

SOLID CARBIDE PRECISION TOOLS





COMPANY PROFILE

At STN Tools Co. Ltd. we believe that only utilizing the most sophisticated equipments, enables us to produce the highest accuracy of cutting tools, and to achieve international quality standards and meet customer demands

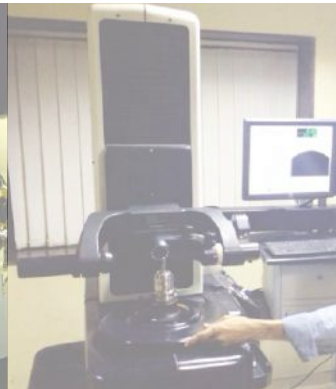
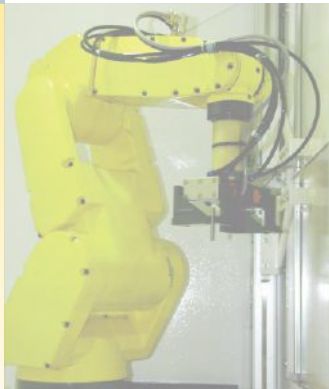
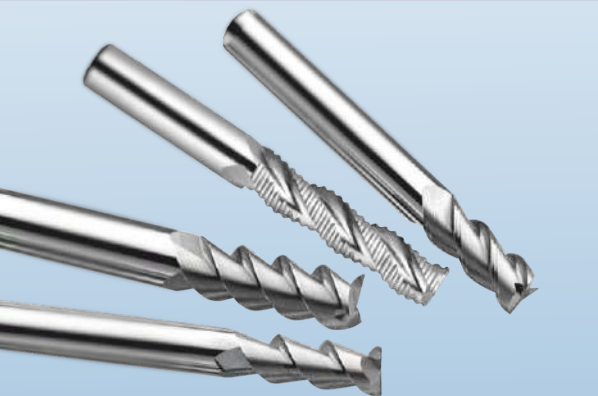
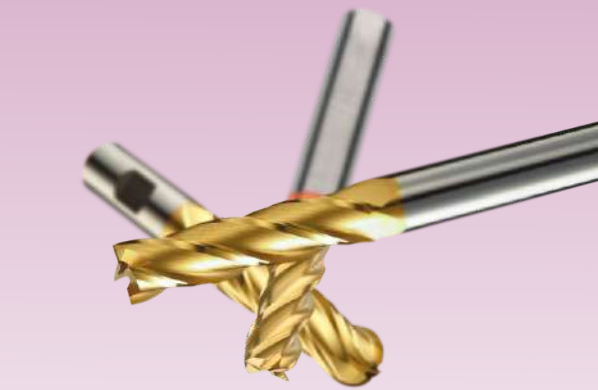
Since our advent in 2001 we have made gradual progress in the international markets. We enjoy our impeccable reputation as quality manufacturers of high performance cutting tools purely on the basis of research and high quality standards adopted by us.

The tools are made of selected quality of ultra fine solid carbide grade under highly controlled production and quality inspection conditions to achieve quality and consistency in efficient cutting and longer life. Ultra fine solid carbide rods used are of the highest quality and sourced from Europe. We give utmost care on designing the geometry of the tools on advanced CAD system and also on the rigid quality control of our tools to ensure the correct geometry of the tool which is extremely vital for effective and efficient cutting operations.

Our extensive research backed by experience of over 14 years in today's complex environment of modern manufacturing industrial processes allows us to understand better and offer effective products committed to fulfilling your requirements. Various industries and users have discovered and realize the value of our products for their complex and diverse industrial manufacturing processes. We take pride in establishing ourselves not only as manufacturers but in also in providing a Tool Management System to our customers.

We offer performance oriented cost benefitting reliable solutions vide our vast range of products to give substantial reduction in production and inventory costs and keep production smoother and perform much better.

Our philosophy is to be precise, maintain accuracy, consistency and to build tools that are highest in quality and highly effective in performance. With STN Tools Co. Ltd. quality is a habit.



Legend to the product page

Performance rating of end mills

X 60 Series	High-performance End mills to machine hard steels upto ≤ 60 HRC
Y 65 Series	High-performance End mills to machine hard steels upto ≤ 65 HRC
A STAR Series	High-performance End mills to machine various types of aluminum and non ferrous materials
D Series	High-performance drills with and without coolant channels holes to machine various materials
R Series	High-performance Reamers with LH & RH Helix to machine various materials

Number of cutting edges and form of the corner

	2 Flute - Flat Large chip room & small core diameter.		3 Flute - Flat The most universal milling tool.		4 Flute - Flat Universal geometry, used for side & face milling & peripheral
	4 Flute / Variable Helix 35° / 38° 40° / 42°		6 Flute - Flat Excellent for finishing		2 Flute - Ball Nose Excellent for mold & die finishing
	2 Flute - Corner Radius Excellent for mold & die finishing		4 flute - Ball Nose Excellent for mold & die finishing		4 flute - Corner Radius Excellent for mold & die finishing
	2 Flute - Taper End mill Excellent for taper milling applications		2 Flute - center Drill Excellent for center drilling applications		2 Flute - Drill With internal coolant
	4 Flute - Burnishing Drill Excellent for drilling applications		2 Flute - Drill Excellent for drilling applications		4 Flute - Reamer Excellent for reaming applications
	6 Flute - Reamer Excellent for finish reaming applications				

Tungsten carbide grades

SMG 0.4mm	Super micro grain	UMG 0.2mm	Ultra micro grain	MG 0.6mm	Micro grain
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Legend to the product page

Types of coating

AT COATING	Max temp-900° Coefficient ratio-0.45 Colour : balckish blue	SI COATING	Max temp-1000° Coefficient ratio-0.45 Colour : brown	TIS COATING	Max temp-800° Coefficient ratio-0.40 Colour : copper	NR COATING	Max temp-1100° Coefficient ratio-0.35 Colour : blackish grey
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Flute finish, drilling depth & various normenclatures

UC MIRROR POLISHED	Uncoated Flutes are mirror polished	COARSE PITCH	Rough milling With excellent material removing	FINE PITCH	Fine rough milling With excellent fine removing ability	HEAVY CUTTING	Heavy material removal designed for high rate material removal
FORM A	Protected center With 2 angles	N TYPE	Point Angle as per N type Geometry	ISO 10898	As per ISO Std	DIN 6535-HA	Available shank style
DIN 6537 K DIN 333 A	Both as per DIN Tolerance	3 x D	Drilling depth 3xD	5 x D	Drilling depth 5xD	8 x D	Drilling depth 8xD

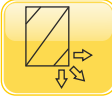
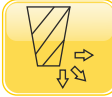
Flute length & Shank length types

LN SERIES	Long Neck Type	LF SERIES	Long Flute Type	LS SERIES	Long Shank Type	TEM SERIES	Taper End Type
LTN SERIES	Long Taper Neck Type						

Helix angles

30°	Helix angles 30 degrees	35°	Helix angles 35 degrees	45°	Helix angles 45 degrees	55°	Helix angles 55 degrees
12° 15°	Unequal Helix angles 12 degrees 15 degrees	35° 38°	Variable Helix angles 35 degrees 38 degrees	40° 42°	Variable Helix angles 40 degrees 42 degrees	0° NUT	Helix angle 0 degrees

Feed directions, point angles & rotation

LH	Left hand Cutting	RH	Right hand Cutting	60° 120°	Point angles 60 degrees 120 degrees	90° 140°	Point angles 90 degrees 140 degrees
	Feed direction The arrow show the allowed feed direction		Feed direction The arrow show the allowed feed direction		Feed direction The arrow show the allowed feed direction		Feed direction The arrow show the allowed feed direction
140°	Point angles 140 degrees	140°	Point angles 140 degrees with internal coolant	90°	Point angles 90 degrees	120°	Point angles 120 degrees

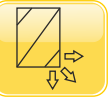
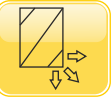
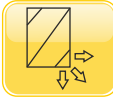
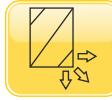
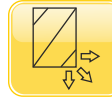
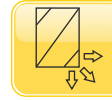
High Performance End Mills for (≤ 60 HRC)	19 - 47	X 60 Series
High Performance End Mills for (≤ 65 HRC)	49 - 69	Y 65 Series
High Performance End Mills for Aluminium	71 - 78	A STAR Series
High Performance Twist Drills	80 - 102	D Series
High Performance Solid Carbide Reamers	104 - 112	R Series
Formulae	113	
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X60Series							
	XF Star 4 (≤60 HRC)	XF Star 2 (≤60 HRC)	Super Star (≤60 HRC)	Multistar (≤60 HRC)	Multistar LF (≤60 HRC)	XF Star 4 LS (≤60 HRC)	XF Star 2 LS (≤60 HRC)
	4 Flute	2 Flute	3 Flute	6 Flute	6 Flute	4 Flute	2 Flute
	19	19	20	21	21	22	23

Tool illustration							
	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING
	35°	35°	45°	45°	45°	35°	35°
	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm
							
					LF SERIES	LS SERIES	LS SERIES

Steel	R _m < 850	☒	☒	☒	☒	☒	☒	☒
	R _m 850-1300	☒	☒	☒	☒	☒	☒	☒
	R _m 1300-1500	☒	☒	☒	☒	☒	☒	☒
M	Stainless Steel	☐	☐	☐	☒	☒	☐	☐
K	Cast Iron	☒	☒	☒	☐	☐	☒	☒
N	Copper	☐	☐	☐	☐	☐	☐	☐
S	Titanium	☒	☒	☒	☒	☒	☒	☒
Hardened Steel	HRC 48-55	☒	☒	☒	☒	☒	☒	☒
	HRC 56-60	☐	☐	☐	☐	☐	☐	☐
	HRC < 60							

X60Series							
	XF Star 4 LF (≤60 HRC)	XF Star 2 LF (≤60 HRC)	Prostar (≤60 HRC)	Tristar (≤60 HRC)	Varistar 35° / 38° (≤60 HRC)	Varistar 40° / 42° (≤60 HRC)	Hulkstar Coarse Pitch (≤60 HRC)
	4 Flute	2 Flute	4 Flute	4 Flute	6 Flute	4 Flute	4 Flute
	24	25	26	27	28	29	30

Tool illustration							
	AT COATING	AT COATING	AT COATING TIS COATING	NR COATING TIS COATING	AT COATING TIS COATING	AT COATING TIS COATING	AT COATING
	35°	35°	45°	45°	35° 38°	40° 42°	45°
	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm
							
	LF SERIES	LF SERIES					COARSE PITCH

Steel	R _m < 850	■	■	■	■	■	■	■
	R _m 850-1300	■	■	■	■	■	■	■
	R _m 1300-1500	■	■	■	■	■	■	■
M	Stainless Steel	□	□	□	■	■	■	□
K	Cast Iron	■	■	■		■	■	■
N	Copper	□	□	□	□	□	□	□
S	Titanium	■	■	■	■	■	■	■
Hardened Steel	HRC 48-55	■	■	■	■	■	■	■
	HRC 56-60	□	□	□	□	□	□	□
	HRC < 60							

X 60 Series							
	Hulkstar Fine Pitch (≤60 HRC)	Microstar FM (≤60 HRC)	XFL Star 4 LN (≤60 HRC)	XFL Star 2 LN (≤60 HRC)	XFN Star 2 TEM (≤60 HRC)	XB Star 4 (≤60 HRC)	XB Star 2 (≤60 HRC)
	3 Flute	2 Flute	4 Flute	2 Flute	2 Flute	4 Flute	2 Flute
	30	31	32	33	34 - 36	37	37

Tool illustration							
	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING
	45°	35°	35°	35°	35°	30°	30°
	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm
							
	FINE PITCH		LN SERIES	LN SERIES	TEM SERIES		

Steel	R _m < 850	■	■	■	■	■	■	■
	R _m 850-1300	■	■	■	■	■	■	■
	R _m 1300-1500	■	■	■	■	■	■	■
M	Stainless Steel	□	□	■	■	□	■	■
K	Cast Iron	■	■	■	■	□	□	□
N	Copper	□	□	□	□	□	□	□
S	Titanium	■	■	■	■	□	□	□
Hardened Steel	HRC 48-55	■	■	■	■	■	■	■
	HRC 56-60	□	□	□	□	□	□	□
	HRC < 60							

X 60 Series							
	XB Star 4 LS (≤60 HRC)	XB Star 2 LS (≤60 HRC)	Microstar BM (≤60 HRC)	XBL Star 4 LN (≤60 HRC)	XBL Star 2 LN (≤60 HRC)	XBN Star 2 LTN (≤60 HRC)	X Cornstar 4 (≤60 HRC)
	4 Flute	2 Flute	2 Flute	4 Flute	2 Flute	2 Flute	4 Flute
	38	39	40	41	42	43	44

Tool illustration							
	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING
	30°	30°	30°	30°	30°	30°	35°
	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm
							
	LS SERIES	LS SERIES		LN SERIES	LN SERIES	LTN SERIES	

Steel	R _m < 850	■	■	■	■	■	■	■
	R _m 850-1300	■	■	■	■	■	■	■
	R _m 1300-1500	■	■	■	■	■	■	■
M	Stainless Steel	■	□	□	■	■	□	■
K	Cast Iron	□	■	■	□	□	■	□
N	Copper	□	□	□	□	□	□	□
S	Titanium	□	■	■	■	■	■	■
Hardened Steel	HRC 48-55	■	■	■	■	■	■	■
	HRC 56-60	□	□	□	□	□	□	□
	HRC < 60							

X 60 Series							
	X Cornstar 2 (≤60 HRC)	X Cornstar 4 LS (≤60 HRC)	X Cornstar 2 LS (≤60 HRC)	XCL Star 4 LN (≤60 HRC)	XCL Star 2 LN (≤60 HRC)		
	2 Flute	4 Flute	2 Flute	4 Flute	2 Flute		
Page No.	44	45	45	46	47		

Tool illustration							
	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING		
	35°	35°	35°	35°	35°		
	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm	SMG 0.4mm		
							
		LS SERIES	LS SERIES	LN SERIES	LN SERIES		

Steel	R _m < 850	■	■	■	■	■		
	R _m 850-1300	■	■	■	■	■		
	R _m 1300-1500	■	■	■	■	■		
M	Stainless Steel	■	■	■	■	■		
K	Cast Iron	□	■	■	□	□		
N	Copper	□	□	□	□	□		
S	Titanium	■	□	□	■	■		
Hardened Steel	HRC 48-55	■	■	■	■	■		
	HRC 56-60	□	□	□	□	□		
	HRC < 60							

							
	YF Star 4 (≤65 HRC)	YF Star 2 (≤65 HRC)	Super Star (≤65 HRC)	Multistar (≤65 HRC)	Multistar LF (≤65 HRC)	YF Star 4 LS (≤65 HRC)	YF Star 2 LS (≤65 HRC)
	4 Flute	2 Flute	3 Flute	6 Flute	6 Flute	4 Flute	2 Flute
	49	49	50	51	51	52	53

Tool illustration							
	SI COATING	SI COATING	SI COATING	SI COATING	SI COATING	SI COATING	SI COATING
	35°	35°	45°	45°	45°	35°	35°
	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm
							
					LF SERIES	LS SERIES	LS SERIES

Steel	R _m < 850	☒	☒	☒	☒	☒	☒	☒
	R _m 850-1300	☒	☒	☒	☒	☒	☒	☒
	R _m 1300-1500	☒	☒	☒	☒	☒	☒	☒
M	Stainless Steel	☒	☒	☒	☒	☒	☒	☒
K	Cast Iron	☐	☐	☐	☐	☐	☐	☐
N	Copper	☐	☐	☐	☐	☐	☐	☐
S	Titanium	☒	☒	☒	☒	☒	☒	☒
Hardened Steel	HRC 48-55	☒	☒	☒	☒	☒	☒	☒
	HRC 56-60	☒	☒	☒	☒	☒	☒	☒
	HRC < 65	☐	☐	☐	☐	☐	☐	☐

Y 65 Series							
	YF Star 4 LF (≤65 HRC)	YF Star 2 LF (≤65 HRC)	YFL Star 4 LN (≤65 HRC)	YFL Star 2 LN (≤65 HRC)	Microstar FM (≤65 HRC)	YB Star 4 (≤65 HRC)	YB Star 2 (≤65 HRC)
	4 Flute	2 Flute	4 Flute	2 Flute	2 Flute	4 Flute	2 Flute
Page No.	54	55	56	57	58	59	59

Tool illustration							
	SI COATING	SI COATING	SI COATING	SI COATING	SI COATING	SI COATING	SI COATING
	35°	35°	35°	35°	35°	30°	30°
	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm
	LF SERIES	LF SERIES	LN SERIES	LN SERIES			

Steel	R _m < 850	■	■	■	■	■	■	■
	R _m 850-1300	■	■	■	■	■	■	■
	R _m 1300-1500	■	■	■	■	■	■	■
M	Stainless Steel	■	■	■	■	■	■	■
K	Cast Iron	□	□	□	□	□	□	□
N	Copper	□	□	□	□	□	□	□
S	Titanium	■	■	■	■	■	■	■
Hardened Steel	HRC 48-55	■	■	■	■	■	■	■
	HRC 56-60	■	■	■	■	■	■	■
	HRC < 65	□	□	□	□	□	□	□

							
	YB Star 4 LS (≤65 HRC)	YB Star 2 LS (≤65 HRC)	Microstar BM (≤65 HRC)	YBL Star 4 LN (≤65 HRC)	YBL Star 2 LN (≤65 HRC)	YBN Star 2 LTN (≤65 HRC)	Y Cornstar 4 (≤65 HRC)
	4 Flute	2 Flute	2 Flute	4 Flute	2 Flute	2 Flute	4 Flute
	60	61	62	63	64	65	66

Tool illustration							
	SI COATING	SI COATING	SI COATING	SI COATING	SI COATING	SI COATING	SI COATING
	30°	30°	30°	30°	30°	30°	35°
	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm
							
	LS SERIES	LS SERIES		LN SERIES	LN SERIES	LTN SERIES	

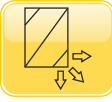
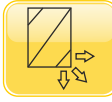
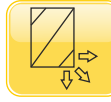
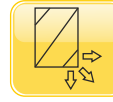
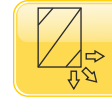
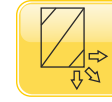
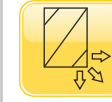
Steel	R _m < 850	■	■	■	■	■	■	■
	R _m 850-1300	■	■	■	■	■	■	■
	R _m 1300-1500	■	■	■	■	■	■	■
M	Stainless Steel	■	■	■	■	■	■	■
K	Cast Iron	□	□	□	□	□	□	□
N	Copper	□	□	□	□	□	□	□
S	Titanium	■	■	■	■	■	■	■
Hardened Steel	HRC 48-55	■	■	■	■	■	■	■
	HRC 56-60	■	■	■	■	■	■	■
	HRC < 65	□	□	□	□	□	□	□

Y 65 Series							
	Y Cornstar 2 (≤65 HRC)	Y Cornstar 4 LS (≤65 HRC)	Y Cornstar 2 LS (≤65 HRC)	YCL Star 4 LN (≤65 HRC)	YCL Star 2 LN (≤65 HRC)		
	2 Flute	4 Flute	2 Flute	4 Flute	2 Flute		
Page No.	66	67	67	68	69		

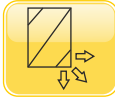
Tool illustration							
	SI COATING	SI COATING	SI COATING	SI COATING	SI COATING		
	35°	35°	35°	35°	35°		
	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm	UMG 0.2mm		
							
		LS SERIES	LS SERIES	LN SERIES	LN SERIES		

Steel	R _m < 850	☒	☒	☒	☒	☒	☒	☒
	R _m 850-1300	☒	☒	☒	☒	☒	☒	☒
	R _m 1300-1500	☒	☒	☒	☒	☒	☒	☒
M	Stainless Steel	☒	☒	☒	☒	☒	☒	☒
K	Cast Iron	☐	☐	☐	☐	☐	☐	☐
N	Copper	☐	☐	☐	☐	☐	☐	☐
S	Titanium	☒	☒	☒	☒	☒	☒	☒
Hardened Steel	HRC 48-55	☒	☒	☒	☒	☒	☒	☒
	HRC 56-60	☒	☒	☒	☒	☒	☒	☒
	HRC < 65	☐	☐	☐	☐	☐	☐	☐

A STAR Series							
	A Star 45°	A Star 45°	A Star 55°	A Star 45° LF	A Star 55° LF	A Star 45° LS	A Star 55° LS
	2 Flute	3 Flute	3 Flute	3 Flute	3 Flute	3 Flute	3 Flute
	71	71	72	73	74	75	76

Tool illustration							
	UC MIRROR POLISHED	UC MIRROR POLISHED	UC MIRROR POLISHED	UC MIRROR POLISHED	UC MIRROR POLISHED	UC MIRROR POLISHED	UC MIRROR POLISHED
	45°	45°	55°	45°	55°	45°	55°
	MG 0.6mm	MG 0.6mm	MG 0.6mm	MG 0.6mm	MG 0.6mm	MG 0.6mm	MG 0.6mm
							
				LF SERIES	LF SERIES	LS SERIES	LS SERIES

Material	Aluminum alloy upto 3% Si	☒	☒	☒	☒	☒	☒	☒
	Al cast alloys	☐	☐	☐	☐	☐	☐	☐
	Copper	☒	☒	☒	☒	☒	☒	☒
	Brass, Bronze	☒	☒	☒	☒	☒	☒	☒
	Magnesium alloys	☐	☐	☐	☐	☐	☐	☐
	Plastics	☒	☒	☒	☒	☒	☒	☒

