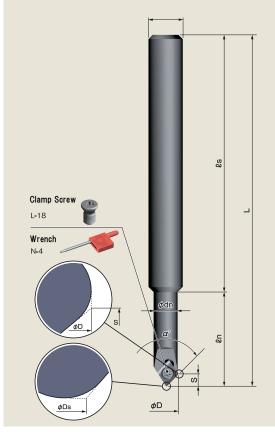
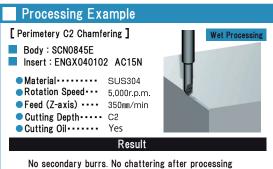


Developed screw-on type smallest insert (under-neck diameter  $\emptyset$  6mm).

This will be smallest insert in the existing market. Small diameter long neck prevents tool interference when processing in the deep area.

You can use this tool for engraving process.





# Centering







\* This tool cannot be used with drilling machines

Dish Chamfering Processing (Min. Blade Diameter ~ Max. Blade Diameter)

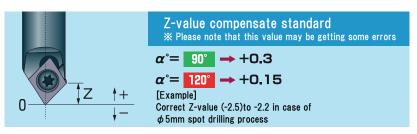
90°
120°

\$\phi 0.6 \text{mm} \phi \phi 0.6 \text{mm} \phi \phi 7.4 \text{mm}\$

# Body

| Model. No. | Blades | φD  | φDs  | <b>φ</b> d | <b>ø</b> dn | L  | ls | ℓn | S   | α°   |
|------------|--------|-----|------|------------|-------------|----|----|----|-----|------|
| SCN0845E   | 1      | 6   | 0.58 | 8          | 5.6         | 82 | 60 | 22 | 2.8 | 90°  |
| SCN0830E   | 1      | 7.4 | 0.52 | 8          | 7           | 82 | 60 | 22 | 2.0 | 120° |

Inset is not equipped as standard accessory. Please purchase it separately. We have the clamp screw wrench in our standard equipment.



# Cutting Conditions

| Centering            |                     |                         |                    |         |  |  |  |  |
|----------------------|---------------------|-------------------------|--------------------|---------|--|--|--|--|
| Material             | Feed per blade (fz) | Rotation speed (r.p.m.) | Recommended Insert | Coolant |  |  |  |  |
| General Steel        | 0.02~0.03           | 4,000~                  | ENGX040102 AC15N   | Yes     |  |  |  |  |
| Alloy Steel          | 0.02~0.03           | 4,000~                  | ENGX040102 AC15N   | Yes     |  |  |  |  |
| Stainless Steel      | 0.01~0.02           | 4,000~                  | ENGX040102 AC15N   | Yes     |  |  |  |  |
| Aluminum,Resin,Brass | 0.05~0.08           | 4,000~                  | ENGX040102F ZC16N  | Yes     |  |  |  |  |
| Castings             | 0.04~0.06           | 4,000~                  | ENGX040102 AC15N   | None    |  |  |  |  |

|   | Chamfering |        |                   |      |  |  |  |  |  |
|---|------------|--------|-------------------|------|--|--|--|--|--|
| Material Feed per blade (fz) Rotation speed (r.p.m.) Recommended Insert |            |        |                   |      |  |  |  |  |  |
| General Steel   | 0.07~0.1   | 4,000~ | ENGX040102 AC15N  | Yes  |  |  |  |  |  |
| Alloy Steel   | 0.07~0.1   | 4,000~ | ENGX040102 AC15N  | Yes  |  |  |  |  |  |
| Stainless Steel   | 0.05~0.1   | 4,000~ | ENGX040102 AC15N  | Yes  |  |  |  |  |  |
| Aluminum,Resin,Brass  | 0.1~0.15   | 4,000~ | ENGX040102F ZC16N | Yes  |  |  |  |  |  |
| Castings  | 0.07~0.12  | 4,000~ | ENGX040102 AC15N  | None |  |  |  |  |  |

|                      | V-groove processing |        |                   |      |  |  |  |  |  |  |
|----------------------|---------------------|--------|-------------------|------|--|--|--|--|--|--|
| Material             | Coolant             |        |                   |      |  |  |  |  |  |  |
| General Steel        | 0.05~0.07           | 4,000~ | ENGX040102 AC15N  | Yes  |  |  |  |  |  |  |
| Alloy Steel          | 0.05~0.07           | 4,000~ | ENGX040102 AC15N  | Yes  |  |  |  |  |  |  |
| Stainless Steel      | 0.03~0.05           | 4,000~ | ENGX040102 AC15N  | Yes  |  |  |  |  |  |  |
| Aluminum,Resin,Brass | 0.05~0.08           | 4,000~ | ENGX040102F ZC16N | Yes  |  |  |  |  |  |  |
| Castings             | 0.04~0.06           | 4,000~ | ENGX040102 AC15N  | None |  |  |  |  |  |  |

- In case of bore chamfering process by Z-axis only, please take same cutting condition of centering process
- According to the shape of work, large or small chamfering amount and position of blade, the cutting condition will have to be adjusted.
   In case of processing with large amount chamfer, please take reducing cutting condition
- In case of chanfering process of Stainless Steel, please take the down cutting

| Figure                   | Model.No.                | Material               | Blade Shape | Coating | Usable corner | Quantity per box |
|--------------------------|--------------------------|------------------------|-------------|---------|---------------|------------------|
| ⟨ENGX040102⟩<br>R0.2 90° | NEW<br>ENGX040102F ZC16N | Fine particles Carbide | Sharp edge  | None    | 2             | 12               |
| 75 3.9 (Except nose R)   | ENGX040102 AC15N         | Fine particles Carbide | Honing edge | AICrN   | 2             | 12               |



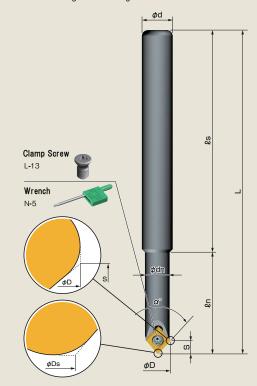
Insert

Blade edge by V-grooving and centering processing could not be a perfect vertex angle

# Chibimomi

Center-drilling and chamfer process can be done by this tool. You can reduce numbers of ATC tooling by using this tool and make high productivity!

Original insert shape desinged by us solves the risk of chattering and breakage.



- Carbide made shank increased rigidity and limit of spotting has been much improved with the standard long shank, Protruding limit is now high.
- This tool have  $(\phi 10)$  Shank and  $(\phi 9)$  Blade, and can be used at narrow area

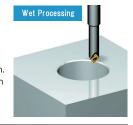


## [ $\phi$ 100 Bore Chamfering]

Body: SCM1045C

Insert : C22GUX NK5050

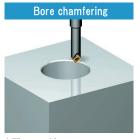
- Material · · · · · · · SUS304
- Rotation Speed · · · 5,000r.p.m.
- Feed (Z-axis) ···· 500mm/min
- Cutting Depth · · · · C1Cutting Oil · · · · · Yes



## Result

 $800 \rm pcs$  process has successfully done without size change, secondary burrs and alternant sound during processing







\* This tool cannot be used with drilling machines

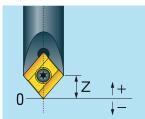
Dish Chamfering Processing (Min. Blade Diameter ~ Max. Blade Diameter)

90° **∲0.6mm∼∮**9mm

# Body

|              |        |    | Dimensions (mm) |            |             |     |     |    |     |     |               |
|--------------|--------|----|-----------------|------------|-------------|-----|-----|----|-----|-----|---------------|
| Model. No.   | Blades | φD | φDs             | <b>φ</b> d | <b>ø</b> dn | L   | ls  | ℓn | S   | α°  | Carbide Shank |
| SCM1045C     | 1      | 9  | 0.5             | 10         | 8           | 105 | 72  | 33 | 4.4 | 90° |               |
| SCM1045CL    | 1      | 9  | 0.5             | 10         | 8           | 165 | 132 | 33 | 4.4 | 90° |               |
| SCM1045CL-CB | 1      | 9  | 0.5             | 10         | 8           | 165 | 145 | 20 | 4.4 | 90° | •             |

Inset is not equipped as standard accessory. Please purchase it separately. We have the clamp screw wrench in our standard equipment.



Z-value compensate standard

\*\* Please note that this value may be getting little errors

 $\alpha$ °= 90°  $\rightarrow$  +0.2

[Example]

Correct Z-value(-4.0)to -3.8in case of  $\phi$  8mm spot drilling process

# Cutting Conditions

| Centering            |                     |                         |                    |         |  |  |  |  |
|----------------------|---------------------|-------------------------|--------------------|---------|--|--|--|--|
| Material             | Feed Per Blade (fz) | Rotation speed (r.p.m.) | Recommended Insert | Coolant |  |  |  |  |
| General Steel        | 0.05~0.08           | 2,000~3,500             | C22GUX NK2020      | Yes     |  |  |  |  |
| Alloy Steel          | 0.05~0.08           | 2,000~3,500             | C22GUX NK3030      | Yes     |  |  |  |  |
| Stainless Steel      | 0.05~0.08           | 2,000~3,500             | C22GUXT AC16N      | Yes     |  |  |  |  |
| Aluminum,Resin,Brass | 0.05~0.1            | 3,000~                  | C22GUX NK1010      | Yes     |  |  |  |  |
| Castings             | 0.05~0.08           | 2,000~3,500             | C22GUX NK3030      | Yes     |  |  |  |  |

|                      | Chamfering          |                         |                    |         |  |  |  |  |  |  |
|----------------------|---------------------|-------------------------|--------------------|---------|--|--|--|--|--|--|
| Material             | Feed Per Blade (fz) | Rotation Speed (r.p.m.) | Recommended Insert | Coolant |  |  |  |  |  |  |
| General Steel        | 0.1~0.15            | 2,000~                  | C22GUX NK2020      | Yes     |  |  |  |  |  |  |
| Alloy Steel          | 0.1~0.15            | 2,000~                  | C22GUX NK3030      | Yes     |  |  |  |  |  |  |
| Stainless Steel      | 0.1~0.15            | 2,000~                  | C22GUXT AC16N      | Yes     |  |  |  |  |  |  |
| Aluminum,Resin,Brass | 0.1~0.15            | 3,000~                  | C22GUX NK1010      | Yes     |  |  |  |  |  |  |
| Castings             | 0.1~0.15            | 2,000~                  | C22GUX NK3030      | Yes     |  |  |  |  |  |  |

- In case of bore chamfering prosess by Z-axis only, please take same cutting condition of centering process
- According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
   In case of process with large amount chamfer, please take reducing cutting condition
- In case of chamfering process of stainless steel, please take the down cutting

## Insert

| - 1110011                |               |                        |             |         |               |                  |
|--------------------------|---------------|------------------------|-------------|---------|---------------|------------------|
| Figure                   | Model.No.     | Material               | Blade Shape | Coating | Usable corner | Quantity per box |
|                          | C22GUX NK1010 | Carbide K10            | Sharp edge  | None    | 2             | 12               |
| $\langle C22GUX \rangle$ | C22GUX NK2020 | Carbide M20            | Honing edge | None    | 2             | 12               |
| R0.2 7°                  | C22GUX NK3030 | Carbide M20            | Honing edge | TiN     | 2             | 12               |
|                          | C22GUX NK5050 | Carbide K10            | Sharp edge  | TiN     | 2             | 12               |
| φ6.35<br>φ2.8            | C22GUX NK6060 | Carbide M20            | Honing edge | TiA&N   | 2             | 12               |
|                          | C22GUX NK8080 | Carbide K10            | Sharp edge  | TiA&N   | 2             | 12               |
| 80° 7 6 2.38             | C22GUXF AC16N | Fine particles Carbide | Sharp edge  | AICrN   | 2             | 12               |
| (Except nose R)          | C22GUXT AC16N | Fine particles Carbide | Honing edge | AICrN   | 2             | 12               |

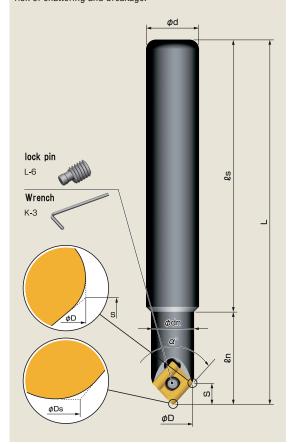


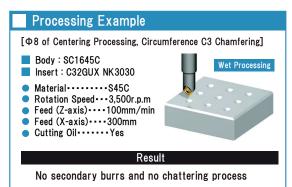
Blade edge by V-grooving and centering processing could not be a perfect vertex angle

# Momimen

Center-drilling and chamfer process can be done by this tool. You can reduce numbers of ATC tooling by using this tool and make high productivity!

Original insert shape desinged by us solves the risk of chattering and breakage.





Centering Dish chamfering Corner chamfering

\* This tool cannot be used with drilling machines

Dish Chamfering Processing (Min. Blade Diameter ~ Max. Blade Diameter)

90°
118°

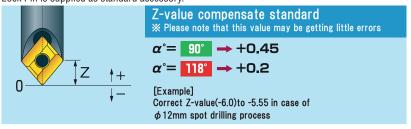
\$\phi 2 \text{mm} \phi \phi 13.5 \text{mm}\$

\$\phi 2 \text{mm} \phi \phi 16.15 \text{mm}\$

## Body

|            |        | Dimensions (mm) |      |    |             |     |     |    |     |      |
|------------|--------|-----------------|------|----|-------------|-----|-----|----|-----|------|
| Model. No. | Blades | φD              | φDs  | φd | <b>ø</b> dn | ٦   | ls  | ℓn | S   | α°   |
| SC1045C    | 1      | 13.5            | 1.0  | 10 | 13          | 110 | 82  | 28 | 6.3 | 90°  |
| SC1245C    | 1      | 13.5            | 1.0  | 12 | 13          | 110 | 82  | 28 | 6.3 | 90°  |
| SC1645C    | 1      | 13.5            | 1.0  | 16 | 13          | 110 | 82  | 28 | 6.3 | 90°  |
| SC1645CL   | 1      | 13.5            | 1.0  | 16 | 13          | 200 | 172 | 28 | 6.3 | 90°  |
| SC1630C    | 1      | 16.15           | 0.39 | 16 | 16.5        | 110 | 82  | 28 | 4.6 | 118° |
| SC1630CL   | 1      | 16.15           | 0.39 | 16 | 16.5        | 200 | 172 | 28 | 4.6 | 118° |

Inset is not equipped as standard accessory. Please purchase it separately. Lock Pin is supplied as standard accessory.



# Cutting Conditions

|                      | Centering           |                         |                    |         |  |  |  |  |  |  |
|----------------------|---------------------|-------------------------|--------------------|---------|--|--|--|--|--|--|
| Material             | Feed Per Blade (fz) | Rotation Speed (r.p.m.) | Recommended Insert | Coolant |  |  |  |  |  |  |
| General Steel        | 0.05~0.1            | 1,500~3,000             | C32GUX NK2020      | Yes     |  |  |  |  |  |  |
| Alloy Steel          | 0.05~0.1            | 1,500~3,000             | C32GUX NK3030      | Yes     |  |  |  |  |  |  |
| Stainless Steel      | 0.05~0.1            | 1,500~3,000             | C32GUX AC15D       | Yes     |  |  |  |  |  |  |
| Aluminum,Resin,Brass | 0.05~0.2            | 3,000~                  | C32GUX NK1010      | Yes     |  |  |  |  |  |  |
| Castings             | 0.05~0.1            | 1,500~3,000             | C32GUX NK3030      | Yes     |  |  |  |  |  |  |

| Chamfering           |                     |                         |                    |         |  |  |  |  |
|----------------------|---------------------|-------------------------|--------------------|---------|--|--|--|--|
| Material             | Feed per blade (fz) | Rotation speed (r.p.m.) | Recommended Insert | Coolant |  |  |  |  |
| General Steel        | 0.1~0.2             | 2,000~                  | C32GUX NK2001      | None    |  |  |  |  |
| Alloy Steel          | 0.1~0.2             | 2,000~                  | C32GUX NK2001      | None    |  |  |  |  |
| Stainless Steel      | 0.1~0.2             | 2,000~                  | C32GUX AC15D       | Yes     |  |  |  |  |
| Aluminum,Resin,Brass | 0.1~0.2             | 3,000~                  | C32GUX NK1010      | Yes     |  |  |  |  |
| Castings             | 0.1~0.2             | 2,000~                  | C32GUX NK2001      | None    |  |  |  |  |

- In case of bore chamfering prosess by Z-axis only, please take same cutting condition of centering process
   According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
- In case of process with large amount chamfer, please take reducing cutting condition
- In case of chamfering process of stainless steel, please take the down cutting

| Figure          | Model.No.      | Material               | Blade Shape | Coating | Usable corner | Quantity per box |
|-----------------|----------------|------------------------|-------------|---------|---------------|------------------|
|                 | C32GUX NK2001  | Cermet                 | Honing edge | None    | 2             | 12               |
| ⟨C32GUX⟩        | C32GUX NK1010  | Carbide K10            | Sharp edge  | None    | 2             | 12               |
| R0.6 190°       | C32GUX NK2020  | Carbide M20            | Honing edge | None    | 2             | 12               |
|                 | C32GUX NK3030  | Carbide M20            | Honing edge | TiN     | 2             | 12               |
|                 | C32GUX NK5050  | Carbide K10            | Sharp edge  | TiN     | 2             | 12               |
| \$3.5           | C32GUX NK6060  | Carbide M20            | Honing edge | TiAℓN   | 2             | 12               |
|                 | C32GUX NK8080  | Carbide K10            | Sharp edge  | TiAℓN   | 2             | 12               |
| 80 3.18         | C32GUX AC15D   | Fine particles Carbide | Honing edge | AlCrN   | 2             | 12               |
| (Except nose R) | C32GUX AC25D   | Fine particles Carbide | Sharp edge  | AlCrN   | 2             | 12               |
| ( <u></u>       | C32GUX HSS     | HSS                    | Sharp edge  | None    | 2             | 12               |
|                 | C32GUX HSS TiN | HSS                    | Sharp edge  | TiN     | 2             | 12               |



Insert

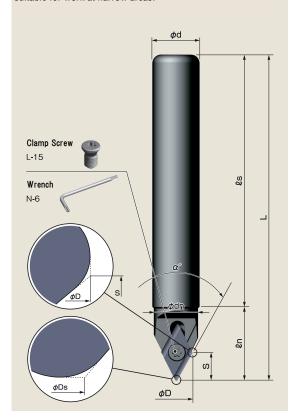
Blade edge by centering processing could not be a perfect vertex angle When mounting insert, please do not take reverse tightening.

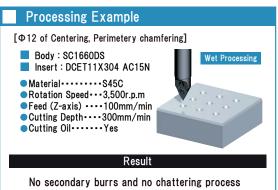
Due to the eccentricity looking mechanism, poor accuracy or breakage of insert may be occurred When replacing insert, please confirm twhether you have been taking reserve tightening or not.

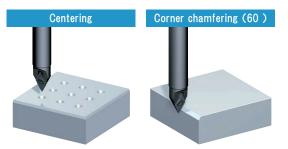
# 60°Momimen

Throw-away type tool ensured no alignment work. Center-drilling and chamfer process can be done by tool. You can reduce numbers of ATC tooling and ensured high speed cutting and high productivity.

Slim body (shank: ø16mm and ø12mm blade) is suitable for work at narrow areas.







