

# BN45





# BN 45 STANDARD BALLNOSE CUTTERS

≤ 1.300 N/mm<sup>2</sup> + B0819 ≤ 36 - 52 HRC

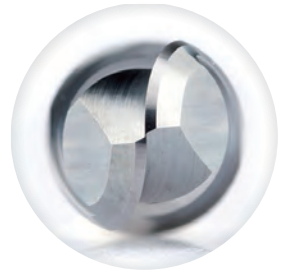
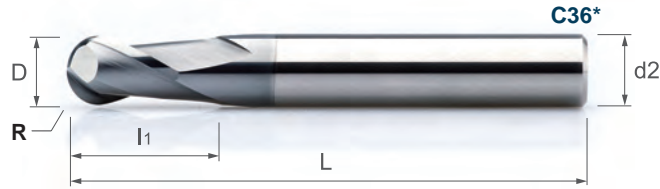
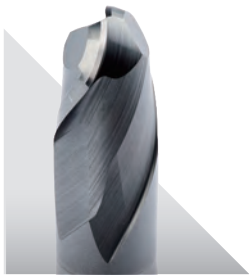
Solid Carbide BN 45 Standard Ballnose Cutters, 2 flutes

Fraises BN 45 Standard en carbure monobloc, à bout hémisphérique, 2 dents

整体硬口合金 BN 45 系列 球口 立刀刀 2 刃 - 口准口度

VHM Standard BN 45 Radiuschafffräser, 2 Zähne

Frese cilindrica a raggio in metallo duro integrale, tipo BN 45 Standard, 2 taglianti



EDPNo./EDV-Nr./ CODEusine/CodiceEDP = *+Ødata	Dimension ( mm )						C36*		929*
	D	R	I1	I2	L	d2 (h6)	G6110	B0819	
0100 040 03	1	0.5	3		40	3	●	●	
0100 040 04	1	0.5	3		40	4	●	●	
0150 040 03	1.5	0.75	3		40	3	●	●	
0150 040 04	1.5	0.75	3		40	4	●	●	
0200 040 03	2	1	4		40	3	●	●	
0200 040 04	2	1	4		40	4	●	●	
0250 040 03	2.5	1.25	4		40	3	●	●	
0250 040 04	2.5	1.25	4		40	4	●	●	
0300	3	1.5	5		40	3	●	●	
0300 050 06	3	1.5	5		50	6	●	●	
0350 050 04	3.5	1.75	8		50	4	●	●	
0400	4	2	8		50	4	●	●	
0400 050 06	4	2	8		50	6	●	●	
0450 050 05	4.5	2.25	9		50	5	●	●	
0500	5	2.5	9		50	5	●	●	
0500 050 06	5	2.5	9		50	6	●	●	
0550 050 06	5.5	2.75	10		50	6	●	●	
0600 050	6	3	10		50	6	●	●	
0600 060	6	3	10		60	6	●	●	
0700 064 08	7	3.5	12		64	8	●	●	
0800	8	4	12		64	8	●	●	
0900 070 10	9	4.5	14		70	10	●	●	
1000 070	10	5	14		70	10	●	●	
1000 075	10	5	14		75	10	●	●	
1100 075 12	11	5.5	16		75	12	●	●	
1200	12	6	16		75	12	●	●	
1400	14	7	32		90	14	●	●	
1600	16	8	32		90	16	●	●	
1800	18	9	38		100	18	●	●	
2000	20	10	38		100	20	●	●	
2200	22	11	40		100	22	●	●	
2500	25	12.5	40		100	25	●	●	

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02 M03 M04 M05 M06 M07 M08 M09 M10 M11 M12 M13 M14 M15 M18 M22 M25 M31 M16 M20 M17 M19 M21 M23 M24 M32  
M26 M27 M28 M33 M01 M29 M30

Working Material | Cutting Parameter



# BN 45 STANDARD BALLNOSE CUTTERS

≤ 1.300 N/mm<sup>2</sup> + B0819 ≤ 36 - 52 HRC

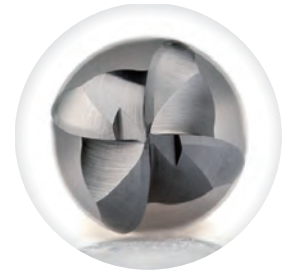
Solid Carbide BN 45 Standard Ballnose Cutters, 4 flutes

Fraises BN 45 Standard en carbure monobloc, à bout hémisphérique, 4 dents

整体硬口合金 BN 45 系列 球口 立刀刀 4 刃 - 口准口度

VHM Standard BN 45 Radiuschaftfräser, 4 Zähne

Frese cilindrica a raggio in metallo duro integrale, tipo BN 45 Standard, 4 taglienti



EDPNo./EDV-Nr./ CODEusine/CodiceEDP = *+Ødata	Dimension ( mm )						B82*
	D	R	I1	I2	L	d2 (h6)	B0819
0300	3	1.5	5		40	3	●
0300 050 06	3	1.5	5		50	6	●
0350 050 04	3.5	1.75	8		50	4	●
0400	4	2	8		50	4	●
0400 050 06	4	2	8		50	6	●
0450 050 05	4.5	2.25	9		50	5	●
0500	5	2.5	9		50	5	●
0500 050 06	5	2.5	9		50	6	●
0550 050 06	5.5	2.75	10		50	6	●
0600 050	6	3	10		50	6	●
0600 060	6	3	10		60	6	●
0700 064 08	7	3.5	12		64	8	●
0800	8	4	12		64	8	●
0900 070 10	9	4.5	14		70	10	●
1000 070	10	5	14		70	10	●
1000 075	10	5	14		75	10	●
1100 075 12	11	5.5	16		75	12	●
1200	12	6	16		75	12	●
1400	14	7	32		90	14	●
1600	16	8	32		90	16	●
1800	18	9	38		100	18	●
2000	20	10	38		100	20	●
2200	22	11	40		100	22	●
2500	25	12.5	40		100	25	●

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02 M03 M04 M05 M06 M07 M08 M09 M10 M11 M12 M13 M14 M15 M18 M22 M25 M31 M16 M20 M17 M19 M21 M23 M24 M32  
M26 M27 M28 M33 M01 M29 M30

