

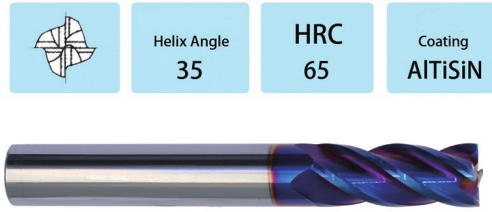
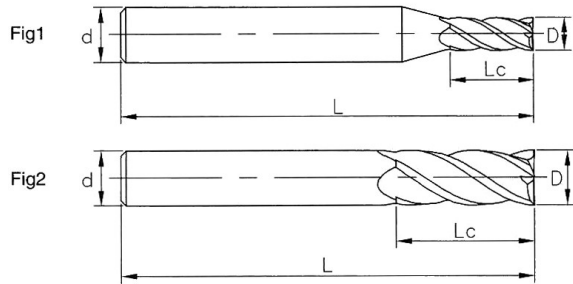


LUXACCESSORIES
milling & turning

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• HRC 65 deg Tungsten Steel End Mills	2-5
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HRC 65 deg Tungsten Steel 4 Flute Square End Mills



Raw Material: Use Golden Egret GU25UF, high hardness and high toughness.

AlTiSiN, 4000HV, 1200 °C

Coating: Use nano-tech the hardness and thermal stability are up to 4000HV and 1200°C , respectively.

Tolerance of End Mill Diameter
 $1 < D \leq 6 - 0.010 \sim - 0.030 \text{ mm}$
 $6 < D \leq 10 - 0.015 \sim - 0.040 \text{ mm}$
 $10 < D \leq 20 - 0.020 \sim - 0.050 \text{ mm}$

Flutes: 4 flutes, high rigidity, widely used in shallow slot, profile milling, and finish machining.

2

Cutting Parameters:

$v_c = 130 (120-180) \text{ m/min}$
 $a_p = 1/3D (1/8-1/2D)$
 $a_e = 1/2D (1/4-1D)$
 $f_z = 0.15 \text{ mm} (0.02-0.2)$

Helix Angle : 35 deg, high adaptability to the material and hardness of workpieces, widely used to mold and product processing and cost efficient.

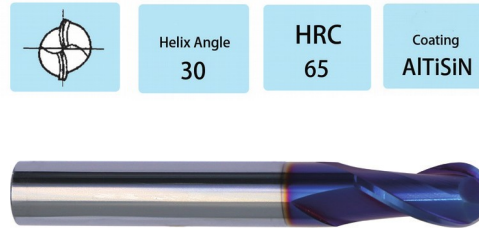
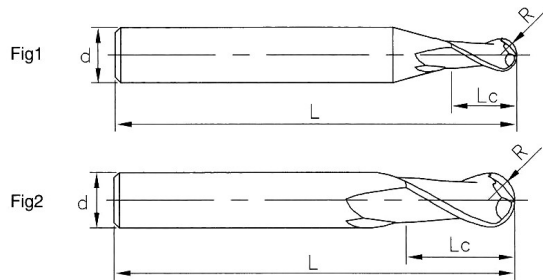
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
Y	Y	Y			Y	Y

Y - Suitable

Cat.No	Specifications				Flutes	Figure No.
	D	Lc	d	L		
MTS-3*8*3*50-4F	3	8	3	50	4	2
MTS-3*12*3*75-4F	3	12	3	75	4	2
MTS-3*12*3*100-4F	3	12	3	100	4	2
MTS-1*3*4*50-4F	1	3	4	50	4	1
MTS-1.5*4*4*50-4F	1.5	4	4	50	4	1
MTS-2*5*4*50-4F	2	5	4	50	4	1
MTS-2.5*7*4*50-4F	2.5	7	4	50	4	1
MTS-3*8*4*50-4F	3	8	4	50	4	1
MTS-3.5*10*4*50-4F	3.5	10	4	50	4	1
MTS-4*10*4*50-4F	4	10	4	50	4	2
MTS-4*20*4*75-4F	4	20	4	75	4	2
MTS-4*25*4*100-4F	4	25	4	100	4	2
MTS-5*13*5*50-4F	5	13	5	50	4	2
MTS-5*20*5*75-4F	5	20	5	75	4	2
MTS-5*25*5*100-4F	5	25	5	100	4	2
MTS-2.5*7*6*50-4F	2.5	7	6	50	4	1
MTS-3*8*6*50-4F	3	8	6	50	4	1
MTS-3.5*10*6*50-4F	3.5	10	6	50	4	1
MTS-4*10*6*50-4F	4	10	6	50	4	1
MTS-4.5*12*6*50-4F	4.5	12	6	50	4	1
MTS-5*13*6*50-4F	5	13	6	50	4	1
MTS-6*15*6*50-4F	6	15	6	50	4	2
MTS-6*20*6*75-4F	6	20	6	75	4	2
MTS-6*30*6*100-4F	6	30	6	100	4	2
MTS-6*40*6*150-4F	6	40	6	150	4	2
MTS-7*18*8*60-4F	7	18	8	60	4	1
MTS-8*20*8*60-4F	8	20	8	60	4	2
MTS-8*25*8*75-4F	8	25	8	75	4	2
MTS-8*35*8*100-4F	8	35	8	100	4	2
MTS-8*50*8*150-4F	8	50	8	150	4	2
MTS-9*23*10*75-4F	9	23	10	75	4	1
MTS-10*25*10*75-4F	10	25	10	75	4	2
MTS-10*40*10*100-4F	10	40	10	100	4	2
MTS-10*50*10*150-4F	10	50	10	150	4	2
MTS-11*28*12*75-4F	11	28	12	75	4	1
MTS-12*30*12*75-4F	12	30	12	75	4	2
MTS-12*45*12*100-4F	12	45	12	100	4	2
MTS-12*55*12*150-4F	12	55	12	150	4	2
MTS-14*35*14*80-4F	14	35	14	80	4	2
MTS-14*45*14*100-4F	14	45	14	100	4	2
MTS-14*60*14*150-4F	14	60	14	150	4	2
MTS-16*45*16*100-4F	16	45	16	100	4	2
MTS-16*60*16*150-4F	16	60	16	150	4	2
MTS-18*45*18*100-4F	18	45	18	100	4	2
MTS-18*60*18*150-4F	18	60	18	150	4	2
MTS-20*45*20*100-4F	20	45	20	100	4	2
MTS-20*60*20*150-4F	20	60	20	150	4	2

HRC 65 deg Tungsten Steel 2 Flute Ball Nose End Mills



Raw Material: Use Golden Egret GU25UF, high hardness and high toughness.

AlTiSiN, 4000HV, 1200 °C

Coating: Use nano-tech, the hardness and thermal stability are up to 4000HV and 1200°C , respectively.

Tolerance of End Mill Diameter

1 < D ≤ 6 - 0.010 ~ - 0.030 mm
6 < D ≤ 10 - 0.015 ~ - 0.040 mm
10 < D ≤ 20 - 0.020 ~ - 0.050 mm

Cutting Parameters:

$v_c = 130$ (120-180)m/min
 $a_p = 1/3D(1/8-1/2D)$
 $f_z = 0.15\text{mm}$ (0.02-0.2)

Please adjust the parameters according to the material and hardness of workpieces.

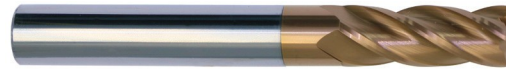
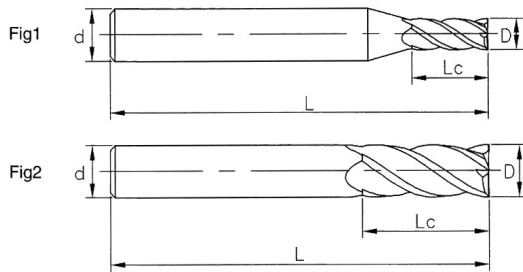
Double-edge design improves rigidity and surface finish effectively. Cutting edge over the center reduces the cutting resistance. High capacity of junk slot benefits chip removal and increases machining efficiency. 2 flutes design is good for chip removal, easy for vertical feed processing, widely used in slot and hole processing.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
Y	Y	Y			Y	Y

Y - Suitable

Cat.No	Specifications				Flutes	Figure No.
	R	Lc	d	L		
MTS-R1.5*6*3*50-2F	1.5	6	3	50	2	2
MTS-R1.5*6*3*75-2F	1.5	6	3	75	2	2
MTS-R1.5*6*3*100-2F	1.5	6	3	100	2	2
MTS-R0.5*2*4*50-2F	0.5	2	4	50	2	1
MTS-R0.75*3*4*50-2F	0.75	3	4	50	2	1
MTS-R1*4*4*50-2F	1	4	4	50	2	1
MTS-R1.25*5*4*50-2F	1.25	5	4	50	2	1
MTS-R1.5*6*4*50-2F	1.5	6	4	50	2	1
MTS-R1.75*7*4*50-2F	1.75	7	4	50	2	1
MTS-R2*8*4*50-2F	2	8	4	50	2	2
MTS-R2*8*4*75-2F	2	8	4	75	2	2
MTS-R2*8*4*100-2F	2	8	4	100	2	2
MTS-R2.5*10*5*50-2F	2.5	10	5	50	2	2
MTS-R2.5*10*5*75-2F	2.5	10	5	75	2	2
MTS-R2.5*10*5*100-2F	2.5	10	5	100	2	2
MTS-R2.5*10*6*50-2F	2.5	10	6	50	2	1
MTS-R3*12*6*50-2F	3	12	6	50	2	2
MTS-R3*12*6*75-2F	3	12	6	75	2	2
MTS-R3*12*6*100-2F	3	12	6	100	2	2
MTS-R3*12*6*150-2F	3	12	6	150	2	2
MTS-R3.5*16*8*60-2F	3.5	16	8	60	2	1
MTS-R4*16*8*60-2F	4	16	8	60	2	2
MTS-R4*16*8*75-2F	4	16	8	75	2	2
MTS-R4*16*8*100-2F	4	16	8	100	2	2
MTS-R4*20*8*150-2F	4	20	8	150	2	2
MTS-R4.5*18*10*75-2F	4.5	18	10	75	2	1
MTS-R5*20*10*75-2F	5	20	10	75	2	2
MTS-R5*20*10*100-2F	5	20	10	100	2	2
MTS-R5*30*10*150-2F	5	30	10	150	2	2
MTS-R5.5*24*12*75-2F	5.5	24	12	75	2	1
MTS-R6*24*12*75-2F	6	24	12	75	2	2
MTS-R6*24*12*100-2F	6	24	12	100	2	2
MTS-R6*36*12*150-2F	6	36	12	150	2	2
MTS-R7*28*14*100-2F	7	28	14	100	2	2
MTS-R7*40*14*150-2F	7	40	14	150	2	2
MTS-R8*32*16*100-2F	8	32	16	100	2	2
MTS-R8*50*16*150-2F	8	50	16	150	2	2
MTS-R9*36*18*100-2F	9	36	18	100	2	2
MTS-R9*50*18*150-2F	9	50	18	150	2	2
MTS-R10*40*20*100-2F	10	40	20	100	2	2
MTS-R10*50*20*150-2F	10	50	20	150	2	2

