BN 30

- For general machining
- Cost efficiency

For material application ≤35 HRC

BN 30

HPMT

P M K N S

BN 30 Ballnose Cutters - Standard

BN 30 Radiusschaftfräser - Standard Frese cilindriche a raggio BN 30 - standard Fraises à bout hémisphérique BN 30 - standard BN 30 系列 球头 立铣刀	EDP	Ø	N° Z	Helix Angle	T ... n	B0819	B0909	RC	Weldon	Tolerance		Page
										Diameter	Tol. µm	
	**923**	3 - 20	2	30°		•				Ø0.1 - Ø2.9	0 / -20	354
										Ø3.0 - Ø6.0	0 / -25	
										Ø6.0 - Ø30.0	0 / -30	

BN 30 Ballnose Cutters - Long

BN 30 Radiusschaftfräser - lang Frese cilindriche a raggio BN 30 - lunghe Fraises à bout hémisphérique BN 30 - longues BN 30 系列 球头 立铣刀 - 中长	EDP	Ø	N° Z	Helix Angle	T ... n	B0819	B0909	RC	Weldon	Tolerance		Page
										Diameter	Tol. µm	
	**925**	3 - 20	2	30°		•				Ø0.1 - Ø2.9	0 / -20	355
										Ø3.0 - Ø6.0	0 / -25	
										Ø6.0 - Ø30.0	0 / -30	

BN 30 Ballnose Cutters - Extra-Long

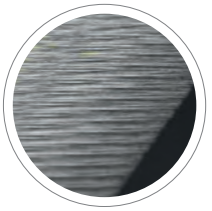
BN 30 Radiusschaftfräser - extra-lang Frese cilindriche a raggio BN 30 - extra-lunghe Fraises à bout hémisphérique BN 30 - extra-longues BN 30 系列 球头 立铣刀 - 加长	EDP	Ø	N° Z	Helix Angle	T ... n	B0819	B0909	RC	Weldon	Tolerance		Page
										Diameter	Tol. µm	
	**927**	3 - 20	2	30°		•				Ø0.1 - Ø2.9	0 / -20	356
										Ø3.0 - Ø6.0	0 / -25	
										Ø6.0 - Ø30.0	0 / -30	

BN 30

01

ECCENTRIC GRINDING

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



02

CUTTING EDGE PREPARATION

Enhances Tool Life

- Less material adhere on the cutting edge
- For stable machining

03

SUPERIOR COATING TO REDUCE FRICTION

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

04

SUITABLE FOR MATERIAL GROUPS

P M K N S

DEUTSCH

01 **EXZENTRISCHER SCHLIFF**
Optimaler exzentrischer Schliff zur Reduzierung der Reibung unter Beibehaltung der maximalen Schneidenstabilität

02 **SCHNEIDKANTENBEHANDLUNG**
Verbessert die Werkzeuglebensdauer
· Weniger Materialanhaftungen an der Schneide
· Für stabile Bearbeitung

03 **AUSGEZEICHNETE BESCHICHTUNG ZUR VERRINGERUNG DER REIBUNG**
· Erhöht die Härte und und bietet bessere Verschleißfestigkeit
· Höhere Temperaturbeständigkeit
· Glatte Oberfläche für besseren Spänefluß

04 **GEEIGNET FÜR DIE MATERIALGRUPPEN P, M, K, N, S**

FRANÇAIS

01 **MEULAGE EXCENTRIQUE**
Meulage optimal diminuant le coeficient de friction tout en maintenant une bonne acuité de l'arête de coupe

02 **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

03 **REVÊTEMENT SUPÉRIEUR POUR RÉDUIRE LA FRICTION**
· Augmente la dureté et la résistance à l'abrasion
· Résistance thermique supérieure
· Évacuation des copeaux plus fluide

04 **ADAPTÉ POUR LES MATÉRIAUX P, M, K, N, S**

ITALIANO

01 **LEVIGATURA ORBITALE**
Levigatura orbitale ottimale per evitare sfregatura, garantendo la massima resistenza dello strumento di taglio

02 **PREPARAZIONE DELL'ANGOLO DI TAGLIO**
Migliora la durata dello strumento
· Meno materiale che aderisce sull'angolo di taglio
· Per una lavorazione stabile

03 **RIVESTIMENTO SUPERIORE PER RIDURRE LA FRIZIONE**
· Aumenta la durezza e una maggiore resistenza all'usura abrasiva
· Resistenza termica superiore
· Evacuazione dei trucioli più semplice

