

The most reliable company for the  
EPC company in Korea.

BOG COMPRESSOR

PROCESS REFRIGERATION

DIAPHRAGM AND DRYING UNIT

FUEL GAS COMPRESSOR



# TECHNICAL KOREA

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## Greeting

TECHNICAL KOREA was formed to achieve the fulfillment of the professional careers of each and every member of the organization, encouraging personal growth and enabling them to pursue happiness supported by a simple and practical management system.

Our primary mission is to provide the latest engineering solutions for process refrigeration, gas compression, system integration and other related applications while we assure complete satisfaction for our customers, partners and contractors.

Commitment, dedication and highly ethical standards are the basis of operation of our company, quality is the top priority and it is never compromised.

Our engineered solutions provide the complete spectrum of services, starting from conceptualization, engineering feasibility to construction and field commissioning.

Main compressor packaging facility located in Korea.

## GLOBAL NETWORK

To provide greater satisfaction to its customers, the Technical Group is made up of skilled and professional engineers from major countries all over the world.

In particular, the Technical Group has branches in Korea, Singapore, the United States, Colombia, Thailand, and Indonesia, providing a full range of services from engineering to field commissioning.

### Technical Group Facilities

TECHNICAL ASIA PTE LTD  
**SINGAPORE**

TECHNICAL KOREA CO LTD  
**KOREA**

TECHNICAL AMERICA INC  
**USA**

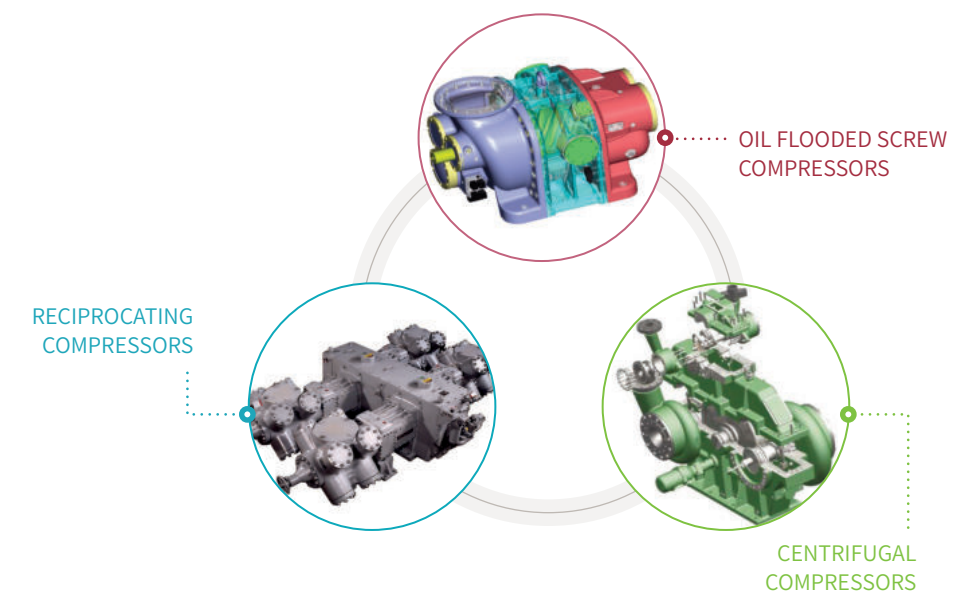
UNITED HEAT & POWER PTE LTD  
**SINGAPORE**

TECHNICAL THAI CO LTD  
**THAILAND**

PT SK METALINDO  
**INDONESIA**




## Compressors Packaged




Our main products include a gas compression system, process refrigeration system, and boil-off gas (BOG) system, and we also provide optimized solutions through system integration and the latest engineering technologies.





