

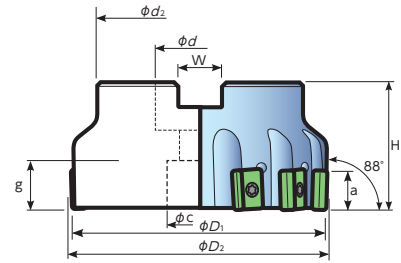
# Rotating Tools

## XFM series

- Lead angle 88 degree - LNX324 (A.R.-4°, R.R.0°)



Left hand added!



### ● Inch size cutters

| Item Number     | Stock |   | ✳  | Dimensions (inch) |                 |      |      |       |     |                 |       |       | Weight (lbs) | Insert  |
|-----------------|-------|---|----|-------------------|-----------------|------|------|-------|-----|-----------------|-------|-------|--------------|---------|
|                 | R     | L |    | φD <sub>1</sub>   | φD <sub>2</sub> | H    | a    | φd    | W   | φd <sub>2</sub> | φc    | g     |              |         |
| JXTM15IN-88-4%  | ●     | ● | 4  | 1.50              | 1.55            | 1.75 | .551 | .750  | .32 | 1.350           | .610  | —     | 1.0          | LNX 324 |
| JXTM15IN-88-5%  | ●     | ● | 5  | 1.50              | 1.55            | 1.75 | .551 | .750  | .32 | 1.350           | .610  | —     | 1.0          |         |
| JXTM20IN-88-6%  | ●     | ● | 6  | 2.00              | 2.05            | 2.00 | .551 | .750  | .32 | 1.770           | .610  | —     | 1.0          |         |
| JXTM25IN-88-8%  | ●     | ● | 8  | 2.50              | 2.55            | 2.00 | .551 | 1.000 | .38 | 2.000           | .760  | —     | 1.5          |         |
| JXTM30IN-88-10% | ●     | ● | 10 | 3.00              | 3.04            | 2.00 | .551 | 1.000 | .38 | 2.362           | .827  | .539  | 2.4          |         |
| JXTM40IN-88-13% | ●     | ● | 13 | 4.00              | 4.04            | 2.00 | .551 | 1.500 | .64 | 3.150           | 2.000 | .870  | 3.9          |         |
| JXTM50IN-88-16% | ●     | ● | 16 | 5.00              | 5.04            | 2.00 | .551 | 1.500 | .64 | 3.740           | 2.000 | .870  | 6.5          |         |
| JXTM60IN-88-18% | ●     | ● | 18 | 6.00              | 6.05            | 2.00 | .551 | 2.000 | .75 | 4.000           | 2.800 | 1.120 | 8.0          |         |

\* 8 corners can be used when using right and left hand cutter.

### ● Metric size cutters

| Item Number    | Stock |   | ✳  | Dimensions (mm) |                 |    |    |       |      |                 |    |    | Weight (kg) | Insert  |
|----------------|-------|---|----|-----------------|-----------------|----|----|-------|------|-----------------|----|----|-------------|---------|
|                | R     | L |    | φD <sub>1</sub> | φD <sub>2</sub> | H  | a  | φd    | W    | φd <sub>2</sub> | φc | g  |             |         |
| JXTM080-88-10% | ○     |   | 10 | 80              | 83              | 50 | 14 | 25.4  | 9.5  | 58              | 36 | 14 | 1.1         | LNX 324 |
| JXTM100-88-13% | ○     |   | 13 | 100             | 103             | 50 | 14 | 31.75 | 12.7 | 77              | 50 | 17 | 1.8         |         |
| JXTM125-88-16% | ○     |   | 16 | 125             | 128             | 58 | 14 | 38.1  | 15.9 | 77              | 55 | 22 | 3.1         |         |

### ● Spare Parts

|              |         |
|--------------|---------|
| Insert Screw | Wrench  |
|              |         |
| LRIS-4 * 12  | LLR-25S |

### ● Screw Drivers (OP)

|         |           |               |
|---------|-----------|---------------|
| Bit     | Handle    | Handle & Bit  |
|         |           |               |
| HLR-25S | XX2815-04 | XX2815-04-25S |

### ● Inserts

|   | Item Number                             | R    | Silicon Nitride |     |
|---|---|------|-----------------|-----|
|   |   |      | SX6             | SP9 |
|   | LNX 324-02 T0420<br>(LNX 324-08 T01020) | .031 | ●               | ●   |
|   | LNX 324-03 T0420<br>(LNX 324-12 T01020) | .047 | ●               | ●   |
| LNX 324-04 T0420<br>(LNX 324-16 T01020) | .063                                    | ●    | ●               |     |

\* Recommend using torque wrench @35lbs (4Nm)

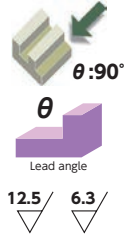
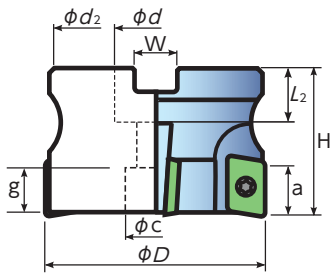
\* 8 corners can be used when using right and left hand cutter.

### ● Recommend Cutting Conditions

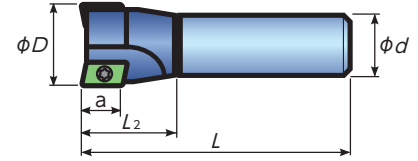
| Work Material  | Grade | Dry | Wet | Cutting Speed (SFM) |      |      |      |      |      |      |      | Feed (IPT) |      |      |      |      |      | Depth of Cut (inch) |
|----------------|-------|-----|-----|---------------------|------|------|------|------|------|------|------|------------|------|------|------|------|------|---------------------|
|                |       |     |     | 700                 | 1200 | 1700 | 2200 | 2700 | 3200 | 3700 | 4200 | .002       | .004 | .006 | .008 | .010 | .012 |                     |
| Gray Cast Iron | SX6   | ●   | ●   |                     |      |      |      |      |      |      |      |            |      |      |      |      |      | ~.300               |
|                | SP9   | ●   | ○   |                     |      |      |      |      |      |      |      |            |      |      |      |      |      | ~.300               |
| Ductile Iron   | SP9   | ●   | ○   |                     |      |      |      |      |      |      |      |            |      |      |      |      |      | ~.300               |

## JQ series

### JQTS



### JQTE



#### ● JQTS Metric size cutters

| Item Number   | Stock |   | Dimensions (mm) |    |       |    |          |      |            |          |      | Weight (kg) | A.R. | R.R. | Insert Screw | Wrench | Insert |
|---------------|-------|---|-----------------|----|-------|----|----------|------|------------|----------|------|-------------|------|------|--------------|--------|--------|
|               |       |   | $\phi D$        | H  | $L_2$ | a  | $\phi d$ | W    | $\phi d_2$ | $\phi c$ | g    |             |      |      |              |        |        |
| JQTS040-90-4R | ●     | 4 | 40              | 40 | 18    | 14 | 16       | 8.4  | 35         | 12       | 4.2  | 0.2         | +6°  | -13° | FSI22-4.0*11 | T-15A  |        |
| JQTS050-90-5R | ●     | 5 | 50              | 40 | 22    | 14 | 22       | 10.4 | 45         | 18       | 10.7 | 0.3         | +6°  | -10° |              |        |        |
| JQTS063-90-6R | ●     | 6 | 63              | 50 | 22    | 14 | 22       | 10.4 | 58         | 18       | 14.5 | 1.4         | +6°  | -12° |              |        |        |

