

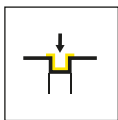


NEUE HARTMETALLSORTE IG6

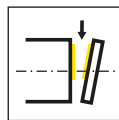
MEHR LEISTUNG BEI DER ZERSPANUNG VON
ALLGEMEINEN UND ROSTFREIEN STÄHLEN

NEW CARBIDE GRADE IG6

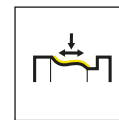
MORE PERFORMANCE IN THE MACHINING
OF ORDINARY AND STAINLESS STEELS



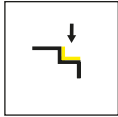
Einstechen
Grooving



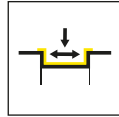
Abstechen
Parting off



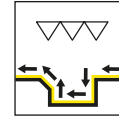
Kopierdrehen
Copy turning



Teilschnitt
Partial cut



Längsdrehen
Side turning



Feindrehen
Fine turning

Alle Abmessungen sind in mm angegeben, sofern nicht anders vermerkt.

All dimensions are in mm, unless otherwise stated.

Unsere Lieferzeiten: Einsatz für Werkstoffgruppen:

- ▲ ab Lager
- Δ 4 Wochen
- empfohlen
- o bedingt einsetzbar
- nicht geeignet

Delivery times: Use for material groups:

- ▲ on stock
- Δ 4 weeks
- recommended
- o alternative recommendation
- not suitable

Die HORN-Trennstellencodierung - wofür wird sie benötigt?

Die Trennstellencodierung stellt sicher, dass Sie immer die zueinander passenden Werkzeuge finden und wird bei Werkzeughaltern und bei Schneidplatten ausgewiesen. Wenn die Codes übereinstimmen, kann die Schneidplatte im entsprechenden Werkzeughalter verwendet werden.

Das gilt auch für unser modulares Haltersystem, hier gibt die Trennstellencodierung die Schnittstelle zwischen Grundhalter und Kassette an.

The HORN connection interface code - what is it needed for?

The connection interface code ensures that you will always find the appropriate tools and is shown on toolholders and inserts. If the codes match, the insert can be used in the corresponding toolholder.

This also applies to our modular holder system, where the connection code indicates the interface between the holder and the cassette.

HORN-Trennstellencodes und mögliche Kombinationen:

HORN connection interface codes and possible combinations:

- HIS** = Plattensitzgröße / Insert seat
- HWS** = Trennstelle Werkstückseitig / Interface workpiece side
- HMS** = Trennstelle Maschinenseitig / Interface machine side

HIS	↔	HWS
HMS	↔	HWS

Beispiel Schneidplatte

Example insert

Bestellnummer Part number	w	r	HIS	IG66
S229.0030.K6	6	3	229050	▲

Beispiel Kassette

Example cassette

Bestellnummer Part number	t _{max}	f ₂	f ₃	D _{max}	l _K	HWS	HMS
RNK220.3215.4.05.IK	25	13,9	f ₂ +w/2	180	38	229050 • 229051	220001

Beispiel Grundhalter

Example basic holder

Bestellnummer Part number	l ₁	d	f ₁	l	l ₂	f	h ₁	HWS
HSKT63.R220.110.K1.IK	81	63	0,6	l ₁ +l _K	91	f ₁ +f ₃	12,5	220001

DER UNTERSCHIED: MEHR MÖGLICHKEITEN

THE DIFFERENCE:
MORE POSSIBILITIES

- **Steigerung der Produktivität durch
warmfeste Sorte**

Increased productivity thanks to heat-resistant grade

- **Effiziente Zerspanung von rostfreien
Werkstoffen**

Efficient machining of stainless materials

- **Schnelle Lieferzeiten durch interne
Beschichtung**

Fast delivery times due to in-house coating

Geometrien und Vorschübe

Geometries and Feed Rates



Geometrie Geometry	Werkstoff Material	Vorschubbereich f [mm/U] Feed rate f [mm/rev]	Bearbeitung Machining						
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,05-0,15</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,15-0,20 ↔ 0,03-0,40</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,10-0,45 ↔ 0,15-0,60</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,03-0,15 ↔ 0,05-0,20</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,10-0,40</p>	
P	M	K							
N	S	H							

Geometrien und Vorschübe

Geometries and Feed Rates



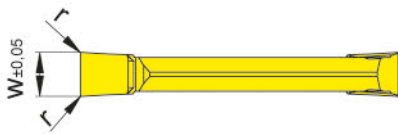
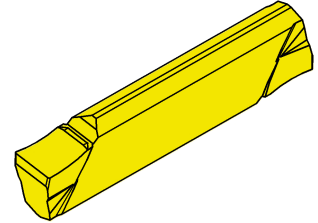
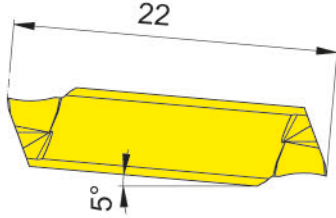
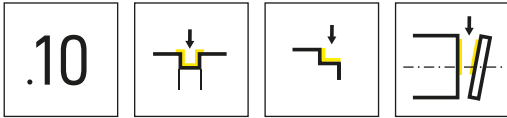
Geometrie Geometry	Werkstoff Material	Vorschubbereich f [mm/U] Feed rate f [mm/rev]	Bearbeitung Machining						
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,20-0,30</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,05-0,25 ↔ 0,05-0,40</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,05-0,25 ↔ 0,05-0,40</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,10-0,22 ↔ 0,05-0,22</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,10-0,22 ↔ 0,05-0,20</p>	
P	M	K							
N	S	H							

Geometrien und Vorschübe

Geometries and Feed Rates



Geometrie Geometry	Werkstoff Material	Vorschubbereich f [mm/U] Feed rate f [mm/rev]	Bearbeitung Machining						
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,07-0,25</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,02-0,10 ↔ 0,0015-0,07</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,05-0,25 ↔ 0,05-0,25</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,05-0,30 ↔ 0,10-0,30</p>	
P	M	K							
N	S	H							
	<table border="1"> <tr> <td>P</td> <td>M</td> <td>K</td> </tr> <tr> <td>N</td> <td>S</td> <td>H</td> </tr> </table>	P	M	K	N	S	H	<p>↓ 0,15-0,25 ↔ 0,10-0,25</p>	
P	M	K							
N	S	H							

