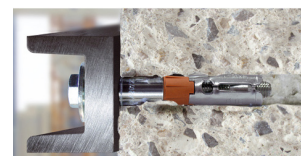
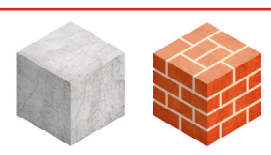


# CHEVILLE DE SÉCURITÉ HAUTE PERFORMANCE

## VERSION TÊTE HEXAGONALE

**HVE**



### CARACTÉRISTIQUES

**Matière :**

Acier électrozingué

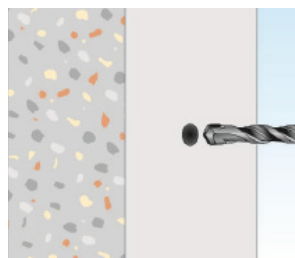
**Avantages :**

- Pose simple et rapide à travers l'objet à fixer
- Cheville femelle : démontable
- ATE béton option 1 pour béton fissuré et non fissuré
- Tenue au feu (120 minutes)
- Utilisation possible sous action sismique (performance catégorie C1)

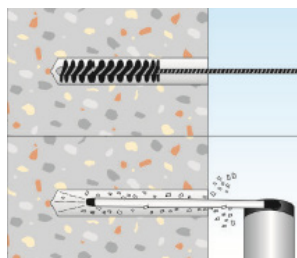
### EXEMPLES D'APPLICATIONS

- Fixation de profils métalliques : garde-corps, poutres métalliques, sabots de charpente, consoles, chemins de câbles...
- Portes et portails industriels
- Supportage industriel

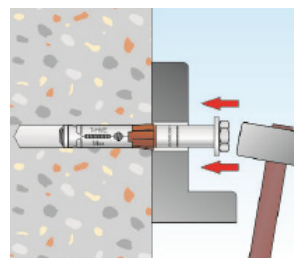
### MISE EN ŒUVRE



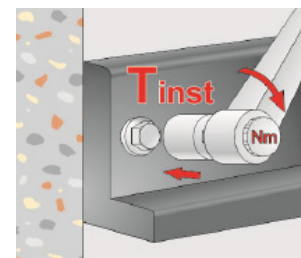
Percer le trou



Dépoussiérer le trou



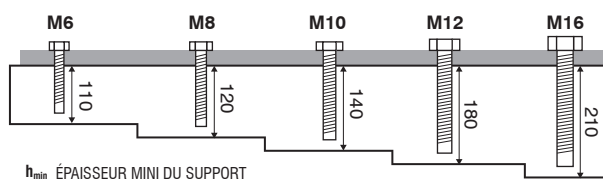
Monter la cheville au travers de la pièce à fixer



Serrer au couple indiqué dans les données de montage

### DONNÉES DE MISE EN ŒUVRE

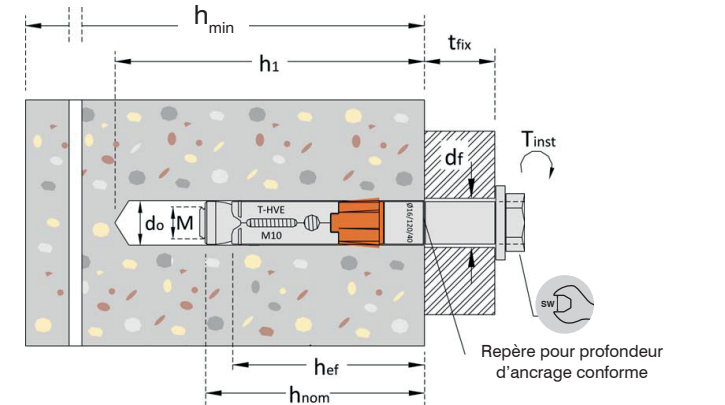
	M6	M8	M10	M12	M16	
$S_{min}$	55	110	80	135	130	ENTRAXE MINIMUM
$C_{min}$	70	100	90	175	180	DISTANCE AU BORDS MINI