\* This tool cannot be used with drilling machines

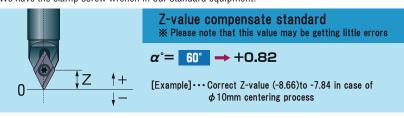
## Dish Chamfering Processing (Min. Blade Diameter ~ Max. Blade Diameter)



# Body

|   |            |        | Dimensions (mm) |      |    |             |     |     |    |     |     |
|---|------------|--------|-----------------|------|----|-------------|-----|-----|----|-----|-----|
|   | Model. No. | Blades | φD              | φDs  | φd | <b>ø</b> dn | L   | ls  | ℓn | S   | α°  |
|   | SC1660DS   | 1      | 11.88           | 0.97 | 16 | 15          | 110 | 85  | 25 | 9.4 | 60° |
| ĺ | SC1660DSL  | 1      | 11.88           | 0.97 | 16 | 15          | 200 | 175 | 25 | 9.4 | 60° |

Inset is not equipped as standard accessory. Please purchase it separately. We have the clamp screw wrench in our standard equipment.



# Cutting Conditions

|                      |                     | Centering               |                    |         |
|----------------------|---------------------|-------------------------|--------------------|---------|
| Material             | Feed Per Blade (fz) | Rotation Speed (r.p.m.) | Recommended Insert | Coolant |
| General Steel        | 0.03~0.05           | 3,000~3,500             | DCET11X304 AC15N   | Yes     |
| Alloy Steel          | 0.03~0.05           | 3,000~3,500             | DCET11X304 AC15N   | Yes     |
| Stainless Steel      | 0.03~0.05           | 3,000~3,500             | DCET11X304 AC15N   | Yes     |
| Aluminum,Resin,Brass | 0.03~0.08           | 3,000~                  | DCET11X304 ZA10N   | Yes     |
| Castings             | 0.03~0.05           | 3,000~3,500             | DCET11X304 AC15N   | Yes     |

|                      |                     | Chamfering              |                    |         |
|----------------------|---------------------|-------------------------|--------------------|---------|
| Material             | Feed Per Blade (fz) | Rotation Speed (r.p.m.) | Recommended Insert | Coolant |
| General Steel        | 0.1~0.15            | 2,000~                  | DCET11X304 AC15N   | Yes     |
| Alloy Steel          | 0.1~0.15            | 2,000~                  | DCET11X304 AC15N   | Yes     |
| Stainless Steel      | 0.1~0.15            | 2,000~                  | DCET11X304 AC15N   | Yes     |
| Aluminum,Resin,Brass | 0.1~0.2             | 3,000~                  | DCET11X304 ZA10N   | Yes     |
| Castings             | 0.1~0.15            | 2,000~                  | DCET11X304 AC15N   | Yes     |

- In case of bore chamfering process by Z-axis only, please take same cutting condition of centering process
- According to the shape of work, large or small chamfering amount and position of blade, the cutting condition will have to be adjusted.
- In cace of process with large chanfer please take reducing cutting condition
  In cace of chamfering process of stainless steel, please take the down cutting

# Insert

| Figure                                  | Model.No.         | Material               | Blade Shape | Coating | Usable Corner | Quantity per box |  |
|---|-------------------|------------------------|-------------|---------|---------------|------------------|--|
| ⟨DCET11X304⟩ ⟨DCET11X304E⟩  R0.4  7°    | DCET11X304 ZA10N  | Carbide K10            | Sharp edge  | None    | 2             | 12               |  |
| 09.525                                  | DCET11X304 AC15N  | Fine Particles Carbide | Sharp edge  | AICrN   | 2             | 12               |  |
| 55° \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | DCET11X304E AC16N | Fine Particles Carbide | Honing edge | AICrN   | 2             | 12               |  |



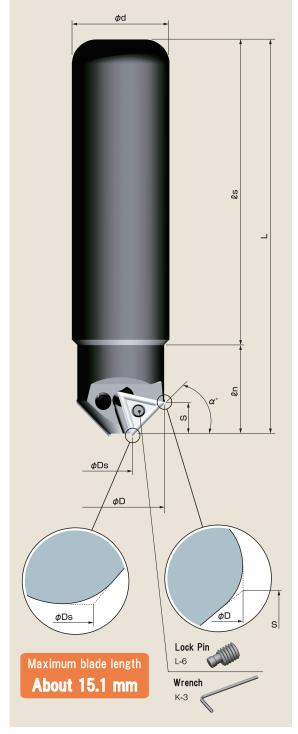
Blade edge by V-grooving and centering processing could not be a perfect vertex angle

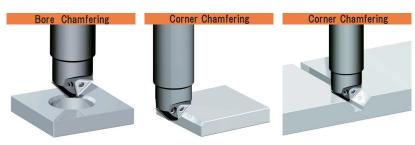
# Chamfering Cutter

| Applications use |                 | Capacity        |                 |                 |                 |                 |                 |          |          |          |          |          |          |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------|----------|----------|----------|----------|----------|
|                  | NK1536T         | NK2035T         | NK2535T         | NK3030T         | NK3532T         | NK4031T         | NK4530T         | NK5031T  | NK5532T  | NK6030T  | NK6533T  | NK7032T  | NK7533T  |
| α°               | 15°             | 20°             | 25°             | 30°             | 35°             | 40°             | 45°             | 50°      | 55°      | 60°      | 65°      | 70°      | 75°      |
| Bore chamfering  | <i>φ</i> 8∼36mm | <i>φ</i> 8∼36mm | <i>φ</i> 8∼35mm | <i>φ</i> 8∼33mm | <i>φ</i> 8∼32mm | <i>φ</i> 8∼31mm | <i>φ</i> 8∼29mm | φ12∼31mm | φ15∼32mm | φ15∼30mm | φ20∼33mm | φ22∼32mm | φ25~33mm |

Angle 15° - 75° (By 5°increments) can be chosen according your application.

Insert available are rich and will meet with various applications you may need.





# Body

|                        |        | Dimensions (mm) |                                    |            |     |     |    |            |            |  |
|------------------------|--------|-----------------|------------------------------------|------------|-----|-----|----|------------|------------|--|
| Model. No.             | Blades | φD              | Minimum cutting diameter $\phi$ Ds | <b>φ</b> d | L   | ls  | ℓn | S          | α°         |  |
| NK1536T-20             | 2      | 37.9            | 8                                  | 20         | 130 | 100 | 30 | 4.0        | 15°        |  |
| NK1536T-25             | 2      | 37.9            | 8                                  | 25         | 130 | 100 | 30 | 4.0        | 15°        |  |
| NK1536T                | 2      | 37.9            | 8                                  | 32         | 130 | 100 | 30 | 4.0        | 15°        |  |
| NK1536TL               | 2      | 37.9            | 8                                  | 32         | 170 | 140 | 30 | 4.0        | 15°        |  |
| NK2035T-20             | 2      | 37.1            | 8                                  | 20         | 130 | 100 | 30 | 5.3        | 20°        |  |
| NK2035T-25             | 2      | 37.1            | 8                                  | 25         | 130 | 100 | 30 | 5.3        | 20°        |  |
| NK2035T                | 2      | 37.1            | 8                                  | 32         | 130 | 100 | 30 | 5.3        | 20°        |  |
| NK2035TL               | 2      | 37.1            | 8                                  | 32         | 170 | 140 | 30 | 5.3        | 20°        |  |
| NK2535T-20             | 2      | 36.0            | 8                                  | 20         | 130 | 100 | 30 | 6.5        | 25°        |  |
| NK2535T-25             | 2      | 36.0            | 8                                  | 25         | 130 | 100 | 30 | 6.5        | 25°        |  |
| NK2535T                | 2      | 36.0            | 8                                  | 32         | 130 | 100 | 30 | 6.5        | 25°        |  |
| NK2535TL               | 2      | 36.0            | 8                                  | 32         | 170 | 140 | 30 | 6.5        | 25°        |  |
| NK3030T-20             | 2      | 34.8            | 8                                  | 20         | 130 | 100 | 30 | 7.7        | 30°        |  |
| NK3030T-25             | 2      | 34.8            | 8                                  | 25         | 130 | 100 | 30 | 7.7        | 30°        |  |
| NK3030T                | 2      | 34.8            | 8                                  | 32         | 130 | 100 | 30 | 7.7        | 30°        |  |
| NK3030TL               | 2      | 34.8            | 8                                  | 32         | 170 | 140 | 30 | 7.7        | 30°        |  |
| NK3532T-20             | 2      | 33.3            | 8                                  | 20         | 130 | 100 | 30 | 8.9        | 35°        |  |
| NK3532T-25             | 2      | 33.3            | 8                                  | 25         | 130 | 100 | 30 | 8.9        | 35°        |  |
| NK3532T                | 2      | 33.3            | 8                                  | 32<br>32   | 130 | 100 | 30 | 8.9        | 35°<br>35° |  |
| NK3532TL<br>NK4031T-20 | 2      | 33.3            | 8                                  | 20         | 130 | 100 | 30 | 8.9<br>9.9 | 40°        |  |
|                        | 2      | 31.7            | 8                                  | 25         | 130 | 100 | 30 |            | 40°        |  |
| NK4031T-25<br>NK4031T  | 2      | 31.7            | 8                                  | 32         | 130 | 100 | 30 | 9.9        | 40°        |  |
| NK4031TL               | 2      | 31.7            | 8                                  | 32         | 170 | 140 | 30 | 9.9        | 40°        |  |
| NK4530T-20             | 2      | 29.9            | 8                                  | 20         | 130 | 100 | 30 | 10.9       | 45°        |  |
| NK4530T-25             | 2      | 29.9            | 8                                  | 25         | 130 | 100 | 30 | 10.9       | 45°        |  |
| NK4530T-25             | 2      | 29.9            | 8                                  | 32         | 130 | 100 | 30 | 10.9       | 45°        |  |
| NK4530TL               | 2      | 29.9            | 8                                  | 32         | 170 | 140 | 30 | 10.9       | 45°        |  |
| NEW NK3-4536T          | 3      | 36.9            | 15                                 | 32         | 130 | 100 | 30 | 10.9       | 45°        |  |
| NEW NK4-4543T          | 4      | 43.9            | 22                                 | 32         | 130 | 100 | 30 | 10.9       | 45°        |  |
| NEW NK5-4559T          | 5      | 59.9            | 38                                 | 32         | 130 | 100 | 30 | 10.9       | 45°        |  |
| NK5031T-20             | 2      | 31.9            | 12                                 | 20         | 130 | 100 | 30 | 11.8       | 50°        |  |
| NK5031T-25             | 2      | 31.9            | 12                                 | 25         | 130 | 100 | 30 | 11.8       | 50°        |  |
| NK5031T                | 2      | 31.9            | 12                                 | 32         | 130 | 100 | 30 | 11.8       | 50°        |  |
| NK5031TL               | 2      | 31.9            | 12                                 | 32         | 170 | 140 | 30 | 11.8       | 50°        |  |
| NK5532T-20             | 2      | 32.7            | 15                                 | 20         | 130 | 100 | 30 | 12.7       | 55°        |  |
| NK5532T-25             | 2      | 32.7            | 15                                 | 25         | 130 | 100 | 30 | 12.7       | 55°        |  |
| NK5532T                | 2      | 32.7            | 15                                 | 32         | 130 | 100 | 30 | 12.7       | 55°        |  |
| NK5532TL               | 2      | 32.7            | 15                                 | 32         | 170 | 140 | 30 | 12.7       | 55°        |  |
| NK6030T-20             | 2      | 30.5            | 15                                 | 20         | 130 | 100 | 30 | 13.4       | 60°        |  |
| NK6030T-25             | 2      | 30.5            | 15                                 | 25         | 130 | 100 | 30 | 13.4       | 60°        |  |
| NK6030T                | 2      | 30.5            | 15                                 | 32         | 130 | 100 | 30 | 13.4       | 60°        |  |
| NK6030TL               | 2      | 30.5            | 15                                 | 32         | 170 | 140 | 30 | 13.4       | 60°        |  |
| NK6533T-20             | 2      | 33.1            | 20                                 | 20         | 130 | 100 | 30 | 14.0       | 65°        |  |
| NK6533T-25             | 2      | 33.1            | 20                                 | 25         | 130 | 100 | 30 | 14.0       | 65°        |  |
| NK6533T                | 2      | 33.1            | 20                                 | 32         | 130 | 100 | 30 | 14.0       | 65°        |  |
| NK6533TL               | 2      | 33.1            | 20                                 | 32         | 170 | 140 | 30 | 14.0       | 65°        |  |
| NK7032T-20             | 2      | 32.6            | 22                                 | 20         | 130 | 100 | 30 | 14.5       | 70°        |  |
| NK7032T-25             | 2      | 32.6            | 22                                 | 25         | 130 | 100 | 30 | 14.5       | 70°        |  |
| NK7032T                | 2      | 32.6            | 22                                 | 32         | 130 | 100 | 30 | 14.5       | 70°        |  |
| NK7032TL               | 2      | 32.6            | 22<br>25                           | 32         | 170 | 140 | 30 | 14.5       | 70°        |  |
| NK7533T-20             | 2      | 33.0            | 25<br>25                           | 20<br>25   | 130 | 100 |    | 15.0       | 75°<br>75° |  |
| NK7533T-25             |        | 33.0            |                                    | 32         | 130 | 100 | 30 | 15.0       |            |  |
| NK7533T                | 2      | 33.0            | 25                                 |            | 130 | 100 |    | 15.0       | 75°        |  |
| NK7533TL               |        | 33.0            | 25                                 | 32         | 170 | 140 | 30 | 15.0       | 75°        |  |

Inset is not Included. Please order separately. We have the lock pin wrench in our standard equipment.

4Blade 3Blade 2Blade 5 Blade

| A !! &!          |                         | Capacity   |            |
|------------------|-------------------------|------------|------------|
| Applications use | NK3-4536T               | NK4-4543T  | NK5-4559T  |
| Blades           | 3                       | 4          | 5          |
| α°               | 45°                     | 45°        | 45°        |
| Bore chamfering  | $\phi$ 15.5 $\sim$ 36mm | φ22.5~43mm | φ38.5~59mm |

Line-up of 3 blades, 4-blade and 5-blades at 45°

## T32MOR

The Insert breaker is thin and is suitable for hard material process if compared with TT32GUR

## TNEA160304

Since the thermal resistance is large when processing the hardening heat treatment materials, chamfering amount will have to be up to C3

## TT32GUR

The Insert's breaker ensures no secondary burrs and no chattering

# **Processing Example** [C5 chamfering] Body: NK4530T Insert: TT32GUR AC15N Material ----- SUS304 Rotation Speed--2,000r.p.m Table feed----200/min Cuting Depth----C5 Cutting Oil-----None Dry cutting Result No secondary burrs and No chattering after processing

# Cutting Conditions

|     |                    |                    | T:                      | 32MOR   |         |         |         |  |  |  |  |
|-----|--------------------|--------------------|-------------------------|---------|---------|---------|---------|--|--|--|--|
|     |                    | Material Model     | NK2001                  | NK1010  | NK2020  | NK3030  | AC16N   |  |  |  |  |
|     | Material           | Feed PerBlade (fz) | Cutting speed (m / min) |         |         |         |         |  |  |  |  |
|     | General Steel      | 0.08~0.2           | 200~250                 |         | 150~200 | 150~200 | 100~200 |  |  |  |  |
|     | Alloy Steel        | 0.08~0.2           | 200~250                 |         | 150~200 | 150~200 | 100~200 |  |  |  |  |
|     | Stainless Steel    | 0.08~0.2           |                         |         | 100~150 | 100~150 | 100~200 |  |  |  |  |
| Αlι | uminum,Resin,Brass |                    |                         |         |         |         |         |  |  |  |  |
|     | Castings           | 0.08~0.2           | 200~250<br>※FCD         | 100~150 |         |         |         |  |  |  |  |

|                                   | TT32GURF            |                         |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---------------------|-------------------------|--|--|--|--|--|--|--|--|--|
|                                   | Material Model      | TC16N                   |  |  |  |  |  |  |  |  |  |
| Material                          | Feed per blade (fz) | Cutting speed (m / min) |  |  |  |  |  |  |  |  |  |
| heat resistant alloy<br>(Inconel) | 0.02~0.05           | 150~200                 |  |  |  |  |  |  |  |  |  |
| titanium alloy                    | 0.02~0.05           | 150~200                 |  |  |  |  |  |  |  |  |  |

|   | TNEA160304          |                         |  |  |  |  |  |  |  |  |  |
|---|---------------------|-------------------------|--|--|--|--|--|--|--|--|--|
|   | Material Model      | TC16N                   |  |  |  |  |  |  |  |  |  |
| Material                                | Feed per blade (fz) | Cutting speed (m / min) |  |  |  |  |  |  |  |  |  |
| Hardened alloy steel SKD/HSS (HBC50~65) | 0.08~0.2            | 150~200                 |  |  |  |  |  |  |  |  |  |

|                     | TT32GUR            |                 |                         |         |         |         |                     |         |       |         |  |  |
|---------------------|--------------------|-----------------|-------------------------|---------|---------|---------|---------------------|---------|-------|---------|--|--|
|                     | Material Model     | NK2001          | NK1010                  | NK2020  | NK3030  | NK5050  | NK8080              | AC15N   | HSS   | HSS TIN |  |  |
| Material            | Feed PerBlade (fz) |                 | Cutting speed (m / min) |         |         |         |                     |         |       |         |  |  |
| General Steel       | 0.08~0.2           | 200~250         |                         | 150~200 | 150~200 |         |                     | 150~200 | 13~23 | 15~25   |  |  |
| Alloy Steel         | 0.08~0.2           | 200~250         |                         | 150~200 | 150~200 |         |                     | 150~200 | 10~20 | 13~22   |  |  |
| Stainless Steel     | 0.08~0.2           |                 |                         | 120~180 | 150~200 | 120~180 | 150~200<br>**SUS316 | 150~200 | 10~15 | 11~17   |  |  |
| Aluminum,Resin,Bras | 0.08~0.3           |                 | 250~800                 |         |         | 250~800 | 300~1,000           |         | 31~40 | 31~47   |  |  |
| Castings            | 0.08~0.3           | 200~250<br>※FCD |                         |         |         |         |                     |         |       |         |  |  |

- According to the shape of work, large or small chamfering, amount and position of blade, the cutting condition will have to be adjusted.
- In case of process with large amount chamfer, please take reducing cutting condition

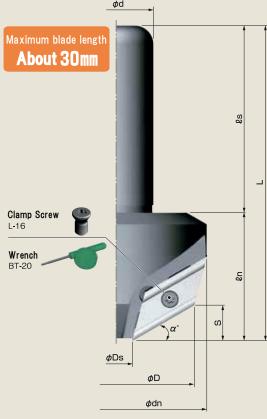
  You have been to the workpiece by recommended inset.

