

**PORTE-PLAQUETTES
INSERT HOLDERS
WENDEPLATTENHALTER**

A7

**PORTE-PLAQUETTES 90°
90° INSERT HOLDERS
90° WENDEPLATTENHALTER**

Capacité Capacity Bereich	Taille porte-plaquette Insert holder size Wendepplattenhalter Größe	90° 90° 90°	90° 90° 90°	90° 90° 90°
∅ 25-∅ 30	CC-0602	A 725 10	A 721 10	A 721 10
∅ 30-∅ 40	CC-0602	A 725 20	A 721 20	A 721 20
∅ 31-∅ 5	CC-0602	A 725 30	A 721 30	A 721 30
∅ 35-∅ 51	CC-0602	A 725 40	A 721 40	A 721 40
∅ 54-∅ 86	CC-0602	A 725 50	A 721 50	A 721 50
∅ 85-∅ 115	CC-0602	A 725 60	A 721 60	A 721 60
∅ 114-∅ 144	CC-0602	A 725 65	A 721 65	A 721 65
∅ 14-∅ 160	CC-0602	A 725 70	A 721 70	A 721 70
∅ 159-∅ 205	CC-0602	A 725 75	A 721 75	A 721 75

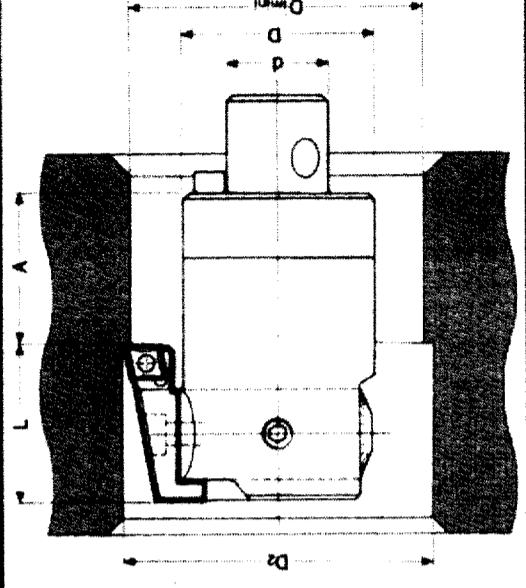
**PORTE-PLAQUETTES 90°
90° INSERT HOLDERS
90° WENDEPLATTENHALTER**

Capacité Capacity Bereich	Taille porte-plaquette Insert holder size Wendepplattenhalter Größe	90° 90° 90°	90° 90° 90°	90° 90° 90°
∅ 18-∅ 192	WB-0301	A 782 09	A 782 09	A 782 09
∅ 19-∅ 235	WB-0301	A 782 09	A 782 09	A 782 09
∅ 23-∅ 31	WB-0301	A 782 09	A 782 09	A 782 09
∅ 30-∅ 40	WB-0301	A 782 09	A 782 09	A 782 09
∅ 39-∅ 51	WB-0301	A 782 09	A 782 09	A 782 09
∅ 50-∅ 65	WB-0301	A 782 09	A 782 09	A 782 09
∅ 64-∅ 86	WB-0301	A 782 09	A 782 09	A 782 09
∅ 85-∅ 115	WB-0301	A 782 09	A 782 09	A 782 09
∅ 114-∅ 144	WB-0301	A 782 09	A 782 09	A 782 09
∅ 14-∅ 160	WB-0301	A 782 09	A 782 09	A 782 09
∅ 159-∅ 205	WB-0301	A 782 09	A 782 09	A 782 09



**PORTE-PLAQUETTES POUR ALESER EN TIRANT
INSERT HOLDERS FOR BORING BY PULLING
WENDEPLATTENHALTER ZUM ROCKWÄRTS-FEINHAUSDREHEN**

A78.