# DIMENSIONS & DONNÉES DE MONTAGE

Type	M	L	t <sub>fix</sub>	Référence	M6	M8	M10	M12	M16
					mm	mm	mm	mm	mm
HVE M6	M6	70	5	HVE10/5					
		80	15	HVE10/15					
		100	35	HVE10/35					
HVE M8	M8	80	10	HVE12/10					
		100	30	HVE12/30					
		120	50	HVE12/50					
HVE M10	M10	100	20	HVE16/20					
		120	40	HVE16/40					
		140	60	HVE16/60					
HVE M12	M12	120	20	HVE18/20					
		150	50	HVE18/50					
		170	50	HVE24/50					
HVE M16	M16	140	20	HVE24/20					
		170	50	HVE24/50					

Profondeur d'ancrage effective	$h_{ef}$	55	60	70	90	105
Ø perçage	$d_o$	10	12	16	18	24
Profondeur mini de perçage	$h_1$	80	90	100	120	140
Profondeur d'ancrage hors-tout	$h_{nom}$	65	70	80	100	120
Ø maxi de perçage dans pièce à fixer	$d_f$	12	14	18	20	26
Ouverture de clef	Sw	10	13	17	19	24
Couple de serrage	$T_{inst}$	15	30	50	100	160



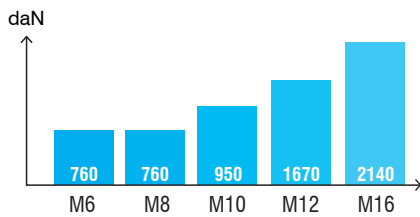
## CHARGES DE SERVICE

Les charges publiées sont calculées à partir des valeurs caractéristiques données dans les ETA sur lesquels des coefficients partiels de sécurité issus de l'ETAG001 ainsi qu'un coefficient partiel d'action  $\chi_f = 1,4$  sont appliqués. Les valeurs sont données pour des profondeurs d'ancrage standard dans du béton C20/25.

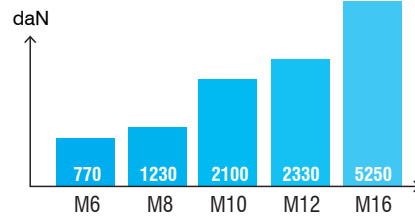
### TRACTION



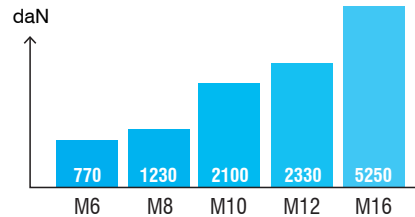
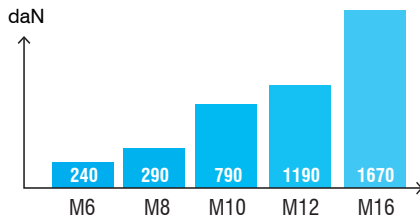
Béton non fissuré



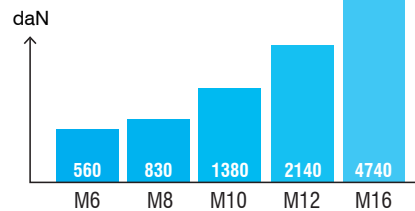
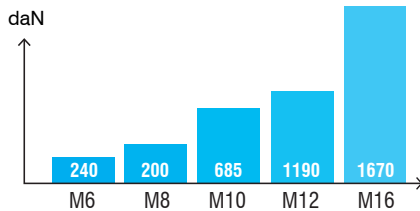
### CISAILLEMENT



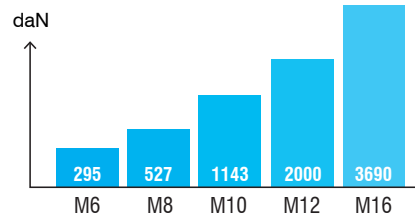
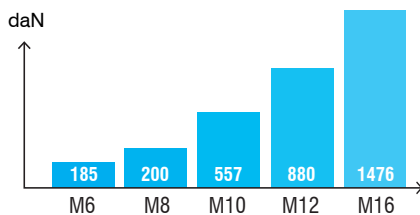
Béton fissuré



Sous contrainte sismique catégorie C1



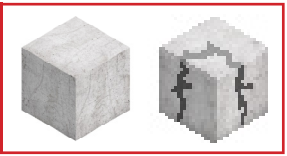
Sous contrainte sismique catégorie C2



Pour les caractéristiques exactes de résistances et de pose, il convient de respecter toutes les exigences mentionnées dans l'agrément technique européen ETA 10/0060 ainsi que sur la notice de pose.