A STAR Series								
Tool Indent		A Star Hulk	AHC - Star					
Number of Flutes		2 Flute	3 Flute					
Page No.		77	78					
Tool illustration		 UC MIRROR POLISHED 45° MG 0.6mm  COARSE PITCH	 UC MIRROR POLISHED 45° MG 0.6mm  HEAVY CUTTING					
N	Aluminum alloy upto 3% Si	☒	☒					
	Al cast alloys	☐	☐					
	Copper	☒	☒					
	Brass, Bronze	☒	☒					
	Magnesium alloys	☐	☐					
	Plastics	☒	☒					

D Series							
	Ratiostar 3 x D	Ratiostar 5 x D	Precistar 3 x D	Precistar 5 x D	Precistar 8 x D	Burnstar 5 x D	Burnstar 8 x D
	2 Flute	2 Flute	2 Flute	2 Flute	2 Flute	2 Flute	2 Flute
	80 - 82	83 - 85	86 - 88	89 - 91	92 - 94	95 - 96	97

Tool illustration							
	3 x D	5 x D	3 x D	5 x D	8 x D	5 x D	8 x D
	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING	AT COATING
	30°	30°	30°	30°	30°	0° NUT	0° NUT
	SMG 0.6mm	SMG 0.6mm	SMG 0.6mm	SMG 0.6mm	SMG 0.6mm	SMG 0.4mm	SMG 0.4mm
							
	N TYPE	N TYPE	N TYPE	N TYPE	N TYPE		
	DIN 6537 K	DIN 6537 K	DIN 6537 K	DIN 6537 K	DIN 6537 K	DIN 6537 K	DIN 6537 K
	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA	DIN 6535-HA

Steel	R _m < 850	☒	☒	☒	☒	☒	☒	☒
	R _m 850-1300	☒	☒	☒	☒	☒	☒	☒
	R _m 1300-1500	☒	☒	☒	☒	☒	☒	☒
M	Stainless Steel	☐	☐	☐	☐	☐	☐	☐
K	Cast Iron	☒	☒	☒	☒	☒	☒	☒
N	Copper	☐	☐	☐	☐	☐	☐	☐
S	Titanium	☐	☐	☐	☐	☐	☐	☐
Hardened Steel	HRC 48-55	☒	☒	☒	☒	☒	☒	☒
	HRC 56-60	☐	☐	☐	☐	☐	☐	☐

D Series								
Tool Indent		NC Star 90°	NC Star 120°	Double End	Single End	Step Drill		
Number of Flutes		2 Flute	2 Flute	2 Flute	2 Flute	2 Flute		
Page No.		98	99	100	101	102		
Tool illustration								
		AT COATING	AT COATING	FORM A	FORM A	AT COATING		
								
		SMG 0.6mm	SMG 0.6mm	MG 0.6mm	MG 0.6mm	SMG 0.4mm		
								
		ISO 10898	ISO 10898	DIN 333 A	DIN 333 A	DIN 6537		
Steel	R _m < 850	☒	☒	☒	☒	☒		
	R _m 850-1300	☒	☒	☒	☒	☒		
	R _m 1300-1500	☒	☒	☐	☐	☒		
M	Stainless Steel	☐	☐	☐	☐	☐		
K	Cast Iron	☒	☒	☒	☒	☒		
N	Copper	☒	☒	☒	☒	☒		
S	Titanium	☐	☐	☐	☐	☐		
Hardened Steel	HRC 48-55	☒	☒	☐	☐	☒		
	HRC 56-60	☐	☐					

R Series								
Tool Indent		Ream Star Left Hand	Ream Star Right Hand	Ream Star Chucking				
Number of Flutes								
Page No.		104 - 107	108 - 111	112				
Tool illustration								
								
		UC MIRROR POLISHED	UC MIRROR POLISHED	UC MIRROR POLISHED				
		12° 15°	12° 15°	0°				
		SMG 0.6mm	SMG 0.6mm	SMG 0.6mm				
								
Steel	R _m < 850	☒	☒	☒				
	R _m 850-1300	☒	☒	☒				
	R _m 1300-1500	☒	☒	☒				
M	Stainless Steel	☐	☐	☐				
K	Cast Iron	☒	☒	☒				
N	Copper	☒	☒	☒				
S	Titanium	☐	☐	☐				
Hardened Steel	HRC 48-55	☐	☐	☐				
	HRC 56-60							

X60 Series

Solid Carbide End Mills



X60 Series

X60 Series, are used for machining of material with the HRC between 45-55, and also the “Miniature End Mills” are made by the same material. This special ultra fine carbide grade is used for very sophisticated materials without compromising high speed machining

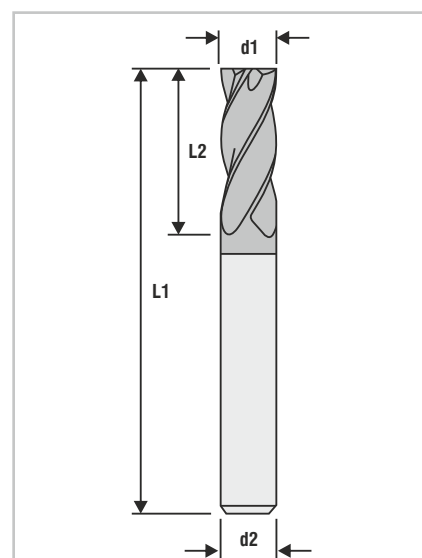
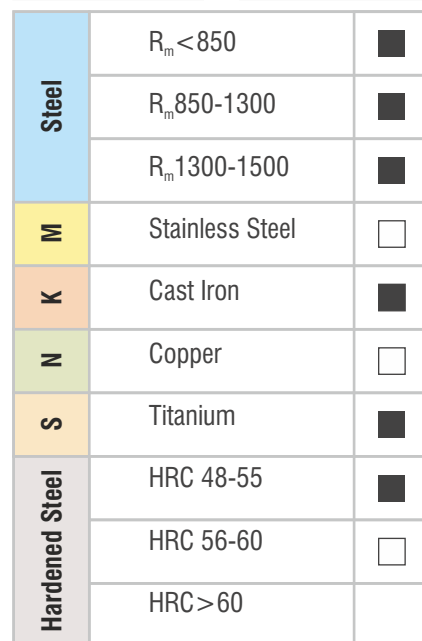
ISO code	USA code	Grain Size	Cobalt Percentage	Density	Hardness		
			Co(%)	g/cm ³	HV10	HV30	HRA
K20-K30	C-2	0.4μm	12.0	14.1	1760	1730	92.7



Flat End Mills - Regular Series

Flat End Mills - Regular Series

Available EX stock / subject to prior sale
SMG - Super-Fine Micron Grade



Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

X 60 Series

Superstar (≤ 60 HRC)

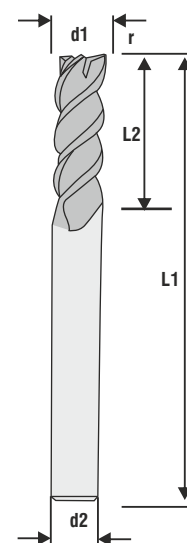
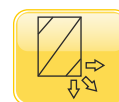
Slotting & Pocketing End Mills – Regular Series

Article No.		Dimension (mm)				
3 Flute		Ø d1 h10	Ø d2 h6	L2	L1	AT-coated
SU4-SEM 3030		3	4	9	50	■
SU4-SEM 3040		4	4	11	50	■
SU6-SEM 3050		5	6	13	50	■
SU6-SEM 3060		6	6	16	50	■
SU8-SEM 3080		8	8	20	60	■
SU10-SEM 3100		10	10	25	75	■
SU12-SEM 3120		12	12	30	75	■
SU16-SEM 3160		16	16	40	100	■
SU20-SEM 3200		20	20	45	100	■

FLAT End Mills



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	



Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

Available EX stock / subject to prior sale
SMG - Super-Fine Micron Grade

Multi Fluted End Mills - Regular Series

Multi Fluted End Mills - Long Flute Series

Article No.		Dimension (mm)				
6 Flutes		Ø d1 h10	Ø d2 h6	L2	L1	AT-coated
X6-SMF 6060		6.0	6	16	50	■
X8-SMF 6080		8.0	8	20	60	■
X10-SMF 6100		10.0	10	25	75	■
X12-SMF 6120		12.0	12	30	75	■
X16-SMF 6160		16.0	16	40	100	■
X20-SMF 6200		20.0	20	45	100	■

Multi Fluted End Mills - Long Flute Series

Article No.		Dimension (mm)				
6 Flutes		Ø d1 h10	Ø d2 h6	L2	L1	AT-coated
X6-SMF 6060 LF		6.0	6	24	75	■
X8-SMF 6080 LF		8.0	8	30	75	■
X10-SMF 6100 LF		10.0	10	40	100	■
X12-SMF 6120 LF		12.0	12	45	100	■
X16-SMF 6160 LF		16.0	16	64	150	■
X20-SMF 6200 LF		20.0	20	72	150	■

- ☒ Available EX stock / subject to prior sale
☐ Only Available against orders with **MOQ 20 Nos.**
SMG - Super-Fine Micron Grade



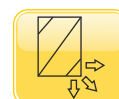
**X
60
Series**

Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	■
K	Cast Iron	□
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	



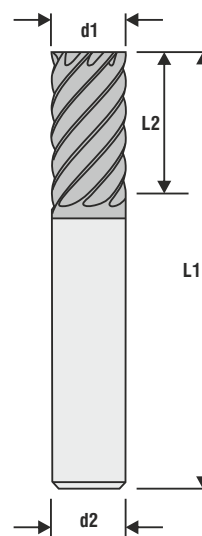
**Regular
Series
LF
SERIES**

**AT
COATING**



I 45°

SMG
0.4mm



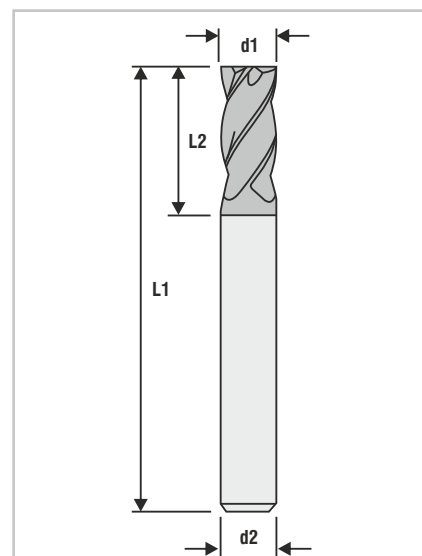
Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

XF Star 4 (≤ 60 HRC) LS

Flat End Mills - Long Shank Series



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	□



Tolerance

Diameter	Range
$3 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

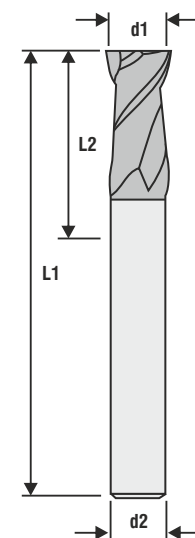
4 Flute	Dimension (mm)					AT-coated
	$\varnothing d1$	$\varnothing d2$ h10	L2 h6	L1		
XF3-SEM 4030 LS 75	3	3	9	75		■
XF4-SEM 4030 LS 75	3	4	9	75		■
XF4-SEM 4040 LS 75	4	4	11	75		■
XF4-SEM 4040 LS 100	4	4	11	100		■
XF6-SEM 4030 LS 75	3	6	9	75		■
XF6-SEM 4040 LS 75	4	6	11	75		■
XF6-SEM 4050 LS 75	5	6	13	75		■
XF6-SEM 4060 LS 75	6	6	16	75		■
XF6-SEM 4040 LS 100	4	6	11	100		■
XF6-SEM 4060 LS 100	6	6	16	100		■
XF8-SEM 4080 LS 75	8	8	20	75		■
XF8-SEM 4080 LS 100	8	8	20	100		■
XF10-SEM 4100 LS 100	10	10	25	100		■
XF10-SEM 4100 LS 150	10	10	25	150		■
XF12-SEM 4120 LS 100	12	12	30	100		■
XF12-SEM 4120 LS 150	12	12	30	150		■
XF16-SEM 4160 LS 150	16	16	40	150		■
XF20-SEM 4200 LS 150	20	20	45	150		■

■ Available EX stock / subject to prior sale
SMG - Super-Fine Micron Grade
LS - Long Shank for deep reach moulds and dies

Flat End Mills - Long Shank Series

Flat End Mills - Long Shank Series

Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade
LS - Long Shank for deep reach moulds and dies



Tolerance	
Diameter	Range
$3 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

FLAT End Mills

X 60 Series

XF Star 4 (≤ 60 HRC) LF

Flat End Mills - Long Flute Series

Article No.		Dimension (mm)				
4 Flute		Ø d1	Ø d2 h10	L2 h6	L1	AT-coated
XF3-SEM 4030 LF 75		3	3	12	75	■
XF4-SEM 4030 LF 75		3	4	12	75	■
XF4-SEM 4040 LF 75		4	4	15	75	■
XF6-SEM 4050 LF 75		5	6	20	75	■
XF6-SEM 4060 LF 75		6	6	25	75	■
XF6-SEM 4060 LF 100		6	6	30	100	■
XF8-SEM 4080 LF 100		8	8	40	100	■
XF10-SEM 4100 LF 100		10	10	45	100	■
XF12-SEM 4120 LF 100		12	12	50	100	■
XF16-SEM 4160 LF 150		16	16	75	150	■
XF20-SEM 4200 LF 150		20	20	80	150	■

FLAT End Mills

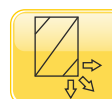


Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	



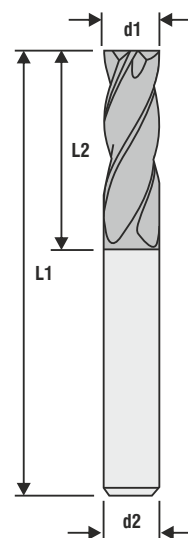
LF
SERIES

AT COATING



| 35°

SMG
0.4mm



Tolerance

Diameter	Range
$3 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade
LF - Long Flute for long wall moulds and dies

Flat End Mills - Long Flute Series

Flat End Mills - Long Flute Series

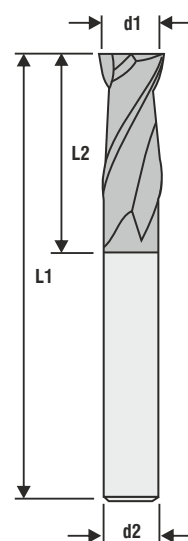


X 60 Series

Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☐
K	Cast Iron	☒
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☐
	HRC > 60	☐



FLAT End Mills



Tolerance	
Diameter	Range
$3 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

X 60 Series

Prostar (≤ 60 HRC)

High Performance End Mills – Regular Series

Article No.	Dimension (mm)					
4 Flute	Ø d1 h10	Ø d2 h6	L2	L1	TIS-coated	AT-coated
PRO-SEM 4030	3	6	9	50		
PRO-SEM 4040	4	6	11	50		
PRO-SEM 4050	5	6	13	50		
PRO-SEM 4060	6	6	16	50		
PRO-SEM 4080	8	8	20	60		
PRO-SEM 4100	10	10	25	75		
PRO-SEM 4120	12	12	30	75		
PRO-SEM 4140	14	16	35	100		
PRO-SEM 4160	16	16	40	100		
PRO-SEM 4200	20	20	45	100		

- Available ex stock / subject to prior sale
- **TIS** Coating will be available on request for machining Titanium, Inconel & Stainless steel for above average performance
- **SMG** - Super-Fine Micron Grade

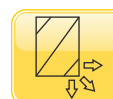


Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	



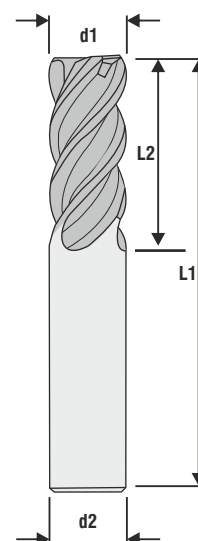
**TIS
COATING**

AT COATING



| 45°

SMG
0.4mm



Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

High Performance End Mills – Regular Series

*Specially Made for Machining Stainless Steel

[illegible]

- Available ex stock / subject to prior sale

NR Coating will be available on request for machining Titanium, Inconel & Stainless steel for extreme performance

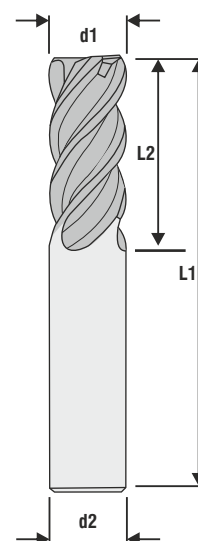
SMG - Super-Fine Micron Grade



Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☒
K	Cast Iron	☐
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☐
	HRC > 60	☐



FLAT End Mills



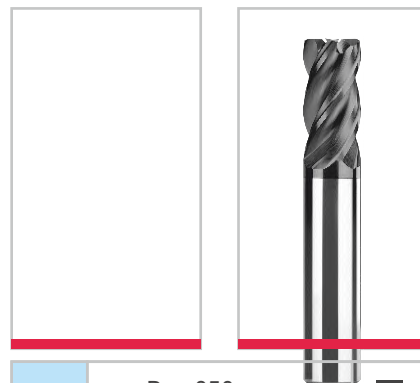
Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

X 60 Series

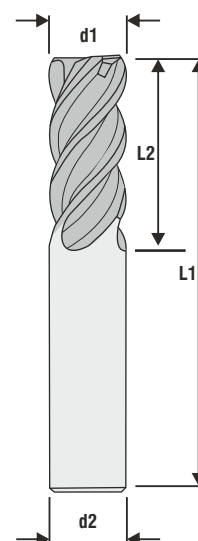
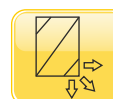
Varistar 35° / 38° (≤60 HRC)

Unequal Helix and Pitch - HPC

Article No.			Dimension (mm)					
4 Flute			Ø d1 h10	Ø d2 h6	L2	L1	TIS-coated	AT-coated
VA-SEM 4030	35° / 38°	3	3	15	50			
VA-SEM 4040	35° / 38°	4	4	15	50			
VA-SEM 4050	35° / 38°	5	6	13	50			
VA-SEM 4060	35° / 38°	6	6	15	50			
VA-SEM 4080	35° / 38°	8	8	20	60			
VA-SEM 4100	35° / 38°	10	10	25	75			
VA-SEM 4120	35° / 38°	12	12	30	75			
VA-SEM 4160	35° / 38°	16	16	40	100			
VA-SEM 4200	35° / 38°	20	20	45	100			



Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☒
K	Cast Iron	☒
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☐
	HRC > 60	☐



Tolerance	
Diameter	Range
$3 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$20 \leq d$	0 / -0.04

Available ex stock / subject to prior sale

TIS Coating will be available on request for machining Titanium, Inconel & Stainless steel for above average performance

SMG - Super-Fine Micron Grade

Unequal Helix and Pitch - HPC

- Available ex stock / subject to prior sale

TIS Coating will be available on request for machining Titanium, Inconel & Stainless steel for above average performance

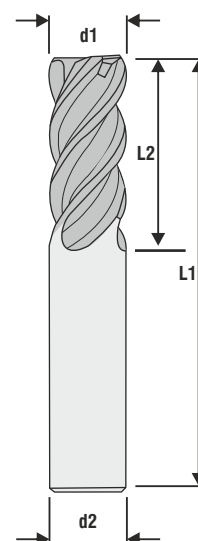
SMG - Super-Fine Micron Grade



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	■
K	Cast Iron	■
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	



FLAT End Mills



Tolerance	
Diameter	Range
$3 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$20 \leq d$	0 / -0.04

X 60 Series

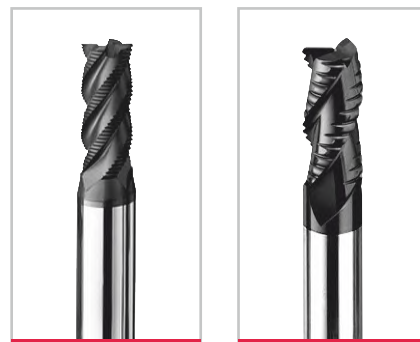
Hulkstar (≤ 60 HRC)

Roughing Endmills For Steel - Regular Series

Article No.		Dimension (mm)				
4 Flutes <i>Coarse Pitch</i>	3 Flutes <i>Coarse Pitch</i>	Ø d1 h10	Ø d2 h6	L2	L1	AT-coated
RC-SEM 4060	RC-SEM 3060	6	6	16	50	
RC-SEM 4080	RC-SEM 3080	8	8	20	60	
RC-SEM 4100	RC-SEM 3100	10	10	25	75	
RC-SEM 4120	RC-SEM 3120	12	12	30	75	
RC-SEM 4160	RC-SEM 3160	16	16	40	100	
RC-SEM 4200	RC-SEM 3200	20	20	45	100	

Article No.		Dimension (mm)				
4 Flutes <i>Fine Pitch</i>	3 Flutes <i>Fine Pitch</i>	Ø d1 h10	Ø d2 h6	L2	L1	AT-coated
RF-SEM 4060	RF-SEM 3060	6	6	16	50	
RF-SEM 4080	RF-SEM 3080	8	8	20	60	
RF-SEM 4100	RF-SEM 3100	10	10	25	75	
RF-SEM 4120	RF-SEM 3120	12	12	30	75	
RF-SEM 4160	RF-SEM 3160	16	16	40	100	
RF-SEM 4200	RF-SEM 3200	20	20	45	100	

FLAT End Mills



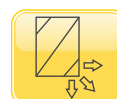
Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	



