Superior Technology Milling Tools

palbit® CUTTING TOOLS SOLUTIONS

Exclusively Distributed by Toolmex Corporation

- **LNX 90° Tangential Milling**
- **SPK High Feed Roughing Cutters**
- **XDK Square Shoulder Milling**
- **ANH 90° Square Shoulder Milling**
- **PNH 60° Face Milling**
- **SNH 45° Face Milling**

TOOLMEX® CORPORATION

www.toolmex.com

Distributed by

LNX – 90° High performance tangential shoulder milling

Cutters

- Excellent Stability
- Internal coolant up to five inch diameter
- Satin Nickel plating for longevity

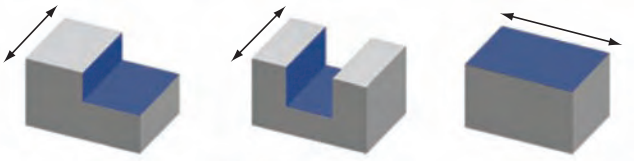
Inserts

- Rigid geometry
- Improved pocket configuration
- Wiper inserts available
- Roughing, pre-finishing, and finishing

Specifications

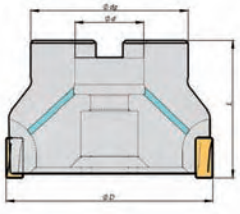
- Geometry: 90° tangential milling
- Cutter diameters: 2.50"-10.0"
- Workpiece materials: Steel, Stainless Steel, and Cast Iron

Applications



Shoulder Milling *Slotting* *Facing*

Order Code	Designation	Number of Inserts	Dimensions				ap max
			ØDc	Ød	Ødg	L	
181-0631-00	LN90 D2.50-A1.00/1.75-05-15	5	2.500	1.000	2.205	1.750	.551
181-0565-00	LN90 D2.50-A1.00/1.75-08-15	8	2.500	1.000	2.205	1.750	
181-0566-00	LN90 D3.00-A1.00/2.00-09-15	9	3.000	1.000	2.205	2.000	
181-0567-00	LN90 D4.00-A1.25/2.00-08-15	8	4.000	1.250	2.874	2.000	
181-0568-00	LN90 D5.00-A1.50/2.50-09-15	9	5.000	1.500	3.386	2.500	
181-0569-00	LN90 D6.00-A2.00/2.50U-10-15	10	6.000	2.000	4.882	2.500	
181-0570-00	LN90 D8.00-A2.50/2.50U-12-15	12	8.000	2.500	5.118	2.500	
181-0571-00	LN90 D10.0-A2.50/2.50U-15-15	15	10.000	2.500	7.087	2.500	



LNXT Inserts

Geometry Code	Description	PH6910	PH6920	PH6125	PH6135	PH6930	PH6920	PH6125	PH6135	PH6315	PH6910	PH6920	PHC315	PH6125	PH6920	PH0910	IC	Insert thickness	Insert length	Radius/ Flat	Hole
		54	68	78	86	66	68	78	86	67	54	68	C0	78	68	10	d	s	l	r	d1
		Grade Code																			
111-1313-	LNXT 150608 PNER-MP	54	68	78		66	68	78			54	68		78	68		.433	.250	.591	.031	.179
111-1524-	LNXT 150608 PNER-W										54						.433	.250	.598	.031	.179

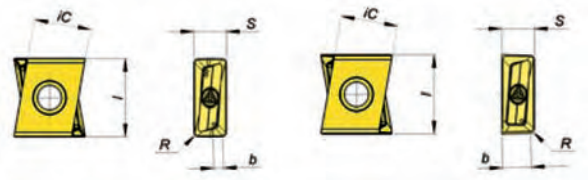
To complete the item number please use the geometry code plus the grade code

Spare Parts

Order Code	Description	Item
290-0475-00	Insert screw	1
290-0124-00	Key (torx T-15) Flag	2

Chip Breaker

Chip Breaker	Features
MP Geometry General machining	Reinforced cutting edge for general application on various materials
W Geometry Wiper	Wiper geometry for excellent finish results



MP ***Wiper***

Recommended Cutting Conditions

ISO	Grades	SFM (ft/min)	fz (in/t)
P	PH6920	450-700	.004-.012
	PH6930	450-600	.004-.012
	PH6125	400-600	.004-.012
M	PH6920	300-600	.004-.014
	PH6930	300-550	.004-.014
K	PH6910	300-800	.004-.016
	PH6920	250-1000	.004-.016
	PH6930	200-750	.004-.016

Carbide Grades

Grades	Information
PH6910	PVD coated Carbide with micro-grain substrate for light milling of Steels or hardened Steels. Excellent for Cast Iron and high temperature Alloys
PH6920	Coated Carbide grade for high cutting speed applications, excellent solution for massive production with stable conditions
PH6930	Micro-grain Carbide grade, suitable for applications with unstable 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 Excellents grade for milling mold Steels for high productivity

SPK – High Feed roughing cutters

Cutters

- Five times more efficient in most roughing operations
- Reduced vibration and maximum reliability
- High metal removal rates up to .118" feed per tooth
- Satin Nickel plating for longevity

