



**KSTC**  
Kavosh Sanat Toos Co.

SPECIAL ROTARY EQUIPMENT OF  
OIL, GAS, PETROCHEMICAL  
AND POWER INDUSTRIES

General  
Catalog



**2002**

Establishment  
Entrance into Khorasan Science & Technology Park as a knowledge-based company in the field of Oil, Gas and Petrochemical industries

**2002**

Manufacture & Development of Reducers Gearboxes through research and field studies of similar designs

**2004**

Manufacture and Development of Complete Assembly of Integrally-geared High-speed High-pressure Pumps (API 610 – OH6) through research and field studies of similar designs

**2003**

Manufacture of Critical Spare Parts of Integrally-geared High-speed High-pressure Pumps and Compressors

**2007**

Improvement of Supply Chain Management (SCM) and Production Chain Management (PCM) through Domestic and Global sub-contractors  
Development of Research & Development Department

**2006**

Manufacture & Development of Complete Assembly of Integrally-geared High-speed Compressors (API 617) through research and field studies of similar designs

**2009**

Signing the First Open Order Contract with a large state-owned company for manufacture and overhaul of High-speed High-pressure OH6 Pumps of several Petrochemical Companies

**2008**

Foundation of multipurpose Test Unit of High-speed High-pressure Pumps

**2013**

ISO Certified  
Starting manufacture project of Multistage High-speed integrally-geared Compressor through research and field studies of similar designs

**2012**

Consolidation of High-speed integrally-geared Compressors' Design Knowledge (API 617).  
Manufacture & Development of High-speed High-pressure integrally-geared Compressors (API 617) completely based on design approach.  
Establishment of Engineering & Technical After-sales Services Center in Mahshahr PETZONE (Petrochemical Special Economic Zone)

**2010**

Consolidation of High-speed High-pressure integrally-geared Pumps' Design Knowledge (API 610 – OH6)  
Manufacture and Development of OH6 Pumps completely based on design approach

**2014**

Establishment of Engineering & Technical After-sales Services Center in PSEEZ, Asaluyeh (Pars Special Energy Economical Zone)

**2015**

Beginning of "In-All-Areas Development Plan" (Organizational, Commercial, and Technical)



Future will never be the same in KSTC...

# KSTC BIG EVENTS

# FUTURE WILL NEVER BE THE SAME IN **KSTC**

KSTC aims to become a distinguished manufacturer, designer and service provider of high-speed small and medium-sized turbo-machines such as pumps and compressors, and high-speed small and medium-sized turbo gear units, especially in the context of oil, gas and petrochemical industries, in Iran and the Middle East.

In KSTC, We seek to provide our customers with high quality, reliable, and affordable products, services and parts, complied with highest standards within the industry; by our professional experts, scientists, and process managers, using high-tech facilities, labs and manufacturing machineries.

Customer satisfaction, especially focusing on best after-sales services, are of our primary importance. We have designed a coordinated and managed set of activities and interactions to achieve the highest possible Customer Satisfaction in KSTC.





