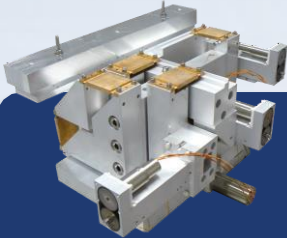




PRECISION ENGINEERING

Edition April 2023

EXPERTISE & INNOVATION



MICRO / NANO POSITIONING



OPTO-MECHANICS



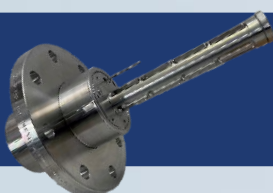
PRECISIONS MACHINES & ROBOTICS



ELECTRIC EMBEDDED ACTUATORS



MEDICAL DEVICE



TEST & MESURE

ABOUT ISP System

ISP System is specialized in precision engineering ingénierie combining the **precision mechanics**, electronics, optics, industrial computing, automation and robotics. Its skills goes also to special technics (empty, cleanliness, CEM, ...).

ISP System is a designer and manufacturer of precision equipment intended **for all sectors of Research and Industry**.

ISP System is part of ISP Group.

The activity of ISP System is divided by 6 products lines :

- Micro-nano positioning
- Opto-mechanics
- Electric embedded actuators
- Precisions machines & robotics
- Medical device
- Test & Mesure



Participation in major programs

ISP SYSTEM is involved in major scientific projects, such as the Mega Joule Laser, the SOLEIL Synchrotron, the European ELI project. ISP participates also in industrial programs in aeronautics (Airbus programs), automotive (hybrid vehicles), space or defense (Electronic Radar, Scorpion, etc.).

With an experience of more than 25 years, ISP System contributes with its skills and knowledges in:

- Large high-precision motorized mechanical equipment,
- Opto-mechanical and positioning equipment, high-precision mechanics,
- Integration of complex mechanical system incorporating control command,
- Embedded electric actuators incorporating Artificial Intelligence.

Technical skills

Participation in major programs



ISP SYSTEM has knowledges in :

- Project management (technical engineering)
- Design (studies, calculations, qualification, ...)
- Realization (industrialization, production, assembly, control)
- Integration, especially in clean rooms (ISO 7 to ISO 5)
- Integration on customer site
- After-Sales Service

Grouping of skills and technical mastery

Its multidisciplinary project teams, made up of experienced engineers and technicians, make it possible to offer optimized solutions.

The professions present within ISP System:

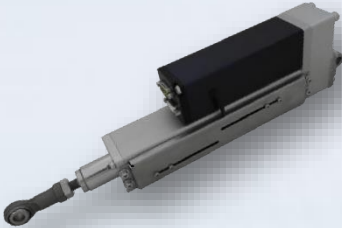
- **Precision mechanics:** structure, mechanism, dynamics, calculation
- **Opto-mechanics:** alignment, positioning, support
- **Electronics:** Command control, Real Time Digital, Actuator commands, Networks....
- **Automation:** electrical engineering, servo-control, industrial computing
- **Measurement:** physical quantity, non-contact measurement, vision
- **Special techniques:** optics, vacuum, cryogenics, pyrotechnics, shielding, hardening

Product lines

ISP SYSTEM offers its services: R&D in partnership with customers, Product design, Unit or multi-unit production, Series production, Installation at customers' premises, After-sales service

Micro Nano positioning

Positioners, translation and rotation tables, multi-axis positioners, etc.



Electric Embedded Actuators

Electromechanical actuators, mechatronic equipment,...

Opto-Mechanics

Deformable mirrors, Active Benders, Mounts, Tip tilt, Fast Steering Mirrors....



Precision machines & robotics

Brazing/laser sintering machines, robots, assembly lines, test benches, tools, handling equipment, etc.

Medical device

Precision mechatronic devices for medical imaging and nuclear medicine, ...



Test & Measure

Gas analysis sensor, balancing control bench, metrology bench, etc.

Commitment

A philosophy of progress through innovation

- **Expertise:** ISP provides its multidisciplinary R&D team as well as its technological portfolio to improve the competitiveness of its customers. The mastery of the technologies used and the experience acquired by ISP guarantee quality solutions.
- **Creativity:** ISP is constantly looking for innovative solutions tailored to customer needs.
- **Precision:** ISP guarantees its customers reliable and quality products, precision is the watchword.

Our Values

- **Innovation:** ISP has had an innovation strategy for more than 25 years by devoting 12% of turnover to R&T projects. Its many partnerships allow it to contribute to major projects such as the Laser Mégajoule.
The products of these R&T projects allow ISP to integrate innovative solutions into its new ones while controlling the risks.
- **Tailor-made:** Each client has their own problem, which is why ISP combines its extensive knowledge with strong client cooperation during the project in order to provide them with an appropriate solution.
- **Turnkey:** From study to production, or from commissioning machines to training user personnel ISP provides its customers with turnkey solutions.

