MITSUBISHI
MITSUBISHI MATERIALS

# TOOLS NEWS

B091G

Single Action Type

# DOUBLE CLAMP SERIES

## New Clamp Bridge

# Simple and highly rigid clamping

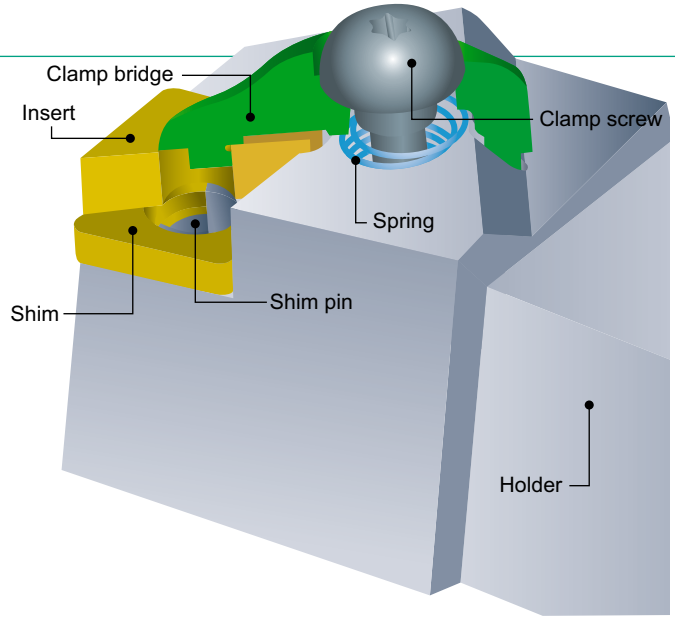
- A simple, secure clamping system ensures stable machining.
- New holders for VN type 35° rhombic inserts. Series expansion.
- New design clamp bridge for ultra clamping rigidity and improved chip evacuation.

# Single Action Type
# DOUBLE CLAMP SERIES

## Features

### Single action type double clamp system

- Newly developed highly rigid clamping system.
- Easy and secure insert retention.
- World class cutting edge indexing accuracy.

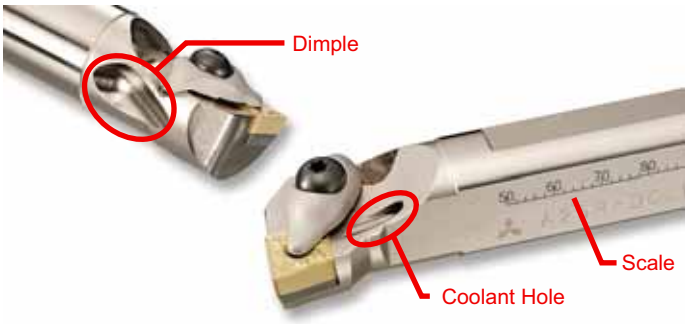



### New optimized clamp bridge

The clamp bridge features a new geometry that is optimized for promoting good chip flow while maintaining tool rigidity. This has been achieved by using CAE design analysis technology to avoid chip packing problems. This new bridge type is also compatible with both right and left hand tool holders.

### Higher vibration resistance and chip discharge properties

The dimple boring bar features excellent vibration resistance properties and through coolant holes for better chip discharge. In addition, a scale for easy overhang length setting is etched on the body.




### Special surface treatment

The body and clamp bridge has been treated with a special surface coating for higher corrosion and abrasion resistance.

### Double-ended torx hole clamp screw

Equally sized torx holes are provided on both ends of the clamp screw, making it easy to attach and remove the insert even when an inverted holder is used, thus ensuring rapid insert indexing and secure clamping.


# A wide selection of tool holders

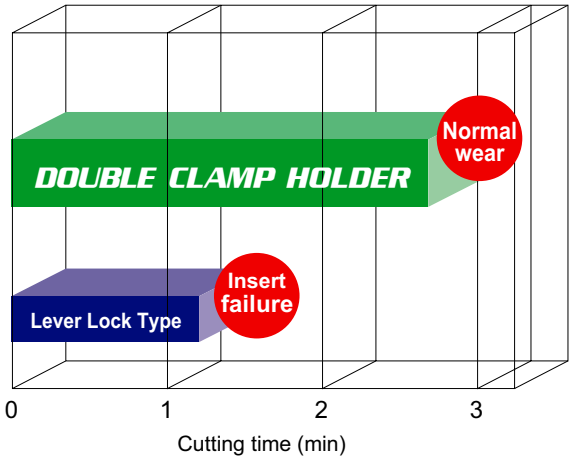
## Mitsubishi's Double Clamp series. 13 types, 84 items

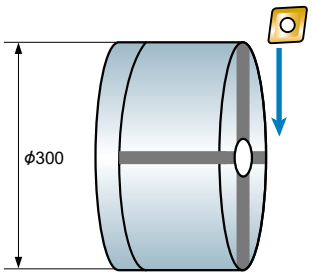
| | Shape | Tool holder geometry | | | | | | |
|---|---|---|---|---|---|---|---|---|
| External turning |  | Type | 91° | 93° | 93° | 95° | 95° | 72° 30′ | 117° 30′ |
| | | No. of items | 6 | 14 | 4 | 12 | 12 | 2 | 4 |
| Boring |  | Type | 91° | 93° | 93° | 95° | 95° | 75° | — |
| | | No. of items | 4 | 6 | 2 | 6 | 8 | 4 | — |

