

90090 | 90190 | 90390

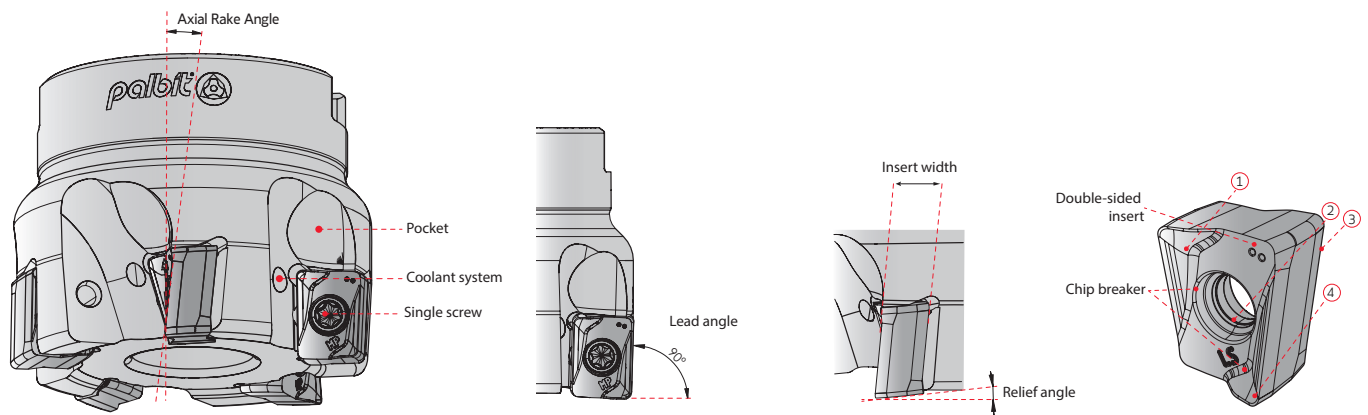
TG PLUS

High performance on tangential shoulder milling

MILLING

Shouldering | Facing | Slotting





Positive Rake Angle

- For a smooth cutting;
- For low cutting forces;

Single screw

- Strong clamping system;

Pocket

- Better chip evacuation due to a wide pocket;

Coolant system

- Improvement of chip control and evacuation;
- Tool life improvement due to reduced cutting temperature;

True 90° wall

- 90° allows multi applications;
- Excellent for tangential shoulder milling;

Insert Width

- High thickness allows a stronger insert;

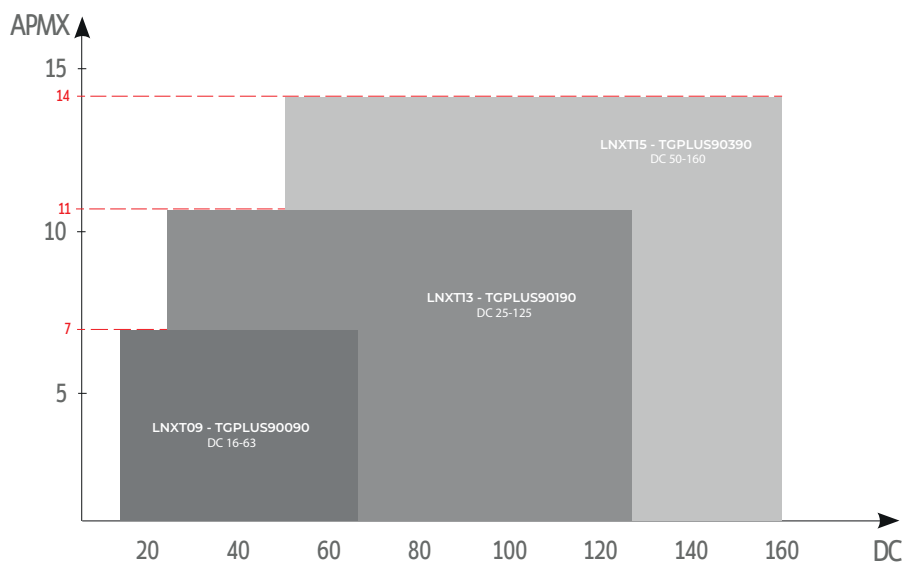
Relief angle

- Reduce the cutting load;
- Low cutting forces;

Double-sided insert

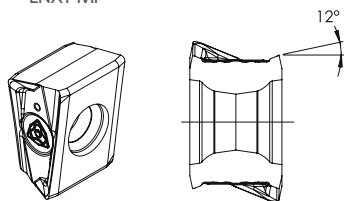
- 4 cutting edges;
- Negative insert has a strong edge;

COMPARATIVE CHAT Gráfico comparativo | Gráfico comparativo

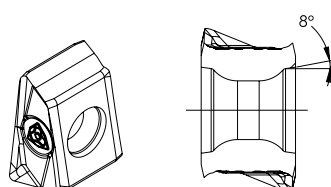


TGPLUS 90090

LNXT-MP



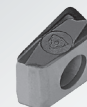
LNXT-LS



P M K

INSERT SIZE
09 LNXT
0904...

