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Short News

## Hilti anchors in the new Jeddah airport, reliable solutions for every challenge.

**Hilti. Outperform. Outlast.**



**TE 2-A22**  
Cordless rotary hammer



**MC channel system**



**DD 150**  
Diamond coring tool



**X-BT + DX 351**  
Fastening grating system

# Cordless rotary hammer

Hilti TE 2-A22

# HILTI

## Applications

- Light-duty drilling in concrete and masonry
- Installation of partition walls and suspended ceilings
- Fastening metal items
- Electrical installation work
- Overhead and frequent drilling, 6-12 mm

## Advantages

- Cordless freedom with the performance of a corded tool
- Compact size and light weight for superior handling
- LED light for better visibility
- Best-in-class system durability backed by Hilti Lifetime Service covering the tool and the battery

## Technical data

Rated voltage	21.6 V
Rated input	360 W
Rotation speed gear 1 under no load	0-1090 rpm
Full hammering frequency	0-5040 impacts/minute
Single impact energy	1.5 J
Weight	2.7 kg



Serial and cordless drilling up to 12 mm is easy and quick with Hilti TE 2-A22. Save the time of arranging a cord.



The fastening of metal items like handrails, staircases, barriers, etc. fits perfect with Hilti TE 2-A22.



Overhead drilling is simple with a cordless and light-weight tool. Reach everywhere with the performance of a corded tool.



## Cordless freedom. Exceptional performance without cords.

## Cordless solutions for each trade.

	Building Construction	Mechanical & Electrical	Steel & Metal	Interior Finishing
Drilling				
Cutting				
Measuring				
Fastening				
Chemical dispensing				
Driving Mech. anchors				
Screw fastening				

## Hilti unique Lithium-Ion Battery system.

### More power

Lithium-ion cells incorporating the latest technology provide unequalled power and capacity. Four LEDs keep you informed about the Hilti CPC battery's state of charge.

### Higher reliability

Electronic battery management for extra-long lifetime, one full day working without charging. Rubberized, impact-resistant, fiberglass-reinforced casings make the tools and batteries exceptionally rugged. One universal charger with ACS cooling system and extra speed charging time. No self-discharge of the batteries.

### Better services

All Hilti Lithium CPC tools, chargers and batteries enjoy Hilti Lifetime Service – this means no costs to you for up to two years from date of purchase in the event of a fault. A broken battery is replaced by a new one, in our Hilti Centers.

<b>HILTI</b>	2 Years
LIFETIME SERVICE™	NO COSTS
Lifetime	Lifetime
REPAIR COST LIMIT	MANUFACTURER'S WARRANTY

**CPC**

### Hilti inserts

**1+1=3**  
Total performance.  
Hilti tools + Hilti accessories.

Get full performance of the Hilti systems using Hilti inserts. Perfect fit tool+accessories to deliver the maximum lifetime and productivity.



## Hilti anchors in the new Jeddah airport project.



**The new Jeddah King Abdulaziz airport is a strategic project for Saudi Arabia, that will improve considerably the communication of Makkah and Jeddah with the world. Hilti is present in the project in many applications working closely with the contractors.**

The anchors are fixed with the help of diamond coring tools Hilti DD 150 (in case of rebar through drilling) and combihammers Hilti TE 70 with the corresponding inserts and accessories. With the full Hilti system, Orascom achieves a great productivity thanks to

The KAIA Project will be a landmark of the economic development for the region and the nation, capitalizing on the Kingdom's ambitious growth plans to enhance the status of Jeddah as an international hub. The Master Plan embraces development in three phases to 2035, when ultimate capacity could reach 80 Million annual passengers.

Hilti is heavily present in the project with three on-site Key Project Managers supported by Field Engineers and a mobile Hilti Centre in the project. This ensures an excellent service level to the contractors in the airport. Indirectly this team works together with the rest of Account Managers all around the Kingdom and the Technical Back Office in Jeddah.

One of the critical applications where Hilti supplied an efficient solution was the fixing of the chilled water supports on the ground in the main utility tunnel. The length of the line is 9 km with 4 water pipes running in parallel. The contractor Orascom Saudi Arabia was in need of an anchor system that can provide high loads due to the large size of the pipes, up to 1.2 m diameter.

Hilti delivered its heavy duty mechanical anchors HDA's and HSL-3 (30,000 pieces). These are highest load anchors that allow maximum security even in cracked concrete or under seismic, fatigue, dynamic or shock conditions. HDA anchors are used worldwide in the most challenging conditions in many construction types and are backed up by numerous approvals.



