Total Formwork Solutions Provider!

kumkang Kind

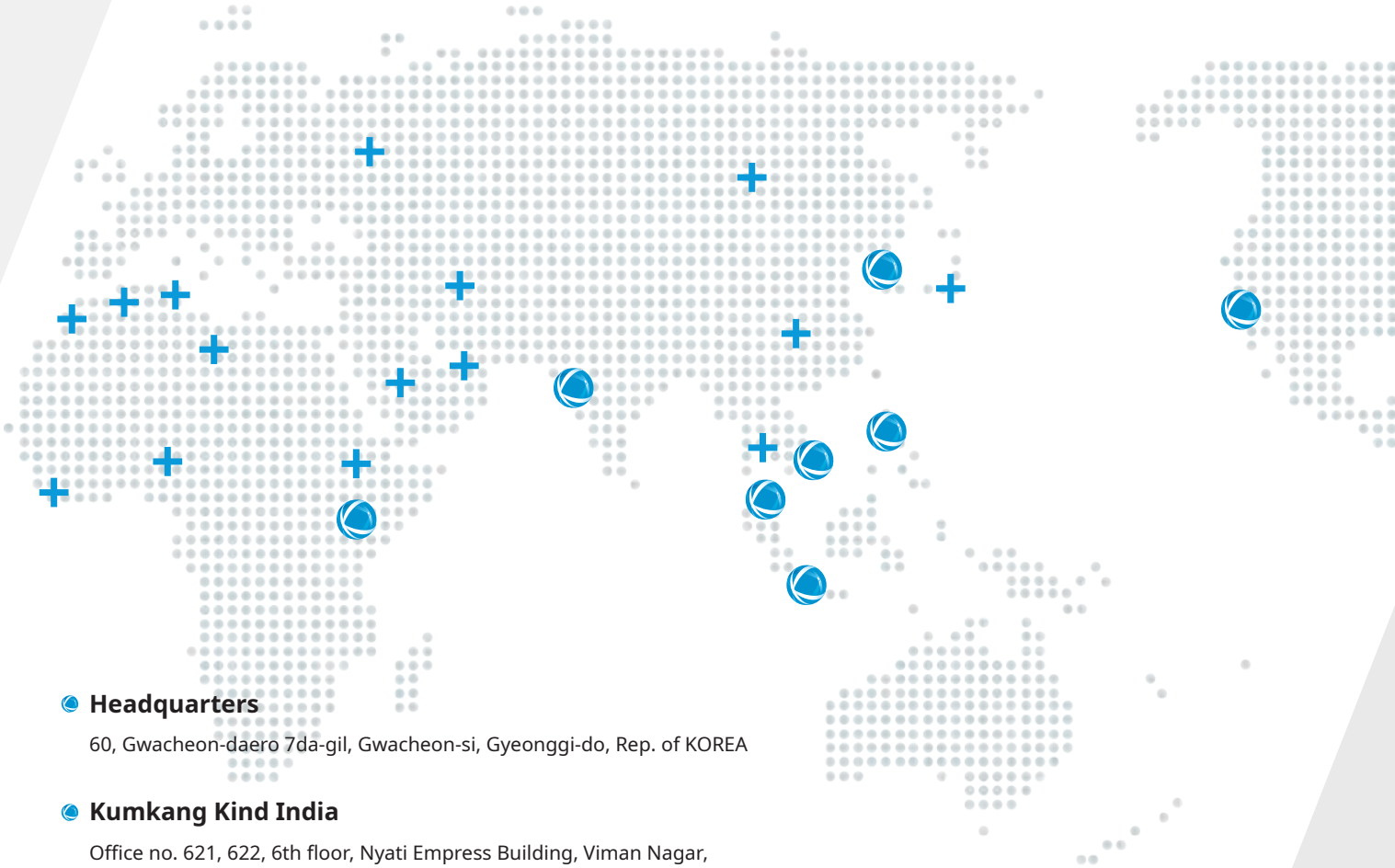
/ Formwork System Catalogue

kumkang Kind

Global Kumkang Kind

Kumkang Kind is proud to have its products in more than 30 countries around the world. With the globalization, we have set up a global network: Kumkang Kind America, Kumkang Kind Malaysia, Kumkang Kind Vietnam, Kumkang Kind India, Kumkang Kind East Africa and Kumkang Kind Indonesia are acting as Kumkang Kind's representatives in their respective regions. As Kumkang Kind has established several agents and distributors, wherever you go, you will always find our products nearby.

Overseas Branch Offices



Headquarters

60, Gwacheon-daero 7da-gil, Gwacheon-si, Gyeonggi-do, Rep. of KOREA

Kumkang Kind India

Office no. 621, 622, 6th floor, Nyati Empress Building, Viman Nagar,
Pune-411014, Maharashtra, India

Kumkang Kind Malaysia

B-9-01, Block B, Oasis Square No.2, Jalan PJU 1A/7A, Ara Damansara,
47301 Petaling Jaya, Selangor Darul Ehsan, Malaysia

Kumkang Kind Vietnam

Beautiful Saigon Building (Lot Cr3-3), No. 2 Nguyen Khac Vien Street,
Tan My Ward, Ho Chi Minh City, Vietnam

Kumkang Kind East Africa

Office 5, 4th Floor, Tower 1, The Mirage Chiromo Rd., Westlands
Nairobi, Kenya

Kumkang Kind Indonesia

Gedung Wisma Slipi Unit 801, Jl..Let. Jend. S. Parman Kav. 12
Jakarta, Indonesia

Kumkang Kind America

1215 W. Imperial HWY., Ste 216 Brea, CA 92812 USA

Contents

Kumkang Kind History

70's

79. 08 Establishment of Kumkang Kind Co., Ltd.

80's

87. 09 Obtained KS certificate [panel form]
88. 09 Listed on the Korean Stock Exchange
89. 06 Completion of Banwol factory

90's

90. 01 Completion of Eonyang factory
92. 01 Completion of Busan factory
92. 05 Obtained KS certificate
[pipes for ordinary, pressure and structural]
92. 07 Obtained quality certificate from
Japanese scaffolding association
92. 11 Achieved $10 million in exports
93. 02 Obtained JIS Certificate [structural pipe]
99. 05 Obtained ISO 9002 Certificate

00's

03. 04 Completion of Jincheon #1 Factory
03. 12 Obtained ISO 9001 Certificate
05. 10 Establishment of Research and Development department
06. 05 Completion of Jincheon #2 Factory
06. 12 Completion of Eumseong Factory
07. 09 Establishment of Kumkang Kind (M) Sdn. Bhd as a subsidiary in Malaysia
08. 06 Obtained KR [The Korean Register of Shipping] Certificate
09. 10 Completion of Nilai Factory in Malaysia
09. 11 Achieved $30 million in exports

10's

10. 01 Establishment of Kumkang Kind America
10. 06 Establishment of Kumkang Kind Vietnam
11. 11 Achieved $50 million in exports
12. 01 Changed Jincheon #2 Factory into Jincheon Modular factory
12. 09 Completion of Eumseong #2 factory
12. 10 Establishment of Kumkang Kind India
12. 12 Achieved US$ 70 million in exports
13. 01 Merged Kumkang Fostem Inc.
14. 12 Achieved $100 million in exports
15. 03 Completion of Changnyeong Factory
15. 08 Completion of Cheonan Modular Factory
17. 02 Establishment of Kumkang Kind East Africa
17. 03 Establishment of Kumkang Kind Indonesia
17. 10 Relocated Modular factory to Changnyeong Factory
19. 08 Establishment of Kumkang Kind Philippines
22. 09 Acquisition of Sammi Metal Products Co., Ltd. as K.K.K subsidiary
24. 07 Completion of New Gwacheon Headquarters

Unrivaled manufacturing capacity

Kumkang Kind manufactures the Aluminum Formwork System both in over a 190,000 m^2 facility located in Eumseong and a 85,000 m^2 facility located in Jincheon, Korea as well as a 24,282 m^2 facility in Nilai, Malaysia and a 90,000 m^2 facility in Nhon Trach, Vietnam. We use the most advanced automated system, skilled labors and the latest computer technology to manufacture the best aluminum formwork system at a competitive price.

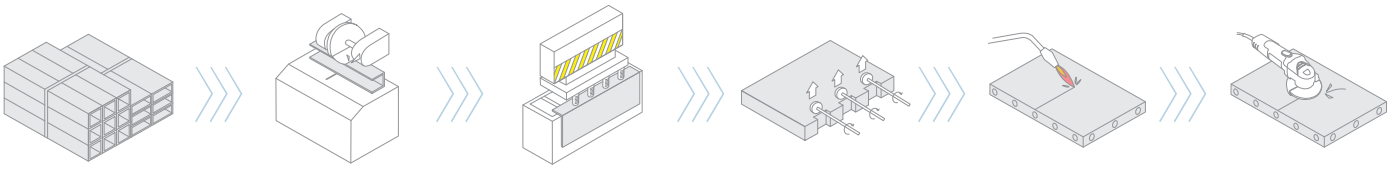
Manufacturing Facilities


Eumseong #1 Factory in Korea


Eumseong #2 Factory in Korea


Nilai Factory in Malaysia

Manufacturing Process



01 Warehousing of raw materials

02 Cutting

03 Hole processing

04 Notching

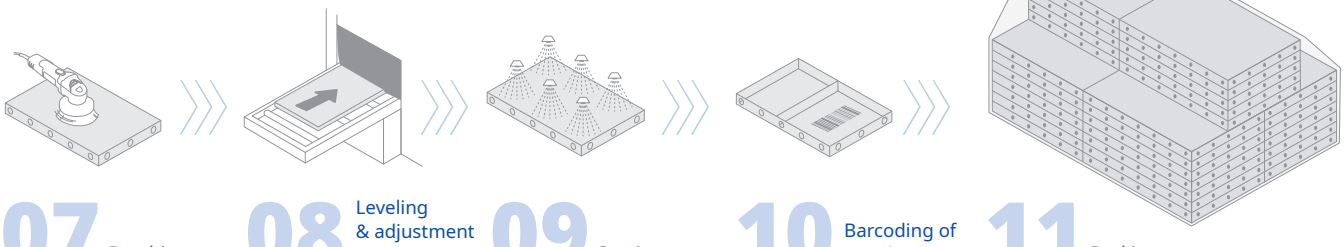
05 Welding

06 Grinding

Jincheon Factory in Korea

Changnyeong Factory in Korea

Nhon Trach Factory in Vietnam



07 Brushing

08 Leveling & adjustment of panels

09 Coating

10 Barcoding of panels

11 Packing

Friction Stir Welding (FSW)

+ Technological background

- Developed in 1991 in Cambridge, United Kingdom, this welding technology applies high pressure between 2 plates and welds them through the heat caused by the friction.

- As it is a joining technology on a solid state (low heat input), compared to the traditional welding method, FSW is environment-friendly, minimizing residual stress and strain.

- Not only FSW allows aluminum welding, but it also allows bimetallic welding such as aluminum/magnesium, alloy steel and lightweight alloy.

- Techology used in aerospace, rail, automotive, marine, and etc. FSW is being used for aluminum formwork since 2015 in Korea.

+ Welding strength

ITEM	Test result based on welding type			Raw material A6061-T6
	Manual welding	Robot welding	FSW	
Tensile Strength (kgf)	900 ~ 1,470	1,770 ~ 2,000	2,600 ~ 3,800	5700
Compared with Raw material	26%	35%	67%	100%

+ Advantages of FSW

- As a solid state process it can be applied to all the major aluminium alloys and avoids problems of hot cracking, porosity, element loss and etc. common to aluminium fusion welding processes.

- Bimetallic (aluminum/magnesium) welding is possible. [bimetallic: different metallic properties]

- No shielding gas or filler wire is required for aluminium alloys
- Excellent mechanical properties, competing strongly with welds made by other processes

- The absence of fusion removes much of the thermal contraction associated with solidification and cooling, leading to significant reductions in distortion

- Workplace friendly: there are no ultraviolet or electromagnetic radiation hazards as the absence of an arc removes these hazards from the process; the process is no noisier than a milling machine of similar power, and generates virtually zero spatter, fume and other pollutants

- As a mechanised process, FSW does not rely on specialised welding skills; indeed manual intervention is seldom required

Aluminum Recycling & Extrusion

Since our establishment in 1979, Kumkang Kind, a manufacturer of steel pipes, formwork system, and modular coordination system has been playing an important role in the development of the South Korea economy and a variety of industries. With a belief in ethical management, the company takes seriously the responsibility toward society and contribution to its well-being.

Recycling is a core business operation in the aluminum formwork industry. The aluminum industry is highly dependant on the global economic cycle. Thus, depending on the economic condition, it becomes extremely difficult to procure raw materials (billet in either cut lengths or logs or scrap). Without billet, it is impossible to have extrusions which will directly affect the production and delivery of aluminum formwork. Thus, Kumkang Kind has newly invested in a billet casting facility in 2015. This facility allows Kumkang Kind to be self-sufficient and procure aluminum in either ingot or scrap form. Our new business will diversify our aluminum supply base and avoid any delays in delivery to our clients.

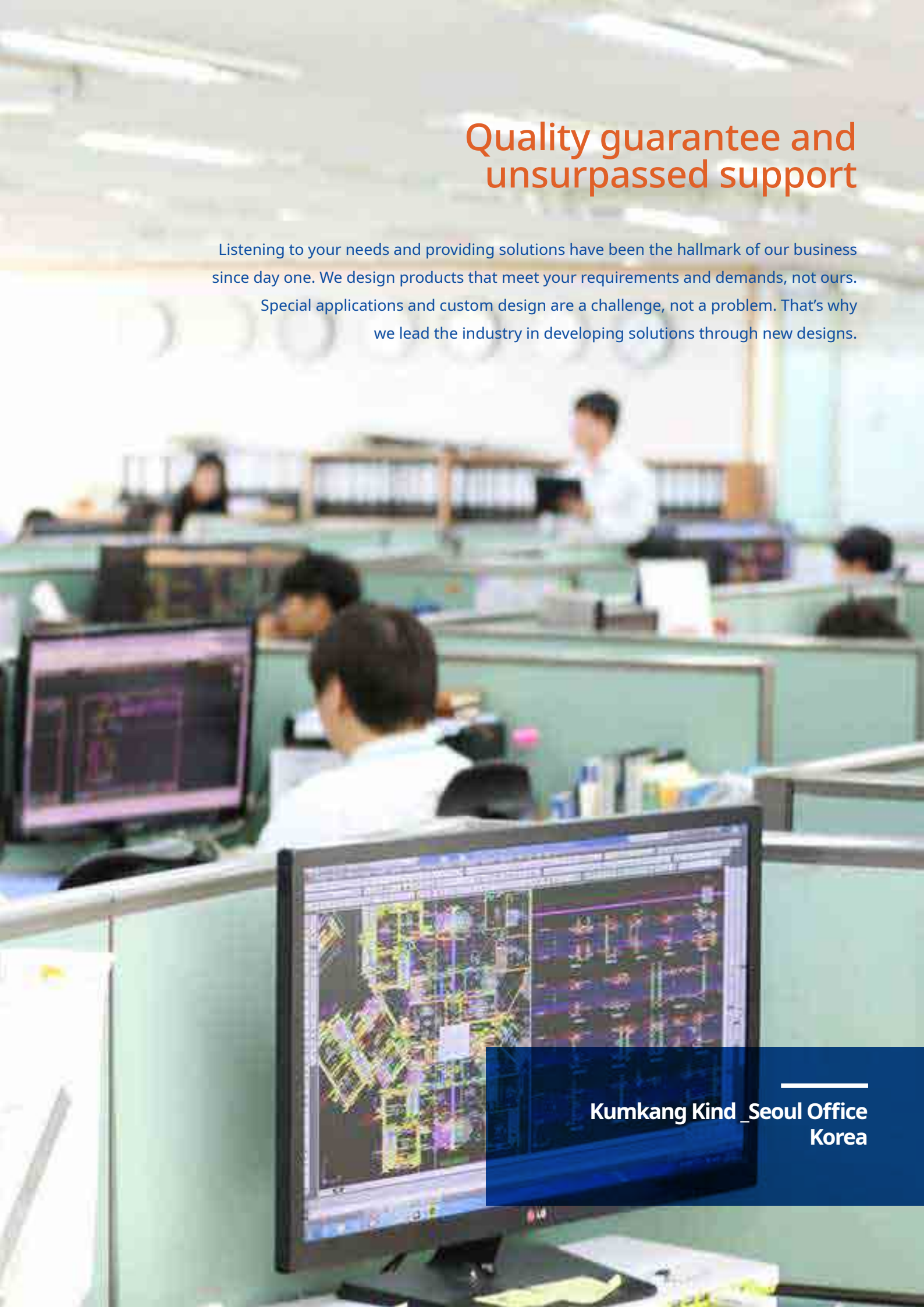






Quality guarantee and unsurpassed support

Listening to your needs and providing solutions have been the hallmark of our business since day one. We design products that meet your requirements and demands, not ours. Special applications and custom design are a challenge, not a problem. That's why we lead the industry in developing solutions through new designs.

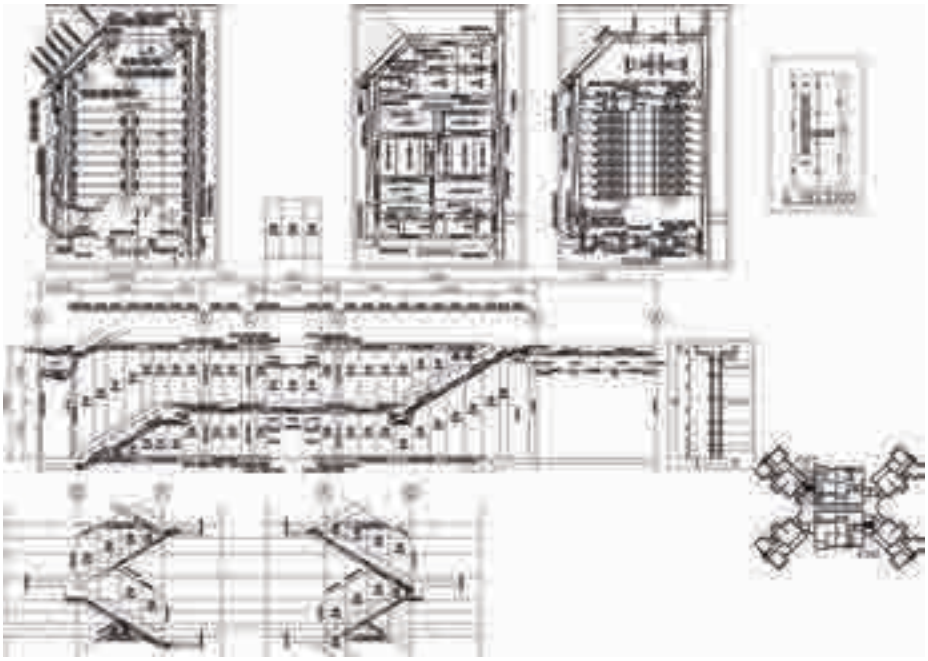


Kumkang Kind _Seoul Office
Korea

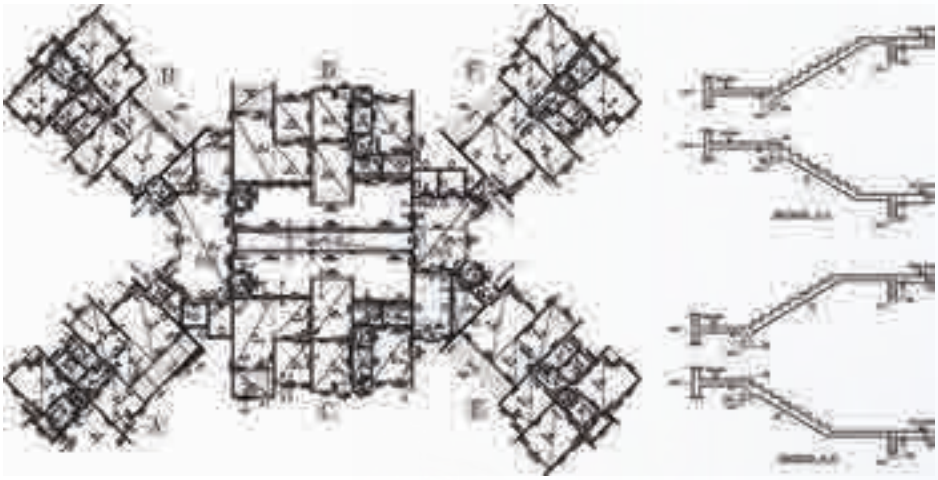
Technical Support

Kumkang Kind offers a wide variety of services, from Aluminum Formwork CAD design to consulting services with an emphasis on commercial and residential construction.

+ Staircase Setting Layout



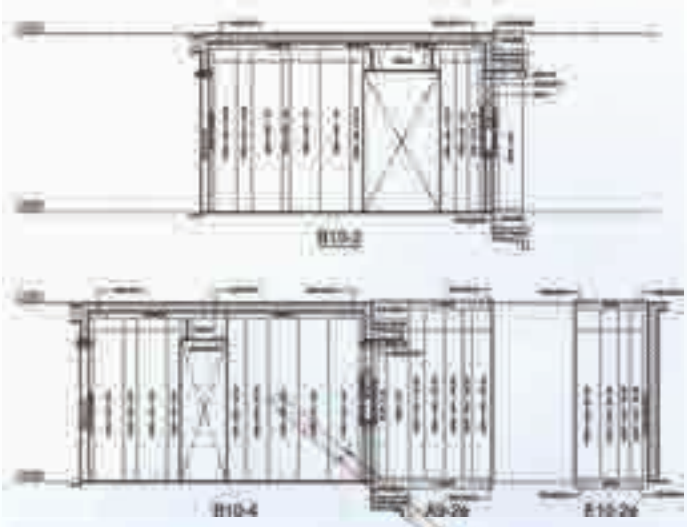
+ Plan



P J T Bundang Yongin U Tower
Builder POSCO E&C
Location Yongin, Korea
T y p e Multipurpose Building
System K-Al formwork, KSB-H

+ External Working Platform Section

+ Elevation Drawing



U Tower_Yongin, Korea

Rigorous Supervision

We provide strict supervision service to enhance efficiency and safety

The most effective way of achieving high level of safety when using the formwork system is to have reliable supervision during erection and concrete pouring. Supervisors must assure that the formwork delivered is manufactured as per the client's design, so that no time is lost during its installation but under a safe working environment. Our experienced supervisors always check whether the formwork system is assembled and installed properly.

Many accidents could occur from handling the formwork materials when jobsite workers, particularly who are inexperienced, use machine and equipment or handle heavy and large materials without proper training.

Jobsite workers' safety is greatly dependant on proper information, instruction, training, and supervision.

Staff must be:

- Informed and trained, so that they understand the nature of risks to their health and safety, or that of other, from the work they do and the measures necessary to adequately control them.

- Supervised to ensure that they follow the instructions and training given to them.

- Involved in the health and safety management system and decision-making process.

Setting Process

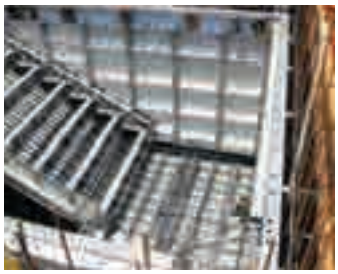
Due to its easiness of assembly, our Kumkang Aluminum Formwork allows an average of 6 days cycle compared to 14~30 days cycle with the conventional method.

+1 Structural line and level check


+2 Installation of electrical, plumbing components and steel rebar. Installation of I/C and wall panels


+3 Installation of beam and SC panels


+4 Installation of staircase panels

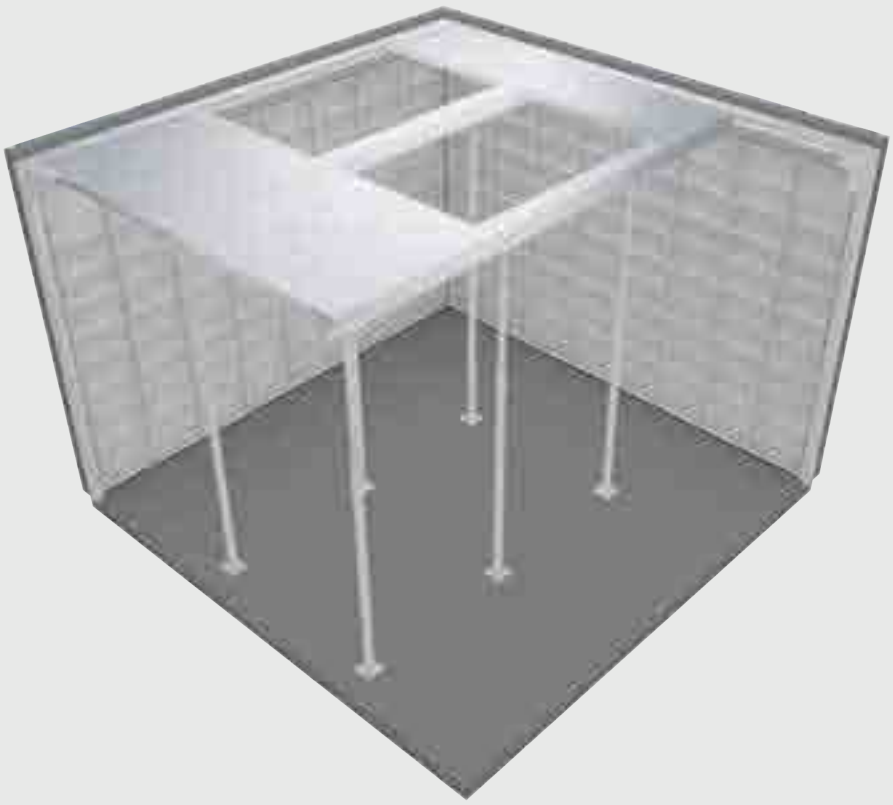



+5 Installation of slab panels

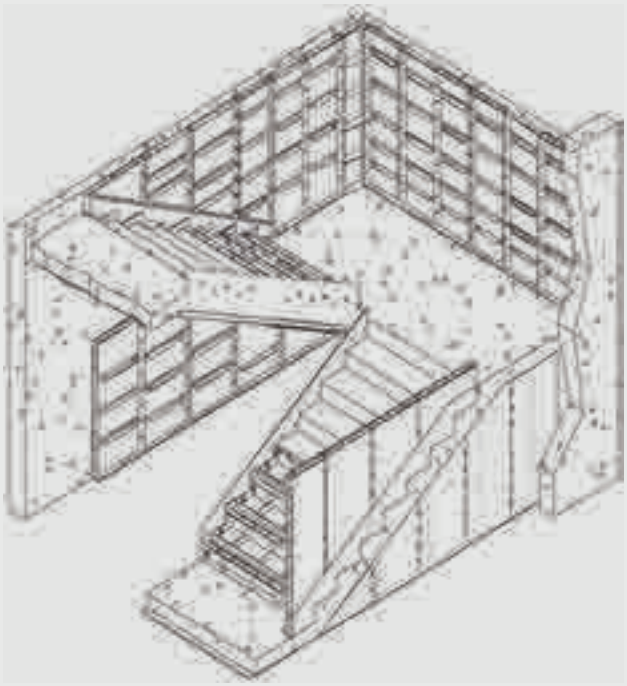

+6 Installation of slab panels

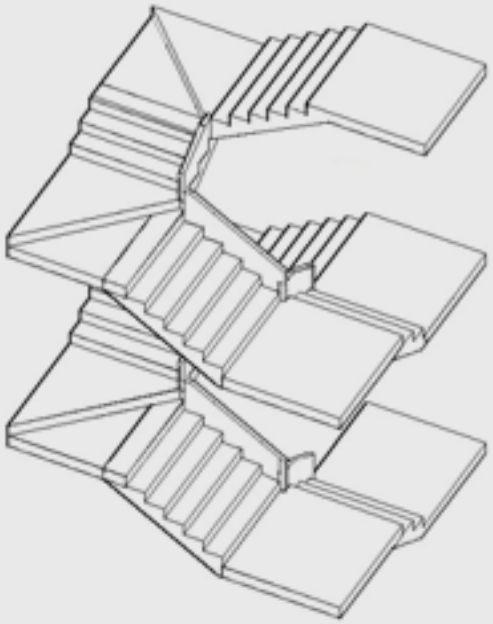

+7 Installation of electrical, plumbing components and steel rebar.