  In case of chamfering process of stainless steel,please take the down cutting

| Insert   |                  |                        |             |         |               |                  |
|--|------------------|------------------------|-------------|---------|---------------|------------------|
| Figure   | Model.No.        | Material               | Blade Shape | Coating | Usable corner | Quantity per box |
| $60^{\circ}$ $\langle$ T32MOR $\rangle$  | T32MOR NK2001    | Cermet                 | Honing edge | None    | 6             | 12               |
| \$3.8<br>\$3.8<br>\$3.8  | T32MOR NK1010    | Carbide K10            | Sharp edge  | None    | 6             | 12               |
| R0.4   | T32MOR NK2020    | Carbide M20            | Honing edge | None    | 6             | 12               |
| R0.4 09.525 3.18   | T32MOR NK3030    | Carbide M20            | Honing edge | TiN     | 6             | 12               |
|  | T32MOR AC16N     | Fine particles Carbide | Honing edge | AICrN   | 6             | 12               |
|  | TT32GUR NK2001   | Cermet                 | Honing edge | None    | 2             | 12               |
| ⟨TT32GUR⟩⟨TT32GURF⟩  | TT32GUR NK1010   | Carbide K10            | Sharp edge  | None    | 2             | 12               |
| 60°\(\frac{1}{2}\)   | TT32GUR NK2020   | Carbide M20            | Honing edge | None    | 2             | 12               |
| 700  | TT32GUR NK3030   | Carbide M20            | Honing edge | TiN     | 2             | 12               |
|  | TT32GUR NK5050   | Carbide K10            | Sharp edge  | TiN     | 2             | 12               |
| R0.4   | TT32GUR NK8080   | Carbide K10            | Sharp edge  | TiAℓN   | 2             | 12               |
| RO.4   | TT32GUR AC15N    | Fine particles Carbide | Honing edge | AICrN   | 2             | 12               |
|  | TT32GURF TC16N   | Fine particles Carbide | Sharp edge  | TiSiN   | 2             | 12               |
| $\phi$ 9.525 3.18  | TT32GUR HSS      | HSS                    | Sharp edge  | None    | 2             | 12               |
|  | TT32GUR HSS TiN  | HSS                    | Sharp edge  | TiN     | 2             | 12               |
| (TNEA160304)<br>PRO.4 (TNEA160304)<br>PRO.4 (TNEA160304)<br>PRO.4 (TNEA160304)<br>PRO.5 (TNEA160304)<br>PRO.5 (TNEA160304) | TNEA160304 TC16N | Fine particles Carbide | Honing edge | TiSiN   | 6             | 12               |

# Gentlemen











# Body

|            |        |      |      |            | Dimens      | ions(mm) |    |    |      |    |
|------------|--------|------|------|------------|-------------|----------|----|----|------|----|
| Model. No. | Blades | φD   | φDs  | <b>φ</b> d | <b>ø</b> dn | L        | ls | ℓn | S    | α° |
| NK4554X-1  | 1      | 54.9 | 12.0 | 32         |             | 135      | 80 | 55 | 21.4 | 45 |
| NK0574X    | 3      | 74.8 | 15.0 | 32         | 102.8       | 135      | 80 | 55 | 2.6  | 5  |
| NK1074X    | 3      | 74.5 | 15.0 | 32         | 99.5        | 135      | 80 | 55 | 5.2  | 10 |
| NK1571X    | 3      | 73.3 | 15.0 | 32         | 95.2        | 135      | 80 | 55 | 7.8  | 15 |
| NK2070X    | 3      | 71.8 | 15.0 | 32         | 90.3        | 135      | 80 | 55 | 10.3 | 20 |
| NK2568X    | 3      | 69.8 | 15.0 | 32         | 84.9        | 135      | 80 | 55 | 12.8 | 25 |
| NK3080X    | 3      | 67.4 | 15.0 | 32         | 79.0        | 135      | 80 | 55 | 15.1 | 30 |
| NK3563X    | 3      | 64.6 | 15.0 | 32         | 72.8        | 135      | 80 | 55 | 17.4 | 35 |
| NK4060X    | 3      | 61.4 | 15.0 | 32         | 66.3        | 135      | 80 | 55 | 19.5 | 40 |
| NK4557X    | 3      | 57.9 | 15.0 | 32         | \           | 135      | 80 | 55 | 21.4 | 45 |
| NK5056X    | 3      | 57.0 | 18.0 | 32         | \           | 135      | 80 | 55 | 23.2 | 50 |
| NK5556X    | 3      | 56.8 | 22.0 | 32         | ] \         | 135      | 80 | 55 | 24.8 | 55 |
| NK6054X    | 3      | 54.3 | 24.0 | 32         | \           | 135      | 80 | 55 | 26.3 | 60 |
| NK6553X    | 3      | 53.6 | 28.0 | 32         | \           | 145      | 80 | 65 | 27.5 | 65 |
| NK7052X    | 3      | 52.8 | 32.0 | 32         | \           | 145      | 80 | 65 | 28.5 | 70 |
| NK7550X    | 3      | 50.7 | 35.0 | 32         | \           | 145      | 80 | 65 | 29.3 | 75 |
| NK8048X    | 3      | 48.5 | 38.0 | 32         | ] \         | 145      | 80 | 65 | 29.9 | 80 |
| NK8547X    | 3      | 47.3 | 42.0 | 32         | \           | 145      | 80 | 65 | 30.3 | 85 |

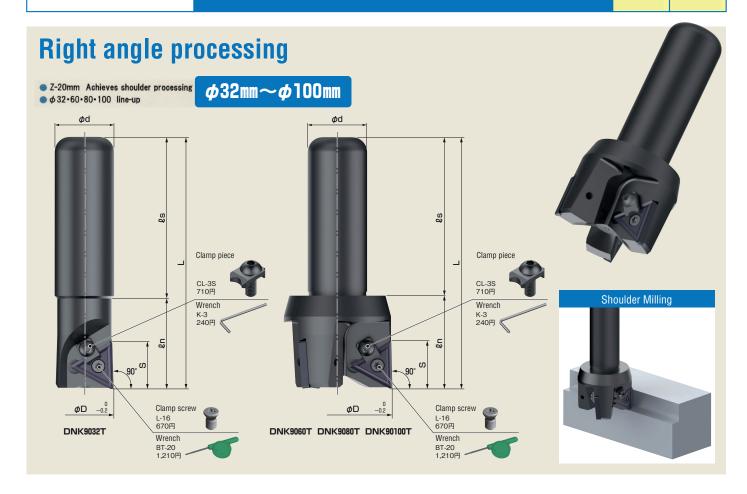
- ※ Inset is not equipped as standard accessory
- \* Clamp screw and wrench are supplied as standard accessory

# **■** Cuttinng Conditions

|                      |   | X63GUR      |             |             |  |
|----------------------|---|-------------|-------------|-------------|--|
| material Model       |   | NK1010      | NK2020      | AC15N       |  |
| Material             | Feed per blade (fz) Rotation speed.(r p.m ) |             |             |             |  |
| General Steel        | 0.05~0.15                                   |             | 1,000~2,000 | 1,000~2,000 |  |
| Alloy Steel          | 0.05~0.15                                   |             | 1,000~2,000 | 1,000~2,000 |  |
| Stainless Steel      | 0.05~0.15                                   |             | 700~1,500   | 700~1,500   |  |
| Aluminum,Resin,Brass | 0.08~0.2                                    | 3,000~5,000 |             |             |  |
| Cast Steel           | 0.05~0.15                                   | 1,000~2,000 |             |             |  |

- According to the shape of work, clamp condition and large or small chamfering amount, the cutting condition will have to be adjusted.
- Yellow marked condition is recommended for the material listed
- In case of chamfering process of Stainless steel, kindly take down cutting

| Figure  | Model.No.     | Material               | Blade Shape | Coating | Usable corner | Quantity per box |
|---|---------------|------------------------|-------------|---------|---------------|------------------|
| X63GUR > R0.4 1,90° 1,12 1,12 1,13 1,13 1,13 1,13 1,13 1,13 | X63GUR NK1010 | Carbide K10            | Sharp edge  | None    | 2             | 3                |
|   | X63GUR NK2020 | Carbide M20            | Honing edge | None    | 2             | 3                |
| 45° SULEXCEPT MOSE HY 4.76                                  | X63GUR AC15N  | Fine particles Carbide | Honing edge | AICrN   | 2             | 3                |



|               |        |     | Dimensions |     |    |    |    |       |  |
|---------------|--------|-----|------------|-----|----|----|----|-------|--|
| Model. No.    | Blades | φD  | <b>φ</b> d | L   | ls | ℓn | S  | (g)   |  |
| NEW DNK9032T  | 1      | 32  | 32         | 135 | 85 | 50 | 24 | 730   |  |
| NEW DNK9060T  | 3      | 60  | 32         | 135 | 85 | 50 | 24 | 1,100 |  |
| NEW DNK9080T  | 3      | 80  | 32         | 135 | 85 | 50 | 24 | 1,600 |  |
| NEW DNK90100T | 3      | 100 | 32         | 135 | 85 | 50 | 24 | 2,300 |  |

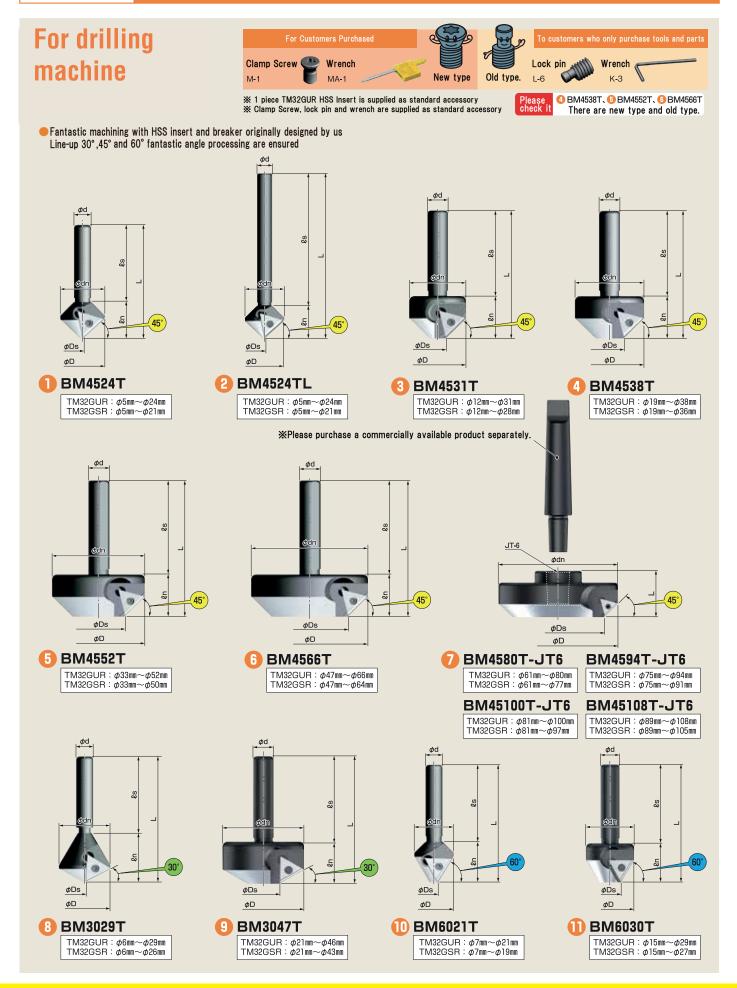
# **Cutting conditioning**

| Material Cutting condition | General steel etc.  | Alloy steel         | Hardened steel<br>HRC~45 | Hardened steel<br>HRC45~65 | Stainless steel     | Castings            | Resin.brass         | Aluminum            | Titanium alloy |
|----------------------------|---------------------|---------------------|--------------------------|----------------------------|---------------------|---------------------|---------------------|---------------------|----------------|
| Feed per blade [fz]        | 0.08~0.2            | 0.08~0.2            | _                        | _                          | 0.08~0.2            | 0.08~0.3            | 0.08~0.3            | 0.08~0.3            | _              |
| Cutting speed [m/min]      | 120~200             | 120~200             | _                        | _                          | 120~150             | 120~200             | 150~200             | 150~200             | _              |
| Rotation speed [r.p.m.]    | 800                 | 800                 | _                        | _                          | 600                 | 800                 | 1,500               | 1,500               | _              |
| Coolant                    | None                | None                | _                        | _                          | None                | None                | None                | None                | _              |
| Recommended insert         | TNMX270412<br>AC15N | TNMX270412<br>AC15N | -                        | -                          | TNMX270412<br>AC15N | TNEQ270412<br>ZA10N | TNEX270412<br>ZA10T | TNEX270412<br>ZA10T | -              |

| Fig. | Model.No.  | Material | Usable corner |  | Quantity per box |
|------|------------|----------|---------------|--|------------------|
|      | TNEX270412 | ZA10T    | 2             |  | 3                |
| 0    | TNEQ270412 | ZA10N    | 6             |  | 3                |
|      | TNMX270412 | AC15N    | 6             |  | 3                |

 <sup>★</sup> Inset is not included. Please order spearately.
 ★ lock pin wrench clamp piece we have standard equipment.

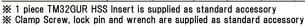
# Mentrube



# Mentrube

# Body

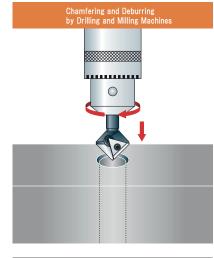
|                  |        |        |        |             |            | Dimens      | ions(mm) |    |    |     |
|------------------|--------|--------|--------|-------------|------------|-------------|----------|----|----|-----|
| Model. No.       | Figure | Blades | φD     | <b>ø</b> Ds | <b>φ</b> d | <b>ø</b> dn | L        | ls | ℓn | α°  |
| BM4524T          | 0      | 1      | 25.20  | 4.49        | 10         | 26          | 67       | 45 | 22 | 45° |
| BM4524TL         | 2      | 1      | 25.20  | 4.49        | 10         | 26          | 110      | 88 | 22 | 45° |
| BM4531T          | 3      | 1      | 33.06  | 11.57       | 12         | 33          | 75       | 50 | 25 | 45° |
| BM4538T          | 4      | 1      | 39.83  | 18.17       | 12         | 40          | 75       | 50 | 25 | 45° |
| BM4552T          | 5      | 1      | 53.91  | 32.17       | 13         | 54          | 80       | 55 | 25 | 45° |
| BM4566T          | 6      | 1      | 67.94  | 46.17       | 13         | 68          | 80       | 55 | 25 | 45° |
| BM4580T-JT6      | 7      | 1      | 81.96  | 60.17       |            | 82          | 40       |    |    | 45° |
| NEW BM4594T-JT6  | 0      | 1      | 95.96  | 74.17       |            | 96          | 40       |    |    | 45° |
| BM45100T-JT6     | 7      | 1      | 101.96 | 80.16       |            | 101         | 40       |    |    | 45° |
| NEW BM45108T-JT6 | 0      | 1      | 109.96 | 88.17       |            | 110         | 40       |    |    | 45° |
| BM3029T          | 8      | 1      | 30.2   | 5.52        | 10         | 30          | 74       | 45 | 29 | 30° |
| BM3047T          | 9      | 1      | 47.39  | 21          | 12         | 47.5        | 75       | 50 | 25 | 30° |
| BM6021T          | 10     | 1      | 21.77  | 6.60        | 10         | 23          | 69       | 45 | 24 | 60° |
| BM6030T          | 0      | 1      | 30.38  | 15          | 12         | 30.4        | 75       | 50 | 25 | 60° |



## Cutting Conditions

| Outtilli     | ittiilig Collations |                      |                         |                      |                  |  |  |  |  |
|--------------|---------------------|----------------------|-------------------------|----------------------|------------------|--|--|--|--|
| Model. No.   | TM32GUR<br>HSS      | TM32GUR<br>HSS TIA¢N | TM32GSR<br>HSS          | TM32GSR<br>HSS TiA¢N | TM32GSR<br>AC16N |  |  |  |  |
|              |                     |                      | Rotation Speed (r.p.m.) |                      |                  |  |  |  |  |
| BM4524T      | 160~320             | 200~400              | 160~320                 | 200~400              | 200~400          |  |  |  |  |
| BM4524TL     | 160~320             | 200~400              | 160~320                 | 200~400              | 200~400          |  |  |  |  |
| BM4531T      | 130~280             | 150~350              | 130~280                 | 150~350              | 150~350          |  |  |  |  |
| BM4538T      | 130~280             | 150~350              | 130~280                 | 150~350              | 150~350          |  |  |  |  |
| BM4552T      | 80~120              | 100~150              | 80~120                  | 100~150              | 100~150          |  |  |  |  |
| BM4566T      | 40~80               | 50~100               | 40~80                   | 50~100               | 50~100           |  |  |  |  |
| BM4580T-JT6  | 20~50               | 20~50                | 20~50                   | 20~50                | 20~50            |  |  |  |  |
| BM4594T-JT6  | 20~50               | 20~50                | 20~50                   | 20~50                | 20~50            |  |  |  |  |
| BM45100T-JT6 | 20~50               | 20~50                | 20~50                   | 20~50                | 20~50            |  |  |  |  |
| BM45108T-JT6 | 20~50               | 20~50                | 20~50                   | 20~50                | 20~50            |  |  |  |  |
| BM3029T      | 160~320             | 200~400              | 160~320                 | 200~400              | 200~400          |  |  |  |  |
| BM3047T      | 130~280             | 150~350              | 130~280                 | 150~350              | 150~350          |  |  |  |  |
| BM6021T      | 160~320             | 200~400              | 160~320                 | 200~400              | 200~400          |  |  |  |  |
| BM6030T      | 130~280             | 150~350              | 130~280                 | 150~350              | 150~350          |  |  |  |  |

• Depending on the Machine's rigidity, above conditions may not be Suitable. In case of soft material like Aluminum, Copper etc , reduce rotation speed accordingly In case the chattering is occurred, rotation speed will have to be reduced and use cutting oil



|              | Сар                             | acity                           |
|--------------|---------------------------------|---------------------------------|
| Model. No.   | Bore ch                         | namfering                       |
|              | TM32GUR                         | TM32GSR                         |
| BM4524T      | $\phi$ 5mm $\sim$ $\phi$ 24mm   | φ5mm~φ21mm                      |
| BM4524TL     | $\phi$ 5mm $\sim$ $\phi$ 24mm   | φ5mm~φ21mm                      |
| BM4531T      | $\phi$ 12mm $\sim$ $\phi$ 31mm  | $\phi$ 12mm $\sim$ $\phi$ 28mm  |
| BM4538T      | $\phi$ 19mm $\sim$ $\phi$ 38mm  | $\phi$ 19mm $\sim$ $\phi$ 36mm  |
| BM4552T      | $\phi$ 33mm $\sim$ $\phi$ 52mm  | φ33mm~φ50mm                     |
| BM4566T      | $\phi$ 47mm $\sim$ $\phi$ 66mm  | φ47mm~φ64mm                     |
| BM4580T-JT6  | $\phi$ 61mm $\sim$ $\phi$ 80mm  | $\phi$ 61mm $\sim$ $\phi$ 77mm  |
| BM4594T-JT6  | $\phi$ 75mm $\sim$ $\phi$ 94mm  | $\phi$ 75mm $\sim$ $\phi$ 91mm  |
| BM45100T-JT6 | φ81mm~φ100mm                    | φ81mm~φ97mm                     |
| BM45108T-JT6 | $\phi$ 89mm $\sim$ $\phi$ 108mm | $\phi$ 89mm $\sim$ $\phi$ 105mm |
| BM3029T      | $\phi$ 6mm $\sim$ $\phi$ 29mm   | φ6mm~φ26mm                      |
| BM3047T      | $\phi$ 21mm $\sim$ $\phi$ 46mm  | φ21mm~φ43mm                     |
| BM6021T      | $\phi$ 7mm $\sim$ $\phi$ 21mm   | $\phi$ 7mm $\sim$ $\phi$ 19mm   |
| BM6030T      | $\phi$ 15mm $\sim$ $\phi$ 29mm  | $\phi$ 15mm $\sim$ $\phi$ 27mm  |

- Please use our original Insert for our tool
- According to the shape, clamp condition and volume of chamfering amount the above cutting condition have to be adjusted. For large amount chamfering, the rate will have to be reduced

## Processing Example

- [ $\phi$  12mm Bore mouth chamfering]
- Body : BM4524T
- Insert: TM32GUR HSS
- · · · · · SUS304 Rotation Speed · · 320r.p.m.
- Use machine · · · Bench type Drilling Machine

