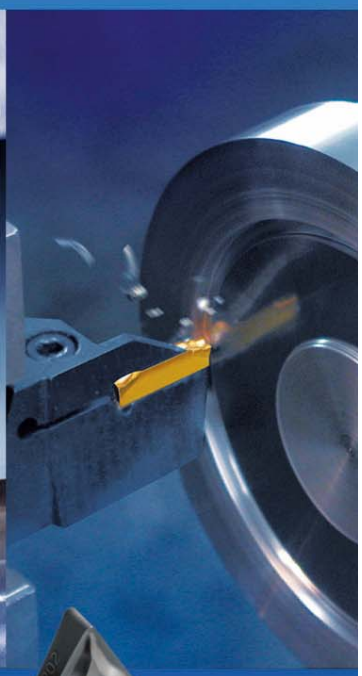
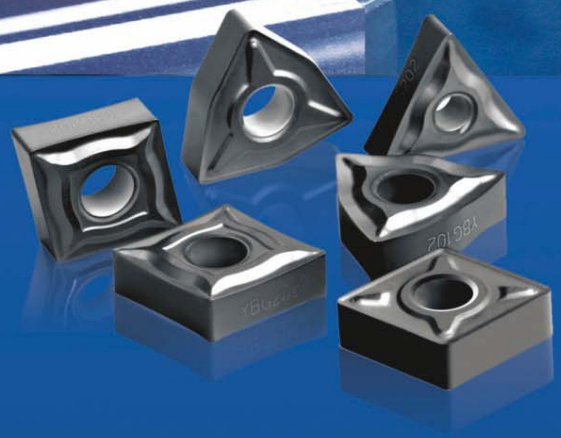
Cutting Tools

Wendeschneidplatten und Werkzeuge

2007–2008

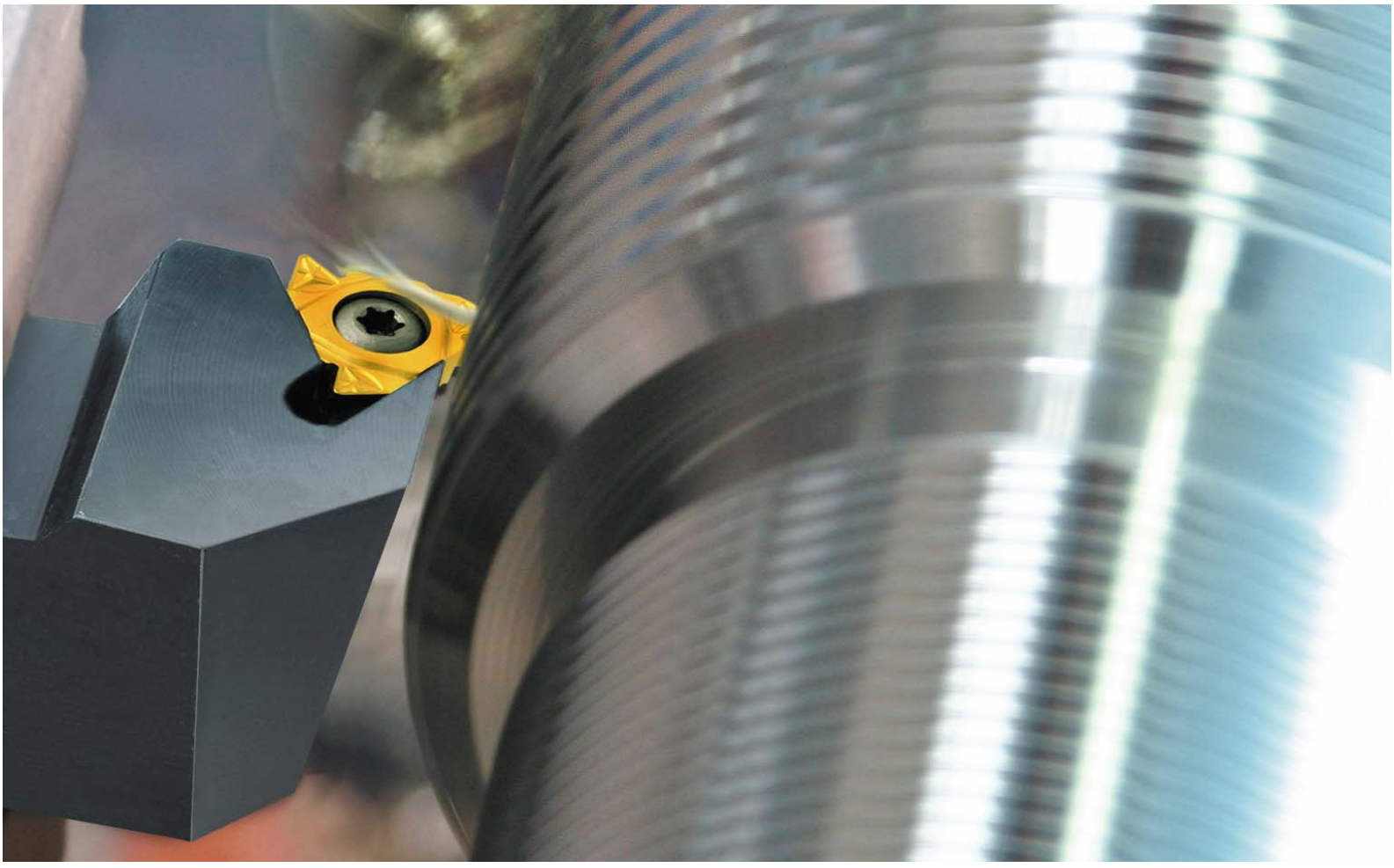
ZCC·CT



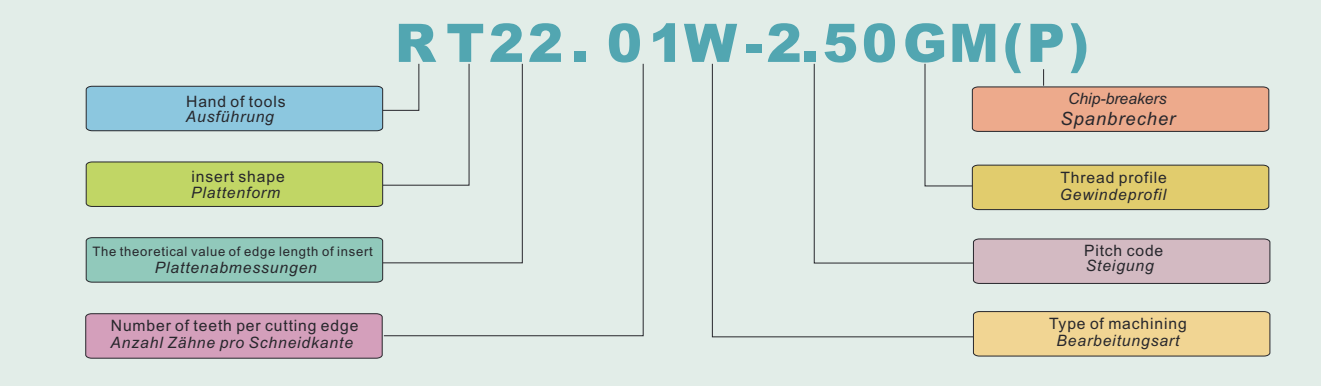


ZhuZhou Cemented Carbide Cutting Tools Co. Ltd
ZCC Group

Threading turning / *Gewindedrehen*



Example / *Beispiel*



Hand of tools / *Ausführung*

R	Righthand / *Rechts*
L	Lefthand / *Links*

insert shape / *Plattenform*

T	others Z

The theoretical value of edge length of insert *Plattenabmessungen*

11	IC=6.35mm
16	IC=9.525mm
22	IC=12.7mm

Number of teeth per cutting edge *Anzahl Zähne pro Schneidkante*

01	One tooth per cutting edge / *1 Zahn*
02	Two teeth per cutting edge/ *2 Zähne*

Type of machining / *Bearbeitungsart*

W	External threading / *Außengewinde*
N	Internal threading / *Innengewinde*

Pitch code / *Steigung*

Omni-tooth (Range of pitch indicated in numbers)

mm	TPI
0.35-9.0	72-2

V-tooth (Range of pitch indicated in letters) *V-Profil (Steigungsbereich)*

	mm	TPI
A	0.5-1.5	48-16
AG	0.5-3.0	48-8
G	1.75-3.0	14-8
N	3.5-5.0	7-5
Q	5.5-6.0	41/2-4

Thred profile / *Gewindeprofil*

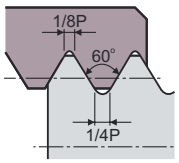
GM	60° ISO metric threads *Metrisch 60°*
60	General pitch threads V-profile 60° *Teilprofil 60°*
55	General pitch threads V-profile 55° *Teilprofil 55°*
W	Whitworth threads *Whitworth Rohrgewinde*
UN	Unified threads (American standard) *UN 60°*
BSPT	British standard taper pipe threads *BSPT Rohrgewinde*
NPT	American standard taper pipe threads *Amerikanisches Rohrgewinde*