LNXT-MP

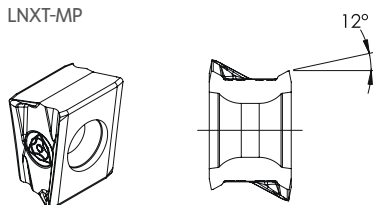


LNXT-MP



TGPLUS 90190

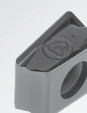
LNXT-MP



P M K

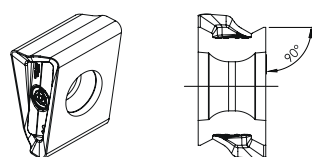
INSERT SIZE
13 LNXT
1306...

LNXT-MP

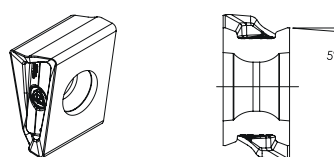


TGPLUS 90390

LNXT-MP



LNXT-HP



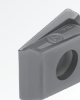
P K

INSERT SIZE
15 LNXT
1506...

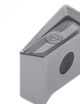
LNXT-MP



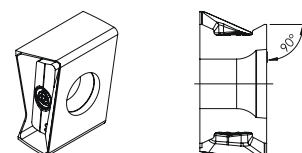
LNXT-HP



LNXT-W



LNXT-W

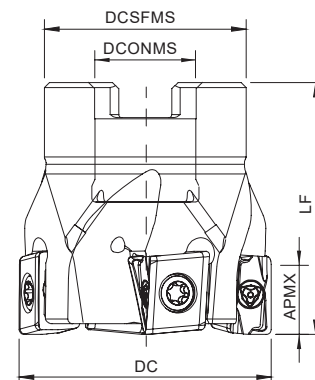


CHIP BREAKERS Quebra- aparas | Rompevirutas

Chip Breaker	Features Características Características
Geometry MP - General machining	Chip-breaker with a reinforced chamfer for general applications on steel and cast iron.
Geometry LS - Light machining	Positive top rake angle to promote a good chip flow and reduce power consumption on stainless steel and HRSA.
Geometry HP - Heavy machining of steels	Chip-breaker with a reinforced chamfer for Medium to heavy cutting conditions.
Geometry W - Wiper	Chip-breaker wiper for the best finishing solutions.



Arbor Mounting
KAPR=90° | GAMP=-4°



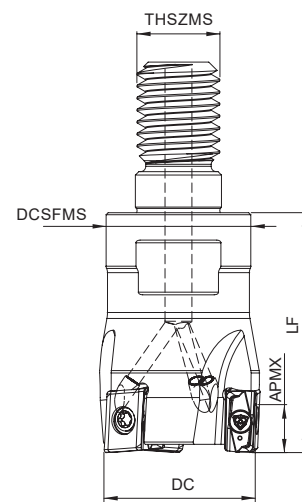
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications		Insert Pastilha Inserto	Stock
			DC	DCONMS	DCSFMS	LF		Arbor Type	APMX (mm)		
181144400	040A90090-04-04-016040	4	40	16	36	40	0,24	A	7,0	LNXT 0904...	⊗
181144500	050A90090-05-04-022040	5	50	22	40	40	0,32	A	7,0	LNXT 0904...	⊗
181144600	063A90090-07-04-022040	7	63	22	48	40	0,54	A	7,0	LNXT 0904...	⊗
181146600	063A90090-10-04-022040	10	63	22	48	40	0,54	A	7,0	LNXT 0904...	⊗

⊗ Stock item | Produto de stock | Itens de stock

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



Threaded Coupling
KAPR=90° | GAMP=-4°

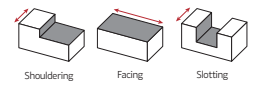


Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications		Insert Pastilha Inserto	Stock
			DC	THSZMS	DCSFMS	LF		APMX (mm)			
181144200	025R90090-03-04-M12035	3	25	12	21	35	0,10	7,0		LNXT 0904...	⊗
181144300	032R90090-04-04-M16040	4	32	16	29	40	0,21	7,0		LNXT 0904...	⊗

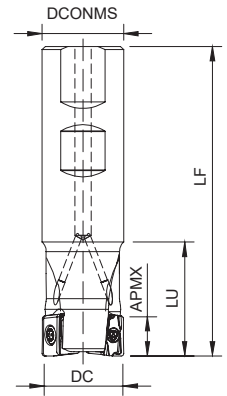
⊗ Stock item | Produto de stock | Itens de stock

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

TGPLUS 90090
LNXT 09



Weldon Shank
KAPR=90° | GAMP=-4°(*-6°)



