Tensil
ENGINEERING

COMPANY PROFILE

Index

Tensil ENGINEERING | OVM Authorized Applicator

About us

About Tensil

Tensil is a distinguished Engineering and Construction firm specializing in Post-Tension Solutions. It is a proud member of the Safa Group, which is Founded by Eng. Hosam Alasali and present in over 37 countries and trusted by 6 governments, including Saudi Arabia, East Asia, and Egypt. Tensil is backed by a skilled team, powered by decades of industry experience, spanning across Egypt and the Gulf, ensuring unparalleled quality and reliability.

The key personnel at Tensil Engineering have a long history and a strong foothold in the field. Eng. Sakher Hijazi, the Co-Founder and CEO, is an expert Civil Engineer and the mastermind behind Tensil. Mohamed Sakhnini, the Business Development Director, brings years of vital management experience, renowned for his strategic operational efficiency. Eng. Mohamed Ali, the Projects Manager with wide knowledge of all aspects about post-tensioning system. Together, they embody Tensil's commitment to excellence and innovation in engineering and construction solutions.

Tensil's Team

Eng. Sakhr Hijazi

Co Founder & CEO

Sakhr has extensive experience in prestressed concrete, overseeing all aspects from design to implementation. His expertise also extends to business development activities, market research, and identifying new business opportunities. Sakhr has made significant contributions to structural design by leading technical and financial studies for over 70 diverse projects. His proficiency has led to successfully securing deals for projects, resulting in a cumulative sales volume of more than 7 million USD.

Eng. Hosam Asali

Co Founder

Hosam is the Founder of SafaSoft. Safasoft is a pioneer back office for many governments and entities around the world.

Mr. Mohamad Ahmed Sakhnini

Co founder - Director

Mohamed Ahmed Sakhnini holds an MBA in International Business from Heriot-Watt University and is a Certified Insurance and Risk Management Specialist from the Global Institute in the UK. With over 25 years of executive and corporate management experience, he has worked in various sectors, including insurance, international investments, and financial asset management in the Middle East and Southeast Asia. Mohamed is responsible for expanding Tensil's market presence and driving growth. He develops and executes strategic plans to enhance business opportunities, manage client relationships, and ensure the company's services align with market demands and regulatory standards.

Eng. Mohamed Ali

Projects manager

Mohamed Ali has wide knowledge of all aspects about post-tensioning system. His expertise spans various sectors, such as Bridges and Slabs. He has remarkably contributed to significant projects in Egypt, including the New Administrative Capital and Alamein City. Mohamed has also been involved in notable projects in Saudi Arabia, and UAE . Mohamed is in charge of managing and executing construction projects. He supervises project timelines, resources, and quality control to ensure a successful completion.

Eng. AbdulRahman Magdy

Technical Office manager

Abdul Rahman has been in the field of structural design for many years and has contributed to significant Engineering Design projects in Egypt and Gulf countries (Oman, Saudi Arabia, UAE, Bahrain, and Kuwait). His portfolio includes a variety of projects, including Residential Towers, Administrative Buildings, Hospitals, Hotels, Banks, Malls, and Bridges. Abdul Rahman manages the technical office, overseeing the design and engineering processes and coordinates with the engineering team to provide reliable solutions.

Eng. Ahmed Ali

Senior technical office engineer

Ahmed Ali is an expert in the structural design of prestressed slabs. His expertise covers various international codes and includes projects in high towers, hospitals, schools, and residential buildings. Ahmed plays a key role in overseeing the structural design. He supports project execution by providing technical guidance and solutions.

A word from CEO

Welcome and thank you for taking the time to browse our Profile. We are very proud of what we have to offer, in terms of products and services, and we stand by the exceptional standard of the work we provide. You should have a slightly better understanding of those services through this portal into our company.

With our experience, we can provide our clients with the lowest cost and the best quality work possible. Please take some time to go through our projects to see the standard that we have set and how our firm is organized.

Our Mission is to provide the best possible service for our clients – which we accomplish through constant assessment, improvement, and extensive training. We hope to work with you soon and exceed your expectations with our work!

Sakhr Hijazi
Co Founder & CEO

Our Vision

"Always offering new Engineering technologies and solutions for our clients in the Middle East and all over the world."

Our Mission

"We are a professional pre-stressing company. Consider pre-stressing and get in touch with us for advice if your building exhibits significant span issues, has a busy timetable, or needs to support heavy loads to obtain the best results at the most affordable price."

A *brief about*
Post Tensioning System

Post-tensioning is a method of reinforcing (strengthening) concrete or other materials with high-strength steel strands or bars, typically referred to as tendons. Post-tensioning applications include office and apartment buildings, parking structures, slabs-on-ground, bridges, sports stadiums, rock and soil anchors, and water-tanks. In many cases, post-tensioning allows construction that would otherwise be impossible due to either site constraints or architectural requirements.

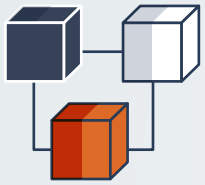
Main Concept

Although post-tensioning systems require specialized knowledge and expertise to fabricate, assemble and install, the concept is easy to explain. Imagine a series of wooden blocks with holes drilled through them, into which a rubber band is threaded. If one holds the ends of the rubber band, the blocks will sag. Post-tensioning can be demonstrated by placing wing nuts on either end of the rubber band and winding the rubber band so that the blocks are pushed tightly together. If one holds the wing nuts after winding, the blocks will remain straight. The tightened rubber band is comparable to a post-tensioning tendon that has been stretched by hydraulic jacks and is held in place by wedge-type anchoring devices.

Construction & Design advantages

Construction advantages

Reducing direct and indirect costs %15 to %20

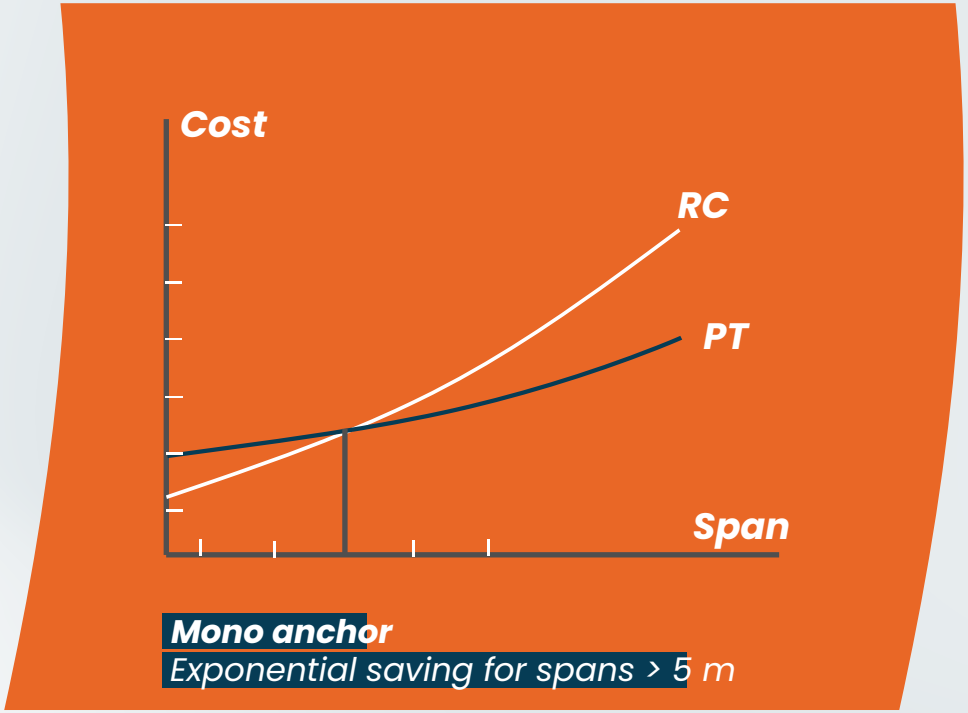


Less material storage space is required .