# Cutting Performance

## Clamping Rigidity

### Higher fracture resistance during interrupted cutting!



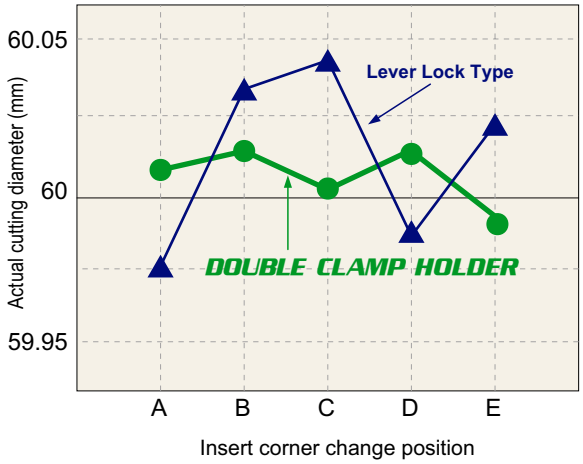



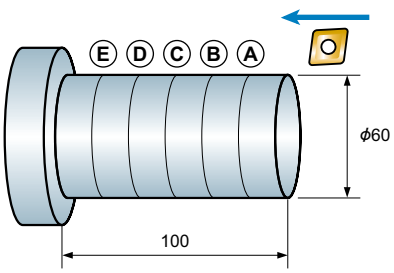

<Cutting conditions>

| | |
|---|---|
| Workpiece | : JIS S45C |
| Insert | : CNMG120408 |
| Cutting Speed | : 70m/min |
| Depth of cut | : 3.0mm |
| Feed | : 0.35mm/rev |
| Dry cutting | |

## Accurate Cutting Edge Positioning

### Precise cutting performance!




<Cutting conditions>

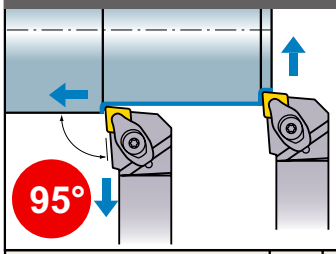
| | |
|---|---|
| Workpiece | : JIS SCM440 |
| Insert | : CNMG120408 |
| Cutting Speed | : 150m/min |
| Depth of cut | : 3.0mm |
| Feed | : 0.6mm/rev |
| Wet cutting | |

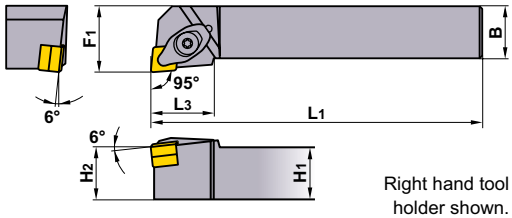
# DOUBLE CLAMP HOLDER

## DCLN

External turning
Facing

CN○○inserts




Right hand tool holder shown.

| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (12) | (09,12) | (12) | (12) |
| **Medium** | **Medium to Semi-Heavy** | **Stainless** | **CBN** |
| Standard | GH | MS | |
|  |  |  |  |
| (09,12) | (12) | (09,12) | (12) |

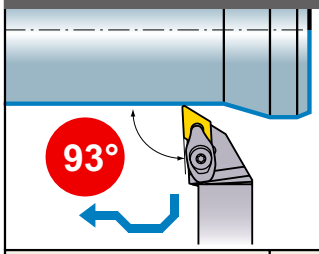
| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | * | | NEW | | NEW | NEW | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | $H_1$ | B | $L_1$ | $L_3$ | $H_2$ | $F_1$ | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
| **DCLNR/L1616H09** | ● | ● | CNMG | 09T3○○ | 16 | 16 | 100 | 24 | 16 | 20 | LLSCN3T3 (LLSCN33) | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2020K09** | ● | ● | | 09T3○○ | 20 | 20 | 125 | 24 | 20 | 25 | LLSCN3T3 (LLSCN33) | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2525M09** | ● | ● | | 09T3○○ | 25 | 25 | 150 | 24 | 25 | 32 | LLSCN3T3 (LLSCN33) | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2020K12** | ● | ● | CNMA CNMG CNMM CNGG | 1204○○ | 20 | 20 | 125 | 28 | 20 | 25 | LLSCN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| **2525M12** | ● | ● | | 1204○○ | 25 | 25 | 150 | 28 | 25 | 32 | LLSCN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| **3225P12** | ● | ● | | 1204○○ | 32 | 25 | 170 | 28 | 32 | 32 | LLSCN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |

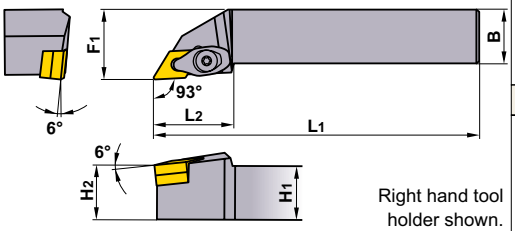
*Please use shim no. LLSCN33 with 3.18mm thick inserts. When using 3.18mm thick inserts, the shim should be ordered separately.

## DDJN

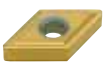
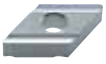
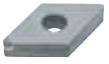
External turning
Copying

DN○○inserts




Right hand tool holder shown.

| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (15) | (11,15) | (15) | (15) |
| **Medium to Semi-Heavy** | **Stainless** | **G Class** | **CBN** |
| GH | MS | R/L | |
|  |  |  |  |
| (15) | (11,15) | (15) | (15) |

| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | * * | | NEW | | NEW | NEW | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | $H_1$ | B | $L_1$ | $L_2$ | $H_2$ | $F_1$ | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
| **DDJNR/L1616H11** | ● | ● | DNMG | 1104○○ | 16 | 16 | 100 | 30 | 16 | 20 | LLSDN32 | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2020K11** | ● | ● | | 1104○○ | 20 | 20 | 125 | 30 | 20 | 25 | LLSDN32 | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2525M11** | ● | ● | | 1104○○ | 25 | 25 | 150 | 30 | 25 | 32 | LLSDN32 | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **3225P11** | ● | ● | | 1104○○ | 32 | 25 | 170 | 30 | 32 | 32 | LLSDN32 | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2020K15** | ● | ● | DNMA DNMG DNMM DNMX DNGA DNGG | 1504○○ | 20 | 20 | 125 | 37 | 20 | 25 | LLSDN43 (LLSDN42) | LLP24 (LLP14) | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| **2525M15** | ● | ● | | 1504○○ | 25 | 25 | 150 | 37 | 25 | 32 | LLSDN43 (LLSDN42) | LLP24 (LLP14) | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| **3225P15** | ● | ● | | 1504○○ | 32 | 25 | 170 | 37 | 32 | 32 | LLSDN43 (LLSDN42) | LLP24 (LLP14) | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |

*Please use shim no. LLSDN42 with 6.35mm thick inserts. When using 6.35mm thick inserts, the shim should be ordered separately.

