

Lamello

# Catalogue

2023/2024 english



A strong connection.
Inspiring.



**«** Lamello's system solutions are synonymous with quality, innovation and excellent functionality, and are used across the globe where they have proven their worth millions of times over!» Susanne Affolter, Managing Director and Owner at Lamello AG

### **Content**

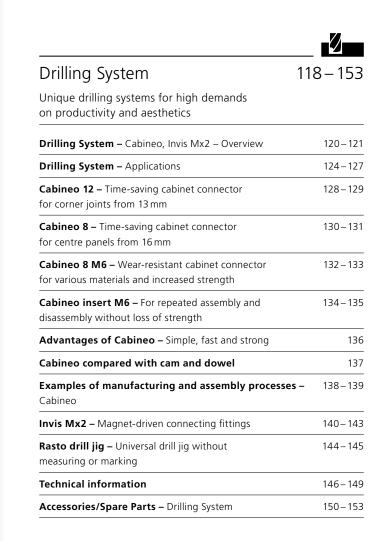


Lamello	6-19
Systems, P-System, Lamello System,	20-21
Drilling System – Overview	

	l_
P-System 22	2 – 73
The time-saving joining system with form-locking anchoring	
P-System – Overview	24-25
Connectors – Features overview	26-27
P-System – Applications	30-33
Clamex P-14 – Detachable furniture connector	34-35
Clamex P-14/10 Medius – Detachable connector for centre panels for materials from 16 mm thickness	36-37
Clamex P-10 – Detachable connector for materials from 12 mm thickness	38-39
Clamex P-14/10 Flexus – Detachable furniture connector with flexible positioning pins	40-41
Clamex P-14 CNC – Detachable furniture connector with precise alignment	42 – 43
Advantages of the Clamex P – Detachable furniture connecto	r 44
Bisco P – Aligning element, suitable for the P-System groove	46-47
Tenso P-14 – Self-clamping connector for glueing materials from 16 mm thickness	48-49
<b>Tenso P-10</b> – Self-clamping connector for glueing thin materials from 12 mm thickness	50-51
<b>Divario P-18</b> – Self-clamping, invisible connector for slide insertion	52-53
High performance without cable – LiHD battery pack	54-55
More flexible in the workshop	56
Mobile working on the construction site	57
<b>Zeta P2 cordless –</b> The powerful P-System biscuit joiner for cordless freedom	58-59
<b>Zeta P2</b> – The machine for the evolving P-System, saving you time daily! Differentiate your products from the standard!	60-6
Accessories – Zeta P2 cordless and Zeta P2	62
Connected in seconds Without waiting time, clamps, or secondary processes, glued and clamped in 40 seconds	63
Technical information	66-69

70-73

Lamello System	74 – 117
The original for efficient, intuitive and precise joints	
Lamello System – Overview	76-77
Lamello System – Applications	80-83
Original wood biscuit – The original wooden biscuit that always fits	84-85
<b>E20 –</b> The self-clamping element	86-87
Clamex S-18 – Detachable, flexible and simple. Installation in an 8 mm groove with screws	88-89
<b>K20</b> – The clamping element, which holds the workpiece in position	90-91
C20/C10 – The transparent element	92-93
Simplex – Detachable slide-in connector	94-95
Minicol – The all purpose glue applicator	96-97
Clamping set – Clamping system for cabinets	98-99
Classic X cordless – The original biscuit joiner – precise and cordless	100 – 101
Classic X – The original biscuit joiner for every workshop	102 – 103
<b>Top 21 –</b> The original biscuit joiner with height adjustable blade from the inventor	104 – 105
Accessories – Classic X cordless, Classic X and Top 21	106–107
Original Lamello biscuit joiners – These properties make the difference	108
<b>Versatile use</b> With various connecting elements	109
Technical information	110-113
Accessories/Spare Parts – Lamello System	114–117



Networked production	154 – 177
From planning and design to procurement, programming and machining with CNC.	
Components for the successful integration of Lamello connection systems into your networked production	157
Networked production – Overview of the production process	158 – 159
Service overview – Lamello's planning and machining partners	160 – 163
P-System with CNC – Joining methods and requirements for CNC machines/machining options	164–167
<b>P-System equipment options –</b> For CNC machines for particularly efficient machining	168–169
Ideas for standardising – The machining on a CNC machine	170
Possible combination of CNC machines with Zeta P.	<b>2</b> 171
Cabineo with CNC – Specific equipment options for CNC machines for Cabineo	172 – 173
CNC tools – For the P-System	174 – 175
CNC tools – For Cabineo	176

Accessories	178 – 195
Accessories/Spare Parts – P-System	180–183
Accessories/Spare Parts – Lamello System	184–187
Accessories/Spare Parts – Drilling System	188–191
Overview of connectors	192 – 195
Disclaimer regarding load limits	195

Subject to modifications and amendments

© Lamello AG. The content of this brochure is protected by copyright and cannot be used for any other purpose without the written consent of Lamello AG.

Accessories/Spare Parts - P-System



**-**)

0

Į.

(a)



# At home right across the globe.

We enjoy supporting you with our international sales network consisting of four subsidaries, distributors in 50 countries and more than 400 sales partners worldwide. As such we are available locally for our customers anywhere and at any time, be it for individual advice, training or services.



### Headquarter:

Switzerland

### Subsidaries:

- Belgium/France/Netherlands
- Germany
- Italy
- Austria

Markets with Lamello sales representatives:

- England
- Eastern Europe
- Spain
- Southeast Europe



# We are here for you!



Support in person

Do you have any questions concerning our products or a certain application? Would you like to learn more about the process benefits for your business? Our qualified employees and sales partners will be happy to help you quickly and competently, whether by telephone, online or during a personal support on site.



Stay up-to-date and sign up for our Lamello News and e-newsletter. Become part of the Lamello community on social media and be inspired, or visit our stand at one of the numerous trade fairs. We are always happy to hear from you.



Quality is one of the cornerstones of our business, and so our products are designed to last. If a repair is necessary, we can offer you uncomplicated service through our certified Lamello service partners and a spare parts warranty of at least 10 years.

### Support in your planning

With the connector search and the P-System configurator on our website, you can quickly find the right connector for your design and requirements. With CAD data for our connectors, tips and tricks, as well as videos about the wide range of applications, we can guide and support you in your planning on our website and on the Lamello YouTube channel.

### Qualified sales partners

Our professional and committed sales partners provide you with qualified advice, always keeping you informed about new products. This way, you can see the benefits of our products first hand.

2

### Competent planning and machining partners

From planning and design to the right tool to machine with the CNC machine: more than 40 industry-leading partner companies support the efficient use and integration of our products into your production.



P-System configurator

Every milestone starts with an idea. However, revolutionary ideas do not just come about easily. It is only through many years of practical knowledge and intensive development working together with our

1969

Founding of Lamello AG

Lamello

under the leadership

of company founder

Hermann Steiner

1944

Joinery founded

in Liestal

by Hermann Steiner

1968

First hand-operated

Lamello biscuit joiner

1958

First stationary Lamello

1955

biscuit joiner LO1

Lamello System

invented by Hermann Steiner

Invention:

Invention:

customers that we have been able to constantly come the market for wood joining technology and wood processing to this day.

up with new solutions, and in so doing decisively shape

1970

Invention:

Tanga 150,

Wood repair system



Invention:

window cutter

1981

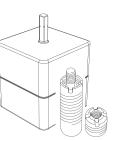


2001

Invention:

Interzum award

Invis



2009

Invention: Clamex P

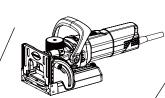
Interzum award



2010

Invention: Zeta, power tool for

the P-System

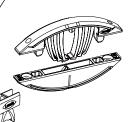


2013

INTERFER

Invention: Tenso P-14

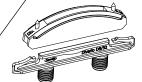
Interzum award



2015

Invention: Divario P-18

Interzum award



2017

Invention:

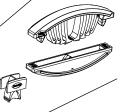
Cabineo CNC connector



2019

Invention: Tenso P-10

Interzum Award



2020

Invention:

Clamex P-14/10 Flexus

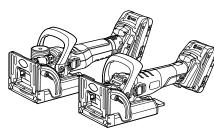




2022

Introduction:

Zeta P2 cordless and Classic X cordless





# *In the centre:* the customer

Lamello AG products are distributed and utilised globally. Cabinet makers, joiners, furniture manufacturers, carpenters, shop-fitters, furniture designers, kitchen manufacturers and many more have been using and relying on the innovative system solutions from Bubendorf for years. Some of these are longstanding business partners, who will be sharing some of their experiences with us. We appreciate the trust that we are met with and thank all our customers for the good teamwork.

### Nils Ingwersen

Process Planning Manager Carpentry Mario Beck, Hamburg, Germany

«Our customers are frequently enthusiastic about the rapid assembly when using the P-System.»

### Roger Schneider

Site Manager, Tschudin AG, Münchenstein, Switzerland

«The Tenso has the advantage that is does not require any access holes, because it is self-clamping. This makes it the ideal connector for glued furniture without the

### **Hannes Kofler**

Owner and Managing Director, Joinery workshop Kofler, St. Felix, Italy

«We previously lacked the right fitting for this application. The Clamex P-14/10 Flexus solved this problem. The connector came exactly at the right time, and has filled this gap very much to our satisfaction.»

### **Jeffrey De Smet**

Self-employed carpenter, Artisanal interior furniture maker, Belgium

«One day a customer placed an order for me to build a staircase, and I was looking for an easy-to-use system that saved me time and enabled me to work independently. With Tenso, all you have to do is to glue it, put the parts together and you're ready to go.»

### **Andreas Kuhlmann**

Managing Director, Adolf Kuhlmann furnishing workshops, Schwerin, Germany

> «Lamello is an asset to us because it allows us to expand our possibilities.»

INTERFER

ᅫ

### John Hampton

Production Manager, Artichoke, Somerset, England

«Artichoke's pursuit of enhanced quality and improved efficiency has led it to the door of Swiss fixings specialist, Lamello.»

Speedmaster Managing Director, Eberstalzell, Austria

«For us, the P System is the most innovative connector solution to have emerged in recent years.»



use of additional screw clamps.»





# Joining technology with 3 systems







### P-System

The **P-System** from Lamello is an innovative and award-winning joining method. Clamex, Tenso and Divario connecting fittings make an entirely new level of flexibility, speed and simplicity possible throughout the design, manufacturing, transport and installation process.

The connector's installation and anchorage system is based on the P-System profile groove. The P-System groove for the connector can be cut either using modern CNC technology or very simply by hand using the Zeta P2 power tool from Lamello.

### Lamello System

The **Lamello System** is an exceptionally efficient, simple and precise joining system for various materials. It is based on a 4 mm groove and offers an enormous variety of joining solutions. The original wood biscuit has been supplemented by the self-clamping element, the clamping element and transparent plastic

element for solid surface materials.
The same applies to
the Simplex and Clamex S-18
detachable connectors. These
can be easily assembled and disassembled. All connectors can be
machined with the biscuit joiners
Classic X, Top 21 and Zeta P2.

### **Drilling System**

The **Cabineo** is a one-piece furniture connector and is installed into a drilled or routed shape. No edge drilling is necessary – the machining happens solely in the surface. Due to this, Cabineo can be used with all kinds of CNC machines, including very simple 3-axis and nesting machines.

Invis Mx2 is the unique connection that satisfies the highest demands for aesthetics, stability and productivity. With no visible openings, Invis Mx2 can be quickly detached and reconnected at any time via its magnet drive.

As a family company, we cultivate a culture of appreciation. We encourage initiative in our employees and support them in taking on new responsibilities. In striving for improvement we always look for fast and pragmatic solutions.

Personal

& unconstr





### Independent & self-determined

In expanding our business, we constantly adapt to changing requirements. This helps us secure the long-term independence of our family company – it is a key element to maintaining our financial autonomy.

### Inventive & imaginative

We are connected by the desire to succeed and a passion for new tasks and inventions. We strive to remain recognised as a leader in innovation and to overcome technological limits time and again.

Our strengths



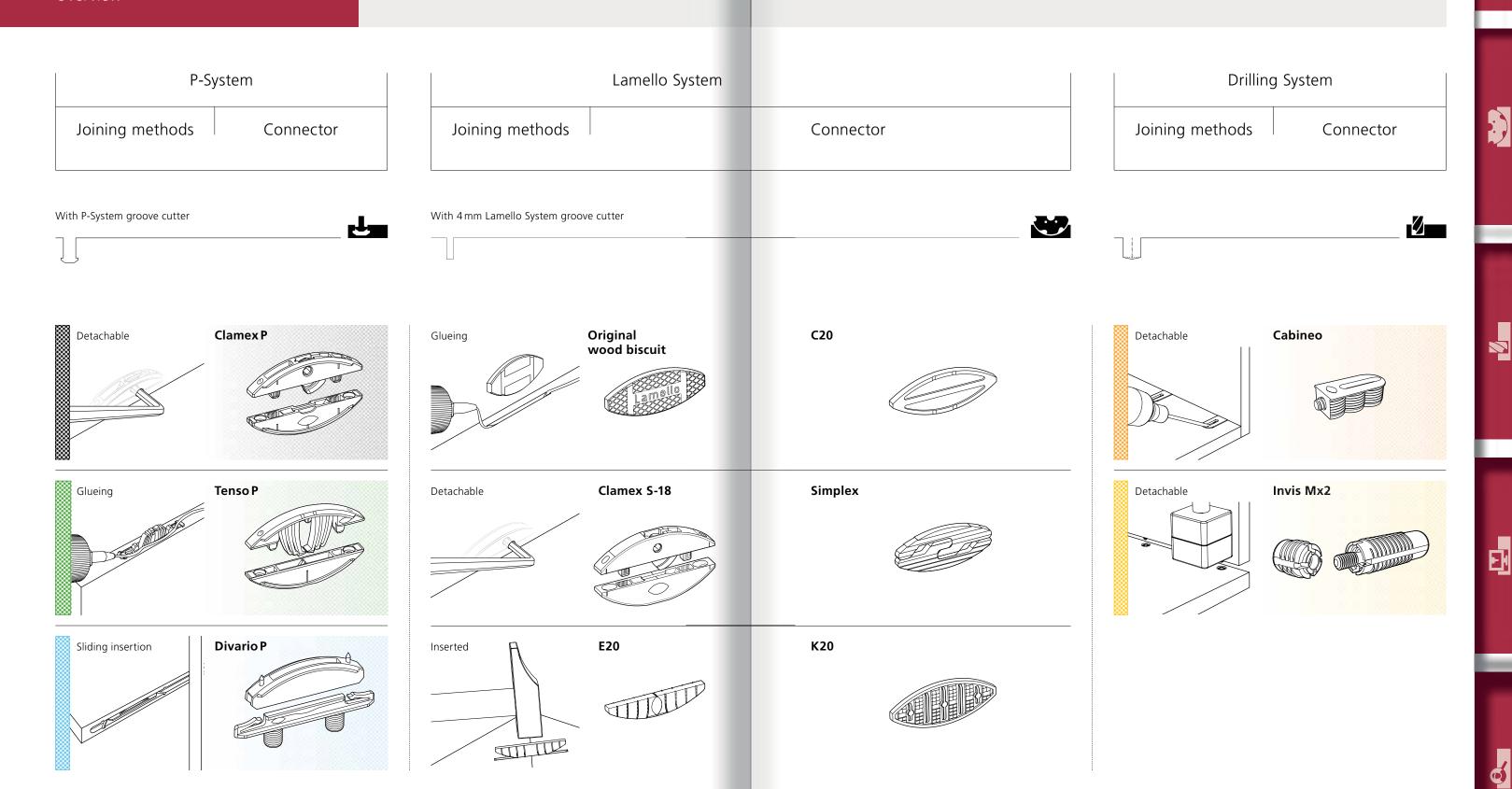


# **Systems**

INTERFER

- P-System
- Lamello System
- Drilling System

Overview





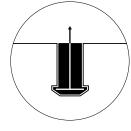






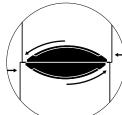
Fast installation

Inserting instead of screwing or glueing



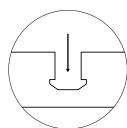
Strong

Form-locking anchorage across large surface areas



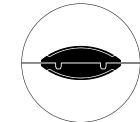
Lateral tolerance

Perfect, flush alignment of both workpieces



Shallow depth

Minimal cutting depth with maximum tensile strength



No twisting

The positioning pins prevent twisting without additional dowels

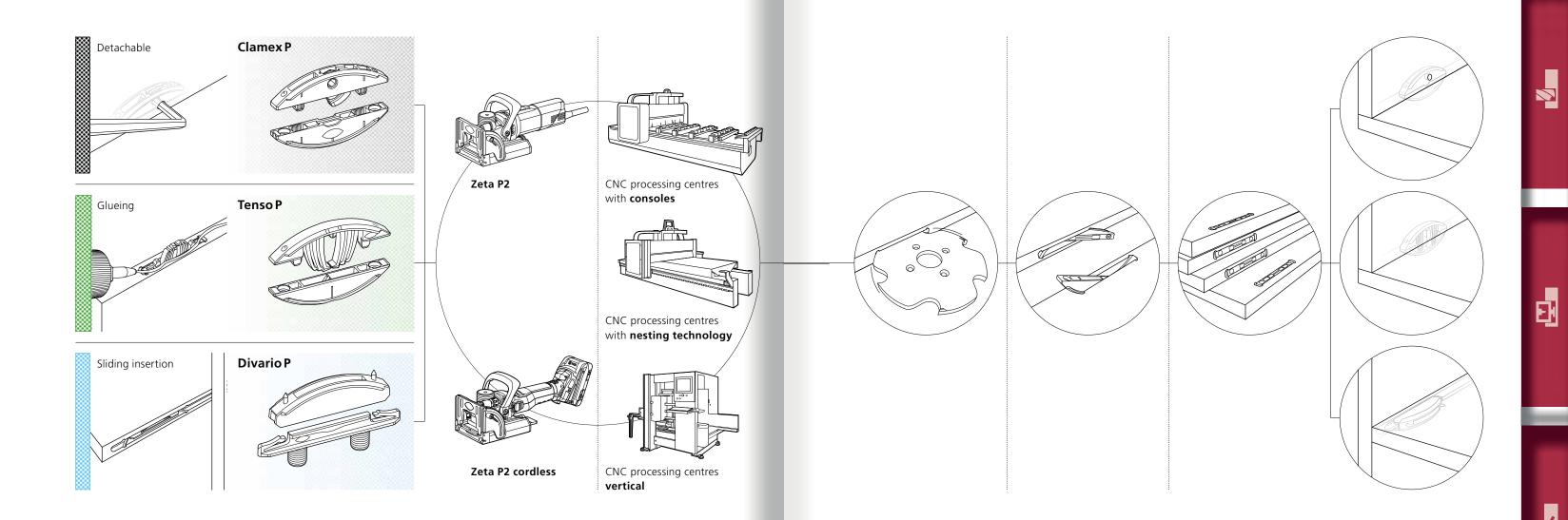


# **P-System**

Overview

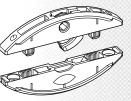


Joining methods   Connector	Machines		Sequence			
	Power tool	CNC machines	<b>1</b> Cut	<b>2</b> Insert the connector	<b>3</b> Deliver flat pack	<b>4</b> Connect the workpieces



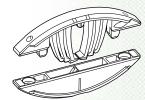
### **Connectors**

Features overview



### **Clamex P**

Detachable furniture connector



### **Tenso P**

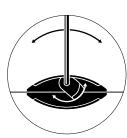
Self-clamping connector for glueing



### **Divario P**

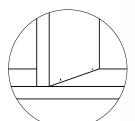
Self-clamping, invisible connector for slide insertion

### Features



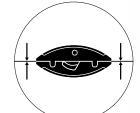
### Detachable

Open the connection time and time again with the rotating lever



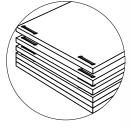
### Aesthetic

The small, hardly visible opening ( $\emptyset = 6 \,\text{mm}$ ) serves to close and open the connector



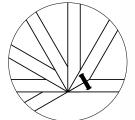
### High clamping force

Clamp and glue workpieces at any angle, ~ 80 kg or 170 lb



### Stackable

Workpieces with pre-installed P-System connectors are stackable for storage and transport



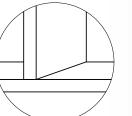
### Versatile

The shallow element depth allows for mitres from 22.5 – 180°, surface, corner and dividing panel connections



### Glueing

Fixed joints of two workpieces



### Invisible

No visible connector

15 kg or 30 lb

Versatile

Simple glueing of

mitre joints

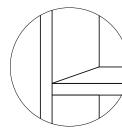
Lower assembly force

In combination with the

pretension clip, only a short

force impulse is required

to snap it into place



### Invisible

Guiding groove covers the connectors

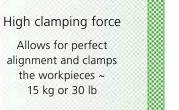
Sliding insertion

Insertion between two

fixed sides or shelves via a

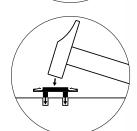
guiding groove

Į.



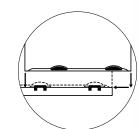
No resistance while inserting until shortly before building the clamping force

Clamped joint



### Fast installation

Quick installation of the connectors without glue after transport



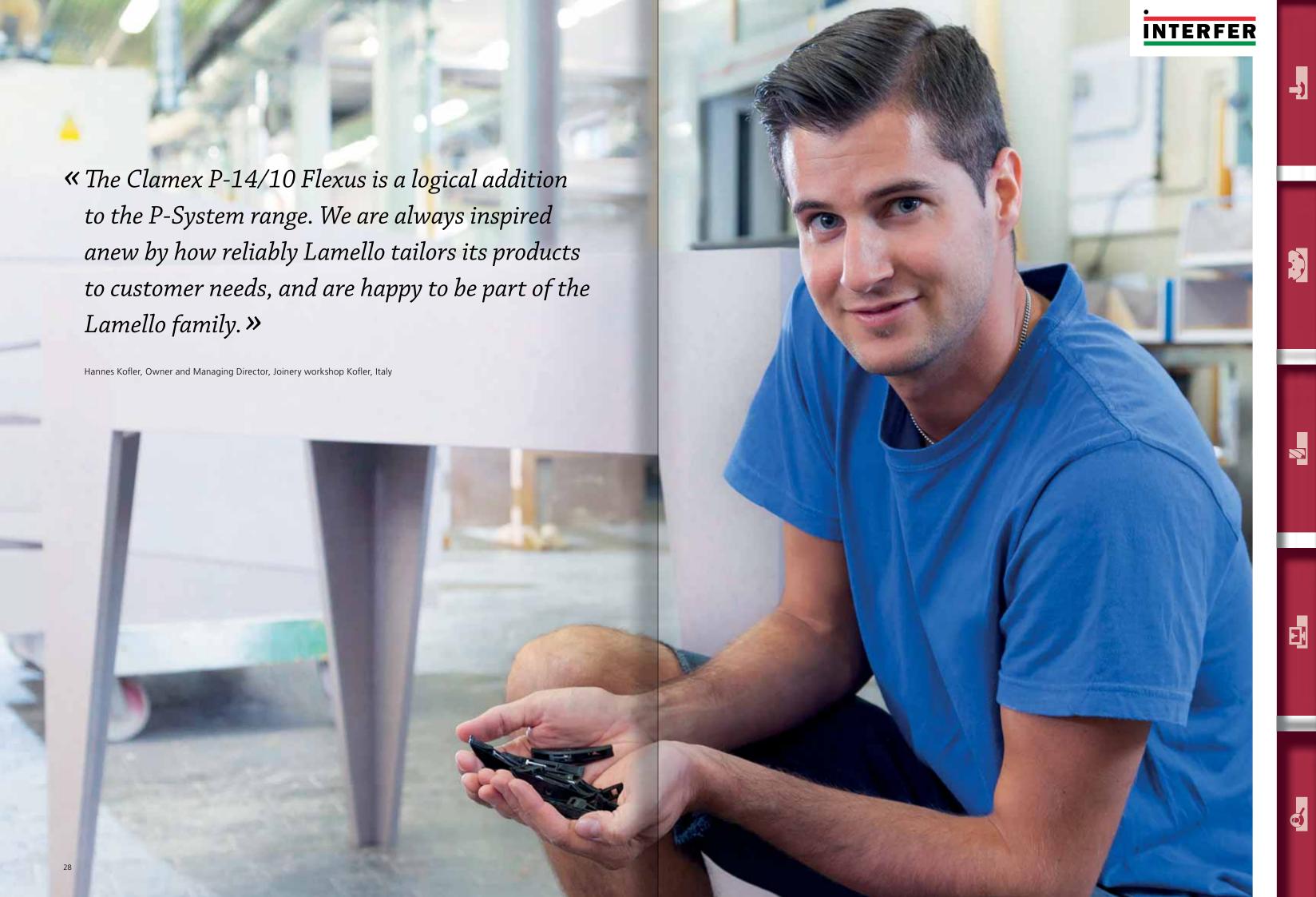
### Assemble by sliding

Partially routed guiding groove for completely invisible furniture joints









# **P-System**

Applications

. Interfer

### Furniture manufacturing

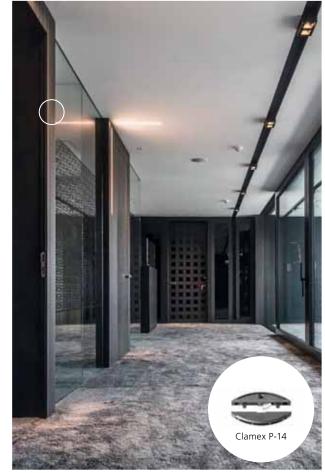






### Interior fitting









# P-System

Applications

. INTERFER

Kitchen manufacturing





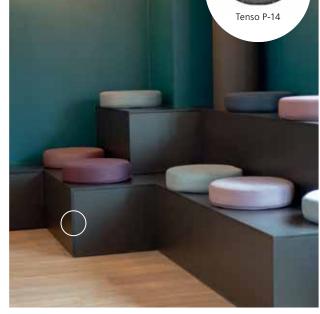












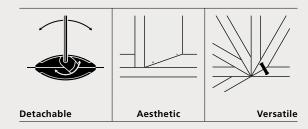
Shop fitting

## Clamex P-14

Detachable furniture connector



### Features



Clamex P-14 is a detachable connector and is anchored in the form-locking P-System groove within seconds.

Through the minimalist 6 mm access hole, Clamex P-14 is firmly connected and disconnected using a lever.

Clamex P-14 eliminates the need for glue, allows aesthetic joints at all angles and is ideal for permanently joined or detachable mitres.

Clamex P-14 is used on mitre joints from 18 mm material thickness and in butt joints from 15 mm.

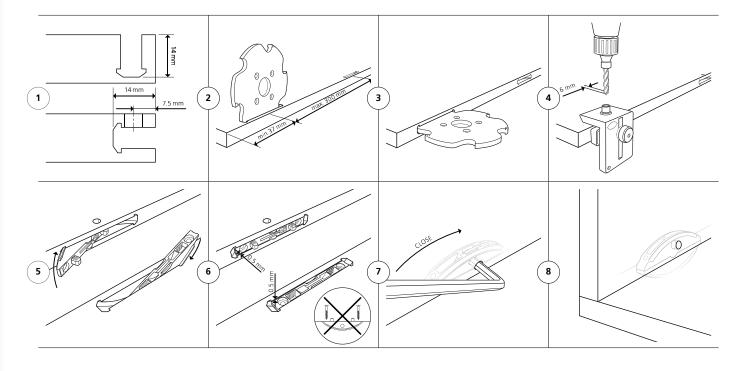


### Articles

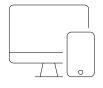


Clamex P-14	Art. No.
80 pairs	145334
300 pairs	145346
1000 pairs	145356
2000 pieces element with lever	145338
2000 pieces element without lever	145339

### **Function**



### www.lamello



Experience the connector live and receive comprehensive product information!















