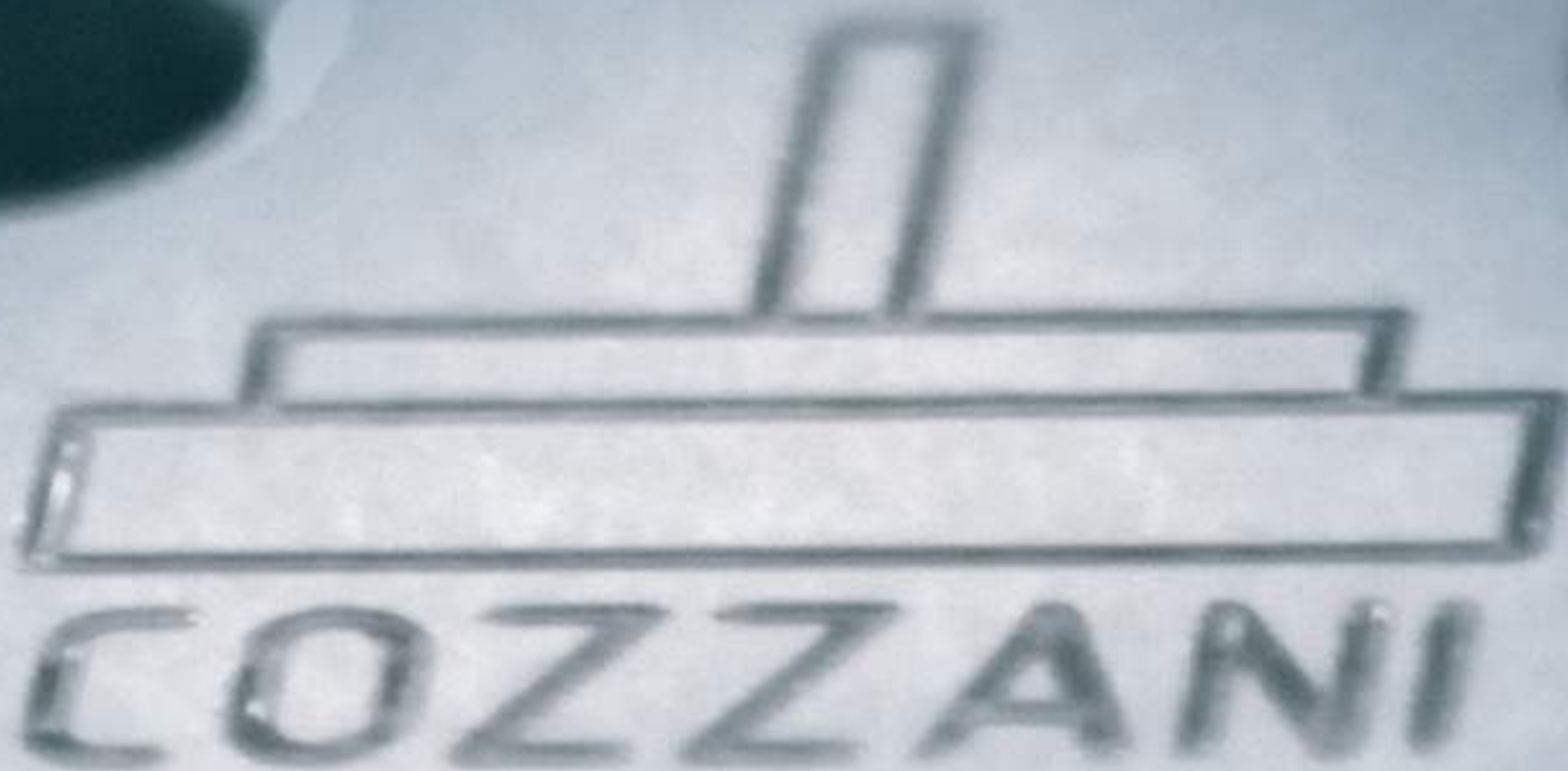
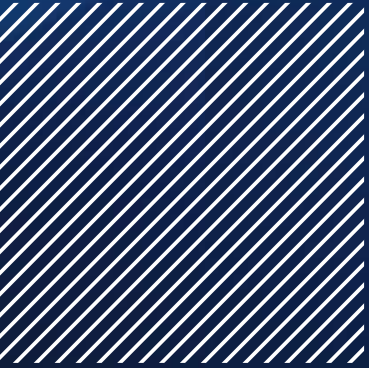




