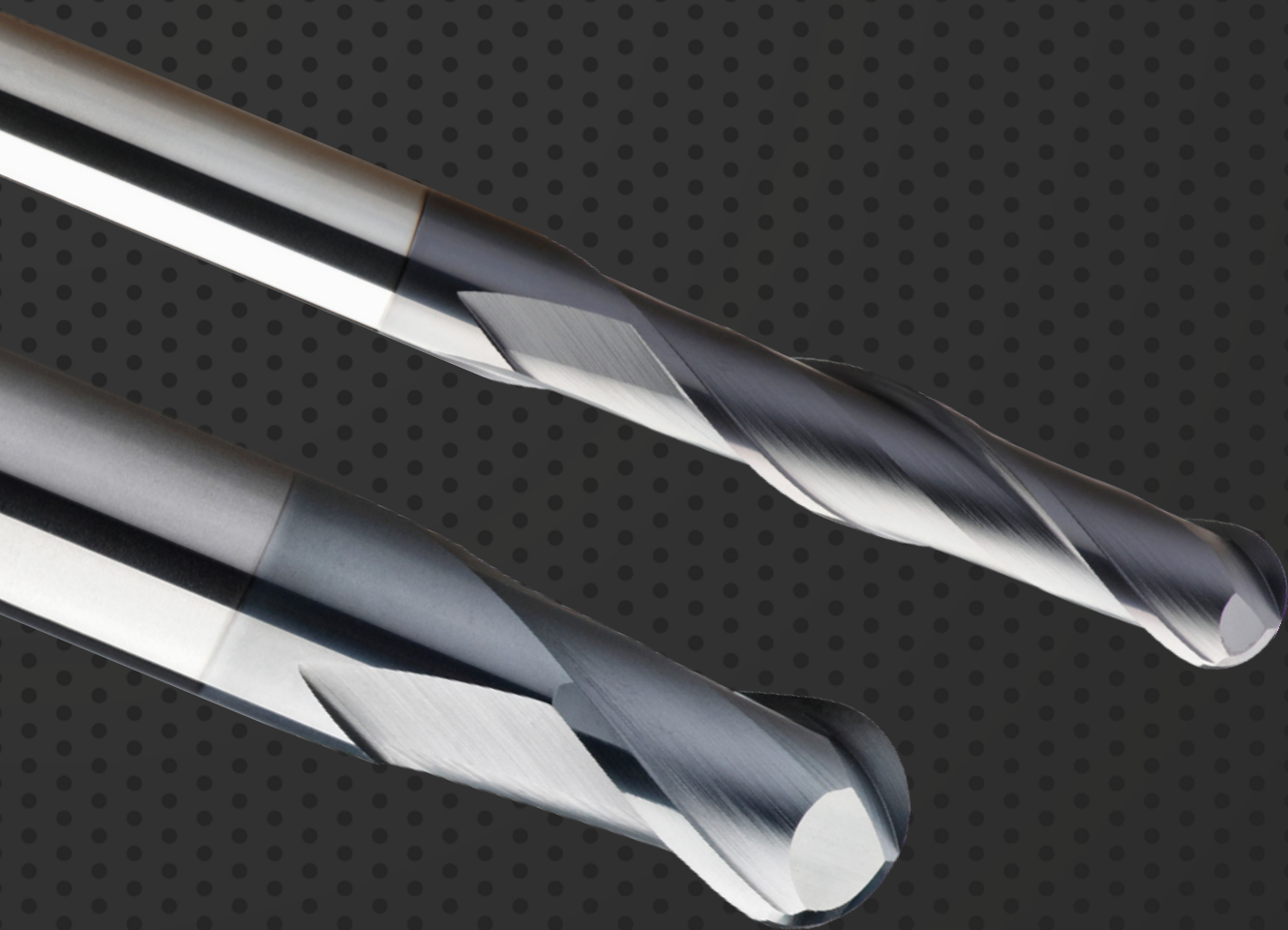




BALLNOSE

BN 30

For general machining

For material application ≤ 35 HRC

Index - BN 30, For ≤ 35 HRC

 Suitable for Material Groups
  Adapté pour les matériaux
  适用于材料
 Geeignet für die Materialgruppen
  Adatto per il materiale

P	M	K
N	S	O

EDP Number	Type	No. Z	Helix Angle	Coating	Performance	Page Number
923 	BN 30	2	30°	B0819	G	360
925 	BN 30 Long	2	30°	B0819	G	361
927 	BN 30 Extra-Long	2	30°	B0819	G	362

G - General P - Performance

FEATURES & BENEFITS

BN 30



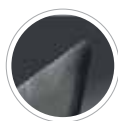
Top View

1 Eccentric Grinding



Optimum eccentric grinding in order to avoid rubbing, while maintaining maximum cutting tool strength.

