

Hiltinnovation Saudi Arabia Issue 6, 2015



System



Applications

- Post-installed rebar connections for concrete slabs, column or wall extensions
- Heavy-duty anchoring 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

No more hole cleaning.

Introducing Hilti Safe Set™



MANUFACTURER'S
WARRANTY

What does Safe Set™ mean?

Hilti Safe Set™ 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

Performance data

	HIT-HY 200-R
Working time/curing time at 30°C	9 min/1 hour
Working time/curing time at 40°C	6 min/1 hour
Installation temperature range	-10 °C/+40 °C
Approval	ETA-12/0006; ETA-11/0493; ETA-11/0492
Suitable for use with	No hole cleaning required with HIT-Z
Rebar diameter range	8 – 32 mm
Anchor rod diameter range	8 – 30 mm
Anchor rod diameter range	8 – 30 mm
We reserve the right to make technical changes.	

the plans.



No cleaning required. HIT-Z anchor rods.

The new Hilti HIT-Z Anchor Rod with its cone-shaped helix works as a torque controlled bonded anchor. This means that because of their shape, HIT-Z anchor rods are not affected by uncleaned, hammer-drilled holes in dry or water saturated concrete in base materials above 41°F (5°C) when used with HIT-HY 200. The benefits are clear: fewer steps and extremely high reliability in anchoring applications.



Holes that clean themselves. Hollow Drill Bits.

Hilti TE-CD and TE-YD Hollow Drill Bits, in conjunction with HIT-HY 200, make subsequent hole cleaning completely unnecessary. Dust is removed by the Hilti VC 20/40 Vacuum System while drilling is in progress for more reliability and a virtually dustless working environment.





The traditional method. Brush and blow.

The current industry standard installation method uses compressed air and a wire brush to clean the drill hole. Like all Hilti adhesive anchors, HIT-HY 200 can be installed using the traditional blow-brush-blow method. Because HIT-HY 200 only requires two blows of compressed air, two brushes, and two more blows of compressed air when using the traditional method, it is still faster to install than many other adhesives on the market. The blow-brushblow cleaning technique maximizes the application range for HIT-HY 200.



Applications

- Drilling holes for heavy-duty anchors from 20-40 mm diameter.
- Chiseling and demolition with pointed and flat chisels.

TE 70 new generation:

The most powerful Hilti combinammer.

Advantages

- High rotation speed (360 rpm) for maximum drilling performance.
- Optimized mechanical clutch for maximum torque transfer.
- Center of gravity close to the grip for optimum balance.
- The unique ATC stops the motor almost instantly if the bit binds and the housing begins to rotate too quickly, reducing the potential of sudden rotation of the combihammer about its own axis.





Highlights

The new Hilti TE 70 combihammer not only impresses the demanding professional users on the construction site, but also the tough calculators in the finance department: the low-maintenance machines also impress with their extended service intervals, low failure rates and proven lower costs over their entire service life.





Active torque control (ATC) gives the user a unique safety feature.



This active torque control system provides additional operator protection in the drilling mode thanks to a rapid cut-out feature. If the combihammer twists out of control

about its drilling axis, such as can happen when a bit hits a rebar or is angulated. If the ATC system is tripped, restart the combinammer by releasing the control switch and then pressing it again after the motor has stopped running (a click sound indicated that the combinammer Is ready for operation again). Always select a working position in which the combihammer can twist freely in a counter clockwise direction (as by the user). If this is not possible, the ATC cannot react.

Active Vibration Reduction (AVR) - up to 2/3 less vibration.



Special counterweights - called "mass dampers" counteract a large part of the high-frequency oscillations that are produced along the combihammer and ensure

