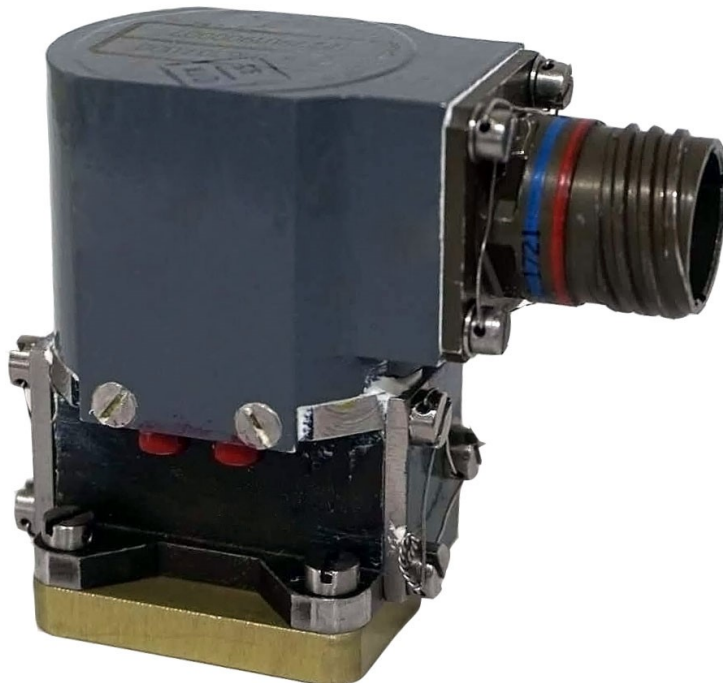




## Innovative developments Electrohydraulic servo valves (Electrohydraulic deflector amplifiers)

STRATEGY, RESULT, QUALITY



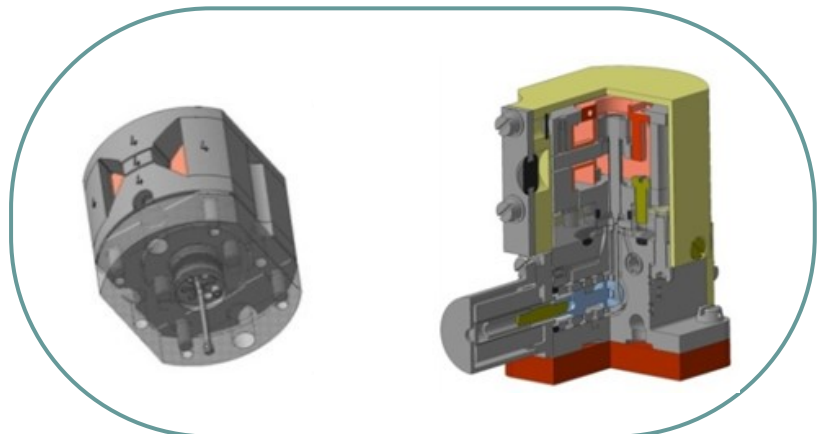
**WIDE SPECTRUM OF APPLICATION:  
Aviation, robotics, machine tools, general  
industrial application.**

High-precision electro-hydraulic amplifiers for use in extreme conditions, which can be used in the event of heavy pollution. In agreement with the customer, the reliability of the electro-hydraulic amplifier can be significantly improved by the use of new materials and technologies, in particular by the use of titanium, ceramics, super hard materials, boron carbide, boron nitride, nanosized materials, as well as the use of glued, armored, powder and stamped parts. We offer to use the most modern technologies: water jet ( $p = 6000$  bar), hydroabrasive, laser, ion-plasma, rapid prototyping technology.

Use of modern equipment: 3D printers for metal and non-metallic materials



- Artificial neural networks are used to calculate the characteristics of a jet device.
- Amplifier parameters are set based on their scholastic changes.
- Amplifier dynamics are modeled on the basis of fuzzy set theory

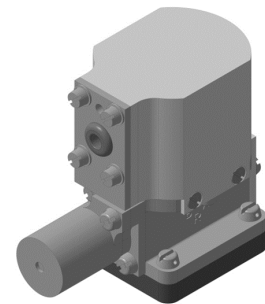




The main advantage of the developed electro-hydraulic amplifier over similar amplifiers of other types is the reliability of its operation in extreme situations with fluid contamination with particles up to 150 microns in size.

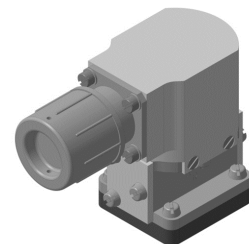
#### Flow control servo valve

The Servo valve is designed to change the flow of the working fluid in proportion to the control current



#### Pressure control servo valve

The Servo valve is designed to convert the inlet pressure into the outlet pressure in proportion to the control current.

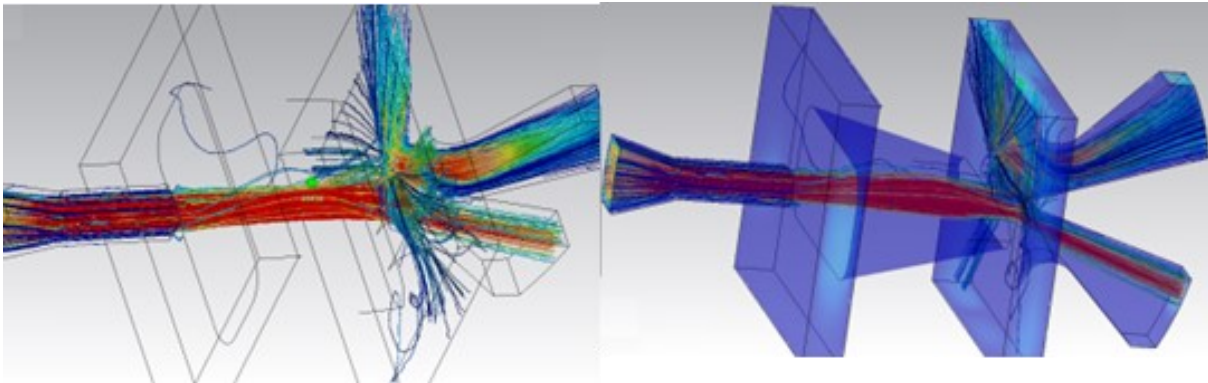




Innovative developments  
Electrohydraulic servo valves  
(Electrohydraulic deflector amplifiers)

STRATEGY, RESULT, QUALITY

## Theoretical calculation of jet flow



(3D stream in receiving channels)

Our design team is able to design and develop hydraulic units for various tasks according to the customer's specifications. Currently, our company has developed and manufactures serial models of electro-hydraulic servo valves according to the specifications of European aviation companies. These units are used in the front wheel rotation system and the main chassis brake system.

