TECHNICAL SOLUTIONS FOR **CONSTRUCTION**

Dextra

www.dextragroup.com

VISION

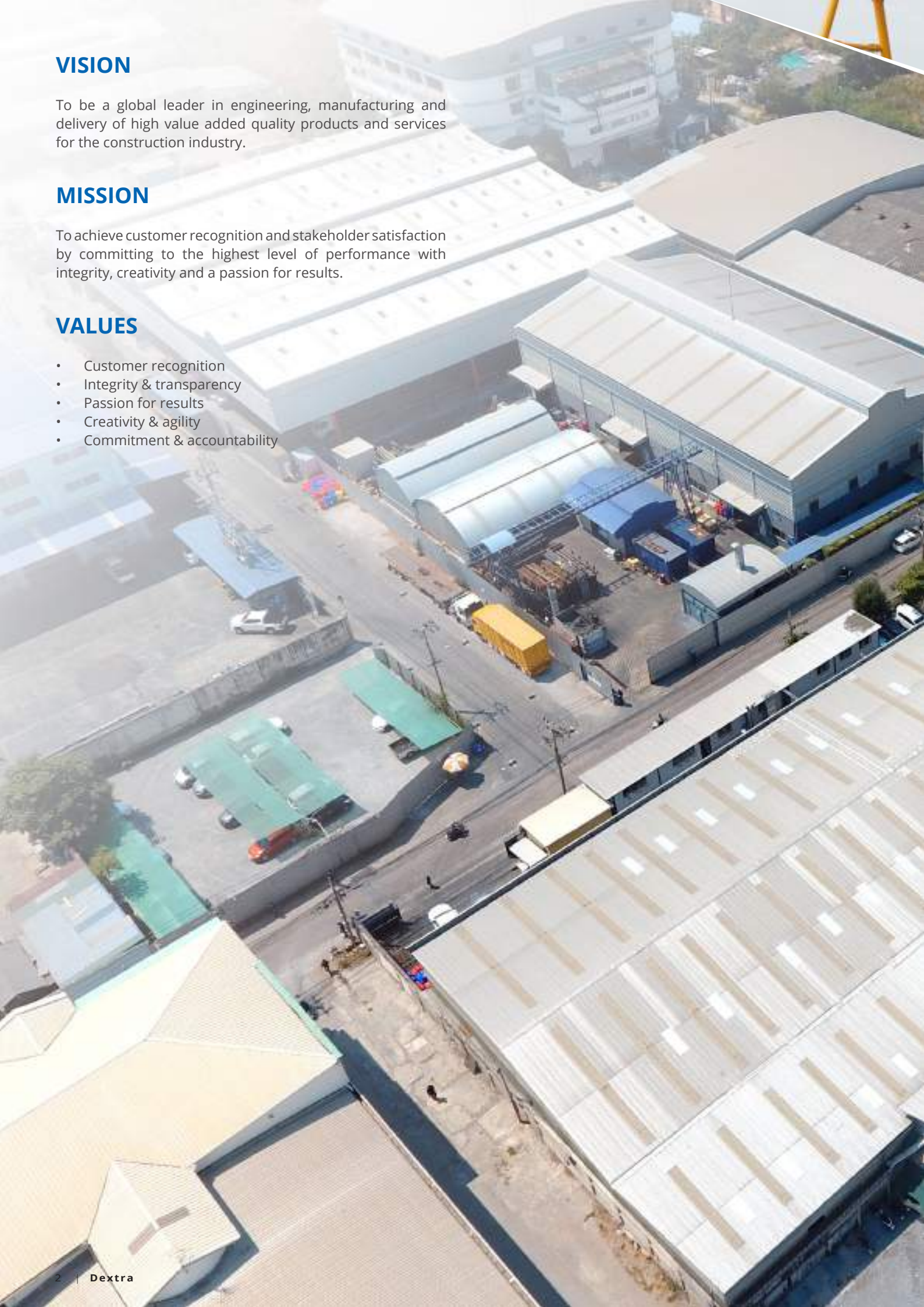
To be a global leader in engineering, manufacturing and delivery of high value added quality products and services for the construction industry.

MISSION

To achieve customer recognition and stakeholder satisfaction by committing to the highest level of performance with integrity, creativity and a passion for results.

VALUES

- Customer recognition
- Integrity & transparency
- Passion for results
- Creativity & agility
- Commitment & accountability



Dextra was established in 1983 and has since developed into a leading manufacturer and distributor of engineered construction products for the international building and civil industries. Globally recognized for its mechanical splicing systems for reinforcing steel bars, Dextra has also pioneered FRP (Fiber Reinforced Polymer) solutions for numerous construction applications.

Today, Dextra products are used around the world in high-rise buildings, power plants, bridges and other concrete structures, and have been accredited by major independent regulatory bodies on all continents.

