



> LET'S TALK ABOUT ONSITE

Innovative answers regarding gas generation in self production onsite.

INMATEC as manufacturer of N₂- and O₂ generators is worldwide among the market leaders. The owner-managed company is a classic producer implementing the market strategy Made in Germany.

Combined under the same umbrella: research and development, construction, production, sales marketing and administration.

Located in Herrsching, west of Munich – our clients are provided by INMATEC with complete solutions for

applications in the general industry, medical branch, food- and pharmaceutical industries and electronics technology.

Since the company foundation, INMATEC is concentrating on the sector of ONSITE-technology. Further to the development of membrane technics we focused our know-how on the PSA-technology.

Nowadays INMATEC, with a subsidiary in Frankfurt/Main and U.A.E., ranks among the international manufacturers of both systems. This also includes the distribution- and service network which has evolved along with it.

Our customers benefit worldwide from this advantage.



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> INMATEC: THE PLUS IN QUALITY,
EFFICIENCY AND FLEXIBILITY.
SO DIVERSITY IS RESULTING IN REAL
IMPROVEMENT.



> TOP-QUALITY FROM GERMANY

Since the formation in 1993 INMATEC continues to grow. Soon we realized that quality and service are the most important factors of successful product development.

Due to intensive research and consistent further development our generators are enhanced to a brand name.

Another success factor is the proficiency of the INMATEC team, working "hand-in-hand".

Our Quality Management ensures the reliability of our generators and systems engineering. Not to forget the enormous cost-savings provided by our generators, compared to conventional tank installations or gas cylinders.

Also our environment takes advantage of the onsite own-production system – approx. minus 1,3 kg CO₂ per km, because continuous delivery of the gases by truck is omitted due to the generator.

