

INSERTS



Drilling inserts, specialized for various applications and materials, optimize cutting processes by providing precise geometries and coatings, resulting in improved chip evacuation, surface finish, and overall tool performance.

As pastilhas de furacão, especializadas para diversas aplicações e materiais, otimizam os processos de corte fornecendo geometrias e revestimentos precisos, resultando numa melhor evacuação de aparas, acabamento de superfície e desempenho geral da ferramenta.

Las plaquitas de furación, especializadas para diversas aplicaciones y materiales, optimizan los procesos de corte al proporcionar geometrías y recubrimientos precisos, lo que resulta en una mejor evacuación de rompevirutas, acabado superficial y rendimiento general de la herramienta.

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- > From sizes 05 to 14

De tamanhos de 05 a 14 | De tamaños de 05 a 14

- > Available in grades PH6920, PH6930, PHC930, PHL930 and PH0910

Disponível nos graus PH6920, PH6930, PHC930, PHL930 e PH0910 | Disponible en las calidades PH6920, PH6930, PHC930, PHL930 y PH0910

- > Suitable for machining steels, stainless steels, cast iron, HRSA and non-ferrous

Adequado para maquinação de aços, aços inoxidáveis, ferro fundido, HRSA e não ferrosos | Adecuado para el mecanizado de aceros, aceros inoxidables, hierro fundido, HRSA y no ferrosos



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- > From sizes 02 to 08

De tamanhos de 02 a 08 | De tamaños de 02 a 08

- > Available in grades PH6920 and PH6930

Disponível nos graus PH6920 e PH6930 | Disponible en las calidades PH6920 y PH6930

- > Suitable for machining steels, stainless steels, cast iron and HRSA

Adequado para maquinação de aços, aços inoxidáveis, ferro fundido e HRSA | Adecuado para el mecanizado de aceros, aceros inoxidables, hierro fundido y HRSA



WCKX-LC > page 427

- > From sizes 05 to 06

De tamanhos de 05 a 06 | De tamaños de 05 a 06

- > Available in grades PH6920 and PH6930

Disponível nos graus PH6920 e PH6930 | Disponible en las calidades PH6920 y PH6930

- > Suitable for machining steels

Adequado para maquinação de aços | Adecuado para el mecanizado de aceros



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- > From sizes 03 to 08

De tamanhos de 03 a 08 | De tamaños de 03 a 08

- > Available in grades PH6920, PHC930 and PHL930

Disponível nos graus PH6920, PHC930 e PHL930 | Disponible en las calidades PH6920, PHC930 y PHL930

- > Suitable for machining steels, stainless steels, cast iron and HRSA

Adequado para maquinação de aços, aços inoxidáveis, ferro fundido e HRSA | Adecuado para el mecanizado de aceros, aceros inoxidables, hierro fundido y HRSA



ISO HOLEMAKING INSERTS CODE KEY

Sistema de codificação para pastilhas de furação ISO | Codificación para plaquetas de furación ISO

H		M	
O		V	
P		W	
S		L	
T		A	
C		B	
D		K	
E		R	
F		X	Special

1- Insert shape symbol

Symbol	m (mm)	d (mm)	s (mm)	Detailed dimension of M class insert Insert height Tolerances (mm)					
A	±0.005	±0.025	±0.025	Inscribed circle					
F	±0.005	±0.013	±0.025	6.35	±0.08	-	-	-	-
C	±0.013	±0.025	±0.025	9.525	±0.08	±0.08	±0.11	±0.10	±0.13
H	±0.013	±0.013	±0.025	12.70	±0.13	±0.13	±0.13	±0.15	-
E	±0.025	±0.025	±0.025	15.875	±0.15	±0.15	±0.15	±0.18	-
G	±0.025	±0.025	±0.13	19.05	±0.15	±0.15	±0.15	±0.18	-
J	±0.005	±0.05~±0.13	±0.025	25.40	-	±0.18	-	-	-
K*	±0.013	±0.05~±0.13	±0.025	31.75	-	±0.25	-	-	-
L*	±0.025	±0.05~±0.13	±0.025	Inscribed circle Tolerances (mm)					
M*	±0.08~±0.20	±0.05~±0.13	±0.13	Inscribed circle					
N*	±0.08~±0.20	±0.05~±0.13	±0.025	6.35	±0.05	-	-	-	-
U*	±0.13~±0.38	±0.08~±0.25	±0.13	9.525	±0.05	±0.05	±0.05	±0.05	±0.05
*As a rule, the sides of these inserts are as sintered. Tolerance differs with insert size, for the accuracy of class M, refer to the table on the right.				12.70	±0.08	±0.08	±0.08	±0.08	±0.08
				15.875	±0.10	±0.10	±0.10	±0.10	±0.10
				19.05	-	-	-	-	±0.10
				25.40	-	±0.13	-	-	±0.10
				31.75	-	±0.20	-	-	±0.12
3 - Tolerances symbol									