#### ● JQTE Metric size cutters

| Item Number   | Stock |   | Dimensions (mm) |     |       |    |          | Weight (kg) | A.R. | R.R. | Insert Screw | Wrench | Insert |
|---------------|-------|---|-----------------|-----|-------|----|----------|-------------|------|------|--------------|--------|--------|
|               |       |   | $\phi D$        | L   | $L_2$ | a  | $\phi d$ |             |      |      |              |        |        |
| JQTE020-90-1R | ●     | 1 | 20              | 100 | 30    | 14 | 20       | 0.2         | +6°  | -13° | FSI23-4.0*7  | T-15A  |        |
| JQTE025-90-2R | ●     | 2 | 25              | 100 | 30    | 14 | 25       | 0.3         | +6°  | -13° |              |        |        |
| JQTE032-90-3R | ○     | 3 | 32              | 110 | 35    | 14 | 32       | 0.5         | +6°  | -13° | FSI22-4.0*11 |        |        |
| JQTE040-90-4R | ○     | 4 | 40              | 110 | 37    | 14 | 32       | 0.6         | +6°  | -13° |              |        |        |

#### ● Inserts

| Shape  | Item Number        | R    | m    | Silicon Nitride |     |
|--|--------------------|------|------|-----------------|-----|
|  |                    |      |      | SX6             | SP9 |
| <br>   | APCW 160408 T01020 | .031 | .288 | ●               | ●   |
|  | APCW 160412 T01020 | .047 | .286 | ●               | ●   |
|  | APCW 160420 T01020 | .079 | .284 | ●               | ●   |
| <br><br>with wiper                                 | APCW 1604 PDTR     | —    | —    | ○               | ○   |
| The insert must be installed in all insert pockets |                    |      |      |                 |     |

\* Recommend using torque wrench @35lbs(4Nm)

● CBN Wiper Insert: Can install 1 or 2 CBN Wiper Inserts with ceramic insert.

| Shape   | Item Number      | B30 | B52 |
|---|------------------|-----|-----|
| <br><br>* Slightly taller insert than ceramic inserts so can be installed in standard cutter. | APCW 1604 PDSRCE | ○   | ○   |

#### ● Recommend Cutting Conditions

| Work Material  | Grade | Dry | Wet | Cutting Speed (SFM) |      |      |      |      |      |      | Feed (IPT) |      |      |      |      |      | Depth of Cut (inch) |       |
|----------------|-------|-----|-----|---------------------|------|------|------|------|------|------|------------|------|------|------|------|------|---------------------|-------|
|                |       |     |     | 700                 | 1200 | 1700 | 2200 | 2700 | 3200 | 3700 | 4200       | .002 | .004 | .006 | .008 | .010 |                     | .012  |
| Gray Cast Iron | SX6   | ●   | ○   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     | ~.320 |
|                | SP9   | ●   | ●   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     | ~.320 |
| Ductile Iron   | SP9   | ●   | ○   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     | ~.320 |

● : Stock  
 ● : Stock (Newly added)  
 ■ : While stocks last  
 R L : Stock (Right / Left-hand only)  
 R L : Stock (Right / Left-hand only, Newly added)  
 Ⓜ : Mirror finish  
 ○ : 1-2 week delivery  
 ○ : 1-2 week delivery (Newly added)  
 Ⓞ : Coolant through  
 (R/L) : 1-2 week delivery (Right / Left-hand only)  
 (R/L) : 1-2 week delivery (Right / Left-hand only, Newly added)

Rotating Tools

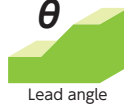
# Rotating Tools

## HVM High Velocity Mill series

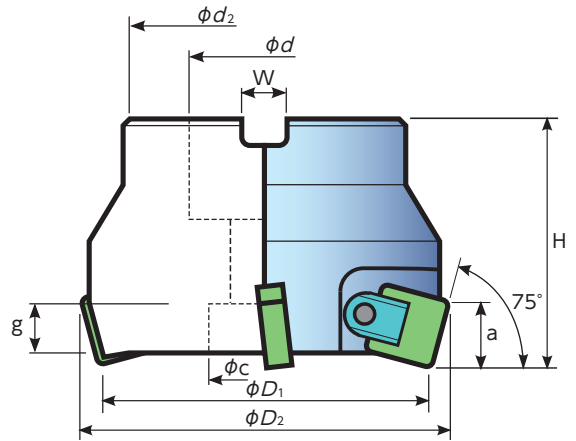
● Lead angle 75 degree -SN43(A.R. -6° R.R. -10°)



$\theta: 75^\circ$



Lead angle



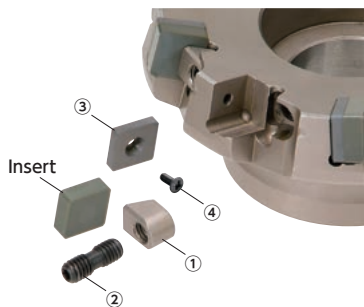
● Inch size cutters

| Item Number     | Stock |    | Dimensions (inch) |            |      |      |          |     |            |          |      | Weight (lbs) | Insert     |
|-----------------|-------|----|-------------------|------------|------|------|----------|-----|------------|----------|------|--------------|------------|
|                 |       |    | $\phi D_1$        | $\phi D_2$ | H    | a    | $\phi d$ | W   | $\phi d_2$ | $\phi c$ | g    |              |            |
| JFDX25IN-75-06R | ●     | 6  | 2.50              | 2.732      | 2.00 | .472 | .750     | .32 | 2.362      | .669     | .760 | 2.0          | <br>SNG 43 |
| JFDX30IN-75-08R | ●     | 8  | 3.00              | 3.232      | 2.00 | .472 | 1.000    | .38 | 2.362      | .827     | .760 | 2.2          |            |
| JFDX40IN-75-10R | ●     | 10 | 4.00              | 4.232      | 2.00 | .472 | 1.500    | .64 | 3.150      | 2.000    | .850 | 3.3          |            |
| JFDX50IN-75-12R | ●     | 12 | 5.00              | 5.232      | 2.00 | .472 | 1.500    | .64 | 3.740      | 2.000    | .850 | 5.7          |            |
| JFDX60IN-75-16R | ●     | 16 | 6.00              | 6.244      | 2.50 | .472 | 2.000    | .75 | 3.937      | 2.835    | .945 | 8.8          |            |

