



SMALL ACCESSORIES PROVIDING GREAT INSULATION

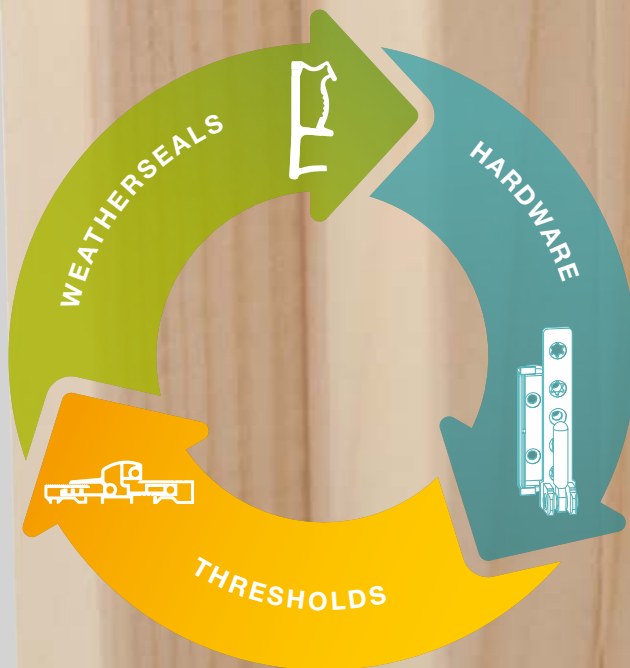
MACO WEATHERSEALS FOR WINDOWS, ENTRANCE AND INTERIOR DOORS, LIFT&SLIDE SYSTEMS



Do you know why our weatherseals are so airtight and comfortable? Because at MACO we design them together with hardware and thresholds. **Weatherseal, hardware, threshold:** a proven system of synergy that becomes the ideal solution for your doors and windows.

SYNERGY

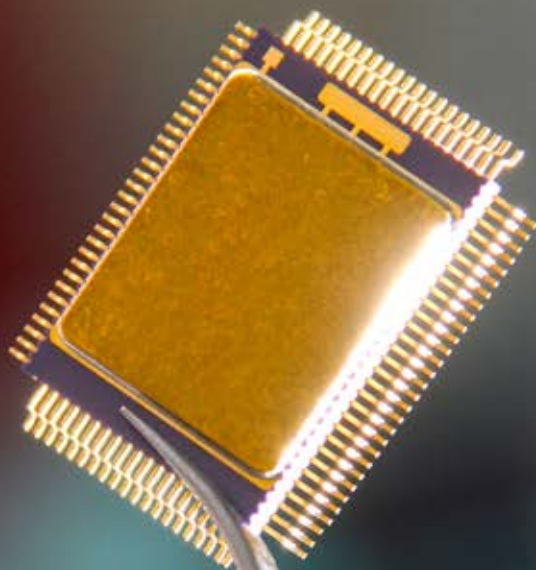
COMPONENTS DESIGNED TO WORK TOGETHER





A SMALL COMPONENT, A HUGE DIFFERENCE

Can triple-glazed windows with reinforced profiles and multiple locking points still be untight? Yes, they can, if the weatherseal does not work properly. This apparently minor component is made with **cutting edge technology**, combining materials with different densities to create complex geometries. It is a **barrier to the passage of air** which makes the difference: more energy savings, improved sound insulation and well being.