**COARSE
PITCH**

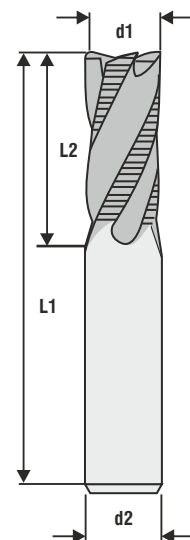
**FINE
PITCH**

AT COATING



| 45°

SMG
0.4mm



Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade

Tolerance	
Diameter	Range
$6 \leq d < 18$	0 / -0.03
$20 \leq d$	0 / -0.04

Flat End Mills - Regular Series

Flat End Mills - Regular Series

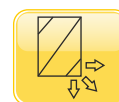


**X
60
Series**

Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	

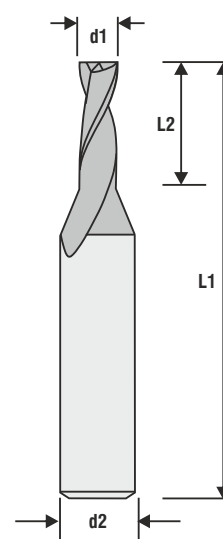


AT COATING



| 35°

SMG
0.4mm



Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

FLAT End Mills

X 60 Series

XFL Star 4 (≤ 60 HRC) LN

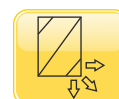
Flat End Mills - Long Neck Series

Article No.		Dimension (mm)				
4 Flute	Ø d1	Ø d2 h10	L2	L3 h6	L1	AT-coated
XFL4-SEM 4010 LN6	1	4	1	6	50	■
XFL4-SEM 4010 LN8	1	4	1	8	50	■
XFL4-SEM 4010 LN10	1	4	1	10	50	■
XFL4-SEM 4010 LN12	1	4	1	12	50	■
XFL4-SEM 4015 LN8	1.5	4	1.5	8	50	■
XFL4-SEM 4015 LN10	1.5	4	1.5	10	50	■
XFL4-SEM 4015 LN12	1.5	4	1.5	12	50	■
XFL4-SEM 4015 LN16	1.5	4	1.5	16	50	■
XFL4-SEM 4020 LN8	2.0	4	2.0	8	50	■
XFL4-SEM 4020 LN10	2.0	4	2.0	10	50	■
XFL4-SEM 4020 LN12	2.0	4	2.0	12	50	■
XFL4-SEM 4020 LN16	2.0	4	2.0	16	50	■
XFL4-SEM 4020 LN20	2.0	4	2.0	20	50	■
XFL4-SEM 4025 LN10	2.5	4	2.5	10	50	■
XFL4-SEM 4025 LN12	2.5	4	2.5	12	50	■
XFL4-SEM 4025 LN16	2.5	4	2.5	16	50	■
XFL4-SEM 4025 LN20	2.5	4	2.5	20	50	■
XFL6-SEM 4030 LN12	3.0	6	3.0	12	50	■
XFL6-SEM 4030 LN16	3.0	6	3.0	16	50	■
XFL6-SEM 4030 LN20	3.0	6	3.0	20	75	■
XFL6-SEM 4030 LN25	3.0	6	3.0	25	75	■

Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	■
K	Cast Iron	■
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	

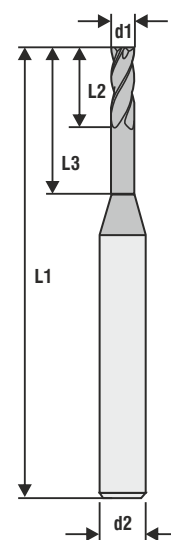
LN
SERIES

AT COATING



| 35°

SMG
0.4mm



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02

Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade
LN - Long Neck for deep reach moulds and dies

Flat End Mills - Long Neck Series

Flat End Mills - Long Neck Series

Available ex stock / subject to prior sale

SMG - Super-Fine Micron Grade

LN - Long Neck for deep reach moulds and dies



SMG
0.4mm

FLAT End Mills



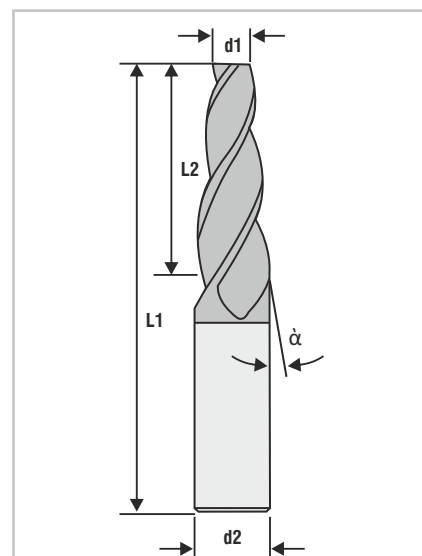
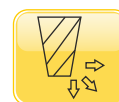
Diameter	Range
$1 \leq d < 8$	0 / -0.02

XFN Star 2 (≤60 HRC) TEM

Flat Tapered End Mills



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	□
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	□



Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02

Article No.	Dimension (mm)					
2 Flute	Ø d1 h10	Ø d2 h6	L2	α TA	L1	AT-coated
XFN4-TEM 2010 TA 0.5	1	4	4	30'	50	■
XFN4-TEM 2010 TA 1.0	1	4	4	1°	50	■
XFN4-TEM 2010 TA 1.5	1	4	4	1° 30'	50	■
XFN4-TEM 2010 TA 2.0	1	4	4	2°	50	■
XFN4-TEM 2010 TA 2.5	1	4	4	2° 30'	50	■
XFN4-TEM 2010 TA 3.0	1	4	4	3°	50	■
XFN4-TEM 2010 TA 5.0	1	4	4	5°	50	■
XFN4-TEM 2010 TA 7.0	1	4	4	7°	50	■
XFN4-TEM 2010 TA 10.0	1	4	4	10°	50	■
XFN4-TEM 2015 TA 0.5	1.5	4	5	30'	50	■
XFN4-TEM 2015 TA 1.0	1.5	4	5	1°	50	■
XFN4-TEM 2015 TA 1.5	1.5	4	5	1° 30'	50	■
XFN4-TEM 2015 TA 2.0	1.5	4	5	2°	50	■
XFN4-TEM 2015 TA 2.5	1.5	4	5	2° 30'	50	■
XFN4-TEM 2015 TA 3.0	1.5	4	5	3°	50	■
XFN4-TEM 2015 TA 5.0	1.5	4	5	5°	50	■
XFN4-TEM 2015 TA 7.0	1.5	4	5	7°	50	■
XFN4-TEM 2015 TA 10.0	1.5	4	5	10°	50	■
XFN4-TEM 2020 TA 0.5	2	4	6	30'	50	■
XFN4-TEM 2020 TA 1.0	2	4	6	1°	50	■
XFN4-TEM 2020 TA 1.5	2	4	6	1° 30'	50	■
XFN4-TEM 2020 TA 2.0	2	4	6	2°	50	■
XFN4-TEM 2020 TA 2.5	2	4	6	2° 30'	50	■
XFN4-TEM 2020 TA 3.0	2	4	6	3°	50	■
XFN4-TEM 2020 TA 5.0	2	4	6	5°	50	■
XFN4-TEM 2020 TA 7.0	2	4	6	7°	50	■
XFN6-TEM 2020 TA 10.0	2	6	6	10°	50	■
XFN4-TEM 2025 TA 0.5	2.5	4	8	30'	50	■
XFN4-TEM 2025 TA 1.0	2.5	4	8	1°	50	■
XFN4-TEM 2025 TA 1.5	2.5	4	8	1° 30'	50	■
XFN4-TEM 2025 TA 2.0	2.5	4	8	2°	50	■
XFN4-TEM 2025 TA 2.5	2.5	4	8	2° 30'	50	■
XFN4-TEM 2025 TA 3.0	2.5	4	8	3°	50	■
XFN4-TEM 2025 TA 5.0	2.5	4	8	5°	50	■
XFN6-TEM 2025 TA 7.0	2.5	6	8	7°	50	■
XFN6-TEM 2025 TA 10.0	2.5	6	8	10°	50	■

- Available ex stock / subject to prior sale
- SMG** - Super-Fine Micron Grade
- TEM** - Taper End mills
- TA** - Taper angle

XFN Star 2 (≤60 HRC) TEM

Flat Tapered End Mills

Article No.	Dimension (mm)					
2 Flute	Ø d1 h10	Ø d2 h6	L2	α TA	L1	AT-coated
XFN4-TEM 2030 TA 0.5	3	4	10	30'	50	■
XFN4-TEM 2030 TA 1.0	3	4	10	1°	50	■
XFN4-TEM 2030 TA 1.5	3	4	10	1° 30'	50	■
XFN4-TEM 2030 TA 2.0	3	4	10	2°	50	■
XFN4-TEM 2030 TA 2.5	3	4	10	2° 30'	50	■
XFN6-TEM 2030 TA 3.0	3	6	10	3°	50	■
XFN6-TEM 2030 TA 5.0	3	6	10	5°	50	■
XFN6-TEM 2030 TA 7.0	3	6	10	7°	50	■
XFN8-TEM 2030 TA 10.0	3	8	10	10°	60	■
XFN6-TEM 2040 TA 0.5	4	6	15	30'	50	■
XFN6-TEM 2040 TA 1.0	4	6	15	1°	50	■
XFN6-TEM 2040 TA 1.5	4	6	15	1° 30'	50	■
XFN6-TEM 2040 TA 2.0	4	6	15	2°	50	■
XFN6-TEM 2040 TA 2.5	4	6	15	2° 30'	50	■
XFN6-TEM 2040 TA 3.0	4	6	15	3°	50	■
XFN8-TEM 2040 TA 5.0	4	8	15	5°	60	■
XFN8-TEM 2040 TA 7.0	4	8	15	7°	60	■
XFN10-TEM 2040 TA 10.0	4	10	15	10°	75	■
XFN6-TEM 2050 TA 0.5	5	6	20	30'	50	■
XFN6-TEM 2050 TA 1.0	5	6	20	1°	50	■
XFN6-TEM 2050 TA 1.5	5	6	20	1° 30'	50	■
XFN8-TEM 2050 TA 2.0	5	8	20	2°	60	■
XFN8-TEM 2050 TA 2.5	5	8	20	2° 30'	60	■
XFN8-TEM 2050 TA 3.0	5	8	20	3°	60	■
XFN10-TEM 2050 TA 5.0	5	10	20	5°	75	■
XFN10-TEM 2050 TA 7.0	5	10	20	7°	75	■
XFN12-TEM 2050 TA 10.0	5	12	20	10°	75	■
XFN8-TEM 2060 TA 0.5	6	8	20	30'	60	■
XFN8-TEM 2060 TA 1.0	6	8	20	1°	60	■
XFN8-TEM 2060 TA 1.5	6	8	20	1° 30'	60	■
XFN8-TEM 2060 TA 2.0	6	8	20	2°	60	■
XFN8-TEM 2060 TA 2.5	6	8	20	2° 30'	60	■
XFN8-TEM 2060 TA 3.0	6	8	20	3°	60	■
XFN10-TEM 2060 TA 5.0	6	10	20	5°	75	■
XFN12-TEM 2060 TA 7.0	6	12	20	7°	75	■
XFN12-TEM 2060 TA 10.0	6	12	20	10°	75	■

■ Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade
TEM - Taper End mills
TA - Taper angle

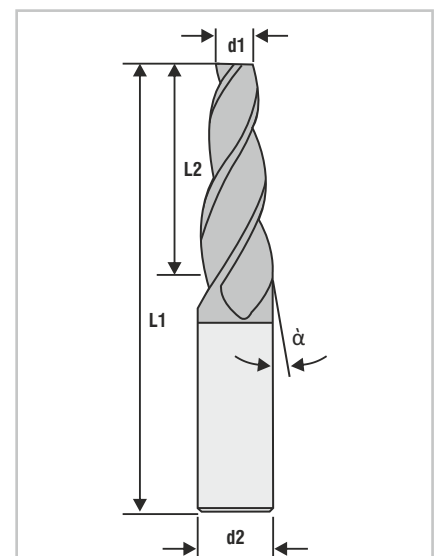


X
60
Series

Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	□
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	□



FLAT
End Mills



Tolerance

Diameter	Range
1 ≤ d < 8	0 / -0.02

X 60 Series

XFN Star 2 (≤ 60 HRC) TEM

Flat Tapered End Mills

Article No.	Dimension (mm)					
2 Flute	Ø d1 h10	Ø d2 h6	L2	α TA	L1	AT-coated
XFN10-TEM 2080 TA 0.5	8	10	25	30'	75	■
XFN10-TEM 2080 TA 1.0	8	10	25	1°	75	■
XFN10-TEM 2080 TA 1.5	8	10	25	1° 30'	75	■
XFN10-TEM 2080 TA 2.0	8	10	25	2°	75	■
XFN10-TEM 2080 TA 2.5	8	10	25	2° 30'	75	■
XFN12-TEM 2080 TA 3.0	8	12	25	3°	75	■
XFN12-TEM 2080 TA 5.0	8	12	25	5°	75	■
XFN12-TEM 2080 TA 7.0	8	12	25	7°	75	■
XFN16-TEM 2080 TA 10.0	8	16	25	10°	100	■
XFN12-TEM 2100 TA 0.5	10	12	35	30'	100	■
XFN12-TEM 2100 TA 1.0	10	12	35	1°	100	■
XFN12-TEM 2100 TA 1.5	10	12	35	1° 30'	100	■
XFN12-TEM 2100 TA 2.0	10	12	35	2°	100	■
XFN12-TEM 2100 TA 2.5	10	12	35	2° 30'	100	■
XFN12-TEM 2100 TA 3.0	10	12	35	3°	100	■
XFN16-TEM 2100 TA 5.0	10	16	35	5°	100	■
XFN16-TEM 2100 TA 7.0	10	16	35	7°	100	■
XFN20-TEM 2100 TA 10.0	10	20	35	10°	100	■

A close-up photograph of a diamond drill bit tip. The bit is dark, likely coated, and shows the characteristic double-flute design. The tip is sharp and pointed, with visible wear marks on the cutting edges. The background is a plain, light-colored surface.

Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	□
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	



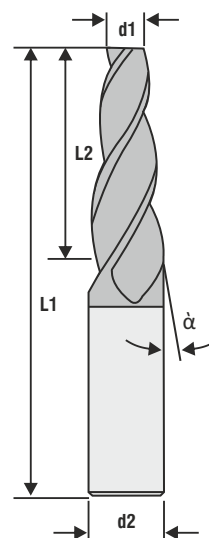
TEM
SERIES

**AT
COATING**



| 35°

SMG
0.4mm

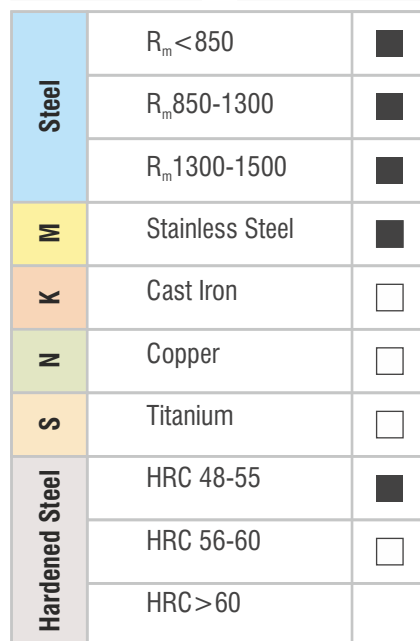


Tolerance	
Diameter	Range
$8 \leq d < 18$	0 / -0.03

Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade
TEM - Taper End mills
TA - Taper angle

XB Star 4 / 2 (≤ 60 HRC)

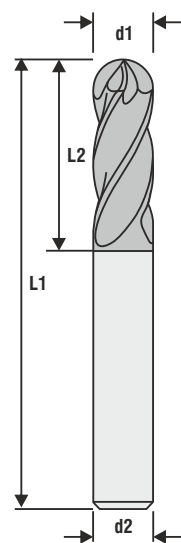
Ball Nose End Mills - Regular Series



X 60 Series



BALL End Mills



Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$20 \leq d$	0 / -0.04

Ball Nose End Mills - Long Shank Series

Ball Nose End Mills - Long Shank Series

[illegible]

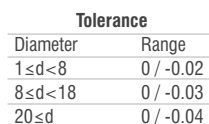
Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade
LS - Long Shank for deep reach moulds and dies



AT COATING



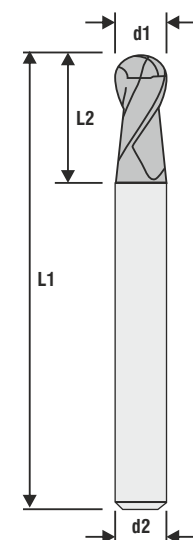
SMG
0.4mm



Ball Nose End Mills - Long Shank Series

Ball Nose End Mills - Long Shank Series

Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade
LS - Long Shank for deep reach moulds and dies



Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$20 \leq d$	0 / -0.04

BALL End Mills

X 60 Series

Microstar BM (≤ 60 HRC)

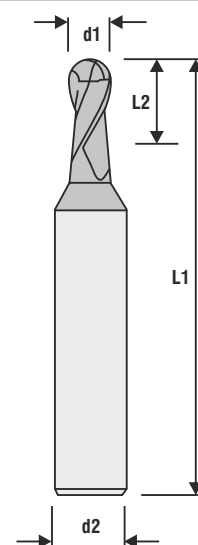
Ball Nose End Mills - Regular Series

Article No.		Dimension (mm)				
2 Flute		Ø d1 h10	Ø d2 h6	L2	L1	AT-coated
M-SBM 2003		R0.15	4	0.6	50	■
M-SBM 2004		R0.20	4	0.8	50	■
M-SBM 2005		R0.25	4	1	50	■
M-SBM 2006		R0.30	4	1.2	50	■
M-SBM 2007		R0.35	4	1.4	50	■
M-SBM 2008		R0.40	4	1.6	50	■
M-SBM 2009		R0.45	4	1.8	50	■

BALL End Mills



Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☐
K	Cast Iron	☒
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☐
	HRC > 60	☐



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02

Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade

XBL Star 4 (≤ 60 HRC) LN

Article No.		Dimension (mm)				
4 Flute	Ø d1 h10	Ø d2 h6	L2	L3	L1	AT-coated
XBL4-SBM 4010 LN6	R0.50	4	1	6	50	■
XBL4-SBM 4010 LN8	R0.50	4	1	8	50	■
XBL4-SBM 4010 LN10	R0.50	4	1	10	50	■
XBL4-SBM 4010 LN12	R0.50	4	1	12	50	■
XBL4-SBM 4015 LN8	R0.75	4	1.5	8	50	■
XBL4-SBM 4015 LN12	R0.75	4	1.5	12	50	■
XBL4-SBM 4015 LN16	R0.75	4	1.5	16	50	■
XBL4-SBM 4015 LN20	R0.75	4	1.5	20	50	■
XBL4-SBM 4016 LN8	R0.80	4	1.6	8	50	■
XBL4-SBM 4016 LN12	R0.80	4	1.6	12	50	■
XBL4-SBM 4016 LN16	R0.80	4	1.6	16	50	■
XBL4-SBM 4020 LN8	R1.00	4	2.0	8	50	■
XBL4-SBM 4020 LN12	R1.00	4	2.0	12	50	■
XBL4-SBM 4020 LN16	R1.00	4	2.0	16	50	■
XBL4-SBM 4020 LN20	R1.00	4	2.0	20	50	■
XBL6-SBM 4030 LN8	R1.50	6	3.0	8	50	■
XBL6-SBM 4030 LN10	R1.50	6	3.0	10	50	■
XBL6-SBM 4030 LN16	R1.50	6	3.0	16	50	■
XBL6-SBM 4040 LN10	R2.00	6	4.0	10	75	■
XBL6-SBM 4040 LN15	R2.00	6	4.0	15	75	■
XBL6-SBM 4040 LN20	R2.00	6	4.0	20	75	■
XBL6-SBM 4040 LN25	R2.00	6	4.0	25	75	■
XBL6-SBM 4040 LN30	R2.00	6	4.0	30	75	■

Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade
LN - Long Neck for deep reach moulds and dies



**X
60
Series**

Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☒
K	Cast Iron	☐
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☐
	HRC > 60	☐



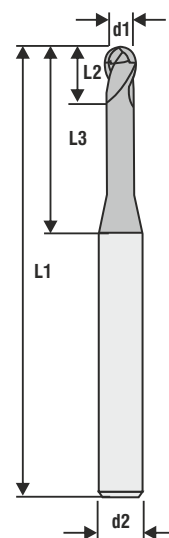
LN
SERIES

AT COATING



| 30°

SMG
0.4mm



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02

X 60 Series

XBL Star 2 (≤ 60 HRC) LN

Article No.		Dimension (mm)				
2 Flute	Ø d1 h10	Ø d2 h6	L2	L3	L1	AT-coated
XBL4-SBM 2010 LN6	R0.50	4	1	6	50	■
XBL4-SBM 2010 LN8	R0.50	4	1	8	50	■
XBL4-SBM 2010 LN10	R0.50	4	1	10	50	■
XBL4-SBM 2010 LN12	R0.50	4	1	12	50	■
XBL4-SBM 2015 LN8	R0.75	4	1.5	8	50	■
XBL4-SBM 2015 LN12	R0.75	4	1.5	12	50	■
XBL4-SBM 2015 LN16	R0.75	4	1.5	16	50	■
XBL4-SBM 2015 LN20	R0.75	4	1.5	20	50	■
XBL4-SBM 2016 LN8	R0.80	4	1.6	8	50	■
XBL4-SBM 2016 LN12	R0.80	4	1.6	12	50	■
XBL4-SBM 2016 LN16	R0.80	4	1.6	16	50	■
XBL4-SBM 2020 LN8	R1.00	4	2.0	8	50	■
XBL4-SBM 2020 LN12	R1.00	4	2.0	12	50	■
XBL4-SBM 2020 LN16	R1.00	4	2.0	16	50	■
XBL4-SBM 2020 LN20	R1.00	4	2.0	20	50	■
XBL6-SBM 2030 LN8	R1.50	6	3.0	8	50	■
XBL6-SBM 2030 LN10	R1.50	6	3.0	10	50	■
XBL6-SBM 2030 LN16	R1.50	6	3.0	16	50	■
XBL6-SBM 2040 LN10	R2.00	6	4.0	10	75	■
XBL6-SBM 2040 LN15	R2.00	6	4.0	15	75	■
XBL6-SBM 2040 LN20	R2.00	6	4.0	20	75	■
XBL6-SBM 2040 LN25	R2.00	6	4.0	25	75	■
XBL6-SBM 2040 LN30	R2.00	6	4.0	30	75	■

