



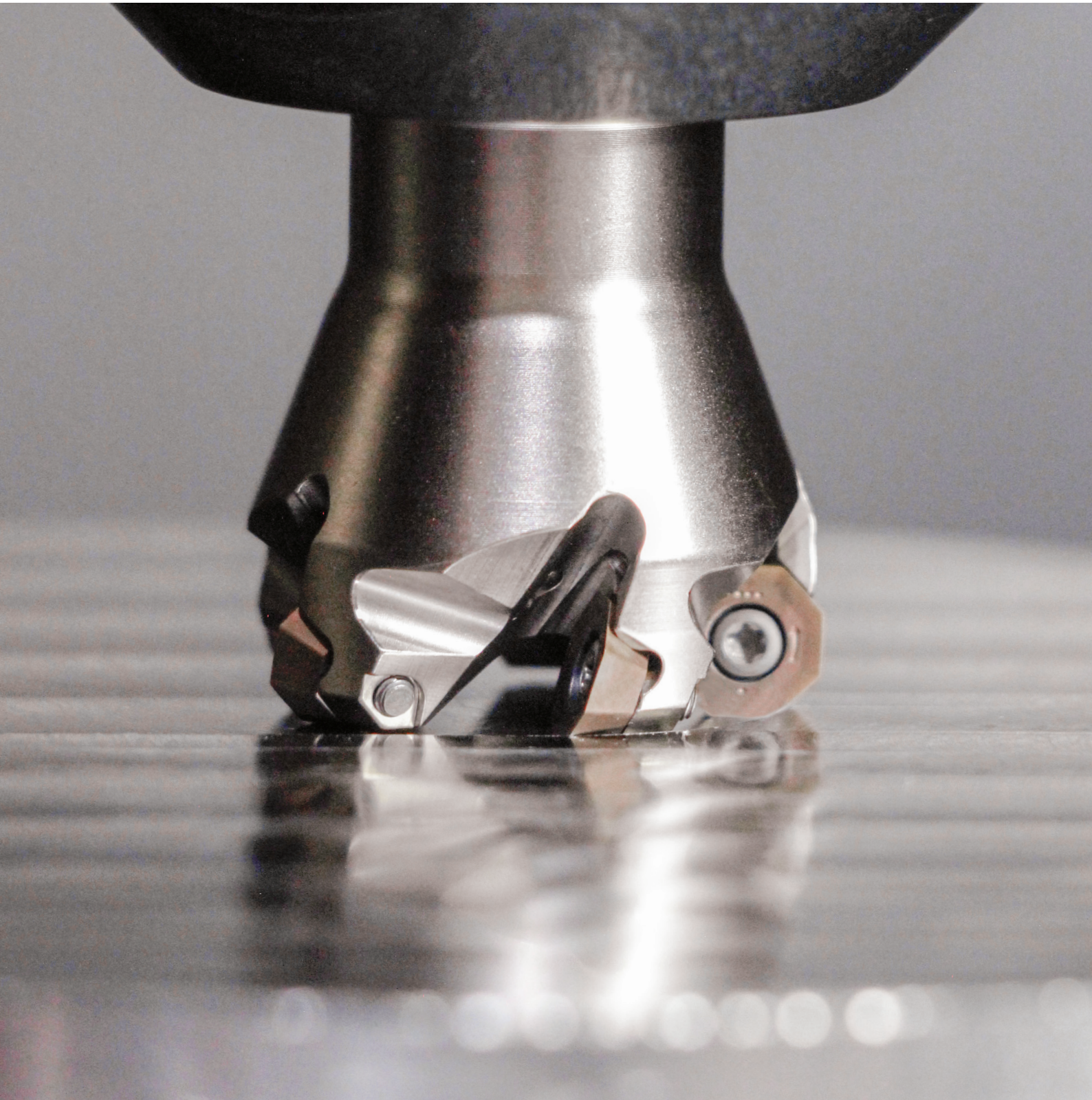
57045

LINEPRO

Positive Cuts, Effortless Machining

MILLING

Facing | Slanted Shoulder



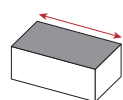
The new **LINEPRO 57045** is engineered for high-performance face milling of stainless steel and HRSA materials. Designed for low force machining, it features both normal and fine pitch options, along with a highly positive insert position that reduces cutting forces and ensures excellent surface finishes.