HRC 55 deg Tungsten Steel 4 Flute Square End Mills



Raw Material: Use Zigong ZK30UF high hardness and good wear resistance.

Coating: TiSiN, containing silica, very high surface hardness and high thermal resistance.

Tolerance of End Mill Diameter
 $1 < D \leq 6 - 0.010 \sim - 0.030 \text{ mm}$
 $6 < D \leq 10 - 0.015 \sim - 0.040 \text{ mm}$
 $10 < D \leq 20 - 0.020 \sim - 0.050 \text{ mm}$

Flutes: 4 flutes, high rigidity, widely used in shallow slot, profile milling, and finish machining.

6

Cutting Parameters:

$v_c = 150 (120-180) \text{ m/min}$
 $a_p = 1/3D(1/8-1/2D)$
 $a_e = 1/2D(1/4-1D)$
 $f_z = 0.15 \text{ mm}(0.02-0.2)$

Helix Angle: 35 deg, high adaptability to the material and hardness of workpieces, widely used to mold and product processing and cost efficient.

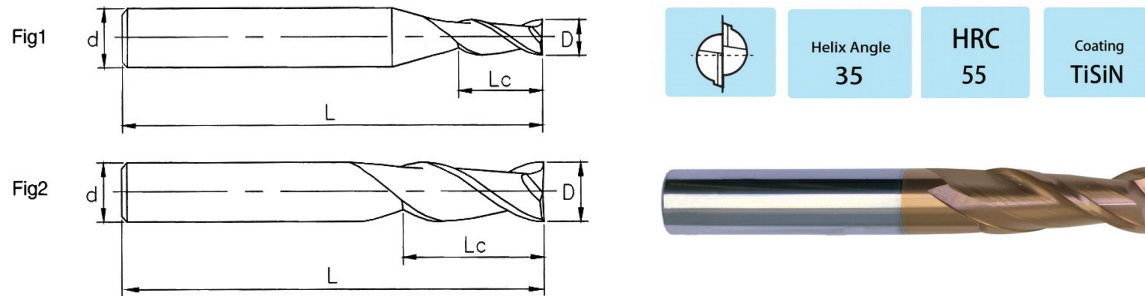
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
Y	Y	Y				Y

Y - Suitable

Cat.No	Specifications				Flutes	Figure No.
	D	Lc	d	L		
MTS-3*8*3*50-4F	3	8	3	50	4	2
MTS-3*12*3*75-4F	3	12	3	75	4	2
MTS-3*12*3*100-4F	3	12	3	100	4	2
MTS-1*3*4*50-4F	1	3	4	50	4	1
MTS-1.5*4*4*50-4F	1.5	4	4	50	4	1
MTS-2*5*4*50-4F	2	5	4	50	4	1
MTS-2.5*7*4*50-4F	2.5	7	4	50	4	1
MTS-3*8*4*50-4F	3	8	4	50	4	1
MTS-3.5*10*4*50-4F	3.5	10	4	50	4	1
MTS-4*10*4*50-4F	4	10	4	50	4	2
MTS-4*20*4*75-4F	4	20	4	75	4	2
MTS-4*25*4*100-4F	4	25	4	100	4	2
MTS-5*13*5*50-4F	5	13	5	50	4	2
MTS-5*20*5*75-4F	5	20	5	75	4	2
MTS-5*25*5*100-4F	5	25	5	100	4	2
MTS-2.5*7*6*50-4F	2.5	7	6	50	4	1
MTS-3*8*6*50-4F	3	8	6	50	4	1
MTS-3.5*10*6*50-4F	3.5	10	6	50	4	1
MTS-4*10*6*50-4F	4	10	6	50	4	1
MTS-4.5*12*6*50-4F	4.5	12	6	50	4	1
MTS-5*13*6*50-4F	5	13	6	50	4	1
MTS-6*15*6*50-4F	6	15	6	50	4	2
MTS-6*20*6*75-4F	6	20	6	75	4	2
MTS-6*30*6*100-4F	6	30	6	100	4	2
MTS-6*40*6*150-4F	6	40	6	150	4	2
MTS-7*18*8*60-4F	7	18	8	60	4	1
MTS-8*20*8*60-4F	8	20	8	60	4	2
MTS-8*25*8*75-4F	8	25	8	75	4	2
MTS-8*35*8*100-4F	8	35	8	100	4	2
MTS-8*50*8*150-4F	8	50	8	150	4	2
MTS-9*23*10*75-4F	9	23	10	75	4	1
MTS-10*25*10*75-4F	10	25	10	75	4	2
MTS-10*40*10*100-4F	10	40	10	100	4	2
MTS-10*50*10*150-4F	10	50	10	150	4	2
MTS-11*28*12*75-4F	11	28	12	75	4	1
MTS-12*30*12*75-4F	12	30	12	75	4	2
MTS-12*45*12*100-4F	12	45	12	100	4	2
MTS-12*55*12*150-4F	12	55	12	150	4	2
MTS-14*35*14*80-4F	14	35	14	80	4	2
MTS-14*45*14*100-4F	14	45	14	100	4	2
MTS-14*60*14*150-4F	14	60	14	150	4	2
MTS-16*45*16*100-4F	16	45	16	100	4	2
MTS-16*60*16*150-4F	16	60	16	150	4	2
MTS-18*45*18*100-4F	18	45	18	100	4	2
MTS-18*60*18*150-4F	18	60	18	150	4	2
MTS-20*45*20*100-4F	20	45	20	100	4	2
MTS-20*60*20*150-4F	20	60	20	150	4	2

HRC 55 deg Tungsten Steel 2 Flute Square End Mills



Raw Material: Use Zigong ZK30UF high hardness and good wear resistance.

Coating: TiSiN, containing silica, very high surface hardness and high thermal resistance.

Tolerance of End Mill Diameter
 $1 < D \leq 6 - 0.010 \sim - 0.030 \text{ mm}$
 $6 < D \leq 10 - 0.015 \sim - 0.040 \text{ mm}$
 $10 < D \leq 20 - 0.020 \sim - 0.050 \text{ mm}$

Flutes: 2 flutes, good for chip removal, easy for vertical feed processing, widely used in slot and hole processing

8

Cutting Parameters:
 $v_c = 130 (120-180) \text{ m/min}$
 $a_p = 1/3D(1/8-1/2D)$
 $a_e = 1/2D(1/4-1D)$
 $f_z = 0.15 \text{ mm}(0.02-0.2)$

Helix Angle: 35 deg, high adaptability to the material and hardness of workpieces, widely used to mold and product processing and cost efficient.

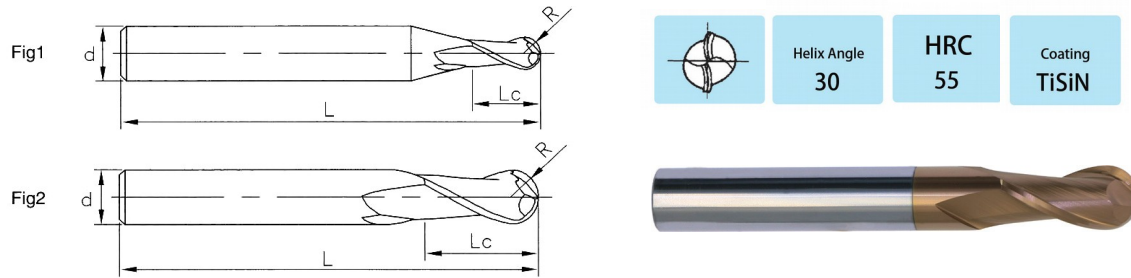
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
Y	Y	Y				Y

