

Lamello



P-System



The time-saving joining system
with form-locking anchoring

P-System



The time-saving joining system with form-locking anchoring

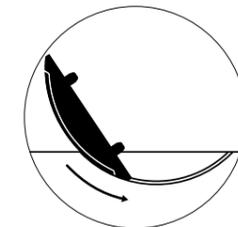
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Subject to modifications and amendments. Plastic parts may vary in colour due to the production process. Colour specifications are for guidance only.

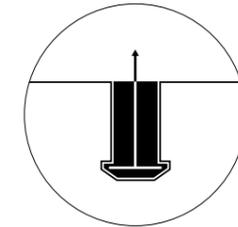
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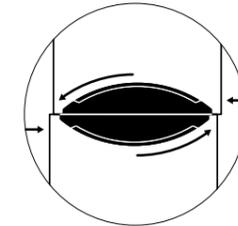
Features



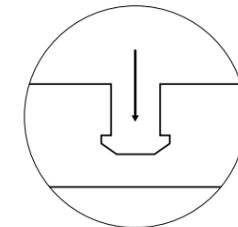
Fast installation
Inserting instead of screwing or glueing



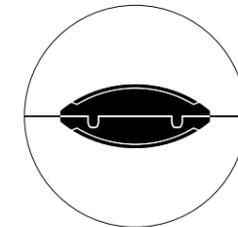
Strong
Form-locking anchorage across large surface areas



Lateral tolerance
Perfect, flush alignment of both workpieces



Shallow depth
Minimal cutting depth with maximum tensile strength

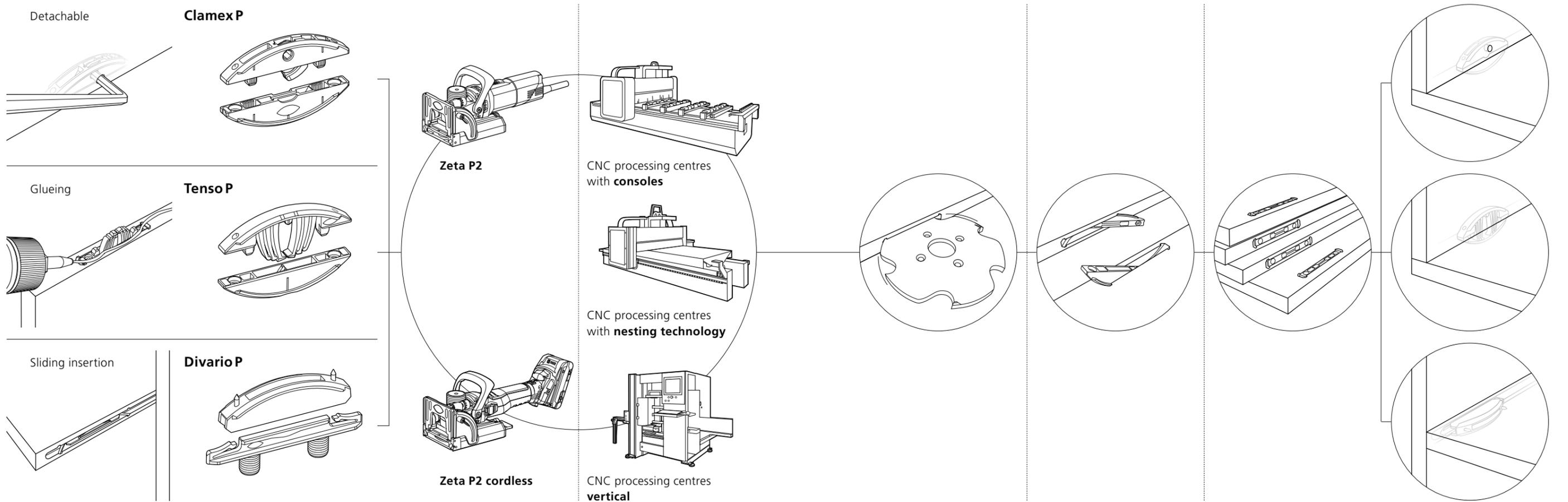


No twisting
The positioning pins prevent twisting without additional dowels

P-System

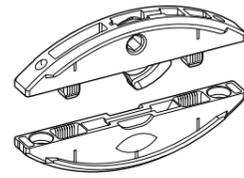
Overview

Features	Connector	Machines		Sequence			
		Power tool	CNC machines	1 Cut	2 Insert the connector	3 Deliver flat pack	4 Connect the workpieces



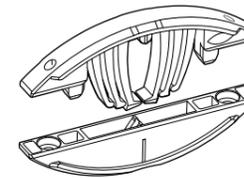
Connectors

Features overview



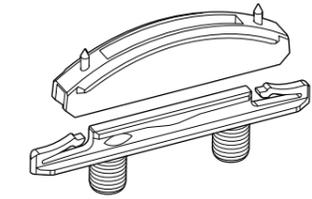
Clamex P

Detachable furniture connector



Tenso P

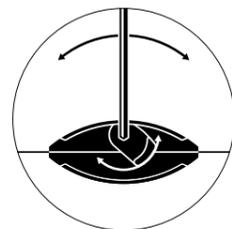
Self-clamping connector for glueing



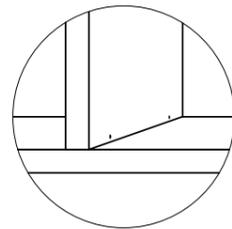
Divario P

Self-clamping, invisible connector for slide insertion

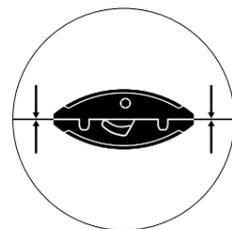
Features



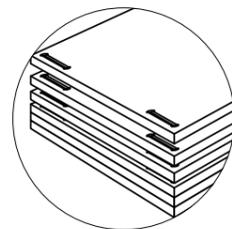
Detachable
Open the connection time and time again with the rotating lever



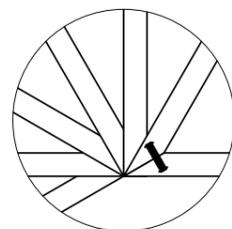
Aesthetic
The small, hardly visible opening ($\varnothing = 6 \text{ mm}$) serves to close and open the connector



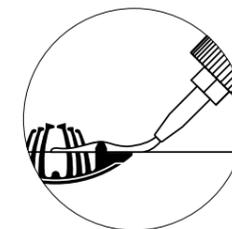
High clamping force
Clamp and glue workpieces at any angle



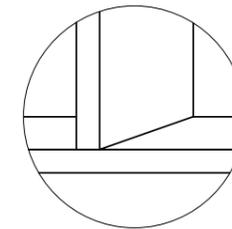
Stackable
Workpieces with pre-installed P-System connectors are stackable for storage and transport



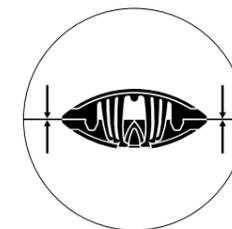
Versatile
The shallow element depth allows for mitres from $22.5^\circ - 180^\circ$, surface, corner and dividing panel connections



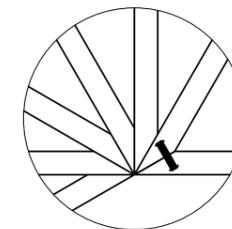
Glueing
Fixed joints of two workpieces



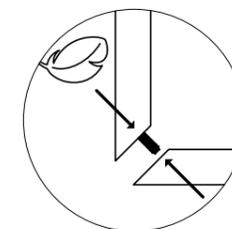
Invisible
No visible connector



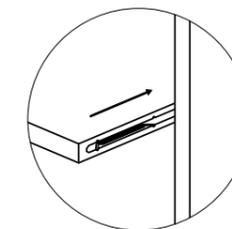
High clamping force
Allows for perfect alignment and clamps the workpieces ~ 15 kg or 30 lb



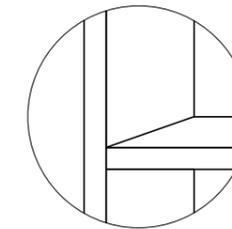
Versatile
Simple glueing of mitre joints



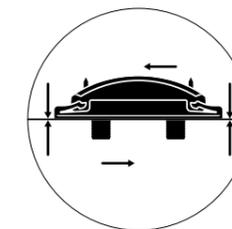
Lower assembly force
In combination with the pretension clip, only a short force impulse is required to snap it into place



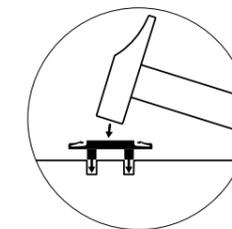
Sliding insertion
Insertion between two fixed sides or shelves via a guiding groove



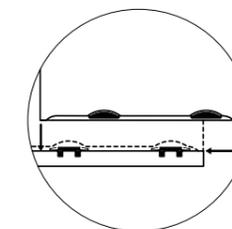
Invisible
Guiding groove covers the connectors



Clamped joint
No resistance while inserting until shortly before building the clamping force



Fast installation
Quick installation of the connectors without glue after transport



Assemble by sliding
Partially routed guiding groove for completely invisible furniture joints

« The Clamex P-14/10 Flexus is a logical addition to the P-System range. We are always inspired anew by how reliably Lamello tailors its products to customer needs, and are happy to be part of the Lamello family. »

Hannes Kofler, Owner and Managing Director, Joinery workshop Kofler, Italy

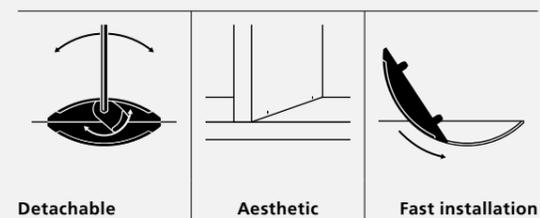


Clamex P-14

Detachable furniture connector



Features



- Detachable furniture connector, installed in seconds
- Aesthetic look with the hardly visible 6 mm access hole
- All-rounder for all angle and miter joints from 22.5° to 180°
- High clamping force for perfectly closed joints
- Ideal for open shelves, cupboards or wardrobes under sloping roofs

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.

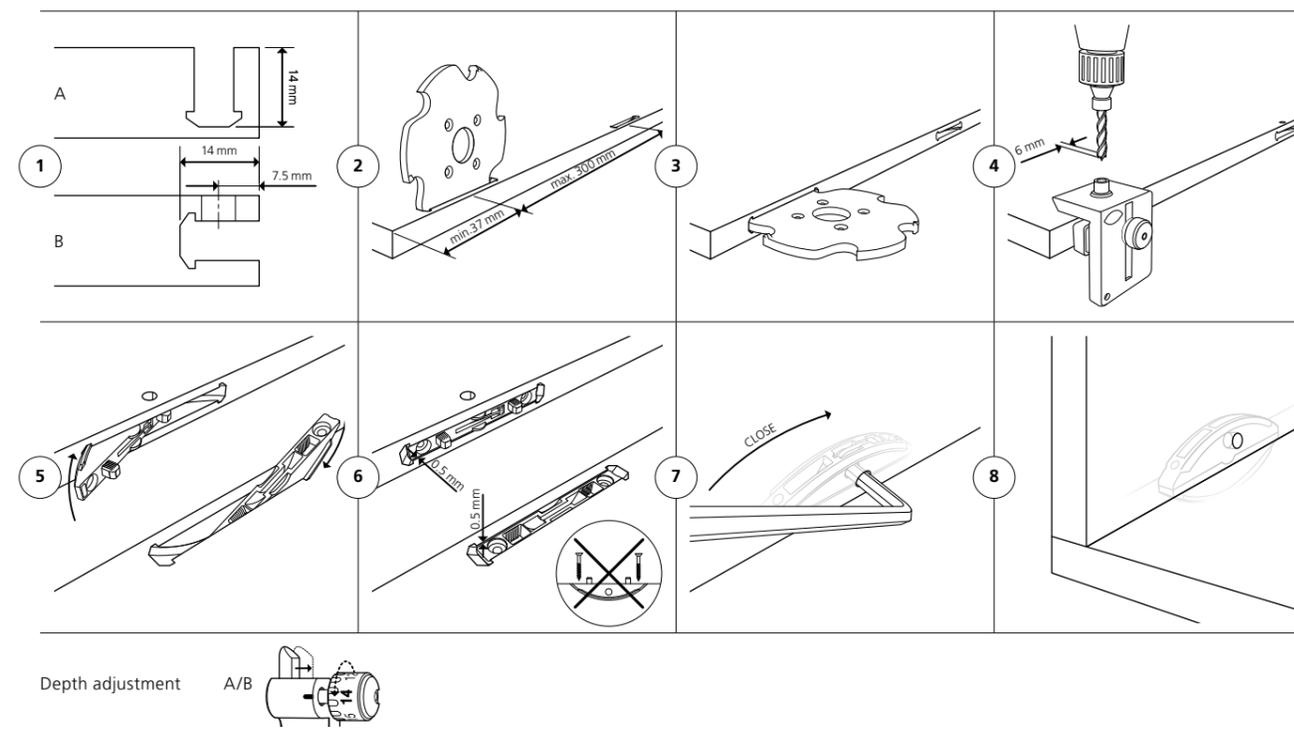
Articles

	
Clamex P-14, 80 pairs	145334
Clamex P-14, 300 pairs	145346
Clamex P-14, 1000 pairs	145356
Clamex P-14 element with lever, 2000 pieces	145338
Clamex P-14 element without lever, 2000 pieces	145339

Matching accessories starting on **PAGE 76**



Installation



Technical data

Joining methods	Size	64 × 27 × 9.7 mm		
	Cutter	Ø 100.4 × 7 × Ø 22 mm		
	Material connector	Fiberglass reinforced plastic		
	Material of lever	Zinc die cast		
	Installation tolerance	Long. ± 1 mm/radial ± 1 mm		
	Tensile strength (N)	MDF	Particle board	Beech
	Up to	1210 ¹	1070 ¹	1870 ¹
	Material range	Particle board, MDF, plywood, softwood, hardwood etc.		

See **PAGE 71** for technical specifications | 90° and 45° cover caps are available in a variety of colours **PAGE 76–77**

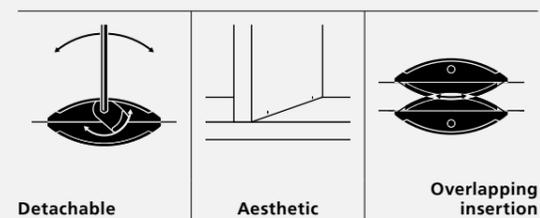
¹ See comment on load limits on **PAGE 83**

Clamex P-14/10 Medius

Detachable connector for centre panels for materials from 16 mm thickness



Features



- Detachable furniture connector, installed in seconds
- Supplement to Clamex P-14 for dividing panel connections from 16 mm
- Aesthetic look with the hardly visible 6 mm access hole
- High clamping force for perfectly closed joints
- Ideal for dividing panel connections in sideboards, shelves or cupboards

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

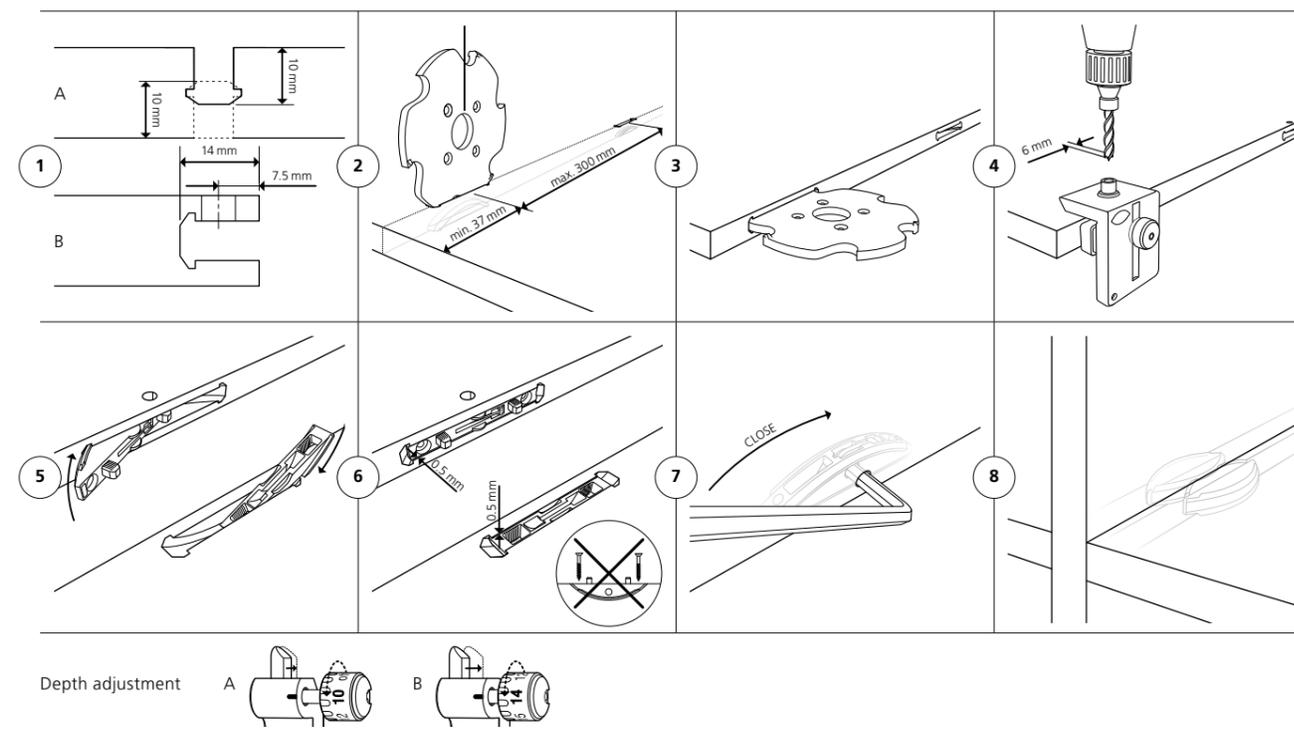


	Art. No.
Clamex P-14/10 Medius, 80 pairs	145370
Clamex P-14/10 Medius, 300 pairs	145371
Clamex P-14/10 Medius, 1000 pairs	145357
Clamex P-14 element with lever, 2000 pieces	145338
Clamex P-10 Medius element without lever, 2000 pieces	145369

Matching accessories starting on PAGE 76



Installation



Technical data

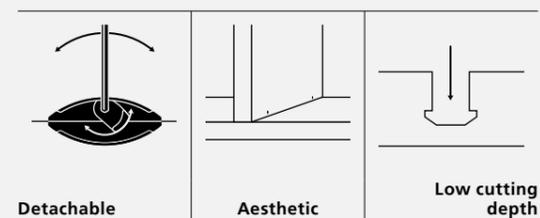
Joining methods	Size	64 × 13.5 × 9.7 mm 52 × 7.5 × 9.7 mm
	Cutter	Ø 100.4 × 7 × Ø 22 mm
	Material connector	Fiberglass reinforced plastic
	Material of lever	Zinc die cast
	Installation tolerance	Long. ± 1 mm/radial ± 1 mm
	Tensile strength (N) Up to	MDF 760 ¹ Particle board 680 ¹ Beech 1070 ¹
	Material range	Particle board, MDF, plywood, softwood, hardwood etc.