 **MADE IN GERMANY**

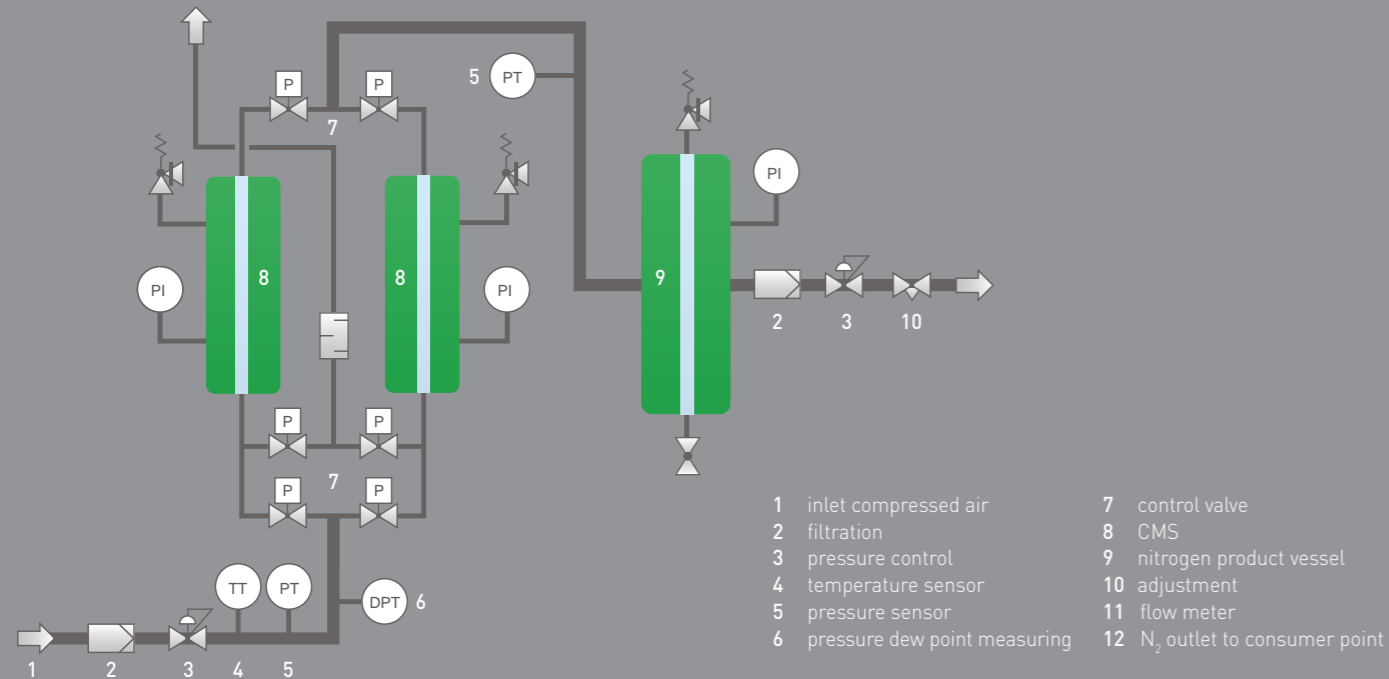


> THE ULTIMATE ONSITE-GASES: INMATEC

- PSA N₂ UP TO 99,9999% (6.0) / 1.0 ppm (residual O₂)
- PSA O₂ UP TO 99,5%
- MEMBRANE N₂ UP TO 99,9%
- MEMBRANE O₂ UP TO 40%
- SPECIAL PLANTS UP TO 10.000 Nm³/h
- REMOTECONTROL VIA TOUCHPANEL
- AFTERSALES/24h-SERVICE



> THE PSA-TECHNOLOGY (N₂)



The Pressure-Swing-Adsorption (PSA)-technology is based on the adsorption principle, using a carbon molecular sieve (CMS) as adsorbent.

Adsorption refers to the binding of particles to the surface of a material.

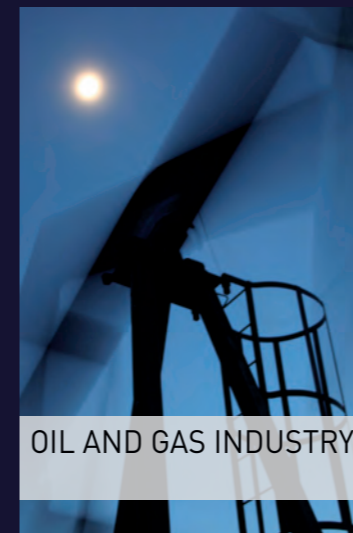
For the process of nitrogen generation compressed air flows thru a vessel filled with carbon molecular sieve. During this process oxygen molecules react with the active carbon.

This adsorption process is continued until the active carbon is saturated with oxygen molecules.

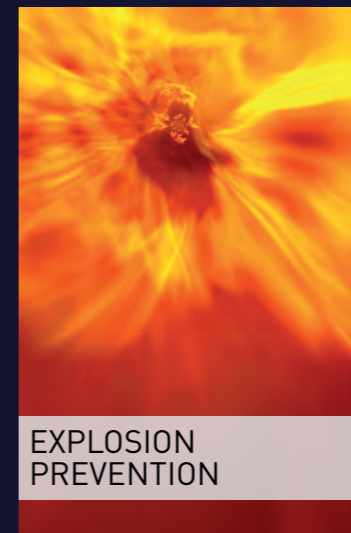
Subsequently the system is switched to the second vessel. The oxygen molecules are again absorbed. During this process the other vessel is in regeneration mode.

> NITROGEN FROM 0,2 Nm³/h – 10.000 Nm³/h
N₂-PURITY UP TO 99,9999% (6.0) / 1.0 ppm (residual O₂)

