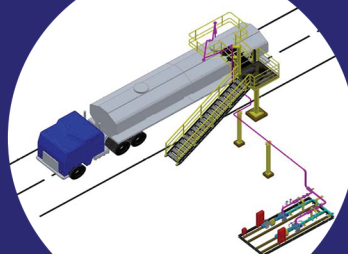


The logo for SHOTEC, featuring the word "SHOTEC" in a bold, sans-serif font. "SH" is in red, "OTEC" is in blue, and there is a blue swoosh graphic to the right of the text.

SHOTEC

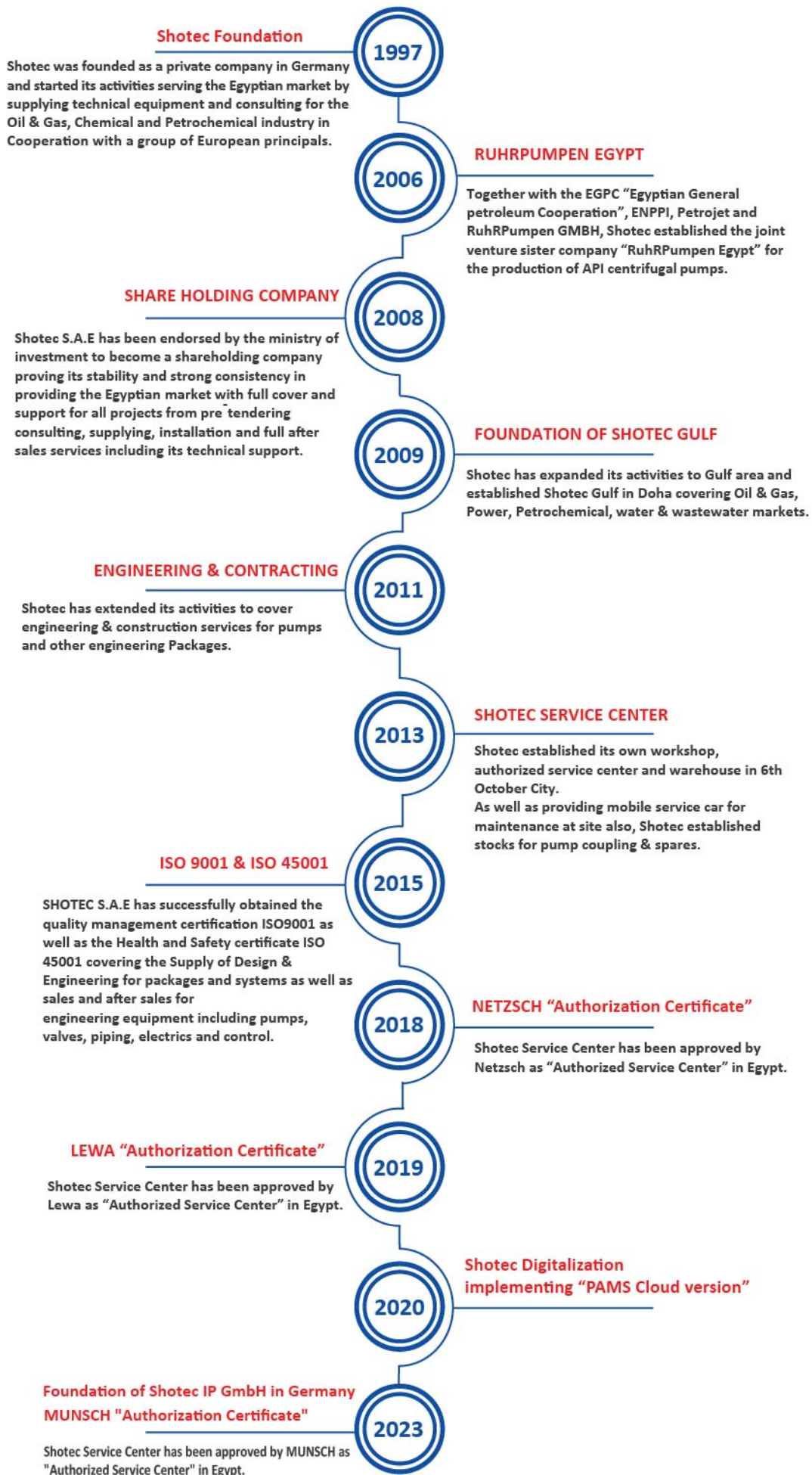


YOUR PARTNER FOR FLUID MANAGEMENT

PRODUCTS & SERVICES

WWW.SHOTECO.COM

COMPANY HISTORY



SHOTEC S.A.E. is a German-Egyptian engineering company specialized in trading and engineering of industrial equipment for the energy and process industry. For over 25 years we are the sole agent of mainly German, Italian and American manufacturers on the Egyptian market and support our clients actively through pre-tendering consulting, engineering services as well as sales and after sales services.