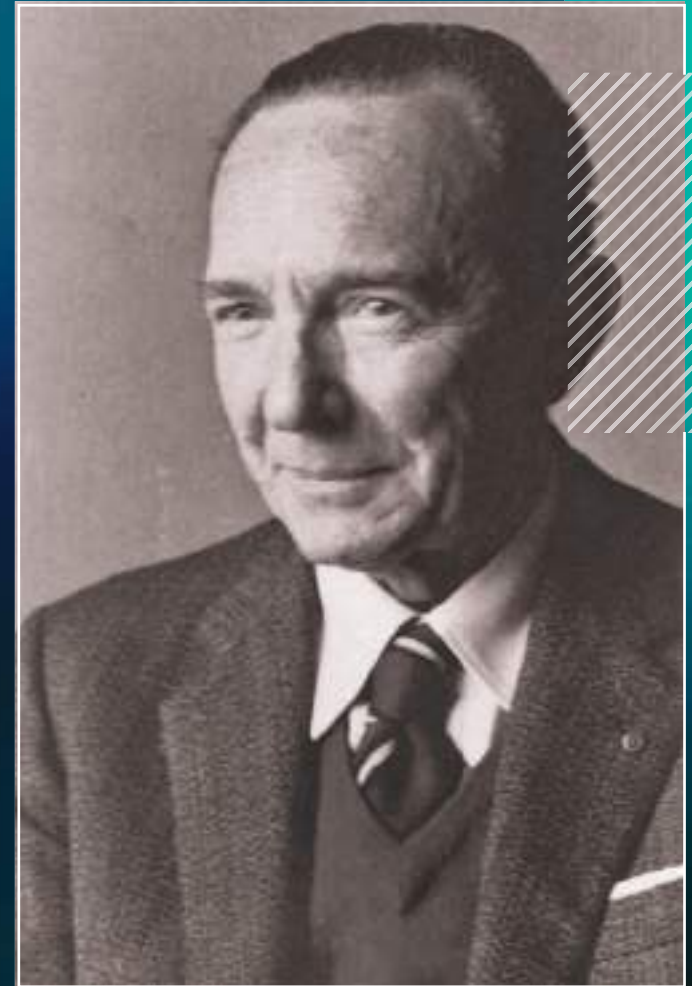
DOTT. ING. MARIO COZZANI S.R.L



WE LOVE WHAT WE MAKE.
COMPRESSOR VALVES.
SINCE 1946.

In 1946, Mario Cozzani started the business of designing and producing the cylinder valves and their actuating systems for reciprocating compressors.

Since that time, the Company, under the founder's name, has been growing standing out for high quality products, leading the business with fairness, and working in close cooperation with compressor manufacturers for the maximum benefit of the End Users. Nowadays, Dott. Ing. Mario Cozzani s.r.l. is acknowledged as one of the main worldwide players.



The image is a collage of 24 aerial photographs of a residential development, arranged in a 4x6 grid. The top row features a large blue banner with the text "OUR COMPANY MISSION & VALUES" in white, bold, sans-serif font. To the right of the text is a decorative pattern of diagonal lines. The subsequent rows show various views of the development, including buildings, parking lots, and surrounding landscape. The images are in a monochromatic teal/blue color scheme.

SINCE 1946, OUR COMPANY HAS BEEN DESIGNING AND PRODUCING CYLINDER VALVES FOR RECIPROCATING COMPRESSORS.

In over 75 years of specialized experience, we have been developing different types of valves suitable for a large variety of operating conditions: lubricated or oil-free compressors, low or high pressures, low or high or variable differential pressure ratios, any gas compositions with corrosive elements included, from cryogenic to high temperatures, for any high duty application.

Our valves are customized to the specific operating conditions, providing tailored solutions to meet the compressor maker requirements.

Using cutting-edge systems for both designing and production, our products fit with very difficult working conditions and fulfil customers' expectations for performance and reliability.

Our mission is to provide very high quality products to meet our customers' satisfaction, responding to their demands, strategies, needs, always providing high flexibility and fast response time.

A close cooperation with the OEM compressor manufacturers enables us:

- to provide them with the best and broadest support for the maximum benefit of the End Users,
- to cooperate in the design phase for the optimization of the cylinder - valve - pocket system,
- to improve our products according to the highest requests for new compressor developments,
- to establish synergies in supplying valve revamping capabilities and valve servicing.