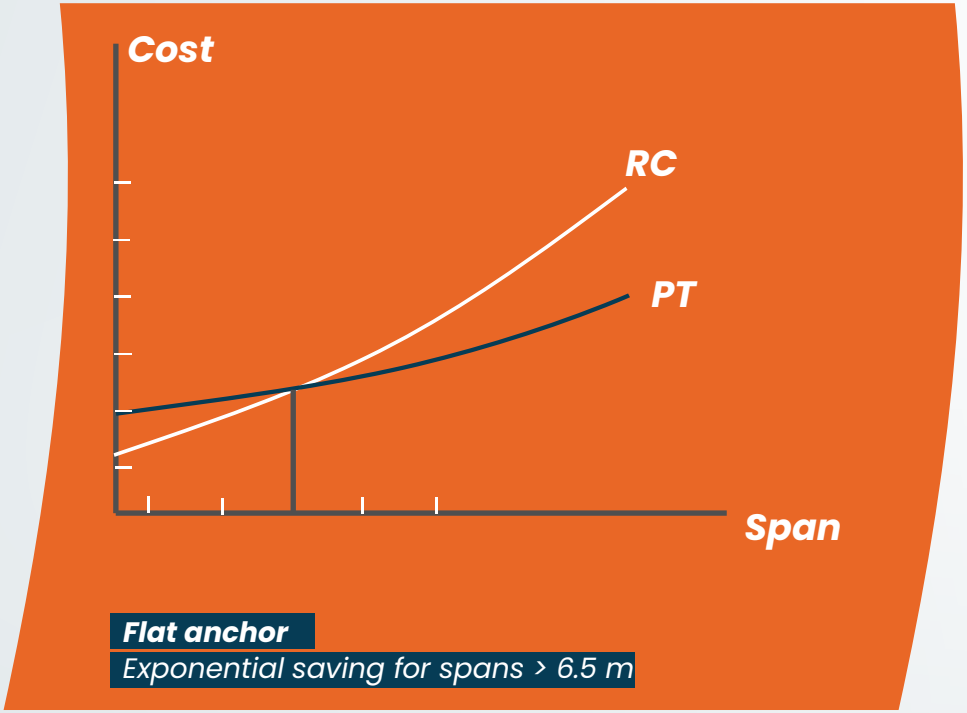
Reducing construction time.

Construction advantages

(Span – Cost – Graph) for RC & PT slabs



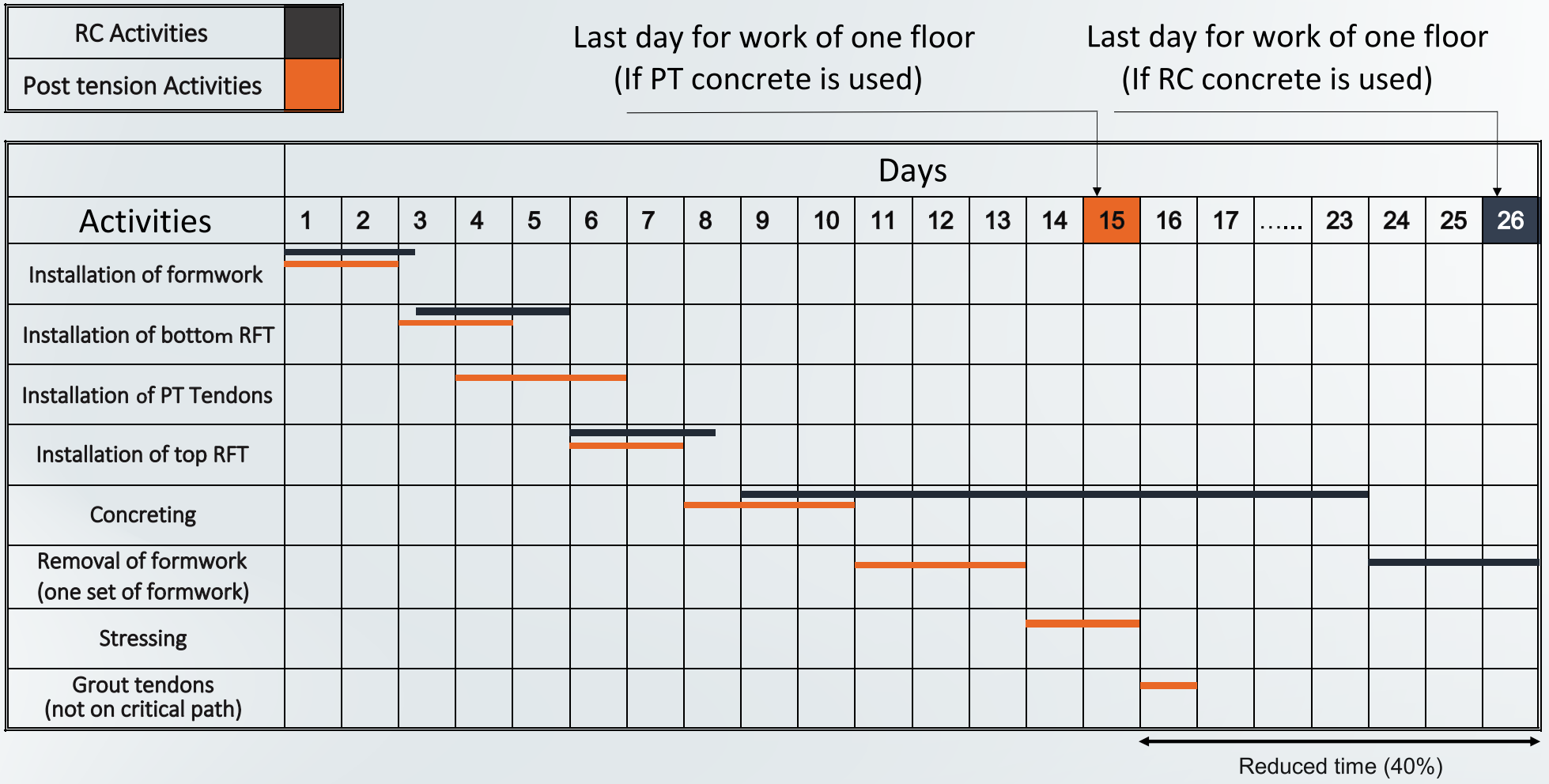
Mono anchor
Exponential saving for spans > 5 m