## Recommended Cutting Conditions

| | Work Material | Cutting Mode | Breaker | Grade | Cutting Speed (m/min) |
|---|---|---|---|---|---|
| P | Mild Steel (≤180HB) | Finish | **FS** | **NX2525** | 270 (180—350) |
| | | Light | **SH** | **UE6010** | 300 (250—350) |
| | | Medium | **MV** | **UE6010** | 300 (250—350) |
| | Carbon Steel Alloy Steel (180HB—280HB) | Finish | **FH** | **NX2525** | 250 (150—300) |
| | | Light | **SH** | **UE6010** | 220 (180—280) |
| | | Medium | **MV** | **UE6010** | 200 (150—250) |

| | Work Material | Cutting Mode | Breaker | Grade | Cutting Speed (m/min) |
|---|---|---|---|---|---|
| M | Stainless Steel (≤200HB) | Finish | **FS** | **NX2525** | 120 (100—150) |
| | | Light | **SH** | **US735** | 100 (80—120) |
| | | Medium | **MS** | **US735** | 100 (70—120) |
| K | Cast Iron (≤350MPa) | Finish | **Standard** | **UC5115** | 240 (180—300) |
| | | Medium | **Standard** | **UC5115** | 210 (160—250) |
| | | Semi-Heavy | **Flat Top** | **UC5115** | 200 (150—240) |

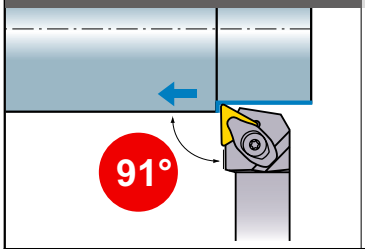
(Note 1) Insert photo, letters show chip breaker style, figures show insert dimensions.
(Note 2) The new type clamp bridge and clamp screw can be used on conventional Double Clamp holders.
For details, refer to the cross reference table on page 10.

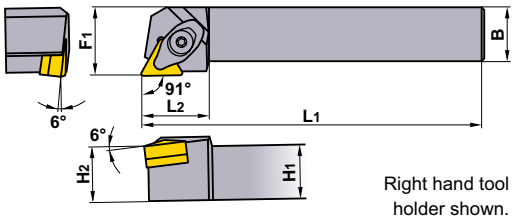
● : Inventory maintained.

# DTGN

## External turning

## TN○○inserts




Right hand tool holder shown.

| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (16) | (16) | (16) | (16) |
| **Medium to Semi-Heavy** | **Stainless** | **G Class** | **CBN** |
| GH | MS | R/L | |
|  |  |  |  |
| (16) | (16) | (16) | (16) |

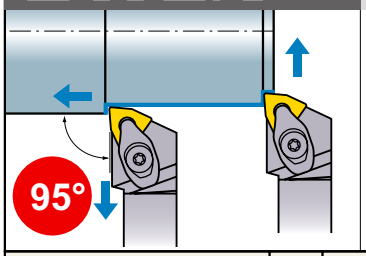
| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | * | | NEW | | NEW | NEW | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | H1 | B | L1 | L2 | H2 | F1 | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
| **DTGNR/L1616H16** | ● | ● | TNMA TNMG TNMM TNGA TNGG | 1604○○ | 16 | 16 | 100 | 25 | 16 | 20 | LLSTN32 (LLSTN33) | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2020K16** | ● | ● | | 1604○○ | 20 | 20 | 125 | 25 | 20 | 25 | LLSTN32 (LLSTN33) | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2525M16** | ● | ● | | 1604○○ | 25 | 25 | 150 | 25 | 25 | 32 | LLSTN32 (LLSTN33) | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |

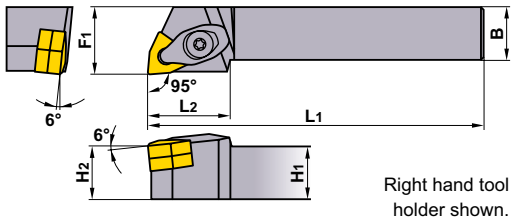
*Please use shim no. LLSTN33 with 3.18mm thick inserts. When using 3.18mm thick inserts, the shim should be ordered separately.

# DWLN

## External turning Facing

## WN○○inserts




Right hand tool holder shown.

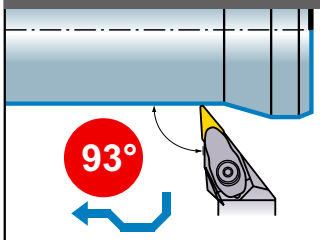
| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (08) | (06,08) | (06,08) | (08) |
| **Medium** | **Medium to Semi-Heavy** | **Stainless** | |
| Standard | GH | MS | |
|  |  |  | |
| (08) | (08) | (06,08) | |

| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | * | | NEW | | NEW | NEW | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | H1 | B | L1 | L2 | H2 | F1 | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
| **DWLNR/L1616H06** | ● | ● | WNMG | 06T3○○ | 16 | 16 | 100 | 24 | 16 | 20 | LLSWN3T3 (LLSWN32) | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2020K06** | ● | ● | | 06T3○○ | 20 | 20 | 125 | 24 | 20 | 25 | LLSWN3T3 (LLSWN32) | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2525M06** | ● | ● | | 06T3○○ | 25 | 25 | 150 | 24 | 25 | 32 | LLSWN3T3 (LLSWN32) | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| **2020K08** | ● | ● | WNMA WNMG | 0804○○ | 20 | 20 | 125 | 31 | 20 | 25 | LLSWN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| **2525M08** | ● | ● | | 0804○○ | 25 | 25 | 150 | 31 | 25 | 32 | LLSWN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| **3225P08** | ● | ● | | 0804○○ | 32 | 25 | 170 | 31 | 32 | 32 | LLSWN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |

*Please use shim no. LLSWN32 with 3.18mm thick inserts. When using 4.76mm thick inserts, the shim should be ordered separately.