After obtaining the ISO 9001 certification in 1996, Dextra became the first ASME-certified manufacturer in Southeast Asia in 2009, emphasizing its outstanding commitment to top quality.

Thanks to a dedicated team of professionals, Dextra has throughout the years developed and enhanced a wide range of technical solutions aimed at helping contractors and consultants to achieve maximum efficiency at their work without compromising on economy.

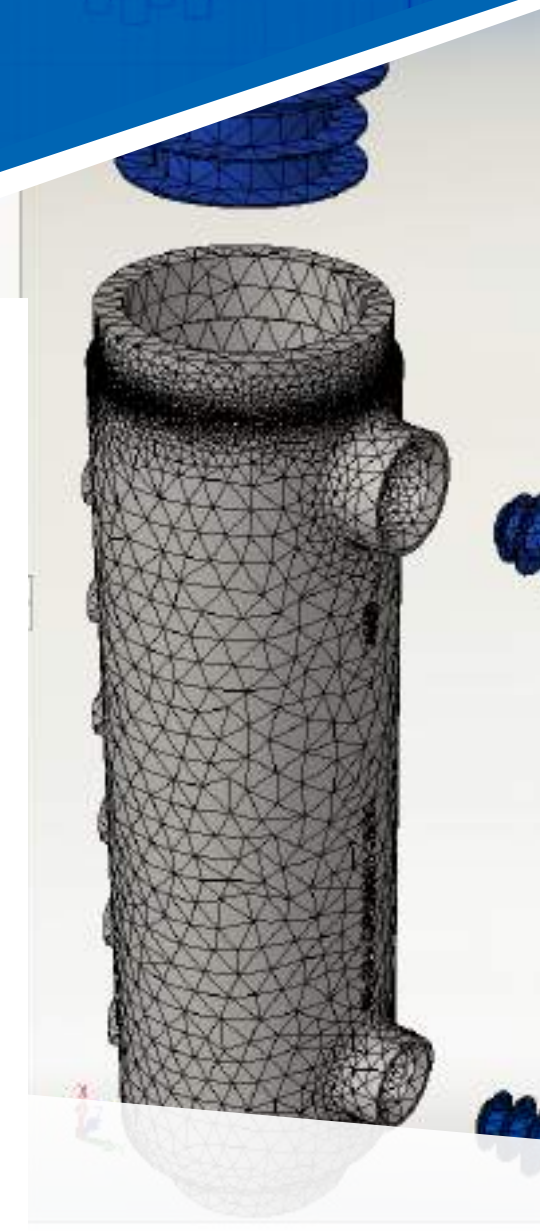
Our expertise

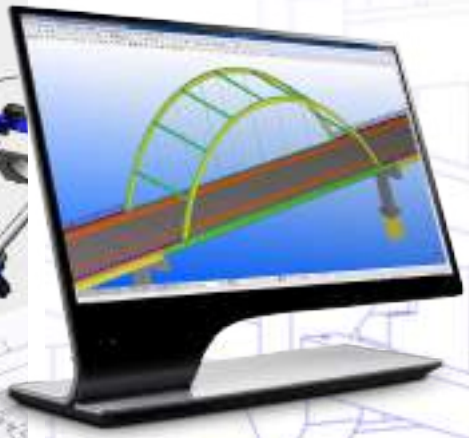
Our business lines

Our projects

ENGINEERING

from product to project





R&D & industrialization
Developing highly productive construction solutions.

Engineering support
for projects where Dextra solutions are customized as per project requirements.

CAD & BIM
Assistance to system creation in Tekla, Revit, AutoCAD.

MANUFACTURING
in our own facilities

Bangkok factories
Thailand

< Production of rebar couplers & equipment

< Production of bar systems & accessories

Guangzhou factory
China

< Production of ground engineering systems & FRP

Mumbai factory
India

< Production of rebar couplers & Sonic tubes

QUALITY
in everything we do

Accredited laboratory & testing facility

At its Bangkok factory, Dextra owns and operates an ISO-IEC 17025 accredited laboratory. Thanks to this facility and its dedicated team, Dextra is able to efficiently test its solutions to guarantee compliance with each project's requirements.

Quality assurance

Our systems have been audited and accredited ISO 9001 (Bureau Veritas & UK CARES), as well as by the ASME (American Society of Mechanical Engineers).

ISO 9001
TH015960
CNBJ301191-US
IND17.5124Q/U

ASME NCA-3800 & ASME NQA-1
QSC-706

ISO/IEC 17025:2005 Accredited Testing Laboratory

Worldwide certifications

Dextra mechanical splices have been tested, evaluated, approved, certified or qualified by many international third-party agencies:

NETWORK

Local presence, global experience

Global experience

in the best construction practices for all project types and on all continents.

