxique pour les organismes aquatiques. (B)

P262 Éviter tout contact avec les yeux, la peau ou les vêtements.

P280 Porter des gants de protection/des vêtements de protection/un équipement de protection des yeux/du visage.

P302 + P352 EN CAS DE CONTACT AVEC LA PEAU : Laver abondamment à l'eau et au savon.

P305 + P351 + P338 EN CAS DE CONTACT AVEC LES YEUX : Rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.

P333+313 En cas d'irritation ou d'éruption cutanée : consulter un médecin.

P337+313 Si l'irritation oculaire persiste : consulter un médecin.

Indications de recyclage

Emballages vides :

- ▶ Laisser la buse mélangeuse vissée et procéder à l'élimination par le biais du système de collecte national "Point Vert".
- ▶ ou code déchets EAK : 150102 Emballages en plastique



Emballages pleins ou à moitié vides :

- ▶ Les apporter à un centre de collecte des matières dangereuses conformément aux dispositions administratives.
 - Code déchets EAK : 08 04 09* Résidus de colles et composants pour joints, contenant des solvants organiques ou d'autres substances dangereuses.
 - ou code déchets EAK : 20 01 27* Peintures, encres d'impression, colles et résines artificielles, contenant des substances dangereuses.

Contenu : 330 ml / 11.1 fl.oz. 500 ml / 16.9 fl. oz **Poids :** 590 g / 20.8 oz 890 g / 31.4 oz

Le non-respect de ces instructions d'installation, l'utilisation de chevilles non distribuées par Hilti, un matériau support de mauvaise qualité ou de qualité douteuse, ou encore des utilisations particulières peuvent avoir des conséquences néfastes sur la fiabilité ou les performances des ancrages.

Information produit

- Le présent mode d'emploi doit toujours être conservé avec le produit, même s'il est confié à une autre personne.
- Avant toute utilisation, prendre connaissance de la **fiche de données de sécurité**.
- **Contrôler la date de péremption** (mois/année) imprimée sur le raccord de la cartouche. Ne plus utiliser le produit lorsque la date de péremption est dépassée.
- **Température des cartouches souples en cours d'utilisation** : entre 0 °C et 40 °C / 32 °F et 104 °F.
- **Température du matériau support en cours d'utilisation** :
HAS/HIT-V, HIS, Rebar : entre -10 °C et 40 °C / 14 °F et 104 °F.
HIT-Z : entre +5 °C et 40 °C / 41 °F et 104 °F.
- **Conditions de transport et de stockage** : dans un endroit frais, sec et à l'abri de la lumière à une température de +5 °C à 25 °C / 41 °F à 77 °F.
- En cas d'applications qui ne sont pas décrites dans le présent mode d'emploi ou hors plage de valeurs spécifiées, s'adresser à Hilti.
- **Les cartouches souples entamées doivent rester dans le porte-cartouches** et être réutilisées dans les **quatre semaines**. Laisser la buse mélangeuse vissée et stocker la cartouche souple dans le porte-cartouches conformément à la réglementation. Avant réutilisation, visser une nouvelle buse mélangeuse et jeter le mortier extrudé lors des premières pressions.

AVIS

▲ La surface de la tige d'ancrage HIT-Z ne doit pas être modifiée.

▲ En cas de maniement non conforme, il y a risque de projection du mortier.

- Lors du travail, porter une protection des yeux, des gants et des vêtements de protection!
- Ne jamais commencer l'extrusion si la buse mélangeuse n'est pas vissée!
- Avant de commencer l'extrusion d'une nouvelle cartouche souple, visser une nouvelle buse mélangeuse. Vérifier qu'elle est bien en place.
- Utiliser exclusivement le type de buse fourni avec le mortier (HIT-RE-M). Ne modifier la buse mélangeuse en aucun cas.
- Ne jamais utiliser de cartouches souples endommagées ni de porte-cartouches endommagés ou très encrassés.

