

**CXAN Series**



- Use ANMX double-sided inserts with 4 cutting edges.
- Positive rake angle design for lower side cutting forces.
- Max. 15mm depth of cut, cutter diameter 25~100mm.
- 使用 ANMX 雙面銑刀片，4 個可用切削角
- 正前角設計可降低切削力
- 每次最大切深可達 15mm，刀桿直徑 25~100mm

→ Page A031

**CXXN Series**



- Use XNMX double-sided inserts with 6 cutting edges.
- Economic and high performance shoulder milling application.
- 17~125mm cutter diameter, max. 7mm depth of cut.
- 使用 XNMX 雙面銑刀片，6 個可用切削角
- 經濟與高性能方肩銑應用的最佳解決方案
- 17~125mm 刀桿直徑，最大切削深度可達 7mm

→ Page A033

**CAPK Series**



- Use APKT inserts with 2 cutting edges.
- Optimized chip breaker for various applications and materials.
- 16~125mm cutter diameter, max. 11mm depth of cut.
- 使用 APKT 銑刀片，2 個可用切削角
- 優化的刀口設計適用於各種加工應用和材料
- 16~125mm 刀桿直徑，最大切削深度可達 11mm

→ Page A036

**CART Series**



- Use WRT inserts with 2 cutting edges.
- Strong chip breaker provides well ramping and slotting capabilities.
- 10~26mm cutter diameter, max. 7mm depth of cut.
- 使用 WRT 銑刀片，2 個可用切削角
- 強化的刀口設計提供了極佳的斜坡銑削及開槽能力
- 10~26mm 刀桿直徑，最大切削深度可達 7mm

→ Page A039

### CASP Series



- Use SPMG inserts with 4 cutting edges.
- Cost effective shoulder milling tools.
- 12~80mm cutter diameter, max. 6mm depth of cut.
- 使用 SPMG 單面銑刀片，4 個可用切削角
- 經濟實惠的方肩銑刀
- 12~80mm 刀桿直徑，最大切削深度可達 6mm

→ Page A041

### CATP Series



- Use TPMX inserts with 3 cutting edges.
- Sharp cutting edges for various low milling force applications.
- 20~80mm cutter diameter, max. 11mm depth of cut.
- 使用 TPMX 銑刀片，3 個可用切削角
- 出色的銳利刀口設計適用於各種低銑削阻力的應用
- 20~80mm 刀桿直徑，最大切削深度可達 11mm

→ Page A045

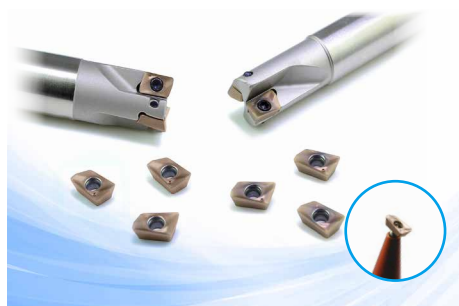
### CAXD Series



- Use XDMT inserts with 2 cutting edges.
- Cutter dia. : 16~32mm, max. depth of cut : 10mm.
- Cutting edge design provides stable machining and reduces vibration during machining.
- 使用 XDMT 銑刀片，2 個可用切削刀口
- 刀桿尺寸：16~32mm，最大切削深度：10mm
- 刀口設計提供切削穩定性，減少加工時的震動

→ Page A048

### CAXO Series



- Use XOMT inserts with 2 cutting edges.
- Optimized chip breaker reduces heat generation and cutting forces.
- 6~32mm cutter diameter, max. 7mm depth of cut.
- 使用 XOMT 銑刀片，2 個可用切削角
- 泛優化的刀口設計降低熱能產生及切削力，能維持長時間高效率加工
- 6~32mm 刀桿直徑，最大切削深度可達 7mm

→ Page A050

**CBAP Series**



- Use APMT inserts with 2 cutting edges.
- Low cost and various geometric designs for versatile applications.
- 16~80mm cutter diameter, max. 11mm depth of cut.
- 使用 APMT 銑刀片，2 個可用切削角
- 低成本和多樣化的幾何設計適用於多種加工應用
- 16~80mm 刀桿直徑，最大切削深度可達 11mm

→ Page A053

**CR39 Series**



- Use W390 inserts with 2 cutting edges.
- Optimized chip breaker for high efficient shoulder and side milling.
- 16~125mm cutter diameter, max. 11mm depth of cut.
- 使用 W390 銑刀片，2 個可用切削角
- 優化的刀口設計適用於各種加工材料的高移除率的方肩銑和側銑
- 16~125mm 刀桿直徑，最大切削深度可達 11mm

→ Page A057

**CR49 Series**



- Use W490 inserts with 4 cutting edges.
- Great repeat side milling capability to reduce burrs and get good surface finishing.
- 20~80mm cutter diameter, max. 9mm depth of cut.
- 使用 W490 單面銑刀片，4 個可用切削角
- 出色的重複側銑能力可減少毛刺產生並獲得良好的表面光潔度
- 20~80mm 刀盤直徑，最大切削深度可達 9mm

→ Page A061

**CWEX Series**



- Use AXMT inserts with 2 cutting edges.
- Strong cutting edges for high removal rate shoulder milling.
- 16~100mm cutter diameter, max. 11mm depth of cut.
- 使用 AXMT 銑刀片，2 個可用切削角
- 堅固的切削刃提供高移除率的方肩銑刀
- 16~100mm 刀桿直徑，最大切削深度可達 11mm

→ Page A063

CWMM Series



- Use APMT inserts with 2 cutting edges.
- Cutter with over-center design for drilling and milling.
- 10~80mm cutter diameter, max. 11mm depth of cut.
- 使用 APMT 銑刀片，2 個可用切削角
- 刀桿過中心設計，適用於鑽孔、方肩、開槽、斜坡、挖槽、及螺旋銑削
- 10~80mm 刀桿直徑，最大端銑切削深度可達 11mm

→ Page A065

**Shoulder Milling - CXAN** 方肩銑刀

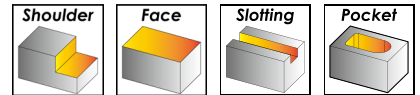
**CXAN Series**



- Use ANMX double-sided inserts with 4 cutting edges.
- Positive rake angle design for lower side cutting forces.
- Max. 15mm depth of cut, cutter diameter 40~100mm.
- 使用 ANMX 雙面銑刀片，4 個可用切削角
- 正前角設計可降低切削力
- 每次最大切深可達 15mm，刀桿直徑 25~100mm

Indexable Milling

**CXANE - Milling Tools 方肩銑刀**

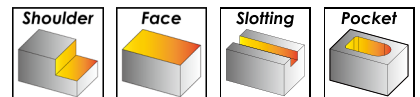
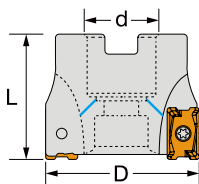


Insert Brand : Winstar, Widia, ...

| Order No.       | D  | L1 | L   | d  | T | Coolant | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---|---------|----------|---------|--------|-------|
| ICXANE502025170 | 25 | 40 | 170 | 25 | 2 |         | ANMX15T6 | ITS4004 | ITK15  | ●     |
| ICXANE502025171 | 25 | 40 | 170 | 25 | 2 | ✓       |          |         |        | ●     |

● stock ○ by inquiry

**CXANF - Milling Tools 方肩銑刀**



Insert Brand : Winstar, Widia, ...

| Order No.       | D   | L  | d  | T | Coolant | Inserts  | Screw   | Wrench | Stock |
|-----------------|-----|----|----|---|---------|----------|---------|--------|-------|
| ICXANF504040161 | 40  | 40 | 16 | 4 | ✓       | ANMX15T6 | ITS4006 | ITK15  | ●     |
| ICXANF505050221 | 50  | 40 | 22 | 5 | ✓       |          |         |        | ●     |
| ICXANF506063221 | 63  | 40 | 22 | 6 | ✓       |          |         |        | ●     |
| ICXANF507080271 | 80  | 50 | 27 | 7 | ✓       |          |         |        | ●     |
| ICXANF508100321 | 100 | 50 | 32 | 8 | ✓       |          |         |        | ●     |

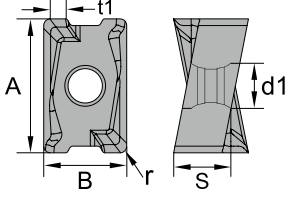
● stock ○ by inquiry

## Recommended Cutting Conditions 建議切削數據



| Working Material           | Vc        | fz          | ap       |
|----------------------------|-----------|-------------|----------|
| Carbon Steel / Alloy Steel | 110 ~ 260 | 0.09 ~ 0.27 | 0.3 ~ 15 |
| Stainless Steel            | 100 ~ 180 | 0.08 ~ 0.18 | 0.3 ~ 15 |
| Cast Iron                  | 110 ~ 260 | 0.09 ~ 0.27 | 0.3 ~ 15 |
| High Temperature Alloy     | 40 ~ 70   | 0.07 ~ 0.14 | 0.3 ~ 15 |

## Insert Specifications 刀片規格

| Insert     | Dimensions (mm) |    |      |     |      |     |
|------------|-----------------|----|------|-----|------|-----|
|            | A               | B  | S    | r   | d1   | t1  |
| ANMX15T608 | 16.1            | 10 | 6.88 | 0.8 | 4.65 | 1.9 |
| ANMX15T616 | 16.1            | 10 | 6.88 | 1.6 | 4.65 | 1.9 |



## Insert Designation 刀片型號

| Insert  | Order No.         | Code-Chipbreaker-Grade | Working Material |   |   |   |   |   |
|---|-------------------|------------------------|------------------|---|---|---|---|---|
|   |                   |                        | P                | M | K | N | S | H |
|  | IANMX15T608MG32HS | ANMX15T608-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IANMX15T608MG33TX | ANMX15T608-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IANMX15T608MG33UX | ANMX15T608-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IANMX15T608MG43TX | ANMX15T608-MG-CX43TX   | ●                | ● |   |   | ● |   |
|   | IANMX15T608MG37TA | ANMX15T608-MG-CX37TA   | ●                |   | ● |   |   | ○ |
|   | IANMX15T608MG47TA | ANMX15T608-MG-CX47TA   | ●                | ○ | ● |   | ○ |   |
|  | IANMX15T616MG33TX | ANMX15T616-MG-CX33TX   | ●                | ● | ● |   | ● | ○ |
|   | IANMX15T616MG43TX | ANMX15T616-MG-CX43TX   | ●                | ● |   |   | ● |   |

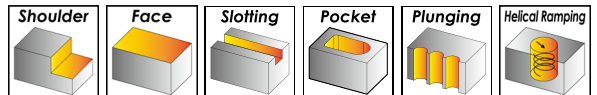
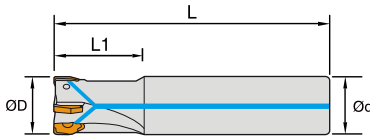
**Shoulder Milling - CXXN** 方肩銑刀

**CXXN Series**



- Use XNMX double-sided inserts with 6 cutting edges.
- Economic and high performance shoulder milling application.
- 17~125mm cutter diameter, max. 7mm depth of cut.
- 使用 XNMX 雙面銑刀片，6 個可用切削角
- 經濟與高性能方肩銑應用的最佳解決方案
- 17~125mm 刀桿直徑，最大切削深度可達 7mm

**CXXNE - Milling Tools** 方肩銑刀



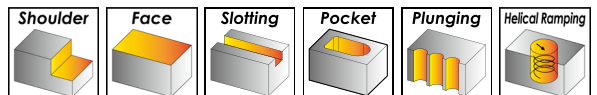
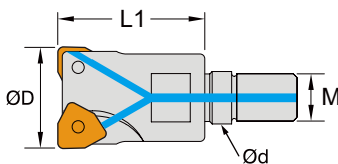
Insert Brand : Winstar, Seco, ...

| Order No.       | D  | L1  | L   | d  | T | Coolant Hole | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|-----|-----|----|---|--------------|----------|---------|--------|-------|
| ICXXNE403020111 | 20 | 28  | 110 | 20 | 3 | ✓            | XNMX0403 | ITS2512 | ITK08  | ●     |
| ICXXNE403020150 | 20 | 40  | 150 | 20 | 3 |              |          |         |        | ●     |
| ICXXNE403020200 | 20 | 100 | 200 | 20 | 3 |              |          |         |        | ●     |
| ICXXNE404025121 | 25 | 28  | 120 | 25 | 4 | ✓            |          |         |        | ●     |
| ICXXNE404025150 | 25 | 40  | 150 | 25 | 4 |              |          |         |        | ●     |
| ICXXNE405032131 | 32 | 30  | 130 | 32 | 5 | ✓            |          |         |        | ●     |
| ICXXNE405032200 | 32 | 45  | 200 | 32 | 5 |              |          |         |        | ●     |

● stock ○ by inquiry

Customize available.

**CXXNM - Modular Milling Heads** 方肩銑刀頭



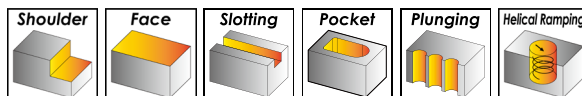
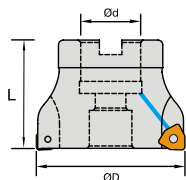
Insert Brand : Winstar, Seco, ...

| Order No.       | D  | L1 | d    | M   | T | Coolant Hole | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|------|-----|---|--------------|----------|---------|--------|-------|
| ICXXNM402017081 | 17 | 26 | 8.5  | M08 | 2 | ✓            | XNMX0403 | ITS2512 | ITK08  | ●     |
| ICXXNM403021101 | 21 | 32 | 10.5 | M10 | 3 | ✓            |          |         |        | ●     |
| ICXXNM404026121 | 26 | 38 | 12.5 | M12 | 4 | ✓            |          |         |        | ●     |
| ICXXNM405032161 | 32 | 41 | 17   | M16 | 5 | ✓            |          |         |        | ○     |

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

## CXXNF - Milling Tools 方肩銑刀



Insert Brand : Winstar, Seco, ...

| Order No.       | D   | L  | d    | T  | Coolant Hole | Inserts  | Screw   | Wrench | Stock |
|-----------------|-----|----|------|----|--------------|----------|---------|--------|-------|
| ICXXNF406050220 | 50  | 50 | 22   | 6  |              | XNMX0403 | ITS2512 | ITK08  | ●     |
| ICXXNF407063220 | 63  | 50 | 22   | 7  |              |          |         |        | ●     |
| ICXXNF407063250 | 63  | 50 | 25.4 | 7  |              |          |         |        | ●     |
| ICXXNF407040161 | 40  | 40 | 16   | 7  | ✓            |          |         |        | ●     |
| ICXXNF409050221 | 50  | 40 | 22   | 9  | ✓            |          |         |        | ●     |
| ICXXNF805050221 | 50  | 40 | 22   | 5  | ✓            | XNMX0806 | ITS4006 | ITK15  | ●     |
| ICXXNF806063221 | 63  | 40 | 22   | 6  | ✓            |          |         |        | ●     |
| ICXXNF807080271 | 80  | 50 | 27   | 7  | ✓            |          |         |        | ●     |
| ICXXNF811100321 | 100 | 50 | 32   | 11 | ✓            |          |         |        | ○     |
| ICXXNF811125401 | 125 | 63 | 40   | 11 | ✓            |          |         |        | ○     |

● stock ○ by inquiry

Customize available.