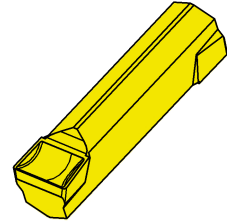
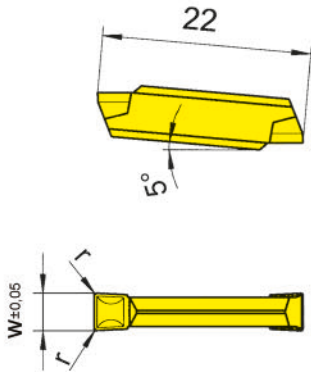
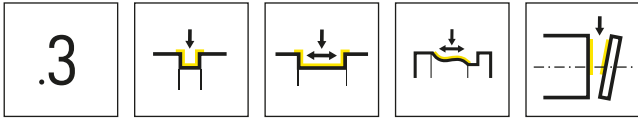


HM-Sorten
Carbide grades

▲ ab Lager
on stock

Δ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S224.0200.10	2	0,05	224028	Δ
S224.0250.10	2,5	0,1	224028	Δ
S224.0300.10	3	0,1	224038	Δ
				P ●
				M ●
				K -
				N -
				S o
				H -

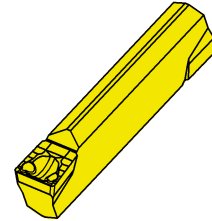
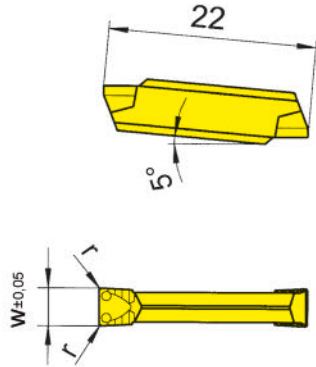
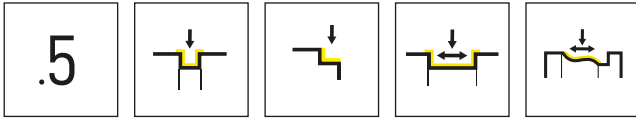


HM-Sorten
Carbide grades

▲ ab Lager
on stock

△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S224.0300.32	3	0,2	224038	▲
S224.0300.34	3	0,4	224038	▲
S224.0400.32	4	0,2	224048	▲
S224.0400.34	4	0,4	224048	▲
S224.0500.34	5	0,4	224058	▲
S224.0500.38	5	0,8	224058	▲
S224.0600.34	6	0,4	224068	▲
S224.0600.38	6	0,8	224068	▲
				P ●
				M ●
				K -
				N -
				S O
				H -

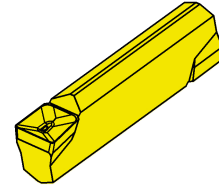
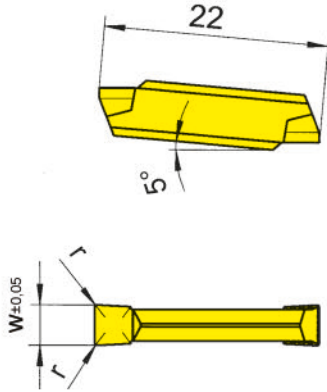
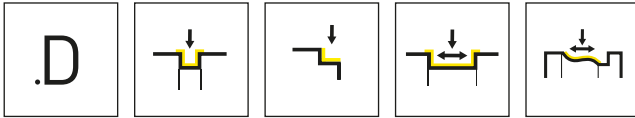


HM-Sorten
Carbide grades

▲ ab Lager
on stock

△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S224.0200.52	2	0,2	224018	▲
S224.0250.52	2,5	0,2	224028	▲
S224.0300.52	3	0,2	224038	▲
S224.0300.54	3	0,4	224038	▲
S224.0400.52	4	0,2	224048	▲
S224.0400.54	4	0,4	224048	▲
S224.0500.54	5	0,4	224058	▲
S224.0500.58	5	0,8	224058	▲
S224.0600.54	6	0,4	224068	▲
S224.0600.58	6	0,8	224068	▲
				P ●
				M ●
				K -
				N -
				S o
				H -

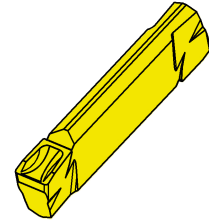
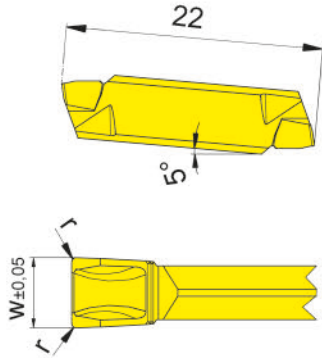
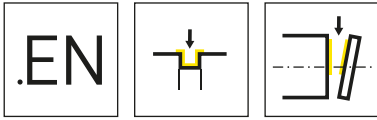


HM-Sorten
Carbide grades

▲ ab Lager
on stock

△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S224.0200.D2	2	0,2	224018	▲
S224.0200.D2.G	2	0,2	224018	▲
S224.0250.D2	2,5	0,2	224028	▲
S224.0250.D2.G	2,5	0,2	224028	▲
S224.0300.D2	3	0,2	224038	▲
S224.0300.D2.G	3	0,2	224038	▲
S224.0400.D2	4	0,2	224048	▲
S224.0400.D2.G	4	0,2	224048	▲
				P ●
				M ●
				K -
				N -
				S O
				H -