Sample mock-up of the Kumkang Aluminum Formwork



3D view of staircase



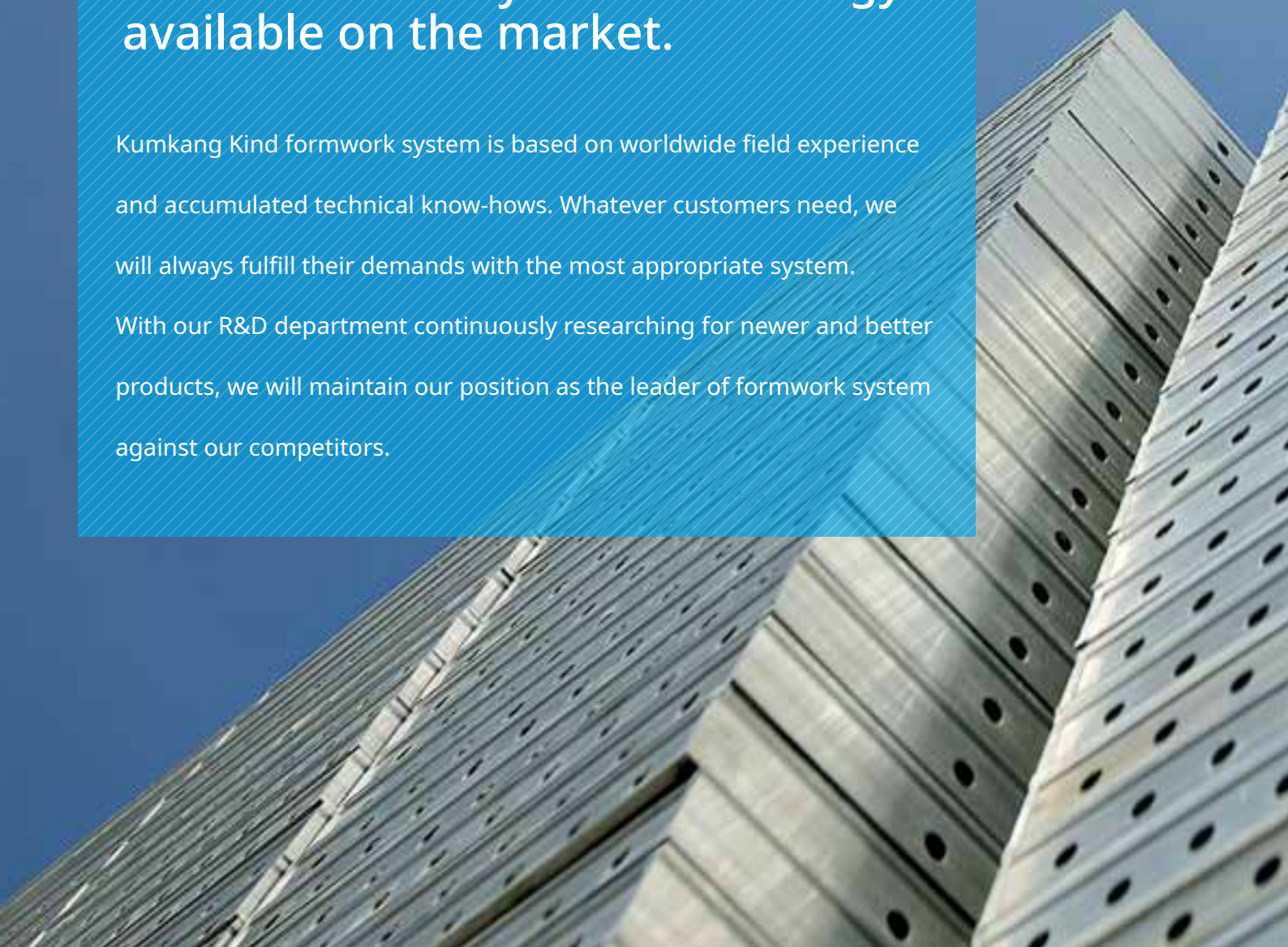


Formwork System

The most important aspect of a successful structural construction is the formwork system. Kumkang Kind will always offer you the most trustful, safe, and up-to-date formwork system technology available on the market.

Kumkang Kind formwork system is based on worldwide field experience and accumulated technical know-hows. Whatever customers need, we will always fulfill their demands with the most appropriate system.

With our R&D department continuously researching for newer and better products, we will maintain our position as the leader of formwork system against our competitors.



K-Al formwork

Kumkang Aluminum formwork system

Megapolis_Pune, India

Our Kumkang Aluminum Formwork is made of high strength aluminum extrusion which, compared with steel formwork, allows a large but lightweight panels. Our formwork will not only achieve better concrete finishing but also allow a faster construction.

Quality Improvement

- Our Kumkang Aluminum Formwork produces an unbeatable concrete finishing which does not require any plastering and eliminate grinding task due to joints created by panels. Furthermore, our engineers will design the staircase formwork so that the concrete will be poured simultaneously on the wall, slab, column and beam.

Cost Reducer

- As our aluminum formwork allows an average of 6 days cycle, it considerably reduces the construction period. Reducing construction period will directly reduce the costruction cost. Furthermore, non-structural wall can also be done with our aluminum formwork which will reduce labour time and cost.

Time Saver

- The Kumkang Aluminum Formwork system allows a single pour of wall, beam, column, slab and staircases. Furthermore, our prop-head system will allow to dismantle the slab panels without removing the props. Thus, 6 days cycle is no longer a dream but a reality.

Safety Provider

- Compared with the conventional method, our formwork system will allow a large working area for jobsite workers (fewer props). Furthermore, through the supply of external working platform, jobsite workers will feel much safer and increase their efficiency.

Eco Friendly

- One of the best advantages of the aluminum formwork is repetition. While the conventional formwork must be thrown away after 5~10 repetitions and steel formwork after a maximum repetition of 50, the aluminum panels can last for over 300 repetitions. Furthermore, after 300 repetitions, the panels can be recycled. Thus, no harm is created to the environment and produce less site wastages.

P J T	Megapolis
Builder	Kumar properties & ABIL
Location	Pune, India
T y p e	Multipurpose Building
System	K-Al formwork

Advantages

The most important aspect of a successful structural construction is the formwork system.
Kumkang Kind will always offer you the most trustful, secure, efficient, and cutting edge of formwork system technology available on the market.

+ Speed

- Due to its easiness of assembly, our Kumkang Aluminum Formwork allows an average of 6 days cycle compared to 14~30 days cycle with the conventional method.

+ Quality

- With a smooth surface and accurate dimension of panels, there is no requirement of plastering or remedial work after concrete casting.

+ Safety

- No need to remove props and prop heads when dismantling slab panels.

+ Easy assembly

- No need for skilled workers nor carpenters.

+ All-in-one system

- With our Kumkang Aluminum Formwork, shoring and external working platforms are also supplied.

+ Mobility

- The formwork panels will be transferred manually to the next level through a slab transfer box; thus, the crane can be used for other tasks.

+ Freedom of design & jobsite planning

- Unlike tunnel for table formwork, Kumkang Kind's Aluminum Formwork is a "modular" formwork; there is no constraint on any architectural or structural design.

+ Durability

- Manufactured through a state of art technology with an aluminum alloy extrusion, our formwork can be repeated over 300 times.

Special Features

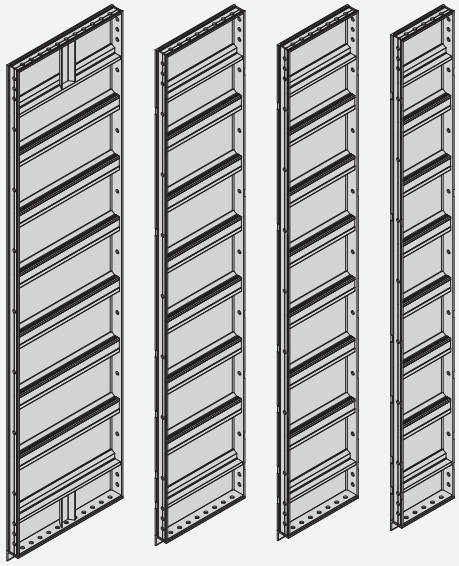
Construction Method	Application			
	Single Storey (Terrace or Link Houses)	Double(2) Storey (Terrace or Link Houses)	Three(3) to Six(6) Storey (Apartments or Buildings)	High Rise (Buildings or Apartments)
Traditional Bricks	The most common. Slow construction and labor intensive	Usually not acceptable without concrete beam	Structurally not suitable Requires concrete structural elements	Structurally not suitable
Concrete Frame (Columns, Beams & Slabs) with Brick or Block infill	Most commonly used where bricks/blocks alone are not acceptable. Slow method	Most commonly used method, slow & costly compared to system	Traditionally used method worldwide. Slow & costly. Remains the method of choice for small builders, but losing out on large-scale projects to new systems	
Precast / Prefabs Concrete	Suitable for large projects. High initial costs and slow start up for precast / prefab plant. Transport and lifting costs are inefficient compared to cast in-situ system			Careful supervision of construction is required. Noted for rampant instability of joints
Cast in-situ concrete: Heavy Shuttering system	Not suitable - requires too much labor & time to move equipment from one house to another		Suitability increases in proportion to height of building & number of units. Not suitable for less than 250 units. Resulting in efficiency loss	
Kumkang Kind Aluminum Formwork System	Efficient & Cost effective than any of the above methods. Kumkang Kind Aluminum Formwork System is lightweight, hand-held shuttering, flexible, adaptable, faster & environmentally friendly			

Characteristics	Formwork Type				
	Hard Held Formwork	Tunnel Formwork	Table Formwork	Traditional Formwork	Kumkang Kind Al. Formwork
No cranes or other heavy equipment required	✓				✓
Allows to pour wall, slab, beam, column and staircase in 1 single concrete pour		✓			✓
Dismantle slab panels without removing props.					✓
Can form concrete columns and beams together	✓			✓	✓
No skilled labor required	✓				✓
Suitable for single (1) or two (2) storey buildings		✓	✓	✓	✓
Suitable for high-rise buildings				✓	✓
Formwork equipment adapts to different designs					✓
Able to form all concrete elements				✓	✓
Lowest formwork to forming area ratio					✓
Respects all architectural and structural requirements of the client, without modifications.	✓			✓	✓
Self correction feature providing unmatched forming accuracy	✓				✓
Environmentally friendly - no huge debris, no messy disposals					✓

Specification	Aluminum A6061-T6		
Material	List	Unit	Combined Aluminum (A6061-T6)
	Specific gravity	-	2.7
	Allowable bending stress	kg/cm^2	1,250
	Young's modulus	kg/cm^2	7.0×10^5
Composition	Inner wall panel	Slab corner & Beam	
	Slab panel & prop	In-out corner & Hunch	
	Accessory	Flat-tie, PVC sleeve, round pin, wedge pin	
Normal module	Wall panel	600mm x Wall height (2,300 or 2,450) x 63.5 thk	
	Slab panel	600mm x 1,200 x 63.5 thk	

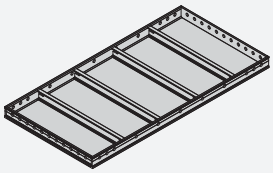
Article List

Wall panel



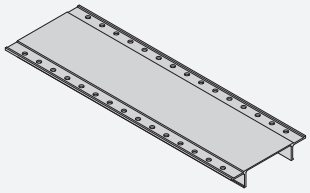
Components (mm)	Weight (kg)	Article No.
Wall standard panel 300 x 2400	15.8	31010000
Wall standard panel 400 x 2400	19.6	
Wall standard panel 450 x 2400	21.5	
Wall standard panel 600 x 2400	27.6	
Wall standard panel 300 x 2450	16.4	
Wall standard panel 400 x 2450	20.4	
Wall standard panel 450 x 2450	21.6	
Wall standard panel 600 x 2450	28.5	

Slab panel



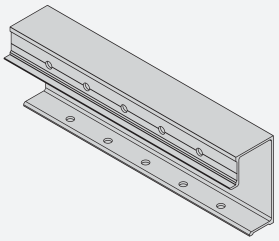
Components (mm)	Weight (kg)	Article No.
Slab panel 600 x 1200	13.5	35000000
Slab panel 450 x 1200	10.8	
Slab panel 400 x 1200	9.9	
Slab panel 300 x 1200	8.1	

Beam bottom slab panel



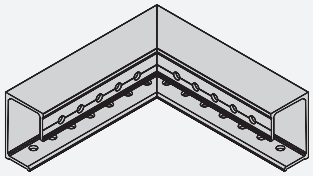
Components (mm)	Weight (kg)	Article No.
Beam bottom slab panel	38.4	35440000

Slab corner



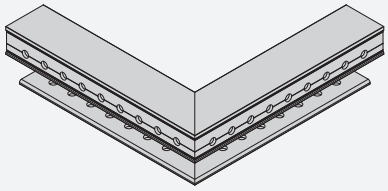
Components (mm)	Weight (kg)	Article No.
Slab corner	6.581	35100000

Slab incorner



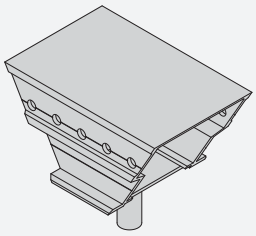
Components (mm)	Weight (kg)	Article No.
Slab incorner	-	35210000

Slab outcorner



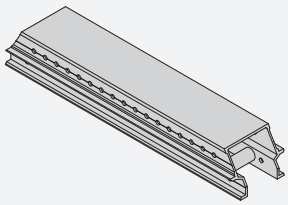
Components (mm)	Weight (kg)	Article No.
Slab outcorner	-	35220000

Prop head [PH]



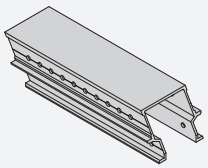
Components (mm)	Weight (kg)	Article No.
Prop head [PH] 150 x 300	2.5	35140000

Middle beam [MB]



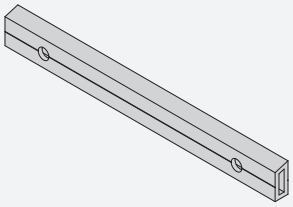
Components (mm)	Weight (kg)	Article No.
Middle beam [MB] 150 x 900	7.6	35160000
Middle beam [MB] 150 x 1050	8.7	

End beam [EB]



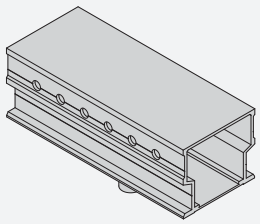
Components (mm)	Weight (kg)	Article No.
End beam [EB] 150 x 600	5	
End beam [EB] 150 x 900	7.2	35180000
End beam [EB] 150 x 1050	8.3	

Joint bar



Components (mm)	Weight (kg)	Article No.
Joint bar	0.67	35200000

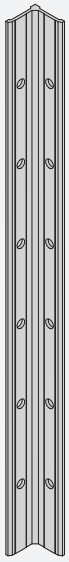
Special prop head



Components (mm)	Weight (kg)	Article No.
Special prop head	3.15	35150000

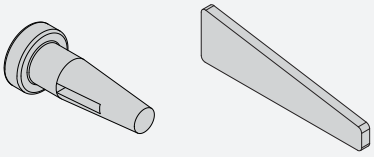
Article List

AL - (A/G) Release



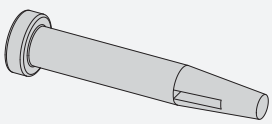
Components (mm)	Weight (kg)	Article No.
AL - (A/G) Release 63.5 x 63.5	1.931	31470000

Wedge & Round pin



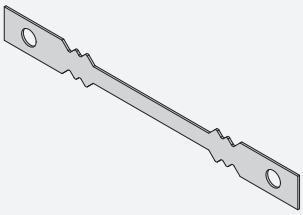
Components (mm)	Weight (kg)	Article No.
AL round pin	0.082	38000100
AL wedge pin	0.04	38000500

Long pin



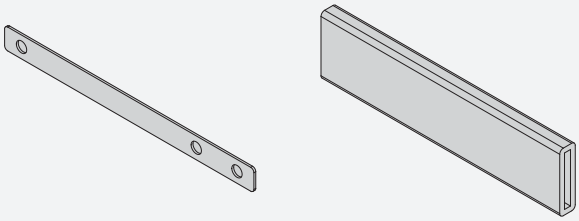
Components (mm)	Weight (kg)	Article No.
AL long pin	0.33	38000200

Embedded tie



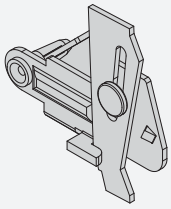
Components (mm)	Weight (kg)	Article No.
Al-embedded tie	0.15	38000700

Reuseable tie & PVC sleeve



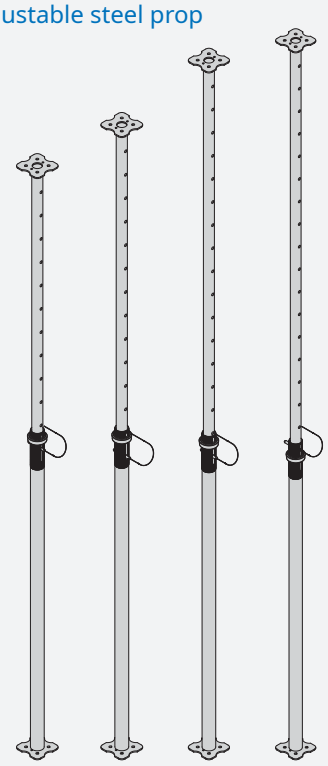
Components (mm)	Weight (kg)	Article No.
Al-reusable tie	0.125	38001110
AL PVC sleeve	0.76	38010600

Al-waler bracket



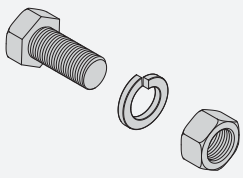
Components (mm)	Weight (kg)	Article No.
Al-waler bracket	0.67	38002800

Adjustable steel prop



Components (mm)	Weight (kg)	Article No.
V-1 1,800 ~ 3,200	10.9	110411
V-2 2,000 ~ 3,400	11.5	110425
V-3 2,400 ~ 3,800	12.5	110413
V-4 2,600 ~ 4,000	13.0	110414

Bolt, Nut & Washer

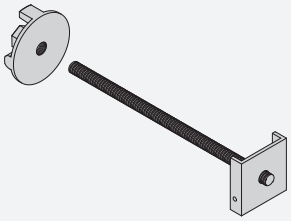


Components (mm)	Weight (kg)	Article No.
Bolt, Nut & Washer	0.11	38001800

Adjustable aluminum prop

Components (mm)	Weight (kg)	Article No.
Aluminum prop	17.6	35141000

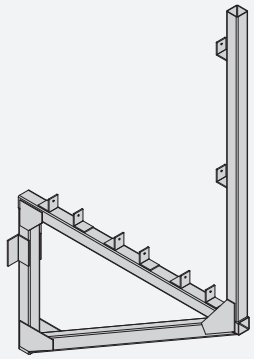
Al-tie rod (working platform)

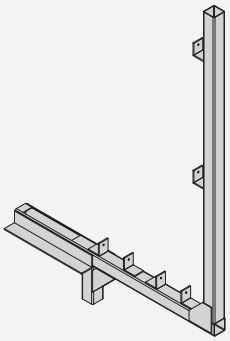


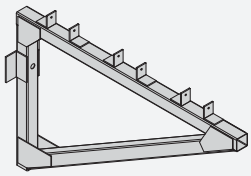
Components (mm)	Weight (kg)	Article No.
Al-tie rod (working platform)	1.52	-

Article List

Working platform

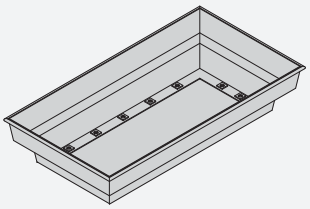






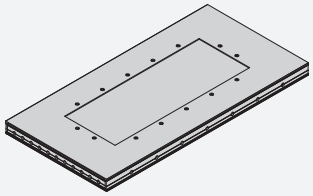
Components (mm)	Weight (kg)	Article No.
Working platform for wall	15.7	-
Working platform for slab	10.6	-
working platform for core	10.3	-

Slab transfer box



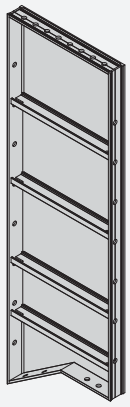
Components (mm)	Weight (kg)	Article No.
Slab transfer box	24.19	34500000

Slab open panel



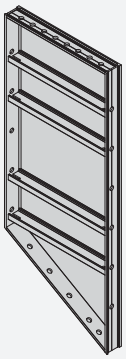
Components (mm)	Weight (kg)	Article No.
Slab open panel	10.93	35480000

Staircase landing panel



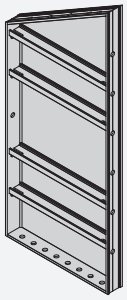
Components (mm)	Weight (kg)	Article No.
Staircase landing panel	11.43	36000000

Staircase wall panel(dw)



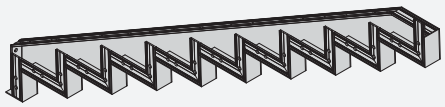
Components (mm)	Weight (kg)	Article No.
Staircase wall panel(dw)	3.37	36000000

Staircase wall panel(up)



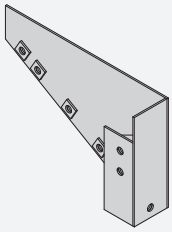
Components (mm)	Weight (kg)	Article No.
Staircase wall panel(up)	3.37	36000000

Gun panel



Components (mm)	Weight (kg)	Article No.
Gun panel	17.34	36510000

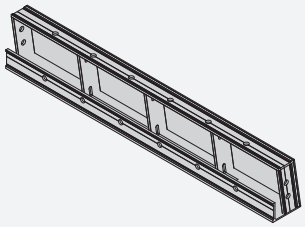
Staircase landing post panel



Components (mm)	Weight (kg)	Article No.
Staircase landing post panel	1.47	36510000

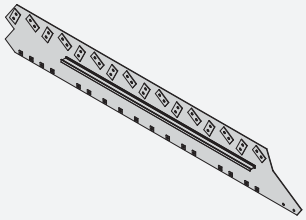
Article List

Staircase riser panel



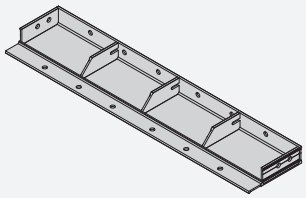
Components (mm)	Weight (kg)	Article No.
Staircase riser panel	6.24	36510000

Staircase side panel



Components (mm)	Weight (kg)	Article No.
Staircase side panel	14.9	36510000

Staircase step panel



Components (mm)	Weight (kg)	Article No.
Staircase step panel	5.05	36510000

K-Deck

Kumkang Drop-down system

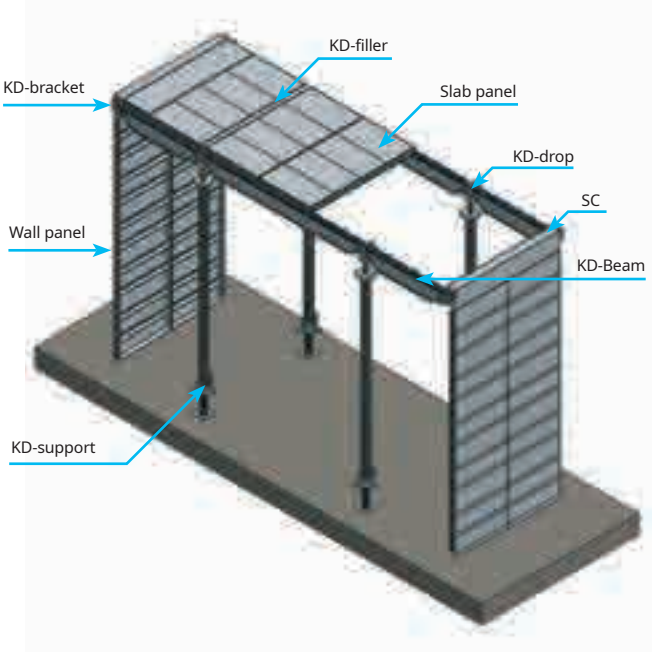
Samsung raemian singil11_Seoul, Korea

Particularities of K-Deck

Considering the construction cycle and reusability of the formwork, Kumkang Kind has developed the K-Deck system. By maximizing the use of standard slab panels, it will allow a considerable reduction on time while increasing safety of workers.

+ Structure of K-DECK System

• Supporting height : 1.00m ~ 6.00m
(allowable load : maximum 7.5ton)



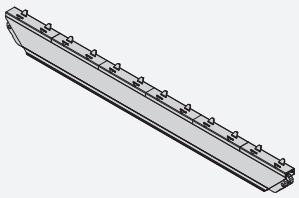
- The drop-down system will reduce the noises provoked by the free-falls of slab panels on the slab. Thus, it will be most effectively used for projects in residential areas.
- By maximizing the intervals between props, it allows a greater working space to workers.
- The K-Deck minimizes the use of pin&wedges; thus, it greatly reduces the construction cycle.
- With the drop-down system, it will further decrease the dismantling time of the aluminum formwork.