Working Material | Cutting Parameter

576

321



# BN 45 BALLNOSE CUTTERS - LONG

≤ 1.300 N/mm<sup>2</sup> + B0819 ≤ 36 - 52 HRC

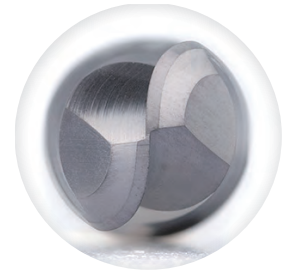
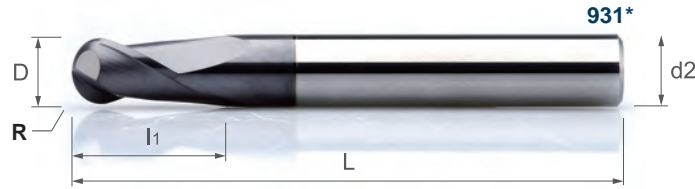
Solid Carbide BN 45 Long Ballnose Cutters, 2 flutes

Fraises BN 45 longues en carbure monobloc, à bout hémisphérique, 2 dents

整体硬口合金 BN 45 系列 球口 立刀刀 2 刃 - 中口

VHM lange BN 45 Radiuschaftfräser, 2 Zähne

Frese cilindrica a raggio in metallo duro integrale, tipo BN 45 lunghe, 2 taglienti



EDPNo./EDV-Nr./ CODEusine/CodiceEDP = *+Ødata	Dimension ( mm )						C65*	931*
	D	R	I1	I2	L	d2 (h6)	G6110	B0819
0100 060 03	1	0.5	3		60	3	●	●
0100 075 04	1	0.5	3		75	4	●	●
0150 060 03	1.5	0.75	3		60	3	●	●
0150 075 04	1.5	0.75	3		75	4	●	●
0200 060 03	2	1	4		60	3	●	●
0200 075 04	2	1	4		75	4	●	●
0250 060 03	2.5	1.25	4		60	3	●	●
0250 075 04	2.5	1.25	4		75	4	●	●
0300	3	1.5	5		60	3	●	●
0300 075 06	3	1.5	5		75	6	●	●
0400	4	2	8		60	4	●	●
0400 075 06	4	2	8		75	6	●	●
0500	5	2.5	9		60	5	●	●
0500 075 06	5	2.5	9		75	6	●	●
0600	6	3	10		75	6	●	●
0800	8	4	12		75	8	●	●
1000 075	10	5	14		75	10	●	●
1000 100	10	5	14		100	10	●	●
1200	12	6	16		100	12	●	●
1400	14	7	32		125	14	●	●
1600	16	8	32		125	16	●	●
1800	18	9	38		125	18	●	●
2000	20	10	38		125	20	●	●

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material | Cutting Parameter

576

323



# BN 45 BALLNOSE CUTTERS - EXTRA-LONG

≤ 1.300 N/mm<sup>2</sup> + B0819 ≤ 36 - 52 HRC

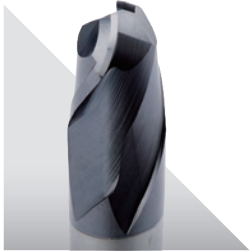
Solid Carbide BN 45 Extra-Long Ballnose Cutters, 2 flutes

Fraises BN 45 extra-longues en carbure monobloc, à bout hémisphérique, 2 dents

整体硬质合金 BN 45 系列 球头 立铣刀 2 刃 - 加长

VHM extra-lange BN 45 Radiuschaftfräser, 2 Zähne

Frese cilindriche a raggio in metallo duro integrale, tipo BN 45 extra-lunghe, 2 taglienti



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EDPNo./EDV-Nr./ CODEusine/CodiceEDP = *+Ødata	Dimension ( mm )						933*
	D	R	l1	l2	L	d2 (h6)	B0819
0100 100 03	1	0.5	3		100	3	●
0100 100 04	1	0.5	3		100	4	●
0150 100 03	1.5	0.75	3		100	3	●
0150 100 04	1.5	0.75	3		100	4	●
0200 100 03	2	1	4		100	3	●
0200 100 04	2	1	4		100	4	●
0250 100 03	2.5	1.25	4		100	3	●
0250 100 04	2.5	1.25	4		100	4	●
0300	3	1.5	5		100	3	●
0300 100 06	3	1.5	5		100	6	●
0400	4	2	8		100	4	●
0400 100 06	4	2	8		100	6	●
0500	5	2.5	9		100	5	●
0500 100 06	5	2.5	9		100	6	●
0600 100	6	3	10		100	6	●
0600 150	6	3	10		150	6	●
0800 100	8	4	12		100	8	●
0800 150	8	4	12		150	8	●
1000 125	10	5	14		125	10	●
1000 150	10	5	14		150	10	●
1200 125	12	6	16		125	12	●
1200 150	12	6	16		150	12	●
1400 150	14	7	32		150	14	●
1400 200	14	7	32		200	14	●
1600 150	16	8	32		150	16	●
1600 200	16	8	32		200	16	●
1800 150	18	9	38		150	18	●
1800 200	18	9	38		200	18	●
2000 150	20	10	38		150	20	●
2000 200	20	10	38		200	20	●

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material | Cutting Parameter

576

327



# BN 45 STANDARD BALLNOSE CUTTERS

≤ 1.300 N/mm<sup>2</sup> + B0819 / B0909 ≤ 36 - 52 HRC

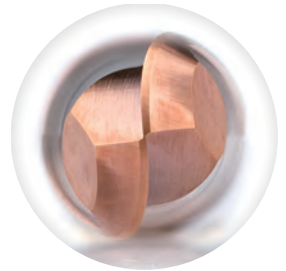
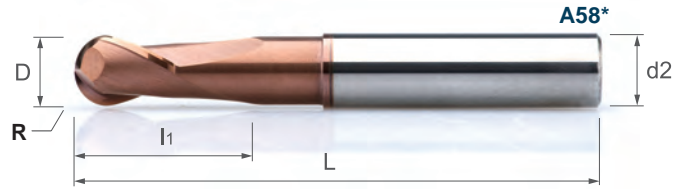
United Kingdom Solid Carbide BN 45 Standard Ballnose Cutters, 2 flutes

France Fraises BN 45 Standard en carbure monobloc, à bout hémisphérique, 2 dents

China 整体硬口合金 BN 45 系列 球口立刀刀 2 刃 - 口准口度

Germany VHM Standard BN 45 Radiuschafffräser, 2 Zähne

Italy Frese cilindriche a raggio in metallo duro integrale, tipo BN 45 Standard, 2 taglienti