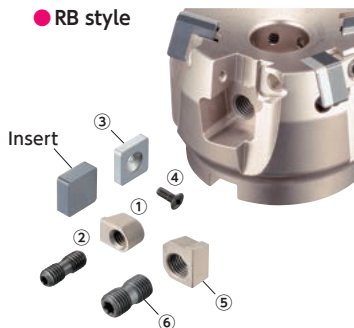
● Metric size cutters

| Item Number      | Stock |    | Dimensions (mm) |            |    |    |          |      |            |          |      | Weight (kg) | Insert     |
|------------------|-------|----|-----------------|------------|----|----|----------|------|------------|----------|------|-------------|------------|
|                  |       |    | $\phi D_1$      | $\phi D_2$ | H  | a  | $\phi d$ | W    | $\phi d_2$ | $\phi c$ | g    |             |            |
| JFDX063-75-06R   | ○     | 6  | 63              | 70         | 50 | 12 | 22.0     | 10.4 | 58         | 18       | 18.5 | 0.8         | <br>SNG 43 |
| JFDX080-75-08R   | ○     | 8  | 80              | 87         | 50 | 12 | 25.4     | 9.5  | 62         | 36       | 15.5 | 1.1         |            |
| JFDX080-75-08RB* | ○     | 8  | 80              | 87         | 50 | 12 | 25.4     | 9.5  | 62         | 36       | 15.5 | 1.36        |            |
| JFDX080MM-75-08R |       | 8  | 80              | 87         | 50 | 12 | 27.0     | 12.4 | 64         | 19       | 15.5 | 1.1         |            |
| JFDX100-75-10R   | ○     | 10 | 100             | 107        | 50 | 12 | 31.75    | 12.7 | 62         | 45       | 16.5 | 1.4         |            |
| JFDX100-75-10RB* | ○     | 10 | 100             | 107        | 50 | 12 | 31.75    | 12.7 | 62         | 45       | 16.5 | 1.83        |            |
| JFDX100MM-75-10R |       | 10 | 100             | 107        | 50 | 12 | 32.0     | 14.4 | 64         | 45       | 23.5 | 1.3         |            |
| JFDX125-75-12R   | ○     | 12 | 125             | 132        | 58 | 12 | 38.1     | 15.9 | 83         | 55       | 21.5 | 2.6         |            |
| JFDX125-75-12RB* | ○     | 12 | 125             | 132        | 58 | 12 | 38.1     | 15.9 | 83         | 55       | 21.5 | 3.34        |            |
| JFDX125MM-75-12R |       | 12 | 125             | 132        | 58 | 12 | 40.0     | 16.4 | 85         | 55       | 26.5 | 2.3         |            |
| JFDX160-75-16R   |       | 16 | 160             | 166        | 60 | 12 | 50.8     | 19   | 100        | 72       | 20.5 | 4.1         |            |
| JFDX160-75-16RB* |       | 16 | 160             | 166        | 60 | 12 | 50.8     | 19   | 100        | 72       | 20.5 | 5.47        |            |

\* One insert pocket can be adjusted for height




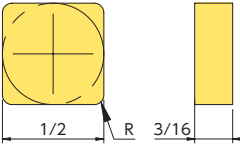

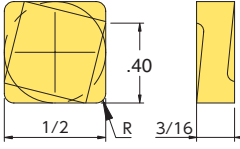

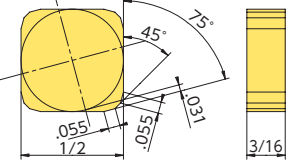
● RB style



● Spare Parts

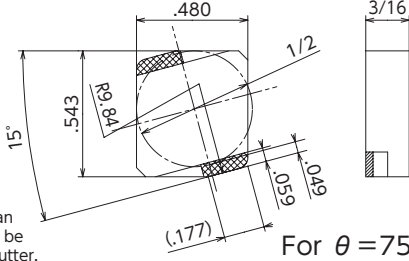
| Wedge  | Wedge Screw | Torx Wrench | Shim   | Shim Screw |
|--------|-------------|-------------|--------|------------|
| ①      | ②           |             | ③      | ④          |
| HLW175 | WS0616-T15  | T15         | ASN423 | M3×8       |
| Wedge  | Wedge Screw | Wrench      |        |            |
| ⑤      | ⑥           |             |        |            |
| HLW177 | WS0816-T25  | LLR-T25     |        |            |

## ● Inserts

| Shape   | Dimensions (inch)   | Item Number   | R    | Silicon Nitride |     | Whisker |
|---|---|---|------|-----------------|-----|---------|
|   |   |   |      | SX6             | SP9 | WA1     |
| <br>12.5                     |  | SNG 432 T0220   | .031 |                 |     | ●       |
|   |   | SNG 432 T0420   | .031 | ●               | ●   | ●       |
|   |   | SNG 433 T0220   | .047 |                 |     | ●       |
|   |   | SNG 433 T0420   | .047 | ●               | ●   | ●       |
|   |   | SNG 434 T0220   | .063 |                 |     | ●       |
|   |   | SNG 434 T0420   | .063 | ●               | ●   | ●       |
| <br>12.5<br>with chipbreaker |  | SNGF 433 TRCC413<br>Reduce tool pressure                              | .047 | ●               |     |         |
|   |   | SNGF 433 RT0425 C421<br>Reduce tool pressure                          | .047 |                 | ●   |         |
| <br>6.3<br>with wiper        |  | SNG 43EN TN<br><br>The insert must be installed in all insert pockets | —    | ●               | ●   |         |

\* Recommend using torque wrench @35lbs(4Nm)

## ● CBN Wiper Insert: Can install 1 or 2 CBN Wiper Inserts with ceramic inserts.

| Dimensions (inch)  | Item Number     | R | CBN |     |
|--|-----------------|---|-----|-----|
|  |                 |   | B30 | B52 |
| <br>* Slightly taller insert than ceramic inserts so can be installed in standard cutter.<br>For $\theta = 75^\circ$ | FDX 1204-75-50R | — | ●   | ●   |

## ● Recommend Cutting Conditions

| Work Material  | Grade | Dry | Wet | Cutting Speed (SFM) |      |      |      |      |      |      |      | Feed (IPT) |      |      |      |      |       | Depth of Cut (inch) |
|----------------|-------|-----|-----|---------------------|------|------|------|------|------|------|------|------------|------|------|------|------|-------|---------------------|
|                |       |     |     | 700                 | 1200 | 1700 | 2200 | 2700 | 3200 | 3700 | 4200 | .002       | .004 | .006 | .008 | .010 | .012  |                     |
| K              | SX6   | ●   | ●   |                     |      |      |      |      |      |      |      |            |      |      |      |      | ~.220 |                     |
| Gray Cast Iron | SP9   | ●   | ○   |                     |      |      |      |      |      |      |      |            |      |      |      |      | ~.220 |                     |
| Ductile Iron   | SP9   | ●   | ○   |                     |      |      |      |      |      |      |      |            |      |      |      |      | ~.220 |                     |

Inserts(SNG) →E13

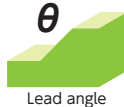
# Rotating Tools

## HVM High Velocity Mill series

● Lead angle 88 degree -SN43(A.R. -6° R.R. -10°)