Flat anchor
Exponential saving for spans > 6.5 m

Construction advantages

(Time – Activities – Graph) for RC & PT slabs



Design advantages

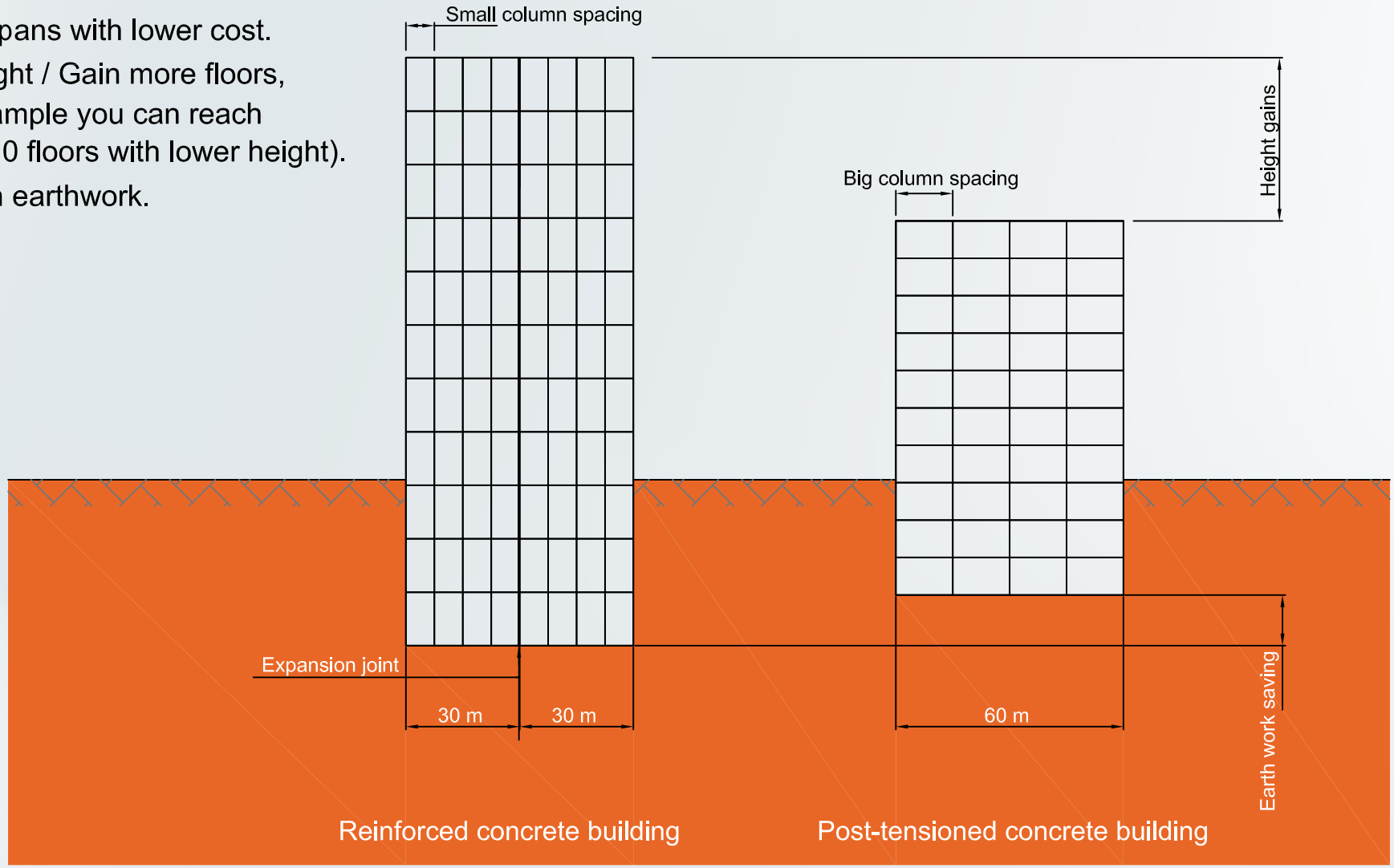
- *Gain more floors!*
- *Bigger column-free spans.*
- *Better deflection and cracks control.*
- *High efficiency in resisting lateral loads.*
- *Shallow structural depth.*

Design advantages

1-Longer spans with lower cost.

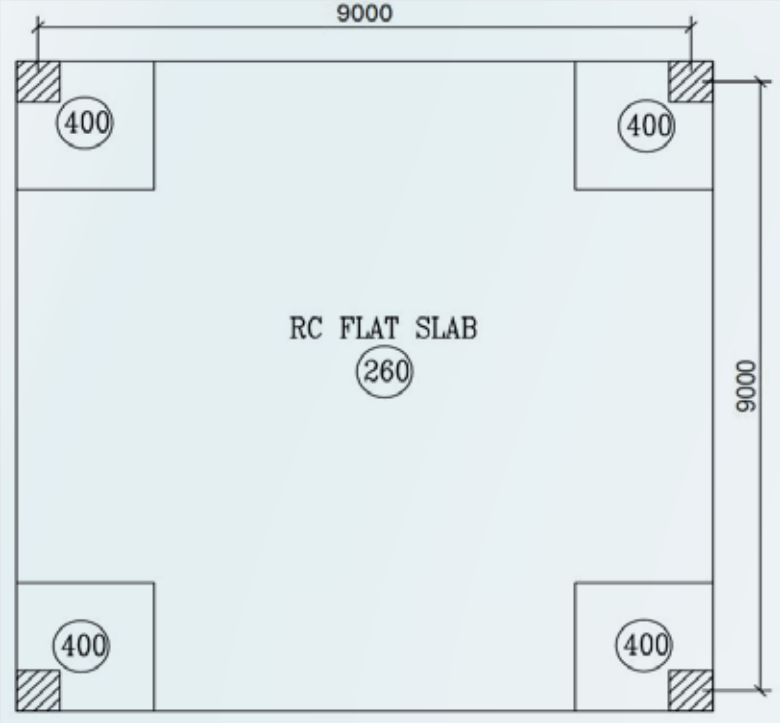
2-Gain height / Gain more floors,
(as our example you can reach
the same 10 floors with lower height).

3-Saving in earthwork.



Case Study

Total construction cost of slab (Module 9mx9m) Using Rc flat slab.



1	الأبعاد الخرسانية	RC Flat slab 26cm	
1.1	مساحة بلاطة ٩×٩ م٢	81	م2
1.2	سمك البلاطة	260mm with drops 400mm	مم
1.3	سمك البلاطة المتوسط	285	مم

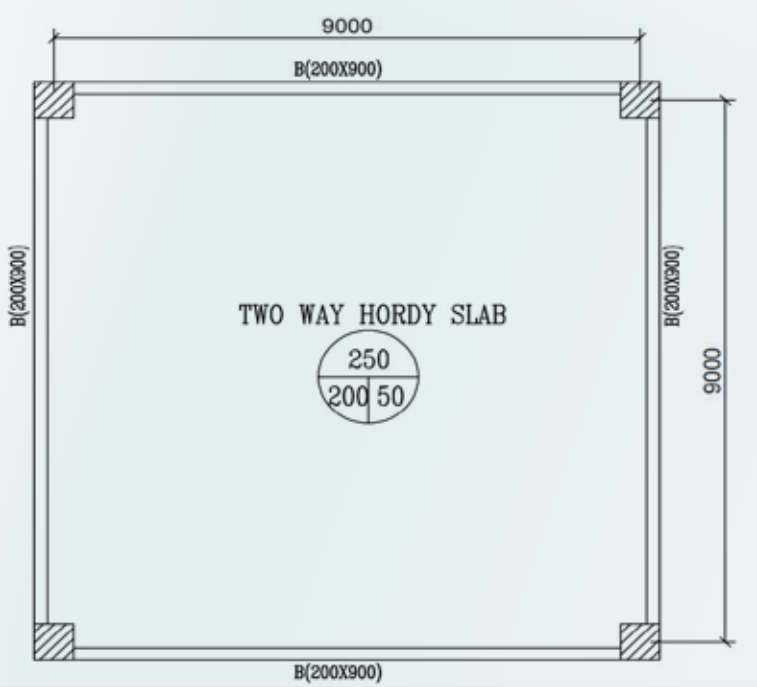
2	الخرسانة	RC Flat slab 26cm	
2.1	كمية الخرسانة	23.09	م3
2.3	تكلفة الخرسانة	210	ر.س/م3
2.4	مصنعيات النجارة والفرمجة والحدادة	160	ر.س/م3
2.5	تكلفة الخرسانة + مصنعيات النجارة والفرمجة والحدادة	370	ر.س/م3
2.6	إجمالي تكلفة الخرسانة	8,541	ر.س