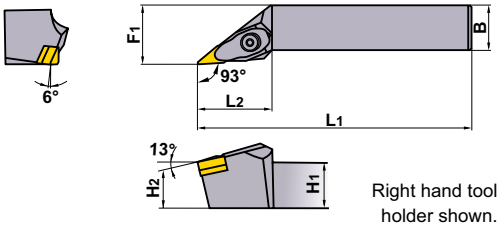
# DOUBLE CLAMP HOLDER

## DVJN




External turning
Copying

VN○○inserts

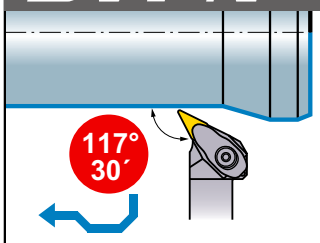



Right hand tool holder shown.

| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (16) | (16) | (16) | (16) |
| **Medium** | **Stainless** | **G Class** | **CBN** |
| Standard | MS | R/L | |
|  |  |  |  |
| (16) | (16) | (16) | (16) |

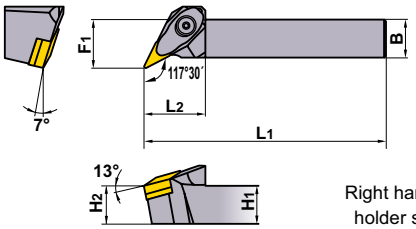
| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | H1 | B | L1 | L2 | H2 | F1 | | | | | | | |
| NEW DVJNR/L2020K16 | ● | ● | VNMG<br>VNGA<br>VNGG | 1604○○ | 20 | 20 | 125 | 41 | 20 | 25 | DCSVN32 | LLP13 | DCK3113 | DCS2 | DC0520T | TKY15F | LLH3 |
| NEW 2525M16 | ● | ● | | 1604○○ | 25 | 25 | 150 | 41 | 25 | 32 | DCSVN32 | LLP13 | DCK3113 | DCS2 | DC0520T | TKY15F | LLH3 |

## DVPN




Facing, Copying

VN○○inserts




Right hand tool holder shown.

| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (16) | (16) | (16) | (16) |
| **Medium** | **Stainless** | **G Class** | **CBN** |
| Standard | MS | R/L | |
|  |  |  |  |
| (16) | (16) | (16) | (16) |

| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | H1 | B | L1 | L2 | H2 | F1 | | | | | | | |
| NEW DVPNR/L2020K16 | ● | ● | VNMG<br>VNGA<br>VNGG | 1604○○ | 20 | 20 | 125 | 32 | 20 | 25 | DCSVN32 | LLP13 | DCK3113 | DCS2 | DC0520T | TKY15F | LLH3 |
| NEW 2525M16 | ● | ● | | 1604○○ | 25 | 25 | 150 | 32 | 25 | 32 | DCSVN32 | LLP13 | DCK3113 | DCS2 | DC0520T | TKY15F | LLH3 |

## Recommended Cutting Conditions

| | Work Material | Cutting Mode | Breaker | Grade | Cutting Speed (m/min) |
|---|---|---|---|---|---|
| P | Mild Steel (≤180HB) | Finish | **FS** | **NX2525** | 270 (180—350) |
| | | Light | **SH** | **UE6010** | 300 (250—350) |
| | | Medium | **MV** | **UE6010** | 300 (250—350) |
| | Carbon Steel Alloy Steel (180HB—280HB) | Finish | **FH** | **NX2525** | 250 (150—300) |
| | | Light | **SH** | **UE6010** | 220 (180—280) |
| | | Medium | **MV** | **UE6010** | 200 (150—250) |

| | Work Material | Cutting Mode | Breaker | Grade | Cutting Speed (m/min) |
|---|---|---|---|---|---|
| M | Stainless Steel (≤200HB) | Finish | **FS** | **NX2525** | 120 (100—150) |
| | | Light | **SH** | **US735** | 100 (80—120) |
| | | Medium | **MS** | **US735** | 100 (70—120) |
| K | Cast Iron (≤350MPa) | Finish | **Standard** | **UC5115** | 240 (180—300) |
| | | Medium | **Standard** | **UC5115** | 210 (160—250) |
| | | Semi-Heavy | **Flat Top** | **UC5115** | 200 (150—240) |

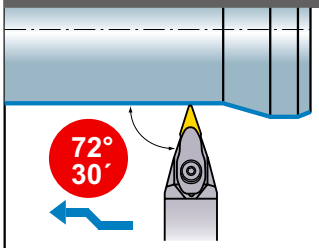
(Note) Insert photo, letters show chip breaker style, figures show insert dimensions.

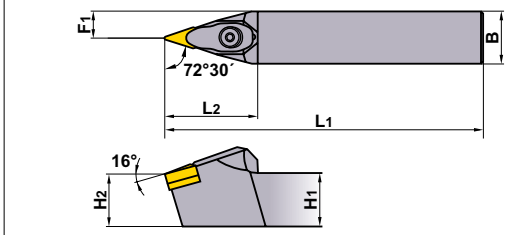
● : Inventory maintained.