04 **ADATTO PER IL MATERIALE P, M, K, N, S**

中文

01 **刀具底刃的设计**
强化刀具，并降低崩刃的几率

02 **切削刃设置提高刀具寿命**
提高刀具寿命
· 较少的材料粘粘在切削刃上
· 用于稳定加工

03 **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

04 **适合加工预硬钢、超合金的材料 P, M, K, N, S**

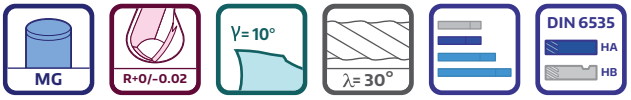
BN 30

STANDARD BALLNOSE CUTTERS

≤ 900 N/mm² + B0819 ≤ 35 HRC

HPMT

VHM Standard BN 30 Radiusschaftfräser, 2 Zähne	Fraises BN 30 Standard en carbure monobloc, à bout hémisphérique, 2 dents
Frese cilindriche a raggio in metallo duro integrale, tipo BN 30 Standard, 2 taglienti	整体硬质合金 BN 30 系列 球头 立铣刀 2 刃 - 标准长度



HPT B0819 AlTiN

EDP No. / EDV-Nr. / CODE usine / Codice EDP	Dimension (mm)						923 *
= * + Ø data	D	R	l 1	l 2	L	d2 (h6)	B0819
0300	3	1.5	9		40	3	•
0300 050 06	3	1.5	9		50	6	•
0400	4	2	14		50	4	•
0400 050 06	4	2	14		50	6	•
0500	5	2.5	15		50	5	•
0500 050 06	5	2.5	15		50	6	•
0600 050	6	3	20		50	6	•
0600 060	6	3	20		60	6	•
0800	8	4	20		64	8	•
1000 070	10	5	22		70	10	•
1000 075	10	5	22		75	10	•
1200	12	6	25		75	12	•
1400	14	7	30		90	14	•
1600	16	8	30		90	16	•
1800	18	9	38		100	18	•
2000	20	10	38		100	20	•

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

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

Cutting Parameter: 357

BN 30 BALLNOSE CUTTERS – Long

≤ 900 N/mm² + B0819 ≤ 35 HRC

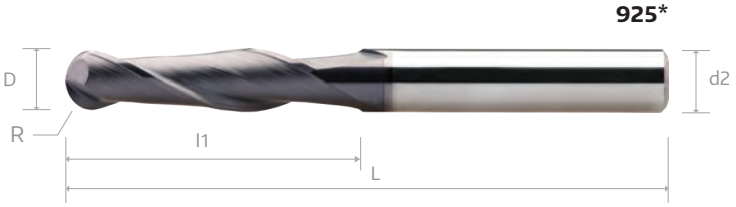
HPMT

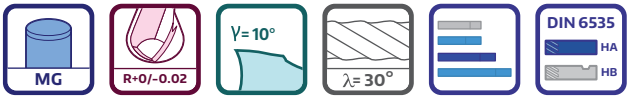
VHM lange BN 30 Radiusschaftfräser, 2 Zähne

Fraises BN 30 longues en carbure monobloc, à bout hémisphérique, 2 dents

Frese cilindriche a raggio in metallo duro integrale, tipo BN 30 lunghe, 2 taglienti

整体硬质合金 BN 30 系列 球头 立铣刀 2 刃 - 中长





EDP No. / EDV-Nr. / CODE usine / Codice EDP	Dimension (mm)						925 *
= * + Ø data	D	R	l 1	l 2	L	d2 (h6)	B0819
0300	3	1.5	19		60	3	•
0300 075 06	3	1.5	19		75	6	•
0400	4	2	19		60	4	•
0400 075 06	4	2	19		75	6	•
0500	5	2.5	19		60	5	•
0500 075 06	5	2.5	19		75	6	•
0600	6	3	31		75	6	•
0800	8	4	31		75	8	•
1000 075	10	5	31		75	10	•
1000 100	10	5	31		100	10	•
1200	12	6	50		100	12	•
1400	14	7	57		125	14	•
1600	16	8	57		125	16	•
1800	18	9	57		125	18	•
2000	20	10	57		125	20	•

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

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

Cutting Parameter: 358

BN 30

BALLNOSE CUTTERS – Extra-Long

≤ 900 N/mm² + B0819 ≤ 35 HRC

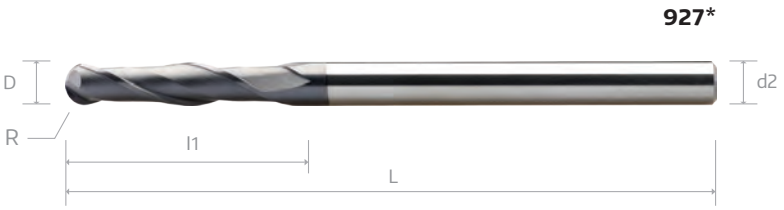
HPMT

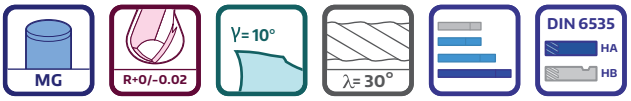
HM extra-lange BN 30 Radiusschaftfräser, 2 Zähne