# KSTC IN IRAN

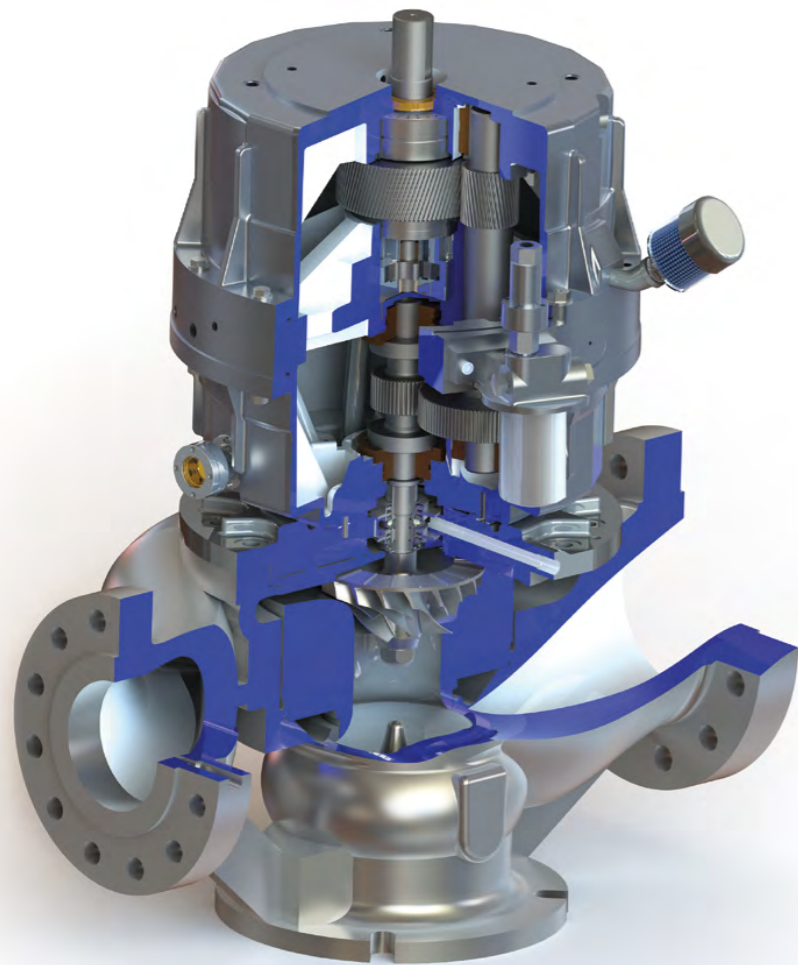


- **Headquarter & Manufacturing Plants**  
Khorasan Science & Technology Park, 91735-813 Mashhad, Iran  
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- **Commercial & Engineering Support Office**  
Tehran, Iran  
Tel: +98 915 923 4079 Email: com@kstc.ir
- **Mahshahr Engineering & Technical After-sales Service Center**  
Talash No. 3 Workshops Complex, No. 1 Site, Petrochemical Special Economic Zone of Bandar Imam (Petzone), Mahshahr, Khuzestan, Iran  
Tel: +98 61 5211 2965 to 6 Email: com@kstc.ir, info@kstc.ir
- **Asaluyeh Engineering & Technical After-sales Service Center**  
Pars Special Economic Energy Zone (PSEEZ), Asaluyeh, Bushehr, Iran  
Tel: +98 51 3542 1701 to 5 Email: com@kstc.ir, info@kstc.ir



