

## Routing - Insert Tooling - CNC Machine

DIMAR offers a wide variety of tools for CNC machines that provide solutions for the woodworking industry.
CNC Tools are manufactured precisely to perfection with tight tolerances to ensure satisfying results for the most demanding professionals.

The bodies are made of high quality tool steel that can withstand the most demanding loads by the CNC machines. The tools are fitted with special grades Carbide Teeth, Brazed or Replaceable inserts.

Whether for Grooving, Rabbeting, Beveling, Rounding, Chamfering or Profiling, we have them all!


## Straight Up \& Down Shear Router Cutter, 2 Flutes

Disposable insert straight router bit with two up and down shear flutes and centre tip. Shear flutes squeeze the material into the middle to give an extra fine finish on both surfaces of laminated and veneered board. Replaceable inserts ensure a constant cutting diameter and finish quality. Centre tip for improved plunging.

For use on CNC routers.

| Tool no. | D | Shank | B | Length | Parts | Category |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| N7R20-20N | 20 mm | $20 \mathrm{~mm} \times 55 \mathrm{~mm}$ | 30 mm | 110 mm | 14 | CNC |
| N7RL20-20N | 20 mm | $20 \mathrm{~mm} \times 55 \mathrm{~mm}$ | 50 mm | 130 mm | 15 | CNC |



Also available with $3 / 4$ " and 25 mm diameter shanks.
Must specify when ordering.

Rough Rebating Router Cutter
Disposable insert straight router bit with multiple

Multiple cutting flutes ensure fine chips are produced for improved chip ejection. Replaceable inserts ensure

| Tool no. | D | Shank | B | Length | No. <br> of Blades | Parts | Category |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N119RL20-50 | 50 mm | $20 \mathrm{~mm} \times 55 \mathrm{~mm}$ | 56 mm | 113 mm | 10 | 16 | CNC |
| N119RLS20-50 | 50 mm | $20 \mathrm{~mm} \times 55 \mathrm{~mm}$ | 78 mm | 135 mm | 14 | 16 | CNC |

Also available with $3 / 4^{\prime \prime}$ and 25 mm diameter shanks.
 cutting edges. Suitable for rough rebating and sizing in softwoods, hardwoods and man-made boards (with or without coating). a constant cutting diameter.

For use on CNC routers.

Must specify when ordering.




## Straight Rebater Router Cutter with Scorers

Disposable insert rebating router bit complete with two cutting edges and scorers.
Suitable for trimming and rebating in softwoods, hardwoods and man-made boards. Scorers will improve finish at the bottom of the cut. For use on CNC routers.


| Tool no. | D | Shank | B | Length | Parts | Cat. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| N114R19-40 | 40 mm | $3 / 4 "$ | 30 mm | 100 mm | 20 | CNC |
| N114R20-40 | 40 mm | $20 \mathrm{~mm} \times 55 \mathrm{~mm}$ | 30 mm | 100 mm | 20 | CNC |
| N114RL20-40 | 40 mm | $20 \mathrm{~mm} \times 55 \mathrm{~mm}$ | 50 mm | 120 mm | 21 | CNC |
| N114R20-60 | 60 mm | $20 \mathrm{~mm} \times 55 \mathrm{~mm}$ | 30 mm | 100 mm | 20 | CNC |
| N114RL20-60 | 60 mm | $20 \mathrm{~mm} \times 55 \mathrm{~mm}$ | 50 mm | 120 mm | 21 | CNC |

Also available with $3 / 4^{\prime \prime}$ and 25 mm diameter shanks.
Must specify when ordering.


## Adjustable Bevel Router Cutter,

## 2 Flutes

Disposable insert router bit with two flutes. Suitable for producing chamfer cuts at various angles in softwoods, hardwoods and manmade boards.
Fast tuning angle of $7.5^{\circ}$ steps.
Fine tuning angle of $1^{\circ}$.
For use on CNC routers.


Fast tuning angle of $7.5^{\circ}$ step. Fine tuning angle of $1^{\circ}$
Also available with $3 / 4^{\prime \prime}$ and 25 mm diameter shanks.
Must specify when ordering.
 of material over a large surface area. Scorers will improve finish at the bottom of the cut. For use on CNC routers.

| Tool no. | D | Shank | B | Length | Cat. |
| :--- | :---: | :---: | :---: | :---: | :---: |
| N163R20-80 | 80 mm | $20 \mathrm{~mm} \times 60 \mathrm{~mm}$ | 12 mm | 90 mm | CNC |

Also available with $3 / 4^{\prime \prime}$ and 25 mm diameter shanks.
Must specify when ordering.


Knives sold in lots of 10 pieces.
Price per single knife.


## Multi Face Profile Router Cutter

Disposable insert router bit that fits five different profile knives. Suitable for producing various profiles in soft wood, hardwood and man-made boards.
For use on CNC routers.


| Tool no. | D | Shank | B | $\alpha$ | $\boldsymbol{R}$ | Length | Cat. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N105R20-B51 | 31.5 mm | 20 mm | 25 mm | $45^{\circ}$ |  | 89.0 mm | CNC |
| N105R20-B52 | 31.5 mm | 20 mm | 25 mm | $30^{\circ}$ |  | 89.0 mm | CNC |
| N105R20-B53 | 31.5 mm | 20 mm | 25 mm |  | 6.3 mm | 89.0 mm | CNC |
| N105R20-B54 | 31.5 mm | 20 mm | 25 mm |  | 12.5 mm | 89.0 mm | CNC |
| N105R20-B55 | 31.5 mm | 20 mm | 25 mm |  | 4.0 mm | 89.0 mm | CNC |


Replacement Parts:

 to perfect the joint.