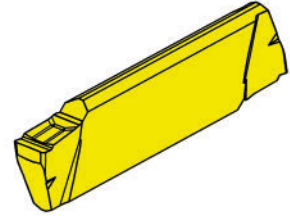
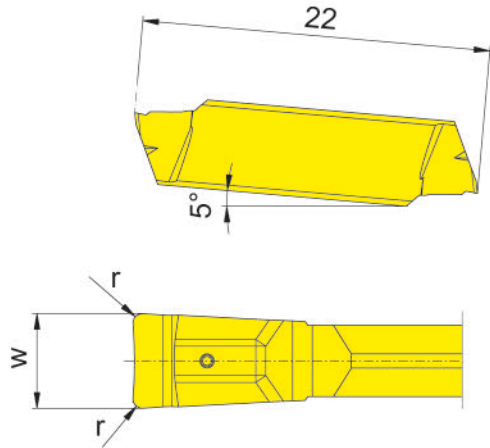
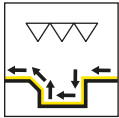


HM-Sorten
Carbide grades

▲ ab Lager
on stock

Δ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S224.0300.EN2	3	0,2	224038	▲
				P ●
				M ●
				K -
				N -
				S o
				H -

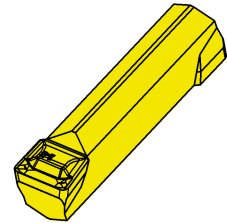
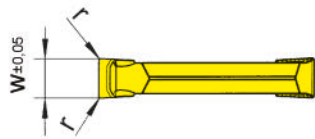
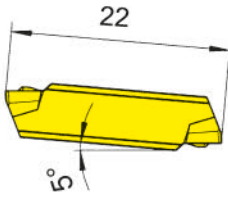
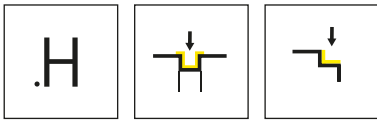


HM-Sorten
Carbide grades

▲ ab Lager
on stock

Δ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG6T
S224.FB20.02	2	0,2	224018	Δ
S224.FB30.02	3	0,2	224038	Δ
				P ●
				M ●
				K -
				N -
				S O
				H -



HM-Sorten
Carbide grades

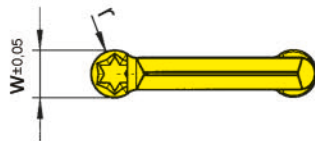
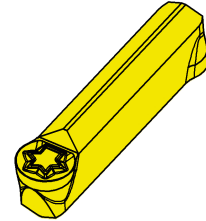
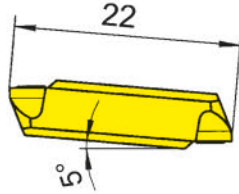
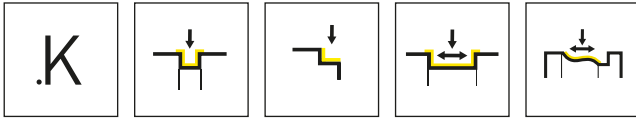
▲ ab Lager
on stock

Δ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S224.0300.H4	3	0,4	224038	Δ
S224.0400.H4	4	0,4	224048	Δ
S224.0500.H6	5	0,6	224058	Δ
S224.0500.H8	5	0,8	224058	Δ
				P ●
				M ●
				K -
				N -
				S o
				H -

Wendeschnidplatte Indexable insert

S224



HM-Sorten
Carbide grades

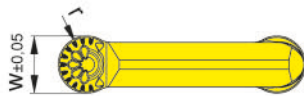
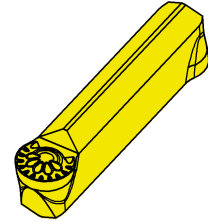
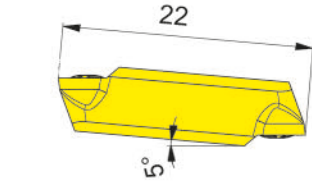
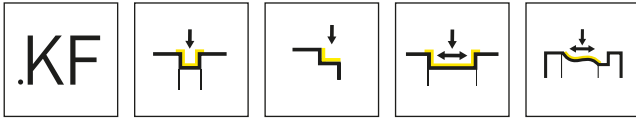
▲ ab Lager
on stock

△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S224.0010.K2	2	1	224018	▲
S224.0015.K3	3	1,5	224038	▲
S224.0020.K4	4	2	224048	▲
S224.0025.K5	5	2,5	224058	▲
S224.0030.K6	6	3	224068	▲
				P ●
				M ●
				K -
				N -
				S O
				H -

Wendeschnidplatte Indexable insert

S224



HM-Sorten
Carbide grades

▲ ab Lager
on stock

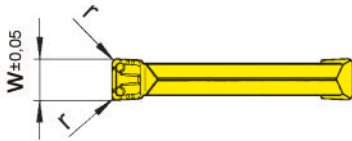
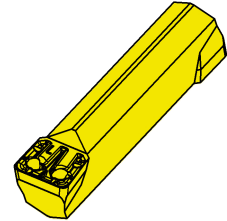
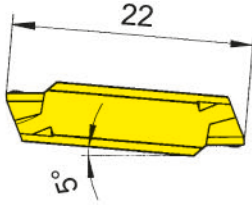
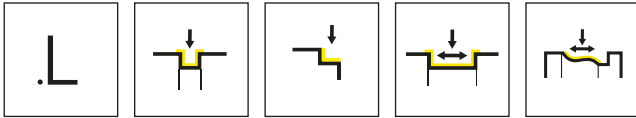
△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S224.0015.KF3	3	1,5	224038	▲
S224.0020.KF4	4	2	224048	▲
S224.0025.KF5	5	2,5	224058	▲
S224.0030.KF6	6	3	224068	▲
				P ●
				M ●
				K -
				N -
				S O
				H -

