

SACER[®]

REMANUFACTURING SOLUTIONS

ORIGINAL DESIGN MANUFACTURER CATALOGUE 2017/2018



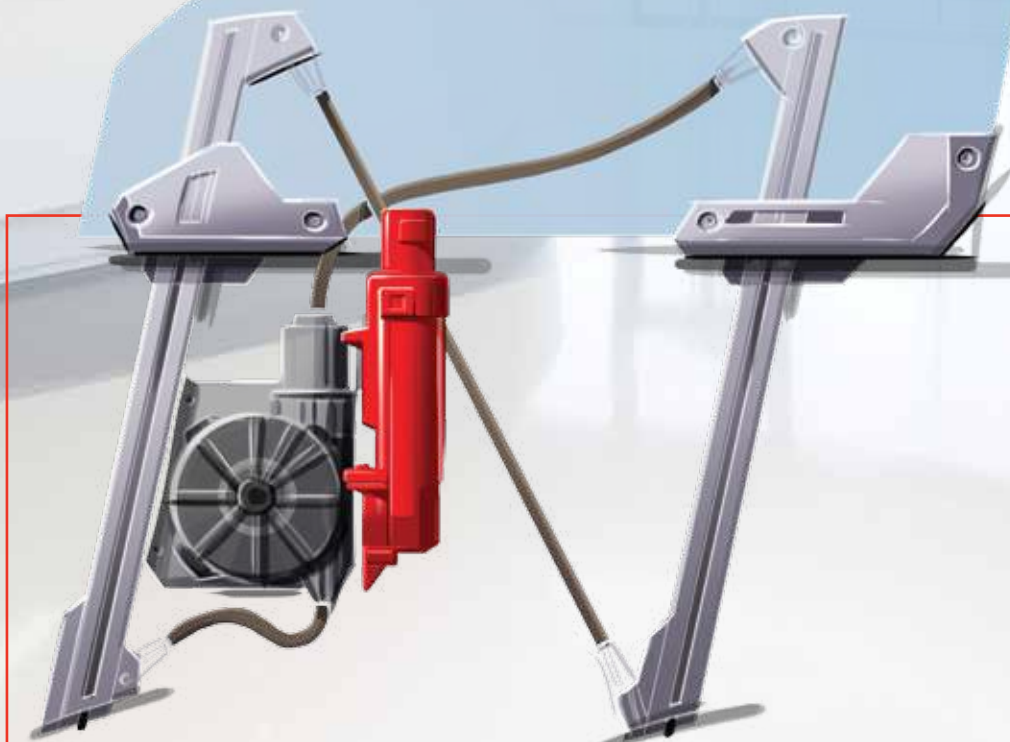
**Turbo
Actuators**



**EHPS Connector
Cards**



**Window Regulator
Modules**





WELCOME TO THE SACER ODM CENTER

ODM (Original Design Manufacturer)

Welcome to Sacer: where experts, teamwork and technology together achieve a competitive advantage for you. Through honesty, transparency and trust we build long-term partnerships. You are the focus of everything we do.

Sacer is a steady growing manufacturer with highly skilled and experienced electronic engineers, founded in 2007, which develops and produces electronic control modules in the automotive aftermarket. We have our own engineering team in Europe, together with more than 100 employees in China and we manage to create the quality bridge between European design and Chinese manufacture.

When we start to investigate in developing a new product, we first focus on the original failure, and try to find out why it breaks. After this we find out how we could improve it to get a longer lifetime. We well understand the European Quality, and strictly process the ISO/TS16949 in production, from design till final delivery. We work very close with OE supply chain in China, therefore we could supply our own designed OE quality products in aftermarket.



Quality people + Quality processes = Quality products



SACER TECHNOLOGY PRODUCTS & SOLUTIONS

In order to deliver better service for our customers with specified needs, in 2015, Sacer has divided products in two categories.

