MAYSER®

Innovative by tradition.

Automotive

Mayser stands for details in automobiles.

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The automobile supplier market has a worldwide value of 620 billion euros and is a challenge for all players. The constantly growing demands require a high level of precision and reliability.

Mayser is known for its high product quality and its service orientation. In foam technology as well as safe sensory analysis, Mayser has demonstrated convincing know-how for decades already. Mayser has built up an international reputation as a specialist for complex, solution-oriented developments.

The company's product portfolio ranges from pressure-sensitive anti-pinch to seat occupancy sensors, from carrier material for steering wheel heaters to non-touch high-end solutions for automatically moved parts in automobiles.

Mayser has been cooperating with numerous renowned OEMs, tier-1 and tier-2 suppliers for years.

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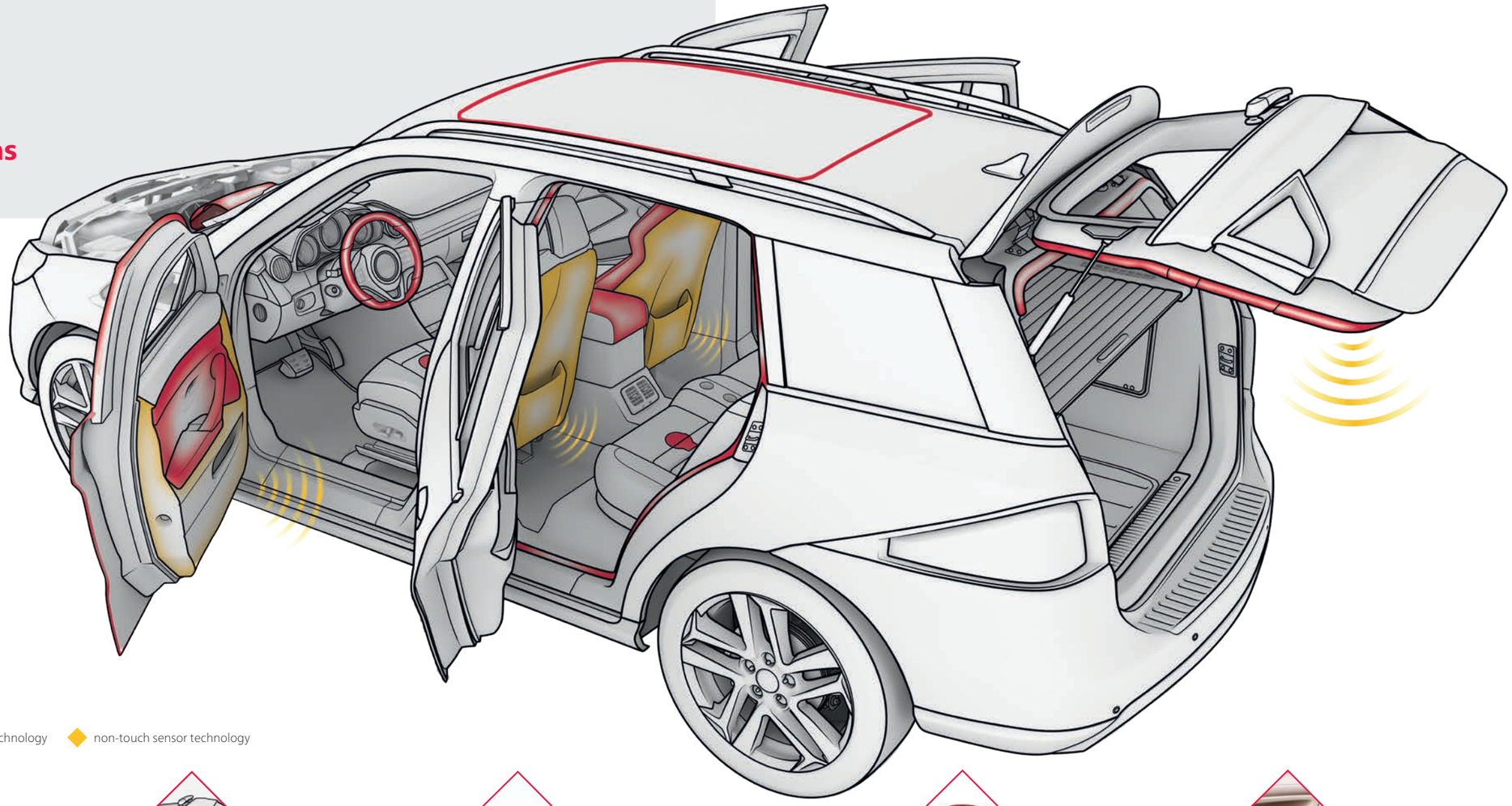
1 Our solutions