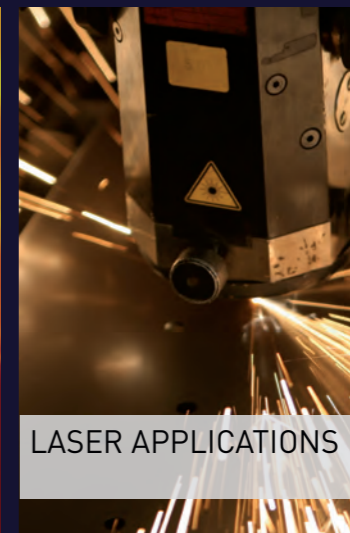
> APPLICATIONS



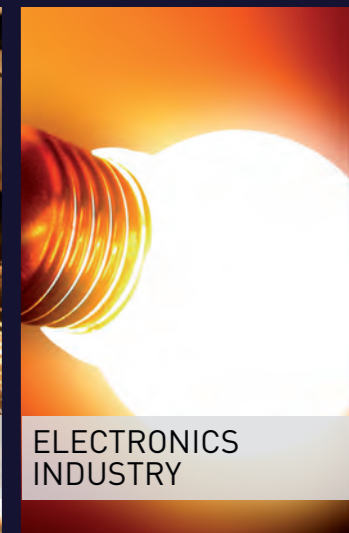
OIL AND GAS INDUSTRY



EXPLOSION PREVENTION



LASER APPLICATIONS



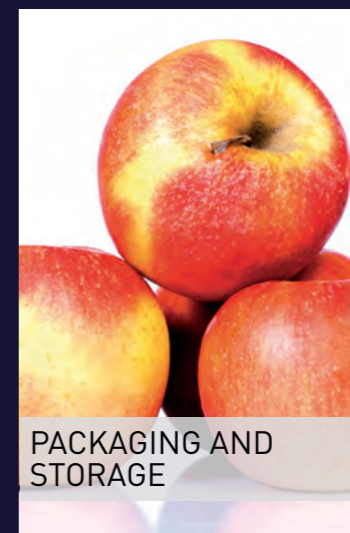
ELECTRONICS INDUSTRY



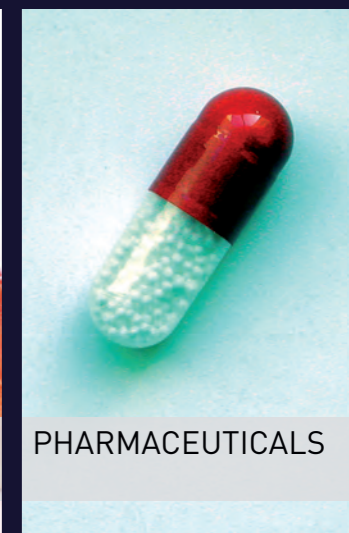
FOOD



AUTOMOTIVE- AND METALWORKING INDUSTRY



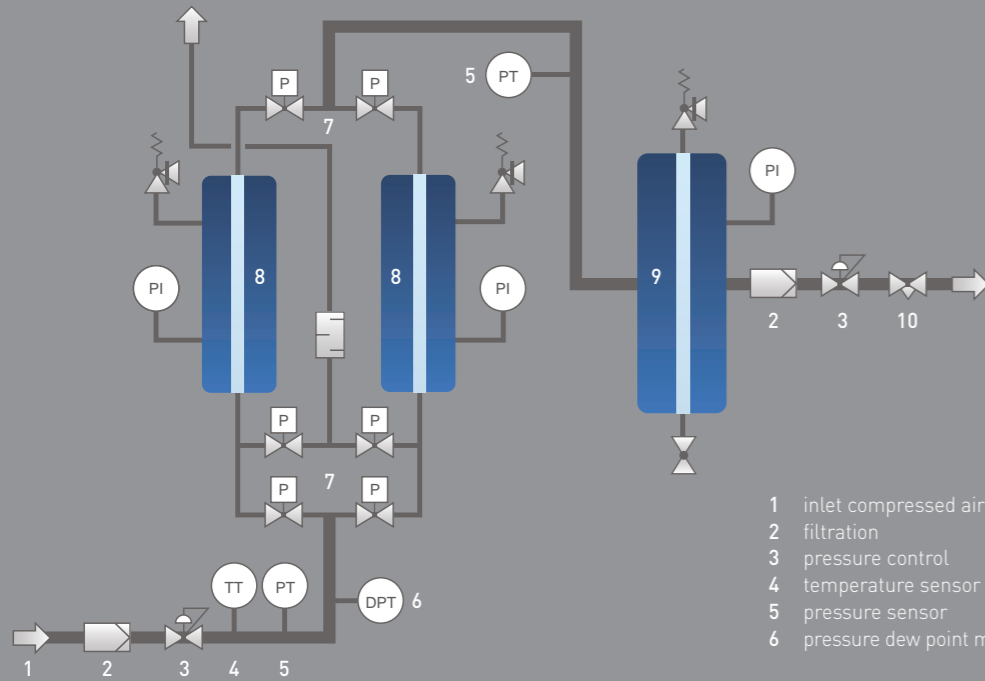
PACKAGING AND STORAGE



PHARMACEUTICALS



> THE PSA-TECHNOLOGY (O₂)