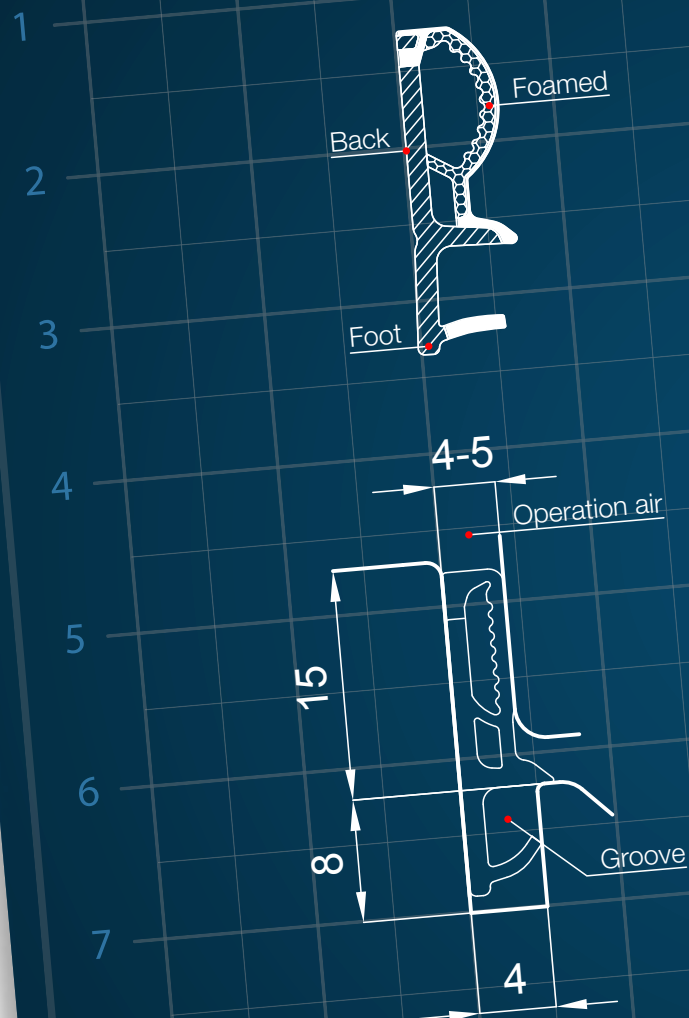
IMPERMEABILITY

In order to have airtight doors and windows and avoid draughts, you need "elastic memory" weatherseals. MACO weatherseals **return to their original shape** even after the windows or doors have been closed for longer periods of time or in presence of low temperatures. Corners (with 45° and 90° cuts) are just as airtight: the weatherseals are designed so that the terminal ends fit perfectly together or overlap each other leaving no gaps or empty spaces.

COMFORT

A slight resistance in the weatherseal while turning the handle is perfectly normal and indicates that the weatherseal is working properly. Nevertheless, closing a door or window should always be an easy operation. The **softness** of MACO weatherseals makes for a comfortable closing experience, absorbing any potential deformation in doors and windows over time.

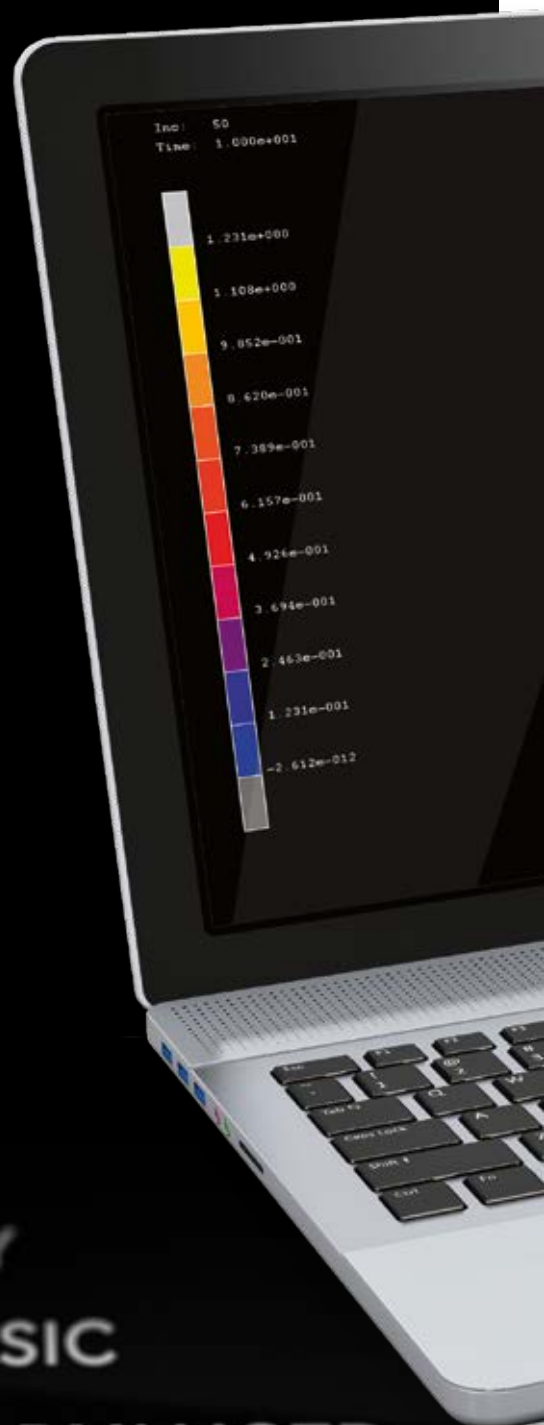
TE3005 Weatherseal



KNOW-HOW

Different materials with different densities, extruded together in a complex geometry designed to close doors and windows perfectly... MACO weatherseals are little technological giants. With a considerable experience in research

and development, the use of quality materials, cutting-edge manufacturing processes and computer simulations on how the weatherseals will behave during compression, we can find the perfect combination of material shapes and features.