Above all, we behave in our business according to the highest standard of fairness and integrity, values that our founder taught us. Our values include Environmental, Health & Safety and Corporate Responsibility, according to our Ethics Code. You can rely on our products because, first of all, you can rely on us.

MILESTONES



1946

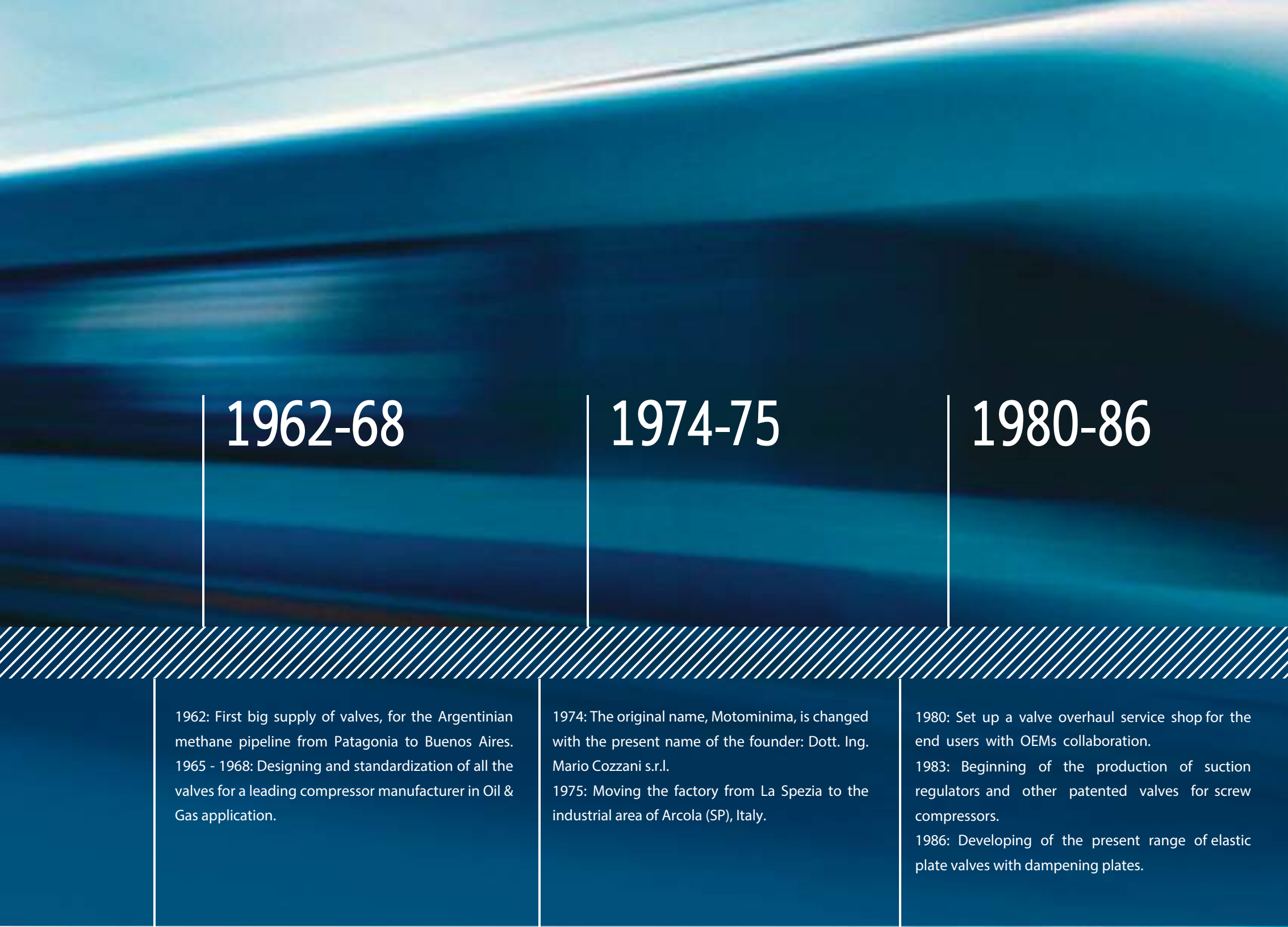
THE
FIFTIES

THE
SIXTIES

Dr. Eng. Mario Cozzani starts the business of designing and manufacturing of valves for reciprocating compressors with the name of Motominima.