REMAN

Wholesale, order from stock, to electronic repair shop / remanufacturer

Instrument LCD displays

ABS / ECU / ECU repair spare parts

DC motor for throttle body

Automotive semiconductors

ODM

Small batch customer design service, for car parts distributor / remanufacturer

Turbo actuator

Contactless TPS sensor

ECU

Window regulator

EPS / EHPS control board

Air flow meter (MAF)

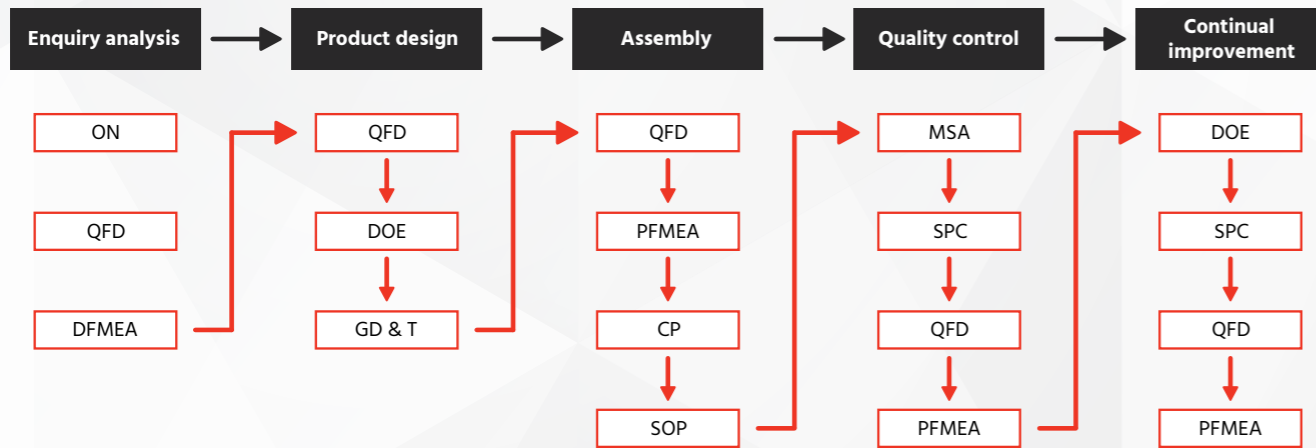
SMALL BATCH CUSTOMER DESIGNER & MANUFACTURER

We dare to be different. Will you?

Imagine what you can accomplish when you are partner with a Chinese automotive electronic company that believes in true collaboration with open doors and access to laboratories, staff and resources. Imagine a Chinese automotive electronic company that believes shared successes are the greatest successes.

- Specialized in redesign, manufacturer electronic control modules for global automotive - remanufacturers.
- Focused on the failure rate and improve the quality with high-tech technology to achieve a longer lifetime.
- Apply on ISO9000/TS16949 quality control system through the entire design & manufacturer process.
- Provide small batch Custom Made Service (ODM/OEM) to satisfy customers' needs.

SACERS NEW PROJECT R&D PROCESS FLOW



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WINDOW REGULATOR SYSTEMS

In the product segment, it has single-rail and double-rail cable window regulators, continuous-path regulators and compact regulators. Our window regulator systems are available as electric or electronically driven and depending on the customers wishes, available with and without pinch protection and comfort features.



WHY ORDER THE SACER WINDOW MOTOR MODULE REGULATOR?

- One touch total close
- Anti - pitch safety model
- Redesigned with water leakage protection
- Fully function OQC test in factory for every unit
- 2 years full european warranty

What make this Temic regulator break quite often?

Water corrosion on the printed circuit board under the 6-pin connector creating a resistance and also corrosion on the neighboring surface mount capacitors. In some cases, the corrosion even progresses under the current shunt (the bridge connection) creating resistance.

Why Sacer window motor module regulator SA500?

