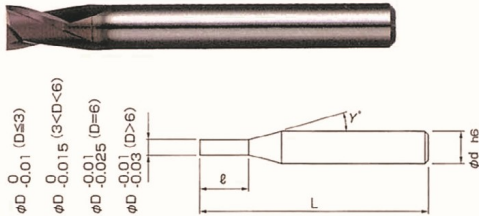


# MX225

무한 리드25 엔드밀 (2날)

MUGEN-COATING 2-Flute LEAD25 End Mill



- 날장은 날경과 같은 배수로 25° 헬릭스 각도를 적용
- 강성을 높인 설계로 홈가공에서의 떨림과 편차를 최소화으로 억제
- L/D=1 and helix 25° to increase rigidity and realize high efficient machining.
- Suppress chattering and deflection in slotting process.



단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품번<br>Code No. | (D)날경<br>Dia. | (ℓ)날장<br>Length of Cut | (r)각도<br>Neck Taper Angle | (d)샤프크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(¥)<br>Retail Price |
|----------------|---------------|------------------------|---------------------------|----------------------|-------------------------|-------------------------|
| 08-00025-00030 | 0.3           | 0.3                    | 12°                       | 4                    | 45                      | 3,400                   |
| 08-00025-00040 | 0.4           | 0.4                    | 12°                       | 4                    | 45                      | 3,800                   |
| 08-00025-00050 | 0.5           | 0.5                    | 12°                       | 4                    | 45                      | 1,900                   |
| 08-00025-00080 | 0.8           | 0.8                    | 12°                       | 4                    | 45                      | 1,900                   |
| 08-00025-00100 | 1             | 1                      | 12°                       | 4                    | 45                      | 1,700                   |
| 08-00025-00120 | 1.2           | 1.2                    | 12°                       | 4                    | 45                      | 1,900                   |
| 08-00025-00150 | 1.5           | 1.5                    | 12°                       | 4                    | 45                      | 1,700                   |
| 08-00025-00180 | 1.8           | 1.8                    | 12°                       | 4                    | 45                      | 1,900                   |
| 08-00025-00200 | 2             | 2                      | 12°                       | 4                    | 45                      | 1,700                   |
| 08-00025-00250 | 2.5           | 2.5                    | 12°                       | 4                    | 45                      | 1,700                   |
| 08-00025-00300 | 3             | 3                      | 12°                       | 6                    | 45                      | 2,200                   |
| 08-00025-00400 | 4             | 4                      | 12°                       | 6                    | 45                      | 2,400                   |
| 08-00025-00500 | 5             | 5                      | 12°                       | 6                    | 50                      | 2,600                   |
| 08-00025-00600 | 6             | 6                      | —                         | 6                    | 50                      | 2,800                   |
| 08-00025-00700 | 7             | 7                      | 12°                       | 8                    | 65                      | 7,900                   |
| 08-00025-00800 | 8             | 8                      | —                         | 8                    | 65                      | 6,500                   |
| 08-00025-00900 | 9             | 9                      | 12°                       | 10                   | 75                      | 11,500                  |
| 08-00025-01000 | 10            | 10                     | —                         | 10                   | 75                      | 8,500                   |
| 08-00025-01200 | 12            | 12                     | —                         | 12                   | 80                      | 11,500                  |

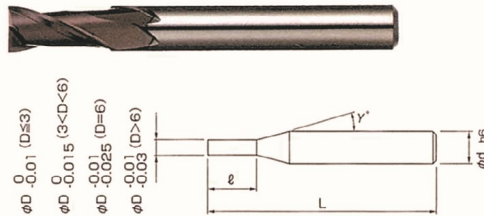
## 주문방법

MX225 날경(D)을 선택하십시오.  
When you order, indicate MX225 (D).

# MX230

무한 리드30 엔드밀 (2날)

MUGEN-COATING 2-Flute LEAD30 End Mill



- 날장은 날경의 2배로 30° 헬릭스 각도를 적용
- 홈 · 측면을 불문하고 모든 가공에 적용하는 표준타입
- L/D=2 and helix 30° standard type, applicable for both slotting and side milling.



단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

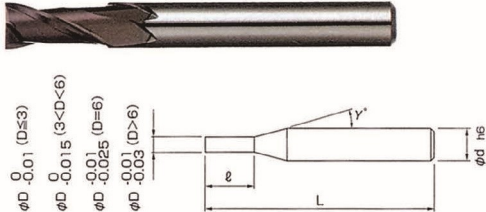
| 품번<br>Code No. | (D)날경<br>Dia. | (ℓ)날장<br>Length of Cut | (r)각도<br>Neck Taper Angle | (d)샤프크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(¥)<br>Retail Price |
|----------------|---------------|------------------------|---------------------------|----------------------|-------------------------|-------------------------|
| 08-00030-00010 | 0.1           | 0.2                    | 12°                       | 4                    | 45                      | 6,500                   |
| 08-00030-00020 | 0.2           | 0.4                    | 12°                       | 4                    | 45                      | 3,900                   |
| 08-00030-00030 | 0.3           | 0.6                    | 12°                       | 4                    | 45                      | 3,400                   |
| 08-00030-00040 | 0.4           | 0.8                    | 12°                       | 4                    | 45                      | 3,800                   |
| 08-00030-00050 | 0.5           | 1                      | 12°                       | 4                    | 45                      | 1,900                   |
| 08-00030-00060 | 0.6           | 1.2                    | 12°                       | 4                    | 45                      | 2,900                   |
| 08-00030-00070 | 0.7           | 1.4                    | 12°                       | 4                    | 45                      | 3,200                   |
| 08-00030-00080 | 0.8           | 1.6                    | 12°                       | 4                    | 45                      | 1,900                   |
| 08-00030-00090 | 0.9           | 1.8                    | 12°                       | 4                    | 45                      | 3,200                   |
| 08-00030-00100 | 1             | 2                      | 12°                       | 4                    | 45                      | 1,700                   |
| 08-00030-00110 | 1.1           | 2.2                    | 12°                       | 4                    | 45                      | 3,600                   |
| 08-00030-00120 | 1.2           | 2.4                    | 12°                       | 4                    | 45                      | 1,900                   |
| 08-00030-00130 | 1.3           | 2.6                    | 12°                       | 4                    | 45                      | 3,600                   |
| 08-00030-00140 | 1.4           | 2.8                    | 12°                       | 4                    | 45                      | 3,600                   |
| 08-00030-00150 | 1.5           | 3                      | 12°                       | 4                    | 45                      | 1,700                   |
| 08-00030-00160 | 1.6           | 3.2                    | 12°                       | 4                    | 45                      | 3,600                   |
| 08-00030-00170 | 1.7           | 3.4                    | 12°                       | 4                    | 45                      | 3,600                   |
| 08-00030-00180 | 1.8           | 3.6                    | 12°                       | 4                    | 45                      | 1,900                   |
| 08-00030-00190 | 1.9           | 3.8                    | 12°                       | 4                    | 45                      | 3,700                   |
| 08-00030-00200 | 2             | 4                      | 12°                       | 4                    | 45                      | 1,700                   |
| 08-00030-00210 | 2.1           | 4.2                    | 12°                       | 4                    | 45                      | 3,600                   |
| 08-00030-00220 | 2.2           | 4.4                    | 12°                       | 4                    | 45                      | 3,600                   |
| 08-00030-00230 | 2.3           | 4.6                    | 12°                       | 4                    | 45                      | 3,600                   |
| 08-00030-00240 | 2.4           | 4.8                    | 12°                       | 4                    | 45                      | 3,600                   |

## 주문방법

MX230 날경(D)을 선택하십시오.  
When you order, indicate MX230 (D).

# MX230

MUGEN-COATING 2-Flute LEAD30 End Mill



- 날장은 날경의 2배로 30° 헬릭스 각도를 적용
- 홈 · 측면을 불문하고 모든 가공에 적용하는 표준타입
- L/D=2 and helix 30° standard type, applicable for both slotting and side milling.

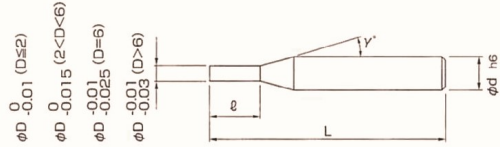
단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)날장<br>Length of Cut | (γ')각도<br>Neck Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(P)<br>Retail Price |
|-----------------|---------------|------------------------|----------------------------|---------------------|-------------------------|-------------------------|
| 08-00030-00250  | 2.5           | 5                      | 12°                        | 4                   | 45                      | 1,700                   |
| 08-00030-00260  | 2.6           | 5.2                    | 12°                        | 4                   | 45                      | 4,600                   |
| 08-00030-00270  | 2.7           | 5.4                    | 12°                        | 4                   | 45                      | 4,600                   |
| 08-00030-00280  | 2.8           | 5.6                    | 12°                        | 4                   | 45                      | 4,600                   |
| 08-00030-00290  | 2.9           | 5.8                    | 12°                        | 4                   | 45                      | 4,600                   |
| 08-00030-00300  | 3             | 6                      | 12°                        | 6                   | 45                      | 2,200                   |
| 08-00030-00310  | 3.1           | 6.2                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00320  | 3.2           | 6.4                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00330  | 3.3           | 6.6                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00340  | 3.4           | 6.8                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00350  | 3.5           | 7                      | 12°                        | 6                   | 45                      | 3,900                   |
| 08-00030-00360  | 3.6           | 7.2                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00370  | 3.7           | 7.4                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00380  | 3.8           | 7.6                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00390  | 3.9           | 7.8                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00400  | 4             | 8                      | 12°                        | 6                   | 45                      | 2,400                   |
| 08-00030-00410  | 4.1           | 8.2                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00420  | 4.2           | 8.4                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00430  | 4.3           | 8.6                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00440  | 4.4           | 8.8                    | 12°                        | 6                   | 45                      | 4,800                   |
| 08-00030-00450  | 4.5           | 9                      | 12°                        | 6                   | 50                      | 4,500                   |
| 08-00030-00460  | 4.6           | 9.2                    | 12°                        | 6                   | 50                      | 5,500                   |
| 08-00030-00470  | 4.7           | 9.4                    | 12°                        | 6                   | 50                      | 5,500                   |
| 08-00030-00480  | 4.8           | 9.6                    | 12°                        | 6                   | 50                      | 5,500                   |

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)날장<br>Length of Cut | (γ')각도<br>Neck Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(P)<br>Retail Price |
|-----------------|---------------|------------------------|----------------------------|---------------------|-------------------------|-------------------------|
| 08-00030-00490  | 4.9           | 9.8                    | 12°                        | 6                   | 50                      | 5,500                   |
| 08-00030-00500  | 5             | 10                     | 12°                        | 6                   | 50                      | 2,600                   |
| 08-00030-00510  | 5.1           | 10.2                   | 12°                        | 6                   | 50                      | 5,500                   |
| 08-00030-00520  | 5.2           | 10.4                   | 12°                        | 6                   | 50                      | 5,500                   |
| 08-00030-00530  | 5.3           | 10.6                   | 12°                        | 6                   | 50                      | 5,500                   |
| 08-00030-00540  | 5.4           | 10.8                   | 12°                        | 6                   | 50                      | 5,500                   |
| 08-00030-00550  | 5.5           | 11                     | 12°                        | 6                   | 50                      | 4,700                   |
| 08-00030-00560  | 5.6           | 11.2                   | 12°                        | 6                   | 50                      | 5,700                   |
| 08-00030-00570  | 5.7           | 11.4                   | 12°                        | 6                   | 50                      | 5,700                   |
| 08-00030-00580  | 5.8           | 11.6                   | 12°                        | 6                   | 50                      | 5,700                   |
| 08-00030-00590  | 5.9           | 11.8                   | 12°                        | 6                   | 50                      | 5,700                   |
| 08-00030-00600  | 6             | 12                     | —                          | 6                   | 50                      | 2,800                   |
| 08-00030-00700  | 7             | 14                     | 12°                        | 8                   | 65                      | 7,800                   |
| 08-00030-00800  | 8             | 16                     | —                          | 8                   | 65                      | 6,300                   |
| 08-00030-00900  | 9             | 18                     | 12°                        | 10                  | 75                      | 11,000                  |
| 08-00030-01000  | 10            | 20                     | —                          | 10                  | 75                      | 8,000                   |
| 08-00030-01200  | 12            | 24                     | —                          | 12                  | 80                      | 11,000                  |

# MX240

무한 리드40 엔드밀 (2날) MUGEN-COATING 2-Flute LEAD40 End Mill



- 날장은 날경의 4배로 40° 헬릭스 각도를 적용
- 깊은 가공도 스무스하게 가공할 수 있고 긴날이면서도 가공면의 편차를 최소화하여 억제
- L/D=4 and helix 40° is suitable for deep machining with minimum deflection of cutting up-right surface.