* Knives are skewed.
(a) 3105002
(a) $\xlongequal{3105002} \xrightarrow{1933950} \xrightarrow{194015}$
(b) $\xlongequal{3105001} \xrightarrow{19333950} \xrightarrow{194015}$
(c) $\xlongequal{3105004} \xrightarrow{1931482} \xrightarrow{1941015}$
(d) $\xlongequal{3105004} \xrightarrow{1931482} \xrightarrow{1941015}$


(b) 3105001


Torx screw
Torx key C 1
33

## V - Groove Router Cutter

Disposable insert router complete with one or two cutting flutes designed to mitre fold on solid wood, hardwood and man-made boards

| Tool no. | D | Shank | B | B1 | Flutes | Length | Cat. |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| N105R20-60 | 52.6 mm | 20 mm | 44.6 mm | $51.5 \mathrm{~mm}^{*}$ | 1 | 111 mm | CNC |
| N105R20-90 | 67 mm | 20 mm | 33 mm | $47 \mathrm{~mm}^{*}$ | 1 | 97 mm | CNC |
| N105R20-120 | 86.6 mm | 20 mm | 25 mm | 50 mm | 2 | 97.5 mm | CNC |
| N105R20-130 | 90.6 mm | 20 mm | 20.8 mm | 50 mm | 2 | 98 mm | CNC |
| N105R20-150 | 96.6 mm | 20 mm | 13 mm | 50 mm | 2 | 90.3 mm | CNC |




## Raised Panel Router Bit, 2 Flutes

Disposable insert profile router bit with two cutting flutes.
Suitable for producing various raised panel profiles in softwoods, hardwoods or man-made boards. Tool can be supplied complete with a small trimmer for machining the edge of the panel.

One bit fits all eight different profiles.
For use on CNC routers.

| Tool no. | D | Shank | Length | Category |
| :--- | :--- | :--- | :--- | :--- |
| N126R20-1 | 112 mm | 20 mm | 110 mm | CNC |
| N126R20-2 | 112 mm | 20 mm | 110 mm | CNC |
| N126R20-3 | 112 mm | 20 mm | 110 mm | CNC |
| N126R20-4 | 112 mm | 20 mm | 110 mm | CNC |
| N126R20-5 | 112 mm | 20 mm | 110 mm | CNC |
| N126R20-6 | 112 mm | 20 mm | 110 mm | CNC |
| N126R20-7 | 112 mm | 20 mm | 110 mm | CNC |
| N126R20-8 | 112 mm | 20 mm | 110 mm | CNC |

Optional trimmer bit N126RT sold separately.
Also available with $3 / 4^{\prime \prime}$ and 25 mm diameter shanks. Must specify when ordering.

## CNC Chucks and Arbors

Complete range of high precision CNC chucks and arbors suitable for all popular makes of machines and production environment. Chucks \& arbors are supplied complete with clamping nuts. Pull studs, collets \& spanners are sold separately.


Morse Adapter for ER 32 collet

| Tool no. | Adapter <br> Standard | D | B | Collet <br> Standard | Category |
| :---: | :---: | :---: | :---: | :---: | :---: |
| N642005 | MK2 | 50 mm | 60 mm | ER32 | CNC |

ISO Tool Holder with Pull Stud for Morbidelli Machines

| Tool no. | Adapter <br> Standard | D | B | Collet <br> Standard | Category |
| :---: | :---: | :---: | :---: | :---: | :---: |
| N641010 | ISO 30 | 50 mm | 55 mm | ER32 | CNC |



## ISO Tool Holder

| Tool no. | Adapter <br> Standard | D | B | Collet <br> Standard | Category |
| :---: | :---: | :---: | :---: | :---: | :---: |
| N641011 | ISO 30 | 50 mm | 42 mm | ER32 | CNC |
| N641021 | ISO 40 | 50 mm | 63 mm | ER32 | CNC |



HSK Tool Holder

| Tool no. | Adapter <br> Standard | D | B | Collet <br> Standard | Category |
| :---: | :---: | :---: | :---: | :---: | :---: |
| N641031 | HSK63-F | 50 mm | 76 mm | ER32 | CNC |
| N641030 | HSK63-F | 63 mm | 76 mm | ER40 | CNC |



Pullstud for Machines

| Tool no. | Adapter | D1 | D | G | L | Category | For Machine |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N650014 | ISO 30 | 12 mm | 8 mm | M12 | 24 mm | CNC | Esseteam |
| N650015 | ISO 30 | 12.8 mm | 9 mm | M12 | 24 mm | CNC | CMS |
|  |  |  |  |  |  |  |  |
| N650018 | ISO 30 | 12 mm | 8 mm | M12 | 24 mm | CNC | Biesse (After 09/92), <br> Masterwood |



| Tool no. | D | Category |
| :--- | :---: | :---: |
| N631004 | For ER32 nut | CNC |
| N631003 | For ER40 nut | CNC |



Tightening Device

| Tool no. | D | Category |
| :---: | :---: | :---: |
| N642001 | For ISO30 Tool Holder | CNC |

Collets


For ER32 Nut

| Tool no. | D | L | Category |
| :---: | :---: | :---: | :---: |
| N615044 | $6-7 \mathrm{~mm}$ | 40 mm | CNC |
| N615012 | $7-8 \mathrm{~mm}$ | 40 mm | CNC |
| N615010 | $9-10 \mathrm{~mm}$ | 40 mm | CNC |
| N615009 | $12-13 \mathrm{~mm}$ | 40 mm | CNC |
| N615053 | $15-16 \mathrm{~mm}$ | 40 mm | CNC |
| N615056 | $18-19 \mathrm{~mm}$ | 40 mm | CNC |
| N615011 | $19-20 \mathrm{~mm}$ | 40 mm | CNC |

For ER40 Nut

| Tool no. | D | L | Category |
| :---: | :---: | :---: | :---: |
| N615060 | $3-4 \mathrm{~mm}$ | 46 mm | CNC |
| N615007 | $9-10 \mathrm{~mm}$ | 46 mm | CNC |
| N615006 | $12-13 \mathrm{~mm}$ | 46 mm | CNC |
| N615003 | $19-20 \mathrm{~mm}$ | 46 mm | CNC |
| N615077 | $20-21 \mathrm{~mm}$ | 46 mm | CNC |
| N615001 | $25-26 \mathrm{~mm}$ | 46 mm | CNC |

## Replacement Parts

|  | 0 | Special Blade |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Parts <br> \# | TC Knife (mm) | TC Knife (mm) | Torx Screw | Torx Screw | Allen <br> Screw | Allen/Torx Key | Wedge | Wedge Lock |
| 14 | $300771616 \times 7 \times 1.5$ | 1934000 |  |  | 1941100 |  |  |  |
| 15 | $300772828 \times 7 \times 1.5$ | 1934000 |  |  | 1941100 |  |  |  |
| 16 | L12 12x12x1.5 |  | 1931482 |  | 1941015 |  |  |  |
| 19 |  | $300052840 \times 12 \times 1.5$ |  |  | 1930494 | 1940035 | 1990820 | 1994031 |
|  |  | $35^{\circ} 26$ c.c. |  |  | 1930265 | 1940036 |  |  |
| 20 | $30 \times 12 \times 1.5$ | L142 14×14×2 | 1931481 | 1933700 | 1941015 |  |  |  |
|  |  |  |  |  |  | 1941060 |  |  |
| 21 | $50 \times 12 \times 1.5$ | L142 14×14x2 | 1931481 | 1933700 | 1941015 |  |  |  |
|  |  |  |  |  | 1941060 |  |  |  |

## Insert Tooling Replaceable Tungsten Carbide Bits

This innovative newly developed type of tooling never requires sharpening and therefore tool diameter remains constant. Fully sharpened multiple cutting edges, rotated to expose new edges, are easily replaced when they become dull or chipped.

