

# Processing instructions

## Egger Eurodekor Plus multilayer structures

### Egger Eurodekor Feelwood surfaces

#### Material description:

Decorative, melamine-faced, wood-based material with special multilayer structure

#### Use:

For high quality interiors



## Product description Eurodekor Plus

Egger Eurodekor Plus ML fulfils high demands regarding impact resistance thanks to special multilayer structures of up to 1 mm thickness. Where desired, an overlay (plus HR) can be added in case of special wear stress.

Eurodekor Plus multilayer structures do not depend on direction thanks to their structure. Cutting can be optimised when manufacturing pre-fabricated parts. Egger multilayer structures are resistant to bending, as well as having fatigue strength, which means they are particularly well-suited for constructions with large spans.

EGGER Eurodekor Plus ML is also used for our Eurodekor Feelwood surfaces in various multi-layer structures due to the texture depth. Therefore, the following processing instructions also apply to our synchronous surface structures of the Feelwood family.

## Processing instructions Eurodekor Plus



The following processing information is based on various test series with the best processing results in cooperation with Leitz GmbH & Co. KG.

Leitz GmbH & Co. KG

[www.leitz.at](http://www.leitz.at)

## General processing guidelines

When processing Egger Eurodekor Plus ML, the guide values listed in the table for cutting speed (vc) and tooth feed (fz) should be observed depending on processing method.

Processing method	Cutting speed $v_c$ [m/s]
Sawing	60 - 90
Chipping	70 - 80
Milling	50 - 70
Drilling	0.5 - 2.0

Processing method	Tooth feed $f_z$ [mm]
Sawing	0.01 - 0.13
Chipping	0.12 - 0.16
Milling	0.40 - 0.70
Drilling	0.05 - 0.15

These parameters are linked to the tool diameter (D), number of teeth (Z), number of revolutions (n), and feed speed (vf) that apply to the processing machine. The right selection of these factors is responsible for a good processing result.

The following formulas apply for calculating cutting speed, tooth feed and feed speed:

$v_c$  - cutting speed [m/s]

$$v_c = D \cdot \pi \cdot n / 60 \cdot 1000$$

D – tool diameter [mm] n – number of tool revolutions [min-1]

$f_z$  – tooth feed [mm]

$$f_z = v_f \cdot 1000 / n \cdot z$$

$v_f$  – feed speed [m/min]

n – number of tool revolutions [min-1]

z – number of teeth

$v_f$  – feed speed [m/min-1]

$$v_f = f_z \cdot n \cdot z / 1000$$

$f_z$  – tooth feed [mm]

n – number of tool revolutions [min-1]

z – number of teeth

## Cutting material

As a rule, both tools with hard metal blades (HW) and diamond edges (DP - diamond polycrystalline) can be used. In order to extend the tool life in case of large volume cutting, it is recommended to use tools with diamond blades (DP). Particularly in groove machining, the use of tools with diamond blades is recommended as only limited tool life is achieved with hard metal blades due to quickly progressing wear.

## Tool general

Tools with new or newly serviced blades are recommended for optimal edging quality.

## Cutting boards with circular saw blades

### General

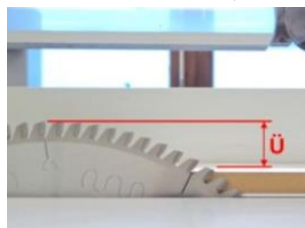
Attention must be paid to:

- Visible side facing up
- The use of correct saw blade projection (see table)
- Adjusting the number of revolutions and number of teeth to the feed speed
- The use of a scoring circular blade is recommended to obtain clean cuts on the bottom of the board

Depending on saw blade projection, the entry and exit angle change, and thus also the quality of the cut edge. If the upper cut edge becomes unclean, the saw blade must be set higher. The saw blade must be set lower in case of an unclean cut on the bottom. The best height setting must be identified.