Beginning of a large production of valves for methane gas extraction compressors.

Designing of valves with dampening rings and self-lubricating guides.
Designing and production of valves for polypropylene at 850 bar.



1962-68

1962: First big supply of valves, for the Argentinian methane pipeline from Patagonia to Buenos Aires.
1965 - 1968: Designing and standardization of all the valves for a leading compressor manufacturer in Oil & Gas application.

1974-75

1974: The original name, Motominima, is changed with the present name of the founder: Dott. Ing. Mario Cozzani s.r.l.
1975: Moving the factory from La Spezia to the industrial area of Arcola (SP), Italy.

1980-86

1980: Set up a valve overhaul service shop for the end users with OEMs collaboration.
1983: Beginning of the production of suction regulators and other patented valves for screw compressors.
1986: Developing of the present range of elastic plate valves with dampening plates.

MILESTONES

1988-91

1988: Developing of a proprietary software for the dynamic simulation of valve shutters behaviour.
1990: Beginning of valve production for marine compressors.
1991: Beginning of valve production with plates and rings made of PEEK™ material.

1996-99

1996: The Engineering Department is equipped with modern software systems: CFD and FEM. The Quality Management System is certified in accordance with the ISO 9001 Standard.
1999: Set up the R&D department.

2000-03

2000: Designed and patented CC valve with special plate and rings shape. Designed and patented Rotary valve. Start-up of service shop activities in Sicily, Italy.
2003: The Environmental Management System is certified in accordance with the ISO 14001 Standard.



2005-09

2010-14

2015-20

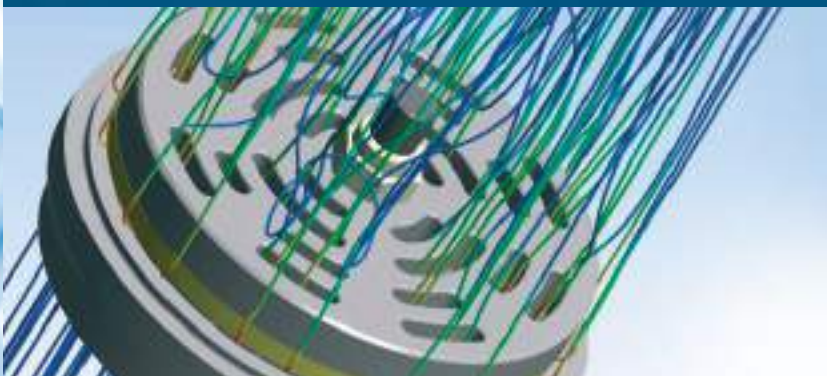
2005: SNC valve designed and patented.
2006: Patented the innovative stepless capacity control system: FluxtoFlow™
2008: Founded Cozzani (Beijing) Compressor Valves Co. Ltd in China.
2009: Qualified to supply poppets for Hypercompressors (up to 3.000 bar).

2010: Start-up of Service Shops activities in USA and Brasil.
2011: Railway market entry.
2012: Start-up of Service Shop activities in Germany.
2013: New sealing material for higher valve reliability.
2014: New shaped ring valves for high efficiency and pressures SR type.

2015: First FluxtoFlow™ installation in China.
2018: Start-up of Service Shop activities in Mexico.
2019: The ultimate efficiency valve for energy saving (SR^{PLUS} type)
2020: Start-up of Service Shop activities in Malaysia.
2020: The first FluxtoFlow™ installation in Russia.

CAPABILITIES

DESIGN



Our technical department designs cylinder valves and unloading systems for reciprocating compressors according to the compressor specifications, to optimize compressor performance. The valve design is supported by commercial software for CFD fluid dynamics, FEM structural and thermal analysis, and in-house developed tools, as the valve dynamic simulator. Our design capabilities are applied not only to new compressors, but also to existing ones to carry out revamping engineering.

RESEARCH & DEVELOPMENT



The R&D team, established in 1999, is composed of mechanical, aerospace, electronic and computer science engineers able to deal with the challenges of cutting-edge technology product development. New materials and valve solutions are continuously tested to improve performance and reliability of Cozzani products. Our testing facilities include flow test bench with automatic acquisition data, reciprocating compressors, and a high frequency dynamometer with climatic chamber.

QUALITY



Since the very beginnings of the Company, the main focus has always been to meet the highest quality with a commitment of all employees to continuous improvement. The appreciation by major compressor manufacturers in the world validates the high quality of our products and services.