A	B	C	D	E
F	G	N	P	O
				Other clearance angle

2 - Normal clearance symbol

ISO

W C K X

4 - Insert symbol														
symbol	Type	Hole type	Chipbreaker	Shape	symbol	Type	Hole type	Chipbreaker	Shape	symbol	Type	Hole type	Chipbreaker	Shape
W	with hole	Round hole / one countersink (40°~60°)	Without chipbreaker		H	with hole	Round hole / one countersink (70°~90°)	Chipbreaker on one side		G	with hole	Round hole	Chipbreaker on both sides	
T			Chipbreaker on one side		C		Round hole / double countersink (70°~90°)	Without chipbreaker		N	without hole	-	Without chipbreaker	
Q		Round hole / double countersink (40°~60°)	Without chipbreaker		J		Chipbreaker on both sides		R	-		Chipbreaker on one side		
U			Chipbreaker on both sides		A		Round hole	Without chipbreaker		F		-	Chipbreaker on both sides	
B		Round hole / one countersink (70°~90°)	Without chipbreaker		M			Chipbreaker on one side		X	-	-	-	On request

ISO HOLEMAKING INSERTS CODE KEY

Sistema de codificação para pastilhas de furação ISO | Codificación para plaquitas de furación ISO

 R's	 V's	 D's	 C's	 S's	 T's	 W's	Ø CI		ANSI Symbol
							mm	inch	
-	06	04	-	03	06	02	3,97	5/32	1,20
-	08	05	04	04	08	L3	4,76	3/16	1,50
-	09	06	05	05	09	03	5,56	7/32	1,80
06**	-	-	-	-	-	-	6,00	0,236	
06*	11	07	06	06	11	04	6,35	1/4	2,00
07*	13	09	08	07	13	05	7,94	5/16	2,50
08*	-	-	-	-	-	-	8,00	0,315	
09*	16	11	09	09	16	06	9,525	3/8	3,00
10**	-	-	-	-	-	-	10,00	0,394	
12**	-	-	-	-	-	-	12,00	0,472	
12*	22	15	12	12	22	08	12,70	1/2	4,00
15*	27	19	16	15	27	10	15,875	5/8	5,00
16**	-	-	-	-	-	-	16,00	0,63	
19*	33	23	19	19	33	13	19,05	3/4	6,00
20**	-	-	-	-	-	-	20,00	0,787	
25**	-	-	-	-	-	-	25,00	0,984	
25*	44	31	25	25	44	17	25,40	1,00	8,00
31*	54	38	32	31	54	21	31,75	1 1/4	10,00
32**	-	-	-	-	-	-	32,00	1,26	

5 - Insert size symbol

* ANSI designation only
(Radius Designation is R0)

** Metric designation only
(Radius Designation is M0)

According to International Standard ISO 1832 - 2012(E)

"Indexable inserts for cutting tools - Designation"

ISO	mm	ANSI	inch
01	1.59	1	0.062
T1	1.98	1.2	0.078
02	2.38	1.5	0.094
03	3.18	2	0.125
T3	3.97	2.5	0.156
04	4.76	3	0.188
05	5.56	3.5	0.219
06	6.35	4	0.250
07	7.94	5	0.312
09	9.52	6	0.375
12	12.70	8	0.500