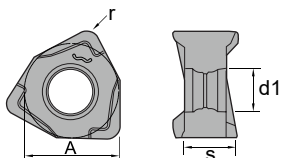
## Recommended Cutting Conditions 建議切削數據

| Working Material           | XNMX0403  |             |           | XNMX0806  |             |           |
|----------------------------|-----------|-------------|-----------|-----------|-------------|-----------|
|                            | Vc        | fz          | ap        | Vc        | fz          | ap        |
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.10 ~ 0.16 | 0.3 ~ 3.0 | 120 ~ 250 | 0.1 ~ 0.3   | 0.3 ~ 7.0 |
| Stainless Steel            | 100 ~ 180 | 0.08 ~ 0.12 | 0.3 ~ 1.6 | 100 ~ 180 | 0.08 ~ 0.25 | 0.3 ~ 4.5 |
| Cast Iron                  | 120 ~ 250 | 0.10 ~ 0.16 | 0.3 ~ 3.0 | 120 ~ 250 | 0.1 ~ 0.3   | 0.3 ~ 7.0 |
| High Temperature Alloy     | 40 ~ 100  | 0.08 ~ 0.12 | 0.3 ~ 1.5 | 40 ~ 100  | 0.08 ~ 0.18 | 0.3 ~ 4.0 |
| Hardened Steel             | 50 ~ 100  | 0.09 ~ 0.13 | 0.3 ~ 1.5 | 50 ~ 100  | 0.09 ~ 0.19 | 0.3 ~ 4.0 |








## Insert Specifications 刀片規格

| Insert     | Dimensions (mm) |       |     |      |
|------------|-----------------|-------|-----|------|
|            | A               | S     | r   | d1   |
| XNMX040304 | 6.7             | 3.285 | 0.4 | 3.15 |
| XNMX040308 | 6.7             | 3.285 | 0.8 | 3.15 |
| XNMX080608 | 12.53           | 6.5   | 0.8 | 4.5  |



## Insert Designation 刀片型號

| Insert  | Order No.         | Code-Chipbreaker-Grade | Working Material |   |   |   |   |   |
|---|-------------------|------------------------|------------------|---|---|---|---|---|
|   |                   |                        | P                | M | K | N | S | H |
|    | IXNMX040304SG23TX | XNMX040304-SG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|   | IXNMX040304SG32HS | XNMX040304-SG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IXNMX040304SG33TX | XNMX040304-SG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IXNMX040304SG33UX | XNMX040304-SG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|  | IXNMX040304MG23TX | XNMX040304-MG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|   | IXNMX040304MG32HS | XNMX040304-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IXNMX040304MG33TX | XNMX040304-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IXNMX040304MG33UX | XNMX040304-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|  | IXNMX040308MG23TX | XNMX040308-MG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|   | IXNMX040308MG32HS | XNMX040308-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IXNMX040308MG33TX | XNMX040308-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IXNMX040308MG33UX | XNMX040308-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IXNMX040308MG43TX | XNMX040308-MG-CX43TX   | ●                | ● |   |   | ● |   |
|  | IXNMX080608MG23TX | XNMX080608-MG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|   | IXNMX080608MG32HS | XNMX080608-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IXNMX080608MG33TX | XNMX080608-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IXNMX080608MG33UX | XNMX080608-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IXNMX080608MG43TX | XNMX080608-MG-CX43TX   | ●                | ● |   |   | ● |   |
|   | IXNMX080608MG37TA | XNMX080608-MG-CX37TA   | ●                |   | ● |   |   | ○ |
|   | IXNMX080608MG47TA | XNMX080608-MG-CX47TA   | ●                | ○ | ● |   | ○ |   |
|  | IXNMX080608RG32HS | XNMX080608-RG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IXNMX080608RG33TX | XNMX080608-RG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IXNMX080608RG43TX | XNMX080608-RG-CX43TX   | ●                | ● |   |   | ● |   |
|   | IXNMX080608RG37TA | XNMX080608-RG-CX37TA   | ●                |   | ● |   |   | ○ |
|   | IXNMX080608RG47TA | XNMX080608-RG-CX47TA   | ●                | ○ | ● |   | ○ |   |

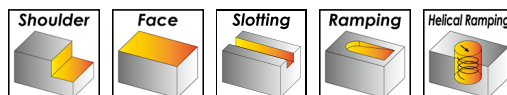
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- Optimized chip breaker for various applications and materials.
- 16~125mm cutter diameter, max. 11mm depth of cut.
- 使用 APKT 銑刀片，2 個可用切削角
- 優化的刀口設計適用於各種加工應用和材料
- 16~125mm 刀桿直徑，最大切削深度可達 11mm

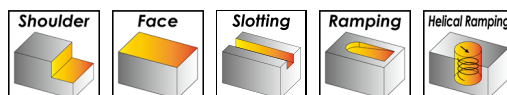
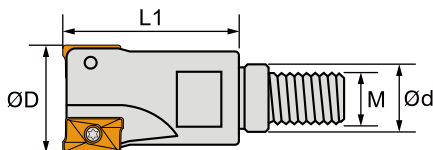
**CAPKE - Milling Tools** 方肩銑刀



Insert Brand : Winstar, Iscar, Ceratizit, ...

| Order No.       | D  | L1 | L   | d  | T | Inserts              | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---|----------------------|---------|--------|-------|
| ICAPKE302016120 | 16 | 25 | 120 | 16 | 2 | APKT1003             | ITS2515 | ITK08  | ●     |
| ICAPKE302020120 | 20 | 30 | 120 | 20 | 2 |                      |         |        | ●     |
| ICAPKE302020150 | 20 | 30 | 150 | 20 | 2 |                      |         |        | ●     |
| ICAPKE304025150 | 25 | 35 | 150 | 25 | 4 |                      |         |        | ●     |
| ICAPKE305032150 | 32 | 35 | 150 | 32 | 5 |                      |         |        | ○     |
| ICAPKE402025150 | 25 | 40 | 150 | 25 | 2 | APET1604<br>APKT1604 | ITS4004 | ITK15  | ●     |
| ICAPKE402032150 | 32 | 45 | 150 | 32 | 2 |                      |         |        | ○     |

**CAPKM - Modular Milling Heads** 方肩銑刀頭



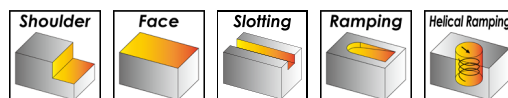
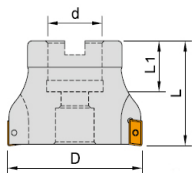
Insert Brand : Winstar, Iscar, Ceratizit, ...

| Order No.       | D  | L1 | d    | M   | T | Inserts              | Screw   | Wrench | Stock |
|-----------------|----|----|------|-----|---|----------------------|---------|--------|-------|
| ICAPKM302016080 | 16 | 26 | 8.5  | M8  | 2 | APKT1003             | ITS2515 | ITK08  | ●     |
| ICAPKM303020100 | 20 | 32 | 10.5 | M10 | 3 |                      |         |        | ○     |
| ICAPKM304025120 | 25 | 38 | 12.5 | M12 | 4 |                      |         |        | ●     |
| ICAPKM305032160 | 32 | 41 | 17   | M16 | 5 |                      |         |        | ○     |
| ICAPKM402025120 | 25 | 38 | 12.5 | M12 | 2 | APET1604<br>APKT1604 | ITS4004 | ITK15  | ○     |
| ICAPKM403032160 | 32 | 41 | 17   | M16 | 3 |                      |         |        | ○     |

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

## CAPKF - Milling Tools 方肩銑刀



Insert Brand : Winstar, Iscar, Ceratizit, ...

| Order No.       | D   | L1 | L  | d     | T | Inserts              | Screw   | Wrench | Stock |
|-----------------|-----|----|----|-------|---|----------------------|---------|--------|-------|
| ICAPKF306050220 | 50  | 20 | 40 | 22    | 6 | APKT1003             | ITS2515 | ITK08  | ●     |
| ICAPKF306063220 | 63  | 21 | 45 | 22    | 6 |                      |         |        | ●     |
| ICAPKF307080270 | 80  | 23 | 50 | 27    | 7 |                      |         |        | ●     |
| ICAPKF404050220 | 50  | 23 | 50 | 22    | 4 | APET1604<br>APKT1604 | ITS4004 | ITK15  | ●     |
| ICAPKF405063220 | 63  | 23 | 50 | 22    | 5 |                      |         |        | ●     |
| ICAPKF405063250 | 63  | 23 | 50 | 25.4  | 5 |                      |         |        | ●     |
| ICAPKF406080250 | 80  | 32 | 55 | 25.4  | 6 |                      |         |        | ●     |
| ICAPKF406080270 | 80  | 32 | 55 | 27    | 6 |                      |         |        | ●     |
| ICAPKF408100310 | 100 | 32 | 55 | 31.75 | 8 |                      |         |        | ●     |
| ICAPKF408100320 | 100 | 32 | 55 | 32    | 8 |                      |         |        | ●     |
| ICAPKF408125380 | 125 | 38 | 63 | 38.1  | 8 |                      |         |        | ●     |

● stock ○ by inquiry

Customize available.

## Recommended Cutting Conditions 建議切削數據

| Working Material           | APKT1003  |             |           | APKT1604 / APET1604 |             |            |
|----------------------------|-----------|-------------|-----------|---------------------|-------------|------------|
|                            | Vc        | fz          | ap        | Vc                  | fz          | ap         |
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 7.0 | 120 ~ 250           | 0.12 ~ 0.28 | 0.5 ~ 11.0 |
| Stainless Steel            | 100 ~ 180 | 0.08 ~ 0.18 | 0.3 ~ 4.0 | 100 ~ 180           | 0.10 ~ 0.22 | 0.5 ~ 7.0  |
| Cast Iron                  | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 6.0 | 120 ~ 250           | 0.12 ~ 0.28 | 0.5 ~ 10.0 |
| Aluminum Alloy             | -         | -           | -         | 300 ~ 1000          | 0.18 ~ 0.40 | 0.3 ~ 11.0 |
| High Temperature Alloy     | 40 ~ 100  | 0.07 ~ 0.14 | 0.3 ~ 4.0 | 40 ~ 100            | 0.10 ~ 0.18 | 0.5 ~ 7.0  |
| Hardened Steel             | 50 ~ 100  | 0.07 ~ 0.15 | 0.3 ~ 4.0 | 50 ~ 100            | 0.10 ~ 0.20 | 0.5 ~ 7.0  |

**Insert Specifications** 刀片規格

| Insert     | Dimensions (mm) |       |      |     |     |
|------------|-----------------|-------|------|-----|-----|
|            | A               | B     | S    | r   | d1  |
| APKT100304 | 10.5            | 6.7   | 3.5  | 0.4 | 2.8 |
| APKT100308 | 10.5            | 6.7   | 3.5  | 0.8 | 2.8 |
| APET160402 | 16.3            | 9.525 | 4.76 | 0.2 | 4.5 |
| APET160404 | 16.3            | 9.525 | 4.76 | 0.4 | 4.5 |
| APKT160408 | 16.3            | 9.525 | 5.25 | 0.8 | 4.5 |

**Insert Designation** 刀片型號

| Insert | Order No.          | Code-Chipbreaker-Grade   | Working Material |   |   |   |   |   |
|--------|--------------------|--------------------------|------------------|---|---|---|---|---|
|        |                    |                          | P                | M | K | N | S | H |
|        | IAPKT100304EMG23TX | APKT100304PDER-MG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|        | IAPKT100304EMG32HS | APKT100304PDER-MG-CX32HS | ●                | ○ | ● |   |   |   |
|        | IAPKT100304EMG33TX | APKT100304PDER-MG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|        | IAPKT100304EMG33UX | APKT100304PDER-MG-CX33UX | ●                | ● | ● |   | ● | ○ |
|        | IAPKT100304EMG43TX | APKT100304PDER-MG-CX43TX | ●                | ● |   |   | ● |   |
|        | IAPKT100308EMG23TX | APKT100308PDER-MG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|        | IAPKT100308EMG32HS | APKT100308PDER-MG-CX32HS | ●                | ○ | ● |   |   |   |
|        | IAPKT100308EMG33TX | APKT100308PDER-MG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|        | IAPKT100308EMG33UX | APKT100308PDER-MG-CX33UX | ●                | ● | ● |   | ● | ○ |
|        | IAPKT100308EMG43TX | APKT100308PDER-MG-CX43TX | ●                | ● |   |   | ● |   |
|        | IAPKT100304ERG32HS | APKT100304PDER-RG-CX32HS | ●                | ○ | ● |   |   |   |
|        | IAPKT100304ERG33TX | APKT100304PDER-RG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|        | IAPET160402FAL10   | APET160402PDFR-AL-CX10   |                  |   |   | ● |   |   |
|        | IAPET160404FAL10   | APET160404PDFR-AL-CX10   |                  |   |   | ● |   |   |
|        | IAPET160402FFG23TX | APET160402PDFR-FG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|        | IAPET160404FFG23TX | APET160404PDFR-FG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|        | IAPKT160408EMG23TX | APKT160408PDER-MG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|        | IAPKT160408EMG32HS | APKT160408PDER-MG-CX32HS | ●                | ○ | ● |   |   |   |
|        | IAPKT160408EMG33TX | APKT160408PDER-MG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|        | IAPKT160408EMG33UX | APKT160408PDER-MG-CX33UX | ●                | ● | ● |   | ● | ○ |
|        | IAPKT160408EMG43TX | APKT160408PDER-MG-CX43TX | ●                | ● |   |   | ● |   |
|        | IAPKT160408ERG23TX | APKT160408PDER-RG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|        | IAPKT160408ERG32HS | APKT160408PDER-RG-CX32HS | ●                | ○ | ● |   |   |   |
|        | IAPKT160408ERG33TX | APKT160408PDER-RG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|        | IAPKT160408ERG43TX | APKT160408PDER-RG-CX43TX | ●                | ● |   |   | ● |   |

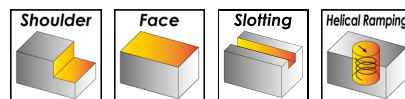
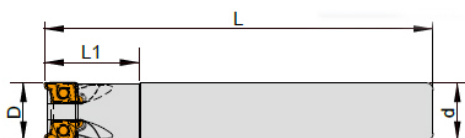
**Shoulder Milling - CART** 方肩銑刀

**CART Series**



- Use WRT inserts with 2 cutting edges.
- Strong chip breaker provides well ramping and slotting capabilities.
- 10~26mm cutter diameter, max. 7mm depth of cut.
- 使用 WRT 銑刀片, 2 個可用切削角
- 強化的刀口設計提供了極佳的斜坡銑削及開槽能力
- 10~26mm 刀桿直徑, 最大切削深度可達 7mm

**CARTE - Milling Tools** 方肩銑刀



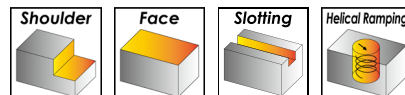
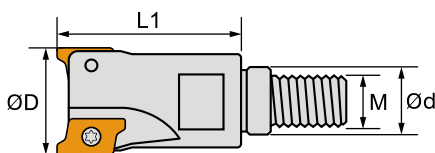
Insert Brand : Winstar, Safety, ...

| Order No.       | D  | L1 | L   | d  | T | Inserts | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---|---------|---------|--------|-------|
| ICARTE702010100 | 10 | 18 | 100 | 10 | 2 | WRT0702 | ITS2003 | ITK06  | ○     |
| ICARTE702011100 | 11 | 18 | 100 | 10 | 2 |         |         |        | ●     |
| ICARTE702013100 | 13 | 20 | 100 | 12 | 2 |         |         |        | ●     |
| ICARTE703016150 | 16 | 30 | 150 | 16 | 3 |         |         |        | ○     |
| ICARTE102017150 | 17 | 30 | 150 | 16 | 2 | WRT1003 | ITS2515 | ITK08  | ●     |
| ICARTE103021150 | 21 | 30 | 150 | 20 | 3 |         |         |        | ●     |
| ICARTE104026150 | 26 | 40 | 150 | 25 | 4 |         |         |        | ●     |

● stock ○ by inquiry

Customize available.