High quality standard is achieved in all business processes, beginning from the earliest stages of the projects and is guaranteed with the certification of the Quality Management System according to ISO standard 9001 obtained in 1996.

TECHNOLOGY & PRODUCTION



Since 1975, when the factory moved from the original location in La Spezia to the new industrial area of Arcola (La Spezia), the production area has enlarged by four times and the means of production have always been increasing in number and renewed thanks to continuous investments in up-to-date technologies, such as CAD-CAM systems, automated processes and digitalization. The steady expansion of the production capacity has ensured high flexibility to match the market needs, enabling to manufacture either small quantities or repetitive large production batches. Very unique and high skills are applied to hypercompressor components manufacturing.

COMPRESSOR VALVES





PLATE VALVES / RING VALVES / CONCENTRIC VALVES / REED VALVES / POPPET VALVES / SHAPED VALVES

Each valve is specifically optimized according to the compressor requirements and to all the operating conditions complying with international standards such as API618 and NACE MR0175, whenever required. We supply valves to the main compressor manufacturers in the world, for many different applications, by using a wide range of steels and special alloy materials, as well as several thermoplastic materials.

The size of the valves can change in accordance with the applications and features required, ranging from 20mm to 600mm for suction, discharge or concentric valve types and valves are designed with safety guard or open guard, according to the requested specification.

Each valve solution is characterized by different features, that give special advantages in efficiency or endurance, depending on the application. Plate or rings valves are the main solutions used in the Oil & Gas, Chemical or Petrochemical applications.

The concentric and reed valves have a wide use in small size compressors especially for marine or railway applications, where the compressor speed usually reaches 1800rpm. Poppet valves are used in small sizes whenever power losses are not critical.

The shaped valves are characterized by a special section profile of the plate and rings which highly increases the valve efficiency, obtaining lower pressure drops and lower power losses. For each of the previous types, we have different complete ranges, varying according to the internal channels, the type of plates or rings, the type of springs, the presence of spring caps, and so on. As a result, several valve ranges have been developed, and their use in each specific case is selected by our technicians.

Special solutions like SNC and CC valves have been patented by the company. The range of products is completed by special valves for diaphragm compressors designed for pressures up to 1000bar and compression ratio up to 20.

An offshore oil rig is silhouetted against a sunset sky. A large flare on the right side of the rig is burning brightly, casting a long, shimmering reflection on the dark blue water below. The rig's complex structure, including cranes and a central derrick, is visible. A semi-transparent green rectangular box is overlaid on the left side of the image, containing white text. The bottom of the green box features a pattern of white diagonal lines.

OTHER PRODUCTS

NON RETURN VALVES

UNLOADING SYSTEMS

STEPLESS CAPACITY CONTROL

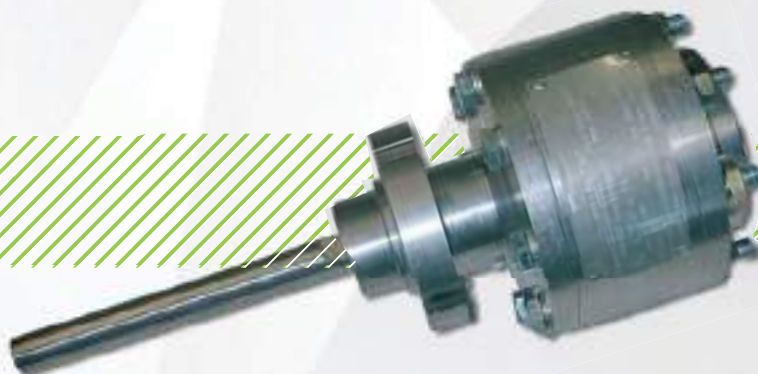
NON RETURN VALVES

Cozzani Non Return Valves are suitable for pulsating conditions, which are typical for reciprocating compressors. They have been designed with minimum pressure drop and according to the European Directive 2014/68/UE (PED) for pressurized equipment. We produce these valves for a wide range of pressure classes from ANSI 150 up to 2500 and sizes from DN 1/2" up to 24".



UNLOADING SYSTEMS

Customized solutions of unloading systems are designed and produced to exclude the flow of the respective cylinder effect, keeping the suction valve opened. Several solutions are available for piston or diaphragm actuators, plug unloaders and port unloaders. They can be designed with different devices in order to assure the gas sealing and according to ATEX 2014/34/EU rule.