VHM	R+0/-0.02	3°	λ = 30°	G6110	B0819	B0909	DIN 6535
				HPT	HPT	HSC	HA HB HE

EDPNo./EDV-Nr./ CODEusine/CodiceEDP =*+Ødata	Dimension (mm)						473*	940*	A57*
	D	R	I1	I2	L	d2 (h6)	G6110	B0819	B0909
0100 040 03	1	0.5	3	4	40	3	○	●	●
0100 040 04	1	0.5	3	4	40	4	○	●	●
0150 040 03	1.5	0.75	3	6	40	3	○	●	●
0150 040 04	1.5	0.75	3	6	40	4	○	●	●
0200 040 03	2	1	4	8	40	3	○	●	●
0200 040 04	2	1	4	8	40	4	○	●	●
0250 040 03	2.5	1.25	4	10	40	3	○	●	●
0250 040 04	2.5	1.25	4	10	40	4	○	●	●
0300	3	1.5	5	14	40	3	○	●	●
0300 050 06	3	1.5	5	14	50	6	○	●	●
0400	4	2	8	20	50	4	○	●	●
0400 050 06	4	2	8	20	50	6	○	●	●
0500	5	2.5	9	20	50	5	○	●	●
0500 050 06	5	2.5	9	20	50	6	○	●	●
0600 050	6	3	10	20	50	6	○	●	●
0600 060	6	3	10	30	60	6	○	●	●
0800	8	4	12	30	64	8	○	●	●
1000	10	5	14	32	70	10	○	●	●
1200	12	6	16	38	75	12	○	●	●
1400	14	7	32	44	90	14	○	●	●
1600	16	8	32	46	90	16	○	●	●
1800	18	9	38	53	100	18	○	●	●
2000	20	10	38	58	100	20	○	●	●
2200	22	11	40	58	100	22	○	●	●
2500	25	12.5	40	58	100	25	○	●	●

941\* A58\*

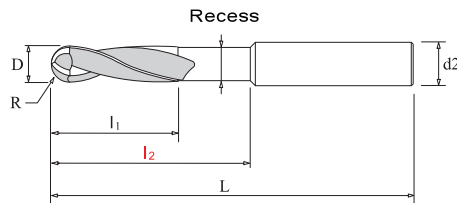
United Kingdom Tools with recess upon request

Germany Fräser mit Freistellung auf Bestellung

France Outils avec dégagement sur demande

Italy Utensilli con riduzione gambo su richiesta

China 密齿 立铣刀 带颈位 特别要求



Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material Cutting Parameter

576

319



# BN 45 STANDARD BALLNOSE CUTTERS

≤ 1.300 N/mm<sup>2</sup> + G6110 ≤ 36 - 52 HRC

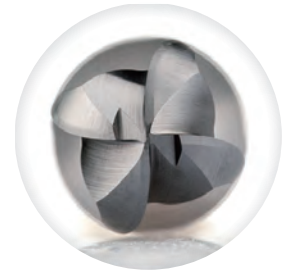
Solid Carbide BN 45 Standard Ballnose Cutters, 4 flutes

Fraises BN 45 Standard en carbure monobloc, à bout hémisphérique, 4 dents

整体硬口合金 BN 45 系列 球口 立刀刀 4 刃 - 口准口度

VHM Standard BN 45 Radiuschaftfräser, 4 Zähne

Frese cilindrica a raggio in metallo duro integrale, tipo BN 45 Standard, 4 taglienti



VHM	R+0/-0.02	3°	λ = 30°	G6110	DIN 6535

EDPNo./EDV-Nr./ CODEusine/CodiceEDP = *+Ødata	Dimension ( mm )						485*
	D	R	I1	I2	L	d2 (h6)	G6110
0300	3	1.5	5		40	3	○
0300 050 06	3	1.5	5		50	6	○
0400	4	2	8		50	4	○
0400 050 06	4	2	8		50	6	○
0500	5	2.5	9		50	5	○
0500 050 06	5	2.5	9		50	6	○
0600 050	6	3	10		50	6	○
0600 060	6	3	10		60	6	○
0800	8	4	12		64	8	○
1000	10	5	14		70	10	○
1200	12	6	16		75	12	○
1400	14	7	32		90	14	○
1600	16	8	32		90	16	○
1800	18	9	38		100	18	○
2000	20	10	38		100	20	○
2200	22	11	40		100	22	○
2500	25	12.5	40		100	25	○

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material | Cutting Parameter

576

321

若有技术规格变更，恕不事先通知

# BN 45 BALLNOSE CUTTERS - LONG

≤ 1.300 N/mm<sup>2</sup> + B0819 / B0909 ≤ 36 - 52 HRC

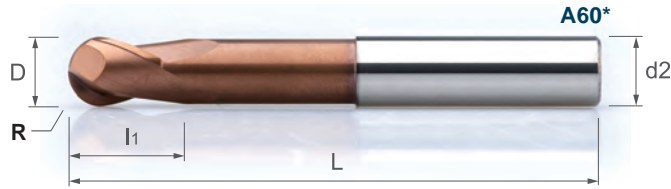
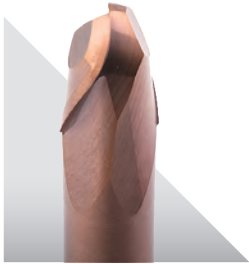
United Kingdom Solid Carbide BN 45 Long Ballnose Cutters, 2 flutes

France Fraises BN 45 longues en carbure monobloc, à bout hémisphérique, 2 dents

China 整体硬质合金 BN 45 系列 球头 立铣刀 2 刃 - 中长

Germany VHM lange BN 45 Radiuschaftfräser, 2 Zähne

Italy Frese cilindriche a raggio in metallo duro integrale, tipo BN 45 lunghe, 2 taglienti