# HIGH LOAD SAFETY BOLT HEXAGONAL HEAD VERSION

**HVE**



## FEATURES

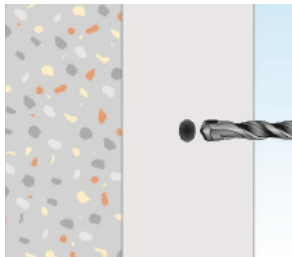
**Material :**  
Steel

**Advantages :**  
• Easy and fast installation through the fixture

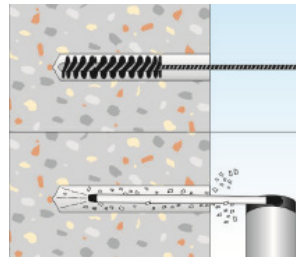
## APPLICATION EXAMPLES

- For fixing metal profiles, railings, beams steel cladding brackets, industrial racking, consoles, cable trays....
- Industrial doors and gates

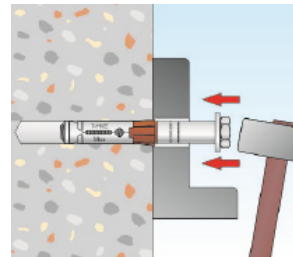
## INSTALLATION



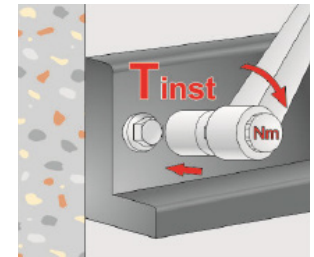
Drill the hole



Remove the dust from the hole with an air pump



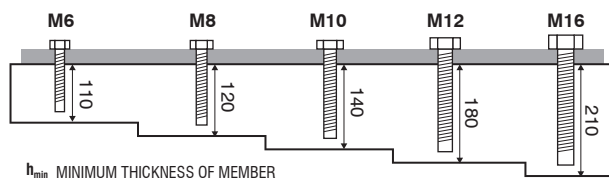
Put the Anchor into the hole through the fixture



Apply required torque

## INSTALLATION DATAS

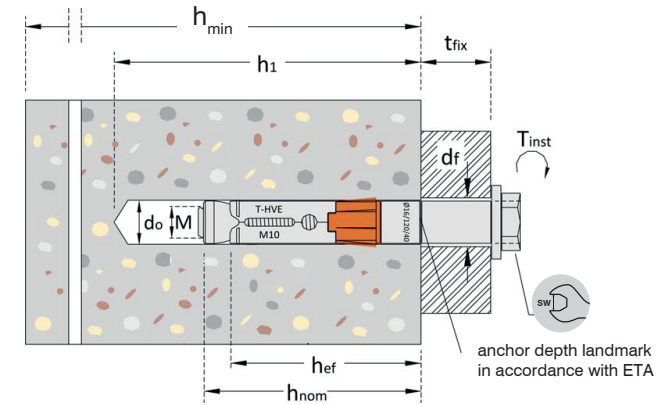
	M6	M8	M10	M12	M16	
$S_{min}$	55	110	80	135	130	MINIMUM SPACING
$C_{min}$	70	100	90	175	180	MINIMUM EDGE DISTANCE



# DIMENSIONS & APPLICATION DATAS

Type	M	L	t <sub>fix</sub>	Reference	M6	M8	M10	M12	M16
					mm	mm	mm	mm	mm
<b>HVE M6</b>	M6	70	5	<b>HVE10/5</b>					
		80	15	<b>HVE10/15</b>					
		100	35	<b>HVE10/35</b>					
<b>HVE M8</b>	M8	80	10	<b>HVE12/10</b>					
		100	30	<b>HVE12/30</b>					
		120	50	<b>HVE12/50</b>					
<b>HVE M10</b>	M10	100	20	<b>HVE16/20</b>					
		120	40	<b>HVE16/40</b>					
		140	60	<b>HVE16/60</b>					
<b>HVE M12</b>	M12	120	20	<b>HVE18/20</b>					
		150	50	<b>HVE18/50</b>					
		170	20	<b>HVE24/20</b>					
<b>HVE M16</b>	M16	140	20	<b>HVE24/20</b>					
		170	50	<b>HVE24/50</b>					

