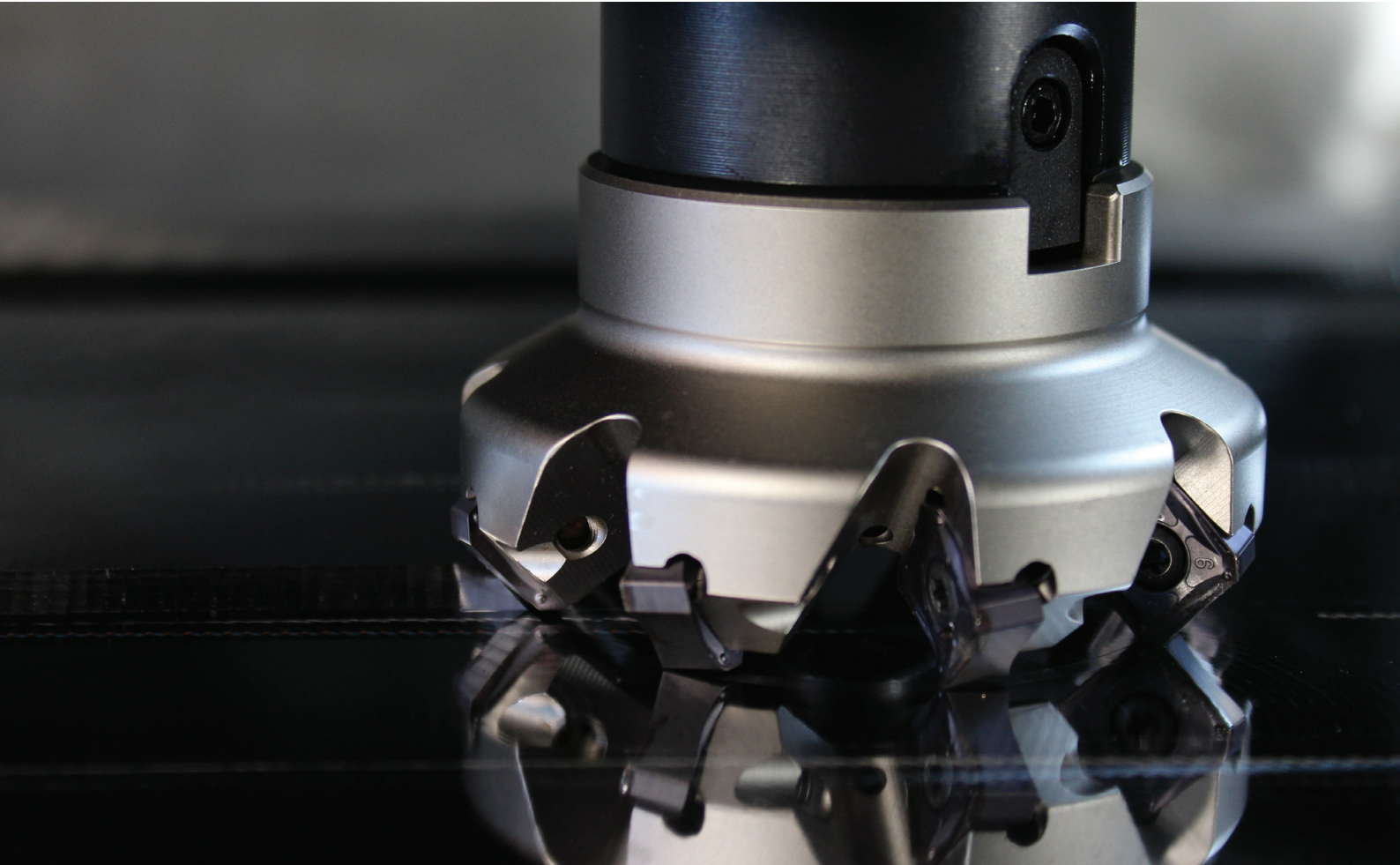


PLUS

90945 | SNHX 1206..

High performance face milling



Cutters

- Excellent surface finishing.
- High feed rates & cost-efficiency.
- Available in regular and fine pitch cutters.
- Large chip gullets ensure the efficient chip evacuation.
- Internal coolant supply up to 125 mm.

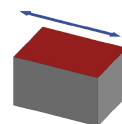
Inserts

- Insert with high rake angle allows a positive setting on the tool for lower cutting forces.
- Innovative chip breaker design for improved tool life and better chip evacuation.
- Helical cutting edge.

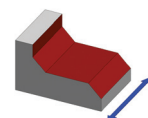
Specifications

- Geometry: 45° face milling.
- Cutter diameters:
 - Arbor Mounting (A): Ø50 till Ø250
- Workpiece materials: Steels, stainless steel, cast iron, high-temp alloy, aluminium, non-ferrous and HRSA.

