A strong connection. Inspiring.

High-end system solutions.

Lamello’s exciting and successful history started when the company was founded in 1944. The invention of the original biscuits in 1955 saw Lamello gain worldwide recognition, and large quantities are still produced and installed to this day. Yet anyone who knows Lamello knows that we don’t like to stand still. Lamello has continuously developed over the years and has launched numerous innovations. We are proud to be the market leader in the manufacture of precision joining systems. Working together as a team, we strive to constantly supplement our system solutions with new, practical components that are simpler than you might expect. This in turn enables us to continuously expand the use of our system. Our customers from trade and industry thereby benefit from a wide spectrum of design options, practical functionality and optimised process costs.
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Far-reaching.
Close to home.
At home right across the globe.

Thanks to our international sales network including four subsidiaries and representations in over 40 countries, we can support our customers worldwide. As such we are available locally for our customers anywhere and at any time, be it for individual advice, training or services.
Looking back.  
Thinking ahead.

Ideas that were always ahead of their time.

Every milestone starts with an idea. However, defining or even revolutionary ideas don’t just come about like that. It is only through many years of practical knowledge and intensive development work together with our customers that we have been able to constantly come up with new solutions, and in so doing decisively shape the market for wood joining technology and wood processing to this day.

2001  
Interzum award: Invis joining system

1969  
Founding of Lamello AG

1958  
Invention: First stationary Lamello biscuit joiner LO1

1955  
Invention: Lamello system

1968  
Invention: First manually guided Lamello biscuit joiner

1944  
Joinery founded by Hermann Steiner in Liestal
1970
Invention:
Wood repair system

1981
Invention:
Tanga 150, window cutter

1996
Acquisition and development:
Schneeberger Leimtechnik

2009
Interzum award:
Invention
Clamex P

2010
Invention:
Zeta, power tool for the P-System

2013
Interzum award:
Invention
Tenso P-14

2015
Interzum award:
Invention
Divario P-18
As a leading manufacturer of precision joining systems, Lamello sets new standards with the P-System when it comes to joining fittings and work pieces. The system’s special feature is its form-locking anchorage that does not require the use of adhesive or screws. The great benefit for the customer lies in just how simple it is to install the fittings – taking just a few seconds without the need for tools. The versatile range of P-System fittings is continually being expanded with new, highly practical, innovative components which allow for an increasingly universal application of the system. Our customers in trade and industry benefit continually from the system’s high functional efficiency and process cost efficiency.
“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
Comprehensively designed.
Utmost precision.

Our ambition.

When faced with the choice of convincing customers or surpassing expectations, we say: why not do both? We want to win over customers through our committed, well trained and experienced employees. We want to surpass your expectations with our high-quality precision technology, first-class quality and professionalism. Or, to quote Oscar Wilde: “I have the simplest tastes. I am always satisfied with the best.” This quote perfectly sums up our ambitions.
When we say “Swiss-made”, we mean it in the literal sense. We are proud that the wood for our elements has been sourced from where our head office is located in Bubendorf ever since production began. Our original biscuits are also manufactured from this material, using the following process: the round logs that are delivered are initially cut into scantlings, which are then dried. The lattice design is embossed into the element during the stamping process and the element is compressed. In the next step, the distinctive oval shape is stamped out diagonally to the grain. After successfully passing the quality inspection, the biscuits are delivered from Bubendorf to locations across the globe.

“Formed more than seven decades ago in search of a solution to inspire the wood processing technology industry right through to the present day.”

Karl Steiner, Chairman of the Board of Directors
“The time saved with the P-System convinced us from the start.”

from left to right: Hannes Kofler, production planning and organisation; Daniel Kofler, purchasing and sales at Kofler in St. Felix, Italy
The name Lamello combines Tradition and Innovation.

We particularly value:

**A strong connection. Inspiring.**
We develop, produce and market intelligent, innovative systems and application solutions that have clear unique selling points and high user value for joining technology. We have an extraordinarily high standard of quality and place immense value on Swiss premium perfection and precision.

**Focussed on solutions. Tailored to customers.**
Lamello products pay for themselves! Our products should enable our customers to work more flexibly, productively and effectively. At Lamello, we don’t take things for granted, but instead set out to impress and inspire our customers on a daily basis. Our system solutions and products should not only meet but exceed our customers’ expectations.

**Convincing. Thinking ahead.**
Our pursuit of outstanding quality is the foundation of our practices and defines the services we offer our customers. You can trust our highly trained, committed employees. We offer many years of experience in high-quality joining and woodworking technology and are equipped with state-of-the-art machinery.

**A sense of tradition. An affinity for innovation.**
In addition to state-of-the-art technology, we also provide unique solutions – such as the P-System – that continue to amaze our customers. We set innovative market trends thanks to the extensive knowledge we have gathered over the years. By continually developing our products, services and processes, we guarantee our customers the lead in performance. This knowledge is complemented by a large dose of curiosity and a close relationship with our customers.

**Uncompromising. Imaginative.**
When it comes to the development, construction and design of our products, we are uncompromising and we focus on practical solutions. The result is machinery characterised by its hard-wearing technology, sophisticated design and simple operation. Technology from Lamello gives you significant benefits in the face of global competition, maximises your productivity and opens up new horizons for design and creativity.

**Responsible. Firmly rooted.**
Lamello products and system solutions are proven to be designed with durability and reliability in mind. This legendary durability helps to preserve precious resources and protects the environment by reducing waste. Moreover, we are constantly improving the energy efficiency of our company and our production processes. The high environmental standards at our production site in Switzerland also ensure careful use of resources – a considerable portion of which come from sustainable management.
P-System

“For us, investing in the P-System from Lamello proved to be worth it.”

Martin Wegscheider, Managing Director, Spechtenhauser in Innsbruck, Austria
Joining with the P-System
Form-locking, tool-free installation of Lamello P-System fittings

The P-System is based on a groove with an undercut, into which connectors with various functions can be inserted, ensuring form-locking anchorage. During the process, the cutter moves downwards to the maximum depth and moves sideways in order to create the profile groove.

There are two options for creating the P-System groove:

**Power tool**
Quick and easy to handle, with a range of applications

**CNC technology**
Ideal for series production

---

**Advantages of the Zeta P2**
Any angle can be cut in a very short space of time, as no set-up time, software or programming is required. The cutting depth can be adjusted in next to no time. The machine is therefore ideal for cutting individual parts, smaller series, prototypes or working on site.

**Advantages with the CNC machine**
From CAD to the CAM system, direct to the CNC machine – this makes the process faster, reduces the planning time and lowers the risk of errors for repeat orders. The speed when processing larger series on the CNC machine makes the P-System an extremely quick, efficient system, from processing through to assembly.

**Quick manual insertion without the need for glue or screws**
**P-System**

Form-locking anchorage without tools

---

**Clamex P**

Detachable connecting fitting

- Fast installation
  - Inserting instead of screwing or glueing

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

---

**Tenso P**

*with preload clip*

Self-clamping fitting as glueing aid, for all angles

- Glueing
  - Fixed joints of two workpieces

---

**Divario P**

Self-clamping, invisible fitting for slide insertion

- Sliding insertion
  - Insertion between two fixed sides or shelves via a guiding groove
Strong
Form-locking anchorage across large surface areas

Lateral tolerance
Perfect, flush alignment of both work pieces

Shallow depth
Minimal cutting depth with maximum tensile strength

No twisting
The positioning pins prevent twisting without additional dowels

Aesthetic
The small, hardly visible opening (Ø = 6 mm) serves to close and open the connector

High clamping force
Clamp and glue work pieces at any angle, ~ 80 kg

Stackable
Work pieces with pre-installed P-System fittings are stackable for storage and transport

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

Invisible
No visible fitting

High clamping force
Allows for perfect alignment and clamps the workpieces – 15 kg

Versatile
Simple gluing of mitre joints

Lower assembly force
Only a short power impulse necessary to join, regardless of the number of connectors

Invisible
Guiding groove covers the fittings

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

Fast installation
Quick installation of the fittings without glue after transport.

Assemble by sliding
Partially routed guiding groove for completely invisible furniture joints
Clamex P
Detachable connecting fitting

Advantages and properties
- Smal opening 6mm, differentiation to furniture standards
- Stackable with pre-installed fittings, advantages in packaging, transport and logistics
- Short assembly time on site, minimal installation cost

Versatility for all angles,
- same system for all joining situations
- Freedom of choice during assembly,
- detachable or glued construction

Technical data
Size............................................. 64 × 27 × 9.7 mm
Cutter......................................... Ø 100.4 × 7 × 22
Material of connector.................. fibreglass reinforced plastic
Material of lever......................... zinc die cast
Installation tolerance............... longitudinal ± 1 mm

Tensile strength (N)
MDF .................................................. ~ 900
Particle board ................................. ~ 800
Beech .............................................. ~ 1000

Clamex P-14
For panels from 16 mm

Advantages and properties
- Smal opening 6mm, differentiation to furniture standards
- Stackable with pre-installed fittings, advantages in packaging, transport and logistics
- Short assembly time on site, minimal installation cost

Clamex P-14
Art.No.
Carton with 80 pairs ......................................... 145334
Carton with 300 pairs ......................................... 145346
Carton with 1000 pairs ...................................... 145356
Drill jig P-System ............................................. 125344

Accessories can be found from page 96 onwards
Clamex P-10
For panels from 13 mm

Technical data
Size ............................................. 52 × 19 × 9.7 mm
Cutter ......................................... Ø 100.4 × 7 × 22
Material of connector .................. fibreglass reinforced plastic
Material of lever .......................... zinc die cast
Installation tolerance ................... longitudinal ± 0.5 mm

Tensile strength (N)
MDF ............................................. ~ 600
Particle board .............................. ~ 600
Beech .......................................... ~ 900

Clamex P-10
Carton with 80 pairs .................................................... 145372
Carton with 300 pairs ................................................... 145373
Carton with 1000 pairs ............................................... 145374
Drill jig P-System ........................................................... 125344

Clamex P-Medius
14/10
For centre panels from 16 mm

Technical data
Size ............................................. 64 × 13.5 × 9.7 mm
Cutter ......................................... Ø 100.4 × 7 × 22
Material of connector .................. fibreglass reinforced plastic
Material of lever .......................... zinc die cast
Installation tolerance ................... longitudinal ± 1 mm

Load (N) (19 mm) Tensile strength (N)
MDF ............................................. ~ 700 ~ 800
Particle board ................................ ~ 550 ~ 600
Beech .......................................... ~ 2400 ~ 900

Clamex P Medius 14/10
Art.No.
Carton with 80 pairs ................................................... 145370
Carton with 300 pairs ................................................... 145371
Carton with 1000 pairs ............................................... 145357
Drill jig P-System ........................................................... 125344
Bisco P
Aligning element suitable for Clamex P-14 and Tenso P-14

Advantages and properties
- Ideal addition to Clamex P and Tenso P, fits into the P-System grooves, without requiring a different cutter
- Bisco P-14 is ideal for dry-assembly before gluing a joint with Tenso P-14
- For aligning P-System grooves, aligning function without glue

Bisco P-14
Aligning element suitable for Clamex P-14 and Tenso P-14

Bisco P-10
Aligning element suitable for Clamex P-10

Applications of Bisco P
- Separation walls
- Furniture with large depth
- Glueing of work pieces

Technical data
Size Bisco P-14 ......................... 65 × 27 × 7 mm
Size Bisco P-10 ......................... 52 × 19 × 7 mm
Cutter ...................................... Ø 100.4 × 7 × 22
Material ...................................... plastic
Installation tolerance ................... longitudinal ± 2 mm
Tensile strength with adhesive ..... ~ 400 N ≈ 40 kg

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

Bisco P-10  Art.No.
Carton with 80 pieces .................. 145304
Carton with 300 pieces ............... 145305
Clamex P – applications

Furniture manufacturing / Interior fitting

Your advantages with Clamex P

Aestethic solution
– Differentiation to furniture standards

Stackable with pre-installed fittings
– Advantages in packaging, transport and logistics

Short assembly time on site
– Minimal installation cost

Applications
sideboards | shelves | wardrobes | display cases | kitchen furniture | TV furniture | etc.

Production process

1. P-groove with CNC
– Same profile groove for both workpieces
– Short process time
– Direct data transfer from CAD / CAM
– No additional dowels for alignment necessary

2. Storage
– Small storage volume when stacking despite installed connector
– Remove the connector for surface treatment – fast and easy
– Short reaction time for finishing of standard parts

3. Delivery in parts
– Small transport volume with pre-installed fittings due to stackability
– Smaller stock volume for the dealer
– Easy transport of the parts into the building

4. Assembly on site
– Shorter assembly time at the customer’s due to the pre-installed connectors
– Easy to assemble for a lay person with an allen key
– No second person necessary
– No dowels for lining-up necessary
– Easy to take apart when moving

Detachable  ✔  Fast installation  ✔
Aesthetic  ✔  Strong  ✔
High clamping force  ✔  Lateral tolerance  ✔
Stackable  ✔  Shallow cutting  ✔
Versatile  ✔  No twisting  ✔
Clamex P – applications

Furniture manufacturing / Interior fitting

Your advantages with Clamex P

Aesthetic solution
– Differentiation to furniture standards
Stackable with pre-installed fittings
– Advantages in packaging, transport and logistics
Short assembly time on site
– Minimal installation cost

- Detachable
- Aesthetic
- High clamping force
- Stackable
- Versatile

- Fast installation
- Strong and form-locking
- Lateral tolerance in P-System groove
- Shallow cutting depth
- No twisting

Applications
sideboards | shelves | wardrobes | display cases | kitchen furniture | TV furniture | etc.