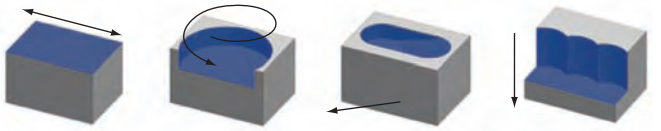
Inserts

- Rigid geometry:
  - Four cutting edges with superior chip evacuation
  - Cutting forces are directed in the axial direction
  - Two different geometries
    - SPKT-General Purpose
    - SPKW-Rigid setups

Specifications

- Geometry-High Feed Cutting
- Cutter Diameters Weldon shank .750"-1.50"
  - Arbor mount 2.00"-3.00"

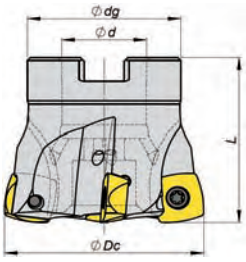
Applications



Facing *Helical Interpolation* *Ramping* *Side Plunging*

Order Code	Designation	Number of Inserts	Dimensions					ap max	α°
			ØDc	Ød	L	L1	Rp		
181-0549-00	SP90 D.750-W.750/5.00-02-08	2	.750	.750	5.000	2.756	.071	.047	3°
181-0550-00	SP90 D.750-W.750/8.00-02-08	2	.750	.750	8.000	4.331			3°
181-0551-00	SP90 D1.00-W1.00/5.00-03-08	3	1.000	1.000	5.000	2.835			2°
181-0552-00	SP90 D1.00-W1.00/8.00-03-08	3	1.000	1.000	8.000	4.843			2°
181-0553-00	SP90 D1.25-W1.25/6.00-04-08	4	1.250	1.250	6.000	3.543			1.5°
181-0554-00	SP90 D1.25-W1.25/8.00-04-08	4	1.250	1.250	8.000	4.843			1.5°
181-0555-00	SP90 D1.50-W1.25/6.00-05-08	5	1.500	1.250	6.000	3.543			1°
181-0556-00	SP90 D1.50-W1.25/8.00-05-08	5	1.500	1.250	8.000	3.543			1°

Order Code	Designation	Number of Inserts	Dimensions					ap max	α°
			ØDc	Ød	Ødg	L	Rp		
181-0495-00	SP90 D2.00-A.750/1.75-04-13	4	2.000	.750	1.772	1.750	.098	.079	1.5°
181-0382-00	SP90 D2.50-A1.00/2.00-05-13	5	2.500	1.000	2.205	2.000			1.0°
181-0381-00	SP90 D3.00-A1.00/2.00-06-13	6	3.000	1.000	2.205	2.000			0.5°



SPKT/SPKW High Feed Inserts

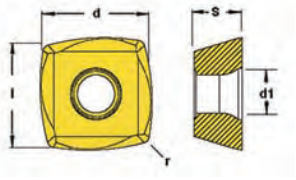
Geometry Code	Description	PH6910	PH6920	PH6125	PH6135	PH6920	PH6125	PH6135	PH6315	PH6910	PH6920	PHC315	PH6125	PH6920	PH0910	IC	Insert thickness	Insert length	Radius/ Flat	Hole
		54	68	78	86	68	78	86	67	54	68	C0	78	68	10	d	s	l	r	d1
		Grade Code																		
111-1314-	SPKT 08T308-E	54	68	78	86	68	78	86								.335	.156	.335	.071	.134
111-1364-	SPKW 08T308-E	54	68	78		68	78			54	68		78	68		.335	.156	.335	.071	.134
112-1227-	SPKW 08T308-S	54	68	78	86	68	78	86		54	68		78	68		.335	.156	.335	.071	.134
111-1195-	SPKT 130510-E	54	68	78	86	68	78	86		54	68		78	68		.512	.219	.512	.094	.171
111-1355-	SPKW 130510-E		68			68				54	68		78	68		.512	.219	.512	.094	.171
111-0888-	SPKW 130510-S	54	68	78	86	68	78	86			68			68		.512	.219	.512	.094	.171

To complete the item number please use the geometry code plus the grade code

S = T-Land – First choice for unstable conditions
E = Hone only – First choice for stable conditions

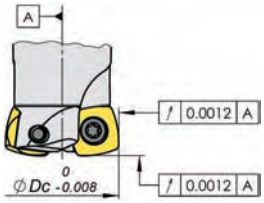
Spare Parts

Order Code	Description	Item
290-0091-00	Insert screw	1
290-0257-00	Key (torx T-9) Flag	2

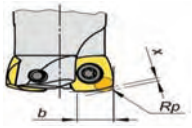


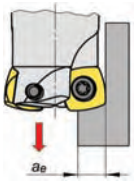
Technical Data

Dimensions



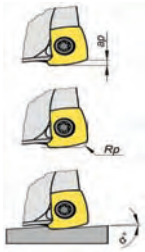
Tolerance when setting with master insert





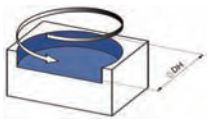
CNC Programming – Corner Radius Definition

Insert	Rp	x	b
SP… 08T308	.071	.028	.256
SP… 130510	.098	.046	.416

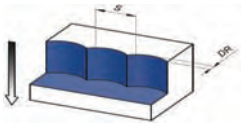


ae = .216 (maximum depth of cut in radial direction for plunging for SPKT 08)
ae = .350 (maximum depth of cut in radial direction for plunging for SPKT 13)
α° = max ramp angle utilizing full contact + internal corner radius