단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (L)날장<br>Length of Cut | (r)각도<br>Neck Taper Angle | (d)샤프크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price |
|-----------------|---------------|------------------------|---------------------------|----------------------|-------------------------|---------------------------|
| 08-00040-00030  | 0.3           | 1.2                    | 12°                       | 4                    | 45                      | 5,100                     |
| 08-00040-00040  | 0.4           | 1.6                    | 12°                       | 4                    | 45                      | 5,100                     |
| 08-00040-00050  | 0.5           | 2                      | 12°                       | 4                    | 45                      | 3,200                     |
| 08-00040-00060  | 0.6           | 2.4                    | 12°                       | 4                    | 45                      | 2,900                     |
| 08-00040-00070  | 0.7           | 2.8                    | 12°                       | 4                    | 45                      | 3,200                     |
| 08-00040-00080  | 0.8           | 3.2                    | 12°                       | 4                    | 45                      | 3,200                     |
| 08-00040-00090  | 0.9           | 3.6                    | 12°                       | 4                    | 45                      | 3,200                     |
| 08-00040-00100  | 1             | 4                      | 12°                       | 4                    | 45                      | 2,900                     |
| 08-00040-00110  | 1.1           | 4.4                    | 12°                       | 4                    | 45                      | 4,300                     |
| 08-00040-00120  | 1.2           | 4.8                    | 12°                       | 4                    | 45                      | 3,500                     |
| 08-00040-00130  | 1.3           | 5.2                    | 12°                       | 4                    | 45                      | 4,400                     |
| 08-00040-00140  | 1.4           | 5.6                    | 12°                       | 4                    | 45                      | 4,400                     |
| 08-00040-00150  | 1.5           | 6                      | 12°                       | 4                    | 45                      | 2,900                     |
| 08-00040-00160  | 1.6           | 6.4                    | 12°                       | 4                    | 45                      | 4,400                     |
| 08-00040-00170  | 1.7           | 6.8                    | 12°                       | 4                    | 45                      | 4,400                     |
| 08-00040-00180  | 1.8           | 7.2                    | 12°                       | 4                    | 45                      | 3,500                     |
| 08-00040-00190  | 1.9           | 7.6                    | 12°                       | 4                    | 45                      | 4,400                     |
| 08-00040-00200  | 2             | 8                      | 12°                       | 4                    | 45                      | 2,900                     |
| 08-00040-00210  | 2.1           | 8.4                    | 12°                       | 4                    | 45                      | 4,400                     |
| 08-00040-00220  | 2.2           | 8.8                    | 12°                       | 4                    | 45                      | 4,400                     |
| 08-00040-00230  | 2.3           | 9.2                    | 12°                       | 4                    | 45                      | 4,400                     |
| 08-00040-00240  | 2.4           | 9.6                    | 12°                       | 4                    | 45                      | 4,400                     |
| 08-00040-00250  | 2.5           | 10                     | 12°                       | 4                    | 45                      | 2,900                     |
| 08-00040-00260  | 2.6           | 10.4                   | 12°                       | 4                    | 50                      | 5,000                     |
| 08-00040-00270  | 2.7           | 10.8                   | 12°                       | 4                    | 50                      | 5,000                     |
| 08-00040-00280  | 2.8           | 11.2                   | 12°                       | 4                    | 50                      | 5,000                     |
| 08-00040-00290  | 2.9           | 11.6                   | 12°                       | 4                    | 50                      | 5,000                     |
| 08-00040-00300  | 3             | 12                     | 12°                       | 6                    | 50                      | 3,600                     |
| 08-00040-00310  | 3.1           | 12.4                   | 12°                       | 6                    | 50                      | 5,300                     |
| 08-00040-00320  | 3.2           | 12.8                   | 12°                       | 6                    | 50                      | 5,300                     |
| 08-00040-00330  | 3.3           | 13.2                   | 12°                       | 6                    | 50                      | 5,300                     |
| 08-00040-00340  | 3.4           | 13.6                   | 12°                       | 6                    | 50                      | 5,300                     |

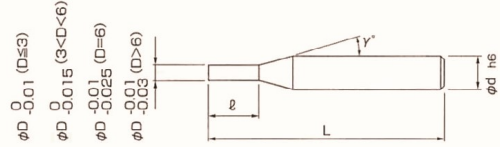
| 품 번<br>Code No. | (D)날경<br>Dia. | (L)날장<br>Length of Cut | (r)각도<br>Neck Taper Angle | (d)샤프크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price |
|-----------------|---------------|------------------------|---------------------------|----------------------|-------------------------|---------------------------|
| 08-00040-00350  | 3.5           | 14                     | 12°                       | 6                    | 50                      | 4,700                     |
| 08-00040-00360  | 3.6           | 14.4                   | 12°                       | 6                    | 50                      | 5,300                     |
| 08-00040-00370  | 3.7           | 14.8                   | 12°                       | 6                    | 50                      | 5,300                     |
| 08-00040-00380  | 3.8           | 15.2                   | 12°                       | 6                    | 50                      | 5,300                     |
| 08-00040-00390  | 3.9           | 15.6                   | 12°                       | 6                    | 50                      | 5,300                     |
| 08-00040-00400  | 4             | 16                     | 12°                       | 6                    | 55                      | 3,900                     |
| 08-00040-00410  | 4.1           | 16.4                   | 12°                       | 6                    | 55                      | 5,300                     |
| 08-00040-00420  | 4.2           | 16.8                   | 12°                       | 6                    | 55                      | 5,300                     |
| 08-00040-00430  | 4.3           | 17.2                   | 12°                       | 6                    | 55                      | 5,300                     |
| 08-00040-00440  | 4.4           | 17.6                   | 12°                       | 6                    | 55                      | 5,300                     |
| 08-00040-00450  | 4.5           | 18                     | 12°                       | 6                    | 55                      | 5,400                     |
| 08-00040-00460  | 4.6           | 18.4                   | 12°                       | 6                    | 55                      | 6,000                     |
| 08-00040-00470  | 4.7           | 18.8                   | 12°                       | 6                    | 55                      | 6,000                     |
| 08-00040-00480  | 4.8           | 19.2                   | 12°                       | 6                    | 55                      | 6,000                     |
| 08-00040-00490  | 4.9           | 19.6                   | 12°                       | 6                    | 55                      | 6,000                     |
| 08-00040-00500  | 5             | 20                     | 12°                       | 6                    | 60                      | 4,400                     |
| 08-00040-00510  | 5.1           | 20.4                   | 12°                       | 6                    | 60                      | 6,000                     |
| 08-00040-00520  | 5.2           | 20.8                   | 12°                       | 6                    | 60                      | 6,000                     |
| 08-00040-00530  | 5.3           | 21.2                   | 12°                       | 6                    | 60                      | 6,000                     |
| 08-00040-00540  | 5.4           | 21.6                   | 12°                       | 6                    | 60                      | 6,000                     |
| 08-00040-00550  | 5.5           | 22                     | 12°                       | 6                    | 65                      | 5,400                     |
| 08-00040-00560  | 5.6           | 22.4                   | 12°                       | 6                    | 65                      | 6,300                     |
| 08-00040-00570  | 5.7           | 22.8                   | 12°                       | 6                    | 65                      | 6,300                     |
| 08-00040-00580  | 5.8           | 23.2                   | 12°                       | 6                    | 65                      | 6,300                     |
| 08-00040-00590  | 5.9           | 23.6                   | 12°                       | 6                    | 65                      | 6,300                     |
| 08-00040-00600  | 6             | 24                     | —                         | 6                    | 65                      | 4,500                     |
| 08-00040-00700  | 7             | 28                     | 12°                       | 8                    | 90                      | 10,500                    |
| 08-00040-00800  | 8             | 32                     | —                         | 8                    | 90                      | 9,600                     |
| 08-00040-00900  | 9             | 36                     | 12°                       | 10                   | 100                     | 18,000                    |
| 08-00040-01000  | 10            | 40                     | —                         | 10                   | 100                     | 10,500                    |
| 08-00040-01200  | 12            | 48                     | —                         | 12                   | 105                     | 18,000                    |

## 주문방법

MX240 날경(D)을 선택하십시오.  
When you order, indicate MX240 (D).

# MX235

무한 리드35 엔드밀 (2날) MUGEN-COATING 2-Flute LEAD35 End Mill



- 날장은 날경의 3배로 35° 헬릭스 각도를 적용
- 2배 날장에서는 날장이 부족하고, 4배 날장은 너무 길었던 문제를 해결
- L/D=3 and helix 35° for appropriate length of cut to avoid the inconveniences in size selection.



단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품번<br>Code No. | (D)날경<br>Dia. | (L)날장<br>Length of Cut | (γ)각도<br>Nose Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price |
|----------------|---------------|------------------------|---------------------------|---------------------|-------------------------|---------------------------|
| 08-00035-00010 | 0.1           | 0.3                    | 12°                       | 4                   | 45                      | 6,500                     |
| 08-00035-00020 | 0.2           | 0.6                    | 12°                       | 4                   | 45                      | 3,900                     |
| 08-00035-00030 | 0.3           | 0.9                    | 12°                       | 4                   | 45                      | 3,400                     |
| 08-00035-00040 | 0.4           | 1.2                    | 12°                       | 4                   | 45                      | 3,800                     |
| 08-00035-00050 | 0.5           | 1.5                    | 12°                       | 4                   | 45                      | 1,900                     |
| 08-00035-00060 | 0.6           | 1.8                    | 12°                       | 4                   | 45                      | 2,900                     |
| 08-00035-00070 | 0.7           | 2.1                    | 12°                       | 4                   | 45                      | 3,200                     |
| 08-00035-00080 | 0.8           | 2.4                    | 12°                       | 4                   | 45                      | 1,900                     |
| 08-00035-00090 | 0.9           | 2.7                    | 12°                       | 4                   | 45                      | 3,200                     |
| 08-00035-00100 | 1             | 3                      | 12°                       | 4                   | 45                      | 1,700                     |
| 08-00035-00110 | 1.1           | 3.3                    | 12°                       | 4                   | 45                      | 3,600                     |
| 08-00035-00120 | 1.2           | 3.6                    | 12°                       | 4                   | 45                      | 1,900                     |
| 08-00035-00130 | 1.3           | 3.9                    | 12°                       | 4                   | 45                      | 3,600                     |
| 08-00035-00140 | 1.4           | 4.2                    | 12°                       | 4                   | 45                      | 3,600                     |
| 08-00035-00150 | 1.5           | 4.5                    | 12°                       | 4                   | 45                      | 1,700                     |
| 08-00035-00160 | 1.6           | 4.8                    | 12°                       | 4                   | 45                      | 3,600                     |
| 08-00035-00170 | 1.7           | 5.1                    | 12°                       | 4                   | 45                      | 3,600                     |
| 08-00035-00180 | 1.8           | 5.4                    | 12°                       | 4                   | 45                      | 1,900                     |
| 08-00035-00190 | 1.9           | 5.7                    | 12°                       | 4                   | 45                      | 3,600                     |
| 08-00035-00200 | 2             | 6                      | 12°                       | 4                   | 45                      | 1,700                     |
| 08-00035-00210 | 2.1           | 6.3                    | 12°                       | 4                   | 45                      | 3,600                     |
| 08-00035-00220 | 2.2           | 6.6                    | 12°                       | 4                   | 45                      | 3,600                     |
| 08-00035-00230 | 2.3           | 6.9                    | 12°                       | 4                   | 45                      | 3,600                     |
| 08-00035-00240 | 2.4           | 7.2                    | 12°                       | 4                   | 45                      | 3,600                     |
| 08-00035-00250 | 2.5           | 7.5                    | 12°                       | 4                   | 45                      | 1,700                     |
| 08-00035-00260 | 2.6           | 7.8                    | 12°                       | 4                   | 45                      | 4,600                     |
| 08-00035-00270 | 2.7           | 8.1                    | 12°                       | 4                   | 45                      | 4,600                     |
| 08-00035-00280 | 2.8           | 8.4                    | 12°                       | 4                   | 45                      | 4,600                     |
| 08-00035-00290 | 2.9           | 8.7                    | 12°                       | 4                   | 45                      | 4,600                     |
| 08-00035-00300 | 3             | 9                      | 12°                       | 6                   | 45                      | 2,200                     |
| 08-00035-00310 | 3.1           | 9.3                    | 12°                       | 6                   | 45                      | 4,800                     |
| 08-00035-00320 | 3.2           | 9.6                    | 12°                       | 6                   | 45                      | 4,800                     |
| 08-00035-00330 | 3.3           | 9.9                    | 12°                       | 6                   | 45                      | 4,800                     |

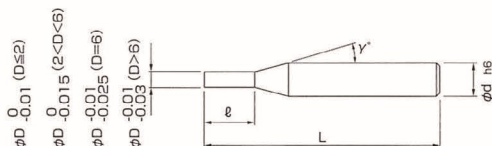
| 품번<br>Code No. | (D)날경<br>Dia. | (L)날장<br>Length of Cut | (γ)각도<br>Nose Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price |
|----------------|---------------|------------------------|---------------------------|---------------------|-------------------------|---------------------------|
| 08-00035-00340 | 3.4           | 10.2                   | 12°                       | 6                   | 45                      | 4,800                     |
| 08-00035-00350 | 3.5           | 10.5                   | 12°                       | 6                   | 45                      | 4,000                     |
| 08-00035-00360 | 3.6           | 10.8                   | 12°                       | 6                   | 45                      | 4,800                     |
| 08-00035-00370 | 3.7           | 11.1                   | 12°                       | 6                   | 45                      | 4,800                     |
| 08-00035-00380 | 3.8           | 11.4                   | 12°                       | 6                   | 45                      | 4,800                     |
| 08-00035-00390 | 3.9           | 11.7                   | 12°                       | 6                   | 45                      | 4,800                     |
| 08-00035-00400 | 4             | 12                     | 12°                       | 6                   | 50                      | 2,400                     |
| 08-00035-00410 | 4.1           | 12.3                   | 12°                       | 6                   | 50                      | 4,800                     |
| 08-00035-00420 | 4.2           | 12.6                   | 12°                       | 6                   | 50                      | 4,800                     |
| 08-00035-00430 | 4.3           | 12.9                   | 12°                       | 6                   | 50                      | 4,800                     |
| 08-00035-00440 | 4.4           | 13.2                   | 12°                       | 6                   | 50                      | 4,800                     |
| 08-00035-00450 | 4.5           | 13.5                   | 12°                       | 6                   | 50                      | 4,600                     |
| 08-00035-00460 | 4.6           | 13.8                   | 12°                       | 6                   | 55                      | 5,500                     |
| 08-00035-00470 | 4.7           | 14.1                   | 12°                       | 6                   | 55                      | 5,500                     |
| 08-00035-00480 | 4.8           | 14.4                   | 12°                       | 6                   | 55                      | 5,500                     |
| 08-00035-00490 | 4.9           | 14.7                   | 12°                       | 6                   | 55                      | 5,500                     |
| 08-00035-00500 | 5             | 15                     | 12°                       | 6                   | 55                      | 2,600                     |
| 08-00035-00510 | 5.1           | 15.3                   | 12°                       | 6                   | 55                      | 5,500                     |
| 08-00035-00520 | 5.2           | 15.6                   | 12°                       | 6                   | 55                      | 5,500                     |
| 08-00035-00530 | 5.3           | 15.9                   | 12°                       | 6                   | 55                      | 5,500                     |
| 08-00035-00540 | 5.4           | 16.2                   | 12°                       | 6                   | 55                      | 5,500                     |
| 08-00035-00550 | 5.5           | 16.5                   | 12°                       | 6                   | 60                      | 4,600                     |
| 08-00035-00560 | 5.6           | 16.8                   | 12°                       | 6                   | 60                      | 5,700                     |
| 08-00035-00570 | 5.7           | 17.1                   | 12°                       | 6                   | 60                      | 5,700                     |
| 08-00035-00580 | 5.8           | 17.4                   | 12°                       | 6                   | 60                      | 5,700                     |
| 08-00035-00590 | 5.9           | 17.7                   | 12°                       | 6                   | 60                      | 5,700                     |
| 08-00035-00600 | 6             | 18                     | —                         | 6                   | 60                      | 2,800                     |
| 08-00035-00700 | 7             | 21                     | 12°                       | 8                   | 65                      | 8,500                     |
| 08-00035-00800 | 8             | 24                     | —                         | 8                   | 65                      | 7,000                     |
| 08-00035-00900 | 9             | 27                     | 12°                       | 10                  | 75                      | 12,000                    |
| 08-00035-01000 | 10            | 30                     | —                         | 10                  | 75                      | 8,800                     |
| 08-00035-01200 | 12            | 36                     | —                         | 12                  | 80                      | 12,000                    |

## 주문방법

MX235 날경(D)을 선택하십시오.  
When you order, indicate MX235 (D).

