

# freud®

## TESTE PORTACOLTELLI FRESE SALDOBRASATE CUTTERHEADS AND BRAZED CUTTERS



### ISO 9001:2000

LA FREUD ATTUA UN SISTEMA DI GESTIONE DELLA QUALITÀ CERTIFICATO ISO 9001:2000 PER LA COMMERCIALIZZAZIONE DI LAME CIRCOLARI CON RIPORTI IN HW E DI COMPONENTI IN METALLO DURO SINTERIZZATO.

FREUD APPLIES A QUALITY SYSTEM ISO 9001:2000 FOR TRADING OF HW TIPPED SAWBLADES AND HARD METAL COMPONENTS.

CERTIFICATE



**CERTIFICATO**

Nr 50 100 4138 - Rev. 02  
Si applica il 170 al centro per  
IL SISTEMA QUALITÀ DI  
THE QUALITY SYSTEM OF

**freud®**  
**POZZO S.p.A.**

SEDE OPERATIVA:  
VIA PADOVA 3  
21100 VERONA  
36050 TAVANAGGIO (VI)

SEDE LEGALE:  
VIA VOLTERRA 37  
30100 BREVENSANO (PD)

È CONFORME ALL'ARTICOLO 1 DELLA NORMA  
HAS BEEN FOUND TO CONFORM TO THE REQUIREMENTS OF  
**UNEN ISO 9001:2000**  
Materiali di cui sono stati prodotti per scopi industriali  
di requisiti della norma ISO 9001:2000.  
Refer to quality manual for details of exclusions  
of requirements of the norm ISO 9001:2000.

Questo certificato è valido per il seguente campo di applicazione:  
This certificate is valid for the following product or service range:  
Commercializzazione a proprio marchio di lame circolari, teste portacolteLLI, frese saldobrasate, punte e componenti in metallo duro. Commercializzazione di lame e punte in diamante, macchine sinterizzate ed artificiali, etc.

Trade of own brand of saw blades, cutter heads, brazed cutters, router bits and hard metal components. Trade of PCD tipped saw blades and router bits, cleaning machines and grinding machines etc.

Data di emissione: 09/05/02

**SINCERT**  
SISTEMI INTEGRATI  
CERTIFICAZIONE

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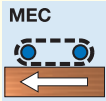
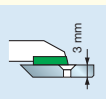


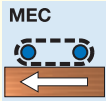

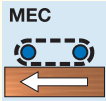

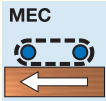

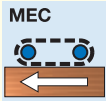

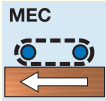

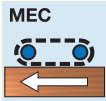


Ritornazione del certificato ammessa per la prima volta in data 2004-03-16  
La validità del presente certificato dipende in modo essenziale dal rispetto di norme  
internazionali in materia di gestione qualità del prodotto finale.  
The validity of this present certificate depends on the correct application every 12 months  
and on the complete review of company's management system after three years.

10100 Brix - Gruppo IRI IRI - Sede Centrale IRI, P.A. S.p.A. - 20090 Sesto San Giovanni (MI) - Italia - www.iri.it

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## LEGENDA DEI SIMBOLI E DELLE ABBREVIAZIONI EXPLANATION OF SYMBOLS AND ABBREVIATIONS

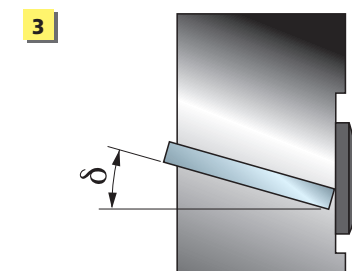
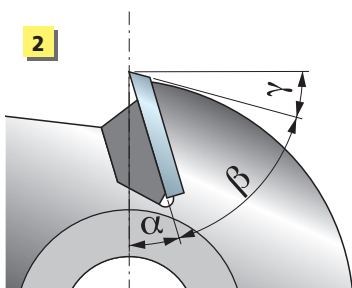
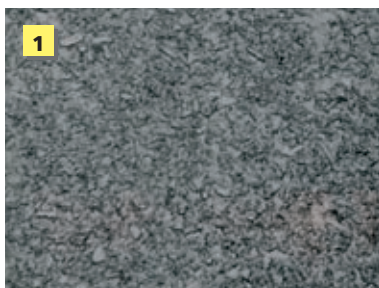
<b>CODICE</b> CODICE ARTICOLO ITEM CODE		ROTAZIONE DX E SX RIGHT HAND AND LEFT HAND		ROTAZIONE DX O SX RIGHT HAND OR LEFT HAND	<b>Utensili collaudati secondo la Normativa</b> <i>Tools tested according to the Norm</i> <b>EN 847-1</b> <b>R&amp;S - SV/R 156/155</b>
<b>D</b> DIAMETRO DIAMETER		<b>MAN</b> UTENSILI PER AVANZAMENTO MANUALE TOOLS FOR MANUAL FEED		<b>MEC</b> UTENSILI PER AVANZAMENTO MECCANICO TOOLS FOR AUTOMATIC FEED	
<b>d</b> FORO BORE		COLTELLI RIAFFILABILI IN HW RESHARPENABLE CARBIDE KNIVES		COLTELLI A GETTARE DISPOSABLE KNIVES	GLI UTENSILI A CUI SI RIFERISCE QUESTO SIMBOLO HANNO SUPERATO LE PROVE TECNOLOGICHE RICHIESTE DALLA NORMATIVA EUROPEA EN 847-1. AD OGNI UTENSILE CONFORME È STATO ASSEGNATO UN NUMERO DI REGISTRAZIONE, CHE VIENE RIPORTATO COME IN QUESTO ESEMPIO. THIS SYMBOL REFERS TO TOOLS THAT HAVE PASSED THE TECHNICAL TESTS IMPOSED BY THE EUROPEAN NORM EN 847-1. EACH TOOL THAT CONFORMS TO THIS NORM HAS BEEN ASSIGNED A REGISTRATION NUMBER AS IN THE EXAMPLE ABOVE.
<b>B</b> SPESORE DI TAGLIO CUTTING THICKNESS		<b>MAN</b> UTENSILI PER AVANZAMENTO MANUALE TOOLS FOR MANUAL FEED		<b>MEC</b> UTENSILI PER AVANZAMENTO MECCANICO TOOLS FOR AUTOMATIC FEED	
<b>B - B1</b> SP. DI TAGLIO REGOLABILE ADJ. CUTTING THICKNESS		<b>MAN</b> UTENSILI PER AVANZAMENTO MANUALE TOOLS FOR MANUAL FEED		<b>MEC</b> UTENSILI PER AVANZAMENTO MECCANICO TOOLS FOR AUTOMATIC FEED	
<b>Z</b> NUMERO DI DENTI NUMBER OF TEETH		<b>MAN</b> UTENSILI PER AVANZAMENTO MANUALE TOOLS FOR MANUAL FEED		<b>MEC</b> UTENSILI PER AVANZAMENTO MECCANICO TOOLS FOR AUTOMATIC FEED	
<b>I</b> INSERTI INSERTS		<b>MAN</b> UTENSILI PER AVANZAMENTO MANUALE TOOLS FOR MANUAL FEED		<b>MEC</b> UTENSILI PER AVANZAMENTO MECCANICO TOOLS FOR AUTOMATIC FEED	
<b>R</b> RASANTI SPURS		<b>MAN</b> UTENSILI PER AVANZAMENTO MANUALE TOOLS FOR MANUAL FEED		<b>MEC</b> UTENSILI PER AVANZAMENTO MECCANICO TOOLS FOR AUTOMATIC FEED	
<b>S</b> SPESORE THICKNESS		<b>MAN</b> UTENSILI PER AVANZAMENTO MANUALE TOOLS FOR MANUAL FEED		<b>MEC</b> UTENSILI PER AVANZAMENTO MECCANICO TOOLS FOR AUTOMATIC FEED	

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Tra tante copie,  
meglio l'originale!

Nothing beats  
the original!



■ Gli utensili Freud sono prodotti qualitativamente superiori perché realizzati con le più avanzate tecnologie, con materiali di prima scelta ed avvalendosi di personale altamente specializzato.

**NORMA EUROPEA EN 847-1**

■ Per il 2002 il programma teste portacoltelli standard è stato ridisegnato e rinnovato in base alla nuova norma europea UNI EN 847-1 per l'eliminazione e la riduzione dei pericoli derivanti dall'utilizzo di tali utensili. Nell'avanzamento manuale si limita il fenomeno del rifiuto a velocità facilmente controllabili e, in caso di contatto con l'utensile, si minimizza la gravità di eventuali lesioni. Gli utensili conformi riportano la scritta "MEC" o "MAN", rispettivamente per l'uso su macchine con avanzamento meccanico integrato e con avanzamento manuale.

■ Le modifiche apportate ai nostri utensili sono fondamentalmente le seguenti:

- per ridurre al minimo il rischio di infortuni, gli utensili sono costruiti a "forma chiusa" e con limitatore di truciolo avente sporgenza ridotta;
- sono state aggiunte delle spine per impedire la rotazione dei singoli utensili che compongono i gruppi;
- per agevolare lo scarico del truciolo sono stati revisionati i vani di scarico e previsti dei deflettori in corrispondenza degli inserti.

**Caratteristiche tecnologiche delle teste portacoltelli**

■ L'esclusivo metallo duro Freud di cui sono costituiti i taglienti viene prodotto in base all'utilizzo cui è destinato, per ottenere le maggiori durata e qualità di finitura possibili. Inoltre, le speciali e sofisticate apparecchiature utilizzate garantiscono una costante precisione nella produzione dei coltelli, che sono perfettamente sostituibili anche a distanza di tempo (la Fig. 1 mostra il metallo duro al microscopio elettronico).

■ Gli angoli caratteristici delle teste portacoltelli e Sistema Performance sono (Fig. 2 e 3):

- angolo mordente ( $\alpha$ ):** dipende dal tipo di materiale da lavorare.
- angolo di cuneo ( $\beta$ ):** è la diretta conseguenza degli angoli  $\alpha$  e  $\gamma$ .
- angolo di spoglia ( $\gamma$ ):** varia secondo il materiale lavorato e lo spessore di taglio.
- angolo assiale ( $\delta$ ):** serve per ottenere una miglior penetrazione nel materiale lavorato ed un'asportazione graduale del truciolo. Nel caso di utensili con differenze di diametro sul profilo, serve a mantenere costante l'angolo mordente.

Freud products are superior tools because they are made using the most advanced technology, with premium quality materials and highly qualified staff.

**EUROPEAN NORM EN 847-1**

■ For 2002, the standard cutterhead programme has been re-designed and renewed, based on the new european norm UNI EN 847-1, to eliminate and reduce dangers that may derive from these tools. In the case of manual feed, the kick-back effect is greatly reduced and easily controlled by the operator, in case of physical contact with the tool, serious injury to the operator is minimized. Tools that conform to these norms have "MEC" or "MAN" incisioned on to them and are to be used respectively on machines with mechanical or manual feed.

■ The fundamental modifications carried out on our tools are the following

- to reduce the risk of injury, our tools are constructed with a "closed form" and an anti kick-back device with limited projection;
- pins have been added to stop each single component of the group, from rotating individually;
- large openings for better chip distribution have been revised and deflectors for inserts are foreseen.

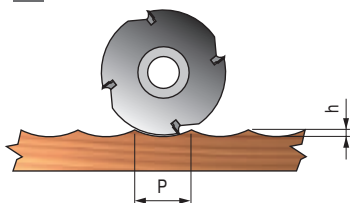
**TECHNICAL FEATURES OF TRADITIONAL CUTTERHEADS**

■ Freud's exclusive HW used to construct each cutter, is produced according to the kind of work which the tool will undergo, in order to obtain the best duration and quality finish possible. Special instruments guarantee precision and therefore perfect replacement of the knives we produce without the need to modify the cutterhead even after prolonged use (Fig. 1 shows hard metal under the microscope).

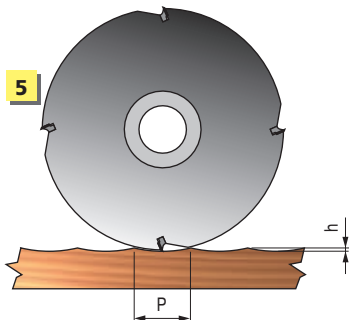
■ The most characteristic angles of a cutterhead are (Fig. 2 and 3):

- hook angle ( $\alpha$ ):** depends on the type of material to be cut.
- wedge angle ( $\beta$ ):** this angle is a direct consequence of angles  $\alpha$  and  $\gamma$ .
- clearance angle ( $\gamma$ ):** depends on the material to be cut and the thickness of the cutting edge.
- shear angle ( $\delta$ ):** necessary to obtain a better penetration into the material to be cut and a gradual removal of the chips. When the tools have different diameters, this angle allows the hook angle to remain constant.

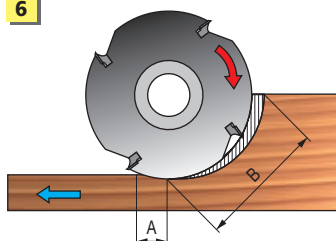
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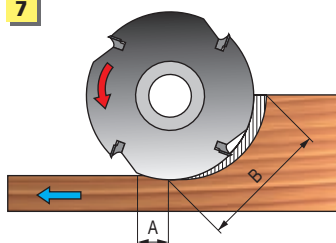
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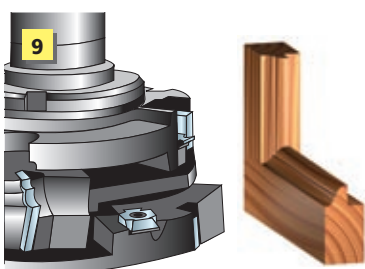
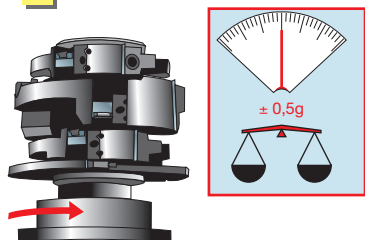
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8



La finitura ottenuta è misurata dalla rugosità superficiale del legno e dipende da molti fattori: l'avanzamento del legno in macchina, il numero di giri a cui lavora l'utensile, la concordanza o discordanza della lavorazione, le caratteristiche tecniche dell'utensile.

Oltre agli angoli mordente, di cuneo ed assiale, anche il diametro influenza la qualità della finitura (Figg. 4 e 5). A pari avanzamento e numero di giri si ha lo stesso passo (lunghezza di asportazione - P); mentre la profondità (h), e quindi la rugosità superficiale, si riduce proporzionalmente all'aumentare del diametro.

Per quanto riguarda la rotazione e l'avanzamento distinguiamo tra:

**lavorazione in concordanza:** si ha quando la direzione di avanzamento ed il senso di rotazione hanno lo stesso verso (Fig. 6).

**lavorazione in discordanza:** si ha quando la direzione di avanzamento ed il senso di rotazione sono opposti (Fig. 7).

Durante l'asportazione si verificano 2 situazioni (Figg. 6 e 7):

nella **zona A** si ha lo schiacciamento del materiale in lavorazione, nel caso in cui si lavori in discordanza;

la **zona B** è l'area dove l'utensile s'incunea nel materiale e ne asporta il truciolo.

Ogni utensile o gruppo per serramenti viene progettato dal nostro ufficio ricerche e sviluppo con una struttura informatica in grado di ottimizzarne le caratteristiche in base alle effettive necessità del Cliente. Tale tecnologia viene applicata anche alle macchine utensili per ottenere precisioni mai raggiunte nel campo degli utensili per la lavorazione del legno, grazie anche alla collaborazione di personale altamente specializzato.

Ogni utensile viene poi equilibrato per eliminare le vibrazioni che si avrebbero in fase di lavorazione, dovute alla disomogenea distribuzione della massa ferrosa. Vengono eseguite tre equilibrature distinte: sull'utensile singolo, sul gruppo completo ed infine la terza, importantissima, sull'insieme di gruppi che vanno assemblati sullo stesso albero della macchina (Fig. 8).

La messa a punto finale avviene nel reparto collaudo e consiste in una simulazione di produzione: per ogni singolo gruppo viene "battuto" un campione legno con il profilo richiesto. In tal modo si fornisce al Cliente un prodotto veramente "chiavi in mano", subito produttivo e quindi proficuo (Fig. 9).

The work piece finish is given by the surface roughness and depends on many factors: the feed rate, the tool's RPM, if the tool cuts against or with the feed and the tool's general geometry such as the hook, wedge and shear angles.

The tool's diameter also influences the work piece finish (Fig. 4 and 5). If the feed rate and the tool's RPM are the same, the pitch (P) will also be the same, therefore the depth and the surface roughness (h) is reduced as the diameter of the tool increases.

The tool cuts "with the feed" when the rotation and feed direction are the same (Fig. 6), the tool cuts "against the feed" when the rotation and feed direction are opposite (Fig. 7).

During the removal of the chips, two areas can be distinguished: A and B (Fig. 6 and 7):

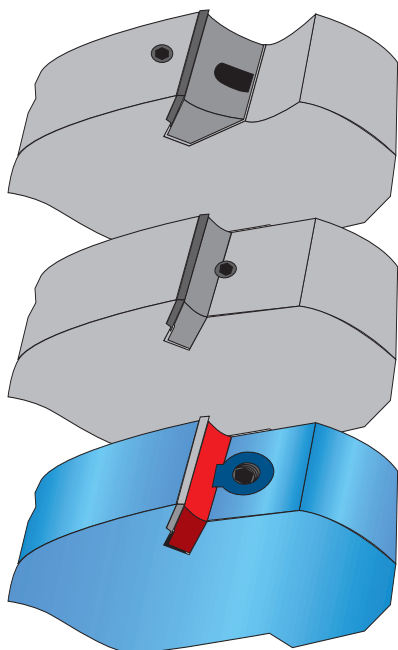
**area A** is where the material is compressed if the rotation is "against the feed";

**area B** is where the tool penetrates the material and removes the chips.

Every tool is designed by our research and development department based on the clients specific needs and the same technology is applied to manufacturing machines that, combined with highly specialised workers, allow precision levels never reached before in the woodworking field.

Every tool is balanced to remove vibrations caused by bizarre distribution of the tool's mass, harmful during the woodworking process. Three balancing operations are done: first on the single tool, second on the set and finally, the third, on the entire group of tools that will be fitted on the same spindle (Fig. 8).

The final tuning operation is done in the testing room and consists of simulating actual working conditions: each set is used to cut a wood sample of the requested profile. All of these testing phases allow FREUD to supply the Client with a product that is ready for use and immediately operational, allowing added savings for the Client (Fig.9).



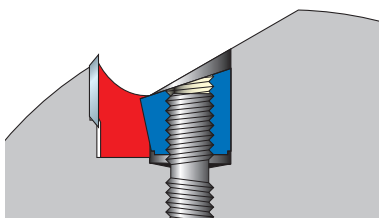
### ■ Sistema di Bloccaggio HRL

La vite frontale di grosse dimensioni non si spana e si intasa molto meno di una più piccola, qualsiasi sia la sua posizione.

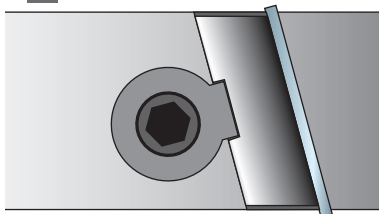
### ■ HRL Locking System

The large front screw does not strip and is less liable to block or get clogged up compared to a small screw, which ever may be its position.

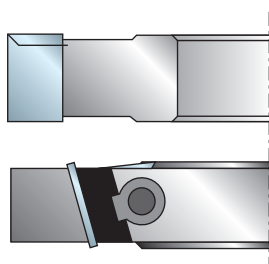
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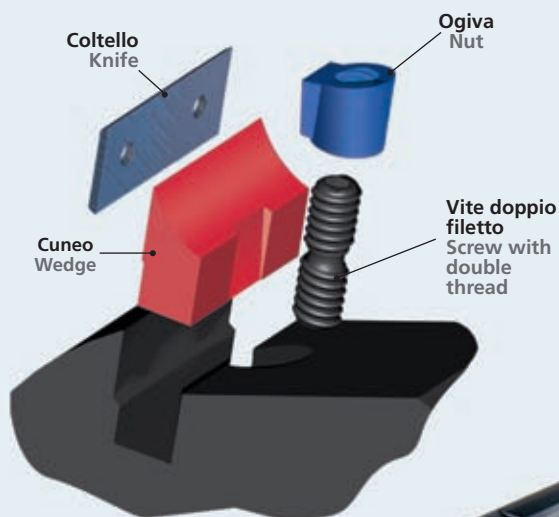


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### VANTAGGI DELLE TESTE PORTACOLTELLI TRADIZIONALI

- Per **Testa Portacoltelli** si intende un utensile rotativo fornito di più taglienti, disposti geometricamente sulla sua circonferenza e costituiti da coltelli a gettare con spessore di 1,5 mm bloccati meccanicamente sul corpo dell'utensile (Fig. 12). Rispetto agli utensili saldobrasati, le teste portacoltelli con coltelli a gettare presentano indubbiamente dei vantaggi importanti. Infatti, per sostituire un coltello usurato o danneggiato non è necessario smontare l'utensile dalla macchina, poiché è sufficiente sbloccare le viti che lo trattengono nella sua sede. Un utensile saldobrasato, invece, dovrebbe essere sostituito completamente e quindi bisognerebbe avere a disposizione anche un utensile di scorta, per evitare fermi macchina con tempi troppo lunghi.
- Il **Sistema di Bloccaggio HRL** sfrutta la forza centrifuga data dalla rotazione dell'utensile per autobloccarsi. Questa caratteristica, unitamente al sovradimensionamento dei singoli elementi, evita rischi di rotture accidentali o di espulsione del coltello. Il sistema di bloccaggio HRL è anche sinonimo di robustezza: l'uso esclusivo di componenti sottoposti a speciali trattamenti termici e la precisione del sistema garantiscono un numero pressoché illimitato di smontaggi e rimontaggi senza diminuirne l'efficacia (Figg. 10 e 11).



### ■ Componenti del sistema HRL

### ■ Components of HRL system

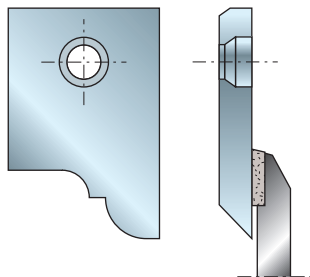


### ADVANTAGES OF TRADITIONAL CUTTERHEADS

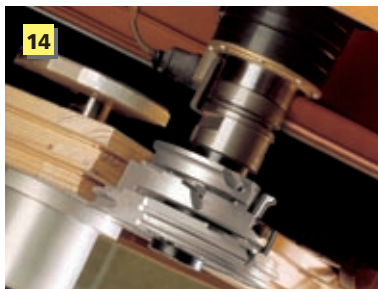
- A **Cutterhead** is a rotating tool consisting of various cutting edges, geometrically fitted on its circumference. The cutting edges are 1,5 mm thick disposable knives, mechanically locked to the tool's body (Fig. 12). With respect to brazed cutters, cutterheads with disposable knives have numerous advantages, in fact, to change a used or damaged knife it is not necessary to dismount the cutterhead from the machine, but simply loosen the screw that holds it in its seat. On the other hand a brazed cutter must be changed altogether and a substitute available so as to avoid time wastage.
- The **HRL Locking System** takes advantage of the centrifugal forces generated by the tool's rotation in order to block itself. This characteristic, along with other single elements avoid the risk of accidental breakage or expulsion of the knives. The HRL system is also synonymous of strength: the use of only specially treated components and the precision of this method guarantees a practically unlimited number of locking and unlocking operations without compromising the efficiency of the very same (Fig. 10 and 11).

## CARATTERISTICHE TECNOLOGICHE TECHNOLOGICAL FEATURES

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I coltelli Sistema Performance sono costruiti con metallo duro che la Freud produce in 6 gradi di durezza differenti, a seconda del materiale da lavorare: legni teneri e duri, massicci, abrasivi, truciolare, melaminico, placcati, M.D.F. ecc. È possibile utilizzare metallo duro con elevati gradi di durezza, tali da permettere una tenuta superiore addirittura del 30% rispetto all'HW impiegato per taglienti da saldobrasare e destinati alla lavorazione di materiali molto abrasivi.

Oltre ad essere una soluzione che praticamente sostituisce le frese saldobrasate, grazie all'intercambiabilità dei profili sullo stesso utensile e alla durata dello stesso, si ha una notevole convenienza nell'ambito della produzione su macchine CNC, dove i fermi macchina risultano molto costosi: infatti, dovendo sostituire un coltello usurato o danneggiato non è necessario smontare l'utensile dalla macchina, poiché è sufficiente sbloccare le viti che lo trattengono nella sua sede. Un utensile saldobrasato, invece, dovrebbe essere sostituito completamente e quindi bisognerebbe prevedere un utensile di scorta per evitare fermi macchina con tempi lunghi.

Oggi la Freud dispone anche di una gamma completa di utensili con coltelli performance standard o personalizzabili per pantografi manuali e a CNC (Fig. 14).

Il sistema performance risulta vantaggioso anche se paragonato alle teste portacoltelli tradizionali, grazie alla possibilità e alla facilità di affilatura dei coltelli e al basso costo dell'operazione, dato che non servono macchine particolari (è sufficiente un lapidello o un'affilatrice - vedi Fig. 15) né personale specializzato.

Anche dopo la riaffilatura, i coltelli Performance mantengono il profilo originale ed il diametro di taglio dell'utensile, poiché si possono avere perdite massime di 0,15÷0,20 mm (Fig. 16).

Consigli per una corretta affilatura su lapidello o affilatrice:

1) Applicare l'attrezzatura TA01M o TA02M (Fig. 16) sul piano del lapidello o dell'affilatrice.

2) Fissare i coltelli, per mezzo delle viti in dotazione, sull'attrezzatura.

3) Procedere all'operazione di affilatura contemporanea dell'intero set di coltelli.

Si raccomanda un'abbondante lubrificazione durante l'affilatura e l'utilizzo di mole diamantate (Fig. 17) con le seguenti caratteristiche: D6A2-C100-D54.

Su richiesta, l'affilatura può essere eseguita presso la nostra sede, inviando tutto il set di coltelli ed indicando sull'ordine il codice **OPTAFF AA9**.

Performance system knives are constructed in hard metal, which Freud produces in 6 grades of hardness, second to the material to be worked: soft and hardwoods, heavy, abrasive, chipboard, melamine, laminated, M.D.F. etc. It is possible to use HW with a high grade of hardness, so as to permit a superior hold of 30% more with respect to the HW used for brazed cutting edges destined to work very abrasive materials.

Other than being a solution that practically substitutes brazed cutters, thanks to the interchangeability of the profiles on the same tool and the duration of the tool itself, there is a notable advantage and convenience when working on overhead CNC router machines, where machine stoppages can result costly: infact the changing of a used or damaged knife does not require the dismounting of the cutterhead from the machine, since it is sufficient to loosen the screw that holds it in place. Instead a brazed cutter must be completely changed and a substitute available to avoid time wastage.

Freud has an entire range of tools with performance, standard or personalized knives for manual or overhead CNC router machines (Fig. 14).

The performance system results advantageous, even when confronted to traditional cutterheads, thanks to the easiness of sharpening, low operational cost and the need of no particular machinery (the use of a flat grinding wheel or surface grinding machine is sufficient - see Fig. 15) or specialized personnel.

Even after sharpening, performance knives maintain their original profile (Fig.16) and the tool's cutting diameter, considering maximum loses of 0,15÷0,20 mm.

Suggestions for correct sharpening on surface grinding machine or flat grinding machine:

1) Fix support TA01M or TA02M (Fig. 16) onto the surface grinding machine or flat grinding machine.

2) Fix the knives with the screws that are supplied.

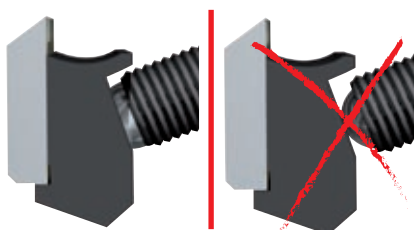
3) Proceed with the sharpening of the entire set of knives.

Use of abundant cooling liquid during sharpening is recommended. Use diamond grinding wheels (Fig. 17) with the following characteristics: D6A2-C100-D54.

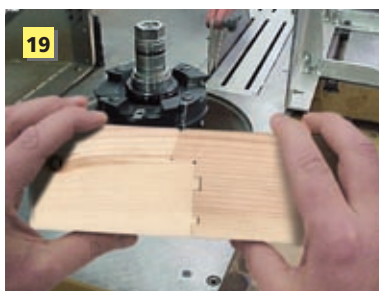
On request, sharpening can be carried out at our premises by simply sending us the complete set of knives and indicating on the order the code **OPTAFF AA9**.



- Viti con inserto sferico per sistema Isoprofil.
- Screws with spherical insert, for Isoprofil System

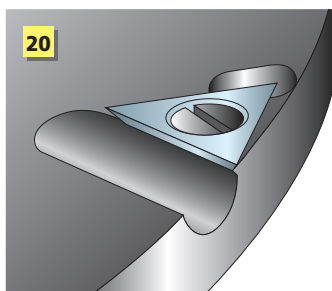


- Il bloccaggio corretto si ha con la superficie piana dell'inserto sferico completamente aderente al cuneo.
- Proper locking is obtained when the flat surface of the spherical insert completely adheres to the wedge.

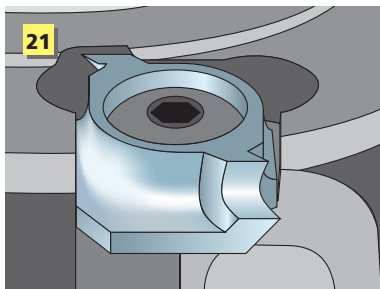


■ **Isoprofil** è un'innovazione straordinaria nata nel reparto "ricerca e sviluppo" della Freud: un'invenzione geniale, per risolvere i problemi dati da utensili che montano coltelli profilati già riaffilati. Com'è noto, infatti, l'affilatura dei coltelli Performance comporta delle variazioni sul diametro di taglio dell'utensile causando un'esecuzione errata del profilo: l'asportazione del materiale dal petto del coltello ne provoca la diminuzione dello spessore, dell'altezza e quindi del diametro di taglio dell'utensile. L'introduzione del Sistema Isoprofil permette di evitare in modo definitivo la riduzione del diametro, con **estrema semplicità e senza l'ausilio di strumenti di misura** per la verifica del corretto posizionamento dei coltelli dopo l'affilatura. L'idea si basa fondamentalmente sulle forme geometriche del cuneo e della sua sede ricavata sull'utensile (Fig. 18): avvitando il grano di serraggio si spinge il cuneo fino a bloccare il coltello sull'utensile. Il cuneo, scorrendo sul piano inclinato, solleva il coltello fino a compensare la diminuzione sul diametro di taglio determinata dall'affilatura. Ne trarranno particolare vantaggio gli utilizzatori di macchine a controllo numerico, che hanno l'esigenza di mantenere costante il diametro degli utensili senza dover intervenire sulla riprogrammazione della macchina operatrice per compensare gli errori dimensionali derivati dall'affilatura. Inoltre, **per mantenere inalterato il profilo** dei coltelli Performance anche dopo le affilature, Freud ha ideato e adottato un semplice ma determinante accorgimento, "spogliando" anche il lato di appoggio del coltello sulla vite di riscontro: in questo modo, anche quando lo spessore del coltello diminuisce per effetto delle affilature, il profilo non varia, come avverrebbe invece in un coltello tradizionale. L'utilizzatore trae sicuramente un vantaggio dal nuovo sistema: in lavorazioni come quella rappresentata in Fig. 19, dove si utilizzano i coltelli riaffilabili per il profilo e per il controprofilo, è evidente che il mantenimento della sagoma originale permette di ottenere un **perfetto accoppiamento per tutta la durata dei coltelli**, anche dopo 8 o 10 affilature, senza necessità di regolazioni delle guide o degli assi controllati. È possibile pertanto sfruttare gli indubbi vantaggi economici di gestione dei coltelli "Performance", senza alcuno svantaggio rispetto ai coltelli profilati "a gettare".

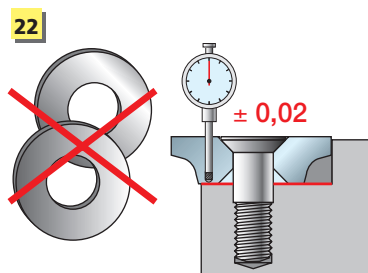
■ **Isoprofil** is an extraordinary innovation born in the company's very own research and development department. An ingenious invention, to solve problems related to tools that mount profiled knives that have already been resharpened. It is well known, sharpening Performance knives implicates variations in the tool's cutting diameter that cause the tool to definitively eliminate an incorrect profile. The removal of material from the knife's surface reduces its thickness, its height and therefore the diameter of the tool itself. The introduction of this Isoprofil system consents us to avoid in a definitive way the reduction of the diameter, with **extreme operative simplicity and without the need of auxiliary measuring instruments** to verify the correct functionality of the knife after sharpening. The idea is fundamentally based on the geometrical form of the wedge and its positioning seats on the tool (Fig. 18). Tightening the locking screw, pushes the wedge until it locks the knife on to the tool. The wedge running on the inclined surface blocks the knife and rises until it compensates the reduction in the cutting diameter, determined by the sharpening. Those liable to draw particular advantage, are those who use numerically controlled machines with the necessity of maintaining a tool with a constant diameter, without having to intervene on the reprogramming of the operating machine, so as to compensate dimensional errors that may derive from sharpening. Furthermore, in order to **maintain the profile of Performance knives even after several resharpenings**, Freud has invented and adopted a simple but determined device, by also creating a relief angle on the support side of the knife on the positioning screw. In this way whilst sharpening is carried out, the profile does not vary, as would happen with a traditional knife. The user is surely to gain an advantage from the new system. Carrying out work such as that illustrated in the picture 19, where there are resharpenable knives to create the profile and the scribe, it is evident that the maintenance of original shape **allows to obtain a perfect fitting all through the knives'life, even after 8-10 sharpenings**, without regulation of guides or cnc axes. In this way you can enjoy the reduced operating costs of "Performance" knives, without any limitation in comparison to disposable knives.



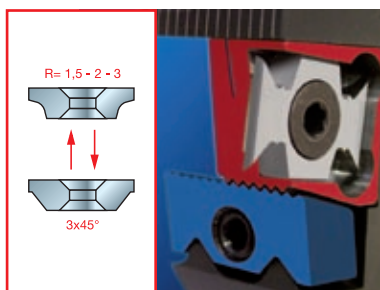
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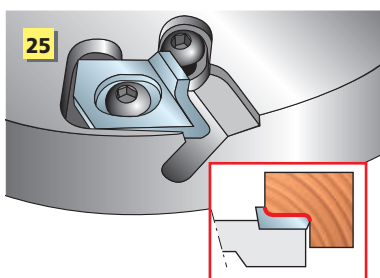
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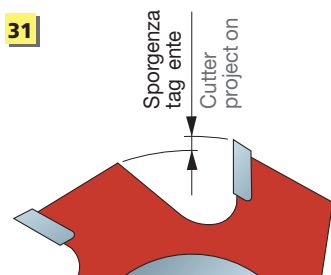
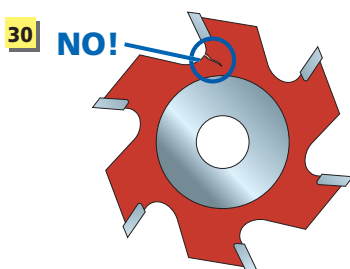
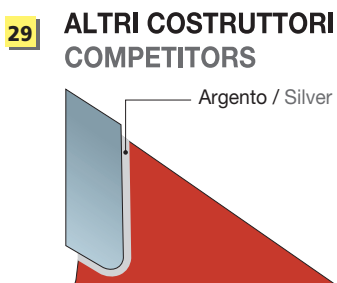
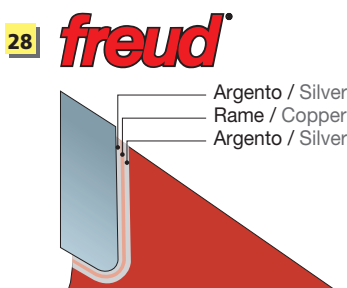
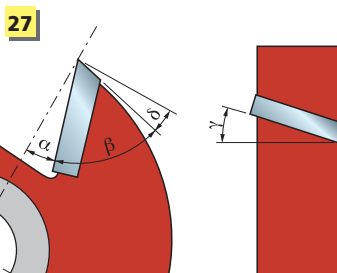
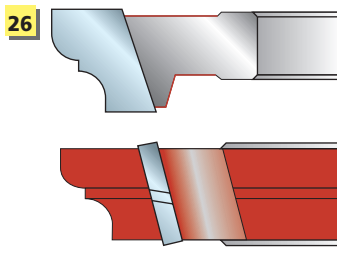
### INSERTI E RASANTI

- Il rasante triangolare (Fig. 20), costruito in HW integrale per conferire una maggiore durata al filo tagliente, è un componente utilizzato su teste con coltelli a gettare e su teste Performance per dare maggior finitura alle battute eseguite. L'ampiezza della superficie di lavoro (22 mm) ed il posizionamento del rasante sull'utensile (con angolo mordente positivo) garantiscono una finitura perfetta senza rigature (la lunghezza della battuta è minore della lunghezza del rasante).
- Caratteristica altrettanto importante è la dimensione dello scarico sul fronte: esso consente una miglior fuoriuscita del truciolo e quindi una miglior lavorabilità del rasante (Fig. 20).
- Gli inserti smussatori e raggianti vengono utilizzati per eliminare gli spigoli vivi dai pezzi lavorati. Oltre a dare una miglior qualità estetica essi contribuiscono, in fase di verniciatura, a fare in modo che la vernice si depositi uniformemente sul legno.
- Gli inserti sono progettati con angolo assiale (Fig. 21) per consentire una miglior finitura nella lavorazione del legno traverso vena (si evita l'"estrazione" della parte tenera della venatura). Essi, come pure le sedi portainseriti, sono costruiti con la massima precisione per garantire una costante intercambiabilità ed evitare l'uso di anellini distanziali (Fig. 22).
- Il sistema di regolazione brevettato, denominato **Sistema NSR**, è l'unico che consente di regolare gli inserti senza l'uso di strumenti di misura. La particolare sede zigrinata consente di regolare l'altezza dell'inserto con incrementi di 1 millimetro su tutto lo spessore dell'utensile, non limitatamente a posizioni fisse e con una precisione al centesimo di millimetro. Le tacche di riferimento, marcate in modo indelebile e preciso con tecnologia laser, consentono il più rapido, preciso e facile posizionamento possibile (Fig. 23). La Fig. 24 mostra le componenti del sistema NSR.
- Gli angoli dell'inserto consentono la massima finitura su qualsiasi materiale lavorato. Sulla stessa sede si possono montare inserti raggianti ( $R=1,5 - 2 - 3$  mm) e smussatori (max smusso possibile:  $3 \text{ mm} \times 45^\circ$ ).
- L'**inserto rasante-raggiatore** combina le funzioni dell'inserto raggiatore e del rasante. Infatti, in un'unica passata esegue la raggatura interna, la raggatura esterna e la finitura della battuta. Esso viene costruito in HW integrale con diverse profondità di battuta e con angoli mordente ed assiale in grado di garantire la massima finitura. Nella stessa sede si possono montare inserti raggianti di diverse misure, in modo tale da produrre battute di varie profondità (Fig. 25) con la stessa testa portacoltelli.

### INSERTS AND SPURS

- The **triangular spur** (Fig. 20) is a component produced in HW to give the cutting edge a long life, used on cutterheads and on Performance tools to give a better finish on rebates. The width of the cutting surface (22 mm) and the position of the spur (positive hook angle) guarantees a perfect finish without leaving a trace (the length of the rebate is less than the length of the spur).
- Another important characteristic is the size of the chip discharge area in front of the spur: this allows excellent chip discharge and therefore the spur is more efficient (Fig.20).
- The **rounding and bevelling inserts** are used to remove sharp angles from the work piece. These inserts give a better quality finish allowing various wood coatings to deposit more uniformly.
- Inserts with a shear angle (Fig. 21) allow a better finish when the wood is cut across the grain. Inserts and their seats are manufactured with extreme precision and this allows them to be replaced without the need of spacing rings (Fig. 22).
- The new and patented **NSR Adjustable Insert System** is the only one that allows adjustments without the need of measuring instruments. This particular system allows the inserts to be adjusted with precision of a hundredth of a millimetre on the entire length of the tool. The indelible reference marks are etched with extreme precision by lasers and allow a rapid and simple repositioning of the insert (Fig. 23). Fig.24 shows the components.
- The inserts have a positive hook angle and a shear angle that allows an excellent finish on any type of material. The same seat can be fitted with rounding inserts ( $R=1,5 - 2 - 3$  mm) or bevelling inserts ( $3 \text{ mm} \times 45^\circ$ ).
- The **rounding spur** combines the characteristics of a rounding insert and a spur. With a single operation, the rebate is internally and externally rounded and finished. These solid carbide inserts are manufactured with various rebate depths to satisfy clients needs. Extremely good finish is guaranteed by the inserts shear - hook angle combination. In the same seats, different inserts can be fitted so that the same tool can cut rebates of different depths (Fig. 25).





- Per **Fresa** si intende un utensile rotativo composto da più taglienti, disposti geometricamente sulla sua circonferenza e costituiti da placchette in HW o HSS fissati in modo definitivo (saldobrasati) sul suo corpo (Fig. 26).
- Gli angoli caratteristici delle frese saldobrasate (Fig. 27) sono gli stessi delle teste portacoltelli e svolgono le medesime funzioni (vedi pag. 97).
- I taglienti in HW sono saldati al corpo della fresa con una lega trimetallica composta da Ag-Cu-Ag, che assicura una resistente saldatura e consente alla placchetta di assorbire eventuali urti dovuti ai contraccolpi sul legno, garantendo una maggior durata dei taglienti e quindi della fresa stessa (Figg. 28 e 29). Questa lega funziona anche da "cuscinetto termico" per le diverse dilatazioni dell'acciaio e dell'HW durante l'esercizio.
- Per quanto riguarda la rotazione e l'avanzamento, la lavorazione in concordanza e in discordanza si veda a pag. 98.
- La Freud realizza anche utensili personalizzati in base alle esigenze del Cliente.
- A **Cutter** is a rotating tool consisting of various cutting edges, geometrically fitted on its circumference (Fig. 26). The cutting edges are HW or HSS inserts, fixed to the tool's body in a definitive way (brazed).
- Brazed cutterhead angles (Fig. 27) are similar to those described on the technical pages relative to the cutterheads and have much the same function (see page 97).
- The teeth in hard metal are brazed on to the cutters body with a special tri-metal alloy of copper-silver-copper, insuring a resistant soldering, permitting the teeth to absorb eventual blows due to kick-back and guaranteeing a longer duration of both the teeth and the cutter itself (Fig. 28 - 29).
- With regards to rotation and feed rate, for working in concordance or discordance, see page 98.
- Other than standard products, Freud offers personalized tools based on the Client's needs.

## PROCEDURE DI LAVORO SICURE

### SAFE WORKING PRACTICE

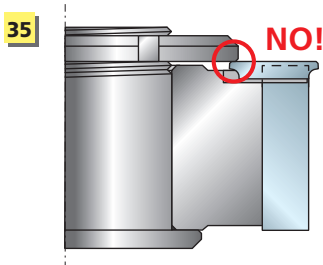
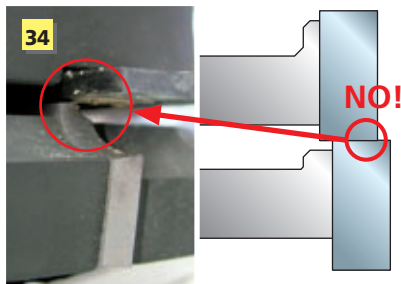
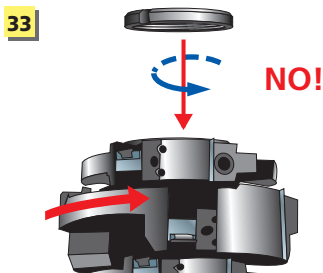
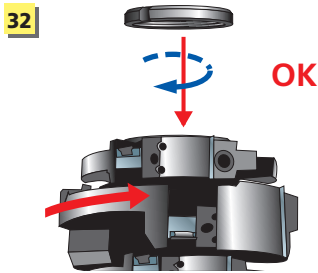
Per le frese saldobrasate si rimanda alle norme già descritte per le teste portacoltelli (pag. 97)

Inoltre:

- Gli utensili con fessurazioni visibili non devono essere utilizzati (Fig. 30).
- La manutenzione, riparazione e modifica delle frese e relativi componenti devono avvenire in accordo con i requisiti del progetto e/o delle istruzioni del produttore. Inoltre, devono essere sempre realizzate da una persona con esperienza e che abbia le conoscenze necessarie riguardo al livello di sicurezza che deve essere raggiunto.
- Affilando le frese, rispettare sempre la sporgenza minima dei taglienti prevista (Fig. 31).
- Nella rimozione a caldo di parti usurate e nella saldatura di nuovi taglienti ci si deve accertare che questi siano correttamente montati, al fine di evitare che il processo crei tensioni critiche nel corpo dell'utensile.
- Modificando una fresa, per esempio il diametro del foro o riportando nuovi taglienti, ci si deve assicurare che i requisiti della norma relativi al bilanciamento dinamico siano ancora rispettati.

For the use of brazed cutters, return to the norms already described in the section relative to cutterheads (page 97). Furthermore:

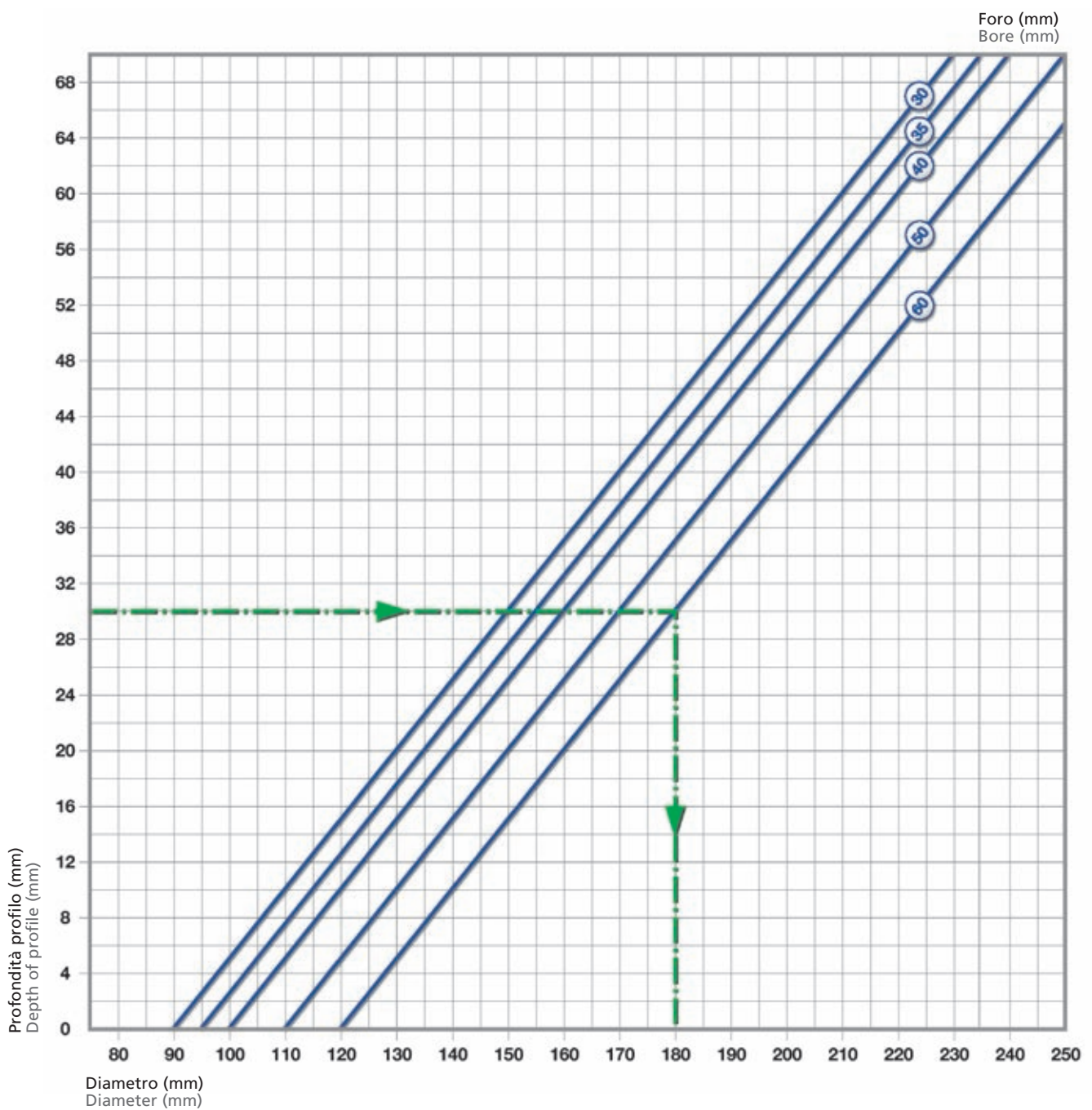
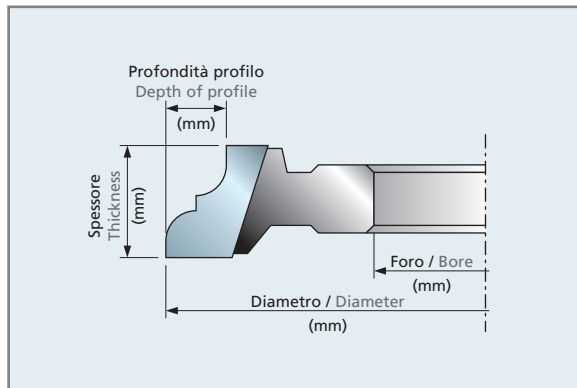
- Tools with visible cracks must on no account be used (Fig. 30).
- The maintainance, repairing and modification of brazed cutters must be carried out in accordance with the manufacturers specific instructions. Furthermore they must always be carried out by competent and qualified personnel with the right understanding of the kind of safety levels to be reached.
- When sharpening brazed cutters, always respect the minimum projection forseen for the cutting edges (Fig. 31).
- For the removal of used parts or the soldering of new cutting edges, insure that these are correctly mounted so as to avoid creating critical tension points on the tool's body.
- Modifying a brazed cutter, e.g. the diameter of the bore, or applying cutting edges, insure that the requirements applied by the norm relative to dynamic balancing are still respected.



- Gli utensili devono essere maneggiati e utilizzati da persone addestrate ed esperte, in possesso delle conoscenze necessarie.
  - Non si deve superare la massima velocità permessa, marcata sull'utensile. Quando definita, la gamma di velocità deve essere rispettata.
  - Utensili e parti di utensili devono essere bloccati in modo che non si allentino durante l'uso (Figg. 32 e 33).
  - Nel montaggio degli utensili, bisogna prestare attenzione che il bloccaggio agisca sul corpo e che i taglienti non siano in contatto con altri taglienti (Fig. 34) o con elementi di bloccaggio (Fig. 35).
  - Viti e dadi di bloccaggio devono essere serrati usando utensili appropriati e alla coppia di serraggio prevista dal costruttore.
  - Prolunghe per attrezzi o serraggio con colpi di martello non sono permessi (Fig. 36).
  - Non utilizzare bussole di riduzione del foro diverse da quelle previste dal costruttore.
  - Le superfici di bloccaggio devono essere esenti da sporco, grasso, olio o acqua (Fig. 37). La resina deve essere rimossa dal corpo di utensili in leghe leggere solo con solventi che non intacchino l'alluminio e non pregiudichino le caratteristiche meccaniche di questi materiali. Pulire accuratamente l'utensile ad ogni sostituzione dei taglienti.
  - Gli utensili composti devono essere riparati da personale competente, addestrato ed esperto, che ha conoscenza dei requisiti progettuali e conosca il livello di sicurezza che deve essere raggiunto.  
La riparazione degli utensili è consentita solo in accordo con le istruzioni del fabbricante. Occorre prestare particolare attenzione ai seguenti punti:  
La riparazione dovrà includere l'uso di parti di ricambio in accordo con le specifiche delle parti originali fornite dal costruttore.
  - Mantenere le tolleranze che assicurano un bloccaggio corretto.
  - Dopo qualsiasi processo di manutenzione, un utensile marcato "MAN" deve continuare a rispettare i requisiti della norma relativi agli utensili per avanzamento manuale.
  - Indossare guanti migliora la presa e riduce ulteriormente il rischio di lesioni.
  - Per evitare lesioni, gli utensili devono essere maneggiati con cautela e utilizzando dispositivi come ganci di trasporto, maniglie specifiche, telai, contenitori, carrelli, ecc.).
- 
- Tools must be used and handled by experienced and trained personnel, in possession of the necessary understanding.
  - The maximum speed marked on the tool shall not be exceeded. Where stated, the speed range must be respected.
  - Tools and tool bodies must be locked correctly, so they do not loosen during operation (Fig. 32 - 33).
  - When mounting tools, insure that locking reacts against the body and the cutting edges are not in contact with each other (Fig. 34) or with any other locking elements (Fig. 35).
  - Screws and nuts shall be tightened using the appropriate spanners etc. and to the torque value provided by the manufacturer.
  - Spanner extensions or tightening using hammer blows is strictly forbidden (Fig. 36).
  - Do not use reduction rings with a bore different to those specified by the constructor.
  - Clamping surfaces must be free of dirt, grease, oil and water (Fig. 37). Resins must be removed from tools with light alloy bodies using cleaners that do not damage the aluminium and compromise the materials mechanical features. Accurately clean the tool after every knife change.
  - Tools compiling a set, must be repaired by experienced and fully trained personnel, with the knowledge of the design requirements and security levels to be reached .
  - Repairing tools is allowed only in accordance to the tool manufacturer's instructions. Particular attention is drawn to the following:  
Repair shall therefore include e. g. use of parts which are in accordance with the specification of the original parts provided by the manufacturer.  
Tolerances which ensure correct locking shall be maintained.
  - After any type of maintenance work, a tool marked "MAN" must continue to respect the requirements imposed by the norm relative to tools with manual feed.
  - Wearing gloves increases grip and reduces the risk of injury.
  - To avoid injury, tools must be handled with care using special appliances so as to transport them without incurring injury to the user.

# TAVOLA PER IL CALCOLO DEL DIAMETRO MINIMO DI UNA FRESA IN FUNZIONE DELLA PROFONDITÀ DEL PROFILO E DEL FORO

TECHNICAL TABLE TO OBTAIN THE MINIMUM DIAMETER OF A PROFILED  
CUTTER ACCORDING TO THE DEPTH OF THE PROFILE AND THE BORE



# TAVOLA PER IL CALCOLO DELLA VELOCITÀ PERIFERICA, DEL DIAMETRO E DEL NUMERO DI GIRI DI UN UTENSILE

## TECHNICAL DIAGRAM TO OBTAIN TIP SPEED, DIAMETER AND RPM OF A CUTTING TOOL

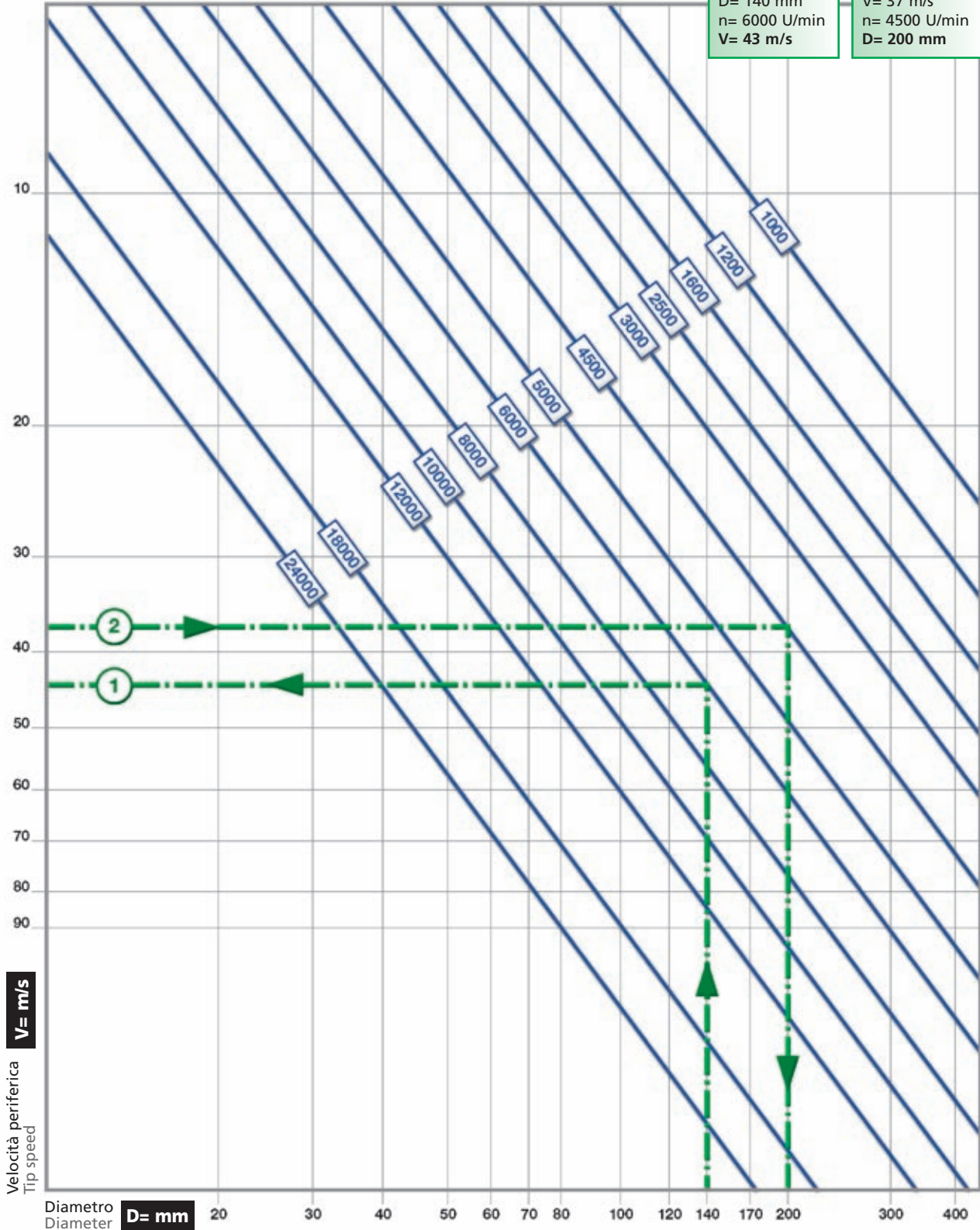
VALORE DELLA VELOCITÀ PERIFERICA (V= m/s): RECOMMENDED TIP SPEED (V= m/s):	LEGNO TENERO SOFTWOOD	HSS 50-80 m/s HW 60-90 m/s	LEGNO DURO HARDWOOD	HSS 40-60 m/s HW 50-80 m/s	TRUCIOLARE CHIPBOARD	HW 60-80 m/s	MEDIUM DENSITY MDF	HW 30-50 m/s

Numero di giri  
RPM

**n = U/min**

es. 1 ex. 1  
D= 140 mm  
n= 6000 U/min  
V= 43 m/s

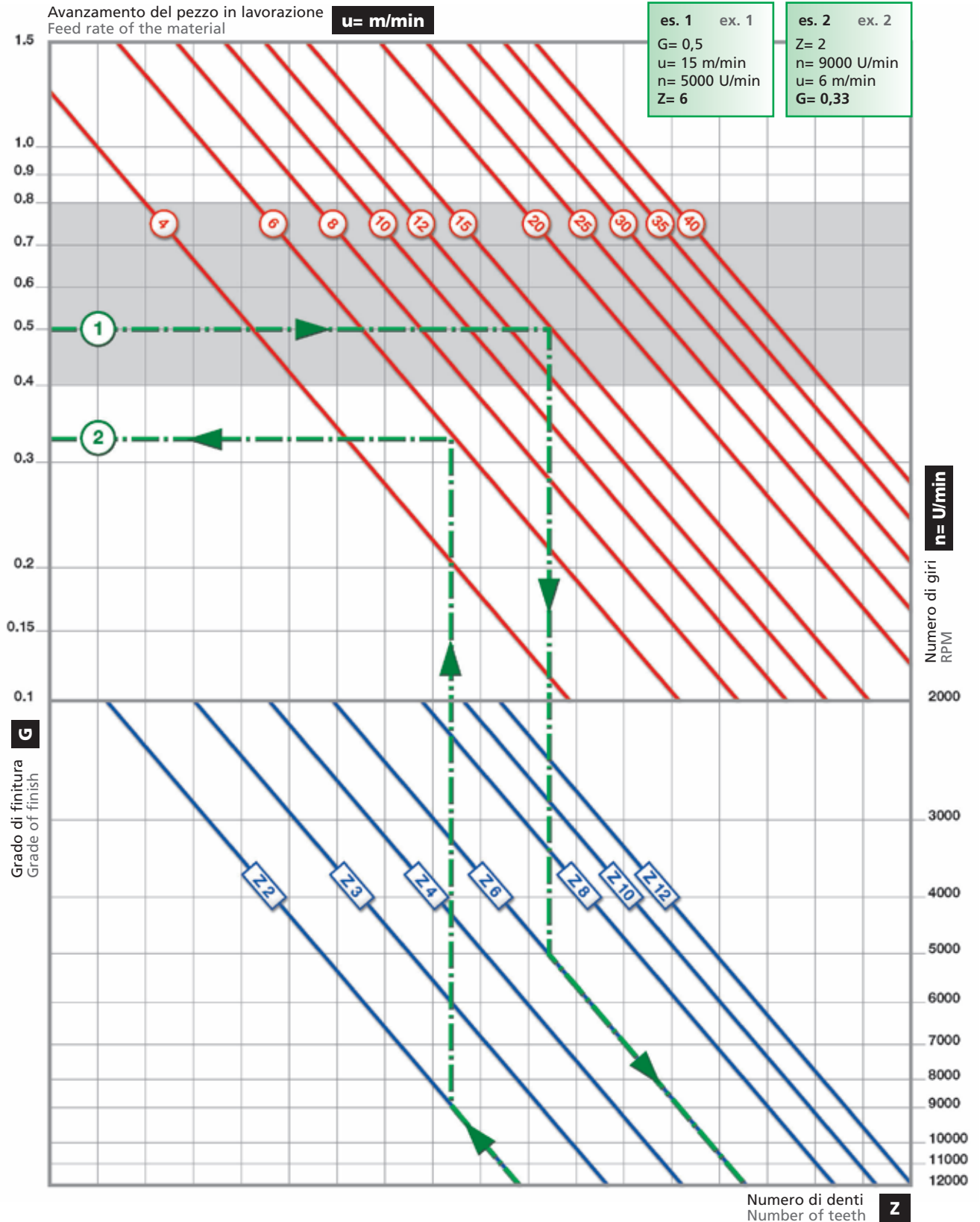
es. 2 ex. 2  
V= 37 m/s  
n= 4500 U/min  
D= 200 mm



# TAVOLA PER IL CALCOLO DEL NUMERO DI DENTI, DELLA VELOCITÀ DI ROTAZIONE, DELLA VELOCITÀ DI AVANZAMENTO E DEL GRADO DI FINITURA IDEALE DI UN UTENSILE

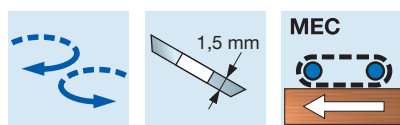
## TECHNICAL DIAGRAM TO OBTAIN NUMBER OF TEETH, FEED RATE, RPM AND GRADE OF FINISH OF A CUTTING TOOL

GRADO DI FINITURA (G): GRADE OF FINISH (G):	TRACCE DI BRUCIATURA BURNING	0,10-0,40	FINITURA SU LEGNO TENERO FINISH ON SOFTWOOD	0,40-0,60	FINITURA SU LEGNO DURO FINISH ON HARDWOOD	0,60-0,80	SGROSSATURA ROUGH FINISH	0,80-1,50
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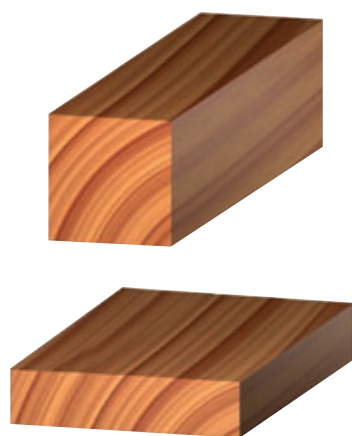
# T102M

## TESTE PORTACOLTELLI PER SPIANARE, PER SCORNICIATRICI MODULAR PLANER CUTTERHEADS WITH DISPOSABLE KNIVES



- Utilizzabile in accoppiamento con utensili T182M.
- Can be used in combination with item T182M to cut guiding rebates.

Articolo Item	Utilizzabile con: in conjunction with item:
T102M	T182M EA3
T102M	T182M EB3



- ESEMPI DI APPLICAZIONE
- APPLICATION EXAMPLES

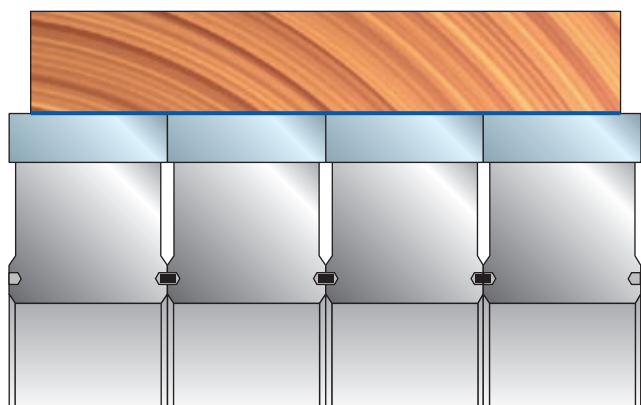


Fig. A

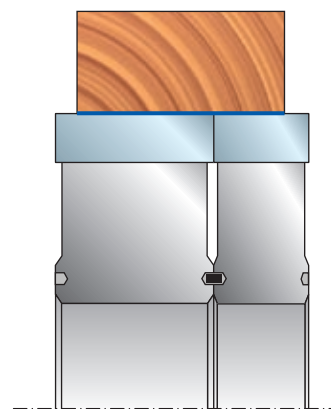
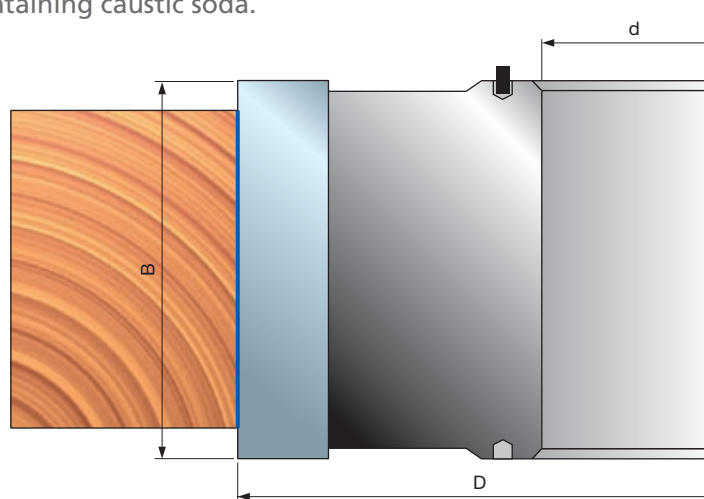


Fig. B

D	B	d*	Z	R	Codice Code
125	50	40	4		T102M AC3
125	50	40	4		T102M AD3
125	30	40 (50)	4		T102M AF3

	Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
AC3 AD3	Coltello / Knife	50 x 12 x 1,5	CG01M FA3
	Cuneo / Wedge	15 x 46 x 8	CN09M AP9
AF3	Coltello / Knife	30 x 12 x 1,5	CG01M EA3
	Cuneo / Wedge	15 x 26 x 8	CN09M AD9
	Vite / Screw	M10 x 22	VT19M MA9
	Ogiva / Nut	15 x 13,3 x 10	VT20M MA9
	Chiave / Allen key	5 x 110	CB03M EA9

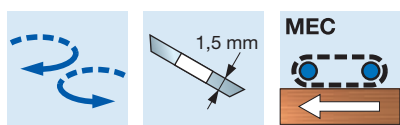
- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda.



- Questi utensili possono essere sovrapposti e utilizzati insieme per la lavorazione di una superficie più ampia. Inoltre, è possibile sovrapporre ed utilizzare utensili che montino gli stessi coltelli (figura A) o utensili con coltelli di misure diverse, per es: 50 mm e 30 mm (figura B).
- These tools can be stacked and used in multiples thus enabling the machining of a wider area. Furthermore, one can either stack and use tools bearing the same identical knives (picture A) or tools equipped with knives of different sizes, for example 50 mm - 30 mm (picture B).

# TM06M

## TESTE PORTACOLTELLI PER SPIANARE - TAGLIANTI ELICOIDALI HELICAL PLANER CUTTERHEADS WITH DISPOSABLE KNIVES



- Utilizzabile in accoppiamento con utensili T182M.
- Can be used in combination with item T182M to cut guiding rebates.

Articolo Item	Utilizzabile con: in conjunction with item:
TM06M Ø125	T182M AB3
TM06M Ø125	T182M AA3
TM06M PC3 - TM06M PH3	T182M CB3
TM06M	T182M DB3

D mm	B <sup>(1)</sup> mm	d mm	Z	R	Codice Code
100	113	35	12		TM06M PC3
100	183	35	20		TM06M PH3
125	78,5	40	12		TM06M AB3
125	130	40	21		TM06M AD3
125	148,5	40	24		TM06M AF3
125	183,5	40	30		TM06M AH3
125	201	40	33		TM06M AI3
125	236	40	39		TM06M AM3

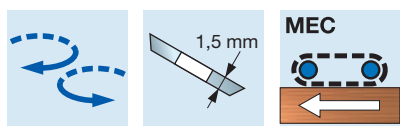
- (1) La misura "B" indica lo spessore utile di taglio; l'ingombro totale dell'utensile è B + 3,5 mm.
- (1) Dimension "B" indicates effective cutting length. The maximum tool length is B + 3,5 mm.

Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Coltello / Knife	24 x 12 x 1,5	CG18M BC3
Cuneo / Wedge	15 x 19,3 x 8	CN09M AM9
Vite / Screw	M10 x 22	VT19M MA9
Ogiva / Nut	15 x 13,3 x 10	VT20M MA9
Chiave / Allen key	5 x 110	CB03M EA9

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. Non è consentita l'allargatura del foro. Per grosse asportazioni di legno, con buona finitura, fino ad uno spessore massimo di 20 mm.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. Rebore not available. Gives a good finish when cutting a maximum depth of 20 mm.

# TM07M

## TESTE PORTACOLTELLI PER SPIANARE - TAGLIANTI ELICOIDALI HELICAL PLANER CUTTERHEADS WITH DISPOSABLE KNIVES



Articolo Item	Utilizzabile con: in conjunction with item:
TM07M Ø125	T182M AB3
TM07M AF3	T182M BB3
TM07M	T182M AA3
TM07M	T182M DB3

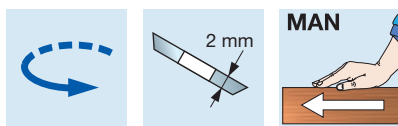
D mm	B mm	d mm	Z	R	Codice Code
125	130	40	9		TM07M GD3
125	138	40	9		TM07M GE3
125	180	40	12		TM07M GF3
125	226	40	15		TM07M GG3

Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Coltello / Knife	50 x 12 x 1,5	CG18M FC3
Cuneo / Wedge	15 x 46 x 8	CN09M AP9
Vite / Screw	M10 x 22	VT19M MA9
Ogiva / Nut	15 x 13,3 x 10	VT20M MA9
Chiave / Allen key	5 x 110	CB03M EA9

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. Non è consentita l'allargatura del foro. Per asportazioni normali di legno (5 - 6 mm), con buona finitura.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. Rebore not available. Gives a good finish when cutting a maximum depth of 5 - 6 mm.
- Utilizzabile in accoppiamento con utensili T182M.
- Can be used in combination with item T182M to cut guiding rebates.

# TM20M

## PIALLETTO MULTITAGLIENTI PER CONTORNATURA CON CUSCINETTO MULTICUT PLANER CUTTERHEADS WITH BALL BEARING



Le nuove teste TM20M per spianare offrono sia la qualità che il risparmio:

- i multitaglianti con disposizione elicoidale hanno la funzione di frazionare il taglio, diminuendo così la superficie d'impatto di ciascun tagliente con il materiale da lavorare,
- i taglienti sono meno soggetti ad usura e quindi l'utensile dura più a lungo,
- in abbinamento al cuscinetto, si possono eseguire contornature con guide sagomate a piacere,
- grazie al diametro ridotto è possibile eseguire con facilità raccordi precisi e di piccole dimensioni.

Inoltre, le teste per spianare Freud sono costruite in lega leggera (Ergal) e l'utensile risulta più maneggevole e richiede meno potenza al motore della macchina. Per la pulizia non utilizzare prodotti contenenti soda caustica.

The new TM20M planer cutterheads offer both quality and savings: the multiple cutters, arranged in a helicoidal fashion, divide the cutting operation between them, thereby reducing each cutter's contact with the surface being processed.

- the cutting edges are less subject to wear and therefore the tool lasts longer,
- when combined with the bearing it can be used for cornering, with shaped guides of your choice,
- its compact diameter makes it easy to obtain small-sized and precise fittings.

Freud planer cutterheads, moreover, are manufactured from light alloy (Ergal) which gives them the advantages of both being more manageable and of requiring less machine motor power. For cleaning do not use products containing caustic soda.

D	B	d	Z	R	Codice
mm	mm	mm			Code
55	59	30		10	TM20M ACC
62	59	35		10	TM20M BCD
68	59	40		10	TM20M CCE
80	59	50		10	TM20M DCF

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Rasante smussato / Spur	14 x 14 x 2	RG01M AG3
Vite / Screw	M5 x 8	VT05M AA9
Chiave Torx / Torx key	T20	CB03M CC9

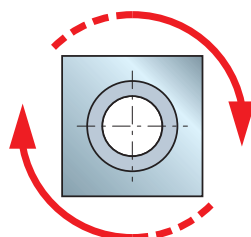
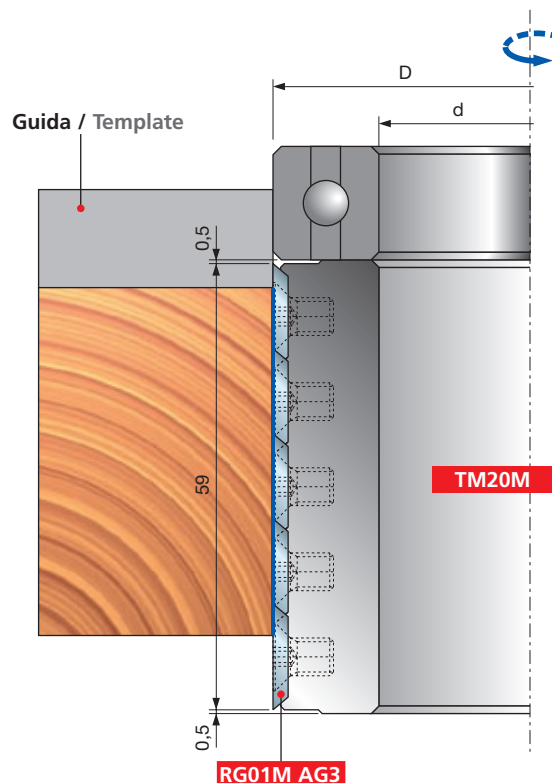
I CUSCINETTI 3101M VANNO ORDINATI A PARTE.

3101M BEARINGS ARE NOT INCLUDED.

### Cuscinetti per teste TM20M

### Bearings for cutterheads TM20M

Per testa	Dimensioni	Codice
For cutterhead	Dimensions	Code
TM20M ACC	55 x 13 x 30	3101M AC9
TM20M BCD	62 x 14 x 35	3101M AD9
TM20M CCE	68 x 15 x 40	3101M AE9
TM20M DCF	80 x 16 x 50	3101M AG9



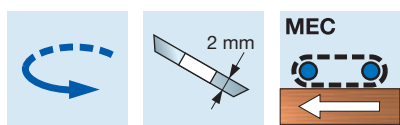
I coltellini quadrati sono affilati su tutti e quattro i lati: questo significa che, per ben 4 volte, si ha un utensile affilato come appena uscito dalla fabbrica!

The square knives are sharpened on all 4 edges, which means that you buy one item but infact receive four factory sharpened tools.



# TM21M

## TESTE MULTITAGLIENTI PER SPIANARE MULTICUT PLANER CUTTERHEADS



Le nuove teste TM21M per spianare offrono sia la qualità che il risparmio:

- i multitaglianti con disposizione elicoidale hanno la funzione di frazionare il taglio, diminuendo così la superficie d'impatto di ciascun tagliente con il materiale da lavorare. I vantaggi di questa soluzione sono molteplici:
- i taglienti sono meno soggetti ad usura e quindi l'utensile dura più a lungo,
- la produttività aumenta,
- lo scarico del truciolo agevolato facilita l'asportazione del materiale e permette lavorazioni più profonde,
- l'utensile risulta più silenzioso.

Inoltre, le teste per spianare sono costruite in lega leggera (Ergal) e l'utensile risulta più maneggevole e richiede meno potenza al motore della macchina.

The new TM21M planer cutterheads offer both quality and savings: the multiple cutters, arranged in a helicoidal fashion, divide the cutting operation between them, thereby reducing each cutter's contact with the surface being processed. This solution provides for multiple advantages:

- the cutters are less subject to wear and the tool, therefore, enjoys a longer working life,
- increased productivity,
- the facilitated wood shavings discharge makes the removal of the material easier and allows for more in-depth processing,
- the tool produces less noise

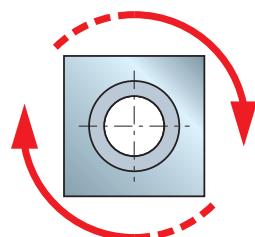
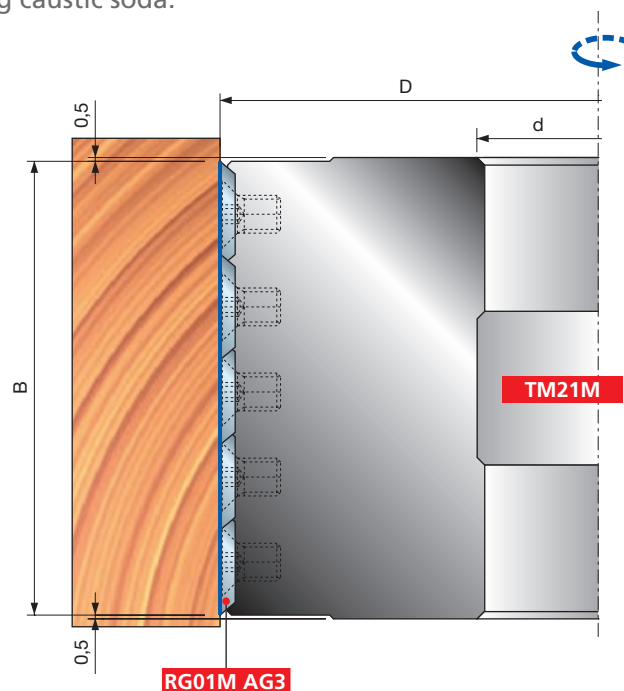
Freud planer cutterheads, moreover, are manufactured from light alloy (Ergal) which gives them the advantages of both being more manageable and of requiring less machine motor power.

D	B	d	Z	R	Codice
mm	mm	mm			Code
100	60	30		15	TM21M ECC
100	100	30		27	TM21M EEC
125	130	40		33	TM21M HGE
125	150	40		39	TM21M HHE
125	180	40		45	TM21M HIE

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Rasante smussato / Spur	14 x 14 x 2	RG01M AG3
Vite / Screw	M5 x 8	VT05M AA9
Chiave Torx / Torx key	T20	CB03M CA9

Questa gamma di teste per spianare TM21M è adatta a soddisfare tutte le lavorazioni ordinarie di piallatura, tuttavia, si costruiscono utensili speciali a disegno o a campione per soddisfare ogni particolare esigenza del Cliente. Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.

Although the TM21M planer cutterhead series is suitable for regular planing operations, special tools can be manufactured, based both on designs as well as on tool samples, in order to satisfy all of the customer's needs. Light alloy body (Ergal). For cleaning do not use products containing caustic soda.

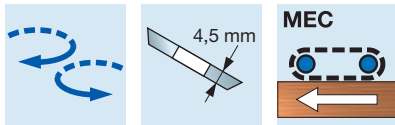


I coltellini quadrati sono affilati su tutti e quattro i lati: questo significa che, per ben 4 volte, si ha un utensile affilato come appena uscito dalla fabbrica!

The square knives are sharpened on all 4 edges, which means that you buy one item but infact receive four factory sharpened tools.

# TM17M

## TESTE PER SPIANARE ISOPROFIL ISOPROFIL PLANER CUTTERHEADS



# ISOPROFIL®

**BREVETTO  
REGISTRATO**

**REGISTERED  
PATENT**

■ Teste con angolo assiale e coltelli in metallo duro micrograno di nuova generazione (X10TS). Massima finitura nelle basse asportazioni (fino a 3 mm); particolarmente indicate per la lavorazione di legni teneri. È possibile costruire le nuove teste per pialla anche con misure diverse da quelle standard indicando, al momento dell'ordine, diametro, lunghezza e foro. La produzione è soggetta all'approvazione del nostro dipartimento tecnico.

■ Cutterheads with shear angle and knives in hard metal micrograin of a new generation (X10TS). Top finish when removing small material quantity (up to 3 mm); particularly well suited for softwood. It is possible to manufacture the new planer heads with different dimensions respect to the standard ones, indicating, in the order, diameter, length and bore. The production is subject to the approval of our technical department.

■ Utilizzabile in accoppiamento con utensili T182M.

■ Can be used in combination with item T182M to cut guiding rebates.

### Utensili con coltelli in HW Tools supplied with HW knives

D	B	d	Z	R	Codice Code
125	80	40	2		TM17M AA3
125	130	40	2		TM17M AD3
125	150	40	2		TM17M AF3
125	180	40	2		TM17M AH3
125	240	40	2		TM17M AM3

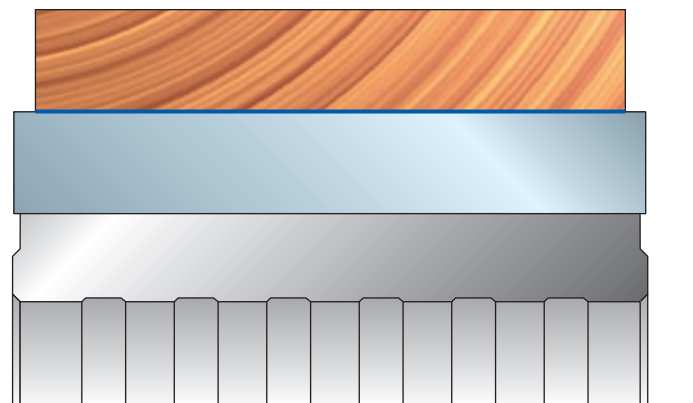
### Utensili con coltelli in HSS Tools supplied with HSS knives

D	B	d	Z	R	Codice Code
125	80	40	2		TM17M AA2
125	130	40	2		TM17M AD2
125	150	40	2		TM17M AF2
125	180	40	2		TM17M AH2
125	240	40	2		TM17M AM2

■ Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.

■ Light alloy body (Ergal). For cleaning do not use products containing caustic soda.

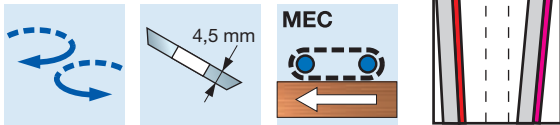
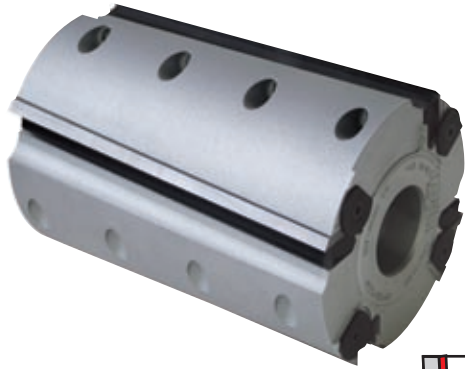
	Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
AA2-AA3	Cuneo / Wedge	82 x 19,5 x 10	CN14M AA9
	Coltello in HW / HW knife	82 x 19 x 4,5	CP10M AA3
	Coltello in HSS / HSS knife	82 x 19 x 4,5	CP10M AA2
	Vite / Screw	M10 x 16	2616M EE9
AD2-AD3	Cuneo / Wedge	132 x 19,5 x 10	CN14M AD9
	Coltello in HW / HW knife	132 x 19 x 4,5	CP10M AD3
	Coltello in HSS / HSS knife	132 x 19 x 4,5	CP10M AD2
	Vite / Screw	M10 x 16	2616M EE9
AF2-AF3	Cuneo / Wedge	152 x 19,5 x 10	CN14M AF9
	Coltello in HW / HW knife	152 x 19 x 4,5	CP10M AF3
	Coltello in HSS / HSS knife	152 x 19 x 4,5	CP10M AF2
	Vite / Screw	M10 x 16	2616M EE9
AH2-AH3	Cuneo / Wedge	182 x 19,5 x 10	CN14M AH9
	Coltello in HW / HW knife	182 x 19 x 4,5	CP10M AH3
	Coltello in HSS / HSS knife	182 x 19 x 4,5	CP10M AH2
	Vite / Screw	M10 x 16	2616M EE9
AM2-AM3	Cuneo / Wedge	242 x 19,5 x 10	CN14M AM9
	Coltello in HW / HW knife	242 x 19 x 4,5	CP10M AM3
	Coltello in HSS / HSS knife	242 x 19 x 4,5	CP10M AM2
	Vite / Screw	M10 x 16	2616M EE9



Articolo Item	Utilizzabile con: in conjunction with item:
TM17M	T182M EA3
TM17M	T182M EB3

# TM28M

## TESTE PER SPIANARE ISOPROFIL CON ANGOLO ASSIALE ALTERNO ISOPROFIL PLANER CUTTERHEADS WITH ALTERNATING SHEAR ANGLE



# ISoprofil®

**BREVETTO  
REGISTRATO**

**REGISTERED  
PATENT**

■ Teste con **angolo assiale alterno** e coltelli in metallo duro micrograno di nuova generazione (X10TS). Massima finitura nelle basse asportazioni (fino a 3 mm); particolarmente indicate per la lavorazione di legni teneri e duri. È possibile costruire le nuove teste per pialla anche con misure diverse da quelle standard indicando, al momento dell'ordine, diametro, lunghezza e foro. La produzione è soggetta all'approvazione del nostro dipartimento tecnico.

■ Cutterheads with **alternating shear angle** and knives in hard metal micrograin of a new generation (x10ts). Top finish when removing small material quantity (up to 3 mm); particularly well suited for hard and softwood. It is possible to manufacture the new planer heads with different dimensions respect to the standard ones, indicating, in the order, diameter, length and bore. The production is subject to the approval of our technical department.

■ Utilizzabile in accoppiamento con utensili T182M.

■ Can be used in combination with item T182M to cut guiding rebates.

Articolo Item	Utilizzabile con: in conjunction with item:
TM28M	T182M EA3
TM28M	T182M EB3

### Utensili con coltelli in HW Tools supplied with HW knives

D mm	B mm	d mm	Z	R	Codice Code
125	80	40	4		TM28M AA3
125	130	40	4		TM28M AD3
125	150	40	4		TM28M AF3
125	180	40	4		TM28M AH3
125	240	40	4		TM28M AM3

### Utensili con coltelli in HSS Tools supplied with HSS knives

D mm	B mm	d mm	Z	R	Codice Code
125	80	40	4		TM28M AA2
125	130	40	4		TM28M AD2
125	150	40	4		TM28M AF2
125	180	40	4		TM28M AH2
125	240	40	4		TM28M AM2

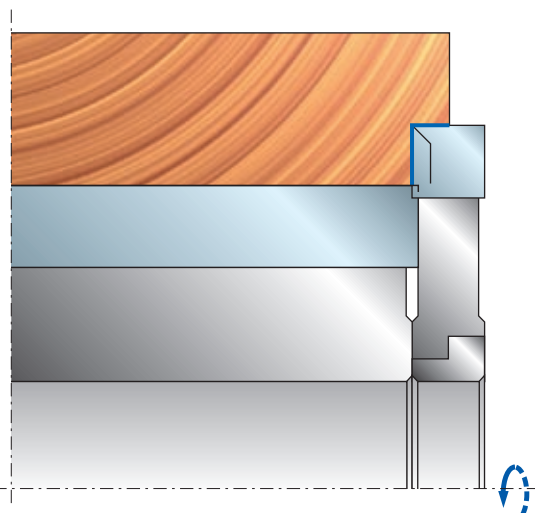
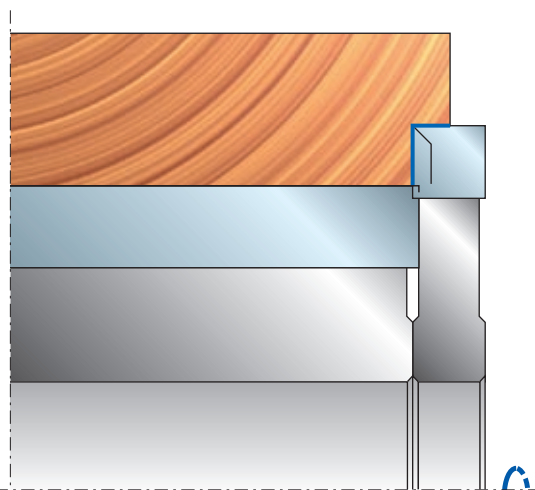
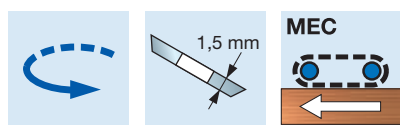
■ Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.

■ Light alloy body (Ergal). For cleaning do not use products containing caustic soda.

	Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
AA2 - AA3	Cuneo DX / Wedge	82 x 19,5 x 10	CN28MD AA9
	Cuneo SX / Wedge	82 x 19,5 x 10	CN28MS AA9
	Coltello DX in HSS / HSS Knife	82 x 19 x 4,5	CP28MD AA2
	Coltello SX in HSS / HSS Knife	82 x 19 x 4,5	CP28MS AA2
	Coltello DX in HW / HW Knife	82 x 19 x 4,5	CP28MD AA3
	Coltello SX in HW / HW Knife	82 x 19 x 4,5	CP28MS AA3
AD2 - AD3	Cuneo DX / Wedge	132 x 19,5 x 10	CN28MD AD9
	Cuneo SX / Wedge	132 x 19,5 x 10	CN28MS AD9
	Coltello DX in HSS / HSS Knife	132 x 4,5 x 19	CP28MD AD2
	Coltello SX in HSS / HSS Knife	132 x 4,5 x 19	CP28MS AD2
	Coltello DX in HW / HW Knife	132 x 4,5 x 19	CP28MD AD3
	Coltello SX in HW / HW Knife	132 x 4,5 x 19	CP28MS AD3
AF2 - AF3	Cuneo DX / Wedge	152 x 19,5 x 10	CN28MD AF9
	Cuneo SX / Wedge	152 x 19,5 x 10	CN28MS AF9
	Coltello DX in HSS / HSS Knife	152 x 4,5 x 19	CP28MD AF2
	Coltello SX in HSS / HSS Knife	152 x 4,5 x 19	CP28MS AF2
	Coltello DX in HW / HW Knife	152 x 4,5 x 19	CP28MD AF3
	Coltello SX in HW / HW Knife	152 x 4,5 x 19	CP28MS AF3
AH2 - AH3	Cuneo DX / Wedge	182 x 19,5 x 10	CN28MD AH9
	Cuneo SX / Wedge	182 x 19,5 x 10	CN28MS AH9
	Coltello DX in HSS / HSS Knife	182 x 4,5 x 19	CP28MD AH2
	Coltello SX in HSS / HSS Knife	182 x 4,5 x 19	CP28MS AH2
	Coltello DX in HW / HW Knife	182 x 4,5 x 19	CP28MD AH3
	Coltello SX in HW / HW Knife	182 x 4,5 x 19	CP28MS AH3
AM2 - AM3	Cuneo DX / Wedge	242 x 19,5 x 10	CN28MD AM9
	Cuneo SX / Wedge	242 x 19,5 x 10	CN28MS AM9
	Coltello DX in HSS / HSS Knife	242 x 4,5 x 19	CP28MD AM2
	Coltello SX in HSS / HSS Knife	242 x 4,5 x 19	CP28MS AM2
	Coltello DX in HW / HW Knife	242 x 4,5 x 19	CP28MD AM3
	Coltello SX in HW / HW Knife	242 x 4,5 x 19	CP28MS AM3
	Piastrina di riscontro / Positioning plate	22 x 1,7 x 19	VT18M GB9
	Vite / Screw	M5 x 8	VT05M AA9
	Chiave / Allen key	5 x 110	CB03M EA9
	Vite / Screw	M10 x 16	2616M EE9

# T182M

## TESTE PORTACOLTELLI PER SCANALATURE DI GUIDA LATERALE GROOVE BEAD CUTTERHEADS WITH DISPOSABLE KNIVES



D	B	d	Z	R	Codice
mm	mm	mm			Code
120	12	35	3	3	T182M BB3
120	12	35	2	2	T182M CB3
145	12	40	4	2	T182M EA3
145	12	40	3	3	T182M AA3
145	10	40	3	3	T182M AB3*
150	10	40	4	2	T182M EB3
150	10	40	3	3	T182M DB3

■ **Art. T182M:** Si utilizza in accoppiamento con utensili TM06M-TM07M.

■ **Item T182M:** For use in combination with TM06M-TM07M to cut guiding rebates.

Articolo	Utilizzabile con:
Item	in conjunction with item:
T182M AB3*	TM06M - TM07M Ø125
T182M BB3	TM07M AF3
T182M AA3	TM06M - TM07M Ø125
T182M CB3	TM06M PC3 - TM06M PH3
T182M DB3	TM06M - TM07M
T182M EA3	TM17M - TM28M - T102M
T182M EB3	TM17M - TM28M - T102M

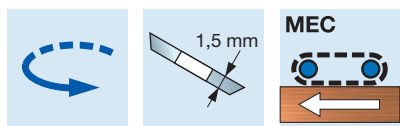
■ \* Va montata su scorniciatrici Casadei e S.C.M.

■ \* For use on Casadei and S.C.M. moulders.

	Parti di ricambio		Dimensioni	Codice
	Spare parts		Dimensions	Code
AA3	Coltello / Knife		12 x 12 x 1,5	CG01M BA3
	Cuneo / Wedge		15 x 10 x 8	CN01M BA9
	Flangia / Flange		68 x 10 x 40	FX01M HC9
	Vite / Screw		M6 x 16	VT03M DI9
AB3	Coltello / Knife		9,6 x 12 x 1,5	CG01M MA3
	Cuneo / Wedge		15 x 8 x 8	CN09M DB9
	Vite / Screw		M5 x 19	VT11M AA9
BB3	Coltello / Knife		11 x 12 x 1,5	CG01M NA3
	Cuneo / Wedge		15 x 10 x 8	CN01M BA9
	Vite / Screw		M6 x 16	VT03M DI9
CB3	Coltello / Knife		12 x 12 x 1,5	CG06M AA3
	Cuneo / Wedge		15 x 10 x 8	CN01M BA9
	Vite / Screw		M6 x 16	VT03M DI9
DB3	Coltello / Knife		9,6 x 12 x 1,5	CG01M MA3
	Cuneo / Wedge		15 x 8 x 8	CN09M DB9
	Vite / Screw		M5 x 16	VT03M BB9
EA3	Coltello / Knife		12 x 12 x 1,5	CG01M BA3
	Cuneo / Wedge		15 x 10 x 8	CN09MS AA9
	Flangia / Flange		68 x 10 x 40	FX01M HC9
	Vite / Screw		M6 x 22	VT19M AB9
	Ogiva / Nut		10 x 11,5 x 6	VT20M AA9
EB3	Coltello / Knife		9,6 x 12 x 1,5	CG01M MA3
	Cuneo / Wedge		15 x 8 x 8	CN09M AH9
	Vite / Screw		M6 x 22	VT19M AB9
	Ogiva / Nut		9 x 10,5 x 6	VT20M GA9
	Rasante / Spur		14 x 14 x 2	RG01M AA3
	Vite / Screw		M5 x 8	VT05M AA9

# T183M

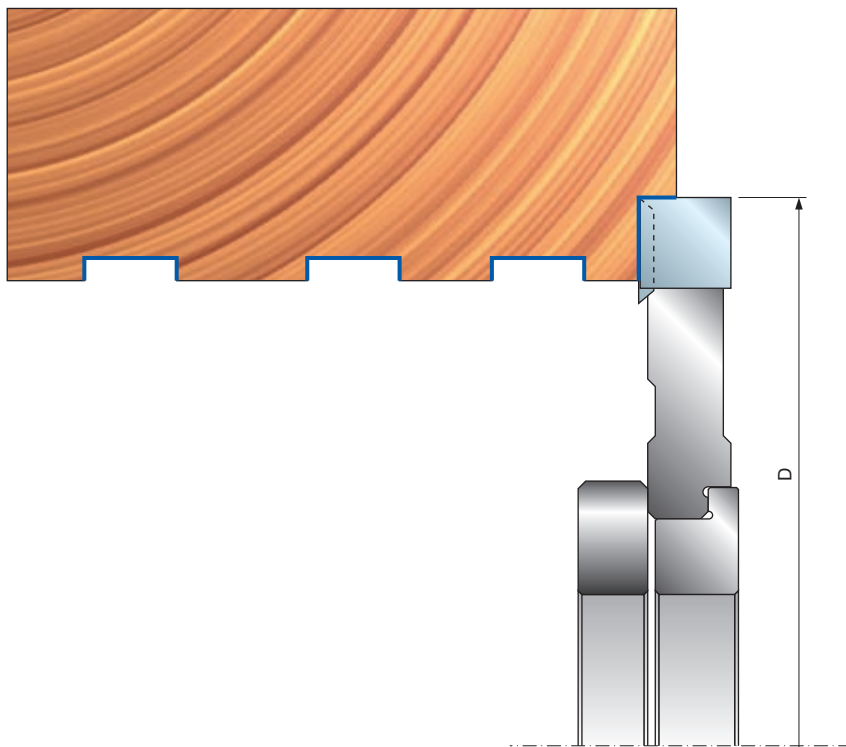
## TESTA PORTACOLTELLI PER SCANALATURE DI GUIDA LATERALE GROOVE BEAD CUTTERHEAD WITH DISPOSABLE KNIVES



D	B	d	Z	R	Codice
mm	mm	mm			Code
145	12	40	4	2	T183M AA3

- **Art. T183M:** Per l'esecuzione di scanalature di guida su corniciatrice S.C.M.
- **Item T183M:** For cutting guide grooves in solid wood for S.C.M. moulding machines.

