INFO
TYPHOON TA-HTA-4HTA
TYPHOON PU-HPU
TYPHOON SUH
TYPHOON ALH
TYPHOON HRC
TYPHOON SUH MINI
TYPHOON HL
C-SD-TA
LFTA
SUTA
HSS-HSS/CO DRILLS
G2
MDTA
HF VH/UP
MEF
ALU
MEX
UH
HSS/CO-HSSP END MILLS
CARBIDE BURRS

CUTTING PARAMETERS

# TAWS4

**UMWS4 (n and Vf = +20%) - WS4 (n and Vf = -20% ÷ -30%)**

SIDE MILLING

| Material Group ISO 513 | | P1 P2 | | | P3 M1 K1 | | | P4 M2 K2 | | | P5 M3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hardness/Rm | | ≤ 700 N/mm² | | | 600-800 N/mm² | | | 800-1000 N/mm² | | | 900-1200 N/mm² | | |
| ap x ae | | **1.5D x 0.5D** | | | **1.5D x 0.5D** | | | **1.5D x 0.3D** | | | **1.5D x 0.3D** | | |
| Vc (m/min) | | **50-70** | | | **40-60** | | | **25-35** | | | **20-30** | | |
| D (mm) | Z (mm) | n (rpm) | fz (mm/z) | Vf (mm/min) | n (rpm) | fz (mm/z) | Vf (mm/min) | n (rpm) | fz (mm/z) | Vf (mm/min) | n (rpm) | fz (mm/z) | Vf (mm/min) |
| **2** | **4** | 9550 | 0.006 | 220 | 7960 | 0.005 | 170 | 5570 | 0.005 | 100 | 3980 | 0.004 | 70 |
| **3** | **4** | 6370 | 0.006 | 145 | 5310 | 0.005 | 110 | 3720 | 0.005 | 70 | 2650 | 0.004 | 45 |
| **4** | **4** | 4780 | 0.009 | 165 | 3980 | 0.008 | 125 | 2790 | 0.007 | 75 | 1990 | 0.006 | 50 |
| **5** | **4** | 3820 | 0.012 | 190 | 3180 | 0.011 | 145 | 2230 | 0.010 | 90 | 1590 | 0.009 | 60 |
| **6** | **4** | 3180 | 0.016 | 210 | 2650 | 0.015 | 155 | 1860 | 0.013 | 95 | 1330 | 0.012 | 65 |
| **8** | **4** | 2390 | 0.021 | 200 | 1990 | 0.019 | 150 | 1390 | 0.017 | 95 | 1000 | 0.016 | 65 |
| **10** | **4** | 1910 | 0.031 | 235 | 1590 | 0.028 | 175 | 1110 | 0.025 | 110 | 800 | 0.023 | 75 |
| **12** | **4** | 1590 | 0.038 | 245 | 1330 | 0.035 | 185 | 930 | 0.031 | 115 | 660 | 0.029 | 75 |
| **14** | **4** | 1360 | 0.046 | 250 | 1140 | 0.041 | 190 | 800 | 0.037 | 120 | 570 | 0.035 | 80 |
| **16** | **4** | 1190 | 0.055 | 260 | 1000 | 0.049 | 195 | 700 | 0.044 | 125 | 500 | 0.041 | 80 |
| **18** | **4** | 1060 | 0.064 | 275 | 880 | 0.058 | 205 | 620 | 0.051 | 130 | 440 | 0.048 | 85 |
| **20** | **4** | 960 | 0.074 | 285 | 800 | 0.067 | 215 | 560 | 0.059 | 130 | 400 | 0.055 | 90 |
| **22** | **4** | 870 | 0.084 | 295 | 720 | 0.076 | 220 | 510 | 0.068 | 140 | 360 | 0.063 | 90 |
| **24** | **6** | 800 | 0.088 | 425 | 660 | 0.079 | 315 | 460 | 0.071 | 195 | 330 | 0.066 | 130 |
| **25** | **4** | 760 | 0.106 | 320 | 640 | 0.095 | 245 | 450 | 0.084 | 150 | 320 | 0.079 | 100 |
| **28** | **6** | 680 | 0.102 | 420 | 570 | 0.092 | 315 | 400 | 0.082 | 195 | 280 | 0.077 | 130 |
| **30** | **6** | 640 | 0.108 | 415 | 530 | 0.097 | 310 | 370 | 0.086 | 190 | 270 | 0.081 | 130 |
| **32** | **6** | 600 | 0.113 | 410 | 500 | 0.102 | 305 | 350 | 0.091 | 190 | 250 | 0.085 | 130 |
| **36** | **6** | 530 | 0.127 | 405 | 440 | 0.114 | 300 | 310 | 0.101 | 190 | 220 | 0.095 | 125 |
| **40** | **6** | 480 | 0.139 | 400 | 400 | 0.125 | 300 | 280 | 0.111 | 185 | 200 | 0.104 | 125 |
| **ap x ae** | **≤ D3** | 1.5D x 0.25D | | | 1.5D x 0.25D | | | 1.2D x 0.1D | | | 1.2D x 0.1D | | |