STAC BOND®

ALUMINIUM COMPOSITE PANEL

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TRANSFORMATION PARAMETERS

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PARAMETERS

STACBOND® Technical Department

Pol. Industrial Picusa s/n 15900 Padrón (A Coruña) Spain

+34 981 817 036

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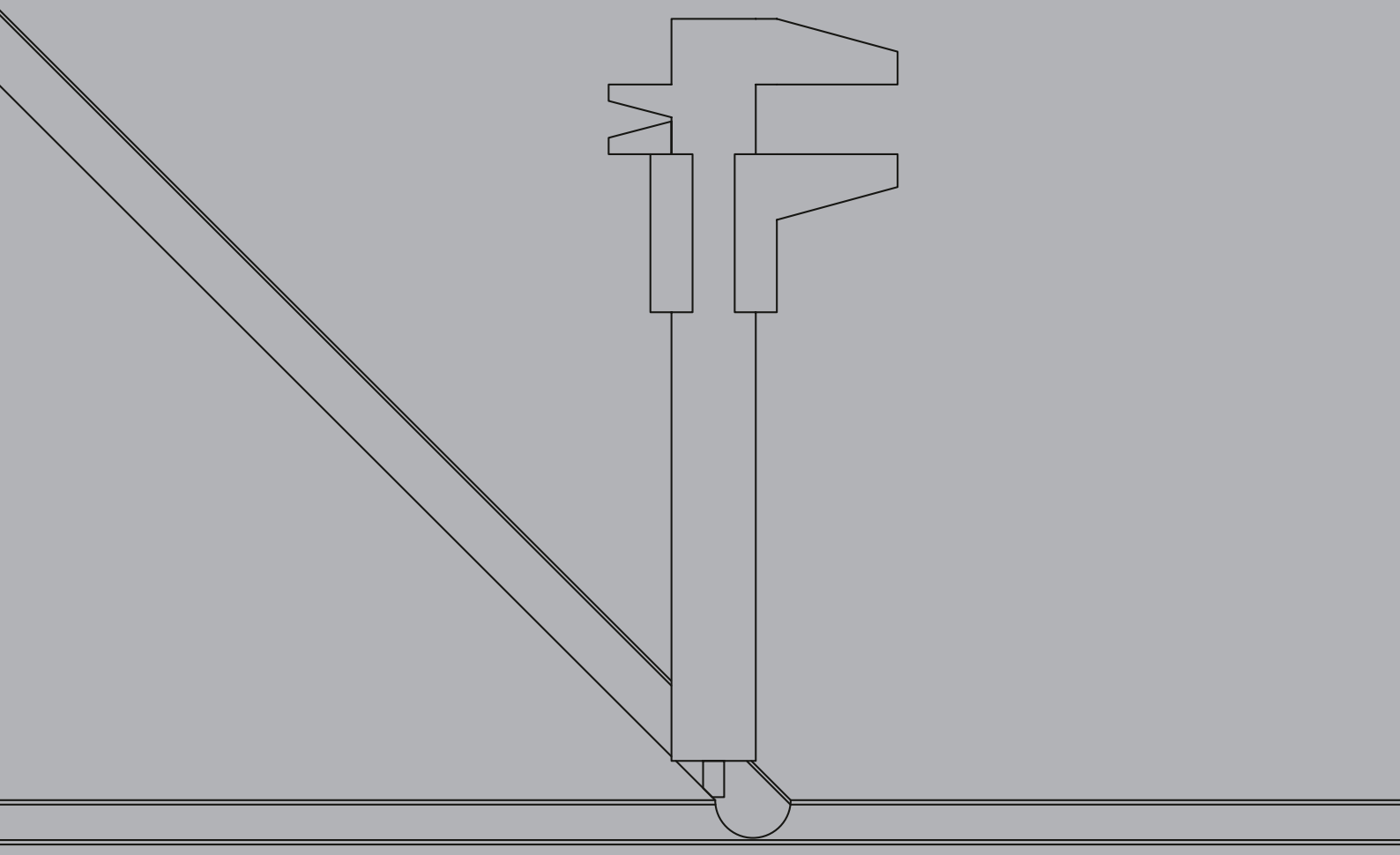
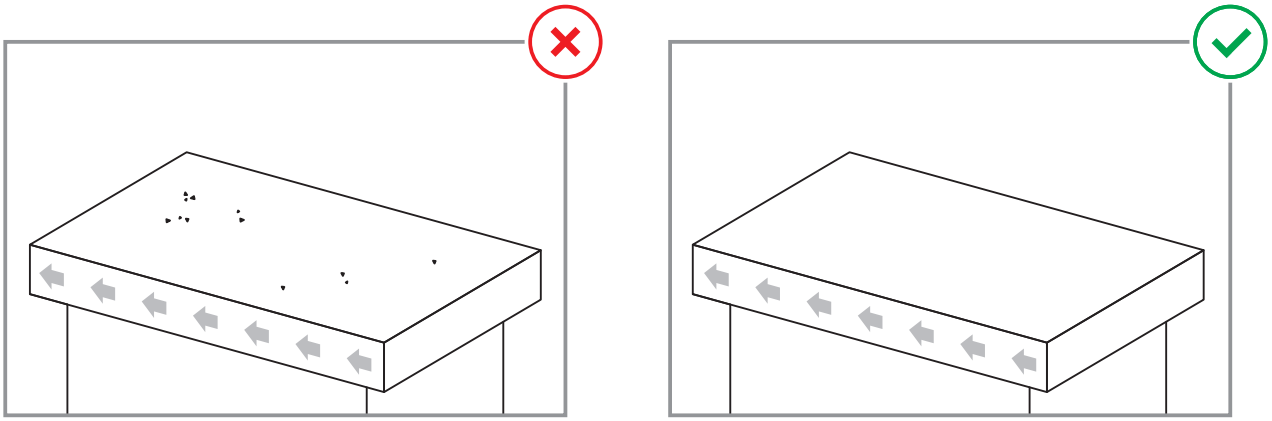
STAC BOND®