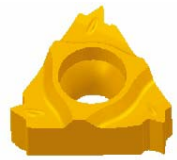
Chip-breakers are indicated by P
(P is omitted when it is metric thread)

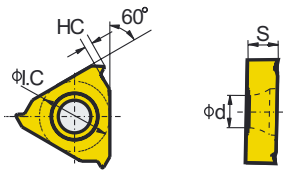
ISO metric thread insert with a shoulder / *Allgemeiner Einsatz zum Gewinden*

Metric 60° / *Metrisch 60°*

ISO 965-1980 DIN 13 GB/T 197-2003
tolerances: 6g/6H







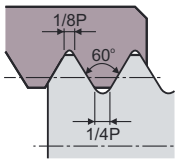
internal, left hand
innen, Linksausführung

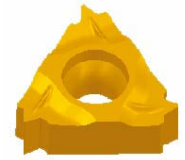
Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (mm)	ΦI.C	S	Φd	YBG201			YD201		
LT11.01N-1.00GM	1.00	6.35	3.18	2.8	●					
LT11.01N-1.25GM	1.25	6.35	3.18	2.8	●					
LT11.01N-1.50GM	1.50	6.35	3.18	2.8	●					
LT11.01N-1.75GM	1.75	6.35	3.18	2.8	●					
LT11.01N-2.00GM	2.00	6.35	3.18	2.8	●					
LT16.01N-1.00GM	1.00	9.525	3.97	4.4	○					
LT16.01N-1.25GM	1.25	9.525	3.97	4.4	●					
LT16.01N-1.50GM	1.50	9.525	3.97	4.4	●					
LT16.01N-1.75GM	1.75	9.525	3.97	4.4	●					
LT16.01N-2.00GM	2.00	9.525	3.97	4.4	●					
LT16.01N-2.50GM	2.50	9.525	3.97	4.4	●					
LT16.01N-3.00GM	3.00	9.525	3.97	4.4	●					
LT22.01N-3.50GM	3.50	12.7	5.56	5.5	●					
LT22.01N-4.00GM	4.00	12.7	5.56	5.5	●					
LT22.01N-4.50GM	4.50	12.7	5.56	5.5	●					
LT22.01N-5.00GM	5.00	12.7	5.56	5.5	●					
LT22.01N-5.50GM	5.50	12.7	5.56	5.5	●					
LT22.01N-6.00GM	6.00	12.7	5.56	5.5	●					

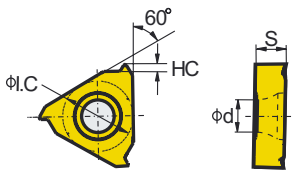
ISO metric thread insert with a shoulder / *Allgemeiner Einsatz zum Gewinden*

Metric 60° / *Metrisch 60°*

ISO 965-1980 DIN 13 GB/T 197-2003
Class of tolerances: 6g/6H







internal, right hand
innen, Rechtsausführung

Type / Typ	Dimension(mm) *Abmessugen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (mm)	ΦI.C	S	Φd	YBG201			YD201		
RT11.01N-1.00GM	1.00	6.35	3.18	2.8	●					
RT11.01N-1.25GM	1.25	6.35	3.18	2.8	●					
RT11.01N-1.50GM	1.50	6.35	3.18	2.8	●					
RT11.01N-1.75GM	1.75	6.35	3.18	2.8	●					
RT11.01N-2.00GM	2.00	6.35	3.18	2.8	●					
RT16.01N-1.00GM	1.00	9.525	3.97	4.4	●					
RT16.01N-1.25GM	1.25	9.525	3.97	4.4	●					
RT16.01N-1.50GM	1.50	9.525	3.97	4.4	●					
RT16.01N-1.75GM	1.75	9.525	3.97	4.4	●					
RT16.01N-2.00GM	2.00	9.525	3.97	4.4	●					
RT16.01N-2.50GM	2.50	9.525	3.97	4.4	●					
RT16.01N-3.00GM	3.00	9.525	3.97	4.4	●					
RT22.01N-3.50GM	3.50	12.7	5.56	5.5	●					
RT22.01N-4.00GM	4.00	12.7	5.56	5.5	●					
RT22.01N-4.50GM	4.50	12.7	5.56	5.5	●					
RT22.01N-5.00GM	5.00	12.7	5.56	5.5	●					
RT22.01N-5.50GM	5.50	12.7	5.56	5.5	●					
RT22.01N-6.00GM	6.00	12.7	5.56	5.5	●					

● *ex stock / ab Lager / pris en magasin*

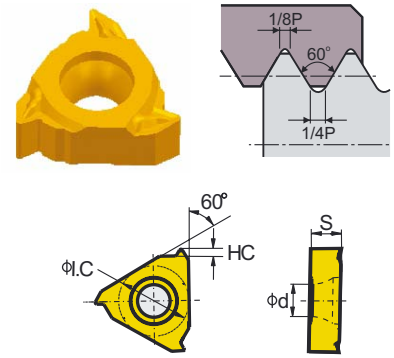
○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*

\+ *on demand / auf Anfrage / sur demande*

ISO metric thread insert with a shoulder / *Allgemeiner Einsatz zum Gewinden*

Metric 60° / *Metrisch 60°*

ISO 965-1980 DIN 13 GB/T 197-2003
Class of tolerances: 6g/6H



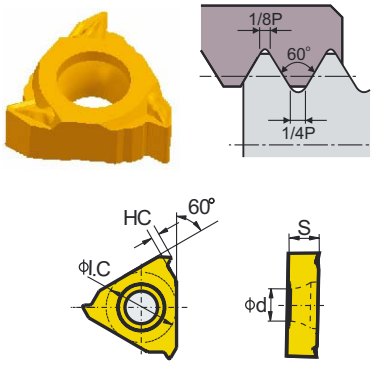
external, left hand
außen, Linksausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (mm)	ΦI.C	S	Φd	YBG201			YD201		
LT16.01W-1.00GM	1.00	9.525	3.97	4.4	●					
LT16.01W-1.25GM	1.25	9.525	3.97	4.4	●					
LT16.01W-1.50GM	1.50	9.525	3.97	4.4	●					
LT16.01W-1.75GM	1.75	9.525	3.97	4.4	●					
LT16.01W-2.00GM	2.00	9.525	3.97	4.4	●					
LT16.01W-2.50GM	2.50	9.525	3.97	4.4	●					
LT16.01W-3.00GM	3.00	9.525	3.97	4.4	●					
LT22.01W-3.50GM	3.50	12.7	5.56	5.5	●					
LT22.01W-4.00GM	4.00	12.7	5.56	5.5	●					
LT22.01W-4.50GM	4.50	12.7	5.56	5.5	●					
LT22.01W-5.00GM	5.00	12.7	5.56	5.5	●					
LT22.01W-5.50GM	5.50	12.7	5.56	5.5	●					
LT22.01W-6.00GM	6.00	12.7	5.56	5.5	●					

ISO metric thread insert with a shoulder / *Allgemeiner Einsatz zum Gewinden*

Metric 60° / *Metrisch 60°*

ISO 965-1980 DIN 13 GB/T 197-2003
Class of tolerances: 6g/6H



external,right hand
außen, Rechtsausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (mm)	ΦI.C	S	Φd	YBG201			YD201		
RT16.01W-1.00GM	1.00	9.525	3.97	4.4	●					
RT16.01W-1.25GM	1.25	9.525	3.97	4.4	●					
RT16.01W-1.50GM	1.50	9.525	3.97	4.4	●					
RT16.01W-1.75GM	1.75	9.525	3.97	4.4	●					
RT16.01W-2.00GM	2.00	9.525	3.97	4.4	●					
RT16.01W-2.50GM	2.50	9.525	3.97	4.4	●					
RT16.01W-3.00GM	3.00	9.525	3.97	4.4	●					
RT22.01W-3.50GM	3.50	12.7	5.56	5.5	●					
RT22.01W-4.00GM	4.00	12.7	5.56	5.5	●					
RT22.01W-4.50GM	4.50	12.7	5.56	5.5	●					
RT22.01W-5.00GM	5.00	12.7	5.56	5.5	●					
RT22.01W-5.50GM	5.50	12.7	5.56	5.5	●					
RT22.01W-6.00GM	6.00	12.7	5.56	5.5	●					