Y - Suitable

Cat.No	Specifications				Flutes	Figure No.
	D	Lc	d	L		
MTS-3*8*3*50-2F	3	8	3	50	2	2
MTS-3*12*3*75-2F	3	12	3	75	2	2
MTS-3*12*3*100-2F	3	12	3	100	2	2
MTS-1*3*4*50-2F	1	3	4	50	2	1
MTS-1.5*4*4*50-2F	1.5	4	4	50	2	1
MTS-2*5*4*50-2F	2	5	4	50	2	1
MTS-2.5*7*4*50-2F	2.5	7	4	50	2	1
MTS-3*8*4*50-2F	3	8	4	50	2	1
MTS-3.5*10*4*50-2F	3.5	10	4	50	2	1
MTS-4*10*4*50-2F	4	10	4	50	2	2
MTS-4*20*4*75-2F	4	20	4	75	2	2
MTS-4*25*4*100-2F	4	25	4	100	2	2
MTS-5*13*5*50-2F	5	13	5	50	2	2
MTS-5*20*5*75-2F	5	20	5	75	2	2
MTS-5*25*5*100-2F	5	25	5	100	2	2
MTS-2.5*7*6*50-2F	2.5	7	6	50	2	1
MTS-3*8*6*50-2F	3	8	6	50	2	1
MTS-3.5*10*6*50-2F	3.5	10	6	50	2	1
MTS-4*10*6*50-2F	4	10	6	50	2	1
MTS-4.5*12*6*50-2F	4.5	12	6	50	2	1
MTS-5*13*6*50-2F	5	13	6	50	2	1
MTS-6*15*6*50-2F	6	15	6	50	2	2
MTS-6*20*6*75-2F	6	20	6	75	2	2
MTS-6*30*6*100-2F	6	30	6	100	2	2
MTS-6*40*6*150-2F	6	40	6	150	2	2
MTS-7*18*8*60-2F	7	18	8	60	2	1
MTS-8*20*8*60-2F	8	20	8	60	2	2
MTS-8*25*8*75-2F	8	25	8	75	2	2
MTS-8*35*8*100-2F	8	35	8	100	2	2
MTS-8*50*8*150-2F	8	50	8	150	2	2
MTS-9*23*10*75-2F	9	23	10	75	2	1
MTS-10*25*10*75-2F	10	25	10	75	2	2
MTS-10*40*10*100-2F	10	40	10	100	2	2
MTS-10*50*10*150-2F	10	50	10	150	2	2
MTS-11*28*12*75-2F	11	28	12	75	2	1
MTS-12*30*12*75-2F	12	30	12	75	2	2
MTS-12*45*12*100-2F	12	45	12	100	2	2
MTS-12*55*12*150-2F	12	55	12	150	2	2
MTS-14*35*14*80-2F	14	35	14	80	2	2
MTS-14*45*14*100-2F	14	45	14	100	2	2
MTS-14*60*14*150-2F	14	60	14	150	2	2
MTS-16*45*16*100-2F	16	45	16	100	2	2
MTS-16*60*16*150-2F	16	60	16	150	2	2
MTS-18*45*18*100-2F	18	45	18	100	2	2
MTS-18*60*18*150-2F	18	60	18	150	2	2
MTS-20*45*20*100-2F	20	45	20	100	2	2
MTS-20*60*20*150-2F	20	60	20	150	2	2

HRC 55 deg Tungsten Steel 2 Flutes Ball Nose End Mills



Raw Material: Use Zigong ZK30UF high hardness and good wear resistance.

Coating: TiSiN, containing silica, very high surface hardness and high thermal resistance.

Tolerance of End Mill Diameter

$1 < D \leq 6$ - 0.010 ~ - 0.030 mm
 $6 < D \leq 10$ - 0.015 ~ - 0.040 mm
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Cutting Parameters:

$v_c = 130$ (120-180)m/min
 $a_p = 1/3D(1/8-1/2D)$
 $f_z = 0.15\text{mm}$ (0.02-0.2)

Please adjust the parameters according to the material and hardness of workpieces.

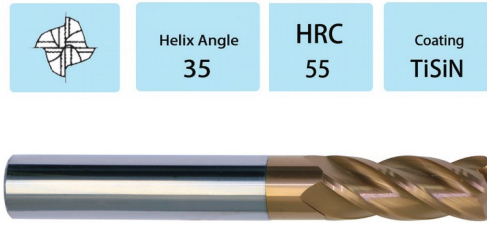
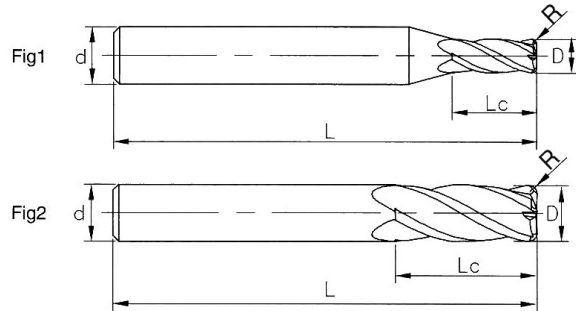
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Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
Y	Y	Y				Y

Y - Suitable

Cat.No	Specifications				Flutes	Figure No.
	R	Lc	d	L		
MTS-R1.5*6*3*50-2F	1.5	6	3	50	2	2
MTS-R1.5*6*3*75-2F	1.5	6	3	75	2	2
MTS-R1.5*6*3*100-2F	1.5	6	3	100	2	2
MTS-R0.5*2*4*50-2F	0.5	2	4	50	2	1
MTS-R0.75*3*4*50-2F	0.75	3	4	50	2	1
MTS-R1*4*4*50-2F	1	4	4	50	2	1
MTS-R1.25*5*4*50-2F	1.25	5	4	50	2	1
MTS-R1.5*6*4*50-2F	1.5	6	4	50	2	1
MTS-R1.75*7*4*50-2F	1.75	7	4	50	2	1
MTS-R2*8*4*50-2F	2	8	4	50	2	2
MTS-R2*8*4*75-2F	2	8	4	75	2	2
MTS-R2*8*4*100-2F	2	8	4	100	2	2
MTS-R2.5*10*5*50-2F	2.5	10	5	50	2	2
MTS-R2.5*10*5*75-2F	2.5	10	5	75	2	2
MTS-R2.5*10*5*100-2F	2.5	10	5	100	2	2
MTS-R2.5*10*6*50-2F	2.5	10	6	50	2	1
MTS-R3*12*6*50-2F	3	12	6	50	2	2
MTS-R3*12*6*75-2F	3	12	6	75	2	2
MTS-R3*12*6*100-2F	3	12	6	100	2	2
MTS-R3*12*6*150-2F	3	12	6	150	2	2
MTS-R3.5*16*8*60-2F	3.5	16	8	60	2	1
MTS-R4*16*8*60-2F	4	16	8	60	2	2
MTS-R4*16*8*75-2F	4	16	8	75	2	2
MTS-R4*16*8*100-2F	4	16	8	100	2	2
MTS-R4*20*8*150-2F	4	20	8	150	2	2
MTS-R4.5*18*10*75-2F	4.5	18	10	75	2	1
MTS-R5*20*10*75-2F	5	20	10	75	2	2
MTS-R5*20*10*100-2F	5	20	10	100	2	2
MTS-R5*30*10*150-2F	5	30	10	150	2	2
MTS-R5.5*24*12*75-2F	5.5	24	12	75	2	1
MTS-R6*24*12*75-2F	6	24	12	75	2	2
MTS-R6*24*12*100-2F	6	24	12	100	2	2
MTS-R6*35*12*150-2F	6	36	12	150	2	2
MTS-R7*28*14*100-2F	7	28	14	100	2	2
MTS-R7*40*14*150-2F	7	40	14	150	2	2
MTS-R8*32*16*100-2F	8	32	16	100	2	2
MTS-R8*50*16*150-2F	8	50	16	150	2	2
MTS-R9*36*18*100-2F	9	36	18	100	2	2
MTS-R9*50*18*150-2F	9	50	18	150	2	2
MTS-R10*40*20*100-2F	10	40	20	100	2	2
MTS-R10*50*20*150-2F	10	50	20	150	2	2

HRC 55 deg Tungsten Steel 4 Flutes Corner Radius End Mills



Raw Material: Use Zigong ZK30UF high hardness and good wear resistance.

Coating: TiSiN, containing silica, very high surface hardness and high thermal resistance.

Tolerance of End Mill Diameter

$1 < D \leq 6$ - 0.010 ~ - 0.030 mm
 $6 < D \leq 10$ - 0.015 ~ - 0.040 mm
 $10 < D \leq 20$ - 0.020 ~ - 0.050 mm

Cutting Edge Design, Corner radius, uneasy to cracking, widely used in high speed cutting

Cutting Parameters:

$v_c = 130$ (120-180)m/min
 $a_p = 1/3D(1/8-1/2D)$
 $a_e = 1/2D(1/4-1D)$
 $f_z = 0.15\text{mm}$ (0.02-0.2)

Helix Angle: 35 deg, high adaptability to the material and hardness of workpieces, widely used to mold and product processing and cost efficient.