▲ Mauvaise fixation/défaillance du chevillage à cause d'un nettoyage insuffisant du trou.

- Avant de procéder à l'injection, s'assurer que le trou de perçage est exempt de débris de perçage, poussières, eau, glace, huile, graisse ou autres contaminants.
- Soufflage du trou foré – avec de l'air exempt d'huile jusqu'à ce que l'air sortant soit exempt de toute poussière.
- Rinçage du trou foré – rincer le trou à l'eau à pression de conduite normale jusqu'à ce que de l'eau propre ressorte.
- Brossage du trou foré – uniquement avec un écouvillon en acier adapté. Une résistance doit se faire sentir lors de l'insertion de l'écouvillon dans le trou – si ce n'est pas le cas, l'écouvillon est trop petit et doit être remplacé.

▲ Veiller à ce que le remplissage se fasse à partir du fond du trou pour éviter la formation de bulles d'air.

- Si nécessaire, utiliser des prolongateurs pour atteindre le fond du trou.
- En cas d'applications au plafond, utiliser l'accessoire HIT-SZ et faire particulièrement attention lors de l'introduction de l'élément de fixation. L'excédent de mortier peut ressortir du trou foré. Veiller alors à ce que celui-ci ne goutte pas sur l'opérateur.

▲ Le non-respect des instructions peut entraîner une défaillance du chevillage!

Resina de inyección para la fijación de anclajes y tacos en hormigón.**Hilti HIT-HY 200-A****Contiene:** metacrilato de hidroxipropilo (A), peróxido de dibenzoilo (B)

(A, B)



(B)

**Atención**

H317 Puede provocar una reacción alérgica en la piel. (A, B)

H319 Provoca irritación ocular grave. (B)

H400 Muy tóxico para los organismos acuáticos. (B)

P262 Evitar el contacto con los ojos, la piel o la ropa.

P280 Llevar guantes/prendas/gafas/máscara de protección.

P302 + P352 EN CASO DE CONTACTO CON LA PIEL: lavar con agua y jabón abundantes.

P305 + P351 + P338 EN CASO DE CONTACTO CON LOS OJOS: aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.

P333+313 En caso de irritación o erupción cutánea: consultar a un médico.

P337+313 Si persiste la irritación ocular: consultar a un médico.

Indicaciones de reciclaje**Cartuchos vacíos:**

- Deseche el mezclador enroscado a través del sistema de recogida nacional identificado como Punto Verde.
- O el código de residuo LER: 150102 embalajes de plástico

**Cartuchos llenos o parcialmente vacíos:**

- Deberán eliminarse como residuos especiales de acuerdo con las normativas oficiales.
 - Código de residuo LER: 08 04 09* Residuos de adhesivos y sellantes que contienen disolventes orgánicos u otras sustancias peligrosas.
 - O el código de residuo LER: 20 01 27* Pinturas, tintas, adhesivos y resinas que contienen sustancias peligrosas.

Contenido: 330 ml / 11.1 fl.oz. 500 ml / 16.9 fl. oz **Peso:** 590 g / 20.8 oz 890 g / 31.4 oz

El incumplimiento de las instrucciones de uso y datos de fijación, el uso de anclajes no fabricados por Hilti, el estado deficiente o cuestionable del hormigón o ciertas aplicaciones puede afectar a la fiabilidad y rendimiento de la fijación.