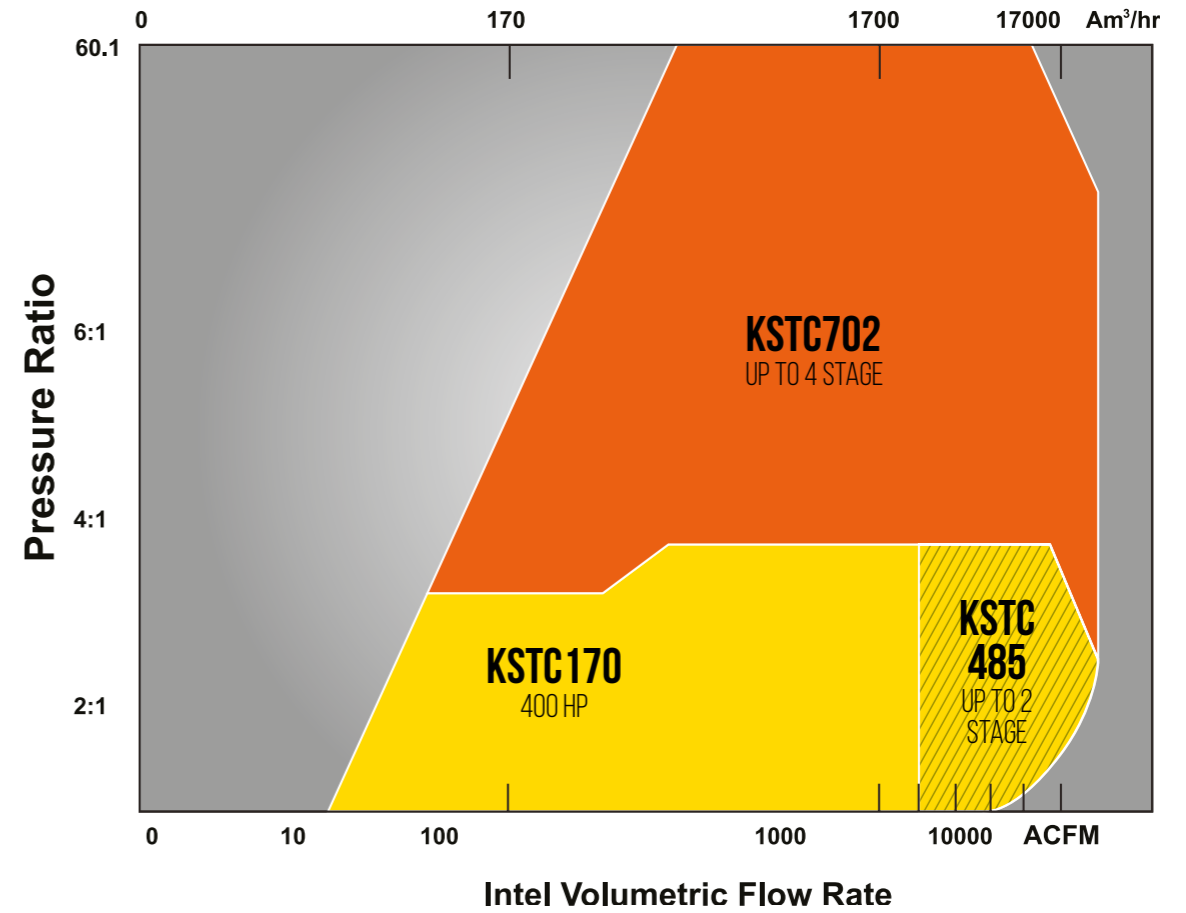
# HIGH-SPEED CENTRIFUGAL COMPRESSORS

(SINGLE/MULTI-STAGE)



KSTC designs and manufactures single-stage and multi-stage compressors complied with API 617 and API 672 standards. Using the advanced machinery and equipment side by side with technical and technological knowledge, based upon the latest designing methods and designing-from-scratch, have led KSTC to be present in the latest and the most up-to-date realm of the turbomachinery. These compressors are primarily used for continuous, stationary service in the oil refineries, chemical and petrochemical plants and natural gas processing plants. Their application can be from 100 to 4,000 hp (75 to 3,000 kW). Multiple compressors chained together can achieve extremely high output pressures up to 4,000 psia (350 bara).

## KSTC COMPRESSOR PERFORMANCE ENVELOPE



### KSTC COMPRESSORS TYPICAL SERVICES AND APPLICATIONS

- |  |   |   |  |
|--|---|---|--|
| <ul style="list-style-type: none"> <li>• Acetic Acid</li> <li>• Acetylene</li> <li>• Ammonia</li> <li>• Atomizing Air</li> <li>• Butane</li> <li>• Chemical Processing</li> <li>• Chemical Transfer</li> <li>• Chlorine</li> <li>• Clean Fuels</li> <li>• Corrosive Gases</li> </ul> | <ul style="list-style-type: none"> <li>• Desulfurization</li> <li>• Ethylene</li> <li>• Evaporators</li> <li>• Flue Gas Desulphurization</li> <li>• Fuel Gas</li> <li>• Gas Boost</li> <li>• Gas Production</li> <li>• Gasification</li> <li>• General Processing Industry</li> <li>• H<sub>2</sub>S Wet Gas</li> </ul> | <ul style="list-style-type: none"> <li>• HC Boost</li> <li>• Hydrocarbon Processing</li> <li>• Hydrogen</li> <li>• Lift Gas</li> <li>• MTBE Replacement</li> <li>• Natural Gas</li> <li>• Natural Gas Extraction</li> <li>• Nitrogen</li> <li>• OEM</li> <li>• Petroleum Production and Refining</li> </ul> | <ul style="list-style-type: none"> <li>• Pipeline Booster</li> <li>• Polypropylene</li> <li>• Power Generation</li> <li>• Purge Gas</li> <li>• Recycle</li> <li>• Refrigeration</li> <li>• Regeneration</li> <li>• Stripper Overhead</li> <li>• Vapor Recovery</li> <li>• Waste Gas</li> </ul> |
|--|---|---|--|