Capacité Capacity Bereich	Taille porte-plaquette Insert holder size Wendepplattenhalter Größe	90° 90° 90°	90° 90° 90°	90° 90° 90°	90° 90° 90°	90° 90° 90°
∅ 18-∅ 235	A 780 0911	17	19	19	19	A 782 09
∅ 225-∅ 28	A 780 0911	17	19	19	19	A 782 0911
∅ 265-∅ 30	A 780 08	14	19	19	19	A 789 X 08 WB 0390
∅ 295-∅ 35	A 780 09	17	19	19	19	A 789 X 08 WB 0390
∅ 34-∅ 42	A 780 10	21.5	22	22	22	A 789 X 10 WB 0390
∅ 39.5-∅ 47.5	A 780 10	21.5	22	22	22	A 789 X 10 CC 0690
∅ 46-∅ 56	A 780 20	27	22	22	22	A 789 X 10 CC 0690
∅ 53-∅ 65	A 780 30	35	32	30	30	A 789 X 30 CC 0690
∅ 61-∅ 76	A 780 40	43	39	30	30	A 789 X 30 CC 0690
∅ 69-∅ 91	A 780 50	54	49	30	30	A 789 X 30 CC 0690
∅ 83-∅ 119	A 780 60	70	50	50	50	A 789 X 60 CC 0690
∅ 118-∅ 154	A 780 70	95	60	50	50	A 789 X 70 CC 0690

CARACTÉRISTIQUES TECHNIQUES

Lors de l'utilisation de ces porte-plaquettes, il faut veiller au diamètre de passage et au sens de rotation qui est inversé (rotation à gauche).

- ▲ Sur demande.
- * L'équilibrage n'est pas applicable lors de l'utilisation de ces porte-plaquettes.

REMARQUE
Les porte-plaquettes sont livrées avec le tournevis et la vis de fixation plaquette.

TECHNICAL FEATURES

By using these insert holders, please take care of the diameter inlet and the reversed direction of rotation (rotation to the left).

- ▲ On request.
- * Balancing is not possible when using these insert holders.

REMARK
The insert holders are delivered with screw driver and insert locking screw.

TECHNISCHE MERKMALE

Bei Einsatz von diesen Wendeplattenhalter muss auf die Durchgangsbohrung und die Änderung der Drehrichtung geachtet werden (nach links).

- ▲ Auf Anfrage.
- * Bei Einsatz dieser Wendeplattenhalter ist das Auswuchten nicht möglich.

HINWEIS
Die Wendeplatten werden mit Schraubendreher und Wendeplatten Anzugschrauben geliefert.



NUANCES ET CONDITIONS DE COUPE

Matière Material Material	Diamètre Ø		Largeur B		Épaisseur E		Vitesse de coupe Cutting speed / Drehzahl / Spindelmotorschwindigkeit		Profondeur de coupe Cutting depth / Schnitttiefe / Schnitttiefe		Avance Feed / Vorschub / Vorschub	
	mm	inch	mm	inch	mm	inch	m/min	min	mm	inch	mm/min	inch/min
Acier au carbone / Carbon steel / Kohlenstoffstahl C ≤ 0.4% C > 0.4%	≤ 180	130-250	80-150				160-350	30-300	50-180	90-200	100-300	100-300
	> 180	110-230	60-130				140-300	110-250	50-150	60-170	50-200	80-300
Acier allié / Alloy steel / Legierungs-Stahl Retreci / annealed / Geht Traité / Treated / Vergütet Treated / Treated / Vergütet	< 210	110-240	60-130				140-300	110-250	50-140	60-160	50-200	80-300
	210-270	110-240	60-130				140-300	110-250	50-140	60-160	50-200	80-300
Acier inoxydable / Stainless steel / Rostfreier Stahl Ferri + Manganese 13% < C > 20% Austenit Cr > 18% Ni > 8%	150-270	100-150	70-110				140-250	110-200	80-130	90-180	80-150	80-150
	150-270	100-180	70-130				120-250	120-200	80-120	90-170	80-150	80-150
Acier trempé / Hardened Steel / Gehärteter Stahl > 45 HRC	150-270						160-350	140-250		80-180		100-500
Fonte grise / Grey cast iron / Grauguß	150-270						60-120	140-250		80-180		100-500
Fonte GS / Spheroidal cast iron / Sphäroguß	150-270						50-100	110-200		60-150		90-250
Fonte malléable / Malleable cast iron / Temperguß	150-240						60-110	80-200		60-150		80-250
Aluminium et alliages / Aluminium and alloys / Aluminium Legierungen	60-120						150-600			150-600		150-1000
Alliages d'aluminium au Si / Si aluminium alloys / Al Si Legierungen	60-120						150-500			150-500		150-800
Cuivre et laiton / Copper and brass / Kupfer und Messing	60-120						150-400			150-400		150-600