ENTRY

BASIC

ADVANCED

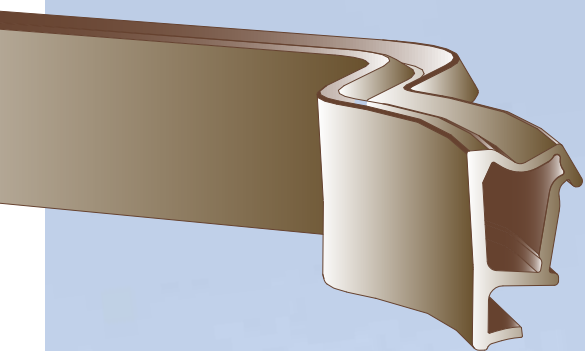
EXPERT



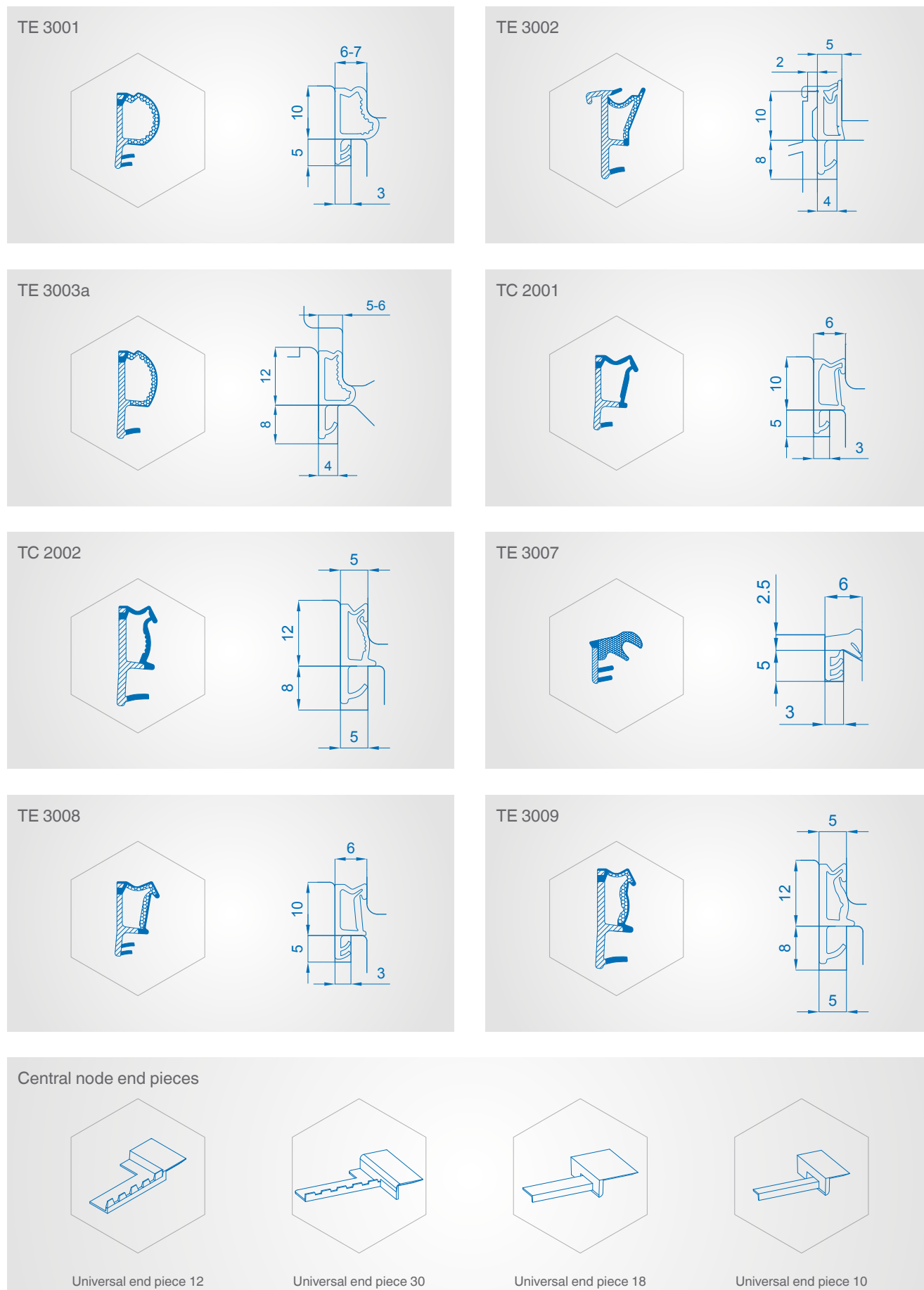
WHERE THE WEATHERSEAL IS UNDER THE GREATEST STRESS
EACH MACO WEATHERSEAL IS PUT THROUGH A FEA SIMULATION (FINITE ELEMENT ANALYSIS), SHOWING STRESS POINTS AND THEIR INTENSITY WHILE THE DOOR OR WINDOW IS CLOSED: THE COLOUR VARIATIONS INDICATE THE STRESS AND TENSION POINTS OF THE WEATHERSEAL, FROM THE SMALLEST IN BLUE TO THE GREATEST IN YELLOW.