# DVVN

**External turning**
**Copying**

**VN○○inserts**



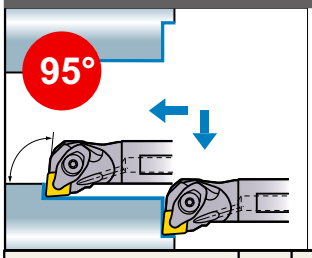



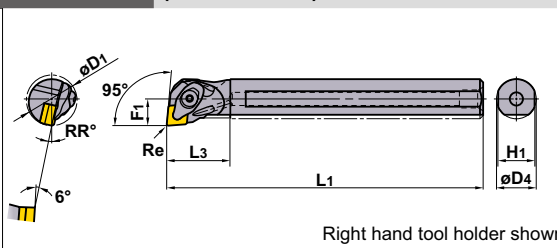

| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (16) | (16) | (16) | (16) |
| **Medium** | **Stainless** | **G Class** | **CBN** |
| Standard | MS | R/L | |
|  |  |  |  |
| (16) | (16) | (16) | (16) |

| Order Number | Stock | Insert Number | | Dimensions (mm) | | | | | | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | H1 | B | L1 | L2 | H2 | F1 | | | | | | | |
| NEW **DVVNN2020K16** | ● | VNMA<br>VNMG | 1604○○ | 20 | 20 | 125 | 44 | 20 | 10 | DCSVN32 | LLP13 | DCK3113 | DCS2 | DC0520T | TKY15F | LLH3 |
| NEW **2525M16** | ● | VNGA<br>VNGG | 1604○○ | 25 | 25 | 150 | 44 | 25 | 12.5 | DCSVN32 | LLP13 | DCK3113 | DCS2 | DC0520T | TKY15F | LLH3 |

# DOUBLE CLAMP DIMPLE BAR

## DCLN (With oil hole) CN○○inserts



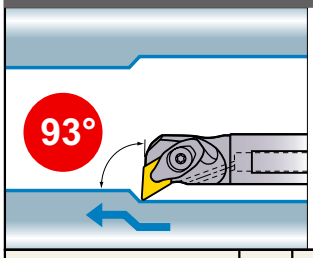



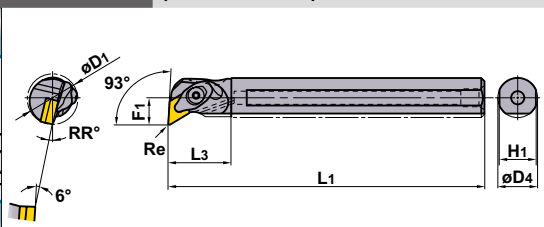

Right hand tool holder shown.

| Finish | Light | Light | Medium |
|---|---|---|---|
| FH | SA | SH | MV |
|  |  |  |  |
| (12) | (12) | (12) | (12) |
| **Medium** | **Medium** | **Stainless** | **PCD** |
| MH | Standard | MS | R/L-F |
|  |  |  |  |
| (12) | (12) | (12) | (12) |

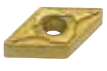
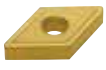
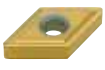
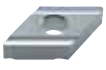
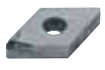
| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | Min. Cutting Diameter | Standard Corner Radius | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | D4 | L1 | L3 | F1 | H1 | RR° | D1 | Re | | | | | | | |
| NEW A25R-DCLNR/L12 | ● | ● | CNMA | 1204○○ | 25 | 200 | 40 | 17 | 23 | 11 | 32 | 0.8 | LLSCP42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| NEW A32S-DCLNR/L12 | ● | ● | CNMG CNMM | 1204○○ | 32 | 250 | 50 | 22 | 30 | 13 | 40 | 0.8 | LLSCN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| NEW A40T-DCLNR/L12 | ● | ● | CNGG | 1204○○ | 40 | 300 | 63 | 27 | 37 | 10 | 50 | 0.8 | LLSCN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |

## DDUN (With oil hole) DN○○inserts




Right hand tool holder shown.

| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (15) | (15) | (15) | (15) |
| **Medium** | **Stainless** | **G Class** | **PCD** |
| Standard | MS | R/L | R/L-F |
|  |  |  |  |
| (15) | (15) | (15) | (15) |

| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | Min. Cutting Diameter | Standard Corner Radius | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | D4 | L1 | L3 | F1 | H1 | RR° | D1 | Re | | | | | | | |
| NEW A25R-DDUNR/L15 | ● | ● | DNMA DNMG | 1504○○ | 25 | 200 | 40 | 17 | 23 | 13 | 32 | 0.8 | LLSDP42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| NEW A32S-DDUNR/L15 | ● | ● | DNMX DNGA | 1504○○ | 32 | 250 | 50 | 22 | 30 | 13 | 40 | 0.8 | LLSDN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| NEW A40T-DDUNR/L15 | ● | ● | DNGG | 1504○○ | 40 | 300 | 63 | 27 | 37 | 10 | 50 | 0.8 | LLSDN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |

## Recommended Cutting Conditions

| | Work Material | Hardness | Cutting Mode | l/d≤3 | | | l/d=3—4 | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Cutting Speed (m/min) | Feed (mm/rev) | Depth of Cut (mm) | Cutting Speed (m/min) | Feed (mm/rev) | Depth of Cut (mm) |
| P | Carbon Steel, Alloy Steel (JIS S45C, JIS SCM440 etc.) | 180—280HB | Medium Cutting | 110 (80—140) | 0.25 (0.1—0.4) | —5.0 | 110 (80—140) | 0.2 (0.1—0.3) | —4.0 |
| M | Stainless Steel (JIS SUS304, JIS SUS316 etc.) | ≤200HB | Medium Cutting | 80 (60—100) | 0.2 (0.1—0.3) | —4.0 | 70 (50—100) | 0.15 (0.1—0.25) | —3.0 |
| K | Cast Iron (JIS FC250 etc.) | Tensile Strength ≤350MPa | Medium Cutting | 80 (60—100) | 0.25 (0.1—0.4) | —5.0 | 80 (60—100) | 0.2 (0.1—0.3) | —4.0 |

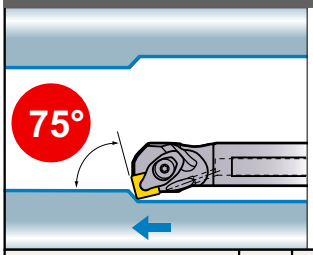
(Note 1) Insert photo, letters show chip breaker style, figures show insert dimensions.