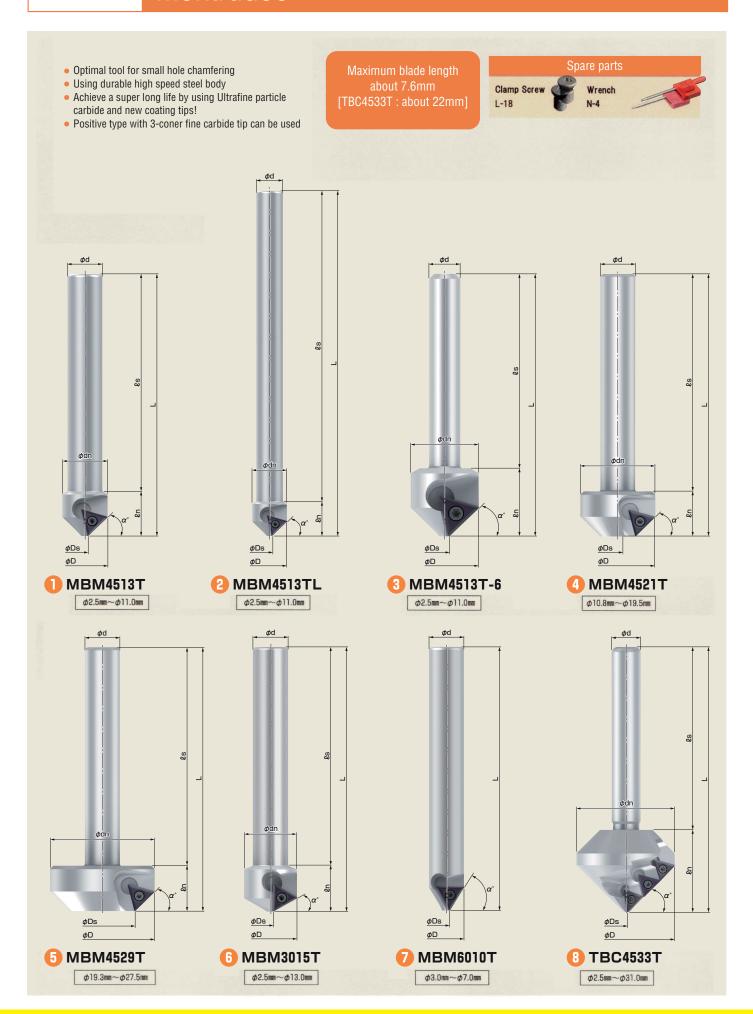
No deburring even after more than 1000 time processing

Blade length is 2-3mm longer than TM32GSR and can be widely processed

TM32GUR have2-usable corners(front and rear) but TM32GSR have 6-usable corners. Saving production cost!

| Figure                             | Model.No.         | Material               | Blade Shape | Coating | Usable Corner | Quantity per box |
|------------------------------------|-------------------|------------------------|-------------|---------|---------------|------------------|
| (TM32GUR)<br>Θ0°<br>R0.4<br>Φ9.525 | TM32GUR HSS       | HSS                    | Sharp edge  | None    | 2             | 3                |
|                                    | TM32GUR HSS TiAℓN | HSS                    | Sharp edge  | TiA£N   | 2             | 3                |
| 60° ⟨TM32GSR⟩                      | TM32GSR HSS       | HSS                    | Sharp edge  | None    | 6             | 3                |
| R0.4                               | TM32GSR HSS TiAℓN | HSS                    | Sharp edge  | TiAℓN   | 6             | 3                |
| \$\tag{99.525}\$                   | NEW TM32GSR AC16N | Fine particles Carbide | Honing edge | AICrN   | 6             | 3                |

# Mentrudee



# Mentrudee





|             | Capacity                                  |
|-------------|---|
|             | Dish Chamfering Processing                |
| Model, No.  | [Min. blade diameter-max. blade diameter] |
| Wiodel. No. | TCXT080102F / TCXT080102E                 |
| MBM4513T    | φ2.5mm~φ11.0mm                            |
| MBM4513TL   | φ2.5mm~φ11.0mm                            |
| MBM4513T-6  | φ2.5mm~φ11.0mm                            |
| MBM4521T    | $\phi$ 10.8mm $\sim$ $\phi$ 19.5mm        |
| MBM4529T    | φ19.3mm~φ27.5mm                           |
| MBM3015T    | φ2.5mm~φ13.0mm                            |
| MBM6010T    | φ3.0mm~φ7.0mm                             |
| TBC4533T    | φ2.5mm~φ31.0mm                            |





|                |      |   |      |      | Dimensions | (mm)        |     |     |    |     |
|----------------|------|---|------|------|------------|-------------|-----|-----|----|-----|
| Model. No.     | Fig. |   | φD   | φDs  | <b>φ</b> d | <b>ø</b> dn | L   | ls  | ₽n | α°  |
| MBM4513T       | 0    | 1 | 13.0 | 2.4  | 10         | 13.0        | 75  | 62  | 13 | 45° |
| MBM4513TL      | 2    | 1 | 13.0 | 2.4  | 10         | 13.0        | 143 | 130 | 13 | 45° |
| NEW MBM4513T-6 | 3    | 1 | 13.0 | 2.4  | 6          | 13.0        | 50  | 37  | 13 | 45° |
| NEW MBM4521T   | 4    | 1 | 21.3 | 10.5 | 10         | 21.5        | 75  | 62  | 13 | 45° |
| NEW MBM4529T   | 6    | 1 | 29.5 | 19.0 | 10         | 29.8        | 75  | 62  | 13 | 45° |
| NEW MBM3015T   | 6    | 1 | 15.3 | 2.4  | 10         | 15          | 75  | 62  | 13 | 30° |
| MBM6010T       | 7    | 1 | 10.3 | 2.7  | 10         |             | 75  |     |    | 60° |
| NEW TBC4533T   | 8    | 3 | 33.7 | 2.4  | 10         | 33.8        | 90  | 62  | 28 | 45° |

- \* 1-pce of TCXT080102E AC16N insert is equipped as standard accessary
- \* Clamp Screw and Wrench are standard accessary
- ※ TBC4533···Inset is not Included. Please Order Spearately.

|   | Material Cutting condition | General steel etc.   | Alloy steel          | Hardened steel<br>HRC~45 | Hardened steel<br>HRC45~65 | Stainless steel      | Castings             | Resin.brass          | Aluminum             | Titanium alloy |
|---|----------------------------|----------------------|----------------------|--------------------------|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------|
| ı | Cuting speed               | 5~40                 | 5~40                 | -                        | _                          | 5~40                 | 5~40                 | 10~50                | 10~50                | _              |
|   | Recommended insert         | TCXT080102E<br>AC16N | TCXT080102E<br>AC16N | -                        | -                          | TCXT080102E<br>AC16N | TCXT080102E<br>AC16N | TCXT080102F<br>ZC16N | TCXT080102F<br>ZC16N | -              |

|            | TCXT080102F<br>ZC16N | TCXT080102E<br>AC16N |  |  |  |
|------------|----------------------|----------------------|--|--|--|
|            |                      |                      |  |  |  |
| MBM4513T   | 250~1,200            | 100~800              |  |  |  |
| MBM4513TL  | 250~1,200            | 100~800              |  |  |  |
| MBM4513T-6 | 250~1,200            | 100~800              |  |  |  |
| MBM4521T   | 150~750              | 75~600               |  |  |  |
| MBM4529T   | 100~550              | 55~400               |  |  |  |
| MBM3015T   | 250~1,200            | 100~800              |  |  |  |
| MBM6010T   | 250~1,200            | 100~800              |  |  |  |
| TBC4533T   | 100~1,200            | 55~800               |  |  |  |

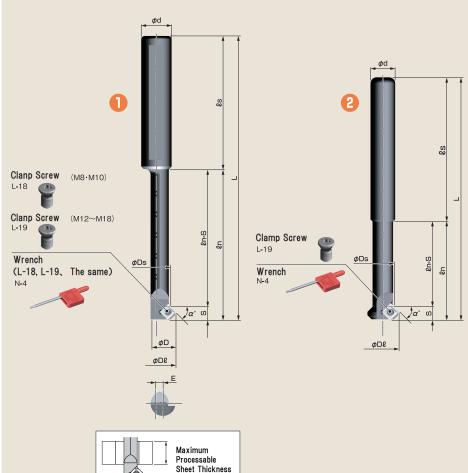
- Due to the rigidity of the machines, the above conditions may not be met [Hard to cut materials like A5052, coppers etc.]
- In case chattering surface, reduce revolutions and use cutting oil
- Please use a dedicated tip listed below
- Please adjust the cutting condition due to the workshape and clamp condition
- In case the processing diameter and chamfering amount is large, reduce the amount
- There is a cutting surface streak between the inserts

| Drawing | Model number | Material | Usable corner |  | Quantity per box |
|---------|--------------|----------|---------------|--|------------------|
|         | TCXT080102F  | ZC16N    | 3             |  | 3                |
|         | TCXT080102E  | AC16N    | 3             |  | 3                |

# **Uratorimen-C**

# **Exclusive use for back chamfering**

This is a special tool for back spot hole chamfering and edge chamfering process



|                   | 30°              |                                    |
|-------------------|------------------|------------------------------------|
| Model. No.        | Hole<br>diameter | Capacity<br>Rear edge chamfering   |
| UMH12-6.8S-M8-30  | φ6.8             | $\phi$ 6.8mm $\sim$ $\phi$ 9.7mm   |
| UMH12-8.5S-M10-30 | φ8.5             | φ8.5mm~φ11.7mm                     |
| UMH12-10S-M12-30  | φ10.0            | $\phi$ 10.0mm $\sim$ $\phi$ 14.8mm |
| UMH12-12S-M14-30  | φ12.0            | $\phi$ 12.0mm $\sim$ $\phi$ 16.8mm |
| UMH12-14S-M16-30  | φ14.0            | $\phi$ 14.0mm $\sim$ $\phi$ 18.8mm |
| UMH16-16S-M18-30  | φ16.0            | $\phi$ 16.0mm $\sim$ $\phi$ 20.8mm |
| UM12-16S-30       |                  | $\phi$ 16.0mm Over $\sim$          |

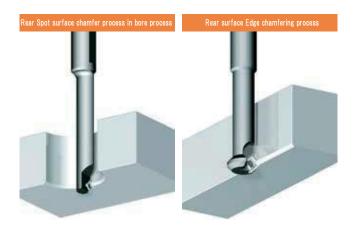
|                | 45°      |                                   |
|----------------|----------|-----------------------------------|
| Model, No.     | Hole     | Capacity                          |
| Model, No.     | diameter | Rear edge chamfering              |
| UMH12-6.8S-M8  | φ6.8     | $\phi$ 6.8mm $\sim$ $\phi$ 9.7mm  |
| UMH12-8.5S-M10 | φ8.5     | $\phi$ 8.5mm $\sim$ $\phi$ 11.7mm |
| UMH12-10S-M12  | φ10.0    | φ10.0mm~φ14.8mm                   |
| UMH12-12S-M14  | φ12.0    | φ12.0mm~φ16.8mm                   |
| UMH12-14S-M16  | φ14.0    | φ14.0mm~φ18.8mm                   |
| UMH16-16S-M18  | φ16.0    | φ16.0mm~φ20.8mm                   |
| UM12-16S       |          | $\phi$ 16.0mm Over $\sim$         |

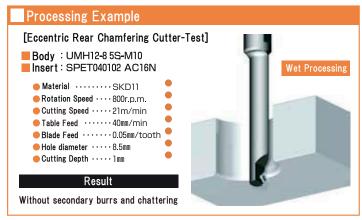
|                   | 60°              |                                    |  |  |  |  |  |  |  |  |
|-------------------|------------------|------------------------------------|--|--|--|--|--|--|--|--|
| Model. No.        | Hole<br>diameter | Capacity<br>Rear edge chamfering   |  |  |  |  |  |  |  |  |
| UMH12-6.8S-M8-60  | φ6.8             | $\phi$ 6.8mm $\sim$ $\phi$ 9.7mm   |  |  |  |  |  |  |  |  |
| UMH12-8.5S-M10-60 | φ8.5             | φ8.5mm~φ11.4mm                     |  |  |  |  |  |  |  |  |
| UMH12-10S-M12-60  | φ10.0            | $\phi$ 10.0mm $\sim$ $\phi$ 13.5mm |  |  |  |  |  |  |  |  |
| UMH12-12S-M14-60  | φ12.0            | φ12.0mm~φ15.5mm                    |  |  |  |  |  |  |  |  |
| UMH12-14S-M16-60  | φ14.0            | $\phi$ 14.0mm $\sim$ $\phi$ 17.5mm |  |  |  |  |  |  |  |  |
| UMH16-16S-M18-60  | φ16.0            | $\phi$ 16.0mm $\sim$ $\phi$ 19.5mm |  |  |  |  |  |  |  |  |
| UM12-14.5S-60     |                  | $\phi$ 14.5mm Over $\sim$          |  |  |  |  |  |  |  |  |

## Body

| _ body            |        |        |      |      |      |            |     |          |        |      |     |    |      |               |     |
|-------------------|--------|--------|------|------|------|------------|-----|----------|--------|------|-----|----|------|---------------|-----|
|                   |        |        |      |      |      |            | D   | imension | s (mm) |      |     |    |      |               |     |
| Model. No.        | Figure | Blades | φD   | φ□ℓ  | φDs  | <b>φ</b> d | L   | ls       | ℓn     | ℓn-S | S   | Т  | E    | Inserts       | α°  |
| UMH12-6.8S-M8-30  | 0      | 1      | 6.2  | 9.7  | 6.8  | 12         | 107 | 70       | 37     | 32.1 | 4.9 | 28 | 1.76 | SP-SPET040102 |     |
| UMH12-8.5S-M10-30 | 0      | 1      | 7.5  | 11.7 | 8.5  | 12         | 117 | 70       | 47     | 42.0 | 5.0 | 38 | 2.11 | SPET040102    |     |
| UMH12-10S-M12-30  | 0      | 1      | 9.0  | 14.8 | 10.0 | 12         | 129 | 70       | 59     | 52.2 | 6.8 | 47 | 2.92 | SPET06T104    |     |
| UMH12-12S-M14-30  | 0      | 1      | 10.0 | 16.8 | 12.0 | 12         | 134 | 70       | 64     | 57.2 | 6.8 | 52 | 3.42 | SPET06T104    | 30° |
| UMH12-14S-M16-30  | 0      | 1      | 12.0 | 18.8 | 14.0 | 12         | 139 | 70       | 69     | 62.2 | 6.8 | 57 | 3.41 | SPET06T104    |     |
| UMH16-16S-M18-30  | 0      | 1      | 14.0 | 20.8 | 16.0 | 16         | 149 | 70       | 79     | 72.2 | 6.8 | 67 | 3.41 | SPET06T104    |     |
| UM12-16S-30       | 2      | 1      |      | 16.0 | 11.0 | 12         | 118 | 70       | 48     | 41.1 | 6.9 |    |      | SPET06T104    |     |
| UMH12-6.8S-M8     | 0      | 1      | 6.2  | 9.7  | 6.8  | 12         | 107 | 70       | 37     | 32.2 | 4.8 | 28 | 1.76 | SP-SPET040102 |     |
| UMH12-8.5S-M10    | 0      | 1      | 7.5  | 11.7 | 8.5  | 12         | 117 | 70       | 47     | 42.0 | 5.0 | 38 | 2.11 | SPET040102    |     |
| UMH12-10S-M12     | 0      | 1      | 9.0  | 14.8 | 10.0 | 12         | 129 | 70       | 59     | 52.1 | 6.9 | 47 | 2.92 | SPET06T104    |     |
| UMH12-12S-M14     | 0      | 1      | 10.0 | 16.8 | 12.0 | 12         | 134 | 70       | 64     | 57.1 | 6.9 | 52 | 3.42 | SPET06T104    | 45° |
| UMH12-14S-M16     | 0      | 1      | 12.0 | 18.8 | 14.0 | 12         | 139 | 70       | 69     | 62.1 | 6.9 | 57 | 3.41 | SPET06T104    |     |
| UMH16-16S-M18     | 0      | 1      | 14.0 | 20.8 | 16.0 | 16         | 149 | 70       | 79     | 72.1 | 6.9 | 67 | 3.41 | SPET06T104    |     |
| UM12-16S          | 2      | 1      |      | 16.0 | 11.0 | 12         | 118 | 70       | 48     | 41.0 | 7.0 |    | /    | SPET06T104    |     |
| UMH12-6.8S-M8-60  | 0      | 1      | 6.2  | 9.7  | 6.8  | 12         | 107 | 70       | 37     | 32.0 | 5.0 | 28 | 1.76 | SP-SPET040102 |     |
| UMH12-8.5S-M10-60 | 0      | 1      | 7.5  | 11.4 | 8.5  | 12         | 117 | 70       | 47     | 42.0 | 5.0 | 38 | 1.96 | SPET040102    |     |
| UMH12-10S-M12-60  | 0      | 1      | 9.0  | 13.5 | 10.0 | 12         | 129 | 70       | 59     | 52.7 | 6.3 | 47 | 2.27 | SPET06T104    |     |
| UMH12-12S-M14-60  | 0      | 1      | 10.0 | 15.5 | 12.0 | 12         | 134 | 70       | 64     | 57.7 | 6.3 | 52 | 2.77 | SPET06T104    | 60° |
| UMH12-14S-M16-60  | 0      | 1      | 12.0 | 17.5 | 14.0 | 12         | 139 | 70       | 69     | 62.7 | 6.3 | 57 | 2.76 | SPET06T104    |     |
| UMH16-16S-M18-60  | 0      | 1      | 14.0 | 19.5 | 16.0 | 16         | 149 | 70       | 79     | 72.7 | 6.3 | 69 | 2.76 | SPET06T104    |     |
| UM12-14.5S-60     | 2      | 1      |      | 14.5 | 11.0 | 12         | 118 | 70       | 48     | 41.7 | 6.3 |    |      | SPET06T104    |     |

 $<sup>\</sup>divideontimes$  Inset is not supplied as standard accessory. Please order separately.