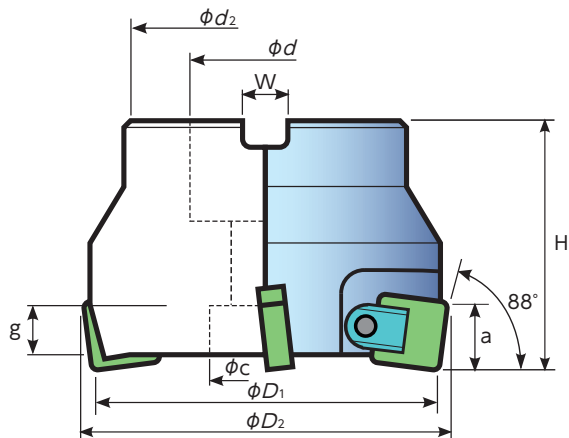


$\theta : 88^\circ$



Lead angle

12.5 / 6.3

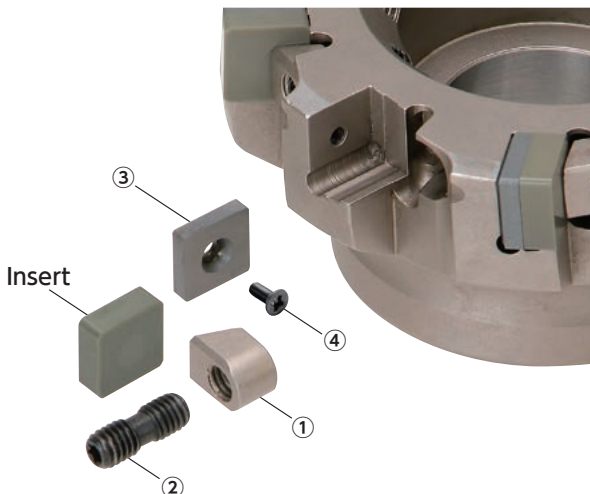


### ● Inch size cutters

| Item Number     | Stock |    | Dimensions (inch) |            |      |      |          |     |            |          |      | Weight (lbs) | Insert |
|-----------------|-------|----|-------------------|------------|------|------|----------|-----|------------|----------|------|--------------|--------|
|                 |       |    | $\phi D_1$        | $\phi D_2$ | H    | a    | $\phi d$ | W   | $\phi d_2$ | $\phi c$ | g    |              |        |
| JFDX25IN-88-06R | ●     | 6  | 2.50              | 2.531      | 2.00 | .472 | .750     | .32 | 2.362      | .669     | .760 | 1.8          |        |
| JFDX30IN-88-08R | ●     | 8  | 3.00              | 3.031      | 2.00 | .472 | 1.000    | .38 | 2.362      | .827     | .760 | 2.1          |        |
| JFDX40IN-88-10R | ●     | 10 | 4.00              | 4.031      | 2.00 | .472 | 1.500    | .64 | 3.150      | 2.000    | .850 | 3.2          |        |
| JFDX50IN-88-12R | ●     | 12 | 5.00              | 5.031      | 2.00 | .472 | 1.500    | .64 | 3.740      | 2.000    | .850 | 5.8          |        |

### ● Metric size cutters


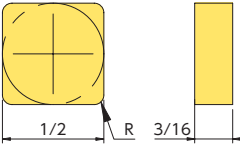

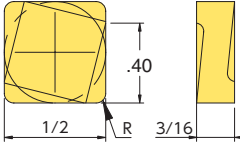

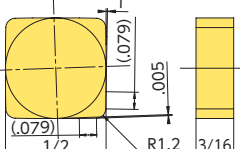
| Item Number      | Stock |    | Dimensions (mm) |            |    |    |          |      |            |          |      | Weight (kg) | Insert |
|------------------|-------|----|-----------------|------------|----|----|----------|------|------------|----------|------|-------------|--------|
|                  |       |    | $\phi D_1$      | $\phi D_2$ | H  | a  | $\phi d$ | W    | $\phi d_2$ | $\phi c$ | g    |             |        |
| JFDX063-88-06R   | ○     | 6  | 63              | 64         | 50 | 12 | 22.0     | 10.4 | 58         | 18       | 13   | 0.8         |        |
| JFDX080-88-08R   | ○     | 8  | 80              | 81         | 50 | 12 | 25.4     | 9.5  | 62         | 36       | 13.5 | 1.0         |        |
| JFDX080MM-88-08R |       | 8  | 80              | 81         | 50 | 12 | 27.0     | 12.4 | 64         | 19       | 13.5 | 1.1         |        |
| JFDX100-88-10R   | ○     | 10 | 100             | 101        | 50 | 12 | 31.75    | 12.7 | 62         | 45       | 16.5 | 1.4         |        |
| JFDX100MM-88-10R |       | 10 | 100             | 101        | 50 | 12 | 32.0     | 14.4 | 64         | 45       | 23.5 | 1.3         |        |
| JFDX125-88-12R   | ○     | 12 | 125             | 126        | 58 | 12 | 38.1     | 15.9 | 83         | 55       | 21.5 | 2.6         |        |
| JFDX125MM-88-12R |       | 12 | 125             | 126        | 58 | 12 | 40.0     | 16.4 | 85         | 55       | 26.5 | 2.5         |        |
| JFDX160-88-16R   |       | 16 | 160             | 156        | 60 | 12 | 50.8     | 19   | 100        | 72       | 20.5 | 4.1         |        |



### ● Spare Parts

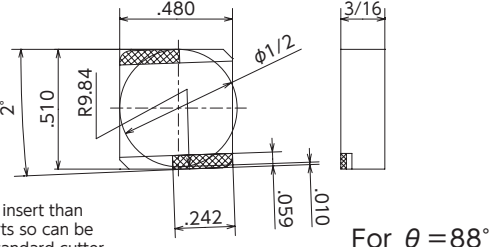
| Wedge  | Wedge Screw | Torx Wrench | Shim   | Shim Screw |
|--------|-------------|-------------|--------|------------|
| ①      | ②           |             | ③      | ④          |
| HLW175 | WS0616-T15  | T-15A       | ASN423 | M3×8       |

## ● Inserts

| Shape  | Dimensions (inch)   | Item Number  | R    | Silicon Nitride |     | Whisker |
|--|---|--|------|-----------------|-----|---------|
|  |   |  |      | SX6             | SP9 | WA1     |
| <br>12.5°                     |  | SNG 432 T0220  | .031 |                 |     | ●       |
|  |   | SNG 432 T0420  | .031 | ●               | ●   | ●       |
|  |   | SNG 433 T0220  | .047 |                 |     | ●       |
|  |   | SNG 433 T0420  | .047 | ●               | ●   | ●       |
|  |   | SNG 434 T0220  | .063 |                 |     | ●       |
|  |   | SNG 434 T0420  | .063 | ●               | ●   | ●       |
| <br>12.5°<br>with chipbreaker |  | SNGF 433 TRCC413<br>Reduce tool pressure                                     | .047 | ●               |     |         |
|  |   | SNGF 433 RT0425 C421<br>Reduce tool pressure                                 | .047 |                 | ●   |         |
| <br>6.3°<br>with wiper        |  | SNEN 1204ZN T01025<br><br>The insert must be installed in all insert pockets | —    | ●               | ●   |         |

\* Recommend using torque wrench @35lbs (4Nm)

## ● CBN Wiper Insert: Can install 1 or 2 CBN Wiper Inserts with ceramic inserts.

| Dimensions (inch)  | Item Number     | R | CBN |     |
|--|-----------------|---|-----|-----|
|  |                 |   | B30 | B52 |
| <br>* Slightly taller insert than ceramic inserts so can be installed in standard cutter.<br>For $\theta = 88^\circ$ | FDX 1204-88-50R | — | ●   | ●   |