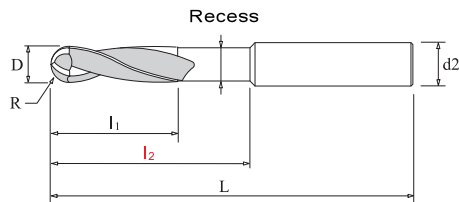


VHM	R+0/-0.02	3°	λ = 30°	G6110	B0819	B0909	DIN 6535
				HPT	HPT	HSC	HA HB HE

EDPNo./EDV-Nr./ CODEusine/CodiceEDP	Dimension ( mm )						493*	942*	A59*
	D	R	l1	l2	L	d2 (h6)	G6110	B0819	B0909
0100 060 03	1	0.5	3	7	60	3	○	●	●
0100 075 04	1	0.7	3	7	75	4	○	●	●
0150 060 03	1.5	0.75	3	10	60	3	○	●	●
0150 075 04	1.5	0.75	3	10	75	4	○	●	●
0200 060 03	2	1	4	14	60	3	○	●	●
0200 075 04	2	1	4	14	75	4	○	●	●
0250 060 03	2.5	1.25	4	18	60	3	○	●	●
0250 075 04	2.5	1.25	4	18	75	4	○	●	●
0300	3	1.5	5	21	60	3	○	●	●
0300 075 06	3	1.5	5	21	75	6	○	●	●
0400	4	2	8	28	60	4	○	●	●
0400 075 06	4	2	8	28	75	6	○	●	●
0500	5	2.5	9	32	60	5	○	●	●
0500 075 06	5	2.5	9	32	75	6	○	●	●
0600	6	3	10	40	75	6	○	●	●
0800	8	4	10	40	75	8	○	●	●
1000 075	10	5	12	40	75	10	○	●	●
1000 100	10	5	14	60	100	10	○	●	●
1200	12	6	16	60	100	12	○	●	●
1400	14	7	32	80	125	14	○	●	●
1600	16	8	32	80	125	16	○	●	●
1800	18	9	38	80	125	18	○	●	●
2000	20	10	38	80	125	20	○	●	●

943\* A60\*

- United Kingdom Tools with recess upon request
- Germany Fräser mit Freistellung auf Bestellung
- France Outils avec dégagement sur demande
- Italy Utensilli con riduzione gambo su richiesta
- China 密齿 立铣刀 带颈位 特别要求



Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M16	M20	M17	M19	M21	M23	M24	M26
M27	M28	M01	M29	M30																	Working Material	Cutting Parameter		

576

323



# BN 45 BALLNOSE CUTTERS - LONG

≤ 1.300 N/mm<sup>2</sup> + G6110 ≤ 36 - 52 HRC

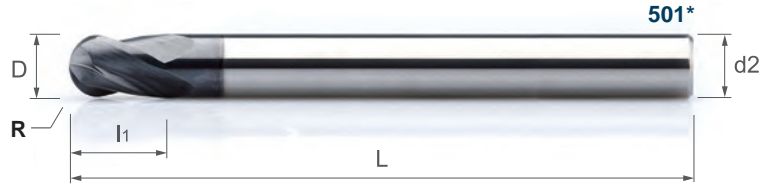
Solid Carbide BN 45 Long Ballnose Cutters, 4 flutes

Fraises BN 45 longues en carbure monobloc, à bout hémisphérique, 4 dents

整体硬质合金 BN 45 系列 球头 立铣刀 4 刃 - 中长

VHM lange BN 45 Radiuschaftfräser, 4 Zähne

Frese cilindrica a raggio in metallo duro integrale, tipo BN 45 lunghe, 4 taglienti



EDPNo./EDV-Nr./ CODEusine/CodiceEDP =*+Ødata	Dimension ( mm )						495*	501*
	D	R	l1	l2	L	d2 (h6)	B0819	G6110
0300	3	1.5	5		60	3	○	○
0300 075 06	3	1.5	5		75	6	○	○
0400	4	2	8		60	4	○	○
0400 075 06	4	2	8		75	6	○	○
0500	5	2.5	9		60	5	○	○
0500 075 06	5	2.5	9		75	6	○	○
0600	6	3	10		75	6	○	○
0800	8	4	12		75	8	○	○
1000 075	10	5	14		75	10	○	○
1000 100	10	5	14		100	10	○	○
1200	12	6	16		100	12	○	○
1400	14	7	32		125	14	○	○
1600	16	8	32		125	16	○	○
1800	18	9	38		125	18	○	○
2000	20	10	38		125	20	○	○

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material | Cutting Parameter

576

325

# BN 45 BALLNOSE CUTTERS - EXTRA-LONG

≤ 1.300 N/mm<sup>2</sup> + B0819 / B0909 ≤ 36 - 52 HRC

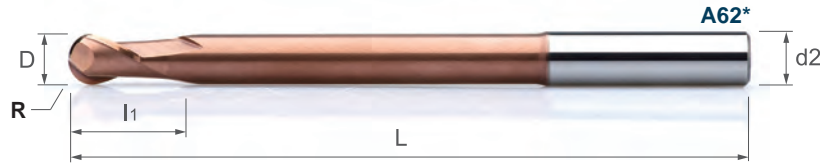
Solid Carbide BN 45 Extra-Long Ballnose Cutters, 2 flutes

Fraises BN 45 extra-longues en carbure monobloc, à bout hémisphérique, 2 dents

整体硬质合金 BN 45 系列 球头 立铣刀 2 刃 - 加长

VHM extra-lange BN 45 Radiuschaftfräser, 2 Zähne

Frese cilindrica a raggio in metallo duro integrale, tipo BN 45 extra-lunghe, 2 taglienti

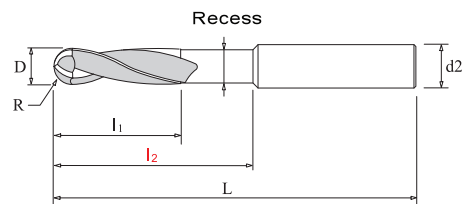


				<b>G6110</b>	<b>B0819</b>	<b>B0909</b>	
VHM	R+0/-0.02	3°	λ = 30°	HPT	HPT	HSC	DIN 6535 HA HB HE

EDPNo./EDV-Nr./ CODEusine/CodiceEDP =*+Ødata	Dimension ( mm )						509*	944*	A61*
	D	R	I1	I2	L	d2 (h6)	G6110	B0819	B0909
0100 100 03	1	0.5	3	10	100	3	○	●	●
0100 100 04	1	0.5	3	10	100	4	○	●	●
0150 100 03	1.5	0.75	3	15	100	3	○	●	●
0150 100 04	1.5	0.75	3	15	100	4	○	●	●
0200 100 03	2	1	4	20	100	3	○	●	●
0200 100 04	2	1	4	20	100	4	○	●	●
0250 100 03	2.5	1.25	4	25	100	3	○	●	●
0250 100 04	2.5	1.25	4	25	100	4	○	●	●
0300	3	1.5	5	30	100	3	○	●	●
0300 100 06	3	1.5	5	30	100	6	○	●	●
0400	4	2	8	40	100	4	○	●	●
0400 100 06	4	2	8	40	100	6	○	●	●
0500	5	2.5	9	50	100	5	○	●	●
0500 100 06	5	2.5	9	50	100	6	○	●	●
0600 100	6	3	10	60	100	6	○	●	●
0600 150	6	3	10	60	150	6	○	●	●
0800 100	8	4	12	60	100	8	○	●	●
0800 150	8	4	12	80	150	8	○	●	●
1000 125	10	5	14	85	125	10	○	●	●
1000 150	10	5	14	100	150	10	○	●	●
1200 125	12	6	16	85	125	12	○	●	●
1200 150	12	6	16	110	150	12	○	●	●
1400 150	14	7	32	110	150	14	○	●	●
1400 200	14	7	32	150	200	14	○	●	●
1600 150	16	8	32	110	150	16	○	●	●
1600 200	16	8	32	150	200	16	○	●	●
1800 150	18	9	38	110	150	18	○	●	●
1800 200	18	9	38	150	200	18	○	●	●
2000 150	20	10	38	110	150	20	○	●	●
2000 200	20	10	38	150	200	20	○	●	●