STEPLESS CAPACITY CONTROL

FluxtoFlow™ is a step-less capacity control system for reciprocating compressors based on the reverse flow principle, developed and patented by the Company.

Thanks to electrical power only, the holding force provided by electromechanical actuators to control the suction valves is obtained by means of a magnetic field.

The FluxtoFlow™ is the first innovative electromechanical system in the market, for energy saving purposes.



APPLICATIONS AND MARKETS SERVED

OIL PRODUCTION & REFINING



All processes that need reciprocating compressors to convert crude oil feedstock into a variety of commercial products such as oil fuels, lubricants etc.



NATURAL GAS



Gas storage, Gas gathering, Gas transport, CNG, LNG, CBG, Biogas, Biomethane and all applications where Natural Gas is compressed by reciprocating compressors.



TECHNICAL GASES



Oxygen, Argon, Helium, Carbon Monoxide, Acetylene, Nitrogen, Carbon Dioxide, Hydrogen, Polysilicon and all gases that need to be compressed in accordance with various industrial applications required by the market.



PETROCHEMICAL & CHEMICAL GAS



Ethylene Plants, Fertilizer Plants, Methanol Plants, Plastic Plants are among the main categories of petrochemical plants using reciprocating compressors in the conversion of feedstock.



MARINE



Air reciprocating compressors installed on ships to start diesel engines



PET



PolyEthylene Terephthalate (PET) is the compound used in the bottle blow-moulding installations, as well as new biodegradable compounds. Reciprocating compressors are used to increase air pressure for the blowing machines.



RAILWAY & GREEN MOBILITY



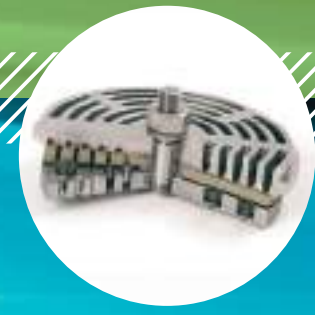
Air Reciprocating Compressors are generally installed on trains to activate the braking system and the automatic doors in the carriages. H₂, both blue or green, is going to be increasingly used for heavy transport such as trains, trucks and buses.



HIGH PRESSURE AIR



High pressure compressed air plays a fundamental role in the latest production processes and in modern civilization.



SERVICE SHOPS

In order to ensure a good support to End Users, Dott. Ing. Mario Cozzani s.r.l. has established a worldwide service shop network where our OEMs customers can address their clients for valve overhauling. Our service shops are located in the most strategic areas for our valve population and are managed by us directly or by partner Companies.

The workers have been trained exclusively by Cozzani technicians, accordingly to our specification and standards. Each service centre is periodically audited by Cozzani staff. Using only original spare parts, the overhauled valves are able to work properly, as well as new ones. Consignment stocks of strategic spare components can also be arranged, upon agreement.

BENEFITS

- All commercial and technical details are agreed with the OEM;
- The repair activities are done at authorized workshop by skilled workers;
- Full repairs technical support by the designer and producer of the valves;
- Use of original spare parts for the overhauls;
- Upgrading and modifications of valves with Cozzani engineering;
- Inventory stocking for spares & repairs;
- Consignment stocks of strategic spare components upon agreement;
- Protection, packaging and identification of valve;
- Availability to collect the valves to be repaired directly from the end user plant and to return them.



HEADQUARTER

- Our headquarter, located in Arcola (La Spezia, Italy), carries out every activity such as design, production, sales and after sales. Valve components are exclusively manufactured in Arcola (Italy) and worldwide delivered.

- Cozzani (Beijing) Compressor Valves Co., Ltd Located in Beijing, WFOE owned and fully managed by COZZANI Italy. Activities: Sales Office, After Sales, Valves Overhauling.

SERVICE SHOPS

- ITALY - Located in Arcola, La Spezia (Italy) and in Siracusa (Sicily).
- CHINA - Located in Beijing.
- USA (TEXAS) - Located in Chappell Hill (Houston).
- MEXICO - Located in Mexico City.
- MALAYSIA - Located in Klang.

DOTT. ING. MARIO COZZANI s.r.l.
Viale XXV Aprile, 7 | 19021 Arcola (La Spezia) | Italy
Phone: +39 0187 955 81 | Fax: +39 0187 955 853
www.cozzani.com | info@cozzani.com