Regional after-sales teams

for training of users and servicing of equipment to ensure the highest possible productivity.

Local distribution points

and inventories for quick support of customers and project sites.

CONCRETE REINFORCEMENT SOLUTIONS

Dubai Metro, UAE

About Dextra rebar couplers

Rebar couplers are devices used to join lengths of rebar together, allowing to quickly and safely create a high performance splice on the construction site. Usually, the rebar ends need to be prepared to connect two bars. This is done by specific equipment which Dextra has engineered and manufactured.

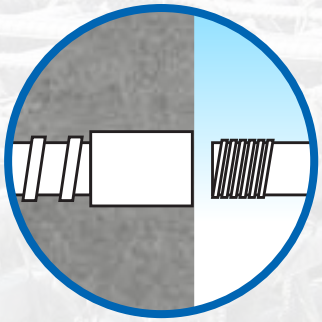
Productivity
Dextra couplers are very versatile in their use and allow important productivity gains in the construction process.

Reliability
Dextra couplers create a strong point in the rebar structure, maintaining the ductility of the reinforcement.

Steel savings
Dextra couplers allow to significantly reduce the tonnage of rebar used by avoiding the traditional bar overlapping.

Compatibility
Dextra couplers and equipment are engineered to fit different rebar grades and sizes according to the various standards across the world.

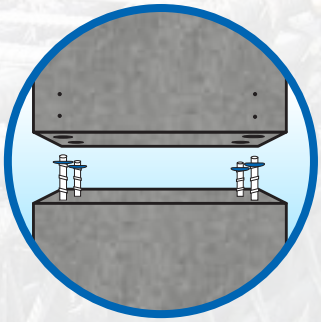
Typical applications



Rebar continuity for cast in place concrete

Foundations:
piles, pile caps,
D-walls

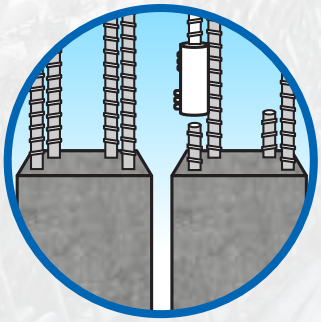
Superstructure:
walls, slabs,
beams, columns,
temporary openings



Precast connections

Connect concrete elements produced at a precast factory.

Columns, beams,
wall panels,
pipe racks



Repair & retrofit

For short or bent bars already casted in concrete.

Piles, barettes

CONCRETE REINFORCEMENT SOLUTIONS

Rebar continuity for cast in place concrete

dextragroup.com/**rebarcouplers**

Bartec® rebar preparation operations for Facebook headquarters expansion, California, USA

GRIP TEC®

Griptec® is the most accomplished mechanical splice on the market: Its patented production process includes a systematic, non-destructive tensile test that performs a 100% check on the bar end.

Moreover, the machine automatically adjusts its processing parameters when the bar size is changed which not only greatly improves the productivity, but also reduces the risk of mistakes.

Griptec rebar preparation equipment

BAR TEC®

Bartec® is the most well-known splice system worldwide, featuring a guaranteed full performance splice under tensile load.

Bartec® not only offers the complete range of splices that may be required on-site, but also facilitates handling and stock-keeping by combining the two most common splices, the standard and the position splice (when the two bars cannot be rotated) into one product.

In some countries, the system is sold under the Fortec trademark.

Bartec rebar preparation equipment installed in container

Mechanical splices are devices used to connect steel bars in reinforced concrete construction. Compared to the conventional method of lap splicing, they not only save steel, but provide a stronger, faster and safer connection.

ROLLTEC®

This ICC type 2 rolled-thread splice system requires one single machine with one operator for the bar-end preparation.

Like all Dextra splice systems, it offers the full range of splice solutions (standard, position, transition, caging) and covers a large range of both metric and imperial measurements.

Rolltec rebar preparation equipment

HEADED BARS

Made of an anchor fixed onto the threaded end of a rebar, Headed Bars produce a mechanical anchorage that conveniently replaces hooks (bent bars) in congested areas, especially at the edges of concrete elements.

Thanks to this solution, contractors can save steel and reduce the risk of steel embrittlement caused by bars bending, especially on large diameters.

Headed Bars anchors are compatible with Griptec, Bartec/Fortec and Rolltec splice systems.

CONCRETE REINFORCEMENT SOLUTIONS

Precast connections

dextragroup.com/**precast**

The Plum Condominium, Bangkok, Thailand

GROUTEC

Groutec is a mechanical splice sleeve specially designed to connect precast concrete elements, horizontally and vertically, to another precast element or a cast in place structure. It is particularly suitable for precast panel and column connection.

The Groutec sleeve has one threaded end which is compatible with Griptec, Bartec/Fortec, Rolltec splice systems. The threaded end facilitates the installation of the sleeve on the rebar structure at the precast factory.

