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# NOŻE WYTACZARSKIE DO OBRÓBKI DROBNYCH DETALI

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KOMPATYBILNE Z AUTOMATAMI TOKARSKIMI  
TYPU SZWAJCARSKIEGO

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# NOŻE WYTACZARSKIE DO OBRÓBKI DROBNYCH DETALI

DŁUGOŚĆ CAŁKOWITA KOMPATYBILNA Z AUTOMATAMI  
TOKARSKIMI TYPU SZWAJCARSKIEGO



## **PŁYTKI MOCOWANE NA WKREŃ**

### **CHWYT WĘGLIKOWY:**

80 mm, 90 mm, 140 mm, 180 mm

### **CHWYT Z TWARDEJ STALI\*:**

70 mm, 80 mm, 90 mm

\* Materiał chwytu charakteryzuje się doskonałą odpornością na uszkodzenia powodowane odprowadzaniem wiórów.

### **CHWYT STALOWY:**

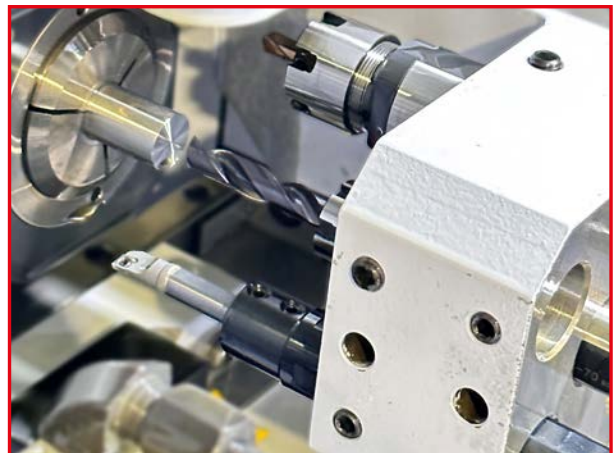
90 mm, 150 mm

## **Z KANAŁEM CHŁODZIWA**

Niektóre noże o małej średnicy z chwytem węglkowym nie posiadają kanału chłodziwa. Patrz "Sposób oznaczania" na str. 3

## **SKRACANIE CHWYTU NIEZALECANE**

Długość narzędzia jest kompatybilna z automatami tokarskimi typu szwajcarskiego, dlatego aby zapobiec kolizji nie ma potrzeby skracania chwytu.



# CHWYT WĘGLIKOWY Z KANAŁEM CHŁODZIWA O MINIMALNEJ ŚREDNICY SKRAWANIA 9 MM

Nóż wytaczarski o minimalnej średnicy skrawania 9 mm ma duży odstęp, który zapewnia skuteczną ewakuację wióra.

## PORÓWNANIE ODSTĘPÓW: ŚREDNICA OTWORU OBRABIANEGO: 11 MM



**Nóż wytaczarski do obróbki drobnych detali**  
Minimalna średnica skrawania 9 mm



**Nóż typu "Dimple Bar"**  
Minimalna średnica skrawania 10 mm

# SPOSÓB OZNACZANIA

| 1. Materiał chwytu |                       | 4. System mocowania |                           | 5. Kształt płytki |               | 6. Kąt przystawienia KAPR |        | 7. Kąt przyłożenia płytki |             |
|--------------------|-----------------------|---------------------|---------------------------|-------------------|---------------|---------------------------|--------|---------------------------|-------------|
| <b>C</b>           | Chwyt węglkowy        | <b>S</b>            | Mocowanie płytki na wkręt | <b>C</b>          | ROMBOWA 80°   | <b>U</b>                  | 93°    | <b>B</b>                  | DODATNI 5°  |
| <b>H</b>           | Chwyt z twardej stali |                     |                           | <b>D</b>          | ROMBOWA 55°   | <b>L</b>                  | 95°    | <b>C</b>                  | DODATNI 7°  |
| <b>S</b>           | Chwyt stalowy         |                     |                           | <b>T</b>          | TRÓJKĄTNA 60° | <b>Q</b>                  | 107.5° | <b>P</b>                  | DODATNI 11° |
|                    |                       |                     |                           | <b>V</b>          | ROMBOWA 35°   | <b>P</b>                  | 117.5° |                           |             |
|                    |                       |                     |                           | <b>W</b>          | TRYGONALNA    | <b>J</b>                  | 142°   |                           |             |

| 2. Min. średnica skrawania DMIN (mm) |           | 3. Średnica chwytu DCONMS (mm) |  |
|--------------------------------------|-----------|--------------------------------|--|
| <b>C</b>                             | <b>18</b> | <b>16</b>                      |  |

| 8. Rodzaj oprawki (kierunek skrawania) |       | 9. Długość krawędzi skrawającej i średnica okręgu wpisanego |      |      |      |      |      | 10. Długość oprawki (mm) |     | 11. Kanał chłodziwa |          |                     |
|--|-------|---|------|------|------|------|------|--------------------------|-----|---------------------|----------|---------------------|
| <b>R</b>                               | Prawa | Średnica okręgu wpisanego (mm)                              | 3.97 | 4.76 | 5.56 | 6.35 | 7.94 | 9.525                    | 070 | 70                  | <b>C</b> | Z kanałem chłodziwa |
| <b>L</b>                               | Lewa  | ROMBOWA 80°   | 03   | 04   | —    | 06   | 08   | 09                       | 080 | 80                  |          |                     |
|  |       | ROMBOWA 55°   | —    | —    | —    | 07   | —    | 11                       | 090 | 90                  |          |                     |
|  |       | TRÓJKĄTNA 60°   | 06   | 08   | 09   | 11   | —    | 16                       | 140 | 140                 |          |                     |
|  |       | ROMBOWA 35°   | —    | 08   | —    | 11   | —    | 16                       | 150 | 150                 |          |                     |
|  |       | TRYGONALNA  | 02   | L3   | —    | 04   | —    | 06                       | 180 | 180                 |          |                     |
|  |       |   |      |      |      |      |      |                          | 200 | 200                 |          |                     |
|  |       |   |      |      |      |      |      |                          | 250 | 250                 |          |                     |

**1. Materiał chwytu**

**2. Min. średnica skrawania DMIN (mm)**

**3. Średnica chwytu DCONMS (mm)**

**4. System mocowania**

**5. Kształt płytki**

**6. Kąt przystawienia KAPR**

**7. Kąt przyłożenia płytki**

**8. Rodzaj oprawki (kierunek skrawania)**

**9. Długość krawędzi skrawającej i średnica okręgu wpisanego**

**10. Długość oprawki (mm)**

**11. Kanał chłodziwa**

## WYTYCZNE DOBORU

| Kształt płytki                       | Typ noża | KAPR   | Materiał chwytu | Długość narzędzia | DMIN    | DCONMS  | Ekonomiczna w użytkowaniu | Wytrzymałość krawędzi skrawającej | Toczenie profile | Wewnętrzny kanał chłodzący | Wyżarzanie głębokie (L/D>6) | Oprawka | Płytki |
|--------------------------------------|----------|--------|-----------------|-------------------|---------|---------|---------------------------|-----------------------------------|------------------|----------------------------|-----------------------------|---------|--------|
| ROMBOWA 80°<br>Kąt przyłożenia 7°    | SCLC     | 95°    | Węglik          | 80, 90            | 5 – 8   | 4 – 7   |                           | ○                                 |                  |                            | ○                           | 5       | 39     |
|                                      |          |        | Węglik          | 90, 140, 180      | 9 – 34  | 8 – 32  |                           | ○                                 |                  | ○                          | ○                           | 6       |        |
|                                      |          |        | Twarda stal     | 70,80,90          | 5 – 10  | 4 – 8   |                           | ○                                 |                  |                            |                             | 7       |        |
|                                      |          |        | Twarda stal     | 90                | 12      | 10      |                           | ○                                 |                  | ○                          |                             | 8       |        |
|                                      |          |        | Stal            | 90, 150           | 14 – 34 | 12 – 32 |                           | ○                                 |                  | ○                          |                             | 9       |        |
| ROMBOWA 80°<br>Kąt przyłożenia 11°   | SCLP     | 95°    | Węglik          | 140, 180          | 12 – 30 | 10 – 25 |                           | ○                                 |                  | ○                          | ○                           | 10      | 47     |
|                                      |          |        | Twarda stal     | 90                | 12      | 10      |                           | ○                                 |                  | ○                          |                             | 11      |        |
|                                      |          |        | Stal            | 90, 150           | 14 – 30 | 12 – 25 |                           | ○                                 |                  | ○                          |                             | 12      |        |
| TRÓJKĄTNA 60°<br>Kąt przyłożenia 7°  | STUC     | 93°    | Węglik          | 90                | 7 – 8   | 6 – 7   | ○                         |                                   |                  |                            | ○                           | 13      | 56     |
|                                      |          |        | Węglik          | 90, 140, 180      | 9 – 32  | 8 – 25  | ○                         |                                   |                  | ○                          | ○                           | 14      |        |
|                                      |          |        | Twarda stal     | 80                | 7 – 10  | 6 – 8   | ○                         |                                   |                  |                            |                             | 15      |        |
|                                      |          |        | Twarda stal     | 90                | 12      | 10      | ○                         |                                   |                  | ○                          |                             | 16      |        |
|                                      |          |        | Stal            | 90, 150           | 14 – 40 | 12 – 32 | ○                         |                                   |                  | ○                          |                             | 17      |        |
| TRÓJKĄTNA 60°<br>Kąt przyłożenia 11° | STUP     | 93°    | Węglik          | 90, 140, 180      | 10 – 34 | 8 – 25  | ○                         |                                   |                  | ○                          | ○                           | 18      | 59     |
|                                      |          |        | Twarda stal     | 80                | 10      | 8       | ○                         |                                   |                  |                            |                             | 19      |        |
|                                      |          |        | Twarda stal     | 90                | 12      | 10      | ○                         |                                   |                  | ○                          |                             | 20      |        |
|                                      |          |        | Stal            | 90, 150           | 14 – 34 | 12 – 25 | ○                         |                                   |                  | ○                          |                             | 21      |        |
| ROMBOWA 55°<br>Kąt przyłożenia 7°    | SDUC     | 93°    | Węglik          | 140, 180          | 14 – 32 | 10 – 25 |                           |                                   | ○                | ○                          | ○                           | 22      | 50     |
|                                      |          |        | Twarda stal     | 90                | 14      | 10      |                           |                                   | ○                | ○                          |                             | 23      |        |
|                                      |          |        | Stal            | 150               | 16 – 32 | 12 – 25 |                           |                                   | ○                | ○                          |                             | 24      |        |
| ROMBOWA 55°<br>Kąt przyłożenia 7°    | SDQC     | 107.5° | Węglik          | 140, 180          | 13 – 30 | 10 – 25 |                           |                                   | ○                | ○                          | ○                           | 25      | 50     |
|                                      |          |        | Twarda stal     | 90                | 13      | 10      |                           |                                   | ○                | ○                          |                             | 26      |        |
|                                      |          |        | Stal            | 90, 150           | 16 – 30 | 12 – 25 |                           |                                   | ○                | ○                          |                             | 27      |        |
| ROMBOWA 35°<br>Kąt przyłożenia 7°    | SVUC     | 93°    | Węglik          | 140               | 16      | 12      |                           |                                   | ○                | ○                          |                             | 28      | 65     |
|                                      |          |        | Stal            | 90                | 16      | 12      |                           |                                   | ○                | ○                          |                             | 29      |        |
|                                      | SVPC     | 117.5° | Węglik          | 140               | 16      | 10      |                           |                                   | ○                | ○                          |                             | 30      |        |
|                                      |          |        | Twarda stal     | 90                | 16      | 10      |                           |                                   | ○                | ○                          |                             | 31      |        |
|                                      | SVJC     | 142°   | Stal            | 90, 150           | 16 – 20 | 12 – 16 |                           |                                   | ○                | ○                          |                             | 33      |        |
| ROMBOWA 35°<br>Kąt przyłożenia 5°    | SVUB     | 93°    | Węglik          | 180               | 20 – 34 | 16 – 25 |                           |                                   | ○                | ○                          |                             | 28      | 62     |
|                                      |          |        | Stal            | 150, 200          | 20 – 40 | 16 – 32 |                           |                                   | ○                | ○                          |                             | 29      |        |
|                                      | SVPB     | 117.5° | Węglik          | 180               | 20 – 34 | 12 – 25 |                           |                                   | ○                | ○                          |                             | 30      |        |
|                                      |          |        | Stal            | 150, 200          | 20 – 40 | 12 – 32 |                           |                                   | ○                | ○                          |                             | 32      |        |
|                                      | SVJB     | 142°   | Stal            | 150, 200, 250     | 25 – 50 | 20 – 40 |                           |                                   | ○                | ○                          |                             | 33      |        |
| TRYGONALNA<br>Kąt przyłożenia 7°     | SWUC     | 93°    | Węglik          | 80, 90            | 6 – 8   | 5 – 7   | ○                         | ○                                 |                  |                            | ○                           | 34      | 67     |
|                                      |          |        | Węglik          | 90, 140, 180      | 10 – 22 | 8 – 20  | ○                         | ○                                 |                  | ○                          | ○                           | 35      |        |
|                                      |          |        | Twarda stal     | 70,80             | 6 – 10  | 5 – 8   | ○                         | ○                                 |                  |                            |                             | 36      |        |
|                                      |          |        | Twarda stal     | 80                | 12      | 10      | ○                         | ○                                 |                  | ○                          |                             | 37      |        |
|                                      |          |        | Stal            | 90, 150           | 14 – 22 | 12 – 20 | ○                         | ○                                 |                  | ○                          |                             | 38      |        |

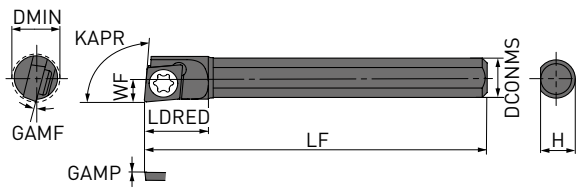
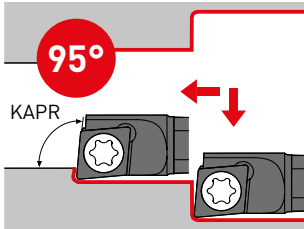
### WSKAZÓWKI DOTYCZĄCE STOSOWANIA PŁYTEK TYPU CPGT, TPGX / TPMX

Zmieniając wkręt mocujący można zastosować płytki wymienione w poniższej tabeli.

| Oznaczenie płytki   | Wkręt dociskowy | Oznaczenie płytki        | Wkręt dociskowy |
|---------------------|-----------------|--------------------------|-----------------|
| CPGT0802○○ (Ø7.94)  | TS3             | TPGX0802○○ (Ø4.76)       | CS200T          |
| CPGT0903○○ (Ø9.525) | TS4             | TPGX/TPMX0902○○ (Ø5.56)  | CS250T          |
|                     |                 | TPGX/TPMX1103○○ (Ø9.525) | CS300890T       |

# C-SCLC

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, BEZ KANAŁU CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

CC $\odot$  $\odot$ -Płytki



{03,04}

PCBN/PCD



{03,04}

| Numer zamówieniowy | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki  |
|--------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|--------------------|
| C05-04SCLCR03-080  | ●          | R              | 5    | 4      | 80 | 7     | 2.5 | 3.7 | 15°  | 0°   | CC $\odot$ $\odot$ |
| C05-04SCLCL03-080  | ●          | L              | 5    | 4      | 80 | 7     | 2.5 | 3.7 | 15°  | 0°   |                    |
| C06-05SCLCR03-080  | ●          | R              | 6    | 5      | 80 | 9     | 3.0 | 4.7 | 13°  | 0°   |                    |
| C06-05SCLCL03-080  | ●          | L              | 6    | 5      | 80 | 9     | 3.0 | 4.7 | 13°  | 0°   |                    |
| C07-06SCLCR04-090  | ●          | R              | 7    | 6      | 90 | 9     | 3.5 | 5.7 | 13°  | 0°   |                    |
| C07-06SCLCL04-090  | ●          | L              | 7    | 6      | 90 | 9     | 3.5 | 5.7 | 13°  | 0°   |                    |
| C08-07SCLCR04-090  | ●          | R              | 8    | 7      | 90 | 10    | 4.0 | 6.7 | 11°  | 0°   |                    |
| C08-07SCLCL04-090  | ●          | L              | 8    | 7      | 90 | 10    | 4.0 | 6.7 | 11°  | 0°   |                    |

1/1



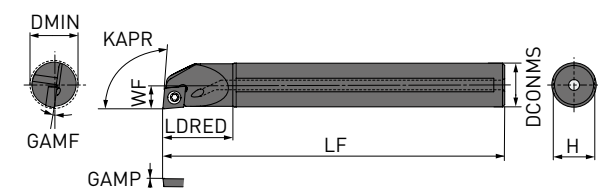
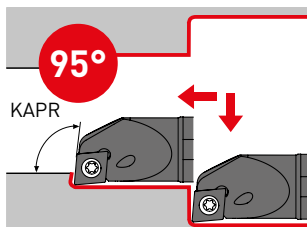
## CZĘŚCI ZAPASOWE

| Oznaczenie noża                     | Wkręt dociskowy * | Klucz  |
|-------------------------------------|-------------------|--------|
| C $\odot$ $\odot$ $\odot$ SCLCR/L03 | TS16              | TKY06F |
| C $\odot$ $\odot$ $\odot$ SCLCR/L04 | TS21              | TKY06F |

\* Moment dokręcenia (Nm): TS16 = 0.6, TS21 = 0.6

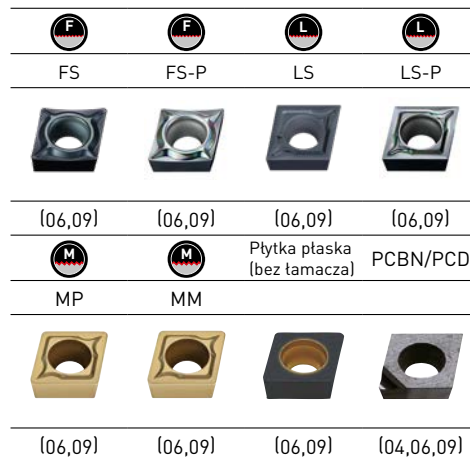
# C-SCLC-C

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

CC $\circ$  $\circ$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki                       |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|---|
| C09-08SCLCR04-090-C | ●          | R              | 9    | 8      | 90  | 14    | 4.5  | 7  | 10°  | 0°   | 04T0 $\circ$ $\circ$                    |
| C10-08SCLCR04-090-C | ●          | R              | 10   | 8      | 90  | 14    | 5.0  | 7  | 9°   | 0°   | 04T0 $\circ$ $\circ$                    |
| C10-08SCLCR06-140-C | ●          | R              | 10   | 8      | 140 | 14    | 5.0  | 7  | 9°   | 0°   | 0602 $\circ$ $\circ$                    |
| C10-08SCLCL06-140-C | ●          | L              | 10   | 8      | 140 | 14    | 5.0  | 7  | 9°   | 0°   | 0602 $\circ$ $\circ$                    |
| C12-10SCLCR06-140-C | ●          | R              | 12   | 10     | 140 | 18    | 6.0  | 9  | 12°  | 0°   | 0602 $\circ$ $\circ$                    |
| C12-10SCLCL06-140-C | ●          | L              | 12   | 10     | 140 | 18    | 6.0  | 9  | 12°  | 0°   | 0602 $\circ$ $\circ$                    |
| C14-12SCLCR06-140-C | ●          | R              | 14   | 12     | 140 | 23    | 7.0  | 11 | 10°  | 0°   | CC $\circ$ $\circ$ 0602 $\circ$ $\circ$ |
| C14-12SCLCL06-140-C | ●          | L              | 14   | 12     | 140 | 23    | 7.0  | 11 | 10°  | 0°   | 0602 $\circ$ $\circ$                    |
| C18-16SCLCR09-180-C | ●          | R              | 18   | 16     | 180 | 28    | 9.0  | 15 | 10°  | 0°   | 09T3 $\circ$ $\circ$                    |
| C18-16SCLCL09-180-C | ●          | L              | 18   | 16     | 180 | 28    | 9.0  | 15 | 10°  | 0°   | 09T3 $\circ$ $\circ$                    |
| C22-20SCLCR09-180-C | ●          | R              | 22   | 20     | 180 | 32    | 11.0 | 19 | 8°   | 0°   | 09T3 $\circ$ $\circ$                    |
| C27-25SCLCR09-180-C | ★          | R              | 27   | 25     | 180 | 38    | 13.5 | 24 | 6°   | 0°   | 09T3 $\circ$ $\circ$                    |
| C34-32SCLCR09-180-C | ★          | R              | 34   | 32     | 180 | 48    | 17.0 | 31 | 4°   | 0°   | 09T3 $\circ$ $\circ$                    |

1/1



## CZĘŚCI ZAPASOWE

Oznaczenie noża



Wkręt dociskowy \*

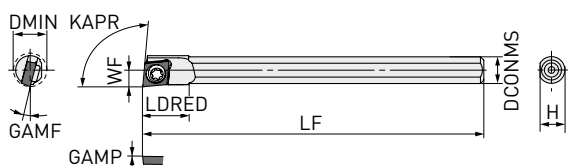
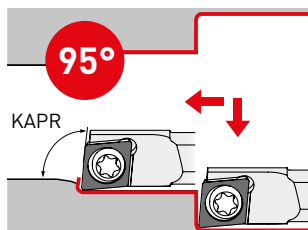
Klucz

|   |      |        |
|---|------|--------|
| C $\circ$ $\circ$ $\circ$ $\circ$ SCLCR04   | TS21 | TKY06F |
| C $\circ$ $\circ$ $\circ$ $\circ$ SCLCR/L06 | TS25 | TKY08F |
| C $\circ$ $\circ$ $\circ$ $\circ$ SCLCR/L09 | TS4  | TKY15F |

