



DUCI srl, together with the associated company AFVC, has represented a reference point in the production of rubber technical parts. An Italian enterprise, also appreciated abroad, which has relied on the quality of the compressors by Ing. Enea Mattei

Quality O-rings require quality compressed air

To obtain a quality O-ring, the compressed air which is used in all stages of the production cycle must also be free of any impurities. The Mattei high efficiency compressors, appropriately equipped with filter and dryer, guarantee these high standards, as well as ensuring a long working life.

From a family firm to a European colossal in the manufacturing of O-rings: history of DUCI srl

DUCI Srl is located in the heart of Lombardy, a strategic region in the plastic rubber industry, with its headquarters in Chiuduno (BG) specialising in the production of O-rings and rubber technical parts. Founded in 1983 by Antonio Duci, DUCI currently boasts a production of roughly 180 million pieces per year with a turnover of 26 million euro. In 2000 the Chiuduno plant, with a workforce of about 80 people, was joined by the company Antica Fornace Villa di Chiesa (AFVC) founded by Antonio Duci and Uvaldo Paris, with registered office in the province of Nuoro, which has 130 employees and generates a turnover of 15 million euro per annum.

A production boasting important figures, which is used in various sectors, explains Eng. Stefano Mazza Purchasing and Logistics Dept. at DUCI srl: "DUCI and its associated company AFVC propose excellent quality products certified to ISO 9001, 16949 and 140001 standards. Ours is an apparently simple product, but in actual fact it is an indispensable detail for many applications, that range from the automotive sector to the food, oil-dyna-

mic, hydraulic and mechanical sectors. The quality of our products is also highly appreciated abroad, in fact 60% of our turnover is generated by foreign sales".

Mattei alongside DUCI since it was founded

The Mattei compressors have supported DUCI since it was founded and also accompanied the startup of activities in Sardinia with AFVC.

"At present, the AFVC plant has a compressor room equipped with three machines which are used for the supply of compressed air in all stages of the production cycle of the O-rings: from the construction of the moulds to the stamping of the finished product, through to the automatic optical selection phase - explains Eng. Stefano Mazza

"This refers to the 4000 series and Optima series models with a power of 90 kW, capable of managing long work cycles - comments Flavio Molinari, Italian Sales Manager at Ing. Enea Mattei SpA - In both plants the compressor room has an extra machine which is only put into operation in the event of exceptional working loads or a failure, so as to avoid produc-



“At the base of the solid, lasting relationship with Mattei, apart from the undisputed reliability of its compressors, there is also the ability to provide an efficient and timely support service, which has always assisted us in a satisfactory manner”

*Eng. Stefano Mazza,
Purchasing and Logistics Dept. at DUCI srl*

*The O-rings made by
DUCI srl since 1983*

tion down times. Moreover, in AFVC the machines are operated by a Multicomp superior controller, capable of managing the operations of multiple compressors and satisfying, in the most efficient way, the demands of the line and the workload for each individual compressor, hence reducing energy absorption”.

The O-rings constitute a fundamental for the functioning of systems, including those of a particularly complex nature: “DUCI and AFVC supply ultimate quality products to guarantee perfect sealing of the components on which they are assembled, whether it is a car or a large valve.

To achieve such results, all the production chain gears must work to perfection; this is where the Mattei high-efficiency compressors come into play” concludes Eng. Mazza.

“The compressed air supplied by Mattei is of excellent quality, thanks to the presence of filters and driers which improve the performance of the compressor itself” explains Flavio Molinari.

Great reliability of the machines and excellent assistance at the base of a solid and long-lasting relationship

MATTEI OPTIMA SERIES compressor

The rotary vane compressors, equipped with inverter system, are able to adapt its operation to the load profile required by the system by changing the engine rotation speed and by adjusting the supplied air flow to the actually required one.

All of the OPTIMA rotary vane compressors are painted with epoxy powders, are corrosion and scratches resistant and are upholsted inside with soundproof material; they are also equipped with pre filter which prevents impurities from obstructing the radiators and air filter, bringing obvious economic advantages.

Hinged doors and easily removable panels allow quick access for service and maintenance operations.

With capacities from 11 to 200 kW and flow rates from 1.190 to 35.5 m³/min., they are also available in the fully water cooled version with combined air dryer.





“The compressors used at the DUCI and AFVC plants are a guarantee in itself of great reliability which minimises the need for maintenance interventions. Furthermore, the support service provided by the Mattei authorised centres is truly excellent and has always been characterised by its punctuality and efficiency” comments Eng. Stefano Mazza.

Mattei avails itself of a network of authorised centres that supply original replacement parts: *“One of the aspects that satisfied us particularly is the extensive availability of replacement parts in stock, even for less recent machines, which allow us to maintain them in excellent working condition over time. This is a detail that boost customer*

loyalty and form the base of a stable and long-lasting relationship” concludes Eng. Mazza.

An eco-sustainable production

DUCI and AFVC are companies that take the regard for the environment extremely seriously. *“Eco-sustainability is a value that inspires the entire production cycles at DUCI and AFVC. The company constantly invests about 10% of its turnover in actions aimed at optimising production processes, also from an energy efficiency point of view. For example, the factory plant in Sardinia is equipped with a solar panel system, states Eng. Stefano Mazza.*

MATTEI 4000 SERIES compressor

The AC 4000 series of rotary vane compressors are equipped with a modulating proportional intake valve, which allows a constant pressure air supply and the possibility of working without tank too. With capacities from 55 to 90 kW, flow rates from 8,37 m³/min to 16,79 m³/min, with a working pressure of 8.10 bar and 13. Available with electric engine with IE3 efficiency.



Equipped with soundproof cabin, made of steel sheet painted with epoxy powder and upholstered inside with soundproof material, they are fire resistant and have large hinged doors and removable panels, so that they are fully accessible during maintenance phases.

Available in the PLUS version with integrated air dryer, in the R version with heat recovery kit, and in the W version that is totally water cooled.

"Mattei compressors fit perfectly in a manufacturing philosophy of this kind. The Optima series machines, in fact, are equipped with an inverter, a special mechanism that makes it possible to adapt the functioning of the machine to the airflow capacities actually required, avoiding useless wasting of energy" continues Eng. Stefano Mazza.

Flavio Molinari also emphasises this aspect: *"Mattei's Optima series, equipped with an inverter, is managed by means of a Maestro XS electronic controller, and designed specifically to meet the requirements for higher efficient production, also in terms of energy. The combination of new generation inverter technology and extraordinary Mattei rotary compressor efficiency is ideal for the Optima series"*.

The special Inverter boosts the performances of the Optima series rotary vane compressors, whose key features include a low rpm, the direct high-yield four-pole motor coupling and working pressures between 7 and 10 bar.

The Mattei 4000 Series and OPTIMA Series compressors used to supply compressed air to the entire production cycle of O-rings



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