945\* A62\*

- Tools with **recess** upon request
- Fräser mit **Freistellung** auf Bestellung
- Outils avec **dégagement** sur demande
- Utensilli con **riduzione gambo** su richiesta
- 密齿 立铣刀 带颈位 特别要求



Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material	Cutting Parameter
576	327

# BN 45 MINIATURE BALLNOSE CUTTERS

≤ 1.300 N/mm<sup>2</sup> + B0819 / B0909 ≤ 36 - 52 HRC

Solid Carbide BN 45 Miniature Ballnose Cutters, 2 flutes

Micro-fraises BN 45 en carbure monobloc à bout hémisphérique, 2 dents

整体硬质合金 BN 45 系列 微型球头 立铣刀 2 刃 - 标准长度

VHM Radiuskleinstschaffräser BN 45, 2 Zähne

Micro-frese cilindriche a raggio in metallo duro integrale, tipo BN 45, 2 taglienti



				<b>G6110</b>	<b>B0819</b>	<b>B0909</b>	
VHM	R+0/-0.02	3°	λ = 30°	HPT	HPT	HSC	DIN 6535 HA HB HE

EDPNo./EDV-Nr./ CODEusine/CodiceEDP = *+Ødata	Dimension ( mm )						566*	935*	A63*
	D	R	l1	l2	L	d2 (h6)	G6110	B0819	B0909
0020 03	0.2	0.1	0.4		40	3	●	●	●
0020 04	0.2	0.1	0.4		40	4	●	●	●
0030 03	0.3	0.15	0.6		40	3	●	●	●
0030 04	0.3	0.15	0.6		40	4	●	●	●
0040 03	0.4	0.2	0.8		40	3	●	●	●
0040 04	0.4	0.2	0.8		40	4	●	●	●
0050 03	0.5	0.25	1.2		40	3	●	●	●
0050 04	0.5	0.25	1.2		40	4	●	●	●
0060 03	0.6	0.3	1.4		40	3	●	●	●
0060 04	0.6	0.3	1.4		40	4	●	●	●
0070 03	0.7	0.35	1.6		40	3	●	●	●
0070 04	0.7	0.35	1.6		40	4	●	●	●
0080 03	0.8	0.4	1.8		40	3	●	●	●
0080 04	0.8	0.4	1.8		40	4	●	●	●
0090 03	0.9	0.45	2		40	3	●	●	●
0090 04	0.9	0.45	2		40	4	●	●	●

Ø mm	Tol. µm
0.1 ~ 0.7	0 / -12
0.7 ~ 4.0	0 / -20

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material | Cutting Parameter

576

329

MODIFICHE TECNICHE POSSIBILI SENZA PREAVVISO

# BN 45 MINIATURE BALLNOSE CUTTERS - with Long Neck

≤ 1.300 N/mm<sup>2</sup> + B0819 / B0909 ≤ 36 - 52 HRC

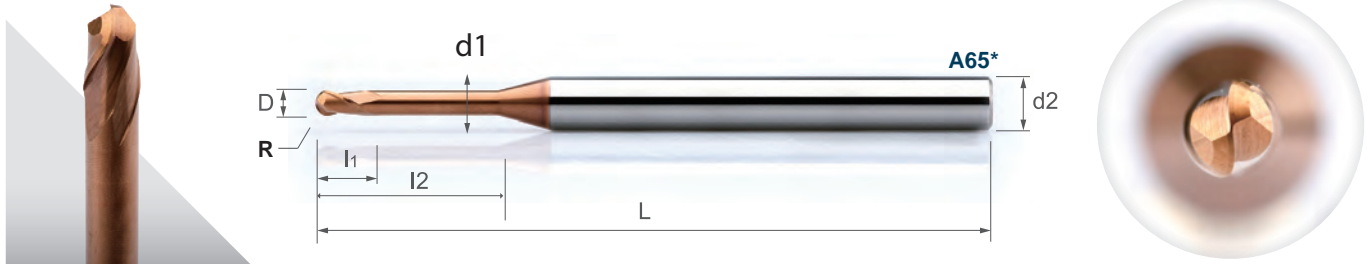
Solid Carbide BN 45 Miniature Ballnose Cutters with long neck, 2 flutes

VHM BN 45 Kleinstradiusfräser mit langem Hals, 2 Zähne

Micro-fraises BN 45 à bout hémisphérique en carbure monobloc avec cou long, 2 dents

Micro-frese cilindriche BN 45 a raggio con collo lungo in metallo duro integrale, 2 taglienti

整体硬质合金 BN 45 系列 长颈短刃 球头 立铣刀 2 刃 - 6柄



				<b>G6110</b>	<b>B0819</b>	<b>B0909</b>	
VHM	R+0/-0.02	3°	λ = 30°	HPT	HPT	HSC	DIN 6535 HA HB HE