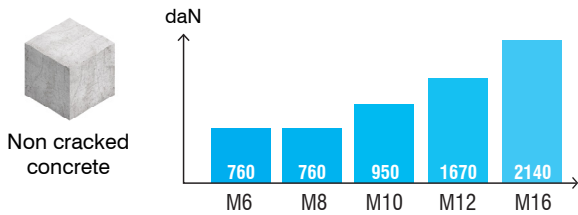
Anchor length	$h_{ef}$	55	60	70	90	105
Ø drill hole	$d_o$	10	12	16	18	24
Min. drilling depth	$h_1$	80	90	100	120	140
Overall anchor embedment depth	$h_{nom}$	65	70	80	100	120
Ø clearance hole in the fixture	$d_f$	12	14	18	20	26
Wrench size/socket size	Sw	10	13	17	19	24
Required torque moment (N.m.)	$T_{inst}$	15	30	50	100	160



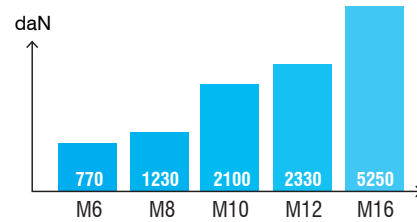
## RECOMMENDED LOADS

Loads are calculated from published characteristic values in the ETA on which partial safety factors from the ETAG001 and a partial coefficient action  $\gamma_f = 1.4$  are applied. Values are given for standard embedment depth for non-cracked concrete C20 / 25.

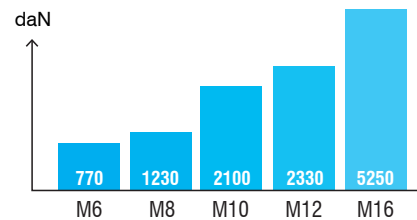
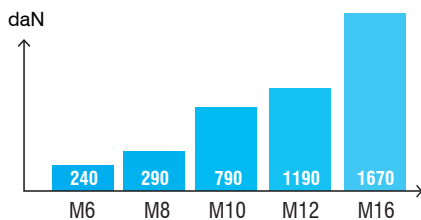
### TENSILE



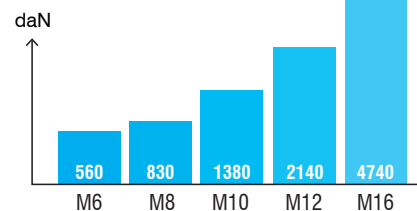
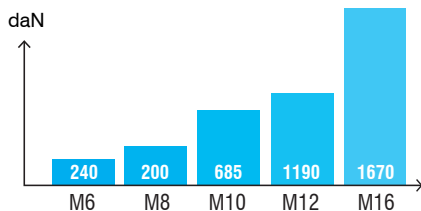
### SHEAR



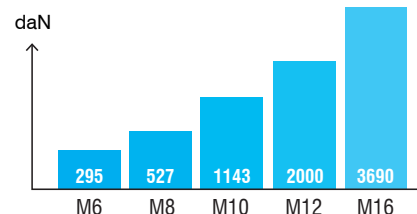
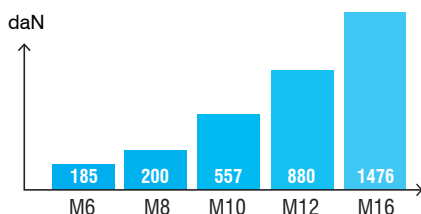
Cracked concrete



under seismic constraint C1



under seismic constraint C2



For accurate loads and implementation data, requirements specified in the ETA 10/0060 must be respected as well as the installation guide.