Fraises BN 30 extra-longues en carbure monobloc, à bout hémi-sphérique, 2 dents

Frese cilindriche a raggio in metallo duro integrale, tipo BN 30 extra-lunghe, 2 taglienti

整体硬质合金 BN 30 系列 球头 立铣刀 2 刃 - 加长





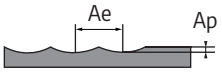
EDP No. / EDV-Nr. / CODE usine / Codice EDP	Dimension (mm)						927 *
= * + Ø data	D	R	l 1	l 2	L	d2 (h6)	B0819
0300	3	1.5	25		100	3	•
0300 100 06	3	1.5	25		100	6	•
0400	4	2	31		100	4	•
0400 100 06	4	2	31		100	6	•
0500	5	2.5	31		100	5	•
0500 100 06	5	2.5	31		100	6	•
0600 100	6	3	38		100	6	•
0600 150	6	3	38		150	6	•
0800 100	8	4	41		100	8	•
0800 150	8	4	41		150	8	•
1000 125	10	5	45		125	10	•
1000 150	10	5	45		150	10	•
1200 125	12	6	75		125	12	•
1200 150	12	6	75		150	12	•
1400 150	14	7	75		150	14	•
1400 200	14	7	75		200	14	•
1600 150	16	8	75		150	16	•
1600 200	16	8	75		200	16	•
1800 150	18	9	75		150	18	•
1800 200	18	9	75		200	18	•
2000 150	20	10	75		150	20	•
2000 200	20	10	75		200	20	•

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

Cutting Parameter

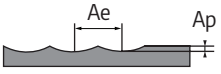
N01	N02	N03	K01	K02	P01	P02	P03	M01	M02	S01	S02	S03	H01	H02	O01	O02
○	○	○	○	○	●	●		●	○	●						

359



Standard Ballnose Cutters 2 Flutes

Roughing	P		M		K		N		S	
Working Material	Carbon Steel		Stainless Steel		Cast Iron		Copper Alloy		Titanium Alloy	
Properties	-		High machinability		-		-		-	
Cutting Depth, Ap (mm)	0.10 × D		0.10 × D		0.10 × D		0.10 × D		0.10 × D	
Cutting Width, Ae (mm)	0.30 × D		0.30 × D		0.30 × D		0.30 × D		0.30 × D	
D (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)
3		0.080		0.080		0.080		0.080		0.080
4		0.101		0.101		0.101		0.101		0.101
5		0.117		0.117		0.117		0.117		0.117
6		0.139		0.139		0.139		0.140		0.140
8		0.159		0.159		0.159		0.159		0.159
10	150	0.179	100	0.179	150	0.179	175	0.179	70	0.179
12		0.199		0.199		0.199		0.201		0.201
14		0.212		0.212		0.212		0.209		0.209
16		0.223		0.223		0.223		0.224		0.224
18		0.220		0.220		0.220		0.224		0.224
20		0.223		0.223		0.223		0.223		0.223

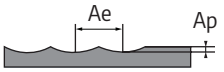


Standard Ballnose Cutters 2 Flutes

Finishing	P		M		K		N		S	
Working Material	Carbon Steel		Stainless Steel		Cast Iron		Copper Alloy		Titanium Alloy	
Properties	-		High machinability		-		-		-	
Cutting Depth, Ap (mm)	0.05 × D		0.05 × D		0.05 × D		0.05 × D		0.05 × D	
Cutting Width, Ae (mm)	0.05 × D		0.05 × D		0.05 × D		0.05 × D		0.05 × D	
D (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)
3		0.080		0.080		0.080		0.080		0.080
4		0.101		0.101		0.101		0.101		0.101
5		0.117		0.117		0.117		0.117		0.117
6		0.139		0.139		0.139		0.140		0.140
8		0.159		0.159		0.159		0.159		0.159
10	150	0.179	100	0.179	150	0.179	175	0.179	70	0.179
12		0.199		0.199		0.199		0.201		0.201
14		0.212		0.212		0.212		0.209		0.209
16		0.223		0.223		0.223		0.224		0.224
18		0.220		0.220		0.220		0.224		0.224
20		0.223		0.223		0.223		0.223		0.223

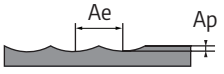
P M K N S | P K

Recommended Cutting Data
Note: These recommended cutting conditions indicate just references. It should be adjusted due to different cutting conditions.