TRANSFORMATION
CONTROL GUIDELINES

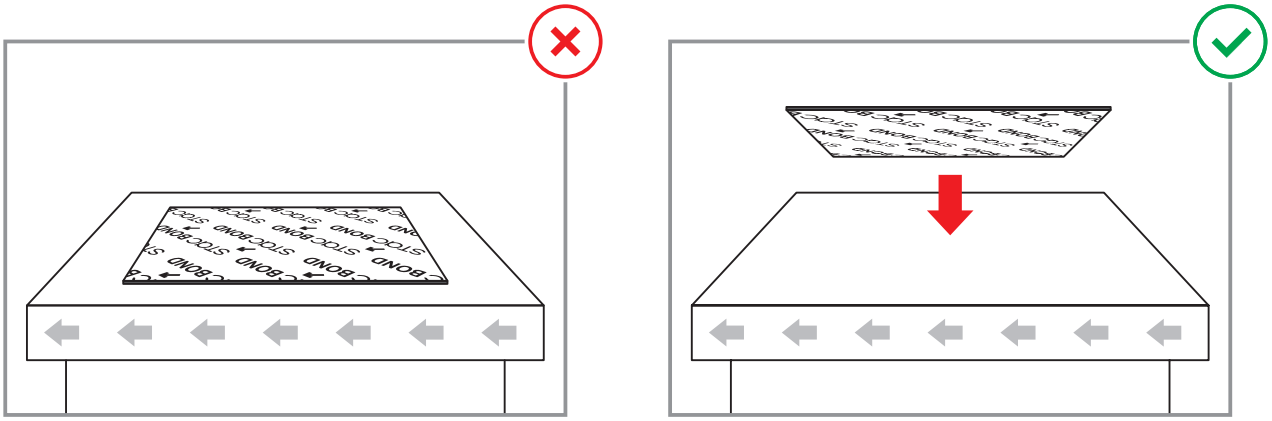


STACBOND® TRANSFORMATION CONTROL GUIDELINES

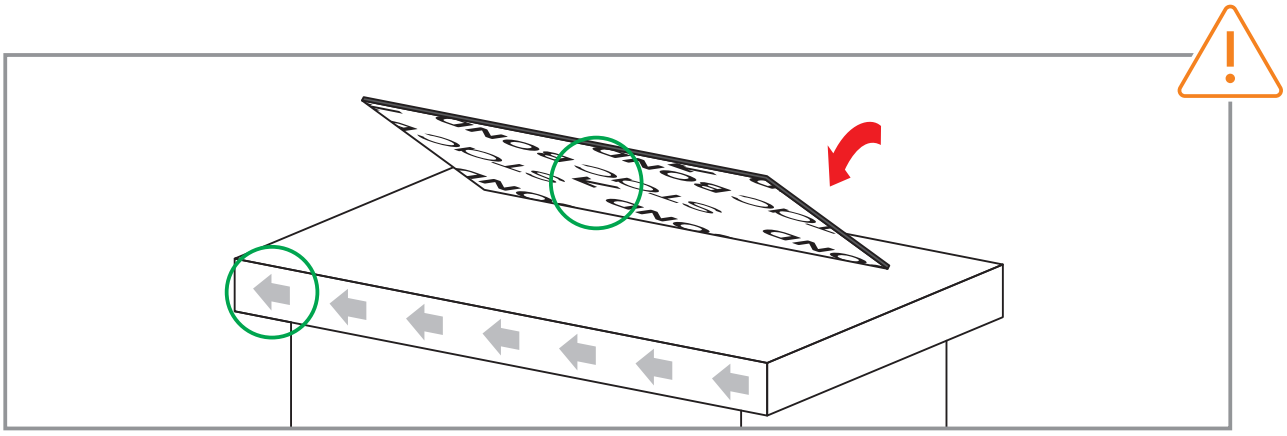
1 - Blow the table before placing the panel, visually verify that there are no shavings.



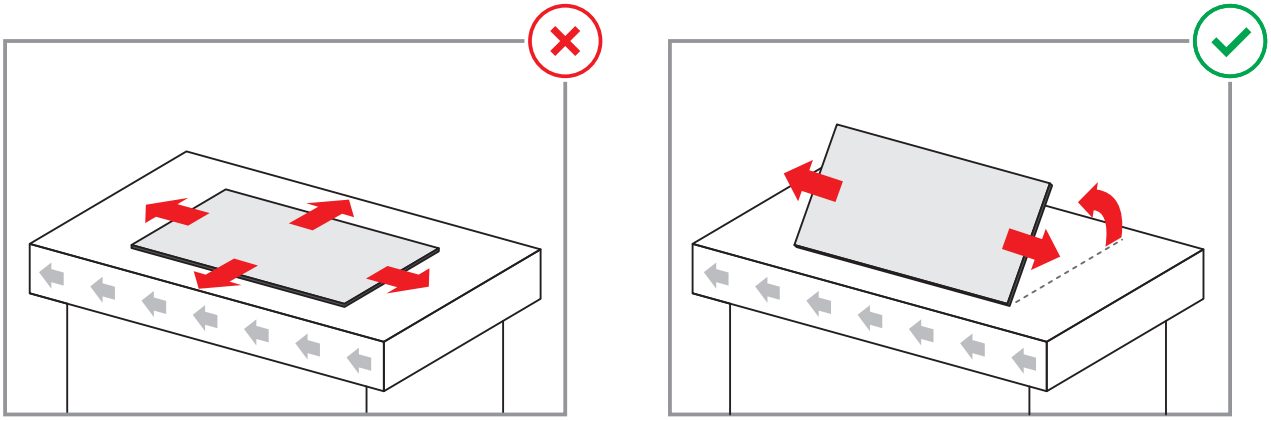
2.1 - Before placing the panel on the table, check visually that the protective film is facing downwards.



2.2 - Place the panel on the table, checking that the arrows on the film always point in the same direction. Check that the finish of the panel coincides with the one indicated in the work order and on the pallet.

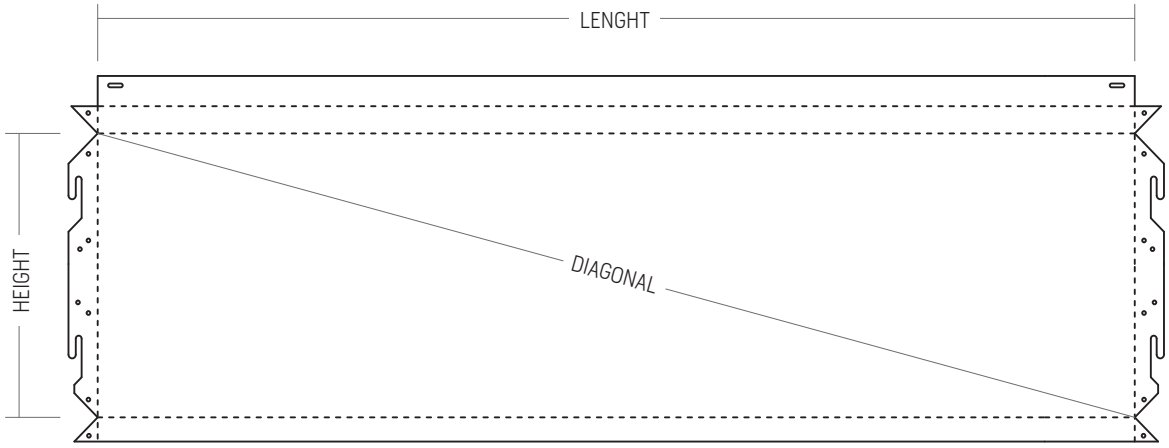


3 - To place the panel on the table for milling, it will never slide fully supported horizontally. It will rest on one edge and will move at an angle.



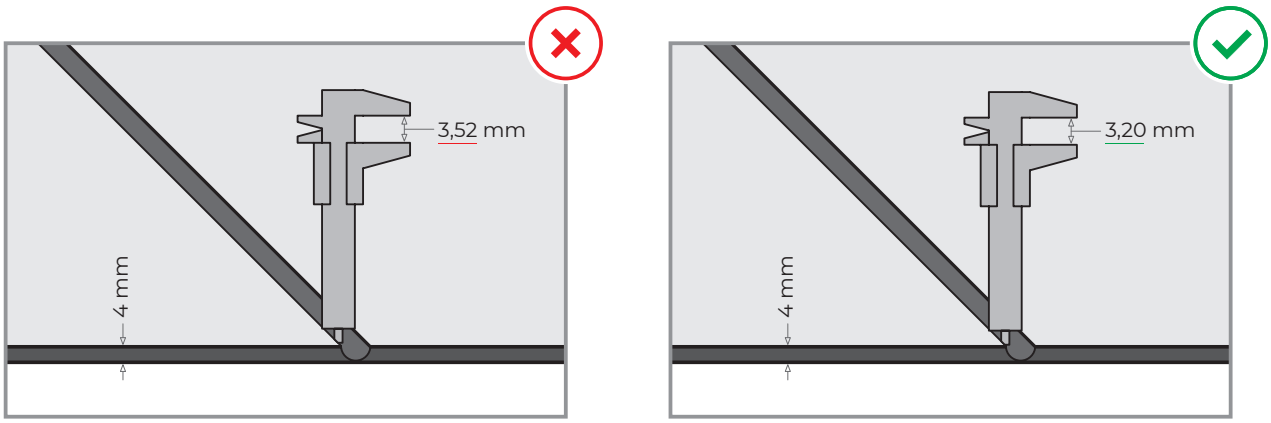
4 - Dimensionally check at least one machined workpiece for each work order:

- Difference between the height and width of the workpiece and the dimension indicated in the plane **± 1 mm**
- Difference between both workpiece diagonals **< 3 mm**