Wendeschnidplatte

Indexable insert

S224



HM-Sorten
Carbide grades

▲ ab Lager
on stock

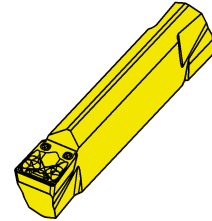
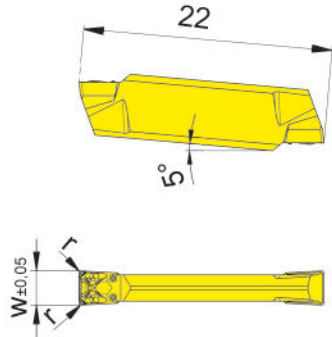
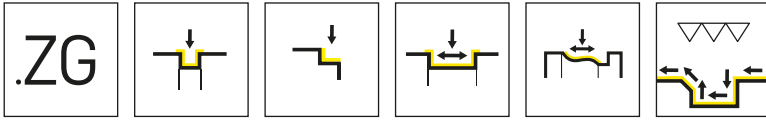
△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S224.0300.L4	3	0,4	224038	▲
S224.0400.L4	4	0,4	224048	▲
S224.0500.L4	5	0,4	224058	▲
S224.0500.L6	5	0,6	224058	▲
S224.0600.L4	6	0,4	224068	▲
S224.0600.L6	6	0,6	224068	▲
				P ●
				M ●
				K -
				N -
				S o
				H -

Wendeschnidplatte

Indexable insert

S224

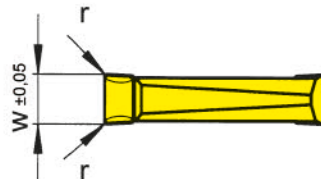
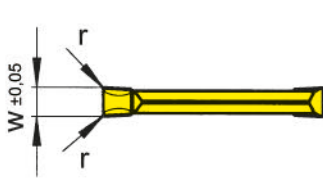
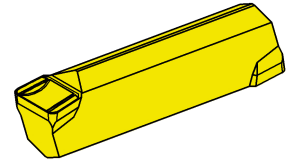
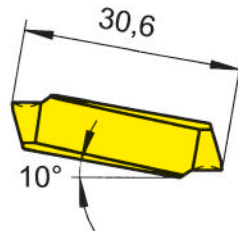
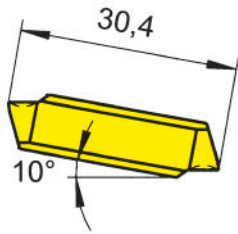
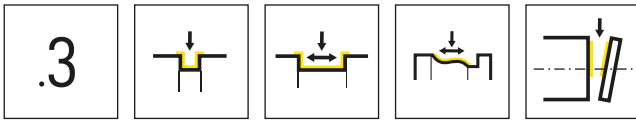


HM-Sorten
Carbide grades

▲ ab Lager
on stock

△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG6T
S224.0300.ZG2	3	0,2	224038	▲
S224.0400.ZG4	4	0,4	224048	▲
				P ●
				M ●
				K -
				N -
				S O
				H -



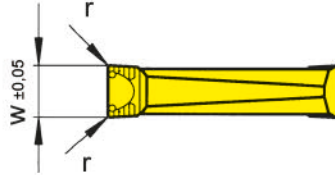
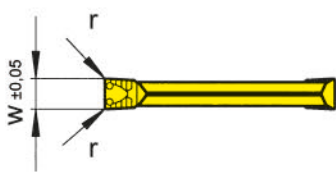
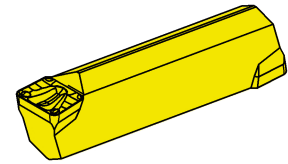
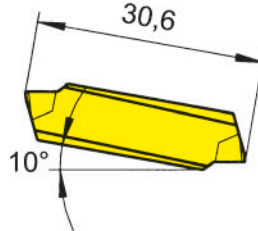
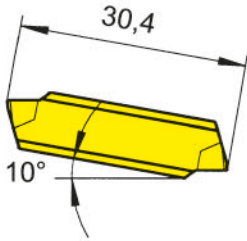
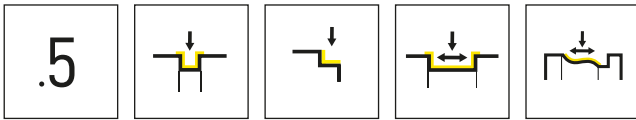
Schneidbreite 3 - 5 mm
Width 3 - 5 mm

Schneidbreite 6 - 10 mm
Width 6 - 10 mm

▲ ab Lager
on stock

HM-Sorten
Carbide grades
Δ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S229.0300.32	3	0,2	229020 • 229030	▲
S229.0300.34	3	0,4	229020 • 229030	▲
S229.0400.32	4	0,2	229030 • 229040	▲
S229.0400.34	4	0,4	229030 • 229040	▲
S229.0500.34	5	0,4	229040	▲
S229.0500.36	5	0,6	229040	▲
S229.0600.34	6	0,4	229051	▲
S229.0600.38	6	0,8	229051	▲
S229.0700.36	7	0,6	229071	▲
S229.0800.36	8	0,6	229071 • 229081	▲
S229.0800.38	8	0,8	229071 • 229081	▲
S229.0800.3K	8	1,2	229071 • 229081	▲
S229.1000.36	10	0,6	229091	▲
				P ●
				M ●
				K -
				N -
				S o
				H -



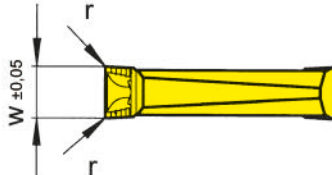
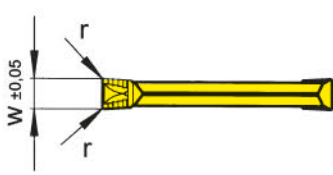
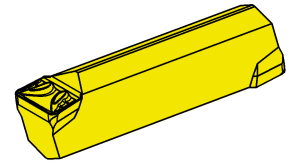
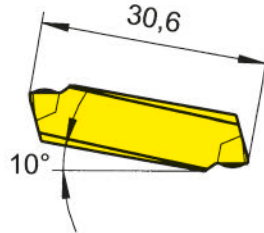
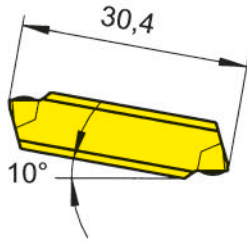
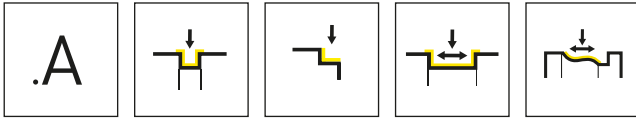
Schneidbreite 3 - 5 mm
Width 3 - 5 mm