In the case of format and panel saws, the following saw blade projections ( $\ddot{U}$ ) must be set depending on diameter (D):

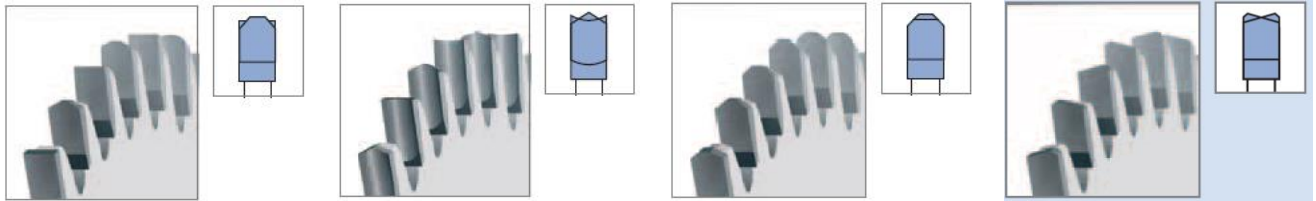
Circular blade diameter D [mm]	Projections $\ddot{U}$ [mm]
300	approx. 5 - 10
350	
400	
450	



Saw blades with a high number of teeth are generally recommended for good processing quality.

In the case of circular blades, the recommended cutting speed  $v_c$  is 60 – 90 m/s.

## Recommended saw tooth shapes



FZ/TR (Flat tooth/Trapezoidal tooth)    HZ/DZ (Hollow tooth/Pointed tooth)    FZ/TR (Trapezoidal tooth)    WZ/FA Alternate tooth with bevel

## Format saws

Formatting with the saw tooth shape hollow tooth/pointed tooth (HZ/DZ) delivers the best cut results. The saw tooth shape flat tooth/trapezoidal tooth also provides good cut results with somewhat longer tool life as compared to HZ/DZ

## Panel saws

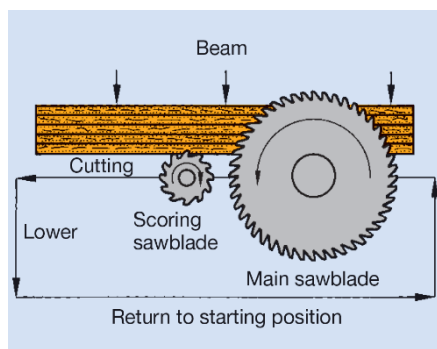
Saw tooth shape combinations such as alternate tooth with bevel (WZ/FA) or trapezoidal/trapezoidal tooth (TR/TR) are recommended in this case. The Leitz RazorCut (TR/TR) saw achieves the best cut quality.

Dimensions DxSBxBo	Tooth shape	Number of teeth Z	Number of revolutions n [min-1]	Feed speed vf (m/min)
300x3.2x30	FZ/TR	96	4000	Manual feed
303x3.2x30	HZ/DZ (Hollow tooth/Pointed tooth)	68	4000	Manual feed
380x4.8x60	FZ/TR (Flat tooth/Trapezoidal tooth)	72	4500	20 – 40
380x4.8x60	TR/TR (Trapezoidal tooth/Trapezoidal tooth)	72	4500	20 – 40
400x4.4x30	WZ/FA (Alternate tooth with bevel)	72	4,500	20 – 40

Dimension DxSBxBo = diameter (D) / cutting width / (SB) / drill hole (Bo)

## Scoring circular blades

In the case of Egger EurodekorPlus ML, the use of a scoring unit on the tooth exit side is recommended in order to achieve a good quality of the cut edges. The cutting width of the scoring circular blade must be set a little higher than the one of the main circular blade, so that the projected tooth of the main saw can no longer touch the cut edge. Piece scorer saw blades are used for table and format circular saw machines.



Beamsaw with scoring aggregate and pressure device

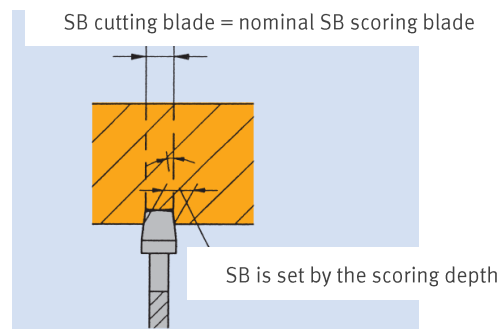


Diagram of conical scoring circular saw blade. When repairing tools (always in sets) the tools must be matched to each other's cutting widths

## Joining mill on table mill or cycle systems

In order to obtain chip-free edges on the board's cover layers, joining tools with reciprocal shaft angle must be used. Diamond cutter heads such as Leitz WhisperCut with a shaft angle of 30° to 50° are recommended. The chip removal should be as low as possible and not exceed 2 mm.