Complete redesigned & manufactured with high-tech automatic equipment, to guarantee good quality only. Continually supply channel for the reliable new original relay and MCU on the circuit board.



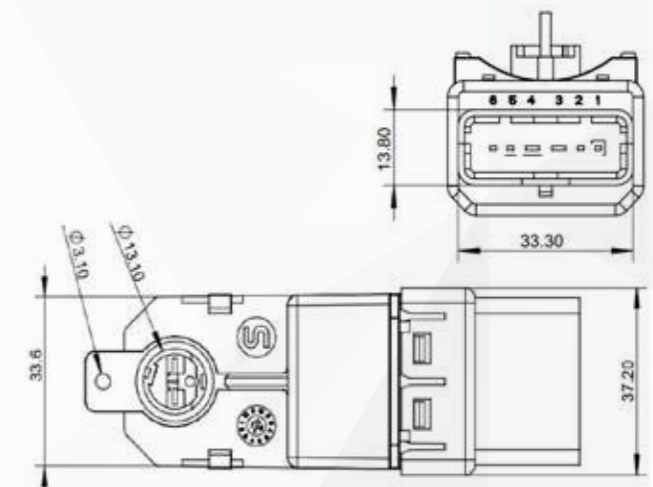
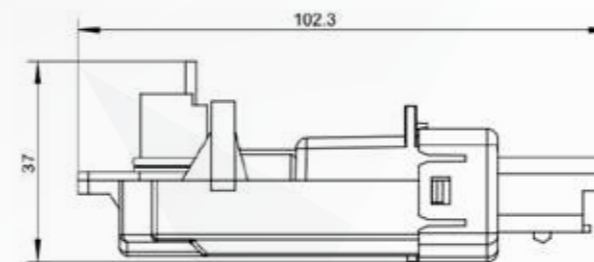
MAKE / MODEL

model	years
Renault Megane 2	2002-2008
Renault Scénic 2	2003-2009
Renault Clio 3	2005-2013
Renault Grand Scénic	2004-2009
Renault Laguna	2002-2009

Technical parameters

Power supply	DC 10V to 5V
Anti-pinch force	< 3.0 kg.
Operating temperatures	-20 °C to 70 °C
Storage temperatures	-40 °C to 85 °C
Weight	50 gr.
Outline dimension (l*w*h)	102.3*33.6*37.2 mm

DIMENSION OR OUTLINE (UNIT: MM)



QUALITY CONTROL

- Full function OQC test and confirm for every unit.
- 2 years full European warranty.
- Finish full function at HALT test, include temperature test, ageing test, drop test, vibration test, salt spray test, destructive test.

Results

Temperature test	-40 °C to 150 °C
Ageing test	1000 hours
Drop test	100 cm
Vibration test	60 G
Outline dimension (l*w*h)	102.3*33.6*37.2mm
Salt spray test	16 hours

SA500

Window motor regulator module Renault

APPLICATION / FEATURE:

Renault Megane 2 2002-2008
Renault Scenic 2 2003-2009
Renault Clio 3 2005-2013
Renault Grand Scenic 2004-2009
Renault Laguna 2002-2009

SPECIFICATION:

TEMIC 0675 D3 440788 HW C6 SW 1.7 PD 29.11.05 PASS4 PASS 4
TEMIC 0675 D4 440726 J4 HW C6 SW 1.7 PD 14.12.07 PASS3 PASS 3
TEMIC 0675 C9 440726 F HW C5 SW 1.7 PD 15.06.04 PASS4 PASS 4



SA503

Window regulator Peugeot 408

APPLICATION / FEATURE:

Peugeot 408



SA500-connector

Connector to SA500

APPLICATION / FEATURE:

Renault Megane II 2002-2008
Renault Scenic II 2003-2009
Renault Clio III 2005-2013