# PRODUCT APPLICATION

Package	Manufacture	Compressor Type	Code
	<ul style="list-style-type: none"> <li>Process Refrigeration</li> <li>Ammonia Boil Off Gas Compressor</li> <li>Tail Gas Compressor</li> </ul>	Oil Flooded	API-619, ISO 10440
	<ul style="list-style-type: none"> <li>Cryogenic</li> <li>Boil Off Gas Compressor</li> </ul>	Oil Free Reciprocating	API-618 (LNG, LPG, Ethane, Ethylene, Propylene)
	<ul style="list-style-type: none"> <li>Argon</li> <li>Hydrogen</li> <li>Oxygen</li> <li>Phosphine</li> <li>Helium</li> <li>Fluorine</li> <li>Germane, Silane</li> </ul>	Diaphragm Compressor, USA	ASME, CE, KGS, UL GOST-R

Package	Manufacture	Compressor Type	Code
	<ul style="list-style-type: none"> <li>Air Plant Feed Purification</li> <li>Argon Purifying Units</li> <li>Hydrogen and Hydrocarbon Purifying Units</li> <li>Liquid Hydrocarbon Dryer Systems</li> <li>Silicon Vent Gas Recovery Processes</li> <li>Liquid Natural Gas Feed Purifying Units</li> <li>Phosgene Plants</li> </ul>		ASME, U-STAMP CE, KGS, UL GOST-R
	<ul style="list-style-type: none"> <li>Fuel Gas Booster Compressor</li> </ul>	Centrifugal Compressor	API-617

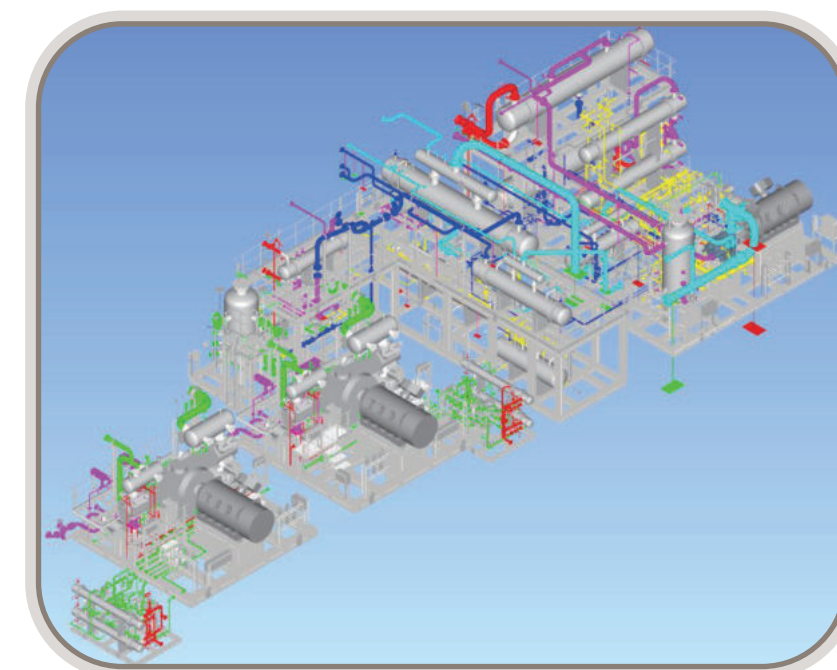




## BOG COMPRESSOR

### TKG-19005P MFC

EPC : GS E&C  
Plant : Refinery  
Motor(KW) : 430  
No. of Package : 2 Set  
Service / Application :  
Ethylene BOG compressor



### TKG-1513 TE3

EPC : GS E&C  
Plant : Petrochemical  
Motor(KW) : 260  
No. of Package : 1 Set  
Service / Application : Propylene

# BOG COMPRESSOR

## Features

### Cryogenic technology as the PIONEER Our Feature

LNG BOG is one of the toughest condition for compressor. Our technology is evaluated by world-wide customer as shown in figure below. Design quality capable of cryogenic service is applied to not only cryogenic compressor but also all ones.