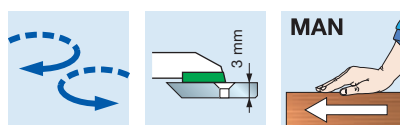
Parti di ricambio		Dimensioni	Codice
Spare parts		Dimensions	Code
Coltello / Knife		12 x 12 x 1,5	CG01M BA3
Cuneo / Wedge		15 x 10 x 8	CN09MS AA9
Vite / Screw		M6 x 22	VT19M AB9
Ogiva / Nut		10 x 11,5 x 6	VT20M AA9
Rasante / Spur		14 x 14 x 2	RG01M AA3
Vite / Screw		M5 x 8	VT05M AA9
Chiave / Allen key		3 x 110	CB03M AA9



# TW23M Z = 2

# TW20M Z = 4

## TESTE PORTACOLTELLI PER GIUNZIONI FINGER JOINT CUTTERHEADS



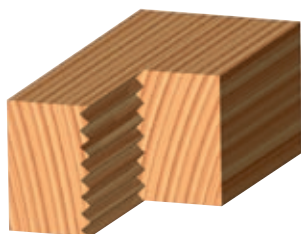
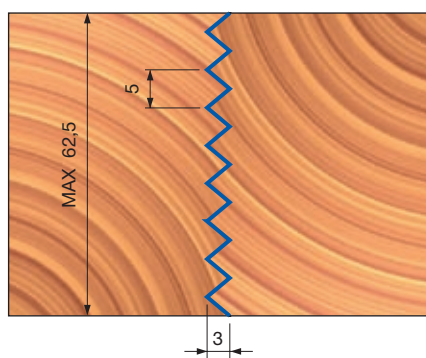
### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •

(1) R&S - SV/R 157/156







(2) R&S - SV/R 144/141



■ Vengono forniti in dotazione i coltelli ed un anello distanziale  $S = 2,5$  mm per ottenere una perfetta giunzione mantenendo la programmazione iniziale inalterata. Lo spessore massimo ottenibile è di 62,5 mm.

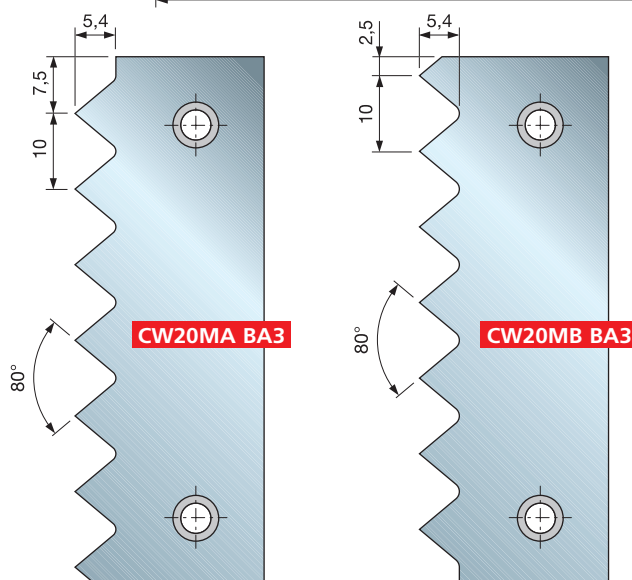
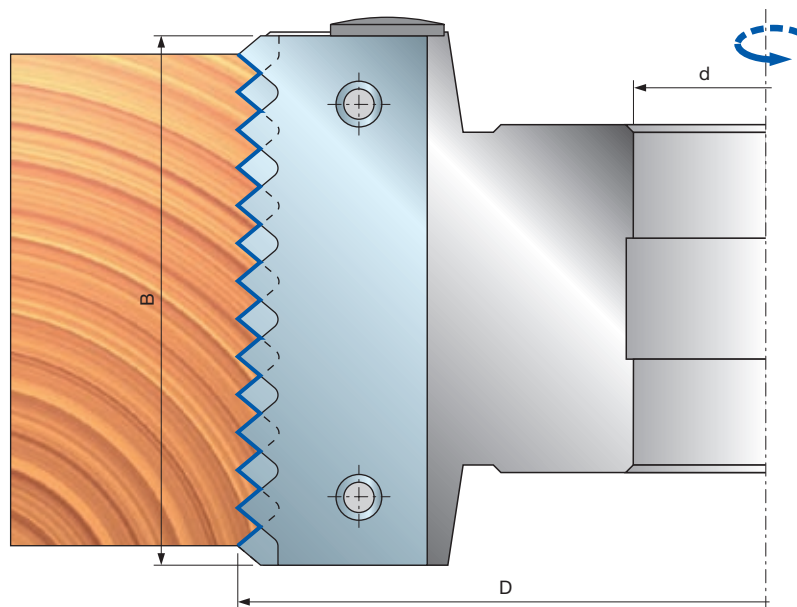
■ The tool is supplied with a spacing ring  $S = 2,5$  mm so that a perfect joint can be obtained and the initial zero-point programming maintained. The max. thickness possible is 62,5 mm.

D	B	d*	Z	R	Codice
mm	mm	mm			Code
140	70	35 (50)	2		TW23M BF3 <sup>(1)</sup>
140	70	35 (50)	4		TW20M BF3 <sup>(2)</sup>

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Coltello / Knife 	70 x 25 x 3	CW20MA BA3
Coltello / Knife 	70 x 25 x 3	CW20MB BA3
Cuneo / Wedge 	66 x 19 x 8	CN13M AF9
Vite / Screw 	M10 x 18	VT03M CC9
Vite / Screw 	M5 x 7 x 16	VT08M AE9
Chiave / Allen key 	5 x 110	CB03M EA9

■ **UTENSILI PER LA LAVORAZIONE LUNGO VENA DI PEZZI CORTI.** Attenzione: sulle teste sono montati due tipi di coltelli diversi: **CW20MA** e **CW20MB**. Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.

■ **TOOLS FOR WORKING LONG GRAIN ON SHORT WORKPIECES.** Please note: two different types of knives are fitted on the cutterheads: **CW20MA** and **CW20MB**. Light alloy body (Ergal). For cleaning do not use products containing caustic soda.



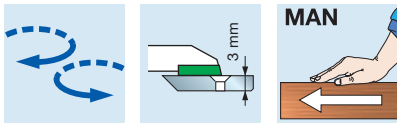
# TW22M

## TESTA PORTACOLTELLI PER GIUNZIONI FINGER JOINT CUTTERHEAD



D	B	d*	Z	R	Codice Code
140	80	35 (50)	4		TW22M BB3

Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Coltello / Knife	80 x 29 x 3	CW22MA AA3
Coltello / Knife	80 x 29 x 3	CW22MB AA3
Cuneo / Wedge	76 x 24 x 8	CN13M AG9
Vite / Screw	M10 x 18	VT03M CC9
Vite / Screw	M5 x 7 x 16	VT08M AE9
Chiave / Allen key	5 x 110	CB03M EA9

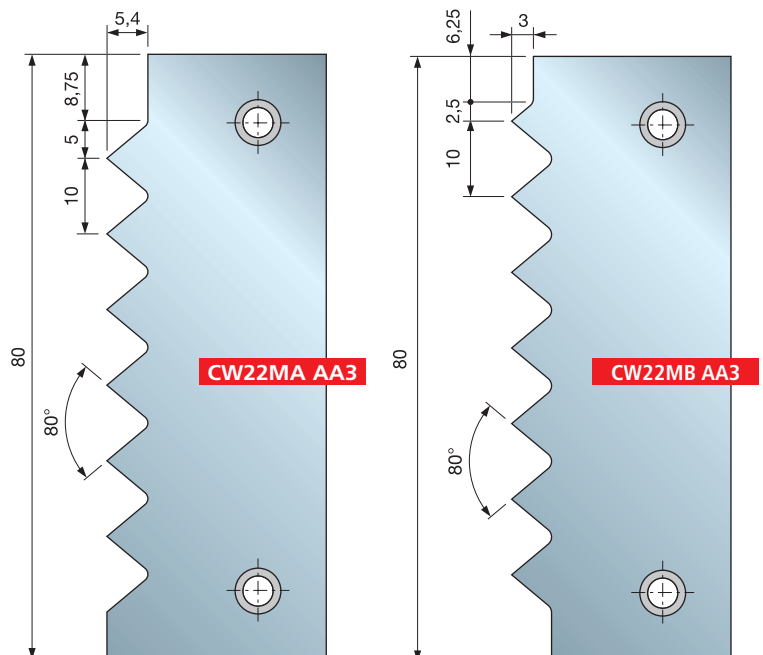
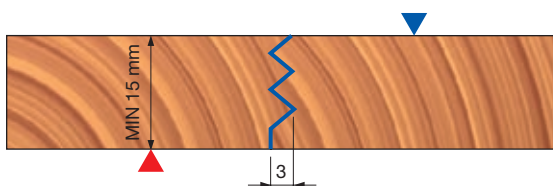
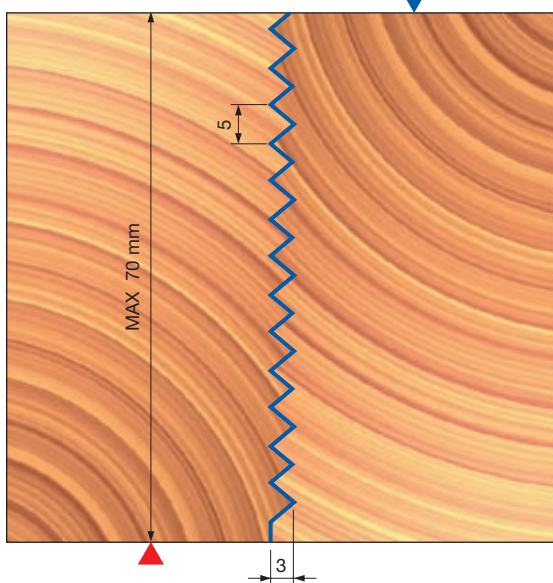
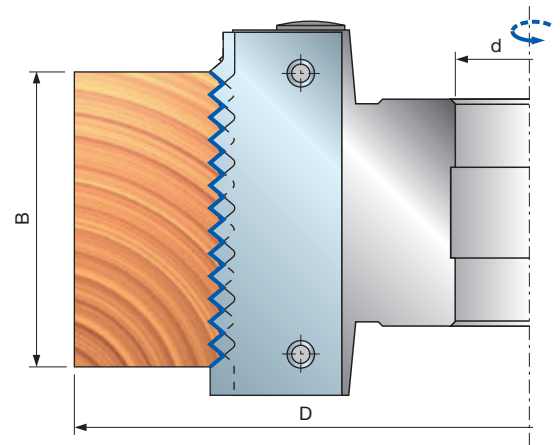
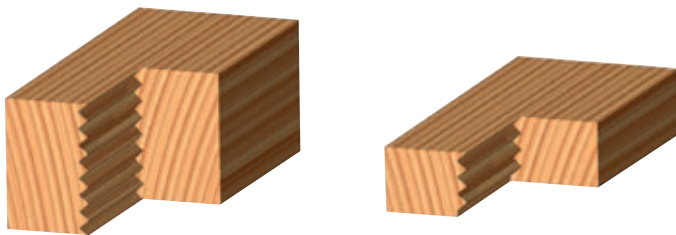


### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •  
R&S - SV/R 156/155

- **UTENSILI PER LA LAVORAZIONE LUNGO VENA DI PEZZI CORTI.** Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. Sulla testa vengono montati due tipi di coltelli: due **CW22MA AA3** + due **CW22MB AA3**.
- **TOOLS FOR WORKING LONG GRAIN ON SHORT WORKPIECES.** Light alloy body (Ergal). For cleaning do not use products containing caustic soda. Please note: two different types of knives are fitted on the cutterheads: two **CW22MA AA3** and two **CW22MB AA3**.



## ESEMPIO DI APPLICAZIONE

### APPLICATION EXAMPLE

FIG. A: PROFILO / PROFILE

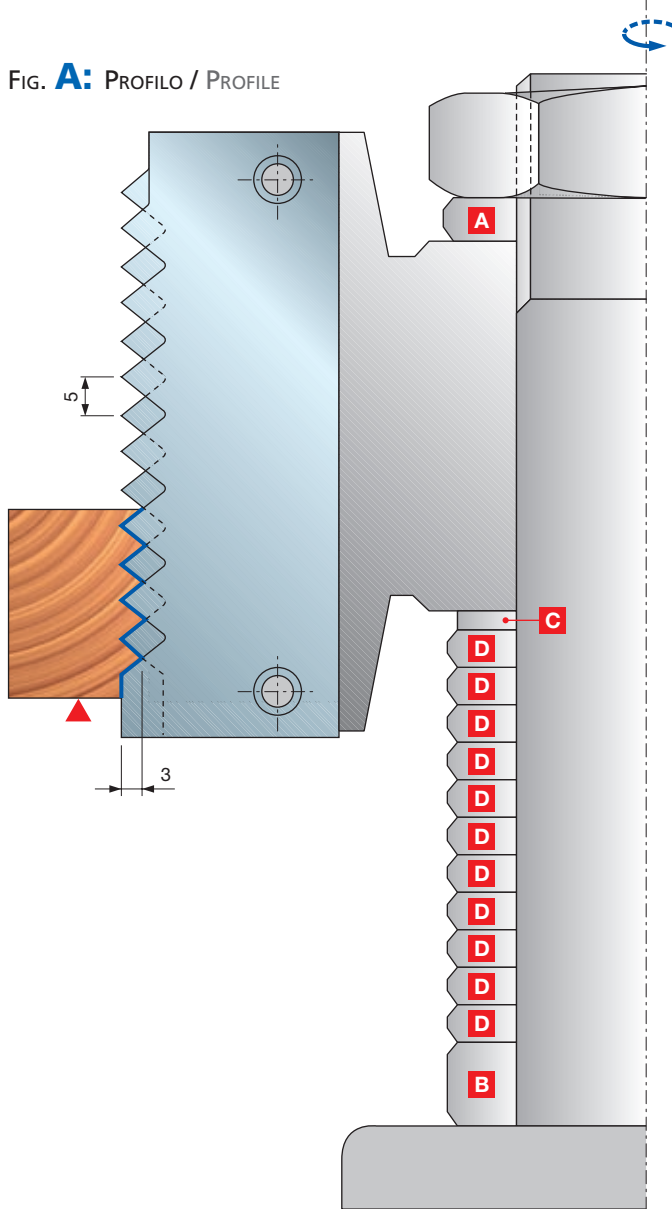
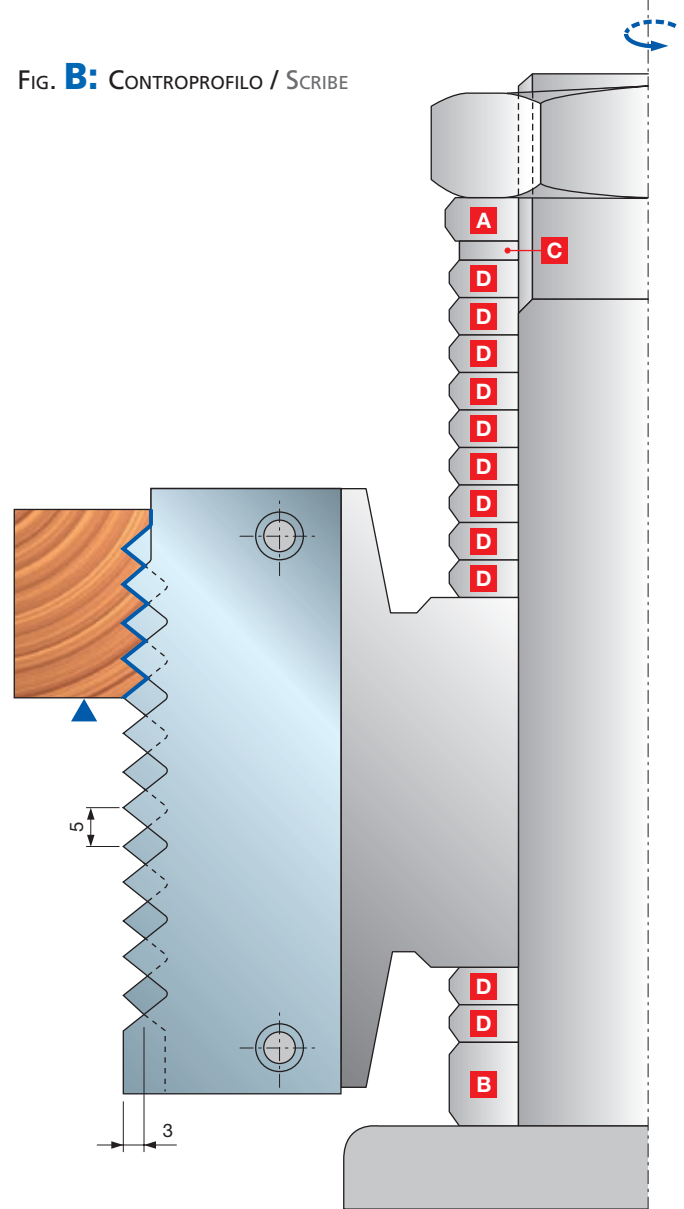


FIG. B: CONTROPROFILO / SCRIBE



- 1: Eseguire il profilo inserendo sotto l'utensile l'anello "C" (in dotazione) e tutti gli anelli "D" (AN04M) come indicato nella figura A.
  - 2: Per eseguire il controprofilo togliere l'anello "C" e gli anelli "D" (tanti quanti sono i dentelli non interessati alla lavorazione), inserendoli nella parte superiore dell'utensile, come indicato nella figura B.
- Nell'esempio raffigurato i dentelli non interessati sono 9 (fig. A): bisognerà quindi togliere n. 9 anelli "D", oltre all'anello "C", ed inserirli sopra l'utensile (fig. B).
- Anelli "A-B": in dotazione alla macchina.
  - Anello "C": in dotazione all'utensile, spessore 2,5 mm (equivalente a 1/2 passo del dentello per il posizionamento esatto dell'utensile nell'esecuzione del controprofilo).
  - Anelli "D": spessore 5 mm (equivalente al passo del dentello), forniti a richiesta. Codice: AN04M BB9.
- 1: To obtain the profile, insert all spacers "C" and "D" below the tool as indicated in figure A.
  - 2: To achieve the counterprofile remove spacer "C" and as many spacers "D" as the number of teeth not in use, placing them above the tool as indicated in figure B.
- In the example above there are 9 teeth not used (fig. A), so 9 spacers "D" will be removed together with spacer "C" and placed above the tool (fig. B).
- Spacers "A-B": supplied with machine.
  - Spacer "C": 2,5 mm thickness, equal to 1/2 the tooth's pitch, for the exact positioning of the tool, in order to carry out the counter profile.
  - Spacers "D": 5 mm thickness, equal to the tooth's pitch (supplied on request; cod: AN04M BB9).

# AN04M

### SET DI ANELLI OPZIONALE

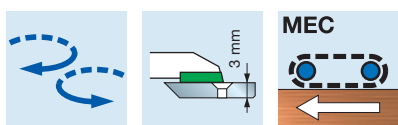
### OPTIONAL SET OF SPACERS

D	B	d	Z	R	Codice
mm	mm	mm			Code
55	5	35			AN04M BB9

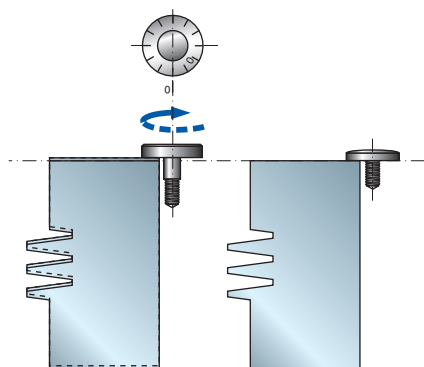


# TW01M

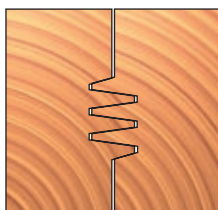
## TESTA PORTACOLTELLI PER GIUNZIONI - PROFILO INTERCAMBIABILE FINGER JOINT CUTTERHEAD



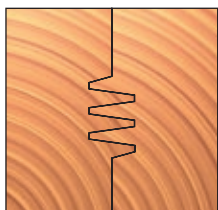
**PERFORMANCE**  
Coltelli Riaffilabili  
**SYSTEM**  
Resharpenable Knives



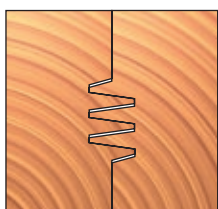
### ESEMPI DI REGOLAZIONE ADJUSTMENT EXAMPLES



Giunzione forzata  
Tight joint



Giunzione normale  
Regular joint



Giunzione lasca  
Loose joint

D	B	d*	Z	R	Codice
mm	mm	mm			Code
136	55	35 (50)	4		TW01M AB3

- Diametro della testa con i coltelli: 150 mm.
- Cutterhead diameter with knives is 150 mm.

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Cuneo / Wedge	51 x 23,6 x 8	CN13M AA9
Vite / Screw	M10 x 18	VT03M CC9
Vite / Screw	M5 x 8	VT08M AC9
Vite / Screw	M5 x 7 x 16	VT08M AE9
Vite / Screw	M4 x 6	2602M CE9
Chiave / Allen key	5 x 110	CB03M EA9

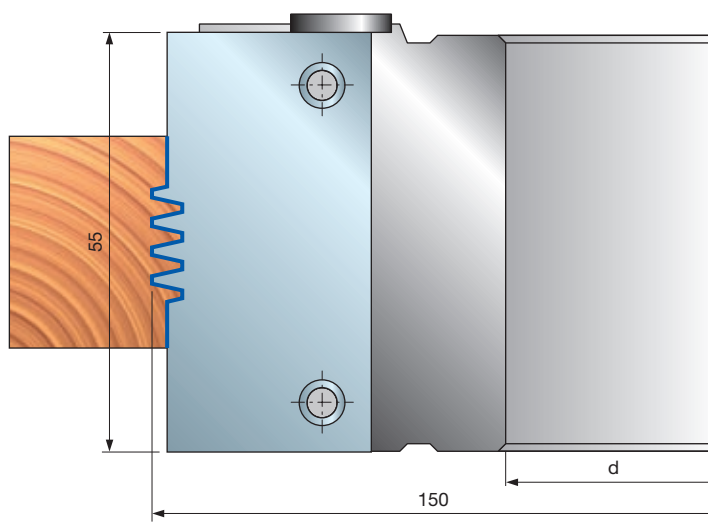
- **VANTAGGI:** Sullo stesso corpo possibilità di montaggio di differenti profili di giunzione (vedi pagina seguente). Possibilità di regolazione del gioco di accoppiamento (giunzione forzata, normale e lasca).
- **ADVANTAGES OF OUR TOOL:** On the same tool body, different jointing profiles can be fitted (see following page). It is possible to adjust the type of joint (tight, regular, loose) by means of a thumb screw mechanism.

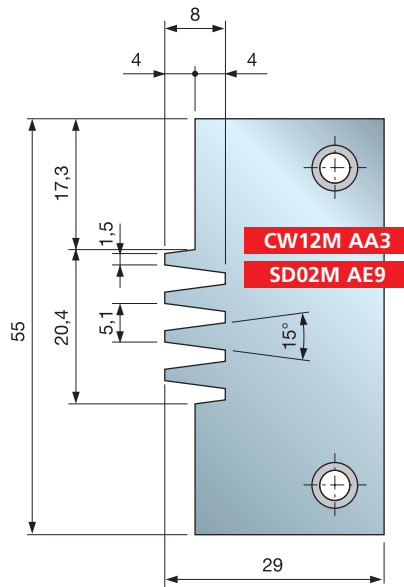
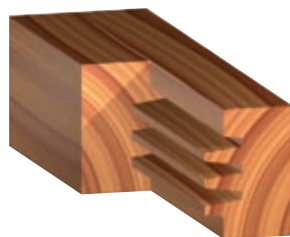
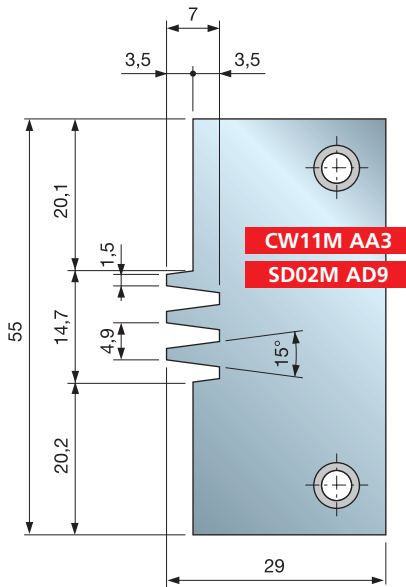
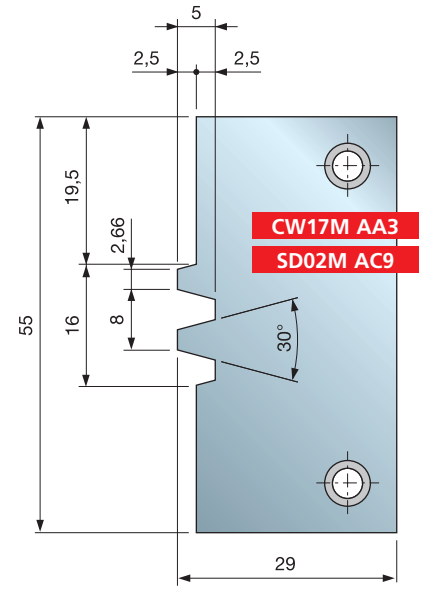
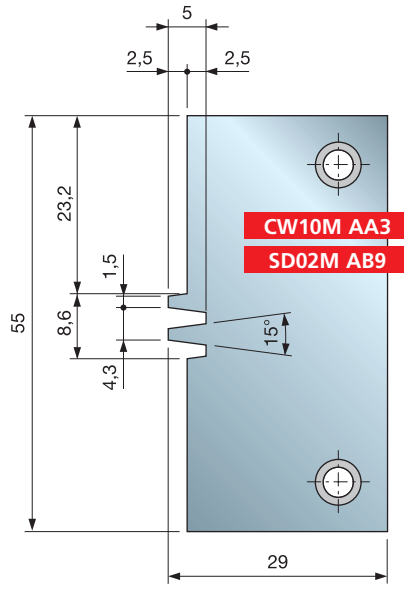
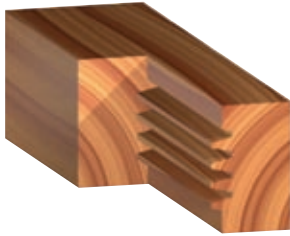
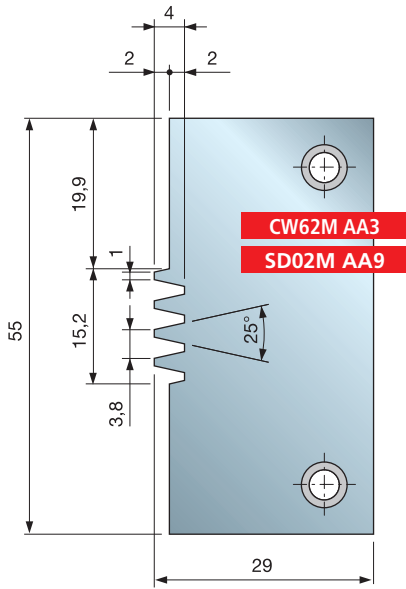
- **UTENSILI PER LA LAVORAZIONE LUNGO E TRAVERSO VENA DI PEZZI CORTI.**
- **TOOLS FOR WORKING LONG AND CROSS GRAIN ON SHORT WORKPIECES.**

- L'articolo non comprende i coltelli e i supporti
- The item does not include knives and support plates

Esempio di ordinazione: / Order example:

TW01M AB3 Ø	136x55x35	Z4	1 pezzo / piece
CW10M AA3	55x29x3		4 pezzi / pieces
SD02M AB9	55x27x5,5		4 pezzi / pieces





Dimensioni		Cottelli di ricambio
Dimensions		Spare Knives
	55 x 29 x 3	CW62M AA3
	55 x 29 x 3	CW10M AA3
	55 x 29 x 3	CW17M AA3
	55 x 29 x 3	CW11M AA3
	55 x 29 x 3	CW12M AA3

Dimensioni		Supporti di ricambio
Dimensions		Spare support plates
	55 x 27 x 5,5	SD02M AA9
	55 x 27 x 5,5	SD02M AB9
	55 x 27 x 5,5	SD02M AC9
	55 x 27 x 5,5	SD02M AD9
	55 x 27 x 5,5	SD02M AE9

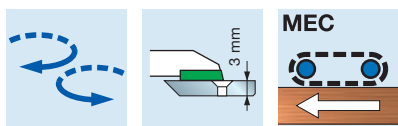
# TW24M

## GRUPPI DI TESTE PORTACOLTELLI PER GIUNZIONI FINGER JOINT CUTTERHEADS



D	B	d*	Z	R	Codice Code
150		35 (50)	2+2		TW24M AB3
150		40 (50)	2+2		TW24M AC3

Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Colt. testa "A" - Knife for tool. "A"	45 x 30 x 3	CW24MA AA3
Colt. testa "B" - Knife for tool. "B"	45 x 30 x 3	CW24MB AA3
Vite / Screw	M5 x 7 x 16	VT08M AE9
Vite / Screw	M6 x 7 x 18	VT08M AG9
Cuneo / Wedge	41 x 17 x 8	CN11M B410
Vite / Screw	M10 x 18	VT03M CC9
Chiave / Allen key	5 x 110	CB03M EA9
Chiave esagonale a "L" - Allen key	2	2619M BA9



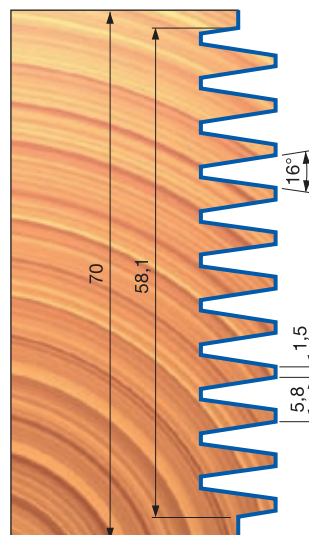
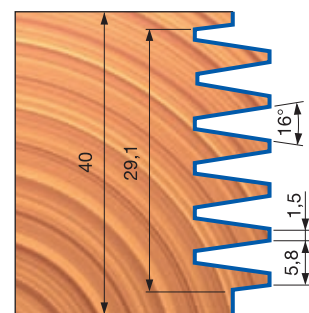
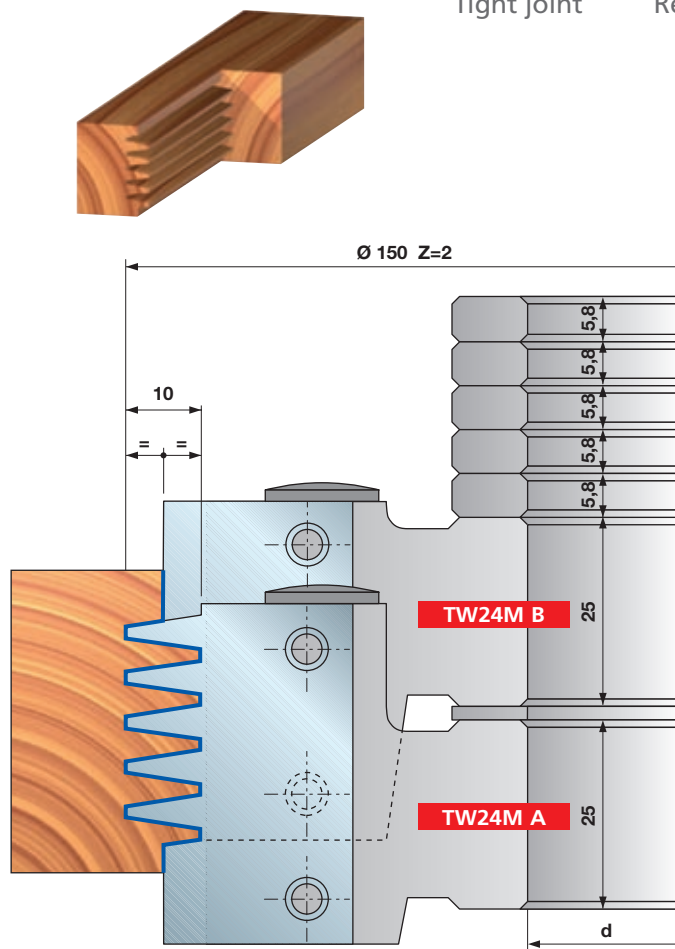
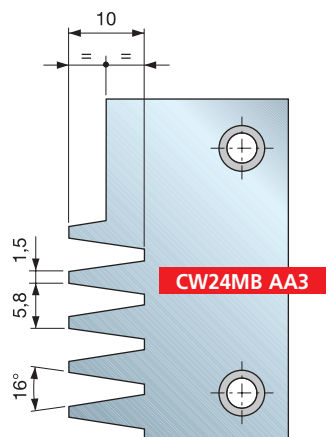
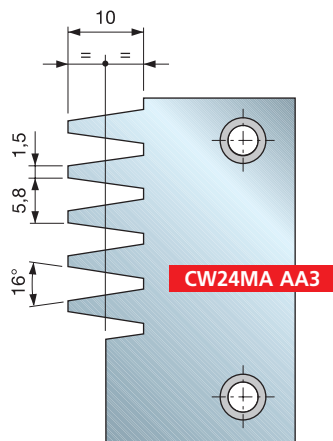
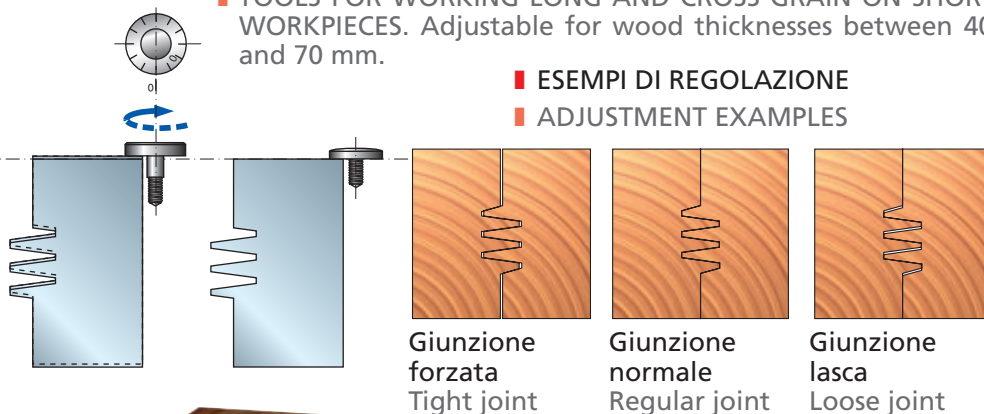
### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

- TESTA FORNITA DI COLTELLI IN HW RIAFFILABILI.
- CUTTERHEAD SUPPLIED WITH RESHARPENABLE TC KNIVES.

UTENSILI PER LA LAVORAZIONE LUNGO E TRAVERSO VENA DI PEZZI CORTI. Regolazione per spessore legno: 40÷70 mm.

TOOLS FOR WORKING LONG AND CROSS GRAIN ON SHORT WORKPIECES. Adjustable for wood thicknesses between 40 and 70 mm.

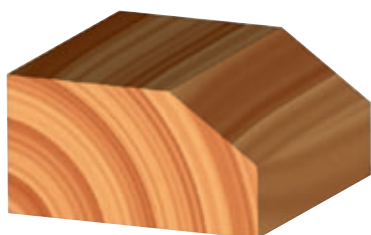
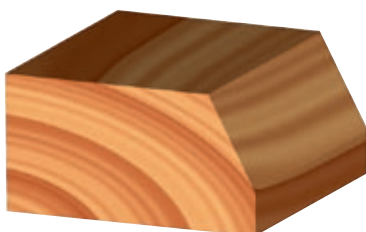
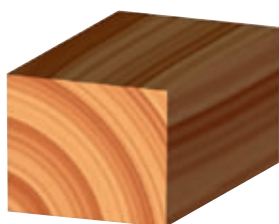
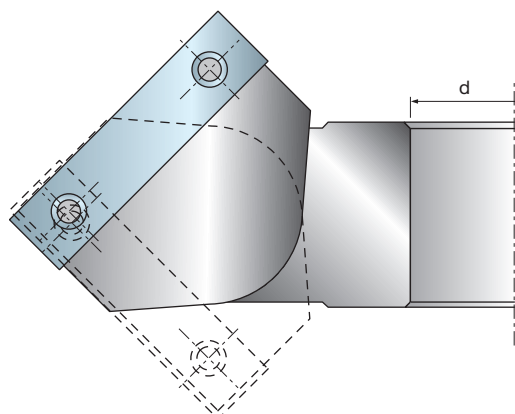
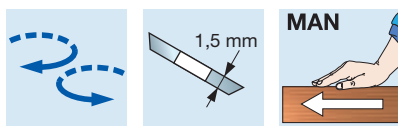
- ESEMPI DI REGOLAZIONE
- ADJUSTMENT EXAMPLES



\* La quota tra parentesi è la massima allargatura foro possibile • Size shown between brackets is the max. rebore possible

# TG08M

BG-TEST  
167-017



## TESTE PORTACOLTELLI AD INCLINAZIONE REGOLABILE ADJUSTABLE BEVEL CUTTERHEADS WITH DISPOSABLE KNIVES

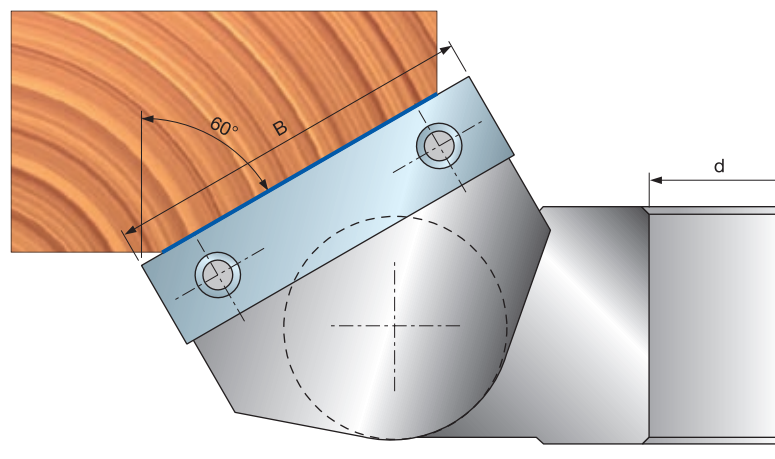
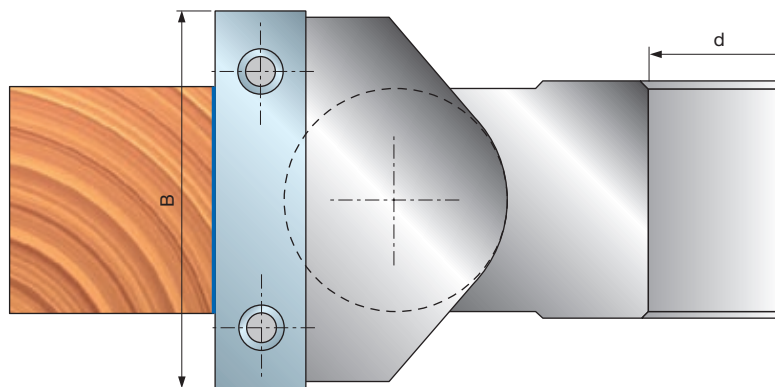
D	B	d	Z	R	Codice Code
120	40	30	2		TG08M LA3
150	50	30	2		TG08M MA3
150	50	35	2		TG08M MB3
150	50	40	2		TG08M MC3

- NON È CONSENTITA L'ALLARGATURA DEL FORO.
- REBORE NOT AVAILABLE.

Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Vite / Screw	M5 x 16	2607M CF9
Vite / Screw	M6 x 8	VT03M DE9
Ogiva / Nut	12 x 12 x 6	VT20M DC9
Ogiva / Nut	12 x 10 x M5	VT20M DB9
Chiave esag. a "L" / Allen key	3	2619M DA9
Chiave / Allen key	4 x 110	CB03M BA9
Ø120 Coltello / Knife	40 x 12 x 1,5	CG01M LA3
Cuneo / Wedge	38 x 11 x 6	CN03M DA9
Ø150 Coltello / Knife	50 x 12 x 1,5	CG01M FA3
Cuneo / Wedge	48 x 11 x 6	CN03M DB9

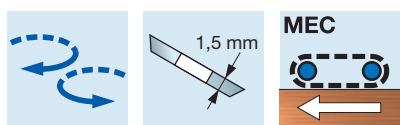
- LA REGOLAZIONE MINIMA OTTENIBILE È DI 1°.
- MINIMUM ADJUSTMENT OBTAINABLE IS 1 DEGREE.

Diametro Diameter	Inclinazione/Inclination	
	Min.	Max.
120 mm	0°	60°
150 mm	0°	90°

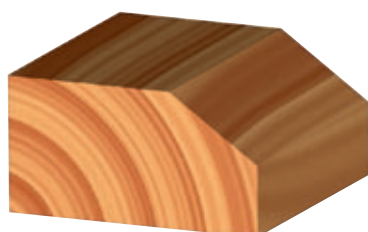
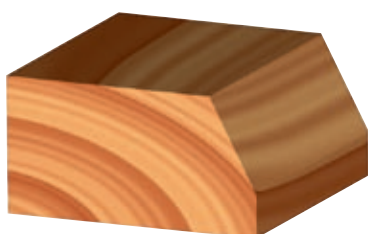
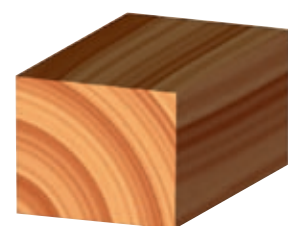
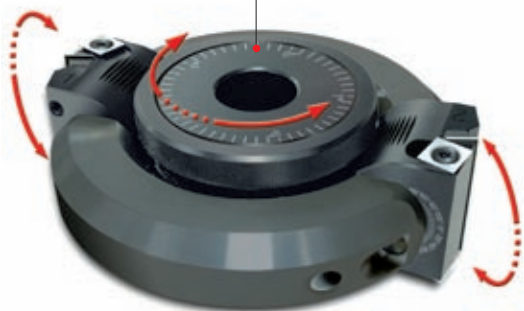


# TG09M

## TESTE PORTACOLTELLI AD INCLINAZIONE REGOLABILE ADJUSTABLE BEVEL CUTTERHEADS WITH DISPOSABLE KNIVES



CON GHIERA GRADUATA  
WITH GRADUATED RING

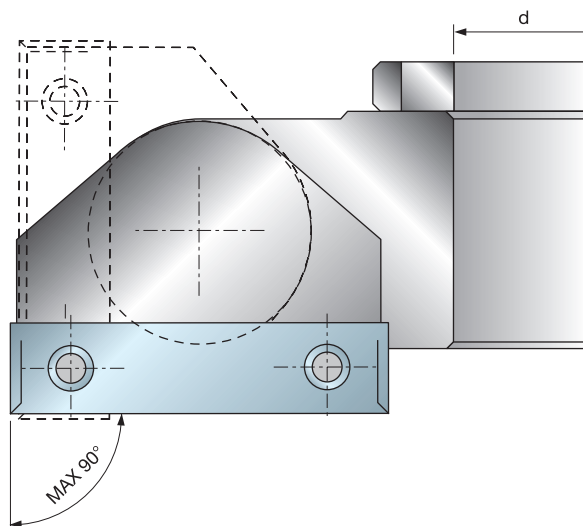
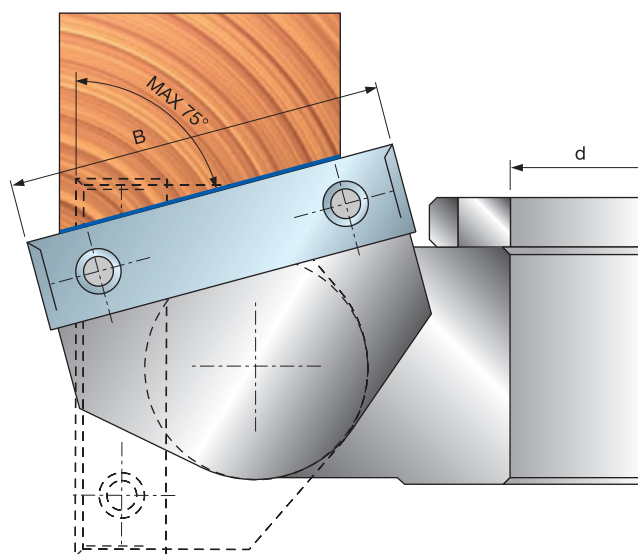


D	B	d	Z	R	Codice
mm	mm	mm			Code
165	50	30	2	4	TG09M AA3
165	50	35	2	4	TG09M AB3
165	50	40	2	4	TG09M AC3
165	50	50	2	4	TG09M AD3

- NON È CONSENTITA L'ALLARGATURA DEL FORO.
- REBORE NOT AVAILABLE.

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Rasante / Spur	14 x 14 x 2	RG01M AA3
Vite / Screw	M5 x 8	VT05M AA9
Coltello / Knife	50 x 12 x 1,5	CG01M FA3
Vite / Screw	M6 x 16	VT03M DI9

- Ideale per la smussatura su legno e suoi derivati. Il particolare sistema di bloccaggio dei taglienti garantisce l'esecuzione di smussi con una regolazione dell'angolo fino a 90° o 75° (v. disegni).
- Mostly suitable for chamfering on wood and composites. The particular knife locking system guarantees an angle regulation up to 90° or 75° (please refer to the drawings).

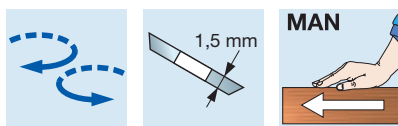


# T111M T112M

Z = 4

Z = 4+4

## TESTE PORTACOLTELLI PER BATTUTE CUTTERHEADS FOR REBATES



Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

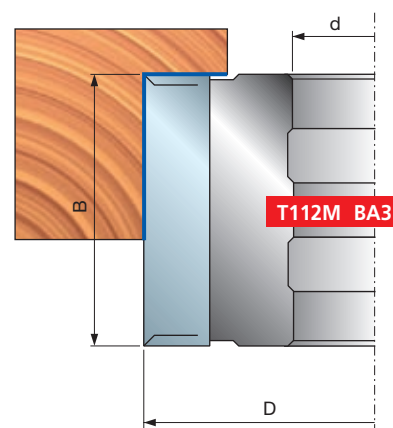
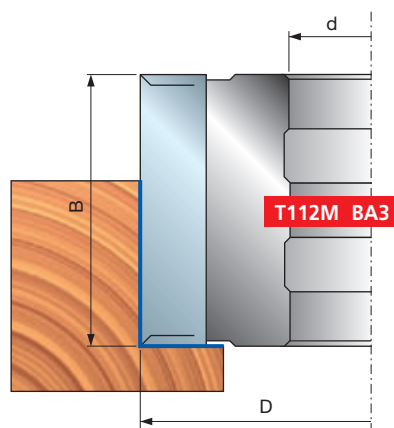
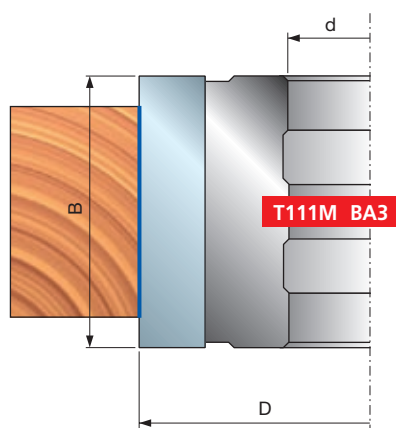
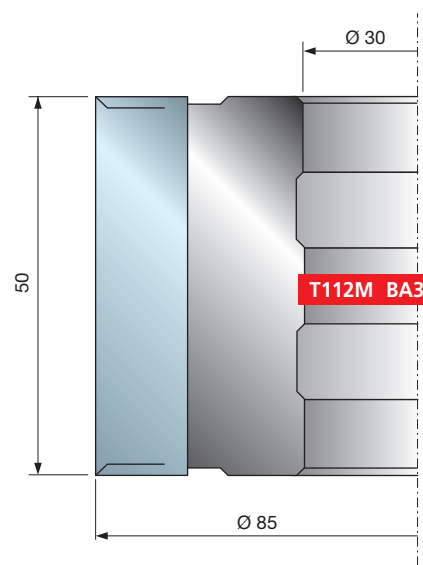
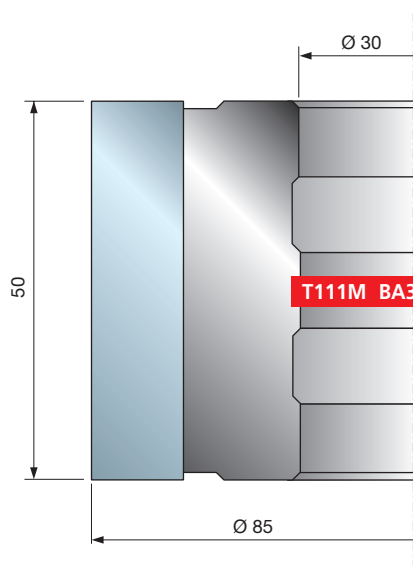
• **EN 847-1** •  
R&S - SV/R 146/145

D	B	d	Z	R	Codice Code
85	50	30	4		T111M BA3
85	50	30	4	4	T112M BA3

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. Utilizzabile su pantografo.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. Can be used on CNC machines.

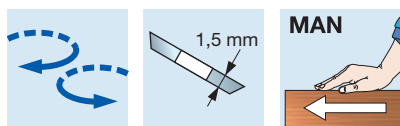
Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Coltello / Knife	50 x 12 x 1,5	CG01M FA3
Vite / Screw	M8 x 16	VT03M AA9
Cuneo / Wedge	46	CN01M KA9
Chiave esag. a "L" / Allen key	4	2619M EA9
<b>T112M</b> Rasante / Spur	14 x 14 x 2	RG01M AA3
Vite / Screw	M5 x 8	VT05M AA9

- NON È CONSENTITA L'ALLARGATURA DEL FORO.
- REBORE NOT AVAILABLE.



**T191M** Z = 4  
**T192M** Z = 2

**TESTE PORTACOLTELLI PER BATTUTE**  
**CUTTERHEADS FOR REBATES**



**ARTICOLO / ITEM T191M**

Utensili collaudati secondo la Normativa  
*Tools tested according to the Norm*

• **EN 847-1** •

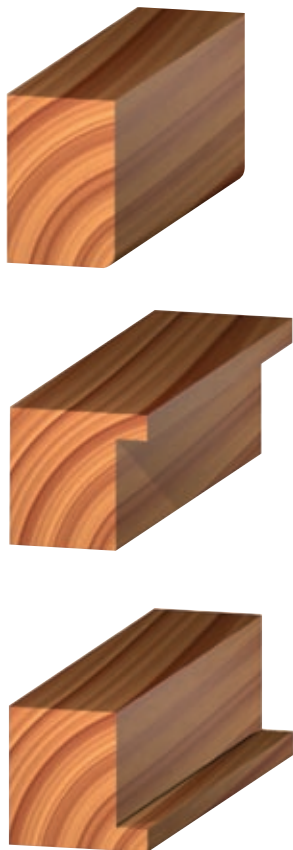
**R&S - SV/R 102/101**

**ARTICOLO / ITEM T192M**

Utensili collaudati secondo la Normativa  
*Tools tested according to the Norm*

• **EN 847-1** •

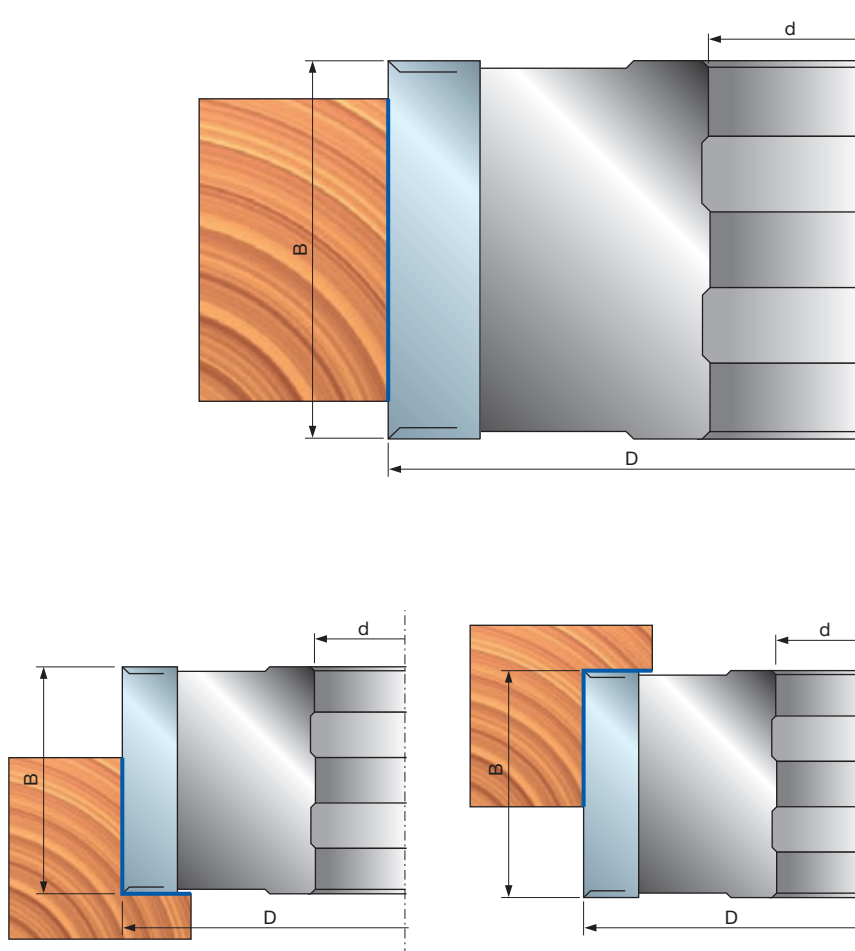
**R&S - SV/R 103/102**



D	B	d*	Z	R	Codice
mm	mm	mm			Code
125	50	30 (50)	4	4	T191M BA3
125	50	35 (50)	4	4	T191M BB3
125	50	40 (50)	4	4	T191M BC3
125	50	50	4	4	T191M BD3
125	50	40 (50)	2	4	T192M BC3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Coltello / Knife	50 x 12 x 1,5	CG01M FA3
Cuneo / Wedge	15 x 46 x 8	CN09M AP9
Vite / Screw	M10 x 22	VT19M MA9
Vite / Screw	M5 x 8	VT05M AA9
Ogiva / Nut	15 x 13,3 x 10	VT20M MA9
Rasante / Spur	14 x 14 x 2	RG01M AA3
Chiave / Allen key	5 x 110	CB03M EA9

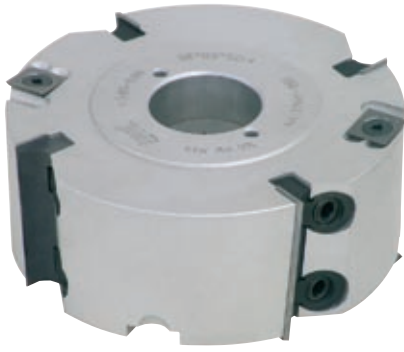
- **UTENSILI CON ANGOLO ASSIALE ALTERNO.**
- **TOOLS WITH ALTERNATE SHEAR ANGLE.**



\* La quota tra parentesi è la massima allargatura foro possibile • Size shown between brackets is the max. rebore possible

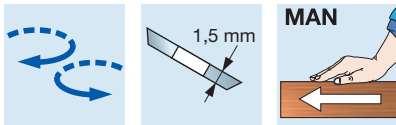
**T194M** Z = 4  
**T195M** Z = 2

**TESTE PORTACOLTELLI PER BATTUTE**  
**CUTTERHEADS FOR REBATES**



D	B	d*	Z	R	Codice
mm	mm	mm			Code
125	30	35 (50)	4	4	T194M AB3 <sup>(1)</sup>
125	50	35 (50)	4	4	T194M BB3 <sup>(2)</sup>
125	50	35 (50)	2	4	T195M BB3 <sup>(2)</sup>

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda.



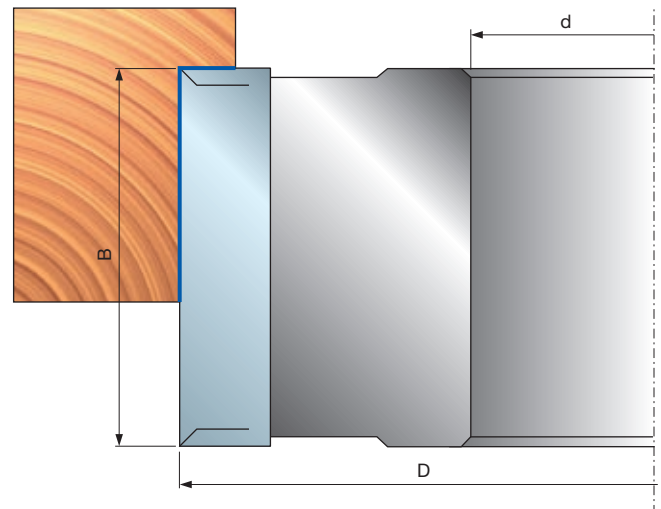
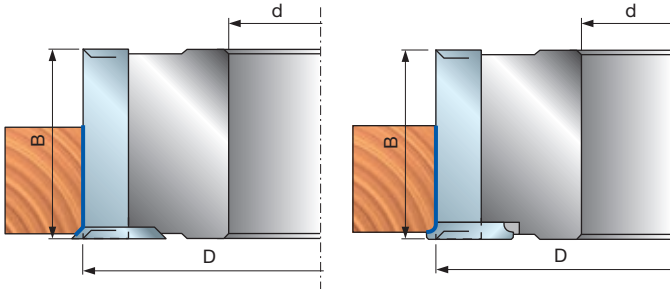
Utensili collaudati secondo la Normativa  
 Tools tested according to the Norm

**EN 847-1**

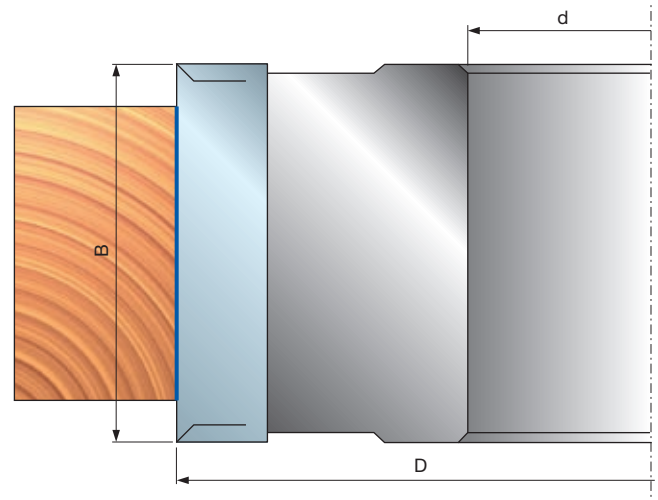
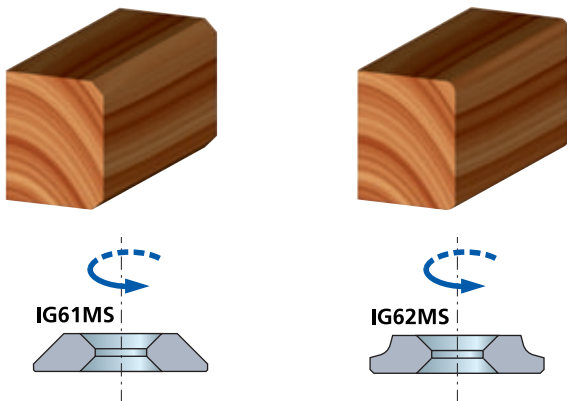
(1) R&S - SV/R 170/169  
 (2) R&S - SV/R 171/170

	Parti di ricambio		Dimensioni	Codice
	Spare parts		Dimensions	Code
AB3	Coltello / Knife		30 x 12 x 1,5	CG01M EA3
	Cuneo / Wedge		15 x 26 x 8	CN09MD AD9
	Cuneo / Wedge		15 x 26 x 8	CN09MS AD9
BB3	Coltello / Knife		50 x 12 x 1,5	CG01M FA3
	Cuneo / Wedge		15 x 46 x 8	CN09M AP9
	Vite / Screw		M10 x 22	VT19M MA9
	Ogiva / Nut		15 x 13,3 x 10	VT20M MA9
	Chiave / Allen key		5 x 110	CB03M EA9
	Rasante / Spur		14 x 14 x 2	RG01M AA3
	Vite / Screw		M5 x 8	VT05M AA9
	Vite per: / Screw for: IG61MS; IG62MS		M6 x 14,5	VT16M AA9

- UTENSILI CON ANGOLO ASSIALE ALTERNO.
- TOOLS WITH ALTERNATE SHEAR ANGLE.



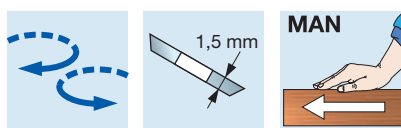
- Con sedi per il montaggio di inserti IG61MS (smussatori) e IG62MS (R= 1,5 - 2 - 3 mm).
- With seat pockets for bevelling inserts IG61MS or radius inserts IG62MS (R= 1,5 - 2 - 3 mm).





# T193M

## TESTA PORTACOLTELLI PER BATTUTE CUTTERHEAD FOR REBATES



D	B	d*	Z	R	Codice Code
125	50	30 (50)	4	2	T193M BA3

Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Coltello / Knife	50 x 12 x 1,5	CG01M FA3
Cuneo / Wedge	15 x 46 x 8	CN09M AP9
Ogiva / Nut	15 x 13,3 x 10	VT20M MA9
Vite / Screw	M10 x 22	VT19M MA9
Rasante / Spur	14 x 14 x 2	RG01M AA3
Vite / Screw	M5 x 8	VT05M AA9
Rondella di reg. / Adjustment ring	16 x 11,9 x 2,6	VT18M AG9
Vite / Screw	M6 x 10	2622M CB9
Chiave / Allen key	5 x 110	CB03M EA9
Chiave / Allen key	4 x 110	CB03M BA9

- UTENSILI CON ANGOLO ASSIALE ALTERNO.
- TOOLS WITH ALTERNATE SHEAR ANGLE.

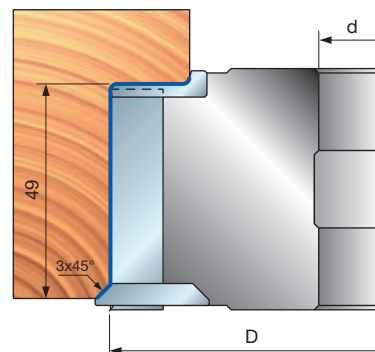
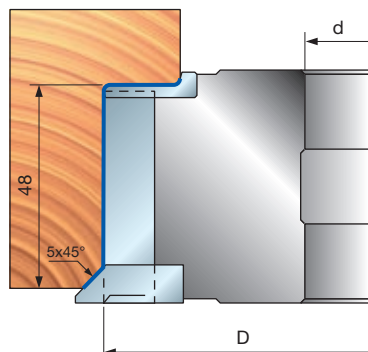
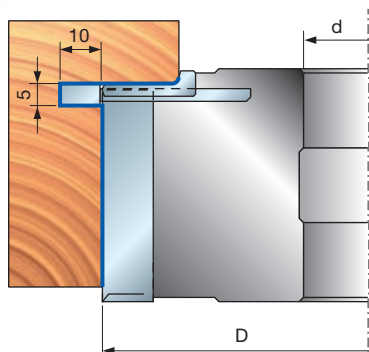
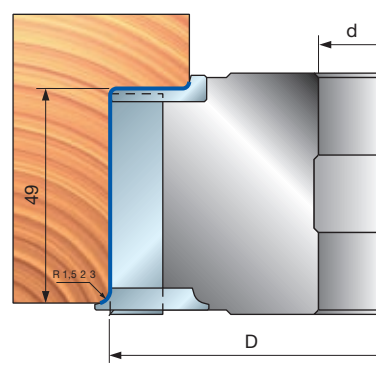
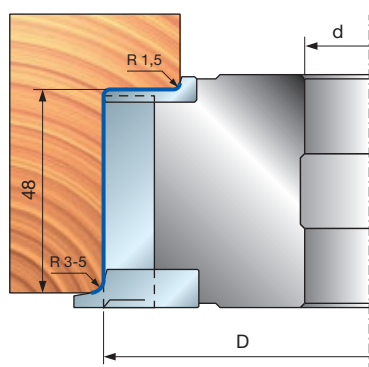
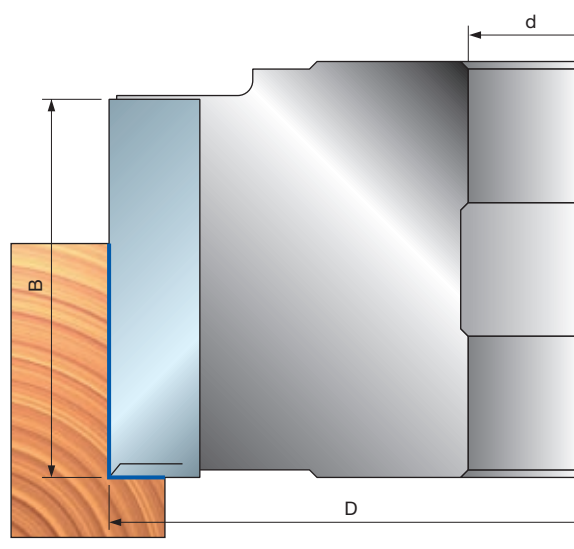
- UTENSILE CON SEDI PER IL MONTAGGIO DEI SEGUENTI INSERTI (NON INCLUSI):

- TOOL WITH SEAT POCKETS FOR THE FOLLOWING INSERTS (NON INCLUDED):

Inserti Inserts	Tipo e dimensioni viti Screw type and dimensions	Viti Screws	Pz. Pcs
IG25M	M6 x 10	2622M CB9	2
IG61M-IG62M-IG51M-IG52M	M6 x 14,5	VT16M AA9	2
IG33M	M6 x 18,5	VT16M AC9	2
SR11MD	M5 x 8	VT05M AA9	4

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.

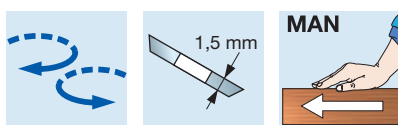
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda.



\* La quota tra parentesi è la massima allargatura foro possibile • Size shown between brackets is the max. rebore possible

# T198M

## TESTE PORTACOLTELLI PER INCASTRI E BATTUTE REGOLABILI MULTIPURPOSE CUTTERHEADS SET WITH DISPOSABLE KNIVES



Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

**EN 847-1**

(1) R&S - SV/R 172/171

(2) R&S - SV/R 173/172

D	B-B1	d	Z	R	Codice
mm	mm	mm			Code
140	20-39	35	4	4	T198M FB3 <sup>(1)</sup>
140	20-39	40	4	4	T198M FC3 <sup>(1)</sup>
140	30-59	35	4	4	T198M GB3 <sup>(2)</sup>
140	30-59	40	4	4	T198M GC3 <sup>(2)</sup>

	Parti di ricambio		Dimensioni	Codice
	Spare parts		Dimensions	Code
FB3-FC3	Coltello / Knife		20 x 12 x 1,5	CG01M DA3
	Cuneo / Wedge		15 x 16 x 8	CN09MD AO9
	Cuneo / Wedge		15 x 16 x 8	CN09MS AO9
GB3-GC3	Coltello / Knife		30 x 12 x 1,5	CG01M EA3
	Cuneo / Wedge		15 x 26 x 8	CN09MD AD9
	Cuneo / Wedge		15 x 26 x 8	CN09MS AD9
	Vite / Screw		M10 x 22	VT19M MA9
	Ogiva / Nut		15 x 13,3 x 10	VT20M MA9
	Chiave / Allen key		5 x 110	CB03M EA9
	Rasante / Spur		14 x 14 x 2	RG01M AA3
	Vite / Screw		M5 x 8	VT05M AA9
	Vite per: / Screw for: IG04MD/S		M6 x 14,5	VT16M AA9
	Vite per: / Screw for: IG61MD/S IG62MD/S		M6 x 13	VT16M AE9
Vite per: / Screw for: ID04M		M4 x 12	VT05M DA9	

■ NON È CONSENTITA L'ALLARGATURA DEL FORO.

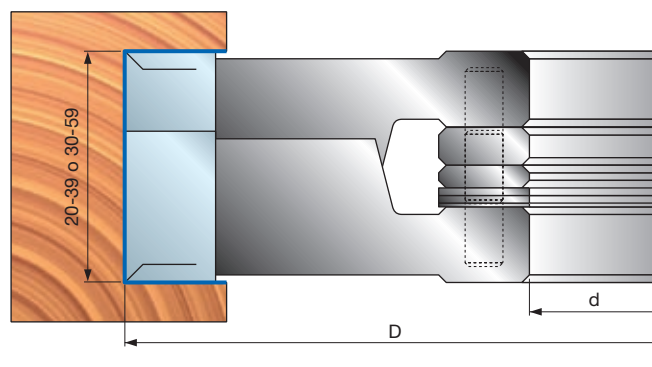
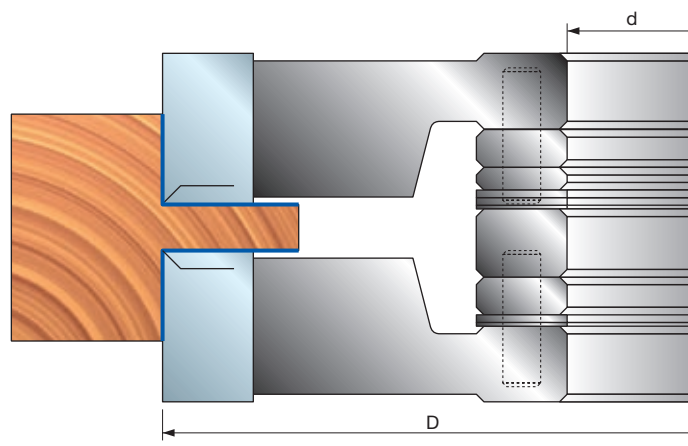
■ REBORE NOT AVAILABLE.

■ UTENSILI CON ANGOLO ASSIALE.

■ TOOLS WITH SHEAR ANGLE.

■ Con sedi per il montaggio di inserti IG61MS (smussatori) e IG62MS (R= 1,5; 2; 3 mm) e di inserti per incastri IG04MD/S AA3 e AB3.

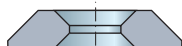
■ With seat pockets for bevelling inserts IG61MS or radius inserts IG62MS (R= 1,5; 2; 3 mm) and for grooving inserts IG04MD/S AA3 and AB3.



IG61MD



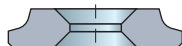
IG61MS



IG62MD



IG62MS



IG04MD

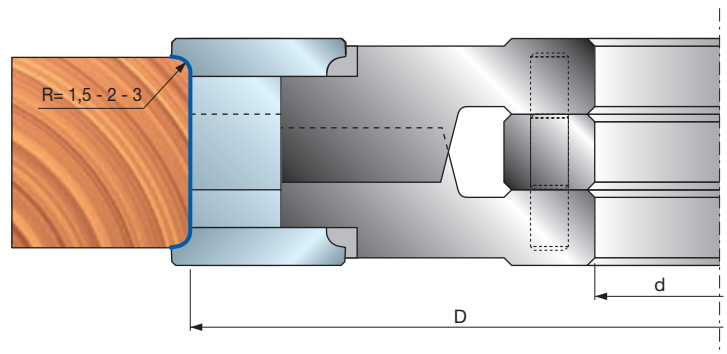
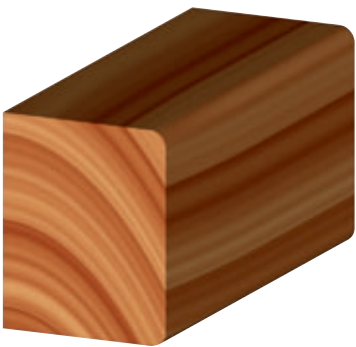
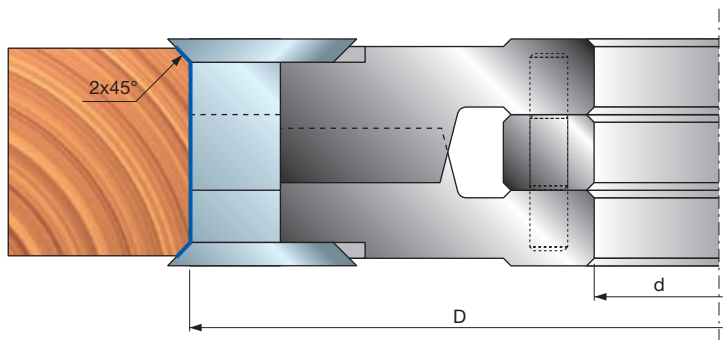
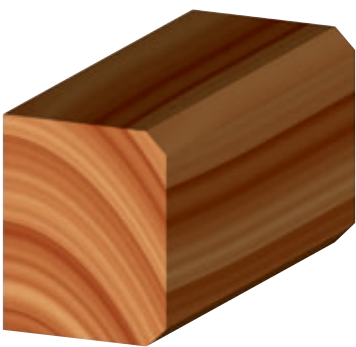
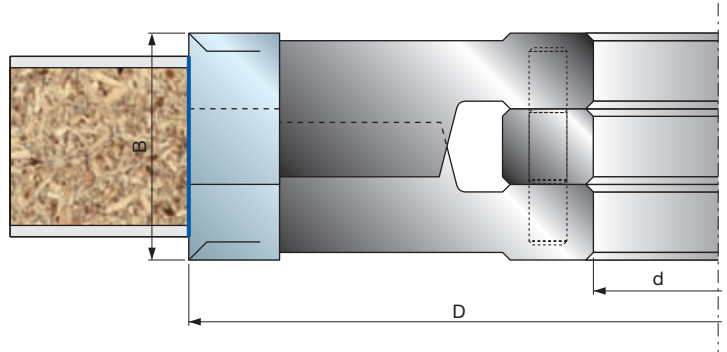


IG04MS

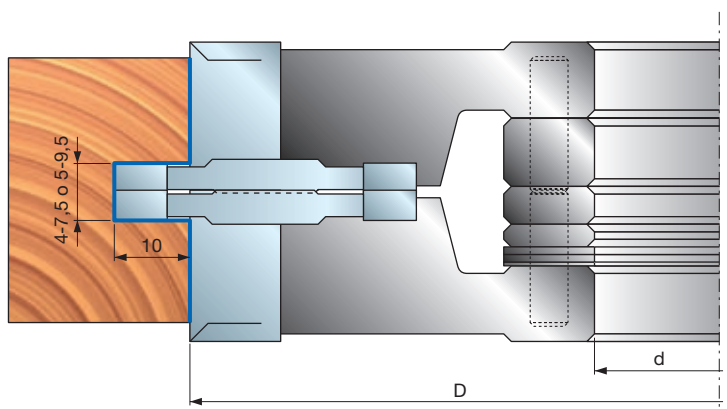
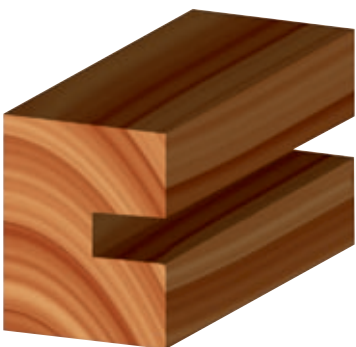


## ESEMPI DI PROFILI REALIZZABILI

### EXAMPLE OF PROFILES

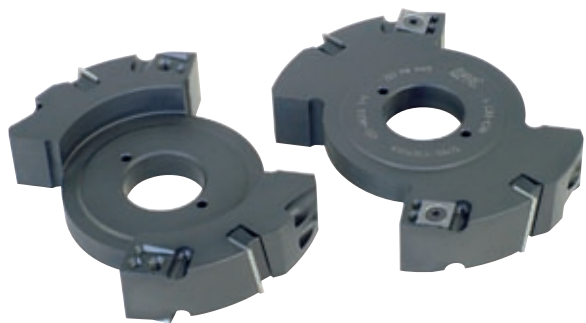


▼ QUESTO PROFILO È UTILIZZABILE SOLAMENTE  
CON AVANZAMENTO MECCANICO.  
THIS PROFILE IS USABLE WITH AUTOMATIC FEED ONLY.

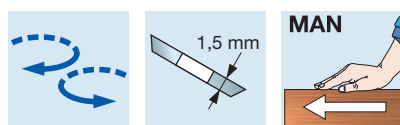


# T199M

## TESTE PORTACOLTELLI PER INCASTRI E BATTUTE REGOLABILI MULTIPURPOSE CUTTERHEADS SET WITH DISPOSABLE KNIVES



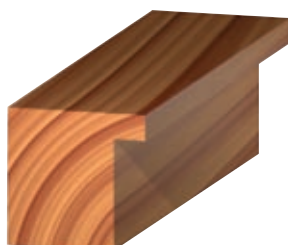
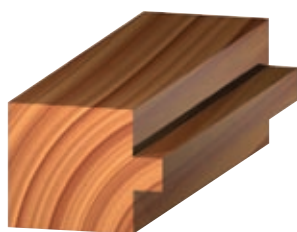
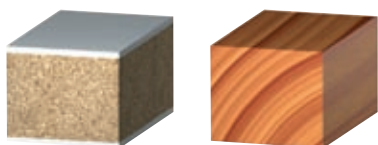
D	B-B1	d*	Z	R	Codice Code
140	30-59	30 (50)	4	4	T199M GA3
140	30-59	35 (50)	4	4	T199M GB3
140	30-59	40 (50)	4	4	T199M GC3



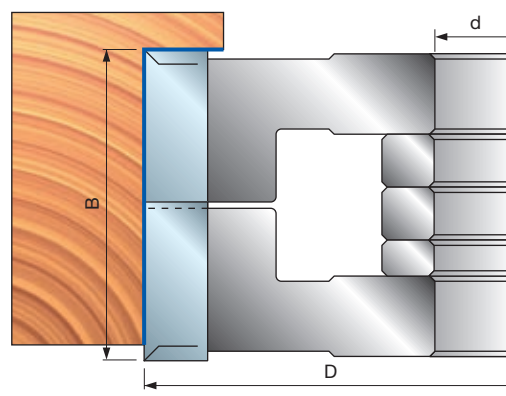
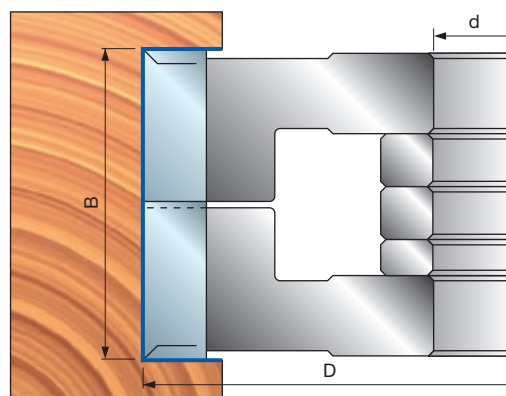
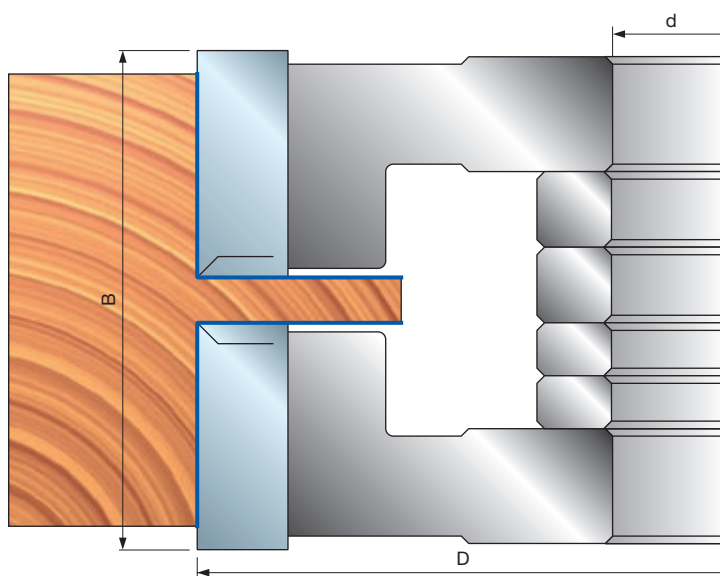
Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
R&S - SV/R 126/130

- UTENSILI CON ANGOLO ASSIALE.
- TOOLS WITH SHEAR ANGLE.



Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Coltello / Knife	30 x 12 x 1,5	CG01M EA3
Cuneo / Wedge	12,3 x 26 x 8	CN01MDGA9
Cuneo / Wedge	12,3 x 26 x 8	CN01MSGA9
Vite / Screw	M5 x 8	VT05M AA9
Rasante / Spur	14 x 14 x 2	RG01M AA3
Vite / Screw	M8 x 16	VT03M AA9
Chiave / Allen key	4 x 110	CB03M BA9



# FI22M

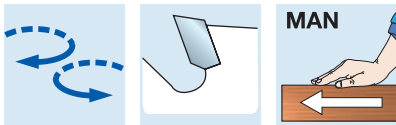
## FRESA PER INCASTRI

### BRAZED CUTTER

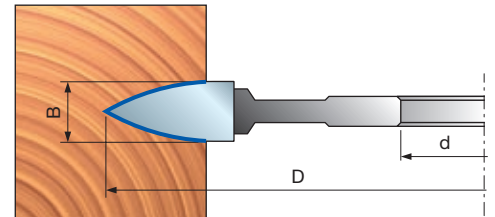
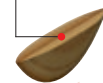


D	B	d	Z	R	Codice
mm	mm	mm			Code
100	8	22	4		FI22M AB3

- Fresa con corpo rivestito in materiale antiaderente, utilizzata per la riparazione di sacche di resina, fessure, bordi danneggiati ed altre imperfezioni del legno.
- Brazed cutter with non-stick coated body. Device for patching resin pockets, cracks, damaged edges and other wood flaws.



Inserto "minispot"  
Patch "minispot"



Il marchio minispot è di proprietà di LAMELLO AG.

MINISPOT is a mark owned by LAMELLO AG.

# FI02M

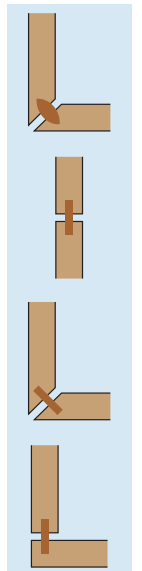
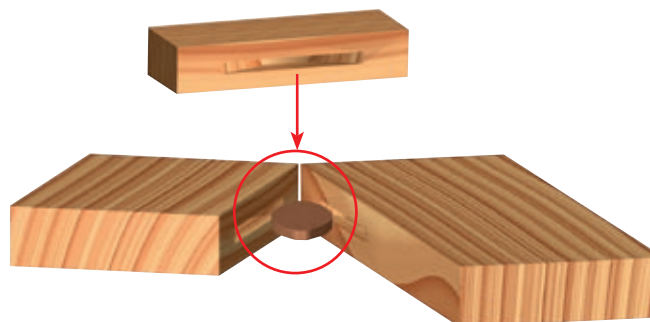
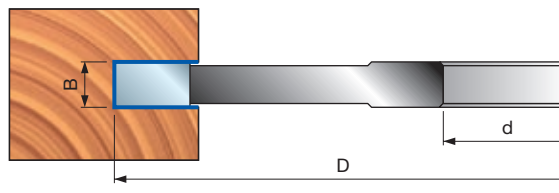
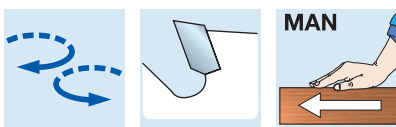
## FRESA PER INCASTRI

### BRAZED CUTTER FOR BISCUIT JOINERS



D	B	d	Z	R	Codice
mm	mm	mm			Code
100	3,95	22	6		FI02M BX3

- Fresa con limitatore di truciolo per incastri di ottima qualità su legni teneri e duri lungo vena e trasverso vena; su multistrato, truciolari, laminati ed MDF.
- Brazed cutter with anti-kickback device for good quality grooving on soft and hard wood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.

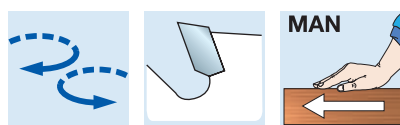


Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •  
R&S - 108

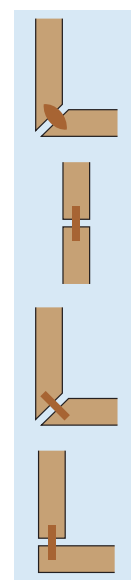
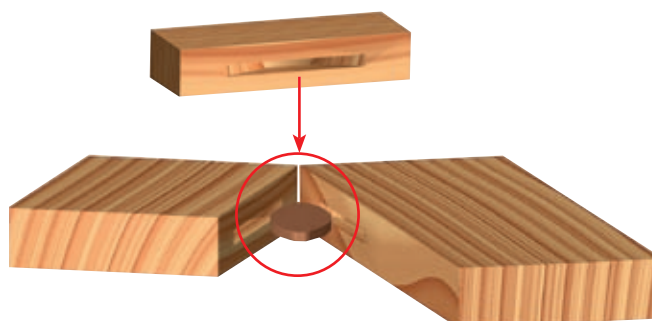
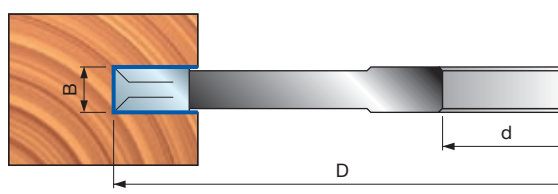
# FI02M

## FRESA PER INCASTRI CON RASANTI GROOVING CUTTER WITH SPURS



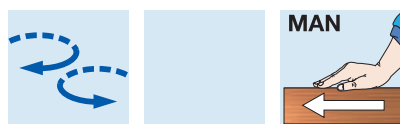
D	B	d	Z	R	Codice
mm	mm	mm			Code
100	4	22	2	4	FI02M BZ3

- Fresa con limitatore di truciolo per incastri di ottima qualità su legni teneri e duri lungo vena e trasverso vena; su multistrato, truciolari, laminati ed MDF.
- Brazed cutter with anti-kickback device for good quality grooving on soft and hard wood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.



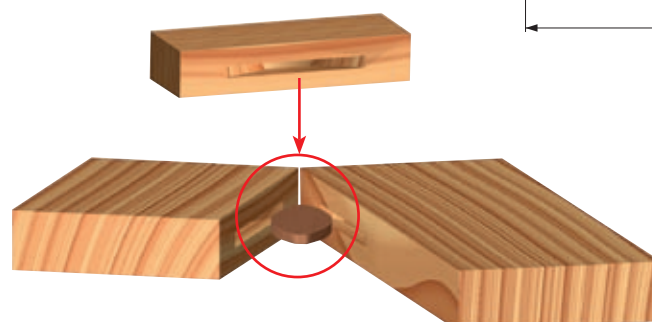
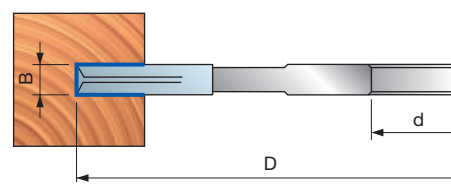
# TG13M

## TESTA PORTACOLTELLI PER INCASTRI GROOVING CUTTERHEAD



D	B	d	Z	R	Codice
mm	mm	mm			Code
100	4	22	4	4	TG13M AA3

Parti di ricambio		Dimensioni	Codice
Spare parts		Dimensions	Code
Coltello / Knife		18 x 1,9 x 18	CG03M AA3
Ghiera / Nut		11,6 x 1,5 x 4	VT18M BA9
Rasante / Spur		14 x 14 x 2	RG01M AA3
Ghiera / Nut		9,4 x 1,7 x 4	VT18M DA9
Vite / Screw		M4 x 3,2	VT05M BB9
Chiave Torx / Torx key		T9	CB03M CA9



Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

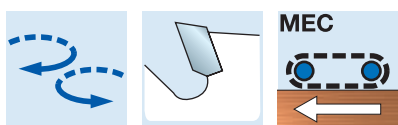
• **EN 847-1** •  
R&S - 165

# FI02M

## FRESE PER INCASTRI GROOVING CUTTERS

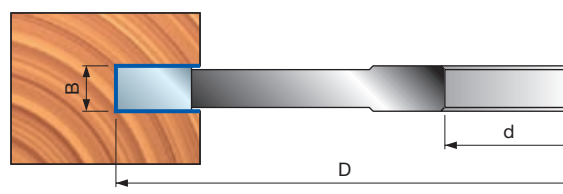
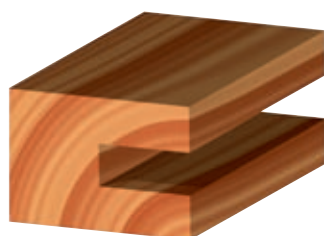


D	B	d*	Z	R	Codice
mm	mm	mm			Code
120	4	35 (40)	6		FI02M CD3
120	6	35 (40)	6		FI02M CI3
140	4	35 (50)	6		FI02M FE3
140	6	35 (50)	6		FI02M FN3
140	8	35 (50)	6		FI02M FS3
140	10	35 (50)	6		FI02M FY3
140	12	35 (40)	6		FI02M GB3
140	14	35 (40)	6		FI02M GF3
140	16	35 (40)	6		FI02M GK3
140	18	35 (40)	6		FI02M GN3
140	20	35 (40)	6		FI02M GP3



■ Frese per incastri di ottima qualità su legni teneri e duri lungo vena e trasverso vena; su multistrato, truciolari, laminati ed MDF.

■ Brazed cutters for good quality grooving on soft and hard wood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.

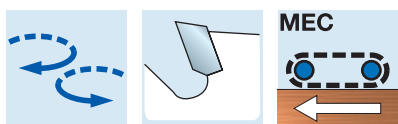


# FI05M

## FRESE CON RASANTI PER INCASTRI GROOVING CUTTERS WITH SPURS

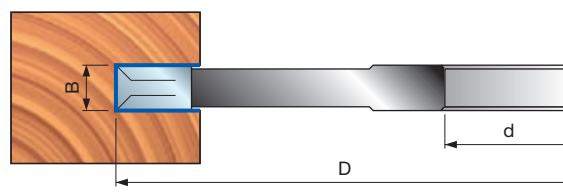


D	B	d*	Z	R	Codice
mm	mm	mm			Code
140	4	35 (50)	3	6	FI05M EB3
140	6	35 (50)	3	6	FI05M EH3
140	8	35 (50)	3	6	FI05M EN3
140	10	35 (50)	3	6	FI05M ER3



■ Frese per incastri di ottima qualità su legni teneri e duri lungo vena e trasverso vena; su multistrato, truciolari, laminati ed MDF.

■ Brazed cutters for good quality grooving on soft and hard wood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.

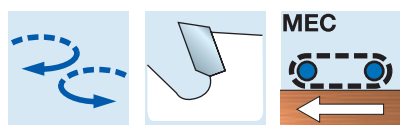


# FI14M

## FRESE PER INCASTRI GROOVING CUTTERS

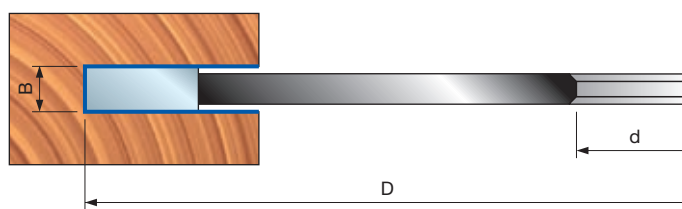
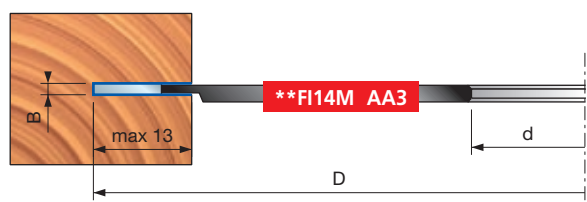


D	B	d*	Z	R	Codice
mm	mm	mm			Code
150	1,5	30 (50)	18		FI14M AA3**
150	2	30 (50)	18		FI14M AE3
150	2,5	30 (50)	18		FI14M AH3
150	3	30 (50)	18		FI14M AM3
150	4	30 (50)	18		FI14M AR3
150	5	30 (50)	18		FI14M AZ3
150	6	30 (50)	18		FI14M AT3
150	8	30 (50)	18		FI14M AU3
180	3	30 (50)	24		FI14M DA3
180	4	30 (50)	24		FI14M DC3
180	6	30 (50)	24		FI14M DE3



■ Frese per incastri di ottima qualità su legni teneri e duri lungo vena e trasverso vena; su multistrato, truciolari, laminati ed MDF.

■ Brazed cutters for good quality grooving on soft and hard wood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF.



# FI07M

## FRESE REGOLABILI, CON RASANTI, PER INCASTRI ADJUSTABLE GROOVING CUTTERS WITH SPURS



D	B	d*	Z	R	Codice
mm	mm	mm			Code
150	3 - 5,5	35 (50)	4	4	FI07M AB3
150	4 - 7,5	35 (50)	4	4	FI07M AE3
150	7,5 - 14	35 (50)	4	4	FI07M AL3
160	10 - 19	35 (50)	4	4	FI07M BB3

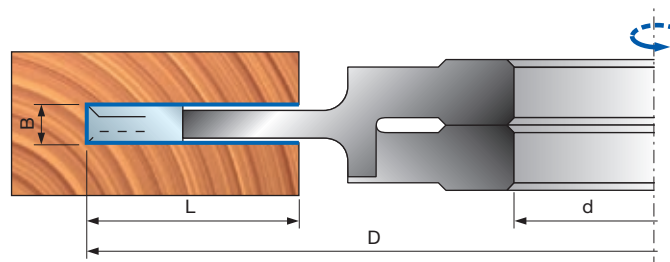
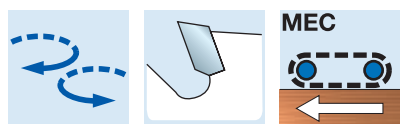
■ Frese per incastri regolabili di ottima qualità su legni teneri e duri lungo vena e trasverso vena; su multistrato, truciolari, laminati ed MDF. Regolazione con anelli.

■ Brazed cutters for good quality adjustable grooving on soft and hard wood, both cross cutting and ripping, on chipboard, compressed laminated woods and MDF. Adjustable with spacers.

■ PROFONDITÀ D'INCASTRO / DEPTH OF CUT

L = 27 mm con / with D = 150 mm

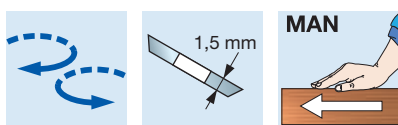
L = 32 mm con / with D = 160 mm





# TG11M

## TESTE PORTACOLTELLI PER INCASTRI REGOLABILI ADJUSTABLE GROOVING CUTTERHEADS



Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •

- (1) **R&S - SV/R 121/125**
- (2) **R&S - SV/R 135/137**
- (3) **R&S - SV/R 124/128**
- (4) **R&S - SV/R 163/162**
- (5) **R&S - SV/R 164/163**
- (6) **R&S - SV/R 165/164**

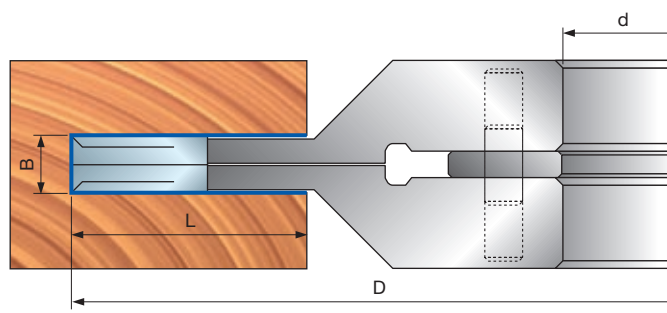
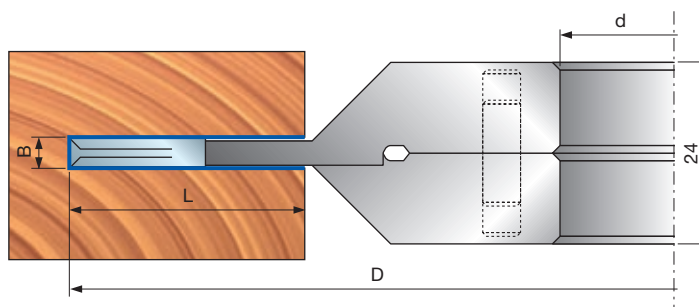
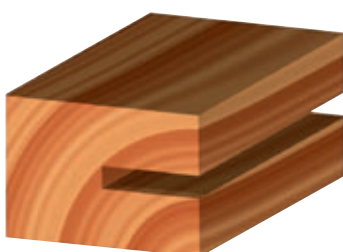
D	B-B1	d*	Z	R	Codice Code
160	4 - 7,5	30	8	4	TG11M AA3 <sup>(1)</sup>
160	4 - 7,5	35	8	4	TG11M AB3 <sup>(1)</sup>
160	4 - 7,5	40	8	4	TG11M AC3 <sup>(1)</sup>
160	8 - 15,5	30	4	4	TG11M DA3 <sup>(2)</sup>
160	8 - 15,5	35	4	4	TG11M DB3 <sup>(2)</sup>
160	8 - 15,5	40	4	4	TG11M DC3 <sup>(2)</sup>
160	12,5 - 24	30	4	4	TG11M TA3 <sup>(3)</sup>
160	12,5 - 24	35	4	4	TG11M TB3 <sup>(3)</sup>
160	12,5 - 24	40	4	4	TG11M TC3 <sup>(3)</sup>
200	4 - 7,5	35 (50)	8	4	TG11M FB3 <sup>(4)</sup>
200	8 - 15,5	35 (50)	4	4	TG11M HB3 <sup>(5)</sup>
200	12,5 - 24	35 (50)	4	4	TG11M VB3 <sup>(6)</sup>

Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Rasante / Spur	14 x 14 x 2	RG01M AA3
Coltello / Knife	18 x 1,9 x 18	CG03M AA3
Ghiera / Nut	11,6 x 1,5 x 4	VT18M BA9
Ghiera / Nut	9,4 x 1,7 x 4	VT18M DA9
Vite / Screw	M4 x 3,2	VT05M BB9
Chiave Torx / Torx key	T9	CB03M CA9
Coltello / Knife	7,5 x 12 x 1,5	CG01M AA3
Cuneo / Wedge	15 x 7,2 x 8	CN09M DA9
Vite / Screw	M5 x 19	VT11M AA9
Vite / Screw	M5 x 6	VT05M AC9
Chiave a forchetta / Fork wrench	5	CB04M 059
Coltello / Knife	12 x 12 x 1,5	CG01M BA3
Cuneo / Wedge	15 x 10 x 8	CN09M AA9
Vite / Screw	M6 x 22	VT19M AB9
Ogiva / Nut	10 x 11,5 x 6	VT20M AA9
Chiave / Allen key	3 x 110	CB03M AA9
Vite / Screw	M5 x 8	VT05M AA9

### PROFONDITÀ D'INCASTRO / DEPTH OF CUT

L = 30 mm con / with D = 160 mm

L = 40 mm con / with D = 200 mm






\* La quota tra parentesi è la massima allargatura foro possibile • Size shown between brackets is the max. rebore possible

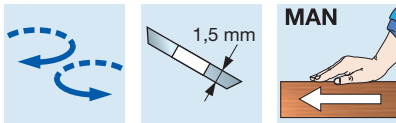
# TG18MA

## ELEMENTO CON COLTELLI A GETTARE PER TG11M ELEMENT WITH DISPOSABLE KNIVES FOR TG11M



D	B-B1	d*	Z	R	Codice Code
160	7,5	30 (50)	2		TG18MA AA3
160	7,5	35 (50)	2		TG18MA AB3
160	7,5	40 (50)	2		TG18MA AC3

Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Coltello / Knife 	7,5 x 12 x 1,5	CG01M AA3
Cuneo / Wedge 	15 x 7,2 x 8	CN09M DA9
Vite / Screw 	M5 x 19	VT11M AA9



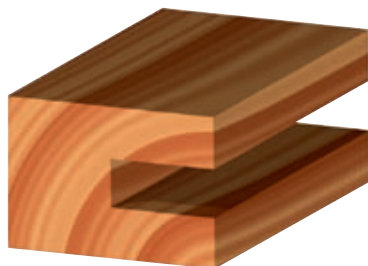
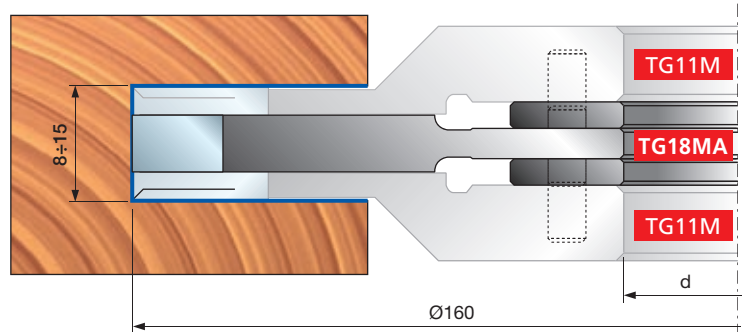
Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
R&S - SV/R 125/129

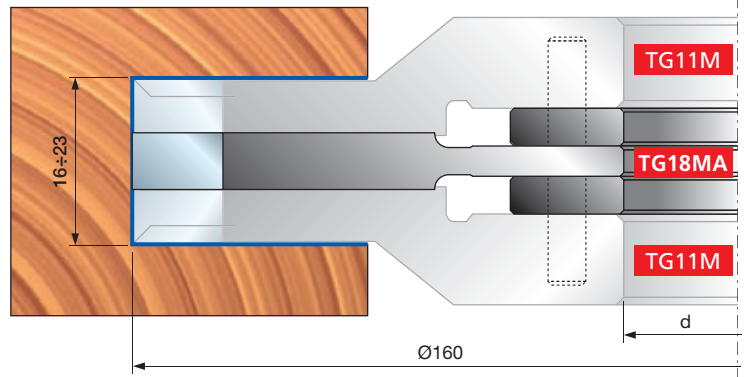
- INCREMENTA LA POSSIBILITÀ DI REGOLAZIONE DELL'ARTICOLO TG11M.
- IMPROVES THE ADJUSTMENT RANGE OF ITEM CODE TG11M.