Moreover, SHOTEC is a shareholder of the joint-venture "RUHRPUMPEN EGYPT", one of EGPC companies manufacturing API 610 pumps, together with ENPPI, PETROJET, NASR PETROLEUM COMPANY, EGPC and RUHRPUMPEN.

Our Activities:

1. Sales & Distribution

We represent more than 20 renowned brands on both the Egyptian and the Gulf market and provide the best engineering solutions for the local demand.

2. Pump-Services

Shotec Service Center provides professional repair, maintenance, commissioning and start up of pumps and is the authorized Service Partner of NETZSCH, LEWA and MUNSCH in Egypt.

3. Engineering & Packaging of Pump Systems

Design and Engineering; Assembly in local inhouse workshop; Installation, Start Up and Commissioning

Industries we serve:



Oil & Gas



Petrochemical



Chemical



Fertilizer



Water & Wastewater



Power & Electricity



Food & Beverage



Pharmaceutical



Mining



Pulp & Paper



Sugar



Iron & Steel



Cement

OUR PRODUCTS

1. PUMPS AND PACKAGES



PLUNGER PUMPS
DIAPHRAGM PUMPS
P. 3



CANNED MOTOR
CENTRIFUGAL PUMPS
P. 4



AIR OPERATED DOUBLE
DIAPHRAGM PUMPS
P. 4



CHEMICAL
CENTRIFUGAL PUMPS
P. 4



PC -, SCREW -, PERISTALTIC
AND ROTARY LOBE PUMPS
P. 5



GEAR PUMPS
SELF PRIMING PUMPS
P. 6



ENGINEERING &
SERVICE CENTER
P. 13

2. STATIC EQUIPMENT



TANK SAFETY
ACCESSORIES
P. 6



PIPING BUK MATERIALS
P. 7



BALL VALVES
P. 7



LOADING ARMS
P. 7

3. HEAT TRANSFER EQUIPMENT



HEAT EXCHANGERS &
AIR COOLERS
P. 8



COOLING TOWERS
P. 8

4. MORE INDUSTRIAL EQUIPMENT



PULSATION DAMPENERS
P. 6



COUPLINGS
P. 9



MECHANICAL SEALS
P. 9



GAS COMPRESSORS
P. 10



INSTRUMENT AIR &
TECHNICAL GAS PLANTS
P. 11



MECHANICAL VARIABLE SPEED
DRIVE UNITS & GEAR BOXES
P. 12



MIXERS & AGITATORS
P. 12

PLUNGER AND DIAPHRAGM PUMPS



METERING PUMPS

The innovative and universal metering pumps with diaphragm protection system.
Flow rates up to 19 m³/h,
Discharge pressures up to 1200 bar.



TRIPLEX PUMPS

High pressure process diaphragm pumps with mono block drive design
Flow rates up to 180 m³/h,
Discharge pressures up to 1200 bar



PLUNGER PUMPS

Pressure up to 3500 bars,
volumetric flow up to 140 m³/h
Temperature up to 200 C,
Viscosity up to 2000 MPAs



PUMP PACKAGES AND SYSTEMS

CHEMICAL INJECTION PACKAGES

Corrosion inhibitor, methanol injection, glycol injection, and other chemicals.
injection with performance range covering flows up to 180 m³/h (45,000 gph) and pressures up to 1,200 bar (17,000 psi)



METERING SYSTEMS

Metering systems are modular combinations of a pump plus an adjusting element, flow meter (volume- or mass-flow), and controller. The metered flow is controlled by a closed control loop.
Custom engineered, expertly built metering pumps and packages.
Complete, ready-to-use solutions for your specific application.