Clamex P-10

Detachable connector for materials from 12 mm thickness



Features



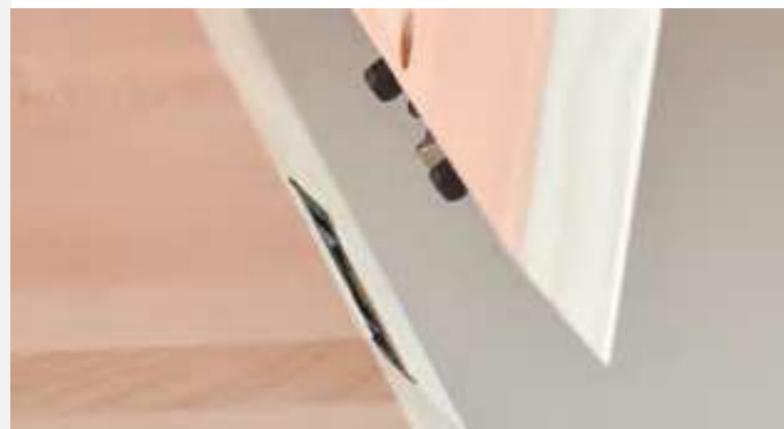
- Detachable furniture connector, installed in seconds
- For miters from 15 mm and butt joints from 12 mm material thickness
- Aesthetic look with the hardly visible 6 mm access hole
- All-rounder for all angle and miter joints from 22.5° to 180°
- Ideal for thin materials, miters, wooden drawers, open shelves

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.

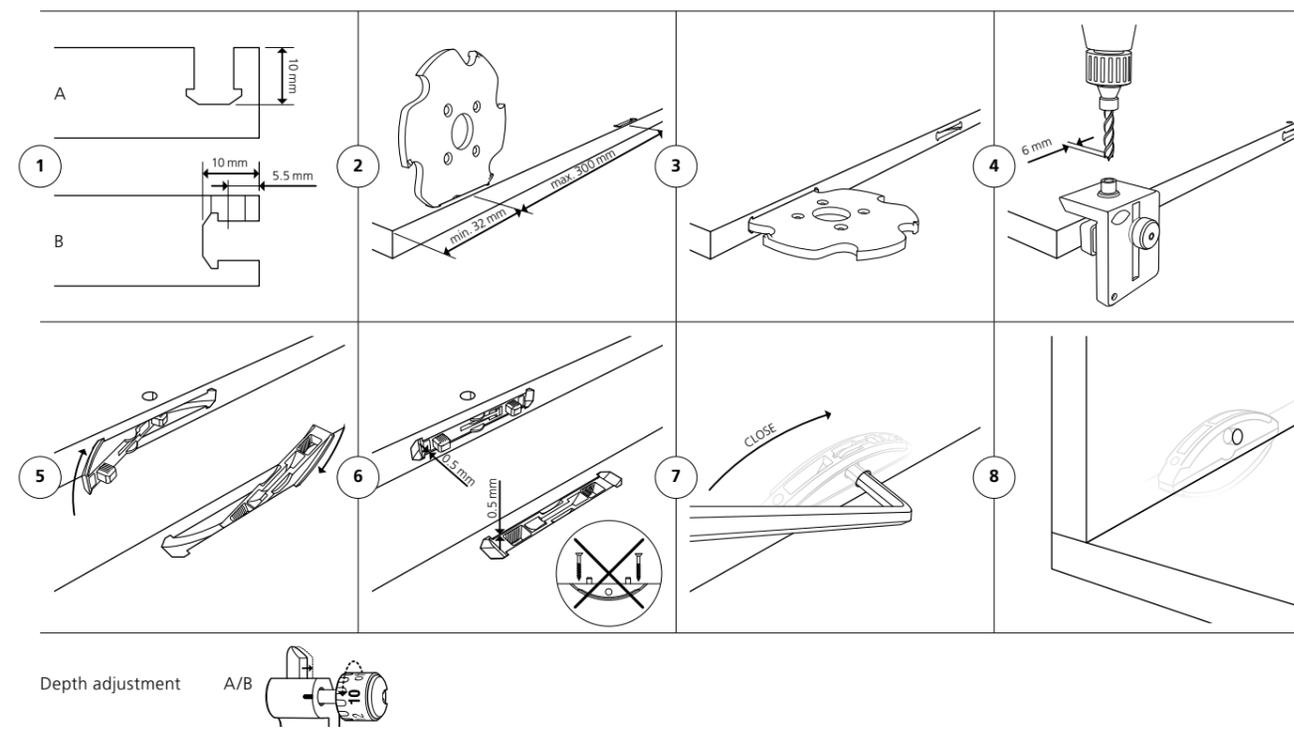
Articles

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

Matching accessories starting on **PAGE 76**



Installation



Technical data

Joining methods	Size	52 x 19 x 9.7 mm		
	Cutter	Ø 100.4 x 7 x Ø 22 mm		
	Material connector	Fiberglass reinforced plastic		
	Material of lever	Zinc die cast		
	Installation tolerance	Long. ± 0.5 mm/radial ± 0.5 mm		
	Tensile strength (N)	MDF	Particle board	Beech
	Up to	700 ¹	540 ¹	900 ¹
	Material range	Particle board, MDF, plywood, softwood, hardwood etc.		

See **PAGE 71** for technical specifications | 90° and 45° cover caps are available in a variety of colours **PAGE 76-77**

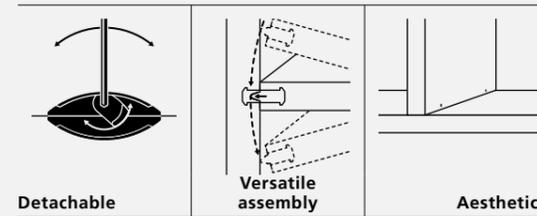
¹ See comment on load limits on **PAGE 83**

Clamex P-14/10 Flexus

Detachable furniture connector with flexible positioning pins



Features



- Detachable furniture connector, installed in seconds
- Flexible positioning pins for retrofitting shelves
- Aesthetic look with the hardly visible 6 mm access hole
- All-rounder for all angle and miter joints from 22.5° to 180°
- Ideal for furniture construction, sideboards, wine racks, inspection flaps

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.

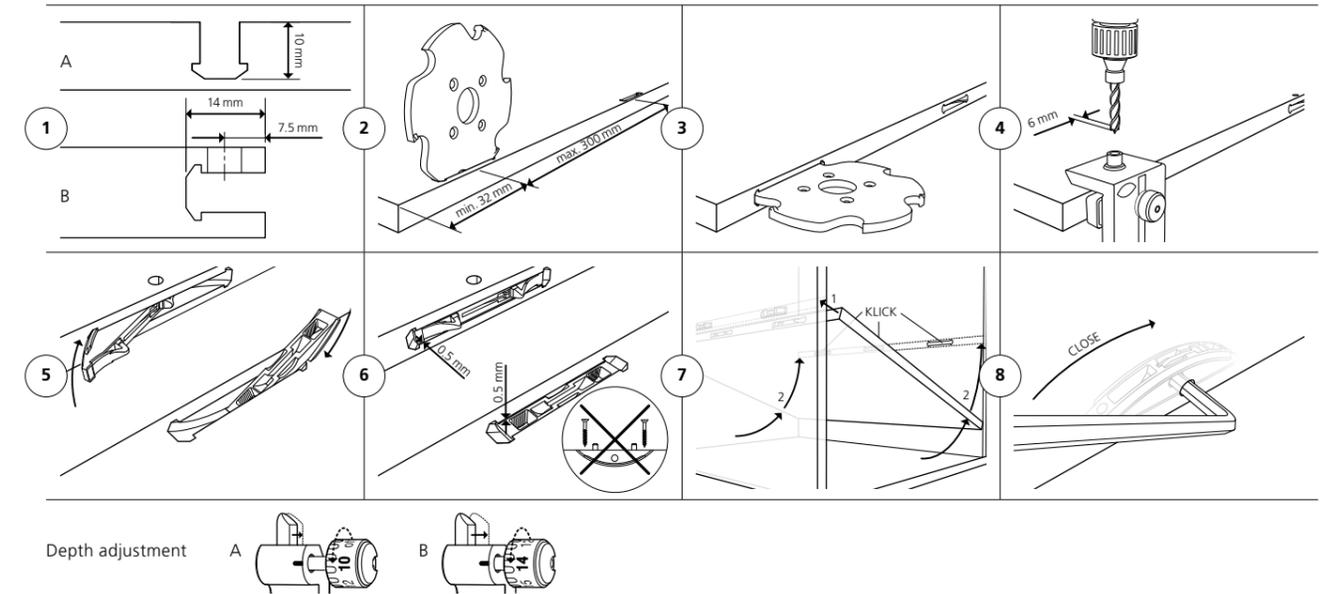
Articles

	
Clamex P-14/10 Flexus, 80 pairs	145315
Clamex P-14/10 Flexus, 300 pairs	145316
Clamex P-14/10 Flexus, 1000 pairs	145317
Clamex P-14 Flexus element with lever, 2000 pieces	145318
Clamex P-10 Medius element without lever, 2000 pieces	145369

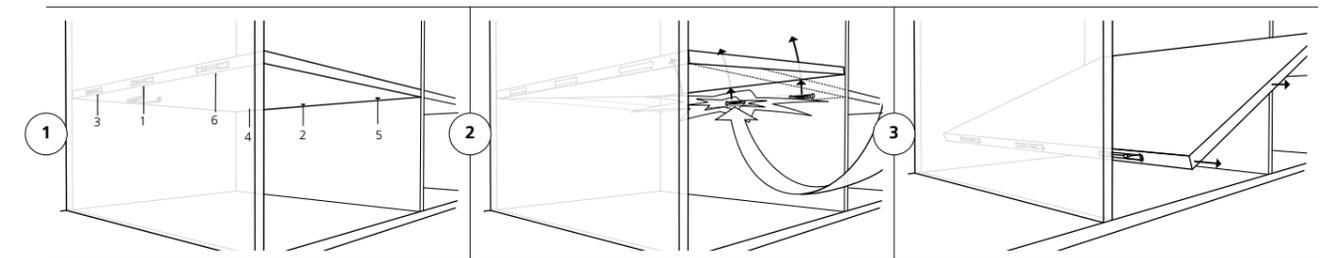
Matching accessories starting on **PAGE 76**



Installation



Shelf disassembly



Technical data

Joining methods	Size	64 × 13.5 × 9.7 mm 52 × 7.5 × 9.7 mm		
	Cutter	Ø 100.4 × 7 × Ø 22 mm		
	Material connector	Fiberglass reinforced plastic		
	Material of lever	Zinc die cast		
	Installation tolerance	Long. ± 0 mm/radial ± 1 mm		
	Tensile strength (N) Up to	MDF 790 ¹	Particle board 710 ¹	Beech 1190 ¹
	Material range	Particle board, MDF, plywood, softwood, hardwood etc.		

See **PAGE 72** for technical specifications | 90° and 45° cover caps are available in a variety of colours **PAGE 76-77**

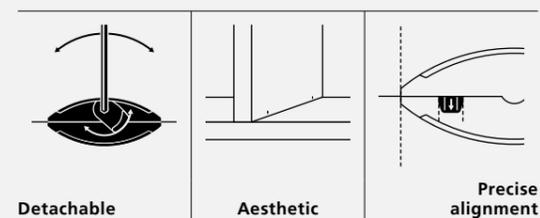
¹ See comment on load limits on **PAGE 83**

Clamex P-14 CNC

Detachable furniture connector with precise alignment



Features



- Detachable furniture connector, installed in seconds
- CNC connector with automatic alignment for efficient assembly
- Aesthetic look with the hardly visible 6 mm access hole
- All-rounder for all angle and miter joints from 22.5° to 180°
- Ideal for furniture construction, especially for flat-pack furniture

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.

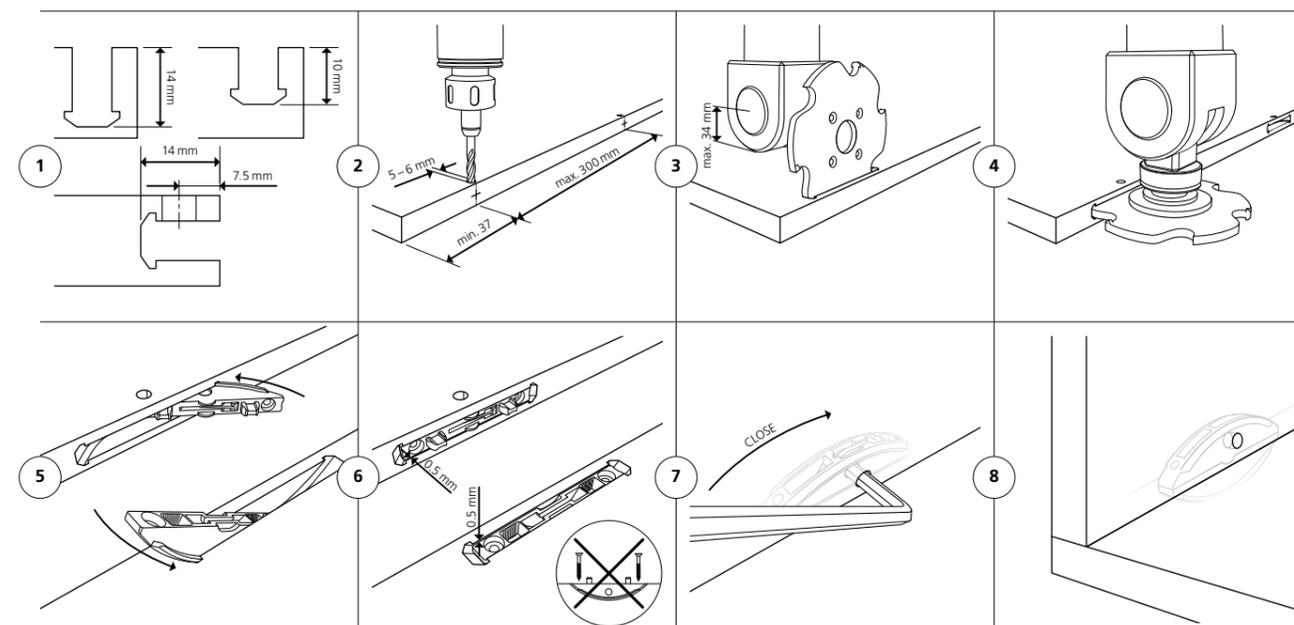
Articles



Matching accessories starting on **PAGE 76**



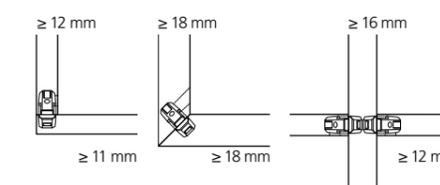
Installation



Version with CNC

Technical data

Joining methods



Size	64 × 13.5 × 9.7 mm
Cutter	Ø 100.4 × 7 × Ø 22 mm
Material connector	Fiberglass reinforced plastic
Material of lever	Zinc die cast
Installation tolerance	Long. ± 0 mm/radial ± 1 mm
Tensile strength (N)	Depending on the connector combination
Material range Up to	Particle board, MDF, plywood, softwood, hardwood etc.

Application examples

Clamex P

Furniture manufacturing/Interior fitting: Sideboards, shelves, wardrobes, trade show exhibits (display cases), kitchen furniture, TV furniture etc.

Shop fitting/Kitchen manufacturing: Wall elements, furniture, trade show exhibits (display cases), trade show exhibits, changing rooms, stools etc.

Clamex P-14/10
Flexus



Clamex P-14 CNC



Clamex P-10



Clamex P-14/10
Medius

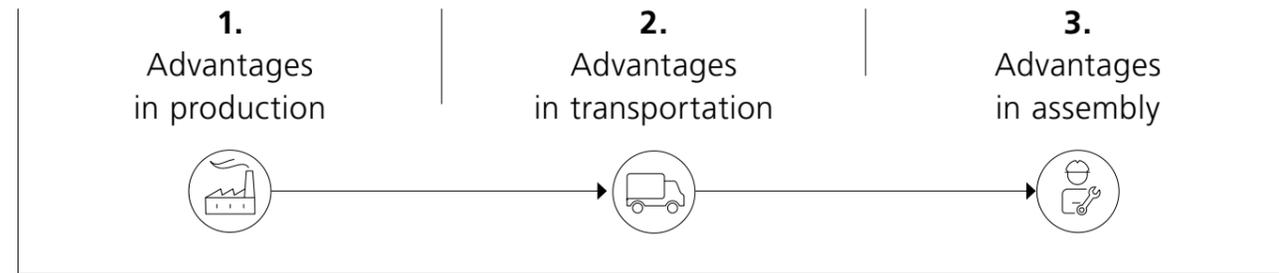


Clamex P-14



Advantages of the Clamex P

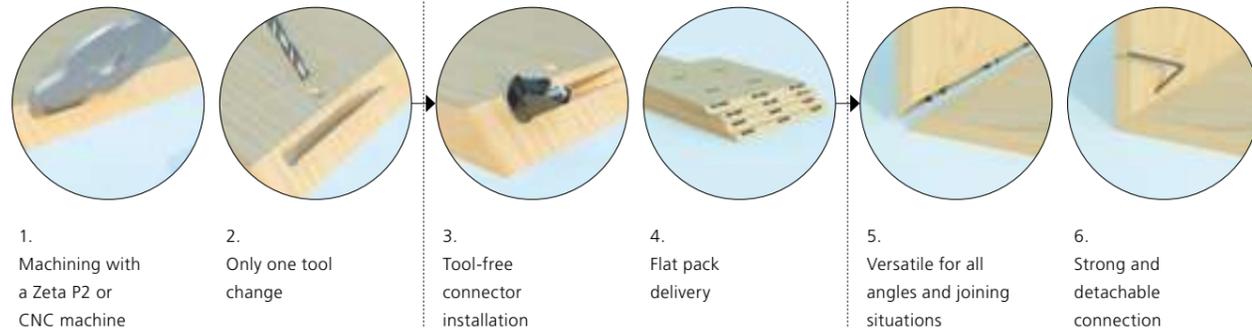
Detachable furniture connector



- 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



« The P-System saves us an enormous amount of time in production. Our fitters are big fans of Clamex and now they don't want to work with anything else. »

Markus Fust, Managing Director,
Fust Schreinerei AG, Wil, Switzerland

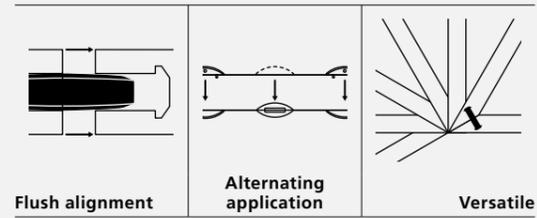


Bisco P

Aligning element, suitable for the P-System groove



Features



- Plastic element for Clamex P and Tenso P
- Align furniture parts flush together with Clamex P
- Before gluing with Tenso P, check furniture for quality control with Bisco P
- All angle and miter joints from 22.5° to 180°
- Bisco P-10 from material thickness 12 mm, Bisco P-14 from 16 mm

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.

