BLUTEK PRODUCTS CATALOG



www.blutek.eu **BLUTEK CUSTOMERS**

INGERSOLL RAND ADGAS <u></u> 100C JACOBS ENG. AL HOSN GAS BECHTEL GROUP JRS BOLDROCCHI ≪ KBR BOROUGE **LUKOIL** BURNS & MCDONNELL MAIRE TECHNIMONT MDOC CEPSA NAVALMARE CHIYODA CORP. CCC NIOC CONSTRUCAP OMV GROUP CPECC OXY (ENI SAIPEM (PEMEX ESSAR PTSC ESSAR PROJECTS LTD PETRONAS **EXXON** PETROVIETNAM

GASCO

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ADCO

QATAR PETROLEUM REPSOL ROSETTI MARINO SAPURAKENCANA SCOP SCOP KERUI PETROLEUM SLT (SNC LAVALIN INC. SONATRACH TAKREER TALEX TECHINT 1 TECHNIP TECNICA REUNIDAS TECNO PROJECT TURBODEN

ZADCO

The company **O2** Skid mounted compressor packages designed for applications in extreme ambient conditions Turn-key instrument air packages for applications in extreme ambient conditions O4 Engineered air compressors for offshore installation Engineered dessicant air dryer heatless heated type Engineered nitrogen generator packages & PSA technology Oil free two stage screw compression technology Single stage oil injected crew compressor technology All process in our hands 10 Projects

Our **History**

BLUTEK is an independent ISO certified Italian Company specialized in the design and production of engineered turnkey Service/Plant Air, Instrument Air and Nitrogen Generation packages suitable for both Offshore and Onshore installation. Thanks to the consolidated experience and to the dynamic approach, BLUTEK is capable to understand the real needs of every customer and to design the most suitable and best efficient solution. In the years, BLUTEK became all around the world one the most important key partners in the Compressed Air and the Nitrogen Generation field, able to face the most adverse environmental conditions and to comply with all national and international safety regulations.





Blutek **Engineering**

Service/Plant Air, Instrument Air and Nitrogen Generation packages design is entirely conducted by BLUTEK. Engineering Department is responsible for the whole design and assembly and our company adopted all state-of-the-art design softwares, including 3D design and Rendering.

Packages components, whether not manufactured by BLUTEK, they are procured by our Purchasing Department through a consolidated and qualified networkIn addition, customers have the opportunity to take advantage of our Engineering Department already at early design stages (FEED) in order to identify and implement in their projects the most effective solution for Compressed Air or Nitrogen requirements. BLUTEK design is often able to provide an increased efficiency in terms of power consumptions and running costs.



The Quality

BLUTEK is a ISO9001 certified Company with the highest commitments in terms of Health, Safety and preservation of the Environment. Every relevant activity, internal or external, is regulated by the Quality Manual and by dedicated project ITP. Quality procedures are defined at any step including commercial offers preparation, engineering phase, production phase, until final delivery and technical documents. The whole production is tested according to Norm ISO1217 and, whether required, performances are subjected to third party inspection and certification.

Full **Service**

BLUTEK service offers a fast and complete range of solutions for all BLUTEK compressor, dryers or nitrogen generation units worldwide. Main services include Installation Supervision, Commissioning, Maintenance and Training. Thanks to the global network BLUTEK resources will promptly respond customer needs. Service is normally provided in English language.



AGFNT

DISTRIBUTOR SERVICE

▲ OFFICE/FACTORY

Worldwide Sales Network







Electrical motors selected for highest intake air ambient temperature, pressure and density. Selection operated in compliance with installation area, protection level and hazard classification.



Screw type compressor packages, single stage or two stages, selected considering worst inlet conditions in order to ensure the flowrate required by the customer. Compressor packages could be oil-injected, water-injected or oil-free.



Cooling system could be air-cooled type, through SS316L heat exchangers, water-cooled type, through exchangers built in a variety of materials (depending on the water characteristics) and combined air/water-cooled type to ensure minimal water consumption.



Cases in which compressor working pressure is higher than 8 bar(g) and design ambient temperature higher than 55°C, Blutek realizes a combined closed-loop type cooling system provided with a dedicated chiller unit, also seized for extreme ambient conditions.

