

Simple guide to select turning insert

Quickly find the correct grade and chip breaker in turning application.
For more detail information, visit Taegutec website.

Turning



Negative type inserts

Finishing	Medium	Roughing
MLP TT8105B	MGP TT8115B	RGP TT8125B
EA TT9215 TT5080	EM TT9225 TT9080	ET TT9235 TT8080
MT TT7005	MT TT7015	KT TT7025
ML K10	ML K10	ML K10
EA TT3005	MGS TT3010	ET TT3020
MGP TT2010	MGP TT2010	MGP TT2010

Positive type inserts

Finishing	Medium	Roughing
FG TT8105B	PC TT8115B	MT TT8125B
FG TT9215	PC TT9225	MT TT9235
FG TT7005	MT TT7015	MT TT7025
FL K10	FL K10	FL K10
FG TT3005	MT TT3010	MT TT3020



Cutting data

Steel

Material	Condition	Hardness	TT8105B	TT8115B	TT8125B	TT8135B	TT5100
Non-alloy steel Cast steel Free cutting steel	Annealed C<0.25%	HB 125	310-580	280-530	230-480	190-400	200-450
	Annealed C>=0.25%	HB 190	270-530	240-480	200-420	170-360	170-390
	Quenched and tempered C<0.55%	HB 250	230-490	200-440	160-380	130-320	130-350
	Annealed C>=0.55%	HB 220	250-500	220-450	190-400	160-340	160-370
Low alloy steel Cast steel (less than 5% of alloying elements)	Quenched and tempered	HB 300	210-470	180-420	150-350	120-300	120-320
	Annealed	HB 200	230-550	200-500	170-400	130-280	140-370
		HB 275	180-330	150-280	140-250	80-170	110-220
		HB 300	160-300	130-250	120-230	70-150	90-200
High alloy steel Cast steel Tool steel	Quenched and tempered	HB 350	150-280	120-230	110-200	60-140	80-170
		HB 200	210-420	190-380	140-280	100-220	110-250
		HB 325	100-200	90-180	70-130	45-100	40-100

Stainless steel

Material	Condition	Hardness	TT9215	TT9225	TT9235	TT5080 (PVD)	TT9080 (PVD)	TT8080 (PVD)
Stainless steel Cast steel	Ferritic/ Martensitic	HB 200	160-250	120-200	110-170	160-390	120-290	110-260
	Martensitic	HB 240	150-230	110-180	100-150	160-280	120-270	110-240
	Austenitic	HB 180	130-220	100-170	90-150	100-250	90-240	80-200

Cast iron

Material	Condition	Hardness	TT7005	TT7015	TT7025
Gray cast iron (GG)	Ferritic	HB 160	300-550	290-450	280-400
	Pearlitic	HB 250	300-430	250-360	200-320
Cast iron nodular (GGG)	Ferritic	HB 180	160-400	150-350	140-300
	Pearlitic	HB 260	140-350	130-300	120-280
Malleable cast iron	Ferritic	HB 130	200-460	250-390	230-350
	Pearlitic	HB 230	180-350	200-320	180-300

Non-ferrous materials

Material	Condition	Hardness	K10
Aluminum wrought alloy	Not cureable	HB 60	200-1000
	Cured	HB 100	200-1000
Aluminum cast alloyed	Not cureable Si<12%	HB 75	50-400
	Cured	HB 90	50-500
	High temp. Si>12%	HB 130	40-350
Copper alloys	Free cutting Pb>1%	HB 110	50-500
	Brass	HB 90	50-500
	Electrolytic copper	HB 100	30-300
Non-metallic	Duroplastics Fiber plastics	70 Shore D	50-300
	Hard rubber	55 Shore D	50-150

Heat resistant super alloys

Material	Condition	Hardness	TT3005	TT3010 (PVD)	TT3020 (PVD)
High temp. alloys (Fe based)	Annealed	HB 200	60-200	50-170	40-165
	Cured	HB 280	50-180	40-150	30-145
High temp. alloys (Ni or Co based)	Annealed	HB 250	55-120	45-90	35-85
	Cured	HB 350	45-110	35-80	30-75
	Cast	HB 320	40-100	30-70	30-65
Titanium Ti alloys	Pure	HB 190	120-220	110-190	100-185
	Alpha+beta alloys, hardened	HB 310	60-120	50-90	40-85

Hardened steel

Material	Condition	Hardness	TT2010 (PVD)
Hardened steel	Hardened	55 HRC	40-70
	Hardened	60HRC	30-60

* Cutting condition can be changed according to workpiece and insert shape.