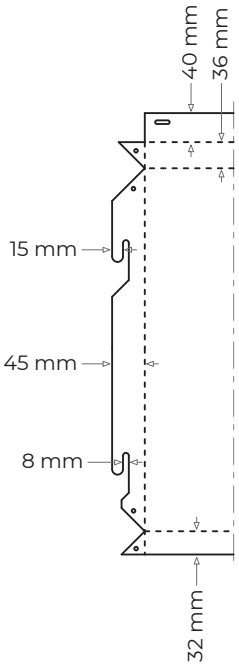
5 - Verify at least one machined workpiece of each work order with a caliper:

- Milling depth **3,20 ± 0,2 mm**

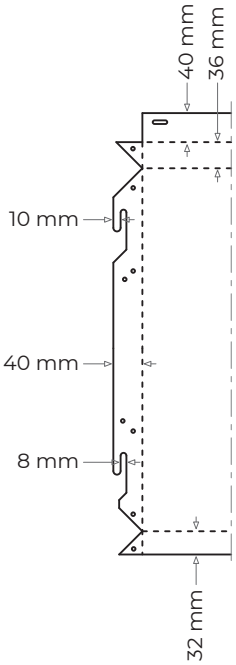


6 - Dimensionally check at least one machined workpiece of the CH and SZ cassette formats of each work order.

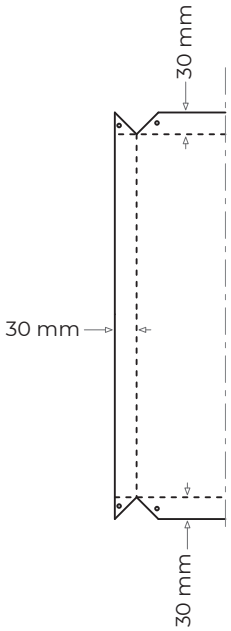
CH CASSETTE
45 mm FLAP



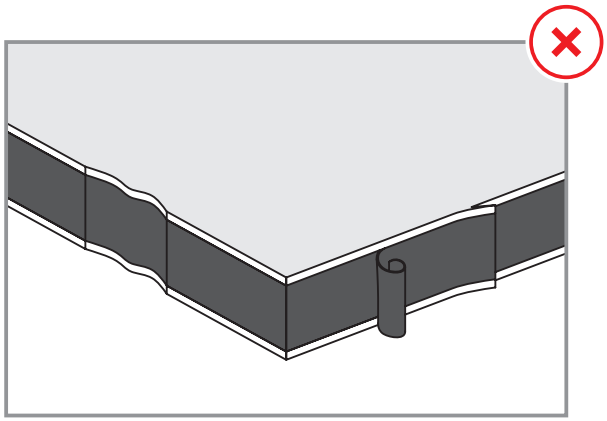
CH CASSETTE
40 mm FLAP

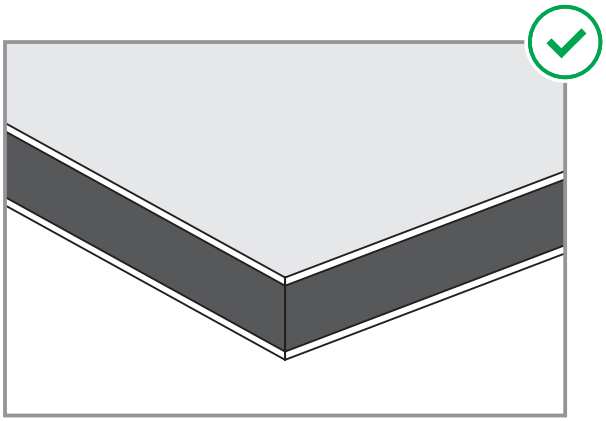


SZ CASSETTE

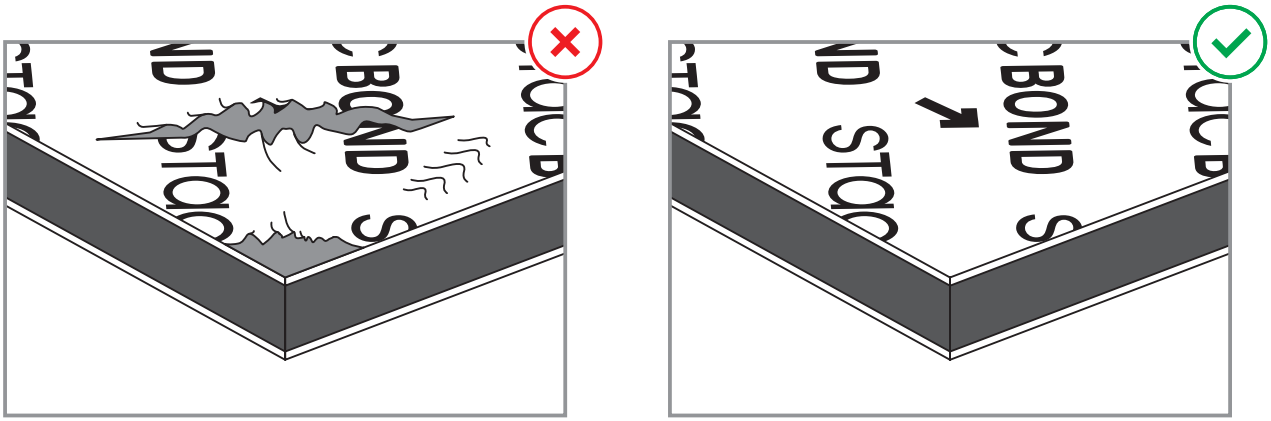


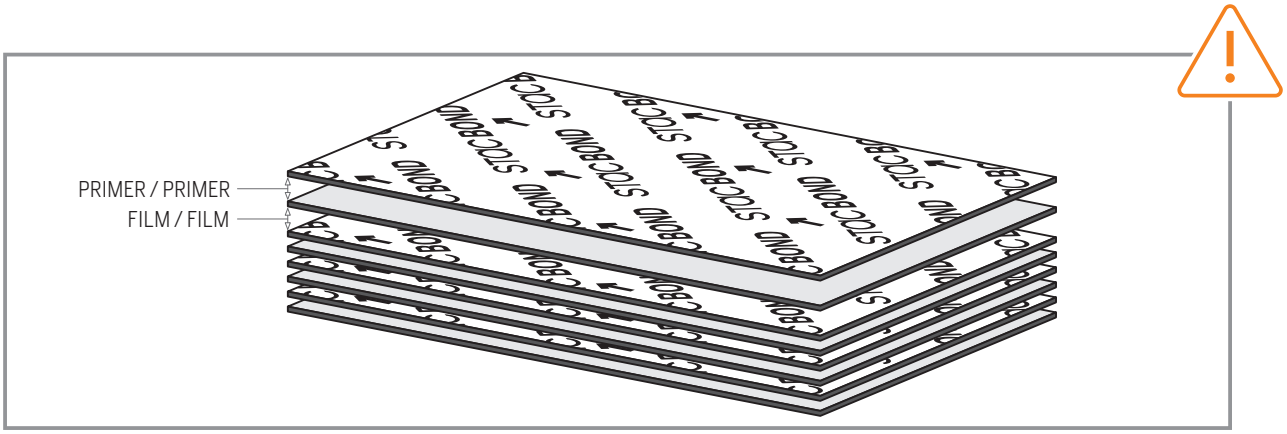
7 - Visually verify that the cuts are straight and there are no defects.





8 - Visually verify that the protective film of the panel is not damaged (scratches, tears, etc.).





RECOMMENDED MILLING PARAMETERS:

CORE	PROCESS	ROTATIONAL SPEED (r.p.m.)	DISPLACEMENT SPEED (mm/min)
STAC BOND A2	CUTTING	22.000 – 24.000	8.000 - 10.000
	MILLING	24.000	10.000 - 12.000
STAC BOND FR	CUTTING	24.000	12.000 - 14.000
	MILLING	24.000	15.000 - 18.000
STAC BOND PE	CUTTING	24.000	12.000 - 14.000
	MILLING	24.000	15.000 - 18.000

Note: These values are for guidance only and are intended for use with **STACBOND®** recommended milling tools. For use with other tools or depending on the type of machine it is necessary to adjust them.