**CARTM - Modular Milling Heads** 方肩銑刀頭



Insert Brand : Winstar, Safety, ...

| Order No.       | D  | L1 | M   | d    | T | Inserts | Screw   | Wrench | Stock |
|-----------------|----|----|-----|------|---|---------|---------|--------|-------|
| ICARTM702010050 | 10 | 18 | M5  | 5.5  | 2 | WRT0702 | ITS2003 | ITK06  | ●     |
| ICARTM702011050 | 11 | 18 | M5  | 5.5  | 2 |         |         |        | ●     |
| ICARTM702012060 | 12 | 20 | M6  | 6.5  | 2 |         |         |        | ●     |
| ICARTM702013060 | 13 | 20 | M6  | 6.5  | 2 |         |         |        | ●     |
| ICARTM103017080 | 17 | 30 | M8  | 8.5  | 3 | WRT1003 | ITS2515 | ITK08  | ●     |
| ICARTM103021100 | 21 | 32 | M10 | 10.5 | 3 |         |         |        | ●     |

● stock ○ by inquiry

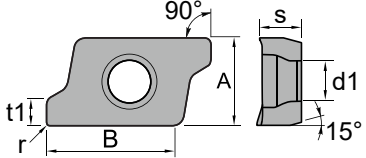
※ For screw-in type adapter, please refer to Tooling System

## Recommended Cutting Conditions 建議切削數據




| Working Material           | WRT0702   |             |           | WRT1003   |             |           |
|----------------------------|-----------|-------------|-----------|-----------|-------------|-----------|
|                            | Vc        | fz          | ap        | Vc        | fz          | ap        |
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.08 ~ 0.20 | 0.3 ~ 5.0 | 120 ~ 250 | 0.10 ~ 0.22 | 0.5 ~ 7.0 |
| Stainless Steel            | 100 ~ 180 | 0.05 ~ 0.15 | 0.3 ~ 3.0 | 100 ~ 180 | 0.08 ~ 0.18 | 0.5 ~ 4.0 |
| Cast Iron                  | 120 ~ 250 | 0.08 ~ 0.20 | 0.3 ~ 4.0 | 120 ~ 250 | 0.10 ~ 0.22 | 0.5 ~ 6.0 |
| High Temperature Alloy     | 40 ~ 100  | 0.05 ~ 0.12 | 0.3 ~ 3.0 | 40 ~ 100  | 0.07 ~ 0.14 | 0.5 ~ 4.0 |
| Hardened Steel             | 50 ~ 100  | 0.05 ~ 0.13 | 0.3 ~ 3.0 | 50 ~ 100  | 0.07 ~ 0.15 | 0.5 ~ 4.0 |

## Insert Specifications 刀片規格

| Insert    | Dimensions (mm) |     |      |     |     |
|-----------|-----------------|-----|------|-----|-----|
|           | A               | B   | S    | r   | d1  |
| WRT070204 | 4.30            | 6.4 | 2.38 | 0.4 | 2.2 |
| WRT100308 | 6.35            | 9.3 | 3.4  | 0.8 | 2.9 |



## Insert Designation 刀片型號

| Insert  | Order No.        | Code-Chipbreaker-Grade | Working Material |   |   |   |   |   |
|---|------------------|------------------------|------------------|---|---|---|---|---|
|   |                  |                        | P                | M | K | N | S | H |
|  | IWRT070204RG23TX | WRT070204-RG-CX23TX    | ○                | ○ | ○ |   | ○ | ● |
|   | IWRT070204RG32HS | WRT070204-RG-CX32HS    | ●                | ○ | ● |   |   |   |
|   | IWRT070204RG33TX | WRT070204-RG-CX33TX    | ●                | ○ | ● |   | ○ | ● |
|   | IWRT070204RG43TX | WRT070204-RG-CX43TX    | ●                | ● |   |   | ● |   |
|  | IWRT100308MG23TX | WRT100308-MG-CX23TX    | ○                | ○ | ○ |   | ○ | ● |
|   | IWRT100308MG32HS | WRT100308-MG-CX32HS    | ●                | ○ | ● |   |   |   |
|   | IWRT100308MG33TX | WRT100308-MG-CX33TX    | ●                | ○ | ● |   | ○ | ● |
|   | IWRT100308MG33UX | WRT100308-MG-CX33UX    | ●                | ● | ● |   | ● | ○ |
|   | IWRT100308MG43TX | WRT100308-MG-CX43TX    | ●                | ● |   |   | ● |   |
|  | IWRT100308RG23TX | WRT100308-RG-CX23TX    | ○                | ○ | ○ |   | ○ | ● |
|   | IWRT100308RG32HS | WRT100308-RG-CX32HS    | ●                | ○ | ● |   |   |   |
|   | IWRT100308RG33TX | WRT100308-RG-CX33TX    | ●                | ○ | ● |   | ○ | ● |
|   | IWRT100308RG43TX | WRT100308-RG-CX43TX    | ●                | ● |   |   | ● |   |

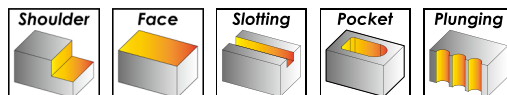
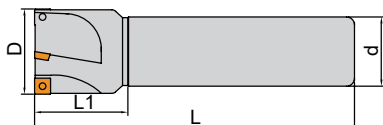
**Shoulder Milling - CASP** 方肩銑刀

**CASP Series**



- Use SPMG inserts with 4 cutting edges.
- Cost effective shoulder milling tools.
- 12~80mm cutter diameter, max. 6mm depth of cut.
- 使用 SPMG 單面銑刀片, 4 個可用切削角
- 經濟實惠的方肩銑刀
- 12~80mm 刀桿直徑, 最大切削深度可達 6mm

**CASPE - Milling Tools** 方肩銑刀



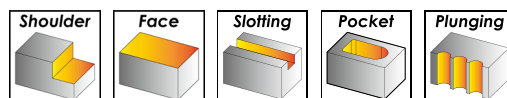
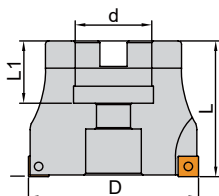
Insert Brand : Winstar, Taegutec, ...

| Order No.       | D  | L1 | L   | d  | T | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---|----------|---------|--------|-------|
| ICASPE502012100 | 12 | 20 | 100 | 12 | 2 | SPMG0502 | ITS2003 | ITK06  | ●     |
| ICASPE502013100 | 13 | 20 | 100 | 12 | 2 |          |         |        | ●     |
| ICASPE502014100 | 14 | 20 | 100 | 12 | 2 |          |         |        | ●     |
| ICASPE602016120 | 16 | 25 | 120 | 16 | 2 | SPMG0602 | ITS2205 | ITK06  | ●     |
| ICASPE603020120 | 20 | 30 | 120 | 20 | 3 |          |         |        | ●     |
| ICASPE604025120 | 25 | 30 | 120 | 25 | 4 |          |         |        | ●     |
| ICASPE604030120 | 30 | 30 | 120 | 25 | 4 |          |         |        | ●     |
| ICASPE605032120 | 32 | 30 | 120 | 25 | 5 |          |         |        | ●     |
| ICASPE904032150 | 32 | 40 | 150 | 32 | 4 | SPMG0904 | ITS3504 | ITK15  | ●     |
| ICASPE904040150 | 40 | 40 | 150 | 32 | 4 |          |         |        | ●     |

● stock ○ by inquiry

Customize available.

## CASPF - Milling Tools 方肩銑刀



Insert Brand : Winstar, Taegutec, ...

| Order No.       | D  | L1 | L  | d    | T  | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|----|------|----|----------|---------|--------|-------|
| ICASPF607050220 | 50 | 20 | 45 | 22   | 7  | SPMG0602 | ITS2205 | ITK06  | ●     |
| ICASPF607050250 | 50 | 20 | 45 | 25.4 | 7  |          |         |        | ○     |
| ICASPF609063220 | 63 | 20 | 45 | 22   | 9  |          |         |        | ●     |
| ICASPF609063250 | 63 | 20 | 45 | 25.4 | 9  |          |         |        | ●     |
| ICASPF611080270 | 80 | 23 | 50 | 27   | 11 |          |         |        | ○     |
| ICASPF611080250 | 80 | 23 | 50 | 25.4 | 11 |          |         |        | ●     |
| ICASPF905050220 | 50 | 20 | 45 | 22   | 5  | SPMG0904 | ITS3504 | ITK15  | ●     |
| ICASPF905050250 | 50 | 20 | 45 | 25.4 | 5  |          |         |        | ○     |
| ICASPF906063220 | 63 | 20 | 45 | 22   | 6  |          |         |        | ●     |
| ICASPF906063250 | 63 | 20 | 45 | 25.4 | 6  |          |         |        | ○     |
| ICASPF907080270 | 80 | 23 | 50 | 27   | 7  |          |         |        | ●     |
| ICASPF907080250 | 80 | 23 | 50 | 25.4 | 7  |          |         |        | ○     |

● stock ○ by inquiry

Customize available.

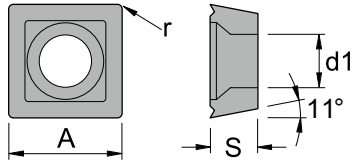
## Recommended Cutting Conditions 建議切削數據

| Working Material           | SPMG050204 & SPMG060204 |             |           | SPMT07T308 & SPMG090408 |             |           |
|----------------------------|-------------------------|-------------|-----------|-------------------------|-------------|-----------|
|                            | Vc                      | fz          | ap        | Vc                      | fz          | ap        |
| Carbon Steel / Alloy Steel | 120 ~ 250               | 0.10 ~ 0.22 | 0.3 ~ 3.0 | 120 ~ 250               | 0.10 ~ 0.22 | 0.5 ~ 6.0 |
| Stainless Steel            | 100 ~ 180               | 0.08 ~ 0.18 | 0.3 ~ 2.0 | 100 ~ 180               | 0.08 ~ 0.18 | 0.5 ~ 4.0 |
| Cast Iron                  | 120 ~ 250               | 0.10 ~ 0.22 | 0.3 ~ 3.0 | 120 ~ 250               | 0.10 ~ 0.22 | 0.5 ~ 6.0 |
| High Temperature Alloy     | 40 ~ 100                | 0.07 ~ 0.14 | 0.3 ~ 2.0 | 40 ~ 100                | 0.07 ~ 0.14 | 0.5 ~ 4.0 |
| Hardened Steel             | 50 ~ 100                | 0.07 ~ 0.15 | 0.3 ~ 2.0 | 50 ~ 100                | 0.07 ~ 0.15 | 0.5 ~ 4.0 |








## Insert Specifications 刀片規格






| Insert     | Dimensions (mm) |      |     |      |
|------------|-----------------|------|-----|------|
|            | A               | S    | r   | d1   |
| SPGG050204 | 5.00            | 2.38 | 0.4 | 2.30 |
| SPGG060204 | 6.00            | 2.38 | 0.4 | 2.65 |
| SPGG07T308 | 7.94            | 3.97 | 0.8 | 2.85 |
| SPGG090408 | 9.80            | 4.3  | 0.8 | 4.05 |
| SPGG110408 | 11.50           | 4.8  | 0.8 | 4.45 |
| SPMG050204 | 5.00            | 2.38 | 0.4 | 2.30 |
| SPMG060204 | 6.00            | 2.38 | 0.4 | 2.65 |
| SPMG07T308 | 7.94            | 3.97 | 0.8 | 2.85 |
| SPMG090408 | 9.80            | 4.3  | 0.8 | 4.05 |
| SPMG110408 | 11.50           | 4.8  | 0.8 | 4.45 |



## Insert Designation 刀片型號

| Insert  | Order No.         | Code-Chipbreaker-Grade | Working Material |   |   |   |   |   |
|---|-------------------|------------------------|------------------|---|---|---|---|---|
|   |                   |                        | P                | M | K | N | S | H |
|  | ISPGG050204SG33TX | SPGG050204-SG-CX33TX   | ○                | ● | ○ | ● | ○ |   |
|  | ISPGG060204SG33TX | SPGG060204-SG-CX33TX   | ○                | ● | ○ | ● | ○ |   |
|  | ISPGG07T304SG33TX | SPGG070304-SG-CX33TX   | ○                | ● | ○ | ● | ○ |   |
|  | ISPGG090408SG33TX | SPGG090408-SG-CX33TX   | ○                | ● | ○ | ● | ○ |   |
|  | ISPGG110408SG33TX | SPGG110408-SG-CX33TX   | ○                | ● | ○ | ● | ○ |   |