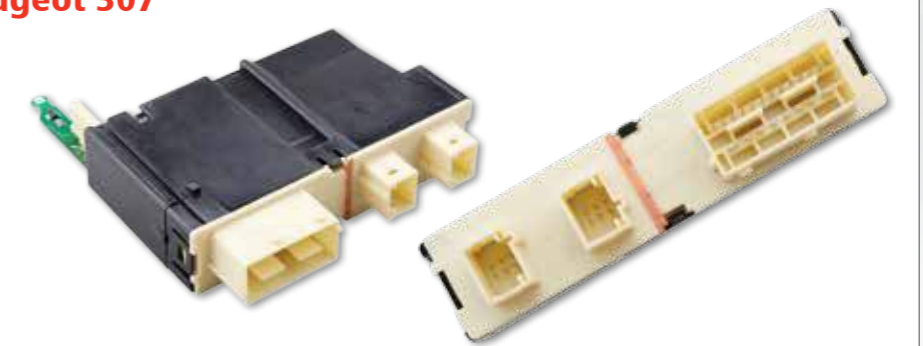


SA504

Window regulator Peugeot 307

APPLICATION / FEATURE:

Peugeot 307



SA501

Window regulator for Peugeot 207 / 308

APPLICATION / FEATURE:

Peugeot 207 / 308
Citroën C3



SA505

Window regulator Ford Focus

APPLICATION / FEATURE:

Ford Focus



SA502

Window regulator Renault Megane CC

APPLICATION / FEATURE:

Renault Megane CC



SA506

Window regulator Renault Koleos

APPLICATION / FEATURE:

Renault Koleos



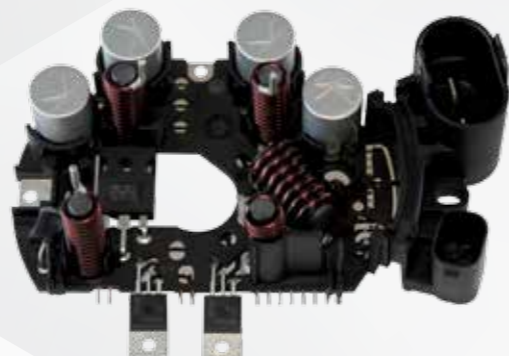


ELECTRONIC INVERTER BRUSH CARD

The Mini Cooper has an EHPS power steering system, with a EHPS pump with a high failure rate, which makes it ideal for remanufacturing. The connectors from the pump are very weak, and often corroded. For this reason, Sacer offers an 'low price - high quality solution' for the power steering remanufacturing industry.

ELECTRONIC INVERTER BRUSH CARD FOR MINI COOPER

- Complete new manufacture brush card with high-power aluminum PCB & EMC filter, without MCU control PCB.
- Brand new brush to guarantee long life time.
- Original new semiconductor on the PCB.
- Remanufacturing and high quality control. Fully test in factory (Function, HALT, EMC test).
- Cheaper solution for steering pump remanufacturer.



Technical parameters

Power input	-20°C to 105°C
Electric current	-40°C to 115°C
Weight	76g (empty), 300g (with component)
Outline Dimension(L*W*H)	131 mm * 78 mm * 44 mm
Operating Temperatures	-20°C to 105°C
Storage Temperatures	-40°C to 115°C
Soldering Temperatures	220°C to 280°C
Vibration strength	High
Corrosion stability	High
Pb free	RoHS