6 - Insert thickness symbol

06 T3 08 E - LC

10 - Chipbreaker geometries
LC


7 - Insert corner symbol			
ISO	mm	inch	ANSI
00	Sharp nose		0
01	0.10	.004	0.2
02	0.20	.008	0.5
04	0.40	.015	1
08	0.80	.032	2
12	1.2	.047	3
16	1.6	.062	4
20	2.0	.078	5
24	2.4	.094	6
28	2.8	.109	7
32	3.2	.125	8
00 (inch or M0/ metric)	Round insert		0

7.1* - Insert edges symbol			
For inserts having secondary edges two digits are used:			
1 st digit is secondary edge		2 nd digit is secondary edges relief angle	
A	45°	A	3°
D	60°	B	5°
E	75°	C	7°
F	85°	D	15°
P	90°	E	20°
Z	special	F	25°
*only when required.		G	30°
		N	0°
		P	11°
		Z	special

8 - Cutting edge information		
Shape	Honing	Symbol
	No honing	F
	With honing	E
	Chamfered No honing	T
	Chamfered with honing	S
*only when required.		

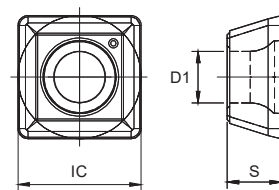
SP..X Inserts | Pastilhas | Plaquitas



SPKX

SPKX
(PHC | PHL grade)

SPHX-LN



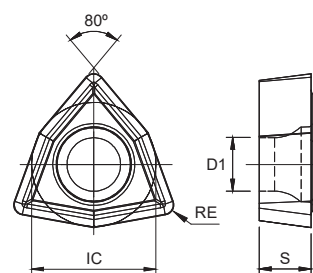
		P				M				K			S				N	Dimensions Dimensões Dimensiones (mm)			
		PVD				PVD				PVD			PVD				UNC				
		⁽²⁾ Grade code	68	66	J3	3B	68	66	J3	3B	68	66	3B	68	66	J3	3B	10			
⁽¹⁾ Geometry code	ISO Reference	PH6920	PH6930	PHC930	PHL930	PH6920	PH6930	PHC930	PHL930	PH6920	PH6930	PHL930	PH6920	PH6930	PHC930	PHL930	PH0910	IC	S	D1	RE
1111281	SPKX 050204	⊗	⊗	⊗		⊗	⊗	⊗		⊗	⊗		⊗	⊗	⊗			5,00	2,38	2,20	0,40
1111282	SPKX 060204	⊗	⊗		⊗	⊗	⊗		⊗	⊗	⊗	⊗	⊗	⊗		⊗		6,00	2,38	2,55	0,40
1142099	SPHX 060204-LN																⊗	6,00	2,38	2,55	0,40
1111283	SPKX 07T308	⊗	⊗		⊗	⊗	⊗		⊗	⊗	⊗	⊗	⊗	⊗		⊗		7,94	3,97	2,85	0,80
1111284	SPKX 090408	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗		9,80	4,30	4,10	0,80
1111285	SPKX 110408	⊗	⊗		⊗	⊗	⊗		⊗	⊗	⊗	⊗	⊗	⊗		⊗		11,50	4,80	4,40	0,80
1111286	SPKX 140512	⊗	⊗		⊗	⊗	⊗		⊗	⊗	⊗	⊗	⊗	⊗		⊗		14,30	5,20	5,75	1,20

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta
Disponível bajo consulta⊗ Available until sold out | Disponível até acabar o stock
Disponível hasta acabar el stock