## Insert Designation 刀片型號

| Insert  | Order No.         | Code-Chipbreaker-Grade | Working Material |   |   |   |   |   |
|---|-------------------|------------------------|------------------|---|---|---|---|---|
|   |                   |                        | P                | M | K | N | S | H |
|    | ISPMG050204MG32HS | SPMG050204-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | ISPMG050204MG33TX | SPMG050204-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | ISPMG050204MG33UX | SPMG050204-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | ISPMG050204MG43TX | SPMG050204-MG-CX43TX   | ●                | ● | ○ |   | ● |   |
|    | ISPMG060204MG32HS | SPMG060204-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | ISPMG060204MG33TX | SPMG060204-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | ISPMG060204MG33UX | SPMG060204-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | ISPMG060204MG43TX | SPMG060204-MG-CX43TX   | ●                | ● | ○ |   | ● |   |
|    | ISPMG07T308MG32HS | SPMG07T308-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | ISPMG07T308MG33TX | SPMG07T308-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | ISPMG07T308MG33UX | SPMG07T308-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | ISPMG07T308MG43TX | SPMG07T308-MG-CX43TX   | ●                | ● | ○ |   | ● |   |
|    | ISPMG090408MG32HS | SPMG090408-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | ISPMG090408MG33TX | SPMG090408-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | ISPMG090408MG33UX | SPMG090408-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | ISPMG090408MG43TX | SPMG090408-MG-CX43TX   | ●                | ● | ○ |   | ● |   |
|  | ISPMG110408MG32HS | SPMG110408-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | ISPMG110408MG33TX | SPMG110408-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | ISPMG110408MG33UX | SPMG110408-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | ISPMG110408MG43TX | SPMG110408-MG-CX43TX   | ●                | ● | ○ |   | ● |   |

**Shoulder Milling - CATP** 方肩銑刀

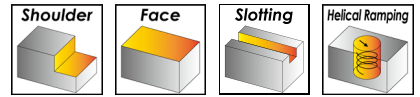
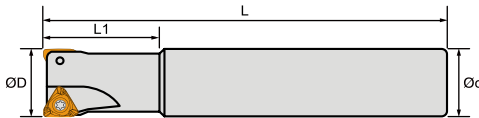
Indexable Milling

**CATP Series**



- Use TPMX inserts with 3 cutting edges.
- Sharp cutting edges for various low milling force applications.
- 20~80mm cutter diameter, max. 11mm depth of cut.
- 使用 TPMX 銑刀片，3 個可用切削角
- 出色的銳利刀口設計適用於各種低銑削阻力的應用
- 20~80mm 刀桿直徑，最大切削深度可達 11mm

**CATPE - Milling Tools** 方肩銑刀



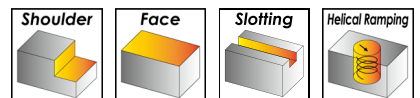
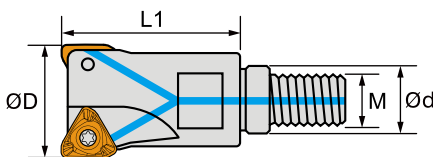
Insert Brand : Winstar, Taegutec, ...

| Order No.       | D  | L1 | L   | d  | T | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---|----------|---------|--------|-------|
| ICATPE102020130 | 20 | 50 | 130 | 20 | 2 | TPMX1004 | ITS2517 | ITK08  | ●     |
| ICATPE103025150 | 25 | 55 | 150 | 25 | 3 |          |         |        | ●     |
| ICATPE503033200 | 33 | 45 | 200 | 32 | 3 | TPMX1505 | ITS4014 | ITK15  | ●     |
| ICATPE504040200 | 40 | 45 | 200 | 32 | 4 |          |         |        | ○     |

● stock ○ by inquiry

Customize available.

**CATPM - Modular Milling Heads** 方肩銑刀頭



Insert Brand : Winstar, Taegutec, ...

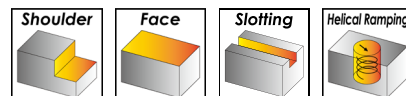
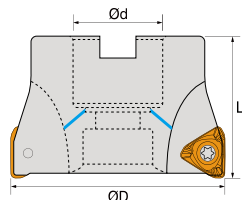
| Order No.       | D  | L1 | d    | M   | T | Coolant | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|------|-----|---|---------|----------|---------|--------|-------|
| ICATPM102020100 | 20 | 35 | 10.5 | M10 | 2 |         | TPMX1004 | ITS2517 | ITK08  | ○     |
| ICATPM102020101 | 20 | 35 | 18   | M10 | 2 | ✓       |          |         |        | ●     |
| ICATPM102021100 | 21 | 35 | 10.5 | M10 | 2 |         |          |         |        | ●     |
| ICATPM103025120 | 25 | 35 | 12.5 | M12 | 3 |         |          |         |        | ○     |
| ICATPM103025121 | 25 | 35 | 21   | M12 | 3 | ✓       |          |         |        | ●     |
| ICATPM103026120 | 26 | 35 | 12.5 | M12 | 3 |         |          |         |        | ●     |
| ICATPM105032160 | 32 | 43 | 29   | M16 | 5 |         |          |         |        | ●     |
| ICATPM105032161 | 32 | 43 | 17   | M16 | 5 | ✓       |          |         |        | ●     |
| ICATPM105033160 | 33 | 43 | 17   | M16 | 5 |         |          |         |        | ●     |
| ICATPM105033161 | 33 | 43 | 17   | M16 | 5 | ✓       |          |         |        | ●     |

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**Shoulder Milling - CATP** 方肩銑刀

**CATPF - Milling Tools** 方肩銑刀



Insert Brand : Winstar, Taegutec, ...

| Order No.       | D  | L  | d  | T | Coolant | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|----|---|---------|----------|---------|--------|-------|
| ICATPF106050221 | 50 | 50 | 22 | 6 | ✓       | TPMX1004 | ITS2517 | ITK08  | ●     |
| ICATPF107050220 | 50 | 50 | 22 | 7 |         |          |         |        | ●     |
| ICATPF107063221 | 63 | 50 | 22 | 7 | ✓       |          |         |        | ●     |
| ICATPF109063220 | 63 | 50 | 22 | 9 |         |          |         |        | ●     |
| ICATPF504040161 | 40 | 40 | 16 | 4 | ✓       | TPMX1505 | ITS4004 | ITK15  | ●     |
| ICATPF505050221 | 50 | 40 | 22 | 5 | ✓       |          |         |        | ●     |
| ICATPF506063221 | 63 | 40 | 22 | 6 | ✓       |          |         |        | ●     |
| ICATPF508080271 | 80 | 50 | 27 | 8 | ✓       |          |         |        | ●     |

● stock ○ by inquiry

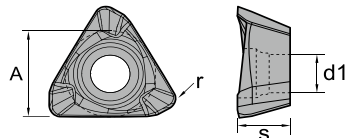
Customize available.

**Recommended Cutting Conditions** 建議切削數據





| Working Material           | TPMX1004  |             |           | TPMX1505  |             |            |
|----------------------------|-----------|-------------|-----------|-----------|-------------|------------|
|                            | Vc        | fz          | ap        | Vc        | fz          | ap         |
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.08 ~ 0.20 | 0.3 ~ 7.0 | 120 ~ 250 | 0.12 ~ 0.28 | 0.5 ~ 11.0 |
| Stainless Steel            | 100 ~ 180 | 0.05 ~ 0.15 | 0.3 ~ 4.0 | 100 ~ 180 | 0.10 ~ 0.22 | 0.5 ~ 7.0  |
| Cast Iron                  | 120 ~ 250 | 0.08 ~ 0.20 | 0.3 ~ 6.0 | 120 ~ 250 | 0.12 ~ 0.28 | 0.5 ~ 10.0 |
| High Temperature Alloy     | 40 ~ 100  | 0.05 ~ 0.12 | 0.3 ~ 4.0 | 40 ~ 100  | 0.10 ~ 0.18 | 0.5 ~ 7.0  |
| Hardened Steel             | 50 ~ 100  | 0.05 ~ 0.13 | 0.3 ~ 4.0 | 50 ~ 100  | 0.10 ~ 0.20 | 0.5 ~ 7.0  |

## Insert Specifications 刀片規格

| Insert     | Dimensions (mm) |   |     |      |
|------------|-----------------|---|-----|------|
|            | A               | S | r   | d1   |
| TPMX100404 | 6.9             | 4 | 0.4 | 3    |
| TPMX100408 | 6.9             | 4 | 0.8 | 3    |
| TPMX150508 | 10.7            | 5 | 0.8 | 4.85 |



## Insert Designation 刀片型號

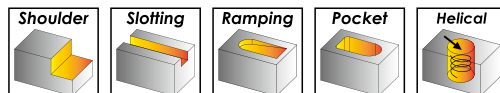
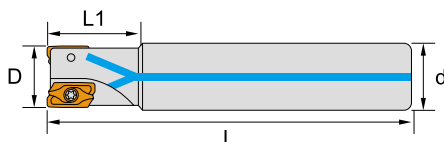
| Insert  | Order No.         | Code-Chipbreaker-Grade | Working Material |   |   |   |   |   |
|---|-------------------|------------------------|------------------|---|---|---|---|---|
|   |                   |                        | P                | M | K | N | S | H |
|   | ITPMX100404SG32HS | TPMX100404-SG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | ITPMX100404SG33TX | TPMX100404-SG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | ITPMX100404SG33UX | TPMX100404-SG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|  | ITPMX100408SG32HS | TPMX100408-SG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | ITPMX100408SG33TX | TPMX100408-SG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | ITPMX100408SG33UX | TPMX100408-SG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|  | ITPMX100408MG23TX | TPMX100408-MG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|   | ITPMX100408MG32HS | TPMX100408-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | ITPMX100408MG33TX | TPMX100408-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | ITPMX100408MG33UX | TPMX100408-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | ITPMX100408MG43TX | TPMX100408-MG-CX43TX   | ●                | ● |   |   | ● |   |
|   | ITPMX150508MG23TX | TPMX150508-MG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|   | ITPMX150508MG32HS | TPMX150508-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | ITPMX150508MG33TX | TPMX150508-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | ITPMX150508MG33UX | TPMX150508-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | ITPMX150508MG43TX | TPMX150508-MG-CX43TX   | ●                | ● |   |   | ● |   |

**CAXD Series**



- Use XDMT inserts with 2 cutting edges.
- Cutter dia. : 16~32mm, max. depth of cut : 10mm.
- Cutting edge design provides stable machining and reduces vibration during machining.
- 使用 XDMT 銑刀片 , 2 個可用切削刀口
- 刀桿尺寸 : 16~32mm, 最大切削深度 : 10mm
- 刃口設計提供切削穩定性 , 減少加工時的震動

**CAXDE - Milling tools 方肩銑刀**



Insert Brand : Winstar, Ceratizit, ...

| Order No.       | D  | L1 | L   | d  | T | Coolant Hole | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---|--------------|----------|---------|--------|-------|
| ICAXDE102016120 | 16 | 30 | 120 | 16 | 2 |              | XDMT11T3 | ITS2515 | ITK08  | ○     |
| ICAXDE103020120 | 20 | 30 | 120 | 20 | 3 |              |          |         |        | ●     |
| ICAXDE103020151 | 20 | 35 | 150 | 20 | 3 | ✓            |          |         |        | ●     |
| ICAXDE104025150 | 25 | 45 | 150 | 25 | 4 |              |          |         |        | ●     |
| ICAXDE104025151 | 25 | 45 | 150 | 25 | 4 | ✓            |          |         |        | ●     |
| ICAXDE105032150 | 32 | 45 | 150 | 32 | 5 |              |          |         |        | ●     |
| ICAXDE105032151 | 32 | 45 | 150 | 32 | 5 | ✓            |          |         |        | ●     |

● stock ○ by inquiry

**Recommended Cutting Conditions 建議切削數據**

| Working Material           | XDMT11T3  |             |            |
|----------------------------|-----------|-------------|------------|
|                            | Vc        | fz          | ap         |
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 10.0 |
| Stainless Steel            | 100 ~ 180 | 0.08 ~ 0.18 | 0.3 ~ 8.0  |
| Cast Iron                  | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 10.0 |
| High Temperature Alloy     | 40 ~ 100  | 0.07 ~ 0.14 | 0.3 ~ 4.0  |
| Hardened Steel             | 50 ~ 100  | 0.07 ~ 0.15 | 0.3 ~ 4.0  |

**Insert Specifications** 刀片規格

| Insert     | Dimensions (mm) |     |     |     |     |     |
|------------|-----------------|-----|-----|-----|-----|-----|
|            | A               | B   | S   | r   | d1  | t1  |
| XDMT11T308 | 10.6            | 6.8 | 3.8 | 0.8 | 2.8 | 1.4 |

Indexable Milling

**Insert Designation** 刀片型號

| Insert | Order No.         | Code-Chipbreaker-Grade | Working Material |   |   |   |   |   |
|--------|-------------------|------------------------|------------------|---|---|---|---|---|
|        |                   |                        | P                | M | K | N | S | H |
|        | IXDMT11T308MG33TX | XDMT11T308-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|        | IXDMT11T308MG33UX | XDMT11T308-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|        | IXDMT11T308MG43TX | XDMT11T308-MG-CX43TX   | ●                | ● |   |   | ● |   |

**Shoulder Milling - CAXO** 方肩銑刀

**CAXO Series**



- Use XOMT inserts with 2 cutting edges.
- Optimized chip breaker reduces heat generation and cutting forces.
- 6~32mm cutter diameter, max. 7mm depth of cut.
- 使用 XOMT 銑刀片，2 個可用切削角
- 泛優化的刀口設計降低熱能產生及切削力，能維持長時間高效率加工
- 6~32mm 刀桿直徑，最大切削深度可達 7mm

**CAXOE - Milling Tools 方肩銑刀**



Insert Brand : Winstar, Seco, ...

| Order No.       | D  | L1 | L   | d  | T | Coolant Hole | Inserts  | Screw   | Wrench | Stock |  |   |
|-----------------|----|----|-----|----|---|--------------|----------|---------|--------|-------|--|---|
| ICAXOE601006080 | 6  | 10 | 80  | 6  | 1 |              | XOMT0602 | ITS1610 | ITK06  | ●     |  |   |
| ICAXOE601008090 | 8  | 10 | 90  | 8  | 1 |              |          |         |        |       |  | ● |
| ICAXOE602010100 | 10 | 20 | 100 | 10 | 2 |              |          |         |        |       |  | ● |
| ICAXOE602012100 | 12 | 20 | 100 | 12 | 2 |              |          |         |        | ●     |  |   |
| ICAXOE603012100 | 12 | 20 | 100 | 12 | 3 |              |          |         |        | ●     |  |   |
| ICAXOE602013100 | 13 | 20 | 100 | 12 | 2 |              |          | ITS1801 | ITK06  | ●     |  |   |
| ICAXOE603013100 | 13 | 20 | 100 | 12 | 3 |              |          |         |        |       |  | ● |
| ICAXOE604016100 | 16 | 30 | 100 | 16 | 4 |              |          |         |        |       |  | ● |
| ICAXOE605020120 | 20 | 30 | 120 | 20 | 5 |              |          |         |        | ●     |  |   |
| ICAXOE102016150 | 16 | 22 | 150 | 16 | 2 |              | XOMT10T3 | ITS2515 | ITK08  | ○     |  |   |
| ICAXOE102020150 | 20 | 28 | 150 | 20 | 2 |              |          |         |        |       |  | ○ |
| ICAXOE104025150 | 25 | 35 | 150 | 25 | 4 |              |          |         |        |       |  | ○ |
| ICAXOE105032150 | 32 | 40 | 150 | 32 | 5 |              |          |         |        |       |  | ○ |
| ICAXOE203025151 | 25 | 36 | 150 | 25 | 3 | ✓            | XOMT1204 | ITS3501 | ITK15  | ●     |  |   |
| ICAXOE204032150 | 32 | 40 | 150 | 32 | 4 |              |          |         |        |       |  | ● |

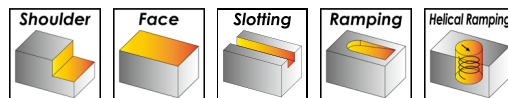
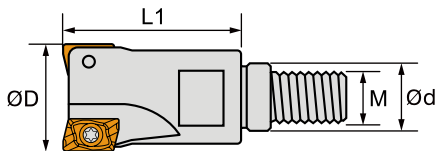
● stock ○ by inquiry

Customize available.



