

Desktop Metal Company



www.aidro.it



Family Company

at the heart of hydraulics

At Aidro, we get to the heart of hydraulic solutions and it is our passion that makes every detail important.

We are involved in all aspects of our products from design to delivery. As such, we are committed to making our expertise and creativity available to our clients, in order to overcome together the challenges of the hydraulics market.

40
years
1982-2022
in
Fluid Power

Our history

In **1982**, Aidro was founded by Mr. Paolo Tirelli, an Italian engineer with a vast experience in the hydraulics sector.

As a leader and innovator (patents' inventor) in the industry, he was appointed President of the prominent hydraulics Associations (Assofluid and CETOP).

In **2004**, Aidro expanded its presence with a new production plant and warehouse in Osmate (Varese).

During **2006**, Aidro received the Quality Certification ISO 9001 for the design and production of hydraulic valves and components.

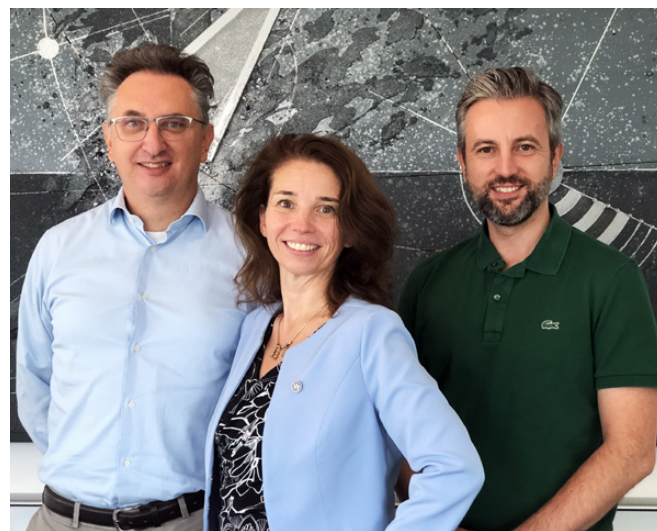
Thanks to the success of its activities, in **2009**, Aidro established a new headquarters in Taino (Varese): a modern location, that merges high technology and art, the Aidro Founder's passions.

In **2012**, Valeria Tirelli succeeded her father as CEO of Aidro. New investments in equipments and resources were made available to the company's clients, resulting in increased services and enlarged products' range.

Starting from **2017**, Aidro introduced the new technology Additive Manufacturing, enabling the production of Metal 3D Printed products in the hydraulics sector.

Driven by the desire to innovate and by the continuous growth of 3D printing, the company now led by the siblings Tommaso and Valeria Tirelli, has expanded its activity to other sectors such as aerospace, energy and oil & gas.

In **2021** Aidro joins Desktop Metal family to growth in fluid power with Additive Manufacturing.



Activities



ENGINEERING AND DESIGN

Technical competence, vast experience and creativity are the basis to design hydraulic solutions that satisfy our customers' needs.



PRODUCTION

Our lean, efficient and flexible organization provides products that meet our customers' expectations in terms of quality and delivery times.



QUALITY ISO9001& EN9100

Constant attention is given to quality control in all phases of engineering, production, assembly, testing, packaging and delivery.



FAST DELIVERY

We believe in the importance of time and a fast response to the customers' requests.



METAL 3D PRINTING

Design and production with Additive Manufacturing of fast prototype, spare parts and new products on demand, with innovative shapes, various materials and higher performances.



E-COMMERCE

A wide range of standard products are available in our online shop, to be delivered within 24h.



hydraulic solutions



Quality Product

We like to do things well done!

