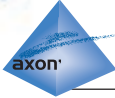


cable and interconnect systems for advanced technologies



**axon'**  
CABLE & INTERCONNECT

- ▲ CONSUMER ELECTRONICS
- ▲ GENERAL AND STEEL INDUSTRY
- ▲ AERONAUTICS AND SPACE
- ▲ MEDICAL ELECTRONICS
- ▲ RESEARCH CENTRES - UNIVERSITIES
- ▲ PETROCHEMICAL INDUSTRY
- ▲ MILITARY ELECTRONICS
- ▲ TELECOMMUNICATIONS
- ▲ AUTOMOTIVE





Test bench 1

Plastics technology



2



## AEROMIL & SPACE



RADARS, MISSILES, NAVIGATION, COMMUNICATION SYSTEMS, COUNTER MEASURES, ELECTRONIC SYSTEMS, SATELLITES (SUN PANELS, BATTERIES), FORWARD-LOOKING INFRA-RED SYSTEMS, ETC...

### ▼ EXPERTISE IN INTERCONNECT SOLUTIONS

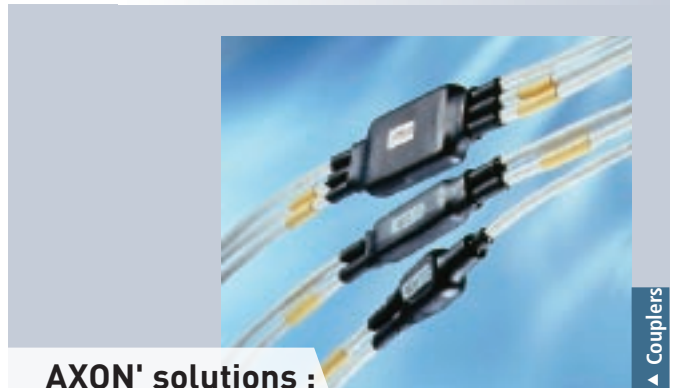
AXON' CABLE, the manufacturer of wires, cables and harnesses for advanced technologies, offers complete interconnect solutions for a wide range of applications: general industry, consumer, automotive, aeronautics, space, military, telecommunications, medical, research centres and oil industry.

AXON' CABLE has brought its expertise in the manufacture of precision conductors, wires and cables together with its knowledge of overmoulding techniques and EMI protection to be able to offer solutions suited to customer requirements.

Axon' Interconnect department offers specialised skills in the termination of single, hybrid, round or flat cables with different types of connectors irrespective of the application.

With 10 % of its turnover invested in Research & Development and its patents, AXON' can offer complete solutions for high tech applications.

Its manufacturing units in France, United Kingdom, USA, Latvia, Hungary and China enable AXON' CABLE to deliver prototypes and large or small production volumes.



▲ Couplers

### AXON' solutions :

- ▶ Integrated production units (conductors, wires and cables), dedicated workshops, project teams.
- ▶ Multi-branched assemblies terminated with different types of overmoulding and connectors : circular, miniature, coaxial, micro-D, nano-D, sub-D, etc...
- ▶ Very flexible miniature assemblies with high performance EMI protection and space savings.
- ▶ EMC/EMI tests and simulations to ensure the integrity of shielding efficiency and transfer impedance.
- ▶ Couplers and assemblies manufactured to MIL-STD-1553 for military and space programmes (Ariane 5, ATV, ISS, Eurofighter, Tiger).

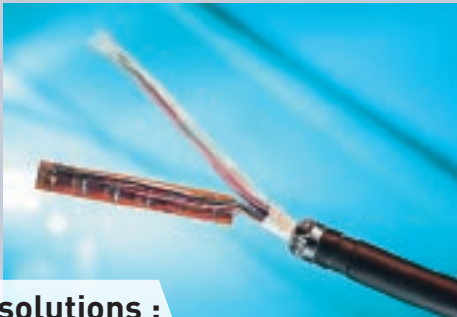




## MEDICAL



ENDOSCOPY, LAPAROSCOPY, ULTRASOUND PROBES, ELECTRO-PHYSIOLOGY EQUIPMENT, PACEMAKERS, COCHLEAR IMPLANT SYSTEMS, OXYMETER SYSTEMS, MEDICAL IMAGING AND OTHER SPECIAL APPLICATIONS...