pressure-sensitive sensors or foam technology

non-touch sensor technology

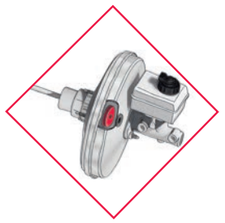
Anti-pinch sensor

Capacitive surface sensor

Seat occupancy sensor

Carrier material for steering wheel heating systems

Laminating foams for internal panelling



Acoustic panels & air filters

Areas of application Safety Technology

For more than ten years, Mayser has established itself as a tier-1 supplier for high-quality safety products in the automotive industry.

The portfolio comprises different safety components:

- Anti-pinch sensor
- Capacitive surface sensor
- Seat occupancy sensor

Areas of application Foam Technology & Moulding

With our production method, we can adjust the PUR foam material to all kinds of needs and requirements depending on the required application.

Possible material properties:

- Low mounting dimensions
- Narrow tolerance defaults
- Homogeneous surface structures

Thanks to these qualities, our materials can be found in numerous automotive applications.

2 Anti-pinch sensor

We secure automatically controlled locking functions in vehicles with our sensor-controlled anti-pinch protection system. This is based on miniature safety edges.

If such a safety edge encounters an obstacle on a shearing or pinching edge, then the dangerous movement is stopped immediately.

We offer complete in-house services from development to design all the way to series delivery.

Your benefits

- Various profile geometries with safety edges
- Maintenance-free
- Customer-specific solutions
- Optimal solution for different installation heights
- Affixed or clipped onto carriers
- Pulled into seal profiles
- Development/design of the carriers in-house

Technical data

Operating principle	Pressure-sensitive
Electronic version	N/O switch principle
Overall height	4 – 16 mm
Actuation angle	Up to 90°
Degree of protection	IP65
Actuating path	≤ 1.0 mm
Rubber envelope profile	TPE
Customer-specific adjustments	Sizing OEM-specific standards
Possible applications	Power liftgate Sliding door Panoramic roof Window

3 Non-touch detection system

The non-touch detection system is a non-touch anti-pinch system on doors and power liftgates and seats. It is based on a capacitive sensor. If a person approaches the active zone of the sensor, then its electrical field changes. This information is evaluated by the control unit and forwarded to the door / power liftgate / seat control. The non-touch detection system is a surface sensor.