### Technical data

Joining methods	Size	64×27>	×9.7 mm	
	Cutter	Ø 100.4	×7ר 22 mm	
	Material connector	Fiberglas	ss reinforced plastic	
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Material of lever	Zinc die	Zinc die cast Long. ± 1 mm/radial ± 1 mm	
≥ 15 mm ≥ 18 mm	Installation tolerance	Long. ±		
	Tensile strength (N)	MDF	Particle board	Beech
	Up to	900¹	8001	1000¹
	Material range	Particle hardwoo	board, MDF, plywood,	softwood

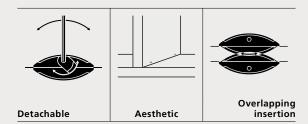
<sup>&</sup>lt;sup>1</sup> See comment on load limits on **PAGE 195** 

# Clamex P-14/10 Medius

Detachable connector for centre panels for materials from 16 mm thickness



### Features



Clamex P-14/10 Medius is a detachable connector and is anchored in the form-locking P-System groove within seconds.

Through the minimalist 6 mm access hole, Clamex P-14/10 Medius is firmly connected and disconnected using a lever.

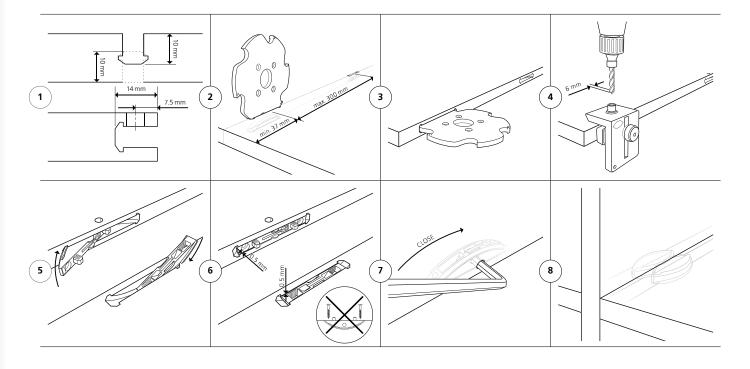
The connector for divisions has two installation depths and is used when two shelves are attached to the same dividing panel at the same height. Due to the reduced installation depth of 10 mm, the minimal thickness for the division is 16 mm.

### Articles

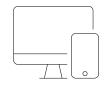


Clamex P-14/10 Medius	Art. No.
80 pairs	145370
300 pairs	145371
1000 pairs	145357
2000 pieces element with lever	145338
2000 pieces element without lever	145369

### Function



### www.lamello



Experience the connector live and receive comprehensive product information!











### Technical data

Joining methods	Size 64 × 13.5 × 9.7 52 × 7.5 × 9.7			
	Cutter	Ø 100.4	×7ר 22 mm	
12 mm 18 mm 16 mm	Material connector	Fiberglas	ss reinforced plastic	
2   2   2   2   2   2   2   2   2   2	Material of lever	Zinc die	Zinc die cast Long. ± 1 mm/radial ± 1 mm	
≥ 12 mm 18 mm 5 12 mm	Installation tolerance	Long. ±		
	Tensile strength (N) Up to	MDF 800 <sup>1</sup>	Particle board 600 <sup>1</sup>	Beech 900¹
	Material range	Particle l hardwoo	board, MDF, plywood, od etc.	softwood

90° and 45° cover caps are available in a variety of colours PAGE 71 | See PAGE 66 for technical specifications



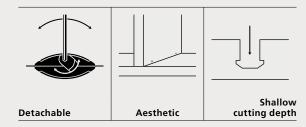
<sup>&</sup>lt;sup>1</sup> See comment on load limits on **PAGE 195** 

# Clamex P-10

Detachable connector for materials from 12 mm thickness



### Features



Clamex P-10 is a detachable connector and is anchored in the form-locking P-System groove within seconds.

Through the minimalist 6 mm access hole, Clamex P-10 is firmly connected and disconnected using a lever.

Clamex P-10 eliminates the need for glue, allows aesthetic joints at all angles and is ideal for permanently joined or detachable mitres.

Clamex P-10 is used on mitre joints from 15 mm material thickness and in butt joints from 12 mm.

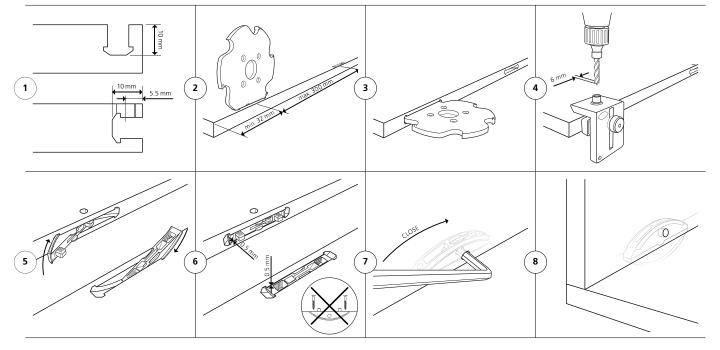
# 38

### Articles

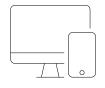


Clamex P-10	Art. No.
80 pairs	145372
300 pairs	145373
1000 pairs	145374
2000 pieces element without lever	145358

### Function



### www.lamello



Experience the connector live and receive comprehensive product information!













### Technical data

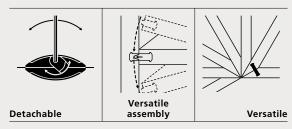
Joining methods	Size	52 × 19 >	< 9.7 mm	
	Cutter	Ø 100.4	×7ר 22 mm	
	Material connector	Fibergla	Fiberglass reinforced plastic	
2 12 mm s 15 mm s 19 mm	Material of lever	Zinc die	Zinc die cast	
	Installation tolerance	Long. ±	Long. ± 0.5 mm/radial ± 0.5 mm	
≥ 12 mm ≥ 15 mm ≥ 12 mm	Tensile strength (N)	MDF	Particle board	Beech
	Up to	600¹	600 <sup>1</sup>	900¹
	Material range		Particle board, MDF, plywood, softwood, hardwood etc.	

# Clamex P-14/10 Flexus

Detachable furniture connector with flexible positioning pins



### Features



Clamex P-14/10 Flexus is a detachable connector and is anchored in the form-locking P-System groove within seconds.

Through the minimalist 6 mm access hole, Clamex P-14/10 Flexus is firmly connected and disconnected using a lever.

The flexible positioning pins allow work pieces to be installed in an already assembled cabinet, simplifying the assembly sequence.

Clamex P-14 is used in mitre joints from 18 mm material thickness and in butt joints from 12 mm.



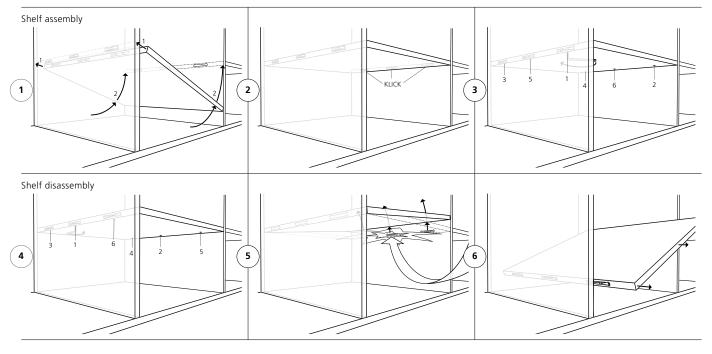
### Articles



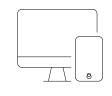


Clamex P-14/10 Flexus	Art. No.
80 pairs	145315
300 pairs	145316
1000 pairs	145317
2000 pieces element with lever	145318
2000 pieces element without lever	145369

### Function



### www.lamello



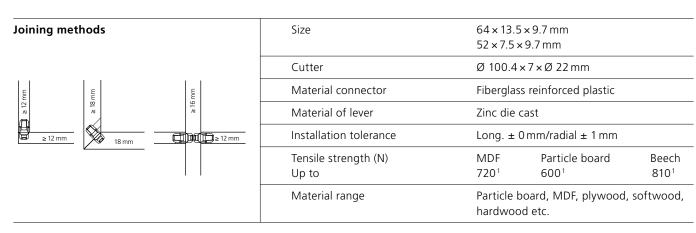
Experience the connector live and receive comprehensive product information!







### Technical data

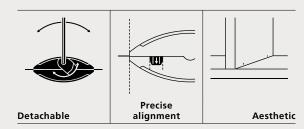


# Clamex P-14 CNC

Detachable furniture connector with precise alignment



### Features



Clamex P-14 CNC is a detachable connector and is anchored in the form-locking P-System groove within seconds. Through the minimalist 5 mm access hole, Clamex P-14 is firmly connected and disconnected using a lever.

Clamex P-14 CNC is ideal for production on CNC machines and, unlike Clamex P-14, is automatically aligned during assembly.

Clamex P-14 CNC is used in mitre joints from 18 mm material thickness and in butt joints from 12 mm.





Clamex P-14 CNC	Art. No.
2000 pieces element with lever	145388



Clamex P-14	Art. No.	
2000 pieces element without lever	145339	

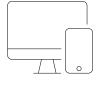


Clamex P-10	Art. No.
2000 pieces element without lever	145358



Clamex P-10 Medius	Art. No.
2000 pieces element without lever	145369

### www.lamello



Experience the connector live and receive comprehensive product information!





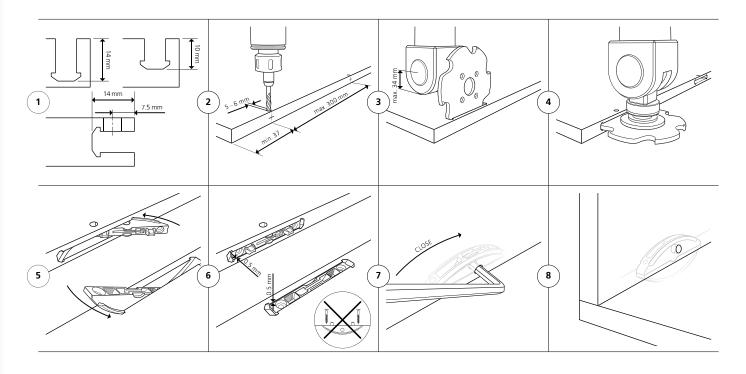




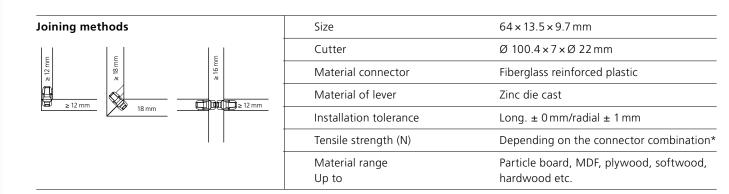




### **Function**



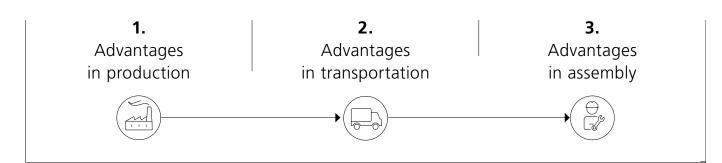
### Technical data



# Advantages of the Clamex P

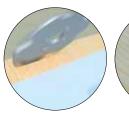
Detachable furniture connector





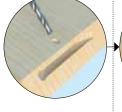
- Machining possible with Zeta P2 or CNC machinery
- Only one tool change from P-System cutter to 6 mm drill
- Same groove everywhere: whether corner connection, shelf, centre panel or mitres
- Consistently competent partners: from CAD to CAM and CNC

- Tool-free connector installation
- Workpieces with pre-installed
   P-System connectors are stackable for storage and transport
- No extra bags or loose hardware required with furniture shipment
- Tool-free connector disassembly for surface treatment
- Simple positioning of workpieces thanks to positioning pins
- Easy assembly with an Allen key
- Aesthetically small, barely visible hole (Ø = 6 mm)
- Open the connection time and time again with the rotating lever
- Lateral tolerance perfect, flush alignment of both workpieces



1.

Machining with
a Zeta P2 or
CNC machine



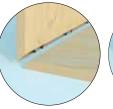
2. Only one tool change



3.
Tool-free
connector
installation



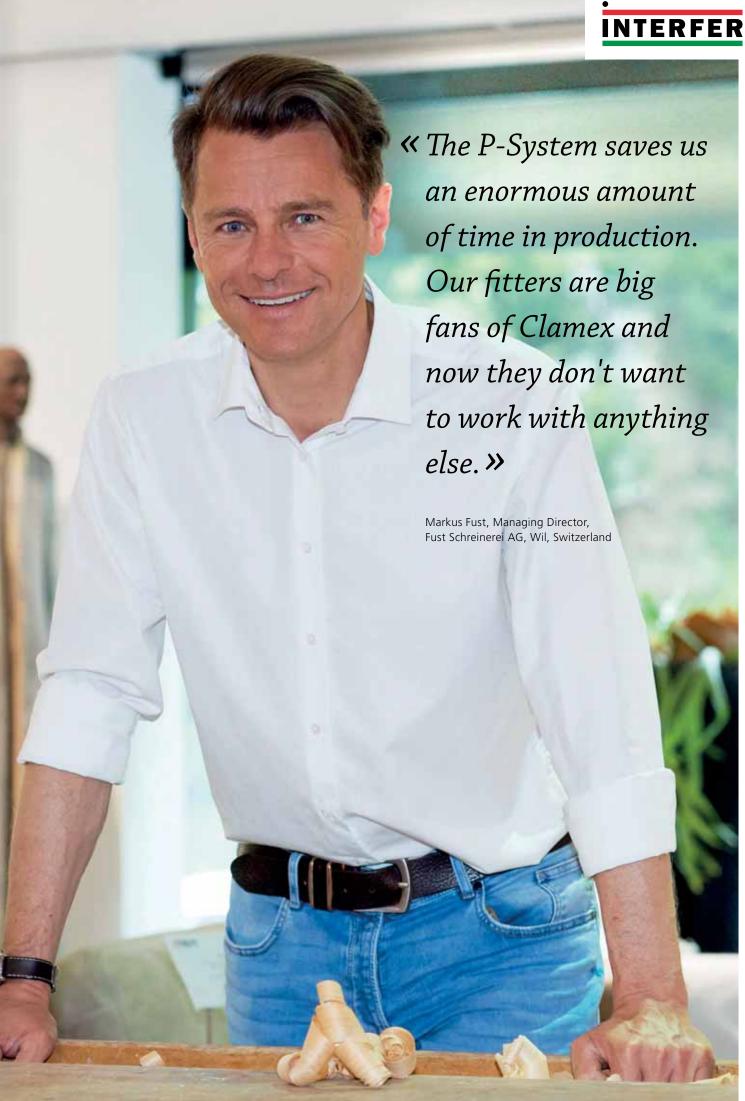
4. Flat pack delivery



Versatile for all angles and joining situations



Strong and detachable connection

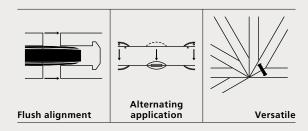


# Bisco P

Aligning element, suitable for the P-System groove



### Features



Bisco P is a plastic biscuit which fits into the 7 mm P-System groove and is held in the groove due to its surface structure. Bisco P is used in combination with Clamex or Tenso as a cost-effective alignment element and ensures flushness of the joint. The Bisco can also be used as a dry joint as a test before the work piece is permanently joined with Tenso P and adhesive.

Bisco P-14 is used in combination with Clamex P-14 or Tenso P-14; and Bisco P-10 with the same connectors in size P-10.



### Articles



Bisco P-14	Art. No.
80 pieces	145301
300 pieces	145302
1000 pieces	145303



Bisco P-10	Art. No.
80 pieces	145304
300 pieces	145305

### www.lamello



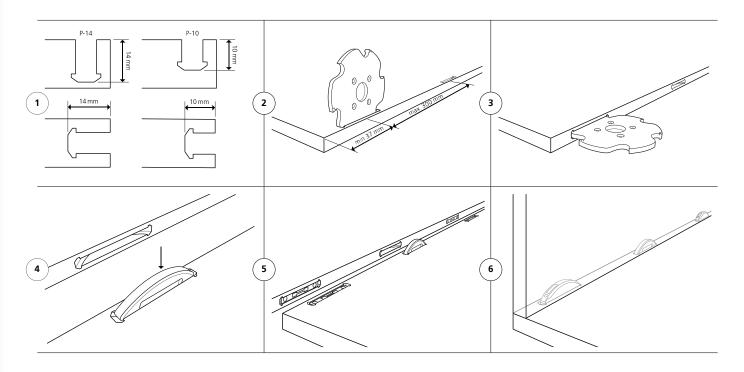
Experience the connector live and receive comprehensive product information!







### Function



### Technical data

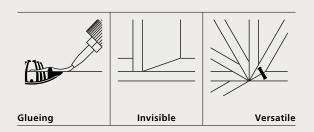
Joining methods	Bisco P-14	
18 mm	Size	65 × 27 × 7 mm
2 18 mm 2 2 9 mm 2 2 9 mm	Cutter	Ø 100.4×7ר 22 mm
≥ 15 mm ≥ 12 mm	Material connector	Plastic
	Installation tolerance	Long. ± 2 mm
1 1	Tensile strength (N)	Depending on the connector combination*
	Bisco P-10	
12 mm 15 mm 20 mm	Size	52 × 19 × 7 mm
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Cutter	Ø 100.4×7ר 22 mm
≥ 12 mm ≥ 12 mm	Material connector	Plastic
	Installation tolerance	Long. ± 2 mm
I I	Tensile strength (N)	Depending on the connector combination*
	Material range	Particle board, MDF, plywood, softwood, hardwood etc.
	I	

### Tenso P-14

Self-clamping connector for glueing materials from 16 mm thickness



### Features



Tenso P-14 is a self-clamping glueing aid and is anchored in the form-locking P-System groove within seconds.

The high clamping force of Tenso leads to perfectly clamped joints without the need for clamps or presses, regardless of the angle of the work pieces.

Aesthetic joining is possible without visible connectors, with short assembly times and without the need to wait for the glue to dry. Tenso P-14 is used on mitre joints from 18 mm material thickness and in butt joints from 15 mm.



### Articles

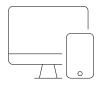


Tenso P-14	Art. No.
80 pairs	145415
80 pairs, with preload clip	1454155
300 pairs	145425
300 pairs, with preload clip	1454255
1000 pairs	145435
2000 pieces element with spring	145440
2000 pieces element without spring	145441



Tenso P-14 preload clip	Art. No.
300 pieces	145426
1000 pieces	145436

### www.lamello



Experience the connector live and receive comprehensive product information!

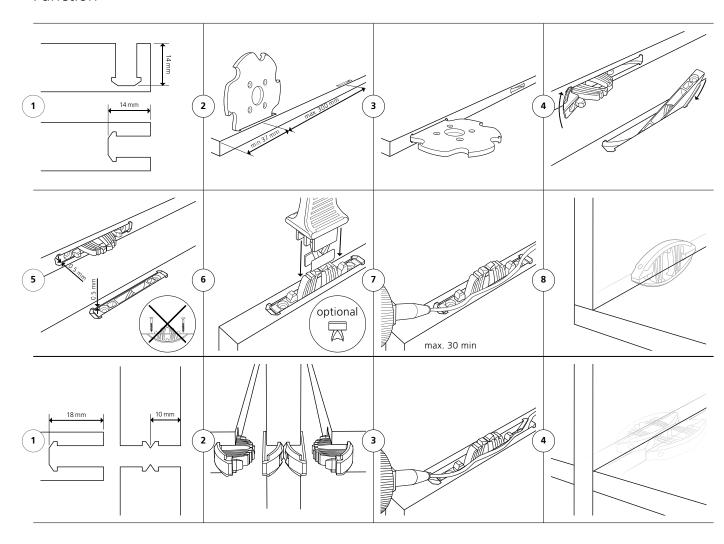






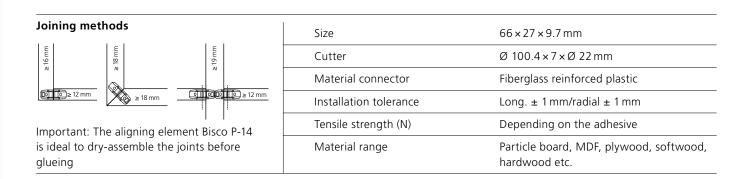


### Function



2

### Technical data

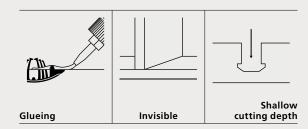


### Tenso P-10

Self-clamping connector for glueing thin materials from 12 mm thickness



### Features

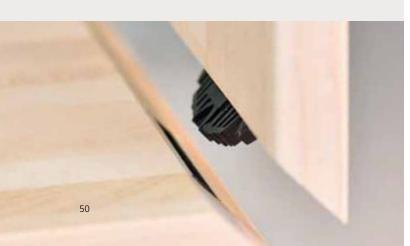


Tenso P-10 is a self-clamping connector to glue and is anchored in the form-locking P-System groove within seconds.

The high clamping force of Tenso leads to perfectly clamped joints without clamps or presses, regardless of the angle of the work pieces.

Aesthetic joining is possible without visible connectors, with short assembly times and without having to wait or the glue to dry.

Tenso P-10 is used on mitre joints from 15 mm material thickness and in butt joints from 12 mm.



### Articles



Tenso P-10	Art. No.
80 pairs, with preload clip	145418
300 pairs, with preload clip	145428
1000 pairs, with preload clip	145438
2000 pieces element with spring	145442
2000 Spieces element without spring	145443



Art. No.
145445

### www.lamello



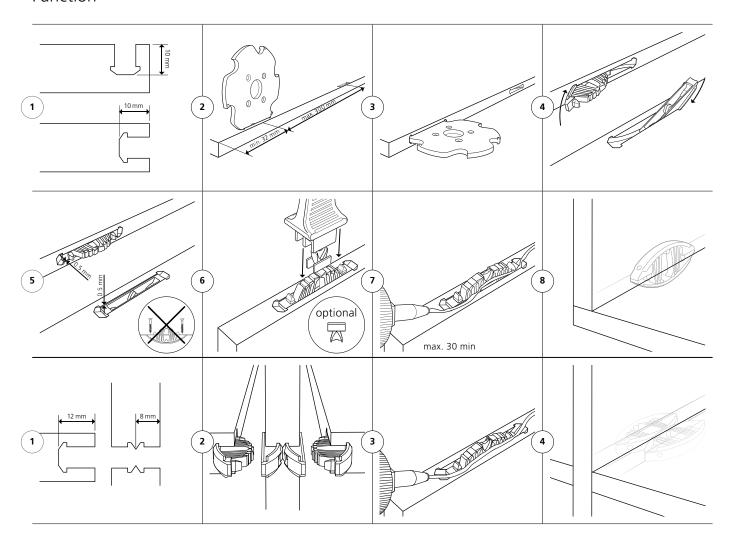
Experience the connector live and receive comprehensive product information!



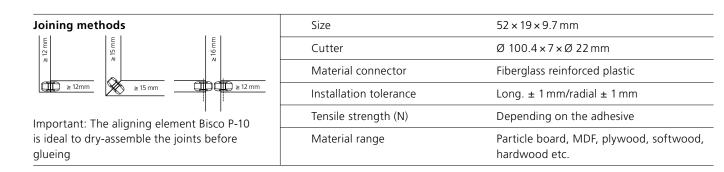




### Function



### Technical data

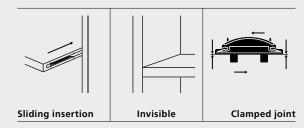


# **Divario P-18**

Self-clamping, invisible connector for slide insertion



### Features



Divario P-18 is a detachable connector for slide-in insertion and is anchored in the form-locking P-System groove within seconds.

The connector is used to slide shelves or partitions into an already assembed cabinet. In the process, the Divario P-18 clamps the workpieces together firmly and ensures perfectly closed joints without visible connectors.

# Divario P-18 is used for joining shelves to divisions from 18 mm panel thickness or in butt joints from 12 mm.

### Articles

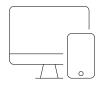


Divario P-18	Art. No.
80 pairs	145550
300 pairs	145560
1000 pairs	145570
2000 pieces, element	145520
for P-System groove	
2000 pieces, element	145540
for drill holes	



Divario P-18 Installation tool	Art. No.
For fixing the Divario in the workpiece	125500

### www.lamello



Experience the connector live and receive comprehensive product information!

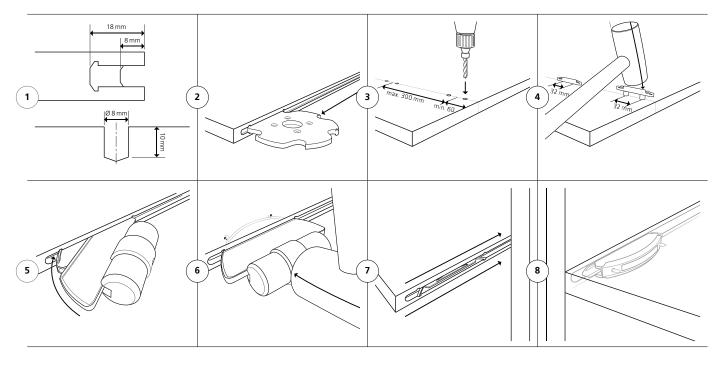








### Function



### Technical data

Joining methods	Element with P-System gro	ove 65 × 16 × 9.7 mm
	Element with drill holes	Ø8×10 mm, distance 32 mm
	Cutter	Ø100.4×7ר22mm
	Material connector	Fiberglass reinforced plastic
2 12 mm 2 18 mm	Installation tolerance	Long. ± 1 mm/radial ± 0 mm
<u></u>	Load limits per connector (l	N) (mm) 19 22 25 30
<b>1 2</b> ≥ 12 mm	Up to	MDF 600 <sup>1</sup> 700 <sup>1</sup> 800 <sup>1</sup> 1000 <sup>2</sup>
		Particle board 500 <sup>1</sup> 600 <sup>1</sup> 700 <sup>1</sup> 1000 <sup>2</sup>
		Beech 1700 <sup>1</sup> 2000 <sup>1</sup> 2000 <sup>1</sup> 2000 <sup>2</sup>
		Spruce 800 <sup>1</sup> 900 <sup>1</sup> 1300 <sup>1</sup> 1400 <sup>2</sup>
	Tensile strength (N)	All materials 6001
	Material range	Particle board, MDF, plywood, softwood, hardwood etc.



# LiHD: The world's most powerful battery system in the industry

A unique interplay of:

- Intelligent battery management for long-lasting high capacity
- Patented AIR-COOLED system for short charging times with hot batteries
- High-quality cell structure with 50-percent reduced internal resistance ensures full Zeta power even with a small battery pack



Multiple power connectors for internal wiring provide continuously high power output

Connection cap made of

Reinforced current collectors for low heat losses

More active material in reactive surface for high capacity in a compact size

### Powerful 18 V LiHD battery pack either as 4.0 Ah or 5.5 Ah

### 18 V LiHD 4.0 Ah

- Included as standard battery in the set
- Compact, lightweight and powerful
- Suitable for all applications

### 18 V LiHD 5.5 Ah

Available as an option for even longer working periods



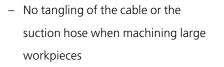


# More flexible in the workshop

greater efficiency and flexibility in the workshop.



