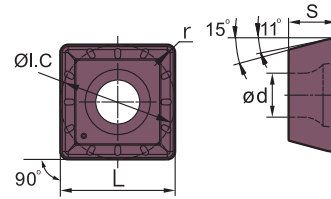


Drilling · Bohren

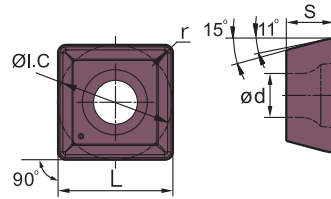
Indexable drill · Wendeschneidplattenbohrer

■ ZTD 02 / 03 / 04 / 05



Type Typ	Dimension Abmessung (mm)						Grade Sorte	
	L	ØI.C	s	ød	α	r	YBG205 outer insert Außenschnide	YBG212 inner insert Innenschnide
SPGT050204-PM	5	5	2.4	2.2	15°, 7°	0.4	•	•
SPGT060204-PM	6	6	2.4	2.6	15°, 11°	0.4	•	•
SPGT07T308-PM	7.94	7.94	4	2.8	15°, 11°	0.8	•	•
SPGT090408-PM	9.8	9.8	4.3	4.2	15°, 11°	0.8	•	•
SPGT110408-PM	11.5	11.5	4.8	4.4	15°, 11°	0.8	•	•
SPGT140512-PM	14.3	14.3	5.2	5.75	15°, 11°	1.2	•	•

• ex stock / ab Lager ○ on demand / auf Anfrage



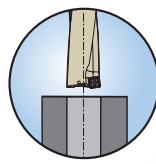
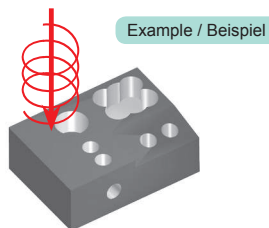
Type Typ	Dimension Abmessung (mm)						Grade Sorte	
	L	ØI.C	s	ød	r	YBG205 outer insert Außenschnide	YBG212 inner insert Innenschnide	
SPGT050204-EM	5	5	2.38	2.2	0.4	•	•	
SPGT060204-EM	6	6	2.38	2.6	0.4	•	•	
SPGT07T308-EM	7.94	7.94	3.97	2.8	0.8	•	•	
SPGT090408-EM	9.8	9.8	4.3	4.2	0.8	•	•	
SPGT110408-EM	11.5	11.5	4.76	4.4	0.8	•	•	
SPGT140512-EM	14.3	14.3	5.2	5.75	1.2	•	•	

• ex stock / ab Lager ○ on demand / auf Anfrage

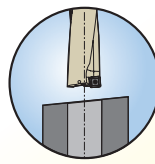
■ Material Overview · Material Übersicht

✓ = Very suitable · Sehr empfohlen
 ✓ = Suitable · Empfohlen

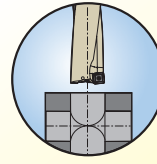
Grade Sorte	Workpiece material · Werkstückstoff									
	Mild steel Baustahl HB≤180	Carbon steel Alloy Steel Kohlenstoff-, Legierter Stahl	Hardened steel · Gehärteter Stahl			Stainless steel Rostfreier Stahl	Cast iron Gusseisen	Nodular cast iron GGG Kugelgrah- itguss	Aluminum alloy Aluleg.	Copper alloy Kupferleg.
SPGT* - PM	✓	✓				✓	✓	✓		



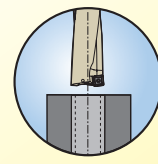
1 General boring
Allgemeine Bohrung



2 Inclined plane
Schiefe Ebene



3 Cross hole
Kreuzbohrung



4 expansion boring
Expansionsbohrung

Drilling · Bohren

General technical information · Allgemeine Technische Information

Comparison table for drilling Insert - Grades
Bohrwendepplatten Übersichtstabelle - Sorten

