

ISO^{ECO}TURN

Tungaloy Report No. 426S2-G

New grades and chipbreakers for this economical insert series





Latest grades and chipbreakers for improved performance in all ISO applications

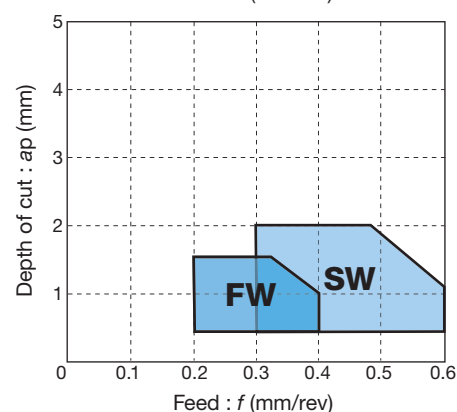
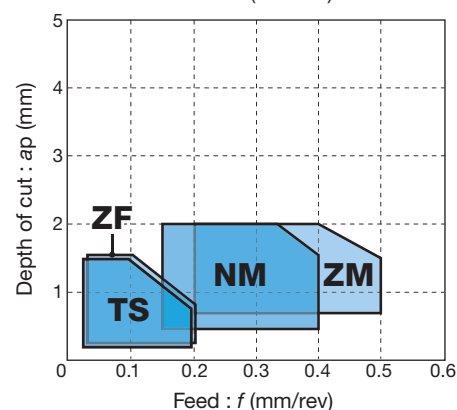
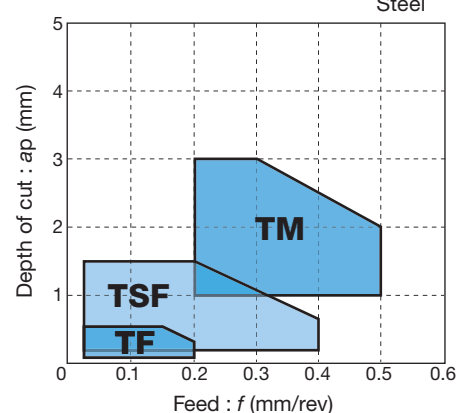
GRADES & CHIPBREAKERS

T9200 SERIES (CVD) **PREMIUMTEC**

- T9205** : Good wear resistance
- T9215** : First choice for machining steel
- T9225** : Grade with a good balance of wear resistance and fracture toughness



Steel



NS9530 (Cermet)

GT9530 / AT9530 (Coated cermet)

PREMIUMTEC

- NS9530** : Suitable for finishing to medium cutting of steel
- GT9530** : Provides stable tool life and excellent surface finish for finish machining of steel at high cutting speeds
- AT9530** : Outstanding wear resistance. First choice for machining alloy steel

AH600 SERIES (PVD)

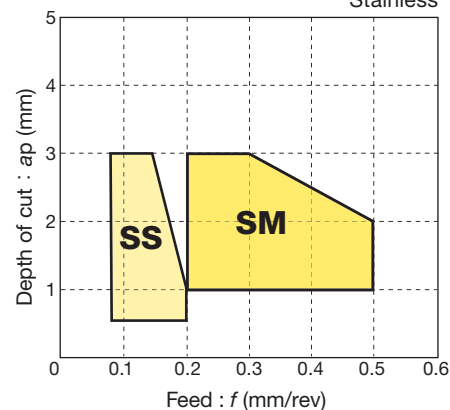
PREMIUMTEC

AH630 : Good resistance to wear and fracture in machining stainless steel at low to medium cutting speed

AH645 : High fracture resistance in machining stainless steel



Stainless



T6100 SERIES (CVD)