Schneidbreite 6 - 8 mm
Width 6 - 8 mm

▲ ab Lager
on stock

HM-Sorten
Carbide grades
Δ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S229.0300.52	3	0,2	229020 • 229030	▲
S229.0300.54	3	0,4	229020 • 229030	▲
S229.0400.52	4	0,2	229030 • 229040	▲
S229.0400.54	4	0,4	229030 • 229040	▲
S229.0500.54	5	0,4	229040	▲
S229.0500.56	5	0,6	229040	▲
S229.0600.54	6	0,4	229051	▲
S229.0600.56	6	0,6	229051	▲
S229.0600.58	6	0,8	229051	▲
S229.0800.56	8	0,6	229071 • 229081	Δ
S229.0800.58	8	0,8	229071 • 229081	Δ
				P ●
				M ●
				K -
				N -
				S o
				H -



Schneidbreite 5 mm
Width 5 mm

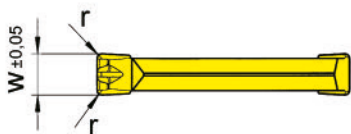
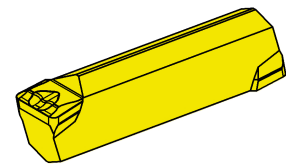
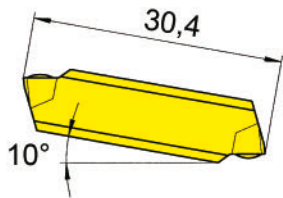
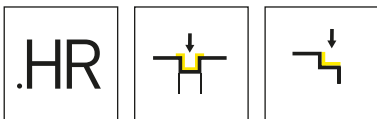
Schneidbreite 8 - 10 mm
Width 8 - 10 mm

▲ ab Lager
on stock

HM-Sorten
Carbide grades
Δ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S229.0500.A4	5	0,4	229040	▲
S229.0500.A6	5	0,6	229040	▲
S229.0800.A6	8	0,6	229071 • 229081	Δ
S229.0800.A8	8	0,8	229071 • 229081	Δ
S229.1000.A6	10	0,6	229091	Δ

P	●
M	●
K	-
N	-
S	o
H	-

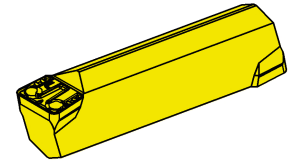
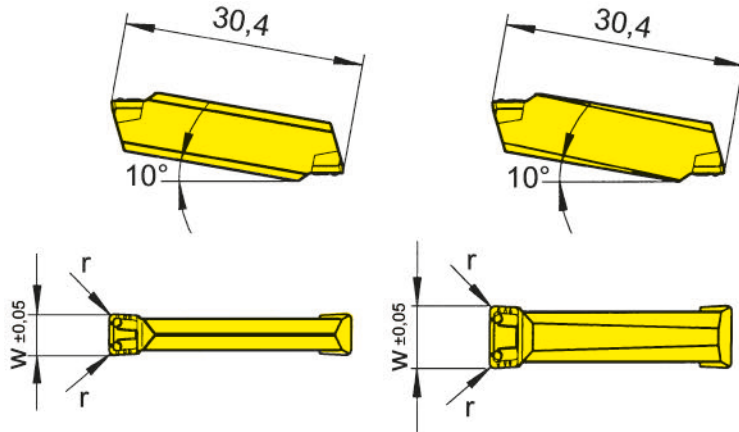
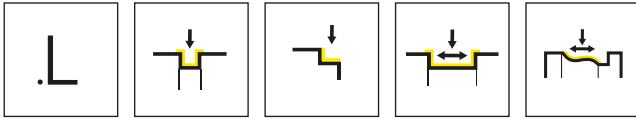


HM-Sorten
Carbide grades

▲ ab Lager
on stock

△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S229.0300.HR4	3	0,4	229020 • 229030	▲
S229.0400.HR4	4	0,4	229030 • 229040	▲
S229.0500.HR4	5	0,4	229040	▲
S229.0500.HR6	5	0,6	229040	▲
S229.0500.HR8	5	0,8	229040	▲
S229.0600.HR4	6	0,4	229050	▲
S229.0600.HR6	6	0,6	229050	▲
S229.0600.HR8	6	0,8	229050	▲
S229.0800.HR8.PG	8	0,8	229071 • 229081	▲
				P ●
				M ●
				K -
				N -
				S o
				H -



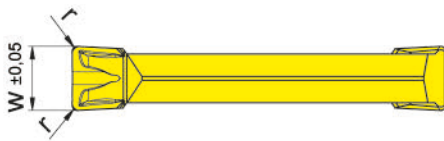
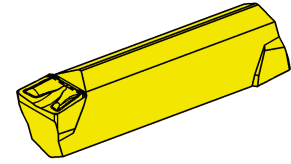
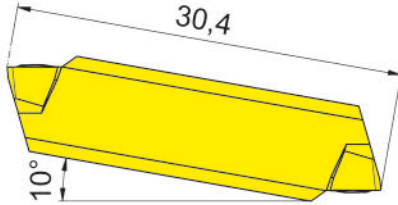
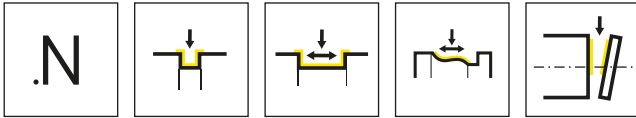
Schneidbreite 4 - 5 mm
Width 4 - 5 mm

