



GK Engineering Group Ltd.

company profile



About Us

GK Engineering Group. Ltd. is Bulgarian company, focused in providing turnkey solutions for healthcare facilities. We ensure complete project management to our clients, starting with consultation on the medical standards requirements, through project planning, design, delivery and installation of medical equipment and after sales services.

The company and its engineers are licensed by the national authority of investment design with full project design certificate.

We have more than 15 years of experience in medical gas systems design and development and have a lot of references in Bulgaria.

We offer to our clients:

- Conceptual design and development of medical gas systems for oxygen, medical air, vacuum, nitrogen, N₂O, CO₂, AGSS.
- Oxygen and nitrogen generation systems design and development
- Liquid nitrogen systems design and development
- Conceptual design and development of nurse call systems
- Integrated operating theatres design and development
- Medical technology design
- Medical equipment delivery, installation and after sales service

GK Engineering Group Ltd. is authorized distributor for Bulgarian market of leading medical devices manufacturers.



Снимки : Изложение Булмедика

Medical Gas Systems Design

Medical gas systems include:

- Compressed air for medical and dental patient and laboratory use; Vacuum for medical and dental patient use
- Oxygen for patient use
- Waste anesthesia gas disposal;
- Other gases for patient, laboratory, and equipment use – carbon dioxide, nitrogen, N₂O

Medical gas systems shall be designed to be safe, reliable, and maintainable.

Our team ensure medical gas systems design as follows:

- **Pipeline design** – copper pipes network with calculation of appropriate pipes dimensions and fittings
- **System control valves**- all medical gas centrally piped systems shall be provided with shut-off valves for section isolation for maintenance and area control boxes for monitoring of the medical gas status and emergency supply from local source in emergency situations.
- **Medical gas alarm systems** - Medical gas pipeline systems must be supplied with local signal system for abnormal pressure in the pipeline
- **Medical central stations** – our team calculates the expected consumption of the hospital and design the most technically and economically efficient solution for gas system sources (steel cylinders, liquid tank, gas production plants, etc.) following the medical standards requirements for main source, second source and emergency source.
- **Planning of equipment with medical gas outlets** – we choose the most ergonomic for use solution for each ward always considering our clients budget and interior design: wall bed head units, ceiling pendants, ceiling suspended units, etc.
- **Oxygen and N₂ generation systems design** - We always put quality and availability of the produced medical oxygen as primary objectives for any healthcare installation. Our broad experience allows us to make an accurate estimation of the future oxygen/ nitrogen consumption to guarantee a correct dimensioning of your plant.

Medical Supply Units

In modern healthcare facilities fulfillment of the standards requirements is not enough. We always try to follow our clients' requirements and create a clearly structured work environment, efficient workflows for the medical staff and considering also the interior design of the hospital.

We create customer specific configurations of medical gas supply units with medical gas outlets, lighting, electrical sockets, data sockets, accessories as IV stands, perfusion stands, shelves, privacy solutions, etc..



Oxygen and Nitrogen Generation Plants

PSA oxygen and nitrogen generation plants are efficient solution for medium sized hospitals and has become a safe alternative to the conventional oxygen and nitrogen supply modes by high-pressure cylinders or liquid storage tanks. Another benefit of investing in own production plant is that you become independent of suppliers of medical gasses.

Our experts can design system for gas production on site according to your personal needs. In case of construction projects for new healthcare facilities our broad experience allows us to make an accurate estimation of the future medical oxygen consumption to guarantee a correct dimensioning of your medical oxygen system.

The advantage of the system we offer is that in case your oxygen supply conditions will change the oxygen generator can be upgraded with additional inexpensive modules.

We always put quality and availability of the produced medical oxygen as primary objectives for any healthcare installation. Steel cylinder station as backup is always planned.



Medical Gas Central Stations

Our team calculates the expected consumption of the hospital and design the most technically and economically efficient solution for medical air compressors and vacuum pumps following the medical standards requirements for main source, second source and emergency source of supply, air quality, filtration and automatic control.