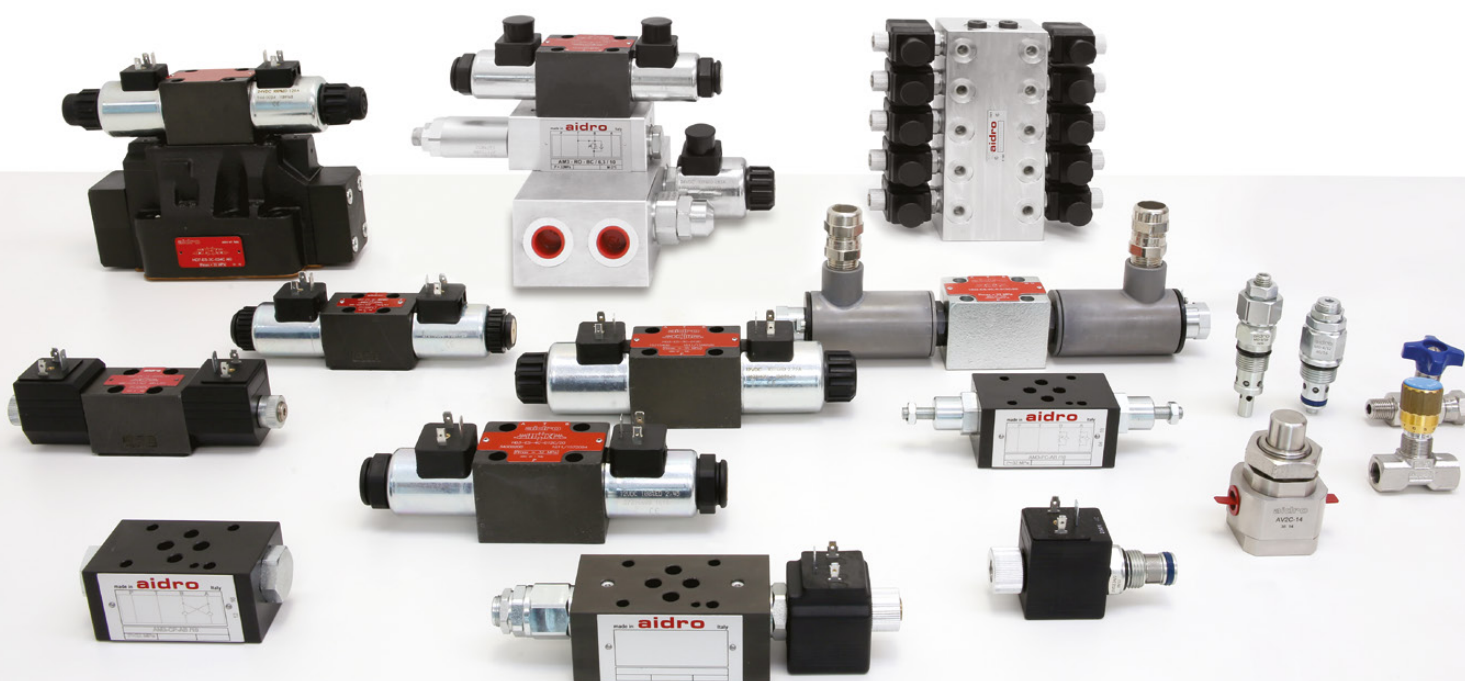
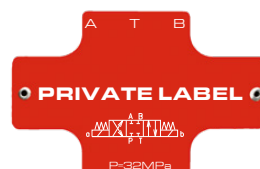
All our activities are undertaken carefully and we offer a wide range of hydraulic valves and blocks: from CETOP components to cartridge valves. Our Company has a complementary portfolio of products and solutions able to converge into integrated hydraulic systems.

Our attention to quality is guaranteed by the ISO 9001 Certification.

The raw materials and components are produced in Italy or in EU countries.

Our production is 100% tested and the goods are meticulously packed in order to ensure our customers receive the best products on time.

We offer **CUSTOMIZED LABEL** on demand of our costumers' specifications.



Products

Hydraulic CETOP Valves

- Directional Control Valves
- Flow Valves
- Check Valves
- Pressure Control Valves
- Proportional Valves

Atex



We offer a wide range of ATEX valves such as on-off, proportional and poppet valves, with certification Gas and Dust and Temperature class from T5 to T6.

Cartridge Valves

- Directional Valves solenoid operated
- Poppet type and Spool type in different sizes
- Pressure reducing and pressure relief
- Flow regulators

Systems and special products

Our design and technical know-how allow Aidro to develop new systems and special products with particular surface treatments to fulfill the customers' needs.