Applications

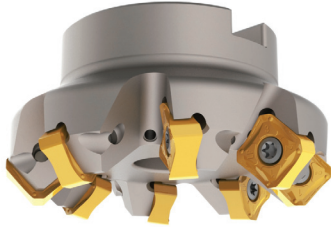


Facing



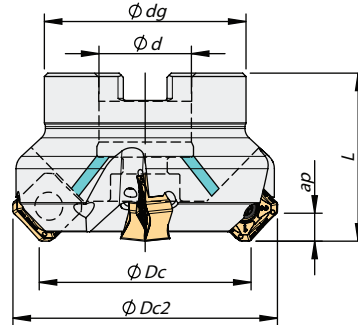
Slanted Shoulder
&
Chamfer

90945 Cutters



$K_r = 45^\circ$
 $\gamma_p = -6^\circ$

Arbor Mounting

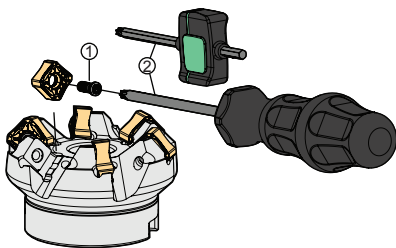


Order Code	Reference		Dimensions (mm)					Arbor Style	a_p Max.	Stock
			ϕDc	$\phi Dc2$	ϕd	ϕdg	L			
181048200	050A90945-04-06-022040	<input checked="" type="checkbox"/>	050	063	22	48	40	A	6,0	
181067000	050A90945-06-06-022040	<input checked="" type="checkbox"/>	050	063	22	48	40	A		
181048300	063A90945-06-06-022040	<input checked="" type="checkbox"/>	063	076	22	52	40	A		
181067100	063A90945-08-06-022040	<input checked="" type="checkbox"/>	063	076	22	52	40	A		
181048400	080A90945-07-06-027050	<input checked="" type="checkbox"/>	080	093	27	60	50	B		
181067200	080A90945-10-06-027050	<input checked="" type="checkbox"/>	080	093	27	60	50	B		
181048500	100A90945-08-06-032050	<input checked="" type="checkbox"/>	100	113	32	80	50	B		
181067300	100A90945-12-06-032050	<input checked="" type="checkbox"/>	100	113	32	80	50	B		
181048600	125A90945-10-06-040063	<input checked="" type="checkbox"/>	125	138	40	90	63	B		
181048700	160A90945-12-06-U040063*	<input checked="" type="checkbox"/>	160	173	40	110	63	C		
181052800	200A90945-14-06-U060063*	<input checked="" type="checkbox"/>	200	213	60	172	63	C		
181064700	250A90945-16-06-U060063*	<input checked="" type="checkbox"/>	250	263	60	172	63	C		

Stock itens / Itens de stock Available under request / Disponibilidade sob consulta / Disponible bajo consulta

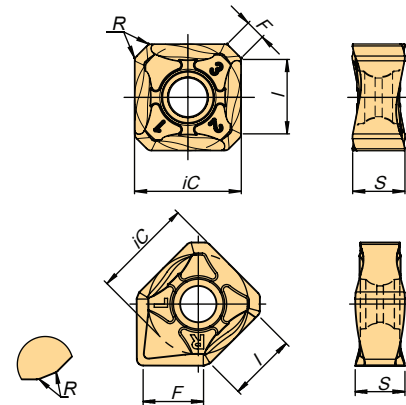
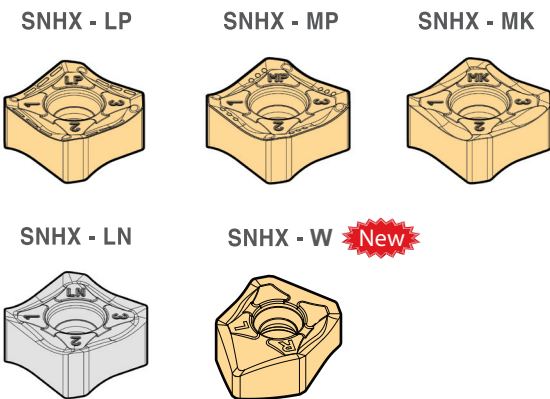
* Cutters with internal coolant supply

Screws & Keys



Item	1	2		Order Separately	
		Insert Screw	Key (Torx)	Torque Value	Screw
A90945 – 50 - 63	P0401200	XT15	3,0	-	-
A90945 – 80	P0401200	XT15	3,0	J0123510	SD6368-12
A90945 – 100	P0401200	PT15	3,0	J0164110	SD6368-16
A90945 – 125	P0401200	PT15	3,0	J0204610	SD6368-20
A90945 – 160 - 250	P0401200	PT15	3,0	-	-

SNHX 1206 AN... Inserts



(1) Geometry	(2) Grade Code	P					M		K			N	S			Dimensions (mm)				
		54	68	66	78	86	68	66	54	68	66	10	54	68	78	IC	S	I	R	F
1111452	SNHX 1206 ANEN-LP	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	12,70	6,35	9,3	0,8	2
1111502	SNHX 1206 ANSN-MP	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	12,70	6,35	9,3	0,8	2
1111503	SNHX 1206 ANEN-MK	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	12,70	6,35	9,3	0,8	2
1111504	SNHX 1206 ANFN-LN	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	12,70	6,40	9,3	0,8	2
1111899	SNHX 1206 ANFN-W*	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	12,70	6,30	9,3	0,4	7,6