Two alternative Groutec versions are available: a larger design with wider tolerances to ease installation on site, and a slim version for thin elements and reduced grout consumption.

Both versions work with commonly available non-shrink grouts: no specific brand is required.

CONCRETE REINFORCEMENT SOLUTIONS

Repair & retrofit

dextragroup.com/**rebarcouplers**

UNITEC

Unitec® is a universal on-site splicing system that does not require the use of any hydraulic power tools. A pneumatic wrench is simply used to tighten the bolts and achieve the connection.

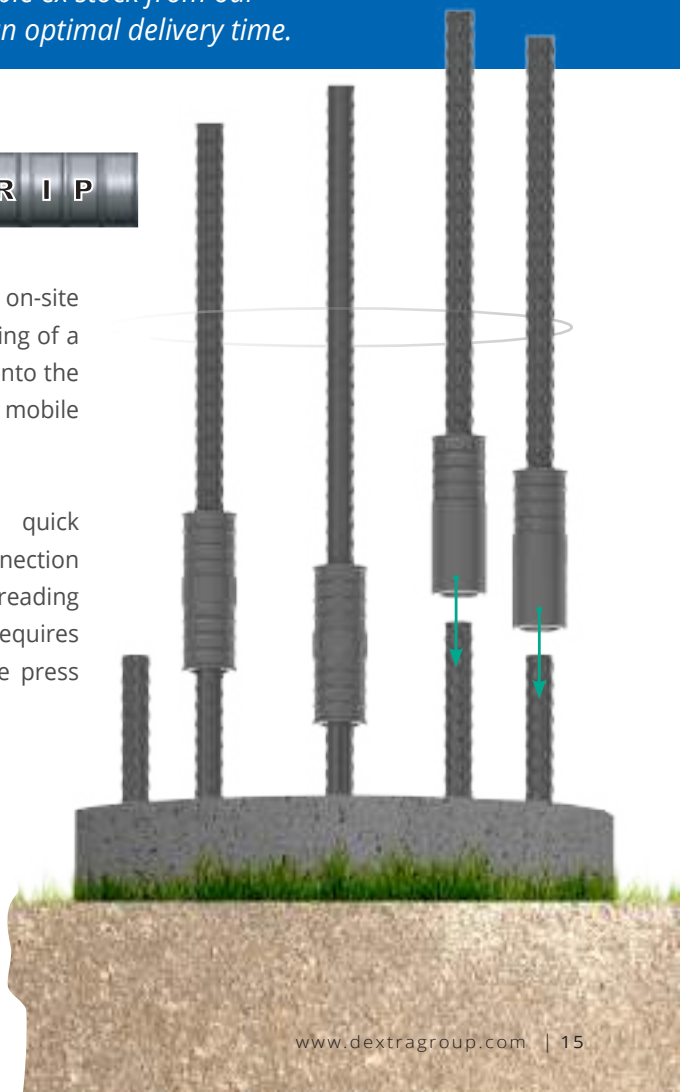
Unitec is ideal in situations where there is no bar end preparation facility to thread the bars and where it would be too cumbersome to handle a mobile hydraulic press.

Do not let a rebar splicing issue slow down your construction project! Unitec and Repairgrip are available ex stock from our warehouses around the globe, for an optimal delivery time.

REPAIR GRIP

Repairgrip is an on-site splicing system consisting of a sleeve that is swaged onto the rebar by means of a mobile hydraulic press.

It is an easy and quick solution for connection situations in which threading is not possible. It only requires sufficient space for the press to be placed.



ENGINEERED **BAR SYSTEMS**

Suvarnabhumi Bangkok International Airport, Bangkok, Thailand

About Dextra bar systems

Over the years, we have developed a comprehensive offer of high performance bar systems.

Rods & accessories

Dextra supplies both the high-tensile steel bars and the accessories used to connect bars together or to a steel/concrete structure.

Customization

Although based on a standard range of sizes and accessories, the assembly length of high performance bars is always customized as per project requirement.

Engineering support

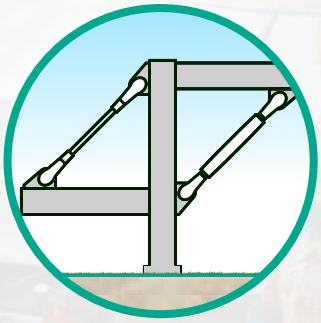
Every project is unique. The Dextra Bar Engineering team is available to support you on the design and customization of bar systems to fit your project requirements.

Applications

Dextra has developed 3 systems of high performance bars that can be distinguished by their main applications.