MAKE/MODEL

MINI Cooper R50, R52, R53 2002-2011

*More detail please check below list

Car Make/Models	Year	Engine Number	KW	Horse Power	ML	Remark
MINI MINI(R50,53) Cooper S	07.04 – 09.06	W11B16A	125	170	1598	Hatchback
MINI MINI(R50,53) Cooper S	03.02 – 09.06	W11B16A	120	163	1598	Hatchback
MINI MINI(R50,53) John Cooper Works	03.06 – 09.06	W11B16A	160	218	1598	Hatchback
MINI MINI(R50,53) One	06.01 – 09.06	W10B16A	66	90	1598	Hatchback
MINI MINI(R50,53) Works	11.01 – 09.06	W11B16A	155	210	1598	Hatchback
MINI MINI Cabriolet (R52) Cooper	07.04 – 11.07	W10B16A	85	116	1598	Convertible
MINI MINI(R52) Cooper S	07.04 – 11.07	W11B16A	125	170	1598	Convertible
MINI MINI(R52) John Cooper Works	07.04 – 11.07	W11B16A	155	210	1598	Convertible
MINI MINI Cabriolet (R52) One	07.04 – 11.07	W10B16A	66	90	1598	Convertible

DIFFERENT VERSIONS OF THE PRODUCT

1. SA402 - Connect PCB: SACER version empty circuit board

Description

- For the SACER version empty circuit board, all the components need to take from the OE board and soldering by yourself.



2. SA402 - Connect PCB-1: SACER version empty circuit board with high power accurate resistor

Description

- For the SACER version empty circuit board with high power accurate resistor, all the components, except high power accurate resistor (red arrow point), need to take from the OE board and soldering by yourself. We have already soldering the high power accurate resistor.



3. SA402-1: SACER version board with component (without MCU module and Power module board)

Description

- For the SACER version board with component, all the component have already soldering, except MCU module and Power module board (below picture red arrow point).



POWER MODULE BOARD

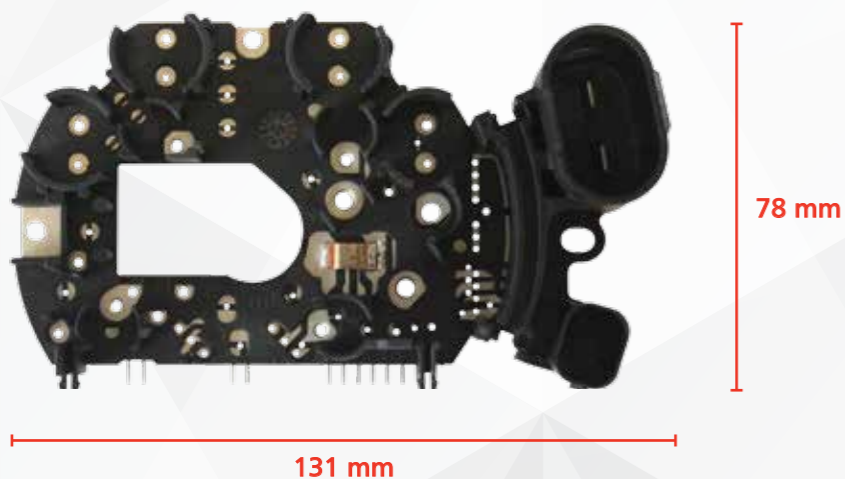


MCU MODULE



Notice: Please check and test before assembly to the car.

DIMENSION OR OUTLINE INFORMATION (UNIT: MM)



PACKAGE

Package	1 in a box
Box size	120mm * 110mm * 41mm
Package weight	50g



1040100201
SA402-1
 BMW MINI ONECOOPER POWER STEER
 PUMP Inverter Brush Card
 SIZ16CMX12CMX6CM
 WEIGHT:270G
 QTY:1PCS



SA402 - Connect PCB

EHPS pump main connector PCB without any components

APPLICATION / FEATURE:

(Electrical Motor Pump Inverter) / Electronic-hydraulic Power steering pump R50 R52 R53 only.



SA402 - Connect PCB-1

EHPS pump main connector PCB with high power accurate resistor

APPLICATION / FEATURE:

(Electrical Motor Pump Inverter) / Electronic-hydraulic Power steering pump R50 R52 R53 only.



SA402-1

BMW Mini One Cooper EHPS power steer pump inverter brush card

APPLICATION / FEATURE:

(Electrical Motor Pump Inverter) / Electronic-hydraulic power steering pump R50 R52 R53 only.