WEATHERSEALS FOR WINDOWS AND ENTRANCE DOORS

MACO weatherseals for windows and entrance doors come in many shapes and sizes: based on your door or window profile, our expert consultants will help you find the right sash, frame or overlap weatherseal.



SOME EXAMPLES OF WEATHERSEALS FOR WINDOWS AND ENTRANCE DOORS



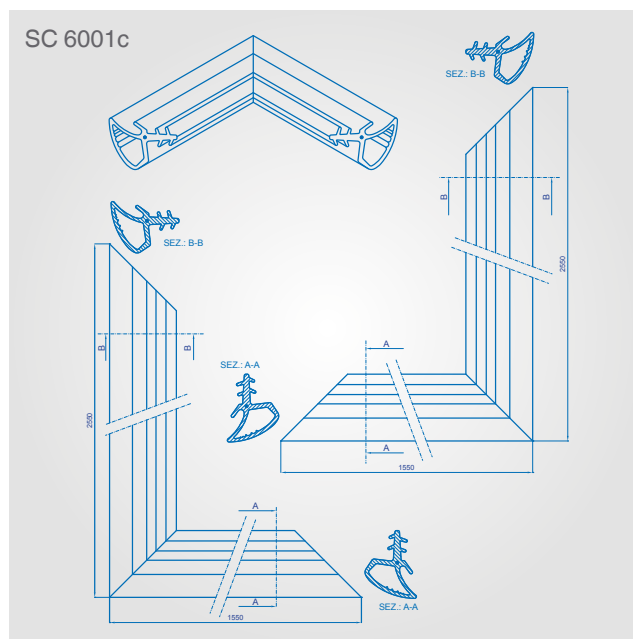
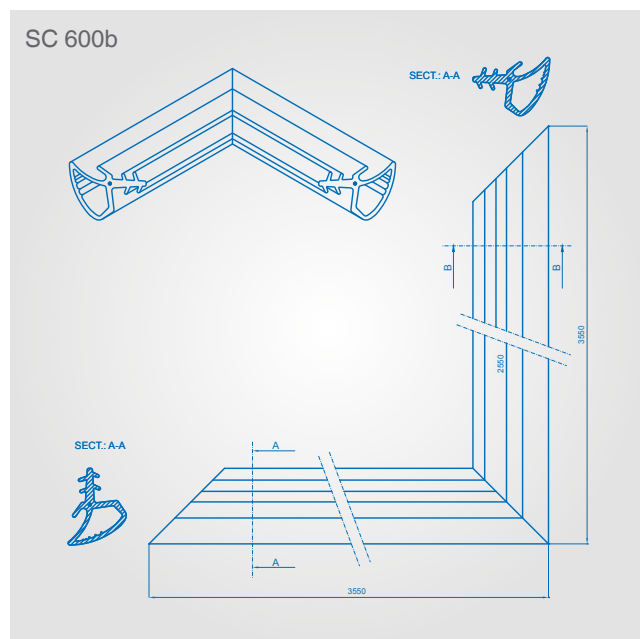
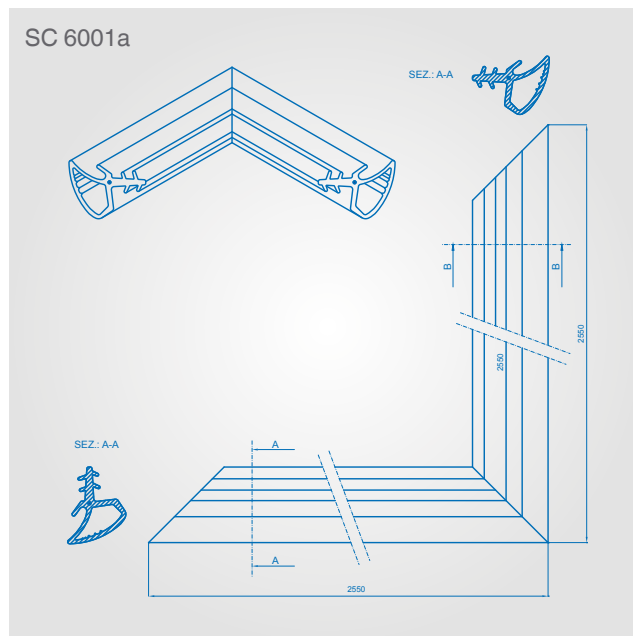
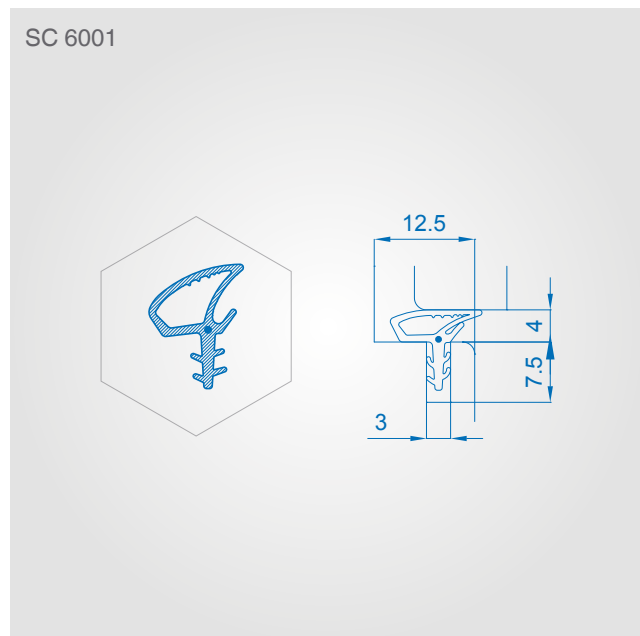
The complete range is available in the electronic catalogue.