- Strict tolerances
- Never needs sharpening
- No downtime on the job
- Economical, cost less than to resharpen
- Indexable, always keeps the same diameter
- Easy to replace, Do-lt-Yourself style
- Blade is fixed directly into tool body
- No wedges are used
- Standard Blades available anywhere
- Bits supplied in a protective box with the needed Torx Key



## Multi Profile System Type B

## It's a whole workshop of options in a single Router Bit



The new Multi Profile System gives you a wide range of profiling options in a single Router bit with Replaceable Carbide Tips.
This New Age Router bit System, developed by DIMAR, puts the power of greater precision, better performance and higher versatility into your hands.
Durability:
Replaceable Carbide knives are harder, stronger, longer lasting and perform better on abrasive materials.

## Versatility:

One Router Bit gives you a wide variety of profiling options and can be used with Portable, or Industrial CNC machinery.

## Safety:

Chip Limitation design for safe operation. All Router bits have been tested for maximum stress by the German institute of Technology.

## Service free:

The Router Bits do not need sharpening. Simply replace the carbide knives.
Accuracy: Carbide knives have consistent and precise profiles for optimum and continued operation without adjustments.

Cost effective: Longer lasting knives, better performance, down time is minimal. Only Carbide Knives are replaced.

Easy to replace: Step by step instructions included, so you can do it yourself.

## "V" Groove $90^{\circ}$, 2 Flute, Type B



## "V" Groove 60º, 2 Flute, Type B



Core Box, 2 Flute, Type B


| Tool no. | D | Shank | Length | Category |
| :--- | :---: | :---: | :---: | :---: |
| N4-B54 | $11 / 4^{\prime \prime}$ | $1 / 4 "$ | $21 / 4^{\prime \prime}$ | । |
| N8-B54 | $11 / 4^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $25 / 8^{\prime \prime}$ | । |
| Dealer Net Price <br> in effect |  |  |  |  | \$

Core Box, 2 Flute, Type B


Ogee Plunge, 2 Flute, Type B



## M ulti Profile System Type A



## Why Choose The M ulti Profile System?

Durability: Replaceable Carbide knives are harder, stronger, longer lasting and perform better on abrasive materials.

Versatility: One Router Bit gives you a wide variety of profiling options and can be used with Portable, or Industrial CNC machinery.

Safety: Chip Limitation design for safe operation. All Router bits have been tested for maximum stress by the German institute of Technology.

Service free: The Router Bits do not need sharpening. Simply replace the carbide knives.

Accuracy: Carbide knives have consistent and precise profiles for optimum and continued operation without adjustments.

Cost effective: Longer lasting knives, better performance, down time is minimal. Only Carbide Knives are replaced.

Easy to replace: Step by step instructions included, so you can do it yourself.

It's a whole workshop of options in a single Router Bit
The new Multi Profile System gives you a wide range of profiling options in a single Router bit with Replaceable Carbide Tips.
This New Age Router bit System, developed by DIMAR, puts the power of greater precision, better

New Age Profile Routing Tools with Replaceable Tips

Rounding Over Bit, 2 Flute, Type A


Rounding Over Bit, 2 Flute, Type A

Chamfer Bit, 2 Flute, Type A



| Tool no. | Blade \# | D | Shank | R | Length | Cat. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| N4-A05 | A05 | $13 / 8^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $25 / 8^{\prime \prime}$ | I |
| N8-A05 | A05 | $13 / 8^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $3^{\prime \prime}$ | I |
| N4-A06 | A06 | $13 / 8^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $5 / 16^{\prime \prime}$ | $25 / 8^{\prime \prime}$ | I |
| N8-A06 | A06 | $13 / 8^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $5 / 16^{\prime \prime}$ | $3 "$ | I |
| N4-A07 | A07 | $11 / 2^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $3 / 8^{\prime \prime}$ | $25 / 8^{\prime \prime}$ | I |
| N8-A07 | A07 | $11 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $3 / 8^{\prime \prime}$ | $3 "$ | I |

Beading Roundover Bit, 2 Flute, Type A


Cove, 2 Flute, Type A


Paneling, 2 Flute, Type A

$\underbrace{\sim}_{\text {A15 }}$

| Tool no. Blade \# | D | Shank | $R$ | $R 1$ | Length | Cat. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\uparrow$ N4-A15 | A15 | $13 / 8^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $5 / 32^{\prime \prime}$ | $3 / 16^{\prime \prime}$ | $25 / 8^{\prime \prime}$ | I |
| N8-A15 | A15 | $13 / 8^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $5 / 32^{\prime \prime}$ | $3 / 16^{\prime \prime}$ | $3^{\prime \prime}$ | I |
| N4-A16 | A16 | $11 / 2^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $5 / 32^{\prime \prime}$ | $3 / 16^{\prime \prime}$ | $25 / 8^{\prime \prime}$ | I |
| N8-A16 | A16 | $11 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $5 / 32^{\prime \prime}$ | $3 / 16^{\prime \prime}$ | $3^{\prime \prime}$ | I |

O gee Fillet, 2 Flute, Type A


Flat O gee, 2 Flute, Type A


Roman O gee, 2 Flute, Type A


O gee Bead, 2 Flute, Type A

Flat O gee, 2 Flute, Type A

| Tool no. | Blade \# | D | Shank | R | Length | Cat. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N4-A22 | A22 | $13 / 8{ }^{\prime \prime}$ | 1/4" | 5/32" | $25 / 8{ }^{\prime \prime}$ | 1 |
| N8-A22 | A22 | 13/8" | 1/2" | 5/32" | $3{ }^{\prime \prime}$ | 1 |
| N4-A23 | A23 | 11/2" | 1/4" | 5/32" | $25 / 8{ }^{\prime \prime}$ | 1 |
| N8-A23 | A23 | 11/2" | 1/2" | 5/32" | $3{ }^{\prime \prime}$ | I |



Classic Panel, 2 Flute, Type A



## Raised Panel Router Cutter

Disposable insert router with two cutting flutes, suitable for light CNC and manual routing applications. Included an assembled ball bearing seat and an anti-dust plug. Can also be used on a CNC machine with a backcutter.

| Tool no. | D | Shank | B | Length | Cat. | 年 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $26 R 884$ | $33 / 8^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $3 / 4^{\prime \prime}$ | $23 / 4^{\prime \prime}$ | 1 | $\$$ |




Price per single knife.