The ready-to-hand battery-powered biscuit joiner ensures



 Cutting directly on the workpiece reduces the handling of bulky parts. There is also no need to disconnect and plug in the cable



- Quick production of furniture with different angles without complicated programming on the CNC
- Create prototypes without timeconsuming machine setup. Unrestricted design freedom thanks to the wide variety of joining elements



- The cordless power tool can be used to easily adapt or add grooves in no
- Corner connections are quickly and precisely cut directly at the work bench



# Mobile working on the construction site

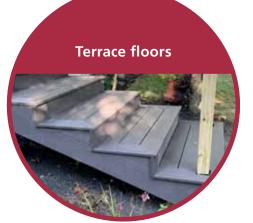
The cordless biscuit joiner makes work on the construction site much easier – there is no need to search for sockets and roll out the cable reel



- Easily and flexibly cut grooves in fitted panels on site, even if the furniture has been completely machined on the
- Additional grooves on the longitudinal joint for fillers or pillar cladding are created extremely efficiently after



- For renovation work, the grooves are only cut directly on site after
- Cable-free work facilitates handling overhead and in hard-to-reach niches



- Join components outdoors without access to a power connection
- No walkways between the processing site and the installation site, and no additional handling of the cable reel







INTERFER











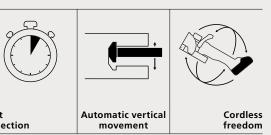
# Zeta P2 cordless

The powerful P-System biscuit joiner for cordless freedom





### Features



The Zeta P2 cordless is the battery-powered biscuit joiner for even faster joining, suitable for use with P-System connectors. It is used to create the form-locking P-System groove within seconds, and is even more flexible to use due to its cordless freedom. The integrated vertical mechanical drive is automatically triggered at the maximum cutting depth and performs a lateral cutter movement for the P-System groove. Connectors with various functions and different sizes can now be inserted into the form-locking P-System groove without the need for any tools.





Zeta P2 cordless biscuit joiner, DP (diamond)	Art. No.
In systainer, incl. 2 batteries and charger	101801SD
In systainer, without batteries, without charger	101800SD

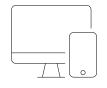


Zeta P2 cordless biscuit joiner, DP, 2 × battery pack 18 V, LiHD 4.0 Ah\*, battery charger ASC 55\*, P-System drill jig incl. drill, suction stub 36 mm, spacer 2 and 4 mm, dust bag, tool set, stop square



\* Only included in art. No. 101801SD

### www.lamello



Experience Zeta P2 cordless live and receive comprehensive product information!





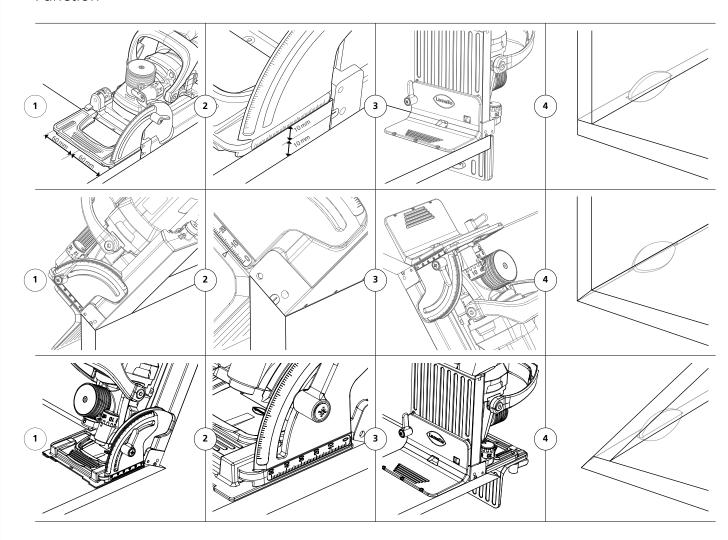








### Function



### Technical data

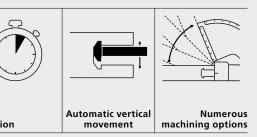
Battery voltage	18 V	Groove width	7/10 mm
Speed	9 000 min <sup>-1</sup>	Groove depth max.	20 mm
P-System Cutter	Ø 100.4×7×22 mm	 Weight	3.7 kg incl. battery

### Zeta P2

The machine for the evolving P-System, saving you time daily! Differentiate your products from the standard!



### Features



The Zeta P2 is the biscuit joiner for P-System connectors and is used to create the form-locking P-System goove within seconds.

The integrated vertical mechanical drive is automatically triggered at the maximum cutting depth and performs a lateral cutter movement for the P-System groove. Connectors with various functions and different sizes can now be inserted into the form-locking P-System groove. The insertion into the groove is quick and without tools.

### Articles



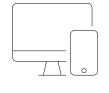
Zeta P2	Art. No.
With P-System groove cutter HW (carbide)	1014035
in Systainer	
With P-System groove cutter DP (diamond)	101403SD
in Systainer	



### Kit contains

Zeta P2, P-System groove cutter, stop square, suction stub 36 mm, disc for angles, spacer 2 + 4 mm, tools, Clamex P drill jig incl. drill

### www.lamello



Experience Zeta P2 live and receive comprehensive product information!







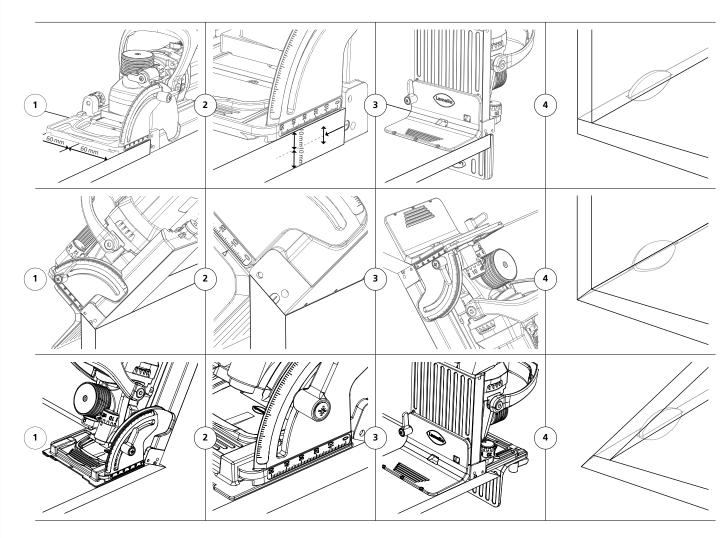








### **Function**



### Technical data

Power/Voltage	1 050 W/230 V	Teeth	Z3	
	800 W/120 V	Cutting depth max.	20 mm	
Speed	9 000 min <sup>-1</sup>	Weight	3.7 kg	
P-System Cutter	HW: Ø 100.9 × 7 × Ø 22 mm DP: Ø 100.4 × 7 × Ø 22 mm		5.1 <b>g</b>	

## Accessories

Zeta P2 cordless and Zeta P2

# Connected in seconds.

Without waiting time, clamps, or secondary processes, glued and clamped in 40 seconds

### Accessories



Stop square for Zeta P2, Top 21, Classic X	Art. No.
For stabilising the biscuit joiner in the vertical	251044
position, ideal for obtuse mitre joints	



Dust bag	Art. No.
For Zeta P2/Top 21/Classic X	257532







Spacer for Zeta P2, Top 21, Classic X	Art. No.	
5 mm, aluminium for 18 mm panels	253027	
2 mm, plastic for 16 mm panels	253023	
4 mm, plastic for mitres	253026	



	Art. No
ery pack 18 V, LiHD 4.0 Ah	31301



### P-System groove cutter DP (diamond),

Ø 100.4×7ר 22 mm	Art. No.
Z3, 4 NL for Zeta P2	132140



### P-System groove cutter HW (carbide),

Ø 100.9×7ר 22 mm	Art. No.	
Z3, 4 NL for Zeta P2	132141	



### Groove cutter HW (carbide),

Ø 100×4ר 22 mm	Art. No.
Z2 + V4 scoring teeth, 4 screw holes, hub	132000
for Zeta P2/Top 21/Classic X	

### Batteries



	Art. No.
ttery pack 18 V, LiHD 4.0 Ah	313013



	Art. No.
attery pack 18 V, LiHD 5.5 Ah	313015



	Art. No
Battery charger ASC 55	12310

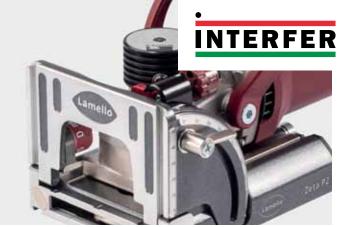
Please find the complete accessories range starting **PAGE 180** 

### Advantage

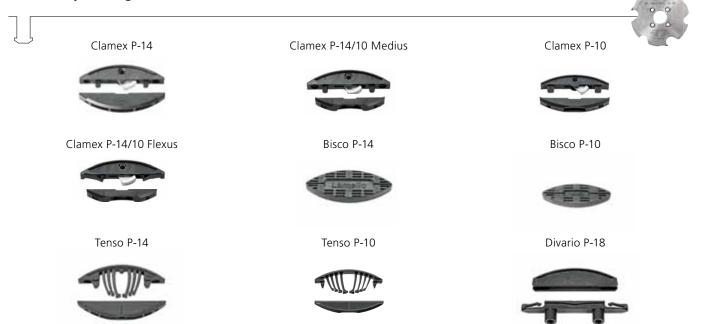
with Clamex P – detachable			Time for one connector pair	
			1. Cut	25
AND THE RESERVE THE PARTY OF TH			2. Drill	15
			3. Insert	5
South of the Control	пипипип		4. Connect – finished!	5
Cut 2 Drill	Insert 3	Connect – finished!	Ready in	50 s
with Tenso P – glued			Time for one	
	"Management of the Control of the Co		1. Cut 2. Insert 3. Apply glue 4. Connect – finished!	25 5 5 5
1 Cut Insert	Apply glue	Connect – finished!	Ready in	40 s



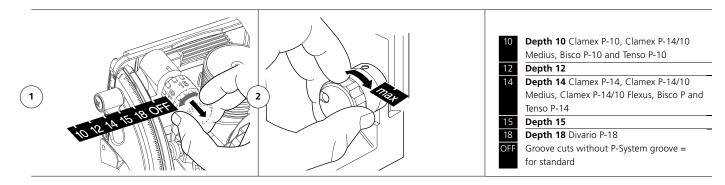
With the Zeta P2, you can quickly and easily connect parts with a range of angles and joining situations. Suitable for individual pieces of furniture as well as prototypes and line production.



### With P-System groove



### P-System depth adjustment



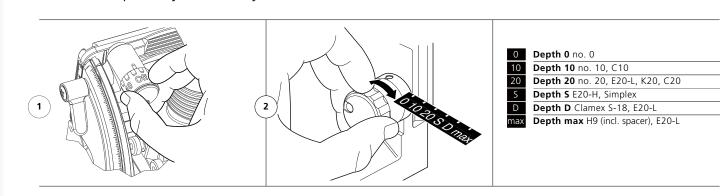
### With 4 mm Lamello System groove cutter



### With 3 mm Lamello System groove cutter

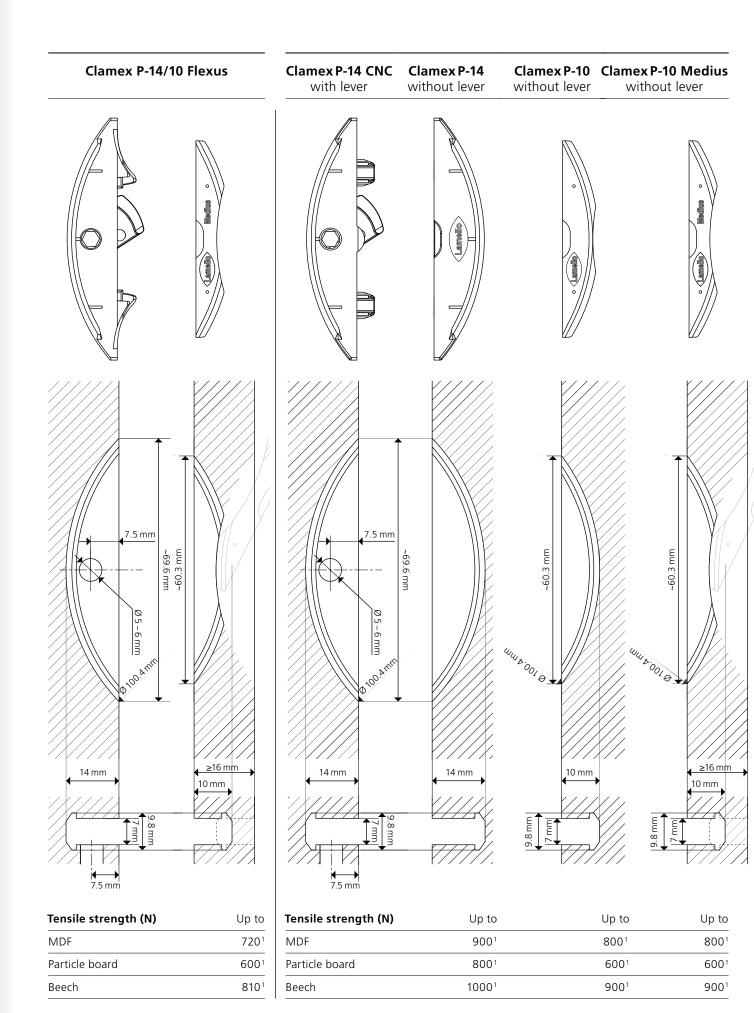


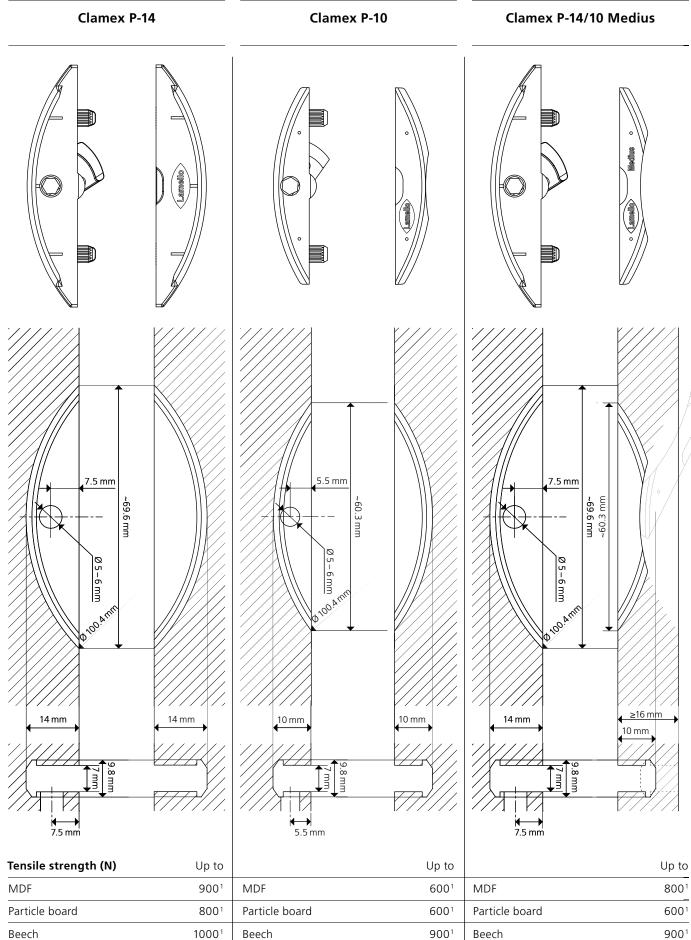
### Lamello depth adjustment system



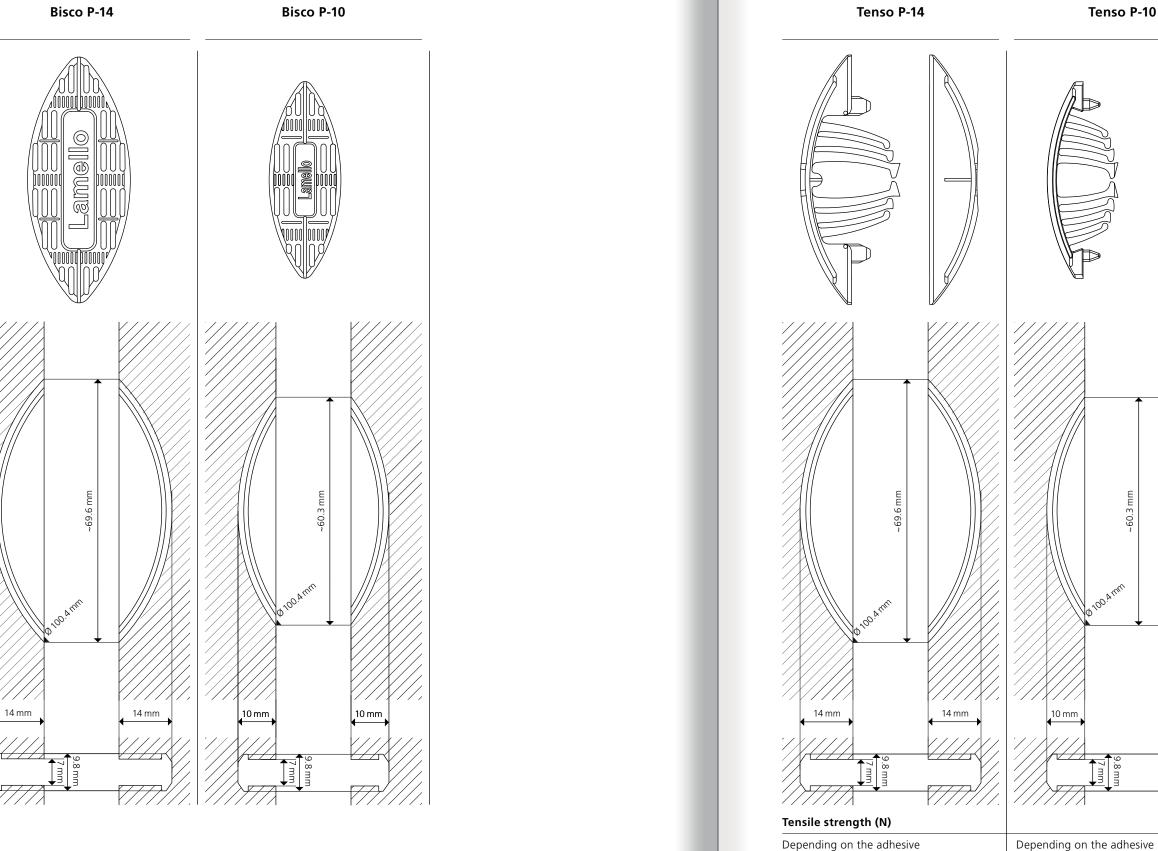


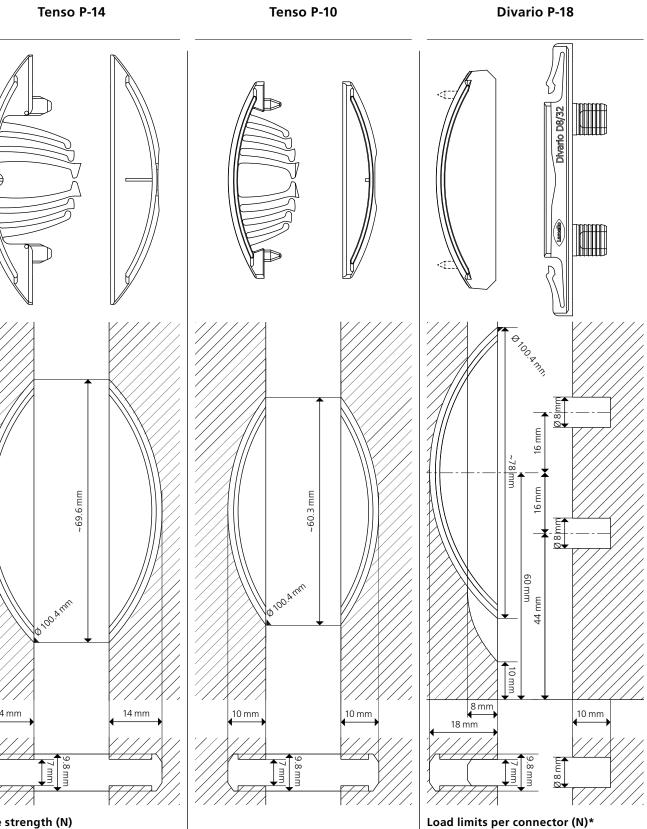












22

1700<sup>1</sup> 2000<sup>1</sup> 2000<sup>1</sup> 2000<sup>1</sup> 800<sup>1</sup> 900<sup>1</sup> 1300<sup>1</sup> 1400<sup>1</sup>

600<sup>1</sup>

700¹ 800¹ 1000¹

700¹ 1000¹

19

600¹

Particle board 500<sup>1</sup>

Tensile strength (N)

<sup>&</sup>lt;sup>1</sup> See comment on load limits on **PAGE 195** I \* Up to

# Accessories / Spare Parts

P-System



### P-System



### P-System connector assortment

professional	Art. No.
Scope of delivery: 120 pairs Clamex P-14,	145323
30 pairs Clamex P-14/10 Flexus, 30 pairs Clamex P-	10,
80 pairs Tenso P-14 incl. clip, 30 pairs Tenso P-10	
incl. clip, 20 pieces Bisco P-14, 20 pieces Bisco P-10	ı
80 pairs Divario P-18, Divario installation tool/drill/	
marking gauge, Clamex P installation tool, Tenso P-	14/10
preload tool, Sortainer T-loc	



### P-System connector assortment

basic	Art. No
In Systainer3 M187, scope of delivery:	14532
80 pairs Clamex P-14, 80 pairs Tenso P-14,	
incl. preload clip, 30 pairs Clamex P-14/10 Medius,	
30 pairs Clamex P14/10 Flexus, 20 pieces Bisco P-14	and
Tenso P-14/10 preload tool	

### Clamex P

4 mm, 120 × 50 mm





271945A





Cover cap, 100 pieces, 90°		Art. No.
RAL 9010 pure white		335280
RAL 9011 graphite black	•	335281
RAL 1014 ivory, pine		335282
RAL 1011 brown beige, beech		335283
RAL 8007 fawn brown		335284
RAL 8017 chocoloate brown		335289
RAL 9002 grey white		335285
RAL 7035 light grey		335286
RAL 7040 window grey		335287
RAL 7031 blue grey		335288
RAL 7022 umbra grey		335298

Cover cap, 500 pieces, 90°		Art. No.
RAL 9010 pure white	$\bigcirc$	335362
RAL 9011 graphite black	•	335363
RAL 1014 ivory, pine		335364
RAL 1011 brown beige, beech		335365





Cover cap, 100 pieces, 45°		Art. No.
RAL 9010 pure white	$\bigcirc$	335380
RAL 9011 graphite black		335381
RAL 1014 ivory, pine		335382
RAL 1011 brown beige, beech		335383
RAL 8017 chocoloate brown		335384
RAL 7035 light grey		335386
RAL 7022 umbra grey		335388



Clamex P drill jig	Art. No.
Incl. drill, from 22.5° for all	125344
Clamex P connectors (P-10, P-14)	
Angle for drill jig	255250
Element insert for size P-10	255251
Element insert for size P-14	255252



Clamex P drill jig long	Art. No.
Drill jig for thick workpieces 100 mm,	125345
(P-14), incl. drill	



Drill	Art. No.
Spiral drill Ø 6 mm with centering point,	131506
for Clamex P drill jig	
Spiral drill Ø 6 mm with centering point,	131508
for Clamex P drill jig long	
Depth adjuster for drill, 6 mm diameter	255243

 $\mathcal{O}$ 

# Accessories / Spare Parts

P-System



#### Combination CNC and Zeta P2



#### Positioning pin CNC for Zeta P2\*,

2 pieces	Art. No.
Ø 5 mm	251048
Ø8mm	251066



Positioning clip CNC for Zeta P2*	Art. No.
Ø 6 mm	251067
for positioning in the Clamex Placess hole (6 mm)	

#### Tenso P



Tenso P-14/10 preload tool	Art. No.
Tool to pre-load the Tenso P	145400

## P-System 4 mm depth

adjuster attachment for P-8	Art. No.
For offset installation on dividing panels	145439
16 mm with Tenso P-10	

#### Divario P



#### Divario P-18 Marking jig metal with

marking points	Art. No.
Marking jig incl. drill with centering point and	125510
rotating depth collar for the precise drilling of	
Divario drill holes by hand	



#### Divario P-18 Marking jig plastic,

to mark with a pencil	Art. No.
Marking jig to mark the Divario holes	125511
with a pencil	_



Divario P-18 Installation tool	Art. No.
Divario P-18 Installation tool for fixing	125500
the Divario in the workpiece	



Divario P-18 Starter set	Art. No.
In systainer3 M137, scope of delivery:	145552
Divario P-18, 80 pairs, drill, marking jig in metal	
and installation tool	

#### Zeta P2



#### Stop square for

Zeta P2, Top 21, Classic X	Art. No.
For stabilising the biscuit joiner in the	251044
vertical position, ideal for obtuse mitre joints	







Spacer for Zeta P2, Top 21, Classic X	Art. No.
5 mm, aluminium for 18 mm panels	253027
2 mm, plastic for 16 mm panels	253023
4 mm, plastic for mitres	253026



#### P-System groove cutter DP (diamond),

Ø 100.4×7ר 22 mm	Art. No
Z3, 4 NL for Zeta P2	132140



#### P-System groove cutter HW (carbide),

Ø 100.9×7ר 22 mm	Art. No.
Z3, 4 NL for Zeta P2	132141



Dust bag	Art. No
For Zeta P2/Top 21/Classic X	257532

#### **Batteries**



 Battery pack 18 V, LiHD 4.0 Ah
 313013



Art. No. Battery pack 18 V, LiHD 5.5 Ah 313015



Art. No.