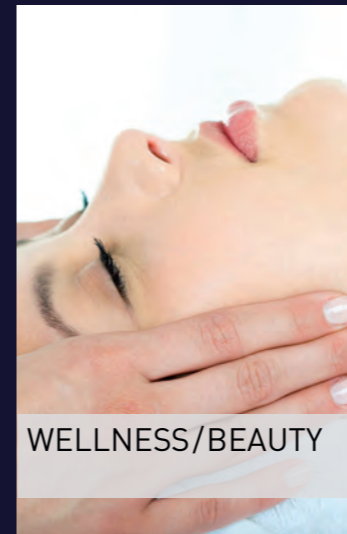
- | | |
|--------------------------------|--|
| 1 inlet compressed air | 7 control valve |
| 2 filtration | 8 zeolite |
| 3 pressure control | 9 oxygen product vessel |
| 4 temperature sensor | 10 adjustment |
| 5 pressure sensor | 11 flow meter |
| 6 pressure dew point measuring | 12 O ₂ outlet to consumer point |

For the production of oxygen are used zeolite as adsorbent.

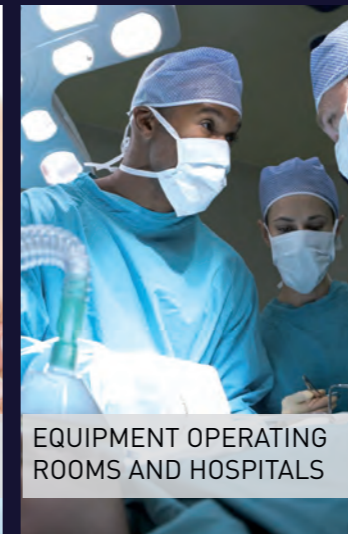
The principle of oxygen generation is likewise performed on basis of the PSA-process.

> OXYGEN FROM 0,2 Nm³/h – 5.000 Nm³/h
O₂ PURITY UP TO 99,5%

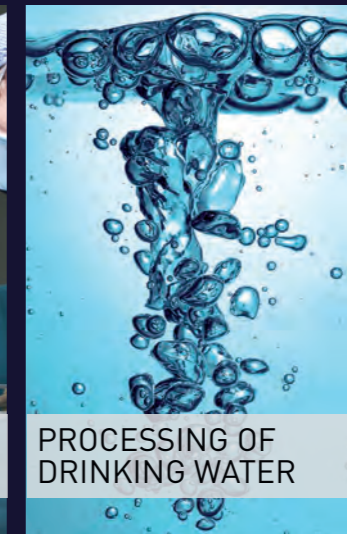
> APPLICATIONS



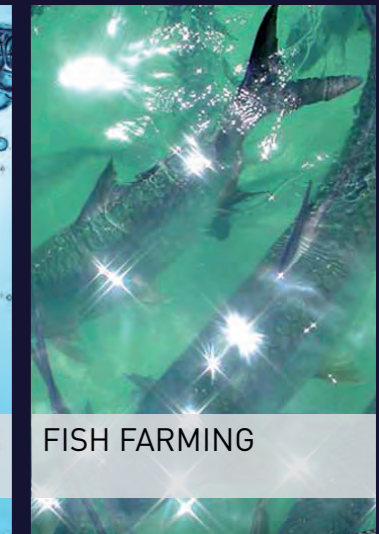
WELLNESS/BEAUTY



EQUIPMENT OPERATING ROOMS AND HOSPITALS



PROCESSING OF DRINKING WATER



FISH FARMING

> ONSITE – YOUR BENEFITS

- AVAILABLE ANYTIME AND FOR ANY QUANTITY
- COST-SAVINGS UP TO 80%
- NO TRANSPORTATION / NO CO₂-POLLUTION
- NO STORAGE / NO LEASING OBLIGATION