Advantage:

- European Quality
- Anti pinch function

EXEPTIONS / PROBLEM AREA'S:

BMW MINI Electronic-hydraulic power steering pump is a very common failure for the MINI one and MINI Cooper built between 2001 - 2007.

COMMON FAILURES INCLUDE:

- Complete loss of power steering
- Intermittent loss of power steering
- Loud whirring noise coming from the motor
- Pump continues to run even with the engine turned off



ECU

In 2010 Sacer proudly presented her first aftermarket ECU, for the Opel Combo / Astra / Corsa 1.7 DT & 1.7DTI, after two years of research and developing. In 2016 we have improved our long term test equipment, to be able to supply our customers with an ECU that has not only a competitive price, but also a competitive quality. While designing the ECU, we took special note on

the weak points, that normally causes these ECU's to break and made dramatically improvements. After assembly, the ECU's are now tested for two weeks at a temperature of 110 degrees, with random vibration testing. The ECU's are in a simulated automotive environment, while performing these tests.

SA1120-1



IMPROVED VERSION

APPLICATION

As designing the ECU, we took special notes on the weak points, that normally causes these ECU to break and made dramatically improvements. After assembly, the ECU is now tested for two weeks at a temperature of 110 degrees with random vibration testing. The ECU is in a simulated automotive environment while performing these tests.

MAKE/MODEL

Diesel ECU Delphi Delco 1.7D-T Opel / Vauxhall, Astra 1.7D-T 1999-2003; Combo 1.7D-T 2000-2004; Corsa 1.7D-T 2000-2003. OE numbers: 8971891360, 8971891361 & 8971891363

European Quality, 18 months warranty.



TURBO ACTUATOR GEARBOX

The turbo actuator is part from a complete VGT turbo assembly, made by Garrett. The original turbo actuator has a short lifespan, and therefore an extreme high failure rate. Often this turbo actuator cannot be purchased separately, and if the actuator breaks, a complete new turbo with actuator assembly needs to be bought. The high failure rate, mostly comes from wear in the two plastic gears, causing too much friction, and results

in breakage from the DC motor. As one of the gears that causes this problem is laser welded, inside the gearbox, it is not possible to exchange only both plastic gears and DC motor. Therefore Sacer offers a reman solution in the shape of a complete new actuator gearbox.

Brand new with self-developed patent & easily plug and play.

SA1130



The 'G-number' is found on the side of the Gearbox, see image here.



Garrett type - Different G-number to adapt to different models:

G-001	G-13	G-18	G-103	G-107	G-108	G-109	G-113
G-125	G-138	G-145	G-149	G-167	G-185	G-186	G-187
G-20	G-203	G-206	G-21	G-219	G-221	G-222	G-226
G-234	G-24	G-25	G-26	G-27	G-276	G-277	G-32
G-33	G-34	G-35	G-41	G-45	G-48	G-49	G-50
G-53	G-59	G-61	G-64	G-66	G-67	G-74	G-77
G-82	G-88	G-92	G-99				

DIAGNOSTIC FAILURE RATE FROM THESE TURBO ACTUATORS:

80%

have a mechanical failure in the Turbo Actuator Gearbox. We offer these complete high quality aftermarket Actuator Gearbox, with a 2 year warranty.