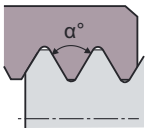
● *ex stock / ab Lager / pris en magasin*

○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*

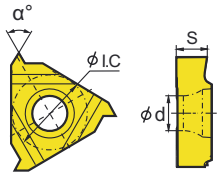
\+ *on demand / auf Anfrage / sur demande*

General pitch threading insert without a shoulder / *Allgemeiner Einsatz zum Gewinden*

V-profile / *Teil Profil*



✱ Inserts with chip-breakers
Platten mit Spanbrecher

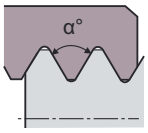


external, right hand
Außen, Rechtsausführung

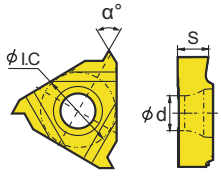
Type / Typ	Dimension(mm) *Abmessungen*					Grade / *Sorte*					
						Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
						P	M	K	S		
	Pitch Range *Steigungsbereich* mm(T.P.i)	S	ϕI.C	ϕd	α°	YBG201			Yd201		
RT16.01W-A60	0.5-1.5 (48-16)	3.97	9.525	4.4	60°	○					
RT16.01W-G60	1.75-3.0 (14-8)	3.97	9.525	4.4	60°	○					
RT16.01W-G60P✱	1.75-3.0 (14-8)	3.97	9.525	4.4	60°	○					
RT16.01W-AG60	0.5-3.0 (48-8)	3.97	9.525	4.4	60°	○					
RT22.01W-N60	3.5-5.0 (7-5)	5.56	12.7	5.5	60°	○					
RT16.01W-A55	0.5-1.5 (48-16)	3.97	9.525	4.4	55°	○					
RT16.01W-G55	1.75-3.0 (14-8)	3.97	9.525	4.4	55°	○					
RT16.01W-G55P✱	1.75-3.0 (14-8)	3.97	9.525	4.4	55°	○					
RT16.01W-AG55	0.5-3.0 (48-8)	3.97	9.525	4.4	55°	○					
RT22.01W-N55	3.5-5.0 (7-5)	5.56	12.7	5.5	55°	○					

General pitch threading insert without a shoulder / *Allgemeiner Einsatz zum Gewinden*

V-profile / *Teil Profil*



✱ Inserts with chip-breakers
Platten mit Spanbrecher



external, left hand
Außen, Linksausführung

Type / Typ	Dimension(mm) *Abmessungen*					Grade / *Sorte*					
						Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
						P	M	K	S		
	Pitch Range *Steigungsbereich* mm(T.P.i)	S	ϕI.C	ϕd	α°	YBG201			YD201		
LT16.01W-A60	0.5-1.5 (48-16)	3.97	9.525	4.4	60°	○					
LT16.01W-G60	1.75-3.0 (14-8)	3.97	9.525	4.4	60°	○					
LT16.01W-G60P ✱	1.75-3.0 (14-8)	3.97	9.525	4.4	60°	○					
LT16.01W-AG60	0.5-3.0 (48-8)	3.97	9.525	4.4	60°	○					
LT22.01W-N60	3.5-5.0 (7-5)	5.56	12.7	5.5	60°	○					
LT16.01W-A55	0.5-1.5 (48-16)	3.97	9.525	4.4	55°	○					
LT16.01W-G55	1.75-3.0 (14-8)	3.97	9.525	4.4	55°	○					
LT16.01W-G55P ✱	1.75-3.0 (14-8)	3.97	9.525	4.4	55°	○					
LT16.01W-AG55	0.5-3.0 (48-8)	3.97	9.525	4.4	55°	○					
LT22.01W-N55	3.5-5.0 (7-5)	5.56	12.7	5.5	55°	○					

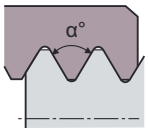
● *ex stock / ab Lager / pris en magasin*

○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*

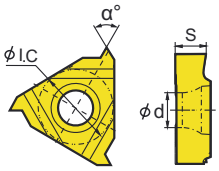
\+ *on demand / auf Anfrage / sur demande*

General pitch threading insert without a shoulder / *Allgemeiner Einsatz zum Gewinden*

V-profile / *Teil Profil*



✱ Inserts with chip-breakers
Platten mit Spanbrecher

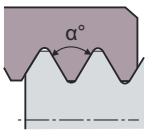


internal, right hand
Innen, Rechtsausführung

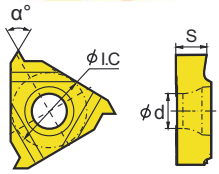
	Type / Typ	Dimension(mm) *Abmessungen*					Grade / *Sorte*					
							Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
							P	M	K	S		
		Pitch Range *Steigungsbereich* mm(T.P.i)	S	ϕI.C	ϕd	α°	YBG201			YD201		
60°	RT16.01N-A60	0.5-1.5 (48-16)	3.97	9.525	4.4	60°	○					
	RT16.01N-G60	1.75-3.0 (14-8)	3.97	9.525	4.4	60°	○					
	RT16.01N-G60P✱	1.75-3.0 (14-8)	3.97	9.525	4.4	60°	○					
	RT16.01N-AG60	0.5-3.0 (48-8)	3.97	9.525	4.4	60°	○					
	RT22.01N-N60	3.5-5.0 (7-5)	5.56	12.7	5.5	60°	○					
55°	RT16.01N-A55	0.5-1.5 (48-16)	3.97	9.525	4.4	55°	○					
	RT16.01N-G55	1.75-3.0 (14-8)	3.97	9.525	4.4	55°	○					
	RT16.01N-G55P✱	1.75-3.0 (14-8)	3.97	9.525	4.4	55°	○					
	RT16.01N-AG55	0.5-3.0 (48-8)	3.97	9.525	4.4	55°	○					
	RT22.01N-N55	3.5-5.0 (7-5)	5.56	12.7	5.5	55°	○					

General pitch threading insert without a shoulder / *Allgemeiner Einsatz zum Gewinden*

V-profile / *Teil Profil*



✱ Inserts with chip-breakers
Platten mit Spanbrecher



internal, right hand
Innen, Rechtsausführung

	Type / Typ	Dimension(mm) *Abmessungen*					Grade / *Sorte*					
							Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
							P	M	K	S		
		Pitch Range *Steigungsbereich* mm(T.P.i)	S	ϕI.C	ϕd	α°	YBG201			YD201		
60°	LT16.01N-A60	0.5-1.5 (48-16)	3.97	9.525	4.4	60°	○					
	LT16.01N-G60	1.75-3.0 (14-8)	3.97	9.525	4.4	60°	○					
	LT16.01N-G60P✱	1.75-3.0 (14-8)	3.97	9.525	4.4	60°	○					
	LT16.01N-AG60	0.5-3.0 (48-8)	3.97	9.525	4.4	60°	○					
	LT22.01N-N60	3.5-5.0 (7-5)	5.56	12.7	5.5	60°	○					
55°	LT16.01N-A55	0.5-1.5 (48-16)	3.97	9.525	4.4	55°	○					
	LT16.01N-G55	1.75-3.0 (14-8)	3.97	9.525	4.4	55°	○					
	LT16.01N-G55P✱	1.75-3.0 (14-8)	3.97	9.525	4.4	55°	○					
	LT16.01N-AG55	0.5-3.0 (48-8)	3.97	9.525	4.4	55°	○					
	LT22.01N-N55	3.5-5.0 (7-5)	5.56	12.7	5.5	55°	○					

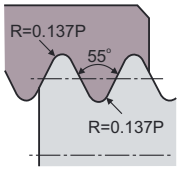
● *ex stock / ab Lager / pris en magasin*

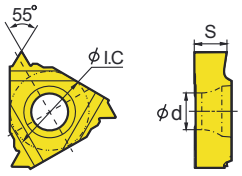
○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*