Typical Application

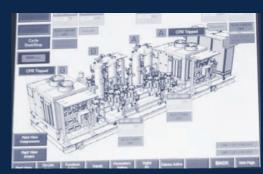
Example of Compressors Packages designed for applications in extreme ambient conditions installed on the desert: n.2 packages with electrical motors, n.2 packages with Diesel motor, provided with combined cooling system.







Screw type compressor packages, single stage or two stages, selected considering worst inlet conditions in order to ensure always the flowrate required by the customer. Compressor packages could be oil-injected, water-injected or oil-free



Unit Control Panel, common for all equipment within the package, provided with single or redundant PLC (SIL2 or SIL3). A touch-screen panel displays all the package settings and working fluxes. Control software is realized by Blutek and customized for every single application.



Interconnecting piping in compliance with ASME or DIN regulations. Blutek design implements the insulation philosophy required by project specifications and applies components tags following the project numbering.



Whether required on-skid, Blutek designs, realizes and installs electrical power control unit for Low or Medium voltage (LV, MV). Starters could be D.O.L. type, Star-Delta, Soft-Start or provided with VFD.

Typical Application

Example of Instrument and Service Air Package for Application in Extreme Ambient Conditions: Instrument Air Package installed in desert area with 58°C ambient temperature. Place of installation: Oman.







All compressors for marine environment made in high quality materials to resist wear and corrosion. Radiators, piping, moisture separators and the compressor noise-hood built in Stainless Steel SS316L.



Electrical motors for marine environment or offshore applications always undergo a specific treatment in order to prevent corrosion and degradation of thermal insulation.



Control panel assembled in SS316L, IP66 cabinets and in compliance with installation area classification. Instruments, cable trays, cable glands realized in SS316L.



Interconnecting piping and components in contact with lubrication oil or compressed air all made in Stainless Steel SS316L and painted with C5M cycle whether required.

Typical Application

Example of Customized Air Compressor Packages for Offshore Installation: Oil free compressor installed on oil rig Place of installation: Mexico Gulf.







All equipment for marine environment (compressor, dryers) made in high quality materials to resist wear and corrosion. Radiators, piping, moisture separators, filters all built in Stainless Steel SS316L.



Although control system is realized enhancing service quality and to reduce as much as possible operators interventions on the equipment, package design always considers spaces necessary for ordinary maintenance with ladders or access platform.



Instruments selected according to client technical specifications, environmental conditions and area classification. Instrument positions designed in order to ensure always visibility and accessibility to operators for ordinary maintenance.



Packages equipped with PLC based control panel and dedicated control software realized by Blutek. Panels assembled in different materials according to project technical specifications and in compliance with area classification.

Typical Application

Example of Customized Turn-Key Instrument and Service Air Package for Offshore Installation: Blutek Compressed air treatment package installed on an offshore oil rig. Place of installation; Vietnam.







Package components selection according to customer technical specifications, designed to achieve longest service duration and minimize ordinary maintenance interventions.



Easy Accesses for adsorbent materials replacement, loading and unloading operations.



Membrane technology nitrogen generator supports made with different materials: Aluminium, FRP, Carbon Steel, Stainless Steel, in compliance with project specifications, process requirements, environmental conditions and area classification.



PSA technology nitrogen columns filled high quality CM260/300 with enhanced mechanical resistance and reduced pulverization.

Typical Application

Example of Engineered Nitrogen Generator Package PSA type: Nitrogen generation package on an oil rig.
Place of installation: Mexico.







First stage compression characterized by bigger rotors with asymmetric profile, made in high quality Stainless Steel. Rotors and body treated with ULTRACOAT coating procedure with the aim to reduce wear and corrosion.



Second stage compression characterized by smaller dimension rotors with asymmetric profile, realized in X13Cr18 Steel. Also for the second stage, rotors and body treated with ULTRACOAT special coating procedure.



Rotors mounted keeping an extremely reduced distance through a high precision synchronism coupling gear.