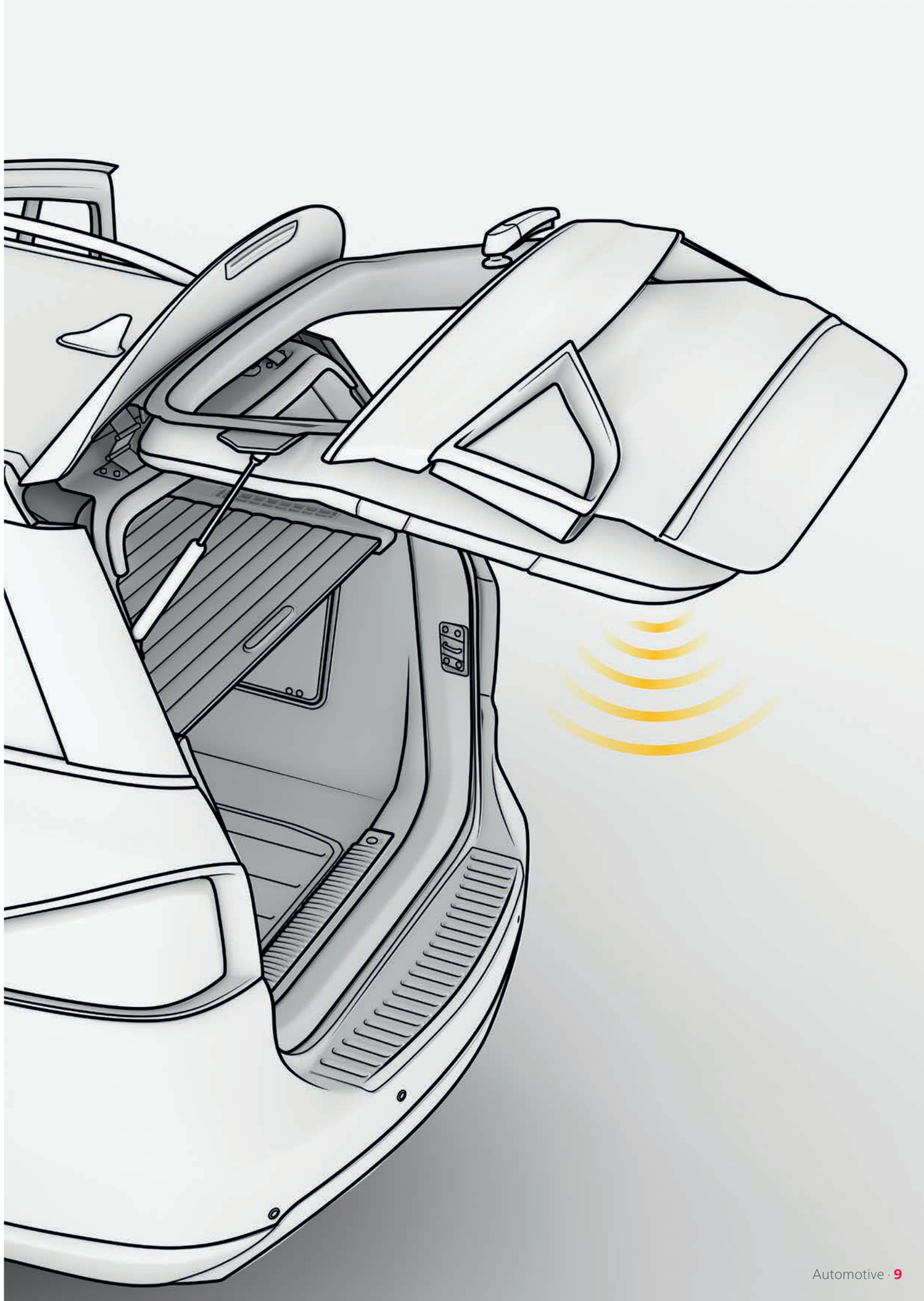
The system is impervious to electromagnetic interference.

Technical data

Operation principle	• capacitive • non-touch
Degree of protection	• IP5K0
Applied standards	• EN 55025 (IEC/CISPR 25) • ISO 10605
Plug connection	• e.g. Molex Mini50TM

Your benefits

- Reliably prevents touching and knocking over of persons
- Invisibly integrated behind the cover
- Nearly any surface geometry incl. cut-outs possible
- Attachment point individually definable
- Several-zone configuration possible
- Tested quality



Your benefits

- Low application effort
- One sensor for all seats
- Positioning on the B side
- Low weight
- Low power consumption
- Long service life through rugged construction method
- Years of know-how from the automotive industry

4 Seat occupancy sensor

Seat occupancy sensors are special sensors that are integrated into vehicle seats and detect seat occupancy. They trigger an alarm when the seat belt is not put on and remind the occupants of the mandatory seat belt wearing through the coupling with the seat belt reminder.

The pressure-sensitive seat occupancy sensors of Mayser can be integrated into nearly any vehicle type.

A short circuit in the supply lines is recognised as 0 Ohm. An optional diagnostic resistance R_d can be integrated to detect cable breaks.

Technical data

Switching criteria with v_{Test} = 5 mm/min	
Switching force	5.3 N ± 1 N
Switching cycles	1×10^6
Test sample	Ø 15.8 mm
Mechanical operating conditions	
Dimensions (W × H × D)	35.4 mm × 7.65 mm × 30.4 mm
Weight	7 g
IEC 60529: Degree of protection	IP52
Operating temperature Temporarily (1 h)	–40 °C to +85 °C up to +120 °C
Storage temperature	–40 °C to +95 °C
Rel. humidity (max.) +80 °C	85 %
Fire behaviour	Self-extinguishing
Electrical operating conditions	
Connection cable	2 × 0.35 mm²
Cable length	Customer-specific
Plug connection	Customer-specific
Electrical capacity Voltage (max.) Current (max.)	 DC 5 V 20 mA
Resistance (SBS actuated)	270 Ohm ± 5 %
Performance (max.)	0.1 W
EMC	Passive electronics

5 Carrier material for steering wheel heating systems

INDUCON® is the ideal carrier substance for steering wheel heating systems. The configurable haptics and elasticity of the material meets the individual requirements of different designs.