The multi-insert pocket design that can accommodate both SFHX and OFHX insert geometries, providing exceptional flexibility in face milling applications. The OFHX insert is specifically designed for shallow depth of cut applications, offering stable performance and excellent efficiency. The SFHX insert supports slightly deeper cuts, offering improved chip control and greater durability in more demanding machining conditions.

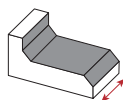
Features & Benefits

- High positive rake angle provides a smooth cut resulting in minimised cutting forces and vibration
- Low force machining ensures effective machining of low rigidity parts on machines with lower cutting force requirements
- Toolholder compatibility with OFHX 0403 and SFHX 1004 inserts enhances adaptability to different machining needs
- Synergistic grade and geometry design ensures optimum cutting performance, maximising tool life and stability in high temperature alloy applications
- Fine pitch provides increased linear feed rates, increasing productivity
- Available cermet inserts where superior surface finish is required

Operations



Facing



Slanted Shoulder & Chamfer

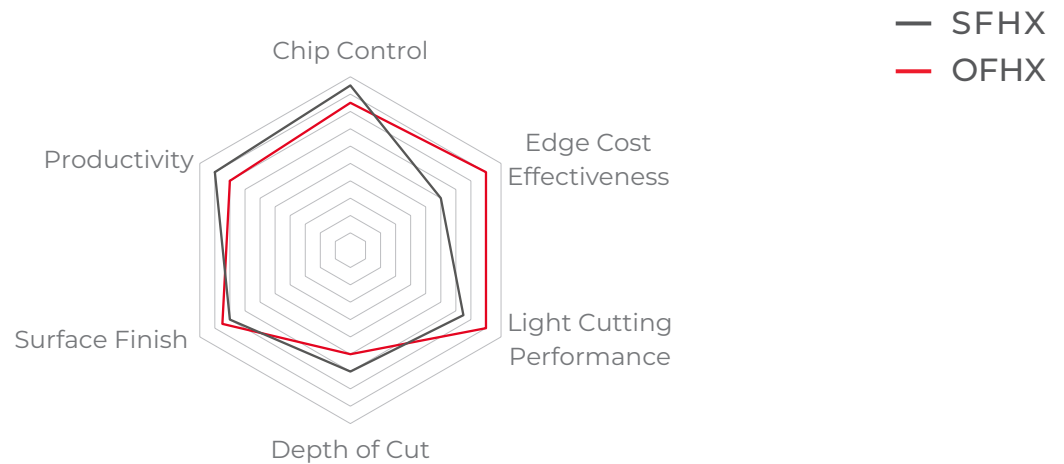
This dual insert capability ensures versatility and responsiveness to varying cutting parameters, leading to consistent, high-quality results across a wide range of applications in face milling operations.



SFHX insert:

- **High depth of cut:** Engineered for deeper cuts
- **Good chip control:** Positive helix angle on chipbreaker

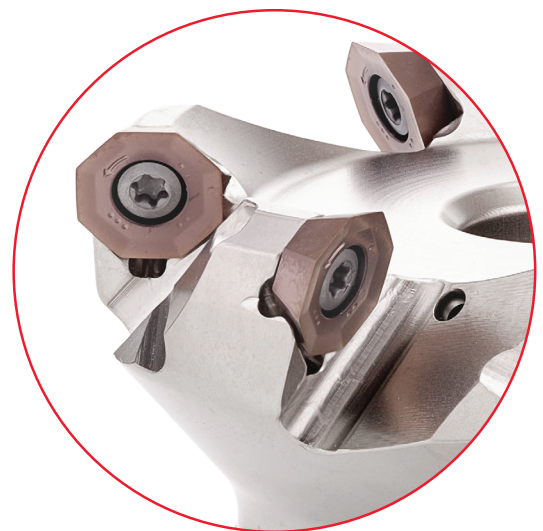
Best suited for more aggressive conditions where chip control is needed.