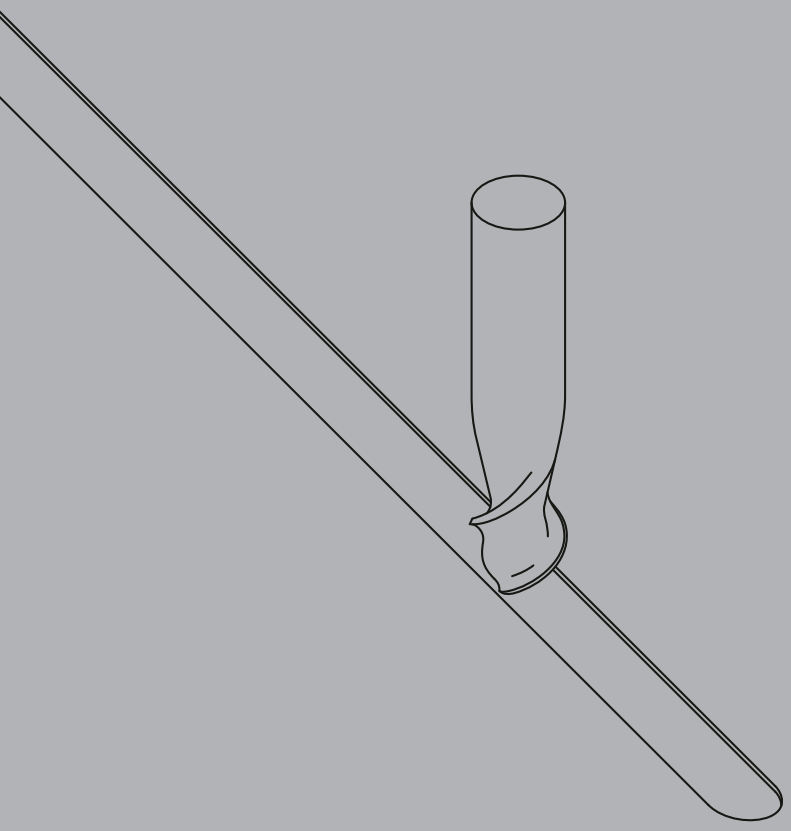
RECOMMENDED TOOLS **A2 CORE**:

- **Cutting tool:** ø 6 mm milling cutter with diamond insertions (STB-FRESA6PCD)
- **Milling tool:** ø 10 mm spherical milling cutter with diamond insertions (STB-FRESA10PCD)

RECOMMENDED TOOLS **FR / PE CORE**:

- **Cutting tool:** ø 6 mm milling cutter with diamond insertions (STB-FD6X80X3.8)
- **Milling tool:** ø 10 mm spherical milling cutter with diamond coating (STB-FEMD-10x72)

PROCESSING TOOLS



MILLING CUTTERS FOR CNC MACHINES

REFERENCE	PART	OBSERVATIONS	MIN. UNITS
STB-FMD4X80X3.8	HM HSS MILLING CUTTER Ø4x80,5x3,8 Z=2 Ø12 BODY 4 mm PANEL CUTTING	Ø 4 mm hard metal milling cutter for panel cutting with 4 mm thickness (marking)	1
STB-FMD5X80X2.8	HM HSS MILLING CUTTER Ø5x80x2,8 Z=2 Ø12 BODY 3 mm PANEL CUTTING	Ø 5 mm hard metal milling cutter for panel cutting with 3 mm thickness (dilation)	1
STB-FMD5X80X3.8	HM HSS MILLING CUTTER Ø5x80x3,8 Z=2 Ø12 BODY 4 mm PANEL CUTTING	Ø 5 mm hard metal milling cutter for panel cutting with 4mm thickness (dilation)	1
STB-FMD6X80X2.8	HM HSS MILLING CUTTER Ø6x80x2,8 Z=2 Ø12 BODY 3 mm PANEL CUTTING	Ø 6 mm hard metal milling cutter for panel cutting with 3 mm thickness (dilation)	1
STB-FMD6X80X3.8	HM HSS MILLING CUTTER Ø6x80x3,8 Z=2 Ø12 BODY 4 mm PANEL CUTTING	Ø 6 mm hard metal milling cutter for panel cutting with 4 mm thickness (dilation)	1
STB-FMD6X80X3.8	HM HSS MILLING CUTTER Ø6x80x3,8 Z=2 Ø12 BODY 4 mm PANEL CUTTING	Ø 6 mm hard metal milling cutter for panel cutting with 6 mm thickness (dilation)	1

REFERENCE	PART	OBSERVATIONS	MIN. UNITS
STB-FD6X80X2.8	DIAMOND HSS MILLING CUTTER COHERSA SPECIAL H4 PCD Ø6x80x2,8 Z=2 Ø12 HM BODY	Ø 6 mm diamond milling cutter for panel cutting with 3 mm thickness	1
STB-FD6X80X3.8	DIAMOND HSS MILLING CUTTER COHERSA SPECIAL H4 PCD Ø6x80x3,8 Z=2 Ø12 HM BODY	Ø 6 mm diamond milling cutter for panel cutting with 4 mm thickness	1
STB-FD6X80X5.8	DIAMOND HSS MILLING CUTTER COHERSA SPECIAL H4 PCD Ø6x80x5,8 Z=2 Ø12 HM BODY	Ø 6 mm diamond milling cutter for panel cutting with 6 mm thickness	1

REFERENCE	PART	OBSERVATIONS	MIN. UNITS
STB-FRESAD6PCD	DIAMOND HSS MILLING CUTTER SECO PCD Ø6x75x3,8 Ø12 HM BODY	Ø 6 mm diamond milling cutter for panel cutting with 4 mm thickness with A2 core	1

REFERENCE	PART	OBSERVATIONS	MIN. UNITS
STB-FMD-C45	HM HSS MILLING CUTTER Ø3x81 90º SPECIAL REF. 1 Z=2 Ø12 BODY	Hard metal milling cutter for 45º cutting	1

REFERENCE	PART	OBSERVATIONS	MIN. UNITS
STB-FRESA90	HM HSS MILLING CUTTER Ø3x81 ESPECIAL REF. 1 Z=2 Ø16 BODY	Hard metal milling cutter for 90º v-groovi ng	1

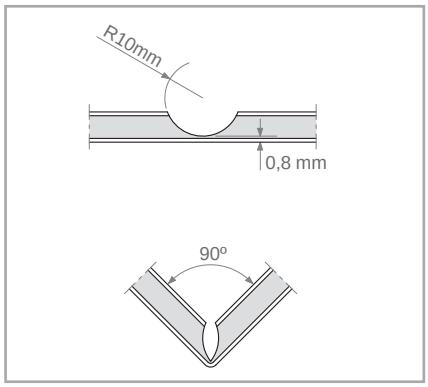
REFERENCE	PART	OBSERVATIONS	MIN. UNITS
STB-FEMD-10x72	HM HSS SPHERICAL MILLING CUTTER WITH DIAMOND COATING Ø10x72 Z=2 Ø10 BODY (COD:JS532100D1B.0Z2-NXT)	Ø 10 mm milling cutter with diamond coating for spherical grooving of panel with PE/FR core	1

REFERENCE	PART	OBSERVATIONS	MIN. UNITS
STB-FRESAD10PCD	DIAMOND HSS SPHERICAL MILLING CUTTER SECO PCD Ø10x73 Ø10 HM BODY	Ø 10 mm diamond milling cutter for spherical grooving of panel with A2 core	1