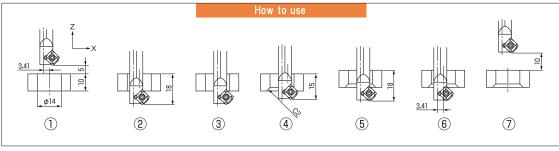


# Cuttinng Conditions

| Body<br>Figure UMH       |                     |                         |        |       | UM12-16S<br>UM12-16S-30<br>UM12-14.5S-60 |                         |        |       |  |  |  |
|--------------------------|---------------------|-------------------------|--------|-------|--|-------------------------|--------|-------|--|--|--|
|                          | Material Model      | NK1010                  | NK2020 | AC16N | Material Model                           | NK1010                  | NK2020 | AC16N |  |  |  |
| Material                 | Feed Per Blade (fz) | Cutting speed (m / min) |        |       | Feed Per Blade (fz)                      | Cutting Speed (m / min) |        |       |  |  |  |
| General Steel            | 0.03~0.05           |                         | 25~30  | 25~30 | 0.05~0.1                                 |                         | 50~70  | 50~70 |  |  |  |
| Alloy Steel              | 0.03~0.05           |                         | 25~30  | 25~30 | 0.05~0.1                                 |                         | 50~70  | 50~70 |  |  |  |
| Stainless Steel          | 0.03~0.05           |                         | 20~25  | 25~30 | 0.05~0.1                                 |                         | 40~50  | 40~50 |  |  |  |
| Aluminum,<br>Resin,Brass | 0.03~0.05           | 30~35                   |        |       | 0.05~0.1                                 | 80~100                  |        |       |  |  |  |
| Cast Steel               | 0.03~0.05           | 30~35                   |        |       | 0.05~0.1                                 | 80~100                  |        |       |  |  |  |

According to the shape of work, clamp condition, large or small chamfering amount and position of blade, the cutting condition will have to be reduced

Coolant is recommended
Yellow marked condition is recommended for the material listed



# 

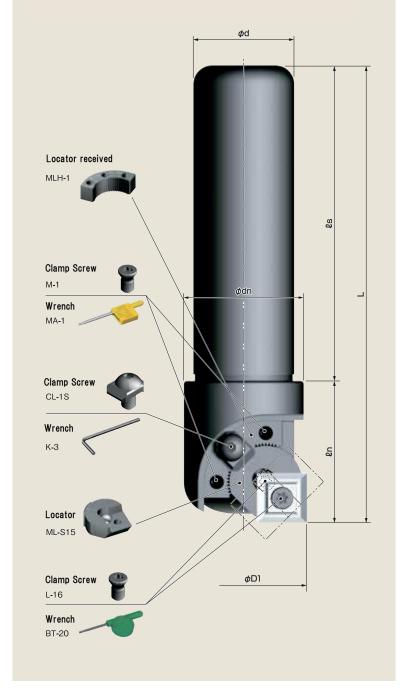
| 1110011  |                         |                        |             |         |               | ı                |
|--|-------------------------|------------------------|-------------|---------|---------------|------------------|
| Figure   | Model.No.               | Material               | Blade Shape | Coating | Usable corner | Quantity per box |
| ●M8 〈SP-SPET040102〉  | SP-SPET040102 NK1010    | Carbide K10            | Sharp edge  | None    | 1             | 12               |
| φ4.762<br>φ2.33  | SP-SPET040102 NK2020    | Carbide M20            | Honing edge | None    | 1             | 12               |
| 4.4 1.588 (Except nose R)  | SP-SPET040102 AC16N     | Fine particles Carbide | Honing edge | AICrN   | 1             | 12               |
| M10 (SPET040102) 11°   | SPET040102 NK1010       | Carbide K10            | Sharp edge  | None    | 4             | 12               |
| B0.2 200 1 2 | SPET040102 NK2020       | Carbide M20            | Honing edge | None    | 4             | 12               |
| 3.9<br>(Except nose R)   | NEW<br>SPET040102 AC16N | Fine particles Carbide | Honing edge | AICrN   | 4             | 12               |
| •M12~18/UM12-16S<br>⟨SPET06T104⟩ 11°   | SPET06T104 NK1010       | Carbide K10            | Sharp edge  | None    | 4             | 12               |
| \$6.35<br>\$\text{\text{\$\phi}}\$   | SPET06T104 NK2020       | Carbide M20            | Honing edge | None    | 4             | 12               |
| 3.4<br>(Except nose R)<br>5.6<br>(Except nose R)   | NEW<br>SPET06T104 AC16N | Fine particles Carbide | Honing edge | AlCrN   | 4             | 12               |

# Multi-Angle mill

# **Variable angle Processing**

By the serration mechanism and our original double clamp system, the holding parts are superior to prevent insert movement.

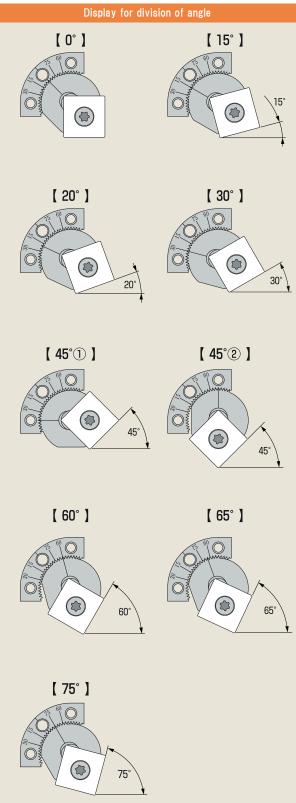
0° - 90° Angle adjustment can be easily and securely made



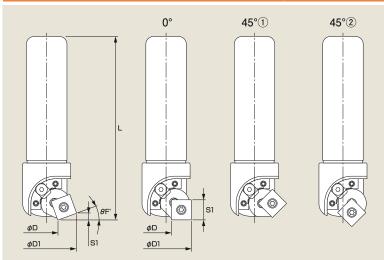
# Body

|            |        | Dimensions (mm) |            |             |     |     |    |  |
|------------|--------|-----------------|------------|-------------|-----|-----|----|--|
| Model No.  | blades | <i>φ</i> D1     | <b>φ</b> d | <b>ø</b> dn | L   | ls  | €n |  |
| MAM32-50S  | 1      | <b>%1</b>       | 32         | 38          | 145 | 100 | 45 |  |
| MAM32-50SL | 1      | <b>%</b> 1      | 32         | 38          | 200 | 155 | 45 |  |



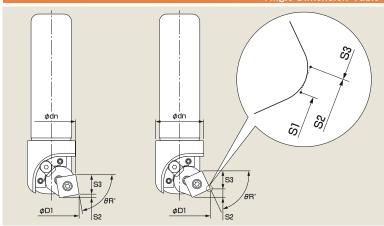


# ⟨θF°⟩ Angle Dimension Table 1 (MAM32-50S)



| <i>θ</i> F° | φD    | <b>φ</b> D1 | S1   | L     |
|-------------|-------|-------------|------|-------|
| 0°          | φ8.3  | φ40         | 15.9 | 145   |
| 5°          | φ11.3 | φ42.1       | 1.3  | 145.2 |
| 10°         | φ13.6 | φ44         | 2.7  | 145.2 |
| 15°         | φ15.9 | φ45.7       | 4.0  | 145.2 |
| 20°         | φ18.1 | φ47.1       | 5.3  | 145.1 |
| 25°         | φ20.4 | φ48.3       | 6.5  | 144.8 |
| 30°         | φ22.6 | φ49.3       | 7.7  | 144.5 |
| 35°         | φ24.7 | φ49.9       | 8.8  | 144.1 |
| 40°         | φ26.7 | φ50.3       | 9.9  | 143.6 |
| 45°①        | φ28.7 | φ50.5       | 10.9 | 143   |
| 45°②        | φ14.3 | φ36         | 10.9 | 150.2 |
| 50°         | φ17.4 | φ37.2       | 11.8 | 150.2 |
| 55°         | φ20.5 | φ38.2       | 12.6 | 150   |
| 60°         | φ23.6 | φ39.1       | 13.4 | 149.6 |
| 65°         | φ26.7 | φ39.7       | 14   | 149.2 |
| 70°         | φ29.6 | φ40.1       | 14.5 | 148.6 |
| 75°         | φ32.4 | φ40.4       | 14.9 | 147.8 |
| 80°         | φ35.1 | φ40.5       | 15.2 | 147   |
| 85°         | φ37.6 | φ40.3       | 15.4 | 146.1 |

# $\langle \theta R^{\circ} \rangle$ Angle Dimension Table 2 ( $\theta R^{\circ}=90^{\circ}-\theta F^{\circ}$ )



| <i>θ</i> R° | <b>φ</b> D1 | <b>ø</b> dn | S2   | S3   |
|-------------|-------------|-------------|------|------|
| 85°         | φ42.1       | φ39.4       | 1.7  | 15.4 |
| 80°         | φ44         | φ38.6       | 3.1  | 15.2 |
| 75°         | φ45.7       | φ38.0       | 4.4  | 14.3 |
| 70°         | φ47.1       | φ38.0       | 5.6  | 12.5 |
| 65°         | φ48.3       | φ38.0       | 6.9  | 11.1 |
| 60°         | φ49.3       | φ38.0       | 8    | 9.7  |
| 55°         | φ49.9       | φ38.0       | 9.2  | 8.5  |
| 50°         | φ50.3       | φ38.0       | 10.2 | 7.4  |
| 45°         | φ50.5       | φ38.0       | 11.2 | 6.2  |

# Cutting Conditions

|                      |                     | SDET150404 | SDMT    | 150404  |
|----------------------|---------------------|------------|---------|---------|
|                      | Material Model      |            | ZA20N   | AC15N   |
| Material             | Feed per blade (fz) |            |         |         |
| General Steel        | 0.05~0.15           |            | 100~150 | 100~150 |
| Alloy Steel          | 0.05~0.15           |            | 100~150 | 100~150 |
| Stainless Steel      | 0.05~0.15           |            | 80~120  | 80~120  |
| Aluminum,Resin,Brass | 0.08~0.2            | 150~400    |         |         |
| Castings             | 0.05~0.15           |            | 100~150 |         |

In case of Stainless steel processing, please take down cut

# Processing Example [Perimetery C5 Chamfering] ■ Body: MAM32-50S ■ Body: SDMT150404 ZA20N

• Material · · · · · · S45C Rotation Speed - - - 630.p.m. Table feed-----63mm/min
Depth of Cut----C5

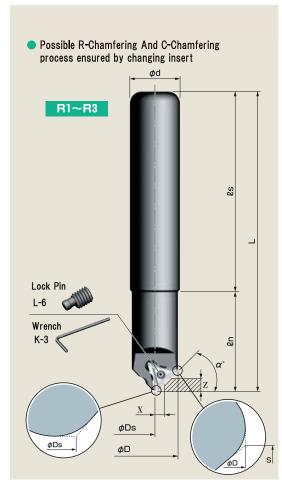
• Cutting Oil · · · · · None

Good!

No secondary burrs and, No chattering after processing

| Figure                                      | Model.No.        | Material               | Blade Shape | Coating | Usable Corner | Quantity per box |
|---|------------------|------------------------|-------------|---------|---------------|------------------|
| RO.4 (SDET150404)  15 (Except nose R) 4.762 | SDET150404 ZA10N | Carbide K10            | Sharp edge  | None    | 2             | 3                |
| R0.4 (SDMT150404)                           | SDMT150404 ZA20N | Carbide M20            | Honing edge | None    | 4             | 3                |
| 15 (Except nose R) 4.762                    | SDMT150404 AC15N | Fine particles Carbide | Honing edge | AICrN   | 4             | 3                |

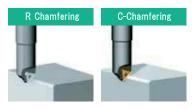
# R Cindo-Cutter



# Setting numerical values

| Processing R | X-axis position (mm) | Z-axis position (mm) |
|--------------|----------------------|----------------------|
| R1           | 6.40                 | 5.81                 |
| R2           | 5.90                 | 6.30                 |
| R3           | 5.40                 | 6.78                 |

numeric value might get some errors, please acknowledge.



# Insert

| T32GSR               |                       |                            |  |  |  |  |  |  |
|----------------------|-----------------------|----------------------------|--|--|--|--|--|--|
| Material             | Feed PerBlade<br>(fz) | Cutting speed<br>(m / min) |  |  |  |  |  |  |
| General Steel        | 0.08~0.2              | 150~200                    |  |  |  |  |  |  |
| Alloy Steel          | 0.08~0.2              | 150~200                    |  |  |  |  |  |  |
| Stainless Steel      | 0.08~0.2              | 120~180                    |  |  |  |  |  |  |
| Aluminum,Resin,Brass | 0.08~0.3              | 200~800                    |  |  |  |  |  |  |
| Castings             | 0.08~0.2              | 150~200                    |  |  |  |  |  |  |

# Processing Example [Periphery R3 Chamfering process] ■ Body : CR25-05T Insert : T32GSR-3R NK2020 ● Table feed · · · · · · · Bakelite ● Material · · · · · · · · 4,000r.p.m. ●Rotational speed · · · 800mm/min Dry cutting

Good discharge of chips, surface accuracy also good Results came out.

# Body

|            |        | Dimensions (mm) |     |            |     |     |    |      |     |
|------------|--------|-----------------|-----|------------|-----|-----|----|------|-----|
| Model, No. | blades | φD              | φDs | <b>φ</b> d | L   | ls  | ℓn | S    | α°  |
| CR25-05T   | 1      | 25              | 3.8 | 25         | 150 | 100 | 50 | 10.6 | 45° |

Inset is not Included. Please Order Spearately.
 Lock pin Wrench we have Standard Equipment.

When mounting insert, please do not take reverse tightening.

Due to the eccentricity looking mechanism ,poor accuracy or breakage of insert may be occurred When replacing insert, please confirm twhether you have been taking reserve tightening or not.

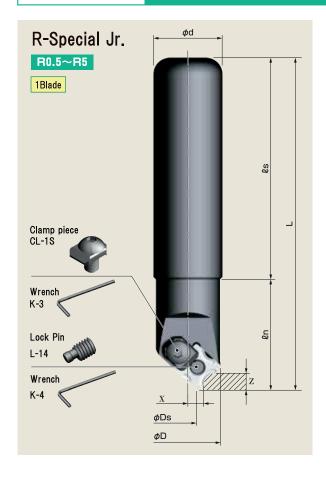
| Insert                                    |                |                  |                        |             |         |               |                  |  |
|---|----------------|------------------|------------------------|-------------|---------|---------------|------------------|--|
| Figure                                    |                | Model No.        | Material               | Blade Shape | Coating | Usable corner | Quantity per box |  |
| R0.4 ⟨T32GSR⟩                             | <u></u>        | T32GSR-1R NK2020 | Carbide M20            |             | None    | 3             | 3                |  |
|   | \$3.8<br>\$3.8 | T32GSR-2R NK2020 | Carbide M20            |             | None    | 3             | 3                |  |
| φ9.525                                    | 3.18           | T32GSR-3R NK2020 | Carbide M20            |             | None    | 3             | 3                |  |
| 60° \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | <b>-</b> 90°   | T32MOR NK2001    | Cermet                 | Honing edge | None    | 6             | 12               |  |
|   | φ3.8<br>Φ3.8   | T32MOR NK1010    | Carbide K10            | Sharp edge  | None    | 6             | 12               |  |
| R0.4                                      | ĬТ <u>ё</u>    | T32MOR NK2020    | Carbide M20            | Honing edge | None    | 6             | 12               |  |
|   | ļ              | T32MOR NK3030    | Carbide M20            | Honing edge | TiN     | 6             | 12               |  |
| $\phi$ 9.525 3.1                          |                | T32MOR AC16N     | Fine particles Carbide | Honing edge | AICrN   | 6             | 12               |  |
| ⟨TT32GUR⟩⟨TT32GUR⟩                        | E/             | TT32GUR NK2001   | Cermet                 | Honing edge | None    | 2             | 12               |  |
| 60°/\                                     | 90°            | TT32GUR NK1010   | Carbide K10            | Sharp edge  | None    | 2             | 12               |  |
|   |                | TT32GUR NK2020   | Carbide M20            | Honing edge | None    | 2             | 12               |  |
|   | \$3.8<br>\$3.8 | TT32GUR NK3030   | Carbide M20            | Honing edge | TiN     | 2             | 12               |  |
| R0.4                                      | 174            | TT32GUR NK5050   | Carbide K10            | Sharp edge  | TiN     | 2             | 12               |  |
| R0.4                                      |                | TT32GUR NK8080   | Carbide K10            | Sharp edge  | TiAℓN   | 2             | 12               |  |
|   |                | TT32GUR AC15N    | Fine particles Carbide | Honing edge | AICrN   | 2             | 12               |  |
| Φ9.525 3.1                                | 18             | TT32GURF TC16N   | Fine particles Carbide | Sharp edge  | TiSiN   | 2             | 12               |  |
| φο.σεσ                                    | 10             | TT32GUR HSS      | HSS                    | Sharp edge  | None    | 2             | 12               |  |
|   |                | TT32GUR HSS TiN  | HSS                    | Sharp edge  | TiN     | 2             | 12               |  |
| (TNEA160304)  RO.4  P.0.4  P.0.525  3.1   | 90°<br>3.8°    | TNEA160304 TC16N | Fine particles Carbide | Honing edge | TiSiN   | 6             | 12               |  |



# THE BEST:

CHAMFERING TOOLS
DEBURRING TOOLS
COUNTERSINK TOOLS
RADIUS TOOLS

# R-Special Jr. / R-Special



# Easy radius change

Various Radius chamfering can be made by just exchanging Inserts

## Setting numerical values

| Processing R | X-axis position (mm) | Z-axis position (mm) |
|--------------|----------------------|----------------------|
| R0.5         | 8.05                 | 4.42                 |
| R0.75        | 7.93                 | 4.55                 |
| R1           | 7.80                 | 4.67                 |
| R1.5         | 7.55                 | 4.92                 |
| R2           | 7.30                 | 5.17                 |
| R2.5         | 7.06                 | 5.42                 |
| R3           | 6.81                 | 5.67                 |
| R3.5         | 6.56                 | 5.91                 |
| R4           | 6.31                 | 6.16                 |
| R4.5         | 6.06                 | 6.41                 |
| R5           | 5.82                 | 6.66                 |
|              |                      |                      |

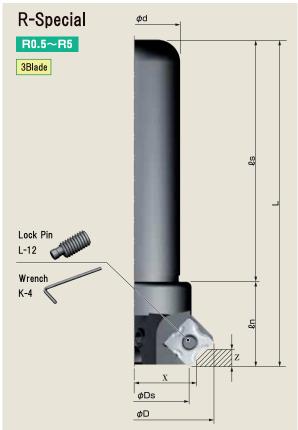




# Body

|            |        | Dimensions (mm) |     |    |     |    |    |  |
|------------|--------|-----------------|-----|----|-----|----|----|--|
| Model. No. | Blades | φD              | φDs | φd | L   | ls | ℓn |  |
| NK20-05R   | 1      | 25              | 8.4 | 20 | 120 | 80 | 40 |  |
| NK25-05R   | 1      | 25              | 8.4 | 25 | 120 | 80 | 40 |  |

\* Inset is not supplied as standard accessory. Please order separately.



# Easy radius change

Various Radius chamfering can be made by just exchanging Inserts

## Setting numerical values

| Processing R | X-axis position (mm) | Z-axis position (mm) |
|--------------|----------------------|----------------------|
| R0.5         | 23.54                | 4.42                 |
| R0.75        | 23.42                | 4.54                 |
| R1           | 23.29                | 4.66                 |
| R1.5         | 23.04                | 4.91                 |
| R2           | 22.79                | 5.16                 |
| R2.5         | 22.54                | 5.41                 |
| R3           | 22.29                | 5.66                 |
| R3.5         | 22.04                | 5.91                 |
| R4           | 21.78                | 6.16                 |
| R4.5         | 21.53                | 6.41                 |
| R5           | 21.28                | 6.65                 |
|              |                      |                      |

numeric value might get some errors, please acknowledge.

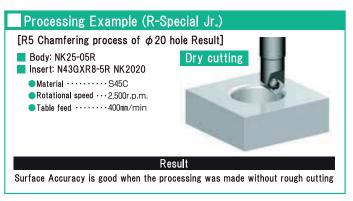


## Body

|        | Dimensions (mm) |                    |                             |        |        |   |  |
|--------|-----------------|--------------------|-----------------------------|--------|--------|---|--|
| Blades | φD              | <b>ø</b> Ds        | <b>φ</b> d                  | L      | ls     | ℓn  |  |
| 3      | 56              | 39.3               | 20                          | 115    | 85     | 30  |  |
| 3      | 56              | 39.3               | 25                          | 115    | 85     | 30  |  |
| 3      | 56              | 39.3               | 32                          | 115    | 85     | 30  |  |
|        | 3               | φD<br>3 56<br>3 56 | φD φDs  3 56 39.3 3 56 39.3 | Blades | Blades | Blades         φD         φDs         φd         L         ℓs           3         56         39.3         20         115         85           3         56         39.3         25         115         85 |  |



When mounting insert, please do not take reverse tightening. Due to the eccentricity looking mechanism ,poor accuracy or breakage of insert may be occurred When replacing insert, please confirm twhether you have been taking reserve tightening or not.