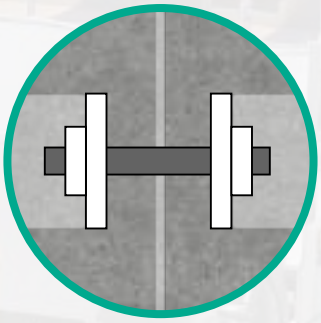
Marine construction

Tie bars to retain quay walls in corrosive environment.



Roof & Façade

Tension rods used for suspension, cross-bracing or support.



Bridge & Viaduct

Post-tensioning bars for lifting, stitching or bracing.

ENGINEERED
BAR SYSTEMS

Marine tie bars

dextragroup.com/**marinetierods**

Jeddah South thermal plant, Jeddah, Saudi Arabia

Marine tie bars

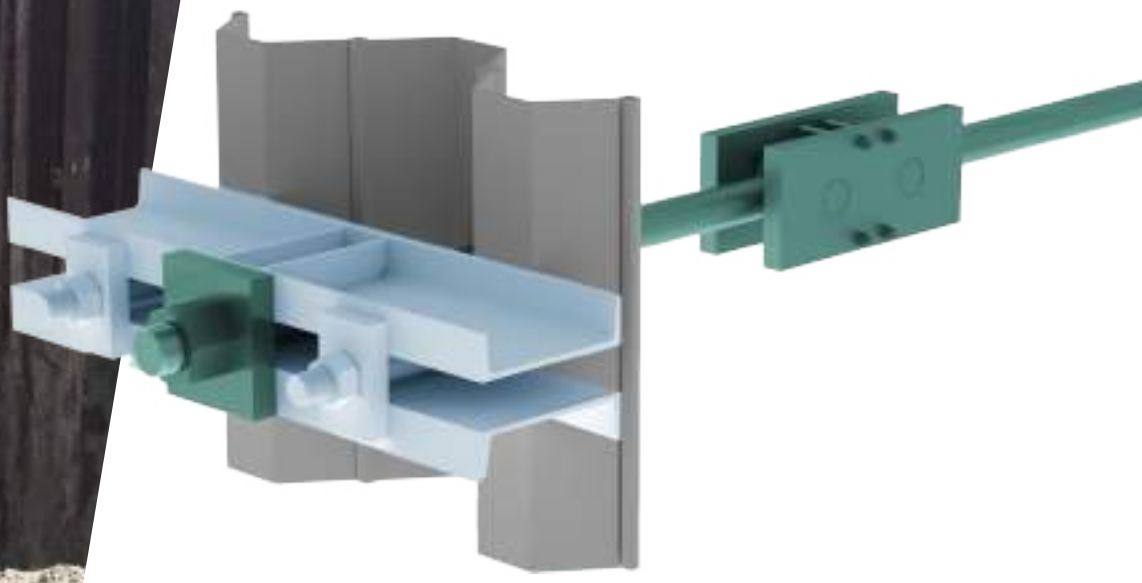
Tie bars are used in port and harbor construction to anchor waterfront structures such as quay walls, berths and crane runways.

Dextra's unique range covers various steel grades from 355 to 700 N/mm^2 in yield strength, and diameters from M42 to M162 mm.

Several types of articulated joints such as swivel plates, captive nuts and ball cage systems can be used to accommodate the project requirements.

Dextra tie bars are compatible with any sheet piles profile, combi walls or concrete diaphragm walls.

Dextra also supplies corrosion protection solutions and can prefabricate waling beams and fixing bolts to provide a complete anchoring system.



Architectural systems

dextragroup.com/**architecturalbars**

BITEC exhibition center expansion,
Bangkok, Thailand

Carbon steel tension rod

Stainless steel tension rod

Tension rod systems

Tension rods are typically used to support large steel or glass structures such as roofs or facades. Being highly visible in most of the cases, they fulfill as much a technical as an aesthetic function in construction.

With a wide range of sizes and accessories in various steel grades, both carbon and stainless, and various finishes, Dextra system can adapt to all your structural requirements.

When there should be no compromise on aesthetics,
Dextra architectural systems are also available in stainless steel.

Compression struts

Compression struts complement Dextra's offer for roof supporting systems. They are used when structural members have to take compression loads.

ENGINEERED
BAR SYSTEMS

Post tensioning

dextragroup.com/**posttensioning**

Jahra road, Kuwait

Post-tensioning, lifting and stressing bars

Post-tensioning of concrete structures is usually done with cables and strands. However, for short tendons, bars provide a number of benefits: less draw-in loss, superior corrosion resistance, reliable modulus of elasticity and lower relaxation. Moreover they are easier to extend, detension, re-stress and need a much smaller recess for their jacking.