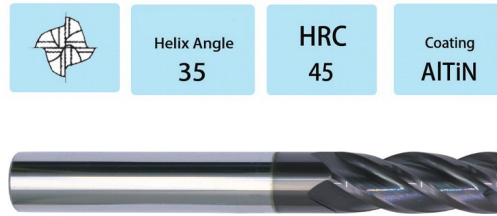
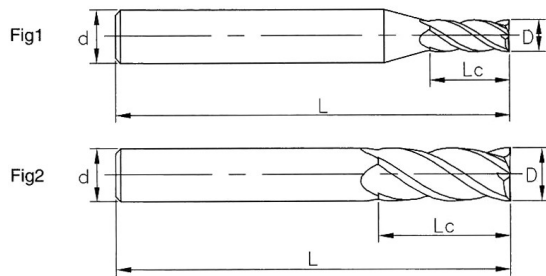
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
Y	Y	Y				Y

Y - Suitable

Cat.No	Specifications				Flutes	Figure No.
	D	R	d	L		
MTS-3R0.5*3*50-4F	3	0.5	3	50	4	2
MTS-3R1*3*50-4F	3	1	3	50	4	2
MTS-3R0.5*3*75-4F	3	0.5	3	75	4	2
MTS-3R1*3*75-4F	3	1	3	75	4	2
MTS-3R0.5*3*100-4F	3	0.5	3	100	4	2
MTS-3R1*3*100-4F	3	1	3	100	4	2
MTS-3R0.5*4*50-4F	3	0.5	4	50	4	1
MTS-3R1*4*50-4F	3	1	4	50	4	1
MTS-4R0.5*4*50-4F	4	0.5	4	50	4	2
MTS-4R1*4*50-4F	4	1	4	50	4	2
MTS-4R0.5*4*75-4F	4	0.5	4	75	4	2
MTS-4R1*4*75-4F	4	1	4	75	4	2
MTS-4R0.5*4*100-4F	4	0.5	4	100	4	2
MTS-4R1*4*100-4F	4	1	4	100	4	2
MTS-5R0.5*5*50-4F	5	0.5	5	50	4	2
MTS-5R1*5*50-4F	5	1	5	50	4	2
MTS-5R0.5*6*50-4F	5	0.5	6	50	4	1
MTS-5R1*6*50-4F	5	1	6	50	4	1
MTS-6R0.5*6*50-4F	6	0.5	6	50	4	2
MTS-6R1*6*50-4F	6	1	6	50	4	2
MTS-6R0.5*6*75-4F	6	0.5	6	75	4	2
MTS-6R1*6*75-4F	6	1	6	75	4	2
MTS-6R0.5*6*100-4F	6	0.5	6	100	4	2
MTS-6R1*6*100-4F	6	1	6	100	4	2
MTS-6R0.5*6*150-4F	6	0.5	6	150	4	2
MTS-6R1*6*150-4F	6	1	6	150	4	2
MTS-8R0.5*8*60-4F	8	0.5	8	60	4	2
MTS-8R1*8*60-4F	8	1	8	60	4	2
MTS-8R2*8*60-4F	8	2	8	60	4	2
MTS-8R3*8*60-4F	8	3	8	60	4	2
MTS-8R0.5*8*75-4F	8	0.5	8	75	4	2
MTS-8R1*8*75-4F	8	1	8	75	4	2
MTS-8R0.5*8*100-4F	8	0.5	8	100	4	2
MTS-8R1*8*100-4F	8	1	8	100	4	2
MTS-8R0.5*8*150-4F	8	0.5	8	150	4	2
MTS-8R1*8*150-4F	8	1	8	150	4	2
MTS-10R0.5*10*75-4F	10	0.5	10	75	4	2
MTS-10R1*10*75-4F	10	1	10	75	4	2
MTS-10R0.5*10*100-4F	10	0.5	10	100	4	2
MTS-10R1*10*100-4F	10	1	10	100	4	2
MTS-10R0.5*10*150-4F	10	0.5	10	150	4	2
MTS-10R1*10*150-4F	10	1	10	150	4	2
MTS-12R0.5*12*75-4F	12	0.5	12	75	4	2
MTS-12R1*12*75-4F	12	1	12	75	4	2
MTS-12R0.5*12*100-4F	12	0.5	12	100	4	2
MTS-12R1*12*100-4F	12	1	12	100	4	2
MTS-12R0.5*12*150-4F	12	0.5	12	150	4	2
MTS-12R1*12*150-4F	12	1	12	150	4	2

HRC 45 deg Tungsten Steel 4 Flute Square End Mills



Raw Material: Use Zigong YG10X, high hardness, good wear resistance and corrosion resistance.

Coating: AlTiN, high aluminum content provides excellent hot hardness and oxidation resistance.

Tolerance of End Mill Diameter

1	$D \leq 6$	-0.010	~ -0.030
6	$D \leq 10$	-0.015	~ -0.040
10	$D \leq 20$	-0.020	-0.050

Flutes: 4 flutes, high rigidity, widely used in shallow slot, profile milling, and finish machining.

Cutting Parameters

$$\begin{aligned} v_c &= 220 \text{ (120-180) m/min} \\ a_p &= 1/3D(1/8-1/2D) \\ a_e &= 1/2D(1/4-1D) \\ f_z &= 0.15 \text{ mm (0.02-0.2)} \end{aligned}$$

Helix Angle: 35 deg, high adaptability to the material and hardness of workpieces, widely used to mold and product processing and cost efficient.

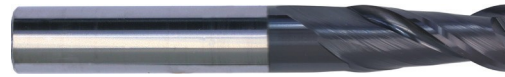
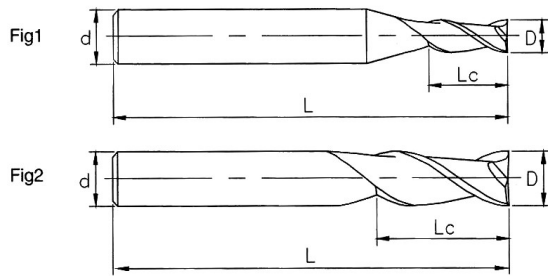
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
Y	Y	Y				

Y - Suitable

Cat.No	Specifications				Flutes	Figure No.
	D	Lc	d	L		
MTS-3*8*3*50-4F	3	8	3	50	4	2
MTS-3*12*3*75-4F	3	12	3	75	4	2
MTS-3*12*3*100-4F	3	12	3	100	4	2
MTS-1*3*4*50-4F	1	3	4	50	4	1
MTS-1.5*4*4*50-4F	1.5	4	4	50	4	1
MTS-2*5*4*50-4F	2	5	4	50	4	1
MTS-2.5*7*4*50-4F	2.5	7	4	50	4	1
MTS-3*8*4*50-4F	3	8	4	50	4	1
MTS-3.5*10*4*50-4F	3.5	10	4	50	4	1
MTS-4*10*4*50-4F	4	10	4	50	4	2
MTS-4*20*4*75-4F	4	20	4	75	4	2
MTS-4*25*4*100-4F	4	25	4	100	4	2
MTS-5*13*5*50-4F	5	13	5	50	4	2
MTS-5*20*5*75-4F	5	20	5	75	4	2
MTS-5*25*5*100-4F	5	25	5	100	4	2
MTS-2.5*7*6*50-4F	2.5	7	6	50	4	1
MTS-3*8*6*50-4F	3	8	6	50	4	1
MTS-3.5*10*6*50-4F	3.5	10	6	50	4	1
MTS-4*10*6*50-4F	4	10	6	50	4	1
MTS-4.5*12*6*50-4F	4.5	12	6	50	4	1
MTS-5*13*6*50-4F	5	13	6	50	4	1
MTS-6*15*6*50-4F	6	15	6	50	4	2
MTS-6*20*6*75-4F	6	20	6	75	4	2
MTS-6*25*6*100-4F	6	25	6	100	4	2
MTS-6*40*6*150-4F	6	40	6	150	4	2
MTS-7*18*8*60-4F	7	18	8	60	4	1
MTS-8*20*8*60-4F	8	20	8	60	4	2
MTS-8*25*8*75-4F	8	25	8	75	4	2
MTS-8*35*8*100-4F	8	35	8	100	4	2
MTS-8*50*8*150-4F	8	50	8	150	4	2
MTS-9*23*10*75-4F	9	23	10	75	4	1
MTS-10*25*10*75-4F	10	25	10	75	4	2
MTS-10*40*10*100-4F	10	40	10	100	4	2
MTS-10*50*10*150-4F	10	50	10	150	4	2
MTS-11*28*12*75-4F	11	28	12	75	4	1
MTS-12*30*12*75-4F	12	30	12	75	4	2
MTS-12*45*12*100-4F	12	45	12	100	4	2
MTS-12*55*12*150-4F	12	55	12	150	4	2
MTS-14*35*14*80-4F	14	35	14	80	4	2
MTS-14*45*14*100-4F	14	45	14	100	4	2
MTS-14*60*14*150-4F	14	60	14	150	4	2
MTS-16*45*16*100-4F	16	45	16	100	4	2
MTS-16*60*16*150-4F	16	60	16	150	4	2
MTS-18*45*18*100-4F	18	45	18	100	4	2
MTS-18*60*18*150-4F	18	60	18	150	4	2
MTS-20*45*20*100-4F	20	45	20	100	4	2
MTS-20*60*20*150-4F	20	60	20	150	4	2

HRC 45 deg Tungsten Steel 2 Flute Square End Mills



Raw Material: Use Zigong YG10X, high hardness, good wear resistance and corrosion resistance.

Coating: AlTiN, high aluminum content provides excellent hot hardness and oxidation resistance.

Tolerance of End Mill Diameter

1	< D≤6	-0.010	~ -0.030
6	< D≤10	-0.015	~ -0.040
10	D≤20	-0.020	-0.050

Flutes : 2 flutes, good for chip removal, easy for vertical feed processing, widely used in slot and hole processing

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Cutting Parameters

$$v_c = 130 \text{ (120-180) m/min}$$

$$a_p = 1/3D(1/8-1/2D)$$

$$a_e = 1/2D(1/4-1D)$$

$$f_z = 0.15 \text{ mm (0.02-0.2)}$$

Helix Angle : 35 deg ' high adaptability to the material and hardness of workpieces, widely used to mold and product processing and cost efficient.

