

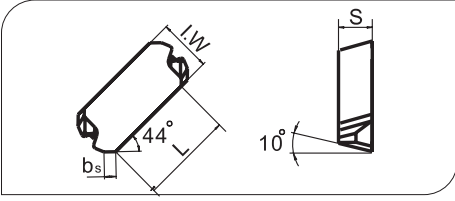
# Milling · Fräsen

## Indexable Milling Tools · Wendeplattenfräser

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Milling Tools · Fräser

### LNCX

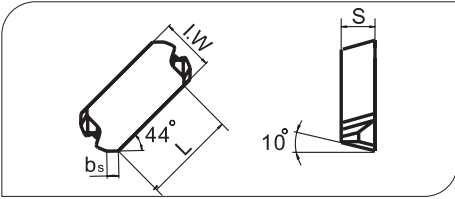


- Ideal Machining Condition / Gute Bearbeitungsbedingungen
- Normal Machining Condition / Normale Bearbeitungsbedingungen
- Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen

Workpiece Material / Werkstoffe	P Steel / Stahl	M Stainless Steel / Rostfreier Stahl	K Cast iron / Gusseisen	N Non-ferrite material / Ne Metalle	S Heat-resistant steel / Warmfester Stahl
YBC301	●	●	●	●	●
YBC401	●	●	●	●	●
YBM251	●	●	●	●	●
YBM351	●	●	●	●	●
YBD152	●	●	●	●	●
YBD252	●	●	●	●	●
YBG102	●	●	●	●	●
YBG202	●	●	●	●	●
YBG205	●	●	●	●	●
YBG302	●	●	●	●	●
YBG152	●	●	●	●	●
YBG252	●	●	●	●	●
YNG151	●	●	●	●	●
YNG151C	●	●	●	●	●
YC30S	●	●	●	●	●
YD051	●	●	●	●	●
YD101	●	●	●	●	●
YD201	●	●	●	●	●

Insert WSP	Type · Typ	Dimensions (mm) · Abmessungen					CVD Coating CVD Beschicht.					PVD Coating PVD Beschicht.					Cermet		Carbide uncoat. unbe. Hartmetall							
		L	I.W	S	bs		YBC301	YBC401	YBM251	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD051	YD101	YD201		
	LNCX1806AZR	18.77	10.0	6.4	2.0		○																			○
	LNCX1806AZL	18.77	10.0	6.4	2.0																					

### LNCX

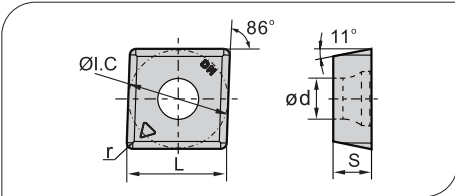


- Ideal Machining Condition / Gute Bearbeitungsbedingungen
- Normal Machining Condition / Normale Bearbeitungsbedingungen
- Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen

Workpiece Material / Werkstoffe	P Steel / Stahl	M Stainless Steel / Rostfreier Stahl	K Cast iron / Gusseisen	N Non-ferrite material / Ne Metalle	S Heat-resistant steel / Warmfester Stahl
YBC301	●	●	●	●	●
YBC401	●	●	●	●	●
YBM251	●	●	●	●	●
YBM351	●	●	●	●	●
YBD152	●	●	●	●	●
YBD252	●	●	●	●	●
YBG102	●	●	●	●	●
YBG202	●	●	●	●	●
YBG205	●	●	●	●	●
YBG302	●	●	●	●	●
YBG152	●	●	●	●	●
YBG252	●	●	●	●	●
YNG151	●	●	●	●	●
YNG151C	●	●	●	●	●
YC30S	●	●	●	●	●
YD051	●	●	●	●	●
YD101	●	●	●	●	●
YD201	●	●	●	●	●

Insert WSP	Type · Typ	Dimensions (mm) · Abmessungen					CVD Coating CVD Beschicht.					PVD Coating PVD Beschicht.					Cermet		Carbide uncoat. unbe. Hartmetall							
		L	I.W	S	bs	T-land	YBC301	YBC401	YBM251	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD051	YD101	YD201		
	LNCX1806AZT11R	18.77	10.0	6.4	2.0	0.1					○															
	LNCX1806AZT11L	18.77	10.0	6.4	2.0	0.1					○															

### MP\*\*



- Ideal Machining Condition / Gute Bearbeitungsbedingungen
- Normal Machining Condition / Normale Bearbeitungsbedingungen
- Unfavorable Machining Condition / Ungünstige Bearbeitungsbedingungen