The special feature of the material is the possibility to perfectly limbed heating wires. This achieves a smooth and perfect leather surface.

In addition, the smooth surface of the INDUCON® material enables economical use of adhesive during laminating. INDUCON® is as standard available as rolls with variable thicknesses and widths. This makes an economical manufacturing process for further processing possible.

Our products*

	INDUCON T 150	INDUCON T 200	INDUCON T 170 / Charmeuse	INDUCON T LO 170 / Charmeuse	INDUCON T E 200
Thickness [mm] (DIN EN ISO 1923)	1.50	2.00	0.75	0.70	2.00
Shore hardness 00 (DIN ISO 7619-1)	41 ± 5 (4 layers)	56 ± 8 (3 layers)			31 ± 5 (3 layers)
Tensile strength [kPa] (DIN ISO 1798)	> 420	> 720	> 600**	> 550**	> 300

* Excerpt from the product portfolio. Other versions on request.
** Measured values refer exclusively to the foam, not to the compound.

Your benefits

- ✓ Narrow thickness tolerances / hardness tolerances / density tolerances
- ✓ Rolls: economic processing
- ✓ Simple fabrication of the material
- ✓ Lamination with charmeuse to improve the processing characteristics during preparation

Low-emission version

6 Laminating foams for internal panelling

Modified polyurethane-polyether foams are used as laminating foams for interior parts with real or artificial leather lamination. With our production method, foam surfaces are finished to enable even application and use of adhesive. This prevents the typical "orange-peel surface formation" when the sewn coverings are glued onto the carriers and gives finished components a high-quality surface structure.

MAYSER BLUEFOAM® is a polyurethane coated foam with outstanding characteristics. It is used for the structure of steering wheel heating systems on the basis of EPDM as haptics and laminating foam. Its high light fastness enable further uses inside the vehicle.

- Low-emission version
- Material widths up to 1.800 mm
- MAYSER BLUEFOAM® colours according to RAL

Your benefits

- ✓ Narrow thickness tolerances / hardness tolerances / density tolerances
- ✓ Rolls: economic processing
- ✓ Modified surfaces enable economic adhesive application

Our products*

	LO-M 4275 F	LO-M 4275 F	B 4248 PFK-LF	MAYSER BLUEFOAM TG-S 30 RG 140
Thickness [mm] (DIN EN ISO 1923)	2.00	3.50	1.00	0.50
Density [kg/m³] (ISO 845)	66	54	147	140
Application	Arm rest Door centre panel Kerb	Arm rest Door centre panel Kerb	Door panel	Steering wheel heating system

* Excerpt from the product portfolio. Other versions on request.

7 Acoustic panels and air filters

INDUCON® has a very good acoustic operation principle and outstanding processing characteristics for noise reduction inside motor vehicles. It is therefore use for the acoustic insulation of electric motors of the lordosis support pump system.

The air permeability of INDUCON® can be precisely defined with controllable pore diameters. The particle separation efficiency of INDUCON® filters, e.g. for brake boosters and other air-conducting systems in automotive engineering, can thus be set to perfectly meet the requirements.