▲ Picocoax®

### AXON' solutions :

- ▶ Cables and assemblies manufactured to meet the most stringent demands of the medical market such as aesthetic aspect, sterilisation, biocompatibility, resistance to chemicals or miniaturisation.
- ▶ Expertise in extruding methods and insulating materials approved for most sterilisation processes.
- ▶ **Picocoax®** : flexible miniature coaxial cables with diameters from 0.65 mm to 0.20 mm and capacitance from 50 to 100 pF/m. These wires can be assembled, insulated and terminated.
- ▶ Doppler ultrasound probes.



## RESEARCH CENTRES



TEMPERATURE SENSORS, VARIOUS TYPES OF MEASUREMENT EQUIPMENT.

PETROCHEMICAL INDUSTRY :

TOOLS FOR DRILLING, OIL SEARCH AND MINING.



▲ Micro-D assemblies

### AXON' solutions :

- ▶ halogen free wires insulated with a thin polyimide jacket ensuring radiation resistance.
- ▶ micro-D assemblies made with polyimide insulated coaxial cables which is resistant to extreme temperatures (-196 °C) and radiation while ensuring rapid and constant signal transmission.
- ▶ Assemblies terminated with plastic micro-D connectors able to resist high temperatures (over 200 °C) and which are directly integrated in drilling tools.





## TELECOMMUNICATIONS



BASE TRANSCIVER STATIONS, ANTENNAE SYSTEMS, TESTS AND MEASUREMENT, HIGH SPEED DIGITAL TRANSMISSION, ETC...



▲ Quasiflex®

### AXON' solutions :

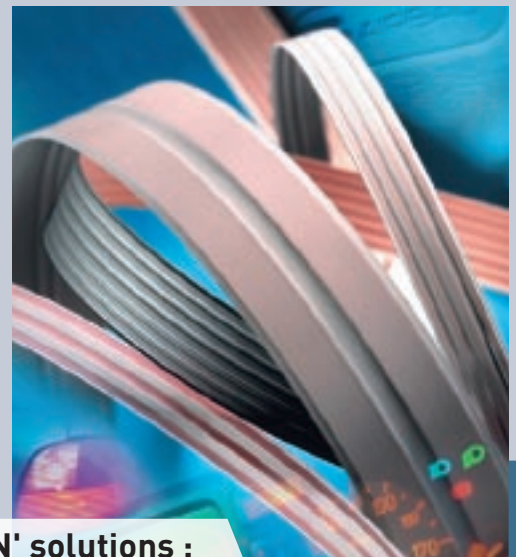
- ▶ **Axowave®**, **Axolab®**, **Axospec®** : low loss microwave coaxial assemblies terminated with connector series 7/16 or SMA, N, TNC and operating at 40 GHz.
- ▶ **Quasiflex®** : hand formable cables semi-rigid substitutes with similar electrical performance. A connected solution (SMA, N...) can be offered.
- ▶ **Gigapair®** : twinax cable designed for new communication technologies "voice-data-image" operating at frequencies greater than 2 Gbits. Maintains the integrity of the signals.
- ▶ Assemblies in large volume.



## AUTOMOTIVE



AIRBAG ROTARY COUPLERS USED TO RELEASE THE DRIVER'S AIRBAG HOUSED UNDER THE STEERING WHEEL. VEHICLE CELL CABLING (WHEEL, DOORS, HEADLINER, DASHBOARDS...).