BALL End Mills

Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade
LN - Long Neck for deep reach moulds and dies



Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☒
K	Cast Iron	☐
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☐
	HRC > 60	☐



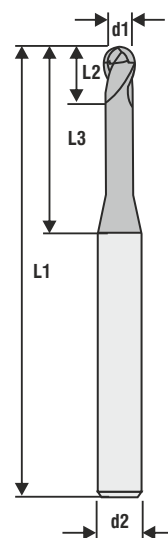
LN
SERIES

AT COATING



| 30°

SMG
0.4mm



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02

Ball Nose End Mill - Long Taper Neck Series

Ball Nose End Mill - Long Taper Neck Series

[illegible]

Available ex stock / subject to prior sale

SMG - Super-Fine Micron Grade

LTN - Long Taper neck Endmills for deep reach moulds

TA - Taper angle, **TN** - Taper neck



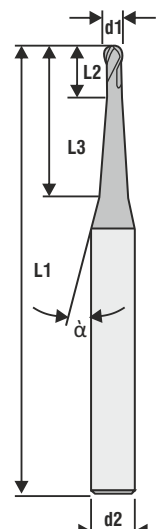
LTN
SERIES

AT



30°

SMG
0.4mm



Tolerance

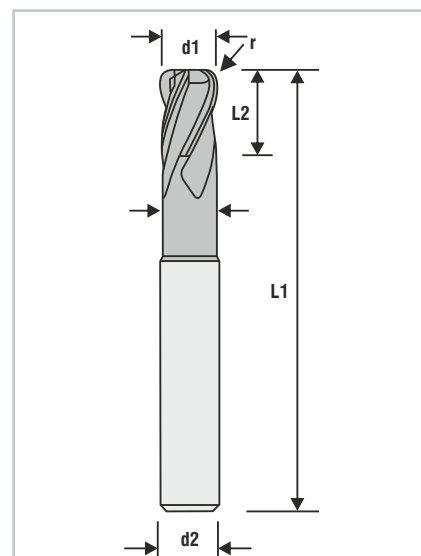
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03

X Cornstar (≤ 60 HRC)

Corner Radius End Mills - Regular Series



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	■
K	Cast Iron	□
N	Copper	□
Hardened Steel	Titanium	■
	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	



Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03

Article No.		Dimension (mm)						
4 Flute	2 Flute	Ø d1 h10	Ø d2 h6	r	L2	L1	AT-coated	
X-CS-SEM 4010-r02	X-CS-SEM 2010-r02	1	4	0.2	2	50	■	
X-CS-SEM 4020-r02	X-CS-SEM 2020-r02	2	4	0.2	4	50	■	
X-CS-SEM 4020-r05	X-CS-SEM 2020-r05	2	4	0.5	4	50	■	
X-CS-SEM 4030-r02	X-CS-SEM 2030-r02	3	4	0.2	6	50	■	
X-CS-SEM 4030-r05	X-CS-SEM 2030-r05	3	4	0.5	6	50	■	
X-CS-SEM 4030-r10	X-CS-SEM 2030-r10	3	4	1.0	6	50	■	
X-CS-SEM 4040-r02	X-CS-SEM 2040-r02	4	4	0.2	8	50	■	
X-CS-SEM 4040-r05	X-CS-SEM 2040-r05	4	4	0.5	8	50	■	
X-CS-SEM 4040-r10	X-CS-SEM 2040-r10	4	4	1.0	8	50	■	
X-CS-SEM 2050-r05	X-CS-SEM 2050-r05	5	6	0.5	10	50	■	
X-CS-SEM 4050-r10	X-CS-SEM 2050-r10	5	6	1.0	10	50	■	
X-CS-SEM 4060-r02	X-CS-SEM 2060-r02	6	6	0.2	12	50	■	
X-CS-SEM 4060-r05	X-CS-SEM 2060-r05	6	6	0.5	12	50	■	
X-CS-SEM 4060-r10	X-CS-SEM 2060-r10	6	6	1.0	12	50	■	
X-CS-SEM 4060-r1.5	X-CS-SEM 2060-r1.5	6	6	1.5	12	50	■	
X-CS-SEM 4060-r20	X-CS-SEM 2060-r20	6	6	2	12	50	■	
X-CS-SEM 4080-r05	X-CS-SEM 2080-r05	8	8	0.5	16	60	■	
X-CS-SEM 4080-r10	X-CS-SEM 2080-r10	8	8	1.0	16	60	■	
X-CS-SEM 4080-r15	X-CS-SEM 2080-r15	8	8	1.5	16	60	■	
X-CS-SEM 4080-r20	X-CS-SEM 2080-r20	8	8	2	16	60	■	
X-CS-SEM 4100-r05	X-CS-SEM 2100-r05	10	10	0.5	20	75	■	
X-CS-SEM 4100-r10	X-CS-SEM 2100-r10	10	10	1	20	75	■	
X-CS-SEM 4100-r15	X-CS-SEM 2100-r15	10	10	1.5	20	75	■	
X-CS-SEM 4100-r20	X-CS-SEM 2100-r20	10	10	2.0	20	75	■	
X-CS-SEM 4100-r25	X-CS-SEM 2100-r25	10	10	2.5	20	75	■	
X-CS-SEM 4100-r30	X-CS-SEM 2100-r30	10	10	3.0	20	75	■	
X-CS-SEM 4120-r05	X-CS-SEM 2120-r05	12	12	0.5	24	75	■	
X-CS-SEM 4120-r10	X-CS-SEM 2120-r10	12	12	1.0	24	75	■	
X-CS-SEM 4120-r15	X-CS-SEM 2120-r15	12	12	1.5	24	75	■	
X-CS-SEM 4120-r20	X-CS-SEM 2120-r20	12	12	2.0	24	75	■	
X-CS-SEM 4120-r25	X-CS-SEM 2120-r25	12	12	2.5	24	75	■	
X-CS-SEM 4120-r30	X-CS-SEM 2120-r30	12	12	3.0	24	75	■	
X-CS-SEM 4160-r05	X-CS-SEM 2160-r05	16	16	0.5	32	100	■	
X-CS-SEM 4160-r10	X-CS-SEM 2160-r10	16	16	1	32	100	■	
X-CS-SEM 4160-r15	X-CS-SEM 2160-r15	16	16	1.5	32	100	■	
X-CS-SEM 4160-r20	X-CS-SEM 2160-r20	16	16	2	32	100	■	
X-CS-SEM 4160-r25	X-CS-SEM 2160-r25	16	16	2.5	32	100	■	
X-CS-SEM 4160-r30	X-CS-SEM 2160-r30	16	16	3	32	100	■	

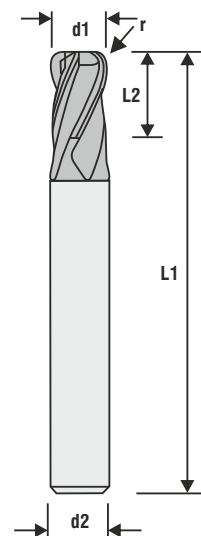
■ Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade

Corner Radius End Mills - Long Shank Series

9



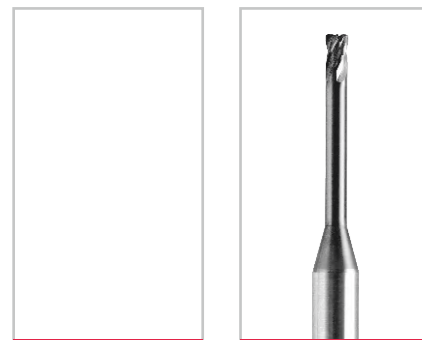


Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03

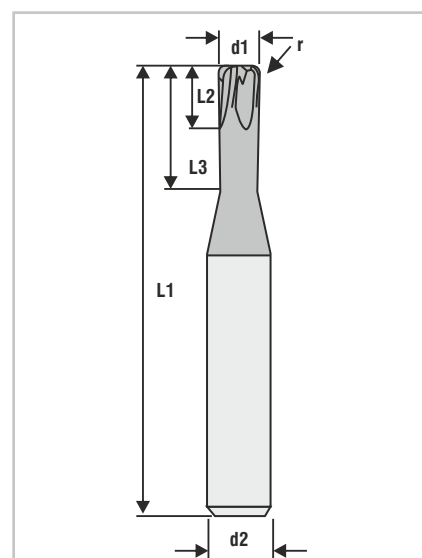
XCL Star 4 (≤60 HRC) LN

Corner Radius End Mills - Long Neck Series

Article No.	Dimension (mm)						
4 Flute	Ø d1	Ø d2 h10	L2	L3 h6	r	L1	AT-coated
XCL4-SEM 4010 LN4	1	4	1	4	0.1	50	■
XCL4-SEM 4010 LN6	1	4	1	6	0.1	50	■
XCL4-SEM4 010 LN8	1	4	1	8	0.1	50	■
XCL4-SEM 4010 LN10	1	4	1	10	0.1	50	■
XCL4-SEM4 015 LN4	1.5	4	1.5	4	0.2	50	■
XCL4-SEM 4015 LN6	1.5	4	1.5	6	0.2	50	■
XCL4-SEM 4015 LN8	1.5	4	1.5	8	0.2	50	■
XCL4-SEM 4015 LN10	1.5	4	1.5	10	0.2	50	■
XCL4-SEM 4015 LN12	1.5	4	1.5	12	0.2	50	■
XCL4-SEM 4020 LN8	2.0	4	2.0	8	0.2	50	■
XCL4-SEM 4020 LN10	2.0	4	2.0	10	0.2	50	■
XCL4-SEM 4020 LN12	2.0	4	2.0	12	0.2	50	■
XCL4-SEM 4020 LN16	2.0	4	2.0	16	0.2	50	■
XCL6-SEM 4030 LN8	3.0	6	3.0	8	0.2	50	■
XCL6-SEM 4030 LN10	3.0	6	3.0	10	0.2	50	■
XCL6-SEM 4030 LN12	3.0	6	3.0	12	0.2	50	■
XCL6-SEM 4030 LN16	3.0	6	3.0	16	0.2	50	■
XCL6-SEM 4030 LN20	3.0	6	3.0	20	0.2	50	■



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	■
K	Cast Iron	□
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	□



Tolerance	
Diameter	Range
1 ≤ d < 8	0 / -0.02

■ Available ex stock / subject to prior sale
SMG - Super-Fine Micron Grade
LN - Long Neck for deep reach moulds and dies

Corner Radius End Mills - Long Neck Series

Corner Radius End Mills - Long Neck Series



X 60 Series



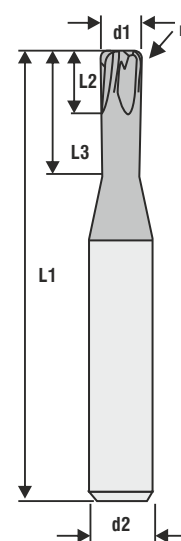
LN SERIES

AT COATING



| 35°

SMG
0.4mm



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02

www.stntools.tw

Y65 Series

Solid Carbide End Mills



Y65 Series

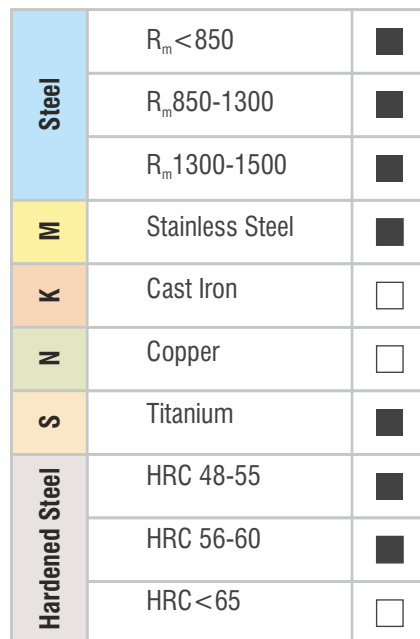
Y65 Series, are the most advanced products, used for the machining of material with HRC 55-65, With high-quality coatings, showing remarkable speed cutting on high hardness materials offering high efficiency, without compromising productivity

ISO code	USA code	Grain Size	Cobalt Percentage	Density	Hardness		
			Co(%)	g/cm ³	HV10	HV30	HRA
K10-K20	C-2	0.2μm	8.2	14.55	1970	1930	93.7



Flat End Mills - Regular Series

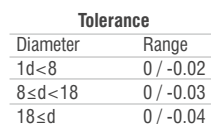
Dimension (mm)



Y 65 Series



FLAT End Mills



49

Superstar (≤ 65 HRC)

Slotting & Pocketing End Mills — Regular Series

Article No.

3 Flute

Dimension (mm)

$\emptyset$ d1 $\emptyset$ d2 L2 L1 SI-coated

SU4-SEM3030

3

4

9

50

■

SU4-SEM3040

4

4

11

50

■

SU6-SEM3050

5

6

13

50

■

SU6-SEM3060

6

6

16

50

■

SU8-SEM3080

8

8

20

60

■

SU10-SEM3100

10

10

25

75

■

SU12-SEM3120

12

12

30

75

■

SU16-SEM3160

16

16

40

100

■

SU20-SEM3200

20

20

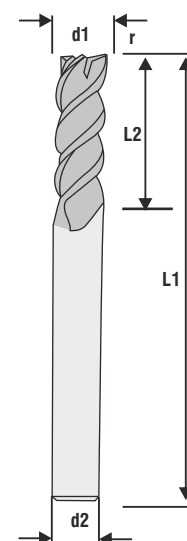
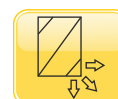
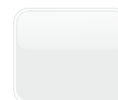
45

100

■



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	■
K	Cast Iron	□
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	■
	HRC < 65	□



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$18 \leq d$	0 / -0.04

■ Available EX stock / subject to prior sale
UMG - Ultra Micron Grade

Y
65
Series

FLAT
End Mills

Multi Fluted End Mills - Regular Series

Multi Fluted End Mills - Long Flute Series

Article No.		Dimension (mm)				
6 Flutes		Ø d1 h10	Ø d2 h6	L2	L1	SI-coated
Y6-SMF 6060		6.0	6	16	50	■
Y8-SMF 6080		8.0	8	20	60	■
Y10-SMF 6100		10.0	10	25	75	■
Y12-SMF 6120		12.0	12	30	75	■
Y16-SMF 6160		16.0	16	40	100	■
Y20-SMF 6200		20.0	20	45	100	■

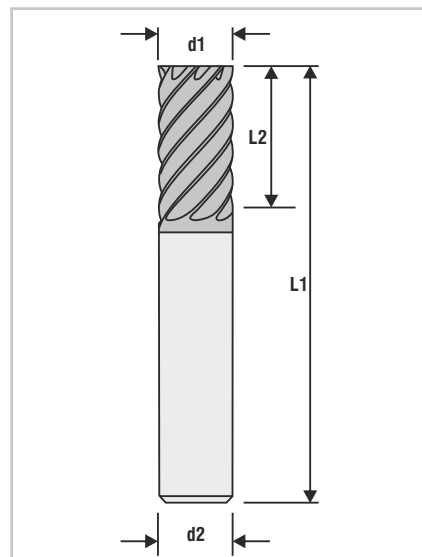
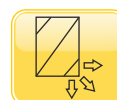
Multi Fluted End Mills - Long Flute Series

Article No.		Dimension (mm)				
6 Flutes		Ø d1 h10	Ø d2 h6	L2	L1	SI-coated
Y6-SMF 6060 LF		6.0	6	24	75	■
Y8-SMF 6080 LF		8.0	8	30	75	■
Y10-SMF 6100 LF		10.0	10	40	100	■
Y12-SMF 6120 LF		12.0	12	45	100	■
Y16-SMF 6160 LF		16.0	16	64	150	■
Y20-SMF 6200 LF		20.0	20	72	150	■

- ☒ Available EX stock / subject to prior sale
☐ Only Available against orders with **MOQ 20 Nos.**
UMG - Ultra Micron Grade



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	■
K	Cast Iron	□
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	■
	HRC < 65	□



Tolerance	
Diameter	Range
$8 \leq d < 18$	0 / -0.03
$20 \leq d$	0 / -0.04

Y 65 Series

FLAT End Mills

Flat End Mills - Long Shank Series

Flat End Mills - Long Shank Series

Y 65 Series

Article No.		Dimension (mm)				
4 Flute		Ø d1	Ø d2 h10	L2 h6	L1	SI-coated
YF4-SEM 4030 LS 75		3	4	9	75	■
YF4-SEM 4040 LS 75		4	4	11	75	■
YF4-SEM 4040 LS 100		4	4	11	100	■
YF6-SEM 4050 LS 75		5	6	13	75	■
YF6-SEM 4060 LS 75		6	6	16	75	■
YF6-SEM 4060 LS 100		6	6	16	100	■
YF8-SEM 4080 LS 75		8	8	20	75	■
YF8-SEM 4080 LS 100		8	8	20	100	■
YF10-SEM 4100 LS 100		10	10	25	100	■
YF10-SEM 4100 LS 150		10	10	25	150	■
YF12-SEM 4120 LS 100		12	12	30	100	■
YF12-SEM 4120 LS 150		12	12	30	150	■
YF16-SEM 4160 LS 150		16	16	40	150	■
YF20-SEM 4200 LS 150		20	20	45	150	■

FLAT End Mills

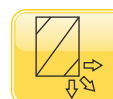


Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☒
K	Cast Iron	☐
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☒
	HRC < 65	☐



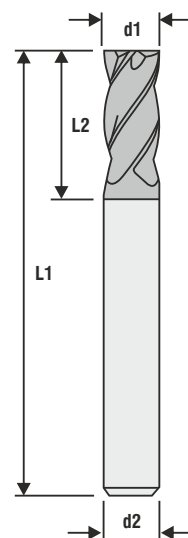
LS
SERIES

SI COATING



| 35°

UMG
0.2mm



Tolerance

Diameter	Range
$3 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$20 \leq d$	0 / -0.04

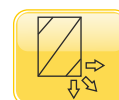
Available EX stock / subject to prior sale
UMG - Ultra Micron Grade
LS - Long Shank for deep reach moulds and dies

Flat End Mills - Long Shank Series

[illegible]

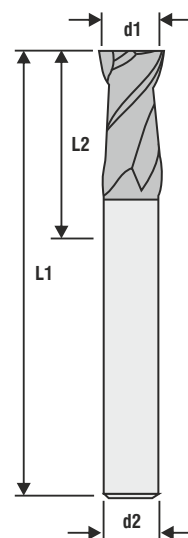
**LS
SERIES**

SI COATING



| 35°

UMG
0.2mm



Tolerance	
Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
20≤d	0 / -0.04

Y65 Series

FLAT End Mills

YF Star 4(≤ 65 HRC) LF

Flat End Mills - Long Flute Series

Y 65 Series

Article No.		Dimension (mm)				
4 Flute		Ø d1	Ø d2 h10	L2 h6	L1	SI-coated
YF4-SEM4030 LF 75		3	4	12	75	■
YF4-SEM 4040 LF 75		4	4	15	75	■
YF6-SEM4050 LF 75		5	6	20	75	■
YF6-SEM 4060 LF 75		6	6	25	75	■
YF6-SEM4060 LF 100		6	6	30	100	■
YF8-SEM 4080 LF 100		8	8	40	100	■
YF10-SEM4100 LF 100		10	10	45	100	■
YF12-SEM 4120 LF 100		12	12	50	100	■
YF16-SEM4160 LF 150		16	16	75	150	■
YF20-SEM 4200 LF 150		20	20	80	150	■

FLAT End Mills

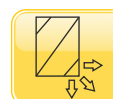


Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☒
K	Cast Iron	☐
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☒
	HRC < 65	☐



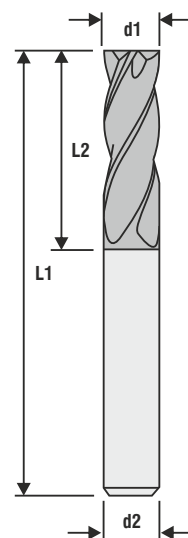
LF
SERIES

SI COATING



| 35°

UMG
0.2mm



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$20 \leq d$	0 / -0.04



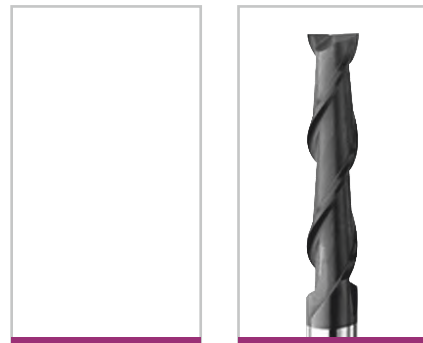
Available ex stock / subject to prior sale