**KSTC 140/240**

|                               |  |
|-------------------------------|--|
| Type                          | High-Speed Integrally Geared Single-Stage Centrifugal Compressor |
| Flow Rate                     | up to 1,450 am <sup>3</sup> /hr (up to 850 acfm)                 |
| Max. Power Required           | 150 kW (200 hp)  |
| Max. Working Pressure         | 100 bar (1,400 psi)  |
| Speed Range                   | max. 33,600 rpm  |
| Mounting Configuration        | Vertical, Horizontal   |
| Suction and Discharge Flanges | 3"x2", 600# or other ratings (ANSI RF)                           |

**KSTC 142/242**

|                               |  |
|-------------------------------|--|
| Type                          | High-Speed Integrally Geared Single-Stage Centrifugal Compressor |
| Flow Rate                     | 3570 am <sup>3</sup> /hr (2100 acfm)                             |
| Max. Power Required           | 150 kW (200 hp)  |
| Max. Working Pressure         | 70 bar (1000 psi)  |
| Speed Range                   | max. 33,600 rpm  |
| Mounting Configuration        | Vertical, Horizontal   |
| Suction and Discharge Flanges | 6"x4", 600# or other ratings (ANSI RF)                           |

**KSTC 146/246**

|                               |  |
|-------------------------------|--|
| Type                          | High-Speed Integrally Geared Single-Stage Centrifugal Compressor |
| Flow Rate                     | 6000 am <sup>3</sup> /hr (3,500 acfm)                            |
| Max. Power Required           | 150 kW (200 hp)  |
| Max. Working Pressure         | 70 bar (1000 psi)  |
| Speed Range                   | max. 33,600 rpm  |
| Mounting Configuration        | Vertical, Horizontal   |
| Suction and Discharge Flanges | 8"x6", 600# or other ratings (ANSI RF)                           |

**KSTC 160/260**

|                               |  |
|-------------------------------|--|
| Type                          | High-Speed Integrally Geared Single-Stage Centrifugal Compressor |
| Flow Rate                     | 1450 am <sup>3</sup> /hr (850 acfm)                              |
| Max. Power Required           | 300 kW (400 hp)  |
| Max. Working Pressure         | 100 bar (1400 psi)   |
| Speed Range                   | max. 33,600 rpm  |
| Mounting Configuration        | Vertical, Horizontal   |
| Suction and Discharge Flanges | 3"x2", 600# or other ratings (ANSI RF)                           |

**KSTC 162/262**

|                               |  |
|-------------------------------|--|
| Type                          | High-Speed Integrally Geared Single-Stage Centrifugal Compressor |
| Flow Rate                     | 3570 am <sup>3</sup> /hr (2100 acfm)                             |
| Max. Power Required           | 300 kW (400 hp)  |
| Max. Working Pressure         | 70 bar (1000 psi)  |
| Speed Range                   | max. 33,600 rpm  |
| Mounting Configuration        | Vertical, Horizontal   |
| Suction and Discharge Flanges | 6"x4", 600# or other ratings (ANSI RF)                           |