2 Cutting Edge Preparation



- Enhances tool life
- Less material adhere on the cutting edge for stable machining
- Improves wear resistance and reduces excessive friction

3 Superior Coating to Reduce Friction

- Increases hardness and higher abrasive wear resistance
- Higher thermal resistance
- Smoother chips evacuation

4 Suitable for Material Groups





1. Exzentrischer Schliff
Optimaler exzentrischer Schliff zur Reduzierung der Reibung unter Beibehaltung der maximalen Schneidenstabilität
2. Schneidkantenbehandlung
Verbessert die Werkzeuglebensdauer
Weniger Materialanhaftungen an der Schneide Für stabile Bearbeitung
3. Ausgezeichnete Beschichtung zur Verringerung der Reibung
Erhöht die Härte und und bietet bessere Verschleißfestigkeit
Höhere Temperaturbeständigkeit
Glatte Oberfläche für besseren Spänefluß
4. Positiver Spanwinkel
Geeignet für die Materialgruppen P, M, K, N, S, O



1. 偏心研磨
最佳偏心研磨, 可避免摩擦, 同时保持最大切削刀具强度。
2. 切削刃设置提高刀具寿命
提高刀具寿命。
较少的材料粘在切削刃上。
用于稳定加工。
3. 优异的涂层, 减少摩擦
增加硬度, 提高材料耐磨性。
更高的抗热性。
更顺畅的排屑。
4. 正前角
适用于材料 P、M、K、N、S、O。



1. Levigatura orbitale
Levigatura orbitale ottimale per evitare sfregatura, garantendo la massima resistenza dello strumento di taglio.
2. Preparazione dell'angolo di taglio
Migliora la durata dello strumento
Meno materiale che aderisce sull'angolo di taglio
Per una lavorazione stabile
3. Rivestimento superiore per ridurre la frizione
Aumenta la durezza e una maggiore resistenza all'usura abrasiva
Resistenza termica superiore
Evacuazione dei trucioli più semplice
4. Angolo di taglio positivo
Adatto per il materiale P, M, K, N, S, O



1. Meulage excentrique
Meulage optimal diminuant le coefficient de friction tout en maintenant une bonne acuité de l'arête de coupe
2. Préparation des arêtes de coupes
Améliore la durée de vie de l'outil
Moins de matériau adhère à l'arête tranchante
Pour un usinage stable
3. Revêtement supérieur pour réduire la friction
Augmente la dureté et la résistance à l'abrasion
Résistance thermique supérieure
Évacuation des copeaux plus fluide
4. Angle de coupe positif
Adapté pour les matériaux P, M, K, N, S, O

BN 30 BALLNOSE CUTTERS, 2 FLUTES

 VHM BN 30 Standard Radiuschaftfräser, 2 Zähne

 Frese sferiche BN 30, 2 taglienti

 Fraises BN 30, à bout hémisphérique, 2 dents

 整体硬质合金 BN 30 系列 2刃球头铣刀



Order Number	Dimension (mm)						B0819
	D	R	I1	I2	L	d2 (h6)	
923 0300	3	1.5	9		40	3	•
923 0300 050 06			9		50	6	•
923 0400	4	2	14		50	4	•
923 0400 050 06			14		50	6	◦
923 0500	5	2.5	15		50	5	•
923 0500 050 06			15		50	6	•
923 0600 060	6	3	20		60	6	◦
923 0800	8	4	20		64	8	•
923 1000 070	10	5	22		70	10	◦
923 1000 075			22		75	10	•
923 1200	12	6	25		75	12	•
923 1400	14	7	30		90	14	◦
923 1600	16	8	30		90	16	◦
923 1800	18	9	38		100	18	◦
923 2000	20	10	38		100	20	•

BN 30

BN 45

BN 60

BN 60X

DM70 -
BN70

BN GR

Material Group | Material-Gruppe | Groupe Matière | Gruppo Materiali | 材质主类

Cutting Parameter

N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

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BN 30 LONG BALLNOSE CUTTERS, 2 FLUTES

- 

VHM BN 30 Radiusschafffräser, lang, 2 Zähne
- 

Frese sferiche lunghe BN 30, 2 taglienti
- 

Fraises BN 30 longues, à bout hémisphérique, 2 dents
- 

整体硬质合金 BN 30 系列 2刃长型球头铣刀



Order Number	Dimension (mm)						B0819
	D	R	l1	l2	L	d2 (h6)	
925 0300	3	1.5	19		60	3	•
925 0300 075 06			19		75	6	•
925 0400	4	2	19		60	4	•
925 0400 075 06			19		75	6	◦
925 0500	5	2.5	19		60	5	◦
925 0500 075 06			19		75	6	◦
925 0600	6	3	31		75	6	•
925 0800	8	4	31		75	8	◦
925 1000 075	10	5	31		75	10	◦
925 1000 100			31		100	10	◦
925 1200	12	6	50		100	12	•
925 1400	14	7	57		125	14	◦
925 1600	16	8	57		125	16	•
925 1800	18	9	57		125	18	◦
925 2000	20	10	57		125	20	◦