# KOTWA DO DUŻYCH OBCIĄŻEŃ WERSJA Z ŁBEM SZEŚCIOKĄTNYM

# HVE



BETON  
BETON SPEKANY



## CECHY

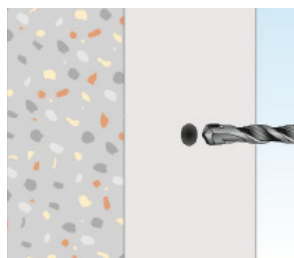
**Materiał :**  
Stal ocynkowana

- Zalety :**
- Łatwe i szybkie przekładanie przez mocowany przedmiot
  - Kotwa zewnętrzna : demontowana
  - ETA beton opcja 1 dla betonu spękanego i niespękanego
  - Odporność na ogień (120 minut)
  - Można używać pod działaniem sejsmicznym (kategoria wydajności C1)

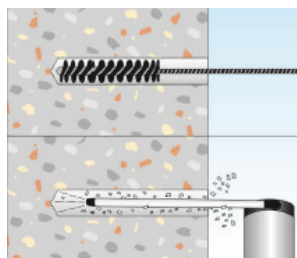
## PRZYKŁADY UŻYCIA

- Mocowanie profili metalowych: balustrady, belki metalowe, wsporniki belki, wsporniki, kanały kablowe...
- Drzwi i portale przemysłowe
- Podpory przemysłowe

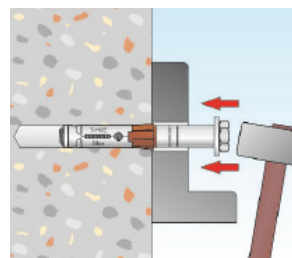
## MONTAŻ



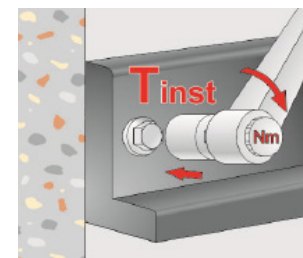
Wywiercić otwór



Usunąć pył z otworu



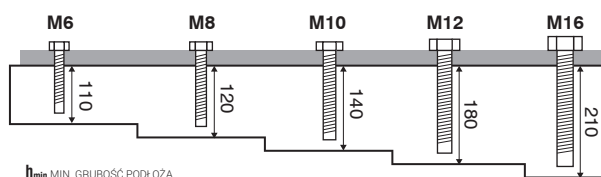
Przełożyć kotwę przez mocowany przedmiot