**Shoulder Milling - CAXO** 方肩銑刀

**CAXOM - Modular Milling Heads** 方肩銑刀頭



Insert Brand : Winstar, Seco, ...

| Order No.       | D  | L1 | d    | M   | T | Coolant Hole | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|------|-----|---|--------------|----------|---------|--------|-------|
| ICAXOM602010050 | 10 | 16 | 5.5  | M5  | 2 |              | XOMT0602 | ITS1801 | ITK06  | ○     |
| ICAXOM603012060 | 12 | 18 | 6.5  | M6  | 3 |              |          |         |        | ●     |
| ICAXOM604016080 | 16 | 20 | 8.5  | M8  | 4 |              |          |         |        | ●     |
| ICAXOM605020100 | 20 | 30 | 10.5 | M10 | 5 |              |          |         |        | ●     |
| ICAXOM102016080 | 16 | 26 | 8.5  | M8  | 2 |              | XOMT10T3 | TS2515  | ITK08  | ●     |
| ICAXOM102016081 | 16 | 26 | 8.5  | M8  | 2 | ✓            |          |         |        | ●     |
| ICAXOM103020100 | 20 | 30 | 10.5 | M10 | 3 |              |          |         |        | ●     |
| ICAXOM103020101 | 20 | 30 | 10.5 | M10 | 3 | ✓            |          |         |        | ●     |

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**Recommended Cutting Conditions** 建議切削數據

| Working Material           | XOMT0602  |             |           | XOMT10T3  |             |           |
|----------------------------|-----------|-------------|-----------|-----------|-------------|-----------|
|                            | Vc        | fz          | ap        | Vc        | fz          | ap        |
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.08 ~ 0.20 | 0.3 ~ 3.0 | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 7.0 |
| Stainless Steel            | 100 ~ 180 | 0.05 ~ 0.15 | 0.3 ~ 2.5 | 100 ~ 180 | 0.08 ~ 0.18 | 0.3 ~ 4.0 |
| Cast Iron                  | 120 ~ 250 | 0.08 ~ 0.13 | 0.3 ~ 3.0 | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 7.0 |
| High Temperature Alloy     | 40 ~ 100  | 0.05 ~ 0.12 | 0.3 ~ 2.5 | 40 ~ 100  | 0.07 ~ 0.14 | 0.3 ~ 5.0 |
| Hardened Steel             | 50 ~ 100  | 0.05 ~ 0.13 | 0.3 ~ 2.5 | 50 ~ 100  | 0.07 ~ 0.15 | 0.3 ~ 5.0 |

Indexable Milling

**Shoulder Milling - CAXO** 方肩銑刀

**Insert Specifications** 刀片規格

| Insert     | Dimensions (mm) |     |      |     |     |
|------------|-----------------|-----|------|-----|-----|
|            | A               | B   | S    | r   | d1  |
| XOMT060204 | 5.5             | 4.1 | 2.45 | 0.4 | 2   |
| XOMT060208 | 5.5             | 4.1 | 2.45 | 0.8 | 2   |
| XOMT060216 | 5.5             | 4.1 | 2.45 | 1.6 | 2   |
| XOMT10T308 | 9.3             | 6.9 | 3.83 | 0.8 | 3   |
| XOMT120408 | 11.6            | 8.2 | 5.07 | 0.8 | 3.9 |
| XOMT120412 | 11.6            | 8.2 | 5.07 | 1.2 | 3.9 |

A = Effective Cutting length

**Insert Designation** 刀片型號

| Insert | Order No.         | Code-Chipbreaker-Grade | Working Material |   |   |   |   |   |
|--------|-------------------|------------------------|------------------|---|---|---|---|---|
|        |                   |                        | P                | M | K | N | S | H |
|        | IXOMT060208SG32HS | XOMT060208-SG-CX32HS   | ●                | ○ | ● |   |   |   |
|        | IXOMT060208SG33TX | XOMT060208-SG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|        | IXOMT060208SG33UX | XOMT060208-SG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|        | IXOMT060204MG23TX | XOMT060204-MG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|        | IXOMT060204MG32HS | XOMT060204-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|        | IXOMT060204MG33TX | XOMT060204-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|        | IXOMT060204MG33UX | XOMT060204-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|        | IXOMT060208MG23TX | XOMT060208-MG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|        | IXOMT060208MG32HS | XOMT060208-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|        | IXOMT060208MG33TX | XOMT060208-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|        | IXOMT060208MG33UX | XOMT060208-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|        | IXOMT060208MG43TX | XOMT060208-MG-CX43TX   | ●                | ● |   |   | ● |   |
|        | IXOMT060216MG23TX | XOMT060216-MG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|        | IXOMT060216MG32HS | XOMT060216-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|        | IXOMT060216MG33TX | XOMT060216-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|        | IXOMT060216MG33UX | XOMT060216-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|        | IXOMT060216MG43TX | XOMT060216-MG-CX43TX   | ●                | ● |   |   | ● |   |
|        | IXOMT10T308SG32HS | XOMT10T308-SG-CX32HS   | ●                | ○ | ● |   |   |   |
|        | IXOMT10T308SG33TX | XOMT10T308-SG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|        | IXOMT10T308SG33UX | XOMT10T308-SG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|        | IXOMT120408MG32HS | XOMT120408-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|        | IXOMT120408MG33TX | XOMT120408-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|        | IXOMT120408MG43TX | XOMT120408-MG-CX43TX   | ●                | ● |   |   | ● |   |
|        | IXOMT120408MG37TA | XOMT120408-MG-CX37TA   | ●                |   | ● |   |   | ○ |
|        | IXOMT120408MG47TA | XOMT120408-MG-CX47TA   | ●                | ○ | ● |   | ○ |   |
|        | IXOMT120412SG33TX | XOMT120412-SG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|        | IXOMT120412SG33UX | XOMT120412-SG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|        | IXOMT120412SG43TX | XOMT120412-SG-CX43TX   | ●                | ● |   |   | ● |   |

**Shoulder Milling - CBAP** 方肩銑刀

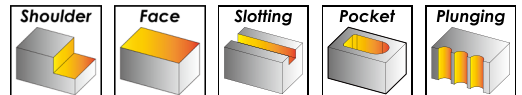
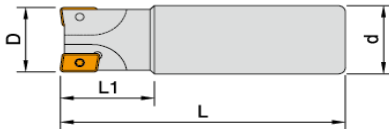
**CBAP Series**



- Use APMT inserts with 2 cutting edges.
- Low cost and various geometric designs for versatile applications.
- 16~80mm cutter diameter, max. 11mm depth of cut.
- 使用 APMT 銑刀片, 2 個可用切削角
- 低成本和多樣化的幾何設計適用於多種加工應用
- 16~80mm 刀桿直徑, 最大切削深度可達 11mm

Indexable Milling

**CBAPE - Milling Tools** 方肩銑刀



Insert Brand : Winstar, Mitsubishi, ...

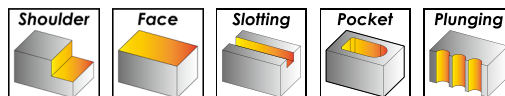
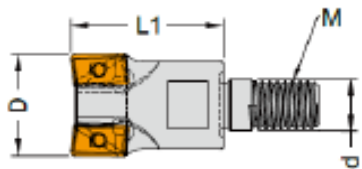
| Order No.       | D  | L1 | L   | d  | T | Inserts              | Screw   | Wrench | Stock                |
|-----------------|----|----|-----|----|---|----------------------|---------|--------|----------------------|
| ICBAPE302016100 | 16 | 25 | 100 | 16 | 2 | APGT1135<br>APMT1135 | ITS2515 | ITK08  | ●                    |
| ICBAPE302016160 | 16 | 35 | 160 | 16 | 2 |                      |         |        | ●                    |
| ICBAPE302020150 | 20 | 35 | 150 | 20 | 2 |                      |         |        | ●                    |
| ICBAPE303020100 | 20 | 30 | 100 | 20 | 3 |                      |         |        | ●                    |
| ICBAPE303020150 | 20 | 35 | 150 | 20 | 3 |                      |         |        | ●                    |
| ICBAPE304025100 | 25 | 35 | 100 | 25 | 4 |                      |         |        | ○                    |
| ICBAPE304030120 | 30 | 40 | 120 | 25 | 4 |                      |         |        | ○                    |
| ICBAPE305032120 | 32 | 40 | 120 | 32 | 5 |                      |         |        | ○                    |
| ICBAPE402025150 | 25 | 40 | 150 | 25 | 2 |                      |         |        | APGT1604<br>APMT1604 |
| ICBAPE402025200 | 25 | 70 | 200 | 25 | 2 | ○                    |         |        |                      |
| ICBAPE403032150 | 32 | 45 | 150 | 32 | 3 | ●                    |         |        |                      |
| ICBAPE403032200 | 32 | 80 | 200 | 32 | 3 | ●                    |         |        |                      |

● stock ○ by inquiry

Customize available.

**Shoulder Milling - CBAP** 方肩銑刀

**CBAPM - Modular Milling Heads** 方肩銑刀頭



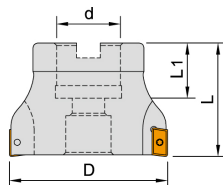
Insert Brand : Winstar, Mitsubishi, ...

| Order No.       | D  | L1 | d    | M   | T | Inserts              | Screw   | Wrench | Stock |
|-----------------|----|----|------|-----|---|----------------------|---------|--------|-------|
| ICBAPM302016080 | 16 | 26 | 8.5  | M8  | 2 | APGT1135<br>APMT1135 | ITS2515 | ITK08  | ●     |
| ICBAPM302020100 | 20 | 30 | 10.5 | M10 | 2 |                      |         |        | ●     |
| ICBAPM303020100 | 20 | 30 | 10.5 | M10 | 3 |                      |         |        | ○     |
| ICBAPM304025120 | 25 | 35 | 12.5 | M12 | 4 |                      |         |        | ●     |
| ICBAPM305032160 | 32 | 40 | 17   | M16 | 5 |                      |         |        | ●     |
| ICBAPM305033160 | 33 | 40 | 17   | M16 | 5 |                      |         |        | ○     |
| ICBAPM402025120 | 25 | 35 | 12.5 | M12 | 2 | APGT1604<br>APMT1604 | ITS4023 | ITK15  | ●     |
| ICBAPM403032160 | 32 | 40 | 17   | M16 | 3 |                      |         |        | ●     |

● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System

**CBAPF - Milling Tools** 方肩銑刀



Insert Brand 建議刀片 : Winstar, Mitsubishi, ...

| Order No.       | D  | L  | L1 | d    | T | Inserts              | Screw   | Wrench | Stock |
|-----------------|----|----|----|------|---|----------------------|---------|--------|-------|
| ICBAPF306050250 | 50 | 18 | 45 | 25.4 | 6 | APGT1135<br>APMT1135 | ITS2515 | ITK08  | ●     |
| ICBAPF307050220 | 50 | 18 | 45 | 22   | 7 |                      |         |        | ●     |
| ICBAPF307063220 | 63 | 22 | 45 | 22   | 7 |                      |         |        | ●     |
| ICBAPF307063254 | 63 | 22 | 45 | 25.4 | 7 |                      |         |        | ●     |
| ICBAPF308080250 | 80 | 26 | 50 | 25.4 | 8 |                      |         |        | ●     |
| ICBAPF308080270 | 80 | 26 | 50 | 27   | 8 |                      |         |        | ●     |
| ICBAPF405050220 | 50 | 22 | 45 | 22   | 5 | APGT1604<br>APMT1604 | ITS4023 | ITK15  | ●     |
| ICBAPF405050250 | 50 | 18 | 45 | 25.4 | 5 |                      |         |        | ●     |
| ICBAPF406063220 | 63 | 22 | 45 | 22   | 6 |                      |         |        | ●     |
| ICBAPF406063250 | 63 | 22 | 45 | 25.4 | 6 |                      |         |        | ●     |
| ICBAPF407080250 | 80 | 26 | 26 | 25.4 | 7 |                      |         |        | ●     |
| ICBAPF407080270 | 80 | 26 | 26 | 27   | 7 |                      |         |        | ●     |

● stock ○ by inquiry

Customize available.