LNG/LPG



AMMONIA



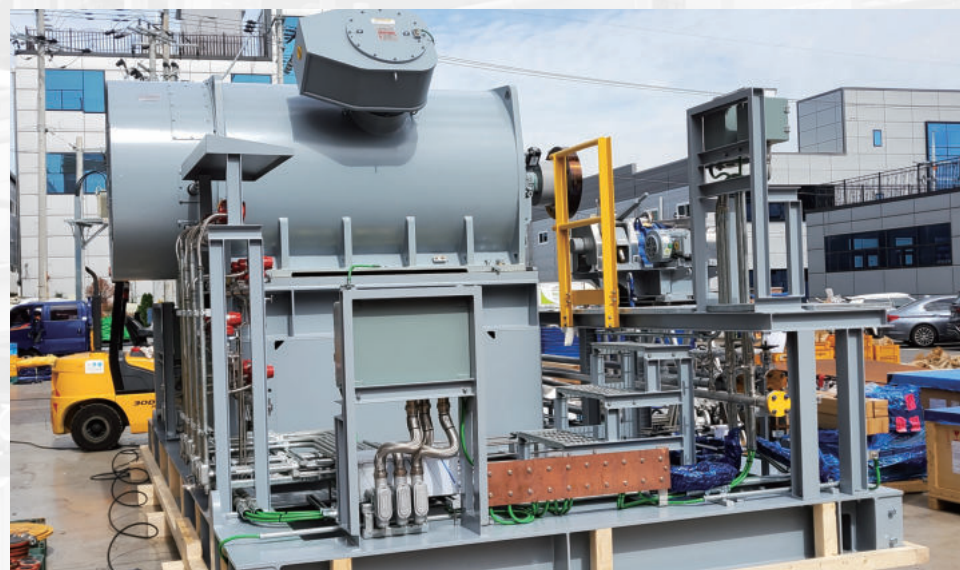
ETHYLENE



PROPYLENE



TKG-19005P  
MFC



TKG-1513 TE3





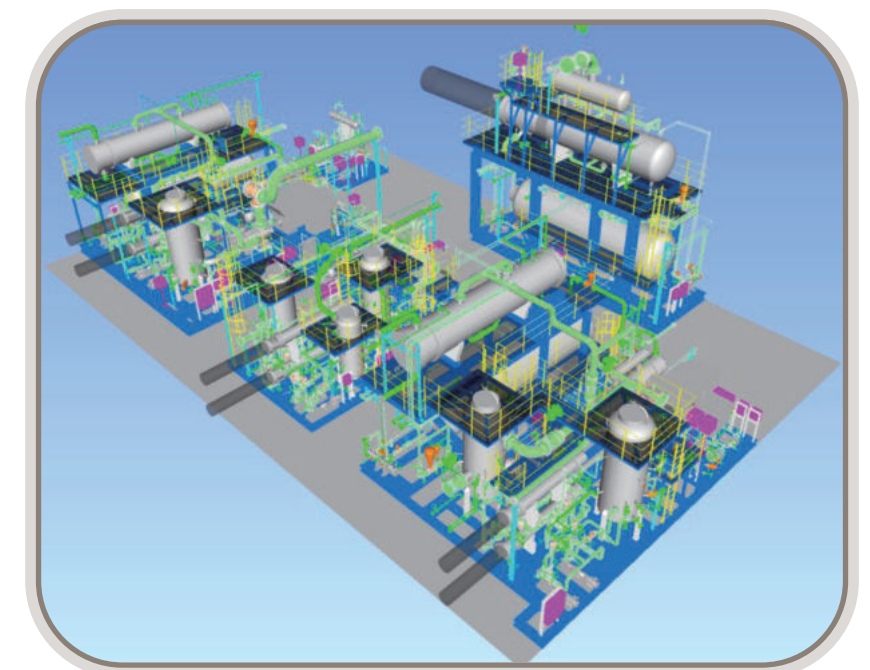
# PROCESS REFRIGERATION

## TKR-17002P

EPC : Hyundai Chemical  
Plant : Refinery  
Motor(KW) : 930  
No. of Package : 1 Set  
Service / Application :  
Propane Refrigeration

## TKR-19006P SK UPP

EPC : SKEC  
Plant : Chemical  
Motor(KW) : 430  
No. of Package : 1 Set  
Service / Application :  
Propylene Refrigeration



## Features

- Precise process temperature control
- Use of the most suitable compressor for the application
- Use of most available refrigerants: propylene, propane, butane, NH3, R-134, R-507, R-410, R-404 and any other commercially available refrigerant.
- Able to design any type of evaporator, water cooled or air condensers
- Robust construction
- Able to comply with customer requirements and specifications
- Assembled with locally available components or as per customers list of materials
- Highly developed operational sequences
- Two oil separators solution for 1 ppm of oil carryover
- Ease of service