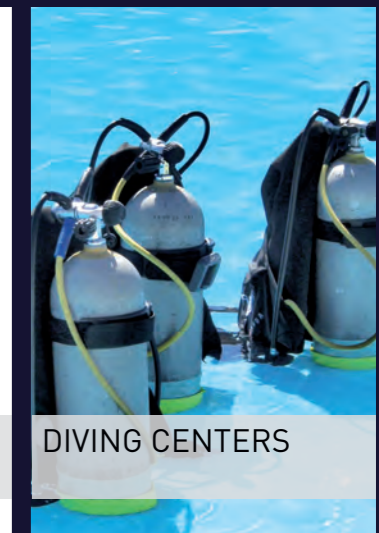
FIRE INTENSIFYING FOR BURNING PROCESS



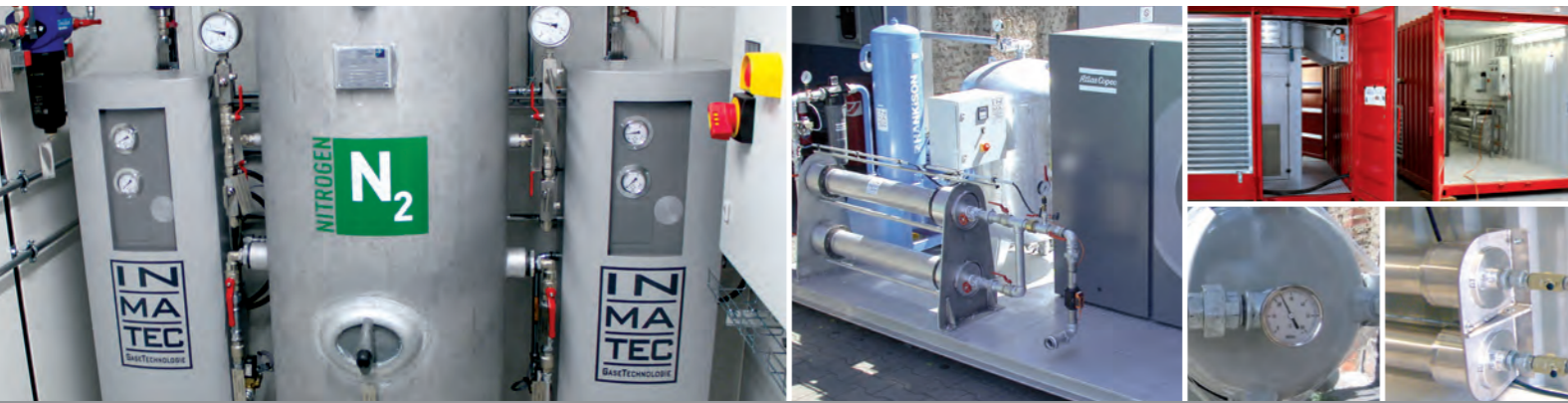
MANUFACTURE OF PHARMACEUTICAL PRODUCTS



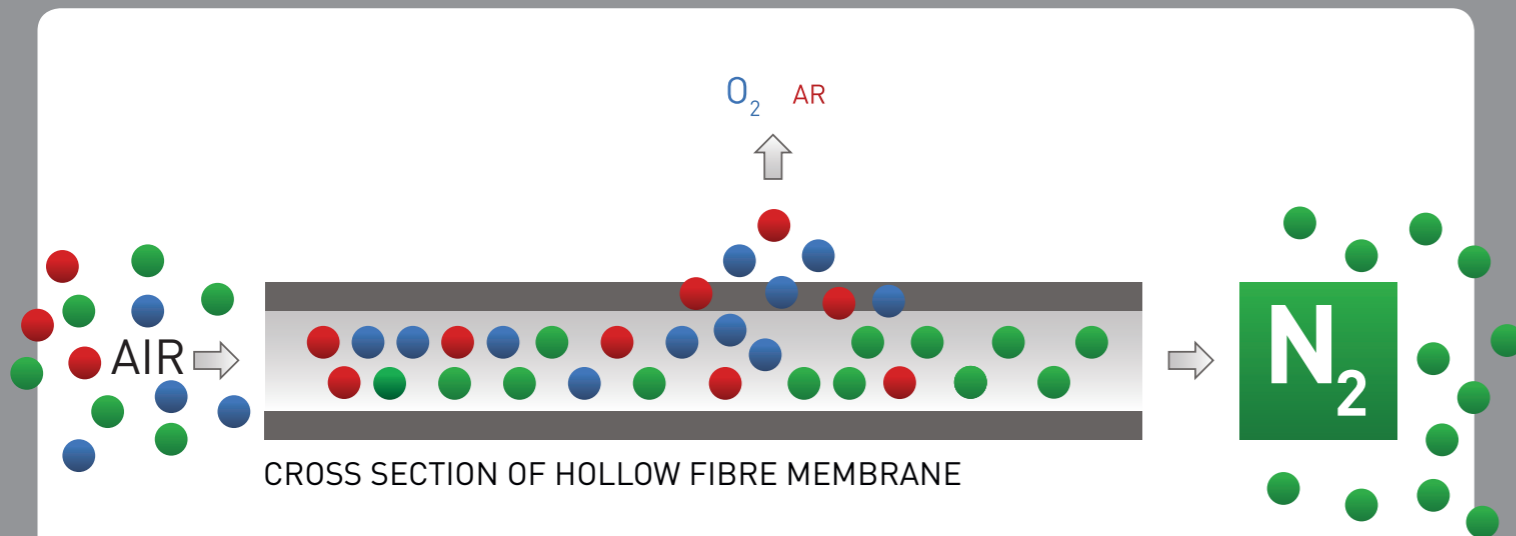
FOOD INDUSTRY



DIVING CENTERS



> THE MEMBRANE TECHNOLOGY



Water vapour, oxygen, nitrogen, rare gases and carbon dioxide diffuse thru the hollow fibre membrane at different rates according to their respective molecular structure. Oxygen having a high diffusion rate is therefore very rapidly