**KSTC 166/266**

|                               |  |
|-------------------------------|--|
| Type                          | High-Speed Integrally Geared Single-Stage Centrifugal Compressor |
| Flow Rate                     | 6030 am <sup>3</sup> /hr (3550 acfm)                             |
| Max. Power Required           | 300 kW (400 hp)  |
| Max. Working Pressure         | 70 bar (1000 psi)  |
| Speed Range                   | max. 33,600 rpm  |
| Mounting Configuration        | Vertical, Horizontal   |
| Suction and Discharge Flanges | 8"x6", 600# or other ratings (ANSI RF)                           |

**KSTC 170/270**

|                               |  |
|-------------------------------|--|
| Type                          | High-Speed Integrally Geared Single-Stage Centrifugal Compressor |
| Flow Rate                     | 1450 am <sup>3</sup> /hr (850 acfm)                              |
| Max. Power Required           | 335 kW (450 hp)  |
| Max. Working Pressure         | 100 bar (1400 psi)   |
| Speed Range                   | max. 33,600 rpm  |
| Mounting Configuration        | Vertical, Horizontal   |
| Suction and Discharge Flanges | 3"x2", 600# or other ratings (ANSI RF)                           |

**KSTC 172/272**

|                               |  |
|-------------------------------|--|
| Type                          | High-Speed Integrally Geared Single-Stage Centrifugal Compressor |
| Flow Rate                     | 3570 am <sup>3</sup> /hr (2100 acfm)                             |
| Max. Power Required           | 335 kW (450 hp)  |
| Max. Working Pressure         | 70 bar (1000 psi)  |
| Speed Range                   | max. 33,600 rpm  |
| Mounting Configuration        | Vertical, Horizontal   |
| Suction and Discharge Flanges | 6"x4", 600# or other ratings (ANSI RF)                           |

**KSTC420**

|                               |   |
|-------------------------------|---|
| Type                          | High-Speed Integrally Geared Multi-Stage Centrifugal Compressor |
| Flow Rate                     | 17000 am <sup>3</sup> /hr (10000 acfm)                          |
| Max. Power Required           | 3000 kW (4000 hp)   |
| Max. Working Pressure         | 350 bar (4000 psi)  |
| Speed Range                   | max. 42,000 rpm   |
| Mounting Configuration        | Horizontal  |
| Suction and Discharge Flanges | 3-14"x2-12", 150#, 300#, 600# or other ratings (ANSI RF)        |

**KSTC485**

|                               |   |
|-------------------------------|---|
| Type                          | High-Speed Integrally Geared Multi-Stage Centrifugal Compressor |
| Flow Rate                     | 10200 am <sup>3</sup> /hr (6000 acfm)                           |
| Max. Power Required           | 670 kW (900 hp)   |
| Max. Working Pressure         | 100 bar (1400 psi)  |
| Speed Range                   | max. 32,000 rpm   |
| Mounting Configuration        | Horizontal  |
| Suction and Discharge Flanges | 4-10"x3-10", 300#, 600# (ANSI RF)                               |