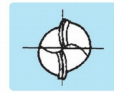
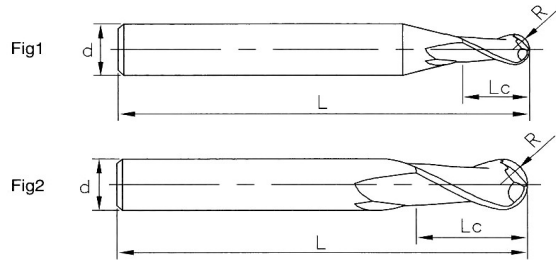
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
Y	Y	Y				

Y Suitable

Cat.No	Specifications				Flutes	Figure No.
	D	Lc	d	L		
MTS-3*8*3*50-2F	3	8	3	50	2	2
MTS-3*12*3*75-2F	3	12	3	75	2	2
MTS-3*12*3*100-2F	3	12	3	100	2	2
MTS-1*3*4*50-2F	1	3	4	50	2	1
MTS-1.5*4*4*50-2F	1.5	4	4	50	2	1
MTS-2*5*4*50-2F	2	5	4	50	2	1
MTS-2.5*7*4*50-2F	2.5	7	4	50	2	1
MTS-3*8*4*50-2F	3	8	4	50	2	1
MTS-3.5*10*4*50-2F	3.5	10	4	50	2	1
MTS-4*10*4*50-2F	4	10	4	50	2	2
MTS-4*20*4*75-2F	4	20	4	75	2	2
MTS-4*25*4*100-2F	4	25	4	100	2	2
MTS-5*13*5*50-2F	5	13	5	50	2	2
MTS-5*20*5*75-2F	5	20	5	75	2	2
MTS-5*25*5*100-2F	5	25	5	100	2	2
MTS-2.5*7*6*50-2F	2.5	7	6	50	2	1
MTS-3*8*6*50-2F	3	8	6	50	2	1
MTS-3.5*10*6*50-2F	3.5	10	6	50	2	1
MTS-4*10*6*50-2F	4	10	6	50	2	1
MTS-4.5*12*6*50-2F	4.5	12	6	50	2	1
MTS-5*13*6*50-2F	5	13	6	50	2	1
MTS-6*15*6*50-2F	6	15	6	50	2	2
MTS-6*20*6*75-2F	6	20	6	75	2	2
MTS-6*25*6*100-2F	6	25	6	100	2	2
MTS-6*40*6*150-2F	6	40	6	150	2	2
MTS-7*18*8*60-2F	7	18	8	60	2	1
MTS-8*20*8*60-2F	8	20	8	60	2	2
MTS-8*25*8*75-2F	8	25	8	75	2	2
MTS-8*35*8*100-2F	8	35	8	100	2	2
MTS-8*50*8*150-2F	8	50	8	150	2	2
MTS-9*23*10*75-2F	9	23	10	75	2	1
MTS-10*25*10*75-2F	10	25	10	75	2	2
MTS-10*40*10*100-2F	10	40	10	100	2	2
MTS-10*50*10*150-2F	10	50	10	150	2	2
MTS-11*28*12*75-2F	11	28	12	75	2	1
MTS-12*30*12*75-2F	12	30	12	75	2	2
MTS-12*45*12*100-2F	12	45	12	100	2	2
MTS-12*55*12*150-2F	12	55	12	150	2	2
MTS-14*35*14*80-2F	14	35	14	80	2	2
MTS-14*45*14*100-2F	14	45	14	100	2	2
MTS-14*60*14*150-2F	14	60	14	150	2	2
MTS-16*45*16*100-2F	16	45	16	100	2	2
MTS-16*60*16*150-2F	16	60	16	150	2	2
MTS-18*45*18*100-2F	18	45	18	100	2	2
MTS-18*60*18*150-2F	18	60	18	150	2	2
MTS-20*45*20*100-2F	20	45	20	100	2	2
MTS-20*60*20*150-2F	20	60	20	150	2	2

HRC 45 deg Tungsten Steel 2 Flute Ball Nose End Mills



Helix Angle
30

HRC
45

Coating
AlTiN



Raw Material : Use Zigong YG10X, high hardness, good wear resistance and corrosion resistance.

Coating: AlTiN, high aluminum content provides excellent hot hardness and oxidation resistance.

Tolerance of End Mill Diameter

1	< D≤6	-0.010	~ -0.030
6	< D≤10	-0.015	~ -0.040
10	D≤20	-0.020	-0.050

Cutting Parameters

$$v_c = 130 \text{ (120-180) m/min}$$

$$a_p = 1/3D(1/8-1/2D)$$

$$a_e = 1/2D(1/4-1D)$$

$$f_z = 0.15 \text{ mm (0.02-0.2)}$$

Double-edge design improves rigidity and surface finish effectively. Cutting edge over the center reduces the cutting resistance. High capacity of junk slot benefits chip removal and increases machining efficiency. 2 flutes design is good for chip removal, easy for vertical feed processing, widely used in slot, profile, and hole processing.

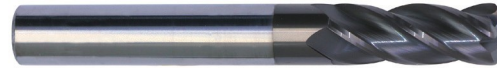
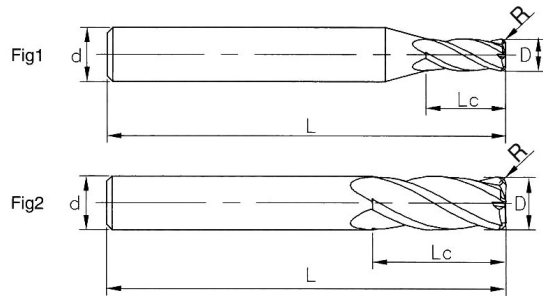
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
Y	Y	Y				

Y Suitable

Cat.No	Specifications				Flutes	Figure No.
	R	Lc	d	L		
MTS-R1.5*6*3*50-2F	1.5	6	3	50	2	2
MTS-R1.5*6*3*75-2F	1.5	6	3	75	2	2
MTS-R1.5*6*3*100-2F	1.5	6	3	100	2	2
MTS-R0.5*2*4*50-2F	0.5	2	4	50	2	1
MTS-R0.75*3*4*50-2F	0.75	3	4	50	2	1
MTS-R1*4*4*50-2F	1	4	4	50	2	1
MTS-R1.25*5*4*50-2F	1.25	5	4	50	2	1
MTS-R1.5*6*4*50-2F	1.5	6	4	50	2	1
MTS-R1.75*7*4*50-2F	1.75	7	4	50	2	1
MTS-R2*8*4*50-2F	2	8	4	50	2	2
MTS-R2*8*4*75-2F	2	8	4	75	2	2
MTS-R2*8*4*100-2F	2	8	4	100	2	2
MTS-R2.5*10*5*50-2F	2.5	10	5	50	2	2
MTS-R2.5*10*5*75-2F	2.5	10	5	75	2	2
MTS-R2.5*10*5*100-2F	2.5	10	5	100	2	2
MTS-R2.5*10*6*50-2F	2.5	10	6	50	2	1
MTS-R3*12*6*50-2F	3	12	6	50	2	2
MTS-R3*12*6*75-2F	3	12	6	75	2	2
MTS-R3*12*6*100-2F	3	12	6	100	2	2
MTS-R3*12*6*150-2F	3	12	6	150	2	2
MTS-R3.5*16*8*60-2F	3.5	16	8	60	2	1
MTS-R4*16*8*60-2F	4	16	8	60	2	2
MTS-R4*16*8*75-2F	4	16	8	75	2	2
MTS-R4*16*8*100-2F	4	16	8	100	2	2
MTS-R4*20*8*150-2F	4	20	8	150	2	2
MTS-R4.5*18*10*75-2F	4.5	18	10	75	2	1
MTS-R5*20*10*75-2F	5	20	10	75	2	2
MTS-R5*20*10*100-2F	5	20	10	100	2	2
MTS-R5*30*10*150-2F	5	30	10	150	2	2
MTS-R5.5*24*12*75-2F	5.5	24	12	75	2	1
MTS-R6*24*12*75-2F	6	24	12	75	2	2
MTS-R6*24*12*100-2F	6	24	12	100	2	2
MTS-R6*35*12*150-2F	6	36	12	150	2	2
MTS-R7*28*14*100-2F	7	28	14	100	2	2
MTS-R7*40*14*150-2F	7	40	14	150	2	2
MTS-R8*32*16*100-2F	8	32	16	100	2	2
MTS-R8*50*16*150-2F	8	50	16	150	2	2
MTS-R9*36*18*100-2F	9	36	18	100	2	2
MTS-R9*50*18*150-2F	9	50	18	150	2	2
MTS-R10*40*20*100-2F	10	40	20	100	2	2
MTS-R10*50*20*150-2F	10	50	20	150	2	2

HRC 45 deg Tungsten Steel 4 Flutes Corner Radius End Mills



Raw Material: Use Zigong YG10X, high hardness, good wear resistance and corrosion resistance.

Coating: AlTiN, high aluminum content provides excellent hot hardness and oxidation resistance.

Tolerance of End Mill Diameter

$1 < D \leq 6 - 0.010 \sim -0.030 \text{ mm}$
 $6 < D \leq 10 - 0.015 \sim -0.040 \text{ mm}$
 $10 < D \leq 20 - 0.020 \sim -0.050 \text{ mm}$

Cutting Edge Design: Corner radius, uneasy to cracking, widely used in high speed cutting

20

Cutting Parameters

$v_c = 130 (120-180) \text{ m/min}$
 $a_p = 1/3D (1/8-1/2D)$
 $a_e = 1/2D (1/4-1D)$
 $f_z = 0.15 \text{ mm} (0.02-0.2)$

Helix Angle: 35 deg, high adaptability to the material and hardness of workpieces, widely used to mold and product processing and cost efficient.

