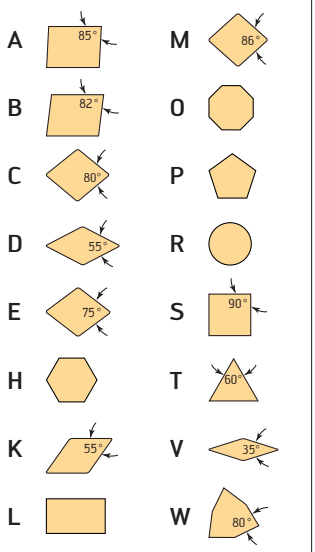
Designation key in accordance with ISO 1832 for indexable inserts for turning

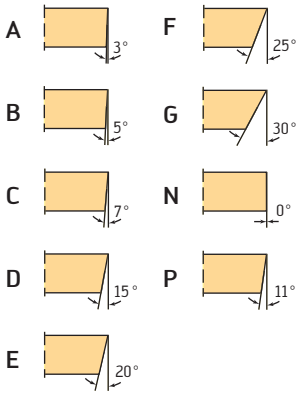
Example 1:

C	N	M	G	12	04	08	–	M	P	5
1	2	3	4	5	6	7		12	13	14

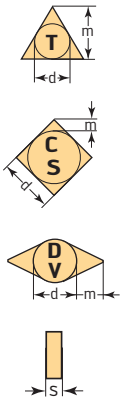
1 Insert shape



2 Clearance angle



3 Clearance angle



Permissible deviation in mm for

	d	m	s
A	± 0,025	± 0,005	± 0,025
C	± 0,025	± 0,013	± 0,025
E	± 0,025	± 0,025	± 0,025
F	± 0,013	± 0,005	± 0,025
G	± 0,025	± 0,025	± 0,130
H	± 0,013	± 0,013	± 0,025
J[1]	± 0,05–0,15[2]	± 0,005	± 0,025
K[1]	± 0,05–0,15[2]	± 0,013	± 0,025
L[1]	± 0,05–0,15[2]	± 0,025	± 0,025
M	± 0,05–0,15[2]	± 0,08–0,20[2]	± 0,130
N	± 0,05–0,15[2]	± 0,08–0,20[2]	± 0,025
U	± 0,08–0,25[2]	± 0,13–0,38[2]	± 0,130

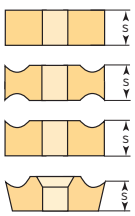
[1] Inserts with ground planar cutting edges
[2] Depending on the insert size (see ISO standard 1832)

5 Cutting edge length l [mm]

Inner circle diameter d		C		D		R	S		T		V		W	
mm	Inches	Size	l	Size	l	Size	Size	l	Size	l	Size	l	Size	l
3,97	5/32								**06**	6,9				
5	0,197					**05**							**03**	3,8
5,56	7/32								**09**	9				
6	0,236					**06**								
6,35	2/8	**06**	6,4	**07**	7,7	**06**[1]			**11**	11	**11**	11	**04**	4,3
8	0,315					**08**							**05**	5,2
9,525	3/8	**09**	9,6	**11**	11,6	**09**[1]	**09**	9,5	**16**	16,5	**16**	16,5	**06**	6,5
10	0,394					**10**								
12	0,472					**12**								
12,7	4/8	**12**	12,9	**15**	15,5	**12**[1]	**12**	12,7	**22**	22	**22**	22,1	**08**	8,7
15,875	5/8	**16**	16,1				**15**	15,8	**27**	27			**10**	10,8
16	0,63					**16**								
17,46	11/16												**12**	11,6
19,05	6/8	**19**	19,3			**19**[1]	**19**	19,0						
20	0,787					**20**								
25	0,984					**25**								
25,4	8/8	**25**	25,8			**25**[1]	**25**	25,4						
32	1,26					**32**								

[1] Inch version (00)