# KSTC502

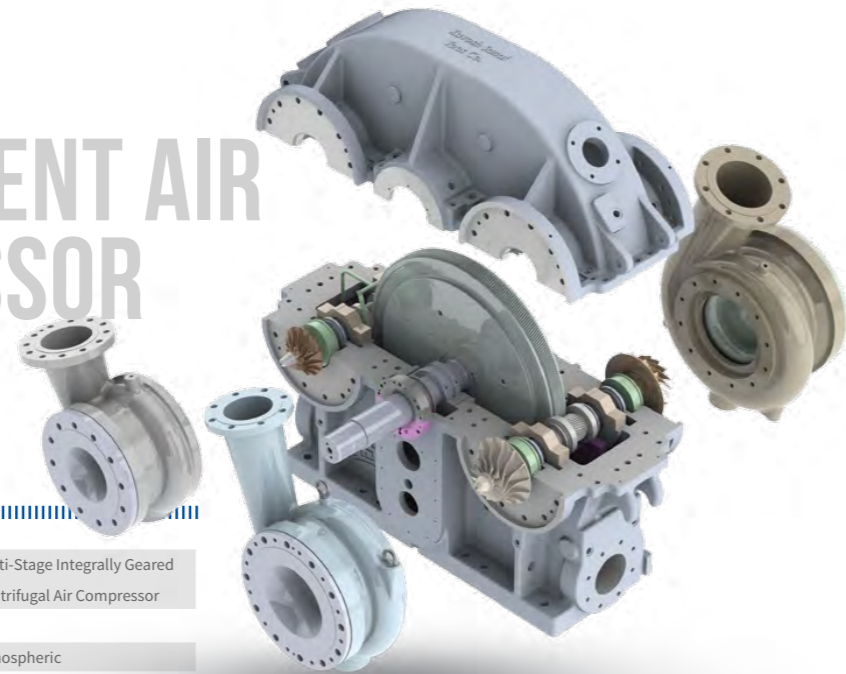
## CHILLER HIGH SPEED COMPRESSOR

**KSTC502**

|                     |  |           |
|---------------------|--|-----------|
| Type                | Single-Stage Horizontal Centrifugal Compressor |           |
| Max. Power Required | 1000 hp  |           |
| Gearbox             | Gear Ratio                                     | 4.35      |
|                     | Output Speed                                   | 12528 rpm |
| Driver Motor        | Speed  | 2280 rpm  |
|                     | Voltage  | 600 V     |
|                     | Phase  | 3         |
|                     | Frequency                                      | 50 Hz     |

## KSTC702

# INSTRUMENT AIR COMPRESSOR



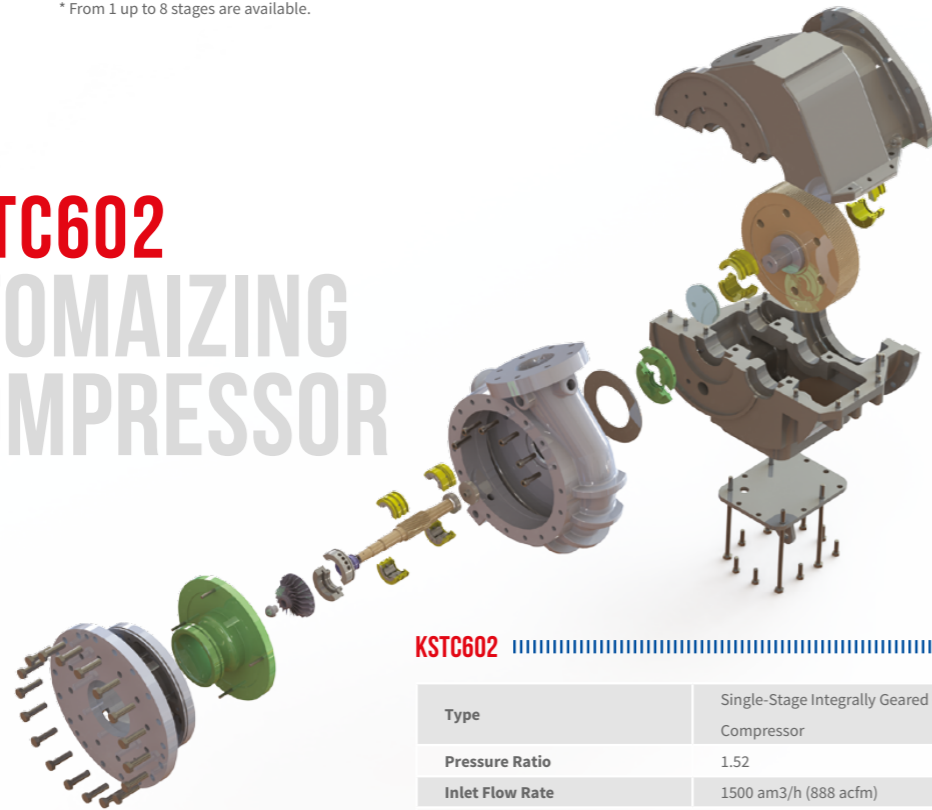
### KSTC702

|                     |  |
|---------------------|--|
| Type                | Multi-Stage Integrally Geared Centrifugal Air Compressor |
| Number of Stages    | 3*   |
| Inlet Pressure      | atmospheric  |
| Output Pressure     | 10.2 bar   |
| Inlet Flow Rate     | 9000 m <sup>3</sup> /h                                   |
| Max. Power Required | 936 kW   |
| Speed               | up to 42,000 rpm   |
| Gearbox             | KSTG903 Integral Gear Unit                               |
| Standards           | ISO 6336, AGMA 6011, API 613, API 617, API 672           |

\* From 1 up to 8 stages are available.

