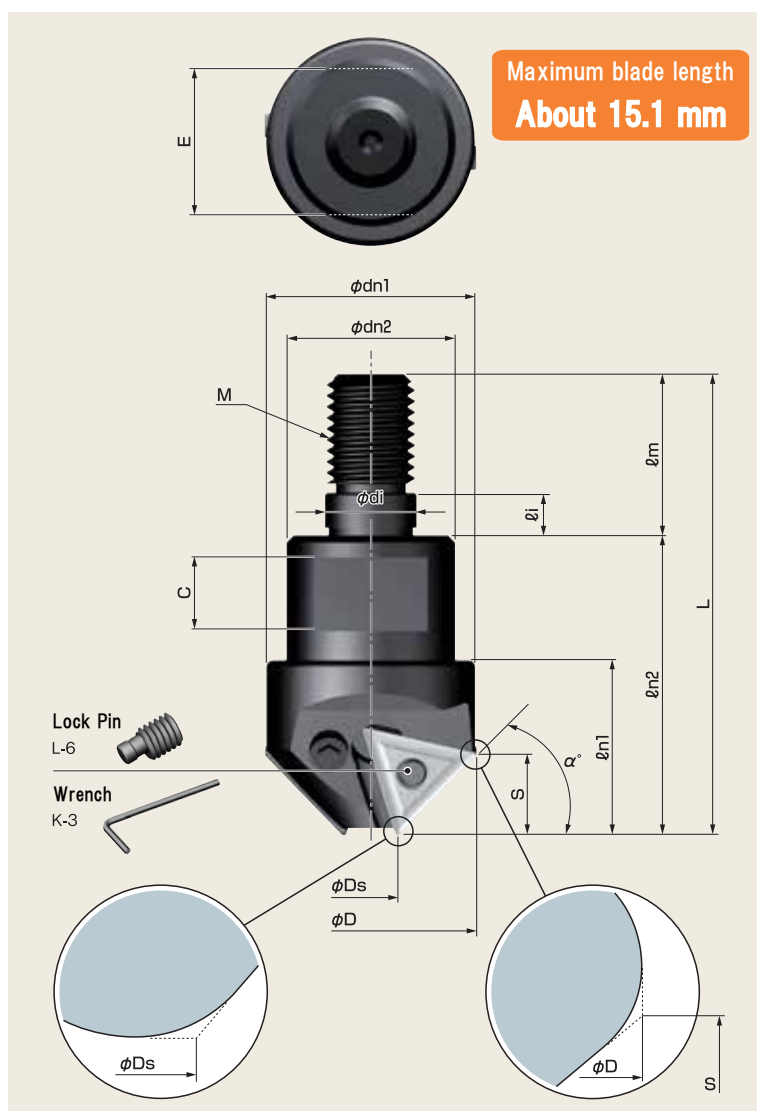


| Applications use | Capacity                  |                           |                           |                           |                           |                           |                           |                            |                            |                            |                            |                            |                            |
|------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
|                  | NK1536T-MD                | NK2035T-MD                | NK2535T-MD                | NK3030T-MD                | NK3532T-MD                | NK4031T-MD                | NK4530T-MD                | NK5031T-MD                 | NK5532T-MD                 | NK6030T-MD                 | NK6533T-MD                 | NK7032T-MD                 | NK7533T-MD                 |
| $\alpha^\circ$   | 15°                       | 20°                       | 25°                       | 30°                       | 35°                       | 40°                       | 45°                       | 50°                        | 55°                        | 60°                        | 65°                        | 70°                        | 75°                        |
| Bore chamfering  | $\phi 8 \sim 36\text{mm}$ | $\phi 8 \sim 36\text{mm}$ | $\phi 8 \sim 35\text{mm}$ | $\phi 8 \sim 33\text{mm}$ | $\phi 8 \sim 32\text{mm}$ | $\phi 8 \sim 31\text{mm}$ | $\phi 8 \sim 29\text{mm}$ | $\phi 12 \sim 31\text{mm}$ | $\phi 15 \sim 32\text{mm}$ | $\phi 15 \sim 30\text{mm}$ | $\phi 20 \sim 33\text{mm}$ | $\phi 22 \sim 32\text{mm}$ | $\phi 25 \sim 33\text{mm}$ |