ODORIZATION SYSTEMS

For all sorts of gases
Applicable for all current odorants
Standard and customized solutions for Odorization
Economical odorizing systems thanks to modular design
Worldwide support and service



CANNED MOTOR CENTRIFUGAL PUMP (NON-SEAL)



Leak-free pumps best suited for use with high-temperature and dangerous liquids . An ideal solution for transfer and circulation tasks in the chemical industry. It can be used to pump hazardous, toxic fluids.

Non-Seal pump consists of a centrifugal pump and an air-tight canned motor. Both of them are attached to each other to form one single unit, while pump and motor share one common shaft. A small flow of working fluid is forced into the rotor chamber to act as a coolant and lubricant in the motor.



AIR-OPERATED DOUBLE DIAPHRAGM PUMP



Blagdon is a unit of IDEX Corporation and a leading manufacturer for Air-Operated Double Diaphragm (AODD) pumps. Being specialized in extreme condition environments and applications, they keep your process moving both above and below ground.

Blagdon AODD pumps have long been recognized as the "work horse" of the industry for handling difficult liquids at relatively low pressures and flows. The range of applications is virtually limitless!



CHEMICAL CENTRIFUGAL PUMPS (PLASTIC)



MUNSCH stands for reliable and safe chemical plastic pumps made in Germany. Our core Know-How is handling abrasive, corrosive and critical fluids for various industries: Oil & Gas, Petrochemical, Chemical, Fertilizer, Steel, Mining, Sugar and Environmental

	Horizontal Pumps with Mech. Seal	Horizontal Pumps with Magnetic Drive	Vertical Pumps
Materials	PP, PE - UHMW, PVDF, PFA, PTFE	PP, PE - UHMW, PVDF, PFA	PP, PE - UHMW, PVDF
Capacity	Up to 5000 m ³ /h	Up to 240 m ³ /h	Up to 700 m ³ /h
Head	Up to 100 m	Up to 90 m	Up to 90 m



CHEMICAL CENTRIFUGAL PUMPS (METALLIC)

For metal chemical pumps we have different European Manufacturers with which we can supply just the right pump for your needs. With over 20 years of experience for chemical pumps, we have a long list of satisfied and trusting clients in Egypt within Oil & Gas, Petrochemical, Chemical, Fertilizer, Steel, Mining, Sugar and Environmental Industry.

PROGRESSIVE CAVITY PUMPS

Have a very broad application range and are used in all industry sectors to convey almost all types of media continuously, smoothly, low pulsation and dosing in proportion to speed.

The pumps have broad range of applications with large capacity and pressure range:

Capacity: from just a few ml/h up to 1000 m³/hr.

Pressure: with range no. of stages from 8-1 for pressures from 6 up to 48 bar.

Continuous range of Solids (max. solid size up to 150 mm) and free of solids.

Low to high viscosity (1 mpas – 3 million mpas)

Temperatures from -20°C to +200°C .

For products which elastomers can't be used be used because of high temperature for reasons of durability, a large no. of solid based stators made from plastic or ceramic is available.

NEMO PC pumps meet the requirements of API 676 3rd edition for Mid/ Downstream applications.



PERISTALTIC PUMPS

Heavy duty pumps that combine the advantages of roller and Shoe principle by using Large Rollers for longer service life.

Peristaltic pumps are Excellent resistance to abrasion, High suction capability (self-priming), Valveless, leak free, Easy installation and maintenance. Also, these pumps withstand dry running.

The pump is available in three different versions: Industrial, Chemical and Food.



SCREW PUMPS

Since 1979 NETZSCH has been manufacturing multi screw pumps to serve wide range of industry and applications, such as:

Crude oil	Palm oil
Lube oil	Asphalt
Diesel	Oil Bitumen

NOTOS pumps are designed to convey low to well lubricating fluids, low to high viscosity, shear sensitive or chemically aggressive media, complies with API 676 3rd edition with large capacity and pressure range.

The hygienic NOTOS 2NSH meets the high requirements of Food & Beverage, Chemical, and cosmetic industries with:

Metal part made from St. St. – no contact between the rotating parts – low pulsation – No dead space.



ROTARY LOBE PUMP

Our rotary lobe pumps are self-priming, valveless pumps offer high performance with a tolerance to the dry running and operating temp. up to °100C.

NETZSCH tornado pumps suitable for a wide range of applications which:

Contain large solids up to 70mm diameter.

Large range of viscosity from 1mpas up to 1 million mpas.

Optional safety system like Gear box security system (GSS) to Bearing security system (BSS) to separate between the pump chamber and bearing housing.



