



*[projects and plants for the chemical industry]*

SWITZERLAND

*technologies  
explosives  
nitration  
hydrogenation*





# company

FROM PROCESS CONCEPT TO PLANT  
COMMISSIONING, BIAZZI SUPPLIES  
THE KNOW-HOW



## BIAZZI's Guiding Principles:

- Focus on core strengths, preserve and develop company know-how
- Focus on niches, and differentiate ourselves in the market by innovation
- Invest in personnel and technology development
- Provide first class engineering
- Focus on delivery of most efficient solutions
- Focus on strong market presence

More than 350 industrial plants have been successfully developed for customers throughout the world.

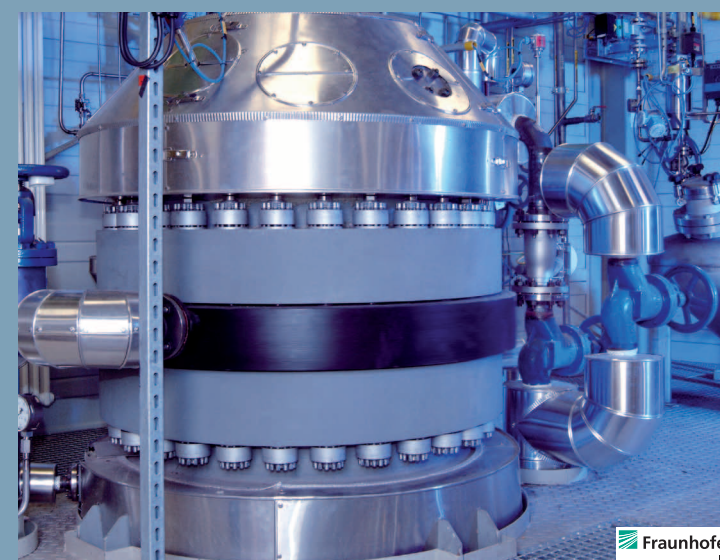
Today BIAZZI has a leading position in hydrogenation, nitration and explosives technologies.

## Our Employees:

- are familiar with other cultures
- are competent and motivated
- are highly skilled
- are appreciated by our clients as experts with great know-how
- have on average 18 years of service for BIAZZI
- are proud to work for BIAZZI S.A.

# hydrogenation

THE WORLD LEADING SPECIALIST IN  
HYDROGENATION / GAS-LIQUID REACTIONS

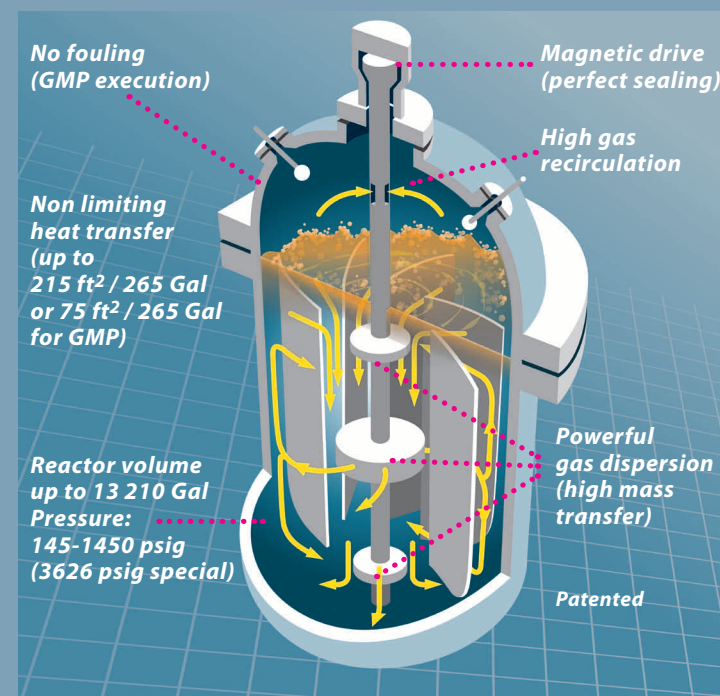


## Technologies and Plants offered for the Manufacture of:

- Delivery of GMP plants for pharma and food products manufacture
- TDA for TDI
- Aromatic amines
- Hydrogenated Sugars/Polyols (e.g. Sorbitol, Xylitol, etc.)
- Furfuryl alcohol and THFA
- Alcohols from aldehydes or ketones\*
- Amines from nitriles, nitrocompounds or others\*
- Partially or fully saturated compounds\*
- Carbonylated derivatives\*
- Oxidized derivatives\*
- Others\*