Insert order code = (1) Geometry Code + (2) Grade Code

WCKX Inserts | Pastilhas | Plaquitas



		P				M		K		S		Dimensions Dimensões Dimensiones (mm)			
		PVD				PVD		CVD		PVD					
		⁽²⁾ Grade code	68	66	I5	78	68	66	68	66	68				
⁽¹⁾ Geometry code	ISO Reference	PH6920	PH6930	PH6740	PH6125	PH6920	PH6930	PH6920	PH6930	PH6920	PH6930	IC	S	D1	RE
1140300	WCKX 02T104	⊗	⊗	○	○	⊗	⊗	⊗	⊗	⊗	⊗	4,76	1,98	2,00	0,40
1140276	WCKX 030204	⊗	⊗	○	○	⊗	⊗	⊗	⊗	⊗	⊗	5,56	2,38	2,55	0,40
1140277	WCKX 040204	⊗	⊗	○	○	⊗	⊗	⊗	⊗	⊗	⊗	6,35	2,38	2,85	0,40
1140278	WCKX 050308	⊗	⊗	○	○	⊗	⊗	⊗	⊗	⊗	⊗	7,94	3,18	3,50	0,80
1140279	WCKX 06T308	⊗	⊗	○	○	⊗	⊗	⊗	⊗	⊗	⊗	9,55	3,97	4,10	0,80
1140280	WCKX 080408	⊗	⊗	○	○	⊗	⊗	⊗	⊗	⊗	⊗	12,70	4,76	5,60	0,80

⊗ Stock item | Produto de stock | Itens de stock

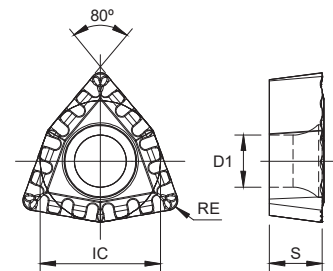
○ Available under request | Disponível sobre consulta | Disponível bajo consulta

Insert order code = (1) Geometry Code + (2) Grade Code

INSERTS

Pastilhas | Plaquetas

WCKX-LC FOR LOW CARBON STEELS Inserts | Pastilhas | Plaquetas



		P		Dimensions Dimensões Dimensiones (mm)			
		PVD					
		(2) Grade code	68				
(1) Geometry code	ISO Reference	PH6920	PH6930	IC	S	D1	RE
1142068	WCKX 050308-LC	⊗	⊗	7,94	3,18	3,50	0,80
1142069	WCKX 06T308-LC	⊗	⊗	9,55	3,97	4,10	0,80

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

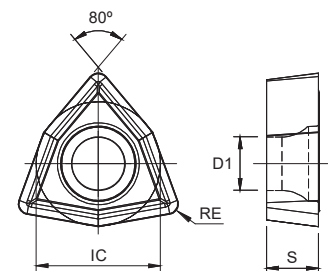
Insert order code = (1) Geometry Code + (2) Grade Code

WCMX Inserts | Pastilhas | Plaquetas

ISO references for other holmaking systems



(PHC | PHL grade)



		P			M			K			S			Dimensions Dimensões Dimensiones (mm)			
		PVD			PVD			PVD			PVD						
		(2) Grade code	68	J3	3B	68	J3	3B	68	J3	3B	68	J3				
(i) Geometry code	ISO Reference	PH6920	PHC930	PHL930	PH6920	PHC930	PHL930	PH6920	PHC930	PHL930	PH6920	PHC930	PHL930	IC	S	D1	RE
1120827	WCMX 030204	○		○	○		○	○		○	○		○	5,56	2,38	2,80	0,40
1120828	WCMX 030208	⊗		⊗	⊗		⊗	⊗		⊗	⊗		⊗	5,56	2,38	2,80	0,80
1120829	WCMX 040208	⊗	△		⊗	△		⊗	△		⊗	△		6,35	2,38	3,10	0,80
1120830	WCMX 050308	⊗		⊗	⊗		⊗	⊗		⊗	⊗		⊗	7,94	3,18	3,20	0,80
1120831	WCMX 06T308	⊗	△	⊗	⊗	△	⊗	⊗	△	⊗	⊗	△	⊗	9,55	3,97	3,70	0,80
1120832	WCMX 080408	⊗	△	⊗	⊗	△	⊗	⊗	△	⊗	⊗	△	⊗	12,70	4,76	4,30	0,80
1120833	WCMX 080412	⊗		⊗	⊗		⊗	⊗		⊗	⊗		⊗	12,70	4,76	4,30	1,20

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta
Disponível bajo consulta

△ Available until sold out | Disponível até acabar o stock
Disponible hasta acabar el stock

Insert order code = (1) Geometry Code + (2) Grade Code