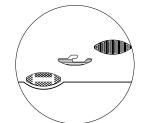
Battery charger ASC 55 123100

\* For detailed information, see PAGE 166/171



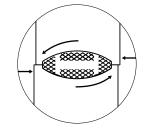


#### Features



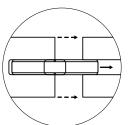
#### Versatile applications

One cutting principle for many different joining elements



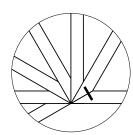
#### Lateral tolerance

The generous sliding tolerance allows for perfect flush alignment of workpieces



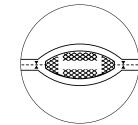
#### Perfect fit

The precision of the joining elements and of the 4 mm groove lead to a perfect fit



#### Versatile

The minimal element depth allows for mitres of 22.5 – 180 degrees as well as surface and corner joints and divisions



#### Symmetrical

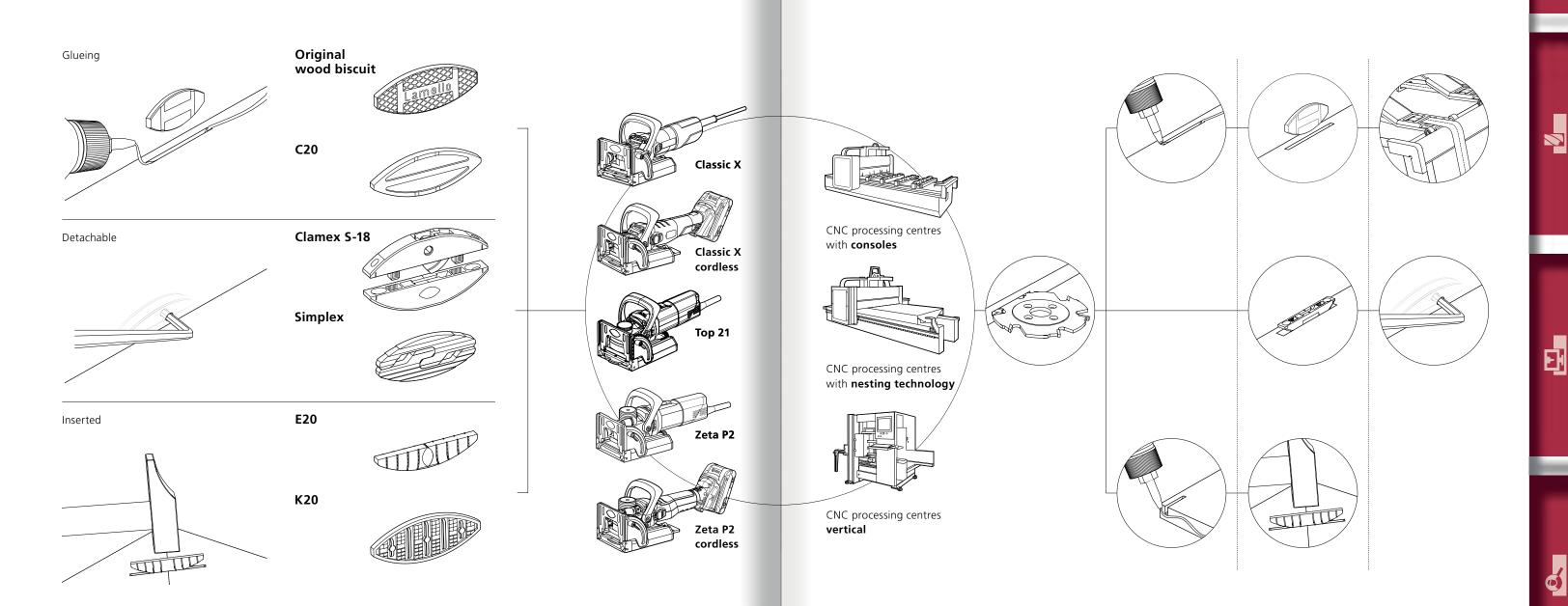
The identical groove in both workpieces leads to an increase in efficiency in production

#### . Interfer

# Lamello System

Overview

Joining methods	Connector	Machines			Sequence		
		Power tools	CNC machines	<b>1</b> Cut	<b>2</b> Apply glue	3 Insert the connector	<b>4</b> Clamp





#### . Interfer

2

# Lamello System

Applications

Furniture manufacturing







Interior fitting

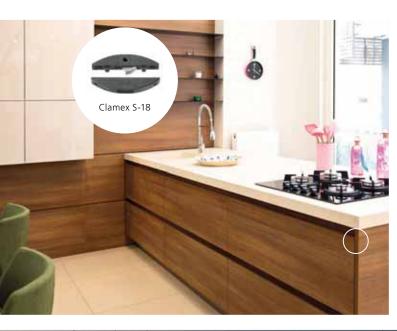




# Lamello System

Applications

Kitchen manufacturing







#### Commercial joinery







. INTERFER

7

1

Shop fitting

# Original wood biscuit

The original wood biscuit that always fits



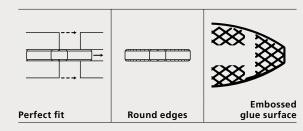








#### Features



The original wood biscuit is the proven solution for wood joints and the original from the inventor of the system. The original wood biscuit guarantees quality with its dimensional accuracy, optimal glue distribution, dimensional stability as well as the sustainable cultivation of the beech wood. The perfect fit demonstrates its value from the very start, when the biscuits are easily inserted into the groove and remain in place even when the work piece is turned.

#### Articles



Original wood biscuit 20	Art. No.
1000 pieces	144020



Original wood biscuit 10	Art. No.
1000 pieces	144010



Original wood biscuit 0	Art. No.
1000 pieces	144000



Original wood biscuit H9*	Art. No.
1000 pieces	144009

Assorted	Art. No.
500/250/250 pieces (20/10/0)	144030

#### www.lamello



Experience the connector live and receive comprehensive product information!







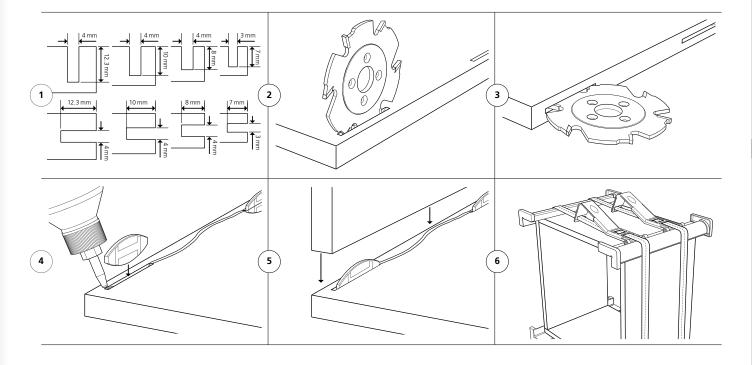






<sup>\*</sup> Installation of wood biscuits with cutter Ø  $100 \times 4 \times Ø$  22 mm (standard cutter). Installation of H9 wood biscuits with cutter Ø  $78 \times 3 \times Ø$  22 mm (Art. No. 132009)

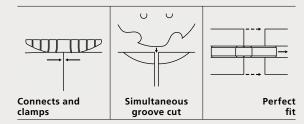
#### **Function**



Joinin	ig methods		Size 20	56×23×4mm
	ICI	151	Size 10	53 × 19 × 4 mm
	mp≥€mu	12 mm	Size 0	47 × 15 × 4 mm
20	≥ 13 mm	≥ 12 mm	Cutter	Ø 100×4ר 22 mm
	2 6 mm	10 mm	Size H9	38 × 12 × 3 mm
10	D ≥ 11 mm	N ≥ 10 mm	Cutter	Ø 78×3ר 22 mm
	<u>6</u> mm		Material connector	Beech
0	^	∑ ≥9 mm	Installation tolerance	Long. ± 1.0 mm/radial ± 1.0 mm
		IEI	Clamping force (N)	Depending on the adhesive
Н9	n D ≥8 mm	© //   ≥8 mm	Material range	Particle board, MDF, plywood, softwood, hardwood etc.



#### Features



E20 is a self-clamping element and can be used with any Lamello biscuit joiner. The E20 is driven into the 4 mm groove using a hammer. During insertion, the curved ridges on each side of the connector hold in the groove and clamp the workpieces together. E20 serves as a perfect glueing aid in the workshop or on site.

E20-L is suitable for surface joints such as picture frames, plinth or panel extensions. E20-H is used in the edge and serves as a plinth connector.

#### Articles



E20-H	Art. No.
80 pieces	145021
400 pieces	145026
1200 pieces	145028

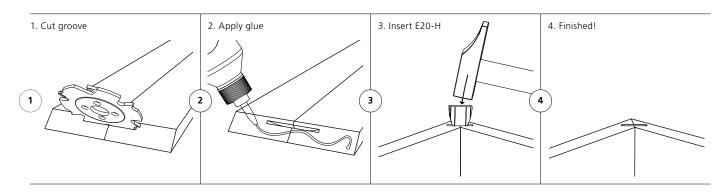


E20-L	Art. No.
80 pieces	145022
400 pieces	145025
1200 pieces	145027

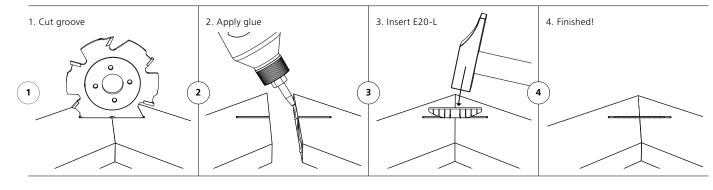
Assorted	Art. No.
40/40 pieces (E20-H/E20-L)	145020

#### Function

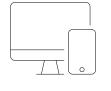
#### E20-H



#### E20-L



#### www.lamello



Experience the connector live and receive comprehensive product information!













#### Technical data

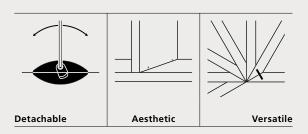


### Clamex S-18

Detachable, flexible and simple. Installation in an 8 mm groove with screws



#### Features



Clamex S-18 is a detachable connector. It is inserted into an 8 mm wide groove and held in place with screws. Through the minimalist 6 mm access hole, Clamex S-18 is firmly connected and disconnected using a lever.

Clamex S-18 can be used with any Lamello biscuit joiner, allows aesthetic joints at all angles and is ideal for permanently joined or detachable mitres.

Clamex S-18 is used in mitre joints from 19 mm material thickness and in butt joints from 15 mm.



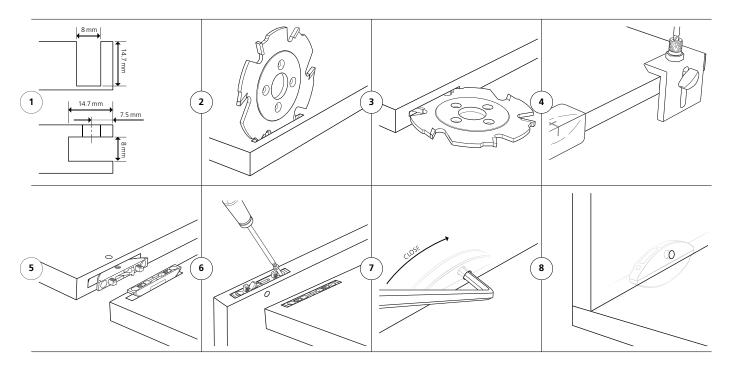
#### Articles



Clamex S-18	Art. No.
18 pairs, incl. screws 3 × 16 mm	145231
80 pairs	145236
300 pairs	145241
1000 pairs	145251



 110	· 一十	ion
 uı	I C. L.	-



#### www.lamello



Experience the connector live and receive comprehensive product information!









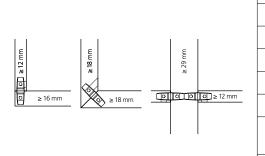






#### Technical data

Joining methods



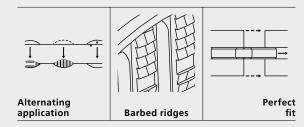
Size	66×29×8 mm		
Cutter	Ø 100×8ר 22 mm		
Material connector	Fiberglass reinforced plastic		
Material of lever	Zinc die cast		
Screw	Panhead 3 × 16 mm		
Installation tolerance	Long. ± 1.0 mm		
Clamping force (N) Up to	MDF 600 <sup>1</sup>	Particle board 6001	Beech 900¹
Material range	Particle board, MDF, plywood, softwood, hardwood etc.		

<sup>\*</sup> Double cut with 4 mm cutter and spacer Single cut with 8 mm cutter Art. No. 132108

The clamping element, which holds the workpiece in position



#### Features



K20 is a clamping element and can be used with any Lamello biscuit joiner. K20 has barbed ridges on each side of the connector which anchor themsleves into the 4 mm groove.

The clamping biscuit is ideal for difficult to clamp workpieces such as fillers or covers and is able to hold workpieces in the correct position until the adhesive is dry.

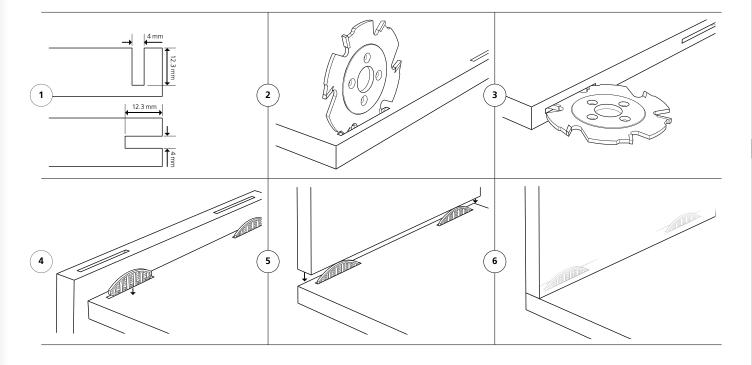
The combination with the original wood biscuits size 20 results in a joint with high strength.

#### Articles

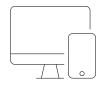


K20	Art. No.
80 pieces	145001
250 pieces	145000

#### Function



#### www.lamello



Experience the connector live and receive comprehensive product information!

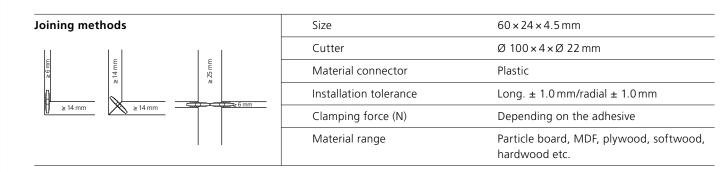










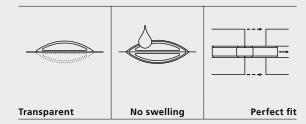


### C20/C10

The transparent element



#### Features



C10 and C20 plastic biscuits are the proven joining solution for mineral composite materials such as Corian, Varicor.

The white transparent plastic ensures that the connectors do not show through thin materials. The specific adhesive for composites can be used for the joints as well as for the biscuits. Since the C10 and C20 do not swell, these biscuits are also suitable for outdoor or wet areas. The sizes 10/20 match the sizes of the original wood biscuit.

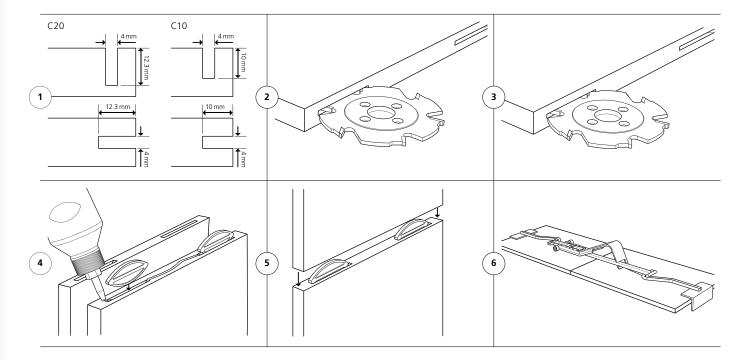
#### Articles



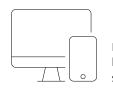


C10	Art. No.
300 pieces	145012

#### Function



#### www.lamello



Experience the connector live and receive comprehensive product information!





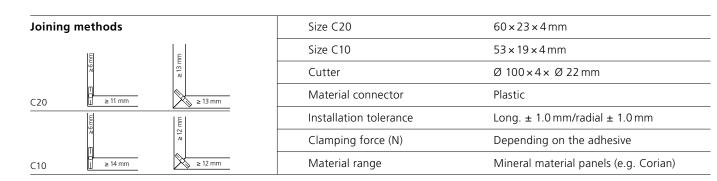








#### Technical data



7

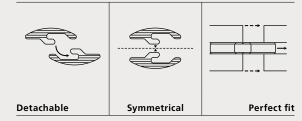
Į.

# **Simplex**

Detachable slide-in connector



#### Features



Simplex is a detachable slide-in connector in two-parts for dismountable constructions and can be used with any Lamello biscuit joiner.

Simplex is inserted into the 4 mm groove and anchored with PUR adhesive. The connector has a stop on one side and can be slid-in and removed again.

Simplex is ideal for repeated insertion and removal of a workpiece, e.g. an inspection cover, a filler, for detachable constructions or as a glueing aid.

#### Articles



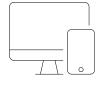
Simplex	Art. No.
50 pairs	166101
100 pairs	166100

#### Accessories



Simplex inserting tool	Art. No.
For accurate positioning of Simplex	166110

#### www.lamello



Experience the connector live and receive comprehensive product information!





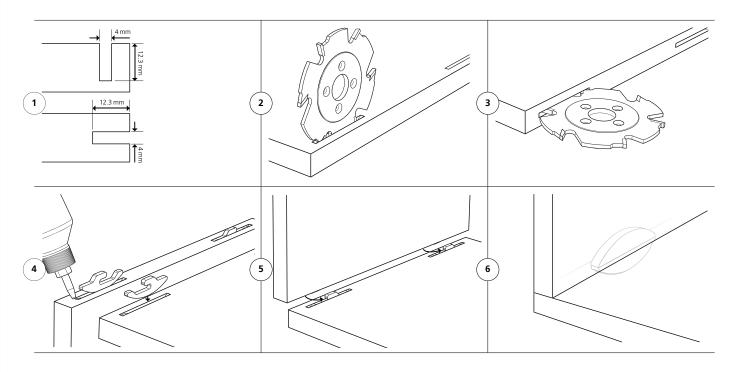


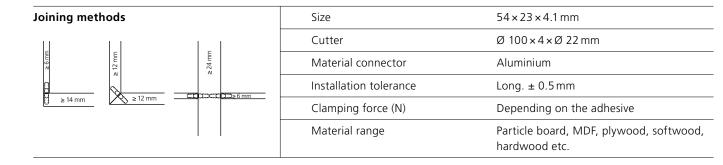






#### **Function**



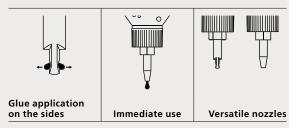


## Minicol

The all purpose glue applicator



#### Features



Minicol is a universal glue applicator and the ideal solution for applying glue in 4 mm grooves.

Unlike with a glue bottle, the glue exits the nozzle on the sides. Therefore glue is applied to the groove sides instead of the groove bottom, resulting in better distribution and a more stable joint.

As the glue applicators are positioned with the nozzles facing downwards in the wooden base, the glue leaves the nozzle immediately and drying out is prevented. In addition to the plastic nozzle, a metal nozzle for biscuit grooves and a pointed nozzle are also available.

#### Articles



Minicol glue applicator	Art. No
With plastic nozzle	175500
for biscuit grooves	
With metal nozzle	175550
for biscuit grooves	



Minicol pointed nozzle	Art. No.	
Plastic nozzle	335522	



Minicol nozzles for biscuit grooves	Art. No.
Metal nozzle	285512
Metal nozzle for biscuits size H9	285509
Plastic nozzle	335511

#### www.lamello



Experience the Minicol live and receive comprehensive product information!





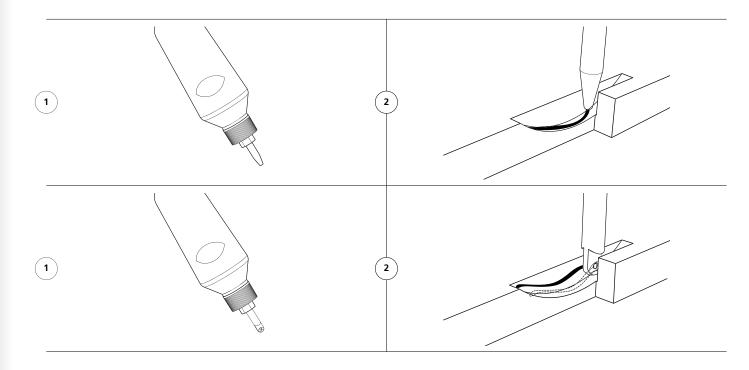








#### Function



Dimension	100 × 100 × 230 mm	
Volume	300 ml	
Material	Base	Maple
	Bottle	Plastic
	Nozzle	Metal/Plastic

# **Clamping set**

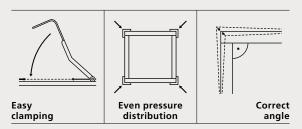
Clamping system for cabinets











Clamping set is a system for glueing cabinets and various other components in furniture production and is an addition to the Lamello System. The clamping set consists of profile sections to protect the edges, 8 meter long straps with tensioners and two tension hooks. Unlike with screw clamps, the pressure distribution is always uniform, which means furniture is automatically clamped at right angles regardless of whether the panels are glued in a butt or mitre joint.

Clamping set is ideal for drawers, cabinets, frames or wall and floor panels.

#### Articles



Clamping set		Art. No.
20 cm	1 piece of clamps	175021
	8 m strap	
	4 pieces profile sections 20 m	
60 cm	2 pieces of clamps	175020
	2 pieces 8 m straps	
	4 pieces profile sections 60 cm	
	2 pieces tension hooks	



Tension hooks	Art. No.
2 pieces	175200

(A)		
Profile sections	Art. No.	
4 pieces, length 12 cm	175401	
4 pieces, length 40 cm	175402	
4 pieces, length 60 cm	175403	

#### www.lamello



Experience the clamping set live and receive comprehensive product information!





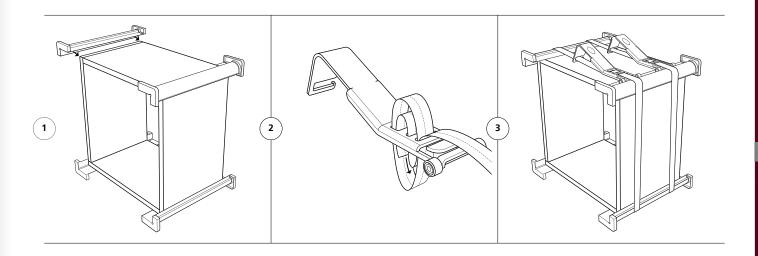








## Function



INTERFER

7

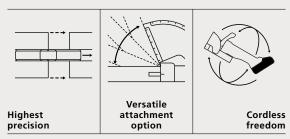
Min. workpiece length	150 mm	
Material	· ·	Anodised aluminium
	Polyester belt for clamps	Polyester
	Clamps/Tension hooks	Metal powder-coated

# Classic X cordless

The original biscuit joiner – precise and cordless



#### Features



Classic X cordless is the original, battery-powered biscuit joiner from the inventor of the Lamello system for cutting the 4 mm groove. The proven and well-designed Classic X cordless is fast and versatile in its use and the basis for the wide range of connectors with fixed, self-clamping and detachable solutions. Precision in every component leads to perfect accuracy of the workpieces, and the cordless freedom means even more flexible application. The multifunctional stop square allows perfect mitres by applying on the exterior surface and stabilises the machine in vertical position.



#### Articles



Classic X cordless biscuit joiner	Art. No.
In systainer, incl. 2 batteries and charger	101701DES
In systainer, without batteries, without charger	101700DES
In carton, without batteries, without charger	101700DEK



#### Kit contains

Classic X cordless biscuit joiner,  $2 \times$  battery pack 18 V, LiHD 4.0 Ah\*, battery charger ASC 55\*, suction stub 36 mm, stop square, spacer 4 mm, dust bag, tool set

#### www.lamello



Experience Classic X cordless live and receive comprehensive product information!







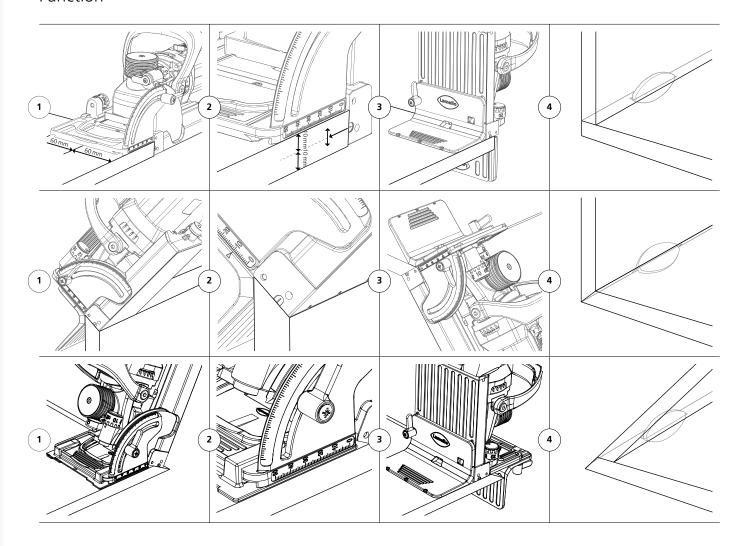






#### More information regarding the battery system on ${\bf PAGES~54-57}$

#### Function



#### Technical data

Battery voltage	18 V	Groove width	4 mm
Speed	7 300 min <sup>-1</sup>	Groove depth max.	20 mm
Cutter	Ø 100 × 4 × 22 mm	Weight	3.1 kg incl. battery

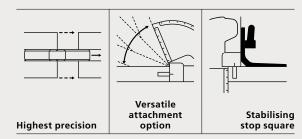
<sup>\*</sup> Only included in art. No. 1017015

### Classic X

The original biscuit joiner for every workshop



#### Features



Classic X is the original biscuit joiner from the inventor of the Lamello System for cutting the 4 mm groove.

The proven and well-designed Classic X is fast and versatile in its use and the basis for the wide range of connectors with fixed, self-clamping and detachable solutions.

Precision in every component leads to perfect accuracy of the workpieces and saves time.

The multifunctional stop square allows perfect mitres by applying on the exterior surface and stabilises the machine in vertical position.



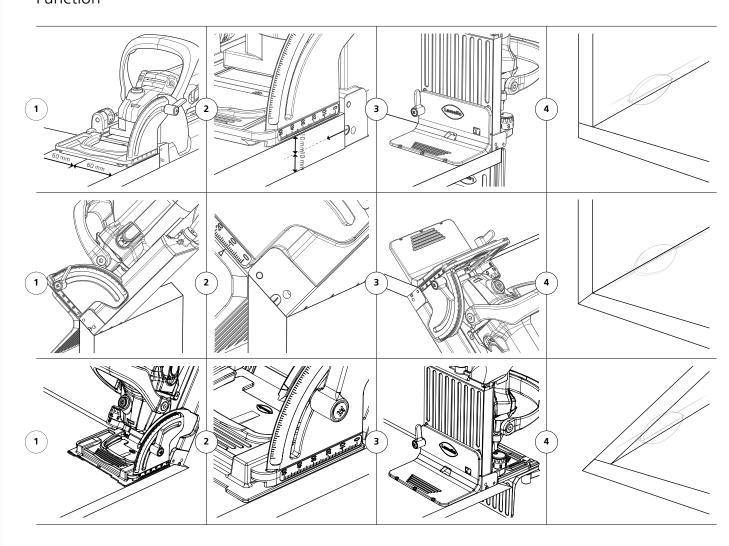


Classic X	Art. No.
In systainer	1016025
In carton	101602K

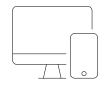


Classic X, groove cutter HW (carbide), suction stub 36 mm, stop square, spacer 4 mm, tool set

#### Function



#### www. lamel lo



Experience Classic X live and receive comprehensive product information!













#### Technical data

Power/Voltage	850 W/230 V or 120 V	Teeth	Z6 (3+3) with reversing teeth
Speed	10 000 min <sup>-1</sup>	Cutting depth max	20 mm
Cutter	Ø 100×4ר 22 mm	Weight	2.9 kg

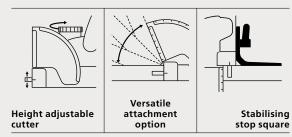
7

# **Top 21**

The original biscuit joiner with height adjustable blade from the inventor



#### Features



Top 21 is the biscuit joiner from the inventor of the Lamello System and includes a height adjustable blade for cutting the 4 mm groove. The unique height adjustment of the cutter in steps from 0.1 mm to max. 4 mm allows positioning the groove in the middle of the material thickness.

Precision in every component leads to perfect accuracy of the workpieces and saves time.

The multifunctional stop square allows perfect mitres by applying on the exterior surface and stabilises the machine in vertical position.