## ● Recommend Cutting Conditions

| Work Material  | Grade | Dry | Wet | Cutting Speed (SFM) |      |      |      |      |      |      |      | Feed (IPT) |      |      |      |      |      | Depth of Cut (inch) |
|----------------|-------|-----|-----|---------------------|------|------|------|------|------|------|------|------------|------|------|------|------|------|---------------------|
|                |       |     |     | 700                 | 1200 | 1700 | 2200 | 2700 | 3200 | 3700 | 4200 | .002       | .004 | .006 | .008 | .010 | .012 |                     |
| K              | SX6   | ●   | ●   |                     |      |      |      |      |      |      |      |            |      |      |      |      |      | ~.220               |
| Gray Cast Iron | SP9   | ●   | ○   |                     |      |      |      |      |      |      |      |            |      |      |      |      |      | ~.220               |
| Ductile Iron   | SP9   | ●   | ○   |                     |      |      |      |      |      |      |      |            |      |      |      |      |      | ~.220               |

Inserts(SNG) ➔ E13

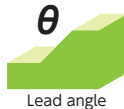
# Rotating Tools

## HVM igh elocity ill series

● Lead angle 45 degree -SN43(A.R. -6° R.R. -10°)

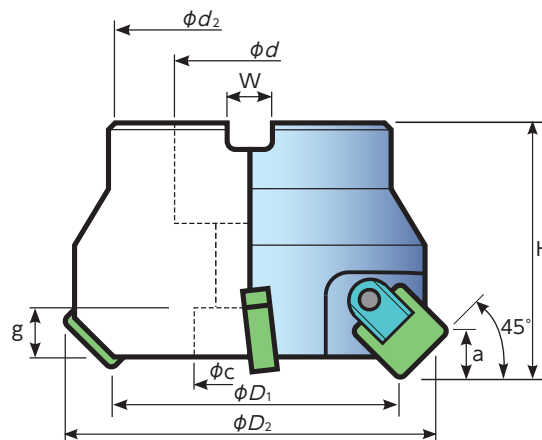


$\theta : 45^\circ$



Lead angle

12.5 / 6.3



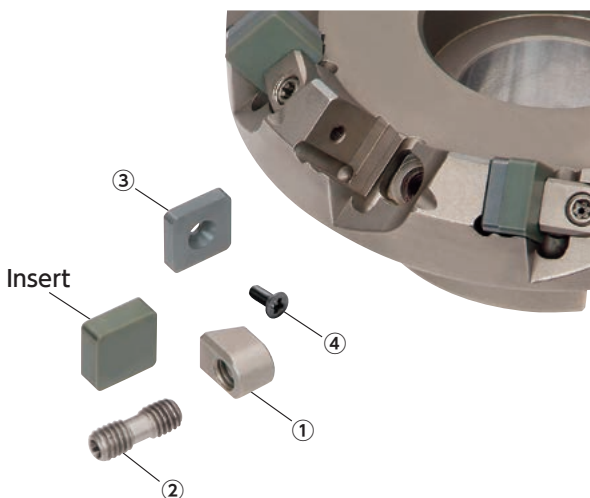
### ● Inch size cutters

| Item Number     | Stock |    | Dimensions (inch) |            |      |      |          |     |            |          |      | Weight (lbs) | Insert |
|-----------------|-------|----|-------------------|------------|------|------|----------|-----|------------|----------|------|--------------|--------|
|                 |       |    | $\phi D_1$        | $\phi D_2$ | H    | a    | $\phi d$ | W   | $\phi d_2$ | $\phi c$ | g    |              |        |
| JFDX25IN-45-06R | ●     | 6  | 2.50              | 3.129      | 2.00 | .315 | .750     | .32 | 2.362      | .669     | .445 | 2.2          |        |
| JFDX30IN-45-08R | ●     | 8  | 3.00              | 3.629      | 2.00 | .315 | 1.000    | .38 | 2.362      | .827     | .445 | 2.8          |        |
| JFDX40IN-45-10R | ●     | 10 | 4.00              | 4.629      | 2.00 | .315 | 1.500    | .64 | 3.150      | 2.000    | .535 | 3.9          |        |
| JFDX50IN-45-12R | ●     | 12 | 5.00              | 5.629      | 2.00 | .315 | 1.500    | .64 | 3.740      | 2.000    | .535 | 4.1          |        |

### ● Metric size cutters

| Item Number      | Stock |    | Dimensions (mm) |            |    |   |          |      |            |          |      | Weight (kg) | Insert |
|------------------|-------|----|-----------------|------------|----|---|----------|------|------------|----------|------|-------------|--------|
|                  |       |    | $\phi D_1$      | $\phi D_2$ | H  | a | $\phi d$ | W    | $\phi d_2$ | $\phi c$ | g    |             |        |
| JFDX063-45-06R   | ○     | 6  | 63              | 72         | 50 | 8 | 22.0     | 10.4 | 58         | 18       | 10.5 | 0.9         |        |
| JFDX080-45-08R   | ○     | 8  | 80              | 95         | 50 | 8 | 25.4     | 9.5  | 62         | 36       | 10.5 | 1.2         |        |
| JFDX080MM-45-08R | ●     | 8  | 80              | 95         | 50 | 8 | 27.0     | 12.4 | 64         | 19       | 10.5 | 1.3         |        |
| JFDX100-45-10R   | ○     | 10 | 100             | 120        | 50 | 8 | 31.75    | 12.7 | 62         | 45       | 8.5  | 1.7         |        |
| JFDX100MM-45-10R | ●     | 10 | 100             | 120        | 50 | 8 | 32.0     | 14.4 | 64         | 45       | 8.5  | 1.5         |        |
| JFDX125-45-12R   | ○     | 12 | 125             | 146        | 58 | 8 | 38.1     | 15.9 | 83         | 55       | 13.5 | 2.8         |        |
| JFDX125MM-45-12R | ●     | 12 | 125             | 146        | 58 | 8 | 40.0     | 16.4 | 85         | 55       | 13.5 | 2.9         |        |


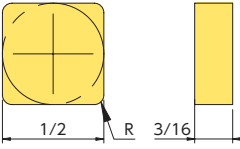

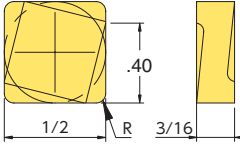

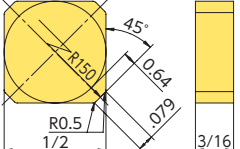
Rotating Tools



### ● Spare Parts

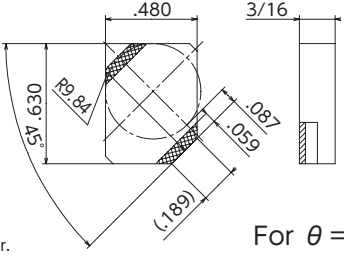
| Wedge  | Wedge Screw | Torx Wrench | Shim   | Shim Screw |
|--------|-------------|-------------|--------|------------|
| ①      | ②           |             | ③      | ④          |
| HLW175 | WS0616-T15  | T-15A       | ASN423 | M3×8       |