PREMIUMTEC

T6120 : Good wear resistance in continuous cutting at high speed

T6130 : High wear resistance in cutting at medium to high speed

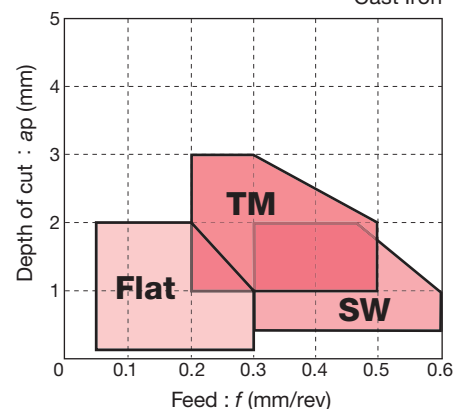
T515 (CVD)

PREMIUMTEC

T515 : Good wear resistance even in high speed machining



Cast Iron



AH8000 SERIES (PVD)

PREMIUMTEC

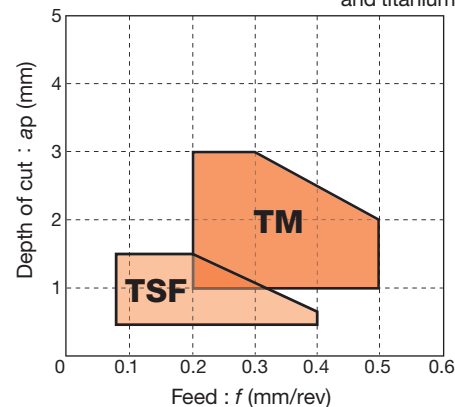
AH8015 : Strong resistance to wear and built up edge



Stainless



Superalloys and titanium



AH120 (PVD)

PREMIUMTEC

AH120 : Suitable for machining steel, stainless steel, cast iron and heat resistant alloys under general cutting conditions



Steel



Stainless



Cast Iron

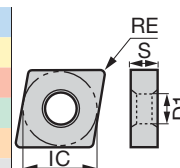


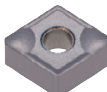
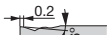
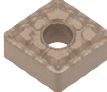
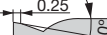
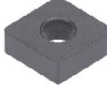
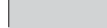
Superalloys and titanium

- : Continuous cutting
- ◐ : Light interrupted cutting
- ⊗ : Heavy interrupted cutting



**Rhombic, 80°
with hole**

[illegible]

Application	Chipbreaker Designation		Coated											Coated cermet		Cermet		Dimension (mm)							
			T9205	T9215	T9225	T6120	T6130	AH630	AH645	AH120	AH8015	T515	T5115			GT9530	AT9530		NS9530			RE	IC	S	D1
Finishing	SS	CNMG090404E-SS						●	●													0.4	9.525	4.76	3.81
		CNMG090408E-SS						●	●													0.8	9.525	4.76	3.81
																									
Medium cutting	TM	CNMG090404E-TM		●	●	●	●	●		●	●	●										0.4	9.525	4.76	3.81
		CNMG090408E-TM		●	●	●	●	●		●	●	●										0.8	9.525	4.76	3.81
		CNMG090412E-TM		●	●	●	●	●		●	●	●										1.2	9.525	4.76	3.81
Finishing to medium cutting	ZM	CNMG090408E-ZM		●	●																	0.8	9.525	4.76	3.81
		CNMG090412E-ZM		●	●																	1.2	9.525	4.76	3.81
																									
Medium cutting	SM	CNMG090404E-SM				●	●	●														0.4	9.525	4.76	3.81
		CNMG090408E-SM				●	●	●														0.8	9.525	4.76	3.81
		CNMG090412E-SM				●	●	●														1.2	9.525	4.76	3.81
Finishing to medium cutting	-	CNMA090404E								●												0.4	9.525	4.76	3.81
		CNMA090408E								●												0.8	9.525	4.76	3.81
		CNMA090412E								●												1.2	9.525	4.76	3.81
		CNMA090416E								●												1.6	9.525	4.76	3.81