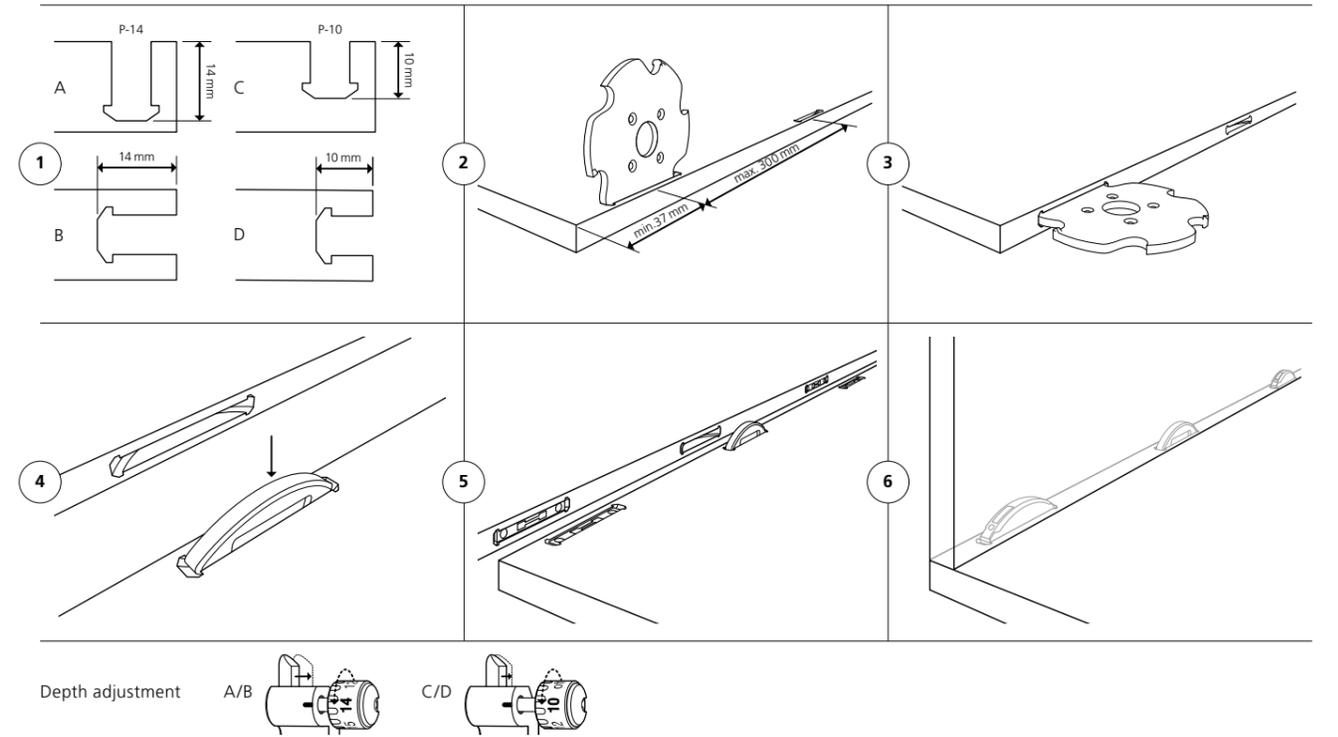
Articles

	Art. No.
Bisco P-14, 80 pieces	145301
Bisco P-14, 300 pieces	145302
Bisco P-14, 1000 pieces	145303
	Art. No.
Bisco P-10, 80 pieces	145304
Bisco P-10, 300 pieces	145305

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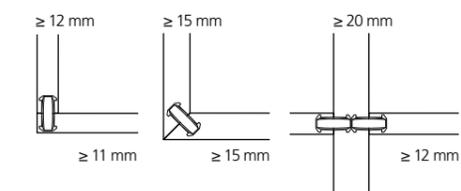
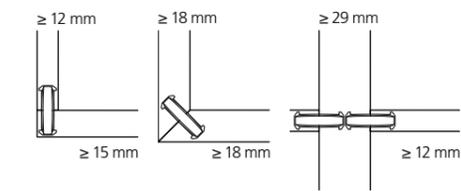


Installation



Technical data

Joining methods



Bisco P-14

Size	65 × 27 × 7 mm
Cutter	Ø 100.4 × 7 × Ø 22 mm
Material connector	Plastic
Installation tolerance	Long. ± 2 mm
Tensile strength (N)	Depending on the connector combination

Bisco P-10

Size	52 × 19 × 7 mm
Cutter	Ø 100.4 × 7 × Ø 22 mm
Material connector	Plastic
Installation tolerance	Long. ± 2 mm
Tensile strength (N)	Depending on the connector combination
Material range	Particle board, MDF, plywood, softwood, hardwood etc.

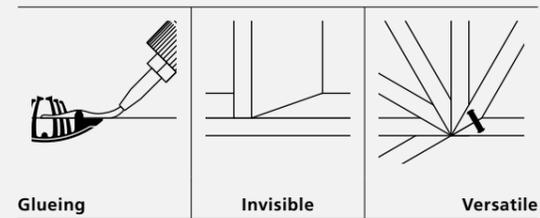
See PAGE 73 for technical specifications

Tenso P-14

Self-clamping connector for glueing materials from 16 mm thickness



Features



- Self-clamping connector for glueing, installed in seconds
- Invisible connection for maximum aesthetics
- Pretensioning function, ideal for miters and connection situations from 22.5° to 180°
- High clamping force for perfectly clamped joints without screw clamps and shims
- Gluing aid for a wide range of applications in furniture or interior design

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

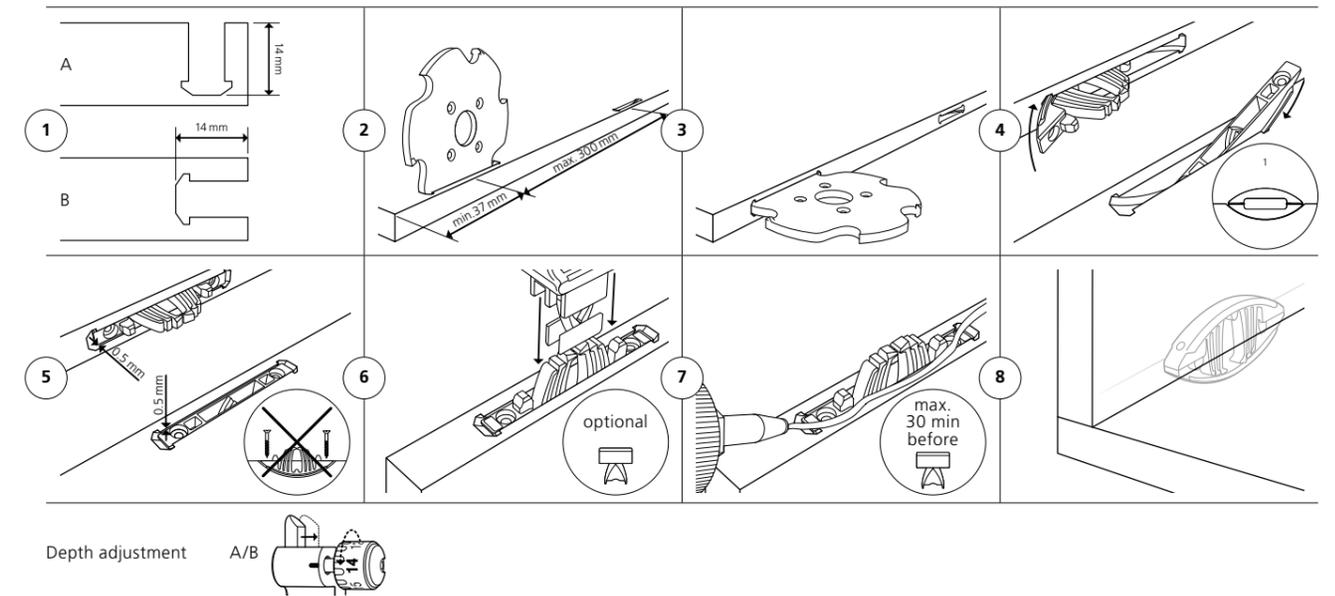
		Art. No.
Tenso P-14, 80 pairs		145415
Tenso P-14, with preload clip, 80 pairs		145415S
Tenso P-14, 300 pairs		145425
Tenso P-14, with preload clip, 300 pairs		145425S
Tenso P-14, 1000 pairs		145435
Tenso P-14 element with spring, 2000 pieces		145440
Tenso P-14 element without spring, 2000 pieces		145441

	
Tenso P-14 preload clip, 300 pieces	145426
Tenso P-14 preload clip, 1000 pieces	145436

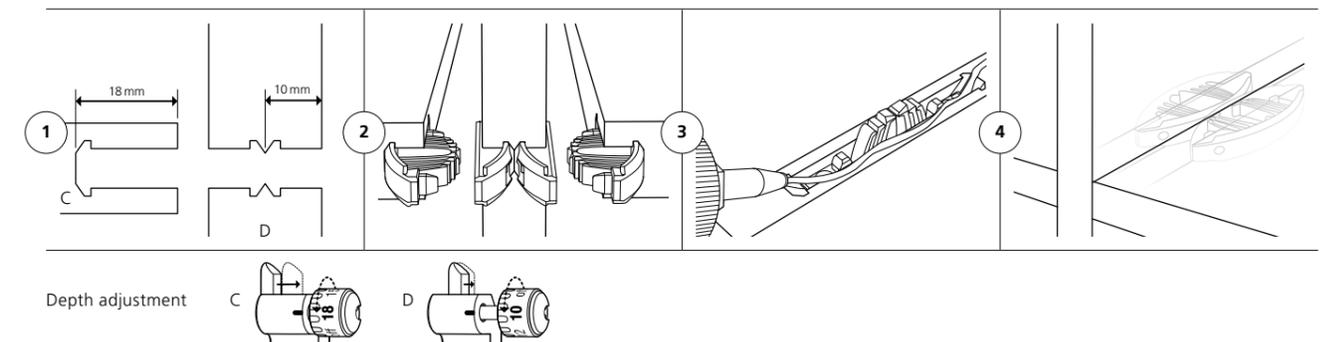
Matching accessories starting on **PAGE 76**



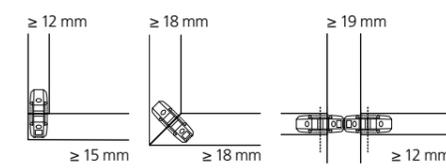
Installation



Offset installation



Technical data

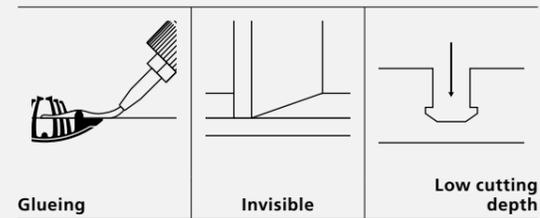
Joining methods	Size	66 × 27 × 9.7 mm
	Cutter	Ø 100.4 × 7 × Ø 22 mm
	Material connector	Fiberglass reinforced plastic
	Installation tolerance	Long. ± 1 mm/radial ± 1 mm
	Tensile strength (N)	Depending on the adhesive
	Material range	Particle board, MDF, plywood, softwood, hardwood etc.

Tenso P-10

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



Features



- Self-clamping connector for glueing, installed in seconds
- For miters from 15 mm and butt joints from 12 mm material thickness
- Invisible connection for maximum aesthetics
- Pretensioning function, ideal for miters and connection situations from 22.5° to 180°
- Gluing aid for a wide range of applications in furniture or interior design

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.

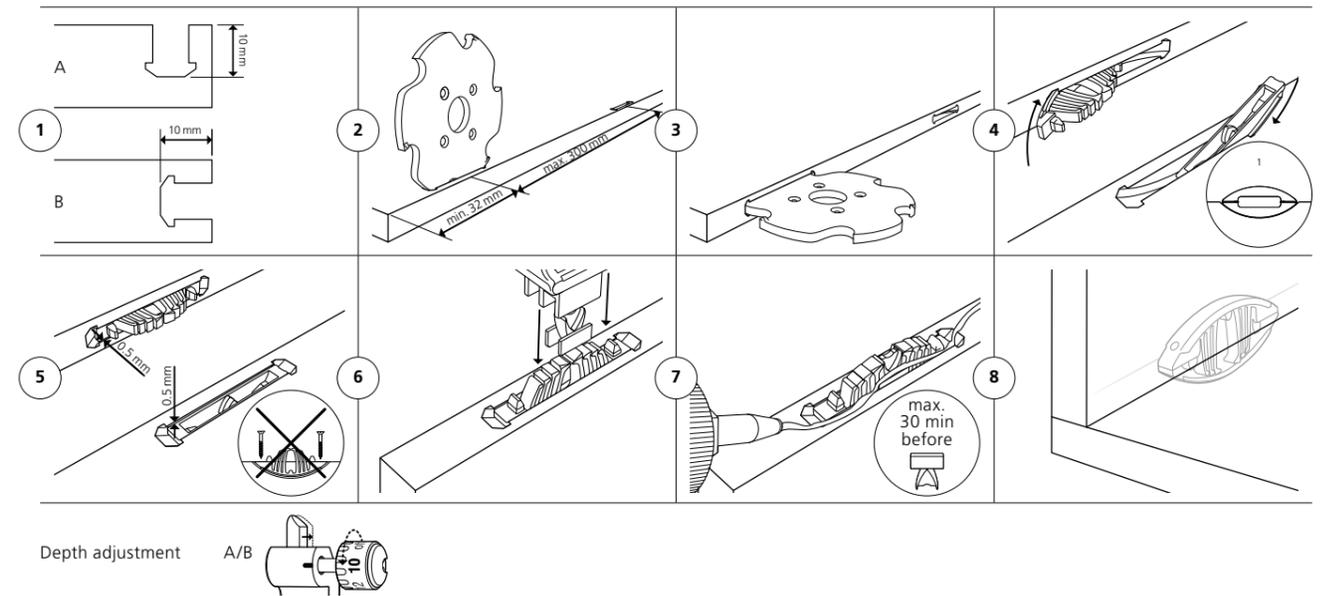
Articles

		Art. No.
Tenso P-10, with preload clip, 80 pairs		145418
Tenso P-10, with preload clip, 300 pairs		145428
Tenso P-10, with preload clip, 1000 pairs		145438
Tenso P-10 element with spring, 2000 pieces		145442
Tenso P-10 element without spring, 2000 pieces		145443
		
Tenso P-10 preload clip, 2000 pieces		145445

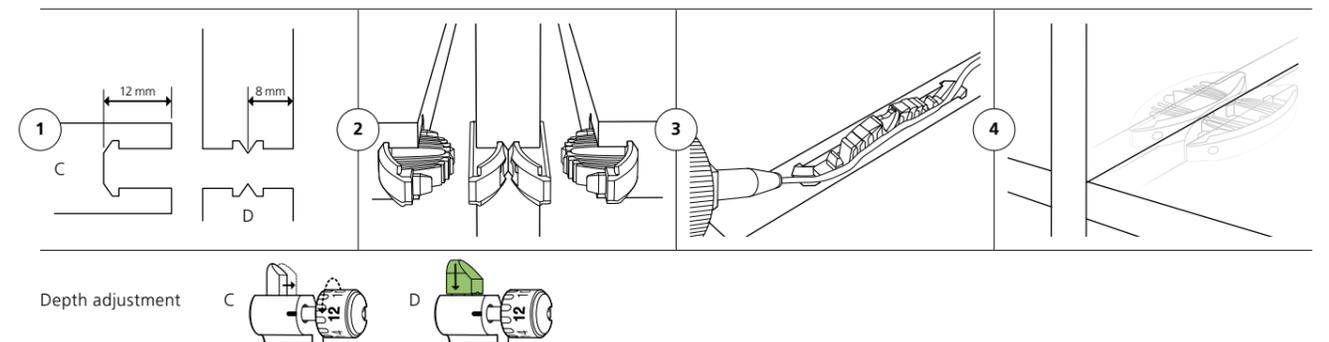
Matching accessories starting on **PAGE 76**



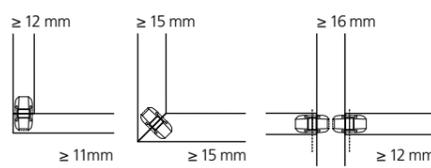
Installation



Offset installation



Technical data

Joining methods	Size	52 × 19 × 9.7 mm
	Cutter	Ø 100.4 × 7 × Ø 22 mm
	Material connector	Fiberglass reinforced plastic
	Installation tolerance	Long. ± 1 mm/radial ± 1 mm
	Tensile strength (N)	Depending on the adhesive
	Material range	Particle board, MDF, plywood, softwood, hardwood etc.

Application examples

Tenso P

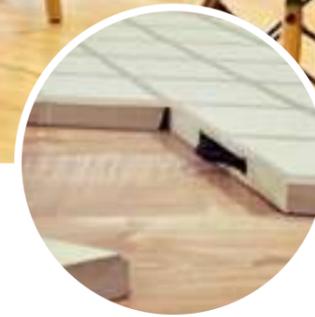
Furniture manufacturing/Interior fitting: Furniture, shelves, stools, sideboards, wardrobes, wall panels, cladding, decorative strips, covering panels, plinths, face frames etc.

Shop fitting/Kitchen manufacturing: Furniture, shelves, stools, sideboards, wardrobes, show cases, sales counters, wall panels, cladding etc.