# MX245

무한 리드45 엔드밀 (2날) MUGEN-COATING 2-Flute LEAD45 End Mill



- 날장은 날경의 5배로 45° 헬릭스 각도를 적용
- 긴날장이면서 가공면의 편차를 최소화하여 억제
- L/D=5 and helix 45° to minimize the milling deflection even though the long cutting length design.



단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)날장<br>Length of Cut | (r)각도<br>Neck Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(PY)<br>Retail Price |
|-----------------|---------------|------------------------|---------------------------|---------------------|-------------------------|--------------------------|
| 08-00045-00030  | 0.3           | 1.5                    | 12°                       | 4                   | 45                      | 7,100                    |
| 08-00045-00040  | 0.4           | 2                      | 12°                       | 4                   | 45                      | 7,100                    |
| 08-00045-00050  | 0.5           | 2.5                    | 12°                       | 4                   | 45                      | 4,500                    |
| 08-00045-00080  | 0.8           | 4                      | 12°                       | 4                   | 45                      | 4,500                    |
| 08-00045-00100  | 1             | 5                      | 12°                       | 4                   | 45                      | 4,000                    |
| 08-00045-00120  | 1.2           | 6                      | 12°                       | 4                   | 45                      | 4,500                    |
| 08-00045-00150  | 1.5           | 7.5                    | 12°                       | 4                   | 45                      | 4,000                    |
| 08-00045-00180  | 1.8           | 9                      | 12°                       | 4                   | 50                      | 4,500                    |
| 08-00045-00200  | 2             | 10                     | 12°                       | 4                   | 50                      | 4,000                    |
| 08-00045-00250  | 2.5           | 12.5                   | 12°                       | 4                   | 50                      | 4,000                    |
| 08-00045-00300  | 3             | 15                     | 12°                       | 6                   | 55                      | 5,300                    |
| 08-00045-00400  | 4             | 20                     | 12°                       | 6                   | 60                      | 5,600                    |
| 08-00045-00500  | 5             | 25                     | 12°                       | 6                   | 65                      | 6,200                    |
| 08-00045-00600  | 6             | 30                     | —                         | 6                   | 75                      | 6,500                    |
| 08-00045-00700  | 7             | 35                     | 12°                       | 8                   | 90                      | 12,000                   |
| 08-00045-00800  | 8             | 40                     | —                         | 8                   | 90                      | 10,500                   |
| 08-00045-00900  | 9             | 45                     | 12°                       | 10                  | 100                     | 20,000                   |
| 08-00045-01000  | 10            | 50                     | —                         | 10                  | 100                     | 12,000                   |
| 08-00045-01200  | 12            | 60                     | —                         | 12                  | 105                     | 20,000                   |

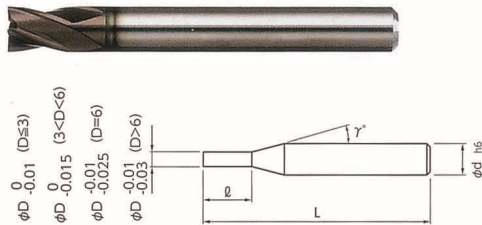
## 주문방법

MX245 날경(D)을 선택하십시오.  
When you order, indicate MX245 (D).

# MX425

무한 리드25 엔드밀 (4날)

MUGEN-COATING 4-Flute LEAD25 End Mil



- 날장은 날경과 같은 배수로 25° 헬릭스 각도를 적용
- 강성을 높인 설계로 가공면의 면떨림과 편차를 최소화하여 억제
- L/D=1 and helix 25° type, increased the rigidity to suppress chattering and minimized milling deflection.



## 피삭재 Work Material

| 탄소강<br>Carbon Steels       | 합금강 · 공구강<br>Alloy Steels · Tool Steels | 프리하든강 · 조질강<br>Prehardened Steels | 열처리강<br>Hardened Steels |               |
|----------------------------|-----------------------------------------|-----------------------------------|-------------------------|---------------|
|                            |                                         |                                   | ~ 55HRC                 | 55HRC ~       |
| ◎                          | ◎                                       | ◎                                 | ◎                       | ◎             |
| 스테인리스강<br>Stainless Steels | 티타늄합금<br>Titanium Alloy                 | 알루미늄합금<br>Aluminum                | 동합금<br>Copper           | 수지<br>Plastic |
| ◎                          | ○                                       | ◎                                 | ◎                       | ◎             |

단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)날장<br>Length of Cut | (r)각도<br>Neck Taper Angle | (d)샤프크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price |
|-----------------|---------------|------------------------|---------------------------|----------------------|-------------------------|---------------------------|
| 08-00075-00100  | 1             | 1                      | 12°                       | 4                    | 45                      | 4,300                     |
| 08-00075-00150  | 1.5           | 1.5                    | 12°                       | 4                    | 45                      | 4,300                     |
| 08-00075-00200  | 2             | 2                      | 12°                       | 4                    | 45                      | 2,800                     |
| 08-00075-00250  | 2.5           | 2.5                    | 12°                       | 4                    | 45                      | 2,800                     |
| 08-00075-00300  | 3             | 3                      | 12°                       | 6                    | 45                      | 3,200                     |
| 08-00075-00350  | 3.5           | 3.5                    | 12°                       | 6                    | 45                      | 5,800                     |
| 08-00075-00400  | 4             | 4                      | 12°                       | 6                    | 45                      | 3,600                     |
| 08-00075-00450  | 4.5           | 4.5                    | 12°                       | 6                    | 50                      | 7,000                     |
| 08-00075-00500  | 5             | 5                      | 12°                       | 6                    | 50                      | 3,900                     |
| 08-00075-00550  | 5.5           | 5.5                    | 12°                       | 6                    | 50                      | 7,200                     |
| 08-00075-00600  | 6             | 6                      | —                         | 6                    | 50                      | 4,200                     |
| 08-00075-00800  | 8             | 8                      | —                         | 8                    | 65                      | 9,500                     |
| 08-00075-01000  | 10            | 10                     | —                         | 10                   | 75                      | 11,000                    |
| 08-00075-01200  | 12            | 12                     | —                         | 12                   | 80                      | 16,500                    |

## 주문방법

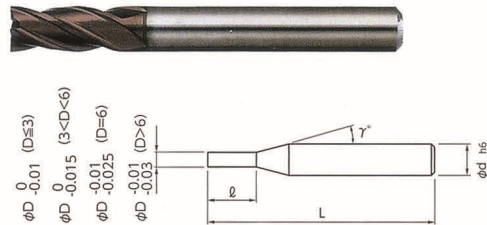
MX425 날경(D)을 선택하십시오.  
When you order, indicate MX425 (D).

※ (r)은 참고값입니다.  
※ (r) is reference value.

# MX430

무한 리드30 엔드밀 (4날)

MUGEN-COATING 4-Flute LEAD30 End Mil



- 날장은 날경의 2배로 30° 헬릭스 각도를 적용
- 홈 · 측면을 불문하고 모든 가공에 적용하는 표준타입
- L/D=2 and helix 30° standard type, applicable to any milling process.



## 피삭재 Work Material

| 탄소강<br>Carbon Steels       | 합금강 · 공구강<br>Alloy Steels · Tool Steels | 프리하든강 · 조질강<br>Prehardened Steels | 열처리강<br>Hardened Steels |               |
|----------------------------|-----------------------------------------|-----------------------------------|-------------------------|---------------|
|                            |                                         |                                   | ~ 55HRC                 | 55HRC ~       |
| ◎                          | ◎                                       | ◎                                 | ◎                       | ◎             |
| 스테인리스강<br>Stainless Steels | 티타늄합금<br>Titanium Alloy                 | 알루미늄합금<br>Aluminum                | 동합금<br>Copper           | 수지<br>Plastic |
| ◎                          | ○                                       | ◎                                 | ◎                       | ◎             |

단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)날장<br>Length of Cut | (r)각도<br>Neck Taper Angle | (d)샤프크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price |
|-----------------|---------------|------------------------|---------------------------|----------------------|-------------------------|---------------------------|
| 08-00080-00100  | 1             | 2                      | 12°                       | 4                    | 45                      | 3,000                     |
| 08-00080-00150  | 1.5           | 3                      | 12°                       | 4                    | 45                      | 3,000                     |
| 08-00080-00200  | 2             | 4                      | 12°                       | 4                    | 45                      | 2,500                     |
| 08-00080-00250  | 2.5           | 5                      | 12°                       | 4                    | 45                      | 2,500                     |
| 08-00080-00300  | 3             | 6                      | 12°                       | 6                    | 45                      | 2,600                     |
| 08-00080-00350  | 3.5           | 7                      | 12°                       | 6                    | 45                      | 4,800                     |
| 08-00080-00400  | 4             | 8                      | 12°                       | 6                    | 45                      | 3,000                     |
| 08-00080-00450  | 4.5           | 9                      | 12°                       | 6                    | 50                      | 5,600                     |
| 08-00080-00500  | 5             | 10                     | 12°                       | 6                    | 50                      | 3,000                     |
| 08-00080-00550  | 5.5           | 11                     | 12°                       | 6                    | 50                      | 5,600                     |
| 08-00080-00600  | 6             | 12                     | —                         | 6                    | 50                      | 3,500                     |
| 08-00080-00800  | 8             | 16                     | —                         | 8                    | 65                      | 6,800                     |
| 08-00080-01000  | 10            | 20                     | —                         | 10                   | 75                      | 9,200                     |
| 08-00080-01200  | 12            | 24                     | —                         | 12                   | 80                      | 12,500                    |

## 주문방법

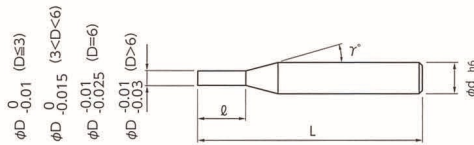
MX430 날경(D)을 선택하십시오.  
When you order, indicate MX430 (D).

※ (r)은 참고값입니다.  
※ (r) is reference value.

# MX435

무한 리드35 엔드밀 (4날)

MUGEN-COATING 4-Flute LEAD35 End Mill



- 날장은 날경의 3배로 35° 헬릭스 각도를 적용
- 2배 날장에서는 날장이 부족하고, 4배 날장은 너무 길었던 문제를 해결
- L/D=3 and helix 35° for appropriate length of cut to avoid the inconveniences in size selection.



## 피삭재 Work Material

| 탄소강<br>Carbon Steels       | 합금강 · 공구강<br>Alloy Steels · Tool Steels | 프리하드강 · 조질강<br>Prehardened Steels | 열처리강<br>Hardened Steels |               |
|----------------------------|-----------------------------------------|-----------------------------------|-------------------------|---------------|
|                            |                                         |                                   | ~ 55HRC                 | 55HRC ~       |
| ◎                          | ◎                                       | ◎                                 | ◎                       | ◎             |
| 스테인리스강<br>Stainless Steels | 티타늄합금<br>Titanium Alloy                 | 알루미늄합금<br>Aluminum                | 동합금<br>Copper           | 수지<br>Plastic |
| ◎                          | ○                                       | ◎                                 | ◎                       | ◎             |

단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)날장<br>Length of Cut | (r)각도<br>Neck Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price |
|-----------------|---------------|------------------------|---------------------------|---------------------|-------------------------|---------------------------|
| 08-00085-00100  | 1             | 3                      | 12°                       | 4                   | 45                      | 4,300                     |
| 08-00085-00150  | 1.5           | 4.5                    | 12°                       | 4                   | 45                      | 4,300                     |
| 08-00085-00200  | 2             | 6                      | 12°                       | 4                   | 45                      | 3,000                     |
| 08-00085-00250  | 2.5           | 7.5                    | 12°                       | 4                   | 45                      | 3,000                     |
| 08-00085-00300  | 3             | 9                      | 12°                       | 6                   | 45                      | 3,300                     |
| 08-00085-00350  | 3.5           | 10.5                   | 12°                       | 6                   | 45                      | 6,000                     |
| 08-00085-00400  | 4             | 12                     | 12°                       | 6                   | 50                      | 3,600                     |
| 08-00085-00450  | 4.5           | 13.5                   | 12°                       | 6                   | 50                      | 7,200                     |
| 08-00085-00500  | 5             | 15                     | 12°                       | 6                   | 55                      | 3,900                     |
| 08-00085-00550  | 5.5           | 16.5                   | 12°                       | 6                   | 60                      | 7,500                     |
| 08-00085-00600  | 6             | 18                     | —                         | 6                   | 60                      | 3,800                     |
| 08-00085-00800  | 8             | 24                     | —                         | 8                   | 65                      | 9,000                     |
| 08-00085-01000  | 10            | 30                     | —                         | 10                  | 75                      | 10,500                    |
| 08-00085-01200  | 12            | 36                     | —                         | 12                  | 80                      | 15,000                    |

## 주문방법

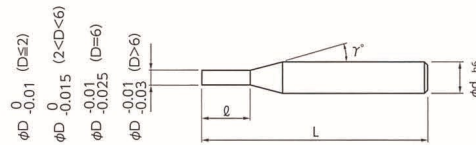
MX435 날경(D)을 선택하십시오.  
When you order, indicate MX435 (D).

※ (r)은 참고값입니다.  
※ (r) is reference value.

# MX440

무한 리드40 엔드밀 (4날)

MUGEN-COATING 4-Flute LEAD40 End Mill



- 날장은 날경의 4배로 40° 헬릭스 각도를 적용
- 깊은 가공도 스무스하게 가공할 수 있고 긴날이지만 가공면의 편차를 최소한으로 억제
- L/D=4 and helix 40° is suitable for deep machining with minimum deflection of cutting up-right surface.