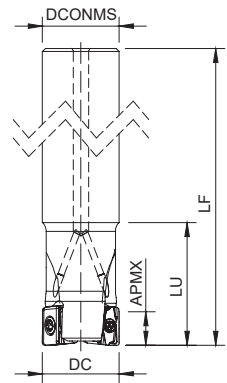
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications	Insert Pastilha Inserto	Stock
			DC	DCONMS	LF	LU		APMX (mm)		
181109400	016W90090-02-06-016090*	2	16	16	90	25	0,12	7,0	LNXT 0904...	⊗
181109500	025W90090-03-04-025095	3	25	25	95	30	0,31	7,0	LNXT 0904...	⊗
181144100	032W90090-04-04-032110	4	32	32	110	30	0,61	7,0	LNXT 0904...	⊗

⊗ Stock item | Produto de stock | Itens de stock

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



Cylindrical Shank
KAPR=90° | GAMP=-4°



Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications	Insert Pastilha Inserto	Stock
			DC	DCONMS	LF	LU		APMX (mm)		
181158800	020E90090-02-04-020150	2	20	20	150	30	0,15	7,0	LNXT 0904...	⊗
181148100	025E90090-03-04-025200	3	25	25	200	30	0,31	7,0	LNXT 0904...	○
181148200	032E90090-04-04-032250	4	32	32	250	30	0,78	7,0	LNXT 0904...	○

⊗ Stock item | Produto de stock | Itens de stock

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

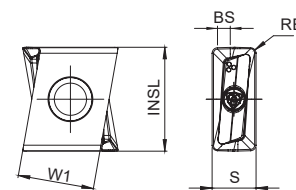
LNXT 0904... Inserts | Pastilhas | Plaquetas



LNXT-MP



LNXT-LS



LNXT-MP | LS

		P			M	K			S	Dimensions Dimensões Dimensiones (mm)				
		CVD	PVD		PVD	CVD	PVD		PVD					
		⁽²⁾ Grade code	T9	T1	G6	X9	L6	T1	G6					
⁽¹⁾ Geometry code	ISO Reference	PHS740	PHP920	PH7740	PHH930	PH5320	PHP920	PH7740	PHH930	W1	S	INSL	RE	BS
1112225	LNXT 090404 PNER-MP	⊗	⊗	⊗		⊗	⊗	⊗		9,40	4,50	9,00	0,40	-
1112226	LNXT 090408 PNER-MP	⊗	⊗	⊗		⊗	⊗	⊗		9,40	4,50	9,00	0,80	-
1112868	LNXT 090404 PNER-LS				⊗				⊗	9,40	4,50	9,00	0,80	-

⊗ First choice | Primeira opção | 1ª opción

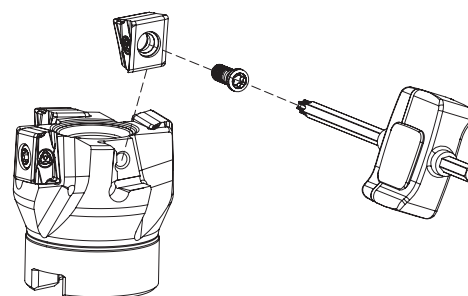
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta
Disponível bajo consulta

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

SPARE PARTS Acessórios | Repuestos

Cutter DC	Insert Screw	Key (Torx)	Order separately	
			Key (Torx - Nm)	Torque Value
A90090 - 40-63	P0250700	XT07	DT0709	1,2
R90090 - 25-32	P0250700	XT07	DT0709	1,2
W90090 - 16-32	P0250700	XT07	DT0709	1,2
E90090 - 25-32	P0250700	XT07	DT0709	1,2



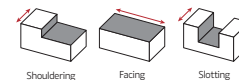
GRADES SELECTION GUIDE Guia para selecção de graus | Tabla para selección de calidades

ISO	PSM	Material	HB (Brinell)	Grades				
				← Wear Resistance		Toughness →		
				PH5320	PHP920	PHH930	PHS740	PH7740
P	1	Unalloyed Steel	125-220	⊗	✓		✓	✓
	2	Low-Alloyed Steel	220-280		✓		✓	✓
	3	High-Alloyed Steel	280-380		✓		✓	✓
M	4	SS - Ferritic / Martensitic	200-330			✓		
	5	SS - Austenitic	200-330			✓		
	6	SS - Austenitic-ferritic (Duplex)	230-260			✓		
K	7	Malleable Cast Iron	130-230	✓	✓			✓
	8	Grey Cast Iron	180-245	✓	✓			✓
	9	Nodular Cast iron	160-250	✓	✓			✓
S	11	Heat Resistant Super Alloys	200-320			✓		

⊗ Good Conditions

⊗ Average Conditions

⊗ Difficult Conditions



RECOMMENDED CUTTING CONDITIONS Condições de corte recomendadas | Condiciones de corte recomendables