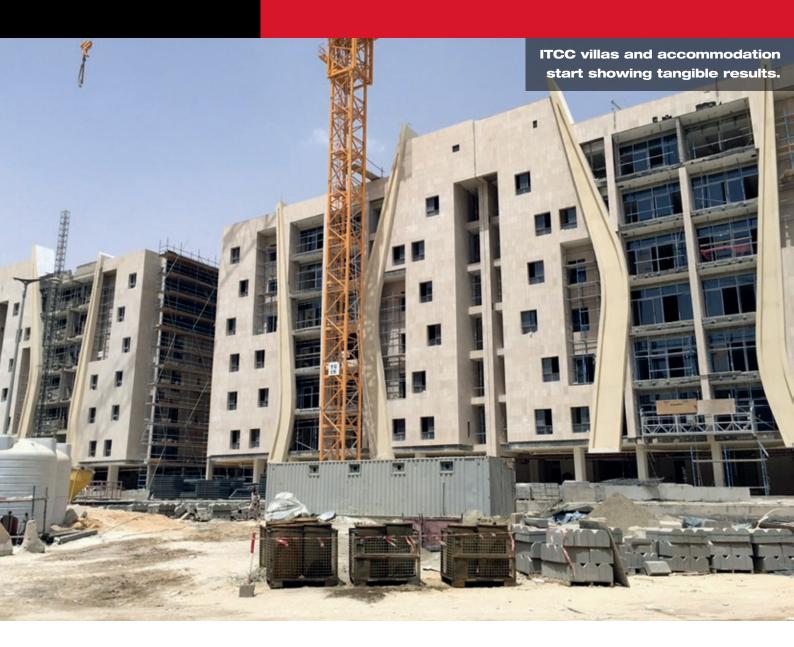
the best possible vibration absorption.

Suspension systems on some models also decouple the handle from the body in order to stabilize the tool in the user's hands. This provides effective protection against the consequences of long-term exposure to Vibration. Fatigue-free working increases daily productivity and results in longer permissible operation times.

Every Combi hammer at hilti was designed to meet a specific need at your job!

	Light Combi		Medium Combi	Heavy Combi			
				70	19	10	
Tool	TE 30 C	TE 30 A	TE 50	TE 60	TE 60 ATC/AVR	TE 70 AVR	TE 70 ATC/AVR
Optimum drilling range	8 – 20 mm	8 – 20 mm	16 – 25 mm	18 – 30 mm	18 – 30 mm	20 – 40 mm	20 – 40 mm
Power range	850 W	36 V / 6 Ah	1050 W	1300 W	1300 W	1800 W	1800 W
Weight	4.2 Kg	5.6 Kg	5.7 Kg	6.4 Kg	7.5 Kg	8.3 Kg	9.5 Kg
AVR/ATC	AVR	AVR/ATC	-	-	AVR/ATC	AVR	AVR/ATC
	SDS plus	SDS plus	SDS max	SDS max	SDS max	SDS max	SDS max





AZMEEL and Otis found inspired solution with the help of Hilti.

In two and a half years Saudi Arabia's capital Riyadh will burst into the cyber-century and beyond with the completion of its Information Technology Communications Complex (ITCC), the Kingdom's first "smart city" In order to attract the world's leading Information Technology and Communications Complex (ITCC) companies to a place like Saudi Arabia, you need to offer the world's best ITC services and infrastructure this is the concept behind the Kingdom's new (SR6.5 billion) ITCC development.

AZMEEL Contracting & Construction Corporation, as a home company of AZMEEL Group, is actively engaged in the construction all over the eastern province for a long time now. Their highly skilled manpower resource of more than 300 professional engineers in various disciplines, strong technical workforce with inter-departmental coordination has yielded series of successful projects.

Otis Elevator Company is the world's largest manufacturer and maintainer of people- moving products, including elevators, escalators and moving walkways. Otis is part of UTC Building & Industrial Systems, a unit of United Technologies Corp., a leading provider to the aerospace and building systems industries worldwide.

Azmeel Contracting (main contractor) cooperated with Otis Elevator to install 173 elevators units for 95 villas, 3 malls and 2 schools. The divider beam application needs to support the elevators quide rails inside the elevators shafts, and for this big project they are looking for a fast solution that can save money without using the welding technique.

Hilti's account manager Qusay Nour was consulted by Otis Project manager Engr.

Ahmed Kamal regarding this issue and a solution was proposed using Hilti MI & MQ installation systems with accessories along with the full Hilti engineering support including design, mockup and training.

TSO, Technical Support Office, is the primary Hilti technical contact in Saudi Arabia for designs, appropriate support solutions for all common applications (e.g. Piping, HVAC, Cabling and Equipment) with compliance to project specifications and applicable codes, ensuring best practices and standards

MI/MQ installation systems are Hilti products used for medium & industrial channel installation, they provide high flexibility and 3D capability with fewer connection parts and they're both compatible with Hilti's PROFIS installation, PROFIS installation is a Hilti PC application for the static design of 3D structures assembled from Hilti channels installation system components. It's suitable for use with Microsoft Windows.