● : New product
● : Line up

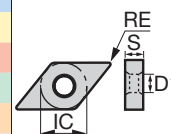
DN

NEGATIVE TYPE

- : Continuous cutting
- ◐ : Light interrupted cutting
- ⊗ : Heavy interrupted cutting



**Rhombic, 55°
with hole**

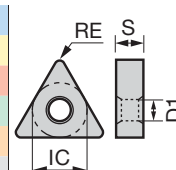
[illegible][illegible]

- : New product
● : Line up

- : Continuous cutting
- ◐ : Light interrupted cutting
- ⊗ : Heavy interrupted cutting



**Triangular, 60°
with hole**

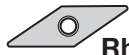
[illegible][illegible]

● : Line up

Insert NEGATIVE TYPE

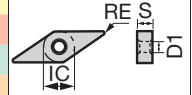
● : Continuous cutting
● : Light interrupted cutting
✱ : Heavy interrupted cutting

VN



Rhombic, 35°
with hole

P	Steel
M	Stainless
K	Cast iron
N	Non-ferrous
S	Superalloys
H	Hard materials

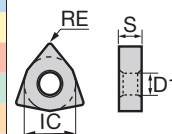


Application	Chipbreaker	Designation	Coated										Coated cermet		Cermet		Dimension (mm)			
			T9205	T9215	T9225	T6120	T6130	AH630	AH645	AH120	AH8015	T515	T5115	GT9530	AT9530	NS9530	RE	IC	S	D1
Precision finishing		VNMG120402E-TF	●	●												●	0.2	7.15	4.76	3.81
		VNMG120404E-TF	●	●												●	0.4	7.15	4.76	3.81
		VNMG120408E-TF	●	●												●	0.8	7.15	4.76	3.81
Finishing		VNMG120402E-TSF	●	●										●	●	●	0.2	7.15	4.76	3.81
		VNMG120404E-TSF	●	●										●	●	●	0.4	7.15	4.76	3.81
		VNMG120408E-TSF	●	●										●	●	●	0.8	7.15	4.76	3.81
Finishing to medium cutting		VNMG120404E-ZF	●	●													0.4	7.15	4.76	3.81
		VNMG120408E-ZF	●	●													0.8	7.15	4.76	3.81
Medium cutting		VNMG120404E-TM	●	●													0.4	7.15	4.76	3.81
		VNMG120408E-TM	●	●													0.8	7.15	4.76	3.81
		VNMG120412E-TM	●	●													1.2	7.15	4.76	3.81
Finishing to medium cutting		VNMG120404E-SM				●	●	●	●								0.4	7.15	4.76	3.81
		VNMG120408E-SM				●	●	●	●								0.8	7.15	4.76	3.81
Finishing to medium cutting		VNMA120404E										●					0.4	7.15	4.76	3.81
		VNMA120408E										●					0.8	7.15	4.76	3.81

● : New product
● : Line up

- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

**Trigon, 80°
with hole**

[illegible]

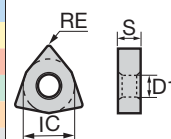
* Please contact our sales representative for your inquiries about the program adjustment when using SW/FW for machining of radius shape or taper machining.

● : New product
● : Line up

- : Continuous cutting
- ◐ : Light interrupted cutting
- ⊕ : Heavy interrupted cutting



P	Steel
M	Stainless
K	Cast iron
N	Non-ferrous
S	Superalloys
H	Hard materials

[illegible]

- : New product
- : Line up



follow us at:
facebook.com/tungaloyjapan
twitter.com/tungaloyjapan
www.youtube.com/tungaloycorporation



