

**Oil
Gas
Petrochemicals**



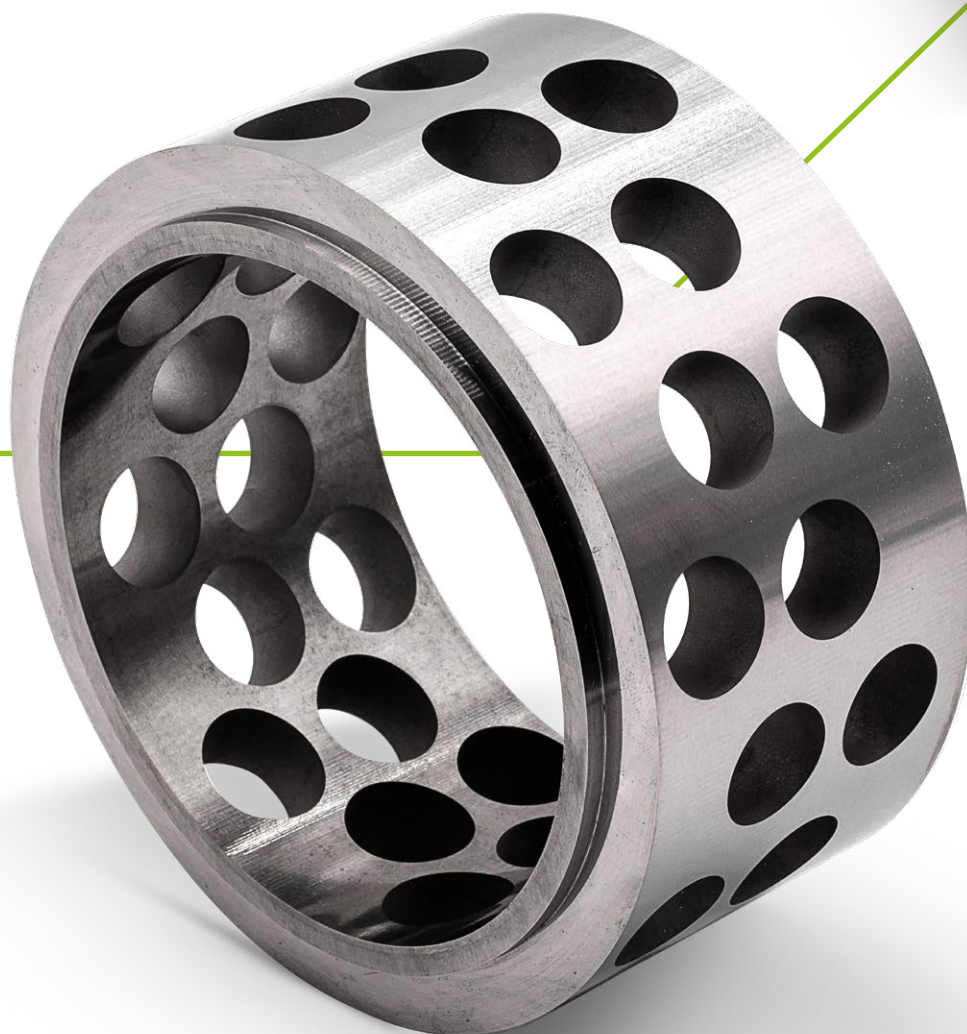
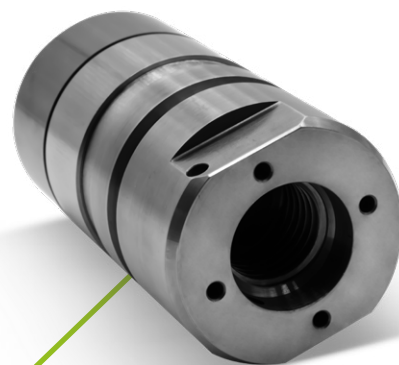
FILMS

