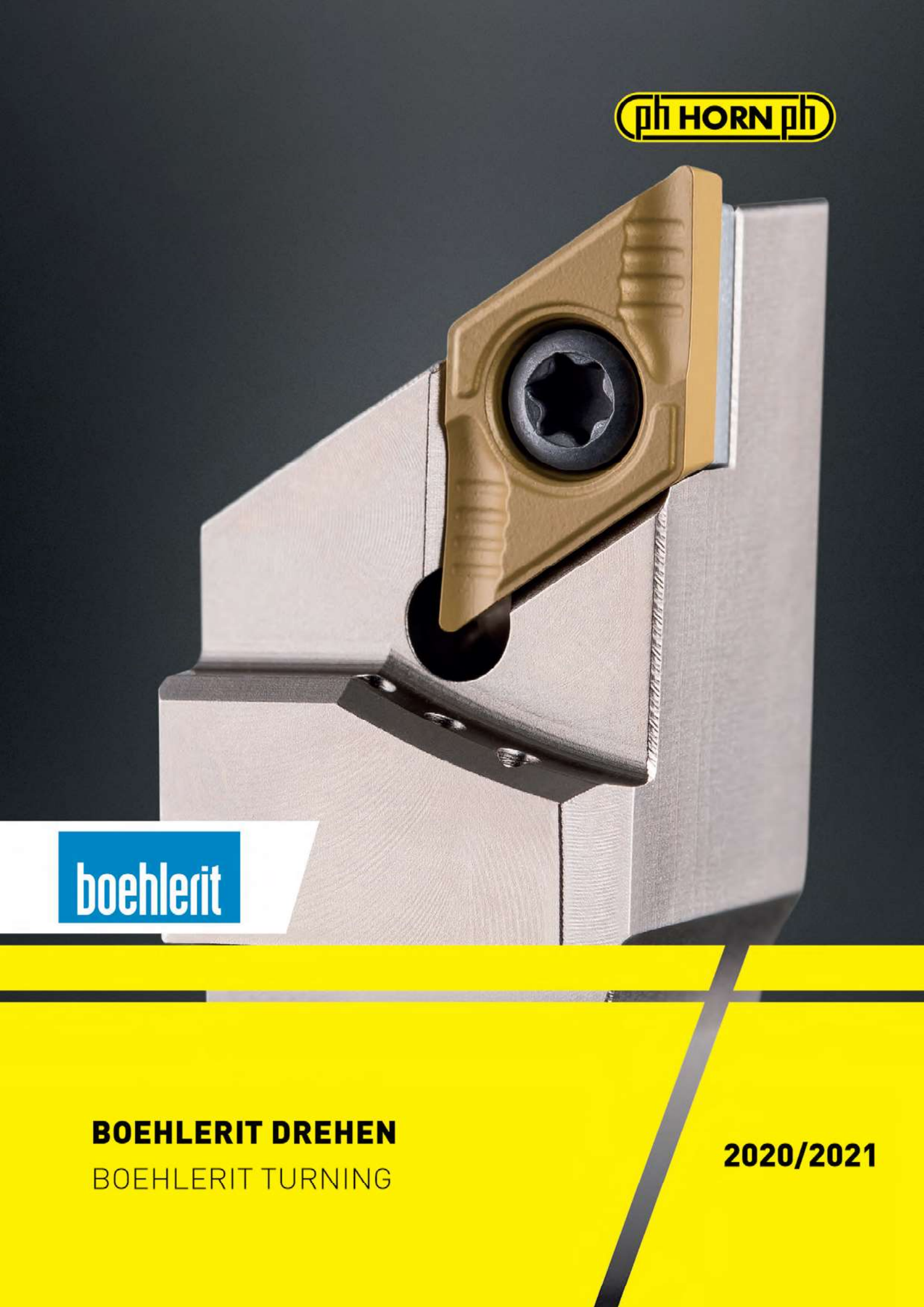


BOEHLERIT DREHEN

BOEHLERIT TURNING

2020/2021

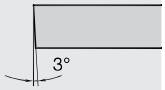
DAS WERKZEUG
HORN TOOLS

Drehen
Turning

W
Grundform
Basic form

A		85°
B		82°
C		80°
D		55°
E		75°
H		120°
K		55°
L		90°
M		86°
O		135°
P		108°
R		–
S		90°
T		60°
V		35°
W		80°

N
Freiwinkel
Clearence angle

A


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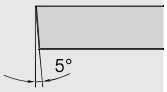

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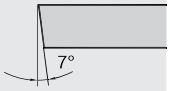