AS9100 Certified
78006
2015.11.04

ISO 14001 Certified
EC97J1123
1997.11.26

the 1990s, the number of people in the United States who are 65 years of age or older has increased by 50 percent, and the number of people 75 years of age or older has increased by 100 percent. The number of people 85 years of age or older has increased by 200 percent. The number of people 95 years of age or older has increased by 400 percent. The number of people 100 years of age or older has increased by 1,000 percent. The number of people 105 years of age or older has increased by 2,000 percent. The number of people 110 years of age or older has increased by 4,000 percent. The number of people 115 years of age or older has increased by 8,000 percent. The number of people 120 years of age or older has increased by 16,000 percent. The number of people 125 years of age or older has increased by 32,000 percent. The number of people 130 years of age or older has increased by 64,000 percent. The number of people 135 years of age or older has increased by 128,000 percent. The number of people 140 years of age or older has increased by 256,000 percent. The number of people 145 years of age or older has increased by 512,000 percent. The number of people 150 years of age or older has increased by 1,024,000 percent. The number of people 155 years of age or older has increased by 2,048,000 percent. The number of people 160 years of age or older has increased by 4,096,000 percent. The number of people 165 years of age or older has increased by 8,192,000 percent. The number of people 170 years of age or older has increased by 16,384,000 percent. The number of people 175 years of age or older has increased by 32,768,000 percent. The number of people 180 years of age or older has increased by 65,536,000 percent. The number of people 185 years of age or older has increased by 131,072,000 percent. The number of people 190 years of age or older has increased by 262,144,000 percent. The number of people 195 years of age or older has increased by 524,288,000 percent. The number of people 200 years of age or older has increased by 1,048,576,000 percent. The number of people 205 years of age or older has increased by 2,097,152,000 percent. The number of people 210 years of age or older has increased by 4,194,304,000 percent. The number of people 215 years of age or older has increased by 8,388,608,000 percent. The number of people 220 years of age or older has increased by 16,777,216,000 percent. The number of people 225 years of age or older has increased by 33,554,432,000 percent. The number of people 230 years of age or older has increased by 67,108,864,000 percent. The number of people 235 years of age or older has increased by 134,217,728,000 percent. The number of people 240 years of age or older has increased by 268,435,456,000 percent. The number of people 245 years of age or older has increased by 536,870,912,000 percent. The number of people 250 years of age or older has increased by 1,073,741,824,000 percent. The number of people 255 years of age or older has increased by 2,147,483,648,000 percent. The number of people 260 years of age or older has increased by 4,294,967,296,000 percent. The number of people 265 years of age or older has increased by 8,589,934,592,000 percent. The number of people 270 years of age or older has increased by 17,179,869,184,000 percent. The number of people 275 years of age or older has increased by 34,359,738,368,000 percent. The number of people 280 years of age or older has increased by 68,719,476,736,000 percent. The number of people 285 years of age or older has increased by 137,438,953,472,000 percent. The number of people 290 years of age or older has increased by 274,877,906,944,000 percent. The number of people 295 years of age or older has increased by 549,755,813,888,000 percent. The number of people 300 years of age or older has increased by 1,099,511,627,776,000 percent. The number of people 305 years of age or older has increased by 2,199,023,255,552,000 percent. The number of people 310 years of age or older has increased by 4,398,046,511,104,000 percent. The number of people 315 years of age or older has increased by 8,796,093,022,208,000 percent. The number of people 320 years of age or older has increased by 17,592,186,044,416,000 percent. The number of people 325 years of age or older has increased by 35,184,372,088,832,000 percent. The number of people 330 years of age or older has increased by 70,368,744,177,664,000 percent. The number of people 335 years of age or older has increased by 140,737,488,355,328,000 percent. The number of people 340 years of age or older has increased by 281,474,976,710,656,000 percent. The number of people 345 years of age or older has increased by 562,949,953,421,312,000 percent. The number of