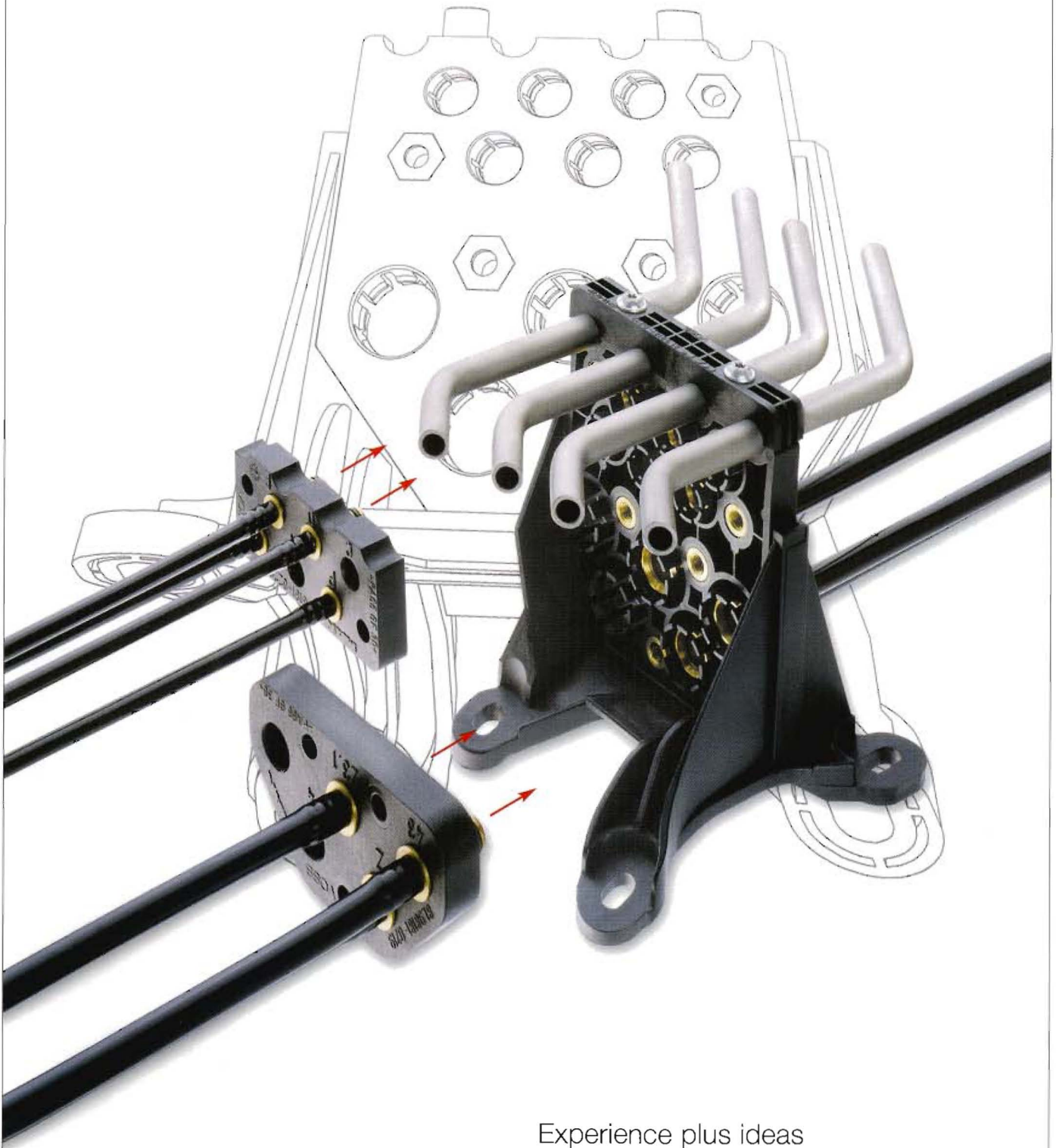


VOSS

System partner for line and connection technology for the vehicular market

Multi-connector technology

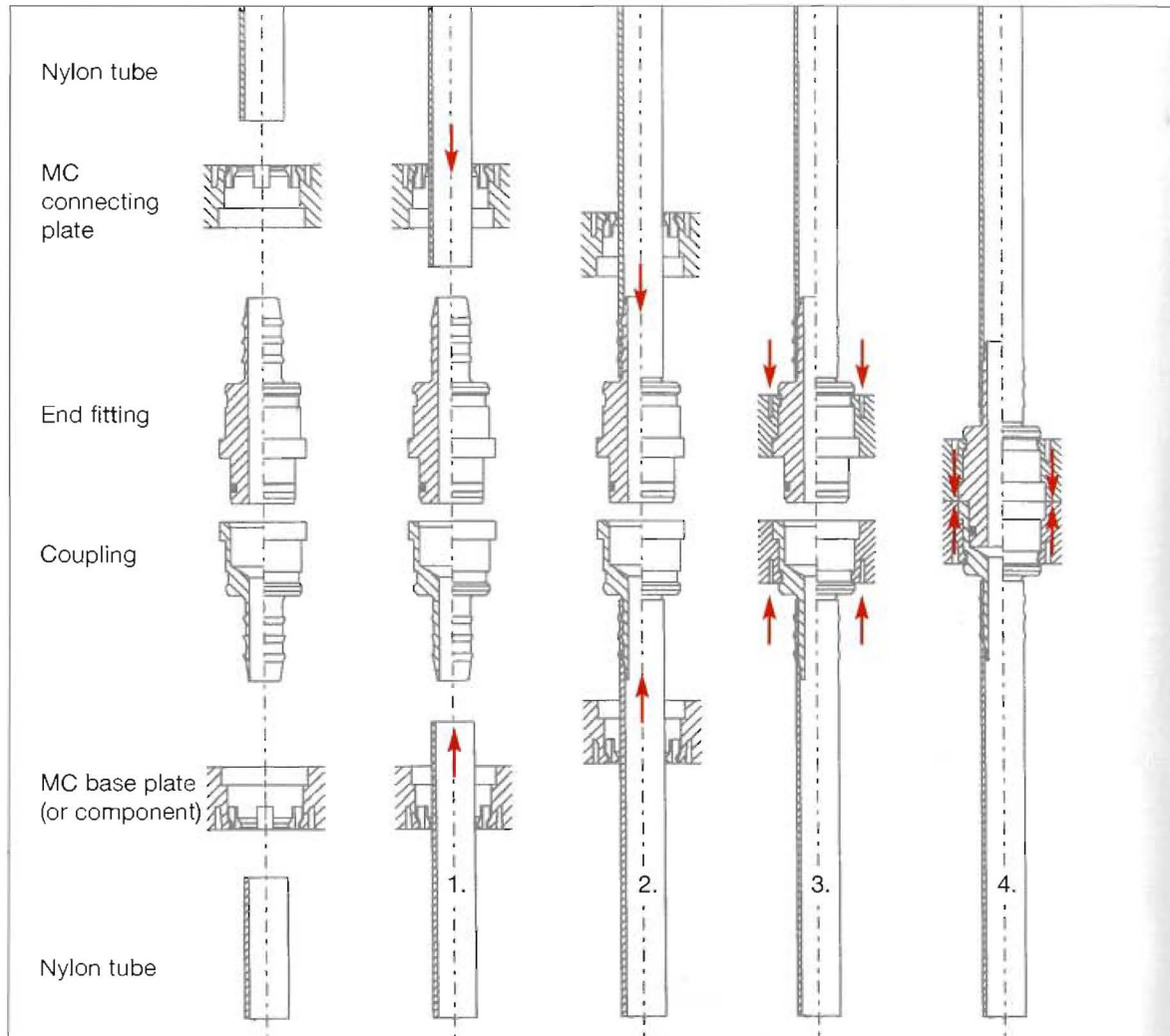


Experience plus ideas

Cost-effective and safe connection of vehicle modules

Our development of systems and components focuses on the requirements of our customers. The multi-connector technology (MC technology) developed by VOSS therefore provides car manufacturers with real cost advantages:

- Reduction of the number of assembly steps and simplification of the assembly process. The tube is fitted to the fir-trees before it is led through the multi-connector plate.
- Incorrect assemblies are easily rectified: tube and end fittings can be disassembled non-destructively as a unit.
- Extremely versatile system: shaped end fittings can be used for the first time for multiple connections.