AZMEEL has also purchased other Hilti products such as, Hilti's injectable mortar HIT HY 200, Hilti rotary hammers TE 1 and Hilti angle grinders DGC 125-S with all the related inserts and accessories.

MEP project manager Engr. Ishaq Ahmed for Azmeel & Project manager Engr. Ahmed Kamal from Otis were very satisfied and happy with Hilti's solutions and services, and the amount of support from Hilti teams on this rush project, Azmeel purchased Hilti MI/MQ installation systems with accessories with total value of 1,260,000 SAR.



MQ Systems are been used for the divider beam.



Customer testimonial

Otis Elevators -Project manager Engr. Ishaq Kamal

What were your company's needs for the application?

The divider beam application need to support the elevators guide rails inside the elevators shafts, and for this big project we are looking for fast solution and can save money to us as well, as we have around 173 elevators unit around the project.

Why did you choose the Hilti solution?

A unique solution with very flexible and cost saving system which can be integrated into the present site conditions provided with full engineering support including design, mockup and training. These types of services are required on this big project especially with 173 elevators units.

Are you satisfied with Hilti's contribution?

Sure, Hilti solutions and Services are unique, and it supported us on this rush project.

Applications

- Effectively seals most common through penetrations in a variety of base materials.
- · For use on concrete, masonry and drywall.
- Mixed and multiple penetrations.
- · Metal pipe penetrations.
- Insulated metal pipe penetrations.
- Plastic pipe penetrations.
- Cable bundles and trays.
- HVAC penetrations.

Advantages

- One product for a variety of common through penetrations.
- Cost-effective and easy-to-use solution.
- · Water-based and paintable.
- W-rated systems available.
- Ethylene glycol-free.
- Industry leading VOC results.
- Convenient multi-application firestop solution for penetrations.

Highlights

Intumescent (expands when exposed to fire) firestop sealant that helps protect combustible and non-combustible penetrations for up to 4 hours fire rating.















FS-ONE MAX can be used for closed or vented plastic pipes.



One product for a variety of common through penetrations.



FS-ONE MAX can be easy cleaned after installing.



FS-ONE MAX firestop sealant

Hilti firestop sealant is an ideal solution for installing reliable, smoke-resistant firestop seals in small-to-medium-sized openings. Perfect for electrical installation work.

- Quick and easy installation.
- Trouble-free dispensing.
- Excellent sound insulation properties.



CS 201-P Hilti dispenser and nozzle will provide you with the best applying and finishing results.

Technical Data				
Chemical basis	Water-based acrylic dispersion			
Color	Red			
Application temperature	41°F to 104°F			
Storage and transportation range	41°F to 77°F			
Approx. cure time	4 mm / 3 days			
Shelf life	12 months			
Temperature resistance range	-4° F to 212°F			
Mold and mildew performance	Class 0 (ASTM G21 - 13)			
Mold and mildew resistant	Yes			
Surface burning characteristics (ASTM E 84-14)	Flame spread: 0 Smock development: 10"			
Approvals	California State Fire Marshal – in progress			
Tested in accordance with	ASTM G21 ASTM E 90 CAN/ULC-S115 UL 1479 ASTM E 814 ASTM E84			



The Ministry of Interior and accommodation for the ministry employees in Dahban area.



Al Rashid Trading and **Contracting (RTCC)** profits from Hilti's Direct Fastening systems.

King Abdullah bin Abdul-Aziz project to develop the Security Headquarters of the Ministry of Interior and accommodation for the ministry employees in Dahban area (phase 4) has started in 2014 and it's planned to be finished in 2016 with a total value of 2500 Million SAR. The project will include 8 buildings and a mosque.

KAP Project



Al-Rashid Trading & Contacting Company RTCC (main contractor) was established in 1957 and expanded vigorously in the field of contracting. RTCC was awarded with contracts to build numerous houses, college campus, medical centers, infrastructure, water supply works, and railway project from renowned clients.

Our Hilti representative Faris BanyAmeerah (account manager) was visiting the project and meeting with RTCC architect Site Engineer Mr. Ahmad Sweity to offer the best Hilti solutions for the ongoing applications. They were working on wall tie fixing and wire mesh fixing. Faris BanyAmeerah made onsite demo explaining the benefits and features of Hilti powder actuated tool DX 2 for wall ties and mesh fixing using Hilti X-C nails. RTCC bought 8 Hilti DX 2 powder actuated tool, 140.000 Pcs of Hilti X-C 27 nails, 140.000 Pcs of Hilti DX yellow

cartridges and 50.000 Pcs of Hilti washers with a total value of 55.000 SAR.