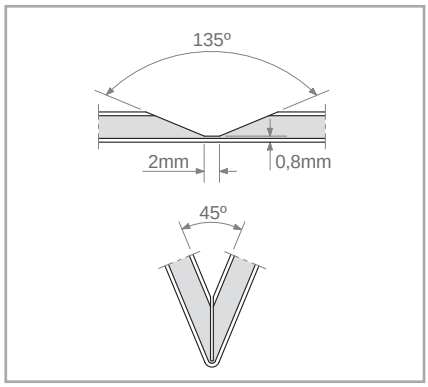
REFERENCE	PART	OBSERVATIONS	MIN. UNITS
STB-FEMD-20X100	HM HSS SPHERICAL MILLING CUTTER Ø20x100 UHM 30º Z=2 Ø20 BODY	Ø20mm hard metal milling cutter for spherical grooving	1

REFERENCE	PART	OBSERVATIONS	MIN. UNITS
STB-FRESA135	HM HSS MILLING CUTTER Ø3xØ32x80x38,8 R0,2 Z=2 Ø16 BODY	Hard metal milling cutter for 45º cutting	1

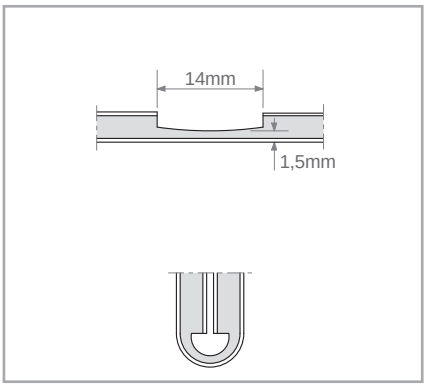
REFERENCE	PART	OBSERVATIONS	MIN. UNITS
STB-FPCD-135	DIAMOND HSS MILLING CUTTER Ø35x175 Z=2 Ø16 BODY	Diamondmilling cutter for 135º v-grooving of panel with A2 core	1



Spherical milling groove for 90º bends.

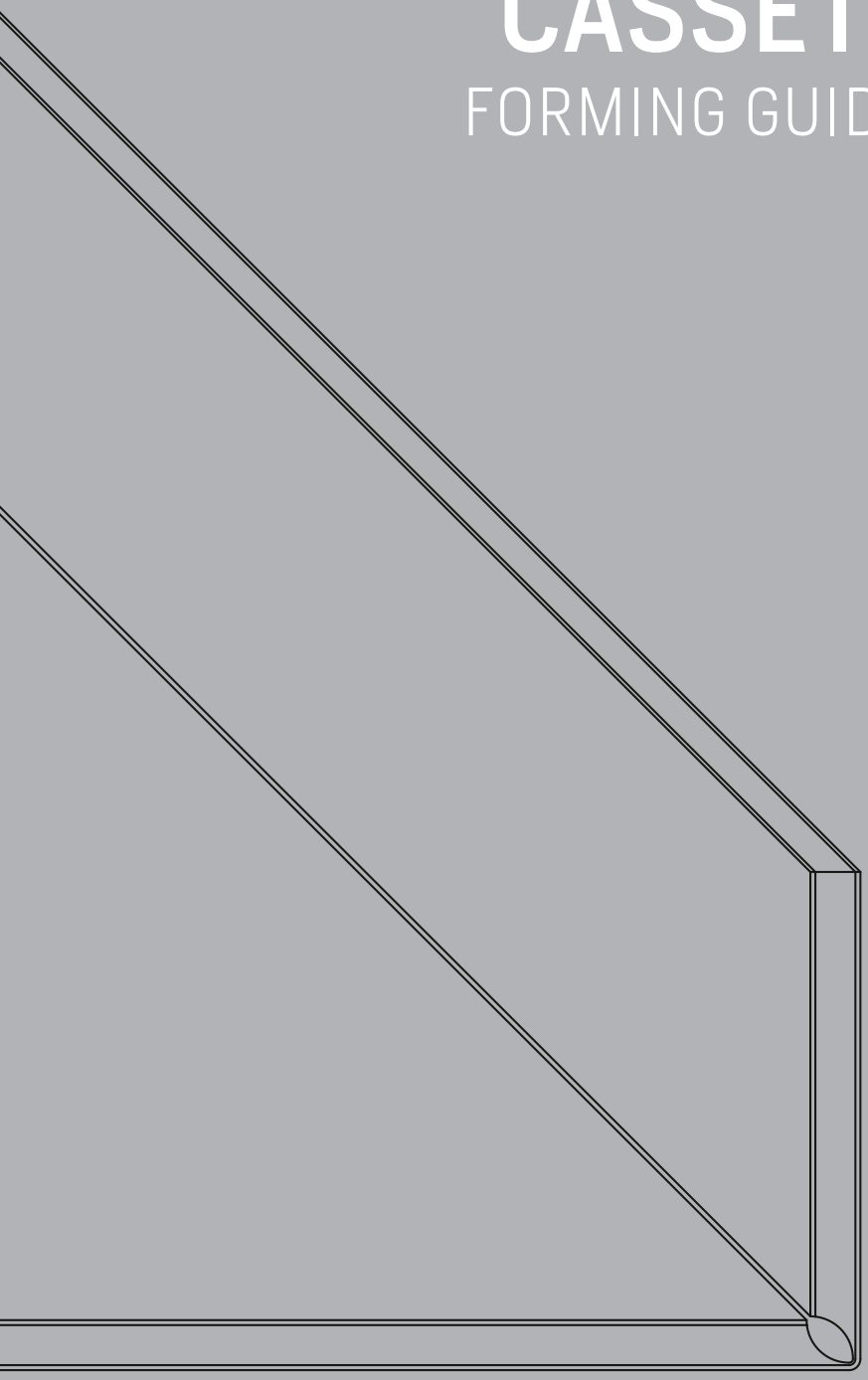


V-shaped milling groove for 135º bends.



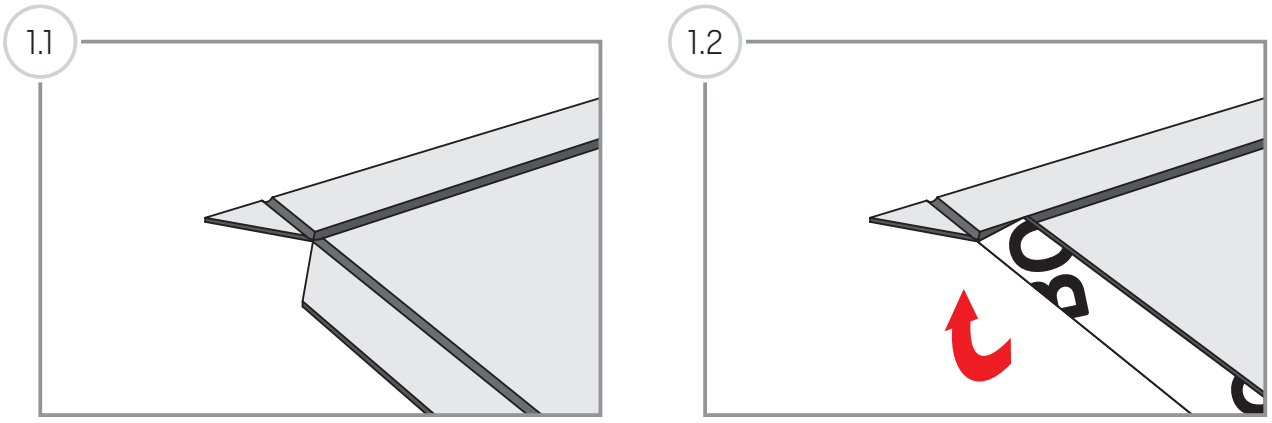
Arc milling groove for complete 180º folds (not possible on **STACBOND® A2** panel).