**Orascom used Hilti diamond coring for drilling the anchor holes through rebar, without producing any concrete cracks.**



**The new Jeddah airport is a challenging project in size and complexity. Hilti is actively providing best-in-class products and services for its customers in the site.**

the power and very low repair rate of Hilti tools, the drilling performance of the inserts and the training and support on site of the Hilti representatives.

Other companies approached Orascom proposing chemical anchors, which were

rejected due to the high depth of the hole needed. This meant more chemicals and drilling consumables, making the process slower and expensive.

The decisive factors that moved Orascom to select Hilti were: Hilti engineering

support, the well-known product quality, the material availability (due to early forecast) and the daily support by the Hilti Key Project Managers on site. The customer is very satisfied with the quality and progress achieved. The application is planned to be finished in October 2014. ■



**To apply the right expansion to the HDA anchor Orascom uses the Hilti combihammer TE 70.**



View of the water pipe support installation in the airport utility tunnel and the Hilti HDA anchors already prepared on the ground.



## Applications

- Light and medium duty support applications
- Integrated floor systems
- Cable trays
- Instrumentation

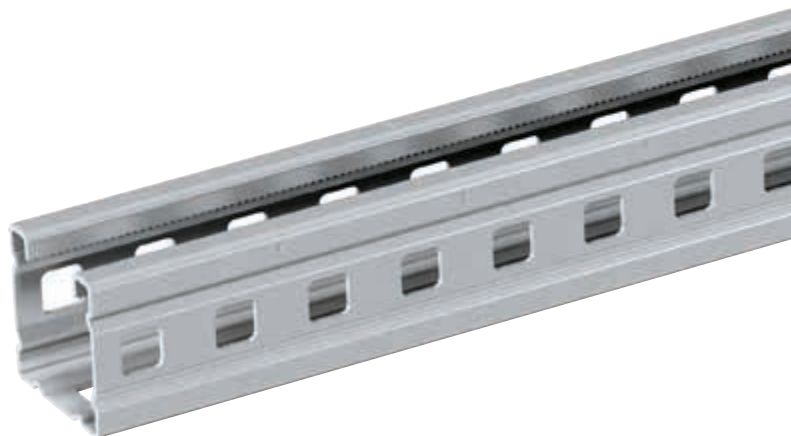
## Advantages

- Quick and easy: few bolted modular parts
- Up to 30% lighter than traditional methods
- Flexible: changes and add-ons possible anytime
- No welding: saves time and increases safety
- Fully compatible with Hilti MI and MQ systems

## Highlights

Offering virtually unlimited configuration possibilities, the Hilti MC system not only reduces the work involved in planning, logistics and inventory management, this highly versatile and efficient system also saves time and money at the critical installation stage.

## A perfect solution for every installation application.



Any integrated floor system can be mounted on Hilti MC channels, reducing costs by making use of previously installed tile supports and shorter posts.



The Hilti MC modular system of lightweight components provides the complete solution for most cable tray or cable ladder sizes and weights.



Only a few parts are needed to assemble and install virtually any instrumentation equipment, in any environment.



## Competence earned through experience.

The daily challenges and considerable safety aspects faced in the energy and construction sector call for trusted system solutions that always meet safety and productivity demands.

Hilti's strength of innovation is based on more than 60 years of experience with fastening and installation technology as well as fire protection. A comprehensive understanding of the technologies involved and first-hand knowledge regarding the needs of the market form the basis for a portfolio of products and services that guarantees true added value for professionals in this field.

The new Hilti MC modular system is designed to improve flexibility and boost productivity in multiple applications in power generating facilities and offshore projects, such as integrated floor supports as well as supports for cable trays and instrumentation.



The MC channel system can be installed easily with Hilti mechanical anchors or, quickly, with Hilti screw anchors HUS with Hilti impact screw drivers.

**PROFIS**  
software

Standardized components and CAD modeling using Hilti's wellthought-out design software PROFIS not only speed up the design process but also help assure maximum safety. Consulting and engineering support is provided by Hilti specialists whenever needed.



## Hilti installation systems in Ras Al Khair.

**The Energy contractors in Saudi Arabia are regular users of Hilti products in their projects. In the construction of the power plant in Ras Al Khair, Hilti delivered its innovative MI installation system as secondary cable tray support.**

The Ras Al Khair Project is located at 250 Km north from Dammam. The power plant will run on gas & steam turbine to generate a power output of 2400 MW, the highest in KSA, with a daily desalination production of 1 million m<sup>3</sup> of drinkable water. It started the 1st quarter of 2011 with a total investment value for the power plant of 2.5 billion USD. It's expected to finish by 1st quarter of 2015.