Our products*

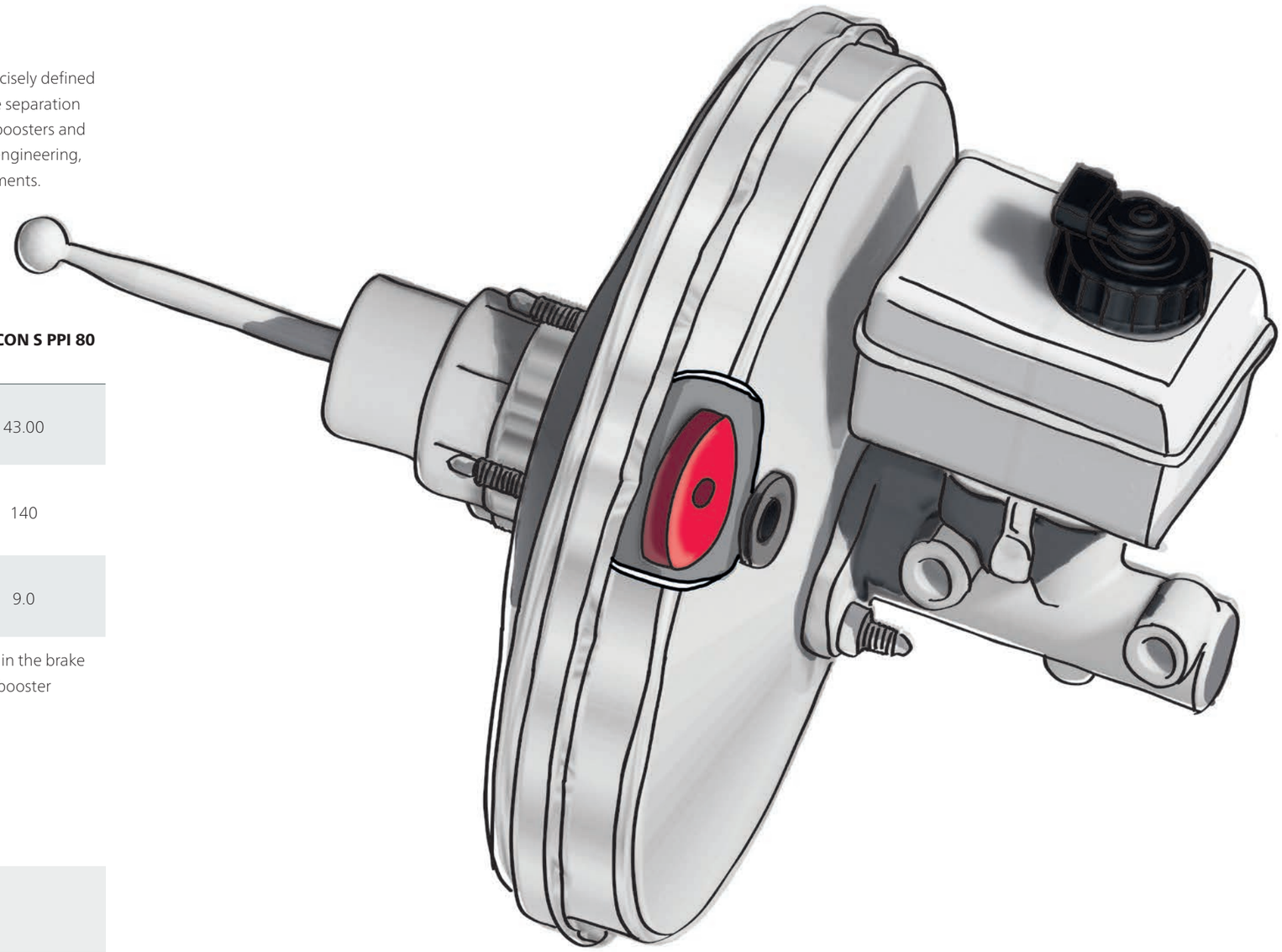
	INDUCON S 150	INDUCON T-LO 150	INDUCON T PPI 90	INDUCON S PPI 80
Thickness [mm] (DIN EN ISO 1923)	3.00	2.00	9.00	43.00
Density [kg/m³] (ISO 845)	150	150	85	140
Air throughput [dm³/min *cm²] (Tolerance ± 1)			1.9	9.0
Use	Lordosis pump system	Lordosis pump system	Filter in the brake booster	Filter in the brake booster

* Excerpt from the product portfolio. Other versions on request.
** Measured values refer exclusively to the foam, not to the compound.

Your benefits

- ✓ Narrow thickness tolerances / hardness tolerances / density tolerances
- ✓ Rolls: economic processing
- ✓ Individual adjustment to requirements in the fields of separation level and frequencies
- ✓ With self-adhesion

ⓘ Low-emission version



8 Special automobile solutions

INDUCON is thermally compressed, PUR foam with controllable physical properties in narrow tolerances. Material configurations according to density, thickness, tensile strength and ultimate strain, compression and shore hardness and additional parameters are possible.

The foams can be embossed, punched, laminated, printed, coated and dyed, among other things. This variety of product versions allows the development of a suitable solution for almost any need.

Application examples

Rattle protection & spacer
Earth straps

Sheathing for moulded foam parts
Side bolsters of bucket seats

2D embossed parts
Seating surfaces of vehicle seats

Haptic elements
Touch pad

Seals
Dust seals for electronic devices

Embossing in seat cover materials
Seat centre

Embossed geometries made of composite materials
Sound insulation solutions for the engine compartment

Self-supporting moulded parts
Roof liners and interior components for special vehicles

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Foam Technology & Moulding **Safety Technology** **Metal Foam** **Headwear**

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