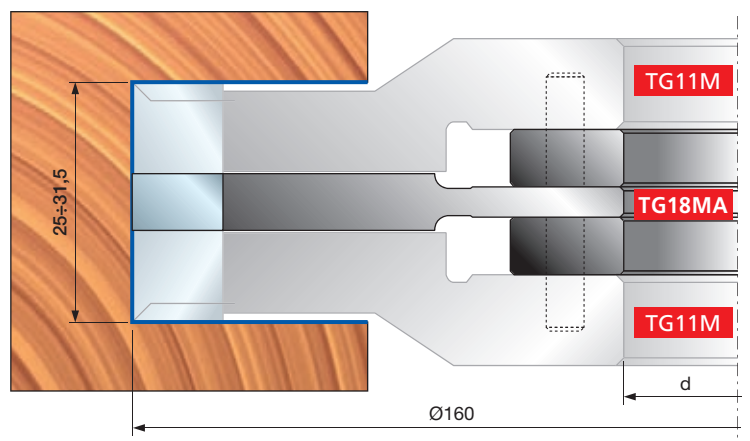
TG18MA  
+  
TG11M (4÷7,5)



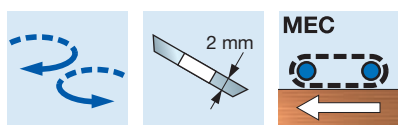
TG18MA  
+  
TG11M (8÷15,5)



TG18MA  
+  
TG11M (12,5÷24)



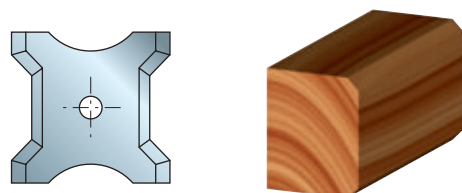
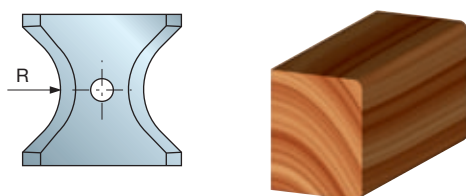
# T135M TG35M



- QUESTI UTENSILI VENGONO FORNITI SENZA COLTELLI.
- THESE ITEMS ARE SUPPLIED WITHOUT KNIVES.

- Per la lavorazione di legni duri, truciolare melaminico, nobilitato, bilaminato ed MDF.
- Especially indicated to work hardwood, melamine chipboard panels, veneer, bilaminated panels and MDF.
- Set di anelli distanziali (cod. AN03M CC9) con i seguenti spessori: 0,1 - 0,2 - 0,3 - 0,5 - 1 - 2 - 3 - 6 - 8 - 10 mm.
- Series of spacers (item AN03M CC9) with the following thicknesses: 0,1 - 0,2 - 0,3 - 0,5 - 1 - 2 - 3 - 6 - 8 - 10 mm.

- COLTELLI PER RAGGIARE.
- KNIVES FOR ROUNDING.



## TESTE PER SPIANARE ED ARROTONDARE POST FORMING CUTTERHEADS SET WITH DISPOSABLE KNIVES

### T135M per spianare / for planing

D mm	B mm	d* mm	Z	R	Codice Code
125	30	40 (50)	3		T135M AC3
125	50	40 (50)	3		T135M BC3

	Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
AC3	Coltello / Knife	30 x 12 x 1,5	CG01M EA3
	Cuneo / Wedge	15 x 26 x 8	CN09M AD9
BC3	Coltello / Knife	50 x 12 x 1,5	CG01M FA3
	Cuneo / Wedge	15 x 46 x 8	CN09M AP9
	Vite / Screw	M10 x 22	VT19M MA9
	Ogiva / Nut	15 x 13,3 x 10	VT20M MA9
	Chiave / Allen key	5 x 110	CB03M EA9

### TG35MD - TG35MS per raggiare / for rounding

D mm	B mm	d* mm	Z	R	Codice Code
125	13	40 (50)	3		TG35MD EC3
125	20	40 (50)	3		TG35MD CC3
125	26	40 (50)	3		TG35MD DC3
125	13	40 (50)	3		TG35MS EC3
125	20	40 (50)	3		TG35MS CC3
125	26	40 (50)	3		TG35MS DC3

	Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
EC3	Cuneo / Wedge	12 x 11 x 8	CN21M AC9
	Vite / Screw	M6 x 22	VT19M AB9
	Ogiva / Nut	10 x 11,5 x 6	VT20M AA9
	Chiave / Allen key	3 x 110	CB03M AA9
CC3 - DC3	Cuneo / Wedge	18 x 18 x 8	CN21M AA9
	Cuneo / Wedge	18 x 26 x 8	CN21M AB9
	Vite / Screw	M10 x 22	VT19M MA9
	Ogiva / Nut	15 x 13,3 x 10	VT20M MA9
	Chiave / Allen key	5 x 110	CB03M EA9
	Vite / Screw	M5 x 7 x 16	VT08M AE9

### Coltelli di ricambio / Spare knives

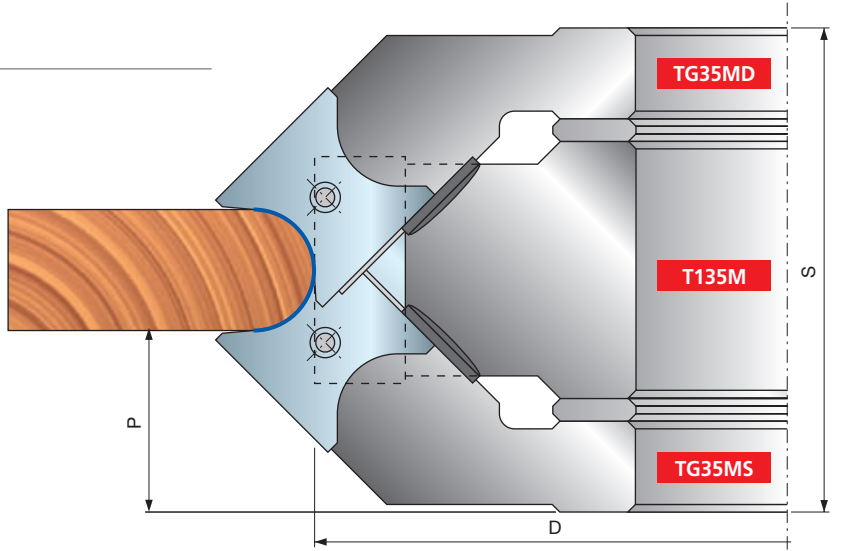
Coltelli Knives	Dimensioni Dimensions	R	Sp. spianatura Thickness		Per teste For cutterheads
			T135M AC3	T135M BC3	
CG50M CE3	13 x 16 x 2	45°			
CG50M CD3	13 x 16 x 2	1			
CG50M CA3	13 x 16 x 2	2	4÷30	24÷50	TG35MD EC3
CG50M CB3	13 x 16 x 2	3			TG35MS EC3
CG50M CC3	13 x 16 x 2	4			
CG50M AE3	20 x 21 x 2	45°			
CG50M AA3	20 x 21 x 2	5			
CG50M AB3	20 x 21 x 2	6	10÷40	30÷60	TG35MD CC3
CG50M AC3	20 x 21 x 2	7			TG35MS CC3
CG50M AD3	20 x 21 x 2	8			
CG50M BE3	26 x 24 x 2	45°			
CG50M BA3	26 x 24 x 2	9			
CG50M BB3	26 x 24 x 2	10	18÷48	36÷68	TG35MD DC3
CG50M BC3	26 x 24 x 2	11			TG35MS DC3
CG50M BD3	26 x 24 x 2	12			

# ESEMPI DI APPLICAZIONE

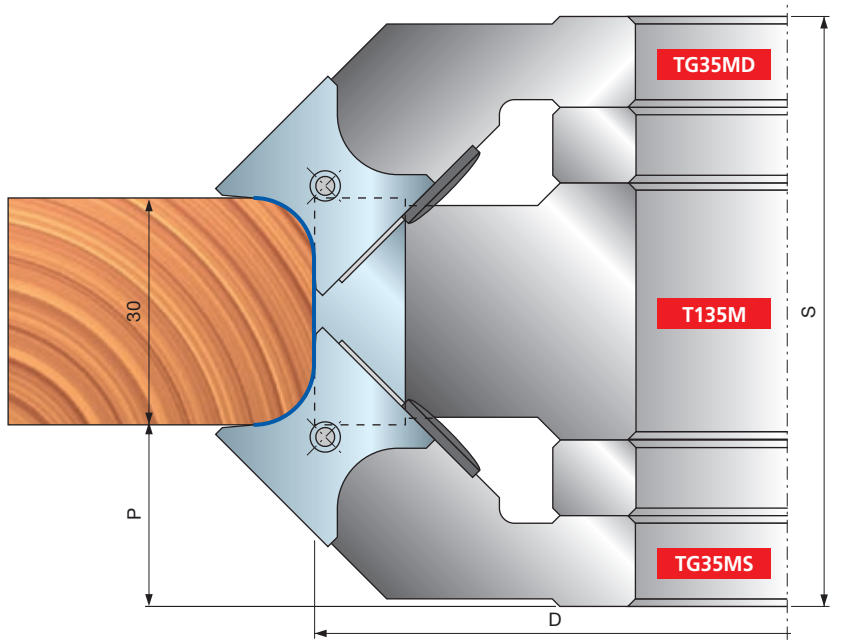
## EXAMPLES OF APPLICATION

Misure coltello	P	S
Knife dimensions		
26 x 24 x 2	26	52 + Sp. legno / Wood thickness
20 x 21 x 2	24	48 + Sp. legno / Wood thickness
13 x 16 x 2	27	54 + Sp. legno / Wood thickness

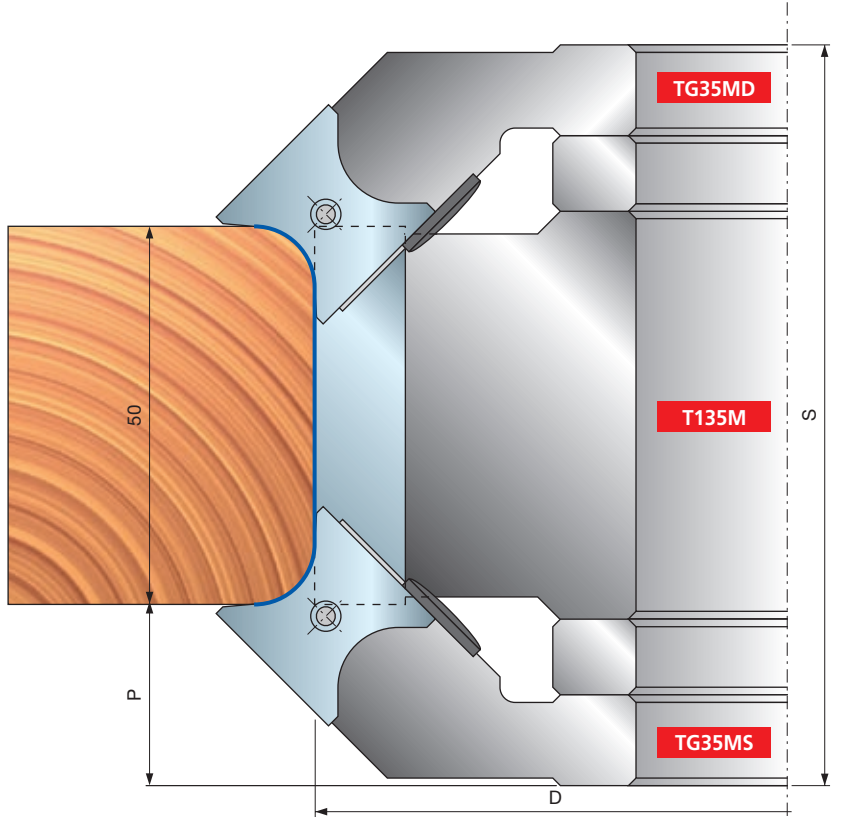
PROFILO / PROFILE **A**



PROFILO / PROFILE **B**

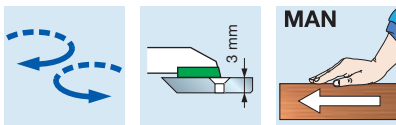


PROFILO / PROFILE **C**



# TP22M

## TESTE PORTACOLTELLI MULTIRAGGIO MULTI RADIUS CUTTERHEADS



### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives













Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •

(1) R&S - SV/R 149/148

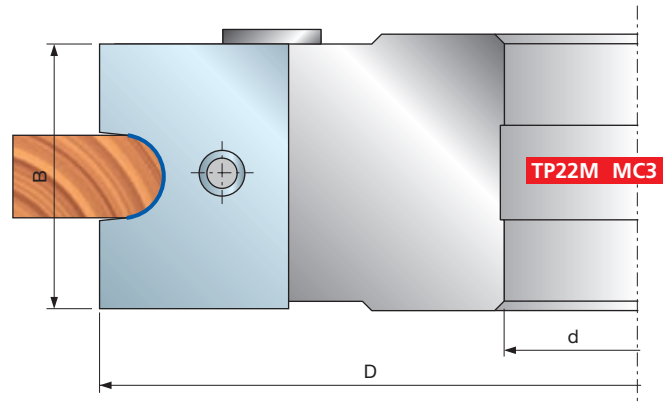
(2) R&S - SV/R 150/149

D	B	d*	Z	Raggio	Codice
mm	mm	mm		Radius	Code
124	45	35 (40)	2	8-9-10-11	TP22M LB3 <sup>(1)</sup>
142	35	40 (50)	2	5-5,5-6	TP22M MC3 <sup>(2)</sup>

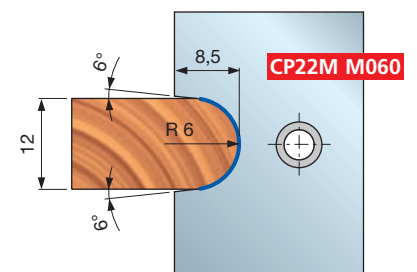
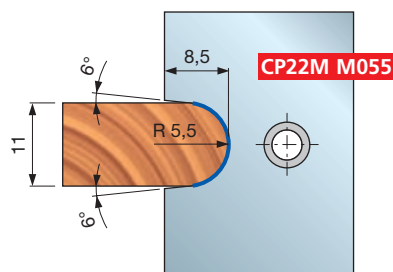
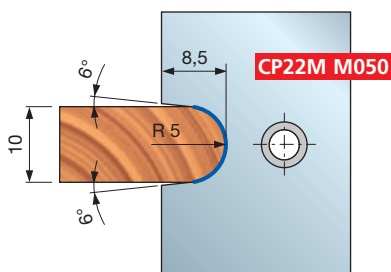
Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
LB3	Cuneo / Wedge 	43 x 28 x 8,5 CN13M CH9A
	Coltello / Knife 	45 x 29 x 3 R8 CP22M L080
	Coltello / Knife 	45 x 29 x 3 R9 CP22M L090
	Coltello / Knife 	45 x 29 x 3 R10 CP22M L100
	Coltello / Knife 	45 x 29 x 3 R11 CP22M L110
MC3	Cuneo / Wedge 	33 x 23 x 8,5 CN13M CI9A
	Coltello / Knife 	35 x 24 x 3 R5 CP22M M050
	Coltello / Knife 	35 x 24 x 3 R5,5 CP22M M055
	Coltello / Knife 	35 x 24 x 3 R6 CP22M M060
	Vite / Screw 	M5 x 7 x 16 VT08M AE9
	Vite / Screw 	M10 x 18 VT03M CC9
Chiave / Allen key 	5 x 110 CB03M EA9	

■ Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. L'articolo è fornito di coltelli.

■ Light alloy body (Ergal). For cleaning do not use products containing caustic soda. This item comes complete with knives in a practical carrying case.



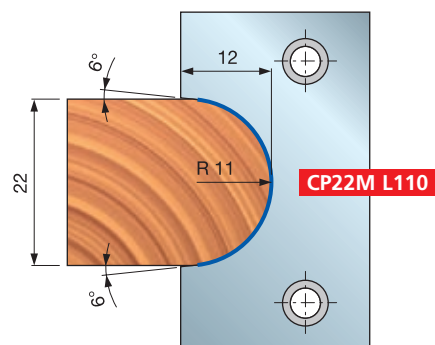
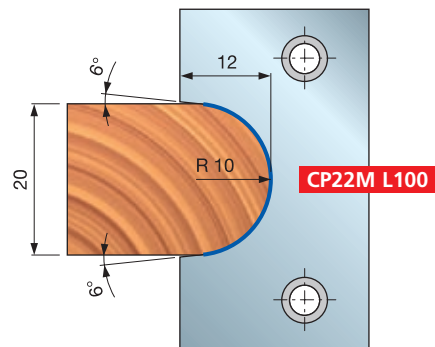
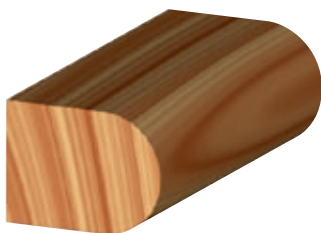
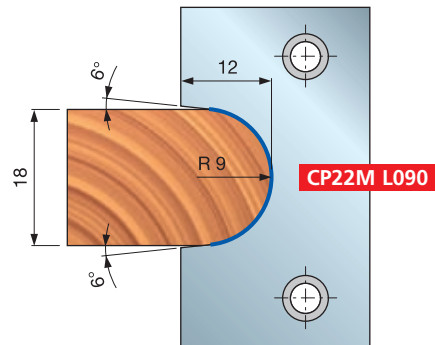
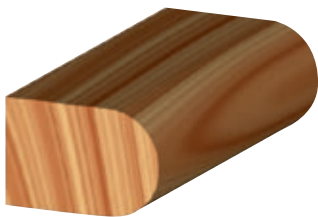
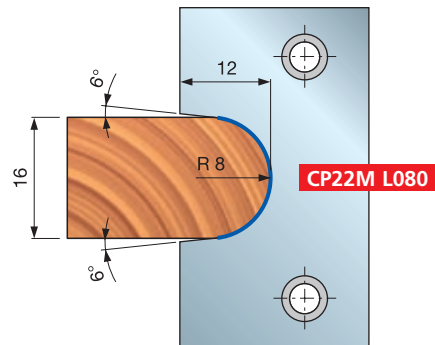
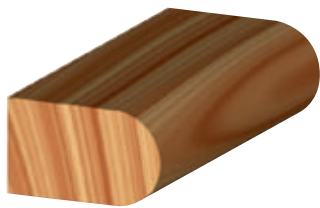
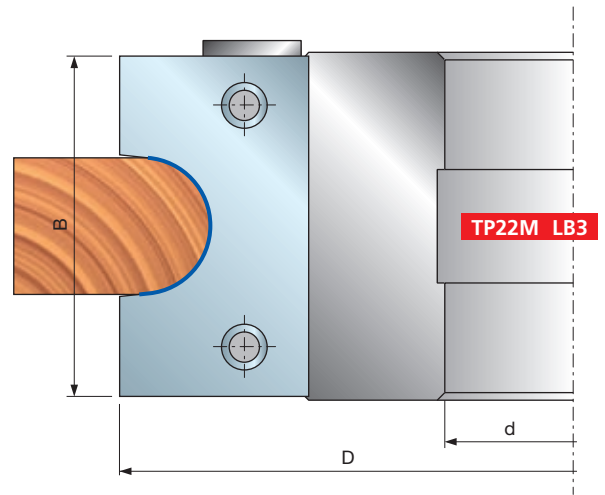
### COLTELLI PER / KNIVES FOR TP22M MC3



# TESTE PORTACOLTELLI MULTIRAGGIO

## MULTI RADIUS CUTTERHEADS

COLTELLI PER / KNIVES FOR **TP22M LB3**



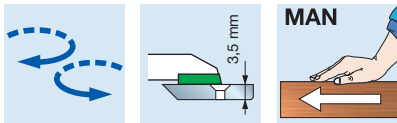
# TP23M

## TESTA PORTACOLTELLI MULTIRAGGIO MULTI RADIUS CUTTERHEAD



D	B	d*	Z	Raggio	Codice
mm	mm	mm		Radius	Code
120	12	35 (50)	2	6 - 8 - 10	TP23M AB3

Parti di ricambio		Dimensioni	Codice
Spare parts		Dimensions	Code
Coltello / Knife		12 x 24 x 3,5 R6	CP23M A060
Coltello / Knife		16 x 24 x 3,5 R8	CP23M A080
Coltello / Knife		20 x 24 x 3,5 R10	CP23M A100
Vite / Screw		M6 x 10	2622M CB9
Vite / Screw		M5 x 8	VT05M AA9
Piastra riscontro / Positioning plate		20 x 11,6 x 2,2	VT18M AR9
Chiave / Allen key		4 x 110	CB03M BA9

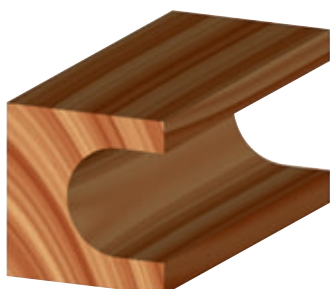
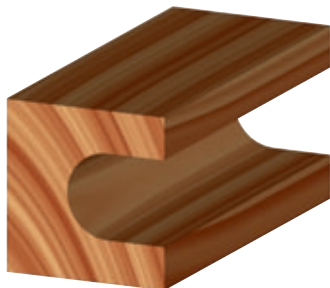
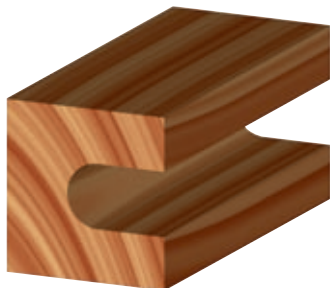


### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

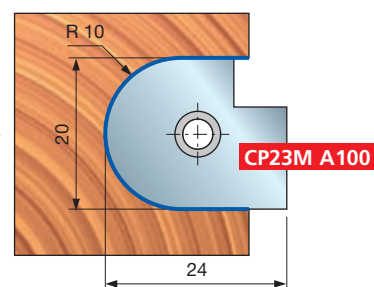
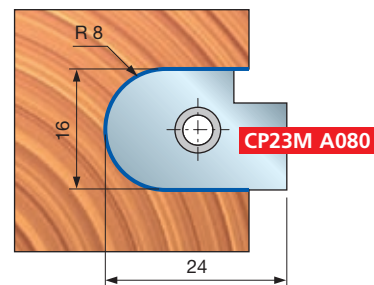
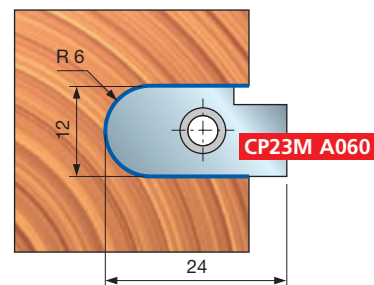
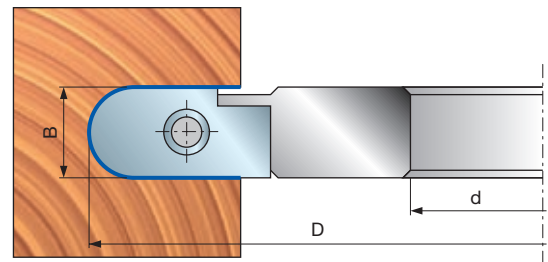
Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •  
R&S - SV/R 151/150

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. L'articolo è fornito di coltelli.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. This item comes complete with knives in a practical carrying case.



QUESTO PROFILO È UTILIZZABILE  
SOLAMENTE CON AVANZAMENTO  
MECCANICO. ▶  
THIS PROFILE IS USABLE WITH  
AUTOMATIC FEED ONLY.



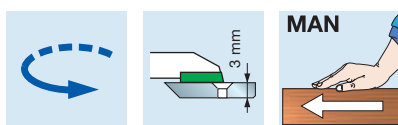
# TP31M

## TESTA PORTACOLTELLI MULTIRAGGIO MULTI RADIUS CUTTERHEAD



D	B	d*	Z	Raggio	Codice
mm	mm	mm		Radius	Code
150	24	35 (50)	2	8 - 10	TP31M AB3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Coltello / Knife	24 x 30 x 3 R8	CP31M A080
Coltello / Knife	24 x 30 x 3 R10	CP31M A100
Cuneo / Wedge	18 x 17 x 8	CN11M B180
Vite / Screw	M10 x 18	VT03M CC9
Piastra riscontro / Positioning plate	20 x 11,6 x 2,2	VT18M AR9
Vite / Screw	M5 x 8	VT05M AA9
Chiave / Allen key	5 x 110	CB03M EA9

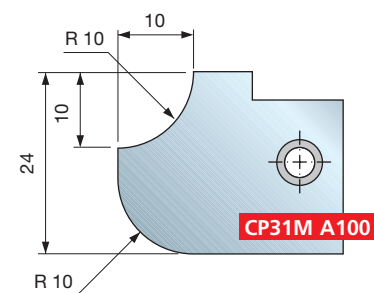
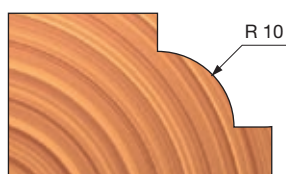
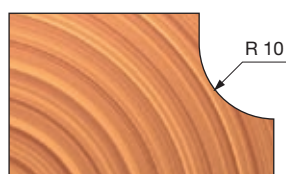
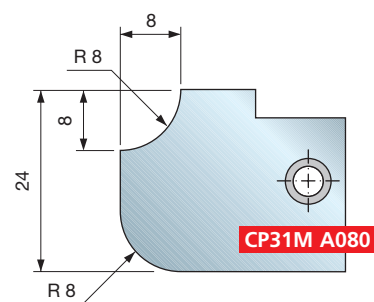
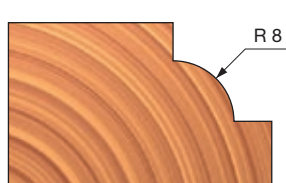
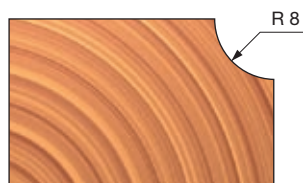
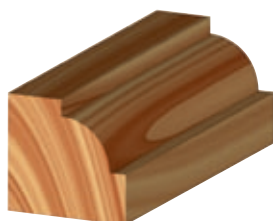
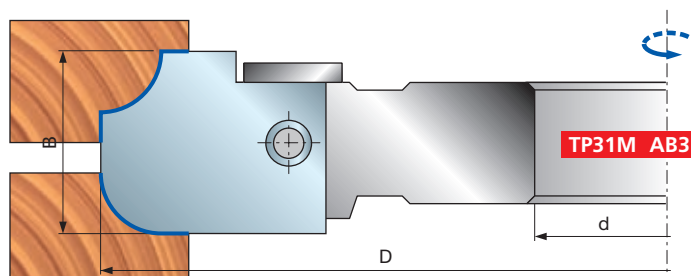


### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •  
R&S - SV/R 152/151

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. L'articolo è fornito di coltelli.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. This item comes complete with knives in a practical carrying case.





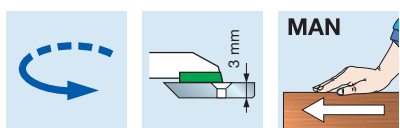
# TP31M

## TESTA PORTACOLTELLI MULTIRAGGIO MULTI RADIUS CUTTERHEAD



D	B	d*	Z	Raggio	Codice
mm	mm	mm		Radius	Code
150	34	35 (50)	2	10 - 12	TP31M EB3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Coltello / Knife	34 x 34 x 3 R10	CP31M B100
Coltello / Knife	34 x 34 x 3 R12	CP31M B120
Cuneo / Wedge	32 x 32 x 8,5	CN13M CF9A
Vite / Screw	M10 x 18	VT03M CC9
Piastra riscontro / Positioning plate	20 x 11,6 x 2,2	VT18M AR9
Vite / Screw	M5 x 8	VT05M AA9
Chiave / Allen key	5 x 110	CB03M EA9

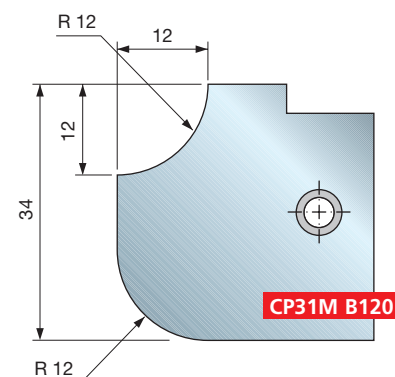
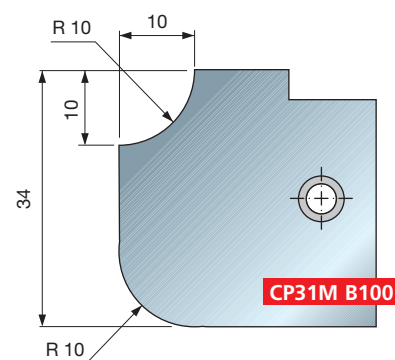
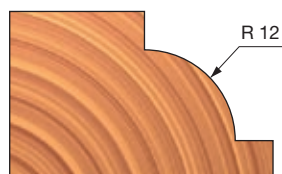
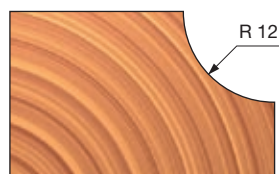
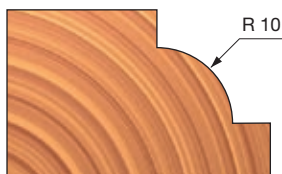
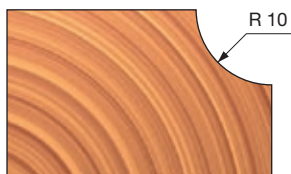
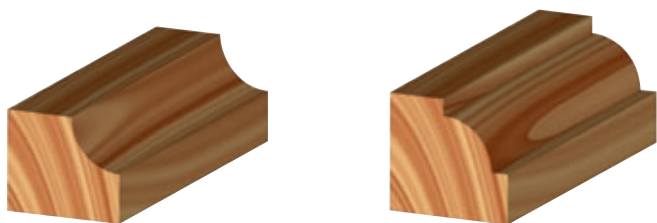
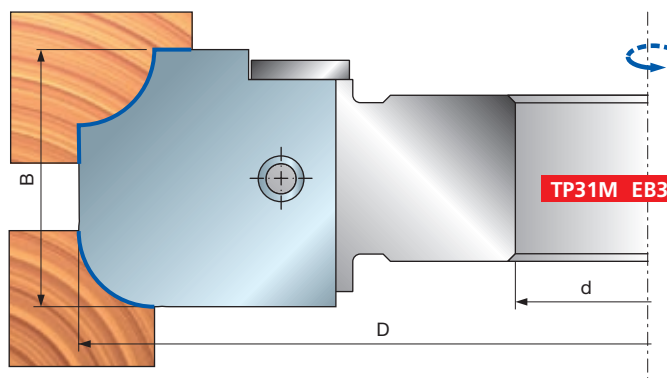


### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
R&S - SV/R 167/166

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. L'articolo è fornito di coltelli.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. This item comes complete with knives in a practical carrying case.



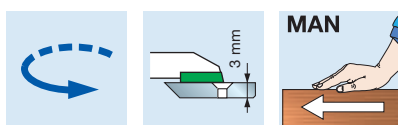
# TP31M

## TESTA PORTACOLTELLI MULTIRAGGIO MULTI RADIUS CUTTERHEAD



D	B	d*	Z	Raggio	Codice
mm	mm	mm		Radius	Code
150	34	35 (50)	2	15	TP31M FB3

Parti di ricambio		Dimensioni	Codice
Spare parts		Dimensions	Code
Coltello / Knife		34 x 34 x 3 R15	CP31M B150
Cuneo / Wedge		32 x 32 x 8,5	CN13M CF9A
Vite / Screw		M10 x 18	VT03M CC9
Piastra riscontro / Positioning plate		20 x 11,6 x 2,2	VT18M AR9
Vite / Screw		M5 x 8	VT05M AA9
Chiave / Allen key		5 x 110	CB03M EA9

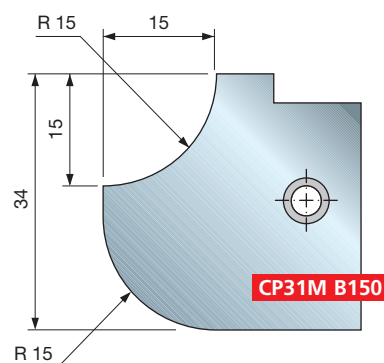
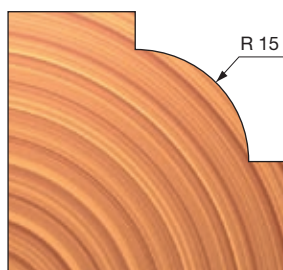
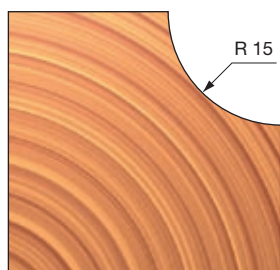
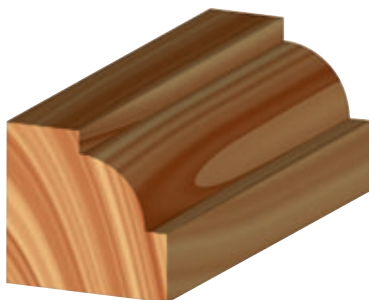
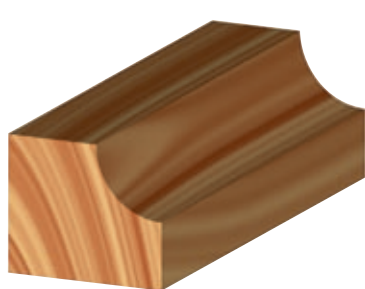
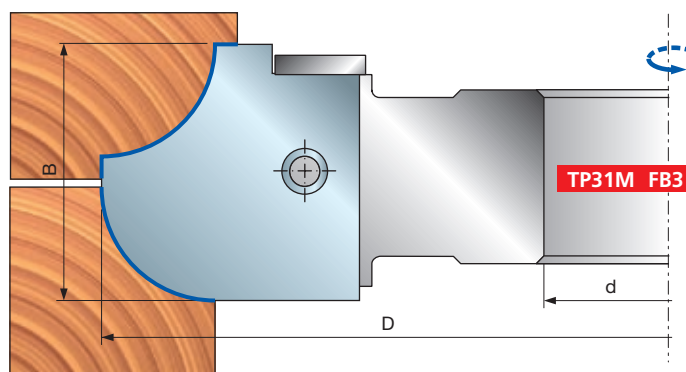


### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
R&S - SV/R 168/167

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. L'articolo è fornito di coltelli.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. This item comes complete with knives in a practical carrying case.



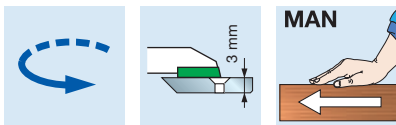
# TP31M

## TESTA PORTACOLTELLI MULTIRAGGIO MULTI RADIUS CUTTERHEAD



D	B	d*	Z	Raggio	Codice
mm	mm	mm		Radius	Code
160	40	35 (50)	2	8 - 10 - 12	TP31M GB3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Coltello / Knife	40 x 40 x 3 R8	CP31M C080
Coltello / Knife	40 x 40 x 3 R10	CP31M C100
Coltello / Knife	40 x 40 x 3 R12	CP31M C120
Cuneo / Wedge	38 x 37 x 8,5	CN13M CG9A
Vite / Screw	M10 x 18	VT03M CC9
Piastra riscontro / Positioning plate	20 x 11,6 x 2,2	VT18M AR9
Chiave / Allen key	5 x 110	CB03M EA9



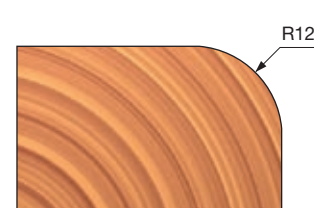
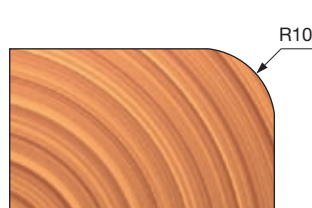
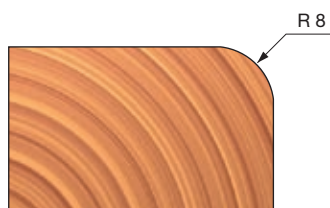
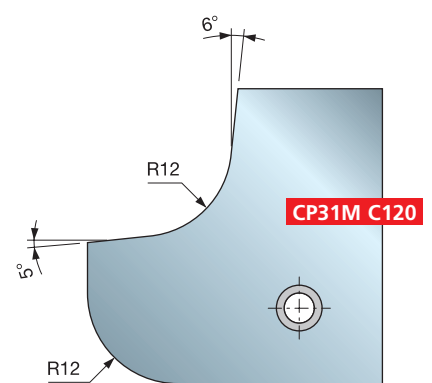
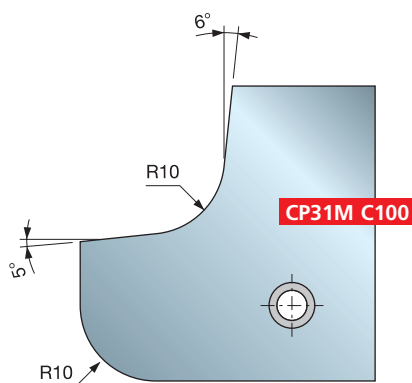
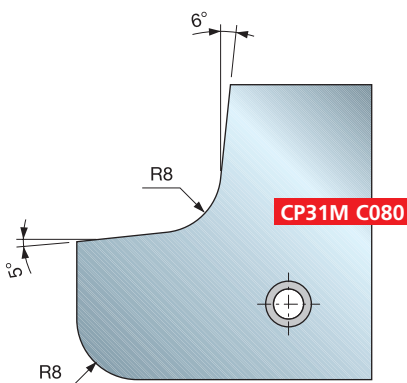
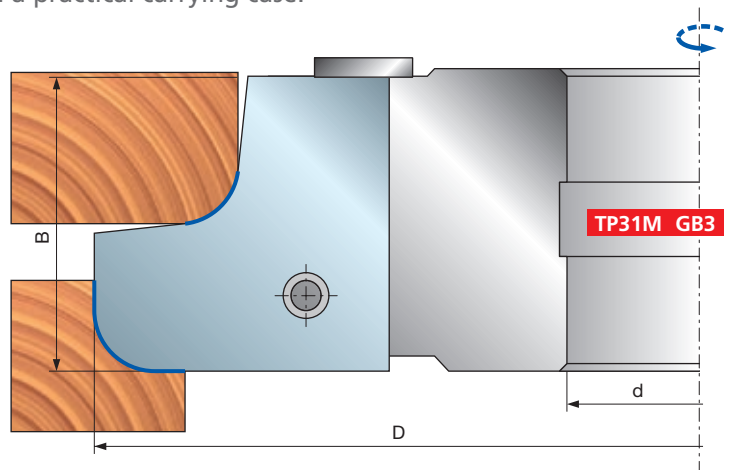
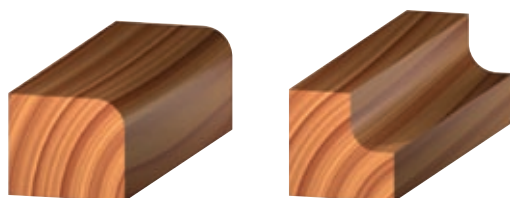
### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •

R&S - SV/R 153/152

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. L'articolo è fornito di coltelli.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. This item comes complete with knives in a practical carrying case.



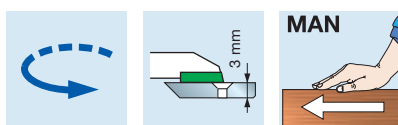
# TP31M

## TESTA PORTACOLTELLI MULTIRAGGIO MULTI RADIUS CUTTERHEAD



D	B	d*	Z	Raggio	Codice
mm	mm	mm		Radius	Code
160	40	35 (50)	2	12-15-17,5	TP31M HB3

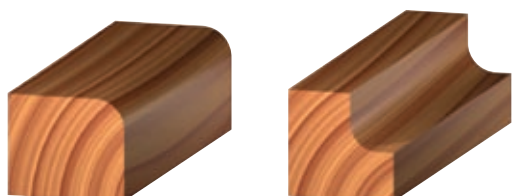
Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Coltello / Knife	40 x 40 x 3 R12	CP31M C120
Coltello / Knife	40 x 40 x 3 R15	CP31M C150
Coltello / Knife	40 x 40 x 3 R17,5	CP31M C175
Cuneo / Wedge	38 x 37 x 8,5	CN13M CG9A
Vite / Screw	M10 x 18	VT03M CC9
Piastra riscontro / Positioning plate	20 x 11,6 x 2,2	VT18M AR9
Chiave / Allen key	5 x 110	CB03M EA9



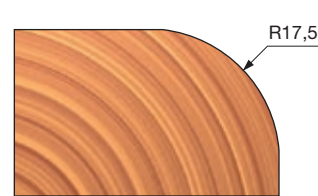
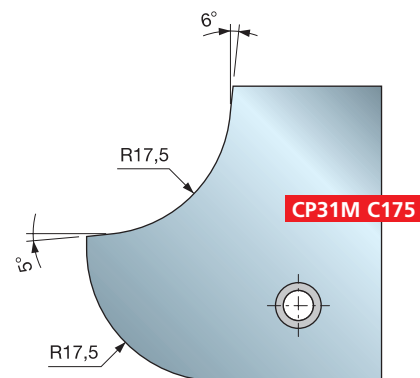
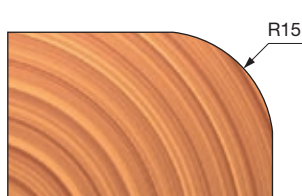
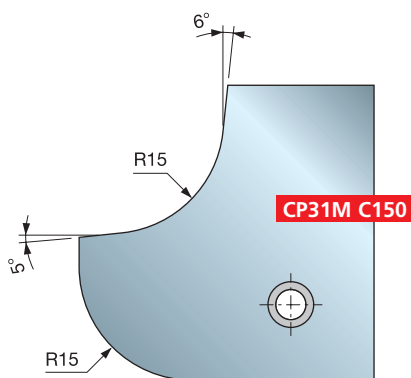
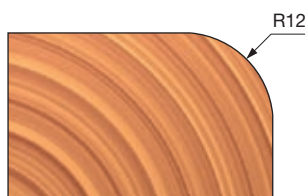
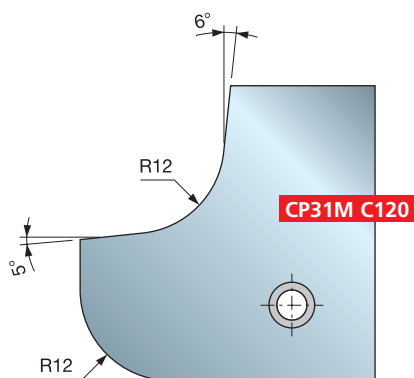
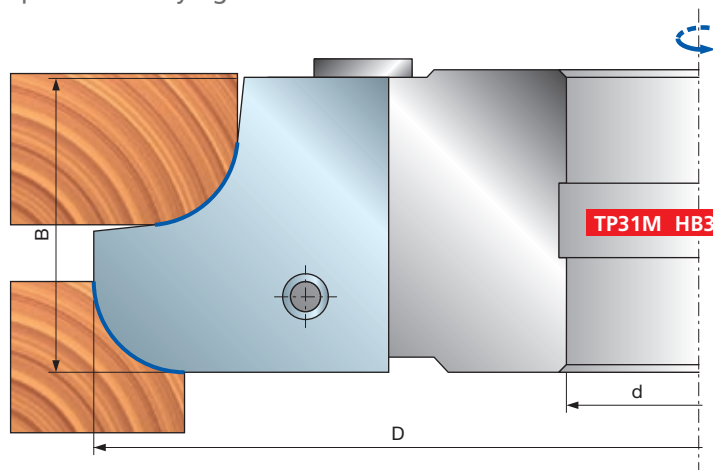
### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •  
R&S - SV/R 154/153

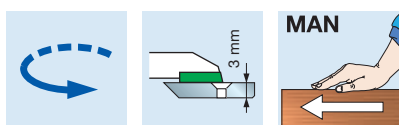


- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. L'articolo è fornito di coltelli.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. This item comes complete with knives in a practical carrying case.



# TP31M TP31MS

## TESTE PORTACOLTELLI MULTIRAGGIO MULTI RADIUS CUTTERHEADS



### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •

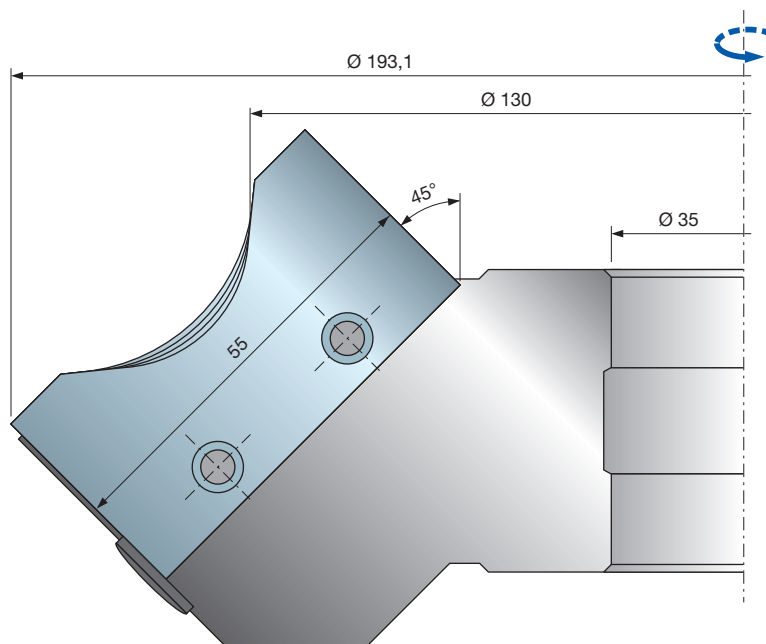
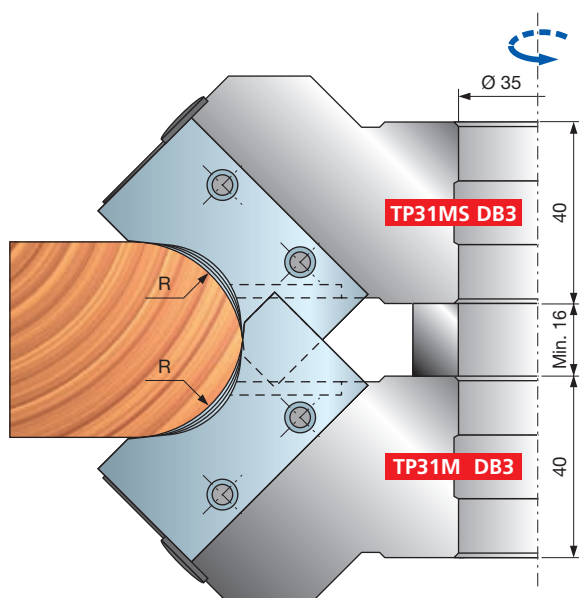
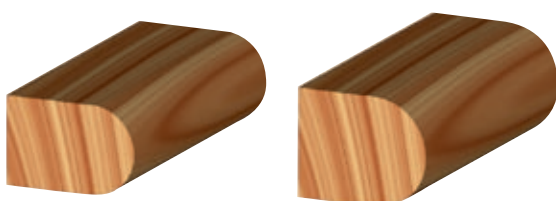
R&S - SV/R 155/154

D	B	d*	Z	Raggio	Codice
mm	mm	mm		Radius	Code
200	55	35 (50)	2	17,5-20-22,5-25	TP31M DB3
200	55	35 (50)	2	17,5-20-22,5-25	TP31MS DB3

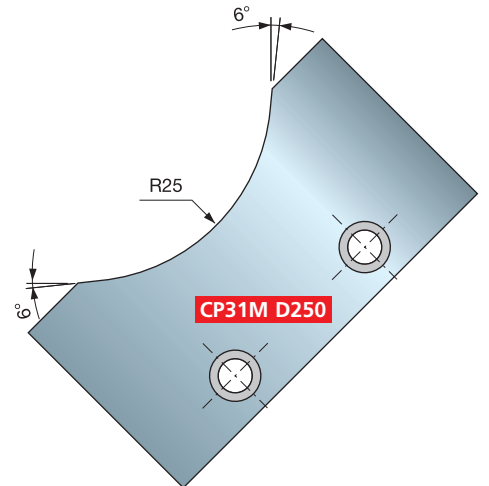
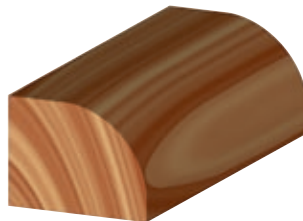
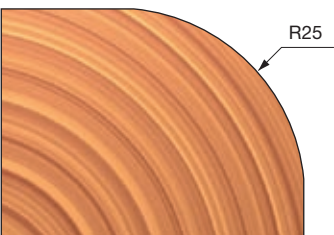
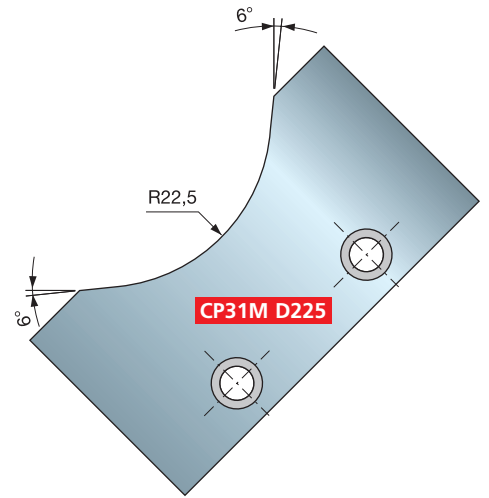
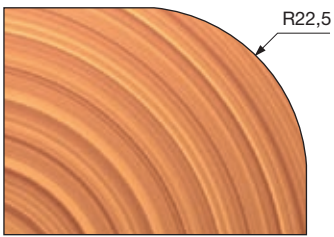
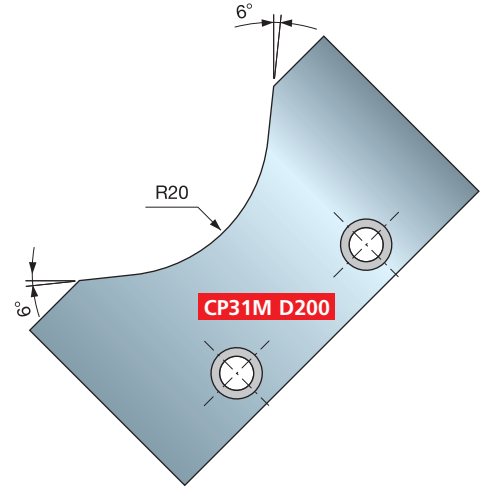
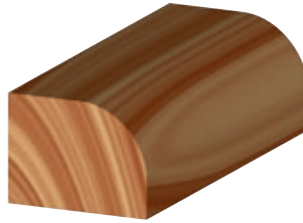
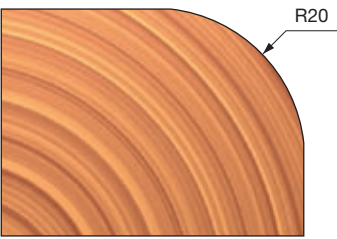
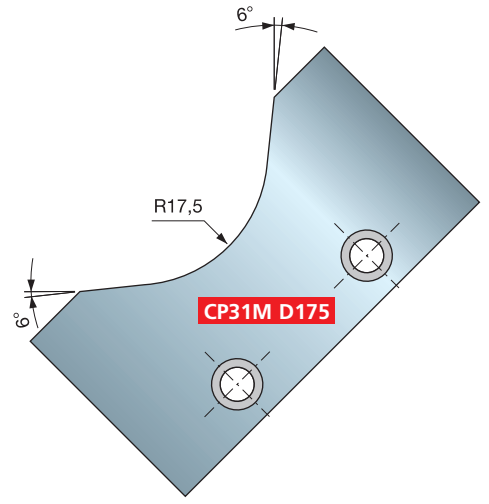
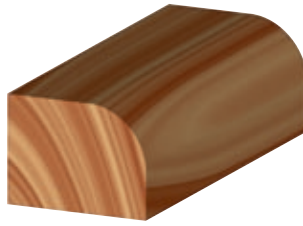
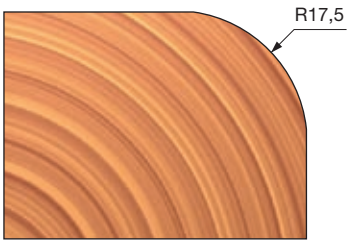
Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Coltello / Knife	55 x 29 x 3 R17,5	CP31M D175
Coltello / Knife	55 x 29 x 3 R20	CP31M D200
Coltello / Knife	55 x 29 x 3 R22,5	CP31M D225
Coltello / Knife	55 x 29 x 3 R25	CP31M D250
Cuneo / Wedge	51 x 19 x 8	CN11M C510
Vite / Screw	M5 x 7 x 16	VT08M AE9
Vite / Screw	M10 x 25	2602M F19
Chiave / Allen key	5 x 110	CB03M EA9

■ Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. Teste portacoltelli multiraggio, complete di 4 set di coltelli riaffilabili di diverso raggio, da utilizzare su macchina toupie. Particolarmente adatte per lavorazioni di contornatura e profilatura su legni teneri, duri ed esotici, con ottima finitura. I coltelli sono perfettamente intercambiabili tra loro e mantengono il diametro minimo di lavorazione; pertanto è possibile sostituire sulle teste un coltello con raggio diverso senza modificare il posizionamento della guida rispetto al pezzo lavorato. Le due teste montano gli stessi coltelli.

■ Light alloy body (Ergal). For cleaning do not use products containing caustic soda. Cutterheads with multi radius knives, fitted with 4 sets of resharpenable knives of various radii. To be used on a moulding machine. This tool is particularly suitable for moulding and profiling on soft, hard and exotic wood. Top quality finish. The knives have various radii and are fully interchangeable and keep the minimum working diameter. It is therefore possible to replace a knife with a different radius without resetting the fence with respect to the machined part. The knives are the same for both cutterheads.



ESEMPI DI PROFILI REALIZZABILI  
EXAMPLE OF PROFILES



# FS39M Z = 2

# FS39MS Z = 2

## FRESE SAGOMATE MULTIPROFILO

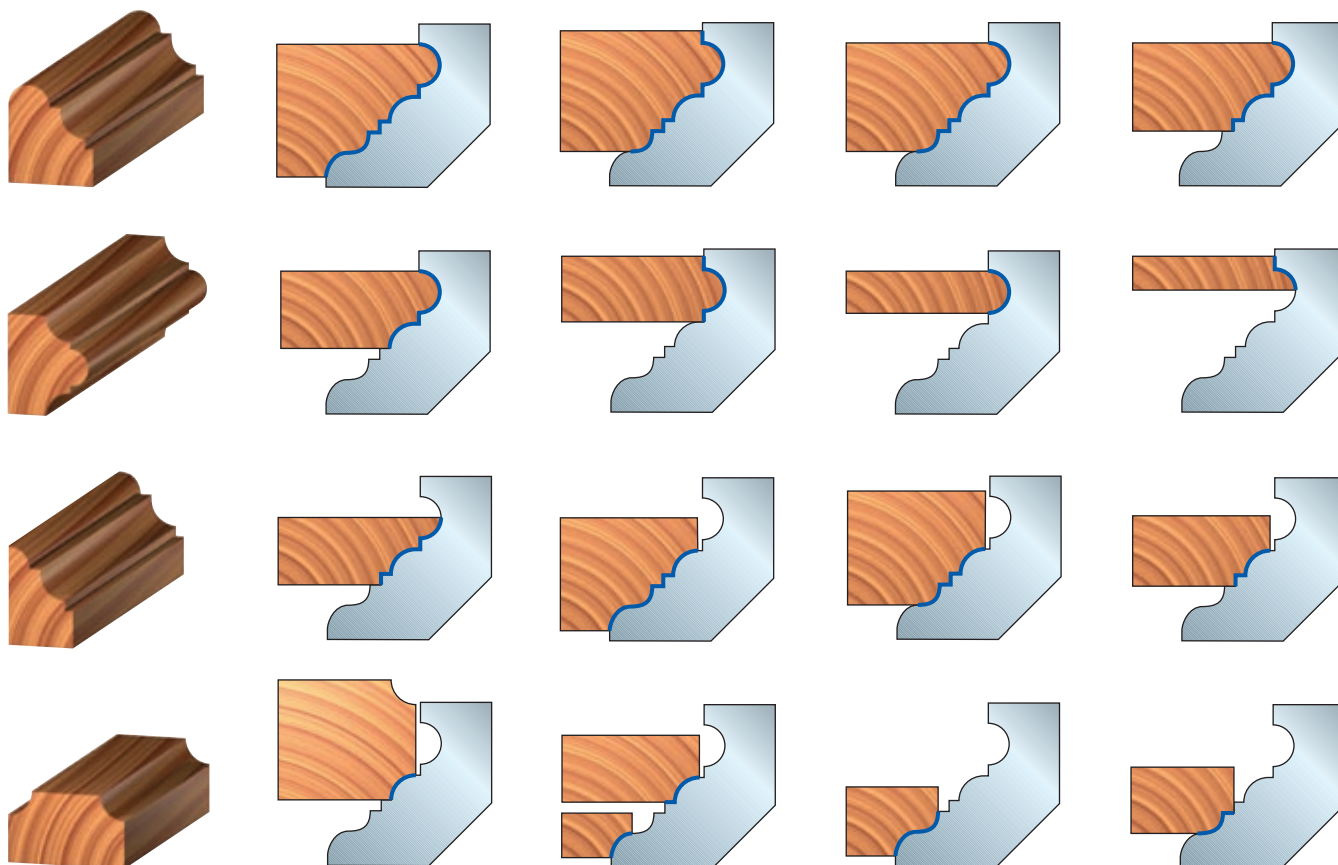
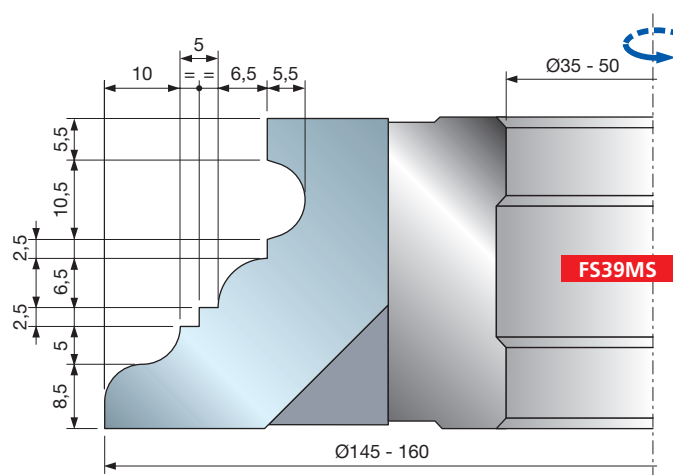
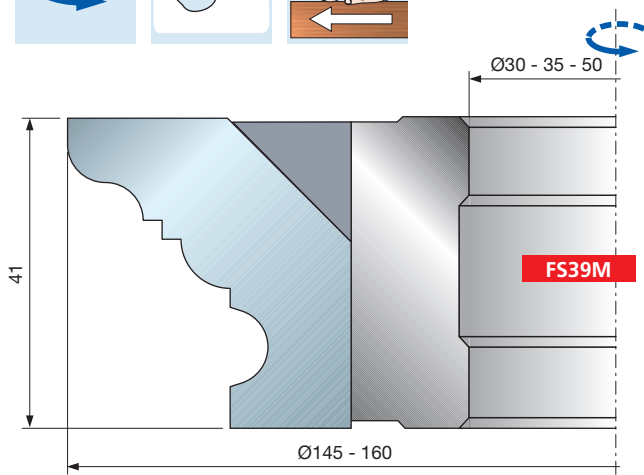
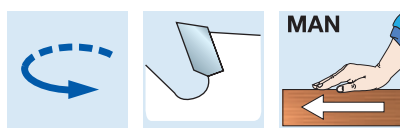
## MULTIPROFILE BRAZED CUTTERS



D	B	d*	Z	R	Codice Code
145	41	30 (40)	2		FS39M AA3
145	41	35 (40)	2		FS39M AB3
160	41	50	2		FS39M AD3
145	41	35 (40)	2		FS39MS AB3
160	41	50	2		FS39MS AD3

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
**R&S - R 142**



\* La quota tra parentesi è la massima allargatura foro possibile • Size shown between brackets is the max. rebore possible

# FS40M

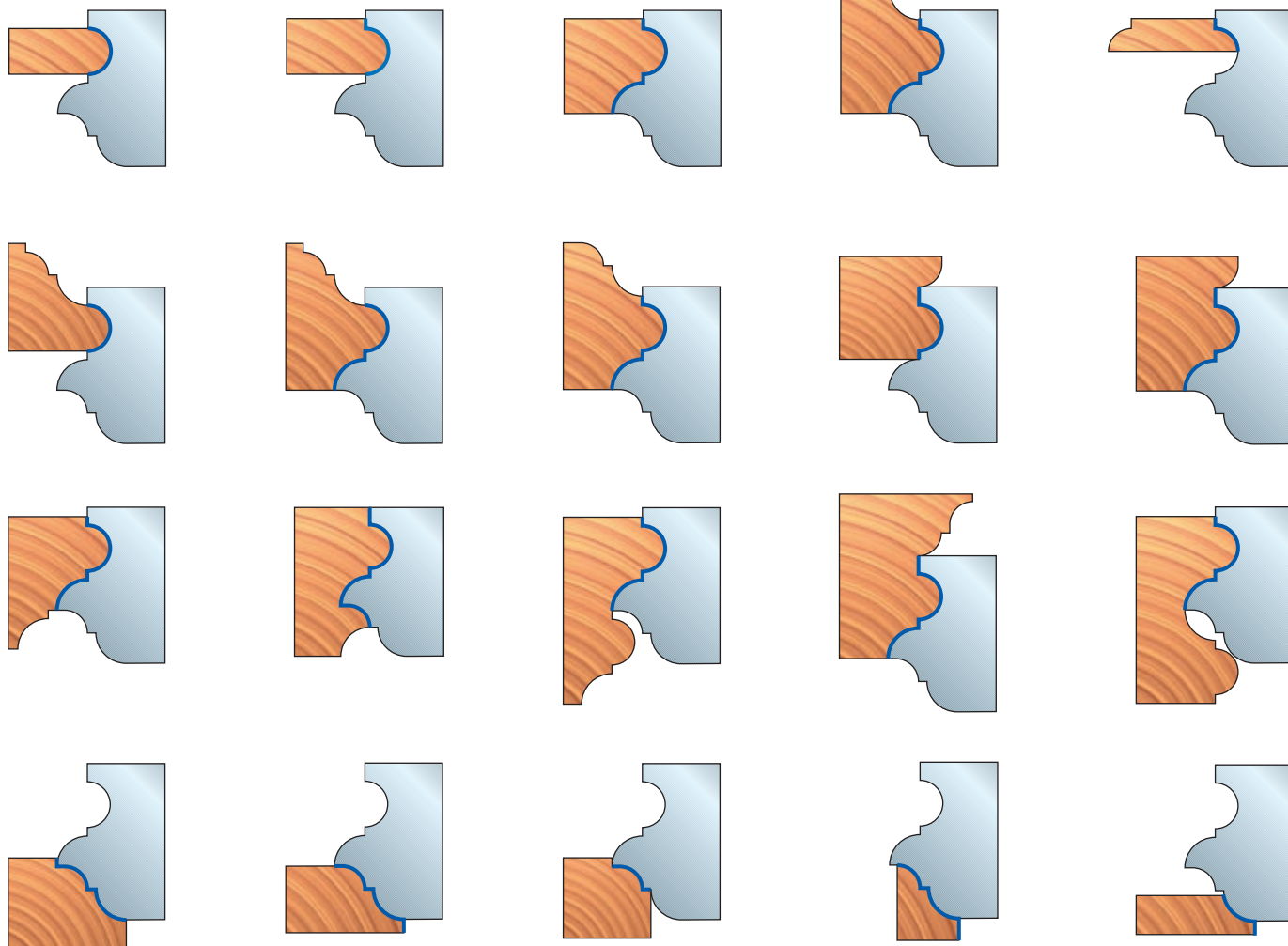
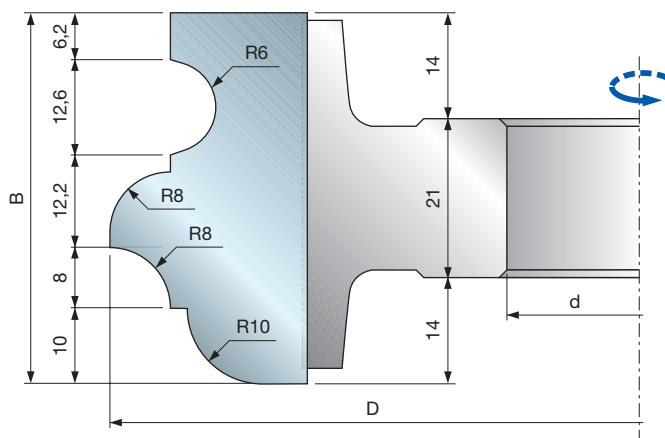
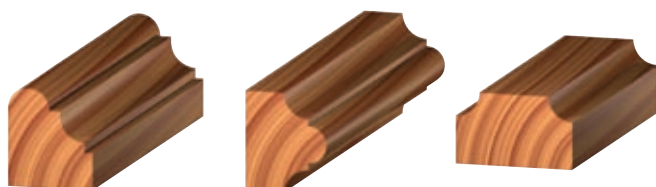
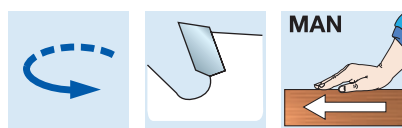
## FRESE SAGOMATE MULTIPROFILO MULTIPROFILE BRAZED CUTTERS



D	B	d*	Z	R	Codice Code
140	49	35 (40)	2		FS40M CB3
140	49	50	2		FS40M CD3

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
**R&S - R 143**

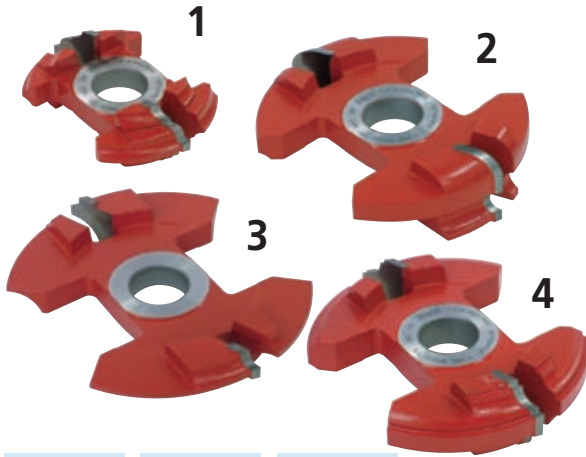




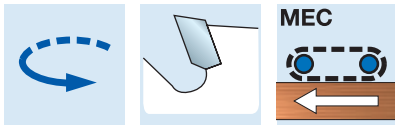
# FS42M

## SET DI FRESE SAGOMATE MULTIPROFILO

## SET OF MULTIPROFILE BRAZED CUTTERS



D	B	d	Z	R	Utensile	Codice Cassetta
mm	mm	mm			Tool	Cutterset code
133	43	35	2		A	FS42M EB3
169	49	35	2		B	
174	50	35	2		C	
188	37	35	2		D	
133	43	40	2		A	FS42M ED3
169	49	40	2		B	
174	50	40	2		C	
188	37	40	2		D	
148	43	50	2		A	FS42M EC3
184	49	50	2		B	
189	50	50	2		C	
203	37	50	2		D	

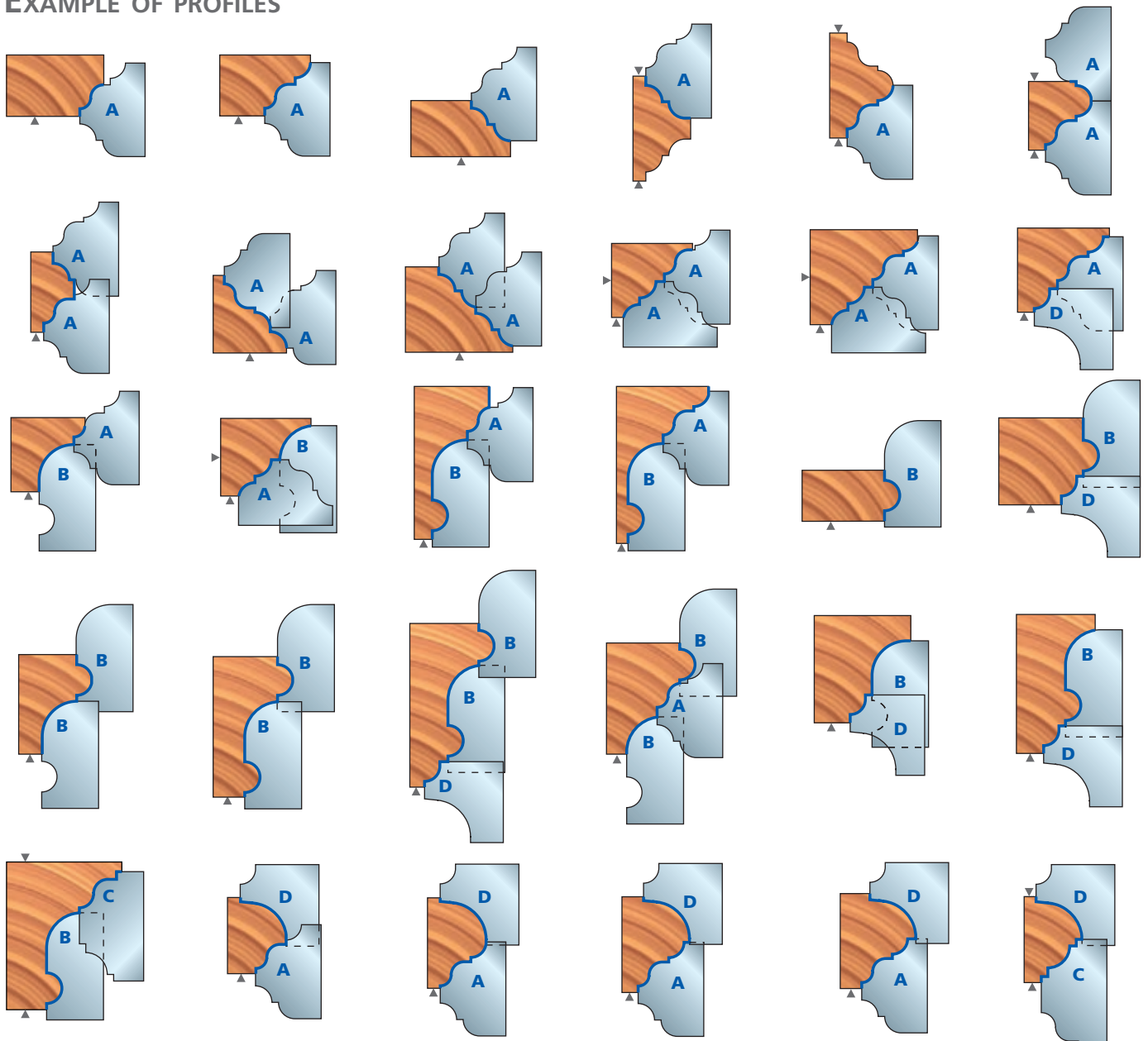


■ Le cassette sono fornite esclusivamente complete di tutti gli elementi.

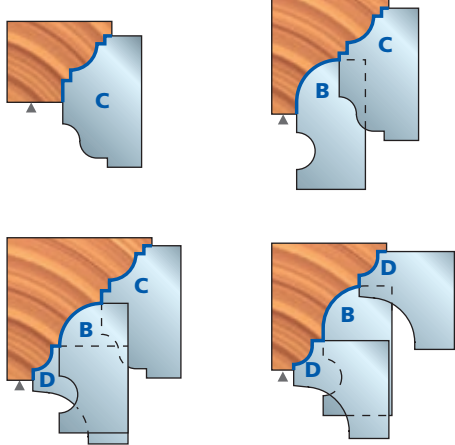
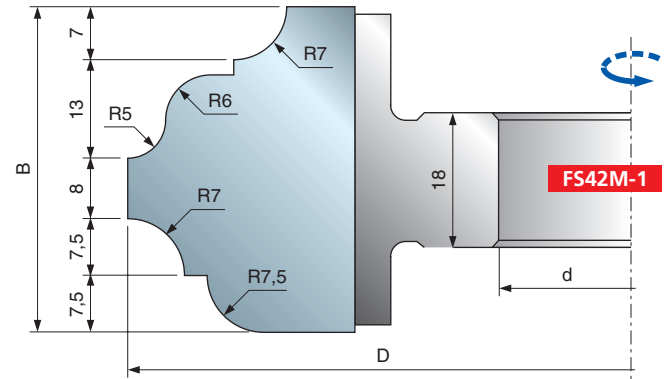
■ The boxes are supplied only complete with all four tools.

### ESEMPI DI PROFILI REALIZZABILI

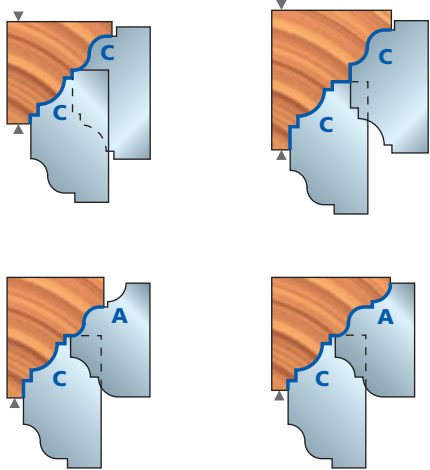
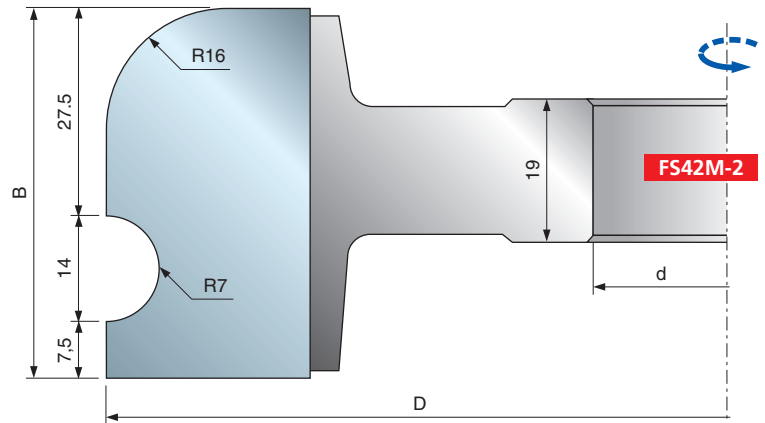
### EXAMPLE OF PROFILES



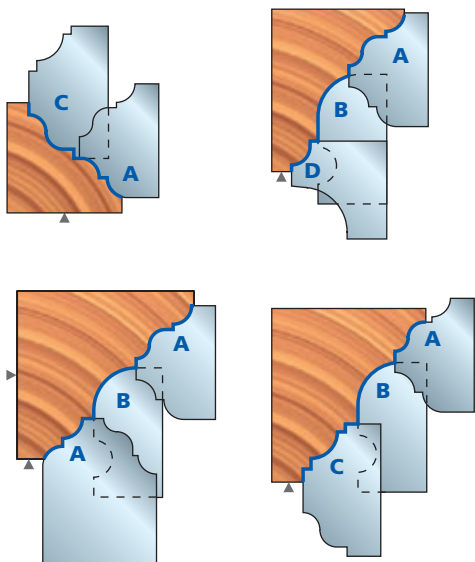
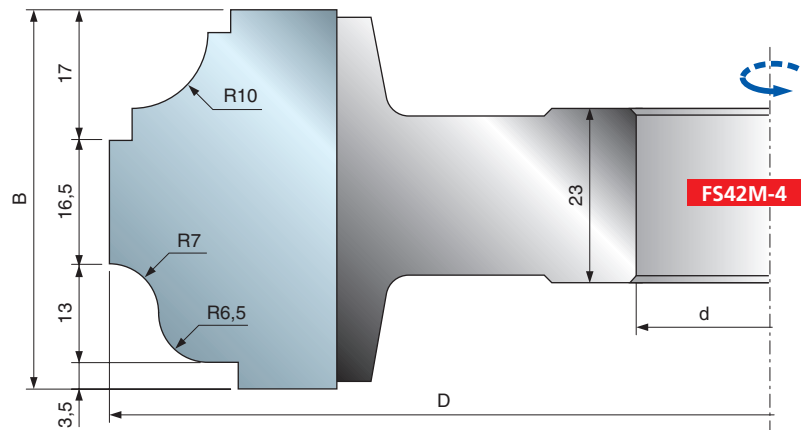
PROFILO / PROFILE **A**



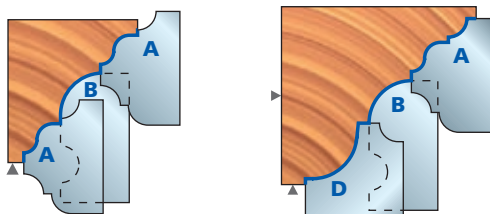
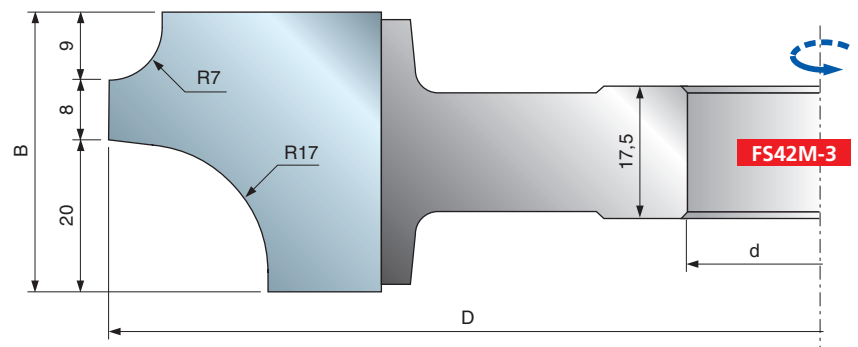
PROFILO / PROFILE **B**



PROFILO / PROFILE **C**



PROFILO / PROFILE **D**



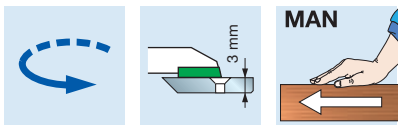
# TP40M

## TESTA PORTACOLTELLI MULTIPROFILO MULTIPROFILE CUTTERHEAD



D	B	d*	Z	R	Codice
mm	mm	mm			Code
160	55	35 (50)	2		TP40M AB3

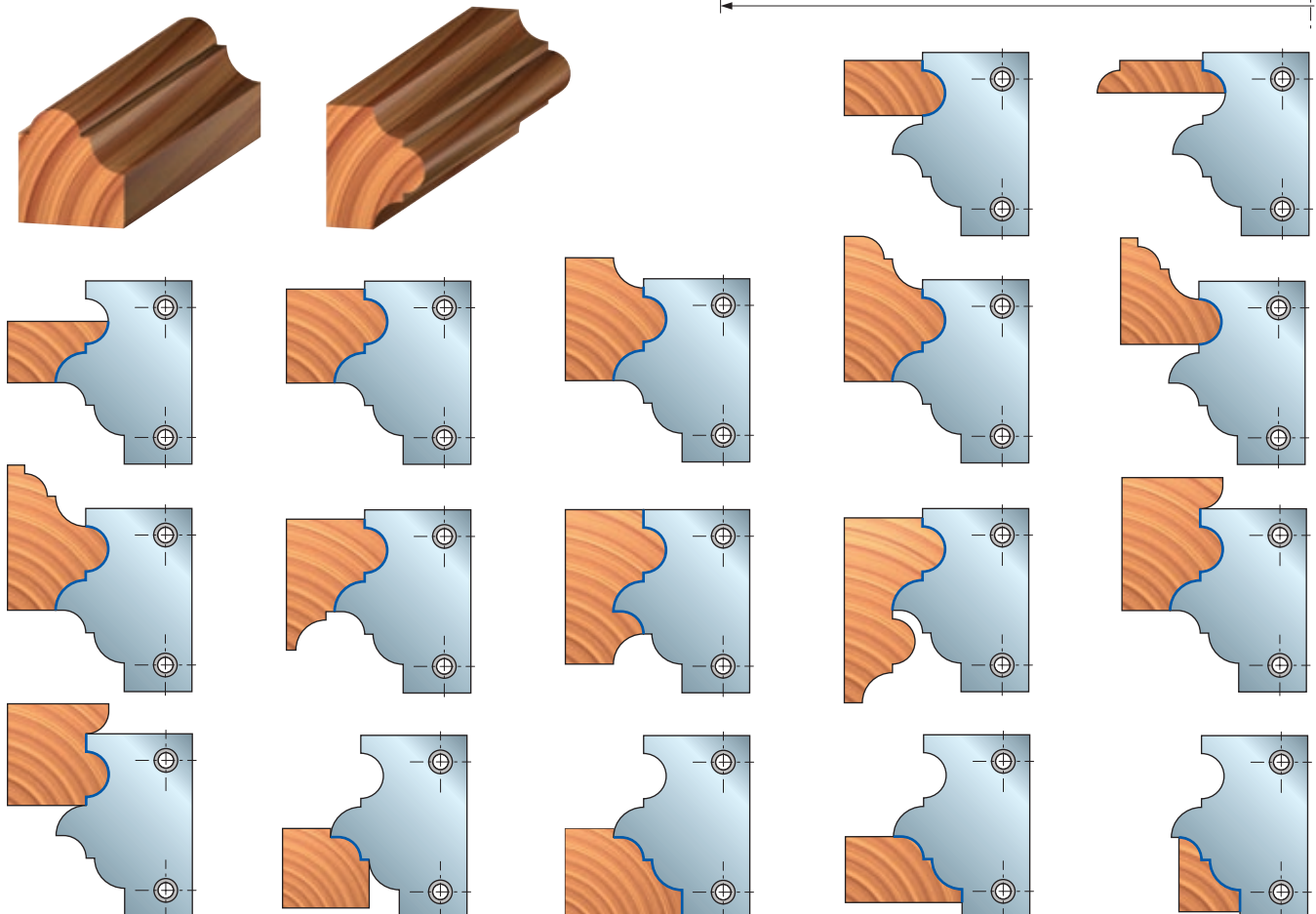
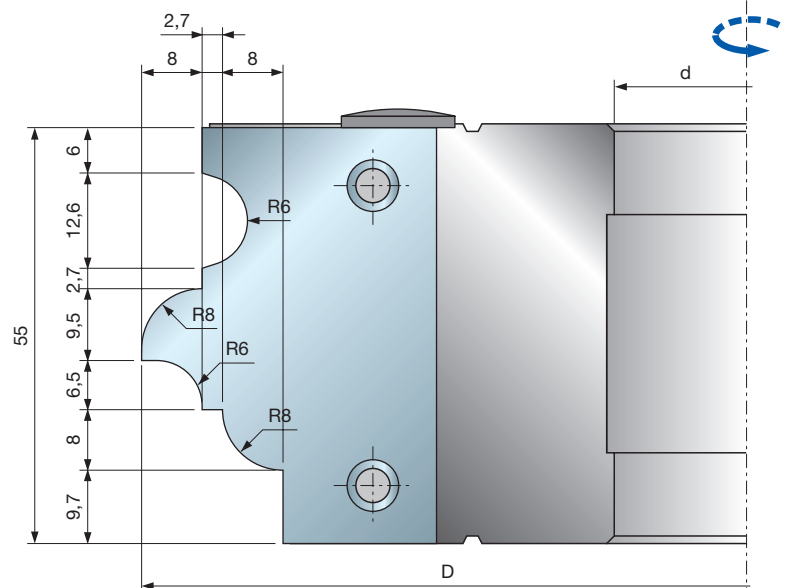
Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Coltello / Knife	55 x 39 x 3	CP40M AA3
Cuneo / Wedge	51 x 35 x 8	CN13M AH9
Vite / Screw	M10 x 18	VT03M CC9
Vite / Screw	M5 x 7 x 16	VT08M AE9
Chiave / Allen key	5 x 110	CB03M EA9



**PERFORMANCE**  
Coltelli Riaffilabili  
**SYSTEM**  
Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

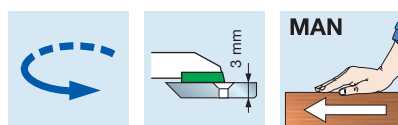
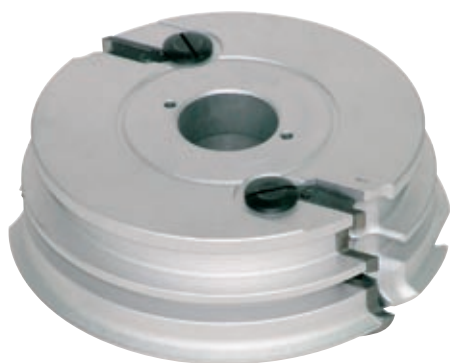
• **EN 847-1** •  
**R&S - SV/R 148/147**



\* La quota tra parentesi è la massima allargatura foro possibile • Size shown between brackets is the max. rebore possible

# TP44M

## TESTA MULTIPROFILI MULTIPROFILE CUTTERHEAD



### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

#### PROFILO / PROFILE 1

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •

R&S - SV/R 136/138

#### PROFILO / PROFILE 2

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• EN 847-1 •

R&S - SV/R 137/139

D	B	d*	Z	R	Codice
mm	mm	mm			Code
160	55	35 (50)	2		TP44M AB3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	
Cuneo / Wedge	38 x 51 x 8	CN13M CE9
Vite / Screw	M5 x 7 x 16	VT08M AE9
Vite / Screw	M10 x 18	VT03M CC9
Chiave / Allen key	5 x 110	CB03M EA9

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. L'articolo viene fornito con coltelli.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. This item is supplied with knives.

Profilo	Coltelli per TP44M	Codice
Profile	Knives for TP44M	Code
1	55 x 40 x 3	CP44M AA3
2	55 x 40 x 3	CP44M BA3

#### ■ CARATTERISTICHE:

Testa multiprofilo per perline, antine e antoni, completa di 2 set di coltelli riaffilabili. Da utilizzare su macchine toupie. Particolarmente adatta per lavorazioni di contornatura e profilatura su legni teneri, duri ed esotici. Ottima finitura. La particolare versatilità dell'utensile permette l'esecuzione di antine di spessore 20-22 mm complete di specchietto, l'esecuzione di perline di spessore 13-17 mm e 20-22 mm, di antoni di spessore di 26 oppure 33 mm. Il tutto viene sempre eseguito con doppie passate invertendo la base di appoggio del pezzo tra una lavorazione e l'altra e modificando opportunamente la programmazione in altezza. I coltelli, di diverso profilo, sono perfettamente intercambiabili tra loro e mantengono il diametro minimo di lavorazione.

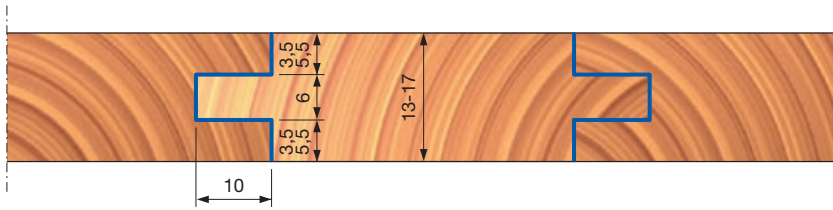
#### ■ FEATURES:

Multiprofile cutterhead for tongue, groove panels, flooring and cabinet doors, kitted with two sets of resharpenable knives. This tool is designed to be used on moulding machines. Mostly suitable for moulding and profiling on soft, hard and exotic wood, with a top quality finish. The tool's versatility allows you to produce 20-22 mm thick cabinet doors, 13-17 mm and 20-22 mm thick floor boards and 26 or 33 mm thick shutters. This can be achieved with two passes and by capsiding the machined part for the second run, taking care to adjust the tool's programmed height accordingly. The variously profiled knives are perfectly interchangeable and do not affect the minimum tool diameter.

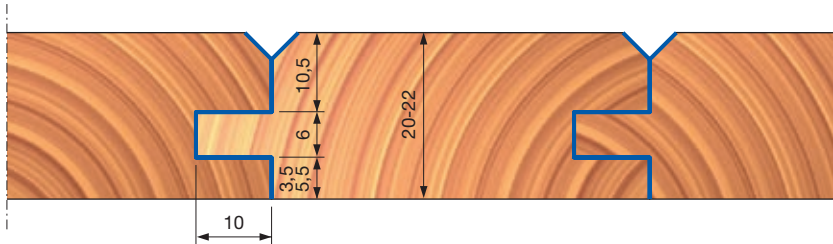


## ESEMPI DI PERLINE

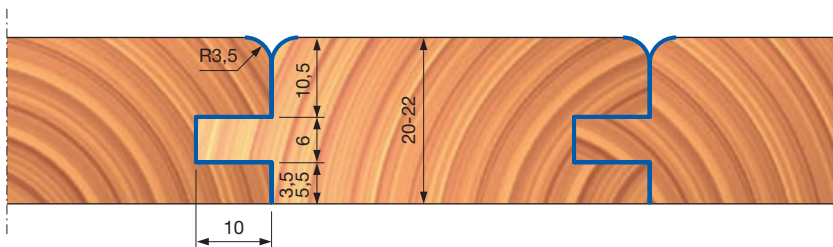
### EXAMPLES OF TONGUE AND GROOVE PANELS



PROFILO / PROFILE **A**



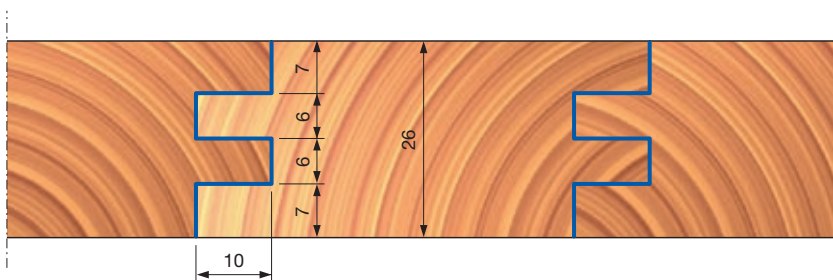
PROFILO / PROFILE **B**



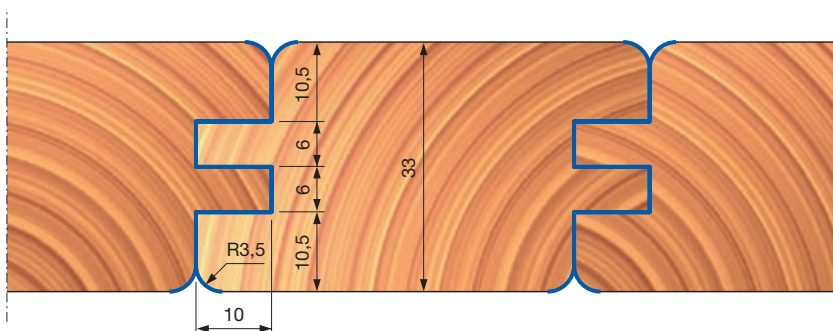
PROFILO / PROFILE **C**

## ESEMPI DI LISTONI

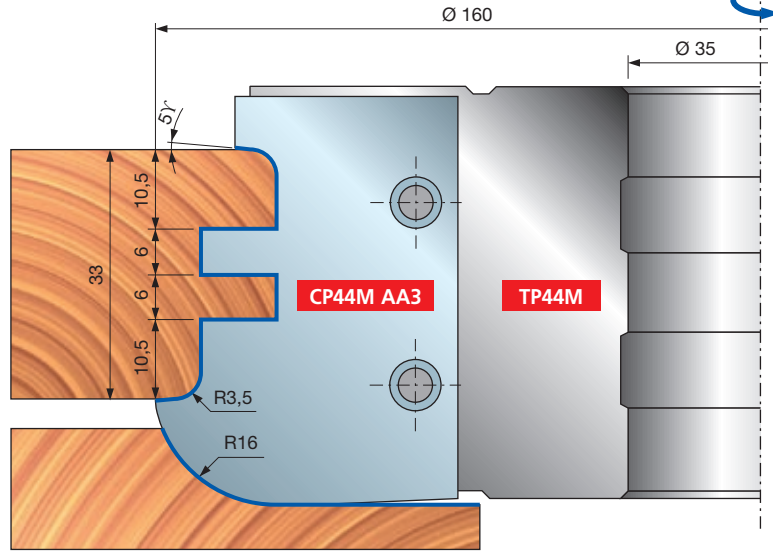
### EXAMPLES OF SHUTTERS



PROFILO / PROFILE **D**

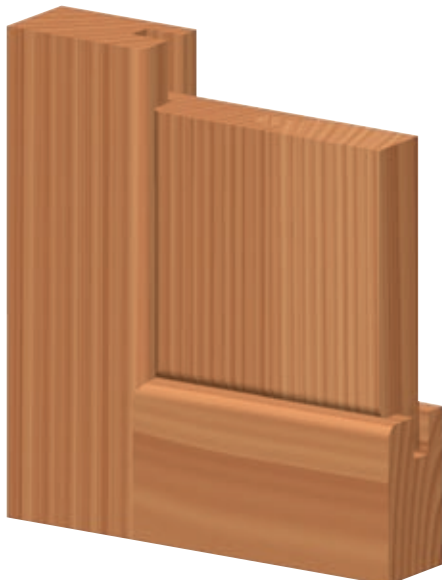
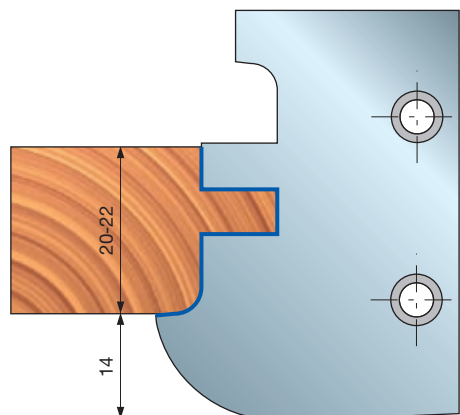
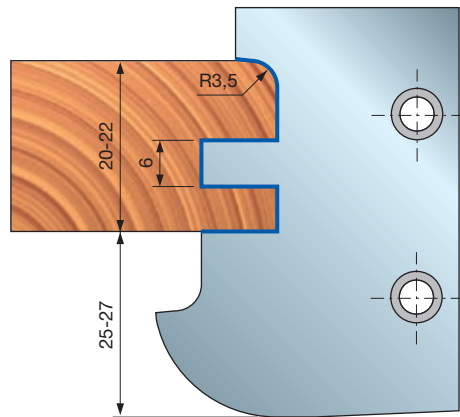
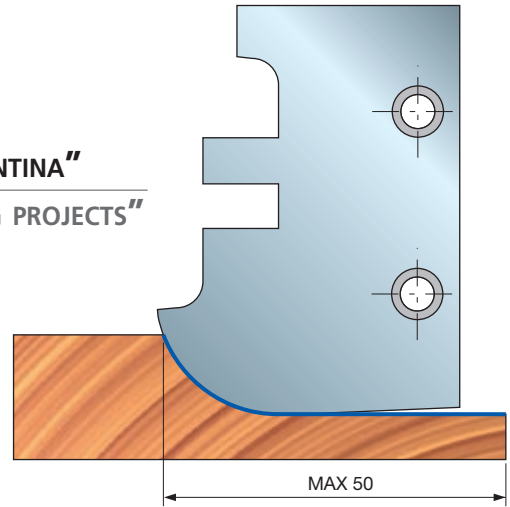
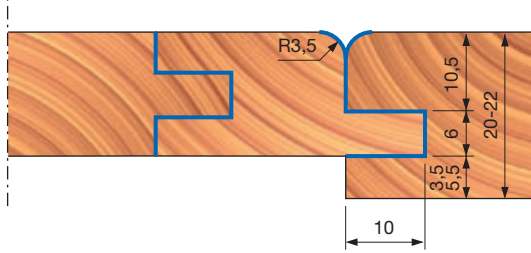
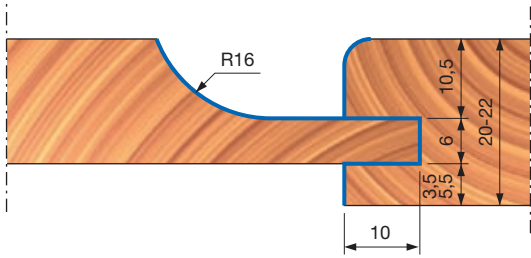


PROFILO / PROFILE **E**

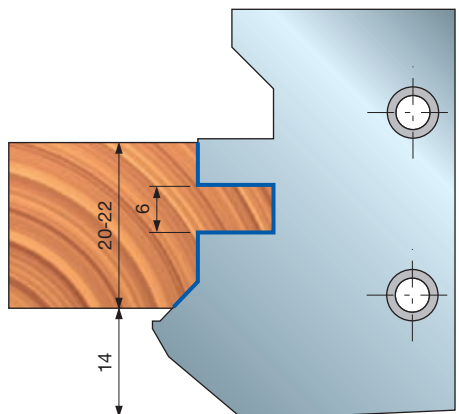
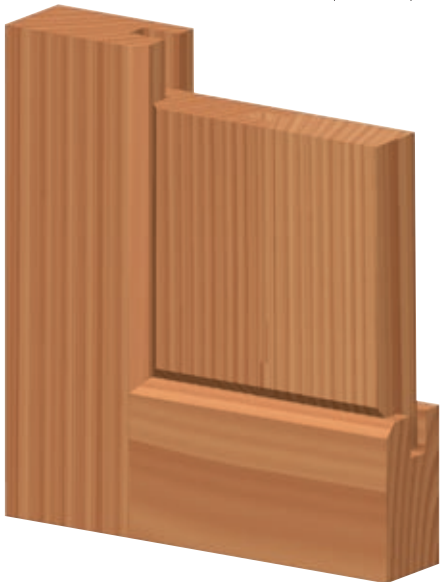
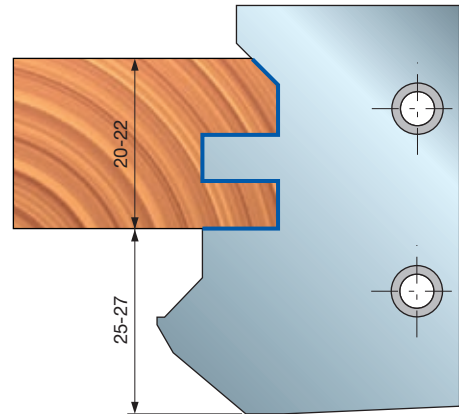
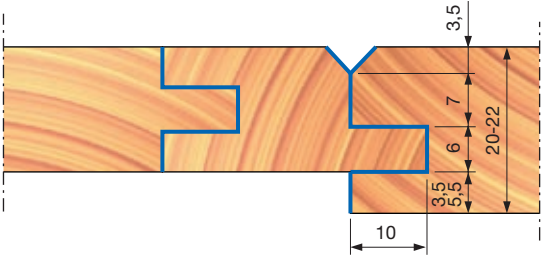
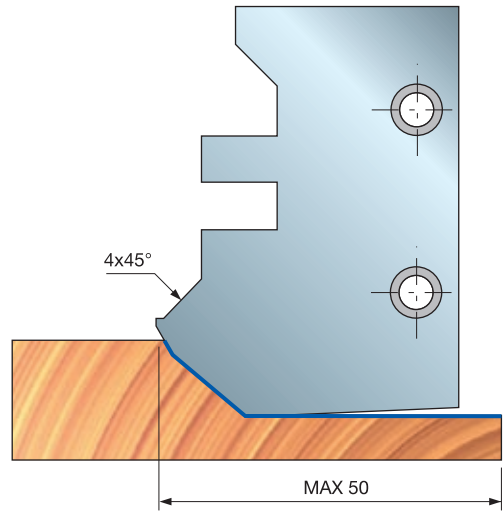
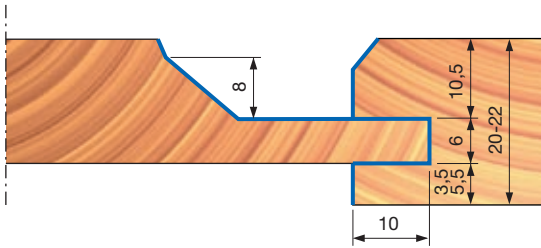
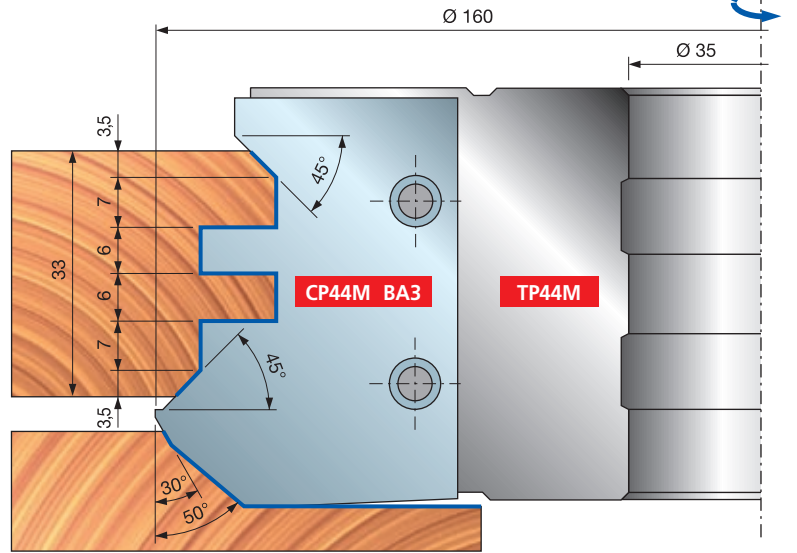


VEDERE A PAG. 229 "PROGETTI PER LA COSTRUZIONE DI UN'ANTINA"

PLEASE REFER TO PAGE 229 "CABINET DOOR MANUFACTURING PROJECTS"



PROFILO / PROFILE 2



# TP32M

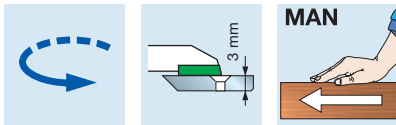
SET DI TESTE PORTACOLTELLI PER ANTINE (SP. LEGNO: 22-24 mm)

CUTTERHEADS SET FOR CABINET DOORS (22-24 mm WOOD THICKNESS)



D	B	d*	Z	R	Codice
mm	mm	mm			Code
159		35 (50)	2+2	2	TP32M AB3

	Parti di ricambio		Dimensioni	Codice
	Spare parts		Dimensions	Code
A	Cuneo / Wedge		41 x 19 x 8	CN11M C410
	Inserto per incastrì / Grooving insert		34 x 6 x 16	SR06M AB3
	Piastra riscontro / Positioning plate		20 x 11,6 x 2,2	VT18M AR9
	Vite / Screw		M6 x 14,5	VT16M AA9
B	Cuneo / Wedge		19 x 17 x 8	CN11M B190
	Piastra riscontro / Positioning plate		20 x 11,6 x 2,2	VT18M AS9
	Vite / Screw		M10 x 18	VT03M CC9
	Vite / Screw		M5 x 8	VT05M AA9
	Chiave / Allen key		5 x 110	CB03M EA9
	Flangia superiore / Upper flange		159 x 12 x 35	FX32M AB9
	Flangia inferiore / Lower flange		159 x 24 x 35	FX32M BB9



**PERFORMANCE**  
Coltelli Riaffilabili  
**SYSTEM**  
Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
**R&S - SV/R 174/173**

- Gruppo composto dagli utensili A e B. **SONO COMPRESI SOLO I COLTELLI PER LA TESTA B.**
- Set consisting of cutterheads A and B. **ONLY KNIVES FOR CUTTERHEAD B ARE INCLUDED.**

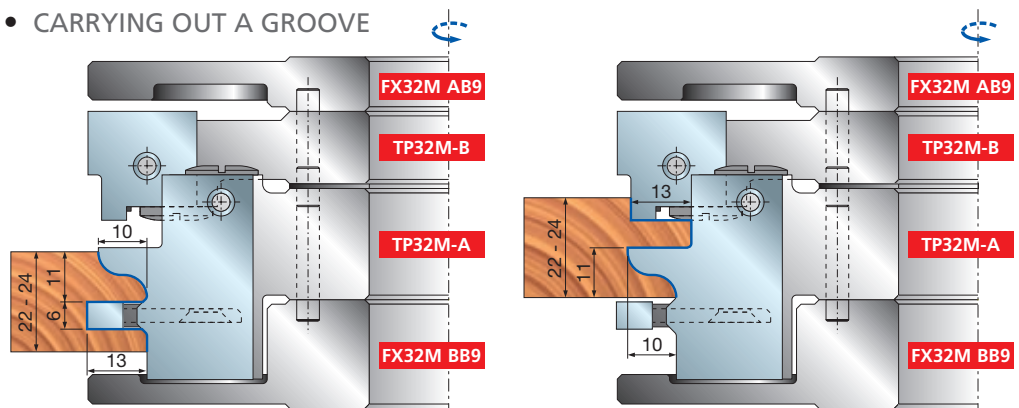
## Importante

- Il gruppo di teste portacoltelli deve essere utilizzato esclusivamente con flange superiore ed inferiore montate. L'utilizzo degli utensili singolarmente non è consentito su macchine ad avanzamento manuale. Il costruttore declina ogni responsabilità sull'uso improprio degli utensili.