Saudi Water Conversion Corporation (SWCC) is the owner for this project, who will provide electricity for the Saudi Mining company Maaden, whose smelter will receive bauxite from the Al-Zabirah mine by rail. The Ras Al Khair aluminium smelter will produce yearly more than 600.000 tons of aluminium.

SEPCO III is the EPC contractor for the power plant and is the customer that trusted Hilti to deliver the channel system to support the cable trays. SEPCO III was looking for a reliable and flexible system that would require a low installation time.

Also it was in need of a suitable design by the installation supplier and an excellent service regarding the definition of the bill of quantities, order delivery and on-site training. These topics are critical in a project of such strategic importance.

After a careful evaluation, SEPCO III commissioned Hilti with this task. Hilti offered its proven MI installation system. It's specially designed for industrial pipes and cable tray support and brings many advantages to the customer: non-welding system – high flexibility in redesigns, quick and easy installation, high dynamic loads, high corrosion resistance, full compatibility with other Hilti systems and the use of the advanced Hilti design software PROFIS.

In this project the use of Hilti channel system as a secondary cable tray support was something new, as this customer utilizes for the first time this system for this application. The cable trays in the power plant hang from a height of 9 m



# Ras Al Khair project

**View of the Ras Al Khair power plant project. This plant will service the strategic aluminium smelter of the Saudi Mining Company Maaden.**



and the necessary steel structure to support them was to be designed and install by the supplier.

SEPCO III has also chosen Hilti as the supplier for the important Firestop systems due to the product and service quality and the good experiences made. Hilti delivered all kinds of firestop products such as boards, sealants, mortars, collars, etc. particularly to seal the different spaces from fire expansion.

SEPCO III appreciates the quality of the Hilti system and the perfect service in the design, delivery and on-site training. Hilti's Key Project Manager in the Ras Al Khair project, Sameer Ulla Khan, was always in contact with the customer's personnel, demonstrating the system and training the users in the project. ■

The Hilti's MI Installation system is used efficiently as a secondary cable tray support, due to its flexibility and reliability.



SEPCO III has also applied Hilti's Firestop systems for the passive protection in the power plant.

## Applications

Penetrations in reinforced concrete, for example, for:

- Heating pipes and ventilation ducts
- Water supply or waste water pipes
- Cables and cable trays

Drilling anchor holes for:

- Large-diameter anchors and post-installed rebar
- Installation of hand rails, railings or barriers

## Advantages

- Keep structural safety, diamond coring doesn't crack the base material due to vibration less drilling
- Speeds up the construction process, it's faster and cuts all materials, even steel
- Suitable for large and/or deep holes
- More convenient in inhabited environments, it's more silent and cores without dust
- Easy to use and learn

## Highlights

- Outstanding coring performance across the entire diameter range
- High lifetime, many years of continuous service
- High performing core bits for the lowest cost per hole
- Low repair needs, Hilti Lifetime Service

**Professionals do it for themselves!**  
Incredibly simple, amazingly versatile.



The DD EC-1 is the fastest coring tool in the world, with up to 9200 rpm, for serial drilling for rebar applications and other types of penetrations.



The DD 150 cores also through masonry and block without cracks and dust for ducts and cable installations.



The DD 350 is used mainly for coring on reinforced concrete for the installation of water pipes.



## Coring portfolio — One tool for each need.

The extensive Hilti tool portfolio offers every customer the right solution. The selection includes light, medium and heavy duty coring tools depending on every customer need, application and preference. If you haven't worked with one of the Hilti tools yet, give it a go and have your own experience.

<b>HILTI</b>	<b>2 Years</b>
<b>LIFETIME SERVICE™</b>	<b>NO COSTS</b>
Lifetime	Lifetime
<b>REPAIR COST LIMIT</b>	<b>MANUFACTURER'S WARRANTY</b>

### The allrounder

#### The smart



**DD 120**  
 • 1600 W  
 • 16-132 mm  
 • Wet/rig-based

**Applications:** Medium concrete or masonry penetrations. High productivity tools.

**Medium duty tools**

### The specialist



**DD 160**  
 • 2200 W  
 • 12-202 mm  
 • Wet/rig-based

**DD 150-U**  
 • 2200 W  
 • 12-162 mm  
 • Wet/dry  
 • Rig or handheld

### The fastest



**DD EC-1**  
 • 1450 W  
 • 8-35 mm  
 • Wet/rig or hand-held

**Applications:** Rebar and small-medium concrete penetrations. Value for money tools.

**Light duty tools**

### The powerful



**DD 200**  
 2600 W  
 52-400 mm  
 Wet/rig-based

**Applications:** Medium-big hard concrete penetrations. High performing tools.

**Heavy duty tools**

### The performer



**DD 350**  
 • 3500 W  
 • 52-500 mm  
 • Wet/rig-based

### The strongest



**DD 500**  
 • 5500 W  
 • 82-500 mm  
 • Wet/rig-based

## Lower costs.

The innovative change module system, an exclusive Hilti feature, saves money again and again, significantly lowering costs.