UMG - Ultra Micron Grade

LF - Long Flute for long wall moulds and dies

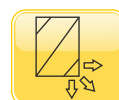
Flat End Mills - Long Flute Series

5



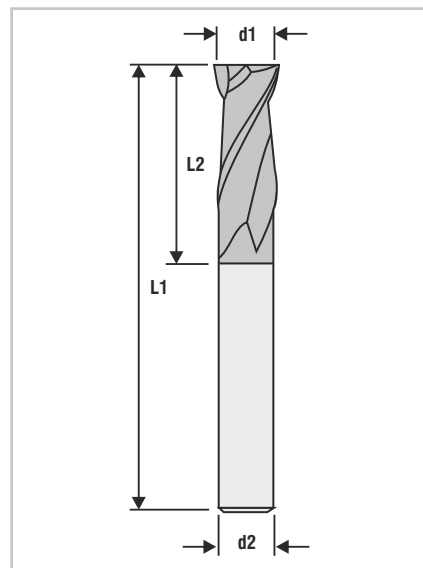
LF
SERIES

**SI
COATING**



35°

UMG
0.2mm



Tolerance	
Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
20≤d	0 / -0.04

**Y
65
Series**

FLAT End Mills

YFL Star 4 (≤ 65 HRC) LN

Flat End Mills - Long Neck Series

**Y
65
Series**

Article No.	Dimension (mm)					
4 Flute	Ø d1	Ø d2 h10	L2	L3 h6	L1	SI-coated
YFL4-SEM 4010 LN6	1	4	1	6	50	■
YFL4-SEM 4010 LN8	1	4	1	8	50	■
YFL4-SEM 4010 LN10	1	4	1	10	50	■
YFL4-SEM 4010 LN12	1	4	1	12	50	■
YFL4-SEM 4015 LN8	1.5	4	1.5	8	50	■
YFL4-SEM 4015 LN10	1.5	4	1.5	10	50	■
YFL4-SEM 4015 LN12	1.5	4	1.5	12	50	■
YFL4-SEM 4015 LN16	1.5	4	1.5	16	50	■
YFL4-SEM 4020 LN8	2.0	4	2.0	8	50	■
YFL4-SEM 4020 LN10	2.0	4	2.0	10	50	■
YFL4-SEM 4020 LN12	2.0	4	2.0	12	50	■
YFL4-SEM 4020 LN16	2.0	4	2.0	16	50	■
YFL4-SEM 4020 LN20	2.0	4	2.0	20	50	■
YFL4-SEM 4025 LN10	2.5	4	2.5	10	50	■
YFL4-SEM 4025 LN12	2.5	4	2.5	12	50	■
YFL4-SEM 4025 LN16	2.5	4	2.5	16	50	■
YFL4-SEM 4025 LN20	2.5	4	2.5	20	50	■
YFL6-SEM 4030 LN12	3.0	6	3.0	12	50	■
YFL6-SEM 4030 LN16	3.0	6	3.0	16	50	■
YFL6-SEM 4030 LN20	3.0	6	3.0	20	75	■
YFL6-SEM 4030 LN25	3.0	6	3.0	25	75	■

FLAT End Mills



Available ex stock / subject to prior sale

UMG - Ultra Micron Grade

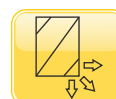
LN - Long Neck for deep reach moulds and dies



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	■
K	Cast Iron	□
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	■
	HRC < 65	□

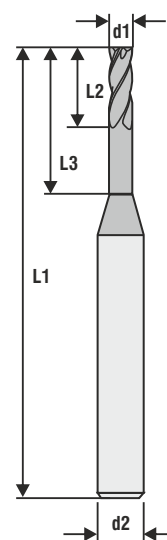
LN
SERIES

SI COATING



| 35°

UMG
0.2mm



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02

YFL Star 2 (≤ 65 HRC) LN

Flat End Mills - Long Neck Series

Article No.	Dimension (mm)					
2 Flute	Ø d1	Ø d2 h10	L2	L3 h6	L1	SI-coated
YFL4-SEM 2010 LN6	1	4	1	6	50	■
YFL4-SEM 2010 LN8	1	4	1	8	50	■
YFL4-SEM 2010 LN10	1	4	1	10	50	■
YFL4-SEM 2010 LN12	1	4	1	12	50	■
YFL4-SEM 2015 LN8	1.5	4	1.5	8	50	■
YFL4-SEM 2015 LN10	1.5	4	1.5	10	50	■
YFL4-SEM 2015 LN12	1.5	4	1.5	12	50	■
YFL4-SEM 2015 LN16	1.5	4	1.5	16	50	■
YFL4-SEM 2020 LN8	2.0	4	2.0	8	50	■
YFL4-SEM 2020 LN10	2.0	4	2.0	10	50	■
YFL4-SEM 2020 LN12	2.0	4	2.0	12	50	■
YFL4-SEM 2020 LN16	2.0	4	2.0	16	50	■
YFL4-SEM 2020 LN20	2.0	4	2.0	20	50	■
YFL4-SEM 2025 LN10	2.5	4	2.5	10	50	■
YFL4-SEM 2025 LN12	2.5	4	2.5	12	50	■
YFL4-SEM 2025 LN16	2.5	4	2.5	16	50	■
YFL4-SEM 2025 LN20	2.5	4	2.5	20	50	■
YFL6-SEM 2030 LN12	3.0	6	3.0	12	50	■
YFL6-SEM 2030 LN16	3.0	6	3.0	16	50	■
YFL6-SEM 2030 LN20	3.0	6	3.0	20	75	■
YFL6-SEM 2030 LN25	3.0	6	3.0	25	75	■



Available ex stock / subject to prior sale

UMG - Ultra Micron Grade

LN - Long Neck for deep reach moulds and dies



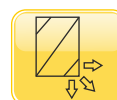
Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☒
K	Cast Iron	☐
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☒
	HRC < 65	☐



LN
SERIES



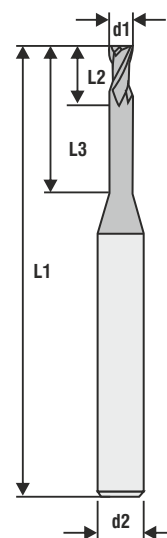
SI COATING



| 35°



UMG
0.2mm



Tolerance

Diameter	Range
1d<8	0 / -0.02

Microstar FM (≤ 65 HRC)

Flat End Mills - Regular Series

Article No.

2 Flute

Dimension (mm)

 $\varnothing$ d1

h10

 $\varnothing$ d2

h6

L2

L1

SI-coated

YM-SEM 2002

YM-SEM 2003

YM-SEM 2004

YM-SEM 2005

YM-SEM 2006

YM-SEM 2007

YM-SEM 2008

YM-SEM 2009

0.2

0.3

0.4

0.5

0.6

0.7

0.8

0.9

4

4

4

4

4

4

4

4

0.4

0.6

0.8

1

1.2

1.4

1.6

1.8

50

50

50

50

50

50

50

50

■

■

■

■

■

■

■

■

Steel

 $R_m < 850$

■

 $R_m 850-1300$

■

 $R_m 1300-1500$

■

M

Stainless Steel

■

K

Cast Iron

□

N

Copper

□

S

Titanium

■

Hardened Steel

HRC 48-55

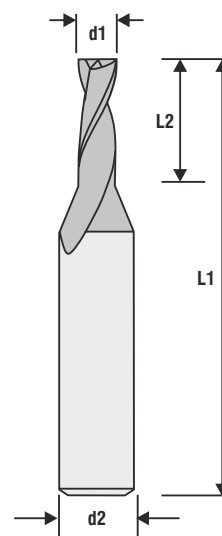
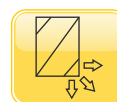
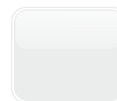
■

HRC 56-60

■

HRC < 65

□



Tolerance

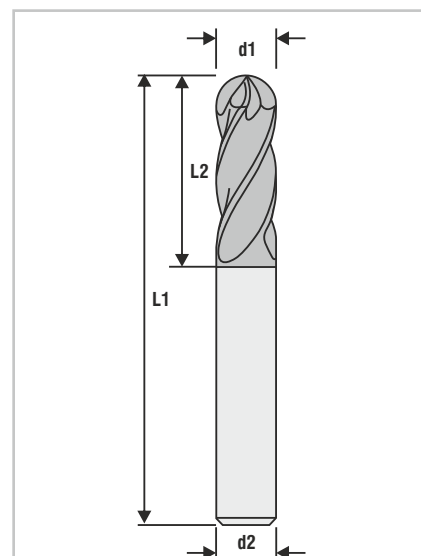
Diameter	Range
$1 \leq d < 8$	0 / -0.02

■ Available ex stock / subject to prior sale
UMG - Ultra Micron Grade

Y
65
Series

FLAT
End Mills

Ball Nose End Mills - Regular Series



Tolerance	
Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
20≤d	0 / -0.04

BALL

End Mills

Ball Nose End Mills - Long Shank Series

Ball Nose End Mills - Long Shank Series

Y 65 Series

Article No.		Dimension (mm)				
4 Flute		Ø d1 h10	Ø d2 h6	L2	L1	SI-coated
YB4-SBM 4010 LS 75		R0.50	4	2	75	■
YB4-SBM 4015 LS 75		R0.75	4	3	75	■
YB4-SBM 4020 LS 75		R1.00	4	4	75	■
YB4-SBM 4030 LS 75		R1.50	4	6	75	■
YB4-SBM 4040 LS 75		R2.00	4	8	75	■
YB4-SBM 4040 LS 100		R2.00	4	8	100	■
YB5-SBM 4050 LS 75		R2.50	5	10	75	■
YB5-SBM 4050 LS 100		R2.50	5	10	100	■
YB6-SBM 4050 LS 75		R2.50	6	10	75	■
YB6-SBM 4060 LS 75		R3.00	6	12	75	■
YB6-SBM 4040 LS 100		R2.00	6	8	100	■
YB6-SBM 4050 LS 100		R2.50	6	10	100	■
YB6-SBM 4060 LS 100		R3.00	6	12	100	■
YB8-SBM 4080 LS 75		R4.00	8	16	75	■
YB8-SBM 4080 LS 100		R4.00	8	16	100	■
YB10-SBM 4100 LS 100		R5.00	10	20	100	■
YB10-SBM 4100 LS 150		R5.00	10	20	150	■
YB12-SBM 4120 LS 100		R6.00	12	24	100	■
YB12-SBM 4120 LS 150		R6.00	12	24	150	■
YB16-SBM 4160 LS 150		R8.00	16	32	150	■

BALL End Mills

Available ex stock / subject to prior sale
UMG - Ultra Micron Grade
LS - Long Shank for deep reach moulds and dies



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	■
K	Cast Iron	□
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	■
	HRC < 65	□

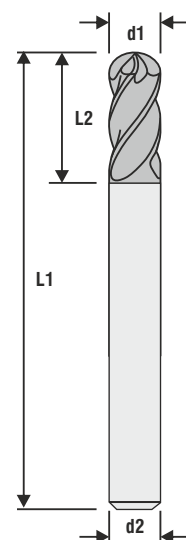
LS
SERIES

SI COATING



| 30°

UMG
0.2mm



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$20 \leq d$	0 / -0.04

Ball Nose End Mills - Long Shank Series

Ball Nose End Mills - Long Shank Series

Available ex stock / subject to prior sale

UMG - Ultra Micron Grade

LS - Long Shank for deep reach moulds and dies



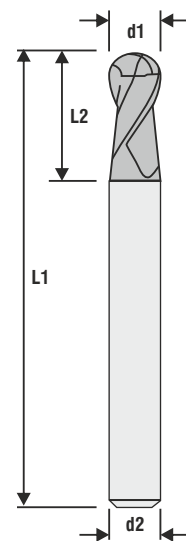
**LS
SERIES**

SI COATING



| 30°

UMG
0.2mm



Tolerance

Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
20≤d	0 / -0.04

Microstar BM (≤ 65 HRC)

Ball Nose End Mills - Regular Series

Article No.

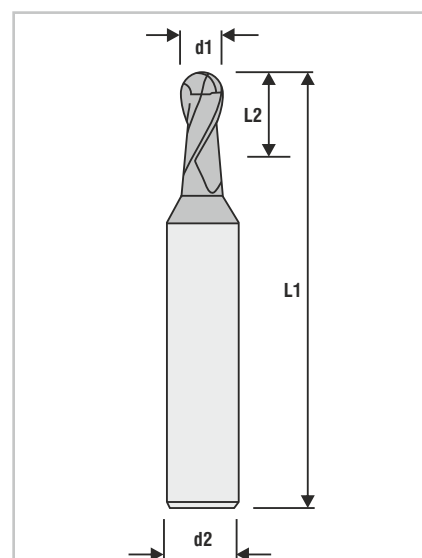
2 Flute

Dimension (mm)

Ø d1 h10	Ø d2 h6	L2	L1	SI-coated
R0.15	4	0.6	50	■
R0.20	4	0.8	50	■
R0.25	4	1	50	■
R0.30	4	1.2	50	■
R0.35	4	1.4	50	■
R0.40	4	1.6	50	■
R0.45	4	1.8	50	■



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	■
K	Cast Iron	□
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	■
	HRC < 65	□



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02

■ Available ex stock / subject to prior sale
UMG - Ultra Micron Grade

Y
65
Series

BALL
End Mills

YBL Star 4 (≤ 65 HRC) LN

Ball Nose End Mill - Long Neck Series

Article No.		Dimension (mm)				
4 Flute	Ø d1 h10	Ø d2 h6	L2	L3	L1	SI-coated
YBL4-SBM 4010 LN6	R0.50	4	1	6	50	■
YBL4-SBM 4010 LN8	R0.50	4	1	8	50	■
YBL4-SBM 4010 LN10	R0.50	4	1	10	50	■
YBL4-SBM 4010 LN12	R0.50	4	1	12	50	■
YBL4-SBM 4015 LN8	R0.75	4	1.5	8	50	■
YBL4-SBM 4015 LN12	R0.75	4	1.5	12	50	■
YBL4-SBM 4015 LN16	R0.75	4	1.5	16	50	■
YBL4-SBM 4015 LN20	R0.75	4	1.5	20	50	■
YBL4-SBM 4016 LN8	R0.80	4	1.6	8	50	■
YBL4-SBM 4016 LN12	R0.80	4	1.6	12	50	■
YBL4-SBM 4016 LN16	R0.80	4	1.6	16	50	■
YBL4-SBM 4020 LN8	R1.00	4	2.0	8	50	■
YBL4-SBM 4020 LN12	R1.00	4	2.0	12	50	■
YBL4-SBM 4020 LN16	R1.00	4	2.0	16	50	■
YBL4-SBM 4020 LN20	R1.00	4	2.0	20	50	■
YBL6-SBM 4030 LN8	R1.50	6	3.0	8	50	■
YBL6-SBM 4030 LN10	R1.50	6	3.0	10	50	■
YBL6-SBM 4030 LN16	R1.50	6	3.0	16	50	■
YBL6-SBM 4040 LN10	R2.00	6	4.0	10	75	■
YBL6-SBM 4040 LN15	R2.00	6	4.0	15	75	■
YBL6-SBM 4040 LN20	R2.00	6	4.0	20	75	■
YBL6-SBM 4040 LN25	R2.00	6	4.0	25	75	■
YBL6-SBM 4040 LN30	R2.00	6	4.0	30	75	■



Available ex stock / subject to prior sale

UMG - Ultra Micron Grade

LN - Long Neck for deep reach moulds and dies



Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☒
K	Cast Iron	☐
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☒
	HRC < 65	☐

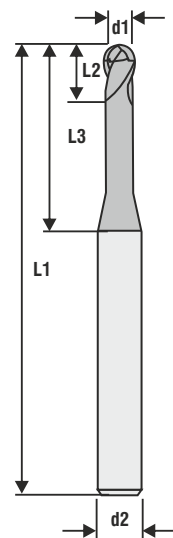
LN
SERIES

SI COATING



| 30°

UMG
0.2mm



Tolerance

Diameter	Range
1d<8	0 / -0.02

YBL Star 2 (≤ 65 HRC) LN

Ball Nose End Mill - Long Neck Series

**Y
65
Series**

Article No.		Dimension (mm)				
2 Flute	Ø d1 h10	Ø d2 h6	L2	L3	L1	SI-coated
YBL4-SBM 2010 LN6	R0.50	4	1	6	50	■
YBL4-SBM 2010 LN8	R0.50	4	1	8	50	■
YBL4-SBM 2010 LN10	R0.50	4	1	10	50	■
YBL4-SBM 2010 LN12	R0.50	4	1	12	50	■
YBL4-SBM 2015 LN8	R0.75	4	1.5	8	50	■
YBL4-SBM 2015 LN12	R0.75	4	1.5	12	50	■
YBL4-SBM 2015 LN16	R0.75	4	1.5	16	50	■
YBL4-SBM 2015 LN20	R0.75	4	1.5	20	50	■
YBL4-SBM 2016 LN8	R0.80	4	1.6	8	50	■
YBL4-SBM 2016 LN12	R0.80	4	1.6	12	50	■
YBL4-SBM 2016 LN16	R0.80	4	1.6	16	50	■
YBL4-SBM 2020 LN8	R1.00	4	2.0	8	50	■
YBL4-SBM 2020 LN12	R1.00	4	2.0	12	50	■
YBL4-SBM 2020 LN16	R1.00	4	2.0	16	50	■
YBL4-SBM 2020 LN20	R1.00	4	2.0	20	50	■
YBL6-SBM 2030 LN8	R1.50	6	3.0	8	50	■
YBL6-SBM 2030 LN10	R1.50	6	3.0	10	50	■
YBL6-SBM 2030 LN16	R1.50	6	3.0	16	50	■
YBL6-SBM 2040 LN10	R2.00	6	4.0	10	75	■
YBL6-SBM 2040 LN15	R2.00	6	4.0	15	75	■
YBL6-SBM 2040 LN20	R2.00	6	4.0	20	75	■
YBL6-SBM 2040 LN25	R2.00	6	4.0	25	75	■
YBL6-SBM 2040 LN30	R2.00	6	4.0	30	75	■

BALL End Mills



Available ex stock / subject to prior sale

UMG - Ultra Micron Grade

LN - Long Neck for deep reach moulds and dies



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	■
K	Cast Iron	□
N	Copper	□
S	Titanium	■
Hardened Steel	HRC 48-55	■
	HRC 56-60	■
	HRC < 65	□



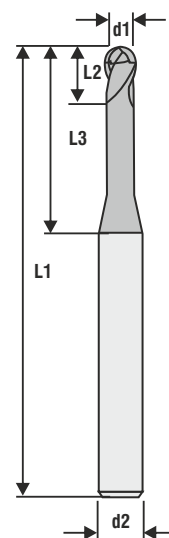
LN
SERIES

SI COATING



| 30°

UMG
0.2mm



Tolerance

Diameter	Range
$1 \leq d < 8$	0 / -0.02

Ball Nose End Mill - Long Taper Neck Series

[illegible]

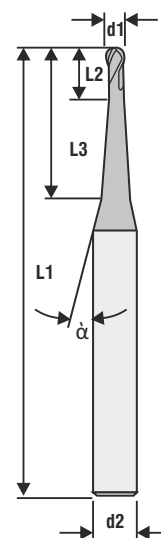
LTN
SERIES

SI COATING



30°

UMG
0.2mm



Tolerance	
Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
20≤d	0 / -0.04

Y 65 Series

BALL End Mills

Y Cornstar (≤ 65 HRC)

Corner Radius End Mills - Regular Series

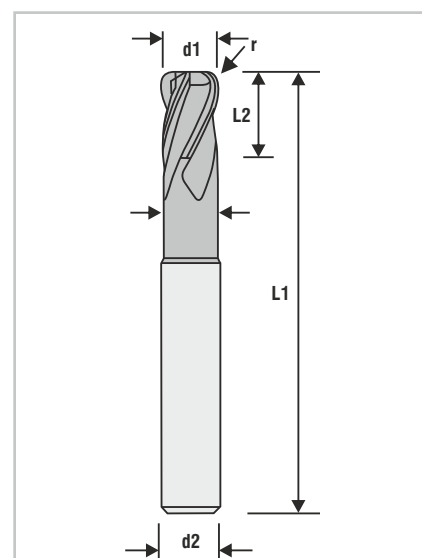
Y
65
Series

Article No.		Dimension (mm)						
4 Flute	2 Flute	Ø d1 h10	Ø d2 h6	r	L2	L1	SI-coated	
Y-CS-SEM 4010-r02	Y-CS-SEM 2010-r02	1	4	0.2	2	50	■	
Y-CS-SEM 4020-r02	Y-CS-SEM 2020-r02	2	4	0.2	4	50	■	
Y-CS-SEM 4020-r05	Y-CS-SEM 2020-r05	2	4	0.5	4	50	■	
Y-CS-SEM 4030-r02	Y-CS-SEM 2030-r02	3	4	0.2	6	50	■	
Y-CS-SEM 4030-r05	Y-CS-SEM 2030-r05	3	4	0.5	6	50	■	
Y-CS-SEM 4030-r10	Y-CS-SEM 2030-r10	3	4	1.0	6	50	■	
Y-CS-SEM 4040-r02	Y-CS-SEM 2040-r02	4	4	0.2	8	50	■	
Y-CS-SEM 4040-r05	Y-CS-SEM 2040-r05	4	4	0.5	8	50	■	
Y-CS-SEM 4040-r10	Y-CS-SEM 2040-r10	4	4	1.0	8	50	■	
Y-CS-SEM 4050-r05	Y-CS-SEM 2050-r05	5	6	0.5	10	50	■	
Y-CS-SEM 4050-r10	Y-CS-SEM 2050-r10	5	6	1.0	10	50	■	
Y-CS-SEM 4060-r02	Y-CS-SEM 2060-r02	6	6	0.2	12	50	■	
Y-CS-SEM 4060-r05	Y-CS-SEM 2060-r05	6	6	0.5	12	50	■	
Y-CS-SEM 4060-r10	Y-CS-SEM 2060-r10	6	6	1.0	12	50	■	
Y-CS-SEM 4060-r1.5	Y-CS-SEM 2060-r1.5	6	6	1.5	12	50	■	
Y-CS-SEM 4060-r20	Y-CS-SEM 2060-r20	6	6	2	12	50	■	
Y-CS-SEM 4080-r05	Y-CS-SEM 2080-r05	8	8	0.5	16	60	■	
Y-CS-SEM 4080-r10	Y-CS-SEM 2080-r10	8	8	1.0	16	60	■	
Y-CS-SEM 4080-r15	Y-CS-SEM 2080-r15	8	8	1.5	16	60	■	
Y-CS-SEM 4080-r20	Y-CS-SEM 2080-r20	8	8	2	16	60	■	
Y-CS-SEM 4100-r05	Y-CS-SEM 2100-r05	10	10	0.5	20	75	■	
Y-CS-SEM 4100-r10	Y-CS-SEM 2100-r10	10	10	1	20	75	■	
Y-CS-SEM 4100-r15	Y-CS-SEM 2100-r15	10	10	1.5	20	75	■	
Y-CS-SEM 4100-r20	Y-CS-SEM 2100-r20	10	10	2.0	20	75	■	
Y-CS-SEM 4100-r25	Y-CS-SEM 2100-r25	10	10	2.5	20	75	■	
Y-CS-SEM 4100-r30	Y-CS-SEM 2100-r30	10	10	3.0	20	75	■	
Y-CS-SEM 4120-r05	Y-CS-SEM 2120-r05	12	12	0.5	24	75	■	
Y-CS-SEM 4120-r10	Y-CS-SEM 2120-r10	12	12	1.0	24	75	■	
Y-CS-SEM 4120-r15	Y-CS-SEM 2120-r15	12	12	1.5	24	75	■	
Y-CS-SEM 4120-r20	Y-CS-SEM 2120-r20	12	12	2.0	24	75	■	
Y-CS-SEM 4120-r25	Y-CS-SEM 2120-r25	12	12	2.5	24	75	■	
Y-CS-SEM 4120-r30	Y-CS-SEM 2120-r30	12	12	3.0	24	75	■	
Y-CS-SEM 4160-r05	Y-CS-SEM 2160-r05	16	16	0.5	32	100	■	
Y-CS-SEM 4160-r10	Y-CS-SEM 2160-r10	16	16	1	32	100	■	
Y-CS-SEM 4160-r15	Y-CS-SEM 2160-r15	16	16	1.5	32	100	■	
Y-CS-SEM 4160-r20	Y-CS-SEM 2160-r20	16	16	2	32	100	■	
Y-CS-SEM 4160-r25	Y-CS-SEM 2160-r25	16	16	2.5	32	100	■	
Y-CS-SEM 4160-r30	Y-CS-SEM 2160-r30	16	16	3	32	100	■	