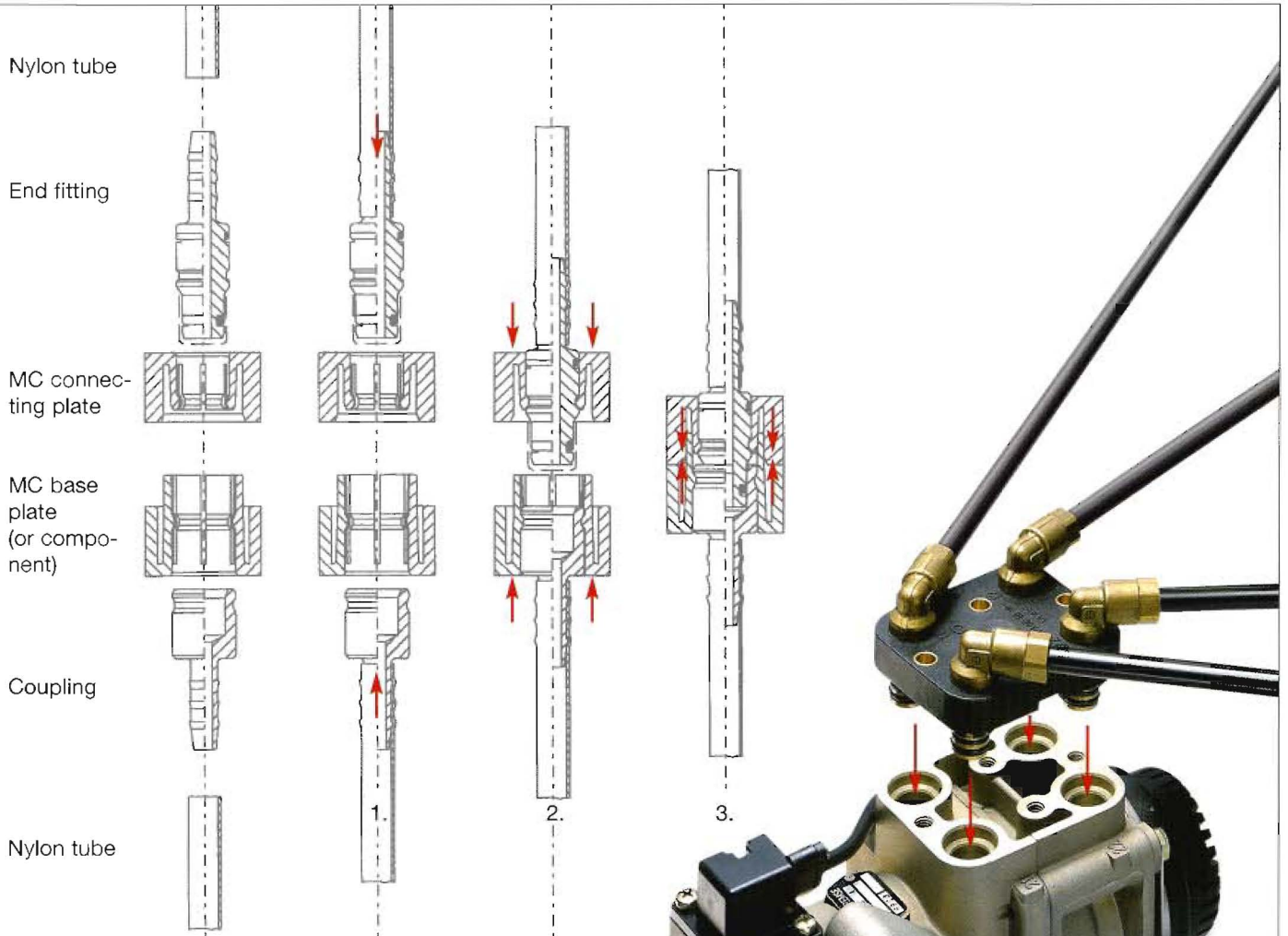
Previous standard

1. Nylon tubes were fed through connecting plate and base plate
2. Nylon tubes were then pressed onto fir-trees of ends and couplings
3. Ends and couplings snapped into plate
4. Plates connected together



“VOSS multi-connector technology introduces a new system standard for efficient and safe connection of vehicle modules.”