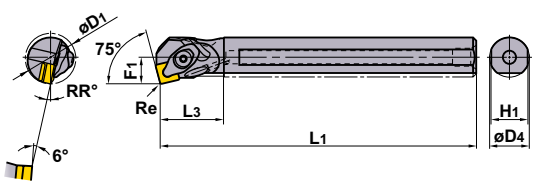
(Note 2) When using inserts with right and left hand chip breakers, please use left hand inserts for right hand holders and right hand inserts for left hand holders.

● : Inventory maintained.

# DSKN

(With oil hole) SN○○inserts



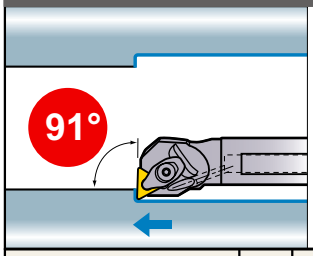

Right hand tool holder shown.

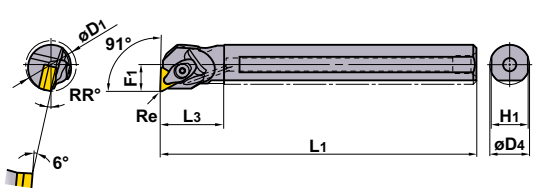
| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (12) | (12) | (12) | (12) |
| **Medium** | **Stainless** | **G Class** | **PCD** |
| Standard | MS | R/L | R/L-F |
|  |  |  |  |
| (12) | (12) | (12) | (12) |

| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | Min. Cutting Diameter | Standard Corner Radius | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | D4 | L1 | L3 | F1 | H1 | RR° | D1 | Re | | | | | | | |
| NEW A25R-DSKNR/L12 | ● | ● | SNMA SNMG SNMM SNGA SNGG | 1204○○ | 25 | 200 | 40 | 17 | 23 | 13 | 32 | 0.8 | LLSSP42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| NEW A32S-DSKNR/L12 | ● | ● | SNMA SNMG SNMM SNGA SNGG | 1204○○ | 32 | 250 | 50 | 22 | 30 | 13 | 40 | 0.8 | LLSSN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |

# DTFN

(With oil hole) TN○○inserts



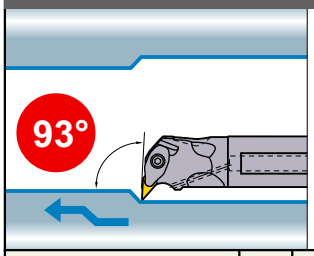

Right hand tool holder shown.

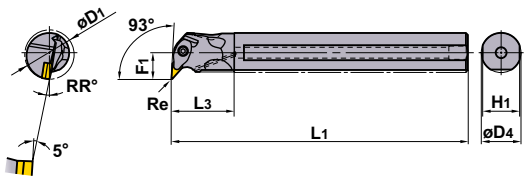
| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (16) | (16) | (16) | (16) |
| **Medium** | **Stainless** | **G Class** | **PCD** |
| Standard | MS | R/L | R/L-F |
|  |  |  |  |
| (16) | (16) | (16) | (16) |

| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | Min. Cutting Diameter | Standard Corner Radius | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | D4 | L1 | L3 | F1 | H1 | RR° | D1 | Re | | | | | | | |
| NEW A25R-DTFNR/L16 | ● | ● | TNMA TNMG TNMM TNGA TNGG | 1604○○ | 25 | 200 | 40 | 17 | 23 | 13 | 32 | 0.8 | LLSTP32 | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| NEW A32S-DTFNR/L16 | ● | ● | TNMA TNMG TNMM TNGA TNGG | 1604○○ | 32 | 250 | 50 | 22 | 30 | 13 | 40 | 0.8 | LLSTN32 | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |

# DOUBLE CLAMP DIMPLE BAR

## DVUN (With oil hole) VN○○inserts



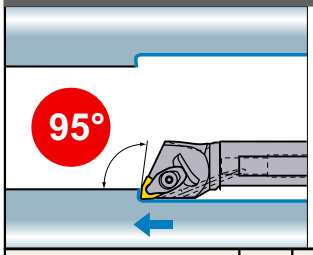



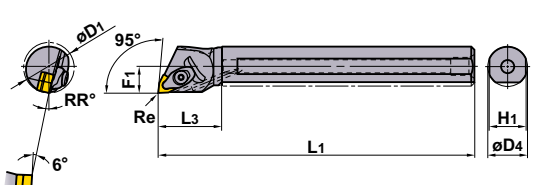

Right hand tool holder shown.

| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (16) | (16) | (16) | (16) |
| Medium | Stainless | Stainless | CBN |
| Standard | MS | R/L | |
|  |  |  |  |
| (16) | (16) | (16) | (16) |

| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | Min. Cutting Diameter | Standard Corner Radius | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | $D_4$ | $L_1$ | $L_3$ | $F_1$ | $H_1$ | RR° | $D_1$ | Re | | | | | | | |
| NEW A40T-DVUNR/L16 | ● | ● | VNMA VNGA | 1604○○ | 40 | 300 | 63 | 27 | 37 | 9 | 50 | 0.8 | DCSVN32 | LLP13 | DCK3113 | DCS2 | DC0520T | TKY15F | LLH3 |

## DWLN (With oil hole) WN○○inserts




Right hand tool holder shown.