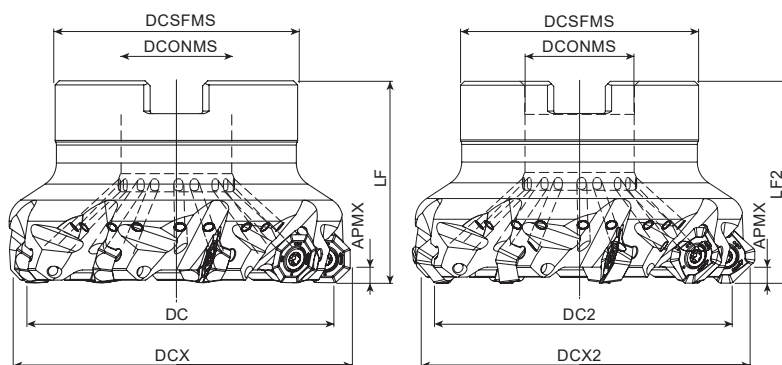
OFHX insert:

- **Lower depth of cut:** Suitable for shallow cuts
- **Economical design:** Lower cost per cutting edge

Best suited for finishing or semi-finishing operations where surface quality and efficiency are a priority.



LINEPRO 57045 offers a blend of efficiency, versatility, and high performance!



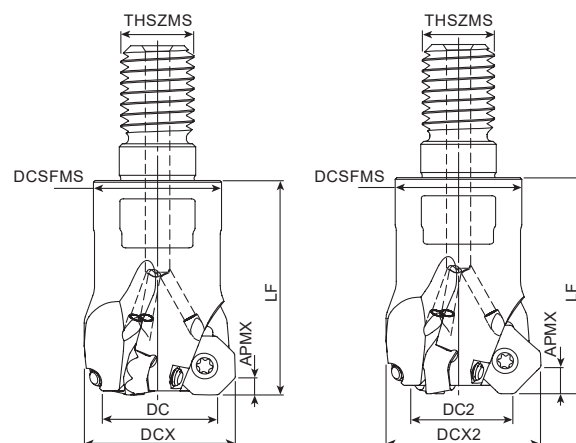
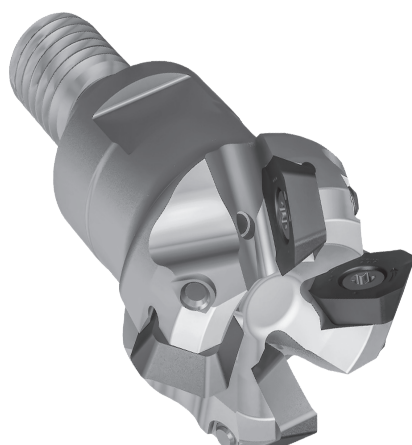
Arbor Mounting

KAPR=45° | GAMP=+18°

Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)								WT	Specifications		Insert Pastilha Inserto	Stock
			DC	DCX	DC2	DCX2	DCONMS	DCSFMS	LF	LF2		Arbor Type	APMX (mm)		
181164100	040A57045-04-18-016040	4	40	45,8	38,4	47,7	16	38	40	40,7	0,150	A	3,5 2,5	SF..10 OF..04	○
181164200	040A57045-06-18-016040	6	40	45,8	38,4	47,7	16	38	40	40,7	0,180	A	3,5 2,5	SF..10 OF..04	⊗
181164300	050A57045-05-18-022040	5	50	55,8	48,4	57,7	22	48	40	40,7	0,330	A	3,5 2,5	SF..10 OF..04	○
181164400	050A57045-07-18-022040	7	50	55,8	48,4	57,7	22	48	40	40,7	0,315	A	3,5 2,5	SF..10 OF..04	⊗
181164500	063A57045-06-18-022040	6	63	68,8	61,4	70,7	22	48	40	40,7	0,505	A	3,5 2,5	SF..10 OF..04	⊗
181164600	063A57045-09-18-022040	9	63	68,8	61,4	70,7	22	48	40	40,7	0,495	A	3,5 2,5	SF..10 OF..04	○
181164700	080A57045-07-18-027050	7	80	85,8	78,4	87,7	27	58	50	50,7	1,150	B	3,5 2,5	SF..10 OF..04	○
181164800	080A57045-11-18-027050	11	80	85,8	78,4	87,7	27	58	50	50,7	1,000	B	3,5 2,5	SF..10 OF..04	○
181164900	100A57045-09-18-032050	9	100	105,8	98,4	107,7	32	78	50	50,7	1,650	B	3,5 2,5	SF..10 OF..04	○
181165000	100A57045-13-18-032050	13	100	105,8	98,4	107,7	32	78	50	50,7	1,550	B	3,5 2,5	SF..10 OF..04	○
181165100	125A57045-12-18-040063	12	125	130,8	123,4	132,7	40	88	63	63,7	2,700	B	3,5 2,5	SF..10 OF..04	○