ISO	PSM	Material	HB (Brinell)	Vc (m/min)					Feed fz (mm/t)	
				← Wear Resistance		Toughness →			LNXT 09... MP	LNXT 09... LS
				PH5320	PHP920	PHH930	PHS740	PH7740		
P	1	Unalloyed Steel	125-220	-	180-250	-	140-220	140-200	0,08-0,25	-
	2	Low-Alloyed Steel	220-280	-	160-230	-	120-200	130-180	0,08-0,25	-
	3	High-Alloyed Steel	280-380	-	140-220	-	100-190	100-170	0,08-0,15	-
M	4	SS - Ferritic / Martensitic	200-330	-	-	140-210	-	-	0,08-0,25	0,08-0,25
	5	SS - Austenitic	200-330	-	-	120-170	-	-	0,08-0,20	0,08-0,20
	6	SS - Austenitic-ferritic (Duplex)	230-260	-	-	100-150	-	-	0,08-0,15	0,08-0,20
K	7	Malleable Cast Iron	130-230	150-280	160-270	-	-	140-220	0,08-0,30	-
	8	Grey Cast Iron	180-245	160-320	140-250	-	-	120-210	0,08-0,25	-
	9	Nodular Cast iron	160-250	100-190	120-210	-	-	100-190	0,08-0,20	-
S	11	Heat Resistant Super Alloys	200-320	-	-	30-110	-	-	-	-

(Note 1) Cutting conditions $a_e/D_c=70\%$.

(Note 2) It's possible to occur vibrations in certain cases. Please reduce depth of cut and / or reduce cutting conditions in following cases:

- When using long shank;
- When using long tool overhang with arbor type;
- When application has poor clamping rigidity or when using a low rigidity machine.

CHIP BREAKER SELECTION GUIDE Guia para aplicações do quebra- aparas | Guía para aplicación del rompevirutas

ISO	PSM	Material	HB (Brinell)	Chip breaker application	
				1st choice	
P	1	Unalloyed Steel	125-220	MP	
	2	Low-Alloyed Steel	220-280	MP	
	3	High-Alloyed Steel	280-380	MP	
M	4	SS - Ferritic / Martensitic	200-330	LS	
	5	SS - Austenitic	200-330	LS	
	6	SS - Austenitic-ferritic (Duplex)	230-260	LS	
K	7	Malleable Cast Iron	130-230	MP	
	8	Grey Cast Iron	180-245	MP	
	9	Nodular Cast iron	160-250	MP	
S	11	Heat Resistant Super Alloys	200-320	LS	

TEST REPORT Relatório de Teste | Informe de Prueba

Milling cutter
020W17190-02-06-020100

Insert
ANHX 100405-PNER-LM

Grade
PH7920

39% productivity improvement

Machining time
90 (min/per edge)

palbit

Milling cutter
Competitor Equivalent product

Insert
Competitor Equivalent product

Grade
Competitor Equivalent product

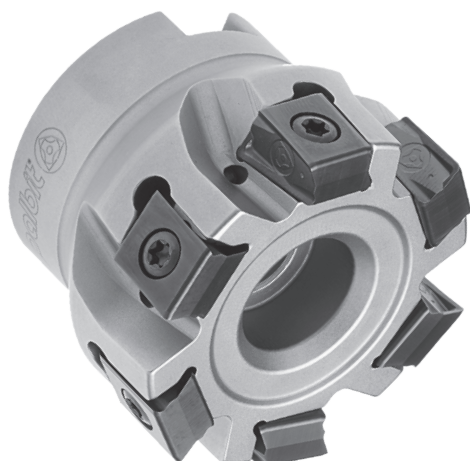
Machining time
65 (min/per edge)

COMPETITOR

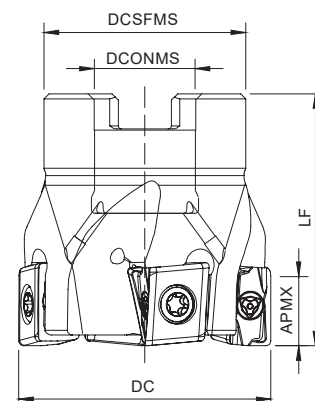


Work material: 40CrMnNiMo7 (1.2738) - (32-36 HRC)

Cutting speed: Vc (m/min)	180
Feed per tooth: fz (mm/t)	0,2
Depth of cut: ap (mm)	4,0
Width of cut: ae (mm)	25,6
Method of machining	Shoulder milling
Coolant	Dry