20%

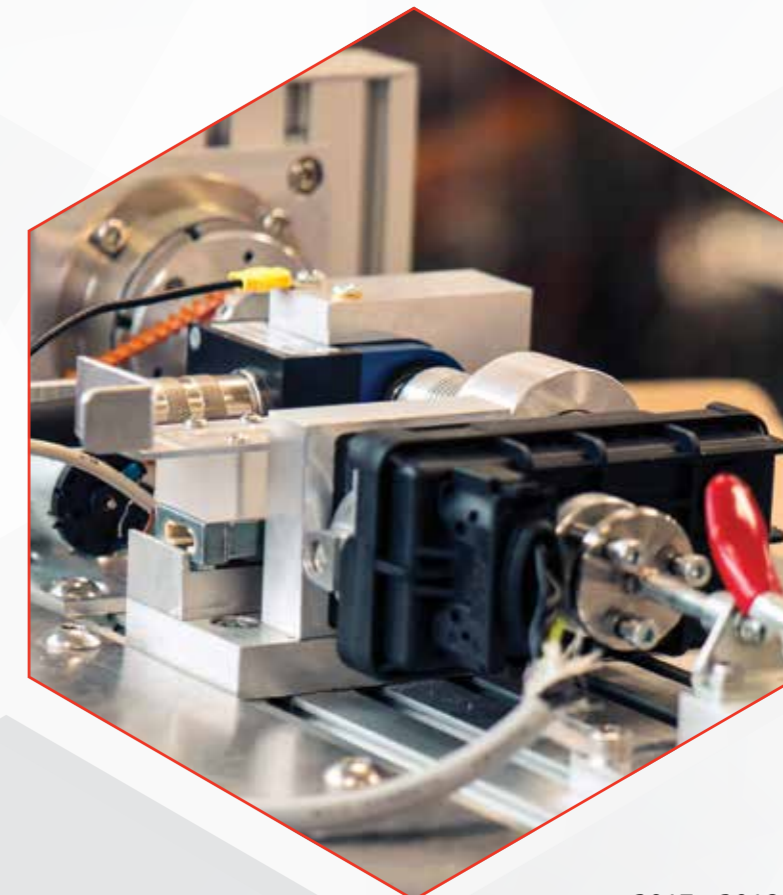
have an electronic failure in the control unit (which is assembled in the black plastic cap).

IF YOU FOLLOW THESE SIMPLE STEPS FOR THE REPLACEMENT GEARBOX

THE UNIT WILL BE ASSEMBLED WITHIN 5 MINUTES

1. Remove clips.
2. Remove the control unit (black plastic cap) from the Gearbox.
3. Place the new control unit (black plastic cap) on the Gearbox (same Gearbox number).
4. Attach the six clips.
5. Perform a function test for complete Actuator with a Turbo Actuator tester (for example with the ATD-1 or the VNTT-pro).

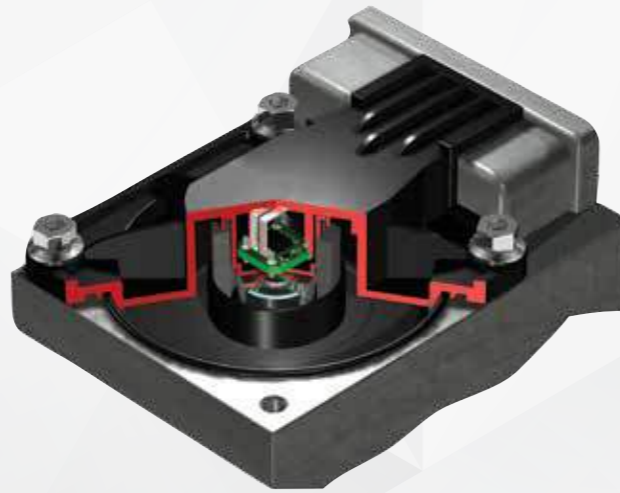
Note: After the production of the Actuator Gearbox at Sacer, each individual Gearbox is fully tested. These tests include precise torque testing. Therefore, expensive torque testing is not needed anymore, when replacing the Actuator Gearbox with our complete aftermarket Turbo Actuator Gearbox assembly.





THROTTLE POSITION SENSORS

The first series of electronic throttle bodies often give errors because of conventional throttle position sensors having wearance. A metal cam scratches over an carbon strip, causes the carbon to break and give an wrong signal. At Sacer we present a solution for this. For several car models, we developed contactless throttle position sensors, used in electronic throttle bodies. Our sensors are equipped with modern hall detecting the exact position from a magnetic field and are programmed to convert this into an analogue signal. This principle guarantees high accuracy and a stable signal for a lifetime, as there is no wearance anymore.