#### Articles



Top 21	Art. No.
In systainer	1015015
In systainer with carbide reversing blade cutter	101501SW



Top 21, groove cutter HW, suction stub 36 mm, dust bag, stop square, spacer  $4 \, \text{mm}$ , tool set

#### www.lamello

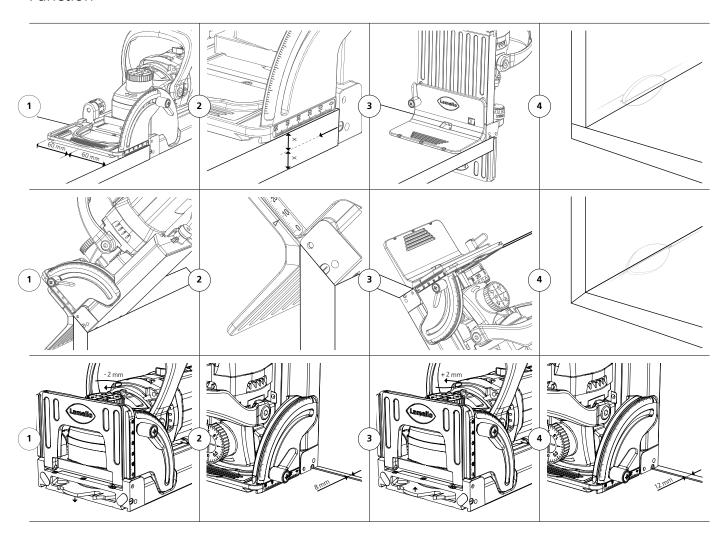


Experience Top 21 live and receive comprehensive product information!





#### Function



#### Technical data

Power/Voltage	1 050 W/230 V 800 W/120 V	Teeth	Z2 + V4 with scoring teeth
Speed	9 000 min <sup>-1</sup>	Cutting depth max	20 mm
Cutter	Ø 100×4ר 22 mm		3.5 kg

## **Accessories**

Classic X cordless, Classic X and Top 21



#### Accessories

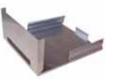


#### Stop square

for Zeta P2, Top 21, Classic X	Art. No.	
For stabilising the biscuit joiner in the vertical	251044	
position, ideal for obtuse mitre joints		



Spacer for Zeta P2, Top 21, Classic X	Art. No.
5 mm, aluminium for 18 mm panels	253027
2 mm, plastic for 16 mm panels	253023
4 mm, plastic for mitres	253026



Slide shoe for biscuit joiner	Art. No.
To protect the wall and the machine	251057
for Zeta P2/Top 21/Classic X	



#### Carbide tipped saw blades HW (carbide)

for expansion gaps, Ø 100×2.4ר 22 mm	Art. No.
Z20, 4 screw holes, 2 spacers	132350
for Zeta P2/Top 21/Classic X	



#### Groove cutter HW (carbide),

Ø 100×4ר 22 mm	Art. No.
Z2 + V4 scoring teeth, 4 screw holes, hub	132000
for Zeta P2/Top 21/Classic X	



<b>(</b>	Art. No.
26 alternating teeth, without hub,	132106
vith spacer for Classic X	



Groove cutter HW (carbide), Ø 78×3ר 22mm	Art. No.
Z4, 4 Screw holes, with hub for original wooden	132009
biscuit H9 for Zeta P2/Top 21/Classic X	



#### Groove cutter HW (carbide) with reversible blades,

Ø 100×8ר 22mm (Clamex S-18 connector)	Art. No.	
Z4 + V4, 4 screw holes for Top 20/Top 21/Classic X	132108	





Dust bag	Art. No.
For Zeta P2/Top 21/Classic X	257532



Suction stub 36 mm	Art. No.
For biscuit joiner (Festool compatible)	331007



Deflector stub	Art. No.
For biscuit joiner	331005



 Battery pack 18 V, LiHD 4.0 Ah
 313013



Art. No. Battery pack 18 V, LiHD 5.5 Ah **313015** 



Art. No.

Battery charger ASC 55 123100

Please find the complete accessories range starting **PAGE 184** 107

# Original Lamello biscuit joiners

These properties make the difference

#### **Features**

#### Multifunctional stop square included in the kit

#### Both sides flush surfaces

The baseplate, swivelling front and stop square are flush on both sides of the machine for efficient positioning of the biscuit joiner on the work piece's outer edge







**Vertical stability** by attaching to the baseplate to increase the surface

**Perfect precision of mitres** by applying on the outer surface for 22.5 and 45° angles

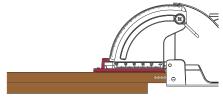
**Variable positioning of the groove** from the application surface 0–50 mm

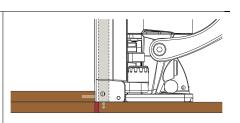
#### Swivelling front with fixed rotational point

#### Exactly the same referencing distances from either the swivelling front or the base plate = 8 mm

Allows alternating the application surface from the swivelling front 1. to the baseplate 2. Especially important when cutting thin dividing panel connections







 Safe process guarantees always precise, parallel grooves

 No inaccuracies or source of mistakes because the height cannot be adjusted

Application with the swivelling front
With the 4 mm spacer for 12 mm dividing panel
(groove in the centre)

Application with the baseplate

The dividing panel (moved by 4 mm) serves as application surface

#### High-precision machined application surfaces





 CNC machined high-precision application surfaces for exact application on the workpiece

Long-life precision guide provides exact,
 parallel grooves for perfect fit of the workpieces

### Versatile use ...

INTERFER

... with various connecting elements.

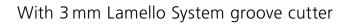
Join workpieces at different angles and in different joining methods with the Classic X and Top 21. Suitable for individual pieces of furniture as well as prototypes and line production.

#### With 4 mm Lamello System groove cutter



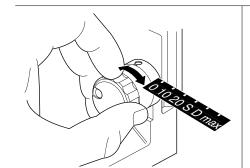
#### With 8 mm Lamello System groove cutter







#### Lamello depth adjustment system



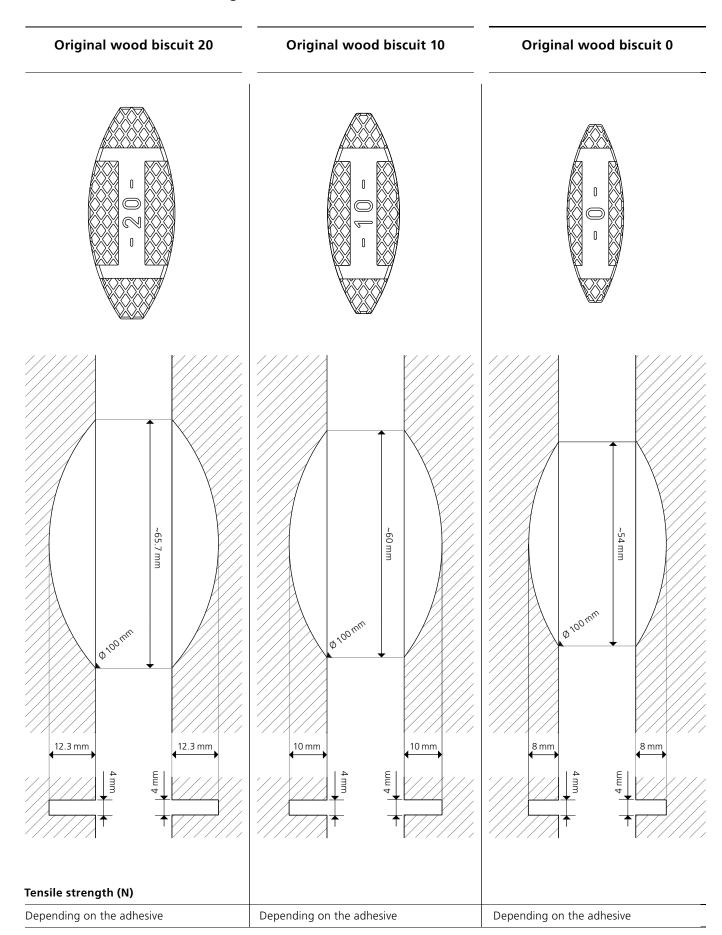
0 Depth 0 no. 0
10 Depth 10 no. 10, C10
20 Depth 20 no. 20, E20-L, K20, C20
S Depth 5 E20-H, Simplex
D Depth D Clamex S-18, E20-L

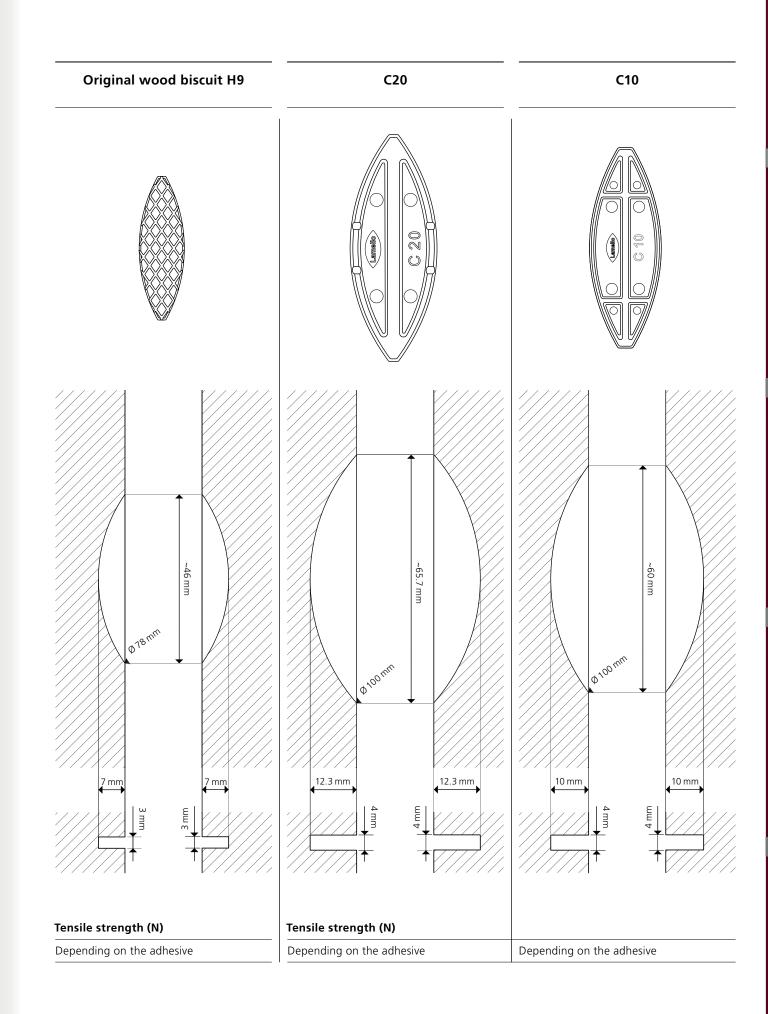
Max H9 (incl. spacer), E20-L

#### **Technical information**

Overview of connectors + grooves (scale 1:1)







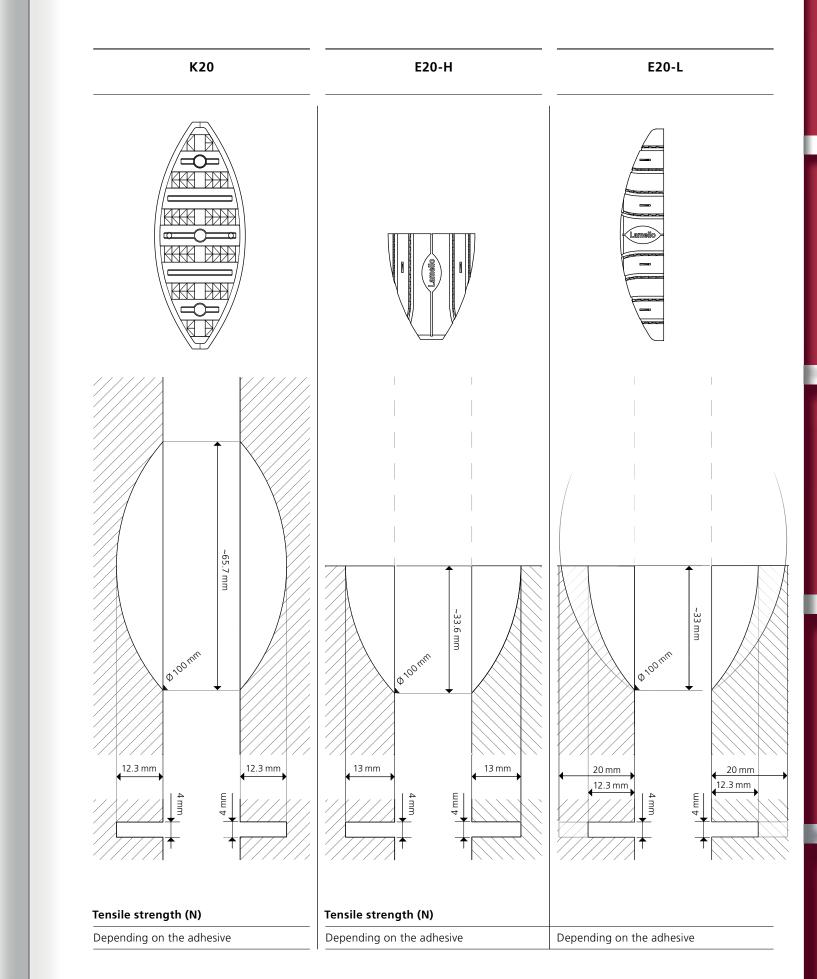
110

112

Overview of connectors + grooves (scale 1:1)

INTER
-------





<sup>1</sup> See comment on load limits on **PAGE 195** 

Clamex S-18 Simplex 14.7 mm 14.7 mm Tensile strength (N) Up to MDF 600<sup>1</sup> Depending on the adhesive 600¹ Particle board 900¹ Beech

# Accessories / Spare Parts

Lamello System

#### . INTERFER

#### Lamello System



#### Stop square for

Zeta P2, Top 21, Classic X	Art. No.
For stabilising the biscuit joiner in the vertical	251044
position, ideal for obtuse mitre joints	







Spacer for Zeta P2, Top 21, Classic X	Art. No.
5 mm, aluminium for 18 mm panels	253027
2 mm, plastic for 16 mm panels	253023
4 mm, plastic for mitres	253026



Systainer3 M187	Art. No.
Systainer3 M187, empty	331579
Insert with two partitions	360023
for Systainer3 M 187	
Divider for insert 360023	360019
Insert Systainer3 M187	360020
for Zeta P2/Top21/Classic X	



#### Groove cutter HW (carbide),

Ø 100×4ר 22 mm	Art. No.
Z2 + V4 scoring teeth, 4 screw holes, hub	132000
for Zeta P2/Top 21/Classic X	



Art. No.

Z6 alternating teeth, without hub, with spacer 132106 for Classic X

### Groove cutter HW (carbide),



Ø 78×3ר 22mm Art. No.

Z4, 4 Screw holes, with hub for original wooden 132009 biscuit H9 for Zeta P2/Top 21/Classic X



#### Groove cutter HW (carbide) with reversible blades,

Ø 100×4ר 22 mm	Art. No.
Z2 + V2, 4 screw holes with hub	132001
for Zeta P2/Top 21/Classic X	
Set of 4 pieces	132111
Countersunk screws	352408T
Allen key, 4 mm	271959L



#### Groove cutter HW (carbide) with reversible blades,

Cross carres in (caratas) in a resemble blades,	
Ø 100×4ר 22 mm	Art. No.
Z4 + V4, 4 screw holes without hub, with spacer	132130
for Zeta P2/Top 21/Classic X	
Set of 10 pieces main teeth	132134
Set of 10 pieces scoring teeth	132135
Replcement set,	132133
4 scoring teeth + 4 main teeth	
Screws	352130
Torx key	352133



#### Groove cutter HW (carbide) with reversible blades,

Ø 100×8ר 22 mm (Clamex S-18 connector)	Art. No
Z4 + V4, 4 screw holes	13210
for Top 20/Top 21/Classic X	
Set of 10 pieces scoring teeth	13213
Set of 10 pieces main teeth	13213
Replcement set,	13211
4 scoring teeth + 4 main teeth	



Dust bag	Art. No.
For Zeta P2/Top 21/Classic X	257532

#### **Batteries**



Art. No.

Battery pack 18 V, LiHD 4.0 Ah 313013



Art. No.

Battery pack 18 V, LiHD 5.5 Ah 313015



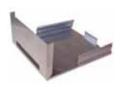
Art. No.
Battery charger ASC 55 123100

## INTERFER

# **Accessories/ Spare Parts**

Lamello System

#### Lamello System



Slide shoe for biscuit joiner	Art. No.
To protect the wall and the machine	251057
for Zeta P2/Top 21/Classic X	



#### Carbide tipped saw blades HW (carbide)

Art. No.
132350



Accessories for saw blades	Art. No.
Spacer, Ø 40 × 1 × Ø 22 mm	322510
with screw holes	
for Zeta P2/Top 21/Classic X	





Clamex S drill jig	Art. No.
Clamex S drill jig 30° – 150°,	125240
with 6 mm drill complete	



Clamex S-18 set	Art. No.
Drill jig for 30°–150° incl. drill and carbide	125250
tipped groove cutter	
with drill jig and cutter	
includes 1 set 125240 and 1 piece 132108	

#### Clamping set parts



Clamps	Art. No.
5 m clamping strap	175005
8 m clamping strap	175008
10 m clamping strap	175010





Polyester strap for clamps	Art. No.
1 roll of 50 m	175050





Tension hooks	Art. No.
2 pieces	175200



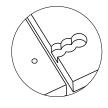
Profile sections	Art. No.
4 pieces, length 12 cm	175401
4 pieces, length 40 cm	175402
4 pieces, length 60 cm	175403



Fast assembly

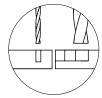


High clamping force



No edge drilling 8

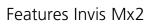
1

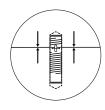


No dowel holes

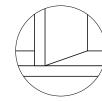


One-piece and pre-installed

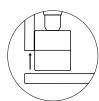




High clamping force



Invisible



Detachable

118

**Drilling System** 

Unique drilling systems for high demands

on productivity and aesthetics

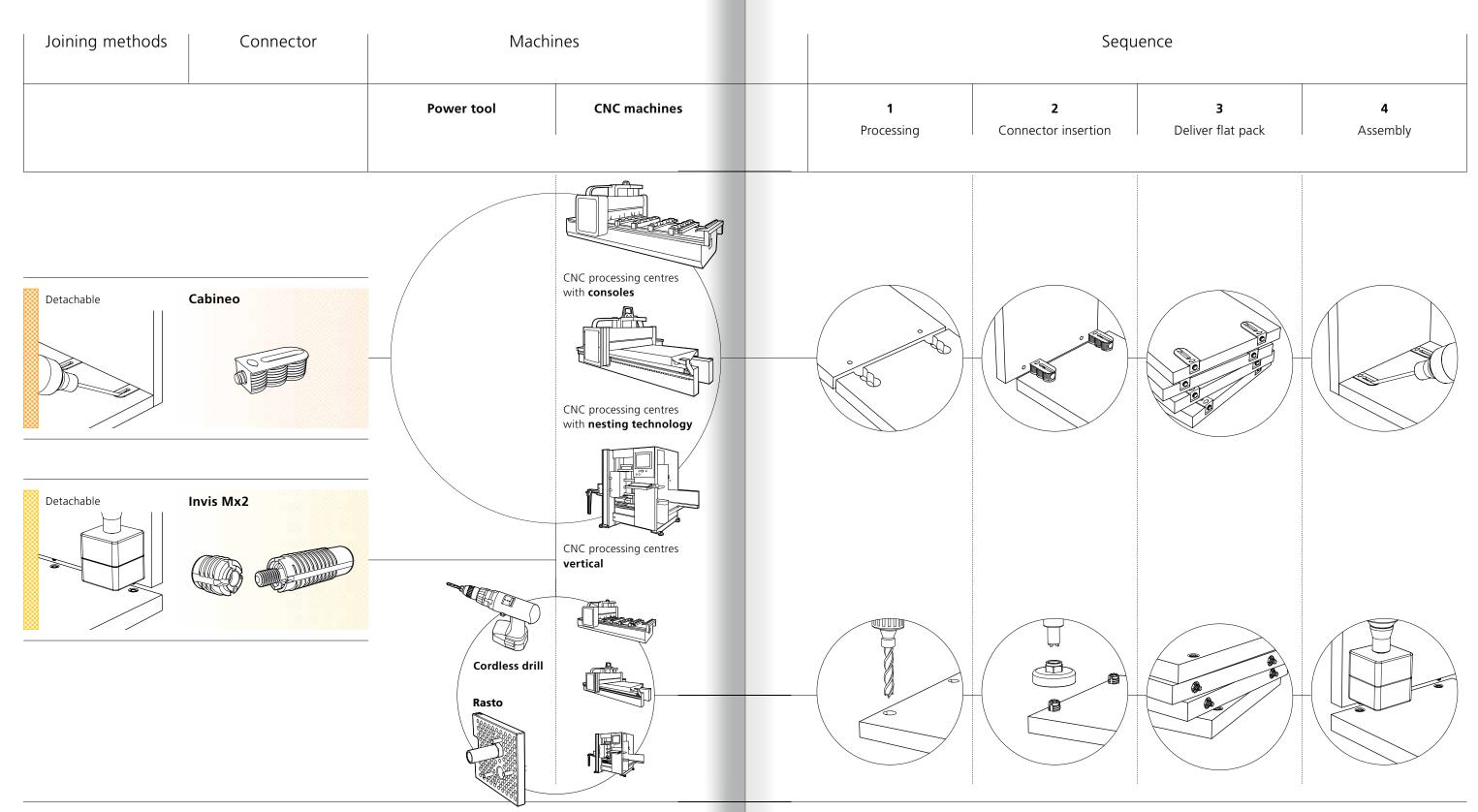
#### . INTERFER

# **Drilling System**

– Cabineo

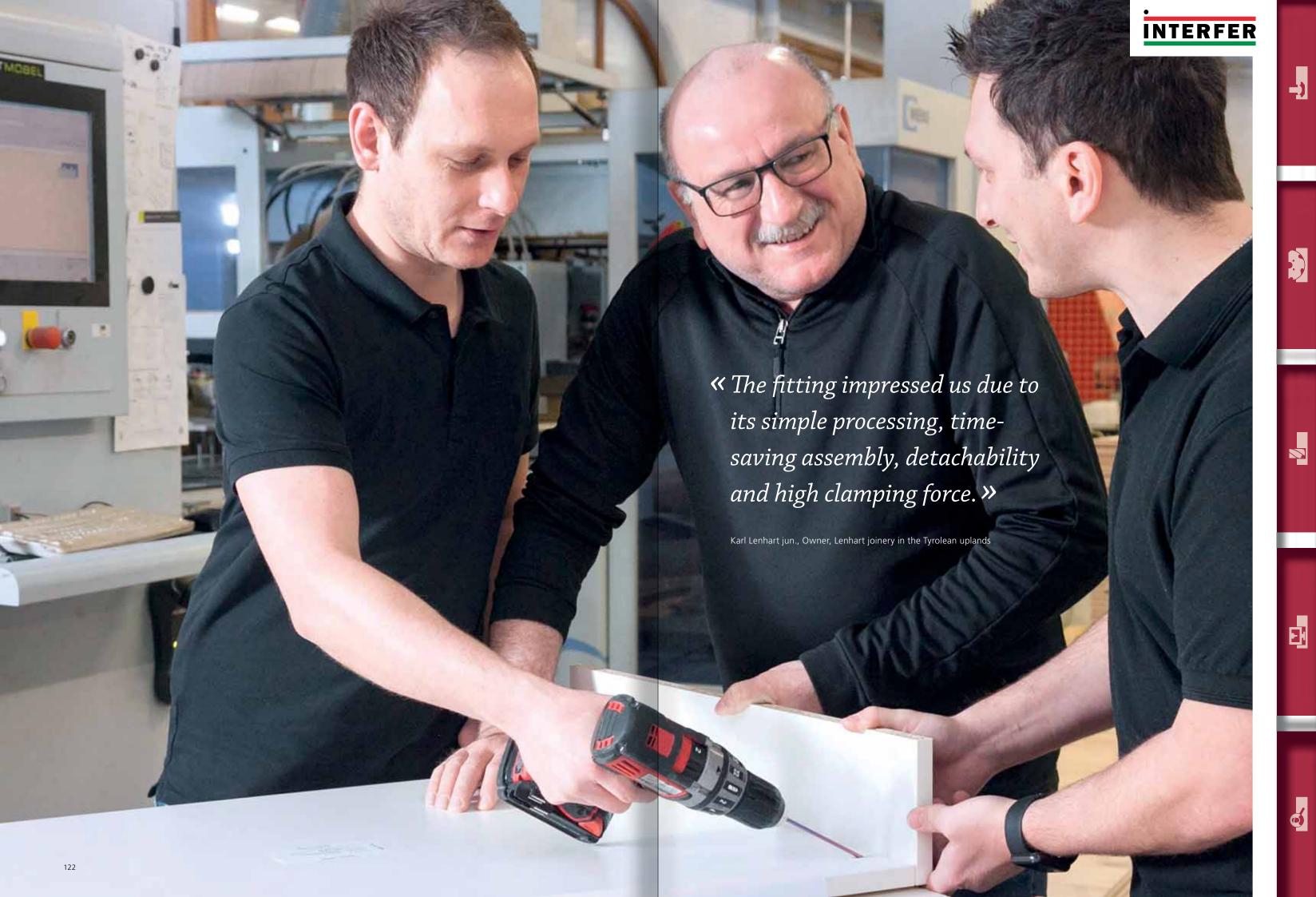
– Invis Mx2

Overview



0

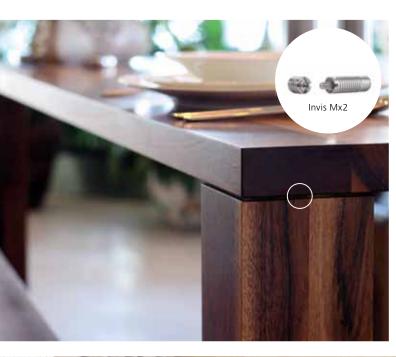
E



# **Drilling System**

Applications

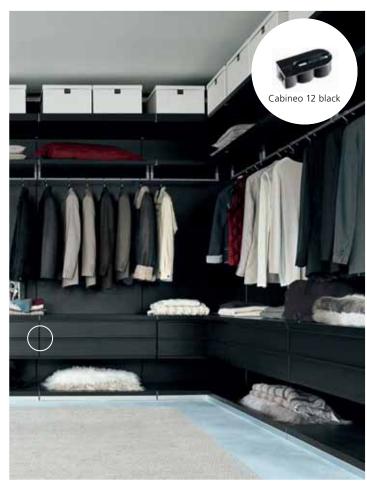
Furniture manufacturing









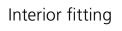




. INTERFER









7

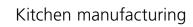




# **Drilling System**

Applications

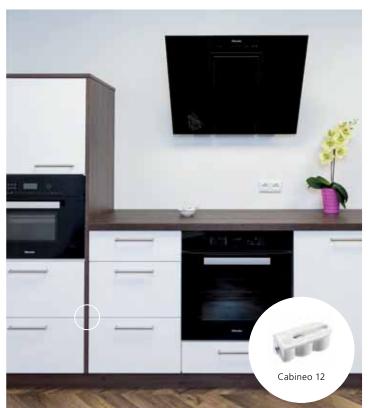
Commercial joinery













. INTERFER

2

øj



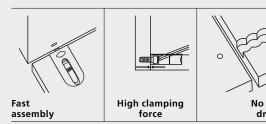
Shop fitting

## Cabineo 12

Time-saving cabinet connector for corner joints from 13 mm



#### Features



Cabineo 12 is a one-piece cabinet connector which can be used with all CNC machines because only surface machining is required. The Cabineo is installed in the board either in the workshop or on site. The pre-assembled screw in the connector is screwed into the 5 mm hole of the second workpiece using a cordless drill. Cabineo impresses with its time-saving processing and assembly as well as the high clamping force which leads to stable connections without the need for additional dowels. Cabineo is available in white or black.