high tech for hard metal

OMCD GROUP

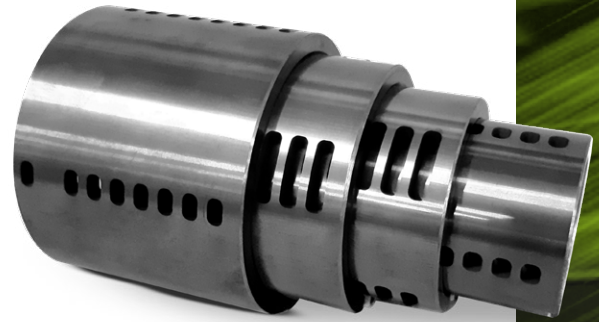
FILMS is the OMCD group company specialising in the design and production of **special wear-resistant hard metal tools.**

With almost **70 years of experience** in the sector, FILMS has specific **technical-commercial skills** that are constantly evolving, enabling it to export wholly Made in Italy products all over the world in full compliance with the highest quality standards.



Customer-centred business model

FILMS actively collaborates with its customers to satisfy their needs and realise **innovative, tailor-made, technically performant and economically advantageous solutions.**



Research and Development

Thanks to the in-house Physical-Metallurgical Laboratory HI.Lab, FILMS is constantly researching **new materials** and keeping abreast of the **latest technologies.**



Staff dedicated to the Oil&Gas sector

For years FILMS has dedicated special attention, resources and energy to the Oil&Gas sector. A specialised staff is reserved exclusively for this sector and assists the customer **from design to production and after-sales service.**

FILMS Oil&Gas Team


At Service of Severe Service Valves

For more than 10 years, FILMS has specialised in the design and production of **components for valves used in the Oil&Gas industry.**

Increasingly, companies in the Oil&Gas industry are facing problems with their control valves, which operate under **Severe Service Conditions:**



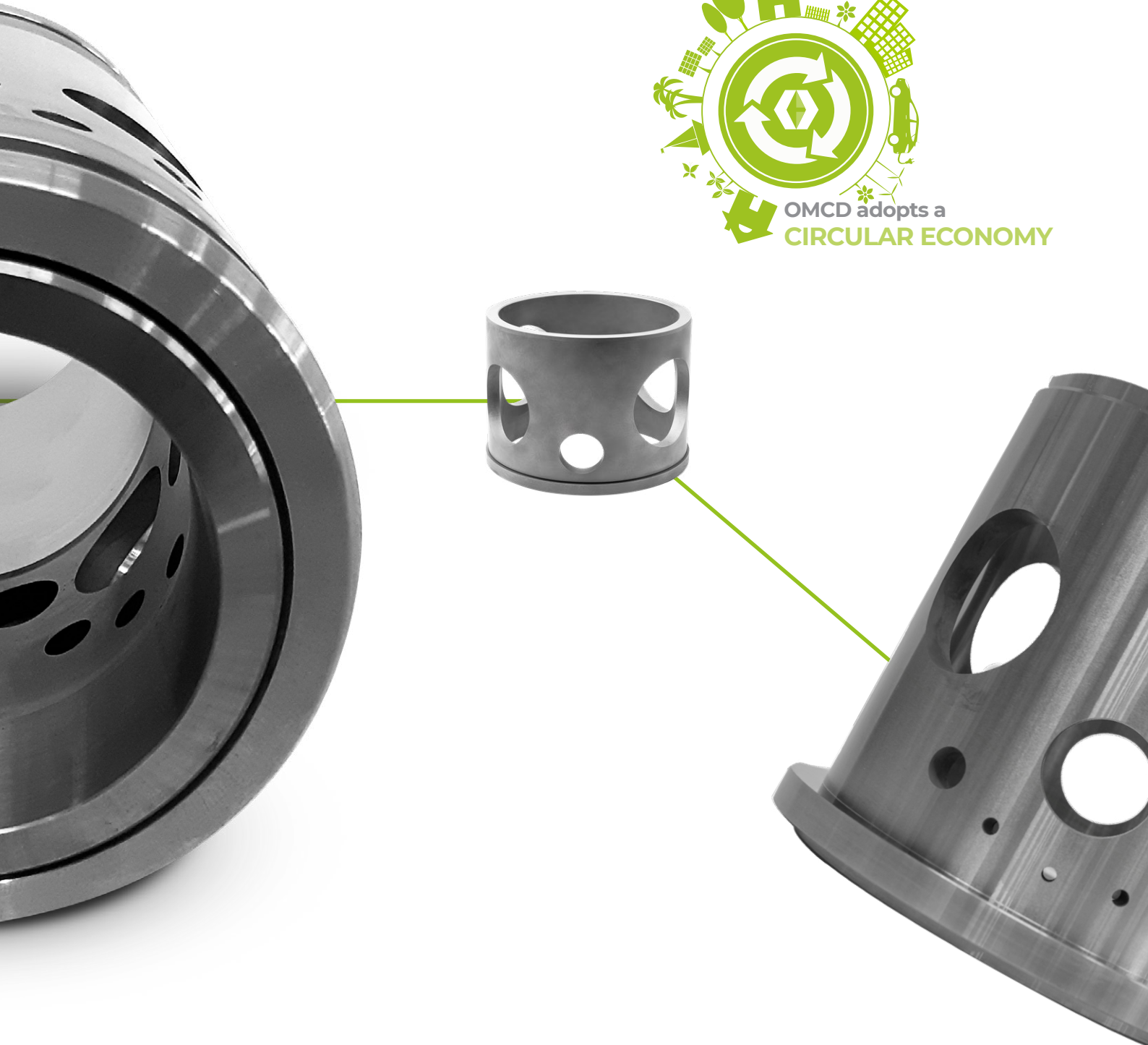
- poor control of the **velocity** of the fluid transported inside the valve can cause high **vibrations**, excessive **noise** and thus unexpected damage;
- the transported fluid can cause **corrosion**, **erosion**, **abrasion**, cavitation and considerably reduce valve life.