Material Group | Material-Gruppe | Groupe Matiere | Gruppo Materiali | 材质主类

Cutting Parameter

N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02	364
○	○	○	●	○	●	●	○	●	○	●		○				○	

BN 30 EXTRA-LONG BALLNOSE CUTTERS, 2 FLUTES

-  VHM BN 30 Radiusschaftfräser, extra-lang, 2 Zähne
 Frese sferiche extra-lunghe BN 30, 2 taglienti
 Fraises BN 30 extra-longues, à bout hémisphérique, 2 dents
 整体硬质合金 BN 30 系列 2刃加长型球头铣刀



Order Number	Dimension (mm)						B0819
	D	R	I1	I2	L	d2 (h6)	
927 0300	3	1.5	25		100	3	•
927 0300 100 06			25		100	6	◦
923 0400	4	2	31		100	4	•
923 0400 100 06			31		100	6	◦
923 0500	5	2.5	31		100	5	◦
923 0500 100 06			31		100	6	◦
923 0600 100	6	3	38		100	6	•
923 0600 150			38		150	6	◦
923 0800 100	8	4	41		100	8	•
923 0800 150			41		150	8	•
923 1000 125	10	5	45		125	10	◦
923 1000 150			45		150	10	•
923 1200 125	12	6	75		125	12	•
923 1200 150			75		150	12	◦
923 1400 150	14	7	75		150	14	◦
923 1400 200			75		200	14	◦
923 1600 150	16	8	75		150	16	◦
923 1600 200			75		200	16	◦
923 1800 150	18	9	75		150	18	◦
923 1800 200			75		200	18	◦
923 2000 150	20	10	75		150	20	◦
927 2000 200			75		200	20	◦

Material Group | Material-Gruppe | Groupe Matière | Gruppo Materiali | 材质主类

Cutting Parameter

N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02
○	○	○	●	○	●	●	○	●	○	●	○	○			○	

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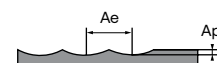
Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition

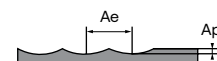


BN 30 Ballnose Cutters, 2 Flutes - 923



Roughing	K		P		M		S			
Working Material	Grey Cast Iron		Carbon Steel		Alloy steel		Stainless steel		Titanium	
Properties	-		-		520 < Rm < 1200		High Machinability		-	
Cutting depth, ap	0.110xD		0.120xD		0.100xD		0.110xD		0.110xD	
Cutting Width, ae	0.110xD		0.120xD		35 ≤ HRC < 45		0.110xD		0.110xD	
D	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz
3	170	0.060	220	0.075	220	0.075	90	0.060	60	0.050
4		0.070		0.090		0.090		0.070		0.060
5		0.080		0.100		0.100		0.080		0.070
6		0.090		0.105		0.110		0.085		0.070
8		0.100		0.125		0.125		0.100		0.085
10		0.115		0.145		0.145		0.115		0.100
12		0.120		0.150		0.150		0.120		0.100
14		0.130		0.165		0.165		0.130		0.105
16		0.145		0.175		0.180		0.140		0.105
18		0.150		0.190		0.190		0.150		0.110
20		0.160		0.200		0.200		0.160		0.110

BN 30 Ballnose Cutters, 2 Flutes - 923



Finishing	K		P				M		S	
Working Material	Grey Cast Iron		Carbon Steel		Alloy steel		Stainless steel		Titanium	
Properties	-		-		520 < Rm < 1200		High Machinability		-	
Cutting depth, ap	0.022xD		0.025xD		0.020xD		0.025xD		0.025xD	
Cutting Width, ae	0.022xD		0.025xD		0.020xD		0.025xD		0.025xD	
D	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz
3	250	0.025	320	0.040	320	0.035	125	0.035	70	0.030
4		0.045		0.065		0.055		0.050		
5		0.050		0.070		0.060		0.065		
6		0.050		0.080		0.065		0.070		
8		0.060		0.090		0.075		0.080		
10		0.065		0.095		0.080		0.085		
12		0.070		0.100		0.085		0.090		
14		0.075		0.115		0.090		0.100		
16		0.080		0.125		0.100		0.110		
18		0.090		0.135		0.110		0.120		
20		0.100		0.140		0.120		0.130		

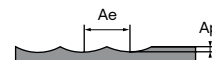
Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition

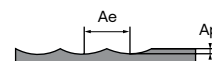


BN 30 Long Ballnose Cutters, 2 Flutes - 925



Roughing	K		P		M		S			
Working Material	Grey Cast Iron		Carbon Steel		Alloy steel		Stainless steel		Titanium	
Properties	-		-		520 < Rm < 1200		High Machinability		-	
Cutting depth, ap	0.080xD		0.080xD		0.080xD		0.080xD		0.080xD	
Cutting Width, ae	0.080xD		0.080xD		0.080xD		0.080xD		0.080xD	
D	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz
3	170	0.060	220	0.070	220	0.075	90	0.055	60	0.045
4		0.065		0.075		0.080		0.060		0.050
5		0.070		0.090		0.090		0.070		0.060
6		0.080		0.095		0.100		0.075		0.065
8		0.090		0.105		0.110		0.085		0.070
10		0.105		0.125		0.130		0.100		0.085
12		0.110		0.130		0.135		0.105		0.090
14		0.115		0.140		0.145		0.115		0.100
16		0.125		0.150		0.155		0.120		0.105
18		0.130		0.160		0.165		0.130		0.115
20		0.145		0.170		0.180		0.140		0.120

BN 30 Long Ballnose Cutters, 2 Flutes - 925



Finishing	K		P				M		S	
Working Material	Grey Cast Iron		Carbon Steel		Alloy steel		Stainless steel		Titanium	
Properties	-		-		520 < Rm < 1200		High Machinability		-	
Cutting depth, ap	0.020xD		0.020xD		0.020xD		0.020xD		0.020xD	
Cutting Width, ae	0.020xD		0.020xD		0.020xD		0.020xD		0.020xD	
D	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz
3	250	0.025	320	0.035	320	0.030	125	0.030	70	0.025
4		0.040		0.060		0.050		0.050		0.045
5		0.045		0.065		0.055		0.055		0.050
6		0.050		0.070		0.060		0.060		0.055
8		0.050		0.080		0.065		0.065		0.060
10		0.055		0.085		0.070		0.070		0.065
12		0.060		0.090		0.075		0.075		0.070
14		0.070		0.100		0.085		0.085		0.080
16		0.070		0.110		0.090		0.090		0.085
18		0.080		0.120		0.100		0.100		0.095
20		0.085		0.130		0.105		0.105		0.100

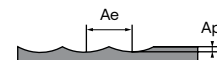
Recommended Cutting Data



Note: These recommended cutting data indicators are just for reference. They should be adjusted according to the different cutting condition

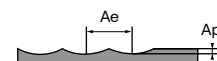


BN 30 Extra-Long Ballnose Cutters, 2 Flutes - 927



Roughing	K		P		M		S			
Working Material	Grey Cast Iron		Carbon Steel		Alloy steel		Stainless steel		Titanium	
Properties	-		-		520 < Rm < 1200		High Machinability		-	
Cutting depth, ap	0.020xD		0.020xD		0.020xD		0.020xD		0.020xD	
Cutting Width, ae	0.020xD		0.020xD		0.020xD		0.020xD		0.020xD	
D	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz
3	145	0.036	190	0.042	190	0.045	75	0.033	50	0.027
4		0.039		0.045		0.048		0.036		0.030
5		0.042		0.054		0.054		0.042		0.036
6		0.048		0.057		0.060		0.045		0.039
8		0.054		0.063		0.066		0.051		0.042
10		0.063		0.075		0.078		0.060		0.051
12		0.066		0.078		0.081		0.063		0.054
14		0.069		0.084		0.087		0.069		0.060
16		0.075		0.090		0.093		0.072		0.063
18		0.078		0.096		0.099		0.078		0.069
20		0.087		0.102		0.108		0.084		0.072

BN 30 Extra-Long Ballnose Cutters, 2 Flutes - 927



Finishing	K		P				M		S	
Working Material	Grey Cast Iron		Carbon Steel		Alloy steel		Stainless steel		Titanium	
Properties	-		-		520 < Rm < 1200		High Machinability		-	
Cutting depth, ap	0.005xD		0.005xD		0.005xD		0.005xD		0.005xD	
Cutting Width, ae	0.005xD		0.005xD		0.005xD		0.005xD		0.005xD	
D	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz	Vc	Fz
3	210	0.015	270	0.021	270	0.018	110	0.018	60	0.015
4		0.024		0.036		0.030		0.030		0.027
5		0.027		0.039		0.033		0.033		0.030
6		0.030		0.042		0.036		0.036		0.033
8		0.030		0.048		0.039		0.039		0.036
10		0.033		0.051		0.042		0.042		0.039
12		0.036		0.054		0.045		0.045		0.042
14		0.042		0.060		0.051		0.051		0.048
16		0.042		0.066		0.054		0.054		0.051
18		0.048		0.072		0.060		0.060		0.057
20		0.051		0.078		0.063		0.063		0.060