VOSS multi-connector technology



New VOSS system

1. Press nylon tubes onto fir-trees of ends and couplings
2. Snap end fittings and couplings into plate
3. Connect plates

Multi-connector for foot brake valve

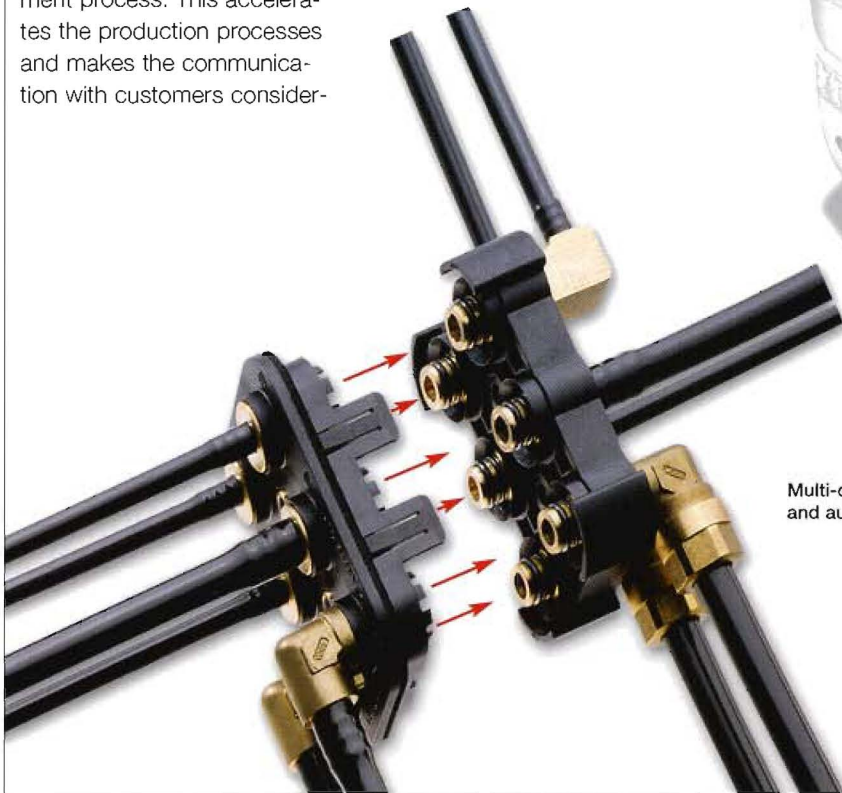
VOSS – your reliable partner – from development to large-scale production

Our multi-connector systems are specifically developed for each application. Individual steps of the product development process are coordinated with the customer, with whom we establish a close working relationship. The customer always benefits from our experience in the field of modern development, manufacturing and testing technologies.

3D CAD systems enable us to apply consistent design data throughout the development process. This accelerates the production processes and makes the communication with customers consider-

ably easier. During the first stages of product development, new ideas are implemented in cost-effective prototypes by means of rapid prototyping methods. This simplifies the decision-making processes and shortens time-to-market.