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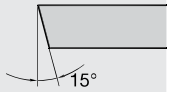

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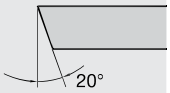

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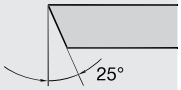

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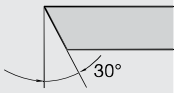

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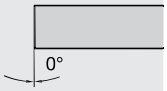

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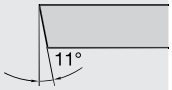

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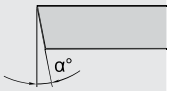
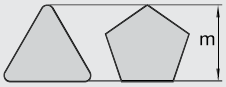


Freiwinkel, bei denen besondere Angaben erforderlich sind
Clearance angle requiring special indication

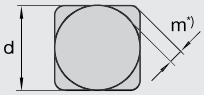
M
Toleranzklasse
Tolerance classes

Zulässige Abweichung für
Limits of tolerance

	m	s	d
A	±0,005[1)]	±0,025	±0,025
C	±0,013	±0,025	±0,025
E	±0,025	±0,025	±0,025
F	±0,005[1)]	±0,025	±0,013
G	±0,025	±0,13	±0,025
H	±0,013	±0,025	±0,013
J	±0,005[1)]	±0,025	±0,05 – ±0,15
K	±0,013[1)]	±0,025	±0,05 – ±0,15
L	±0,025	±0,025	±0,05 – ±0,15
M	±0,08 – ±0,20	±0,13	±0,05 – ±0,15
U	±0,13 – ±0,38	±0,13	±0,08 – ±0,25
	d	**m**	**d**
M	6,35	±0,08	±0,05
	9,52	±0,08	±0,05
	12,7	±0,13	±0,08
	15,88	±0,15	±0,10
	19,05	±0,15	±0,10
	25,4	±0,18	±0,13
U	6,35	±0,13	±0,08
	9,52	±0,13	±0,08
	12,7	±0,20	±0,13
	15,88	±0,27	±0,18
	19,05	±0,27	±0,18
	25,4	±0,38	±0,25



Wendeschneidplatte mit ungerader Seitenanzahl
Indexable insert with unequal number of sides

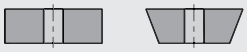


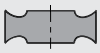
Wendeschneidplatte mit gerader Seitenanzahl
Indexable insert with equal number of sides

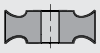
1) Gelten in der Regel für Wendeschneidplatten mit geschliffenen Planschneiden.
*) Der Berechnung der „m"-Maße liegt der genaue Zoll-Radius zugrunde.

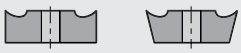
1) Generally used for indexable inserts with ground face cutting edges.
*) The calculation for the "m" measurement is based on the precise radius in inches.

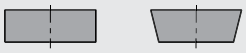
G
Plattentype
Type of insert

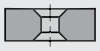
A

ohne Spanformrille, mit Befestigungsloch
without chip breaker, with cylindrical fixation hole

F

mit Spanformrille auf beiden Spanflächen, ohne Befestigungsloch
Chip breaker at both sides, without fixation hole

G

mit Spanformrille auf beiden Spanflächen, mit Befestigungsloch
Chip breaker at both sides, with cylindrical fixation hole

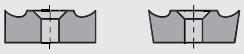
M

mit Spanformrille auf einer Spanfläche, mit Befestigungsloch
Chip breaker at one side, with cylindrical fixation hole

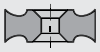
N

ohne Spanformrille, ohne Befestigungsloch
without chip breaker, without fixation hole

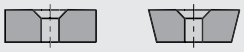
Q

ohne Spanformrille, mit Kegelloch beidseitig
without chip breaker, with fixation hole conical from both sides

R

mit Spanformrille auf einer Spanfläche, ohne Befestigungsloch
Chip breaker at one side, without fixation hole

T

mit Spanformrille auf einer Spanfläche, Kegelloch einseitig
Chip breaker at one side, with conical fixation hole

U

mit Spanformrille auf beiden Spanflächen, Kegelloch beidseitig
Chip breaker at both sides, with fixation hole conical from both sides

W

ohne Spanformrille, Kegelloch einseitig
without chip breaker, with conical fixation hole

X

mit Besonderheiten nach Zeichnung
with special features to drawing

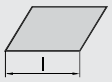
06
Schneidkantenlänge
Length of cutting edge