Typical applications

- Post-tensioning of concrete structures
- Temporary bracing / Temporary post-tensioning
- Heavy lifting
- Seismic restrainer system
- Hold down for steel structure, wind turbine
- Structural steel frame ties
- Bridge segment connections
- Bridge segment continuity tendons
- Pre-stressed concrete

GROUND ENGINEERING SOLUTIONS

Musheireb Station Doha Metro
Qatar

About our systems

Unique material proposition

Dextra manufactures ground systems both in steel (hot rolled coarse bars) and innovative composite FRP (Fiber Reinforced Polymer) materials.

Innovative

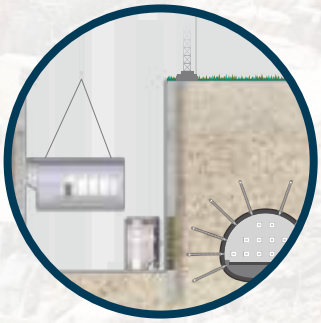
Taking advantage of the characteristics of composite materials, Dextra has developed unique solutions that do not corrode (permanent applications) or can be simply cut while remaining in the ground (temporary applications). Dextra also offers unique hybrid steel/FRP solutions as an alternative to removable anchors.

Standard and customized

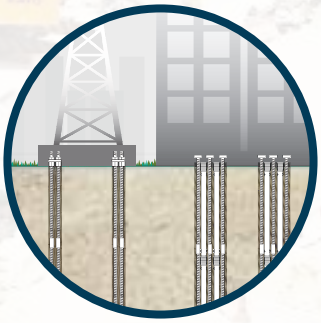
Depending on the type of application, Dextra systems are available as standard item or as customized systems.

Applications

Soil Retention



Tunneling & Mining



Deep Foundations

GROUND ENGINEERING SOLUTIONS

Soil retention

dextragroup.com/**soilretention**

Doha Metro, Qatar

Anchors for retaining walls

Retaining walls for excavations are vertical structures that only allow limited deflection.

Prestressed active anchors, available in steel or FRP material, are usually preferred to avoid the smallest ground displacement.

These Active Anchors are high strength tendons anchored to the retaining wall on one end and to the ground on the other end by pressure-injected grout.

Soil nails for slope stabilization

Similarly on soil-covered slopes, soil is constantly moving downward due to gravity. Therefore larger displacement have to be considered.

Passive anchors (soil nails) are the preferred solution. High strength tendons that are fully grouted from the face of the slope into the stable ground.

Dextra ASTEC Active Anchors (hybrid steel/FRP system) is a new alternative to removable anchors. Fully cut-able, it doesn't need to be extracted from the ground.

Steel ground anchor systems can be made suitable for permanent application thanks to corrosion protection accessories.

GROUND ENGINEERING SOLUTIONS

Tunneling and mining

dextragroup.com/**tunneling**

Doha Metro
Qatar

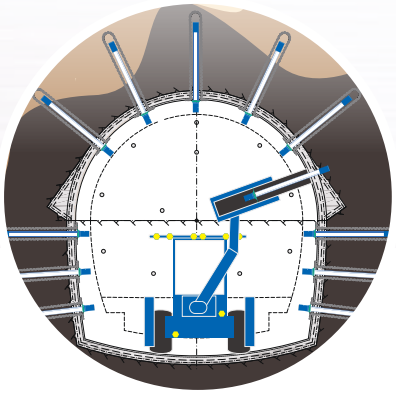
Soft-Eyes for mechanical tunneling

ASTEC Soft-Eyes consist of FRP bars and facilitate the penetration of TBMs (Tunnel Boring Machines) through retaining walls.

Dextra was the first company to introduce this technology in the market almost 25 years ago, and supplied over 500 Soft-Eyes to-date.

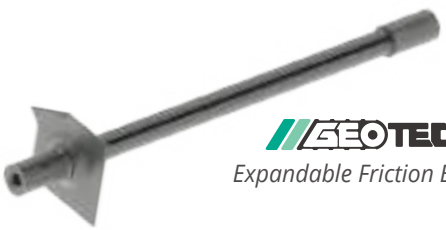
Rock Bolt for drill & blast tunneling

Dextra offers a full range of steel and FRP Rock Bolts adapted to all situations: solid bolts or hollow bolts, self-drilling or pre-grouted and even mechanical anchors using expansion shells.