*Wiper insert with 2 rights and 2 left-hand cutting edges

⊙ Stock items / Itens de stock ○ Available under request / Disponibilidade sob consulta / Disponible bajo consulta

Order code = (1) Geometry Code + (2) Grade Code

Chip Breaker

Chip Breaker	Cutting Edges	Features
Geometry LP Light machining of steels		Positive top rake angle to promote a good chip flow and reduce power consumption on low alloy steels.
Geometry MP General machining of steels		Chip-breaker with a reinforced chamfer for general applications on steels.
Geometry MK General machining of cast irons		Angles optimized for greater stability and durability of the edge in the machining of cast irons.
Geometry LN Aluminum alloys and non-ferrous		High positive chip-breaker, polished for applications of non ferrous (aluminum, cooper and cooper alloys).

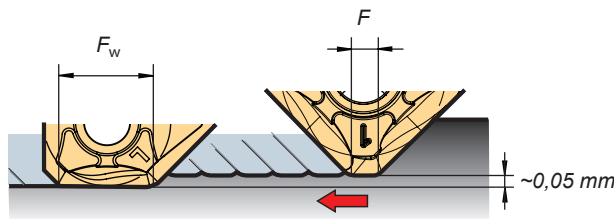
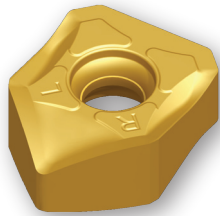
Rec. Cutting Conditions

ISO	HB (Brinell)	Vc (m/min)						fz (mm/t)	
		PH6910	PH6920	PH6930	PH6125	PH6135	PH0910		
P	Unalloyed Steel	125 - 220	180 - 280	170 - 250	150 - 200	140 - 220	120 - 180	-	0,10 - 0,35
	Low-Alloyed Steel	220 - 280	170 - 230	160 - 210	140 - 170	130 - 180	100 - 160	-	0,10 - 0,35
	High-Alloyed Steel	280 - 380	150 - 190	140 - 190	100 - 150	100 - 170	80 - 140	-	0,10 - 0,35
M	Stainless Steel	200 - 330	-	100 - 190	80 - 170	-	-	-	0,10 - 0,35
K	Malleable Cast Iron	130 - 230	170 - 300	180 - 280	150 - 250	-	-	-	0,10 - 0,40
	Grey Cast Iron	180 - 245	150 - 250	150 - 230	170 - 270	-	-	-	0,10 - 0,40
	Nodular Cast Iron	160 - 250	90 - 210	80 - 190	90 - 170	-	-	-	0,10 - 0,40
N	Allum. Alloys and Non-ferrous	30 - 130	-	-	-	-	-	350 - 1000	0,10 - 0,40
S	Heat Resistant Super Alloys	200 - 320	20 - 90	20 - 80	-	20 - 70	-	-	0,10 - 0,20

Grades

Grades	Information
PH6910	PVD coated carbide with micro-grain substrate for light milling of steels or for hardened steels. Excellent for cast iron and high temperature alloys.
PH6920	Coated carbide grade for high cutting speed applications, excellent solution to massive production with stable conditions.
PH6930	Micro-grain carbide grade, suitable for applications with instability conditions. Excellent solution for medium cutting speed applications.
PH6125	PVD coated carbide grade for light to heavy milling (wet and dry) in steel at elevated temperature. Excellent grade for milling mould steels at high productivity.
PH6135	PVD coated carbide for toughness demanding milling operations. Excellent solution for instable applications and can be applied in wet or dry.
PH0910	Uncoated carbide grade suitable for milling of aluminium alloys combined with high positive geometries.

Wiper Inserts



Features

Excellent surface finishing can be achieved with the combination of standard inserts and one or more wiper inserts. Wiper inserts can be used in the most materials to produce a good surface finishing, even under unfavorable conditions. The feed per revolution can be increased four times the normal. When using larger cutter diameters with higher number of inserts, it becomes essential to use wiper inserts to obtain a good surface finish.

Rec. Cutting Conditions

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

Example:

- The width of the parallel land (F) of the insert is 2 mm.
- With a cutter of 10 inserts and using a feed per tooth (f_z) of 0,3 mm, the feed per revolution (f_n) will be 3 mm, i.e. 33% bigger than the parallel land.
- To obtain a good surface finish, the feed per revolution should be a maximum of 80% of 2 mm = 1,6 mm.
- The wiper insert will have a parallel land (F_w) with a width of approximately 7,6 mm.
- Result: Feed per revolution (f_n) could be increased from 1,6 mm to 60% of 7,6 mm = 4,56 mm.

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

How to use a wiper insert

- Since wiper is one corner use for standard cutters, please attach the insert with the parallel land down to the workpiece cutting surface;