Price per single knife.


## Tongue \& Groove Router Bit Set , 2 Flutes



Disposable insert router set with two cutting flutes.
Suitable for light CNC and manual routing applications.
Recommended wood thickness from $5 / 8^{\prime \prime}(16 \mathrm{~mm})$ to $11 / 8^{\prime \prime}(28 \mathrm{~mm})$.

All four Tongue profiles can be used on the same router bit body. All four Groove profiles can be used on the same router bit body.

Start with any complete tongue and groove set (2 pieces), and then simply purchase additional pairs of knives from the selection below.


| Tool no. |  | D | Shank | B | B1 | t | Length | Cat. | $\$$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 42R8-6A | Complete Set | $23 / 8{ }^{\prime \prime}$ | 1/2" | 30 mm | 1/4" | 3/8" | $3 "$ | 1 |  |
| 42R8-6AT | Tongue | $23 / 8{ }^{\prime \prime}$ | 1/2" | 30 mm | 1/4" | 3/8" | 3 " | I | Dealer |
| 42R8-6AG | Groove | $23 / 8{ }^{\prime \prime}$ | 1/2" | 30 mm | 1/4" | 3/8" | $3 "$ | 1 | in effect |
| 0 <br> 0 <br> 0 |  |  | 9 |  |  |  | *1800 MAX. |  |  |
| T.C. Blade (T) | T.C. Blade (G) |  | Torxscrew |  |  |  |  |  |  |
| 3145004 | 3145014 |  | 1933950 |  |  |  |  |  |  |
| 30x23x2 | $30 \times 23 \times 2$ |  | M4×6 |  |  |  |  |  |  |

Price per single knife.


Price per single knife.



Price per single knife.


Price per single knife.

## Tongue \& Groove 2 piece Router Bit Set, 2 Flutes

Disposable insert router set with two cutting flutes. Suitable for light CNC and manual routing applications. Fine adjusting option for precise fitting between tongue \& groove.

Tongue \& Groove kerf (B1) may be adjusted to match various wood thicknesses. Recommended wood thickness from 16 mm to 28 mm
? Adjustable set screw to stagger knife for the desired kerf



Price per single knife.


Groove Router Bit, 2 Flutes


Price per single knife.


Straight Bits, Plunge, 1 Flute
Designed mainly for Side Routing and Plunge (Bottom) Routing. Penetration into the side of wood for Beading, Grooving or Slotting and Dado operations, or into wood surface for Drilling and Grooving or Mortising.


Each knife has two useable cutting edges.


|  | Tool no. | Knife \# | D | Shank | B | Length | Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 7RL8-12S | L309 | 1/2" | 1/2" | $13 / 16^{\prime \prime}(30 \mathrm{~mm})$ | $3 "$ | I |
| C | 7RL8-16S | L301 | 5/8" | 1/2" | $13 / 16^{\prime \prime}$ (30mm) | $31 / 2^{\prime \prime}$ | I |
| B | 7RW8-16S | L501 | 5/8" | 1/2" | $115 / 16^{\prime \prime}(50 \mathrm{~mm})$ | 4 1/8" | I |
| C | 7RL8-19S | L301 | 3/4" | 1/2" | $13 / 16^{\prime \prime}(30 \mathrm{~mm})$ | $31 / 2$ " | I |
| B | 7RW8-19S | L501 | 3/4" | 1/2" | $115 / 16^{\prime \prime}(50 \mathrm{~mm})$ | $41 / 8$ " | I |
| C | 7RL8-22S | L301 | 7/8" | 1/2" | $13 / 16^{\prime \prime}(30 \mathrm{~mm})$ | $31 / 2$ " | 1 |
| B | 7RW8-22S | L501 | 7/8" | 1/2" | $115 / 16{ }^{\prime \prime}(50 \mathrm{~mm})$ | $41 / 8$ " | 1 |



## Metric

|  | Tool no. |  | Knife \# | D | Shank | B | Length |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| New A | 7RL4-12MS | L309 | 12 mm | $1 / 4^{\prime \prime}$ | 29.5 mm | $25 / 8^{\prime \prime}$ | I |
| A | 7RL8-12MS | L309 | 12 mm | $1 / 2^{\prime \prime}$ | 30 mm | $3^{\prime \prime}$ | I |
| A | 7RL8-14MS | L309 | 14 mm | $1 / 2^{\prime \prime}$ | 30 mm | $3^{\prime \prime}$ | I |
| C | 7RL8-16MS | L301 | 16 mm | $1 / 2^{\prime \prime}$ | 30 mm | $31 / 2^{\prime \prime}$ | I |
| B | 7RW8-16MS | L501 | 16 mm | $1 / 2^{\prime \prime}$ | 50 mm | $41 / 8^{\prime \prime}$ | I |
| C | 7RL8-18MS | L301 | 18 mm | $1 / 2^{\prime \prime}$ | 30 mm | $31 / 2^{\prime \prime}$ | I |
| A | 7RW8-18MS | L501 | 18 mm | $1 / 2^{\prime \prime}$ | 50 mm | $41 / 8^{\prime \prime}$ | I |
| C | 7RL8-20MS | L301 | 20 mm | $1 / 2^{\prime \prime}$ | 30 mm | $31 / 2^{\prime \prime}$ | I |
| A | 7RW8-20MS | L501 | 20 mm | $1 / 2^{\prime \prime}$ | 50 mm | $41 / 8^{\prime \prime}$ | I |
| C | 7RL8-22MS | L301 | 22 mm | $1 / 2^{\prime \prime}$ | 30 mm | $31 / 2^{\prime \prime}$ | I |
| A | 7RW8-22MS | L501 | 22 mm | $1 / 2^{\prime \prime}$ | 50 mm | $41 / 8^{\prime \prime}$ | I |

Left Hand Rotation

|  | Tool no. | Knife \# | D | Shank | B | Length | Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A | 7RL8-12SL | L309 | $1 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $13 / 16^{\prime \prime}(30 \mathrm{~mm})$ | $3^{\prime \prime}$ | I |