A
B

C
E

D

H

K


L

M

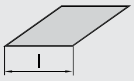
O

P

R

S

T

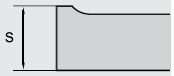
V


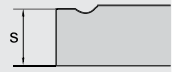
W

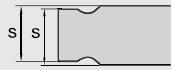
Beispiele:
Examples:

06	**l**	**=**	**6,350 mm**
09	l	=	9,525 mm
11	l	=	11,000 mm
12	l	=	12,700 mm
15	l	=	15,880 mm
16	l	=	16,500 mm
19	l	=	19,050 mm
22	l	=	22,000 mm
25	l	=	25,400 mm
27	l	=	27,500 mm
33	l	=	33,000 mm

04
Dicke
Thickness







Beispiele:
Examples:

01	s	=	1,59 mm
T1	s	=	1,98 mm
02	s	=	2,38 mm
03	s	=	3,18 mm
T3	s	=	3,97 mm
04	**s**	**=**	**4,76 mm**
05	s	=	5,56 mm
06	s	=	6,35 mm
07	s	=	7,94 mm
09	s	=	9,52 mm
12	s	=	12,70 mm

04
Schneidenecke
Corner radius

Beispiele:
Examples:

00	r	=	max 0,2 mm
04	**r**	**=**	**0,4 mm ±0,1**
08	r	=	0,8 mm ±0,1
12	r	=	1,2 mm ±0,1
16	r	=	1,6 mm ±0,1
20	r	=	2,0 mm ±0,1
24	r	=	2,4 mm ±0,1
25	r	=	2,5 mm ±0,1

Schneidenausführung
Edge condition

F

scharfe Schneide
sharp cutting edges

E

Schneiden gerundet
Rounded cutting edges

S

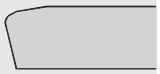
Schneiden gefast und gerundet
Chamfered and rounded cutting edges

T

Schneiden gefast
Chamfered cutting edges

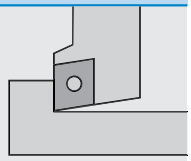
K

Schneiden doppelt gefast
Double-chamfered cutting edges

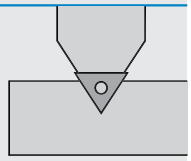
P


Schneiden doppelt gefast und verrundet
Double-chamfered and rounded cutting edges

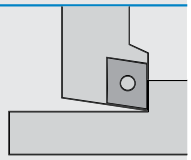
Schnittrichtung
Cutting direction

L


Wendeschneidplatte kann nur linksschneidend verwendet werden
The indexable insert can only be used for cuts to the left

N


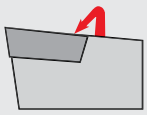
Wendeschneidplatte kann rechts- und linksschneidend verwendet werden
The indexable insert can be used for cuts either to the left or to the right

R


Wendeschneidplatte kann nur rechtsschneidend verwendet werden
The indexable insert can only be used for cuts to the right

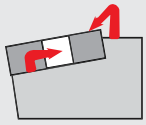
P
Befestigungsart
Type of fixation

C



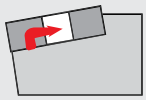
Von oben geklemmt
Fixation from above

M



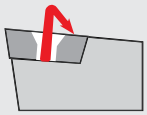
Von oben und über Bohrung geklemmt
Fixation from above and through a hole

P



Über Bohrung geklemmt
Fixation through a hole

S

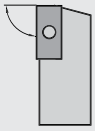
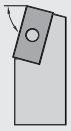
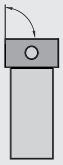
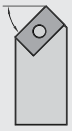
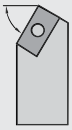
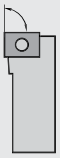
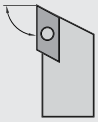
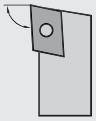
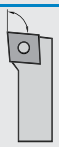
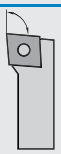
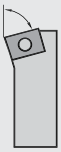
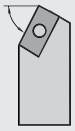
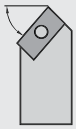
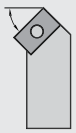
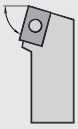
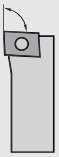
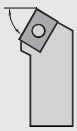
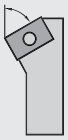
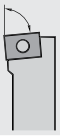


Durch Bohrung geschraubt
Fixation by screw through a conical hole

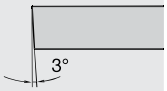
C
Wendeplattenform
Indexable insert shape

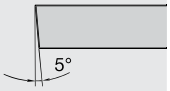
A		85°
B		82°
C		80°
D		55°
E		75°
H		120°
K		55°
L		90°
M		86°
O		135°
P		108°
R		–
S		90°
T		60°
V		35°
W		80°