Good milling results are achieved when employing tools with high concentricity and balancing quality, which are obtained when using centring interfaces, such as hydro-clamping, hollow taper shank, or shrink clamping systems.

When working with manual feed on table mills, only tools marked "MAN" or "BG Test" may be used. The range of numbers of revolutions indicated on the tool must be observed for safety reasons. Tools for manual feed may only be used in upcut milling.

The use parameters of the joining mills should be set so that the tooth feed (fz) is between 0.3 and 0.7 mm. The DP WhisperCut version is recommended for a perfect cut result.

Dimensions DxSBxBo [mm]	Number of revolutions n [min-1]	Number of teeth Z	Feed speed vf [m/min]	Leitz-ID, DP WhisperCut		Machine
				LL	RL	
85x43x30	12000	3	15 – 20	192076	192077	Ott
100x43x30		2	10 – 15	192082	192083	Stefani, Holz Her
				192080	192081	Hebrock, EBM
				192088	192088	Biesse
				90885	90886	Brandt
100x32x30			192090	192091	IMA	
125x32x30	9000	3	14 - 20	192092	192093	IMA
75627				75627	Homag, Biesse	
125x43x30				192094	192095	IMA

Dimension DxSBxBo = diameter (D) / cutting width / (SB) / drill hole (Bo)

## Flakers and cycle machines

Diamond compact flakers are recommended, which produce little friction and cutting pressure. The Leitz Diamaster DT PLUS mounted on a hydro-clamping element is particularly recommended for the highest radial and axial runout and excellent processing quality and tool life. The cutting speed (vc) is 80 m/s for the regular number of revolutions (n) 6000 min-1 and diameter (D) 250 mm. The use parameters and number of teeth of the flakers should be set so that the tooth feed (fz) is between 0.12 - 0.16 mm.

Dimensions DxSBxBo [mm]	Number of revolutions n [min-1]	Number of teeth Z	Feed speed vf [m/min]	Leitz ID, DT PLUS	
				LL	RL
250x10x60	6000	24	15 – 24	190312	190313
250x10x60	6000	36	25 – 35	190316	190317
250x10x60	6000	48	35 – 45	190320	190321
250x10x60	6000	60	45 – 55	190324	190325

Dimension DxSBxBo = diameter (D) / cutting width / (SB) / drill hole (Bo)



Leitz DP Kompaktzerspaner Diamaster DT PLUS

## Groove machining

In order to obtain optimal edging quality with groove machining, tools with a high number of teeth should be given priority. The tooth feed (fz) should remain within the range 0.1 – 0.25 mm in the case of downcut machining. Satisfactory tool life results are only achieved with the cutting material diamond.

Diameter D [mm]	Number of revolutions n [min-1]	Number of teeth Z	Feed speed vf [m/min]
180	6000	36	7 – 18
200	6000	48	10 – 27

## CNC stationary machines

Spiral solid carbide end mills (VHW) or preferably diamond-fitted (DP) routers are suitable for processing on router machines and processing centres.

Good workpiece clamping on the machine must be ensured. To support the vacuum cups, additional mechanical clampers may be used where applicable. Stable and rigid shrink clamping chucks of the Leitz Thermo-Grip® type are recommended for highest concentricity, balance quality and for perfect cut quality. Good processing results can only be produced if sufficient rigidity of the machine is reached. Rigid portal machines are ideal.

Recommended settings:

Number of revolutions n = 20.000 – 24.000 min-1

Feed (vf) in full section::

Z1 = 8 m/min

Z2 = 16 m/min

Z3 = 24 m/min

Dimensions DxNLxS [mm]	Number of teeth Z	Direction of rotation	Version	Leitz ID no.
16 x 28 x 20	2 + 2	RL	Diamaster Pro	191042
20 x 28 x 20	2 + 2	RL	Diamaster Quattro	91235
20 x 28 x 20	3 + 3	RL	Diamaster Plus <sup>3</sup>	191051
12 x 24 x 12	2 + 2	RL	Diamaster Pro, Nesting	191060

Dimension DxNLxS [mm] = diameter (D) / effective length (NL) / shaft dimension (S)

Other dimensions available upon request

## Drilling

Spiral, dowel and fitting drills equipped with hard metal or solid carbide (VHW) are recommended. On CNC processing centres, it is recommended to use the fitting drill in the main spindle rather than the drilling beam due to its higher stability.