Shop fitting / kitchen manufacturing

Your advantages with Clamex P

Stackable with pre-installed fittings
– Advantages in packaging, transport and logistics
Versatility for all angles
– Same system for all joining situations
Freedom of choice during assembly
– Detachable or glued construction
Short assembly time on site
– Minimal installation cost

- Detachable
- Aesthetic
- High clamping force
- Stackable
- Versatile

- Fast installation
- Strong and form-locking
- Lateral tolerance in P-System groove
- Shallow cutting depth
- No twisting

Applications
wall elements | furniture | show cases | changing rooms | stools | etc.
Tenso P

Tenso P-14, advantages and properties
– Can be used as a glueing aid, with high tightening force/clamping force (no clamps or presses necessary)
– A perfect look, completely concealed/invisible
– Reliable and quick, tool-free connector installation (simple and quick, without screws or adhesive)

Tenso P-14 with preload clip, advantages and properties
– Versatile, simple gluing of mitre joints
– Minimum force required, only a short force impulse is needed for insertion
– Effortless connection, regardless of the number of connectors

Tenso P-14
Self-clamping fitting as glueing aid

Technical data
Size............................................. 66 × 27 × 9.7 mm
Cutter......................................... Ø 100.4 × 7 × 22
Material................................. fibreglass reinforced plastic
Installation tolerance............... longitudinal ± 1 mm

Clamping force (N)
Per fitting ............................................. ~ 150

Tenso P-14 with preload function
Art.No.
Carton with 80 pairs (without preload clip).................. 145415
Carton with 300 pairs (without preload clip)............... 145425
Carton with 1000 pairs (without preload clip)........... 145435

Important:
The aligning element Bisco P-14 is ideal to dry-assemble the joints before glueing

Accessories can be found from page 97 onwards
Installation with off-set

### Tenso P-14 + preload clip

Self-clamping fitting as glueing aid, for all angles

Insert preload clip into installation tool

Preload the Tenso P-14

Apply glue

Assemble Work pieces

Accessories can be found from page 97 onwards

---

**Tenso P-14 Starter-Set**

- Carton with 80 pairs (with preload clip) .................................. **1454155**
- Carton with 300 pairs (with preload clip) ............................... **1454255**

**Preload clip**

- Carton with 300 pieces ....................................................... **145426**
- Carton with 1000 pieces ................................................... **145436**

---

max. 30 min
Tenso P-14 – applications

Furniture manufacturing / Interior fitting

Your advantages with Tenso P-14

Fast glueing process
– Time saving without clamps and protectors
– Ship workpieces immediately after assembly, no waiting time for the glue to dry

Clamps the joint from the inside
– Clamping force perfectly perpendicular to the glue surface
– Glueing of shaped workpieces
– Simultaneously aligns and clamps

✓ Glueing ✓ Fast installation
✓ Invisible ✓ Strong
✓ High clamping force ✓ Lateral tolerance
✓ Versatile ✓ Shallow cutting
✓ Lower assembly force ✓ No twisting

Applications
furniture | shelves | stools | sideboards | wardrobes |
separating walls | cladding | decorative strips | covering panels | plinths | face frames etc.

Production process

1. Cutting the groove with Zeta P2
   – Quick, easy and precise work with the well-known Lamello system
2. Temporary storage
   – Small volume due to stackability with pre-installed fittings
   – Remove fittings without tools for the surface treatment
3. Assembly in the factory
   – Quick and efficient glueing
   – No additional clamping device necessary
   – No pressure marks and damage due to protectors or clamps on the work piece
   – Excess glue is removed with ease right after assembly
   – Furniture is automatically in the correct angle
   – No additional person helping with applying the clamps
4. Delivery: product already assembled
   – Short assembly time on site with pre-assembles elements / furniture parts
Shop fitting
Your advantages with Tenso P-14

Stackable with pre-installed fittings
– Advantages in packaging, transport and logistics

Short assembly time on site
– Quick and easy gluing without additional aids
– Minimal installation cost

- Glueing
- Invisible
- High clamping force
- Versatile
- Lower assembly force
- Fast installation
- Strong
- Lateral tolerance
- Shallow cutting
- No twisting

Applications
furniture | shelves | stools | sideboards | wardrobes | show cases | sales counters | separating walls | cladding | face frames etc.

Production process

1. Cutting the groove with CNC
– Same profile groove for both workpieces
– Direct data transfer from CAD / CAM

2. Temporary storage
– Small volume with pre-installed fittings due to stackability
– Remove fittings without tools for the surface treatment

3. Delivery: product in parts
– Small transport volume (flat pack)
– Easier transport of the workpieces to the job site
– Reduced amount of assembly aids without the need of clamps and protectors

4. Assembly on site
– Quick and efficient assembly on site
– No waiting time before the clamps are removed
– No transporting clamps and protectors to and from the job site
– Customer-friendly, quick and clean installation

[Image of shop fitting shelves and wardrobe]
Divario P
Self-clamping, invisible fitting for slide insertion

Advantages and properties
– Completely invisible joint for highest quality standards
– Joins and clamps during insertion for perfectly closed joints
– Efficient machining and installation with a CNC or a Zeta based on the P-System
– Narrow element for the use in shelves from 19 mm
– No resistance while inserting until shortly before building the clamping force
– Insertion of shelves after transport for lower transport weight

Divario P-18
Self-clamping, invisible fitting for slide insertion

Technical data
Half for P-System groove ............. 65 × 16 × 9.7 mm
Half for drill holes ...................... Ø 8 × 9 mm, distance 32 mm
Cutter ..................................... Ø 100.4 × 7 × 22
Material ................................... fibreglass reinforced plastic
Installation tolerance ................. longitudinal ± 1 mm

Load per fitting (N)

<table>
<thead>
<tr>
<th>Material</th>
<th>19 mm</th>
<th>22 mm</th>
<th>25 mm</th>
<th>30 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particle board</td>
<td>500</td>
<td>600</td>
<td>700</td>
<td>1000</td>
</tr>
<tr>
<td>MDF</td>
<td>600</td>
<td>700</td>
<td>800</td>
<td>1000</td>
</tr>
<tr>
<td>Spruce</td>
<td>800</td>
<td>900</td>
<td>1300</td>
<td>1400</td>
</tr>
</tbody>
</table>

Tensile strength (N)
all materials 600

Divario P-18

Art.No.
Starter-Set 80 pairs incl. Installation tool ...................... 1455505
Starter-Set 80 pairs in Systainer Size I, incl. Installation tool and marking jig in metal .................. 145551
Carton with 80 pairs ............................................ 145550
Carton with 300 pairs ............................................ 145560
Carton with 1000 pairs ........................................... 145570
Divario P-18 Installation tool .................................. 125500
Divario P-18 marking jig in metal incl. drill .................... 125510
Divario P-18 marking jig in plastic ................................ 125511

Accessories can be found from page 97 onwards
Furniture manufacturing / Interior fitting

Your advantages with Divario P-18

Efficient installation
– Fitting to insert by hand or install by hammer
– Fixing pins to drive into the wood for efficient installation
– Drilling into the surface possible with a CNC machine without angle aggregates (e.g. nesting machines)
– Possible in the factory or on site with a CNC or a Zeta P2

Clamped joints
– Joint with high tensile strength
– Reinforcing tall cupboards with fixed shelves
– perfect look with closed joints
– No clamps or presses necessary

Sliding insertion in a second process
– The outer cabinet can be joined in a first process
– Transport of the empty cabinet to save weight
– Assembly of the complete furniture piece on site possible (flat pack)
– Insertion of the shelves without glue or clamping aids
– Detachable for transport

Applications
Cabinets, shelves, open room dividers, wine racks, side boards, cupboards, separating walls, showcases, hanging elements etc.
Zeta P2
The machine for the evolving P-System, saving you time daily! Differentiate your products from the standard!

Watch the video:
www.lamello.com

Fastest joining system with a power tool
Connection is complete within seconds, without the need for waiting time, clamps, or secondary processes

<table>
<thead>
<tr>
<th>Time for one connector pair</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cut</td>
</tr>
<tr>
<td>2. Drill</td>
</tr>
<tr>
<td>3. Insert</td>
</tr>
<tr>
<td>4. Connect – finished!</td>
</tr>
<tr>
<td>Ready in</td>
</tr>
</tbody>
</table>

Connected in seconds with Clamex – detachable

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

Connected in seconds with Tenso – glued

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

Time for one connector pair
1. Cut                     | 25 |
2. Insert                  | 5  |
3. Apply glue              | 5  |
4. Connect – finished!     | 5  |
Ready in                   | 40 seconds |
Advantages and properties

– Zeta P2, the power tool for fast, form-locking anchorage of all P-System connecting fittings for wood joints
– The automatic vertical movement creates a profile groove enabling manual insertion of the connecting fittings
– Time saving when installing fittings due to the innovative profile groove concept which saves labour cost as well as the cost for glue or screws, insertion of the fittings by hand, without using glue or screws, greatly reduces labour time while also negating the need for additional fastening materials

Profile groove function

The vertical mechanical drive is the core of the machine
– Fast ~ 1 second
– User-friendly with automatic operation of the cutting process
– Switch off the VMD to use the machine as a standard biscuit joiner enabling 11 more applications (see page 52)

Zeta P2-Set with carbide tipped profile groove cutter in Systainer... 101402S
cutter supplied.............................................................. 132141
with diamond tipped profile groove cutter in Systainer.. 101402DS
cutter supplied.............................................................. 132140

Technical data

Power / Voltage................ 1050 W / 230 V
.............................. 800 W / 120 V
Speed .............................. 9'000 min⁻¹
P-System Cutter ............... Carbide tipped / Diamond tipped
Ø 100 × 7 × 22 mm
Teeth ......................... Z3
Cutting depth max............. 20 mm
Weight......................... 3.7 kg

Kit contains

– Zeta P2
– P-System cutter 7 mm
– Stop square
– Suction stub 23 + 36 mm
– Disc for angles
– Spacer 2 + 4 mm
– Tools
– P-System drill jig incl. drill

Accessories can be found from page 96 onwards
Zeta P2 – versatile and fast

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

90° corner or dividing panel connection

Swivel down the front and apply on the outer sides of the workpieces when cutting. The two workpieces will then fit perfectly together, even when the material thicknesses are different.

Mitre connection 45° – 180°

For 45° or 22.5° angles, slide the stop square onto the front and place it on the outer side of the workpiece. For all other angles, swivel the front stop forward and make the cut applying on the inner side.

Obtuse mitre connection, 22.5° – 120°

Swivel the front stop to the correct angle and place the machine on the inner side. Copy the centre position of the cut onto the other workpiece, slide the stop square onto the front and cut.

Working with centre marking

1. Cut and mark the centre of the cut
2. Copy the centre to the second workpiece
3. Align the Zeta P2 with the marking
4. Produce connections at all angles
**Clamex P-14**
- **Size**: 64 x 27 x 9.7 mm
- **Tensile strength**:
  - Particle board: ~ 800 N
  - Beech: ~ 1000 N

**Clamex P-10**
- **Size**: 64 x 13.5 x 9.7 mm
- **Tensile strength**:
  - Particle board: ~ 700 N
  - Beech: ~ 900 N

**Clamex P Medius 14 / 10**
- **Size**:
  - 52 x 19 x 9.7 mm
  - 52 x 7.5 x 9.7 mm
- **Tensile strength**:
  - Particle board: ~ 600 N
  - Beech: ~ 900 N

**Bisco P-14**
- **Size**: 52 x 7.5 x 9.7 mm

**Bisco P-10**
- **Size**: 52 x 9.7 mm

**Aligning element suitable for Clamex P-14 + Tenso P-14 and Clamex P-10**
- **Size**: 64 x 27 x 9.7 mm
- **Tightening force**: ~ 150 N

**Divario P-18**
- **Size**: 65 x 16 x 9.7 mm
- **Tensile strength**: all materials: ~ 600 N

**Bisco P-14 Art.No.**
- 80 pairs: 145334
- 300 pairs: 145356
- 1000 pairs: 145357

**Bisco P-10 Art.No.**
- 80 pairs: 145335
- 300 pairs: 145358
- 1000 pairs: 145359

**Tenso P-14 with preload function**
- **Size**: 64 x 13.5 x 9.7 mm
- **Preload clip Art.No.**
  - 300 pieces: 145370
  - 1000 pieces: 145371

**Bisco P-14: Ideal for dry assembly before gluing with Tenso P-14**
- **Size**: 64 x 13.5 x 9.7 mm
- **Preload clip Art.No.**
  - 300 pieces: 145372
  - 1000 pieces: 145373

**Self-clamping, invisible fitting for slide insertion**
- **Size**: 66 x 27 x 9.7 mm

**Detachable connecting fitting**
- **Size**: 64 x 27 x 9.7 mm

**Detachable connecting fitting for centre panels**
- **Size**: 64 x 13.5 x 9.7 mm

**Self-clamping fitting as gluing aid**
- **Size**: 66 x 27 x 9.7 mm

**Aligning element suitable for Clamex P-14 + Tenso P-14 and Clamex P-10**
- **Size**: 64 x 27 x 9.7 mm
- **Tightening force per connector**: ~ 150 N

**Tenso P-14 Art.No.**
- 80 pairs: 145415
- 300 pairs: 145425
- 1000 pairs: 145435

**Preload clip Art.No.**
- 300 pieces: 145436
- 1000 pieces: 145437

**Bisco P-14: Ideal for dry assembly before gluing with Tenso P-14**
- **Size**: 64 x 13.5 x 9.7 mm
- **Preload clip Art.No.**
  - 300 pieces: 145438
  - 1000 pieces: 145439

**P-System cutter Art.No.**
- Ø 100.4 x 7 x 22 mm, Z3
  - Diamond tipped: 132140
  - Carbide tipped: 132141

**Aligning element suitable for Clamex P-14 + Tenso P-14 and Clamex P-10**
- **Size**: 64 x 27 x 9.7 mm
- **Tightening force per connector**: ~ 150 N
P-System CNC

“With the P-System on our CNC machine we achieve a significant increase in productivity daily.”

from left to right: Nicolas Rassinfosse and Pierre Vereecken, directors of Modul 3 in Gembloux, Belgium
Joining with the **P-System CNC technology**
CNC partners

Design and production software, aggregates, cutting tools and CNC machining – these companies assist you with the efficient manufacturing with the P-System:

To see more of our partners, visit Lamello.com

Installation options with CNC

CNC processing centres with pad and rails

CNC processing centres with nesting technology

Vertical CNC processing centres

CNC machines with equipment options for particularly efficient processing

BHX 200

Evolution 7405

Brema Eko 2.1
CNC machines

What setup do I need if I want to create P-System grooves with my CNC machine?