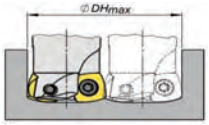
Helical Interpolation



Side Plunging



ØDc	α°	ØDHmin = 2Dc - 2b	ØDHmax = 2Dc - .079
.750	3°	.988	1.421
1.000	2°	1.488	1.921
1.250	1.5°	1.988	2.421
1.500	1°	2.488	2.921



Recommended Cutting Conditions

ISO	Grades	SFM (ft/min)	fz (in/t)
P	PH6910	500-750	.012-.118
	PH6920	450-700	.012-.118
	PH6125	400-600	.012-.118
	PH6135	400-600	.012-.118
M	PH6920	300-600	.012-.079
	PH6125	300-600	.012-.079
	PH6135	300-600	.012-.079
K	PH6910	300-1000	.012-.118
	PH6920	250-1000	.012-.118
S	PH6125	50-230	.012-.059
	PH6920	50-250	.012-.059

Carbide Grades

Grades	Information
PH6910	PVD coated Carbide with micro-grain substrate for light milling Steel or hardened Steels. Excellent for Cast Iron and high temperature Alloys
PH6920	Coated Carbide grade for high cutting speed applications, excellent solution for massive production with stable conditions
PH6930	Micro-grain Carbide grade, suitable for applications with unstable 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 temperatures. Excellent grade for milling mold Steel for higher productivity
PH6135	PVD coated Carbide for tough demanding milling operations Excellent solution for unstable applications can be applied wet or dry

XDK – High performance square shoulder milling

Cutters

- Cutters are designed to generate an accurate 90º square shoulder, minimizing secondary operations
- Large chip gullets ensures sufficient chip evacuation
- Internal coolant up to 3.00" diameter
- Satin Nickel plating for longevity

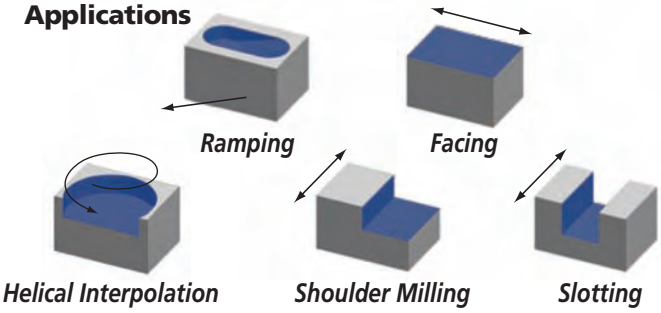
Inserts

- Positive chip former creates lower cutting forces while maintaining high feed rates
- Unique insert geometry enables high ramping capabilities

Specifications

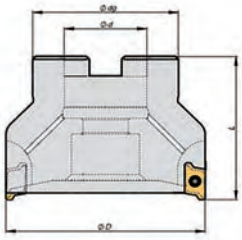
- Geometry: square shoulder milling
- Cutter Diameters: – Weldon shank .625-1.50"
  – Arbor type up to 3.00" diameter
- Workpiece Materials: Steel, Stainless Steel, Cast Iron, high-temp Alloys, Aluminum, and non-Ferrous materials

Applications



Order Code	Designation	Number of Inserts	Dimensions					ap max
			ØDc	Ød	L	L1	α°	
181-0572-00	XD90 D.625-W.625/3.94-02-10	2	.625	.625	3.937	1.181	11.7	.350
181-0573-00	XD90 D.625-W.625/5.91-02-10	2	.625	.652	5.906	1.181	11.7	
181-0574-00	XD90 D.750-W.750/3.94-03-10	3	.750	.750	3.937	1.181	8.7	
181-0575-00	XD90 D.750-W.750/5.91-03-10	3	.750	.750	5.906	1.181	8.7	
181-0576-00	XD90 D1.00-W1.00/3.94-04-10	4	1.000	1.000	3.937	1.575	5.8	
181-0577-00	XD90 D1.00-W1.00/5.91-04-10	4	1.000	1.000	5.906	1.575	5.8	
181-0578-00	XD90 D1.25-W1.25/5.91-05-10	5	1.250	1.250	5.906	1.968	4.2	
181-0579-00	XD90 D1.50-W1.50/5.91-06-10	6	1.500	1.500	5.906	1.968	3.5	

Order Code	Designation	Number of Inserts	Dimensions					ap max
			ØDc	Ød	Ødg	L	α°	
181-0580-00	XD90 D2.00-A.750/1.75-05-10	5	2.000	.750	1.772	1.750	2.5	.350
181-0581-00	XD90 D2.50-A1.00/1.75-06-10	6	2.500	1.000	2.205	1.750	2.0	
181-0582-00	XD90 D3.00-A1.00/2.00-07-10	7	3.000	1.000	2.205	2.000	1.6	



XDK Inserts

Geometry Code	Description	PH6910	PH6920	PH6125	PH6135	PH6920	PH6125	PH6135	PH6315	PH6910	PH6920	PHC315	PH6125	PH6920	PH0910	IC	Insert thickness	Insert length	Radius/ Flat	Hole
		54	68	78	86	68	78	86	67	54	68	C0	78	68	10	d	s	l	r	d1
		Grade Code																		
111-1224-	XDKT 100308 PDSR	54	68	78	86	68	78	86		54	68		78	68		.394	.143	.394	.031	.110

