



Platform Screen Doors

SAMJUNG PSD

SAMJUNG Platform Screen Doors

Satisfy 5 growing needs in metro stations all over the world.

SAFETY

COMFORT

PASSENGER REGULATION

SAVING ENERGY

PROFITABILITY



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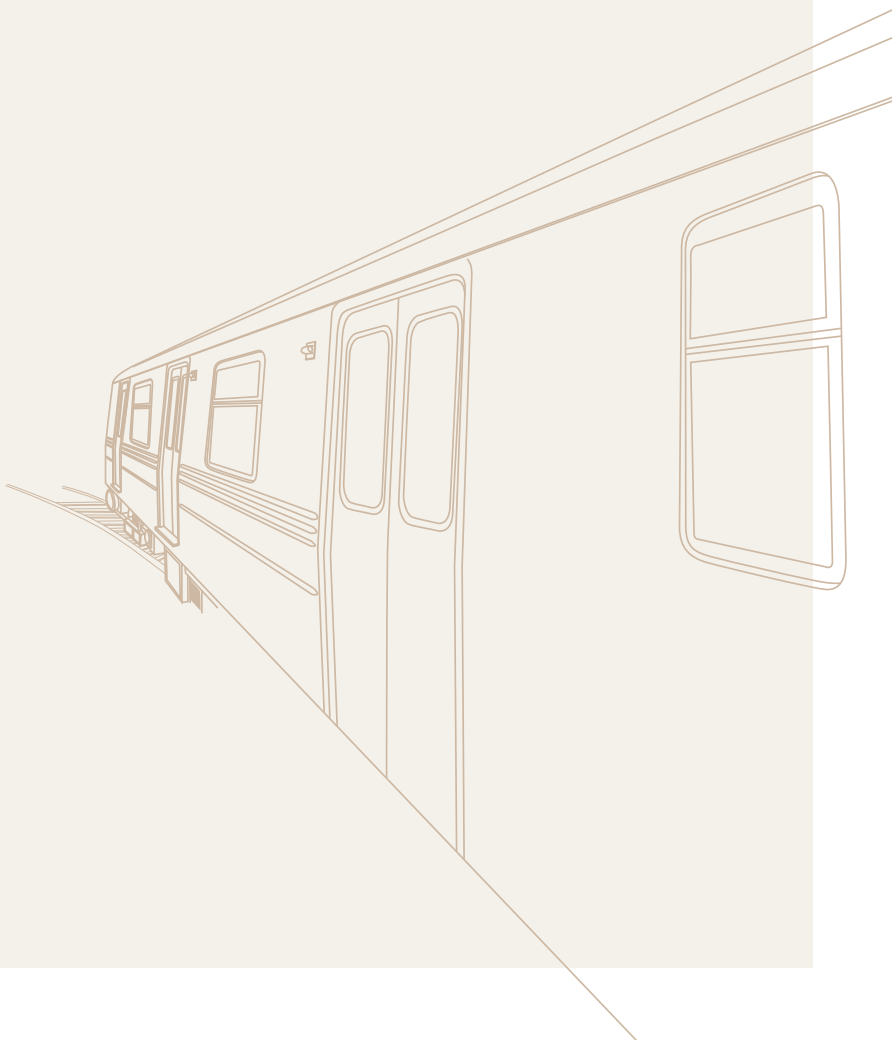
Samjung PSD creates a safe and pleasant platform environment.

Subway and LRT have become the most important methods of transportation in the biggest cities of the world.

Installation of Platform Screen Doors (PSD) are expanding in order to minimize the possibility of unexpected accident and to raise the satisfaction level of the passengers.

PSD not only ensures the safety of passengers and decreases the stress of train drivers but also provides pleasant platform environment.

Samjung Tech realizes high technology in manufacturing and installation of platform screen doors with focuses on safety, comfort, passenger regulation, energy saving and profitability.





A New Platform culture is opening up with human-based technology.

Platform Screen Doors are a safety system preventing the fall of passengers or objects onto railway track by the installation of fixed wall and automatic doors between platform and track and screen doors synchronized with the opening and closing of the train's doors.