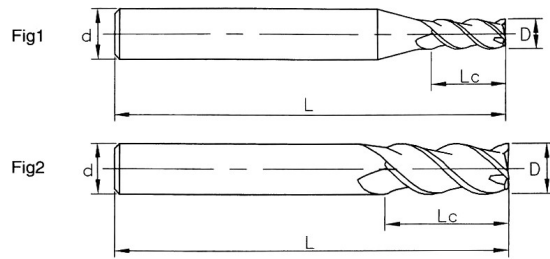
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
Y	Y	Y				

Y - Suitable

Cat.No	Specifications				Flutes	Figure No.
	D	R	d	L		
MTS-3R0.5*3*50-4F	3	0.5	3	50	4	2
MTS-3R1*3*50-4F	3	1	3	50	4	2
MTS-3R0.5*3*75-4F	3	0.5	3	75	4	2
MTS-3R1*3*75-4F	3	1	3	75	4	2
MTS-3R0.5*3*100-4F	3	0.5	3	100	4	2
MTS-3R1*3*100-4F	3	1	3	100	4	2
MTS-3R0.5*4*50-4F	3	0.5	4	50	4	1
MTS-3R1*4*50-4F	3	1	4	50	4	1
MTS-4R0.5*4*50-4F	4	0.5	4	50	4	2
MTS-4R1*4*50-4F	4	1	4	50	4	2
MTS-4R0.5*4*75-4F	4	0.5	4	75	4	2
MTS-4R1*4*75-4F	4	1	4	75	4	2
MTS-4R0.5*4*100-4F	4	0.5	4	100	4	2
MTS-4R1*4*100-4F	4	1	4	100	4	2
MTS-5R0.5*5*50-4F	5	0.5	5	50	4	2
MTS-5R1*5*50-4F	5	1	5	50	4	2
MTS-5R0.5*6*50-4F	5	0.5	6	50	4	1
MTS-5R1*6*50-4F	5	1	6	50	4	1
MTS-6R0.5*6*50-4F	6	0.5	6	50	4	2
MTS-6R1*6*50-4F	6	1	6	50	4	2
MTS-6R0.5*6*75-4F	6	0.5	6	75	4	2
MTS-6R1*6*75-4F	6	1	6	75	4	2
MTS-6R0.5*6*100-4F	6	0.5	6	100	4	2
MTS-6R1*6*100-4F	6	1	6	100	4	2
MTS-6R0.5*6*150-4F	6	0.5	6	150	4	2
MTS-6R1*6*150-4F	6	1	6	150	4	2
MTS-8R0.5*8*60-4F	8	0.5	8	60	4	2
MTS-8R1*8*60-4F	8	1	8	60	4	2
MTS-8R2*8*60-4F	8	2	8	60	4	2
MTS-8R3*8*60-4F	8	3	8	60	4	2
MTS-8R0.5*8*75-4F	8	0.5	8	75	4	2
MTS-8R1*8*75-4F	8	1	8	75	4	2
MTS-8R0.5*8*100-4F	8	0.5	8	100	4	2
MTS-8R1*8*100-4F	8	1	8	100	4	2
MTS-8R0.5*8*150-4F	8	0.5	8	150	4	2
MTS-8R1*8*150-4F	8	1	8	150	4	2
MTS-10R0.5*10*75-4F	10	0.5	10	75	4	2
MTS-10R1*10*75-4F	10	1	10	75	4	2
MTS-10R0.5*10*100-4F	10	0.5	10	100	4	2
MTS-10R1*10*100-4F	10	1	10	100	4	2
MTS-10R0.5*10*150-4F	10	0.5	10	150	4	2
MTS-10R1*10*150-4F	10	1	10	150	4	2
MTS-12R0.5*12*75-4F	12	0.5	12	75	4	2
MTS-12R1*12*75-4F	12	1	12	75	4	2
MTS-12R0.5*12*100-4F	12	0.5	12	100	4	2
MTS-12R1*12*100-4F	12	1	12	100	4	2
MTS-12R0.5*12*150-4F	12	0.5	12	150	4	2
MTS-12R1*12*150-4F	12	1	12	150	4	2

HRC 55 deg Tungsten Steel 3 Flute End Mills for Aluminum



Raw Material: Use Zigong ZK30UF
high hardness and good wear resistance.

Flutes: 3 flutes, effectively mitigate vibration and stable cutting.

Tolerance of End Mill Diameter
 $1 < D \leq 6$ - 0.010 ~ - 0.030 mm
 $6 < D \leq 10$ - 0.015 ~ - 0.040 mm
 $10 < D \leq 20$ - 0.020 ~ - 0.050 mm

A Type: Double-edge design provides good smooth finish and is suitable for semi-finish and finish machining.

Cutting Parameters:
 $v_c = 220$ (100-800)m/min
 $a_p = 1/2D(1/8-3/4D)$
 $a_e = 1/2D(1/4-1D)$
 $f_z = 0.15\text{mm}$ (0.02-0.2)

B Type: Single-edge design, sharp blade, good for chip removal, high cutting speed, widely used in rough machining.

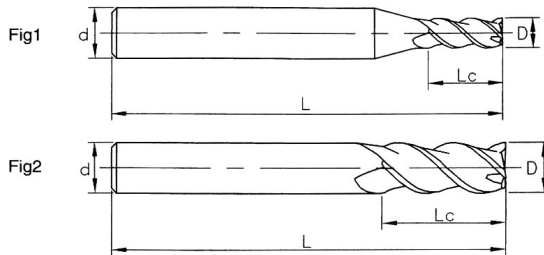
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
			Y	Y		

Y - Suitable

Cat.No		Specifications				Flutes	Figure No.
		D	Lc	d	L		
MTS-3*9*3*50-3FA	MTS-3*9*3*50-3FB	3	9	3	50	3	2
MTS-3*15*3*75-3FA	MTS-3*15*3*75-3FB	3	15	3	75	3	2
MTS-3*15*3*100-3FA	MTS-3*15*3*100-3FB	3	15	3	100	3	2
MTS-1*3*4*50-3FA	MTS-1*3*4*50-3FB	1	3	4	50	3	1
MTS-1.5*5*4*50-3FA	MTS-1.5*5*4*50-3FB	1.5	5	4	50	3	1
MTS-2*6*4*50-3FA	MTS-2*6*4*50-3FB	2	6	4	50	3	1
MTS-2.5*8*4*50-3FA	MTS-2.5*8*4*50-3FB	2.5	8	4	50	3	1
MTS-3*9*4*50-3FA	MTS-3*9*4*50-3FB	3	9	4	50	3	1
MTS-3.5*12*4*50-3FA	MTS-3.5*12*4*50-3FB	3.5	12	4	50	3	1
MTS-4*12*4*50-3FA	MTS-4*12*4*50-3FB	4	12	4	50	3	2
MTS-4*15*4*75-3FA	MTS-4*15*4*75-3FB	4	15	4	75	3	2
MTS-4*20*4*100-3FA	MTS-4*20*4*100-3FB	4	20	5	100	3	2
MTS-5*15*5*50-3FA	MTS-5*15*5*50-3FB	5	15	5	50	3	2
MTS-5*20*5*75-3FA	MTS-5*20*5*75-3FB	5	20	5	75	3	2
MTS-5*25*5*100-3FA	MTS-5*25*5*100-3FB	5	25	6	100	3	2
MTS-2*6*6*50-3FA	MTS-2*6*6*50-3FB	2	6	6	50	3	1
MTS-3*9*6*50-3FA	MTS-3*9*6*50-3FB	3	9	6	50	3	1
MTS-4*12*6*50-3FA	MTS-4*12*6*50-3FB	4	12	6	50	3	1
MTS-5*15*6*50-3FA	MTS-5*15*6*50-3FB	5	15	6	50	3	1
MTS-6*18*6*50-3FA	MTS-6*18*6*50-3FB	6	18	6	50	3	2
MTS-6*25*6*75-3FA	MTS-6*25*6*75-3FB	6	25	6	75	3	2
MTS-6*30*6*100-3FA	MTS-6*30*6*100-3FB	6	30	6	100	3	2
MTS-6*35*6*150-3FA	MTS-6*35*6*150-3FB	6	35	6	150	3	2
MTS-7*21*8*60-3FA	MTS-7*21*8*60-3FB	7	21	8	60	3	1
MTS-8*24*8*60-3FA	MTS-8*24*8*60-3FB	8	24	8	60	3	2
MTS-8*30*8*75-3FA	MTS-8*30*8*75-3FB	8	30	8	75	3	2
MTS-8*40*8*100-3FA	MTS-8*40*8*100-3FB	8	40	8	100	3	2
MTS-8*50*8*150-3FA	MTS-8*50*8*150-3FB	8	50	8	150	3	2
MTS-9*27*10*75-3FA	MTS-9*27*10*75-3FB	9	27	10	75	3	1
MTS-10*30*10*75-3FA	MTS-10*30*10*75-3FB	10	30	10	75	3	2
MTS-10*45*10*100-3FA	MTS-10*45*10*100-3FB	10	45	10	100	3	2
MTS-10*50*10*150-3FA	MTS-10*50*10*150-3FB	10	50	10	150	3	2
MTS-11*33*12*75-3FA	MTS-11*33*12*75-3FB	11	33	12	75	3	1
MTS-12*36*12*75-3FA	MTS-12*36*12*75-3FB	12	36	12	75	3	2
MTS-12*45*100-3FA	MTS-12*45*100-3FB	12	45	12	100	3	2
MTS-12*60*12*150-3FA	MTS-12*60*12*150-3FB	12	60	12	150	3	2
MTS-14*35*14*80-3FA	MTS-14*35*14*80-3FB	14	35	14	80	3	2
MTS-14*45*14*100-3FA	MTS-14*45*14*100-3FB	14	45	14	100	3	2
MTS-14*60*14*150-3FA	MTS-14*60*14*150-3FB	14	60	14	150	3	2
MTS-16*45*16*100-3FA	MTS-16*45*16*100-3FB	16	45	16	100	3	2
MTS-16*60*16*150-3FA	MTS-16*60*16*150-3FB	16	60	16	150	3	2
MTS-18*45*18*100-3FA	MTS-18*45*18*100-3FB	18	45	18	100	3	2
MTS-18*60*18*150-3FA	MTS-18*60*18*150-3FB	18	60	18	150	3	2
MTS-20*45*20*100-3FA	MTS-20*45*20*100-3FB	20	45	20	100	3	2
MTS-20*60*20*150-3FA	MTS-20*60*20*150-3FB	20	60	20	150	3	2

HRC 45 deg Tungsten Steel 3 Flute End Mills for Aluminum



Raw Material: Use Zigong YG10X, high hardness, good wear resistance and corrosion resistance.