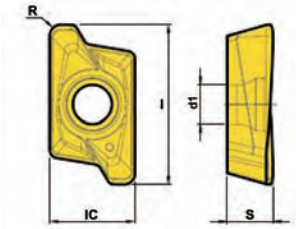
To complete the item number please use the geometry code plus the grade code

Spare Parts

Order Code	Description	Item
290-0489-00	Insert screw	1
290-0117-00	Key (torx T-8) Flag	2

Chip Breaker

Chip Breaker	Features
PDSR Geometry General machining applications	Unique chip former with reinforced cutting edges for use on various applications



Recommended Cutting Conditions

ISO	Grades	SFM (ft/min)	fz (in/t)
P	PH6910	500-700	.004-.012
	PH6920	450-650	.004-.012
	PH6125	400-600	.004-.012
	PH6135	400-600	.004-.012
M	PH6920	300-600	.004-.012
	PH6125	300-600	.004-.012
	PH6135	300-600	.004-.012
K	PH6910	300-800	.004-.012
	PH6920	250-800	.004-.012
S	PH6910	50-250	.004-.012
	PH6125	50-200	.004-.012
	PH6920	50-250	.004-.012

Carbide Grades

Grades	Information
PH6910	PVD coated Carbide with micro-grain substrate for light milling of Steels or hardened Steels. Excellent for Cast Iron and high temperature Alloys
PH6920	Coated Carbide grade for high cutting speed applications, excellent solution for massive production with stable conditions
PH6125	PVD coated Carbide grade for light to heavy milling (wet and dry) for Steel at elevated temperatures Excellents grade for milling mold Steels for higher productivity
PH6135	PVD coated Carbide for toughness demanding milling operations. Excellent solution for unstable applications and can be applied wet or dry

ANH – 90° High performance square shoulder milling

Cutters

- Strong pocket design
- Wide chip gullets
- Double-sided technology
- Satin Nickel finish
- Coolant through

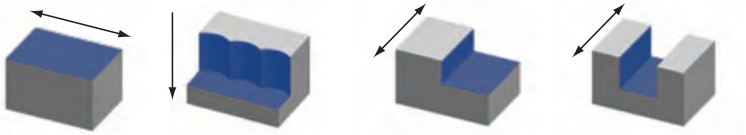
Specifications

- 90° milling operations
- Weldon Shank 1.25"-2.00"
- Arbor Mount 2.0"-6.0"
- Slight ramping capabilities for cutters up to 2.0"

Inserts

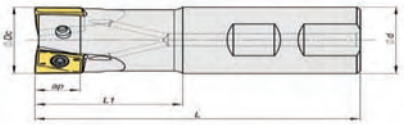
- Ridgid geometry
- Double-sided helical cutting
- Unique clamping
- Four cutting edges

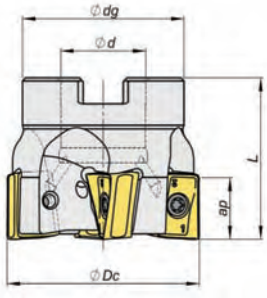
Applications



Facing *Side Plunging* *Shoulder Milling* *Slotting*

Order Code	Designation	Number of Inserts	Dimensions				ap max
			ØDc	Ød	L	L1	
181-0601-00	AN90D1.25-W1.25/4.92-02-16	2	1.250	1.250	4.921	1.575	.591
181-0602-00	AN90D1.50-W1.25/5.12-03-16	3	1.500	1.250	5.118	1.654	
181-0603-00	AN90D2.00-W1.25/5.32-04-16	4	2.000	1.250	5.315	1.772	
181-0589-00	AN90D2.00-A.750/1.75-03-16	3	2.000	.750	1.772	1.750	.591
181-0590-00	AN90D2.00-A.750/1.75-04-16	4	2.000	.750	1.772	1.750	
181-0591-00	AN90D2.50-A1.00/1.75-04-16	4	2.500	1.000	2.205	1.750	
181-0592-00	AN90D2.50-A1.00/1.75-06-16	6	2.500	1.000	2.205	1.750	
181-0593-00	AN90D3.00-A1.00/2.00-05-16	5	3.000	1.000	2.205	2.000	
181-0594-00	AN90D3.00-A1.00/2.00-06-16	6	3.000	1.000	2.205	2.000	
181-0595-00	AN90D4.00-A1.25/2.00-05-16	5	4.000	1.250	2.874	2.000	
181-0596-00	AN90D4.00-A1.25/2.00-08-16	8	4.000	1.250	2.874	2.000	
181-0597-00	AN90D5.00-A1.50/2.50-07-16	7	5.000	1.500	3.386	2.500	
181-0598-00	AN90D5.00-A1.50/2.50-10-16	10	5.000	1.500	3.386	2.500	
181-0599-00	AN90D6.00-A2.00/2.50U-08-16	8	6.000	2.000	4.882	2.500	
181-0600-00	AN90D6.00-A2.00/2.50U-11-16	11	6.000	2.000	4.882	2.500	





