



Oil & Gas Solutions



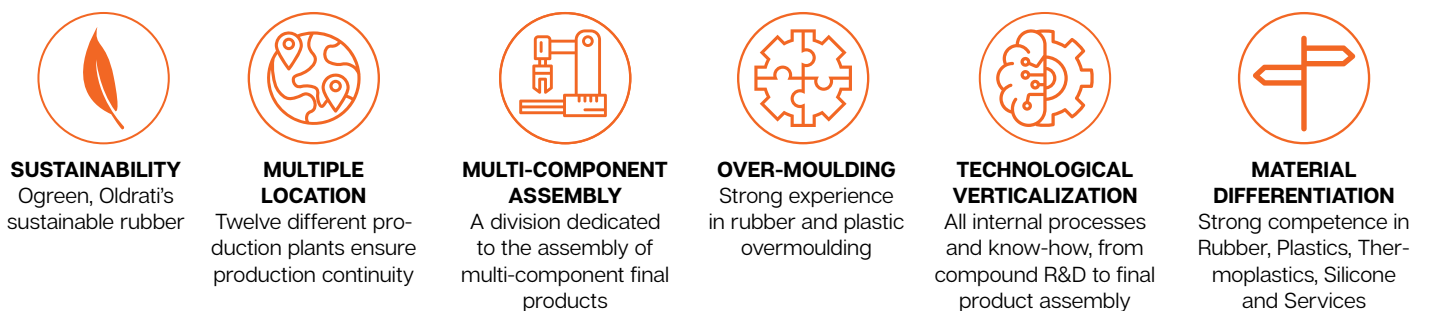
The Oldrati Group



Main Markets



Oldrati Differentiation



Founded in 1964 in Italy, the Oldrati Group is one of the main international actors in the production of Rubber, Plastic and Silicone technical products. The Oldrati Group is active in many industrial sectors including Automotive, Healthcare, Heating, Household Appliances, Manufacturing Industry, Oil & Gas and Sporting Goods. Each sector requires specific and dedicated operational capabilities and compliance to international standards and certifications.

All production phases are fully integrated within Oldrati Group: compounding, tooling, moulding, extrusion, and product finalization. This ensures great reliability and quality. Services are at the heart of Oldrati Group, ranging from product co-design to multi-component assembly. Innovation and R&D are the core of Oldrati Group thanks to its capability to develop and test materials specifically created for customers' needs. This is possible thanks to the Group's

metrological laboratories. The Group operates in 12 different production sites in Europe thus ensuring high quality for global customers. Technological innovation and sustainability are the main assets of the company's strategy: digitalization, automation, energy efficiency and the development of Oldrati Ogreen are the cornerstones in which the Group believes and dedicates resources and knowledge on a daily basis to always provide added value to customers.



Oil&Gas Solutions

In view of the ever-increasing extreme specialisation required in the **Oil & Gas** sector, the industry is looking for products with **special characteristics** and **particular conformities**. These products must be able to work at **particular temperatures**, have **high chemical resistance**, **different hardness ranges** and **long-term reliability**.



1200+ Molds

Oldrati produces O-Rings from 1.5 mm (0.06") to 2500mm (8.2021 ft) outer diameters and 0.8mm(0.03") to 12 mm (0.47") cross section.



Different hardness range

Oldrati produces O-Rings with hardnesses ranging from 70 ShA to 98 ShA allowing to satisfy all customer needs and ensure maximum sealing against a fluid. Items with higher hardness allow a better seal at high working pressures avoiding phenomena of extrusion of the seat seal.



Compression Moulding

Thanks to the large number of moulds available, Oldrati is able to compression mould all its articles while maintaining excellent performance compared to alternative types of moulding (jointed extrusions or injection). This type of moulding is the best possible choice for this type of articles, always allowing a high level of performance and design on the entire surface of the technical article.



R&D Center



R&D Centre is where our engineers create new compounds and study the most advanced technologies of our articles, with a constant attention to **innovation, reliability and environmental sustainability**, with the aim of bring polymeric material solutions to their highest expression. There are **three materials laboratories, two in Italy** (one dedicated exclusively to silicone materials) and **one in Turkey**, which developing innovative solutions to meet the ever-increasing market needs in terms of product performance and customer needs.

Products are subjected to stringent controls and checks on both **mechanical and**

chemical performance, which ensures reliability and durability.

400 new products are developed every every year that keep committed all our internal R&D departments, alongside collaboration with **universities, R&D laboratories and major raw material suppliers**, the Group has a partnership aimed at the constant search to increase the innovative value of our materials and towards the environment.