Maximum blade length  
About 15.1 mm

## Modular Type!

- Angle 15° ~ 75° (by 5° increments) Modular type cutter can be chosen according your application
- Insert available are rich and will meet with various applications you may need

Specific  
agency  
Items



Corner Chamfering



Bore Chamfering



Corner Chamfering



※ Please use Arbors to size and application, at local market

## Body

| Model. No. | Blades | Dimensions (mm) |            |            |            |           |     |    |          |          |       |       |      |    |    | $\alpha^\circ$ |
|------------|--------|-----------------|------------|------------|------------|-----------|-----|----|----------|----------|-------|-------|------|----|----|----------------|
|            |        | $\phi D$        | $\phi D_s$ | $\phi dn1$ | $\phi dn2$ | $\phi di$ | M   | L  | $l_{n1}$ | $l_{n2}$ | $l_m$ | $l_i$ | S    | C  | E  |                |
| NK1536T-MD | 2      | 37.9            | 8          | 37.8       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 4.0  | 10 | 17 | 15°            |
| NK2035T-MD | 2      | 37.1            | 8          | 36.8       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 5.3  | 10 | 17 | 20°            |
| NK2535T-MD | 2      | 36.0            | 8          | 35.6       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 6.5  | 10 | 17 | 25°            |
| NK3030T-MD | 2      | 34.8            | 8          | 34.1       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 7.7  | 10 | 17 | 30°            |
| NK3532T-MD | 2      | 33.3            | 8          | 32.5       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 8.9  | 10 | 17 | 35°            |
| NK4031T-MD | 2      | 31.7            | 8          | 30.6       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 9.9  | 10 | 17 | 40°            |
| NK4530T-MD | 2      | 29.9            | 8          | 28.5       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 10.9 | 10 | 17 | 45°            |
| NK5031T-MD | 2      | 31.9            | 12         | 30.6       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 11.8 | 10 | 17 | 50°            |
| NK5532T-MD | 2      | 32.7            | 15         | 31.4       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 12.7 | 10 | 17 | 55°            |
| NK6030T-MD | 2      | 30.5            | 15         | 28.9       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 13.4 | 10 | 17 | 60°            |
| NK6533T-MD | 2      | 33.1            | 20         | 31.7       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 14.0 | 10 | 17 | 65°            |
| NK7032T-MD | 2      | 32.6            | 22         | 31.2       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 14.5 | 10 | 17 | 70°            |
| NK7533T-MD | 2      | 33.0            | 25         | 31.6       | 23         | 12.5      | M12 | 63 | 24       | 41       | 22    | 5.5   | 15.0 | 10 | 17 | 75°            |

※ Inset is not equipped as standard accessory. Please purchase it separately.

※ Lock Pin is 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 whether you have been taking reserve tightening or not.

...P.114

## Processing Example

### [ C5 chamfering ]

- Body : NK4530T-MD
- Insert : TT32GUR AC15N

- Material.....SUS304
- Rotation Speed...2,000r.p.m
- Table feed.....200/min
- Cuting Depth....C5
- Cutting Oil.....None

#### Result

Good! No secondary burrs and  
No chattering after processing



T32MOR

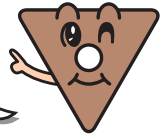
The Insert's breaker ensures no secondary burrs and no chattering

TT32GUR



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

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



TNEA160304

## Cutting Conditions

| T32MOR               |                         |                 |         |         |         |         |
|----------------------|-------------------------|-----------------|---------|---------|---------|---------|
| Material             | Material Model          | NK2001          | NK1010  | NK2020  | NK3030  | AC16N   |
| 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 |
| Aluminum,Resin,Brass |                         |                 |         |         |         |         |
| Castings             | 0.08~0.2                | 200~250<br>※FCD | 100~150 |         |         |         |

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

| TNEA160304                              |                         |         |
|---|-------------------------|---------|
| Material                                | Material Model          | TC16N   |
| Feed per blade (fz)                     | Cutting speed (m / min) |         |
| Hardened alloy steel SKD/HSS (HRC50~65) | 0.08~0.2                | 150~200 |

| TT32GUR              |                         |                 |         |         |         |         |                    |         |       |         |
|----------------------|-------------------------|-----------------|---------|---------|---------|---------|--------------------|---------|-------|---------|
| Material             | Material Model          | NK2001          | NK1010  | NK2020  | NK3030  | NK5050  | NK8080             | AC15N   | HSS   | HSS TIN |
| 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,Brass | 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 insert.