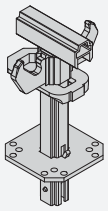

Article List

K-Deck beam



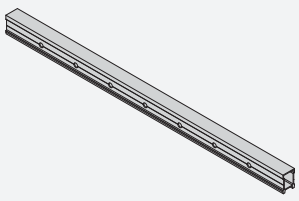
Components (mm)	Weight (kg)	Article No.
KD beam 1800	10.8.	42000000
KD beam 1200	7.1	
KD beam 900	5.9	
KD beam 600	4.2	

K-Deck drop



Components (mm)	Weight (kg)	Article No.
KD drop	3.5	42100000

K-Deck filler

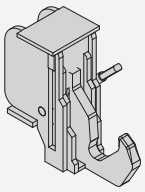


Components (mm)	Weight (kg)	Article No.
KD filler 2400	5.4	42300000
KD filler 1200	2.7	
KD filler 900	2	
KD filler 600	1.3	

K-Deck prop

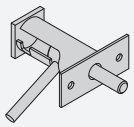
Components (mm)	Weight (kg)	Article No.
KD 6509 1,000 ~ 1,500 (7.5t)	6.5	42200000
KD 6514 1,500 ~ 2,500 (3.2t)	8.28	
KD 6520 2,100 ~ 3,200 (2t)	9.56	
KD 802 2,100 ~ 3,200 (2.8t)	11.27	
KD 803 3,100 ~ 4,200 (2.1t)	14.44	
KD 804 4,200 ~ 6,000 (1.7t)	22.54	

K-Deck bracket



Components (mm)	Weight (kg)	Article No.
KD bracket	3.2	48001100

K-Deck brace



Components (mm)	Weight (kg)	Article No.
SC brace	0.25	48001200

Gang formwork

Gang formwork system

Delhi One_Delhi, India

Particularities of Gang formwork

As buildings are getting higher than ever, the construction companies must consider several factors including quality, construction period and safety of jobsite workers. Our Kumkang gang-form system will satisfy all above factors. Made of mild steel, working platform is attached to the formwork, which will increase jobsite workers' safety. Through the gang-form, the concrete finishing will be unbeatable while providing a safe working environment to workers and reduce construction period.

Characteristics of Gang formwork

- 2 walers will be installed (top and bottom) to ensure horizontal straightness
- Easily adaptable for any width of external façade and core area
- Easily adaptable with aluminum formwork (external façade and core area with gang-form and internal wall, beam, column, slab and staircase with aluminum formwork)
- Allows the installation of safety net on all levels.

Advantages of Gang formwork

Safety

- The 600mm width of the working platform shall allow a safer working environment for workers.

Concrete quality

- Due to the use of single panels, the gang-form will allow the horizontality and verticality of the structure.

Installation

- Compared with the aluminum formwork, the gang-form will greatly reduce the number of workers for its installation and dismantlement.

Simultaneous construction task

- While the setting is done on the "0" level, the workers can immediately start the plastering work on "-1" and "-2" level.

Large formwork

- 100% customized system; the gang-form shall be lifted with a tower crane or through our climbing system using a hydraulic unit.

P J T Delhi One
Builder Larsen & Toubro Ltd.
Location Delhi, India
Type Multipurpose Building
System Gang formwork, Climbing system

Delhi One is a contemporary landmark embodying the spirit of modern living, burnished with a long tradition of luxury. It is an exclusive milieu spanning living, working, entertainment and luxury retail. Life, here is like a holistic experience where various aspects of daily living are woven into a seamless pattern.

Euro formwork

Euro formwork system

Jeonggwan lotte castle_Busan, Korea

Particularities of Euro formwork

Kumkang euro-form is a “modular formwork”, which combines plywood sheet with steel frame. It is used in residential, commercial buildings (parking/ground level), civil construction and other various projects, which will satisfy the jobsite requirements.

Advantages of Euro formwork

Our euro-form is a flexible system, which can be simultaneously used with the aluminum or conventional formwork to maximize the jobsite efficiency. By replacing the plywood sheet, it will further increase its repetitiveness.

Weight table of Euro formwork

[Unit : Kg]

Size (mm)	Horizontal Stiffener	Vertical Stiffener	A/G	275mm Stiffener	Plywood	Total Weight
600 X 1200	2.98	6.14	3.2	1.01	5.96	19.3
450 X 1200	2.22	6.14	2.38	-	4.43	15.16
400 X 1200	1.96	6.14	2.1	-	3.91	14.12
300 X 1200	1.45	6.14	1.55	-	2.89	12.04
600 X 1500	2.98	7.68	3.2	-	7.47	22.34
450 X 1500	2.22	7.68	2.38	-	5.55	17.82
400 X 1500	1.96	7.68	2.1	-	4.91	16.65
300 X 1500	1.45	7.68	1.55	-	3.63	14.31
600 X 900	2.98	4.61	3.2	1.01	4.45	15.24
450 X 900	2.22	4.61	2.38	-	3.3	12.51
400 X 900	1.96	4.61	2.1	-	2.92	11.59
300 X 900	1.45	4.61	1.55	-	2.16	9.77
500 X 1200	2.47	6.14	2.65	-	4.94	16.21
350 X 1200	1.7	6.14	1.83	-	3.4	13.08
250 X 1200	1.19	6.14	1.28	-	2.38	11
200 X 1200	0.94	6.14	1	-	1.87	9.96

Large area formwork

Kumkang Alumium & Wood formwork system

Samsung S3 Factory_Hwasung, Korea

Particularities of Aluminum & Wood formwork

Our large area formwork is made of plywood and timber beam/aluminum beam and steel waling. With its freedom of design, this formwork system will be efficiently used in any shape of structure.

- Through our extensive formwork experience, our Kumkang Kind engineers shall consider the jobsite condition and formwork usability of the workers to design the most effective large area formwork.
- As plywood will be used as formwork face, it will be easily adaptable for any architectural or structural changes.

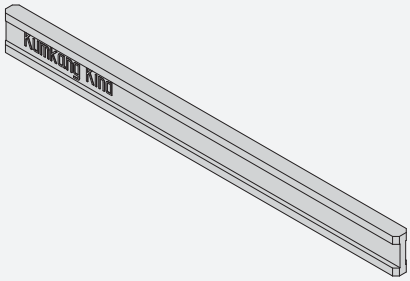
+ Samsung S3 Factory - Korea




+ Incheon International Airport - Korea

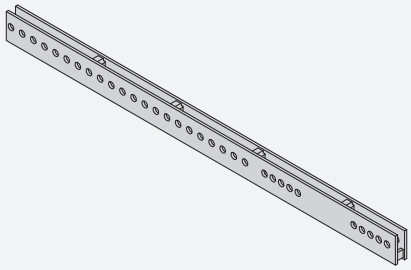

Article List

Timber beam H20N



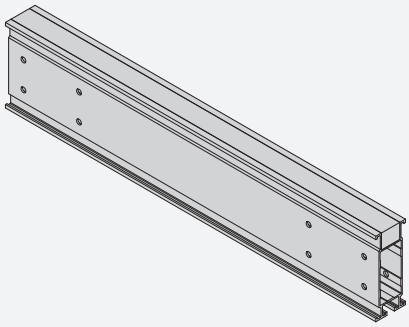
Components (mm)	Weight (kg)	Article No.
Timber beam H20N	5	k0110010

Adjustable waling extension 1.4m



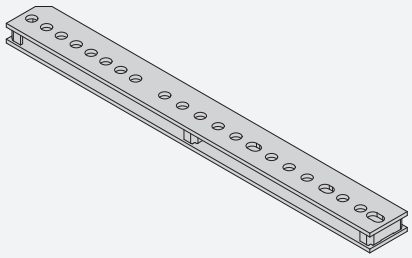
Components (mm)	Weight (kg)	Article No.
Adjustable waling extension 1400	5.71	k0110030

Al beam 200



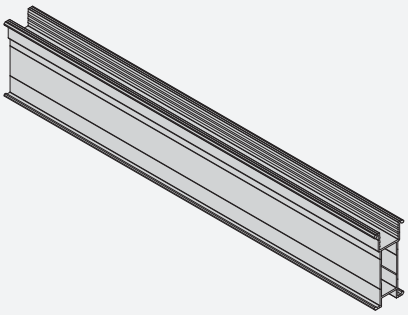
Components (mm)	Weight (kg)	Article No.
Al beam 200	5.8	k0110020

Adjustable waling extension FF20/50



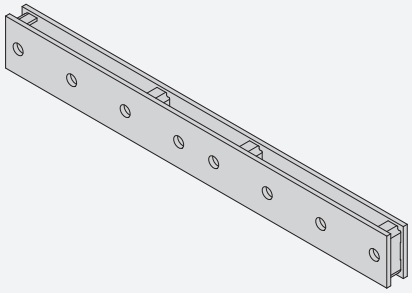
Components (mm)	Weight (kg)	Article No.
FF20/50	9.1	k0110110

Al beam 175



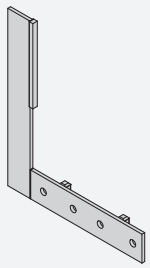
Components (mm)	Weight (kg)	Article No.
Al beam 175	5.71	k0110030

Splice plate



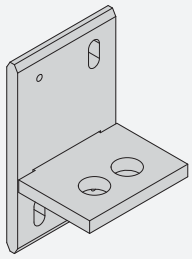
Components (mm)	Weight (kg)	Article No.
Splice plate	9	k0110130

Assembly angle



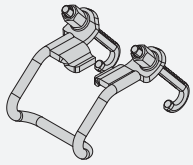
Components (mm)	Weight (kg)	Article No.
Assembly angle	7.4	k0110150

Beam clamp



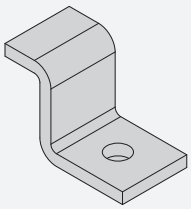
Components (mm)	Weight (kg)	Article No.
Beam clamp	1.2	k0110170

Flange clamp



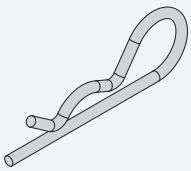
Components (mm)	Weight (kg)	Article No.
Flange clamp	1	k0110190

Timber beam clamp



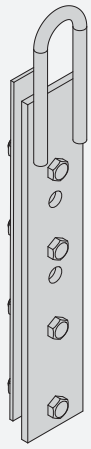
Components (mm)	Weight (kg)	Article No.
Timber beam clamp	0.21	k0110230

Sping cotter



Components (mm)	Weight (kg)	Article No.
Sping cotter 6mm	0.06	k0110241

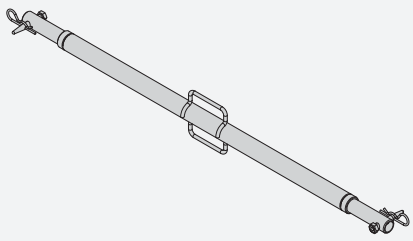
Lifting bracket



Components (mm)	Weight (kg)	Article No.
Lifting bracket	6.2	k0110330

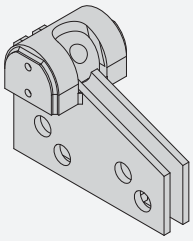
Article List

Spindle strut



Components (mm)	Weight (kg)	Article No.
Spindle strut t7	39.96	k0110370

Universal angle tie bracket



Components (mm)	Weight (kg)	Article No.
Universal angle tie bracket	4.4	k0110470


SK VIEW

K-Steel formwork

Kumkang Steel & Sus form system

Bansong line of Busan subway _Busan, Korea

Particularities of Kumkang Kind

Designed and manufactured from our vast domestic/overseas experience and technical know-how, the reputation of our Kumkang steel formwork is as high as the sky!

Mainly used for civil construction, our steel formwork will help our clients to reduce its cost while increasing safety of workers. Made of high-strength steel, any structural shape shall be efficiently designed and manufactured by Kumkang Kind.

- Depending on the static calculation, the thickness of our steel formwork will be from 4 to 10 inches.

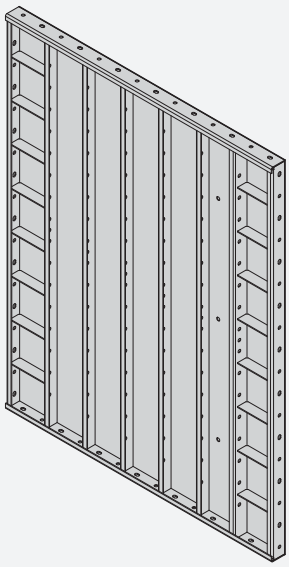
- Based on the client's requirement, our steel formwork can be stainless; thus it will increase its repetitiveness.

+ Bansong line of Busan subway - Korea

+ Hyundai steel mill - Korea

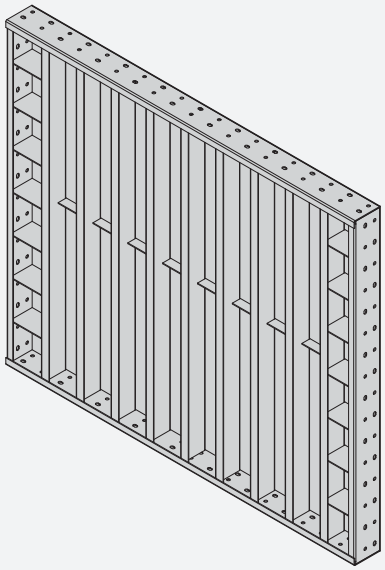
Article List

K-steel formwork sus form



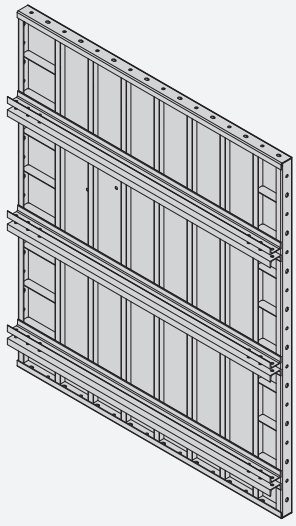
Components (mm)	Weight (kg)	Article No.
Sus form	144	k0120010

K-steel formwork 6 inch steel form



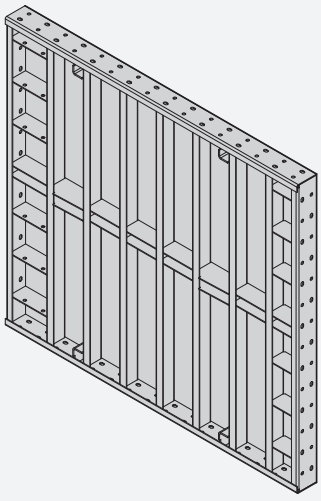
Components (mm)	Weight (kg)	Article No.
6 inch steel form	55	k0130020

K-steel formwork 4 inch steel form



Components (mm)	Weight (kg)	Article No.
4 inch steel form	43	k0130010

K-steel formwork 8 inch steel form



Components (mm)	Weight (kg)	Article No.
8 inch steel form	67	k0130030

Project References

+ PNB 118, Kuala Lumpur - Malaysia

- K-Al Form

+ KLCC Tower, Kuala Lumpur - Malaysia

- K-Al Form

+ Oasis Damansara, Kuala Lumpur - Malaysia

- K-Al Form

+ The Troika, Kuala Lumpur - Malaysia

- K-Al Form

+ Fennel, Sentul - Malaysia

- K-Al Form

+ Meridin, Johor Bahru - Malaysia

- K-Al Form

+ Riversails Residence - Singapore

- K-Al Form

+ Sky Habitat - Singapore

- K-Al Form

+ Marina Bay Financial Center R2 - Singapore

- K-Al Form

+ Alexandra - Singapore

- K-Al Form, Gangform, KSC-50, KGB-H, KSB-H

+ Nus College - Singapore

- K-Al Form, Gangform, KGB-C, Balcony cage

+ Viva Condominium - Singapore

- K-Al Form

Project References

+ Landmark 81, Ho Chi Minh - Vietnam

- K-Al Form, Gang form, KSC-100, KSC-50

+ Kumho Asiana Plaza, Ho Chi Minh - Vietnam

- K-Al Form

+ Masteri Complex, Ho Chi Minh - Vietnam

- K-Al Form

+ Keangnam Landmark Tower, Hanoi - Vietnam

- K-Al Form

+ Vietinbank, Hanoi - Vietnam

- K-Al Form

+ Keangnam Landmark 72, Hanoi - Vietnam

- K-Al Form, Gang form, KSC-50

+ Lodha The Park, Mumbai - India

- K-Al Form, Gang form KSC 50, KSC 100, KGB-H, KSB-H,

+ Marathon Monte South, Mumbai - India

- K-Al Form

+ Delhi one, Delhi - India

- K-Al Form, Gang form, KGB-H

+ Aratt Amora Villa, Bangalore - India

- K-Al Form

+ Megapolis, Pune - India

- K-Al Form

+ Nanded City, Pune - India

- K-Al Form

Project References

+ The Elements, Jakarta - Indonesia

- K-Al Form

+ The Alton, Kota semarang - Indonesia

- K-Al Form

+ Urban Sky, Kota Bekasi - Indonesia

- K-Al Form

+ Pollux Habibie, Kota Batam - Indonesia

- K-Al Form

+ Darmohill, Surabaya - Indonesia

- K-Al Form

+ Ayoma, Karawaci Serpong - Indonesia

- K-Al Form

+ Villa Maya, Nairobi - Kenya

- K-Al Form

+ Unity Gardens, Eldoret - Kenya

- K-Al Form

+ Unity West, Kiambu - Kenya

- K-Al Form

+ 80 logements LPA, Oued-Rhiou - Algeria

- K-Al Form

+ 50,000 housing project, Tripoli - Libya

- K-Al Form

+ JW Marriott Hotel, Tripoli - Libya

- K-Al Form

Project References

+ Royal Atlantis, Dubai - UAE

- K-Al Form

+ 5JJ, Dubai - UAE

- K-Al Form

+ Abraj Quartier, Doha - Qatar

- K-Al Form

+ Admir Residential, Jounieh - Lebanon

- K-Al Form

+ Residential apartment, Colombo - Sri Lanka

- K-Al Form

+ Tsubaki Hotel Guam - Guam

- K-Al Form

+ Rowhouse, Cebu - Philippines

- K-Al Form

+ Palawan Height, Puetro Princesa - Philippines

- K-Al Form

+ Shangri-La Hotel, Ulaanbaatar - Mongolia

- K-Al Form

+ Yangon Amara Hotel, Yangon - Myanmar

- K-Al Form

+ Phnom Penh Tower, Phnom Penh - Cambodia

- K-Al Form

+ Residencial Mirante, Suzano - Brazil

- K-Al Form

Climbing System

Based on creative technology, we, Kumkang Kind, are doing our best to provide the optimal system to our customers.

With the most advanced manufacturing technology and technical know-how from our vast domestic & overseas experience, Kumkang Kind shall always provide the most economical and productive formwork systems to our clients. Kumkang Kind will create a new era of formwork system in the global market.

KSC 100

Kumkang Self Climbing 100 - Hydraulic lifting

Samsung DSR_Hwaseong, Korea

P J T	Samsung DRS
Builder	Samsung C&T
Location	Hwaseong, Korea
T y p e	Research complex
System	KSC 100

Particularities of KSC 100

Our KSC 100 is an self climbing system which is mostly used for residential, commercial and civil engineering projects. The entire bracket is attached to hydraulic cylinders which will drastically reduce the overall construction period.

As an extremely safe and user-friendly system, the KSC 100 will be used for core wall construction method (core preceding) for high-rise buildings, pylons and heavy structures.

- The profile and the platform are lifted separately.
- Since the KSC 100's width of the platform is 3m and can offer up to 6 levels, it provides a safer and better working environment to workers. Furthermore, it will also allow pre-assembly of the steel rebar.
- The lifting of the KSC 100 is easily controlled with a remote control and can lift up 15~20 brackets at the same time.
- Any structural changes up to 200mm can be self-adapted by the system (for more than 200mm, a special adapter is required).
- The KSC 100 can be used from 3m to 6m floor height and easily adaptable for any floor height changes.
- The KSC 100 allows an inclination of +/- 15 degrees.
- Depending on jobsite conditions, the KSC 100 can be installed on the overhead crane or on the CPB.
- With the exception of the initial installation and its dismantlement, the KSC 100 does not require the tower crane for its use.

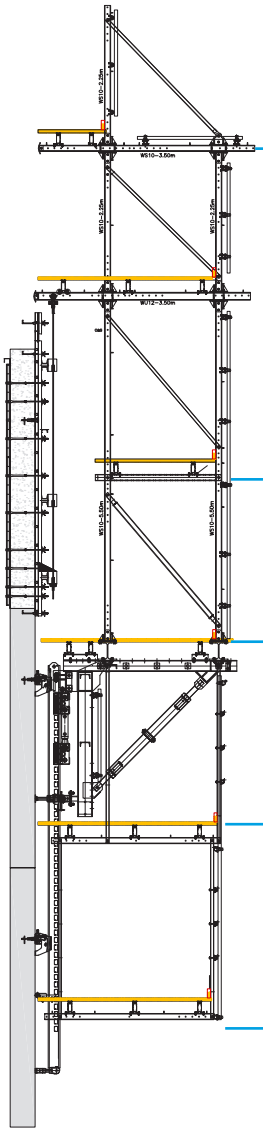
System Specification

Allowable load	100kN [10ton]
Height of concrete casting	3.0~6.0m
Lifting speed	5min/1m
Lifting method	Hydraulic

+ KSC 100 system shoe

One of the biggest company in the Republic of Korea, Samsung Electronics, used our Kumkang KSC 100 to build their semiconductor R&D center. The project which consisted of 2 blocks of 27 floors, used the core wall construction method in order to achieve 4 days cycle.

+ KSC 100 typical section



Level +"3"Working platform

"+2" and "+3" level are used for the pre-assembly of the steel rebar. Since it does not affect the dismantlement of the formwork on below level, it greatly reduces cycle time.

Level +"1" ~ +"2"Working platform

The installation and dismantlement of the formwork can be done through traveling or hanging system method. Based on the structure of the project and working envrionment, the productivity will increase depending on the method chosen.

Level "0"Working platform

Level "+2", "+1" and "0" are the platforms where most of the work are done. Thus, we have designed the platform to be 3m width which will allow a safer working environment for the workers and prevent any accidents.

Level -"1"Working platform

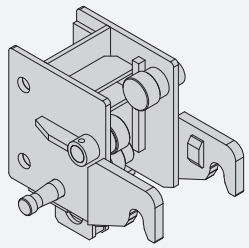
Level "-1" is where the hydraulic unit will be used in order to lift the whole system.

Level -"2"Working platform

Level "-2" is where the system shoe will be dismantled.

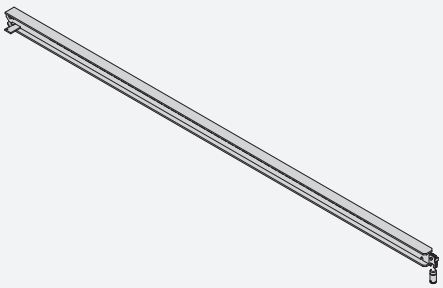
Article List

KSC 100 climbing carriage



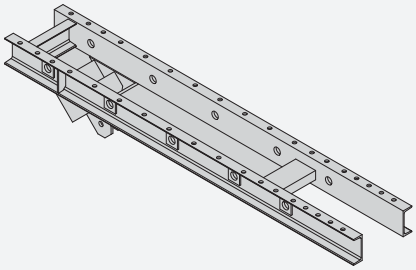
Components (mm)	Weight (kg)	Article No.
Climbing carriage	74	k0370010

KSC 100 climbing profile



Components (mm)	Weight (kg)	Article No.
Climbing profile	456	k0370020

KSC 100 horizontal profiile

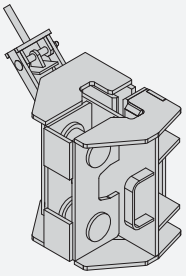


Components (mm)	Weight (kg)	Article No.
Horizontal profiile	140	k0370030

KSC 100 hydraulic cylinder

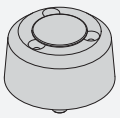
Components (mm)	Weight (kg)	Article No.
Hydraulic cylinder	39	k0370050

KSC 100 lifting mechanism



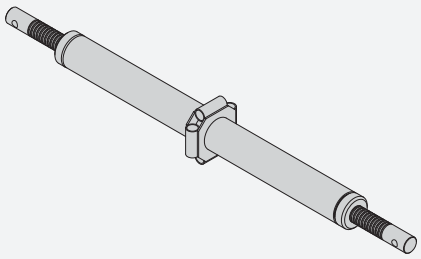
Components (mm)	Weight (kg)	Article No.
Lifting mechanism	50.9	k0370070

KSC 100 positioning cone-N



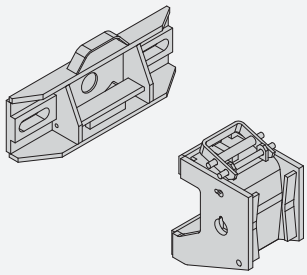
Components (mm)	Weight (kg)	Article No.
Positioning cone-N	0.5	k0370080

KSC 100 spindle strut



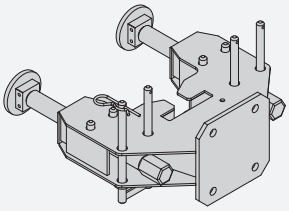
Components (mm)	Weight (kg)	Article No.
Spindle strut	65.3	k0370110

KSC 100 suspension shoe



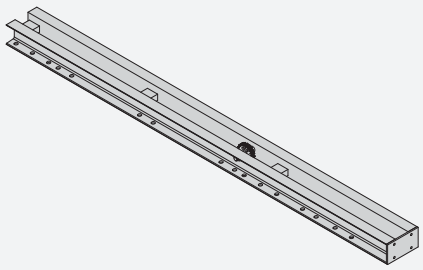
Components (mm)	Weight (kg)	Article No.
Suspension shoe	48.7	k0370140

KSC 100 supporting carriage



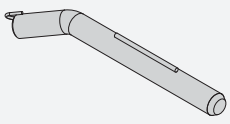
Components (mm)	Weight (kg)	Article No.
Supporting carriage	59.5	k0370120

KSC 100 travelling profile mf



Components (mm)	Weight (kg)	Article No.
Travelling profile mf	79	k0370150

KSC 100 suspension pin



Components (mm)	Weight (kg)	Article No.
Suspension pin	5	k0370130

Article List

KSC 100 hydraulic unit

Components (mm)	Weight (kg)	Article No.
Hydraulic unit	1,000	-

KSC 100 circular tube

Components (mm)	Weight (kg)	Article No.
Circular tube	15.2	-

KSC 100 radio remote control

Components (mm)	Weight (kg)	Article No.
Radio remote control	-	-

KSC 50

Kumkang Self Climbing 50 - Hydraulic lifting

W_Busan, Korea

Particularities of KSC 50

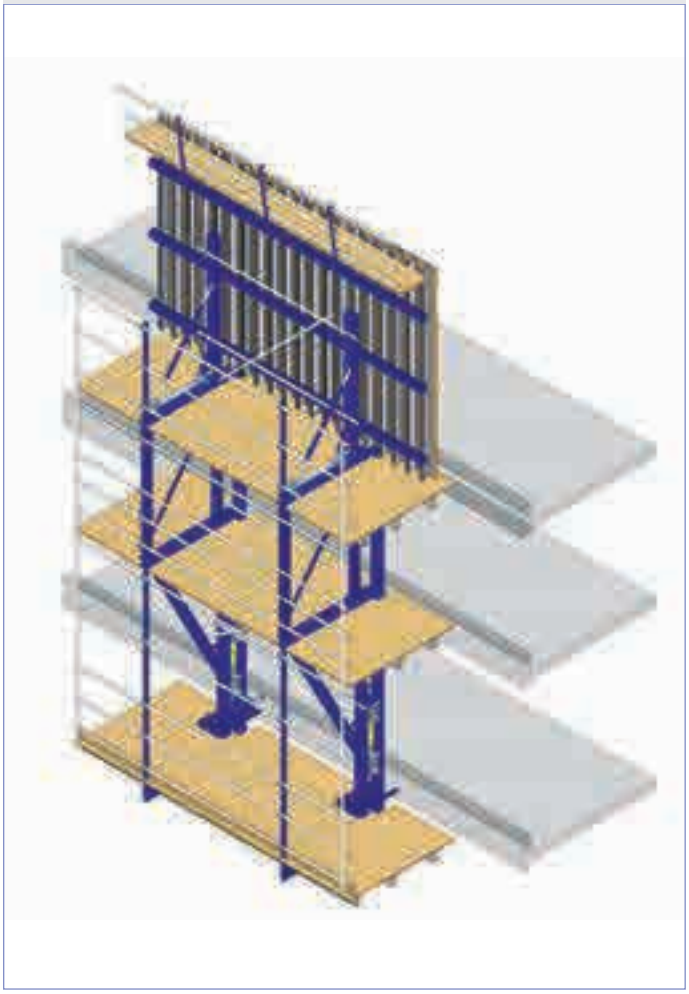
Our KSC 50 is an self climbing system which is mostly used for residential, commercial and civil engineering projects. The entire bracket is attached to hydraulic cylinders which will drastically reduce the overall construction period.