▲ Axoline®

### AXON' solutions :

- ▶ **Picoline®** : low margin flat cables made with flat copper conductors insulated with polyester tapes. They can be punched to facilitate the positioning of the cable. Their low margin saves space and reduces noise in the cassette.
- ▶ **Axoline®** : flat cables with flat copper conductors and thermoplastic insulation material. They save weight and space compared with round cables.
- ▶ Overmoulded and assembled harnesses for air bag cassettes.

Axon' Research & Process team design and assemble the equipment and machinery necessary to manufacture these products.





## CONSUMER ELECTRONICS

## GENERAL AND STEEL INDUSTRIES



WIRELESS TECHNOLOGIES. WIRELESS TECHNOLOGY HAS MADE IT POSSIBLE TO EXCHANGE DATA BETWEEN MOBILE PHONES, LAPTOPS, PRINTERS, DIGITAL CAMERAS, ETC...

FOR ANY APPLICATIONS REQUIRING RESISTANCE TO HIGH TEMPERATURES FOR EXAMPLE ELECTRICAL APPLIANCES, ELECTROMECHANICS (E.G. CABLES FOR TORQUE WRENCH), SMELTING FURNACE, ETC...



### AXON' solutions :

- ▶ High performance miniature coaxials (**Picocoax**<sup>®</sup>) up to 6 GHz with either single or double braids connect antennae to the electronic cards of wireless equipment.
- ▶ 30, 32 and 36 AWG cables compatible with MHF, MMCX and UMP connectors.

▲ Picocoax<sup>®</sup>

BOARD-TO-BOARD INTERCONNECTIONS FOR NUMEROUS APPLICATIONS SUCH AS CD AND DVD PLAYERS, VCRS, CAR RADIOS, TACHOGRAPHS, PHONES, LAPTOPS, HI-FI, BAR CODE SCANNERS ETC...

### AXON' solutions :

- ▶ **Axojump**<sup>®</sup> : Flat Flexible Cables (pitches : 0.50 mm to 2.54 mm) made with tin plated conductors insulated with Polyester or PVC tapes. Reinforcement tapes can be added to strengthen both ends and allow for termination with compatible ZIF/LIF connectors.
- ▶ Flat cables with special insulation, shielding, marking, folding, adhesive tape, notching, flat cables with Hirose DF-9/ DF-19 or JAE FX/FI-X connectors for display interconnect (**Axolink**<sup>®</sup>), flat conductors bulk cables (**Flexlink**<sup>®</sup>).
- ▶ **Axostrip**<sup>®</sup> : flat cables with round pins which can be soldered or inserted to make board-to-board interconnections.



### AXON' solutions :

- ▶ Precision conductors : round or flat, single or multistrands made with copper, copper alloy, tin, silver or nickel plated, aluminium.
- ▶ High temperature wires : PTFE, FEP, PFA, ETFE, Polyimide and other insulating materials for high temperatures ranging from -90°C to +260°C.
- ▶ Round or ribbon composite cables : wires can be assembled, taped, shielded and insulated with a jacket (PTFE, PEEK, PVC, PUR or **VITAX**<sup>™</sup>) dependent on the temperature range and applications.
- ▶ **Axotherm**<sup>®</sup> : wires, cables and jackets for temperatures ranging from -60°C to +600°C.
- ▶ **Vibraflame**<sup>®</sup> : range of cables specially designed for extreme temperatures (-196°C to +1565°C).
- ▶ PTFE tubes and sheaths, extension or compensating cables.

▲ Axotherm<sup>®</sup>



## ▼ AXON' IN BRIEF

**Headquarters :** Montmirail (France)  
**1965 :** established  
**608 employees** (1300 in the group)  
**3000 customers**  
**30 000 products**  
**Consolidated turnover of the group :** 80 million €

## ▼ OUR CUSTOMERS

### ▼ AUTOMOTIVE :

BECKER, BOSCH, DELPHI, KOSTAL, MOTOROLA, PANASONIC, SIEMENS VDO, STONERIDGE, TRW, VALEO, ...