\* Moment dokręcenia (Nm): TS21 = 0.6, TS25 = 1.0, TS4 = 3.5

# H-SCLC

## CHWYT Z TWARDEJ STALI, BEZ KANAŁU CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

CC $\odot$ -Płytki



| Numer zamówieniowy | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF   | H   | GAMF | GAMP | Oznaczenie płytki       |
|--------------------|------------|----------------|------|--------|----|-------|------|-----|------|------|-------------------------|
| H05-04SCLCR03-070  | ●          | R              | 5    | 4      | 70 | 7     | 2.5  | 3.7 | 15°  | 0°   | 03S1 $\odot$            |
| H05-04SCLCL03-070  | ●          | L              | 5    | 4      | 70 | 7     | 2.5  | 3.7 | 15°  | 0°   | 03S1 $\odot$            |
| H055-04SCLCR03-070 | ●          | R              | 5.5  | 4      | 70 | 7     | 2.95 | 3.7 | 15°  | 0°   | 03S1 $\odot$            |
| H06-05SCLCR03-070  | ●          | R              | 6    | 5      | 70 | 9     | 3.0  | 4.7 | 13°  | 0°   | 03S1 $\odot$            |
| H06-05SCLCL03-070  | ●          | L              | 6    | 5      | 70 | 9     | 3.0  | 4.7 | 13°  | 0°   | 03S1 $\odot$            |
| H07-06SCLCR04-080  | ●          | R              | 7    | 6      | 80 | 10    | 3.5  | 5.7 | 13°  | 0°   | 04T0 $\odot$            |
| H07-06SCLCL04-080  | ●          | L              | 7    | 6      | 80 | 10    | 3.5  | 5.7 | 13°  | 0°   | CC $\odot$ 04T0 $\odot$ |
| H08-07SCLCR04-080  | ●          | R              | 8    | 7      | 80 | 11    | 4.0  | 6.7 | 11°  | 0°   | 04T0 $\odot$            |
| H08-07SCLCL04-080  | ●          | L              | 8    | 7      | 80 | 11    | 4.0  | 6.7 | 11°  | 0°   | 04T0 $\odot$            |
| H09-08SCLCR04-080  | ●          | R              | 9    | 8      | 80 | 16    | 4.5  | 7.7 | 10°  | 0°   | 04T0 $\odot$            |
| H10-08SCLCR04-080  | ●          | R              | 10   | 8      | 80 | 16    | 5.0  | 7.7 | 9°   | 0°   | 04T0 $\odot$            |
| H10-08SCLCR06-090  | ●          | R              | 10   | 8      | 90 | 16    | 5.0  | 7.7 | 14°  | 0°   | 0602 $\odot$            |
| H10-08SCLCL06-090  | ●          | L              | 10   | 8      | 90 | 16    | 5.0  | 7.7 | 14°  | 0°   | 0602 $\odot$            |

1/1



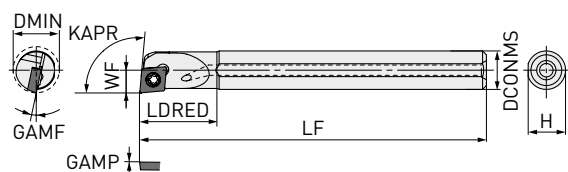
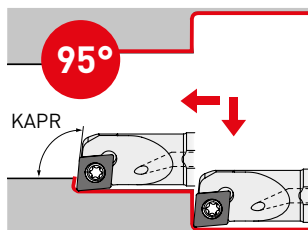
## CZĘŚCI ZAPASOWE

| Oznaczenie noża               | Wkręt dociskowy * | Klucz  |
|-------------------------------|-------------------|--------|
| H $\odot$ - $\odot$ SCLCR/L03 | TS16              | TKY06F |
| H $\odot$ - $\odot$ SCLCR/L04 | TS21              | TKY06F |
| H $\odot$ - $\odot$ SCLCR/L06 | TS25              | TKY08F |

\* Moment dokręcenia (Nm): TS16 = 0.6, TS21 = 0.6, TS25 = 1.0

# H-SCLC-C

## CHWYT Z TWARDEJ STALI, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

CC $\odot$ -Płytki




| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki       |
|---------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|-------------------------|
| H12-10SCLCR06-090-C | ●          | R              | 12   | 10     | 90 | 20    | 6.0 | 9.7 | 12°  | 0°   | CC $\odot$ 0602 $\odot$ |
| H12-10SCLCL06-090-C | ●          | L              | 12   | 10     | 90 | 20    | 6.0 | 9.7 | 12°  | 0°   | CC $\odot$ 0602 $\odot$ |

1/1



## CZĘŚCI ZAPASOWE

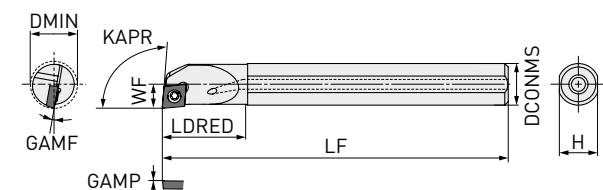
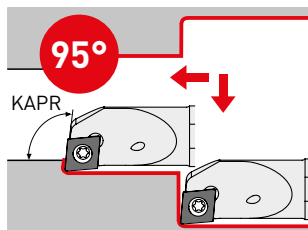
| Oznaczenie noża                     |  Wkręt dociskowy * |  Klucz |
|-------------------------------------|---|---|
| H $\odot$ $\odot$ $\odot$ SCLCR/L06 | TS25  | TKY08F  |

\* Moment dokręcenia (Nm): TS25 = 1.0



# S-SCLC-C

## NÓŻ WYTACZARSKI Z CHWYTEM STALOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

CC<sup>00</sup>-Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki                   |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------------------------|
| S14-12SCLCR06-090-C | ●          | R              | 14   | 12     | 90  | 24    | 7.0  | 11 | 10°  | 0°   | 0602 <sup>00</sup>                  |
| S14-12SCLCL06-090-C | ●          | L              | 14   | 12     | 90  | 24    | 7.0  | 11 | 10°  | 0°   | 0602 <sup>00</sup>                  |
| S18-16SCLCR09-150-C | ●          | R              | 18   | 16     | 150 | 30    | 9.0  | 15 | 10°  | 0°   | 09T3 <sup>00</sup>                  |
| S18-16SCLCL09-150-C | ●          | L              | 18   | 16     | 150 | 30    | 9.0  | 15 | 10°  | 0°   | 09T3 <sup>00</sup>                  |
| S22-20SCLCR09-150-C | ●          | R              | 22   | 20     | 150 | 36    | 11.0 | 19 | 8°   | 0°   | 09T3 <sup>00</sup>                  |
| S22-20SCLCL09-150-C | ●          | L              | 22   | 20     | 150 | 36    | 11.0 | 19 | 8°   | 0°   | CC <sup>00</sup> 09T3 <sup>00</sup> |
| S27-25SCLCR09-150-C | ●          | R              | 27   | 25     | 150 | 46    | 13.5 | 24 | 6°   | 0°   | 09T3 <sup>00</sup>                  |
| S27-25SCLCL09-150-C | ●          | L              | 27   | 25     | 150 | 46    | 13.5 | 24 | 6°   | 0°   | 09T3 <sup>00</sup>                  |
| S34-32SCLCR09-150-C | ●          | R              | 34   | 32     | 150 | 58    | 17.0 | 31 | 4°   | 0°   | 09T3 <sup>00</sup>                  |
| S34-32SCLCL09-150-C | ★          | L              | 34   | 32     | 150 | 58    | 17.0 | 31 | 4°   | 0°   | 09T3 <sup>00</sup>                  |

1/1



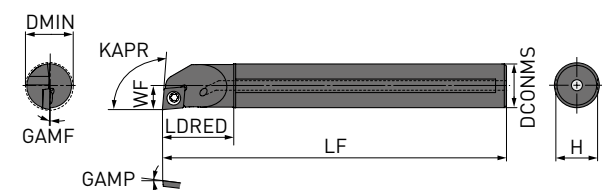
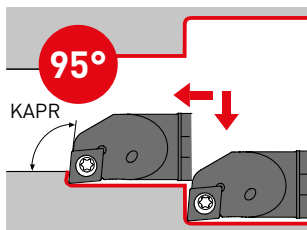
## CZĘŚCI ZAPASOWE

| Oznaczenie noża                                       | Wkręt dociskowy * | Klucz  |
|---|-------------------|--------|
| S14-12SCLCR/L06                                       | TS25              | TKY08F |
| S <sup>00</sup> <sup>00</sup> <sup>00</sup> SCLCR/L09 | TS4               | TKY15F |

\* Moment dokręcenia (Nm): TS25 = 1.0, TS4 = 3.5

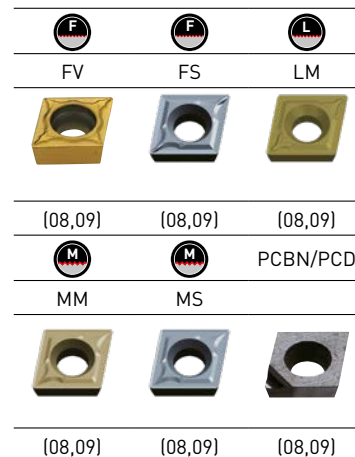
# C-SCLP-C

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

CP<sup>○○</sup>-Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------|
| C12-10SCLPR08-140-C | ●          | R              | 12   | 10     | 140 | 18    | 6.0  | 9  | 5°   | 5°   | CP <sup>○○</sup>  |
| C12-10SCLPL08-140-C | ●          | L              | 12   | 10     | 140 | 18    | 6.0  | 9  | 5°   | 5°   |                   |
| C14-12SCLPR08-140-C | ●          | R              | 14   | 12     | 140 | 23    | 7.0  | 11 | 4°   | 5°   |                   |
| C14-12SCLPL08-140-C | ●          | L              | 14   | 12     | 140 | 23    | 7.0  | 11 | 4°   | 5°   |                   |
| C16-12SCLPR09-140-C | ●          | R              | 16   | 12     | 140 | 23    | 8.0  | 11 | 4°   | 5°   |                   |
| C16-12SCLPL09-140-C | ●          | L              | 16   | 12     | 140 | 23    | 8.0  | 11 | 4°   | 5°   |                   |
| C18-16SCLPR09-180-C | ●          | R              | 18   | 16     | 180 | 28    | 9.0  | 15 | 3.5° | 5°   |                   |
| C18-16SCLPL09-180-C | ●          | L              | 18   | 16     | 180 | 28    | 9.0  | 15 | 3.5° | 5°   |                   |
| C22-20SCLPR09-180-C | ●          | R              | 22   | 20     | 180 | 32    | 11.0 | 19 | 2°   | 5°   |                   |
| C22-20SCLPL09-180-C | ●          | L              | 22   | 20     | 180 | 32    | 11.0 | 19 | 2°   | 5°   |                   |
| C27-25SCLPR09-180-C | ★          | R              | 27   | 25     | 180 | 38    | 13.5 | 24 | 0°   | 5°   |                   |
| C30-25SCLPR09-180-C | ★          | R              | 30   | 25     | 180 | 38    | 15.0 | 24 | 0°   | 5°   |                   |

1/1



## CZĘŚCI ZAPASOWE

Oznaczenie noża



Wkręt dociskowy \*

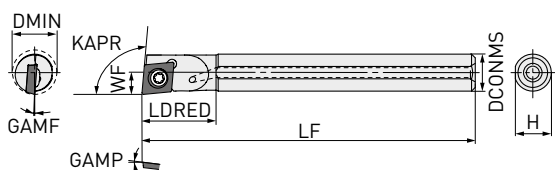
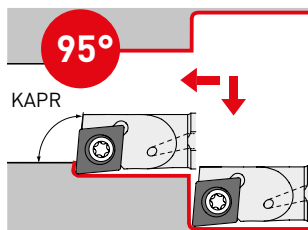
Klucz

|   |      |        |
|---|------|--------|
| C <sup>○○</sup> - <sup>○○</sup> SCLPR/L08 | TS3D | TKY10F |
| C <sup>○○</sup> - <sup>○○</sup> SCLPR/L09 | TS4D | TKY15F |

\* Moment dokręcenia (Nm): TS3D = 2.5, TS4D = 3.5  
Aby użyć innej płytki, należy zmienić wkręt mocujący. Szczegóły patrz str. 3.

# H-SCLP-C

## CHWYT Z TWARDEJ STALI, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

CP<sup>○○</sup>-Płytki

|      |      |                             |          |
|------|------|-----------------------------|----------|
|      |      |                             |          |
| FP   | FM   | LP                          | LM       |
|      |      |                             |          |
| (08) | (08) | (08)                        | (08)     |
|      |      | Płytki płaska (bez tamacza) | PCBN/PCD |
| MP   | MM   |                             |          |
|      |      |                             |          |
| (08) | (08) | (08)                        | (08)     |

| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki                   |
|---------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|-------------------------------------|
| H12-10SCLPR08-090-C | ●          | R              | 12   | 10     | 90 | 20    | 6.0 | 9.7 | 5°   | 5°   | CP <sup>○○</sup> 0802 <sup>○○</sup> |
| H12-10SCLPL08-090-C | ●          | L              | 12   | 10     | 90 | 20    | 6.0 | 9.7 | 5°   | 5°   | CP <sup>○○</sup> 0802 <sup>○○</sup> |

1/1



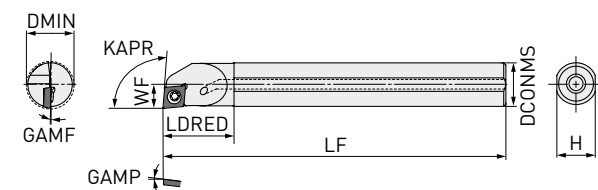
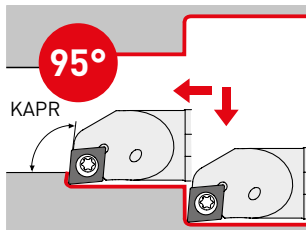
## CZĘŚCI ZAPASOWE

| Oznaczenie noża | Wkręt dociskowy * | Klucz  |
|-----------------|-------------------|--------|
| H12-10SCLPR/L08 | TS3D              | TKY10F |

\* Moment dokręcenia (Nm): TS3D = 2.5

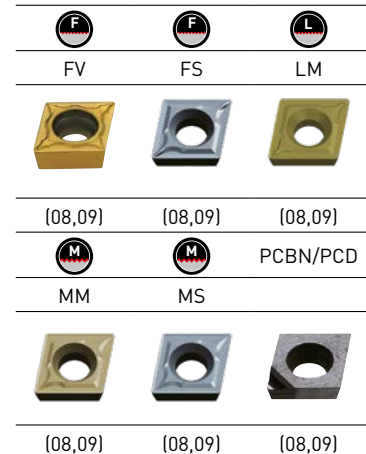
# S-SCLP-C

## NÓŻ WYTACZARSKI Z CHWYTEM STALOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

CP $\odot\odot$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------|
| S14-12SCLPR08-090-C | ●          | R              | 14   | 12     | 90  | 24    | 7.0  | 11 | 4°   | 5°   | CP $\odot\odot$   |
| S14-12SCLPL08-090-C | ●          | L              | 14   | 12     | 90  | 24    | 7.0  | 11 | 4°   | 5°   |                   |
| S16-12SCLPR09-090-C | ★          | R              | 16   | 12     | 90  | 24    | 8.0  | 11 | 4°   | 5°   |                   |
| S16-12SCLPL09-090-C | ★          | L              | 16   | 12     | 90  | 24    | 8.0  | 11 | 4°   | 5°   |                   |
| S18-16SCLPR09-150-C | ★          | R              | 18   | 16     | 150 | 30    | 9.0  | 15 | 3.5° | 5°   |                   |
| S18-16SCLPL09-150-C | ★          | L              | 18   | 16     | 150 | 30    | 9.0  | 15 | 3.5° | 5°   |                   |
| S22-20SCLPR09-150-C | ★          | R              | 22   | 20     | 150 | 36    | 11.0 | 19 | 2°   | 5°   |                   |
| S22-20SCLPL09-150-C | ★          | L              | 22   | 20     | 150 | 36    | 11.0 | 19 | 2°   | 5°   |                   |
| S27-25SCLPR09-150-C | ★          | R              | 27   | 25     | 150 | 46    | 13.5 | 24 | 0°   | 5°   |                   |
| S27-25SCLPL09-150-C | ★          | L              | 27   | 25     | 150 | 46    | 13.5 | 24 | 0°   | 5°   |                   |
| S30-25SCLPR09-150-C | ●          | R              | 30   | 25     | 150 | 46    | 15.0 | 24 | 0°   | 5°   |                   |
| S30-25SCLPL09-150-C | ★          | L              | 30   | 25     | 150 | 46    | 15.0 | 24 | 0°   | 5°   |                   |

1/1



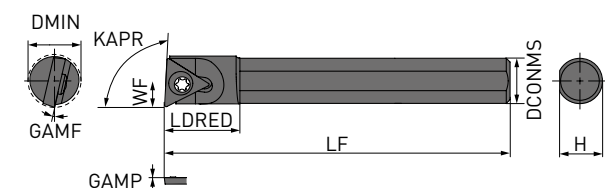
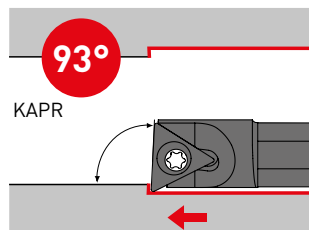
## CZĘŚCI ZAPASOWE

| Oznaczenie noża                    | Wkręt dociskowy * | Klucz  |
|------------------------------------|-------------------|--------|
| S14-12SCLPR/L08                    | TS3D              | TKY10F |
| S $\odot\odot\odot\odot$ SCLPR/L09 | TS4D              | TKY15F |

\* Moment dokręcenia (Nm): TS3D = 2.5, TS4D = 3.5  
Aby użyć innej płytki, należy zmienić wkręt mocujący. Szczegóły patrz str. 3.

# C-STUC

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, BEZ KANAŁU CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

TC-00-Płytki



{06}

| Numer zamówieniowy | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki |
|--------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|-------------------|
| C07-06STUCR06-090  | ●          | R              | 7    | 6      | 90 | 10    | 3.5 | 5.7 | 13°  | 0°   | TC-00             |
| C07-06STUCL06-090  | ●          | L              | 7    | 6      | 90 | 10    | 3.5 | 5.7 | 13°  | 0°   |                   |
| C08-07STUCR06-090  | ●          | R              | 8    | 7      | 90 | 10    | 4.0 | 6.7 | 12°  | 0°   | TC-00             |
| C08-07STUCL06-090  | ●          | L              | 8    | 7      | 90 | 10    | 4.0 | 6.7 | 12°  | 0°   |                   |

1/1



## CZĘŚCI ZAPASOWE

Oznaczenie noża



Wkręt dociskowy \*



Klucz

C-00-00STUCR/L06

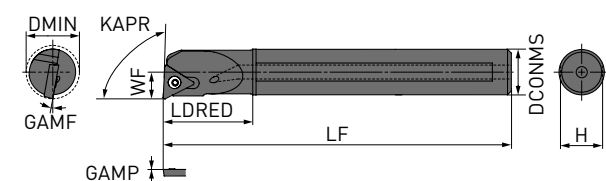
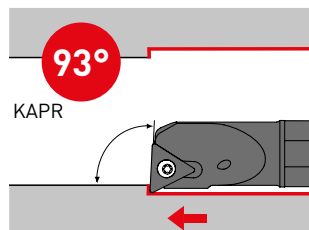
TS2C

TKY06F

\* Moment dokręcenia (Nm): TS2C = 0.6

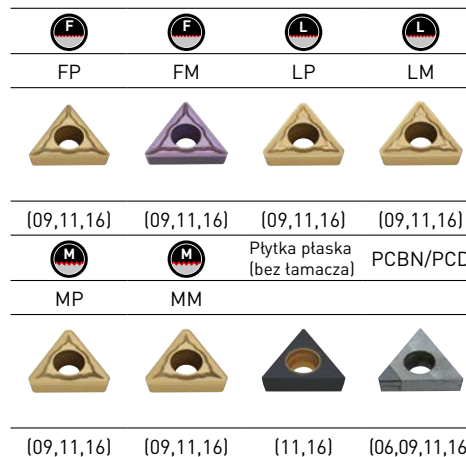
# C-STUC-C

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

TC $\odot$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki       |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------------|
| C09-08STUCR06-090-C | ●          | R              | 9    | 8      | 90  | 14    | 4.5  | 7  | 11°  | 0°   | 0601 $\odot$            |
| C10-08STUCR09-090-C | ●          | R              | 10   | 8      | 90  | 14    | 5.0  | 7  | 14°  | 0°   | 0902 $\odot$            |
| C10-08STUCL09-090-C | ●          | L              | 10   | 8      | 90  | 14    | 5.0  | 7  | 14°  | 0°   | 0902 $\odot$            |
| C12-10STUCR09-140-C | ●          | R              | 12   | 10     | 140 | 18    | 6.2  | 9  | 12°  | 0°   | 0902 $\odot$            |
| C12-10STUCL09-140-C | ●          | L              | 12   | 10     | 140 | 18    | 6.2  | 9  | 12°  | 0°   | 0902 $\odot$            |
| C14-12STUCR09-140-C | ●          | R              | 14   | 12     | 140 | 23    | 7.2  | 11 | 10°  | 0°   | 0902 $\odot$            |
| C14-12STUCL09-140-C | ●          | L              | 14   | 12     | 140 | 23    | 7.2  | 11 | 10°  | 0°   | 0902 $\odot$            |
| C18-16STUCR11-180-C | ●          | R              | 18   | 16     | 180 | 28    | 9.2  | 15 | 8°   | 0°   | TC $\odot$ 1102 $\odot$ |
| C18-16STUCL11-180-C | ●          | L              | 18   | 16     | 180 | 28    | 9.2  | 15 | 8°   | 0°   | 1102 $\odot$            |
| C22-20STUCR11-180-C | ●          | R              | 22   | 20     | 180 | 32    | 11.2 | 19 | 6°   | 0°   | 1102 $\odot$            |
| C22-20STUCL11-180-C | ●          | L              | 22   | 20     | 180 | 32    | 11.2 | 19 | 6°   | 0°   | 1102 $\odot$            |
| C27-20STUCR11-180-C | ●          | R              | 27   | 20     | 180 | 32    | 13.5 | 19 | 5°   | 0°   | 1102 $\odot$            |
| C27-20STUCL11-180-C | ●          | L              | 27   | 20     | 180 | 32    | 13.5 | 19 | 5°   | 0°   | 1102 $\odot$            |
| C32-25STUCR16-180-C | ●          | R              | 32   | 25     | 180 | 38    | 17.0 | 24 | 5°   | 0°   | 16T3 $\odot$            |
| C32-25STUCL16-180-C | ★          | L              | 32   | 25     | 180 | 38    | 17.0 | 24 | 5°   | 0°   | 16T3 $\odot$            |