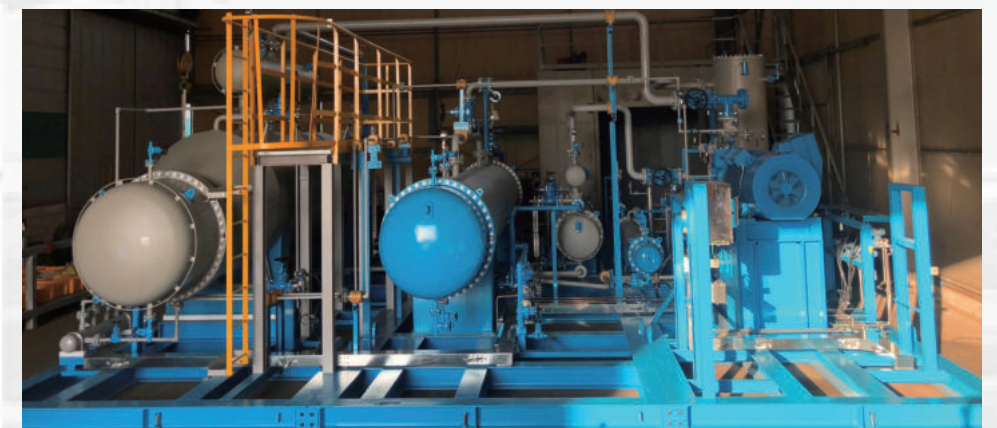
TKR-16001P  
RUC



TKR-17004P  
UZGTL



TKR-17003P  
NPE

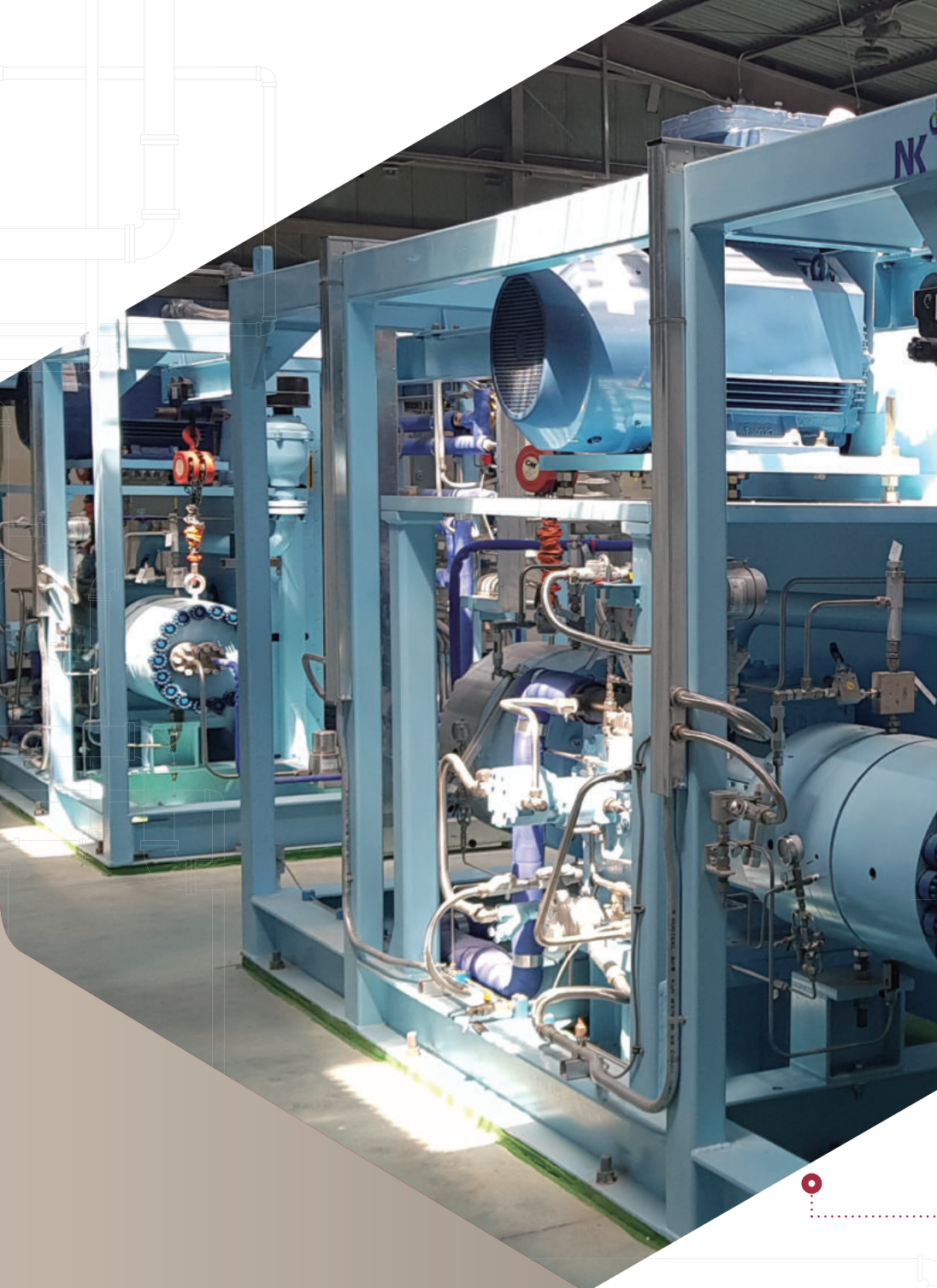


TKR-19008P  
MFC



PROCESS REFRIGERATION

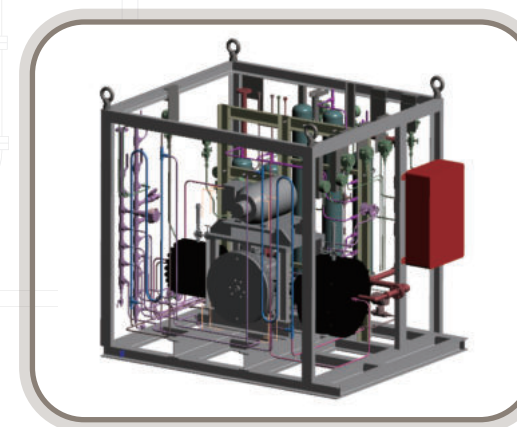




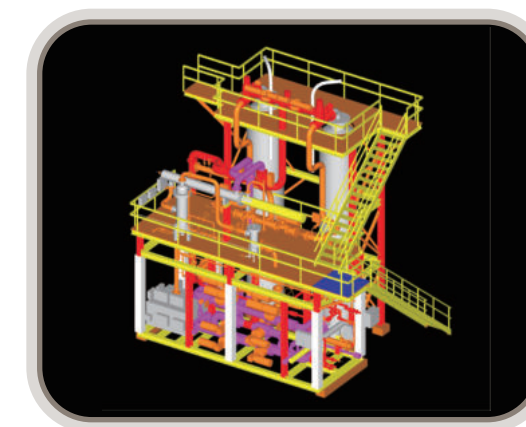
## DIAPHRAGM AND DRYING UNIT

**TKO-18025P / HSVC1 PP4 Project**  
**Drying Unit model :** Licenser(CDI)  
**Plant :** Petrochemical  
**HEATER (KW) :** 37 / 15  
**No. of Package :** 2 Set  
**Service / Application :** Catalyst

### DIAPHRAGM



### DRYING UNIT



**TKG-18013P / Hydrogen  
 Booster Compressor**  
**Diaphragm model :** PDC  
**Plant :** Hydrogen Filling Station  
**Motor(KW) :** 75  
**No. of Package :** 2 Set  
**Service / Application :** Hydrogen

### Features

Two-stage compressor for HCL service. This compressor is rated for Zone IIC Exd and in compliance with Korean Gas Law. Process Piping & Vessels nitric acid passivated, 100% Welded and Radiographed, and cleaned to < 6mg. Produces flow of 1100NM<sup>3</sup>/hr. Instrumentation includes transmitters, suction and discharge pulsation dampeners, and isolation valves. Controlled by redundant Siemens PLCs.

A single stage diaphragm compressor for compressing hydrocarbon gas mixture. Boosting pressures up to 500 psi (34 barg), flow rate 1,600 Nm<sup>3</sup>/hr and power is 60 hp (45 kW). This compressor was installed in Qatar and meets European codes and standards.

PDC-4-800-3500, 25 hp (18 kW) two-stage fully instrumented high pressure reciprocating diaphragm compressor for transferring breathing grade mixtures of helium and oxygen for use with its Saturation Diving Systems. Using the compressing in conjunction with a blender, the system can blend its own gas and help eliminate the need for large amounts of pre-mixed gas, which saves storage space and weight. This compressor is used every day while the system is in the Diving mode.