Workpiece Material / Werkstoffe	P Steel / Stahl	M Stainless Steel / Rostfreier Stahl	K Cast iron / Gusseisen	N Non-ferrite material / Ne Metalle	S Heat-resistant steel / Warmfester Stahl
YBC301	●	●	●	●	●
YBC401	●	●	●	●	●
YBM251	●	●	●	●	●
YBM351	●	●	●	●	●
YBD152	●	●	●	●	●
YBD252	●	●	●	●	●
YBG102	●	●	●	●	●
YBG202	●	●	●	●	●
YBG205	●	●	●	●	●
YBG302	●	●	●	●	●
YBG152	●	●	●	●	●
YBG252	●	●	●	●	●
YNG151	●	●	●	●	●
YNG151C	●	●	●	●	●
YC30S	●	●	●	●	●
YD051	●	●	●	●	●
YD101	●	●	●	●	●
YD201	●	●	●	●	●

Insert WSP	Type · Typ	Dimensions (mm) · Abmessungen					CVD Coating CVD Beschicht.					PVD Coating PVD Beschicht.					Cermet		Carbide uncoat. unbe. Hartmetall						
		I.C	L	S	d	r	YBC301	YBC401	YBM251	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD051	YD101	YD201	
	MPHT060304-DM	6.35	6.35	3.18	2.8	0.4			●																
	MPHT080305-DM	8.3	8.3	3.18	3.4	0.5			●																
	MPHT120408-DM	12.7	12.7	4.76	5.56	0.8			●																

Applicable tool / Werkzeug **B9-B15**

Tools code key / WSP ISO **B152-B153**

Grade selection guide / Sortenauswahl **B16-B20**

Technical data / Technische Daten **B183-B188**

# Milling · Fräsen

General Technical Information · Allgemeine Technische Informationen

Comparison table for milling Insert - Grades  
Fräswendepplatten Übersichtstabelle - Sorten

Workpiece material	ISO	Coated carbide · Beschichtetes Hartmetal		Cermet	Uncoated carbide unbeschichtetes Hartmetal	PCBN & PCD PCBN & PKD
		CVD	PVD			
<b>P</b> Steel · Stahl	P01					
	P10		YBG202	YNG151 YNG151C		
	P20	YBC301 YBM251 YBM253	YBG252			
	P30	YBM351 YBC401			YC30S	
	P40			YBG302		
<b>M</b> Stainless Steel Rostfreier Stahl	M01					
	M10		YBG202 YBG205 YBG252	YNG151 YNG151C		
	M20	YBM251 YBM253				
	M30	YBM351			YC30S	
	M40			YBG302		
<b>K</b> Cast iron · Grauguss	K01					
	K10	YBD152	YBG102	YNG151 YNG151C		
	K20	YBD252				YD201
	K30		YBG152			
	K40			YBG252		
<b>N</b> Hardened material Gehärtete Werkstoffe	N01					
	N10				YD101	
	N20					YD201
	N30					
<b>S</b> Heat-resistant steel Wärmefester Stahl	S01					
	S10		YBG202			
	S20					
	S30					
<b>H</b> Non-ferrous materials Ne Metalle	H01					
	H10					
	H20					
	H30					