Replacement Parts:
Torx Screw: 1933548; Key T15: 1941015
Flat head screw for knife: 1930355 .....for 7RL4-12MS only


## Straight Bits (No Plunge)

This innovative newly developed type of tooling never requires sharpening and therefore tool diameter remains constant. Fully sharpened multiple cutting edges, rotated to expose new edges, are easily replaced when they become dull or chipped. Super-tough ultra-fine grain carbide inserts, featuring high performance \& wear resistance.
Durable CNC machined metal bodies have been redesigned for improved rigidity.
Bits supplied in a protective box with the needed Key.
Highly recommended professional tools for CNC applications in order to get the best cut quality and longer lifetime of the replaceable tip.

| Tool no. | Knife \# | D | Shank | B | Length | Flutes | Parts | Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7RL8-10-1 | 3107510 | 3/8" | 1/2" | $3 / 4{ }^{\prime \prime}$ | $27 / 8{ }^{\prime \prime}$ | 1 | 1 | 1 |
| 7RL8-12-2 | 3107511 | 1/2" | 1/2" | $13 / 16{ }^{\prime \prime}$ | $31 / 8{ }^{\prime \prime}$ | 2 | 2 | I |
| 7RL9-16-2 | 3107511 | 5/8" | 3/4" | $13 / 16{ }^{\prime \prime}$ | $31 / 4{ }^{\prime \prime}$ | 2 | 3 | 1 |
| 7RW9-16-2 | 3107513 | 5/8" | 3/4" | $115 / 16^{\prime \prime}$ | 4" | 2 | 4 | 1 |
| 7RL9-19-3 | 3107511 | 3/4" | $3 / 4 "$ | $13 / 16{ }^{\prime \prime}$ | $31 / 4 "$ | 3 | 5 | I |
| 7RW9-19-3 | 3107513 | 3/4" | $3 / 4 "$ | 115/16" | 4" | 3 | 5 | I |

## Replacement Parts:

1 Spring Washer 1962050 ; Screw \# 1930350 ; Key \# 1941020
2 Spring Washer 1962070 ; Screw \# 1930360 ; Key \# 1941020
3 Spring Washer 1962150 ; Screw \# 1930370 ; Key \# 1941020
4 Spring Washer 1962110 ; Screw \# 1930370 ; Key \# 1941020
5 Spring Washer 1962150 ; Screw \# 1930370 ; Key \# 1941020

Replacement Knife:
3107510-19.5 $\times 5.5 \times 1.1$
$3107511-29.5 \times 5.5 \times 1.1$
3107513-49.5 $\times 5.5 \times 1.1$
Price per single knife.

Replacement Knife:
L301 $29.5 \times 12 \times 1.5$
L309 $29.5 \times 9 \times 1.5$
L501 $49.5 \times 12 \times 1.5$
Knives sold in lots of 10 pieces.
Price per single knife.

$\qquad$ , y.
$\qquad$




Straight Bits, No Plunge, 2 Flutes
Designed mainly for Side Routing. Penetration into the side of wood for Beading, Grooving or Slotting and Dado operations. Each knife has two useable cutting edges.


| Tool no. | Knife \# | D | Shank | $B$ | Parts | Length | Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7RL8-14M | L309 | 14 mm | 1/2" | 30 mm | C | 3 3/8" | I |
| 7RL8-16M | L309 | 16 mm | 1/2" | 30 mm | a | $31 / 2^{\prime \prime}$ | I |
| 7RL8-16 | L309 | 5/8" | 1/2" | 30 mm | a | $31 / 2^{\prime \prime}$ | I |
| 7RL8-18M | L301 | 18 mm | 1/2" | 30 mm | b | $31 / 2^{\prime \prime}$ | I |
| 7RL8-19 | L301 | 3/4" | 1/2" | 30 mm | b | $31 / 2^{\prime \prime}$ | I |
| 7RL8-20M | L301 | 20 mm | 1/2" | 30 mm | b | $31 / 2{ }^{\prime \prime}$ | 1 |
| 7RL8-22M | L301 | 22 mm | 1/2" | 30 mm | b | $31 / 2^{\prime \prime}$ | 1 |
| 7RL8-22 | L301 | 7/8" | 1/2" | 30 mm | b | $31 / 2^{\prime \prime}$ | 1 |
| 7RL8-25 | L301 | $1{ }^{\prime \prime}$ | 1/2" | 30 mm | b | $31 / 2$ " | I |

Replacement Parts:
(a) Torx Screw: 1933548
(b) Torx Screw: 1931482
(c) Torx Screw: 1933648

Key T15: 1941015

Replacement Knife:
L301 $29.5 \times 12 \times 1.5$
L309 $29.5 \times 9 \times 1.5$
Knives sold in lots of 10 pieces.
Price per single knife.

## Straight Bits,

Staggered, No Plunge
2 Flutes


| Tool no. | Knife \# | D | Shank | B | Parts | Length | Category |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7RW8-16M | L309 | 16 mm | $1 / 2^{\prime \prime}$ | 50 mm | b | $41 / 4^{\prime \prime}$ | I |
| 7RW8-16 | L309 | $5 / 8^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | 50 mm | a | $41 / 4^{\prime \prime}$ | I |
| 7RW8-18M | L301 | 18 mm | $1 / 2^{\prime \prime}$ | 50 mm | b | $41 / 4^{\prime \prime}$ | I |
| 7RW8-19 | L301 | $3 / 4^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | 50 mm | b | $41 / 4^{\prime \prime}$ | I |
| 7RW8-20M | L301 | 20 mm | $1 / 2^{\prime \prime}$ | 50 mm | b | $41 / 4^{\prime \prime}$ | I |
| 7RW8-22M | L301 | 22 mm | $1 / 2^{\prime \prime}$ | 50 mm | b | $41 / 4^{\prime \prime}$ | I |
| 7RW8-22 | L301 | $7 / 8^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | 50 mm | b | $41 / 4^{\prime \prime}$ | I |

$\begin{array}{ll}\text { Replacement Parts: } & \text { Replacement Knife: } \\ \text { (a) Torx Screw: 1933548 } & \text { L301 } 29.5 \times 12 \times 1.5\end{array}$
L309 $29.5 \times 9 \times 1.5$
Knives sold in lots of 10 pieces. Price per single knife.

for Beading, Grooving or Slotting and Dado operations.
Each knife has four useable cutting edges.