Steel & GFRP Self-Drilling Rock Bolt with hollow steel bar for grouting

Self Drilling Rock Bolt



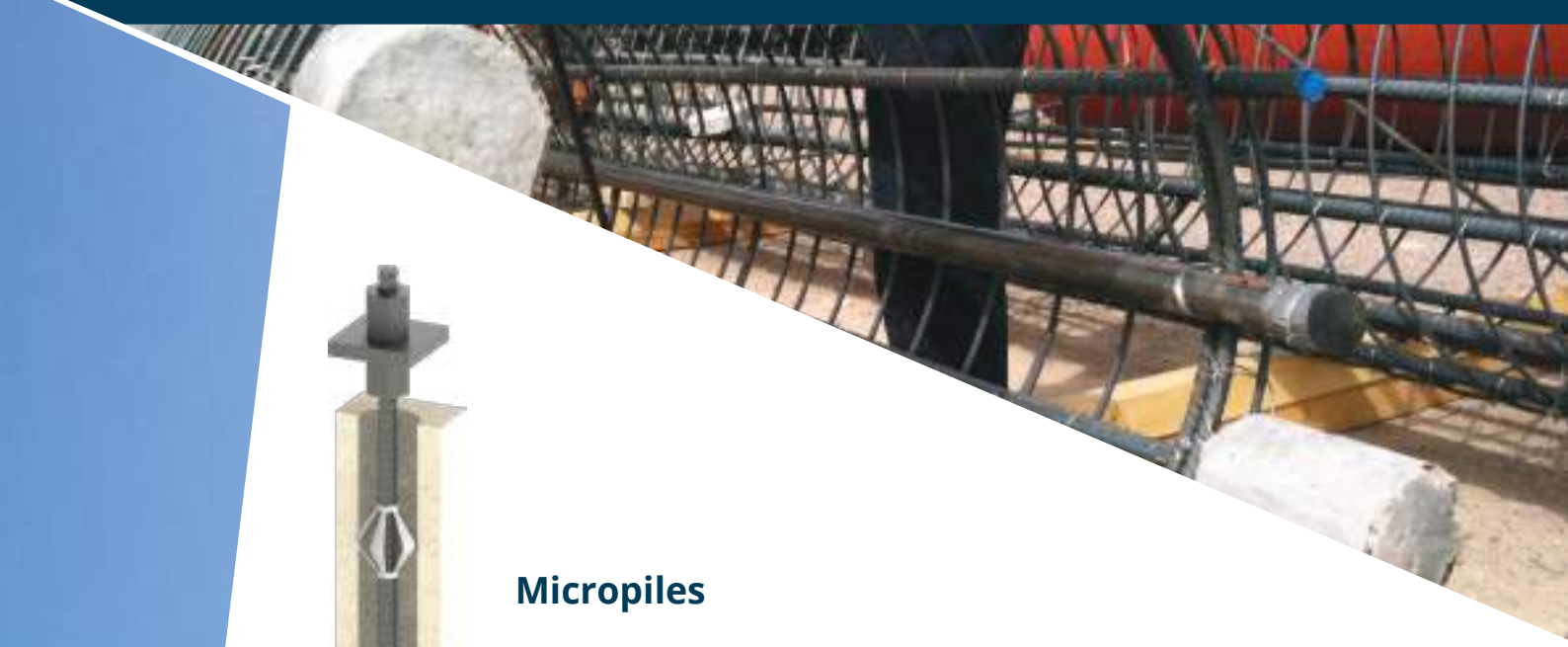
Expandable Friction Bolts

GROUND ENGINEERING SOLUTIONS

Deep foundations

dextragroup.com/**deepfoundations**

Causeway Bridge
Kuwait



Micropiles

Micropiles are structural elements used to transmit an applied tension or compression load into soil or rock. As passive anchors, they do not require post-tensioning. Micropiles are suitable for both compression and tension applications thanks to customizable head accessories.

Our wide range is based on fully threaded bars available in various diameters and 3 steel grades. Higher grades may be preferred to ease handling and reduce borehole diameter. Couplers may be used in order to splice bar segments and achieve longer length.

Corrosion protection (Black steel/Double corrosion protection levels) is an integral part of the system and supplied by Dextra. Multi-bar systems are also available on request.

For foundation piles and D-walls, rebar couplers can also be used for the safe and fast reconnection of cages.

SONITEC V2

Tubes for sonic testing in bored piles

Sonitec tubes are used for integrity checking of deep foundations: diaphragm walls, concrete piles, bored piles and barrette piles.

Dextra Sonitec tubes are fast to handle and easy to assemble on-site. Installed inside the steel reinforcement cage, they offer a reservation for Crosshole Sonic Logging (CSL) probes.

Sonitec tubes are conveniently connected by push-fit, making the installation process safe and reliable.