**1+1=3**  
 Total performance.  
 Hilti tools + Hilti accessories.




## Hilti core bits.

Hilti core bits guarantee the lowest cost per hole, due to their high speed and high lifetime, due to the high quality diamond segments and laser welding. The patented Hilti quick connection saves the operator's time, significantly lowering costs.







The monorail system in KAFD will have 6 stations over 3.5 km, where Hilti has contributed with high-end innovative solutions.

## Innovation in KAFD's monorail.

A new city is rising within the Saudi Arabian capital of Riyadh. The King Abdullah Financial District (KAFD) is an infrastructure project of superlatives and designed to underscore the country's position as the region's largest economy and financial center. Hilti offers its customers comprehensive support on this project and also provides the occasional distinctive solution.

This "city" is emerging practically from out of thin air. The construction work, covering an area of 1.6 square kilometers, includes 34 high rises and 62,000 parking spaces. In addition to office space, which will house the local headquarters of banks and financial institutions, some 12,000 apartments are also being built.

The King Abdullah Financial District will also have its own monorail system

to connect the mini-cities with each other. The rail system will move over a 3.5-kilometer long railway viaduct featuring 131 support pillars, 30 bridges and six stations. This subproject will require more than 5000 linear meters of cast-in Hilti anchor channels and 17,500 T-bolts. The maintenance and emergency exit shafts will be fastened to the monorail's concrete guide beams. Salespeople and engineers from Hilti

Saudi Arabia and the business unit in the Hilti Headquarters were involved in the planning phase of the project early on. In addition to know-how, a great deal of creativity was required as a special solution for this type of application had to be developed. "One challenge was calculating which anchor to use. The penetration depth could not exceed 150 mm. We also had to manufacture special anchor channels for this application as the standard models were not suitable", explains Hilti engineering manager Hussein Abu-Sheikha. The solution looks as if two separate types of modified anchor channels (HAC 70 and HAC 40) are encased in concrete one over the other. "Thanks to the good and close cooperation between MO engineering in Saudi Arabia and the BU in Schaan we





The new Hilti cast-in anchor channels were selected for the construction of the maintenance walkways of the KAFD monorail viaducts.

## Hilti cast-in anchor channels deliver extremely high loads on shorter edge distances.

were able to quickly create a suitable solution”, adds Abu-Sheikha.

Saudi Oger Ltd., the Hilti customer, is very positive about the cooperation. “In spite of the significant challenges that confronted us, Hilti was able to offer this highly-developed engineering solution. Hilti manufactured the new, modified anchor channels and delivered them to the construction site on time. We have been working with Hilti for a long time and we can look back on a very good partnership”.

The city within the city should be completed by the end of 2015, at which time the monorail transit system will make its rounds, transporting thousands of people each day. ■



## Work without rework – Hilti's X-BT fastening system.

Save time and money with Hilti's threaded stud fastening system designed for coated construction steel as thin as 8 mm thick without rework or through-penetration of the base steel. May also be used on uncoated steel.



Fastening on coated steel isn't a problem, no rework is needed. The steel corrosion protection remains intact.



Threaded stud and grating disc, available in different types of steel. It provides an anti-slip surface and a secure hold against horizontal moves or shocks. Sealed against liquids.

Hilti X-BT is an innovative way of fastening to pre-painted steel without damaging the surface. X-BT is designed to work on construction steels as thin as 8 mm without through-penetration. Made of A4 (AISI 316) stainless steel, X-BT performance in corrosive environments is exceptional and makes it the perfect fastening solution for industrial facilities. Steel corrosion protection remains intact.

Possible applications for the X-BT system are: grating, cable tray, junction box, lightning, pipe hangers, outfitting, channels, instrumentation, etc.

The set-up is simple and efficient. With the help of the Hilti Fastening Tool DX 351 BT / BTG, an inexperienced operator can set easily 120 studs per

hour. No electrical cords or heavy equipment is required. The studs have high loading and pull out values and equal, if not surpass, most conventional techniques. It's ideal for high strength as well as standard construction steel.