- The profile and the platform are lifted separately.
- Since the KSC 50's width of the platform is 2.7m and can offer up to 5 levels, it provides a safer and better working environment to workers.
- The lifting of the KSC 50 is easily controlled with a remote control and can lift up to 30~40 brackets at the same time.
- The KSC 50 can be used from 2.8m to 3.5m floor height and easily adaptable for any floor height changes.
- The KSC 50 allows an inclination of +/- 15 degrees.
- With the exception of the initial installation and its dismantlement, the KSC 50 does not require the tower crane for its use.

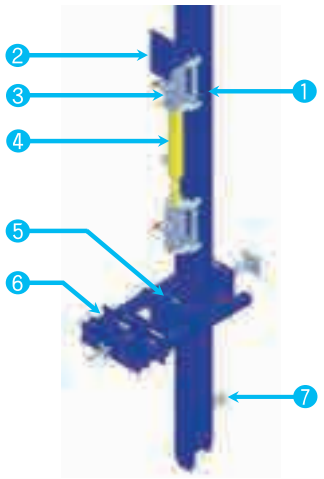
System Specification

Allowable load	50kN [5ton]
Height of concrete casting	2.8~3.5m
Lifting speed	5min/1m
Lifting method	Hydraulic

• Patented Product : Registration No. 10-0841011



+ KSC 50 driving part



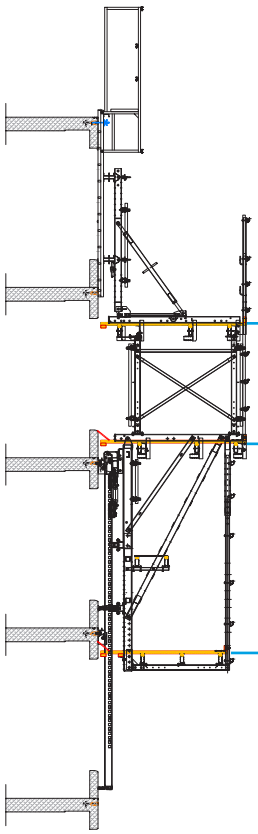
1. Climbing Profile
2. Carrriage Bracket
3. Lifting Mechanism
4. Hydraulic Cylinder
5. Supporting Bracket[part-1]
6. Supporting Bracket
7. Supporting Screw Jack

P J T W
Builder IS dongseo
Location Busan, Korea
Type Super High-rise residential building
System Al. Form, Gang Form, KSC 50, KGB-H

Having an awesome view over the Busan's Gwang An bridge, the project "W" consists of 4 blocks of 69 floors and used the core wall construction method using our KSC 50. Due to its proximity of the ocean with its strong wind, Kumkang Kind has supplied the KSC 50, which was designed to offer a safe working environment for the workers.

Special Features

+ KSC 50 Typical section [Facade Type]



Level “0”Working platform

Level “0” is the platform where the formwork installation and dismantlement will be conducted.

• Working space : 2.60m

Level -“1” ±Working platform

Level “-1” is where the lifting mechanism, supporting bracket and the hydraulic unit are installed.

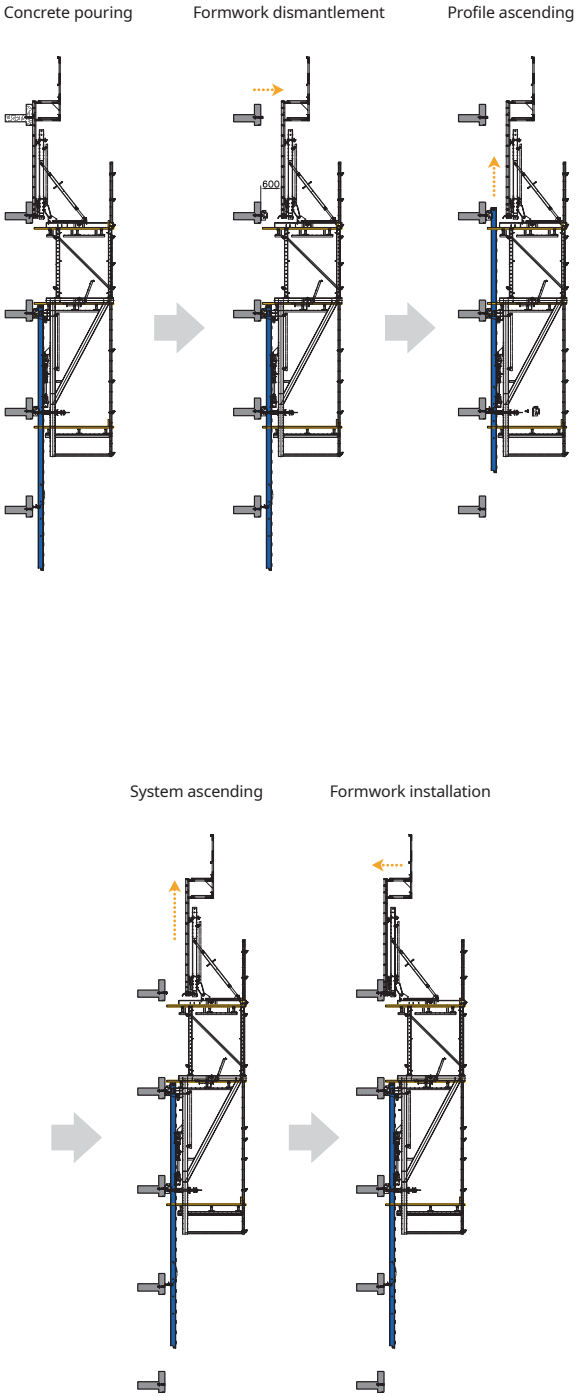
• Working space : 2.70m

Level -“2” ±Working platform

Level “-2” is where the system shoe will be dismantled.

• Working space : 2.30m

+ KSC 50 Operation flow [Facade Type]



+ KSC 50 system shoe

+ KSC 50 Typical section [Core Type]

Level “0”Working platform

Level “0” is the platform where the formwork installation and dismantlement will be conducted.

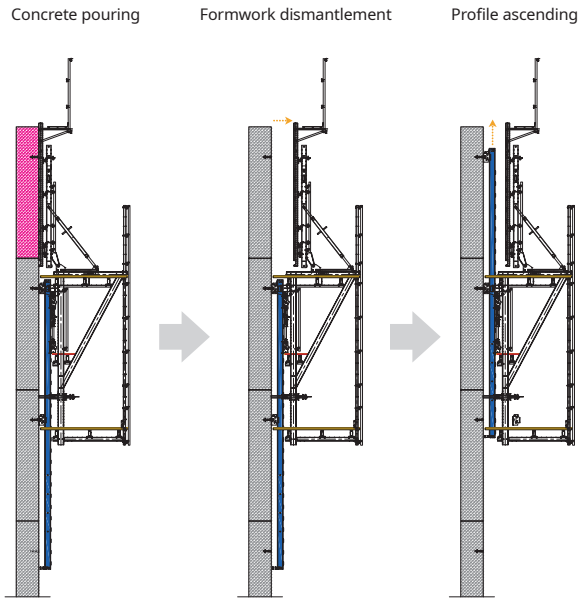
• Working space : Variable

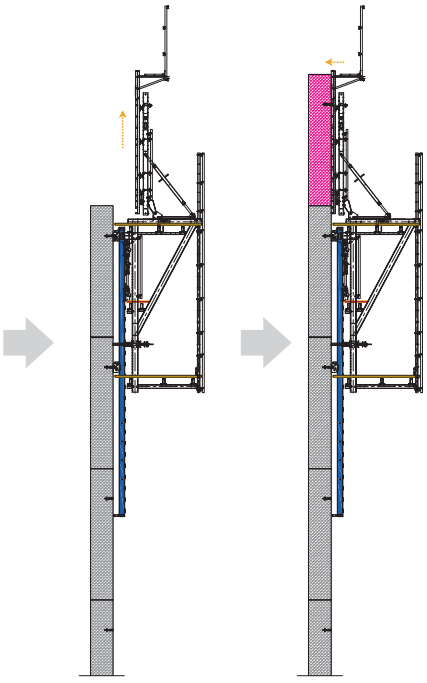
Level -“1” ±Working platform

Level “-1” is where the lifting mechanism, supporting bracket and the hydraulic unit are installed. Furthermore, this platform is where the system shoe will be dismantled.

• Working space : Variable

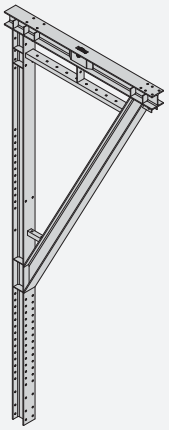
+ KSC 50 Operation flow [Core Type]





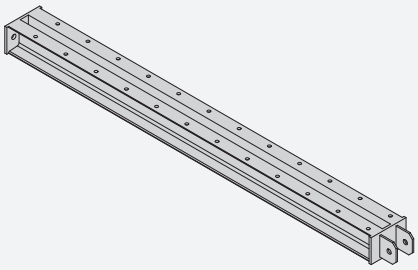
Article List

KSC 50 climbing bracket



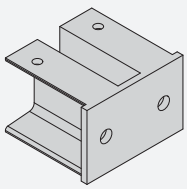
Components (mm)	Weight (kg)	Article No.
Climbing bracket	322.65	k0310010

KSC 50 working deck level -2



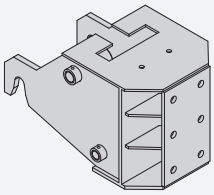
Components (mm)	Weight (kg)	Article No.
Working deck level -2	31.47	k0310020

KSC 50 working deck additional



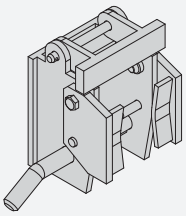
Components (mm)	Weight (kg)	Article No.
Working deck additional	3.36	k0310030

KSC 50 climbing carriage



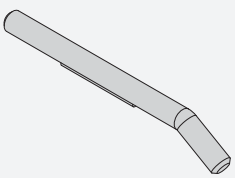
Components (mm)	Weight (kg)	Article No.
Climbing carriage	44.16	k0310050

KSC 50 climbing shoe



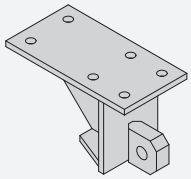
Components (mm)	Weight (kg)	Article No.
Climbing shoe	18.5	k0310060

KSC 50 suspension pin



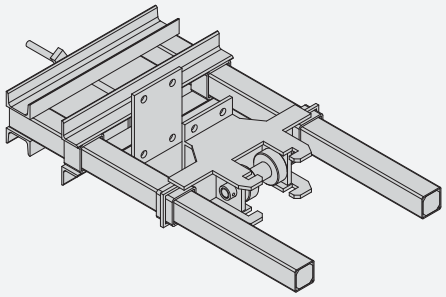
Components (mm)	Weight (kg)	Article No.
Suspension pin	2.19	k0310070
Suspension pin	2	k0360120

KSC 50 lifting mechanism bracket



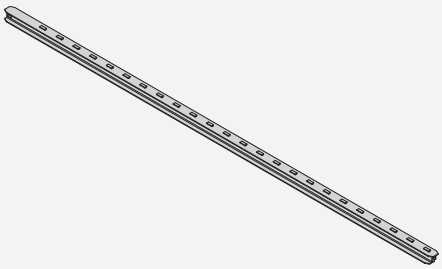
Components (mm)	Weight (kg)	Article No.
Lifting mechanism bracket	7.79	k0310080

KSC 50 supporting bracket



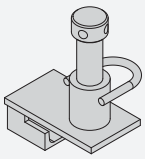
Components (mm)	Weight (kg)	Article No.
Supporting bracket	16.75	k0310090

KSC 50 climbing profile



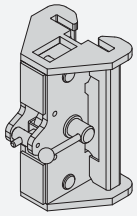
Components (mm)	Weight (kg)	Article No.
Climbing profile	250	k0310100

KSC 50 climbing profile support



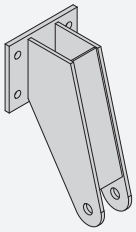
Components (mm)	Weight (kg)	Article No.
Climbing profile support	5.5	k0310110

KSC 50 lifting mechanism



Components (mm)	Weight (kg)	Article No.
Lifting mechanism	16.9	k0310120

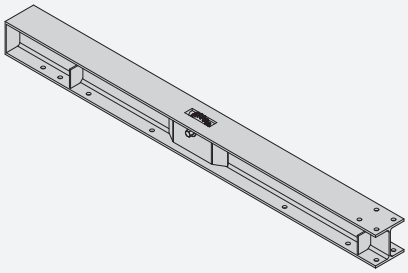
KSC 50 vertical waler adapter



Components (mm)	Weight (kg)	Article No.
Vertical waler adapter	9.95	k0310130

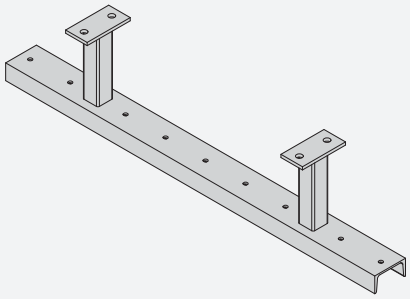
Article List

KSC 50 upper horizontal beam



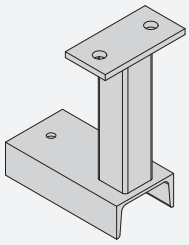
Components (mm)	Weight (kg)	Article No.
Upper horizontal beam	64.19	k0310140

KSC 50 working deck level +1 rear



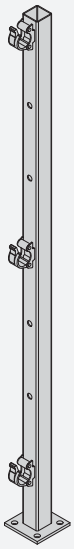
Components (mm)	Weight (kg)	Article No.
Working deck level +1 rear	14.5	k0310150

KSC 50 working deck level +1 front



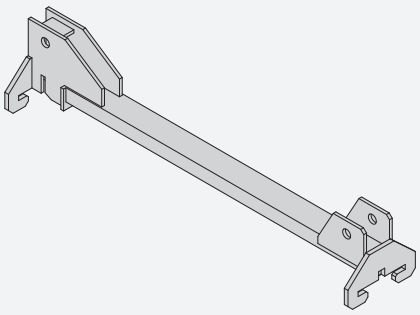
Components (mm)	Weight (kg)	Article No.
Working deck level +1 front	3.43	k0310160

KSC 50 handrail post



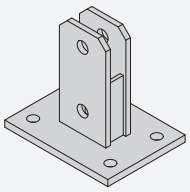
Components (mm)	Weight (kg)	Article No.
Handrail post	12.5	k0310170

KSC 50 traveller



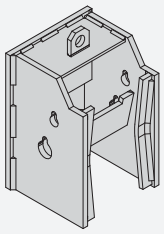
Components (mm)	Weight (kg)	Article No.
Traveller	21.4	k0310180

KSC 50 scaffolding shoe



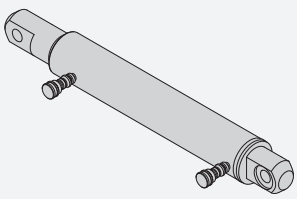
Components (mm)	Weight (kg)	Article No.
Scaffolding shoe	5.11	k0310190

KSC 50 suspension shoe rigid



Components (mm)	Weight (kg)	Article No.
Suspension shoe rigid	13.1	k0360130

KSC 50 hydraulic cylinder



Components (mm)	Weight (kg)	Article No.
Hydraulic cylinder	25	k0360160

KSC 50 hydraulic unit

Components (mm)	Weight (kg)	Article No.
Hydraulic unit	1,000	-

KSC 50 circular tube

Components (mm)	Weight (kg)	Article No.
Circular tube	15.2	-

KSC 50 radio remote control

Components (mm)	Weight (kg)	Article No.
Radio remote control	-	-

KGB-H

Kumkang Gangform Bracket - Hydraulic lifting

Ichon Caelitus_Seoul, Korea

Particularities of KGB-H

The Kumkang Gang-form Bracket (KGB-H) is a dual system where the gang-form is attached to the working platform in order to install, dismantle and lift the formwork on the external facade. Having a 2.2m width platform, it offers a safer climbing system to construction companies.

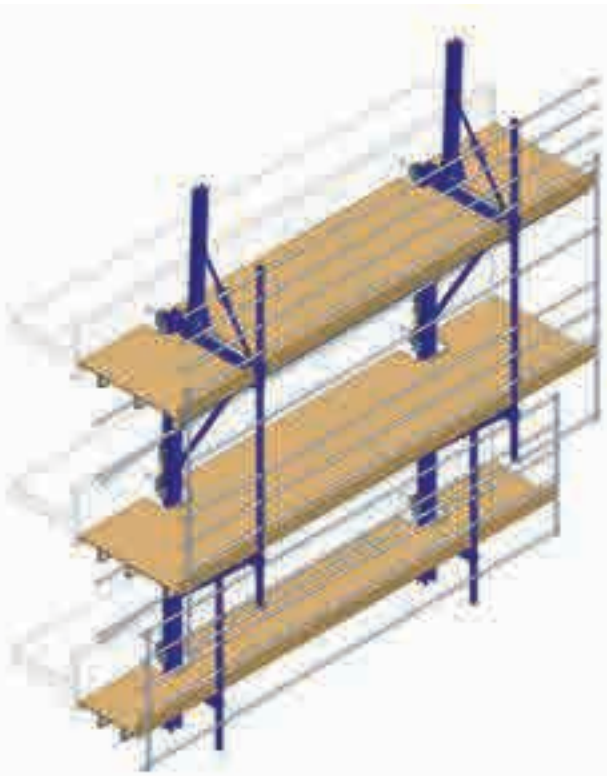
As the lifting of the KGB-H can be done through tower crane or removable hydraulic unit, it efficiently manages the construction cycle.

System Specification

Allowable load	50kN [5ton]
Height of concrete casting	2.0~5.0m
Lifting speed	3.5min/1m
Lifting method	Portable hydraulic

• Patented Product : Registration No. 10-2009-0064761

- Different from the KSC 100 or 50, the KGB-H uses a monolithic profile and platform.
- The same profile can be modified to other systems (KSB, material lifting system and etc)
- The hydraulic equipment (unit and cylinder) is portable.
- User-friendly designed shoe.
- The presence of connecting point on the lower shoe allows an easier installation.
- As the shoe is an open type, the horizontal installation of the platform is possible (installation after the concrete pour of 2 floors).
- Lighter than the KSC 100 and 50, the installation and dismantlement of the KGB-H is easier.
- The KGB-H is easily adaptable for floor height changes (ground floor, refuge floor and etc).



P J T Ichon Caelitus
Builder Samsung C&T
Location Seoul, Korea
Type Super high-rise housing
System KGB-H

Built by Samsung C&T, the Caelitus project consists of 3 blocks of 56 floors, total of 460 units. The KSC 50 was used for the core (E/V pit) while KGB-H was used for the external facade.

Special Features

+ KGB-H Section

Level “0”Working platform

Level“0”istheplatformwherethegang-formwillbe installed and dismantled through the travelling unit.

• Working space : 2.20m

Level -“1” ±Working platform

Level “-1” is where the the anchoring will be done. Furthermore, the installation and control of the hydraulic cylinder will be done on this floor.

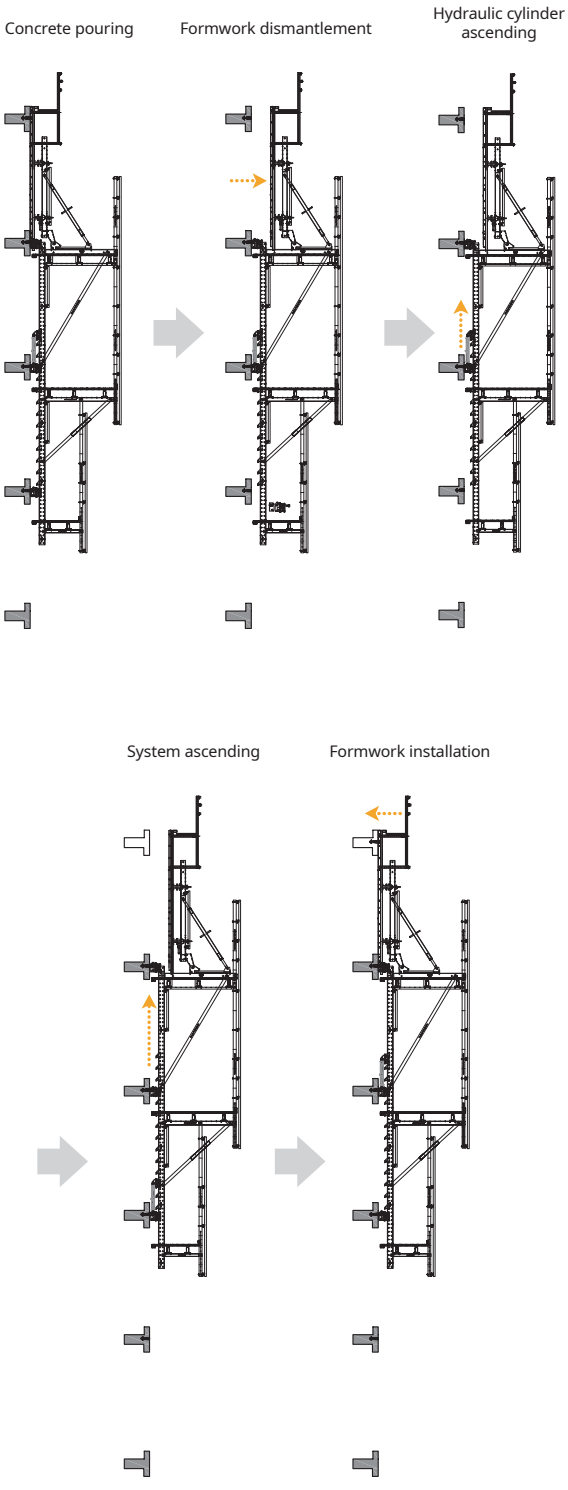
• Working space : 2.20m

Level -“2” ±Working platform

Level “-2” is where the system shoe will be dismantled.