\+ *on demand / auf Anfrage / sur demande*

Whitworth thread insert with a shoulder / *Withworth Rohrgewinde*

ISO 228/1:1982 DIN 259 B.S.84:1956
Class of tolerances: Medium class A



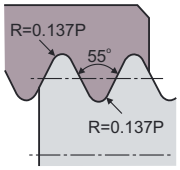


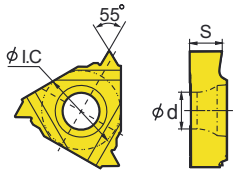
external, right hand
Außen, Rechtsausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (T.P.i)	ϕd	S	ϕI.C	YBG201			YD201		
RT16.01W-8W	8	3.97	9.525	4.4	○					
RT16.01W-9W	9	3.97	9.525	4.4	○					
RT16.01W-10W	10	3.97	9.525	4.4	○					
RT16.01W-11W	11	3.97	9.525	4.4	○					
RT16.01W-12W	12	3.97	9.525	4.4	○					
RT16.01W-14W	14	3.97	9.525	4.4	○					
RT16.01W-16W	16	3.97	9.525	4.4	○					

Whitworth thread insert with a shoulder / *Withworth Rohrgewinde*

ISO 228/1:1982 DIN 259 B.S.84:1956
Class of tolerances: Medium class A





external, left hand
Außen, Linksausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (T.P.i)	ϕI.C	S	ϕd	YBG201			YD201		
LT16.01W-8W	8	3.97	9.525	4.4	○					
LT16.01W-9W	9	3.97	9.525	4.4	○					
LT16.01W-10W	10	3.97	9.525	4.4	○					
LT16.01W-11W	11	3.97	9.525	4.4	○					
LT16.01W-12W	12	3.97	9.525	4.4	○					
LT16.01W-14W	14	3.97	9.525	4.4	○					
LT16.01W-16W	16	3.97	9.525	4.4	○					

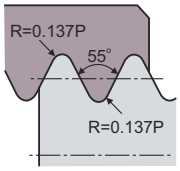
● *ex stock / ab Lager / pris en magasin*

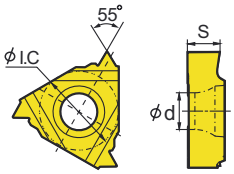
○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*

\+ *on demand / auf Anfrage / sur demande*

Whitworth thread insert with a shoulder / *Withworth Rohrgewinde*

ISO 228/1:1982 DIN 259 B.S.84:1956
Class of tolerances: Medium class A



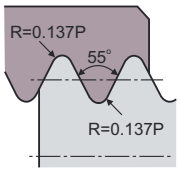


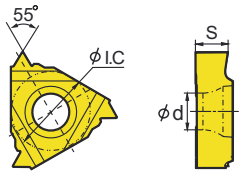
internal, right hand
Innen, Rechtsausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (T.P.i)	ϕd	S	ϕI.C	YBG201			YD201		
RT16.01N-8W	8	3.97	9.525	4.4	○					
RT16.01N-9W	9	3.97	9.525	4.4	○					
RT16.01N-10W	10	3.97	9.525	4.4	○					
RT16.01N-11W	11	3.97	9.525	4.4	○					
RT16.01N-12W	12	3.97	9.525	4.4	○					
RT16.01N-14W	14	3.97	9.525	4.4	○					
RT16.01N-16W	16	3.97	9.525	4.4	○					

Whitworth thread insert with a shoulder / *Withworth Rohrgewinde*

ISO 228/1:1982 DIN 259 B.S.84:1956
Class of tolerances: Medium class A





internal, left hand
Innen, Linksausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (T.P.i)	ϕI.C	S	ϕd	YBG201			YD201		
LT16.01N-8W	8	3.97	9.525	4.4	○					
LT16.01N-9W	9	3.97	9.525	4.4	○					
LT16.01N-10W	10	3.97	9.525	4.4	○					
LT16.01N-11W	11	3.97	9.525	4.4	○					
LT16.01N-12W	12	3.97	9.525	4.4	○					
LT16.01N-14W	14	3.97	9.525	4.4	○					
LT16.01N-16W	16	3.97	9.525	4.4	○					

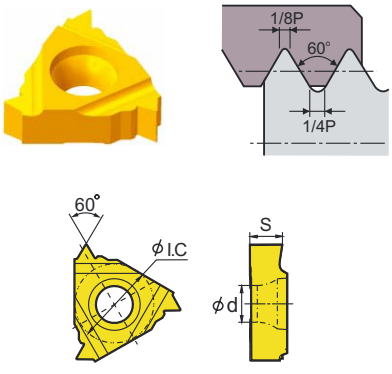
● *ex stock / ab Lager / pris en magasin*

○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*

\+ *on demand / auf Anfrage / sur demande*

Unified thread insert with a shoulder / *Allgemeiner Einsatz zum Gewinden*

UN60° ASME B1.1-1989
Class of tolerances: 2A/2B

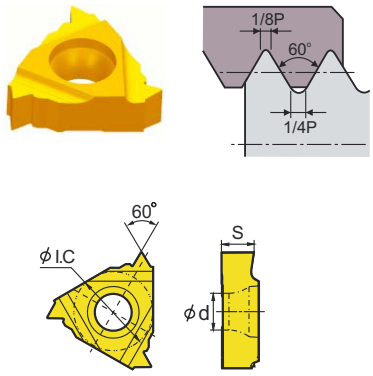


external, right hand
Außen, Rechtsausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (T.P.i)	ϕd	S	ϕI.C	YBG201			YD201		
RT16.01W-8UN	8	3.97	9.525	4.4	○					
RT16.01W-10UN	10	3.97	9.525	4.4	○					
RT16.01W-12UN	11	3.97	9.525	4.4	○					
RT16.01W-14UN	12	3.97	9.525	4.4	○					
RT16.01W-16UN	14	3.97	9.525	4.4	○					
RT16.01W-18UN	16	3.97	9.525	4.4	○					
RT16.01W-20UN	20	3.97	9.525	4.4	○					

Unified thread insert with a shoulder / *Allgemeiner Einsatz zum Gewinden*

UN60° ASME B1.1-1989
Class of tolerances: 2A/2B



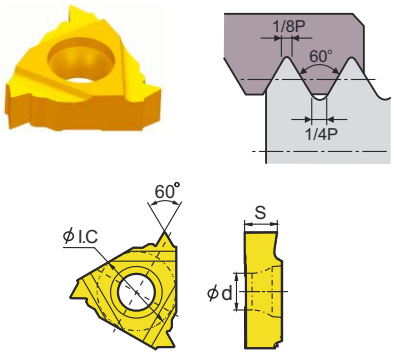
external, left hand
Außen, Linksausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (T.P.i)	ϕI.C	S	ϕd	YBG201			YD201		
LT16.01W-8UN	8	3.97	9.525	4.4	○					
LT16.01W-10UN	10	3.97	9.525	4.4	○					
LT16.01W-12UN	11	3.97	9.525	4.4	○					
LT16.01W-14UN	12	3.97	9.525	4.4	○					
LT16.01W-16UN	14	3.97	9.525	4.4	○					
LT16.01W-18UN	16	3.97	9.525	4.4	○					
LT16.01W-20UN	20	3.97	9.525	4.4	○					

● *ex stock / ab Lager / pris en magasin*
○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*
\+ *on demand / auf Anfrage / sur demande*

Unified thread insert with a shoulder / *Allgemeiner Einsatz zum Gewinden*

UN60° ASME B1.1-1989
Class of tolerances: 2A/2B

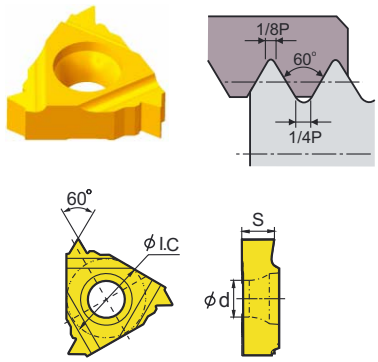


internal, right hand
Innen, Rechtsausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet* P M K S			Uncoated / *Unbeschichtet*		
	Pitch *Steigung* (T.P.i)	ϕd	S	ϕI.C	YBG201			YD201		
RT16.01N-8UN	8	3.97	9.525	4.4	○					
RT16.01N-10UN	10	3.97	9.525	4.4	○					
RT16.01N-12UN	11	3.97	9.525	4.4	○					
RT16.01N-14UN	12	3.97	9.525	4.4	○					
RT16.01N-16UN	14	3.97	9.525	4.4	○					
RT16.01N-18UN	16	3.97	9.525	4.4	○					
RT16.01N-20UN	20	3.97	9.525	4.4	○					