| Finish | Light | Medium | Medium |
|---|---|---|---|
| FH | SH | MV | MH |
|  |  |  |  |
| (08) | (06,08) | (06,08) | (08) |
| Medium | Medium to Semi-Heavy | Stainless | |
| Standard | GH | MS | |
|  |  |  | |
| (08) | (08) | (06,08) | |

| Order Number | Stock | | Insert Number | | Dimensions (mm) | | | | | | Min. Cutting Diameter | Standard Corner Radius | Shim | Shim Pin | Clamp Bridge | Spring | Clamp Screw | Wrench | Punch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | R | L | | | $D_4$ | $L_1$ | $L_3$ | $F_1$ | $H_1$ | RR° | $D_1$ | Re | | | | | | | |
| NEW A25R-DWLNR/L06 | ● | ● | WNMG | 0604○○ | 25 | 200 | 40 | 17 | 23 | 13 | 32 | 0.8 | LLSWP32 | LLP23 | DCK2211 | DCS2 | DC0520T | TKY15F | LLH3 |
| NEW A25R-DWLNR/L08 | ● | ● | WNMA WNMG | 0804○○ | 25 | 200 | 40 | 17 | 23 | 13 | 32 | 0.8 | LLSWP42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| NEW A32S-DWLNR/L08 | ● | ● | | 0804○○ | 32 | 250 | 50 | 22 | 30 | 13 | 40 | 0.8 | LLSWN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |
| NEW A40T-DWLNR/L08 | ● | ● | | 0804○○ | 40 | 300 | 63 | 27 | 37 | 10 | 50 | 0.8 | LLSWN42 | LLP14 | DCK2613 | DCS1 | DC0621T | TKY20F | LLH4 |

## Recommended Cutting Conditions

| Work Material | | Hardness | Cutting Mode | l/d≤3 | | | l/d=3—4 | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Cutting Speed (m/min) | Feed (mm/rev) | Depth of Cut (mm) | Cutting Speed (m/min) | Feed (mm/rev) | Depth of Cut (mm) |
| P | Carbon Steel, Alloy Steel (JIS S45C, JIS SCM440 etc.) | 180—280HB | Medium Cutting | 110 (80—140) | 0.25 (0.1—0.4) | —5.0 | 110 (80—140) | 0.2 (0.1—0.3) | —4.0 |
| M | Carbon Steel, Alloy Steel (JIS S45C, JIS SCM440 etc.) | ≤200HB | Medium Cutting | 80 (60—100) | 0.2 (0.1—0.3) | —4.0 | 70 (50—100) | 0.15 (0.1—0.25) | —3.0 |
| K | Cast Iron (JIS FC250 etc.) | Tensile Strength ≤350MPa | Medium Cutting | 80 (60—100) | 0.25 (0.1—0.4) | —5.0 | 80 (60—100) | 0.2 (0.1—0.3) | —4.0 |

(Note 1) Insert photo, letters show chip breaker style, figures show insert dimensions.

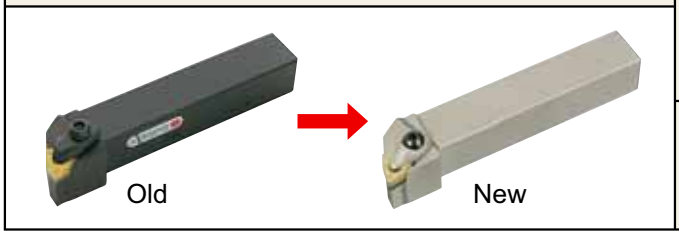
(Note 2) When using inserts with right and left hand chip breakers, please use left hand inserts for right hand holders and right hand inserts for left hand holders.

● : Inventory maintained.

# Cross reference table for old and new parts

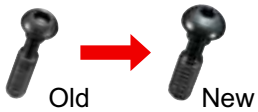
| Order Number | Shim | Shim Pin | Spring | Clamp Bridge | | Clamp Screw | | Wrench | | Punch |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Old Number | New Number | Old Number | New Number | Old Number | New Number | |
| **DCLNR/L1616H09** | LLSCN3T3 (LLSCN33) | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **2020K09** | LLSCN3T3 (LLSCN33) | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **2525M09** | LLSCN3T3 (LLSCN33) | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **DCLNR/L2020K12** | LLSCN42 | LLP14 | DCS1 | DCK14R/L | DCK2613 | DCBS106 | DC0621T | HKY40R | TKY20F | LLH4 |
| **2525M12** | LLSCN42 | LLP14 | DCS1 | DCK14R/L | DCK2613 | DCBS106 | DC0621T | HKY40R | TKY20F | LLH4 |
| **3225P12** | LLSCN42 | LLP14 | DCS1 | DCK14R/L | DCK2613 | DCBS106 | DC0621T | HKY40R | TKY20F | LLH4 |
| **DDJNR/L1616H11** | LLSDN32 | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **2020K11** | LLSDN32 | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **2525M11** | LLSDN32 | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **3225P11** | LLSDN32 | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **DDJNR/L2020K15** | LLSDN43 (LLSDN42) | LLP24 (LLP14) | DCS1 | DCK14R/L | DCK2613 | DCBS106 | DC0621T | HKY40R | TKY20F | LLH4 |
| **2525M15** | LLSDN43 (LLSDN42) | LLP24 (LLP14) | DCS1 | DCK14R/L | DCK2613 | DCBS106 | DC0621T | HKY40R | TKY20F | LLH4 |
| **3225P15** | LLSDN43 (LLSDN42) | LLP24 (LLP14) | DCS1 | DCK14R/L | DCK2613 | DCBS106 | DC0621T | HKY40R | TKY20F | LLH4 |
| **DTGNR/L1616H16** | LLSTN32 (LLSTN33) | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **2020K16** | LLSTN32 (LLSTN33) | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **2525M16** | LLSTN32 (LLSTN33) | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **DWLNR/L1616H06** | LLSWN3T3 (LLSWN32) | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **2020K06** | LLSWN3T3 (LLSWN32) | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **2525M06** | LLSWN3T3 (LLSWN32) | LLP23 | DCS2 | DCK11R/L | DCK2211 | DCCS085 | DC0520T | HKY30R | TKY15F | LLH3 |
| **DWLNR/L2020K08** | LLSWN42 | LLP14 | DCS1 | DCK14R/L | DCK2613 | DCBS106 | DC0621T | HKY40R | TKY20F | LLH4 |
| **2525M08** | LLSWN42 | LLP14 | DCS1 | DCK14R/L | DCK2613 | DCBS106 | DC0621T | HKY40R | TKY20F | LLH4 |
| **3225P08** | LLSWN42 | LLP14 | DCS1 | DCK14R/L | DCK2613 | DCBS106 | DC0621T | HKY40R | TKY20F | LLH4 |