⊗ Stock item | Produto de stock | Itens de stock

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



Threaded Coupling

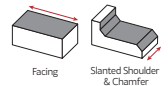
KAPR=45° | GAMP=+18°

Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)								WT	Specifications	Insert Pastilha Inserto	Stock
			DC	DCX	DC2	DCX2	THSZMS	DCSFSM	LF	LF2		APMX (mm)		
181163800	020R57045-03-18-M12035	3	20	25,6	18,6	27,4	M12	21	35	35,7	0,100	3,5 2,5	SF..10 OF..04	○
181163900	025R57045-04-18-M12035	4	25	30,7	23,3	32,6	M12	21	35	35,7	0,190	3,5 2,5	SF..10 OF..04	○
181164000	032R57045-05-18-M16035	5	32	37,8	30,4	39,7	M16	29	35	35,7	0,310	3,5 2,5	SF..10 OF..04	○

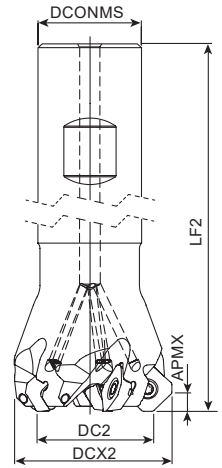
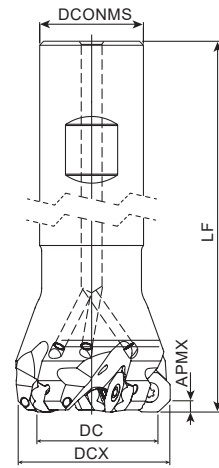
⊗ Stock item | Produto de stock | Itens de stock

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

LINEPRO 57045
OFHX 04 | SFHX 10



Weldon Shank
KAPR=45° | GAMP=+18°



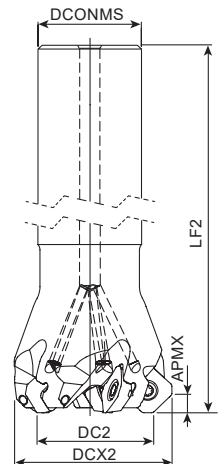
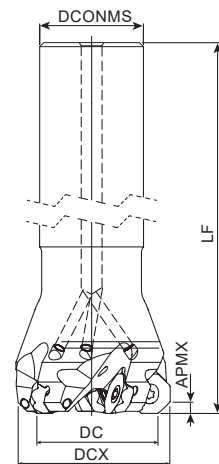
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)							WT	Specifications	Insert Pastilha Inserto	Stock
			DC	DCX	DC2	DCX2	DCONMS	LF	LF2		APMX (mm)		
181165900	020W57045-03-18-020080	3	20	25,6	18,6	27,7	20	80	80,7	0,180	3,5 2,5	SF..10 OF..04	⊗
181166000	025W57045-04-18-020085	4	25	30,7	23,6	32,7	20	85	85,7	0,240	3,5 2,5	SF..10 OF..04	⊗
181166100	032W57045-05-18-025100	5	32	37,8	30,6	39,7	25	100	100,7	0,375	3,5 2,5	SF..10 OF..04	⊗

⊗ Stock item | Produto de stock | Itens de stock

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



Cilindrical Shank
KAPR=45° | GAMP=+18°



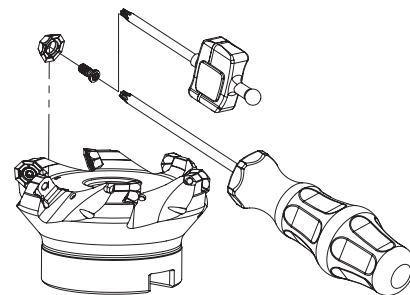
Order code Código	Reference Referência Referencia	CICT	Dimensions Dimensões Dimensiones (mm)							WT	Specifications	Insert Pastilha Inserto	Stock
			DC	DCX	DC2	DCX2	DCONMS	LF	LF2		APMX (mm)		
181165200	020E57045-03-18-020080	3	20	25,6	18,6	27,7	20	80	80,7	0,180	3,5 2,5	SF..10 OF..04	⊗
181165300	025E57045-04-18-020085	4	25	30,7	23,6	32,7	20	85	85,7	0,240	3,5 2,5	SF..10 OF..04	⊗
181146500	032E57045-05-18-025100	5	32	37,8	30,6	39,7	25	100	100,7	0,375	3,5 2,5	SF..10 OF..04	⊗