Unified thread insert with a shoulder / *Allgemeiner Einsatz zum Gewinden*

UN60° ASME B1.1-1989
Class of tolerances: 2A/2B



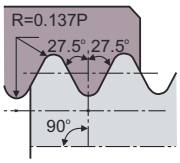
internal, left hand
Innen, Linksausführung

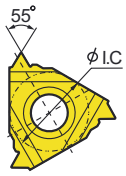
Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet* P M K S			Uncoated / *Unbeschichtet*		
	Pitch *Steigung* (T.P.i)	ϕI.C	S	ϕd	YBG201			YD201		
LT16.01N-8UN	8	3.97	9.525	4.4	○					
LT16.01N-10UN	10	3.97	9.525	4.4	○					
LT16.01N-12UN	11	3.97	9.525	4.4	○					
LT16.01N-14UN	12	3.97	9.525	4.4	○					
LT16.01N-16UN	14	3.97	9.525	4.4	○					
LT16.01N-18UN	16	3.97	9.525	4.4	○					
LT16.01N-20UN	20	3.97	9.525	4.4	○					

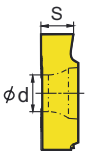
● *ex stock / ab Lager / pris en magasin*
○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*
\+ *on demand / auf Anfrage / sur demande*

British standard taper pipe thread insert with a shoulder / Rohrgewinde für Dampf-, Gas- und Wasserleitungen

ISO 7/1:1994 B.S.21:1985
Standard BSPT





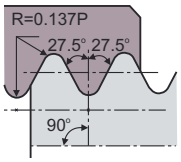


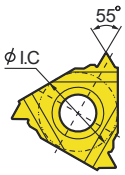
external, right hand
Außen, Rechtsausführung

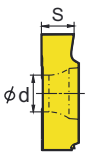
Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*				Uncoated / *Unbeschichtet*	
					P	M	K	S		
	Pitch *Steigung* (T.P.i)	ϕd	S	ϕI.C	YBG201				YD201	
RT16.01W-11 BSPT	11	3.97	9.525	4.4	○					
RT16.01W-14 BSPT	14	3.97	9.525	4.4	○					
RT16.01W-19 BSPT	19	3.97	9.525	4.4	○					
RT16.01W-28 BSPT	20	3.97	9.525	4.4	○					

British standard taper pipe thread insert with a shoulder / Rohrgewinde für Dampf-, Gas- und Wasserleitungen

ISO 7/1:1994 B.S.21:1985
Standard BSPT







external, left hand
Außen, Linksausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*				Uncoated / *Unbeschichtet*	
					P	M	K	S		
	Pitch *Steigung* (T.P.i)	ϕI.C	S	ϕd	YBG201				YD201	
LT16.01W-11 BSPT	11	3.97	9.525	4.4	○					
LT16.01W-14 BSPT	14	3.97	9.525	4.4	○					
LT16.01W-19 BSPT	19	3.97	9.525	4.4	○					
LT16.01W-28 BSPT	20	3.97	9.525	4.4	○					

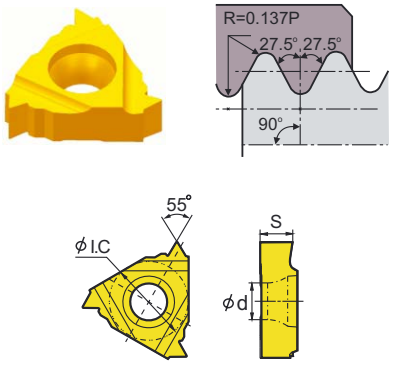
● *ex stock / ab Lager / pris en magasin*

○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*

\+ *on demand / auf Anfrage / sur demande*

British standard taper pipe thread insert with a shoulder / *Rohrgewinde für Dampf-, Gas- und Wasserleitungen*

ISO 7/1:1994 B.S.21:1985
Standard BSPT

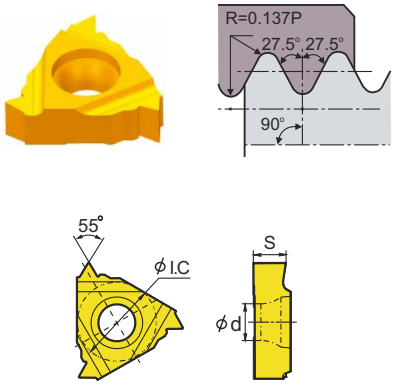


internal, right hand
Innen, Rechtsausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (T.P.i)	ϕd	S	ϕI.C	YBG201			YD201		
RT16.01N-11 BSPT	11	3.97	9.525	4.4	○					
RT16.01N-14 BSPT	14	3.97	9.525	4.4	○					
RT16.01N-19 BSPT	19	3.97	9.525	4.4	○					
RT16.01N-28 BSPT	20	3.97	9.525	4.4	○					

British standard taper pipe thread insert with a shoulder / *Rohrgewinde für Dampf-, Gas- und Wasserleitungen*

ISO 7/1:1994 B.S.21:1985
Standard BSPT



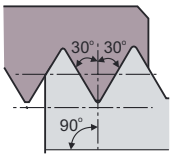
internal, left hand
Außen, Linksausführung

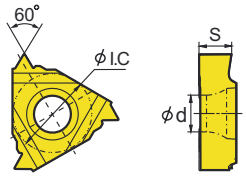
Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet*			Uncoated / *Unbeschichtet*		
					P M K S					
	Pitch *Steigung* (T.P.i)	ϕI.C	S	ϕd	YBG201			YD201		
LT16.01N-11 BSPT	11	3.97	9.525	4.4	○					
LT16.01N-14 BSPT	14	3.97	9.525	4.4	○					
LT16.01N-19 BSPT	19	3.97	9.525	4.4	○					
LT16.01N-28 BSPT	20	3.97	9.525	4.4	○					

● *ex stock / ab Lager / pris en magasin*
○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*
\+ *on demand / auf Anfrage / sur demande*

NPT American standard taper pipe thread with a shoulder / *Amerikanisches kegeliges Rohrgewinde*

ASME B1.20.1-1983
Standard NPT





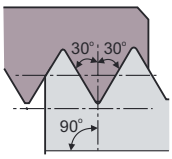
external, right hand
Außen, Rechtsausführung

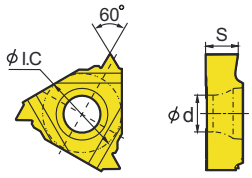
Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet* P M K S			Uncoated / *Unbeschichtet*		
	Pitch *Steigung* (T.P.i)	ϕd	S	ϕI.C	YBG201			YD201		
RT16.01W-8 NPT	8	3.97	9.525	4.4	○					
RT16.01W-11.5 NPT	11.5	3.97	9.525	4.4	○					
RT16.01W-14 NPT	14	3.97	9.525	4.4	○					
RT16.01W-18 NPT	18	3.97	9.525	4.4	○					
RT16.01W-27 NPT	27	3.97	9.525	4.4	○					

NPT American standard taper pipe thread with a shoulder / *Amerikanisches kegeliges Rohrgewinde*

ASME B1.20.1-1983
Standard NPT

Left hand type





external, left hand
Außen, Linksausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet* P M K S			Uncoated / *Unbeschichtet*		
	Pitch *Steigung* (T.P.i)	ϕI.C	S	ϕd	YBG201			YD201		
LT16.01W-8 NPT	8	3.97	9.525	4.4	○					
LT16.01W-11.5 NPT	11.5	3.97	9.525	4.4	○					
LT16.01W-14 NPT	14	3.97	9.525	4.4	○					
LT16.01W-18 NPT	18	3.97	9.525	4.4	○					
LT16.01W-27 NPT	27	3.97	9.525	4.4	○					

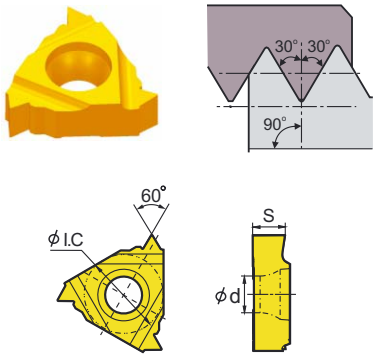
● *ex stock / ab Lager / pris en magasin*