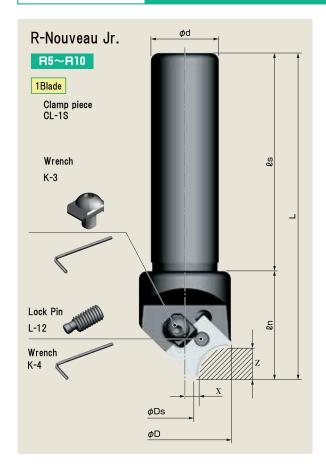
# Cuttinng Conditions

|                      | N43GXR              |                |                         |         |         |  |  |  |  |  |  |
|----------------------|---------------------|----------------|-------------------------|---------|---------|--|--|--|--|--|--|
|                      | Material Model      | NK2001         | NK2001 NK1010 NK2020    |         |         |  |  |  |  |  |  |
| Material             | Feed Per Blade (fz) |                | Cutting Speed (m / min) |         |         |  |  |  |  |  |  |
| General Steel        | 0.1~0.2             | 100~250        |                         | 100~200 |         |  |  |  |  |  |  |
| Alloy Steel          | 0.1~0.2             | 100~250        |                         | 100~200 | 150~200 |  |  |  |  |  |  |
| Stainless Steel      | 0.1~0.2             |                |                         | 80~160  | 150~200 |  |  |  |  |  |  |
| Aluminum,Resin,Brass | 0.1~0.3             |                | 150~300                 | 150~300 |         |  |  |  |  |  |  |
| Castings             | 0.1~0.3             | 80~150<br>※FCD | 80~150                  | 80~150  |         |  |  |  |  |  |  |

- According to the shape of work, clamp condition and large or small chamfering amount, the cutting condition will have to be adjusted.
- Yellow marked condition is recommended for the material listed
- on ln case of chamfering process of Stainless steel, kindly take down cutting

| Insert   |                                      |                        |                        |         |               |                  |
|--|--------------------------------------|------------------------|------------------------|---------|---------------|------------------|
| Figure   | Model No.                            | Material               | Blade Shape            | Coating | Usable corner | Quantity per box |
|  | N43GXR8 NK2001                       | Cermet                 | R1 · 2 · 3 · 4         | None    | 8             | 3/12             |
|  | N43GXR8-1R NK2001                    | Cermet                 | The Same R Each corner | None    | 8             | 3/12             |
| ⟨N43GXR8⟩  | N43GXR8-2R NK2001                    | Cermet                 | The Same R Each corner | None    | 8             | 3/12             |
| 90°  | N43GXR8-3R NK2001                    | Cermet                 | The Same R Each corner | None    | 8             | 3/12             |
|  | N43GXR8-4R NK2001                    | Cermet                 | The Same R Each corner | None    | 8             | 3/12             |
| R0.8   | Semi standard  NEW N43GXR8-5R NK2001 | Cermet                 | The Same R Each corner | None    | 8             | 3/12             |
| 12.7 4.76  | N43GXR NK1010                        | Carbide K10            | R1 • 2 • 3 • 4         | None    | 4             | 3/12             |
| 12.7   | NEW N43GXR8 NK2020                   | Carbide M20            | R1 · 2 · 3 · 4         | None    | 8             | 3/12             |
|  | NEW N43GXR8-1R NK2020                | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
|  | NEW N43GXR8-2R NK2020                | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
|  | NEW N43GXR8-3R NK2020                | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
| ⟨N43GXR⟩   | NEW N43GXR8-4R NK2020                | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
| ~90°   | S N43GXR8-0.5R NK2020                | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
| T-0  | m N43GXR8-0.75R NK2020               | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
| R0.8   | N43GXR8-1.5R NK2020                  | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
|  | t N43GXR8-2.5R NK2020                | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
| 12.7 4.76  | n N43GXR8-3.5R NK2020                | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
|  | a N43GXR8-4.5R NK2020                | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
|  | d N43GXR8-5R NK2020                  | Carbide M20            | The Same R Each corner | None    | 8             | 3/12             |
|  | NEW N43GXR8 AC16N                    | Fine particles Carbide | R1·2·3·4               | AICrN   | 8             | 3/12             |
|  | NEW N43GXR8-1R AC16N                 | Fine particles Carbide | The Same R Each corner | AICrN   | 8             | 3/12             |
| ⟨N43GXR8 Semistandard Insert⟩  | NEW N43GXR8-2R AC16N                 | Fine particles Carbide | The Same R Each corner | AICrN   | 8             | 3/12             |
| I qn°  | NEW N43GXR8-3R AC16N                 | Fine particles Carbide | The Same R Each corner | AICrN   | 8             | 3/12             |
|  | NEW N43GXR8-4R AC16N                 | Fine particles Carbide | The Same R Each corner | AICrN   | 8             | 3/12             |
| φ5.2 <u></u>   | S N43GXR8-0.5R AC16N                 | Fine particles Carbide | The Same R Each corner | AICrN   | 8             | 3/12             |
| R0.8   | e m N43GXR8-0.75R AC16N              | Fine particles Carbide | The Same R Each corner | AICrN   | 8             | 3/12             |
| The second secon | N43GXR8-1.5R AC16N                   | Fine particles Carbide | The Same R Each corner | AICrN   | 8             | 3/12             |
| 12.7 4.76  | t N43GXR8-2.5R AC16N                 | Fine particles Carbide | The Same R Each corner | AlCrN   | 8             | 3/12             |
|  | N43GXR8-3.5R AC16N                   | Fine particles Carbide | The Same R Each corner | AICrN   | 8             | 3/12             |
|  | a N43GXR8-4.5R AC16N                 | Fine particles Carbide | The Same R Each corner | AICrN   | 8             | 3/12             |
|  | d N43GXR8-5R AC16N                   | Fine particles Carbide | The Same R Each corner | AICrN   | 8             | 3/12             |

# R-Nouveau Jr./R-Nouveau



# Easy radius change

Various Radius chamfering can be made by just exchanging Inserts

## Setting numerical values

| Processing R | X-axis position (mm) | Z-axis position (mm) |
|--------------|----------------------|----------------------|
| R5           | 6.00                 | 6.70                 |
| R6           | 5.41                 | 7.21                 |
| R7           | 5.64                 | 8.42                 |
| R8           | 6.00                 | 9.65                 |
| R9           | 5.41                 | 10.16                |
| R10          | 6.00                 | 11.62                |

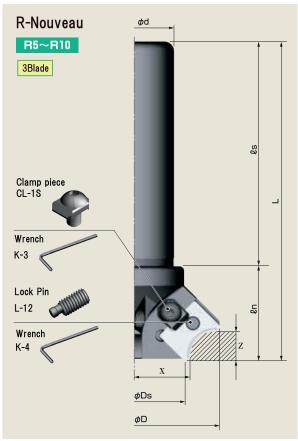
numeric value might get some errors, please acknowledge.



## Body

|   |            |        | Dimensions (mm) |     |    |     |    |    |  |  |
|---|------------|--------|-----------------|-----|----|-----|----|----|--|--|
|   | Model. No. | Blades | φD              | φDs | φd | L   | ls | ℓn |  |  |
| I | NK20-10R   | 1      | 35.4            | 8.9 | 20 | 120 | 80 | 40 |  |  |
|   | NK25-10R   | 1      | 35.4            | 8.9 | 25 | 120 | 80 | 40 |  |  |

- \* Inset is not supplied as standard accessory. Please order separately.
- ※ look pin and wrench are supplied as standard accessory.



# Easy radius change

Various Radius chamfering can be made by just exchanging Inserts

# Setting numerical values

| Processing R | X-axis position (mm) | Z-axis position (mm) |  |  |  |  |  |  |  |
|--------------|----------------------|----------------------|--|--|--|--|--|--|--|
| R5           | 22.80                | 6.80                 |  |  |  |  |  |  |  |
| R6           | 22.25                | 7.32                 |  |  |  |  |  |  |  |
| R7           | 22.49                | 8.56                 |  |  |  |  |  |  |  |
| R8           | 22.80                | 9.80                 |  |  |  |  |  |  |  |
| R9           | 22.25                | 10.32                |  |  |  |  |  |  |  |
| R10          | 22.80                | 11.80                |  |  |  |  |  |  |  |

numeric value might get some errors, please acknowledge.



## Body

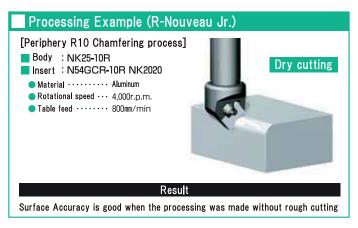
|            |        | Dimensions (mm) |      |            |     |     |    |  |
|------------|--------|-----------------|------|------------|-----|-----|----|--|
| Model. No. | Blades | φD              | φDs  | <b>φ</b> d | L   | ls  | ℓn |  |
| NK25-70R   | 3      | 69.2            | 42.3 | 25         | 130 | 90  | 40 |  |
| NK32-70R   | 3      | 69.2            | 42.3 | 32         | 130 | 90  | 40 |  |
| NK32-70RL  | 3      | 69.2            | 42.3 | 32         | 200 | 150 | 50 |  |

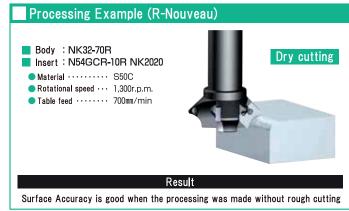
- \* Inset is not supplied as standard accessory. Please order separately.
- $\divideontimes$  look pin and wrench are supplied as standard accessory.



When mounting insert, please do not take reverse tightening.

Due to the eccentricity looking mechanism ,poor accuracy or breakage of insert may be occurred When replacing insert, please confirm twhether you have been taking reserve tightening or not.





## Insert

| IIISCI L             |                    |             |             |  |  |  |  |  |  |  |  |  |
|----------------------|--------------------|-------------|-------------|--|--|--|--|--|--|--|--|--|
|                      | N54GCR             |             |             |  |  |  |  |  |  |  |  |  |
|                      |                    | NK2020      | NK6060      |  |  |  |  |  |  |  |  |  |
| Material             | Feed PerBlade (fz) | Cutting spe | ed(m / min) |  |  |  |  |  |  |  |  |  |
| General Steel        | 0.1~0.3            | 100~250     |             |  |  |  |  |  |  |  |  |  |
| Alloy Steel          | 0.1~0.3            | 100~250     | 150~250     |  |  |  |  |  |  |  |  |  |
| Stainless Steel      | 0.1~0.25           | 80~160      | 150~250     |  |  |  |  |  |  |  |  |  |
| Aluminum,Resin,Brass | 0.1~0.3            | 150~400     |             |  |  |  |  |  |  |  |  |  |
| Castings             | 0.1~0.3            | 80~200      |             |  |  |  |  |  |  |  |  |  |

- According to the shape of work, clamp condition and large or small chamfering amount, the cutting condition will have to be adjusted.
- Yellow marked condition is recommended for the material listed
  In case of chamfering process of Stainless steel, kindly take down cutting

# ■ Insert

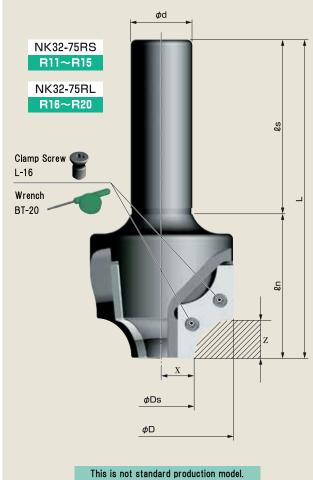
| Figure                                 | Model No.                     | Material    | Blade Shape | Coating | Usable corner | Quantity per box |
|--|-------------------------------|-------------|-------------|---------|---------------|------------------|
| ⟨N54GCR⟩                               | N54GCR-5R NK2020              | Carbide M20 |             | None    | 1             | 3                |
| Tag                                    | N54GCR-8R NK2020              | Carbide M20 |             | None    | 1             | 3                |
| 90.8 RO.8                              | N54GCR-10R NK2020             | Carbide M20 |             | None    | 1             | 3                |
| 20 4.76                                | N54GCR-5R NK6060              | Carbide M20 |             | TiAℓN   | 1             | 3                |
| ⟨N54GCR Semistandard Insert⟩   √90°    | N54GCR-8R NK6060              | Carbide M20 |             | TiAℓN   | 1             | 3                |
| 25.2                                   | N54GCR-10R NK6060 Carbide M20 |             | TiAℓN       | 1       | 3             |                  |
| P0.8                                   | N54GCR-6R NK2020              | Carbide M20 |             | None    | 1             | 3                |
| 20 4.5                                 | N54GCR-7R NK2020              | Carbide M20 |             | None    | 1             | 3                |
| ※ Semi standard Insert have no breaker | a<br>r<br>N54GCR-9R NK2020    | Carbide M20 |             | None    | 1             | 3                |

# R-Giga

# 3Blade

# **Easy radius change**

Various Radius chamfering can be made by just exchanging Inserts



## **SETTING NUMERICAL VALUES**

| Processing R | X-axis position (mm) | Z-axis position (mm) |
|--------------|----------------------|----------------------|
| R11          | 17.50                | 11.77                |
| R12          | 17.50                | 12.70                |
| R13          | 17.50                | 13.63                |
| R14          | 17.50                | 14.56                |
| R15          | 17.50                | 15.48                |
| R16          | 17.50                | 16.41                |
| R17          | 17.50                | 17.34                |
| R18          | 17.50                | 18.27                |
| R19          | 17.50                | 19.20                |
| R20          | 17.50                | 20.12                |

numeric value might get some errors, please acknowledge.



## CUTTING CONDITIONS

| Mat                  | erial model number | NK2020  |
|----------------------|--------------------|---------|
| Material             |                    |         |
| General Steel        | 0.1~0.3            | 100~250 |
| Alloy Steel          | 0.1~0.3            | 100~250 |
| Stainless Steel      | 0.1~0.25           | 80~160  |
| Aluminum,Resin,Brass | 0.1~0.3            | 150~400 |
| Castings             | 0.1~0.3            | 80~200  |

- According to the shape of work, clamp condition and large or small chamfering amount, the cutting condition will have to be adjusted.
- Yellow marked condition is recommended for the material listed In case of chamfering process of Stainless steel, kindly take down cutting

## **Processing Example**

[Periphery R20 Chamfering process]

Body: NK32-75RL

■ Insert : XNEW3004-20R NK2020

Material · · · · S50C Rotational speed · · · 750r.p.m.

● Table feed · · · · · · 225mm/min



## Result

Surface Accuracy is good when the processing was made without rough cutting

# Body

|            |         |        | Dimensions(mm) |     |    |     |    |    |
|------------|---------|--------|----------------|-----|----|-----|----|----|
| Model. No. |         | Blades | φD             | φDs | φd | L   | ls | ℓn |
| NK32-75RS  | R11~R15 | 3      | 75.5           | 35  | 32 | 165 | 90 | 75 |
| NK32-75RL  | R16~R20 | 3      | 75.5           | 35  | 32 | 165 | 90 | 75 |

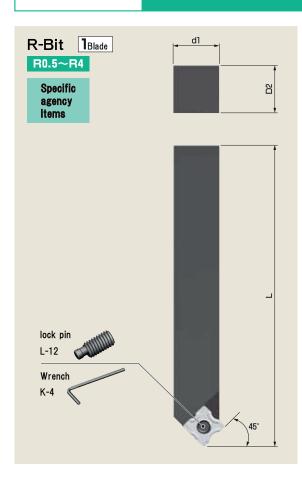
Please check the delivery time when ordering

Insert is not equipped as standard accessory. Please purchase it separately
 Clamp screw, screw, wrench and locator are supplied as standard accessories

| Figure                                       | Model.No.           | Material    | Blade Shape | Coating | Usable corner | Quantity per box |
|--|---------------------|-------------|-------------|---------|---------------|------------------|
|  | XNEW3004-11R NK2020 | Carbide M20 | Honing edge | None    | 2             | 3                |
| ⟨ <b>XNEW3004</b> ⟩                          | XNEW3004-12R NK2020 | Carbide M20 | Honing edge | None    | 2             | 3                |
|  | XNEW3004-13R NK2020 | Carbide M20 | Honing edge | None    | 2             | 3                |
|  | XNEW3004-14R NK2020 | Carbide M20 | Honing edge | None    | 2             | 3                |
|  | XNEW3004-15R NK2020 | Carbide M20 | Honing edge | None    | 2             | 3                |
|  | XNEW3004-16R NK2020 | Carbide M20 | Honing edge | None    | 2             | 3                |
| 4.76   | XNEW3004-17R NK2020 | Carbide M20 | Honing edge | None    | 2             | 3                |
| <b>Y Y</b>                                   | XNEW3004-18R NK2020 | Carbide M20 | Honing edge | None    | 2             | 3                |
| This is not standard production model.       | XNEW3004-19R NK2020 | Carbide M20 | Honing edge | None    | 2             | 3                |
| Please check the delivery time when ordering | XNEW3004-20R NK2020 | Carbide M20 | Honing edge | None    | 2             | 3                |

# R-Bit / 10R-Bit

1 Blade







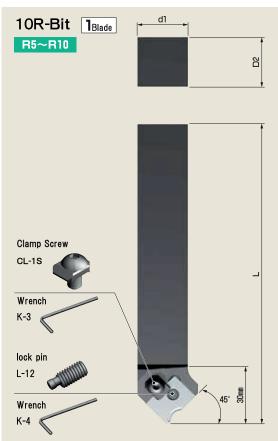
# BODY

| Davidsol access                |           |        | Dimensions (mm) |    |     |                                  |
|--------------------------------|-----------|--------|-----------------|----|-----|----------------------------------|
| Product name                   | Model No. | blades | dl              | D2 | L   | Inserts                          |
| R-Bit<br>Specific agency Items | 20XR      | 1      | 19              | 20 | 126 | N43GXR NK1010<br>N43GXR8-0.5R~4R |

 $\mathbf{X}$  Inset is not supplied as standard accessory. Please purchase it separately.

★ Lock Pin and wrench are supplied as standard accessory









| Product name | Mandal Nin | blades | Dimensions (mm) |    |     | Inserts       |
|--------------|------------|--------|-----------------|----|-----|---------------|
|              | Model No.  |        | dl              | D2 | L   | IIISEI LS     |
| 10R-Bit      | 25CR       | 1      | 25              | 25 | 150 | N54GCR-5R~10R |





When mounting insert, please do not take reverse tightening. When industring insert, please to not take levelse usefulning.

Poor accurred or finish or breakage of insert may be occurred due to the Eccentricity looking mechanism When replacing insert, please make sure that the reserve tightening Was not made.