Información del producto

- Conserve las presentes instrucciones de uso siempre junto con el producto y entréguelas también si el producto pasa a manos de otra persona.
- Consulte la hoja de **datos de seguridad** antes de utilizar el producto.
- La **fecha de caducidad** se indica en la pieza de conexión (mes/año). El producto no debe utilizarse después de la fecha de caducidad.
- **Temperatura del cartucho durante la utilización:** de 0 °C a 40 °C / de 32 °F a 104 °F.
- **Temperatura del material base durante la instalación:**
Varilla HAS/HIT-V, manguito HIS, barra corrugada: de -10 °C a 40 °C / de 14 °F a 104 °F.
HIT-Z: de +5 °C a 40 °C / de 41 °F a 104 °F.
- **Condiciones de transporte y almacenamiento:** lugar fresco, seco y oscuro con una temperatura de +5 °C a 25 °C / de 41 °F a 77 °F.
- Para aplicaciones que no se describen en las presentes instrucciones de uso o no se enmarcan en la especificación, póngase en contacto con Hilti.
- **Los cartuchos que no estén completamente vacíos deberán permanecer en el portacartuchos** y utilizarse antes de **cuatro semanas**. Para ello deberán guardarse en el portacartuchos con el mezclador enroscado en las condiciones de almacenamiento recomendadas. Antes de utilizarlo de nuevo, enroscar un nuevo mezclador y desechar la resina inicial.

es

AVISO

- ▲ **La superficie de la barra de anclaje HIT-Z no debe modificarse.**
- ▲ **La resina puede salpicar si se utiliza incorrectamente.**
 - Lleve gafas protectoras, guantes de protección y ropa de trabajo durante el trabajo.
 - No comience a inyectar si no se ha roscado el mezclador.
 - Enrosque un nuevo mezclador antes de trabajar con un cartucho nuevo. Asegúrese de que el mezclador está unido firmemente.
 - Utilice exclusivamente el modelo de mezclador (HIT-RE-M) suministrado con la resina. No modifique el mezclador en ningún caso.
 - No utilice cartuchos en mal estado y/o portacartuchos dañados o sucios.
- ▲ **Valores de sujeción deficientes/fallo de la fijación debido a limpieza insuficiente del agujero.**
 - Antes de inyectar la resina, los agujeros deben estar libres de restos de perforación, polvo, agua, hielo, aceite, grasa o cualquier otro agente contaminante.
 - Soplado del agujero con aire sin aceite hasta que el aire que refluye esté libre de polvo.
 - Lavado del agujero: lave con una manguera de agua con la presión normal de la red hasta que salga agua limpia.
 - Limpieza del agujero: realícese sólo con un cepillo metálico de tamaño apropiado. Al cepillar el agujero, se notará cierta resistencia en el cepillo. Si no es este el caso, el cepillo es demasiado pequeño y debe cambiarse.
- ▲ **Verificar que el relleno del agujero se produce desde el fondo del mismo para que no se formen burbujas de aire.**
 - Si es necesario, utilice las prolongaciones para alcanzar el fondo del agujero..
 - En aplicaciones por encima de la cabeza, utilice el accesorio HIT-SZ y preste especial atención al introducir el elemento de fijación. Puede salir resina sobrante del agujero. Asegúrese de que la resina no gotee sobre el usuario.
- ▲ **El incumplimiento de estas instrucciones puede llevar a una fijación incorrecta.**

Buchas químicas para fixações de ferros e de ancoragens em betão.**Hilti HIT-HY 200-A****Contém:** metacrilato de hidroxipropilo (A), peróxido de dibenzoílo (B)

(A, B)



(B)

**Atenção**

H317 Pode provocar uma reacção alérgica cutânea. (A, B)

H319 Provoca irritação ocular grave. (B)

H400 Muito tóxico para os organismos aquáticos. (B)

P262 Não pode entrar em contacto com os olhos, a pele ou a roupa.

P280 Usar luvas de protecção/vestuário de protecção/protecção ocular/protecção facial.

P302 + P352 **SE ENTRAR EM CONTACTO COM A PELE:** lavar com sabonete e água abundantes.P305 + P351 + P338 **SE ENTRAR EM CONTACTO COM OS OLHOS:** enxaguar cuidadosamente com água durante vários minutos. Se usar lentes de contacto, retire-as, se tal lhe for possível. Continuar a enxaguar.

P333+313 Em caso de irritação ou erupção cutânea: consulte um médico.

P337+313 Caso a irritação ocular persista: consulte um médico.