WEATHERSEALS FOR HS

In order to allow the lift&slide systems (HS) to slide without friction and avoid the passage of air or water, you need weatherseals with a special geometry and high quality materials. MACO weatherseals enclose the whole sliding system without interruptions thanks to their welded corners.



SOME EXAMPLES OF WEATHERSEALS FOR LIFT&SLIDE SYSTEMS



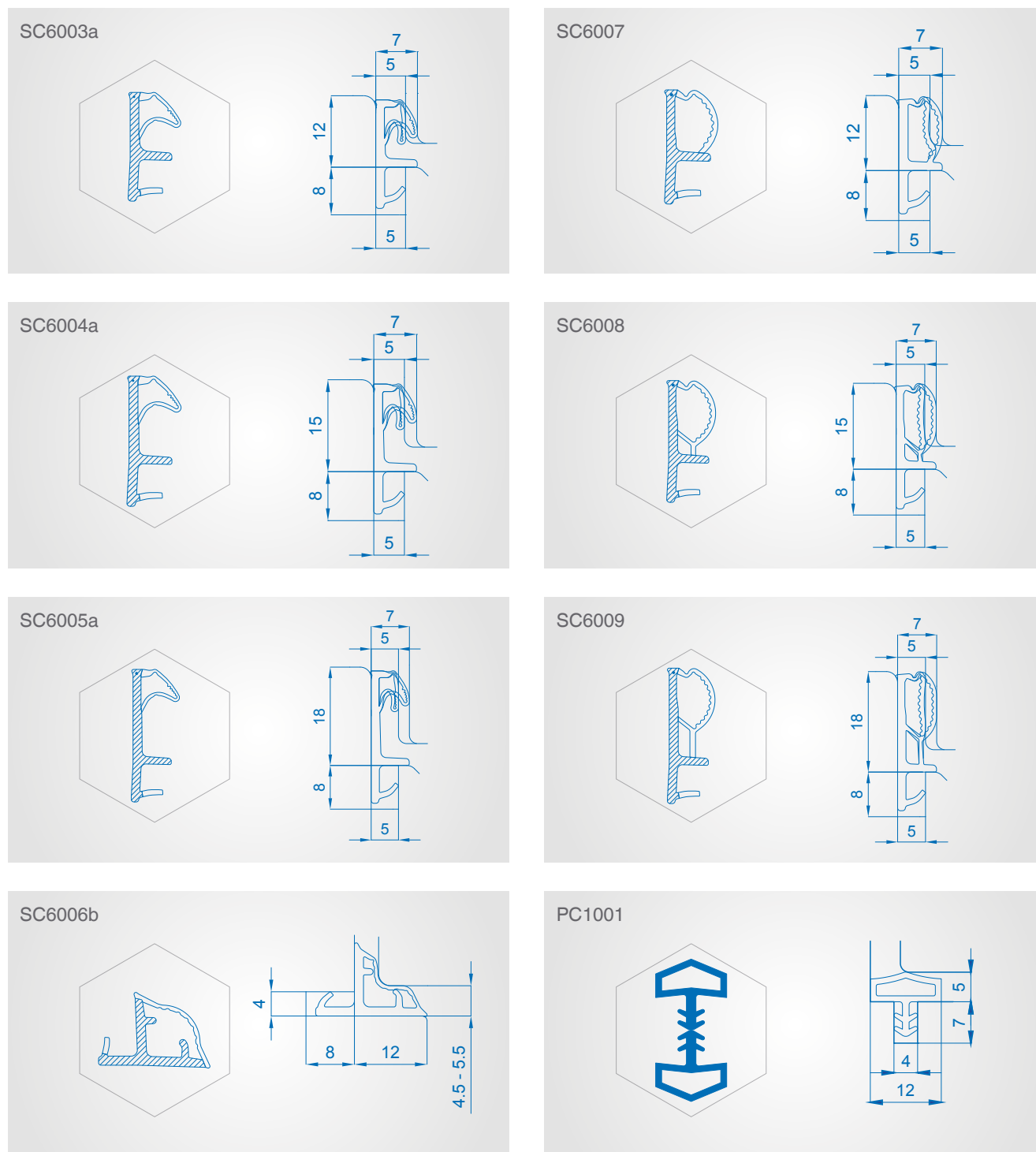
The complete range is available in the electronic catalogue.