Flutes: 3 flutes, effectively mitigate vibration and stable cutting.

Tolerance of End Mill Diameter

$1 < D \leq 6$ - 0.010 ~ - 0.030 mm
 $6 < D \leq 10$ - 0.015 ~ - 0.040 mm
 $10 < D \leq 20$ - 0.020 ~ - 0.050 mm

A Type: Double-edge design provides good smooth finish and is suitable for semi-finish and finish machining

Cutting Parameters

$v_c = 220(100-800) \text{ m/min}$
 $a_p = 1/2D(1/8-3/4D)$
 $a_e = 1/2D(1/4-1D)$
 $f_z = 0.15 \text{ mm}(0.02-0.2)$

B Type: Single-edge design, sharp blade, good for chip removal, high cutting speed, widely used in rough machining.

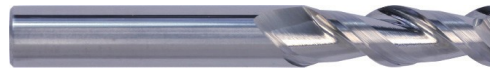
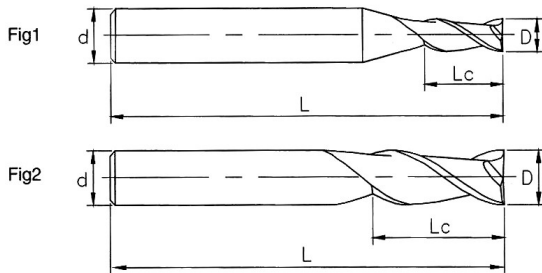
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
			Y	Y		

Y - Suitable

Cat.No		Specifications				Flutes	Figure No.
		D	Lc	d	L		
MTS-3*9*3*50-3FA	MTS-3*9*3*50-3FB	3	9	3	50	3	2
MTS-3*15*3*75-3FA	MTS-3*15*3*75-3FB	3	15	3	75	3	2
MTS-3*15*3*100-3FA	MTS-3*15*3*100-3FB	3	15	3	100	3	2
MTS-1*3*4*50-3FA	MTS-1*3*4*50-3FB	1	3	4	50	3	1
MTS-1.5*5*4*50-3FA	MTS-1.5*5*4*50-3FB	1.5	5	4	50	3	1
MTS-2*6*4*50-3FA	MTS-2*6*4*50-3FB	2	6	4	50	3	1
MTS-2.5*8*4*50-3FA	MTS-2.5*8*4*50-3FB	2.5	8	4	50	3	1
MTS-3*9*4*50-3FA	MTS-3*9*4*50-3FB	3	9	4	50	3	1
MTS-3.5*12*4*50-3FA	MTS-3.5*12*4*50-3FB	3.5	12	4	50	3	1
MTS-4*12*4*50-3FA	MTS-4*12*4*50-3FB	4	12	4	50	3	2
MTS-4*15*4*75-3FA	MTS-4*15*4*75-3FB	4	15	4	75	3	2
MTS-4*20*4*100-3FA	MTS-4*20*4*100-3FB	4	20	5	100	3	2
MTS-5*15*5*50-3FA	MTS-5*15*5*50-3FB	5	15	5	50	3	2
MTS-5*20*5*75-3FA	MTS-5*20*5*75-3FB	5	20	5	75	3	2
MTS-5*25*5*100-3FA	MTS-5*25*5*100-3FB	5	25	6	100	3	2
MTS-2*6*6*50-3FA	MTS-2*6*6*50-3FB	2	6	6	50	3	1
MTS-3*9*6*50-3FA	MTS-3*9*6*50-3FB	3	9	6	50	3	1
MTS-4*12*6*50-3FA	MTS-4*12*6*50-3FB	4	12	6	50	3	1
MTS-5*15*6*50-3FA	MTS-5*15*6*50-3FB	5	15	6	50	3	1
MTS-6*18*6*50-3FA	MTS-6*18*6*50-3FB	6	18	6	50	3	2
MTS-6*25*6*75-3FA	MTS-6*25*6*75-3FB	6	25	6	75	3	2
MTS-6*30*6*100-3FA	MTS-6*30*6*100-3FB	6	30	6	100	3	2
MTS-6*35*6*150-3FA	MTS-6*35*6*150-3FB	6	35	6	150	3	2
MTS-7*21*8*60-3FA	MTS-7*21*8*60-3FB	7	21	8	60	3	1
MTS-8*24*8*60-3FA	MTS-8*24*8*60-3FB	8	24	8	60	3	2
MTS-8*30*8*75-3FA	MTS-8*30*8*75-3FB	8	30	8	75	3	2
MTS-8*40*8*100-3FA	MTS-8*40*8*100-3FB	8	40	8	100	3	2
MTS-8*50*8*150-3FA	MTS-8*50*8*150-3FB	8	50	8	150	3	2
MTS-9*27*10*75-3FA	MTS-9*27*10*75-3FB	9	27	10	75	3	1
MTS-10*30*10*75-3FA	MTS-10*30*10*75-3FB	10	30	10	75	3	2
MTS-10*45*10*100-3FA	MTS-10*45*10*100-3FB	10	45	10	100	3	2
MTS-10*50*10*150-3FA	MTS-10*50*10*150-3FB	10	50	10	150	3	2
MTS-11*33*12*75-3FA	MTS-11*33*12*75-3FB	11	33	12	75	3	1
MTS-12*36*12*75-3FA	MTS-12*36*12*75-3FB	12	36	12	75	3	2
MTS-12*45*100-3FA	MTS-12*45*100-3FB	12	45	12	100	3	2
MTS-12*60*12*150-3FA	MTS-12*60*12*150-3FB	12	60	12	150	3	2
MTS-14*35*14*80-3FA	MTS-14*35*14*80-3FB	14	35	14	80	3	2
MTS-14*45*14*100-3FA	MTS-14*45*14*100-3FB	14	45	14	100	3	2
MTS-14*60*14*150-3FA	MTS-14*60*14*150-3FB	14	60	14	150	3	2
MTS-16*45*16*100-3FA	MTS-16*45*16*100-3FB	16	45	16	100	3	2
MTS-16*60*16*150-3FA	MTS-16*60*16*150-3FB	16	60	16	150	3	2
MTS-18*45*18*100-3FA	MTS-18*45*18*100-3FB	18	45	18	100	3	2
MTS-18*60*18*150-3FA	MTS-18*60*18*150-3FB	18	60	18	150	3	2
MTS-20*45*20*100-3FA	MTS-20*45*20*100-3FB	20	45	20	100	3	2
MTS-20*60*20*150-3FA	MTS-20*60*20*150-3FB	20	60	20	150	3	2

HRC 45 deg Tungsten Steel 2 Flute End Mills



Raw Material: Use Zigong YG10X, high hardness, good wear resistance and corrosion resistance.

Double-edge design provides good smooth finish and is suitable for semi-finish and finish machining

Tolerance of End Mill Diameter

$1 < D \leq 6 - 0.010 \sim - 0.030 \text{ mm}$
 $6 < D \leq 10 - 0.015 \sim - 0.040 \text{ mm}$
 $10 < D \leq 20 - 0.020 \sim - 0.050 \text{ mm}$

2 Flutes: Large capacity of junk slot and smooth chip evacuation.

26

Cutting Parameters

$v_c = 220 (100-800) \text{ m/min}$
 $a_p = 1/2D(1/8-3/4D)$
 $a_e = 1/2D(1/4-1D)$
 $f_z = 0.15 \text{ mm}(0.02-0.2)$

Edge Design: Cutting edge over the center reduces the cutting resistance and increases the rigidity of tools.

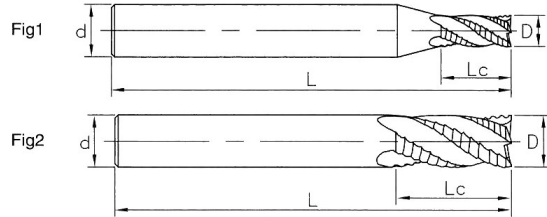
Please adjust the parameters according to the material and hardness of workpieces.