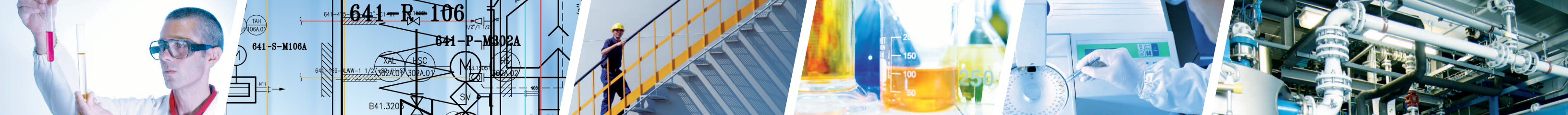
\* based on customer's or jointly developed processes

## Process development, optimization and other services available.



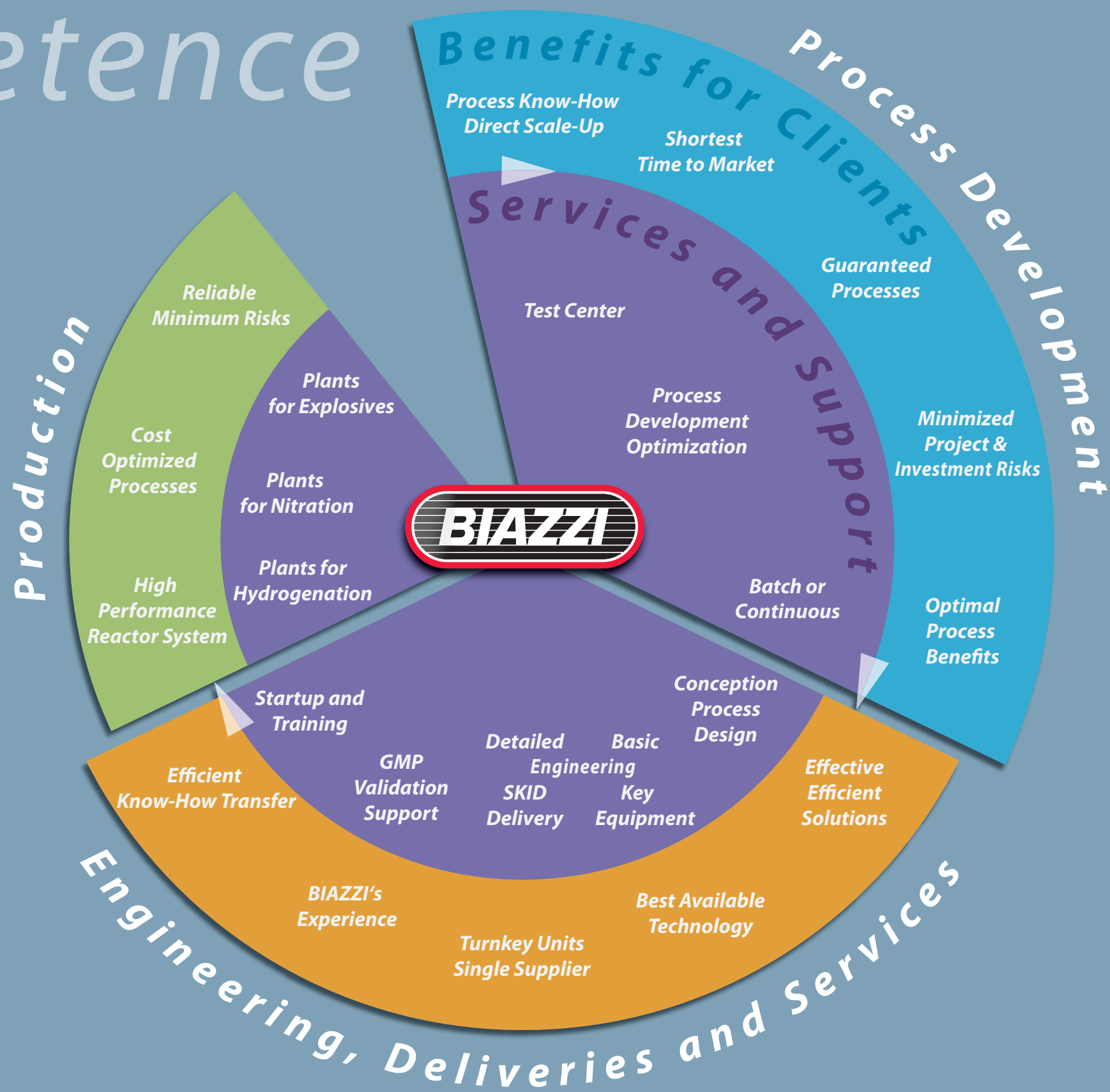
The **BIAZZI High Performance Reactor** was developed with the aim of overcoming the limitations of conventional stirred tank reactors and improving on other high performance reactor systems. To date more than 70 BIAZZI gas/liquid reaction systems have been built worldwide.