Power units and mini power packs

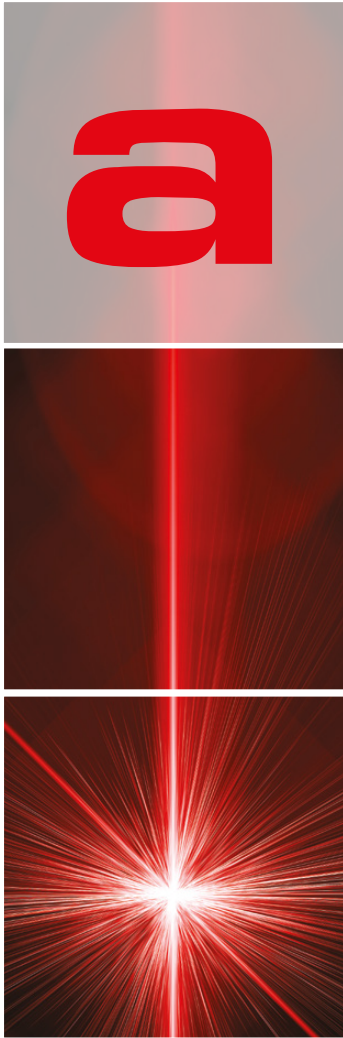
We have developed a new series of mini power packs with a compact design, suitable for DC and AC supply.

Manifolds and accessories

Panels and Manifold Blocks of different sizes are available: CETOP 02 (NG04), CETOP 03 (NG06) and CETOP 05 (NG10), moreover in line assembly body for SAE08 and SAE10 cartridges. Aidro provides many accessories such as connectors, coils and reliable pressure switches.



hydraulic solutions



New Technology

Additive Manufacturing in hydraulics

Aidro has introduced Additive Manufacturing, or Metal 3D Printing, to create a new generation of hydraulic solutions and to overcome the limits of traditional manufactured hydraulic components.

This new technology allows to produce **lightweight** and **space saving** products and provide a **better performances** thanks to the optimization of the internal channels.

The **fast lead time** is an advantage for prototypes that can be tested and marketed in a competitive time. Additive manufacturing is also able to produce **functional parts** with complex geometries made with a wide range of high quality metals such as Stainless Steel, Aluminium, Inconel, Maraging steel.

Aidro **designs** and **produces** 3D printed hydraulic systems using the laser power bed fusion technology (DMLS), which guarantees a high quality metal materials and very good mechanical properties of the printed parts.

*“At Aidro, we love the idea of creating the **impossible thing** and we see ourselves as pioneers in the introduction of additive manufacturing in the hydraulic sector”*



conventional hydraulic manifold



conventional hydraulic manifold with
3d printed valves



3d printed hydraulic manifold and
valves (single piece)

3D Printed Products

Hydraulic Valve Block

- Freedom to design
- Possibility to produce complex geometries
- High customization
- Space saving

Heat Exchanger

- High performances in small size
- Possibility to combine multiple parts into one
- Aluminum and Stainless Steel materials availability

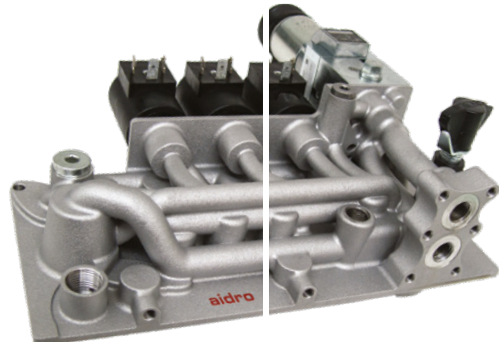
Valve Body

- Feasibility of geometric forms impossible with traditional machine
- Optimized performances, thanks to curved channels and no more 90 degrees intersection angles
- Elimination of plugs and auxiliary drillings
- Risk of leakages is completely removed



Hydraulic Manifold High Pressure

- Lightweight solutions (up to 75% weight reduction)
- Good material properties (similar to metal bars)
- High pressure resistance (700 bar)



from
Traditional production

to

Metal 3D printing



- 75% weight reduction
- 1/2 size dimension

hydraulic solutions