## 피삭재 Work Material

| 탄소강<br>Carbon Steels       | 합금강 · 공구강<br>Alloy Steels · Tool Steels | 프리하드강 · 조질강<br>Prehardened Steels | 열처리강<br>Hardened Steels |               |
|----------------------------|-----------------------------------------|-----------------------------------|-------------------------|---------------|
|                            |                                         |                                   | ~ 55HRC                 | 55HRC ~       |
| ◎                          | ◎                                       | ◎                                 | ◎                       | ◎             |
| 스테인리스강<br>Stainless Steels | 티타늄합금<br>Titanium Alloy                 | 알루미늄합금<br>Aluminum                | 동합금<br>Copper           | 수지<br>Plastic |
| ◎                          | ○                                       | ◎                                 | ◎                       | ◎             |

단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)날장<br>Length of Cut | (r)각도<br>Neck Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price |
|-----------------|---------------|------------------------|---------------------------|---------------------|-------------------------|---------------------------|
| 08-00090-00100  | 1             | 4                      | 12°                       | 4                   | 45                      | 4,500                     |
| 08-00090-00150  | 1.5           | 6                      | 12°                       | 4                   | 45                      | 4,500                     |
| 08-00090-00200  | 2             | 8                      | 12°                       | 4                   | 45                      | 3,700                     |
| 08-00090-00250  | 2.5           | 10                     | 12°                       | 4                   | 45                      | 3,700                     |
| 08-00090-00300  | 3             | 12                     | 12°                       | 6                   | 50                      | 4,000                     |
| 08-00090-00350  | 3.5           | 14                     | 12°                       | 6                   | 50                      | 6,500                     |
| 08-00090-00400  | 4             | 16                     | 12°                       | 6                   | 55                      | 4,300                     |
| 08-00090-00450  | 4.5           | 18                     | 12°                       | 6                   | 55                      | 7,600                     |
| 08-00090-00500  | 5             | 20                     | 12°                       | 6                   | 60                      | 4,600                     |
| 08-00090-00550  | 5.5           | 22                     | 12°                       | 6                   | 65                      | 8,000                     |
| 08-00090-00600  | 6             | 24                     | —                         | 6                   | 65                      | 5,000                     |
| 08-00090-00800  | 8             | 32                     | —                         | 8                   | 90                      | 12,500                    |
| 08-00090-01000  | 10            | 40                     | —                         | 10                  | 100                     | 13,800                    |
| 08-00090-01200  | 12            | 48                     | —                         | 12                  | 105                     | 21,000                    |

## 주문방법

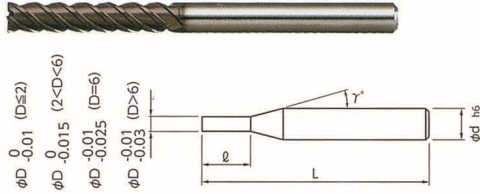
MX440 날경(D)을 선택하십시오.  
When you order, indicate MX440 (D).

※ (r)은 참고값입니다.  
※ (r) is reference value.

# MX445

무한 리드45 엔드밀 (4날)

MUGEN-COATING 4-Flute LEAD45 End Mill



- 날장은 날경의 5배로 45° 헬릭스 각도를 적용
- 긴 날장이지만 가공면의 편차를 최소한으로 억제
- L/D=5 and helix 45° to minimize the milling deflection even though the long cutting length design.



## 피삭재 Work Material

| 탄소강<br>Carbon Steels       | 합금강 · 공구강<br>Alloy Steels · Tool Steels | 프리하드강 · 조질강<br>Prehardened Steels | 열처리강<br>Hardened Steels |               |
|----------------------------|-----------------------------------------|-----------------------------------|-------------------------|---------------|
|                            |                                         |                                   | ~ 55HRC                 | 55HRC ~       |
| ◎                          | ◎                                       | ◎                                 | ◎                       |               |
| 스테인리스강<br>Stainless Steels | 티타늄합금<br>Titanium Alloy                 | 알루미늄합금<br>Aluminum                | 동합금<br>Copper           | 수지<br>Plastic |
| ◎                          | ○                                       | ◎                                 | ◎                       | ◎             |

단위 : mm / 가격 : 엔화  
Unit [size: mm / Retail Price: JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)날장<br>Length of Cut | (r)각도<br>Neck Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price |
|-----------------|---------------|------------------------|---------------------------|---------------------|-------------------------|---------------------------|
| 08-00095-00100  | 1             | 5                      | 12°                       | 4                   | 45                      | 6,000                     |
| 08-00095-00150  | 1.5           | 7.5                    | 12°                       | 4                   | 45                      | 6,000                     |
| 08-00095-00200  | 2             | 10                     | 12°                       | 4                   | 50                      | 5,000                     |
| 08-00095-00250  | 2.5           | 12.5                   | 12°                       | 4                   | 50                      | 5,000                     |
| 08-00095-00300  | 3             | 15                     | 12°                       | 6                   | 55                      | 6,000                     |
| 08-00095-00350  | 3.5           | 17.5                   | 12°                       | 6                   | 60                      | 8,000                     |
| 08-00095-00400  | 4             | 20                     | 12°                       | 6                   | 60                      | 6,600                     |
| 08-00095-00450  | 4.5           | 22.5                   | 12°                       | 6                   | 65                      | 9,000                     |
| 08-00095-00500  | 5             | 25                     | 12°                       | 6                   | 65                      | 6,900                     |
| 08-00095-00550  | 5.5           | 27.5                   | 12°                       | 6                   | 75                      | 9,800                     |
| 08-00095-00600  | 6             | 30                     | —                         | 6                   | 75                      | 7,500                     |
| 08-00095-00800  | 8             | 40                     | —                         | 8                   | 90                      | 15,000                    |
| 08-00095-01000  | 10            | 50                     | —                         | 10                  | 100                     | 17,000                    |
| 08-00095-01200  | 12            | 60                     | —                         | 12                  | 105                     | 24,000                    |

## 주문방법

MX445 날경(D)을 선택하십시오.  
When you order, indicate MX445 (D).

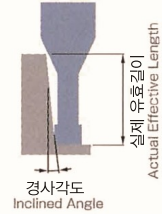
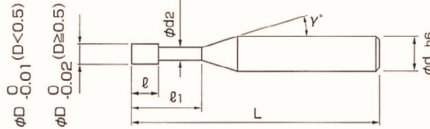
※ (r)은 참고값입니다.  
※ (r) is reference value.

# MHR230

무한코팅 2날 롱넥 엔드밀 MUGEN-COATING 2-Flute Long Neck End Mill



- 무한코팅을 적용한 NS의 깊은 가공용 오리지널 엔드밀
- 좁고 깊은 가공에 적합한 타입
- 총 217 사이즈
- MUGEN-COATING has been put on our original end mill for deep rib.
- It is very suitable for cutting on narrow and deep rib by long neck end mill.
- Total 217 sizes!
- NEW SIZE



단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

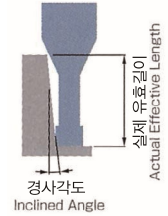
| 품 번<br>Code No.  | (D)날경<br>Dia. | (ℓ)유효길이<br>Effective Length | (ℓ)날장<br>Length of Cut | (d)목두께<br>Neck Dia. | (γ)각도<br>Neck Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price | 경사각도에 따른 실제 유효길이<br>Actual effective length depending on inclined angle of workpiece. |      |        |       |       |
|------------------|---------------|-----------------------------|------------------------|---------------------|---------------------------|---------------------|-------------------------|---------------------------|---------------------------------------------------------------------------------------|------|--------|-------|-------|
|                  |               |                             |                        |                     |                           |                     |                         |                           | 30°                                                                                   | 1°   | 1° 30' | 2°    | 3°    |
| 08-00200-01003   | 0.1           | 0.3                         | 0.15                   | 0.085               | 12°                       | 4                   | 45                      | 9,300                     | 0.34                                                                                  | 0.36 | 0.38   | 0.40  | 0.44  |
| 08-00200-01005   |               | 0.5                         |                        |                     |                           |                     | 45                      | 10,200                    | 0.55                                                                                  | 0.58 | 0.61   | 0.64  | 0.71  |
| ● 08-00200-01007 |               | 0.75                        |                        |                     |                           |                     | 45                      | 11,300                    | 0.82                                                                                  | 0.86 | 0.90   | 0.94  | 1.05  |
| 08-00200-01010   |               | 1                           |                        |                     |                           |                     | 45                      | 12,700                    | 1.07                                                                                  | 1.12 | 1.18   | 1.23  | 1.37  |
| ● 08-00200-01503 | 0.15          | 0.3                         | 0.2                    | 0.13                | 12°                       | 4                   | 45                      | 8,700                     | 0.36                                                                                  | 0.38 | 0.40   | 0.42  | 0.46  |
| ● 08-00200-01505 |               | 0.5                         |                        |                     |                           |                     | 45                      | 9,500                     | 0.57                                                                                  | 0.60 | 0.62   | 0.66  | 0.73  |
| ● 08-00200-01507 |               | 0.75                        |                        |                     |                           |                     | 45                      | 10,500                    | 0.83                                                                                  | 0.87 | 0.91   | 0.96  | 1.06  |
| ● 08-00200-01510 |               | 1                           |                        |                     |                           |                     | 45                      | 10,500                    | 1.09                                                                                  | 1.14 | 1.20   | 1.25  | 1.39  |
| ● 08-00200-01515 | 0.2           | 1.5                         | 0.3                    | 0.18                | 12°                       | 4                   | 45                      | 11,500                    | 1.61                                                                                  | 1.69 | 1.77   | 1.85  | 2.06  |
| 08-00200-02005   |               | 0.5                         |                        |                     |                           |                     | 45                      | 6,100                     | 0.57                                                                                  | 0.59 | 0.62   | 0.65  | 0.72  |
| ● 08-00200-02007 |               | 0.75                        |                        |                     |                           |                     | 45                      | 6,100                     | 0.83                                                                                  | 0.87 | 0.91   | 0.96  | 1.06  |
| 08-00200-02010   |               | 1                           |                        |                     |                           |                     | 45                      | 6,600                     | 1.09                                                                                  | 1.14 | 1.19   | 1.25  | 1.38  |
| 08-00200-02015   | 0.3           | 1.5                         | 0.4                    | 0.28                | 12°                       | 4                   | 45                      | 8,000                     | 1.61                                                                                  | 1.68 | 1.76   | 1.85  | 2.05  |
| 08-00200-02020   |               | 2                           |                        |                     |                           |                     | 45                      | 9,000                     | 2.13                                                                                  | 2.23 | 2.33   | 2.44  | 2.71  |
| 08-00200-02025   |               | 2.5                         |                        |                     |                           |                     | 45                      | 9,000                     | 2.65                                                                                  | 2.77 | 2.90   | 3.04  | 3.38  |
| 08-00200-02030   |               | 3                           |                        |                     |                           |                     | 45                      | 9,300                     | 3.17                                                                                  | 3.31 | 3.47   | 3.64  | 4.04  |
| 08-00200-02035   | 0.4           | 3.5                         | 0.6                    | 0.37                | 12°                       | 4                   | 45                      | 10,300                    | 3.69                                                                                  | 3.86 | 4.04   | 4.24  | 4.70  |
| 08-00200-02040   |               | 4                           |                        |                     |                           |                     | 45                      | 11,200                    | 4.22                                                                                  | 4.40 | 4.61   | 4.84  | 5.37  |
| 08-00200-03010   |               | 1                           |                        |                     |                           |                     | 45                      | 5,400                     | 1.09                                                                                  | 1.14 | 1.19   | 1.25  | 1.38  |
| 08-00200-03015   |               | 1.5                         |                        |                     |                           |                     | 45                      | 5,400                     | 1.61                                                                                  | 1.68 | 1.76   | 1.85  | 2.05  |
| 08-00200-03020   | 0.5           | 2                           | 0.8                    | 0.45                | 12°                       | 4                   | 45                      | 6,600                     | 2.13                                                                                  | 2.23 | 2.33   | 2.44  | 2.71  |
| 08-00200-03025   |               | 2.5                         |                        |                     |                           |                     | 45                      | 6,900                     | 2.65                                                                                  | 2.77 | 2.90   | 3.04  | 3.38  |
| 08-00200-03030   |               | 3                           |                        |                     |                           |                     | 45                      | 6,900                     | 3.17                                                                                  | 3.31 | 3.47   | 3.64  | 4.04  |
| 08-00200-03040   |               | 4                           |                        |                     |                           |                     | 45                      | 7,900                     | 4.22                                                                                  | 4.40 | 4.61   | 4.84  | 5.37  |
| 08-00200-03050   | 0.6           | 5                           | 1.2                    | 0.65                | 12°                       | 4                   | 45                      | 7,900                     | 5.26                                                                                  | 5.49 | 5.75   | 6.03  | 6.69  |
| 08-00200-03060   |               | 6                           |                        |                     |                           |                     | 45                      | 8,800                     | 6.30                                                                                  | 6.58 | 6.89   | 7.23  | 8.02  |
| 08-00200-03090   |               | 9                           |                        |                     |                           |                     | 45                      | 9,300                     | 9.43                                                                                  | 9.85 | 10.31  | 10.82 | 12.00 |
| 08-00200-04010   |               | 1                           |                        |                     |                           |                     | 45                      | 3,900                     | 1.11                                                                                  | 1.16 | 1.22   | 1.28  | 1.42  |
| ● 08-00200-04015 | 0.8           | 1.5                         | 1.6                    | 0.85                | 12°                       | 4                   | 45                      | 3,900                     | 1.64                                                                                  | 1.71 | 1.79   | 1.88  | 2.09  |
| 08-00200-04020   |               | 2                           |                        |                     |                           |                     | 45                      | 3,900                     | 2.15                                                                                  | 2.25 | 2.36   | 2.47  | 2.74  |
| ● 08-00200-04025 |               | 2.5                         |                        |                     |                           |                     | 45                      | 3,900                     | 2.68                                                                                  | 2.80 | 2.93   | 3.08  | 3.42  |
| 08-00200-04030   |               | 3                           |                        |                     |                           |                     | 45                      | 3,900                     | 3.20                                                                                  | 3.34 | 3.50   | 3.67  | 4.07  |
| ● 08-00200-04035 | 1.0           | 3.5                         | 2.0                    | 1.05                | 12°                       | 4                   | 45                      | 3,900                     | 3.72                                                                                  | 3.89 | 4.08   | 4.28  | 4.75  |
| 08-00200-04040   |               | 4                           |                        |                     |                           |                     | 45                      | 3,900                     | 4.24                                                                                  | 4.43 | 4.64   | 4.87  | 5.40  |
| 08-00200-04050   |               | 5                           |                        |                     |                           |                     | 45                      | 3,900                     | 5.28                                                                                  | 5.52 | 5.78   | 6.06  | 6.72  |
| 08-00200-04060   |               | 6                           |                        |                     |                           |                     | 45                      | 4,900                     | 6.33                                                                                  | 6.61 | 6.92   | 7.26  | 8.05  |

## 주문방법

MHR230 날경(D)×유효길이(ℓ 1)를 선택하십시오.  
When you order, indicate MHR230 (D)×(ℓ 1).