3	حديد التسليح	RC Flat slab 26cm	
3.1	معدل حديد التسليح العادي	35	كجم/م2
3.2	معدل حديد التسليح العادي	123	كجم/م3
3.3	كمية حديد التسليح	2.84	طن
3.4	تكلفة حديد التسليح العادي	3,300	ريال/طن
3.5	كمية الأسمنت اللازم للحقن (يتم توريده من قبل العميل)	0	طن
0	تكلفة الأسمنت اللازم للحقن (يتم توريده من قبل العميل)	0	ر.س
3.7	تكلفة حديد التسليح سبق الإجهاد	0	ريال/م2
3.8	إجمالي تكلفة حديد التسليح سبق الإجهاد	0	ريال
3.9	إجمالي تكلفة حديد التسليح سبق الإجهاد + حديد التسليح العادي	9,356	ر.س

4	ملخص الأسعار	RC Flat slab 26cm	
4.1	التكلفة الاجمالية للخرسانة + حديد التسليح سبق الإجهاد + حديد التسليح العادي /م2	221	ر.س /م2

Tensil ENGINEERING | OVM Authorized Applicator

Total construction cost of slab (Module 9mx9m) Using two way hordy slab.



1	الأبعاد الخرسانية	Hordy slab 25cm	
1.1	مساحة بلاطة ٩×٩ م٢	81	م2
1.2	سمك البلاطة	250 mm (200mm ribbs + 50mm screed slab) with drop beams 200*900mm	مم
1.3	سمك البلاطة المتوسط	270	مم

2	الخرسانة	Hordy slab 25cm	
2.1	كمية الخرسانة	21.87	م3
2.3	تكلفة الخرسانة	210	ر.س/م3
2.4	مصنعيات النجارة والفرمجة والحدادة	160	ر.س/م3
2.5	تكلفة الخرسانة + مصنعيات النجارة والفرمجة والحدادة	370	ر.س/م3
2.6	إجمالي تكلفة الخرسانة	8,092	ر.س

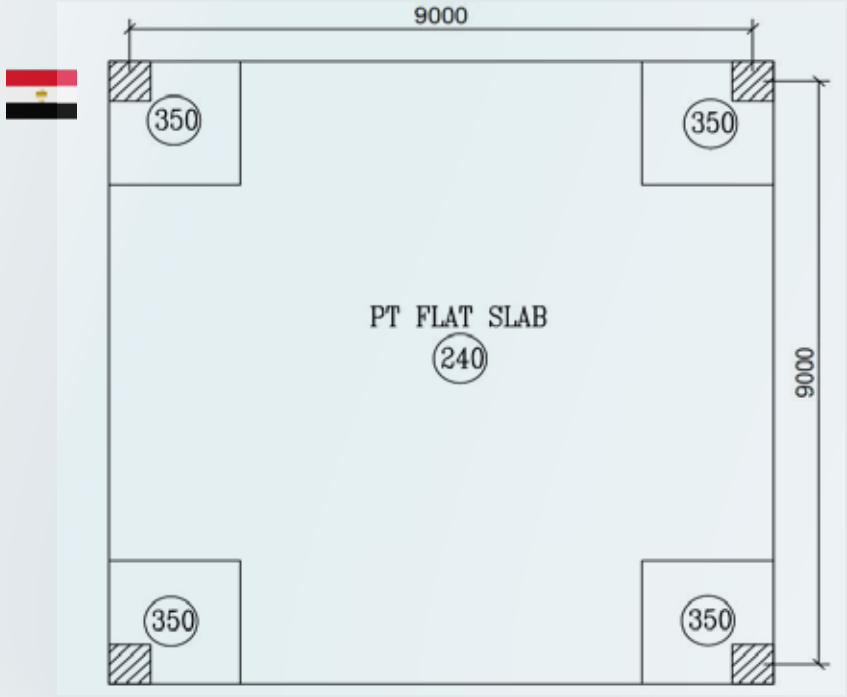
3	حديد التسليح	Hordy slab 25cm	
3.1	معدل حديد التسليح العادي	33	كجم/م2
3.2	معدل حديد التسليح العادي	122	كجم/م3
3.3	كمية حديد التسليح	2.67	طن
3.4	تكلفة حديد التسليح العادي	3,300	ريال/طن
3.5	كمية الأسمنت اللازم للحقن (يتم توريده من قبل العميل)	0	طن
0	تكلفة الأسمنت اللازم للحقن (يتم توريده من قبل العميل)	0	ر.س
3.7	تكلفة حديد التسليح سبق الإجهاد	0	ريال/م2
3.8	إجمالي تكلفة حديد التسليح سبق الإجهاد	0	ريال
3.9	إجمالي تكلفة حديد التسليح سبق الإجهاد + حديد التسليح العادي	8,821	ر.س

4	ملخص الأسعار	Hordy slab 25cm	
4.1	التكلفة الاجمالية للخرسانة + حديد التسليح سبق الإجهاد + حديد التسليح العادي /م2	209	ر.س /م2

Tensil ENGINEERING | OVM Authorized Applicator

Total construction cost of slab (Module 9mx9m) Using PT flat slab.

(What we deliver)



1	الأبعاد الخرسانية	PT Flat slab 24cm
1.1	مساحة بلاطة ٩×٩ م٢	81 م2
1.2	سمك البلاطة	240mm with drops 350mm مم
1.3	سمك البلاطة المتوسط	260 مم

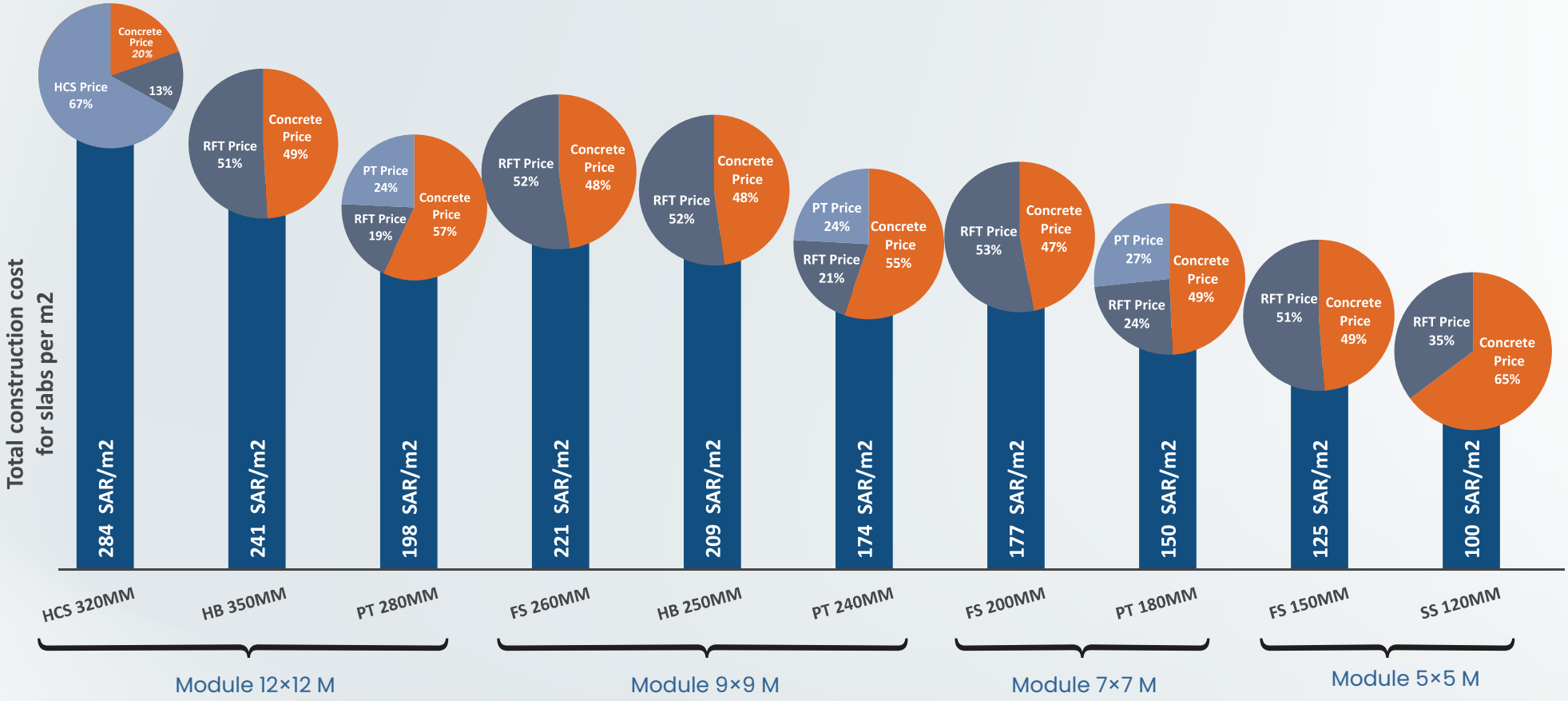
2	الخرسانة	PT Flat slab 24cm
2.1	كمية الخرسانة	21.06 م3
2.3	تكلفة الخرسانة	210 ر.س/م3
2.4	مصنعيات النجارة والفرمجة والحدادة	160 ر.س/م3
2.5	تكلفة الخرسانة + مصنعيات النجارة والفرمجة والحدادة	370 ر.س/م3
2.6	إجمالي تكلفة الخرسانة	7,792 ر.س