Available ex stock / subject to prior sale
UMG - Ultra Micron Grade



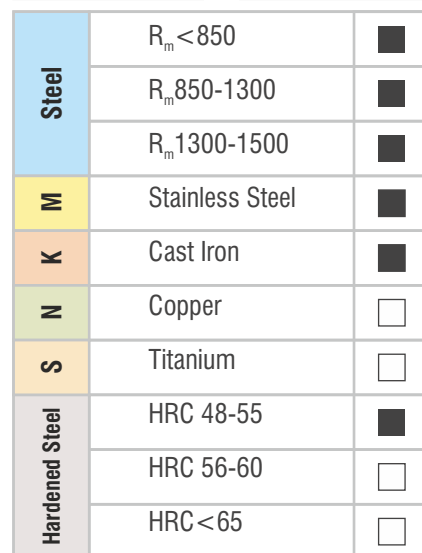
Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☒
K	Cast Iron	☐
N	Copper	☐
S	Titanium	☒
	HRC 48-55	☒
	HRC 56-60	☒
Hardened Steel	HRC < 65	☐



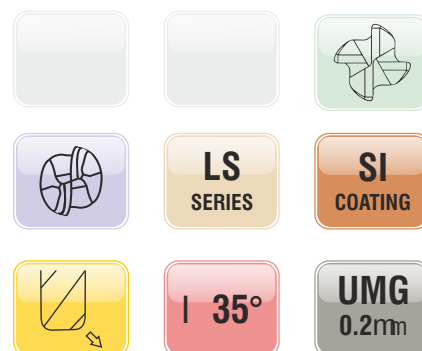
Tolerance	
Diameter	Range
$1d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03
$20 \leq d$	0 / -0.04

Corner Radius End Mills - Long Shank Series

9

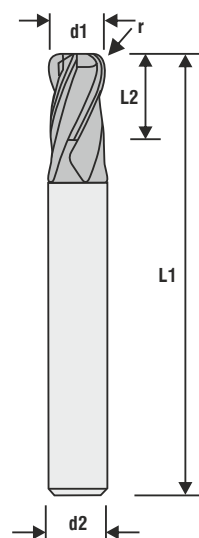


**Y
65
Series**



CORNER

End Mills



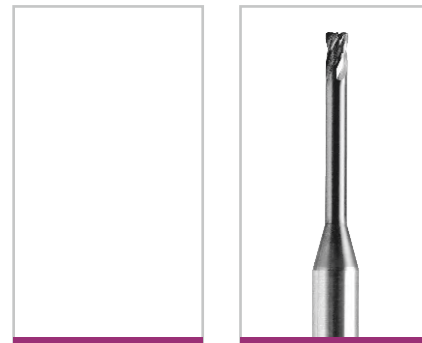
Tolerance	
Diameter	Range
$1 \leq d < 8$	0 / -0.02
$8 \leq d < 18$	0 / -0.03

YCL Star 4 (≤ 65 HRC) LN

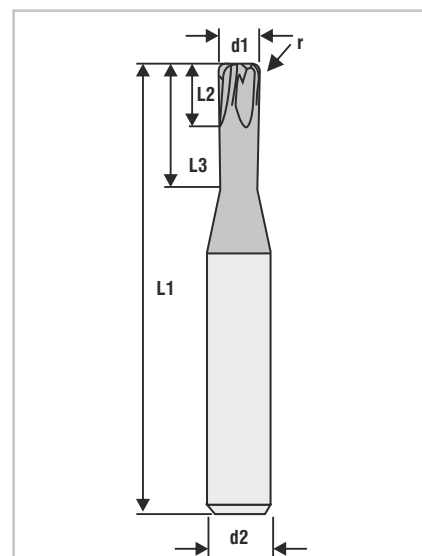
Corner Radius End Mills - Long Neck Series

Y
65
Series

Article No.	Dimension (mm)						SI-coated
	4 Flute	$\varnothing d1$	$\varnothing d2$ h10	L2	L3 h6	r	L1
YCL4-SEM 4010 LN4		1	4	1	4	0.1	50
YCL4-SEM 4010 LN6		1	4	1	6	0.1	50
YCL4-SEM 4010 LN8		1	4	1	8	0.1	50
YCL4-SEM 4010 LN10		1	4	1	10	0.1	50
YCL4-SEM 4015 LN4		1.5	4	1.5	4	0.2	50
YCL4-SEM 4015 LN6		1.5	4	1.5	6	0.2	50
YCL4-SEM 4015 LN8		1.5	4	1.5	8	0.2	50
YCL4-SEM 4015 LN10		1.5	4	1.5	10	0.2	50
YCL4-SEM 4015 LN12		1.5	4	1.5	12	0.2	50
YCL4-SEM 4020 LN8		2.0	4	2.0	8	0.2	50
YCL4-SEM 4020 LN10		2.0	4	2.0	10	0.2	50
YCL4-SEM 4020 LN12		2.0	4	2.0	12	0.2	50
YCL4-SEM 4020 LN16		2.0	4	2.0	16	0.2	50
YCL6-SEM 4030 LN8		3.0	6	3.0	8	0.2	50
YCL6-SEM 4030 LN10		3.0	6	3.0	10	0.2	50
YCL6-SEM 4030 LN12		3.0	6	3.0	12	0.2	50
YCL6-SEM 4030 LN16		3.0	6	3.0	16	0.2	50
YCL6-SEM 4030 LN20		3.0	6	3.0	20	0.2	50



Steel	$R_m < 850$	☒
	$R_m 850-1300$	☒
	$R_m 1300-1500$	☒
M	Stainless Steel	☒
K	Cast Iron	☐
N	Copper	☐
S	Titanium	☒
Hardened Steel	HRC 48-55	☒
	HRC 56-60	☒
	HRC < 65	☐



Tolerance

Diameter	Range
$1d < 8$	0 / -0.02



Available ex stock / subject to prior sale

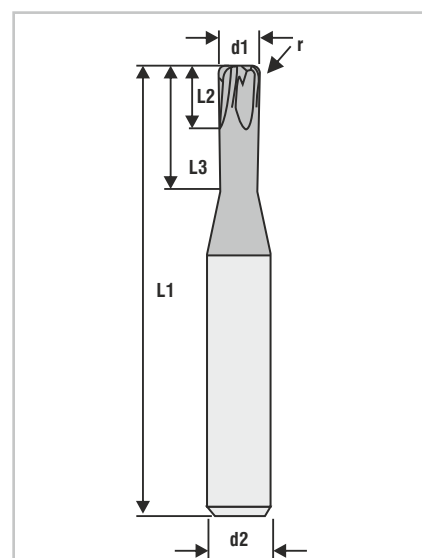
UMG - Ultra Micron Grade

LN - Long Neck for deep reach moulds and dies

CORNER
End Mills

Corner Radius End Mills - Long Neck Series

Corner Radius End Mills - Long Neck Series



Tolerance	
Diameter	Range
1 ≤ d < 8	0 / -0.02

**Y
65
Series**

CORNER

End Mills

A Star Series

Solid Carbide End Mills For Aluminum



A Star Series

A Star Series, are the most advanced products, used for the machining of Aluminum material with silicon % 12 or below and offering high performance, without compromising finish on the component. This is only possible due to our **NAS** technology and mirror polish on flutes.

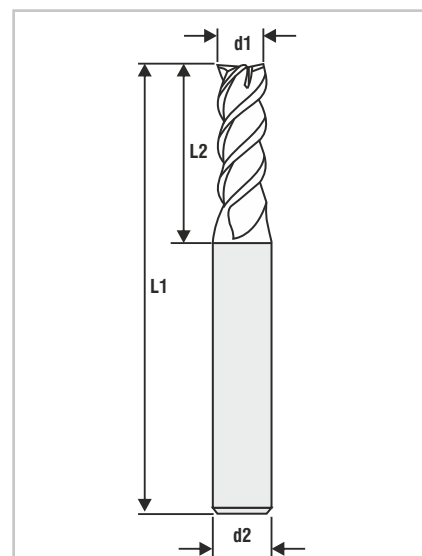
ISO code	USA code	Grain Size	Cobalt Percentage	Density	Hardness		
			Co(%)		HV10	HV30	HRA
K20-K40	C-2	0.6 μ m	10.0	14.45	1680	1660	92.3

A Star 45°

End Mills For Aluminum - Regular Series



Z	Aluminum alloy upto 3% Si	■
	Al cast alloys	□
	Copper	■
	Brass, Bronze	■
	Magnesium alloys	□
	Plastics	■



Tolerance	
Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
20≤d	0 / -0.04

☐ Available ex stock / subject to prior sale
MG - Micron Grade
 Delivery time on request - mention coated in the article no. eg. **A6-SEM 3030**

A
STAR
Series

FLAT
End Mills

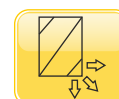
End Mills For Aluminum - Regular Series



N	Aluminum alloy upto 3% Si	■
	Al cast alloys	□
	Copper	■
	Brass, Bronze	■
	Magnesium alloys	□
	Plastics	■

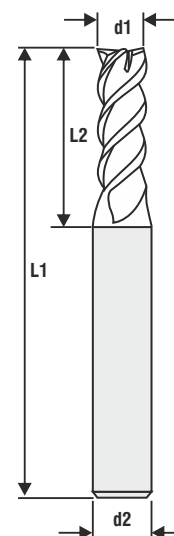


UC
MIRROR
POLISHED



1 55°

MG
0.6mm



Tolerance	
Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
20≤d	0 / -0.04

☐ Available ex stock / subject to prior sale

MG - Micron Grade

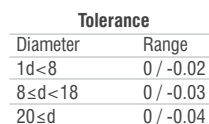
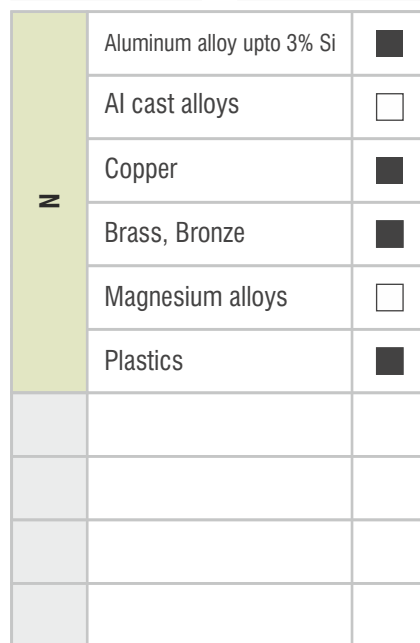
Delivery time on request - mention coated in the article no. eg. **A6-SEM 3030**

End Mills For Aluminum - Long Flute Series

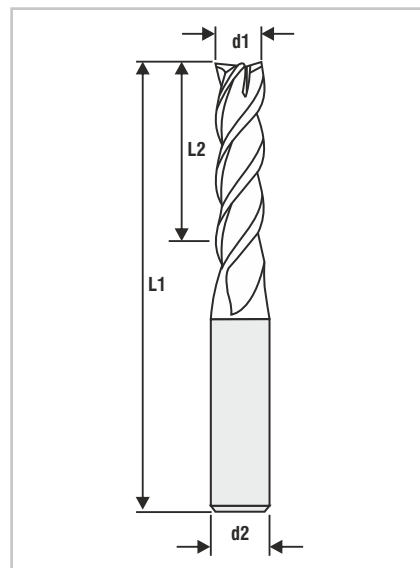
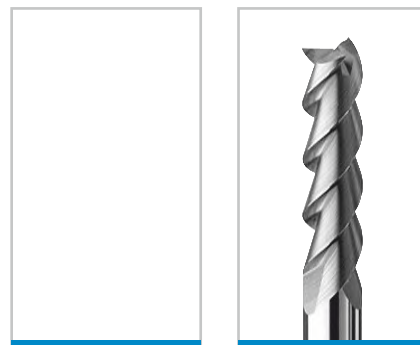
- ☐ Available ex stock / subject to prior sale

MG - Micron Grade

Delivery time on request - mention coated in the article no. eg. **A6-SEM 3030 L -45°**



End Mills For Aluminum - Long Flute Series



Tolerance	
Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
20≤d	0 / -0.04

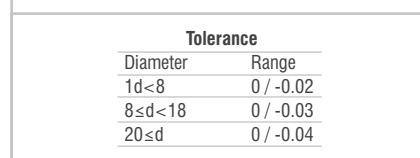
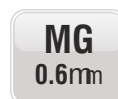
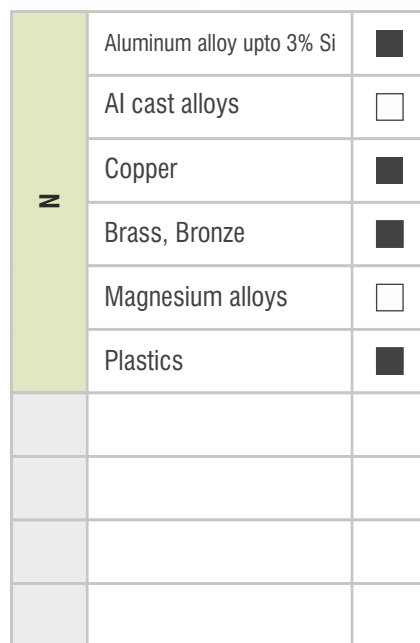
☐ Available ex stock / subject to prior sale
MG - Micron Grade
 Delivery time on request - mention coated in the article no. eg. **A6-SEM 3030 L -55°**

End Mills For Aluminum - Long Shank Series

- ☐ Available ex stock / subject to prior sale

MG - Micron Grade

Delivery time on request - mention coated in the article no. eg. **A6-SEM 3030 L -45°**



Tolerance

Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
20≤d	0 / -0.04

FLAT End Mills

End Mills For Aluminum - Long Shank Series



Dimension (mm)

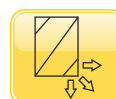
Article No.		Dimension (mm)					
3 Flute 55°		Ø d1 h10	Ø d2 h6	L2	L1	Helix α	Uncoated
A4-SEM 3030 LS		3	4	9	75	55°	☐
A4-SEM 3040 LS		4	4	12	75	55°	☐
A6-SEM 3030 LS		3	6	9	75	55°	☐
A6-SEM 3040 LS		4	6	12	75	55°	☐
A6-SEM 3050 LS		5	6	15	75	55°	☐
A6-SEM 3060 LS 75		6	6	18	75	55°	☐
A6-SEM 3060 LS100		6	6	18	100	55°	☐
A8-SEM 3080 LS		8	8	24	100	55°	☐
A10-SEM 3100 LS		10	10	30	100	55°	☐
A12-SEM 3120 LS		12	12	36	100	55°	☐
A16-SEM 3160 LS		16	16	48	150	55°	☐
A20-SEM 3200 LS		20	20	60	150	55°	☐

N	Aluminum alloy upto 3% Si	■
	Al cast alloys	□
	Copper	■
	Brass, Bronze	■
	Magnesium alloys	□
	Plastics	■



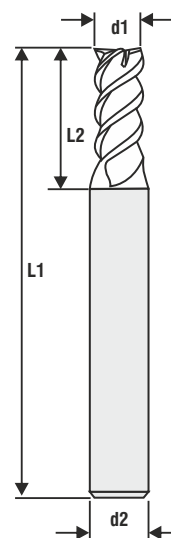
**LS
SERIES**

UC
MIRROR
POLISHED



| 55°

MG
0.6mm



Tolerance

Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
20≤d	0 / -0.04

MG - Micron Grade

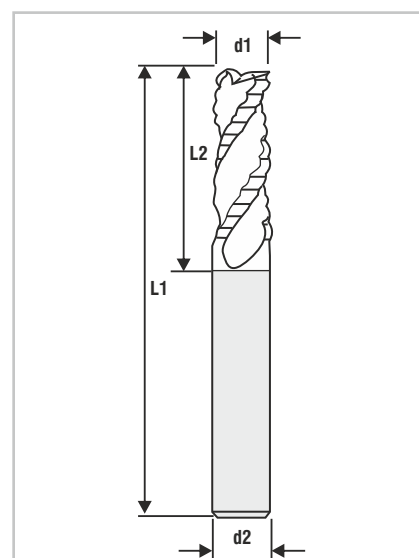
Delivery time on request - mention coated in the article no. eg. **A6-SEM 3030 L -55°**

For Aluminum grade machining

- 1



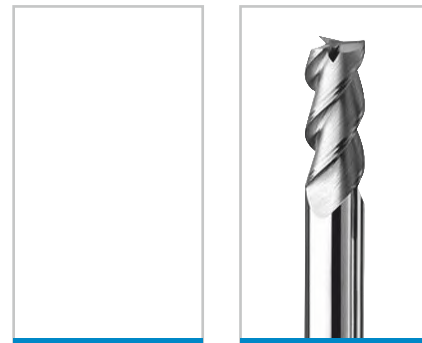
	COARSE PITCH	UC MIRROR POLISHED
	 45°	MG 0.6mm



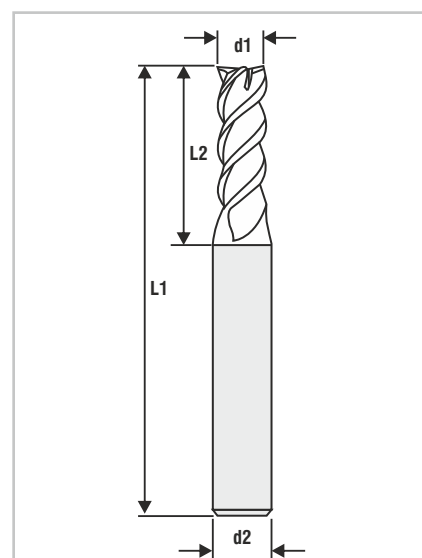
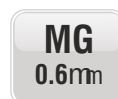
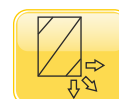
Tolerance	
Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
25≤d	0 / -0.04

AHC- Star Heavy Cutting Endmills

For Aluminum grade machining & Soft material



N	Aluminum alloy upto 3% Si	☒
	Al cast alloys	☐
	Copper	☒
	Brass, Bronze	☒
	Magnesium alloys	☐
	Plastics	☒



Tolerance

Diameter	Range
1d<8	0 / -0.02
8≤d<18	0 / -0.03
25≤d	0 / -0.04

☐ Available ex stock / subject to prior sale
MG - Micron Grade

A
STAR
Series

FLAT
End Mills

D Series

Solid Carbide Drills



D Series

D Series, are the most advanced drill products available also with internal coolant. The point angle with 140° and round face gash gives an even distribution on the cutting force. The formed flutes give an effective chip evacuation low friction hence excellent surface finish. The edges are given with honing treatment.