## Recommended Cutting Conditions 建議切削數據

· For Shoulder Milling

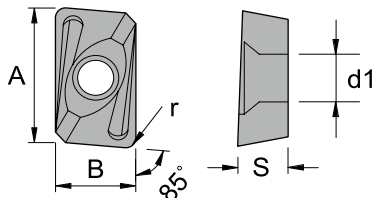
| Working Material           | APMT1135  |             |           | APMT1604   |             |            |
|----------------------------|-----------|-------------|-----------|------------|-------------|------------|
|                            | Vc        | fz          | ap        | Vc         | fz          | ap         |
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.10 ~ 0.22 | 0.5 ~ 7.0 | 120 ~ 250  | 0.12 ~ 0.28 | 0.5 ~ 11.0 |
| Stainless Steel            | 100 ~ 180 | 0.08 ~ 0.18 | 0.5 ~ 4.0 | 100 ~ 180  | 0.10 ~ 0.22 | 0.5 ~ 7.0  |
| Cast Iron                  | 120 ~ 250 | 0.10 ~ 0.22 | 0.5 ~ 6.0 | 120 ~ 250  | 0.12 ~ 0.28 | 0.5 ~ 11.0 |
| Aluminum Alloy             | -         | -           | -         | 300 ~ 1000 | 0.10 ~ 0.40 | 0.5 ~ 11.0 |
| High Temperature Alloy     | 40 ~ 100  | 0.07 ~ 0.14 | 0.5 ~ 4.0 | 40 ~ 100   | 0.10 ~ 0.22 | 0.5 ~ 7.0  |
| Hardened Steel             | 50 ~ 100  | 0.07 ~ 0.15 | 0.5 ~ 4.0 | 50 ~ 100   | 0.10 ~ 0.22 | 0.5 ~ 7.0  |

· For High Feed Face Milling (use APMT113516 or APMT160416 insert)




| Working Material           | Vc        | fz            | ap        |
|----------------------------|-----------|---------------|-----------|
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.25 ~ 0.55   | 0.2 ~ 0.5 |
| Stainless Steel            | 100 ~ 180 | 0.2 ~ 0.45    | 0.2 ~ 0.5 |
| Cast Iron                  | 120 ~ 250 | 0.25 ~ 0.55   | 0.2 ~ 0.5 |
| High Temperature Alloy     | 40 ~ 100  | 0.175 ~ 0.35  | 0.2 ~ 0.5 |
| Hardened Steel             | 50 ~ 100  | 0.175 ~ 0.375 | 0.2 ~ 0.5 |

## Insert Specifications 刀片規格










| Insert     | Dimensions (mm) |       |      |     |     |
|------------|-----------------|-------|------|-----|-----|
|            | A               | B     | S    | r   | d1  |
| APGT113508 | 11.0            | 6.35  | 3.5  | 0.8 | 2.8 |
| APMT113508 | 11.0            | 6.35  | 3.5  | 0.8 | 2.8 |
| APMT113516 | 11.0            | 6.35  | 3.5  | 1.6 | 2.8 |
| APGT160408 | 16.5            | 9.525 | 4.76 | 0.8 | 4.4 |
| APMT160408 | 16.5            | 9.525 | 4.76 | 0.8 | 4.4 |
| APMT160416 | 16.5            | 9.525 | 4.76 | 1.6 | 4.4 |



## Insert Designation 刀片型號

| Insert  | Order No.          | Code-Chipbreaker-Grade   | Working Material |   |   |   |   |   |
|---|--------------------|--------------------------|------------------|---|---|---|---|---|
|   |                    |                          | P                | M | K | N | S | H |
|  | IAPGT113508EAL10   | APGT113508PDER-AL-CX10   |                  |   |   | ● |   |   |
|  | IAPGT113508EFG23TX | APGT113508PDER-FG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|  | IAPMT113508EMG23TX | APMT113508PDER-MG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|   | IAPMT113508EMG32HS | APMT113508PDER-MG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAPMT113508EMG33TX | APMT113508PDER-MG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|   | IAPMT113508EMG33UX | APMT113508PDER-MG-CX33UX | ●                | ● | ● |   | ● | ○ |
|   | IAPMT113508EMG43TX | APMT113508PDER-MG-CX43TX | ●                | ● |   |   | ● |   |

## Insert Designation 刀片型號

| Insert  | Order No.          | Code-Chipbreaker-Grade   | Working Material |   |   |   |   |   |
|---|--------------------|--------------------------|------------------|---|---|---|---|---|
|   |                    |                          | P                | M | K | N | S | H |
|    | IAPMT113516EMG23TX | APMT113516PDER-MG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|   | IAPMT113516EMG32HS | APMT113516PDER-MG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAPMT113516EMG33TX | APMT113516PDER-MG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|   | IAPMT113516EMG33UX | APMT113516PDER-MG-CX33UX | ●                | ● | ● |   | ● | ○ |
|   | IAPMT113516EMG43TX | APMT113516PDER-MG-CX43TX | ●                | ● |   |   | ● |   |
|    | IAPMT113508ERG23TX | APMT113508PDER-RG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|   | IAPMT113508ERG32HS | APMT113508PDER-RG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAPMT113508ERG33TX | APMT113508PDER-RG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|    | IAPMT113508EHG32HS | APMT113508PDER-HG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAPMT113508EHG33TX | APMT113508PDER-HG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|   | IAPMT113508EHG43TX | APMT113508PDER-HG-CX43TX | ●                | ● |   |   | ● |   |
|    | IAPGT160408EAL10   | APGT160408PDER-AL-CX10   |                  |   |   | ● |   |   |
|   | IAPGT160408EFG23TX | APGT160408PDER-FG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|  | IAPMT160408EMG23TX | APMT160408PDER-MG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|   | IAPMT160408EMG32HS | APMT160408PDER-MG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAPMT160408EMG33TX | APMT160408PDER-MG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|   | IAPMT160408EMG33UX | APMT160408PDER-MG-CX33UX | ●                | ● | ● |   | ● | ○ |
|   | IAPMT160408EMG43TX | APMT160408PDER-MG-CX43TX | ●                | ● |   |   | ● |   |
|   | IAPMT160408EMG47TA | APMT160408PDER-MG-CX47TA | ●                | ○ | ● |   | ○ |   |
|  | IAPMT160416EMG32HS | APMT160416PDER-MG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAPMT160416EMG33TX | APMT160416PDER-MG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|   | IAPMT160416EMG33UX | APMT160416PDER-MG-CX33UX | ●                | ● | ● |   | ● | ○ |
|   | IAPMT160416EMG43TX | APMT160416PDER-MG-CX43TX | ●                | ● |   |   | ● |   |
|  | IAPMT160408ERG23TX | APMT160408PDER-RG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|   | IAPMT160408ERG32HS | APMT160408PDER-RG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAPMT160408ERG33TX | APMT160408PDER-RG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|   | IAPMT160408ERG43TX | APMT160408PDER-RG-CX43TX | ●                | ● |   |   | ● |   |
|  | IAPMT160408EHG23TX | APMT160408PDER-HG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|   | IAPMT160408EHG32HS | APMT160408PDER-HG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAPMT160408EHG33TX | APMT160408PDER-HG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|   | IAPMT160408EHG43TX | APMT160408PDER-HG-CX43TX | ●                | ● |   |   | ● |   |

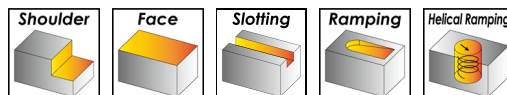
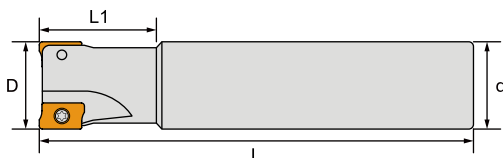
**Shoulder Milling - CR39** 方肩銑刀

**CR39 Series**



- Use W390 inserts with 2 cutting edges.
- Optimized chip breaker for high efficient shoulder and side milling.
- 16~125mm cutter diameter, max. 11mm depth of cut.
- 使用 W390 銑刀片, 2 個可用切削角
- 優化的刀口設計適用於各種加工材料的高移除率的方肩銑和側銑
- 16~125mm 刀桿直徑, 最大切削深度可達 11mm

**CR39E - Milling Tools** 方肩銑刀



Insert Brand : Winstar, Sandvik, ...

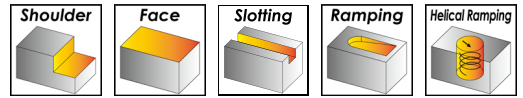
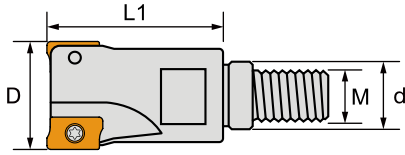
| Order No.       | D  | L1 | L   | d  | T | Inserts  | Screw    | Wrench | Stock    |         |       |   |
|-----------------|----|----|-----|----|---|----------|----------|--------|----------|---------|-------|---|
| ICR39E302016150 | 16 | 30 | 150 | 16 | 2 | W39011T3 | ITS2509  | ITK08  | ●        |         |       |   |
| ICR39E303020150 | 20 | 30 | 150 | 20 | 3 |          |          |        | ○        |         |       |   |
| ICR39E303025150 | 25 | 30 | 150 | 25 | 3 |          |          |        | ●        |         |       |   |
| ICR39E303032150 | 32 | 35 | 150 | 32 | 3 |          |          |        | ○        |         |       |   |
| ICR39E702025150 | 25 | 32 | 150 | 25 | 2 | W3901704 | IMS3507A | ITK15  | ●        |         |       |   |
| ICR39E702025200 | 25 | 32 | 200 | 25 | 2 |          |          |        | ●        |         |       |   |
| ICR39E702026150 | 26 | 32 | 150 | 25 | 2 |          |          |        | ●        |         |       |   |
| ICR39E702026200 | 26 | 32 | 200 | 25 | 2 |          |          |        | ●        |         |       |   |
| ICR39E703032150 | 32 | 35 | 150 | 32 | 3 |          |          |        | ●        |         |       |   |
| ICR39E703032200 | 32 | 35 | 200 | 32 | 3 |          |          |        | ●        |         |       |   |
| ICR39E703033150 | 33 | 35 | 150 | 32 | 3 |          |          |        | ●        |         |       |   |
| ICR39E703033200 | 33 | 35 | 200 | 32 | 3 |          |          |        | ●        |         |       |   |
| ICR39E802025150 | 25 | 35 | 150 | 25 | 2 |          |          |        | W3901806 | ITS4005 | ITK15 | ○ |
| ICR39E803032150 | 32 | 40 | 150 | 32 | 3 |          |          |        |          |         |       | ○ |

● stock ○ by inquiry

Customize available.

**Shoulder Milling - CR39** 方肩銑刀

**CR39M - Modular Milling Heads 方肩銑刀頭**



Insert Brand : Winstar, Sandvik, ...

| Order No.       | D  | L1 | d    | M   | T | Inserts  | Screw    | Wrench | Stock |
|-----------------|----|----|------|-----|---|----------|----------|--------|-------|
| ICR39M302016080 | 16 | 26 | 8.5  | M8  | 2 | W39011T3 | ITS2509  | ITK08  | ○     |
| ICR39M303020100 | 20 | 32 | 10.5 | M10 | 3 |          |          |        | ○     |
| ICR39M303025120 | 25 | 38 | 12.5 | M12 | 3 |          |          |        | ○     |
| ICR39M303032160 | 32 | 41 | 17   | M16 | 3 |          |          |        | ○     |
| ICR39M702025120 | 25 | 35 | 12.5 | M12 | 2 | W3901704 | IMS3507A | ITK15  | ●     |
| ICR39M702026120 | 26 | 35 | 12.5 | M12 | 2 |          |          |        | ●     |
| ICR39M703032160 | 32 | 43 | 17   | M16 | 3 |          |          |        | ●     |
| ICR39M703033160 | 33 | 43 | 17   | M16 | 3 |          |          |        | ●     |

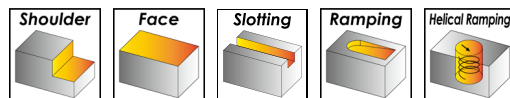
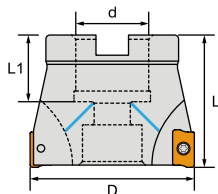
● stock ○ by inquiry

※ For screw-in type adapter, please refer to Tooling System



**Shoulder Milling - CR39** 方肩銑刀

**CR39F - Milling Tools** 方肩銑刀



Insert Brand : Winstar, Sandvik, ...

| Order No.       | D   | L  | d  | T | Coolant | Inserts  | Screw   | Wrench | Stock |
|-----------------|-----|----|----|---|---------|----------|---------|--------|-------|
| ICR39F305040161 | 40  | 40 | 16 | 5 | ✓       | W39011T3 | ITS2509 | ITK08  | ●     |
| ICR39F304050220 | 50  | 40 | 22 | 4 |         |          |         |        | ○     |
| ICR39F306050221 | 50  | 40 | 22 | 6 | ✓       |          |         |        | ●     |
| ICR39F305063220 | 63  | 40 | 22 | 5 |         |          |         |        | ○     |
| ICR39F307063221 | 63  | 50 | 22 | 7 | ✓       |          |         |        | ●     |
| ICR39F308080270 | 80  | 50 | 27 | 8 |         | W3901704 | ITS3505 | ITK15  | ○     |
| ICR39F704040161 | 40  | 40 | 16 | 4 | ✓       |          |         |        | ●     |
| ICR39F705050221 | 50  | 40 | 22 | 5 | ✓       |          |         |        | ●     |
| ICR39F706063221 | 63  | 40 | 22 | 6 | ✓       |          |         |        | ●     |
| ICR39F707080271 | 80  | 50 | 27 | 7 | ✓       |          |         |        | ●     |
| ICR39F708100321 | 100 | 50 | 32 | 8 | ✓       | ●        |         |        |       |
| ICR39F709125400 | 125 | 63 | 40 | 9 |         | ●        |         |        |       |
| ICR39F805050221 | 50  | 40 | 22 | 5 | ✓       | W3901806 | ITS4005 | ITK15  | ●     |
| ICR39F806063221 | 63  | 40 | 22 | 6 | ✓       |          |         |        | ●     |
| ICR39F807080271 | 80  | 50 | 27 | 7 | ✓       |          |         |        | ●     |
| ICR39F808100321 | 100 | 50 | 32 | 8 | ✓       |          |         |        | ●     |

● stock ○ by inquiry

Customize available.