## KSTC602

# ATOMAIZING COMPRESSOR



### KSTC602

|                     |   |
|---------------------|---|
| Type                | Single-Stage Integrally Geared Centrifugal Air Compressor |
| Pressure Ratio      | 1.52  |
| Inlet Flow Rate     | 1500 am <sup>3</sup> /h (888 acfm)                        |
| Max. Power Required | 235 kW (315 hp)   |
| Speed               | up to 50,100 rpm  |



# KSTC ORGANIZATION

- **BOARD OF DIRECTORS**
- **COMMERCIAL & SALES ENGINEERING**
- **RESEARCH & DEVELOPMENT**
- **ENGINEERING & PRODUCTION**
- **ASSEMBLY & TEST**
- **FABLESS MANUFACTURING**
- **QUALITY ASSURANCE & QUALITY CONTROL**
- **STOCK AND PACKAGING**

In KSTC everyone is supposed to contribute to innovation. Every worker and employee is a valuable element in our growth. Our hunger for more and better is large and is present at every level. In our company, we have an open-door policy without much hierarchical stages. We communicate directly and to the point. All this leads to quick decisions and solutions.

## BOARD OF DIRECTORS

KSTC's board of directors, including general manager and technical executive director, determine the company's vision and mission to guide and set the pace for its current operations and future development. With the help of best experts and professional consultants within the country, board members closely monitor the company's performance and customers' requirements to ensure all the organization's activities and structures are appropriate for implementing the chosen strategies.



# COMMERCIAL & SALES ENGINEERING DEPARTMENT

Our Sales engineers try to make and then cement strong professional relationships with customers at high technical and commercial levels to fulfil their special requirements. They are authorized directly from the general manager to push all other departments forward so that the customer's demands are satisfied. Another important mandate of this department is to help with the company's business growth and conducting market research for our latest products and services. In addition, as we are a leading *manufacturer* of Special Process Rotary equipment, this department is able to supply the customers with their demand on a wide variety of API pumps, compressors and gearboxes with after-sales-service by its experts.

## AFTER-SALES SERVICE: WE ARE BESIDE YOU!

KSTC after-sales service centers are directly supervised by Commercial & Sales Engineering Department. In order to enable end users to have easier and faster access to our after-sales service, technical support and facilities, we have established other workshops in country's major Oil centers and Petrochemical Industry's poles which are located at *Mahshahr Petzone* and *PSEEZ* (Pars Special Energy Economical Zone in Asaluyeh).



## WE'VE BEEN ON YOUR SIDE AT:

— CIPPE –China International Petroleum & Petrochemical Technology and Equipment Exhibition– 2013: Shanghai & 2014: Beijing



— Iran Oil Show –International Oil, Gas, Refining and Petrochemical Exhibition– 2014 & 2015: Tehran, Iran



— Metalloobrabotka –International Specialized Equipment, Instruments and Tools for the Metalworking Industry– 2015: Moscow, Russia



— ADIPEC –Abu Dhabi International Petroleum Exhibition & Conference– 2014 & 2015: Abu Dhabi, UAE



— Khuzestan Oil, Gas, Petrochemical and Drilling Exhibition– 2011 & 2012: Iran



— Science to Practice Festival– 2011: Tehran, Iran



— Iran Solo Exhibition; Building, Electricity, Oil and Gas– 2015: Ashgabat, Turkmenistan