# competence circle

SERVICES AND  
DELIVERIES FOR  
THE CHEMICAL  
INDUSTRY



## First Class Engineering

Our suppliers are regularly inspected to insure the best possible quality in equipment and materials delivered by BIAZZI.

Chemists, engineers or technicians highly skilled are sent to the customer site for training the personnel and supporting the critical phases of construction, commissioning and startup of the plant.

## Scale-up

A key factor in BIAZZI's success lies in its know-how, in the performance of lab scale trials with the capability of then providing full **scale-up guarantees to its customers for commercial plants.**

BIAZZI offers several possibilities for developing and scaling-up gas-liquid reactions to industrial scale.

## Test Center in Montreux

Our modern and well equipped test center with its laboratories is operated by skilled personnel allowing fast, reliable and efficient process development.





# explosives

THE REFERENCE IN EXPLOSIVES



*BIAZZI production plants are spread over five continents and benefit from an outstanding safety record.*

*BIAZZI has extensive know-how in all aspects related to the nitration process and to product handling. BIAZZI is able to deliver safe and efficient processes and plants for the manufacture of the following products:*

*Sensitive explosives such as Nitroglycerine, DEGDN, TEGDN, PGDN, BTTN, etc. and their co-nitrates.*

*High explosives such as PETN, RDX, HMX, NENA's etc.*

#### **Continuous or batch plants consisting of:**

- nitration, stabilization, purification, filtration, etc.

#### **Downstream processing lines:**

- Detonating cords: complete manufacturing lines consisting of: drying, spinning, coating, spooling, etc.
- Pre-Mix, Master-Mix and Dynamite production: complete manufacturing lines
- Cartridging for small and large diameters. Weighing, marking and packaging stations

*BIAZZI has been building plants for explosives manufacture since 1936. To date more than 250 units have been realized. More than 50% of worldwide produced Nitroglycerine uses BIAZZI technology.*

# nitration

THE COMPETENCE CENTER IN NITRATION



*BIAZZI has a leading position in the nitration field thanks to extensive experience gained during more than 60 years in the design, engineering, delivery and operation of Nitroaromatics and Nitroesters manufacturing plants.*

*BIAZZI built the first plant in 1946. Since then over 50 units have been built using BIAZZI technology.*

*Numerous references are in operation worldwide. BIAZZI is able to deliver safe, efficient processes and plants at attractive prices for the manufacture of:*

- DNT for TDA/TDI (BIAZZI also can offer the technology for hydrogenation of DNT to TDA)
- Several Nitroaromatics upon request
- Isomer separation
- Associated waste water treatment using our novel patented technology







# we are here

## BIAZZI REPRESENTATIONS IN THE WORLD



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The BIAZZI Group is headquartered near Montreux, Switzerland, about an hour's drive from Geneva International Airport.