1/1



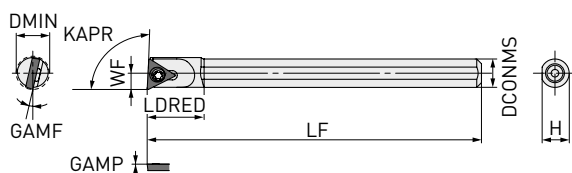
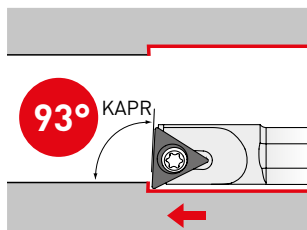
## CZĘŚCI ZAPASOWE

| Oznaczenie noża                     | Wkręt dociskowy * | Klucz  |
|-------------------------------------|-------------------|--------|
| C09-08STUCR06                       | TS2C              | TKY06F |
| C $\odot$ $\odot$ $\odot$ STUCR/L09 | TS22              | TKY06F |
| C $\odot$ $\odot$ $\odot$ STUCR/L11 | TS25              | TKY08F |
| C32-25STUCR/L16                     | TS4               | TKY15F |

\* Moment dokręcenia (Nm): TS2C = 0.6, TS22 = 0.6, TS25 = 1.0, TS4 = 3.5

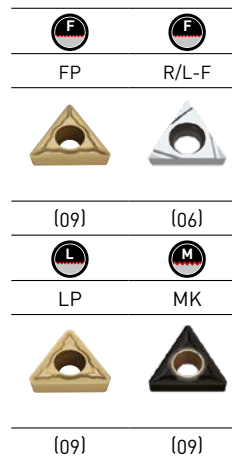
# H-STUC

## CHWYT Z TWARDEJ STALI, BEZ KANAŁU CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

TC<sup>○○</sup>-Płytki





| Numer zamówieniowy | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki                   |
|--------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|-------------------------------------|
| H07-06STUCR06-080  | ●          | R              | 7    | 6      | 80 | 12    | 3.5 | 5.7 | 13°  | 0°   | 0601 <sup>○○</sup>                  |
| H07-06STUCL06-080  | ●          | L              | 7    | 6      | 80 | 12    | 3.5 | 5.7 | 13°  | 0°   | 0601 <sup>○○</sup>                  |
| H08-07STUCR06-080  | ●          | R              | 8    | 7      | 80 | 12    | 4.0 | 6.7 | 12°  | 0°   | 0601 <sup>○○</sup>                  |
| H08-07STUCL06-080  | ●          | L              | 8    | 7      | 80 | 12    | 4.0 | 6.7 | 12°  | 0°   | TC <sup>○○</sup> 0601 <sup>○○</sup> |
| H09-08STUCR06-080  | ●          | R              | 9    | 8      | 80 | 16    | 4.5 | 7.7 | 11°  | 0°   | 0601 <sup>○○</sup>                  |
| H10-08STUCR09-080  | ●          | R              | 10   | 8      | 80 | 16    | 5.0 | 7.7 | 14°  | 0°   | 0902 <sup>○○</sup>                  |
| H10-08STUCL09-080  | ●          | L              | 10   | 8      | 80 | 16    | 5.0 | 7.7 | 14°  | 0°   | 0902 <sup>○○</sup>                  |

1/1



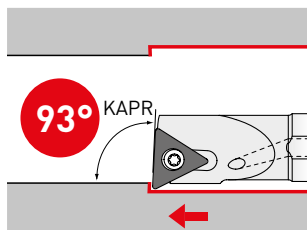
## CZĘŚCI ZAPASOWE

| Oznaczenie noża                           |  Wkręt dociskowy * |  Klucz |
|---|---|---|
| H <sup>○○</sup> - <sup>○○</sup> STUCR/L06 | TS2C  | TKY06F  |
| H <sup>○○</sup> - <sup>○○</sup> STUCR/L09 | TS22  | TKY06F  |

\* Moment dokręcenia (Nm): TS2C = 0.6, TS22 = 0.6

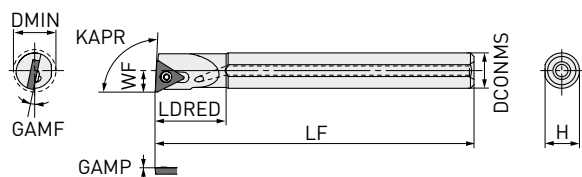
# H-STUC-C

## CHWYT Z TWARDEJ STALI, Z KANAŁEM CHŁODZIWA



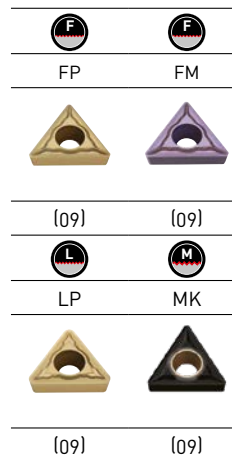
93°

KAPR



Na rysunku pokazano oprawkę w wykonaniu prawym.

TC<sup>00</sup>-Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki                   |
|---------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|-------------------------------------|
| H12-10STUCR09-090-C | ●          | R              | 12   | 10     | 90 | 20    | 6.2 | 9.7 | 12°  | 0°   | TC <sup>00</sup> 0902 <sup>00</sup> |
| H12-10STUCL09-090-C | ●          | L              | 12   | 10     | 90 | 20    | 6.2 | 9.7 | 12°  | 0°   | TC <sup>00</sup> 0902 <sup>00</sup> |

1/1



## CZĘŚCI ZAPASOWE

Oznaczenie noża



Wkręt dociskowy \*



Klucz

H<sup>00</sup>-<sup>00</sup>STUCR/L09

TS22

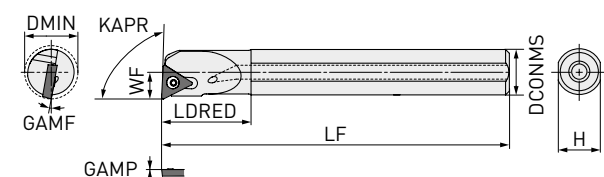
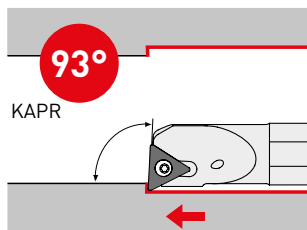
TKY06F

\* Moment dokręcenia (Nm): TS22 = 0.6



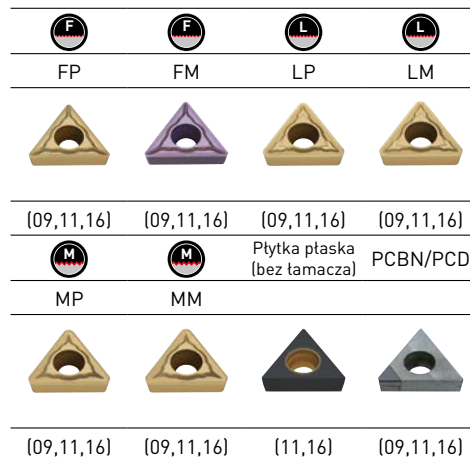
# S-STUC-C

## NÓŻ WYTACZARSKI Z CHWYTEM STALOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

TC<sup>○○</sup>-Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki                   |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------------------------|
| S14-12STUCR09-090-C | ●          | R              | 14   | 12     | 90  | 24    | 7.2  | 11 | 10°  | 0°   | 0902 <sup>○○</sup>                  |
| S14-12STUCL09-090-C | ●          | L              | 14   | 12     | 90  | 24    | 7.2  | 11 | 10°  | 0°   | 0902 <sup>○○</sup>                  |
| S18-16STUCR11-150-C | ●          | R              | 18   | 16     | 150 | 30    | 9.2  | 15 | 8°   | 0°   | 1102 <sup>○○</sup>                  |
| S18-16STUCL11-150-C | ●          | L              | 18   | 16     | 150 | 30    | 9.2  | 15 | 8°   | 0°   | 1102 <sup>○○</sup>                  |
| S22-20STUCR11-150-C | ●          | R              | 22   | 20     | 150 | 36    | 11.2 | 19 | 6°   | 0°   | 1102 <sup>○○</sup>                  |
| S22-20STUCL11-150-C | ●          | L              | 22   | 20     | 150 | 36    | 11.2 | 19 | 6°   | 0°   | 1102 <sup>○○</sup>                  |
| S27-20STUCR11-150-C | ●          | R              | 27   | 20     | 150 | 36    | 13.5 | 19 | 5°   | 0°   | TC <sup>○○</sup> 1102 <sup>○○</sup> |
| S27-20STUCL11-150-C | ●          | L              | 27   | 20     | 150 | 36    | 13.5 | 19 | 5°   | 0°   | 1102 <sup>○○</sup>                  |
| S32-25STUCR16-150-C | ●          | R              | 32   | 25     | 150 | 46    | 17.0 | 24 | 5°   | 0°   | 16T3 <sup>○○</sup>                  |
| S32-25STUCL16-150-C | ●          | L              | 32   | 25     | 150 | 46    | 17.0 | 24 | 5°   | 0°   | 16T3 <sup>○○</sup>                  |
| S40-32STUCR16-150-C | ★          | R              | 40   | 32     | 150 | 58    | 22.0 | 31 | 3°   | 0°   | 16T3 <sup>○○</sup>                  |
| S40-32STUCL16-150-C | ★          | L              | 40   | 32     | 150 | 58    | 22.0 | 31 | 3°   | 0°   | 16T3 <sup>○○</sup>                  |

1/1



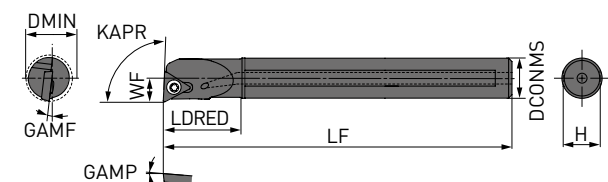
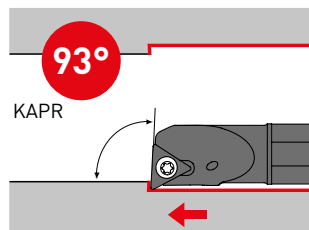
## CZĘŚCI ZAPASOWE

| Oznaczenie noża           | Wkręt dociskowy * | Klucz  |
|---------------------------|-------------------|--------|
| S14-12STUCR/L09           | TS22              | TKY06F |
| S <sup>○○</sup> STUCR/L11 | TS25              | TKY08F |
| S <sup>○○</sup> STUCR/L16 | TS4               | TKY15F |

\* Moment dokręcenia (Nm): TS22 = 0.6, TS25 = 1.0, TS4 = 3.5

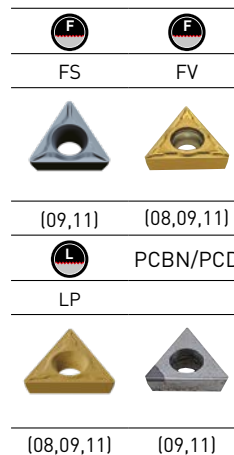
# C-STUP-C

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

TP $\odot\odot$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki                 |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-----------------------------------|
| C10-08STUPR08-090-C | ●          | R              | 10   | 8      | 90  | 14    | 5.0  | 7  | 10°  | 5°   | 0802 $\odot\odot$                 |
| C10-08STUPL08-090-C | ●          | L              | 10   | 8      | 90  | 14    | 5.0  | 7  | 10°  | 5°   | 0802 $\odot\odot$                 |
| C12-10STUPR09-140-C | ●          | R              | 12   | 10     | 140 | 18    | 6.2  | 9  | 8°   | 5°   | 0902 $\odot\odot$                 |
| C12-10STUPL09-140-C | ●          | L              | 12   | 10     | 140 | 18    | 6.2  | 9  | 8°   | 5°   | 0902 $\odot\odot$                 |
| C14-12STUPR09-140-C | ●          | R              | 14   | 12     | 140 | 23    | 7.2  | 11 | 7°   | 5°   | 0902 $\odot\odot$                 |
| C14-12STUPL09-140-C | ●          | L              | 14   | 12     | 140 | 23    | 7.2  | 11 | 7°   | 5°   | 0902 $\odot\odot$                 |
| C18-16STUPR11-180-C | ●          | R              | 18   | 16     | 180 | 28    | 9.2  | 15 | 3.5° | 5°   | TP $\odot\odot$ 1103 $\odot\odot$ |
| C18-16STUPL11-180-C | ★          | L              | 18   | 16     | 180 | 28    | 9.2  | 15 | 3.5° | 5°   | 1103 $\odot\odot$                 |
| C22-20STUPR11-180-C | ●          | R              | 22   | 20     | 180 | 32    | 11.2 | 19 | 2°   | 5°   | 1103 $\odot\odot$                 |
| C22-20STUPL11-180-C | ★          | L              | 22   | 20     | 180 | 32    | 11.2 | 19 | 2°   | 5°   | 1103 $\odot\odot$                 |
| C27-25STUPR11-180-C | ★          | R              | 27   | 25     | 180 | 38    | 13.7 | 24 | 0°   | 5°   | 1103 $\odot\odot$                 |
| C27-25STUPL11-180-C | ★          | L              | 27   | 25     | 180 | 38    | 13.7 | 24 | 0°   | 5°   | 1103 $\odot\odot$                 |
| C34-25STUPR11-180-C | ★          | R              | 34   | 25     | 180 | 38    | 17.2 | 24 | 0°   | 5°   | 1103 $\odot\odot$                 |
| C34-25STUPL11-180-C | ★          | L              | 34   | 25     | 180 | 38    | 17.2 | 24 | 0°   | 5°   | 1103 $\odot\odot$                 |

1/1



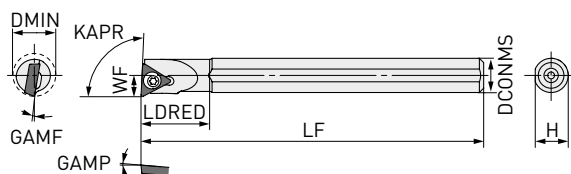
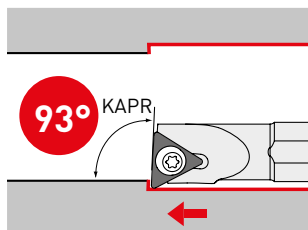
## CZĘŚCI ZAPASOWE

| Oznaczenie noża               | Wkręt dociskowy * | Klucz  |
|-------------------------------|-------------------|--------|
| C10-08STUPR/L08               | TS2D              | TKY06F |
| C $\odot\odot\odot$ STUPR/L09 | TS25D             | TKY08F |
| C $\odot\odot\odot$ STUPR/L11 | TS31D             | TKY10F |

\* Moment dokręcenia (Nm): TS2D = 0.6, TS25D = 1.6, TS31D = 2.5  
Aby użyć innej płytki, należy zmienić wkręt mocujący. Szczegóły patrz str. 3.

# H-STUP

## CHWYT Z TWARDEJ STALI, BEZ KANAŁU CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

TP○○-Płytki



| Numer zamówieniowy | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki |
|--------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|-------------------|
| H10-08STUPR08-080  | ●          | R              | 10   | 8      | 80 | 16    | 5.0 | 7.7 | 10°  | 5°   | TP○○ 0802○○       |
| H10-08STUPL08-080  | ●          | L              | 10   | 8      | 80 | 16    | 5.0 | 7.7 | 10°  | 5°   | TP○○ 0802○○       |

1/1



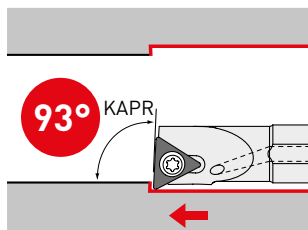
## CZĘŚCI ZAPASOWE

| Oznaczenie noża |  Wkręt dociskowy * |  Klucz |
|-----------------|---|---|
| H10-08STUPR/L08 | TS2D  | TKY06F  |

\* Moment dokręcenia (Nm): TS2D = 0.6

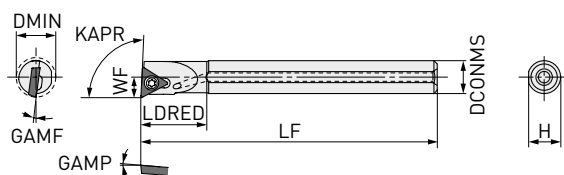
# H-STUP-C

## CHWYT Z TWARDEJ STALI, Z KANAŁEM CHŁODZIWA



93°

KAPR



Na rysunku pokazano oprawkę w wykonaniu prawym.

TP<sup>00</sup>-Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki                   |
|---------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|-------------------------------------|
| H12-10STUPR09-090-C | ●          | R              | 12   | 10     | 90 | 20    | 6.2 | 9.7 | 8°   | 5°   | TP <sup>00</sup> 0902 <sup>00</sup> |
| H12-10STUPL09-090-C | ●          | L              | 12   | 10     | 90 | 20    | 6.2 | 9.7 | 8°   | 5°   | TP <sup>00</sup> 0902 <sup>00</sup> |

1/1



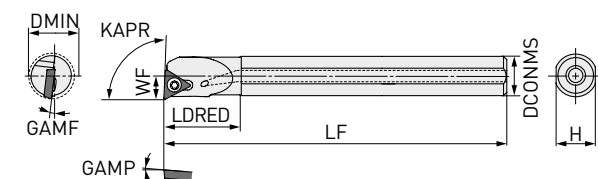
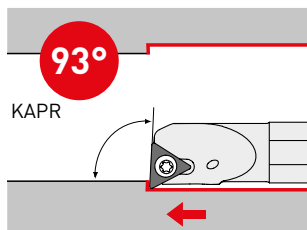
## CZĘŚCI ZAPASOWE

| Oznaczenie noża | Wkręt dociskowy * | Klucz  |
|-----------------|-------------------|--------|
| H12-10STUPR/L09 | TS25D             | TKY08F |

\* Moment dokręcenia (Nm): TS25D = 1.6

# S-STUP-C

## NÓŻ WYTACZARSKI Z CHWYTEM STALOWYM, Z KANAŁEM CHŁODZIWA

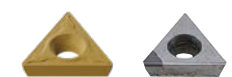


Na rysunku pokazano oprawkę w wykonaniu prawym.

TP<sup>○○</sup>-Płytki



(09,11) (08,09,11)



(08,09,11) (09,11)

| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------|
| S14-12STUPR09-090-C | ●          | R              | 14   | 12     | 90  | 24    | 7.2  | 11 | 7°   | 5°   | TP <sup>○○</sup>  |
| S14-12STUPL09-090-C | ●          | L              | 14   | 12     | 90  | 24    | 7.2  | 11 | 7°   | 5°   |                   |
| S18-16STUPR11-150-C | ●          | R              | 18   | 16     | 150 | 30    | 9.2  | 15 | 3.5° | 5°   | TP <sup>○○</sup>  |
| S18-16STUPL11-150-C | ●          | L              | 18   | 16     | 150 | 30    | 9.2  | 15 | 3.5° | 5°   |                   |
| S22-20STUPR11-150-C | ★          | R              | 22   | 20     | 150 | 36    | 11.2 | 19 | 2°   | 5°   | TP <sup>○○</sup>  |
| S22-20STUPL11-150-C | ★          | L              | 22   | 20     | 150 | 36    | 11.2 | 19 | 2°   | 5°   |                   |
| S27-25STUPR11-150-C | ★          | R              | 27   | 25     | 150 | 46    | 13.7 | 24 | 0°   | 5°   | TP <sup>○○</sup>  |
| S27-25STUPL11-150-C | ★          | L              | 27   | 25     | 150 | 46    | 13.7 | 24 | 0°   | 5°   |                   |
| S34-25STUPR11-150-C | ★          | R              | 34   | 25     | 150 | 46    | 17.2 | 24 | 0°   | 5°   | TP <sup>○○</sup>  |
| S34-25STUPL11-150-C | ★          | L              | 34   | 25     | 150 | 46    | 17.2 | 24 | 0°   | 5°   |                   |

1/1



## CZĘŚCI ZAPASOWE

Oznaczenie noża



Wkręt dociskowy \*



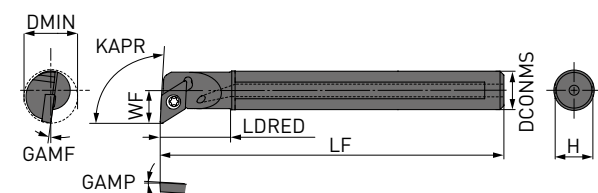
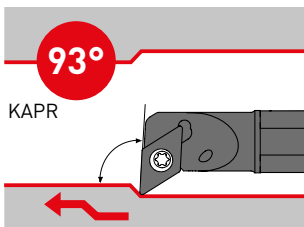
Klucz

|   |       |        |
|---|-------|--------|
| S14-12STUPR/L09                           | TS25D | TKY08F |
| S <sup>○○</sup> - <sup>○○</sup> STUPR/L11 | TS31D | TKY10F |

\* Moment dokręcenia (Nm): TS25D = 1.6, TS31D = 2.5  
Aby użyć innej płytki, należy zmienić wkręt mocujący. Patrz str. 3.