Arbor Mounting
KAPR=90° | GAMP=-4°



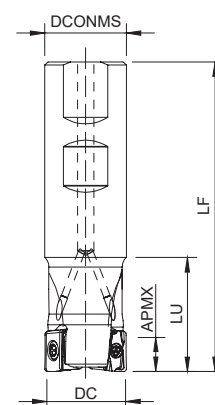
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications		Insert Pastilha Inserto	Stock
			DC	DCONMS	DCSFMS	LF		Arbor Type	APMX (mm)		
181118800	040A90190-04-04-016040	4	40	16	32	40	0,17	A	11	LNXT 1306...	Ⓢ
181118900	040A90190-05-04-016040	5	40	16	32	40	0,18	A	11	LNXT 1306...	Ⓢ
181111200	050A90190-05-04-022040	5	50	22	42	40	0,27	A	11	LNXT 1306...	Ⓢ
181111300	050A90190-06-04-022040	6	50	22	42	40	0,28	A	11	LNXT 1306...	Ⓢ
181119000	063A90190-06-04-022040	6	63	22	52	40	0,52	A	11	LNXT 1306...	Ⓢ
181119100	063A90190-08-04-022040	8	63	22	52	40	0,52	A	11	LNXT 1306...	Ⓢ
181119200	080A90190-07-04-027050	7	80	27	60	50	0,88	B	11	LNXT 1306...	Ⓢ
181119300	080A90190-10-04-027050	10	80	27	60	50	0,86	B	11	LNXT 1306...	Ⓢ
181119400	100A90190-09-04-032050	9	100	32	80	50	1,56	B	11	LNXT 1306...	Ⓢ
181119500	100A90190-13-04-032050	13	100	32	80	50	1,56	B	11	LNXT 1306...	Ⓢ
181119600	125A90190-11-04-040063	11	125	40	90	63	2,87	B	11	LNXT 1306...	Ⓢ
181119700	125A90190-16-04-040063	16	125	40	90	63	2,86	B	11	LNXT 1306...	Ⓢ

Ⓢ Stock item | Produto de stock | Itens de stock

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



Weldon Shank
KAPR=90° | GAMP=-4°



Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications		Insert Pastilha Inserto	Stock
			DC	DCONMS	LF	LU		APMX (mm)			
181118300	025W90190-02-04-025095	2	25	25	95	45	0,29	11		LNXT 1306...	Ⓢ
181109800	032W90190-03-04-032110	3	32	32	110	50	0,55	11		LNXT 1306...	Ⓢ
181118400	040W90190-04-04-032110	4	40	32	110	50	0,60	11		LNXT 1306...	Ⓢ

Ⓢ Stock item | Produto de stock | Itens de stock

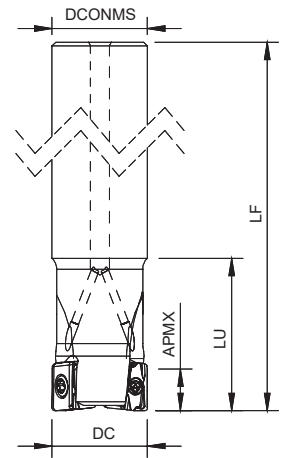
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

TGPLUS 90190

LNXT 13



Cylindrical Shank
KAPR=90° | GAMP=-4°



Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications	Insert Pastilha Inserto	Stock
			DC	DCONMS	LF	LU		APMX (mm)		
181118500	025E90190-02-04-025200	2	25	25	200	40	0,66	11	LNXT 1306...	Ⓢ
181118600	032E90190-03-04-032250	3	32	32	250	50	1,37	11	LNXT 1306...	Ⓢ
181118700	040E90190-04-04-032250	4	40	32	250	50	1,42	11	LNXT 1306...	Ⓢ

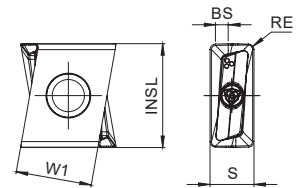
Ⓢ Stock item | Produto de stock | Itens de stock

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

LNXT 1306... Inserts | Pastilhas | Plaquetas



LNXT-MP



LNXT-MP

		P			M	K			Dimensions Dimensões Dimensiones (mm)				
		CVD	PVD		PVD	CVD	PVD						
		⁽²⁾ Grade code	T9	T1	G6	G6	L6	T1					
⁽¹⁾ Geometry code	ISO Reference	PH5740	PH6920	PH7740	PH7740	PH5320	PH6920	PH7740	W1	S	INSL	RE	BS
1112242	LNXT 130604 PNER-MP								9,80	6,80	13,00	0,40	0,90
1112243	LNXT 130608 PNER-MP								9,80	6,80	13,00	0,80	0,90

Ⓢ First choice | Primeira opção | 1ª opción

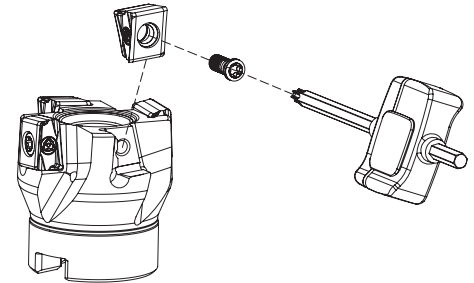
Ⓢ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta
Disponible bajo consulta