WEATHERSEALS FOR INTERIOR AND FRONT DOORS

Weatherseals that run along the three sides of an interior door frame, muffling sounds for improved comfort.



SOME EXAMPLES OF WEATHERSEALS FOR INTERIOR DOORS



The complete range is available in the electronic catalogue.

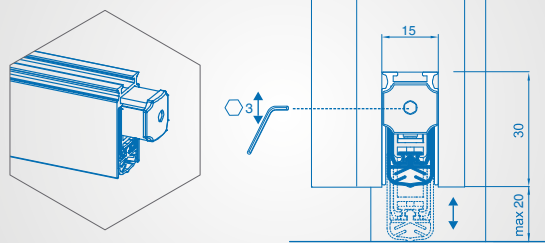
FLOOR-DOOR WEATHERSEALS

The gap between the door and the floor can be closed with a rise and fall system: when the door is open, the weatherseal is hidden within a metal profile; when the door is closed, the weatherseal drops to prevent draughts and noise. It is an ideal system to make reinforced doors airtight or for soundproofing hotel doors.

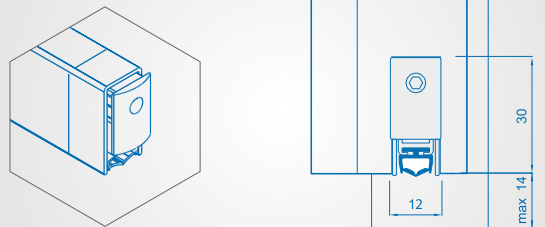


SOME EXAMPLES OF FLOOR-DOOR WEATHERSEALS

54 dB sound insulation 15 x 30



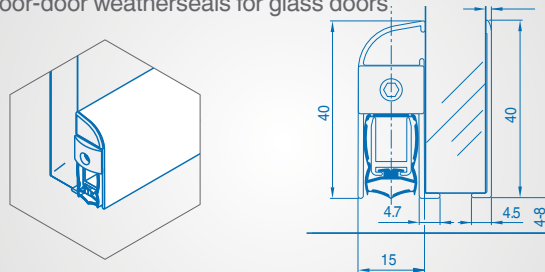
Self-adjusting 12 x 30



Mini 12 x 12



Floor-door weatherseals for glass doors.