The Constant Innovation Programme aimed at perfecting innovative and and sustainable processes led in **September 2021** to create a **New Product Development Team**. In the New Product Development

Laboratory the activities are carried out at every stage of the production process, from the dimensional analysis of prototypes to the conditions of use of the finished product, in order to guarantee **reliability technological efficiency and 100% safety**.

At the end of testing in laboratories, all compounds are sent to the most important **European Certification Institutes**: these certifications attest to the conformity of our internal audits against international standards proof of **quality, safety and compliance with environmental** and certifying our commitment to total satisfaction of customer expectations, both in terms of product design, functionality and performance.



All in **One**



Moulds and internal compounds

From the customers design requests, Oldrati is able to manage all the product development processes: from the creation of the compounds to the sampling of the finished articles, Oldrati Group offers a complete and customised service for each request.



Certified materials and goods

After passing stringent laboratory tests, all materials can be approved by the most important European Institutes, certifying that the article complies with European standards, directives and regulations. This is tangible proof of quality, safety and absolute respect for environmental laws. In this way, quality becomes a concrete value that responds to the customer's expectations, a seal of guarantee of the product's design, safety and functional characteristics.



100% Tested

Before leaving the production unit, Oldrati's technical articles are tested with physical and mechanical tests by a team of professionals to ensure maximum reliability and 100% safety at all times.

RGD (RAPID GAS DECOMPRESSION)

APPROVED COMPOUNDS PORTFOLIO

Swelling temperature at 23°C
 From 10% to 30%

From 30% to 50%
 Up to 50% (not recommended)