⊗ 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		Torque Value	Screw	DIN 6368 Wrench
			Key (Torx - Nm)	Nm			
A57045 - 40-80	P0300800	XT09	DT0914	1,4	-	-	-
A57045 - 100	P0300800	XT09	DT0914	1,4	J0164110	SD6368-16	-
A57045 - 125	P0300800	XT09	DT0914	1,4	J0204610	SD6368-20	-
R57045 - 20-32	P0300800	XT09	DT0914	1,4	-	-	-
W57045 - 20-32	P0300800	XT09	DT0914	1,4	-	-	-
E57045 - 20-32	P0300800	XT09	DT0914	1,4	-	-	-



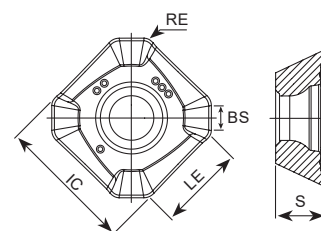
SFHX 100410 | OFHX 040305 Inserts | Pastilhas | Plaquetas



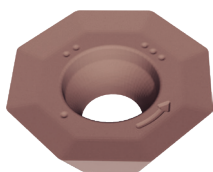
SFHX-LS



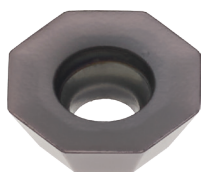
SFHX-LP



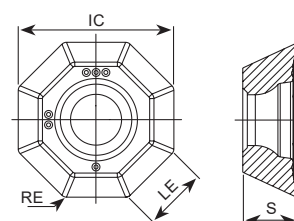
SFHX-LS | LP



OFHX-LS



OFHX-LP



OFHX-LS | LP

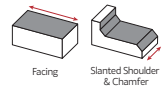
		P			M			K		S			Dimensions Dimensões Dimensiones (mm)				
		PVD		CERMET	PVD			PVD		PVD							
		T1	P4	5I	X9	Z3	4H	T1	P4	X9	Z3	4H					
⁽¹⁾ Geometry code	ISO Reference	PHP920	PHP930	PTP120	PHH930	PHH530	PHF530	PHP920	PHP930	PHH930	PHH530	PHF530	IC	S	LE	RE	BS
1112738	SFHX 100410 AFER-LS												10,10	3,72	6,50	1,00	2,50
1113485	SFHX 100410 AFSR-LP												10,10	3,72	6,50	1,00	2,50
1112737	OFHX 040305 AFEN-LS												10,00	3,45	4,10	0,50	-
1112739	OFHX 040305 AFSN-LP												10,00	3,45	4,10	0,50	-

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



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

ISO	PSM	Material	HB (Brinell)	Grades					CERMET
				← Wear Resistance			Toughness →		
				PHP920	PHP930	PHH930	PHH530	PHF530	PTP120
P	1	Unalloyed steel	125-220	✓	✓			✓	✓
	2	Low-alloyed steel	220-280	✓	✓			✓	✓
	3	High-alloy 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)					CERMET	Feed fz (mm/t)	
				← Wear Resistance			Toughness →				
				PHP920	PHP930	PHH930	PHH530	PHF530	PTP120	OFHX 04..	SFHX 10..
P	1	Unalloyed steel	125-220	180-250	160-220	-	-	-	250-400	0,10-0,30	0,10-0,30
	2	Low-alloyed steel	220-280	170-210	150-180	-	-	-	250-400	0,10-0,30	0,10-0,30
	3	High-alloy steel	280-380	160-200	130-160	-	-	-	250-350	0,15-0,25	0,15-0,20
M	4	SS - Ferritic / Martensitic	200-330	-	-	100-160	120-180	120-180	-	0,10-0,25	0,10-0,20
	5	SS - Austenitic	200-330	-	-	90-150	100-160	100-160	-	0,10-0,25	0,10-0,20
	6	SS - Austenitic-ferritic (Duplex)	230-260	-	-	60-130	70-140	70-140	-	0,10-0,20	0,10-0,20
K	7	Malleable cast iron	130-230	170-300	160-280	-	-	-	-	0,10-0,30	0,10-0,30
	8	Grey cast iron	180-245	150-250	140-240	-	-	-	-	0,10-0,30	0,10-0,30
	9	Nodular cast iron	160-250	90-210	90-200	-	-	-	-	0,15-0,25	0,15-0,20
S	11	Heat Resistant Super Alloys	200-320	-	-	25-70	30-75	70-140	-	0,07-0,18	0,07-0,18

(Note 1) Cutting conditions ae/DC=70%

(Note 2) Cutting conditions should be adjusted according to the machine and work rigidity.