Architect Site Engineer Mr. Ahmad Sweity was very satisfied with Hilti tools comparing with the other market tools which had too many breakdowns and the repairing process took more than 20 days. And he was very happy with the after sales services that Hilti offers such as Hilti life time service (HLTS), technical sales support on site and the very good quality of the materials.

Hilti is a certified supplier for the Ministry of Interior. Al-Rashid Trading & Contacting Company RTCC is also using in the project Hilti firestop materials, Hilti breakers, Hilti combihammers and angle grinders. RTCC is studying now the use of Hilti ceiling clips X-CC for false ceiling applications with the support of its Hilti technical salesman and field engineers.

Customer testimonial



Architect Site Engineer, Mr. Ahmad Sweity.

You've worked together with Hilti for quite some time. Why is that?

- · Price Vs Quality.
- · Supporting at jobsite (the availability of Hilti personnel constantly at work site).

What are the biggest challenges you face with this project?

Many of the previous tools I used before were defective. So I needed to buy more to close the shortage at site.

What service do you appreciate more than others?

- · HLTS (Hilti life time service).
- · Follow up at site, and the availability of Hilti guys over the phone any time and they follow up the order until we received it.

Are you satisfied with the services Hilti offers?

Yes.

Applications

- Fastening of cable ladders with a channel or with a hold-down / expansion guide clip
- Fastening of cable trays and cable runs with a channel or with a conduit clip
- Fastening junction boxes switches, and instrumentation panels directly or with a channel
- Fastening light fixtures, signage, etc.

Advantages

- The X-BT-MF is easy and safe to use and requires no electrical cords or heavy equipment for installation.
- Suitable for mildly corrosive environments (C3)
- · Easy installation in tight spaces
- Eliminates rework
- Compatible with Hilti MQ system
- No-slip socket with access to narrow channels

Highlights

- Designed for steel thicknesses of 8 mm (5 / 16") and above
- High performance polymer nut with an integrated washer
- Fastening possible in all directions
- High ductility
- Suitable for all steel strengths

Hilti X-BT-MF Composite Stud. Easy does it.





The X-BT-MF's easy setting method makes rework a thing of the past.



Install high quality fastenings in less than two minutes.



X-PT-MF can be used for fastening of cable trays and cable runs with a channel or with a conduit clip.



No Rework.

The X-BT-MF's easy setting method makes rework a thing of the past. Simply set the X-BT-MF into a small pre-drilled hole. An integrated washer completely seals the drill entry point. What's more, its blunt tip design prevents damage against the steel or its surrounding protective coating.

Super strength.

The Hilti X-BT-MF is a reliable, vibrationresistant fastening system for mildly corrosive environments. Its remarkable strength comes from a high performance polymer thread molded on to a ductile, A2 stainless steel pin. Combined with a specially designed nut with integrated washer, the X-BT-MF takes ease of installation to a whole new level.

Fast. Simple. Reliable.

Install high quality fastenings in less than two minutes, thanks to the Hilti X-BT-MF composite stud's integrated washer design along with the SFC-A cordless drill and the DX 351-BT fully-automatic powder.

Actuated tool. Available in M10 / W10, X-BT-MF composite studs ensure high, reliable holding values. Installation is:

- 2X faster than clamping
- 3X faster than bolting
- 10X faster than welding

A minimal amount of training is all that's required to benefit from faster installations at a fraction of the cost.

Hilti Engineering Services

Better. Together.



Hilti offers a variety of technical support services to assist Architects and Engineers in evaluating and specifying our innovative products. Hilti engineers and technical specialists support your team in developing application-oriented design solutions. We utilize our expertise to consult, and train the design and construction community on key structural and non-structural applications. Learn how Hilti can be your design partner.



Technical onsite support.

On site testing for tensile, shear or bending loads is often required by building owners, inspection bodies or engineers to verify that fastening products have been installed correctly. On demand Hilti engineers can offer a wide variety of on-site tests across the country and provide you all necessary reports to proper document the test.



Engineering design.

The Hilti engineers are high qualified and ready to design for you, or provide you technical assistance, related to our technical systems including technical data, load calculations and AutoCad drawings. Our team is also capable of converting existing calculations to the equivalent Hilti system or designing a customized solution specific to your project needs.