## ● Inserts

| Shape   | Dimensions (inch)   | Item Number  | R    | Silicon Nitride |     | Whisker |
|---|---|--|------|-----------------|-----|---------|
|   |   |  |      | SX6             | SP9 | WA1     |
| <br>12.5                     |  | SNG 432 T0220                                      | .031 |                 |     | ●       |
|   |   | SNG 432 T0420                                      | .031 | ●               | ●   | ●       |
|   |   | SNG 433 T0220                                      | .047 |                 |     | ●       |
|   |   | SNG 433 T0420                                      | .047 | ●               | ●   | ●       |
|   |   | SNG 434 T0220                                      | .063 |                 |     | ●       |
|   |   | SNG 434 T0420                                      | .063 | ●               | ●   | ●       |
| <br>12.5<br>with chipbreaker |  | SNGF 433 TRCC413                                   | .047 | ●               |     |         |
|   |   | Reduce tool pressure                               |      |                 |     |         |
| <br>6.3<br>with wiper        |  | SNG 43AN TW  | —    | ●               | ●   |         |
|   |   | The insert must be installed in all insert pockets |      |                 |     |         |

\* Recommend using torque wrench @35lbs (4Nm)

## ● CBN Wiper Insert: Can install 1 or 2 CBN Wiper Inserts with ceramic inserts.

| Dimensions (inch)   | Item Number     | R | CBN |     |
|---|-----------------|---|-----|-----|
|   |                 |   | B30 | B52 |
| <br>*Slightly taller insert than ceramic inserts so can be installed in standard cutter.<br>For $\theta = 45^\circ$ | FDX 1204-45-50R | — | ●   | ●   |

## ● Recommend Cutting Conditions

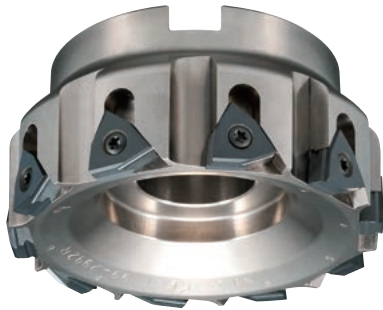
| Work Material  | Grade | Dry | Wet | Cutting Speed (SFM) |      |      |      |      |      |      |      | Feed (IPT) |      |      |      |      |      | Depth of Cut (inch) |
|----------------|-------|-----|-----|---------------------|------|------|------|------|------|------|------|------------|------|------|------|------|------|---------------------|
|                |       |     |     | 700                 | 1200 | 1700 | 2200 | 2700 | 3200 | 3700 | 4200 | .002       | .004 | .006 | .008 | .010 | .012 |                     |
| K              | SX6   | ●   | ○   |                     |      |      |      |      |      |      |      |            |      |      |      |      |      | ~.220               |
| Gray Cast Iron | SP9   | ●   | ○   |                     |      |      |      |      |      |      |      |            |      |      |      |      |      | ~.220               |
| Ductile Iron   | SP9   | ●   | ○   |                     |      |      |      |      |      |      |      |            |      |      |      |      |      | ~.220               |

Inserts(SNG) **E13**

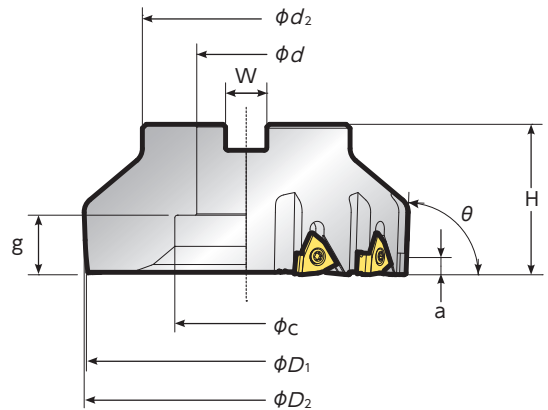
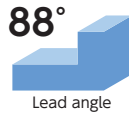


## TRI series

● Lead angle 88 degree



A. R. 5°  
R. R. 4°, 7°, 10°



● Metric size cutters

| Item Number        | Stock |    | Dimensions (mm) |            |    |      |      |          |      |            |          |      | Weight (kg) | Rake angle (°) |      | Insert Screw         | Wrench  |
|--------------------|-------|----|-----------------|------------|----|------|------|----------|------|------------|----------|------|-------------|----------------|------|----------------------|---------|
|                    |       |    | $\phi D_1$      | $\phi D_2$ | H  | a *1 | a *2 | $\phi d$ | W    | $\phi d_2$ | $\phi c$ | g    |             | A.R.           | R.R. |                      |         |
| JWNXM063C2200R06-A | ○     | 6  | 63              | 63         | 50 | 5.5  | 4.5  | 22       | 10.4 | 60         | 18       | 15.5 | 0.9         | +5             | +4   | FSI26-4.0<br>* 12-LH | LLR-T15 |
| JWNXM080A2540R08-A | ○     | 8  | 80              | 80         | 50 | 5.5  | 4.5  | 25.4     | 9.5  | 60         | 36       | 15   | 1.1         | +5             | +7   |                      |         |
| JWNXM100A3175R10-A | ○     | 10 | 100             | 100        | 50 | 5.5  | 4.5  | 31.75    | 12.7 | 80         | 50       | 18   | 1.8         | +5             | +10  |                      |         |
| JWNXM125A3810R12-A | ○     | 12 | 125             | 125        | 58 | 5.5  | 4.5  | 38.1     | 15.9 | 80         | 55       | 23   | 3           | +5             | +10  |                      |         |
| JWNXM160A5080R16-A | ○     | 16 | 160             | 160        | 60 | 5.5  | 4.5  | 50.8     | 19   | 100        | 72       | 22   | 4.9         | +5             | +10  |                      |         |

\* 1 Dimension when set the insert [WNX44-C10T01020]  
\* 2 Dimension when set the insert [WNX44-R12T01020]

● Insert

| Shape | Dimensions (inch) | Item number           | C or $r_\epsilon$ | Silicon Nitride |     |
|-------|-------------------|-----------------------|-------------------|-----------------|-----|
|       |                   |                       |                   | SX6             | SP9 |
|       |                   | <b>WNX44-C10T0420</b> | C .040            | ○               | ○   |
|       |                   | <b>WNX44-R12T0420</b> | R .0472           | ○               | ○   |

\* Recommend using torque wrench @35lbs (4Nm)

○ : New standard stock items

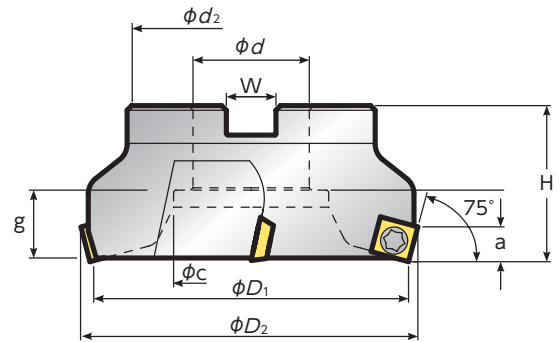
● Recommend Cutting Conditions

| Work Material  | Grade      | Dry | Wet | Cutting Speed (SFM) |      |      |      |      |      |      | Feed (IPT) |      |      |      |      |      | Depth of Cut (inch) |      |       |
|----------------|------------|-----|-----|---------------------|------|------|------|------|------|------|------------|------|------|------|------|------|---------------------|------|-------|
|                |            |     |     | 700                 | 1200 | 1700 | 2200 | 2700 | 3200 | 3700 | 4200       | .002 | .004 | .006 | .008 | .010 |                     | .012 |       |
| K              | <b>SX6</b> | ●   | ●   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     |      | ~.220 |
| Gray Cast Iron | <b>SP9</b> | ●   | ○   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     |      | ~.220 |
| Ductile Iron   | <b>SP9</b> | ●   | ○   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     |      | ~.220 |

