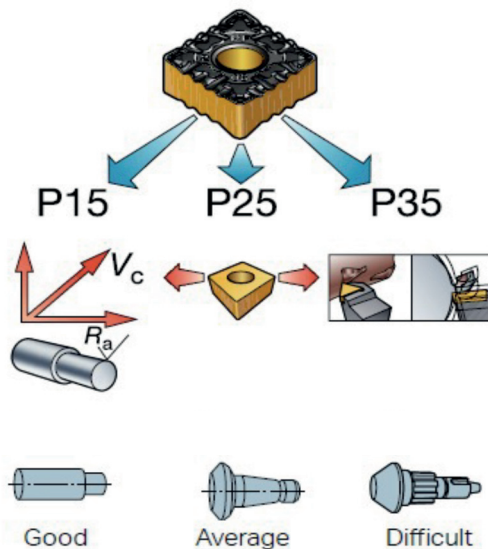


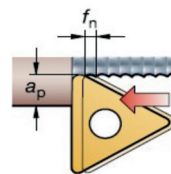
MATERIALS

P	Steel
M	Stainless steel
K	Cast iron
N	Non-ferrous
S	Heat resistant super alloys and titanium
H	Hardened steel

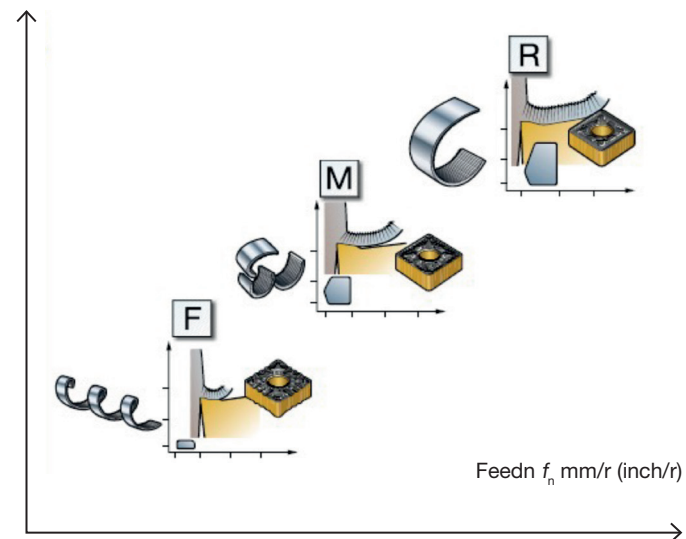


$$V_c = \frac{\pi \times D_m \times n}{1000} \text{ m/min}$$

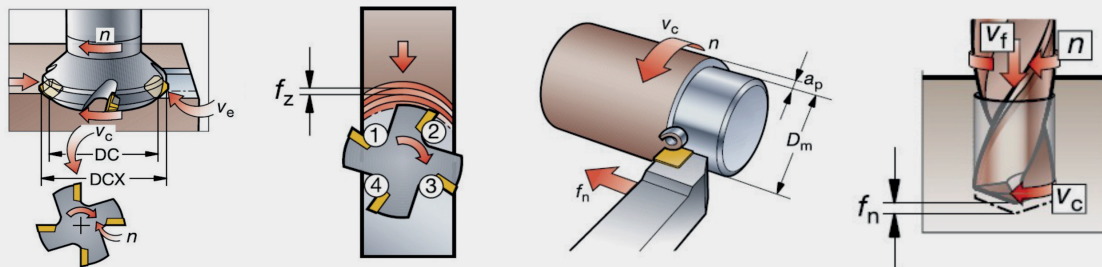
$$V_f = f_z \times Z_c \times n \text{ mm/min}$$



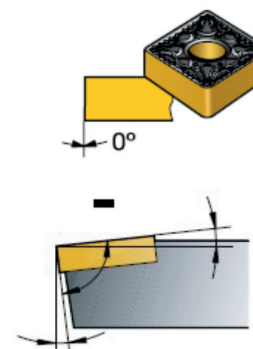
Cutting depth,
 a_p mm (inch)



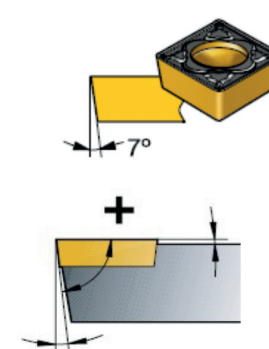
FEEDS, SPEEDS AND FORCES



Negative style



Positive style



CODE OF INSERTS

C N M G 12 04 08 N - GE

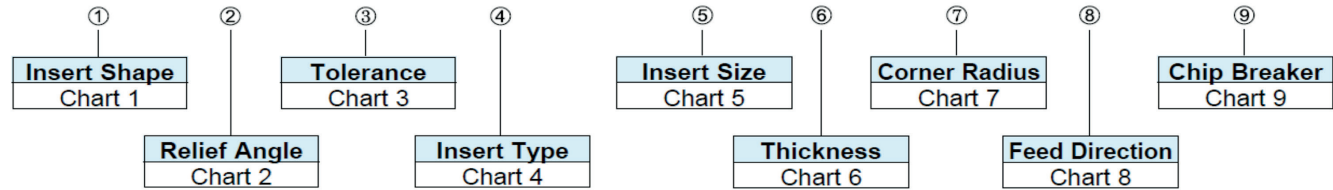


Chart 1: Insert Shape

Symbol	Insert Shape	Angle
C		80°
D		55°
E		75°
F		50°
V		35°
R		—
S		90°
T		60°
W		80°
A		85°
B		82°
K		55°
H		120°
O		135°
P		108°
L		90°
M		86°