### Dowel drill

Number of revolutions n [min-1] 4000 – 6000

Feed speed vf [m/min] 0.5 – 1

Dimensions DxNLxGL [mm]	Number of teeth Z	Version	Leitz ID	
			LL	RL
5 x 35 x 70	Z 2 / V2	HW dowel drill standard	33440	33441
8 x 35 x 70	Z 2 / V2	HW dowel drill standard	33446	33447
10 x 35 x 70	Z 2 / V2	HW dowel drill standard	33448	33449
5 x 35 x 70	Z 2 / V2	HW massive dowel drill Excellent	33496	33497
8 x 35 x 70	Z 2 / V2	HW massive dowel drill Excellent	33500	33501
10 x 35 x 70	Z 2 / V2	HW massive dowel drill Excellent	33540	33541

Dimension DxNLxGL [mm] = diameter (D) / effective length (NL) / total length (GL)

### Through hole drill

Number of revolutions n [min-1] 4000 – 6000

Feed speed vf [m/min] 0.5 – 1

Dimensions DxNLxGL [mm]	Number of teeth Z	Version	Leitz ID	
			LL	RL
5 x 35 x 70	Z 2 / V2	HW through hole drill standard	34074	34075
8 x 35 x 70	Z 2 / V2	HW through hole drill standard	34076	34077
5 x 35 x 70	Z 2 / V2	HW massive through hole drill Excellent	34100	34101
8 x 35 x 70	Z 2 / V2	HW massive through hole drill Excellent	34104	34105

Dimension DxNLxGL [mm] = diameter (D) / effective length (NL) / total length (GL)

### Fitting drill

Number of revolutions n [min-1] 3000 – 4500

Feed speed vf [m/min] 0.5 – 1

Fitting holes are best drilled with solid carbide fitting drills. The following Leitz tools are recommended to this end:

Dimensions DxNLxGL [mm]	Number of teeth Z	Version	Leitz ID	
			LL	RL
15 x 70	Z 2 / V2	HW massive fitting drill	37203	37204
20 x 70	Z 2 / V2	HW massive fitting drill	37205	37206
25 x 70	Z 2 / V2	HW massive fitting drill	37207	37208
26 x 70	Z 2 / V2	HW massive fitting drill	37209	37210
30 x 70	Z 2 / V2	HW massive fitting drill	37211	37212
35 x 70	Z 2 / V2	HW massive fitting drill	37213	37214

Dimension DxNLxGL [mm] = diameter (D) / effective length (NL) / total length (GL)

## Tool life

Tool life depends on a multitude of factors, which means that this processing guideline cannot be used to derive tool life claims or rights. The data regarding tools and processing parameters represent recommended values. Machine or process related configurations may lead to different parameters. An optimal adjustment of machine, tool, and material, as well as customer-specific requirements can only be undertaken on site with a Leitz application technician. Given the high quality requirements and special surface composition of the Egger Eurodekor Plus ML, a shorter tool life is expected when compared to Egger boards that are produced in the regular manner.

## General processing instructions

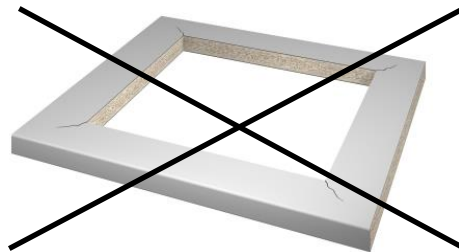
### Cut-outs

In general, it is important to ensure that the board is sitting securely before machining in order to prevent damage through sawing, milling or drilling. Especially narrow slab parts can break during processing due to improper storage. Furthermore, tears can occur. The panel cutouts must also be secured so that they cannot fall down or break uncontrolled, causing personal injury or other damage.

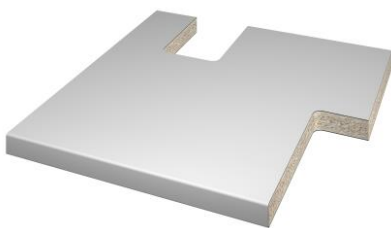
Cut-outs must always be rounded, because corners with sharp edges adversely affect materials, causing them to crack. This is particularly true for kitchen back panels, furniture, shelves, etc. where increased heat shrinkage occurs due to frequent heat exposure (see Fig. 1). When using halogen lighting (spot lights), it must be noted that a continuous temperature load does not exceed 50 °C. The cut-outs should preferably be produced using a hand-held or CNC routers. If using a jigsaw, you need to pre-drill the corners to the correct radius and saw from radius to radius. Finish off the cut edges with sandpaper, files or hand-held routers to remove chips and prevent cracking. The same careful finishing work should be done when using the tool known as a "circle cutter" for halogen spot lights.