CODE ISO DES PLAQUETTES

1. Type de cope Type of chip	2. Angle de coupe / Angle of cut A = 3° B = 5° C = 7° D = 15° E = 20° F = 25° G = 30° N = 0° P = 11° Q = 15° R = 18° S = 20° T = 25° V = 30° W = 35°	3. Type de cope / Type of chip A = ± 0.025 B = ± 0.03 C = ± 0.025 D = ± 0.03 E = ± 0.025 F = ± 0.025 G = ± 0.025 H = ± 0.03 I = ± 0.025 J = ± 0.025 K = ± 0.025 L = ± 0.025 M = ± 0.025 N = ± 0.025 O = ± 0.025 P = ± 0.025 Q = ± 0.025 R = ± 0.025 S = ± 0.025 T = ± 0.025 U = ± 0.025 V = ± 0.025 W = ± 0.025	4. Type de cope / Type of chip A = ± 0.025 B = ± 0.03 C = ± 0.025 D = ± 0.03 E = ± 0.025 F = ± 0.025 G = ± 0.025 H = ± 0.03 I = ± 0.025 J = ± 0.025 K = ± 0.025 L = ± 0.025 M = ± 0.025 N = ± 0.025 O = ± 0.025 P = ± 0.025 Q = ± 0.025 R = ± 0.025 S = ± 0.025 T = ± 0.025 U = ± 0.025 V = ± 0.025 W = ± 0.025	5. Type de cope / Type of chip A = ± 0.025 B = ± 0.03 C = ± 0.025 D = ± 0.03 E = ± 0.025 F = ± 0.025 G = ± 0.025 H = ± 0.03 I = ± 0.025 J = ± 0.025 K = ± 0.025 L = ± 0.025 M = ± 0.025 N = ± 0.025 O = ± 0.025 P = ± 0.025 Q = ± 0.025 R = ± 0.025 S = ± 0.025 T = ± 0.025 U = ± 0.025 V = ± 0.025 W = ± 0.025	6. Type de cope / Type of chip A = ± 0.025 B = ± 0.03 C = ± 0.025 D = ± 0.03 E = ± 0.025 F = ± 0.025 G = ± 0.025 H = ± 0.03 I = ± 0.025 J = ± 0.025 K = ± 0.025 L = ± 0.025 M = ± 0.025 N = ± 0.025 O = ± 0.025 P = ± 0.025 Q = ± 0.025 R = ± 0.025 S = ± 0.025 T = ± 0.025 U = ± 0.025 V = ± 0.025 W = ± 0.025	7. Type de cope / Type of chip A = ± 0.025 B = ± 0.03 C = ± 0.025 D = ± 0.03 E = ± 0.025 F = ± 0.025 G = ± 0.025 H = ± 0.03 I = ± 0.025 J = ± 0.025 K = ± 0.025 L = ± 0.025 M = ± 0.025 N = ± 0.025 O = ± 0.025 P = ± 0.025 Q = ± 0.025 R = ± 0.025 S = ± 0.025 T = ± 0.025 U = ± 0.025 V = ± 0.025 W = ± 0.025	8. Type de cope / Type of chip A = ± 0.025 B = ± 0.03 C = ± 