ANH Inserts

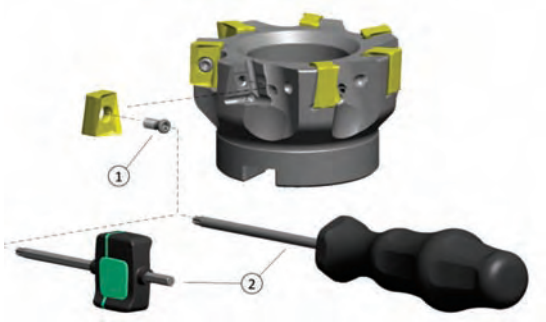
Geometry Code	Description	PH6910	PH6920	PH6125	PH6930	PH6920	PH6125	PH6135	PH6930	PH6910	PH6920	PH6705	PH6125	PH6920	PH0910	IC	Insert thickness	Insert length	Radius/ Flat	Wiper
		54	68	78	66	68	78	86	66	54	68	D2	78	68	10	d	s	l	r	a
		Grade Code																		
111-1519-	ANHX 160708 PDER-LP	54	68		66	68			66	54	68	D2		68		.441	.425	.634	.031	.057
111-1596-	ANHX 160712 PDER-LP	54	68		66	68			66	54	68	D2		68					.047	
111-1595-	ANHX 160708 PDER-MP	54	68		66	68			66	54	68	D2		68					.031	
111-1597-	ANHX 160712 PDER-LN														10				.047	

To complete the item number please use the geometry code plus the grade code

Spare Parts

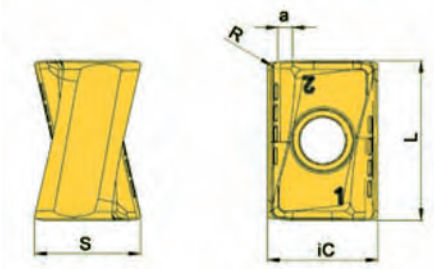
Order Code	Description	Item
290-0475-00	Insert screw	1
290-0124-00	Key (torx T-15) Flag	2
290-0148-00	Key (torx T-15) Handle	2*

* This type is standard for ØDc > 3"



Chip Breaker

Chip Breaker	Features
LP Geometry Light machining of Steels	Positive top rake angle promotes excellent chip flow and reduces cutting forces on low Alloy Steels
MP Geometry General machining of Steels	Chip breaker with a reinforced chamfer for general applications in Steels and various other materials
LN Geometry Aluminum Alloys and non-Ferrous materials	High Positive chip breaker polished and ground for Aluminum and other non-Ferrous materials



Recommended Cutting Conditions

ISO	Grades	SFM (ft/min)	fz (in/t)
P	PH6910	500-1150	.004-.010
	PH6920	500-800	.004-.010
	PH6930	350-800	.004-.010
M	PH6920	400-750	.004-.008
	PH6930	350-650	.004-.008
K	PH6705	350-1000	.004-.010
	PH6910	300-1000	.004-.010
	PH6920	250-1000	.004-.010
	PH6930	250-800	.004-.010
N	PH0910	300-1000	.004-.010
S	PH6910	150-300	.004-.006
	PH6920	100-250	.004-.006

Carbide Grades

Grades	Information
PH6910	PVD coated Carbide with a micrograin substrate for light milling of low Carbon to hardened Steels. Excellent for Cast Iron and high temperature Alloys
PH6920	Coated Carbide grade for high cutting speed applications in stable conditions
PH6930	Micrograin Carbide grade suitable for application with unstable conditions at medium cutting speeds
PH6705	PVD coated fine and hard grade and an excellent solution for Cast Iron
PH0910	Uncoated Carbide grade suitable for milling of Aluminum Alloys combined with a high positive geometry

PNH – 60° High efficient face milling

Cutters

- High depth of cuts are achieved while maintaining cutter stability
- Low power requirements and smooth cutting
- New generation chip breaker
- Satin Nickel plating for longevity

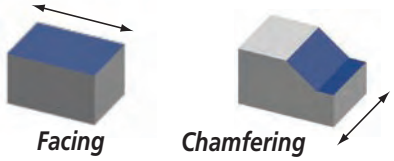
Inserts

- Ten unique cutting edges improving cost per edge
- Excellent surface finishes are achieved due to the pressed in wiper edge
- Strong design with optimal distribution of cutting forces

Specifications

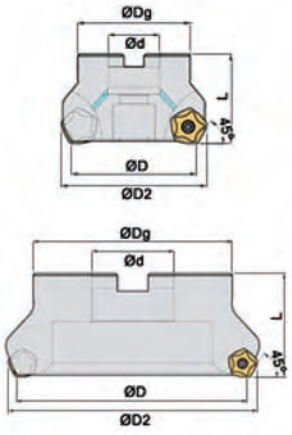
- Geometry: 60° face milling
- Cutter Diameters:
  – 2.00"-10.00" in both coarse and fine pitch cutters
- Workpiece Materials: Cast Iron and Steel