Recomendação sobre a eliminação**Cartuchos vazios:**

- Deixar o misturador enroscado e eliminar através do sistema de recolha "Ponto Verde" nacional.
- ou código CER: 150102 Embalagens de plástico

**Cartuchos semiusados ou novos:**

- Eliminar de acordo com as normas e regulamentações legais sobre resíduos especiais.
 - Código CER: 08 04 09* Resíduos de colas ou vedantes, contendo solventes orgânicos ou outras substâncias perigosas.
 - ou código CER: 20 01 27* Tintas, produtos adesivos, colas e resinas, contendo substâncias perigosas.

Conteúdo: 330 ml / 11.1 fl.oz. 500 ml / 16.9 fl. oz **Peso:** 590 g / 20.8 oz 890 g / 31.4 oz

O não cumprimento destas instruções de instalação, a utilização de ancoragens não Hilti, condições deficientes ou duvidosas do material base ou aplicações únicas podem afectar a fiabilidade ou desempenho das fixações.

Dados informativos sobre o produto

- Guarde estas instruções de utilização sempre junto com o produto, mesmo quando o entregar a outras pessoas.
- Antes de iniciar os trabalhos, tenha em consideração a **ficha técnica de segurança**.
- Veja o **prazo de validade** (mês/ano) na peça de junção. Não utilize produtos cujo prazo de validade se encontre ultrapassado.
- **Temperatura do cartucho durante a utilização:** entre 0 °C e 40 °C / 32 °F e 104 °F.
- **Temperatura do material base durante a instalação:**
HAS/HIT-V, HIS, Rebar: entre -10 °C e 40 °C / 14 °F e 104 °F.
HIT-Z: entre +5 °C e 40 °C / 41 °F e 104 °F.
- **Condições de transporte e armazenamento:** em lugar fresco, seco e ao abrigo da luz, entre +5 °C e 25 °C / 41 °F e 77 °F.
- Em caso de aplicações que não se encontrem descritas nas presentes instruções de utilização ou estejam fora das especificações, é favor dirigir-se à Hilti.
- **As sobras de cartuchos parcialmente usados devem permanecer** no suporte e ser utilizadas num prazo de **quatro semanas**. Deixe o misturador enroscado e armazene-o no suporte juntamente com o cartucho, de acordo com as condições de armazenagem preconizadas. Quando/se reutilizados, utilize um misturador novo e não utilize novamente a resina inicial.

 AVISO
⚠ A superfície do varão roscado HIT-Z não pode ser modificada.**⚠ No caso de manuseamento incorrecto, é possível que seja injectada resina.**

- Durante a realização de trabalhos, use óculos de protecção, luvas de protecção e roupa de trabalho!
- Nunca comece a aplicação sem que o misturador esteja enroscado!
- Antes da aplicação de um novo cartucho, enrosque um misturador novo. Certifique-se de que está bem apertado.
- Utilizar apenas o tipo de misturador (HIT-RE-M) fornecido com a resina. Não modifique o misturador de forma alguma.
- Nunca utilize cartuchos danificados e/ou suportes danificados ou sujos.

⚠ Valores de retenção deficientes/falha da fixação devido a limpeza insuficiente do furo.

- Antes da injeção, os furos têm de estar isentos de material de perfuração, pó, água, gelo, óleo, gordura ou outras impurezas.
- Limpar o furo por sopro com ar isento de óleo, até que o ar saia sem pó.
- Lavar o furo – com uma mangueira com pressão normal, até sair água limpa.
- Escovar o furo – apenas com uma escova de aço adequada. Ao escovar o furo deverá ser perceptível uma resistência na escova – se não for o caso, a escova é demasiado pequena e deverá ser substituída.