# Aeromill / NEW Tiko Cutter

# Smaller shank Consider to use this Aeromill for Non-Rigidity Machines like Tapping Center! Choose various workpiece with Negative and Positive type Face Milling Cutters! Aeromill \$\phi 30 \text{mm} \cdot \phi 40 \text{mm}\$

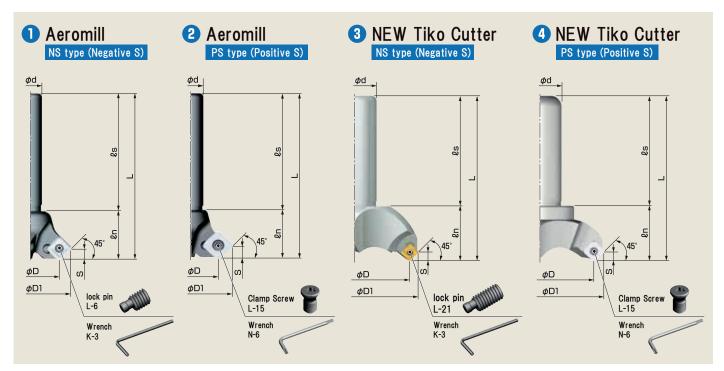


# Thin workpiece processing

NEW Tiko Cutter  $\phi$ 60mm •  $\phi$ 80mm







# Body

| Б. 1. 1          |     |              | Fig. | la la alara |    |             | Dir        | mensions( | mm) |    |     | Weight |                   |  |
|------------------|-----|--------------|------|-------------|----|-------------|------------|-----------|-----|----|-----|--------|-------------------|--|
| Product name     |     | Model No.    |      | blades      | φD | <i>φ</i> D1 | <b>φ</b> d | L         | ls  | ℓn | S   | (g)    | Inserts           |  |
|                  | NS  | ARN12-30S    | 0    | 3           | 30 | 42          | 12         | 85        | 60  | 25 | 5.0 | 132    | S32MOZ / S32GUR   |  |
| Aeromill         | ИЭ  | ARN16-40S    | 0    | 3           | 40 | 52          | 16         | 85        | 60  | 25 | 5.0 | 210    | S32MOZ / S32GUR   |  |
| Aeromiii         | PS  | ARP12-30S    | 2    | 3           | 30 | 43.2        | 12         | 85        | 60  | 25 | 6.0 | 116    | S3H3MNZ / S3H3GNZ |  |
|                  | го  | ARP16-40S    | 2    | 3           | 40 | 53.6        | 16         | 85        | 60  | 25 | 6.0 | 224    | S3H3MNZ / S3H3GNZ |  |
|                  |     | TKN20-60S-03 | 3    | 3           | 60 | 73          | 20         | 120       | 80  | 40 | 5.0 | 668    | S32MOZ / S32GUR   |  |
|                  | NS  | TKN20-80S-03 | 3    | 3           | 80 | 93          | 20         | 120       | 80  | 40 | 5.0 | 826    | S32MOZ / S32GUR   |  |
|                  | INO | TKN32-60S-03 | 3    | 3           | 60 | 73          | 32         | 120       | 80  | 40 | 5.0 | 968    | S32MOZ / S32GUR   |  |
| NEW Tiko Cutter  |     | TKN32-80S-03 | 3    | 3           | 80 | 93          | 32         | 120       | 80  | 40 | 5.0 | 1,126  | S32MOZ / S32GUR   |  |
| INEW TIKO Cutter |     | TKP20-60S-03 | 4    | 3           | 60 | 74          | 20         | 120       | 80  | 40 | 6.0 | 600    | S3H3MNZ / S3H3GNZ |  |
| I                | PS  | TKP20-80S-03 | 4    | 3           | 80 | 94          | 20         | 120       | 80  | 40 | 6.0 | 780    | S3H3MNZ / S3H3GNZ |  |
|                  | 13  | TKP32-60S-03 | 4    | 3           | 60 | 74          | 32         | 120       | 80  | 40 | 6.0 | 900    | S3H3MNZ / S3H3GNZ |  |
|                  |     | TKP32-80S-03 | 4    | 3           | 80 | 94          | 32         | 120       | 80  | 40 | 6.0 | 1,070  | S3H3MNZ / S3H3GNZ |  |

<sup>※</sup> Insert is not supplied as standard accessory

<sup>\*</sup> Clamp Screw, Lock Pin and wrench are supplied as standard accessories

# Cutting Conditions

|                          | S32MOZ              |                 |                         |                 |         |         |         |       |  |  |  |
|--------------------------|---------------------|-----------------|-------------------------|-----------------|---------|---------|---------|-------|--|--|--|
|                          | Material Model      | NK2001          | NK2050                  | AB01F           | NK1010  | NK2020  | NK3030  | AC15T |  |  |  |
| Material                 | Feed per blade (fz) |                 | Cutting speed (m / min) |                 |         |         |         |       |  |  |  |
| General Steel            | 0.1~0.3             | 200~300         | 200~300                 | 200~300         |         | 150~200 | 150~250 |       |  |  |  |
| Alloy Steel              | 0.1~0.3             | 200~250         | 200~250                 | 200~250         |         | 150~200 | 150~250 |       |  |  |  |
| Stainless Steel          | 0.1~0.25            |                 |                         |                 |         | 120~180 | 150~200 | 150   |  |  |  |
| Aluminum,<br>Resin,Brass |                     |                 |                         |                 |         |         |         |       |  |  |  |
| Castings                 | 0.1~0.3             | 200~250<br>*FCD |                         | 200~250<br>%FCD | 150~200 |         |         |       |  |  |  |

Chamfered Insert nose increase feed speed per I-blade and make a good surface finishing

Yellow marked rate is recommended for the workpiece listed

|                          |                     |                 | S       | 32GUR   |          |          |         |                    |           |
|--------------------------|---------------------|-----------------|---------|---------|----------|----------|---------|--------------------|-----------|
|                          | Material Model      | NK2001          | NK1010  | NK2020  | NK3030   | NK5050   | NK6060  | NK8080             | DIA       |
| Material                 | Feed per blade (fz) |                 |         | Cutt    | ing spee | d (m / n | nin)    |                    |           |
| General Steel            | 0.08~0.2            | 200~300         |         | 150~200 |          |          |         |                    |           |
| Alloy Steel              | 0.08~0.2            | 200~250         |         | 150~200 |          |          |         |                    |           |
| Stainless Steel          | 0.08~0.2            |                 |         | 120~180 | 150~200  |          | 150~250 | 150~250<br>#SUS316 |           |
| Aluminum,<br>Resin,Brass | 0.08~0.3            |                 | 250~800 |         |          | 200~800  |         | 200~800            | 500~2,000 |
| Castings                 | 0.08~0.2            | 200~250<br>%FCD | 100~150 |         |          |          |         |                    |           |

Insert breaker ensures sharp processing and R shaped nose ensure less cutting resistance. and recommended the workpiece which are easily chattered and a distortion arises

Yellow marked rate is recommended for the workpiece listed

|                          |                     |         | S3H3MNZ |               | S3H3      | BGNZ      |
|--------------------------|---------------------|---------|---------|---------------|-----------|-----------|
|                          | Material Model      | NK2001  | NK2020  | AC15D         | NK1010    | NK9090    |
| Material                 | Feed per blade (fz) |         | Cuttir  | ng speed (m / | min)      |           |
| General Steel            | 0.08~0.2            | 200~300 | 150~200 |               |           |           |
| Alloy Steel              | 0.08~0.2            | 200~300 | 150~200 |               |           |           |
| Stainless Steel          | 0.1                 |         |         | 150           |           |           |
| Aluminum,<br>Resin,Brass | 0.1~0.2             |         |         |               | 500~1,000 | 500~1,000 |
| Castings                 |                     |         |         |               |           |           |

Chamfered Insert nose increase feed speed per I-blade and make a good surface finishing

Yellow marked rate is recommended for the workpiece listed

# Processing Example (Aeromill)

## [Face Milling (PS type)]

- Body: ARP16-40S
- Insert: S3H3MNZ NK1010
  - Material
     A5052
     Rotation Speed
     1,000r.p.m.
  - Table feed · · · · · 300mm/min

  - Depth of Cut --- 0.5mm
  - Cutting Oil ---- None

## Result

Machined surface good.



# Processing Example (NEW TikoCutter)

# [Face Milling (PS type)]

- Body: TKP32-80S-03
- Insert: S3H3MNZ NK1010
- Material S50C
   Rotation Speed 1,060r.p.m.
- Table feed 636mm/min
  Depth of Cut 3mm
- Cutting Oil ---- None

# Result

Machined surface good.

# [Face Milling (NS type)]

- Body: TKN32-60S-03
- Insert: S32MOZ AC15T
- Material ----- SUS304
- Rotation Speed 1,000r.p.m.
- Table feed · · · · · · 300mm/min
- Depth of Cut---- 2mm
- Cutting Oil ----- None

# Result

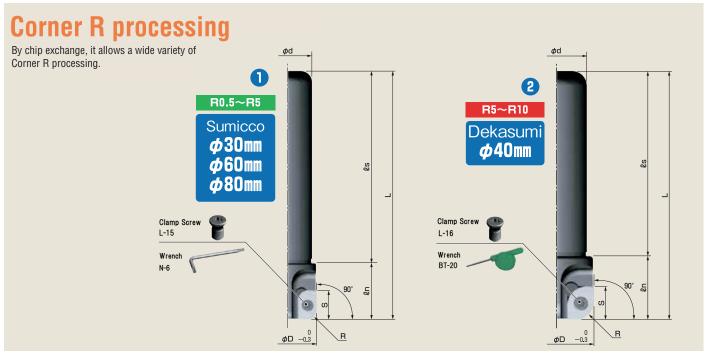
Machined surface good.



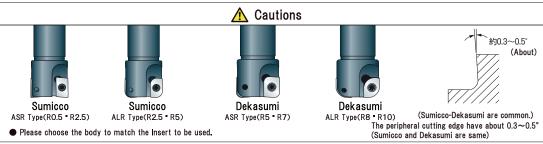


| Insert                                       |  |                        |             |         |               |                  |
|--|--|------------------------|-------------|---------|---------------|------------------|
| Fig.   | Model.No.                                  | Material               | Blade Shape | Coating | Usable corner | Quantity per box |
| NegativeType  ⟨S32MOZ⟩  -,90°                | S32MOZ NK2001                              | Cermet                 | Honing edge | None    | 8             | 12               |
|  | S32MOZ NK2050                              | Cermet                 | Honing edge | None    | 8             | 12               |
| φ9.525<br>φ3.8                               | S32MOZ AB01F                               | Cermet                 | Honing edge | AlCrN   | 8             | 12               |
| 6.8  | S32MOZ NK1010                              | Carbide K10            | Sharp edge  | None    | 8             | 12               |
| 6.8<br>(Except nose R)                       | S32MOZ NK2020                              | Carbide M20            | Honing edge | None    | 8             | 12               |
| 0.8R →                                       | S32MOZ NK3030                              | Carbide M20            | Honing edge | TiN     | 8             | 12               |
| V08  | S32MOZ AC15T                               | Fine particles Carbide | Honing edge | AlCrN   | 8             | 12               |
| ⟨S32GUR⟩ ¬90°                                | S32GUR NK2001                              | Cermet                 | Honing edge | None    | 8             | 12               |
|  | S32GUR NK1010                              | Carbide K10            | Sharp edge  | None    | 8             | 12               |
| φ3.8   | S32GUR NK2020                              | Carbide M20            | Honing edge | None    | 8             | 12               |
| e la     | S32GUR NK3030                              | Carbide M20            | Honing edge | TiN     | 8             | 12               |
| P B12  | S32GUR NK5050                              | Carbide K10            | Sharp edge  | TiN     | 8             | 12               |
| 2.4 R1.2 3.18                                | S32GUR NK6060                              | Carbide M20            | Honing edge | TiA&N   | 8             | 12               |
| 7.] (Except nose R)                          | S32GUR NK8080                              | Carbide K10            | Sharp edge  | TiAℓN   | 8             | 12               |
| (S32GUR DIA) 90°  R1.2 3.18  (Except nose R) | S32GUR DIA                                 | DIA                    | Sharp edge  | None    | 1             | 1                |
| PositiveType<br>⟨S3H3MNZ⟩⟨S3H3GNZ⟩           | S3H3MNZ NK2001                             | Cermet                 | Honing edge | None    | 4             | 12               |
| 98. 1-14.                                    | S3H3GNZ NK1010                             | Carbide K10            | Sharp edge  | None    | 4             | 12               |
| 8.2  | S3H3MNZ NK2020                             | Carbide M20            | Honing edge | None    | 4             | 12               |
| (Except nose R)                              | S3H3GNZ NK9090<br>(Mirror polished finish) | Carbide K10            | Sharp edge  | None    | 4             | 12               |
|  | S3H3MNZ AC15D                              | Fine particles Carbide | Honing edge | AlCrN   | 4             | 12               |

# Sumicco / Dekasumi







# Body

|              |             |      |        |    |            | Dimens | ions(mm) |      |      |                  | Weight |
|--------------|-------------|------|--------|----|------------|--------|----------|------|------|------------------|--------|
| Product name | Model No.   | Fig. | blades | φD | <b>φ</b> d | L      | ls       | ℓn   | S    | Inserts          | (g)    |
|              | SK25-30ASR  | 0    | 2      | 30 | 25         | 130    | 100      | 30   | 15   | A52GNR-0.5R~2.5R | 478    |
|              | SK25-30ASRL | 0    | 2      | 30 | 25         | 200    | 170      | 30   | 15   | A52GNR-0.5R~2.5R | 748    |
|              | SK25-30ALR  | 0    | 2      | 30 | 25         | 130    | 100      | 30   | 15   | A52GNR-2.5R~5R   | 474    |
|              | SK25-30ALRL | 0    | 2      | 30 | 25         | 200    | 170      | 30   | 15   | A52GNR-2.5R~5R   | 746    |
|              | SK32-60ASR  | 0    | 4      | 60 | 32         | 105    | 80       | 25   | 15   | A52GNR-0.5R~2.5R | 798    |
| Sumicco      | SK32-60ASRL | 0    | 4      | 60 | 32         | 175    | 150      | 25   | 15   | A52GNR-0.5R~2.5R | 1,240  |
| Sumilico     | SK32-60ALR  | 0    | 4      | 60 | 32         | 105    | 80       | 25   | 15   | A52GNR-2.5R~5R   | 784    |
|              | SK32-60ALRL | 0    | 4      | 60 | 32         | 175    | 150      | 25   | 15   | A52GNR-2.5R~5R   | 1,240  |
|              | SK32-80ASR  | 0    | 4      | 80 | 32         | 105    | 80       | 25   | 15   | A52GNR-0.5R~2.5R | 1,100  |
|              | SK32-80ASRL | 0    | 4      | 80 | 32         | 175    | 150      | 25   | 15   | A52GNR-0.5R~2.5R | 1,560  |
|              | SK32-80ALR  | 0    | 4      | 80 | 32         | 105    | 80       | 25   | 15   | A52GNR-2.5R~5R   | 1,120  |
|              | SK32-80ALRL | 0    | 4      | 80 | 32         | 175    | 150      | 25   | 15   | A52GNR-2.5R~5R   | 1,550  |
|              | DC32-40ASR  | 2    | 2      | 40 | 32         | 135.0  | 100      | 35.0 | 18.1 | ADEW19T3-5R~7R   | 820    |
| Dalea auma!  | DC32-40ASRL | 2    | 2      | 40 | 32         | 185.0  | 150      | 35.0 | 18.1 | ADEW19T3-5R~7R   | 1,140  |
| Dekasumi     | DC32-40ALR  | 2    | 2      | 40 | 32         | 134.6  | 100      | 34.6 | 17.6 | ADEW19T3-8R~10R  | 813    |
|              | DC32-40ALRL | 2    | 2      | 40 | 32         | 184.6  | 150      | 34.6 | 17.6 | ADEW19T3-8R~10R  | 1,140  |

- \* Insert is not equipped as standard accessories. Please order separately
- 💥 Clamp screw, and wrench are supplied as standard accessories

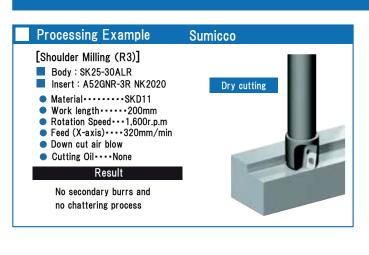
# Cutting Conditions

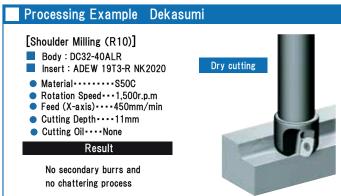
|                 | Sumicco             |                         |         |         |  |  |  |  |  |  |
|-----------------|---------------------|-------------------------|---------|---------|--|--|--|--|--|--|
|                 | Material Model      | NK1010                  | NK2020  | AC16N   |  |  |  |  |  |  |
| Material        | Feed per blade (fz) | Cutting speed (m / min) |         |         |  |  |  |  |  |  |
| General Steel   | 0.1~0.2             |                         | 100~150 | 150~200 |  |  |  |  |  |  |
| Alloy Steel     | 0.1~0.2             |                         | 100~150 | 150~200 |  |  |  |  |  |  |
| Stainless Steel | 0.1~0.2             |                         | 80~120  | 120~160 |  |  |  |  |  |  |
| Aluminum,Resin, | 0.1~0.3             | 250~600                 |         |         |  |  |  |  |  |  |
| Castings        | 0.1~0.2             | 80~150                  |         |         |  |  |  |  |  |  |

| Work shape, clamping state | tool protrusion length, please adjust | the conditions by cutting amount |
|----------------------------|---------------------------------------|----------------------------------|
| You have been to the       | workpiece by recommended Insert.      |                                  |

| Dekasumi        |                     |                         |         |         |  |  |  |  |  |
|-----------------|---------------------|-------------------------|---------|---------|--|--|--|--|--|
|                 | Material Model      | NK1010                  | NK2020  | AC16N   |  |  |  |  |  |
| Material        | Feed per blade (fz) | Cutting speed (m / min) |         |         |  |  |  |  |  |
| General Steel   | 0.1~0.2             |                         | 100~150 | 150~200 |  |  |  |  |  |
| Alloy Steel     | 0.1~0.2             |                         | 100~150 | 150~200 |  |  |  |  |  |
| Stainless Steel | 0.1~0.2             |                         | 80~120  | 120~160 |  |  |  |  |  |
| Aluminum,Resin, | 0.1~0.3             | 250~600                 |         |         |  |  |  |  |  |
| Castings        | 0.1~0.2             | 80~150                  |         |         |  |  |  |  |  |

Work shape, clamping state, tool protrusion length, please adjust the conditions by cutting amount
 Recommended Inserts





| Fig.   | Model.No.  | Material               | Blade Shape | Coating | Usable corner | Quantity per box |
|--|--|------------------------|-------------|---------|---------------|------------------|
| A52GNR   15°   3.18   3 | A52GNR-0.5R NK1010 A52GNR-1.5R NK1010 A52GNR-2R NK1010 A52GNR-2.5R NK1010 A52GNR-3.5R NK1010 A52GNR-3.5R NK1010 A52GNR-4R NK1010 A52GNR-4R NK1010 A52GNR-4.5R NK1010 A52GNR-5R NK1010                  | Carbide K10            | Sharp edge  | None    | 2             | 12               |
|  | A52GNR-0.5R NK2020 A52GNR-1B NK2020 A52GNR-1.5R NK2020 A52GNR-2.5R NK2020 A52GNR-3.5R NK2020 A52GNR-3.5R NK2020 A52GNR-4R NK2020 A52GNR-4R NK2020 A52GNR-4SR NK2020 A52GNR-4SR NK2020 A52GNR-5R NK2020 | Carbide M20            | Honing edge | None    | 2             | 12               |
|  | A52GNR-0.5R AC16N<br>A52GNR-1.5R AC16N<br>A52GNR-2.5R AC16N<br>A52GNR-2.5R AC16N<br>A52GNR-3.5R AC16N<br>A52GNR-3.5R AC16N<br>A52GNR-4.5R AC16N<br>A52GNR-4.5R AC16N<br>A52GNR-5R AC16N                | Fine Particles Carbide | Honing edge | AICrN   | 2             | 12               |
| © Dekasumi   | ADEW19T3-5R NK1010<br>ADEW19T3-6R NK1010<br>ADEW19T3-7R NK1010<br>ADEW19T3-9R NK1010<br>ADEW19T3-10R NK1010  | Carbide K10            | Sharp edge  | None    | 2             | 4                |
| 3.969  19.050  Blade length of the Insert (Except nose R)  Model,No. A   | ADEW19T3-5R NK2020<br>ADEW19T3-6R NK2020<br>ADEW19T3-7R NK2020<br>ADEW19T3-9R NK2020<br>ADEW19T3-10R NK2020  | Carbide M20            | Honing edge | None    | 2             | 4                |
| R5 13.2mm R6 12mm R7 11mm R8 9.8mm R9 8.7mm R10 7.7mm  | ADEW19T3-5R AC16N<br>ADEW19T3-6R AC16N<br>ADEW19T3-7R AC16N<br>ADEW19T3-8R AC16N<br>ADEW19T3-10R AC16N<br>ADEW19T3-10R AC16N   | Fine Particles Carbide | Honing edge | AICrN   | 2             | 4                |

