Hilti SAFEset chemical anchoring





#### **Applications**

- Post-installed rebar connections for concrete slab, column or wall extensions
- Heavy-duty anchoring with threaded rod in cracked or uncracked concrete,
  e.g. for steel beams, columns,
  manufacturing equipment or ledger angles
- Facade installation, steel and metal construction, installation of railings and safety barriers

#### What does SAFEset mean?

Hilti SAFEset Technology eliminates the most load-affecting and time-consuming step in the installation process: cleaning the hole before injection of the adhesive. The system improves reliability because the specified application is being performed on the jobsite just as it has been designed to in the plans.

## A small step for contractors.

And a giant leap forward for your next job.

Now you can install anchor rod and post-installed rebar connections with more confidence. Inadequately cleaning holes during installation can reduce the performance of conventional chemical anchor systems significantly. Hilti SAFEset Technology eliminates this factor almost entirely – in both cracked and uncracked concrete, and with anchor rods or post-installed rebar.



## **Introducing SAFEset Technology**

Products featuring Hilti SAFEset Technology are approved for installation using Hilti's innovative zero cleaning or auto-cleaning solutions.

Hilti's zero cleaning solution involves the use of HIT-HY 200 with HIT-Z anchor rods. Using this method, dust can be left in the anchor hole without impacting holding values. ETA approved with Hilti HIT-HY 200.

Auto-cleaning installation is as simple as it sounds. This involves drilling the anchor hole using a Hilti hollow drill bit with a Hilti vacuum system attached. Using this method, the dust is sucked out of the hole during the drilling process, thereby eliminating the need for further cleaning. ETA approved with Hilti HIT-HY 200 and HIT-RE 500.

## **Introducing Hilti SAFEset Technology**

Once in a blue moon, something comes along with the power to accelerate the way you work.





## Zero cleaning solution.

HIT-Z anchor rods + HIT-HY 200

The new Hilti HIT-Z anchor rod works as a torque-contolled bonded anchor. Because of their unique shape, HIT-Z anchor rods, used in hammer-drilled holes in dry or water-saturated concrete above 5°C, are not affected by uncleaned holes. The benefits are clear: fewer steps and more productivity in anchoring applications.



| Anchor diameter range          | M8 to M20                      |
|--------------------------------|--------------------------------|
| Material                       | Carbon or stainless steel (A4) |
| Embedment depth                | Up to 12 times rod diameter    |
| Concrete compressive strengths | C20/25 to C50/60               |
| Installation temperature range | 5°C to 40°C                    |
|                                | W/ ~ 0                         |









# **Auto-cleaning solution.**

Hollow drill bits + HIT-HY 200 / HIT-RE 500

Hilti TE-CD and TE-YD hollow drill bits, in conjunction with HIT-HY 200 or HIT-RE 500, make subsequent hole cleaning completely unnecessary. Dust is removed by the Hilti vacuum system while drilling is in progress for faster drilling and a virtually dustless working environment.



| Rebar diameter range           | N10 to N26       |
|--------------------------------|------------------|
| Threaded rod diameters         | M10 to M24       |
| Embedment depths               | Up to 400 mm     |
| Concrete compressive strengths | C20/25 to C50/60 |
| Installation temperature range | -10°C to 40°C    |









Another option is to continue using the traditional hole cleaning method with any Hilti HIT system for superior performance.

| Drill | Blow twice     | Brush twice | Blow twice | Set  |
|-------|----------------|-------------|------------|------|
|       |                |             |            |      |
| Drill | <b>&gt;</b> 2x | 2x          | <b>2</b> x | Done |

| Rebar diameter range           | N8 to N36                       |
|--------------------------------|---------------------------------|
| Threaded rod diameters         | M8 to M36                       |
| Embedment depth                | Up to 20 times element diameter |
| Concrete compressive strengths | C20/25 to C50/60                |
| Installation temperature range | -10°C to 40°C                   |