| Tool no. | Knife \# | D | Shank | $B$ | Length | Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7R4-18M | L12 | 18 mm | 1/4" | 20 mm | 2 " | 1 |
| 7R8-18M | L12 | 18 mm | $1 / 2^{\prime \prime}$ | 20 mm | $23 / 8$ " | I |
| 7R4-20M | L12 | 20 mm | $1 / 4 "$ | 20 mm | 2 " | 1 |
| 7R4-22M | L12 | 22 mm | $1 / 4{ }^{\prime \prime}$ | 20 mm | 2 " | I |
| 7R8-22M | L12 | 22 mm | 1/2" | 20 mm | $23 / 8$ " | I |
| INCHES: |  |  |  |  |  |  |
| 7R4-19 | L12 | 3/4" | 1/4" | 3/4" | 2 " | I |
| 7R8-19 | L12 | $3 / 4{ }^{\prime \prime}$ | 1/2" | 3/4" | $23 / 8$ " | I |
| 7R4-22 | L12 | 7/8" | 1/4" | $3 / 4{ }^{\prime \prime}$ | $2{ }^{\prime \prime}$ | I |
| 7R8-22 | L12 | 7/8" | 1/2" | $3 / 4 "$ | $23 / 8$ " | I |

## Replacement Parts:

Torx Screw: 1931482 ; Knife L12 12x12x1.5; Key T15: 1941015
Knives sold in lots of 10 pieces.
Price per single knife.


Straight Bits-No Plunge, 2 Flutes
Designed mainly for Side Routing. Penetration into the wood for Beading, Grooving or Slotting and Dado operations. Each knife has four useable cutting edges.

| Tool no. | Knife \# | D | Shank | B | Length | Category |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 7R4-20AM | L12 | 20 mm | $1 / 4^{\prime \prime}$ | 12 mm | $13 / 4^{\prime \prime}$ | I |
| 7R4-22AM | L12 | 22 mm | $1 / 4^{\prime \prime}$ | 12 mm | $13 / 4^{\prime \prime}$ | I |
| INCHES: |  |  |  |  |  |  |
| 7R4-19A | L12 | $3 / 4^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $15 / 32 " ~(12 \mathrm{~mm})$ | $13 / 4^{\prime \prime}$ | I |
| 7R4-22A | L12 | $7 / 8^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $15 / 32^{\prime \prime}(12 \mathrm{~mm})$ | $13 / 4^{\prime \prime}$ | I |

Replacement Parts: Torx Screw: 1931482 ; Knife: L12 12x12x1.5; Key T15: 1941015
Knives sold in lots of 10 pieces. Price per single knife.


V Groove Bit, 1 Flute

| Tool no. | Knife \# | D | Shank | B | Length | Category |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 5R4-18 | L12 | $11 / 16^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $11 / 32^{\prime \prime}$ | $21 / 16^{\prime \prime}$ | I |

## Replacement Parts:

Knife: L12 $12 \times 12 \times 1.5$; Flat head screw for knife: 1930355
Knives sold in lots of 10 pieces. Price per single knife.



## Straight / Template Bit, 2 Flutes

Template bits also known as Pattern bits or Straight Bits with Centre Ball Bearing are used in woodworking to replicate letters, shapes or designs by means of copying an overlaid shape onto the desired material. The Ball Bearing guide will ride along the Template, and the carbide teeth will cut into the material at the exact diameter of the bearing, hereby "copying" the design flush with the bearing's diameter.


| Tool no. | D | Shank | Length | Category |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1 RCL4-12 | $1 / 2^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | 30 mm | 80 mm | \| |
| 1 RCL8-19 | $3 / 4^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | 30 mm | 81 mm | I |



Price per single knife.


Straight / Template Bit, 2 Flutes


Replacement Parts:

| 000 |
| :---: |
| $\frac{\text { T.C. Blade }}{} \frac{3107350}{50 \times 12 \times 1.7}$ |



Price per single knife.


## Flush Trim / Template Bit, 2 Flutes

This double sided bearing guided router bit allows the bit to be used with template mounted on either side of the work piece and consequently, it is possible to route from either direction using only one template and without moving the template to the other side of the work piece. This is especially useful when cutting curves which run both with and against the grain.
The replaceable carbide knives ensure durability, ease of use accuracy and cost effective.

| Tool no. | D | Shank | B | Length | Category |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1RCDW8-19 | $3 / 4^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | 50 mm | $47 / 16^{\prime \prime}$ | I |

Replacement Parts:


[^0]

Flush Trim Bit, 2 Flutes
Utilizes inexpensive 2 sided disposable carbide knives.

| $\square$ |
| :--- |
| $\frac{\square . C . ~ K n i f e ~}{3101501}$ |
| $8.5 \times 5.5 \times 1.1$ |



Washer for Screw: 1950010 Washer for Bearing: 1920070


Flush Trim Bits, 2 Flutes
Self guiding, with two replaceable solid carbide knives.

| Tool no. | Knife \# | D | Shank | B | Length | Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RL4-12 | 3101512 | $1 / 2^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | 20 mm | $27 / 16^{\prime \prime}$ | I |

Replacement Parts: Knives sold in lots of 10 pieces. Price per single knife.


Flush Trim Bit, 2 Flutes
Self guiding, with two replaceable solid carbide knives.




## Multi-Bevel Bits

Self guiding with one replaceable solid carbide knife. Two different angles can be achieved by inserting the knife in 1 of 2 slots.


| Tool no. | Knife \# | D | Shank | $\alpha$ | Length | Category |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 2R4-30 | L7.0 | 14 mm | $1 / 4^{\prime \prime}$ | $15^{\circ}$ and $30^{\circ}$ | $21 / 8^{\prime \prime}$ | I |
| 2R4-45 | L7.0 | 14 mm | $1 / 4^{\prime \prime}$ | $23^{\circ}$ and $45^{\circ}$ | $21 / 8^{\prime \prime}$ | I |

Replacement Parts: Torx Screw (for bearing): 1931482 ; Torx Screw (for knife): 1931481;
Ball Bearing: BB-14M ; Knife L7.0 7.5x12x1.5; Key T15: 1941015
Knives sold in lots of 10 pieces. Price per single knife.


## Multi-Bevel Bit

Self guiding with one replaceable solid carbide knife. Four different angles can be achieved by inserting the knife in 1 of 4 slots.