— Shanghai Tube Expo– 2012: Shanghai, China



— Shanghai Metal Expo– 2012: Shanghai, China



— International Machinery Parts and Assemblies– 2012: China



— Gear China– 2012: Shanghai, China



— Iran Solo Exhibition; Building, Electricity, Oil and Gas– 2015: Muscat, Oman



— Kish ENEX –Energy Exhibition– 2013: Kish Island, Iran



— NAFTEGAZ International Exhibition – Equipment and Technologies for Oil and Gas industries –2016: Moscow, Russia



# STOCK AND PACKAGING

## Internal Product Coding System

With the aim of managing technical documentation a separate unit has been established for coding all parts and products. Any product is defined with a unique internal code (named KST Code) based on a fixed pattern. Furthermore, in order to establish and maintain effective and fast communications with our customers, cross-reference tables have been created which are in correspondence with other coding systems in oil, gas and petrochemical industries, especially MESIC, that are being updated continuously. This system facilitates ordering process as well as identifying customer's needs based on the codes they use.

All parts and equipment, produced in the factory or assembled as the final product, are stored based on our ISO system in Stock & Packaging Section. Moreover, parts are kept with Shell standard system of MESIC coding pattern as well as our internal coding system (KST Code)



# KSTC CUSTOMERS

DMT SORC KRPC STPC KHPC PARSPC SPC IGTC JPC MEHRPC PKC FNPCC

S.P.G.C KALANAFT ICIC AKPC BSPC MOBINPC RAZIP FAJRCO BORC KPIC NIOC ABADAN-REF

SPEC MPC WOGPC SGPC BIPC BISPC KZPC ZPCIR NISOC ARVANDPVC ASPC IKORC



# KSTC CERTIFICATES



Certificate of Membership in IEMA (Iranian Equipment Manufacturers Association) - 2013



Certificate of Membership in SIPIEM (Society of Iranian Petroleum Industries Equipment Manufacturer)



Certificate of Reducing Dependency upon Foreign Leading Manufacturers



Performance Certificate of KSTC Commitments in AKPC (Amir Kabir Petrochemical Company)



Quality Certificate of SPGC (South Pars Gas Company) on KSTC's Spare Parts of High Speed Pumps



Performance Certificate of KSTC in Khalij Fars Petrochemical Co.



Performance Certificate of KSTC Commitments in STPC (Shahid Tongdugyan Petrochemical Complex)

## VENDOR LIST

**Membership Confirmation of KSTC in Approved Vendor List (AVL) of KHP (Khorasan Petrochemical Company)**

**Membership Confirmation of KSTC in Approved Vendor List (AVL) of NIGC (National Iranian Gas Company)**



## ISO CERTIFICATIONS

**Certificate of Registration**  
MOODY INTERNATIONAL  
This is to certify that the Quality Management System of:  
**Kavosh Sanat Toos Co.**  
Khorasan Science and Technology Park, Km 12 Ghoochah Highway, Mashhad-Iran  
has been assessed and found compliant with the requirements of:  
**ISO 9001:2008**  
Approval is hereby granted for registration on the proviso that the certification rules & conditions are observed at all times.  
Certification Scope:  
Design & Manufacturing of Oil, Gas, Petrochemical and Power Plants Equipment  
Certificate No: 1011130207  
Issue Date: May 11, 2013  
Expiry Date: May 10, 2016

**Certificate of Registration**  
MOODY INTERNATIONAL  
This is to certify that the Quality Management Systems of:  
**Kavosh Sanat Toos Co.**  
Khorasan Science and Technology Park, Km 12 Ghoochah Highway, Mashhad-Iran  
have been assessed and registered against the following international standard:  
**ISO/TS 29001:2010**  
Approval is hereby granted for registration on the proviso that the certification rules and conditions are observed at all times.  
The scope of the registration:  
Design & Manufacturing of Oil, Gas, Petrochemical and Power Plants Equipment  
Certificate No: 1300014  
Issue Date: May 11, 2013  
Expiry Date: May 10, 2016



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BE THE SAME IN  
**KSTC**



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