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

SPARE PARTS Acessórios | Repuestos

Cutter DC	Insert Screw	Key (Torx)	Order separately		Order separately	
			Key (Torx - Nm)	Torque Value	Screw	DIN 6368 Wrench
E90190 - 25	P0400900	XT15	DT1530	3,0	-	-
E90190 - 32-40	P0401200	XT15	DT1530	3,0	-	-
W90190 - 25	P0400900	XT15	DT1530	3,0	-	-
W90190 - 32-40	P0401200	XT15	DT1530	3,0	-	-
A90190 - 40-63	P0401200	XT15	DT1530	3,0	-	-
A90190 - 80	P0401200	XT15	DT1530	3,0	J0123510	SD6368-12
A90190 - 100	P0401200	XT15	DT1530	3,0	J0164110	SD6368-16
A90190 -125	P0401200	XT15	DT1530	3,0	J0204610	SD6368-20



GRADES SELECTION GUIDE Guia para selecção de graus | Tabla para selección de calidades

ISO	PSM	Material	HB (Brinell)	Grades			
				← Wear Resistance	Toughness →		
				PH5320	PHP920	PHS740	PH7740
P	1	Unalloyed Steel	125-220	●	✓	✓	✓
	2	Low-Alloyed Steel	220-280		✓	✓	✓
	3	High-Alloyed Steel	280-380		✓	✓	✓
M	4	SS - Ferritic / Martensitic	200-330				
	5	SS - Austenitic	200-330				
	6	SS - Austenitic-ferritic (Duplex)	230-260				
K	7	Malleable Cast Iron	130-230	✓	✓		✓
	8	Grey Cast Iron	180-245	✓	✓		✓
	9	Nodular Cast iron	160-250	✓	✓		✓



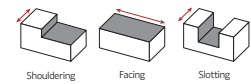
Good Conditions



Average Conditions



Difficult Conditions



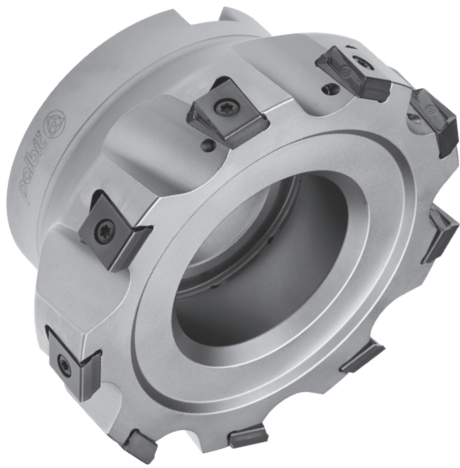
RECOMMENDED CUTTING CONDITIONS Condições de corte recomendadas | Condiciones de corte recomendables

ISO	PSM	Material	HB (Brinell)	Vc (m/min)				Feed fz (mm/t)
				← Wear Resistance		Toughness →		
				PH5320	PHP920	PHS740	PH7740	LNXT 09... MP
P	1	Unalloyed Steel	125-220	-	180-250	140-220	140-200	0,08-0,25
	2	Low-Alloyed Steel	220-280	-	160-230	120-200	130-180	0,08-0,25
	3	High-Alloyed Steel	280-380	-	140-220	100-190	100-170	0,08-0,15
M	4	SS - Ferritic / Martensitic	200-330	-	-	-	-	0,08-0,25
	5	SS - Austenitic	200-330	-	-	-	-	0,08-0,20
	6	SS - Austenitic-ferritic (Duplex)	230-260	-	-	-	-	0,08-0,15
K	7	Malleable Cast Iron	130-230	150-280	160-270	-	140-220	0,08-0,30
	8	Grey Cast Iron	180-245	160-320	140-250	-	120-210	0,08-0,25
	9	Nodular Cast iron	160-250	100-190	120-210	-	100-190	0,08-0,20

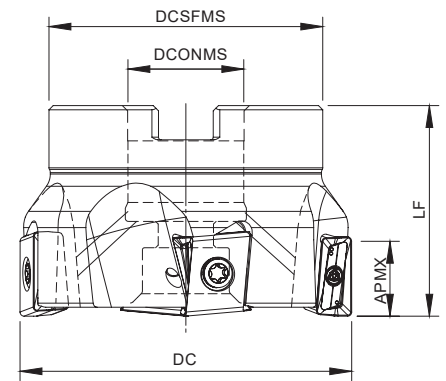
(Note 1) Cutting conditions $a_e/D_c=70\%$.

(Note 2) It's possible to occur vibrations in certain cases. Please reduce depth of cut and / or reduce cutting conditions in following cases:

- When using long shank;
- When using long tool overhang with arbor type;
- When application has poor clamping rigidity or when using a low rigidity machine.