SA300

Contactless TPS sensor electronic throttle body Volvo

APPLICATION:
Contactless model, electronic throttle body Volvo, made by Magneti Marelli.

MAKE / MODELS:
Volvo S60, V70, S70, C70, S80

ADVANTAGE:

- Original quality
- Contactless



SA301

Cable clamps for Volvo

APPLICATION:
Volvo throttle body (Magneti Marelli)

ADDITIONAL INFORMATION:
Clip work together with SA300 Volvo TPS sensors. SA6006 Protective cap after repair.

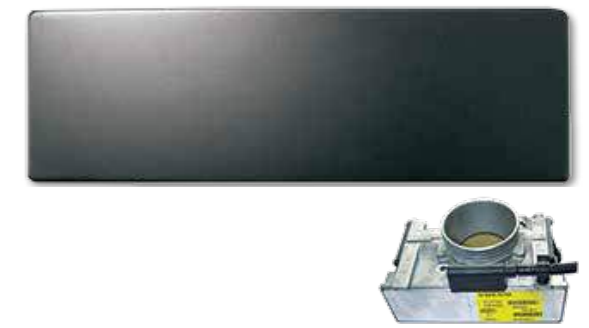


SA6006

Throttle body cap Volvo Magneti Marelli

APPLICATION:
ETM cover

ADDITIONAL INFORMATION:
SA300 Volvo TPS sensor, SA301 cable clip, SA6006 Protective cap after repair.



SA101

Contactless TPS sensor for Mitsubishi older model

APPLICATION:
Contactless model, 4 pins for Mitsubishi Electronic Throttle body. Mitsubishi EAC60-001, EAC60-002, EAC65-001, MD350416, MD514340, MD355534, MR514334, MN153345, MD355406, MR514341.

MAKE / MODELS:
Mitsubishi Carisma, Galant, Space Star, Space Wagon, Space Runner, Space - Gear, Pajero.



SA201

Contactless TPS sensor for Mitsubishi new model

APPLICATION:
Contactless model, Electronic throttle body Volvo, made by Magneti Marelli.

MAKE / MODELS:
Mitsubishi Colt, Space Wagon, Space Runner, Carisma, Galant, Pajero.





AIR FLOW METER

Sacer produces micro controlled high-quality airflowmeters. Our airflowmeters are self calibrating (by software), to guarantee an accurate signal for a long lifetime. The airflowmeters are made on a modern hybrid ceramic substrate, with thick film technology and are equipped with OE thin glass sensors to give a very short response time. After production, the airflowmeters are calibrated by software, within a tolerance of 0,03 Volt, on the whole output line, on special calibrating machines.



SA2000

Air Flow Meter

AFM / MFM / Air flow meters

APPLICATION:

Air flow meters / Air mass meters AFH / MAF.

MAKE / MODELS:

Mercedes. OE number: 0000940948.



EXHIBITIONS



2017
Equip auto
Paris, France



2016
Automechanika
Frankfurt, Germany



2015
Equip auto
Paris, France



2014
Automechanika
Frankfurt, Germany



2013
Interauto
Moscow, Russia



2011
Autopromotec
Bologna, Italy



2010
Paace
Mexico city, Mexico



2010
Automechanika
Frankfurt, Germany

SACER TEAM



Sacer team culture:
Sacer believes in
“think twice before
processing”.



**Summer outdoor
activities, a well
understanding team.**



**Sweet candy
performance party,
a versatile team.**



**Staff training and
Sacer photo wall,
a knowledge
driving team.**



**Spring festival
with staff families,
a family team.**



**Sacer people
characteristics:**
Transcending - Friendly
Honest - Target-driving
Responsible - Creative

SACER[®]

REMANUFACTURING SOLUTIONS



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