B

Milling Tools · Fräser

## Coated Cemented Carbide CVD Beschichtetes Hartmetall CVD

Grade · Sorte	Coating · Beschicht.	Micro-Structure	ISO	Application Anwendung
<b>YBC301</b>	Substrate with high strength, in combination with MT-Ti(CN), thin layer Al <sub>2</sub> O <sub>3</sub> and TiN Coating. Beschichtetes Hartmetall mit hoher Schneidkantensicherheit. In Kombination mit TiCN Al <sub>2</sub> O <sub>3</sub> , und TiN.		<b>P15~35</b>	Suitable for light and midium milling of low alloy steel and non alloy steel, even under unfavorable condition. Gut geeignet für leichte bis mittlere Fräsbearbeitung von niedriglegierten Stählen unter schwierigen Bedingungen.
<b>YBC401</b>	Substrate with excellent toughness, in combination with Ti(CN), thin layer Al <sub>2</sub> O <sub>3</sub> , TiN. CVD beschichtetes Hartmetall mit einer guter Wärmeleitfähigkeit.		<b>P25~50</b> <b>M20~40</b>	It is suitable for medium to heavy milling steels and stainless steel. Zum Fräsen von Stahl und rostfreiem Stahl
<b>YBM251</b>	Substrate with good toughness and strength, in combination with Ti(CN), thin layer Al <sub>2</sub> O <sub>3</sub> , TiN. Universal einsetzbare CVD-beschichtete Hartmetallsorte aus TiN +MT-TiCN + dünner Al <sub>2</sub> O <sub>3</sub> + TiN mit guter Zähigkeit und Verschleißfestigkeit.		<b>P15~40</b> <b>M10~30</b>	Good performance in milling of alloy steel and stainless steel. Gute Eigenschaft zum Fräsen von legiertem und rostfreiem Stahl.
<b>YBM351</b>	MT-TiCN+Al <sub>2</sub> O <sub>3</sub> coated carbide grade with very good strength and impact resistance. Beschichtete Hartmetallsorte MT-TiCN+Al <sub>2</sub> O <sub>3</sub> mit ausgezeichneter Widerstandsfähigkeit und Schneidkantensicherheit.		<b>P25~40</b> <b>M20~40</b>	It is for milling of steel, alloy steel and stainless steel. Zum Fräsen von Stahl, legiertem und rostfreiem Stahl
<b>YBD152</b>	Hard medium fine corn Substrate in combination with TiCN, thick Al <sub>2</sub> O <sub>3</sub> coating. Hartes mittel-feinkörniges Subtrat mit TiCN, dicker Al <sub>2</sub> O <sub>3</sub> Beschichtung.		<b>K05~25</b>	It is suitable for machining of gray cast iron and nodular cast iron under normal cutting conditions from low to moderate cutting speeds. Bearbeitung von Guss und Kugelgraphitguss mit niedrigen bis mittleren Schnittgeschwindigkeiten.
<b>YBD252</b>	Tough substrate in combination with TiN, TiCN, thick Al <sub>2</sub> O <sub>3</sub> coating. For milling of cast iron and alloy steel. Zähes Subtrat mit TiCN, dicke Al <sub>2</sub> O <sub>3</sub> Beschichtung.		<b>K15~35</b>	For milling of cast iron and alloy steel. Zum Fräsen von Grauguss und legiertem Stahl.

## Coated Cemented Carbide **PVD** Beschichtetes Hartmetall **PVD**

Grade · Sorte	Coating · Beschicht.	ISO	Application Anwendung
<b>YBG102</b>	PVD nano-TiAlN coated fine grain hard carbide grade.	<b>K05-K20</b>	For light milling of cast iron, hard steel.
	Nano-TiAlN PVD-beschichtete, feinkörnige Hartmetallsorte.		Zum Schlichtfräsen von Guss und gehärtetem Stahl.
<b>YBG202</b>	PVD nano-TiAlN coated fine grain hard carbide grade. Good performance in combination of toughness and wear resistance.	<b>P10~30</b>	Milling of steel, finishing and semi-finishing of stainless steel, and hightemperature alloys .  Zum Fräsen von Stahl, rostfreiem Stahl, und warmfesten Superlegierungen bei leichter und mittlerer Bearbeitung.
	Nano-TiAlN PVD-beschichtete, feinkörnige Hartmetallsorte. Hervorragende Kombination von Zähigkeit und Verschleißfestigkeit.	<b>M10~30</b>	
		<b>S05~20</b>	
<b>YBG205</b>	Special PVD nano-TiAlN coated fine grain hard carbide grade. Good performance in combination of toughness and wear resistance.	<b>M10~30</b>	Milling of steel, finishing and semi-finishing of stainless steel.
	Sonder Nano-TiAlN PVD-beschichtete, feinkörnige Hartmetallsorte. Hervorragende Kombination von Zähigkeit und Verschleißfestigkeit.		Zum Fräsen von rostfreiem Stahl bei leichter und mittlere Bearbeitung
<b>YBG302</b>	Substrate with reasonable hardness and strength + Nano-TiAlN PVD coating	<b>P25~P40</b>	For rough and semi-finish milling of steel and stainless steel.
	Substrate mit einer guten Härte und Festigkeit + Nano-TiAlN PVD Beschichtung.	<b>M25~40</b>	Anwendung für mittlere- und Schruppbearbeitung von Stahl, und rostfreiem Stahl .
<b>YBG152</b>	Substrate with medium hardness and strength + Nano-TiAlN PVD coating	<b>K 20~35</b>	Applicable for rough and semi-finish milling of cast iron.
	Substrate mit mittlerer Härte und Festigkeit + Nano-TiAlN PVD Beschichtung		Anwendung für Schrupp- und mittlerer Bearbeitung. von Guss.
<b>YBG252</b>	Ultra fine carbide substrate plus nano-TiAlN PVD coating with high strength, toughness and wear resistance.	<b>P05~20</b>	Special for finishing of alloy steel, stainless steel and cast iron.  Speziell zum schlichten von legiertem Stahl, rostfreiem Stahl und Guss.
	Ultra-feinkorn-Hartmetall plus Nano-TiAlN PVD-Beschichtung mit guter Zähigkeit und Verschleißfestigkeit, .	<b>M05~20</b>	
		<b>K05-K20</b>	