

No. 525

Sanding out sawing edges from acrylic glass parts



A

Description

Acrylic glass, also known as Plexiglas®, is a diverse material processed in many industries.

Acrylic glass is used for advertising lighting, in display and model-making, for picture frames, in interior fittings, in apparatus engineering, for sanitary objects, in the construction of vehicles, aircraft and boats as a noise protection element, etc. It is characterised by its good visible quality and high transparency (92%).



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Acrylic glass is offered as cast acrylic glass (type GS = yellow protective film on the bottom of the plate) and as extruded acrylic glass (type XT = blue protective film on the bottom of the plate).

- Cast acrylic glass: wide processing scope, particularly suited for individual production and for small series production, e.g. displays, models, furniture, apparatus engineering, special glazing, etc.
- Extruded acrylic glass: more efficient and cheaper acrylic glass. Particularly suited for series production of advertising lighting, caravan/mobile home windows, less demanding series parts.

When cutting acrylic glass a rough, milky white cutting edge arises. In a processed state a scratch-free and clear surface is required, especially if the cutting edges are to be visible.

Previous solution:

1. Complex, energy-sapping and time-consuming sanding by hand.
2. Machine preparation with angle grinders. The risk of the surface overheating arises as a result.

The water absorption of acrylic glass increases with an increasing temperature. Permanent exposure to temperatures over 40°C can give acrylic glass a milky white colour. This can be remedied by air or oven drying, but only if there has been no considerable overstress.

Solution:

Using the ROTEX RO 150 FEQ or alternatively the ROTEX RO 125 FEQ, and the corresponding Festool system accessories the above-mentioned problem can be solved quickly, cleanly and efficiently, and without the problem of heat development.

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Tools/Accessories

The following tools and accessories are used in this application example:



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Designation	Order No.
ROTEX RO 150 FEQ	
Geared eccentric sander ROTEX RO 150 FEQ	493915
Stickfix abrasive sheets Ø 150 mm:	
Brilliant 2 STF-D150/8-P 240-BR2	492987
Brilliant 2 STF-D150/8-P 320-BR2	492988
Brilliant 2 STF-D150/8-P 400-BR2	492989
Platin 2 STF-D150/0-S 1000-PL2	492370
Platin 2 STF-D150/0-S 2000-PL2	492371
CTL series mobile dust extractor	*

Alternative:

Designation	Order No.
ROTEX RO 125 FEQ	
Geared eccentric sander ROTEX RO 125 FEQ	571333
Stickfix abrasive sheets Ø 125 mm:	
Brilliant 2 STF-D125/8-P 220-BR2	492950
Brilliant 2 STF-D125/8-P 320-BR2	492951
Brilliant 2 STF-D125/8-P 400-BR2	492952
Platin 2 STF-D125/0-S 1000-PL2	492375
Platin 2 STF-D125/0-S 2000-PL2	492376
FastFix sanding pad, ST-STF D125/8 FX-H	492127
CTL series mobile dust extractor	*

* Please obtain the order no. from the Festool main catalogue or from the Festool website.

Designation	Order No.
Optional guide control black:	
Guide control black set	495939
Guide control black refill	495940

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Preparation/Set-up



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Sanding

	RO 150 FEQ	RO 125 FEQ
Sanding motion	Fine sanding	
Electronic level	6	
Sanding pad	FastFix sanding pad	
	ST-STF D150/8 FX-H	ST-STF D125/8 FX-H
Abrasives	Brilliant® 2 P 240 Brilliant® 2 P 320 Brilliant® 2 P 400	

D

Procedure



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Sanding out sawing edges using the ROTEX:

1. Position the sanding disc Brilliant 2, grit P 240, firmly on the sanding pad.
2. Connect the extractor hose to the ROTEX.
3. Set the speed to level 6.
4. Fine sanding setting (see Fig. 525/07).
5. Edge has guide control black.
6. Sand surface until no more saw marks are visible.
7. Check edge with guide control black and sand out any visible scratches.
8. Position the sanding disc Brilliant 2, grit P 320, firmly on the sanding pad and sand edge.
9. Repeat step 8 with Brilliant 2, grit P 400.
10. Position the sanding disc Platin 2, grit S 1000, firmly on the sanding pad.
11. Sand the edge in the fine sanding setting (see Fig. 525/07) and add finish cleaner MPA.
12. Sand the edge with sanding disc Platin 2, grit S 2000.
13. Then the edge should be wiped using the microfibre polishing cloth.
A matt sanding area is now visible, which is removed again by the polishing (see application example 526: Polishing acrylic glass parts)

Edge trimming:

If the cutting edges are too narrow (less than 10 mm material thickness), it is possible to strip the area using a scraper, a sharp back of a hacksaw blade, scissors, knife, or similar.

Notes:

When sanding acrylic glass always work with a dust extractor with an antistatic hose.

Reason:

Quick clogging of the sanding discs and inhalation of harmful fine dust are thus avoided.

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Our example for use is a recommendation tried and tested in practice. However the actual conditions pertaining in each situation are completely outside of our control. We therefore do not provide any form of guarantee. Any legal claims arising out of this are not to be made against Festool. Please observe without fail the safety and operating instructions included with the product.

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