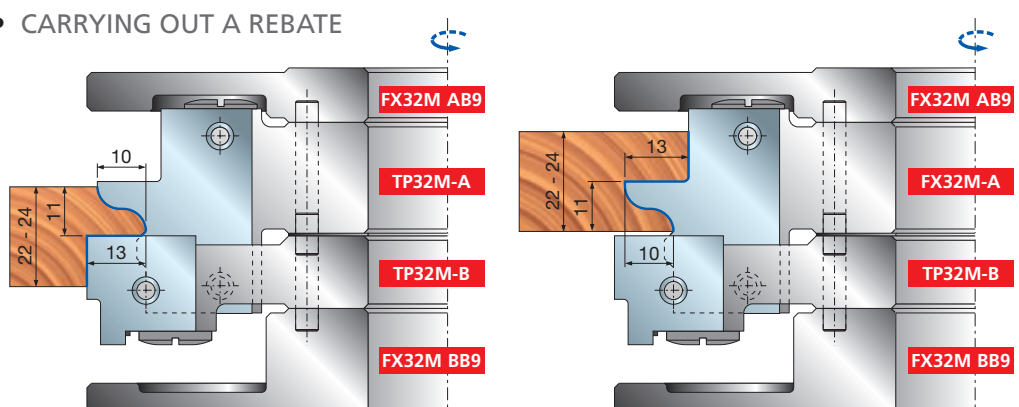
## Important

- The cutterhead set must be used exclusively with upper and lower flanges mounted. The use of each cutterhead as a singular piece is not consented on machines with manual feed. The constructor declines any responsibility for improper use.

### ESECUZIONE CON INCASTRO • CARRYING OUT A GROOVE

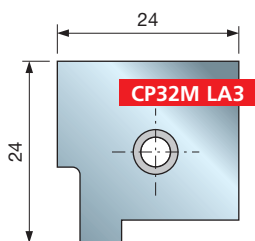


### ESECUZIONE CON BATTUTA • CARRYING OUT A REBATE





### COLTELLO PER / KNIFE FOR TP32M - B

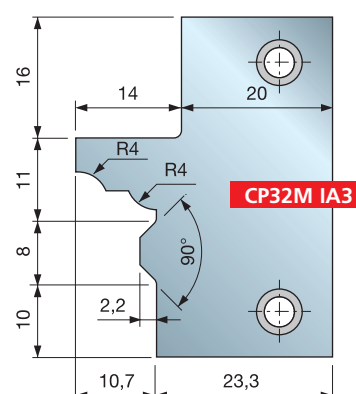
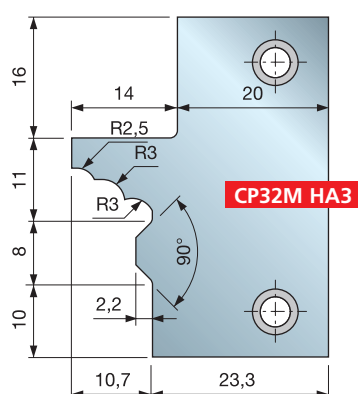
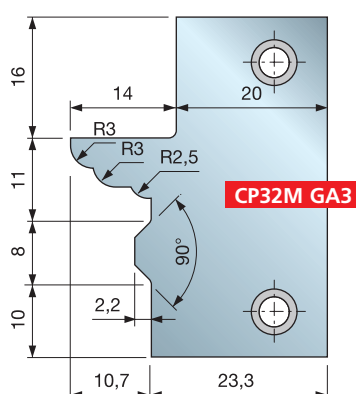
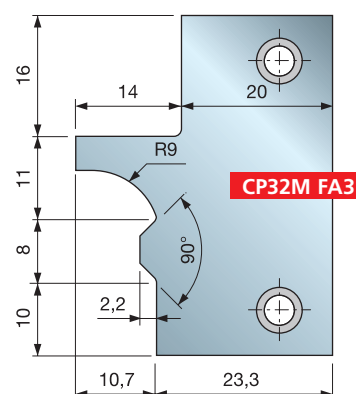
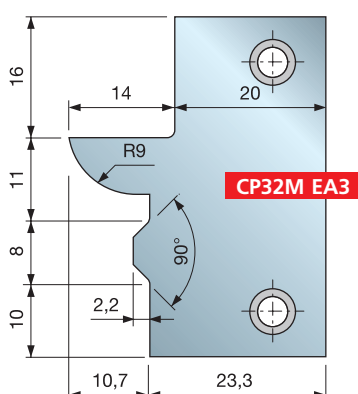
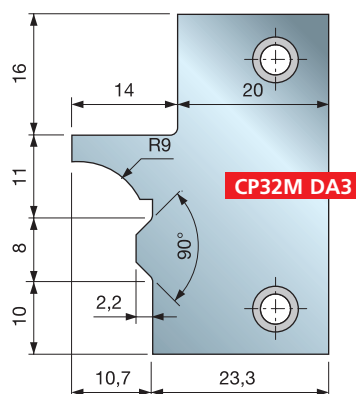
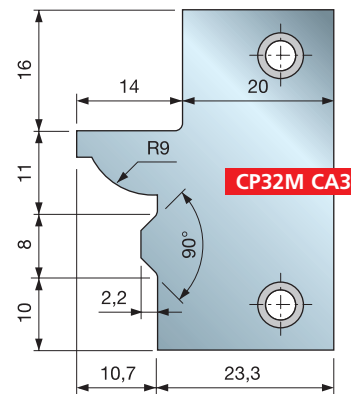
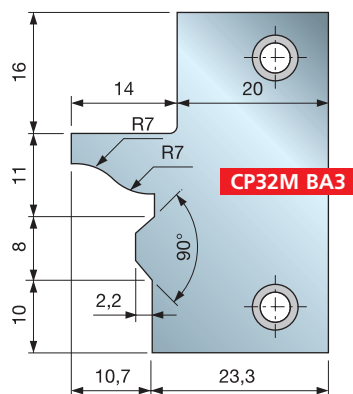
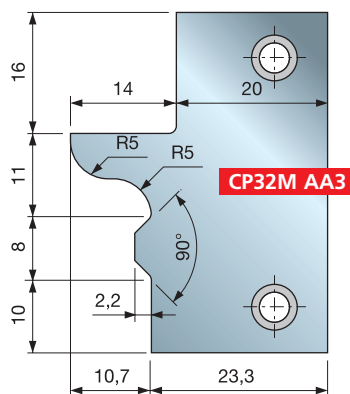


Coltelli di ricambio Spare knives	Dimensioni Dimensions	Codice Code
	45 x 34 x 3	CP32M AA3
	45 x 34 x 3	CP32M BA3
	45 x 34 x 3	CP32M CA3
	45 x 34 x 3	CP32M DA3
	45 x 34 x 3	CP32M EA3
	45 x 34 x 3	CP32M FA3
	45 x 34 x 3	CP32M GA3
	45 x 34 x 3	CP32M HA3
	45 x 34 x 3	CP32M IA3
	24 x 24 x 3	CP32M LA3

### INSERTO PER / INSERT FOR TP32M - B

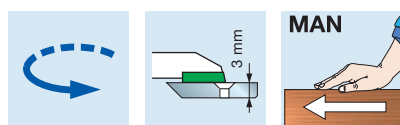


### COLTELLI PER / KNIVES FOR TP32M - A



# TPSEM SET DI TESTE PORTACOLTELLI PER ANTINE (SP. LEGNO: 22-30 mm)

## CUTTERHEADS SET FOR CABINET DOORS (22-30 mm WOOD THICKNESS)



**PERFORMANCE**  
Coltelli Riaffilabili  
**SYSTEM**  
Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •

(1) **R&S - SV/R 176/175**  
(2) **R&S - SV/R 177/176**

### Importante

Il gruppo di teste portacoltelli deve essere utilizzato esclusivamente con flange superiore ed inferiore montate. L'utilizzo degli utensili singolarmente non è consentito su macchine ad avanzamento manuale. Il costruttore declina ogni responsabilità sull'uso improprio degli utensili.

### Important

The cutterhead set must be used exclusively with upper and lower flanges mounted. The use of each cutterhead as a singular piece is not consented on machines with manual feed. The constructor declines any responsibility for improper use.

D	B	d*	Z	R	Codice
mm	mm	mm			Code
160		35 (50)			TPSEM22GB3 <sup>(1)</sup>
160		35 (50)			TPSEM30GB3 <sup>(2)</sup>

■ Gruppi completi per antine con spessori rispettivamente di 22 e 30 mm. ARTICOLI FORNITI IN VALIGETTA.

(1) Il gruppo TPSEM22GB3 è composto da:

TPSEM AB3\*\*, TPSEM CB3, TPSEMDB3, FXSEM AB9 e FXSEM BB9.

(2) Il gruppo TPSEM30GB3 è composto da:

TPSEM BB3\*\*, TPSEM CB3, TPSEMDB3, FXSEM AB9 e FXSEM BB9.

■ Complete cabinet door sets with either 22 mm or 30 mm thickness. THIS ITEM COMES IN A PRATICAL CARRYING CASE.

(1) The TPSEM22GB3 set includes items:

TPSEM AB3\*\*, TPSEM CB3, TPSEMDB3, FXSEM AB9 and FXSEM BB9.

(2) The TPSEM30GB3 set includes items:

TPSEM BB3\*\*, TPSEM CB3, TPSEMDB3, FXSEM AB9 and FXSEM BB9.

	Parti di ricambio	Dimensioni	Codice
	Spare parts	Dimensions	Code
TPSEM AB3	Testa di ricambio / Spare Cutterh.	160 x 35 x 35 Z2+4	TPSEM AB3**
	Cuneo / Wedge	30,7 x 33 x 8	CN13MD AM9
	Vite / Screw	M10 x 18	VT03M CC9
	Vite / Screw	M5 x 7 x 16	VT08M AE9
	Insero per incastri / Grooving insert	40 x 16 x 4	IG04MS AA3
	Piastra riscontro / Positioning plate	34 x 4 x 16	SR06MD AL3
	Vite / Screw	M6 x 14,5	VT16M AA9
	Deflettore / Deflector	30,8 x 7 x 24,5	ID04MS AA9
	Vite per: / Screw for: ID04M	M4 x 12	VT05M DA9
Insero per incastri / Grooving insert	20 x 11,6 x 2,2	VT18M AS9	
TPSEM BB3	Testa di ricambio / Spare Cutterh.	160 x 35 x 35 Z2+4	TPSEM BB3**
	Cuneo / Wedge	30,7 x 33 x 8	CN13MD AM9
	Vite / Screw	M10 x 18	VT03M CC9
	Insero per incastri / Grooving insert	40 x 16 x 6	IG04MS AD3
	Insero rasante / Spur insert	34 x 4 x 16	SR06MD AL3
	Vite / Screw	M6 x 14,5	VT16M AA9
	Deflettore / Deflector	30,8 x 8 x 24,5	ID04MS AD9
	Vite per: / Screw for: ID04M	M4 x 12	VT05M DA9
	Piastra riscontro / Positioning plate	20 x 11,6 x 2,2	VT18M AS9
TPSEM CB3	Testa di ricambio / Spare Cutterh.	152 x 20,4 x 35 Z2+4	TPSEM CB3
	Coltello / Knife	20 x 24 x 3	CPSEM CA3
	Cuneo / Wedge	16 x 17 x 8	CN11M B160
	Vite / Screw	M10 x 18	VT03M CC9
TPSEM DB3	Rasante / Spur	22,86 x 2,5	RG02M AA3
	Testa di ricambio / Spare Cutterh.	138 x 20 x 35 Z2+4	TPSEM DB3
	Coltello / Knife	17 x 24 x 3	CPSEM DA3
	Cuneo / Wedge	16 x 17 x 8	CN11M B160
	Vite / Screw	M10 x 18	VT03M CC9
	Piastra riscontro / Positioning plate	20 x 11,6 x 2,2	VT18M AR9
	Vite / Screw	M5 x 8	VT05M AA9
	Flangia superiore / Upper flange	152 x 13,6 x 35	FXSEM AB9
	Flangia inferiore / Lower flange	152 x 28 x 35	FXSEM BB9
	Chiave / Allen key	4 x 110	CB03M BA9
Chiave / Allen key	5 x 110	CB03M EA9	

■ \*\*LE TESTE PORTACOLTELLI AB3 E BB3 VENGONO FORNITE SENZA I COLTELLI.

La testa TPSEM AB3 si utilizza per la produzione di antine di spessore 22 mm; la testa TPSEM BB3 per la produzione di antine di spessore 30 mm.

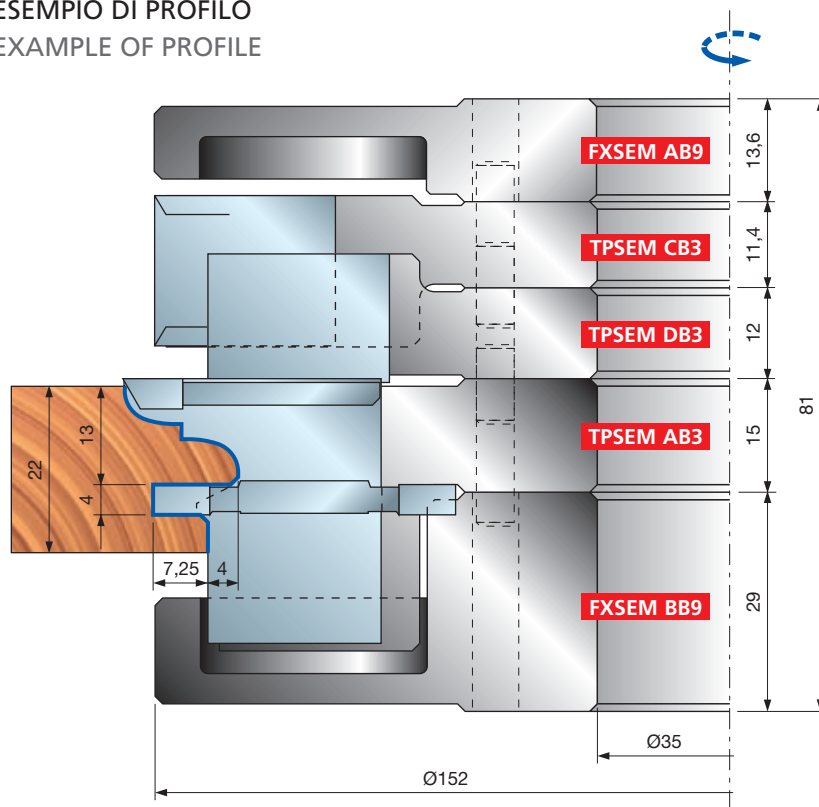
■ \*\*CUTTERHEADS AB3 AND BB3 ARE SUPPLIED WITHOUT KNIVES.

Cutterhead TPSEM AB3 is used to produce cabinet doors with a 22 mm thickness; cutterhead TPSEM BB3 is used to produce cabinet doors with a 30 mm thickness.

# ESEMPIO DI UTILIZZO DEL GRUPPO COD. TPSEM22GB3

## EXAMPLES OF USE OF CUTTERHEAD SET CODE TPSEM22GB3

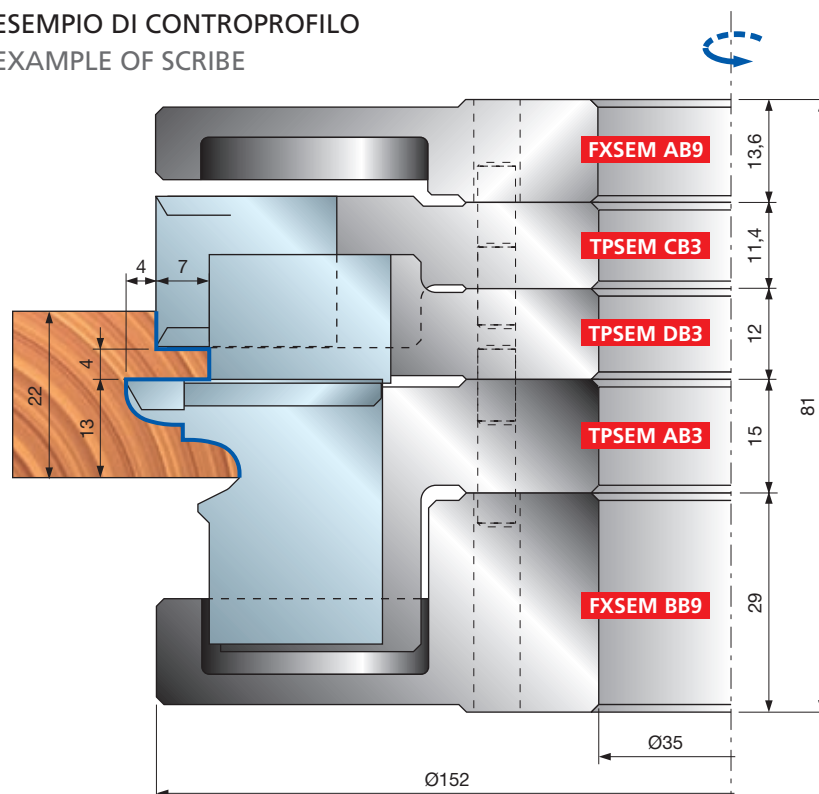
ESEMPIO DI PROFILO  
EXAMPLE OF PROFILE



- Per eseguire lo spessore legno da 22 mm, utilizzare gli utensili:
- For 22 mm thick workpieces, use:

**TPSEM AB3 + TPSEM DB3 + TPSEM CB3 + FXSEM AB9 + FXSEM BB9**

ESEMPIO DI CONTROPROFILO  
EXAMPLE OF SCRIBE

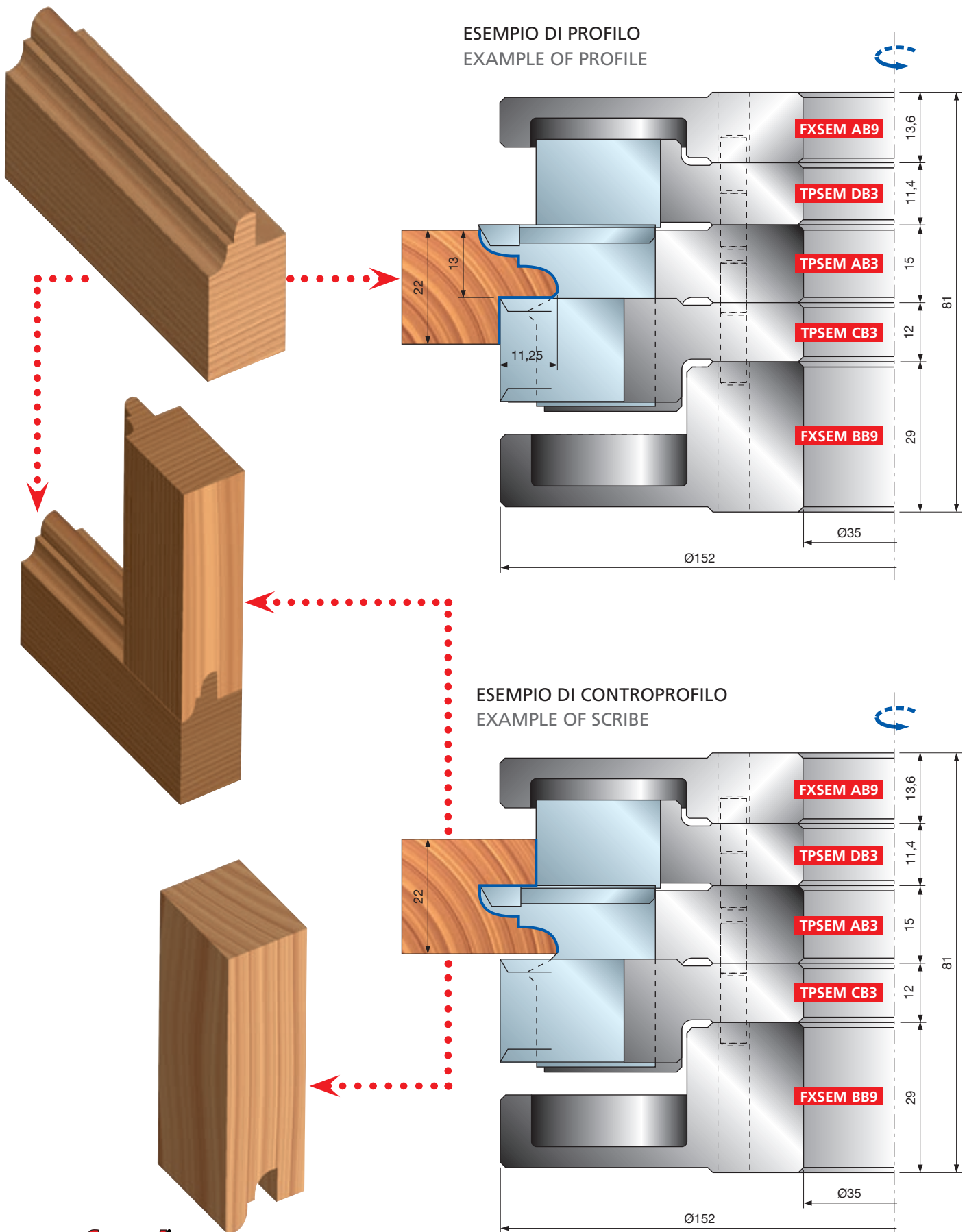


## ESEMPIO DI UTILIZZO DEL GRUPPO COD. TPSEM22GB3

### EXAMPLES OF USE OF CUTTERHEAD SET CODE TPSEM22GB3

- ESECUZIONE ANTINA CON PROFILO VETRO: per eseguire lo spessore legno da 22 mm, utilizzare gli utensili:
- CARRYING OUT A GLASS CABINET DOOR: for 22 mm thick workpieces, use:

**TPSEM DB3 + TPSEM AB3 + TPSEM CB3 + FXSEM AB9 + FXSEM BB9**

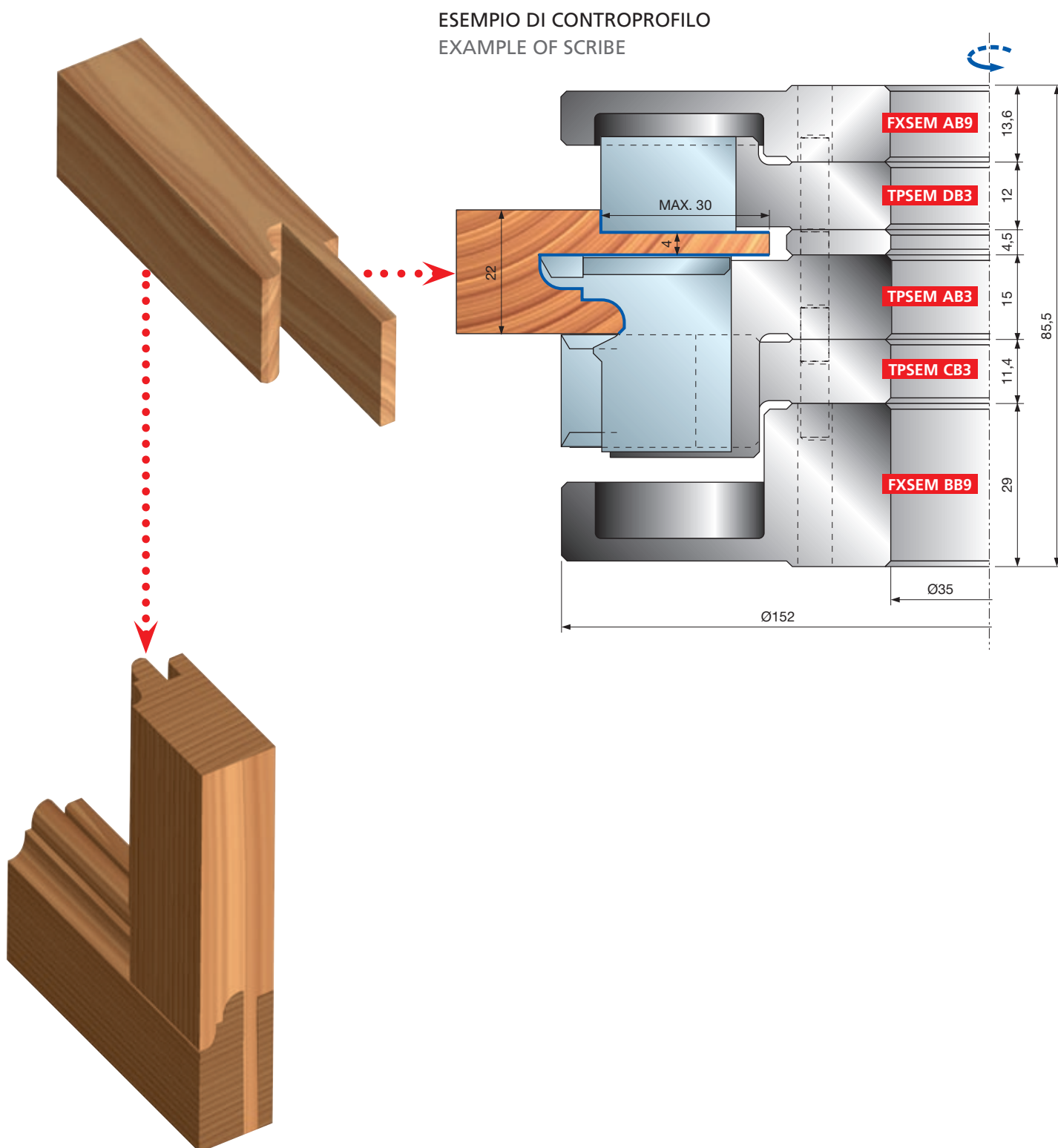


## ESEMPIO DI UTILIZZO DEL GRUPPO COD. TPSEM22GB3

### EXAMPLES OF USE OF CUTTERHEAD SET CODE TPSEM22GB3

- ESECUZIONE ANTINA CON SPINA APERTA.  
Per eseguire lo spessore legno da 22 mm, utilizzare gli utensili:
- CARRYING OUT A CABINET DOOR WITH LONG SQUARE TENON SHOULDER.  
For 22 mm thick workpieces, use:

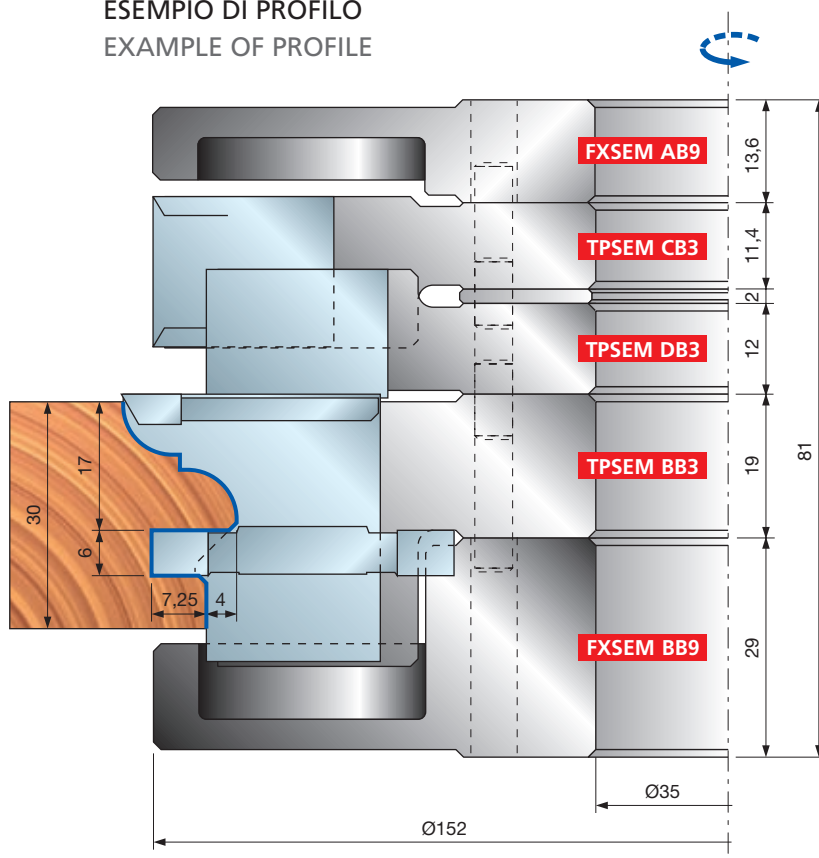
**TPSEM AB3 + TPSEM DB3 + TPSEM CB3 + FXSEM AB9 + FXSEM BB9**



## ESEMPIO DI UTILIZZO DEL GRUPPO COD. TPSEM30GB3

### EXAMPLES OF USE OF CUTTERHEAD SET CODE TPSEM30GB3

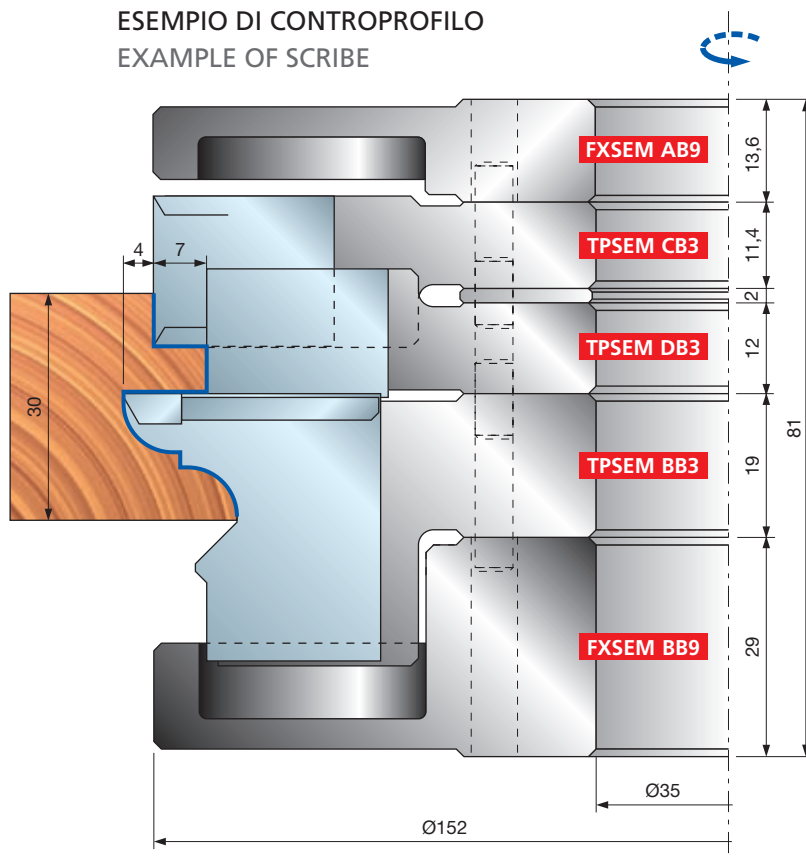
ESEMPIO DI PROFILO  
EXAMPLE OF PROFILE



- Per eseguire lo spessore legno da 30 mm, utilizzare gli utensili:
- For 30 mm thick workpieces, use:

**TPSEM BB3 + TPSEM DB3 + TPSEM CB3 + FXSEM AB9 + FXSEM BB9**

ESEMPIO DI CONTROPROFILO  
EXAMPLE OF SCRIBE



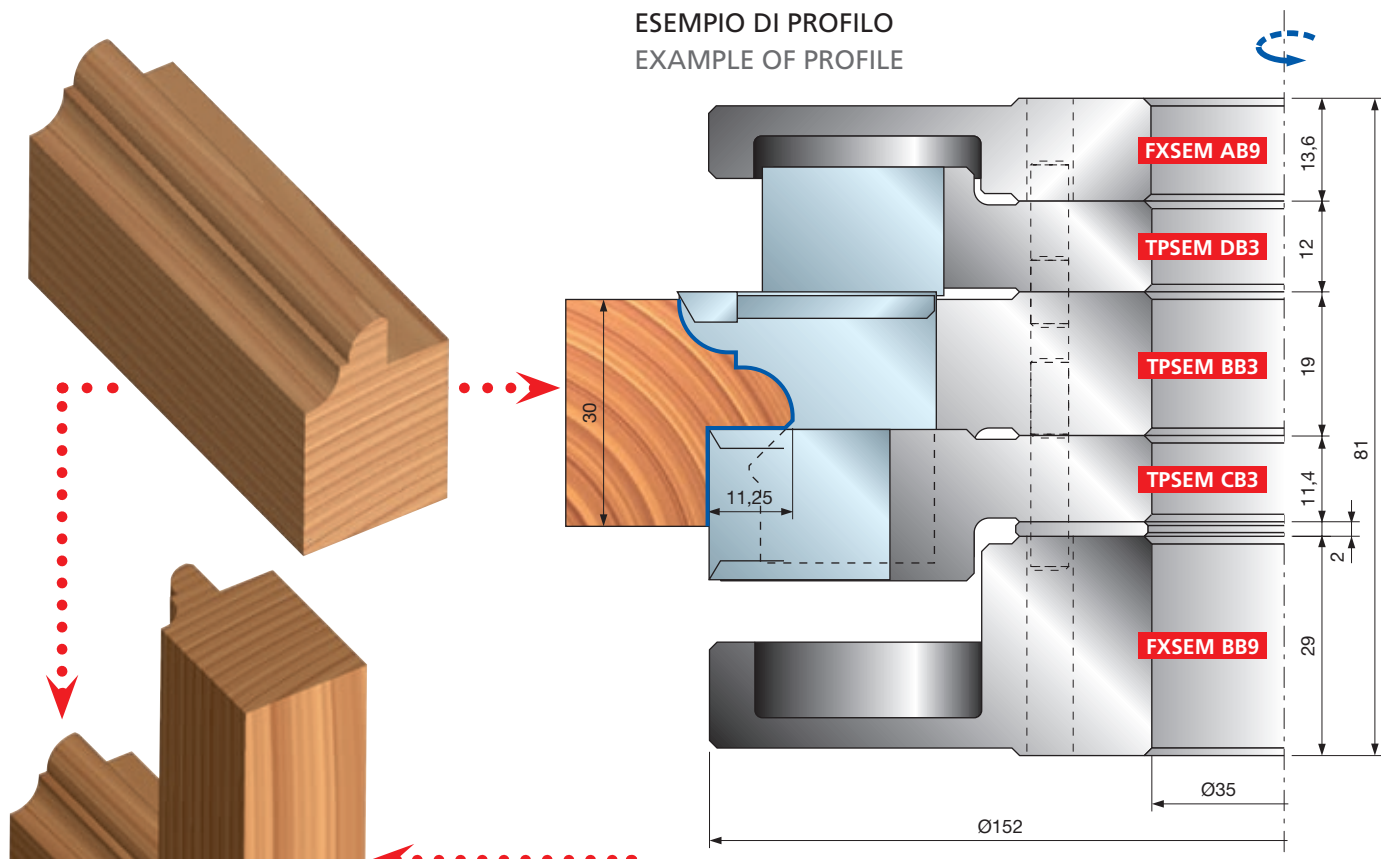
# ESEMPIO DI UTILIZZO DEL GRUPPO COD. TPSEM30GB3

## EXAMPLES OF USE OF CUTTERHEAD SET CODE TPSEM30GB3

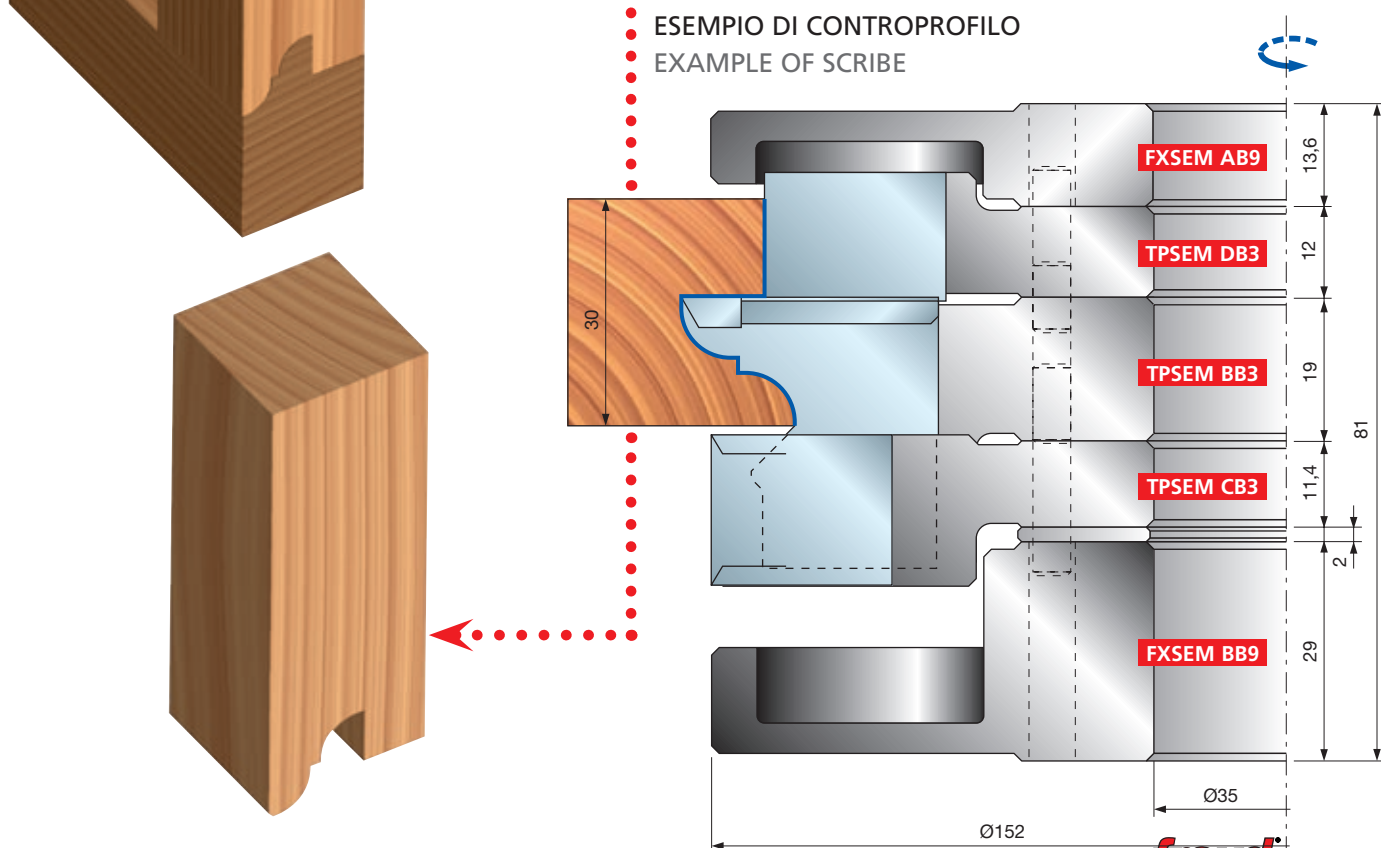
- Esecuzione antina con profilo vetro. Per eseguire lo spessore legno da 30 mm, utilizzare gli utensili:
- Carrying out a glass cabinet door. For 30 mm thick workpieces, use:

**TPSEM DB3 + TPSEM BB3 + TPSEM CB3 + FXSEM AB9 + FXSEM BB9**

ESEMPIO DI PROFILO  
EXAMPLE OF PROFILE



ESEMPIO DI CONTROPROFILO  
EXAMPLE OF SCRIBE



## ESEMPIO DI UTILIZZO DEL GRUPPO COD. TPSEM30GB3

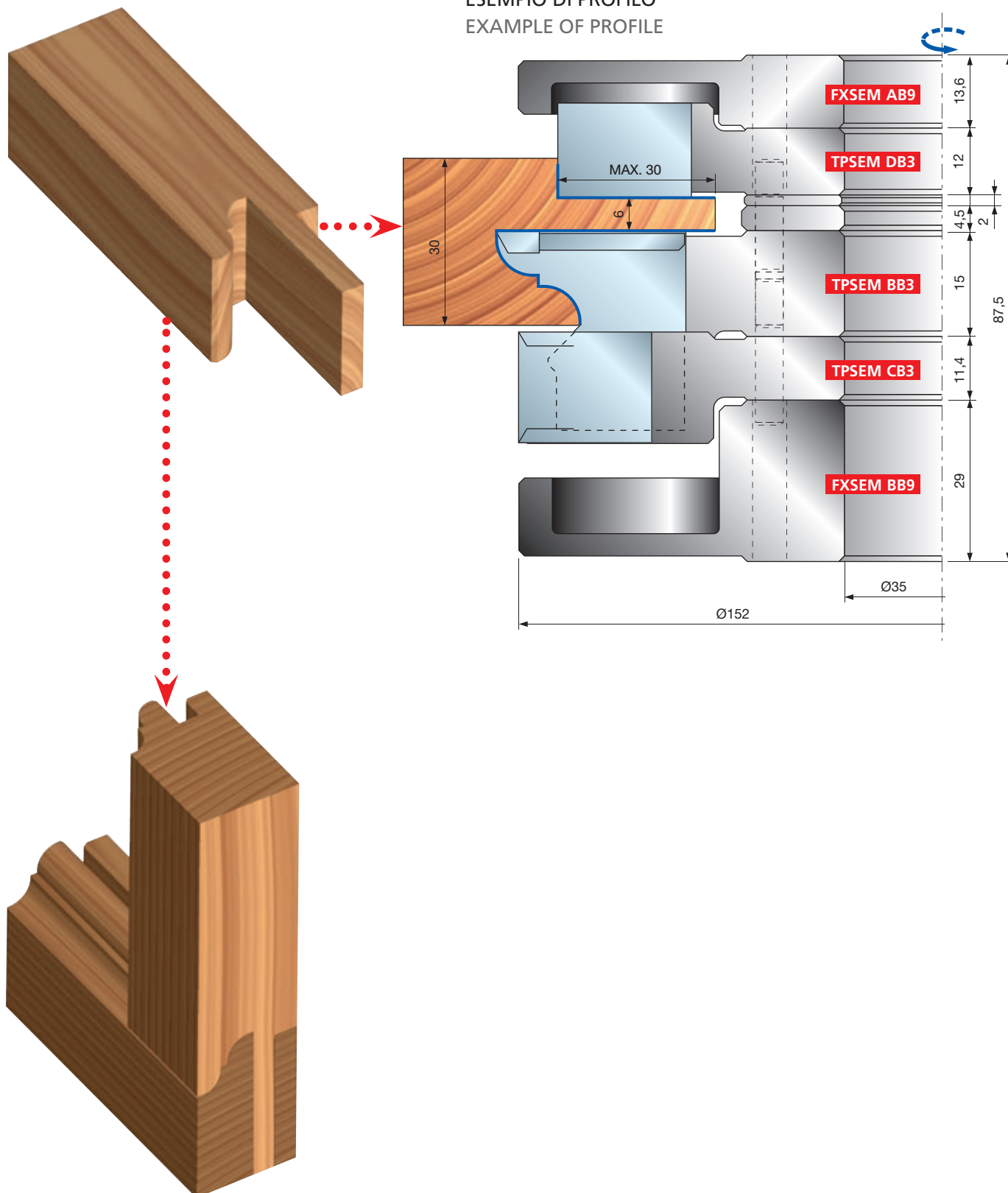
## EXAMPLES OF USE OF CUTTERHEAD SET CODE TPSEM30GB3

■ ESEMPIO DI UTILIZZO DEL GRUPPO COD. TPSEM30GB3

■ EXAMPLES OF USE OF CUTTERHEAD SET CODE TPSEM30GB3

**TPSEM BB3 + TPSEM DB3 + TPSEM CB3 + FXSEM AB9 + FXSEM BB9**

ESEMPIO DI PROFILO  
EXAMPLE OF PROFILE



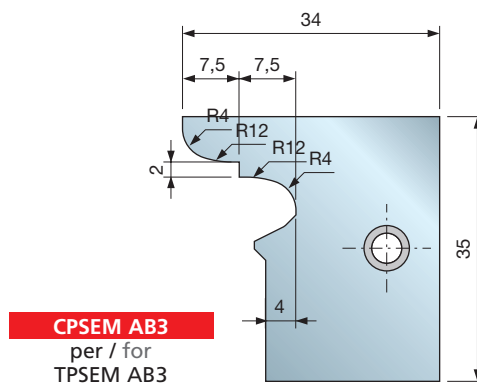
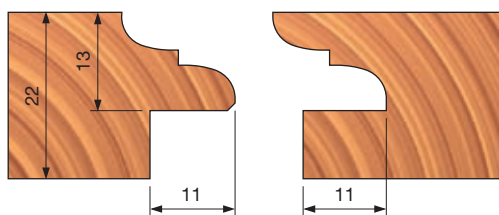
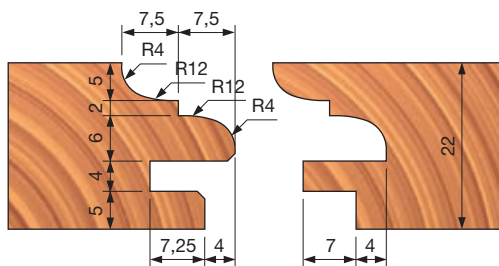


# CPSEM AB3

COLTELLI PER TPSEM AB3 (SPESSORE LEGNO: 22 mm)  
KNIVES FOR TPSEM AB3 (WOOD THICKNESS: 22 mm)

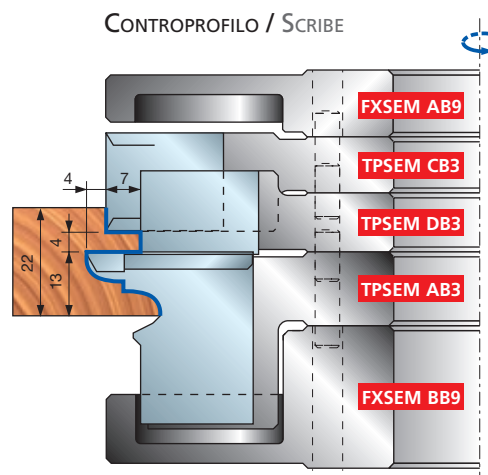
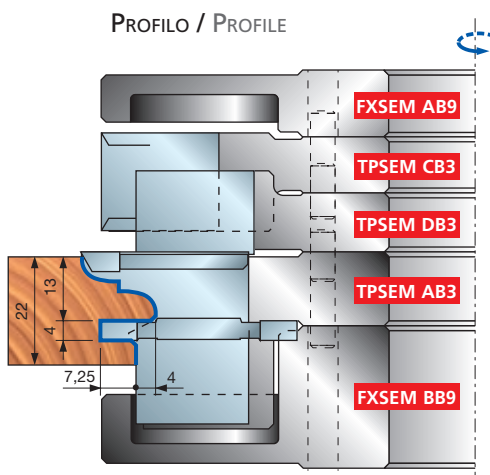
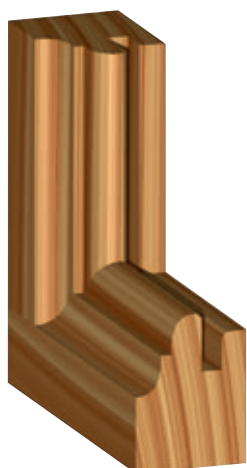
Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM22GB3
2	35 x 34 x 3	CPSEM AB3

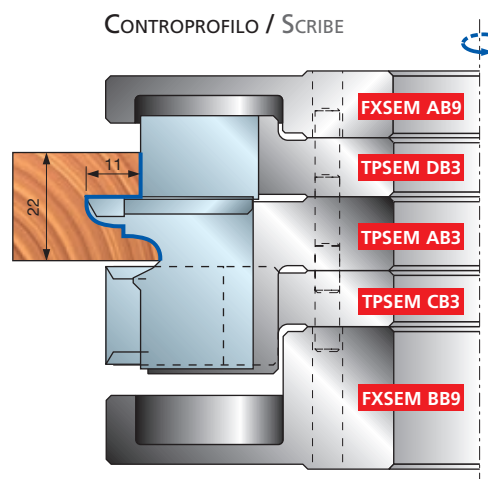
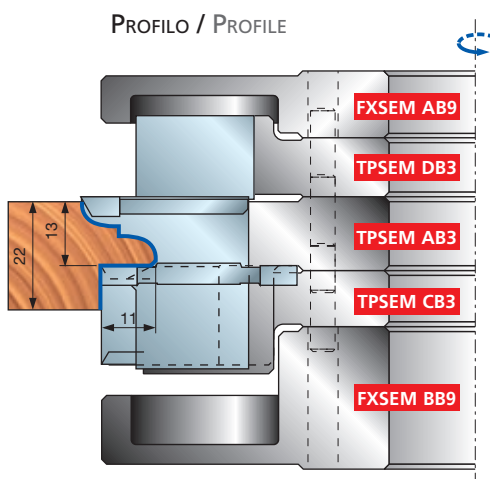
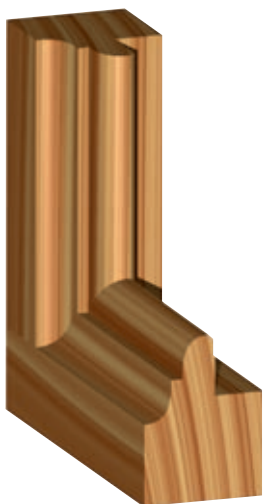


**CPSEM AB3**  
per / for  
TPSEM AB3

## ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE



## ESECUZIONE CON BATTUTA CARRYING OUT A REBATE

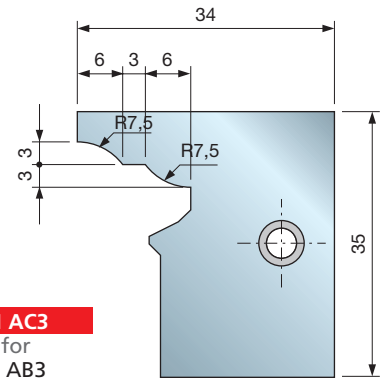
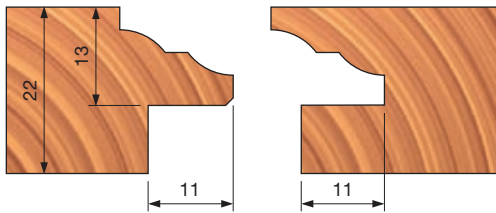
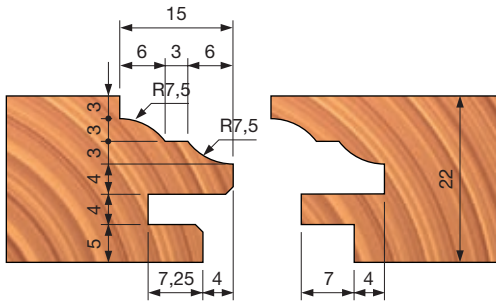


# CPSEM AC3

## COLTELLI PER TPSEM AB3 (SPESSORE LEGNO: 22 mm) KNIVES FOR TPSEM AB3 (WOOD THICKNESS: 22 mm)

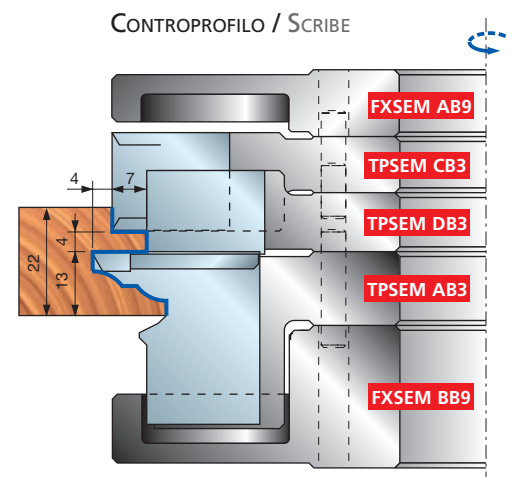
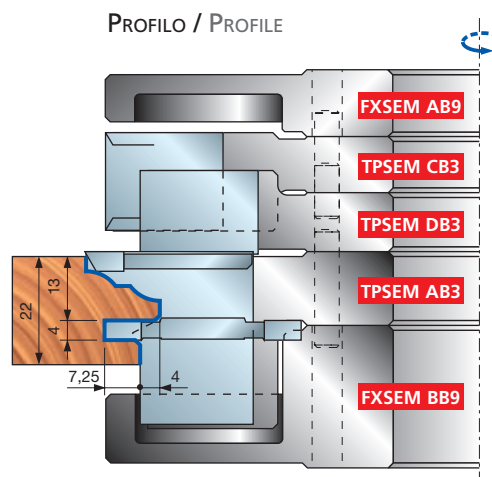
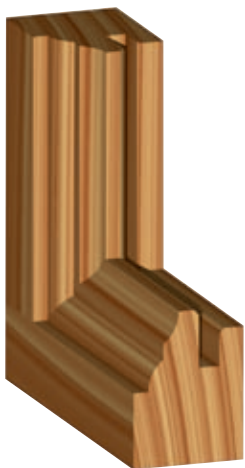
Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM22GB3
2	35 x 34 x 3	CPSEM AC3

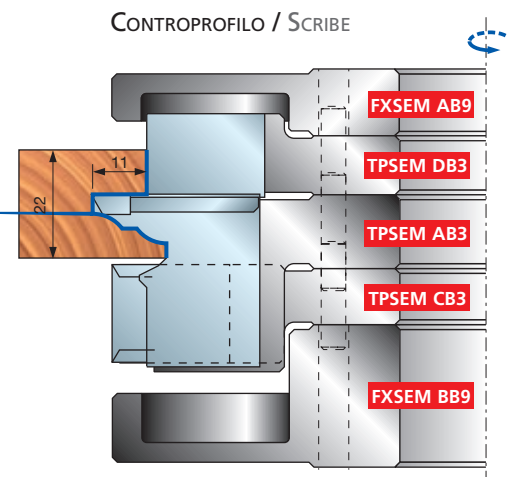
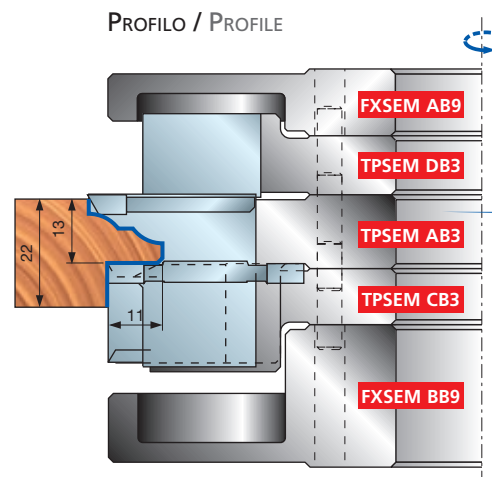


**CPSEM AC3**  
per / for  
TPSEM AB3

### ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE



### ESECUZIONE CON BATTUTA CARRYING OUT A REBATE

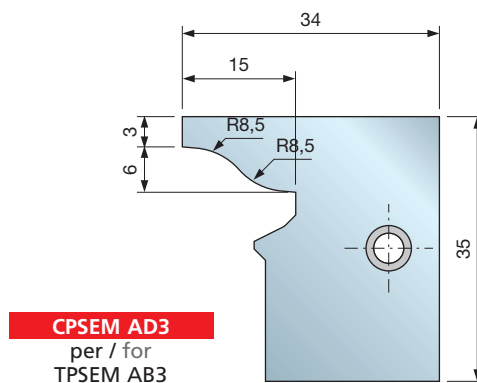
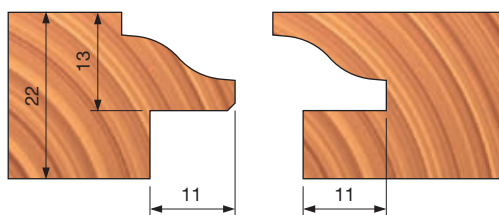
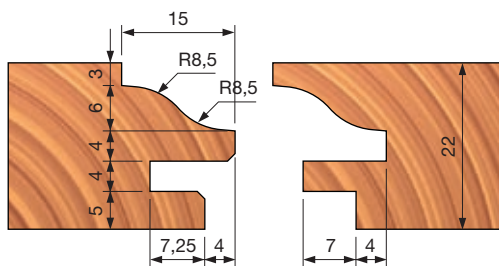


# CPSEM AD3

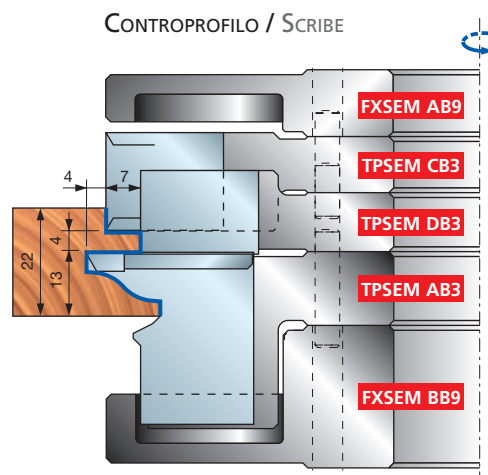
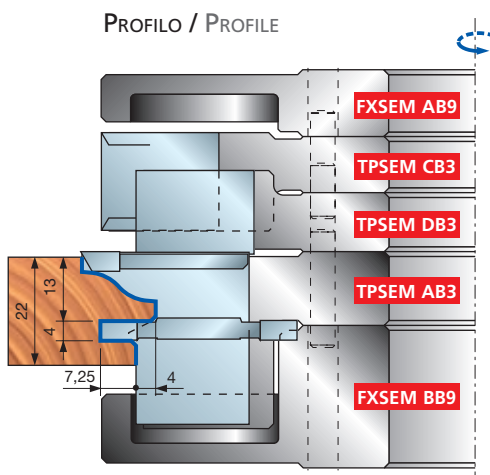
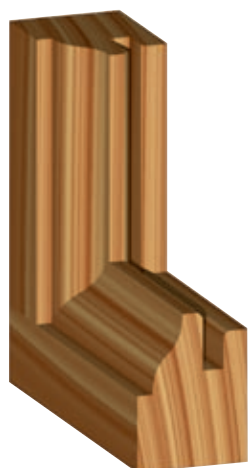
COLTELLI PER TPSEM AB3 (SPESSORE LEGNO: 22 mm)  
KNIVES FOR TPSEM AB3 (WOOD THICKNESS: 22 mm)

Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

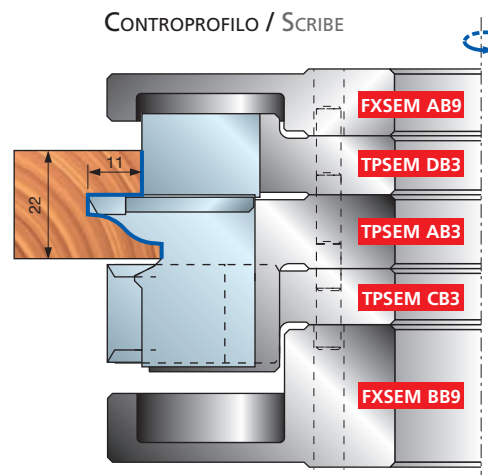
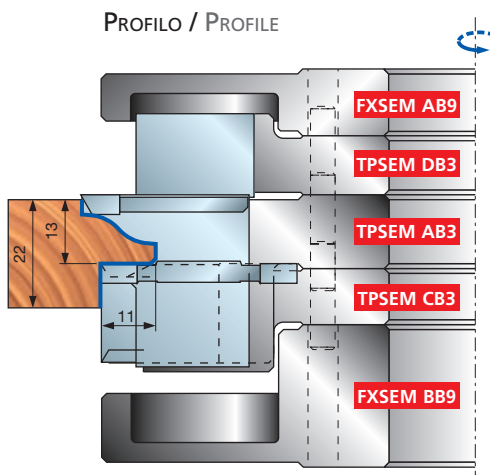
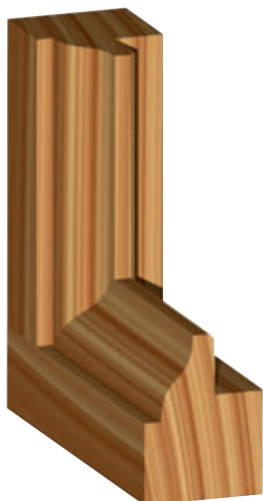
Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM22GB3
2	35 x 34 x 3	CPSEM AD3



## ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE



## ESECUZIONE CON BATTUTA CARRYING OUT A REBATE

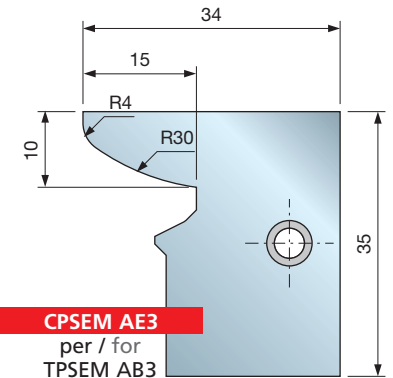
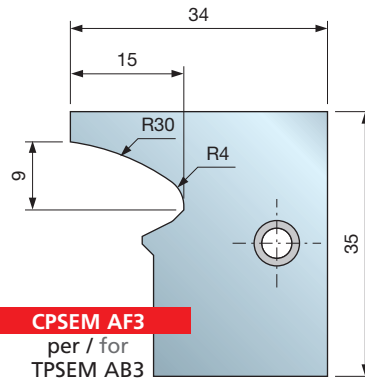
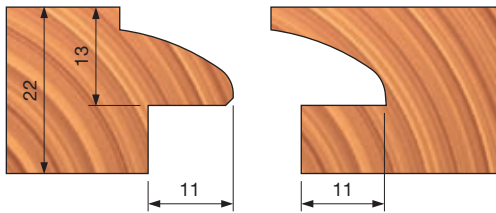
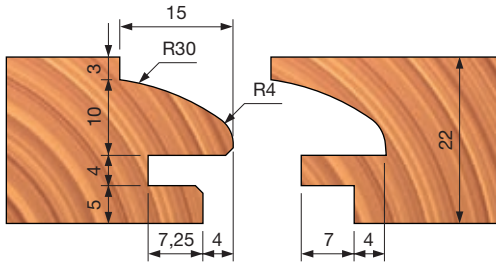


# CPSEM AF3 CPSEM AE3

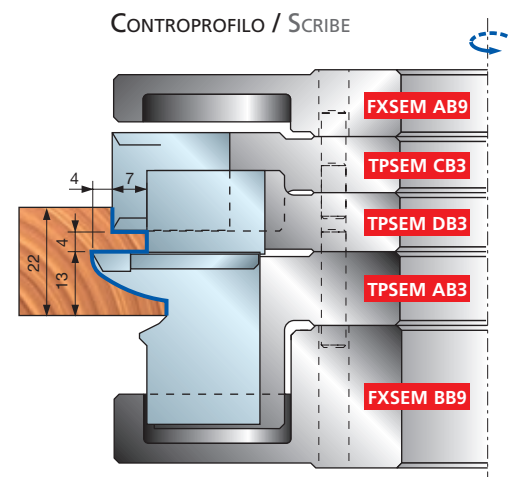
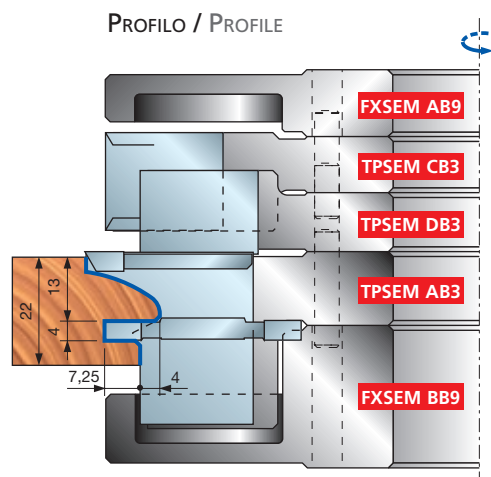
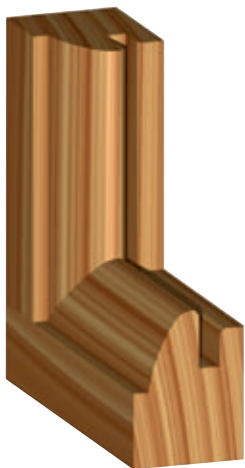
## COLTELLI PER TPSEM AB3 (SPESSORE LEGNO: 22 mm) KNIVES FOR TPSEM AB3 (WOOD THICKNESS: 22 mm)

Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

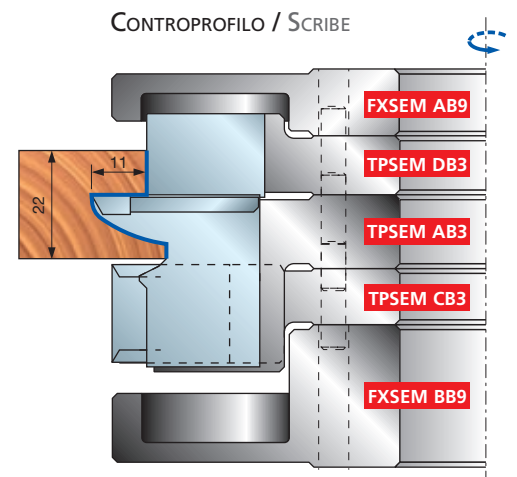
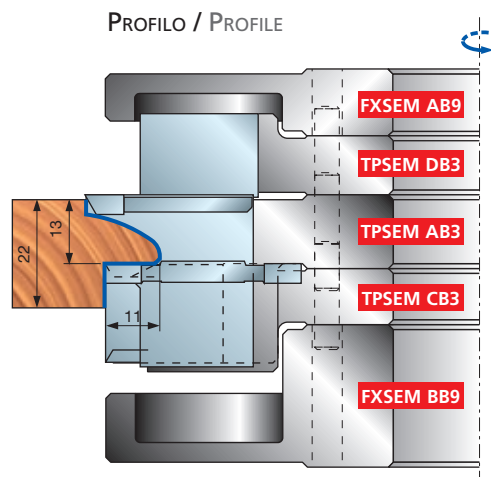
Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM22GB3
2	35 x 34 x 3	CPSEM AE3
2	35 x 34 x 3	CPSEM AF3



### ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE



### ESECUZIONE CON BATTUTA CARRYING OUT A REBATE

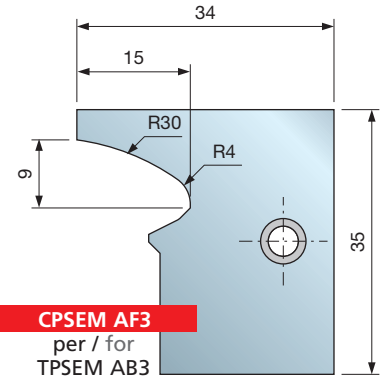
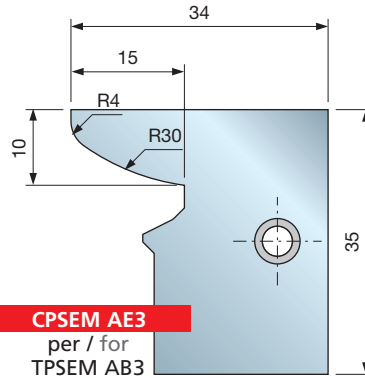
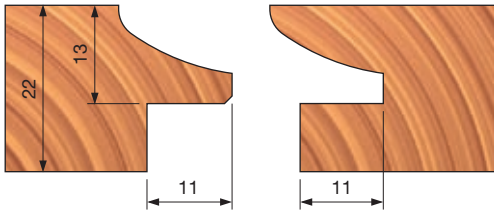
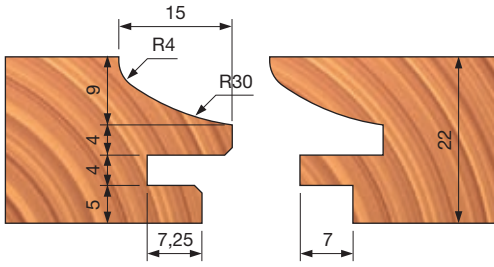


# CPSEM AE3 CPSEM AF3

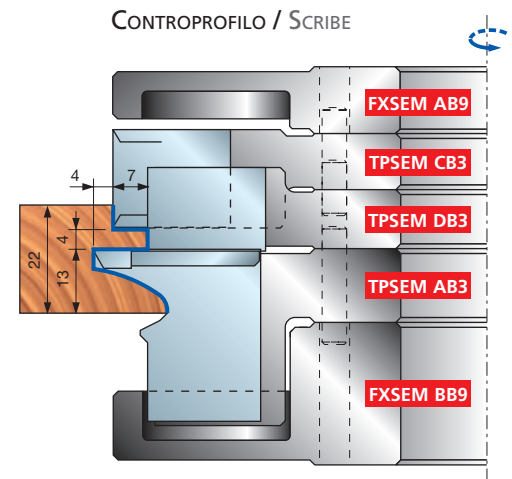
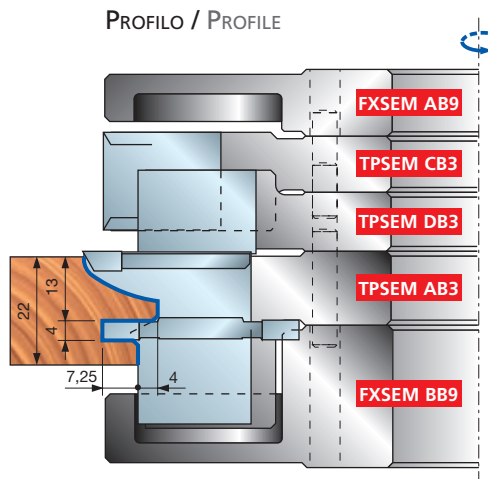
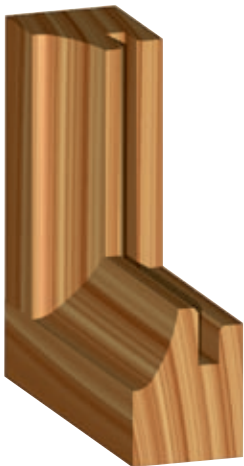
## COLTELLI PER TPSEM AB3 (SPESSORE LEGNO: 22 mm) KNIVES FOR TPSEM AB3 (WOOD THICKNESS: 22 mm)

Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

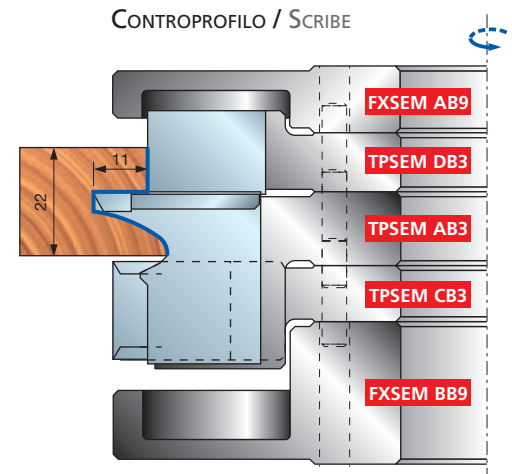
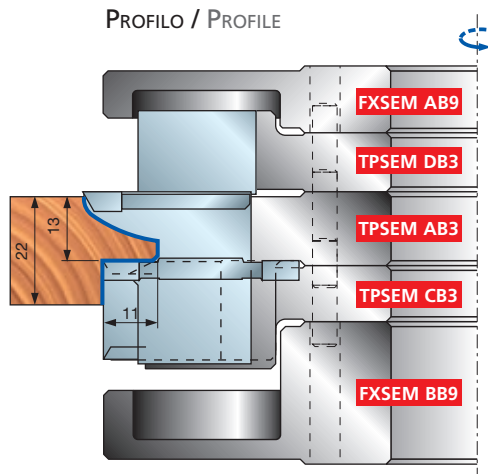
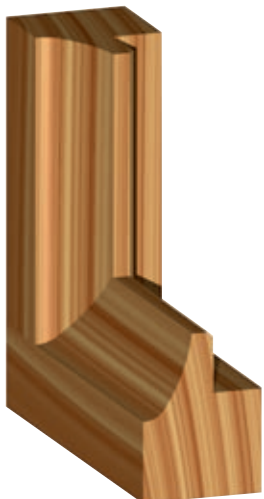
Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM22GB3
2	35 x 34 x 3	CPSEM AE3
2	35 x 34 x 3	CPSEM AF3



### ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE



### ESECUZIONE CON BATTUTA CARRYING OUT A REBATE

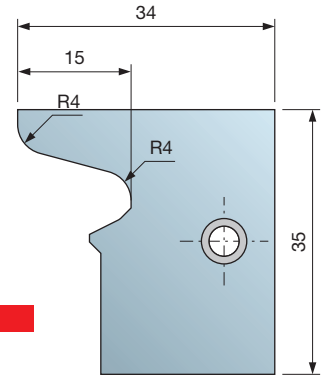
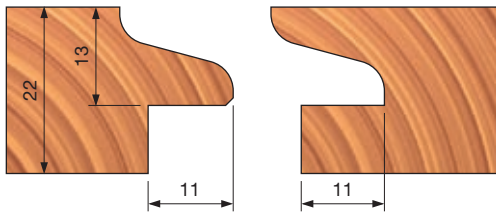
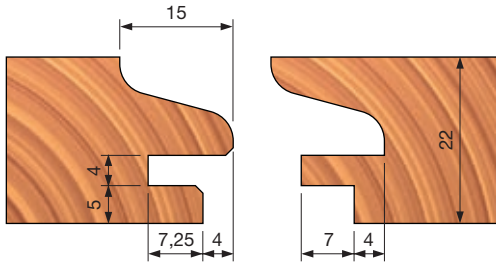


# CPSEM AG3

COLTELLI PER TPSEM AB3 (SPESSORE LEGNO: 22 mm)  
KNIVES FOR TPSEM AB3 (WOOD THICKNESS: 22 mm)

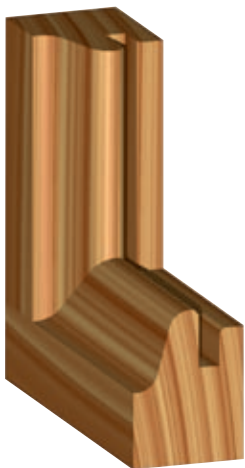
Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM22GB3
2	35 x 34 x 3	CPSEM AG3

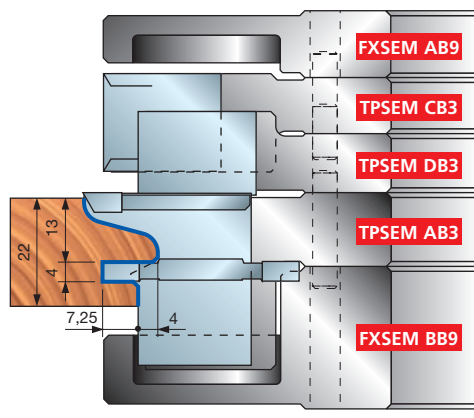


**CPSEM AG3**  
per / for  
TPSEM AB3

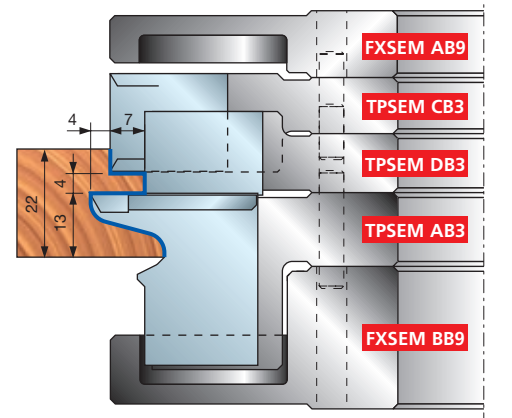
ESECUZIONE CON INCASTRO  
CARRYING OUT A GROOVE



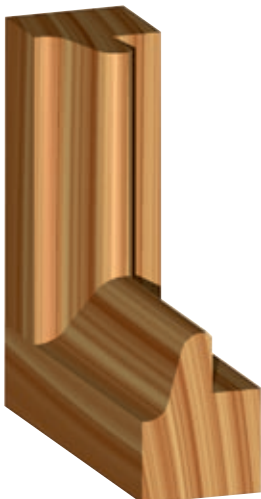
PROFILO / PROFILE



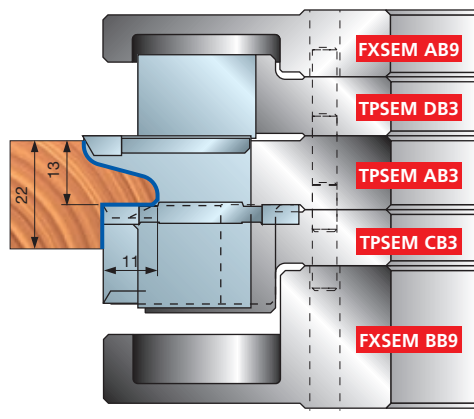
CONTROPROFILO / SCRIBE



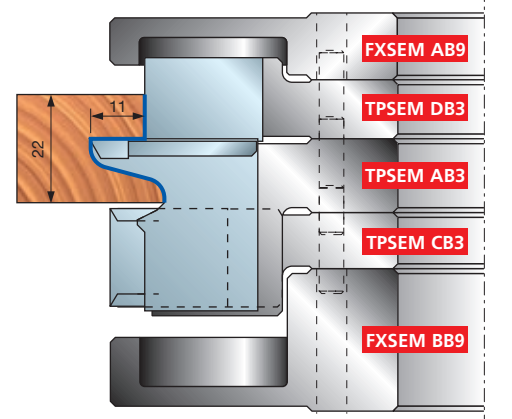
ESECUZIONE CON BATTUTA  
CARRYING OUT A REBATE



PROFILO / PROFILE



CONTROPROFILO / SCRIBE

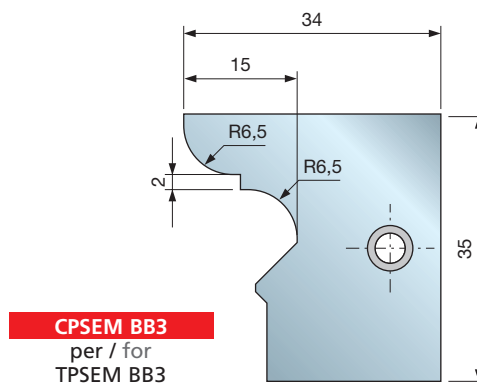
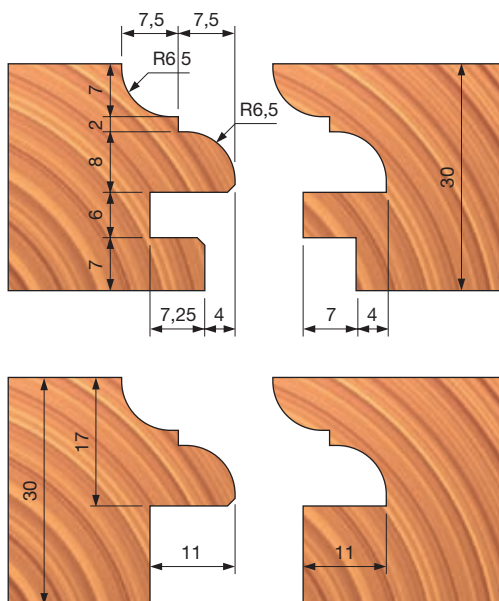


# CPSEM BB3

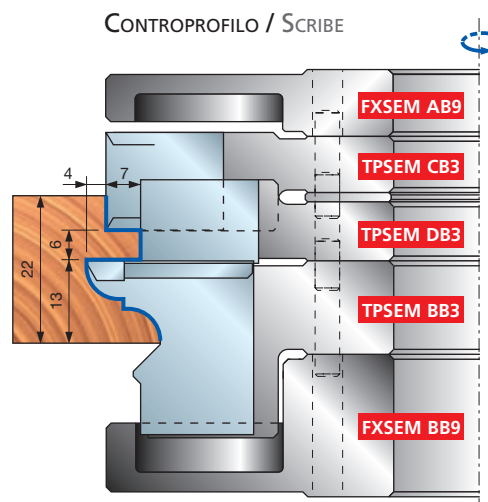
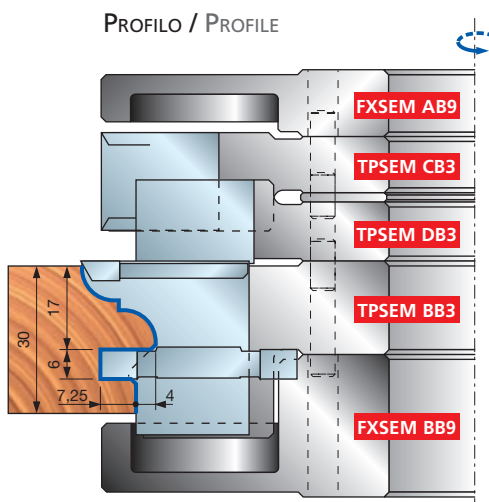
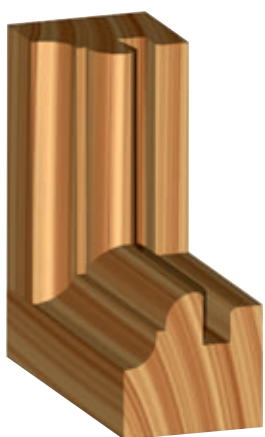
COLTELLI PER TPSEM BB3 (SPESSORE LEGNO: 30 mm)  
KNIVES FOR TPSEM BB3 (WOOD THICKNESS: 30 mm)

Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

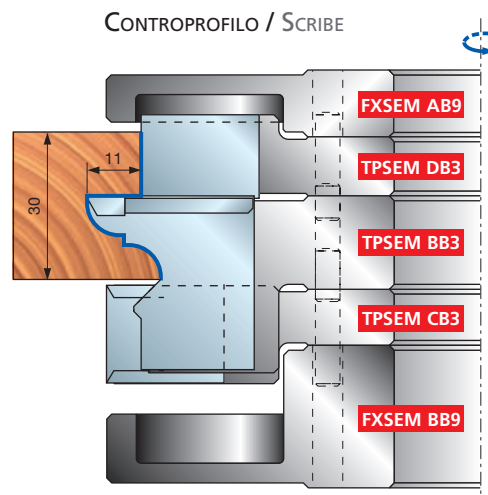
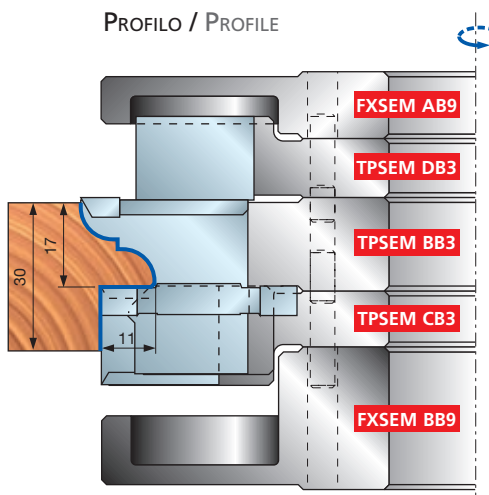
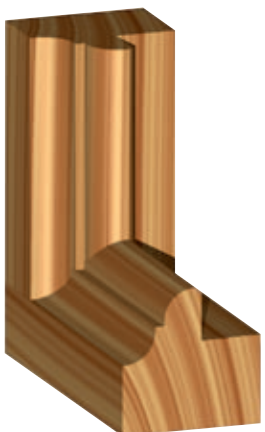
Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM30GB3
2	35 x 34 x 3	CPSEM BB3



## ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE



## ESECUZIONE CON BATTUTA CARRYING OUT A REBATE

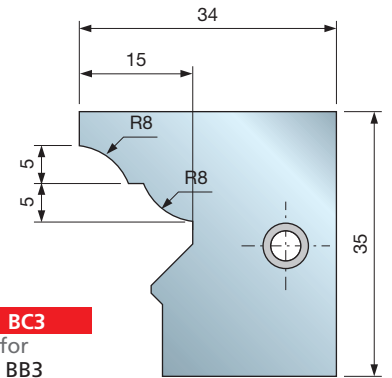
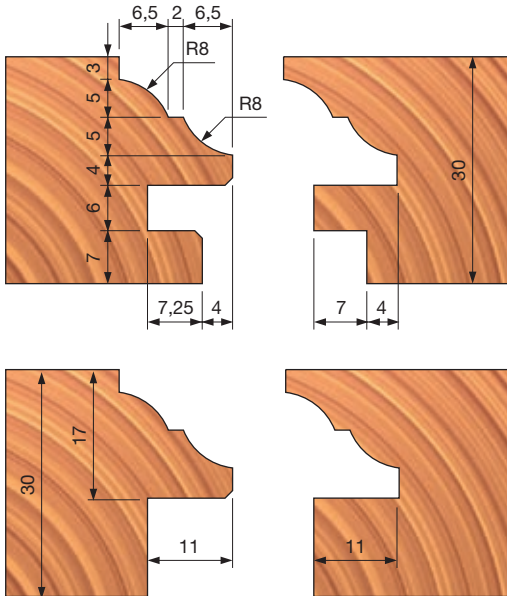


# CPSEM BC3

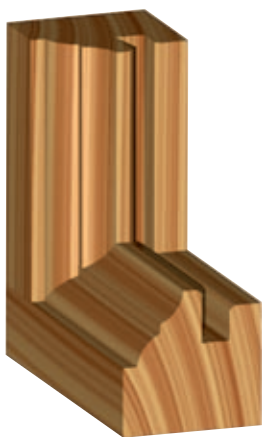
## COLTELLI PER TPSEM BB3 (SPESSORE LEGNO: 30 mm) KNIVES FOR TPSEM BB3 (WOOD THICKNESS: 30 mm)

Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

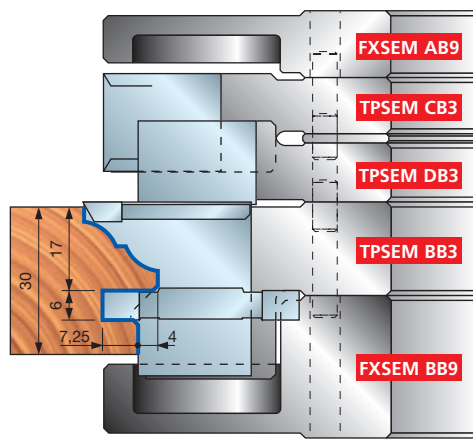
Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM30GB3
2	35 x 34 x 3	CPSEM BC3



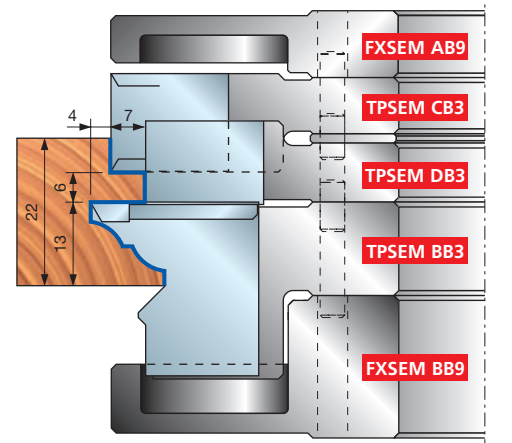
### ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE



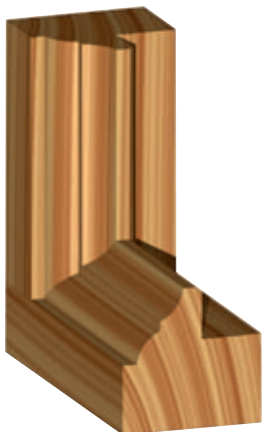
PROFILO / PROFILE



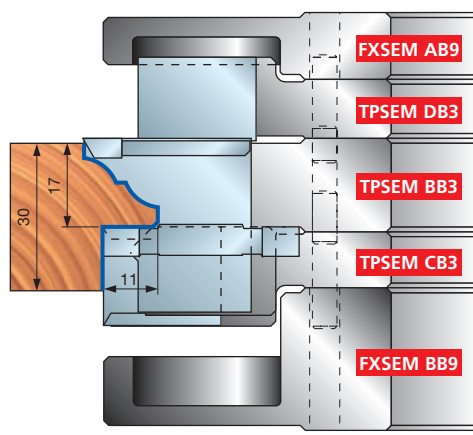
CONTROPROFILO / SCRIBE



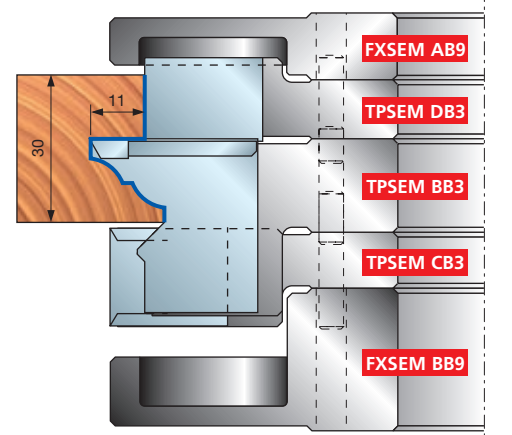
### ESECUZIONE CON BATTUTA CARRYING OUT A REBATE



PROFILO / PROFILE



CONTROPROFILO / SCRIBE



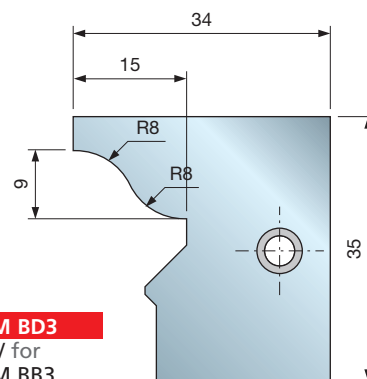
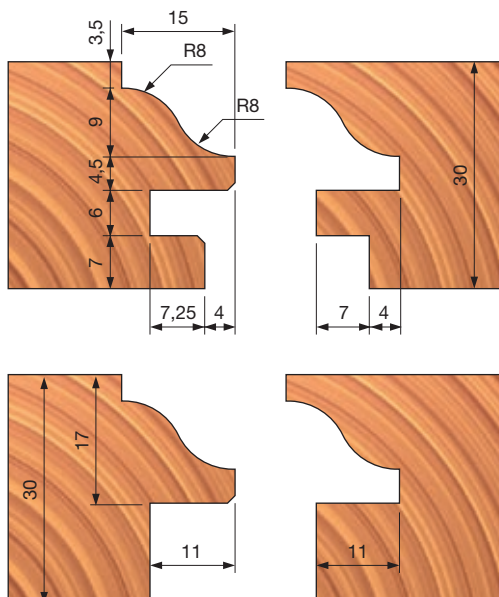


# CPSEM BD3

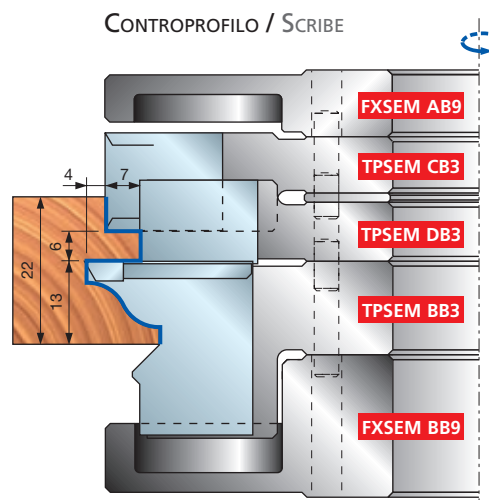
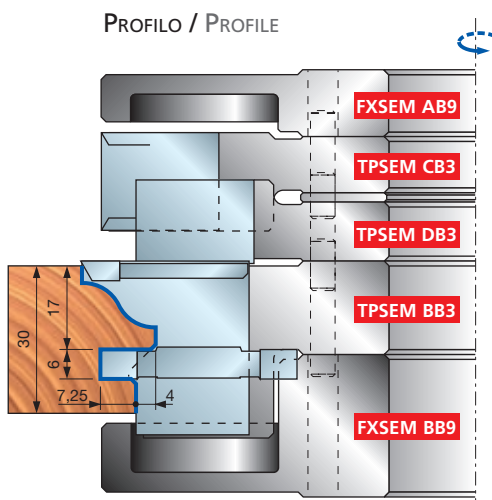
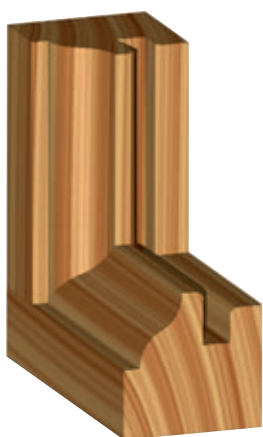
COLTELLI PER TPSEM BB3 (SPESSORE LEGNO: 30 mm)  
KNIVES FOR TPSEM BB3 (WOOD THICKNESS: 30 mm)

Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

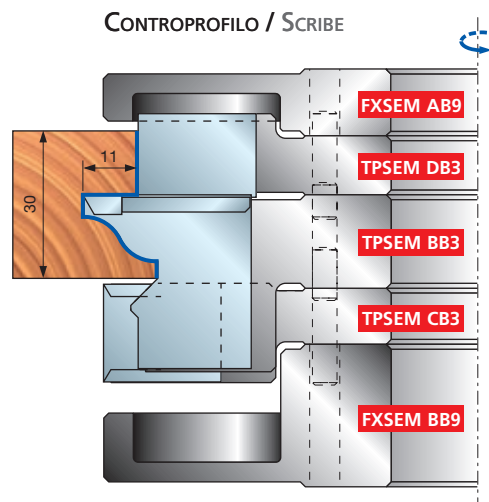
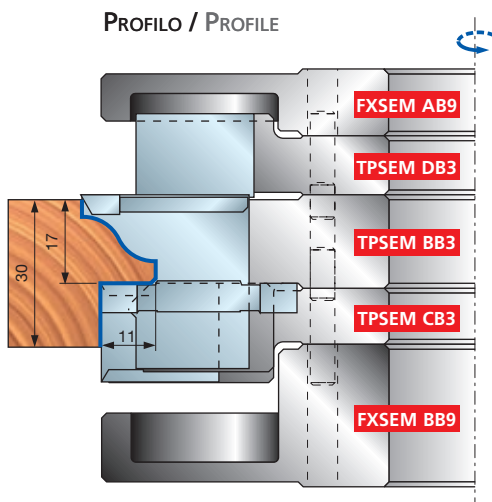
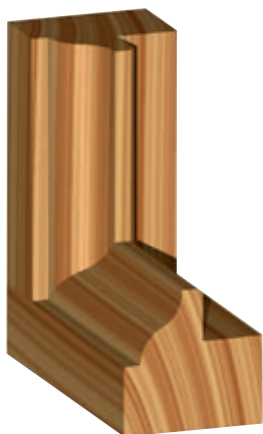
Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM30GB3
2	35 x 34 x 3	CPSEM BD3



## ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE



## ESECUZIONE CON BATTUTA CARRYING OUT A REBATE

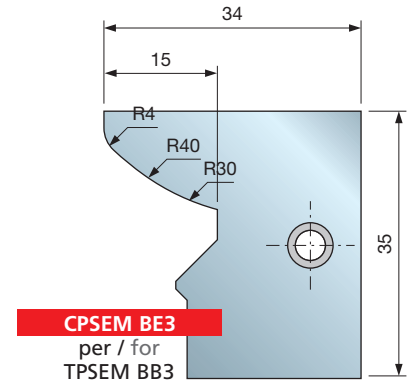
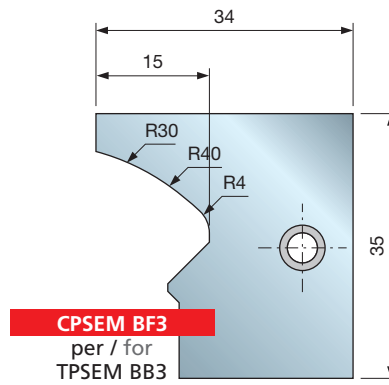
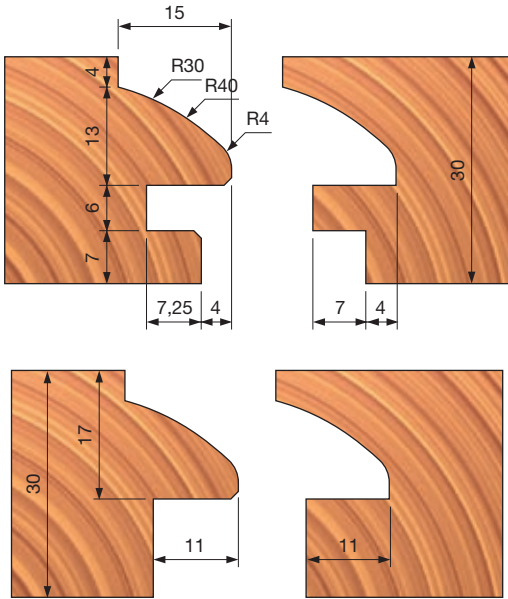


# CPSEM BF3 CPSEM BE3

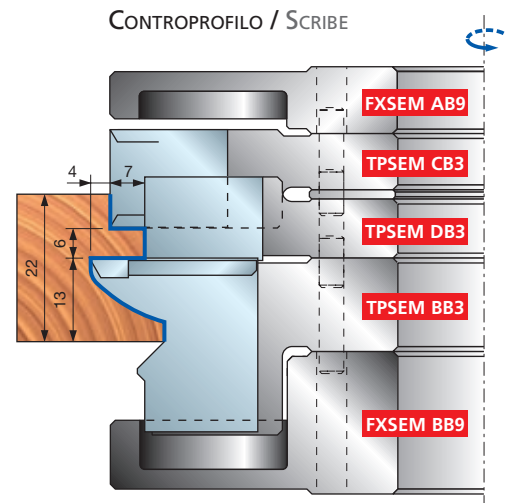
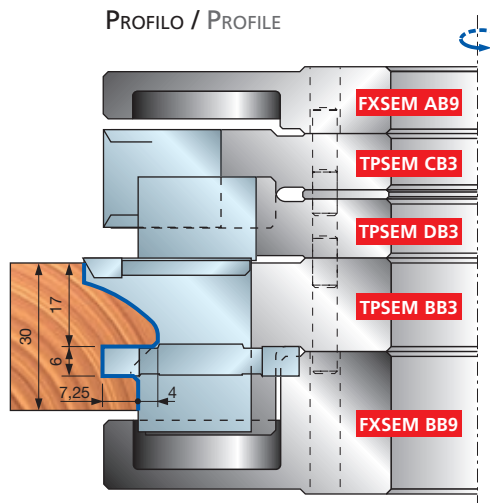
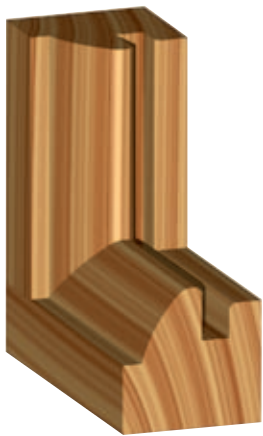
## COLTELLI PER TPSEM BB3 (SPESSORE LEGNO: 22 mm) KNIVES FOR TPSEM BB3 (WOOD THICKNESS: 22 mm)

Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

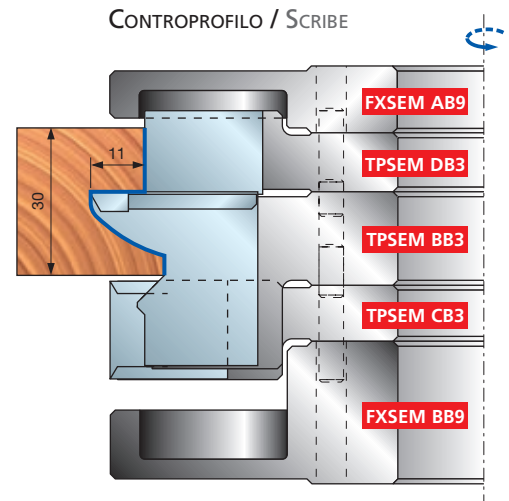
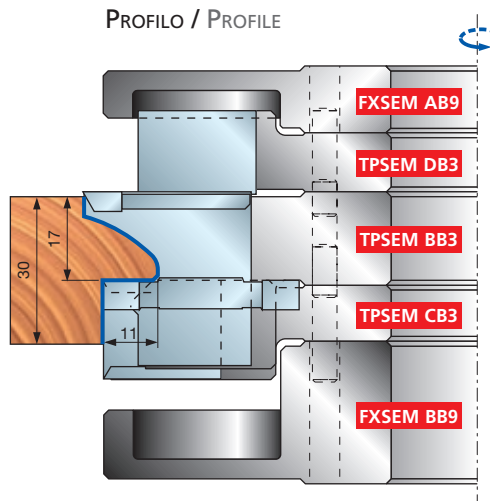
Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM30GB3
2	35 x 34 x 3	CPSEM BE3
2	35 x 34 x 3	CPSEM BF3



### ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE



### ESECUZIONE CON BATTUTA CARRYING OUT A REBATE

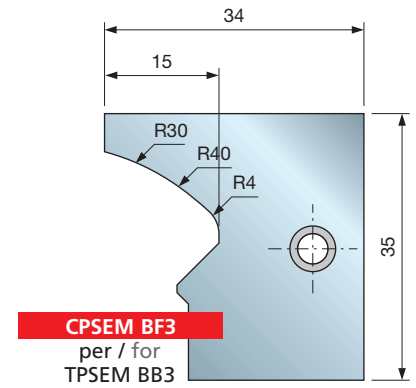
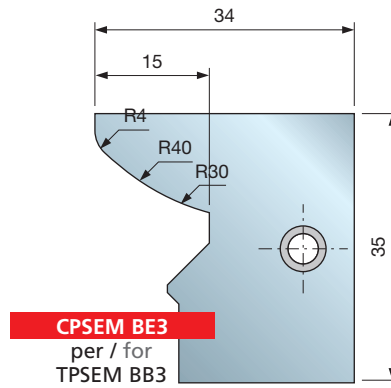
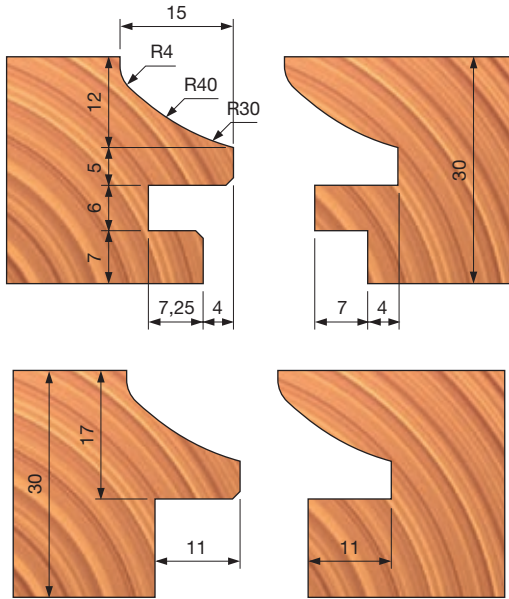


# CPSEM BE3 CPSEM BF3

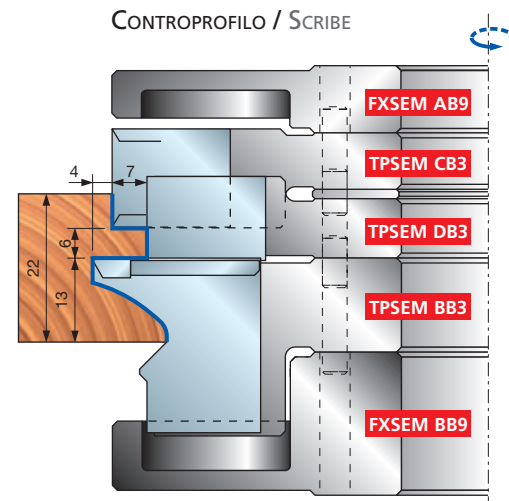
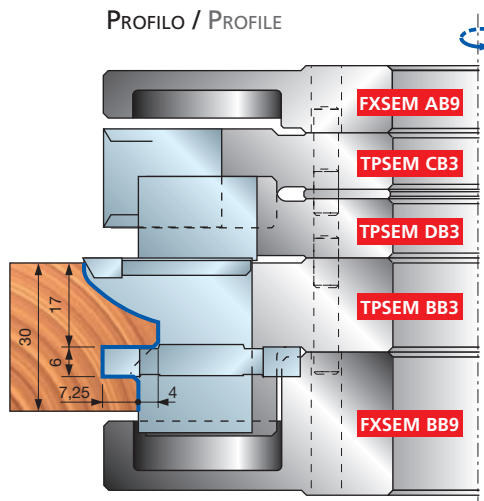
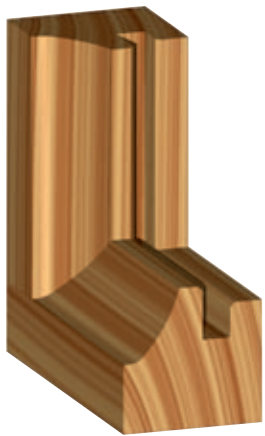
## COLTELLI PER TPSEM BB3 (SPESSORE LEGNO: 30 mm) KNIVES FOR TPSEM BB3 (WOOD THICKNESS: 30 mm)

Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

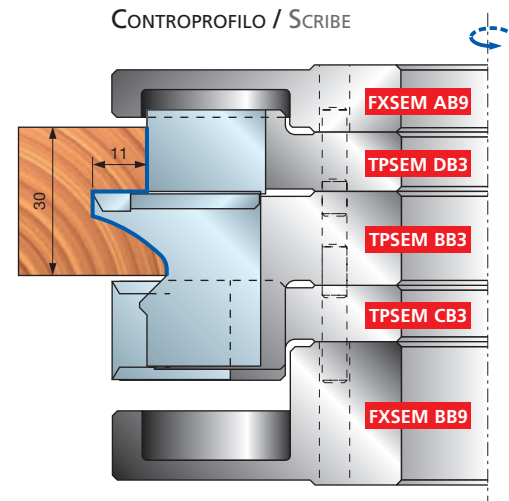
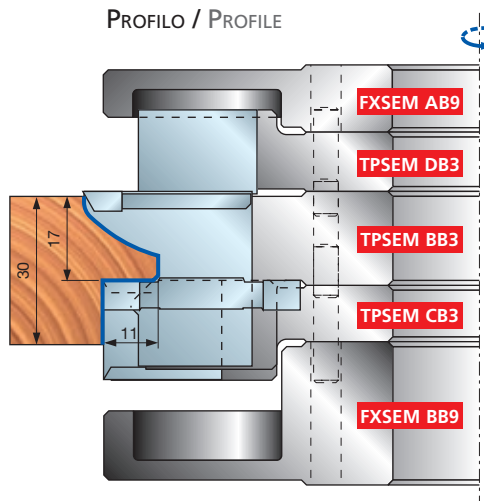
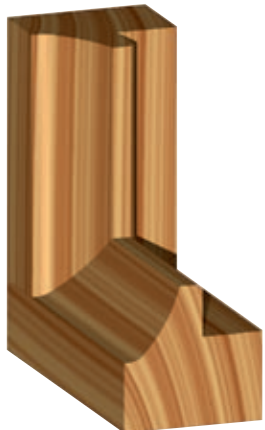
Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM30GB3
2	35 x 34 x 3	CPSEM BE3
2	35 x 34 x 3	CPSEM BF3



### ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE



### ESECUZIONE CON BATTUTA CARRYING OUT A REBATE

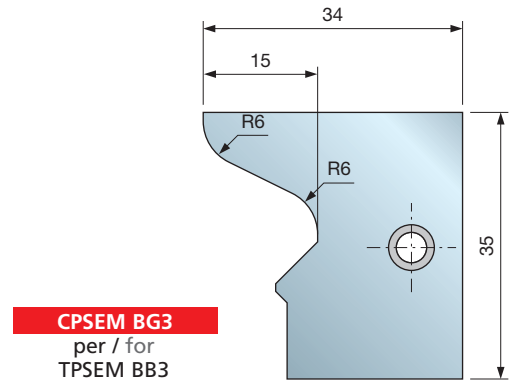
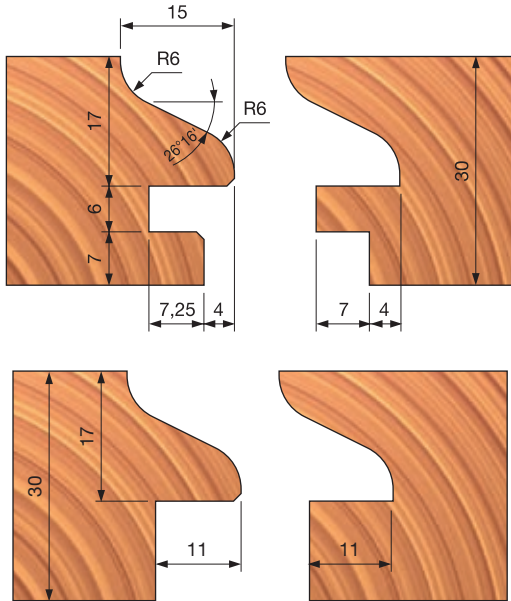


# CPSEM BG3

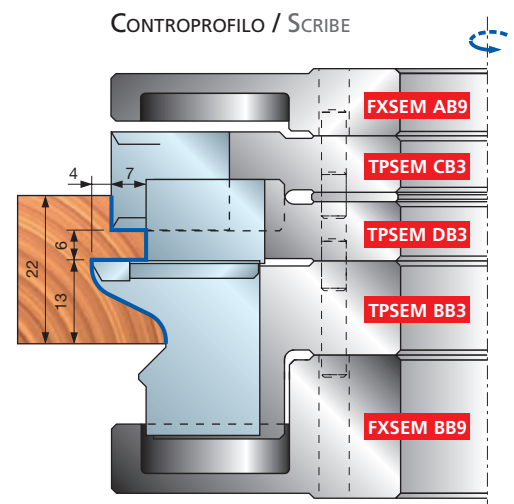
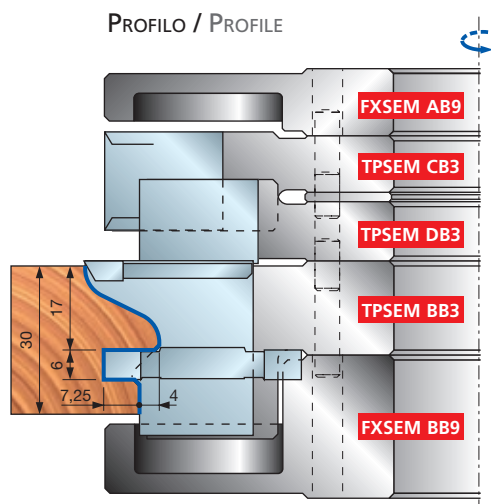
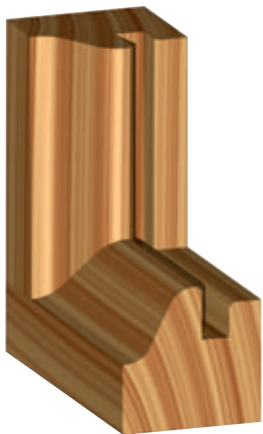
## COLTELLI PER TPSEM BB3 (SPESSORE LEGNO: 30 mm) KNIVES FOR TPSEM BB3 (WOOD THICKNESS: 30 mm)

Esempio di ordinazione per l'esecuzione dei profili indicati  
Order example for the profiles shown

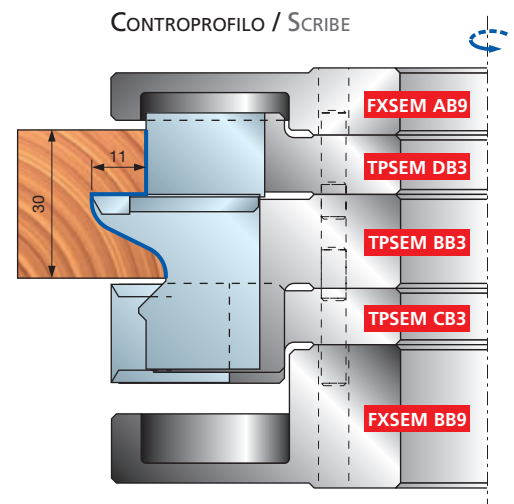
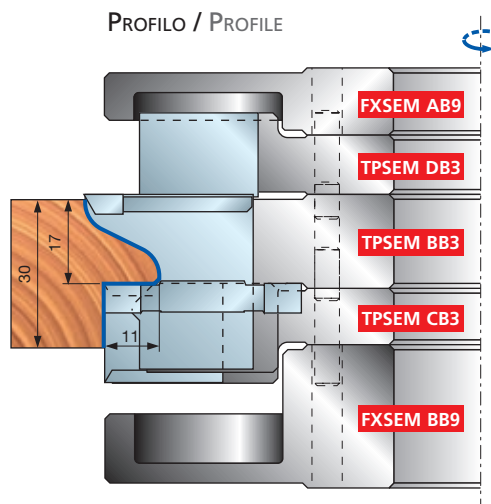
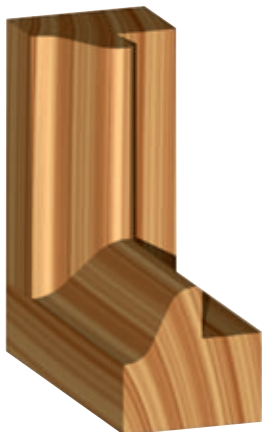
Pezzi Pieces	Dimensioni Dimensions	Codice Code
1	160 x 35 (50)	TPSEM30GB3
2	35 x 34 x 3	CPSEM BG3



### ESECUZIONE CON INCASTRO CARRYING OUT A GROOVE

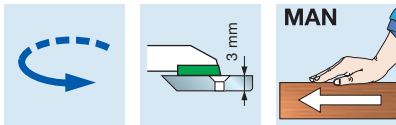


### ESECUZIONE CON BATTUTA CARRYING OUT A REBATE



# TP42M

## TESTA PORTACOLTELLI MULTIPROFILO PER PORTE MULTIPROFILE CUTTERHEAD FOR DOORS



### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
**R&S - SV/R 169/168**

#### ■ CARATTERISTICHE:

Questo utensile è stato progettato per essere utilizzato su macchine toupie. Particolarmente indicato per la profilatura di legni teneri, duri ed esotici, con ottima finitura. La versatilità di questo utensile permette di produrre porte con spessori da 44 a 52 mm. Questo può essere ottenuto con due passate, capovolgendo la parte già lavorata per la seconda lavorazione ed avendo l'accortezza di regolare l'altezza di programmazione dell'utensile. I coltelli, di diverso profilo, sono perfettamente intercambiabili tra loro e mantengono il diametro minimo di lavorazione.

#### ■ FEATURES:

This tool is designed to be used on moulding. Mostly suitable for moulding and profiling on soft, hard and exotic wood, with a top quality finish. The tool's versatility allows you to produce 44 - 52 mm thick doors. This can be achieved with two passes and by capsiding the machined part for the second run, taking care to adjust the tool's programmed height accordingly. The variously profiled knives are perfectly interchangeable and do not affect the minimum tool diameter.

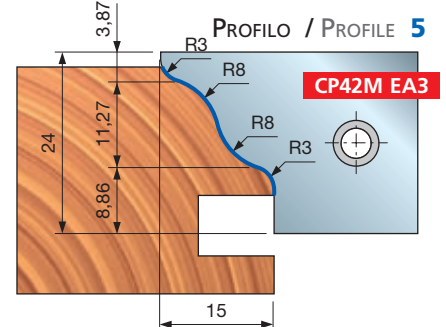
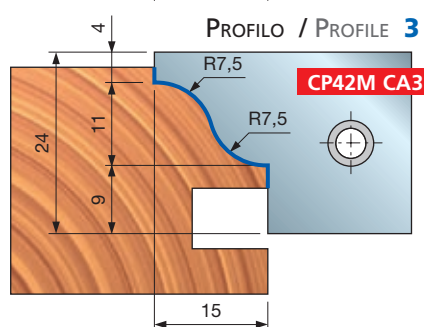
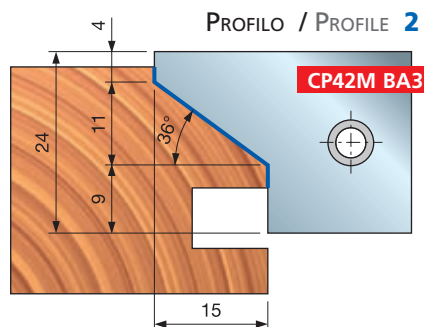
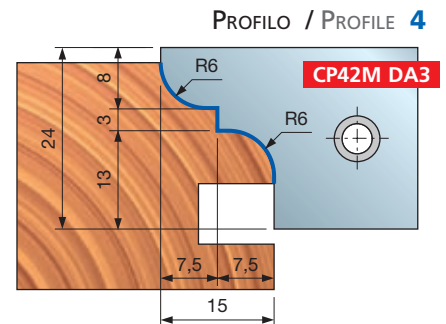
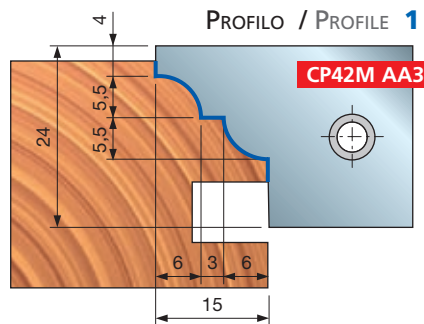
D	B	d*	Z	R	Codice
mm	mm	mm			Code
176	40	35 (50)	2	4	TP42M AB3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Vite / Screw	M5 x 7 x 16	VT08M AE9
Cuneo / Wedge	21 x 19 x 8	CN13M AS9
Vite / Screw	M10 x 18	VT03M CC9
Inserto rasante / Spur insert	40 x 4 x 7	IG05MD AA3
Vite / Screw	M6 x 14,5	VT16M AA9
Inserto per incastri / Grooving insert	34 x 8 x 16	SR06M AM3
Vite / Screw	M6 x 11,5	VT16M AB9
Chiave / Allen key	4 x 110	CB03M BA9
Chiave / Allen key	5 x 110	CB03M EA9

■ Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.  
L'ARTICOLO VIENE FORNITO SENZA COLTELLI.

■ Light alloy body (Ergal). For cleaning do not use products containing caustic soda.  
THIS ITEM IS SUPPLIED WITHOUT KNIVES.

Coltelli di ricambio	Dimensioni	Codice
Spare knives	Dimensions	Code
<b>1</b>	24 x 34 x 3	CP42M AA3
<b>2</b>	24 x 34 x 3	CP42M BA3
<b>3</b>	24 x 34 x 3	CP42M CA3
<b>4</b>	24 x 34 x 3	CP42M DA3
<b>5</b>	24 x 34 x 3	CP42M EA3



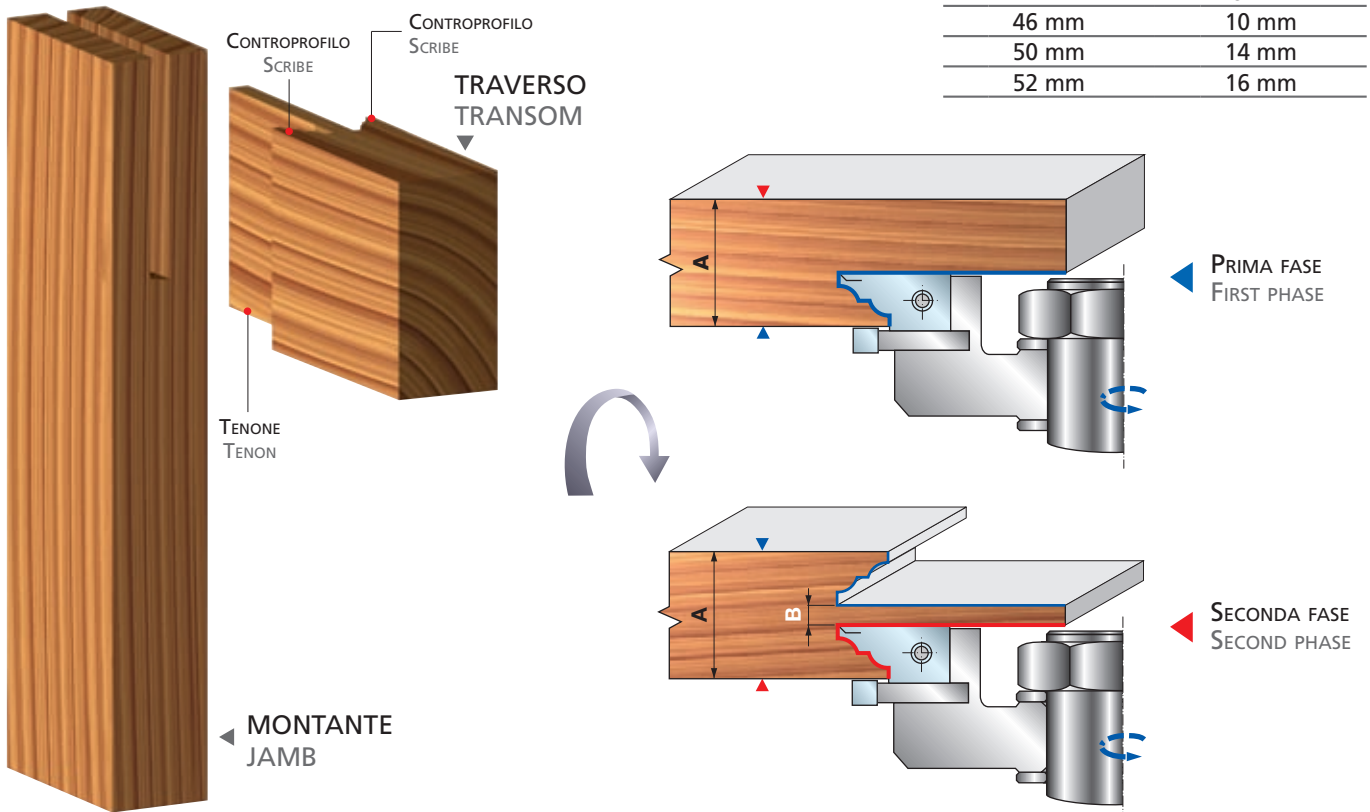
▲ I profili 4 e 5 sono utilizzabili solamente con avanzamento meccanico.  
Profiles 4 and 5 are usable with automatic feed only.  
▼

\* La quota tra parentesi è la massima allargatura foro possibile • Size shown between brackets is the max. rebore possible

# 1

## ESECUZIONE DEL CONTROPROFILO CON SPINA DOOR TENONING

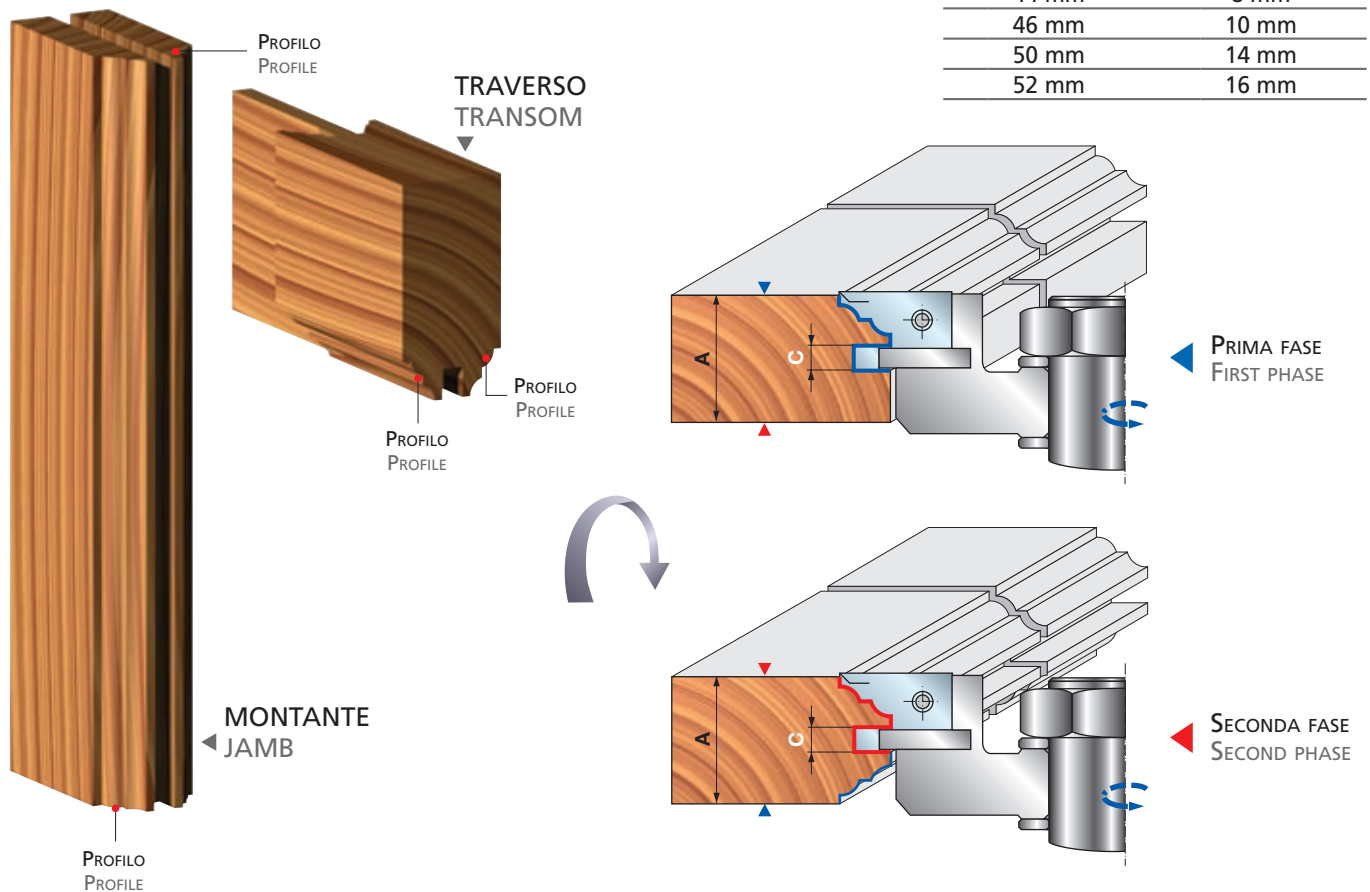
A	Spessore Porta Door thickness	B	Spessore Tenone Tenon thickness
	44 mm		8 mm
	46 mm		10 mm
	50 mm		14 mm
	52 mm		16 mm



# 2

## PROFILATURA DEI MONTANTI E DEI TRAVERSI DOOR FRAME PROFILING

A	Spessore Porta Door thickness	C	Spessore Incastro Groove thickness
	44 mm		8 mm
	46 mm		10 mm
	50 mm		14 mm
	52 mm		16 mm



■ VEDERE A PAG. 242 "COSTRUZIONE DI UNA PORTA"  
■ PLEASE REFER TO PAGE 242 "DOOR MANUFACTURING"

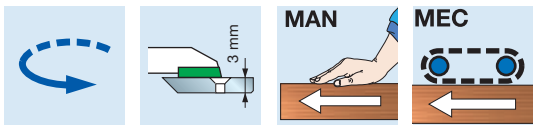
# TP46M

## SET DI TESTE PORTACOLTELLI PER PORTE CON SPESSORE 38-40 mm MULTIPROFILE CUTTERHEAD SETS FOR DOORS (38-40 mm)



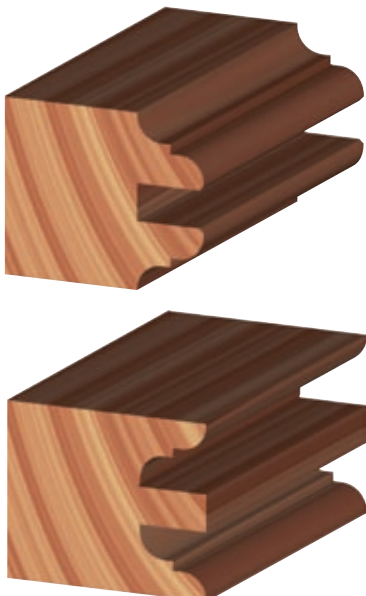
### Set TP46MAN per avanzamento manuale TP46MAN sets for manual feed

Profilo Profile	D mm	d* mm	Z	I	R	Codice Code
1	170	30 (50)	4	8		TP46MAN001
2	170	30 (50)	4	8		TP46MAN002
3	170	30 (50)	4	8		TP46MAN003
4	170	30 (50)	4	8		TP46MAN004
5	170	30 (50)	4	8		TP46MAN005
6	170	30 (50)	4	8		TP46MAN006
7	170	30 (50)	4	8		TP46MAN007
8	170	30 (50)	4	8		TP46MAN008

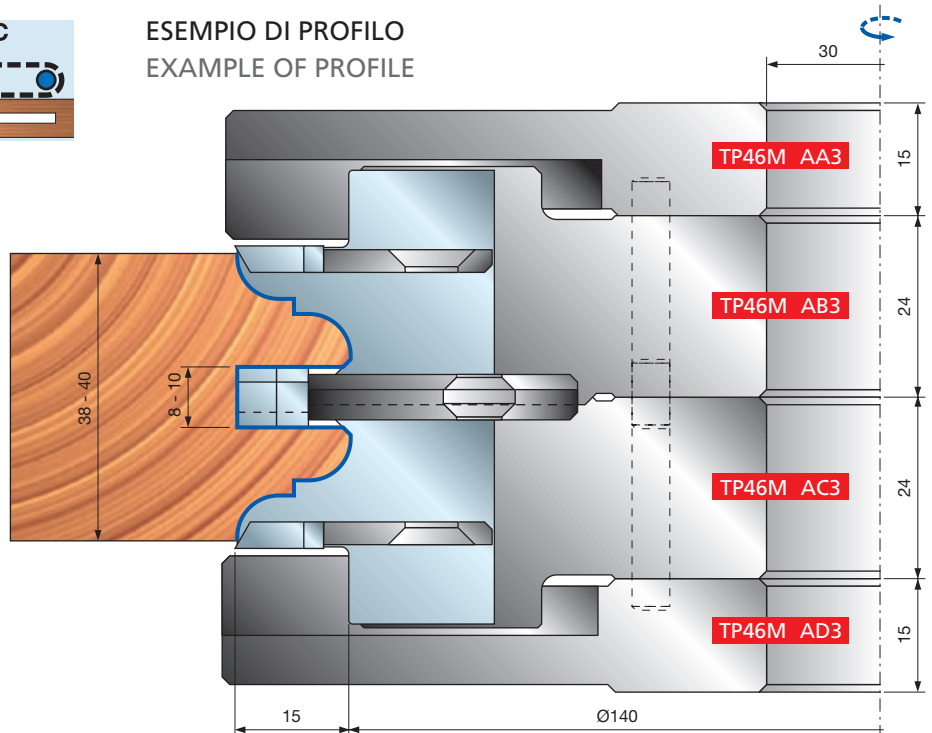


### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

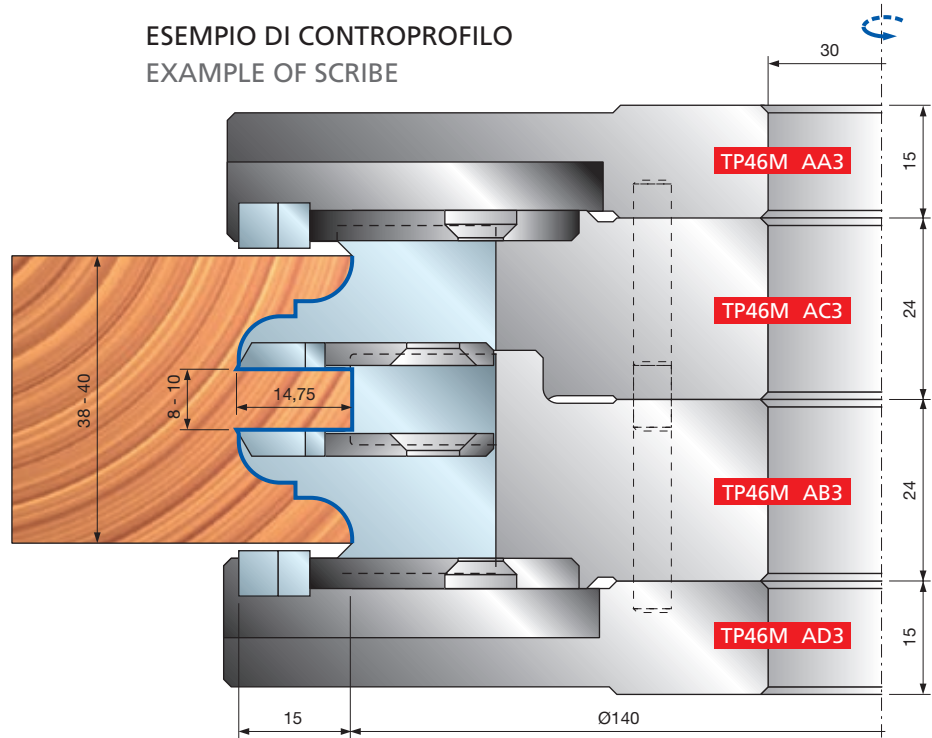
- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. I GRUPPI VIENGONO FORNITI CON COLTELLI.  
N.B.: Per lo spessore legno da 40 mm, usare l'anello distanziale da 2 mm (cod. AN01MA0209, incluso).
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. THESE SETS ARE SUPPLIED WITH KNIVES.  
Please Note: To obtain a workpiece of 40 mm, use a spacer of 2 mm (item AN01MA0209, included).



### ESEMPIO DI PROFILO EXAMPLE OF PROFILE



### ESEMPIO DI CONTROPROFILO EXAMPLE OF SCRIBE

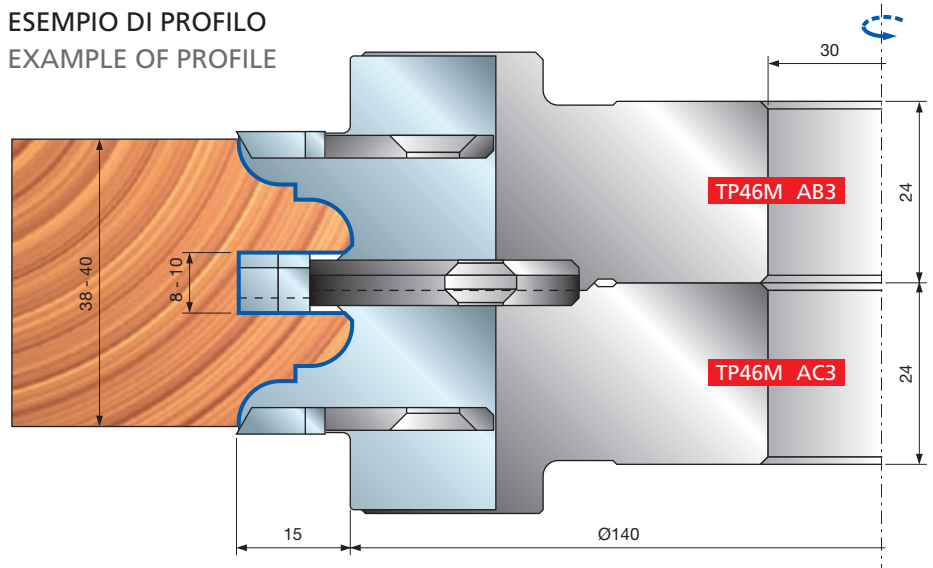


# SET DI TESTE PORTACOLTELLI PER PORTE CON SPESSORE 38-40 mm MULTIPROFILE CUTTERHEAD SETS FOR DOORS (38-40 mm)

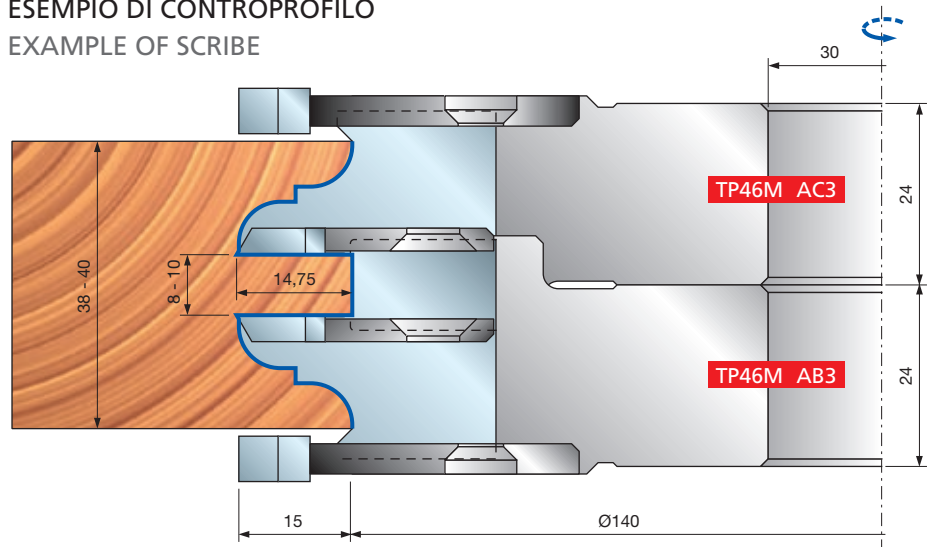
Set TP46MEC per avanzamento meccanico  
TP46MEC sets for automatic feed

Profilo	D	d*	Z	I	R	Codice
Profile	mm	mm				Code
1	170	30 (50)	4	8		TP46MEC001
2	170	30 (50)	4	8		TP46MEC002
3	170	30 (50)	4	8		TP46MEC003
4	170	30 (50)	4	8		TP46MEC004
5	170	30 (50)	4	8		TP46MEC005
6	170	30 (50)	4	8		TP46MEC006
7	170	30 (50)	4	8		TP46MEC007
8	170	30 (50)	4	8		TP46MEC008

ESEMPIO DI PROFILO  
EXAMPLE OF PROFILE



ESEMPIO DI CONTROPROFILO  
EXAMPLE OF SCRIBE

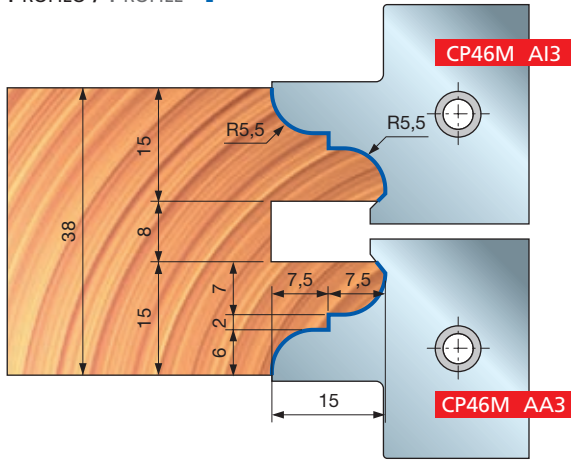


Parti di ricambio		Dimensioni	Codice
Spare parts		Dimensions	Code
Vite / Screw		M5 x 8	VT05M AA9
Vite / Screw		M5 x 7 x 16	VT08M AE9
Vite / Screw		M6 x 11,5	VT16M AB9
Vite / Screw		M10 x 18	VT03M CC9
<b>AB3</b> Inserto rasante / Spur insert		34 x 3,5 x 16	SR06MS BA3
Settore / Sector		25 x 45 x 6 Z1	SR11MD BE3
<b>AC3</b> Inserto rasante / Spur insert		34 x 3,5 x 16	SR06MD BA3
Settore / Sector		25 x 45 x 6 Z1	SR11MS BE3

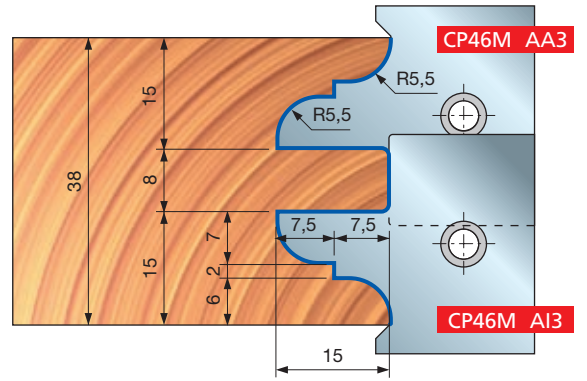


COLTELLI PER UTENSILI / KNIVES FOR CUTTERHEADS: **TP46M AB3**  
**TP46M AC3**

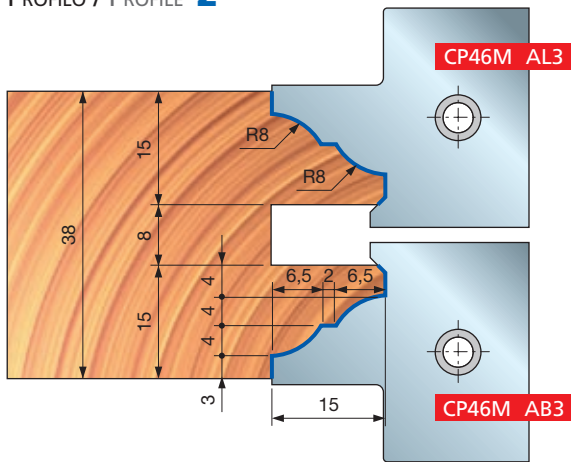
PROFILO / PROFILE **1**



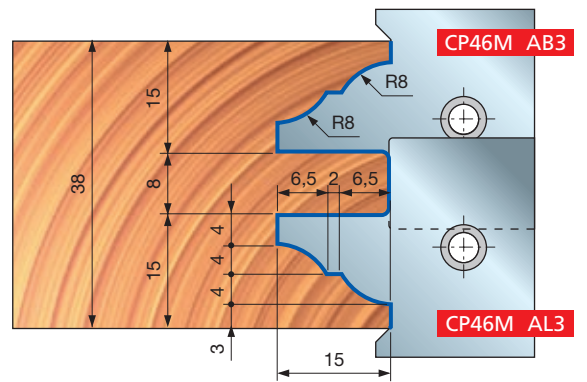
CONTROROFILO / SCRIBE **1**



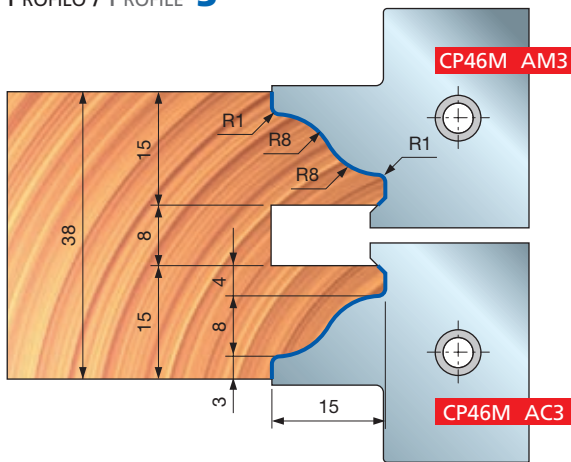
PROFILO / PROFILE **2**



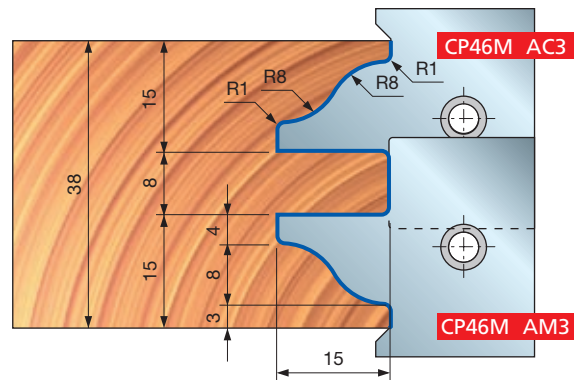
CONTROROFILO / SCRIBE **2**



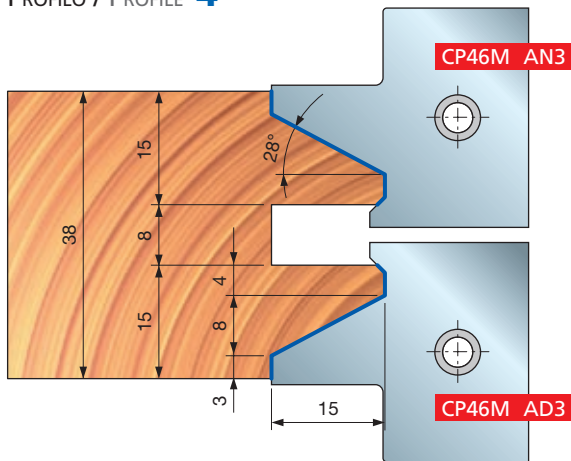
PROFILO / PROFILE **3**



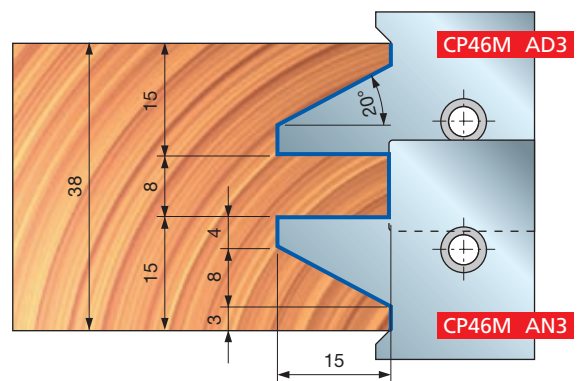
CONTROROFILO / SCRIBE **3**



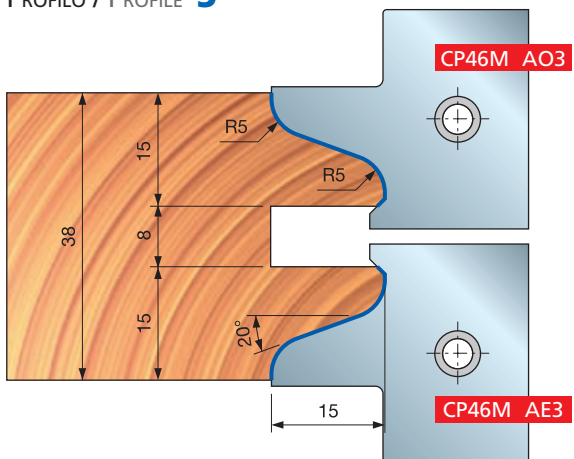
PROFILO / PROFILE **4**



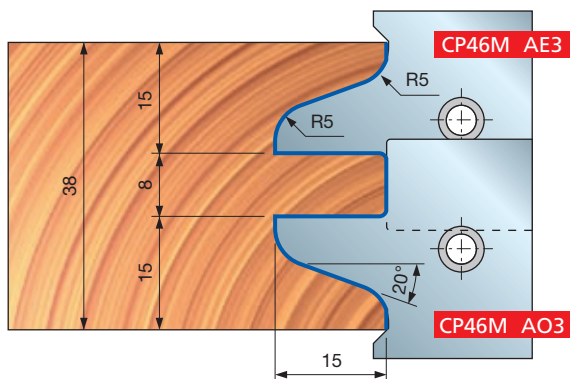
CONTROROFILO / SCRIBE **4**



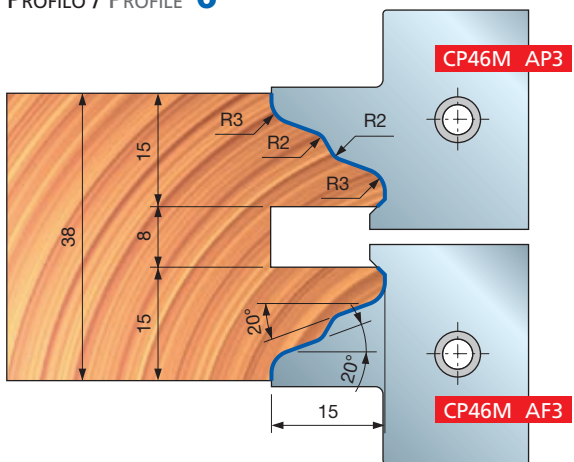
PROFILO / PROFILE **5**



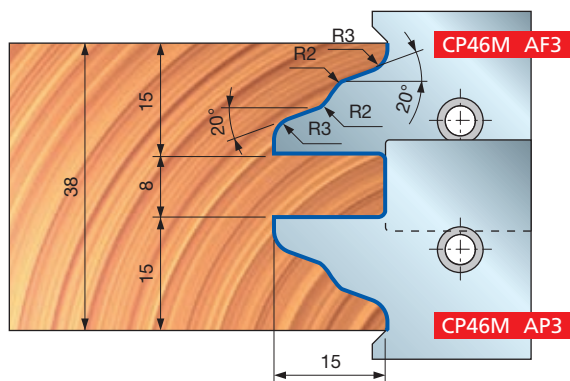
CONTROROFILO / SCRIBE **5**



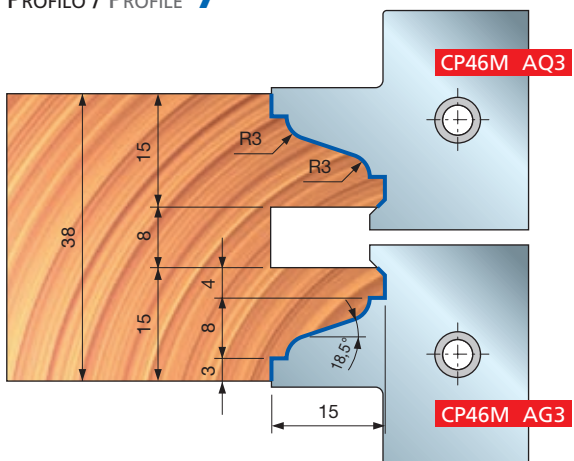
PROFILO / PROFILE **6**



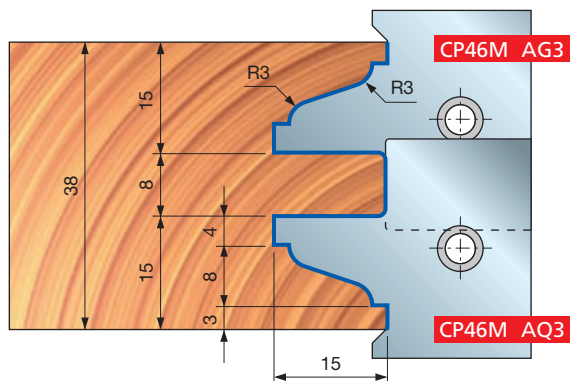
CONTROROFILO / SCRIBE **6**



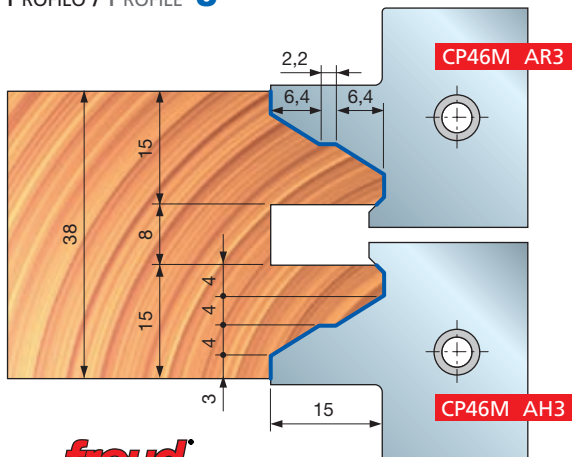
PROFILO / PROFILE **7**



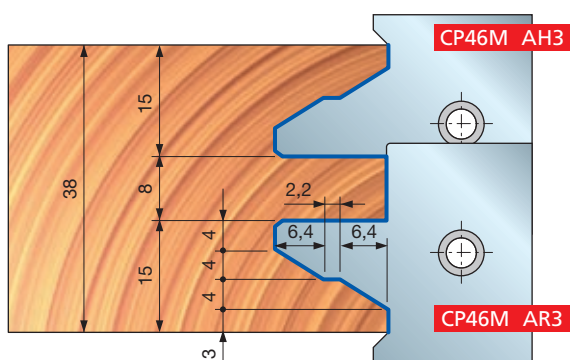
CONTROROFILO / SCRIBE **7**



PROFILO / PROFILE **8**

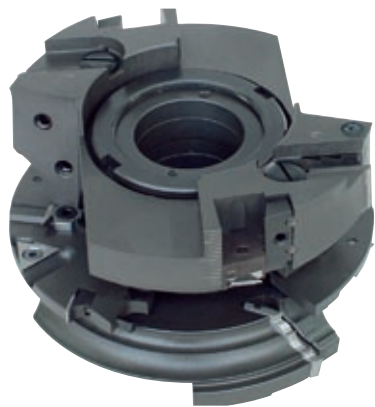


CONTROROFILO / SCRIBE **8**



# ST12MG

## GRUPPI PER PROFILI DI PORTE INTERNE E PORTONCINI PROFILING SETS FOR INTERNAL AND EXTERNAL DOORS



### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

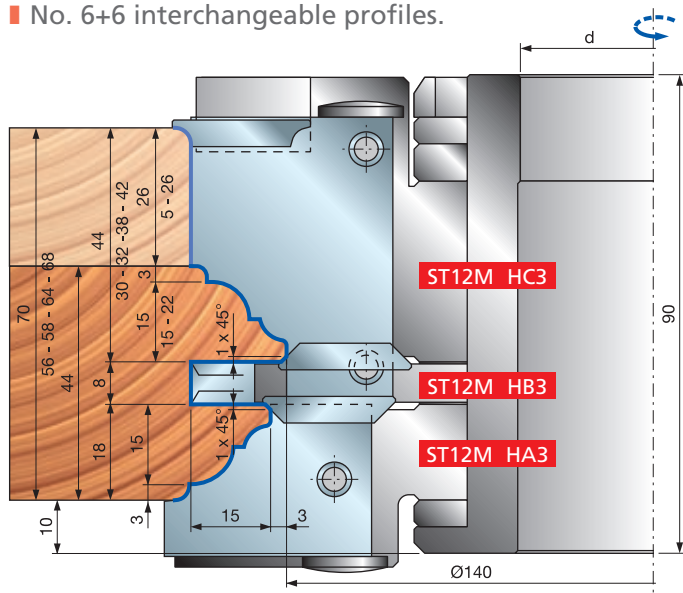
- La bussola BF10MD ed i coltelli per gli utensili HA3 e HC3 vanno ordinati a parte.
- BF10MD sleeve and knives for cutterheads HA3 and HC3 are not included.

Dimensioni	Codice bussola
Dimensions	Sleeve code
Ø70 x 90 x 50	BF10MD ED9
Ø70 x 90 x 40	BF10MD EC9
Ø70 x 90 x 35	BF10MD EB9

Sp. legno	Reg. vetrocamera
Dimensions	double-glazing thickness adj.
44	5 ÷ 8
56	13 ÷ 20
58	15 ÷ 22
64	21 ÷ 28
68	25 ÷ 32
70	27 ÷ 34

### GRUPPO / SET **ST12MG-800**

- N. 6+6 profili intercambiabili.
- No. 6+6 interchangeable profiles.



### Utensili per gruppi ST12MG-800 e ST12MG-801 Tools for ST12MG-800 and ST12MG-801 sets

D	B	d	Z	R	Codice
mm	mm	mm			Code
186	29	70	2		ST12M HA3
176	8	70	2	8	ST12M HB3
176	58,5	70	2		ST12M HC3
184	8	70	2	8	ST12M HD3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
HA3	Cuneo / Wedge	26 x 38 x 8 CN07M HA9
	Vite / Screw	M10 x 18 VT03M CC9
HC3	Vite / Screw	M5 x 7 x 16 VT08M AE9
	Vite / Screw	M10 x 18 VT03M CC9
	Cuneo / Wedge	50 x 38 x 8 CN07M HC9
	Vite / Screw	M5 x 7 x 16 VT08M AE9
	Insero raggatore / Rounding insert	22 x 16 X 5 IG52M AE3
	Vite / Screw	M6 x 13 VT16M AE9
HB3 - HD3	Supporto / Serrated support	14 x 21,5 X 22 CN03M BA9
	Cuneo / Wedge	28 x 9,5 X 8 CN03M BB9
	Vite / Screw	M8 x 22 VT19M BB9
	Coltello / Knife	7,6 x 12 x 1,5 CG06M HA3
	Cuneo / Wedge	15 x 7,2 x 8 CN09M DA9
	Vite / Screw	M5 x 19 VT11M AA9
HB3 - HD3	Rasante / Spur	22,86 x 2,5 RG02M AA3
	Vite / Screw	M5 x 6 VT05M AC9
	Insero smussatore / Beveling insert	22 x 16 x 5 IG51M BA3
Vite / Screw	M6 x 11,5 VT16M AB9	

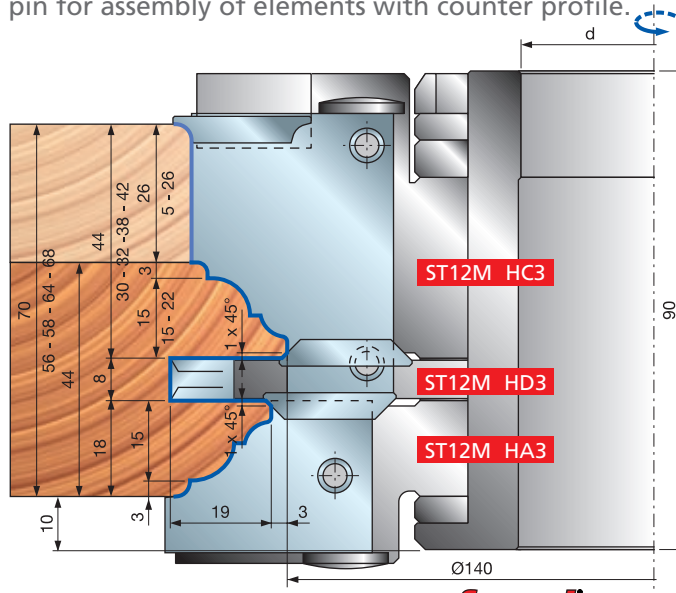
- TRAVERSI E MONTANTI INTERMEDI CON IL GRUPPO ST12MG-801: Tagliando la spina maschio come illustrato, si ottiene il controprofilo con spinetta di tenuta.

- JAMB AND TRANSOM WITH ST12MG-801 SET: By cutting the tenon as shown, the counter profile with anti-torsion pin is obtained.



### GRUPPO / SET **ST12MG-801**

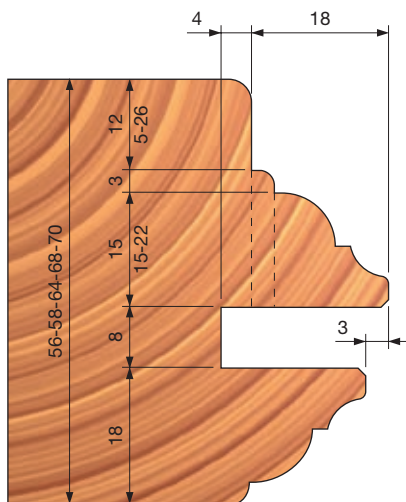
- N. 6+6 profili intercambiabili. Con incastro di tenuta per assemblaggio di elementi con controprofilo.
- No. 6+6 interchangeable profiles. With anti-torsion pin for assembly of elements with counter profile.



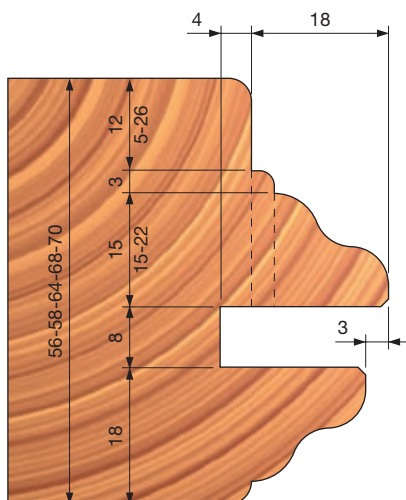
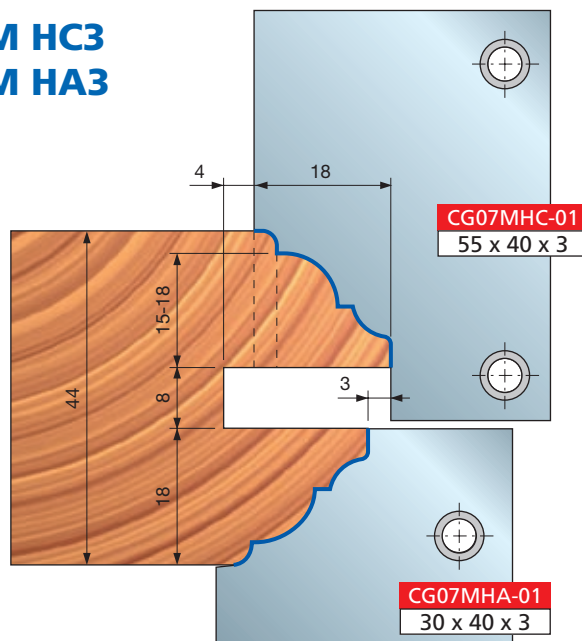
# ST12MG

## PROFILI CON RAGGIATURA ESTERNA DA 3 mm PROFILES WITH 3 mm EXTERNAL ROUNDING

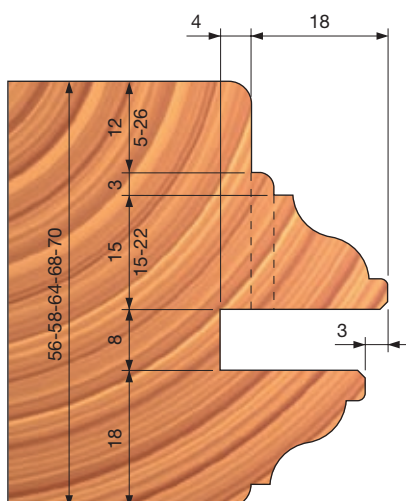
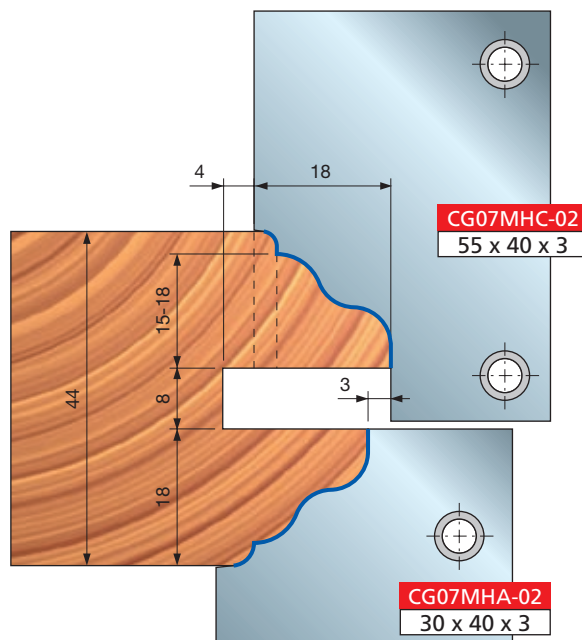
COLTELLI PER UTENSILI / KNIVES FOR CUTTERHEADS: **ST12M HC3**  
**ST12M HA3**



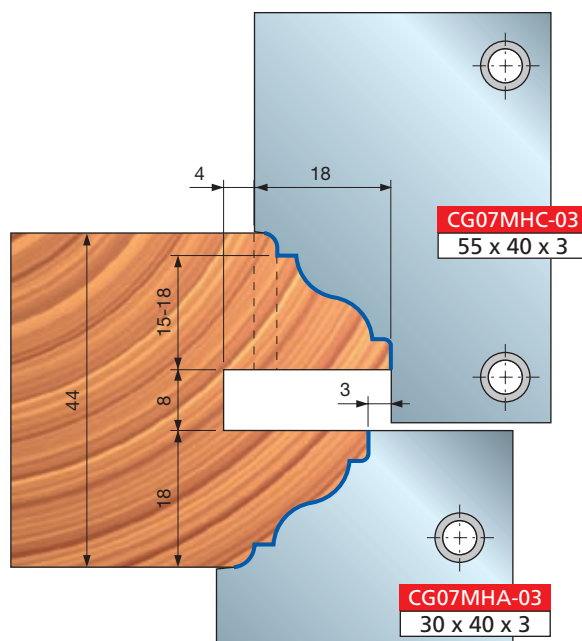
PROFILO / PROFILE **1**



PROFILO / PROFILE **2**



PROFILO / PROFILE **3**

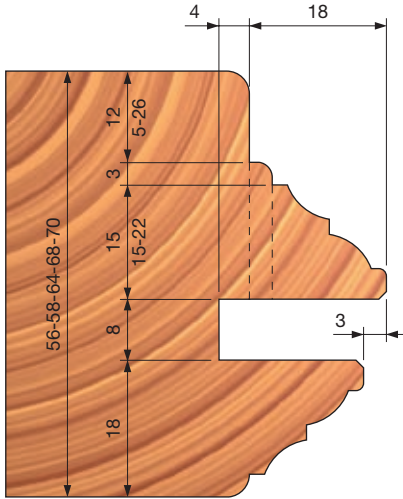


# ST12MG

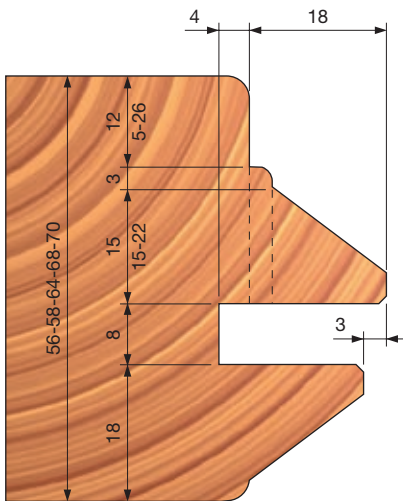
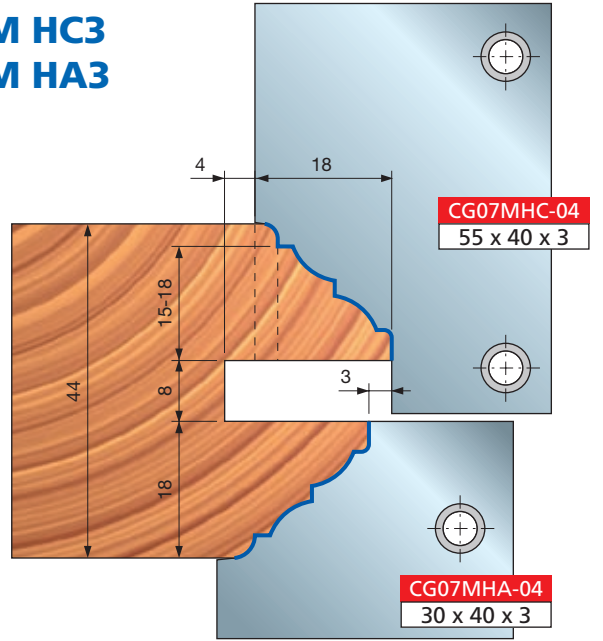
PROFILI CON RAGGIATURA ESTERNA DA 3 mm  
 PROFILES WITH 3 mm EXTERNAL ROUNDING

COLTELLI PER UTENSILI / KNIVES FOR CUTTERHEADS: **ST12M HC3**

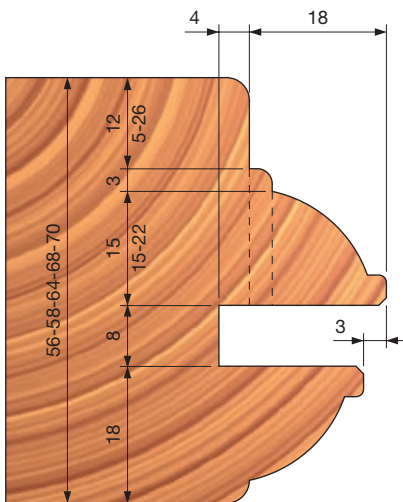
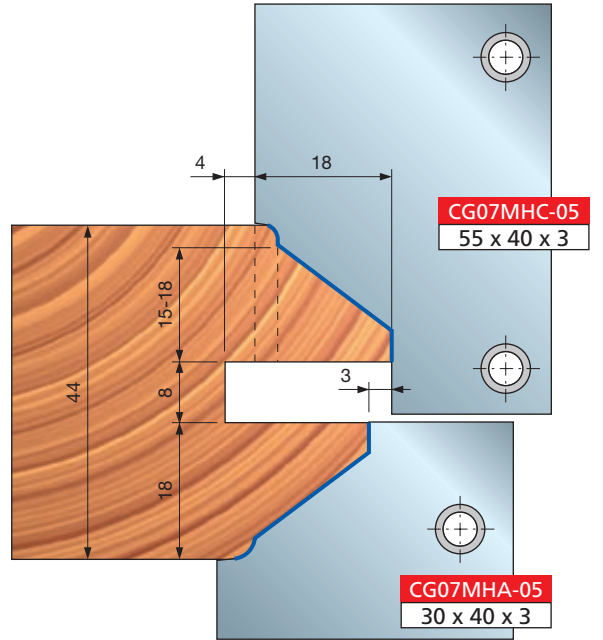
**ST12M HA3**



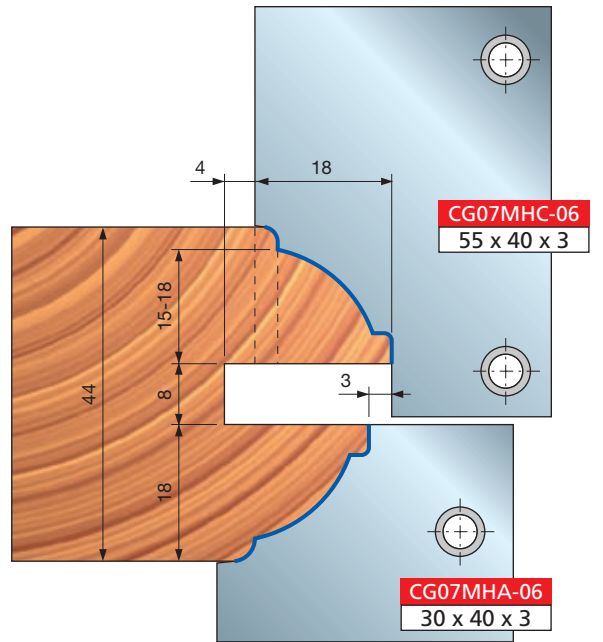
PROFILO / PROFILE **4**



PROFILO / PROFILE **5**



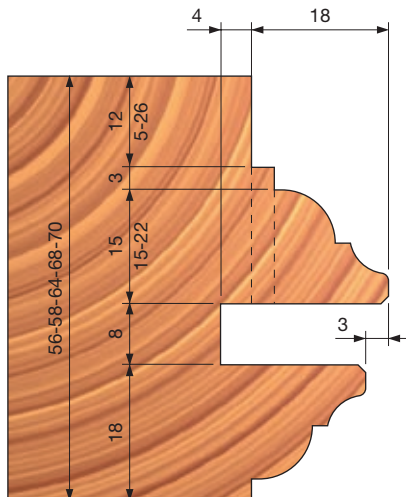
PROFILO / PROFILE **6**



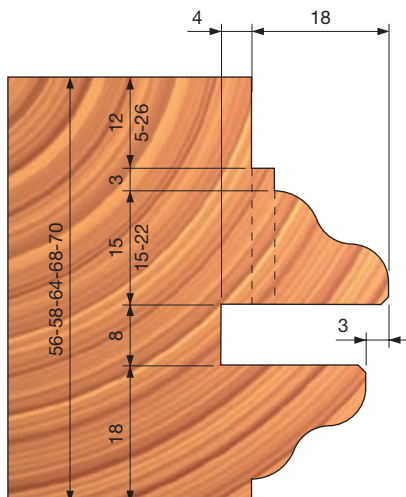
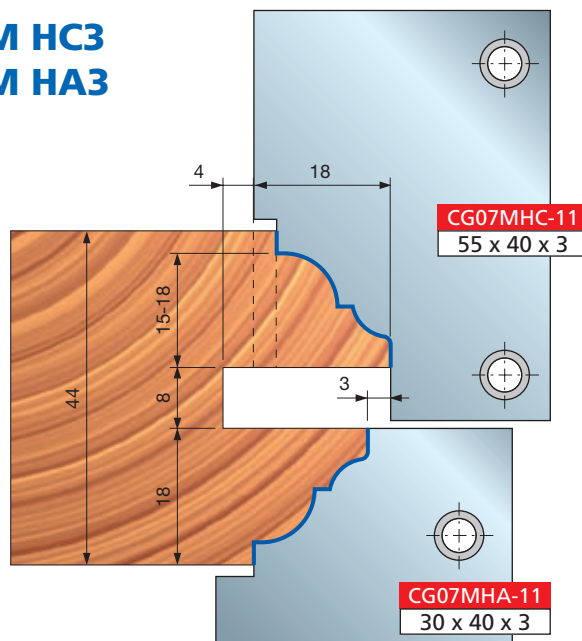
# ST12MG

## PROFILI SENZA RAGGIATURA ESTERNA PROFILES WITHOUT EXTERNAL ROUNDING

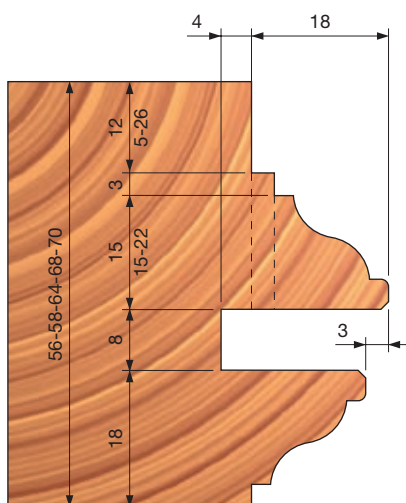
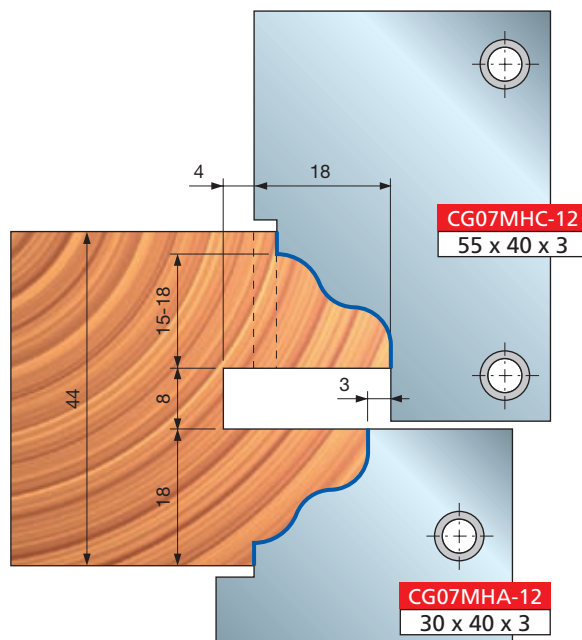
COLTELLI PER UTENSILI / KNIVES FOR CUTTERHEADS: **ST12M HC3**  
**ST12M HA3**



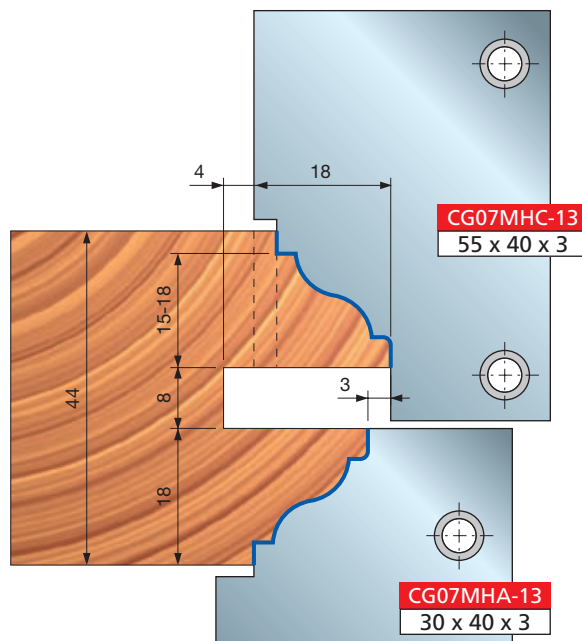
PROFILO / PROFILE **11**



PROFILO / PROFILE **12**



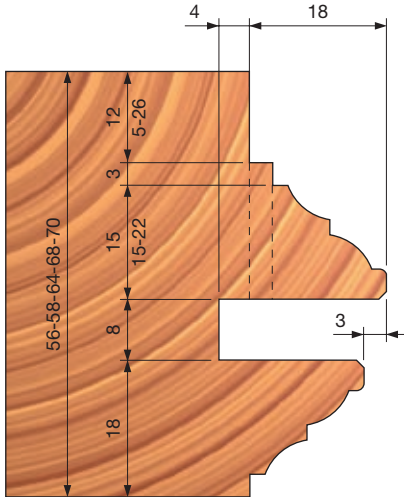
PROFILO / PROFILE **13**



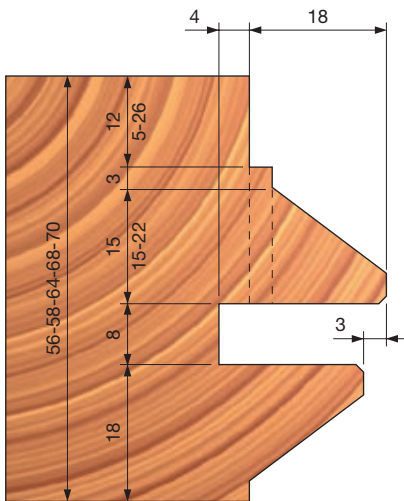
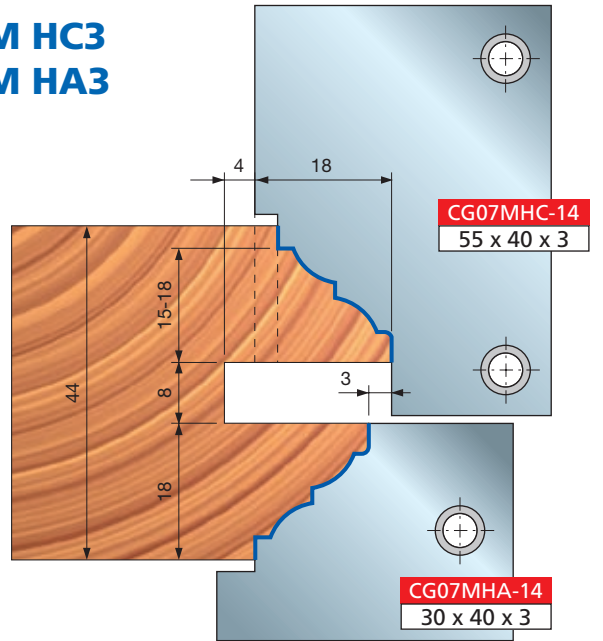
# ST12MG

## PROFILI SENZA RAGGIATURA ESTERNA PROFILES WITHOUT EXTERNAL ROUNING

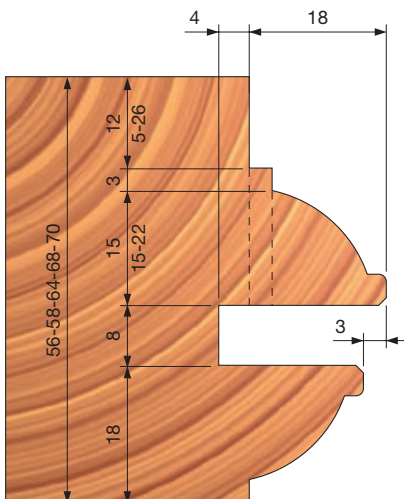
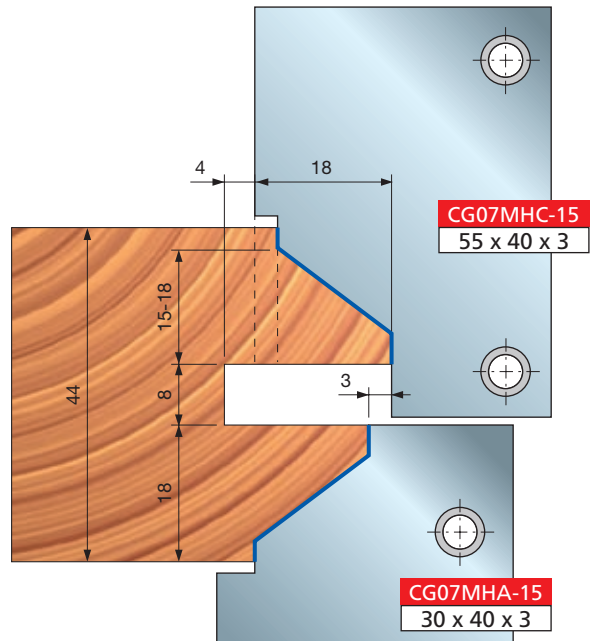
COLTELLI PER UTENSILI / KNIVES FOR CUTTERHEADS: **ST12M HC3**  
**ST12M HA3**



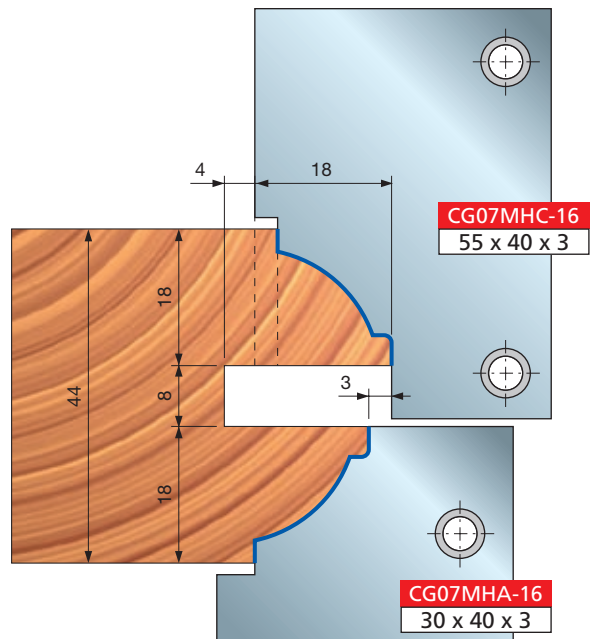
PROFILO / PROFILE **14**



PROFILO / PROFILE **15**



PROFILO / PROFILE **16**



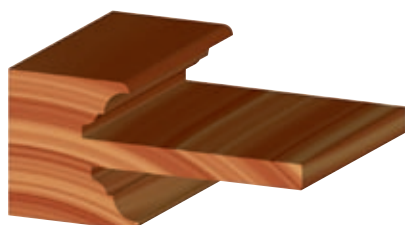
# ST12MG

## GRUPPI PER TENONI TENONING SETS



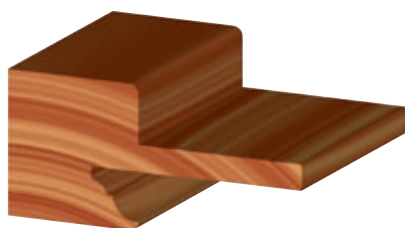
### GRUPPO / SET **ST12MG-820**

- Esempio di controprofilo con spina semplice ottenibile con il gruppo **ST12MG-820** (vedi pagina seguente).
- Example of scribe with single tenon, obtainable with **ST12MG-820** set (see following page).



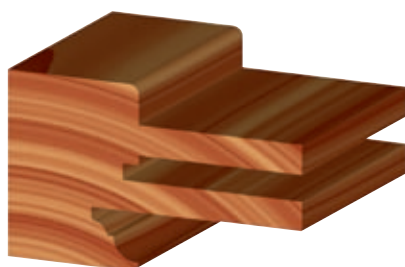
### GRUPPO / SET **ST12MG-821**

- Esempio di controprofilo con spina semplice ottenibile con il gruppo **ST12MG-821** (vedi pagina seguente).
- Example of scribe with single tenon, obtainable with **ST12MG-821** set (see following page).



### GRUPPO / SET **ST12MG-822**

- Esempio di controprofilo con spina doppia ottenibile con il gruppo **ST12MG-822** (vedi pagina seguente).
- Example of scribe with double tenon, obtainable with **ST12MG-822** set (see following page).



Utensili per gruppi: **ST12MG-820, ST12MG-821, ST12MG-822**  
Tools for **ST12MG-820, ST12MG-821, ST12MG-822** sets

D	B	d	Z	R	Codice
mm	mm	mm			Code
264	8	70	2	6	ST12M DB3
294	26	70	2	4	ST12M HF3
300	26	70	2	4	ST12M HG3
264	30	70	2	4	ST12M HH3

	Parti di ricambio	Dimensioni	Codice
	Spare parts	Dimensions	Code
DB3	Coltello / Knife	7,6 x 12 x 1,5	CG06M HA3
	Cuneo / Wedge	15 x 7,2 x 8	C09M DA9
	Vite / Screw	M5 x 19	VT11M AA9
	Rasante / Spur	22,86 x 2,5	RG02M AA3
	Settore dentato / Grooving insert	40 x 5 x 8	SR01MS AA3
	Vite / Screw	M6 x 10	VT01M AA9
	Ghiera / Nut	11,7 x 2,5 x 4	VT18M BB9
	Vite / Screw	M4 x 6,5	VT05M BD9
	Vite / Screw	M5 x 6	VT05M AC9
	Vite / Screw	M5 x 7 x 16	VT08M AE9
HF3	Cuneo / Wedge	21 x 38 x 8	C07M HF9
	Vite / Screw	M10 x 18	VT03M CC9
	Insero rasante / Spur insert	40 x 4 x 7	IG05MD AA3
	Vite / Screw	M6 x 11,5	VT16M AB9
	Insero raggiatore / Rounding insert	22 x 16 x 5	IG52M AE3
	Vite / Screw	M6 x 14,5	VT16M AA9
HG3	Vite / Screw	M5 x 7 x 16	VT08M AE9
	Cuneo / Wedge	21 x 38 x 8	C07M HG9
	Vite / Screw	M10 x 18	VT03M CC9
	Insero rasante / Spur insert	40 x 4 x 7	IG05MS AA3
	Vite / Screw	M6 x 11,5	VT16M AB9
HH3	Insero raggiatore / Rounding insert	22 x 16 x 5	IG52M AE3
	Vite / Screw	M6 x 14,5	VT16M AA9
	Coltello / Knife	30 x 12 x 15	CG06M DA3
	Cuneo / Wedge	15 x 26 x 8	C09MS AD9
	Ogiva / Nut	15 x 13,3 x 10	VT20M MA9
	Vite / Screw	M10 x 22	VT19M MA9
	Rasante / Spur	22,86 x 2,5	RG02M AA3
	Vite / Screw	M5 x 8	VT05M AA9
	Insero raggiatore / Rounding insert	22 x 16 x 5	IG52M AE3
	Vite / Screw	M6 x 13	VT16M AE9
Supporto / Serrated support	14 x 21,5 x 22	C03M BA9	
Cuneo / Wedge	28 x 9,5 x M8	C03M BB9	
Vite / Screw	M8 x 22	VT19M BB9	

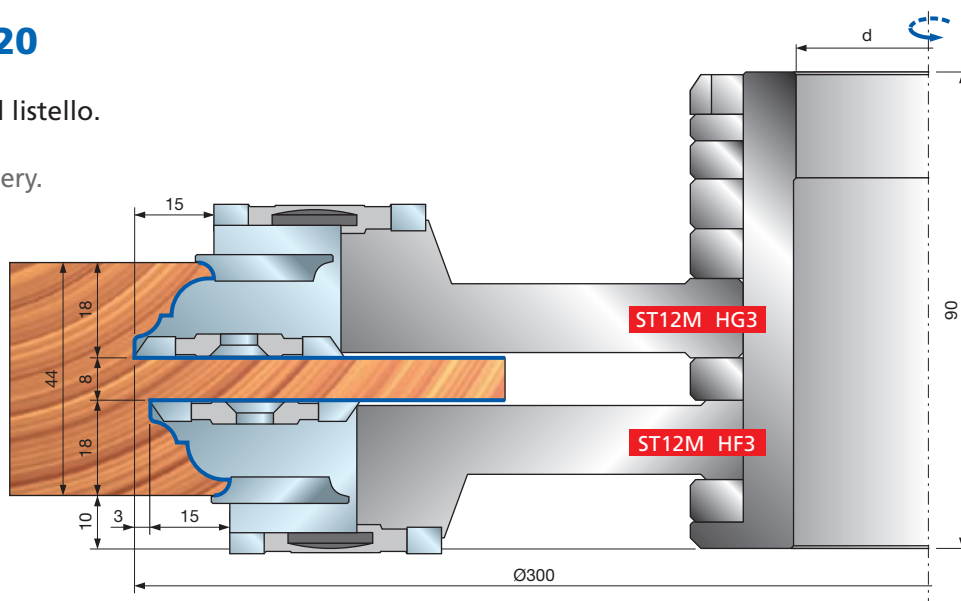
- Le bussole BF10MD ed i coltelli per gli utensili HF3 e HG3 vanno ordinati a parte.
- BF10MD sleeves and knives for cutterheads HF3 and HG3 are not included.

Dimensioni	Codice bussola
Dimensions	Sleeve code
Ø70 x 90 x 50	BF10MD ED9
Ø70 x 90 x 40	BF10MD EC9
Ø70 x 90 x 35	BF10MD EB9



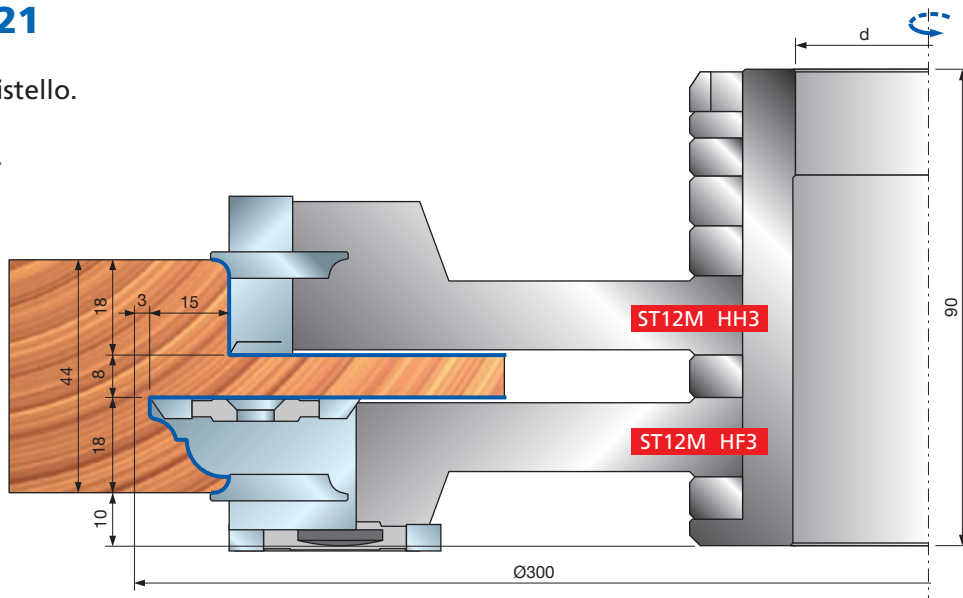
### GRUPPO / SET **ST12MG-820**

- Spina semplice.  
Per profilo senza recupero del listello.
- Single tenon.  
For profile without bead recovery.



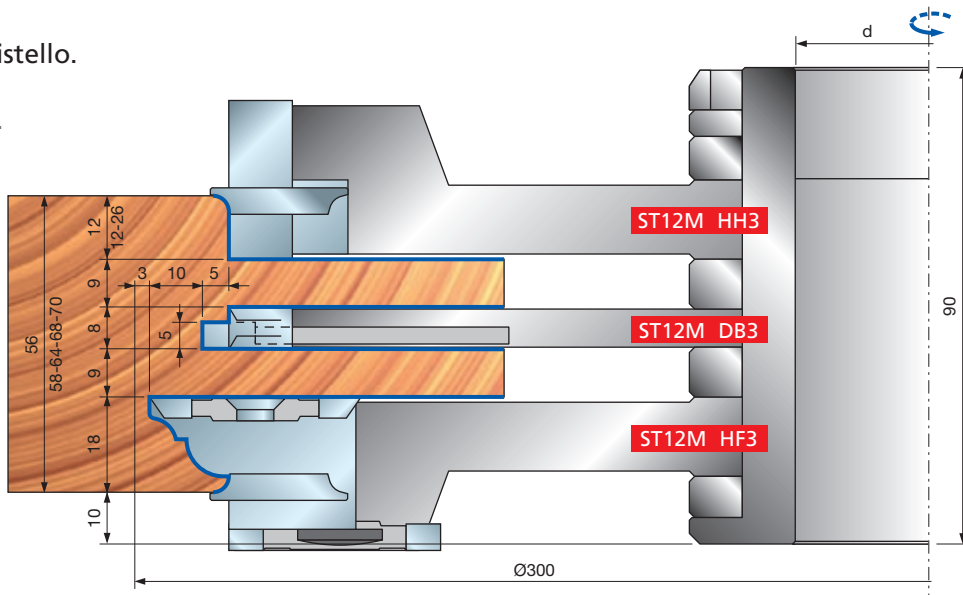
### GRUPPO / SET **ST12MG-821**

- Spina semplice.  
Per profilo con recupero del listello.
- Single tenon.  
For profile with bead recovery.



### GRUPPO / SET **ST12MG-822**

- Spina doppia.  
Per profilo con recupero del listello.
- Double tenon.  
For profile with bead recovery.