3	حديد التسليح	PT Flat slab 24cm
3.1	معدل حديد التسليح العادي	11 كجم/م2
3.2	معدل حديد التسليح العادي	42 كجم/م3
3.3	كمية حديد التسليح	0.89 طن
3.4	تكلفة حديد التسليح العادي	3,300 ريال/طن
3.5	كمية الأسمنت اللازم للحقن (يتم توريده من قبل العميل)	0.11 طن
0	تكلفة الأسمنت اللازم للحقن (يتم توريده من قبل العميل)	32 ر.س
3.7	تكلفة حديد التسليح سبق الإجهاد	42 ريال/م2
3.8	إجمالي تكلفة حديد التسليح سبق الإجهاد	3,434 ريال
3.9	إجمالي تكلفة حديد التسليح سبق الإجهاد + حديد التسليح العادي	6,374 ر.س

4	ملخص الأسعار	PT Flat slab 24cm
4.1	التكلفة الاجمالية للخرسانة + حديد التسليح سبق الإجهاد + حديد التسليح العادي /م2	175 ر.س /م2

Tensil ENGINEERING | OVM Authorized Applicator

a Comparison between the previous methods.



Structural system

Tensil ENGINEERING | OVM Authorized Applicator

CONCLUSION:

if you choose to work with Tensil, we will save %16 to %21 of the total construction costs of slabs for your project.

Project References

Project name *Rock Yard Compound.*

Location Sheraton - Egypt

Tensil's Scope of work

Design and preparation of shop drawings for all post-tensioned slabs within the project. Supply and installation of the post-tensioning system, including stressing and grouting works.

Project Description

Rock Yard Compound is a prominent residential development in Sheraton, featuring contemporary design and a diverse range of units. The project offers an integrated lifestyle with landscaped spaces, recreational amenities, and a strategic location near key landmarks and the airport.

CDEC
Center of Design Egineering Consulting
مكتب الاستشارات والتصميم الهندسية

ROCK DEVELOPMENTS

ELBATAL DEVELOPMENTS

Project name *Golden Gate.*

Location New Cairo - Egypt

Tensil's Scope of work

Golden Gate is a mixed-use destination designed with a strong focus on sustainability, seamlessly integrating business and lifestyle within a refined and harmonious environment.

Project Description

Strategically located in the heart of New Cairo, directly opposite the American University in Cairo (AUC) on South 90th Street, the development enjoys excellent connectivity, with convenient access to both Suez Road and Sokhna Road within a 15-minute drive.

redcon PROPERTIES

EHAF CONSULTING ENGINEERS

AACE

REDCON Construction Co.

Project name *Amaz Tower.*

Location New Capital - Egypt

Tensil's Scope of work

Design and preparation of shop drawings for all post-tensioned slabs within the project. Supply and installation of the post-tensioning system, including stressing and grouting works.

Project Description

Amaz Tower is part of the AMAZ Business Complex, featuring one of the largest plazas in the New Administrative Capital. The development offers a modern, high-end commercial environment defined by refined architecture and a distinctive blend of contemporary design and authenticity.

AFG ALFATH GROUP

IEC INTERNATIONAL ENGINEERING CONSULTANCY FAISAL - FAHD

Project name *Raville Tower .*

Location New Capital - Egypt

Tensil's Scope of work

Preparation of shop drawings for all post-tensioned slabs within the project. Supply and installation of the post-tensioning system, including stressing and grouting works.

Project Description

Raville Tower is a landmark high-rise development executed by REDCON Construction, rising 206 meters with 49 floors. Inspired by a Pharaonic obelisk, its iconic design combines heritage with contemporary architecture, delivering a premium mixed-use environment with advanced systems, panoramic views, and a strong presence on Cairo's skyline.

ECG
جماعة المهندسين للاستشاريين
ENGINEERING CONSULTANTS GROUP S.A.

REDCON Construction Co.

Project name *Rivan Mall .*

Location New Capital - Egypt

Tensil's Scope of work

Design and preparation of shop drawings for all post-tensioned slabs within the project. Supply and installation of the post-tensioning system, including stressing and grouting works.

Project Description

Rivan Mall is a mixed-use development by Altameer Arabian, strategically located along the Champs-Élysées walkway in the New Administrative Capital. It offers a range of commercial, medical, and administrative units within a modern environment that combines functionality, accessibility, and premium facilities.

ALTAMEER ARABIAN

ACE MOHARRAM.BAKHOUM

Project name *Rivan Compound.*

Location New Capital - Egypt

Tensil's Scope of work

Design and preparation of shop drawings for all post-tensioned slabs within the project. Supply and installation of the post-tensioning system, including stressing and grouting works.

Project Description

Rivan Compound is a residential development in the R7 district of the New Administrative Capital, spanning 17 acres with a strong focus on green spaces. It offers a range of apartments and garden units within a well-planned community designed for balanced, modern living.

ALTAMEER ARABIAN

ACE MOHARRAM.BAKHOUM

Project name *Rock White Compound.*

Location New Heliopolis - Egypt

Tensil's Scope of work

Structural design and preparation of design drawings for all structural elements within the project.

Project Description

Rock White Compound is an upscale residential development in New Heliopolis by El Batal Developments, spanning 25 acres. The project emphasizes green living, with %90 of the area dedicated to landscaping, and offers a range of residential units alongside premium amenities, creating a balanced and family-friendly environment.