ISO code	USA code	Grain Size	Cobalt Percentage	Density	Hardness		
			Co(%)	g/cm ³	HV10	HV30	HRA
K20-K40	C-2	0.6μm	10.0	14.5	1680	1660	92.3

Ratiostar 3 x D

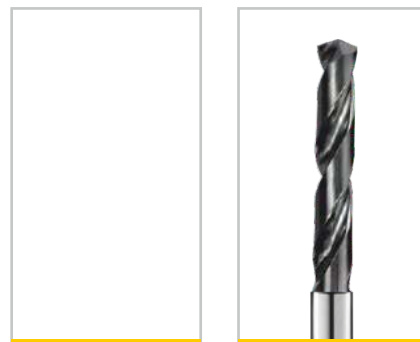
Solid Carbide High Performance Twist Drill

D
Series

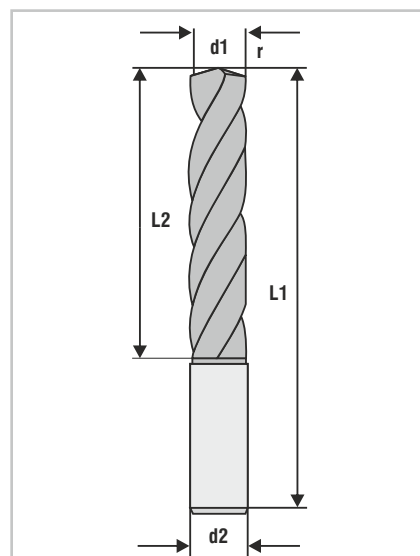
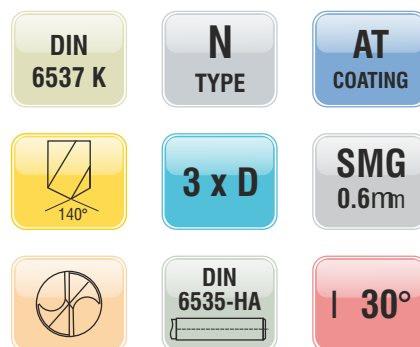
DRILL

Article No.	Dimension (mm)					AT-coated
	2 Flute	Ø d1 m7	Ø d2 h6	L2	L1	
RA-D3-2030		3,0	6,0	20	62	■
RA-D3-2031		3,1	6,0	20	62	■
RA-D3-2032		3,2	6,0	20	62	■
RA-D3-2033		3,3	6,0	20	62	■
RA-D3-2034		3,4	6,0	20	62	■
RA-D3-2035		3,5	6,0	20	62	■
RA-D3-2036		3,6	6,0	20	62	■
RA-D3-2037		3,7	6,0	20	62	■
RA-D3-2038		3,8	6,0	24	66	■
RA-D3-2039		3,9	6,0	24	66	■
RA-D3-2040		4,0	6,0	24	66	■
RA-D3-2041		4,1	6,0	24	66	■
RA-D3-2042		4,2	6,0	24	66	■
RA-D3-2043		4,3	6,0	24	66	■
RA-D3-2044		4,4	6,0	24	66	■
RA-D3-2045		4,5	6,0	24	66	■
RA-D3-2046		4,6	6,0	24	66	■
RA-D3-2047		4,7	6,0	24	66	■
RA-D3-2048		4,8	6,0	28	66	■
RA-D3-2049		4,9	6,0	28	66	■
RA-D3-2050		5,0	6,0	28	66	■
RA-D3-2051		5,1	6,0	28	66	■
RA-D3-2052		5,2	6,0	28	66	■
RA-D3-2053		5,3	6,0	28	66	■
RA-D3-2054		5,4	6,0	28	66	■
RA-D3-2055		5,5	6,0	28	66	■
RA-D3-2056		5,6	6,0	28	66	■
RA-D3-2057		5,7	6,0	28	66	■
RA-D3-2058		5,8	6,0	28	66	■
RA-D3-2059		5,9	6,0	28	66	■
RA-D3-2060		6,0	6,0	28	66	■
RA-D3-2061		6,1	8,0	34	79	■
RA-D3-2062		6,2	8,0	34	79	■
RA-D3-2063		6,3	8,0	34	79	■
RA-D3-2064		6,4	8,0	34	79	■
RA-D3-2065		6,5	8,0	34	79	■
RA-D3-2066		6,6	8,0	34	79	■
RA-D3-2067		6,7	8,0	34	79	■
RA-D3-2068		6,8	8,0	34	79	■
RA-D3-2069		6,9	8,0	34	79	■
RA-D3-2070		7,0	8,0	34	79	■
RA-D3-2071		7,1	8,0	41	79	■
RA-D3-2072		7,2	8,0	41	79	■
RA-D3-2073		7,3	8,0	41	79	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□



Tolerance - m7	
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

Sizes Continued for 3 x D...

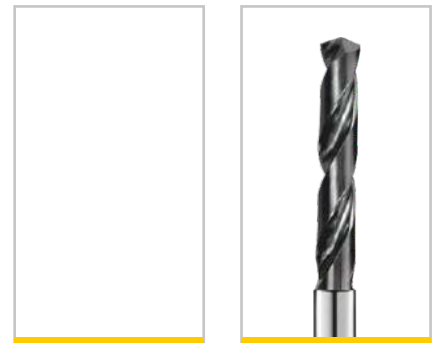
Ratiostar 3 x D

Solid Carbide High Performance Twist Drill

Article No.	Dimension (mm)					AT-coated
	2 Flute	Ø d1 m7	Ø d2 h6	L2	L1	
RA-D3-2074		7,4	8,0	41	79	■
RA-D3-2075		7,5	8,0	41	79	■
RA-D3-2076		7,6	8,0	41	79	■
RA-D3-2077		7,7	8,0	41	79	■
RA-D3-2078		7,8	8,0	41	79	■
RA-D3-2079		7,9	8,0	41	79	■
RA-D3-2080		8,0	10,0	41	79	■
RA-D3-2081		8,1	10,0	47	89	■
RA-D3-2082		8,2	10,0	47	89	■
RA-D3-2083		8,3	10,0	47	89	■
RA-D3-2084		8,4	10,0	47	89	■
RA-D3-2085		8,5	10,0	47	89	■
RA-D3-2086		8,6	10,0	47	89	■
RA-D3-2087		8,7	10,0	47	89	■
RA-D3-2088		8,8	10,0	47	89	■
RA-D3-2089		8,9	10,0	47	89	■
RA-D3-2090		9,0	10,0	47	89	■
RA-D3-2091		9,1	10,0	47	89	■
RA-D3-2092		9,2	10,0	47	89	■
RA-D3-2093		9,3	10,0	47	89	■
RA-D3-2094		9,4	10,0	47	89	■
RA-D3-2095		9,5	10,0	47	89	■
RA-D3-2096		9,6	10,0	47	89	■
RA-D3-2097		9,7	10,0	47	89	■
RA-D3-2098		9,8	10,0	47	89	■
RA-D3-2099		9,9	10,0	47	89	■
RA-D3-2100		10,0	10,0	47	89	■
RA-D3-2101		10,1	12,0	55	102	■
RA-D3-2102		10,2	12,0	55	102	■
RA-D3-2103		10,3	12,0	55	102	■
RA-D3-2104		10,4	12,0	55	102	■
RA-D3-2105		10,5	12,0	55	102	■
RA-D3-2106		10,6	12,0	55	102	■
RA-D3-2107		10,7	12,0	55	102	■
RA-D3-2108		10,8	12,0	55	102	■
RA-D3-2109		10,9	12,0	55	102	■
RA-D3-2112		11,2	12,0	55	102	■
RA-D3-2115		11,5	12,0	55	102	■
RA-D3-2118		11,8	12,0	55	102	■
RA-D3-2120		12,0	12,0	55	102	■
RA-D3-2122		12,2	14,0	60	107	■
RA-D3-2125		12,5	14,0	60	107	■
RA-D3-2128		12,8	14,0	60	107	■
RA-D3-2130		13,0	14,0	60	107	■

■ Available ex stock / subject to prior sale

Sizes Continued for 3 x D...



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□

DIN 6537 K

N TYPE

AT COATING



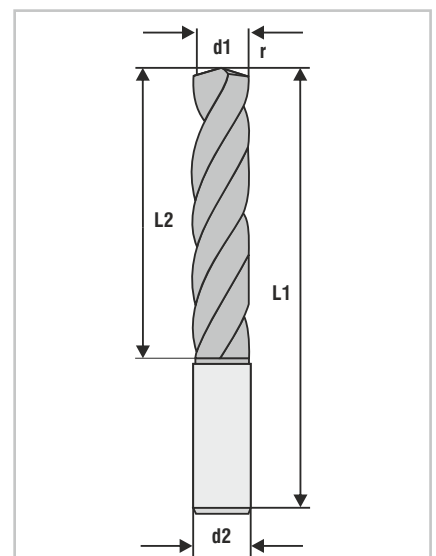
3 x D

SMG 0.6mm



DIN 6535-HA

30°

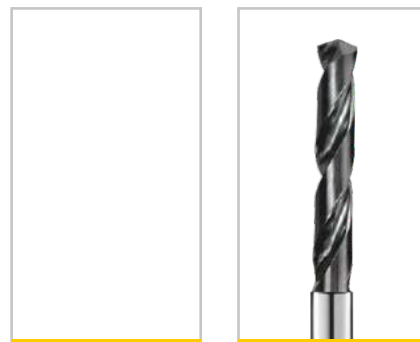


Tolerance - m7	
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

D
Series

DRILL

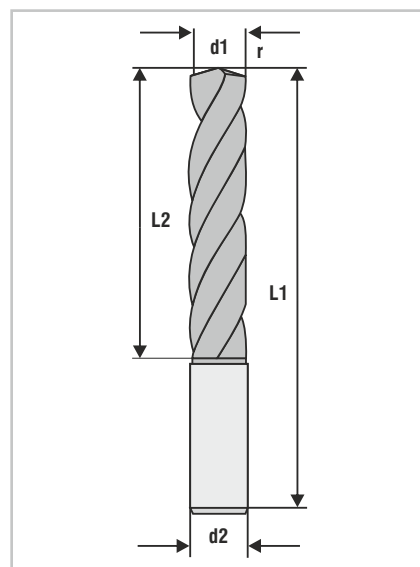
Solid Carbide High Performance Twist Drill



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□



Technical drawing of a 3D diamond-shaped object. The drawing shows a diamond shape with a diagonal line and a 140-degree angle. The dimensions are 3 x D and SMG 0.6mm.



Tolerance - m7	
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

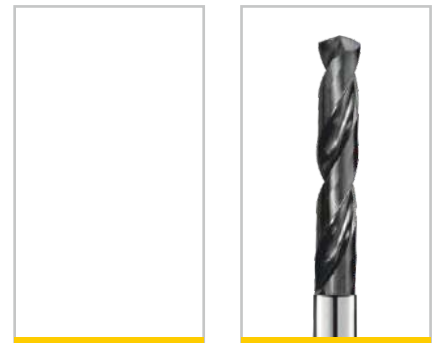
■ Available ex stock / subject to prior sale

Ratiostar 5 x D

Solid Carbide High Performance Twist Drill

Article No.	Dimension (mm)					AT-coated
	2 Flute	Ø d1 m7	Ø d2 h6	L2	L1	
RA-D5-2030		3,0	6,0	28	66	■
RA-D5-2031		3,1	6,0	28	66	■
RA-D5-2032		3,2	6,0	28	66	■
RA-D5-2033		3,3	6,0	28	66	■
RA-D5-2034		3,4	6,0	28	66	■
RA-D5-2035		3,5	6,0	28	66	■
RA-D5-2036		3,6	6,0	28	66	■
RA-D5-2037		3,7	6,0	28	66	■
RA-D5-2038		3,8	6,0	36	74	■
RA-D5-2039		3,9	6,0	36	74	■
RA-D5-2040		4,0	6,0	36	74	■
RA-D5-2041		4,1	6,0	36	74	■
RA-D5-2042		4,2	6,0	36	74	■
RA-D5-2043		4,3	6,0	36	74	■
RA-D5-2044		4,4	6,0	36	74	■
RA-D5-2045		4,5	6,0	36	74	■
RA-D5-2046		4,6	6,0	36	74	■
RA-D5-2047		4,7	6,0	36	74	■
RA-D5-2048		4,8	6,0	44	82	■
RA-D5-2049		4,9	6,0	44	82	■
RA-D5-2050		5,0	6,0	44	82	■
RA-D5-2051		5,1	6,0	44	82	■
RA-D5-2052		5,2	6,0	44	82	■
RA-D5-2053		5,3	6,0	44	82	■
RA-D5-2054		5,4	6,0	44	82	■
RA-D5-2055		5,5	6,0	44	82	■
RA-D5-2056		5,6	6,0	44	82	■
RA-D5-2057		5,7	6,0	44	82	■
RA-D5-2058		5,8	6,0	44	82	■
RA-D5-2059		5,9	6,0	44	82	■
RA-D5-2060		6,0	6,0	44	82	■
RA-D5-2061		6,1	8,0	53	91	■
RA-D5-2062		6,2	8,0	53	91	■
RA-D5-2063		6,3	8,0	53	91	■
RA-D5-2064		6,4	8,0	53	91	■
RA-D5-2065		6,5	8,0	53	91	■
RA-D5-2066		6,6	8,0	53	91	■
RA-D5-2067		6,7	8,0	53	91	■
RA-D5-2068		6,8	8,0	53	91	■
RA-D5-2069		6,9	8,0	53	91	■
RA-D5-2070		7,0	8,0	53	91	■
RA-D5-2071		7,1	8,0	53	91	■
RA-D5-2072		7,2	8,0	53	91	■
RA-D5-2073		7,3	8,0	53	91	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□

DIN 6537 K

N TYPE

AT COATING



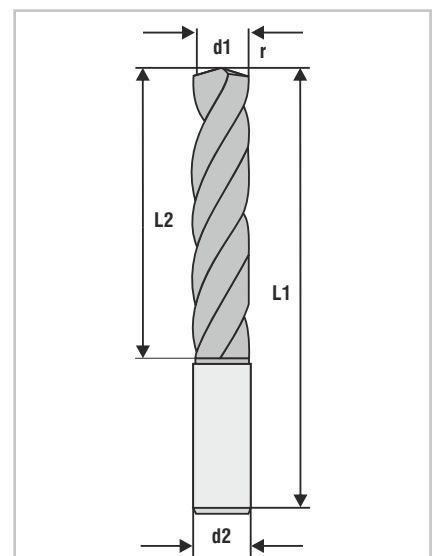
5 x D

SMG 0.6mm



DIN 6535-HA

30°



Tolerance - m7	
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

Ratiostar 5 x D

Solid Carbide High Performance Twist Drill

Article No.

Dimension (mm)

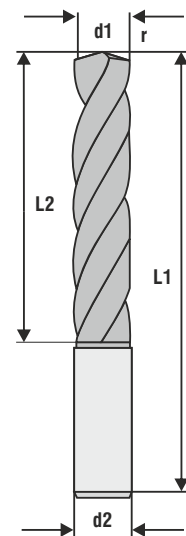
2 Flute	Ø d1 m7	Ø d2 h6	L2	L1	AT-coated
RA-D5-2074	7,4	8,0	53	91	■
RA-D5-2075	7,5	8,0	53	91	■
RA-D5-2076	7,6	8,0	53	91	■
RA-D5-2077	7,7	8,0	53	91	■
RA-D5-2078	7,8	8,0	53	91	■
RA-D5-2079	7,9	8,0	53	91	■
RA-D5-2080	8,0	8,0	53	91	■
RA-D5-2081	8,1	10,0	61	103	■
RA-D5-2082	8,2	10,0	61	103	■
RA-D5-2083	8,3	10,0	61	103	■
RA-D5-2084	8,4	10,0	61	103	■
RA-D5-2085	8,5	10,0	61	103	■
RA-D5-2086	8,6	10,0	61	103	■
RA-D5-2087	8,7	10,0	61	103	■
RA-D5-2088	8,8	10,0	61	103	■
RA-D5-2089	8,9	10,0	61	103	■
RA-D5-2090	9,0	10,0	61	103	■
RA-D5-2091	9,1	10,0	61	103	■
RA-D5-2092	9,2	10,0	61	103	■
RA-D5-2093	9,3	10,0	61	103	■
RA-D5-2094	9,4	10,0	61	103	■
RA-D5-2095	9,5	10,0	61	103	■
RA-D5-2096	9,6	10,0	61	103	■
RA-D5-2097	9,7	10,0	61	103	■
RA-D5-2098	9,8	10,0	61	103	■
RA-D5-2099	9,9	10,0	61	103	■
RA-D5-2100	10,0	10,0	61	103	■
RA-D5-2101	10,1	12,0	71	118	■
RA-D5-2102	10,2	12,0	71	118	■
RA-D5-2103	10,3	12,0	71	118	■
RA-D5-2104	10,4	12,0	71	118	■
RA-D5-2105	10,5	12,0	71	118	■
RA-D5-2106	10,6	12,0	71	118	■
RA-D5-2107	10,7	12,0	71	118	■
RA-D5-2108	10,8	12,0	71	118	■
RA-D5-2109	10,9	12,0	71	118	■
RA-D5-2110	11,0	12,0	71	118	■
RA-D5-2112	11,2	12,0	71	118	■
RA-D5-2115	11,5	12,0	71	118	■
RA-D5-2118	11,8	12,0	71	118	■
RA-D5-2120	12,0	12,0	71	118	■
RA-D5-2122	12,2	14,0	77	124	■
RA-D5-2125	12,5	14,0	77	124	■
RA-D5-2128	12,8	14,0	77	124	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□

DIN 6537 K	N TYPE	AT COATING
	5 x D	SMG 0.6mm
	DIN 6535-HA	30°



Tolerance - m7

Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

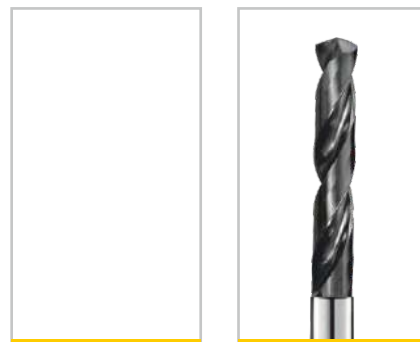
Sizes Continued for 5 x D...

D
Series

DRILL

Solid Carbide High Performance Twist Drill

9



**DIN
6537 K**

N TYPE

AT COATING



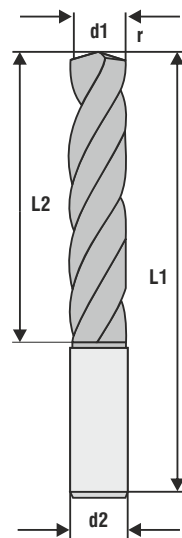
5 x D

SMG
0.6mm



**DIN
6535-HA**

| 30°



Tolerance - m7	
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

D



Precistar 3 x D

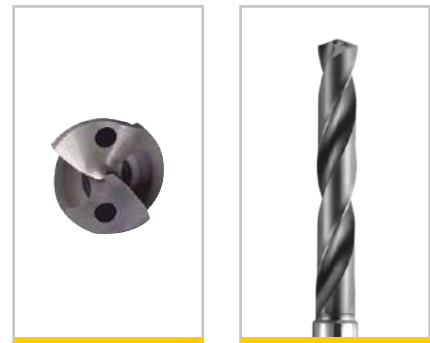
Solid Carbide Extreme Performance Twist Drill.

Article No.

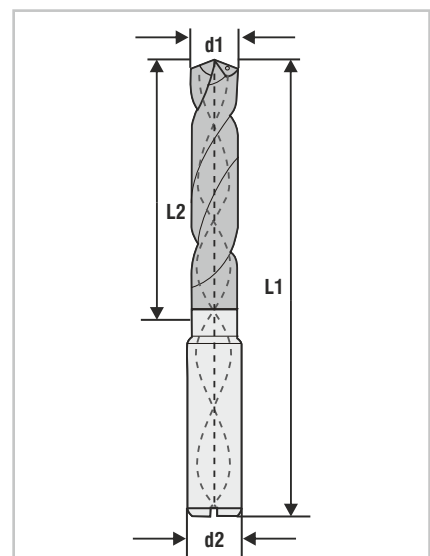
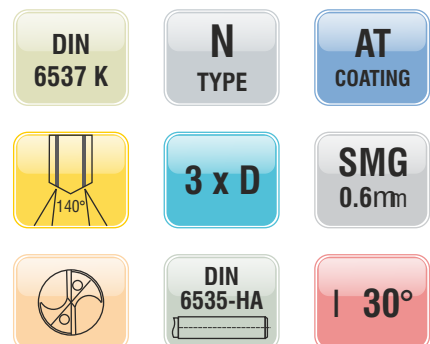
Dimension (mm)

2 Flute	Ø d1 m7	Ø d2 h6	L2	L1	AT-coated
PS-D3-2030	3,0	6,0	20	62	■
PS-D3-2031	3,1	6,0	20	62	■
PS-D3-2032	3,2	6,0	20	62	■
PS-D3-2033	3,3	6,0	20	62	■
PS-D3-2034	3,4	6,0	20	62	■
PS-D3-2035	3,5	6,0	20	62	■
PS-D3-2036	3,6	6,0	20	62	■
PS-D3-2037	3,7	6,0	20	62	■
PS-D3-2038	3,8	6,0	24	66	■
PS-D3-2039	3,9	6,0	24	66	■
PS-D3-2040	4,0	6,0	24	66	■
PS-D3-2041	4,1	6,0	24	66	■
PS-D3-2042	4,2	6,0	24	66	■
PS-D3-2043	4,3	6,0	24	66	■
PS-D3-2044	4,4	6,0	24	66	■
PS-D3-2045	4,5	6,0	24	66	■
PS-D3-2046	4,6	6,0	24	66	■
PS-D3-2047	4,7	6,0	24	66	■
PS-D3-2048	4,8	6,0	28	66	■
PS-D3-2049	4,9	6,0	28	66	■
PS-D3-2050	5,0	6,0	28	66	■
PS-D3-2051	5,1	6,0	28	66	■
PS-D3-2052	5,2	6,0	28	66	■
PS-D3-2053	5,3	6,0	28	66	■
PS-D3-2054	5,4	6,0	28	66	■
PS-D3-2055	5,5	6,0	28	66	■
PS-D3-2056	5,6	6,0	28	66	■
PS-D3-2057	5,7	6,0	28	66	■
PS-D3-2058	5,8	6,0	28	66	■
PS-D3-2059	5,9	6,0	28	66	■
PS-D3-2060	6,0	6,0	28	66	■
PS-D3-2061	6,1	8,0	34	79	■
PS-D3-2062	6,2	8,0	34	79	■
PS-D3-2063	6,3	8,0	34	79	■
PS-D3-2064	6,4	8,0	34	79	■
PS-D3-2065	6,5	8,0	34	79	■
PS-D3-2066	6,6	8,0	34	79	■
PS-D3-2067	6,7	8,0	34	79	■
PS-D3-2068	6,8	8,0	34	79	■
PS-D3-2069	6,9	8,0	34	79	■
PS-D3-2070	7,0	8,0	34	79	■
PS-D3-2071	7,1	8,0	41	79	■
PS-D3-2072	7,2	8,0	41	79	■
PS-D3-2073	7,3	8,0	41	79	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□



Tolerance - m7

Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

Sizes Continued for 3 x D...