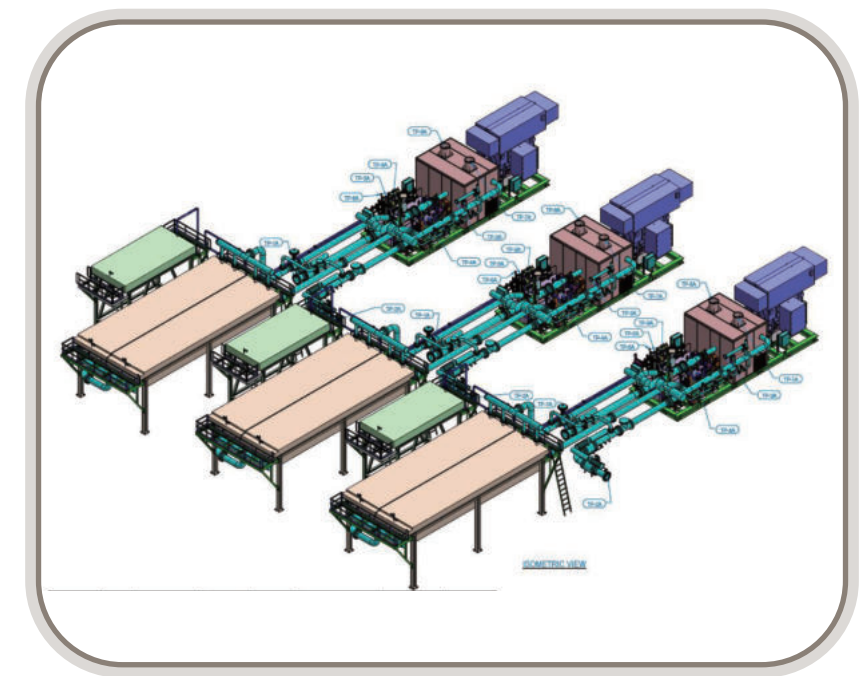
PDC-13-1250-3000 two stage diaphragm compressor manufactured by PDC and installed in United Arab Emirates for feeding hydrogen gas into a reactor at a flow rate of 400 Nm<sup>3</sup>/hr at a discharge pressure of 200 bara. Horse-power is 125 hp (93 kW) for manufacturing plastic. This reciprocating diaphragm compressor meets plant codes and standards. The scope of supply is a turnkey system including inlet and outlet pulsation dampners, pressure and temperature transmitters for all stages, segregated junction boxes. 100% Welded and Radiographed Process Piping & Vessel joints.

# DIAPHRAGM AND DRYING UNIT





## FUEL GAS COMPRESSOR



**TAG-1603 SOHAR**  
EPC : SEPCOIII  
Plant : Power Plant  
Motor : 6100 kW  
No. of package : 3 Sets  
Service / Application :  
Fuel Gas Compressor

# FUEL GAS COMPRESSOR

### features

- Precise gas pressure control as required by the TURBINE
- Proprietary design strainer/suction drum operating with 7 times more filtering capacity
- For oil injection screw compressor, dual oil separation, 1st & 2nd STAGE oil separators guarantee less than 1 to 5 PPM oil carryover, 3rd STAGE will ensure to 0.5 ppm.
- DRY oil free compression systems design with Integrally geared centrifugal and reciprocating compressors
- Dual filtration high capacity lubrication system
- Robust construction
- Able to comply with customer requirements for water or air cooled
- Assembled with locally available components or as per customers list of materials
- Highly developed operational sequences



### Daily Check

- User daily inspection and replacement of genuine spare parts.
- Periodic inspection: 2 times / year (Korea Market)
- Confirm the operation status of the machine, and if necessary, contact T.K immediately

### Overhaul Service

- Directly conducted by T.K., dispatched Supervisor from TA / Singapore as needed.
- Reciprocating Compressor uses Core of Japan IHI, so it can supply quickly and smoothly.
- Screw compressors are used in Overhaul in Korea, and the basic spare parts are supplied to T.K Securing Stock, All other parts are supplied directly from Technical Asia / Singapore Parts are supplied to the site within 36 hours.