0.025 D = ± 0.03 E = ± 0.025 F = ± 0.025 G = ± 0.025 H = ± 0.03 I = ± 0.025 J = ± 0.025 K = ± 0.025 L = ± 0.025 M = ± 0.025 N = ± 0.025 O = ± 0.025 P = ± 0.025 Q = ± 0.025 R = ± 0.025 S = ± 0.025 T = ± 0.025 U = ± 0.025 V = ± 0.025 W = ± 0.025	9. Type de cope / Type of chip A = ± 0.025 B = ± 0.03 C = ± 0.025 D = ± 0.03 E = ± 0.025 F = ± 0.025 G = ± 0.025 H = ± 0.03 I = ± 0.025 J = ± 0.025 K = ± 0.025 L = ± 0.025 M = ± 0.025 N = ± 0.025 O = ± 0.025 P = ± 0.025 Q = ± 0.025 R = ± 0.025 S = ± 0.025 T = ± 0.025 U = ± 0.025 V = ± 0.025 W = ± 0.025	10. Type de cope / Type of chip A = ± 0.025 B = ± 0.03 C = ± 0.025 D = ± 0.03 E = ± 0.025 F = ± 0.025 G = ± 0.025 H = ± 0.03 I = ± 0.025 J = ± 0.025 K = ± 0.025 L = ± 0.025 M = ± 0.025 N = ± 0.025 O = ± 0.025 P = ± 0.025 Q = ± 0.025 R = ± 0.025 S = ± 0.025 T = ± 0.025 U = ± 0.025 V = ± 0.025 W = ± 0.025	11. Type de cope / Type of chip A = ± 0.025 B = ± 0.03 C = ± 0.025 D = ± 0.03 E = ± 0.025 F = ± 0.025 G = ± 0.025 H = ± 0.03 I = ± 0.025 J = ± 0.025 K = ± 0.025 L = ± 0.025 M = ± 0.025 N = ± 0.025 O = ± 0.025 P = ± 0.025 Q = ± 0.025 R = ± 0.025 S = ± 0.025 T = ± 0.025 U = ± 0.025 V = ± 0.025 W = ± 0.025	12. Type de cope / Type of chip A = ± 0.025 B = ± 0.03 C = ± 0.025 D = ± 0.03 E = ± 0.025 F = ± 0.025 G = ± 0.025 H = ± 0.03 I = ± 0.025 J = ± 0.025 K = ± 0.025 L = ± 0.025 M = ± 0.025 N = ± 0.025 O = ± 0.025 P = ± 0.025 Q = ± 0.025 R = ± 0.025 S = ± 0.025 T = ± 0.025 U = ± 0.025 V = ± 0.025 W = ± 0.025	
S	A = 3°	A = ± 0.025	A = ± 0.025	A = ± 0.025	A = ± 0.025	A = ± 0.025	A = ± 0.025	A = ± 0.025	A = ± 0.025	A = ± 0.025	A = ± 0.025	A = ± 0.025
T	B = 5°	B = ± 0.03	B = ± 0.03	B = ± 0.03	B = ± 0.03	B = ± 0.03	B = ± 0.03	B = ± 0.03	B = ± 0.03	B = ± 0.03	B = ± 0.03	B = ± 0.03