Applications



Facing *Chamfering*

Order Code	Designation	Number of Inserts	Dimensions					ap max
			ØDc	ØDc2	Ød	Ødg	L	
181-0557-00	PN60 D2.00-A.750/1.75-05-11	5	2.000	2.356	.750	1.772	1.750	.197
181-0638-00	PN60 D2.50-A1.00/1.75-05-11	5	2.500	2.856	1.000	2.205	1.750	
181-0558-00	PN60 D2.50-A1.00/1.75-06-11	6	2.500	2.856	1.000	2.205	1.750	
181-0639-00	PN60 D3.00-A1.00/2.00-06-11	6	3.000	3.356	1.000	2.205	2.000	
181-0559-00	PN60 D3.00-A1.00/2.00-08-11	8	3.000	3.356	1.000	2.205	2.000	
181-0640-00	PN60 D4.00-A1.25/2.00-07-11	7	4.000	4.356	1.250	2.874	2.000	
181-0560-00	PN60 D4.00-A1.25/2.00-10-11	10	4.000	4.356	1.250	2.874	2.000	
181-0641-00	PN60 D5.00-A1.50/2.50-08-11	8	5.000	5.356	1.500	3.386	2.500	
181-0561-00	PN60 D5.00-A1.50/2.50-12-11	12	5.000	5.356	1.500	3.386	2.500	.197
181-0642-00	PN60 D6.00-A2.00/2.50U-10-11	10	6.000	6.356	2.000	4.882	2.500	
181-0562-00	PN60 D6.00-A2.00/2.50U-14-11	14	6.000	6.356	2.000	4.882	2.500	
181-0563-00	PN60 D8.00-A2.50/2.50U-16-11	16	8.000	8.356	2.500	5.512	2.500	
181-0564-00	PN60 D10.0-A2.50/2.50U-18-11	18	10.000	10.356	2.500	7.087	2.500	



PNH Inserts

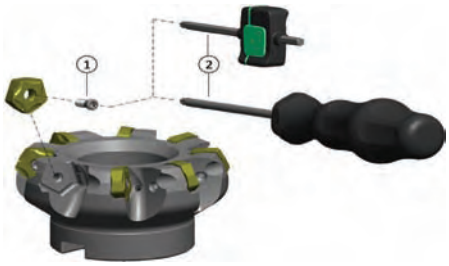
Geometry Code	Description	PH6910	PH6920	PH6125	PH6135	PH6920	PH6125	PH6135	PH6705	PH6910	PH6920	PHC315	PH6125	PH6920	PH0910	IC	Insert thickness	Insert length	Radius/ Flat	Hole
		54	68	78	86	68	78	86	D2	54	68	C0	78	68	10	d	s	l	r	d1
		Grade Code																		
111-1374-	PNHX 1105 ZNER	54	68	78	86	68	78	86	D2	54	68		78	68		.650	.217	–	–	.181

To complete the item number please use the geometry code plus the grade code

Spare Parts

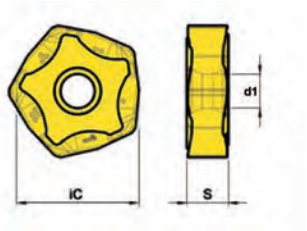
Order Code	Description	Item
290-0475-00	Insert screw	1
290-0124-00	Key (torx T-15) Flag	2
290-0148-00	Key (torx T-15) Handle	2*

* This type is standard for ØDc > 3"



Chip Breaker

Chip Breaker	Features
ZNEmetry General Machining of Cast Iron	Angles optimized for greater stability and durability of the edge in the machining of Cast Iron



Recommended Cutting Conditions

ISO	Grades	SFM (ft/min)	fz (in/t)
P	PH6910	300-1000	.0059-.0110
	PH6920	250-800	.0059-.0110
	PH6125	300-650	.0059-.0110
	PH6135	250-500	.0059-.0110
K	PH6705	300-1000	.0047-.0138
	PH6910	300-850	.0047-.0138
	PH6920	250-1000	.0047-.0138

Carbide Grades

Grades	Information
PH6910	PVD coated Carbide with micro-grain substrate for light milling of Steels or hardened Steels. Excellent for Cast Iron and high temperature Alloys
PH6920	Coated Carbide grade for high cutting speed applications, excellent solution for massive production with stable conditions
PH6930	Micro-grain Carbide grade, suitable for applications with unstable conditions. Excellent solution for medium cutting speed applications
PH6125	PVD coated Carbide grade for light to heavy milling (wet and dry) for Steel at elevated temperatures Excellents grade for milling mold Steels for higher productivity
PH6135	PVD coated Carbide for toughness demanding milling operations. Excellent solution for unstable applications and can be applied in wet or dry
PH6705	PVD coated Carbide fine grade and very hard. Excellent solution for Cast Iron

SNH – High performance face milling

Cutters

- 45° face milling cutter with excellent surface finish
- High feed rates and cost-efficient
- Large chip gullets ensures sufficient chip evacuation
- Internal coolant supply up to five inch diameter
- Satin Nickel plating for longevity

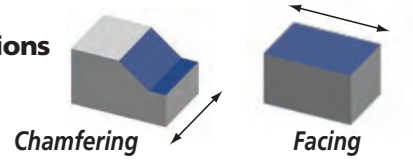
Inserts

- High rake angle inserts allow a positive cutting action on the tool for lower cutting forces
- Innovative chip breaker design for improved tool life and better chip evacuation

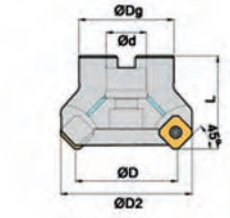
Specifications

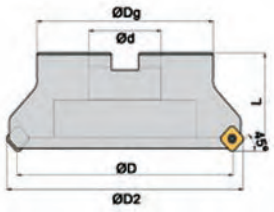
- Geometry: 45° face milling
- Cutter Diameters:
  – Arbor Type 2.00"-10.00" in coarse and fine pitch
- Workpiece Materials: Steel, Stainless Steel, Cast Iron, high temp Alloys, Aluminum, non-Ferrous and extra hard Steel