Replacement Parts: Torx Screw (for bearing): 1931482 ; Torx Screw (for blade): 1931481;
Ball Bearing: BB-14M ; Knife L7.0 7.5x12x1.5 ; Key T15: 1941015
Knives sold in lots of 10 pieces. Price per single knife.


Replacement Parts: Torx Screw: 1931482; Ball Bearing: BB-16 ; Knife L12 12×12x1.5;
Key T15 1941015; Ball Bearing: BB-12A (for 2RB4-45 only) ;
Super Guide Ball Bearing SG-27 $1 / 4 \times 27 \times 1 / 4$
Knives sold in lots of 10 pieces. Price per single knife.


Bevel/Roundover Trimming Bit, 2 Flutes


| Tool no. | Knife \# | D | Shank | B | Length | Category |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 92R4-345 | 3109323 | $11 / 16^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | 6.7 mm | $21 / 4^{\prime \prime}$ | I |

## Replacement Parts:

Knife: $310932312 \times 12 \times 1.5$; Ball Bearing:BB-12; Flat head screw for knife: 1930355;
Flat Screw for Bearing: $1930016 \quad$ Price per single knife.

"V" Grooving Bits
Disposable insert router bit complete with one or two cutting flutes, designed for engraving on solid wood, hardwood and man-made boards.

|  | Tool no. | D | Shank | B | B1 | $\alpha$ | Length | Flutes | Parts | Cat. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| New | 5R8-225S | 13/16" | 1/2" | $1{ }^{\prime \prime}$ | $11 / 16^{\prime \prime}$ | $22.5{ }^{\circ}$ | $23 / 8{ }^{\prime \prime}$ | 1 | a | 1 |
| New | 5R8-25S | 7/8" | 1/2" | 31/32" | $11 / 16^{\prime \prime}$ | $25^{\circ}$ | $29 / 16^{\prime \prime}$ | 1 | b | I |
| New | 5R8-30S | $1{ }^{\prime \prime}$ | 1/2" | 15/16" | $11 / 16^{\prime \prime}$ | $30^{\circ}$ | $23 / 8$ " | 1 | c | I |
| New | 5R8-35S | 11/4" | 1/2" | 7/8" | $11 / 16^{\prime \prime}$ | $35^{\circ}$ | $29 / 16{ }^{\prime \prime}$ | 1 | d | I |
| New | 5R8-45S | 11/2" | 1/2" | 3/4" | $11 / 16^{\prime \prime}$ | $45.5{ }^{\circ}$ | 3" | 1 | e | 1 |
| New | 5R8-50S | $15 / 8 "$ | 1/2" | 11/16" | $11 / 16{ }^{\prime \prime}$ | $50^{\circ}$ | $31 / 4 "$ | 1 | $f$ | I |
| New | 5R8-55S | 13/4" | 1/2" | 5/8" | $11 / 16^{\prime \prime}$ | $55^{\circ}$ | $31 / 4{ }^{\prime \prime}$ | 1 | g | I |
| New | 5R8-60 | $2{ }^{\prime \prime}$ | 1/2" | 19/32" | $13 / 16{ }^{\prime \prime}$ | $60^{\circ}$ | $3{ }^{\prime \prime}$ | 2 | h | I |
| New | 5R8-65 | $21 / 8{ }^{\prime \prime}$ | 1/2" | 1/2" | 111/64" | $65^{\circ}$ | 3" | 2 | i | 1 |
| New | 5R8-75 | $21 / 4 "$ | 1/2" | 19/64" | 111/64" | $75^{\circ}$ | $215 / 16{ }^{\prime \prime}$ | 2 | j | 1 |
| New | 5R8-80 | $25 / 16{ }^{\prime \prime}$ | 1/2" | 3/16" | 111/64" | $80^{\circ}$ | $23 / 4 "$ | 2 | k | I |

18000
MAX. RPM
Replacement Parts:




Replacement Knife:
$3109326 \quad 15.7 \times 9 \times 1.5(6 \mathrm{~mm})$ $310930320 \times 9 \times 1.5(3 \mathrm{~mm})$ $3109306 \quad 20 \times 9 \times 1.5(6 \mathrm{~mm})$ $3109308 \quad 30 \times 15 \times 1.5(8 \mathrm{~mm})$ $310931030 \times 15 \times 1.5(10 \mathrm{~mm})$ Price per single knife.

Rounding Over Bits, 2 Flutes


| Tool no. | Knife \# | D | Shank | B | $R$ | Length | Parts | Cat. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | ---: | ---: |
| 9R4-6M | 3109326 | $1^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $5 / 8^{\prime \prime}$ | 6 mm | $23 / 16^{\prime \prime}$ | (a) | I |
| 9RC8-3 | 3109303 | $11 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $3 / 4^{\prime \prime}$ | 3 mm | $25 / 8^{\prime \prime}$ | (b) | I |
| $9 R C 8-6$ | 3109306 | $11 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $3 / 4^{\prime \prime}$ | 6 mm | $25 / 8^{\prime \prime}$ | (c) | I |
| $9 R C 8-8$ | 3109308 | $11 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $13 / 16^{\prime \prime}$ | 8 mm | $3^{\prime \prime}$ | (d) | I |
| $9 R C 8-10$ | 3109310 | $11 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $13 / 16^{\prime \prime}$ | 10 mm | $3^{\prime \prime}$ | (e) | I |

Replacement Parts:
(a) Ball Bearing: BB-12 ; Flat head screw for knife: 1930355 ; Allen Key: 1940200 ;

Flat Screw: 1930016
(b) Ball Bearing: BB-19A ; Torx Screw: 1931482; Key T15: 1941015
(c) Ball Bearing: BB-16M ; Torx Screw: 1931482 ; Key T15: 1941015
(d) Ball Bearing: BB-16M ; Torx Screw: 1931482; Key T15: 1941015
(e) Ball Bearing: BB-16M ; Torx Screw: 1931482 ; Key T15: 1941015


Cove Bit, 2 Flutes

| Tool no. | Knife \# | D | Shank | B | Length | Category |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12R4-6M | 3112006 | $1 "$ | $1 / 4^{\prime \prime}$ | $9 / 16^{\prime \prime}$ | $21 / 16^{\prime \prime}$ | I |

Replacement Parts:
Knife: 3112006; Ball Bearing: BB-12 ; Flat head screw for knife: 1930355 ;
Allen Key: 1940200 ; Flat Screw: 1930016
Price per single knife.