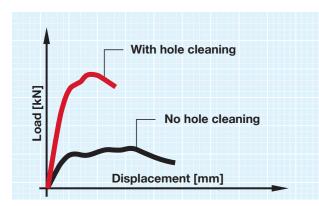




## No cleaning required. Set anchors and rebar reliably.

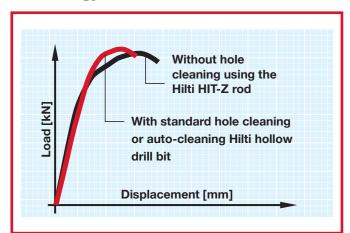
It's no secret that adhesive anchors encounter varying jobsite conditions. Hilti HIT injection technology, reliably and safely, combats this issue. Now Hilti SAFEset Technology, which offers the choice of either hollow drill bits with a Hilti vacuum system or HIT-Z anchor rods, takes a giant leap forward, by removing a step in the installation process entirely.

### Potential effects of no hole cleaning



When a threaded rod or rebar is set with conventional injection adhesive, the load it can hold may be significantly reduced, if the hole is inadequately cleaned after drilling. The Hilti SAFEset system eliminates a cleaning step while still providing excellent load values.

## Hilti HIT injectable adhesive with SAFEset **Technology**



The new SAFEset system featuring HIT-HY 200 or HIT-RE 500 allows a fastening point to take high loads, as though the hole was cleaned manually using traditional installation methods.



#### HIT-Z anchor rods For use with HIT-HY 200 only. Ordering designation Drill bit diameter Fastening thickness at standard embedment depth Tightening torque HIT-Z M8x80 10 mm 8 mm 10 Nm 2018364 HIT-Z M8x100 10 Nm 2018365 10 mm 28 mm HIT-Z M8x120 10 mm 48 mm 10 Nm 2018366 HIT-Z M10x95 25 Nm 12 mm 22 mm 2018367 HIT-Z M10x115 12 mm 42 mm 25 Nm 2018368 HIT-Z M10x135 62 mm 25 Nm 2018369 12 mm HIT-Z M10x160 12 mm 87 mm 25 Nm 2018410 HIT-Z M12x105 14 mm 29 mm 40 Nm 2018411 HIT-Z M12x140 40 Nm 2018412 14 mm 64 mm HIT-Z M12x155 79 mm 40 Nm 2018413 14 mm HIT-Z M12x196 14 mm 120 mm 40 Nm 2018415 HIT-Z M16x155 80 Nm 2018416 18 mm 38 mm HIT-Z M16x175 18 mm 58 mm 80 Nm 2018417 HIT-Z M16x205 80 Nm 18 mm 88 mm 2018418 HIT-Z M16x240 18 mm 123 mm 80 Nm 2018419 HIT-Z M20x215 22 mm 91 mm 150 Nm 2018420 HIT-Z M20x250 22 mm 126 mm 150 Nm 2018421

Also available in stainless steel.

| Hollow drill bit     | S For use with HIT-HY 200 | or HIT-RE 500 only. |         |
|----------------------|---------------------------|---------------------|---------|
| Ordering designation | Drill bit diameter        | Working length      | Item no |
| TE-CD 12/33          | 12 mm                     | 240 mm              | 2018940 |
| TE-CD 14/37          | 14 mm                     | 240 mm              | 2018942 |
| TE-CD 16/37          | 16 mm                     | 240 mm              | 2018945 |
| TE-CD 18/37          | 18 mm                     | 240 mm              | 2018946 |
| TE-YD 16/59          | 16 mm                     | 400 mm              | 2018956 |
| TE-YD 18/59          | 18 mm                     | 400 mm              | 2018957 |
| TE-YD 20/59          | 20 mm                     | 400 mm              | 2018959 |
| TE-YD 22/59          | 22 mm                     | 400 mm              | 2018960 |
| TE-YD 25/59          | 25 mm                     | 400 mm              | 2018962 |
| TE-YD 28/59          | 28 mm                     | 400 mm              | 2018964 |
| TE-YD 32/59          | 32 mm                     | 400 mm              | 2018966 |







### Contact Hilti for the SAFEset solution that suits your needs:

- 1. Hilti engineers and account managers
- 2. Customer Service T 131 292
- 3. Online www.hilti.com.au
- 4. Hilti centres check www.hilti.com.au/centres for locations

#### **Productivity plus**



Combi hammers



Vacuum cleaners



HIT chemical anchors and dispensers