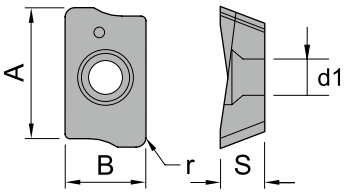
**Recommended Cutting Conditions** 建議切削數據

| Working Material           | W39011T3  |             |           |
|----------------------------|-----------|-------------|-----------|
|                            | Vc        | fz          | ap        |
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 7.0 |
| Stainless Steel            | 100 ~ 180 | 0.08 ~ 0.18 | 0.3 ~ 4.0 |
| Cast Iron                  | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 7.0 |
| High Temperature Alloy     | 40 ~ 100  | 0.07 ~ 0.14 | 0.3 ~ 4.0 |
| Hardened Steel             | 50 ~ 100  | 0.07 ~ 0.15 | 0.3 ~ 4.0 |





| Working Material           | W3901704 / W3901806 |             |            |
|----------------------------|---------------------|-------------|------------|
|                            | Vc                  | fz          | ap         |
| Carbon Steel / Alloy Steel | 120 ~ 250           | 0.12 ~ 0.28 | 0.5 ~ 10.0 |
| Stainless Steel            | 100 ~ 180           | 0.10 ~ 0.22 | 0.5 ~ 6.0  |
| Cast Iron                  | 120 ~ 250           | 0.12 ~ 0.28 | 0.5 ~ 10.0 |
| High Temperature Alloy     | 40 ~ 100            | 0.10 ~ 0.18 | 0.5 ~ 6.0  |
| Hardened Steel             | 50 ~ 100            | 0.10 ~ 0.20 | 0.5 ~ 6.0  |

## Insert Specifications 刀片規格

| Insert     | Dimensions (mm) |     |      |     |      |
|------------|-----------------|-----|------|-----|------|
|            | A               | B   | S    | r   | d1   |
| W39011T308 | 10              | 6.8 | 3.59 | 0.8 | 2.8  |
| W39011T320 | 10              | 6.8 | 3.59 | 2.0 | 2.8  |
| W390170408 | 15.7            | 9.6 | 4.76 | 0.8 | 4.1  |
| W390180612 | 15.4            | 11  | 6.33 | 1.2 | 4.15 |



## Insert Designation 刀片型號

| Insert  | Order No.         | Code-Chipbreaker-Grade | Working Material |   |   |   |   |   |
|---|-------------------|------------------------|------------------|---|---|---|---|---|
|   |                   |                        | P                | M | K | N | S | H |
|    | IW39011T308SG23TX | W39011T308-SG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|   | IW39011T308SG32HS | W39011T308-SG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IW39011T308SG33TX | W39011T308-SG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IW39011T308SG33UX | W39011T308-SG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IW39011T308SG43TX | W39011T308-SG-CX43TX   | ●                | ● |   |   | ● |   |
|  | IW39011T308MG23TX | W39011T308-MG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|   | IW39011T308MG32HS | W39011T308-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IW39011T308MG33TX | W39011T308-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IW39011T308MG33UX | W39011T308-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IW39011T308MG43TX | W39011T308-MG-CX43TX   | ●                | ● |   |   | ● |   |
|   | IW39011T308MG37TA | W39011T308-MG-CX37TA   | ●                |   | ● |   |   | ○ |
|   | IW39011T308MG47TA | W39011T308-MG-CX47TA   | ●                | ○ | ● |   | ○ |   |
|   | IW39011T320MG23TX | W39011T320-MG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|   | IW39011T320MG32HS | W39011T320-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IW39011T320MG33TX | W39011T320-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IW39011T320MG33UX | W39011T320-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IW39011T320MG43TX | W39011T320-MG-CX43TX   | ●                | ● |   |   | ● |   |
|   | IW390170408MG32HS | W390170408-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IW390170408MG33TX | W390170408-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IW390170408MG33UX | W390170408-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IW390170408MG43TX | W390170408-MG-CX43TX   | ●                | ● |   |   | ● |   |
|   | IW390170408MG37TA | W390170408-MG-CX37TA   | ●                |   | ● |   |   | ○ |
|   | IW390170408MG47TA | W390170408-MG-CX47TA   | ●                | ○ | ● |   | ○ |   |
|   | IW390180612SG32HS | W390180612-SG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IW390180612SG33TX | W390180612-SG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IW390180612SG33UX | W390180612-SG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IW390180612SG43TX | W390180612-SG-CX43TX   | ●                | ● |   |   | ● |   |
|   | IW390180612SG37TA | W390180612-SG-CX37TA   | ●                |   | ● |   |   | ○ |
|   | IW390180612SG47TA | W390180612-SG-CX47TA   | ●                | ○ | ● |   | ○ |   |

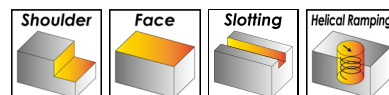
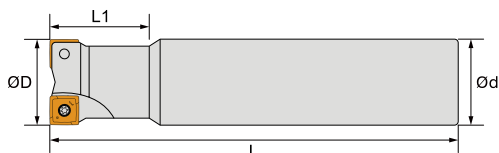
**Shoulder Milling - CR49** 方肩銑刀

**CR49 Series**



- Use W490 inserts with 4 cutting edges.
- Great repeat side milling capability to reduce burs and get good surface finishing.
- 20~80mm cutter diameter, max. 9mm depth of cut.
- 使用 W490 單面銑刀片，4 個可用切削角
- 出色的重複側銑能力可減少毛刺產生並獲得良好的表面光潔度
- 20~80mm 刀盤直徑，最大切削深度可達 9mm

**CR49E - Milling Tools** 方肩銑刀

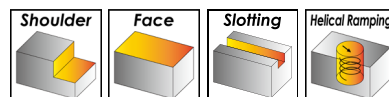
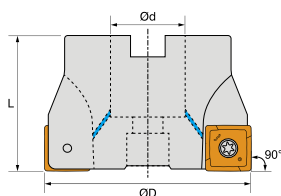


Insert Brand : Winstar, Sandvik, ...

| Order No.       | D  | L1 | L   | d  | T | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---|----------|---------|--------|-------|
| ICR49E802020100 | 20 | 25 | 100 | 20 | 2 | W49008T3 | ITS2507 | ITK08  | ●     |
| ICR49E802020150 | 20 | 25 | 150 | 20 | 2 |          |         |        | ●     |
| ICR49E803025100 | 25 | 32 | 100 | 20 | 3 |          |         |        | ●     |
| ICR49E803025150 | 25 | 32 | 150 | 20 | 3 |          |         |        | ●     |

● stock ○ by inquiry

**CR49F - Milling Tools** 方肩銑刀



Insert Brand : Winstar, Sandvik, ...

| Order No.       | D  | L  | d  | T | Coolant | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|----|---|---------|----------|---------|--------|-------|
| ICR49F804040161 | 40 | 40 | 16 | 4 | ✓       | W49008T3 | ITS2507 | ITK08  | ●     |
| ICR49F805050221 | 50 | 40 | 22 | 5 | ✓       |          |         |        | ●     |
| ICR49F806063221 | 63 | 40 | 22 | 6 | ✓       |          |         |        | ●     |
| ICR49F404050221 | 50 | 40 | 22 | 4 | ✓       | W4901404 | ITS3505 | ITK15  | ●     |
| ICR49F405063221 | 63 | 40 | 22 | 5 | ✓       |          |         |        | ●     |
| ICR49F407080271 | 80 | 50 | 27 | 7 | ✓       |          |         |        | ●     |

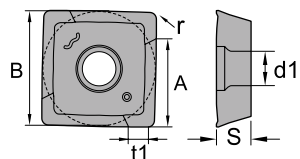
● stock ○ by inquiry

## Recommended Cutting Conditions 建議切削數據




| Working Material           | Vc         | W49008T3    |           | W4901404    |         |
|----------------------------|------------|-------------|-----------|-------------|---------|
|                            |            | fz          | ap        | fz          | ap      |
| Carbon Steel / Alloy Steel | 120 ~ 250  | 0.05 ~ 0.12 | 0.3 ~ 5.5 | 0.06 ~ 0.15 | 0.3 ~ 9 |
| Stainless Steel            | 100 ~ 180  | 0.04 ~ 0.10 | 0.3 ~ 4.5 | 0.05 ~ 0.12 | 0.3 ~ 8 |
| Cast Iron                  | 120 ~ 250  | 0.05 ~ 0.12 | 0.3 ~ 5.5 | 0.06 ~ 0.15 | 0.3 ~ 9 |
| Aluminum Alloy             | 300 ~ 1000 | -           | -         | 0.05 ~ 0.15 | 0.3 ~ 9 |
| High Temperature Alloy     | 40 ~ 100   | 0.03 ~ 0.09 | 0.3 ~ 4.5 | 0.04 ~ 0.11 | 0.3 ~ 8 |
| Hardened Steel             | 50 ~ 100   | 0.03 ~ 0.09 | 0.3 ~ 4.5 | 0.04 ~ 0.11 | 0.3 ~ 8 |

## Insert Specifications 刀片規格

| Insert     | Dimensions (mm) |      |     |     |     |     |
|------------|-----------------|------|-----|-----|-----|-----|
|            | A               | B    | S   | r   | d1  | t1  |
| W49008T308 | 5.6             | 8.5  | 3.3 | 0.8 | 2.8 | 1.2 |
| W490140408 | 10.3            | 13.8 | 3.9 | 0.8 | 4.1 | 2.0 |



## Insert Designation 刀片型號

| Insert  | Order No.         | Code-Chipbreaker-Grade | Working Material |   |   |   |   |   |
|---|-------------------|------------------------|------------------|---|---|---|---|---|
|   |                   |                        | P                | M | K | N | S | H |
|  | IW49008T308SG23TX | W49008T308-SG-CX23TX   | ○                | ○ | ○ |   | ○ | ● |
|   | IW49008T308SG32HS | W49008T308-SG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IW49008T308SG33TX | W49008T308-SG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IW49008T308SG33UX | W49008T308-SG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IW49008T308SG43TX | W49008T308-SG-CX43TX   | ●                | ● |   |   | ● |   |
|   | IW490140408SG33TX | W490140408-SG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IW490140408SG33UX | W490140408-SG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IW490140408SG43TX | W490140408-SG-CX43TX   | ●                | ● |   |   | ● |   |
|   | IW490140408SG37TA | W490140408-SG-CX37TA   | ●                |   | ● |   |   | ○ |
|   | IW490140408MG32HS | W490140408-MG-CX32HS   | ●                | ○ | ● |   |   |   |
|   | IW490140408MG33TX | W490140408-MG-CX33TX   | ●                | ○ | ● |   | ○ | ● |
|   | IW490140408MG33UX | W490140408-MG-CX33UX   | ●                | ● | ● |   | ● | ○ |
|   | IW490140408MG43TX | W490140408-MG-CX43TX   | ●                | ● |   |   | ● |   |
|   | IW490140408MG37TA | W490140408-MG-CX37TA   | ●                |   | ● |   |   | ○ |
|   | IW490140408MG47TA | W490140408-MG-CX47TA   | ●                | ○ | ● |   | ○ |   |

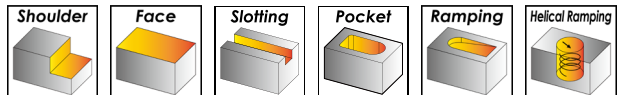
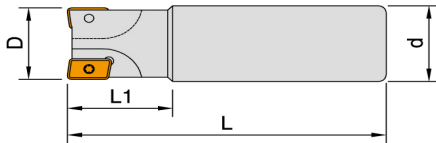
**Shoulder Milling - CWEX** 方肩銑刀

**CWEX Series**



- Use AXMT inserts with 2 cutting edges.
- Strong cutting edges for high removal rate shoulder milling.
- 16~100mm cutter diameter, max. 11mm depth of cut.
- 使用 AXMT 銑刀片, 2 個可用切削角
- 堅固的切削刃提供高移除率的方肩銑刀
- 16~100mm 刀桿直徑, 最大切削深度可達 11mm

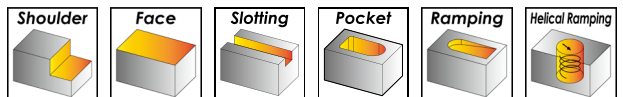
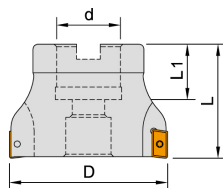
**CWEXE - Milling Tools** 方肩銑刀



Insert Brand : Winstar, Sumitomo, Nachi, ...

| Order No.       | D  | L1 | L   | d  | T | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---|----------|---------|--------|-------|
| ICWEXE202016120 | 16 | 35 | 120 | 16 | 2 | AXMT1235 | ITS3002 | ITK09  | ●     |
| ICWEXE203020120 | 20 | 40 | 120 | 20 | 3 |          |         |        | ●     |
| ICWEXE204025150 | 25 | 45 | 150 | 25 | 4 |          |         |        | ●     |
| ICWEXE205032150 | 32 | 45 | 150 | 32 | 5 |          |         |        | ●     |
| ICWEXE702025150 | 25 | 40 | 150 | 25 | 2 | AXMT1705 | ITS4004 | ITK15  | ●     |
| ICWEXE703032150 | 32 | 45 | 150 | 32 | 3 |          |         |        | ●     |

**CWEXF - Milling Tools** 方肩銑刀



Insert Brand : Winstar, Sumitomo, Nachi, ...

| Order No.       | D   | L1 | L  | d  | T | Inserts  | Screw   | Wrench | Stock |
|-----------------|-----|----|----|----|---|----------|---------|--------|-------|
| ICWEXF206050220 | 50  | 20 | 45 | 22 | 6 | AXMT1235 | ITS3002 | ITK09  | ●     |
| ICWEXF207063220 | 63  | 20 | 45 | 22 | 7 |          |         |        | ●     |
| ICWEXF208080270 | 80  | 26 | 50 | 27 | 8 |          |         |        | ●     |
| ICWEXF704050220 | 50  | 20 | 45 | 22 | 4 | AXMT1705 | ITS4004 | ITK15  | ●     |
| ICWEXF705063220 | 63  | 20 | 45 | 22 | 5 |          |         |        | ●     |
| ICWEXF707080270 | 80  | 26 | 50 | 27 | 7 |          |         |        | ●     |
| ICWEXF707100320 | 100 | 26 | 50 | 32 | 7 |          |         |        | ○     |

● stock ○ by inquiry

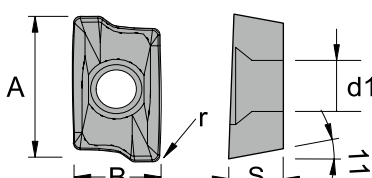
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## Recommended Cutting Conditions 建議切削數據



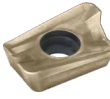
| Working Material           | AXMT1235  |             |           | AXMT1705  |             |            |
|----------------------------|-----------|-------------|-----------|-----------|-------------|------------|
|                            | Vc        | fz          | ap        | Vc        | fz          | ap         |
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 7.0 | 120 ~ 250 | 0.12 ~ 0.28 | 0.5 ~ 11.0 |
| Stainless Steel            | 100 ~ 180 | 0.08 ~ 0.18 | 0.3 ~ 4.0 | 100 ~ 180 | 0.10 ~ 0.22 | 0.5 ~ 7.0  |
| Cast Iron                  | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 6.0 | 120 ~ 250 | 0.12 ~ 0.28 | 0.5 ~ 10.0 |
| High Temperature Alloy     | 40 ~ 100  | 0.07 ~ 0.14 | 0.3 ~ 4.0 | 40 ~ 100  | 0.10 ~ 0.18 | 0.5 ~ 7.0  |
| Hardened Steel             | 50 ~ 100  | 0.07 ~ 0.15 | 0.3 ~ 4.0 | 50 ~ 100  | 0.10 ~ 0.20 | 0.5 ~ 7.0  |

## Insert Specifications 刀片規格

| Insert     | Dimensions (mm) |      |      |     |     |
|------------|-----------------|------|------|-----|-----|
|            | A               | B    | S    | r   | d1  |
| AXMT123508 | 12.18           | 6.93 | 3.58 | 0.8 | 3.4 |
| AXMT170508 | 17.50           | 10.2 | 5.56 | 0.8 | 4.6 |
| AXMT170516 | 17.50           | 10.2 | 5.56 | 1.6 | 4.6 |