The Company

ID Card



ISP SYSTEM

- Legal form: Public limited company
- Date of creation: founded in 1997
- Share capital : 1 000 000 €
- SIREN : 10 675 078
- D-U-N-S number : 896 285 830
- VAT Intr. : FR 19 410 675 078
- NAF Code : 7112B
- NATO Code : FAFR4

Legal representatives :

- Chief Executive Officer : M. Paul SAUVAGEOT
- Chief Operating Officer : M. Laurent ROPERT

ISP System in a few figures

- €12.3 M in turnover in 2022 (€9.5 M for ISP System)
- 50 machines and 10,000 pieces of equipment delivered to customers / year
- 30% of turnover from export
- 100 employees (including integrated production units)
- 12% of turnover dedicated to R&D expenses

Quality certificates



The means of development

IT resources

Mechanics: 15 CAD and finite element calculation stations (mechanical, thermal, dynamic, electromagnetism)	Creo 2.0 to Creo 4.0, CATIA V5, SOLIDWORKS, NASTRAN NX19, MAGNETICS for NX, Pro-Mechanica, Mechanism Dynamics
Electrical: 5 CAD stations	SEE 3000 (IGE-XAO), Pro/CABLING, ROUTED SYSTEMS DESIGNER 5.6, X-RELAIS
Electronics: 2 CAD stations	EAGLE
Automation	SCHNEIDER ELECTRIC, SIEMENS, OMRON, CROUZET, BOSCH, BECKHOFF
Programming	JAVA, BORLAND C++, VISUAL C++, VISUAL BASIC, XBTL 1000, C#, PYTHON

Development lab

- Micrometric positioning jack test bench
- Opto-mechanical test bench
- Adaptive optical bench for beam up to Ø500mm
- Electric motor test bench
- Vibrating pot 3 kN (5 to 4500 Hz)
- Helium leak detector
- Electronics laboratory
- Thermal camera
- Climate chamber (-65 to +180°C)
- Secondary vacuum test chamber
- UHV enclosure equipped with an RG probe

Electrical & optical packaging prototyping machines

- Laser soldering for electronics and power optics
- Silver oxalate sintering process
- Photonic micro-assembly process...

The means of production

Production unit

4500m² dedicated to production and development activities:

- Class ISO5 to ISO7 clean rooms: 300m² sized to accommodate large rooms (3.50m high and large entrance hall).
- Assembly hall 10m high: 800 m².
- ESD assembly rooms: 1800m².
- Design and methods offices: 700 m²
- Laboratories: 500m²

Means of control

- Laser tracker 3D
- Laser interferometer, 3-beam laser interferometer
- Three-dimensional measuring machine
- 2D measuring machine by vision
- Adaptive optical bench for beam up to Ø500mm
- Auto-collimating telescope

Machining means available in-house

- Filming
- Score
- Milling
- 3D printing



AERONAUTICS,
SPACE, DEFENSE

AUTOMOTIVE,
RAILWAY, ENERGY
AND OTHER
INDUSTRIES

SCIENCE/OPTICS,
PHOTONICS, ELECTRONICS

MEDICAL, BIOTECH,
PHARMACY

AIRBUS (FR,DE)
AIRBUS DS (FR,DE)
AIRBUS Helicopters
ARIANE GROUP
ARQUUS PANHARD Gen Def
ARQUUS RENAULT Truck D
CANADIAN SPACE AGENCY (CA)
CEA-DAM
CNES
CNIM
DAHER Aerospace
DASSAULT Aviation
ECA Robotics
ESA (NL)
ETIENNE Lacroix
EXAIL
LIEBHERR Aerospace
MBDA
NAVAL Group
NEXTER
OPTSYS
ROXEL
RUAG Defense
SAFRAN Helicopter Engines
SAFRAN Electronics & Defense
SODERN
SPIE Sud-Ouest
THALES Air System
THALES Alenia Space
THALES Communication
THALES Electron Device

ACC
ACTENIUM
ALSTOM Transport
CMR International
FIVES Machining
FRAMATOME
IMPIKA - Groupe Xerox
LECTRA
NEW TL
NEXANS
PALL EXEKIA
POMMIER
QUIRI
RATP
SAFT
SAFT America
SAVOYE Logistic
SAINT GOBAIN
SMURFIT Kappa
TECHNETICS Group
TIFLEX
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ALSYMEX
ALPHANOV
AMPLITUDE
ASML (NL-US)
BERTIN Technologies
CEA
CIAE (CN)
CILAS
CLPU (ES)
CNRS
CSTB
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ELI (CZ, HU)
GSI (DE)
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HORIBA Scientific
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IMPERIAL COL.LONDON (UK)
INFLPR - CETAL (RO)
INRS (CA)
IRT Saint Exupery
Max Planck Inst. (DE)

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National Energetics (US)
OXXIUS
PHASICS
PKU Pekin University (CN)
PSI (CH)
QST (JP)
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RUTHERFORD (UK)
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IMV Technologies
MAUNA Kea Tech
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SIEMENS Healthcare (DE)
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