GEAR PUMPS

INTERNAL GEAR PUMPS

Reliable and easy to maintain: Only two moving parts.
Adjustable End Clearance, for low or high viscosities, high temperatures:

- Max. Capacity:** to 1,600 GPM (365 M³/Hr)
- Max. Pressure:** to 250 PSI (17 BAR)
- Viscosity Range:** 28 to 2,000,000 SSU (1 to 440,000 cSt)
- Temperature Range:** -120°F to +800°F (-85°C to +430°C)



EXTERNAL GEAR PUMPS

- Max. Capacity:** to 190 GPM (43 M³/Hr)
- Max. Pressure:** to 2500 PSI (170 BAR)
- Viscosity Range:** 28 to 1,000,000 SSU (1 to 250,000 cSt)
- Temperature Range:** -40°F to +450°F (-40°C to +230°C)

The pumps can be supplied as well acc. To API 676 Standard



SELF-PRIMING PUMPS

STANDARD SELF PRIMING PUMPS

Designed for reliable solids and clear liquids handling.
After initial priming, they continue too re-prime automatically.



VACUUM PRIME ASSIST PUMPS

Vacuum assisted pumps that can deliver extreme flow up to 10,000 m³/hr with high head capacity up to 210 meters and utilize the priming system with solid handling capacity up to 760 mm.

Even in run dry situations and suction lift applications, the priming system combined with the low NPSHr impeller design achieves better suction lift faster priming.

TANK ACCESSORIES

We supply pressure safety products for industrial processes and OEM applications as follow:

- Pressure/Vacuum Relief Valves
- Gauge hatches Emergency vents
- Flame and detonations Arrestors
- Blanket gas regulators
- Pilot operated valves
- Rupture discs & Burst indicators



PULSATION DAMPENERS

- Pulsation dampeners
- Calibration pots
- Hydraulic accumulators



PIPING BULK MATERIALS



For the successful completion of major projects, excellent connections to qualified suppliers are essential. A combination of qualified producers for mill quantities and distributors with well-equipped warehouses ensure each item is in the right place. Piping bulk materials in all carbon, alloy and stainless material grades are available, in addition to the special material grades such as Hastelloy, Inconel, Monel, Duplex, Copper-Nickel and others.

RANGE OF SUPPLY

- Pipes and tubes "seamless and welded"
- Structural products "beams and plates"
- Fittings, bolts, nuts and gaskets.
- Flanges.
- Valves and strainers.



VALVES AND FLOW CONTROL PRODUCTS



Our products are designed, engineered and manufactured to exceed its customer's stringent process requirements including API 6D, API 6A, API 6DSS, API 600, API 602, API 608, ISO 9001, PED, ATEX, SIL 3 and TA – Luft.

- Soft & metal seated Trunnion Mounted Ball Valves (Split body, Top Entry, Welded Body, Subsea, Cryogenic & High Temperature and Twin Ball DB&B)
- Pipeline Gate and Check Valves
- Floating Ball Valves
- Gate, Globe and Check Valves including cast & forged
- Butterfly Valves including triple offset, high performance and resilient sealed n Dual Plate Check Valves
- Needle and Gauge Valves
- Wellhead Gate Valves



MARINE AND LAND LOADING ARMS



We provide Marine-and Land-Loading Arms for hazard applications and complete loading stations, complying with international standards and safety requirements.

Our loading arms can be chosen from top and bottom loading arms and our loading stations come as a complete package, including platforms and all accessories.

Business Fields:

Chemical and Petrochemical industry as well as the Oil and Gas Sector

Applications:

Any kind of liquid and gas (All Hydrocarbon Liquid and Gases, LPG, LNG, Acids, Alkies, Nitrogen, Chlorine, Sulphur and Mineral Oil Products)



HEAT EXCHANGERS

SHELL AND TUBE HEAT EXCHANGERS

- Primary Quench Exchangers (PQE) for Ethylene applications
- Transfer Line Exchangers (TLE) for Ethylene applications
- Secondary and Tertiary Quench Exchangers (SQE/TQE) and relative Steam Drums (SD) and Piping Systems (PS) for Ethylene applications
- Process Gas Boilers/WHB with gas inside tubes and water on shell side for refining and petrochemicals applications
- Shell & Tube heat exchangers with exotic materials (Cr-Mo alloys, SS, Duplex, Super-duplex, Ni alloys, Ti, Zr) and/or operating at severe conditions (Pressure > 50 barg, Temperature > 400 °C, erosive/corrosive environment)
- Once Through Coolers (OTC) for Power applications (turbines by Alstom)
- Process Equipment for UREA, Ammonia, Methanol, Melamine applications

AIR COOLERS

Alfa Laval Olmi offers a wide range for Forced- and Induced-Air Coolers. Their products can handle pressures up to 613 bar as well as temperatures up to 400°C and for the tubes a broad variety of materials can be applied.