CASSETTES
FORMING GUIDELINES

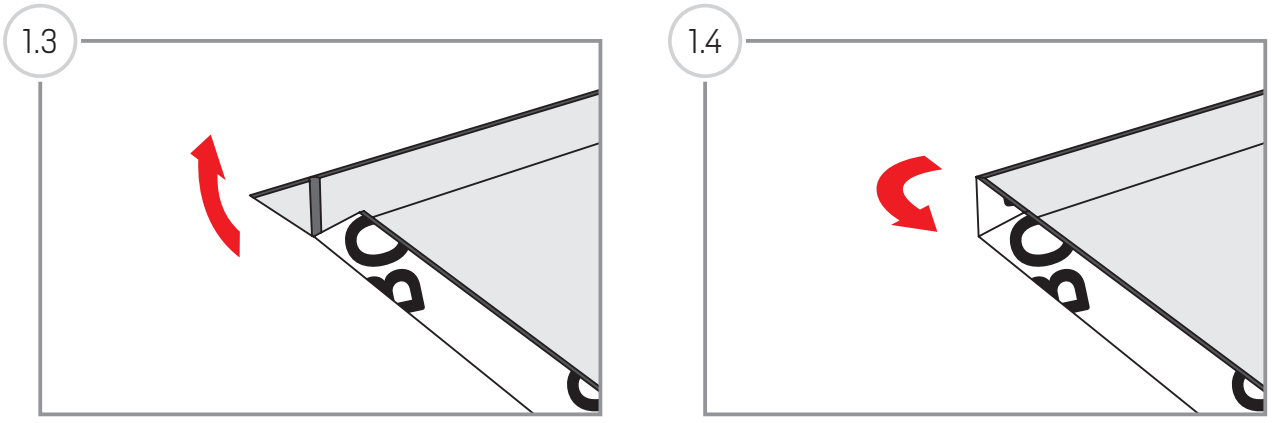


1 - FOLDING SIDE FLAPS

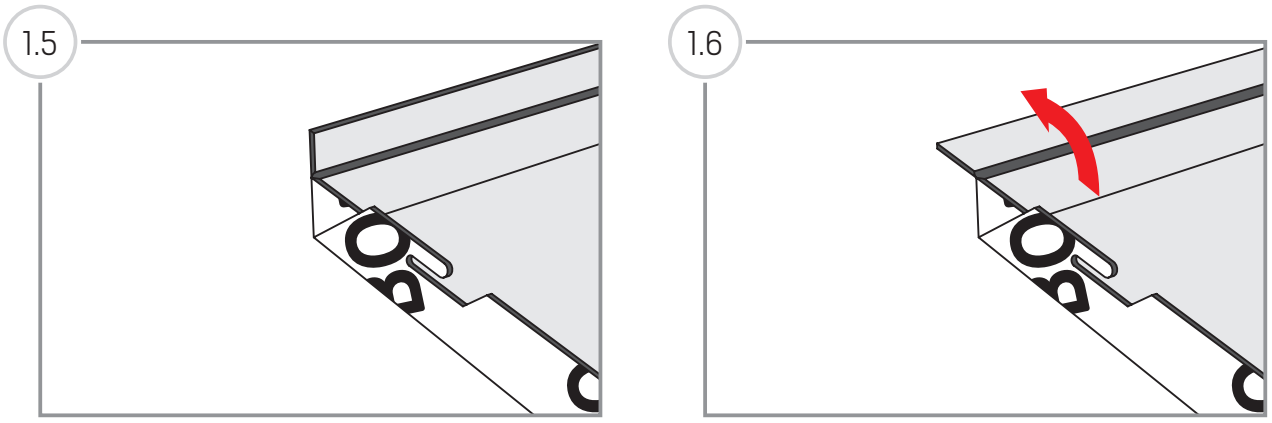
When forming SZ cassettes, the side flaps are folded one by one to form a 90º angle with the surface of the cassette.



The corner trims are folded by pressing the finger inwards until it coincides with the adjacent flap, and forming a 90º angle.

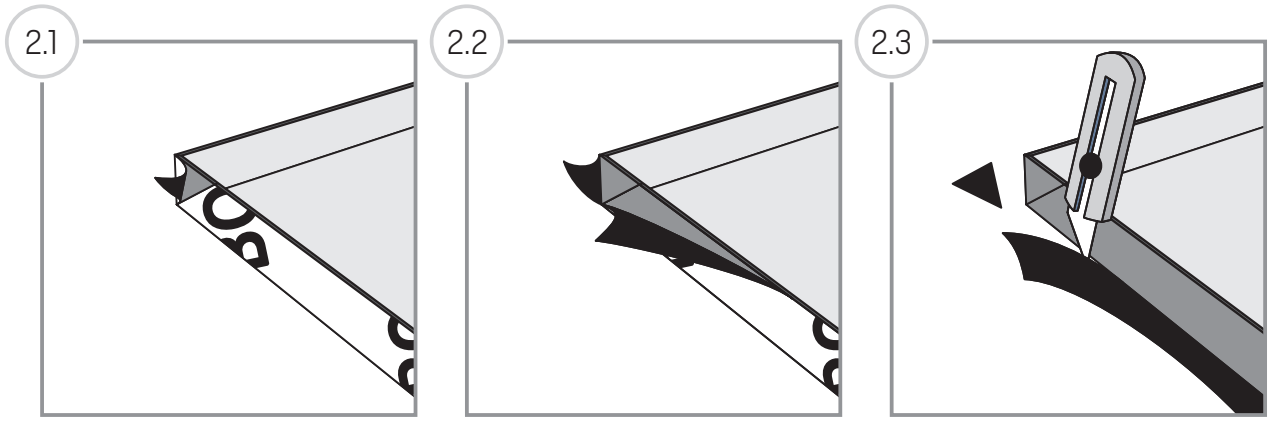


In the case of CH cassettes, it is necessary to fold the second 40 mm upper flap parallel to the surface of the cassette.



2 - REMOVING FILM FROM THE FLAPS

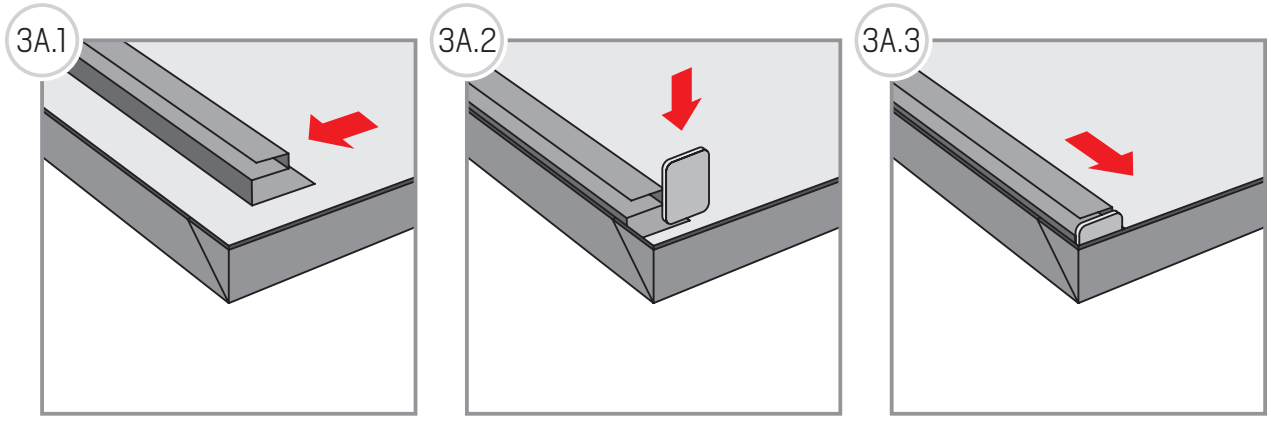
The film is peeled off in the areas of the tabs where the profiles and forming accessories will be fastened with rivets.