※ (γ)은 참고값입니다.  
※ (γ) is reference value.

# MHR230



## NEW SIZE

단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)유효길이<br>Effective Length | (ℓ)날장<br>Length of Cut | (d)목두께<br>Neck Dia. | (r)각도<br>Neck Taper Angle | (d)상크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price | 경사각도에 따른 실제 유효길이<br>Actual effective length depending on inclined angle of workpiece. |       |        |       |       |
|-----------------|---------------|-----------------------------|------------------------|---------------------|---------------------------|---------------------|-------------------------|---------------------------|---------------------------------------------------------------------------------------|-------|--------|-------|-------|
|                 |               |                             |                        |                     |                           |                     |                         |                           | 30°                                                                                   | 1°    | 1° 30' | 2°    | 3°    |
| 08-00200-04070  | 0.4           | 7                           | 0.6                    | 0.37                | 12°                       | 4                   | 45                      | 6,000                     | 7.37                                                                                  | 7.70  | 8.06   | 8.46  | 9.38  |
| 08-00200-04080  |               | 8                           |                        |                     |                           |                     | 45                      | 8,500                     | 8.41                                                                                  | 8.79  | 9.20   | 9.65  | 10.71 |
| 08-00200-04090  |               | 9                           |                        |                     |                           |                     | 45                      | 8,500                     | 9.45                                                                                  | 9.88  | 10.34  | 10.85 | 12.03 |
| 08-00200-04100  |               | 10                          |                        |                     |                           |                     | 45                      | 9,300                     | 10.50                                                                                 | 10.97 | 11.48  | 12.05 | 13.36 |
| 08-00200-04120  |               | 12                          |                        |                     |                           |                     | 45                      | 9,300                     | 12.58                                                                                 | 13.15 | 13.76  | 14.44 | 16.02 |
| 08-00200-05010  | 0.5           | 1                           | 0.7                    | 0.46                | 12°                       | 4                   | 45                      | 2,800                     | 1.14                                                                                  | 1.19  | 1.24   | 1.30  | 1.45  |
| 08-00200-05015  |               | 1.5                         |                        |                     |                           |                     | 45                      | 2,800                     | 1.66                                                                                  | 1.74  | 1.82   | 1.91  | 2.12  |
| 08-00200-05020  |               | 2                           |                        |                     |                           |                     | 45                      | 2,800                     | 2.18                                                                                  | 2.28  | 2.38   | 2.50  | 2.77  |
| 08-00200-05025  |               | 2.5                         |                        |                     |                           |                     | 45                      | 2,800                     | 2.71                                                                                  | 2.83  | 2.96   | 3.11  | 3.45  |
| 08-00200-05030  |               | 3                           |                        |                     |                           |                     | 45                      | 2,800                     | 3.22                                                                                  | 3.37  | 3.52   | 3.70  | 4.10  |
| 08-00200-05035  |               | 3.5                         |                        |                     |                           |                     | 45                      | 2,800                     | 3.75                                                                                  | 3.92  | 4.10   | 4.31  | 4.78  |
| 08-00200-05040  |               | 4                           |                        |                     |                           |                     | 45                      | 2,800                     | 4.26                                                                                  | 4.46  | 4.66   | 4.89  | 5.43  |
| 08-00200-05045  |               | 4.5                         |                        |                     |                           |                     | 45                      | 2,800                     | 4.79                                                                                  | 5.01  | 5.24   | 5.50  | 6.12  |
| 08-00200-05050  |               | 5                           |                        |                     |                           |                     | 45                      | 2,800                     | 5.31                                                                                  | 5.54  | 5.80   | 6.09  | 6.76  |
| 08-00200-05060  |               | 6                           |                        |                     |                           |                     | 45                      | 2,800                     | 6.35                                                                                  | 6.63  | 6.95   | 7.29  | 8.08  |
| 08-00200-05070  |               | 7                           |                        |                     |                           |                     | 45                      | 4,700                     | 7.39                                                                                  | 7.72  | 8.09   | 8.48  | 9.41  |
| 08-00200-05080  |               | 8                           |                        |                     |                           |                     | 50                      | 4,700                     | 8.44                                                                                  | 8.81  | 9.23   | 9.68  | 10.74 |
| 08-00200-05090  |               | 9                           |                        |                     |                           |                     | 50                      | 4,700                     | 9.48                                                                                  | 9.90  | 10.37  | 10.88 | 12.07 |
| 08-00200-05100  |               | 10                          |                        |                     |                           |                     | 50                      | 4,700                     | 10.52                                                                                 | 10.99 | 11.51  | 12.07 | 13.39 |
| 08-00200-05120  |               | 12                          |                        |                     |                           |                     | 50                      | 5,600                     | 12.61                                                                                 | 13.17 | 13.79  | 14.47 | 16.05 |
| 08-00200-05150  |               | 15                          |                        |                     |                           |                     | 50                      | 6,000                     | 15.74                                                                                 | 16.44 | 17.21  | 18.06 | 20.03 |
| 08-00200-06015  | 0.6           | 1.5                         | 0.9                    | 0.56                | 12°                       | 4                   | 45                      | 3,000                     | 1.66                                                                                  | 1.74  | 1.82   | 1.91  | 2.12  |
| 08-00200-06020  |               | 2                           |                        |                     |                           |                     | 45                      | 3,000                     | 2.18                                                                                  | 2.28  | 2.38   | 2.50  | 2.77  |
| 08-00200-06030  |               | 3                           |                        |                     |                           |                     | 45                      | 3,000                     | 3.22                                                                                  | 3.37  | 3.52   | 3.70  | 4.10  |
| 08-00200-06040  |               | 4                           |                        |                     |                           |                     | 45                      | 3,000                     | 4.26                                                                                  | 4.46  | 4.66   | 4.89  | 5.43  |
| 08-00200-06050  |               | 5                           |                        |                     |                           |                     | 45                      | 3,000                     | 5.31                                                                                  | 5.54  | 5.80   | 6.09  | 6.76  |
| 08-00200-06060  |               | 6                           |                        |                     |                           |                     | 45                      | 3,000                     | 6.35                                                                                  | 6.63  | 6.95   | 7.29  | 8.08  |
| 08-00200-06070  |               | 7                           |                        |                     |                           |                     | 45                      | 3,800                     | 7.39                                                                                  | 7.72  | 8.09   | 8.48  | 9.41  |
| 08-00200-06080  |               | 8                           |                        |                     |                           |                     | 50                      | 4,900                     | 8.44                                                                                  | 8.81  | 9.23   | 9.68  | 10.74 |
| 08-00200-06090  |               | 9                           |                        |                     |                           |                     | 50                      | 5,600                     | 9.48                                                                                  | 9.91  | 10.38  | 10.90 | 12.10 |
| 08-00200-06100  |               | 10                          |                        |                     |                           |                     | 50                      | 5,600                     | 10.52                                                                                 | 10.99 | 11.51  | 12.07 | 13.39 |
| 08-00200-06120  |               | 12                          |                        |                     |                           |                     | 50                      | 6,300                     | 12.61                                                                                 | 13.17 | 13.79  | 14.47 | 16.05 |
| 08-00200-06150  |               | 15                          |                        |                     |                           |                     | 50                      | 7,200                     | 15.74                                                                                 | 16.44 | 17.21  | 18.06 | 20.03 |
| 08-00200-06180  |               | 18                          |                        |                     |                           |                     | 50                      | 7,600                     | 18.86                                                                                 | 19.71 | 20.63  | 21.65 | 24.01 |
| 08-00200-07020  | 0.7           | 2                           | 1                      | 0.66                | 12°                       | 4                   | 45                      | 3,400                     | 2.18                                                                                  | 2.28  | 2.38   | 2.50  | 2.77  |
| 08-00200-07040  |               | 4                           |                        |                     |                           |                     | 45                      | 3,400                     | 4.26                                                                                  | 4.46  | 4.66   | 4.89  | 5.43  |

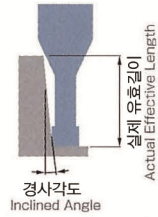
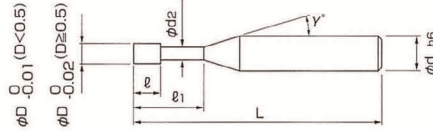
### 주문방법

MHR230 날경(D)×유효길이(ℓ)를 선택하십시오.  
When you order, indicate MHR230 (D)×(ℓ).

※ (r)은 참고값입니다.  
※ (r) is reference value.

# MHR230

무한코팅 2날 롱넥 엔드밀 MUGEN-COATING 2-Flute Long Neck End Mill



- 무한코팅을 적용한 NS의 깊은 가공용 오리지널 엔드밀
- 좁고 깊은 가공에 적합한 타입
- 총 217 사이즈

- MUGEN-COATING has been put on our original end mill for deep rib.
- It is very suitable for cutting on narrow and deep rib by long neck end mill.
- Total 217 sizes!

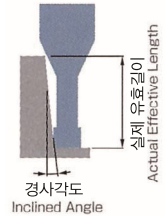
- NEW SIZE



단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품번<br>Code No. | (D)날경<br>Dia. | (L)유효길이<br>Effective Length | (L)날장<br>Length of Out | (d)목두께<br>Neck Dia. | (γ)각도<br>Neck Taper Angle | (d)샤프크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price | 경사각도에 따른 실제 유효길이<br>Actual effective length depending on inclined angle of workpiece. |       |        |       |       |
|----------------|---------------|-----------------------------|------------------------|---------------------|---------------------------|----------------------|-------------------------|---------------------------|---------------------------------------------------------------------------------------|-------|--------|-------|-------|
|                |               |                             |                        |                     |                           |                      |                         |                           | 30°                                                                                   | 1°    | 1° 30' | 2°    | 3°    |
| 08-00200-07060 | 0.7           | 6                           | 1                      | 0.66                | 12°                       | 4                    | 45                      | 3,400                     | 6.35                                                                                  | 6.63  | 6.95   | 7.29  | 8.08  |
| 08-00200-07080 |               | 8                           |                        |                     |                           |                      | 50                      | 5,500                     | 8.44                                                                                  | 8.81  | 9.23   | 9.68  | 10.74 |
| 08-00200-07100 |               | 10                          |                        |                     |                           |                      | 50                      | 7,200                     | 10.52                                                                                 | 10.99 | 11.51  | 12.07 | 13.39 |
| 08-00200-08030 | 0.8           | 3                           | 1.2                    | 0.76                | 12°                       | 4                    | 45                      | 3,300                     | 3.23                                                                                  | 3.37  | 3.53   | 3.71  | 4.12  |
| 08-00200-08040 |               | 4                           |                        |                     |                           |                      | 45                      | 3,300                     | 4.26                                                                                  | 4.46  | 4.66   | 4.89  | 5.43  |
| 08-00200-08050 |               | 5                           |                        |                     |                           |                      | 45                      | 3,300                     | 5.31                                                                                  | 5.55  | 5.81   | 6.10  | 6.78  |
| 08-00200-08060 |               | 6                           |                        |                     |                           |                      | 45                      | 3,300                     | 6.35                                                                                  | 6.63  | 6.95   | 7.29  | 8.08  |
| 08-00200-08080 |               | 8                           |                        |                     |                           |                      | 50                      | 3,300                     | 8.44                                                                                  | 8.81  | 9.23   | 9.68  | 10.74 |
| 08-00200-08100 |               | 10                          |                        |                     |                           |                      | 50                      | 4,900                     | 10.52                                                                                 | 10.99 | 11.51  | 12.07 | 13.39 |
| 08-00200-08120 |               | 12                          |                        |                     |                           |                      | 50                      | 5,500                     | 12.61                                                                                 | 13.17 | 13.79  | 14.47 | 16.05 |
| 08-00200-08140 |               | 14                          |                        |                     |                           |                      | 50                      | 6,300                     | 14.69                                                                                 | 15.35 | 16.07  | 16.86 | 18.70 |
| 08-00200-08160 |               | 16                          |                        |                     |                           |                      | 50                      | 6,300                     | 16.78                                                                                 | 17.53 | 18.35  | 19.25 | 21.36 |
| 08-00200-08200 |               | 20                          |                        |                     |                           |                      | 60                      | 7,000                     | 20.95                                                                                 | 21.89 | 22.91  | 24.04 | 26.66 |
| 08-00200-08240 |               | 24                          |                        |                     |                           |                      | 60                      | 7,700                     | 25.12                                                                                 | 26.24 | 27.47  | 28.83 | Free  |
| 08-00200-09040 | 0.9           | 4                           | 1.4                    | 0.86                | 12°                       | 4                    | 45                      | 3,800                     | 4.26                                                                                  | 4.46  | 4.66   | 4.89  | 5.43  |
| 08-00200-09060 |               | 6                           |                        |                     |                           |                      | 45                      | 3,800                     | 6.35                                                                                  | 6.63  | 6.95   | 7.29  | 8.08  |
| 08-00200-09080 |               | 8                           |                        |                     |                           |                      | 50                      | 3,800                     | 8.44                                                                                  | 8.81  | 9.23   | 9.68  | 10.74 |
| 08-00200-09100 |               | 10                          |                        |                     |                           |                      | 50                      | 3,800                     | 10.52                                                                                 | 10.99 | 11.51  | 12.07 | 13.39 |
| 08-00200-09120 |               | 12                          |                        |                     |                           |                      | 50                      | 4,400                     | 12.61                                                                                 | 13.18 | 13.80  | 14.49 | 16.10 |
| 08-00200-09150 |               | 15                          |                        |                     |                           |                      | 60                      | 7,200                     | 15.74                                                                                 | 16.44 | 17.21  | 18.06 | 20.03 |
| 08-00200-10020 | 1             | 2                           | 1.5                    | 0.95                | 12°                       | 4                    | 50                      | 3,000                     | 2.21                                                                                  | 2.31  | 2.42   | 2.54  | 2.82  |
| 08-00200-10030 |               | 3                           |                        |                     |                           |                      | 50                      | 3,000                     | 3.25                                                                                  | 3.39  | 3.55   | 3.73  | 4.13  |
| 08-00200-10040 |               | 4                           |                        |                     |                           |                      | 50                      | 3,000                     | 4.29                                                                                  | 4.48  | 4.69   | 4.92  | 5.46  |
| 08-00200-10050 |               | 5                           |                        |                     |                           |                      | 50                      | 3,000                     | 5.33                                                                                  | 5.57  | 5.83   | 6.12  | 6.79  |
| 08-00200-10060 |               | 6                           |                        |                     |                           |                      | 50                      | 3,000                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00200-10070 |               | 7                           |                        |                     |                           |                      | 50                      | 3,000                     | 7.42                                                                                  | 7.75  | 8.11   | 8.51  | 9.44  |
| 08-00200-10080 |               | 8                           |                        |                     |                           |                      | 50                      | 3,000                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00200-10090 |               | 9                           |                        |                     |                           |                      | 50                      | 3,000                     | 9.50                                                                                  | 9.93  | 10.39  | 10.91 | 12.10 |
| 08-00200-10100 |               | 10                          |                        |                     |                           |                      | 50                      | 3,000                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00200-10120 |               | 12                          |                        |                     |                           |                      | 50                      | 3,000                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00200-10140 |               | 14                          |                        |                     |                           |                      | 50                      | 3,000                     | 14.72                                                                                 | 15.38 | 16.10  | 16.89 | 18.73 |
| 08-00200-10160 |               | 16                          |                        |                     |                           |                      | 60                      | 4,900                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |
| 08-00200-10180 |               | 18                          |                        |                     |                           |                      | 60                      | 4,900                     | 18.89                                                                                 | 19.73 | 20.66  | 21.67 | 24.04 |
| 08-00200-10200 |               | 20                          |                        |                     |                           |                      | 60                      | 4,900                     | 20.97                                                                                 | 21.91 | 22.94  | 24.07 | 26.70 |
| 08-00200-10220 |               | 22                          |                        |                     |                           |                      | 60                      | 5,600                     | 23.06                                                                                 | 24.09 | 25.22  | 26.46 | Free  |
| 08-00200-10250 |               | 25                          |                        |                     |                           |                      | 70                      | 5,600                     | 26.19                                                                                 | 27.36 | 28.64  | 30.05 | Free  |