### Emergency

- Arrive within 4 hours from TK.(Korea Market)
- Supported by TA / Singapore immediately upon request.
- Immediate dispatch of personnel from IHI or GEA / Singapore or Germany

# TECHNICAL KOREA'S AFTER SERVICE

## Reference List

Project Name	EPC	Location	Plant	Compressor Type	Motor (KW)	of Package	Service / Application	Remark	Delivery Year
TKR-1409 / TACE (Ethane Cracker & PE PP Plant)	Hyundai ENG.	Turkmenistan	Petrochemical	Oil Flooded Screw model : GEA	1100	1	Propylene Refrigeration	HC Condensation	Aug-2015
TKR-1415 / Dongkwang CO2 Liquefaction	Dongkwang END USER	Korea	Chemical	Oil Flooded Screw model : GEA	850 / 110 / 55	1	Ammonia Refrigeration	CO2 Liquefaction	July-2015
TKG-1513 / Titan TE-3 Project	GS E&C	Malaysia	Petrochemical	Oil Free Reciprocating model : IHI	260	1	Propylene	BOG Liquefaction	Nov-2016
TKR-16001P / S-Oil RUC Project	DAEWOO ENG	Korea	Refinery	Oil Flooded Screw model : GEA	340	2	Propylene Refrigeration	Utilities & Offsites	May-2017
TKR-17002P / HDC Chiller System	Hyundai Chemical	Korea	Refinery	Oil Flooded Screw model : GEA	930	1	Propane Refrigeration	Feed Gas Condenser	Feb-2018
TKR-17004P / UzGTL	Hyundai EN	Uzbekistan	Petrochemical	Oil Flooded Screw model : GEA	950 / 2000 / 1250	3	Ethylene Refrigeration Propane Refrigeration	Process Refrigeration, C2 & C3 Cascade	Sep-2018
TKG-17001P / LVSF Project	Hyundai Engineering	Korea	Spacial Rupper	Diaphragm model : PDC	15	1	Hydrogen Booster	Hydrogen Make-up	Jun-2017
TKR-17003P / NPE Project	TOYO ENG	Indonesia	Petrochemical	Oil Flooded Screw MODEL : GEA	260	1	Propylene Refrigeration	HDPE & LDPE	Aug-2018
TKG-18001P / POE PROJECT	Lotte E&C	Korea	YEOSU POE PLANT	Diaphragm model : PDC	7.5	1	Hydrogen booster		Dec-2018
TKR-18024P / HSCV1 PP4 Project	ETEC ENG	Vietnam	Petrochemical	Oil Flooded Screw model : GEA	550 / 340	2	Propylene Refrigeration		May-2019
TKO-18025P / HSCV1 PP4 Project	ETEC ENG	Vietnam	Petrochemical	Drying Unit model : CDI	37 / 15	2	Catalyst		May-2019
TKG-18027P / YC 4% H2N2 MIX PROJECT	Wonik Materials	Korea	Mix Gas Plant	Diaphragm model : PDC	15	1	Hydrogen		March-2020
TKG-18013P / Hydrogen Booster Compressor	NK Tech End user	Korea	Hydrogen Filling Station	Diaphragm model : PDC	75	2	Hydrogen		Jan-2019
TKR-18032P ULSADO (Malaysia Petron)	Daelim Ind	Malaysia	Chemical	Oil Flooded Screw model : GEA	175	2	Propane Refrigeration	Chiller Package	Oct-2019
TKR-18031P / DAELIM mPE Project	Daelim Ind	Korea	Chemical	Oil Flooded Screw model : GEA	1340	1	Propylene Refrigeration	Chiller Package	May-2020
TKR-19005P / GS Caltex MFC Project	GSEC	Korea	Refinery	Oil Flooded Screw model : GEA	1460	1	Propylene Refrigeration	BOG Liquefaction	Jul-2020
TKG-19005P / GS Caltex MFC Project	GSEC	Korea	Refinery	Reciprocating BOG model : IHI	430	2	Ethylene BOG compressor	BOG Liquefaction	Jul-2020
TKR-19008P / GS Caltex MFC Project	GSEC	Korea	Refinery	Oil Flooded Screw model : GEA	275	1	Propylene Refrigeration	process Refrigeration	Jul-20
TKR-19006P / Ulsan PP	SKEC	Korea	Chemical	Oil Flooded Screw model : GEA	430	1	Propylene Refrigeration	process Refrigeration	Mar-20
TKR-19016P / HPC Hyundai oil bank Project	Hyundai Chemical	Korea	Refinery	Oil Flooded Screw model : GEA	1340	1	Propylene Refrigeration	BOG Liquefaction	Feb-21
TKG-19015P / HPC Hyundai oil bank Project	Hyundai Chemical	Korea	Refinery	Reciprocating BOG model : IHI	580	1	Ethylene BOG compressor	BOG Liquefaction	Feb-21
TKG-19017P / HSCV OLI	ETEC ENG	Vietnam	Petrochemical	Oil Flooded Screw model : GEA	700	1	Tail gas compressor	Tail gas compressor	Nov-20
TKG-20002P / LINDE	LINDE KOREA	Korea	Pyeongtaek (hyungok) Gas Plant	Diaphragm model : PDC	11	1	Hydrogen		Jun-20
TKG-20005P / SKMR	SK MATERIALS	Korea	Yeongju Gas Plant	Diaphragm model : PDC	11	2	Krypton Gas Filling		Sep-20
TKR-20007P / HSCV PP5	ETEC ENG	Vietnam	Petrochemical	Oil Flooded Screw model : GEA	550	1	Propylene Refrigeration	Chiller Package Drying Package	Dec-20
TKO-20008P / HSCV PP5	ETEC ENG	Vietnam	Petrochemical	Drying Unit model : CDI	50	1	Catalyst	Drying Package	Dec-20
TKG-20015P ROTEM	HYUNDAI ROTEM	Korea	Dangjin Hydrogen Delivery Center	Diaphragm model : PDC	90	5	Hydrogen		Jan-21