1. CNC machine
   - Machine with 3/4/5 axes + angle aggregate

2. CNC software
   - Purchase software/macro/component from the manufacturer
   or
   - Program the macro yourself

3. Suitable angle aggregate
   - Aggregate sub program

   The angle aggregate also enables the P-System groove to be cut in the centre of the surface

   An overview of other aggregates is available on our website: www.lamello.com

   **Attention:** Get the approval to use the P-System cutter on the aggregate from the CNC manufacturer

4. P-System cutting tool
## CNC tools

### P-System CNC drill bit

<table>
<thead>
<tr>
<th>Description</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 mm, solid carbide, for mitres, L = 100 / 35 mm, shaft = 10</td>
<td>131556</td>
</tr>
</tbody>
</table>

### P-System CNC groove cutter, Ø 100.4 × 7

<table>
<thead>
<tr>
<th>Description</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>× 30 mm, 4 / 6.6 / DTK 48 mm, Z3, suitable for all cutter arbors listed below</td>
<td>132142</td>
</tr>
<tr>
<td>× 30 mm, 4 / 6.6 / DTK 48 mm, Z6, suitable for all cutter arbors listed below</td>
<td>132145</td>
</tr>
<tr>
<td>× 40 mm, 4 / 5.5 / DTK 52 mm, Z3</td>
<td>132143</td>
</tr>
<tr>
<td>× 16 mm, 4 / 5.5 / DTK 28 mm, Z3</td>
<td>132144</td>
</tr>
<tr>
<td>× 35 mm, 4 / 5.5 / DTK 50 mm, Z3</td>
<td>132148</td>
</tr>
</tbody>
</table>

### P-System CNC cutter arbors 30 / DTK 48 mm

<table>
<thead>
<tr>
<th>Description</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaft Ø 20 × 50, L = 102 mm</td>
<td>132150</td>
</tr>
<tr>
<td>Shaft Ø 25 × 60, L = 102 mm</td>
<td>132151</td>
</tr>
<tr>
<td>Shaft Ø 16 × 50, L = 85 mm</td>
<td>132152</td>
</tr>
<tr>
<td>Shaft Ø 16 × 55, L = 68 mm</td>
<td>132153</td>
</tr>
<tr>
<td>Shaft Ø 16 × 50, L = 85 mm, with clamping surface (2°- angle)</td>
<td>132154</td>
</tr>
<tr>
<td>Shaft Ø 20 × 50, L = 85 mm, with clamping surface (2°- angle)</td>
<td>132155</td>
</tr>
<tr>
<td>M6 × 16 mm Torx countersunk bolt, 4 pcs, suitable for cutter arbors</td>
<td>132159</td>
</tr>
<tr>
<td>Screwdriver with cross-grip, Torx T20 × 100</td>
<td>271919</td>
</tr>
</tbody>
</table>

### P-System CNC shaft tool cutter

<table>
<thead>
<tr>
<th>Description</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid carbide, shaft Ø 12 × 40, L = 80 mm</td>
<td>131342</td>
</tr>
<tr>
<td>Only for machining panel centres with 5 axis CNC machines</td>
<td></td>
</tr>
</tbody>
</table>

### Positioning pins for Zeta P2

<table>
<thead>
<tr>
<th>Description</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 5 mm, 1 pairs</td>
<td>251048</td>
</tr>
<tr>
<td>Ø 8 mm, 1 pairs</td>
<td>251066</td>
</tr>
<tr>
<td>For positioning in positioning holes with a diameter of Ø 5 mm or 8 mm</td>
<td></td>
</tr>
</tbody>
</table>

### Positioning clip for Zeta P

<table>
<thead>
<tr>
<th>Description</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 6 mm</td>
<td>251067</td>
</tr>
<tr>
<td>For positioning in the Clamex access hole (6 mm)</td>
<td></td>
</tr>
</tbody>
</table>
Requirements for CNC machines:

– Either the macro and component software for the desired angle are provided or you have programmed these yourself
– Aggregate sub program is available

### Equipment

<table>
<thead>
<tr>
<th>Machines</th>
<th>Axes</th>
<th>Surface 180°</th>
<th>Corner 90°</th>
<th>Centre wall 90°</th>
<th>Mitre 22.5° – 180°</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portal</td>
<td>3/4</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 × P-System cutter</td>
<td>1 × cutter arbor</td>
<td>1 × drill Ø 6 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 × P-System cutter</td>
<td>(2) × cutter arbor</td>
<td>1 × drill Ø 6 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 × P-System cutter</td>
<td>1 × cutter arbor</td>
<td>1 × P-System drill Ø 6 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 × P-System cutter</td>
<td>1 × P-System drill Ø 6 mm + adaptor</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 × P-System cutter</td>
<td>1 × cutter arbor</td>
<td>1 × P-System drill Ø 6 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 × P-System cutter</td>
<td>(2) × P-System cutter arbor</td>
<td>1 × P-System drill Ø 6 mm</td>
<td></td>
</tr>
<tr>
<td>Nesting</td>
<td>3/4</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 × drill Ø 5 mm</td>
<td>1 × drill Ø 6 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
<td>⬤</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 × P-System cutter</td>
<td>1 × cutter arbor</td>
<td>1 × P-System drill Ø 6 mm</td>
<td></td>
</tr>
</tbody>
</table>

Possible

Only possible with Zeta P2 and positioning pins

Possible with shaft tool

Not possible

Tip: Instead of using an angle aggregate, the Zeta P2 power tool can be used to cut the P-System groove in the centre of the surface. To do so, drill two 5 mm positioning holes spaced at 101 mm in the work piece surface using the CNC machine. These are required to align the Zeta P2 on the work piece.

More on page 46
For more information, visit: www.lamello.com

Aggregates

**A** Angle aggregate

Possible angle aggregates
- One to four spindel angle aggregates
- Corner notching aggregate
- Aggregate for door locks

An aggregate overview can be found on the Lamello website: www.lamello.com

**B** Manually adjustable swivelling aggregates

Information: The use of several aggregates is required. Several tool changes required for angle cuts, drilling and P-System grooves

Information: The cutting depth in the centre of the surface may be restricted depending on the model

Tip: For mitres, spare yourself a tool change and drill the hole using a manual drill jig!

**C** Automatically adjustable swivelling aggregates (Flex S+C, from manufacturing year 2015)

Note: Automatically adjustable swivelling aggregate with automatic tool changer. The profile groove is restricted to 10 mm in the centre of the surface

Advantages in the production process

1. P-System groove with CNC
   - Same profile groove for both work pieces
   - Short process time
   - Less processing than for other connection methods
   - Direct data transfer from CAD / CAM

2. Storage
   - Small storage volume due to stacking despite installed connector
   - Shorter reaction time for the continuation of the next process

3. Delivery: in parts
   - Smaller transport volume without damaging the parts
   - Easy transport of the parts into the building (stairs, elevator)

4. Assembly on site
   1. Easy assembly by customer possible
   2. Assembly by sales personnel or tradesman
      - Shorter assembly time on site
Ideas for standardising the machining on a CNC machine

<table>
<thead>
<tr>
<th>Depth 10 mm</th>
<th>for all P-System</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>grooves in the surface</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth 14 mm</th>
<th>for all P-System</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>grooves in the edge</td>
</tr>
</tbody>
</table>

Positioning drill holes on a CNC

Combining strengths: 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 for nesting machines, when the cost for an additional aggregate can’t be justified or the machine cannot be upgraded anymore.

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.

Advantages and properties

- Save time and money!
- Short setup time with a Zeta P2
- No specific angle aggregates, software or CNC tools necessary
- Precise positioning for center panels

Ideal combination of CNC machines and Zeta P2

Positioning pin Zeta P2

| Ø 5 mm | Art.No. 251048 |
| Ø 8 mm | Art.No. 251066 |

Positioning clip for Zeta P2

| Ø 6 mm | Art.No. 251067 |
| For positioning in the Clamex access hole (6 mm) |

Clamex P-14, element with the lever

Art.No. 145338

box with 2’000 pcs

Clamex P-10, element without lever

Art.No. 145358

box with 2’000 pcs

Clamex P-10, element Medius

Art.No. 145369

box with 2’000 pcs

Art.No.
Cutting the groove in the surface

1. Drill the positioning holes with the CNC, Ø 5 mm / Ø 8 mm

2. Hole pattern of the positioning drill holes

3. Insert the positioning pins in the Zeta P2

4. Position the machine in the drill holes

Cutting the groove in the edge

1. Drill the positioning hole with the CNC, Ø 6 mm

2. Insert the positioning clip

3. Insert the positioning clip in the drill hole Ø 6 mm

4. Cut the groove with the positioned machine
Lamello-System

“The original biscuit – always a perfect fit! Efficient, quick and precise!”

Mr Antonio Orlando, Head of Production Ladenmacher AG in Hägendorf, Switzerland
Joining with the Lamello System
An exceptionally efficient, simple and precise joining system for panels

How it works

1. Cut grooves
2. Apply glue
3. Insert biscuits
4. Clamp work piece

The precise work results of the system and the long life of the power tools pay off.

Advantages and properties

Fast – Lateral sliding tolerance

- Easy positioning of the machine to the pencil mark
- No additional side stops or positioning aids necessary
- Great flexibility when assembling, possibility to join panels by sliding together from different angles – not just perpendicular unlike dowels (see large picture left)

Easy – Same groove depth for both sides

- No changing of the cutting depth means less room for error
- Saves time with every joint

Precise – Established cutting principle with disc cutter

Disc-shaped tools cannot bend or flex
- Always parallel, precise grooves – despite wood knots or fast working
- No tool change for many different joining elements
- Low maintenance cost throughout the long life of the power tool, maintenance comprises one cutting tool only

Versatile – Thin flat joining element with minimal installation depth

- Join thin work pieces 8 or 10 mm in many various angles
- Minimal material weakening
- Non-rotating, cost effective joining elements
### Versatile applications with a wide range of joining elements

<table>
<thead>
<tr>
<th>Without tool change</th>
<th>With tool change</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>H9</td>
</tr>
<tr>
<td>E20-L</td>
<td>Clamex S-18</td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>E20-H</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>K20</td>
<td></td>
</tr>
<tr>
<td>C20</td>
<td></td>
</tr>
<tr>
<td>C10</td>
<td></td>
</tr>
<tr>
<td>Simplex</td>
<td></td>
</tr>
</tbody>
</table>

...and many more additional benefits

- **Cut grooves**
  - Cut grooves for tongue and groove connections, Standard carbide-tipped groove cutter 4 mm

- **Wood repairs**
  - Repairing of resin pockets and small defects, Carbide tipped cutter for Minispot patches size 2

- **Cut expansion gaps**
  - Expansion gaps for wood ceilings or floors, Sliding shoe and carbide-tipped saw blade
Original Lamello biscuit joiners
These properties make the difference

**Multifunctional stop square** included in the kit

- **Both sides flush surfaces** on baseplate, swivelling front and stop square for efficient positioning of the biscuit joiner on the workpiece’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 distance from both sides to the cutter = 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 4mm) serves as application surface

**High-precision machined application surfaces**

- **CNC machined high-precision application surfaces** for exact application on the work piece

- **Long-life precision guide** provides exact, parallel grooves for perfect fit of the work pieces
**Classic X**

The original biscuit joiner for every workshop. Choose Lamello for precision, reliability, longevity and many other benefits.

---

**Advantages and properties**

- **Powerful 780 W, ergonomic slim shape**
- **Base plate is flush on both sides for efficient positioning of the machine on the work piece**
- **High-precision machined guide and application surfaces for perfect fit of the work pieces** (see p 49)
- **Multifunctional stop square** (see p 49)
- **Versatile use**, with the possibility for 19 more applications (see p 44 – 45)
- **Swivelling front stop 0–90° catching at 22.5°, 45°, 67.5°, 90°**
- **Rotating depth adjuster with 6 standard depths**

---

**Technical data**

Power ......................................... 780 W
Voltage ....................................... 230 V oder 120 V
Speed ......................................... 10'000 min⁻¹
Cutting depth max. ..................... 20 mm
Weight ........................................ 3.1 kg

**Kit contains**

Classic X with:
- carbide tipped cutter
- suction stub 36 mm
- stop square
- spacer 4 mm
- set of tools

Accessories can be found from page 98 onwards
Top 21
The original biscuit joiner with height adjustable blade from the inventor of biscuit joiners. Choose Lamello for precision, reliability, longevity and many additional applications.

Unique features
1. Height adjustable cutter
   SMS: Step Memory System
   – Scale +/- 2 mm in steps of 0.1 mm (total 4 mm)
   – Adjust groove position to exact center of the work-piece (material thickness 8 – 24 mm)
   – Easy joining of laterally off-set workpieces
   – Double cut 2 x 4 mm for Lamello Clamex S
   – Expansion gaps (adjustable from 8 to 12 mm) adjustable in steps of 0.1 mm
   – Individual positioning of the groove

2. New baseplate
   – Base plate, swivelling front stop and stop square are flush on both sides – for efficient positioning of the machine on the edge of the workpiece
   – New multifunctional stop square with smooth running, precise guidance – for quick, exact setting of the groove position

3. Precision cutter
   with 4 scoring teeth and hub

4. Including dust bag
   and adapter Ø 36 mm

Technical data
Power / Voltage........................... 1’050 W / 230 V
................................................ 800 W / 120 V
Speed .........................................9’000 min-1
Cutter .........................................Carbide tipped cutter
   with hub Ø 100 x 4 x 22 mm
Teeth ..........................................Z2 + V4 with scoring teeth
Cutting depth max ...................... 20 mm
Weight ........................................3.5 kg

Top 21  Art.No.
in systainer ........................................... 101500S
in systainer with carbide reversing blade cutter .......... 101500SW

Kit contains
Top 21 with:
– carbide tipped cutter
– suction stub 23 mm
– stop square
– spacer 4 mm
– extractor stub 36 mm
– dust bag
– set of tools

Accessories can be found from page 98 onwards
The original wooden biscuit
The Original
Swiss production
Swiss timber
Lamello quality

Advantages and properties

1. Rounded smooth edges
   – Easy handling and insertion

2. Recessed & embossed glue surface
   – Accurate glue distribution
   – Easy insertion into groove

Diagonal fiber orientation
– Excellent breaking strength

Wood biscuits

<table>
<thead>
<tr>
<th>carton</th>
<th>Size</th>
<th>Quantity</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size 20</td>
<td>56 x 23 x 4 mm</td>
<td>1000 pieces</td>
<td>144020</td>
</tr>
<tr>
<td>Size 10</td>
<td>53 x 19 x 4 mm</td>
<td>1000 pieces</td>
<td>144010</td>
</tr>
<tr>
<td>Size 0</td>
<td>47 x 15 x 4 mm</td>
<td>1000 pieces</td>
<td>144000</td>
</tr>
<tr>
<td>Size H9</td>
<td>38 x 12 x 3 mm</td>
<td>1000 pieces</td>
<td>144009</td>
</tr>
<tr>
<td>Size 20, 10, 0</td>
<td>assorted</td>
<td>1000 pieces (500, 250, 250)</td>
<td>144030</td>
</tr>
<tr>
<td>Size 20, 10, 0</td>
<td>assorted</td>
<td>400 pieces (240, 80, 80)</td>
<td>144032</td>
</tr>
</tbody>
</table>

Installation of wooden biscuits with cutter Ø 100 x 4 x 22 mm (standard cutter)
Installation of H9 wooden biscuits with cutter Ø 78 x 3 x 22 mm (Art.No. 132009)
Glueing