The Effectiveness of PSD Installation

| Safety

Preventing passengers from falling onto railway track either by accident or intentionally
Blocking of heat and high-temperature smoke in case of fire
Provision of safe escape route in case of emergency

| Comfort

Blocking of Piston Effect of Train
Restraint of noise and dust resulting improvement of platform environment

| Passenger Regulation

Connecting spot linking train and passengers

| Saving Energy

Energy saving through remodeling of platform environment and HVAC system
(Reduction of approximately 30-40% of cooling load during summer season)

| Profitability

Profit achieved through advertising effect utilizing the fixed wall of PSD



Types of Platform Screen Doors

- Full-closed type** Installed on underground platform, PSD plays role of separating wall between platform and tracks resulting improved safety, amenity, and energy saving.
- Semi-closed type** Installed above the ground platform, this PSD provides excellent safety and effectiveness with its open-top configuration.
- Half-Screen type** Installed above the ground platform, this PSD creates pleasant and spacious image with outstanding visibility of passengers with its screen doors synchronized with the doors of train.

| Type | Full-closed | Semi-closed | Half-screen |
|------------------------|-----------------------------------|--------------------------------------|------------------------------|
| Location | Underground platform | Ground platform | Ground platform |
| HVAC system | Operation | Only ventilation | None |
| Merits | Safety(100%) | Safety(100%) | Safety(70%) |
| | Automatic/Manual Operation | Automatic/Manual Operation | Automatic Operation |
| | Comfortableness(100%) | Comfortableness(70%) | Passenger's visibility |
| Matter of Construction | Structural reinforcement, ceiling | Structural reinforcement, No ceiling | Considering external factors |



Full-closed type



Semi-closed type



Half-screen type

Samjung is leading the PSD industry with its know-how in mechanical facility area.

Based on engineering and execution capability accumulated over long term, Samjung Tech rules the PSD market. Starting with the first installation of PSD at SNU Station in Seoul Metro Line 2 in 2006, around 5,000 PSD have been installed at 64 stations in 130 platforms, including 28 stations at SMRT Line 5 in 2008, 22 stations at Seoul Metro and 13 stations in 2009 respectively.

Reference of

Samjung PSD

| Project Name | Description | Period |
|--|--|---------------------------|
| Seoul National Univ. Station • Seoul Metro • Line 2 | 1 Station, 2 platforms, 205m length, 80 doors Design, Manufacturing, Installation, Testing & Commissioning of PSD Systems | 2006. 02 ~ 2006. 12 |
| Seoul Banghwa Station & the others • Seoul SMRT • Line 5 | 28 Stations, 56 platforms, 185m length, 1,792 doors Design, Manufacturing, Installation, Testing & Commissioning of PSD Systems | 2008. 03 ~ 2008. 12 |
| Seoul Sincheon Station & the others • Seoul Metro • Line 2,3,4 | 22 Stations, 46 platforms, 205m length, 1,744 doors Design, Manufacturing, Installation, Testing & Commissioning of PSD Systems | 2008.12 ~ 2009.12 |
| Seoul Chunggeong-ro Station & the others • Seoul Metro • Line 2,3,4 | 13 Stations, 26 platforms, 205m length, 1,360 doors Design, Manufacturing, Installation, Testing & Commissioning of PSD Systems | 2009.09 ~ 2009.12 |
| Total | 64 stations, 130 platforms (4,976 doors) | |



I Banghwa station



I Sungsu station



I SNU station



I Sanggye station



I Gyeongbokgung station

The best quality is maintained through development of high technology.

Samjung Tech achieved independence of PSD technology early on through adopting advanced technology and improving upon it. Samjung Tech's outstanding technology is officially recognized through obtaining various certificates related to PSD quality, including Certificate of Quality for Railroad Products (Ministry of Land, Transportation, and Maritime Affairs), CE Certificate for Individual Control Unit for PSD, ISO Certificate (Quality, Environment). Samjung Tech offers the best quality in PSD technology with its own design patents on new device and patents related to PSD through independent development of technology.

Certificate of Samjung PSD

| Description | Details | Remark |
|---------------------------------------|---|--|
| Certificate of PSD Quality | Korea Railway's Material Standard Certification | Ministry of Land, Transport and Maritime Affairs |
| Certificate of ISO Quality Management | Acquire of ISO 9001:2000 | BSI |
| | Acquire of ISO 14001:2004 | |
| EMC Test Report | Issued No: KT108EV11003 | Korea Technology Institute Co. Ltd |
| Attestation of Conformity(CE) | Issued No: M8 09 10 67923 001 | TUV |
| Patent{6 items} | Ground platform PSD sliding guide(LM) | Korea Property Office |