○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*

\+ *on demand / auf Anfrage / sur demande*

NPT American standard taper pipe thread with a shoulder / *Amerikanisches kegeliges Rohrgewinde*

ASME B1.20.1-1983
Standard NPT

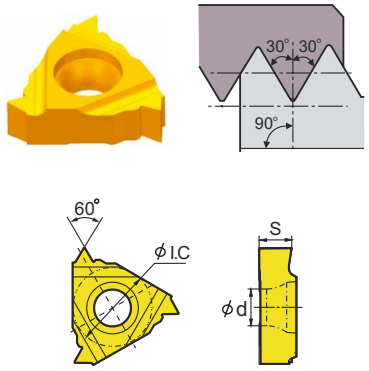


internal, right hand
Innen, Rechtsausführung

Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet* P M K S			Uncoated / *Unbeschichtet*		
	Pitch *Steigung* (T.P.i)	ϕd	S	ϕI.C	YBG201			YD201		
RT16.01N-8 NPT	8	3.97	9.525	4.4	○					
RT16.01N-11.5 NPT	11.5	3.97	9.525	4.4	○					
RT16.01N-14 NPT	14	3.97	9.525	4.4	○					
RT16.01N-18 NPT	18	3.97	9.525	4.4	○					
RT16.01N-27 NPT	27	3.97	9.525	4.4	○					

NPT American standard taper pipe thread with a shoulder / *Amerikanisches kegeliges Rohrgewinde*

ASME B1.20.1-1983
Standard NPT



internal, left hand
Außen, Linksausführung

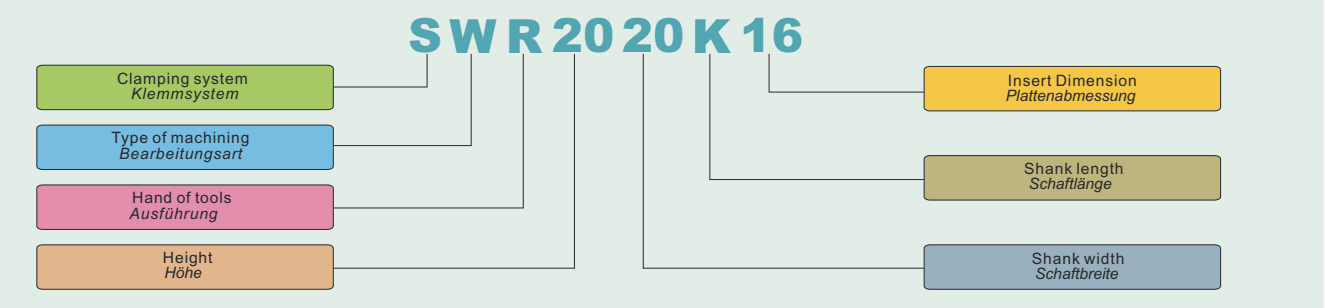
Type / Typ	Dimension(mm) *Abmessungen*				Grade / *Sorte*					
					Coated / *Beschichtet* P M K S			Uncoated / *Unbeschichtet*		
	Pitch *Steigung* (T.P.i)	ϕI.C	S	ϕd	YBG201			YD201		
LT16.01N-8 NPT	8	3.97	9.525	4.4	○					
LT16.01N-11.5 NPT	11.5	3.97	9.525	4.4	○					
LT16.01N-14 NPT	14	3.97	9.525	4.4	○					
LT16.01N-18 NPT	18	3.97	9.525	4.4	○					
LT16.01N-27 NPT	27	3.97	9.525	4.4	○					

● *ex stock / ab Lager / pris en magasin*

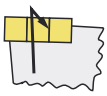
○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*

\+ *on demand / auf Anfrage / sur demande*

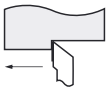
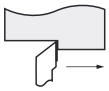
Example / *Beispiel*



Clamping system / *Klemmsystem*

Top clamping	Screw on
	
C	S

Hand of tools / *Ausführung*

R Right / Rechts	L Left / Links
	

Type of screw / *Bearbeitungsart*

W	External / *Außen*
N	Internal / *Innen*

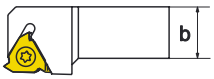
Tool length / *Schaftlänge*

Code	H	K	M	P	Q
Length	100	125	150	170	180

Height / *Höhe*

Integers to be proceeded by 0
eg: h=8 indicated by 08

Shank width / *Schaftbreite*

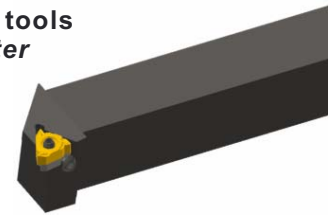


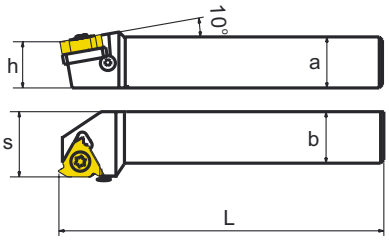
Integers to be proceeded by 0
eg: h=8 indicated by 08

Insert Dimension / *Plattenabmessung*

Code	Cutting edge length	Inscribed circle dia.
11	11	6.35
16	16	9.525
22	22	12.70

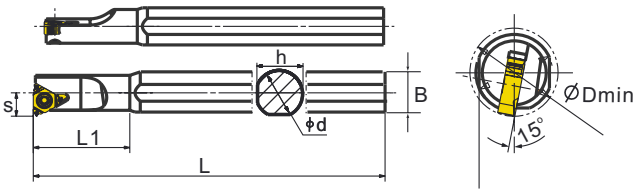
External threading tools
Außengewindehalter





Type / Typ		Dimension(mm) *Abmessungen*							Applicable inserts *Wendeschneidplatten*	Screw *Schraube*	Shim *Unterlage*	ShimScrew *Zwischenlage-schraube*	Wrench *Schlüssel*
		R	L	a	h	b	L	s					
SWR/L	1616H16	●	●	16	16	16	100	20	R/LT16.01W-**GM	I60 M3.5X12	MT16-**M	SM4X8C	WT15P WH25L
	2020K16	●	●	20	20	20	125	25					
	2525M16	●	●	25	25	25	150	32					
	3225P16	●	○	32	25	32	170	32					
	3232P16	●	○	32	32	32	170	40					
	2525M22	●	●	25	25	25	150	32	R/LT22.01W-**GM	I60 M5X17	MT22-**M	SM4X8C	WT20P WH25L
	3225P22	○	○	32	32	25	170	32					
	3232P22	●	●	32	32	32	170	40					
	4040S22	○	○	40	40	40	250	50					

Internal threading tools
Innengewindehalter



Type / Typ		Dimension(mm) *Abmessungen*									Applicable inserts *Wendeschneidplatten*	Screw *Schraube*	Shim *Unterlage*	ShimScrew *Zwischenlage-schraube*	Wrench *Schlüssel*
		R	L	d	L	B	Dmin	s	h	L1					
SNR/L	0016K11	○	○	16	125	16	12	10	15	20.9	LT11.01N-**GM	I60 M2.5X6.5			WT07P
	0016M11	○	○	16	150	15.5	16	10.5	15	25.9					
	0016M16	●	●	16	150	15.5	20	12	15	27	RT16.01N-**GM	I60 M3.5X8			WT15P
	0020M16	○	○	20	150	19	25	14	18	28.7		I60 M3.5X12	MT16-**M	SM4X8C	WT15P WT25L
	0020Q16	●	●	20	180	19	25	14	18	34					
	0025M16	○	○	25	150	24	32	17	23	28.8					
	0032R16	○	○	32	200	31	40	22	30	30.9					
	0032S16	○	○	32	250	31	40	22	30	30.9					
	0040T16	○	○	40	300	38.5	50	27	37	31.5					
	0050U16	○	○	50	350	49.5	63	35	49	40.2					
	0020Q22	○	○	20	180	21.5	25	15	18	35	RT22.01N-**GM	I60 M5X10			WT20P
	0025R22	○	○	25	200	24	32	19	23	39		I60 M5X17	MT22-**M	SM4X8C	WT15P WT25L
	0032S22	○	○	32	250	31	40	22	30	36.4					
	0040T22	○	○	40	300	38.5	50	27	37	37.2					
	0050U22	○	○	50	350	48.5	63	35	47	42.6					