EDPNo./EDV-Nr./ CODEusine/CodiceEDP = *+Ødata	Dimension ( mm )							C57*	936*	A65*
	D	R	I1	I2	L	d1	d2 (h6)	G6110	B0819	B0909
0050 060 0600 025	0.5	0.25	0.5	2.5	60	0.45	6	●	●	●
0060 060 0600 060	0.6	0.30	0.6	6.0	60	0.55	6	●	●	●
0080 060 0600 040	0.8	0.40	0.8	4.0	60	0.75	6	●	●	●
0080 060 0600 080	0.8	0.40	0.8	8.0	60	0.75	6	●	●	●
0100 060 0600 050	1.0	0.50	1.5	5.0	60	0.95	6	●	●	●
0100 060 0600 080	1.0	0.50	1.5	8.0	60	0.95	6	●	●	●
0100 060 0600 120	1.0	0.50	1.5	12.0	60	0.93	6	●	●	●
0120 060 0600 060	1.2	0.60	1.8	6.0	60	1.15	6	●	●	●
0150 060 0600 080	1.5	0.75	2.3	8.0	60	1.45	6	●	●	●
0150 060 0600 120	1.5	0.75	2.3	12.0	60	1.43	6	●	●	●
0150 060 0600 160	1.5	0.75	2.3	16.0	60	1.41	6	●	●	●
0160 060 0600 160	1.6	0.80	2.4	16.0	60	1.51	6	●	●	●
0180 060 0600 160	1.8	0.90	2.7	16.0	60	1.71	6	●	●	●
0200 060 0600 120	2.0	1.00	3.0	12.0	60	1.93	6	●	●	●
0200 060 0600 160	2.0	1.00	3.0	16.0	60	1.91	6	●	●	●
0200 075 0600 200	2.0	1.00	3.0	20.0	75	1.89	6	●	●	●
0250 075 0600 125	2.5	1.25	3.0	12.5	75	2.4	6	●	●	●
0300 075 0600 160	3.0	1.50	4.5	16.0	75	2.85	6	●	●	●
0300 075 0600 200	3.0	1.50	4.5	20.0	75	2.85	6	●	●	●
0400 075 0600 200	4.0	2.00	6.0	20.0	75	3.85	6	●	●	●

Ø mm	Tol. µm
0.1 ~ 0.7	0 / -12
0.7 ~ 4.0	0 / -20

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material | Cutting Parameter

576

329

若有技术规格变更, 恕不事先通知



# BN 45 MINIATURE BALLNOSE CUTTERS - with Long Neck

≤ 1.300 N/mm<sup>2</sup> + B0819 / B0909 ≤ 36 - 52 HRC

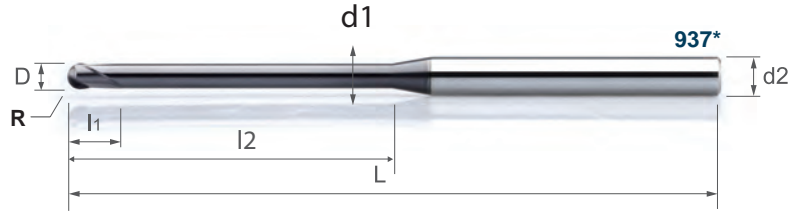
Solid Carbide BN 45 Miniature Ballnose Cutters with long neck, 2 flutes

VHM Kleinst-Radiusfräser BN 45 mit langem Hals, 2 Zähne

Micro-fraises BN 45 en carbure monobloc avec bout hémisphérique et cou long, 2 dents

Micro-frese cilindriche BN 45 a raggio con collo lungo, 2 taglienti

整体硬质合金 BN 45 系列 长颈短刃 球头 立铣刀 2 刃



				<b>B0819</b>	<b>B0909</b>	
VHM	R+0/-0.02	3°	λ = 30°	HPT	HSC	DIN 6535 HA HB HE

EDPNo./EDV-Nr./ CODEusine/CodiceEDP =*+Ødata	Dimension ( mm )							937*		A66*	
	D	R	I1	I2	L	d1	d2 (h6)	B0819	B0909		
0020 050 0400 005	0.2	0.10	0.2	0.5	50	0.15	4	●	●		
0020 050 0400 010	0.2	0.10	0.2	1.0	50	0.15	4	●	●		
0020 050 0400 015	0.2	0.10	0.2	1.5	50	0.15	4	●	●		
0030 050 0400 010	0.3	0.15	0.3	1.0	50	0.25	4	●	●		
0030 050 0400 020	0.3	0.15	0.3	2.0	50	0.25	4	●	●		
0030 050 0400 030	0.3	0.15	0.3	3.0	50	0.25	4	●	●		
0040 050 0400 010	0.4	0.20	0.4	1.0	50	0.35	4	●	●		
0040 050 0400 020	0.4	0.20	0.4	2.0	50	0.35	4	●	●		
0040 050 0400 030	0.4	0.20	0.4	3.0	50	0.35	4	●	●		
0040 050 0400 040	0.4	0.20	0.4	4.0	50	0.35	4	●	●		
0040 050 0400 050	0.4	0.20	0.4	5.0	50	0.35	4	●	●		
0050 050 0400 020	0.5	0.25	0.4	2.0	50	0.45	4	●	●		
0050 050 0400 030	0.5	0.25	0.4	3.0	50	0.45	4	●	●		
0050 050 0400 040	0.5	0.25	0.4	4.0	50	0.45	4	●	●		
0050 050 0400 050	0.5	0.25	0.4	5.0	50	0.45	4	●	●		
0050 050 0400 060	0.5	0.25	0.4	6.0	50	0.45	4	●	●		
0050 050 0400 080	0.5	0.25	0.4	8.0	50	0.45	4	●	●		
0060 050 0400 020	0.6	0.30	0.5	2.0	50	0.55	4	●	●		
0060 050 0400 030	0.6	0.30	0.5	3.0	50	0.55	4	●	●		
0060 050 0400 040	0.6	0.30	0.5	4.0	50	0.55	4	●	●		
0060 050 0400 050	0.6	0.30	0.5	5.0	50	0.55	4	●	●		
0060 050 0400 060	0.6	0.30	0.5	6.0	50	0.55	4	●	●		
0060 050 0400 080	0.6	0.30	0.5	8.0	50	0.55	4	●	●		
0080 050 0400 020	0.8	0.40	0.6	2.0	50	0.75	4	●	●		
0080 050 0400 040	0.8	0.40	0.6	4.0	50	0.75	4	●	●		
0080 050 0400 050	0.8	0.40	0.6	5.0	50	0.75	4	●	●		
0080 050 0400 060	0.8	0.40	0.6	6.0	50	0.75	4	●	●		
0080 050 0400 070	0.8	0.40	0.6	7.0	50	0.75	4	●	●		
0080 050 0400 080	0.8	0.40	0.6	8.0	50	0.75	4	●	●		
0080 050 0400 100	0.8	0.40	0.6	10.0	50	0.75	4	●	●		
0100 050 0400 030	1.0	0.50	0.8	3.0	50	0.95	4	●	●		

cont'd ▶

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material | Cutting Parameter