#### Articles



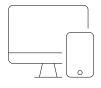
Cabineo 12	Art. No.
500 pieces	186320
2000 pieces	186321



Cabineo 12 black	Art. No.
500 pieces	186330
2000 pieces	186331

Cabineo 8/12 Starter set	Art. No.
Cabineo 8 + 12 (40 pieces each),	186305
incl Cabineo hex bit and set of cover caps (	40 pieces)

#### www.lamello



Experience the connector live and receive comprehensive product information!





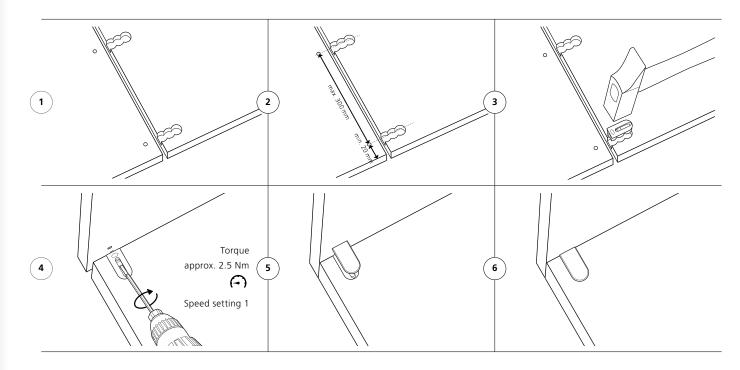








#### **Function**



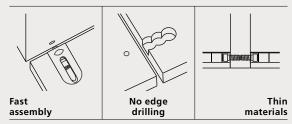
Joining methods	Size	33.8 × 16.5 × 1	33.8 × 16.5 × 10.8 mm		
	Screw length	12 mm			
	Cutter	Ø 12 mm or smaller			
	Drill	Ø 5 mm and Ø 15 mm			
	Material housing	Fiberglass reinforced plastic			
≥ 13 mm	Installation tolerace	Long. ± 0.1 mm			
N N N N N N N N N N N N N N N N N N N	Strength per connector without dowel (N)				
	Particle board 19 mm Up to	Tensile strength (N)	Shear strength	Clamping force	
		9001	850¹	900¹	
		10 N ~ 1 kg			
	Material range	Particle board hardwood etc		od, softwood	

## Cabineo 8

Time-saving cabinet connector for centre panels from 16 mm



#### Features



Cabineo 8 is a one-piece cabinet connector which can be used with all CNC machines because only surface machining is required. The Cabineo is installed in the board either in the workshop or on site. The pre-assembled screw in the connector is screwed into the 5 mm hole of the second workpiece using a cordless drill. Cabineo impresses with its time-saving processing and assembly as well as the high clamping force which leads to stable connections without the need for additional dowels.

#### Articles



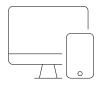
Cabineo 8	Art. No.
500 pieces	186310
2000 pieces	186311



Art. No.
186340
186341

Cabineo 8/12 Starter set	Art. No.
Cabineo 8 + 12 (40 pieces each),	186305
incl. Cabineo hex bit and set of cover caps (40 p	oieces)

#### www.lamello



Experience the connector live and receive comprehensive product information!





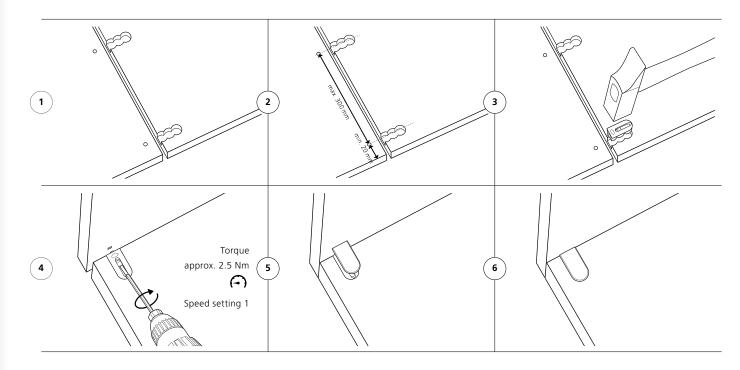








#### **Function**



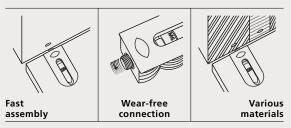
Joining methods	Size	$33.8 \times 16.5 \times 10.8 \text{mm}$		
	Screw length	8 mm		
	Cutter	Ø 12 mm or smaller		
	Drill	Ø 5 mm and Ø 15 mm		
	Material housing	Fiberglass reinforced plastic		
12 mm     19 mm     19 mm     19 mm     19 mm   19 m	Installation tolerace	Long. ± 0.1 mm		
N N N N N N N N N N N N N N N N N N N	Strength per connector without dowel (N)			
	Particle board 19 mm Up to	Tensile strength (N)	Shear strength	Clamping force
		500¹	550¹	500¹
		10 N ~ 1 kg		
	Material range	Particle board hardwood etc		od, softwood,

### Cabineo 8 M6

Wear-resistant cabinet connector for various materials and increased strength



#### Features



Cabineo 8 M6 is a one-piece cabinet connector which can be used with all CNC machines because only surface machining is required. The connector is ideal when joining wood composites with materials such as aluminium, steel or compact laminate.

After installing the connector in the board, the pre-assembled metric screw is screwed into a threaded hole or a socket, using a cordless drill.

Cabineo impresses with its time-saving processing and assembly as well as the high clamping force which leads to stable connections without the need for additional dowels.

Cabineo is available in white or black.



#### Articles



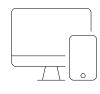
Cabineo 8 M6	Art. No.
500 pieces, metric thread M6	186315
2000 pieces, metric thread M6	186316



Cabineo 8 M6 black	Art. No.
500 pieces, metric thread M6	186345
2000 pieces, metric thread M6	186346

Cabineo 8 M6 Starter set	Art. No.
Cabineo 8 M6 (80 pieces), insert and cover	186306
caps (40 pieces each), Cabineo insertion tool (1 pie	ece),
Cabineo hex bit 1/4" (1 piece)	

#### www.lamello



Experience the connector live and receive comprehensive product information!





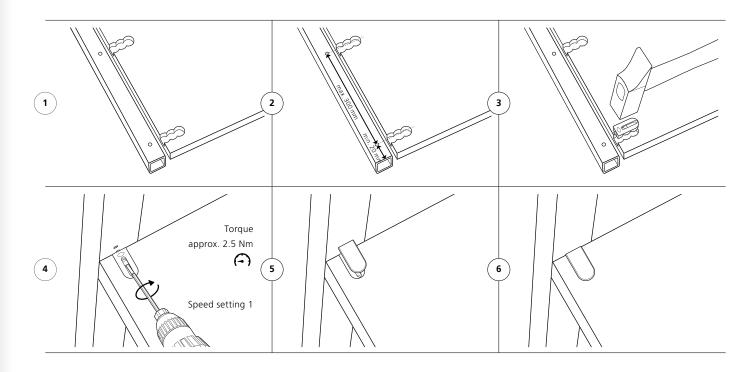








#### **Function**



Joining methods	Size	33.8 × 16.5 ×	33.8 × 16.5 × 10.8 mm		
	Screw length	8 mm	8 mm		
	Cutter	Ø 12 mm or s	Ø 12 mm or smaller		
	Drill	Ø 15 mm	Ø 15 mm		
	Screw thread	M6	M6		
	Material housing	Fiberglass rei	Fiberglass reinforced plastic		
	Installation tolerace	Long. ± 0.1 mm			
	Strength per connector without dowel (N)				
	In HPL 12 mm Up to	Tensile strength (N)	Shear strength	Clamping force	
		1700¹	1000¹	1700¹	
		10 N ~ 1 kg			
	Material range	Particle board, MDF, plywood, softwood, hardwood etc.			

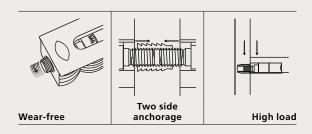
## Cabineo insert M6

For repeated assembly and disassembly without loss of strength



#### Features

134



The Cabineo insert M6 is a threaded insert to drive in, which can be used in combination with the Cabineo 8 M6. It is ideal for applications where the thread cannot be cut directly into the workpiece or to increase the strength in corner and dividing panel joints. The Cabineo insert M6 is hammered into the through-hole of the middle panel so that the Cabineo can reach into the insert from both sides. The same connector and insert can be used everywhere for corner and dividing panels.



Cabineo insertion tool is included in delivery for the inserts.



Cabineo insert M6 × 12.3	Art. No.
100 pieces	186370
500 pieces	186371

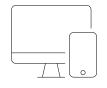


Cabineo insert M6 × 15.3	Art. No.
100 pieces, for dividing panels	186375
500 pieces, for dividing panels	186376



Cabineo insert insertion tool	Art. No.	
For insert M6	276310	

#### www.lamello



Experience the connector live and receive comprehensive product information!





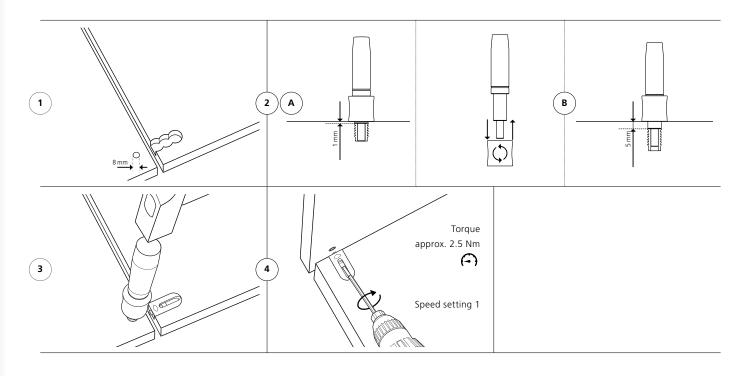




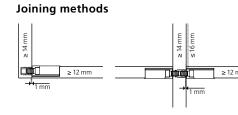




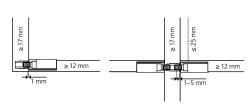
#### Function



#### Technical data



Cabineo insert M6 x 12.3 for material thickness 14-16 mm



Cabineo insert M6 x 15.3
for material thickness 17 – 25 mm

Size	$12.3/15.3 \times 9.3 \times 9.3 \text{mm}$		
Thread	M6		
Drill hole	Ø8mm		
Material	Brass		
Installation tolerace	Long. ± 0.1 mm		
Strength per connector without dowel (N)			
Particle board 19 mm Up to	Tensile strength (N)	Shear strength	Clamping force
Insert M6 × 12.3	750¹	1050¹	750¹
Insert M6 × 15.3	9001	1200¹	900¹
	10 N ~ 1 kg		
Material range	Particle board, MDF, plywood, softwood, hardwood etc.		











## **Advantages of Cabineo**

Simple, fast and strong





#### 1. Advantages in production

Time-saving in production



2.

Advantages

in transportation

Time-saving in transportation

- Optimised process due to surface machining; no edge drilling necessary
- Only one tool change from 5 mm to 15 mm drill; no tool change for the dowel hole drill necessary
- No dowel holes means less drill holes per connector
- Shallow element of 10 mm allows for panels from 12 mm thickness

- Efficient pre-installation of the one-piece connector

- Flat pack delivery with pre-installed connectors - No extra bags or loose hardware required with

Detachable for transport or if the fixed shelves

in the factory

furniture shipment

need adjusting







Fit Cabineo into top or bottom shelf

Flat pack the

workpieces

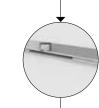


3 surface processing

2 tool changes

2 edge drill holes 1 tool change

Prepare fitting bag



Flat pack the

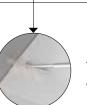
workpieces

### 3. Advantages



- One-piece connector without dowels; no pre-assembly of screws or dowels in the side panels necessary
- Easy positioning of the Cabineo in the corresponding hole due to the protruding screw
- Fast assembly with a cordless drill
- Installation of fixed shelves or vertical dividers in an already assembled unit





Assemble using a cordless drill



Insert cam into shelf



the side Insert dowel into the side

Install the screw in



Assemble using a screwdriver

in assembly

Time-saving in the assembly



# Examples of manufacturing and assembly processes

Cabineo



Flatpack workpiece delivery with pre-assembled connector.



Place furniture side on base. The element is correctly positioned by the protruding screw.



Join furniture elements with cordless drill and Cabineo tool. Easy, fast working with preset torque approx. 2.5 Nm.



Position top and push towards the furniture side.



Screw front corner in place with a cordless drill. This makes one-man assembly easy.

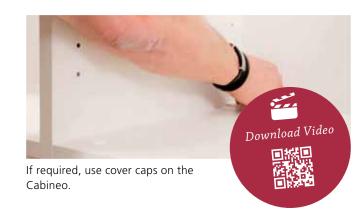


required positions.

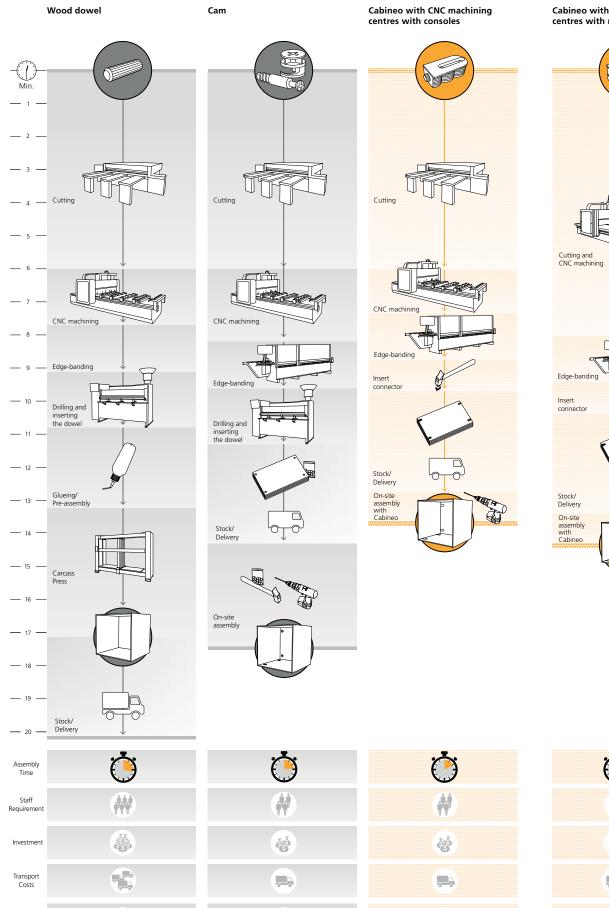


Tip:

- Place one side of the shelf on the shelf support and fasten the
- Retract the screw to facilitate installation.





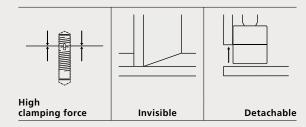


### **Invis Mx2**

Magnet-driven connecting fittings



#### Features



Invis Mx2 is a unique, magnet-driven connection for the highest demands on aesthetics, stability and productivity. With no visible openings, Invis Mx2 is connected and disconnected quickly again and again, using its magnetic drive.

Invis Mx2 connectors are screwed into the 12 mm drill holes in the panel. Using the MiniMag with a cordless drill, the connection closes and creates a clamping force of up to 250 kg per connector.

Ideal for high gloss painted furniture, molded workpieces, stairs, etc.



#### Articles



Invis Mx2 connector setArt. No.With 14 mm Invis Mx2 stud, 20 pairs6012300



Art. No.
With 30 mm Invis Mx2 stud, 20 pairs 6012301



Invis Mx2 Starter set

Invis Mx2 MiniMag, Invis Mx2 connector sets, 6100300
20 pairs, with 14 mm Invis Mx2 stud, Rasto drill jig
with 12 mm drill bit, depth adjuster, bushing,

#### www.lamello



Experience the connector live and receive comprehensive product information!







screw bit, flexible shaft, insertion jig

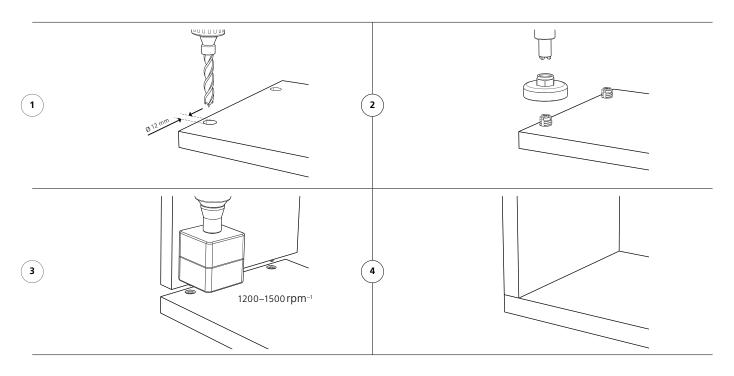






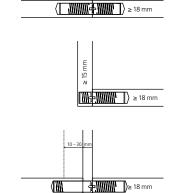
Art. No.

#### Function



#### Technical data

#### Joining methods



Size connector	Ø 12×35 mm		
Size stud	Ø 12 mm × 30/14 mm		
Size centre-wall stud	Ø 12 mm × 30 mm		
Drill	Ø 12 mm		
Speed MiniMag	Must be 1200–1500 rpm <sup>-1</sup>		
Material housing	Zinc		
Installation tolerace	Long. ± 0.1 mm		
Clamping force per connector	250 kg <sup>1</sup>		
Tensile strength (N) Up to	Connector sets with stud	14 mm	30 mm
	MDF	1500 N¹	4000 N <sup>1</sup>
	Particle board	600 N <sup>1</sup>	1600 N <sup>1</sup>
	Beech	2000 N <sup>1</sup>	4000 N <sup>1</sup>
	Spruce	1000 N <sup>1</sup>	2000 N <sup>1</sup>
Material range	Particle board, MDI hardwood etc.	, plywood, so	ftwood,



Articles



Invis Mx2 connector 35 mm Art. No. 20 pieces 6012317



Invis Mx2 stud 14 mm Art. No. 6012312 20 pieces



Invis Mx2 stud 30 mm Art. No. 20 pieces 6012309

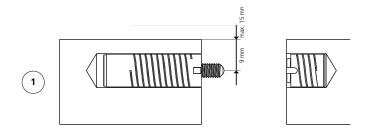


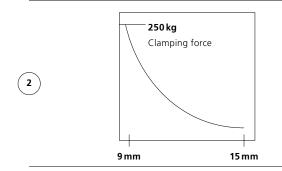
Invis Mx2 centre wall stud 10-30 mm Art. No. 6012208 10 pieces



Invis Mx2 MiniMag Art. No. Incl. screw bit 6100301

#### Function





Small distance from the edge for high clamping force





## Rasto drill jig

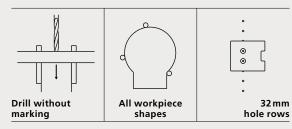
Universal drill jig without measuring or marking



Function

(1)

#### Features



Rasto is a universal drilling jig and is used for creating precise drilled holes for Invis Mx2. The drilling jig can be clamped onto almost any workpiece shape by means of three positioning pins without measuring or marking. After the first workpiece has been drilled, the position is transferred unchanged to the second workpiece. Working in this way means the holes will always line up with each other.

Rasto is also suitable for 8 mm dowel holes or 5 mm holes for handles or for row hole drilling.

### Articles



#### Rasto Duo set

Art. No.

In a systainer: 2 transparent perforated plates,

126002

- 8 drill bushings, 2 × Ø 5, 8, 10, 12 mm,
- 3 wood drill bits Ø 5, 8, 12 mm, 6 positioning bolts,
- 2 fastening screws, 1 connection rod,
- 1 Invis Mx2 spacer, 1 Invis Mx2 insertion bush

#### **Rasto Basic set**

Art. No.

- In a cardboard box: 1 transparent perforated plate, 126005
- 3 positioning bolts, 1 fastening screw

4 drill bushings Ø 5, 8, 10, 12 mm,

#### Rasto Mono set

In a systainer: 1 transparent perforated plate,

- 1 Invis Mx2 spacer, 1 Invis Mx2 insertion bush

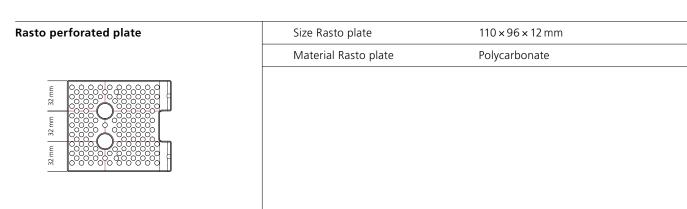
Art. No.

126001

- 4 drill bushings Ø 5, 8, 10, 12 mm, 3 wood drill bits
- Ø 5, 8, 12 mm, 3 positioning bolts, 1 fastening screw,

#### Technical data

 $\bigcirc \bigcirc \bigcirc$ 



#### www.lamello



Experience Rasto live and receive comprehensive product information!

















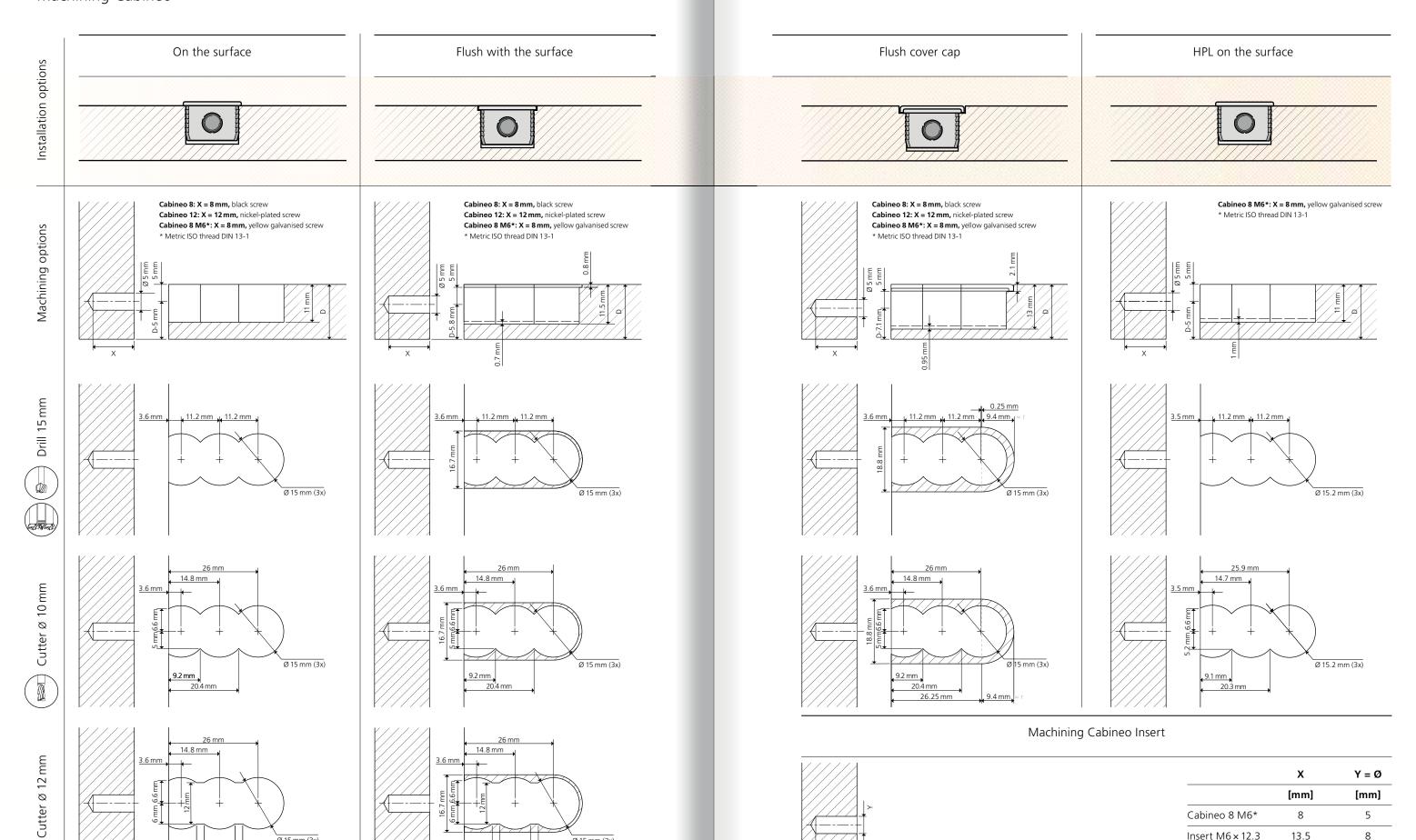
2

#### **Technical information**

### Machining Cabineo



1



Ø 15 mm (3x)

8.1 mm 2.2 mm

Ø 15 mm (3x)

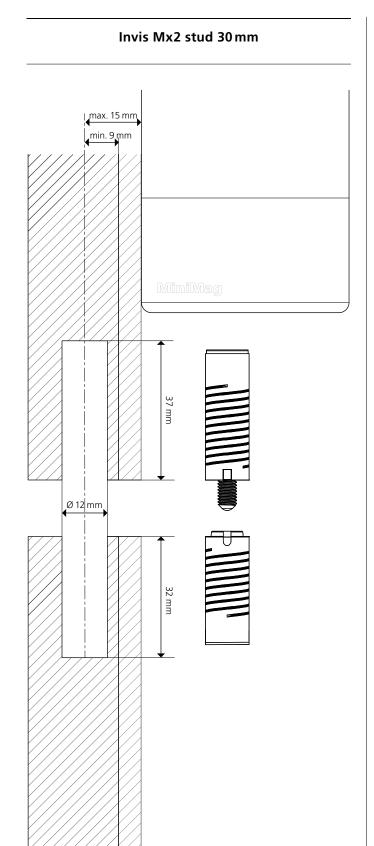
Cabineo 8 M6\* 8 13.5 Insert M6 x 12.3 8 16.5 8 Insert M6 × 15.3

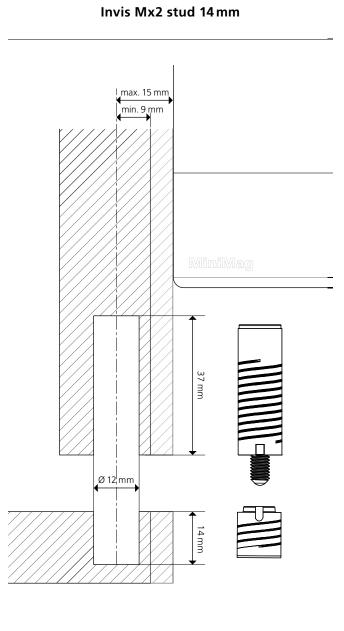
<sup>\*</sup> Metric ISO thread DIN 13-1