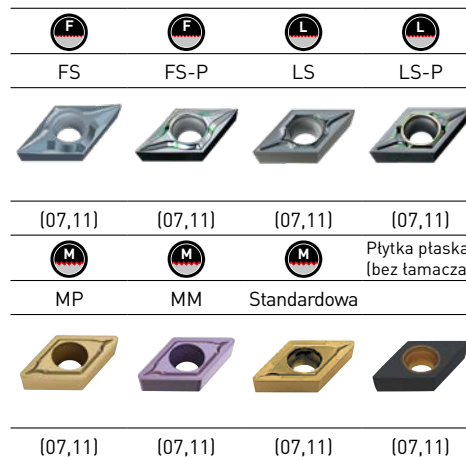
# C-SDUC-C

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

DC $\odot\odot$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------|
| C14-10SDUCR07-140-C | ●          | R              | 14   | 10     | 140 | 18    | 8.7  | 9  | 7.5° | 3°   | DC $\odot\odot$   |
| C14-10SDUCL07-140-C | ●          | L              | 14   | 10     | 140 | 18    | 8.7  | 9  | 7.5° | 3°   |                   |
| C16-12SDUCR07-180-C | ●          | R              | 16   | 12     | 180 | 23    | 9.7  | 11 | 6.5° | 3°   |                   |
| C16-12SDUCL07-180-C | ●          | L              | 16   | 12     | 180 | 23    | 9.7  | 11 | 6.5° | 3°   |                   |
| C20-16SDUCR07-180-C | ●          | R              | 20   | 16     | 180 | 28    | 11.7 | 15 | 5°   | 3°   |                   |
| C20-16SDUCL07-180-C | ●          | L              | 20   | 16     | 180 | 28    | 11.7 | 15 | 5°   | 3°   |                   |
| C23-16SDUCR07-180-C | ●          | R              | 23   | 16     | 180 | 28    | 14.5 | 15 | 5°   | 3°   |                   |
| C23-16SDUCL07-180-C | ●          | L              | 23   | 16     | 180 | 28    | 14.5 | 15 | 5°   | 3°   |                   |
| C27-20SDUCR11-180-C | ●          | R              | 27   | 20     | 180 | 32    | 16.5 | 19 | 5°   | 3°   |                   |
| C27-20SDUCL11-180-C | ●          | L              | 27   | 20     | 180 | 32    | 16.5 | 19 | 5°   | 3°   |                   |
| C32-25SDUCR11-180-C | ●          | R              | 32   | 25     | 180 | 38    | 19.0 | 24 | 5°   | 3°   |                   |
| C32-25SDUCL11-180-C | ★          | L              | 32   | 25     | 180 | 38    | 19.0 | 24 | 5°   | 3°   |                   |

1/1



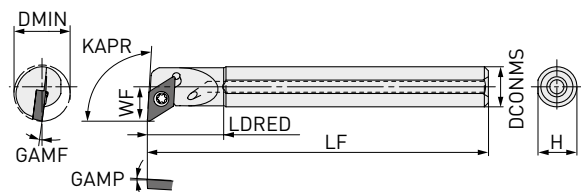
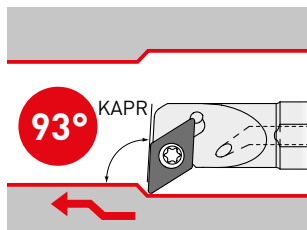
## CZĘŚCI ZAPASOWE

| Oznaczenie noża               | Wkręt dociskowy * | Klucz  |
|-------------------------------|-------------------|--------|
| C $\odot\odot\odot$ SDUCR/L07 | TS25              | TKY08F |
| C $\odot\odot\odot$ SDUCR/L11 | TS4               | TKY15F |

\* Moment dokręcenia (Nm): TS25 = 1.0, TS4 = 3.5

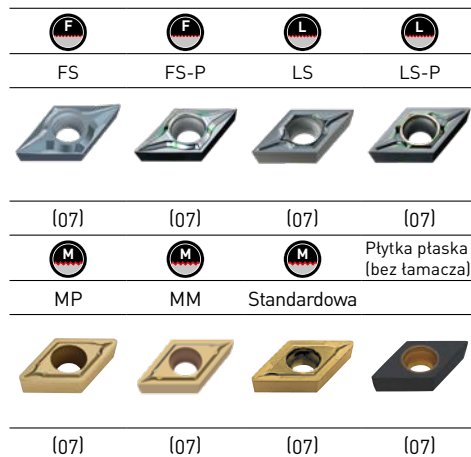
# H-SDUC-C

## CHWYT Z TWARDEJ STALI, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

DC $\odot$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki            |
|---------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|------------------------------|
| H14-10SDUCR07-090-C | ●          | R              | 14   | 10     | 90 | 19    | 8.7 | 9.7 | 7.5° | 3°   | DC $\odot$ 0702 $\odot\odot$ |
| H14-10SDUCL07-090-C | ●          | L              | 14   | 10     | 90 | 19    | 8.7 | 9.7 | 7.5° | 3°   | DC $\odot$ 0702 $\odot\odot$ |

1/1



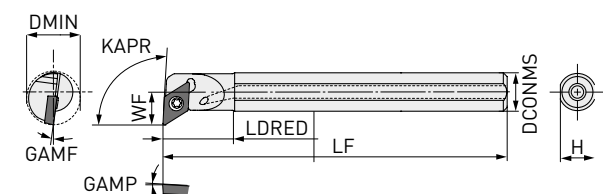
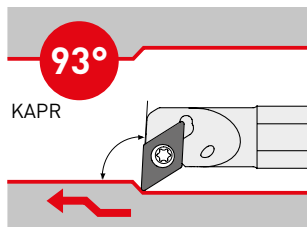
## CZĘŚCI ZAPASOWE

| Oznaczenie noża | Wkręt dociskowy * | Klucz  |
|-----------------|-------------------|--------|
| H14-10SDUCR/L07 | TS25              | TKY08F |

\* Moment dokręcenia (Nm): TS25 = 1.0

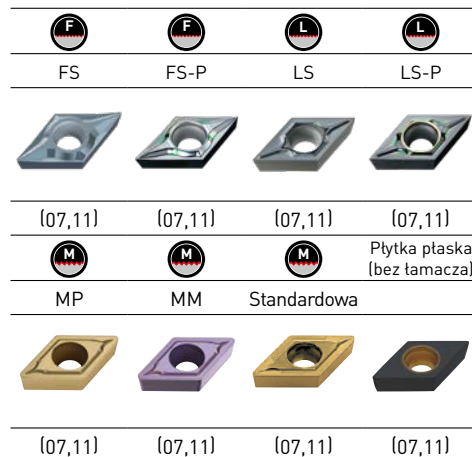
# S-SDUC-C

## NÓŻ WYTACZARSKI Z CHWYTEM STALOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

DC $\odot\odot$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------|
| S16-12SDUCR07-150-C | ●          | R              | 16   | 12     | 150 | 21    | 9.7  | 11 | 6.5° | 3°   | DC $\odot\odot$   |
| S16-12SDUCL07-150-C | ●          | L              | 16   | 12     | 150 | 21    | 9.7  | 11 | 6.5° | 3°   |                   |
| S20-16SDUCR07-150-C | ●          | R              | 20   | 16     | 150 | 21    | 11.7 | 15 | 5°   | 3°   |                   |
| S20-16SDUCL07-150-C | ●          | L              | 20   | 16     | 150 | 21    | 11.7 | 15 | 5°   | 3°   |                   |
| S23-16SDUCR07-150-C | ●          | R              | 23   | 16     | 150 | 21    | 14.5 | 15 | 5°   | 3°   |                   |
| S23-16SDUCL07-150-C | ●          | L              | 23   | 16     | 150 | 21    | 14.5 | 15 | 5°   | 3°   |                   |
| S27-20SDUCR11-150-C | ●          | R              | 27   | 20     | 150 | 23    | 16.5 | 19 | 5°   | 3°   |                   |
| S27-20SDUCL11-150-C | ●          | L              | 27   | 20     | 150 | 23    | 16.5 | 19 | 5°   | 3°   |                   |
| S32-25SDUCR11-150-C | ●          | R              | 32   | 25     | 150 | 24    | 19.0 | 24 | 5°   | 3°   |                   |
| S32-25SDUCL11-150-C | ●          | L              | 32   | 25     | 150 | 24    | 19.0 | 24 | 5°   | 3°   |                   |

1/1



## CZĘŚCI ZAPASOWE

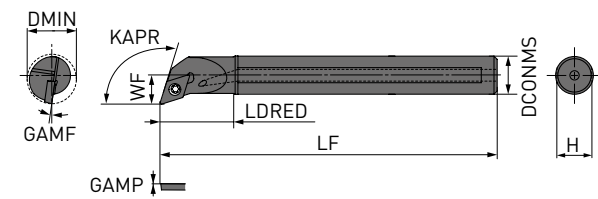
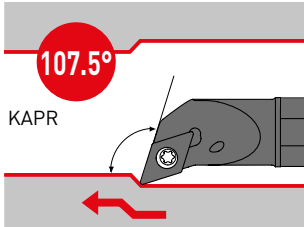
| Oznaczenie noża               | Wkręt dociskowy * | Klucz  |
|-------------------------------|-------------------|--------|
| S $\odot\odot\odot$ SDUCR/L07 | TS25              | TKY08F |
| S $\odot\odot\odot$ SDUCR/L11 | TS4               | TKY15F |

\* Moment dokręcenia (Nm): TS25 = 1.0, TS4 = 3.5



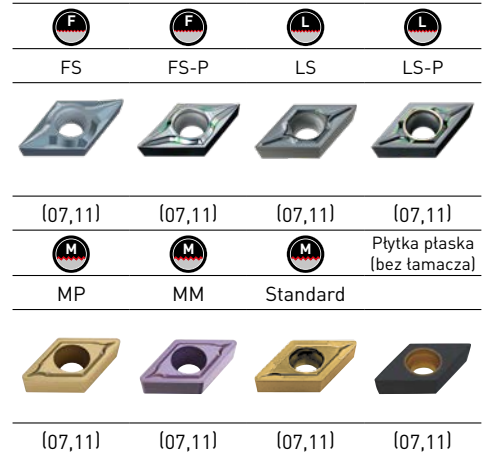
# C-SDQC-C

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

DC $\circ\circ$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------|
| C13-10SDQCR07-140-C | ●          | R              | 13   | 10     | 140 | 18    | 7.5  | 9  | 10°  | 0°   | DC $\circ\circ$   |
| C13-10SDQCL07-140-C | ●          | L              | 13   | 10     | 140 | 18    | 7.5  | 9  | 10°  | 0°   |                   |
| C16-12SDQCR07-140-C | ●          | R              | 16   | 12     | 140 | 23    | 9.25 | 11 | 8°   | 0°   |                   |
| C16-12SDQCL07-140-C | ●          | L              | 16   | 12     | 140 | 23    | 9.25 | 11 | 8°   | 0°   |                   |
| C20-16SDQCR07-180-C | ●          | R              | 20   | 16     | 180 | 28    | 11.3 | 15 | 6°   | 0°   |                   |
| C20-16SDQCL07-180-C | ●          | L              | 20   | 16     | 180 | 28    | 11.3 | 15 | 6°   | 0°   |                   |
| C23-16SDQCR07-180-C | ●          | R              | 23   | 16     | 180 | 28    | 12.8 | 15 | 5°   | 0°   |                   |
| C23-16SDQCL07-180-C | ●          | L              | 23   | 16     | 180 | 28    | 12.8 | 15 | 5°   | 0°   |                   |
| C25-20SDQCR11-180-C | ●          | R              | 25   | 20     | 180 | 32    | 14.4 | 19 | 5°   | 0°   |                   |
| C25-20SDQCL11-180-C | ●          | L              | 25   | 20     | 180 | 32    | 14.4 | 19 | 5°   | 0°   |                   |
| C30-25SDQCR11-180-C | ★          | R              | 30   | 25     | 180 | 38    | 16.9 | 24 | 4°   | 0°   |                   |
| C30-25SDQCL11-180-C | ★          | L              | 30   | 25     | 180 | 38    | 16.9 | 24 | 4°   | 0°   |                   |

1/1



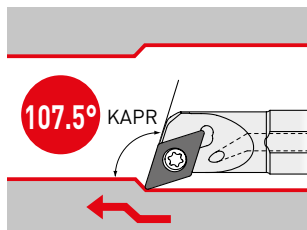
## CZĘŚCI ZAPASOWE

| Oznaczenie noża               | Wkręt dociskowy * | Klucz  |
|-------------------------------|-------------------|--------|
| C $\circ\circ\circ$ SDQCR/L07 | TS25              | TKY08F |
| C $\circ\circ\circ$ SDQCR/L11 | TS4               | TKY15F |

\* Moment dokręcenia (Nm): TS25 = 1.0, TS4 = 3.5

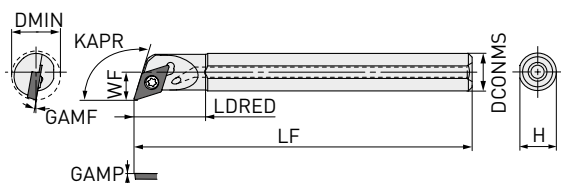
# H-SDQC-C

## CHWYT Z TWARDEJ STALI, Z KANAŁEM CHŁODZIWA



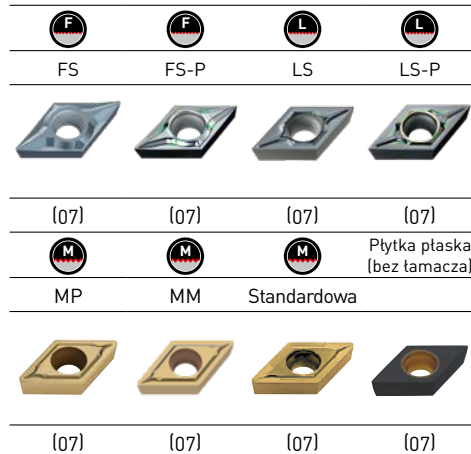
107.5°

KAPR



Na rysunku pokazano oprawkę w wykonaniu prawym.

DC $\odot$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF  | GAMP | Oznaczenie płytki       |
|---------------------|------------|----------------|------|--------|----|-------|-----|-----|-------|------|-------------------------|
| H13-10SDQCR07-090-C | ●          | R              | 13   | 10     | 90 | 19    | 7.5 | 9.7 | 10.0° | 0°   | DC $\odot$ 0702 $\odot$ |
| H13-10SDQCL07-090-C | ●          | L              | 13   | 10     | 90 | 19    | 7.5 | 9.7 | 10.0° | 0°   | DC $\odot$ 0702 $\odot$ |

1/1



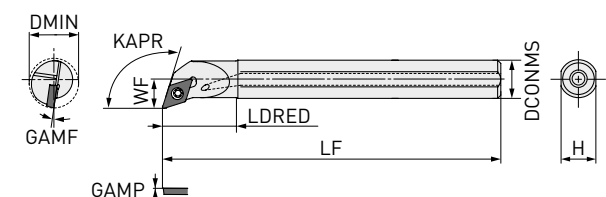
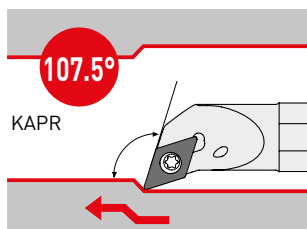
## CZĘŚCI ZAPASOWE

| Oznaczenie noża | Wkręt dociskowy * | Klucz  |
|-----------------|-------------------|--------|
| H13-10SDQCR/L07 | TS25              | TKY08F |

\* Moment dokręcenia (Nm): TS25 = 1.0

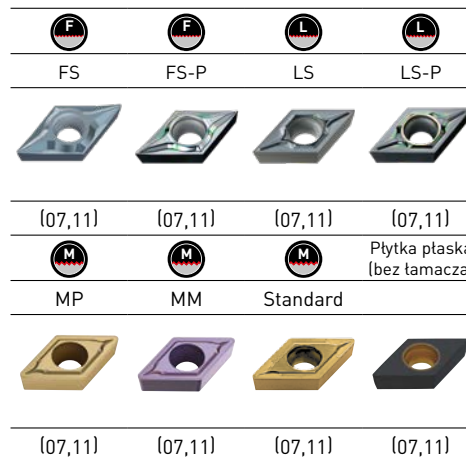
# S-SDQC-C

## NÓŻ WYTACZARSKI Z CHWYTEM STALOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

DC○○-Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki |        |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------|--------|
| S16-12SDQCR07-090-C | ●          | R              | 16   | 12     | 90  | 22    | 9.25 | 11 | 8°   | 0°   | DC○○              | 0702○○ |
| S16-12SDQCL07-090-C | ●          | L              | 16   | 12     | 90  | 22    | 9.25 | 11 | 8°   | 0°   |                   | 0702○○ |
| S20-16SDQCR07-150-C | ●          | R              | 20   | 16     | 150 | 25    | 11.3 | 15 | 6°   | 0°   |                   | 0702○○ |
| S20-16SDQCL07-150-C | ●          | L              | 20   | 16     | 150 | 25    | 11.3 | 15 | 6°   | 0°   |                   | 0702○○ |
| S23-16SDQCR07-150-C | ●          | R              | 23   | 16     | 150 | 25    | 12.8 | 15 | 5°   | 0°   |                   | 0702○○ |
| S23-16SDQCL07-150-C | ●          | L              | 23   | 16     | 150 | 25    | 12.8 | 15 | 5°   | 0°   |                   | 0702○○ |
| S25-20SDQCR11-150-C | ●          | R              | 25   | 20     | 150 | 31    | 14.4 | 19 | 5°   | 0°   |                   | 11T3○○ |
| S25-20SDQCL11-150-C | ●          | L              | 25   | 20     | 150 | 31    | 14.4 | 19 | 5°   | 0°   |                   | 11T3○○ |
| S30-25SDQCR11-150-C | ●          | R              | 30   | 25     | 150 | 38    | 16.9 | 24 | 4°   | 0°   |                   | 11T3○○ |
| S30-25SDQCL11-150-C | ●          | L              | 30   | 25     | 150 | 38    | 16.9 | 24 | 4°   | 0°   |                   | 11T3○○ |

1/1



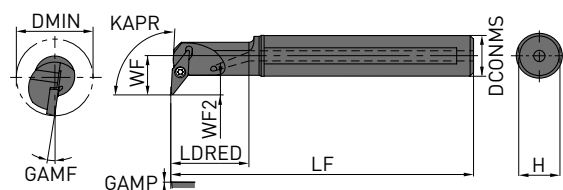
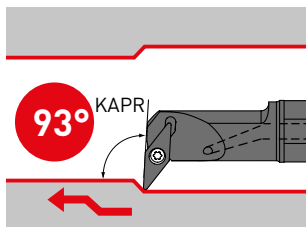
## CZĘŚCI ZAPASOWE

| Oznaczenie noża | Wkręt dociskowy * | Klucz  |
|-----------------|-------------------|--------|
| S○○○○SDQCR/L07  | TS25              | TKY08F |
| S○○○○SDQCR/L11  | TS4               | TKY15F |

\* Moment dokręcenia (Nm): TS25 = 1.0, TS4 = 3.5

# C-SVUC/B-C

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

VC/VB $\odot$ -Płytki

|         |            |             |            |
|---------|------------|-------------|------------|
|         |            |             |            |
| FP      | FM         | LP          | LM         |
|         |            |             |            |
| {11,16} | {08,11,16} | {08,11,16}  | {08,11,16} |
|         |            |             | PCBN/PCD   |
| MP      | MM         | Standardowa |            |
|         |            |             |            |
| {16}    | {16}       | {16}        | {11,16}    |

| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | WF2 | H  | GAMF | GAMP | Oznaczenie płytki       |
|---------------------|------------|----------------|------|--------|-----|-------|------|-----|----|------|------|-------------------------|
| C16-12SVUCR08-140-C | ●          | R              | 16   | 12     | 140 | 23    | 11.5 | 5.6 | 11 | 8°   | 0°   | VC $\odot$              |
| C20-16SVUBR11-180-C | ●          | R              | 20   | 16     | 180 | 28    | 16.0 | 8.1 | 15 | 8°   | 0°   | 1103 $\odot$            |
| C20-16SVUBL11-180-C | ●          | L              | 20   | 16     | 180 | 28    | 16.0 | 8.1 | 15 | 8°   | 0°   | 1103 $\odot$            |
| C25-20SVUBR11-180-C | ●          | R              | 25   | 20     | 180 | 32    | 18.0 | 8.1 | 19 | 7°   | 0°   | VB $\odot$ 1103 $\odot$ |
| C30-20SVUBR11-180-C | ●          | R              | 30   | 20     | 180 | 32    | 18.0 | 8.1 | 19 | 6°   | 0°   | 1103 $\odot$            |
| C34-25SVUBR16-180-C | ●          | R              | 34   | 25     | 180 | 38    | 20.5 | 8.4 | 24 | 13°  | 0°   | 1604 $\odot$            |

1/1



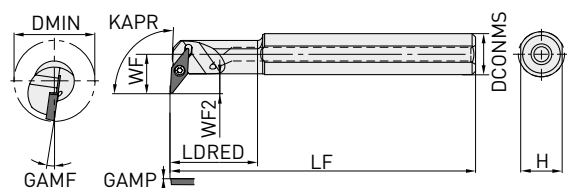
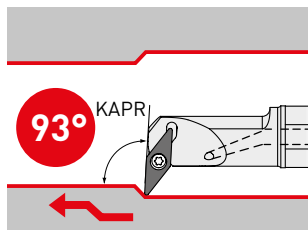
## CZĘŚCI ZAPASOWE

| Oznaczenie noża                     | Wkręt dociskowy * | Klucz  |
|-------------------------------------|-------------------|--------|
| C16-12SVUCR08                       | TS202             | TKY06F |
| C $\odot$ $\odot$ $\odot$ SVUBR/L11 | TS255             | TKY08F |
| C34-25SVUBR16                       | TS35D             | TKY15F |

\* Moment dokręcenia (Nm): TS202 = 0.6, TS255 = 1.0, TS35D = 3.5

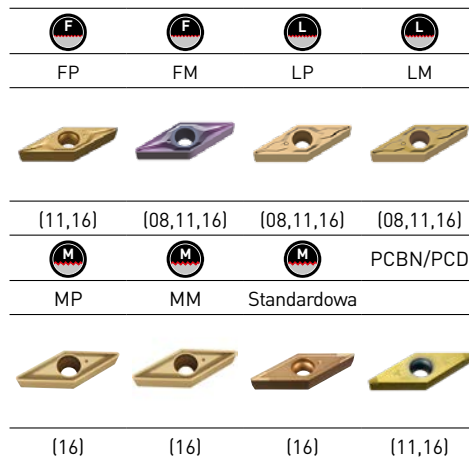
# S-SVUC/B-C

## NÓŻ WYTACZARSKI Z CHWYTEM STALOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

VC/VB $\odot$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | WF2  | H  | GAMF | GAMP | Oznaczenie płytki |              |
|---------------------|------------|----------------|------|--------|-----|-------|------|------|----|------|------|-------------------|--------------|
| S16-12SVUCR08-090-C | ●          | R              | 16   | 12     | 90  | 25.5  | 11.5 | 5.6  | 11 | 8°   | 0°   | VC $\odot$        | 0802 $\odot$ |
| S20-16SVUBR11-150-C | ●          | R              | 20   | 16     | 150 | 32.5  | 16.0 | 8.1  | 15 | 8°   | 0°   |                   | 1103 $\odot$ |
| S20-16SVUBL11-150-C | ●          | L              | 20   | 16     | 150 | 32.5  | 16.0 | 8.1  | 15 | 8°   | 0°   | VB $\odot$        | 1103 $\odot$ |
| S25-20SVUBR11-150-C | ●          | R              | 25   | 20     | 150 | 40.5  | 18.0 | 8.1  | 19 | 7°   | 0°   |                   | 1103 $\odot$ |
| S30-20SVUBR11-150-C | ●          | R              | 30   | 20     | 150 | 40.5  | 18.0 | 8.1  | 19 | 6°   | 0°   | 1103 $\odot$      |              |
| S34-25SVUBR16-150-C | ●          | R              | 34   | 25     | 150 | 40.0  | 20.5 | 8.4  | 24 | 13°  | 0°   | 1604 $\odot$      |              |
| S40-32SVUBR16-200-C | ●          | R              | 40   | 32     | 200 | 84.0  | 28.0 | 12.4 | 31 | 9°   | 0°   | 1604 $\odot$      |              |

1/1



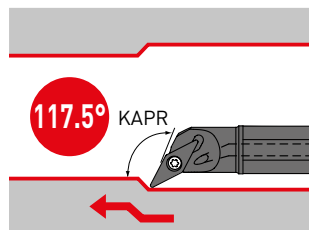
## CZĘŚCI ZAPASOWE

| Oznaczenie noża                     | Wkręt dociskowy * | Klucz  |
|-------------------------------------|-------------------|--------|
| S16-12SVUCR08                       | TS202             | TKY06F |
| S $\odot$ $\odot$ $\odot$ SVUBR/L11 | TS255             | TKY08F |
| S $\odot$ $\odot$ $\odot$ SVUBR16   | TS35D             | TKY15F |

\* Moment dokręcenia (Nm): TS202 = 0.6, TS255 = 1.0, TS35D = 3.5

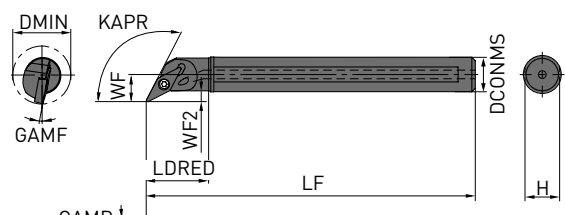
# C-SVPC/B-C

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, Z KANAŁEM CHŁODZIWA



117.5°

KAPR



Na rysunku pokazano oprawkę w wykonaniu prawym.