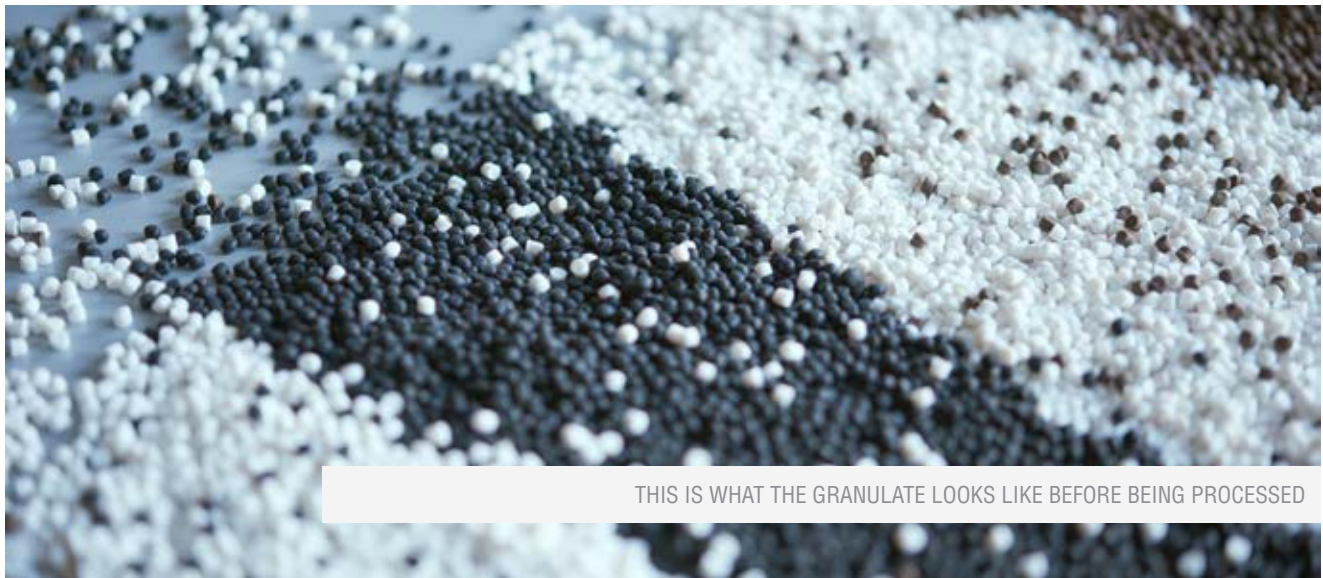


The complete range is available in the electronic catalogue.



MATERIALS

The use of fine materials determines the quality of a weatherseal and ensures its softness and elasticity over time. MACO weatherseals are made with high-quality raw materials: our products are compatible with all kinds of paint, working well at both low and high temperatures and maintaining their resistance over time.



THIS IS WHAT THE GRANULATE LOOKS LIKE BEFORE BEING PROCESSED

EXPANDED THERMOPLASTIC ELASTOMER (TPE) WEATHERSEALS (TE)

In thermoplastic co-extruded and tri-extruded elastomer, with parts in expanded material.

- Excellent absorption of tolerances
- Highly rigid back, anti-stretch, for easy insertion into the groove
- Geometric stability
- Functional parts in foam material, for comfortable and soft compression
- Compatible with water-based or solvent-based paints
- Machinable profile with 45° cut or welding in the corner
- Temperature range: -40/+120 °C

COMPACT TPE WEATHERSEALS (TC)

In thermoplastic mono-extruded and co-extruded elastomer.

- Excellent absorption of tolerances
- Highly rigid back, anti-stretch, for easy insertion into the groove
- Excellent dimensional stability
- Can be extruded with thin panels, for maximum comfort and minimum closing effort
- Compatible with water-based or solvent-based paints
- Machinable profile with 45° cut or welding in the corner
- Temperature range: -40/+120 °C

EPDM WEATHERSEALS (EE, EC)

In cured EPDM, mono-extruded or co-extruded, with a compact EPDM profile (EC) or with parts in foam material (EE).

- (EE) Functional parts in foam material, for comfortable and soft compression
- (EC) Thin panels for high performance and long life
- High spring-back
- Excellent absorption of tolerances
- Compatible with water-based or solvent-based paints
- Machinable profile with 45° cut in the corner
- Temperature range: -40/+120 °C

COMPACT SILICONE WEATHERSEALS (SC)

In cured silicone, mono-extruded or co-extruded.

- Excellent resistance to UV rays
- Soft and comfortable compression, even with unfavourable rotation axes
- Better spring-back in adverse weather conditions
- Temperature range: -40/+200 °C

EXPANDED SILICONE WEATHERSEALS (SE)

In co-extruded cured silicone, with parts in expanded material.

- Excellent resistance to UV rays
- Extreme softness with parts in expanded material
- Better spring-back in adverse weather conditions
- Temperature range: -40/+200 °C

COMPACT THERMOPLASTIC WEATHERSEALS (PC)

In soft vinyl thermoplastic, mono-extruded and co-extruded.

- Suitable with solvent-based paints; not suitable with water-based paints
- Machinable profile with 45° cut or welding in the corner
- Temperature range: -10/+70 °C

NOTE: The specified values refer to extreme temperatures, which weatherseals may be subjected to only occasionally and for limited periods of time.