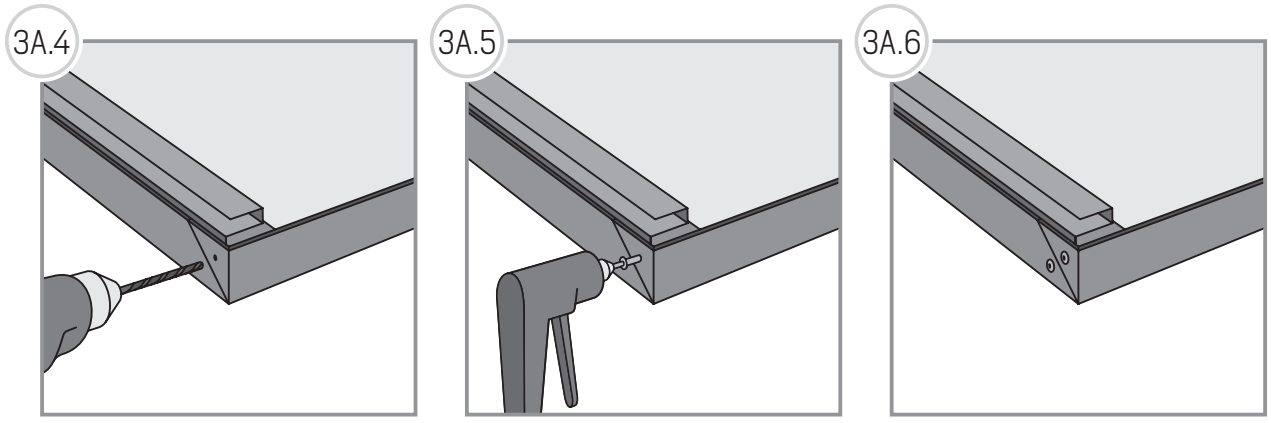
3 - FIXING THE CASSETTE SZ

3A - PROFILE S

The segment of profile S is located at the corresponding end of the interior of the cassette, and is approached until it reaches a stop with the wedge that rests on the flap.

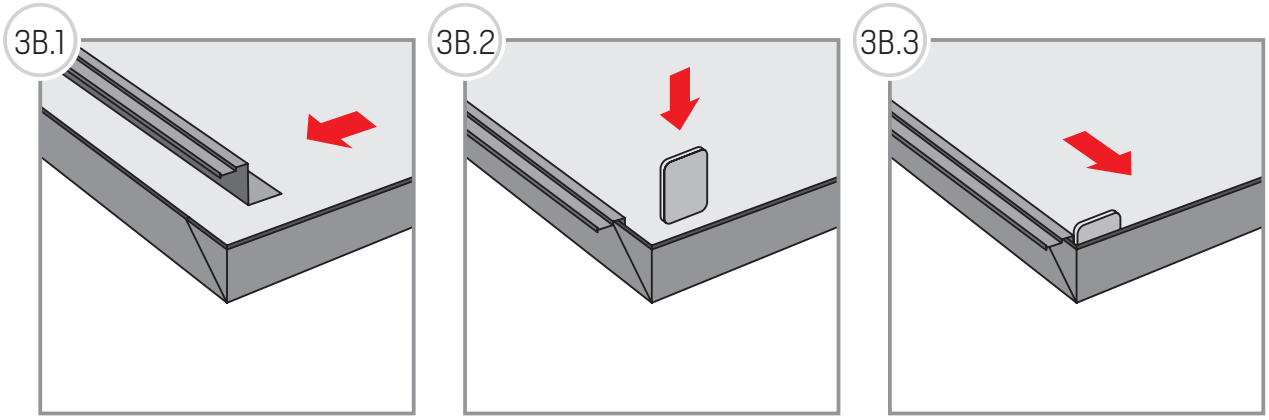


The flaps and the profile S are drilled and fastened together using rivets (rivet ISO 15977 Ø 4,8 x 15 mm).

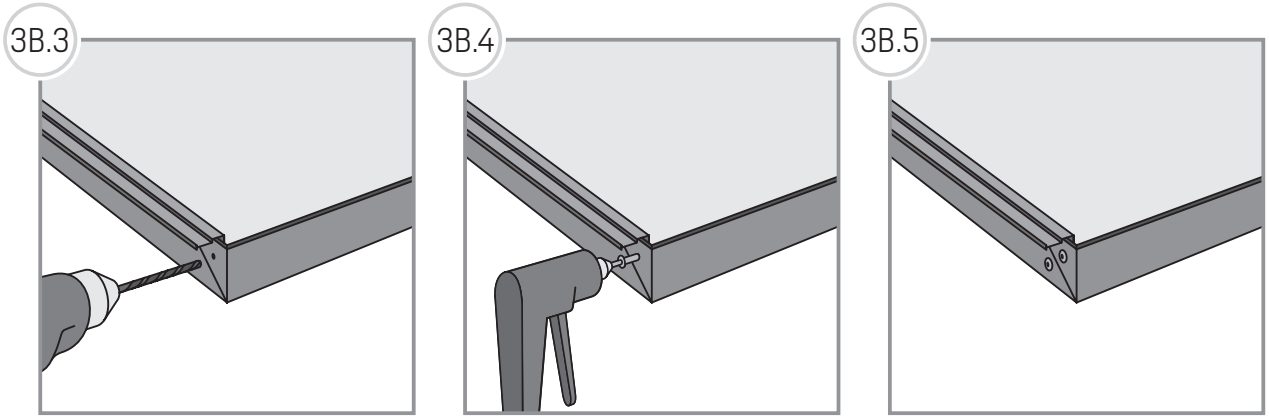


3A – PROFILE Z

The Z-profile segment is located at the corresponding end of the interior of the cassette, and is approached until it reaches a stop with the wedge that rests on the flap.



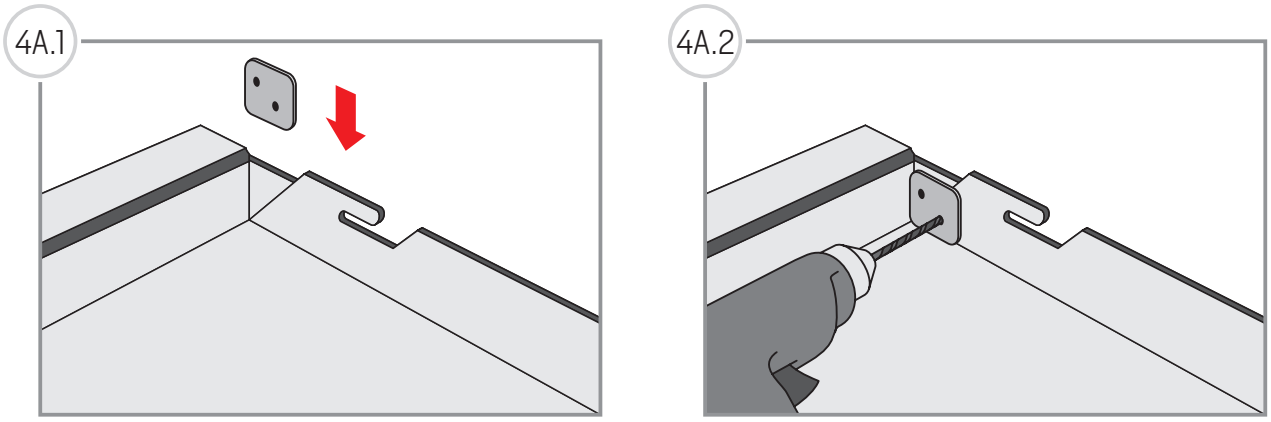
The flaps and the profile Z are drilled and fastened together using rivets (rivet ISO 15977 Ø 4,8 x 15 mm).