Schneidbreite 6 - 8 mm
Width 6 - 8 mm

▲ ab Lager
on stock

HM-Sorten
Carbide grades
Δ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S229.0400.L4	4	0,4	229030 • 229040	▲
S229.0400.L6	4	0,6	229030 • 229040	▲
S229.0500.L4	5	0,4	229040	▲
S229.0500.L6	5	0,6	229040	▲
S229.0500.L8	5	0,8	229040	▲
S229.0600.L4	6	0,4	229050	▲
S229.0600.L6	6	0,6	229050	▲
S229.0800.L6	8	0,6	229071 • 229081	▲
S229.0600.L4.PG	6	0,4	229050	▲
S229.0800.L8.PG	8	0,8	229071 • 229081	▲
				P ●
				M ●
				K -
				N -
				S o
				H -

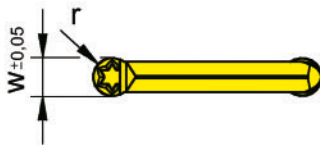
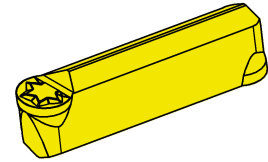
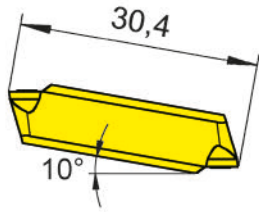
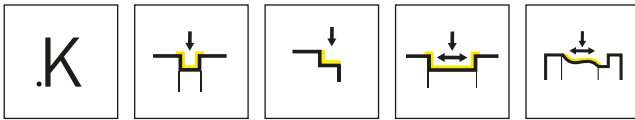


HM-Sorten
Carbide grades

▲ ab Lager
on stock

△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S229.0300.N2.G	3	0,2	229020 • 229030	▲
S229.0300.N4.G	3	0,4	229020 • 229030	▲
S229.0400.N2.G	4	0,2	229030 • 229040	▲
S229.0400.N4.G	4	0,4	229030 • 229040	▲
S229.0500.N2.G	5	0,2	229040	▲
S229.0500.N4.G	5	0,4	229040	▲
S229.0500.N6.G	5	0,6	229040	▲
S229.0500.N8.G	5	0,8	229040	▲
S229.0600.N4.G	6	0,4	229050	▲
S229.0600.N6.G	6	0,6	229050	▲
				P ●
				M ●
				K -
				N -
				S o
				H -

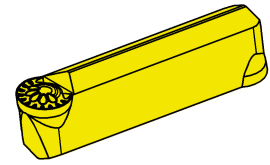
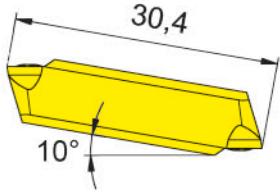
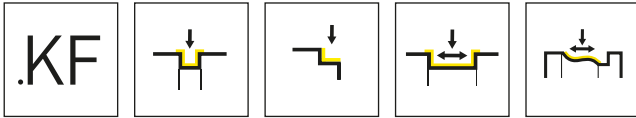


HM-Sorten
Carbide grades

▲ ab Lager
on stock

△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S229.0015.K3	3	1,5	229020 • 229030	▲
S229.0020.K4	4	2	229030 • 229040	▲
S229.0025.K5	5	2,5	229040	▲
S229.0030.K6	6	3	229050	▲
S229.0040.K8	8	4	229070 • 229080	▲
				P ●
				M ●
				K -
				N -
				S O
				H -

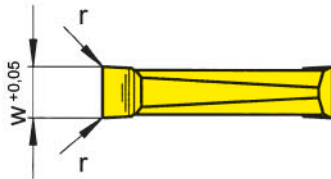
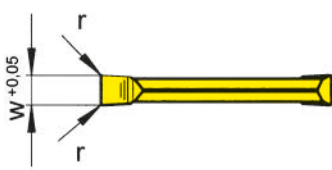
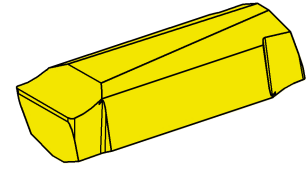
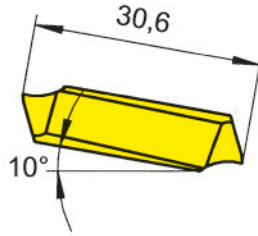
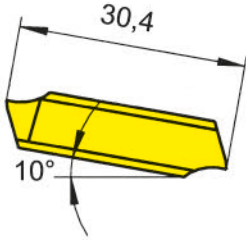
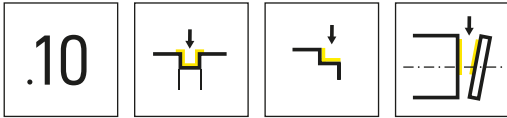


HM-Sorten
Carbide grades

▲ ab Lager
on stock

△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
S229.0015.KF3	3	1,5	229020 • 229030	▲
S229.0020.KF4	4	2	229030 • 229040	▲
S229.0025.KF5	5	2,5	229040	▲
S229.0030.KF6	6	3	229050	▲
S229.0040.KF8	8	4	229070 • 229080	▲
				P ●
				M ●
				K -
				N -
				S O
				H -



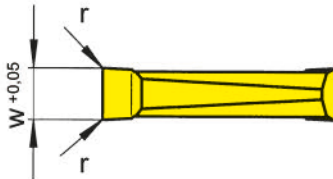
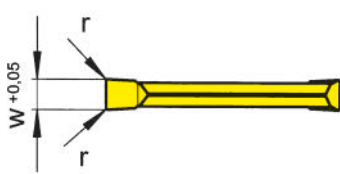
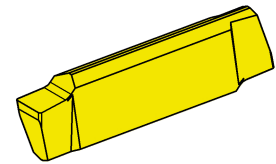
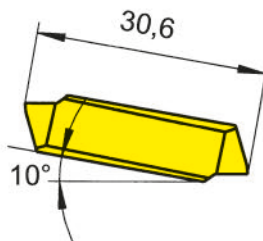
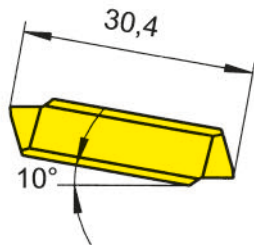
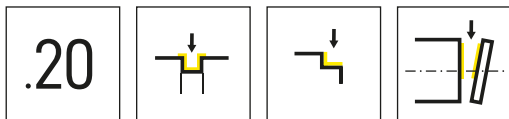
Schneidbreite 2,5 - 5,0 mm
Width of groove 2,5 - 5,0 mm