Applications



Order Code	Designation	Number of Inserts	Dimensions					ap max
			ØDc	ØDc2	Ød	Ødg	L	
181-0488-00	SN45 D2.00-A.750/1.75-04-12	4	2.000	2.513	.750	1.772	1.750	.236
181-0627-00	SN45 D2.00-A.750/1.75-06-12	6	2.000	2.513	.750	1.772	1.750	
181-0489-00	SN45 D2.50-A1.00/1.75-06-12	6	2.500	3.013	1.000	2.205	1.750	
181-0628-00	SN45 D2.50-A1.00/1.75-08-12	8	2.500	3.013	1.000	2.205	1.750	
181-0490-00	SN45 D3.00-A1.00/2.00-07-12	7	3.000	3.513	1.000	2.205	2.000	
181-0629-00	SN45 D3.00-A1.00/2.00-10-12	10	3.000	3.513	1.000	2.205	2.000	
181-0491-00	SN45 D4.00-A1.25/2.00-08-12	8	4.000	4.513	1.250	2.874	2.000	
181-0630-00	SN45 D4.00-A1.25/2.00-12-12	12	4.000	4.513	1.250	2.874	2.000	
181-0492-00	SN45 D5.00-A1.50/2.50-10-12	10	5.000	5.513	1.500	3.386	2.500	
181-0493-00	SN45 D6.00-A2.00/2.50U-12-12	12	6.000	6.513	2.000	4.882	2.500	
181-0544-00	SN45 D8.00-A2.50/2.50U-14-12	14	8.000	8.513	2.500	5.512	2.500	
181-0545-00	SN45 D10.0-A2.50/2.50U-16-12	16	10.000	10.513	2.500	7.087	2.500	





SNH Inserts

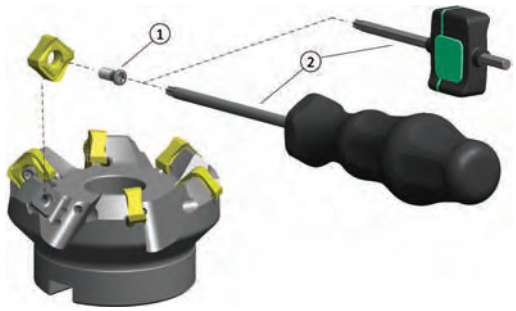
Geometry Code	Description	PH6910	PH6920	PH6125	PH6135	PH6920	PH6125	PH6135	PH6315	PH6910	PH6920	PHC315	PH6125	PH6920	PH0910	IC	Insert thickness	Insert length	Flat	Hole
		54	68	78	86	68	78	86	67	54	68	C0	78	68	10	d	s	l	b	d1
		Grade Code																		
111-1452-	SNHX 1206 ANEN-LP	54	68	78	86	68	78	86		54	68		78	68		.500	.226	.500	.080	.179
111-1503-	SNHX 1206 ANEN-MK	54	68			68				54	68			68						
111-1504-	SNHX 1206 ANFN-LN														10					
111-1502-	SNHX 1206 ANSN-MP	54	68	78	86	68	78	86		54	68		78	68						

To complete the item number please use the geometry code plus the grade code

Spare Parts

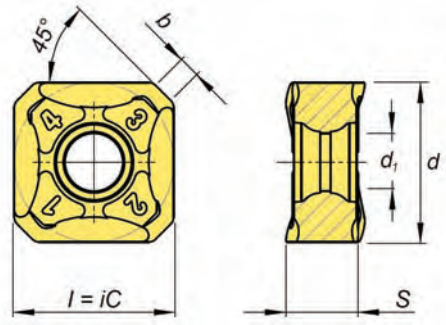
Order Code	Description	Item
290-0475-00	Insert screw	1
290-0124-00	Key (torx T-15) Flag	2
290-0148-00	Key (torx T-15) Handle	2*

* This type is standard for ØDc > 3"



Chip Breaker

Chip Breaker	Features
LP Geometry Light machining of Steels	Positive top rake angle promotes excellent chip flow and reduces cutting forces on low Alloy Steels
MP Geometry General machining of Steels	Reinforced cutting edge for general applications on Steels
MK Geometry General machining of Cast Iron	Optimized cutting edge for greater stability and durability when machining Cast Iron
LN Geometry Aluminum Alloys and non-Ferrous materials	High positive chip breaker. up-sharp and polished for non-Ferrous materials (Aluminum, Copper and Copper Alloys)



Recommended Cutting Conditions

ISO	Grades	SFM (ft/min)	fz (in/t)
P	PH6920	500-800	.004-.014
	PH6930	400-700	.004-.014
	PH6125	450-750	.004-.014
	PH6135	450-600	.004-.014
M	PH6920	450-750	.004-.014
	PH6930	350-650	.004-.014
K	PH6910	300-1000	.004-.016
	PH6920	250-1000	.004-.016
	PH6930	250-800	.004-.016
N	PH0910	300-1000	.004-.016
S	PH6920	100-250	.004-.016
H	PH6910	50-250	.003-.008