Tenso P-14



Tenso P-14



Tenso P-10

Tenso P-14

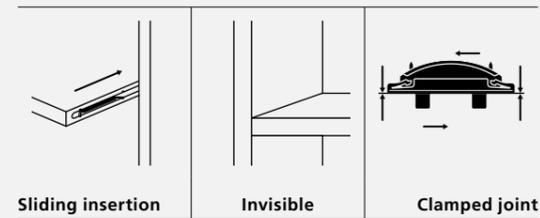


Divario P-18

Self-clamping, invisible connector for slide insertion



Features



- Furniture connectors for subsequent insertion of shelves or partitions
- Quick assembly on site – insert. Done.
- Divario P-18 tensions the joint perfectly during insertion
- Invisible connection for maximum aesthetics
- Ideal for wall units, wine racks, large pieces of furniture, flat-pack furniture

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 assembled 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

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

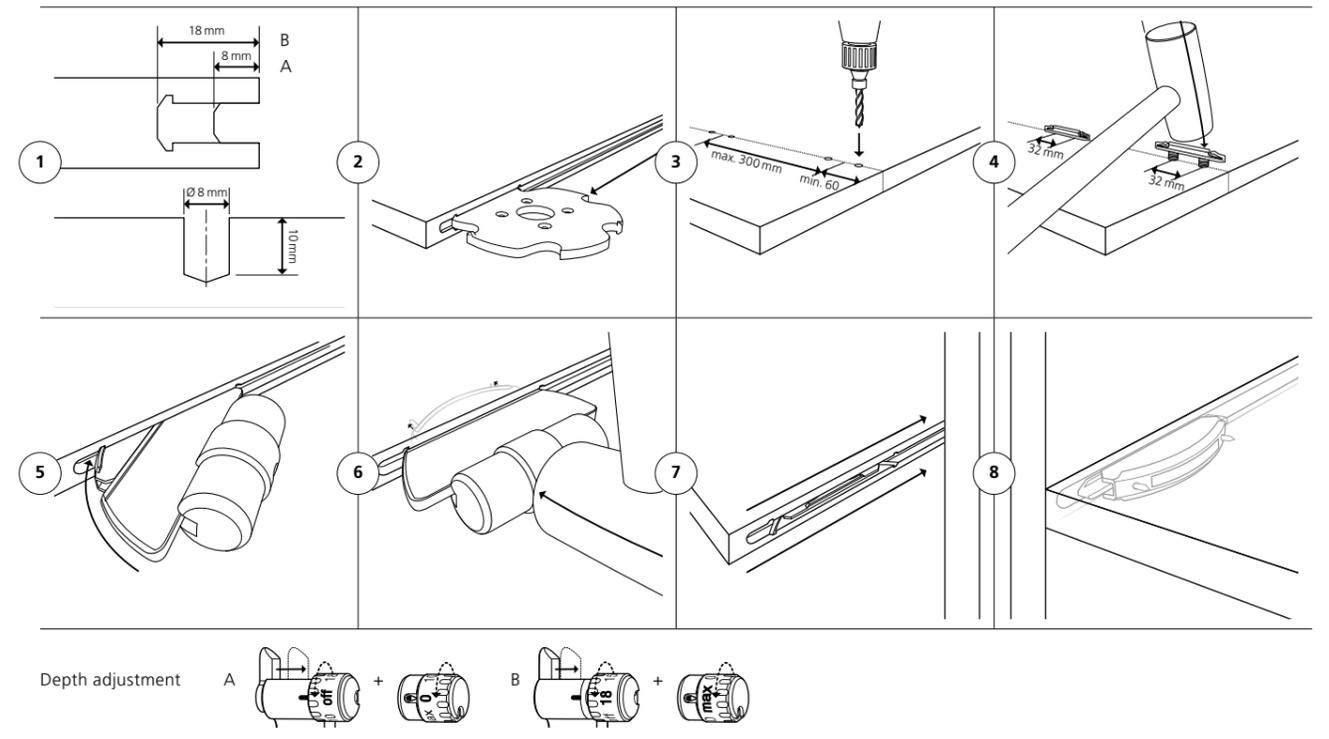
	
Divario P-18 installation tool	125500

	
Divario P-18 Starter set	145550S
Scope of delivery: 80 pair Divario P-18, Divario installation tool, marking jig plastic	

	
Divario P-18 Starter kit, in Systainer ³ M 137	145552
Kit contains: 80 pairs Divario P-18, Divario installation tool, marking jig metal	

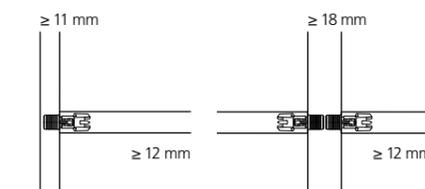
Matching accessories starting on PAGE 76

Installation



Technical data

Joining methods	Element with P-System groove	58 × 16 × 9.7 mm
	Element with drill holes	72 × 17 × 8 mm
	Cutter	Ø 100.4 × 7 × Ø 22 mm
	Material connector	Fiberglass reinforced plastic
	Installation tolerance	Long. ± 1 mm/radial ± 0 mm
	Load limits per connector (N)	19 mm
	Up to	MDF 740 ¹ Particle board 590 ¹ Beech 1820 ¹
	Tensile strength (N)	All materials 600 ¹
	Material range	Particle board, MDF, plywood, softwood, hardwood etc.



Application examples

Divario P-18

Furniture manufacturing/Interior fitting: Furniture, shelves, open room dividers, wine racks, sideboards, wardrobes, separating walls, showcases, hanging elements etc.



Divario P-18

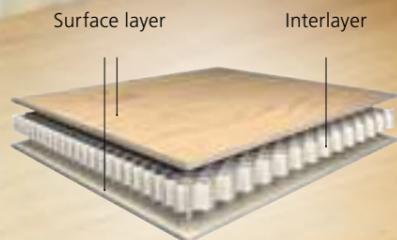


LC P-16 connector for lightweight construction

New possibilities in lightweight construction with the P-System



LC P-16 is a connector that combines the advantages of lightweight construction with the efficient and aesthetic Clamex connection. Due to its width, the LC P-16 is anchored in the surface layers and acts as an adapter into which a Clamex P-14 connector is slid in.



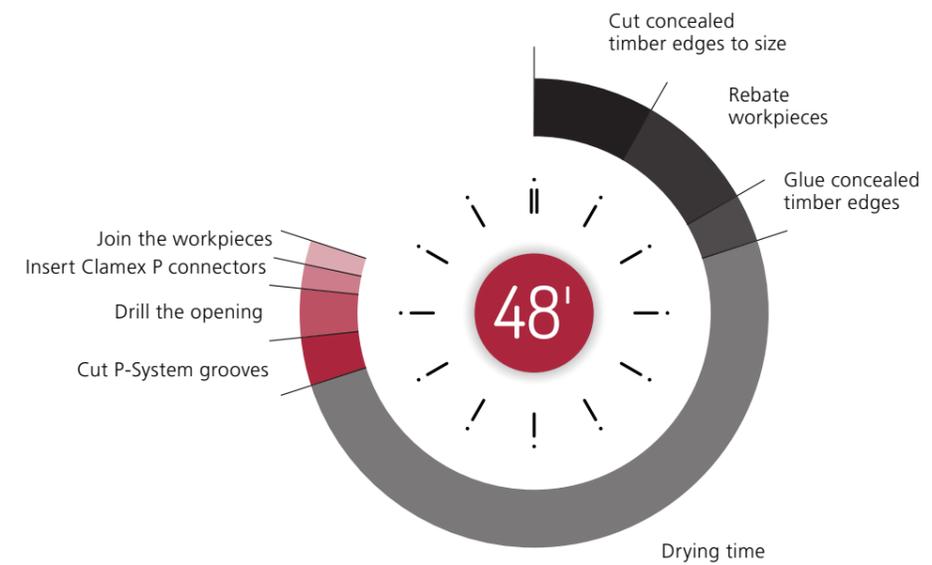
Lightweight construction stands for innovative designs that offer maximum stability and functionality with minimal use of materials. At a time when sustainability and resource conservation are becoming increasingly important, lightweight construction plays a central role. The use of intelligent materials and innovative technologies not only reduces weight and costs, but also protects the environment. Whether in the furniture industry, interior fittings or vehicle construction – lightweight construction enables flexible, resilient and sustainable solutions. It opens up new design possibilities and promotes efficient, future-oriented construction.

Advantages in the manufacturing process

The LC P-16 lightweight connector significantly improves the machining and assembly process. The time-consuming use of a concealed timber edge is eliminated, which speeds up the production process and also saves material. The simple assembly – the connector is simply slid in – completely eliminates waiting times due to glueing. The result is a fast, smooth process that reduces time and costs in both manufacturing and assembly without compromising on aesthetics, stability and quality.

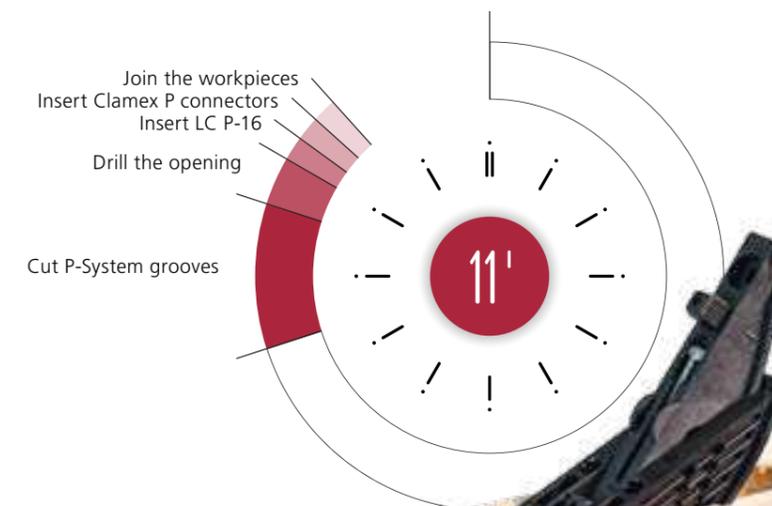
Cabinet with concealed timber edge

Processing time per cabinet



Cabinet with LC P-16

Processing time per cabinet

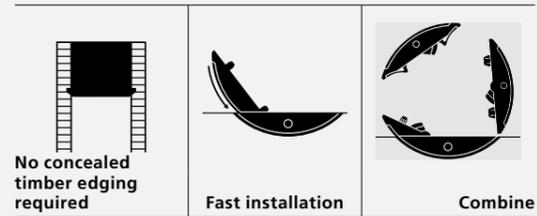


LC P-16

Joining system for lightweight panels without the need for concealed timber edges



Features



- P-System joint for lightweight materials and speedy installation
- Strong anchorage in the surface layers without concealed timber edges
- Three product sizes for use with all common material thicknesses
- Enables the use of the detachable Clamex P family
- Ideal for furniture and assemblies in lightweight construction, caravans and shipbuilding

The LC P-16 is a P-System joint for lightweight panels. It is securely anchored in the surface layer by its profile. The integrated P-System groove makes it possible to slide in Clamex P connectors without the time-consuming use of concealed timber edges or glues. Machining with two to three machining steps is carried out either with the Zeta P2 or, even more efficiently, with the CNC machining centre. Thanks to the three sizes of the LC P-16, detachable connections in various lightweight panels are possible.

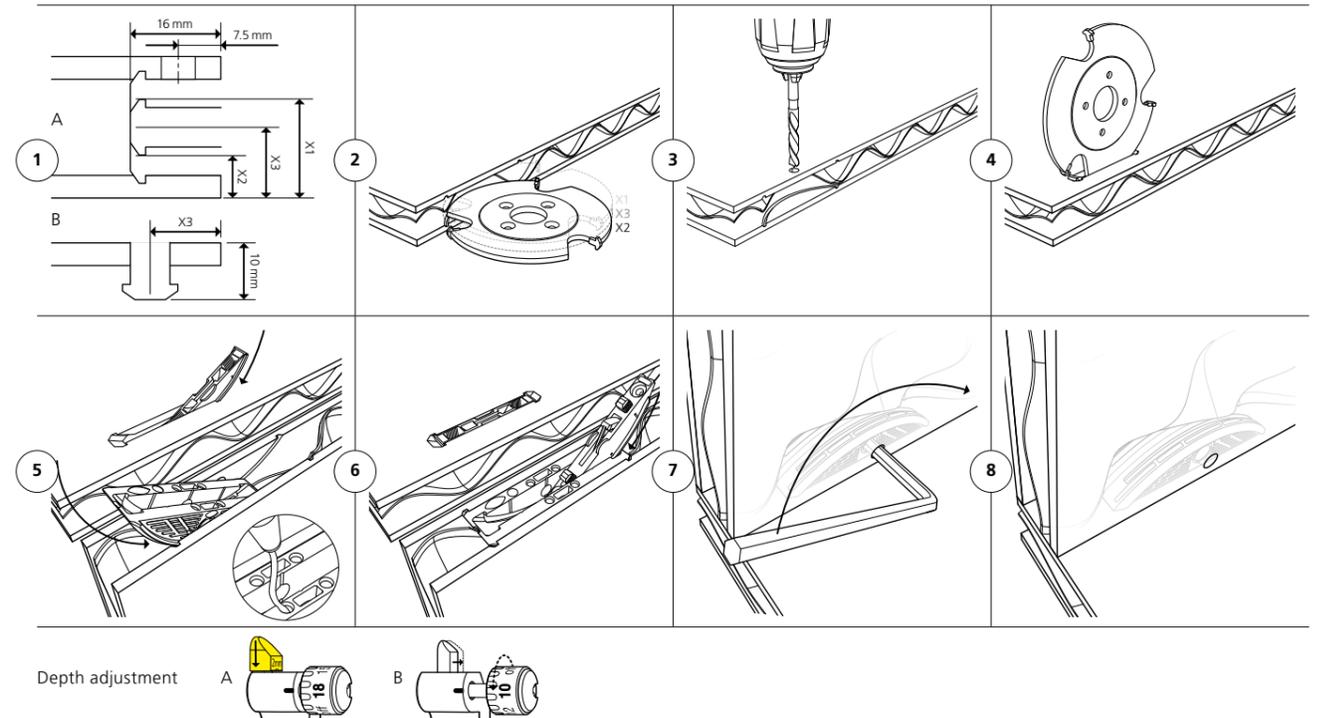
Articles

	Art. No.
	
LC P-16 x 11, 80 pieces	145710
LC P-16 x 11, 1000 pieces	145711
LC P-16 x 11 Set, 80 pieces, incl. Clamex P-14/10	145712
	
LC P-16 x 17, 80 pieces	145720
LC P-16 x 17, 1000 pieces	145721
LC P-16 x 17 Set, 80 pieces, incl. Clamex P-14/10	145722
	
LC P-16 x 22, 80 pieces	145730
LC P-16 x 22, 1000 pieces	145731
LC P-16 x 22 Set, 80 pieces, incl. Clamex P-14/10	145732

	
LC P-16 Starter Set	145700
Scope of delivery: 20 x LC P-16 x 11, 20 x LC P-16 x 17, 20 x LC P-16 x 22, 20 pairs Clamex P-14/10, 1 piece positioning clip, 1 piece element insert Clamex P-16, 1 piece depth adjuster cap 2 mm, 1 piece allen key, SW 4 mm, 75 x 55 mm	

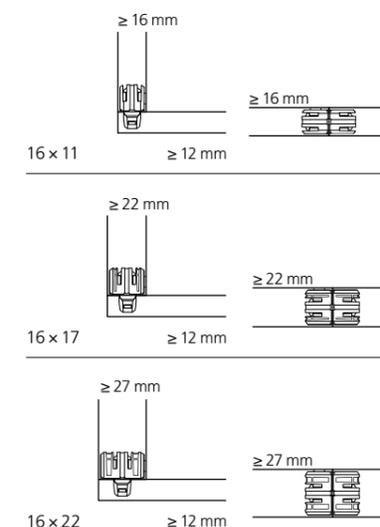


Installation



Technical data

Joining methods



Size 16 x 11	71.4 x 15.3 x 13.6 mm
Size 16 x 17	71.4 x 15.3 x 19.6 mm
Size 16 x 22	71.4 x 15.3 x 24.6 mm
Cutter	Ø 100.4 x 7 x Ø 22 mm
Material connector	Fiberglass reinforced plastic
Installation tolerance	Long. ± 1.0 mm/radial ± 1.0 mm
Tensile strength 90° (N) Up to	Surface layer / Interlayer: MDF / Corrugated wood fibre Particle board / Cardboard honeycomb
LC size / Surface layer thickness:	
LC P-16 x 11 / 4 mm	680 ¹ 460 ¹
LC P-16 x 17 / 4 mm	670 ¹ 410 ¹
LC P-16 x 22 / 8 mm	1100 ¹ 870 ¹
Material range	Lightweight materials, particle board, MDF, softwood etc.

Matching accessories starting on PAGE 76

See PAGE 75 for technical specifications | ¹ See comment on load limits on PAGE 83

Application examples

LC P-16

Furniture construction/Interior design: Wall units, cupboards, hanging sideboards, dining tables

Shop fitting/Kitchen construction: Carcasses, sideboards, wall elements, sales counters, central gondolas, showcases, changing rooms, stools, etc.

Vehicle interior design and ship interior design: Partition walls, cupboards, benches, storage spaces, wall panelling, various furniture constructions

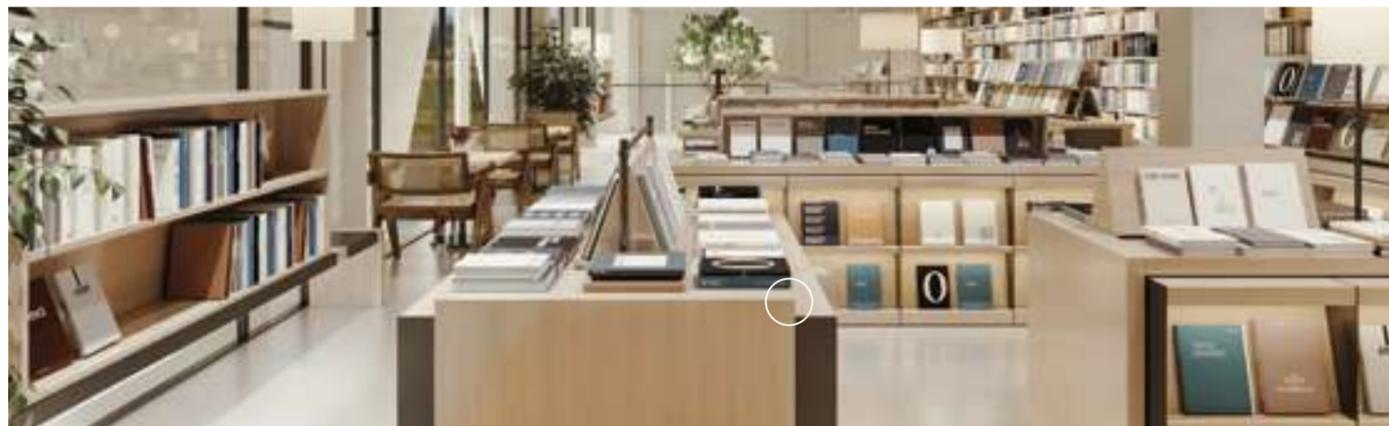


LC P-16 +
Clamex P-14/
Clamex P-14

LC P-16 +
Clamex P-14/
Clamex P-10

LC P-16 +
Clamex P-14/
Clamex P-10

LC P-16 +
Clamex P-14 Flexus/
Clamex P-10



LC P-16 +
Clamex P-14 CNC/
Clamex P-10



High performance without cable

Lamello – partner in the Cordless Alliance System.



CAS. The multi-brand battery system.

More than 40 powerful manufacturers have joined forces so that tools, battery packs, and chargers are 100% compatible with each other. CAS battery packs are developed in Germany and perform well even in the most demanding applications thanks to leading battery pack technology.