R	C = 7°	C = ± 0.025	C = ± 0.025	C = ± 0.025	C = ± 0.025	C = ± 0.025	C = ± 0.025	C = ± 0.025	C = ± 0.025	C = ± 0.025	C = ± 0.025	C = ± 0.025
C	D = 15°	D = ± 0.03	D = ± 0.03	D = ± 0.03	D = ± 0.03	D = ± 0.03	D = ± 0.03	D = ± 0.03	D = ± 0.03	D = ± 0.03	D = ± 0.03	D = ± 0.03
O	E = 20°	E = ± 0.025	E = ± 0.025	E = ± 0.025	E = ± 0.025	E = ± 0.025	E = ± 0.025	E = ± 0.025	E = ± 0.025	E = ± 0.025	E = ± 0.025	E = ± 0.025
M	F = 25°	F = ± 0.025	F = ± 0.025	F = ± 0.025	F = ± 0.025	F = ± 0.025	F = ± 0.025	F = ± 0.025	F = ± 0.025	F = ± 0.025	F = ± 0.025	F = ± 0.025
V	G = 30°	G = ± 0.025	G = ± 0.025	G = ± 0.025	G = ± 0.025	G = ± 0.025	G = ± 0.025	G = ± 0.025	G = ± 0.025	G = ± 0.025	G = ± 0.025	G = ± 0.025
W	N = 0°	N = ± 0.025	N = ± 0.025	N = ± 0.025	N = ± 0.025	N = ± 0.025	N = ± 0.025	N = ± 0.025	N = ± 0.025	N = ± 0.025	N = ± 0.025	N = ± 0.025
	P = 11°	P = ± 0.025	P = ± 0.025	P = ± 0.025	P = ± 0.025	P = ± 0.025	P = ± 0.025	P = ± 0.025	P = ± 0.025	P = ± 0.025	P = ± 0.025	P = ± 0.025
	Q = 15°	Q = ± 0.025	Q = ± 0.025	Q = ± 0.025	Q = ± 0.025	Q = ± 0.025	Q = ± 0.025	Q = ± 0.025	Q = ± 0.025	Q = ± 0.025	Q = ± 0.025	Q = ± 0.025
	R = 18°	R = ± 0.025	R = ± 0.025	R = ± 0.025	R = ± 0.025	R = ± 0.025	R = ± 0.025	R = ± 0.025	R = ± 0.025	R = ± 0.025	R = ± 0.025	R = ± 0.025
	S = 20°	S = ± 0.025	S = ± 0.025	S = ± 0.025	S = ± 0.025	S = ± 0.025	S = ± 0.025	S = ± 0.025	S = ± 0.025	S = ± 0.025	S = ± 0.025	S = ± 0.025
	T = 25°	T = ± 0.025	T = ± 0.025	T = ± 0.025	T = ± 0.025	T = ± 0.025	T = ± 0.025	T = ± 0.025	T = ± 0.025	T = ± 0.025	T = ± 0.025	T = ± 0.025
	V = 30°	V = ± 0.025	V = ± 0.025	V = ± 0.025	V = ± 0.025	V = ± 0.025	V = ± 0.025	V = ± 0.025	V = ± 0.025	V = ± 0.025	V = ± 0.025	V = ± 0.025
	W = 35°	W = ± 0.025	W = ± 0.025	W = ± 0.025	W = ± 0.025	W = ± 0.025	W = ± 0.025	W = ± 0.025	W = ± 0.025	W = ± 0.025	W = ± 0.025	W = ± 0.025