Schneidbreite 5,1 - 10,4 mm
Width 5,1 - 10,4 mm

▲ ab Lager
on stock

HM-Sorten
Carbide grades
Δ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
229.0250.10	2,5	0,2	229020	▲
229.0300.10	3	0,2	229020 • 229030	▲
229.0400.10	4	0,2	229030 • 229040	▲
229.0500.10	5	0,2	229040	Δ
229.0600.10	6	0,4	229051	Δ
229.0700.10	7	0,4	229071	Δ
229.0800.10	8	0,4	229071 • 229081	Δ
229.0900.10	9	0,4	229091	Δ
229.1000.10	10	0,4	229091	Δ
				P ●
				M ●
				K -
				N -
				S o
				H -



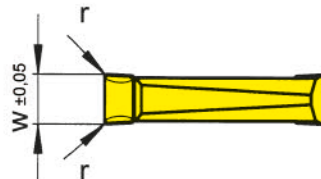
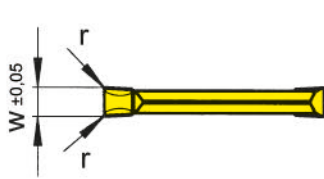
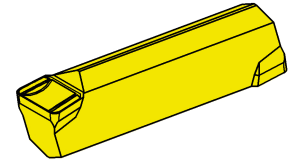
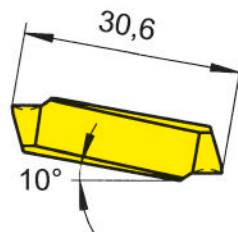
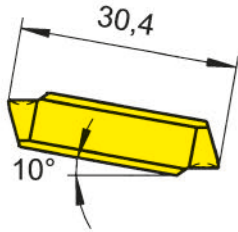
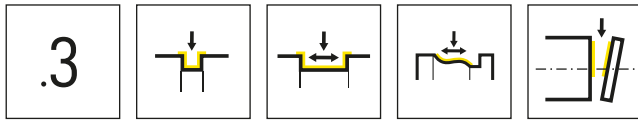
Schneidbreite 3 - 5 mm
Width 3 - 5 mm

Schneidbreite 5,1 - 10,4 mm
Width 5,1 - 10,4 mm

▲ ab Lager
on stock

HM-Sorten
Carbide grades
Δ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
229.0300.20	3	0,2	229020 • 229030	Δ
229.0400.20	4	0,2	229030 • 229040	Δ
229.0500.20	5	0,2	229040	Δ
229.0600.20	6	0,4	229051	Δ
229.0700.20	7	0,4	229071	Δ
229.0800.20	8	0,4	229071 • 229081	Δ
229.0900.20	9	0,4	229091	Δ
229.1000.20	10	0,4	229091	Δ
				P ●
				M ●
				K -
				N -
				S o
				H -



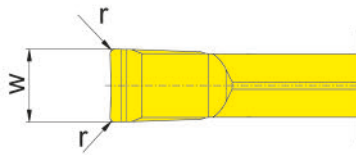
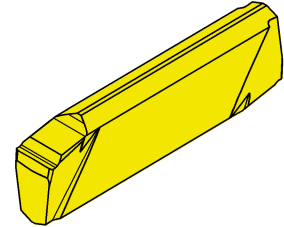
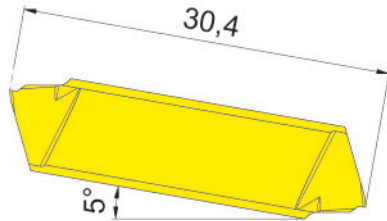
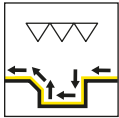
Schneidbreite 3 - 5 mm
Width 3 - 5 mm

Schneidbreite 5,1 - 10,4 mm
Width 5,1 - 10,4 mm

▲ ab Lager
on stock

HM-Sorten
Carbide grades
△ 4 Wochen
4 weeks

Bestellnummer Part number	w	r	HIS	IG66
229.0300.31	3	0,2	229020 • 229030	▲
229.0300.34	3	0,4	229020 • 229030	▲
229.0350.31	3,5	0,2	229030	▲
229.0400.31	4	0,2	229030 • 229040	▲
229.0400.34	4	0,4	229030 • 229040	▲
229.0500.31	5	0,2	229040	▲
229.0500.34	5	0,4	229040	△
229.0500.36	5	0,6	229040	△
229.0600.31	6	0,4	229051	△
229.0600.38	6	0,8	229051	△
229.0700.31	7	0,4	229071	△
229.0800.31	8	0,4	229071 • 229081	△
229.0900.31	9	0,4	229091	△
229.1000.31	10	0,4	229091	△
				P ●
				M ●
				K -
				N -
				S o
				H -