Carbide Grades

Grades	Information
PH6910	PVD coated Carbide with micro-grain substrate for light milling for Steel or hardened Steels. Excellent for Cast Iron and high temperature Alloys
PH6920	Coated Carbide grade for high cutting speed applications, excellent solution for massive production with stable conditions
PH6930	Micro-grain Carbide grade, suitable for applications with unstable 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 temperatures. Excellent grade for milling mold Steel for higher productivity
PH6135	PVD coated Carbide for toughness demanding milling operations. Excellent solution for unstable applications and can be applied in wet or dry
PH0910	Uncoated Carbide grade suitable for milling of Aluminum Alloys combined with high positive geometries

Milling Grades Quick Reference

Applications	P	M	K	N	S
Finishing	PH6910	PH6920	PH6705	PH0910	PH6920
	PH6920		PH6910		
Roughing	PH6920	PH6920	PH6705	PH0910	PH6920
	PH6125	PH6930	PH6910		
	PH6135				

Milling Grade Cross Reference

ISO	Competitors Carbide Millinig Grade Cross Reference											
	Palbit	Korloy	Sumitomo	Iscar	Sandvik	Seco Carboloy	Kennametal	Toshiba	Mitsubishi	Hitachi	Walter	Taegutec
P	PH6910				GC1010				AP20M	JX1005		
									GP20M	TB6005		
	PH6125	PC3500	ACZ310	IC903		MP3000						
	PH6125	PC3525		IC908			KC522M	GH330				
	PH6135	PC3535	ACP200	IC950		F25M	KUC20M					TT7070
	PH6920				GC1025	F30M			VP15TF			TT7080
			ACZ330	IC1008	GC1030		KC525M	AH120		TB6045		TT7030
	PH6930						KUC30M		UP20M	CY250		
										PTH30E		
		PC5300										
			ACP300									
			ACZ350	IC308			KC935M					TT8020
	PH6135	PC3545		IC928	GC1030	F40M	KC7140		VP30RT			
				IC903			KC5510			JX1020		
M	PH6920						KC7020			CY9020		
	PH6125	PC5300	ACP200		GC1125		KC522M					TT9030
				IC900	GC1025	F25M	KC725M	AH120				
				IC250	GC2030		KC735M			JX1045		
	PH6135	PC9530	ACP300	IC928	GC1030	F30M	KC7030	AH140		TB6045	WQM35	TT9080
			ACZ350									
	PH6930	PC3545		IC328		F40M	KC722			JX1060	WSP45	TT8020
				IC308						TB6060		
K	PH6705			IC4100								
	PH6910	PC8110		DT7150			KC510M		VP10MF			
		PC6510		IC900			KC915M		VP15TF			TT6290
	PH6315			IC910								
	PH6920			IC950			KC520M	AH120	VP20RT			TT6030
		PC5300		IC350								TT6060
N	PH0910	H01	H1	IC28	S30T	HX	K68	TH03	HTi10	WH05		K10
S	PH6920	PC5300	AC520U	IC328	GC1025	TS2500	KC510M		VP15TF	ACS05E		TT9030

Key

P = Steel | M = Stainless Steel | K = Cast Iron | N = Aluminum | S = High-Temp Alloy

Companion products offered by Toolmex

TMX Vises Ultra Precision Power Clamping

Features

- 10 Year Warranty
- Body made from high quality ductile Iron hardened to 45RC
- Sealed bearing system increases the life of the vise
- Close tolerance bed heights for excellent accuracy
- Anti-lift mechanism keeps the work piece from lifting
- Chip cover for lead screw protection

Part Numbers

3-220-006	7.5" Jaw Opening
3-220-0068	8.9" Jaw Opening
3-220-0081	10" Jaw Opening

TMX V-Flange Balanced Precision

Features

- Premium Nickel Plating
- New square bottom packaging for ease of stacking
- Better run-out assures better tool life and even tool wear
- High Balance
- Extended Length Tools
- Wide Variety
- Coolant Through Shell Mill Holders
- Extended Selection of Retention Knobs
- Even clamping force
- Short collet chucks for zero chatter

15K-G2.5
All CAT-BT-HSK
End Mill Holders
Shell Mill Holders
Milling Chucks

25K-G2.5
All CAT-BT-HSK
Collet Chucks

Companion products offered by Toolmex

TMX Solid Carbide

Die Mold

Toolmex has the tools you need for machining hardened mold and die products. Mold and die machining requires tools that can handle extreme materials. TMX products offer you a variety of shapes and sizes along with the precision required for tight tolerance applications and excellent finishes.

Medical

Orthopedic parts and medical devices used in the medical industry are increasing in demand and complexity. Toolmex delivers medical machining solutions with our sub-micro grain end mills designed for tough materials whether you are machining Titanium Alloys, Cobalt Chrome, or Stainless Steel implants.

Aerospace

Machining aerospace parts means that you need high quality sub-micro grain end mills with extended tool life that can be utilized at elevated speeds. You also need a tool that reduces self induced chatter for improved surface finishes. Toolmex has the tools you need to do all this by saving time and expense...and much more.

Power Generation

Toolmex understands what it takes to machine super Alloys used in turbines for the gas, wind, steam, and oil power industries. To ensure precise, economical machining with these often difficult-to-cut materials, Toolmex offers specific tools to accommodate your various needs, call us and talk with a Product Manager about your business needs.

TOOLMEX® CORPORATION

1075 Worcester Street, Natick, MA 01760-1589

+1-508-653-8897 • 800-992-4766 • Fax +1-508-653-5110

www.toolmex.com

Scan and Explore

4-999-966 0611 5.0