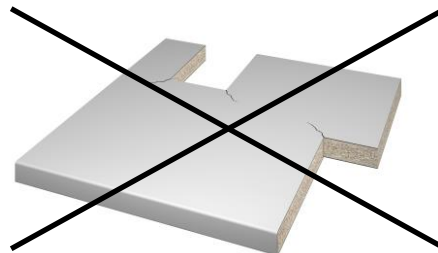
Right!  
Figure 1



Wrong!



Right!



Wrong

### Fasteners

Where fittings, wall terminating strips, etc., are to be secured to the composite elements, Eurodekor surfaces should be pre-drilled for the screws. The bore holes must be at least 1 mm (0.04") larger than the screw diameter in order to avoid tension in the material. With horizontal surfaces we also recommend protecting the inside of the screw hole with sealant before screwing.



## Sealing edges, cut-outs and drilled holes

In general, Eurodekor surfaces are reliably protected against the ingress of moisture in the use as table tops / worktops, fronts etc. due to the melamine coating. Moisture and damp can still reach the core board, however, via unprotected edges such as cut-outs, corner joins, mitres, back edges, drill holes, screw holes and fixtures. The necessary final sealing operations should always be carried out during the final assembly phase, especially with horizontal surfaces (worktops). Egger ABS security edging (thermoplastic edging) is used to seal visible cut edges.

The best products for sealing hidden cut edges have been found to be sealing profiles and self-curing sealants, such as silicon rubber, polyurethane and acrylic. When using sealants a primer also has to be applied; either one that forms a film or a cleaning primer depending on the material.

### You must follow the manufacturer's instructions carefully when using these materials!

It is essential that you clean the areas you are sealing and to allow the manufacturer's specified venting time when using primer. Apply the sealant leaving no gaps or holes and the smooth over with water and detergent. Areas near joints should be masked off to prevent the surface from becoming dirty. Any pipes or cables must be centred so that a minimum distance of 2 to 3 mm is maintained on all sides of the feedthrough. Careful sealing is also required.

## Maintenance and cleaning recommendations

Thanks to their resistant, hygienic and dense surface, EGGER Eurodekor does not require special care. As a general rule, any soiling and spilled substances such as tea, coffee, wine etc. should be cleaned immediately as the cleaning effort increases if they are left to dry. When necessary, cleaning should be done with mild solutions. Cleaning agents must in particular not contain any abrasive components, as they may adversely affect the gloss level or scratch the surface. As many kinds of soiling can occur, from slight and fresh to heavy and obstinate, and a huge range of different substances may be involved, it is essential to use the correct cleaning procedure.

The following instructions should be observed in daily use:



Placing burning cigarettes on the Eurodekor surface leads to surface damage. **Always use an ashtray.**



Eurodekor surfaces should not be used as a cutting surface, as this can leave cutting marks even on highly resistant Eurodekor surfaces. **Always use a chopping board.**



Placing hot cooking utensils such as saucepans and frying pans directly from the hob or oven onto the Eurodekor surface should be avoided, as, depending on the heat exposure, a change in the gloss appearance or damage to the surface can arise. **Always use heat resistant mats.**



Spilled liquids should always be cleaned up immediately, especially in the areas around cut-outs and joints, as prolonged exposure to some substances may cause a change in the gloss appearance of the Eurodekor surface.

These recommendations apply especially to matt Eurodekor surfaces which have a distinctive look and feel, but also a greater tendency to show wear and tear.

## Further documents

Technical Data Sheet Eurodekor Melamine-Faced Boards

Technical Data Sheet Eurodekor Storage and Transport Guidelines

Technical Data Sheet Symmetrical/Asymmetrical Structures

### Provisional note:

These processing instructions were prepared in agreement with Leitz, based on the best available information and with due diligence. We accept no liability for any mistakes, errors in standards, or printing errors. In addition, technical modifications may result from the continuous development of Egger Eurodekor, the Leitz tool technology, as well as from changes to standards and public law documents. Therefore, the content of these processing instructions cannot serve as a legally binding agreement.