VC/VB $\odot$ -Płytki

|         |            |             |            |
|---------|------------|-------------|------------|
|         |            |             |            |
| FP      | FM         | LP          | LM         |
|         |            |             |            |
| [11,16] | [08,11,16] | [08,11,16]  | [08,11,16] |
|         |            |             | PCBN/PCD   |
| MP      | MM         | Standardowa |            |
|         |            |             |            |
| [16]    | [16]       | [16]        | [11,16]    |

| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | WF2 | H  | GAMF | GAMP | Oznaczenie płytki |
|---------------------|------------|----------------|------|--------|-----|-------|------|-----|----|------|------|-------------------|
| C16-10SVPCR08-140-C | ●          | R              | 16   | 10     | 140 | 18    | 8.0  | 3.1 | 9  | 8°   | -5°  | VC $\odot$        |
| C16-10SVPCL08-140-C | ●          | L              | 16   | 10     | 140 | 18    | 8.0  | 3.1 | 9  | 8°   | -5°  |                   |
| C20-12SVPBR11-180-C | ●          | R              | 20   | 12     | 180 | 23    | 10.0 | 4.1 | 11 | 8°   | -5°  | VB $\odot$        |
| C20-12SVPBL11-180-C | ●          | L              | 20   | 12     | 180 | 23    | 10.0 | 4.1 | 11 | 8°   | -5°  |                   |
| C25-16SVPBR11-180-C | ●          | R              | 25   | 16     | 180 | 28    | 12.5 | 4.6 | 15 | 6°   | -5°  | VB $\odot$        |
| C25-16SVPBL11-180-C | ●          | L              | 25   | 16     | 180 | 28    | 12.5 | 4.6 | 15 | 6°   | -5°  |                   |
| C30-20SVPBR11-180-C | ●          | R              | 30   | 20     | 180 | 32    | 15.0 | 5.1 | 19 | 5°   | -5°  | 1103 $\odot$      |
| C34-25SVPBR16-180-C | ●          | R              | 34   | 25     | 180 | 38    | 17.0 | 4.9 | 24 | 13°  | -5°  | 1604 $\odot$      |

1/1



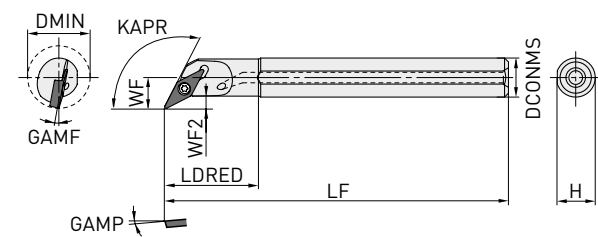
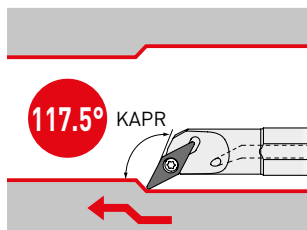
## CZĘŚCI ZAPASOWE

| Oznaczenie noża                   | Wkręt dociskowy * | Klucz  |
|-----------------------------------|-------------------|--------|
| C16-10SVPCR/L08                   | TS202             | TKY06F |
| $\odot$ $\odot$ $\odot$ SVPBR/L11 | TS255             | TKY08F |
| C34-25SVPBR16                     | TS35D             | TKY15F |

\* Moment dokręcenia (Nm): TS202 = 0.6, TS255 = 1.0, TS35D = 3.5

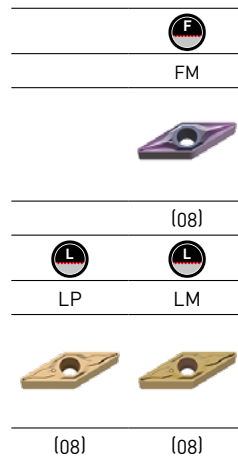
# H-SVPC-C

## CHWYT Z TWARDEJ STALI, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

VC $\odot\odot$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | WF2 | H   | GAMF | GAMP | Oznaczenie płytki                 |
|---------------------|------------|----------------|------|--------|----|-------|-----|-----|-----|------|------|-----------------------------------|
| H16-10SVPCR08-090-C | ●          | R              | 16   | 10     | 90 | 24    | 8.0 | 3.1 | 9.7 | 8.0° | -5°  | VC $\odot\odot$ 0802 $\odot\odot$ |

1/1



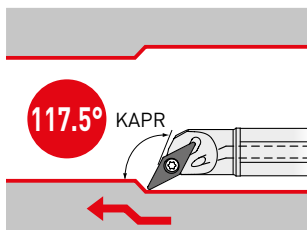
## CZĘŚCI ZAPASOWE

| Oznaczenie noża |  Wkręt dociskowy * |  Klucz |
|-----------------|---|---|
| H16-10SVPCR08   | TS202   | TKY06F  |

\* Moment dokręcenia (Nm): TS202 = 0.6

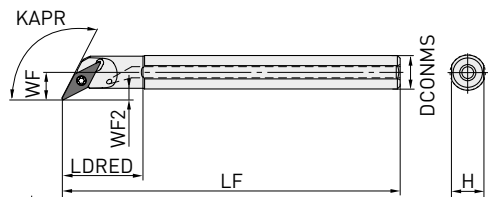
# S-SVPB-C

## NÓŻ WYTACZARSKI Z CHWYTEM STALOWYM, Z KANAŁEM CHŁODZIWA



117.5°

KAPR



Na rysunku pokazano oprawkę w wykonaniu prawym.

VB○○-Płytki

|         |            |             |            |
|---------|------------|-------------|------------|
|         |            |             |            |
| FP      | FM         | LP          | LM         |
|         |            |             |            |
| {11,16} | {08,11,16} | {08,11,16}  | {08,11,16} |
|         |            |             | PCBN/PCD   |
| MP      | MM         | Standardowa |            |
|         |            |             |            |
| {16}    | {16}       | {16}        | {11,16}    |

| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | WF2 | H  | GAMF | GAMP | Oznaczenie płytki |
|---------------------|------------|----------------|------|--------|-----|-------|------|-----|----|------|------|-------------------|
| S20-12SVPBR11-150-C | ●          | R              | 20   | 12     | 150 | 29    | 10.0 | 4.1 | 11 | 8°   | -5°  | 1103○○            |
| S20-12SVPBL11-150-C | ●          | L              | 20   | 12     | 150 | 29    | 10.0 | 4.1 | 11 | 8°   | -5°  | 1103○○            |
| S25-16SVPBR11-150-C | ●          | R              | 25   | 16     | 150 | 35    | 12.5 | 4.6 | 15 | 6°   | -5°  | 1103○○            |
| S25-16SVPBL11-150-C | ●          | L              | 25   | 16     | 150 | 35    | 12.5 | 4.6 | 15 | 6°   | -5°  | VB○○ 1103○○       |
| S30-20SVPBR11-150-C | ●          | R              | 30   | 20     | 150 | 41    | 15.0 | 5.1 | 19 | 5°   | -5°  | 1103○○            |
| S34-25SVPBR16-150-C | ●          | R              | 34   | 25     | 150 | 51    | 17.0 | 4.9 | 24 | 13°  | -5°  | 1604○○            |
| S40-32SVPBR16-200-C | ●          | R              | 40   | 32     | 200 | 54    | 22.0 | 6.4 | 31 | 9°   | -5°  | 1604○○            |

1/1



## CZĘŚCI ZAPASOWE

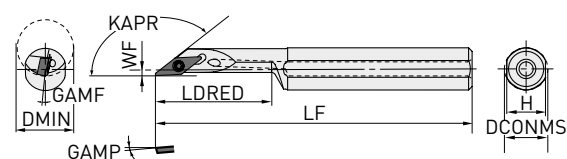
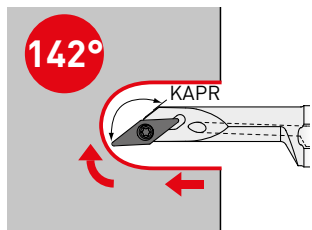
| Oznaczenie noża | Wkręt dociskowy * | Klucz  |
|-----------------|-------------------|--------|
| S○○○○SVPBR/L11  | TS255             | TKY08F |
| S○○○○SVPBR16    | TS35D             | TKY15F |

\* Moment dokręcenia (Nm): TS255 = 1.0, TS35D = 3.5



# S-SVJC/B-C

## NÓŻ WYTACZARSKI Z CHWYTEM STALOWYM, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

VC/VB $\odot$ -Płytki

|         |            |             |            |
|---------|------------|-------------|------------|
|         |            |             |            |
| FP      | FM         | LP          | LM         |
|         |            |             |            |
| {11,16} | {08,11,16} | {08,11,16}  | {08,11,16} |
|         |            |             | PCBN/PCD   |
| MP      | MM         | Standardowa |            |
|         |            |             |            |
| {16}    | {16}       | {16}        | {11,16}    |

| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF  | H  | GAMF | GAMP | Oznaczenie płytki |
|---------------------|------------|----------------|------|--------|-----|-------|-----|----|------|------|-------------------|
| S16-12SVJCR08-090-C | ●          | R              | 16   | 12     | 90  | 33    | 2.0 | 11 | 6°   | -5°  | VC $\odot$        |
| S20-16SVJCR08-150-C | ●          | R              | 20   | 16     | 150 | 43    | 2.0 | 15 | 5°   | -5°  | VC $\odot$        |
| S25-20SVJBR11-150-C | ●          | R              | 25   | 20     | 150 | 48    | 2.0 | 19 | 6°   | -5°  | VB $\odot$        |
| S30-25SVJBR11-150-C | ●          | R              | 30   | 25     | 150 | 58    | 3.5 | 24 | 5°   | -5°  | VB $\odot$        |
| S40-32SVJBR16-200-C | ●          | R              | 40   | 32     | 200 | 74    | 3.5 | 31 | 8°   | -5°  | VB $\odot$        |
| S50-40SVJBR16-250-C | ●          | R              | 50   | 40     | 250 | 91    | 4.5 | 39 | 7°   | -5°  | VB $\odot$        |

1/1



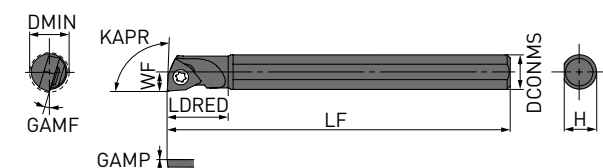
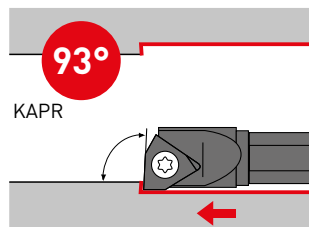
## CZĘŚCI ZAPASOWE

| Oznaczenie noża                   | Wkręt dociskowy * | Klucz  |
|-----------------------------------|-------------------|--------|
| S $\odot$ $\odot$ $\odot$ SVJCR08 | TS202             | TKY06F |
| S $\odot$ $\odot$ $\odot$ SVJBR11 | TS255             | TKY08F |
| S $\odot$ $\odot$ $\odot$ SVJBR16 | TS35D             | TKY15F |

\* Moment dokręcenia (Nm): TS202 = 0.6, TS255 = 1.0, TS35D = 3.5

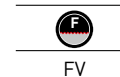
# C-SWUC

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, BEZ KANAŁU CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

WC $\odot\odot$ -Płytki



(02,L3)

PCBN/PCD





(L3)

| Numer zamówieniowy | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki |
|--------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|-------------------|
| C06-05SWUCR02-080  | ●          | R              | 6    | 5      | 80 | 9     | 3.0 | 4.7 | 17°  | 0°   | WC $\odot\odot$   |
| C06-05SWUCL02-080  | ●          | L              | 6    | 5      | 80 | 9     | 3.0 | 4.7 | 17°  | 0°   |                   |
| C08-07SWUCRL3-090  | ●          | R              | 8    | 7      | 90 | 10    | 4.0 | 6.7 | 15°  | 0°   | WC $\odot\odot$   |
| C08-07SWUCLL3-090  | ●          | L              | 8    | 7      | 90 | 10    | 4.0 | 6.7 | 15°  | 0°   |                   |

1/1



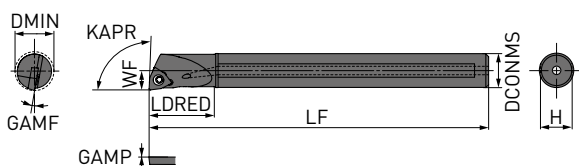
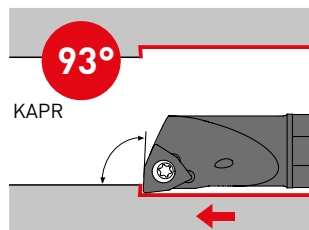
## CZĘŚCI ZAPASOWE

| Oznaczenie noża |  Wkręt dociskowy * |  Klucz |
|-----------------|---|---|
| C06-05SWUCR/L02 | TS21  | TKY06F  |
| C08-07SWUCR/LL3 | TS2   | TKY06F  |

\* Moment dokręcenia [Nm]: TS21 = 0.6, TS2 = 0.6

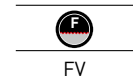
# C-SWUC-C

## NÓŻ WYTACZARSKI Z CHWYTEM WĘGLIKOWYM, Z KANAŁEM CHŁODZIWA

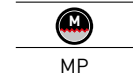


Na rysunku pokazano oprawkę w wykonaniu prawym.

WC $\odot\odot$ -Płytki



(04,06)



(04,06)

| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki                 |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-----------------------------------|
| C10-08SWUCR04-090-C | ●          | R              | 10   | 8      | 90  | 14    | 5.0  | 7  | 15°  | 0°   | 0402 $\odot\odot$                 |
| C10-08SWUCL04-090-C | ●          | L              | 10   | 8      | 90  | 14    | 5.0  | 7  | 15°  | 0°   | 0402 $\odot\odot$                 |
| C12-10SWUCR04-090-C | ●          | R              | 12   | 10     | 90  | 18    | 6.0  | 9  | 12°  | 0°   | 0402 $\odot\odot$                 |
| C12-10SWUCL04-090-C | ●          | L              | 12   | 10     | 90  | 18    | 6.0  | 9  | 12°  | 0°   | 0402 $\odot\odot$                 |
| C14-12SWUCR04-140-C | ●          | R              | 14   | 12     | 140 | 23    | 7.0  | 11 | 10°  | 0°   | 0402 $\odot\odot$                 |
| C14-12SWUCL04-140-C | ●          | L              | 14   | 12     | 140 | 23    | 7.0  | 11 | 10°  | 0°   | 0402 $\odot\odot$                 |
| C16-12SWUCR06-140-C | ●          | R              | 16   | 12     | 140 | 23    | 8.0  | 11 | 12°  | 0°   | WC $\odot\odot$ 06T3 $\odot\odot$ |
| C16-12SWUCL06-140-C | ●          | L              | 16   | 12     | 140 | 23    | 8.0  | 11 | 12°  | 0°   | 06T3 $\odot\odot$                 |
| C18-16SWUCR06-140-C | ●          | R              | 18   | 16     | 140 | 28    | 9.0  | 15 | 10°  | 0°   | 06T3 $\odot\odot$                 |
| C18-16SWUCL06-140-C | ●          | L              | 18   | 16     | 140 | 28    | 9.0  | 15 | 10°  | 0°   | 06T3 $\odot\odot$                 |
| C22-20SWUCR06-180-C | ●          | R              | 22   | 20     | 180 | 32    | 11.0 | 19 | 7°   | 0°   | 06T3 $\odot\odot$                 |
| C22-20SWUCL06-180-C | ●          | L              | 22   | 20     | 180 | 32    | 11.0 | 19 | 7°   | 0°   | 06T3 $\odot\odot$                 |

1/1



## CZĘŚCI ZAPASOWE

Oznaczenie noża



Wkręt dociskowy \*

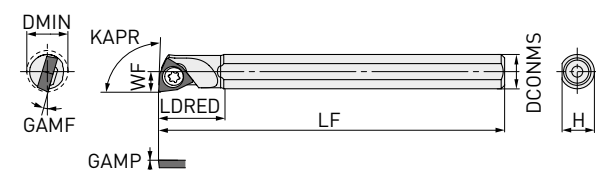
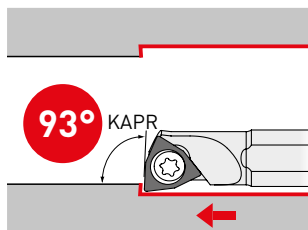
Klucz

|                               |      |        |
|-------------------------------|------|--------|
| C $\odot\odot\odot$ SWUCR/L04 | TS25 | TKY08F |
| C $\odot\odot\odot$ SWUCR/L06 | TS4  | TKY15F |

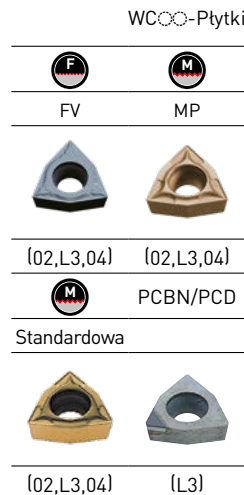
\* Moment dokręcenia (Nm): TS25 = 1.0, TS4 = 3.5

# H-SWUC

## CHWYT Z TWARDEJ STALI, BEZ KANAŁU CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.



| Numer zamówieniowy | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki   |
|--------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|---|
| H06-05SWUCR02-070  | ●          | R              | 6    | 5      | 70 | 9     | 3.0 | 4.7 | 17°  | 0°   | WC-Co<br>0201○○<br>0201○○<br>L302○○<br>L302○○<br>0402○○<br>0402○○ |
| H06-05SWUCL02-070  | ●          | L              | 6    | 5      | 70 | 9     | 3.0 | 4.7 | 17°  | 0°   |   |
| H08-07SWUCRL3-080  | ●          | R              | 8    | 7      | 80 | 11    | 4.0 | 6.7 | 15°  | 0°   |   |
| H08-07SWUCLL3-080  | ●          | L              | 8    | 7      | 80 | 11    | 4.0 | 6.7 | 15°  | 0°   |   |
| H10-08SWUCR04-080  | ●          | R              | 10   | 8      | 80 | 16    | 5.0 | 7.7 | 15°  | 0°   |   |
| H10-08SWUCL04-080  | ●          | L              | 10   | 8      | 80 | 16    | 5.0 | 7.7 | 15°  | 0°   |   |

1/1



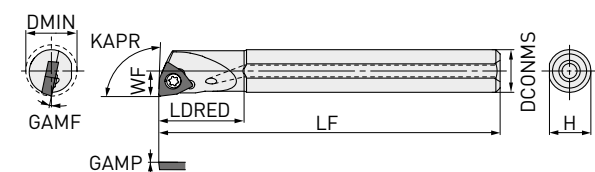
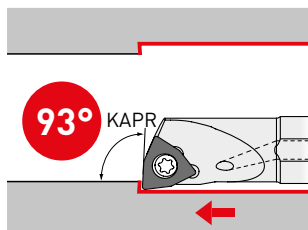
## CZĘŚCI ZAPASOWE

| Oznaczenie noża | Wkręt dociskowy * | Klucz  |
|-----------------|-------------------|--------|
| H06-05SWUCR/L02 | TS21              | TKY06F |
| H08-07SWUCR/LL3 | TS2               | TKY06F |
| H10-08SWUCR/L04 | TS25              | TKY08F |

\* Moment dokręcenia (Nm): TS21 = 0.6, TS2 = 0.6, TS25 = 1.0

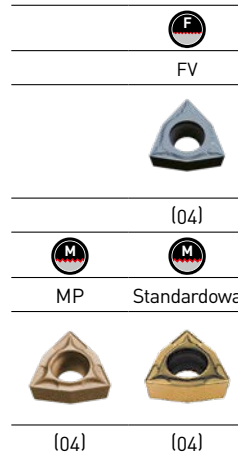
# H-SWUC-C

## CHWYT Z TWARDEJ STALI, Z KANAŁEM CHŁODZIWA



Na rysunku pokazano oprawkę w wykonaniu prawym.