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

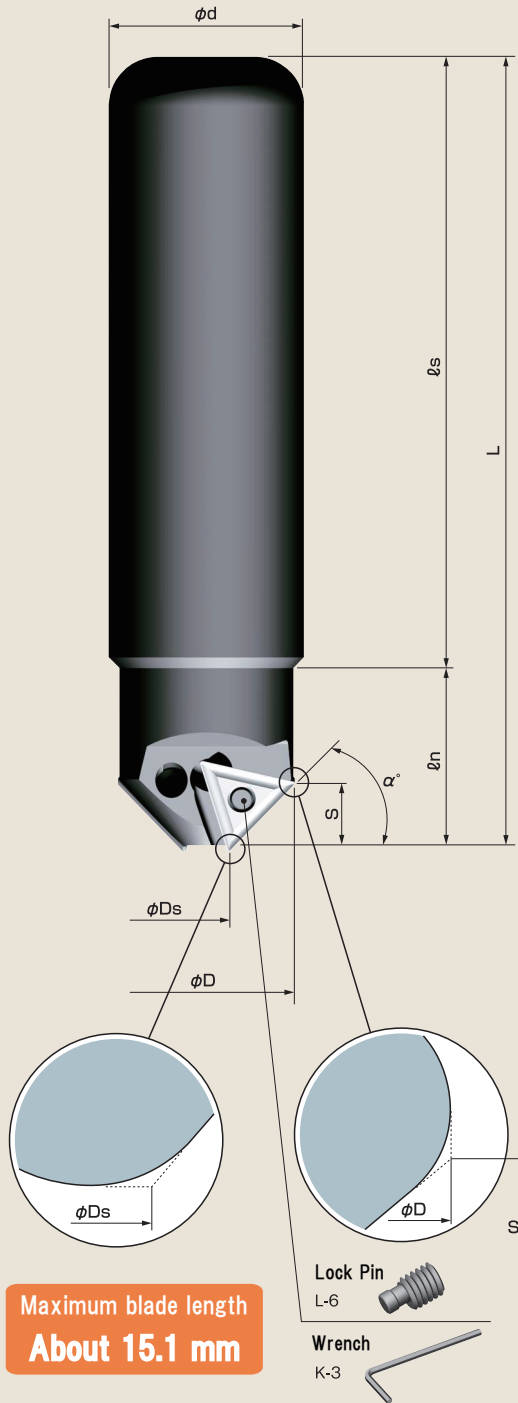
## Insert

| Figure | Model.No.        | Material               | Blade Shape | Coating | Usable corner | Quantity per box |
|--------|------------------|------------------------|-------------|---------|---------------|------------------|
|        | T32MOR NK2001    | Cermet                 | Honing edge | None    | 6             | 12               |
|        | T32MOR NK1010    | Carbide K10            | Sharp edge  | None    | 6             | 12               |
|        | T32MOR NK2020    | Carbide M20            | Honing edge | None    | 6             | 12               |
|        | T32MOR NK3030    | Carbide M20            | Honing edge | TiN     | 6             | 12               |
|        | T32MOR AC16N     | Fine particles Carbide | Honing edge | AlCrN   | 6             | 12               |
|        | TT32GUR NK2001   | Cermet                 | Honing edge | None    | 2             | 12               |
|        | TT32GUR NK1010   | Carbide K10            | Sharp edge  | None    | 2             | 12               |
|        | TT32GUR NK2020   | Carbide M20            | Honing edge | None    | 2             | 12               |
|        | TT32GUR NK3030   | Carbide M20            | Honing edge | TiN     | 2             | 12               |
|        | TT32GUR NK5050   | Carbide K10            | Sharp edge  | TiN     | 2             | 12               |
|        | TT32GUR NK8080   | Carbide K10            | Sharp edge  | TiAlN   | 2             | 12               |
|        | TT32GUR AC15N    | Fine particles Carbide | Honing edge | AlCrN   | 2             | 12               |
|        | TT32GURF TC16N   | Fine particles Carbide | Sharp edge  | TiSiN   | 2             | 12               |
|        | TT32GUR HSS      | HSS                    | Sharp edge  | None    | 2             | 12               |
|        | TT32GUR HSS TiN  | HSS                    | Sharp edge  | TiN     | 2             | 12               |
|        | TNEA160304 TC16N | Fine particles Carbide | Honing edge | TiSiN   | 6             | 12               |