Minicol / Servicol
The all purpose glue applicator

**Advantages and properties**
- For 4 mm grooves
- Nozzle facing downwards in the stand for quick use
- Bottle base prevents the glue from drying up in the nozzle
- Volumetric capacity: 300 ml
- Glue application on the sides

**Dosicol**
The efficient glue applicator with metering pump

**Advantages and properties**
- One stroke glue application
- The volume is easily adjusted by the metering ring
- Accurate dispensing, optimal for biscuit and dowel joints
- Available in 3 different models
- Volumetric capacity: 450 ml (4.5 dl)

**Clamping Set**
Easy clamping system for gluing case work, drawers, frames, wall and floor panels
Even pressure distribution guarantees correct angle of workpiece

**Glue applicator Minicol**
<table>
<thead>
<tr>
<th>Mod.</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>KS</td>
<td>175500</td>
</tr>
<tr>
<td>M</td>
<td>175550</td>
</tr>
</tbody>
</table>

**Glue applicator Servicol**
<table>
<thead>
<tr>
<th>Mod.</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>KS</td>
<td>175560</td>
</tr>
<tr>
<td>M</td>
<td>175570</td>
</tr>
<tr>
<td>X</td>
<td>175580</td>
</tr>
</tbody>
</table>

**Nozzles for Minicol and Servicol**
<table>
<thead>
<tr>
<th>Material</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic</td>
<td>335511</td>
</tr>
<tr>
<td>Metal</td>
<td>285512</td>
</tr>
<tr>
<td>Pointed</td>
<td>335522</td>
</tr>
</tbody>
</table>

**Glue applicator Dosicol**
<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mod. 20</td>
<td>177000</td>
</tr>
<tr>
<td>Mod. D</td>
<td>177007</td>
</tr>
</tbody>
</table>

**Nozzles for Dosicol**
<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamello</td>
<td>287020</td>
</tr>
<tr>
<td>Minispot</td>
<td>287022</td>
</tr>
<tr>
<td>Dowel holes</td>
<td>287024</td>
</tr>
</tbody>
</table>

Accessories can be found from page 99 onwards

**Parts**
<table>
<thead>
<tr>
<th>Quantity</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clamps</td>
<td>175020</td>
</tr>
<tr>
<td>Buckle for clamps</td>
<td>175060</td>
</tr>
<tr>
<td>Polyester belt</td>
<td>175050</td>
</tr>
<tr>
<td>Tension hooks</td>
<td>175401</td>
</tr>
<tr>
<td>Profile sections</td>
<td>175403</td>
</tr>
</tbody>
</table>

**Quantity**
<table>
<thead>
<tr>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 pieces</td>
</tr>
<tr>
<td>5 m clamping belt</td>
</tr>
<tr>
<td>8 m clamping belt</td>
</tr>
<tr>
<td>4 pieces</td>
</tr>
<tr>
<td>8 m belt</td>
</tr>
<tr>
<td>4 pieces profile sections 20 cm</td>
</tr>
<tr>
<td>50 m</td>
</tr>
<tr>
<td>2 pieces</td>
</tr>
<tr>
<td>8 m clamping belt</td>
</tr>
<tr>
<td>4 pieces</td>
</tr>
<tr>
<td>8 m belt</td>
</tr>
<tr>
<td>4 pieces profile sections 60 cm</td>
</tr>
<tr>
<td>2 pieces</td>
</tr>
<tr>
<td>5 m clamping belt</td>
</tr>
</tbody>
</table>
Clamex S connector

For aesthetic constructions. Demountable, flexible and easy. Installation in an 8 mm groove with screws

**Advantages and properties**
- Detachable connections
- Aligns and connects, 2 functions in one
- Aesthetic joint due to the small hole for opening and closing
- Safe from twisting due to the aligning studs
- Flexible mitres in all angles
- Stackable, since no parts protrude from the surface, so ideal for flat packing
- Easy installation with any Lamello biscuit joiner

**Applications of Clamex S**
- Detachable furniture joints
- Surface, corner and dividing wall connections
- All angles
- Frame connections
- Dividing walls
- Glue aid

**Technical data**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>66 × 29 × 8 mm</td>
</tr>
<tr>
<td>Cutter</td>
<td>Ø 100 × 8 × 22</td>
</tr>
<tr>
<td>Material of connector</td>
<td>Fibreglass reinforced plastic</td>
</tr>
<tr>
<td>Material of lever</td>
<td>Zinc die cast</td>
</tr>
<tr>
<td>Installation tolerance</td>
<td>Longitudinal ± 1.0 mm (max. ± 1.25 mm)</td>
</tr>
</tbody>
</table>

**Clamex S-18**

- 18 pairs: 145231
- 80 pairs: 145236
- 300 pairs: 145241
- 1000 pairs: 145251

Accessories can be found from page 98 onwards

**How it works**

Clamex S installation with cutter Ø 100 × 8 × 22 mm (Art.No.132108)

1. Cut groove, 8 mm
2. Drill hole 6 mm
3. Screw in the Clamex S
4. Connect, finished!
E20
The self-clamping element

Advantages and properties

- Connects and clamps with one strike. The curved ridges clamp the connection together during insertion.
- Cut groove in both work pieces simultaneously
- No clamps – no waiting time
- Easy joining with a Lamello biscuit joiner

Applications of E20

- Door frames
- Furniture plinths
- Elongating of panels and profiles
- Ideal on site

Technical data

<table>
<thead>
<tr>
<th>Size</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>E20-L</td>
<td>56 × 11.5 × 4 mm</td>
</tr>
<tr>
<td>E20-H</td>
<td>23 × 28 × 4 mm</td>
</tr>
<tr>
<td>Cutter</td>
<td>Ø 100 × 4 × 22</td>
</tr>
<tr>
<td>Material</td>
<td>Fibreglass reinforced plastic</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E20</th>
<th>Quantity</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>E20-H</td>
<td>80 pieces</td>
<td>145021</td>
</tr>
<tr>
<td>E20-H</td>
<td>400 pieces</td>
<td>145026</td>
</tr>
<tr>
<td>E20-H</td>
<td>1200 pieces</td>
<td>145028</td>
</tr>
<tr>
<td>E20-L</td>
<td>80 pieces</td>
<td>145022</td>
</tr>
<tr>
<td>E20-L</td>
<td>400 pieces</td>
<td>145025</td>
</tr>
<tr>
<td>E20-L</td>
<td>1200 pieces</td>
<td>145027</td>
</tr>
<tr>
<td>E20-L / E20-H</td>
<td>40 pieces per type</td>
<td>145020</td>
</tr>
</tbody>
</table>

How it works

E20-H

1. Cut groove
2. Apply glue
3. Insert E20-H
4. Finished!

E20-L

1. Cut groove
2. Apply glue
3. Insert E20-L
4. Finished!
**K20**
Clamping element

**Advantages and properties**
Clamping aid for work pieces which are difficult to clamp, e.g. screens, crown moulding etc.
Use in combination with wooden Lamello biscuits.
Made of plastic, barbed cross ribs for grip.

<table>
<thead>
<tr>
<th>Cutter</th>
<th>Size (mm)</th>
<th>Quantity</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 100 x 4 x 22</td>
<td>60 x 24 x 4.5</td>
<td>80 pieces</td>
<td>145001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>250 pieces</td>
<td>145000</td>
</tr>
</tbody>
</table>

**C20 / C10**
Solid surface element

**Advantages and properties**
For joining solid surface materials such as Corian®, Varicor® etc. Made of translucent plastic

<table>
<thead>
<tr>
<th>Cutter</th>
<th>Size (mm)</th>
<th>Quantity</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C20</td>
<td>Ø 100 x 4 x 22</td>
<td>60 x 23 x 4</td>
<td>250 pieces</td>
</tr>
<tr>
<td>C10</td>
<td>Ø 100 x 4 x 22</td>
<td>53 x 19 x 4</td>
<td>300 pieces</td>
</tr>
</tbody>
</table>

**Simplex**
Detachable slide-in connector

**Advantages and properties**
Detachable, two part connector for ceiling panels, screens, shelves and general casegoods.
Install with insertion tool and two-part epoxy adhesive.
Made of aluminum

<table>
<thead>
<tr>
<th>Cutter</th>
<th>Size (mm)</th>
<th>Quantity</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 100 x 4 x 22</td>
<td>54 x 23 x 4.1</td>
<td>50 pair</td>
<td>166101</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 pair</td>
<td>166100</td>
</tr>
</tbody>
</table>

Inserting tool for Simplex (For accurate positioning of Simplex) | 166110
original wooden biscuit

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>47 x 15 x 4 mm</td>
<td>144000</td>
<td>1000 pieces</td>
</tr>
</tbody>
</table>

E20-L

Self-clamping element

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>56 x 23 x 4 mm</td>
<td>144020</td>
<td>1000 pieces</td>
</tr>
</tbody>
</table>

K20

Clamping element

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 x 24 x 4.5 mm</td>
<td>145001</td>
<td>250 pieces</td>
</tr>
</tbody>
</table>

C20

Biscuit for solid surface

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 x 23 x 4 mm</td>
<td>145000</td>
<td>1000 pieces</td>
</tr>
</tbody>
</table>

Simplex

Detachable slide-in connector

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>54 x 23 x 4 mm</td>
<td>166100</td>
<td>1000 pieces</td>
</tr>
</tbody>
</table>

Clamex S-18

Connector with screw insertion

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>66 x 29 x 8 mm</td>
<td>145251</td>
<td>1000 pieces</td>
</tr>
</tbody>
</table>

C10

Biscuit for solid surface

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>53 x 19 x 4 mm</td>
<td>145012</td>
<td>1000 pieces</td>
</tr>
</tbody>
</table>

** Carbide tipped groove cutter

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 78 x 3 x 22 mm</td>
<td>132000</td>
<td>1000 pieces</td>
</tr>
</tbody>
</table>

Lamello-System

www.lamello.com
Invis Mx2

“I am delighted with the ingenious connection: stability and aesthetics for the highest requirements!”

Marcel Eggimann, owner of Eggimann Holzfertigung in Ramsei, Switzerland.
Joining with the

Invis Mx2 System
Magnet-driven connections with an even higher clamping force!

Invisible as if glued, versatile as if screwed!

60% higher clamping force

250 kg clamping force per connector

Even more applications

Powerful mechanical connections
Detachable within seconds
Completely invisible

No openings | no protective caps | no filler | a perfect look!

The MiniMag Mx2 drive opens or closes the connection
The speed of the cordless drill must be 1200 – 1500 rpm
Invis Mx2

The unique invisible connection for highest demands on aesthetics, stability and productivity

Drill the hole for the Invis Mx2 connector with ...

... the Rasto drill jig or a CNC machine

Fast and easy installation

Save time!

1. Screw the connector into the pre-drilled hole
2. Screw in the stud vertically using the insertion jig
3. Join and clamp the connection using MiniMag Mx2
4. If desired, open the connection by reversing the rotation of the cordless drill

Kits

Invis Mx2 Starter Kit (in systainer) ........................................ 6100300
– MiniMag Mx2
– 20 Invis Mx2 connector sets with 14 mm stud
– Rasto drill jig with 12 mm drill bit, depth adjuster, bushing
– Screw bit
– Flexible shaft
– Insertion jig

MiniMag Mx2 Kit (in cardboard box) ........................................ 6100301
MiniMag Mx2, screw bit

Invis Mx2 connector set Quantity Art.No.
with 14 mm stud .............................. 20 pieces ............................ 6012300
with 30 mm stud .............................. 20 pieces ............................ 6012301

35 mm Invis Mx2 connector .............................. 20 pieces ............................ 6012317
14 mm stud .............................. 20 pieces ............................ 6012312
30 mm stud .............................. 20 pieces ............................ 6012309
Centre-wall stud for 10 – 30 mm thickness .............................. 10 pieces ............................ 6012208
Screw bit .............................. 1 piece ............................ 6112205
Flexible shaft for MiniMag Mx2 .............................. 1 piece ............................ 6100204
Invis Mx2 insertion jig for studs 14 mm 1 piece ............................ 6112333
Clamp
1. Clamp high-gloss painted furniture without causing damage  
2. Easily connect and clamp moulded parts  
3. Prepare stairs and handrails in the workshop and connect them quickly on-site

Invisible
4. Install wall elements without any visible fasteners  
5. Connect and plaster substructures without needing to fill holes  
6. Join separation walls without screw clamps

Detachable
7. Deliver large furniture items in parts and assemble them on-site in next to no time  
8. Join table legs without visible fasteners and unscrew them again if necessary  
9. Quickly assemble and dismantle trade fair stands
Rasto

The drill jig allows for precise drilling without measuring or marking into any workpiece shape. It is ideal for Invis Mx and many other applications.

How Rasto works

Drill precise and efficient holes without measuring or marking into any shape!

The Rasto concept uses positioning pins as stops instead of measuring the hole position. The holes always align perfectly because the position of the pins is not changed when drilling the second workpiece. The transparency allows for easy setup on the work piece or aligning to a pencil mark. Due to its approximately 180 positioning holes Rasto can be used for nearly any shape, thickness or size.

Advantages and properties

- Fast and precise holes
- Drill holes into all workpiece shapes
- Drill without measuring or marking
- Handles and 32 mm hole rows
- Ideal for exact drilling of holes for Invis Mx elements and studs

Holes in the centre of 16 and 19 mm panels

Holes in the centre of any workpiece thickness

Mitre connections

Dividing wall connections

Furniture handle holes and 32 mm hole rows

32 mm hole rows by referencing from the last hole

8 mm or 12 mm hole rows by referencing from the last hole
Applications of Rasto

- Kitchen bench tops
- Hand rails
- Corner connections
- All shapes and profiles
- Mitre connections
- Surface connections
- Dividing wall connections
- Stairs

Rasto  Art.No.
Basic Kit .......................................................... 126005
In a cardboard box: 1 transparent perforated plate,
4 drill bushings Ø 5, 8, 10, 12 mm, 3 positioning bolts,
1 fastening screw

Mono Kit .......................................................... 126001
In a systainer: 1 transparent perforated plate, 4 drill bushings
Ø 5, 8, 10, 12 mm, 3 wood drill bits Ø 5, 8, 12 mm,
3 positioning bolts, 1 fastening screw, 1 Invis Mx2 spacer,
1 Invis Mx2 insertion bush

Duo Kit .......................................................... 126002
In a systainer: 2 transparent perforated plates, 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

Accessories  Art.No.
Perforated plate for Rasto drill jig ......................... 6160000
Bolt Ø 5 × 40 for Rasto drill jig .......................... 6160001
Drill bush for Rasto drill jig:
Ø 5 mm ........................................................... 6100065
Ø 6 mm ........................................................... 6100056
Ø 8 mm ........................................................... 6100057
Ø 10 mm ........................................................ 6100067
Ø 12 mm ........................................................ 6100058
Depth adjuster for drill bit for Rasto drill jig:
Ø 5 mm ........................................................... 6100059
Ø 6 mm ........................................................... 6100063
Ø 8 mm ........................................................... 6100060
Ø 10 mm ........................................................ 6100064
Ø 12 mm ........................................................ 6100061

Wood drill bit with centring tip for Rasto drill jig:
Ø 5 mm ........................................................... 6100160
Ø 6 mm ........................................................... 6106161
Ø 8 mm ........................................................... 6108060
Ø 10 mm ........................................................ 6110162
Ø 12 mm ........................................................ 6112060
500 mm connection rod, two-part ......................... 6160601
Fastening screw with rubber pads ......................... 6560450
Invis Mx2 spacer for Rasto ............................... 6112331
Invis Mx2 insertion bush for studs 14 mm ............ 6112330
Joining with the Glueing System
An ingenious glueing system for strong joining: economical, ready to use, modularly expandible

How it works

1. Equipment ready
2. Attach required nozzle
3. Apply glue
4. Clean nozzle

Advantages and properties

Dosage

“Simply apply the desired amount”
Optimise glue application: precisely set the ideal quantity.