separated from the air mixture. Nitrogen, in turn having a low diffusion rate, permeates the membrane very

slowly and is thereby enriched when flowing thru the hollow fibres. The respective gas purity depends on the through flow velocity. By variation of pressure and volumetric flow it is possible to adjust the gas precisely to required quantity and purity.

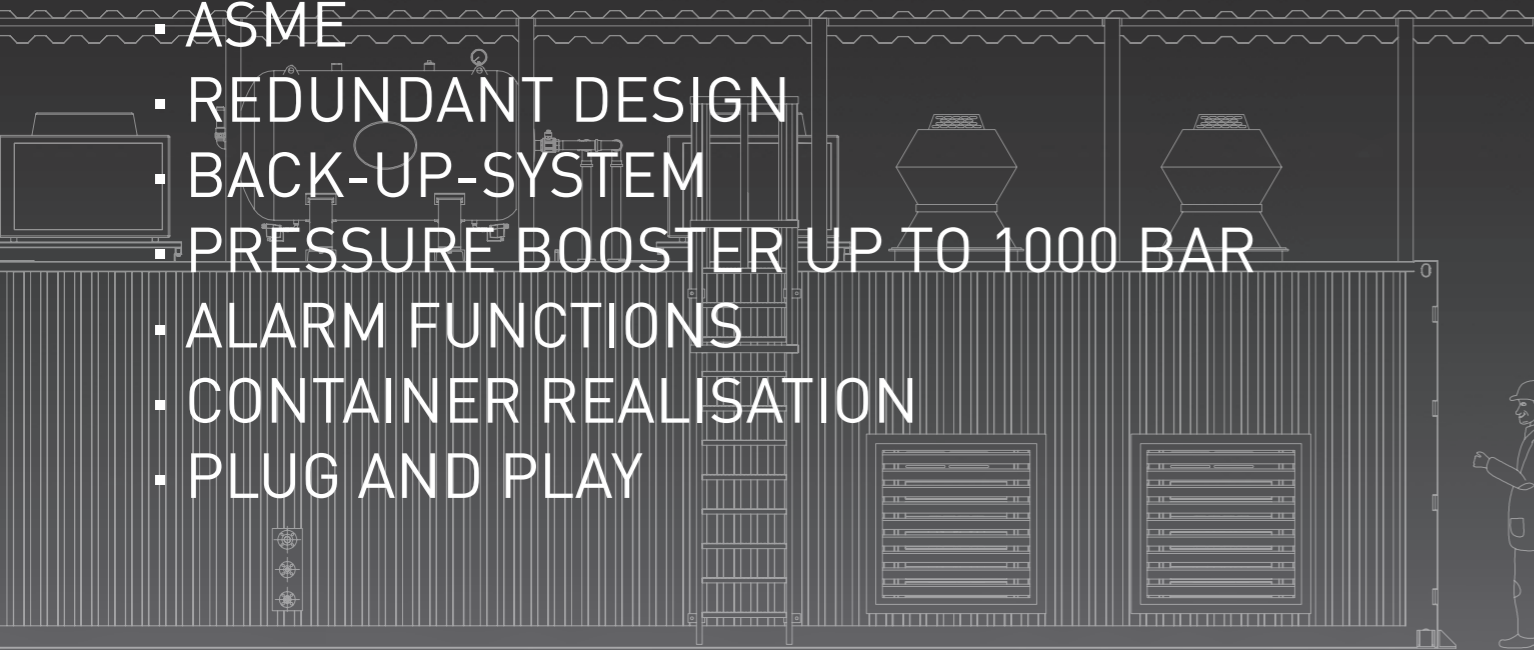
> THE MEMBRANE TECHNOLOGY SETS STANDARDS BY OBTAINING HIGH QUANTITIES OF N₂ AT LOW SUPPLY OF COMPRESSED AIR