6 Insert thickness s [mm]



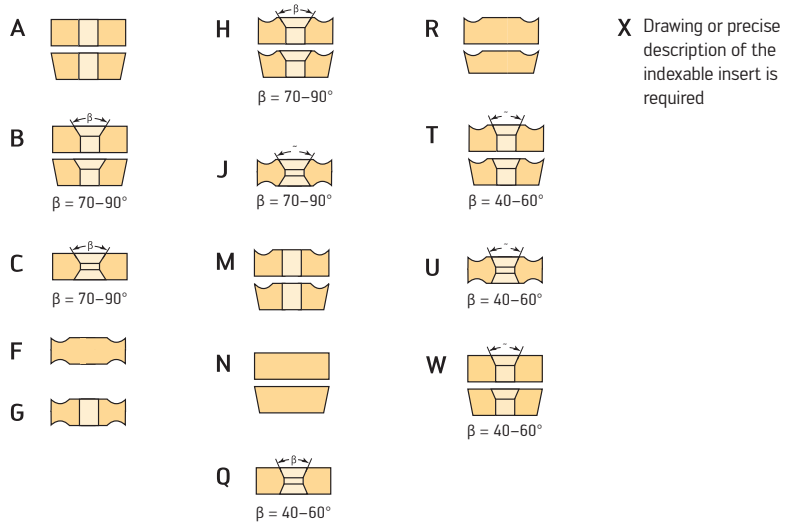
01	s = 1,59
T1	s = 1,98
02	s = 2,38
T2	s = 2,78
03	s = 3,18
T3	s = 3,97
04	s = 4,76
05	s = 5,56
06	s = 6,35
07	s = 7,94
09	s = 9,52

Designation key in accordance with ISO 1832 for indexable inserts for turning (continued)

Example 2:

T	N	M	A	16	04	08	T	020	20
1	2	3	4	5	6	7	8	10	11

4 – Machining and fastening features



7 – Corner radius r [mm]

005M	r = 0,03
01M	r = 0,07
01	r = 0,1
02M	r = 0,17
02	r = 0,2
04M	r = 0,37
04	r = 0,4
08M	r = 0,77
08	r = 0,8
12	r = 1,2
16	r = 1,6
24	r = 2,4

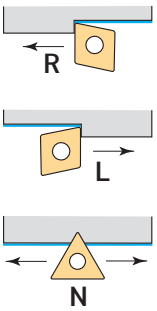
R

M0 Metric version (diameter in [mm])

00 Inch version (diameter with inch units in [mm])

8 – Edge formation

9 – Cutting direction



10 – Chamfer width

010 = 0,10 mm
020 = 0,20 mm
025 = 0,25 mm
070 = 0,70 mm
150 = 1,50 mm
200 = 2,00 mm

11 – Chamfer angle

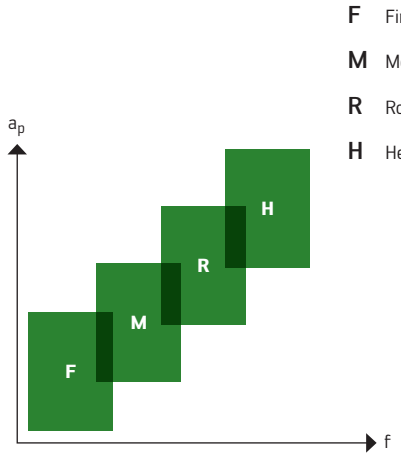
15 = 15°
20 = 20°

Geometry designation key for indexable inserts for turning

Geometry index

C	N	M	G	12	04	08	–	M	P	5
1	2	3	4	5	6	7		12	13	14

12 Chip breaking area

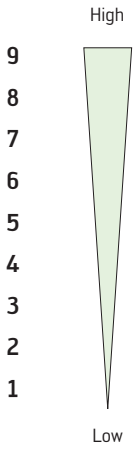


F	Finishing operation
M	Medium machining
R	Roughing operation
H	Heavy cutting

13 Material

P	Steel
M	Stainless steel
K	Cast iron
N	NF metals
S	Materials with difficult cutting properties
H	Hard materials
U	Universal
L	Long-chipping materials
W	Wiper
X	Ground chip former

14 Feed/depth of cut within the chip breaking area



Designation key for carbide cutting tool materials – Turning

Example:

W	P	P	20	G
Walter	1	2	3	4

1

1. Primary application or coating type

P	Steel
M	Stainless steel
K	Cast iron
N	NF metals
S	Materials with difficult cutting properties
H	Hard materials
X	PVD coating

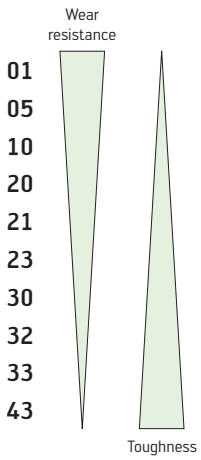
2

2. Primary application

P	Steel
M	Stainless steel
K	Cast iron
N	NF metals
S	Materials with difficult cutting properties
H	Hard materials

3

ISO range of applications



Cutting tool materials for:

0	ISO turning
1	ISO turning
5	ISO turning
2	Thread turning
3	Grooving

4

Generation

G	Tiger·tec® Gold
S	Tiger·tec® Silver