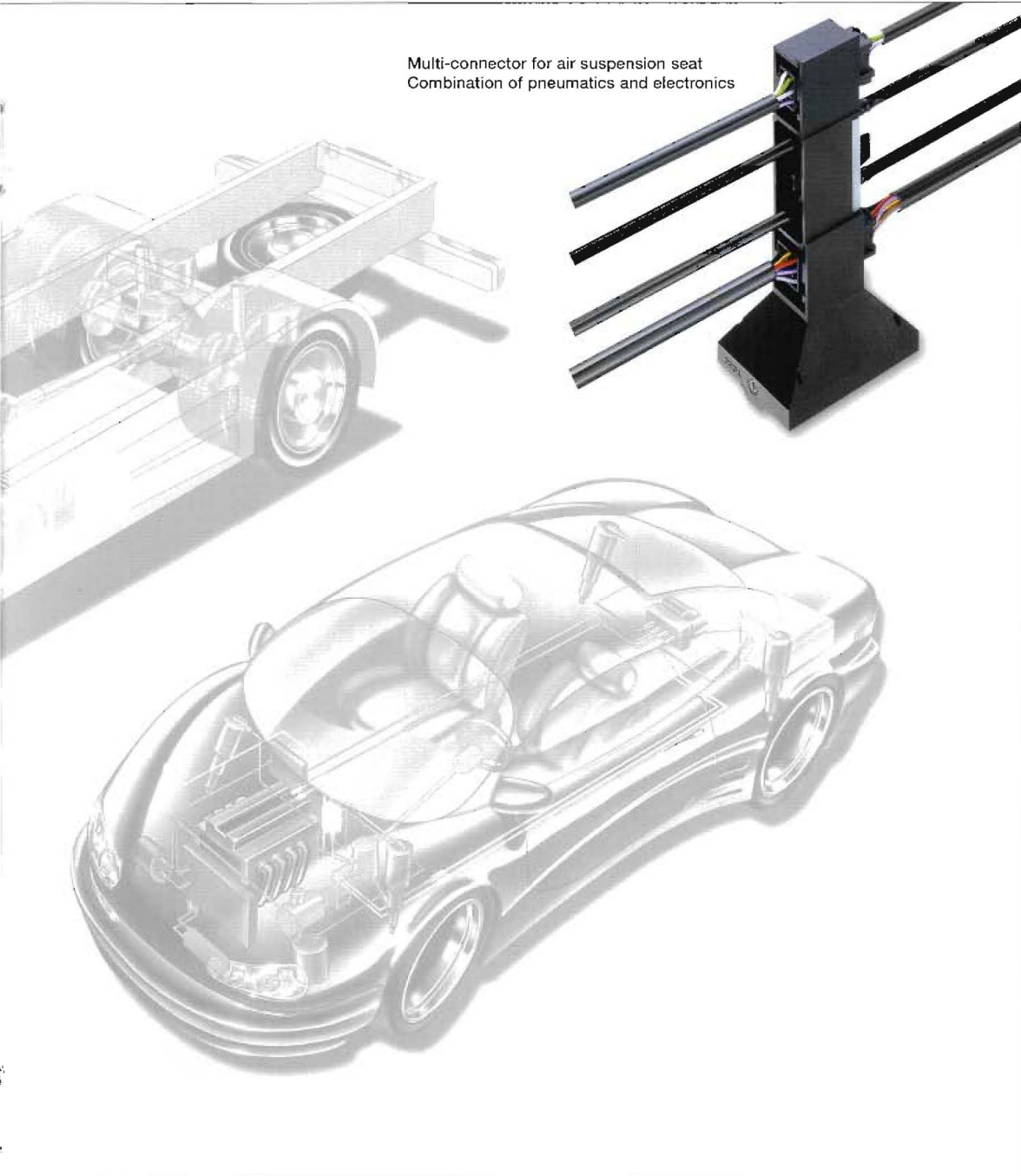
Efficient organisational structures and customer-oriented project management allows for short development cycles.