WC $\odot\odot$ -Płytki



| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF | LDRED | WF  | H   | GAMF | GAMP | Oznaczenie płytki                 |
|---------------------|------------|----------------|------|--------|----|-------|-----|-----|------|------|-----------------------------------|
| H12-10SWUCR04-080-C | ●          | R              | 12   | 10     | 80 | 20    | 6.0 | 9.7 | 12°  | 0°   | WC $\odot\odot$ 0402 $\odot\odot$ |
| H12-10SWUCL04-080-C | ●          | L              | 12   | 10     | 80 | 20    | 6.0 | 9.7 | 12°  | 0°   | WC $\odot\odot$ 0402 $\odot\odot$ |

1/1



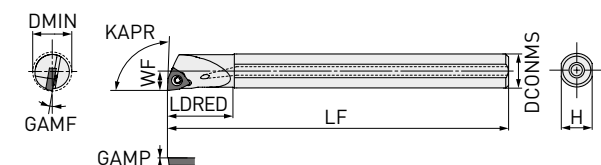
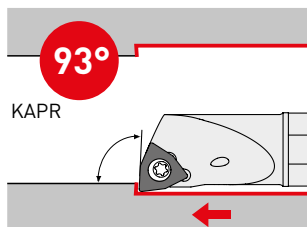
## CZĘŚCI ZAPASOWE

| Oznaczenie noża |  Wkręt dociskowy * |  Klucz |
|-----------------|---|---|
| H12-10SWUCR/L04 | TS25  | TKY08F  |

\* Moment dokręcenia (Nm): TS25 = 1.0

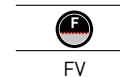
# S-SWUC-C

## NÓŻ WYTACZARSKI Z CHWYTEM STALOWYM, Z KANAŁEM CHŁODZIWA

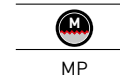


Na rysunku pokazano oprawkę w wykonaniu prawym.

WC $\odot\odot$ -Płytki



(04,06)



(04,06)

| Numer zamówieniowy  | Dostępność | Kierunek pracy | DMIN | DCONMS | LF  | LDRED | WF   | H  | GAMF | GAMP | Oznaczenie płytki |
|---------------------|------------|----------------|------|--------|-----|-------|------|----|------|------|-------------------|
| S14-12SWUCR04-090-C | ●          | R              | 14   | 12     | 90  | 24    | 7.0  | 11 | 10°  | 0°   | WC $\odot\odot$   |
| S14-12SWUCL04-090-C | ●          | L              | 14   | 12     | 90  | 24    | 7.0  | 11 | 10°  | 0°   |                   |
| S16-12SWUCR06-090-C | ●          | R              | 16   | 12     | 90  | 24    | 8.0  | 11 | 12°  | 0°   |                   |
| S16-12SWUCL06-090-C | ●          | L              | 16   | 12     | 90  | 24    | 8.0  | 11 | 12°  | 0°   |                   |
| S18-16SWUCR06-090-C | ●          | R              | 18   | 16     | 90  | 30    | 9.0  | 15 | 10°  | 0°   |                   |
| S18-16SWUCL06-090-C | ●          | L              | 18   | 16     | 90  | 30    | 9.0  | 15 | 10°  | 0°   |                   |
| S22-20SWUCR06-150-C | ●          | R              | 22   | 20     | 150 | 36    | 11.0 | 19 | 7°   | 0°   |                   |
| S22-20SWUCL06-150-C | ●          | L              | 22   | 20     | 150 | 36    | 11.0 | 19 | 7°   | 0°   |                   |

1/1



## CZĘŚCI ZAPASOWE

| Oznaczenie noża               | Wkręt dociskowy * | Klucz  |
|-------------------------------|-------------------|--------|
| S14-12SWUCR/L04               | TS25              | TKY08F |
| S $\odot\odot\odot$ SWUCR/L06 | TS4               | TKY15F |

\* Moment dokręcenia (Nm): TS25 = 1.0, TS4 = 3.5














PLYTKI TYPU CC, 80° Z OTWOREM



|   |                                |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |   |   |   |   |   |   |   |  |
|---|--------------------------------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|---|---|---|---|---|---|---|--|
| P | Stale                          | ●●●● | ⊕ | ⊕ | ⊕ | ⊕ |   |   |   |   |   | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ |   |   |  |  |  | ⊕ |   |   |   |   |   |   |  |
| M | Stale nierdzewne               |      |   |   | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |  |  |  | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ |  |
| K | Żeliwa                         |      |   |   |   |   |   |   | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |   |  |  |  |   |   |   |   |   |   |   |  |
| N | Metale nieżelazne              |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |   |   |   |   |   |   |   |  |
| S | Stopy zaroodporne stopy tytanu |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |   |   |   |   |   |   |   |  |

| Numer zamówieniowy | RE    | Pokrywy |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        | Cermetal pokrywy | Cermetal | Węglík |        |        |        |        |        | Kształt |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
|--------------------|-------|---------|--------|--------|--------|----------|----------|----------|----------|----------|--------|--------|--------|--------|--------|-------|--------|------------------|----------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|-------|--------|-------|-------|-------|--------|--------|--------|--------|--------|-----------------|---|
|                    |       | MS6015  | MC6115 | MG6125 | MC6135 | MC6015*1 | MC6025*1 | UE6105*1 | UE6110*1 | UE6020*1 | MS7025 | MC7015 | MC7025 | MP7035 | US7020 | US735 | MC5105 |                  |          | MC5115 | MC5125 | MS9025 | MP9005 | MP9015 | MP9025 |         | VP10RT | VP15TF | VP30RT | UP20M | MP3025 | AP25N | VP25N | VP45N | NX2525 | NX3035 | MT9005 | RT9010 | UT120T | HT105T          | HT110   |
| CCGT060201M-SMG    | 0.1*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT060202M-SMG    | 0.2*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        | ●      |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 | SMG   |
| CCGT060204M-SMG    | 0.4*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        | ●      |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |  |
| CCGT09T301M-SMG    | 0.1*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T302M-SMG    | 0.2*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T304M-SMG    | 0.4*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT0602V3R-SN     | 0.03  |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        | ●      |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        | Obróbka średnia |   |
| CCGT060201R-SN     | 0.1   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ★      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        | R/L-SN          |   |
| CCGT060201L-SN     | 0.1   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ★      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT060202R-SN     | 0.2   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ●      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT060202L-SN     | 0.2   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ●      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T3V3R-SN     | 0.03  |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ★      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T3V3L-SN     | 0.03  |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ★      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T301R-SN     | 0.1   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ●      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T301L-SN     | 0.1   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ★      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T302R-SN     | 0.2   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ●      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T302L-SN     | 0.2   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ●      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T304R-SN     | 0.4   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ●      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T304L-SN     | 0.4   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ●      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT060201MR-SN    | 0.1*2 | ●       |        |        |        |          |          |          | ●        |          |        |        |        |        |        |       |        |                  |          |        |        |        |        | ●      |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT060201ML-SN    | 0.1*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT060202MR-SN    | 0.2*2 | ●       |        |        |        |          |          |          | ●        |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT060202ML-SN    | 0.2*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T301MR-SN    | 0.1*2 | ●       |        |        |        |          |          |          | ●        |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T301ML-SN    | 0.1*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T302MR-SN    | 0.2*2 | ●       |        |        |        |          |          |          | ●        |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T302ML-SN    | 0.2*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T304MR-SN    | 0.4*2 | ●       |        |        |        |          |          |          | ●        |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |
| CCGT09T304ML-SN    | 0.4*2 | ●       |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |          |        |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |                 |   |



\*1 Zostanie zastąpiona przez nowe wyroby.  
 \*2 Oznacza maksymalną wartość promienia naroża R.  
 (Po 10 płytek w opakowaniu)

●: Obróbka stabilna [Pierwszy wybór]      ⊕: Obróbka ogólna [Pierwszy wybór]      ⊕: Obróbka niestabilna [Pierwszy wybór]  
 ○: Obróbka stabilna [Drugi wybór]      ⊕: Obróbka ogólna [Drugi wybór]      ⊕: Obróbka niestabilna [Drugi wybór]

● / ★ = Nowe pozycje w asortymencie  
 ● : Standard magazynowy.      ★ : Na specjalne zamówienie z magazynu w Japonii.



**PŁYTKI TYPU CC, 80° Z OTWOREM**

|   |                                    | Pokrwywy |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        | Cermetal.pokrywy | Cermetal | Węgliki |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  |   |   |  |  |
|---|------------------------------------|----------|--------|--------|--------|----------------------|----------------------|----------------------|----------------------|----------------------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|------------------|----------|---------|--------|--------|-------|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|------|---------|--|---|---|--|--|
|   |                                    | MS6015   | MC6115 | MC6125 | MC6135 | MC6015 <sup>*1</sup> | MC6025 <sup>*1</sup> | UE6105 <sup>*1</sup> | UE6110 <sup>*1</sup> | UE6020 <sup>*1</sup> | MS7025 | MC7015 | MC7025 | MP7035 | US7020 | US735 | MC5105 | MC5115 | MC5125 | MS9025 | MP9005 | MP9015           | MP9025   | VP10RT  | VP15TF | VP30RT | LP20M | MP3025 | AP25N | VP25N | VP45N | NX2525 | NX3035 | MT9005 | RT9010 | UT120T | HT105T | HT110 | TF15 | Kształt |  |   |   |  |  |
| P | Stale                              | ●        | ●      | ●      | ⊕      | ⊕                    | ⊕                    | ⊕                    | ⊕                    | ⊕                    |        |        |        |        |        |       |        |        |        |        |        |                  |          | ⊕       | ⊕      | ⊕      | ⊕     | ⊕      | ⊕     |       |       |        |        |        |        | ⊕      | ⊕      | ⊕     | ⊕    | ⊕       | ⊕  |   |   |  |  |
| M | Stale nierdzewne                   |          |        |        |        |                      |                      |                      |                      |                      | ●      | ●      | ●      | ●      | ●      | ●     |        |        |        |        |        | ●                |          |         |        | ⊕      | ⊕     | ⊕      | ⊕     | ⊕     | ⊕     | ⊕      | ⊕      |        |        |        |        |       | ⊕    |         |  |   |   |  |  |
| K | Żeliwa                             |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        | ●     | ●      | ⊕      |        |        |        |                  |          |         | ⊕      | ⊕      |       | ⊕      | ⊕     | ⊕     |       |        |        |        |        |        | ⊕      | ⊕     | ⊕    | ⊕       | ⊕  | ⊕   |   |  |  |
| N | Metale nieżelazne                  |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  |   |   |  |  |
| S | Stopy zaroodporne stopy tytanu     |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       | ●      | ●      | ●      | ⊕      | ⊕      | ⊕                |          |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       | ●    | ●       | ⊕  |   |   |  |  |
|   | Numer zamówieniowy RE              |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | Kształt   |   |  |  |
|   | CCET060200R-SN 0.0 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | ★   | R/L-SN  |  |  |
|   | CCET060200L-SN 0.0 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | ★   |   |  |  |
|   | CCET0602V3R-SN 0.03 <sup>*2</sup>  |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | ★   |   |  |  |
|   | CCET0602V3L-SN 0.03 <sup>*2</sup>  |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | ★   |   |  |  |
|   | CCET060201R-SN 0.1 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | ★   |   |  |  |
|   | CCET060201L-SN 0.1 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | ★   |   |  |  |
|   | CCET060202R-SN 0.2 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | ★   |   |  |  |
|   | CCET060202L-SN 0.2 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | ★   |   |  |  |
|   | CCET060204R-SN 0.4 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | ★   |   |  |  |
|   | CCET060204L-SN 0.4 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ●      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |   |   |  |  |
|   | CCET09T300R-SN 0.0 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ●      |       |        |       |       |       |        |        |        |        |        |        |       |      |         |  | ★   |  |  |  |
|   | CCET09T300L-SN 0.0 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |   |   |  |  |
|   | CCET09T3V3R-SN 0.03 <sup>*2</sup>  |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ●      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |   |   |  |  |
|   | CCET09T3V3L-SN 0.03 <sup>*2</sup>  |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |   |   |  |  |
|   | CCET09T301R-SN 0.1 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ●      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |   |   |  |  |
|   | CCET09T301L-SN 0.1 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ●      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |   |   |  |  |
|   | CCET09T302R-SN 0.2 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ●      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |   |   |  |  |
|   | CCET09T302L-SN 0.2 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ●      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |   |   |  |  |
|   | CCET09T304R-SN 0.4 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ●      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |   |   |  |  |
|   | CCET09T304L-SN 0.4 <sup>*2</sup>   |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ●      |       |        |       |       |       |        |        |        |        |        |        |       |      | ★       | Obróbka średnia                            |   |   |  |  |
|   | CCET0602V3RW-SN 0.03 <sup>*2</sup> |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  | R/LW-SN   |   |  |  |
|   | CCET0602V3LW-SN 0.03 <sup>*2</sup> |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ●      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |  |   |  |  |
|   | CCET09T3V3RW-SN 0.03 <sup>*2</sup> |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |         | ★  |   |   |  |  |
|   | CCET09T3V3LW-SN 0.03 <sup>*2</sup> |          |        |        |        |                      |                      |                      |                      |                      |        |        |        |        |        |       |        |        |        |        |        |                  |          |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      | ★       | Obróbka średnia (z krawędzią wygładzającą) |   |   |  |  |

\*1 Zostanie zastąpiona przez nowe wyroby.  
\*2 Oznacza maksymalną wartość promienia naroża R.  
(Po 10 płytek w opakowaniu)

● : Obróbka stabilna [Pierwszy wybór]      ● : Obróbka ogólna [Pierwszy wybór]      ⊕ : Obróbka niestabilna [Pierwszy wybór]  
 ○ : Obróbka stabilna [Drugi wybór]      ⊕ : Obróbka ogólna [Drugi wybór]      ⊕ : Obróbka niestabilna [Drugi wybór]

● / ★ = Nowe pozycje w asortymencie  
 ● : Standard magazynowy.      ★ : Na specjalne zamówienie z magazynu w Japonii.



















**PŁYTKI TYPU CP, 80° Z OTWOREM**



| Numer zamówieniowy | RE  | Pokrywy |        |        |        |                      |                      |                      |                      |                      |        |        |        | Cermetal pokrywy |        |       |        | Cermetal |        |        |        | Węglik |        |        |        | Kształt |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |   |   |
|--------------------|-----|---------|--------|--------|--------|----------------------|----------------------|----------------------|----------------------|----------------------|--------|--------|--------|------------------|--------|-------|--------|----------|--------|--------|--------|--------|--------|--------|--------|---------|--------|-------|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-----------------------------|--|----|---|---|
|                    |     | MS6015  | MC6115 | MC6125 | MC6135 | MC6015 <sup>*1</sup> | MC6025 <sup>*1</sup> | UE6105 <sup>*1</sup> | UE6110 <sup>*1</sup> | UE6020 <sup>*1</sup> | MS7025 | MC7015 | MC7025 | MP7035           | US7020 | US735 | MC5105 | MC5115   | MC5125 | MS9025 | MP9005 | MP9015 | MP9025 | VP10RT | VP15TF |         | VP30RT | LP20M | MP3025 | AP25N | VP25N | VP45N | NX2525 | NX3035 | MT9005 | RT9010 | UT120T | HT105T | HT110 | TF15                        |  |    |   |   |
| CPMH080204-MP      | 0.4 | ●       | ●      | ●      |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    | MP  |   |
| CPMH080208-MP      | 0.8 | ●       | ●      | ●      |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |    |   |
| CPMH090304-MP      | 0.4 | ●       | ●      | ●      |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    | Obróbka średnia   |   |
| CPMH090308-MP      | 0.8 | ●       | ●      | ●      |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |    |   |
| CPMH080204-MM      | 0.4 |         |        |        |        |                      |                      |                      |                      | ●                    | ●      |        |        |                  |        |       |        |          |        |        |        |        |        |        | ●      |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  | MM |   |   |
| CPMH080208-MM      | 0.8 |         |        |        |        |                      |                      |                      |                      | ●                    | ●      |        |        |                  |        |       |        |          |        |        |        |        |        |        | ●      |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |    |   |
| CPMH090304-MM      | 0.4 |         |        |        |        |                      |                      |                      |                      | ●                    | ●      |        |        |                  |        |       |        |          |        |        |        |        |        |        | ●      |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    | Obróbka średnia   |   |
| CPMH090308-MM      | 0.8 |         |        |        |        |                      |                      |                      |                      | ●                    | ●      |        |        |                  |        |       |        |          |        |        |        |        |        |        | ●      |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |  |   |
| CPMH080204-MK      | 0.4 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        | ●     | ●      | ●        |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  | MK |   |   |
| CPMH080208-MK      | 0.8 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        | ●     | ●      | ●        |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |  |   |
| CPMH090304-MK      | 0.4 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        | ●     | ●      | ●        |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    | Obróbka średnia   |   |
| CPMH090308-MK      | 0.8 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        | ●     | ●      | ●        |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |  |   |
| CPMH080204-MS      | 0.4 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        | ●      |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  | MS |   |   |
| CPMH080208-MS      | 0.8 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        | ●      |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |  |   |
| CPMH090304-MS      | 0.4 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        | ●      |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    | Obróbka średnia   |   |
| CPMH090308-MS      | 0.8 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        | ●      |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |  |   |
| CPMH080204-MV      | 0.4 | ●       | ★      | ●      | ●      |                      |                      |                      | ●                    | ●                    |        |        | ★      |                  |        |       |        |          |        |        |        |        | ●      |        | ★      | ●       | ●      | ★     |        |       |       |       |        |        |        |        |        |        |       |                             |  |    | MV  |   |
| CPMH080208-MV      | 0.8 | ●       | ★      | ●      | ●      |                      |                      |                      | ●                    | ●                    |        |        | ★      |                  |        |       |        |          |        |        |        |        | ●      |        | ★      | ★       | ★      | ★     |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |  |   |
| CPMH090304-MV      | 0.4 | ●       | ★      | ●      | ●      |                      |                      |                      | ●                    | ●                    |        |        | ★      |                  |        |       |        |          |        |        |        |        | ●      |        | ★      | ●       | ●      | ★     |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |   | Obróbka średnia   |
| CPMH090308-MV      | 0.8 | ●       | ★      | ●      | ●      |                      |                      |                      | ●                    | ●                    |        |        | ★      |                  |        |       |        |          |        |        |        |        | ●      |        | ★      | ★       | ★      | ★     |        |       |       |       |        |        |        |        |        |        |       |                             |  |    |   |  |
| CPMB080202         | 0.2 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        | ★     | Płytki płaska (bez łamacza) |  |    |   |   |
| CPMB080204         | 0.4 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  | ★  |   |   |
| CPMB080208         | 0.8 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    | ★   |   |
| CPMB090302         | 0.2 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    | ★   |   |
| CPMB090304         | 0.4 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    | ★   |   |
| CPMB090308         | 0.8 |         |        |        |        |                      |                      |                      |                      |                      |        |        |        |                  |        |       |        |          |        |        |        |        |        |        |        |         |        |       |        |       |       |       |        |        |        |        |        |        |       |                             |  |    | ★   |   |

3/3

\*1 Zostanie zastąpiona przez nowe wyroby. (Po 10 płytek w opakowaniu)

- : Obróbka stabilna (Pierwszy wybór)      ● : Obróbka ogólna (Pierwszy wybór)      ✖ : Obróbka niestabilna (Pierwszy wybór)
- : Obróbka stabilna (Drugi wybór)      ⊗ : Obróbka ogólna (Drugi wybór)      ⊗ : Obróbka niestabilna (Drugi wybór)
- / ★ = Nowe pozycje w asortymencie
- : Standard magazynowy.      ★ : Na specjalne zamówienie z magazynu w Japonii.





