Exact

“Exactly where I want it”
Improve quality: precisely apply in the correct position, optimise joint strength

Efficient

“As fast as possible”
Save time: apply efficiently with the correct nozzle, minimise cleaning requirement
Glue applicators
LK 3, LK 5, LK 10
Glue applicator for water soluble glues

**Advantages and features of the glue applicators**
- Stainless steel pressure tank guarantees a long service life
- Minimal cleaning required due to the user-friendly design (only the pistol’s ends and nozzles)
- One single pressurisation suffices to expel the entire 10, 5 or 3 kg capacity (even after an extended time period)
- Complete and ready to use with standard equipment
- Modularly expandible

**Advantages and features of the glue pistols**
- Glue quantity steplessly dosable
- Drip free and easy to clean
- Bayonet coupling for speedy nozzle changing
- Easy to service

**Suitable adhesive**
Adhesive type ......................... Physically bonding water-based adhesive, e.g. PVA glue (polyvinyl acetate PVAc)
Viscosity ............................. 6'000 – 16'000 mPas
Unsuitable adhesives ................. Reactive adhesives (PU or PUR, superglue, two-component adhesives, etc.), solvent-based adhesives (epoxy resin, contact adhesives, etc.)

**Technical data**
Size ........................................ LK 3 ............ Ø 210 × 220 mm
........................................ LK 5 ............ Ø 210 × 340 mm
........................................ LK 10 .......... Ø 285 × 410 mm
Capacity ............................... LK 3 ................... 3 kg
........................................ LK 5 ................... 5 kg
........................................ LK 10 ................... 10 kg
Operating pressure .................. 1 – 5 bar
Glue applicators

**LK 3**
Glue applicators incl. hose, glue pistols and pointed nozzle ............................................................ 502003

**LK 5**
Glue applicators incl. hose, glue pistols and pointed nozzle ............................................................ 502005

**LK 10**
Glue applicators incl. hose, glue pistols and pointed nozzle ............................................................ 502010
incl. connection option for a second hose

Glue pistols

**Typ** | **Application** | **Art.No.**
---|---|---
**LK 0** | for manual operation | 512200

**Typ** | **Application** | **Art.No.**
---|---|---
**LK 100** | for pneumatic external operation | 512210

**Kit contains**
Stainless steel pressure tank with:
inner plastic glue container, water container for glue pistol, hose Ø 10 mm, length 4 m, glue pistol
LK 0, pointed nozzle, pump hose, manual

Accessories can be found from page 99 onwards
Glue nozzles

Lamello glue nozzles are anodised, coating them with a hard surface, 3/100 mm thick.

Advantages and properties

- Resistance to wear
- Smooth gliding surface
- Surfaces easy to clean
- Speedy nozzle changes are made possible with the Bayonet coupling for edges

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brush</td>
<td>40 mm</td>
</tr>
<tr>
<td></td>
<td>60 mm</td>
</tr>
<tr>
<td>Adjustable nozzle</td>
<td>10 – 22 mm</td>
</tr>
<tr>
<td></td>
<td>23 – 42 mm</td>
</tr>
<tr>
<td></td>
<td>40 – 62 mm</td>
</tr>
<tr>
<td>Adjustable edge roller</td>
<td>10 – 46 mm</td>
</tr>
<tr>
<td>Pointed nozzle</td>
<td>5/4 × 30 mm</td>
</tr>
<tr>
<td>Round nozzle</td>
<td></td>
</tr>
<tr>
<td>Adjustable guide</td>
<td>0 – 25 mm for pointed / round nozzle</td>
</tr>
</tbody>
</table>

for grooves

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>U nozzle glue outlets in the groove</td>
<td>4 × 5 mm</td>
</tr>
<tr>
<td></td>
<td>4 × 8 mm</td>
</tr>
<tr>
<td></td>
<td>513010</td>
</tr>
<tr>
<td></td>
<td>513011</td>
</tr>
</tbody>
</table>
### for surfaces

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface roller</td>
<td>180 mm with rubber roller</td>
</tr>
<tr>
<td>Replacement roller</td>
<td>width 180 mm</td>
</tr>
<tr>
<td>Gluing brush</td>
<td>50 × 35 mm</td>
</tr>
<tr>
<td>Surface nozzle</td>
<td>70 mm</td>
</tr>
<tr>
<td></td>
<td>120 mm</td>
</tr>
<tr>
<td></td>
<td>180 mm</td>
</tr>
</tbody>
</table>

### for joints

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dowel nozzle</td>
<td>Ø 6 × 20 mm</td>
</tr>
<tr>
<td></td>
<td>Ø 8 × 25 mm</td>
</tr>
<tr>
<td></td>
<td>Ø 8 × 32 mm</td>
</tr>
<tr>
<td></td>
<td>Ø 3/8” × 30 mm</td>
</tr>
<tr>
<td></td>
<td>Ø 10 × 30 mm</td>
</tr>
<tr>
<td></td>
<td>Ø 12 × 40 mm</td>
</tr>
<tr>
<td></td>
<td>Ø 14 × 40 mm</td>
</tr>
<tr>
<td></td>
<td>Ø 15 × 45 mm</td>
</tr>
<tr>
<td></td>
<td>Ø 16 × 45 mm</td>
</tr>
<tr>
<td>Dowel nozzle, double</td>
<td>Ø * mm, A = 32 mm</td>
</tr>
<tr>
<td>Lamello nozzle</td>
<td>Size 0–20</td>
</tr>
<tr>
<td>Tongue nozzle</td>
<td>70 × 30 × 4 mm (plastics)</td>
</tr>
<tr>
<td>Universal tongue</td>
<td>30 × 100 × 4.5 mm</td>
</tr>
<tr>
<td></td>
<td>50 × 110 × 4.5 mm</td>
</tr>
<tr>
<td>Roller nozzle</td>
<td>25 mm Ø 7 mm</td>
</tr>
<tr>
<td></td>
<td>50 mm Ø 7 mm</td>
</tr>
<tr>
<td></td>
<td>50 mm heavy duty Ø 7 mm</td>
</tr>
<tr>
<td></td>
<td>75 mm Ø 9 mm</td>
</tr>
<tr>
<td>Replacement roll</td>
<td>50 mm Ø 7 mm</td>
</tr>
<tr>
<td></td>
<td>75 mm Ø 9 mm</td>
</tr>
<tr>
<td></td>
<td>25 mm Ø 7 mm</td>
</tr>
</tbody>
</table>

* according to your requirements
Repairing with the Minispot System
For the repair of wood defects and damaged areas such as resin pockets, small knots or damaged edges

How it works

1. Cut the defect
2. Apply the glue
3. Insert the Minispot patch
4. Plane the surface

Advantages and properties

System solution

"Where all parts match"
- All necessary components such as machines, templates, cutters and patches are made to fit ideally

Efficient and professional

"Field-proven and suited for the industry"
- Easy and fast positioning due to the markings and the see-through cover on templates and machines
- Efficient tools and standard attachment for dust extraction

Easy and complete

"The ideal solution for every situation"
- Diverse patch sizes for damaged areas available, single patches and patch rods from 85–500 mm
- Suitable system solutions for repairs of surfaces or edges

Fast

"Fast completion of the repair"
- Optimal hold of the patches due to the fine interlocking in the wood surface
- No long waiting time after gluing

Invisible

"Quality which pays off"
- Fine interlocking makes the patch invisible
- Patch takes on the same colour as the surrounding wood or can be stained, oiled or lacquered accordingly
G20 S2

The Minispot grooving machine to cut grooves for patches sizes 2, 4, 22, 20

Advantages and properties
- Precision guidance with finished surface
- Easy positioning due to see-through cover
- No slipping while cutting due to anti-slide coating and fixation spikes
- Controlled plunge due to ergonomic push-down lever
- Suction stub for dust extraction

Technical data
Power ......................................... 1'000 W
Voltage ....................................... 230 V
Speed ......................................... 10'000 min⁻¹
Max. groove depth ...................... 20 mm
Weight ........................................ 4.4 kg

Minispot G20 S2  Art.No.
in carton ................................................................. 111750

Kit contains
Machine (without cutter) with:
set of tools, manual

Accessories  Art.No.
Stop square for edge patches ................................. 121755
ger G20 S2
To cut Minispot-grooves on edges
for all models since 2005

Milling jig for Minispot patching rods .................. 121702
85 / 250 / 500 mm
for G20 / G20 S2 / G2A

Accessories can be found from page 100 onwards
The Minispot grooving machine to cut grooves for patche size 2

**Advantages and properties**
- **Precision guidance with finished surface**
- **Easy positioning** due to see-through cover
- No slipping while cutting due to anti-slide coating
- **Sliding back cover** for closer cuts in the groove
- Suction stub for dust extraction

**Technical data**
- **Power** ......................................... 780 W
- **Version** ....................................... 230 V
- **Speed** ......................................... 10'000 min⁻¹
- **Cutter** ......................................... Carbide tipped Minispot cutter size 2
- **Max. groove depth** ...................... 8 mm
- **Weight** ........................................ 3.1 kg

<table>
<thead>
<tr>
<th>Minispot G2A</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>in carton .................................................</td>
<td>111702</td>
</tr>
</tbody>
</table>

**Kit contains**
Machine with:
carbide cutter, set of tools, manual

**Accessories**
- **Art.No.**
- **Milling jig** for Minispot patching rods .......................... 121702
  85 / 250 / 500 mm
  for **G20 / G20 S2 / G2A**

Accessories can be found from page 100 onwards
Patchmaker 2

The patch-making machine for the manufacture of individual size 2 patches, using your own wood scraps 72 × 25 × 10 mm

**Advantages and properties**

- The patch is made from the same wood piece as the workpiece
- Using your own wood offers a perfect match between workpiece and patch
- The patch is available immediately

**Technical data**

- Power ................... 250 W / 500 W
- Voltage .................. 230 V or 120 V
- Speed .................... 18'000 min⁻¹ / 25'000 min⁻¹
- Tools ..................... Carbide tipped profile cutter 2 teeth, Carbide tipped saw blade 100 × 2.4 × 22 mm
- Weight .................. 9.3 kg

**Patchmaker 2**

<table>
<thead>
<tr>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>in carton ...................................................... 111600</td>
</tr>
</tbody>
</table>

**Kit contains**

Machine with:
- carbide tipped form cutter / saw blade, suction hose with adapter piece, set of tools, manual

Accessories can be found from page 100 onwards
Plano 45 S2

The flush milling machine to flush-mill projecting wood pieces such as resin-pocket patches, patching rods, knots, crossbar patches

Advantages and properties
- **Unique helical milling geometry** produces a shearing cut which guarantees tear-free work
- **Low cutting pressure**, no chipping at the end of the piece
- **Perfect cut even on crossgrained wood**
- Set milling height easily in steps of 0.035 mm, +/- 0.7 mm
- Ergonomically improved and repositioned switches and handles
- **Cost-effective** tool due to long life
- Stainless steel base inserts for minimal wear
- Suction stub for dust extraction

Technical data
- **Power** ................................... 1’000 W
- **Voltage** ................................. 230 V or 120 V
- **Speed** ................................... 10'000 min⁻¹
- **Tool** ...................................... Cutter head with 3 carbide reversing blades 45 × 12 × 1.5 mm
- **Cutting width** ....................... 45 mm
- **Cutting height** ...................... 3 mm
- **Weight** ................................. 4.1 kg

Plano 45 S2  
Art.No. 111851

Kit contains
Machine with:
- set of tools, manual

Accessories can be found from page 102 onwards
### Patches

To patch wood defects and damaged areas

<table>
<thead>
<tr>
<th>Profile</th>
<th>Size</th>
<th>Width mm</th>
<th>Height mm</th>
<th>Length mm</th>
<th>Quantity per box</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>8</td>
<td>13</td>
<td>69</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>20</td>
<td>11</td>
<td>65</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>20 K</td>
<td>20</td>
<td>17</td>
<td>81</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>15</td>
<td>13</td>
<td>69</td>
<td>200</td>
</tr>
</tbody>
</table>

### Wood species

Sizes and wood types not listed here are available on request.