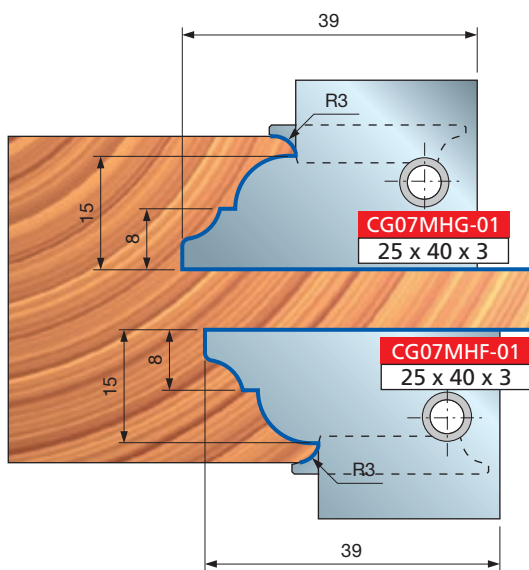


# ST12MG

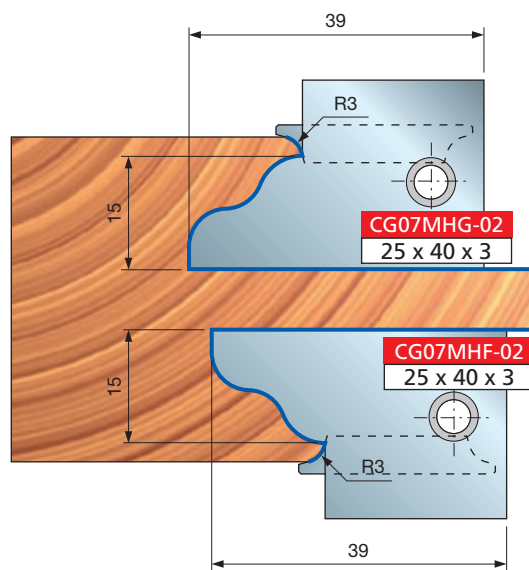
## PROFILI CON RAGGIATURA ESTERNA DA 3 mm PROFILES WITH 3 mm EXTERNAL ROUNDING

COLTELLI PER UTENSILI / KNIVES FOR CUTTERHEADS: **ST12M HG3**  
**ST12M HF3**

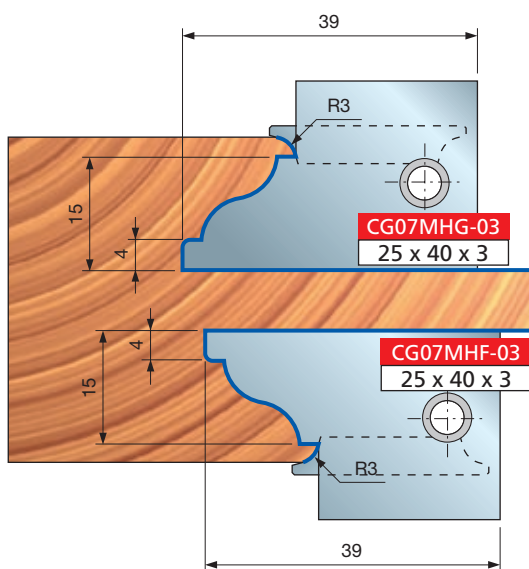
CONTROPROFILO / SCRIBE **1**



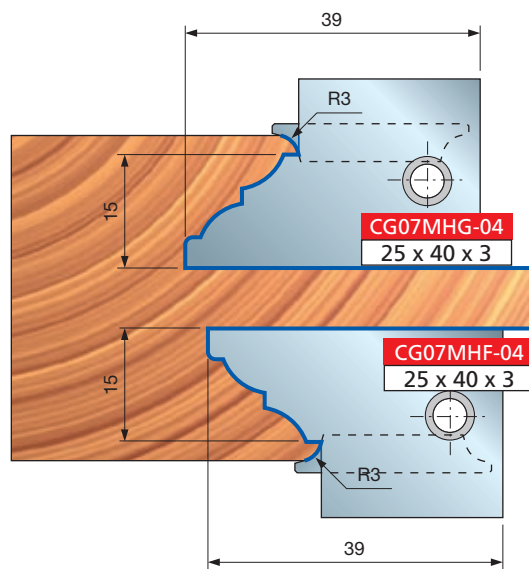
CONTROPROFILO / SCRIBE **2**



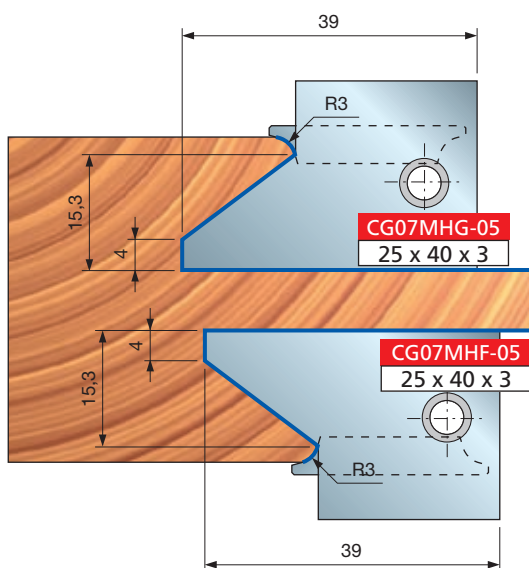
CONTROPROFILO / SCRIBE **3**



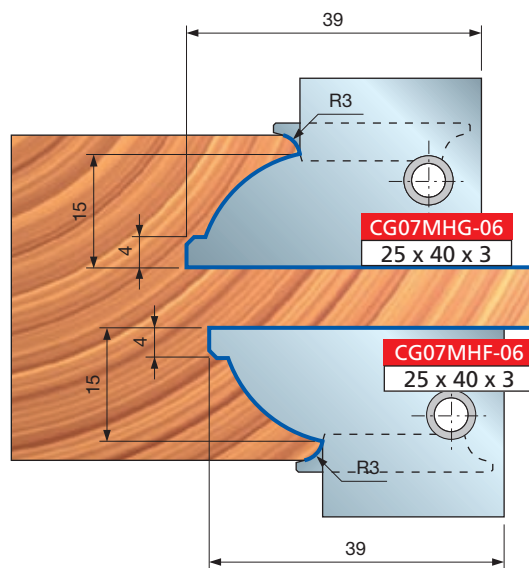
CONTROPROFILO / SCRIBE **4**



CONTROPROFILO / SCRIBE **5**



CONTROPROFILO / SCRIBE **6**



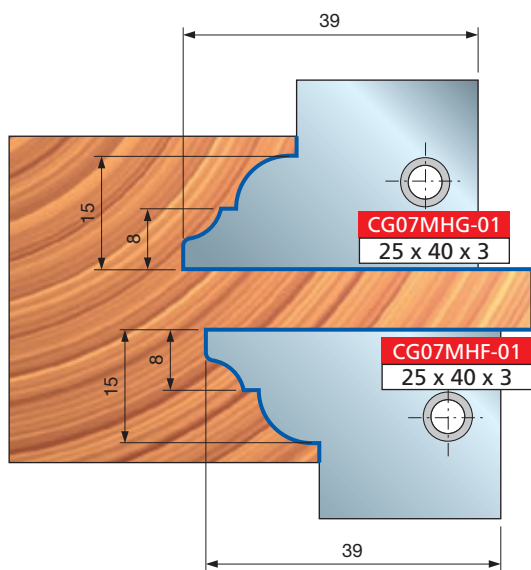
# ST12MG

## PROFILI SENZA RAGGIATURA ESTERNA PROFILES WITHOUT EXTERNAL ROUNDING

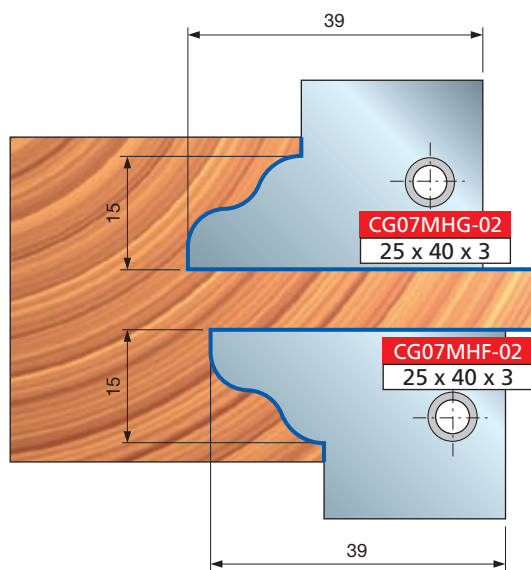
COLTELLI PER UTENSILI / KNIVES FOR CUTTERHEADS: **ST12M HG3**

**ST12M HF3**

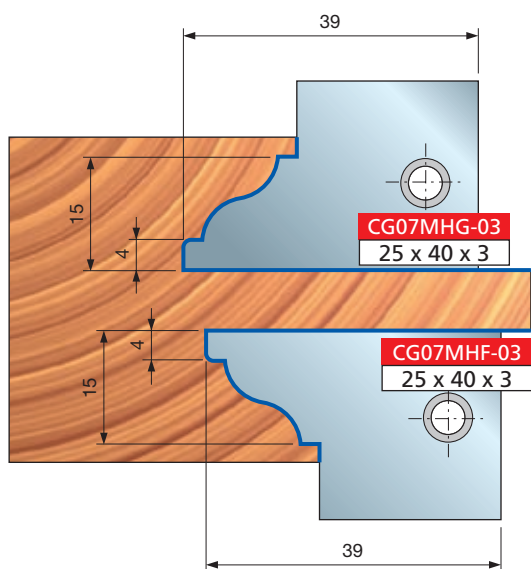
CONTROPROFILO / SCRIBE **11**



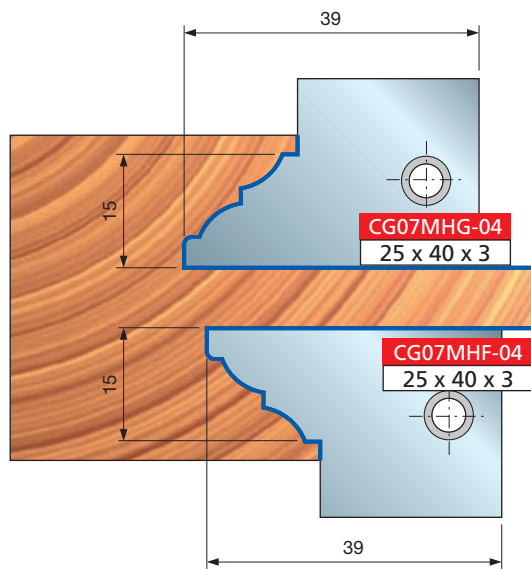
CONTROPROFILO / SCRIBE **12**



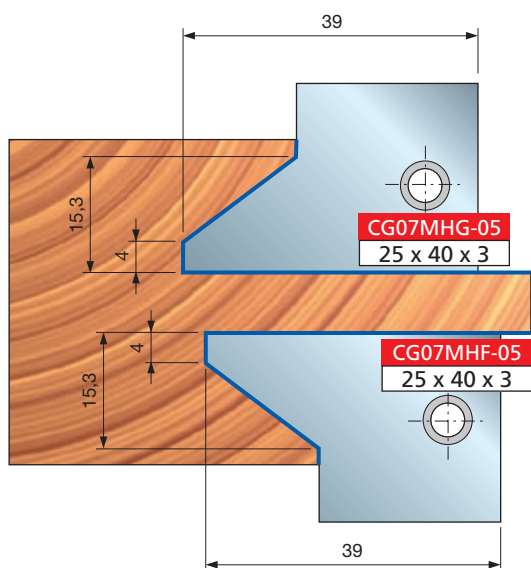
CONTROPROFILO / SCRIBE **13**



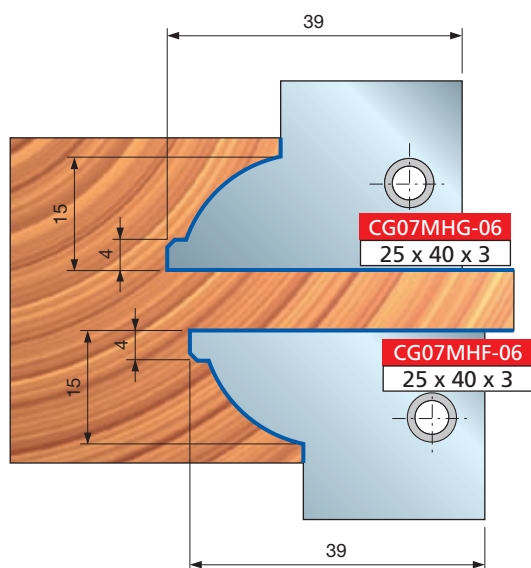
CONTROPROFILO / SCRIBE **14**



CONTROPROFILO / SCRIBE **15**



CONTROPROFILO / SCRIBE **16**



# ST12MG

## UTENSILI PER IMBOTTI TOOLS FOR DOOR INTRADOS



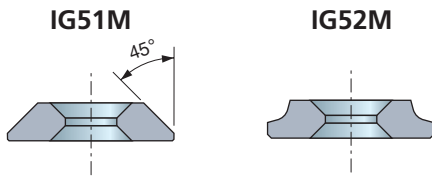
Utensili per gruppo: ST12MG-830  
Tools for ST12MG-830 set

D	B	d	Z	R	Codice
mm	mm	mm			Code
204	24	70	2	6	ST12M HI3

Parti di ricambio		Dimensioni	Codice
Spare parts		Dimensions	Code
Coltello / Knife		20 x 25 x 3	CG07MD HI3
Cuneo / Wedge		18 x 23 x 8,5	CN12MS BA9A
Vite / Screw		M10 x 18	VT03M CC9
Vite / Screw		M5 x 7 x 16	VT08M AE9
Inserto per incastri / Grooving insert		40 x 16 x 3	IG04MD AC3
Vite per: / Screw for: IG04MD		M6 x 14,5	VT16M AA9

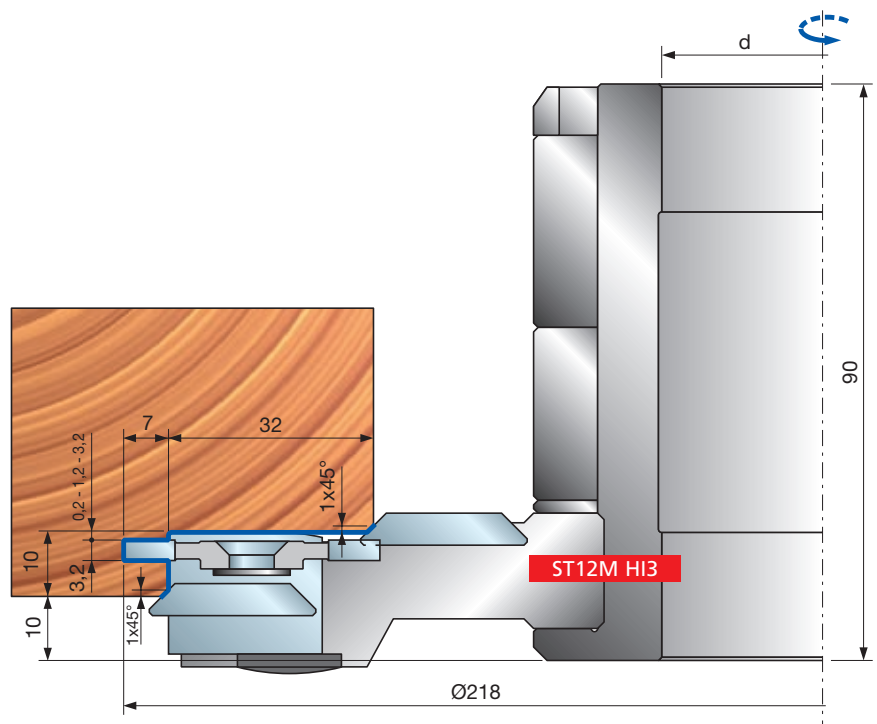
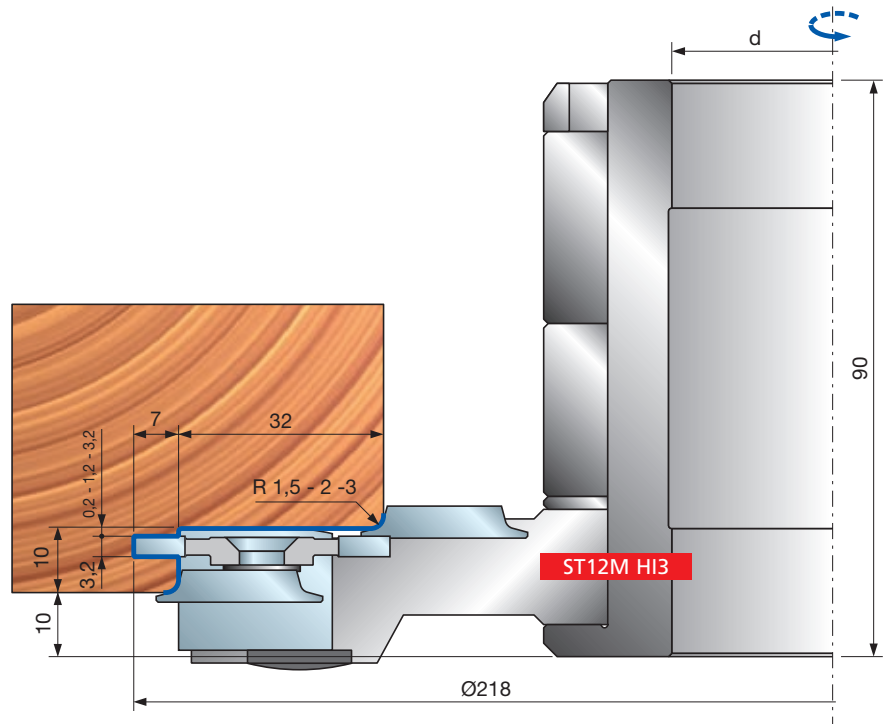
### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

- Con sedi per il montaggio di inserti IG51M (smussatori) e IG52M (R= 1,5 - 2 - 3 mm).
- With seat pockets for bevelling inserts IG51M or radius inserts IG52M (R= 1,5 - 2 - 3 mm).



- La bussola BF10MD va ordinata a parte.
- BF10MD sleeve is not included.

Dimensioni	Codice
Dimensions	bussola / sleeves
Ø70 x 90 x 50	BF10MD ED9
Ø70 x 90 x 40	BF10MD EC9
Ø70 x 90 x 35	BF10MD EB9



# ST12MG

## UTENSILI PER BATTUTE DI PORTE TOOLS FOR DOOR REBATES



**PERFORMANCE**  
Coltelli Riaffilabili  
**SYSTEM**  
Resharpenable Knives

- Le bussole BF10MD ed i coltelli per gli utensili HR3 vanno ordinati a parte.
- BF10MD sleeves and knives for cutterheads HR3 are not included.

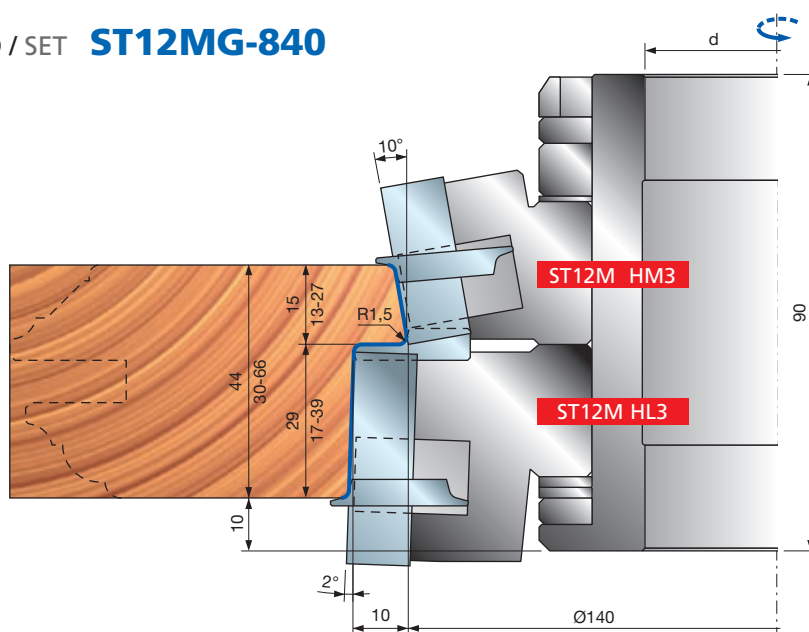
Dimensioni	Codice bussola
Dimensions	Sleeve code
Ø70 x 90 x 50	BF10MD ED9
Ø70 x 90 x 40	BF10MD EC9
Ø70 x 90 x 35	BF10MD EB9

Utensili per gruppi: ST12MG-840, ST12MG-841, ST12MG-842  
Tools for ST12MG-840, ST12MG-841, ST12MG-842 sets

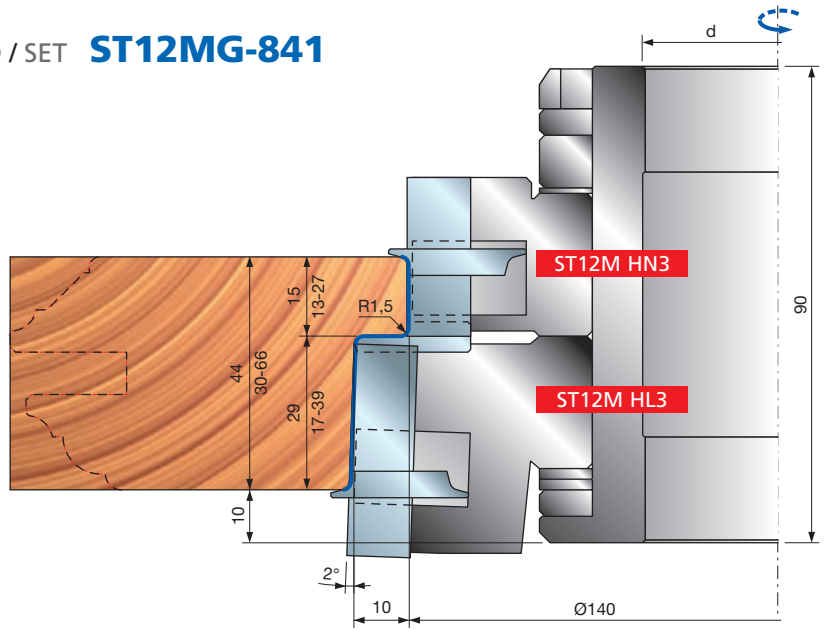
D	B	d	Z	R	Codice
mm	mm	mm			Code
161,8	41	70	2	4	ST12M HL3
147	33	70	2	2	ST12M HM3
140	30	70	2	2	ST12M HN3
166	35	70	2		ST12M HR3

	Parti di ricambio	Dimensioni	Codice
	Spare parts	Dimensions	Code
HL3	Coltello / Knife	40 x 12 x 1,5	CG01M LA3
	Cuneo / Wedge	15 x 36 x 8	CN09MD AR9
	Vite / Screw	M10 x 22	VT19M MA9
	Ogiva / Nut	15 x 13,3 x 10	VT20M NA9
	Rasante ragg. / Multipurpose insert	10	IG25MD 103
	Vite / Screw	M6 x 10	2622M CB9
	Vite / Screw	M6 x 13	VT16M AE9
	Supporto / Serrated support	14 x 21,5 x 22	CN03M BA9
	Cuneo / Wedge	28 x 9,5 x 8	CN03M BB9
Vite / Screw	M8 x 22	VT19M BB9	
HM3 - HN3	Coltello / Knife	30 x 12 x 1,5	CG01M EA3
	Cuneo / Wedge	15 x 26 x 8	CN09MD AD9
	Vite / Screw	M10 x 22	VT19M MA9
	Ogiva / Nut	15 x 13,3 x 10	VT20M NA9
	Insero raggatore / Rounding insert	22 x 16 x 5	IG52M AB3
	Vite / Screw	M6 x 13	VT16M AE9
	Supporto / Serrated support	14 x 21,5 x 22	CN03M BA9
	Cuneo / Wedge	28 x 9,5 x 8	CN03M BB9
	Vite / Screw	M8 x 22	VT19M BB9
HR3	Cuneo / Wedge	30,7 x 33 x 8	CN07M HR9
	Vite / Screw	M10 x 18	VT03M CC9
	Vite / Screw	M5 x 7 x 16	VT08M AE9

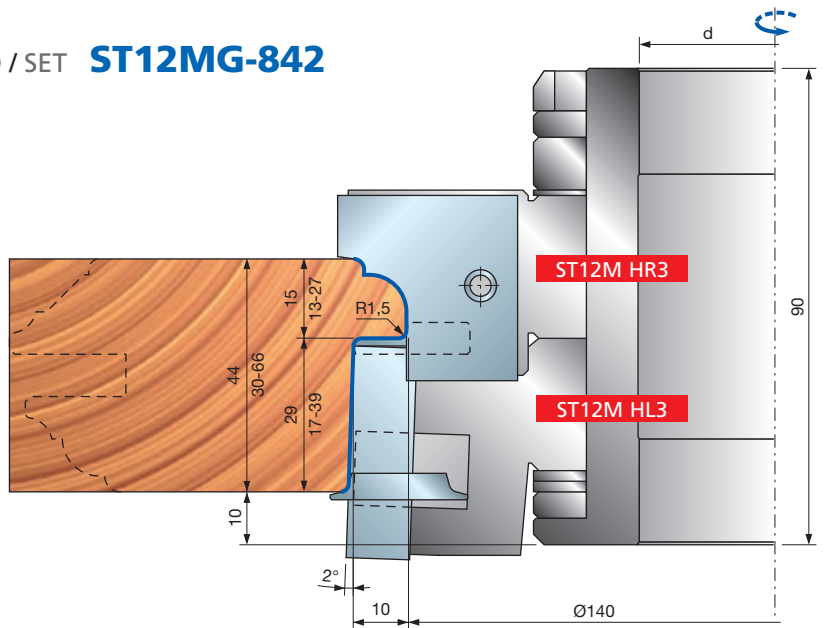
### GRUPPO / SET ST12MG-840



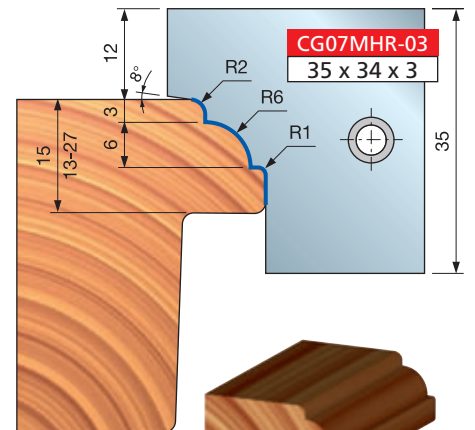
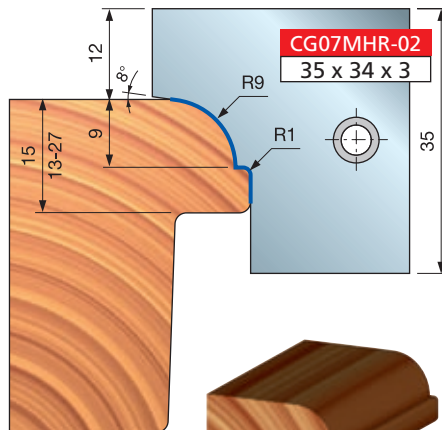
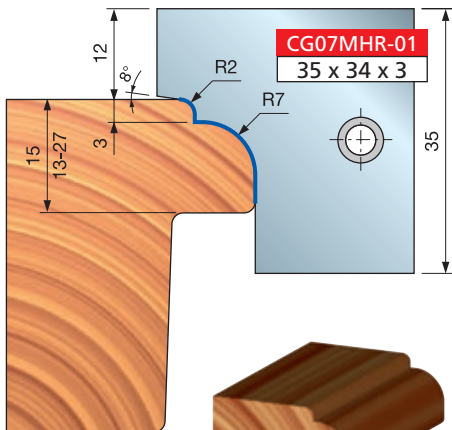
GRUPPO / SET **ST12MG-841**



GRUPPO / SET **ST12MG-842**



**COLTELLI PER UTENSILE ST12M HR3**  
**KNIVES FOR CUTTERHEAD ST12M HR3**



# ST12MG

## UTENSILI PER RECUPERO LISTELLO BEAD RECOVERY TOOLS SET



### Utensili per gruppi ST12MG-302 Tools for ST12MG-302

D	B	d	Z	R	I	Codice Code
144	13,5	60			4	ST12M CG3

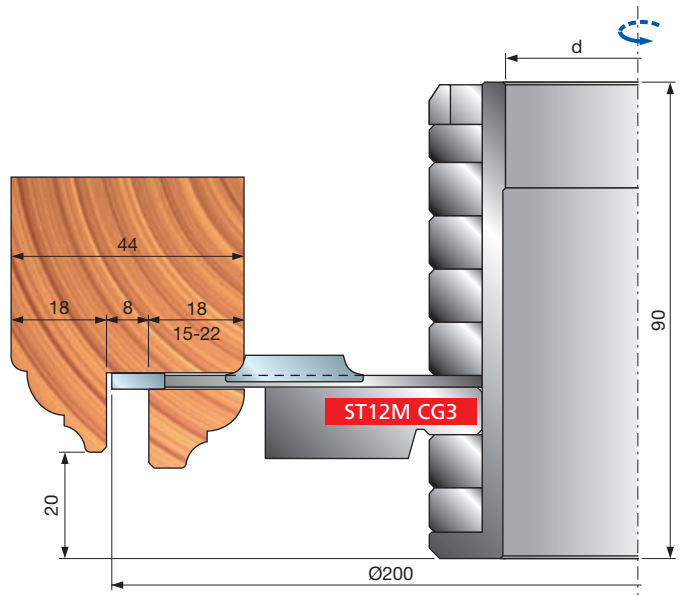
Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Lama / Sawblade	200 x 3 x 60 Z34	LL02M20060
Vite / Screw	M6 x 10	VT01M AA9
Insero raggiatore / Rounding insert	22 x 16 x 5	IG52M AE3
Vite / Screw	M6 x 14,5	VT16M AA9
Insero raggiatore / Rounding insert	18 x 26 x 8,5	IG23MD AE3
Vite / Screw	M6 x 15,5	VT16M AD9

- La bussola BF10MD non è inclusa.
- Sleeve BF10MD not included.

Dimensioni Dimensions	Codice bussola Sleeve code
Ø60 x 90 x 50	BF10MD DD9
Ø60 x 90 x 40	BF10MD DC9
Ø60 x 90 x 35	BF10MD DB9

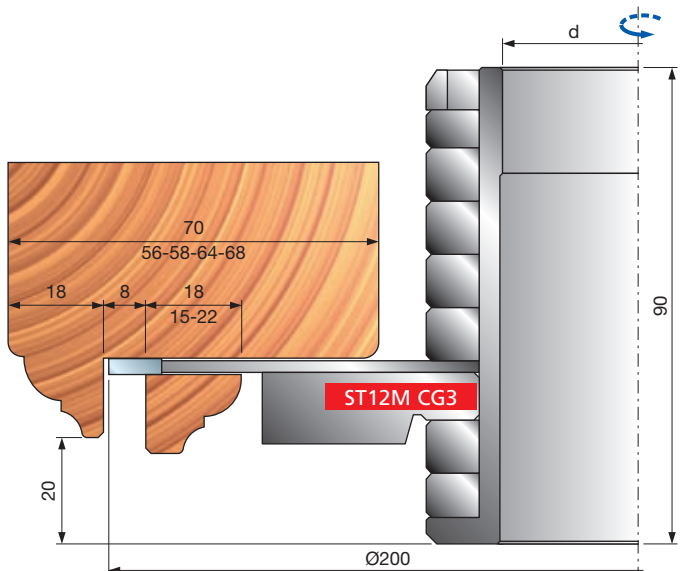
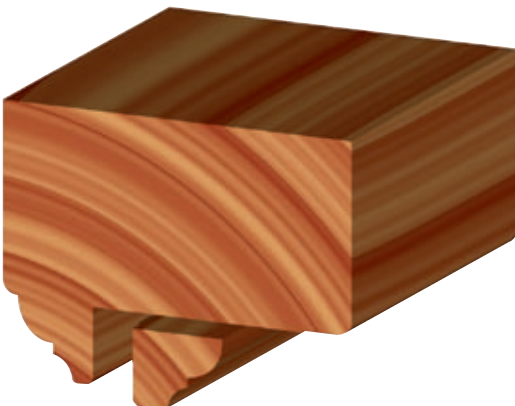
### GRUPPO / SET **ST12MG-302**

- Spessore 44 mm con raggiatore.
- 44 mm thickness with rounding insert.



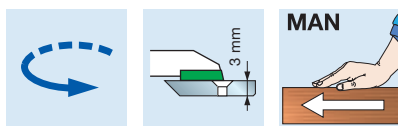
### GRUPPO / SET **ST12MG-302**

- Spessori 56-58-64-68-70 mm senza raggiatore.
- 56-58-64-68-70 thicknesses without rounding insert.



# TD60M

## TESTA PORTACOLTELLI PER PROFILI DI TELAI E MOSTRINE DI PORTE DOOR FRAME CUTTERHEAD



### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
**R&S - SV/R 147/146**

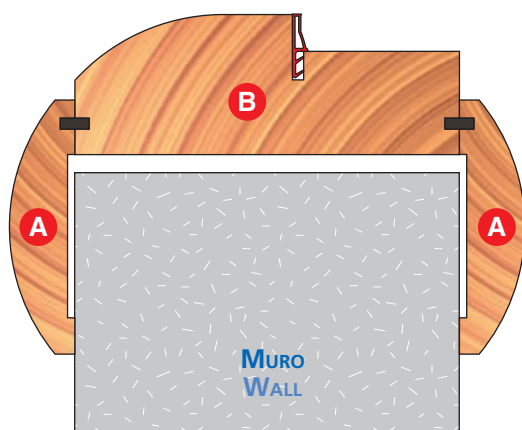
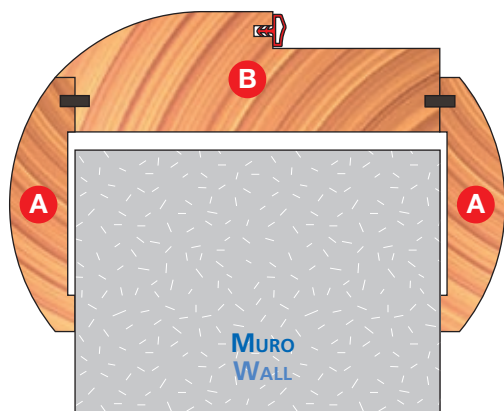
D	B	d*	Z	R	Codice Code
200	60	35 (40)	3		TD60M AB3

Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
Coltello / Knife	55 x 35 x 3	CT60M AA3
Cuneo / Wedge	50 x 23 x 8	CN60M AA9
Vite / Screw	M10 x 25	2602M FI9
Vite / Screw	M8 x 10 x 22	VT08M AD9
Chiave / Allen key	5 x 110	CB03M EA9

- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica. Piattabanda con coltelli sagomati per profili di telai e mostrine di porte. Da utilizzare su macchina toupie. Particolarmente adatta per lavorazioni di contornatura e profilatura su legni duri ed esotici, per l'esecuzione di telai di porte con profilo raggiato, con ottima finitura. La profilatura delle mostrine viene eseguita in doppia passata, senza modificare il posizionamento dell'utensile rispetto al piano di lavoro.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda. Panel sizing cutterhead with profiled knives suitable for door frames and door frame covers profiles. To be used on moulders. This tool is particularly suitable for moulding and profiling on hard and exotic wood, to produce door frames with rounded profile. Top quality finish. The profiling of the door frame covers is achieved with two passes and without altering the tool's position with respect to the working surface.

### ESEMPI DI TELAI REALIZZABILI

#### EXAMPLE OF DOOR FRAMES



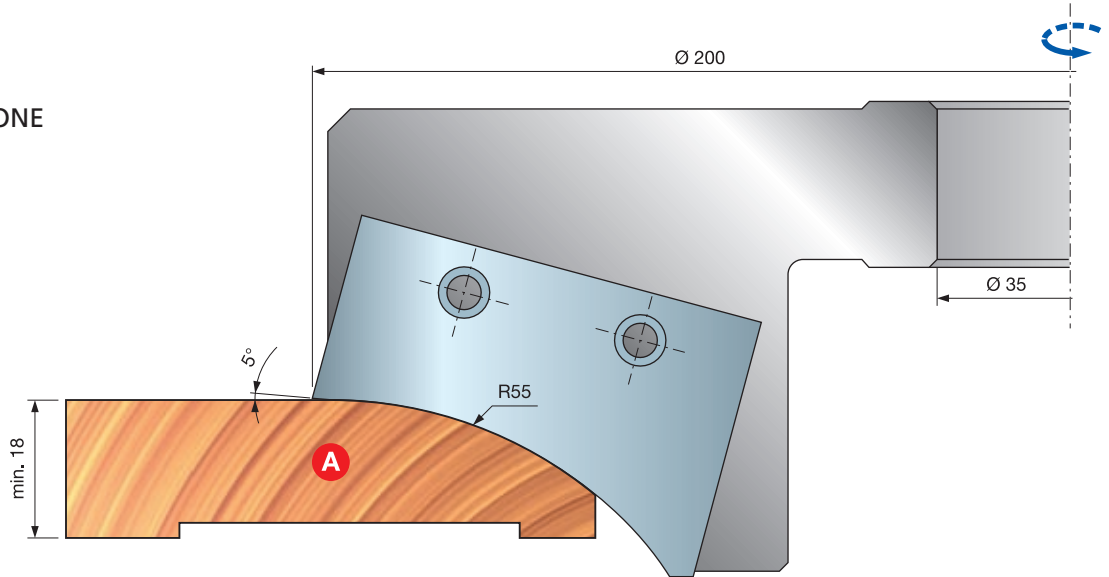


# ESEMPIO DI APPLICAZIONE

## APPLICATION EXAMPLE

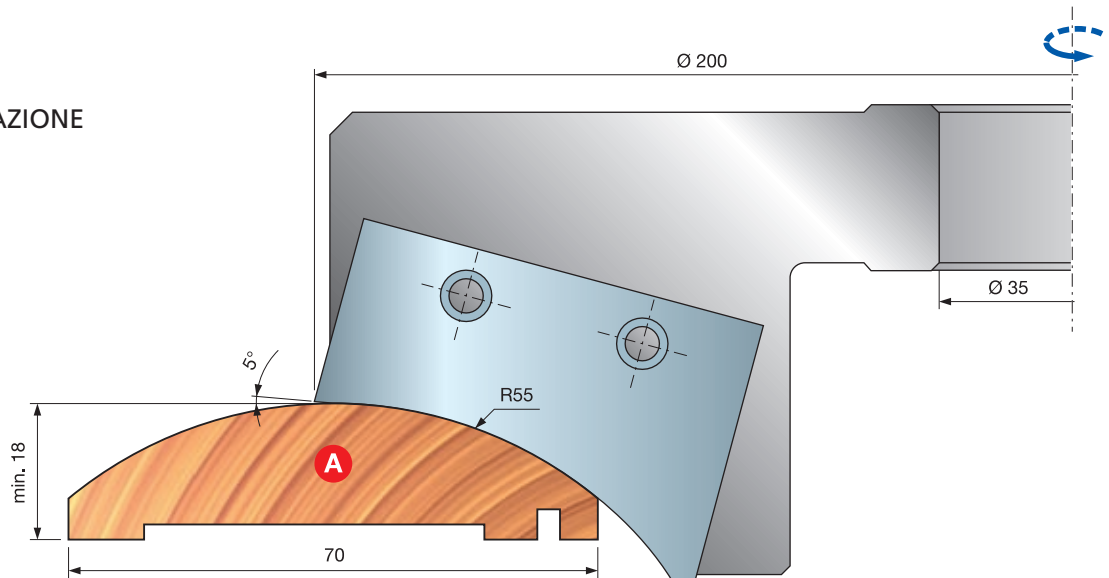
■ PRIMA LAVORAZIONE

■ FIRST STEP



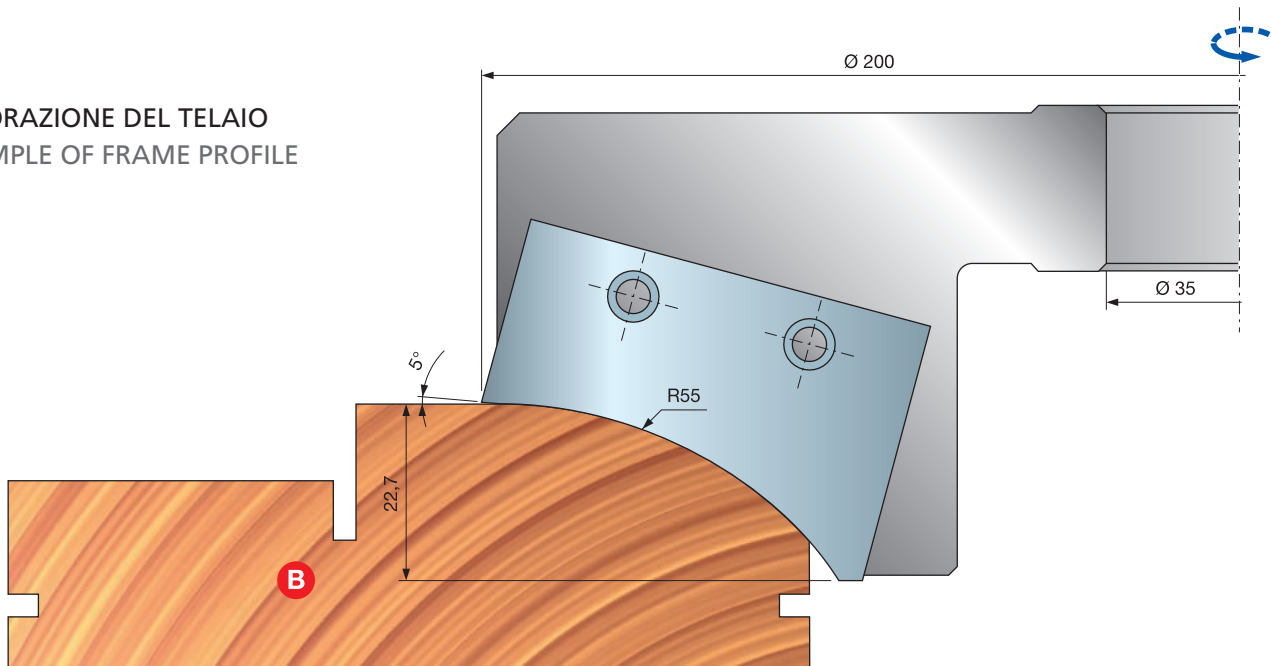
■ SECONDA LAVORAZIONE

■ SECOND STEP



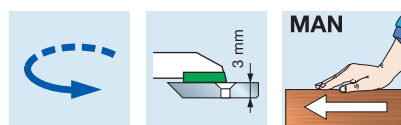
■ LAVORAZIONE DEL TELAIO

■ EXAMPLE OF FRAME PROFILE



# TD61M

## TESTE PORTACOLTELLI PER PROFILI DI TELAI DI PORTE CUTTERHEADS FOR DOOR FRAME PROFILES

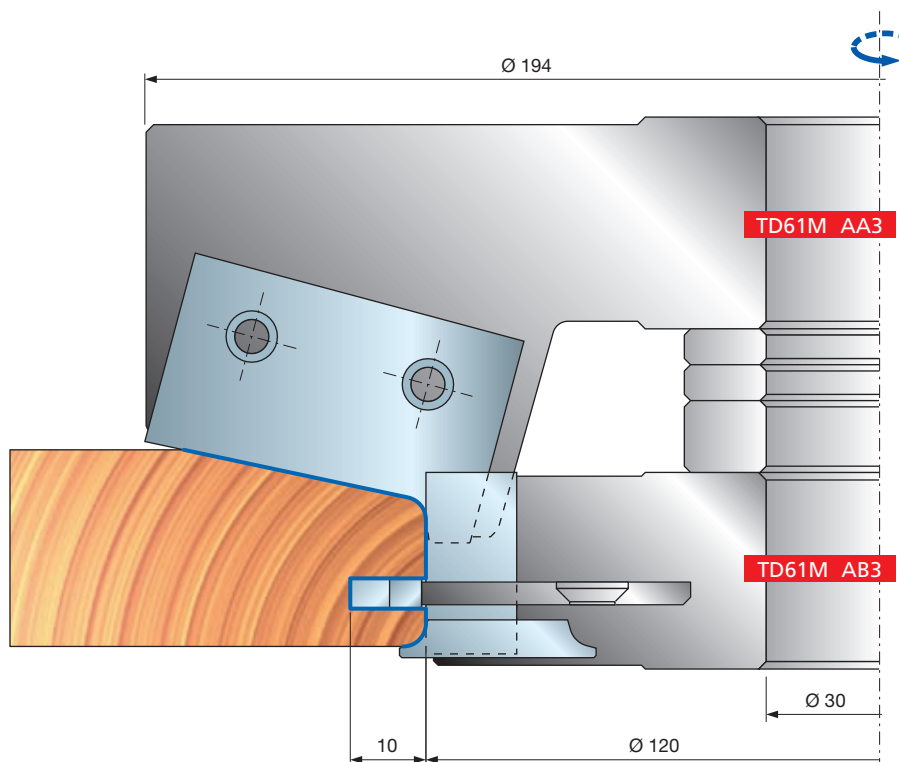


**PERFORMANCE**  
Coltelli Riaffilabili  
**SYSTEM**  
Resharpenable Knives

D	B	d*	Z	R	Codice Code
194	59	30 (40)	2		TD61M AA3
140	25	30 (40)	2	4	TD61M AB3

	Parti di ricambio Spare parts		Dimensioni Dimensions	Codice Code
AA3	Vite / Screw		M10 x 18	VT03M CC9
	Cuneo / Wedge		43 x 28 x 8,5	CN12M CF9A
	Vite / Screw		M8 x 10 x 22	VT08M AD9
AB3	Coltello / Knife		24 x 12 x 1,5	CG01M OA3
	Cuneo / Wedge		15 x 20 x 8	CN09MD AK9
	Ogiva / Nut		15 x 13,3 x 10	VT20M MA9
	Vite / Screw		M10 x 22	VT19M MA9
	Settore / Sector		25 x 45 x 4 Z1	SR11MD BC3
	Vite / Screw		M5 x 8	VT05M AA9
	Inserto raggiatore / Rounding insert		26 x 16 x 5 R3	IG62MS AE3
	Vite per: / Screw for: IG62MS		M6 x 14,5	VT16M AA9






- Corpo in lega leggera (Ergal).  
Per la pulizia non utilizzare prodotti contenenti soda caustica.  
L'ARTICOLO TD61M AA3 VIENE FORNITO SENZA COLTELLI.
- Light alloy body (Ergal).  
For cleaning do not use products containing caustic soda.  
CUTTERHEAD TD61M AA3 IS SUPPLIED WITHOUT KNIVES.

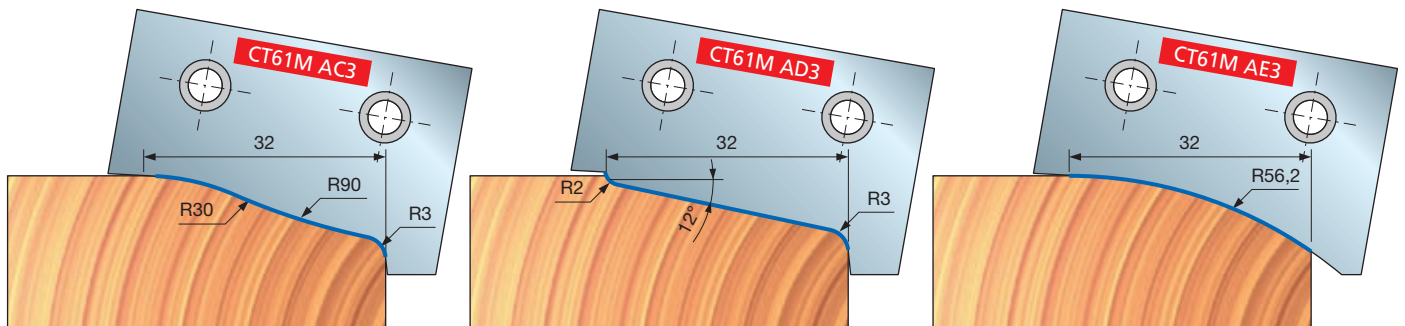
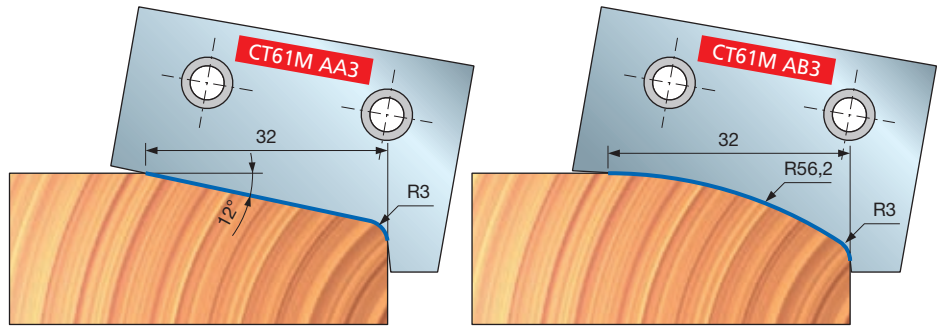


## PROFILI REALIZZABILI CON L'UTENSILE TD61M AA3

### PROFILES OBTAINABLE WITH THE CUTTERHEAD TD61M AA3

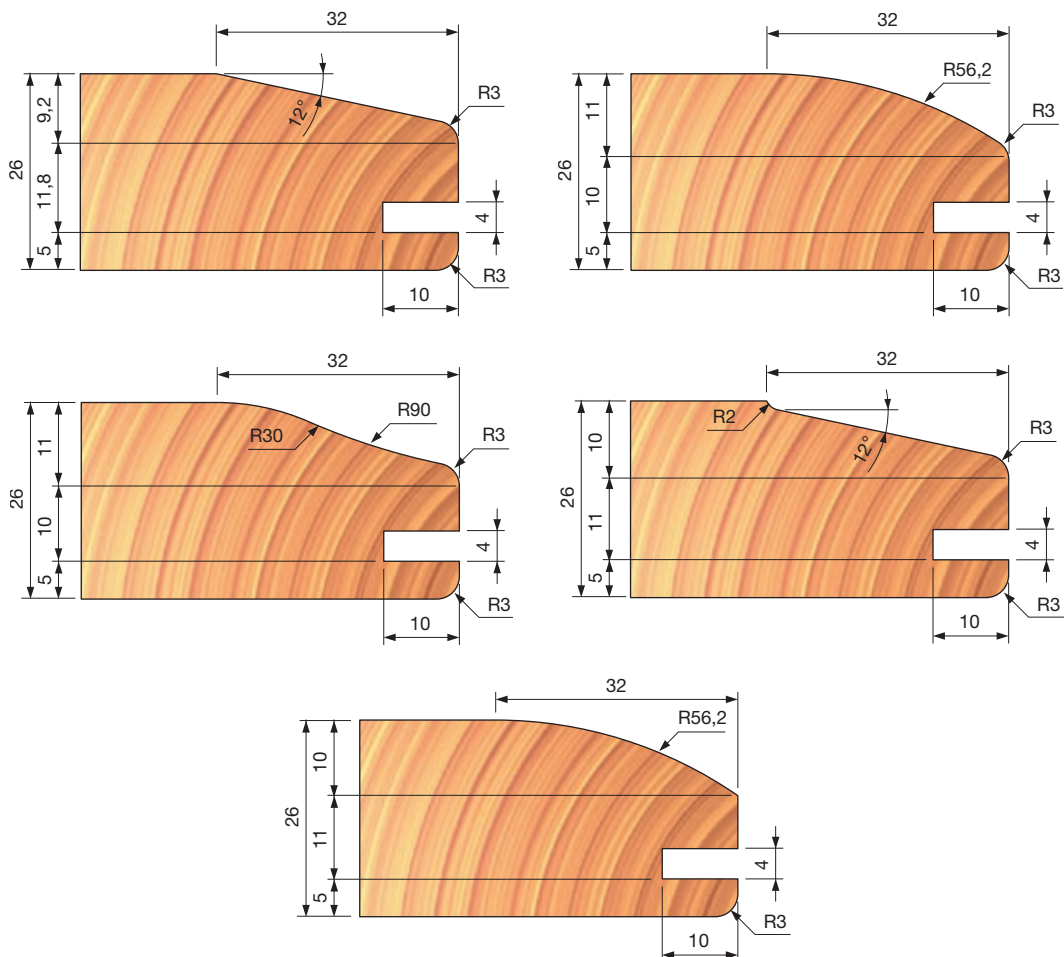
**Coltelli per TD61M AA3**  
Knives for cutterhead TD61M AA3

Dimensioni	Coltelli di ricambio
Dimensions	Spare knives
 45 x 30 x 3	CT61M AA3
 45 x 30 x 3	CT61M AB3
 45 x 30 x 3	CT61M AC3
 45 x 30 x 3	CT61M AD3
 45 x 30 x 3	CT61M AE3



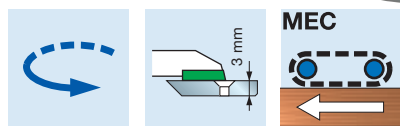
## PROFILI REALIZZABILI UTILIZZANDO GLI UTENSILI TD61M AA3 E TD61M AB3

### PROFILES OBTAINABLE USING BOTH THE CUTTERHEADS TD61M AA3 AND TD61M AB3



# TP43M

## GRUPPI PER SCURETTI A DOGHE VERTICALI SETS FOR VERTICAL SLAT SHUTTERS



**PERFORMANCE**  
Coltelli Riaffilabili  
**SYSTEM**  
Resharpenable Knives

D	B	d	Z	R	Codice
mm	mm	mm			Code
125		50	2+2		TP43M MD3
125		50	2+2		TP43M FD3

Utensile	Parti di ricambio	Dimensioni	Codice	
Tool	Spare parts	Dimensions	Code	
MD3	1	Coltello / Knife	34 x 24 x 3	CP43M 1MD3
	2	Coltello / Knife	34 x 24 x 3	CP43M 2MD3
	1	Cuneo / Wedge	30,7 x 23 X 8	CN13M AV9
	2	Cuneo / Wedge	30,7 x 23 X 8	CN13M AW9
FD3	1	Coltello / Knife	35 x 29 x 3	CP43M 1FD3
	2	Coltello / Knife	35 x 29 x 3	CP43M 2FD3
	1	Cuneo / Wedge	30,7 x 28 X 8	CN13M AT9
	2	Cuneo / Wedge	30,7 x 28 X 8	CN13M AU9
	Vite / Screw	M10 x 18	VT03M CC9	
	Vite / Screw	M5 x 7 x 16	VT08M AE9	

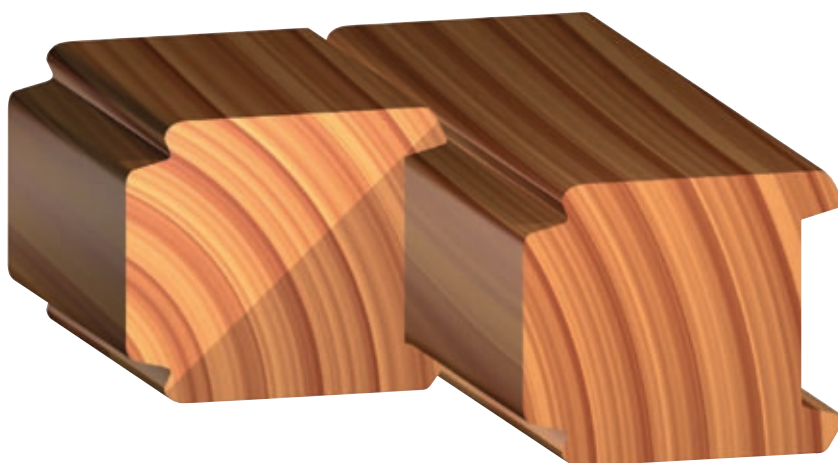
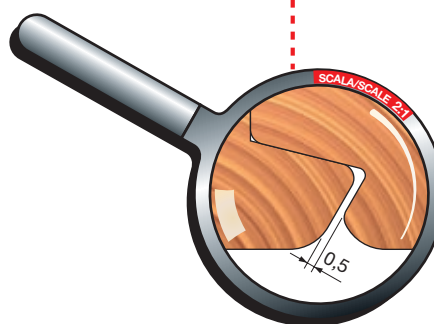
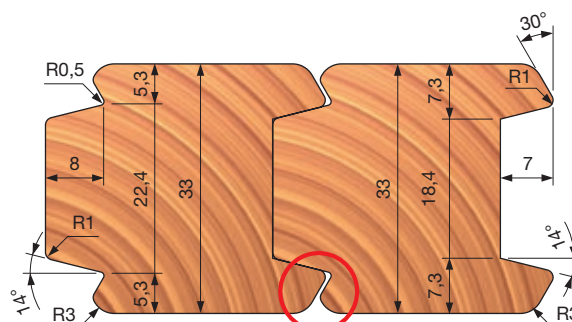
- Le bussole devono essere ordinate a parte.  
**N.B.:** I gruppi si possono ordinare anche con rotazione oraria con la bussola cod. BF10MS.
- Sleeves must be ordered separately.  
**Please Note:** The sets can be ordered with clockwise rotation with BF10MS sleeve.

### Bussole con rotazione destra Right-hand sleeves

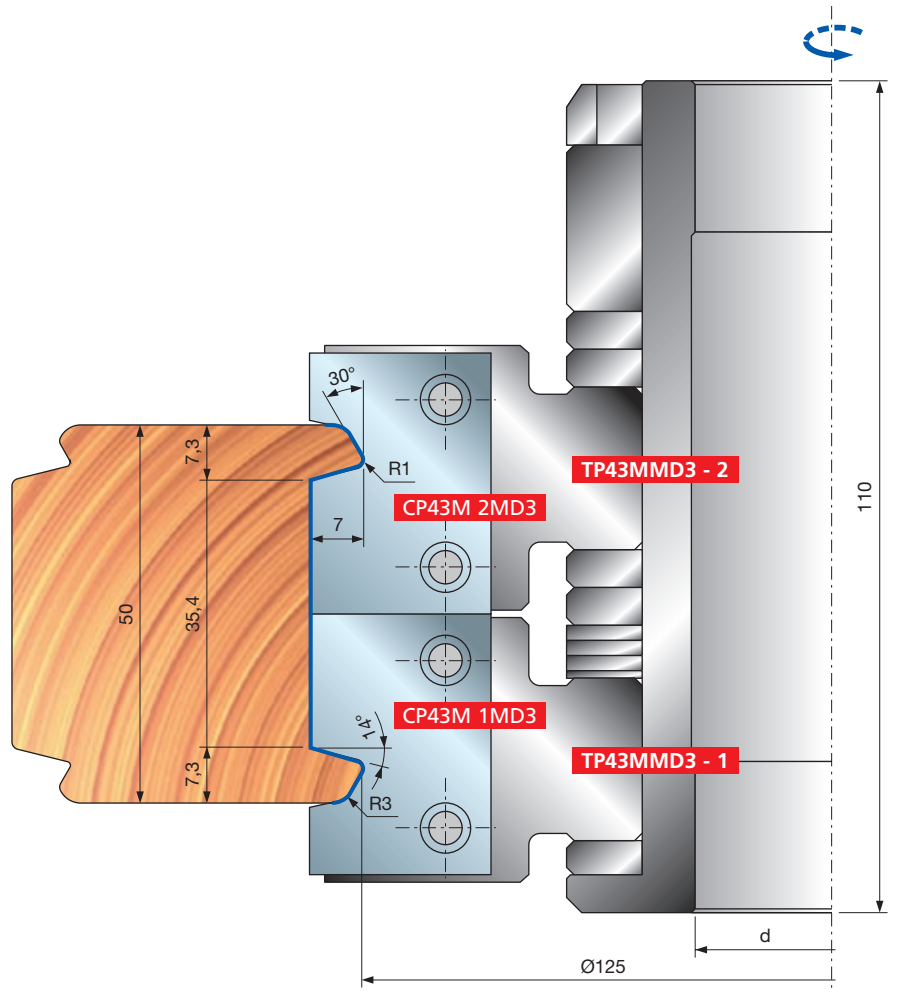
Dimensioni	Codice bussola
Dimensions	Sleeve code
Ø50 x 110 x 30	BF10MD AA9
Ø50 x 110 x 35	BF10MD AB9
Ø50 x 110 x 40	BF10MD AC9

### Bussole con rotazione sinistra Left-hand sleeves

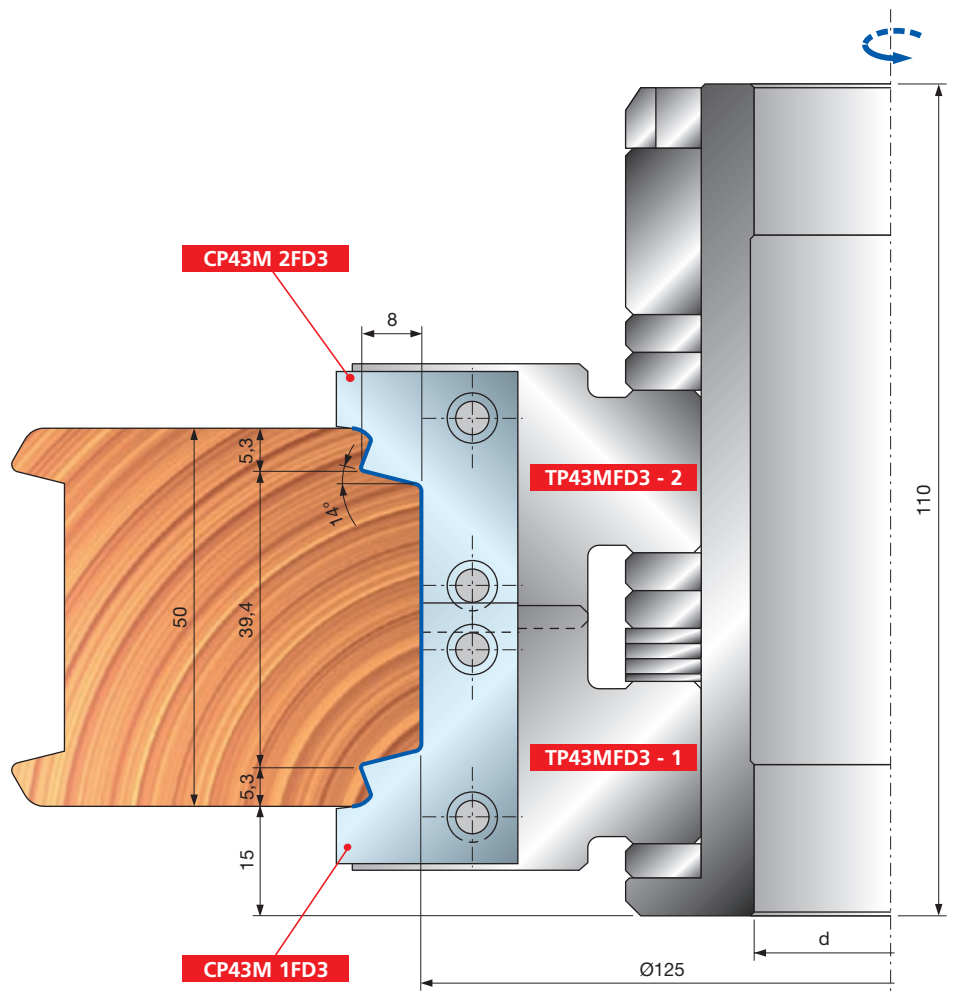
Dimensioni	Codice bussola
Dimensions	Sleeve code
Ø50 x 110 x 30	BF10MS AA9
Ø50 x 110 x 35	BF10MS AB9
Ø50 x 110 x 40	BF10MS AC9



GRUPPO / SET  
**TP43M MD3**

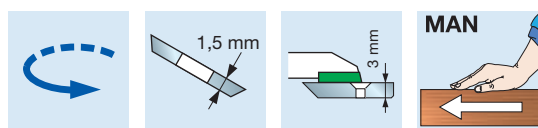


GRUPPO / SET  
**TP43M FD3**



# TP45M

## SET DI TESTE PORTACOLTELLI PER ALZANTI-SCORREVOLI CUTTERHEADS SET FOR LIFTING-SLIDING DOORS



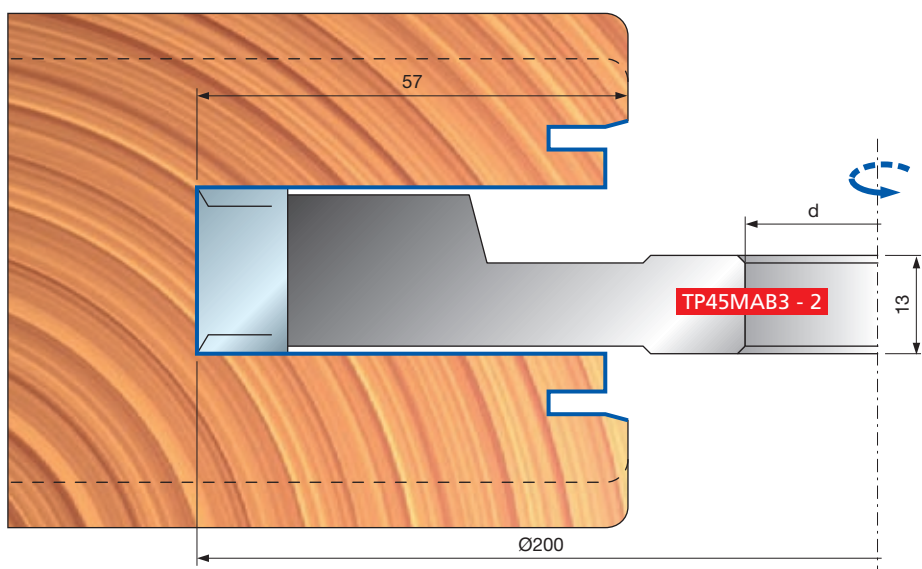
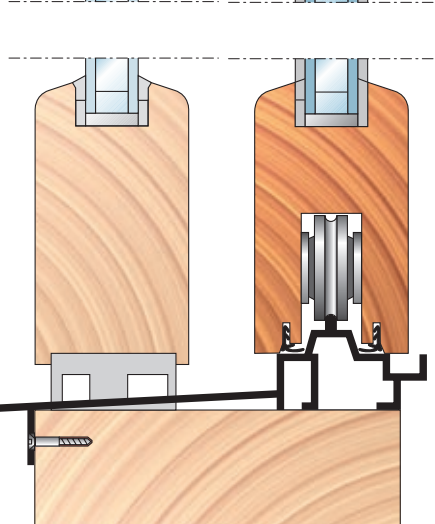
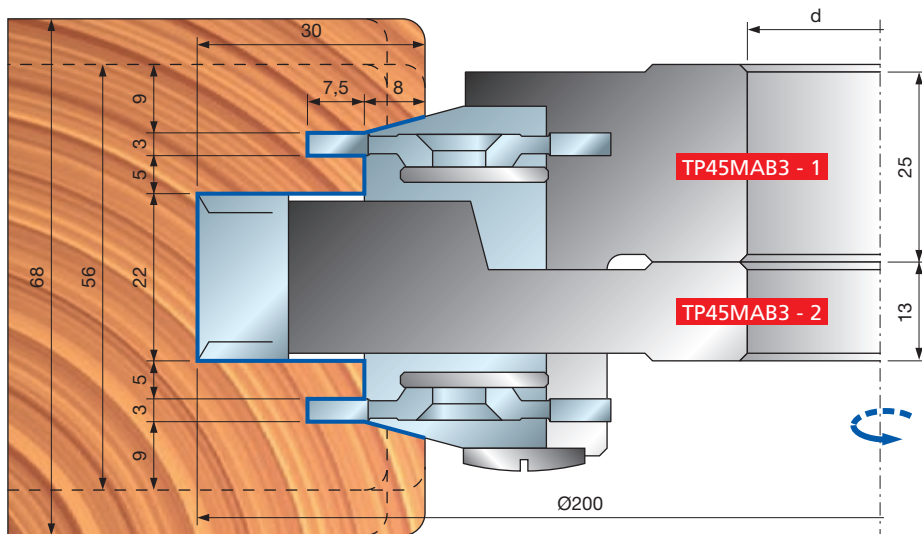
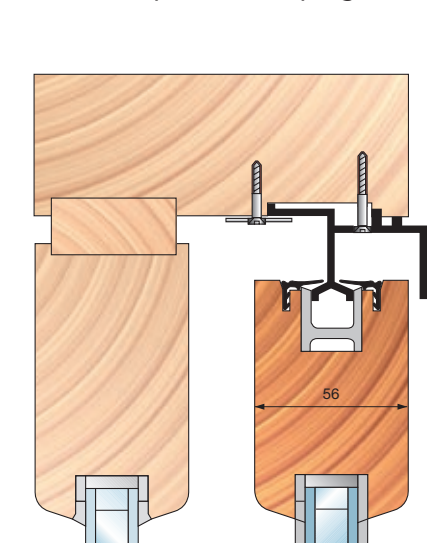
**PERFORMANCE**  
**Coltelli Riaffilabili**  
**SYSTEM**  
**Resharpenable Knives**

■ Per la realizzazione di porte con peso complessivo max. 250 Kg, con l'applicazione della ferramenta tipo MAICO HS25, AGB o G.U. L'articolo comprende anche l'anello sp. 25 mm di programmazione sulla base.

■ For doors with maximum weight of 250 Kg using hardware HS25 from MAICO, AGB or G.U. This item is supplied with 25 mm thick ring for base programming.

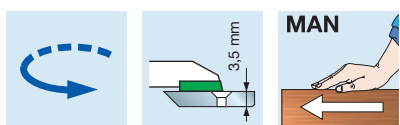
D	B	d*	Z	R	I	Codice
mm	mm	mm				Code
200	45	35 (50)	2+2	2	4	TP45M AB3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Coltello / Knife	45 x 25 x 3	CP45M AA3
Vite / Screw	M5 x 16 x 7	VT08M AE9
Cuneo / Wedge	41 x 17 x 8	CN11M B410
Vite / Screw	M10 x 18	VT03M CC9
Insero per incastri / Grooving insert	40 x 16 x 3	IG04MD AC3
Insero per incastri / Grooving insert	40 x 16 x 3	IG04MS AC3
Vite / Screw	M6 x 14,5	VT16M AA9
Coltello / Knife	21,6 x 12 x 1,5	CG06M TA3
Cuneo / Wedge	15 x 20 x 8	CN09M AK9
Ogiva / Nut	15 x 13,3 x 10	VT20M MA9
Vite / Screw	M10 x 22	VT19M MA9
Rasante / Spur	22,86 x 2,5	RG02M AA3
Vite / Screw	M5 x 8	VT05M AA9
Chiave / Allen key	4 x 110	CB03M BA9
Chiave / Allen key	5 x 110	CB03M EA9



# TD21M

## PIATTABANDA MULTIPROFILO RAISED PANEL CUTTERHEAD SET

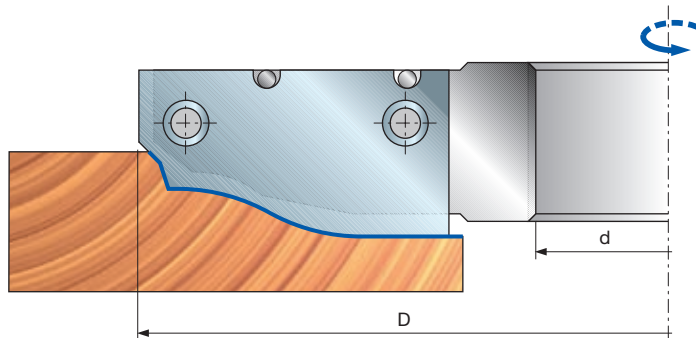
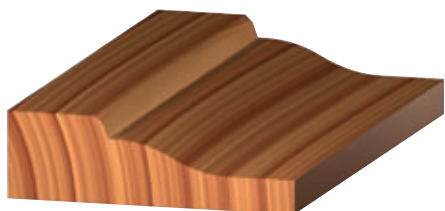


■ Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.

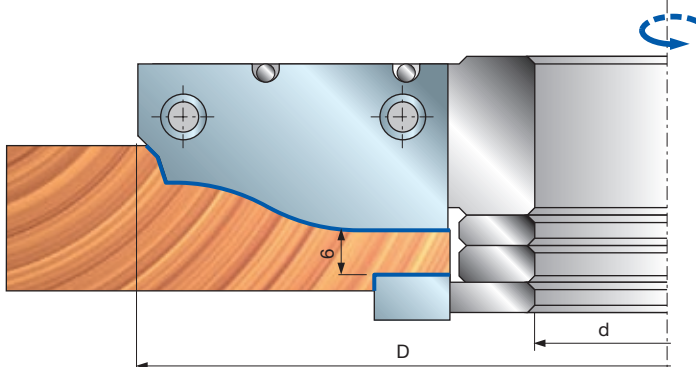
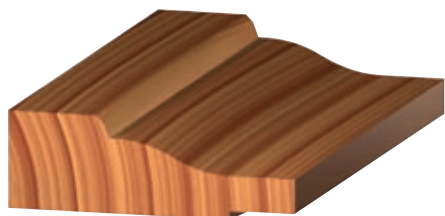
Esecuzione di tipo economico che permette di usare i differenti profili rappresentati in queste pagine.

L'ARTICOLO VIENE FORNITO CON COLTELLI E FRESE SUPPLEMENTARI.

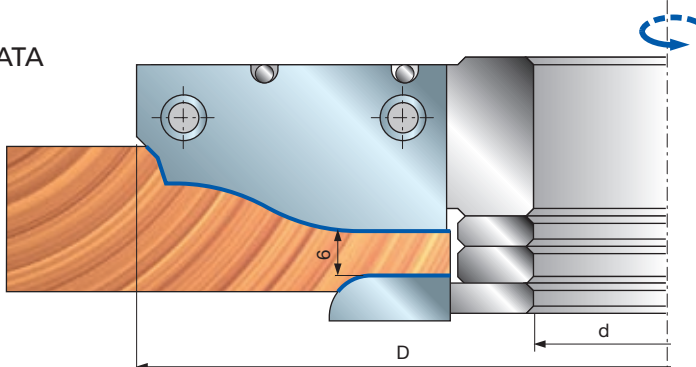
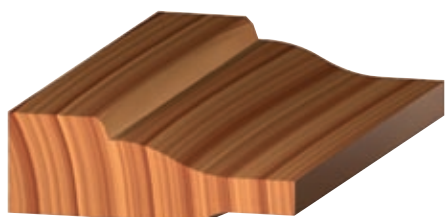
LAVORAZIONE CON PIATTABANDA  
WORKING WITH RAISED PANEL CUTTERHEAD








LAVORAZIONE CON FRESA SUPPLEMENTARE DIRITTA  
WORKING WITH OPTIONAL STRAIGHT CUTTER








LAVORAZIONE CON FRESA SUPPLEMENTARE SAGOMATA  
WORKING WITH OPTIONAL ROUNDED CUTTER



D	B	d	Z	R	Codice
mm	mm	mm			Code
140	21	35	2		TD21M GB3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Rondella / Ring	 14 x 2 x 6	VT18M AL9
Piastra riscontro / Positioning plate	 33 x 3 x 16	VT18M AI9
Vite / Screw	 M6 x 12	2622M CC9
Vite / Screw	 M6 x 10	2622M CB9
Chiave / Allen key	 4 x 110	CB03M BA9

Coltelli di ricambio	Dimensioni	Codice
Spare knives	Dimensions	Code
1	 41 x 22 x 3,5	CT21M AA3
2	 41 x 22 x 3,5	CT21M BA3
3	 41 x 22 x 3,5	CT21M CA3
4	 41 x 22 x 3,5	CT21M DA3
5	 41 x 22 x 3,5	CT21M EA3

■ Light alloy body (Ergal). For cleaning do not use products containing caustic soda.

This item is supplied with knives and optional cutters. Cost saving: 5 different raised panels can be produced with this cutter at a fraction of the cost of individual tools.

THIS ITEM IS SUPPLIED WITH KNIVES AND OPTIONAL CUTTERS.

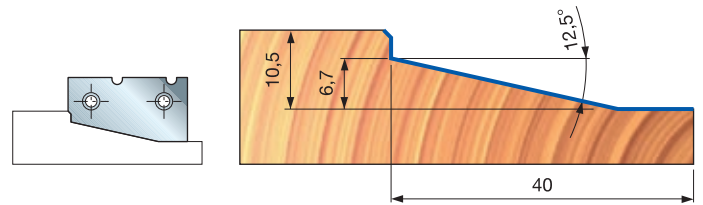
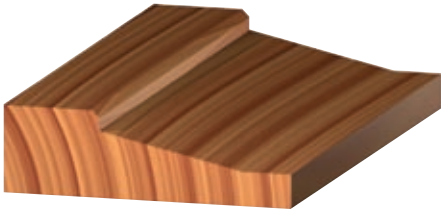
# ESEMPI DI PROFILI REALIZZABILI

## EXAMPLE OF PROFILES

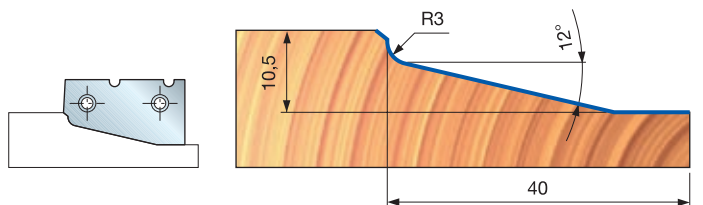
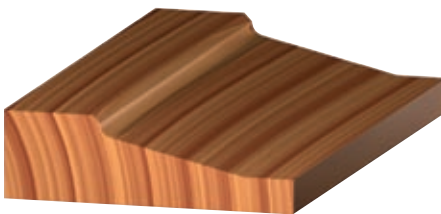
Utensili collaudati secondo la Normativa  
Tools tested according to the Norm  
• **EN 847-1** •  
**R&S - SV/R 158/157**

**PERFORMANCE**  
**Coltelli Riaffilabili**  
**SYSTEM**  
**Resharpener Knives**

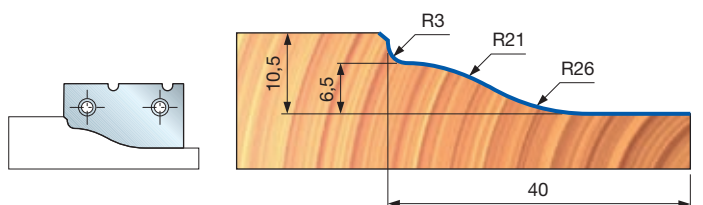
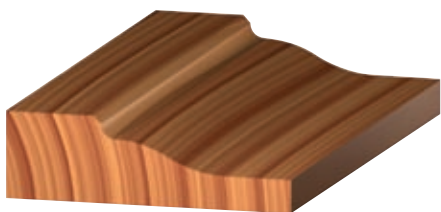
PROFILO / PROFILE **1**



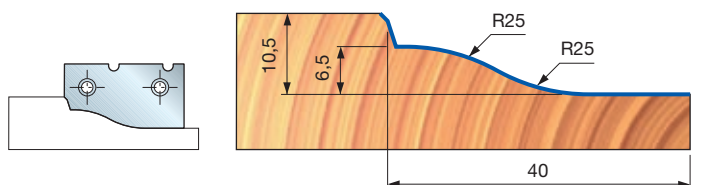
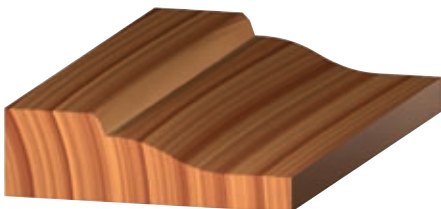
PROFILO / PROFILE **2**



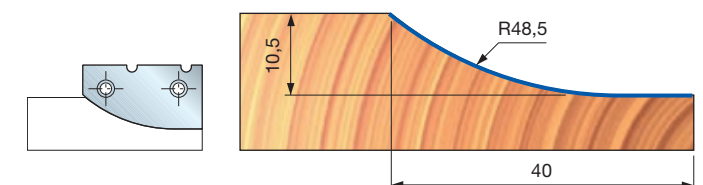
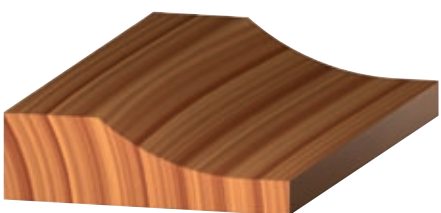
PROFILO / PROFILE **3**



PROFILO / PROFILE **4**



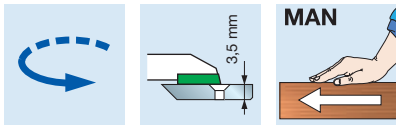
PROFILO / PROFILE **5**





# TD51M

## PIATTABANDE MULTIPROFILO PER LEGNO TENERO E DURO RAISED PANEL CUTTERHEADS FOR SOFT AND HARD WOOD



### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
**R&S - SV/R 159/158**

#### CARATTERISTICHE:




L'utensile è concepito per poter lavorare con 2 taglianti su legno tenero oppure con gli altri 2 taglianti su legno duro, con perfetta finitura, sia di testa che lungovena. Questo risultato si è potuto ottenere grazie alla scelta di diversi angoli di taglio sulle sedi per coltello.

Si possono montare solo 2 coltelli alla volta e vanno montati diametralmente opposti. Le dimensioni dei coltelli per il legno duro sono diverse da quelle per legno tenero, però realizzano lo stesso profilo.

#### FEATURES:

This tool is designed to perfectly cut softwood or hardwood with two knives, with both along the grain or end grain feeding. This result has been achieved by choosing different cutting angles according to the type of wood to be machined. Only two knives are to be fitted on the tool at one time, in opposite direction. The dimensions of the knives for cutting hardwood and softwood are different but the same profile is achieved.



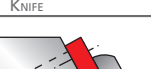


D	B	d*	Z	R	Codice
mm	mm	mm			Code
180	22	30 (50)	2+2		TD51M AA3
180	22	35 (50)	2+2		TD51M AB3
180	21	50	2+2		TD51M AD3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Rondella / Ring 	14 x 2 x 6	VT18M AL9
Vite / Screw 	M6 x 12	2622M CC9
Chiave / Allen key 	4 x 130	CB03M BB9

■ Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.  
L'ARTICOLO VIENE FORNITO SENZA COLTELLI.



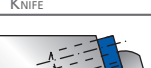


■ Light alloy body (Ergal). For cleaning do not use products containing caustic soda.  
THIS ITEM IS SUPPLIED WITHOUT KNIVES.

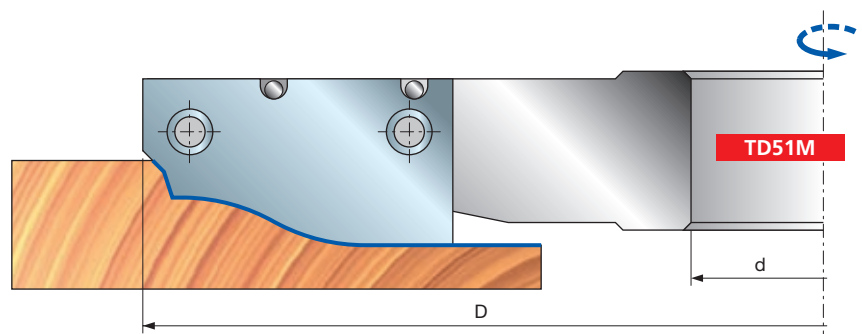
### 2 Coltelli per Legno Tenero 2 Knives for Softwood

Coltelli di ricambio	Dimensioni	Codice
Spare knives	Dimensions	Code
 1	41 x 28 x 3,5	CT51M AA3
 2	41 x 28 x 3,5	CT51M BA3
 3	41 x 28 x 3,5	CT51M CA3
 4	41 x 28 x 3,5	CT51M DA3
 5	41 x 28 x 3,5	CT51M EA3



### 2 Coltelli per Legno Duro 2 Knives for Hardwood

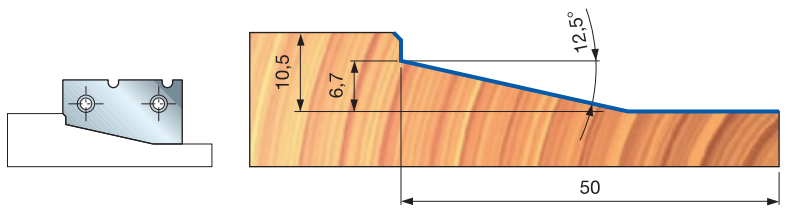
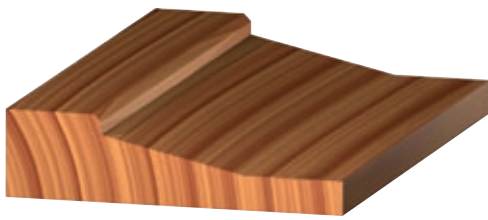
Coltelli di ricambio	Dimensioni	Codice
Spare knives	Dimensions	Code
 1	41 x 22 x 3,5	CT21M AA3
 2	41 x 22 x 3,5	CT21M BA3
 3	41 x 22 x 3,5	CT21M CA3
 4	41 x 22 x 3,5	CT21M DA3
 5	41 x 22 x 3,5	CT21M EA3



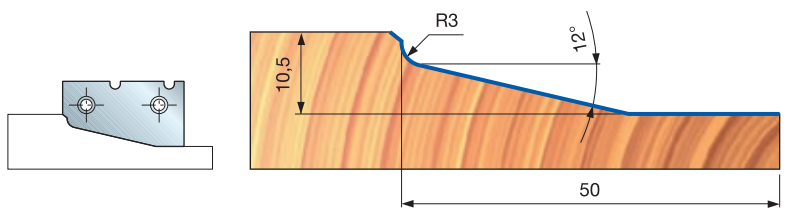
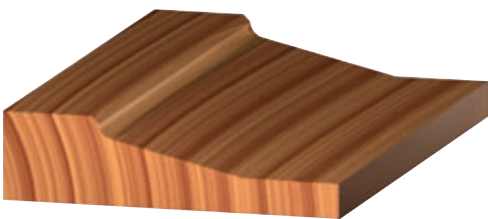
# ESEMPI DI PROFILI REALIZZABILI

## EXAMPLE OF PROFILES

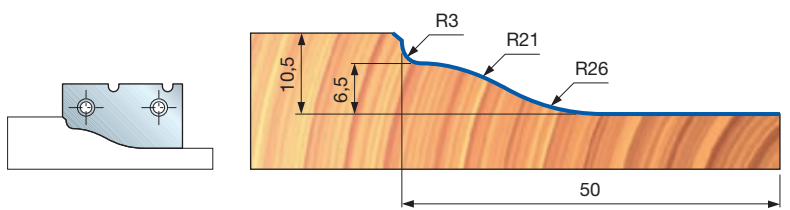
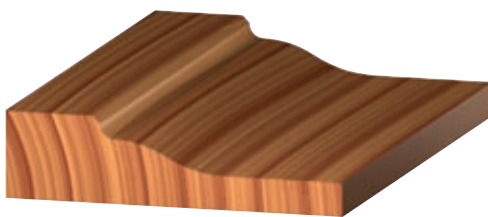
PROFILO / PROFILE 1



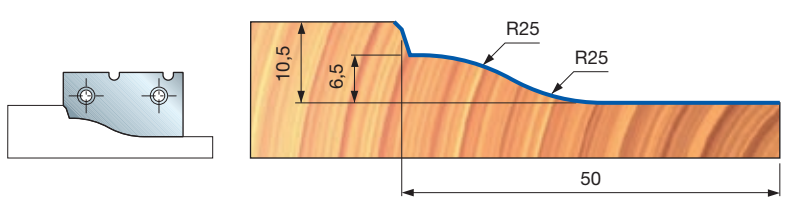
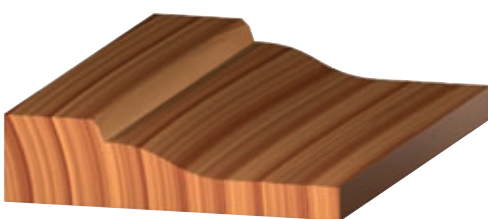
PROFILO / PROFILE 2



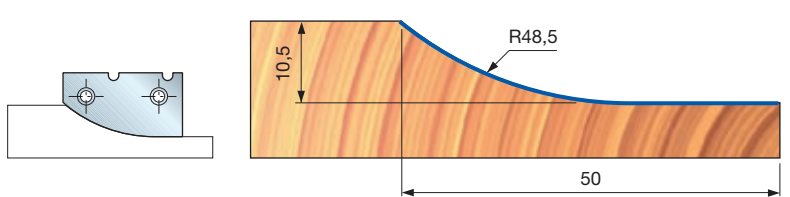
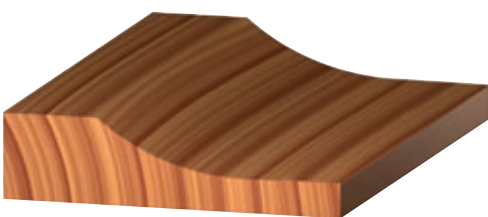
PROFILO / PROFILE 3



PROFILO / PROFILE 4

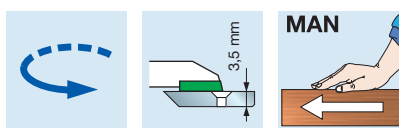


PROFILO / PROFILE 5

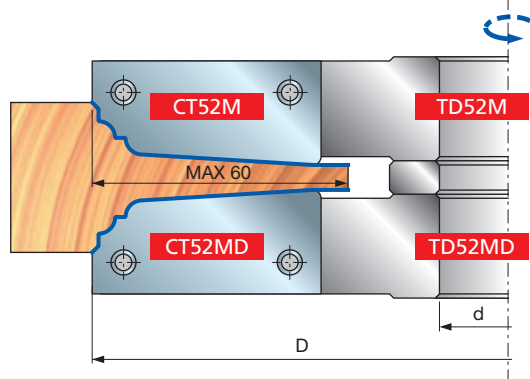


# TD52M TD52MD

## PIATTABANDE MULTIPROFILO PER LEGNO TENERO E DURO RAISED PANEL CUTTERHEADS FOR SOFT AND HARD WOOD



- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda.



### ■ CARATTERISTICHE:

L'utensile è concepito per poter lavorare con 2 taglienti su legno tenero oppure con gli altri 2 taglienti su legno duro, con perfetta finitura, sia di testa che lungovena. Questo risultato si è potuto ottenere grazie alla scelta di diversi angoli di taglio sulle sedi per coltello. Si possono montare solo 2 coltelli alla volta e vanno montati diametralmente opposti. Le dimensioni dei coltelli per il legno duro sono diverse da quelle per legno tenero, però realizzano lo stesso profilo.

### ■ FEATURES:

This tool is designed to perfectly cut softwood or hardwood with two knives, with both along the grain or end grain feeding. This result has been achieved by choosing different cutting angles according to the type of wood to be machined. Only two knives are to be fitted on the tool at one time, in the opposite direction. The dimensions of the knives for cutting hardwood and softwood are different but the same profile is achieved.

D	B	d*	Z	R	Codice
mm	mm	mm			Code
200	25	35 (50)	2+2		TD52M CB3 <sup>(1)</sup>
200	25	35 (50)	2+2		TD52MD CB3 <sup>(1)</sup>

- (1) QUESTI ARTICOLI VENGONO FORNITI CON COLTELLI.
- (1) THESE ITEMS ARE SUPPLIED WITH KNIVES.

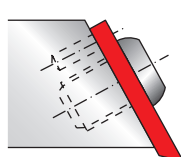
D	B	d*	Z	R	Codice
mm	mm	mm			Code
200	25	35 (50)	2+2		TD52M HB3 <sup>(2)</sup>
200	25	35 (50)	2+2		TD52MD HB3 <sup>(2)</sup>

- (2) QUESTI ARTICOLI VENGONO FORNITI SENZA COLTELLI.
- (2) THESE ITEMS ARE SUPPLIED WITHOUT KNIVES.

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Rondella / Ring	14 x 2 x 6	VT18M AL9
Vite / Screw	M6 x 12	2622M CC9
Chiave / Allen key	4 x 130	CB03M BB9

### 2 Coltelli per Legno Tenero 2 Knives for Softwood

Coltelli di ricambio	Dimensioni	Codice
Spare knives	Dimensions	Code
1	55 x 30 x 3,5	CT52M TA3 CT52MD TA3
2	55 x 30 x 3,5	CT52M TB3 CT52MD TB3
3	55 x 30 x 3,5	CT52M TC3 CT52MD TC3
4	55 x 30 x 3,5	CT52M TD3 CT52MD TD3
5	55 x 30 x 3,5	CT52M TE3 CT52MD TE3

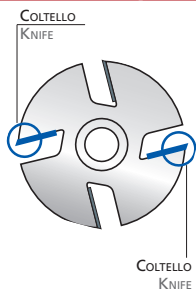


LEGNO TENERO / SOFTWOOD

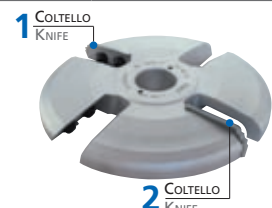


### 2 Coltelli per Legno Duro 2 Knives for Hardwood

Coltelli di ricambio	Dimensioni	Codice
Spare knives	Dimensions	Code
1	55 x 25 x 3,5	CT52M DA3 CT52MD DA3
2	55 x 25 x 3,5	CT52M DB3 CT52MD DB3
3	55 x 25 x 3,5	CT52M DC3 CT52MD DC3
4	55 x 25 x 3,5	CT52M DD3 CT52MD DD3
5	55 x 25 x 3,5	CT52M DE3 CT52MD DE3



LEGNO DURO / HARDWOOD

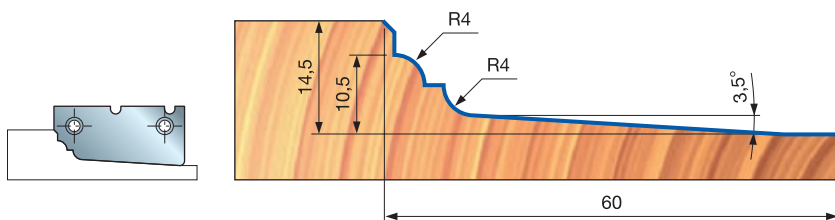
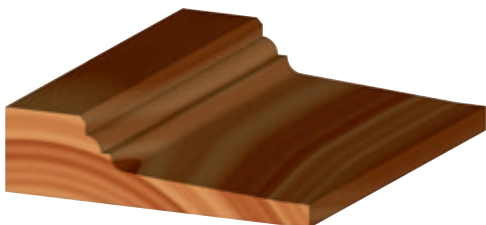


Utensili collaudati secondo la Normativa  
*Tools tested according to the Norm*

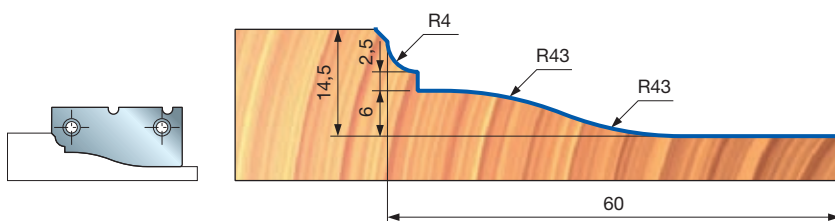
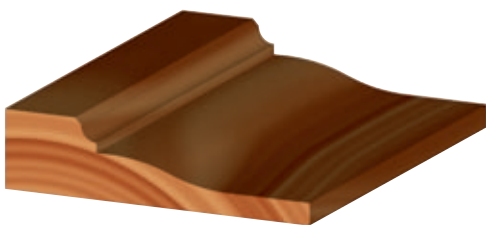
• **EN 847-1** •  
**R&S - SV/R 160/159**

▼ **QUESTO PROFILO È UTILIZZABILE SOLAMENTE  
 CON AVANZAMENTO MECCANICO.**  
**THIS PROFILE IS USABLE WITH AUTOMATIC FEED ONLY.**

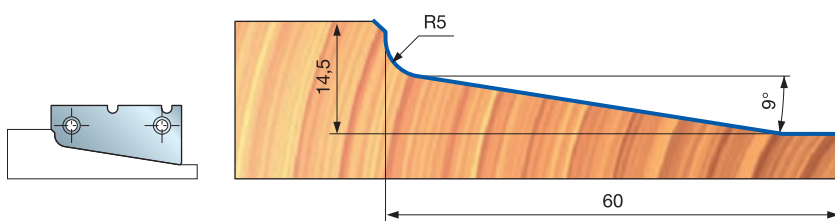
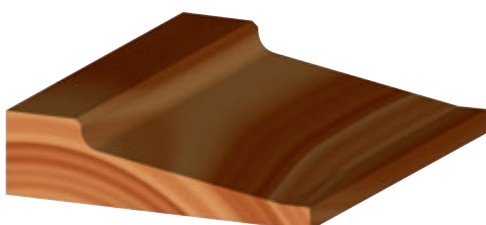
PROFILO / PROFILE **1**



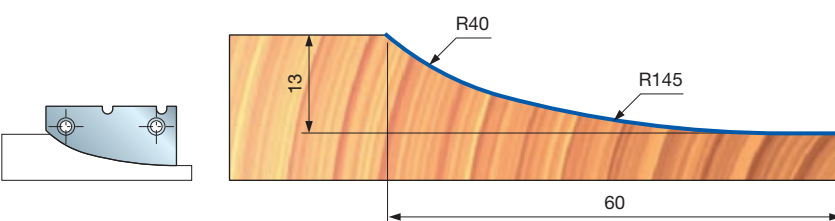
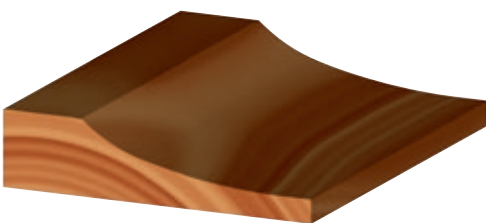
PROFILO / PROFILE **2**



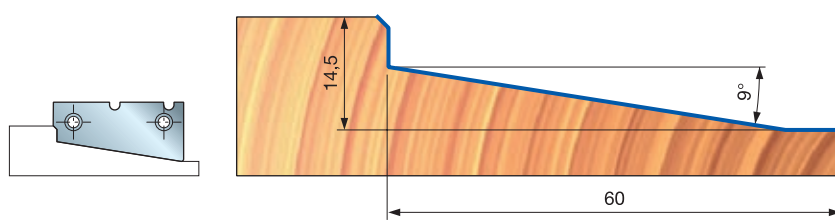
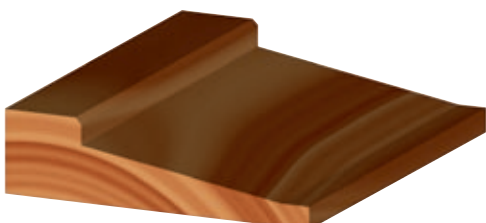
PROFILO / PROFILE **3**



PROFILO / PROFILE **4**

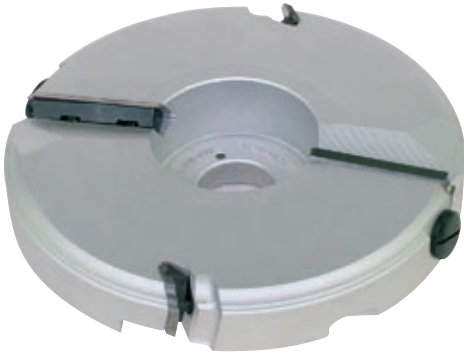


PROFILO / PROFILE **5**



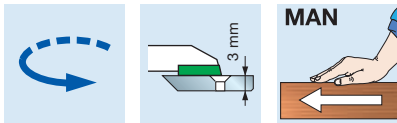
# TD55MD TD55MS

## PIATTABANDE MULTIPROFILO RAISED PANEL CUTTERHEADS



D	B	d*	Z	R	Codice
mm	mm	mm			Code
210		35 (50)	2+2		TD55MD BB3
210		35 (50)	2+2		TD55MS BB3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
TD55MD	Cuneo / Wedge <b>A</b>	21 x 23 x 8 CN55MD AA9
	Cuneo / Wedge <b>B</b>	61 x 18 x 8 CN55MD BA9
TD55MS	Cuneo / Wedge <b>A</b>	21 x 23 x 8 CN55MS AA9
	Cuneo / Wedge <b>B</b>	61 x 18 x 8 CN55MS BA9
Vite / Screw	M10 x 25	2602M F19
Vite / Screw	M8 x 10 x 22	VT08M AD9
Vite / Screw	M5 x 7 x 16	VT08M AE9
Chiave / Allen key	5 x 110	CB03M EA9



- Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.
- Light alloy body (Ergal). For cleaning do not use products containing caustic soda.