One battery pack, many advantages.

- Clear cost advantages
- High investment security
- 40 years of battery pack experience
- Compatible with 18 Volt since 2009 & in the future
- 15 million battery packs on the market



Cross-
Manufacturer

18 V
compatible

Fits in over
400 tools

Find out more at:
www.cordless-alliance-system.com

Ludwig Bauer, Teamleader Product Management

«With the lightweight, powerful 18 V LiHD 4.0 Ah battery pack, the Zeta P2 cordless is ideally equipped to cut longitudinal grooves for the Divario P-18 – even in solid wood.»



LiHD 4.0 Ah battery pack

The unique 4.0 Ah battery pack with a single cell row and thus

- considerably flatter than a standard Li-Ion 4.0 Ah battery pack
- significantly lighter
- better handling thanks to less weight and size
- the perfect battery for Lamello cordless biscuit joiner machines and all cordless drill drivers, cordless impact drivers and impact wrenches.



More flexible in the workshop

The ready-to-hand battery-powered biscuit joiner ensures greater efficiency and flexibility in the workshop.

- No tangling of the cable or the suction hose when machining large workpieces
- 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 time-consuming 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 time
- Corner connections are quickly and precisely cut directly at the work bench

Large workpieces



Fitted panels



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

Exclusive individual pieces



Roof window casing



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

Adapting furniture



Terrace floors



- 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

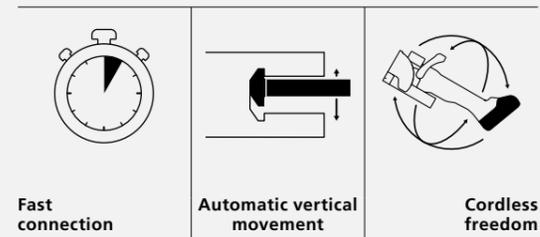


Zeta P2 cordless

The powerful P-System biscuit joiner for cordless freedom



Features



- Cordless biscuit joiner for the production of the form-locking P-System groove
- Extremely fast, time-saving joining method
 - Cut. Connect. Done.
- Maximum freedom of movement in the workshop or on the construction site
- Large range of connectors for different applications
- Same application advantages as the well-known Lamello system with wooden biscuits

The cordless Zeta P2 is the profile biscuit joiner for even faster joints, 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 thanks to its battery drive. 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.

Articles



Art. No. **101801DESD**
Zeta P2 cordless biscuit joiner, DP, Set, in systainer, incl. batteries, charger type C Euro

Art. No. **101800DESD**
Zeta P2 cordless biscuit joiner, DP, in systainer, without batteries without charger

Art. No. **101801GBSD**
Zeta P2 cordless biscuit joiner, DP, Set, in systainer, incl. batteries, charger type G

Art. No. **101800GBSD**
Zeta P2 cordless biscuit joiner, DP, in systainer, without batteries without charger

Kit contains: Zeta P2 cordless biscuit joiner, DP, 2 x Battery pack 18V, 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. 101801DESD/101801GBSD
For other plug versions please contact your local Lamello specialist

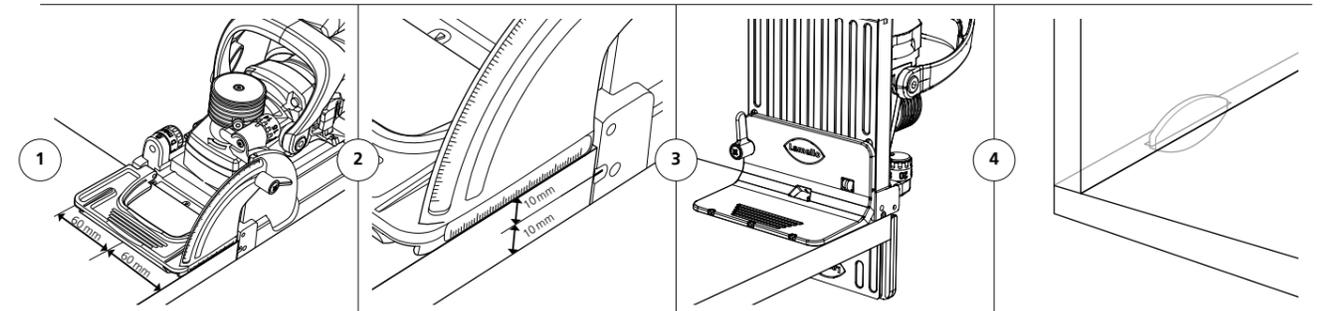


Matching accessories starting on PAGE 76

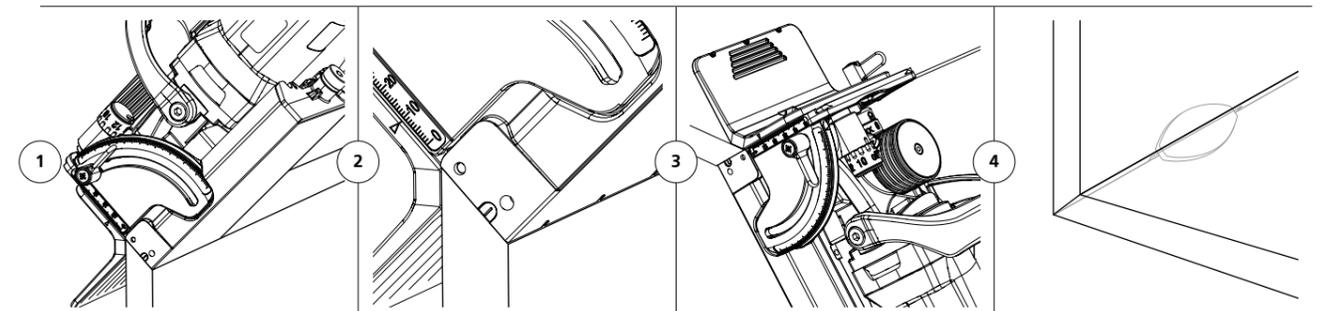


Function

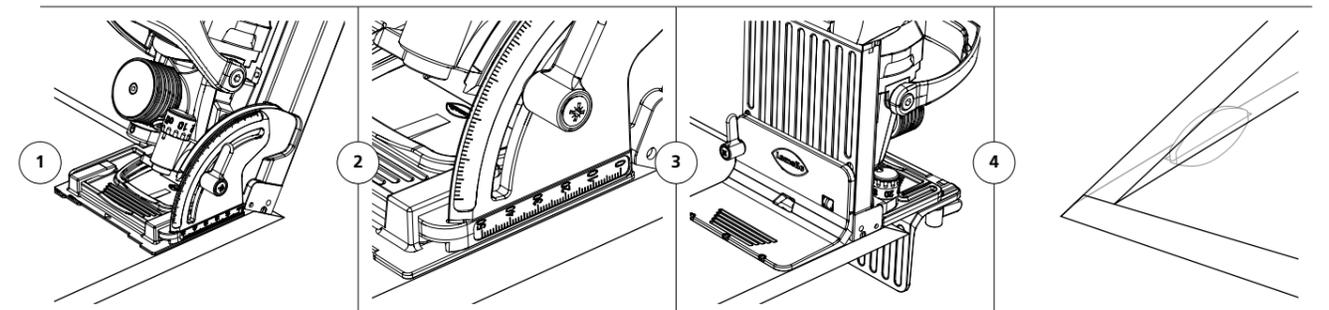
90° corner and dividing panel connection



Miter connection 45° – 180° (struck from the outside)



Obtuse miter connection 22.5° – 120°



Technical data

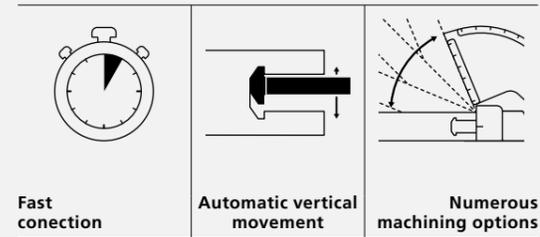
Battery voltage	18 V	Groove width	7/10 mm
Speed	9000 min ⁻¹	Groove depth max.	20 mm
P-System Cutter	Ø 100.4 x 7 x 22 mm	Weight	3.7 kg incl. battery

Zeta P2

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



Features



- Biscuit joiner for the production of the form-locking P-System groove
- Extremely fast, time-saving joining method
 - Cut. Connect. Done.
- Large range of connectors for different applications
- Same application advantages as the well-known Lamello system with wooden biscuits
- Precise furniture connections in all angle and connection situations

The Zeta P2 is the biscuit joiner for P-System connectors and is used to create the form-locking P-System groove 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



Art. No.

Zeta P2 biscuit joiner, HW, plug type F Schuko, in Systainer³ M **101403DES**

Zeta P2 biscuit joiner, HW, plug type G, in Systainer³ M **101403GBS**

Zeta P2 biscuit joiner, DP, plug type F Schuko, in Systainer³ M **101403DESD**

Zeta P2 biscuit joiner, DP, plug type G, in Systainer³ M **101403GBSD**

Kit contains: Zeta P2 biscuit joiner, DP, plug type C Euro, Clamex P drill jig incl. drill, adapter 36 mm, spacer 2 and 4 mm, set of tools, stop square

For other plug versions please contact your local Lamello specialist

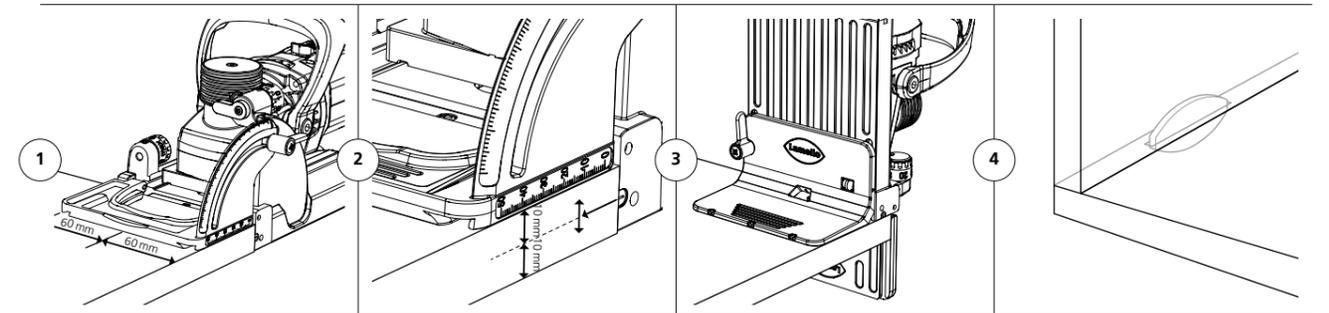


Also available as a set (see PAGE 50)

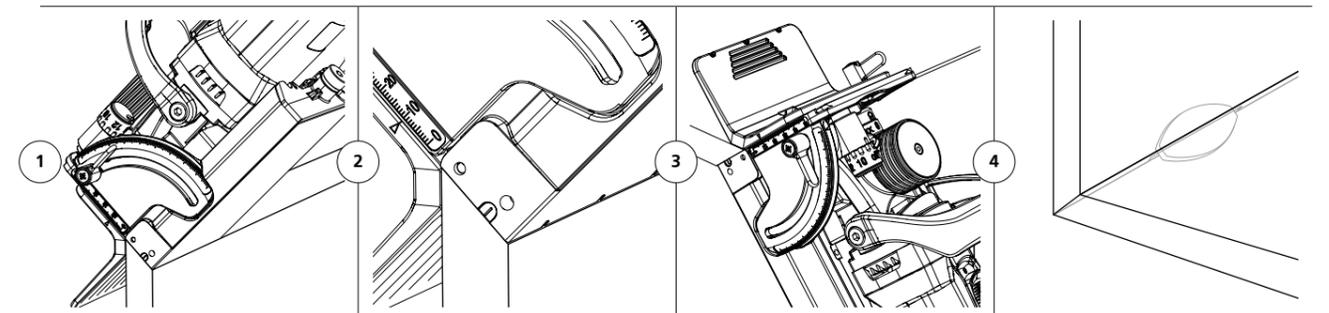
Matching accessories starting on PAGE 76

Function

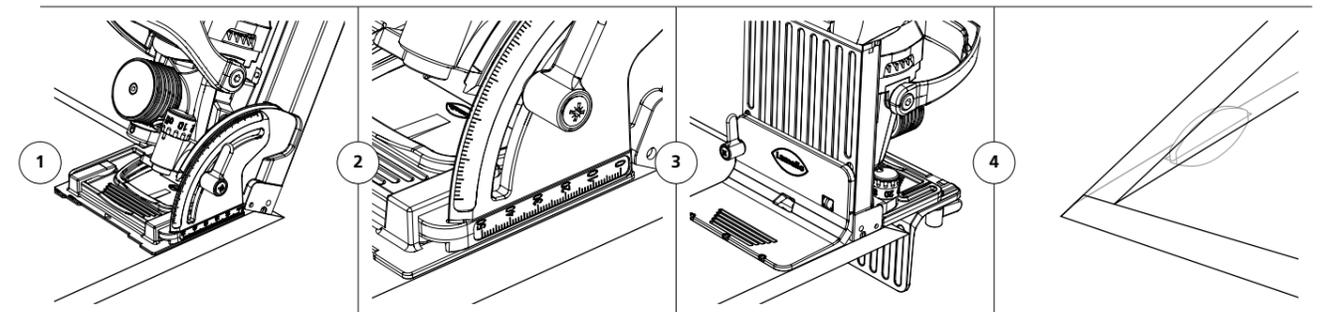
90° corner and dividing panel connection



Miter connection 45° – 180° (struck from the outside)



Obtuse miter connection 22.5° – 120°



Technical data

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

Zeta P2 Set

The perfect start to the P-System

Connected in seconds ...

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

Articles

The Zeta P2 Set is the comprehensive pack to get started with the P-System. It consists of three systainers that can be stacked compactly. The first systainer contains the Zeta P2 machine including accessories. The second systainer contains the Divario P-18 Starter Set and the third systainer contains the most common connectors, Clamex P-14 and Tenso P-14.

	Art. No.
Zeta P2 Set, DP, plug type F Schuko, in Systainer ³ M incl. connector assortment	101403DESET
Zeta P2 Set, DP, plug type G, in Systainer ³ M incl. connector assortment	101403GBSET

Scope of delivery 1st systainer:

1 pce Zeta P2 biscuit joiner, Clamex P drill jig incl. drill, adapter 36 mm, spacer 2 and 4 mm, set of tools, stop square

Scope of delivery 2nd systainer

1 pce Divario P-18 Starter Set in Systainer³ M
Consisting of: 80 pairs Divario P-18, marking jig metal, installation tool, drill

Scope of delivery 3rd systainer:

1 pce P-System connector set in Systainer³ M
Consisting of: 80 pairs Clamex P-14, 80 pairs Tenso P-14 incl. preload tool



Advantage

... with Clamex P – detachable

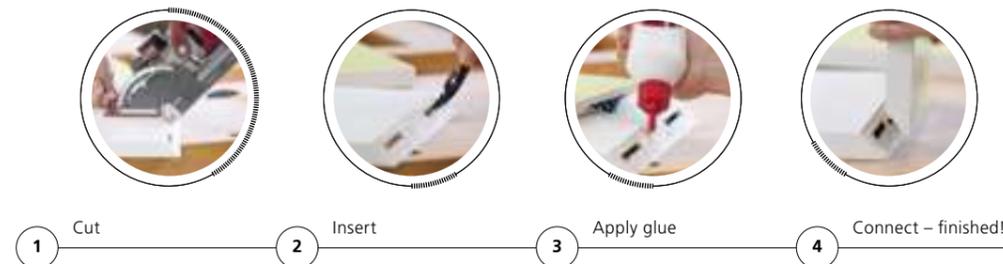


Time for one connector pair

1. Cut	25
2. Drill	15
3. Insert	5
4. Connect – finished!	5

Ready in 50 s

... with Tenso P – glued



Time for one connector pair

1. Cut	25
2. Insert	5
3. Apply glue	5
4. Connect – finished!	5

Ready in 40 s



3-year Lamello warranty

Register now and benefit!

Comprehensive cover

By registering your new device online you can obtain an additional extension of your guarantee and comprehensive cover against repair costs for a total of three years from your purchase date.



Register now
on our website!

How do I register?

1. Website:
Service > Guarantee registration
2. Fill out the form online

The guarantee applies exclusively to the Lamello biscuit joiners Zeta P2, Classic X and Top 21 in selected countries. Registration must take place via the Lamello website and within 30 days of purchase from an authorised dealer.



*« Zeta P2 – for fast, easy
and precise work. »*

Jeffrey De Smet, independent carpenter, Belgium

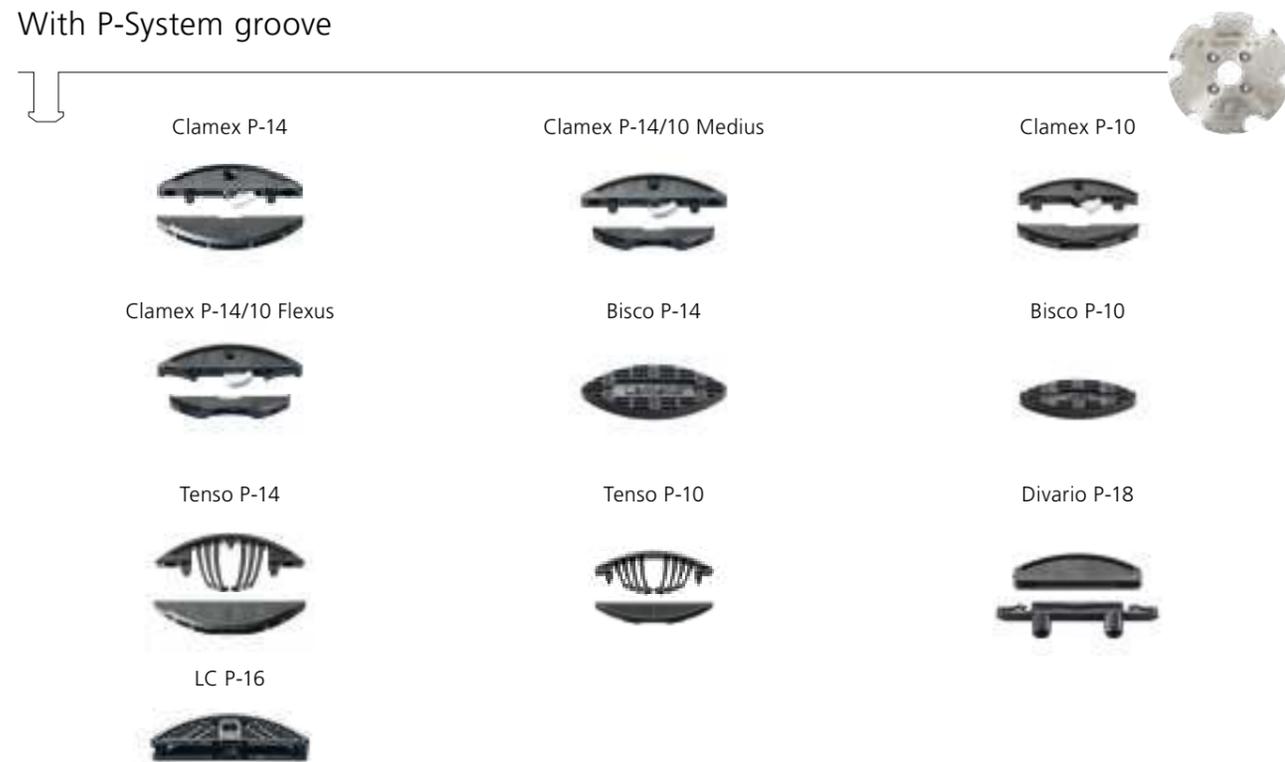
Versatile use

With many different connecting elements



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.