PLAQUETTES POUR TÊTES A ALESER GRAFLEX

Domäne d'application des inserts: Grades range of application / Anwendungsbereich der Hartmetalle

Matériau / Material / Werkstoff	01	02	21	22	23	25	26	51	81	82	91	
Matériau / Material / Werkstoff	PS1	PS2	PS3	PS4	PS5	PS6	PS7	PS8	PS9	PS10	PS11	PS12
Caractéristiques des inserts	Inserts with coated, sintered and laser coated carbide, titanium nitride and titanium nitride with carbide inserts. Beschreibung der Hartmetalle											
01	Nuançe pour finition et semi-finition sur acier au carbone, acier coulé, aciers (surtout) alliés. Nuance utilisée dans des conditions favorables pour des vitesses de coupe élevées.											
02	Nuançe pour ébauche et semi-finition sur acier au carbone, acier coulé, acier allié, acier inoxydable, fonte malléable à copeaux longs dans des conditions moins favorables.											
21	Nuançe pour ébauche légère, semi-finition et finition sur fonte grise, fonte malléable à copeaux courts, aluminium et alliages cuivre, laiton, matériaux synthétiques.											
22	Nuançe revêtue céramique pour ébauche, semi-finition et finition sur fonte grise, fonte spéculaire, fonte malléable, aciers non alliés et alliés, aciers inoxydables.											
23	Nuançe revêtue TiC, TiN pour ébauche sur acier au carbone, acier allié, acier coulé, aciers inoxydables. Nuance utilisée dans des conditions défavorables avec des vitesses de coupe faibles.											
25	Nuançe revêtue Al ₂ O ₃ , TiC, TiN pour ébauche sur acier au carbone, aciers alliés, aciers coulés, aciers inoxydables et fonte. Nuance utilisée dans des conditions moins favorables avec des vitesses de coupe moyennes.											
26	Nuançe revêtue PVD pour finition dans l'acier, la fonte et les métaux non ferreux.											
51	Céramet pour la finition des aciers. Cette nuance présente une excellente tenacité et une grande résistance à l'usure.											
81	CBN, nature de base cubique, pour la finition des aciers trempés. Cette nuance présente une excellente tenacité et une grande résistance à l'usure.											
82	CBN, nature de base cubique, pour la finition de la fonte grise. Cette nuance présente une excellente tenacité et une grande résistance à l'usure.											
91	PKD - diamant polycristallin, pour la finition de l'aluminium et alliages, cuivre, laiton, bronze, matériaux synthétiques.											



PLAQUETTES EBAUCHE

Code	Matériau / Matière / Material												Cote				
	01	02	03	04	05	06	07	08	09	10	11	12					
CCGT 060204																	0.05-0.15
CCGA 060204																	0.05-0.15
CCGT 09T308																	0.15-0.3
CCGA 09T308																	0.15-0.3
CCGT 120408																	0.15-0.3
CCGA 120408																	0.15-0.3
CPGT 050204																	0.05-0.25
EPMT 060204																	0.05-0.25
EPEX 08M304																	0.05-0.25
EPMT 08M304																	0.05-0.25
ECMT 09T308																	0.15-0.4
ECMT 12T308																	0.15-0.4
ECMT 16M608																	0.15-0.4
ECMT 16M812																	0.15-0.4
ECMT 16T308																	0.15-0.4
TCMT 16T308																	0.15-0.4
TCMT 22M508																	0.15-0.4
TCMT 22M512																	0.15-0.4
TCMT 22M508																	0.15-0.4
VBMA 110204																	0.15-0.4
VBMA 160408																	0.15-0.4

PLAQUETTES FINITION FINISHING INSERTS FEINAUSDREH-WENDEPLATTEN

Code	Matériau / Matière / Material												Cote				
	01	02	03	04	05	06	07	08	09	10	11	12					
CCGT 060200																	0.05-0.15
CCGT 060202																	0.05-0.15
CCGT 060204																	0.05-0.15
CCMT 060202																	0.05-0.15
CCMT 060204																	0.05-0.15
CCGT 09T302																	0.15-0.3
CCMT 09T304																	0.15-0.3
CCMT 09T308																	0.15-0.3
EPEX 040202																	0.05-0.15
EPEX 060202																	0.05-0.15
EPEX 08M302																	0.05-0.15
EPEX 08M302																	0.05-0.15
TGGT 070203																	0.05-0.15
TGGT 110203																	0.05-0.15
TGGT 110204																	0.05-0.15
WBGT 030100																	0.05-0.15
WBGT 030102																	0.05-0.15
WBGT 030102																	0.05-0.15

■ Sur stock en stock / Lager sur commande / on request / nur anfrage