# PŁYTKI TYPU TP



## 60° Z OTWOREM

|          |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------|--------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <b>P</b> | Stale                          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>M</b> | Stale nierdzewne               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>K</b> | Żeliwa                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>N</b> | Metale nieżelazne              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>S</b> | Stopy żaroodporne stopy tytanu |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| Numer zamówieniowy | RE  | Pokrywany |        |        |        |          |          |          |          |          |        |        |        |        |        |       | Cermetal pokrywany |        |        | Cermetal |        |        | Węglik |        |        |        | Kształt |       |        |       |       |       |        |        |        |        |        |        |                      |                      |
|--------------------|-----|-----------|--------|--------|--------|----------|----------|----------|----------|----------|--------|--------|--------|--------|--------|-------|--------------------|--------|--------|----------|--------|--------|--------|--------|--------|--------|---------|-------|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|----------------------|----------------------|
|                    |     | MS6015    | MC6115 | MC6125 | MC6135 | MC6015*1 | MC6025*1 | UE6105*1 | UE6110*1 | UE6020*1 | MS7025 | MC7015 | MC7025 | MP7035 | US7020 | US735 | MC5105             | MC5115 | MC5125 | MS9025   | MP9005 | MP9015 | MP9025 | VP10RT | VP15TF | VP30RT |         | UP20M | MP3025 | AP25N | VP25N | VP45N | NX2525 | NX3035 | MT9005 | RT9010 | UT120T | HT105T | HT110                | TF15                 |
| TPMH090202-FP      | 0.2 | ●         | ●      | ●      |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      | FP                   |
| TPMH090204-FP      | 0.4 | ●         | ●      | ●      |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      |                      |
| TPMH110302-FP      | 0.2 | ●         | ●      | ●      |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      |                      |
| TPMH110304-FP      | 0.4 | ●         | ●      | ●      |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      |                      |
| TPMH110308-FP      | 0.8 | ●         | ●      | ●      |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        | Obróbka wykańczająca |                      |
| TPMH090202-FM      | 0.2 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        |        | ●      |        |         |       |        |       |       |       |        |        |        |        |        |        | FM                   |                      |
| TPMH090204-FM      | 0.4 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      |                      |
| TPMH110302-FM      | 0.2 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      |                      |
| TPMH110304-FM      | 0.4 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      |                      |
| TPMH110308-FM      | 0.8 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        |         |       |        |       |       |       |        |        |        |        |        |        | Obróbka wykańczająca |                      |
| TPMH080202-FV      | 0.2 |           | ★      | ★      |        |          |          |          | ●        |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       |       |        |       |       |       |        | ★      | ★      |        |        |        |                      | FV                   |
| TPMH080204-FV      | 0.4 |           | ★      | ★      |        |          |          |          | ●        |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       |       |        |       |       |       |        | ★      | ★      |        |        |        |                      |                      |
| TPMH090202-FV      | 0.2 |           | ★      | ★      |        |          |          |          | ★        |          |        |        |        |        |        |       |                    |        |        |          |        |        | ●      | ●      | ●      |        | ●       |       |        |       |       |       |        | ●      | ★      |        |        |        |                      |                      |
| TPMH090204-FV      | 0.4 |           | ●      | ★      |        |          |          |          | ●        |          |        |        |        |        |        |       |                    |        |        |          |        |        | ●      | ●      | ●      |        | ★       |       |        |       |       |       |        | ★      | ★      |        |        |        |                      |                      |
| TPMH110302-FV      | 0.2 |           | ★      | ★      |        |          |          |          | ★        |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ●       |       |        |       |       |       |        |        | ★      | ★      |        |        |                      |                      |
| TPMH110304-FV      | 0.4 |           | ●      | ●      | ★      |          |          |          | ●        |          |        |        |        |        |        |       |                    |        |        |          |        |        | ●      | ●      | ●      |        | ●       |       |        |       |       |       |        | ★      | ★      |        |        |        | Obróbka wykańczająca |                      |
| TPMH110308-FV      | 0.8 |           | ●      | ●      | ★      |          |          |          | ★        |          |        |        |        |        |        |       |                    |        |        |          |        |        | ●      | ★      | ●      |        | ★       |       |        |       |       |       |        | ●      | ★      |        |        |        | Obróbka wykańczająca |                      |
| TPMH090202-FS      | 0.2 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      | FS                   |
| TPMH090204-FS      | 0.4 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      |                      |
| TPMH110302-FS      | 0.2 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      |                      |
| TPMH110304-FS      | 0.4 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        |         |       |        |       |       |       |        |        |        |        |        |        |                      |                      |
| TPMH110308-FS      | 0.8 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        |         |       |        |       |       |       |        |        |        |        |        |        | Obróbka wykańczająca |                      |
| TPGH080202R-FS     | 0.2 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       |       | ★      |       |       |       |        |        |        | ★      |        |        | R/L-FS               |                      |
| TPGH080202L-FS     | 0.2 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       | ●     |        | ★     |       |       |        |        |        |        | ★      |        |                      |                      |
| TPGH080204R-FS     | 0.4 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       |       | ★      |       |       |       |        |        |        |        | ★      |        |                      |                      |
| TPGH080204L-FS     | 0.4 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       | ●     |        | ★     |       |       |        |        |        |        | ★      |        |                      |                      |
| TPGH090202R-FS     | 0.2 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       |       | ★      |       |       |       |        |        |        |        | ★      |        |                      |                      |
| TPGH090202L-FS     | 0.2 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       | ●     |        | ★     |       |       |        |        |        |        | ★      |        |                      |                      |
| TPGH090204R-FS     | 0.4 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       |       | ★      |       |       |       |        |        |        |        | ★      |        |                      |                      |
| TPGH090204L-FS     | 0.4 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       | ●     |        | ★     |       |       |        |        |        |        | ★      |        |                      |                      |
| TPGH110302R-FS     | 0.2 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       |       | ●      |       |       |       |        |        |        |        | ★      |        |                      |                      |
| TPGH110302L-FS     | 0.2 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       | ●     |        | ★     |       |       |        |        |        |        | ★      |        |                      |                      |
| TPGH110304R-FS     | 0.4 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ★       |       | ★      |       |       |       |        |        |        |        | ★      |        |                      |                      |
| TPGH110304L-FS     | 0.4 |           |        |        |        |          |          |          |          |          |        |        |        |        |        |       |                    |        |        |          |        |        |        | ●      |        |        | ●       | ●     |        | ●     |       |       |        |        |        |        | ★      |        |                      | Obróbka wykańczająca |

1/3

\*1 Zostanie zastąpiona przez nowe wyroby.  
(Po 10 płytek w opakowaniu)

●: Obróbka stabilna [Pierwszy wybór]  
○: Obróbka stabilna [Drugi wybór]

●: Obróbka ogólna [Pierwszy wybór]  
○: Obróbka ogólna [Drugi wybór]

⊕: Obróbka niestabilna [Pierwszy wybór]  
⊗: Obróbka niestabilna [Drugi wybór]

● / ★ = Nowe pozycje w asortymencie

● : Standard magazynowy. ★ : Na specjalne zamówienie z magazynu w Japonii.

## PŁYTKI TYPU TP, 60° Z OTWOREM



|                    |     | Pokrywy |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        | Cermet pokrywany | Cermet | Węglik |        |        |        | Kształt |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
|--------------------|-----|---------|--------|--------|--------|----------|----------|----------|----------|----------|--------|--------|--------|--------|--------|-------|--------|--------|--------|------------------|--------|--------|--------|--------|--------|---------|-------|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|------|---|--|-----|--|--|
| Numer zamówieniowy | RE  | MS6015  | MC6115 | MC6125 | MC6135 | MC6015*1 | MC6025*1 | UE6105*1 | UE6110*1 | UE6020*1 | MS7025 | MC7015 | MC7025 | MP7035 | US7020 | US735 | MC5105 | MC5115 | MC5125 | MS9025           | MP9005 | MP9015 | MP9025 | VP10RT | VP15TF | VP30RT  | UP20M | MP3025 | AP25N | VP25N | VP45N | NX2525 | NX3035 | MT9005 | RT9010 | UT120T | HT105T | HT110 | TF15 |   |  |     |  |  |
|                    |     |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPGX080202R        | 0.2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        | ●      |        |        |        | ★     | ★    |   |  | R/L |  |  |
| TPGX080202L        | 0.2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        | ●      |        |        |       | ★    | ★ |  |     |  |  |
| TPGX080204R        | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        | ★     |       |       |        |        |        | ●      |        |        | ★     | ★    |   |  |     |  |  |
| TPGX080204L        | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       | ●      |       |       |       |        |        |        | ●      |        |        | ★     | ★    |   |  |     |  |  |
| TPGX090202R        | 0.2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        | ●      |        |        | ★     | ★    |   |  |     |  |  |
| TPGX090202L        | 0.2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        | ●      |        |        | ★     | ★    | ● |  |     |  |  |
| TPGX090204R        | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       | ★      |       |       |       |        |        |        | ●      |        |        | ★     | ★    | ● |  |     |  |  |
| TPGX090204L        | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         | ●     |        |       |       |       |        |        |        | ●      |        |        | ★     | ★    | ● |  |     |  |  |
| TPGX090208R        | 0.8 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        | ★      |        |        | ★     | ★    |   |  |     |  |  |
| TPGX090208L        | 0.8 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         | ★     |        |       |       |       |        |        |        | ●      |        |        | ★     | ●    |   |  |     |  |  |
| TPGX110302L        | 0.2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        | ●      |        |        | ★     | ●    |   |  |     |  |  |
| TPGX110304R        | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       | ●      |       |       |       |        |        |        |        | ●      |        |       | ★    | ★ |  |     |  |  |
| TPGX110304L        | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         | ●     |        |       |       |       |        |        |        | ●      |        |        | ★     | ★    |   |  |     |  |  |
| TPGX110308R        | 0.8 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        | ★      |        |        | ★     | ★    |   |  |     |  |  |
| TPGX110308L        | 0.8 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         | ●     |        |       |       |       |        |        |        | ●      |        |        | ★     | ★    | ● |  |     |  |  |
| TPMX090204L        | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        | ★      |        |        |       |      |   |  |     |  |  |
| TPMX110304L        | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        | ★      |        |        |       |      |   |  |     |  |  |
| TPMH080202-LP      | 0.2 |         | ●      | ★      |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH080204-LP      | 0.4 |         | ●      | ★      |        |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH090202-LP      | 0.2 |         | ●      | ★      | ★      |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH090204-LP      | 0.4 |         | ●      | ●      | ★      |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH110302-LP      | 0.2 |         | ●      | ★      | ★      |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH110304-LP      | 0.4 |         | ●      | ●      | ★      |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH110308-LP      | 0.8 |         | ●      | ★      | ★      |          |          |          |          |          |        |        |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH090202-LM      | 0.2 |         |        |        |        |          |          |          |          |          | ●      | ●      |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        | ●     |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH090204-LM      | 0.4 |         |        |        |        |          |          |          |          |          | ●      | ●      |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        | ●     |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH110302-LM      | 0.2 |         |        |        |        |          |          |          |          |          | ●      | ●      |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        | ●     |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH110304-LM      | 0.4 |         |        |        |        |          |          |          |          |          | ●      | ●      |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       | ●      |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH110308-LM      | 0.8 |         |        |        |        |          |          |          |          |          | ●      | ●      |        |        |        |       |        |        |        |                  |        |        |        |        |        |         |       | ●      |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH110302-LK      | 0.2 |         |        |        |        |          |          |          |          |          | ●      | ●      | ●      |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH110304-LK      | 0.4 |         |        |        |        |          |          |          |          |          | ●      | ●      | ●      |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |
| TPMH110308-LK      | 0.8 |         |        |        |        |          |          |          |          |          | ●      | ●      | ●      |        |        |       |        |        |        |                  |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |        |       |      |   |  |     |  |  |

\*1 Zostanie zastąpiona przez nowe wyroby.  
(Po 10 ptytek w opakowaniu)

●: Obróbka stabilna (Pierwszy wybór)  
○: Obróbka stabilna (Drugi wybór)

●: Obróbka ogólna (Pierwszy wybór)  
○: Obróbka ogólna (Drugi wybór)

⊕: Obróbka niestabilna (Pierwszy wybór)  
⊖: Obróbka niestabilna (Drugi wybór)

● / ★ = Nowe pozycje w asortymencie

●: Standard magazynowy. ★: Na specjalne zamówienie z magazynu w Japonii.





PLYTKI TYPU VB, 35° Z OTWOREM



| Numer zamówieniowy | RE  | Pokrywy |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        | Cermetal pokrywy |        | Cermetal |        | Węglik |        |        |        |        | Kształt |       |        |       |       |       |        |        |        |        |        |       |      |   |    |                 |                 |  |
|--------------------|-----|---------|--------|--------|--------|----------|----------|----------|----------|----------|--------|--------|--------|--------|--------|-------|--------|------------------|--------|----------|--------|--------|--------|--------|--------|--------|---------|-------|--------|-------|-------|-------|--------|--------|--------|--------|--------|-------|------|---|----|-----------------|-----------------|--|
|                    |     | MS6015  | MC6115 | MC6125 | MC6135 | MC6015*1 | MC6025*1 | UE6105*1 | UE6110*1 | UE6020*1 | MS7025 | MC7015 | MC7025 | MP7035 | US7020 | US735 | MC5105 | MC5115           | MC5125 | MS9025   | MP9005 | MP9015 | MP9025 | VP10RT | VP15TF | VP30RT |         | UP20M | MP3025 | AP25N | VP25N | VP45N | NX2525 | NX3035 | RT9010 | UT120T | HT105T | HT110 | TF15 |   |    |                 |                 |  |
| VBMT110304-LP      | 0.4 | ●       | ●      | ●      | ★      | ●        | ●        | ●        | ★        |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        |        |         | ●     |        |       |       | ★     |        |        |        |        |        |       |      |   |    | LP              |                 |  |
| VBMT110308-LP      | 0.8 | ●       | ●      | ●      | ★      | ●        | ●        | ●        | ●        |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        |        |         | ★     |        |       |       | ●     |        |        |        |        |        |       |      |   |    |                 |                 |  |
| VBMT160404-LP      | 0.4 | ●       | ●      | ●      | ★      | ●        | ●        | ●        | ●        |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        |        |         | ●     |        |       |       | ●     |        |        |        |        |        |       |      |   |    |                 | Obróbka lekka   |  |
| VBMT160408-LP      | 0.8 | ●       | ●      | ●      | ★      | ●        | ●        | ●        | ●        |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        |        |         | ●     |        |       |       | ●     |        |        |        |        |        |       |      |   |    |                 |                 |  |
| VBMT160412-LP      | 1.2 | ●       | ●      | ●      |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    | Obróbka lekka   |                 |  |
| VBMT110304-LM      | 0.4 |         |        |        |        |          |          |          |          | ●        | ●      | ●      |        |        |        |       |        |                  |        |          |        |        |        |        |        |        | ●       | ●     |        |       |       |       |        |        |        |        |        |       |      |   |    | LM              |                 |  |
| VBMT110308-LM      | 0.8 |         |        |        |        |          |          |          |          | ●        | ★      | ★      |        |        |        |       |        |                  |        |          |        |        |        |        |        | ●      | ●       |       |        |       |       |       |        |        |        |        |        |       |      |   |    |                 |                 |  |
| VBMT160404-LM      | 0.4 |         |        |        |        |          |          |          |          | ●        | ●      | ●      |        |        |        |       |        |                  |        |          |        |        |        |        |        | ●      |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    | Obróbka lekka   |                 |  |
| VBMT160408-LM      | 0.8 |         |        |        |        |          |          |          |          | ●        | ●      | ★      |        |        |        |       |        |                  |        |          |        |        |        |        | ●      |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    |                 |                 |  |
| VBMT160412-LM      | 1.2 |         |        |        |        |          |          |          |          | ●        | ●      |        |        |        |        |       |        |                  |        |          |        |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    | Obróbka lekka   |                 |  |
| VBMT110302-LS      | 0.2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          | ●      | ●      | ●      |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   | LS |                 |                 |  |
| VBMT110304-LS      | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          | ●      | ●      | ●      |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    |                 |                 |  |
| VBMT110308-LS      | 0.8 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          | ●      | ●      | ●      |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    |                 |                 |  |
| VBMT160404-LS      | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          | ●      | ●      | ●      |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    |                 | Obróbka lekka   |  |
| VBMT160408-LS      | 0.8 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          | ●      | ●      | ●      |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    |                 |                 |  |
| VBMT160412-LS      | 1.2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          | ●      |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    |                 | Obróbka lekka   |  |
| VBMT110304-SV      | 0.4 |         |        |        |        |          |          |          | ●        |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        | ●      |         |       |        |       |       |       |        |        |        |        | ★      |       |      |   |    | SV              |                 |  |
| VBMT110308-SV      | 0.8 |         |        |        |        |          |          |          | ★        |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        | ●      |         |       |        |       |       |       |        |        |        |        |        | ●     |      |   |    |                 |                 |  |
| VBMT160404-SV      | 0.4 |         |        |        |        |          |          |          | ●        |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        | ●      |         |       |        |       |       |       |        |        |        |        |        | ●     |      |   |    | Obróbka lekka   |                 |  |
| VBMT160408-SV      | 0.8 |         |        |        |        |          |          |          | ●        |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        | ●      |         |       |        |       |       |       |        |        |        |        |        | ★     |      |   |    |                 |                 |  |
| VBMT160404-MP      | 0.4 | ●       | ●      | ●      | ★      | ●        | ●        | ●        | ●        |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        |        |         | ●     |        |       |       | ★     |        |        |        |        |        |       |      |   |    |                 | MP              |  |
| VBMT160408-MP      | 0.8 | ●       | ●      | ●      | ★      | ●        | ●        | ●        | ●        |          |        |        |        |        |        |       |        |                  |        |          |        |        |        |        |        |        |         | ★     |        |       |       | ★     |        |        |        |        |        |       |      |   |    |                 |                 |  |
| VBMT160404-MM      | 0.4 |         |        |        |        |          |          |          |          | ●        | ●      |        |        |        |        |       |        |                  |        |          |        |        |        |        |        | ●      |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    | Obróbka średnia |                 |  |
| VBMT160408-MM      | 0.8 |         |        |        |        |          |          |          |          | ●        | ●      |        |        |        |        |       |        |                  |        |          |        |        |        |        |        | ●      |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    |                 |                 |  |
| VBMT160404-MK      | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       | ★      | ●                | ★      |          |        |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    | Obróbka średnia |                 |  |
| VBMT160408-MK      | 0.8 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       | ★      | ●                | ★      |          |        |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      |   |    |                 |                 |  |
| VBMT160402-MS      | 0.2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          | ●      | ●      | ●      |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       | ●    |   |    | MS              |                 |  |
| VBMT160404-MS      | 0.4 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          | ●      | ●      | ●      |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      | ● |    |                 |                 |  |
| VBMT160408-MS      | 0.8 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          | ●      | ●      | ●      |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      | ● |    |                 |                 |  |
| VBMT160412-MS      | 1.2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                  |        |          | ●      |        |        |        |        |        |         |       |        |       |       |       |        |        |        |        |        |       |      | ● |    |                 | Obróbka średnia |  |

\*1 Zostanie zastąpiona przez nowe wyroby.  
(Po 10 płytek w opakowaniu)

- : Obróbka stabilna [Pierwszy wybór]
- : Obróbka stabilna [Drugi wybór]
- / ★ = Nowe pozycje w asortymencie
- : Standard magazynowy. ★: Na specjalne zamówienie z magazynu w Japonii.
- : Obróbka ogólna [Pierwszy wybór]
- : Obróbka ogólna [Drugi wybór]
- ✦: Obróbka niestabilna [Pierwszy wybór]
- ✧: Obróbka niestabilna [Drugi wybór]







**PŁYTKI TYPU VC, 35° Z OTWOREM**



|   |                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| P | Stale                          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M | Stale nierdzewne               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| K | Żeliwa                         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| N | Metale nieżelazne              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| S | Stopy żaroodporne stopy tytanu |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| Numer zamówieniowy | RE    | Pokrywy |        |        |        |          |          |          |          |          |        |        |        |        |        | Cermetal pokrywany | Cermetal | Węglik |        |        |        |        | Kształt |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |         |
|--------------------|-------|---------|--------|--------|--------|----------|----------|----------|----------|----------|--------|--------|--------|--------|--------|--------------------|----------|--------|--------|--------|--------|--------|---------|--------|--------|--------|-------|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|------|--|--|---------|
|                    |       | MS6015  | MC6115 | MC6125 | MC6135 | MC6015*1 | MC6025*1 | UE6105*1 | UE6110*1 | UE6020*1 | MS7025 | MC7015 | MC7025 | MP7035 | US7020 | US735              | MC5105   | MC5115 | MS9025 | MP9005 | MP9015 | MP9025 |         | VP10RT | VP15TF | VP30RT | LP20M | MP3025 | AP25N | VP25N | VP45N | NX2525 | NX3035 | MT9005 | RT9010 | UT120T | HT105T | HT110 | TF15 |  |  |         |
| VCET080202MR-SRF   | 0.2*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-SRF |
| VCET080202ML-SRF   | 0.2*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-SRF |
| VCET080204MR-SRF   | 0.4*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-SRF |
| VCET080204ML-SRF   | 0.4*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-SRF |
| VCET110301MR-SRF   | 0.1*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-SRF |
| VCET110301ML-SRF   | 0.1*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-SRF |
| VCET110302MR-SRF   | 0.2*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-SRF |
| VCET110302ML-SRF   | 0.2*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-SRF |
| VCET110304MR-SRF   | 0.4*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-SRF |
| VCET110304ML-SRF   | 0.4*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-SRF |
| VCGT080202R-F      | 0.2   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-F   |
| VCGT080202L-F      | 0.2   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-F   |
| VCGT080204R-F      | 0.4   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-F   |
| VCGT080204L-F      | 0.4   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | R/L-F   |
| VCMT080202-SV      | 0.2   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | SV      |
| VCMT080204-SV      | 0.4   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | SV      |
| VCMT080202-MV      | 0.2   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | MV      |
| VCMT080204-MV      | 0.4   |         |        |        |        |          |          |          |          |          |        |        |        |        |        |                    |          |        |        |        |        |        |         |        |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  | MV      |

\*1 Zostanie zastąpiona przez nowe wyroby.  
 \*2 Oznacza maksymalną wartość promienia naroża R.  
 (Po 10 płytek w opakowaniu)

: Obróbka stabilna [Pierwszy wybór]     
 : Obróbka ogólna [Pierwszy wybór]     
 : Obróbka niestabilna [Pierwszy wybór]     
 : Obróbka stabilna [Drugi wybór]     
 : Obróbka ogólna [Drugi wybór]     
 : Obróbka niestabilna [Drugi wybór]



/ = Nowe pozycje w asortymencie

: Standard magazynowy.      : Na specjalne zamówienie z magazynu w Japonii.





**PŁYTKI DO NOŻY WYTACZARSKICH INNYCH TYPÓW, PŁYTKI POZYTYWNE Z OTWOREM**

|                    |       | Pokrywy |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        | Cermetal pokrywany | Cermetal | Węglik |        |        |        | Kształt |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  |         |   |   |  |
|--------------------|-------|---------|--------|--------|--------|----------|----------|----------|----------|----------|--------|--------|--------|--------|--------|-------|--------|--------------------|----------|--------|--------|--------|--------|---------|--------|--------|-------|--------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|------|--|--|--|--|---------|---|---|--|
| Numer zamówieniowy | RE    | MS6015  | MC6115 | MC6125 | MC6135 | MC6015*1 | MC6025*1 | UE6105*1 | UE6110*1 | UE6020*1 | MS7025 | MC7015 | MC7025 | MP7035 | US7020 | US735 | MC5105 | MC5115             | MC5125   | MS9025 | MP9005 | MP9015 | MP9025 | VP10RT  | VP15TF | VP30RT | UP20M | MP3025 | AP25N | VP25N | VP45N | NX2525 | NX3035 | MT9005 | RT9010 | UT120T | HT105T | HT110 | TF15 |  |  |  |  |         |   |   |  |
| VPET1103V3R-SRF    | 0.03  |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                    |          |        | ●      |        |        |         | ★      |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  | R/L-SRF |   |   |  |
| VPET1103V3L-SRF    | 0.03  |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                    |          |        | ●      |        |        |         |        | ★      |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  |         |   |  |  |
| VPET080201MR-SRF   | 0.1*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                    |          |        | ●      |        |        |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  | R/L-SRF |   |   |  |
| VPET080201ML-SRF   | 0.1*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                    |          |        | ●      |        |        |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  |         |  |   |  |
| VPET080202MR-SRF   | 0.2*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                    |          |        | ●      |        |        |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  |         |   |   |  |
| VPET080202ML-SRF   | 0.2*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                    |          |        | ●      |        |        |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  |         |   |   |  |
| VPET110301MR-SRF   | 0.1*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                    |          |        | ●      |        |        |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  |         |   |   |  |
| VPET110301ML-SRF   | 0.1*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                    |          |        | ●      |        |        |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  |         |   |   |  |
| VPET110302MR-SRF   | 0.2*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                    |          |        | ●      |        |        |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  |         |   |   |  |
| VPET110302ML-SRF   | 0.2*2 |         |        |        |        |          |          |          |          |          |        |        |        |        |        |       |        |                    |          |        | ●      |        |        |         |        |        |       |        |       |       |       |        |        |        |        |        |        |       |      |  |  |  |  |         |   |   |  |

2/2

\*1 Zostanie zastąpiona przez nowe wyroby.  
 \*2 Oznacza maksymalną wartość promienia naroża R.  
 (Po 10 płytek w opakowaniu)

- : Obróbka stabilna [Pierwszy wybór]
- : Obróbka stabilna [Drugi wybór]
- : Obróbka ogólna [Pierwszy wybór]
- : Obróbka ogólna [Drugi wybór]
- ✚: Obróbka niestabilna [Pierwszy wybór]
- ✚: Obróbka niestabilna [Drugi wybór]
- / ★ = Nowe pozycje w asortymencie
- : Standard magazynowy.    ★: Na specjalne zamówienie z magazynu w Japonii.