HOW TO CHOOSE

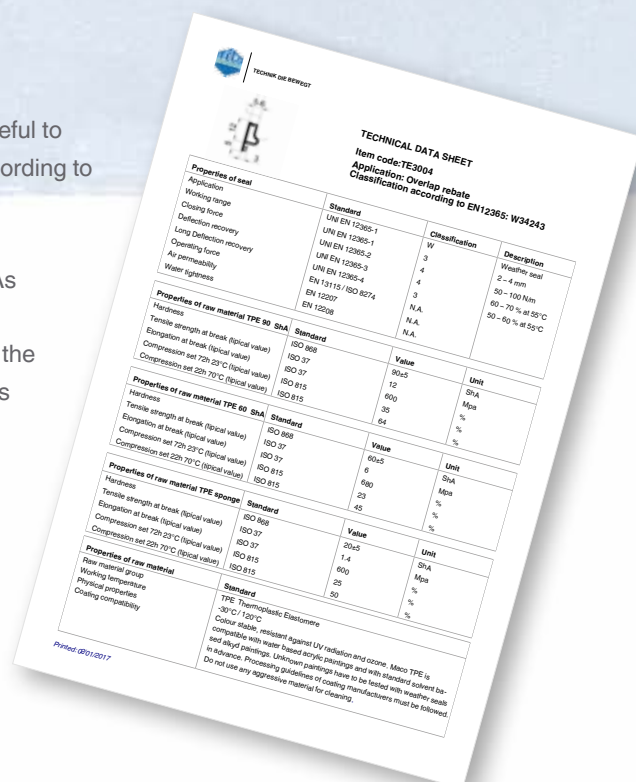
A CODE INDICATES THE QUALITY OF THE WEATHERSEAL

To know and compare weatherseal performance at a glance, it is useful to learn how to read the codes with **6 characters** classifying them according to the EN 12365-1:2003 standard.

So we can see right away that a **W33264** is better than a W38221. As explained in the table below, **each digit in the code has its own meaning**: for example, the letter describes the type of weatherseal, the first number indicates sphere of action, the second number indicates the closing pressure, and so on.

But above all, it is **the last two digits** that are the best quality indicators for a weatherseal: a higher figure means a better performance (in fact, they measure the ability of the weatherseal to return to its original shape even after prolonged compression).

Each MACO weatherseal is provided with a **technical sheet** where you can find the code (as shown on the right).



W	3	3	2	6	4
Category	Field of Operation	Closing pressure	Temperature	Elastic recovery	Long term elastic recovery
Type of weatherseal according to where it is to be applied	Space (in mm) within which the weatherseal operates	Force (in N/m) required to compress the weatherseal up to the limit of its field of operation	Temperature range within which the weatherseal can be used	Elastic return percentage after crushing at maximum usage temperature and at the limit of the field operation	Elastic return percentage after crushing at maximum temperature with long-term usage (simulated ageing)
W or G	from 1 to 9	from 1 to 9	from 1 to 6	from 0 to 7	from 0 to 7
W: dynamic weatherseal (central weatherseal or jamb weatherseal) G: static weatherseal (glass pane stop)	1) ≤ 1 mm 2) > 1 – ≤ 2 mm 3) > 2 – ≤ 4 mm 4) > 4 – ≤ 6 mm 5) > 6 – ≤ 8 mm 6) > 8 – ≤ 10 mm 7) > 10 – ≤ 15 mm 8) > 15 – ≤ 30 mm 9) > 30	1) ≤ 10 N/m 2) > 10 – ≤ 20 N/m 3) > 20 – ≤ 50 N/m 4) > 50 – ≤ 100 N/m 5) > 100 – ≤ 200 N/m 6) > 200 – ≤ 500 N/m 7) > 500 – ≤ 700 N/m 8) > 700 – ≤ 1000 N/m 9) > 1000 N/m	1) 0 <-> +45 °C 2) -10 <-> +55 °C 3) -80 <-> +85 °C 4) -25 <-> +100 °C 5) -40 <-> +70 °C 6) -0 <-> +200 °C	0) no requirement 1) > 30 – ≤ 40 % 2) > 40 – ≤ 50 % 3) > 50 – ≤ 60 % 4) > 60 – ≤ 70 % 5) > 70 – ≤ 80 % 6) > 80 – ≤ 90 % 7) > 90 %	0) no requirement 1) > 30 – ≤ 40 % 2) > 40 – ≤ 50 % 3) > 50 – ≤ 60 % 4) > 60 – ≤ 70 % 5) > 70 – ≤ 80 % 6) > 80 – ≤ 90 % 7) > 90 %



COLOURS

	SIGNAL BLACK
	WINDOW GREY
	TRAFFIC WHITE
	BEIGE
	SEPIA BROWN

The colours are for guidance only: the reproduction on paper may differ from the original weatherseal colours.

**MACO Door & Window
Hardware (U.K.) LTD**

Eurolink Industrial Centre,
Castle Road,
Sittingbourne,
Kent. ME10 3LY

+44 1795 433900
enquiry@macouk.net
www.macouk.net

Order No. 757573 – Date: January 2017

Date changed: April 2018

All rights reserved and subject to change.

Graphic source: Maco, Maico, iStock.com

This print document is continuously revised
and the current version can be downloaded from www.maco.eu