Certificate of Quality for
Railroad Products

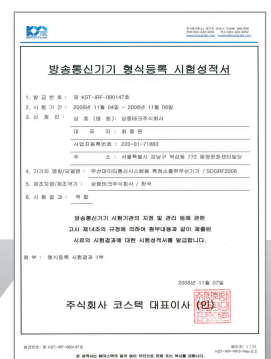
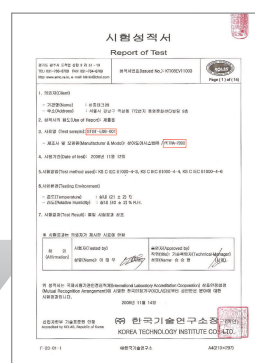
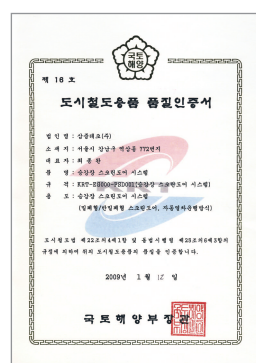
EMC Test Report

Attestation of Conformity (CE)

Certificate of ISO –
Environment Management

Certificate of ISO –
Quality Management

Certificate of RF Registration



Proper Management of Quality is the pride of Samjung PSD.

Management of quality from the very beginning of the manufacturing is a must as PSD is responsible for the safety of passengers. Samjung Tech operates a mock-up at its factory and Lab test-bench for self development in order to assure the quality management. Also, the completion of PSD test for continuous operation over 2 million times is the pride of Samjung Tech.

Quality Management

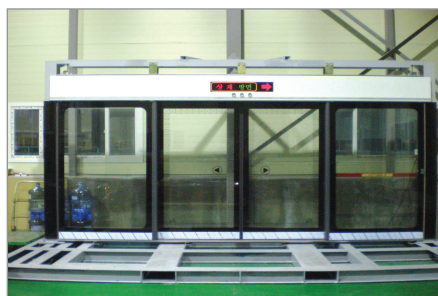
Temperature & Humidity Test

APG & PSD Test

Operation of Mock-up PSD & APG

Completion of PSD test for continuous operation over 2 million times

Quality Inspection of Module



From the design to the completion, Samjung Tech provides the best one stop service.

Samjung Tech's capability provides the best service for the satisfaction to client through long history of experiences of installation and state of art manufacturing facility for PSD. It is doing its best for shortening the delivery and improving quality of PSD by total management from the design to the completion.

Process of PSD



Design |



| Manufacturing



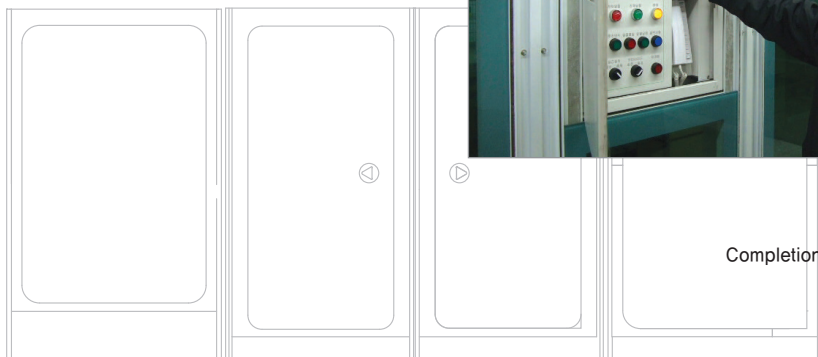
Installation |



| Test



Completion |



The best quality is guaranteed with the professional system management.

Based on abundant experiences of maintenance accumulated in mechanical parking system and HVAC installation area, resulting systematic and rapid maintenance capability, Samjung Tech realizes the professional system management. While convenience and safety of the passengers are the priority, Samjung Tech also guarantees smooth business operation, prevention of any accident through systematic management, including advanced checking and spot checking, and efficient maintenance program without disrupting train schedule.