4 – FIXING THE CASSETTE CH

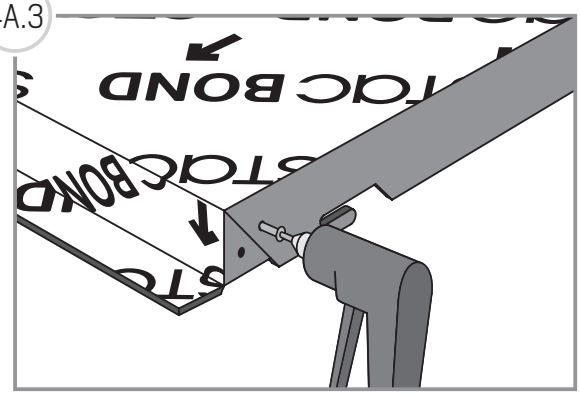
4A – CASSETTE CH (45 mm FLAP)

The forming plates are placed inside each corner of the cassette. Using the holes in the piece as a guide, the panel is drilled.

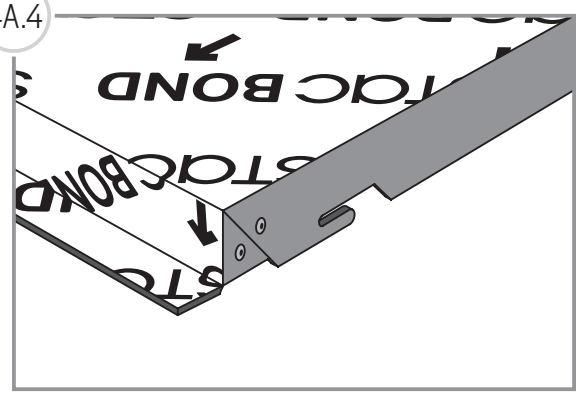


The forming plate is fixed to the corner with rivets (remache ISO 15977 Ø 4,8 x 15 mm).

4A.3



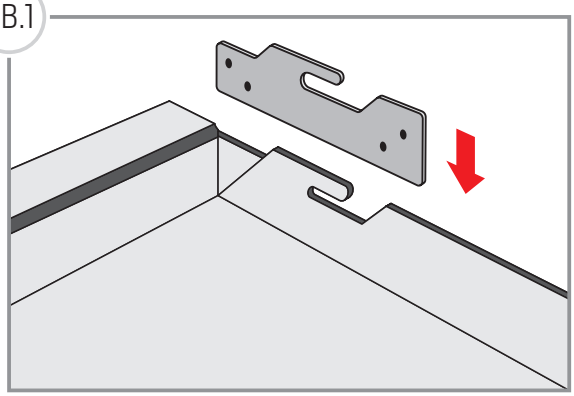
4A.4



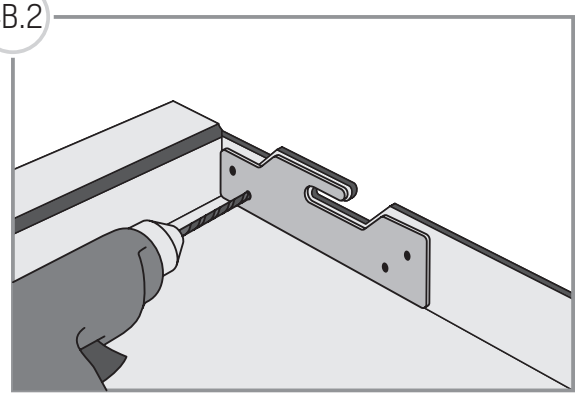
4B – CASSETTE CH (40 mm FLAP)

The hanging reinforcements are placed inside each of the corners and hanging hooks of the cassette. Using the holes of the piece as a guide the panel is drilled.

4B.1

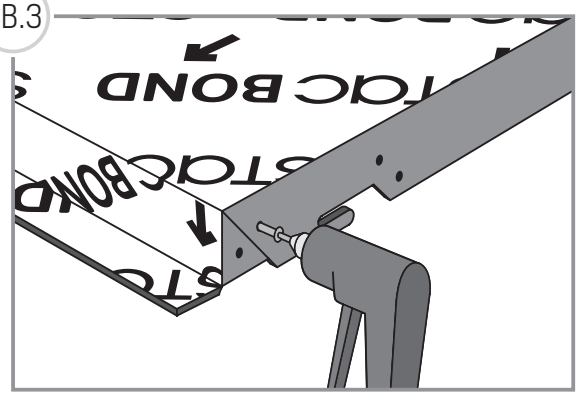


4B.2

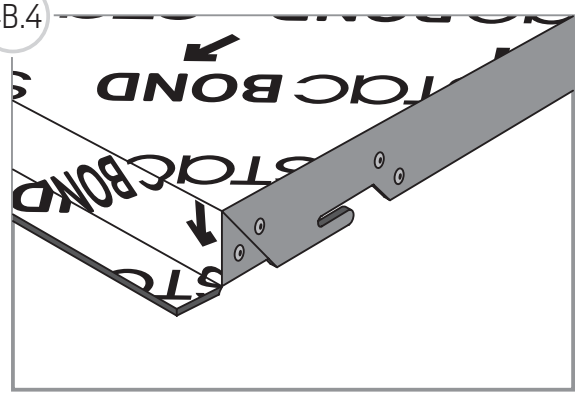


The reinforcements are fixed to the cassette flap with rivets (rivet ISO 15977 Ø 4,8 x 15 mm). The reinforcements located in the corners of the tray need 4 rivets to fix them, while the remaining ones need 2.

4B.3



4B.4



5 - ATTACHING CH CASSETTE STIFFENER

5.1 - PREPARING THE AREA
Firstly dust and dirt is removed mechanically. Solvents must never be used. This cleaning consists of light or heavy sanding, depending on the extent of dirt present. The dust is then vacuumed or blown away. For cleaning and subsequent degreasing, SIKA–AVIATOR–205 or similar is used. It should be left to evaporate for 10 minutes minimum.

5.2 - PRIMING THE AREA
Once the area is clean it is primed using a specific product which strengthens the adherence of the elastic adhesive (SIKATACK PANEL PRIMER or similar).

5.3 - DOUBLE–SIDED ADHESIVE TAPE
After the required drying time of the primer (30 to 60 mins) the double–sided adhesive tape – SIKATACK PANEL–3 TAPE or similar – is applied. This holds the part whilst the adhesive polymerizes, as well as ensuring the required minimum depth of adhesive for any possible dilation of the **STACBOND**® composite panel.

5.4 - APPLYING THE ADHESIVE
The elastic adhesive – SIKATACK PANEL or similar – is then applied to the panel, applying a continuous bead contiguous to the adhesive tape.

5.5 - ATTACHING THE STIFFENER
The stiffener is then put in place ensuring that its full face surface is in contact with the adhesive.

5.6 - FIXING WITH RIVETS
Lastly, the stiffener is drilled and riveted through the upper and lower ends to the horizontal tabs of the cassette.

5.1 - CLEANING

5.2 - PRIMING

5.3 - ADHESIVE TAPE

5.4 - SIKATACK PANEL ADHESIVE

5.5 - ATTACHING THE STIFFENER

5.6 - FIX WITH RIVETS

STAC**BOND**® would be pleased to help with any enquiry.

For further information, please visit our website or get in touch and we'll study a solution that meets your requirements.

We provide technical assistance in Spanish, English, French, German and Italian.

STAC® CENTRAL Spain

(+34) 981 817 036
(+34) 981 817 037
stacbond@stac.es

Pol. industrial Picusa s/n
15900 Padrón (A Coruña)
Spain

STACBOND® PRODUCTION CENTER Spain

(+34) 981 817 036
(+34) 981 817 037
stacbond@stac.es

C/ Isaac Prado BodelónP. 2
Pol. ind. de La Rozada
24516 Parandones (León)
Spain

STAC® Poland

(+48) 322 630 740
polska@stac.es

Ul. Kluczewska 2A
32-300 Olkusz
Poland

STAC® Morocco

(+212) 053952 11 36
(+212) 053952 11 54
maroc@stac.es

Route nationale 1 Km. 92
Comune Rurale Laouamra
Larache, Morocco

STAC® Mexico

(+52) 442 251 7019
mexico@stac.es

Parque Ind. Pyme, carretera estatal 431. Los Cues, km 5.8
Huimilpan, 76970
Querétaro, Mexico

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