Long Ballnose Cutters 2 Flutes

Roughing	P		M		K		N		S	
Working Material	Carbon Steel		Stainless Steel		Cast Iron		Copper Alloy		Titanium Alloy	
Properties	-		High machinability		-		-		-	
Cutting Depth, Ap (mm)	0.10 × D		0.10 × D		0.10 × D		0.10 × D		0.10 × D	
Cutting Width, Ae (mm)	0.30 × D		0.30 × D		0.30 × D		0.30 × D		0.30 × D	
D (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)
3		0.064		0.064		0.064		0.064		0.064
4		0.081		0.081		0.081		0.081		0.081
5		0.093		0.093		0.093		0.093		0.093
6		0.112		0.112		0.112		0.112		0.112
8		0.127		0.127		0.127		0.127		0.127
10	150	0.143	100	0.143	150	0.143	175	0.143	70	0.143
12		0.159		0.159		0.159		0.161		0.161
14		0.169		0.169		0.169		0.167		0.167
16		0.179		0.178		0.179		0.179		0.180
18		0.176		0.176		0.176		0.179		0.179
20		0.178		0.178		0.178		0.179		0.179

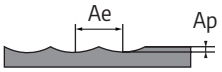


Long Ballnose Cutters 2 Flutes

Finishing	P		M		K		N		S	
Working Material	Carbon Steel		Stainless Steel		Cast Iron		Copper Alloy		Titanium Alloy	
Properties	-		High machinability		-		-		-	
Cutting Depth, Ap (mm)	0.05 × D		0.05 × D		0.05 × D		0.05 × D		0.05 × D	
Cutting Width, Ae (mm)	0.05 × D		0.05 × D		0.05 × D		0.05 × D		0.05 × D	
D (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)
3		0.064		0.064		0.064		0.064		0.064
4		0.081		0.081		0.081		0.081		0.081
5		0.093		0.093		0.093		0.093		0.093
6		0.112		0.112		0.112		0.112		0.112
8		0.127		0.127		0.127		0.127		0.127
10	150	0.143	100	0.143	150	0.143	175	0.143	70	0.143
12		0.159		0.159		0.159		0.161		0.161
14		0.169		0.169		0.169		0.167		0.167
16		0.179		0.178		0.179		0.179		0.180
18		0.176		0.176		0.176		0.179		0.179
20		0.178		0.178		0.178		0.179		0.179

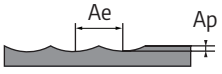
P M K N S | P K

Recommended Cutting Data
Note: These recommended cutting conditions indicate just references. It should be adjusted due to different cutting conditions.



Extra Long Ballnose Cutters 2 Flutes

Roughing	P		M		K		N		S	
Working Material	Carbon Steel		Stainless Steel		Cast Iron		Copper Alloy		Titanium Alloy	
Properties	-		High machinability		-		-		-	
Cutting Depth, Ap (mm)	0.10 × D		0.10 × D		0.10 × D		0.10 × D		0.10 × D	
Cutting Width, Ae (mm)	0.30 × D		0.30 × D		0.30 × D		0.30 × D		0.30 × D	
D (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)
3		0.056		0.056		0.056		0.056		0.056
4		0.071		0.071		0.071		0.071		0.070
5		0.082		0.082		0.082		0.082		0.082
6		0.098		0.098		0.098		0.098		0.098
8		0.111		0.111		0.111		0.112		0.111
10	150	0.125	100	0.125	150	0.125	175	0.125	70	0.125
12		0.139		0.139		0.139		0.141		0.141
14		0.148		0.148		0.148		0.146		0.146
16		0.156		0.156		0.156		0.157		0.157
18		0.154		0.154		0.154		0.157		0.157
20		0.156		0.156		0.156		0.156		0.156



Extra Long Ballnose Cutters 2 Flutes

Finishing	P		M		K		N		S	
Working Material	Carbon Steel		Stainless Steel		Cast Iron		Copper Alloy		Titanium Alloy	
Properties	-		High machinability		-		-		-	
Cutting Depth, Ap (mm)	0.05 × D		0.05 × D		0.05 × D		0.05 × D		0.05 × D	
Cutting Width, Ae (mm)	0.05 × D		0.05 × D		0.05 × D		0.05 × D		0.05 × D	
D (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)	Vc (m/min)	Fz (mm)
3		0.056		0.056		0.056		0.056		0.056
4		0.071		0.071		0.071		0.071		0.070
5		0.082		0.082		0.082		0.082		0.082
6		0.098		0.098		0.098		0.098		0.098
8		0.111		0.111		0.111		0.112		0.111
10	150	0.125	100	0.125	150	0.125	175	0.125	70	0.125
12		0.139		0.139		0.139		0.141		0.141
14		0.148		0.148		0.148		0.146		0.146
16		0.156		0.156		0.156		0.157		0.157
18		0.154		0.154		0.154		0.157		0.157
20		0.156		0.156		0.156		0.156		0.156

P M K N S | P K

Recommended Cutting Data
Note: These recommended cutting conditions indicate just references. It should be adjusted due to different cutting conditions.