# TECHNICAL GROUP



TECHNICAL KOREA CO., LTD. / KOREA



TECHNICAL ASIA PTE. LTD. / SINGAPORE



TECHNICAL THAILAND CO., LTD / THAILAND



TECHNICAL AMERICA CORP. INC. / US





# TECHNICAL KOREA CERTIFICATION



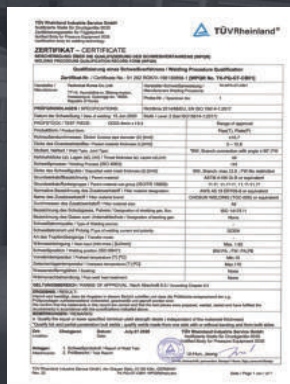
Designation of Talent Development Small and Medium Business



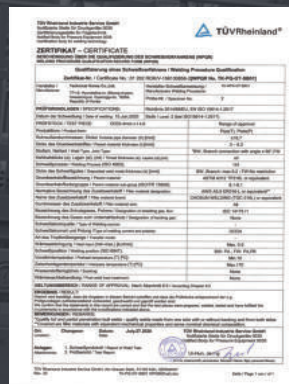
patent certificate



patent certificate



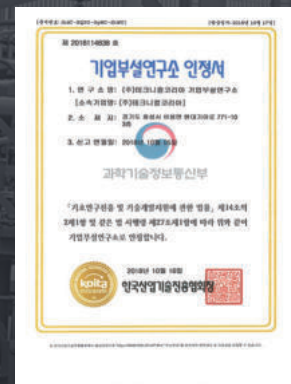
TK-PQ-GT-CB01 WPQR & Test report



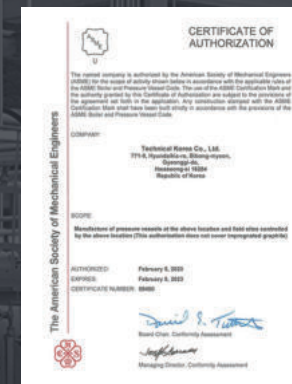
TK-PQ-GT-SB01 WPQR & Test report



Technical Innovative Small and Medium Business Confirmation



Certificate of company affiliated research institute



CERTIFICATE OF AUTHORIZATION



Certificate of Excellent Job Invention Compensation Company



Specific equipment manufacturing registration certificate



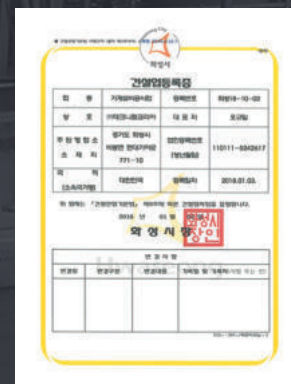
ISO 9001:2015



ISO 14001:2015



Factory registration certificate



Construction registration card



Certificate of Completion Inspection



patent certificate



certificate of registration for cold manufacture



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