● *ex stock / ab Lager / pris en magasin*

○ *short-term delivery / kurzfristige Lieferung / délai de livraison au plus court*

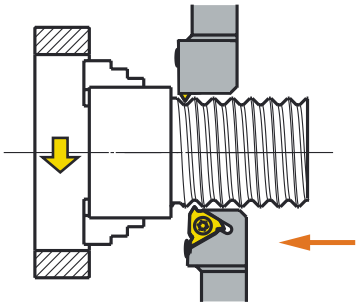
\+ *on demand / auf Anfrage / sur demande*

Threading tools application key

a. The threading machining style / *Gewindedrehmethode*
b. The inserts / *Gewindeplatten*
c. The toolholder / *Halter*
d. The suitable shim / *Passende Unterlage*
e. The cutting data / *Gewindedrehdaten*

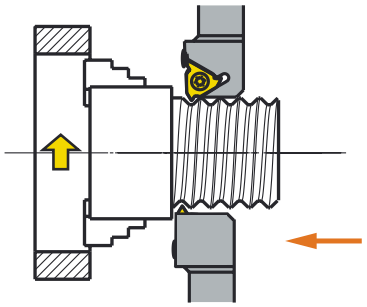
a. To choose the method of threading / *Bearbeitungsmethode wählen*

External right threading
Außen Rechtsgewinde

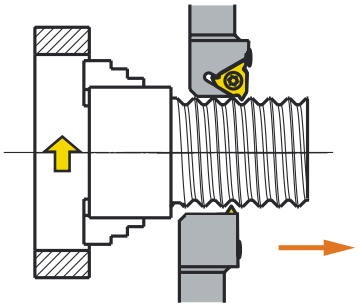


Tools (inserts for right threading)
Werkzeuge (Wendeplatten in Rechtsausführung)

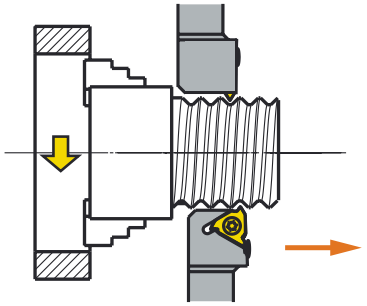
External left threading
Außen Linksgewinde



Tools (inserts for left threading)
Werkzeuge (Wendeplatten in Linksausführung)

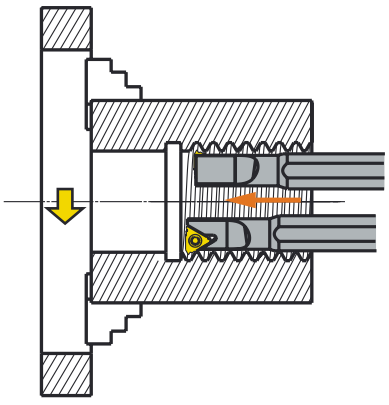


Tools (inserts for right threading)
Werkzeuge (Wendeplatten in Rechtsausführung)



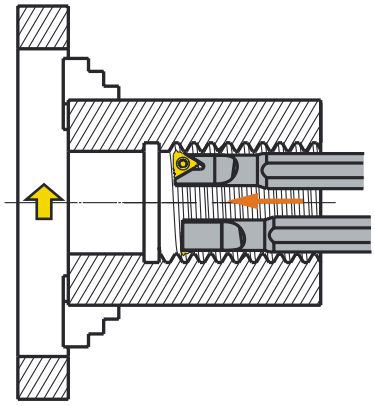
Tools (inserts for left threading)
Werkzeuge (Wendeplatten in Linksausführung)

Internal right threading
Innen Rechtsgewinde



Tools (inserts for right threading)
Werkzeuge (Wendeplatten in Rechtsausführung)

Internal left threading
Innen Linksgewinde



Tools (inserts for left threading)
Werkzeuge (Wendeplatten in Linksausführung)

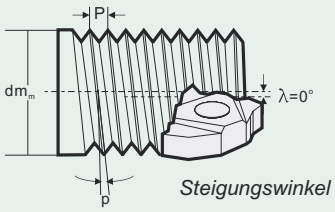
b. To choose right inserts and toolholders / *Gewindeplatte und Halter wählen*

c. Threading helix angle,shim / *Steigungswinkel des Gewindes, der Unterlage*

The flank clearance angles of the thread profile is dependent on the helix angle of the thread.
Die Flankenfreiwinkel des Gewindeprofils sind vom Steigungswinkel des Gewindes abhängig.

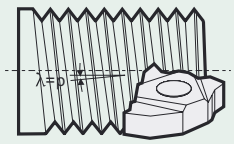
.

λ =Threading helix angle.



Steigungswinkel

Φ =Threading helix angle.



Neigungswinkel

The helix angle of the thread must coincide with the insert's angle of inclination angle as far as possible to get the ideal profile, to avoid obviate unfavourable wear on one of the flanks and thus to ensure tool life.

Der Steigungswinkel des Gewindes muss mit dem Neigungswinkel der Gewindeplatte soweit wie möglich übereinstimmen, um Profilgenauigkeit zu erzielen, ungleichmäßigen Freiflächen-verschleiß der Gewindeplatte zu vermeiden und eine längere Standzeit zu gewährleisten.

The angle of inclination is calculated by using the formula.
Der Steigungswinkel des Gewindes bzw. der erforderliche Neigungswinkel ergibt sich aus folgender Formel.

$$tg\lambda = \frac{p}{d_2 x}$$

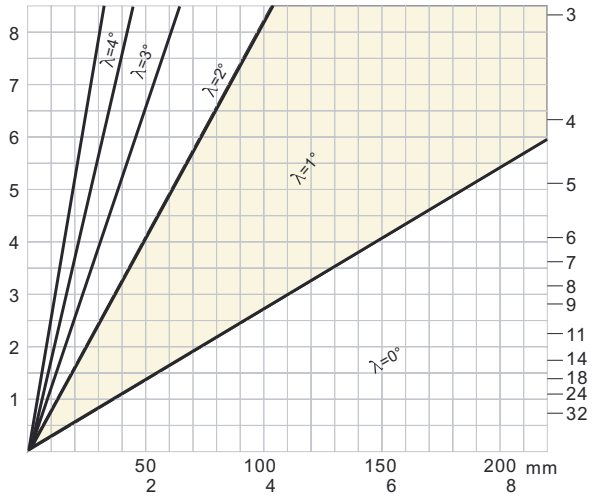
p = Pitch
Steigung

d_2= Effective diameter of thread
Flankendurchmesser

λ = Inclination angle
Neigungswinkel

Pitchrange *Steigungsbereich*	Insert size *Platten Größe*	Inclination angle *Neigungswinkel*	Shims *Zwischenlagen*
0.5-3.0	16	0 1 2 3	MT16-00M MT16-01M MT16-02M MT16-03M
3.5-6.0	22	0 1 2 3	MT22-00M MT22-01M MT22-02M MT22-03M

Choice of right shim
Wahl der richtigen Unterlage



Shim for λ=1° is as the standard shim with the toolholder.
Die Unterlage λ=1° wird mit dem Halter geliefert.

Selecting the shim / *Empfehlungen für die Einstellungswerte*

Metric system ISO external threading with wiper edge feed recommendation form
Metrisch 60 Außenbearbeitung

Pitch(mm) / *Steigung*	1.0		1.25		1.5		1.75		2.0		2.5		3.0		4.0		5.0	
Total feed (a) *Gesamtzustellung*	0.72		0.86		1.02		1.17		1.33		1.63		1.94		2.58		3.21	
Cutting times(nap) *Anzahl der Schnitte*	5		6		7		8		9		11		13		15		17	
Cutting order *Schnittaufteilung*	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial
1	0.20	0.10	0.20	0.10	0.21	0.10	0.22	0.12	0.24	0.13	0.25	0.14	0.26	0.14	0.35	0.17	0.40	0.20
2	0.18	0.09	0.18	0.09	0.18	0.10	0.20	0.10	0.22	0.12	0.24	0.12	0.24	0.012	0.30	0.14	0.35	0.17
3	0.16	0.06	0.14	0.08	0.18	0.09	0.18	0.09	0.20	0.09	0.21	0.10	0.20	0.12	0.25	0.12	0.30	0.16
4	0.10		0.10	0.06	0.15	0.07	0.15	0.08	0.15	0.07	0.18	0.09	0.20	0.10	0.20	0.10	0.28	0.14
5	0.08		0.08		0.12	0.06	0.13	0.06	0.12	0.07	0.15	0.07	0.18	0.09	0.18	0.10	0.25	0.12
6					0.10		0.11	0.06	0.12	0.06	0.12	0.07	0.15	0.08	0.18	0.09	0.20	0.10
7					0.08		0.10		0.10	0.06	0.12	0.06	0.13	0.07	0.16	0.09	0.18	0.09
8							0.08		0.10		0.10	0.06	0.12	0.06	0.15	0.09	0.16	0.09
9									0.08		0.10	0.05	0.10	0.06	0.15	0.08	0.15	0.09
10											0.08		0.10	0.06	0.13	0.07	0.15	0.08
11											0.08		0.08	0.05	0.12	0.07	0.13	0.08
12													0.08		0.12	0.06	0.13	0.07
13															0.11	0.06	0.12	0.07
14															0.10		0.12	0.06
15															0.08		0.11	0.06
16																	0.10	
17																	0.08	