# MHR230



## NEW SIZE

단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)유효길이<br>Effective Length | (ℓ)날장<br>Length of Cut | (d)목두께<br>Neck Dia. | (r)각도<br>Neck Taper Angle | (d)샅크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price | 경사각도에 따른 실제 유효길이<br>Actual effective length depending on inclined angle of workplace. |       |        |       |       |
|-----------------|---------------|-----------------------------|------------------------|---------------------|---------------------------|---------------------|-------------------------|---------------------------|---------------------------------------------------------------------------------------|-------|--------|-------|-------|
|                 |               |                             |                        |                     |                           |                     |                         |                           | 30°                                                                                   | 1°    | 1° 30' | 2°    | 3°    |
| 08-00200-10300  | 1             | 30                          | 1.5                    | 0.95                | 12°                       | 4                   | 70                      | 6,300                     | 31.40                                                                                 | 32.81 | 34.34  | 36.03 | Free  |
| 08-00200-12040  | 1.2           | 4                           | 1.8                    | 1.15                | 12°                       | 4                   | 50                      | 3,200                     | 4.29                                                                                  | 4.48  | 4.69   | 4.92  | 5.46  |
| 08-00200-12060  |               | 6                           |                        |                     |                           |                     | 50                      | 3,200                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00200-12080  |               | 8                           |                        |                     |                           |                     | 50                      | 3,200                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00200-12100  |               | 10                          |                        |                     |                           |                     | 50                      | 3,200                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00200-12120  |               | 12                          |                        |                     |                           |                     | 50                      | 3,200                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00200-12160  |               | 16                          |                        |                     |                           |                     | 60                      | 5,000                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |
| 08-00200-12200  |               | 20                          |                        |                     |                           |                     | 60                      | 5,000                     | 20.97                                                                                 | 21.91 | 22.94  | 24.07 | 26.70 |
| 08-00200-14060  | 1.4           | 6                           | 2.1                    | 1.35                | 12°                       | 4                   | 50                      | 3,300                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00200-14080  |               | 8                           |                        |                     |                           |                     | 50                      | 3,300                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00200-14100  |               | 10                          |                        |                     |                           |                     | 50                      | 3,300                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00200-14120  |               | 12                          |                        |                     |                           |                     | 50                      | 3,300                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00200-14140  |               | 14                          |                        |                     |                           |                     | 60                      | 3,300                     | 14.72                                                                                 | 15.38 | 16.10  | 16.89 | 18.73 |
| 08-00200-14160  |               | 16                          |                        |                     |                           |                     | 60                      | 3,800                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |
| 08-00200-14220  |               | 22                          |                        |                     |                           |                     | 60                      | 5,100                     | 23.06                                                                                 | 24.09 | 25.22  | 26.46 | Free  |
| 08-00200-15040  | 1.5           | 4                           | 2.3                    | 1.45                | 12°                       | 4                   | 50                      | 3,200                     | 4.29                                                                                  | 4.48  | 4.69   | 4.92  | 5.46  |
| 08-00200-15060  |               | 6                           |                        |                     |                           |                     | 50                      | 3,200                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00200-15080  |               | 8                           |                        |                     |                           |                     | 50                      | 3,200                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00200-15100  |               | 10                          |                        |                     |                           |                     | 50                      | 3,200                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00200-15120  |               | 12                          |                        |                     |                           |                     | 50                      | 3,200                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00200-15140  |               | 14                          |                        |                     |                           |                     | 60                      | 3,300                     | 14.72                                                                                 | 15.38 | 16.10  | 16.89 | 18.73 |
| 08-00200-15160  |               | 16                          |                        |                     |                           |                     | 60                      | 3,300                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |
| 08-00200-15180  |               | 18                          |                        |                     |                           |                     | 60                      | 3,300                     | 18.89                                                                                 | 19.73 | 20.66  | 21.67 | 24.04 |
| 08-00200-15200  |               | 20                          |                        |                     |                           |                     | 60                      | 3,300                     | 20.97                                                                                 | 21.91 | 22.94  | 24.07 | Free  |
| 08-00200-15250  |               | 25                          |                        |                     |                           |                     | 70                      | 4,900                     | 26.19                                                                                 | 27.36 | 28.64  | 30.05 | Free  |
| 08-00200-15300  |               | 30                          |                        |                     |                           |                     | 70                      | 4,900                     | 31.40                                                                                 | 32.81 | 34.34  | 36.03 | Free  |
| 08-00200-15350  |               | 35                          |                        |                     |                           |                     | 80                      | 5,500                     | 36.62                                                                                 | 38.25 | 40.05  | Free  | Free  |
| 08-00200-15380  |               | 38                          |                        |                     |                           |                     | 80                      | 5,600                     | 39.74                                                                                 | 41.52 | 43.47  | Free  | Free  |
| 08-00200-15400  |               | 40                          |                        |                     |                           |                     | 80                      | 6,200                     | 41.83                                                                                 | 43.70 | 45.75  | Free  | Free  |
| 08-00200-15450  |               | 45                          |                        |                     |                           |                     | 80                      | 6,200                     | 47.04                                                                                 | 49.15 | Free   | Free  | Free  |
| 08-00200-16060  | 1.6           | 6                           | 2.4                    | 1.55                | 12°                       | 4                   | 50                      | 3,300                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00200-16080  |               | 8                           |                        |                     |                           |                     | 50                      | 3,300                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00200-16100  |               | 10                          |                        |                     |                           |                     | 50                      | 3,300                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00200-16120  |               | 12                          |                        |                     |                           |                     | 50                      | 3,300                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00200-16140  |               | 14                          |                        |                     |                           |                     | 60                      | 3,300                     | 14.72                                                                                 | 15.38 | 16.10  | 16.89 | 18.73 |
| 08-00200-16160  |               | 16                          |                        |                     |                           |                     | 60                      | 3,300                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |

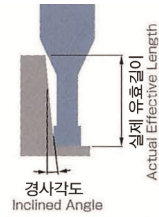
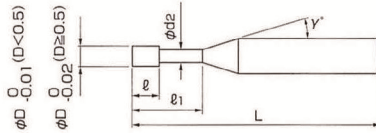
## 주문방법

MHR230 날경(D)×유효길이(ℓ 1)를 선택하십시오.  
When you order, indicate MHR230 (D)×(ℓ 1).

※ (r)은 참고값입니다.  
※ (r) is reference value.

# MHR230

무한코팅 2날 롱넥 엔드밀 MUGEN-COATING 2-Flute Long Neck End Mill



- 무한코팅을 적용한 NS의 깊은 가공용 오리지널 엔드밀
- 좁고 깊은 가공에 적합한 타입
- 총 217 사이즈
- MUGEN-COATING has been put on our original end mill for deep rib.
- It is very suitable for cutting on narrow and deep rib by long neck end mill.
- Total 217 sizes!
- NEW SIZE



단위 : mm / 가격 : 엔화  
Unit [size: mm / Retail Price: JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (L)유효길이<br>Effective Length | (L)날장<br>Length of Cut | (D)목두께<br>Neck Dia. | (Y)각도<br>Neck Taper Angle | (d)샙크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price | 경사각도에 따른 실제 유효길이<br>Actual effective length depending on inclined angle of workpiece. |       |        |       |       |
|-----------------|---------------|-----------------------------|------------------------|---------------------|---------------------------|---------------------|-------------------------|---------------------------|---------------------------------------------------------------------------------------|-------|--------|-------|-------|
|                 |               |                             |                        |                     |                           |                     |                         |                           | 30°                                                                                   | 1°    | 1° 30' | 2°    | 3°    |
| 08-00200-16180  | 1.6           | 18                          | 2.4                    | 1.55                | 12°                       | 4                   | 60                      | 3,300                     | 18.89                                                                                 | 19.73 | 20.66  | 21.67 | Free  |
| 08-00200-16200  |               | 20                          |                        |                     |                           |                     | 60                      | 3,300                     | 20.97                                                                                 | 21.91 | 22.94  | 24.07 | Free  |
| 08-00200-16260  |               | 26                          |                        |                     |                           |                     | 60                      | 5,100                     | 27.23                                                                                 | 28.45 | 29.78  | 31.25 | Free  |
| 08-00200-18060  | 1.8           | 6                           | 2.7                    | 1.75                | 12°                       | 4                   | 50                      | 3,300                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00200-18080  |               | 8                           |                        |                     |                           |                     | 50                      | 3,300                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00200-18100  |               | 10                          |                        |                     |                           |                     | 50                      | 3,300                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00200-18120  |               | 12                          |                        |                     |                           |                     | 50                      | 3,300                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00200-18140  |               | 14                          |                        |                     |                           |                     | 50                      | 3,300                     | 14.72                                                                                 | 15.38 | 16.10  | 16.89 | 18.73 |
| 08-00200-18160  |               | 16                          |                        |                     |                           |                     | 60                      | 3,300                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |
| 08-00200-18180  |               | 18                          |                        |                     |                           |                     | 60                      | 3,300                     | 18.89                                                                                 | 19.73 | 20.66  | 21.67 | Free  |
| 08-00200-18200  |               | 20                          |                        |                     |                           |                     | 60                      | 3,300                     | 20.97                                                                                 | 21.91 | 22.94  | 24.07 | Free  |
| 08-00200-18250  |               | 25                          |                        |                     |                           |                     | 70                      | 4,600                     | 26.19                                                                                 | 27.36 | 28.64  | 30.05 | Free  |
| 08-00200-20040  | 2             | 4                           | 3                      | 1.94                | 12°                       | 4                   | 50                      | 3,200                     | 4.32                                                                                  | 4.51  | 4.73   | 4.96  | 5.51  |
| 08-00200-20060  |               | 6                           |                        |                     |                           |                     | 50                      | 3,200                     | 6.40                                                                                  | 6.69  | 7.00   | 7.34  | 8.15  |
| 08-00200-20080  |               | 8                           |                        |                     |                           |                     | 50                      | 3,200                     | 8.48                                                                                  | 8.86  | 9.28   | 9.74  | 10.80 |
| 08-00200-20100  |               | 10                          |                        |                     |                           |                     | 50                      | 3,200                     | 10.57                                                                                 | 11.04 | 11.56  | 12.13 | 13.45 |
| 08-00200-20120  |               | 12                          |                        |                     |                           |                     | 50                      | 3,200                     | 12.66                                                                                 | 13.22 | 13.84  | 14.52 | 16.11 |
| 08-00200-20140  |               | 14                          |                        |                     |                           |                     | 60                      | 3,200                     | 14.74                                                                                 | 15.40 | 16.12  | 16.92 | 18.76 |
| 08-00200-20160  |               | 16                          |                        |                     |                           |                     | 60                      | 3,200                     | 16.83                                                                                 | 17.58 | 18.40  | 19.31 | Free  |
| 08-00200-20180  |               | 18                          |                        |                     |                           |                     | 60                      | 3,200                     | 18.91                                                                                 | 19.76 | 20.69  | 21.70 | Free  |
| 08-00200-20200  |               | 20                          |                        |                     |                           |                     | 60                      | 3,200                     | 21.00                                                                                 | 21.94 | 22.97  | 24.10 | Free  |
| 08-00200-20250  |               | 25                          |                        |                     |                           |                     | 70                      | 3,200                     | 26.21                                                                                 | 27.39 | 28.67  | Free  | Free  |
| 08-00200-20300  |               | 30                          |                        |                     |                           |                     | 70                      | 3,900                     | 31.43                                                                                 | 32.83 | 34.37  | Free  | Free  |
| 08-00200-20350  |               | 35                          |                        |                     |                           |                     | 80                      | 4,700                     | 36.64                                                                                 | 38.28 | Free   | Free  | Free  |
| 08-00200-20400  |               | 40                          |                        |                     |                           |                     | 90                      | 5,900                     | 41.85                                                                                 | 43.73 | Free   | Free  | Free  |
| 08-00200-20500  |               | 50                          |                        |                     |                           |                     | 100                     | 7,100                     | 52.28                                                                                 | 54.62 | Free   | Free  | Free  |
| 08-00200-20600  |               | 60                          |                        |                     |                           |                     | 110                     | 8,500                     | 62.71                                                                                 | Free  | Free   | Free  | Free  |
| 08-00200-25080  | 2.5           | 8                           | 3.7                    | 2.4                 | 12°                       | 4                   | 50                      | 3,300                     | 8.58                                                                                  | 8.97  | 9.39   | 9.85  | 10.93 |
| 08-00200-25100  |               | 10                          |                        |                     |                           |                     | 50                      | 3,300                     | 10.67                                                                                 | 11.15 | 11.67  | 12.24 | 13.58 |
| 08-00200-25120  |               | 12                          |                        |                     |                           |                     | 50                      | 3,300                     | 12.75                                                                                 | 13.32 | 13.95  | 14.64 | Free  |
| 08-00200-25140  |               | 14                          |                        |                     |                           |                     | 50                      | 3,300                     | 14.84                                                                                 | 15.50 | 16.23  | 17.03 | Free  |
| 08-00200-25160  |               | 16                          |                        |                     |                           |                     | 60                      | 3,300                     | 16.93                                                                                 | 17.68 | 18.51  | 19.42 | Free  |
| 08-00200-25180  |               | 18                          |                        |                     |                           |                     | 60                      | 3,300                     | 19.01                                                                                 | 19.86 | 20.79  | 21.82 | Free  |
| 08-00200-25200  |               | 20                          |                        |                     |                           |                     | 60                      | 3,300                     | 21.10                                                                                 | 22.04 | 23.07  | Free  | Free  |
| 08-00200-25250  |               | 25                          |                        |                     |                           |                     | 70                      | 3,600                     | 26.31                                                                                 | 27.49 | 28.78  | Free  | Free  |
| 08-00200-25300  |               | 30                          |                        |                     |                           |                     | 70                      | 3,600                     | 31.52                                                                                 | 32.94 | Free   | Free  | Free  |