• Working space : 1.30m

+ KGB-H Operation flow



+ KGB-H system shoe

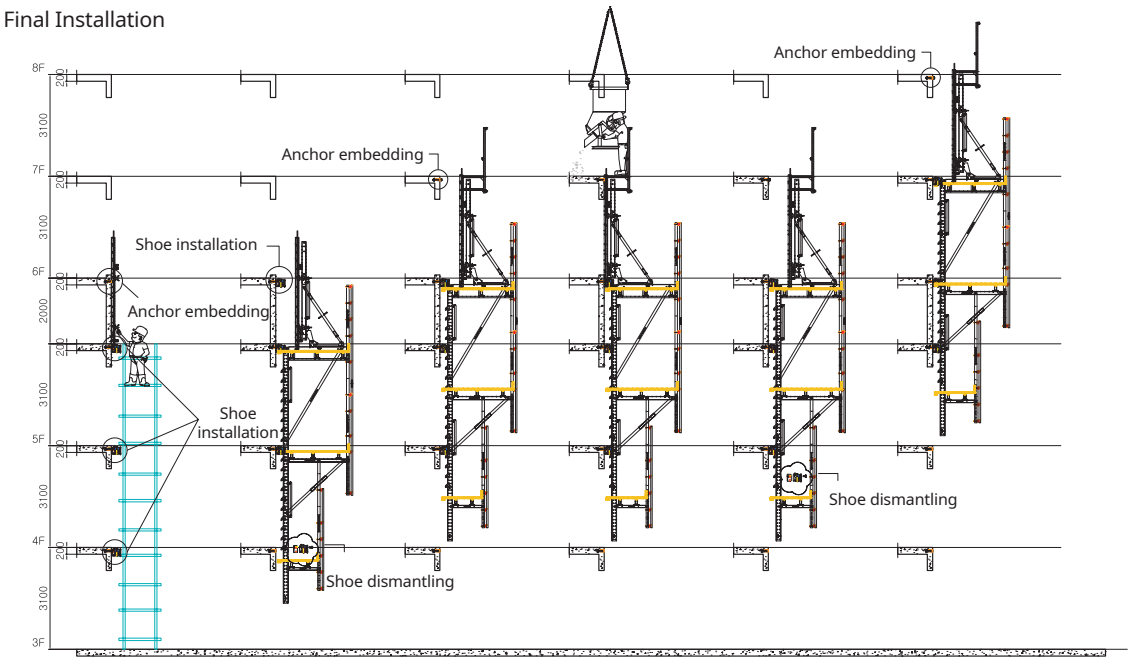
+ The typical floor drawing and lifting process plan

+ KGB-H & KSB-H system shoe

Adjustable angles : ±7

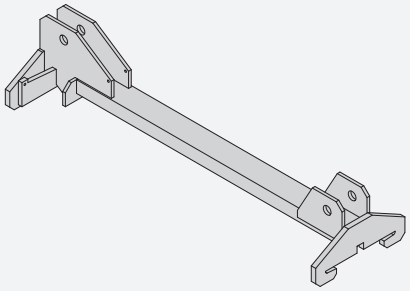
Rotatable Shoe

+ KGB-H Typical Sequence



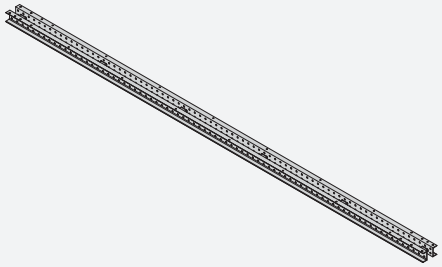
Article List

KGB-H traveller



Components (mm)	Weight (kg)	Article No.
Traveller	21.4	k0330010

KGB-H main profile

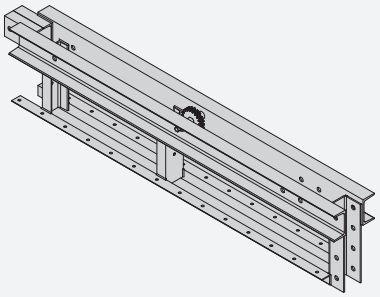


Components (mm)	Weight (kg)	Article No.
Main profile	287.5	k0330030

KGB-H handrail post

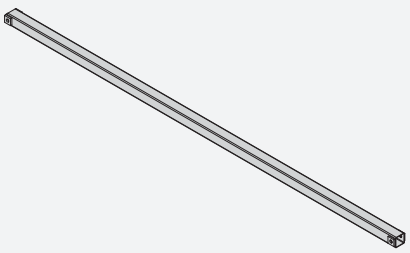
Components (mm)	Weight (kg)	Article No.
Handrail post	14.76	k0330020

KGB-H main working deck level-0



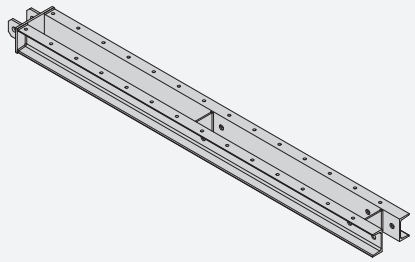
Components (mm)	Weight (kg)	Article No.
Main working deck level-0	77.9	k0330040

KGB-H diagonal brace-1



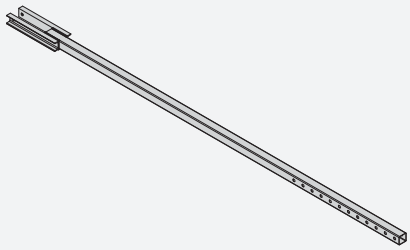
Components (mm)	Weight (kg)	Article No.
Diagonal brace-1	23.83	k0330050

KGB-H working deck level-1



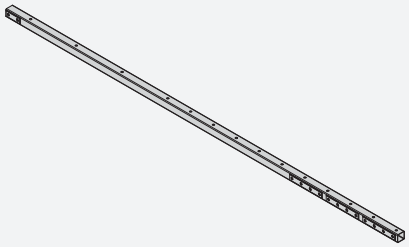
Components (mm)	Weight (kg)	Article No.
Working deck level-1	37.33	k0330060

KGB-H diagonal brace loading



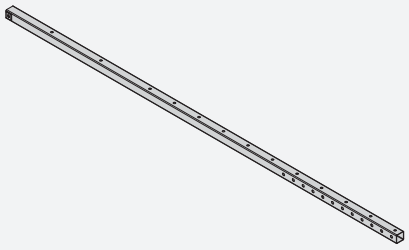
Components (mm)	Weight (kg)	Article No.
Diagonal brace loading	25.13	k0330081

KGB-H vertical profile



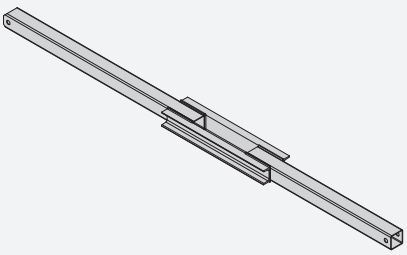
Components (mm)	Weight (kg)	Article No.
Vertical profile	33.23	k0330070

KGB-H suspension n-profile



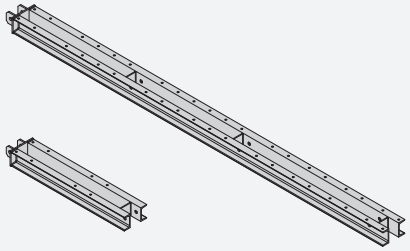
Components (mm)	Weight (kg)	Article No.
Suspension n-profile	27.61	k0330090

KGB-H diagonal brace-2



Components (mm)	Weight (kg)	Article No.
Diagonal brace-2	25.13	k0330080

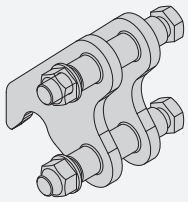
KGB-H working deck level-2



Components (mm)	Weight (kg)	Article No.
Working deck level-2 960	19.2	k0330100
Working deck level-2 3015	58.44	k0330100

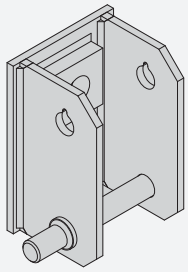
Article List

KGB-H stopper



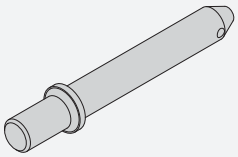
Components (mm)	Weight (kg)	Article No.
Stopper	2.48	k0330110

KGB-H shoe adapter



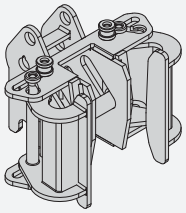
Components (mm)	Weight (kg)	Article No.
Shoe adapter	6.33	k0330120

KGB-H supporting pin



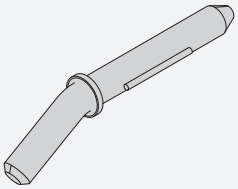
Components (mm)	Weight (kg)	Article No.
Supporting pin	0.8	k0330121

KGB-H suspension shoe



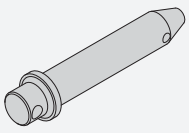
Components (mm)	Weight (kg)	Article No.
Suspension shoe	14.69	k0330130

KGB-H suspension pin



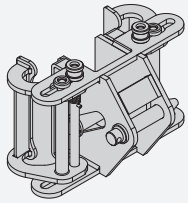
Components (mm)	Weight (kg)	Article No.
Suspension pin	0.98	k0330140

KGB-H cylinder pin



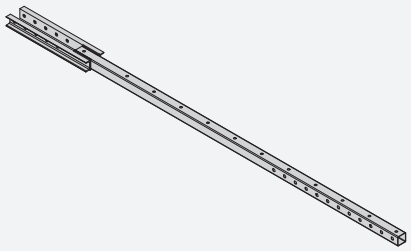
Components (mm)	Weight (kg)	Article No.
Cylinder pin	0.62	k0330150

KGB-H guide device



Components (mm)	Weight (kg)	Article No.
Guide device	12.37	k0330160

KGB-H suspension w-profile



Components (mm)	Weight (kg)	Article No.
Suspension w-profile	31.3	k0330170

KGB-H hydraulic cylinder

Components (mm)	Weight (kg)	Article No.
Hydraulic cylinder	21	-

KGB-H hydraulic unit

Components (mm)	Weight (kg)	Article No.
hydraulic unit	85	-

KGB-H circular tube

Components (mm)	Weight (kg)	Article No.
Circular tube	9	-

KGB-H remote control

Components (mm)	Weight (kg)	Article No.
Remote control	-	-

KSB-H

Kumkang Slab Bracket - Hydraulic lifting

KEPCO_Gimcheon, Korea

Particularities of KSB-H

The Kumkang Slab Bracket (KSB-H) is used as an external working platform on flat slab reinforced concrete (RC) or steel reinforced concrete structure (SRC). With its large platform, it allows workers to install and dismantle facade formwork and steel rebar while preventing the free-fall of any construction material

As the lifting of the KSB-H can be done through tower crane or removable hydraulic unit, it efficiently manage the construction cycle.

- Different from the KSC 100 or 50, the KSB-H uses a monolithic profile and platform.
- The same profile can be modified to other systems (KGB, material lifting system and etc)
- User-friendly designed shoe.
- As the shoe is an open type, the horizontal installation of the platform is possible (installation after the concrete pour of 2 floors).
- Lighter than the KSC 100 and 50, the installation and dismantlement of the KSB-H is easier.
- The KSB-H is easily adaptable for floor height changes (ground floor, refuge floor and etc).

System Specification

Allowable load	50kN [5ton]
Height of concrete casting	2.0~5.0m
Lifting speed	3.5min/1m
Lifting method	Portable hydraulic

• Patented Product : Registration No. 10-1040033

P J T New KEPCO E&C Head Office
Builder Daelim
Location Gimcheon, Korea
Type Office Building
System KSB-H

The new headquarter of the Korea Electric Power Corporation (KEPCO) is located in Gimcheon newtown. In order to build this magnificent structure, our KSB-H was supplied to secure the external facade for 28 floors.

Special Features

+ KSB-H section

Level “0”Working platform

Level “0” is the platform where the slab edge form operation will be handled.

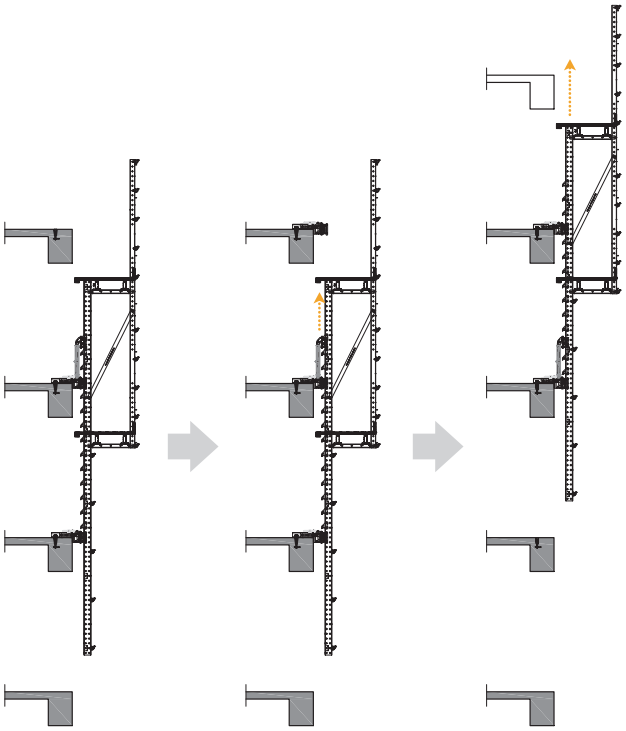
• Working space : 1.25m

Level -“1” ±Working platform

Level “-1” is where the the anchoring will be done. Furthermore, the installation and control of the hydraulic cylinder will be done on this floor.

• Working space : 1.25m

+ KSB-H operation flow



+ KSB-H system shoe

+ Slab Anchor Unit for KSB-H System

- The KSB-H was been designed to be adapted for external facade's structural changes. By controlling the anchor unit's upper screw, it can be moved forward or backward by 40mm.

+ Hydraulic Unit Operation [KGB-H & KSB-H]

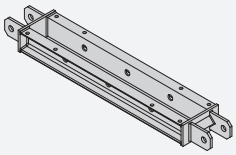
Specification

Operating method	Synchronizing systems
Necessary network voltage	3-phase 380V, 60Hz
Working pressure	210 bar
Supply cable	5.5 SQ
Drive motor output	3.7kw (5HP)
Dimension	0.5m(W)X0.5(B)X1.0m(H)
Hydraulic tank	45 liter
Weight	about 85kg (excluding the hydraulic fluid)

- The hydraulic unit must be only operated by an operator who has received technical instructions by a supervisor.
- The operator must check if there is any interference on the system and its safety before operating the hydraulic unit.
- Do not touch any driving part during the operation.
- After raising the hydraulic unit, it must be lifted to the upper level before installing it.
- When raining, the hydraulic unit must be prevented from being wet. (power connector)
- After using the hydrulic unit, the load part must be returned before transporting it
- Do not operate the hydraulic unit deliberately. (if broken, contact us for repair)

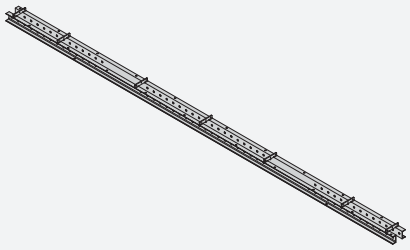
Article List

KSB-H working deck



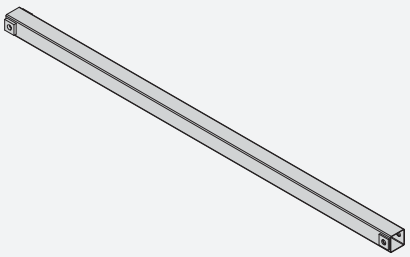
Components (mm)	Weight (kg)	Article No.
Working deck	12.48	k0340010

KSB-H vertical waling



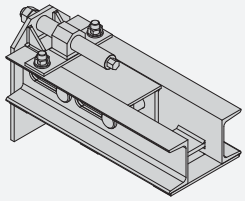
Components (mm)	Weight (kg)	Article No.
Vertical waling	110.17	k0340020

KSB-H diagonal brace



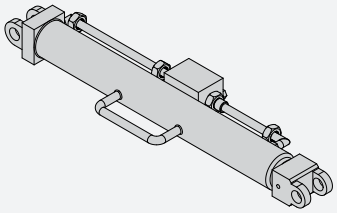
Components (mm)	Weight (kg)	Article No.
Diagonal brace	14.75	k0340030

KSB-H anchor unit



Components (mm)	Weight (kg)	Article No.
Anchor unit	22.6	k0340080

KSB-H hydraulic cylinder



Components (mm)	Weight (kg)	Article No.
Hydraulic cylinder	21	-

KSB-H hydraulic unit

Components (mm)	Weight (kg)	Article No.
hydraulic unit	85	-

KSB-H circular tube

Components (mm)	Weight (kg)	Article No.
Circular tube	9	-

KSB-H remote control

Components (mm)	Weight (kg)	Article No.
Remote control	-	-

KSB-P

Kumkang Slab Bracket - Protection Screen

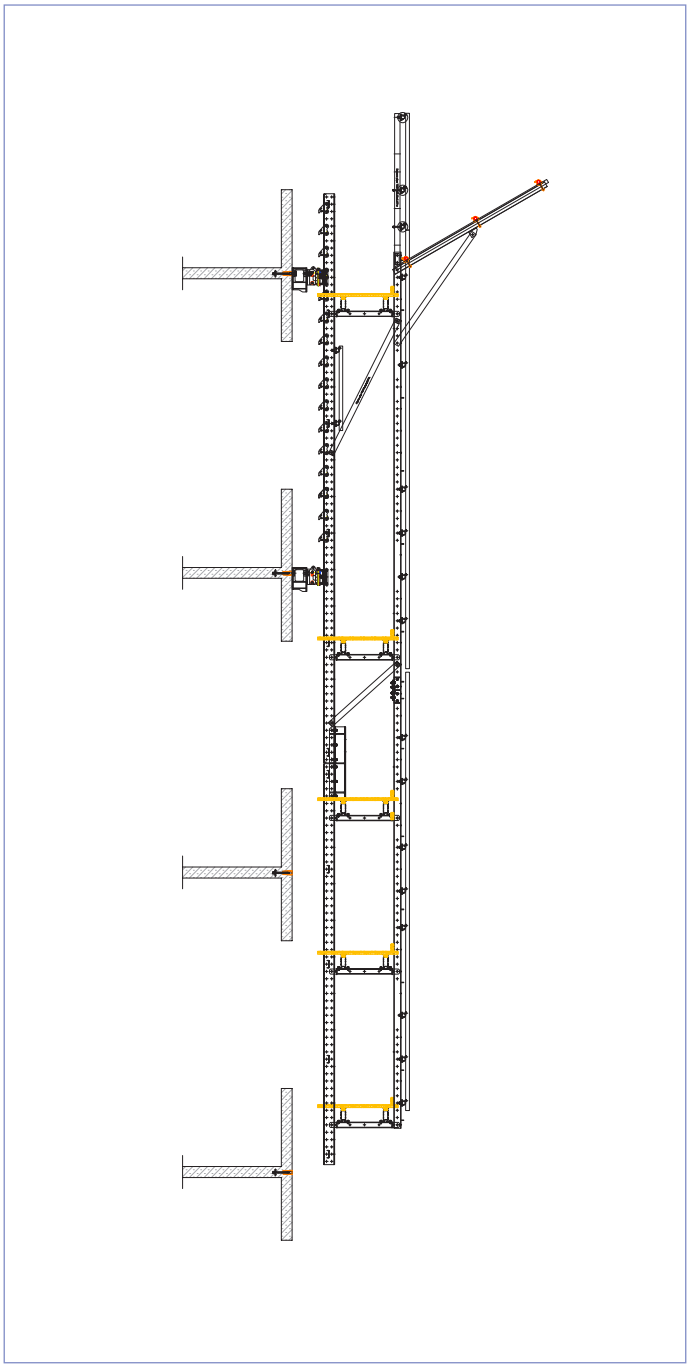
Prugio City_Seoul, Korea

Particularities of KSB-P

In order to meet the continuous demands from our clients, Kumkang Kind has developed a new system; the Kumkang Slab Bracket - Protection Screen.

Our KSB-P will allow to conduct the facade finishing work such as the installation of windows, brick work and etc under a safe environment.

- Different from the KSC 100 or 50, the KSB-P uses a monolithic profile and platform.
- The same profile can be modified to other systems (KGB, KSB, material lifting system and etc)
- User-friendly designed shoe.
- As the shoe is an open type, the horizontal installation of the platform is possible (installation after the concrete pour of 2 floors).
- Lighter than the KSC 100 and 50, the installation and dismantlement of the KGB-H is easier.
- KSB-P offers a wide working platform to perform the finishing work.



KGB-C

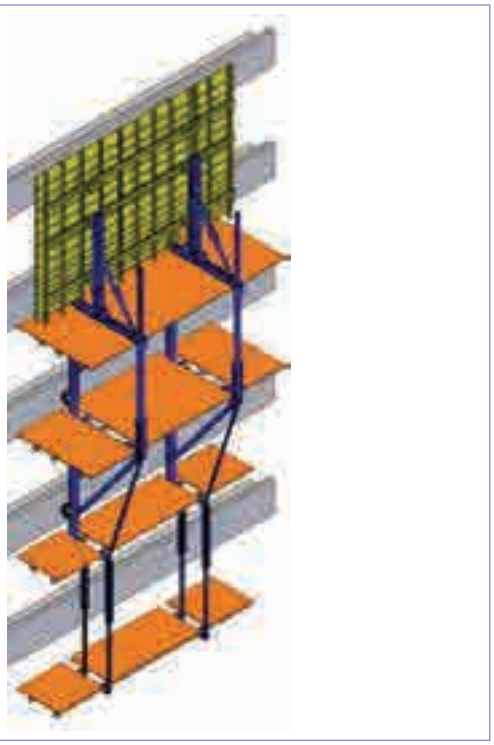
Kumkang Gangform Bracket - Crane lifting

Kumjung Cherevil_Gunpo, Korea

Particularities of KGB-C

The Kumkang Gang-form Bracket (lifted through tower crane) is the first guided climbing system to be developed in South Korea where the profile and platform are monolithic.

Although the tower crane capacity will dictate the sizes of the platforms, the construction companies still use this system for their high-rise and multipurpose buildings due to its cost effectiveness, quality and safety.



- Different from the KSC 100 or 50, the KGB-C uses a monolithic profile and platform.
- The same profile can be modified to other systems (KSB, material lifting system and etc)
- The KGB-C is lifted through a tower crane.
- Through the use of the shoe, it allows the system to climb vertically and thus allow a safer construction.
- Depending on the tower crane location and capability, the design of the KGB-C will be maximized.

+ Park View Xi - Korea

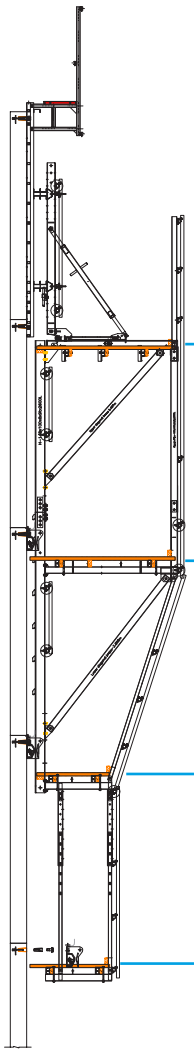
+ Posco The Sharp Greensquare - Korea

P J T Kumjung Cherevil
Builder Samsung heavy industries
Location Gunpo, Korea
Type High-rise housing
System KGB-C

The Samsung Cherevil is a 2 blocks, 37 floors project in Gunpo. The 6 level KGB-C allowed the installation of the gang-form while ensuring the finishing work within a safe working environment.

Special Features

+ KGB-C Section



Level “0”Working platform

Level “0” is the platform where the gang-form will be installed and dismantled through the travelling unit.

• Working space : 2.20m

Level -“1” ±Working platform

Level “-1” is where the the anchoring will be done. Furthermore, this platform will act as the supporting bracket.

• Working space : 2.20m

Level -“2” ±Working platform

Level “-2” allows workers to conduct finishing works such as grinding, plastering and painting.

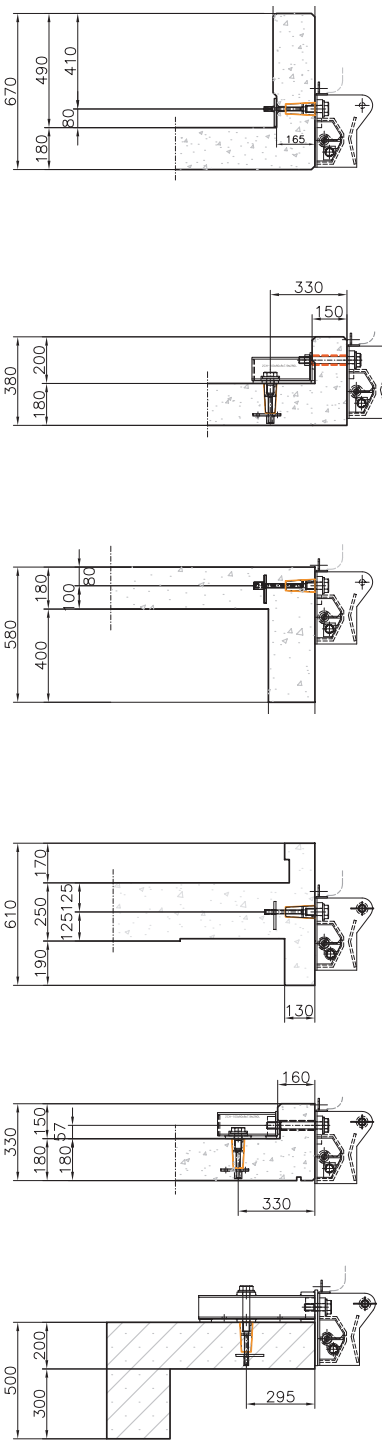
• Working space : 1.30m

Level -“3” ±Working platform

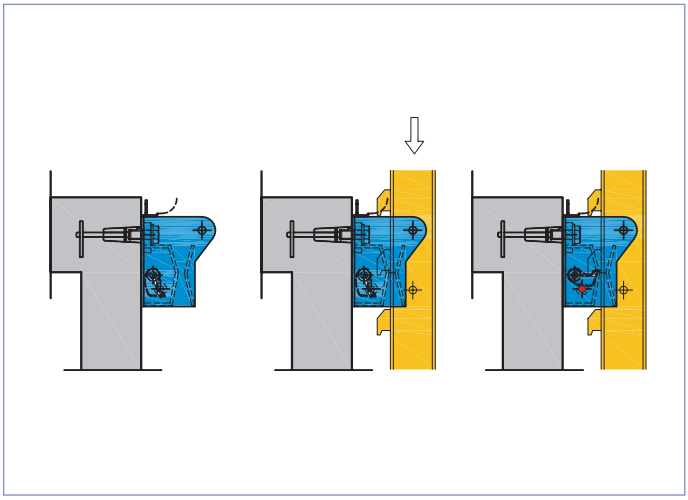
Level “-3” is where the system shoe will be dismantled.