Selecting the shim / *Empfehlungen für die Einstellungswerte*

Metric system ISO external threading with wiper edge feed recommendation form
Metrisch 60 Innenbearbeitung

Pitch(mm) / *Steigung*	1.0		1.25		1.5		1.75		2.0		2.5		3.0		4.0		5.0	
Total feed (a) *Gesamtzustellung*	0.62		0.77		0.92		1.06		1.21		1.49		1.79		2.36		2.95	
Cutting times(nap) *Anzahl der Schnitte*	5		6		7		8		9		11		13		15		17	
Cutting order *Schnittaufteilung*	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial	Radial	Axial
1	0.18	0.08	0.020	0.09	0.22	0.09	0.23	0.09	0.24	0.10	0.25	0.12	0.26	0.12	0.030	0.14	0.32	0.16
2	0.14	0.07	0.15	0.07	0.16	0.08	0.16	0.08	0.18	0.09	0.20	0.09	0.20	0.12	0.25	0.13	0.28	0.14
3	0.12	0.06	0.12	0.07	0.14	0.07	0.14	0.08	0.15	0.08	0.15	0.09	0.20	0.10	0.22	0.12	0.25	0.13
4	0.10		0.12	0.06	0.12	0.06	0.13	0.07	0.14	0.07	0.15	0.08	0.18	0.09	0.20	0.10	0.22	0.12
5	0.08		0.10		0.11	0.05	0.12	0.06	0.12	0.06	0.13	0.07	0.15	0.07	0.18	0.09	0.21	0.12
6					0.09		0.10	0.06	0.11	0.06	0.12	0.07	0.12	0.07	0.15	0.09	0.20	0.10
7					0.08		0.10		0.10	0.05	0.12	0.06	0.12	0.06	0.15	0.09	0.18	0.10
8							0.08		0.09		0.10	0.06	0.10	0.06	0.15	0.07	0.18	0.09
9									0.08		0.10	0.05	0.010	0.06	0.12	0.07	0.15	0.09
10											0.09		0.10	0.06	0.12	0.07	0.15	0.09
11											0.08		0.10	0.05	0.12	0.06	0.15	0.09
12													0.08		0.11	0.06	0.15	0.07
13															0.11	0.06	0.12	0.06
14															0.10		0.11	0.06
15															0.08		0.10	0.06
16																	0.10	
17																	0.08	

d. To chose threading cutting data / *Gewindeschneiddaten wählen*

The Number of passes and infeed are the key points of threading operation.
Please choose the cutting parameters with the recommended form according to experience data.
Rising cutting speed when cutting edge break and reducing cutting speed when wearness of inserts is rising.

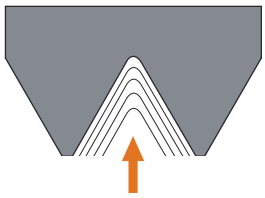
Die Anzahl der Durchgänge und die Zustellungsgröße sind ein entscheidender Faktor bei der Gewindebearbeitung. Die empfohlenen Daten und Erfahrungen sind als Startwerte zu betrachten. Im Falle von Schneidkantenbruch Anzahl der Schnitte erhöhen, bei höherem Verschleiß die Schnittgeschwindigkeit reduzieren.

Types of infeed of threading / *Zustellarten vom Gewindedrehen*

Radial infeed / *Radiale Zustellung*

Radial infeed requires low cutting depth, sharp cutting edge, and tough grade. It is recommended when the pitch is smaller than 2mm, not ideal for material with long chips.

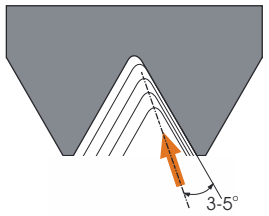
Radiale Zustellung fordert eine niedrige Schnitttiefe, scharfe Schneidkante und zähe Sorte.



Modified flank infeed / *Modifizierte Flankenzustellung*

Infeed at an angle of 3-5 to the flank to the teeth. It is easy for chips flow.
Suitable for long chip material and internal threading.

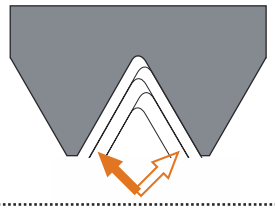
Zustellung unter einem Winkel von 3-5 zur Flanke des Gewindes, guter Spanablauf. Geeignet für langspanende Werkstoffe und Innengewinde.



Alternating flank infeed / *Wechselseitige Zustellung*

Alternating flank infeed is mainly used for large pitches and long chip materials. To get equal insert wear on both edges.

Wechselseitige Zustellung entlang beider Flanken. Anwendung bei großen Steigungen und langspanenden Werkstoffen. Gleichmäßiger Flankenverschleiß an beiden Schneidkanten.



ISO	Materials		Kc0.4 N/mm² Cutting force Kc0.4 N/mm²	Hardness HB	Grades / Sorte	
					YBG201	YD201
					Cutting speed m/min	
P	Carbon Steel	C=0.15% C=0.35% C=0.60%	1900 2100 2250	125 150 200	150-175 140-155 130-145	140-160 110-135 100-130
	Alloy steel	Annealed Hardened Hardened Hardened	2100 2600 2700 2850	180 275 300 350	110-130 80-100 70-90 60-80	90-120 70-90 60-80 50-70
	High alloy steel	Annealed Hardened	2600 3900	200 325	90-115 70-90	80-105 60-80
	Cast steel	Unalloyed Low-alloy High-alloy	2000 2500 2700	180 200 225	180-210 90-115 90-115	150-180 70-100 70-90
M	Stain-less steel	Austenit	2450	180	110-130	60-80
		Martensite Ferrite	2300	200	130-170	90-115
	Heat resi-stant alloy	Iron based, Annealed Aged	3000 3050	200 280	35-50 25-35	35-50 25-35
		Ni- or Co-based, Annealed Aged cas	3500 4150 4150	250 350 320	15-25 10-20 10-15	15-25 10-20 10-15
K	Hardened Steel	Hardened steel [1) 2) 3)] Manganese steel 12% [1)]	4500 3600	HRC55 250	40-50	40-50
	Malleable iron	Ferrite Pearlite	1100 1100	130 230	110-140 85-105	75-100 60-75
		Low Tough cast iron High Tough cast iron	1100 1500	180 260	110-140 90-115	70-90 65-85
	Graphite cast iron	Ferrite Pearlite	1100 1800	160 250	110-130 80-100	100-120 45-55
		Chilled cast iron [2)]	3000	400	10-20	450-520 400-500
	Aluminium Alloys	No heat treatment Heat treatment	500 800	60 100	1300-1450 450-500	
	Cast Alumnium Alloy	No heat treatment Heat treatment	750 900	75 90	430-470 250-290	410-450 220-260
	Copper Alloy	Lead alloy,pb>1% Brass, red copper bronze,lead-free & Electrolyzed copper	700 750 1750	110 90 100	400-430 220-250 160-180	350-380 200-220 130-160
	Other Materials	Hard plastics Fiber materials Hard rubber				

ZhuZhou Cemented Carbide Cutting Tools Co. Ltd
ZCC Group

ZCC·CT

Sales center in Europe
Vertriebszentrale in Europa:
ZCC Cutting Tools Europe GmbH
www.zccct-europe.com www.zccct.com
Heinrichstraße 169 A D-40239 Düsseldorf
Tel. 0049-211-230390
Fax: 0049-211-23039139
E-mail: Info@zccct-europe.com

Distributor
Vertretung