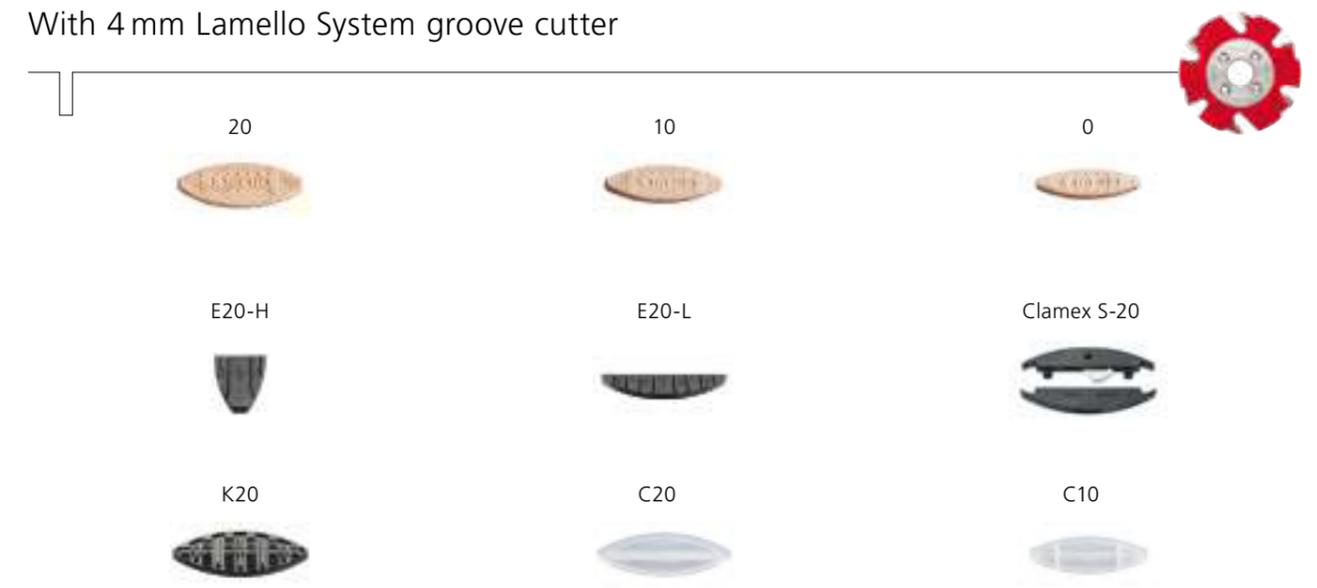
With P-System groove



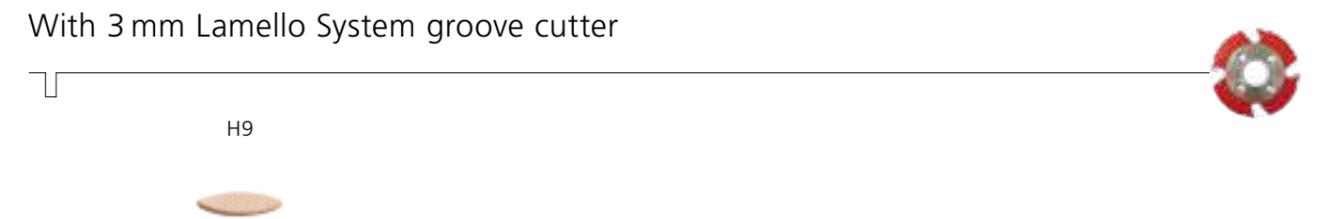
P-System depth adjustment



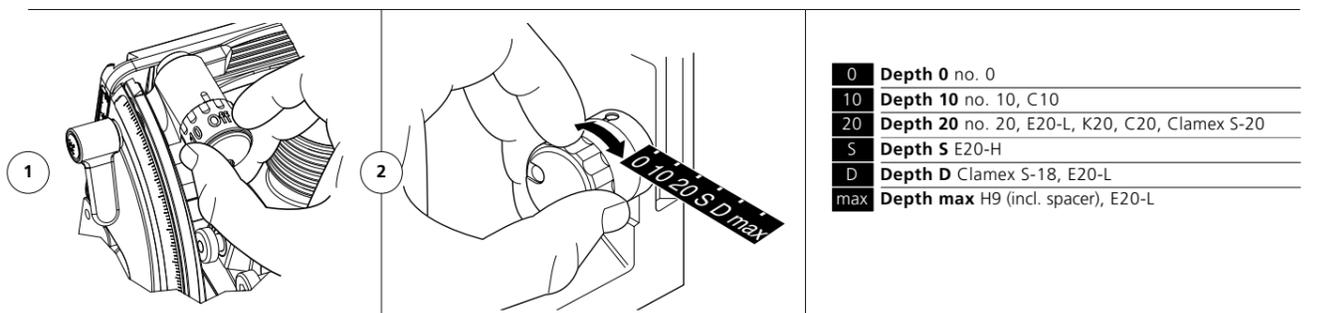
With 4 mm Lamello System groove cutter



With 3 mm Lamello System groove cutter

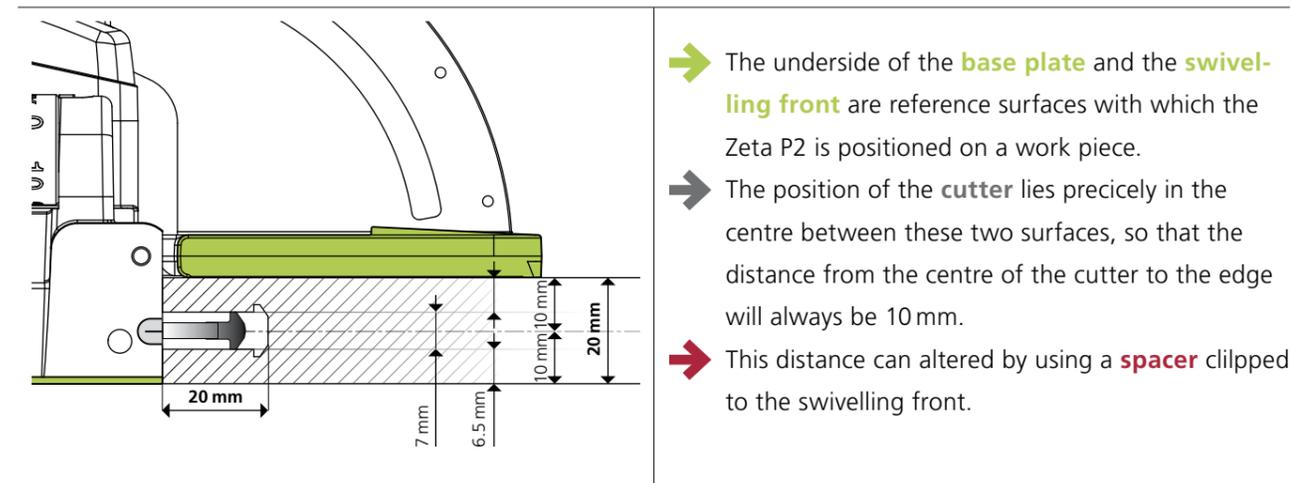


Lamello depth adjustment system

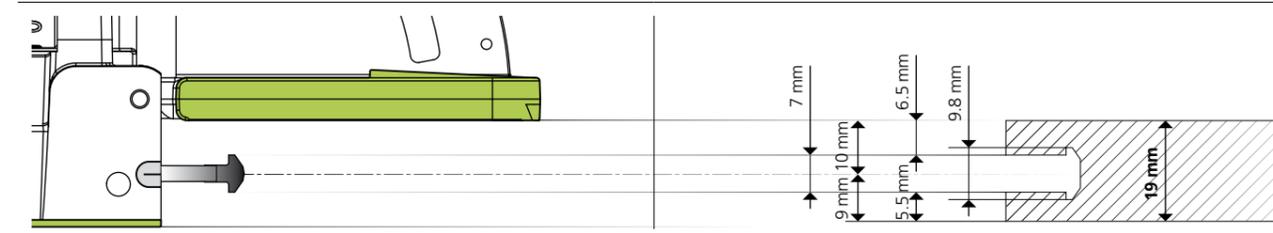


Changing the cutter position

Using spacers

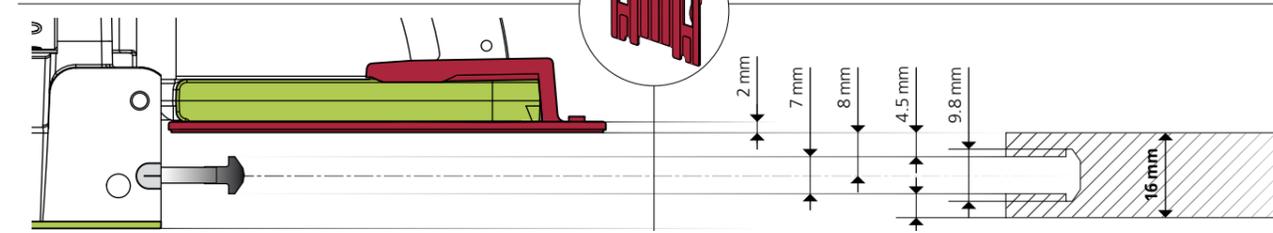


Without spacer

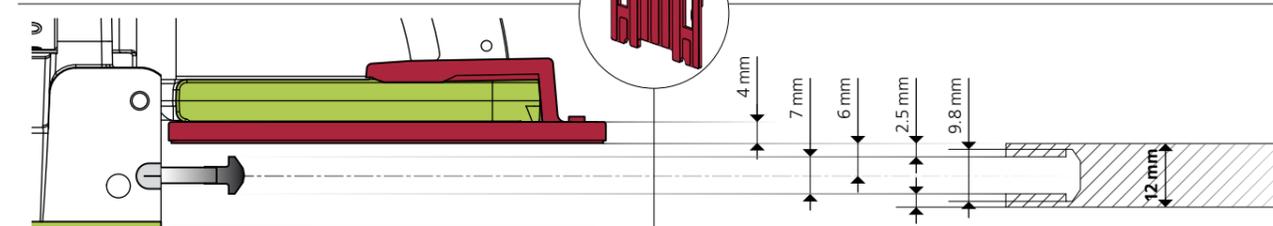


With spacer

With 2 mm spacer used in 16 mm material thickness



With 4 mm spacer used in 12 mm material thickness



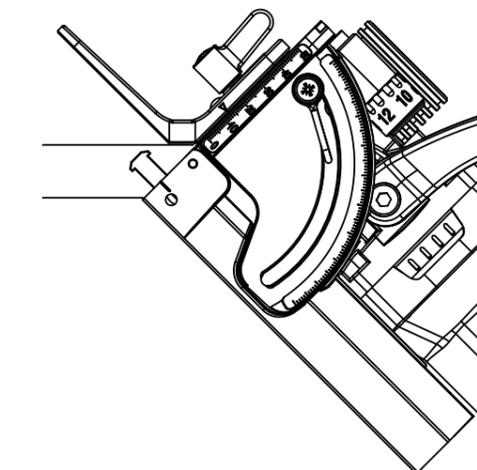
Joints in various angles

P-System grooves on edges cut to an angle



To create **joints in various angles**, at least one of the two workpieces needs to have one of its edges cut to an angle. There are **two possibilities** to cut a groove into an edge: Applying the Zeta P2 either on the outer side or the inner side of the work piece as the reference surface.

A. Positioning the Zeta P2 on the **face** of the workpiece:



Using this method, the multifunctional stop square is attached to the swivelling front and fixed at the desired position.

The machine is then applied on the work piece in such a manner, that the stop square rests on the outer side (green surface) of the workpiece.

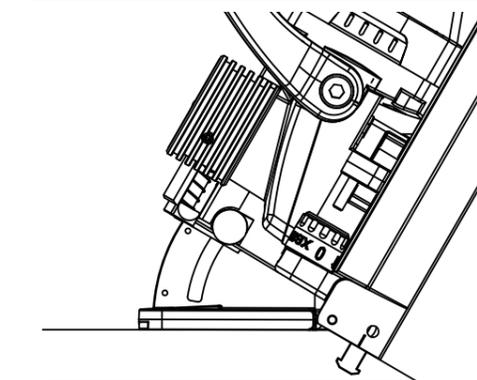
Advantages

- Perfectly flush on the visible work piece outer side. Material tolerances cannot lead to misalignment with this method
- Steplessly adjustable stop square, allowing for perfect positioning of the groove in every board thickness
- Thick work pieces with two rows of grooves (see picture above) with varying groove positions to increase strength
- No mistakes due to sliding during cutting because the machine sits very tightly in its position

Only angles 45° oder 67.5° are possible with this method



B. Positioning the Zeta P2 on the **inner side** of the workpiece:



Using this method, the swivelling front is adjusted to the angle of the workpieces edge and then fixed in that position.

The machine now lies on the inner side (green surface) of the work piece, due to which material tolerances can show on the outer side of the workpieces.

Advantages

- The groove position is fixed, however, to two more positions are available using the 2 mm or 4 mm spacers
- The advantage of this method is that all angles from 0-180 degrees are possible

Strong partnerships

For efficient production with CNC technology

CAD/ERP/CAM software



CNC machines/Aggregates/CNC tools



Networked production

- Extensive network of planning and processing partners
- Efficient integration of Lamello products into production
- Continuous productivity in planning, processing and installation

P-System with CNC

Joining methods and requirements for
CNC machines/machining options



CNC machines		With consoles/ vertical or horizontal					With nesting technology					
Number of axes		3		4	5	3		5				
			Machining option	Machining option			Machining option		Machining option			
Joining methods	Machining											
	Access drill hole											
	Profile groove in the edge											
	Profile groove on the surface (close to the edge)											
	Profile groove on the surface (centre of the surface)*											
	Access drill hole 45°											
	Profile groove in the edge 45°											
	Access drill hole 22 – 108°											
	Profile groove in the edge 22 – 108°											

* The Divario P-18 can also be used as an alternative connecting element in the middle of the surface. (2 x 8mm holes without profile groove)

¹ Without a C-axis, the angle unit cannot be rotated by 90°/180°. Alternatively, the workpiece could be rotated and work in two steps.

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.

Additional explanations for the requirements of the CNC machines/machining options



Detailed information on machining	Detailed information on machining	Possible setup 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 68
			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 68/69
			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
			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. Tip: For a mitre, the drill hole could be made with the manual drill
			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 shank 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
			Shrink chuck for clamping Ø 12 x 40 mm and shank tool 131342 or collet chuck for clamping Ø 12 x 40 mm and shank tool 131342 P-System CNC shank tool cutter on PAGE 69.

* More information on **PAGES 68–69**

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.

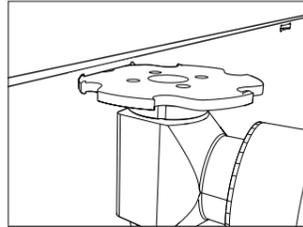
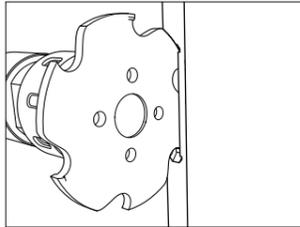
Possible combination of CNC machines with Zeta P2

More regarding the machining on **PAGE 67**

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P-System equipment options

For CNC machines for particularly efficient machining



Vertical and horizontal CNC machining centres «CNC compact class»



EVOLUTION 7405 Connect

1 · 2 · 3



Brema Eko 2.1

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

1 · 2 · 3



Brema Eko 2.2

1x aggregate for 90°
1x aggregate 45° for 2x 45°
2x P-System CNC groove cutters
1x P-System CNC cutter arbor
1x drill Ø 6 mm

1 · 2 · 3 · 4



Project TF 100/TF 100 2.0

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

1 · 2 · 3



Creator 950

1x P-System CNC groove cutter in HSK63F
1x P-System CNC shank tool cutter* in HSK63F
1x drill Ø 6 mm

*optional for P-System CNC shank tool cutter:
1x aggregate for 90°
1x P-System CNC groove cutter

1 · 2 · 3



ProTec + P-System add-on package

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

1 · 2 · 3



DRILLTEQ V-200

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

1 · 2 · 3



DRILLTEQ V-310

for 180° + 90° joints:
woodWOP component «Lamello P-System»
1x P-System tool set

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

1 · 2 · 3 · 4



cx 220

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

1 · 2 · 3



DYNESTIC 7535

1x P-System tool set

1 · 2 · 3 · 4



Vitap K2 2.0

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

1 · 2 · 3



DRILLTEQ D-510

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

1 · 2



cx 110

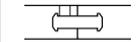
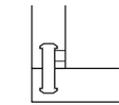
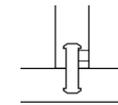
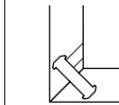
1x aggregate
2x P-System CNC groove cutters
1x P-System CNC cutter arbor
1x drill Ø 6 mm

1 · 2 · 3

www.lamello.com Experience CNC live and receive comprehensive product information!

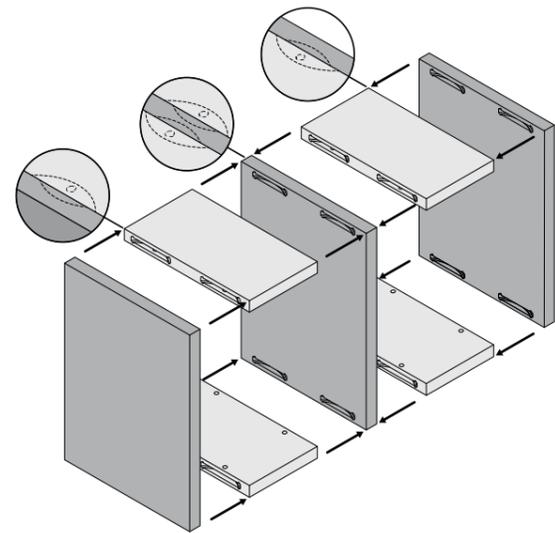


Connectivity

Surface 180°	Corner 90°	Centre wall 90°	Mitre 2x 45°
			
1	2	3	4

Ideas for standardising

The machining on a CNC machine



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.