### CARATTERISTICHE:

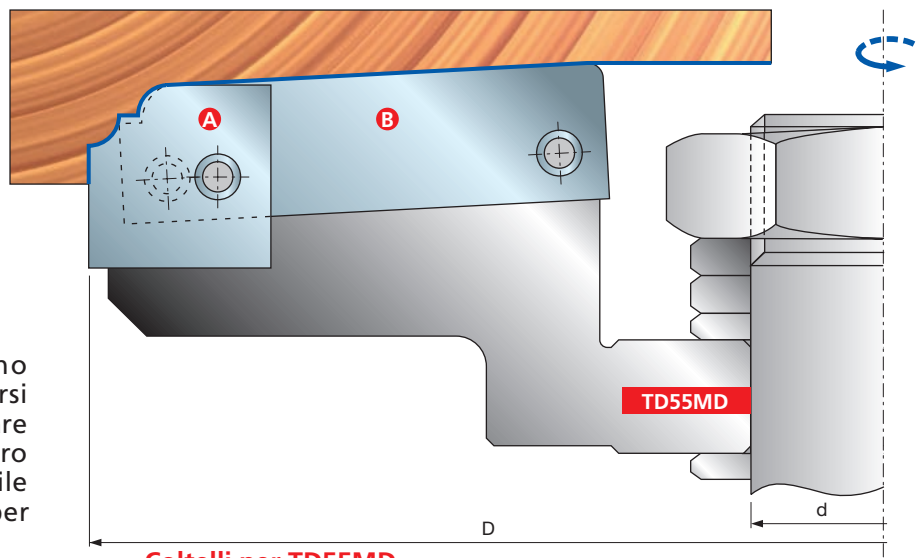
Con questo utensile si possono ottenere n. 5 tipi di profili diversi (vedi disegni). Possibilità di realizzare specchietti lunghi anche oltre l'albero portautensili (particolarmente utile per l'esecuzione di specchietti per portoni).

QUESTI ARTICOLI VENGONO FORNITI SENZA COLTELLI.

### FEATURES:

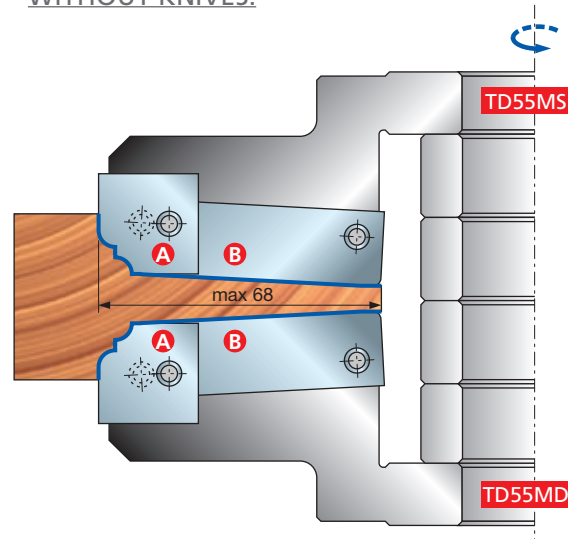
It is possible to fit 5 types of standard knives for machining 5 different profiles (see drawings). Due to the particular tool geometry, this item is particularly indicated for cutting deep profiles.

THESE ITEMS ARE SUPPLIED WITHOUT KNIVES.



### Coltelli per TD55MD Knives for TD55MD

Profilo	Dimensioni	Codice
Profile	Dimensions	Code
<b>1</b>	Colt. / knife <b>A</b> 23 x 24 x 3	CT55MD AA3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MD BA3
<b>2</b>	Colt. / knife <b>A</b> 23 x 24 x 3	CT55MD AB3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MD BB3
<b>3</b>	Colt. / knife <b>A</b> 23 x 24 x 3	CT55MD AC3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MD BC3
<b>4</b>	Colt. / knife <b>A</b> 23 x 24 x 3	CT55MD AE3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MD BE3
<b>5</b>	Colt. / knife <b>A</b> 23 x 24 x 3	CT55MD AF3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MD BF3



### Coltelli per TD55MS Knives for TD55MS

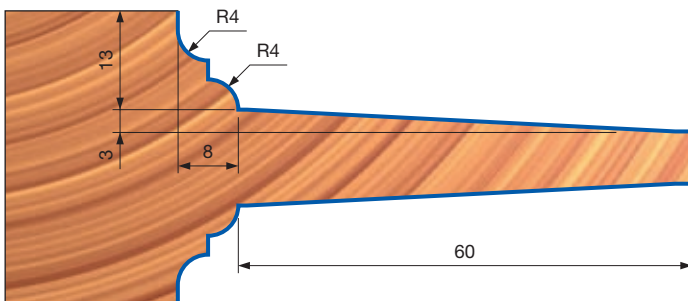
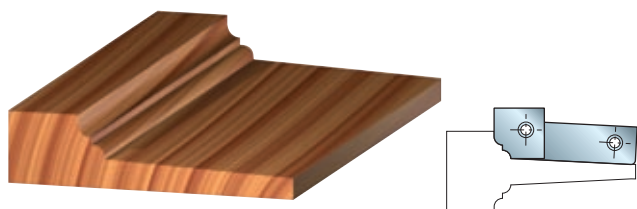
Profilo	Dimensioni	Codice
Profile	Dimensions	Code
<b>1</b>	Colt. / knife <b>A</b> 23 x 24 x 3	CT55MS AA3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MS BA3
<b>2</b>	Colt. / knife <b>A</b> 23 x 24 x 3	CT55MS AB3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MS BB3
<b>3</b>	Colt. / knife <b>A</b> 23 x 24 x 3	CT55MS AC3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MS BC3
<b>4</b>	Colt. / knife <b>A</b> 23 x 24 x 3	CT55MS AE3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MS BE3
<b>5</b>	Colt. / knife <b>A</b> 23 x 24 x 3	CT55MS AF3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MS BF3

Utensili collaudati secondo la Normativa  
 Tools tested according to the Norm

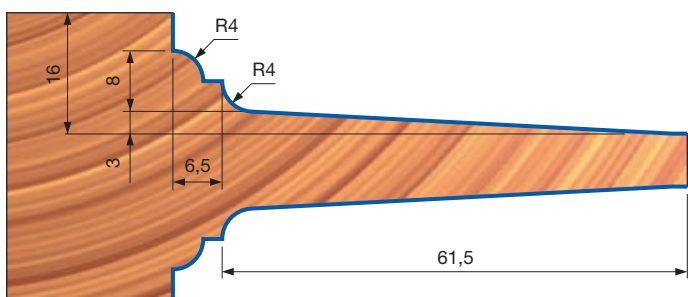
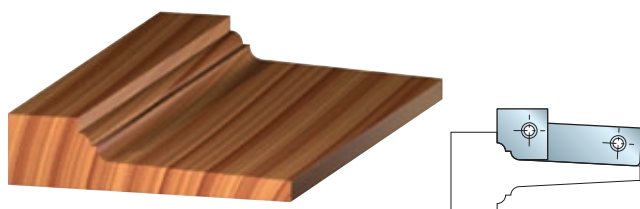
• **EN 847-1** •

**R&S - SV/R 161/160**

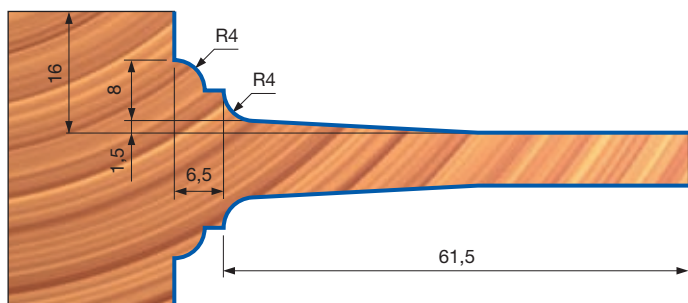
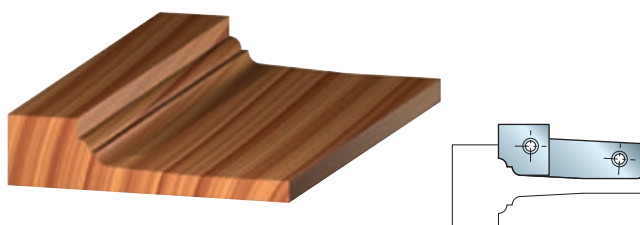
PROFILO / PROFILE **1**



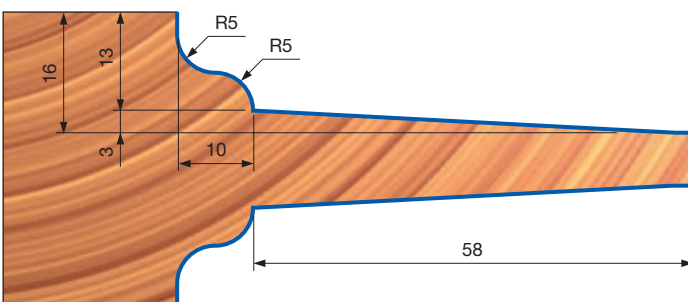
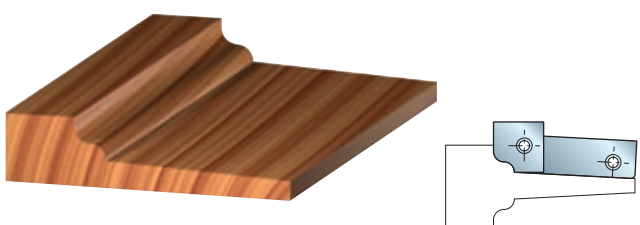
PROFILO / PROFILE **2**



PROFILO / PROFILE **3**



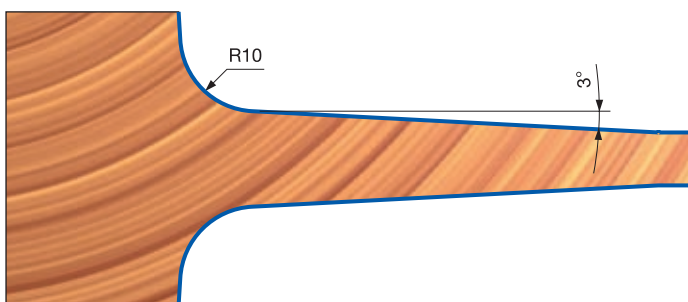
PROFILO / PROFILE **4**



PROFILO / PROFILE **5**

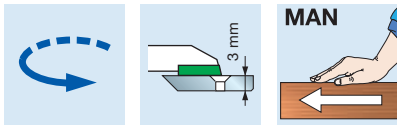
QUESTO PROFILO È UTILIZZABILE  
 SOLAMENTE CON AVANZAMENTO  
 MECCANICO. ▶

THIS PROFILE IS USABLE WITH  
 AUTOMATIC FEED ONLY.



# TD55MD TD55MS

## PIATTABANDE MULTIPROFILO RAISED PANEL CUTTERHEADS



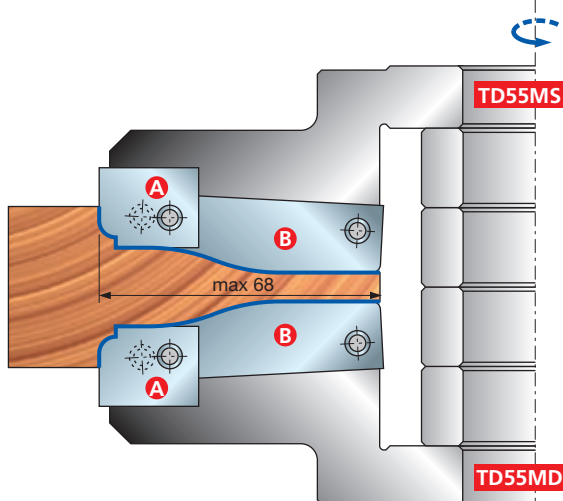
### PERFORMANCE Coltelli Riaffilabili SYSTEM Resharpenable Knives

Utensili collaudati secondo la Normativa  
Tools tested according to the Norm

• **EN 847-1** •  
**R&S - SV/R 162/161**

■ **CARATTERISITCHE:** Con questo utensile si possono ottenere n. 4 tipi di profili diversi (vedi disegni). Possibilità di realizzare specchietti lunghi anche oltre l'albero portautensili (particolarmente utile per l'esecuzione di specchietti per portoni). QUESTI ARTICOLI VENGONO FORNITI SENZA COLTELLI.

■ **FEATURES:** It is possible to fit 4 types of standard knives for machining 4 different profiles (see drawings). Due to the particular tool geometry, this item is particularly indicated for cutting deep profiles. THESE ITEMS ARE SUPPLIED WITHOUT KNIVES.

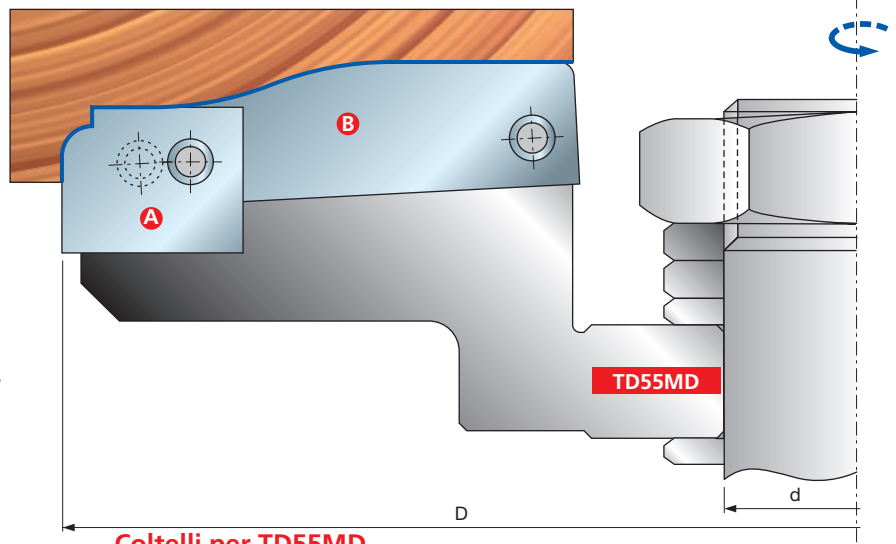


D	B	d*	Z	R	Codice
mm	mm	mm			Code
210	35 (50)	2+2			TD55MD CB3
210	35 (50)	2+2			TD55MS CB3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
TD55MD Cuneo / Wedge <b>A</b>		CN55MD AA9
TD55MD Cuneo / Wedge <b>B</b>		CN55MD BA9
TD55MS Cuneo / Wedge <b>A</b>		CN55MS AA9
TD55MS Cuneo / Wedge <b>B</b>		CN55MS BA9
Vite / Screw		M10 x 25 2602M F19
Vite / Screw		M8 x 10 x 22 VT08M AD9
Vite / Screw		M5 x 7 x 16 VT08M AE9
Chiave / Allen key		5 x 110 CB03M EA9

■ Corpo in lega leggera (Ergal). Per la pulizia non utilizzare prodotti contenenti soda caustica.

■ Light alloy body (Ergal). For cleaning do not use products containing caustic soda.



### Coltelli per TD55MD Knives for TD55MD

Profilo	Dimensioni	Codice
Profile	Dimensions	Code
<b>1</b>	Colt. / knife <b>A</b> 20 x 24 x 3	CT55MD AD3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MD BD3
<b>2</b>	Colt. / knife <b>A</b> 20 x 24 x 3	CT55MD AG3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MD BG3
<b>3</b>	Colt. / knife <b>A</b> 20 x 24 x 3	CT55MD AH3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MD BH3
<b>4</b>	Colt. / knife <b>A</b> 20 x 24 x 3	CT55MD AI3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MD BI3

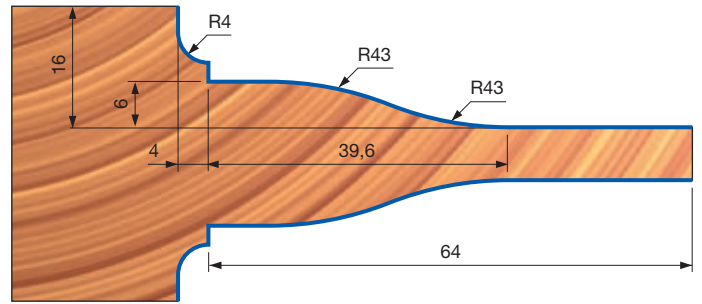
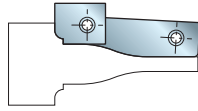
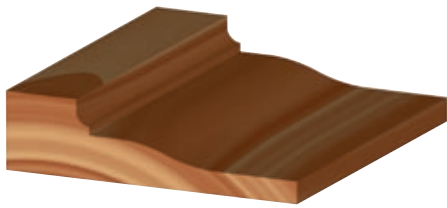
### Coltelli per TD55MS Knives for TD55MS

Profilo	Dimensioni	Codice
Profile	Dimensions	Code
<b>1</b>	Colt. / knife <b>A</b> 20 x 24 x 3	CT55MS AD3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MS BD3
<b>2</b>	Colt. / knife <b>A</b> 20 x 24 x 3	CT55MS AG3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MS BG3
<b>3</b>	Colt. / knife <b>A</b> 20 x 24 x 3	CT55MS AH3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MS BH3
<b>4</b>	Colt. / knife <b>A</b> 20 x 24 x 3	CT55MS AI3
	Colt. / knife <b>B</b> 65 x 20 x 3	CT55MS BI3

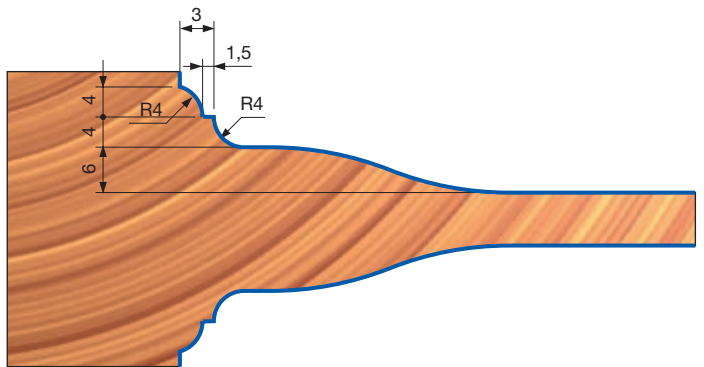
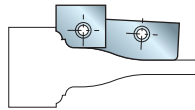
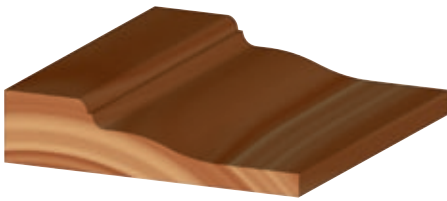
# ESEMPI DI PROFILI REALIZZABILI

## EXAMPLE OF PROFILES

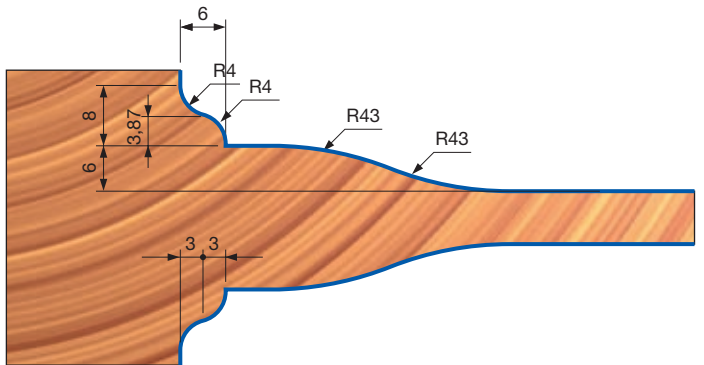
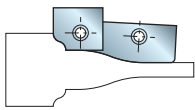
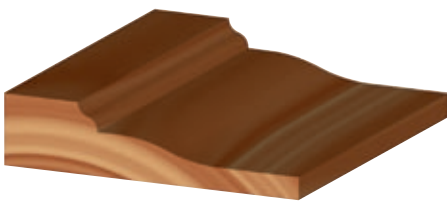
PROFILO / PROFILE 1



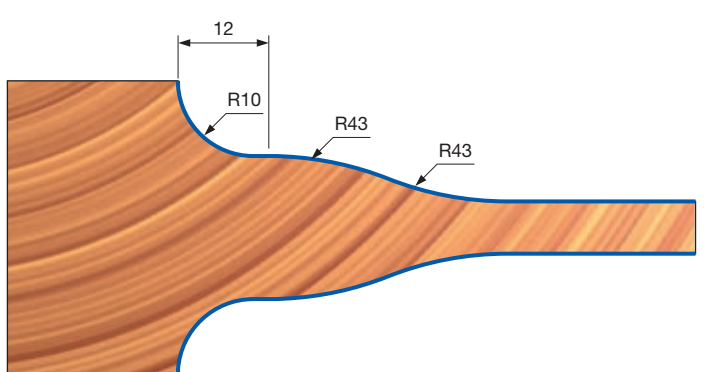
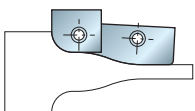
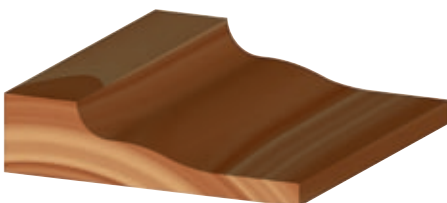
PROFILO / PROFILE 2



PROFILO / PROFILE 3



PROFILO / PROFILE 4





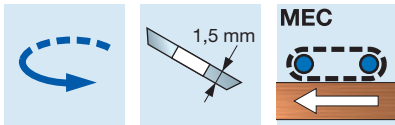
# TG79M Z = 2

## GRUPPI DI TESTE PORTACOLTELLI PER PERLINE E PARCHETTI PANELLING AND FLOORING CUTTERHEAD SETS



### Utensili per gruppi TG79M Tools for TG79M sets

D	B	d	Z	R	Codice Code
125	20	50	2	2	TG79M AA3
125	20	50	2	2	TG79M AB3
143	20	50	2	2	TG79M AC3
128	8	50	2		TG79M AD3
143	20	50	2	4	TG79M AE3
144	20	50	2	4	TG79M AF3
125	20	50		4	TG79M AG3
125	20	50		4	TG79M AI3
143	20	50		4	TG79M AM3
143	20	50		4	TG79M AO3



I GRUPPI SONO DISPONIBILI A MAGAZZINO, COMPLETI DI INSERTI. Le teste di ricambio AG3-AI3-AM3-AO3 vengono fornite senza inserti e relative viti, i quali andranno ordinati a parte.

THE CUTTERHEAD SETS COME COMPLETE WITH BEVELLING INSERTS. The AG3-AI3-AM3-AO3 spare cutterheads are supplied without inserts and screws, which should be ordered separately.

Profilo Profile	Gruppo per maschio Tongue set	Gruppo per femmina Groove set
1	TG79MG 002	TG79MG 001
2	TG79MG 003	TG79MG 001
3	TG79MG 006	TG79MG 004
4	TG79MG 025	TG79MG 020
5	TG79MG 007	TG79MG 005
6	TG79MG 026	TG79MG 021
7	TG79MG 027	TG79MG 022
8	TG79MG 028	TG79MG 023
9	TG79MG 029	TG79MG 024
10	TG79MG 010	TG79MG 008
11	TG79MG 035	TG79MG 030
12	TG79MG 011	TG79MG 009
13	TG79MG 036	TG79MG 031
14	TG79MG 037	TG79MG 032
15	TG79MG 038	TG79MG 033
16	TG79MG 039	TG79MG 034

	Parti di ricambio Spare parts	Dimensioni Dimensions	Codice Code
AA3	Coltello / Knife	20 x 12 x 1,5	CG01M DA3
	Cuneo / Wedge	16	CN01M DA9
	Vite / Screw	M8 x 16	VT03M AA9
	Insero per incastri / Grooving insert	40 x 16 x 4	IG04MD AA3
AB3	Vite / Screw	M6 x 14,5	VT16M AA9
	Coltello / Knife	20 x 12 x 1,5	CG01M DA3
	Cuneo / Wedge	16	CN01M DA9
	Vite / Screw	M8 x 16	VT03M AA9
AC3	Insero per incastri / Grooving insert	40 x 16 x 4	IG04MS AA3
	Vite / Screw	M6 x 14,5	VT16M AA9
	Coltello / Knife	20 x 12 x 1,5	CG01M DA3
	Cuneo / Wedge	16	CN01M DA9
AD3	Vite / Screw	M8 x 16	VT03M AA9
	Rasante / Spur	22,86 x 2,5	RG02M AA3
	Vite / Screw	M5 x 8	VT05M AA9
	Coltello / Knife	7,5 x 12 x 1,5	CG01M OB3
AE3 - AF3	Cuneo / Wedge	14 x 7,2 x 8	CN09M AT9
	Vite / Screw	M5 x 19	VT11M AA9
	Coltello / Knife	20 x 12 x 1,5	CG01M DA3
	Cuneo / Wedge	16	CN01M DA9
AG3 - AI3 - AM3 - AO3	Vite / Screw	M8 x 16	VT03M AA9
	Rasante / Spur	22,86 x 2,5	RG02M AA3
	Vite / Screw	M5 x 8	VT05M AA9
	Insero smussatore / Beveling insert	22 x 16 x 5 45°	IG51M BA3
AG3 - AI3 - AM3 - AO3	Vite / Screw	M6 x 14,5	VT16M AA9
	Insero smussatore / Beveling insert	22 x 16 x 5 45°	IG51M BA3
	Insero raggatore / Rounding insert	22 x 16 x 5 R=1,5	IG52M AB3
	Insero raggatore / Rounding insert	22 x 16 x 5 R=2	IG52M AC3
	Insero raggatore / Rounding insert	22 x 16 x 5 R=3	IG52M AE3
	Vite / Screw	M6 x 14,5	VT16M AA9
AG3 - AI3 - AM3 - AO3	Insero raggatore / Rounding insert	25,5 x 16 x 9 R3	IG33M AA3
	Insero raggatore / Rounding insert	25,5 x 16 x 9 R5	IG33M AB3
	Insero smussatore / Beveling insert	25,5 x 16 x 9 45°	IG33M AD3
	Vite / Screw	M6 x 15,5	VT16M AD9

I codici delle tabelle relative ai gruppi sono da considerarsi esclusa la bussola, la quale andrà ordinata a parte.

The above codes are intended without sleeve, which should be ordered separately.

### Bussole per albero destro Sleeves for fence side spindle

Dimensioni Dimensions	Codice bussola Sleeve code
Ø50 x 110 x 30	BF10MD AA9
Ø50 x 110 x 35	BF10MD AB9
Ø50 x 110 x 40	BF10MD AC9

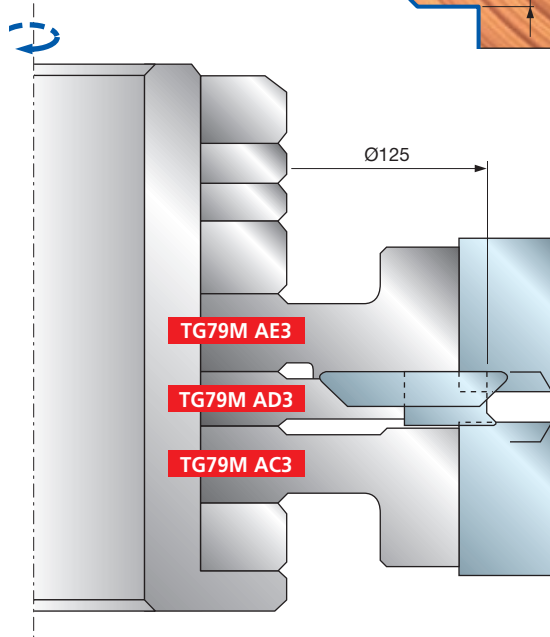
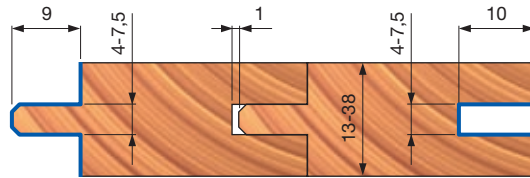
### Bussole per albero sinistro Sleeves for off side spindle

Dimensioni Dimensions	Codice bussola Sleeve code
Ø50 x 110 x 30	BF10MS AA9
Ø50 x 110 x 35	BF10MS AB9
Ø50 x 110 x 40	BF10MS AC9

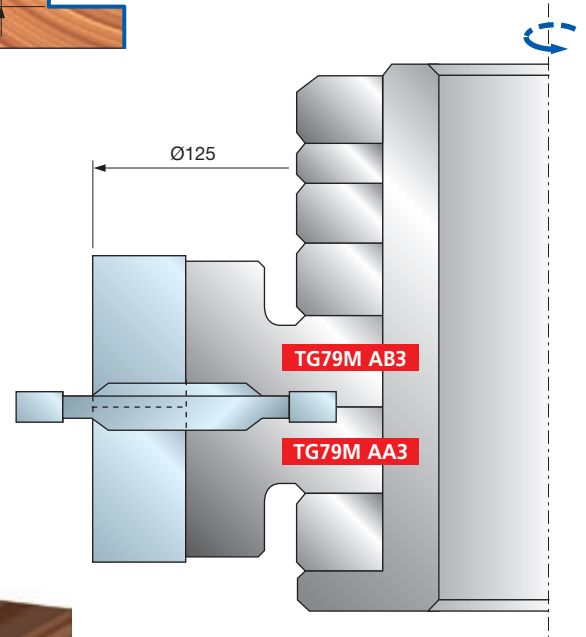
# ESEMPI DI PROGRAMMAZIONE

## EXAMPLES OF PROGRAMMING

PROFILO / PROFILE 1



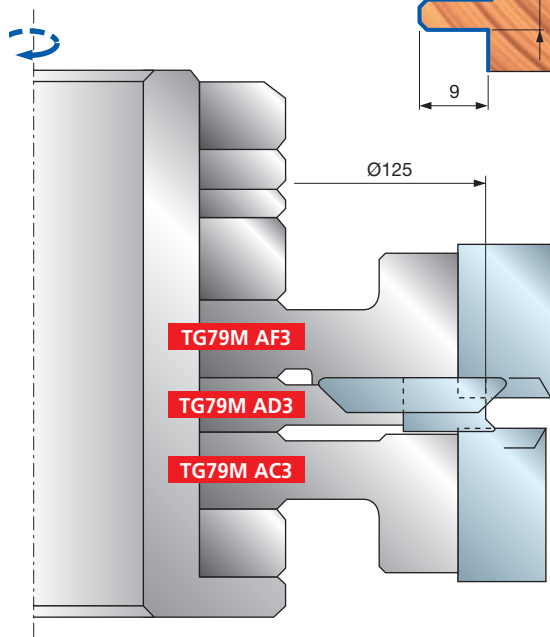
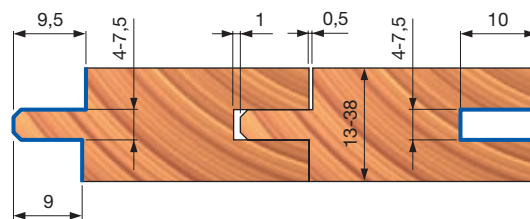
GRUPPO / CUTTERHEAD SET  
TG79MG-002



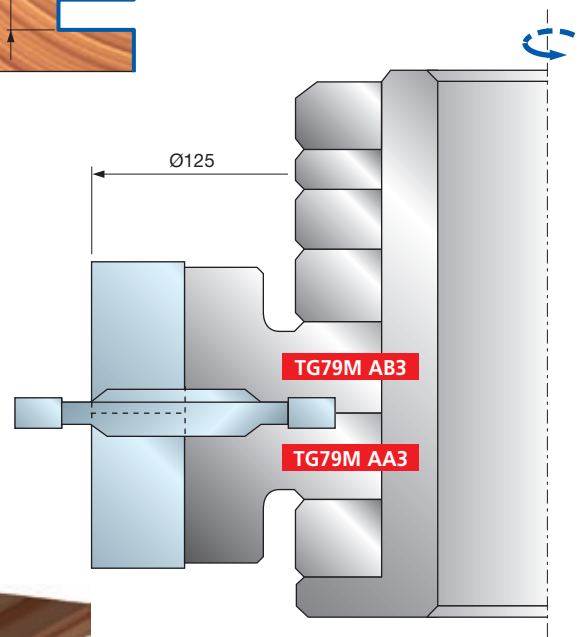
GRUPPO / CUTTERHEAD SET  
TG79MG-001



PROFILO / PROFILE 2



GRUPPO / CUTTERHEAD SET  
TG79MG-003



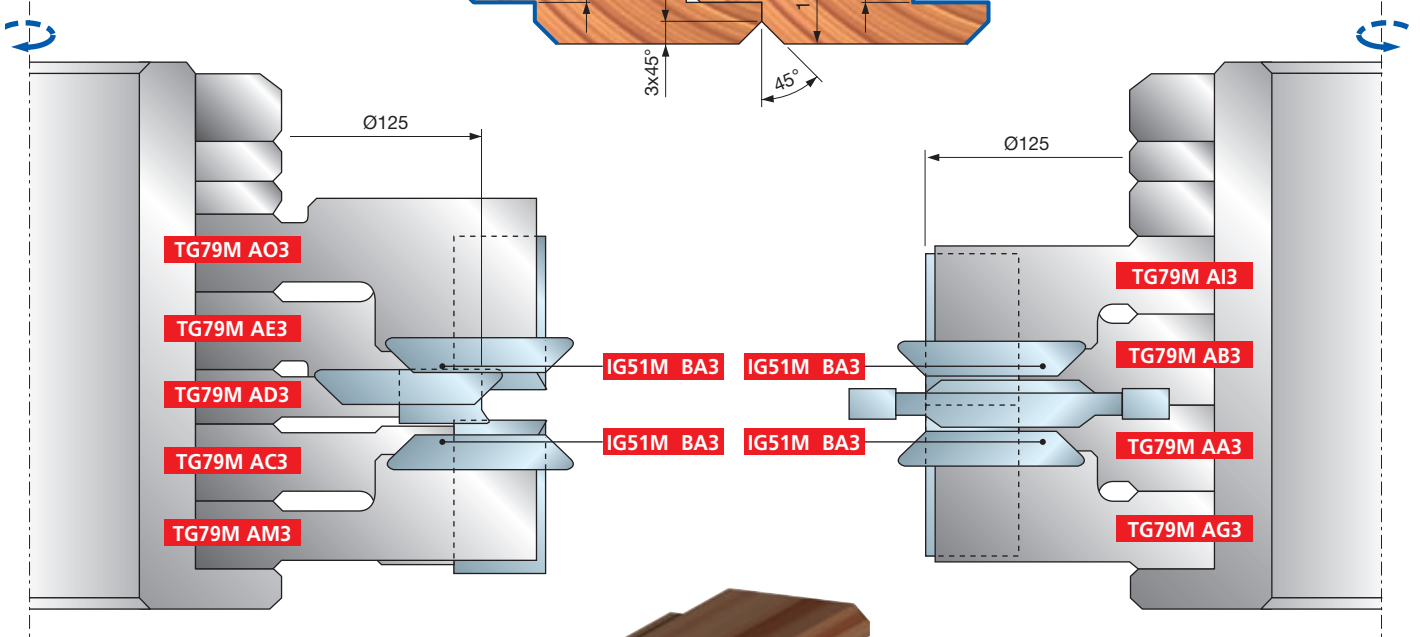
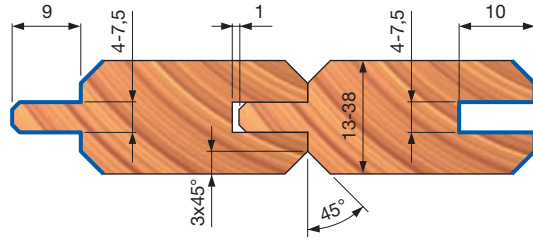
GRUPPO / CUTTERHEAD SET  
TG79MG-001



# ESEMPI DI PROGRAMMAZIONE

## EXAMPLES OF PROGRAMMING

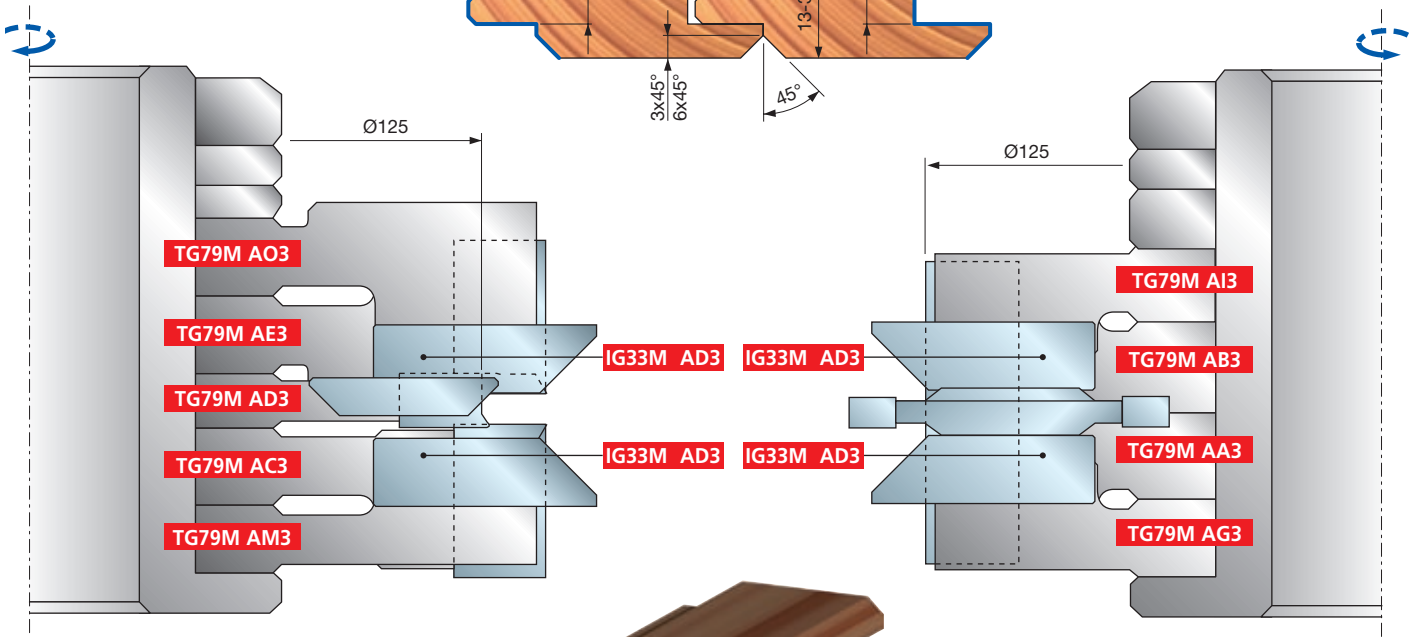
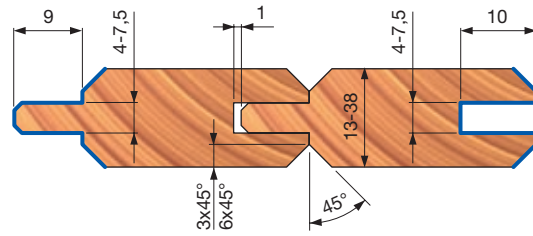
PROFILO / PROFILE **3**



GRUPPO / CUTTERHEAD SET  
TG79MG-006

GRUPPO / CUTTERHEAD SET  
TG79MG-004

PROFILO / PROFILE **4**



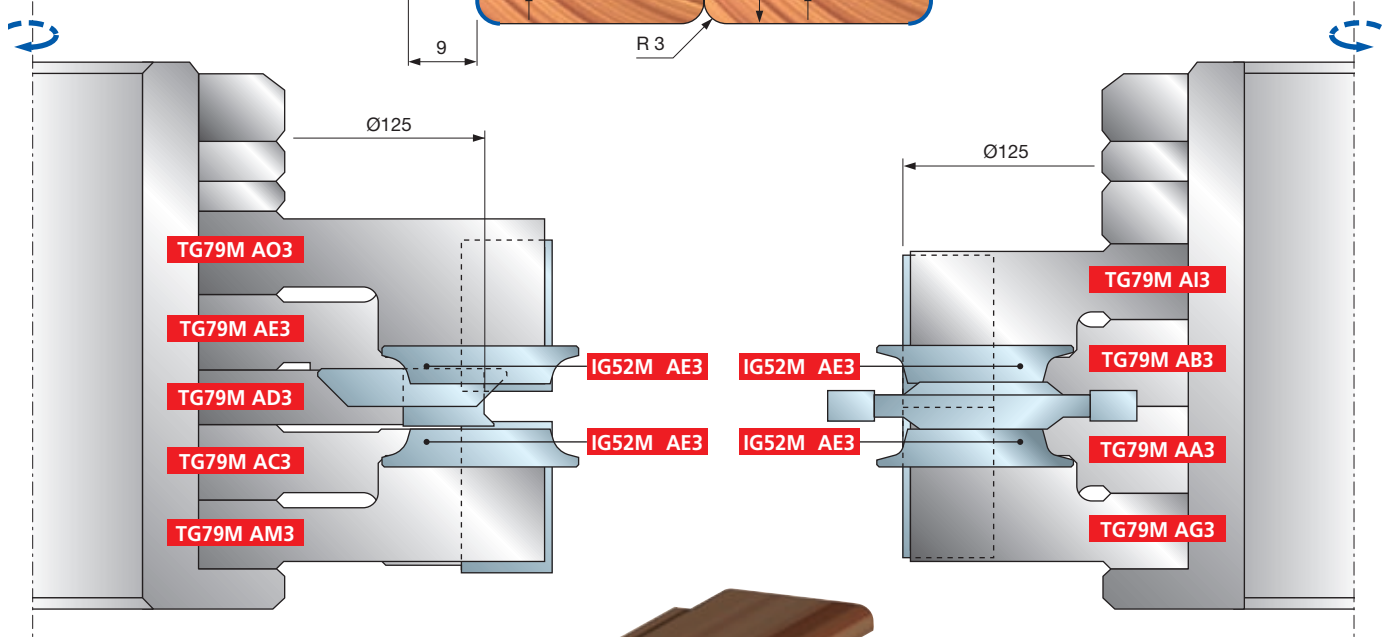
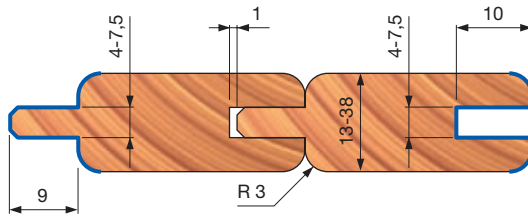
GRUPPO / CUTTERHEAD SET  
TG79MG-025

GRUPPO / CUTTERHEAD SET  
TG79MG-020

# ESEMPI DI PROGRAMMAZIONE

## EXAMPLES OF PROGRAMMING

PROFILO / PROFILE **5**

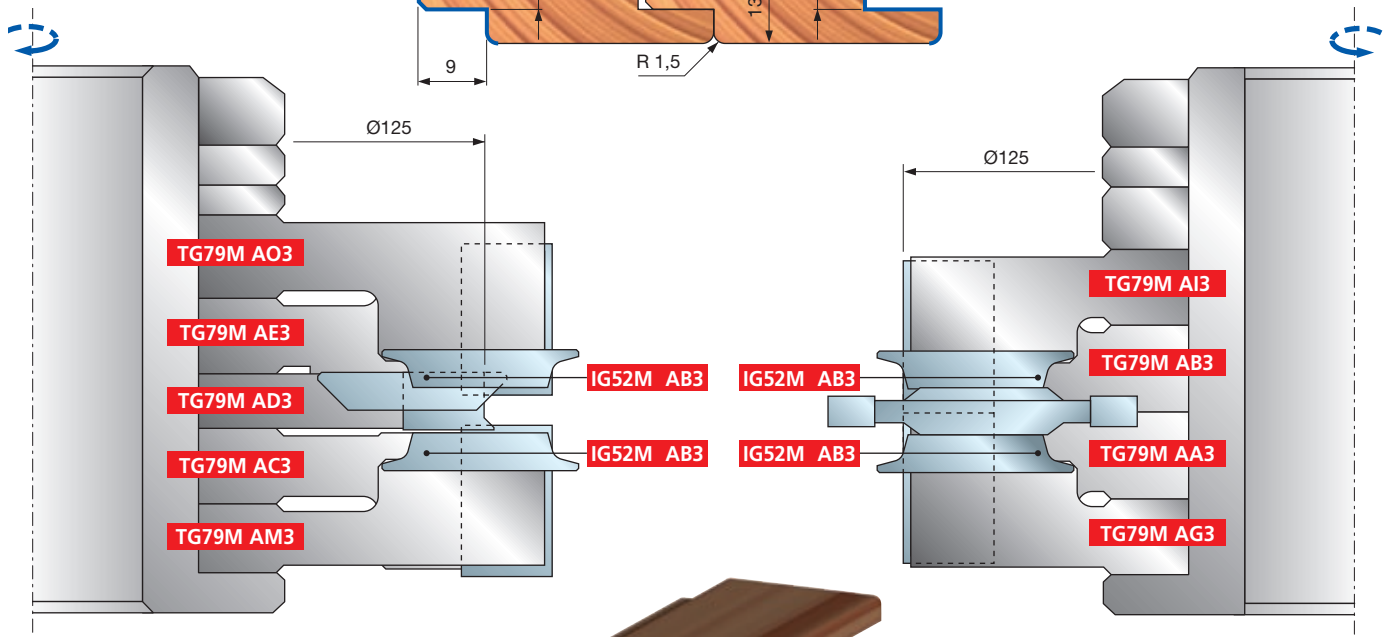
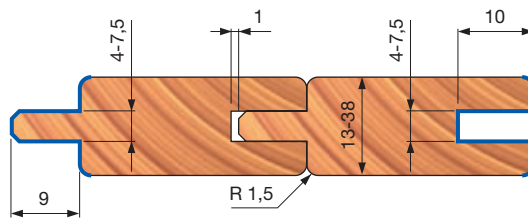


GRUPPO / CUTTERHEAD SET  
TG79MG-007

GRUPPO / CUTTERHEAD SET  
TG79MG-005



PROFILO / PROFILE **6**



GRUPPO / CUTTERHEAD SET  
TG79MG-026

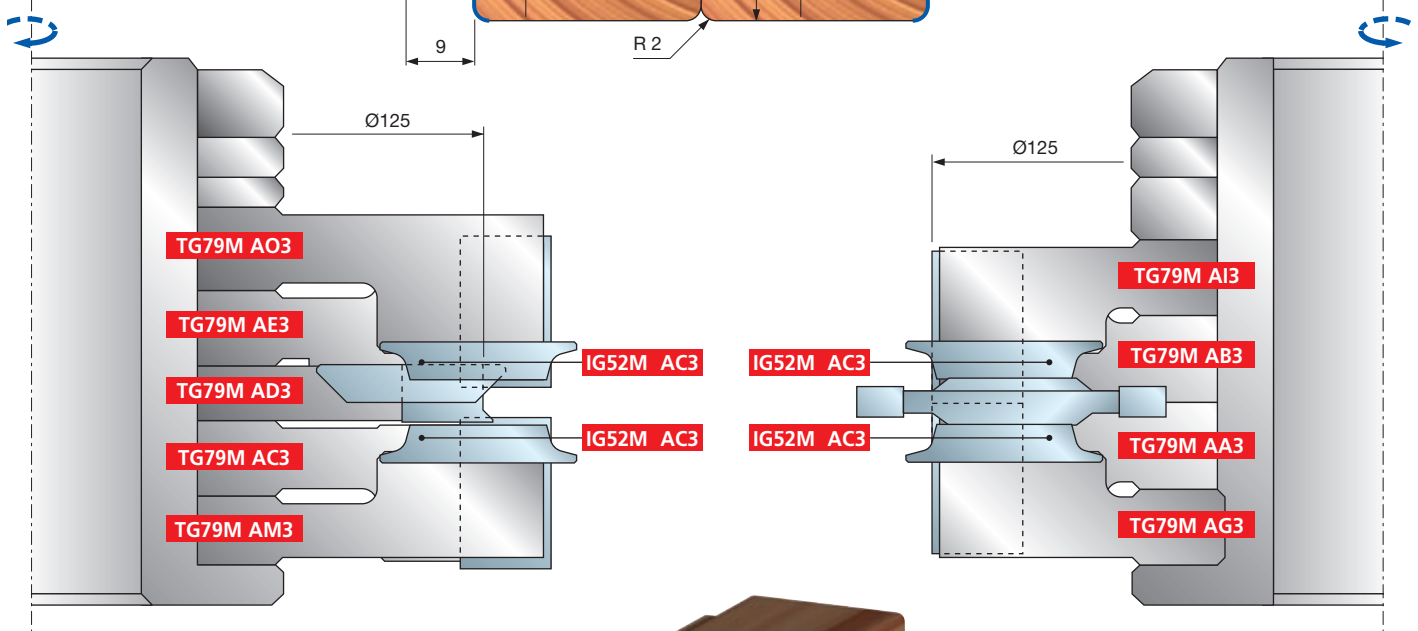
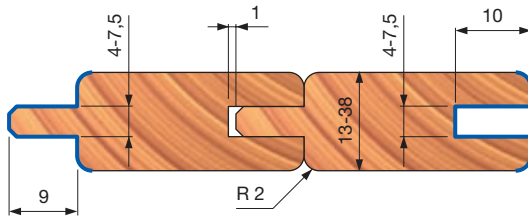
GRUPPO / CUTTERHEAD SET  
TG79MG-021



# ESEMPI DI PROGRAMMAZIONE

## EXAMPLES OF PROGRAMMING

PROFILO / PROFILE **7**

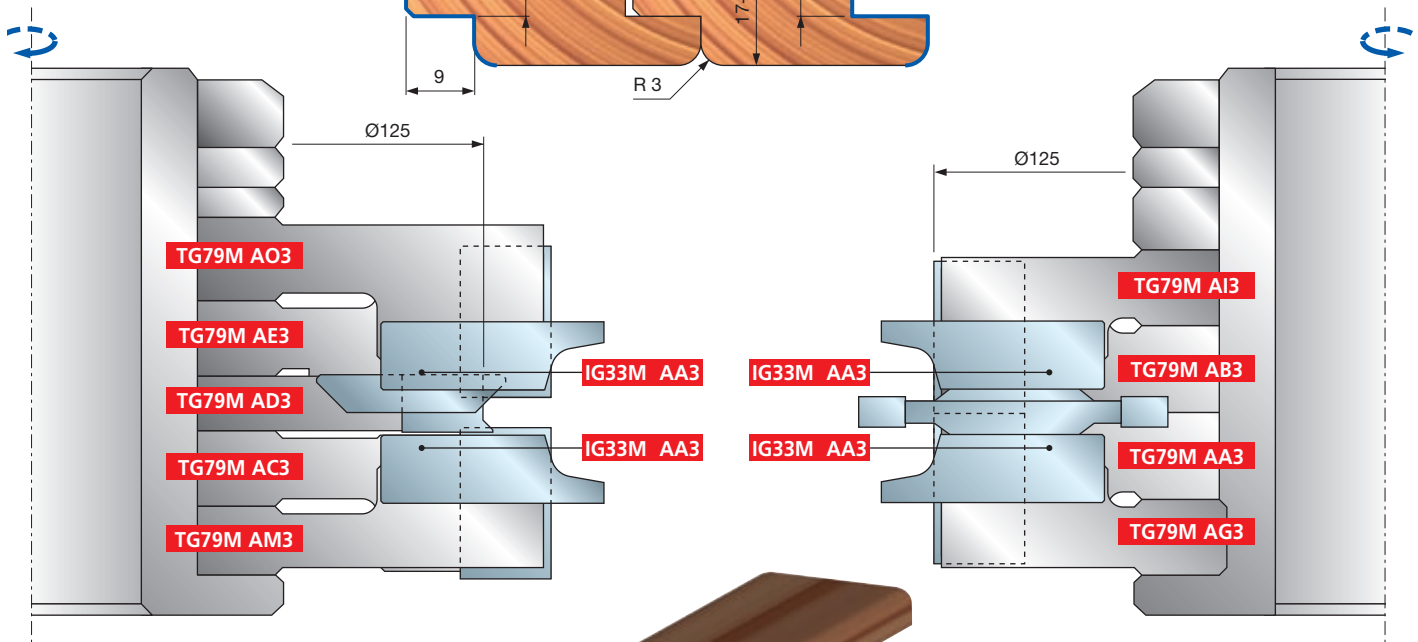
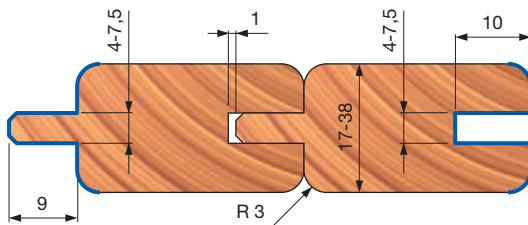


GRUPPO / CUTTERHEAD SET  
TG79MG-027



GRUPPO / CUTTERHEAD SET  
TG79MG-022

PROFILO / PROFILE **8**



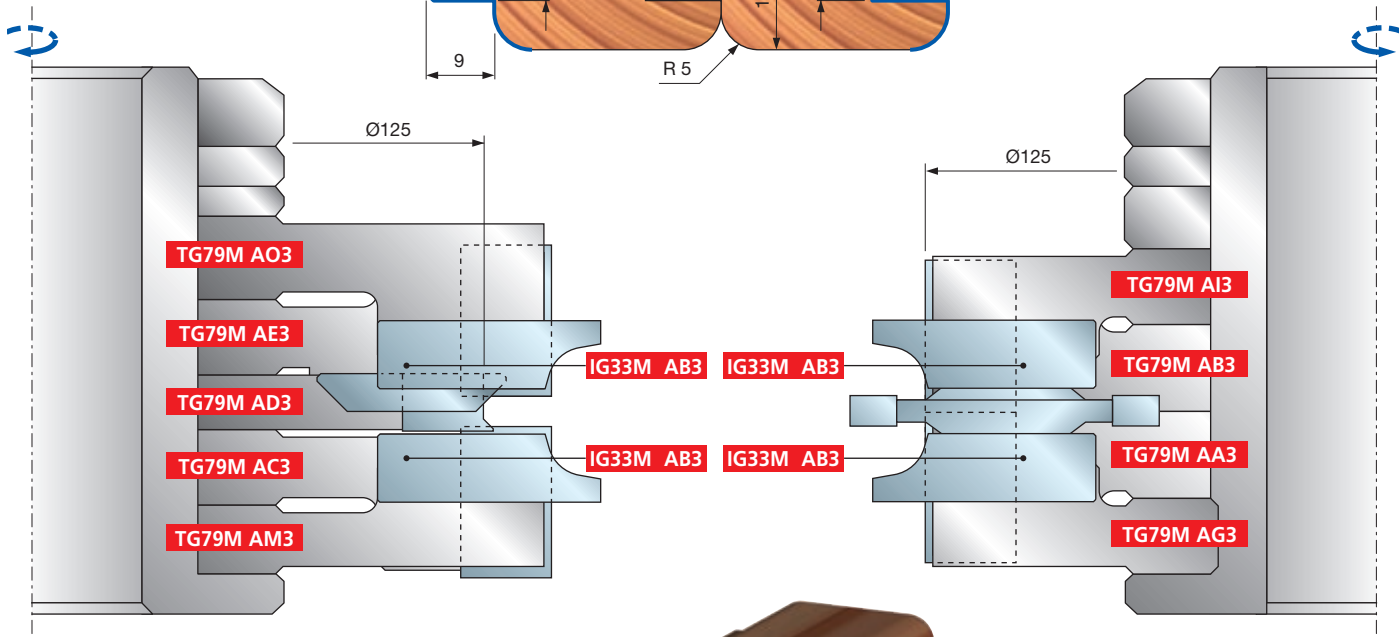
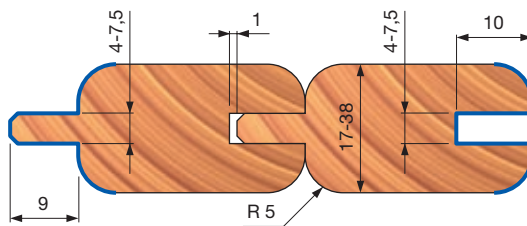
GRUPPO / CUTTERHEAD SET  
TG79MG-028



GRUPPO / CUTTERHEAD SET  
TG79MG-023

# ESEMPI DI PROGRAMMAZIONE EXAMPLES OF PROGRAMMING

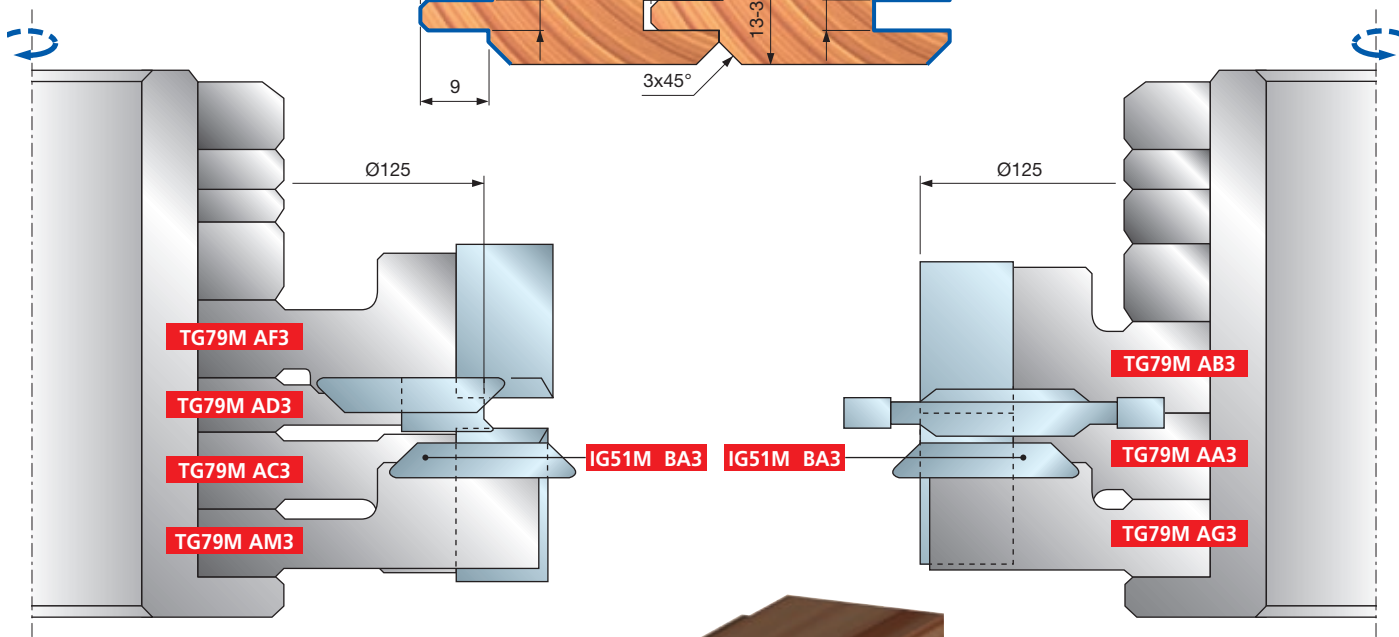
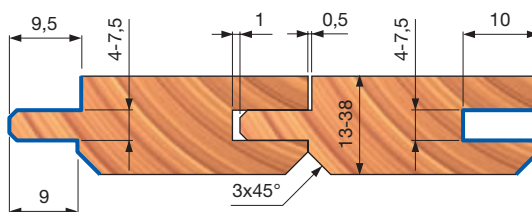
PROFILO / PROFILE **9**



GRUPPO / CUTTERHEAD SET  
TG79MG-029

GRUPPO / CUTTERHEAD SET  
TG79MG-024

PROFILO / PROFILE **10**



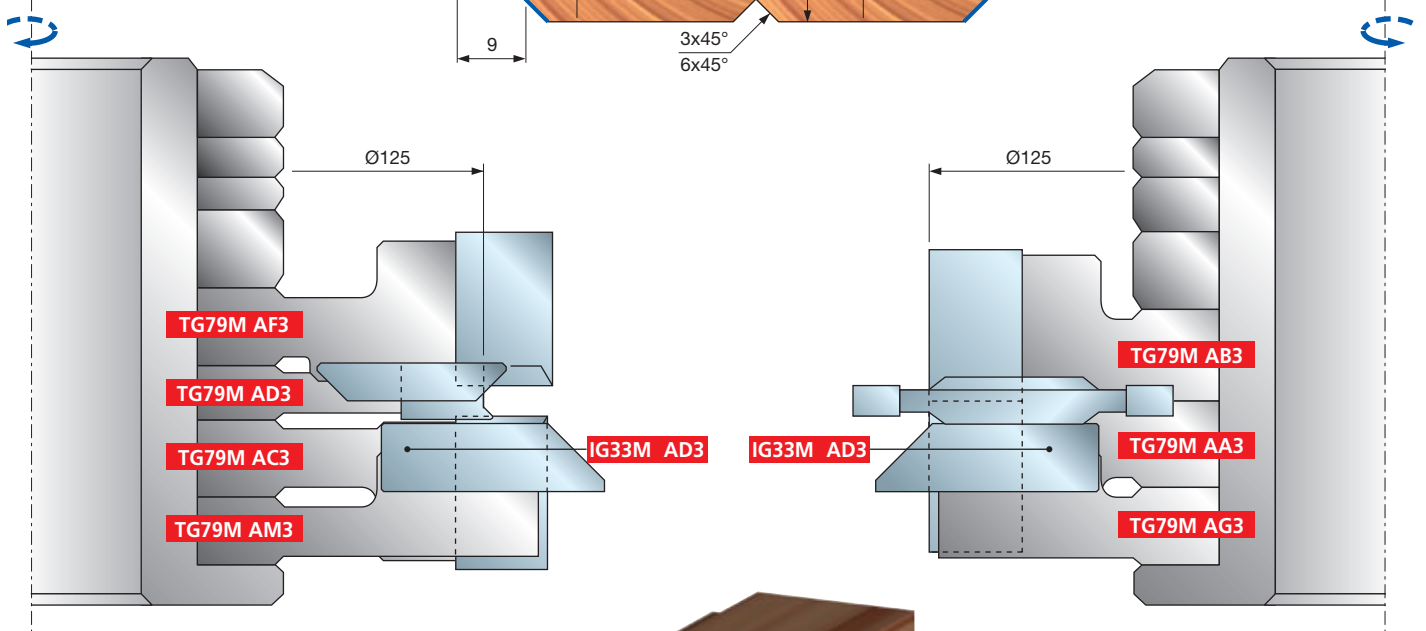
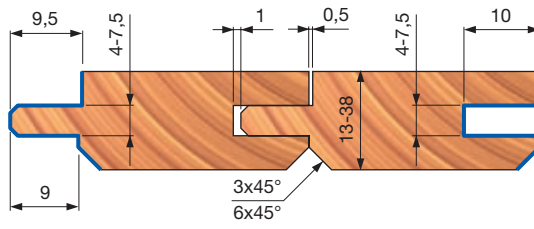
GRUPPO / CUTTERHEAD SET  
TG79MG-010

GRUPPO / CUTTERHEAD SET  
TG79MG-008

# ESEMPI DI PROGRAMMAZIONE

## EXAMPLES OF PROGRAMMING

PROFILO / PROFILE **11**

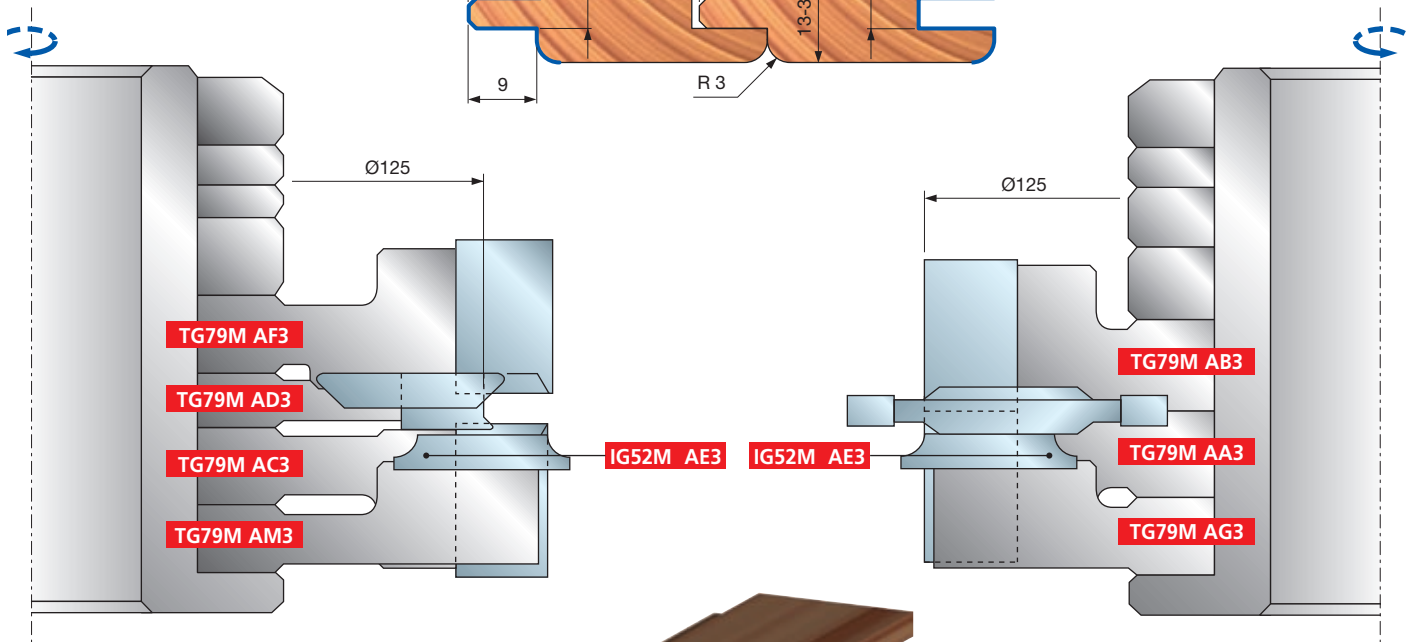
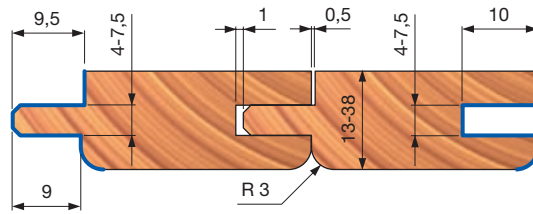


GRUPPO / CUTTERHEAD SET  
TG79MG-035

GRUPPO / CUTTERHEAD SET  
TG79MG-030



PROFILO / PROFILE **12**



GRUPPO / CUTTERHEAD SET  
TG79MG-011

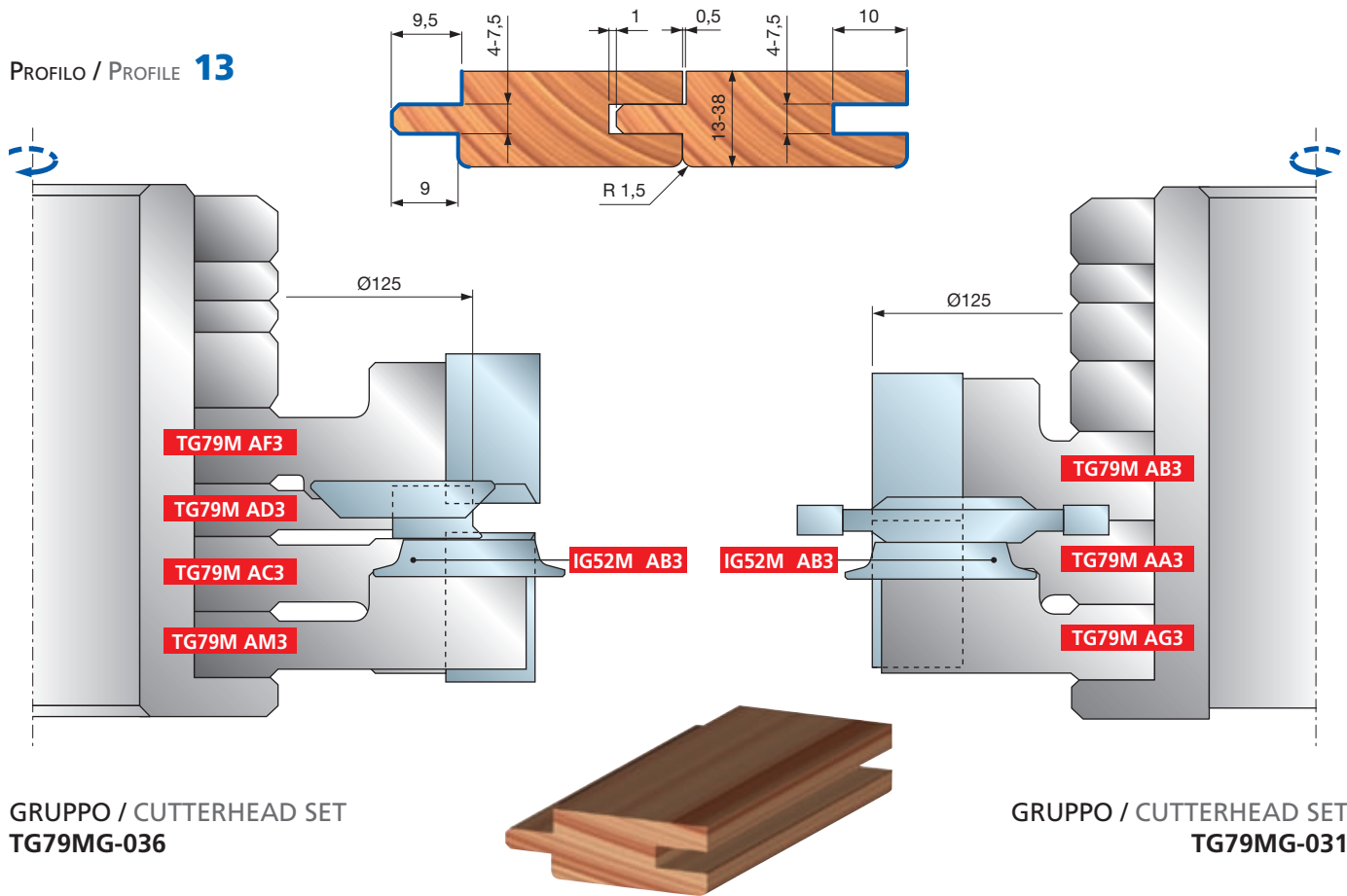
GRUPPO / CUTTERHEAD SET  
TG79MG-009



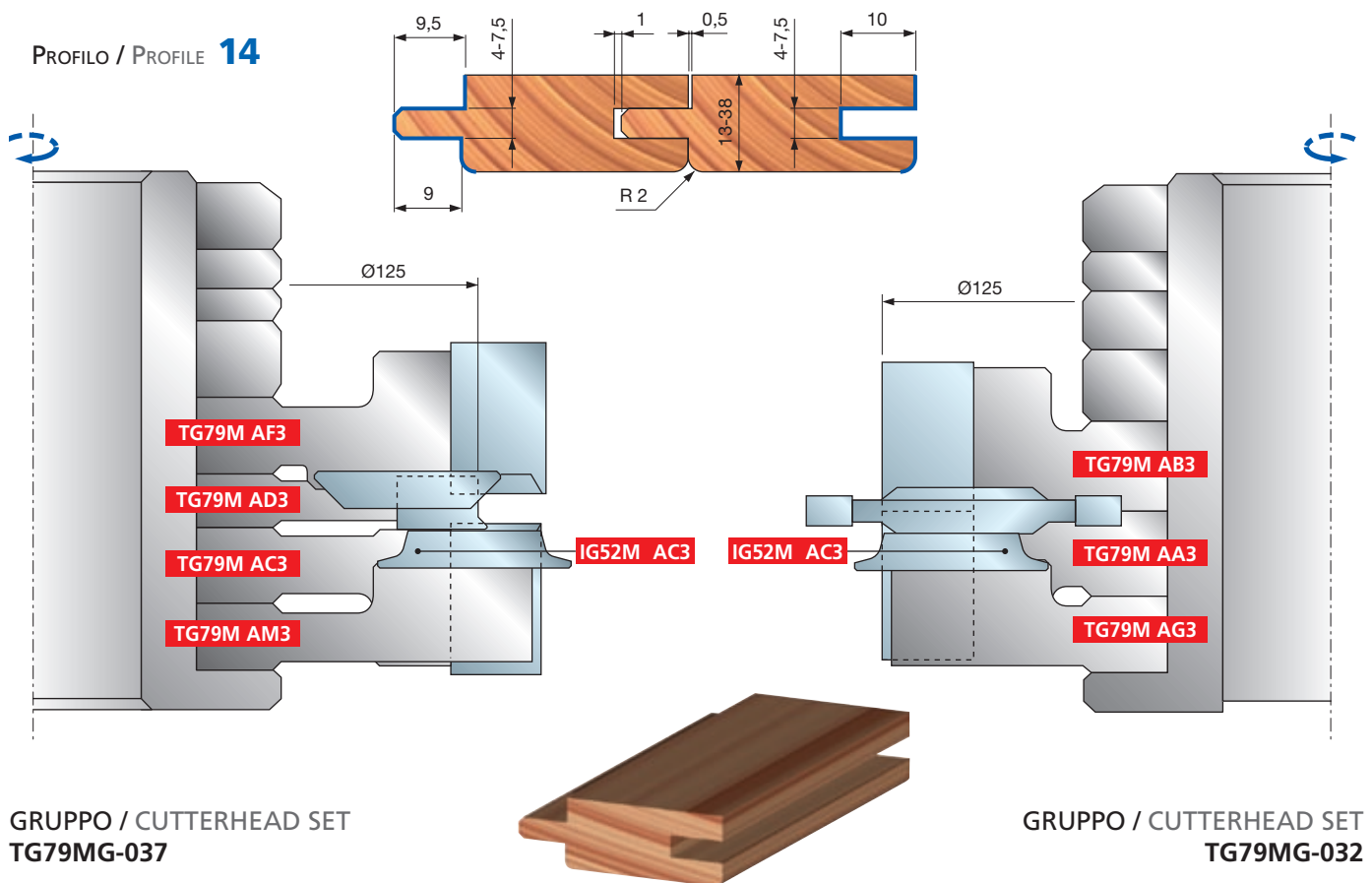
# ESEMPI DI PROGRAMMAZIONE

## EXAMPLES OF PROGRAMMING

PROFILO / PROFILE **13**



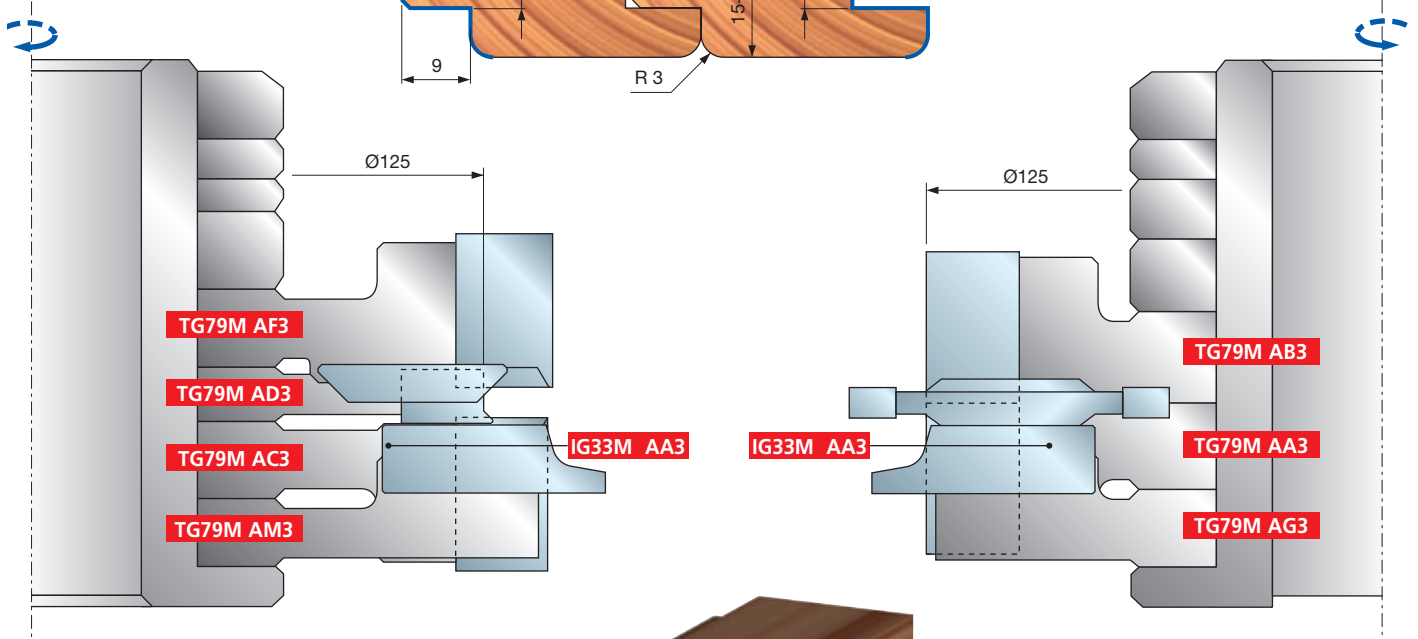
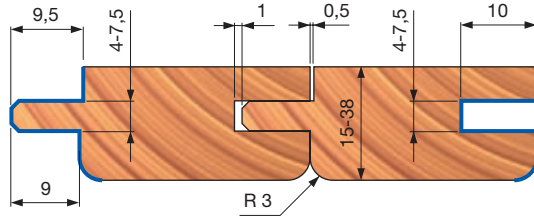
PROFILO / PROFILE **14**





# ESEMPI DI PROGRAMMAZIONE EXAMPLES OF PROGRAMMING

PROFILO / PROFILE **15**

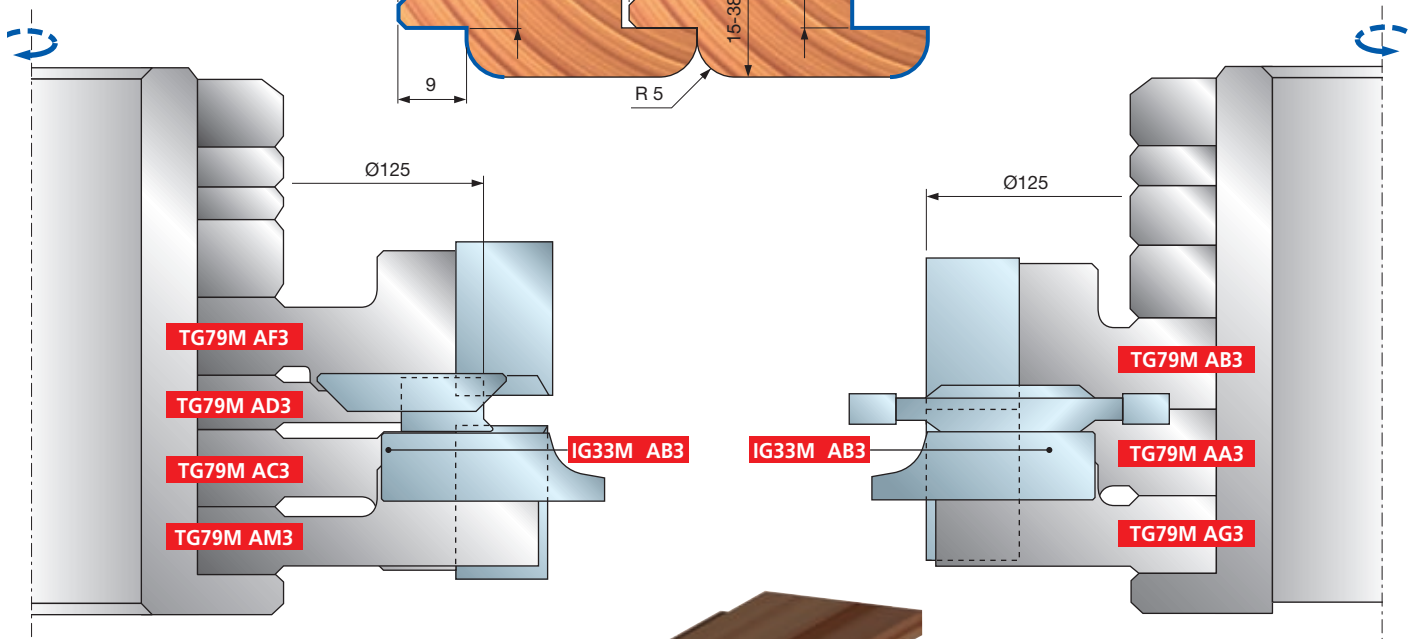
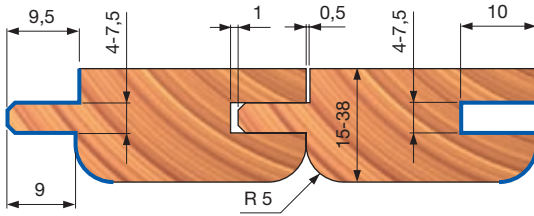


GRUPPO / CUTTERHEAD SET  
TG79MG-038



GRUPPO / CUTTERHEAD SET  
TG79MG-033

PROFILO / PROFILE **16**



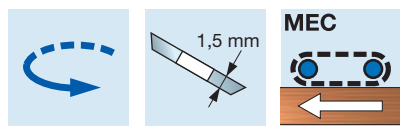
GRUPPO / CUTTERHEAD SET  
TG79MG-039



GRUPPO / CUTTERHEAD SET  
TG79MG-034

# TG99M Z = 4

## GRUPPI DI TESTE PORTACOLTELLI PER PERLINE E PARCHETTI PANELLING AND FLOORING CUTTERHEAD SETS



Profilo	Gruppo per maschio	Gruppo per femmina
Profile	Tongue set	Groove set
A	TG99MG002	TG99MG001
B	TG99MG003	TG99MG001
C	TG99MG009	TG99MG008
D	TG99MG011	TG99MG010
E	TG99MG005	TG99MG004
F	TG99MG007	TG99MG006
G	TG99MG013	TG99MG012
H	TG99MG015	TG99MG014

### Tabella per la scelta dei ricambi Chart for choosing spare parts

Ricambio	per testa - for cutterhead TG99M...											
Spare part	EA3	EB3	EC3	ED3	EE3	EF3	EG3	EH3	EI3	EK3	EL3	
CG26M BA3												
CG26M DA3												
CG26M EA3	•	•	•	•				•				
CN03M BA9	•	•	•	•								
CN03M BB9	•	•	•	•								
CN09M AA9												
CN09MD AD9	•											
CN09MD AO9												
CN09MS AD9		•	•	•	•			•				
VT05M AA9			•	•	•	•			•	•	•	•
VT16M AA9			•	•	•	•			•	•	•	•
VT16M AD9	•	•										
VT16M AE9												
VT19M AB9												
VT19M BB9	•	•	•	•								
VT19M MA9	•	•	•	•								
VT20M AA9												
VT20M MA9												
VT20M NA9	•	•										
IG04MS AA3												
IG16M AA3	•	•										
IG17MD AA3												
IG51M BA3												
IG52M AB3												
RG02M AA3												
SR06MS BB3												
CB03M CA9	•	•	•	•	•	•	•	•	•	•	•	•
CB03M AA9	•	•	•	•	•	•	•	•	•	•	•	•
CB03M BA9	•	•	•	•	•	•	•	•	•	•	•	•

### Utensili per gruppi TG99M Tools for TG99M sets

D	B	d	Z	R	Codice
mm	mm	mm			Code
125	30	50	4	4	TG99M EA3
125	30	50	4	4	TG99M EB3
137	30	50	4	8	TG99M EC3
137	30	50	4	4	TG99M ED3
138	20	50	4	4	TG99M EE3
137	12	50	4	4	TG99M EF3
125	30	50	4	6	TG99M EG3
149	12	50	4	8	TG99M EH3
143	20	50	4	4	TG99M EI3
142	12	50	4	4	TG99M EK3
169	12	50	4	8	TG99M EL3

Parti di ricambio	Dimensioni	Codice
Spare parts	Dimensions	Code
Coltello / Knife	12x12x1,5	CG26M BA3
Cuneo / Wedge	15x10x8	CN09M AA9
Ogiva / Nut	10x11,5x6	VT20M AA9
Vite / Screw	M6x22	VT19M AB9
Coltello / Knife	20x12x1,5	CG26M DA3
Cuneo / Wedge	15x16x8	CN09MD AO9
Vite / Screw	M10x22	VT19M MA9
Ogiva / Nut	15x13,3x10	VT20M MA9
Coltello / Knife	30x12x1,5	CG26M EA3
Cuneo / Wedge	15x26x8	CN09MD AD9
Cuneo / Wedge	15x26x8	CN09MS AD9
Ogiva / Nut	15x13,3x10	VT20M NA9
Ogiva / Nut	15x13,3x10	VT20M MA9
Vite / Screw	M10x22	VT19M MA9
Cuneo / Wedge	28x9,5x8	CN03M BB9
Vite / Screw	M8x22	VT19M BB9
Cuneo / Wedge	14x21,5x22	CN03M BA9
Rasante / Spur	22,86x2,5	RG02M AA3
Vite / Screw	M5x8	VT05M AA9
Inserto rasante / Spur insert	34x9x16	SR06MS BB3
Vite / Screw	M6x13	VT16M AE9
Ins. incastrati smuss. / Beveled grooves ins.	32,7x16x6	IG16M AA3
Vite / Screw	M6x15,5	VT16M AD9
Inserto per incastrati / Grooving insert	40x16x4	IG04MS AA3
Inserto smussato / Beveled insert	35x4x7	IG17MD AA3
Inserto smussatore / Beveling insert	22x16x5 45°	IG51M BA3
Inserto raggiatore / Rounding insert	22x16x5 R=1,5	IG52M AB3
Vite / Screw	M6x14,5	VT16M AA9
Chiave Torx / Torx key	T9	CB03M CA9
Chiave / Allen key	3 x 110	CB03M AA9
Chiave / Allen key	4 x 110	CB03M BA9

### Bussolle per albero destro Sleeves for fence side spindle

Dimensioni	Codice bussola
Dimensions	Sleeve code
Ø50 x 110 x 30	BF10MD AA9
Ø50 x 110 x 35	BF10MD AB9
Ø50 x 110 x 40	BF10MD AC9

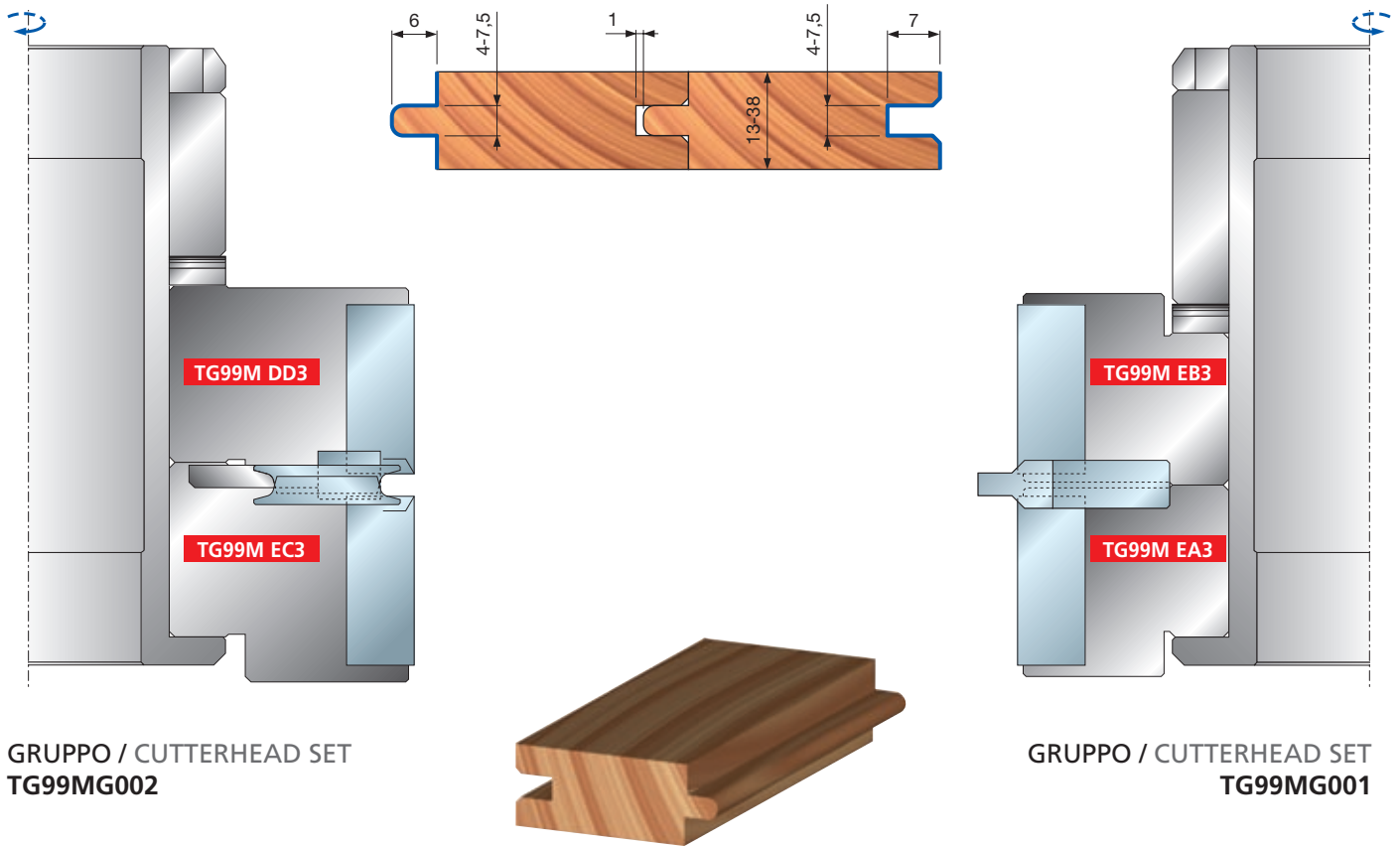
### Bussolle per albero sinistro Sleeves for off side spindle

Dimensioni	Codice bussola
Dimensions	Sleeve code
Ø50 x 110 x 30	BF10MS AA9
Ø50 x 110 x 35	BF10MS AB9
Ø50 x 110 x 40	BF10MS AC9

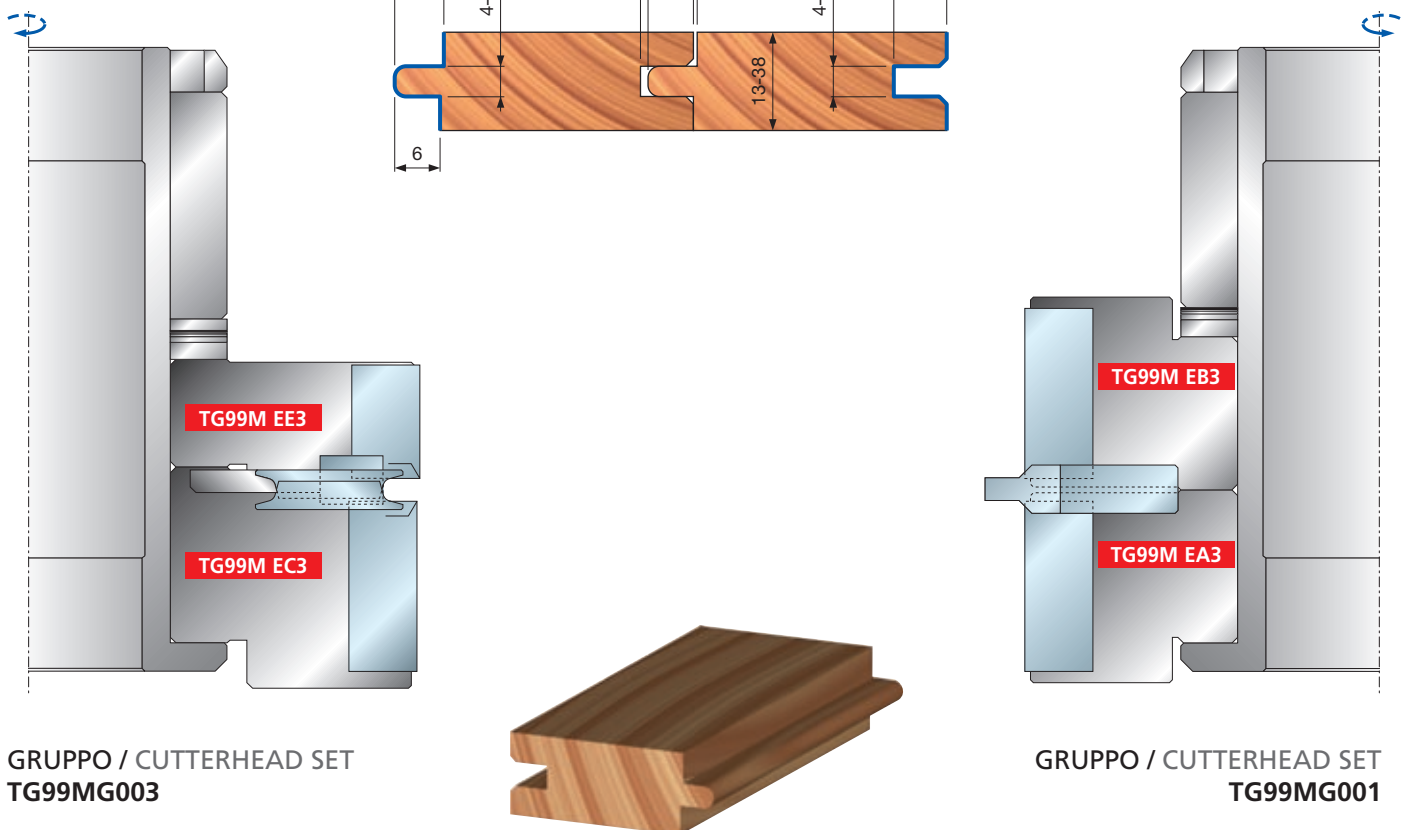
- I codici delle tabelle relative ai gruppi sono da considerarsi esclusa la bussola, la quale andrà ordinata a parte.
- The above codes are intended without sleeve, which should be ordered separately.