Easy assembly thanks to Sonitec PUSH-FIT® concept

WORLDWIDE
REFERENCES

*More than **10,000** projects worldwide*

Browse our projects on a map:
www.dextragroup.com/**construction-projects**

MahaNakhon Tower
Bangkok, Thailand

Buildings

One Nine Elms, UK
Dubai Creek Tower, UAE
Tours Duo, France
Katara Tower, Qatar
Algiers Great Mosque, Algeria
International Commerce Centre, Hong Kong
Two IFC, Hong Kong
Macau Tower, Macau
Nathani Heights, Mumbai, India
Forest City, Johor Bahru, Malaysia
Jeddah Tower, Saudi Arabia
Marina Bay Sands, Singapore
MahaNakhon Tower, Bangkok, Thailand
Icon Siam Complex, Bangkok, Thailand
Burj Khalifa, Dubai, UAE

Airport

Kuwait International Airport, Kuwait
Rio de Janeiro Galeão Airport, Brazil
Phnom Penh Airport, Cambodia
Chek Lap Kok Airport, Hong Kong
Delhi International Airport T3, India
Mumbai International Airport, India
Doha Airport, Qatar
Changi Airport T3, Singapore
Suvarnabhumi Airport, Bangkok, Thailand
Abu Dhabi International Airport, UAE
Dubai International Airport T3, UAE
London Heathrow Airport T2 & T5, UK
Los Angeles Tom Bradley Terminal, USA

Stadia

Ras Abu Aboud Stadium, Qatar
Baku Stadium, Azerbaidjan
Brasilia Mané Garrincha stadium, Brazil
São Paulo Arena Corinthians, Brazil
Stade du Havre, France
Sports Hub, Singapore
Green Point Cape Town, South Africa
Kaohsiung National Stadium, Taiwan
Bangkok Futsal Arena, Thailand
Olympic Velodrome, London, UK

Ports

Aberdeen Harbour Expansion, UK
Ras Al Khair Maritime Yard, KSA
Porto Multi Rio, Brazil
Port of Douala, Cameroon
Shanghai International Port, China
Yantian Container Terminals, China
Port Autonome de Pointe-Noire, Congo
Container Terminal 9, Hong Kong
Sète Quay H, France
Aqaba Container Terminal, Jordan
Mubarak Al-Kabeer Port, Kuwait
Tanger Med 2, Morocco
Laem Chabang Port, Thailand
Dubai Jebel Ali Terminal 3, UAE
Fujairah Port, UAE

Bridges & Viaducts

New Zuari Bridge, India
Cebu-Cordova Bridge, Philippines
Tuen Mun - Chek Lap Kok Line, Hong Kong
Mahakam IV Bridge, Indonesia
Bouira Viaduct, Algeria
Temburong Bridge, Brunei
New Champlain Bridge, Canada
Chingzhou Mingjiang Bridge, China
Tsing Ma Bridge, Hong Kong
Atlantic Bridge, Panama
Doha Link & Jaber Causeway, Kuwait
Nouvelle Route du Littoral, Reunion Island
Industrial Ring Road, Bangkok, Thailand
New Bay Bridge, San Francisco, USA
Nhat Tan Bridge, Vietnam

Subways & Urban railways

Melbourne Metro, Australia
Rio de Janeiro Metro, Brazil
Shanghai Metro, China
Cairo Metro, Egypt
Hong Kong MTR & KCR, Hong Kong
Delhi Metro, India
Mexico City Metro Line 12, Mexico
Panama Metro, Panama
Doha Metro, Qatar
London Crossrail, United Kingdom
Riyadh Metro, Saudi Arabia
Singapore MRT, Singapore
Taipei Metro, Taiwan
Bangkok MRT & BTS, Thailand
Dubai Metro, UAE

Port Autonome de Pointe-Noire, Congo

Nuclear

Hinkley Point C NPP, UK
Rooppur 1&2 NPP, Bangladesh
Astravets 1&2, Belarus
Fangchenggang, China
Fuqing, China
Taishan 1 & 2 EPRs, China
Flamanville 3 EPR, France
Krümmel storage tanks, Germany
Kalpakkam FBR, India
Kudankulam 1 & 2, India
Rajasthan 5 & 6, 7 & 8, India
KANUPP-II 2&3, Pakistan
Novovoronezh II 1 & 2, Russia
Sellafield EPS 3 storage tank, UK

Hydroelectric

Kraftwerk Rott Dam, Austria
Belo Monte Dam, Brazil
Santo Antônio Dam, Brazil
Teles Pires Dam, Brazil
Reventazon Dam, Costa Rica
Naga Hammadi Dam, Egypt
Baglihar Dam, India
Kol Dam, India
Nam Theun Dam, Laos
Xayaburi Dam, Laos
San Roque Dam, Philippines
Thadan Dam, Thailand

Oil & Gas

Hyosung LPG Cavern, Vietnam
Jamnagar Refinery, India
Wheatstone LNG complex, Australia
Dunkirk LNG Terminal, France
Petronas RAPID, Malaysia
Talara Refinery, Peru
SLNG Berth 2, Singapore
Cylingas reservoirs, UAE
Fujairah Port oil terminal expansion, UAE
Jizan Refinery, Saudi Arabia

Hinkley Point C NPP, UK

Commercial presence
in more than
55 countries

Main offices

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Dextra

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Dextra construction activity brochure - November 2021 - WK