

# SUPER COBALT END MILLS

ICS USA

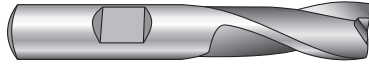
HEAVY DUTY

CENTER CUTTING

Super Cobalt End Mills have a high resistance to abrasion and will stay sharp even when the cutting edge is subjected to extreme temperatures. Ideal for stainless steels and other work hardening alloys.

TiN Coated Super Cobalt End Mills combine the best features of cobalt and TiN coating. While many dramatic improvements in tool life have been claimed for TiN coating, only when a very hard material such as super cobalt is used, can the full potential of TiN coating be realized. This is because the very high RC 80 hardness of the TiN coating cannot be effective under machining stresses which can deform or degrade the structure of the much less hard material which it overlays.

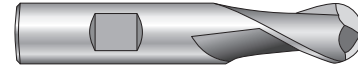
## 2 Flute - Single End



REGULAR LENGTH

RIGHT HAND CUT  
RIGHT HAND HELIX

## 2 Flute Ball Nose Single End



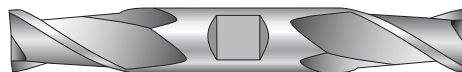
REGULAR LENGTH

SIZE	SHANK DIA.	FLUTE LENGTH	OVERALL LENGTH	PRICE EACH	
				SUPER COBALT	TiN COATED
				EMC-2R	EMC-2T
1/8	3/8	3/8	2-5/16	15.42	20.98
3/16	3/8	7/16	2-5/16	15.42	20.98
1/4	3/8	1/2	2-5/16	15.42	20.98
5/16	3/8	9/16	2-5/16	16.42	21.98
3/8	3/8	9/16	2-5/16	16.42	21.98
1/2	1/2	13/16	2-1/2	23.70	33.58
5/8	5/8	1-1/8	3-1/8	35.46	47.94
3/4	3/4	1-5/16	3-9/16	47.28	63.52
1	3/4	1-1/2	3-3/4	71.28	89.26
1	1	1-1/2	4-1/8	71.28	92.62
1-1/4	1-1/4	1-5/8	4-1/8	120.86	150.70
1-1/2	1-1/4	1-5/8	4-1/8	147.24	188.80

SIZE	SHANK DIA.	FLUTE LENGTH	OVERALL LENGTH	PRICE EACH	
				SUPER COBALT	TiN COATED
				EMC-2B	EMC-2BT
1/8	3/8	3/8	2-5/16	27.00	32.56
3/16	3/8	1/2	2-3/8	27.00	32.56
1/4	3/8	5/8	2-7/16	27.00	32.56
5/16	3/8	3/4	2-1/2	29.80	35.36
3/8	3/8	3/4	2-1/2	29.80	35.36
1/2	1/2	1	3	45.32	55.20
5/8	5/8	1-3/8	3-1/2	62.84	75.32
3/4	3/4	1-5/8	3-7/8	73.84	90.08
1	1	2-1/4	4-3/4	117.88	139.20
1-1/4	1-1/4	2-1/2	5	143.58	173.40
1-1/2	1-1/4	2-1/2	5	159.76	201.32

TOLERANCES  
Flute Dia.: + .003 - .000"  
Shank Dia.: + .0005 - .0005"

## 2 Flute - Double End



REGULAR LENGTH

SIZE	SHANK DIA.	FLUTE LENGTH	OVERALL LENGTH	PRICE EACH	
				SUPER COBALT	TiN COATED
				DEMC-2R	DEMC-2T
1/8	3/8	3/8	3-1/16	24.04	33.60
5/32	3/8	7/16	3-1/8	24.04	33.60
3/16	3/8	7/16	3-1/8	24.04	33.60
7/32	3/8	1/2	3-1/8	24.04	33.60
1/4	3/8	1/2	3-1/8	24.04	33.60
9/32	3/8	9/16	3-1/8	25.44	35.00
5/16	3/8	9/16	3-1/8	25.44	35.00
11/32	3/8	9/16	3-1/8	25.44	35.00
3/8	3/8	9/16	3-1/8	25.44	35.00
13/32	1/2	13/16	3-3/4	34.50	50.54

SIZE	SHANK DIA.	FLUTE LENGTH	OVERALL LENGTH	PRICE EACH	
				SUPER COBALT	TiN COATED
				DEMC-2R	DEMC-2T
7/16	1/2	13/16	3-3/4	34.50	50.54
15/32	1/2	13/16	3-3/4	34.50	50.54
1/2	1/2	13/16	3-3/4	34.50	50.54
9/16	5/8	1-1/8	4-1/2	50.52	69.72
5/8	5/8	1-1/8	4-1/2	50.52	69.72
11/16	3/4	1-5/16	5	63.14	89.74
3/4	3/4	1-5/16	5	63.14	89.74
7/8	7/8	1-9/16	5-1/2	79.20	116.56
1	1	1-5/8	5-7/8	99.20	136.38

TOLERANCES  
Flute Dia.: +.0000 -.0015"  
Shank Dia.: +.0005 -.0005"

NOTE: All Cobalt End Mills are furnished with a Weldon flat on the shank.