Holder

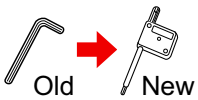



Clamp Bridge


Clamp Screw




Wrench



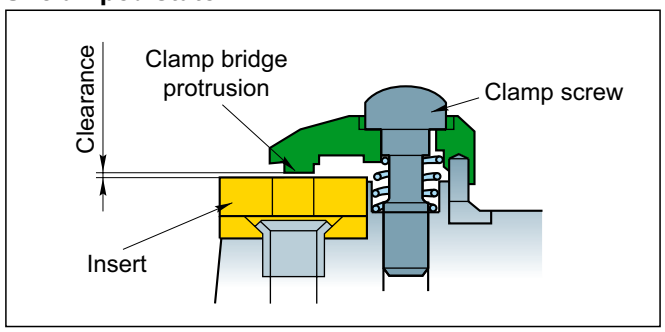

(Note) When replacing old clamp screws with new ones, the wrench should also be replaced with a new type.

# Operational Guidance

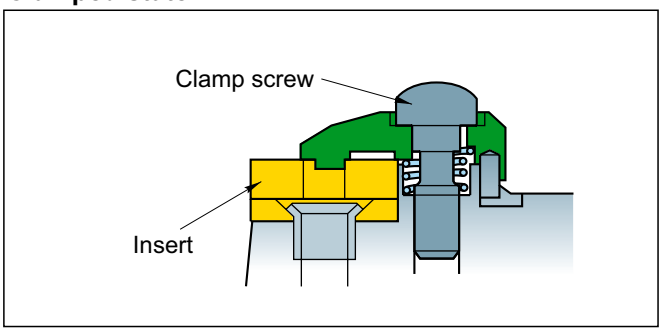
●When indexing or replacing an insert, check there is clearance between the protruding section of the clamp and the insert, as shown in the figure below. → Guide: Turn the clamp screw 2-3 rotations from the fully clamped state to ensure clearance.

●When clamping the insert, be sure to use the wrench provided. Over tightening may cause damage to the clamp bridge and the torx holes of the clamp screw. (The appropriate tightening torque is 5.0Nm for a TKY20F wrench size; 3.5Nm for a TKY15F type.)

**Unclamped state**




**Clamped state**

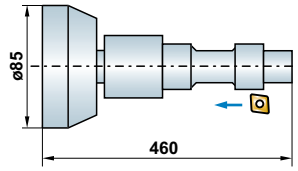
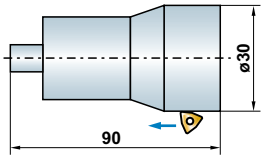
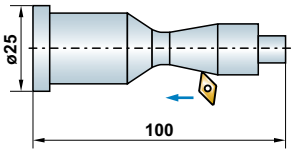


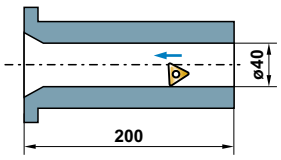
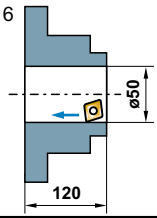
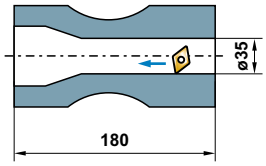

●If chips interfere or wrap around the clamp screw, the selected insert breaker may not be suitable. In this case, a review of the insert breaker is recommended as this may affect the surface finish accuracy of the workpiece.

MITSUBISHI

# DOUBLE CLAMP SERIES

## Application Example

| Tool | DCLNL2525M12 | DWLNR2020K08 | DVJNR2525M16 |
|---|---|---|---|
| Insert | CNMG120408-MA | WNMG080408-SA | VNMG160408-MV |
| Grade | UE6010 | UE6010 | UE6020 |
| Workpiece | JIS S53C   | JIS S45C   | JIS SCM440   |
| Cutting Conditions: Cutting Speed (m/min) | 140 — 150 | 150 — 222 | 175 |
| Cutting Conditions: Feed (mm/rev) | 0.25 | 0.15 — 0.4 | 0.4 |
| Cutting Conditions: Depth of Cut (mm) | 1.0 — 3.5 | 1.0 — 2.0 | 1.0 |
| Coolant | Water soluble | Water soluble | Water soluble |
| Result | Abnormal damage to the insert is unlikely to occur during machining because mis-clamping can easily be avoided compared to when using conventional products. | Dimensional control becomes easier due to a higher cutting edge positioning accuracy. | Higher clamping rigidity of the insert and a 20% increase in the number of components machined. |

| Tool | A32S-DTFNR16 | A32S-DCLNR12 | A25R-DDUNR15 |
|---|---|---|---|
| Insert | TNMG160404-MS | CNMG120408-MS | DNMG150408-MA |
| Grade | US7020 | VP15TF | UE6020 |
| Workpiece | JIS S45C   | JIS SUS316   | JIS SCM440   |
| Cutting Conditions: Cutting Speed (m/min) | 150 | 130 | 150 |
| Cutting Conditions: Feed (mm/rev) | 0.4 | 0.2 | 0.25 |
| Cutting Conditions: Depth of Cut (mm) | 1.0 | 2.0 | 1.5 |
| Coolant | Water soluble | Water soluble | Water soluble |
| Result | Excellent machining with no vibration even when using a long overhang of l/d = 5.5. | Double tool life achieved with no vibration when compared to conventional products. | Prolonged tool life with no vibration even when using an overhang 2 times longer than normal. |

For Your Safety
●Don't handle inserts and chips without gloves. ●Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage. ●Please use safety covers and wear safety glasses. ●When using compounded cutting oils, please take fire precautions. ●When attaching inserts or spare parts, please use only the correct wrench or spanner.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(Tools specifications subject to change without notice.)

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