<table>
<thead>
<tr>
<th>Wood species</th>
<th>Size 2 (100 pieces)</th>
<th>Size 2 (500 pieces)</th>
<th>Size 4 (200 pieces)</th>
<th>Size 20 (160 pieces)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spruce-fir</td>
<td>15 0002 K100</td>
<td>15 0002*</td>
<td>15 0004</td>
<td>15 0020*</td>
</tr>
<tr>
<td>Spruce nat.</td>
<td>15 0102 K100</td>
<td>15 0102*</td>
<td>15 0102*</td>
<td>15 0120</td>
</tr>
<tr>
<td>Nordic spruce</td>
<td>15 0202 K100</td>
<td>15 0202*</td>
<td>15 0220*</td>
<td>15 0202*</td>
</tr>
<tr>
<td>Pine</td>
<td>15 0302 K100</td>
<td>15 0302*</td>
<td>15 0320</td>
<td>15 0420*</td>
</tr>
<tr>
<td>Nordic pine</td>
<td>15 0402 K100</td>
<td>15 0402*</td>
<td>15 0404</td>
<td>15 0420*</td>
</tr>
<tr>
<td>Beech</td>
<td>15 0702 K100</td>
<td>15 0702*</td>
<td>15 0720</td>
<td>15 0720</td>
</tr>
<tr>
<td>Larch</td>
<td>15 0802 K100</td>
<td>15 0802*</td>
<td>15 0820*</td>
<td>15 0820*</td>
</tr>
<tr>
<td>Silver fir</td>
<td>15 1102 K100</td>
<td>15 1102*</td>
<td>15 1120</td>
<td>15 1120</td>
</tr>
<tr>
<td>Beech</td>
<td>15 1602 K100</td>
<td>15 1602*</td>
<td>15 1620</td>
<td>15 1620</td>
</tr>
<tr>
<td>Larch Siberian</td>
<td>15 5202 K100</td>
<td>15 5202*</td>
<td>15 5220</td>
<td>15 5220</td>
</tr>
<tr>
<td>Douglas fir / Oregon Pine</td>
<td>15 2902 K100</td>
<td>15 2902</td>
<td>15 2920</td>
<td></td>
</tr>
<tr>
<td>Oak</td>
<td>15 3002 K100*</td>
<td>15 3002*</td>
<td>15 3020</td>
<td>15 3020</td>
</tr>
<tr>
<td>Meranti</td>
<td>15 3202 K100</td>
<td>15 3202*</td>
<td>15 3220</td>
<td>15 3220</td>
</tr>
<tr>
<td>Walnut</td>
<td>15 3502 K100</td>
<td>15 3502</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Jumbo Box

<table>
<thead>
<tr>
<th>Wood species</th>
<th>1500 pieces</th>
<th>500 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spruce-fir</td>
<td>15 0002J*</td>
<td>15 0020J</td>
</tr>
<tr>
<td>Larch</td>
<td>15 0802J</td>
<td>15 0820J</td>
</tr>
<tr>
<td>Pine</td>
<td>15 0302J</td>
<td>15 0320J</td>
</tr>
</tbody>
</table>

### Industrial package

<table>
<thead>
<tr>
<th>Wood species</th>
<th>7000 pieces</th>
<th>200 pieces</th>
<th>2500 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spruce-fir</td>
<td>15 0002I*</td>
<td>15 0004I</td>
<td>15 0020I</td>
</tr>
<tr>
<td>Spruce nat.</td>
<td>15 0102I</td>
<td>15 0102I</td>
<td>15 0202I</td>
</tr>
<tr>
<td>Nordic spruce</td>
<td>15 0202I</td>
<td>15 0202I</td>
<td>15 0220I</td>
</tr>
<tr>
<td>Pine</td>
<td>15 0302I</td>
<td>15 0302I</td>
<td>15 0320I</td>
</tr>
</tbody>
</table>

### Edge patches

<table>
<thead>
<tr>
<th>Wood species</th>
<th>Size 20K</th>
<th>55 pieces</th>
<th>850 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spruce-fir</td>
<td>15 0023</td>
<td>15 0023I</td>
<td></td>
</tr>
<tr>
<td>Larch Siberian</td>
<td>15 5223</td>
<td>15 5223I</td>
<td></td>
</tr>
</tbody>
</table>

1 mixed, close / wide growth rings
2 comb-grained / close growth rings / light-coloured
3 wide growth rings / light-coloured

* on stock / All other products in various sizes are available on request

Delivery for cartons of 100 pcs approx. 1 – 2 weeks / all other cartons approx. 2 – 5 weeks

Articles not in stock cannot be returned.
Patches

Multibox

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>156580</td>
<td>with Minispot patches assorted, 12 x 50 pieces</td>
</tr>
</tbody>
</table>

beech, oak, ash, spruce-fir, pine, hemlock, cherry, larch, mahogany, walnut, sapelli, silver fir

Patching rods

<table>
<thead>
<tr>
<th>Wood species</th>
<th>Size</th>
<th>Length</th>
<th>Quantity</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spruce-fir</td>
<td>85 mm</td>
<td>250 mm</td>
<td>500</td>
<td>15 0021L08</td>
</tr>
<tr>
<td></td>
<td>500 mm</td>
<td>100</td>
<td>15 0021L25</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>15 0021L50</td>
<td></td>
</tr>
<tr>
<td>Spruce-fir</td>
<td>22 mm</td>
<td>250 mm</td>
<td>50</td>
<td>15 0022L08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45</td>
<td>15 0022L25</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>45</td>
<td>15 0022L50</td>
<td></td>
</tr>
<tr>
<td>Pine</td>
<td>2 mm</td>
<td>250 mm</td>
<td>100</td>
<td>15 0301L08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>15 0301L25</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>15 0301L50</td>
<td></td>
</tr>
<tr>
<td>Larch, Siberian</td>
<td>20 mm</td>
<td>250 mm</td>
<td>220</td>
<td>15 5220L08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45</td>
<td>15 5220L25</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>45</td>
<td>15 5220L50</td>
<td></td>
</tr>
</tbody>
</table>

Industrial package

<table>
<thead>
<tr>
<th>Wood species</th>
<th>Size</th>
<th>Length**</th>
<th>Quantity</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spruce-fir</td>
<td>20 mm</td>
<td>250 mm</td>
<td>900</td>
<td>15 0021L08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 mm</td>
<td>630</td>
<td>15 0021L25</td>
</tr>
<tr>
<td>Pine</td>
<td>20 mm</td>
<td>250 mm</td>
<td>900</td>
<td>15 0301L08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 mm</td>
<td>630</td>
<td>15 0301L25</td>
</tr>
<tr>
<td>Larch</td>
<td>20 mm</td>
<td>250 mm</td>
<td>900</td>
<td>15 0820L08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 mm</td>
<td>630</td>
<td>15 0820L25</td>
</tr>
</tbody>
</table>

** Nominal length = Traverse path

Knot patches and Crossbar pins

Knot patches

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 7010</td>
<td>Ø 10 mm</td>
</tr>
<tr>
<td>15 7015</td>
<td>Ø 15 mm</td>
</tr>
<tr>
<td>15 7020</td>
<td>Ø 20 mm</td>
</tr>
<tr>
<td>15 7025</td>
<td>Ø 25 mm</td>
</tr>
<tr>
<td>15 7030</td>
<td>Ø 30 mm</td>
</tr>
<tr>
<td>15 7035</td>
<td>Ø 35 mm</td>
</tr>
</tbody>
</table>

Spruce-fir
Pine
Larch

Knot patches assorted

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 71050</td>
<td>Pieces per package: Ø 10 mm 100 pieces, Ø 15 mm 100 pieces, Ø 20 mm 150 pieces, Ø 25 mm 100 pieces, Ø 30 mm 50 pieces</td>
</tr>
</tbody>
</table>

Crossbar pins

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 7010Q</td>
<td>Ø 10 mm</td>
</tr>
<tr>
<td>15 7015Q</td>
<td>Ø 15 mm</td>
</tr>
<tr>
<td>15 7020Q</td>
<td>Ø 20 mm</td>
</tr>
<tr>
<td>15 7025Q</td>
<td>Ø 25 mm</td>
</tr>
<tr>
<td>15 7030Q</td>
<td>Ø 30 mm</td>
</tr>
<tr>
<td>15 7035Q</td>
<td>Ø 35 mm</td>
</tr>
</tbody>
</table>

Spruce-fir
Pine
Larch

* on stock / All other products in various sizes are available on request, approx. 1 – 3 weeks
Renovating Windows

“We can no longer imagine window removal without the Tanga Delta S2!”

Sven Hennings, Head of Assembly at rekord-fenster+türen in Dägeling, Germany
Window replacement with the Tanga Delta
Clean and efficient window replacement
For good customer care

How it works

1. Unpack the machines
2. Cut the window out
3. Pull the window out
4. Install the new window

Advantages and properties

High working speed
- Powerful 1'600 W motor with ideal weight-power ratio
- Cutting depth up to 68 mm

Cuts into the corner
- Deep cuts into the corner with the Tanga Delta S2

High quality
- Clean cuts into wood, stone and tiles without damaging surrounding structures
- Ideal air flow channeling minimises dust emissions

Only one cut
- Cutting depth up to 68 mm

Flat, light construction
- Only 5.4 kg but 1'600 W power!

Low dust emission
- Smoothly running base plate is instantly retracted by the strong spring

Safe
Tanga Delta
The ideal machine for window replacement.

**Tanga Delta S2**
- Cut into the stone wall
- Base plate for cuts into corner
- 45° cut into the corner
- Cut-out for the weatherboard
- Shortening doors
- Tanga with rabbet stop

**Tanga Delta H**
- Cut into the timber frame
- Cut into the tiled wall
- Cut groove for door seal with the rabbet stop

**Advantages and properties**
- Effortless low friction guide for longevity despite daily use in stone and plaster
- Base plate with snap-in locker for a quick change of tools

**Tanga Delta S2 – Cut into the stone wall**
- Diamond blade for cutting plaster, stone and tiles
- 2 base plates for cutting straight-line and into the corner

**Tanga Delta H – cut into the timber frame**
- Saw blade for wood frames
- 1 base plate for cutting straight-line

**Applications with Tanga Delta S2**
- Clean replacement of old windows
- Cut the wall for larger windows
- Cut-outs for weatherboards
- Cuts for wall breakthroughs
- Dustless cuts into plasterboards
- Straight cuts into tiled walls

**Technical data**
- **Power** .................................. 1'600 W with electronic overload protection
- **Voltage** ................................. 230 V
- **Speed** .................................. 7’700 min⁻¹
- **Cutting height** ...................... 6 mm (groove width)
- **Weight** ................................. 5.4 kg

**Tanga Delta S2**
- Diamond blade ..................... Ø 180 × 2.6 × 22 mm
- Cutting depth ....................... adjustable 0 – 58 mm
  (optional 0 – 68 mm with 200 mm saw blade)

**Tanga Delta H**
- Carbide saw blade ................ Ø 200 × 2.4 × 22 mm
- Cutting depth ....................... adjustable 0 – 68 mm

**in wooden case**
- Tanga Delta S2 with diamond blade ................. 111553
- Tanga Delta H with saw blade for wood ....................... 111560

**Kit contains**
- 4 m suction hose with suction stub, set of tools, safety glasses,
- **Tanga Delta S2**: Diamond blade
- **Tanga Delta H**: Carbide saw blade

Accessories can be found from page 101 onwards
Variocut
The expansion gap and parquet cutter for gap width 4–8 mm

Advantages and properties
– For minimal gap width from 4–8 mm
– Fast height adjustment 4–8 mm in tenths of a millimeter with the adjusting knob
– Plastic front cover for easy gliding on the ceiling or on the floor
– Can also be used for wood repairs with a Minispot cutter

Application
– Expansion gaps on ceilings
– Various cuts with and cross grain
– Expansion gaps on floor boards
– Wood repairing (with Minispot cutter Art.No. 132217)

Technical data
Power ......................................... 1'050 W
Voltage ....................................... 230 V
Speed ......................................... 10'000 min⁻¹
Carbide tipped cutter .................. Z20, Ø 100 × 2.4 × 22 mm
Gap width................................... 4–8 mm (1/10 per step), or more by use of a spacer
Cutting depth ............................. adjustable 0–20 mm
Weight ........................................ 3.5 kg

Variocut ........................................ Art.No. 111450

Kit contains
Machine with:
saw blade, set of tools, manual

Accessories can be found from page 101 onwards
Edge processing with the Profila
The edge profiling machine with a stable surface for various jobs

Advantages and properties

Stepless fine adjustment

Simple rotation of the nut ensures the base plate remains stable and correctly angled.

Stable working

Stability when working protruding edges is enabled by vertical positioning of the machine using the gap in the baseplate.

All shapes, any job

Whether curved inwards or outwards, if straight or rounded. Whether the top layer or the edging protrudes.

All standard cutters

No special cutters required. Use your existing cutters. The machines are shipped with collet chucks Ø 6 mm and 8 mm.

Variable tool opening

25 mm or 34 mm depending on the cutter size

Large base plate

The large base plate Ø 100 with a sliding coating on the surface allows for stable running on the work piece.
Profila

The edge profiling machine with electric or pneumatic motor for flush-milling, edge-milling and profiling of edges even on curved work pieces

**Advantages and properties**

- Easy and stepless precision adjustment of the cutting depth by simply turning the base plate
- Ideal for all standard cutters
- Small, variable tool opening for 25 and 34 mm
- Special coating on the base plate avoids leaving marks on the workpiece
- Large base plate
- High speed for a clean cut

**Profila E plus, Profila Pro plus**

- The opening in the base plate enables milling of protruding edges through application on the surface instead of the edge. This allows for stable guiding of the machine and milling of curved work pieces.
- Ideal for cutting protruding PVC edges

---

**Technical data**

<table>
<thead>
<tr>
<th></th>
<th>Profila E plus</th>
<th>Profila Pro plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>740 W</td>
<td>400 W</td>
</tr>
<tr>
<td>Voltage</td>
<td>230 V</td>
<td></td>
</tr>
<tr>
<td>Speed</td>
<td>25'000 min⁻¹</td>
<td>22'000 min⁻¹</td>
</tr>
<tr>
<td>Base plate</td>
<td>Ø 100 mm with tool opening 34 mm, reducer 25 mm</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>1.8 kg</td>
<td>1 kg</td>
</tr>
<tr>
<td>Air consumption</td>
<td>180 l/min</td>
<td></td>
</tr>
<tr>
<td>Operating pressure</td>
<td>max. 6.5 bar</td>
<td></td>
</tr>
<tr>
<td>Air consumption</td>
<td>¼&quot; NPT</td>
<td></td>
</tr>
</tbody>
</table>

**Kit contains**

Machine with:
- carbide tipped cutter Z2, R 2 mm, collet chucks 6 mm and 8 mm, set of tools, manual, dust cover

Accessories can be found from page 102 onwards
Cantex Ergo

The high-precision planer for top quality flush-milling of solid wood edges

Advantages and properties
- **Round front on the base plate** for more manoeuvrability, ideal for planing all-sided edges on panels
- **New: Scale on the cutter** for the exact setting of the parallel guide
- Unique helical milling geometry produces a **shearing cut which guarantees tear-free work**
- Low cutting pressure, no chipping at the end of the piece
- **Perfect cut even on cross-grained wood**
  - Set milling height easily in steps of 0.035 mm, +/- 0.7 mm
  - Sliding spacer prevents tipping of the machine when working in the surface

Technical data
- Power ......................... 1'000 W
- Voltage ....................... 230 V or 120 V
- Speed ......................... 10'000 min⁻¹
- Tool ............................ Cutter head with 3 carbide reversing blades, 45 × 12 × 1.5 mm
- Milling height ............... adjustable in steps 0.035 mm, ± 0.7 mm
- Cutting width ............... 45 mm
- Cutting height .............. 3 mm
- Weight ....................... 4.3 kg

Cantex Ergo  Art.No.
in systainer.................................................... 111857

Kit contains
- Machine with:
  set of tools, manual

Accessories  Art.No.
Parallel guide stop for Cantex Ergo / S2 .................. 121290
For efficient flush-milling of protruding wood edges on materials with finished surfaces (melamine, veneer)
Prevents cutting into the finished surface!