• Working space : 1.30m

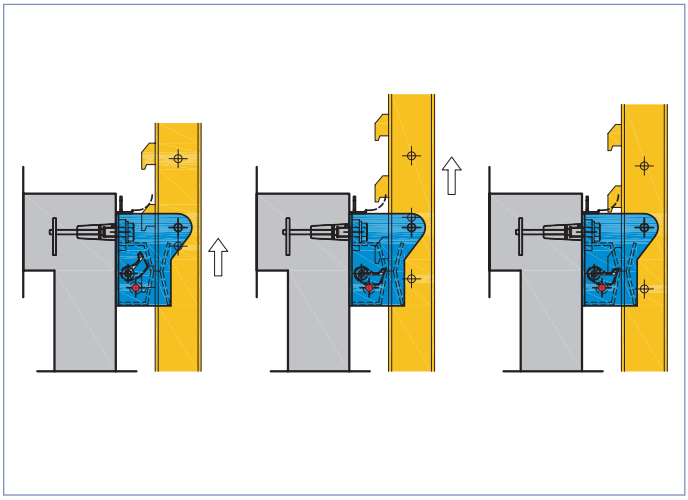
+ Shoe installation based on slab type



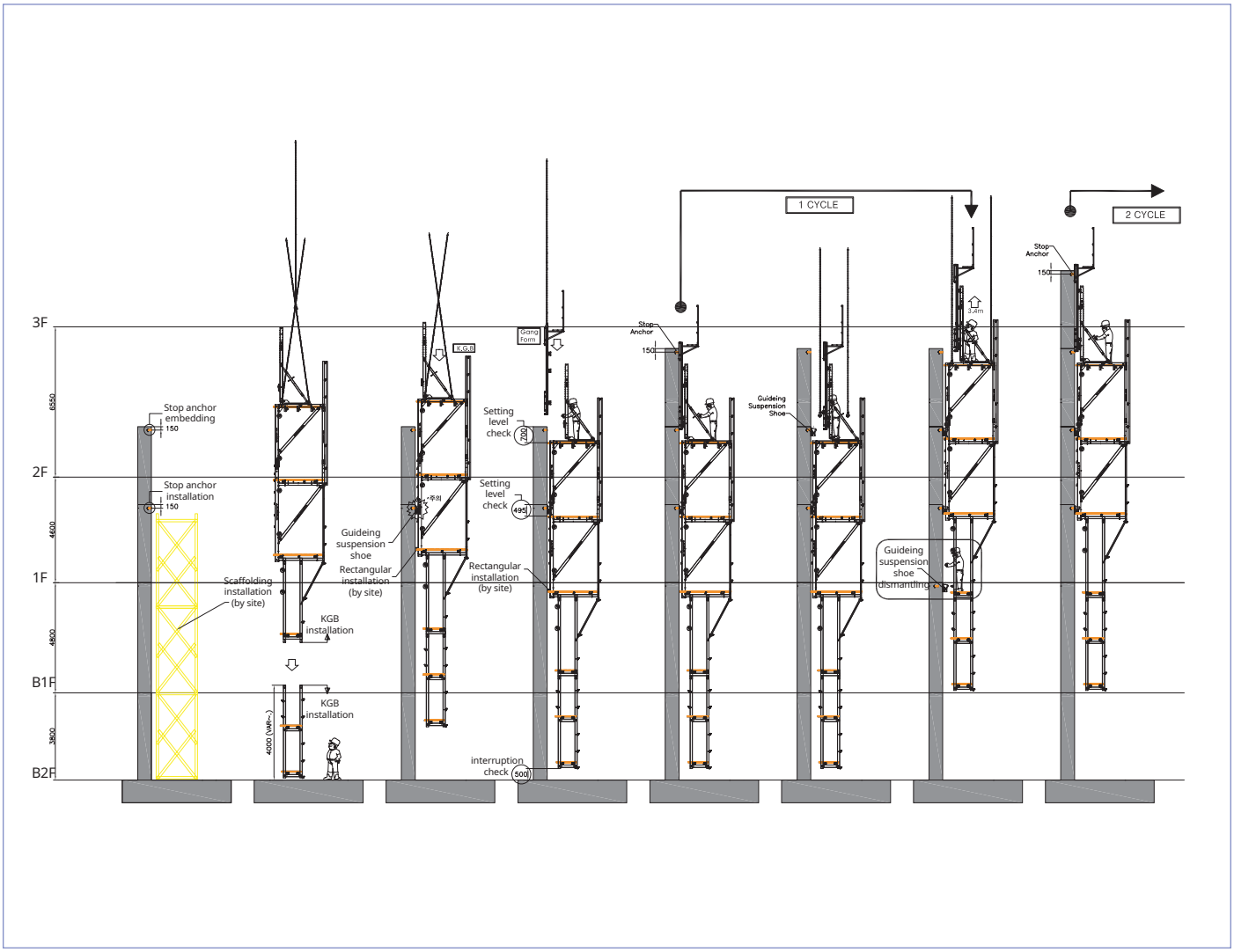
+ Operation flow of system setting



+ Flowchart of the system climbing



+ Cross section of system setting



KSB-C

Kumkang Slab Bracket - Crane lifting

E-TON Tower River_Seoul, Korea

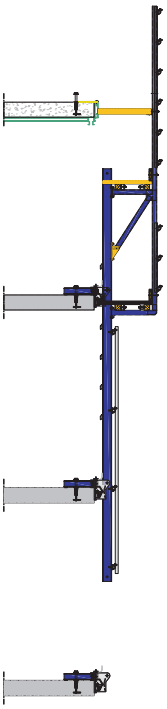
Particularities of KSB-C

Jointly developed with the KGB-C, the Kumkang Slab Bracket (lifted through tower crane) is used as an external working platform on flat slab reinforced concrete (RC) or steel reinforced concrete structure (SRC). With its large platform, it allows workers to install and dismantle facade formwork and steel rebar while preventing the free-fall of any construction materials.

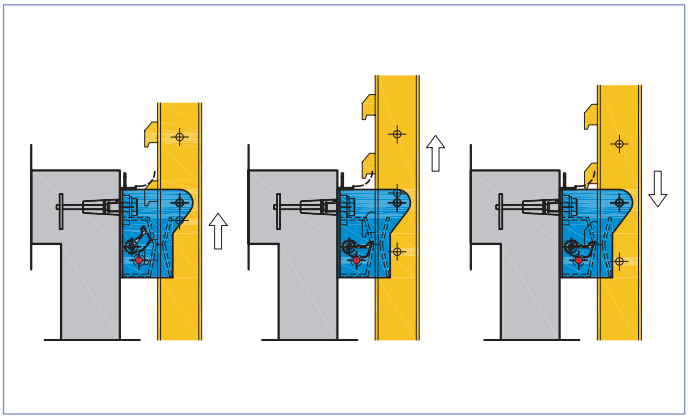
Although the tower crane capacity will dictate the sizes of the platforms, the construction companies still use this system for their high-rise and multipurpose buildings due to its cost effectiveness, quality and safety.

- Different from the KSC 100 or 50, the KSB-C uses a monolithic profile and platform.
- The KSB-C is lifted through a tower crane.
- Through the use of the shoe, it allows the system to climb vertically and thus allow a safer construction.
- Designed to allow the installation of slab end formwork on the platform.

+ KSB-C Section



+ Flowchart of the system climbing



+ Lifting operation procedure





P J T E-TON Tower River
Builder Injung constructions
Location Seoul, Korea
T y p e High-rise housing
System KSB-C

Since slab can be casted by installing deck-plate on steel frame as SRC structure building, KSB is not required in particular for slab work, but the client decided to adapt KSB System considering process control in cold weather, safety, and civil appeal. KSB System contributed to improve client's image by safely covering 4 levels of follow-up process and minimizing the civil appeal.

K-Cage

Kumkang Cage System

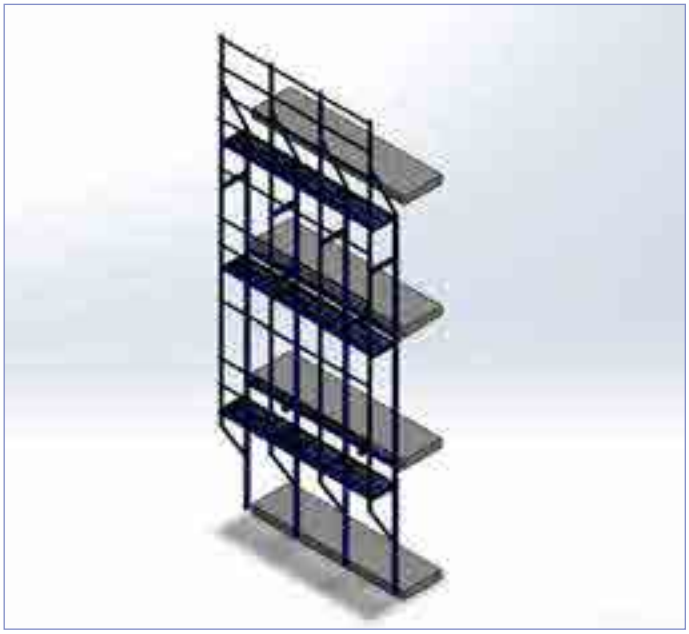
Golden land_Hanoi, Vietnam

Particularities of K-Cage

The Kumkang K-Cage is a lightweight scaffolding system which is used on a flat slab structure and lifted by tower crane.

High repetition, easy installation, labour and construction cost reduction and faster cycle time are all the advantages of our K-Cage system.

+ Slab type



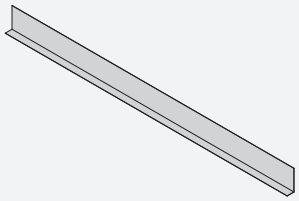
+ Wall type

+ Hoabinh - Vietnam

+ Him Lam Riverside - Vietnam

Article List

K-cage covering plate

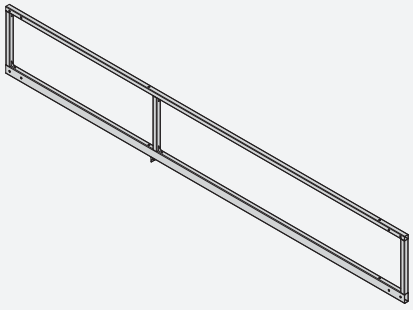


Components (mm)	Weight (kg)	Article No.
Covering plate 150 x 50 x 2050	3.2	-

K-cage expanded metal

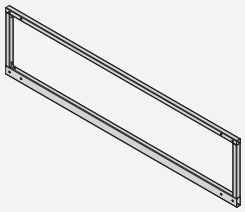
Components (mm)	Weight (kg)	Article No.
Expanded metal 550 x 4000	77.26	-

K-cage main profile



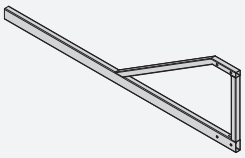
Components (mm)	Weight (kg)	Article No.
Main profile	59.7	-

K-cage extension profile



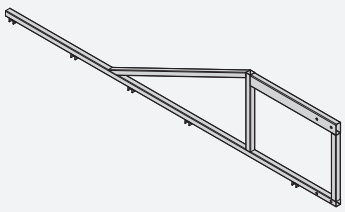
Components (mm)	Weight (kg)	Article No.
Extension profile 3000	35	-

K-cage safety profile



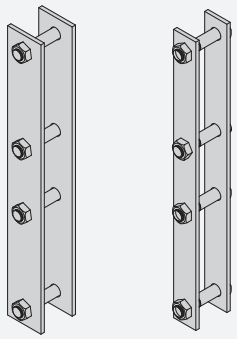
Components (mm)	Weight (kg)	Article No.
Safety profile	24.4	-

K-cage upper profile



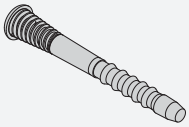
Components (mm)	Weight (kg)	Article No.
Upper profile	27.2	-

K-cage joint plate



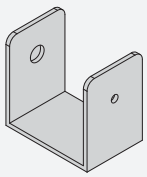
Components (mm)	Weight (kg)	Article No.
Joint plate A	3.1	-
Joint plate B	2.29	-

K-cage handrail lug pin



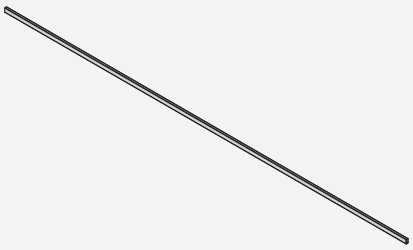
Components (mm)	Weight (kg)	Article No.
Handrail lug pin	0.02	-

K-cage handrail lug



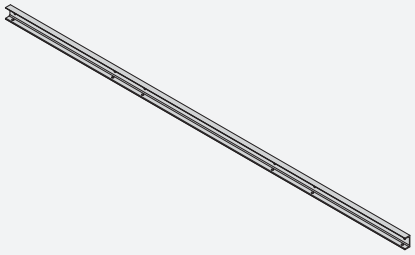
Components (mm)	Weight (kg)	Article No.
Handrail lug	0.05	-

K-cage pipe



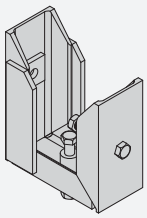
Components (mm)	Weight (kg)	Article No.
Pipe 40x20x1.4t	4.48	-

K-cage supporting channel



Components (mm)	Weight (kg)	Article No.
Supporting channel	37.3	-

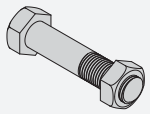
K-cage supporting shoe



Components (mm)	Weight (kg)	Article No.
Supporting shoe	8	-

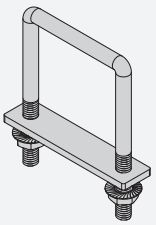
Article List

K-cage M16-85L bolt & nut



Components (mm)	Weight (kg)	Article No.
M16-85L bolt & nut	0.17	-

K-cage U bolt



Components (mm)	Weight (kg)	Article No.
U bolt	0.065	-

KP 240

Kumkang Climbing bracket system

Hyundai steel mill_Dangjin, Korea

Particularities of KP 240

Through embedding a high load anchor, the KP 240 system is used for various building and civil structures. Furthermore, the 2.4m platform allows a safer and wider working environment for workers.

By installing brackets on the external structure and connecting them with a separate travelling unit, the KP 240 will be used as a full formwork system. This system can also be used for working platform inside a pier elevator pit.

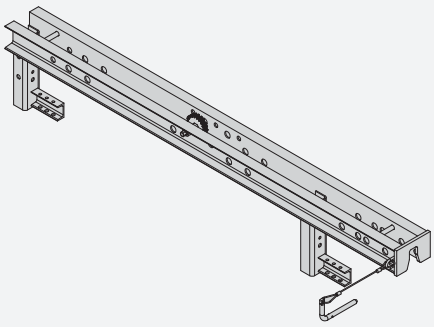
+ Incheon LNG tank - Korea




+ Dangjin fuel treatment facilities - Korea

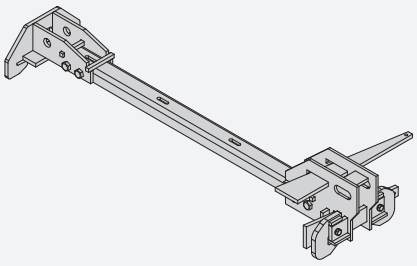

Article List

KP 240 horizontal profile



Components (mm)	Weight (kg)	Article No.
Horizontal profile	88	k0250010

KP 240 running gear

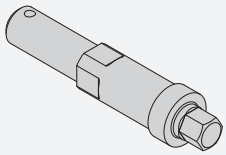


Components (mm)	Weight (kg)	Article No.
Running gear	88	k0250010

KP 240 pinion

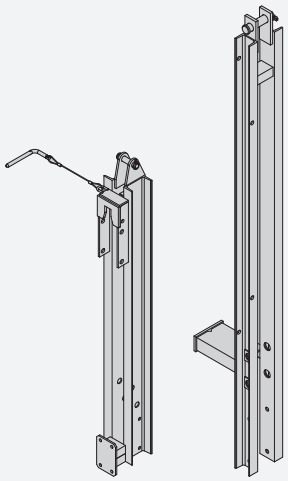
Components (mm)	Weight (kg)	Article No.
Pinion	0.6	k0250011

KP 240 shaft



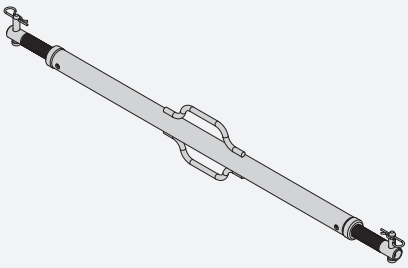
Components (mm)	Weight (kg)	Article No.
Shaft	0.86	k0250012

KP 240 main vertical profile



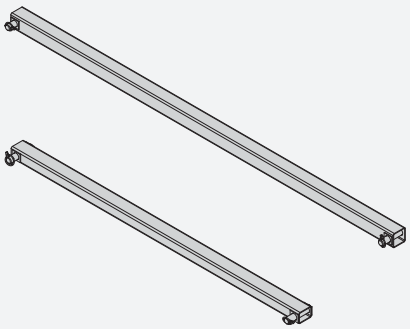
Components (mm)	Weight (kg)	Article No.
Main vertical profile 160	90.5	k0250020
Main vertical profile 80	44	k0250030

KP 240 pressure spindle



Components (mm)	Weight (kg)	Article No.
Pressure spindle	26	k0250040

KP 240 pressure strut

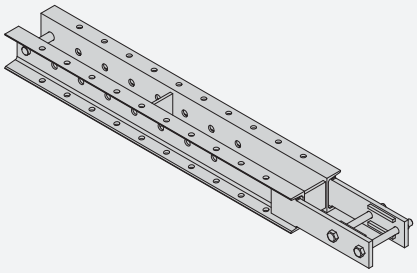


Components (mm)	Weight (kg)	Article No.
Pressure strut long	24.7	k0250050
Pressure strut short	16.3	k0250060

KP 240 vertical waling

Components (mm)	Weight (kg)	Article No.
Vertical waling	127.5	k0250070

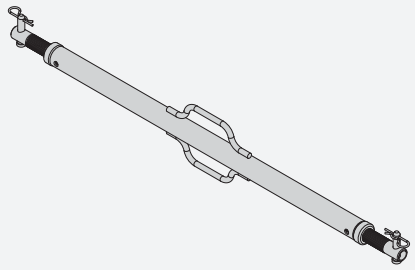
KP 240 vertical waling extension



Components (mm)	Weight (kg)	Article No.
Vertical waling extension	41.5	k0250080

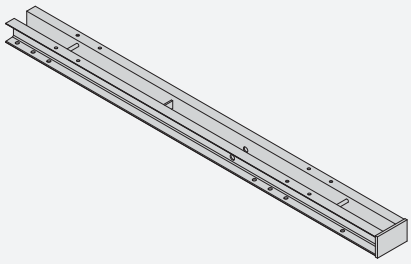
Article List

KP 240 plumbing spindle



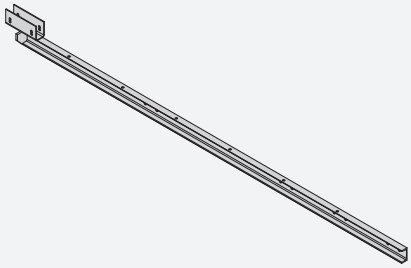
Components (mm)	Weight (kg)	Article No.
Plumbing spindle	48	k0250090

KP 240 kf traveling profile



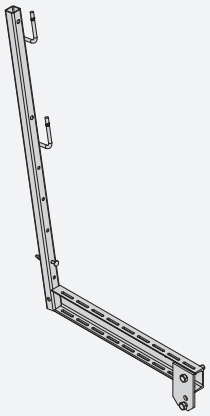
Components (mm)	Weight (kg)	Article No.
Kf traveling profile	57.5	k0250200

KP 240 suspension profile



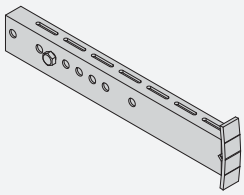
Components (mm)	Weight (kg)	Article No.
Suspension profile	43	k0250110

KP 240 screw on access bracket



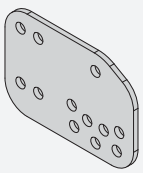
Components (mm)	Weight (kg)	Article No.
Screw on access bracket	19	k0250120

KP 240 distance profile



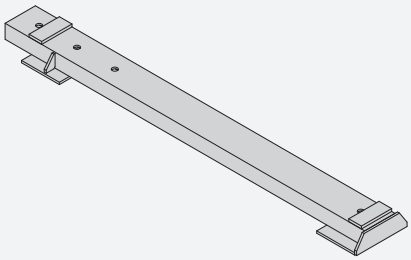
Components (mm)	Weight (kg)	Article No.
Distance profile	7.8	k0250130

KP 240 swivel plate



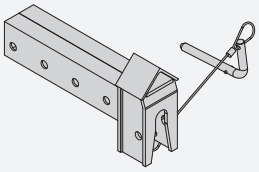
Components (mm)	Weight (kg)	Article No.
Swivel plate	4.5	k0250140

KP 240 starter block unit



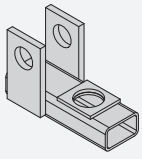
Components (mm)	Weight (kg)	Article No.
Starter block unit	23.2	k0250150

KP 240 main beam head



Components (mm)	Weight (kg)	Article No.
Main beam head	14.9	k0250160

KP 240 wind bracing



Components (mm)	Weight (kg)	Article No.
Wind bracing	4.6	k0250210

KD 150/220

Kumkang Dam bracket system

Buhang Dam _Gimcheon, Korea

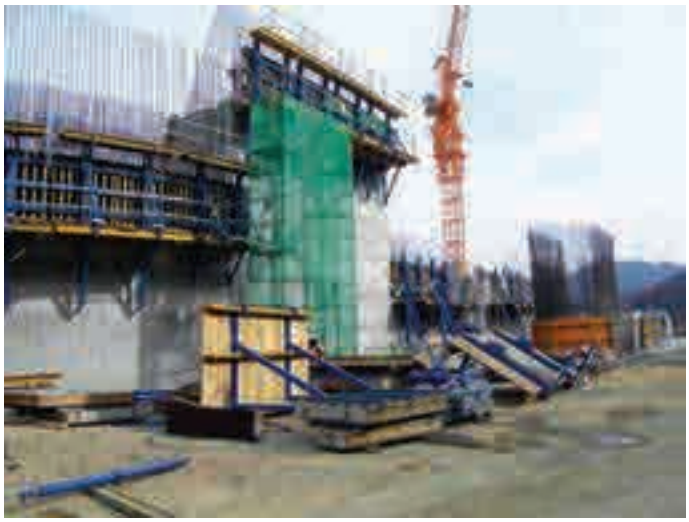
Particularities of KD 150/220

Our KD 150/220 is mainly used for basement of building or civil structures (such as dam) where tie rod cannot be used.

Based on the tensile strength of the embedded anchor, Kumkang Kind offers 2 systems:
KD 150 (15 ton, width: 1.70m)
KD 220 (22 ton, width: 2.40m)

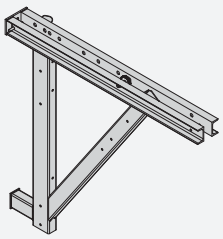
+ Chilgokbo Weir - Korea

+ Buhang Dam - Korea



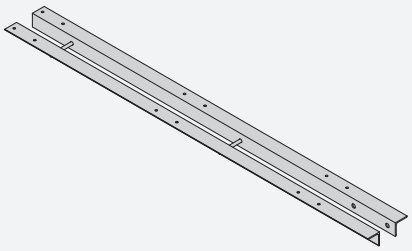
Article List

KD 220 cantilever bracket F22



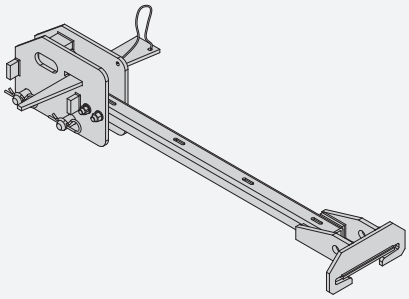
Components (mm)	Weight (kg)	Article No.
Cantilever bracket F22	230	k0210010

KD 220 supporting profile F22



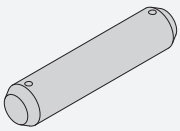
Components (mm)	Weight (kg)	Article No.
Supporting profile F22	32.4	k0210020

KD 220 retracting unit F22



Components (mm)	Weight (kg)	Article No.
Retracting unit F22	44.8	k0210030

KD 220 suspension bolt d32

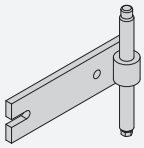


Components (mm)	Weight (kg)	Article No.
Suspension bolt d32	1.2	k0210031

KD 220 vertical waling 2.8m, 3.2m, 4.0m

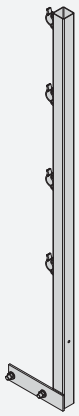
Components (mm)	Weight (kg)	Article No.
Vertical waling 2.8m, 3.2m, 4.0m	150	k0210040

KD 220 adjusting spindle for dam



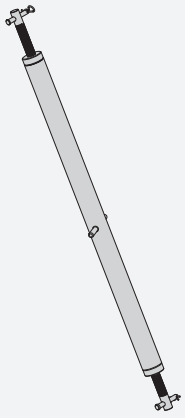
Components (mm)	Weight (kg)	Article No.
Adjusting spindle for dam	5	k0210042

KD 220 handrail post



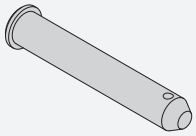
Components (mm)	Weight (kg)	Article No.
Handrail post 2000	21.3	k0210050

KD 220 plumbing spindle



Components (mm)	Weight (kg)	Article No.
Plumbing spindle	50	k0210060

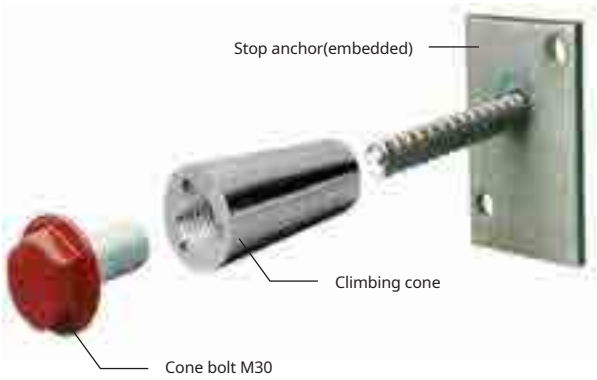
KD 220 joint bolt



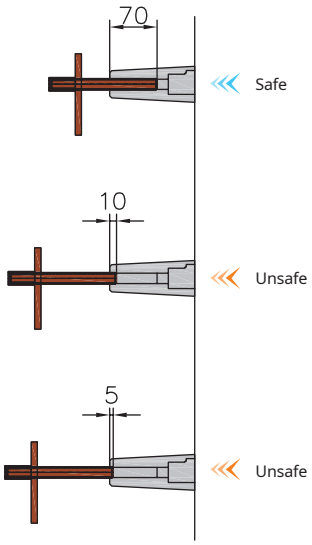
Components (mm)	Weight (kg)	Article No.
Joint bolt	0.8	k0210061

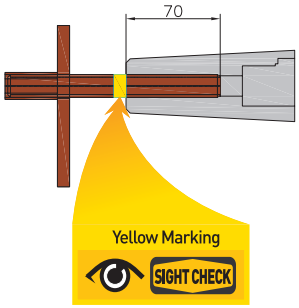
Anchor system

+ Assembly of anchor system



+ Anchor Safety Check





As shown on the image, the anchor must be screwed until the yellow marking line (70mm). It is extremely importanttoverifytheproper installation to ensure the safety of the system.