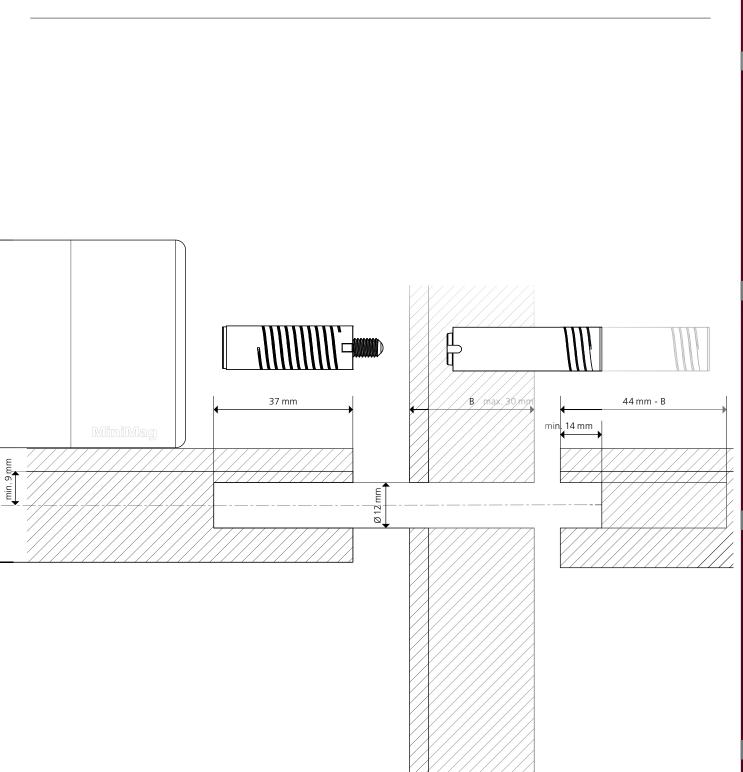
Machining Invis Mx2











Invis Mx2 centre wall stud 14-30 mm

Drilling System



### Cabineo



Cabineo installation tool	Art. No.
With handle, incl. hex bit 1/4"	256300
	Art. No.
Cabineo hex bit 1/4"	276312
	Art. No.
Cabineo hex bit 1/4" GL 80 mm	276308
Cabineo hex bit 1/4" GL 80 mm, 100 pieces	276309

Cabineo dril/cutter	Art. No.
Cabineo drill Ø 15 mm with short centering point	136312
	Art. No.
Cabineo cutter Ø 10 mm	136310
	Art. No.
Cabineo cutter Ø 12 mm	136311
<u></u>	Art. No.
Cabineo drills for aggregate* Ø 15 mm	136314
RH carbide tipped (right hand rotation)	<del></del>
_	Art. No.
Cabineo drills for aggregate* Ø 15 mm	136315
LH carbide tipped (left hand rotation)	

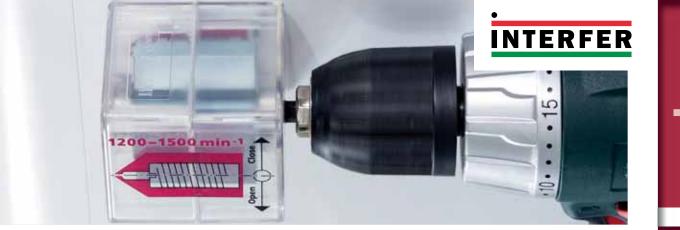


Cabineo cover caps	Art. No.		Art. No.
	100 pieces		2000 pieces
RAL 9003 signal white	1863505	$\bigcirc$	1863515
RAL 9010 pure white	186350W		186351W
RAL 9018 papyrus white	186350P		186351P
RAL 1015 light ivory	186350H		186351H
RAL 1011 brown beige	186350B		186351B
RAL 8007 fawn brown	186350R		186351R
RAL 7040 window grey	186350F		186351F
RAL 7005 mouse grey	186350A		186351A
RAL 9005 jet black	186350T	•	186351T
Metal look, silver	186350C		186351C
Metal look, nickel	186350N		186351N
Metal look, dark steel	186350D		186351D



Cabineo insert insertion tool	Art. No	
For insert M6	276310	

Drilling System



Invis Mx2

Invis Mx2 screw bit	Art. No
1 piece	6112205



invis wixz wiiniwag	Art. No
Incl. screw bit	610030



Invis Mx2 flexible shaft	Art. No.
1 piece	6100204



Invis Mx2 insertion jig	Art. No	
For studs 14 mm	611233	



Art. No	
6112330	

Rasto

Rasto wood drill bit with centering tip	Art. No.
Ø 5 mm	6100160
Ø 6 mm	6106161
Ø 8 mm	6108060
Ø 10 mm	6110162
Ø 12 mm	6112060



Rasto depth adjuster	Art. No.
Ø 5 mm	6100059
Ø 6 mm	6100063
Ø 8 mm	6100060
Ø 10 mm	6100064
Ø 12 mm	6100061



Invis Mx2 spacer	Art. No.
For Rasto	6112331



Rasto perforated plate	Art. No.
1 piece	6160000



Rasto drill bush	Art. No.
Ø 5 mm	6100065
Ø 6 mm	6100056
Ø 8 mm	6100057
Ø 10 mm	6100067
Ø 12 mm	6100058



Art. No.
6560450

Rasto positioning bolts	Art. No.
Ø 5×40 mm	6160001

Rasto connection rod 500 mm	Art. No.
- wo-part	6160601

## **Networked production**

From planning and design to procurement, programming and machining with CNC.

Our planning and processing partners support you with integrating Lamello connecting elements into your production process, from A to Z.











## Components for the successful integration of Lamello connection systems into your networked production

#### CAD/ERP/Configurator software

- Design and planning software with integrated Lamello connectors
- Also download CAD data:
- from the Lamello website
- from iFurn
- from specialist retailers (ComNorm)

The degree of integration of the data and the parameterised position rules influence planning efficiency.



#### CAM software

- Software for generating CNC programming data
- Post-processor

Data transfer between CAD and CNC, and in particular the control of the macros/component, must be individually coordinated.



#### CNC machine

- Machine with 3/4/5-axis

The number of axes and equipment options influence the processing possibilities



#### CNC software

- Purchase software for machine/macro/component from the manufacturer or
- Program the machining process yourself

The macro/component determines/affects the processing possibilities





#### Suitable aggregate

- Aggregate sub-program
- The angle aggregate makes it easier to cut the P-System groove in the surface and the centre
  of the surface
- The Cabineo unit enables triple drilling in one stroke

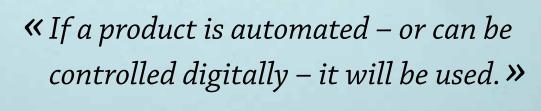
The right unit can significantly increase efficiency when cutting/drilling connectors.



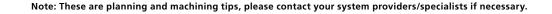


Purchase tools from Lamello or a P-System tool partner
 You can find the tools recommended by Lamello on PAGES 174-176.

The right cutting tool can significantly increase precision and efficiency when cutting the connectors.



Jochen Meier, Owner and Managing Director, Jochen Meier Schreinerei GmbH, Nürnberg, Germany



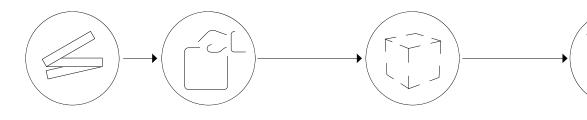
## Networked production

Overview of the production process

Enabled by Lamello planning and machining partners



Sequence								
<b>1</b> Measurements	<b>2</b> The proposal phase	<b>3</b> Planning with CAD/configurator/ERP	<b>4</b> The bill of material	<b>5</b> Procurement	6 CAM interface CAD/CAM system CNC programming data	<b>7</b> CNC machining	<b>8</b> Final processing	<b>9</b> Dispatch/assembly
				Lamello sales partners				



The room or the object to be machined can be quickly and efficiently measured on site using a room scanner and imported directly into CAD. Even in difficult room situations, without scaffolding, ladders or additional assistants.

The customer data is recorded, and the calculation and quote are prepared in the industry software, CRM or ERP. If necessary, photo-realistic drawing can also be created for the customer in order to create a life-like impression of the end product.

Here, the furniture is drawn with all individual parts, connectors and fittings or generated automatically using the configurator. In this phase, the planner can now select the desired Lamello connectors, which are placed manually or automatically in the workpieces according to parametric rules.

Planning aids on the Lamello website:

- The «Connector Search» web tool helps you select the right connectors
- The «P-System Configurator» defines the optimal connector positioning at any angle
- The «CAD Data» can also be downloaded from the product pages

The parts list can now be generated from the finished CAD file or the data can be imported into the ERP software, where the parts and fitting list can be issued automatically. The material order can now be triggered manually or automatically.

With an online connection to specialist retailers, both digital data exchange and procurement can be automated. For example, this allows the current prices to be queried, availability checked and picking implemented.

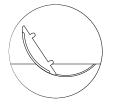
With an online connection to specialist retailers, both digital data exchange and procurement can be

One of the most important winterfaces» is the transfer of planning data to production. Here, a seamless connection should be established between design

**«interfaces»** is the transfer of planning data to production. Here, a seamless connection should be established between design, programming, simulation and subsequent production on the CNC machines. The 3D design data can also be used to enter the production information, such as the control of macros, the tool type, approach or cutting mode. The CAD data is translated, for example, via a post-processor into an electronic procedure for controlling CNC machines.



The workpieces are now formatted and machined on the machining centre. With the necessary macros for the appropriate units and cutting tools, the desired machining procedures for the connectors are now milled into the workpieces.



After CNC machining, or if the workpieces are ready for further processing, the edges are glued or the surface is painted and the connectors are then installed.

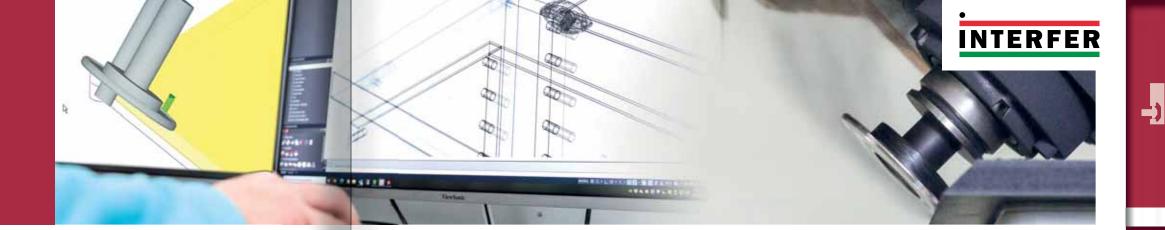


The items of furniture are now ready to be transported to the customer. Ideally, the furniture should be sent as a flat pack, which is no problem at all with the Lamello connectors.

159

## **Service overview**

Lamello's planning and machining partners



Planning partners	CAD/ERP/Configurator/	CAM software

			<u>инн</u>	9	Pu		-13	<u> </u>	<i></i>		, comi	gurace	<i>,</i> ,,,		1 30100	, ai c	
Company		0000	2020	ad A VAVETA COLINI A did	DAMINGOTI WANE	Jita ma of alma o	DOILINGTHE		CAD+T		cadwork	direkt CNC-system	ZZ () () () () () () () () () () () () ()		iFurn	imos	
		20	20			BOI	RM ratik	(	AD.T		work	NC-HOPS'	HE	XAGON	<b>i</b> Furn	imos	5-
Product name		2020 CAD	2020 CAD	SPAZIO3D PROF. + -ENTERP. PLUS	SPAZIO3D JOINERY + INDUSTY 4.0	Pointline CAD	BormBusiness/EVO	Design/Engineer	ERP/Konfigurator	CNC	Configurator	NC Hops	Alphacam	Cabinet Vision		IX CAD 2021	IX CAM 2021
Offer/ Material	ERP software						•		•							al.	
management / Ordering	Interface with procurement			•	•	•	•	•	•					•		•*	
	Interface with CAD			•	•	•	•	•	•	•		•	•				
Visualisation / Planning /	Interface with ERP			•	•	•	•	•	•		•	•		•		•	
Construction/ Parts list	Data cloud for CAD data	•					•		•		•				•		
	CAD 2D software			•	•	•		•			•	•		•			
	CAD 3D software	•		•	•	•		•			•	•		•		•	
	Configurator	•		•	•	•			•		•	•		•		•*	
CNC programming data	Interface with CNC		•	•	•	•		•	•	•	•	•	•	•			•
uutu	CAD/CAM software		•	•	•					•		•	•				•
	WOP programming software		•	•	•					•		•	•				
	ISO programming software		•	•	•					•		•	•				

KCD Software	Kosmosoft	LIGNOCAM		USD Datensysteme		raietteCAD		PINCAIC	PHYTA	Qulity Industriale		) Swiss-all-CAD		F 200	pilosdoi	TrunCAD	extragroupe	rwdm.ch	Tibek		Eficad	
Software	SmartCABINET	Lignocam	OS Deserve	atterne Greight	Palet	teCAD		Trans & Service ( such Steller)	PPTUB	STUDIO	) (	viss al CAI		Тор	Solid	TrunCAD	( VECTORWORKS	rwdm.ch	SmartWOP	) ((	wood	)
KCD Software	Smart CABINET	LIGNOCAM	ERP/PPS	CAD/CAM	Palette CAD	Palette CAM	ERP P123 Corpora	CAD/CAM P305	3D CAD	woodlab STUDIO	AutoCAD/ZWCAD/BricsCAD	Matrizen – Excel – CAM	Matrizen – ERP – Manager	Wood CAD	Wood CAM	TrunCAD	VECTORWORKS	rwdm.ch	SmartWOP	SWOOD Design	SWOOD Service Center	SWOOD CAM/Nesitng
			•				•						•									
			•		•		•						•	•					•		•	
	•			•	•			•		•	•	•	_	•		•	•		•	•	•	•
				•	•						•						•	•				
•				•	•						•			•		•	•					
•				•	•				•		•			•		•	•			•		
•	•			•	•				•	•	•			•		•	•		•	•	•	
	•	•		•		•		•	Ť	•		•			•		•		•		•	•
	•	•				•	•	•		•		•					•		•			•
•	•	•		•						•					•							•

## **Service overview**

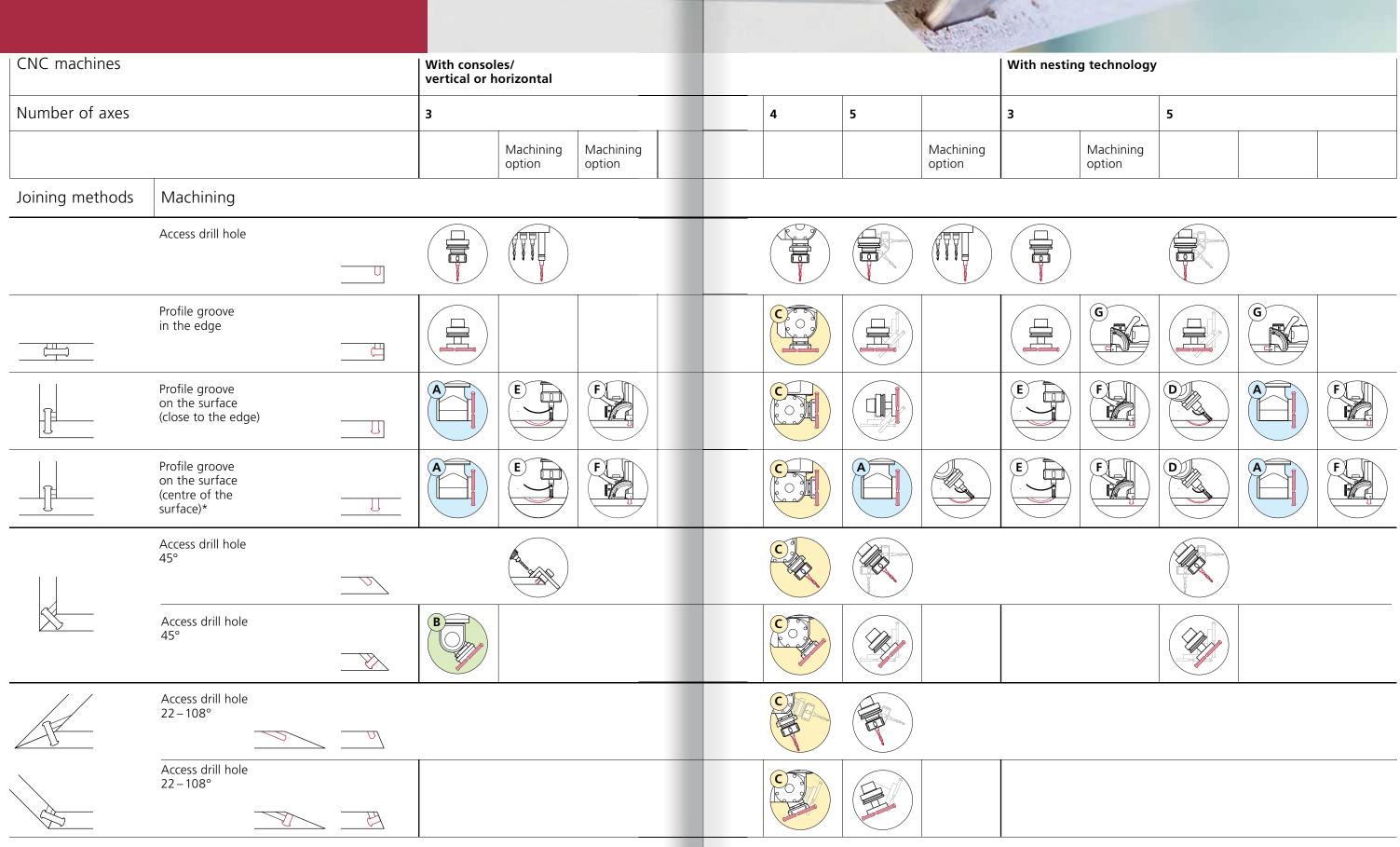
Lamello's planning and machining partners



						_											
		М	achin	ning	part	tner	s CN	IC m	achi	ines	/Agg	greg	ate	s/C	NC 1	ools	<b>i</b>
Company		L d	AES		Biesse			Felder		GANNOMAT		HOLZ-HER			Holzfraese		Homaq
				⊗B	IESSE	)	(	FORM	GANI	No <b>met</b>	) (	HOLZHE	R	(H	olzfrae	Se no	HE HON
				***************************************			***************************************			or	***************************************		EO				
Product name		CNC machines	AesWOP	CNC machines bSolid	NC Hops	bCabinet	CNC machines	F4Integrate	VVOOG Flash	GANNOMAT Editor	CNC machines	NC Hops	CabinetControl NEO	3D-Master	CNC machines	Macchine CNC	WoodWOP
Offer/ Material	ERP software	l e	<u> </u>														
management/ Ordering	Interface with procurement																
Ordering	Interface with CAD					•				•		•		•			
Visualisation/	Interface with ERP					•				•					•		•
Planning / Construction / Parts list	Data cloud for CAD data																
raits list	CAD 2D software			•		•		•	•								
	CAD 3D software			•		•		•	•					•			•
	Configurator					•				• 1			•	•	•		
CNC programming data	Interface with CNC		• 4	•	•	•		•		•		•	•	•	•		•
uala	CAD/CAM software		•	•	•	•		•				•	•	•	•		•
	WOP programming software		•	•	•	•		•		•		•		•	•		•
	ISO programming software					•		•						•			
CNC machining	CNC with consoles	•	•	•			•				•					•	
	CNC vertical/horizontal (compact)	•	•	•			•		•		•					•	
	CNC nesting	•		•			•				•				•	•	
	Aggregates			•			•				•					•	
	CNC tools																

## P-System with CNC

Joining methods and requirements for CNC machines/machining options



7

INTERFER



Detailed information on machining	Detailed informat	ion on machining		Possible setup c	of aggregates and tools	Comments
					Integrated CNC Z-axis with drill (5/6 mm) or with collet chuck for clamping Ø 10 mm and drill 131556	P-System CNC drill bit on PAGE 175
		<b></b>	=146		Saw blade clamp Ø 40/DTK 52 mm and cutter 132143 or with collet chuck and cutter arbor	You can find dimensions for cutters and clamping Ø and lengths of cutter arbors on PAGE 174/175
A The state of the					Angle aggregate  - One to four spindle angle aggregates  - Floating trimming unit for P-System  - Corner notching aggregate  - Aggregate for door locks	A unit overview can be found on the Lamello website: www.lamello.com under planning and machining partners
B					Manually adjustable swivelling aggregates Information: Several tool changes required for angle cuts, drilling and P-System grooves	Note: The cutting depth in the centre of the surface may be restricted depending on the model. <b>Tip:</b> For a mitre, the drill hole could be made with the manual drill
C TOO 4 mm	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6				Automatically adjustable swivelling aggregates with automatic tool changer (FLEX5+C/5-MOTION PLUS/Flex5+C, from year of manufacture 2015)  - Tool holder WFC 40-25 clamping Ø 10 mm for drill  - Drill shaft Ø 10 mm, tool protrusion max. 50 mm  - Tool holder WFC 40-25 with flange and cutter 132143	Note: In the centre of the surface, the profile groove depth is limited to 10 mm
D			- <del></del>		Shrink chuck for clamping Ø 12 × 40 mm and shaft tool 131342 or collet chuck for clamping Ø 12 × 40 mm and shaft tool 131342	P-System CNC shaft tool cutter on <b>PAGE 175</b> .
E			-			

\* More information on **PAGES 174–175** 

The information concerns technical options regarding how the applications could be implemented. These must be adapted to your company facilities and coordinated with the planning and machining partners.

Possible combination of CNC machines with Zeta P2

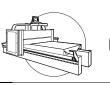
More regarding the machining on PAGE 171











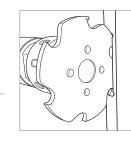


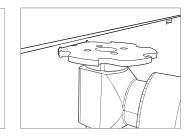


## P-System equipment options

For CNC machines for particularly efficient machining







Vertical and horizontal CNC machining centres «CNC compact class»











**DRILLTEQ V-500** 25-spindle + 1× aggregate (VKNR 1549) 1× tool set (VKNR 9763)

 $\mathbf{0} \cdot \mathbf{2} \cdot \mathbf{3}$ 



**EVOLUTION 7405** Connect

#### **BIESSE**

Brema Eko 2.1 1× aggregate 2× P-System CNC groove cutters 1× P-System CNC cutter arbor 1× drill Ø 6 mm

#### **BIESSE**

1× aggregate for 90° 1× aggregate 45° for 2× 45° 2× P-System CNC groove cutters 1× P-System CNC cutter arbor

Brema Eko 2.2

0 · 2 · 3



groove cutter in HSK63F 1x P-System CNC shaft tool 1× drill Ø 6 mm

1 · 2 · 3 · 4





0 · 2 · 3







#### Project TF 100/TF 100 2.0

1× aggregate 2× P-System CNC groove cutters 1× P-System CNC cutter arbor 1× drill Ø 6 mm



#### **4**morbidelli

### cx 210

1× aggregate 2× P-System CNC groove cutters 1x P-System CNC cutter arbor 1× drill Ø 6 mm





Nextec 7707 1× tool set

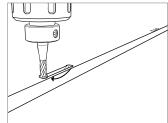
0 . 2 . 8

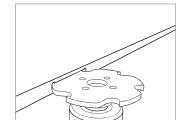


#### Vitap K2 2.0 1× aggregate

2× P-System CNC groove cutters 1× P-System CNC cutter arbor 1× drill Ø 6 mm

0 . 2 . 3







FORM AT

Creator 950

1× P-System CNC

cutter\* in HSK63F

1× drill Ø 6 mm

\*optional for P-System CNC

shaft tool cutter:

1× aggregate for 90°

1× P-System CNC groove cutter 0 . 2 . 6

#### GANNO*mat*

#### ProTec + P-System add-on package

Editor with Lamello P-System macro 1× P-System CNC groove cutter in HSK63F 1× P-System CNC cutter arbor 1× P-System CNC shaft tool cutter 1× drill Ø 6 mm

 $\mathbf{0} \cdot \mathbf{2} \cdot \mathbf{8}$ 





#### **HE HOMAG**

#### **DRILLTEQ V-200**

woodWOP «Lamello P-System» component 1x P-System tool set



#### **IE HOMAG**

#### **DRILLTEQ V-310**

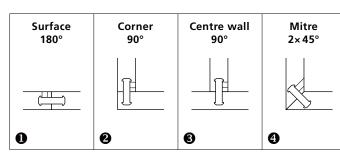
for  $180^{\circ} + 90^{\circ}$  joints: woodWOP component «Lamello P-System» 1x P-System tool set

additionally for 45° joints: 2× aggregate 45° 1× tool set for 45°

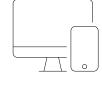
 $\mathbf{0} \cdot \mathbf{Q} \cdot \mathbf{G}$ 



#### Connectivity



#### www.lamello



Experience CNC live and receive comprehensive product information!











## Ideas for standardising

The machining on a CNC machine

# Possible combination of CNC machines with Zeta P2

Clamex P-14 CNC with lever, Clamex P-14 with lever and Clamex P-14/10 Flexus with lever are compatible with all Clamex P elements without lever.

This allows for a standardised construction method.

145318

**Depth 14 mm** for all P-System grooves in the panel edge (with the access hole)

2000 pieces element with lever

Clamex P-14 CNC	Art. No.
2000 pieces element with lever	145388
Clamex P-14	
	145338
2000 pieces element with lever	145550

**Depth 10 mm** for all P-System grooves in the surface

Clamex P-10	Art. No.
2000 pieces element without lever	145358
Clamex P-10 Medius	

Precise drilling on a CNC machine; use these drill holes to position the Zeta P2 to cut the P-System grooves.

This application is especially ideal if the CNC machine is a nesting machine and or no aggregate is available.

This method combines the precision and efficiency of a CNC machine and uses the simple and fast machining of

#### Positioning drill holes for the Zeta P2



a P-System groove with a Zeta P2.







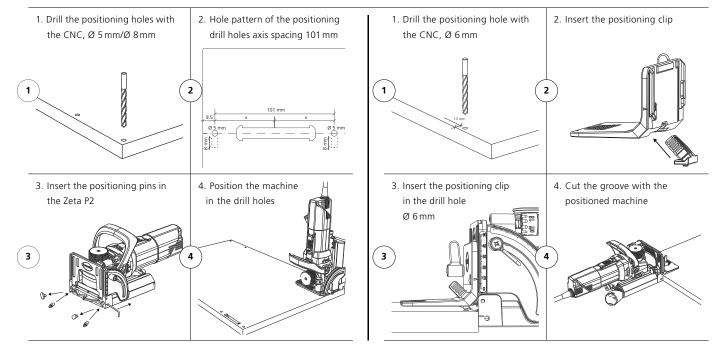
#### Positioning pin CNC for Zeta P2,

2 pieces	Art. No.
Ø 5 mm	251048
Ø 8 mm	251066

#### Positioning clip CNC

for Zeta P2	Art. No.
Ø 6 mm	251067
for positioning in the Clamex P	
access hole (6 mm)	

#### Machining steps



### Cabineo with CNC

Specific equipment options for CNC machines for Cabineo





CNC machine

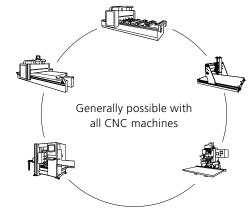
#### **Homag CENTATEQ N-600**

Homag has developed the unmanned installation of the Cabineo connector on its nesting CNC machine CENTATEQ N-600. First, the multi spindle aggregate from Benz creates the drill shape, consisting of 3 drill holes, in one plunge. Once the panels are cut to size, the machine will commence with the fully automated insertion of the Cabineo into the board.

#### **Gannomat Basica Variabel 0194**

First, the 3 spindle aggregate drills the 15 mm drill holes in one plunge. Following this, the Cabineo is held by an insertion aggregate and is pressed into the board. The 5 mm holes for the Cabineo screw are drilled either with the boss hinge aggregate or the 11 spindle shelf pin aggregate.





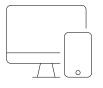








#### www.lamello



Experience CNC live and receive comprehensive product information!



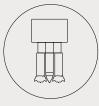












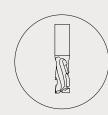
CNC tools - aggregate

#### **Benz MULTI V3 CABINEO**

Benz has developed a 3 spindle aggregate to drill the holes for the Cabineo in one plunge. This reduces the production time to 1–2 seconds (1 drill, anti-clockwise rotation; 2 drills, clockwise rotation).



Atemag offers an aggregate for the efficient machining of the three Cabineo drill holes in one process step (2 drills, anti-clockwise rotation; 1 drill, clockwise rotation).



CNC tools

#### Leuco triple drill

Leuco developed the three meshing drills for aggregates with triple multi-spindle head

#### Leitz triple drill

Leuco triple drill set for Cabineo aggregate.