Accessories can be found from page 102 onwards
Accessories / Spare Parts
Accessories / Clamex P

**P-System drill jig**
- P-System drill jig incl. drill, from 22.5° for all Clamex P fittings (P-10, P-14, P Medius 14/10)...
- Angle for drill jig...
- Quick-change biscuit joiner P-10...
- Quick-change biscuit joiner P-14...

**Art.No.**
- 125344
- 255250
- 255251
- 255252

**P-System drill jig long**
- Drill jig for thick work pieces 100 mm, (P-14, P Medius 14/10)...

**Art.No.**
- 125345

**Drill**
- Spiral drill Ø 6 mm with centering point, for standard drill jig...
- Spiral drill Ø 6 mm with centering point, for long drill jig...
- Depth adjuster for drill, 6 mm diameter...

**Art.No.**
- 131506
- 131508
- 255243

**Clamex P assembly tool**
- for all angles, fast and flexible,
- Hex 4 × 30 mm, length 290 mm...

**Art.No.**
- 251993

**Allen key**
- 4 mm, 75 × 55 mm...
- 4 mm, 120 × 50 mm...

**Art.No.**
- 271945
- 271945A

**Systainer T-Loc Size II empty**
- incl. 2 separators...

**Art.No.**
- 331565V

**Cover caps, 100 pieces**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>90°</td>
<td>335280</td>
<td>335285</td>
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<tr>
<td>90°</td>
<td>335281</td>
<td>335286</td>
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<td>335283</td>
<td>335288</td>
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<tr>
<td>45°</td>
<td>335380</td>
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<tr>
<td>45°</td>
<td>335381</td>
<td></td>
</tr>
<tr>
<td>45°</td>
<td>335382</td>
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<tr>
<td>45°</td>
<td>335383</td>
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<tr>
<td>45°</td>
<td>335384</td>
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<td>45°</td>
<td>335385</td>
<td></td>
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<tr>
<td>45°</td>
<td>335386</td>
<td></td>
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<tr>
<td>45°</td>
<td>335387</td>
<td></td>
</tr>
<tr>
<td>45°</td>
<td>335388</td>
<td></td>
</tr>
</tbody>
</table>
**Accessories / P-System**

**Divario P-18 Installation tool**
Division P-18 installation tool for fixing the Divario in the workpiece

Art.No. 125500

**Divario P-18 Marking jig in metal with marking points**
Marking jig incl. drill with centering point and rotating depth collar for the precise drilling of Divario drill holes by hand

Art.No. 125510

**Divario P-18 Marking jig in plastic, to mark with a pencil**
Marking jig to mark the Divario holes with a pencil

Art.No. 125511

**Tenso P-14 Preload tool**
Tool to pre-load the Tenso P-14

Art.No. 145430

**P-System groove cutter, Ø 100.4 x 7 x 22 mm**
Z3, diamond dipped for Zeta (P-System)

Art.No. 132140

**P-System groove cutter, Ø 100.9 x 7 x 22 mm**
Z3, carbide tipped for Zeta (P-System)

Art.No. 132141

**Stop square for Zeta P2, Top 21, Classic X**
For stabilising the biscuit joiner in the vertical position, ideal for obtuse mitre joints

Art.No. 251044

**Spacer for biscuit joiner**
5 mm, Aluminium for 18 mm panels for Top 21 / Zeta / Classic

Art.No. 253027

2 mm, Plastic for 16 mm panels for Top 21 / Zeta / Classic

Art.No. 253023

4 mm, Plastic for mitres for Top 21 / Zeta / Classic

Art.No. 253026
## Accessories / Lamello-System

### Carbide tipped groove cutter, Ø 100 × 4 × 22 mm
- **Art.No.**: 132000
- **Z2 + V4 scoring teeth, 4 screw holes, hub** for Zeta, Top 20, Top 21, Classic...
- **Z6 alternating teeth, without hub, with spacer** for Classic...
- **Countersunk bolts, M4 × 8, Torx**

### Carbide tipped groove cutter, Ø 78 × 3 × 22 mm
- **Art.No.**: 132009
- **Z4, 4 Screw holes, with hub for biscuit H9** for Zeta, Top 20, Top 21, Classic...

### Carbide tipped groove cutter with reversible blades, Ø 100 × 4 × 22 mm
- **Art.No.**: 132001
- **Z2 + V2, 4 screw holes with hub** for Zeta, Top 20, Top 21, Classic...
- **Z4 + V4, 4 screw holes without hub, with spacer** for Classic...
- **Set of 4 pieces**
- **Countersunk bolts**
- **Allen key, 4 mm long**
- **Set of 10 pieces main teeth**
- **Set of 10 pieces scoring teeth**
- **Replacement-Set, 4 scoring teeth + 4 main teeth**
- **Torx key**

### Carbide tipped groove cutter with reversible blades, Ø 100 × 8 × 22 mm (Clamex S connector)
- **Art.No.**: 132108
- **Z4 + V4, 4 screw holes** for Top 20, Top 21, Classic...
- **Set of 10 pieces scoring teeth**
- **Set of 10 pieces main teeth**
- **Replacement-Set, 4 scoring teeth + 4 main teeth**

### Slide shoe, to protect the wall and the machine
- **Art.No.**: 251057
- **from year of manufacture 1999** for Experta, Classic C2, C3...
- **Top 20, S, S2, S3, S4, Top 21, Zeta**

### Carbide tipped saw blades for expansion gaps, Ø 100 × 2.4 × 22 mm
- **Art.No.**: 132350
- **Z20, 4 screw holes, 2 spacers** for Zeta, Top 20, Top 21, Classic...

### Accessories for saw blades
- **Art.No.**: 322510
- **Spacer, 40 × 20 × 1mm with screw holes** for Zeta, Top 20, Top 21, Classic...
- **Flange M8** for Zeta, Classic...

### Clamex S drill jig 30° – 150°
- **Art.No.**: 125240
- **Drill jig (60 mm) incl. drill for Clamex S**

### Clamex S installation set
- **Art.No.**: 125250
- **Drill jig for 30°–150° incl. drill and carbide tipped groove cutter with reversible blades 8 mm (132108)** for Lamello biscuit joiner

---

**Applications of saw blades for cutting expansions gap**

<table>
<thead>
<tr>
<th>Classic C2, C3, 3S Pa, Zeta</th>
<th>Top 20, S2, S3, S4, Top 21</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 mm</td>
<td>+2</td>
</tr>
<tr>
<td>9 mm</td>
<td>±0</td>
</tr>
<tr>
<td>10 mm</td>
<td>+1</td>
</tr>
<tr>
<td>11 mm</td>
<td>+2</td>
</tr>
<tr>
<td>12 mm</td>
<td>+2</td>
</tr>
</tbody>
</table>

---
### Accessories / Glueing System

#### LK 3, LK 5, LK 10

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>533205</td>
<td>LK Service carriage (for LK 10, LK 5 und LK 3)</td>
</tr>
</tbody>
</table>

- adjustable suspension rod
- incl. service boiler with grip, cover and grid basket to submerge nozzles in water when not in use, volume 3 l (533255)
- Dimensions 410 x 410 x 850 mm

#### LK Rolling base with handle

For LK 5 and LK 3:

- On 4 wheels with pushing handle
- Complete with water container and hook for suspension of hose
- Dimensions 254 x 254 x 820 mm

#### LK Rolling base

Allows pulling behind by hose of LK 5 and LK 3:

- Lowered platform for stability of the glue applicator
- Dimensions 254 x 254 mm

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>533204</td>
<td>LK Rolling base with handle (for LK 5 and LK 3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>533201</td>
<td>LK Rolling base (for LK 5 and LK 3)</td>
</tr>
</tbody>
</table>

#### Accessories / Spare Parts

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>533250</td>
<td>Connector 3/4&quot; for water tap</td>
</tr>
<tr>
<td>533251</td>
<td>US for water tap</td>
</tr>
<tr>
<td>533252</td>
<td>Cleaning brush Ø 40 x 100 mm length 340 mm round Ø 6 mm length 340 mm</td>
</tr>
<tr>
<td>533253</td>
<td>Service container Volume 3 litres with mesh basket</td>
</tr>
<tr>
<td>533255</td>
<td>Water reservoir complete Inside dimensions Ø 60 x 90 mm</td>
</tr>
<tr>
<td>533260</td>
<td>Inside dimensions 134 x 60 x 60 mm</td>
</tr>
<tr>
<td>533261</td>
<td>Distributor for 2 – 3 additional hoses</td>
</tr>
<tr>
<td>533230</td>
<td>Connector with external thread M8 with 2 screws M4 x 10 for round nozzle</td>
</tr>
<tr>
<td>583208</td>
<td>Hose mounted Ø 10 x 4000 mm Ø 13 x 4000 mm</td>
</tr>
<tr>
<td>533215</td>
<td>Hose Ø 10 mm Ø 13 mm</td>
</tr>
<tr>
<td>533216</td>
<td>Hose fitting set Ø 10 mm Ø 13 mm</td>
</tr>
<tr>
<td>533224</td>
<td>Empty glue container incl. cover with 1 hole 3 kg</td>
</tr>
<tr>
<td>533225</td>
<td>incl. cover with 1 hole 5 kg</td>
</tr>
<tr>
<td>533226</td>
<td>incl. cover with 2 holes 10 kg</td>
</tr>
<tr>
<td>533205</td>
<td>Lid for glue container without hole 5 kg</td>
</tr>
<tr>
<td>533224</td>
<td>Lid for glue container without hole 10 kg</td>
</tr>
<tr>
<td>552822</td>
<td>Bracket with 2 screws for roller nozzle</td>
</tr>
<tr>
<td>552829</td>
<td>Pump hose</td>
</tr>
<tr>
<td>552829</td>
<td>Dosicol / Minicol / Servicol</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>287012</td>
<td>Glue bottle with metering pump for Dosicol</td>
</tr>
<tr>
<td>287013</td>
<td>Metering pump complete for Dosicol</td>
</tr>
<tr>
<td>337001</td>
<td>Cap for glue bottle for Dosicol</td>
</tr>
<tr>
<td>287010</td>
<td>Base for Dosicol</td>
</tr>
<tr>
<td>337040</td>
<td>Water container for Dosicol</td>
</tr>
<tr>
<td>533232</td>
<td>Adapter for nozzels for Dosicol</td>
</tr>
<tr>
<td>335510</td>
<td>Glue bottle Minicol, Servicol for Minicol / Servicol</td>
</tr>
<tr>
<td>285515</td>
<td>Base, solid wood for Minicol for Minicol</td>
</tr>
<tr>
<td>335513</td>
<td>Base, plastic for Servicol for Minicol</td>
</tr>
</tbody>
</table>

#### Dosicol / Minicol / Servicol

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>287012</td>
<td>Glue bottle with metering pump for Dosicol</td>
</tr>
<tr>
<td>287013</td>
<td>Metering pump complete for Dosicol</td>
</tr>
<tr>
<td>337001</td>
<td>Cap for glue bottle for Dosicol</td>
</tr>
<tr>
<td>287010</td>
<td>Base for Dosicol</td>
</tr>
<tr>
<td>337040</td>
<td>Water container for Dosicol</td>
</tr>
<tr>
<td>533232</td>
<td>Adapter for nozzels for Dosicol</td>
</tr>
<tr>
<td>335510</td>
<td>Glue bottle Minicol, Servicol for Minicol / Servicol</td>
</tr>
<tr>
<td>285515</td>
<td>Base, solid wood for Minicol for Minicol</td>
</tr>
<tr>
<td>335513</td>
<td>Base, plastic for Servicol for Minicol</td>
</tr>
</tbody>
</table>
### Carbide tipped cutters for Lamello wood repair machines

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>132217</td>
<td>100 × 8 × 22 mm, Z4, 4 screw holes for Minispot patches. (fits all Lamello biscuit joiners)</td>
</tr>
<tr>
<td>132209</td>
<td>100 × 15 × 22 mm, Z4 for Minispot patches.</td>
</tr>
<tr>
<td>132208</td>
<td>100 × 15 × 22 mm, Z4 for Minispot patches.</td>
</tr>
<tr>
<td>132222</td>
<td>100 × 20 × 22 mm, Z4 for Minispot patches. (our recommendation)</td>
</tr>
<tr>
<td>132220</td>
<td>100 × 20 × 22 mm, Z2 with profile blades for Patchmaker 20.</td>
</tr>
<tr>
<td>132221</td>
<td>Profile blades for Art.No. 132220.</td>
</tr>
</tbody>
</table>

### Carbide tipped saw blade Z20

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>132301</td>
<td>Ø 100 × 2.4 × 22 mm for Patchmaker 2, Patchmaker 20, Variocut.</td>
</tr>
<tr>
<td>132350</td>
<td>Ø 100 × 2.4 × 22 mm with 2 spacers for Patchmaker 2, Patchmaker 20, Variocut.</td>
</tr>
</tbody>
</table>

### Carbide tipped profile cutter Z2

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>131600</td>
<td>Shaft-Ø 8 mm for Patchmaker 2.</td>
</tr>
</tbody>
</table>

### Carbide tipped profile cutter Z2+2

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>131620</td>
<td>Ø 80 × 29 × 20 mm for Patchmaker 20.</td>
</tr>
<tr>
<td>131621</td>
<td>for 1 × Size 20.</td>
</tr>
<tr>
<td></td>
<td>for 2 × Size 2.</td>
</tr>
</tbody>
</table>
## Accessories / Window replacement

### Carbide tipped saw blades

**Ø 200 × 2.4 × 22 mm (cutting depth 68 mm)** for Tanga Delta  
Art.No. 132322  
Z12, 4 screw holes  
Z24, 4 screw holes  
Z24, 4 NL, higher resistance against screws, high cutting performance  
Z24, 4 NL, (only suited for cutting into the wood without moving the machine)  
Screw M4 × 8 for saw blades  
Art.No. 352408F

**Ø 200 × 2.2 × 22 mm (cutting depth 68 mm)** for Tanga Delta  
Art.No. Z32, for aluminium windows  
Art.No. 132324

**Ø 180 × 2.4 × 22 mm (cutting depth 58 mm)** for Tanga Swiss, 1811, Dia  
Art.No. Z12, 6 screw holes  
Z24, 6 screw holes  
Z24 special, 6 screw holes, only for cutting into the wood without moving the machine  
Art.No. 132318  
Art.No. 132319

**Ø 150 × 2.4 × 22 mm (cutting depth 45 mm)** for Tanga 150, 1511  
Art.No. Z12, 6 screw holes  
Z24, 6 screw holes  
Z26 special, 6 screw holes, only for cutting into the wood without moving the machine  
Art.No. 132315  
Art.No. 132316  
Art.No. 132314

### Diamond blades

**Ø 200 × 2.6 × 22 mm (cutting depth 68 mm)** for Tanga Delta  
4 screw holes, for a clean cut into tiles and plaster  
4 screw holes, segmented for soft materials  
4 NL, for PVC windows with steel core  
Art.No. 132517  
Art.No. 132522  
Art.No. 132523

**Ø 180 × 2.6 × 22 mm (cutting depth 58 mm)**  
4 screw holes  
for Tanga Delta  
for Tanga Dia  
Art.No. 132519  
Art.No. 132518

### Attention:

Please use original Lamello blades only for perfect cutting quality and to prevent damage to the machine.