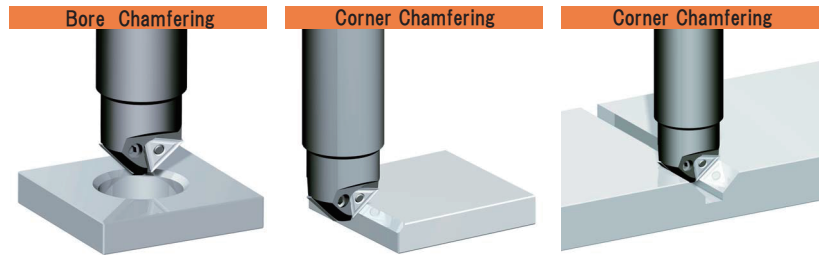
| Applications use | NK1536T                   | NK2035T                   | NK2535T                   | NK3030T                   | NK3532T                   | NK4031T                   | NK4530T                   | NK5031T                    | NK5532T                    | NK6030T                    | NK6533T                    | NK7032T                    | NK7533T                    |
|------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| $\alpha^\circ$   | 15°                       | 20°                       | 25°                       | 30°                       | 35°                       | 40°                       | 45°                       | 50°                        | 55°                        | 60°                        | 65°                        | 70°                        | 75°                        |
| Bore chamfering  | $\phi 8 \sim 36\text{mm}$ | $\phi 8 \sim 36\text{mm}$ | $\phi 8 \sim 35\text{mm}$ | $\phi 8 \sim 33\text{mm}$ | $\phi 8 \sim 32\text{mm}$ | $\phi 8 \sim 31\text{mm}$ | $\phi 8 \sim 29\text{mm}$ | $\phi 12 \sim 31\text{mm}$ | $\phi 15 \sim 32\text{mm}$ | $\phi 15 \sim 30\text{mm}$ | $\phi 20 \sim 33\text{mm}$ | $\phi 22 \sim 32\text{mm}$ | $\phi 25 \sim 33\text{mm}$ |

## Wide variety!

- 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



Maximum blade length  
About 15.1 mm



### Body

| Model. No.    | Blades | Dimensions (mm) |                                     |          |     |          |          |      | $\alpha^\circ$ |
|---------------|--------|-----------------|-------------------------------------|----------|-----|----------|----------|------|----------------|
|               |        | $\phi D$        | Minimum cutting diameter $\phi D_s$ | $\phi d$ | L   | $\ell_s$ | $\ell_n$ | S    |                |
| 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       | 130 | 100      | 30       | 8.9  | 35°            |
| NK3532TL      | 2      | 33.3            | 8                                   | 32       | 170 | 140      | 30       | 8.9  | 35°            |
| NK4031T-20    | 2      | 31.7            | 8                                   | 20       | 130 | 100      | 30       | 9.9  | 40°            |
| NK4031T-25    | 2      | 31.7            | 8                                   | 25       | 130 | 100      | 30       | 9.9  | 40°            |
| 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       | 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                                  | 32       | 170 | 140      | 30       | 14.5 | 70°            |
| NK7533T-20    | 2      | 33.0            | 25                                  | 20       | 130 | 100      | 30       | 15.0 | 75°            |
| NK7533T-25    | 2      | 33.0            | 25                                  | 25       | 130 | 100      | 30       | 15.0 | 75°            |
| NK7533T       | 2      | 33.0            | 25                                  | 32       | 130 | 100      | 30       | 15.0 | 75°            |
| NK7533TL      | 2      | 33.0            | 25                                  | 32       | 170 | 140      | 30       | 15.0 | 75°            |

※ Inset is not included. Please Order Separately.