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



Art. No.

Clamex P-14 CNC element with lever,
2000 pieces

145388



Clamex P-14 element with lever,
2000 pieces

145338



Clamex P-14 Flexus element with lever,
2000 pieces

145318

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



Art. No.

Clamex P-10 element without lever, 2000 pieces

145358



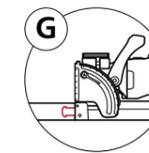
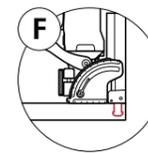
Clamex P-10 Medius element without lever,
2000 pieces

145369

Possible combination of CNC machines with Zeta P2

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 a P-System groove with a Zeta P2.

Positioning drill holes for the Zeta P2



	Art. No.
Zeta P2 positioning pin CNC, Ø 5 mm, 2 pieces	251048
Zeta P2 positioning pin CNC, Ø 8 mm, 2 pieces	251066

	Art. No.
Zeta P2 positioning clip CNC, for drill hole Ø 6 mm	251067

Machining steps

<p>1. Drill the positioning holes with the CNC, Ø 5 mm/Ø 8 mm (axis spacing 101 mm)</p>	<p>2. Remove the anti-slip devices on the Zeta P2</p>	<p>1. Drill the positioning hole with the CNC, Ø 6 mm</p>	<p>2. Insert the positioning clip</p>
<p>3. Insert the positioning pins in the Zeta P2</p>	<p>4. Position the machine in the drill holes</p>	<p>3. Insert the positioning clip in the drill hole Ø 6 mm</p>	<p>4. Cut the groove with the positioned machine</p>

CNC tools

For the P-System



P-System CNC tools

 Art. No. **131556**
Clamex CNC drill bit, HW (carbide), Ø 6 mm, shaft Ø 10 x 65 mm, L 100 mm

 Art. No. **132142**
P-System groove cutter CNC, DP (diamond), Ø 100.4 x 7 x Ø 30 mm, Z3, NL 4 x Ø 6.6 x Ø 48 mm

 Art. No. **132149**
P-System groove cutter CNC, DP, left hand, Ø 100.4 x 7 x Ø 30 mm, Z3, NL 4 x Ø 6.6 x Ø 48 mm, for Weeke BHX 200, Homag DRILLTEQ V-500, DRILLTEQ V-310, ...

 Art. No. **132145**
P-System groove cutter CNC, DP (diamond), Ø 100.4 x 7 x Ø 30 mm, Z6, NL 4 x Ø 6.6 x Ø 48 mm, for Lamello CNC milling arbor with 30 mm hub

 Art. No. **132143**
P-System groove cutter CNC, DP (diamond), Ø 100.4 x 7 x Ø 40 mm, Z3, NL 4 x Ø 5.5 x Ø 52 mm, e.g. Benz FLEX5+C, Benz 5-MOTION PLUS, ...

 Art. No. **132144**
P-System groove cutter CNC, DP (diamond), Ø 100.4 x 7 x Ø 16 mm, Z3, NL 4 x Ø 5.5 x Ø 28 mm, for corner notching unit, ...

 Art. No. **132148**
P-System groove cutter CNC, DP (diamond), Ø 100.4 x 7 x Ø 35 mm, Z3, NL 4 x Ø 5.5 x Ø 50 mm, for Brema Eko 2.1, Masterwood project TF 100, Format4 D-Jet, Morbidelli cx110 / cx220, ...

 Art. No. **132180**
P-System groove cutter CNC, DP, rotation left, Ø 100.4 x 7 x Ø 35 mm, Z3, NL 4 x Ø 5.5 x Ø 50 mm, for Format4 Nesting profit H08, ...

 Art. No. **132150**
Cutter arbor CNC for P-System groove cutter, Ø 30 mm, S Ø 20 x 50 mm, L 102 mm, NL 4 x M4 x Ø 48 mm

 Art. No. **132151**
Cutter arbor CNC for P-System groove cutter, Ø 30 mm, S Ø 25 x 60 mm, L 102 mm, NL 4 x M4 x Ø 48 mm

 Art. No. **132152**
Cutter arbor CNC for P-System groove cutter, Ø 30 mm, S Ø 16 x 50 mm, L 85 mm, NL 4 x M4 x Ø 48 mm

 Art. No. **132153**
Cutter arbor CNC for P-System groove cutter, Ø 30 mm, S Ø 16 x 55 mm, L 68 mm, NL 4 x M4 x Ø 48 mm

 Art. No. **132154**
Cutter arbor CNC P-System cutter, clamping surf. 2, Ø 30 mm, S Ø 16 x 50 mm, L 85 mm, NL 4 x M4 x Ø 48 mm, for lock case unit

 Art. No. **132155**
Cutter arbor CNC P-System cutter, clamping surf. 2, Ø 30 mm, S Ø 20 x 50 mm, L 85 mm, NL 4 x M4 x Ø 48 mm, for lock case unit

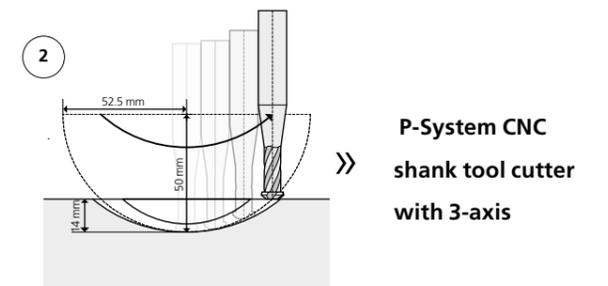
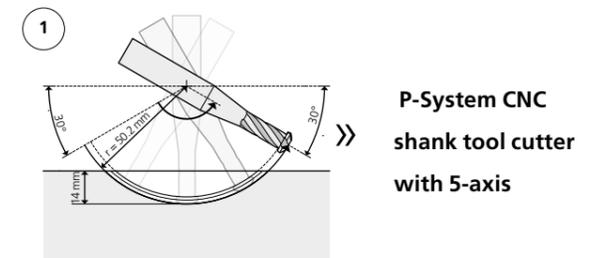
Countersunk screw, Torx, 4 pieces, M6 x 16 mm, T20, for CNC cutter arbor Art. No. **132159**

Screwdriver with cross-grip, Torx T20 x 100 mm, green Art. No. **271919**

 Art. No. **132156**
Cutter arbor CNC for 4 mm Lamello groove cutter, Ø 22 mm, shaft Ø 16 x 36 mm, L 80 mm, NL 4 x M4 x Ø 36 mm

 Art. No. **131342**
P-System shaft tool cutter, HW solid (carbide), Ø 7.05/9.8 mm, S Ø 12 x 40 mm, L 80 mm

One tool with 2 functions



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

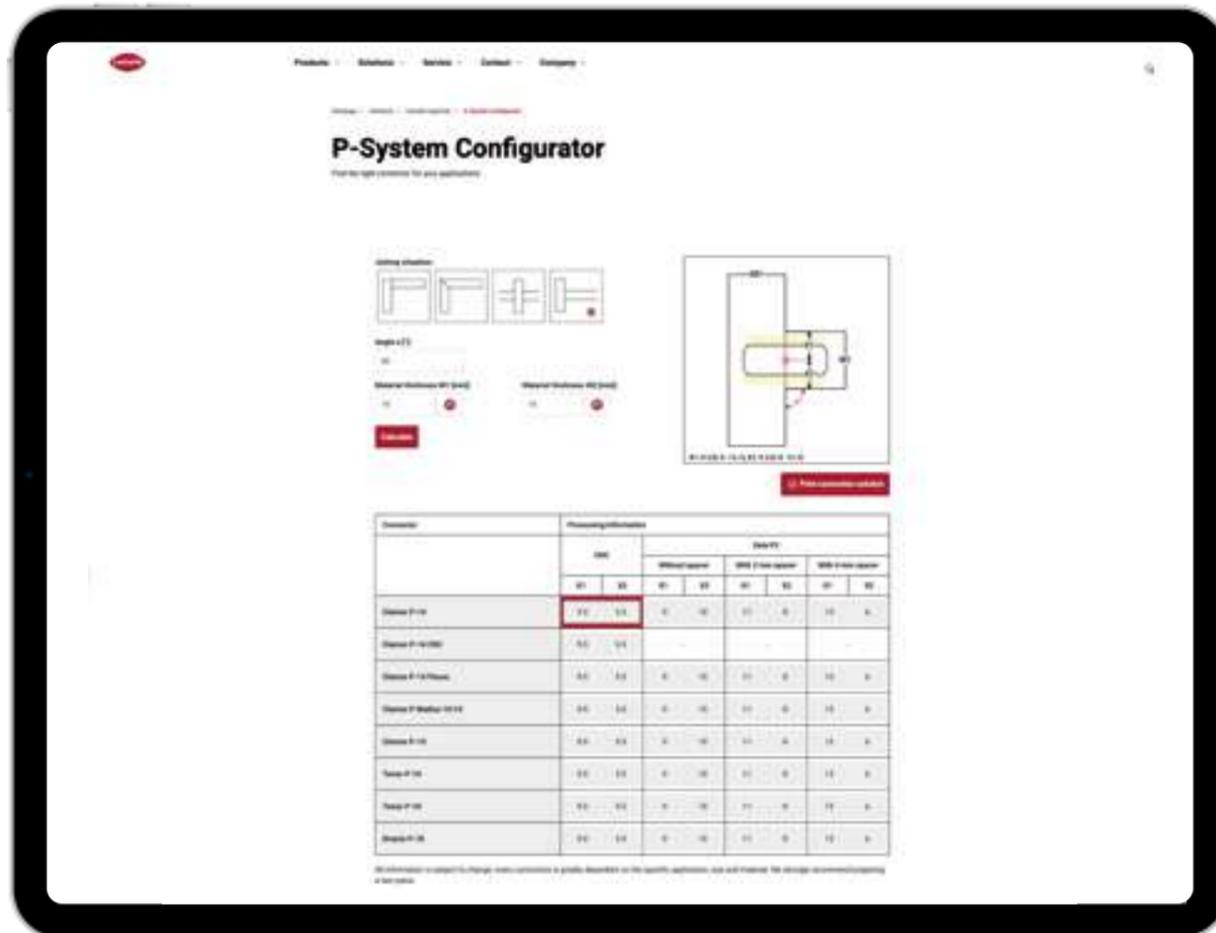
A P-System CNC shank tool cutter or contour cutter should only be used for the machining of surfaces if no angle aggregate is available.

P-System

configurator

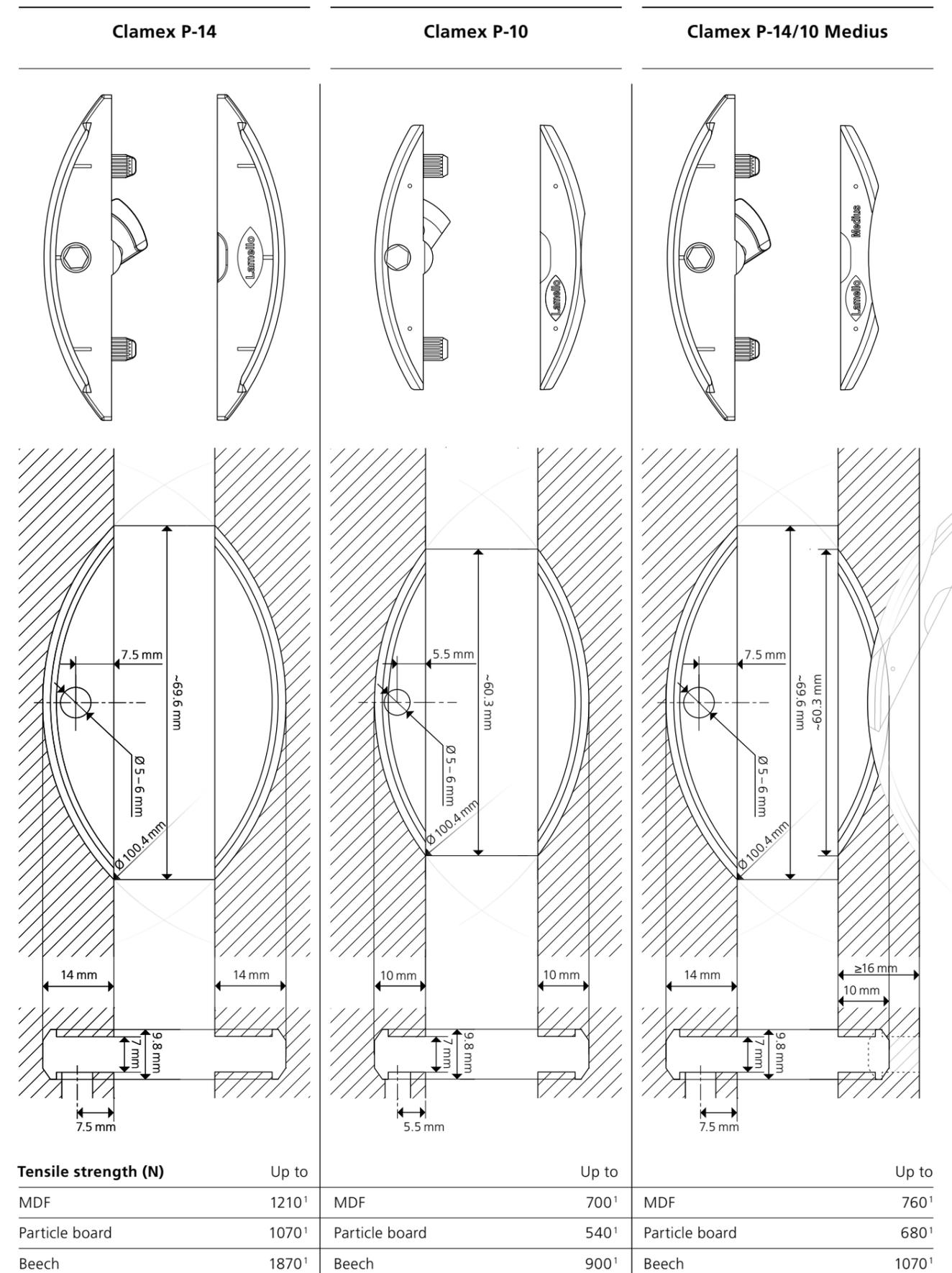


The configurator shows the exact positioning in the workpiece.



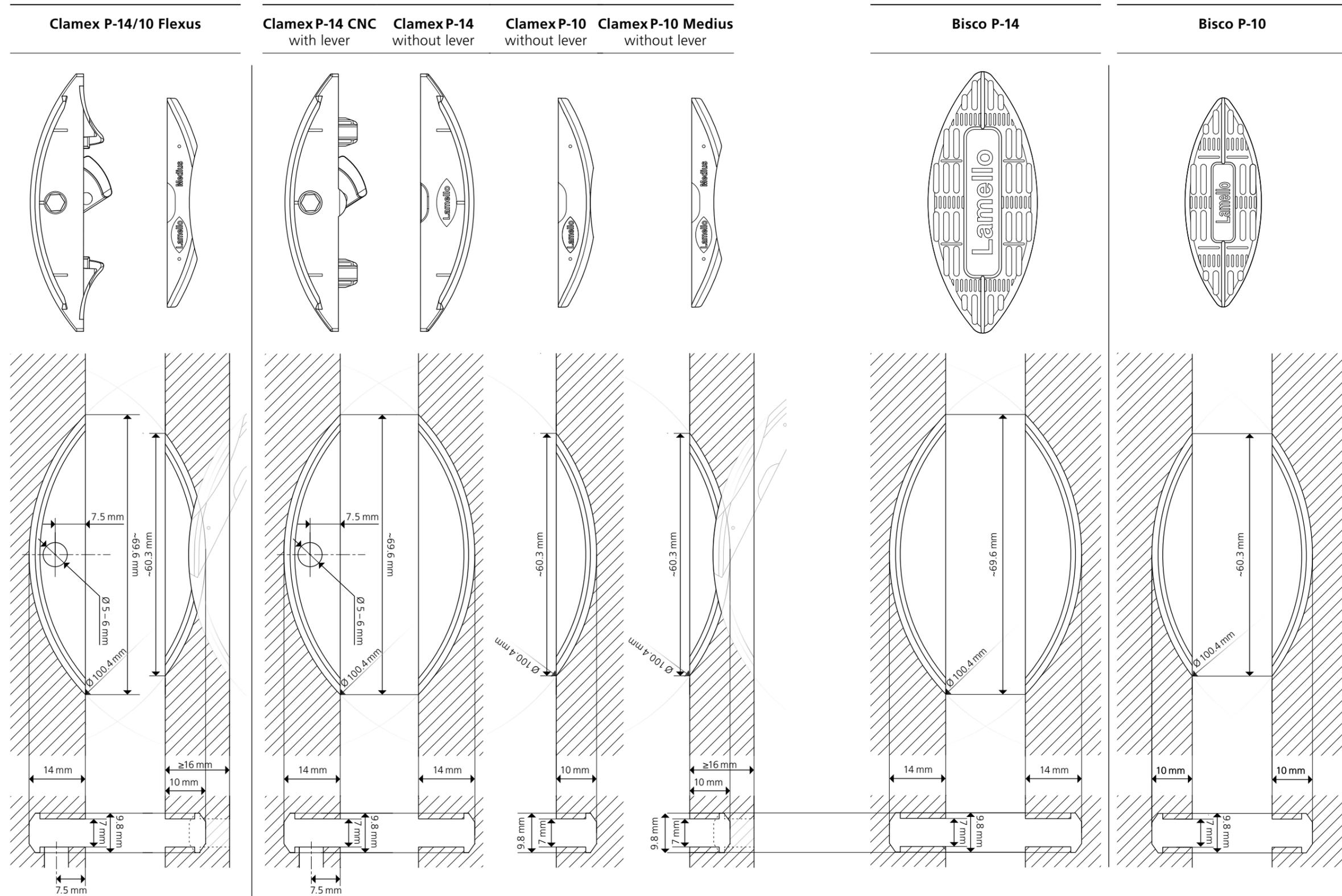
Technical information

Overview of connectors + grooves (scale 1:1)



Technical information

Overview of connectors + grooves (scale 1:1)