### Accessories

**Rabbet stop for Tanga**  
for Tanga 180, 1811 S, Swiss  
for Tanga Delta H, S2  
Art.No. 251525  
Art.No. 121556

**Base plate for corners**  
for Tanga Delta H, S2  
Art.No. 321548  
Art.No. 251554  
Art.No. 352509

**2 rolls for base plate**  
for Tanga Delta H, S2  
Art.No. 321554  
Art.No. 322502

**M5 × 8 screws for sliding guide**  
for Tanga Delta H, S2  
Art.No. 121556  
Art.No. 321548

### Carbide tipped saw blades

**Ø 120 × 2.4 × 22 mm** for 3S Pa  
Art.No. 132312  
Z20, with 2 spacers  
Z20, with flange M8  
Art.No. 132382

**Ø 100 × 2.4 × 22 mm**  
Art.No. 132350  
Z20, with 2 spacers  
Z20, without spacer rings  
for Variocut, Patchmaker 2  
Art.No. 132301

### Accessories for saw blades

**Flange M8, with screws (M4 × 6, Art.No. 352406)**  
for 3S Pa  
Art.No. 252502  
Art.No. 325201  
Art.No. 322502

**Spacer**  
Art.No. 322502

**40 × 22 × 1 mm**  
for 3S Pa  
Art.No. 322501

**40 × 22 × 0.5 mm**  
for 3S Pa  
Art.No. 322502
## Accessories / Edge processing

<table>
<thead>
<tr>
<th>Accessories / Spare Parts</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carbide tipped edge cutters</strong></td>
<td></td>
</tr>
<tr>
<td>Radius 2 mm, shaft-Ø 8 mm... for Profila E, P...</td>
<td>131987</td>
</tr>
<tr>
<td><strong>Base plates</strong></td>
<td></td>
</tr>
<tr>
<td>with gap, Ø 100 mm... for Profila E</td>
<td>121982</td>
</tr>
<tr>
<td>for Profila, Pro</td>
<td>121987</td>
</tr>
<tr>
<td>without gap, Ø 100 mm... for Profila E</td>
<td>121983</td>
</tr>
<tr>
<td>for Profila P2, Pro plus...</td>
<td>121984</td>
</tr>
<tr>
<td><strong>Collet chucks</strong></td>
<td></td>
</tr>
<tr>
<td>6 mm... for Profila E (L 48, L 50, 230 V)...</td>
<td>251960</td>
</tr>
<tr>
<td>8 mm... for Profila E (L 48, L 50, 230 V)...</td>
<td>251962</td>
</tr>
<tr>
<td>1/4”... for Profila E (L 48, L 50, 230 V)...</td>
<td>251961</td>
</tr>
<tr>
<td>6 mm... for Profila E (L 51, 120 V)...</td>
<td>251963</td>
</tr>
<tr>
<td>8 mm... for Profila E (L 51, 120 V)...</td>
<td>251978</td>
</tr>
<tr>
<td>1/4”... for Profila E (L 51, 120 V)...</td>
<td>251964</td>
</tr>
<tr>
<td>6 mm... for Profila P2, Pro, Pro plus...</td>
<td>251966</td>
</tr>
<tr>
<td>8 mm... for Profila P2, Pro, Pro plus...</td>
<td>251988</td>
</tr>
<tr>
<td>1/4”... for Profila P2, Pro, Pro plus...</td>
<td>251967</td>
</tr>
<tr>
<td><strong>Dust cover</strong></td>
<td></td>
</tr>
<tr>
<td>Individually adjustable position, with stopper for the bearing... for Profila E, Pro, P2...</td>
<td>121900</td>
</tr>
<tr>
<td><strong>Carbide tipped reversible blades (3 pieces)</strong></td>
<td></td>
</tr>
<tr>
<td>45 x 12 x 1.5 mm, angle 55°... for Cantex Ergo, Plano 45...</td>
<td>131822</td>
</tr>
<tr>
<td>(from 2006)</td>
<td></td>
</tr>
<tr>
<td>45 x 12 x 1.5 mm, angle 45°... for Cantex, Plano 45...</td>
<td>131823</td>
</tr>
<tr>
<td>(until 2006)</td>
<td></td>
</tr>
<tr>
<td><strong>Carbide tipped profile cutter</strong></td>
<td></td>
</tr>
<tr>
<td>Ø 30 mm... for Lamina, 90° and 35°...</td>
<td>131980</td>
</tr>
<tr>
<td>for Lamina, 90° and 22°...</td>
<td></td>
</tr>
</tbody>
</table>
### Suction accessories

#### Suction set complete

<table>
<thead>
<tr>
<th>Suction set 23 for biscuit joiner, Variocut, 35, G2A</th>
<th>Art.No. 121810</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner diameter 23 mm</td>
<td></td>
</tr>
<tr>
<td>3 m suction hose black</td>
<td></td>
</tr>
<tr>
<td>Conical connecting piece for hose Ø 30–42 mm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suction set 30 for Tanga Delta, G20</th>
<th>Art.No. 121820</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inner diameter 30 mm</td>
<td></td>
</tr>
<tr>
<td>4 m Suction hose with adapter 58 mm</td>
<td></td>
</tr>
</tbody>
</table>

#### Parts

<table>
<thead>
<tr>
<th>Suction hose black int. Ø 23 mm per Meter</th>
<th>Art.No. 331808</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Connecting piece conical for suction hose int. Ø 23 mm</th>
<th>Art.No. 331802</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Suction hose adapter for suction set 23 and 30 54 and 58 mm</th>
<th>Art.No. 331805</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Suction stub 23 mm for biscuit joiner, Perfora, Trimming unit Patchmaker</th>
<th>Art.No. 331006</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Deflector stub for biscuit joiner</th>
<th>Art.No. 331005</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Extractor stub 36 mm for biscuit joiner (Festool compatible)</th>
<th>Art.No. 331007</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Dust bag for biscuit joiner</th>
<th>Art.No. 337530</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Dust bag and extractor stub Ø 36 mm for biscuit joiner</th>
<th>Art.No. 257530</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Dust bags for Art.No. 283035 10 pieces</th>
<th>Art.No. 283030</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Suction stub LMA-74 for 35, G2A, G2, Junior10, Dynamic, Directa, Top fits suction hose int. Ø 23 mm</th>
<th>Art.No. 281804</th>
</tr>
</thead>
</table>
### Spare Parts

|------------------------|----------------|-------------|--------------------------|------------------------|-------------|-----------|----------------------|-----------|-----------|---------------|-------------------------|-----------|--------------|--------------|----------------|----------------|---|--------|----------------|-------------------|-------------|-----------|
## P-System

www.lamello.com

### P-System cutter

<table>
<thead>
<tr>
<th>Ø 100.4 x 7 x 22 mm, Z3</th>
<th>Art.No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diamond tipped</td>
<td>132140</td>
</tr>
<tr>
<td>Carbide tipped</td>
<td>132141</td>
</tr>
</tbody>
</table>

### Self-clamping fitting

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>80 pairs</th>
<th>300 pairs</th>
<th>1000 pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisco P-14</td>
<td>145344</td>
<td>145346</td>
<td>145356</td>
</tr>
</tbody>
</table>

### Self-clamping, invisible fitting for slide insertion

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>80 pairs</th>
<th>300 pairs</th>
<th>1000 pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenso P-14</td>
<td>145415</td>
<td>145425</td>
<td>145435</td>
</tr>
</tbody>
</table>

### Aligning element suitable for Clamex P-14 + Tenso P-14 and Clamex P-10

<table>
<thead>
<tr>
<th>Size</th>
<th>P-14</th>
<th>P-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>64 x 27 x 9.7 mm</td>
<td>~ 800 N</td>
<td>~ 1000 N</td>
</tr>
<tr>
<td>64 x 13.5 x 9.7 mm</td>
<td>~ 700 N</td>
<td>~ 900 N</td>
</tr>
</tbody>
</table>

### Tenso P-14 with preload function

<table>
<thead>
<tr>
<th>Size</th>
<th>Bisco P-14</th>
<th>65 x 27 x 7 mm</th>
<th>Bisco P-10</th>
<th>52 x 19 x 7 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>66 x 27 x 9.7 mm</td>
<td>~ 150 N</td>
<td>~ 200 N</td>
<td>~ 250 N</td>
<td>~ 300 N</td>
</tr>
</tbody>
</table>

### Bisco P-14: Ideal for dry assembly before gluing with Tenso P-14

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>80 pieces</th>
<th>300 pieces</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisco P-14</td>
<td>145301</td>
<td>145302</td>
<td>145303</td>
<td>145304</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>80 pieces</th>
<th>300 pieces</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisco P-10</td>
<td>145370</td>
<td>145371</td>
<td>145372</td>
<td>145373</td>
</tr>
</tbody>
</table>

### Detachable connecting fitting

<table>
<thead>
<tr>
<th>Size</th>
<th>64 x 27 x 9.7 mm</th>
<th>64 x 13.5 x 9.7 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bech:</td>
<td>~ 800 N</td>
<td>~ 1000 N</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>~ 600 N</td>
<td>~ 900 N</td>
</tr>
</tbody>
</table>

### Detachable connecting fitting for centre panels

<table>
<thead>
<tr>
<th>Size</th>
<th>P-14</th>
<th>P-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>52 x 19 x 9.7 mm</td>
<td>~ 600 N</td>
<td>~ 900 N</td>
</tr>
<tr>
<td>52 x 7.5 x 9.7 mm</td>
<td>~ 700 N</td>
<td>~ 900 N</td>
</tr>
</tbody>
</table>

### Self-clamping fitting as gluing aid

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>80 pairs</th>
<th>300 pairs</th>
<th>1000 pairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenso P-14</td>
<td>145415</td>
<td>145425</td>
<td>145435</td>
<td></td>
</tr>
</tbody>
</table>

### Preload clip

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>80 pieces</th>
<th>300 pieces</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>145301</td>
<td>145302</td>
<td>145303</td>
<td>145304</td>
<td>145305</td>
</tr>
</tbody>
</table>

### Beam connections

<table>
<thead>
<tr>
<th>Size</th>
<th>Art.No.</th>
<th>80 pieces</th>
<th>300 pieces</th>
<th>1000 pieces</th>
</tr>
</thead>
<tbody>
<tr>
<td>145370</td>
<td>145371</td>
<td>145372</td>
<td>145373</td>
<td>145374</td>
</tr>
</tbody>
</table>

### Centre panel

<table>
<thead>
<tr>
<th>Size</th>
<th>64 x 27 x 9.7 mm</th>
<th>64 x 13.5 x 9.7 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bech:</td>
<td>~ 800 N</td>
<td>~ 1000 N</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>~ 600 N</td>
<td>~ 900 N</td>
</tr>
</tbody>
</table>

### Articulated panel connections

<table>
<thead>
<tr>
<th>Size</th>
<th>66 x 27 x 9.7 mm</th>
<th>52 x 19 x 9.7 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bech:</td>
<td>~ 150 N</td>
<td>~ 200 N</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>~ 700 N</td>
<td>~ 900 N</td>
</tr>
</tbody>
</table>

### Centre panel connections

<table>
<thead>
<tr>
<th>Size</th>
<th>66 x 27 x 9.7 mm</th>
<th>52 x 19 x 9.7 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bech:</td>
<td>~ 150 N</td>
<td>~ 200 N</td>
</tr>
<tr>
<td>Tensile strength</td>
<td>~ 700 N</td>
<td>~ 900 N</td>
</tr>
</tbody>
</table>

### Self-clamping fitting for slide insertion

<table>
<thead>
<tr>
<th>Size</th>
<th>65 x 16 x 9.7 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile strength</td>
<td>~ 600 N</td>
</tr>
</tbody>
</table>

### Bisco P-14 Art.No.

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Ø 100.4 x 7 x 22 mm, Z3</th>
</tr>
</thead>
<tbody>
<tr>
<td>145344</td>
<td>145346</td>
</tr>
</tbody>
</table>

### Bisco P-10 Art.No.

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Ø 100.4 x 7 x 22 mm, Z3</th>
</tr>
</thead>
<tbody>
<tr>
<td>145370</td>
<td>145371</td>
</tr>
</tbody>
</table>

### Bisco P-14 Art.No.

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Ø 100.4 x 7 x 22 mm, Z3</th>
</tr>
</thead>
<tbody>
<tr>
<td>145301</td>
<td>145302</td>
</tr>
</tbody>
</table>

### Bisco P-10 Art.No.

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Ø 100.4 x 7 x 22 mm, Z3</th>
</tr>
</thead>
<tbody>
<tr>
<td>145375</td>
<td>145376</td>
</tr>
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</table>

### Bisco P-14 Art.No.

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Ø 100.4 x 7 x 22 mm, Z3</th>
</tr>
</thead>
<tbody>
<tr>
<td>145315</td>
<td>145316</td>
</tr>
</tbody>
</table>

### Bisco P-10 Art.No.

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Ø 100.4 x 7 x 22 mm, Z3</th>
</tr>
</thead>
<tbody>
<tr>
<td>145325</td>
<td>145326</td>
</tr>
</tbody>
</table>

### Bisco P-14 Art.No.

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Ø 100.4 x 7 x 22 mm, Z3</th>
</tr>
</thead>
<tbody>
<tr>
<td>145335</td>
<td>145336</td>
</tr>
</tbody>
</table>

### Bisco P-10 Art.No.

<table>
<thead>
<tr>
<th>Art.No.</th>
<th>Ø 100.4 x 7 x 22 mm, Z3</th>
</tr>
</thead>
<tbody>
<tr>
<td>145345</td>
<td>145346</td>
</tr>
</tbody>
</table>