# MHR230



## ● NEW SIZE

단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품번<br>Code No. | (D)날경<br>Dia. | (ℓ)유효길이<br>Effective Length | (ℓ)날장<br>Length of Cut | (d)목두께<br>Neck Dia. | (r)각도<br>Neck Taper Angle | (d)샤프크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price | 경사각도에 따른 실제 유효길이<br>Actual effective length depending on inclined angle of workpiece. |       |        |       |       |
|----------------|---------------|-----------------------------|------------------------|---------------------|---------------------------|----------------------|-------------------------|---------------------------|---------------------------------------------------------------------------------------|-------|--------|-------|-------|
|                |               |                             |                        |                     |                           |                      |                         |                           | 30°                                                                                   | 1°    | 1° 30' | 2°    | 3°    |
| 08-00200-25400 | 2.5           | 40                          | 3.7                    | 2.4                 | 12°                       | 4                    | 90                      | 5,000                     | 41.95                                                                                 | 43.83 | Free   | Free  | Free  |
| 08-00200-25500 |               | 50                          |                        |                     |                           |                      | 100                     | 6,200                     | 52.38                                                                                 | Free  | Free   | Free  | Free  |
| 08-00200-30080 | 3             | 8                           | 4.5                    | 2.85                | 12°                       | 6                    | 50                      | 4,300                     | 8.71                                                                                  | 9.10  | 9.52   | 9.99  | 11.08 |
| 08-00200-30100 |               | 10                          |                        |                     |                           |                      | 50                      | 4,300                     | 10.79                                                                                 | 11.27 | 11.80  | 12.38 | 13.74 |
| 08-00200-30120 |               | 12                          |                        |                     |                           |                      | 50                      | 4,300                     | 12.88                                                                                 | 13.45 | 14.08  | 14.78 | 16.39 |
| 08-00200-30140 |               | 14                          |                        |                     |                           |                      | 50                      | 4,300                     | 14.96                                                                                 | 15.63 | 16.36  | 17.17 | 19.04 |
| 08-00200-30160 |               | 16                          |                        |                     |                           |                      | 60                      | 4,300                     | 17.05                                                                                 | 17.81 | 18.65  | 19.56 | 21.70 |
| 08-00200-30180 |               | 18                          |                        |                     |                           |                      | 60                      | 4,300                     | 19.13                                                                                 | 19.99 | 20.93  | 21.96 | 24.35 |
| 08-00200-30200 |               | 20                          |                        |                     |                           |                      | 60                      | 4,300                     | 21.22                                                                                 | 22.17 | 23.21  | 24.35 | 27.01 |
| 08-00200-30250 |               | 25                          |                        |                     |                           |                      | 70                      | 4,300                     | 26.43                                                                                 | 27.62 | 28.91  | 30.33 | Free  |
| 08-00200-30300 |               | 30                          |                        |                     |                           |                      | 70                      | 5,100                     | 31.65                                                                                 | 33.06 | 34.61  | 36.31 | Free  |
| 08-00200-30350 |               | 35                          |                        |                     |                           |                      | 90                      | 5,300                     | 36.86                                                                                 | 38.51 | 40.32  | 42.30 | Free  |
| 08-00200-30400 |               | 40                          |                        |                     |                           |                      | 90                      | 5,300                     | 42.08                                                                                 | 43.96 | 46.02  | Free  | Free  |
| 08-00200-30500 |               | 50                          |                        |                     |                           |                      | 100                     | 7,400                     | 52.50                                                                                 | 54.85 | 57.42  | Free  | Free  |
| 08-00200-40120 | 4             | 12                          | 6                      | 3.8                 | 12°                       | 6                    | 50                      | 4,900                     | 13.00                                                                                 | 13.58 | 14.22  | 14.92 | 16.55 |
| 08-00200-40160 |               | 16                          |                        |                     |                           |                      | 60                      | 4,900                     | 17.17                                                                                 | 17.94 | 18.78  | 19.70 | Free  |
| 08-00200-40200 |               | 20                          |                        |                     |                           |                      | 60                      | 4,900                     | 21.34                                                                                 | 22.30 | 23.34  | 24.49 | Free  |
| 08-00200-40250 |               | 25                          |                        |                     |                           |                      | 70                      | 4,900                     | 26.56                                                                                 | 27.74 | 29.04  | Free  | Free  |
| 08-00200-40300 |               | 30                          |                        |                     |                           |                      | 70                      | 4,900                     | 31.77                                                                                 | 33.19 | 34.75  | Free  | Free  |
| 08-00200-40350 |               | 35                          |                        |                     |                           |                      | 80                      | 4,900                     | 36.98                                                                                 | 38.64 | Free   | Free  | Free  |
| 08-00200-40400 |               | 40                          |                        |                     |                           |                      | 90                      | 6,200                     | 42.20                                                                                 | 44.09 | Free   | Free  | Free  |
| 08-00200-40450 |               | 45                          |                        |                     |                           |                      | 90                      | 7,500                     | 47.41                                                                                 | 49.53 | Free   | Free  | Free  |
| 08-00200-40500 |               | 50                          |                        |                     |                           |                      | 100                     | 9,200                     | 52.63                                                                                 | 54.98 | Free   | Free  | Free  |
| 08-00200-40600 |               | 60                          |                        |                     |                           |                      | 110                     | 11,400                    | 63.05                                                                                 | Free  | Free   | Free  | Free  |
| 08-00200-50160 | 5             | 16                          | 7.5                    | 4.8                 | 12°                       | 6                    | 60                      | 6,200                     | 17.17                                                                                 | 17.94 | 18.78  | Free  | Free  |
| 08-00200-50200 |               | 20                          |                        |                     |                           |                      | 60                      | 6,200                     | 21.34                                                                                 | 22.30 | Free   | Free  | Free  |
| 08-00200-50250 |               | 25                          |                        |                     |                           |                      | 70                      | 6,200                     | 26.56                                                                                 | 27.74 | Free   | Free  | Free  |
| 08-00200-50300 |               | 30                          |                        |                     |                           |                      | 80                      | 6,200                     | 31.77                                                                                 | Free  | Free   | Free  | Free  |
| 08-00200-50350 |               | 35                          |                        |                     |                           |                      | 80                      | 6,200                     | 36.98                                                                                 | Free  | Free   | Free  | Free  |
| 08-00200-50400 |               | 40                          |                        |                     |                           |                      | 90                      | 6,200                     | 42.20                                                                                 | Free  | Free   | Free  | Free  |
| 08-00200-50500 |               | 50                          |                        |                     |                           |                      | 110                     | 9,800                     | 52.63                                                                                 | Free  | Free   | Free  | Free  |
| 08-00200-50600 |               | 60                          |                        |                     |                           |                      | 120                     | 12,000                    | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00200-60200 | 6             | 20                          | 9                      | 5.8                 | —                         | 6                    | 80                      | 6,400                     | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00200-60300 |               | 30                          |                        |                     |                           |                      | 90                      | 6,600                     | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00200-60400 |               | 40                          |                        |                     |                           |                      | 100                     | 7,700                     | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00200-60500 |               | 50                          |                        |                     |                           |                      | 110                     | 9,800                     | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00200-60600 |               | 60                          |                        |                     |                           |                      | 120                     | 12,500                    | Free                                                                                  | Free  | Free   | Free  | Free  |

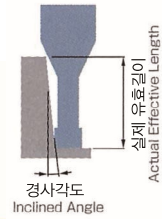
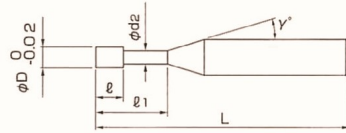
### 주문방법

MHR230 날경(D)×유효길이(ℓ 1)를 선택하십시오.  
When you order, indicate MHR230 (D)×(ℓ 1).

※(r)은 참고값입니다.  
※(r) is reference value.

# MHR430

무한코팅 4날 롱넥 엔드밀 MUGEN-COATING 4-Flute Long Neck End Mill



- 무한코팅을 적용한 NS의 깊은 가공용 오리지널 엔드밀
- 좁고 깊은 가공에 적합한 타입

- MUGEN-COATING has been put on our original end mill for deep rib.
- It is very suitable for cutting on narrow and deep rib by long neck end mill.



단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)유효길이<br>Effective Length | (ℓ)날장<br>Length of Cut | (d)목두께<br>Neck Dia. | (r)각도<br>Neck Taper Angle | (d)샙크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price | 경사각도에 따른 실제 유효길이<br>Actual effective length depending on inclined angle of workpiece. |       |        |       |       |
|-----------------|---------------|-----------------------------|------------------------|---------------------|---------------------------|---------------------|-------------------------|---------------------------|---------------------------------------------------------------------------------------|-------|--------|-------|-------|
|                 |               |                             |                        |                     |                           |                     |                         |                           | 30°                                                                                   | 1°    | 1° 30' | 2°    | 3°    |
| 08-00210-01004  | 1             | 4                           | 1.5                    | 0.95                | 12°                       | 4                   | 50                      | 4,000                     | 4.29                                                                                  | 4.48  | 4.69   | 4.92  | 5.46  |
| 08-00210-01006  |               | 6                           |                        |                     |                           |                     | 50                      | 4,000                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00210-01008  |               | 8                           |                        |                     |                           |                     | 50                      | 4,000                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00210-01010  |               | 10                          |                        |                     |                           |                     | 50                      | 4,000                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00210-01012  |               | 12                          |                        |                     |                           |                     | 50                      | 4,000                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00210-01016  |               | 16                          |                        |                     |                           |                     | 50                      | 6,400                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |
| 08-00210-01106  | 1.1           | 6                           | 1.7                    | 1.05                | 12°                       | 4                   | 50                      | 7,000                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00210-01110  |               | 10                          |                        |                     |                           |                     | 50                      | 7,000                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00210-01116  |               | 16                          |                        |                     |                           |                     | 60                      | 9,000                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |
| 08-00210-01206  | 1.2           | 6                           | 1.8                    | 1.15                | 12°                       | 4                   | 50                      | 4,000                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00210-01208  |               | 8                           |                        |                     |                           |                     | 50                      | 4,000                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00210-01210  |               | 10                          |                        |                     |                           |                     | 50                      | 4,000                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00210-01212  |               | 12                          |                        |                     |                           |                     | 50                      | 4,000                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00210-01216  |               | 16                          |                        |                     |                           |                     | 60                      | 5,600                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |
| 08-00210-01306  | 1.3           | 6                           | 1.9                    | 1.25                | 12°                       | 4                   | 50                      | 7,000                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00210-01312  |               | 12                          |                        |                     |                           |                     | 50                      | 7,000                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00210-01318  |               | 18                          |                        |                     |                           |                     | 60                      | 9,000                     | 18.89                                                                                 | 19.73 | 20.66  | 21.67 | 24.04 |
| 08-00210-01406  | 1.4           | 6                           | 2.1                    | 1.35                | 12°                       | 4                   | 50                      | 4,000                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00210-01408  |               | 8                           |                        |                     |                           |                     | 50                      | 4,000                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00210-01410  |               | 10                          |                        |                     |                           |                     | 50                      | 4,000                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00210-01412  |               | 12                          |                        |                     |                           |                     | 50                      | 4,000                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00210-01414  |               | 14                          |                        |                     |                           |                     | 60                      | 4,000                     | 14.72                                                                                 | 15.38 | 16.10  | 16.89 | 18.73 |
| 08-00210-01416  |               | 16                          |                        |                     |                           |                     | 60                      | 5,600                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |
| 08-00210-01422  |               | 22                          |                        |                     |                           |                     | 60                      | 7,200                     | 23.06                                                                                 | 24.09 | 25.22  | 26.46 | Free  |
| 08-00210-01506  | 1.5           | 6                           | 2.3                    | 1.45                | 12°                       | 4                   | 50                      | 4,000                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00210-01508  |               | 8                           |                        |                     |                           |                     | 50                      | 4,000                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00210-01510  |               | 10                          |                        |                     |                           |                     | 50                      | 4,000                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |
| 08-00210-01512  |               | 12                          |                        |                     |                           |                     | 50                      | 4,000                     | 12.63                                                                                 | 13.20 | 13.82  | 14.49 | 16.08 |
| 08-00210-01514  |               | 14                          |                        |                     |                           |                     | 60                      | 4,000                     | 14.72                                                                                 | 15.38 | 16.10  | 16.89 | 18.73 |
| 08-00210-01516  |               | 16                          |                        |                     |                           |                     | 60                      | 4,000                     | 16.80                                                                                 | 17.55 | 18.38  | 19.28 | 21.39 |
| 08-00210-01518  |               | 18                          |                        |                     |                           |                     | 60                      | 4,000                     | 18.89                                                                                 | 19.73 | 20.66  | 21.67 | 24.04 |
| 08-00210-01520  |               | 20                          |                        |                     |                           |                     | 60                      | 4,000                     | 20.97                                                                                 | 21.91 | 22.94  | 24.07 | Free  |
| 08-00210-01606  | 1.6           | 6                           | 2.4                    | 1.55                | 12°                       | 4                   | 50                      | 4,000                     | 6.37                                                                                  | 6.66  | 6.97   | 7.32  | 8.11  |
| 08-00210-01608  |               | 8                           |                        |                     |                           |                     | 50                      | 4,000                     | 8.46                                                                                  | 8.84  | 9.25   | 9.71  | 10.77 |
| 08-00210-01610  |               | 10                          |                        |                     |                           |                     | 50                      | 4,000                     | 10.55                                                                                 | 11.02 | 11.53  | 12.10 | 13.42 |

## 주문방법

MHR430 날경(D)×유효길이(ℓ 1)를 선택하십시오.  
When you order, indicate MHR430 (D)×(ℓ 1).

※ (r)은 참고값입니다.  
※ (r) is reference value.