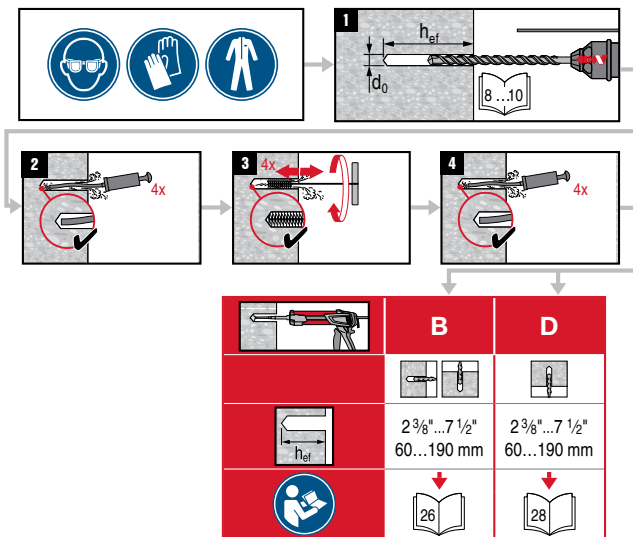
⚠ Assegure que o enchimento do furo é efectuado a partir do fundo, para que não se formem bolhas de ar.

- Se necessário, utilize os prolongadores para alcançar o fundo do furo.
- No caso de aplicações em suspensão, utilize o acessório HIT-SZ e preste especial atenção ao inserir o elemento de fixação. Pode sair resina em excesso do furo. Certifique-se de que não pinga resina sobre o utilizador.

⚠ A limpeza manual do furo é permitida, desde que as instruções abaixo sejam seguidas rigorosamente. Note que a limpeza manual do orifício de perfuração é apenas válida de acordo com ETA-15/0195 e não para outras homologações.



	HAS/HIT-V HIS-N		$d_0:$ $\leq \frac{3}{4}"$ 19 mm	$h_{ef}:$ $\leq 10d$
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⚠ A não observação das instruções pode conduzir à falha da fixação!

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CA	Hilti (Canada) Corp. 2360 Meadowpine Boulevard Mississauga, Ontario L5N 6S2 Tel +1 905 813 9200
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CE

15

Hilti AG
FL-9494 Schaan
Hilti Werke

1343-CPR-M 500-10/07.14
ETA-11/0493
Notified body 1343
ETAG 001-1, -5
Option 1, (Seismic C1)
www.hilti.com

CE

15

Hilti AG
FL-9494 Schaan
Hilti Werke

1343-CPR-M 500-05/07.14
ETA-11/0492
Notified body 1343
ETAG 001-1, -5
www.hilti.com

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15

Hilti AG
FL-9494 Schaan
Hilti Werke

1343-CPR-M 500-14/07.14
ETA-12/0006
Notified body 1343
ETAG 001-1, -5
Option 1, Seismic C1, (C2)
www.hilti.com

CE

15

Hilti AG
FL-9494 Schaan
Hilti Werke

1343-CPR-M 500-12/07.14
ETA-15/0296
Notified body 1343
ETAG 001-1, -5
Option 1, Seismic C1, C2
www.hilti.com

CE

15

Hilti AG
FL-9494 Schaan
Hilti Werke

1343-CPR-M 500-11/07.14
ETA-12/0084
Notified body 1343
ETAG 001-1, -5
Option 1, (Seismic C1)
www.hilti.com

CE

14

Hilti AG
FL-9494 Schaan
Hilti Werke

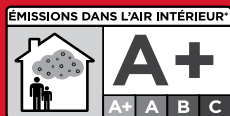
1343-CPR-M 500-06/07.14
ETA-12/0083
Notified body 1343
ETAG 001-1, -5
www.hilti.com

CE

15

Hilti AG
FL-9494 Schaan
Hilti Werke

1343-CPR-M 500-15/07.14
ETA-12/0028
Notified body 1343
ETAG 001-1, -5
Option 1, Seismic C1, (C2)
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Certified to
ANSI-NSF 61



* Information sur le niveau d'émission de substances volatiles dans l'air intérieur, présentant un risque de toxicité par inhalation, sur une échelle de classe allant de A+ (très faibles émissions) à C (fortes émissions).

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