PLATE HEAT EXCHANGERS

For 90 years, Alfa Laval has been developing plate heat exchanger technology tailored to our customers' applications. Today Alfa Laval offers the market's most comprehensive portfolio of plate heat exchangers to cover the widest range of needs:

- Gasketed plate-and-frame heat exchangers
- Welded Plate Heat Exchangers
- Brazed and fusion-bonded plate heat exchangers



COOLING TOWERS

SCAM is a well experienced technology provider for open circuit cooling towers for both civil and industrial plants. With its own equipment design, an inhouse production and doing the installation on client site, SCAM can respond to individual client needs

Product range covers:

- Field erected cooling towers, FRP and Concrete material
- Packaged cooling towers.
- Turnkey cooling towers with water treatment unit and pumps and all accessories
- Capacity Up to 50,000 m3/hr

SCAM T.P.E.
SCAM TOWERS PACKAGE EQUIPMENT S.r.l.



DRIVE TECHNOLOGY, BRAKE SYSTEMS & HYDRAULIC COMPONENTS



COUPLING TECHNOLOGIES

- Couplings:
 - Steel lamina couplings according to API 610 / API 671 (special materials like Monel/Inconel available on request)
 - Flexible and flanged couplings
- Torque Limiters & Torque Measuring Technology



CLAMPING & BRAKING SYSTEMS

KTR hydraulic and electromechanical brake systems are globally used in various industries. Customer preferences and parameters of the application decide on the selection of the right brake.

Applications: "Wind power, Construction & agricultural machines, Hydraulics, Indoor materials handling, Marine/shipbuilding, General drive technology"



HYDRAULIC COMPONENTS AND COOLING SYSTEMS

KTR has a growing range of hydraulic components from our in-house development: accurate selection, high-quality processing, quick availability, and low prices.

As a customized product or standard solution, multimediu cooler, oil/air cooler or oil/water cooler, for mobile machines or stationary hydraulics, optionally available as a marine or ATEX version, powerful and efficient.



MECHANICAL SEALS



CHETRA is an international specialist in manufacturing high quality and high capacity mechanical seals. The product range includes single-, double- and cartridge type mechanical seals as well as complete seal systems.

Mechanical Seals from CHETRA meet the most demanding technical requirements (API 682, customized and standard seals) and are "Made in Germany". They are typically applied in the Oil & Gas Industry, the Petrochemical- and the Chemical Industry.



RECIPROCATING COMPRESSORS

Reciprocating compressors are of modular design and meet the recommendations of the API 618, a set of regulations by the American Petroleum Institute.

They are offered dry-running or with cylinder lubrication. The maximum number of cylinder axes is 6.

Operating Range:

Discharge pressure $p = (10 \dots 1,000)$ bar

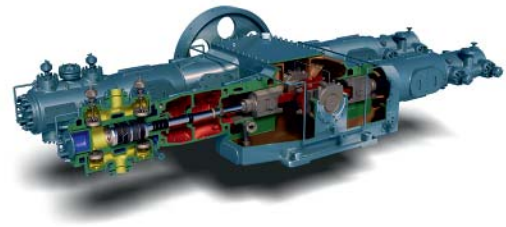
Flow rate $V = (100 \dots 115,000)$ m³/h

Coupling power $P = (50 \dots 16,000)$ kW

Not only is a compressor we are delivering also: The assembly and commissioning of the reciprocating compressors at site, the conversion and modernization of reciprocating compressors and the upgrading of control systems

Application fields:

- Chemical and petrochemical industry
- Refinery technology
- Oil and gas industry
- Gas turbine power plants
- Production, transportation and storage of natural gas



CENTRIFUGAL COMPRESSORS

Dry-running integrally geared centrifugal compressors which are of modular design and satisfy the design guidelines of the applicable API recommendations (API 617, API 614).