Ogee Fillet, 2 Flutes


| Tool no. | Knife \# | D | Shank | B | R | Length | Category |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 38R4-4.5M | 3138501 | $1^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $5 / 8^{\prime \prime}$ | 4.5 mm | $25 / 16^{\prime \prime}$ | \| |

Replacement Parts:
Knife: 3138501; Ball Bearing: BB-12; Flat head screw for knife: 1930355 ;
Allen Key: 1940200 ; Flat Screw: 1930016
Price per single knife.


| Hex Key <br> Tool no. | Size | Category |
| :---: | :---: | :---: |
| 1940090 | S3 | I |
| 1941020 | S1.5 | I |

Torx Screws


| Tool no. | Size | Head Dia. | Thread Length | Category |
| :--- | :---: | :---: | :---: | :---: |

## 20



Rabbeting Bits, 2 Flutes

| Tool no. | Knife \# | D | Shank | B | E | Length | Parts | Cat. |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| New | 4R4-28 | 3101513 | $11 / 8^{\prime \prime}$ | $1 / 4^{\prime \prime}$ | $33 / 64 "$ | $3 / 8^{\prime \prime}$ | $17 / 8^{\prime \prime}$ | (a) |
| 4R8-35 | L12 | $11 / 2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $15 / 32^{\prime \prime}$ | $7 / 16^{\prime \prime}$ | $21 / 2^{\prime \prime}$ | (b) | I |



Replacement Parts:
(a) Knife: 3101513; Ball Bearing: BB-10; Flat head screw for knife: 1930355;

Allen Key: 1940200; Flat Screw: 1930016
(b) Knife: L12; Ball Bearing: BB-12A ; Torx Screw: 1931482; Key T15: 1941015;

Washer: 1950010; Spacer: 1920270; Screw: 1930040
Knives sold in lots of 10 pieces. Price per single knife.


| Tool no. | Knife \# | D | Shank | B | E | Length | Category |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| 4R8-50 | L301 | $2^{\prime \prime}$ | $1 / 2^{\prime \prime}$ | $13 / 16^{\prime \prime}$ | $3 / 4^{\prime \prime}$ | $35 / 16^{\prime \prime}$ | I |



Replacement Parts:
Knife: L301; Ball Bearing: BB-12A ; Torx Screw: 1931482 ; Key T15: 1941015 ;
Washer: 1950010; Spacer: 1920270; Screw: 1930040
Knives sold in lots of 10 pieces. Price per single knife.


Collars

| Tool no. | D1 | $\begin{aligned} & \text { (E) } \\ & \text { for 4R8-35 } \end{aligned}$ | $\begin{aligned} & \text { (E) } \\ & \text { for 4R8-50 } \end{aligned}$ | Cat. |
| :---: | :---: | :---: | :---: | :---: |
| 1929790 | 2" | - | Flush | R |
| 1929900 | 47.6 mm | - | 1/16" | R |
| 1929890 | 44.4 mm | - | $1 / 8{ }^{\prime \prime}$ | R |
| 1929880 | 41.3 mm | - | 3/16" | R |
| 1929950 | 38.9 mm | - | 15/64" | R |
| 1929870 | 38.1 mm | - | 1/4" | R |
| 1929860 | 34.9 mm | Flush | 5/16" | R |
| 1929940 | 32.5 mm | 3/64" | 23/64" | R |
| 1929850 | 31.7 mm | 1/16" | 3/8" | R |
| 1929840 | 28.6 mm | 1/8" | 7/16" | R |
| 1929930 | 27.0 mm | 5/32" | 15/32" | R |
| 1929830 | 25.4 mm | 3/16" | 1/2" | R |
| 1929820 | 22.2 mm | 1/4" | 9/16" | R |
| 1929920 | 20.6 mm | 9/32" | 19/32" | R |
| 1929810 | 19.0 mm | 5/16" | 5/8" | R |
| 1929800 | 15.9 mm | 3/8" | 11/16" | R |
| 1929910 | 14.3 mm | 13/32" | 23/32" | R |




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## Engraving

## system

The Engraving Insert System features one tool body with 40 unique insert knives designed for a variety of applications: Straight cut, core box ,round corner, V grooves and Chamfering.

Industrial quality insert knives ensure clean cuts and a longer life time than the standard solid router bits.

This engraving system was engineered to quickly interchange inserts while mounted in CNC machines to eliminate set up time and to maintain consistent cutting accuracy.

Balanced design to minimize vibration and to provide superior cutting results.

Ideal for cutting laminated materials, veneers, MDF, plastics, wood
 and solid surfaces

Engraving System, Arbor only


Engraving System Insert Knives
"V" Groove 30º

| Tool No. | D |
| :--- | :---: |
| *3185005 | 0.12 mm |
| *3185006 | 0.24 mm |
| 3185007 | 0.50 mm |
| 3185008 | 0.75 mm |
| 3185009 | 1.0 mm |
| 3185010 | 1.5 mm |
| 3185011 | 2.25 mm |

* Only for use with controllable feed rate machines.

"V" Groove $90^{\circ}$


Core Box

| Tool No. | $\boldsymbol{R}$ | $\boldsymbol{B}$ |
| :---: | :---: | :---: |
| 3185028 | 1.6 mm | 5 mm |
| 3185029 | 2.4 mm | 6 mm |
| 3185030 | 3.2 mm | 7 mm |
| 3185031 | 4.0 mm | 8 mm |
|  | \$ <br> Dealer <br> Net rice <br> in effect |  |

Corner Round

| Tool No. | $\boldsymbol{R}$ | B |
| :---: | :---: | :---: |
| 3185025 | 1.6 mm | 8 mm |
| 3185026 | 2.4 mm | 8 mm |
| 3185027 | 3.2 mm | 8 mm |
|  | C <br> Dealer <br> Net Price <br> in effect |  |


"V" Groove 60º

| Tool No. | D |
| :---: | :---: |
| *3185018 | 0.12 mm |
| *3185019 | 0.24 mm |
| 3185020 | 0.50 mm |
| 3185021 | 0.75 mm |
| 3185022 | 1.0 mm |
| 3185023 | 1.5 mm |
| 3185024 | 2.25 mm |
|  | Dealer Net Price in effect |



| Tool No. | D | B |
| :---: | :---: | :---: |
| 3185032 | 3.2 mm | 5 mm |
| 3185033 | 4.76 mm | 6 mm |
| 3185034 | 6.35 mm | 7 mm |
| 3185035 | 7.94 mm | 8 mm |
|  |  | \$ |
|  | Dealer <br> Netree <br> in effect |  |





[^0]:    Price per single knife.