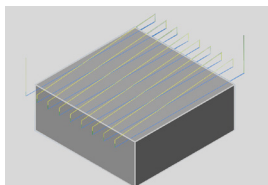
(Note 3) If chattering occurs, reduce ap and Vc by 30% and keep the same fz per tooth.

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	LP	-
	2	Low-Alloyed Steel	220-280	LP	-
	3	High-Alloyed Steel	280-380	LP	-
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	LP	-
	8	Grey Cast Iron	180-245	LP	-
	9	Nodular Cast iron	160-250	LP	-
S	11	Heat Resistant Super Alloys	200-320	LS	-

TEST REPORT: SFHX VS OFHX INSERTS

The LINEPRO 57045 toolholder accommodates interchangeable SFHX and OFHX insert geometries, providing application-specific optimization within a single tooling system.



Workpiece CAM program

Workpiece Material: Titanium Alloy (Ti-6Al-4V)

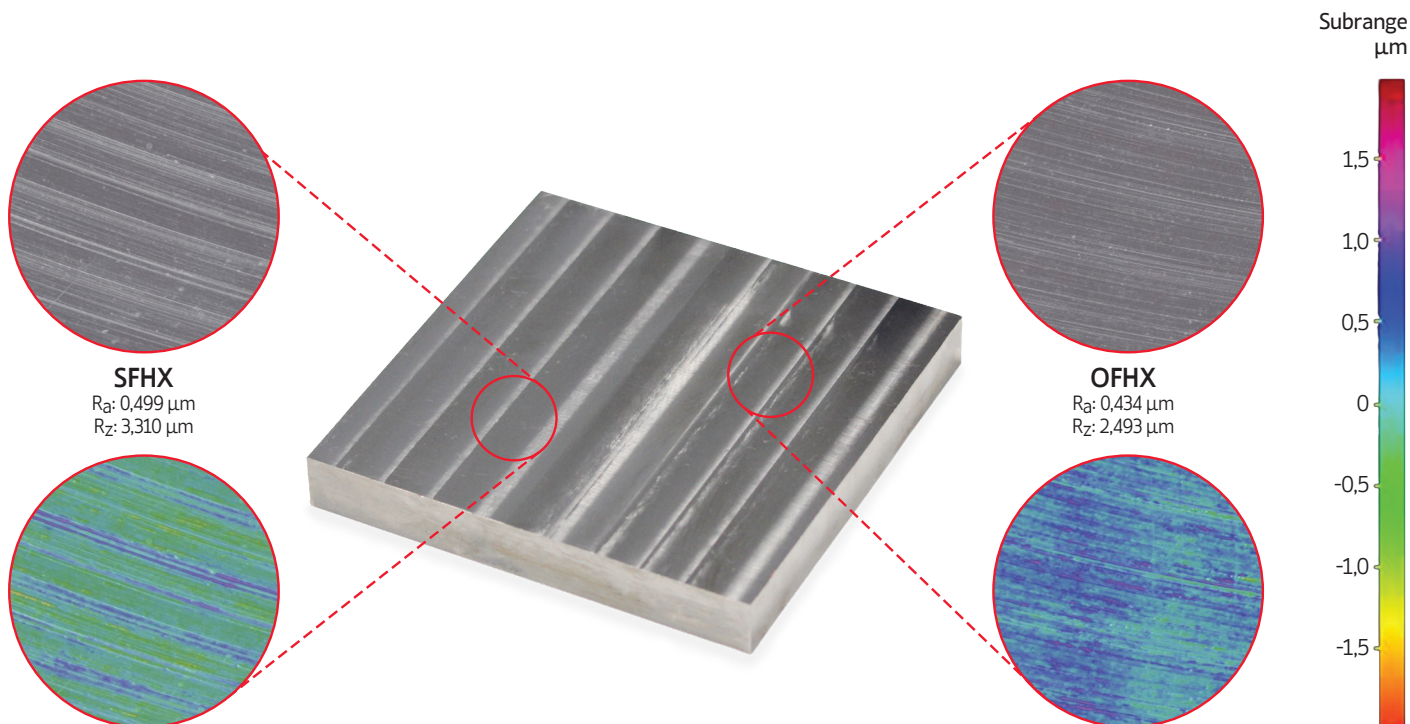
Operation: Face milling

Coolant: Air

Cutting speed: Vc	50 m/min
Feed per tooth: fz	0,10 mm/t
Depth of cut: ap	1,0 mm
Stepover : ae	19,2 mm (60%DC)

	SFHX	OFHX
Toolholder	032E57045-05-18-025100	032E57045-05-18-025100
Insert	SFHX 100410 AFER-LS PHH530	OFHX 040305-AFEN-LS PHH530

■ SURFACE FINISHING

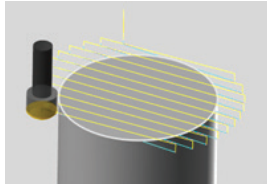


OFHX is optimal for shallow depth-of-cut applications, whereas SFHX excels in deeper cutting scenarios.

OFHX's refined edge geometry contributes to a slight improvement in surface finish.

TEST REPORT: SFHX VS SNHX INSERTS