※ 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 whether you have been taking reserve tightening or not.

| Applications use | Capacity                     |                              |                              |
|------------------|------------------------------|------------------------------|------------------------------|
|                  | NK3-4536T                    | NK4-4543T                    | NK5-4559T                    |
| Blades           | 3                            | 4                            | 5                            |
| $\alpha^\circ$   | 45°                          | 45°                          | 45°                          |
| Bore chamfering  | $\phi 15.5 \sim 36\text{mm}$ | $\phi 22.5 \sim 43\text{mm}$ | $\phi 38.5 \sim 59\text{mm}$ |

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



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

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

Good!  
No secondary burrs and  
No chattering after processing

## Cutting Conditions

| T32MOR                 |                     |                         |         |         |         |         |
|------------------------|---------------------|-------------------------|---------|---------|---------|---------|
| Material               | Material Model      | NK2001                  | NK1010  | NK2020  | NK3030  | AC16N   |
|                        | Feed Per Blade (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 |
| Aluminum, Resin, Brass |                     |                         |         |         |         |         |
| Castings               | 0.08~0.2            | 200~250<br>※FCD         | 100~150 |         |         |         |

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

| TNEA160304                              |                     |                         |
|---|---------------------|-------------------------|
| Material                                | Material Model      | TC16N                   |
|   | Feed per blade (fz) | Cutting speed (m / min) |
| Hardened alloy steel SKD/HSS (HRC50~65) | 0.08~0.2            | 150~200                 |

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

● 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 |
|---|------------------|------------------------|-------------|---------|---------------|------------------|
| <p>60°<br/>R0.4<br/><math>\phi 9.525</math><br/>15.1 (Excess) (mm)<br/>3.18<br/><math>\phi 3.8</math><br/>90°</p> | T32MOR NK2001    | Cermet                 | Honing edge | None    | 6             | 12               |
|   | T32MOR NK1010    | Carbide K10            | Sharp edge  | None    | 6             | 12               |
|   | T32MOR NK2020    | Carbide M20            | Honing edge | None    | 6             | 12               |
|   | T32MOR NK3030    | Carbide M20            | Honing edge | TiN     | 6             | 12               |
|   | T32MOR AC16N     | Fine particles Carbide | Honing edge | AlCrN   | 6             | 12               |
| <p>60°<br/>R0.4<br/><math>\phi 9.525</math><br/>15.1 (Excess) (mm)<br/>3.18<br/><math>\phi 3.8</math><br/>90°</p> | TT32GUR NK2001   | Cermet                 | Honing edge | None    | 2             | 12               |
|   | TT32GUR NK1010   | Carbide K10            | Sharp edge  | None    | 2             | 12               |
|   | TT32GUR NK2020   | Carbide M20            | Honing edge | None    | 2             | 12               |
|   | TT32GUR NK3030   | Carbide M20            | Honing edge | TiN     | 2             | 12               |
|   | TT32GUR NK5050   | Carbide K10            | Sharp edge  | TiN     | 2             | 12               |
|   | TT32GUR NK8080   | Carbide K10            | Sharp edge  | TiAlN   | 2             | 12               |
|   | TT32GUR AC15N    | Fine particles Carbide | Honing edge | AlCrN   | 2             | 12               |
|   | TT32GURF TC16N   | Fine particles Carbide | Sharp edge  | TiSiN   | 2             | 12               |
|   | TT32GUR HSS      | HSS                    | Sharp edge  | None    | 2             | 12               |
| <p>60°<br/>R0.4<br/><math>\phi 9.525</math><br/>15.1 (Excess) (mm)<br/>3.18<br/><math>\phi 3.8</math><br/>90°</p> | TNEA160304 TC16N | Fine particles Carbide | Honing edge | TiSiN   | 6             | 12               |