HM-Sorten
Carbide grades

▲ ab Lager
on stock

Δ 4 Wochen
4 weeks

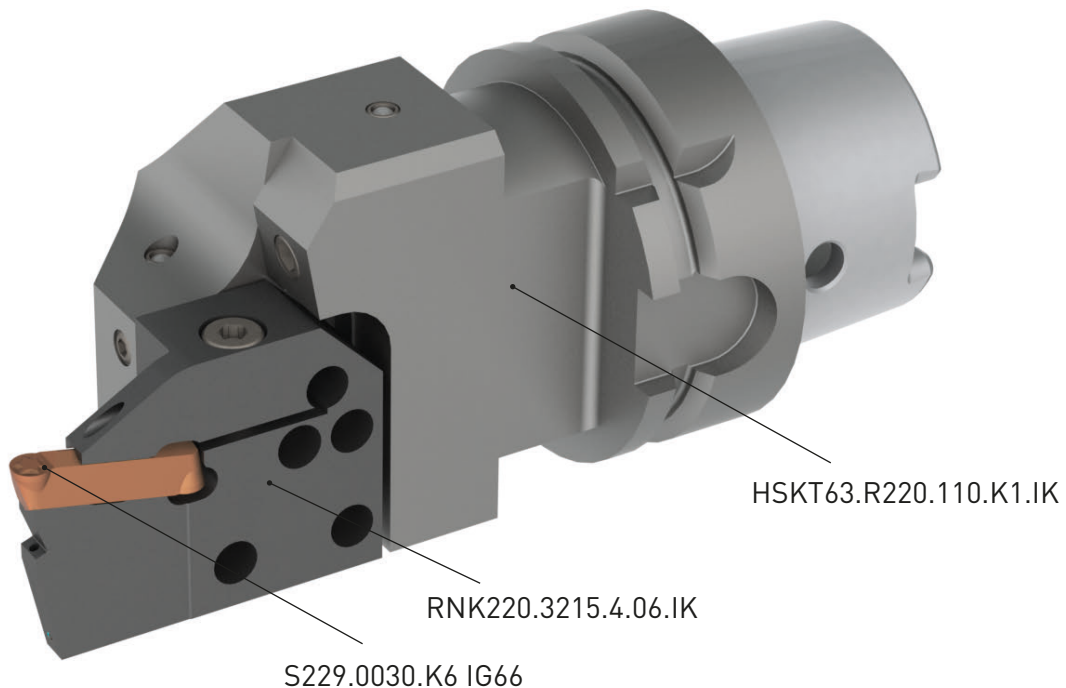
Bestellnummer Part number	w	r	HIS	IG6T
229.FB30.02	3	0,2	229030	Δ
229.FB40.02	4	0,2	229030 • 229040	Δ
				P ●
				M ●
				K -
				N -
				S O
				H -

Anwendungsbeispiel

Machining Example



Anwendung:	Trochoidalstechen	Machining:	Trochoidal turning
Bauteil:	Rad	Component:	Wheel
Material:	20MnCrS5	Material:	20MnCrS5
Werkzeuge:	HSKT63.R220.110.K1.IK RNK229.3215.4.06.IK S229.0030.K6 IG66	Tool:	HSKT63.R220.110.K1.IK RNK229.3215.4.06.IK S229.0030.K6 IG66
Kühlschmierstoff:	Emulsion	Cooling lubricant:	Emulsion
v_c (m/min)	270	v_c (m/min)	270
f (mm/U)	0,9	f (mm/rev)	0.9
a_p (mm)	0,5 - 0,9	a_p (mm)	0.5 - 0.9
Standzeit:	117 Minuten	Tool life:	117 minutes



Schnittdaten

Cutting Data



Werkstoff Material	Härte Hardness Brinell (HB)	Schnittgeschwindigkeit v _c (m/min) Cutting speed v _c (m/min)											
		K10	EG35 EG55	HP66	IG36*	IG66	TH35 AS65	DD26	HS36	H20	H54		
P Kohlenstoffstahl Carbon steel	0,2% C	140		300-180	200-160		340-220	280-180			230-170	200-140	
	0,4% C	180		270-150	180-150		320-200	250-140			220-160	180-120	
	0,6% C	200		250-120	180-140		300-180	230-120			210-150	160-100	
	Legierter Stahl Alloyed steel (<5%)	geglüht annealed	180		250-100	180-140		300-180	230-100			210-150	180-120
		vergütet quenched	280		220-90	160-110		280-150	190-90			170-120	160-100
		vergütet quenched	350		200-80	140-90		250-140	170-80			140-80	120-80
	hochlegierter Stahl high alloyed steel (>5%)	geglüht annealed	200		220-140	120-90		280-200	200-140			120-100	100-90
		gehärtet hardened	-										
	Stahlguss Cast steel	unlegiert unalloyed	180		200-150	200-150		250-200	200-150			180-120	
		legiert alloyed	220		160-100	150-90		220-160	160-100			140-90	
M Rostfreier Stahl Stainless steel	martensitisch ferritisch martensitic, ferritic	200		130-100	180-120	190-140	190 - 140			180-120	190-120		
	austenitisch austenitic	180			140-110	140-110	140 - 110			140-110	170-120		
K Grauguss Grey cast iron	niedrige Festigkeit low tensile strength	180	90-60	200-120			250-140	200-120					
		250	90-60	160-120			220-150	160-120					
	Kugelgraphitguss Spheroidal graphite cast iron	ferritisch ferritic	160		180-130			240-160	180-130				
		perlitisch perlitic	250		160-120			200-160	160-120				
	Temperguss Malleable cast iron	ferritisch ferritic	125		220-120			280-180	220-120				
		perlitisch perlitic	225		190-100			250-160	190-100				
N Al-Legierungen Al-alloys	nicht vergütbar not heat treatable	30-80	1000-600						1000-600				
		80-120	400-220						400-220				
	Al-Guss-Legierung Al-cast-alloy	nicht vergütbar not heat treatable	80	1000-600						1000-600			
		vergütbar heat treatable	100	600-300						600-300			
	Kupfer- Legierungen Copper-alloys	nicht vergütbar not heat treatable	90	200-120						210-130			
		vergütbar heat treatable	100	150-90						160-90			
S Warmfeste Legierung Heat resistant alloy (Fe)	geglüht annealed	200								50-30			
		275								40-20			
	Warmfeste Legierung Heat resistant alloy (Ni, Co)	geglüht annealed	250								30-20		
		gehärtet hardened	350								20-10		

Hinweise / Note:

* Alternative: TI25 oder TI26 / * Alternative: TI25 or TI26



**FINDEN SIE JETZT IHRE
PASSENDE WERKZEUGLÖSUNG.**

FIND YOUR RIGHT
TOOLING SOLUTION NOW.

horn-group.com

DEUTSCHLAND, STAMMSITZ

GERMANY, HEADQUARTERS

—

Hartmetall Werkzeugfabrik

Paul Horn GmbH

Horn-Straße 1

D-72072 Tübingen

Tel +49 7071 / 70040

Fax +49 7071 / 72893

info@de.horn-group.com

horn-group.com