### ▼ AERONAUTICS AND SPACE :

AGUSTA-WESTLAND, ALCATEL SPACE, ALENIA, ASTRIUM, BAE SYSTEMS, BOEING, CHINA AEROSPACE, DASSAULT, EADS, GESPAC, HISPANO SUIZA, KHI, MHI, NTS, NORD MICRO, WESTON AEROSPACE, ...

### ▼ MEDICAL ELECTRONICS :

ATL, BIOTRONIK, E2V, ECM, GE MEDICAL SYSTEMS, HITACHI, MED EL, MEDISON, MEDTRONIC, SIEMENS, STORZ, THALES ULTRASOUND PROBES, VERMON, ...

### ▼ CONSUMER ELECTRONICS :

AGILENT, CANON, HITACHI, MATSUSHITA, PHILIPS, PIONEER, SAMSUNG, SANYO, SCHNEIDER, SIEMENS, SONY, TECHNISAT, THOMSON MULTIMEDIA, ...

### ▼ RESEARCH CENTRES - UNIVERSITIES

CEA, CERN, CNRS, INFN, LAL, MPI, ...

### ▼ GENERAL INDUSTRY :

IMAJE, ATLAS COPCO, SCHNEIDER, GESPAC, ELSTER, ABB, EUROTHERM, THALES, ...

### ▼ MILITARY ELECTRONICS

ALENIA, BAE SYSTEMS, DASSAULT, IAI, EADS, GIAT, GRUMANN, MBDA, MTU, SAGEM, THALES, ...

### ▼ TELECOMMUNICATIONS :

ALCATEL, CELESTICA, FLEXTRONICS, ERICSSON, MATRA, MOTOROLA, NORTEL, SANMINA, SIEMENS, SIGMA, SOLECTRON, ...

### ▼ PETROCHEMICAL INDUSTRY :

IFP, GEOSERVICE, SCHLUMBERGER, SPERRY SUN, WESTERN GECO

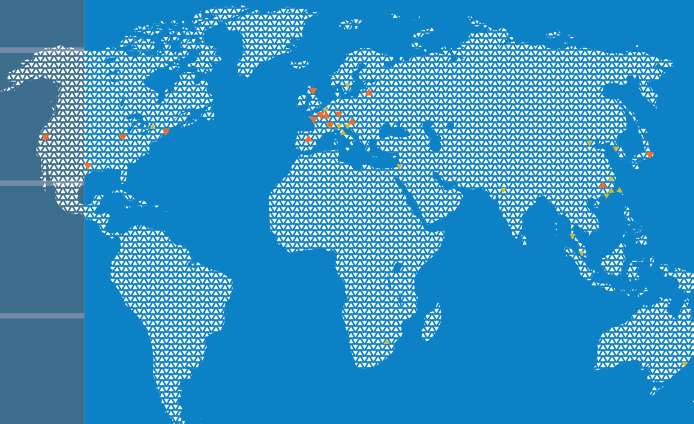
### ▼ STEEL INDUSTRY :

ALCOA, ASCOMETAL, BRITISH STEEL, CORUS STAAL, DANIELI, JFE GROUP, NIPPON STEEL, POSCO, SAARSTAHL, SOLLAC, UNIMETAL, UTECO, VOEST ALPINE, ...



## ▼ QUALITY ASSURANCE : ISO 9001, VERSION 2000 – QS9000

AXON' CABLE has successfully retained 9001 approval (version 2000) and QS9000. The company is planning to further develop its Quality programme with ISO 14000 and Business Excellence Models (EFQM).



## ▲ WORLD-WIDE SALES SUPPORT

With subsidiaries in Germany, UK, USA, Japan and Spain, along with a large network of agents in Australia, Benelux, Canada, Croatia, Hong Kong, India, Israel, Italy, Korea, Singapore, South Africa, Sweden, Taiwan, etc..., AXON' CABLE has a global presence.

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