Project References

+ W - Korea

- K-Al Form, Gang Form, KSC 50, KGB-H

+ Marina G7 - Korea

- K-Al Form, Gang Form, KGB-H

+ Yulim Jangpyung - Korea

- KSC 50, KGB-H

+ Dongwon Royal Duke Vista - Korea

- KSC 50, KGB-H, KGB-C

+ Prugio Worldmark - Korea

- KSC 100

+ Posco The Sharp Greensquare - Korea

- KGB-C

Project References

+ Samsung DSR - Korea

- KSC 50, KSC 100

+ Raemian Yongsan - Korea

- KGB-H

+ Trimage - Korea

- K-Al Form, KGB-H, KSB-H

+ Posco The Sharp Parkcity - Korea

- KGB-H

+ Sk sky view - Korea

- KGB-H

+ Yongsan The Prime - Korea

- KGB-H

+ Samsung R5 - Korea

- KSC 50, KGB-H

+ Posco Seoul forest The sharp - Korea

- KGB-H

+ Songpa Prugio City - Korea

- KSB-H

+ Songpa Obelisk - Korea

- KSB-H

+ Posco Songdo The Sharp Central Park 2 - Korea

- KSB-H

+ Susomoon Daehan Building - Korea

- KSB-P

Project References

+ Dongtan Prugio City - Korea

- KGB-C

+ Park View Xi - Korea

- KGB-C

+ New KEPCO E&C Head Office - Korea

- KSB-H

+ Ichon Caelitus - Korea

- KGB-H

+ Hapjeong Prugio - Korea

- KGB-H

+ Sinchon Prugio city - Korea

- KSB-P

+ Geoje Daemyung resort - Korea

- KGB-H

+ Daelim janggyo 4 - Korea

- KSB-H

+ Yuseong Prugio city - Korea

- KGB-H

+ Bucheon Kumho Richensia - Korea

- KSC 50

+ Ilsan Y-city - Korea

- KGB-H

+ Jeonju Sky tower - Korea

- KGB-H

Project References

+ DNP Tower, Kuala Lumpur - Malaysia

- K-Al Form, KSB-C

+ Kerjaya sky88, Johor - Malaysia

- K-Al Form, KSB-H

+ Ireka Eco City, Kuala Lumpur - Malaysia

- KSB-C

+ JKR Tower, Kuala Lumpur - Malaysia

- K-Al Form, KSB-C

+ Nus College - Singapore

- K-Al Form, Gangform, KGB-C, Balcony cage

+ Alexandra - Singapore

- K-Al Form, Gangform, KSC-50, KGB-H, KSB-H

+ Delhi one, Delhi - India

- K-Al Form, Gang form, KGB-H

+ An Khanh Splendora, Hanoi - Vietnam

- K-Al Form, KSB-H

+ Keangnam Landmark 72, Hanoi - Vietnam

- K-Al Form, Gang form, KSC-50

+ Dolphin Plaza, Hanoi - Vietnam

- K-Al Form, KGB-H

+ Daewoo Tripoli Hotel, Tripoli - Libya

- K-Al Form, Gang form, Euro form, KGB-C

+ Phnom Penh Tower, Phnom Penh - Cambodia

- K-Al Form, KSB-C

Bridge formwork system

Based on creative technology, we, Kumkang Kind, are doing our best to provide the optimal system to our customers.

With the most advanced manufacturing technology and technical know-how from our vast domestic & overseas experience, Kumkang Kind shall always provide the most economical and productive formwork systems to our clients. Kumkang Kind will create a new era of formwork system in the global market.

Pier formwork

312 sector of Busan subway _Busan, Korea

Particularities of Pier formwork

Designed and manufactured through our extensive experience, our pier formwork is mainly used for bridge construction (various designs of pier and coping).

+ Seongsu Grand Bridge - Korea

+ 4th Geumgang Bridge - Korea

+ Worldcup Grand Bridge - Korea

+ Sepung Bridge - Korea

Coping formwork

Miho stream Bridge_Cheongju, Korea

Particularities of coping formwork

Plate girder system, one of Kumkang Kind's coping system is used to build coping by installing anchor bracket on top of the pier and while the formwork stiffeners shall take the concrete load. This makes assembly, installation and dismantlement of the formwork easier than the traditional method (support method) which results in efficient construction while minimizing the cycle time. Moreover, it can be applied in higher bridges.

The truss girder system, another Kumkang Kind's coping system is structurally safe and minimizes the raw material in order to make the formwork economically efficient for the project.

+ Miho stream Bridge - Korea

+ Jayoo Road Zone 3-3 - Korea

+ Gyodong Grand Bridge - Korea

+ 1st section of Donghae Expressway - Korea

Pylon

Incheon Grand Bridge_Incheon , Korea

Particularities of pylon formwork

Used in mega pylons and long span bridges, our Kumkang pylon formwork are extensively designed by conducting a meticulous analysis of the static calculation and through 3D design technology.

The Incheon Grand Bridge (cable-stayed bridge), Namchang Grand Bridge (cable-stayed bridge), Ulsan Grand Bridge (suspension bridge) and Kumga Grand Bridge (extradosed bridge) are only some of the several projects where our pylon formwork was supplied.

+ Incheon Grand Bridge - Korea

+ Nakdong Grand Bridge - Korea

Pier table

Beonam Bridge_Jangsu, Korea

Particularities of pier table formwork

This formwork is used to pour concrete on the top structure of a bridge (pier table); using the truss girder system, plywood and steel formwork and the main bracket, our Kumkang system allows a precise and safe construction.

+ Beonam Bridge - Korea

+ Sangya Bridge - Korea

+ Soosong Bridge - Korea

+ Gyeongin Ara Waterway Section 6 - Korea

F.C.M

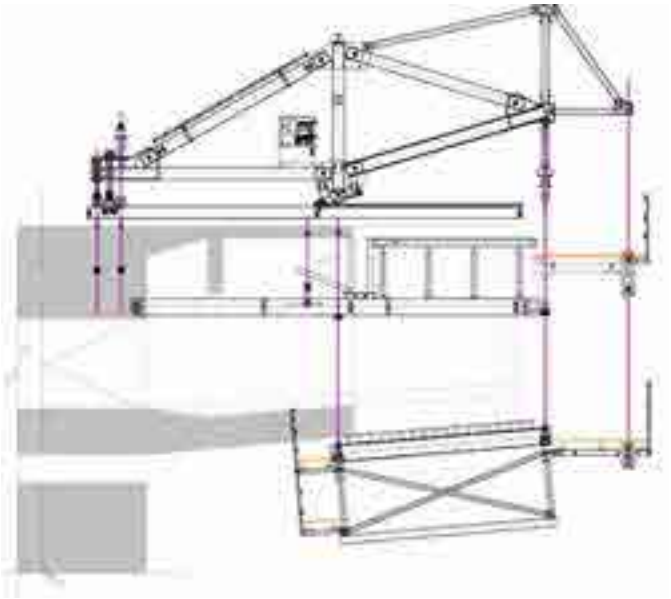
Free Cantilever Method - Form traveler

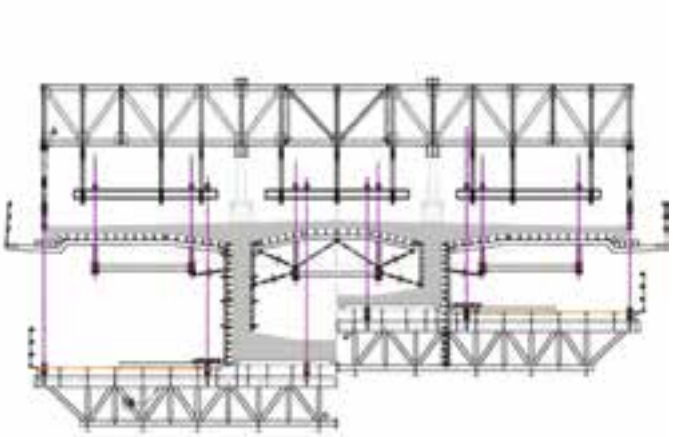
3 sector of Gyeongin Canal _Gyeonggi-do, Korea

Particularities of F.C.M

The Free Cantilever Method (F.C.M) was firstly developed by the German Dywidag company in the 1950's. This method performs progressive placement by maintaining the symmetry on both sides with a movable truss (form traveler), without any scaffolding on the already built pier and pier table.

The system was applied to Shin Haeng Ju Grand Bridge, Shin Danyang Grand Bridge (highest bridge in Korea), and other large and small F.C.M bridges, and Kumkang Kind is renowned for its quality and technology.





+ 6-1 sector of High speed Railway - Korea

+ Shindanyang Large Bridge - Korea

F.S.M

Full Staging Method - Bent

2-2 section of Choji bridge-Incheon road_Incheon, Korea

Particularities of F.S.M

The Full Staging Method (F.S.M) is the most common method among PSC construction method, in which the scaffolding will support the concrete, formwork and working platforms' load until the concrete reaches the prescribed strength.

According to the jobsite requirement, Kumkang Kind shall provide the most optimal system.

+ 4-2 section of High speed railway - Korea

+ Busan port - Korea

F.S.L.M

Full Span Launching Method

Honam High Speed Railway_Nonsan, Korea

Particularities of F.S.L.M

The Full Span Lauching Method (F.S.L.M) is the most advanced method in producing the upper pier girder in precast concrete. Kumkang Kind has successfully used this method for the 1st time in South Korea (Honam high-speed railway project).

Through our utmost quality and technology, Kumkang Kind has been awarded various overseas projects such as the Kuwait Doha Link project and Brunei Temburong CC2 project.

+ 2-2 sector of Honam High Speed Railway - Korea

P.S.M

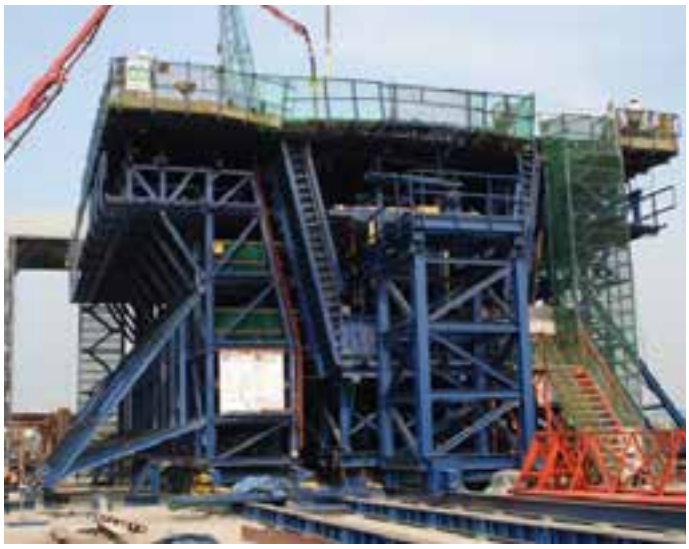
Precast Segment Method

Uijeongbu LRT Project_Uijeongbu, Korea

Particularities of P.S.M

The Precast Segment Method is a method to partially produce upper pier girders in a constant length and connect the girders consecutively using launching girder and etc. This method was not only applied to Incheon Grand Bridge, Uijeongbu Light Rail Transit but also applied o Bahrain ISA Town projects and other overseas projects.

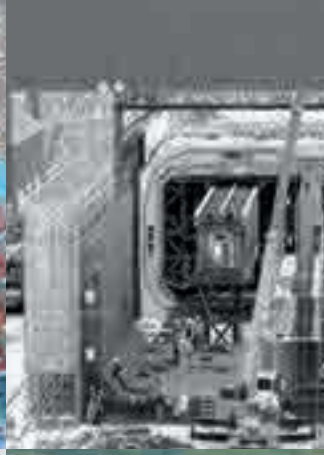
+ Incheon Grand Bridge - Korea



+ Uijeongbu LRT Project - Korea

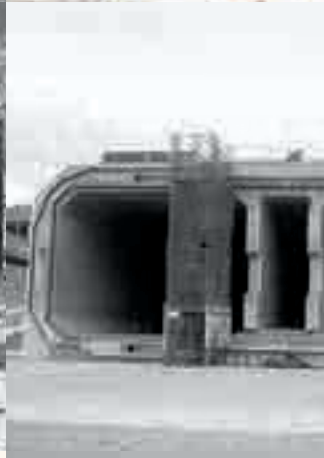
+ ISA Town Project - Bahrain





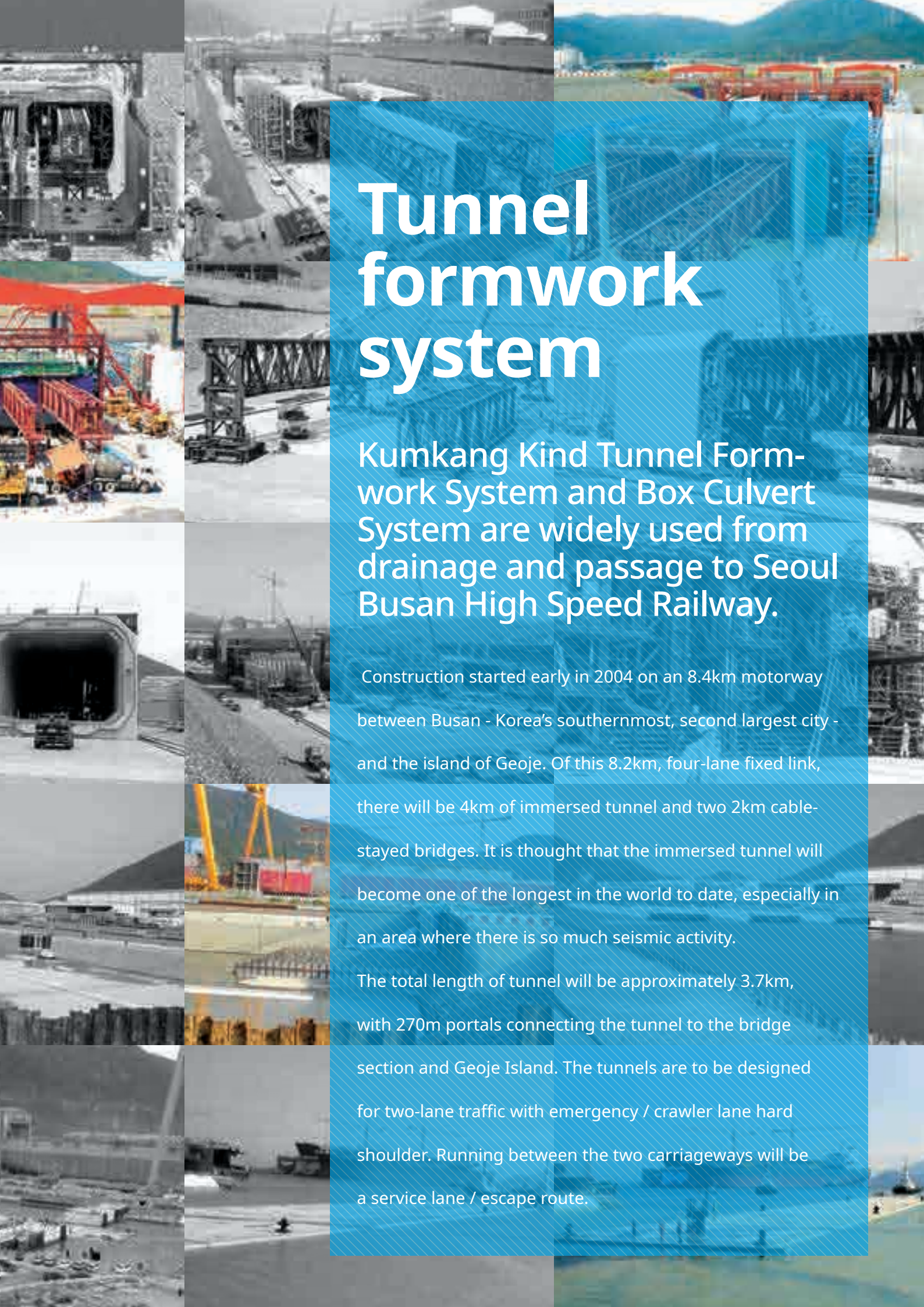










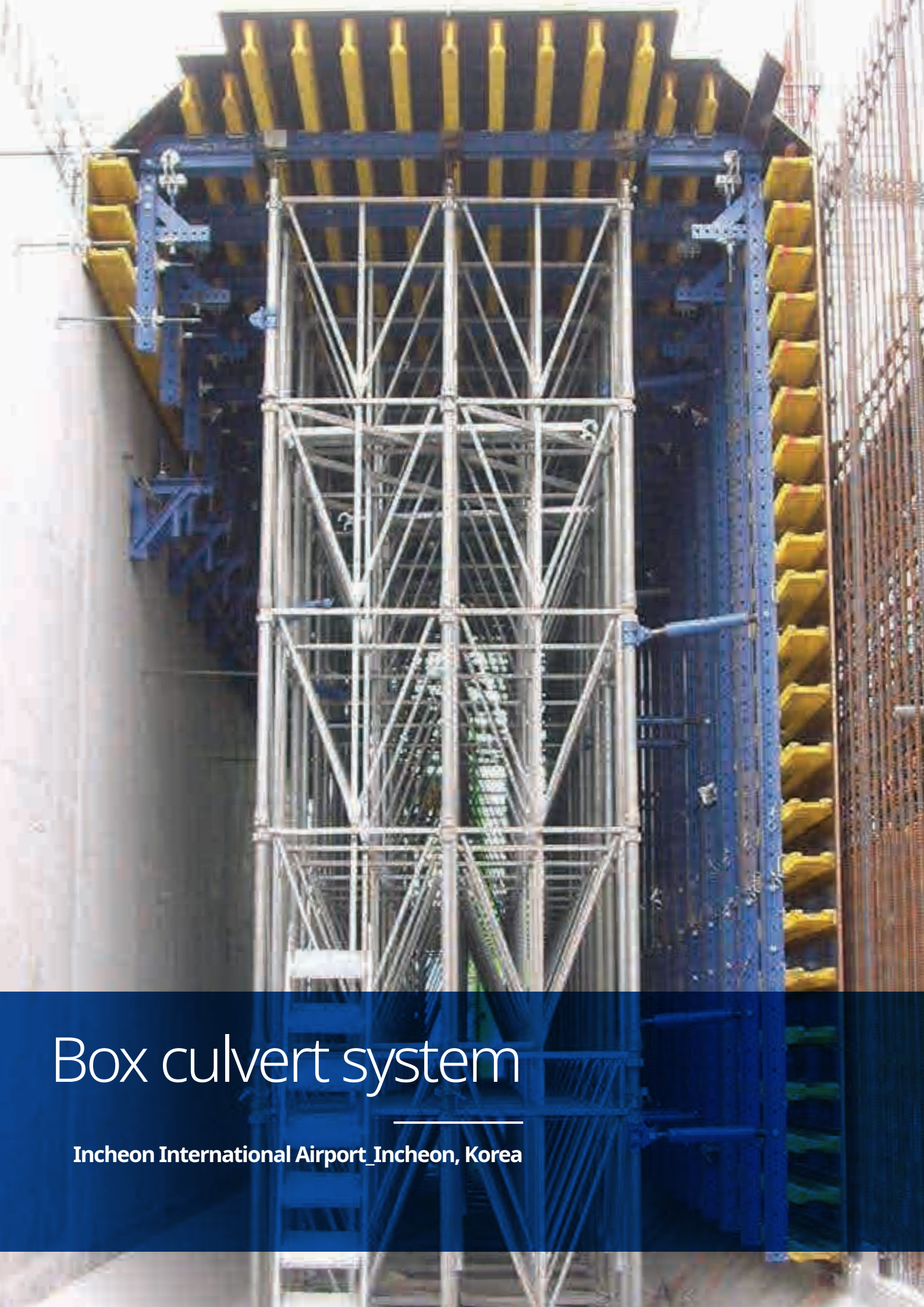


Tunnel formwork system

Kumkang Kind Tunnel Form-work System and Box Culvert System are widely used from drainage and passage to Seoul Busan High Speed Railway.

Construction started early in 2004 on an 8.4km motorway between Busan - Korea's southernmost, second largest city - and the island of Geoje. Of this 8.2km, four-lane fixed link, there will be 4km of immersed tunnel and two 2km cable-stayed bridges. It is thought that the immersed tunnel will become one of the longest in the world to date, especially in an area where there is so much seismic activity.

The total length of tunnel will be approximately 3.7km, with 270m portals connecting the tunnel to the bridge section and Geoje Island. The tunnels are to be designed for two-lane traffic with emergency / crawler lane hard shoulder. Running between the two carriageways will be a service lane / escape route.



Box culvert system

Incheon International Airport_Incheon, Korea

Particularities of Box Culvert System

There are two types of box culvert system depending on the site condition: 1) small, manual, movable by wheels on scaffolding system, and 2) large, automatic, movable by hydraulic unit.

+ Incheon International Airport - Korea

+ Ilsan Grand Bridge - Korea

+ 6th sector of Guri-Poheon Road - Korea

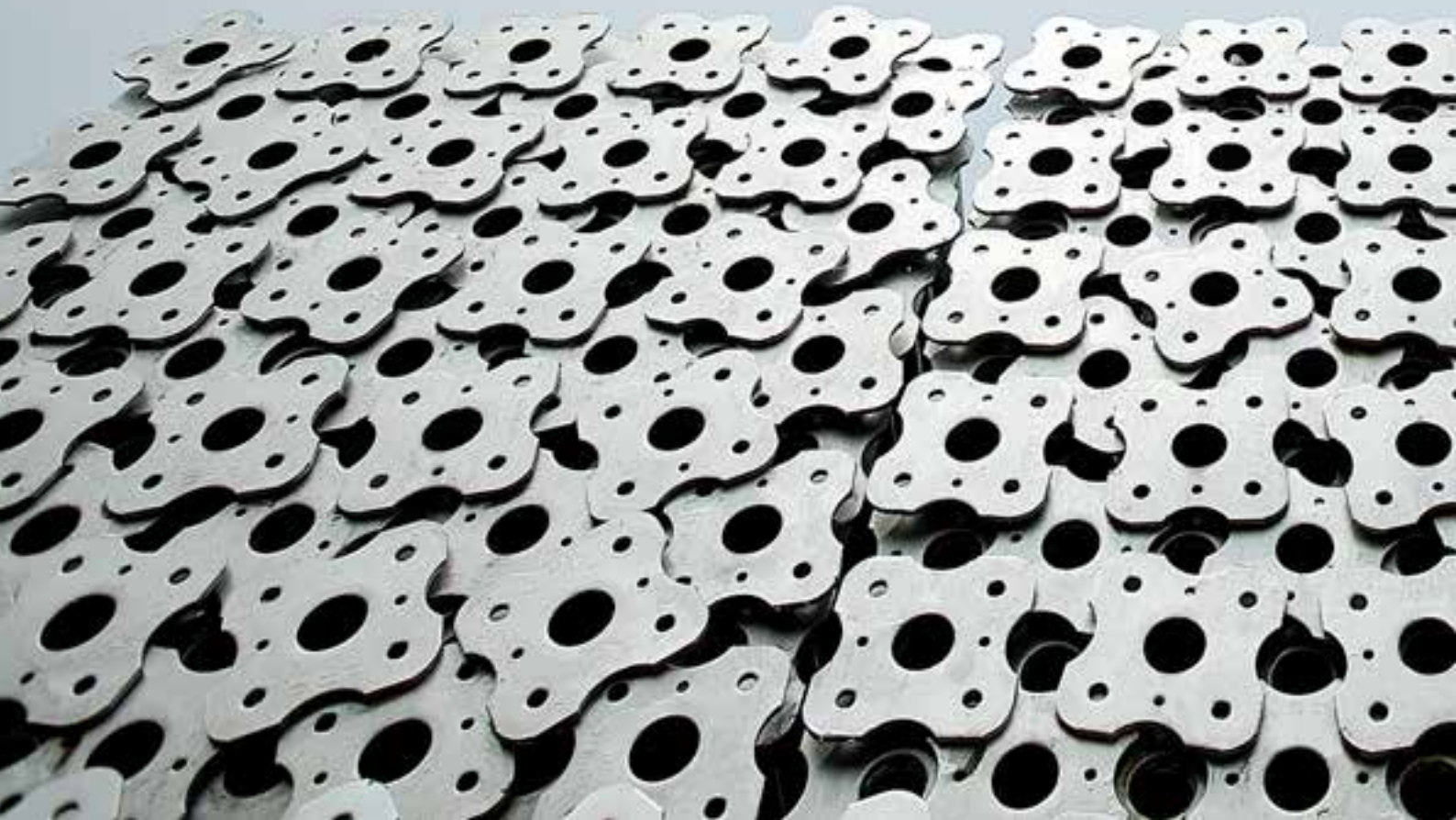
+ Gimcheon Nongso-Eomo Road - Korea

Immersed tunnel

GK Immersed Tunnel_Geoje, Korea

Particularities of immersed tunnel

Introduced for the first time in South Korea, the immersed tunnel connects Busan to Geoje Island. The structure will be prefabricated at the workshop, sealed with bulkheads and floated through the buoyant force, mounted on the earth 50m underwater, before being connected together with the water pressure.



Scaffolding & Shoring System

Whenever you need props or scaffolding system, you will need to consider the size and location of the construction, quantity of materials needed, quality of products and etc.

With exhaustive field experience, we offer you the best scaffold and shoring materials available on the market. In order to produce the most secure and reliable products, we are using high-strength steel materials with special galvanizing method to reinforce its durability. Thus, scaffolding & shoring system has become a synonym of Kumkang Kind.

Scaffolding products

For the most secure construction projects

Kumkang Kind's support and scaffolding products use high-strength steel materials with a special galvanizing method to reinforce its durability. Moreover, with our accumulated technological know-hows and wide construction experience, Kumkang Kind offers you various top-notch quality products for your construction projects.

+ Prop

- Using our great wealth of technological know-how and the best possible raw material, we have developed the most secure and durable props available on the market. Due to its easy structure, our prop system is very simple to install and dismantle.

+ Clamps

- One of the most important products to ensure the safety of a jobsite is clamps. Kumkang Kind clamps are renowned domestically and internationally for their quality. Various types of clamps are offered at Kumkang Kind: fixed clamps, swivel clamps, beam clamps, support clamps, hanger clamps, and many others.

+ Scaffolding Pipe

- Produced with high-strength material, Kumkang Kind scaffolding pipe is highly respected by our customers for its level of safety and durability with its special galvanizing method. Its recognition and market share have already been proven.

+ Square Pipe

- In order to offer you the most reliable and secure square pipes, we only produce and sell square pipes with a thickness of more than 2mm. Their durability and quality will provide safety and trust for all your construction projects.

+ Safety Board

- Produced in various lengths and widths through our robotized system, Kumkang Kind safety board is light-weight but very rigid at the same time. Moreover, our safety board has been made for easy installation and dismantling by the jobsite workers. Simplicity and efficiency are two words which can best describe our safety board.

+ Shipyard scaffold

- Our scaffolding products are also used in the shipbuilding industry. They are used in building the inner part of the L.N.G.C. (liquefied natural gas carrier) and our products' efficiency is unbeatable. Moreover, our innovativesafety boards are used to ensure the safety of workers.