For special gasses like CO₂ and N₂O steel cylinders manifolds supply is most commonly used.

Medical gas monitoring system for monitoring the condition of the central stations can be designed for maximum safety. The monitoring can be integrated in the hospital BMS.



Medical Gas Systems Development

The installation, testing and commissioning of our products and systems is implemented by our team of qualified and licensed specialists, under the control of engineers ensuring the compliance to the following standards:

ISO 9001

ISO 7693 - 1 :2007

MDD 9342 EEC

We always use certified materials for the installation process which are suitable for use with medical gasses. Our installation equipment is of highest class, guaranteeing highest quality of our work, fast and effective installation process.



Integrated Operating Theatre

Together with our partners from Merivaara Corp. – Finland, we design individual operating room integration system that integrates operating room devices, data and image management. Video recordings in the operating room are becoming more common as non-invasive surgery and new medical technology are emerging. Additionally, hospitals need to pay more attention to the quality of care which increases the need for traceability.

The system is IP based audio and video management inside the operating room that enables flexible video routing between sources and displays. Medical video devices can easily be connected with a simple plug'n play function. The integration system enables real-time remote consultation, flexible telemedicine and premium level of university teaching outside the OR. No delays in image transmission inside or outside the operating room.

The system provides management of surgical lights, operating tables, cameras and environmental controls such as general lighting and air ventilation. Tools for improved patient safety and operating room hygiene and efficiency as well as relaxation for patients.

The system is open and additional modules can be added in future.



Our clients

We, at GK Engineering Group Ltd. know that the key to satisfaction of our clients is constant work on improvement of our products and services. We value our customers' opinion and periodically perform client satisfaction surveys.

We are proud for having established so many long term business partnerships with our clients and we are grateful for their cooperation and positive feedback.

- “St. Marina” Hospital – Pleven
- Eye Hospital “St. Petka” – Varna
- Vita Hospital – Sofia
- Women’s Health Hospital “Nadezhda”- Sofia
- Hospital “Avis Medica” – Pleven
- “Luylin” Hospital – Sofia
- Hospital “Medica”- Rousse
- Dentaprime - St. Konstantin and Elena , etc.



Reference case: "St.Marina" Hopspital Pleven



- Design of medical gas pipeline, central stations, oxygen generation plant, equipment with medical gas outlets
- Design of 4 integrated operating theatres
- Delivery and installation of medical air compressors, vacuum pumps, oxygen generation plant, bed head units, ceiling bridges, ceiling pendants
- Delivery and installation of operating tables and surgical lamps, medical displays and cameras
- System integration of operating theatres
- Medical gas monitoring system design and implementation
- Design, delivery and installation of nurse call system



Reference case: "St.Marina" Hopspital Pleven



Reference Case: Intensive care ward of “St. Anna” Hospital -Varna



- Design of medical pipeline of the ward
- Design of ceiling supply units – “bridge”
- Delivery and installation of ceiling supply units
- Installation of medical pipeline
- Design, delivery and installation of nurse call system

Reference case: Vita Hospital - Sofia



- Design, delivery and installation of medical gas systems for oxygen, N₂O, CO₂, compressed air, vacuum including pipeline and central stations
- Design, delivery and installation of medical gas supply units for intensive care ward, patient wards, surgery rooms: bed head units, ceiling pendants
- Design, delivery and installation of medical gas monitoring system, integrated in the hospital BMS
- Delivery of medical equipment: surgical lights, surgical tables, delivery beds, hospital beds

Reference case: Vita Hospital - Sofia



Reference case: St. Petka Eye Hospital - Varna



- Design, delivery and installation of medical gas systems for oxygen, compressed air, vacuum including pipeline and central stations
- Design, delivery and installation of medical gas supply units for intensive care ward, patient wards, surgery rooms
- Design, delivery and installation of medical gas monitoring system, integrated in the hospital BMS
- Delivery of medical equipment
- Design, delivery and installation of nurse call system

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