Moment obrotowy wskazany w danych montażowych

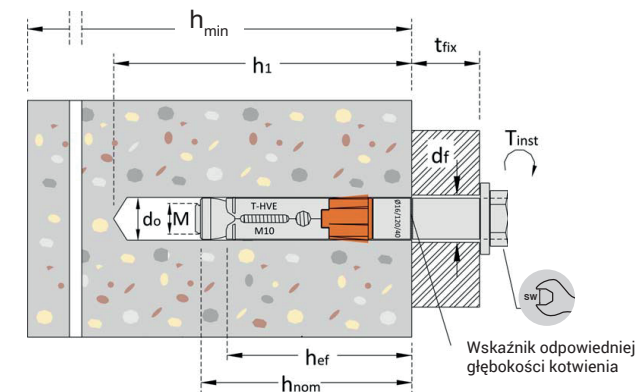
## DANE MONTAŻOWE

	M6	M8	M10	M12	M16	
$S_{min}$	55	110	80	135	130	MINIMALNY ROZSTAW
$C_{min}$	70	100	90	175	180	MIN. ODLEGŁOŚĆ OD KRAWĘDZI



# WYMIARY I DANE MONTAŻOWE

Typ	M	L	t <sub>fix</sub>	Symbol	M6	M8	M10	M12	M16		
					h <sub>ef</sub>	d <sub>o</sub>	h <sub>1</sub>	h <sub>nom</sub>	d <sub>f</sub>	S <sub>w</sub>	T <sub>inst</sub>
		mm	mm								
HVE M6	M6	70	5	HVE10/5	55	10	80	80	12	10	15
		80	15	HVE10/15	60	12	90	65	14	13	30
		100	35	HVE10/35	70	16	100	80	18	17	50
HVE M8	M8	80	10	HVE12/10	90	12	100	70	14	13	30
		100	30	HVE12/30	60	16	120	80	18	19	100
		120	50	HVE12/50	70	18	140	100	20	19	160
HVE M10	M10	100	20	HVE16/20	100	16	120	80	18	17	50
		120	40	HVE16/40	60	20	140	100	20	19	100
		140	60	HVE16/60	70	24	160	120	26	19	160
HVE M12	M12	120	20	HVE18/20	120	18	140	100	20	17	50
		150	50	HVE18/50	70	24	160	120	26	19	100
		170	70	HVE24/20	80	28	180	140	30	19	160
HVE M16	M16	140	20	HVE24/20	140	24	160	120	26	19	100
		170	50	HVE24/50	70	30	180	140	30	19	160



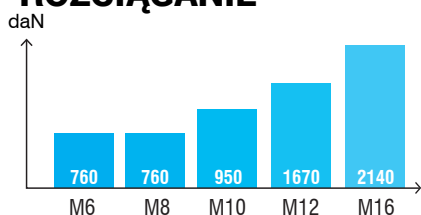
## ZAKRES OBCIĄŻEŃ

Przedstawiony zakres został wyliczony na podstawie charakterystycznych wartości podanych w ETA, do których zostały przystawione częściowe współczynniki bezpieczeństwa pochodzące z ETAG001 oraz częściowy współczynnik działania  $\chi_f = 1,4$ . Podane wartości dotyczą standardowych głębokości kotwienia dla betonu C20/25.

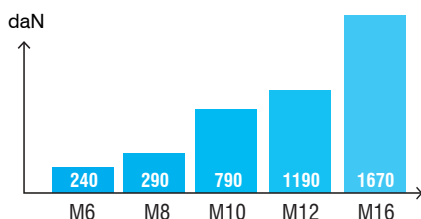
### ROZCIĄGANIE



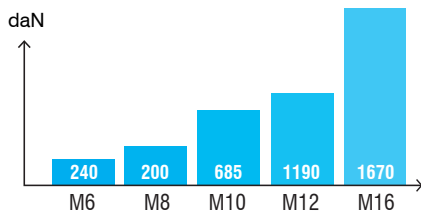
Beton niespękany



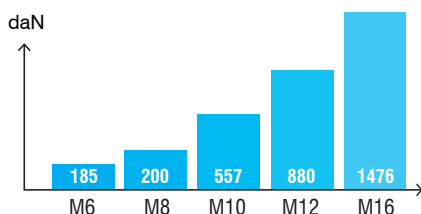
Beton spękany



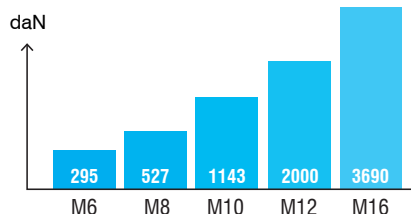
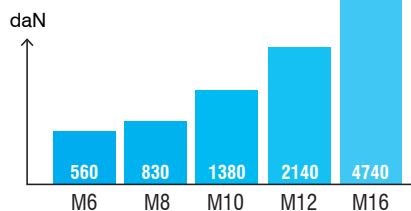
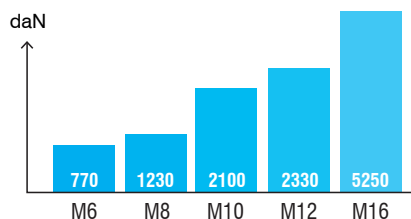
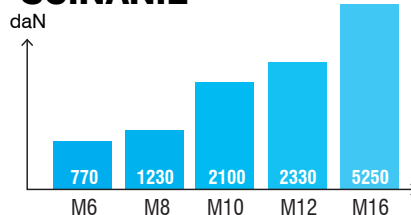
Pod wpływem sejsmicznym kategorii C1



Pod wpływem sejsmicznym kategorii C2



### ŚCINANIE



Dla zachowania poprawnych cech wytrzymałości i montażu, należy przestrzegać wszystkich wymagań zawartych w europejskiej aprobacie technicznej ETA 10/0060, a także w instrukcji montażu.