Power ranges:

Discharge pressure $p = (\dots 150)$ bara

Flow rate $V = (\dots 300,000)$ m³/h

Coupling power $P = (\dots 25,000)$ kW

Application fields:

- Chemical and petrochemical plants
- Flue gas and desulphurization plants
- Cooling processes in the metal and special steel production sector
- Biochemical plants
- Process technology



AIR & NITROGEN COMPRESSOR PACKAGES

Sinergia is an internationally renowned packager for Air- and Nitrogen Compressors, who has agreements with main global compressor manufacturers. Toughest applications, such as dangerous/explosive environmental conditions, ambient temperatures of up to +58°C, instrumental and control system redundancies etc. are our specialty. Our highly specified compressor packages are customized to your needs and comply with API 619, API 672 and API 618.

- Products:**
- Oil free Screw Air Compressor
 - Oil injected Screw Air Compressor
 - Centrifugal Air Compressor
 - Reciprocating Air & N₂ Compressor

Markets: - Oil & Gas, Petrochemical, Chemical, Fertilizer, Power Plants



AIR DRYERS

Air dryers are installed downstream the air compression in order to ensure the level of humidity content suitable for the process scope. Sinergia engineers, manufactures and packages a wide range of air dryers, suitable for any kind of application and operation condition.

- Products:**
- Heatless Dryer
 - Refrigeration Dryer
 - Heat Dryer with Blower
 - Heat of Compression Dryer

Markets: - Oil & Gas, Petrochemical, Chemical, Fertilizer, Power Plants



NITROGEN & OXYGEN GENERATORS

Together with compressed air, nitrogen is one of the most wide spread utility in industrial productions. The inert property of this gas promoted its diffusion in all industries. Especially for safety reasons, when raw materials and products are potentially explosive or where oxidation could damage the production.

- Products:**
- Membrane Generator
 - PSA Generator
 - Cryogenic Nitrogen Generator

Markets: - Oil & Gas, Petrochemical, Chemical, Fertilizer, Power Plants, Steel, Food & Beverage



NITROGEN ARTIFICIAL LIFT PLANT

By injecting Nitrogen into oil/gas wells, the production of weak or even abandoned wells can be increased economically. Sinergia offers a solution that generates Nitrogen from the environmental air and injects it into the well. Due to the modular/containerized solution, this technology can be applied at most remote locations.

VOITH is a world leading technology provider for drive and control systems for turbomachinery. Its main market segments are Power Plants, Oil & Gas, Petrochemical and Chemical, Fertilizers, Mining, Cement and Steel.

GEARED VARIABLE SPEED DRIVES

Products: Mechanical Variable Speed Drive (VORECON),
Electro Mechanical Variable Speed Drive (VECO DRIVE),
Hydrodynamic Torque Converter (VOSYCON)
Torque converters, Geared Couplings,
Rotor turning devices

Applications: Pumps, Compressors, Fans & Blowers,
Starting of Gas- & Steam-Turbines

Markets: Oil & Gas, Power, Chemical, Petrochemical



HYDRODYNAMIC COUPLINGS

Products: Constant-Fill Fluid Couplings, Fill-Controlled Fluid Couplings,
Variable Speed Fluid Couplings (S-Coupling)

Applications: Pumps, Blowers, Crushers, Belt Conveyers,
Armoured Face Conveyers

Markets: Oil & Gas, Power, Steel & Mining



COUPLING TECHNOLOGIES

Products: Highly Flexible Couplings, Torque Limiting Couplings,
Universal Joint Shafts, Connecting Couplings

Applications: Pumps, Gas Turbines & Compressors, Steel Mills,
Rolling Mills, Conveyers, Crushers & Grinders,
Tunnel Boring Machines, Thrusters & Waterjets

Markets: Power, Steel & Mining, Construction, Rail

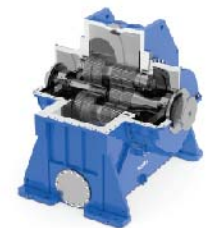


TURBO GEARS

Products: Parallel Shaft Gear, Integral Gear, Epicyclic gear

Applications: Gas-, Steam- & Water-Turbines, Turboexpanders,
Pumps, Compressors, Generators