Shipyard jobsite

Clamps

- Clamps are used to attach horizonal and vertical scaffolding pipes. We offer a variety of clamps

Item	Size (mm)	Weight (kg)
Fixed, Swivel	ø48.6 X ø48.6	0.7
Advanced Universal Clamp	ø48.6 X ø42.7	0.7
Beam Clamp	ø48.6	1.2
Single Clamp	ø60.5 ø48.6	0.35
Support Clamp Swivel	ø48.6 X ø60.5	0.9

Adjustable steel prop

- Supporting concrete molding structures such as office buildings, apartment buildings or bridges, our adjustable steel props help to accomplish a safe and precise construction.

Item	Size (mm)	Weight (kg)
V-1	1,800 ~ 3,200	10.9
V-2	2,000 ~ 3,400	11.5
V-3	2,400 ~ 3,800	12.5
V-4	2,600 ~ 4,000	13.0

Scaffolding Pipe

Specification		Weight (kg)
STK 500 ø48.6 X 2.3t	6m	15.70
		15.00
	4m	10.50
		10.00
STK 500 ø48.6 X 2.3t	3m	7.80
		7.50
	2m	5.20
		5.00

Safety Board

- Fixed on scaffolding columns, our safety board is used whenever a worker needs to stand up to install, dismantle, paint or weld any part of a structure.

Type	Size (mm)	Weight (kg)
Stair board	250 X 914	7
Working board	250 X 1829	9
	400 X 1829	13
	500 X 1829	15
Access board	250 X 3000	15
	400 X 3000	18
	500 X 3000	20

Square Pipe

- Square pipe is used to support sidewalls or slabs while installing a formwork system.

Pipe [STK400]	Size (mm)	Weight (kg)
□50 X 50 X 2.0	250 X 914	7
	250 X 1829	9
	400 X 3000	18
	500 X 3000	20

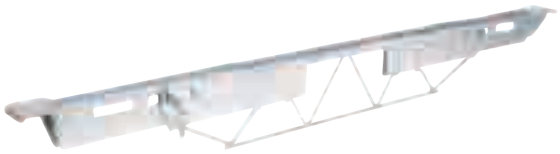
Joint Pins

- Joint pins are used to connect two scaffolding pipes together. After inserting the joint pin into the scaffolding pipe, one must rotate the joint pin until it locks into the rivet pin. By doing this, the joint pin will not get loose from the scaffolding pipe.

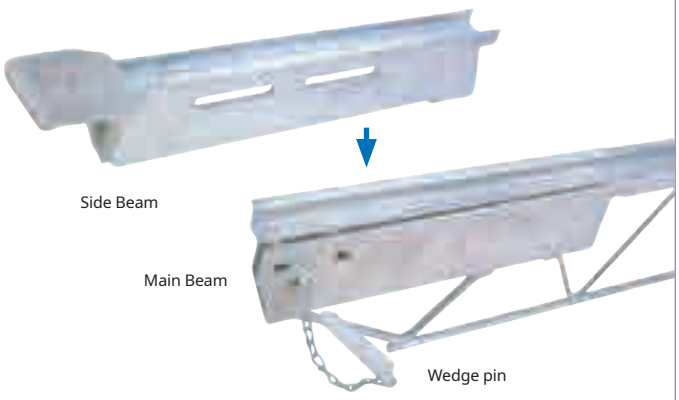
Horizontal beam support

New type of Beam with lighter and easily applicable bracket integrated design

- Side beam acts as bracket for excellent usability which results in less number of brackets needed and stock.
- Wooden panels are nailed on top of the beam to save work time.
- Length can be adjusted precisely using the wedge pin and dismantling is one-touch job.
- The weight of 2,500mm beam is only 19.0kg.
- Insert side beam into the main and fix with wedge pin.
- Simply designed for fast and easy construction.

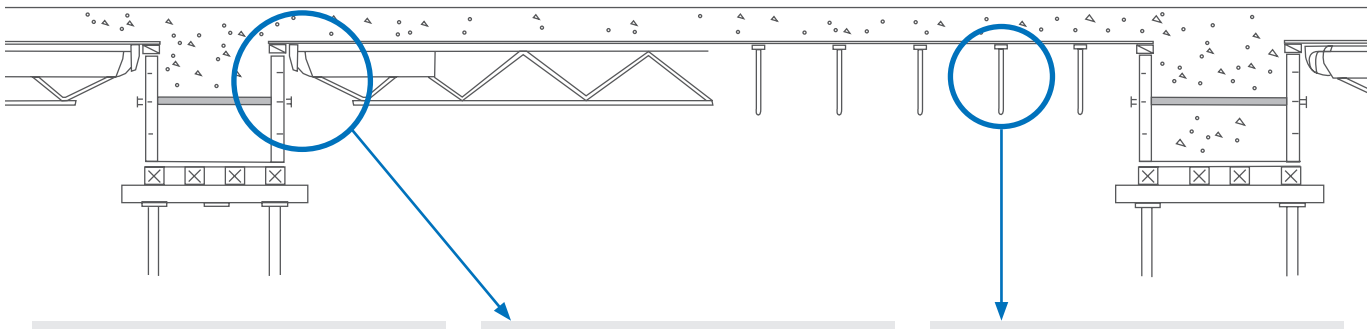


• Beam support has six different types ranging from 1,450mm ~ 5,300mm



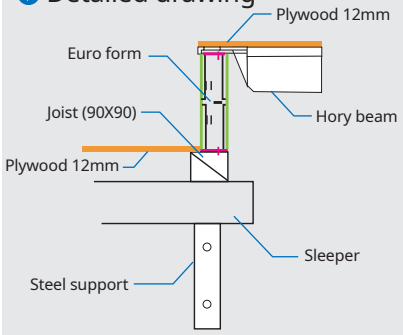
+ Horizontal beam support plywood application description

- Insert side beam into the main beam. Adjust to the correct span and fix with wedge pin. After installation, put timber onto the upper part of the beam and fix plywood with nails. Then, pour concrete afterwards.



Able to adjust span with smooth sliding.

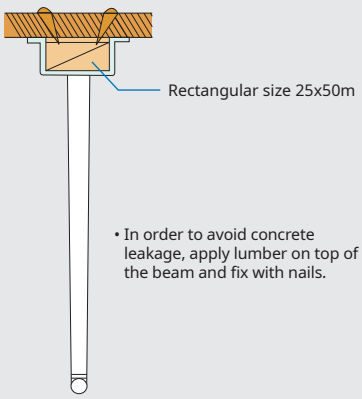
Detailed drawing



• When used for beam type mould, lower the side beam panel by 9mm.

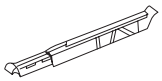
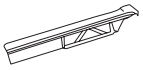
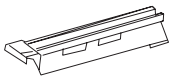
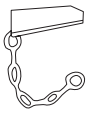
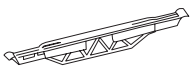
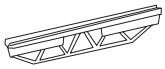
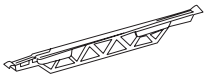
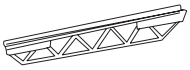
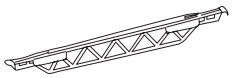
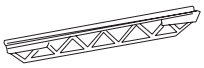
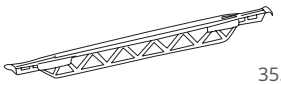
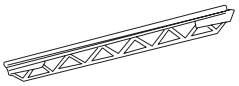
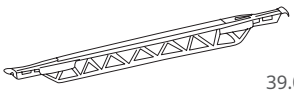
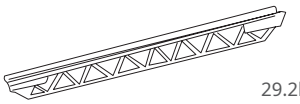
• Fill in with boards between upper panel and side beam

Plywood joint detailed drawing



• In order to avoid concrete leakage, apply lumber on top of the beam and fix with nails.

+ Specification

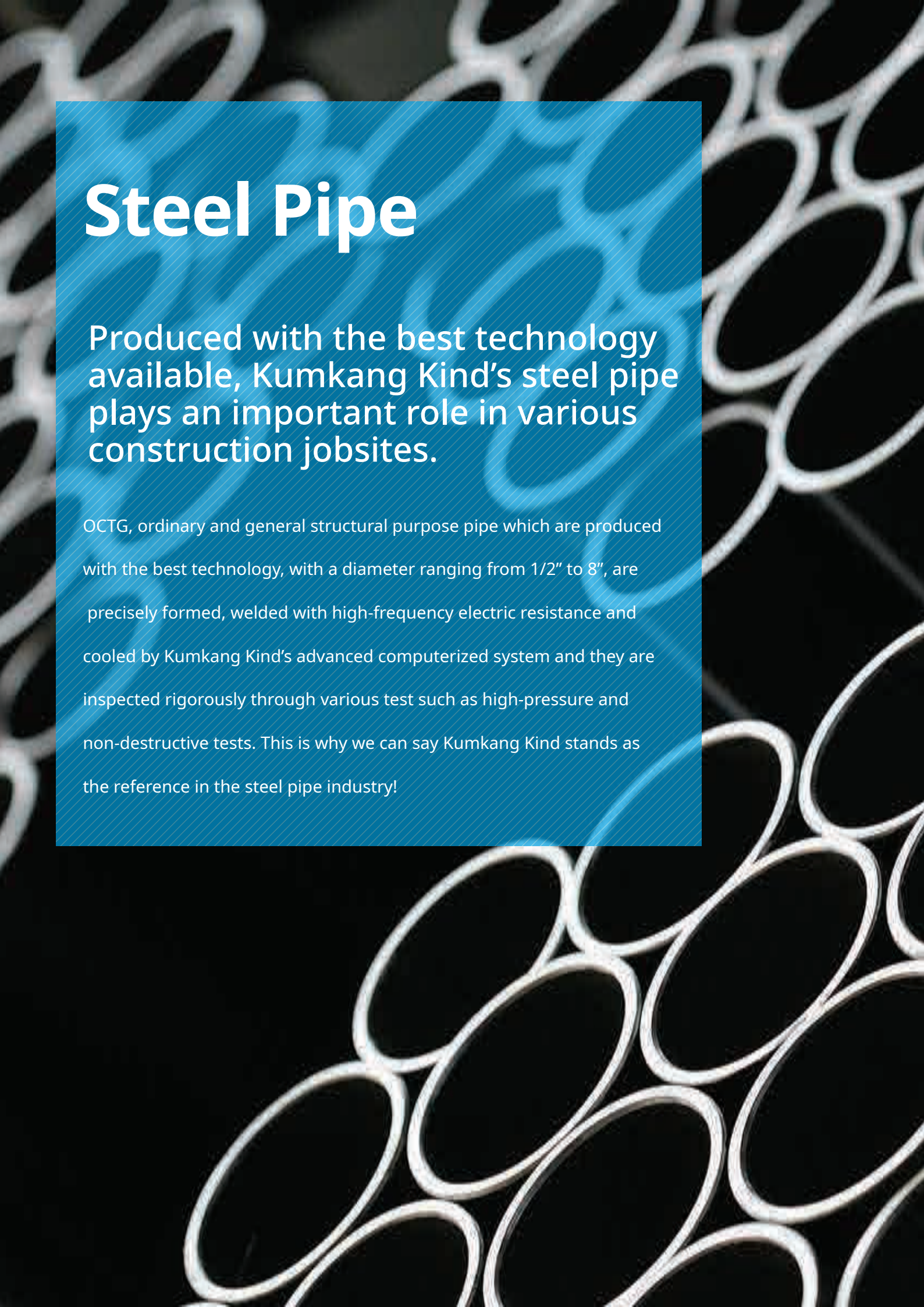
Type	Assembly drawing	Main beam	Side beam	Wedge pin
14-18	 12.3kg	 7.4kg	 4.7kg	 0.2kg
18-25	 19.0kg	 9.2kg		
25-32	 23.0kg	 13.2kg		
32-39	 28.0kg	 18.2kg		
39-46	 35.0kg	 25.2kg		
46-53	 39.0kg	 29.2kg		

+ Gajaeul i-park - Korea

+ Gildong prugio - Korea

+ Opo woolim - Korea

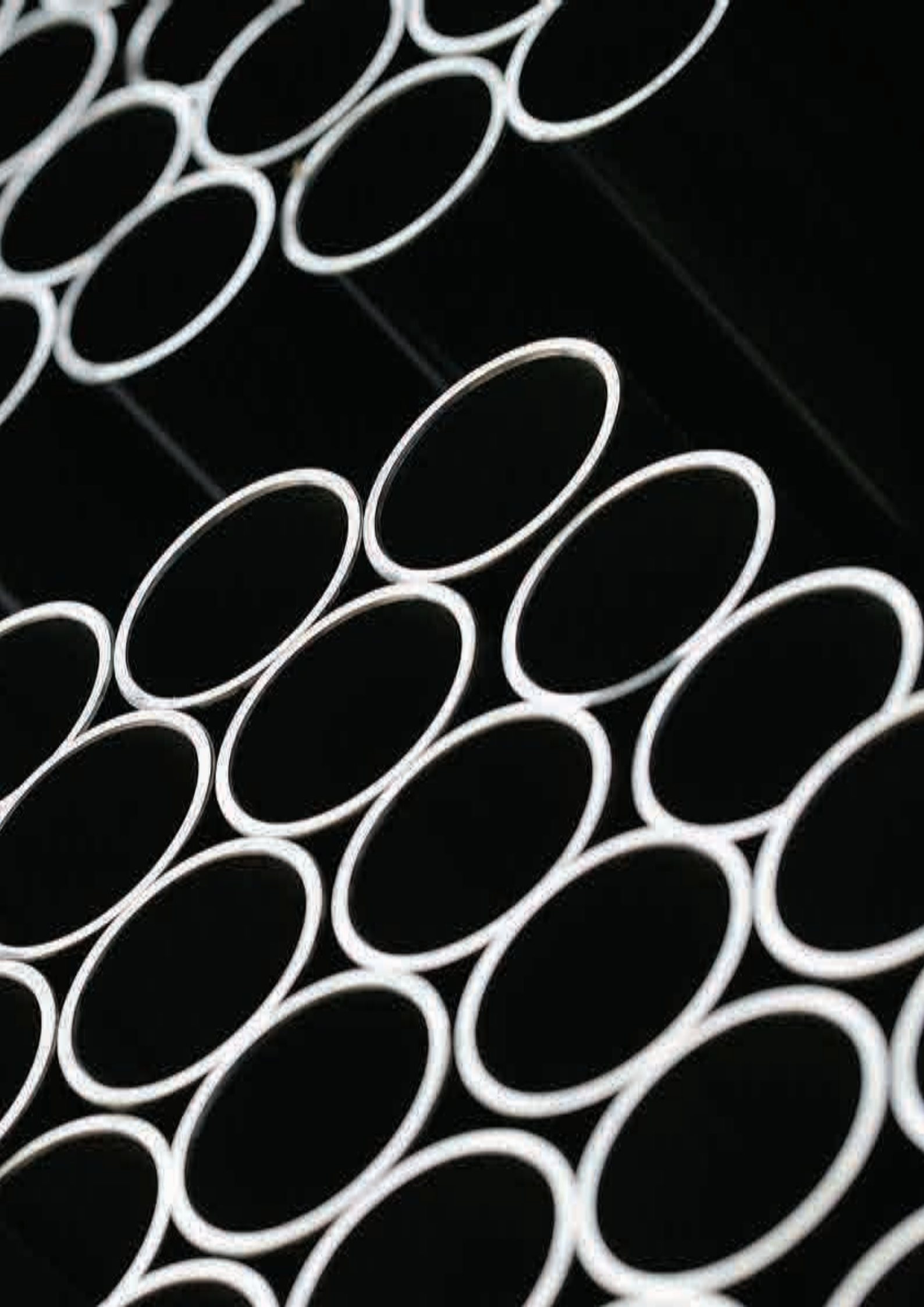
+ Pangyo dongyang - Korea



Steel Pipe

Produced with the best technology available, Kumkang Kind's steel pipe plays an important role in various construction jobsites.

OCTG, ordinary and general structural purpose pipe which are produced with the best technology, with a diameter ranging from 1/2" to 8", are precisely formed, welded with high-frequency electric resistance and cooled by Kumkang Kind's advanced computerized system and they are inspected rigorously through various test such as high-pressure and non-destructive tests. This is why we can say Kumkang Kind stands as the reference in the steel pipe industry!



Steel pipe products

Division	Classification	Standard No.	Application
Oil Piping	Line pipes OCTG casing & tubing	API 5L - 0864 API 5CT - 1344	Oil rigs
Ordinary	Pipes for ordinary piping	KS D 3507 JIS G 3452 ASTM A 53 Gr.A BS 1387	For city & industrial water, irrigation & agriculture water, oil & gas supply, sprinkler, fire hydrant, ship piping, etc.
	Pipes for pressure service	KS D 3562 JIS G 3454 ASTM A 53 Gr.B	Fro pressure service at the temperature under 350˚C
	Pipes for fire protection	ASTM A795	
	For fuel gas piping	KDS 3631	For city gas & LPG supply etc.
Structural	Carbon steel pipes for general structural purposes	KS D 3566 JIS G 3444 ASTM A 500	
	Square & rectangular tubes	KS D 3568 JIS G 3466 ASTM A 500	For civil engineering, building, steel tower, shoring, etc.
	Carbon steel tubes for machines structural purposes	KS D 3517 JIS G 3445	For machinery, automobile, bicycle, steel furniture, etc.
	Steel pipes for scaffolding	KS F 8003 BS 1139 JIS G 3444	For scaffolding, handrail, fence, etc.
	Fence tubes	AWWA C 202	
	Structural tubes for special purposes	Kumkang Standard	
	Rigid steel conduits	KS C 8401 JIS C 8305 UL-6 ANSI C 80.1	Protection purposes for electric wire or cable
	Color coated square & rectangular pipes	Kumkang Standard	For reinforcement, parking facilities, etc.

Approved certification

5L - 0864
5CT- 1344

Product Description

Exporting

- As Kumkang Kind steel pipes are exported to various countries around the world, we conduct rigorous quality control on our pipes, This is why Kumkang Kind is renowned for its accurate delivery of quality steel pipes.

Hot Galvanized

- Used for ordinary piping, pressure service, fuel gas piping or general structural piping, its zinc galvanized coating gives it an elegant external finish and a strong rustproof effect.

Black Steel Pipe

- Used for ordinary piping, pressure service, fuel gas piping or general structural piping, it is very effective for industrial water, vessels, transportation of oil, fire hydrant pipes and structural parts of cars, machines, public works, steel towers and props.

Conduit Pipe

- Used to protect electric wires, the hot dipped galvanized conduit pipe's durability has been drastically extended and, because of the sockets at each extremity, the work at the job site is easier than ever.

Steel Square

- Kumkang Kind has a special steel square production line that produces various sizes and satisfies the most stringent customer demands for their structural pipes for construction.

Primer Coated

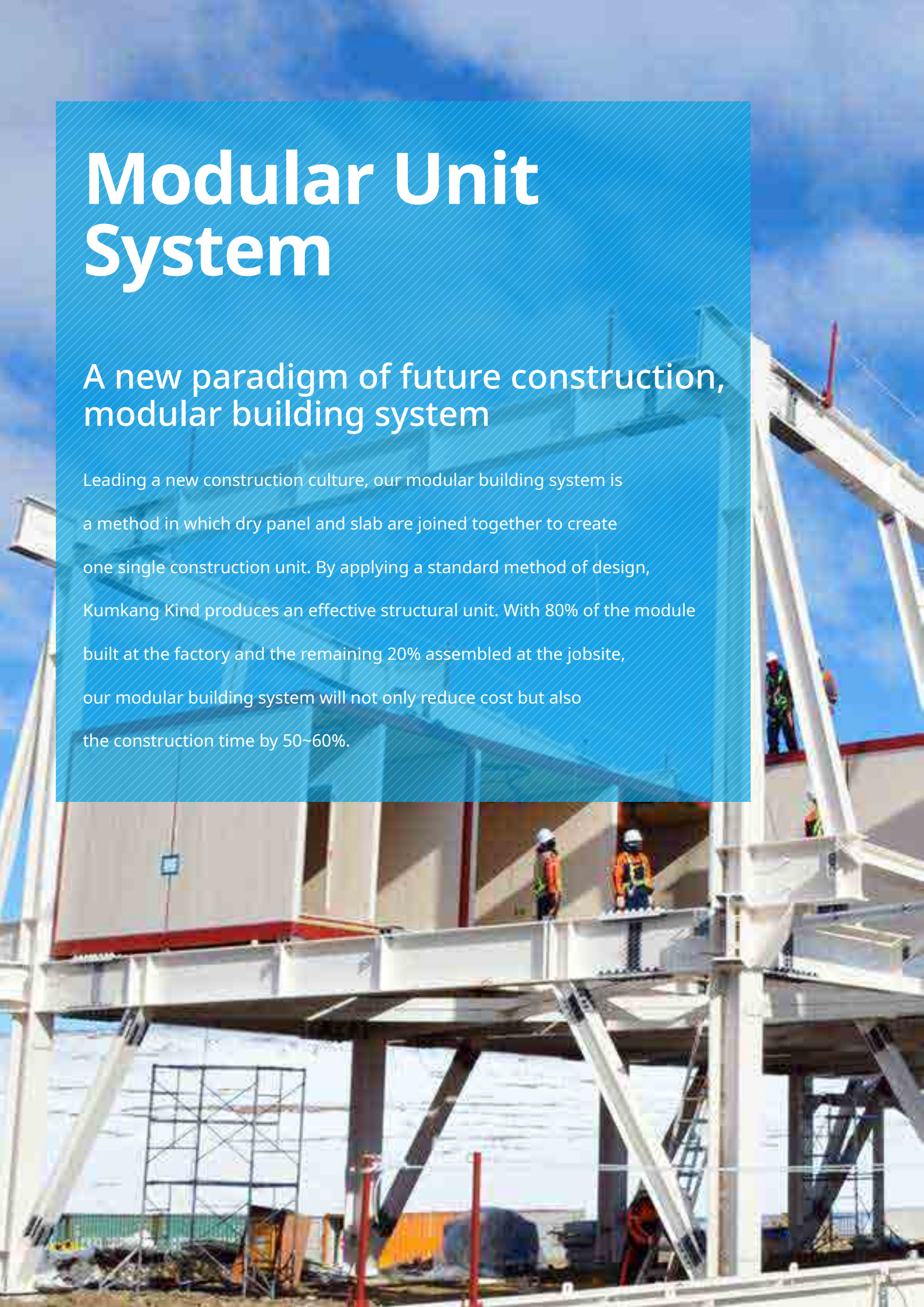
- The primer coated pipes are coated with rust-proof material which provides excellent durability. Very easy to work with at the job site, it reduces labor and production costs and is widely used to reinforce the interior and exterior of buildings and also for parking facilities.

Kumkang Kind _Eonyang Factory
Korea

Modular Unit System

A new paradigm of future construction, modular building system

Leading a new construction culture, our modular building system is a method in which dry panel and slab are joined together to create one single construction unit. By applying a standard method of design, Kumkang Kind produces an effective structural unit. With 80% of the module built at the factory and the remaining 20% assembled at the jobsite, our modular building system will not only reduce cost but also the construction time by 50~60%.



Characteristics and merits of modular building system

A new method of construction, Kumkang Modular building system

Our modular building system, which integrates all of the modern method of construction, used basic structural construction technology in order to design a new standard production system. After designing a single unit of structure, factory will assemble all the structures, including equipments, electricity and finishing materials and bring them to the jobsite where work will be completed by installing all the single units into one building.

+ Reduced term of works

- By accomplishing 80% of construction process at the factory, it reduces the term of works by 50~60% than usual method of construction. Particularly well adapted for residential houses, schools, military barracks or dormitories, our modular building system can also be used as temporary office on a jobsite.

+ Environmentally friendly

- Our modular building system barely produces any pollutant elements at the jobsite and thanks to our new standard production system, our factory is also nearly free of pollution made by assembling this system. Moreover, environmentalist will be happy to hear that this system is easily moveable and re-usable, which helps to keep our environment safe and clean.

+ Reduced cost

- Because our modular building system allows contractors to reduce their term of works, it results into a reduction of jobsite management fee, polluting elements treatment fee and other financial fees. Moreover, with standard construction module, it allows a reduction in design, construction, production and designer fees.

+ Flexibility and extendable

- Our modular building system is light-weight and allows a fast and efficient construction. Thus, addition or extension to an existing building can be very straightforward.

+ Safety

- Our modular building system conforms to all governmental safety norms such as earthquake-proof, storm-proof and fire-proof. Moreover, with our strict safety rules, work accidents are nearly impossible. In addition, since the modular system will be installed on already set-up foundation and walls, the modular building system provides the highest level of security for workers.

kumkang Kind

Headquarters
Kumkang Kind Bldg. 60, Gwacheon-daero 7da-gil, Gwacheon-si, Gyeonggi-do, Korea
Tel. 82-2-3415-4167 Fax. 82-2-3415-4165
kkkorea@kumkangkind.com

Kumkang Kind India
Office no. 621, 622, 6th floor, Nyati Empress Building,
Viman Nagar, Pune-411014,
Maharashtra, India
Tel. 91-20-6647-3800
kkindia@kumkangkind.com

Kumkang Kind Malaysia
B-9-01, Block B, Oasis Square
No.2, Jalan PJU 1A/7A,
Ara Damansara 47301 Petaling Jaya,
Selangor Darul Ehsan, Malaysia
Tel. 60-3-7831-0488 Fax. 60-3-7831-2588
kkmalaysia@kumkangkind.com

Kumkang Kind Vietnam
Beautiful Saigon Building (Lot Cr3-3), No. 2 Nguyen Khac Vien Street,
Tan My Ward, Ho Chi Minh City, Vietnam
Tel. 84-8-5413-6508 Fax. 84-8-5413-6507
kkvietnam@kumkangkind.com

Kumkang Kind East Africa
Office 5, 4th Floor, Tower 1, The Mirage
Chiromo Rd., Westlands
Nairobi, Kenya
Tel. 254-2-0250-0882
kkafrica@kumkangkind.com

Kumkang Kind Indonesia
Gedung Wisma Slipi.
Jl..Let. Jend. S. Parman Kav. 12,
Jakarta, Indonesia
Tel. 62-857-7788-7737
kkindonesia@kumkangkind.com

Kumkang America
1215 W. Imperial HWY., Ste 216 Brea, CA 92812 USA
Tel. 1-714-278-9089 Fax. 1-714-494-8032

Published by Kumkang Kind Co., Ltd.
Address. Kumkang Kind Bldg. 60, Gwacheon-daero 7da-gil, Gwacheon-si, Gyeonggi-do, Korea
www.kumkangkind.com

www.kumkangkind.com

kumkang Kind