O₂

> ONSITE IS OUR WORLD

> SPECIAL PLANTS

- STAINLESS STEEL DESIGN
- EX-PROTECTION
- ATEX-DESIGN
- IP 66
- ASME
- REDUNDANT DESIGN
- BACK-UP-SYSTEM
- PRESSURE BOOSTER UP TO 1000 BAR
- ALARM FUNCTIONS
- CONTAINER REALISATION
- PLUG AND PLAY



> BEHIND ALL CONCEPTS STANDS AN EFFICIENT TEAM AND A HIGH LEVEL OF DISCIPLINE. PLANT ENGINEERING SIGNIFIES FOR US TO ACHIEVE AN OPTIMAL RESULT, CONSISTENT, GOAL-ORIENTED AND ENGAGING.



> INMATEC: COMPETENCE BY IMPROVEMENT – OUR CUSTOMER’S SATISFACTION COMES FIRST.

INMATEC assumes any task from engineering, installation and commissioning, to after sales incl. service and maintenance.

After sales of our generators is covered by our worldwide INMATEC service network.

With a view to increase the life cycle of our generators, we have continuously adapted and expanded our service activities.

If you should need support despite the present back-up system, we are contactable to assist you: 24 hours a day – 7 days a week.

> INTUITIVE AND COMFORTABLE OPERATION

INMATEC plants are operated and monitored in fully automatic mode by the “Touch Control Panel” fitted on the generator. Due to the user-friendly design and handling of the “Touch Control Panel” all operation-relevant parameters are perceived at a glance and saved in the system.

In addition to the control of the generators, the “Touch Control Panel” monitors the functions of the entire system.

When actual parameters fall below or exceed preset values, an alarm message is triggered and saved. It is possible for INMATEC to control and to examine the generator from any computer and from any location worldwide via the Internet.

The INMATEC “Touch Control Panel” is: independent of site, fast and safe – the maximum flexibility for our clients.

ООО «ТИ-СИСТЕМС» ИНЖИНИРИНГ И ПОСТАВКА ТЕХНОЛОГИЧЕСКОГО ОБОРУДОВАНИЯ
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> EQUIPMENT

- AIR COMPRESSORS
- COMPRESSED AIR BOOSTERS
- COMPRESSED AIR CONDITIONING
- OIL/WATER WASTE DISPOSAL
- POWER GENERATORS
- NITROGEN STORAGE VESSELS
- NITROGEN BUNDLES UP TO 300 BAR
- NITROGEN HIGH PRESSURE BOOSTERS UP TO 1000 BAR
- OXYGEN STORAGE VESSELS
- OXYGEN BUNDLES UP TO 200 BAR
- OXYGEN HIGH PRESSURE BOOSTERS UP TO 300 BAR