Markets: Oil & Gas, Power, Petrochemical



ACTUATORS & GOVERNORS FOR TURBOMACHINERY

Service: Retrofitting & Modernization of Steam-Turbines,
Gas-Turbines and Compressors

Products: I/H Converter, Way Valves, Servo Motors, Trip Actuator,
EMA, Selcon, Hydraulic Cylinder, Valve Assembly

Markets: Oil & Gas, Power, Petrochemical, Chemical, Fertilizers, Steel & Mining



AGITATORS / MIXERS

PRO-DO-mix®

Our agitators are specially designed and manufactured to mix fluids in a reliable and efficient way. They are applied for stirring fluids in tanks up to 1500 m³ with a shaft length of up to 10 m and a motor power of up to 45 kW.

Due to their availability in different metals (carbon steel, SS304, SS316L, Super Duplex) and optionally even with plastic linings, our agitators cover a wide range of applications. They also comply with Directive 34/2014/EU-ATEX for installation in hazardous areas and with Regulation 2004/1935/EC for food-grade installations.

Other products for water and wastewater application:

- Surface aerators
- Dry Powder feeders
- Dosing stations
- Polymer preparation
- Submersible mixers



SERVICE CENTER, WAREHOUSE FOR EQUIPMENT AND SPARE PARTS

AUTHORIZED LOCAL SERVICE CENTER

SHOTEC SERVICE CENTER is the authorize local Servicer Partner in Egypt for NETZSCH, LEWA and MUNSCH

- Scope of Services
 - Installation, commissioning and startup for pumps and other industrial equipment
 - Original spare parts on stock
 - Regular maintenance, overall and repair works.
- Highly skilled & certified Service Engineers
- Mobile Service Car equipped with all tools for maintenance at site - 7/24 technical support !



QUALIFICATIONS

- Highly skilled well-trained certified service engineers
- Authorization from NETZSCH, LEWA and MUNSCH for Service & Repair
- ISO 9001 & ISO 45001 Certifications.



SERVICE CONTRACTS AND SPARE PARTS AGREEMENTS

We offer annual service contracts including:

- Equipment
- Check visit
- Preventive maintenance (including technical reports & equipment record book)
- Spare parts recommendations

We also provide lists of recommended sparts for pump systems. On demand, all spare parts can be stored on stock in our warehouse.



ENGINEERING AND TECHNICAL CONSULTATION

TECHNICAL CONSULTATION

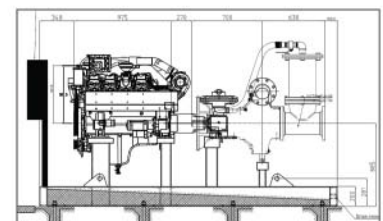
During pre-tender phase, we actively support our clients to specify the requirements according to international standards and to enable the optimal solutions for their needs.

PACKAGING OF PUMP SYSTEMS

With our inhouse technical expertise, SHOTEC is a trusted solution provider for pump packages and process equipment. We are specialized in tailored systems and provide complete pump packages, including all necessary piping, instrumentation, control systems, testing as well as documentation and drawings. On request, our Service Engineers will also do the installation, commissioning and startup of the system.

Engineering activities include but not limited to:

- Design and Generate Equipment P&ID, G.A. Drawings, data sheets & 3D Modelling
- Assembly of pump package
- Installation, commissioning and startup on client site



WITH IMPROVEMENT, PROFICIENCY,
AND DEDICATION WE DO OUR BUSINESS,
AND WITH INTEGRITY AND TRUST
WE GOT THE CONTENTMENT OF OUR CLIENTS

PARTNERS FOR SUCCESS



SHOTEC S.A.E

2 New Marwa Buildings, Ahmed
Tayseer St., Heliopolis, Cairo, Egypt
Tel.: (+2) 02 269047-60/61
Fax: (+2) 02 269047-62

SHOTEC IP GmbH

Kirneckweg 3, 78655
Dunningen, Germany
Tel.: (+49) 07403 / 914455
Fax: (+49) 07403 / 914466

SHOTEC Gulf

Commercial Office, 251 Al Amir St., Freej Al Soudan, Building
no. 63, Zone no.55, 1st Floor, Office No.5, Doha, Qatar
Tel.: (+974) 55513097
Fax: (+974) 44167895

Warehouse & Service Center

17 First Industrial Zone,
6th October City, Egypt
Tel.: (+2) 02 38200618
Fax: (+2) 02 38200615