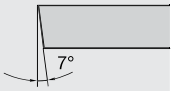
L
Klemmhalterform
Tool holder shape

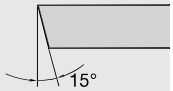
A		90°	B		75°
C		90°	D		45°
E		60°	F		90°
G		90°	J		93°
H		107,5°	L		95°
K		75°	N		63°
M		50°	S		45°
R		75°	U		93°
T		60°	W		60°
V		72,5°	Y		85°

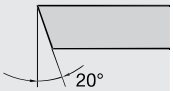
N
Wendeplattenfreiwinkel
Insert clearance angle

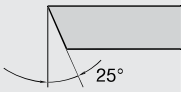
A 

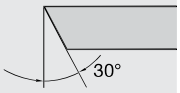
B 

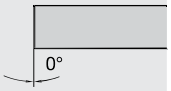
C 

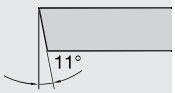
D 

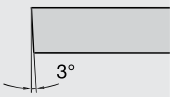
E 

F 

G 

N 

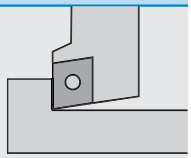
P 

O 

Freiwinkel, bei denen besondere Angaben erforderlich sind
Clearance angle requiring special indication

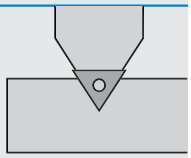
R
Schnittrichtung
Cutting direction

L



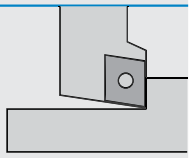
Klemmhalter kann nur linksschneidend verwendet werden
The tool holder can only be used for cuts to the left

N



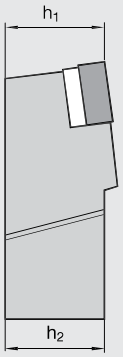
Klemmhalter kann rechts- und linksschneidend verwendet werden
The tool holder can be used for cuts either to the left or to the right

R



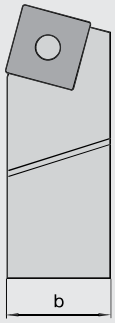
Klemmhalter kann nur rechtsschneidend verwendet werden
The tool holder can only be used for cuts to the right

25
Schneidenhöhe
Cutting height

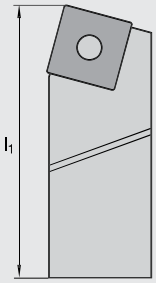


Bei Klemmwerkzeugen entspricht die Schneidenhöhe (h_1) im allgemeinen der Schafthöhe (h_2). Ausgenommen sind Kurzklemmhalter und Klemmwerkzeuge zum Innendrehen.
For clamped tools, the cutting height (h_1) generally corresponds to the shaft height (h_2). The exceptions to this include cartridge toolholders and clamped tools for internal turning.

25
Schaftbreite
Shank width



M
Werkzeuglänge
Tool length



Kennbuchstaben für die Längen l_1
Code letters for the length l_1

A	32 mm
B	40 mm
C	50 mm
D	60 mm
E	70 mm
F	80 mm
G	90 mm
H	100 mm
J	110 mm
K	125 mm
L	140 mm
M	**150 mm**
N	160 mm
P	170 mm
Q	180 mm
R	200 mm
S	250 mm
T	300 mm
U	350 mm
V	400 mm
W	450 mm
X	Sonderlänge Special length
Y	500 mm

12
Schneidkantenlänge
Cutting edge length

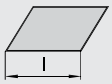
A
B

C
E

D

H

K



L

M

O

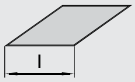
P

R

S

T

V



W

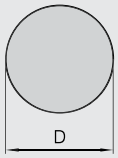
Beispiele:
Examples:

06	l = 6,350 mm
09	l = 9,525 mm
11	l = 11,000 mm
12	**l = 12,700 mm**
15	l = 15,880 mm
16	l = 16,500 mm
19	l = 19,050 mm
22	l = 22,000 mm
25	l = 25,400 mm
27	l = 27,500 mm
33	l = 33,000 mm