# **Pricelist Catalogue Hogetex - Chamfering and Radius - Tools**

| DACEO MO               | MIMEN NANO  |                  | PAGE 8 - GEI           | NITI EMEN                               |                    |
|------------------------|---|------------------|------------------------|---|--------------------|
|                        |   | 120.006          | 1W21.2.01              | NK4557X                                 | 500 00£            |
| 1W20.6.21<br>Inserts:  | SCN0845E  | 129,00€          | 1W21.2.01<br>1W21.2.02 | NK6054X                                 | 589,00€            |
|                        | ENGX040102 AC15N  | 17,80€           | 1W21.2.02<br>1W21.2.03 | NK3080X                                 | 570,00€<br>610,00€ |
| 1W20.6.31              | ENGA040102 AC13N  | 17,00€           | Inserts:               | INVOCOV                                 | 619,00€            |
| PAGE 3 - CHI           | BIMOMI  |                  | 1W21.2.11              | X63GUR NK1010                           | 45,00€             |
| 1W20.6.01              | SCM1045C  | 95,00€           | 1W21.2.12              | X63GUR NK2020                           | 45,00€             |
| 1W20.6.02              | SCM1045CL   | 115,00€          | 1W21.2.13              | X63GUR AC15N                            | 51,00€             |
| Inserts:               |   |                  |                        | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 3.,333             |
| 1W20.6.11              | C22GUX NK5050   | 19,50€           | PAGE 9 - DEI           | KATCUT                                  |                    |
| 1W20.6.12              | C22GUX NK1010   | 15,90€           | 1W22.1.21              | DNK9032T                                | 205,00€            |
|                        |   | -                | 1W22.1.22              | DNK9060T                                | 369,00€            |
| PAGE 4 - MO            | MIMEN   |                  | 1W22.1.23              | DNK9080T                                | 410,00€            |
| 1W20.7.01              | SC1645C   | 122,00€          | 1W22.1.24              | DNK90100T                               | 465,00€            |
| 1W20.7.02              | SC1645CL  | 177,00€          | Inserts:               |   |                    |
| 1W20.7.03              | SC1045C   | 94,00€           | 1W22.1.27              | TNEX270412 ZA10T                        | 31,00€             |
| 1W20.7.04              | SC1245C   | 122,00€          | 1W22.1.28              | TNEQ270412 ZA10N                        | 21,00€             |
| 1W20.7.05              | SC1630C   | 122,00€          | 1W22.1.29              | TNMX270412 AC15N                        | 25,00€             |
| 1W20.7.06              | SC1630CL  | 179,00€          |                        |   |                    |
| Inserts:               |   |                  |                        | D 11 - MENTRUBE                         |                    |
| 1W20.7.11              | C32GUX NK1010   | 14,50€           | 1W20.3.01              | BM-4524T                                | 83,00€             |
| 1W20.7.12              | C32GUX NK2001   | 15,00€           | 1W20.3.02              | BM-4538T                                | 101,00€            |
| 1W20.7.13              | C32GUX NK2020   | 14,50€           | 1W20.3.03              | BM-4552T                                | 127,00€            |
| 1W20.7.14              | C32GUX NK3030   | 20,80€           | 1W20.3.04              | BM-4566T                                | 167,00€            |
| 1W20.7.15              | C32GUX NK5050   | 20,80€           | 1W20.3.05              | BM-4524TL                               | 118,00€            |
| 1W20.7.16              | C32GUX NK8080   | 25,00€           | 1W20.3.07              | BM-6021T                                | 112,00€            |
| 1W20.7.17              | C32GUX HSS  | 18,00€           | 1W20.3.08              | BM-3029T                                | 115,00€            |
| D4055 000              | MOMINEN   |                  | Inserts:               |   |                    |
| PAGE 5 - 60°           |   | 440.000          | 1W20.3.11              | TM32GUR-HSS                             | 15,50€             |
| 1W20.8.01              | SC1660D (old Model)                                       | 140,00€          | 1W20.3.12              | TM32GUR HSS TIALN                       | 24,00€             |
| 1W20.8.02              | SC1660DS (new Model)                                      | 160,00€          | 1W20.3.13              | TM32-GSR-HSS                            | 23,50€             |
| Inserts:               | D40011V NIK4040 (-14 M-4-1)                               | 00.000           | 1W20.3.14              | TM32-GSR-HSS-TIALN                      | 26,80€             |
| 1W20.8.11              | D43GUX NK1010 (old Model)                                 | 26,80€           | DAOE 40 AND            | 2.40 MENTOLIDEE                         |                    |
| 1W20.8.12              | D43GUX NK5050 (old Model)                                 | 31,50€           |                        | D 13 - MENTRUDEE                        | 04.000             |
| 1W20.8.13<br>1W20.8.14 | DCET11X304 ZA10N (new Model) DCET11X304 AC15N (new Model) | 36,80€<br>26,80€ | 1W22.1.01<br>1W22.1.02 | MBM4513T<br>MBM4513TL                   | 91,00€             |
| 1W20.8.14<br>1W20.8.15 | DCET11X304 AC16N (new Model)                              | 36,80€           | 1W22.1.02<br>1W22.1.06 |   | 93,00€             |
| 10020.0.13             | DUET TTA 304E ACTON (Hew Model)                           | 30,00€           | 1W22.1.00<br>1W22.1.07 | MBM3015T<br>MBM6010T                    | 98,00€<br>98,00€   |
| PAGE 6 AND             | 7 - CHAMFERING CUTTER                                     |                  | Inserts:               | MIDIMIOUTUT                             | 90,00€             |
| 1W21.3.01              | NK1536T-20  | 275,00€          | 1W22.1.11              | TCXT080102F ZC16N                       | 11,50€             |
| 1W21.3.03              | NK2035T-20  | 275,00€          | 1W22.1.11              | TCXT080102E AC16N                       | 17,50€             |
| 1W21.3.05              | NK2535T-20  | 275,00€          | 14422.1.12             | 10/110001022 /101010                    | 17,000             |
| 1W21.3.07              | NK3030T-20  | 275,00€          | PAGE 14 ANI            | O 15 - URATORIMEN-C                     |                    |
| 1W21.3.09              | NK3532T-20  | 275,00€          | 1W21.1.01              | UMH12-6.8S-M8                           | 175,00€            |
| 1W21.3.11              | NK4031T-20  | 275,00€          | 1W21.1.02              | UMH12-8.5S-M10                          | 175,00€            |
| 1W21.3.13              | NK4530T-20  | 275,00€          | 1W21.1.03              | UMH12-10S-M12                           | 175,00€            |
| 1W21.3.15              | NK5031T-20  | 275,00€          | 1W21.1.04              | UMH12-12S-M14                           | 175,00€            |
| 1W21.3.17              | NK5532T-20  | 275,00€          | 1W21.1.05              | UMH12-14S-M16                           | 175,00€            |
| 1W21.3.19              | NK6030T-20  | 275,00€          | 1W21.1.06              | UM12-16S                                | 120,00€            |
| 1W21.3.21              | NK6533T-20  | 275,00€          | Inserts:               |   |                    |
| 1W21.3.23              | NK7032T-20  | 275,00€          | 1W21.1.11              | SP-SPET040102 NK1010                    | 16,00€             |
| 1W21.3.25              | NK7533T-20  | 275,00€          | 1W21.1.12              | SP-SPET040102 NK2020                    | 16,00€             |
|                        |   |                  | 1W21.1.13              | SP-SPET040102 AC16N                     | 21,50€             |
|                        | 7 - CHAMFERING CUTTER                                     |                  | 1W21.1.21              | SPET040102 NK1010                       | 18,90€             |
| INSERTS:               |   |                  | 1W21.1.22              | SPET040102 NK2020                       | 18,90€             |
| 1W20.1.14              | T32MOR NK2001   | 6,00€            | 1W21.1.23              | SPET040102 AC16N                        | 24,50€             |
| 1W20.1.15              | TT32GUR NK2020  | 12,70€           | 1W21.1.31              | SPET06T104 NK1010                       | 19,30€             |
| 1W20.1.16              | TT32GUR NK2001  | 12,70€           | 1W21.1.32              | SPET06T104 NK2020                       | 19,30€             |
| 1W20.1.17              | TT32GUR NK1010  | 12,70€           | 1W21.1.33              | SPET06T104 AC16N                        | 24,90€             |
| 1W20.1.18              | TT32GUR NK3030  | 16,50€           |                        |   |                    |
| 1W20.1.19              | TT32GUR NK5050  | 16,50€           |                        | O 17 - MULTI-ANGLE MILL                 |                    |
| 1W20.1.20              | T32MOR NK2020   | 6,00€            | 1W20.3.60              | MAM32-50S                               | 379,00€            |
| 1W20.1.21              | T32MOR NK1010   | 6,00€            | Inserts:               | ODINT450404 T10                         |                    |
| 1W20.1.22              | TT32GUR NK6060/AC15N                                      | 20,00€           | 1W20.3.65              | SDMT150404 ZA20N                        | 15,30€             |
| 1W20.1.23              | TT32GUR NK8080  | 18,20€           | 1W20.3.66              | SDMT150404 DA20N /AC15N                 | 29,00€             |

PRICES VALID TILL 31.12.2023. PRICES EXCLUDED VAT.

# **Pricelist Catalogue Hogetex - Chamfering and Radius - Tools**

| PAGE 18 - RC INDO CUTTER F |  |                                       |             | PAGE 25 - R-BIT / 10R-BIT       |         |  |
|----------------------------|--|---------------------------------------|-------------|---------------------------------|---------|--|
| 1W20.1.01                  | CR25-05T                                   | 125,00€                               | 1W20.2.01   | Radiusbeitel 20XR               | 229,00€ |  |
| Inserts:                   |  | · · · · · · · · · · · · · · · · · · · | Inserts:    |                                 |         |  |
| 1W20.1.11                  | T32GSR-1R NK2020                           | 28,00€                                | 1W20.4.08   | N43GXR8 NK2001                  | 22,80€  |  |
| 1W20.1.12                  | T32GSR-2R NK2020                           | 28,00€                                | 1W20.4.09   | N43GXR8 NK1010                  | 22,80€  |  |
| 1W20.1.13                  | T32GSR-3R NK2020                           | 28,00€                                | 1W20.4.10   | N43GXR8 NK2020                  | 22,80€  |  |
| 1W20.1.14                  | T32MOR NK2001                              | 6,00€                                 | 1W20.4.11   | N43GXR8-1R NK2020               | 22,80€  |  |
| 1W20.1.15                  | TT32GUR NK2020                             | 12,70€                                | 1W20.4.12   | N43GXR8-2R NK2020               | 22,80€  |  |
| 1W20.1.16                  | TT32GUR NK2001                             | 12,70€                                | 1W20.4.13   | N43GXR8-3R NK2020               | 22,80€  |  |
| 1W20.1.17                  | TT32GUR NK1010                             | 12,70€                                | 1W20.4.14   | N43GXR8-4R NK2020               | 22,80€  |  |
| 1W20.1.17                  | TT32GUR NK3030                             | 16,50€                                | 1W20.4.15   | N43GXR8-5R NK2020               | 44,50€  |  |
| 1W20.1.10                  | TT32GUR NK5050                             | 16,50€                                | 1W20.4.16   | N43GXR8-0,5R NK2020             | 44,50€  |  |
| 1W20.1.13                  | T32MOR NK2020                              | 6,00€                                 | 1W20.4.17   | N43GXR8-0,75R NK2020            | 44,50€  |  |
|                            | T32MOR NK1010                              |                                       |             |                                 |         |  |
| 1W20.1.21                  |  | 6,00€                                 | 1W20.4.18   | N43GXR8-1,5R NK2020             | 44,50€  |  |
| 1W20.1.22                  | TT32GUR NK6060/AC15N                       | 20,00€                                | 1W20.4.19   | N43GXR8-2,5R NK2020             | 44,50€  |  |
| 1W20.1.23                  | TT32GUR NK8080                             | 18,20€                                | 1W20.4.20   | N43GXR8-3,5R NK2020             | 44,50€  |  |
|                            | DOL D CDECIAL ID / D CDECIAL               |                                       | 1W20.4.21   | N43GXR8-4,5R NK2020             | 44,50€  |  |
|                            | D 21 - R-SPECIAL JR. / R-SPECIAL           | 100.000                               | 1W20.4.31   | N43GXR8-1R NK2001               | 22,80€  |  |
| 1W20.4.00                  | NK20-05R                                   | 126,00€                               | 1W20.4.32   | N43GXR8-2R NK2001               | 22,80€  |  |
| 1W20.4.01                  | NK25-05R                                   | 126,00€                               | 1W20.4.33   | N43GXR8-3R NK2001               | 22,80€  |  |
| 1W20.4.02                  | NK20-40R-3                                 | 354,00€                               | 1W20.4.34   | N43GXR8-4R NK2001               | 22,80€  |  |
| 1W20.4.03                  | NK25-40R-3                                 | 354,00€                               |             |                                 |         |  |
| 1W20.4.04                  | NK32-40R-3                                 | 354,00€                               | PAGE 26 ANI | D 27 - AEROMILL/NEW TIKO CUTTER |         |  |
| Inserts:                   |  |                                       | 1W21.6.01   | ARN12-30S                       | 195,00€ |  |
| 1W20.4.08                  | N43GXR8 NK2001                             | 22,80€                                | 1W21.6.02   | ARN16-40S                       | 220,00€ |  |
| 1W20.4.09                  | N43GXR8 NK1010                             | 22,80€                                | 1W21.7.01   | ARP12-30S                       | 196,00€ |  |
| 1W20.4.10                  | N43GXR8 NK2020                             | 22,80€                                | 1W21.7.02   | ARP16-40S                       | 220,00€ |  |
| 1W20.4.11                  | N43GXR8-1R NK2020                          | 22,80€                                | Inserts:    |                                 |         |  |
| 1W20.4.12                  | N43GXR8-2R NK2020                          | 22,80€                                | 1W21.6.11   | S32MOZ NK2020                   | 5.70€   |  |
| 1W20.4.13                  | N43GXR8-3R NK2020                          | 22,80€                                | 1W21.6.12   | S32M0Z NK3030                   | 10,50€  |  |
| 1W20.4.14                  | N43GXR8-4R NK2020                          | 22,80€                                | 1W21.6.13   | S32MOZ NK6060 / AC15T           | 12,90€  |  |
| 1W20.4.14                  | N43GXR8-5R NK2020                          | 44,50€                                | 1W21.6.14   | S32GUR NK2020                   | 10,90€  |  |
| 1W20.4.16                  | N43GXR8-0,5R NK2020                        | 44,50€                                | 1W21.6.15   | S32GUR NK3030                   | 13,50€  |  |
|                            |  |                                       |             |                                 |         |  |
| 1W20.4.17                  | N43GXR8-0,75R NK2020                       | 44,50€                                | 1W21.6.16   | S32GUR NK6060                   | 16,00€  |  |
| 1W20.4.18                  | N43GXR8-1,5R NK2020                        | 44,50€                                | 1W21.6.17   | S32GUR DIA                      | 108,00€ |  |
| 1W20.4.19                  | N43GXR8-2,5R NK2020                        | 44,50€                                | 1W21.7.11   | S3H3MNZ NK2020                  | 8,90€   |  |
| 1W20.4.20                  | N43GXR8-3,5R NK2020                        | 44,50€                                | 1W21.7.12   | S3H3MNZ NK6060 / AC15D          | 14,00€  |  |
| 1W20.4.21                  | N43GXR8-4,5R NK2020                        | 44,50€                                |             |                                 |         |  |
| 1W20.4.31                  | N43GXR8-1R NK2001                          | 22,80€                                |             | D 29 - SUMICCO / DEKASUMI       |         |  |
| 1W20.4.32                  | N43GXR8-2R NK2001                          | 22,80€                                | 1W21.4.01   | SK25-30ASR                      | 169,00€ |  |
| 1W20.4.33                  | N43GXR8-3R NK2001                          | 22,80€                                | 1W21.4.02   | SK25-30ALR                      | 168,00€ |  |
| 1W20.4.34                  | N43GXR8-4R NK2001                          | 22,80€                                | 1W21.5.01   | DC32-40ASR                      | 259,00€ |  |
|                            |  | -                                     | 1W21.5.02   | DC32-40ALR                      | 259,00€ |  |
| PAGE 22 ANI                | D 23 - R-NOUVEAU JR. / R-NOUVEAU           |                                       | Inserts:    |                                 |         |  |
| 1W20.5.01                  | NK25-10R                                   | 142,00€                               | 1W21.4.11   | A52GNR-1R NK2020                | 15,90€  |  |
| 1W20.5.02                  | NK20-10R                                   | 142,00€                               | 1W21.4.12   | A52GNR-2R NK2020                | 15,90€  |  |
| 1W20.5.03                  | NK32-70R                                   | 455,00€                               | 1W21.4.13   | A52GNR-3R NK2020                | 15,90€  |  |
| Inserts:                   | 141102 7 011                               | 100,000                               | 1W21.4.14   | A52GNR-4R NK2020                | 15,90€  |  |
| 1W20.5.11                  | N54GCR-5R NK2020                           | 33,50€                                | 1W21.4.15   | A52GNR-5R NK2020                | 15,90€  |  |
|                            | N54GCR-8R NK2020                           |                                       |             |                                 |         |  |
| 1W20.5.12                  |  | 33,50€                                | 1W21.5.11   | ADEW19T3-5R NK2020              | 27,50€  |  |
| 1W20.5.13                  | N54GC-10R NK2020                           | 33,50€                                | 1W21.5.12   | ADEW19T3-6R NK2020              | 27,50€  |  |
| 1W20.5.14                  | N54GCR-6R NK2020                           | 44,50€                                | 1W21.5.13   | ADEW19T3-7R NK2020              | 27,50€  |  |
| 1W20.5.15                  | N54GCR-7R NK2020                           | 44,50€                                | 1W21.5.21   | ADEW19T3-8R NK2020              | 27,50€  |  |
| 1W20.5.16                  | N54GCR-9R NK2020                           | 44,50€                                | 1W21.5.22   | ADEW19T3-9R NK2020              | 27,50€  |  |
|                            |  |                                       | 1W21.5.23   | ADEW19T3-10R NK2020             | 27,50€  |  |
| PAGE 24 - R-               | ·GIGA                                      |                                       |             |                                 |         |  |
| 1W20.5.30                  | NK32-75RS                                  | 759,00€                               |             |                                 |         |  |
| 1W20.5.31                  | NK32-75RL                                  | 759,00€                               |             |                                 |         |  |
| Inserts:                   |  |                                       |             |                                 |         |  |
| 1W20.5.41                  | XNEW3004-12R NK2020                        | 259,00€                               |             |                                 |         |  |
| 1W20.5.43                  | XNEW3004-14R NK2020                        | 259,00€                               |             |                                 |         |  |
| 1W20.5.44                  | XNEW3004-15R NK2020                        | 259,00€                               |             |                                 |         |  |
| 1W20.5.45                  | XNEW3004-16R NK2020                        | 259,00€                               |             |                                 |         |  |
| 1W20.5.47                  | XNEW3004-18R NK2020                        | 259,00€                               |             |                                 |         |  |
| 1W20.5.47                  | XNEW3004-70T-NK2020<br>XNEW3004-20R NK2020 | 259,00€                               |             |                                 |         |  |
| 1 *** 4 U.U.T              | AND TOO I LOTT WILLDED                     | 200,000                               |             |                                 |         |  |

# Hogetex



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