CDEC
Center of Design Egineering Consulting
مكتب الاستشارات والتصميم الهندسية

ROCK DEVELOPMENTS

ELBATAL DEVELOPMENTS

Project name *Falak.*

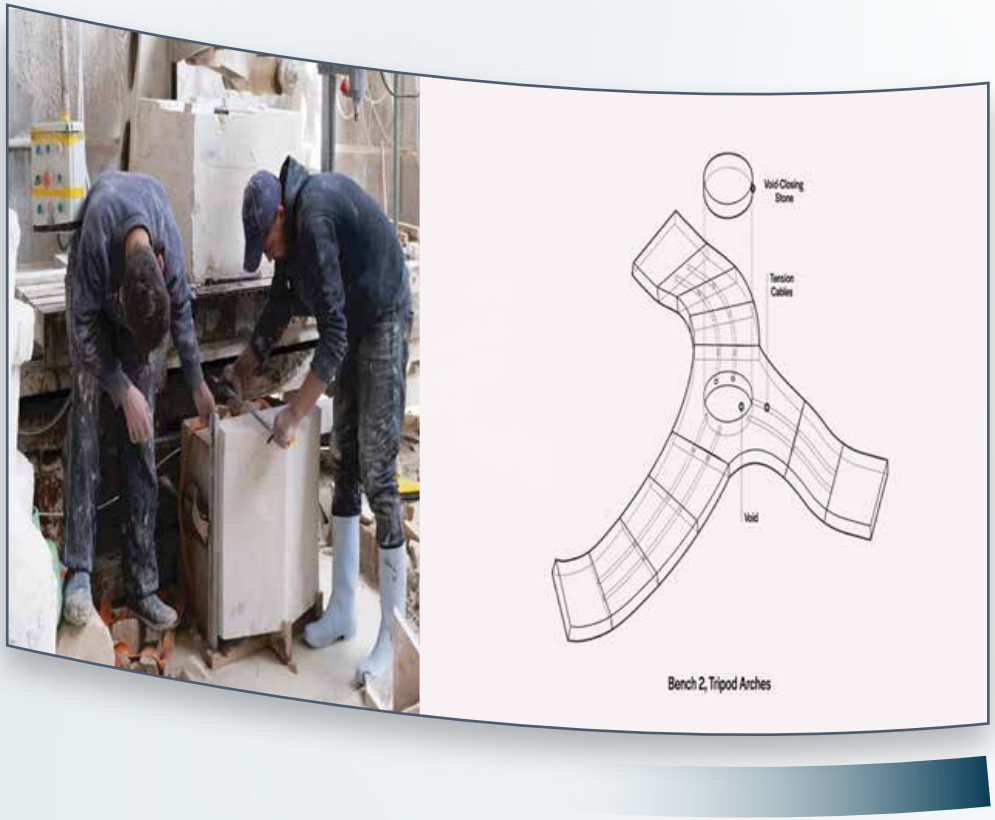
Location Qatar

Tensil's Scope of work

Structural design and preparation of design drawings for the post-tensioned elements of the project (post-tensioned limestone).

Project Description

Falak is a spatial installation that reimagines limestone as a structural material through an arched architectural form. Blending engineering with craftsmanship, the project creates a contemplative space for gathering and dialogue, where material, design, and human interaction come together.



متاحف قطر
QATAR MUSEUMS

Tensil
ENGINEERING

Project name *Rivan Tower.*

Location New Adminstrative Capital-Egypt.

Tensil's Scope of work

Structural design and preparation of design drawings for the post-tensioning elements of the project.

Project Description

Rivan Tower is a premium residential development in the R7 district of the New Administrative Capital by Altameer Arabian Developments. Designed as a fully integrated gated community, it offers modern living with high-end amenities, seamless services, and a prime location.

I.C.G

ALTAMEER ARABIAN

Project name *Cinco.*

Location Fifth of Settlments - Egypt

Tensil's Scope of work

Supply of the post-tensioning system (OVM).

Project Description

Cinco is a distinctive development by Upwyde, representing innovation, growth, and design excellence. Envisioned as a dynamic destination, the project combines functionality with a contemporary architectural identity in a vibrant, customer-focused environment.

upwyde developments

Tensil ENGINEERING

OVM Authorized Applicator

Project name *Park Vie.*

Location New capital - Egypt.

Tensil's Scope of work

Supply of the post-tensioning system (OVM).

Project Description

Park Vie is a mixed-use development designed to reflect distinct lifestyle experiences across business, dining, and retail. Through a harmonious blend of architecture, landscape, and natural elements, the project creates a dynamic and immersive environment that adapts to different activities and moods.

upwyde developments

Tensil ENGINEERING

OVM Authorized Applicator

Project name *Jazebya.*

Location 6 Of October - Giza

Tensil's Scope of work

Supply of the post-tensioning system (OVM).

Project Description

Jazebya is a mixed-use residential and commercial development in 6th of October City, inspired by the concept of "gravity" to reflect a grounded and practical design approach. The project combines functionality and modern simplicity within a balanced, well-integrated urban environment.

upwyde developments

raeffahmi. architects

CONSULTING ENGINEERS

Project name *SkyRamp.*

Location Sheikh Zayed- Giza

Tensil's Scope of work

Supply of the post-tensioning system (OVM).

Project Description

SkyRamp is a mixed-use development that integrates residential, commercial, and administrative functions within a unified urban concept. Its dynamic architectural form creates a strong visual identity, combining functionality with contemporary design expression.

upwyde developments

Tensil ENGINEERING

OVM Authorized Applicator

Project name *Deraya University*

Location New Menia- Egypt

Tensil's Scope of work

Supply of the post-tensioning system (OVM).

Project Description

Deraya University is a private higher education institution in New Minya, Egypt, established in 2010 under the supervision of the Ministry of Higher Education. It offers a range of undergraduate and graduate programs across medical, scientific, and business disciplines, alongside active research and community development initiatives.

OVM Authorized Applicator

Deraya UNIVERSITY

FLOORTEC CONTRACTING & SPECIAL APPLICATIONS

Aprovals &Certificates

Approvals & Certificates

Tensil has Approvals from major consulting companies:

-Engineering consultants group **ECG**
- **EHAF** Consulting Engineers
-Amr Abdelrahman Consulting Engineers **AACE**
-Moharram Bakhoum **ACE**
- International Engineering Consultancy **IEC**
- Engineering Consulting & Project Management **TDS**
- International Consultant Group **ICG**

Tensil is an authorized applicator for major post-tension system companies:

-OVM post-tension Systems™:
-SARE post-tension Systems™:

Approvals & Certificates

Approvals & Certificates

OVM

Post Tensioning Systems

REALIZE YOUR IDEAS,
SUPPORT YOUR SOLUTIONS.

Project Name	Country	Project type
High-Speed Rail, Egypt	Egypt	Railway
Railway Project Novi Sad Subotica	Serbia	Railway
C390B-Seac Pai Van Line Project	Macao, China	Railway
Padma Bridge Rail Link	Bangladesh	Railway
The Standard Gauge Railway (SGR) Line from Mwanza to Isaka Project	Tanzania	Railway
Zalau Bypass Project	Romania	Expressway
Grigoleti Kobuleti Bypass Lot-1 Project	Georgia	Expressway
North–South Expressway Phase 1&2	Vietnam	Expressway
Al Nujoom External Road And Two Bridge at Al Hamriya-Sharijah	UAE	Highway
Improvement of EXPO 2020 Roads	UAE	Highway
Save River Bridge	Mozambique	Highway
Tahlia Underpass	KSA	Highway
Section C714 of Tanzi Exchange Road Project	Taiwan, China	Highway
Aby River Bridge	Ethiopia	Cable Stayed Bridge
New Selander Bridge	Tanzania	Cable Stayed Bridge
Bintulu-Jepak Bridge	Malaysia	Cable Stayed Bridge
Koh Pich-Koh Norea Bridge	Cambodia	Cable Stayed Bridge
Paira Bridge	Bangladesh	Cable Stayed Bridge
Alamein Downtown Towers Project	Egypt	Building
Diriyah Superbasement	KSA	Building
The Aveneus Riyadh	KSA	Building
JTC Space AMK	Singapore	Building
Chip Mong Tower	Cambodia	Building
Mohmand Hydropower Station	Pakistan	Hydropower
Dasu Hydropower Station	Pakistan	Hydropower
Nam Theun 1 Hydropower Station	Laos	Hydropower