Arbor Mounting
KAPR=90° | GAMP=-5°



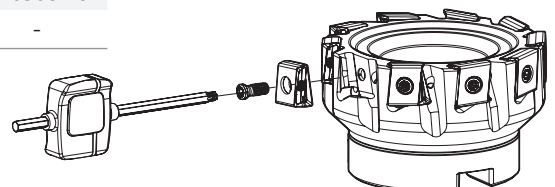
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)				WT	Specifications		Insert Pastilha Inserto	Stock
			DC	DCONMS	DCSFMS	LF		Arbor Type	APMX (mm)		
181069200	050A90390-05-05-022040	5	50	22	42	40	0,315	A	14,0	LNXT 1506...	⊗
181066400	063A90390-05-05-022040	5	63	22	52	40	0,524	A	14,0	LNXT 1506...	⊗
181051000	063A90390-08-05-022040	8	63	22	52	40	0,550	A	14,0	LNXT 1506...	⊗
181066500	080A90390-07-05-027050	7	80	27	60	50	0,936	A	14,0	LNXT 1506...	⊗
181052000	080A90390-10-05-027050	10	80	27	60	50	0,939	B	14,0	LNXT 1506...	⊗
181066600	100A90390-08-05-032050	8	100	32	80	50	1,586	B	14,0	LNXT 1506...	⊗
181051100	100A90390-12-05-032050	12	100	32	80	50	1,690	B	14,0	LNXT 1506...	⊗
181066700	125A90390-09-05-040063	9	125	40	90	63	3,001	B	14,0	LNXT 1506...	⊗
181051200	125A90390-15-05-040063	15	125	40	90	63	3,113	B	14,0	LNXT 1506...	⊗
181051300	160A90390-10-05-U040063	10	160	40	110	63	4,470	C	14,0	LNXT 1506...	⊗
181066800	160A90390-20-05-U040063	20	160	40	110	63	4,580	C	14,0	LNXT 1506...	⊗

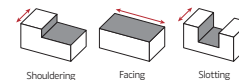
⊗ Stock item | Produto de stock | Itens de stock

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

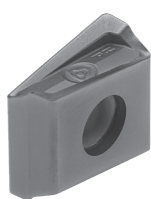
SPARE PARTS Acessórios | Repuestos

Cutter DC	Insert Screw	Key (Torx)	Order separately		Order separately	
			Key (Torx - Nm)	Torque Value	Screw	DIN 6368 Wrench
A90390 - 50 - 80	P0401200	XT15	DT1530	3,0	-	-
A90390 - 80	P0401200	XT15	DT1530	3,0	J0123510	SD6368-12
A90390 - 100	P0401200	XT15	DT1530	3,0	J0164110	SD6368-16
A90390 - 125	P0401200	XT15	DT1530	3,0	J0204610	SD6368-20
A90390 - 160	P0401200	XT15	DT1530	3,0	-	-





LNXT 1506... Inserts | Pastilhas | Plaquetas



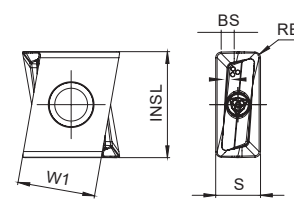
LNXT-HP



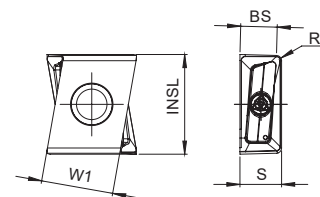
LNXT-MP



LNXT-W



LNXT - MP | HP



LNXT-W

		P					K						Dimensions Dimensões Dimensiones (mm)				
		CVD	PVD					CVD		PVD							
	⁽²⁾ Grade code	T9	G1	G4	T1	G6	L5	L9	G1	G4	T1	G6					
⁽¹⁾ Geometry code	ISO Reference	PH5740	PH7910	PH7920	PHP920	PH7740	PH5705	PH5740	PH7910	PH7920	PHP920	PH7740	W1	S	INSL	RE	BS
1111313	LNXT 150608 PNER-MP												11,00	6,35	15,00	0,80	1,80
1111590	LNXT 150612 PNER-MP												11,00	6,35	15,00	1,20	1,80
1111591	LNXT 150608 PNSR-HP												11,00	6,35	15,00	0,80	1,80
1111524	LNXT 150608 PNER-W												11,00	6,35	15,20	0,80	5,50

⊗ First choice | Primeira opção | 1ª opción

⊗ 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

GRADES SELECTION GUIDE Guia para selecção de graus | Tabla para selección de calidades

ISO	PSM	Material	HB (Brinell)	Grades						
				← Wear Resistance				Toughness →		
				PH5705	PH7910	PHP920	PH7920	PH5740	PH5740	PH7740
P	1	Unalloyed Steel	125-220		✓	✓	✓		✓	✓
	2	Low-Alloyed Steel	220-280		✓	✓	✓		✓	✓
	3	High-Alloyed Steel	280-380		✓	✓	✓		✓	✓
K	7	Malleable Cast Iron	130-230	✓	✓	✓	✓	✓		✓
	8	Grey Cast Iron	180-245	✓	✓	✓	✓	✓		✓
	9	Nodular Cast iron	160-250	✓	✓	✓	✓	✓		✓

● Good Conditions

● Average Conditions

● Difficult Conditions

RECOMMENDED CUTTING CONDITIONS Condições de corte recomendadas | Condiciones de corte recomendables