Workpiece Material						
Carbon Steel	Alloy Steel	Cast Iron	Aluminum Alloy	Copper Alloy	Stainless Steel	Hardened Steel
			Y	Y		

Y - Suitable

Cat.No	Specifications				Flutes	Figure No.
	D	Lc	d	L		
MTS-3*9*3*50-2F	3	9	3	50	2	2
MTS-3*15*3*75-2F	3	15	3	75	2	2
MTS-3*15*3*100-2F	3	15	3	100	2	2
MTS-1*3*4*50-2F	1	3	4	50	2	1
MTS-1.5*5*4*50-2F	1.5	5	4	50	2	1
MTS-2*6*4*50-2F	2	6	4	50	2	1
MTS-2.5*8*4*50-2F	2.5	8	4	50	2	1
MTS-3*9*4*50-2F	3	9	4	50	2	1
MTS-3.5*12*4*50-2F	3.5	12	4	50	2	1
MTS-4*12*4*50-2F	4	12	4	50	2	2
MTS-4*15*4*75-2F	4	15	4	75	2	2
MTS-4*20*4*100-2F	4	20	5	100	2	2
MTS-5*15*5*50-2F	5	15	5	50	2	2
MTS-5*20*5*75-2F	5	20	5	75	2	2
MTS-5*25*5*100-2F	5	25	6	100	2	2
MTS-2*6*6*50-2F	2	6	6	50	2	1
MTS-3*9*6*50-2F	3	9	6	50	2	1
MTS-4*12*6*50-2F	4	12	6	50	2	1
MTS-5*15*6*50-2F	5	15	6	50	2	1
MTS-6*18*6*50-2F	6	18	6	50	2	2
MTS-6*25*6*75-2F	6	25	6	75	2	2
MTS-6*30*6*100-2F	6	30	6	100	2	2
MTS-6*35*6*150-2F	6	35	6	150	2	2
MTS-7*21*8*60-2F	7	21	8	60	2	1
MTS-8*24*8*60-2F	8	24	8	60	2	2
MTS-8*30*8*75-2F	8	30	8	75	2	2
MTS-8*40*8*100-2F	8	40	8	100	2	2
MTS-8*50*8*150-2F	8	50	8	150	2	2
MTS-9*27*10*75-2F	9	27	10	75	2	1
MTS-10*30*10*75-2F	10	30	10	75	2	2
MTS-10*45*10*100-2F	10	45	10	100	2	2
MTS-10*50*10*150-2F	10	50	10	150	2	2
MTS-11*33*12*75-2F	11	33	12	75	2	1
MTS-12*36*12*75-2F	12	36	12	75	2	2
MTS-12*45*100-2F	12	45	12	100	2	2
MTS-12*60*12*150-2F	12	60	12	150	2	2
MTS-14*35*14*80-2F	14	35	14	80	2	2
MTS-14*45*14*100-2F	14	45	14	100	2	2
MTS-14*60*14*150-2F	14	60	14	150	2	2
MTS-16*45*16*100-2F	16	45	16	100	2	2
MTS-16*60*16*150-2F	16	60	16	150	2	2
MTS-18*45*18*100-2F	18	45	18	100	2	2
MTS-18*60*18*150-2F	18	60	18	150	2	2
MTS-20*45*20*100-2F	20	45	20	100	2	2
MTS-20*60*20*150-2F	20	60	20	150	2	2

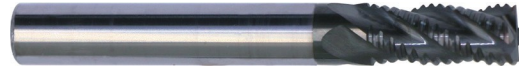
Tungsten Steel 4 Flute Roughing End Mills



Helix Angle
35

HRC
45

Coating
AlTiN



Raw Material: HRC 45 deg tools
uses Zigong YG10X.

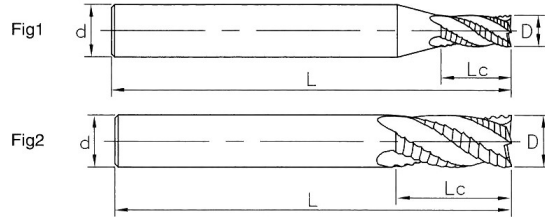
Coating: Products in stock are uncoated,
various coatings available according to
your needs.

Workpiece Material: Die casting steel,
general steel, cast iron, mould steel, nickel
alloy, aluminum alloy, copper alloy,
steel, etc.

Product Design: Sharp wave and 35 helix
angle design improve the chip removal
capacity, widely used in slot, profile, rough
milling.

Cat.No	Specifications				Flutes	Figure No.
	D	Lc	d	L		
MTS-6*15*6*50-4F	6	15	6	50	4	2
MTS-8*20*8*60-4F	8	20	8	60	4	2
MTS-10*25*10*75-4F	10	25	10	75	4	2
MTS-10*40*10*100-4F	10	40	10	100	4	2
MTS-12*30*12*75-4F	12	30	12	75	4	2
MTS-12*45*12*100-4F	12	45	12	100	4	2
MTS-14*45*14*100-4F	14	45	14	100	4	2
MTS-16*45*16*100-4F	16	45	16	100	4	2
MTS-18*45*18*100-4F	18	45	18	100	4	2
MTS-20*45*20*100-4F	20	45	20	100	4	2

Tungsten Steel 4 Flute Roughing End Mills



Helix Angle
35

HRC
55

Coating
TiSiN



Raw Material: HRC 55 deg tools
uses Zigong ZK30UF.

Coating: Products in stock are uncoated,
various coatings available according to
your needs.

Workpiece Material: Die casting steel,
general steel, cast iron, mould steel, nickel
alloy, aluminum alloy, copper alloy,
steel, etc.

Product Design: Sharp wave and 35 helix
angle design improve the chip removal
capacity, widely used in slot, profile, rough
milling.

Cat.No	Specifications				Flutes	Figure No.
	D	Lc	d	L		
MTS-6*15*6*50-4F	6	15	6	50	4	2
MTS-8*20*8*60-4F	8	20	8	60	4	2
MTS-10*25*10*75-4F	10	25	10	75	4	2
MTS-10*40*10*100-4F	10	40	10	100	4	2
MTS-12*30*12*75-4F	12	30	12	75	4	2
MTS-12*45*12*100-4F	12	45	12	100	4	2
MTS-14*45*14*100-4F	14	45	14	100	4	2
MTS-16*45*16*100-4F	16	45	16	100	4	2
MTS-18*45*18*100-4F	18	45	18	100	4	2
MTS-20*45*20*100-4F	20	45	20	100	4	2

Tungsten Steel twist Drills



Raw Material: HRC 45 deg tools uses Zigong YG10X, HRC 55 deg uses ZK30UF. HRC 65 deg uses Jinlu GU25UF. The performances of those are as follows.

Raw Material	g/cm^3 Density	HRA Hardness	Co Co Content	μm Grain Size	N/mm^2 Bending strength
YG10X	14.5	91.5	10	1.0	≥ 2800
ZK30UF	14.3-14.6	92.0	10	0.6	≥ 3000
GU25UF	14.3-14.6	93	12	0.4	≥ 4000

Tolerance of End Mill Diameter:

Every size: 0.000 ~ - 0.050 mm

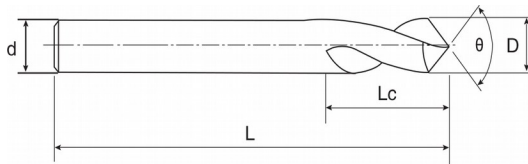
Specification:

Diameter: 1 mm – 25 mm

Overall Length: 25 mm – 150 mm

Customizd: production according to your needs.

Tungsten Steel Spotting Drill



Raw Material: HRC 45 deg tools uses Zigong YG10X, HRC 55 deg uses ZK30UF.

Coating: Products in stock are uncoated, various coatings available according to your needs.

Workpiece Material: Suitable for general steels, alloy steels, tempered steels, cast iron, and aluminum alloy, etc.

Products Design: Spotting drills can perform both centering and chamfering. Precise position the holes and chamfer are accomplished at one time to improve the processing efficiency.

Cat.No	Specifications		Cat.No	Specifications	
	D	L		D	L
MTS-3*50*90°	3	50	MTS-6*75*90°	6	75
MTS-3*75*90°	3	75	MTS-6*100*90°	6	100
MTS-4*50*90°	4	50	MTS-8*60*90°	8	60
MTS-4*75*90°	4	75	MTS-8*75*90°	8	75
MTS-4*100*90°	4	100	MTS-8*100*90°	8	100
MTS-5*50*90°	5	50	MTS-10*75*90°	10	75
MTS-5*75*90°	5	75	MTS-10*100*90°	10	100
MTS-5*100*90°	5	100	MTS-12*75*90°	12	75
MTS-6*50*90°	6	50	MTS-12*100*90°	12	100

Solid Carbide Insert Shims



MW0603

9.3 mm
3.18 mm
5.7 mm
6.4 mm



MW0603

9.3 mm
3.18 mm
5.7 mm
6.4 mm



MW0603

9.3 mm
3.18 mm
5.7 mm
6.4 mm



MW0603

9.3 mm
3.18 mm
5.7 mm
6.4 mm

		mm	mm	mm	mm
MTS-MT1603		9	3.18	5.7	6.4
MTS-MT2204		12.5	4.8	7.3	8
MTS-MW0603		9.3	3.18	5.7	6.4
MTS-MW0804		12.5	4.76	7.3	8
MTS-MD1504		12.5	4.76	7.3	8
MTS-MD1506		12.5	6.35	7.3	8
MTS-MC0903		9.3	3.18	5.7	6.4
MTS-MC1204		12.5	4.76	7.3	8
MTS-MC1604		15.6	4.76	9.8	10.6
MTS-MV1603		9.3	3.18	5.7	6.4
MTS-MS1204		12.5	4.76	7.3	8
MTS-STM16		9.4	3.18	5	4
MTS-STM16L		9.4	3.18	5	4
MTS-STM16R		9.4	3.18	5	4
MTS-STM22L		12.5	4	7	5.2
MTS-STM22R		12.5	4	7	5.2

The Calculation of Cutting Parameters

n	n (r/min)	$n = \frac{v_c \cdot 1000}{d \cdot \pi}$
v_c	v_c (m/min)	$v_c = \frac{d \cdot \pi \cdot n}{1000}$
f_z	f_z (mm/tooth)	$f_z = \frac{V_f}{z \cdot n}$
f	F (mm/r)	$f = f_z \cdot z$
V_f	V_f (mm/min)	$V_f = f_z \cdot z \cdot n = f \cdot n$
Q	Q (cm ³ /min)	$Q = \frac{a_e \cdot a_p \cdot V_f}{1000}$
V_{eff}	V_{eff} (m/min)	$V_{eff} = \frac{d_{eff} \cdot \pi \cdot n}{1000}$
d_{eff}	d_{eff} (mm)	
a_e	a_e (mm)	
a_p	a_p (mm)	
d	d (mm)	
z	z	
β		