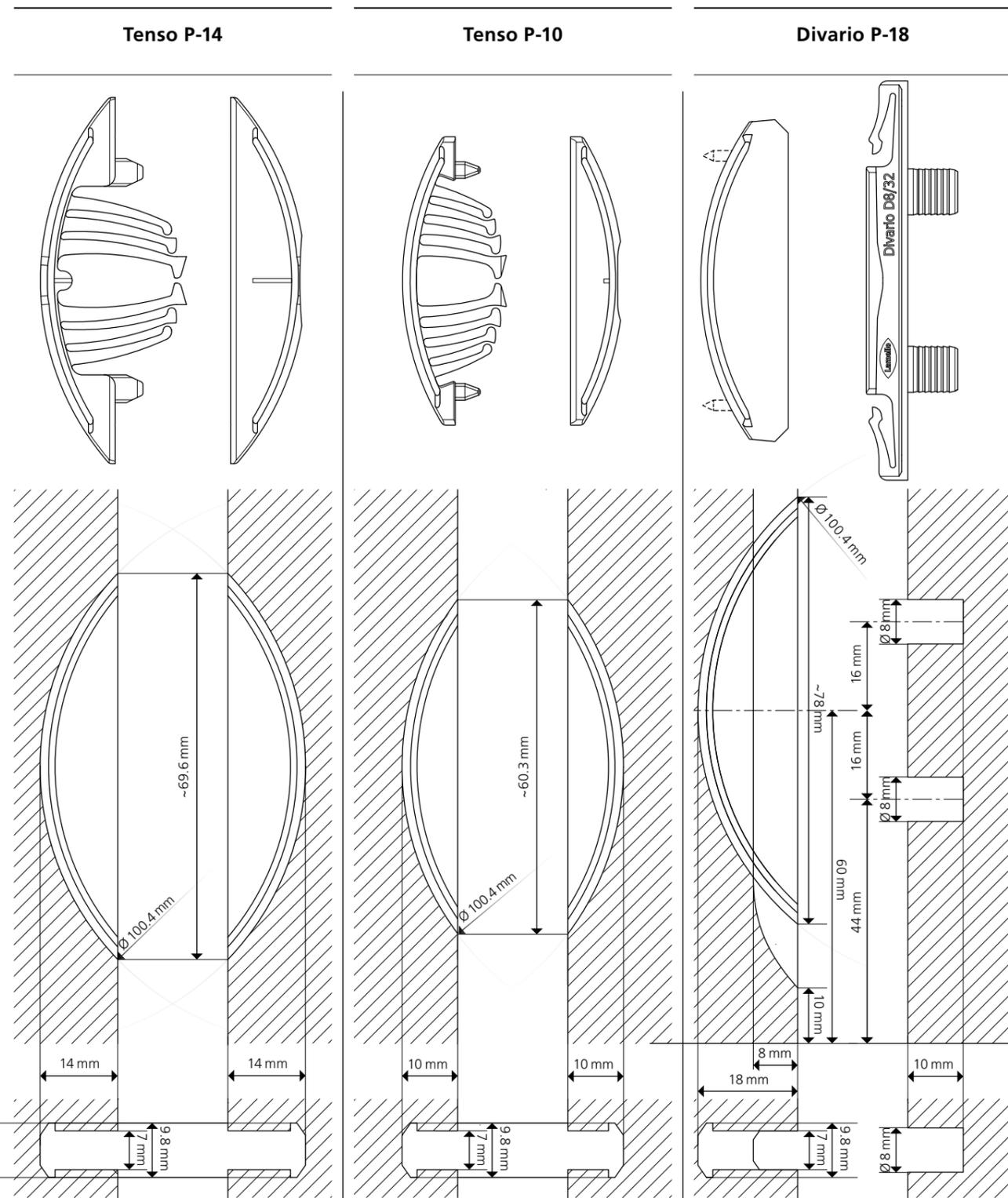


Tensile strength (N)	Up to
MDF	790 ¹
Particle board	710 ¹
Beech	1190 ¹

Tensile strength (N)	Up to	Up to	Up to
MDF	1210 ¹	950 ¹	810 ¹
Particle board	1000 ¹	880 ¹	730 ¹
Beech	1660 ¹	1560 ¹	1220 ¹

Technical information

Overview of connectors + grooves (scale 1:1)



Tensile strength (N)

Depending on the adhesive

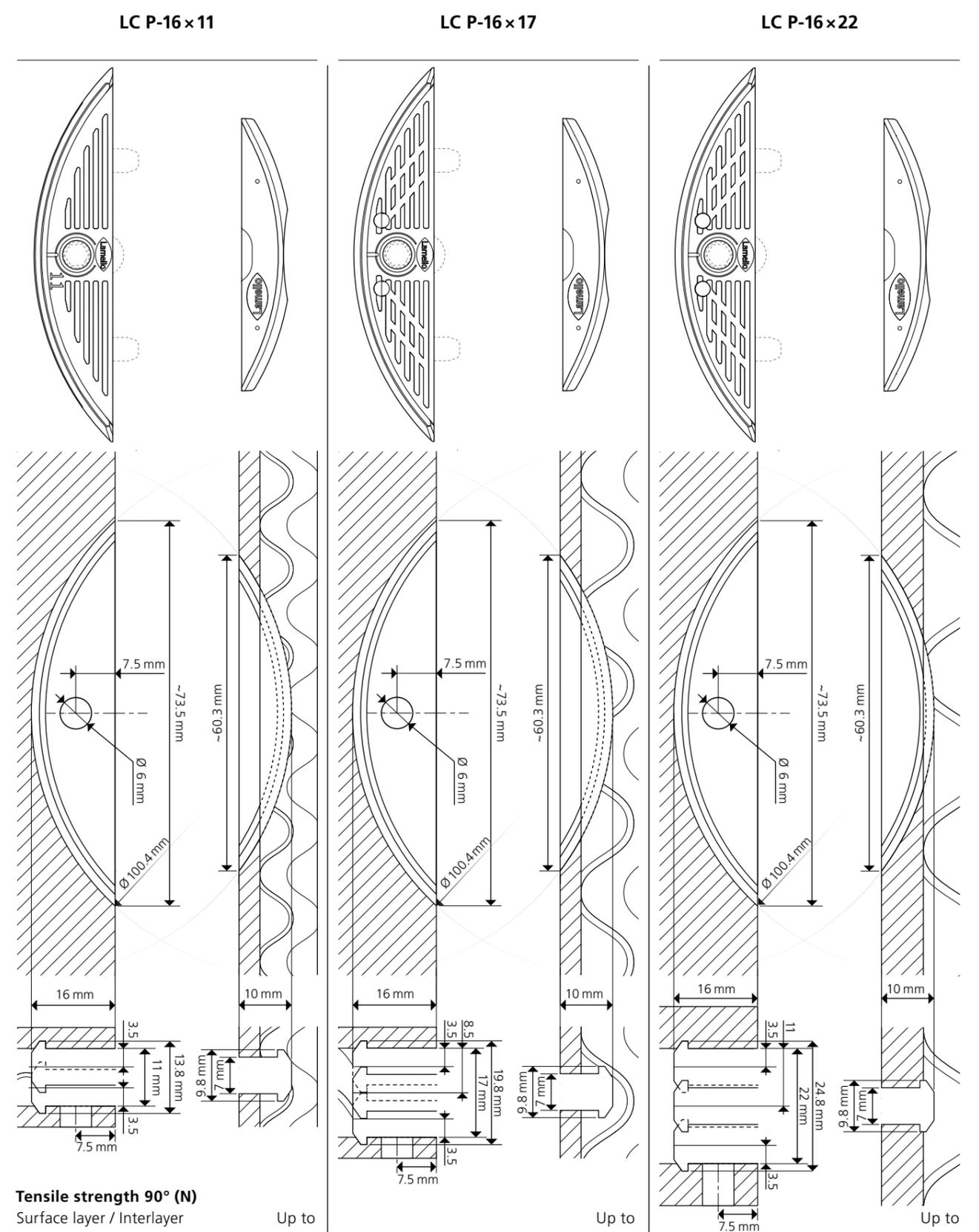
Depending on the adhesive

Load limits per connector (N)*

19 mm	
MDF	740 ¹
Particle board	590 ¹
Beech	1820 ¹

Tensile strength (N)

All materials	600 ¹
---------------	------------------



Tensile strength 90° (N)

Surface layer / Interlayer Up to

Up to

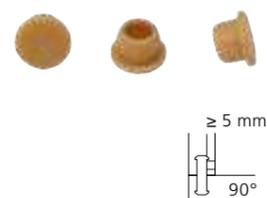
Up to

MDF / Corrugated wood fibre	680 ¹	MDF / Corrugated wood fibre	670 ¹	MDF / Corrugated wood fibre	1100 ¹
Particle board / Cardboard honeycomb	460 ¹	Particle board / Cardboard honeycomb	410 ¹	Particle board / Cardboard honeycomb	870 ¹

¹ See comment on load limits on PAGE 83

Accessories/ Spare Parts

Clamex P



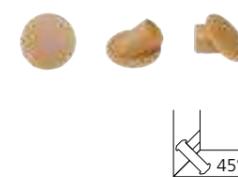
Clamex cover cap 90°

	Art. No.
Clamex cover cap, 100 pieces, RAL 9010 pure white	335280
Clamex cover cap, 100 pieces, RAL 9011 graphite black	335281
Clamex cover cap, 100 pieces, RAL 1014 ivory, pine	335282
Clamex cover cap, 100 pieces, RAL 1011 brown beige, beech	335283
Clamex cover cap, 100 pieces, RAL 8007 fawn brown	335284
Clamex cover cap, 100 pieces, RAL 8017 chocolate brown	335289
Clamex cover cap, 100 pieces, RAL 9002 grey white	335285
Clamex cover cap, 100 pieces, RAL 7035 light grey	335286
Clamex cover cap, 100 pieces, RAL 7040 window grey	335287
Clamex cover cap, 100 pieces, RAL 7031 blue grey	335288
Clamex cover cap, 100 pieces, RAL 7022 umbra grey	335298
Clamex cover cap, 500 pieces, RAL 9010 pure white	335362
Clamex cover cap, 500 pieces, RAL 9011 graphite black	335363
Clamex cover cap, 500 pieces, RAL 1014 ivory, pine	335364
Clamex cover cap, 500 pieces, RAL 1011, brown beige, beech	335365
Clamex cover cap, 5000 pieces, RAL 9010 pure white	335296
Clamex cover cap, 5000 pieces RAL 9011 graphite black	335291
Clamex cover cap, 5000 pieces, RAL 1014 ivory, pine	335292
Clamex cover cap, 5000 pieces, RAL 1011 brown beige, beech	335293
Clamex cover cap, 5000 pieces, RAL 8007 fawn brown	335294
Clamex cover cap, 5000 pieces, RAL 8017 chocolate brown	335299
Clamex cover cap, 5000 pieces, RAL 9002 grey white	335295
Clamex cover cap, 5000 pieces, RAL 7040 window grey	335297



Clamex cover cap 45°

Clamex cover cap 45°, 100 pieces, RAL 9010 pure white	335380
Clamex cover cap 45°, 100 pieces, RAL 9011 graphite black	335381
Clamex cover cap 45°, 100 pieces, RAL 1014 ivory, pine	335382
Clamex cover cap 45°, 100 pieces, RAL 1011 brown beige, beech	335383
Clamex cover cap 45°, 100 pieces, RAL 8017 chocolate brown	335384
Clamex cover cap 45°, 100 pieces, RAL 7035 light grey	335386



Clamex cover cap 45°

	Art. No.
Clamex cover cap 45°, 100 piece, RAL 7022 umbra grey	335388
Clamex cover cap 45°, 5000 pieces, RAL 9010 pure white	335390
Clamex cover caps 45°, 5000 pieces, RAL 1014 ivory, pine	335392
Clamex cover caps 45°, 5000 pieces, RAL 1011 Beech	335393
Clamex installation tool, flexible, hexagon head key, L 290	251993
Allen key, SW 4 mm, 75 x 55 mm	271945
Allen key, SW 4 mm, 120 x 50 mm	271945A
Clamex P drill jig with drill Ø 6 mm	125344
Clamex P drill jig, angle with bushing, for Art. No. 125344	255250
Clamex P drill jig, element insert P-10, for Art. No. 125344	255251
Clamex P drill jig, element insert P-14, for Art. No. 125344	255252
Clamex P drill jig long, incl. drill Ø 6 mm, for P-14 groove	125345
Clamex wood drill, Ø 6 mm	131506
Wood drill with centre point for Ø 6 drilling jig, Length 150 mm	131508EK
Clamex depth collar, Ø 6 mm, incl. allen key	255243



Tenso P



Tenso P-14/10 insertion tool	145400
P-System depth adjuster cap 4 mm for P-8	145439

Accessories/ Spare Parts

Divario P



	Art. No.
Divario P-18 marking jig metal, incl. drill and rotating depth stop	125510
Divario P-18 marking jig plastic	125511
Divario P-18 installation tool	125500
Divario P-18 Starterset Scope of delivery: 80 pair Divario P-18, Divario installation tool, marking jig plastic	145550S

LC P-16



P-System depth adjuster cap 2 mm for P-16	251068
Clamex P drill jig, element insert P-16, suitable for Art. No. 125344 for LC P-16	255255
Zeta P2 positioning clip CNC, for drill hole Ø 6mm	251067

Zeta P2, Classic X, Top 21



Stop square, for Zeta P2, Top 21, Classic X	251044
Spacer 5 mm, aluminium, for Zeta P2, Top 21, Classic X	253027

Zeta P2, Classic X, Top 21



Spacer 2 mm, plastic, for Zeta P2, Top 21, Classic X	253023
Spacer 4 mm, plastic, for Zeta P2, Top 21, Classic X	253026

Zeta P2, Classic X, Top 21



Groove cutter, HW, Ø 100 × 4 × Ø 22 mm, Z2+V4, NL 4	132000
Groove cutter for biscuit joiners, HW, Ø 78 × 3 × Ø 22 mm, Z4, NL 4	132009
Saw blade for biscuit joiners, HW, Ø 100 × 2.4 × Ø 22 mm, Z20, NL 4, incl spacers	132350
Groove cutter with reversible blades, HW, Ø 100 × 4 × Ø 22 mm, Z4, NL 4	132001
Reversible blades set for 4 mm groove cutter, 4 pieces, suitable for item no. 132101/132001	132111
Countersunk screw, M4 × 8 mm	352408T
Allen key, SW4 mm, 144 × 29 mm	271959L
Groove cutter HW with reversible blades, Ø 100 × 4 × Ø 22 mm, Z4+V4, WS, NL 4, without hub Kit contains: Groove cutter, HW, Torx key T9, 4 × screws, spacer	132130
Main teeth for groove cutter with rev. blades 4 mm, 10 pieces, for Art. No. 132130	132134
Scoring teeth for groove cutter with rev. blades, 10 pieces, for Art. No. 132130	132135
Reversible blades set for 4 mm groove cutter, 4 pieces, suitable for item no. 132130	132133
Screw, for groove cutter with rev. blades Art. No. 132130	352130
Torx key, for groove cutter rev. blades Art. No. 132130, TX9	352133

Accessories/ Spare Parts

Zeta P2, Classic X, Top 21

	Art. No.
 Spacer disk, Ø 40 x 1 x Ø 22 mm, NL 4	322510
 Flange to saw blades, incl. screws, Ø 45 x 5.5 mm, M8, NL 4	252502

Zeta P2 cordless and Zeta P2

 Zeta P2, P-System groove cutter, DP (Diamond), Ø 100.4 x 7 x Ø 22 mm, Z3, NL 4	132140
 Zeta P2, P-System groove cutter, HW, Ø 100.9 x 7 x Ø 22 mm, Z3, NL 4	132141

Zeta P2 cordless and Zeta P2

 Zeta P2 positioning pin CNC*, Ø 5 mm, 2 pieces	251048
 Zeta P2 positioning pin CNC*, Ø 8 mm, 2 pieces	251066
 Zeta P2 positioning clip CNC*, for drill hole Ø 6 mm	251067

Dust bag and accessories

 Dust bag, for Zeta P2, Top 21, Classic X	Art. No. 257532
 Extractor stub 36 mm, for Zeta P2, Top 21, Classic X	331007
 Deflector stub 90°, Ø 23 mm, for Zeta P2, Top 20/21, Classic X	331005

Battery

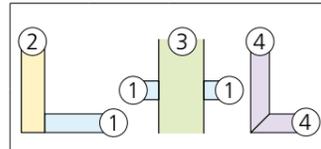
CAS

 Battery pack 18V, LiHD 4.0 Ah, for Zeta P2 cordless, Classic X cordless	313013
 Battery pack 18V, LiHD 5.5 Ah, for Zeta P2 cordless, Classic X cordless	313015
 Battery charger ASC 55, plug type C Euro, for Zeta P2 cordless, Classic X cordless	123100DE
 Battery charger ASC 55, plug type G, GB, for Zeta P2 cordless, Classic X cordless	123100GB

Overview of connectors

Disclaimer regarding load limits

Quantity ⊖ Pairs ∩ Pieces	Art. No.	Minimum material strength (mm)				Depth adjustment	Produktseite	Product drawing 1:1
		1	2	3	4			



P-System

Clamex P Detachable	Clamex P-14	⊖ 80 300 1000	145334 145346 145356	≥ 12	≥ 15	≥ 29	≥ 18	P14	P. 10	P. 71
	Clamex P-14 CNC element with lever	∩ 2000	145388		≥ 18	P14	P. 18	P. 72		
	Clamex P-14/10 Medius	⊖ 80 300 1000	145370 145371 145357		≥ 16	P14/ P10	P. 12	P. 71		
	Clamex P-10	⊖ 80 300 1000	145372 145373 145374		≥ 11	≥ 19	≥ 15	P10	P. 14	P. 71
	Clamex P-14/10 Flexus	⊖ 80 300 1000	145315 145316 145317		≥ 16	≥ 18	P14/ P10	P. 16	P. 72	
Bisco P Detachable	Bisco P-14	∩ 80 300 1000	145301 145302 145303	≥ 12	≥ 15 ¹ (≥ 11 ¹)	≥ 21 ¹	≥ 18	P14	P. 24	P. 73
	Bisco P-10	∩ 80 300	145304 145305		≥ 11 (≥ 9 ¹)	≥ 17 ¹	≥ 15	P10	P. 24	P. 73
Tenso P Glueing	Tenso P-14	⊖ 80 300 1000	145415 145425 145435	≥ 12	≥ 15 (≥ 11 ¹)	≥ 19 ¹	≥ 18	P14	P. 26	P. 74
	Tenso P-10	⊖ 80 300 1000	145418 145428 145438		≥ 11 (≥ 9 ¹)	≥ 16 ¹	≥ 15	P10	P. 28	P. 74
Divario P Sliding insertion	Divario P-18	⊖ 80 300 1000	145550 145560 145570	≥ 12	≥ 11	≥ 18	–	P18/0	P. 32	P. 74
LC P-16	LC P-16 × 11	∩ 80 1000	145710 145711	≥ 16	≥ 12	≥ 19	–	P18 ³	P. 38 P. 38	P. 75 P. 75
	LC P-16 × 17	∩ 80 1000	145720 145721	≥ 16	≥ 12	≥ 19	–	P18 ³	P. 38 P. 38	P. 75 P. 75
	LC P-16 × 22	∩ 80 1000	145730 145731	≥ 16	≥ 12	≥ 19	–	P18 ³	P. 38 P. 38	P. 75 P. 75

Minimum material thicknesses depend on the materials used

¹ Offset installation (more information regarding on **PAGE 27/29**)

² Additional use of the clip

³ Additional use of the P-System depth adjuster cap 2 mm for P-16

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 selection of suitable screws, 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.



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