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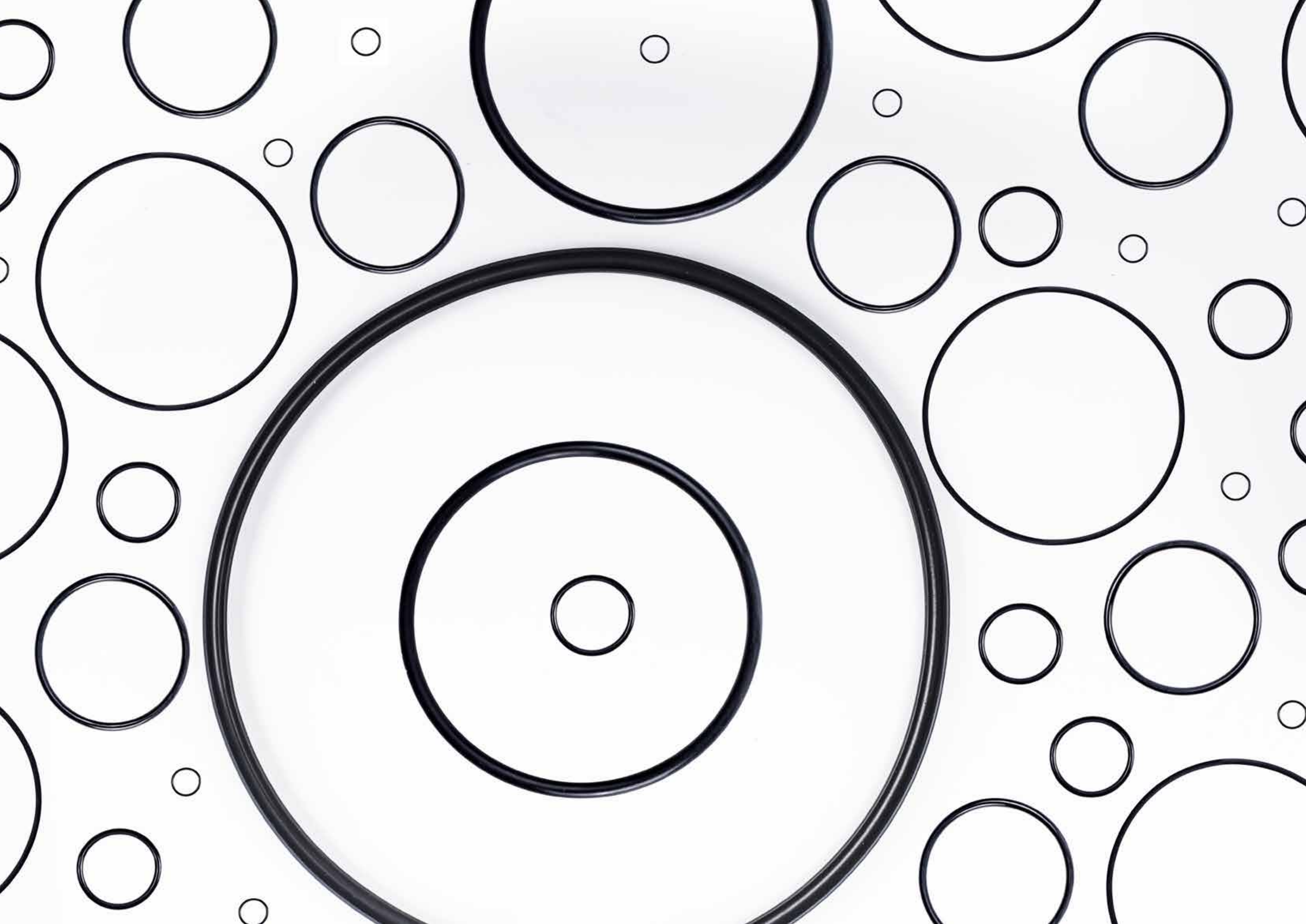
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NOMENCLATURE	NAME	POLYMER DESCRIPTION	SPECIFICATION APPROVAL	TEST CONDITION	TEMPERATURE RANGE (peaks in static condition)	HARDNESS ShA	CHEMICAL RESISTANCE CHART										
						ISO 7619	AROMATIC HYDROCARBON	ALIPHATIC HYDROCARBON	AMMINE	SULPHIDRIC ACID	METHANOL	STEAM 200°C/L	MW ESTERS/CA	RBON DIOXIDE/H	VDROGEN	OLEUM (H2SO4 FUMING)	NITRIC ACID 65%
FKM	OLD EDFP 95NA	Black fluorocarbon rubber peroxide cured with improved chemical resistance	SAUDI ARAMCO 06-SamSS-001 ed. 2013	CH ₄ /CO ₂ 95/5% ; 15MPa; 100°C; 5 cicli; 5,33mm 10,82mm	-15 (-25) to 230 (+250°C)	90/95											
				CO ₂ 100%; 15MPa; 100°C;5 cicli; 5,33mm													
	OLD EDFP 95N	Black fluorocarbon rubber peroxide cured with improved chemical resistance	TOTAL GS PVV 142 03/01 Rev.00	CH ₄ /CO ₂ 80/20%; 190Bar;75°C; 5,33mm 6,99mm	-15 (-25) to 230 (+250°C)	90/95											
	OLD EDB 95N	Black fluorocarbon rubber bisphenolic cured with improved chemical resistance	NORSOK M710 rev2	CH ₄ /CO ₂ 90/10%; 150Bar;100°C, 10 cicli;5,33mm	-25 to 220°C (250°C)	90/95											
	OLD EDA 95N	Black fluorocarbon rubber bisphenolic cured	NORSOK M710 rev2	CH ₄ /CO ₂ 90/10%; 150Bar;100°C, 10 cicli;5,33mm	-25 (-30°C) to 250°C (275°C)	90/95											
FEPM	OLD EDAF 90N	Black fluorocarbon rubber peroxide cured specifically designed in ammine service	NORSOK M710 rev2	CH ₄ /CO ₂ 90/10%; 150Bar;100°C, 10 cicli;5,33mm	-5 to 250°C	85/90											
HNBR	OLD NHP ICE 90	Black hydrogeneted nitrile butadiene rubber peroxide cured for low temperature application	NORSOK M710 rev3 (ISO 23936-2)	CH ₄ /CO ₂ 90/10%; 150Bar;100°C, 8 cicli;5,33mm	-55 to 150°C- (160°C)	85/90						< 140°C					
	OLD EDNHP 90N	Black hydrogeneted nitrile butadiene rubber peroxide cured with good chemical resistance	NORSOK M710 rev2	CH ₄ /CO ₂ 90/10%; 150Bar;100°C, 10 cicli;5,33mm	-25 to 160°C (180°C)	85/90						< 140°C					
			TOTAL GS PVV142 03/01 REV.00	CH ₄ /CO ₂ 80/20%; 190Bar;75°C; 5,33mm 6,99mm													
	OLD ULTRA ED90N	Black hydrogeneted nitrile butadiene rubber peroxide cured with improved RGD performance at high pressure	TOTAL GS PVV154 REV00	CH ₄ /CO ₂ 80/20%; 400Bar;90°C; 6,99mm	-25 TO 160°C (180°C)	85/90						< 140°C					





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