OVM Global Network

5+
OVERSEAS SUBSIDIARIES & OFFICES

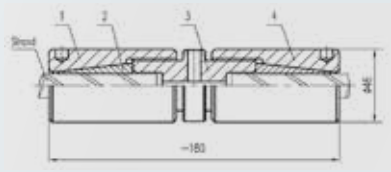
20+
AGENTS & COOPERATIVE PARTNERS

1500+
CONSTRUCTION PROJECTS IN OVER 60 COUNTRIES

Mono-Strand Coupler

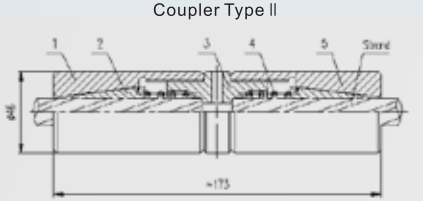
This coupler is used to connect and elongate single strand. It is composed of n (n-strand number) pieces of mono-couplers which are set parallelly in the protective sleeve, usually including seven parts : anchor head, bearing plate, spiral reinforcement, protective sleeve, restraining ring, wedge and mono-coupler.

Coupler Type I

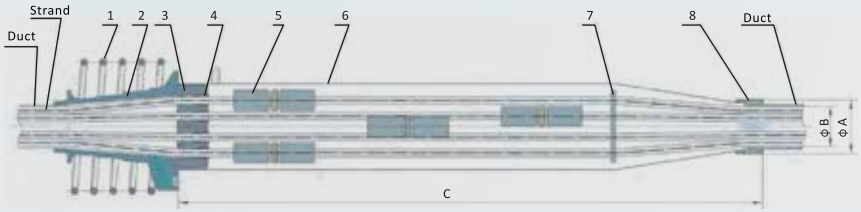


1.Anchor head 2.Wedge 3.Connecting head
4.Anchor head

Coupler Type II



1/5.Anchor head. 2 Wedge 3.Connecting head 4. Coil spring



1.Spiral reinforcement 2.Bearing plate 3.Anchor head 4.Wedge
5.Mono-strand coupler 6.Protective sleeve 7.Plate 8.Restraining ring

Main Data of OVM.L15/13-F

Unit:mm

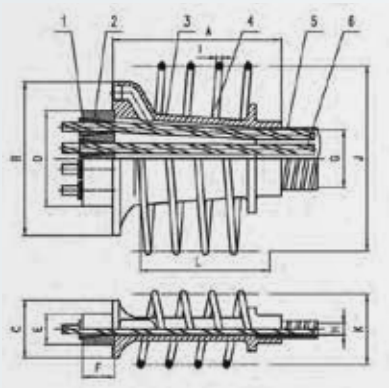
Spec. / Size	OVM $^{15}_{13}$L-F-3	OVM $^{15}_{13}$L-F-4	OVM $^{15}_{13}$L-F-5	OVM $^{15}_{13}$L-F-6	OVM $^{15}_{13}$L-F-7	OVM $^{15}_{13}$L-F-8	OVM $^{15}_{13}$L-F-9	OVM $^{15}_{13}$L-F-12	OVM $^{15}_{13}$L-F-19	OVM $^{15}_{13}$L-F-27	OVM $^{15}_{13}$L-F-31	OVM $^{15}_{13}$L-F-37
ΦA	Φ80 (Φ75)	Φ85 (Φ80)	Φ85 (Φ80)	Φ100 (Φ90)	Φ100 (Φ90)	Φ110 (Φ90)	Φ110 (Φ100)	Φ120 (Φ110)	Φ140 (Φ120)	Φ180 (Φ140)	Φ180 (Φ145)	Φ200 (Φ170)
ΦB	Φ58 (Φ53)	Φ63 (Φ58)	Φ63 (Φ58)	Φ80 (Φ68)	Φ80 (Φ68)	Φ90 (Φ68)	Φ90 (Φ80)	Φ100 (Φ90)	Φ110 (Φ100)	Φ130 (Φ110)	Φ140 (Φ115)	Φ150 (Φ130)
C	840 (830)	1080 (1060)	1090 (1080)	810 (790)	1130 (1090)	1450 (1420)	1150 (1130)	1200 (1180)	1310 (1250)	1420 (1360)	1410 (1400)	1560 (1430)

Notes:

1. Data in the brackets are for OVM13L-F
2. OVM15L-F applicable to strands with A_P =140mm² or A_P =150mm²
3. OVM13L-F applicable to strands with A_P =98.7mm² or A_P =100mm²

Stressing-end Slab Anchorage OVM.BM15/13

Stressing-end Slab Anchorage



1.Wedge 2.Slab anchor head 3.Slab bearing plate
4.Spiral reinforcement 5.Steel flat duct 6.Strand

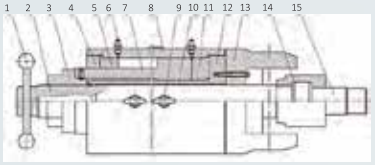
Main Data

Designation	Bearing plate			Anchor head			Duct		Spiral reinforcement
	A	B	C	D	E	F	G	H	L×J×K×I
OVM.BM15/13-2	120	150	70	80	48	50	50	19	180×130×100×ϕ10
OVM.BM15/13-3	150	180	70	115	48	50	60	19	180×170×100×ϕ10
OVM.BM15/13-4	210	220	70	150	48	50	70	19	180×210×100×ϕ10
OVM.BM15/13-5	250	260	70	185	48	50	90	19	225×250×100×ϕ10

Notes:

1. All dimensions in"mm"
2. Applicable to strands with A_P =140mm² /A_P =150mm² /A_P =98.7mm²/ A_P =100mm²
3. Applicable to the concrete strength of 32/40Mpa ($f_{c,cyclinde}$/ $f_{c,cube}$) or above.
4. For other working conditions, reinforcement and related data may be modified, contact OVM.

Hollow Piston Jack YC (L)



1.Handle 2.Tensioning Bar 3.Tensioning Nut 4 Small Wedge Plate 5. Rear Sealplate 6. Grease Nipple Assembly 7.Piston
8.Oli Cylinder 9.Lifting Bolt 10.Centralizer 11.End Plug 12.Large Wedge Plate 13.Strut 14.Tensioning Head 15.Tensioning Coupler

Main Data

Type	Nom. pressure (MPa)	Nom.force (kN)	Stroke (mm)	Cavity aperture (mm)	Mass(kg)	Overall size (Jack) (mm)	Overall size (Strut) (mm)	Overall size (Tensioning bar) (mm)	Adapted pump(mm)
YCW60C-200	52	600	200	Φ60	36	322×Φ168	300×Φ160	620×Φ54	ZB2-500AZ ZB4-500A
YCW75C-200	50	751	200	Φ60	42	325×Φ155	300×Φ180	640×Φ58	
YC60A-500	40	600	500	Φ55	231.4	1555×Φ210	700×Φ210	1430×Φ54	
YCL120A	50	1200	100	Φ76	254	850×Φ280	335×Φ280	690×Φ74	
			200		278	1050×Φ280	435×Φ280	890×Φ74	
			300		302	1250×Φ280	535×Φ280	1090×Φ74	
			500		350	1650×Φ280	735×Φ280	1490×Φ74	
YC200A	50	2000	300	Φ110	518	1445×Φ405	720×Φ405	1320×Φ100	
			400		550	865×Φ400	630×484×Φ400	1670×Φ120	
YC300A	50	3000	300	Φ122	771	665×Φ400	530×484×Φ400	1570×Φ120	ZB2-500AZ ZB4-500AZ ZB10/320-4/800E
			400		823	765×Φ400	530×484×Φ400	1570×Φ120	
			500		915	865×Φ400	630×484×Φ400	1670×Φ120	
YC400A-400	49	4021	400	Φ150	590	685×Φ436	/	1650×Φ130	
YC600A	51	6088	400	Φ240	1125	819×Φ576	/	1650×Φ172	ZB10/320-4/800E

Note:

Please supply a 0.5m-long steel bar to machine the corresponding threaded of tensioning coupler.