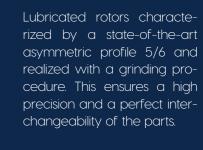


Both edges of the driveshaft equipped with a series of floating seals providing compression chamber insulation from bearing lubrication system.



Each stage can be easily disassembled and shipped to shop for inspection. A stock of compressor stages is always available for a prompt replacement.







Intake butterfly regulator with blow-off valve integrated. In feed air applications for nitrogen generation packages, regulator is set for proportional 70-100% adjusting of the ideal flow rate.



Air filters designed and assembled by Blutek, seized for 150% of the nominal flowrate and made in Stainless Steele SS316L with silencer.



Aluminium or SS316L coolers suitable for 60°C temperature in desert environment.



Flexible coupling wrap design allows onsite replacement with no need to disassemble the electrical motor or the compressor stage.

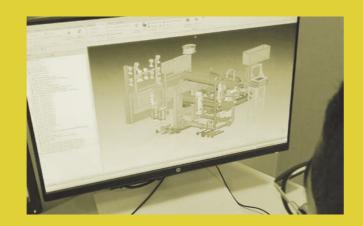
BLUTEK ALL PROCESS IN OUR HANDS

Package components study and design conducted using state-of-the-art 3D modelling, fluid dynamics and FEM simulation systems.

Blutek designs and realizes the software used in packages control and management system, PLC based (Rockwell or Siemens), for each single project.

During project development, Blutek Quality Assurance Department follows all production stages, including shop tests, conducted within both the company and vendors.

Every package of whichever dimension, is subjected to a functional performance test, including parameters measurement, to verify the compliance with values indicated in the contract performance guarantee.

















Blutek provides all accessories for packages lifting and installation onsite.

Before shipping, all equipment is seaworthy packed in wooden boxes with vacuum bags, filled with adsorbent materials for humidity.

Logistics for packages transport until site of installation (INCOTERMS 2010) is operated through proven experience forwarders to every place of the world.

Blutek Engineers conduct site supervision during installation activities and coordinate pre-commissioning, commissioning and start-up operations until the release of the final acceptance certificate that constitutes the closing point of every project.

BLUTEK PROJECTS

Blutek is an important player in the introduction of new ideas in the compressed air and nitrogen generation, for the main components and the complete package. During the years, some of those have become milestones and are now part of the actual State of the Art worldwide.

As Blutek is always looking for innovative technical solutions, the acquired knowledge is in continuous evolution, that's why 'Dynamic know-how' defines the Blutek team passion in giving to customer the best product ever.



Customer Shell

Site of installation

North Sea

Type

Oil free screw Safe area



Flow

2500 Nm³/h



Customer **Pemex**

Site of installation

Gulf of Mexico

Type

Oil free screw for Zone 2

Power

200 Kw



Customer **Sonatrach**

Site of installation

Type

400 Kw



Power

200 Kw



Site of installation

China Sea

Type

Dessicant dryer for Zone 2



Bir Seba Algeria

Oil free screw for Zone 2

Power

Customer **ENI**

Site of installation

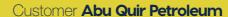
Adriatic Sea

Type

Oil flooded screw

Power

22 Kw



Site of installation

Mediterran Sea

Type

Dryer for Zone 2

Flow

300 Nm³/h



Site of installation

Bagdad Refinery

Type

Mobile oil free screw

Power

480 Kw



Site of installation

Bagdad Refinery

Oil free screw close loop cooling

Power

355 Kw



Site of installation

Oman OXY Mukazina

Type

Instrument air skid

Power

132 Kw



Customer **OXY**

Site of installation

Oman OXY Sahafa

Type

Instrument air skid

Power

30 Kw



Customer **ONGC**

Site of installation

Indian Sea

Type

Oil free screw for Zone 2

Power

132 Kw



Customer **Kuwait Energy**

Site of installation

Siba Iraq

Instrument air package for Zone 2

Power

200 Kw



Customer **ENI**

Site of installation

Congo Sea

Instrument air package for Zone 2

Power

37 Kw



Customer Sonatrach

Site of installation

Bir Seba Algeria

Type

Black start Oil free screw for Zone 2

Power

415 Kw

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