Multi-connector for brake and auxiliary devices

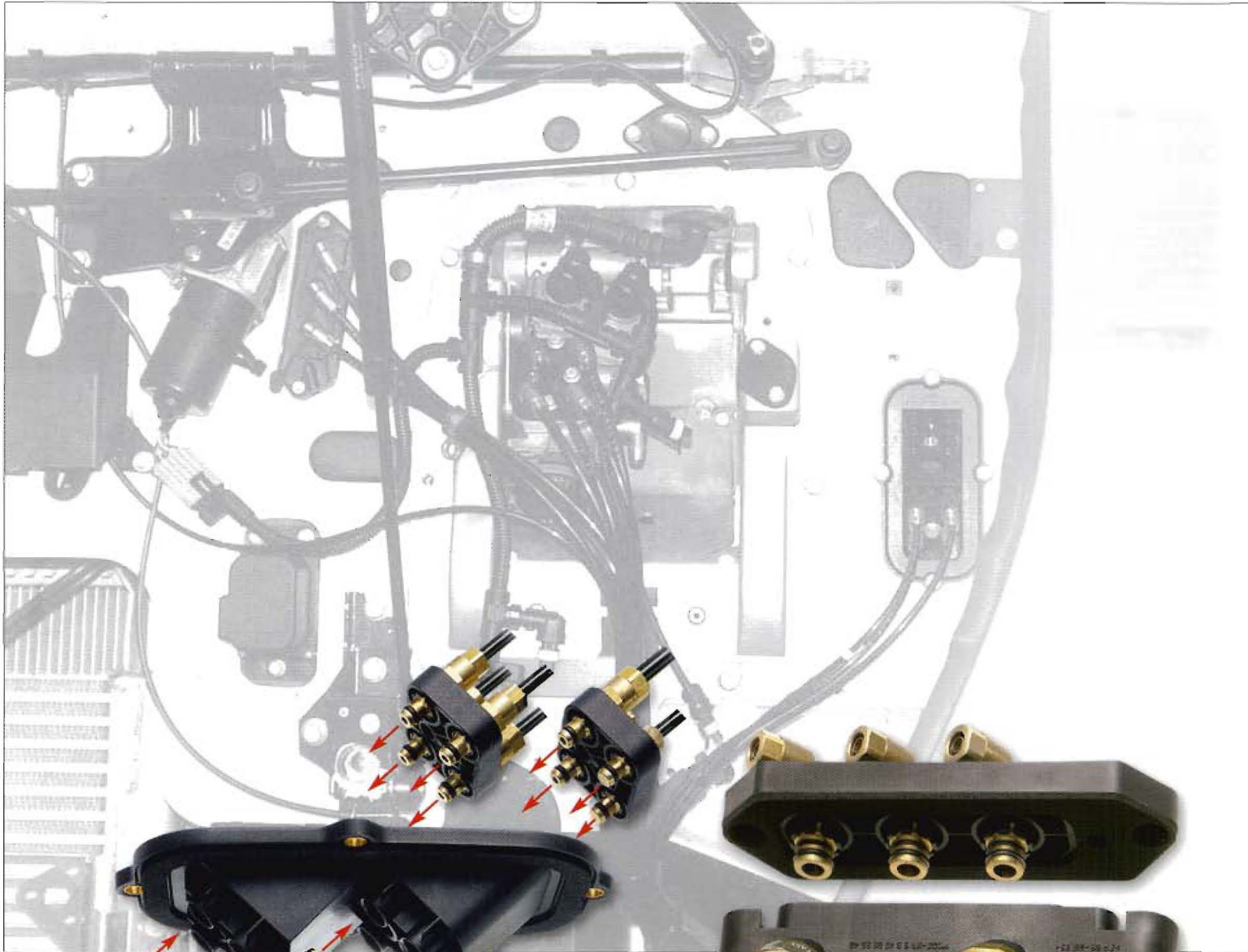


Multi-connector for air suspension seat
Combination of pneumatics and electronics



"To ensure efficient exchange of information during the product development, we adjust our project management, CAD system and prototyping to suit the needs of the individual customer."





Multi-connector for auxiliary devices



Intersection for hand brake with integrated pressure switches

The advantages of VOSS multi-connector technology at a glance

- Simpler handling.
- Cost saving through easier assembly.
- VOSS multi-connector technology extends the use of functional modules: linking of several lines at the module interfaces in one connection operation. Modules can be linked simply to diagnostic systems.
- First time use of shaped end fittings: extended range of suitable connectors (e.g. straight ends, shaped ends, capped ends and connectors with and without fir-tree).
- Wide range of applications: intersection to components (valve) and between lines.
- Incorrect assemblies are easily rectified: connecting points which have been mismatched in pre-assembly can be changed without the need to disassemble tube and fitting.
- Plate shapes and hole patterns provide reliable guidance for the mounting of multi-connector plates.
- Connectors are firmly secured to the plates without additional retaining or safety clips.
- Proven design keeps air or fluid in and dirt out: option of using one-or two-O-ring systems.
- End fittings and couplings are also available in nylon.



VOSS

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