people 350 years of age or older has increased by 1,125,899,906,842,624,000 percent. The number of people 355 years of age or older has increased by 2,251,799,813,685,248,000 percent. The number of people 360 years of age or older has increased by 4,503,599,627,370,496,000 percent. The number of people 365 years of age or older has increased by 9,007,199,254,740,992,000 percent. The number of people 370 years of age or older has increased by 18,014,398,509,481,984,000 percent. The number of people 375 years of age or older has increased by 36,028,797,018,963,968,000 percent. The number of people 380 years of age or older has increased by 72,057,594,037,927,936,000 percent. The number of people 385 years of age or older has increased by 144,115,188,075,855,872,000 percent. The number of people 390 years of age or older has increased by 288,230,376,151,711,744,000 percent. The number of people 395 years of age or older has increased by 576,460,752,303,423,488,000 percent. The number of people 400 years of age or older has increased by 1,152,921,504,606,846,976,000 percent. The number of people 405 years of age or older has increased by 2,305,843,009,213,693,952,000 percent. The number of people 410 years of age or older has increased by 4,611,686,018,427,387,904,000 percent. The number of people 415 years of age or older has increased by 9,223,372,036,854,775,808,000 percent. The number of people 420 years of age or older has increased by 18,446,744,073,709,551,616,000 percent. The number of people 425 years of age or older has increased by 36,893,488,147,419,103,232,000 percent. The number of people 430 years of age or older has increased by 73,786,976,294,838,206,464,000 percent. The number of people 435 years of age or older has increased by 147,573,952,589,676,412,928,000 percent. The number of people 440 years of age or older has increased by 295,147,905,179,352,825,856,000 percent. The number of people 445 years of age or older has increased by 590,295,810,358,705,651,712,000 percent. The number of people 450 years of age or older has increased by 1,180,591,620,717,411,303,424,000 percent. The number of people 455 years of age or older has increased by 2,361,183,241,434,822,606,848,000 percent. The number of people 460 years of age or older has increased by 4,722,366,482,869,645,213,696,000 percent. The number of people 465 years of age or older has increased by 9,444,732,965,739,290,427,392,000 percent. The number of people 470 years of age or older has increased by 18,889,465,931,478,580,854,784,000 percent. The number of people 475 years of age or older has increased by 37,778,931,862,957,161,709,568,000 percent. The number of people 480 years of age or older has increased by 75,557,863,725,914,323,419,136,000 percent. The number of people 485 years of age or older has increased by 151,115,727,451,828,646,838,272,000 percent. The number of people 490 years of age or older has increased by 302,231,454,903,657,293,676,544,000 percent. The number of people 495 years of age or older has increased by 604,462,909,807,314,587,353,088,000 percent. The number of people 500 years of age or older has increased by 1,208,925,819,614,629,174,706,176,000 percent. The number of people 505 years of age or older has increased by 2,417,851,639,229,258,349,412,352,000 percent. The number of people 510 years of age or older has increased by 4,835,703,278,458,516,698,824,704,000 percent. The number of people 515 years of age or older has increased by 9,671,406,556,917,033,397,649,408,000 percent. The number of people 520 years of age or older has increased by 19,342,813,113,834,066,795,298,816,000 percent. The number of people 525 years of age or older has increased by 38,685,626,227,668,133,590,597,632,000 percent. The number of people 530 years of age or older has increased by 77,371,252,455,336,267,181,195,264,000 percent. The number of people 535 years of age or older has increased by 154,742,504,910,672,534,362,390,528,000 percent. The number of people 540 years of age or older has increased by 309,485,009,821,345,068,724,781,056,000 percent. The number of people 545 years of age or older has increased by 618,970,019,642,690,137,449,562,112,000 percent. The number of people 550 years of age or older has increased by 1,237,940,039,285,380,274,899,124,224,000 percent. The number of people 555 years of age or older has increased by 2,475,880,078,570,760,549,798,248,448,000 percent. The number of people 560 years of age or older has increased by 4,951,760,157,141,521,099,596,496,896,000 percent. The number of people 565 years of age or older has increased by 9,903,520,314,283,042,199,193,993,792,000 percent. The number of people 570 years of age or older has increased by 19,807,040,628,566,084,398,387,9

 FIND US ON THE CLOUD!
machiningcloud.com

Mar. 2021 (TJ)