Tedious and time-consuming rework commonly associated with stud welding disappears with X-BT. The stud with sealing washer is cleanly set in a small pre-drilled hole.

X-BT works great on most steel shapes including tubulars, channel sections, wide flanges and angles. Forget the limitations usually found with clamps.

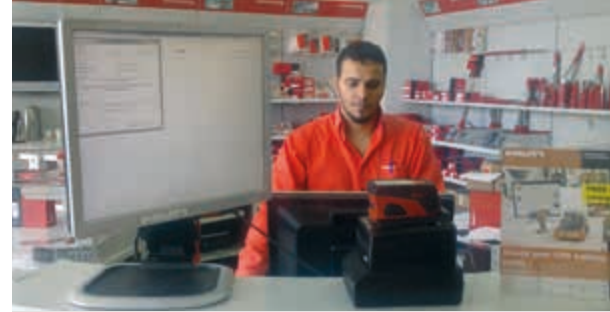
The unique fastening technique of X-BT creates a true weld of the stud to the base material ensuring high holding values. ■





### Hilti Engineering Back Office.

2012 was the official launch for Hilti Saudi Arabia technical support office and it is now steadily running with four competent engineers to cover all customers technical and design requirements. The aim of Hilti Technical Support Office is to reduce the response time to our customer technical requirements and to increase the quality of its deliverables which includes, technical submittals, detailed designs for complicated cases, engineering judgments and take-offs for firestop and supporting systems. More than 4,800 designing hours has been invested from our team to serve our customers which is equivalent to 2.4 million SR service value savings. For enquiries please send us an e-mail to [sa.tso@hilti.com](mailto:sa.tso@hilti.com).



### Unique battery warranty.

Hilti gives an outstanding warranty for Hilti batteries directly in the Hilti Centres. Once a customer comes in with a Hilti battery, it gets tested on the desk with a repair software. If the battery is really broken and it's within two years from purchasing date, the customer gets a new one. This gives our cordless tools customers a great peace of mind.



### Engineering seminar in Makkah.

Each year, Hilti comes with new innovations that make the applications at the jobsite easier as well as safer. The engineering team did a seminar in Makkah's clock tower (Hajar Tower) for the consultant Dar Al-Handasah with participation from Saudi Bin Laden Group. The seminar included a review for the new Hilti chemical anchor HY 200 systems as well as the new HSA mechanical anchor with automatic torque control. Also other solutions for fixing in hollow core slabs and seismic design for firestop have been illustrated.

### Azmeel trusts Hilti in ITCC project.

Azmeel Contracting is one of the most successful contractors in KSA. For the megaproject ITCC in Riyadh they've recently issued a one million order for Hilti material to use in their mechanical applications. The main items are: 50 combihammers, 100 rotary hammers, 25 slitting tools, 2 coring tools and the corresponding consumables. As per Mr. Engineer Mohammed Zakaria, M&E Project Manager, Azmeel selected Hilti for its reliability, productivity, Lifetime Service, high level of relationship and on-site training.



### Mobile Hilti Centre in Jeddah airport project.

To increase the level of service in megaprojects, Hilti allocates mobile Hilti centres on selected job sites. One of them is the new airport project in Jeddah. Since April 2012 the mobile Hilti Centre helps customers with repair tools, orders and demos on site. It has also an office and showroom for meetings. The main products bought are rotary hammers, combihammers and breakers together with drill bits, chisels and cutting discs.



## **Hilti Centres: Kingdom of Saudi Arabia**

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Saad Abukhadra Building  
21454, Jeddah  
**Phone 800 120 0013**

King Abdul Aziz Street  
11323, Riyadh  
**Phone +966 11 460 8974**

Baladia Street  
Al Shoaili Center  
21454, Jeddah  
**Phone +966 12 667 8475**

Old Industrial Area  
Dahran street, Bawardi building  
11323, Riyadh  
**Phone +966 11 447 5766**

Old Jeddah Road, Imam Bukhari Street  
Al Sultan Building  
24231, Makkah  
**Phone +966 12 549 0773**

Khobar-Dammam Highway  
Dammam 1st Industrial area, Aba Hussain Building  
31952, Khobar  
**Phone +966 13 810 0285**

Jeddah Road – King Abdul-Aziz street  
Mohammed AL-Juhani Building  
41911, Yanbu  
**Phone +966 14 322 4661**

1st Industrial City, street #114  
Near Al Bayan Institute  
31962, Jubail  
**Phone +966 13 340 4872**

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