# MHR430



단위 : mm / 가격 : 엔화  
Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ <sub>1</sub> )유효길이<br>Effective Length | (ℓ <sub>2</sub> )날장<br>Length of Out | (d <sub>2</sub> )목두께<br>Neck Dia. | (r)각도<br>Neck Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price | 경사각도에 따른 실제 유효길이<br>Actual effective length depending on inclined angle of workpiece. |       |       |       |       |  |
|-----------------|---------------|-------------------------------------------|--------------------------------------|-----------------------------------|---------------------------|---------------------|-------------------------|---------------------------|---------------------------------------------------------------------------------------|-------|-------|-------|-------|--|
|                 |               |                                           |                                      |                                   |                           |                     |                         |                           | 30°                                                                                   | 1°    | 1°30' | 2°    | 3°    |  |
| 08-00210-01612  | 1.6           | 12                                        | 2.4                                  | 1.55                              | 12°                       | 4                   | 50                      | 4,000                     | 12.63                                                                                 | 13.20 | 13.82 | 14.49 | 16.08 |  |
| 08-00210-01614  |               | 14                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 14.72                                                                                 | 15.38 | 16.10 | 16.89 | 18.73 |  |
| 08-00210-01616  |               | 16                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 16.80                                                                                 | 17.55 | 18.38 | 19.28 | 21.39 |  |
| 08-00210-01618  |               | 18                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 18.89                                                                                 | 19.73 | 20.66 | 21.67 | Free  |  |
| 08-00210-01620  |               | 20                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 20.97                                                                                 | 21.91 | 22.94 | 24.07 | Free  |  |
| 08-00210-01626  |               | 26                                        |                                      |                                   |                           |                     | 70                      | 9,200                     | 27.23                                                                                 | 28.45 | 29.78 | 31.25 | Free  |  |
| 08-00210-01706  | 1.7           | 6                                         | 2.5                                  | 1.65                              | 12°                       | 4                   | 50                      | 5,000                     | 6.37                                                                                  | 6.66  | 6.97  | 7.32  | 8.11  |  |
| 08-00210-01714  |               | 14                                        |                                      |                                   |                           |                     | 60                      | 5,000                     | 14.72                                                                                 | 15.38 | 16.10 | 16.89 | 18.73 |  |
| 08-00210-01724  |               | 24                                        |                                      |                                   |                           |                     | 70                      | 12,000                    | 25.15                                                                                 | 26.27 | 27.50 | 28.85 | Free  |  |
| 08-00210-01806  | 1.8           | 6                                         | 2.7                                  | 1.74                              | 12°                       | 4                   | 50                      | 4,000                     | 6.37                                                                                  | 6.66  | 6.97  | 7.32  | 8.11  |  |
| 08-00210-01808  |               | 8                                         |                                      |                                   |                           |                     | 50                      | 4,000                     | 8.46                                                                                  | 8.84  | 9.25  | 9.71  | 10.77 |  |
| 08-00210-01810  |               | 10                                        |                                      |                                   |                           |                     | 50                      | 4,000                     | 10.55                                                                                 | 11.02 | 11.53 | 12.10 | 13.42 |  |
| 08-00210-01812  |               | 12                                        |                                      |                                   |                           |                     | 50                      | 4,000                     | 12.63                                                                                 | 13.20 | 13.82 | 14.49 | 16.08 |  |
| 08-00210-01814  |               | 14                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 14.72                                                                                 | 15.38 | 16.10 | 16.89 | 18.73 |  |
| 08-00210-01816  |               | 16                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 16.80                                                                                 | 17.55 | 18.38 | 19.28 | 21.39 |  |
| 08-00210-01818  |               | 18                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 18.89                                                                                 | 19.73 | 20.66 | 21.67 | Free  |  |
| 08-00210-01820  |               | 20                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 20.97                                                                                 | 21.91 | 22.94 | 24.07 | Free  |  |
| 08-00210-01825  |               | 25                                        |                                      |                                   |                           |                     | 70                      | 5,600                     | 26.19                                                                                 | 27.36 | 28.64 | 30.05 | Free  |  |
| 08-00210-01906  | 1.9           | 6                                         | 2.8                                  | 1.84                              | 12°                       | 4                   | 50                      | 7,000                     | 6.40                                                                                  | 6.69  | 7.00  | 7.34  | 8.15  |  |
| 08-00210-01916  |               | 16                                        |                                      |                                   |                           |                     | 60                      | 7,000                     | 16.83                                                                                 | 17.58 | 18.40 | 19.31 | Free  |  |
| 08-00210-01928  |               | 28                                        |                                      |                                   |                           |                     | 70                      | 9,000                     | 29.34                                                                                 | 30.65 | 32.09 | Free  | Free  |  |
| 08-00210-02006  | 2             | 6                                         | 3                                    | 1.94                              | 12°                       | 4                   | 50                      | 4,000                     | 6.40                                                                                  | 6.69  | 7.00  | 7.34  | 8.15  |  |
| 08-00210-02008  |               | 8                                         |                                      |                                   |                           |                     | 50                      | 4,000                     | 8.48                                                                                  | 8.86  | 9.28  | 9.74  | 10.80 |  |
| 08-00210-02010  |               | 10                                        |                                      |                                   |                           |                     | 50                      | 4,000                     | 10.57                                                                                 | 11.04 | 11.56 | 12.13 | 13.45 |  |
| 08-00210-02012  |               | 12                                        |                                      |                                   |                           |                     | 50                      | 4,000                     | 12.66                                                                                 | 13.22 | 13.84 | 14.52 | 16.11 |  |
| 08-00210-02014  |               | 14                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 14.74                                                                                 | 15.40 | 16.12 | 16.92 | 18.76 |  |
| 08-00210-02016  |               | 16                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 16.83                                                                                 | 17.58 | 18.40 | 19.31 | Free  |  |
| 08-00210-02018  |               | 18                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 18.91                                                                                 | 19.76 | 20.69 | 21.70 | Free  |  |
| 08-00210-02020  |               | 20                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 21.00                                                                                 | 21.94 | 22.97 | 24.10 | Free  |  |
| 08-00210-02025  |               | 25                                        |                                      |                                   |                           |                     | 70                      | 4,400                     | 26.21                                                                                 | 27.39 | 28.67 | Free  | Free  |  |
| 08-00210-02030  |               | 30                                        |                                      |                                   |                           |                     | 70                      | 5,600                     | 31.43                                                                                 | 32.83 | 34.37 | Free  | Free  |  |
| 08-00210-02508  | 2.5           | 8                                         | 3.7                                  | 2.4                               | 12°                       | 4                   | 50                      | 4,000                     | 8.58                                                                                  | 8.97  | 9.39  | 9.85  | 10.93 |  |
| 08-00210-02512  |               | 12                                        |                                      |                                   |                           |                     | 50                      | 4,000                     | 12.75                                                                                 | 13.32 | 13.95 | 14.64 | Free  |  |
| 08-00210-02516  |               | 16                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 16.93                                                                                 | 17.68 | 18.51 | 19.42 | Free  |  |
| 08-00210-02520  |               | 20                                        |                                      |                                   |                           |                     | 60                      | 4,000                     | 21.10                                                                                 | 22.04 | 23.07 | Free  | Free  |  |

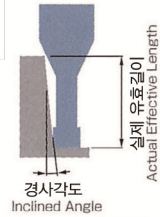
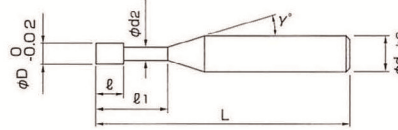
## 주문방법

MHR430 날경(D)×유효길이(ℓ<sub>1</sub>)를 선택하십시오.  
When you order, indicate MHR430 (D)×(ℓ<sub>1</sub>).

※(r)은 참고값입니다.  
※(r) is reference value.

# MHR430

무한코팅 4날 롱넥 엔드밀 MUGEN-COATING 4-Flute Long Neck End Mill



● 무한코팅을 적용한 NS의 깊은 가공용 오리지널 엔드밀

● 좁고 깊은 가공에 적합한 타입

● MUGEN-COATING has been put on our original end mill for deep rib.

● It is very suitable for cutting on narrow and deep rib by long neck end mill.



단위 : mm / 가격 : 엔화

Unit [size:mm / Retail Price:JPY]

| 품 번<br>Code No. | (D)날경<br>Dia. | (ℓ)유효길이<br>Effective Length | (ℓ)날장<br>Length of Cut | (d)목두께<br>Neck Dia. | (γ)각도<br>Neck Taper Angle | (d)샤크<br>Shank Dia. | (L)전장<br>Overall Length | 엔화가격(JPY)<br>Retail Price | 경사각도에 따른 실제 유효길이<br>Actual effective length depending on inclined angle of workpiece. |       |        |       |       |
|-----------------|---------------|-----------------------------|------------------------|---------------------|---------------------------|---------------------|-------------------------|---------------------------|---------------------------------------------------------------------------------------|-------|--------|-------|-------|
|                 |               |                             |                        |                     |                           |                     |                         |                           | 30°                                                                                   | 1°    | 1° 30' | 2°    | 3°    |
| 08-00210-02525  | 2.5           | 25                          | 3.7                    | 2.4                 | 12°                       | 4                   | 70                      | 4,400                     | 26.31                                                                                 | 27.49 | 28.78  | Free  | Free  |
| 08-00210-03008  | 3             | 8                           | 4.5                    | 2.85                | 12°                       | 6                   | 50                      | 5,600                     | 8.71                                                                                  | 9.10  | 9.52   | 9.99  | 11.08 |
| 08-00210-03012  |               | 12                          |                        |                     |                           |                     | 50                      | 5,600                     | 12.88                                                                                 | 13.45 | 14.08  | 14.78 | 16.39 |
| 08-00210-03016  |               | 16                          |                        |                     |                           |                     | 60                      | 5,600                     | 17.05                                                                                 | 17.81 | 18.65  | 19.56 | 21.70 |
| 08-00210-03020  |               | 20                          |                        |                     |                           |                     | 60                      | 5,600                     | 21.22                                                                                 | 22.17 | 23.21  | 24.35 | 27.01 |
| 08-00210-03025  |               | 25                          |                        |                     |                           |                     | 70                      | 5,600                     | 26.43                                                                                 | 27.62 | 28.91  | 30.33 | Free  |
| 08-00210-03030  |               | 30                          |                        |                     |                           |                     | 70                      | 7,200                     | 31.65                                                                                 | 33.06 | 34.61  | 36.31 | Free  |
| 08-00210-03515  | 3.5           | 15                          | 5.5                    | 3.35                | 12°                       | 6                   | 60                      | 6,300                     | 16.01                                                                                 | 16.72 | 17.50  | 18.37 | 20.37 |
| 08-00210-03525  |               | 25                          |                        |                     |                           |                     | 70                      | 6,300                     | 26.43                                                                                 | 27.62 | 28.91  | 30.33 | Free  |
| 08-00210-03535  |               | 35                          |                        |                     |                           |                     | 80                      | 8,000                     | 36.86                                                                                 | 38.51 | 40.32  | Free  | Free  |
| 08-00210-04012  | 4             | 12                          | 6                      | 3.8                 | 12°                       | 6                   | 50                      | 6,300                     | 13.00                                                                                 | 13.58 | 14.22  | 14.92 | 16.55 |
| 08-00210-04016  |               | 16                          |                        |                     |                           |                     | 60                      | 6,300                     | 17.17                                                                                 | 17.94 | 18.78  | 19.70 | Free  |
| 08-00210-04020  |               | 20                          |                        |                     |                           |                     | 60                      | 6,300                     | 21.34                                                                                 | 22.30 | 23.34  | 24.49 | Free  |
| 08-00210-04025  |               | 25                          |                        |                     |                           |                     | 70                      | 6,300                     | 26.56                                                                                 | 27.74 | 29.04  | Free  | Free  |
| 08-00210-04030  |               | 30                          |                        |                     |                           |                     | 70                      | 6,300                     | 31.77                                                                                 | 33.19 | 34.75  | Free  | Free  |
| 08-00210-04035  |               | 35                          |                        |                     |                           |                     | 80                      | 6,300                     | 36.98                                                                                 | 38.64 | Free   | Free  | Free  |
| 08-00210-04040  |               | 40                          |                        |                     |                           |                     | 90                      | 8,000                     | 42.20                                                                                 | 44.09 | Free   | Free  | Free  |
| 08-00210-04045  |               | 45                          |                        |                     |                           |                     | 90                      | 9,600                     | 47.41                                                                                 | 49.53 | Free   | Free  | Free  |
| 08-00210-04050  |               | 50                          |                        |                     |                           |                     | 100                     | 12,100                    | 52.63                                                                                 | 54.98 | Free   | Free  | Free  |
| 08-00210-05016  | 5             | 16                          | 7.5                    | 4.8                 | 12°                       | 6                   | 60                      | 8,000                     | 17.17                                                                                 | 17.94 | 18.78  | Free  | Free  |
| 08-00210-05025  |               | 25                          |                        |                     |                           |                     | 70                      | 8,000                     | 26.56                                                                                 | 27.74 | Free   | Free  | Free  |
| 08-00210-05035  |               | 35                          |                        |                     |                           |                     | 80                      | 8,000                     | 36.98                                                                                 | Free  | Free   | Free  | Free  |
| 08-00210-05050  |               | 50                          |                        |                     |                           |                     | 110                     | 12,100                    | 52.63                                                                                 | Free  | Free   | Free  | Free  |
| 08-00210-06020  | 6             | 20                          | 9                      | 5.8                 | —                         | 6                   | 80                      | 8,000                     | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00210-06030  |               | 30                          |                        |                     |                           |                     | 90                      | 8,000                     | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00210-06040  |               | 40                          |                        |                     |                           |                     | 100                     | 9,600                     | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00210-06050  |               | 50                          |                        |                     |                           |                     | 110                     | 12,100                    | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00210-08030  | 8             | 30                          | 12                     | 7.8                 | —                         | 8                   | 100                     | 12,700                    | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00210-08050  |               | 50                          |                        |                     |                           |                     | 120                     | 15,800                    | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00210-08060  |               | 60                          |                        |                     |                           |                     | 130                     | 16,900                    | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00210-10040  | 10            | 40                          | 15                     | 9.8                 | —                         | 10                  | 110                     | 13,700                    | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00210-10060  |               | 60                          |                        |                     |                           |                     | 130                     | 19,000                    | Free                                                                                  | Free  | Free   | Free  | Free  |
| 08-00210-10080  |               | 80                          |                        |                     |                           |                     | 150                     | 21,100                    | Free                                                                                  | Free  | Free   | Free  | Free  |