Samjung PSD's

Maintenance and Quality

Control System

- Systematic Quality Control Plan
- Establishment of Quality Guarantee by professionals
- Maintaining 99.9% of Reliability in RAMS procedure

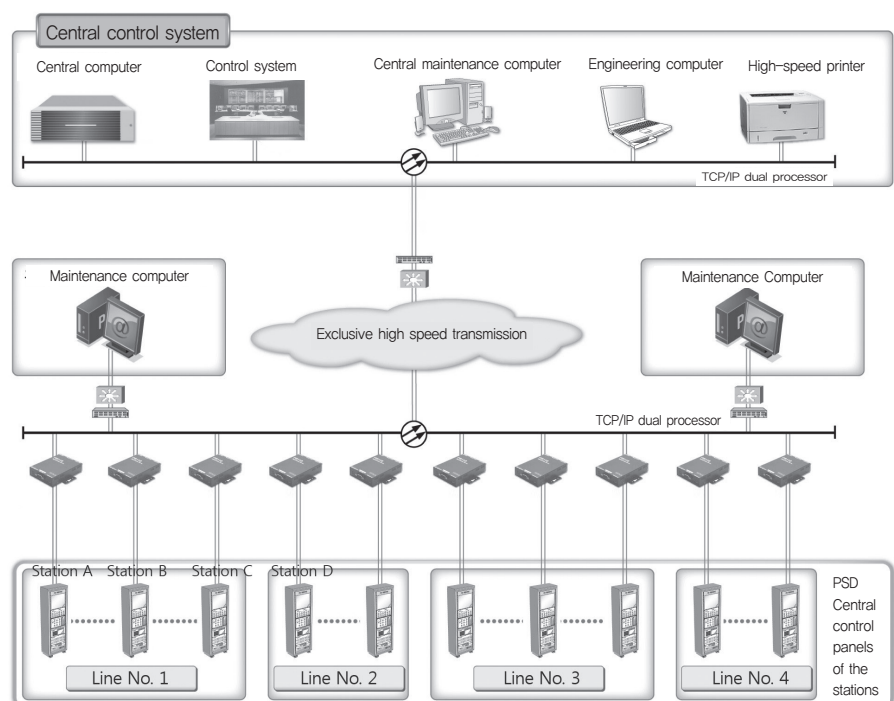
Integrating

Maintenance and

Central Control

System

It is convenient to keep the maintenance and to control the system by connecting the central control panel of each station and the central control center with an exclusive high speed transmission, and building the integrated management system of PSD.



Remark) Changeable according to customer requirement.

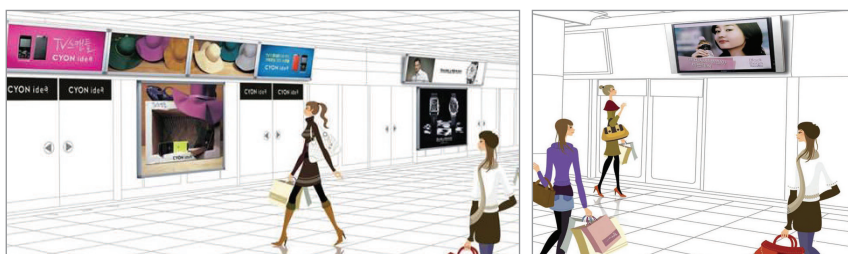
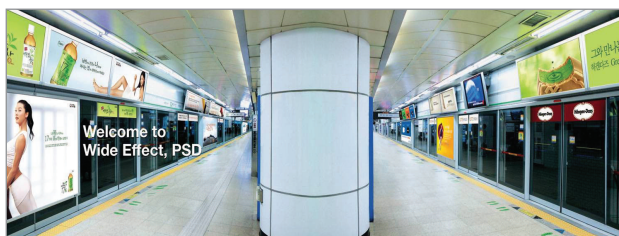
Premium Design of PSD contributes to the profitability for clients.

The outcome of advertising campaign using the Platform Screen Door Panels has been recognized as a profitable model for private investors and clients. Especially, PSD has been in spot light as an efficient advertising medium for yielding high returns for investment using high-tech panels. PSD is also playing a vital role in creating a new cultural trend for platform by leading the improvement and remodeling of station environment campaigns. Therefore, Samjung Tech is striving to contribute not only to the improvement of city environment but also to the profitability for clients by developing more refined trend-setting designs.