Workpiece material Werkstück Material	ISO	Coating · Beschichtung		Cermet Cermet	uncoated carbide unb. Hartmetall	PCBN & PCD PCBN & PKD
		CVD	PVD			
P Steel · Stahl	P01					
	P10		YBG202 YBG205 YBG212			
	P20	YBD252				
	P30					
	P40					
M Stainless Steel Rostfreier Stahl	M01					
	M10		YBG202 YBG205 YBG212			
	M20					
	M30					
	M40					
K Cast iron · Grauguss	K01					
	K10	YBD252		YBG202 YBG205 YBG212		
	K20					
	K30					
	K40					
N Hardened material Gehärtete Werkstoffe	N01					
	N10				YD201	
	N20					
	N30					
S Heat-resistant steel Warmfester Stahl	S01					
	S10		YBG202 YBG205			
	S20					
	S30					
H Non-ferrite materials Ne - Metalle	H01					
	H10					
	H20					
	H30					



Drilling · Bohren

Indexable drill · Wendeschneidplattenbohrer

Recommended cutting data for shallow drills · Empfohlene Schnittdaten für WSP-Bohrern

ISO	Material	Hardness HB Härte HB	Diameter Ø Durchmesser [mm]	Feed rate Vorschub fn [mm/r]	Cutting speed Schnittgeschwindigkeit Vc [m/min]
P	Carbon steel Kohlenstoff- stahl	80-200	16.0-23.0 24.0-30.0 31.0-38.0 39.0-46.0 47.0-58.0	0.05-0.09 0.05-0.09 0.06-0.10 0.07-0.11 0.08-0.12	200(170-240)
	Low alloy steel Niedrigleg. Stahl	150-260	16.0-23.0 24.0-30.0 31.0-38.0 39.0-46.0 47.0-58.0	0.05-0.09 0.05-0.12 0.06-0.14 0.08-0.16 0.10-0.20	170(140-220)
	High alloy steel Hochleg. Stahl	150-320	16.0-23.0 24.0-30.0 31.0-38.0 39.0-46.0 47.0-58.0	0.05-0.09 0.05-0.12 0.06-0.16 0.08-0.18 0.10-0.22	150(120-180)
	Cast steel Gussstahl	180-250	16.0-23.0 24.0-30.0 31.0-38.0 39.0-46.0 47.0-58.0	0.05-0.08 0.05-0.08 0.06-0.10 0.07-0.11 0.07-0.12	140(120-170)
M	Stainless steel Ferrite Martensite Rostfreier Stahl	150-270	16.0-23.0 24.0-30.0 31.0-38.0 39.0-46.0 47.0-58.0	0.05-0.09 0.05-0.12 0.06-0.16 0.08-0.18 0.10-0.22	160(110-230)
	Austenite Austenit	150-275	16.0-23.0 24.0-30.0 31.0-38.0 39.0-46.0 47.0-58.0	0.05-0.09 0.05-0.11 0.06-0.13 0.08-0.14 0.10-0.16	140(110-220)
K	Malleable cast iron Temperguss	150-230	16.0-23.0 24.0-30.0 31.0-38.0 39.0-46.0 47.0-58.0	0.05-0.10 0.05-0.14 0.08-0.16 0.10-0.20 0.12-0.24	160(120-220)
	Gray cast iron Grauguss	150-220	16.0-23.0 24.0-30.0 31.0-38.0 39.0-46.0 47.0-58.0	0.05-0.10 0.05-0.14 0.08-0.16 0.10-0.20 0.12-0.24	200(170-240)
	Nodular cast iron GGG Kugelgra- phitguss	160-250	16.0-23.0 24.0-30.0 31.0-38.0 39.0-46.0 47.0-58.0	0.05-0.09 0.05-0.12 0.06-0.14 0.08-0.16 0.10-0.20	160(130-200)
N	Al alloy Alulegierung	60-110	16.0-23.0 24.0-30.0 31.0-38.0 39.0-46.0 47.0-58.0	0.05-0.10 0.05-0.14 0.08-0.16 0.10-0.20 0.12-0.24	300(250-350)

C

Indexable drills
WSP-Bohrer