576

329



# BN 45 MINIATURE BALLNOSE CUTTERS - with Long Neck

≤ 1.300 N/mm<sup>2</sup> + B0819 / B0909 ≤ 36 - 52 HRC

UK Solid Carbide BN 45 Miniature Ballnose Cutters with long neck, 2 flutes

DE VHM Kleinst-Radiusfräser BN 45 mit langem Hals, 2 Zähne

FR Micro-fraises BN 45 en carbure monobloc avec bout hémisphérique et cou long, 2 dents

IT Micro-frese cilindriche BN 45 a raggio con collo lungo, 2 taglienti

CN 整体硬质合金 BN 45 系列 长颈短刃 球头 立铣刀 2 刃



EDPNo./EDV-Nr./ CODEusine/CodiceEDP =*+Ødata	Dimension ( mm )							937*		A66*	
	D	R	I1	I2	L	d1	d2 (h6)	B0819	B0909		
0100 050 0400 040	1.0	0.50	0.8	4.0	50	0.95	4	●	●		
0100 050 0400 050	1.0	0.50	0.8	5.0	50	0.95	4	●	●		
0100 050 0400 060	1.0	0.50	0.8	6.0	50	0.95	4	●	●		
0100 050 0400 070	1.0	0.50	0.8	7.0	50	0.95	4	●	●		
0100 050 0400 080	1.0	0.50	0.8	8.0	50	0.95	4	●	●		
0100 050 0400 090	1.0	0.50	0.8	9.0	50	0.95	4	●	●		
0100 050 0400 100	1.0	0.50	0.8	10.0	50	0.95	4	●	●		
0100 050 0400 120	1.0	0.50	0.8	12.0	50	0.95	4	●	●		
0100 050 0400 140	1.0	0.50	0.8	14.0	50	0.95	4	●	●		
0100 050 0400 160	1.0	0.50	0.8	16.0	50	0.95	4	●	●		
0100 060 0400 200	1.0	0.50	0.8	20.0	60	0.95	4	●	●		
0120 050 0400 060	1.2	0.60	1.0	6.0	50	1.15	4	●	●		
0120 050 0400 080	1.2	0.60	1.0	8.0	50	1.15	4	●	●		
0120 050 0400 100	1.2	0.60	1.0	10.0	50	1.15	4	●	●		
0120 050 0400 120	1.2	0.60	1.0	12.0	50	1.15	4	●	●		
0140 050 0400 080	1.4	0.70	1.1	8.0	50	1.35	4	●	●		
0140 050 0400 120	1.4	0.70	1.1	12.0	50	1.35	4	●	●		
0140 050 0400 160	1.4	0.70	1.1	16.0	50	1.35	4	●	●		
0150 050 0400 080	1.5	0.75	1.2	8.0	50	1.45	4	●	●		
0150 050 0400 120	1.5	0.75	1.2	12.0	50	1.45	4	●	●		
0150 050 0400 160	1.5	0.75	1.2	16.0	50	1.45	4	●	●		
0150 060 0400 180	1.5	0.75	1.2	18.0	60	1.45	4	●	●		
0160 050 0400 080	1.6	0.80	1.3	8.0	50	1.55	4	●	●		
0160 050 0400 120	1.6	0.80	1.3	12.0	50	1.55	4	●	●		
0160 050 0400 160	1.6	0.80	1.3	16.0	50	1.55	4	●	●		
0160 060 0400 200	1.6	0.80	1.3	20.0	60	1.55	4	●	●		
0180 050 0400 080	1.8	0.90	1.4	8.0	50	1.75	4	●	●		
0180 050 0400 120	1.8	0.90	1.4	12.0	50	1.75	4	●	●		
0180 050 0400 160	1.8	0.90	1.4	16.0	50	1.75	4	●	●		
0180 060 0400 200	1.8	0.9	1.4	20	60	1.75	4	●	●		
0200 050 0400 040	2	1	1.6	4	50	1.95	4	●	●		

cont'd ▶

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02 M03 M04 M05 M06 M07 M08 M09 M10 M11 M12 M13 M14 M15 M18 M22 M25 M31 M16 M20 M17 M19 M21 M23 M24 M32  
M26 M27 M28 M33 M01 M29 M30

Working Material | Cutting Parameter

576

329



# BN 45 MINIATURE BALLNOSE CUTTERS - with Long Neck

≤ 1.300 N/mm<sup>2</sup> + B0819 / B0909 ≤ 36 - 52 HRC

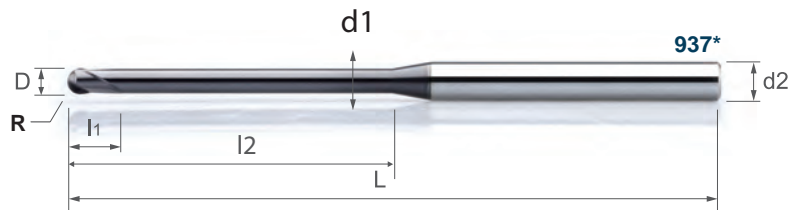
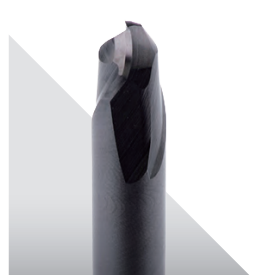
UK Solid Carbide BN 45 Miniature Ballnose Cutters with long neck, 2 flutes

DE VHM Kleinst-Radiusfräser BN 45 mit langem Hals, 2 Zähne

FR Micro-fraises BN 45 en carbure monobloc avec bout hémisphérique et cou long, 2 dents