Technical documentation and submittals.

Submittal and substitution documentation is often required to meet project specific needs. Submittal information for all of our technical systems like for example fastening, fire protection and installation support systems are available at click distance and can be directly downloaded from the Hilti download center. For more complex submittals you can also request to our technical team specific technical documents you need from a long list of choices and incorporate them into a submittal. Technical data, material safety data sheets, installation instructions, product approvals, and more are all accessible. Preparing submittal documentation for the wide variety of Hilti solutions has never been so easy.



STC goes cordless

Hilti's innovative cordless portfolio enables customers across all trades to execute their job easily and efficiently. Bright Wires Company, a subcontractor for STC responsible for the fiber optics installation within Riyadh, currently executes its work with Hilti cordless tools. More than 300 pieces of Hilti's SFC 14 (compact drill driver) have been purchased to enable the fast execution of the job within all parties. They can use the tools to drill in steel and drive screws for fiber optics utilities installation. As a light weight tool, the user can work for long hours comfortably without major fatigue. High productivity is ensured as the battery has high capacity. The batteries are robust, have LED indicators, individual cell voltage and long lifetime. CPC (cordless power care) technology assures secure and maximum performance.



Hilti pull out tests in KAFD

Performing anchor pull-out tests is one of the many services Hilti offers to its customers. A series of pull-out tests were performed in King Abdullah Financial District, parcel 412, in Riyadh. The contractor Guigaro Architecture and Structures asked our Hilti account manager Kamil Baschur to make pull-out tests on 10% of the tower's anchors (167 tests). The tests were successful and the contractor was satisfied with the technical support, quick response and the price compared to local laboratories. Guigaro Architecture and structures purchased the onsite testing services and anchors with total value of 85,000 SAR.



New repair center for wall saw tools

Hilti has invested in a new repair facility for heavy wall saw tools in Jeddah for Saudi customers. Hilti wall saws are leading tools for cutting reinforced concrete structures, either with diamond wall saw blades or with diamond wire. A considerable investment was done in specialized trainings for professional repair men and in buying the necessary equipment, like a test bench for wall saw heads, diagnoses set, pressure gauge set, electric lifter, etc. Now all wall saw Hilti customers will enjoy very short repair times with the highest quality. This will allow them to finish their jobs with complete peace of mind.

Hilti Centres: Kingdom of Saudi Arabia

Kilo 14, King Fahd Street Saad Abukhadra Building

21454, Jeddah

Phone 800 120 0013

Baladia Street
Al Shoaili Center
21454, Jeddah

Phone +966 12 667 8475

Old Jeddah Road, Imam Bukhari Street

Al Sultan Building 24231, Makkah

Phone +966 12 549 0773

Jeddah Road - King Abdul-Aziz street Mohammed AL-Juhani Building

41911, Yanbu

Phone +966 14 322 4661

Abi- Zar Street

Souk Ohd Commercial Center, P.O. Box 3400

3400, Madina

Phone +966 14 835 1914

King Abdul Aziz Street 11323, Riyadh

Phone +966 11 460 8974

Old Industrial Area

Dahran street, Bawardi building

11323, Riyadh

Phone +966 11 447 5766

Khobar-Dammam Highway

Dammam 1st Industrial area, Aba Hussain Building

31952, Khobar

Phone +966 13 810 0285

1st Industrial City, street #114

Near Al Bayan Institute

31962, Jubail

Phone +966 13 340 4872

King Fahd Street

Next to Industrial Vocation Institute

31982, Hofuf

Phone +966 13 531 3671

Hilti. Outperform. Outlast.

Hilti Saudi Arabia

for Construction Tools

King Abdul Aziz Street P.O. Box 5287 | 1Riyadh 11422 Toll Free Phone 8001200013

Toll Free Fax 8002445554 Sa.customerservice@hilti.com

www.hilti.sa

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لأدوات البناء

شارع الملك عبد العزيز

صندوق بريد 5287 الرياض 11422

عدوی برید ۵۲۵۲ اریاطل ۲۲۶

الهاتف المجاني 8001200013

الفاكس المجاني 8002445554

Sa.customerservice@hilti.com

www.hilti.sa

سجل تجاري رقم 1010278712

شركة ذات مسؤولية محدودة - رأس المال المدفوع 39,230,000 ريال سعودي