# ZALECANE PARAMETRY SKRAWANIA

| Materiał   | Twardość                                   | Rodzaj obróbki | Gatunek  | Vc     | f               | ap          |           |
|--|--|----------------|----------|--------|-----------------|-------------|-----------|
| P<br>Czyste żelazo<br>Stale automatowe   | —  | Wykańczająca   | R/L-F    | MS6015 | 150 ( 50 – 250) | 0.01 – 0.15 | 0.1 – 0.4 |
|  |  | Lekka          | LS-P     | MS6015 | 150 ( 50 – 250) | 0.01 – 0.15 | 0.3 – 2.2 |
|  |  | Lekka          | R/L-SS   | MS6015 | 150 ( 50 – 250) | 0.01 – 0.15 | 0.2 – 0.8 |
|  |  | Średnia        | R/L-SN   | MS6015 | 150 ( 50 – 250) | 0.01 – 0.15 | 0.1 – 0.4 |
|  |  | Średnia        | SMG      | MS6015 | 150 ( 50 – 250) | 0.01 – 0.15 | 0.1 – 1.5 |
| Stale węglowe<br>Stale stopowe   | 180 – 280 HB                               | Wykańczająca   | R/L-F    | MS6015 | 100 ( 50 – 150) | 0.01 – 0.15 | 0.1 – 0.4 |
|  |  | Lekka          | LS-P     | MS6015 | 100 ( 50 – 150) | 0.01 – 0.15 | 0.3 – 2.2 |
|  |  | Lekka          | R/L-SS   | MS6015 | 100 ( 50 – 150) | 0.01 – 0.15 | 0.2 – 0.8 |
|  |  | Średnia        | R/L-SN   | MS6015 | 100 ( 50 – 150) | 0.01 – 0.15 | 0.1 – 0.4 |
|  |  | Średnia        | SMG      | MS6015 | 100 ( 50 – 150) | 0.01 – 0.15 | 0.1 – 1.5 |
| M<br>Austenityczne<br>stale nierdzewne   | —  | Wykańczająca   | R/L-F    | MS7025 | 60 ( 40 – 100)  | 0.01 – 0.08 | 0.1 – 0.4 |
|  |  | Wykańczająca   | FS-P     | MS9025 | 100 ( 60 – 150) | 0.04 – 0.15 | 0.2 – 0.5 |
|  |  | Wykańczająca   | R/L-F    | MS7025 | 60 ( 40 – 100)  | 0.01 – 0.08 | 0.1 – 0.4 |
|  |  | Wykańczająca   | R-SRF    | MS9025 | 100 ( 60 – 150) | 0.04 – 0.15 | 0.1 – 0.4 |
|  |  | Lekka          | LS-P     | MS7025 | 60 ( 40 – 100)  | 0.01 – 0.08 | 0.3 – 2.2 |
|  |  | Lekka          | LS-P     | MS9025 | 100 ( 60 – 150) | 0.05 – 0.15 | 0.3 – 2.2 |
|  |  | Średnia        | R-SN     | MS7025 | 60 ( 40 – 100)  | 0.01 – 0.08 | 0.1 – 3.8 |
|  |  | Średnia        | R-SN     | MS9025 | 100 ( 60 – 150) | 0.05 – 0.15 | 0.1 – 3.8 |
| Stale nierdzewne ferrytyczne<br>i martenzytyczne   | —  | Wykańczająca   | FS-P     | MS7025 | 60 ( 40 – 100)  | 0.01 – 0.08 | 0.2 – 0.5 |
|  |  | Wykańczająca   | R-SRF    | MS7025 | 60 ( 40 – 100)  | 0.01 – 0.08 | 0.1 – 0.4 |
|  |  | Lekka          | LS-P     | MS7025 | 60 ( 40 – 100)  | 0.01 – 0.08 | 0.3 – 2.2 |
|  |  | Lekka          | R-SN     | MS7025 | 60 ( 40 – 100)  | 0.01 – 0.08 | 0.1 – 3.8 |
| M<br>Stale nierdzewne magnetyczne<br>miękkie<br>(X105CrMo17 / 1.4125,<br>X42Cr13 / 1.2083 itp.)                        | 230 HBW                                    | Wykańczająca   | FS-P     | MS7025 | 80 ( 40 – 160)  | 0.02 – 0.08 | 0.2 – 1.4 |
|  |  | Wykańczająca   | FS-P     | MS9025 | 100 ( 50 – 180) | 0.04 – 0.12 | 0.2 – 1.4 |
|  |  | Wykańczająca   | R-SRF    | MS7025 | 80 ( 40 – 160)  | 0.03 – 0.08 | 0.1 – 0.4 |
|  |  | Wykańczająca   | R-SRF    | MS9025 | 100 ( 50 – 180) | 0.05 – 0.12 | 0.1 – 0.4 |
|  |  | Lekka          | LS-P     | MS7025 | 80 ( 40 – 160)  | 0.02 – 0.10 | 0.3 – 2.2 |
|  |  | Lekka          | LS-P     | MS9025 | 100 ( 50 – 180) | 0.04 – 0.15 | 0.3 – 2.2 |
|  |  | Średnia        | R-SN     | MS7025 | 80 ( 40 – 160)  | 0.01 – 0.10 | 0.1 – 3.8 |
|  |  | Średnia        | R-SN     | MS9025 | 100 ( 50 – 180) | 0.01 – 0.10 | 0.1 – 3.8 |
| Stale nierdzewne utwardzane<br>wydzieleniowo<br>(17-4PH / 1.4542,<br>17-7PH / X7CrNi-A117-7 /<br>X5CrNi-CuNb17-4 itp.) | < 450 HB                                   | Wykańczająca   | FS-P     | MS7025 | 60 ( 40 – 80)   | 0.01 – 0.10 | 0.1 – 1.0 |
|  |  | Wykańczająca   | FS-P     | MS9025 | 70 ( 50 – 100)  | 0.03 – 0.15 | 0.1 – 1.0 |
|  |  | Wykańczająca   | R-SRF    | MS7025 | 60 ( 40 – 80)   | 0.01 – 0.10 | 0.1 – 0.4 |
|  |  | Wykańczająca   | R-SRF    | MS9025 | 70 ( 50 – 100)  | 0.03 – 0.15 | 0.1 – 0.4 |
|  |  | Lekka          | LS-P     | MS7025 | 60 ( 40 – 80)   | 0.04 – 0.10 | 0.2 – 2.2 |
|  |  | Lekka          | LS-P     | MS9025 | 70 ( 50 – 100)  | 0.04 – 0.15 | 0.2 – 2.2 |
|  |  | Średnia        | R-SN     | MS7025 | 60 ( 40 – 80)   | 0.03 – 0.10 | 0.3 – 2.2 |
| K<br>Żeliwo szare  | Wytrzymałość na<br>rozciąganie<br><350 MPa | Wykańczająca   | Flat Top | MC5115 | 225 (150 – 300) | 0.04 – 0.15 | 0.1 – 0.5 |
|  |  | Wykańczająca   | Flat Top | HTi10  | 100 ( 50 – 150) | 0.04 – 0.15 | 0.1 – 0.5 |
|  |  | Lekka          | Flat Top | MC5115 | 225 (150 – 300) | 0.04 – 0.15 | 0.2 – 1.0 |
|  |  | Lekka          | Flat Top | HTi10  | 100 ( 50 – 150) | 0.04 – 0.15 | 0.2 – 1.0 |
|  |  | Średnia        | Flat Top | MC5115 | 225 (150 – 300) | 0.04 – 0.15 | 0.1 – 2.0 |
|  |  | Średnia        | Flat Top | HTi10  | 100 ( 50 – 150) | 0.04 – 0.15 | 0.1 – 2.0 |
| S<br>Stopy żaroodporne<br>(stale nierdzewne żaroodporne<br>itp.)   | —  | Wykańczająca   | FS-P     | MS9025 | 80 ( 40 – 140)  | 0.04 – 0.12 | 0.2 – 1.0 |
|  |  | Wykańczająca   | R-SRF    | MS9025 | 80 ( 40 – 140)  | 0.05 – 0.12 | 0.1 – 0.4 |
|  |  | Lekka          | LS-P     | MS9025 | 80 ( 40 – 140)  | 0.04 – 0.15 | 0.3 – 2.2 |
|  |  | Średnia        | R-SN     | MS9025 | 80 ( 40 – 140)  | 0.01 – 0.10 | 0.1 – 3.8 |



1/1

1. W razie wystąpienia drgań karbujących dostosować parametry skrawania i kontynuować obróbkę.
2. Jeśli wysięg narzędzia wynosi (dla chwytów węglkowych) L/D = 5 lub więcej, bądź L/D = 3 lub więcej (dla chwytów stalowych), zmniejszyć prędkość skrawania o 10% do 20%.
3. Posuw i głębokość skrawania dla płytek o dodatniej geometrii, z kątem natarcia 7° z tamaczami wióra nie wymienionymi w tabeli, patrz Katalog Generalny, str. A058 a dla płytek o dodatniej geometrii, z kątem natarcia 11° patrz str. A066. Prędkość skrawania dla różnych gatunków materiału płytek, patrz wytyczne doboru na str. A034.



# ZALECANE PARAMETRY SKRAWANIA

## SERIA MC6100 – PŁYTKI POZYTYWNE 5° / 7° (DO TOCZENIA ZEWNĘTRZNEGO)



| Materiał                       | Twardość    | Warunki                             |  | Priorytet | Gatunek   |  | Vc          | f           | ap          |
|--------------------------------|-------------|-------------------------------------|---|-----------|-----------|---|-------------|-------------|-------------|
| Stal konstrukcyjna             | ≤180HB      | ●                                   | F   | 1         | MC6115    | FP  | 295 – 570   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ●                                   | F   | 2         | MC6115    | FV  | 295 – 570   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ●                                   | L   | 1         | MC6115    | LP  | 295 – 570   | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ●                                   | L   | 2         | MC6115    | SW  | 295 – 570   | 0.06 – 0.24 | 0.20 – 1.50 |
|                                |             | ●                                   | M   | 1         | MC6115    | MP  | 245 – 475   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ●                                   | M   | 2         | MC6115    | MV  | 245 – 475   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ●                                   | M   | 3         | MC6115    | MW  | 245 – 475   | 0.10 – 0.35 | 0.80 – 2.50 |
|                                |             | ✱                                   | F   | 1         | MC6125    | FP  | 320 – 505   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ✱                                   | F   | 2         | MC6135    | FP  | 265 – 400   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ✱                                   | L   | 1         | MC6125    | LP  | 320 – 505   | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ✱                                   | L   | 2         | MC6135    | LP  | 265 – 400   | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ✱                                   | L   | 3         | MC6125    | SW  | 320 – 505   | 0.06 – 0.24 | 0.20 – 1.50 |
|                                |             | ✱                                   | M   | 1         | MC6125    | MP  | 270 – 420   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱                                   | M   | 2         | MC6135    | MP  | 220 – 330   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱                                   | M   | 3         | MC6125    | MV  | 270 – 420   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | P<br>Stale węglowe<br>Stale stopowe | 180 – 280HB   | ●         | F         | 1   | MC6115      | FP          | 220 – 420   |
| ●                              | F           |                                     |   | 2         | MC6125    | FP  | 240 – 370   | 0.04 – 0.20 | 0.20 – 0.90 |
| ●                              | F           |                                     |   | 3         | MC6115    | FV  | 220 – 420   | 0.04 – 0.20 | 0.20 – 0.90 |
| ●                              | L           |                                     |   | 1         | MC6115    | LP  | 220 – 420   | 0.06 – 0.25 | 0.20 – 1.00 |
| ●                              | L           |                                     |   | 2         | MC6125    | LP  | 240 – 370   | 0.06 – 0.25 | 0.20 – 1.00 |
| ●                              | M           |                                     |   | 1         | MC6125    | MP  | 200 – 310   | 0.08 – 0.30 | 0.30 – 2.00 |
| ●                              | M           |                                     |   | 2         | MC6115    | MP  | 180 – 350   | 0.08 – 0.30 | 0.30 – 2.00 |
| ●                              | M           |                                     |   | 3         | MC6125    | MV  | 200 – 310   | 0.08 – 0.30 | 0.30 – 2.00 |
| ●                              | M           |                                     |   | 4         | MC6115    | MV  | 180 – 350   | 0.08 – 0.30 | 0.30 – 2.00 |
| ●                              | M           |                                     |   | 5         | MC6115    | MW  | 180 – 350   | 0.10 – 0.35 | 0.80 – 2.50 |
| ✱                              | F           |                                     |   | 1         | MC6125    | FP  | 240 – 370   | 0.04 – 0.20 | 0.20 – 0.90 |
| ✱                              | F           |                                     |   | 2         | MC6135    | FP  | 195 – 295   | 0.04 – 0.20 | 0.20 – 0.90 |
| ✱                              | F           |                                     |   | 3         | MC6125    | FV  | 240 – 370   | 0.04 – 0.20 | 0.20 – 0.90 |
| ✱                              | L           |                                     |   | 1         | MC6125    | LP  | 240 – 370   | 0.06 – 0.25 | 0.20 – 1.00 |
| ✱                              | L           |                                     |   | 2         | MC6135    | LP  | 195 – 295   | 0.06 – 0.25 | 0.20 – 1.00 |
| ✱                              | L           |                                     |   | 3         | MC6125    | SW  | 240 – 370   | 0.06 – 0.24 | 0.20 – 1.50 |
| ✱                              | M           | 1                                   | MC6125  | MP        | 200 – 310 | 0.08 – 0.30   | 0.30 – 2.00 |             |             |
| ✱                              | M           | 2                                   | MC6135  | MP        | 160 – 245 | 0.08 – 0.30   | 0.30 – 2.00 |             |             |
| ✱                              | M           | 3                                   | MC6125  | MV        | 200 – 310 | 0.08 – 0.30   | 0.30 – 2.00 |             |             |
| Stale węglowe<br>Stale stopowe | 280 – 350HB | ●                                   | F   | 1         | MC6115    | FP  | 155 – 295   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ●                                   | F   | 2         | MC6115    | FV  | 155 – 295   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ●                                   | L   | 1         | MC6115    | LP  | 155 – 295   | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ●                                   | M   | 1         | MC6115    | MP  | 130 – 245   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ●                                   | M   | 2         | MC6115    | MV  | 130 – 245   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱                                   | F   | 1         | MC6125    | FP  | 170 – 265   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ✱                                   | F   | 2         | MC6135    | FP  | 135 – 210   | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ✱                                   | L   | 1         | MC6125    | LP  | 170 – 265   | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ✱                                   | L   | 2         | MC6135    | LP  | 135 – 210   | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ✱                                   | M   | 1         | MC6125    | MP  | 140 – 220   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱                                   | M   | 2         | MC6135    | MP  | 115 – 175   | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱                                   | M   | 3         | MC6125    | MV  | 140 – 220   | 0.08 – 0.30 | 0.30 – 2.00 |

1. Zalecane parametry skrawania dla płytek pozytywnych 5° / 7° / 11° mają jedynie charakter orientacyjny.  
Sprawdzić zalecane parametry dla każdej oprawki wytaczarskiej, ponieważ dla obróbki wewnętrznej parametry skrawania zależą od długości wysięgu



# ZALECANE PARAMETRY SKRAWANIA

## SERIA MC6100 – PŁYTKI POZYTYWNE 11° (DO TOCZENIA ZEWNĘTRZNEGO)

| Materiał                       | Twardość    | Warunki |  | Priorytet | Gatunek |  | Vc        | f           | ap          |
|--------------------------------|-------------|---------|---|-----------|---------|---|-----------|-------------|-------------|
| Stal konstrukcyjna             | ≤180HB      | ●       | F   | 1         | MC6125  | FP  | 320 – 505 | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ●       | F   | 2         | MC6125  | FV  | 320 – 505 | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ●       | L   | 1         | MC6125  | LP  | 320 – 505 | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ●       | L   | 2         | MC6115  | R-Std   | 245 – 475 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ●       | M   | 1         | MC6125  | MP  | 270 – 420 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ●       | M   | 2         | MC6115  | MP  | 245 – 475 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ●       | M   | 3         | MC6125  | MV  | 270 – 420 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ●       | M   | 4         | MC6115  | MV  | 245 – 475 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱       | L   | 1         | MC6125  | LP  | 320 – 505 | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ✱       | L   | 2         | MC6135  | LP  | 265 – 400 | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ✱       | M   | 1         | MC6125  | MP  | 270 – 420 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱       | M   | 2         | MC6135  | MP  | 220 – 330 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱       | M   | 3         | MC6125  | MV  | 270 – 420 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱       | M   | 4         | MC6135  | MV  | 220 – 330 | 0.08 – 0.30 | 0.30 – 2.00 |
| Stale węglowe<br>Stale stopowe | 180 – 280HB | ●       | F   | 1         | MC6125  | FP  | 240 – 370 | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ●       | F   | 2         | MC6125  | FV  | 240 – 370 | 0.04 – 0.20 | 0.20 – 0.90 |
|                                |             | ●       | L   | 1         | MC6125  | LP  | 240 – 370 | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ●       | L   | 2         | MC6115  | LP  | 220 – 420 | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ●       | M   | 1         | MC6125  | MP  | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ●       | M   | 2         | MC6125  | MV  | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ●       | M   | 3         | MC6115  | R-Std   | 180 – 350 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ●       | M   | 4         | MC6125  | R-Std   | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱       | L   | 1         | MC6125  | LP  | 240 – 370 | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ✱       | L   | 2         | MC6135  | LP  | 195 – 295 | 0.06 – 0.25 | 0.20 – 1.00 |
|                                |             | ✱       | M   | 1         | MC6125  | MP  | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱       | M   | 2         | MC6135  | MP  | 160 – 245 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱       | M   | 3         | MC6125  | MV  | 200 – 310 | 0.08 – 0.30 | 0.30 – 2.00 |
|                                |             | ✱       | M   | 4         | MC6135  | MV  | 160 – 245 | 0.08 – 0.30 | 0.30 – 2.00 |

1/1

1. Zalecane parametry skrawania dla płytek pozytywnych 5° / 7° / 11° mają jedynie charakter orientacyjny. Sprawdzić zalecane parametry dla każdej oprawki wytaczarskiej, ponieważ dla obróbki wewnętrznej parametry skrawania zależą od długości wysięgu

## ZALECANE PARAMETRY SKRAWANIA

### SERIA MC5100 – PŁYTKI POZYTYWNE 5° / 7° (DO TOCZENIA ZEWNĘTRZNEGO)


| Materiał                | Właściwości                         | Warunki | Gatunek | Vc        |
|-------------------------|-------------------------------------|---------|---------|-----------|
| K<br>Żeliwo szare       | Wytrzymałość na rozciąganie ≤350MPa | ●       | MC5115  | 190 – 350 |
|                         |                                     | ●       | MC5115  | 140 – 270 |
|                         |                                     | ✚       | MC5115  | 80 – 150  |
| K<br>Żeliwo sferoidalne | Wytrzymałość na rozciąganie ≤450MPa | ●       | MC5115  | 170 – 320 |
|                         |                                     | ●       | MC5115  | 130 – 250 |
|                         |                                     | ✚       | MC5125  | 60 – 130  |
|                         | Wytrzymałość na rozciąganie ≤800MPa | ●       | MC5115  | 125 – 240 |
|                         |                                     | ●       | MC5115  | 105 – 200 |
|                         |                                     | ✚       | MC5125  | 55 – 115  |

1/1

### SERIA MC5100 – PŁYTKI POZYTYWNE 11° (DO TOCZENIA ZEWNĘTRZNEGO)

| Materiał                | Właściwości                         | Warunki | Gatunek | Vc        |
|-------------------------|-------------------------------------|---------|---------|-----------|
| K<br>Żeliwo szare       | Wytrzymałość na rozciąganie ≤350MPa | ●       | MC5115  | 150 – 300 |
|                         |                                     | ●       | MC5115  | 140 – 270 |
|                         |                                     | ✚       | MC5115  | 80 – 150  |
| K<br>Żeliwo sferoidalne | Wytrzymałość na rozciąganie ≤450MPa | ●       | MC5115  | 170 – 320 |
|                         |                                     | ●       | MC5115  | 130 – 250 |
|                         |                                     | ✚       | MC5125  | 60 – 130  |
|                         | Wytrzymałość na rozciąganie ≤800MPa | ●       | MC5115  | 125 – 240 |
|                         |                                     | ●       | MC5115  | 105 – 200 |
|                         |                                     | ✚       | MC5125  | 55 – 115  |

1/1

| Rodzaj obróbki  |  | f           | ap        |
|-----------------|---|-------------|-----------|
| Obróbka lekka   | LK  | 0.06 – 0.25 | 0.2 – 1.0 |
|                 | SW  | 0.06 – 0.24 | 0.2 – 1.5 |
| Obróbka średnia | MK  | 0.08 – 0.30 | 0.3 – 2.0 |
|                 | MV  | 0.08 – 0.30 | 0.3 – 2.0 |
|                 | Standardowa   | 0.08 – 0.30 | 0.3 – 2.0 |
|                 | MW  | 0.10 – 0.35 | 0.8 – 2.5 |
| Obróbka ciężka  | Płytką płaską (bez tamacza)   | 0.08 – 0.30 | 0.3 – 2.0 |

Parametry skrawania : ● : Obróbka stabilna ● : Obróbka ogólna ✚ : Obróbka niestabilna



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