Advertising Panel

Underground

Examples for
full-closed type PSD



Advertising Panel

Ground

Examples for
half-screen type PSD



Special

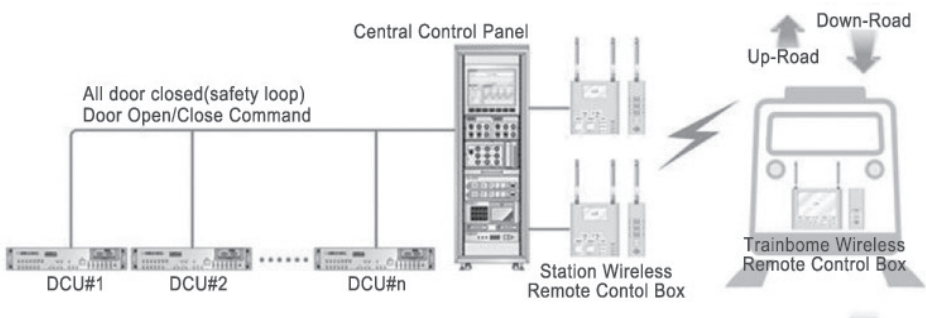
Advertising Panel



Interface matters related to station and train are resolved.

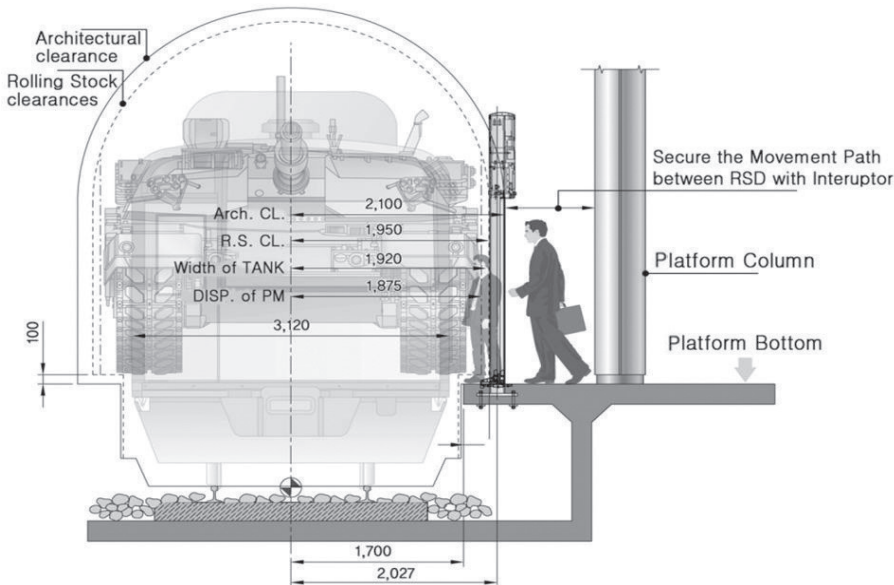
Based on railway related knowledge and technology accumulated over many years, Samjung offers various solutions to the matters of interface between PSD to be installed and other systems. Especially, Samjung has been recognized its ability in handling peripheral technologies of PSD such as the Synchronization between train signal and system, or resolving the matter of rolling stock clearances and interruptor.

Case of the linkage
between train signal
and system



| Project Name | Description | Remark |
|-------------------------------|---|-------------------------------|
| Seoul METRO Line no. 2,3,4 | <ul style="list-style-type: none">· Synchronization Control & Signal Interface between PSD and Train by RF communication· Synchronization Control by ATO signal | Redundancy of Synchronization |
| Seoul SMRT Line no.5 | <ul style="list-style-type: none">· Synchronization Control & Signal Interface between PSD and Train· Train operating board modification in connection with PSD signal | Redundancy of Synchronization |