## HSM series

High speed hear-ill series

● Lead angle 75 degrees - SDW43 (A.R.+12°, R.R.0°)



● Inch size cutters

| Item Number       | Stock | ✳ | Dimensions (inch) |            |       |      |          |     |            |          |      | Weight (lbs) | Insert  |
|-------------------|-------|---|-------------------|------------|-------|------|----------|-----|------------|----------|------|--------------|---------|
|                   |       |   | $\phi D_1$        | $\phi D_2$ | H     | a    | $\phi d$ | W   | $\phi d_2$ | $\phi c$ | g    |              |         |
| E250R100-SDW43-4C | ●     | 4 | 2.500             | 2.780      | 2.000 | .360 | 1.000    | .38 | 2.290      | .820     | .787 | 1.9          | SDCW 43 |
| E300R100-SDW43-5C | ●     | 5 | 3.000             | 3.280      | 2.000 | .360 | 1.000    | .38 | 2.290      | .820     | .787 | 2.4          |         |
| E400R150-SDW43-6C | ●     | 6 | 4.000             | 4.280      | 2.000 | .360 | 1.500    | .64 | 3.200      | 2.000    | .875 | 3.7          |         |
| E500R150-SDW43-7C | ●     | 7 | 5.000             | 5.280      | 2.000 | .360 | 1.500    | .64 | 3.200      | 2.000    | .875 | 5.4          |         |

● Metric size cutters

| Item Number    | Stock | ✳  | Dimensions (mm) |            |    |     |          |      |            |          |      | Weight (kg) | Insert  |
|----------------|-------|----|-----------------|------------|----|-----|----------|------|------------|----------|------|-------------|---------|
|                |       |    | $\phi D_1$      | $\phi D_2$ | H  | a   | $\phi d$ | W    | $\phi d_2$ | $\phi c$ | g    |             |         |
| JSDW063-75-04R | ○     | 4  | 63              | 70.6       | 50 | 9.1 | 22       | 10.4 | 58         | 18       | 14   | 0.8         | SDCW 43 |
| JSDW080-75-05R | ○     | 5  | 80              | 83.3       | 50 | 9.1 | 25.4     | 9.5  | 62         | 36       | 15.5 | 1.0         |         |
| JSDW100-75-06R | ○     | 6  | 100             | 108.7      | 50 | 9.1 | 31.75    | 12.7 | 58         | 45       | 16.5 | 1.3         |         |
| JSDW125-75-07R | ○     | 7  | 125             | 134.1      | 58 | 9.1 | 38.1     | 15.9 | 79         | 55       | 21.5 | 2.5         |         |
| JSDW160-75-10R |       | 10 | 160             | 165        | 68 | 9.1 | 50.8     | 19   | 100        | 72       | 28.5 | 4.0         |         |

● CBN Wiper Insert: Can install 1 or 2 CBN Wiper Inserts with ceramic inserts.

| Shape   | Item Number            | CBN |     |
|---|------------------------|-----|-----|
|   |                        | B30 | B52 |
| <p>* Slightly taller insert than ceramic inserts so can be installed in standard cutter.<br/>For <math>\theta = 75^\circ</math></p> | <b>SDW 1204-75-50R</b> | ○   | ○   |

● Spare Parts

| Insert Screw           | Torx Wrench |
|------------------------|-------------|
| <p>FSI21-5.0*12.45</p> | <p>T20</p>  |

● Inserts

| Item Number       | R    | Fig. | Silicon Nitride |     |
|-------------------|------|------|-----------------|-----|
|                   |      |      | SX6             | SP9 |
| SDCW 432 T0420    | .031 | 1    | ●               | ○   |
| SDCW 433 T0420    | .047 | 1    | ●               |     |
| SDCW 434 T0420    | .063 | 1    | ●               |     |
| SDCW 43EER T0420* | —    | 2    | ●               | ○   |

\* Recommend using torque wrench @35lbs (4Nm)

\* The insert must be installed in all insert pockets

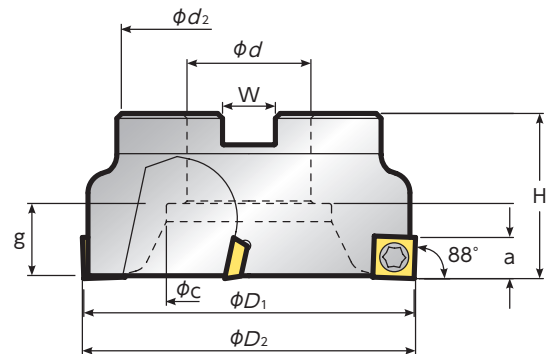
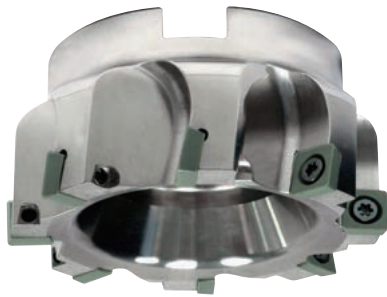
● Recommend Cutting Conditions

| Work Material  | Grade      | Dry | Wet | Cutting Speed (SFM) |      |      |      |      |      |      | Feed (IPT) |      |      |      |      |      | Depth of Cut (inch) |
|----------------|------------|-----|-----|---------------------|------|------|------|------|------|------|------------|------|------|------|------|------|---------------------|
|                |            |     |     | 700                 | 1200 | 1700 | 2200 | 2700 | 3200 | 3700 | 4200       | .002 | .004 | .006 | .008 | .010 |                     |
| Gray Cast Iron | <b>SX6</b> | ●   | ●   |                     |      |      |      |      |      |      |            |      |      |      |      |      | ~.220               |
|                | <b>SP9</b> | ●   | ○   |                     |      |      |      |      |      |      |            |      |      |      |      |      | ~.220               |
| Ductile Iron   | <b>SP9</b> | ●   | ○   |                     |      |      |      |      |      |      |            |      |      |      |      |      | ~.220               |

## HSM series

High speed hear-ill

● Lead angle 88 degree - SDW43 (A.R.+12°, R.R.0°)