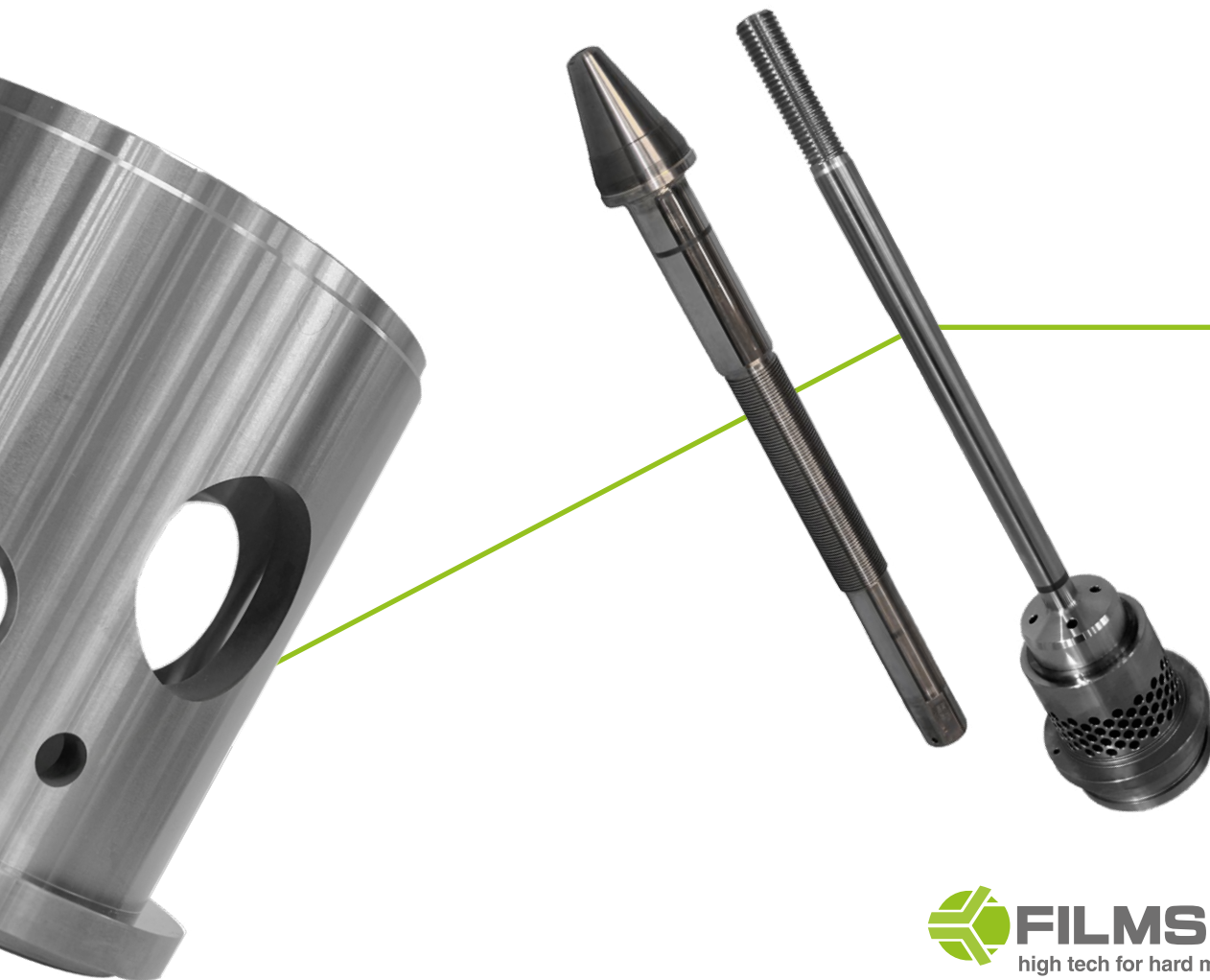
It is therefore essential that the regulators used in the Oil&Gas industry and their components are made from **suitable geometries** and **materials** that can cope with the severe service conditions of the process and reduce maintenance requirements, avoiding costly shutdowns.