### **CNC** tools

For the P-System



#### P-System CNC tools





#### P-System groove cutter CNC DP (diamond),

Ø 100.4×7 mm	Art. No.
Ø 100.4×7ר 30 mm, Z3, NL 4ר 6.6ר 48 mm	132142
suitable for all P-System CNC cutter arbor listed	
on the right	
Ø 100.4×7ר 30 mm, Z3, NL 4ר 6.6ר 48 mm	132149
LH for Weeke BHX 200 / DRILLTEQ V-500	
(left hand rotation)	



Art. No.

 $\varnothing$  100.4 × 7 ×  $\varnothing$  30 mm, Z6, NL 4 ×  $\varnothing$  6.6 ×  $\varnothing$  48 mm **132145** suitable for all all P-System CNC cutter arbor listed on the right



Art. No.

 $\varnothing$  100.4×7× $\varnothing$  40 mm, Z3, NL 4× $\varnothing$  5.5× $\varnothing$  52 mm **132143** E.g. for angle aggregates and FLEX5+C/5-MOTION PLUS



Art. No.

Ø  $100.4 \times 7 \times Ø$  16 mm, Z3, NL  $4 \times Ø$  5.5 × Ø 28 mm **132144** E.g. for corner notching aggregate



Art. No.

 $\varnothing$  100.4×7× $\varnothing$  35 mm, Z3, NL 4× $\varnothing$  5.5× $\varnothing$  50 mm **132148** e.g. for Brema Eko 2.1, Masterwood Project TF 100, Format4 D-Jet



### -6

#### **CNC** cutter arbors for P-System groove

cutter, Ø 30, NL 4×M4ר 48 mm	Art. No.
Shaft Ø 20 × 50 mm, L = 102 mm	132150



Shaft Ø 25 × 60 mm, L = 102 mm **132151** 



Art. No. Shaft Ø  $16 \times 50$  mm, L = 85 mm **132152** 



Shaft Ø 16 × 55 mm, L = 68 mm **132153** 



Art. No.

Art. No.

Art. No.

Shaft  $\emptyset$  16 × 50 mm, L = 85 mm, with clamping **132154** surface (2°- angle) e.g. for aggregate for door locks



Art. No. Shaft  $\emptyset$  20 × 50 mm, L = 85 mm, 132155 with clamping surface (2°- angle) e.g. for aggregate for door locks

M6 × 16 mm Torx countersunk bolt, 4 pieces,

suitable for cutter arbors

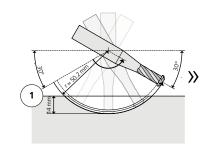
Screwdriver with cross-grip, Torx T20 × 100 mm

271919



P-System CNC shaft tool cutter Art. No. HW solid (carbide), shaft  $\emptyset$  12 × 40 mm, L = 80 mm 131342

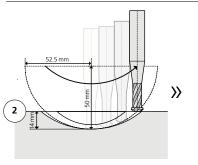
#### One tool with 2 functions



P-System CNC shaft tool cutter with 5-axis

P-System CNC shaft tool cutter

with 3-axis



Lamello recommends making all profile grooves with a disc cutter, primarily for reasons of precision, service life, machining time and thus economic efficiency.

A P-System CNC shaft tool cutter or contour cutter should only be used for the machining of surfaces if no angle aggregate is available.

## **CNC** tools

For Cabineo



### Drilling System

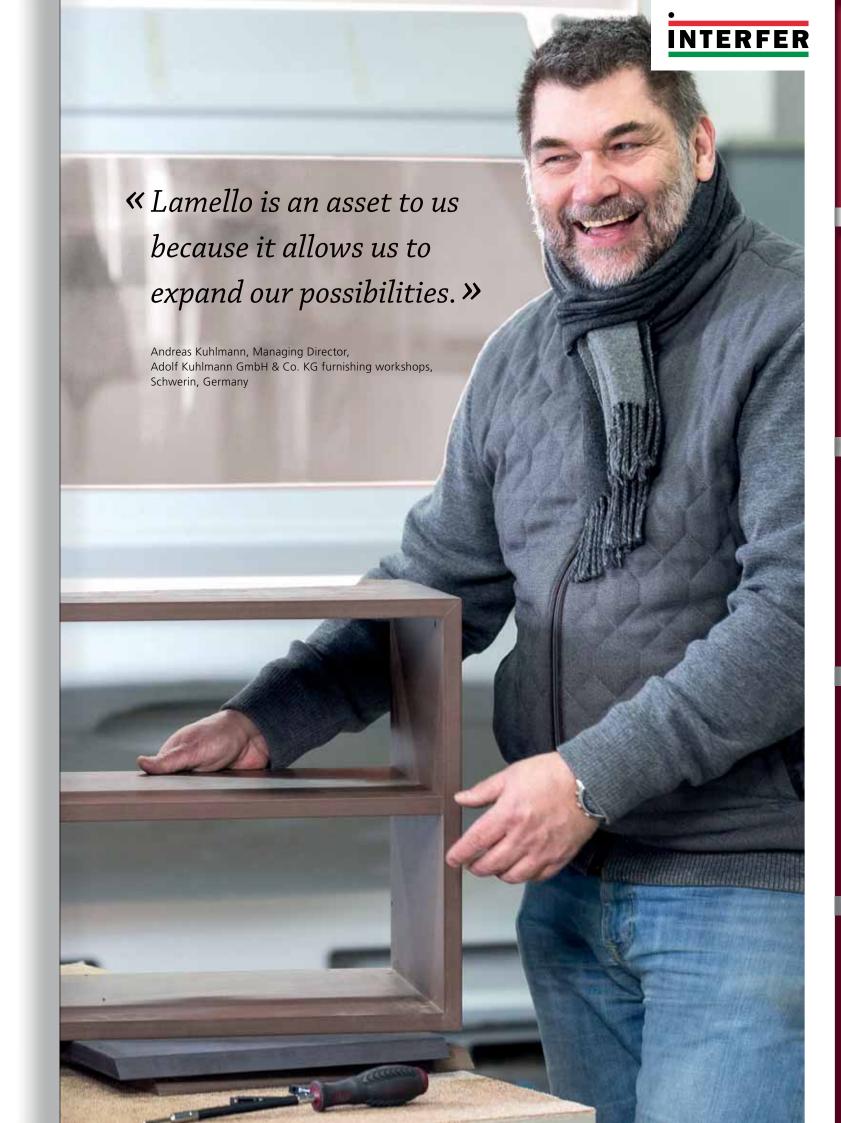
#### Cabineo dril/cutter

	Art. No.
Cabineo drill Ø 15 mm with short centering point	136312
	Art. No.
Cabineo cutter Ø 10 mm	136310
	Art. No.
Cabineo cutter Ø 12 mm	136311

#### Cabineo drills for triple aggregate\*

	Art. No.
Cabineo drills for aggregate Ø 15 mm	136314
RH carbide tipped (right hand rotation)	
	Art. No.
Cabineo drills for aggregate Ø 15 mm	136315
LH carbide tipped (left hand rotation)	

<sup>\*</sup> Benz: 2×136314 and 1×136315 (MULTI V3 CABINEO)
Atemag: 1×136314 and 2×136315 (VERTINEO Cabineo Drilling)





)

- I

ر م

P-System



#### P-System



#### P-System connector assortment

professional	Art. No.
Scope of delivery: 120 pairs Clamex P-14,	145323
30 pairs Clamex P-14/10 Flexus, 30 pairs Clamex P-1	0,
80 pairs Tenso P-14 incl. clip, 30 pairs Tenso P-10	
incl. clip, 20 pieces Bisco P-14, 20 pieces Bisco P-10,	
80 pairs Divario P-18, Divario installation tool/drill/	
marking gauge, Clamex P installation tool, Tenso P-	14/10
preload tool, Sortainer T-loc	



#### P-System connector assortment

basic	Art. No
In Systainer3 M187, scope of delivery:	14532
80 pairs Clamex P-14, 80 pairs Tenso P-14,	
incl. preload clip, 30 pairs Clamex P-14/10 Medius,	
30 pairs Clamex P14/10 Flexus, 20 pieces Bisco P-14	and
Tenso P-14/10 preload tool	

#### Clamex P





Allen key	Art. No.
4 mm, 75 × 55 mm	271945
4 mm, 120×50 mm	271945A







Cover cap, 100 pieces, 90°		Art. No.
RAL 9010 pure white	$\bigcirc$	335280
RAL 9011 graphite black	•	335281
RAL 1014 ivory, pine		335282
RAL 1011 brown beige, beech		335283
RAL 8007 fawn brown		335284
RAL 8017 chocoloate brown		335289
RAL 9002 grey white		335285
RAL 7035 light grey		335286
RAL 7040 window grey		335287
RAL 7031 blue grey		335288
RAL 7022 umbra grey		335298

Cover cap, 500 pieces, 90°		Art. No.
RAL 9010 pure white	$\bigcirc$	335362
RAL 9011 graphite black		335363
RAL 1014 ivory, pine		335364
RAL 1011 brown beige, beech		335365









Clamex P drill jig	Art. No.
Incl. drill, from 22.5° for all	125344
Clamex P connectors (P-10, P-14)	
Angle for drill jig	255250
Element insert for size P-10	255251
Element insert for size P-14	255252



Clamex P drill jig long	Art. No.
Drill jig for thick workpieces 100 mm,	125345
(P-14), incl. drill	



Art. No.
131506
131508
255243

P-System



#### Combination CNC and Zeta P2



#### Positioning pin CNC for Zeta P2\*,

2 pieces	Art. No.
Ø 5 mm	251048
Ø 8 mm	251066



Positioning clip CNC for Zeta P2*	Art. No.
Ø 6 mm	251067
for nositioning in the Clamex Placess hole (6 mm)	

#### Tenso P



Tenso P-14/10 preload tool	Art. No.
Tool to pre-load the Tenso P	145400

## P-System 4 mm depth

adjuster attachment for P-8	Art. No.
For offset installation on dividing panels	145439
16 mm with Tenso P-10	

#### Divario P



#### Divario P-18 Marking jig metal with

marking points	Art. No.
Marking jig incl. drill with centering point and	125510
rotating depth collar for the precise drilling of	
Divario drill holes by hand	



#### Divario P-18 Marking jig plastic,

to mark with a pencil	Art. No.
Marking jig to mark the Divario holes	125511
with a pencil	



Divario P-18 Installation tool	Art. No.
Divario P-18 Installation tool for fixing	125500
the Divario in the workpiece	



Divario P-18 Starter set	Art. No.
In systainer3 M137, scope of delivery:	145552
Divario P-18, 80 pairs, drill, marking jig in metal	
and installation tool	

#### Zeta P2



#### Stop square for

Zeta P2, Top 21, Classic X	Art. No.
For stabilising the biscuit joiner in the	251044
vertical position, ideal for obtuse mitre joints	







Spacer for Zeta P2, Top 21, Classic X	Art. No
5 mm, aluminium for 18 mm panels	253027
2 mm, plastic for 16 mm panels	253023
4 mm, plastic for mitres	253026



#### P-System groove cutter DP (diamond),

Ø 100.4×7ר 22 mm	Art. No
Z3, 4 NL for Zeta P2	13214



#### P-System groove cutter HW (carbide),

Ø 100.9×7ר 22 mm	Art. No.
Z3, 4 NL for Zeta P2	132141



Dust bag	Art. No.
For Zeta P2/Top 21/Classic X	257532

#### **Batteries**



 Battery pack 18 V, LiHD 4.0 Ah
 313013



Art. No. Battery pack 18 V, LiHD 5.5 Ah **313015** 



Art. No.

Battery charger ASC 55 123100

\* For detailed information, see PAGE 166/171

Lamello System

#### . INTERFER

#### Lamello System



#### Stop square for

Zeta P2, Top 21, Classic X	Art. No.
For stabilising the biscuit joiner in the vertical	251044
position, ideal for obtuse mitre joints	







Spacer for Zeta P2, Top 21, Classic X	Art. No.
5 mm, aluminium for 18 mm panels	253027
2 mm, plastic for 16 mm panels	253023
4 mm, plastic for mitres	253026



Systainer3 M187	Art. No.
Systainer3 M187, empty	331579
Insert with two partitions	360023
for Systainer3 M 187	
Divider for insert 360023	360019
Insert Systainer3 M187	360020
for Zeta P2/Top21/Classic X	



#### Groove cutter HW (carbide),

Ø 100×4ר 22 mm	Art. No.
Z2 + V4 scoring teeth, 4 screw holes, hub	132000
for Zeta P2/Top 21/Classic X	



Art. No.

Z6 alternating teeth, without hub, with spacer 132106 for Classic X

### Groove cutter HW (carbide),



Ø 78×3ר 22mm Art. No.

Z4, 4 Screw holes, with hub for original wooden
biscuit H9 for Zeta P2/Top 21/Classic X



#### Groove cutter HW (carbide) with reversible blades,

	,
Ø 100×4ר 22 mm	Art. No.
Z2 + V2, 4 screw holes with hub	132001
for Zeta P2/Top 21/Classic X	
Set of 4 pieces	132111
Countersunk screws	352408T
Allen key, 4 mm	271959L



#### Groove cutter HW (carbide) with reversible blades,

-
Art. No.
132130
132134
132135
132133
352130
352133



#### Groove cutter HW (carbide) with reversible blades,

Ø 100×8ר 22 mm (Clamex S-18 connector)	Art. No
Z4 + V4, 4 screw holes	13210
for Top 20/Top 21/Classic X	
Set of 10 pieces scoring teeth	13213
Set of 10 pieces main teeth	13213
Replcement set,	13211
4 scoring teeth + 4 main teeth	



Dust bag	Art. No.
For Zeta P2/Top 21/Classic X	257532

#### **Batteries**



Art. No. Battery pack 18 V, LiHD 4.0 Ah 313013



 Battery pack 18 V, LiHD 5.5 Ah
 313015



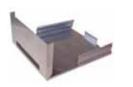
Art. No.
Battery charger ASC 55 123100

### INTERFER

## Accessories/ Spare Parts

Lamello System

### Lamello System



Slide shoe for biscuit joiner	Art. No.
To protect the wall and the machine	251057
for Zeta P2/Top 21/Classic X	



#### Carbide tipped saw blades HW (carbide)

for expansion gaps, Ø 100×2.4ר 22 mm	Art. No.
Z20, 4 screw holes, 2 spacers	132350
for Zeta P2/Top 21/Classic X	



Accessories for saw blades	Art. No.
Spacer, Ø 40 × 1 × Ø 22 mm	322510
with screw holes	
for Zeta P2/Top 21/Classic X	





Clamex S drill jig	Art. No.
Clamex S drill jig 30° – 150°,	125240
with 6 mm drill complete	



Clamex S-18 set	Art. No.
Drill jig for 30°–150° incl. drill and carbide	125250
tipped groove cutter	
with drill jig and cutter	
includes 1 set 125240 and 1 piece 132108	
	_

#### Clamping set parts



Clamps	Art. No.
5 m clamping strap	175005
8 m clamping strap	175008
10 m clamping strap	175010





Art. No.

175050

1 roll of 50 m

Art. No.

175060





Tension hooks	Art. No.
2 pieces	175200



Profile sections	Art. No.
4 pieces, length 12 cm	175401
4 pieces, length 40 cm	175402
4 pieces, length 60 cm	175403

Drilling System



### Cabineo



Cabineo installation tool	Art. No.
With handle, incl. hex bit 1/4"	256300
	Art. No.
Cabineo hex bit 1/4"	276312
	Art. No.
Cabineo hex bit 1/4" GL 80 mm	276308
Cabineo hex bit 1/4" GL 80 mm, 100 pieces	276309

Cabineo drill Ø 15 mm with short centering point	136312
	_
	Art. No.
Cabineo cutter Ø 10 mm	136310
	Art. No.
Cabineo cutter Ø 12 mm	136311
<u></u>	Art. No.
Cabineo drills for aggregate* Ø 15 mm	136314
RH carbide tipped (right hand rotation)	
	Art. No.
Cabineo drills for aggregate* Ø 15 mm	136315
LH carbide tipped (left hand rotation)	



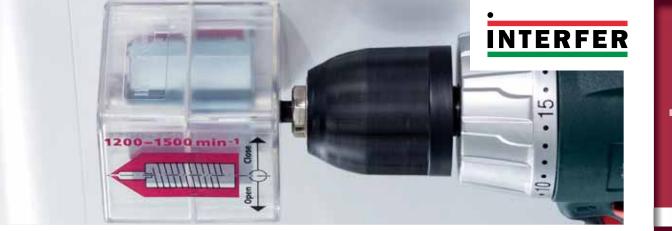
Cabineo cover caps	Art. No.		Art. No.
	100 pieces	2	2000 pieces
RAL 9003 signal white	1863505	$\bigcirc$	1863515
RAL 9010 pure white	186350W		186351W
RAL 9018 papyrus white	186350P		186351P
RAL 1015 light ivory	186350H		186351H
RAL 1011 brown beige	186350B		186351B
RAL 8007 fawn brown	186350R		186351R
RAL 7040 window grey	186350F		186351F
RAL 7005 mouse grey	186350A		186351A
RAL 9005 jet black	186350T		186351T
Metal look, silver	186350C		186351C
Metal look, nickel	186350N		186351N
Metal look, dark steel	186350D		186351D



Cabineo insert insertion tool	Art. No
For insert M6	27631

<sup>\*</sup> Benz: 2×136314 and 1×136315 (MULTI V3 CABINEO) Atemag: 1×136314 and 2×136315 (VERTINEO Cabineo Drilling)

Drilling System



Invis Mx2

Rasto



Invis Mx2 screw bit	Art. No
1 piece	6112205



Invis Mx2 MiniMag	Art. No
Incl. screw bit	6100301



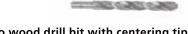
Invis Mx2 flexible shaft	Art. No.
1 piece	6100204



Invis Mx2 insertion jig	Art. No
For studs 14 mm	6112333



Invis Mx2 insertion bush for Rasto	Art. No.
For studs 14 mm	6112330



Rasto wood drill bit with centering tip  Art. 1	
Ø 5 mm	6100160
Ø 6 mm	6106161
Ø8mm	6108060
Ø 10 mm	6110162
Ø 12 mm	6112060



Rasto depth adjuster	Art. No.
Ø 5 mm	6100059
Ø 6 mm	6100063
Ø 8 mm	6100060
Ø 10 mm	6100064
Ø 12 mm	6100061



Invis Mx2 spacer	Art. No.
For Rasto	6112331



Rasto perforated plate	Art. No.
1 piece	6160000



Rasto drill bush	Art. No.
Ø 5 mm	6100065
Ø 6 mm	6100056
Ø 8 mm	6100057
Ø 10 mm	6100067
Ø 12 mm	6100058



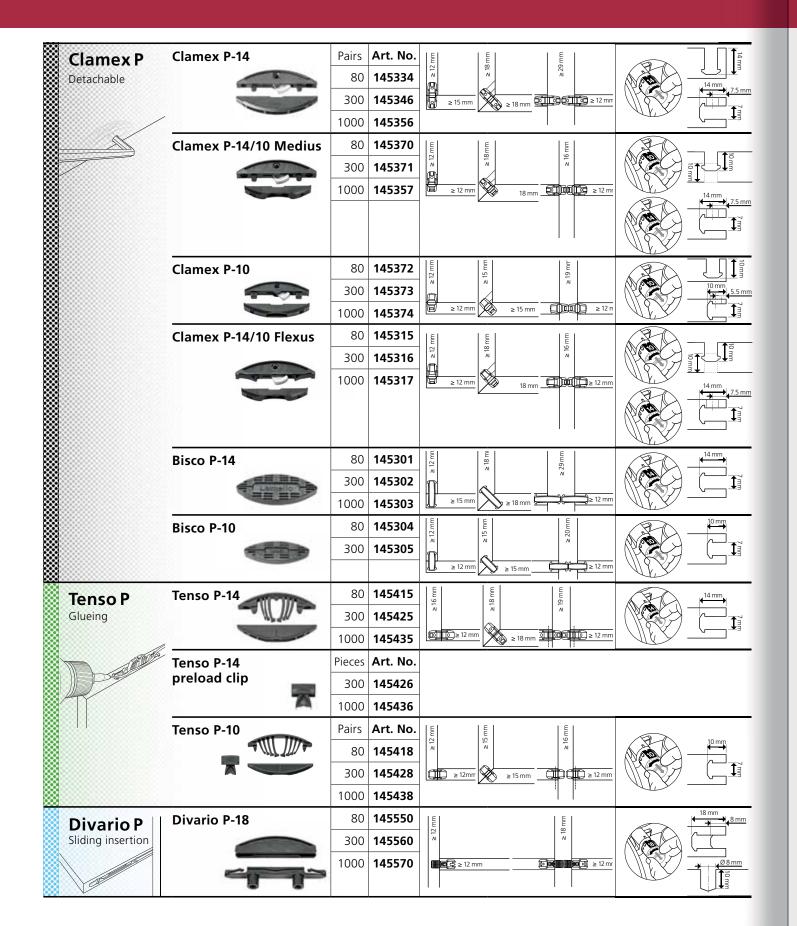
Rasto fixing screw	Art. No.
4.5 × 35 mm, TX 25	6560450



sto connection rod 500 mm	Art. No.
o-part	6160601

## Overview of connectors

P-System





## Overview of connectors

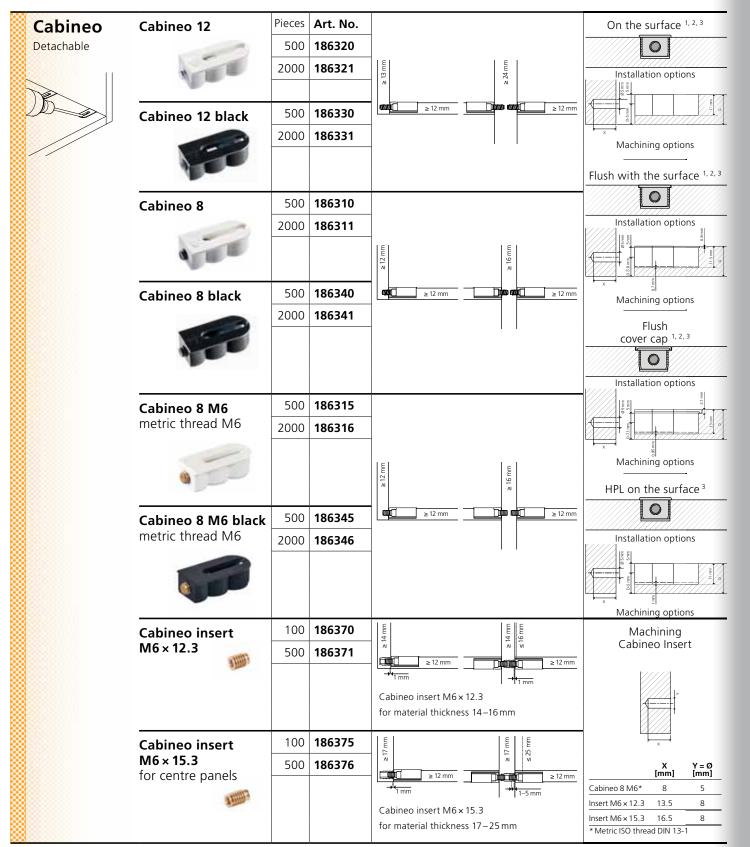
Lamello System

			T		
Glueing	Original wooden biscuit 20		Art. No.	ISI ICI	12.3
	DISCUIT 20	1000	144020	E E 21	
	- Children			≥ 13 mm ≥ 12 mm	4
		1000	444040		
	Original wooden biscuit 10	1000	144010	E	10
	Mode			≥ 11 mm ≥ 10 mm	4
	Original wooden	1000	144000	Ici ICI	8 8
	biscuit 0			29 mm ≥ 6 mm	
				<u>29 mm</u> ≥9 mm	4
	Original wooden	1000	144009		7
	biscuit H9			E	
				<u> </u>	3
				ld Icl	
	C20	250	145010	<u>≥6 mm</u>	12.3
				≥ 14 mm ≥ 13 mm	4
	C10	300	145012		10
	CIO	300	113012	IO Al	
				≥ 11 mm	4
Detachable	Clamex S-18	Pairs	Art. No.		
		18	145231	2 12 mm 2 18 mm	14.7
		80			8
		300		2 ≥ 16 mm ≥ 18 mm	
		1000			
	Simplex	50		≥ 6 mm 12 mm	13
		100	166100	N ≥ 14 mm	4
		D: -	At P:	≥ 14 mm ≥ 12 mm	
Inserted	E20-H		Art. No.	≥8mm	13
	•	400			
				≥ 29 mm	
		1200	145028 145022		4
	E20-L	400		≥8mm	
		1200		≥ 13 mm	12.3-20
	K20	80		≥ 6 mm ≥ 14 mm	12.3
		250		V	
				≥ 14 mm	4

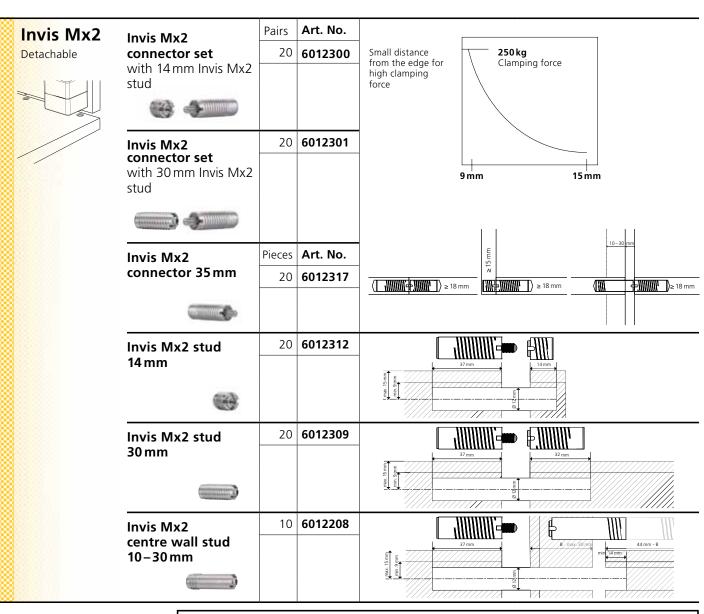
## Overview of connectors

**Drilling System** 

- 1 Cabineo 8: X = 8 mm, black screw
- 2 Cabineo 12: X = 12 mm, nickel-plated screw
- 3 Cabineo 8 M6\*: X = 8 mm, yellow galvanised screw
  \*Metric ISO thread DIN 13-1







### Disclaimer regarding load limits

Wherever we list information on material strength or loads for our products, they are empirical values of load limits, based on specifically defined test conditions similar to DIN 68501:2016-11. Specific characteristics, in particular to the effect that the products will reach the listed loads in the actual used case, are not thereby guaranteed. Rather, it is the responsibility of the respective user to check and ensure the suitability of the products for each specific used case. Since actual load limits substantially depend on circumstances unrelated to the products themselves, e.g. the properties of the carrier materials used, the assembly or the installation environment, any advice provided by us in the form of a product recommendation with regard to a specific suitability is always non-binding and does not release the user from his or her own examination. To the maximum extent possible under the law, all warranties, express or implied are DISCLAIMED. This includes, but is not limited to, any warranty of fitness for a particular purpose or merchantability. We undertake no responsibility that the goods except as may be included in any contract, and we assume no responsibility that the goods will be fit for any particular purpose, except as may be provided in any contract.



Manufacturer: Lamello AG Joining technology Hauptstrasse 149 CH-4416 Bubendorf

CH-4416 Bubendorf Tel. +41 61 935 36 36 Fax +41 61 935 36 06 info@lamello.com www.lamello.com