● Inch size cutters

| Item Number        | Stock |    | Dimensions (inch) |            |       |      |          |     |            |          |      |     | Weight (lbs) | Insert |
|--------------------|-------|----|-------------------|------------|-------|------|----------|-----|------------|----------|------|-----|--------------|--------|
|                    |       |    | $\phi D_1$        | $\phi D_2$ | H     | a    | $\phi d$ | W   | $\phi d_2$ | $\phi c$ | g    |     |              |        |
| P250R100-SDW43-4C  | ●     | 4  | 2.500             | 2.590      | 2.000 | .400 | 1.000    | .38 | 2.290      | .820     | .787 | 1.7 |              |        |
| P300R100-SDW43-6C  | ●     | 6  | 3.000             | 3.070      | 2.000 | .400 | 1.000    | .38 | 2.290      | .820     | .787 | 2.2 |              |        |
| P400R150-SDW43-8C  | ●     | 8  | 4.000             | 4.070      | 2.000 | .400 | 1.500    | .64 | 3.200      | 2.000    | .875 | 3.5 |              |        |
| P500R150-SDW43-10C | ●     | 10 | 5.000             | 5.070      | 2.000 | .400 | 1.500    | .64 | 3.200      | 2.000    | .875 | 5.2 |              |        |

● Spare Parts

| Insert Screw    | Torx Wrench |
|-----------------|-------------|
|                 |             |
| FSI21-5.0*12.45 | T-20        |

● Inserts

| <br>Fig.1: SDCW43 | <br>Fig.2: SDCW43PE with wiper | Item Number       | R    | Fig. | Silicon Nitride |     |
|-------------------|--------------------------------|-------------------|------|------|-----------------|-----|
|                   |                                |                   |      |      | SX6             | SP9 |
|                   |                                | SDCW 432 T0420    | .031 | 1    | ●               | ○   |
|                   |                                | SDCW 433 T0420    | .047 | 1    | ●               |     |
|                   |                                | SDCW 434 T0420    | .063 | 1    | ●               |     |
|                   |                                | SDCW 43PE T0420R* | .031 | 2    | ●               |     |

\* Recommend using torque wrench @35lbs(4Nm)

\* The insert must be installed in all insert pockets

● Recommend Cutting Conditions

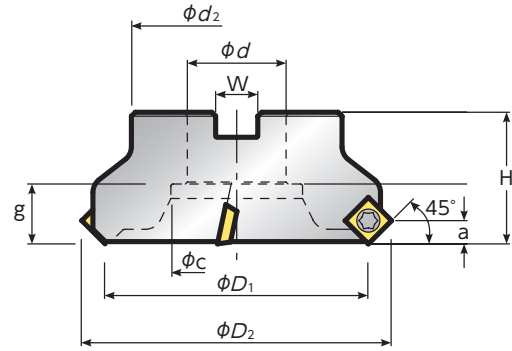
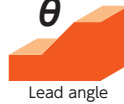
| Work Material  | Grade | Dry | Wet | Cutting Speed (SFM) |      |      |      |      |      |      | Feed (IPT) |      |      |      |      |      | Depth of Cut (inch) |       |
|----------------|-------|-----|-----|---------------------|------|------|------|------|------|------|------------|------|------|------|------|------|---------------------|-------|
|                |       |     |     | 700                 | 1200 | 1700 | 2200 | 2700 | 3200 | 3700 | 4200       | .002 | .004 | .006 | .008 | .010 |                     | .012  |
| K              | SX6   | ●   | ●   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     | ~.220 |
| Gray Cast Iron | SP9   | ●   | ○   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     | ~.220 |
| Ductile Iron   | SP9   | ●   | ○   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     | ~.220 |

Inserts(SDCW)

● Lead angle 45 degree - SDW43 (A.R.+12°, R.R.0°)



$\theta : 45^\circ$



● Inch size cutters

| Item Number       | Stock | 6 | Dimensions (inch) |            |       |      |          |     |            |          |      | Weight (lbs) | Insert  |
|-------------------|-------|---|-------------------|------------|-------|------|----------|-----|------------|----------|------|--------------|---------|
|                   |       |   | $\phi D_1$        | $\phi D_2$ | H     | a    | $\phi d$ | W   | $\phi d_2$ | $\phi c$ | g    |              |         |
| A300R100-SDW43-6C | ●     | 6 | 3.000             | 3.740      | 2.000 | .260 | 1.000    | .38 | 2.290      | .820     | .787 | 2.3          | SDCW 43 |
| A400R150-SDW43-7C | ●     | 7 | 4.000             | 4.740      | 2.000 | .260 | 1.500    | .64 | 3.200      | 2.000    | .875 | 3.3          |         |
| A500R150-SDW43-8C | ●     | 8 | 5.000             | 5.740      | 2.000 | .260 | 1.500    | .64 | 3.810      | 2.120    | .871 | 5.0          |         |

● Metric size cutters

| Item Number    | Stock | 6 | Dimensions (mm) |            |    |     |          |      |            |          |    | Weight (kg) | Insert  |
|----------------|-------|---|-----------------|------------|----|-----|----------|------|------------|----------|----|-------------|---------|
|                |       |   | $\phi D_1$      | $\phi D_2$ | H  | a   | $\phi d$ | W    | $\phi d_2$ | $\phi c$ | g  |             |         |
| JSDW080-45-06R | ○     | 6 | 80              | 95.0       | 50 | 6.6 | 25.4     | 9.5  | 62         | 36       | 18 | 1.1         | SDCW 43 |
| JSDW100-45-07R | ○     | 7 | 100             | 120.4      | 50 | 6.6 | 31.75    | 12.7 | 58         | 45       | 16 | 1.4         |         |
| JSDW125-45-08R | ○     | 8 | 125             | 145.8      | 58 | 6.6 | 38.1     | 15.9 | 79         | 55       | 21 | 2.6         |         |

● CBN Wiper Insert: Can install 1 or 2 CBN Wiper Inserts with ceramic inserts.

| Shape  | Item Number     | CBN |     |
|--|-----------------|-----|-----|
|  |                 | B30 | B52 |
| <p>*Slightly taller insert than ceramic inserts so can be installed in standard cutter.<br/>For <math>\theta = 45^\circ</math></p> | SDW 1204-45-50R | ●   | ●   |

● Spare Parts

| Insert Screw           | Torx Wrench |
|------------------------|-------------|
| <p>FSI21-5.0*12.45</p> | <p>T20</p>  |

● Inserts

| Item Number      | R    | Fig. | Silicon Nitride |     |
|------------------|------|------|-----------------|-----|
|                  |      |      | SX6             | SP9 |
| SDCW 432 T0420   | .031 | 1    | ●               | ○   |
| SDCW 433 T0420   | .047 | 1    | ●               |     |
| SDCW 434 T0420   | .063 | 1    | ●               |     |
| SDCW 43AE T0420* | —    | 2    | ●               | ○   |

\* Recommend using torque wrench @35lbs (4Nm)

\* The insert must be installed in all insert pockets

● Recommend Cutting Conditions

| Work Material  | Grade | Dry | Wet | Cutting Speed (SFM) |      |      |      |      |      |      | Feed (IPT) |      |      |      |      |      | Depth of Cut (inch) |       |
|----------------|-------|-----|-----|---------------------|------|------|------|------|------|------|------------|------|------|------|------|------|---------------------|-------|
|                |       |     |     | 700                 | 1200 | 1700 | 2200 | 2700 | 3200 | 3700 | 4200       | .002 | .004 | .006 | .008 | .010 |                     | .012  |
| K              | SX6   | ●   | ●   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     | ~.200 |
| Gray Cast Iron | SP9   | ●   | ○   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     | ~.200 |
| Ductile Iron   | SP9   | ●   | ○   |                     |      |      |      |      |      |      |            |      |      |      |      |      |                     | ~.200 |