Hydraulic Pump

ZB4-500 Hydraulic Pump

ZB10/320-4/800B Hydraulic Pump

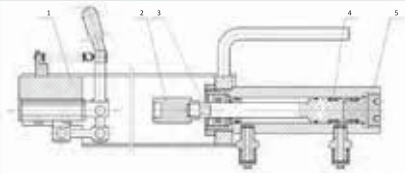
Hydraulic Pump ZB2-500AZ

Hydraulic Pump ZPB-505B/175B

Main Data

Type	Nom. pressure (MPa)	Nom.flow (L/min)	Effiective Tank Vol. (l)	Motor Power (kw)	Mass (KG)		Overall Size (mm)	Remarks
					Empty	Full		
ZB4-500AZ	50	2×2	/	/	100	130	695×370×1050	To provide pressure oil for YCW/YZ85/YC60 series jacks, as well as GYJC swaging machine etc.
ZB10/320-4/800E	32	10	/	/	225	320	1035×495×1130	Two stage variable pump, for large tonnage, long stroke and rapid jacks.
	80	4						
ZB2-500AZ	50	2	/	/	100	130	810×430×855	Small pump station size, small flow rate, suitable for jacks below 5000KN
EPB-505B	5	9	8	1.1	24		386×270×495	Two stage pump, small volume, light weight, easy to move. It can be used with ultra-high pressure and small flow jack.
	70	0.82						
EPB-175B	3	4.5	5	0.37	20		355×240×470	
	70	0.28						

Bulb Machine YH3B



1.Jack 2.Pushing head 3.Piston 4.Cylinder

Main Data

Type	Nom. force (kN)	Nom. pressure (MPa)	Tension Piston Area (m^2)	Return piston Area (m^2)	Stroke (mm)	Adapted strands	Mass (kg)	OVerall Size (mm)	Recommended Matching Pump
YH3B	340	50	0.7068×10^{-3}	0.4524×10^{-3}	90	Φ15/Φ13	13.4KG	606×166×136	EPB-505, EPB-175, ZB4-500, ZB2-500AZ

Heading Machine

Main Data

Model	Heading (mm)	Nom.PR. (mpa)	Nom. Force (kn)	Mass (KG)	Overall Size (MM)	Matching Pump
LD10	Φ5	40	88.2	10	Φ98×289×206	EPB-505, EPB-175, ZB4-500, ZB2-500AZ
LD20K	Φ7	43	165	15	Φ120×319×249	
GD300	Φ9.2	48	305	29.5	Φ140×337×286	

Intelligent Grouting System LGSTC-700B

Main Data

Mixing High Speed	Mixing Speed	1465r/min
	Measurement Accuracy	Better than ±1%
	Single Mixing Volume	350kg
	Motor Power	5.5kw
Mixing Low Speed	Mixing Speed	70r/min
	Storage Capacity	400Kg
Grouting Data	Conveying Capacity	45L/min
	Max. Working PR.	1.5mpa
	Cement Conveying (water/cement=0.43)	Horizontal conveying distance 400m Vertical conveying height 90m
Overall size		2790mmX1750mmX2235mm
Mass		1200kg

Integrated Mix and Grouting Machine GS300

Main Data

Mixing High Speed	Mixing Speed	1465r/min
	Measurement Accuracy	Better than ±1%
	Single Mixing Volume	250kg
	Motor Power	5.5kw
Mixing Low Speed	Mixing Speed	70r/min
	Storage Capacity	300Kg
Grouting Data	Conveying Capacity	45L/min
	Max. Working PR.	1.5mpa
	Cement Conveying (water/cement=0.43)	Horizontal conveying distance 400m Vertical conveying height 90m
Overall size		1895mmX1530mmX1915mm
Mass		700kg

Certificates

- Certificate of Constancy of Performance

- Certificate of ETA

- BSI Certificate

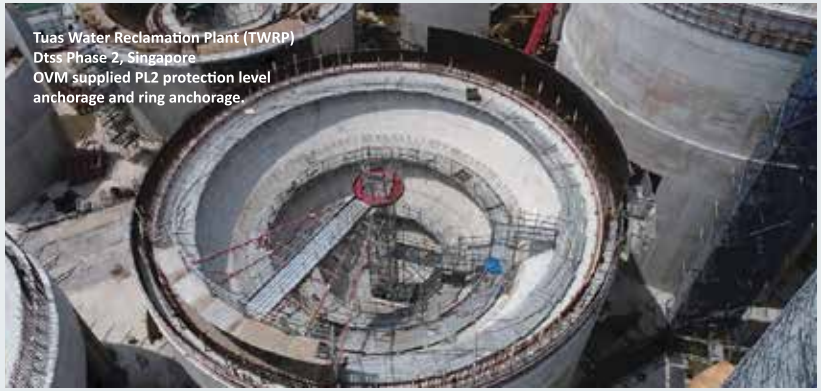
- ISO 9001 Certificate

- OHSMS Certificate

- EMS Certificate

OVM
PROJECT REFERENCES

PROJECT REFERENCE



Tuas Water Reclamation Plant (TWRP)
Dtss Phase 2, Singapore
OVM supplied PL2 protection level anchorage and ring anchorage.

Autopista al Mar 2 Highway, Colombia
OVM supplied PT anchorage and installation services.

Mohmand Hydropower Project, Pakistan
OVM supplied strand tendon (active) anchor system and construction equipment.

Central Business District of the New Administrative Capital, Egypt
OVM supplied PT system.

Sino-Thai Railway, Thailand
OVM supplied PT system.

East Coast Rail Link, Malaysia
OVM supplied PT system, intelligent tensioning and grouting system, bearings and expansion joints.

Taipingling Nuclear Power Plant, China
OVM supplied nuclear PT system, aircraft-impact-resistant rebar coupler, and specialized construction.

North-South Commuter Railway, Philippines
OVM supplied PT system.

Dhaka Elevated Expressway, Bangladesh
OVM supplied PT anchorages and bridge bearings.

Tianjin LNG Tank Project, China
OVM supplied Cryogenic Prestressing system.

Project References

Overpass Preljubovica, Montenegro
OVM supplied PT system and equipment.

Project of RA 259, Kuwait
OVM supplied PT System.

Improvement of EXPO 2020 Roads, Dubai
OVM supplied PT System.

Cairo Monorail project, Egypt
OVM supplied PT System.

Aby River Bridge, Ethiopia
OVM supplied PT system, extradosed stay cable system and construction.

4th bridge of Abidjan, Côte d'Ivoire
OVM supplied PT system.

Port Access Elevated Highway Project, Sri Lanka
OVM supplied PT system, HDPE pipe, bearings, equipment,expansion joints and technical support.

Red Sea Village Development, Kingdom of Saudi Arabia
OVM supplied PT system and construction supervision.

Tensil ENGINEERING

COMPANY PROFILE 2025

www.tensileng.com

info@tensileng.com

(+20)10 2611 8111

99 Misr Helwan Agriculture Road,
Third Floor, Maadi - Cairo

Piece No. 8, Block 18092, District 9,
Sky Mall, Shop No. 10, El Obour - Qalyubia