ISO	PSM	Material	HB (Brinell)	Vc (m/min)						
				← Wear Resistance					Toughness →	
				PH5705	PH7910	PHP920	PH7920	PH5740	PH5740	PH7740
P	1	Unalloyed Steel	125-220	-	180-250	180-250	180-240	-	140-220	140-200
	2	Low-Alloyed Steel	220-280	-	160-230	160-230	160-220	-	120-200	130-180
	3	High-Alloyed Steel	280-380	-	140-220	140-220	140-210	-	100-190	100-170
K	7	Malleable Cast Iron	130-230	160-290	180-300	160-270	160-260	160-260	-	140-220
	8	Grey Cast Iron	180-245	170-320	160-250	140-250	140-240	140-240	-	120-210
	9	Nodular Cast iron	160-250	140-200	150-200	120-210	120-200	120-200	-	100-190

ISO	PSM	Material	HB (Brinell)	Feed fz (mm/t)		
				LNXT 15... MP	LNXT 15... HP	LNXT 15... W
P	1	Unalloyed Steel	125-220	0,10-0,30	0,10-0,30	0,10-0,35
	2	Low-Alloyed Steel	220-280	0,10-0,30	0,10-0,30	0,10-0,35
	3	High-Alloyed Steel	280-380	0,10-0,25	0,10-0,25	0,10-0,35
K	7	Malleable Cast Iron	130-230	0,10-0,40	0,10-0,40	0,10-0,50
	8	Grey Cast Iron	180-245	0,10-0,35	0,10-0,35	0,10-0,50
	9	Nodular Cast iron	160-250	0,10-0,30	0,10-0,30	0,10-0,50

(Note 1) Cutting conditions $a_e/D_c=70\%$.

(Note 2) It's possible to occur vibrations in certain cases. Please reduce depth of cut and / or reduce cutting conditions in following cases:

- When using long shank;
- When using long tool overhang with arbor type;
- When application has poor clamping rigidity or when using a low rigidity machine.

CHIP BREAKER SELECTION GUIDE Guia para aplicações do quebra- aparas | Guía para aplicación del rompevirutas

ISO	PSM	Material	HB (Brinell)	Chip breaker application	
				1st choice	Difficult Operations
P	1	Unalloyed Steel	125-220	LNXT 15... MP	LNXT 15... HP
	2	Low-Alloyed Steel	220-280	LNXT 15... MP	LNXT 15... HP
	3	High-Alloyed Steel	280-380	LNXT 15... MP	LNXT 15... HP
K	7	Malleable Cast Iron	130-230	LNXT 15... MP	LNXT 15... HP
	8	Grey Cast Iron	180-245	LNXT 15... MP	LNXT 15... HP
	9	Nodular Cast iron	160-250	LNXT 15... MP	LNXT 15... HP

WIPER INSERTS

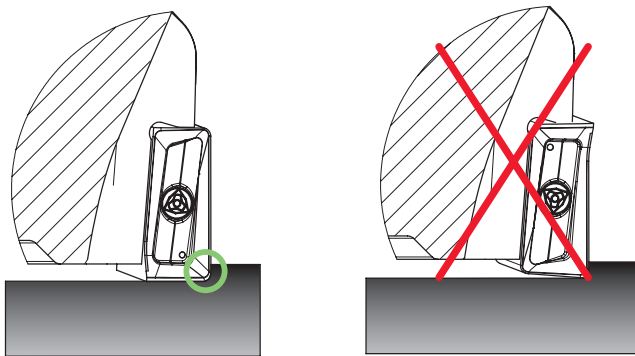
Rec. Cutting Conditions

- F_w at least 40% larger than f_n ($f_n - f_2 \times Z$);
- Axial depth of cut is 0,5 - 0,8mm.

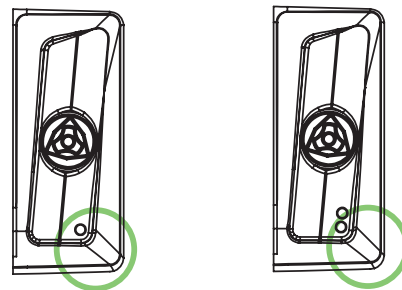
Example:

- The width of the parallel land (F) of the insert is 1,8mm
- With a cutter of 10 inserts and using a feed per tooth (f_z) of 0,3mm, the feed per revolution (f_n) will be 3mm, i.e. 40% bigger than the parallel land.
- To obtain a good surface finish, the feed per revolution should be a maximum of 80% of 1,8mm = 1,44mm.
- The wiper insert will have a parallel land (F_w) with a width of approximately 5,5mm.
- Result: Feed per revolution (f_n) could be increased from 0,8mm to 60% of 5,5mm = 3,3mm.

Note: Other limitations, such as machine power, must be taken into consideration.



The points on the insert indicates the side that should be parallel to the workspace material.



Wiper insert with 2 Right-hand cutting edges.
The side work of the insert it's indicated by points.

90090 | 90190 | 90390

TG PLUS

High performance on tangential shoulder milling



Check the QrCode for more information



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