Chart 2: Relief Angle

Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P*	11°
O	Others

* Inserts with a 10° relief angle are sometimes considered as "P"

Chart 3: Tolerance (mm)

Symbol	Nose Height	Inscribed Circle	Thickness
A	± 0,005	± 0,025	± 0,025
F	± 0,005	± 0,013	± 0,025
C	± 0,013	± 0,025	± 0,025
H	± 0,013	± 0,013	± 0,025
E	± 0,025	± 0,025	± 0,025
G	± 0,025	± 0,025	± 0,13
J*	± 0,005	± 0,05 – ± 0,15	± 0,025
K*	± 0,013	± 0,05 – ± 0,15	± 0,025
L*	± 0,025	± 0,05 – ± 0,15	± 0,025
M*	± 0,08 – ± 0,2	± 0,05 – ± 0,15	± 0,13
N*	± 0,08 – ± 0,2	± 0,05 – ± 0,15	± 0,025
U*	± 0,13 – ± 0,38	± 0,08 – ± 0,25	± 0,13

Chart 4: Insert Hole or Breaker

Symbol	Hole	Hole Style	Chip Breaker	Shape	Symbol	Hole	Hole Style	Chip Breaker	Shape
N	No Hole	—	Nil		A	With Hole	Straight Hole	Nil	
R	No Hole	—	One Face		M	With Hole	Straight Hole	One Face	
F	No Hole	—	Both Faces		G	With Hole	Straight Hole	Both Faces	
W	With Hole	Straight hole with top end counter-sink (40°-60°)	Nil		B	With Hole	Straight hole with top end counter-sink (70°-90°)	Nil	
T	With Hole	Straight hole with top end counter-sink (40°-60°)	One Face		H	With Hole	Straight hole with top end counter-sink (70°-90°)	One Face	
Q	With Hole	Straight hole with top end counter-sink (40°-60°)	Both Faces		C	With Hole	Straight hole with top end counter-sink (70°-90°)	Both Faces	
U	With Hole	Straight hole with top end counter-sink (40°-60°)	Both Faces		J	With Hole	Straight hole with top end counter-sink (70°-90°)	Both Faces	
					X	—	—	—	Special

Chart 5: Cutting Edge Length (mm)

Shape	Symbol	Cutting Edge	Inscribed Circle	Shape	Symbol	Cutting Edge	Inscribed Circle	Shape	Symbol	Cutting Edge	Inscribed Circle
	03	3,55	3,50		07	7,7	6,35		03	3,8	5,56
	04	4,97	4,30		09	9,7	7,94		04	4,3	6,35
	06	6,4	6,35		11	11,6	9,525		05	5,4	7,94
	08	8,0	7,94		15	15,5	12,70		06	6,5	9,525
	09	9,7	9,525		19	19,4	15,875		08	8,7	12,70
	12	12,9	12,70		08	8,3	4,76		11	4,3	6,35
	16	16,1	15,875		09	9,7	5,56		16	6,5	9,525
	19	19,3	19,05		11	11,1	6,35		08	8,0	8,0
	25	25,8	25,4		16	16,6	9,525		10	10,0	10,0
					22	22,1	12,7		12	12,0	12,0
	06	6,35	6,35		06	6,9	3,97		12	12,70	12,70
	S7	7,14	7,14		08	8,2	4,76		15	15,875	15,875
	07	7,94	7,94		09	9,6	5,56		16	16,0	16,0
	09	9,525	9,525		11	11,0	6,35		19	19,05	19,05
	12	12,70	12,70		13	13,7	7,94		20	20,0	20,0
	15	15,875	15,875		16	16,5	9,525		24	24,0	24,0
	19	19,05	19,05		22	22,0	12,70		25	25,0	25,0
	25	25,40	25,40		27	27,5	15,875		25	25,40	25,40
	31	31,75	31,75		33	33,0	19,05		32	32,0	32,0

Chart 6: Thickness

Symbol	Thickness (mm)
X1	*
01	1,59
02	2,38
T2	2,78
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94
09	9,52

(*):
CCET03X1 Insert thickness: 1,40
CCET04X1 Insert thickness: 1,80

Chart 7: Nose Radius

Symbol	Nose Radius (mm)
00	Sharp Point
003	0,03
008	0,08
01	0,1
015	0,15
018	0,18
02	0,2
035	0,35
04	0,4
08	0,8
10	1,0
12	1,2
16	1,6
20	2,0
24	2,4
32	3,2
M0	Round Insert (Metric)
00	Round Insert (Imperial)

An "M" after the nose radius indicates a negative tolerance
Example:

Chart 8: Feed Direction

Symbol	Direction
R	Right-hand
L	Left-hand
N	Neutral

Chart 9: Chip Breaker