# ESEMPI DI PROGRAMMAZIONE EXAMPLES OF PROGRAMMING

PROFILO / PROFILE **A**



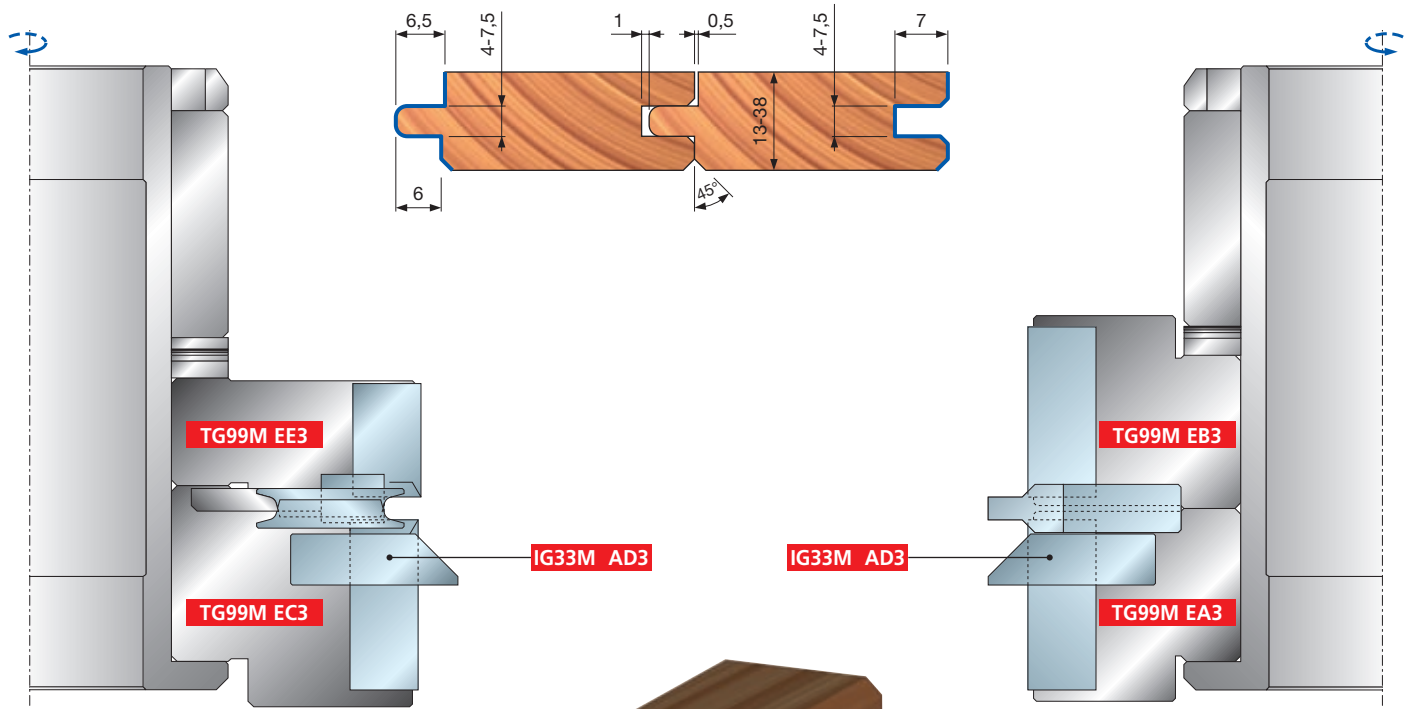
PROFILO / PROFILE **B**



# ESEMPI DI PROGRAMMAZIONE

## EXAMPLES OF PROGRAMMING

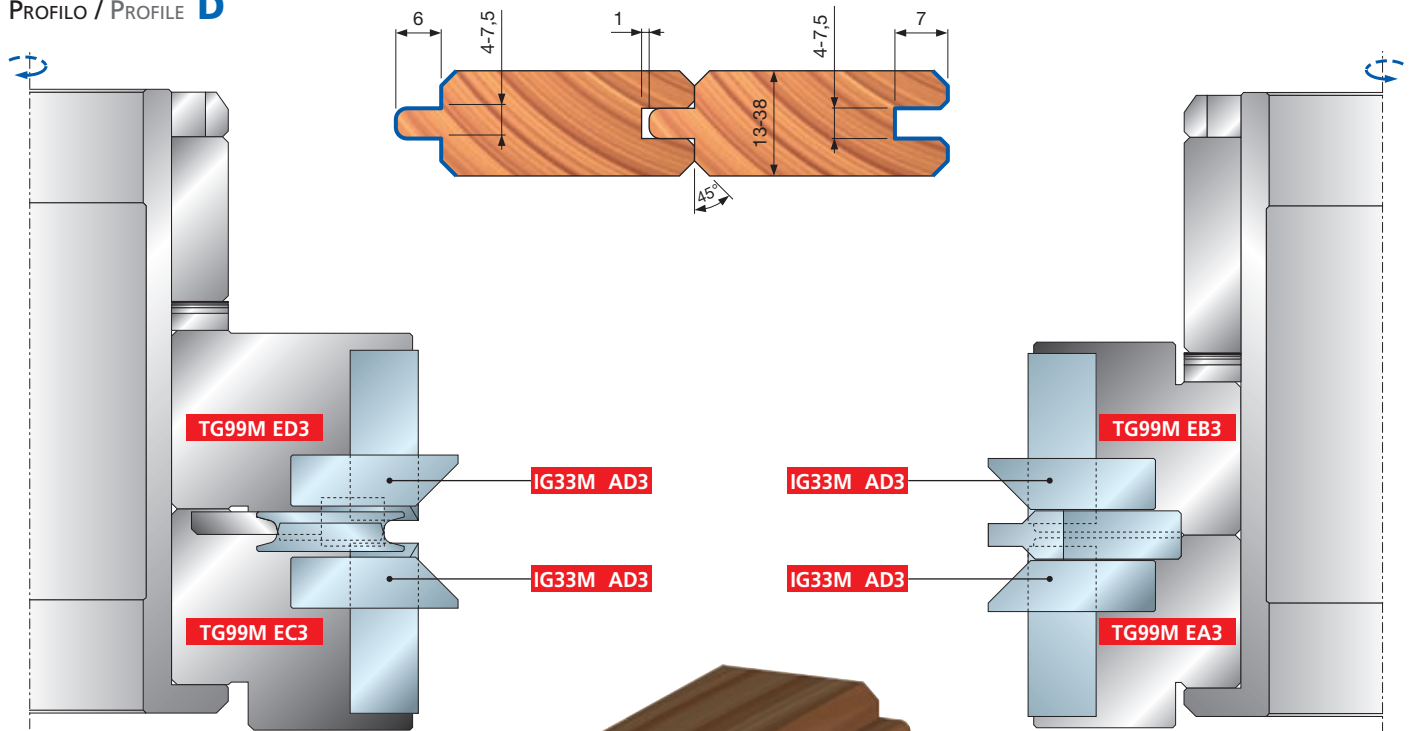
PROFILO / PROFILE **C**



GRUPPO / CUTTERHEAD SET  
TG99MG009

GRUPPO / CUTTERHEAD SET  
TG99MG008

PROFILO / PROFILE **D**



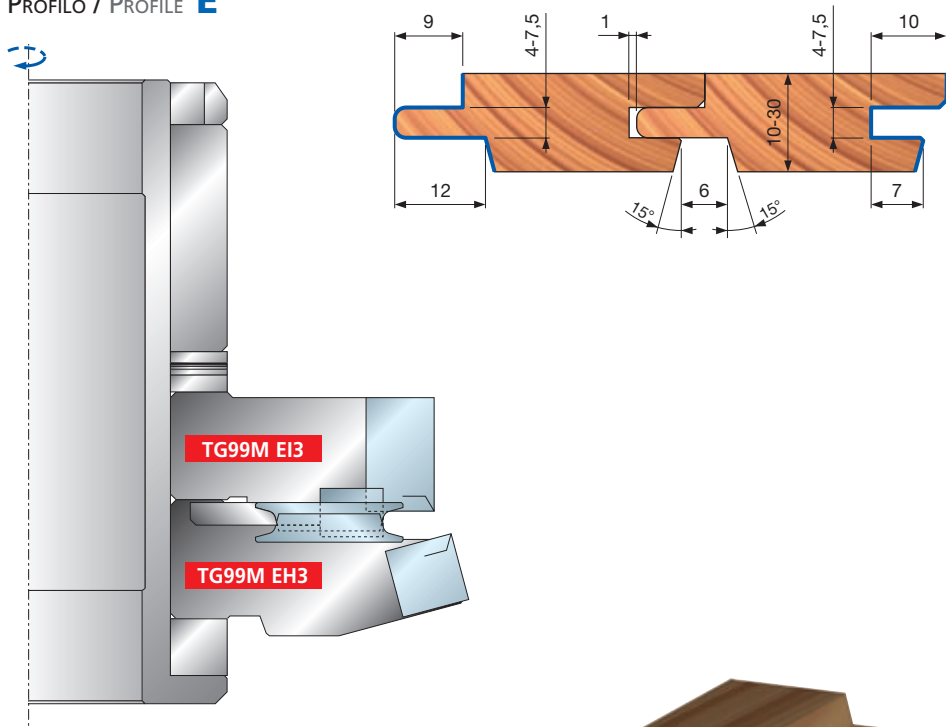
GRUPPO / CUTTERHEAD SET  
TG99MG011

GRUPPO / CUTTERHEAD SET  
TG99MG010

# ESEMPI DI PROGRAMMAZIONE

## EXAMPLES OF PROGRAMMING

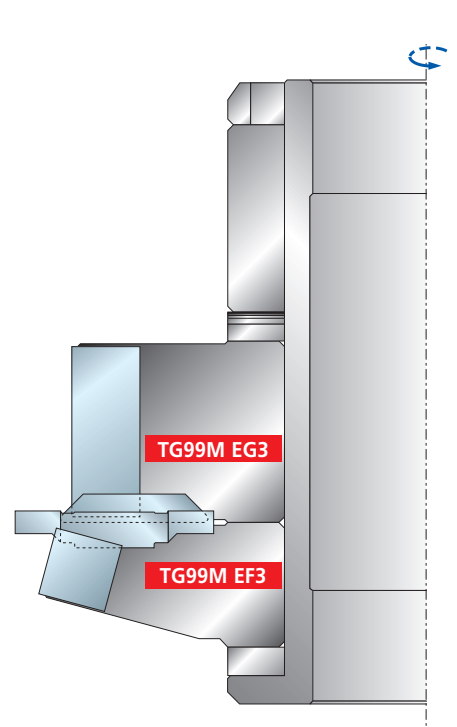
PROFILO / PROFILE **E**



TG99M E13

TG99M EH3

GRUPPO / CUTTERHEAD SET  
TG99MG005

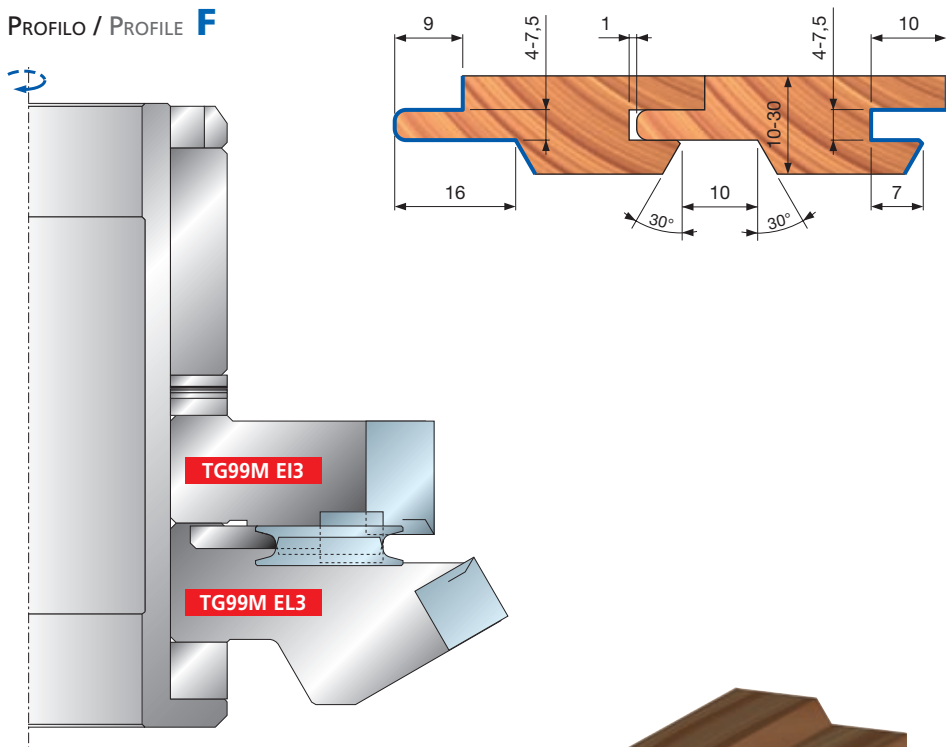


TG99M EG3

TG99M EF3

GRUPPO / CUTTERHEAD SET  
TG99MG004

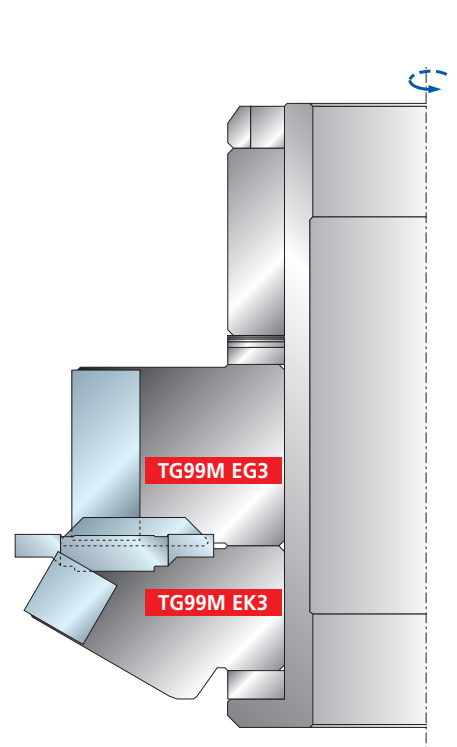
PROFILO / PROFILE **F**



TG99M E13

TG99M EL3

GRUPPO / CUTTERHEAD SET  
TG99MG007



TG99M EG3

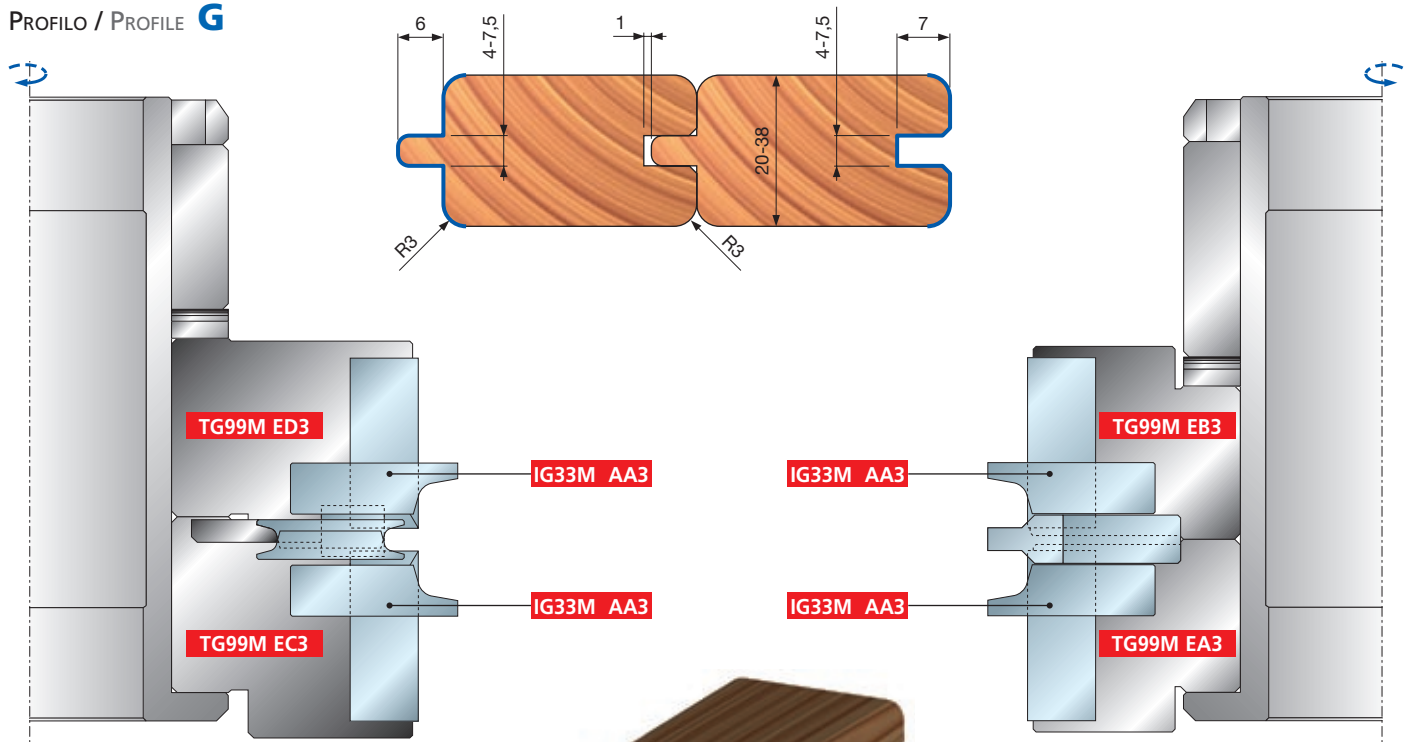
TG99M EK3

GRUPPO / CUTTERHEAD SET  
TG99MG006

# ESEMPI DI PROGRAMMAZIONE

## EXAMPLES OF PROGRAMMING

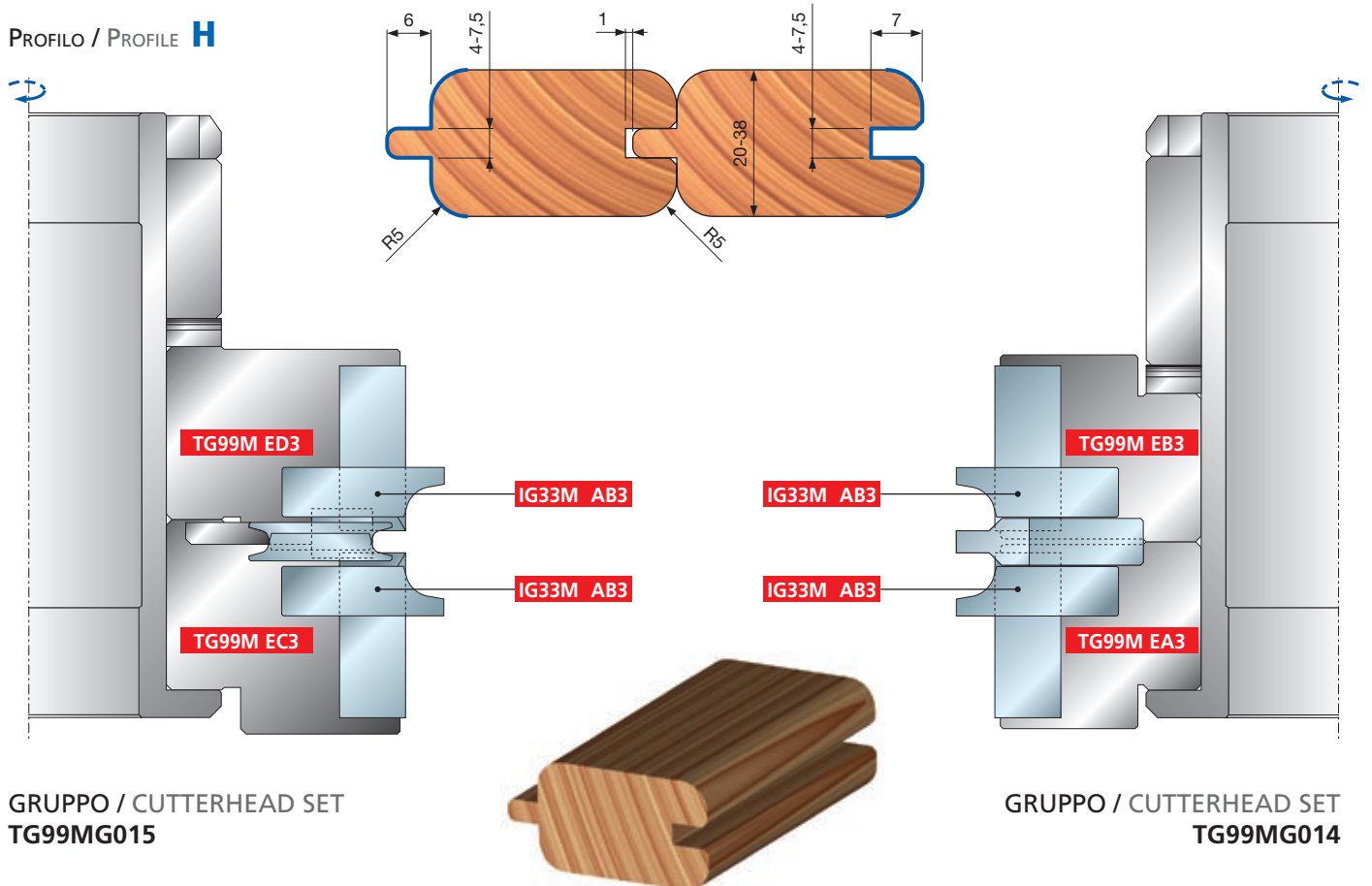
PROFILO / PROFILE **G**



GRUPPO / CUTTERHEAD SET  
TG99MG013

GRUPPO / CUTTERHEAD SET  
TG99MG012

PROFILO / PROFILE **H**



GRUPPO / CUTTERHEAD SET  
TG99MG015

GRUPPO / CUTTERHEAD SET  
TG99MG014

# PROGETTI PER LA COSTRUZIONE DI UN'ANTINA

## CABINET DOOR MANUFACTURING PROJECTS



TW20M BF3



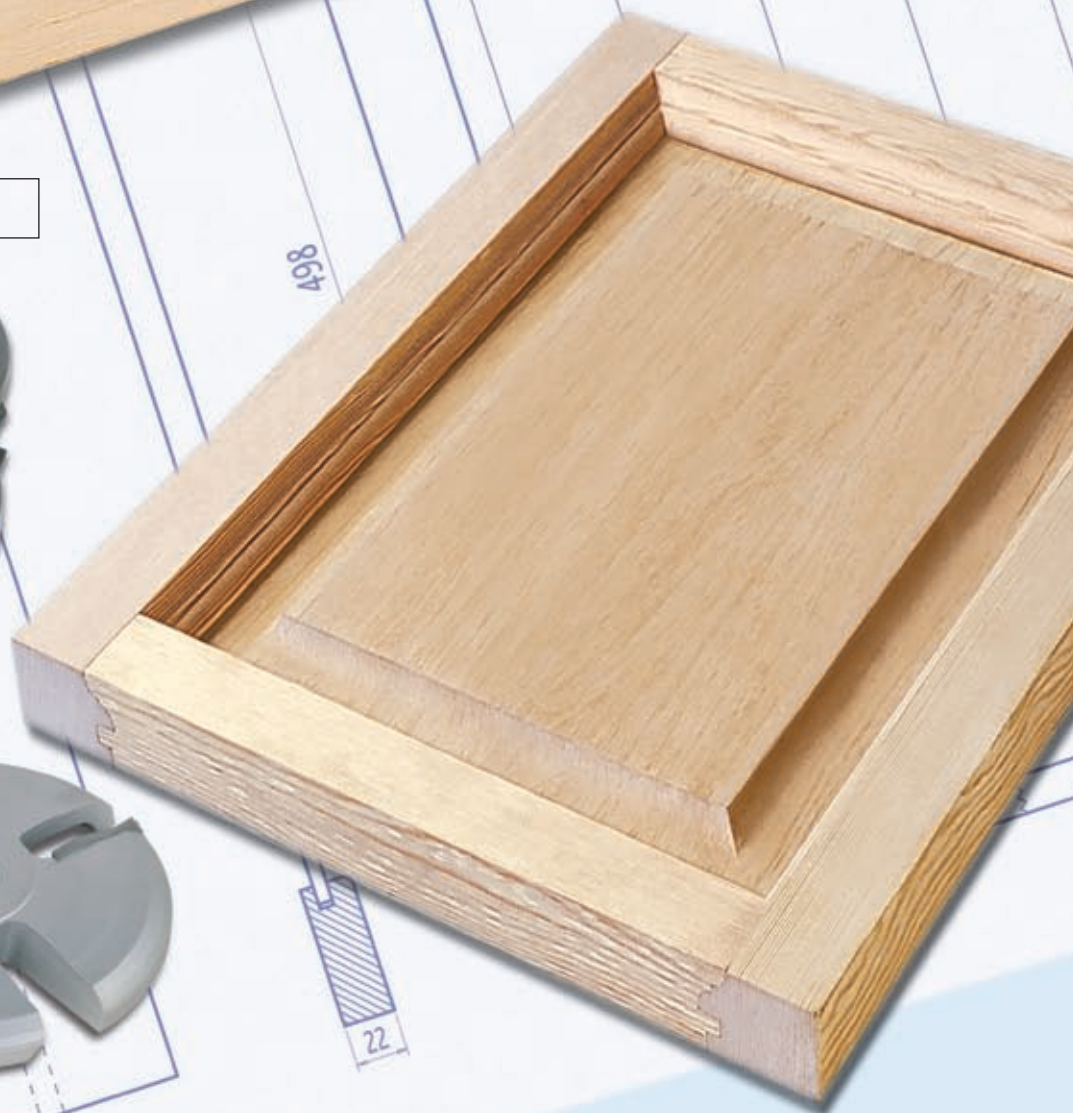
TP44M AB3



TPSEM



TD52M HB3

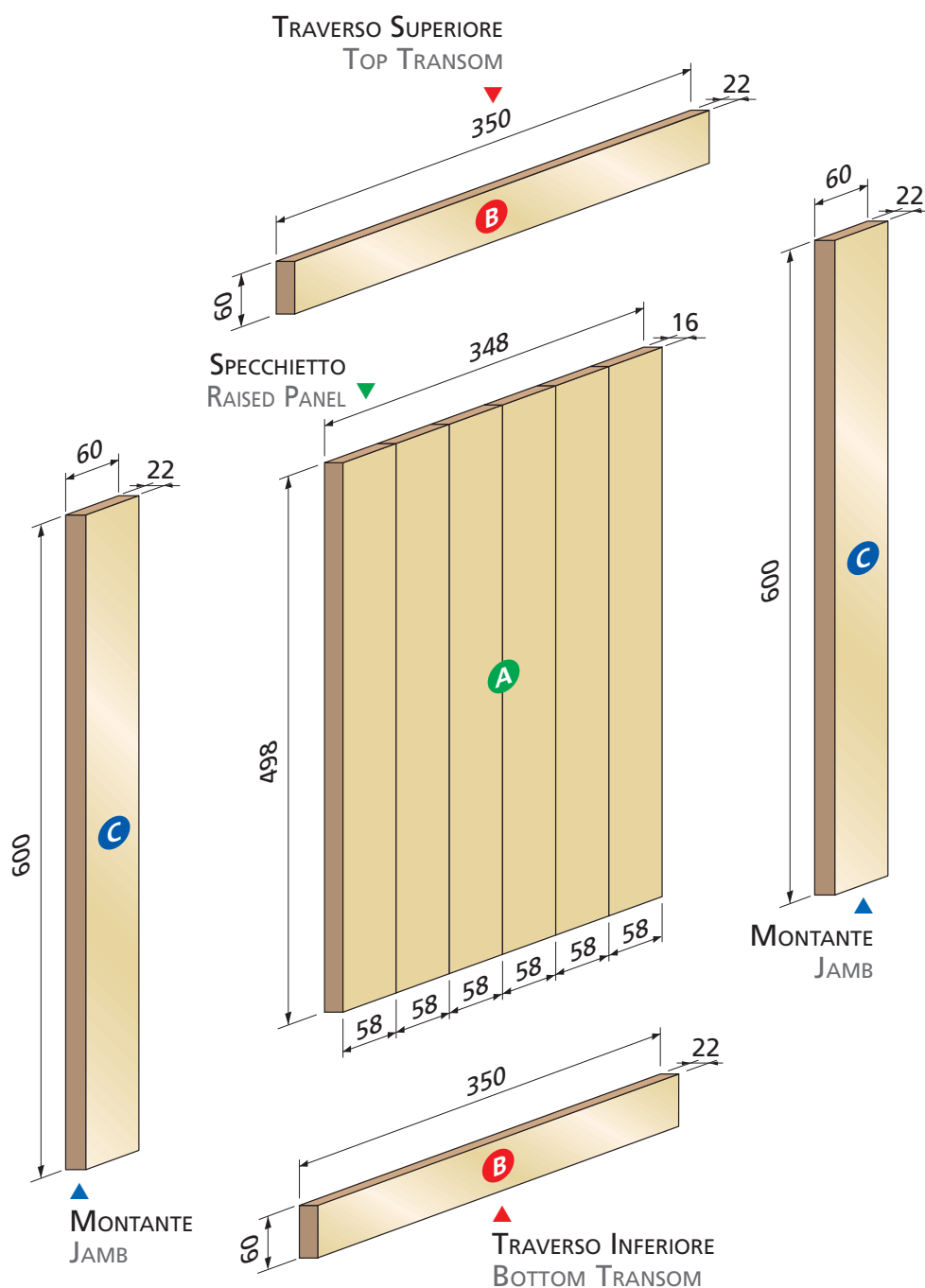


864

22

# PROGETTO DELL'ANTINA

## THE CABINET DOOR PROJECT

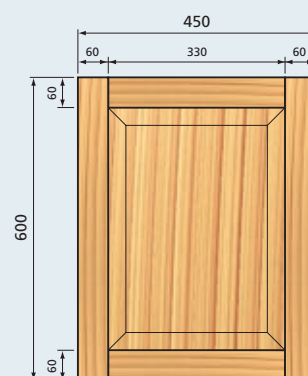


Il progetto che vi proponiamo prevede la costruzione di una antina delle misure di 450 x 600 x 22 mm, realizzata con legno douglas. Per la realizzazione preparare dei listelli di legno perfettamente squadrati delle seguenti misure:

- A** per lo SPECCHIETTO:  
n. 6 listelli 58 x 498 x 16 mm;
- B** per i TRAVERSI:  
n. 2 listelli 350 x 60 x 22 mm;
- C** per i MONTANTI:  
n. 2 listelli 60 x 600 x 22 mm;

Per la lavorazione utilizzare i seguenti utensili **freud**:

art. TW20M BF3;  
art. TP44M AB3 + CP44M AA3



*L'antina assemblata*  
Assembled cabinet door

The project we propose entails the construction of a cabinet door measuring 450 x 600 x 22 mm with douglas wood. For the realization of this project prepare some perfectly sized panels with the following measurements.

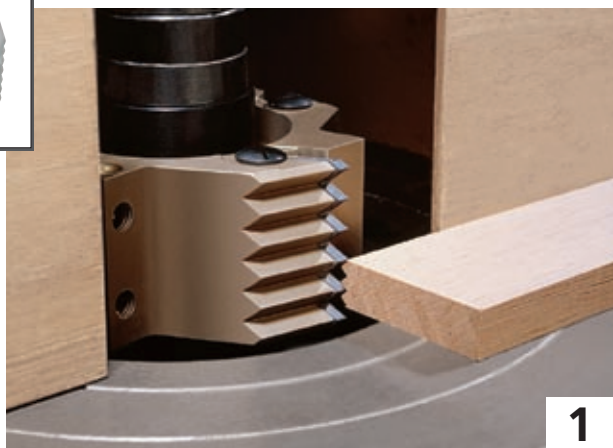
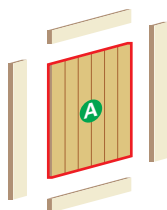
- A** for the RAISED PANEL:  
6 panels 58 x 498 x 16 mm;
- B** for the TOP & BOTTOM TRANSOMS:  
2 panels 350 x 60 x 22 mm;
- C** for the JAMBS:  
2 panels 60 x 600 x 22 mm;

For wood machining use the following **freud** tools:

cod. TW20M BF3;  
cod. TP44M AB3 + CP44M AA3



TW20M BF3



**A** SPECCHIETTO DELL'ANTINA

**- PRIMA FASE -**

**GIUNZIONI**

Come prima fase di lavorazione preparare il pannello per lo specchio dell'antina. Inserire sulla toipie la testa portacoltelli per giunzioni TW20M BF3 e fresare 5 dei 6 listelli da 58 x 498 x 16 mm solo su un lato, lungo vena.

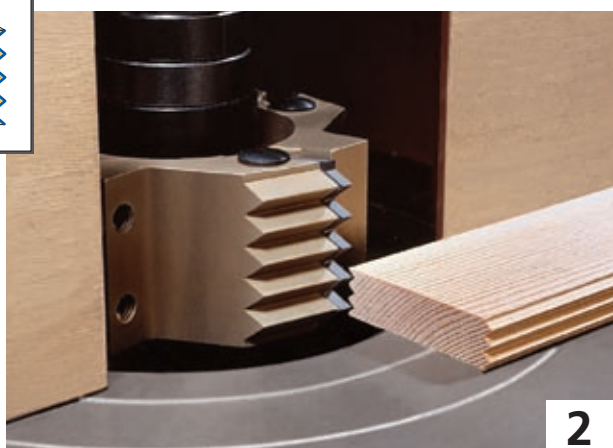
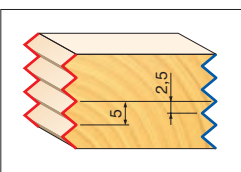
**A** RAISED PANEL

**- FIRST PHASE -**

**JOINING ONE SIDE**

To prepare the inner raised panel, take 6, 58 x 498 x 16 mm pieces. With the TW20M BF3 finger-joint cutterhead on the spindle moulder, mould 5 of the 6 pieces on one side only, long grain.

1



**A** SPECCHIETTO DELL'ANTINA

**- SECONDA FASE -**

**GIUNZIONI**

Successivamente inserire l'anello distanziale di spessore 2,5 mm fornito in dotazione con la testa portacoltelli TW20M BF3. Riprendere quattro dei listelli lavorati precedentemente, piú l'unico non lavorato ed eseguire la seconda fresatura sull'altro lato, lungo vena.

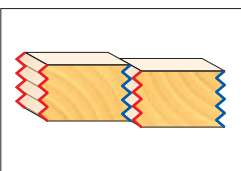
**A** RAISED PANEL

**- SECOND PHASE -**

**JOINING TWO SIDES**

Now insert the 2,5 mm spacer, supplied with the TW20M BF3 fingerjoint cutterhead. Take 4 of the previously worked panels and carry out the second moulding on the opposite side, long grain. Now take the unworked panel and carry out a single moulding on one side, along the grain.

2



**A** SPECCHIETTO DELL'ANTINA

**- TERZA FASE -**

**ASSEMBLAGGIO**

Assemblare ed incollare i listelli lavorati tenendoli uniti con un morsetto. Per una maggiore tenuta del pannello, aver cura di disporre i listelli in modo tale che al momento della giunzione la venatura degli stessi sia contraria.

**A** RAISED PANEL

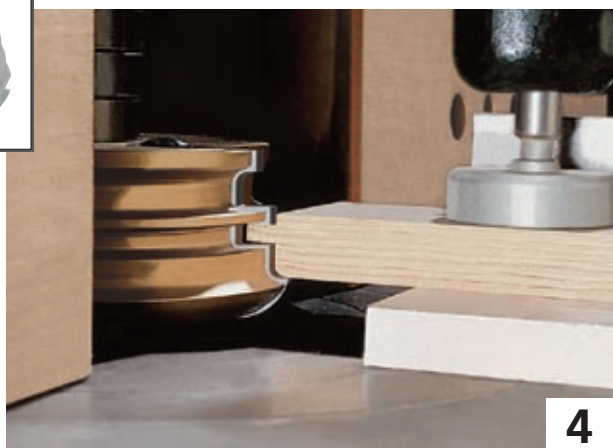
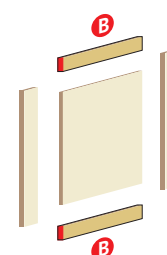
**- THIRD PHASE -**

**ASSEMBLY**

Assemble and glue the panels holding them together with a clamp. In order to obtain a better grip insure that at the moment of joining, the grain of each panel is facing the opposite direction.

3

TP44M AB3



**B** TRAVERSI

**- PRIMA FASE -**

**TENONATURA**

Per la realizzazione dei traversi, utilizzare la testa portacoltelli Freud TP44M AB3. Lavorare i due listelli da 350 x 60 x 22 mm su uno dei lati corti, come illustrato nella Fig. 4.

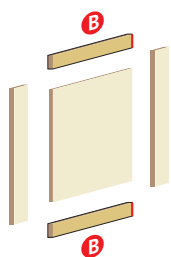
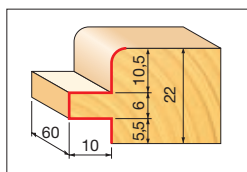
**B** TRANSOMS

**- FIRST PHASE -**

**TENONING**

For the realization of the transoms use the Freud multiprofile cutterhead TP44M AB3. Work the short side of two of the 350x60x22 mm panels as illustrated in Fig. 4.

4

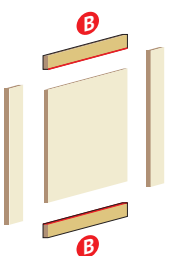
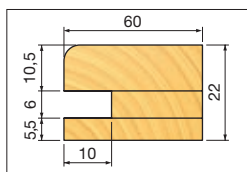


**B TRAVERSI**  
- SECONDA FASE -  
**TENONATURA**

Come illustrato nella Fig. 5, compiere la medesima operazione sull'altro lato corto dei due listelli, avendo cura di appoggiarli sul piano di lavoro sempre sullo stesso lato.

**B TRANSOMS**  
- SECOND PHASE -  
**TENONING**

As illustrated in Fig. 5, complete the same operation on the other short side of the two panels, making sure you always place them the same way up on the work surface.

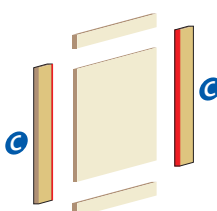
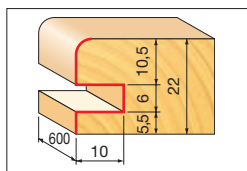


**B TRAVERSI**  
- TERZA FASE -  
**PROFILATURA**

Abbassare la testa portacoltelli in modo da far combaciare la spina del tagliente con il tenone (Fig. 6). Eseguire il profilo su tutta la lunghezza dei due traversi (su uno dei lati lunghi, come illustrato).

**B TRANSOMS**  
- THIRD PHASE -  
**PROFILING**

Lower the cutterhead so as the blades spine may coincide with the tenon (Fig. 6). Carry out the profiling along the entire length of the two transoms (on one of the length sides as illustrated).

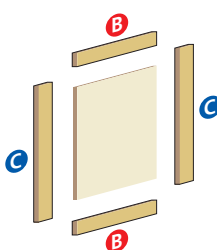
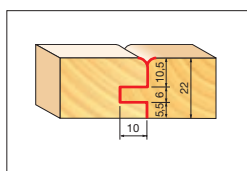


**C MONTANTI**

**PROFILATURA**  
Mantenendo la testa portacoltelli sempre alla stessa altezza, realizzare la profilatura dei due montanti (listelli da 60x600x22 mm) su uno dei lati lunghi, come illustrato nella Fig. 7.

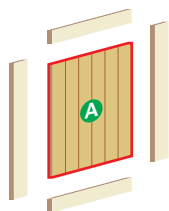
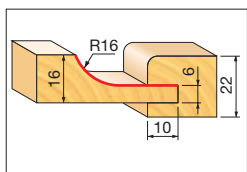
**C JAMBS**

**PROFILING**  
Prepare two 600 x 60 x 22 mm panels. Always maintaining the cutterhead at the same height, carry out the profiling of one length side of each jamb, as illustrated in Fig. 7.



Abbiamo ottenuto i traversi ed i montanti. Se avete eseguito correttamente le precedenti operazioni, avrete ottenuto lo stesso risultato illustrato nella Fig. 8.

We now have our transoms and jamba. If you have correctly followed the previous instructions you will have obtained the same results as illustrated in Fig. 8.



**A SPECCHIETTO DELL'ANTINA**

**PROFILATURA**

Riprendere i listelli assemblati ed incollati precedentemente per eseguire la profilatura dello specchio dell'antina.

Alzare la testa portacoltelli TP44M AB3 in modo da lavorare il pannello con la parte inferiore del coltello profilato, come illustrato nella Fig. 9. Eseguire la lavorazione sui quattro lati, avendo l'accortezza di lavorare per primi i due lati trasverso vena.

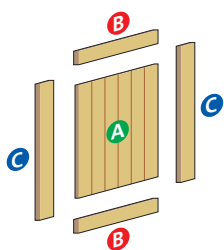
**A RAISED PANEL**

**PROFILING**

Take the previously glued and assembled panels (see Fig. 3) in order to carry out the profiling on the raised panel.

Lift the TP44M AB3 so you can work the panel with the lower part of the profiled cutterhead, as illustrated in Fig. 9.

Work all four sides making sure you work the cross grain sides first.



La Fig. 10 mostra i pezzi ottenuti eseguendo le semplici lavorazioni descritte.

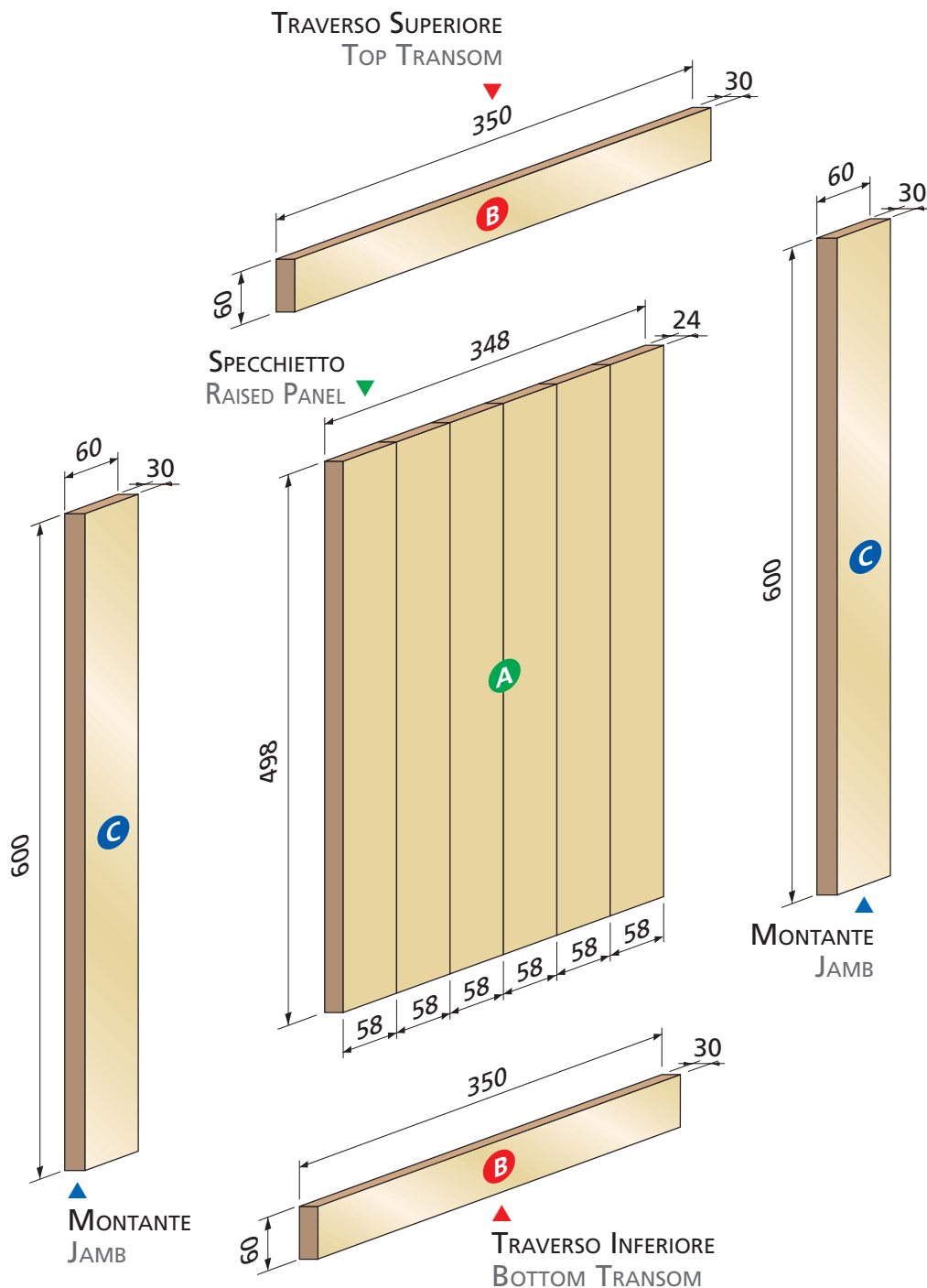
Fig. 10 shows the final piece obtained by following these simple instructions.

*L'antina assemblata.  
Assembled cabinet door.*



# PROGETTO DELL'ANTINA

## THE CABINET DOOR PROJECT

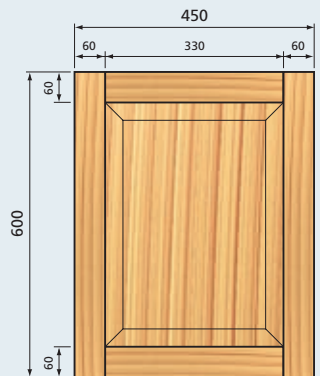


Il progetto che vi proponiamo prevede la costruzione di una antina delle misure di 450 x 600 x 30 mm, realizzata con legno douglas. Per la realizzazione preparare dei listelli di legno perfettamente squadrati delle seguenti misure:

- A** per lo SPECCHIETTO:  
n. 6 listelli 58 x 498 x 24 mm;
- B** per i TRAVERSI:  
n. 2 listelli 350 x 60 x 30 mm;
- C** per i MONTANTI:  
n. 2 listelli 60 x 600 x 30 mm;

Per la lavorazione utilizzare i seguenti utensili **freud**:

- art. TW20M BF3;
- art. TPSEM BB3;
- art. TD52M HB3.



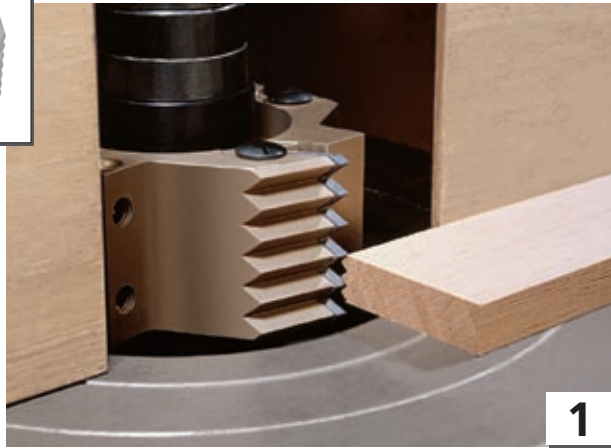
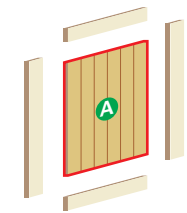
L'antina assemblata  
Assembled cabinet door

The project we propose entails the construction of a cabinet door measuring 450 x 600 x 30 mm with douglas wood. For the realization of this project prepare some perfectly sized panels with the following measurements.

- A** for the RAISED PANEL:  
6 panels 58 x 498 x 24 mm;
- B** for the TRANSOMS:  
2 panels 350 x 60 x 30 mm;
- C** for the JAMBS:  
2 panels 60 x 600 x 30 mm;

For wood machining use the following **freud** tools:

- cod. TW20M BF3;
- cod. TPSEM BB3;
- cod. TD52M HB3.



1

**A SPECCHIETTO DELL'ANTINA**

**- PRIMA FASE -**

**GIUNZIONI**

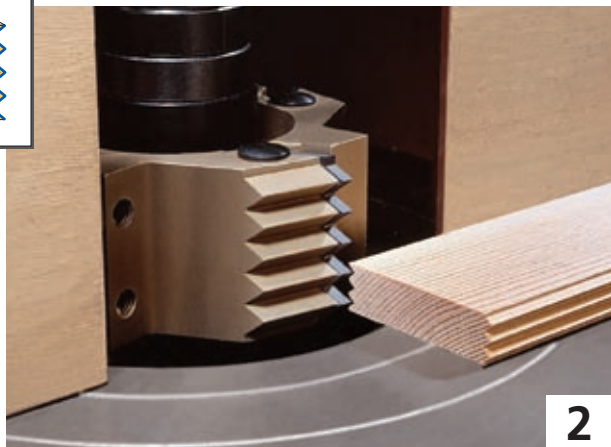
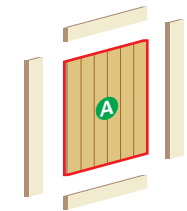
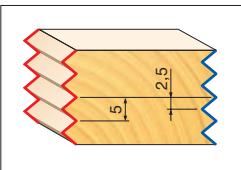
Come prima fase di lavorazione preparare il pannello per lo specchietto dell'antina. Inserire sulla toupie la testa portacoltelli per giunzioni TW20M BF3 e fresare 5 dei 6 listelli da 58 x 498 x 24 mm solo su un lato, lungo vena.

**A RAISED PANEL**

**- FIRST PHASE -**

**JOINING ONE SIDE**

To prepare the inner raised panel, take the 6,58 x 498 x 24 mm pieces. With the TW20M BF3 finger-joint cutterhead on the spindle moulder, mould 5 of the 6 pieces on one side only, long grain.



2

**A SPECCHIETTO DELL'ANTINA**

**- SECONDA FASE -**

**GIUNZIONI**

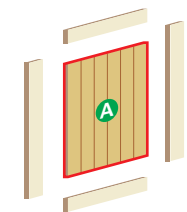
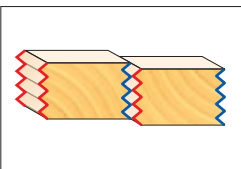
Successivamente inserire l'anello distanziale di spessore 2,5 mm fornito in dotazione con la testa portacoltelli TW20M BF3. Riprendere quattro dei listelli lavorati precedentemente, piú l'unico non lavorato ed eseguire la seconda fresatura sull'altro lato, lungo vena.

**A RAISED PANEL**

**- SECOND PHASE -**

**JOINING TWO SIDES**

Now insert the 2,5 mm spacer, supplied with the TW20M BF3 fingerjoint cutterhead. Take 4 of the previously worked panels and carry out the second moulding on the opposite side, long grain. Now take the unworked panel and carry out a single moulding on one side, along the grain.



3

**A SPECCHIETTO DELL'ANTINA**

**- TERZA FASE -**

**ASSEMBLAGGIO**

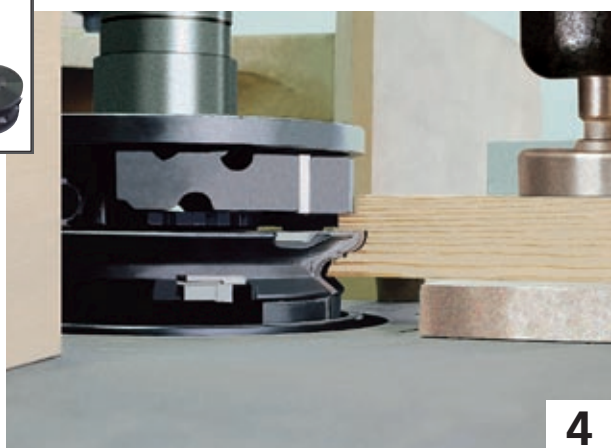
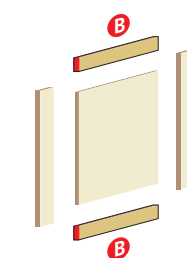
Assemblare ed incollare i listelli lavorati tenendoli uniti con un morsetto. Per una maggiore tenuta del pannello, aver cura di disporre i listelli in modo tale che al momento della giunzione la venatura degli stessi sia contraria.

**A RAISED PANEL**

**- THIRD PHASE -**

**ASSEMBLY**

Assemble and glue the panels holding them together with a clamp. In order to obtain a better grip insure that at the moment of joining, the grain of each panel is facing the opposite direction.



4

**B TRAVERSI**

**- PRIMA FASE -**

**TENONATURA**

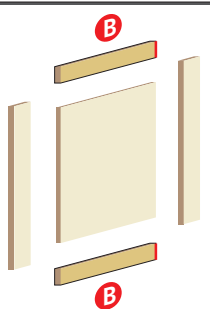
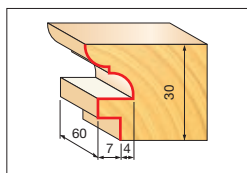
Per la realizzazione dei traversi, utilizzare la testa portacoltelli Freud TPSEM BB3, DB3, CB3. Lavorare i due listelli da 350 x 60 x 30 mm su uno dei lati corti, come illustrato nella Fig. 4.

**B TRANSOMS**

**- FIRST PHASE -**

**TENONING**

For the realization of the transoms use the Freud multiprofile cutterhead TPSEM BB3, DB3, CB3. Work the short side of two of the 350x60x30 mm panels as illustrated in Fig. 4.



**B TRAVERSI**

**- SECONDA FASE -**

**TENONATURA**

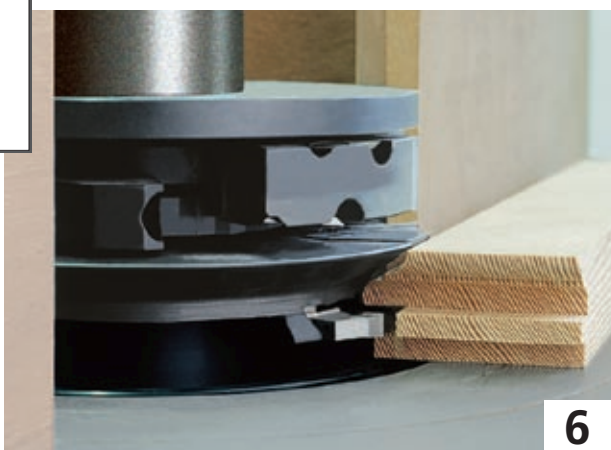
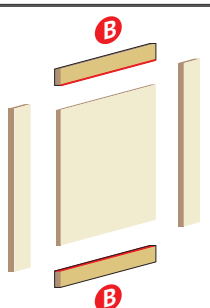
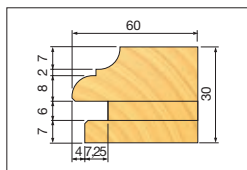
Come illustrato nella Fig. 5, compiere la medesima operazione sull'altro lato corto dei due listelli, avendo cura di appoggiarli sul piano di lavoro sempre sullo stesso lato.

**B TRANSOMS**

**- SECOND PHASE -**

**TENONING**

As illustrated in Fig. 5, complete the same operation on the other short side of the two panels, making sure you always place them the same way up on the work surface.



**B TRAVERSI**

**- TERZA FASE -**

**PROFILATURA**

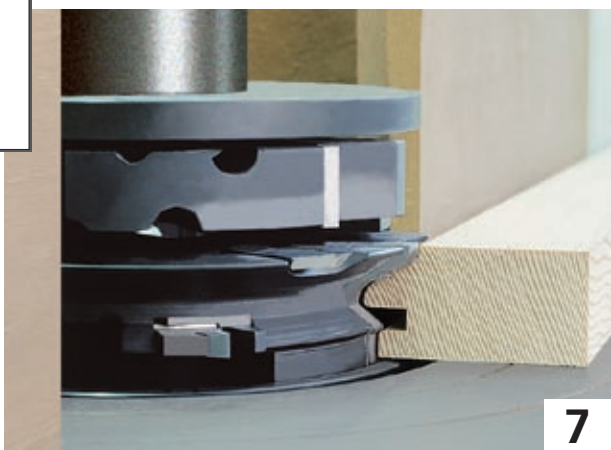
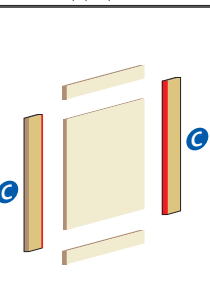
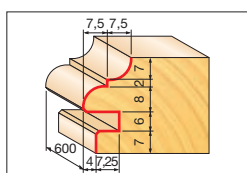
Abbassare il gruppo testa portacoltelli in modo da far combaciare la spina del tagliente con il tenone eseguito sui traversi (Fig.6). Eseguire il profilosu tutta la lunghezza dei due traversi (su uno dei lati lunghi, come illustrato).

**B TRANSOMS**

**- THIRD PHASE -**

**PROFILING**

Lower the cutterhead set so as the blades spine may coincide with the tenon (Fig. 6). Carry out the profiling along the entire length of the two transoms (on one of the length sides as illustrated).



**C MONTANTI**

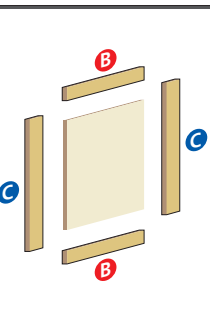
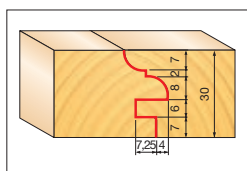
**PROFILATURA**

Mantenendo il gruppo testa portacoltelli sempre alla stessa altezza, realizzare la profilatura dei due montanti (listelli da 60 x 600 x 30 mm) su uno dei lati lunghi, come illustrato nella Fig. 7.

**C JAMBS**

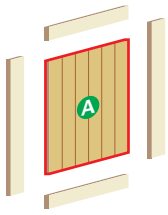
**PROFILING**

Prepare two 600 x 60 x 30 mm panels. Always maintaining the cutterhead set at the same height, carry out the profiling of one length side of each jamb, as illustrated in Fig. 7.



Abbiamo ottenuto i traversi ed i montanti. Se avete eseguito correttamente le precedenti operazioni, avrete ottenuto lo stesso risultato illustrato nella Fig. 8.

We now have our transoms and jambs. If you have correctly followed the previous instructions you will have obtained the same results as illustrated in Fig. 8.



**A SPECCHIETTI**

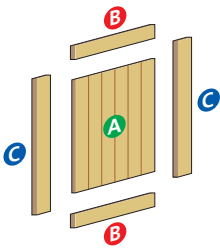
**- PRIMA FASE -  
PROFILATURA**

Posizionare l'articolo TD52M HB3 sulla toupe. Lavorare su tutti i lati i due pannelli preparati precedentemente (vedi punti 1-2-3), avendo cura di fresare per primi i due lati lungo vena.

**A INNER RAISED PANELS**

**- FIRST PHASE -  
PROFILING**

Position item code TD52M HB3 on the spindle moulder. Work the two previously prepared panels on all sides (steps 1-2-3), making sure that you first machine the two sides along the grain.



La Fig. 10 mostra i pezzi ottenuti eseguendo le semplici lavorazioni descritte.

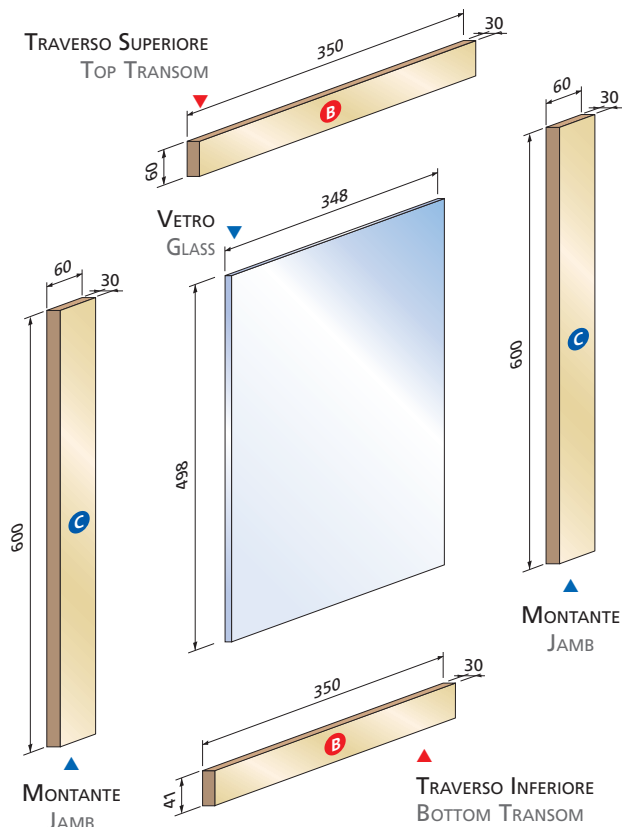
Fig. 10 shows the final piece obtained by following these simple instructions.



L'antina assemblata.  
Assembled cabinet door.

# PROGETTO DELL'ANTINA CON PROFILO VETRO

## CABINET DOOR PROJECT WITH GLASS



Il progetto che vi proponiamo prevede la costruzione di un'antina delle misure di 450 x 600 x 30 mm, realizzata con legno douglas.

Per la realizzazione preparare dei listelli di legno perfettamente squadrati delle seguenti misure:

**B** per i TRAVERSI:  
n. 2 listelli 350 x 60 x 30 mm;

**C** per i MONTANTI:  
n. 2 listelli 60 x 600 x 30 mm;

Per la lavorazione utilizzare i seguenti utensili **freud**:  
art. TPSEM BB3

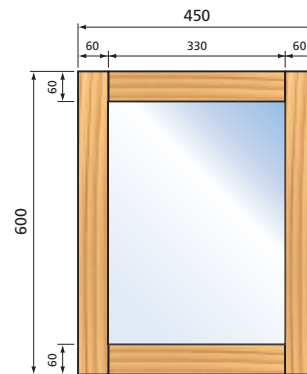
The project we propose entails the construction of a cabinet door measuring 450 x 600 x 30 mm with douglas wood.

For the realization of this project prepare some perfectly sized panels with the following measurements.

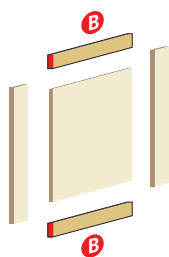
**B** for the TRAVERSI:  
2 panels 350 x 60 x 30 mm;

**C** for the MONTANTI:  
2 panels 60 x 600 x 30 mm;

For wood machining use the following **freud** tools:  
cod. TPSEM BB3



L'antina assemblata  
Assembled cabinet door



1

### **B** TRAVERSI

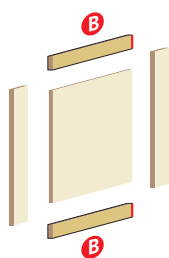
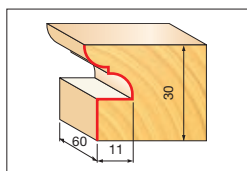
#### - PRIMA FASE - TENONATURA

Per la realizzazione dei traversi, utilizzare la testa portacoltelli Freud TPSEM BB3, DB3, CB3. Lavorare i due listelli da 350x60x30 mm su uno dei lati corti, come illustrato nella Fig. 1.

### **B** TRAVERSI

#### - FIRST PHASE - TENONING

For the realization of the transoms use the Freud multiprofile cutterhead TPSEM BB3, DB3, CB3. Work the short side of two of the 350x60x30 mm panels as illustrated in Fig. 1.



2

### **B** TRAVERSI

#### - SECONDA FASE - TENONATURA

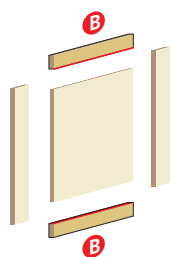
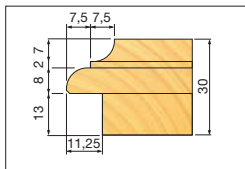
Come illustrato nella Fig. 2, compiere la medesima operazione sull'altro lato corto dei due listelli, avendo cura di appoggiarli sul piano di lavoro sempre sullo stesso lato.

### **B** TRAVERSI

#### - SECOND PHASE - TENONING

As illustrated in (Fig. 2), complete the same operation on the other short side of the two panels, making sure you always place them the same way up on the work surface.





### B TRAVERSI

#### - TERZA FASE -

##### PROFILATURA

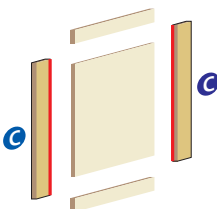
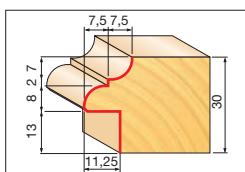
Abbassare la testa portacolteili in modo da far combaciare il rasante del-la testa TPSEM CB3 con la battuta eseguita sui traversi (Fig. 3). Eseguire il profilo su tutta la lunghezza dei due traversi (su uno dei lati lunghi, come illustrato).

### B TRANSOMS

#### - THIRD PHASE -

##### PROFILING

Lower the TPSEM CB3 so its spur may coincide with the rebate carried out on the transoms (Fig. 3). Carry out the profiling along the entire length of the two transoms (on one of the length sides as illustrated).



### C MONTANTI

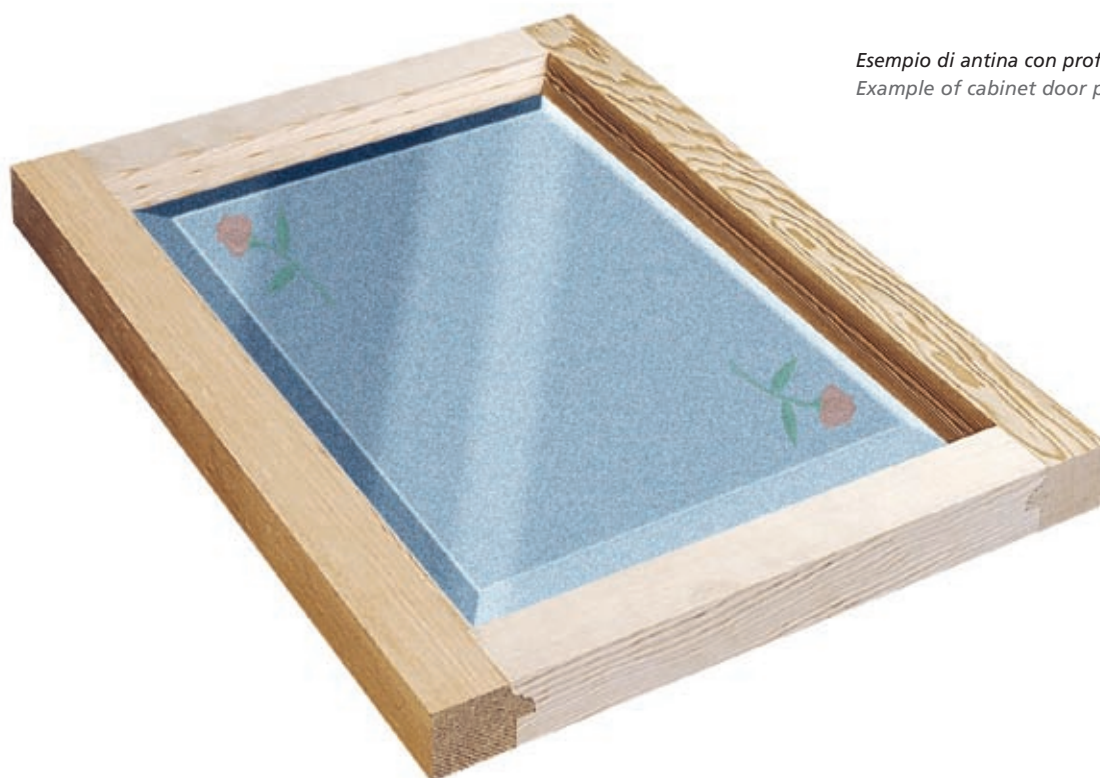
#### PROFILATURA

Mantenendo la testa portacolteili sempre alla stessa altezza, realizzare la profilatura dei due montanti (listelli da 60 x 600 x 30 mm) su uno dei lati lunghi, come illustrato nella Fig. 4.

### C JAMBS

#### PROFILING

Prepare two 600 x 60 x 30 mm panels. Always maintaining the cutterhead at the same height, carry out the profiling of one length side of each jamb, as illustrated in Fig. 4.

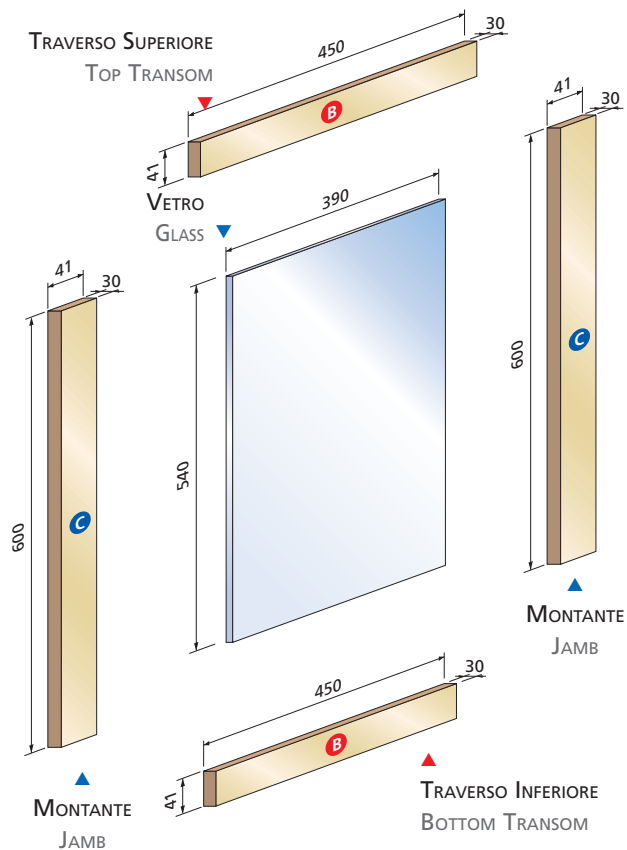


*Esempio di antina con profilo vetro.*

*Example of cabinet door project with glass.*

# PROGETTO DELL'ANTINA CON SPINA APERTA

## CABINET DOOR PROJECT WITH LONG SQUARE TENON SHOULDER



Il progetto che vi proponiamo prevede la costruzione di un'antina delle misure di 450 x 600 x 30 mm, realizzata con legno douglas.

Per la realizzazione preparare dei listelli di legno perfettamente squadri delle seguenti misure:

**B** per i TRAVERSI:  
n. 2 listelli 450 x 41 x 30 mm;

**C** per i MONTANTI:  
n. 2 listelli 41 x 600 x 30 mm;

Per la lavorazione utilizzare i seguenti utensili **freud**:  
art. TPSEM BB3

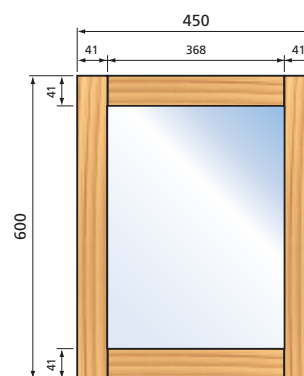
The project we propose entails the construction of a cabinet door measuring 450 x 600 x 30 mm with douglas wood.

For the realization of this project prepare some perfectly sized panels with the following measurements.

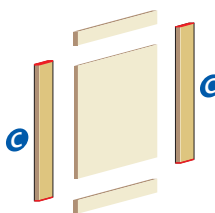
**B** for the TRANSOMS:  
2 panels 450 x 41 x 30 mm;

**C** for the JAMBS:  
2 panels 41 x 600 x 30 mm;

For wood machining use the following **freud** tools:  
cod. TPSEM BB3



L'antina assemblata  
Assembled cabinet door



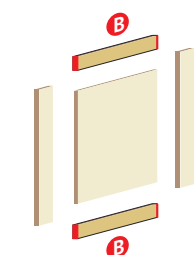
1

### **C** MONTANTI TENONATURA

Posizionare sulla toupie la fresa per tenoni. Utilizzare 2 listelli da 41 x 600 x 30 mm. Realizzare su entrambe le estremità dei due listelli le sedi per i tenoni dei traversi superiore ed inferiore.

### **C** JAMBS TENONING

Position the tenon brazed cutter onto the spindle moulder. Take 2, 41 x 600 x 30 mm pieces. Now groove each end of the top and bottom jambs.



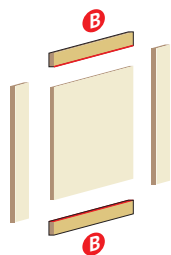
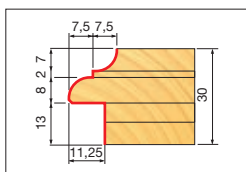
2

### **B** TRAVERSI TENONATURA

Montare il gruppo di teste TPSEM. Posizionare correttamente l'utensile sulla toupie. Utilizzare 2 listelli da 450 x 41 x 30 mm. Eseguire una passata su un lato traverso vena dei due listelli. Ripetere l'operazione sull'altro lato dei traversi.

### **B** TRANSOMS TENONING

Correctly position the cutterhead set TPSEM onto the spindle moulder. Take 2, 450 x 41 x 30 mm pieces. Work one side, cross grain of the two pieces. Repeat the same operation on the other side.



### B TRAVERSI

#### PROFILATURA

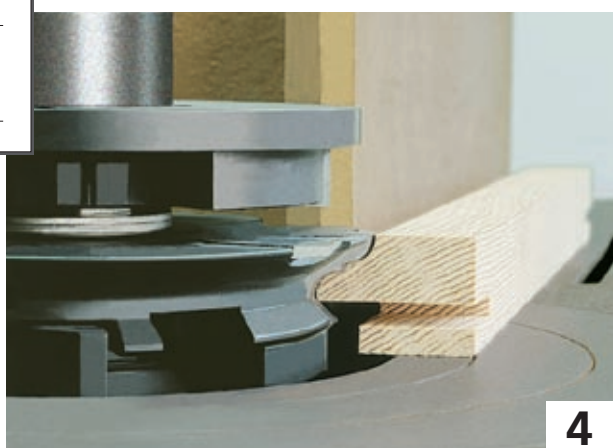
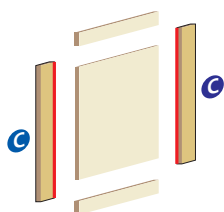
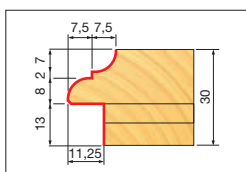
Regolare l'altezza dell'utensile.

Riprendere i traversi e profilarli solo su un lato, lungo vena.

### B TRANSOMS

#### PROFILING

Adjust the tool height. Take the transoms and profile on one side, along the grain.



### C MONTANTI

#### PROFILATURA

Eeguire la stessa lavorazione del punto 3 anche su uno dei lati lunghi dei due montanti.

### C JAMBS

#### PROFILING

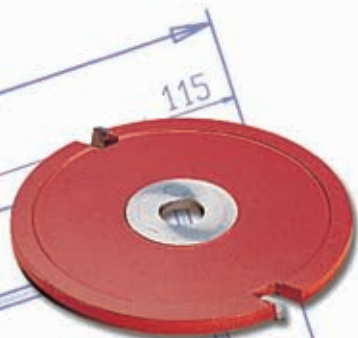
Carry out on one of the length sides of the two jambs the same operation as specified in point 3.



*Con profilo vetro e spina aperta.  
Example of cabinet door with glass  
and long square tenon shoulder.*

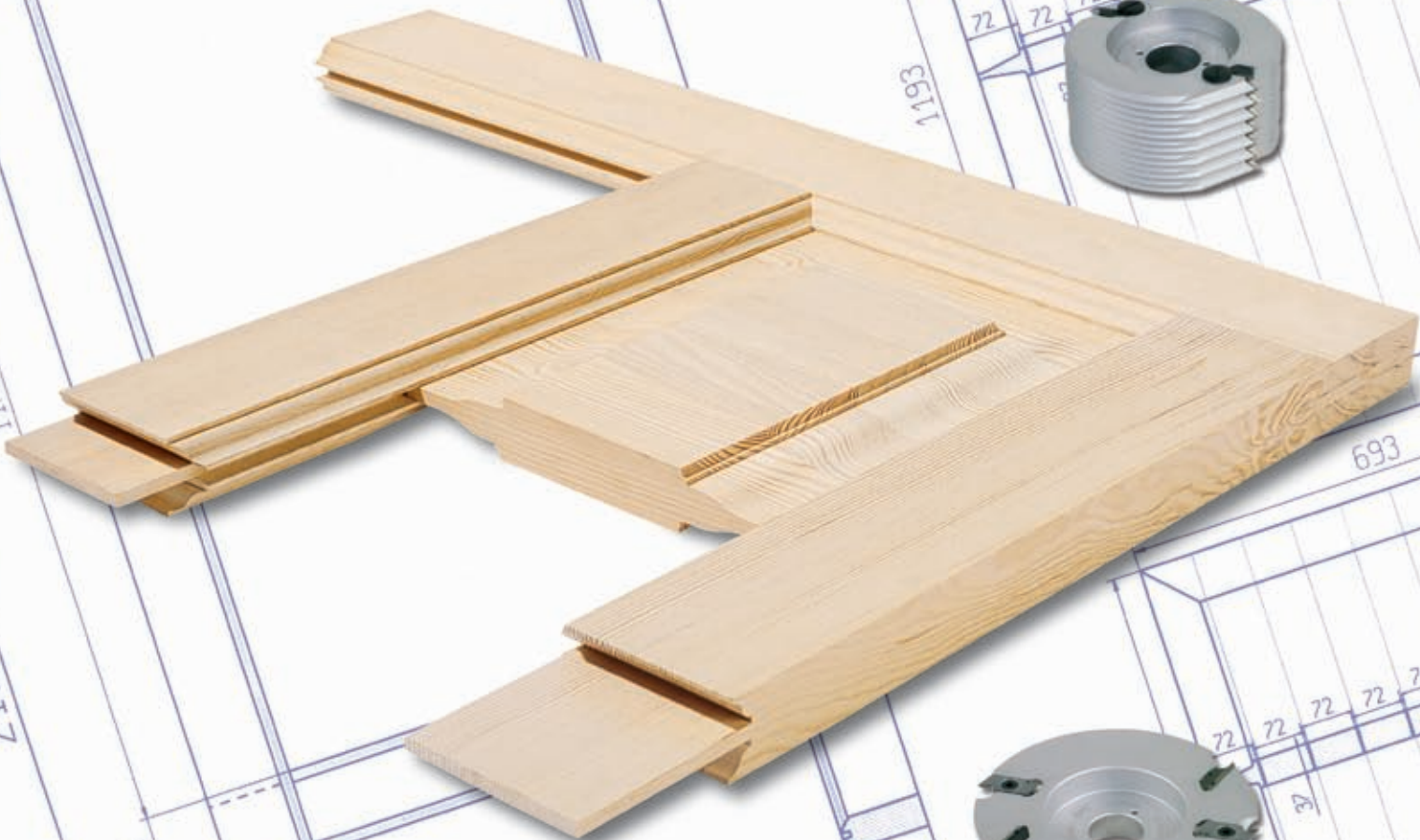
# COSTRUZIONE DI UNA PORTA

## DOOR MANUFACTURING



**Fresa per tenoni**  
Tenoning brazen cutter

**TW23M BF3**



**TD52M HB3**

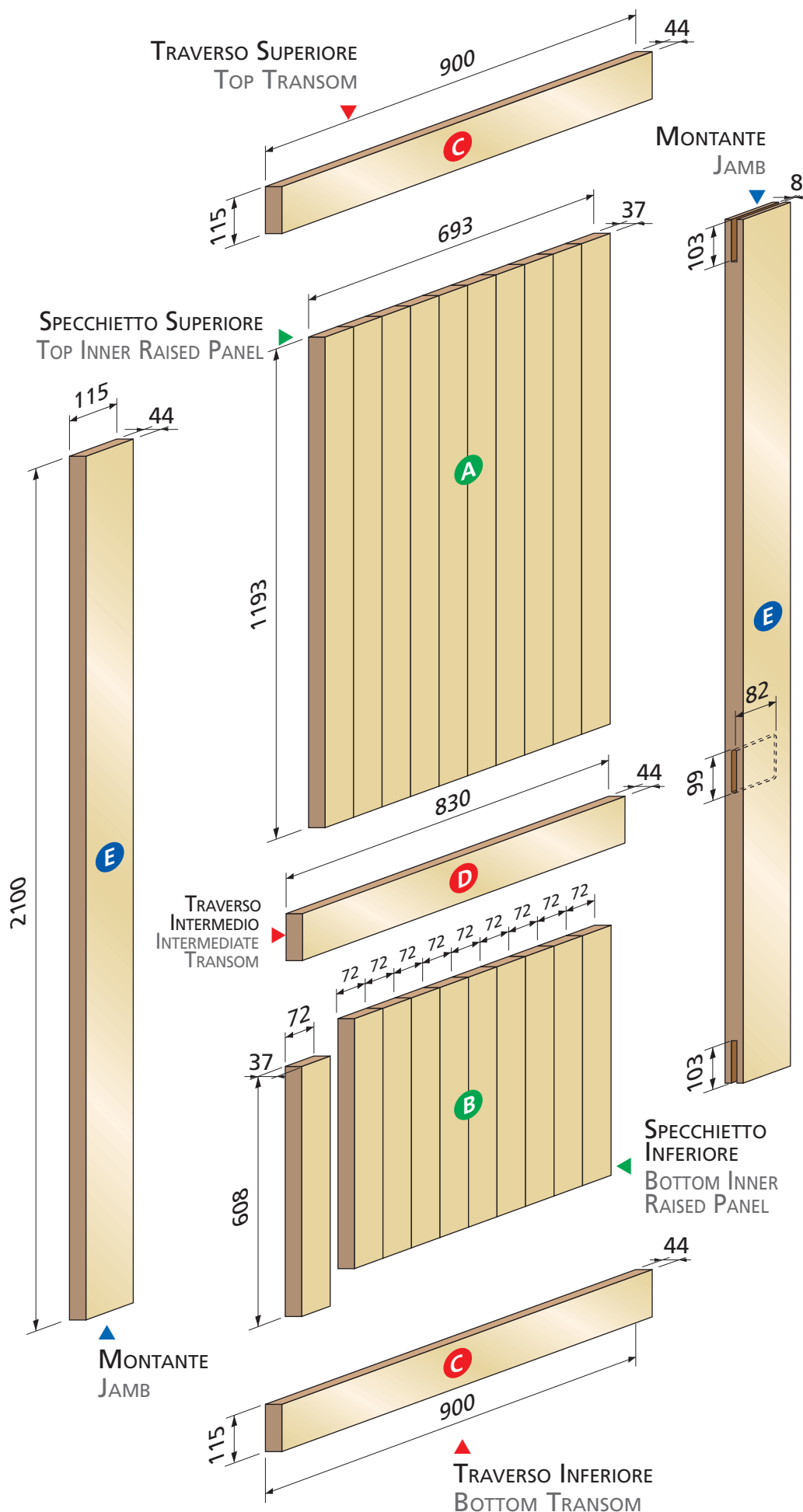


**TP42M AB3**



# PROGETTO DELLA PORTA

## THE DOOR PROJECT



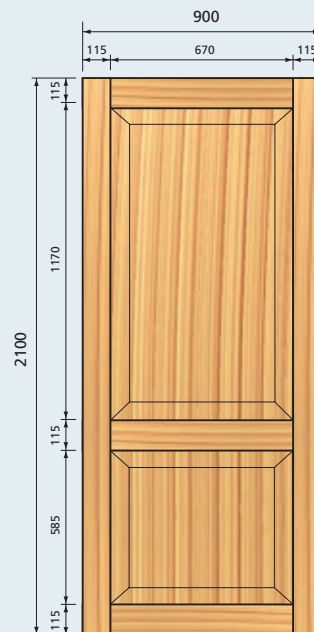
Il nostro progetto riguarda la costruzione di una porta da 2100 x 900 x 44 mm, in legno Douglas.

Per realizzare questo progetto è necessario preparare dei pannelli perfettamente finiti, con le seguenti dimensioni:

- A** per lo SPECCHIETTO SUPERIORE: n. 10 listelli da 72 x 1193 x 37 mm;
- B** per lo SPECCHIETTO INFERIORE: n. 10 listelli da 72 x 608 x 37 mm;
- C** per i TRAVERSI SUPERIORE E INFERIORE: n. 2 listelli da 115 x 900 x 44 mm;
- D** per il TRAVERSO INTERMEDIO: n. 1 pezzo da 115 x 830 x 44 mm;
- E** per i MONTANTI: n. 2 listelli da 115 x 2100 x 44 mm.

Per la lavorazione utilizzare i seguenti utensili **freud** :

art. TW23M BF3;  
 art. TP42M AB3 + CP42M CA3;  
 art. TD52M HB3 + CT52M TB3  
 più una fresa per tenoni e una punta per mortasare.



La porta assemblata  
Assembled door

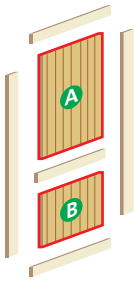
Our project entails the assembling of a 2100 x 900 x 44 mm door in Douglas wood. In order to do so you must prepare a number of perfectly finished wood panels with the following dimensions:

- A** for the TOP INNER RAISED PANEL: no. 10, 72 x 1193 x 37 mm pieces;
- B** for the BOTTOM INNER RAISED PANEL: no. 10, 72 x 608 x 37 mm pieces;
- C** for the TOP AND BOTTOM TRANSOMS: no. 2, 115 x 900 x 44 mm pieces;
- D** for the INTERMEDIATE TRANSOM: no. 1, 115 x 830 x 44 mm piece;
- E** for the JAMBS: no. 2, 115 x 2100 x 44 mm pieces;

For wood machining use a mortising bit, a tenon brazed cutter and the following **freud** tools:

cod. TW23M BF3;  
 cod. TP42M AB3 + CP42M CA3;  
 cod. TD52M HB3 + CT52M TB3.

TW23M BF3

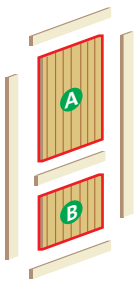
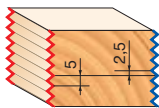


Come prima fase di lavorazione preparare i due pannelli per gli specchietti superiore (A) e inferiore (B) della porta. Inserire sulla toupie la testa portacoltelli per giunzioni cod. TW23M BF3.

- A SPECCHIETTO SUPERIORE**  
Lavorare solo su un lato 9 listelli dei 10 disponibili da 72 x 1193 x 37 mm.
- B SPECCHIETTO INFERIORE**  
Lavorare solo su un lato 9 listelli dei 10 disponibili da 72 x 608 x 37 mm.

First of all prepare the top (A) and bottom (B) inner raised door panels. Mount the finger joint cutterhead item code TW23M BF3 on the spindle moulder.

- A TOP INNER RAISED PANEL**  
Work 9 of the 10, 72 x 1193 x 37 mm pieces on one side only.
- B BOTTOM INNER RAISED PANEL**  
Work 9 of the 10, 72 x 608 x 37 mm pieces on one side only.

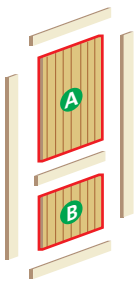
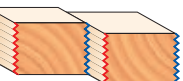


Inserire sull'albero della toupie l'anello distanziale di spessore 2,5 mm, fornito con la testa portacoltelli cod. TW23M BF3.

- A SPECCHIETTO SUPERIORE**  
Riprendere 8 dei 9 pezzi precedentemente utilizzati, più l'unico listello da 72 x 1193 x 37 mm non lavorato ed eseguire la seconda fresatura sull'altro lato.
- B SPECCHIETTO INFERIORE**  
Riprendere 8 dei 9 pezzi precedentemente utilizzati, più l'unico listello da 72 x 608 x 37 mm non lavorato ed eseguire la seconda fresatura sull'altro lato.

Position the 2,5 mm spacer, supplied with cutterhead item code TW23M BF3.

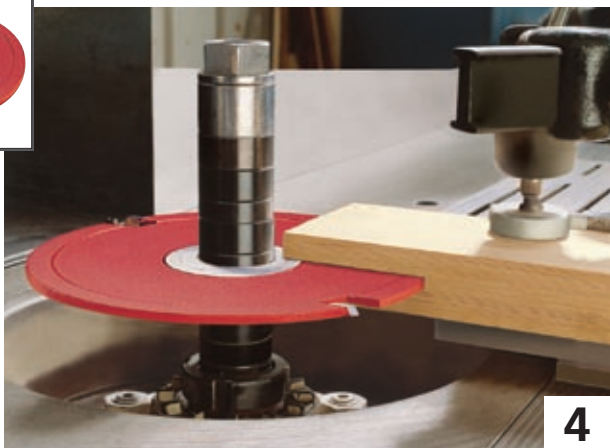
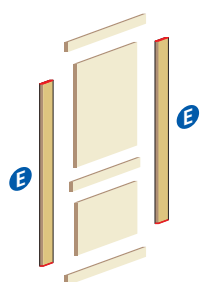
- A TOP INNER RAISED PANEL**  
Take 8 of the 9 previously machined 72 x 1193 x 37 mm pieces, plus the only non worked one and carry out the second moulding on the opposite side.
- B BOTTOM INNER RAISED PANEL**  
Take 8 of the 9 previously machined 72 x 608 x 37 mm pieces and the only non worked one and carry out the second moulding on the opposite side.



Assemblare ed incollare i listelli lavorati tenendoli uniti con un morsetto. Per una maggiore tenuta del pannello, fin dall'inizio disporre i listelli in modo tale che, al momento della giunzione, siano posizionati con venatura contraria, in modo alternato (vedi Foto 3).

Assemble and glue together all the machined pieces, holding them tightly together with a clamp. When joining the pieces together, make sure you lay them out so as they show opposite and alternate wood grains (Fig. 3).

FRESA PER TENONI  
BRAZED CUTTER

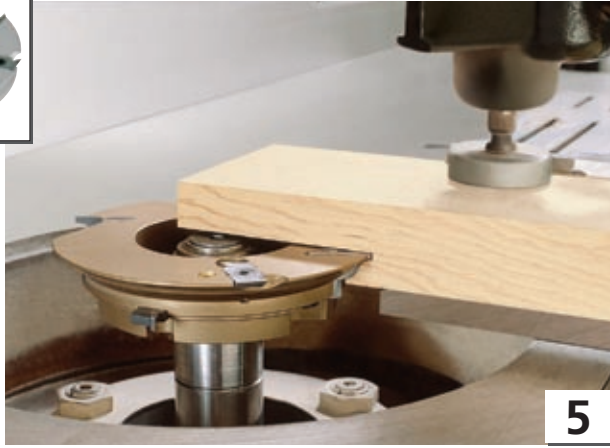


Posizionare sulla toupie la fresa per tenoni.

- E TENONI FEMMINA DEI MONTANTI**  
Utilizzare 2 listelli da 115 x 2100 x 44 mm. Realizzare su entrambe le estremità dei due listelli le sedi per i tenoni dei traversi superiore ed inferiore. La profondità di lavorazione sarà di 103 mm, per uno spessore di 8 mm.

Position the tenonig brazed cutter onto the spindle moulder.

- E JAMBS GROOVING TENONS**  
Take 2, 115 x 2100 x 44 mm pieces. Now groove each end of the top and bottom jambs. Working depth must be 103 mm and 8 mm thick.



Montare i coltelli alla testa multiprofilo per porte cod. TP42M AB3. Posizionare correttamente l'utensile sulla topie.

**C** TRAVERSI SUPERIORE E INFERIORE  
Utilizzare 2 listelli da 115 x 900 x 44 mm.

- PRIMA FASE -

TENONATURA

Eeguire una passata su un lato trasverso vena dei listelli.

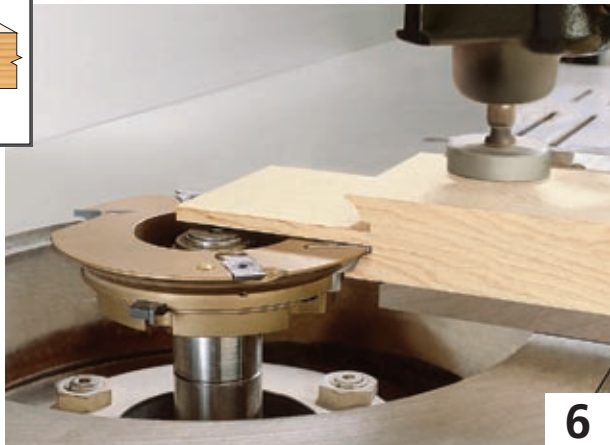
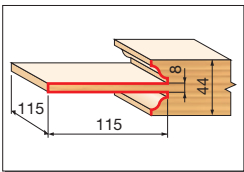
Fix the knives onto the multiprofile cutterhead for doors (item code TP42M AB3) and correctly position it onto the spindle moulder.

**C** TOP AND BOTTOM TRANSOMS  
Take 2, 115 x 900 x 44 mm pieces.

- FIRST PHASE -

TENONING

Work one side, cross grain of the two pieces.



**C** TRAVERSI SUPERIORE E INFERIORE

- SECONDA FASE -

TENONATURA

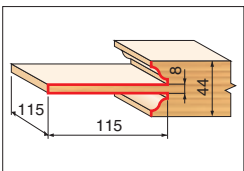
Girare i listelli di 180° ed eseguire una passata sullo stesso lato trasverso vena lavorato precedentemente.

**C** TOP AND BOTTOM TRANSOMS

- SECOND PHASE -

TENONING

Turn the pieces upside down and work the same side cross grain again, as previously done.



**C** TRAVERSI SUPERIORE E INFERIORE

- TERZA E QUARTA FASE -

TENONATURA

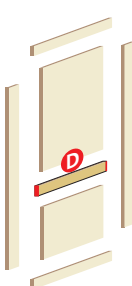
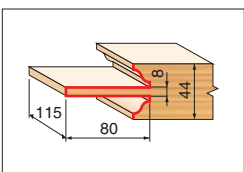
Riprendere i due listelli fresati precedentemente e ripetere, sul lato opposto trasverso vena di ciascun pezzo, le medesime lavorazioni descritte ai punti 5 e 6.

**C** TOP AND BOTTOM TRANSOMS

- THIRD AND FOURTH PHASES -

TENONING

Take the two previously moulded pieces and repeat the same operation cross grain, on the opposite side of each one, as described in steps 5 - 6.



**D** TRAVERSO INTERMEDIO

Utilizzare 1 listello da 115 x 830 x 44 mm.

TENONATURA

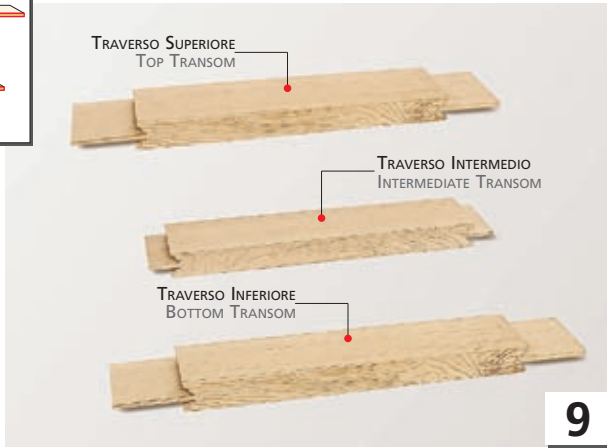
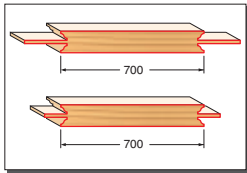
Sui due lati trasverso vena ripetere le lavorazioni descritte ai punti 5 - 6 - 7.

**D** INTERMEDIATE TRANSOM

Take 1, 115 x 830 x 44 mm piece.

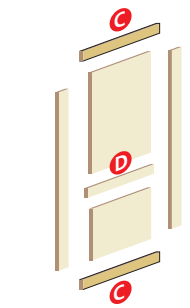
TENONING

On both sides cross grain, perform the same operations as described in steps 5 - 6 - 7.

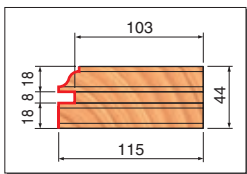


Nella foto a fianco compaiono i tre traversi della porta, su quali è stato realizzato il controprofilo con tenone.

This photo shows the three transoms, with scribe and tenon on both ends.



9



**C** TRAVERSI SUPERIORE E INFERIORE

- PRIMA FASE -

**PROFILATURA**

Regolare l'altezza dell'utensile.

Riprendere i traversi superiore e inferiore e profilarli solo su un lato, lungo vena.

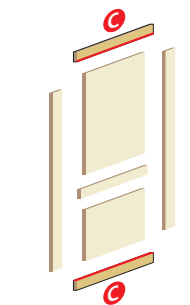
**C** TOP AND BOTTOM TRANSOMS

- SECOND PHASE -

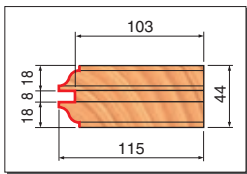
**PROFILING**

Adjust the tool height.

Take the top and bottom transoms and profile on one side, along the grain.



10



**C** TRAVERSI SUPERIORE E INFERIORE

- SECONDA FASE -

**PROFILATURA**

Ruotare i due traversi di 180° (sottosopra) e profilare lo stesso lato che si è lavorato al punto 10.

**C** TOP AND BOTTOM TRANSOMS

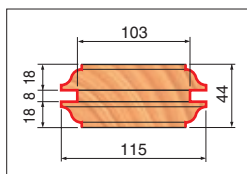
- SECOND PHASE -

**PROFILING**

Turn the two transoms upside down and profile the same side as previously worked in step 10.



11



**D** TRAVERSO INTERMEDIO

**PROFILATURA**

Riprendere il traverso intermedio e ripetere le medesime lavorazioni descritte ai punti 10 e 11 su entrambi i lati, lungo vena.

**D** INTERMEDIATE TRANSOM

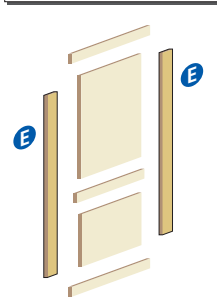
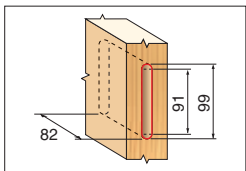
**PROFILING**

Take the intermediate transom and repeat the same operations, working both sides along the grain, as in steps 10 and 11.



12





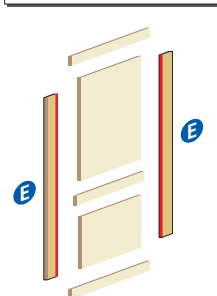
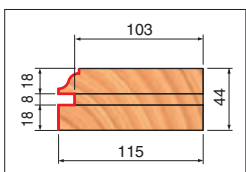
#### E MONTANTI

Riprendere i due listelli da 115 x 2100 x 44 mm già lavorati su entrambi i lati (vedi punto 4). Con una punta per mortasare con diametro da 8 mm, realizzare la scanalatura che permetterà l'alloggiamento dei tenoni del traverso intermedio.

#### E JAMBS

Now take the two 115 x 2100 x 44 mm pieces already machined at both ends (see Fig. 4). With an 8 mm mortising bit make a slot which will allow the fixing of the jamb onto the intermediate transom when assembling the door.

13



#### E PROFILATURA DEI MONTANTI

##### - PRIMA FASE -

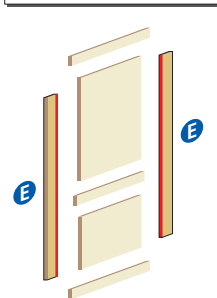
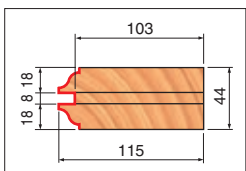
Con la testa multiprofile cod. TP42M AB3, profilare gli stessi listelli lavorati al punto 13, ciascuno su uno dei lati lunghi, lungo vena.

#### E JAMBS PROFILING

##### - FIRST PHASE -

With multiprofile cutterhead TP42M AB3, profile the same pieces as worked in step 13. Machine one side of each piece length ways, along the grain.

14



#### E PROFILATURA DEI MONTANTI

##### - SECONDA FASE -

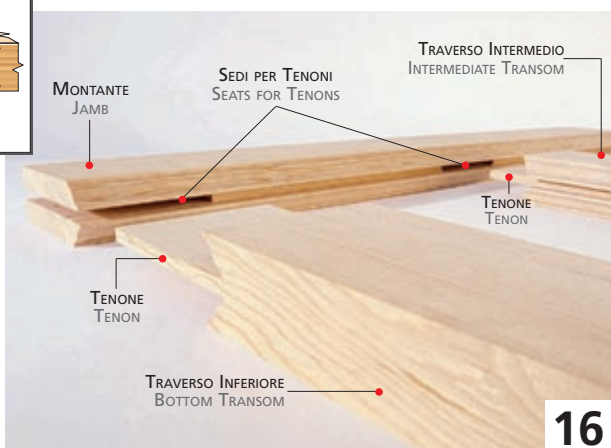
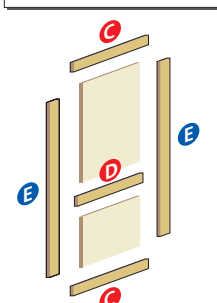
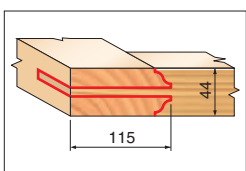
Ruotare di 180° (sotto-sopra) i listelli appena profilati ed eseguire la medesima lavorazione, sempre sullo stesso lato lungo, lungo vena.

#### E JAMBS PROFILING

##### - SECOND PHASE -

Turn the previously machined pieces upside down and carry out the same operation on the same side length ways, along the grain.

15



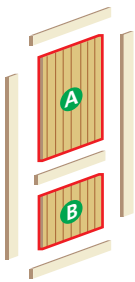
L'immagine a lato evidenzia i tenoni dei traversi inferiore ed intermedio e gli alloggiamenti ricavati sul montante.

This picture highlights the jambs slots and the intermediate and bottom transoms tenons.

16



TD52M HB3



Posizionare l'articolo TD52M HB3 sulla toupie.

- A SPECCHIETTI SUPERIORE
- B E INFERIORE

- PRIMA FASE -

**PROFILATURA**

Lavorare su tutti i lati i due pannelli preparati precedentemente (vedi punti 1-2-3), avendo cura di fresare per primi i due lati lungo vena.

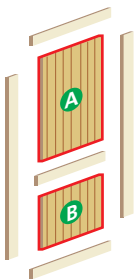
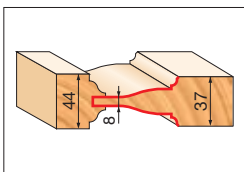
Position item code TD52M HB3 on the spindle moulder.

- A TOP AND BOTTOM
- B INNER RAISED PANELS

- FIRST PHASE -

**PROFILING**

Work the two previously prepared panels on all sides (steps 1-2-3), making sure that you first machine the two sides along the grain.



- A SPECCHIETTI SUPERIORE
- B E INFERIORE

- SECONDA FASE -

**PROFILATURA**

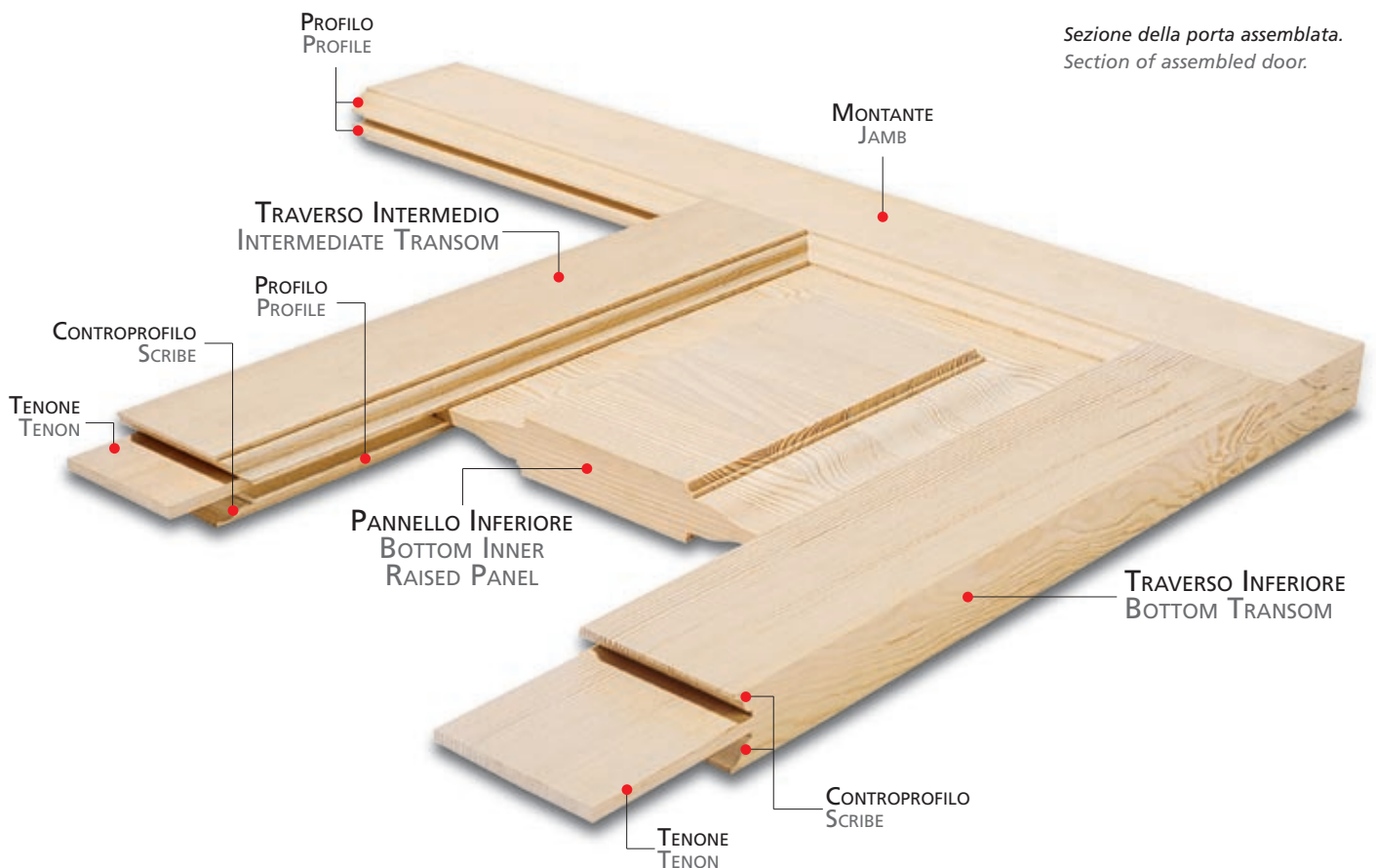
Ruotare i pannelli di 180° (sottosopra) ed eseguire le stesse procedure descritte al punto 17.

- A TOP AND BOTTOM
- B INNER RAISED PANELS

- SECOND PHASE -

**PROFILING**

Turn the panels upside down and carry out the same operations as those described in step 17.



Sezione della porta assemblata.  
Section of assembled door.