## Insert Designation 刀片型號

| Insert  | Order No.          | Code-Chipbreaker-Grade   | Working Material |   |   |   |   |   |
|---|--------------------|--------------------------|------------------|---|---|---|---|---|
|   |                    |                          | P                | M | K | N | S | H |
|  | IAXMT123508ERG23TX | AXMT123508PEER-RG-CX23TX | ○                | ○ | ○ |   | ○ | ● |
|   | IAXMT123508ERG32HS | AXMT123508PEER-RG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAXMT123508ERG33TX | AXMT123508PEER-RG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|   | IAXMT123508ERG43TX | AXMT123508PEER-RG-CX43TX | ●                | ● |   |   | ● |   |
|   | IAXMT123508ERG37TA | AXMT123508PEER-RG-CX37TA | ●                |   | ● |   |   | ○ |
|   | IAXMT170508ERG32HS | AXMT170508PEER-RG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAXMT170508ERG33TX | AXMT170508PEER-RG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|   | IAXMT170508ERG43TX | AXMT170508PEER-RG-CX43TX | ●                | ● |   |   | ● |   |
|   | IAXMT170516ERG32HS | AXMT170516PEER-RG-CX32HS | ●                | ○ | ● |   |   |   |
|   | IAXMT170516ERG33TX | AXMT170516PEER-RG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|   | IAXMT170516ERG43TX | AXMT170516PEER-RG-CX43TX | ●                | ● |   |   | ● |   |

**Drilling & Milling - CWMM** 鑽銑刀

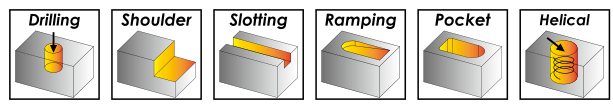
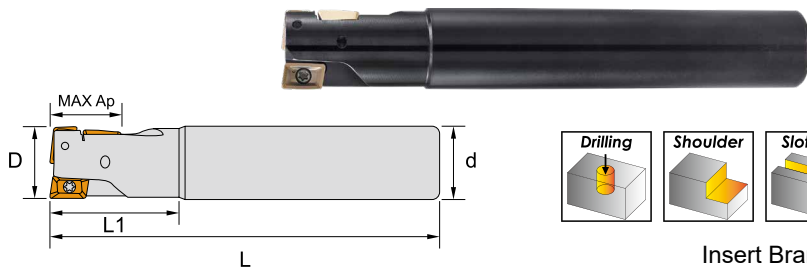
**CWMM Series**



- Use APMT inserts with 2 cutting edges.
- Cutter with over-center design for drilling and milling.
- 10~80mm cutter diameter, max. 11mm depth of cut.
- 使用 APMT 銑刀片, 2 個可用切削角
- 刀桿過中心設計, 適用於鑽孔、方肩、開槽、斜坡、挖槽、及螺旋銑削
- 10~80mm 刀桿直徑, 最大端銑切削深度可達 11mm

Indexable Milling

**CWMMD - Drilling & Milling Tools 鑽銑刀**



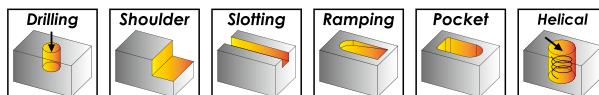
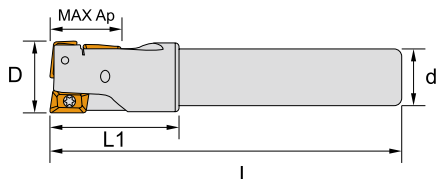
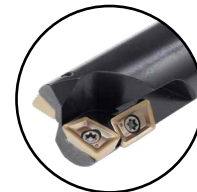
Insert Brand : Winstar, Sumitomo, Nachi, ...

| Order No.       | D  | L1 | L   | d  | Insert Number | Max Ap | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---------------|--------|----------|---------|--------|-------|
| ICWMMD303020120 | 20 | 35 | 125 | 20 | 3             | 16     | APMT1035 | ITS2515 | ITK08  | ●     |
| ICWMMD303020180 | 20 | 35 | 185 | 20 | 3             | 16     |          |         |        | ●     |
| ICWMMD304025140 | 25 | 35 | 140 | 25 | 4             | 24     |          |         |        | ●     |
| ICWMMD304025220 | 25 | 35 | 220 | 25 | 4             | 24     |          |         |        | ●     |
| ICWMMD604032150 | 32 | 50 | 150 | 32 | 4             | 40     | APMT1605 | ITS4004 | ITK15  | ●     |
| ICWMMD604032230 | 32 | 60 | 230 | 32 | 4             | 40     |          |         |        | ●     |

● stock ○ by inquiry

**Drilling & Milling - CWMM** 鑽銑刀

**CWMMD - Drilling & Milling Tools** 鑽銑刀



Insert Brand : Winstar, Sumitomo, Nachi, ...

| Order No.       | D  | L1 | L   | d  | Insert Number | Max Ap | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---------------|--------|----------|---------|--------|-------|
| ICWMMD303021120 | 21 | 35 | 125 | 20 | 3             | 16     | APMT1035 | ITS2515 | ITK08  | ●     |
| ICWMMD304026140 | 26 | 35 | 140 | 25 | 4             | 24     |          |         |        | ●     |
| ICWMMD305030150 | 30 | 50 | 150 | 25 | 5             | 32     |          |         |        | ●     |
| ICWMMD604033150 | 33 | 50 | 150 | 32 | 4             | 40     | APMT1605 | ITS4004 | ITK15  | ●     |
| ICWMMD604040160 | 40 | 60 | 160 | 32 | 4             | 40     |          |         |        | ●     |
| ICWMMD604040240 | 40 | 60 | 240 | 32 | 4             | 40     |          |         |        | ●     |

● stock ○ by inquiry

**Recommended Cutting Conditions** 建議切削數據

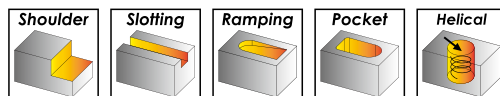
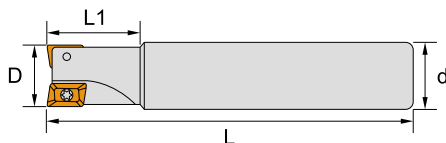
| Working Material           | Vc        | fz          |             |             |             |             |             |
|----------------------------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|
|                            |           | APMT1035    |             |             | APMT1605    |             |             |
|                            |           | Shoulder    | Slotting    | Drilling    | Shoulder    | Slotting    | Drilling    |
| Carbon Steel / Alloy Steel | 100 ~ 160 | 0.06 ~ 0.20 | 0.06 ~ 0.12 | 0.06 ~ 0.18 | 0.06 ~ 0.25 | 0.06 ~ 0.15 | 0.06 ~ 0.20 |
| Stainless Steel            | 80 ~ 120  | 0.05 ~ 0.15 | 0.05 ~ 0.10 | 0.05 ~ 0.12 | 0.05 ~ 0.20 | 0.05 ~ 0.12 | 0.05 ~ 0.18 |
| Cast Iron                  | 90 ~ 180  | 0.06 ~ 0.20 | 0.06 ~ 0.12 | 0.06 ~ 0.18 | 0.06 ~ 0.25 | 0.06 ~ 0.15 | 0.06 ~ 0.20 |
| High Temperature Alloy     | 60 ~ 100  | 0.05 ~ 0.12 | 0.05 ~ 0.08 | 0.05 ~ 0.10 | 0.05 ~ 0.17 | 0.05 ~ 0.10 | 0.05 ~ 0.15 |
| Hardened Steel             | 60 ~ 100  | 0.05 ~ 0.12 | 0.05 ~ 0.08 | 0.05 ~ 0.10 | 0.05 ~ 0.17 | 0.05 ~ 0.10 | 0.05 ~ 0.15 |

※ Use step feed in drilling, per step Ap 0.5 ~ 1.0mm.



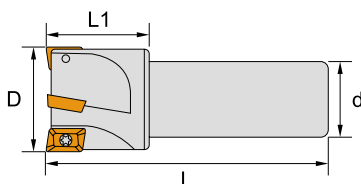
**Shoulder Milling - CWMM** 方肩銑刀

**CWMME - Milling Tools** 方肩銑刀



Insert Brand : Winstar, Sumitomo, Nachi, ...

| Order No.       | D  | L1 | L   | d  | T | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---|----------|---------|--------|-------|
| ICWMME301010100 | 10 | 20 | 100 | 12 | 1 | APMT1035 | ITS2515 | ITK08  | ●     |
| ICWMME301012100 | 12 | 25 | 100 | 12 | 1 |          |         |        | ●     |
| ICWMME302016120 | 16 | 25 | 120 | 16 | 2 |          |         |        | ●     |
| ICWMME303020120 | 20 | 30 | 120 | 20 | 3 |          |         |        | ●     |
| ICWMME304025150 | 25 | 35 | 150 | 25 | 4 |          |         |        | ●     |
| ICWMME305032150 | 32 | 45 | 150 | 32 | 5 |          |         |        | ●     |
| ICWMME602025150 | 25 | 40 | 150 | 25 | 2 | APMT1605 | ITS4004 | ITK15  | ●     |
| ICWMME602032150 | 32 | 45 | 150 | 32 | 2 |          |         |        | ●     |
| ICWMME602032250 | 32 | 45 | 250 | 32 | 2 |          |         |        | ●     |
| ICWMME603032150 | 32 | 45 | 150 | 32 | 3 |          |         |        | ●     |

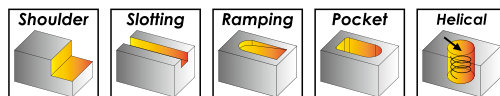
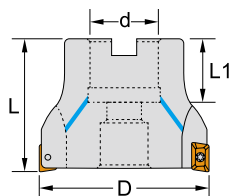


| Order No.       | D  | L1 | L   | d  | T | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|-----|----|---|----------|---------|--------|-------|
| ICWMME306040130 | 40 | 45 | 135 | 32 | 6 | APMT1035 | ITS2515 | ITK08  | ○     |
| ICWMME306050130 | 50 | 45 | 135 | 32 | 6 |          |         |        | ○     |
| ICWMME306063130 | 63 | 45 | 135 | 32 | 6 |          |         |        | ○     |
| ICWMME603035150 | 35 | 45 | 150 | 32 | 3 | APMT1605 | ITS4004 | ITK15  | ○     |
| ICWMME603035250 | 35 | 45 | 250 | 32 | 3 |          |         |        | ○     |
| ICWMME603040130 | 40 | 45 | 135 | 32 | 3 |          |         |        | ○     |
| ICWMME604050130 | 50 | 45 | 135 | 32 | 4 |          |         |        | ○     |

● stock ○ by inquiry

**Shoulder Milling - CWMM** 方肩銑刀

**CWMMF - Milling Tools** 方肩銑刀



Insert Brand : Winstar, Sumitomo, Nachi, ...

| Order No.       | D  | L1 | L  | d    | T | Coolant Hole | Inserts  | Screw   | Wrench | Stock |
|-----------------|----|----|----|------|---|--------------|----------|---------|--------|-------|
| ICWMMF306050221 | 50 | 20 | 45 | 22   | 6 | ✓            | APMT1035 | ITS2515 | ITK08  | ●     |
| ICWMMF306050250 | 50 | 20 | 45 | 25.4 | 6 |              |          |         |        | ●     |
| ICWMMF306063220 | 63 | 20 | 45 | 22   | 6 |              |          |         |        | ●     |
| ICWMMF306063250 | 63 | 20 | 45 | 25.4 | 6 |              |          |         |        | ●     |
| ICWMMF604050221 | 50 | 20 | 45 | 22   | 4 | ✓            | APMT1605 | ITS4004 | ITK15  | ●     |
| ICWMMF604050251 | 50 | 20 | 45 | 25.4 | 4 | ✓            |          |         |        | ●     |
| ICWMMF605063220 | 63 | 20 | 45 | 22   | 5 |              |          |         |        | ○     |
| ICWMMF605063251 | 63 | 20 | 45 | 25.4 | 5 | ✓            |          |         |        | ●     |
| ICWMMF606080250 | 80 | 26 | 50 | 25.4 | 6 |              |          |         |        | ●     |
| ICWMMF606080270 | 80 | 26 | 50 | 27   | 6 |              |          |         |        | ○     |

● stock ○ by inquiry

**Recommended Cutting Conditions** 建議切削數據

| Working Material           | APMT1035  |             |           | APMT1605  |             |            |
|----------------------------|-----------|-------------|-----------|-----------|-------------|------------|
|                            | Vc        | fz          | ap        | Vc        | fz          | ap         |
| Carbon Steel / Alloy Steel | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 7.0 | 120 ~ 250 | 0.12 ~ 0.28 | 0.5 ~ 11.0 |
| Stainless Steel            | 100 ~ 180 | 0.08 ~ 0.18 | 0.3 ~ 4.0 | 100 ~ 180 | 0.10 ~ 0.22 | 0.5 ~ 7.0  |
| Cast Iron                  | 120 ~ 250 | 0.10 ~ 0.22 | 0.3 ~ 6.0 | 120 ~ 250 | 0.12 ~ 0.28 | 0.5 ~ 10.0 |
| High Temperature Alloy     | 40 ~ 100  | 0.07 ~ 0.14 | 0.3 ~ 4.0 | 40 ~ 100  | 0.10 ~ 0.18 | 0.5 ~ 7.0  |
| Hardened Steel             | 50 ~ 100  | 0.07 ~ 0.15 | 0.3 ~ 4.0 | 50 ~ 100  | 0.10 ~ 0.20 | 0.5 ~ 7.0  |

**Shoulder Milling - CWMM** 方肩銑刀

**Insert Specifications** 刀片規格

| Insert     | Dimensions (mm) |       |      |     |     |
|------------|-----------------|-------|------|-----|-----|
|            | A               | B     | S    | r   | d1  |
| APMT103508 | 10              | 6.6   | 3.5  | 0.8 | 3   |
| APMT160508 | 16              | 9.525 | 5.56 | 0.8 | 4.4 |

Indexable Milling

**Insert Designation** 刀片型號

| Insert | Order No.          | Code-Chipbreaker-Grade   | Working Material |   |   |   |   |   |
|--------|--------------------|--------------------------|------------------|---|---|---|---|---|
|        |                    |                          | P                | M | K | N | S | H |
|        | IAPMT103508ERG32HS | APMT103508PDER-RG-CX32HS | ●                | ○ | ● |   |   |   |
|        | IAPMT103508ERG33TX | APMT103508PDER-RG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|        | IAPMT103508ERG43TX | APMT103508PDER-RG-CX43TX | ●                | ● |   |   | ● |   |
|        | IAPET160508FAL10   | APET160508PDFR-AL-CX10   |                  |   |   | ● |   |   |
|        |                    |                          |                  |   |   |   |   |   |
|        | IAPMT160508ERG32HS | APMT160508PDER-RG-CX32HS | ●                | ○ | ● |   |   |   |
|        | IAPMT160508ERG33TX | APMT160508PDER-RG-CX33TX | ●                | ○ | ● |   | ○ | ● |
|        |                    |                          |                  |   |   |   |   |   |