The high positive geometry of the SFHX insert allows low force machining and minimises cutting vibration during stainless steel facing operations. This optimisation results in improved surface finish and overall machining efficiency, improving product quality.



Workpiece CAM program

Workpiece Material: Stainless steel 316L (25 HRC)

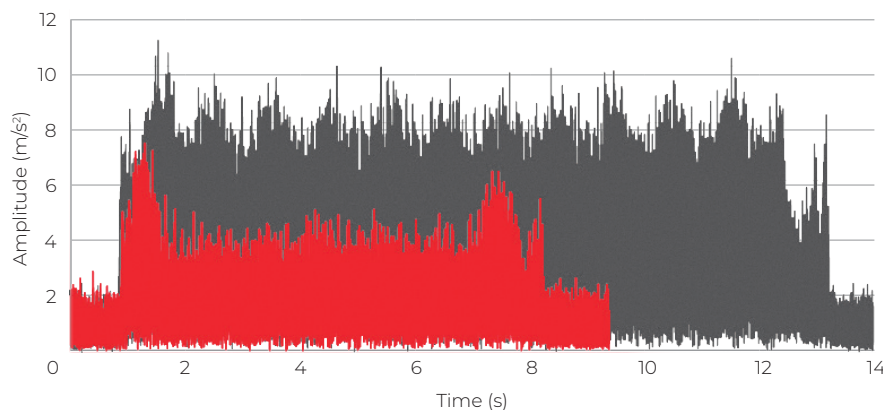
Operation: Face milling

Coolant: Air

Cutting speed: Vc	160 m/min
Feed per tooth: fz	0,20 mm/t
Depth of cut: ap	2,0 mm
Stepover : ae	19,2 mm (60%DC)

	Positive solution	Negative solution
Toolholder	032E57045-05-18-025100	032W90845-03-06-025100
Insert	SFHX 100410 AFER-LS PHH530	SNHX 1206 ANER-LS PHH530
Cutting Diameter	32 mm	32 mm
Number of teeth	5	3

VIBRATION RESULTS



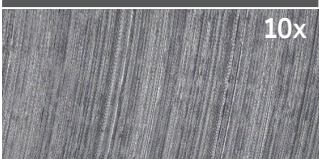
Positive solution
SFHX | RMS = 1,99

Negative solution
SNHX | RMS = 3,57

-33%
Vibration

Under stable cutting conditions, machining with SFHX demonstrates a 33% reduction in vibration levels compared to SNHX insert.

SURFACE FINISHING

	SFHX	SNHX
	 10x	 10x
R_a (μm)	1,03	1,45
S_a (μm)	1,37	1,84

-29%
Roughness

The positive cutting angle reduces tool vibration, leading to a smoother cut and improved surface finish quality of the workpiece.

57045

LINEPRO

Positive Cuts, Effortless Machining



Check the QrCode for more information



ZIBTRPRO

tehnologija obdelave · vpenjalni sistemi



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