Case of the resolving
the matter of rolling
stock clearances
and interruptor

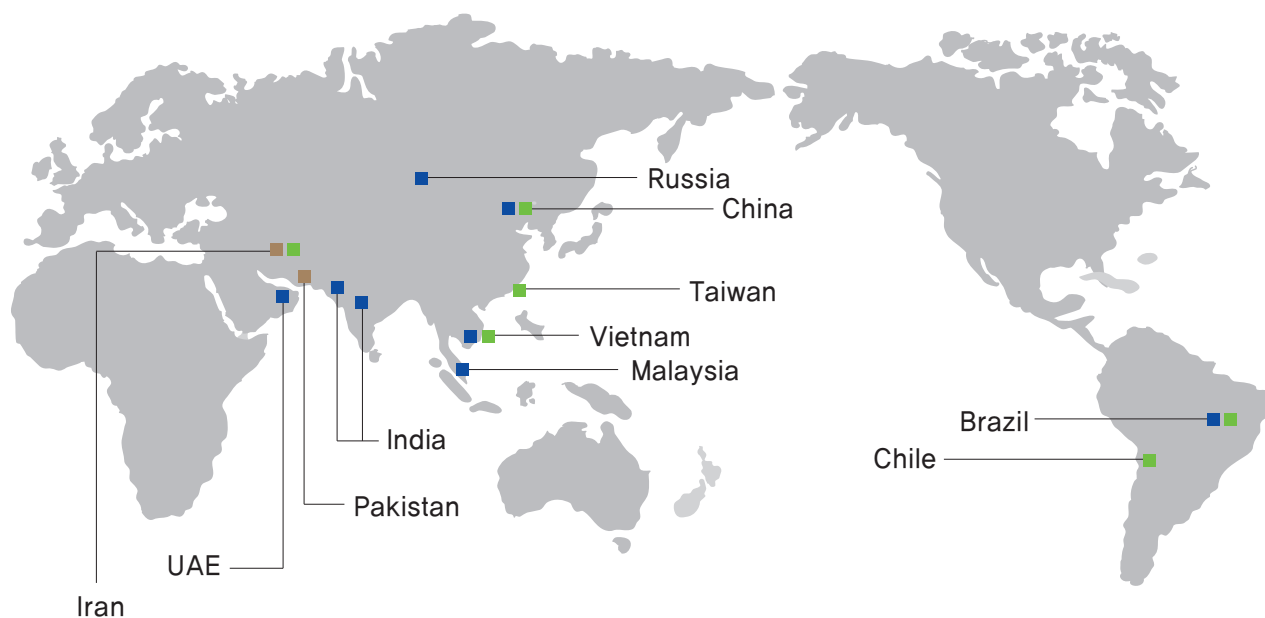


Samjung is pioneering overseas markets by expanding its global base.

Samjung Tech is strengthening global competitiveness by actively pioneering world market. While the importance of railway industry as a major national infrastructure grows not only in developing countries but also in advanced countries, Samjung PSD is involved in bidding in Taiwan, Vietnam, and technology exchange in Iran, Kazakhstan, and expanding market shares through dealers in Chile, Brazil, therefore enlarging the market from domestic to overseas. Especially, Samjung Tech is planning to enter the emerging market of east and north China with outstanding investment and strong marketing policies.

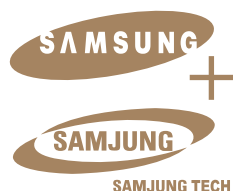
Global strategy

- Parking system
- Refrigeration & air conditioning system
- Platform screen doors system



Samjung Tech, A Leading Company with the Outstanding Technology

Samjung Tech has been growing into a leading company by developing technology and market activities since separated from Samsung Heavy Industry in 1999. Succeeding to manpower and the technology from Samsung, it is satisfying its customers with shortening the delivery and the best quality of the products from combining equipment manufacturing and construction. It has reinforced its competitiveness through diversifying business from Parking system and Refrigeration & air conditioning system to Facility construction, PSD system, Construction, and Environment-friendly new renewable energy business.



History of Samjung Tech

| | |
|------|--|
| 1974 | Aus. Established Samsung Heavy Industries Co., Ltd. |
| 1979 | Jun. Launched parking system business |
| 1992 | Jan. Launched Refrigeration & air conditioning system business |
| 1999 | Dec. Established Samjung tech Co., Ltd. |
| 2000 | Jul. Acquired ISO 9001 certification |
| 2006 | Dec. Completed the first order of PSD project (SNU station) |
| 2008 | Oct. Acquired ISO 14001 certification |
| | Dec. Completed 28 stations PSD projects (SMRT) |
| 2009 | Jan. Acquired quality certification for PSD (MLTM) |
| | Oct. Acquired CE certificate |
| | Nov. Awarded as excellent business for competitive quality (MKE) |
| | Dec. Completed 35 stations PSD projects(Seoul Metro) |

Business Field of

Samjung Tech

Parking system

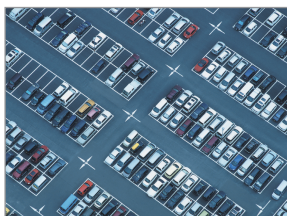
Refrigeration &
air conditioning system

Platform screen doors system

Facility construction

Environment-friendly
new & renewable energy

Construction





SAMJUNG TECH

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Tel. 82-70-7011-8915 Fax. 82-31-997-1795

Subsidiary companies

Samjung Tech Construction / Samjung machines and electrics / Samjung parking system /
Samjung HVAC ENG / Samjung system