Hard Metal alloys, due to their hardness and wear resistance characteristics, are the **perfect solution** to these needs and are gradually supplanting other less durable and performing materials.

FILMS has developed **specific grades** of Hard Metal dedicated to the **Oil&Gas** sector, aimed at meeting the requirements of hardness and resistance to abrasion and corrosion.



| Grade | Metallic Binder | | WC Grain Size | Hardness (HV30) | Fracture toughness (MPa · m ^{1/2}) |
|-------|-----------------|--------------|---------------|--------------------|---|
| | Composition | Content (m%) | | | |
| J68B | Co-base alloy | 6 | s-f | 1680 | 8.6 |
| J68F | Co-base alloy | 8 | s-f | 1680 | 9.3 |
| J55F | Co-base alloy | 9.5 | s-f | 1550 | 11 |
| K39F | Co-base alloy | 10.5 | m-c | 1390 | 13.9 |
| S57M | CoNi-base alloy | 8.8 | s-f | 1570 | 9.5 |
| S38H | CoNi-base alloy | 11 | s-f-m | 1380 | 13 |
| S28E | CoNi-base alloy | 12 | m | 1280 | 15.6 |
| S15V | CoNi-base alloy | 16 | m-c | 1150 | 21.9 |
| N52A | Ni-base alloy | 8 | s-f | 1520 | 9.5 |
| N52C | Ni-base alloy | 6 | m | 1520 | 8 |
| N42A | Ni-base alloy | 10 | s-f | 1420 | n.d. |
| N42C | Ni-base alloy | 8 | m | 1420 | 11.8 |



The OMCD Group headed by the Tedeschi family for two generations, is a multinational company made up of **10 brands active in the field of Hard Metal, sintered copper/tungsten and precious metals.**

Its centralized structure and **synergy between each brand** guarantees **control of the entire production process**, from the refining of minerals to the micro-finishing operations.

Technical **competence**, continuous **innovation** and focus on **customer satisfaction** are just some of the reasons why every day more and more companies rely on OMCD Group as their commercial business partner.



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