IT Micro-frese cilindriche BN 45 a raggio con collo lungo, 2 taglienti

CN 整体硬质合金 BN 45 系列 长颈短刃 球头 立铣刀 2 刃



EDPNo./EDV-Nr./ CODEusine/CodiceEDP =*+Ødata	Dimension ( mm )							937*		A66*	
	D	R	I1	I2	L	d1	d2 (h6)	B0819	B0909		
0200 050 0400 060	2	1.00	1.6	6.0	50	1.95	4	●	●		
0200 050 0400 080	2	1.00	1.6	8.0	50	1.95	4	●	●		
0200 050 0400 100	2	1.00	1.6	10.0	50	1.95	4	●	●		
0200 050 0400 120	2	1.00	1.6	12.0	50	1.95	4	●	●		
0200 050 0400 140	2	1.00	1.6	14.0	50	1.95	4	●	●		
0200 050 0400 160	2	1.00	1.6	16.0	50	1.95	4	●	●		
0200 060 0400 180	2	1.00	1.6	18.0	60	1.95	4	●	●		
0200 060 0400 200	2	1.00	1.6	20.0	60	1.95	4	●	●		
0200 060 0400 220	2	1.00	1.6	22.0	60	1.95	4	●	●		
0200 075 0400 250	2	1.00	1.6	25.0	75	1.95	4	●	●		
0200 075 0400 300	2	1.00	1.6	30.0	75	1.95	4	●	●		
0300 050 0600 080	3	1.50	2.4	8.0	50	2.85	6	●	●		
0300 050 0600 100	3	1.50	2.4	10.0	50	2.85	6	●	●		
0300 060 0600 160	3	1.50	2.4	16.0	60	2.85	6	●	●		
0300 060 0600 200	3	1.50	2.4	20.0	60	2.85	6	●	●		
0300 075 0600 250	3	1.50	2.4	25.0	75	2.85	6	●	●		
0300 075 0600 300	3	1.50	2.4	30.0	75	2.85	6	●	●		
0300 075 0600 350	3	1.50	2.4	35.0	75	2.85	6	●	●		
0400 050 0600 100	4	2.00	3.2	10.0	50	3.85	6	●	●		
0400 060 0600 160	4	2.00	3.2	16.0	60	3.85	6	●	●		
0400 060 0600 200	4	2.00	3.2	20.0	60	3.85	6	●	●		
0400 075 0600 250	4	2.00	3.2	25.0	75	3.85	6	●	●		
0400 075 0600 300	4	2.00	3.2	30.0	75	3.85	6	●	●		
0400 075 0600 350	4	2.00	3.2	35.0	75	3.85	6	●	●		
0400 100 0600 400	4	2.00	3.2	40.0	100	3.85	6	●	●		
0400 100 0600 450	4	2.00	3.2	45.0	100	3.85	6	●	●		
0400 100 0600 500	4	2.00	3.2	50.0	100	3.85	6	●	●		

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material | Cutting Parameter

576

329



# BN 45 BALLNOSE CUTTERS - with Taper Neck

≤ 1.300 N/mm<sup>2</sup> + B0819 / B0909 ≤ 36 - 52 HRC

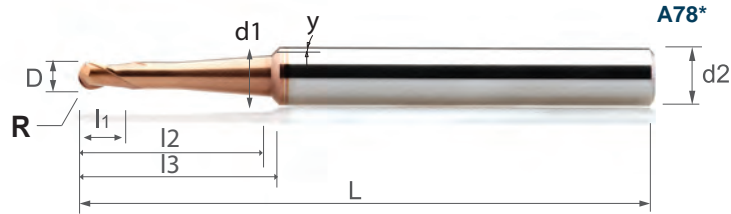
Solid Carbide BN 45 Ballnose Cutters with taper neck, 2 flutes

Fraises à bout hémisphérique BN 45 en carbure monobloc avec cou conique, 2 dents

整体硬口合金 BN 45 系列 球口 立口刀 2 刃

VHM BN 45 Radiusfräser mit konischem Hals, 2 Zähne

Frese cilindrica BN 45 a raggio in metallo duro integrale con collo conico, 2 taglienti



EDPNo./EDV-Nr./ CODEusine/CodiceEDP = *+Ødata	Dimension ( mm )									C59*	939*	A78*
	D	R	l1	l2	l3	L	d2 (h6)	y	G6110	B0819	B0909	
0100 020 06 080	1.0	0.5	1.5	4.0	20	60	6	8°	●	●	●	
0100 040 06 040	1.0	0.5	1.5	4.0	40	75	6	4°	●	●	●	
0150 020 06 070	1.5	0.75	2.3	7.5	20	60	6	7°	●	●	●	
0150 040 06 035	1.5	0.75	2.3	7.5	40	75	6	3.5°	●	●	●	
0200 020 06 067	2.0	1	3.0	8.0	20	60	6	6.7°	●	●	●	
0200 040 06 029	2.0	1	3.0	8.0	40	75	6	2.9°	●	●	●	
0200 040 06 010	2.0	1	3.0	8.0	40	75	6	1°	●	●	●	
0300 020 06 043	3.0	1.5	3.5	10.0	20	60	6	4.3°	●	●	●	
0300 040 06 022	3.0	1.5	3.5	12.0	40	75	6	2.2°	●	●	●	
0300 045 06 010	3.0	1.5	3.5	12.0	45	75	6	1°	●	●	●	
0400 020 06 029	4.0	2	4.0	12.0	20	60	6	2.9°	●	●	●	
0400 040 06 014	4.0	2	4.0	20.0	40	75	6	1.4°	●	●	●	
0400 060 06 010	4.0	2	4.0	20.0	60	100	6	1°	●	●	●	
0500 040 06 007	5.0	2.5	6.0	25.0	40	75	6	0.7°	●	●	●	
0600 020 06 000	6.0	3	6.0	20.0	20	60	6	-	●	●	●	
0600 040 06 000	6.0	3	6.0	40.0	40	75	6	-	●	●	●	
0600 060 08 010	6.0	3	6.0	25.0	60	100	8	1°	●	●	●	
0600 080 08 010	6.0	3	6.0	25.0	80	125	8	1°	●	●	●	
0800 025 08 000	8.0	4	7.0	25.0	25	64	8	-	●	●	●	
0800 060 08 000	8.0	4	7.0	60.0	60	100	8	-	●	●	●	
0800 075 10 008	8.0	4	7.0	30.0	75	125	10	0.8°	●	●	●	
0800 105 10 006	8.0	4	7.0	20.0	105	150	10	0.6°	●	●	●	
1000 030 10 000	10.0	5	8.0	30.0	30	75	10	-	●	●	●	
1000 075 10 000	10.0	5	8.0	75.0	75	125	10	-	●	●	●	
1000 070 12 008	10.0	5	8.0	30.0	70	125	12	0.8°	●	●	●	
1200 035 12 000	12.0	6	10.0	35.0	35	100	12	-	●	●	●	
1200 070 12 000	12.0	6	10.0	70.0	70	125	12	-	●	●	●	
1200 090 16 013	12.0	6	10.0	35.0	90	150	16	1.3°	●	●	●	

Material group - Material-Gruppe - Groupe matière - Gruppo materiali - 材质主类

M02	M03	M04	M05	M06	M07	M08	M09	M10	M11	M12	M13	M14	M15	M18	M22	M25	M31	M16	M20	M17	M19	M21	M23	M24	M32
M26	M27	M28	M33	M01	M29	M30																			

Working Material | Cutting Parameter