S
Werkstoff des Körpers
Material used for main body

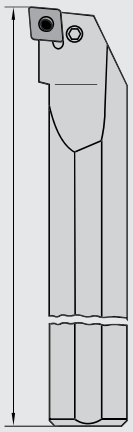
Kenn-buchstabe Identification letter	Werkstoff des Körpers Material used for main body	Konstruktions-merkmale Features of design
S	Stahlschaft Solid steel	keine none
A		mit innerer Kühlmittelzuführung with internal coolant supply
B		mit Vibrationsdämpfung with vibration damping
D		mit Vibrationsdämpfung und innerer Kühlmittelzuführung with vibration damping and internal coolant supply
C	Hartmetallschaft mit Stahlkopf Hard metal with steel head	keine none
E		mit innerer Kühlmittelzuführung with internal coolant supply
F		mit Vibrationsdämpfung with vibration damping
G		mit Vibrationsdämpfung und innerer Kühlmittelzuführung with vibration damping and internal coolant supply
H	Schwermetall Heavy metal	keine none
J		mit innerer Kühlmittelzuführung with internal coolant supply

32
Schaftdurchmesser
Shank diameter



08
10
12
16
20
25
32
40
50

T
Werkzeuglänge
Tool length



Kennbuchstaben für die Längen
Code letters for the length

A	32 mm
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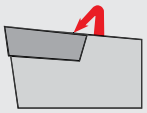
H	100 mm
J	110 mm
K	125 mm
L	140 mm
M	150 mm
N	160 mm
P	170 mm
Q	180 mm
R	200 mm
S	250 mm
T	**300 mm**
U	350 mm
V	400 mm
W	450 mm
X	Sonderlänge Special length
Y	500 mm

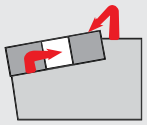
P
Befestigungsart
Type of fixation

C



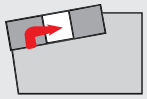
Von oben geklemmt
Fixation from above

M



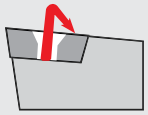
Von oben und über Bohrung geklemmt
Fixation from above and through a hole

P



Über Bohrung geklemmt
Fixation through a hole

S



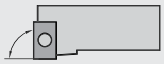
Durch Bohrung geschraubt
Fixation by screw through a conical hole

C
Wendeplattenform
Indexable insert shape

A	85°
B	82°
C	80°
D	55°
E	75°
H	120°
K	55°
L	90°
M	86°
O	135°
P	108°
R	–
S	90°
T	60°
V	35°
W	80°

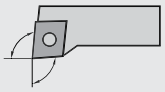
L
Klemmhalterform
Tool holder shape

F 90°



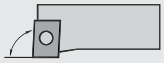
K 75°

L 95°

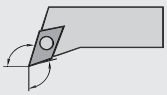


S 45°

U 93°

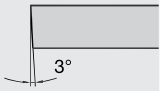


Q 107°



N
Wendeplattenfreiwinkel
Insert clearance angle

A



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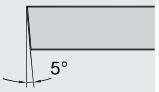

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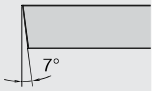

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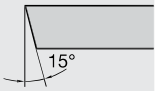

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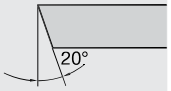

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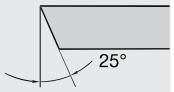

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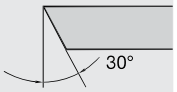

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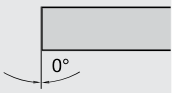

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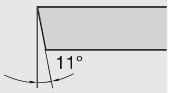

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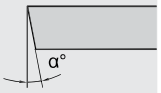
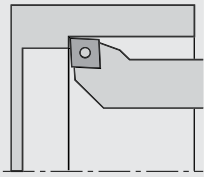


Freiwinkel, bei denen besondere Angaben erforderlich sind.
Clearance angle requiring special indication.

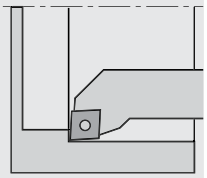
R
Schnittrichtung
Cutting direction

L



Halter kann nur linksschneidend verwendet werden
Boring bar suitable for operation to the left only

R



Halter kann nur rechtsschneidend verwendet werden
Boring bar suitable for operation to the right only

12
Schneidkantenlänge
Cutting edge length

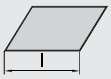
A
B

C
E

D

H

K



L

M

O

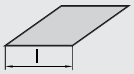
P

R

S

T

V



W

Beispiele:
Examples:

06	l = 6,350 mm
09	l = 9,525 mm
11	l = 11,000 mm
12	**l = 12,700 mm**
15	l = 15,880 mm
16	l = 16,500 mm
19	l = 19,050 mm
22	l = 22,000 mm
25	l = 25,400 mm
27	l = 27,500 mm
33	l = 33,000 mm