D
Series

DRILL

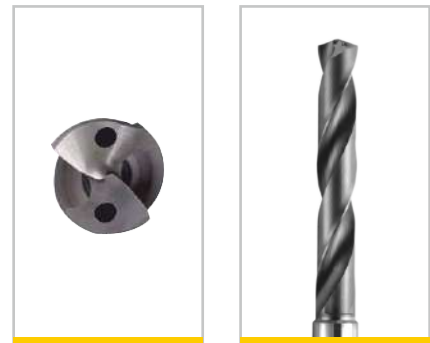
Precistar 3 x D

Solid Carbide Extreme Performance Twist Drill.

Article No.	Dimension (mm)					AT-coated
	2 Flute	Ø d1 m7	Ø d2 h6	L2	L1	
PS-D3-2074		7,4	8,0	41	79	■
PS-D3-2075		7,5	8,0	41	79	■
PS-D3-2076		7,6	8,0	41	79	■
PS-D3-2077		7,7	8,0	41	79	■
PS-D3-2078		7,8	8,0	41	79	■
PS-D3-2079		7,9	8,0	41	79	■
PS-D3-2080		8,0	8,0	41	79	■
PS-D3-2081		8,1	10,0	47	89	■
PS-D3-2082		8,2	10,0	47	89	■
PS-D3-2083		8,3	10,0	47	89	■
PS-D3-2084		8,4	10,0	47	89	■
PS-D3-2085		8,5	10,0	47	89	■
PS-D3-2086		8,6	10,0	47	89	■
PS-D3-2087		8,7	10,0	47	89	■
PS-D3-2088		8,8	10,0	47	89	■
PS-D3-2089		8,9	10,0	47	89	■
PS-D3-2090		9,0	10,0	47	89	■
PS-D3-2091		9,1	10,0	47	89	■
PS-D3-2092		9,2	10,0	47	89	■
PS-D3-2093		9,3	10,0	47	89	■
PS-D3-2094		9,4	10,0	47	89	■
PS-D3-2095		9,5	10,0	47	89	■
PS-D3-2096		9,6	10,0	47	89	■
PS-D3-2097		9,7	10,0	47	89	■
PS-D3-2098		9,8	10,0	47	89	■
PS-D3-2099		9,9	10,0	47	89	■
PS-D3-2100		10,0	10,0	47	89	■
PS-D3-2101		10,1	12,0	55	102	■
PS-D3-2102		10,2	12,0	55	102	■
PS-D3-2103		10,3	12,0	55	102	■
PS-D3-2104		10,4	12,0	55	102	■
PS-D3-2105		10,5	12,0	55	102	■
PS-D3-2106		10,6	12,0	55	102	■
PS-D3-2107		10,7	12,0	55	102	■
PS-D3-2108		10,8	12,0	55	102	■
PS-D3-2109		10,9	12,0	55	102	■
PS-D3-2112		11,2	12,0	55	102	■
PS-D3-2115		11,5	12,0	55	102	■
PS-D3-2118		11,8	12,0	55	102	■
PS-D3-2120		12,0	12,0	55	102	■
PS-D3-2122		12,2	14,0	60	107	■
PS-D3-2125		12,5	14,0	60	107	■
PS-D3-2128		12,8	14,0	60	107	■
PS-D3-2130		13,0	14,0	60	107	■

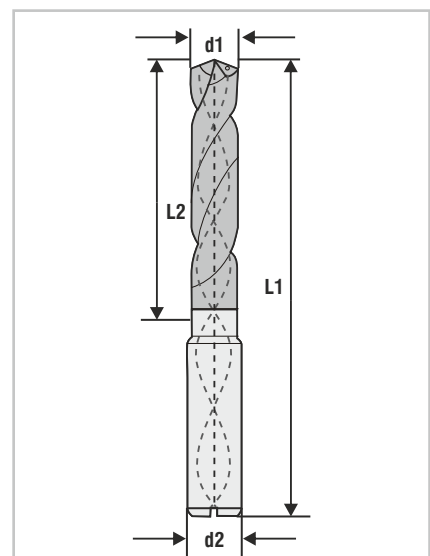
■ Available ex stock / subject to prior sale

Sizes Continued for 3 x D...



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□

DIN 6537 K	N TYPE	AT COATING
	3 x D	SMG 0.6mm
	DIN 6535-HA	30°



Tolerance - m7	
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

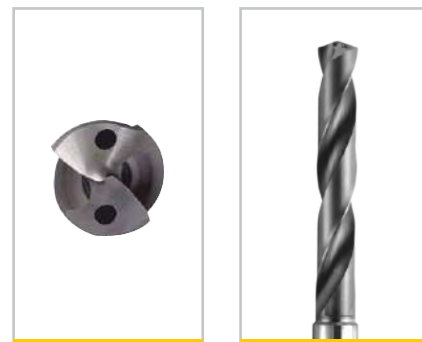
D
Series

DRILL

Solid Carbide Extreme Performance Twist Drill.

Solid Carbide Extreme Performance Twist Drill.

■ Available ex stock / subject to prior sale

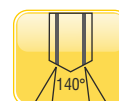


Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□

**DIN
6537 K**

N
TYPE

AT COATING



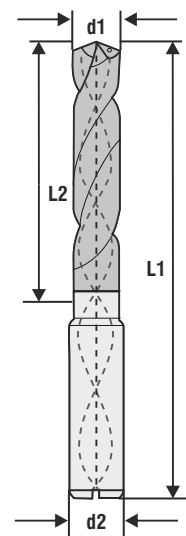
3 x D

SMG
0.6mm



**DIN
6535-HA**

| 30°



Tolerance - m7

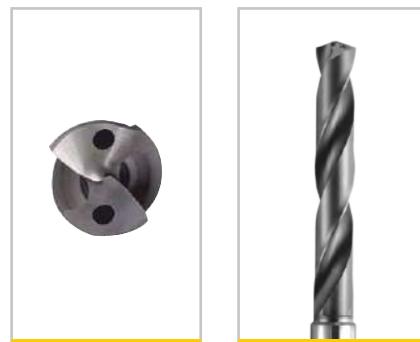
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

Precistar 5 x D

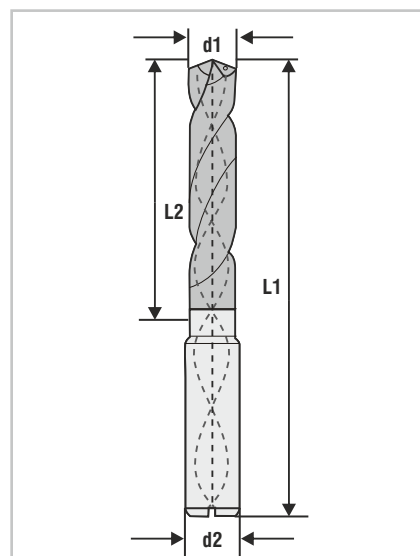
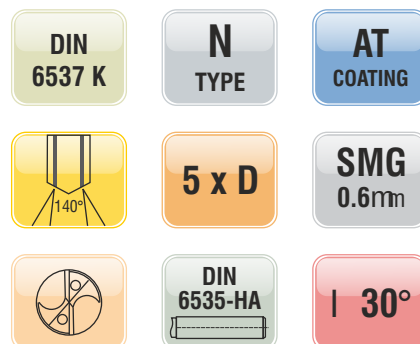
Solid Carbide Extreme Performance Twist Drill

Article No.	Dimension (mm)					AT-coated
	2 Flute	Ø d1 m7	Ø d2 h6	L2	L1	
PS-D5-2030		3,0	6,0	20	62	■
PS-D5-2031		3,1	6,0	20	62	■
PS-D5-2032		3,2	6,0	20	62	■
PS-D5-2033		3,3	6,0	20	62	■
PS-D5-2034		3,4	6,0	20	62	■
PS-D5-2035		3,5	6,0	20	62	■
PS-D5-2036		3,6	6,0	20	62	■
PS-D5-2037		3,7	6,0	20	62	■
PS-D5-2038		3,8	6,0	24	66	■
PS-D5-2039		3,9	6,0	24	66	■
PS-D5-2040		4,0	6,0	24	66	■
PS-D5-2041		4,1	6,0	24	66	■
PS-D5-2042		4,2	6,0	24	66	■
PS-D5-2043		4,3	6,0	24	66	■
PS-D5-2044		4,4	6,0	24	66	■
PS-D5-2045		4,5	6,0	24	66	■
PS-D5-2046		4,6	6,0	24	66	■
PS-D5-2047		4,7	6,0	24	66	■
PS-D5-2048		4,8	6,0	28	66	■
PS-D5-2049		4,9	6,0	44	82	■
PS-D5-2050		5,0	6,0	44	82	■
PS-D5-2051		5,1	6,0	44	82	■
PS-D5-2052		5,2	6,0	44	82	■
PS-D5-2053		5,3	6,0	44	82	■
PS-D5-2054		5,4	6,0	44	82	■
PS-D5-2055		5,5	6,0	44	82	■
PS-D5-2056		5,6	6,0	44	82	■
PS-D5-2057		5,7	6,0	44	82	■
PS-D5-2058		5,8	6,0	44	82	■
PS-D5-2059		5,9	6,0	44	82	■
PS-D5-2060		6,0	6,0	44	82	■
PS-D5-2061		6,1	8,0	53	91	■
PS-D5-2062		6,2	8,0	53	91	■
PS-D5-2063		6,3	8,0	53	91	■
PS-D5-2064		6,4	8,0	53	91	■
PS-D5-2065		6,5	8,0	53	91	■
PS-D5-2066		6,6	8,0	53	91	■
PS-D5-2067		6,7	8,0	53	91	■
PS-D5-2068		6,8	8,0	53	91	■
PS-D5-2069		6,9	8,0	53	91	■
PS-D5-2070		7,0	8,0	53	91	■
PS-D5-2071		7,1	8,0	53	91	■
PS-D5-2072		7,2	8,0	53	91	■
PS-D5-2073		7,3	8,0	53	91	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□



Tolerance - m7	
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

Precistar 5 x D

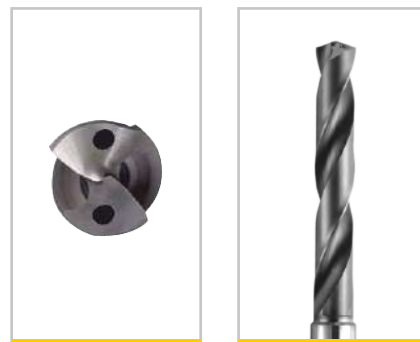
Solid Carbide Extreme Performance Twist Drill.

Article No.

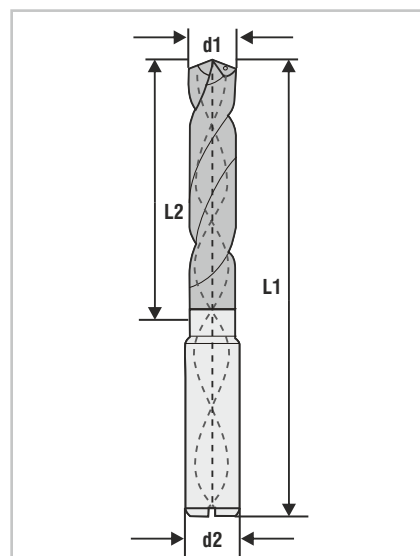
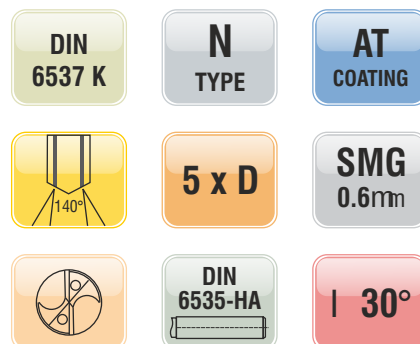
Dimension (mm)

2 Flute	Ø d1 m7	Ø d2 h6	L2	L1	AT-coated
PS-D5-2074	7,4	8,0	53	91	■
PS-D5-2075	7,5	8,0	53	91	■
PS-D5-2076	7,6	8,0	53	91	■
PS-D5-2077	7,7	8,0	53	91	■
PS-D5-2078	7,8	8,0	53	91	■
PS-D5-2079	7,9	8,0	53	91	■
PS-D5-2080	8,0	8,0	53	91	■
PS-D5-2081	8,1	10,0	61	103	■
PS-D5-2082	8,2	10,0	61	103	■
PS-D5-2083	8,3	10,0	61	103	■
PS-D5-2084	8,4	10,0	61	103	■
PS-D5-2085	8,5	10,0	61	103	■
PS-D5-2086	8,6	10,0	61	103	■
PS-D5-2087	8,7	10,0	61	103	■
PS-D5-2088	8,8	10,0	61	103	■
PS-D5-2089	8,9	10,0	61	103	■
PS-D5-2090	9,0	10,0	61	103	■
PS-D5-2091	9,1	10,0	61	103	■
PS-D5-2092	9,2	10,0	61	103	■
PS-D5-2093	9,3	10,0	61	103	■
PS-D5-2094	9,4	10,0	61	103	■
PS-D5-2095	9,5	10,0	61	103	■
PS-D5-2096	9,6	10,0	61	103	■
PS-D5-2097	9,7	10,0	61	103	■
PS-D5-2098	9,8	10,0	61	103	■
PS-D5-2099	9,9	10,0	61	103	■
PS-D5-2100	10,0	10,0	61	103	■
PS-D5-2101	10,1	12,0	71	118	■
PS-D5-2102	10,2	12,0	71	118	■
PS-D5-2103	10,3	12,0	71	118	■
PS-D5-2104	10,4	12,0	71	118	■
PS-D5-2105	10,5	12,0	71	118	■
PS-D5-2106	10,6	12,0	71	118	■
PS-D5-2107	10,7	12,0	71	118	■
PS-D5-2108	10,8	12,0	71	118	■
PS-D5-2109	10,9	12,0	71	118	■
PS-D5-2110	11,0	12,0	71	118	■
PS-D5-2112	11,2	12,0	71	118	■
PS-D5-2115	11,5	12,0	71	118	■
PS-D5-2118	11,8	12,0	71	118	■
PS-D5-2120	12,0	12,0	71	118	■
PS-D5-2122	12,2	14,0	77	124	■
PS-D5-2125	12,5	14,0	77	124	■
PS-D5-2128	12,8	14,0	77	124	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□



Tolerance - m7

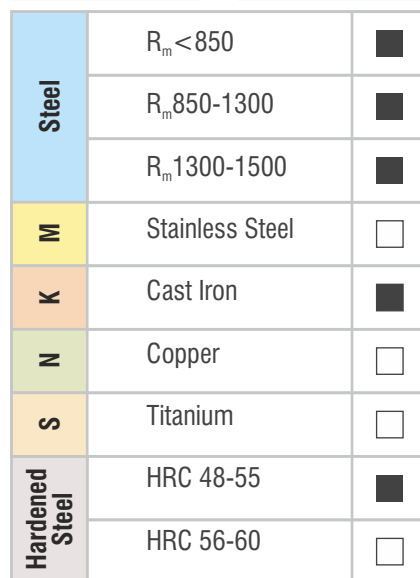
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

Sizes Continued for 5 x D...

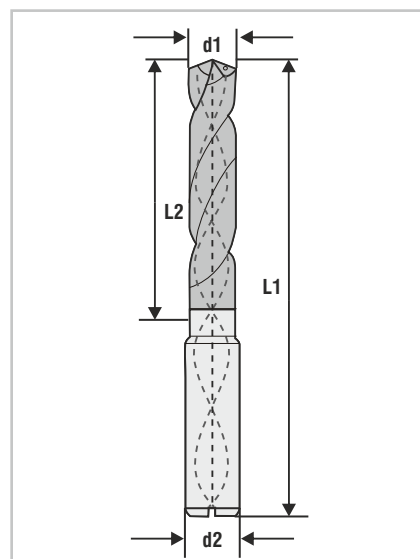
D
Series

DRILL

Solid Carbide Extreme Performance Twist Drill



D



Precistar 8 x D

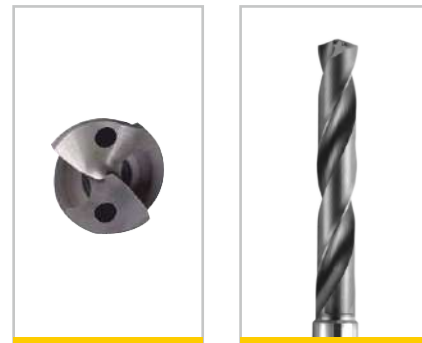
Solid Carbide Extreme Performance Twist Drill.

Article No.

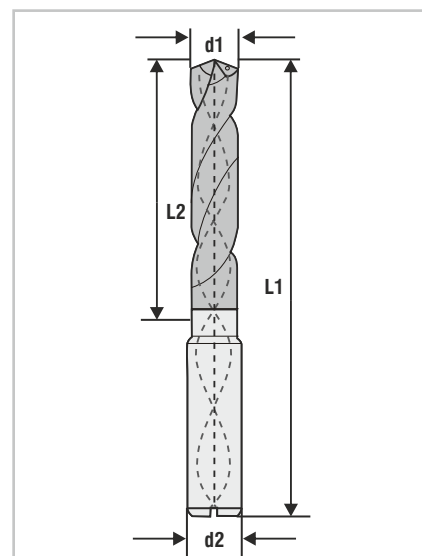
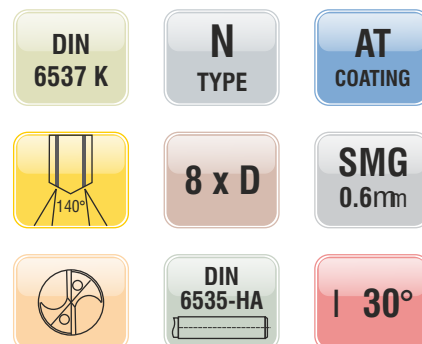
Dimension (mm)

2 Flute	Ø d1 m7	Ø d2	L2	L1	AT-coated
PS-D8-2040	4,00	6	45	85	■
PS-D8-2041	4,10	6	45	85	■
PS-D8-2042	4,20	6	45	85	■
PS-D8-2043	4,30	6	45	85	■
PS-D8-2044	4,40	6	45	85	■
PS-D8-2045	4,50	6	45	85	■
PS-D8-2046	4,60	6	45	85	■
PS-D8-2047	4,70	6	45	85	■
PS-D8-2048	4,80	6	57	97	■
PS-D8-2049	4,90	6	57	97	■
PS-D8-2050	5,00	6	57	97	■
PS-D8-2051	5,10	6	57	97	■
PS-D8-2052	5,20	6	57	97	■
PS-D8-2053	5,30	6	57	97	■
PS-D8-2054	5,40	6	57	97	■
PS-D8-2055	5,50	6	57	97	■
PS-D8-2056	5,60	6	57	97	■
PS-D8-2057	5,70	6	57	97	■
PS-D8-2058	5,80	6	57	97	■
PS-D8-2059	5,90	6	57	97	■
PS-D8-2060	6,00	6	57	97	■
PS-D8-2061	6,10	6	57	97	■
PS-D8-2062	6,20	8	66	106	■
PS-D8-2063	6,30	8	66	106	■
PS-D8-2064	6,40	8	66	106	■
PS-D8-2065	6,50	8	66	106	■
PS-D8-2066	6,60	8	66	106	■
PS-D8-2067	6,70	8	66	106	■
PS-D8-2068	6,80	8	66	106	■
PS-D8-2069	6,90	8	66	106	■
PS-D8-2070	7,00	8	66	106	■
PS-D8-2071	7,10	8	66	106	■
PS-D8-2072	7,20	8	76	116	■
PS-D8-2073	7,30	8	76	116	■
PS-D8-2074	7,40	8	76	116	■
PS-D8-2075	7,50	8	76	116	■
PS-D8-2076	7,60	8	76	116	■
PS-D8-2077	7,70	8	76	116	■
PS-D8-2078	7,80	8	76	116	■
PS-D8-2079	7,90	8	76	116	■
PS-D8-2080	8,00	8	76	116	■
PS-D8-2081	8,10	8	76	116	■
PS-D8-2082	8,20	10	95	139	■
PS-D8-2083	8,30	10	95	139	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□



Tolerance - m7

Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

Sizes Continued for 8 x D...

D
Series

DRILL

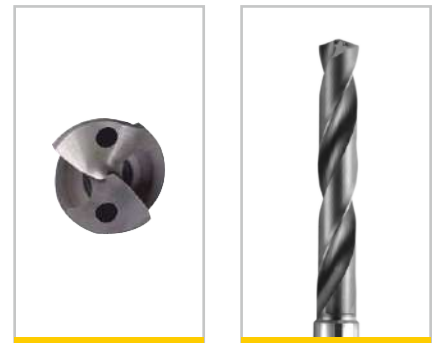
Precistar 8 x D

Solid Carbide Extreme Performance Twist Drill

Article No.	Dimension (mm)					AT-coated
	2 Flute	Ø d1 m7	Ø d2	L2	L1	
PS-D8-2084		8,40	10	95	139	■
PS-D8-2085		8,50	10	95	139	■
PS-D8-2086		8,60	10	95	139	■
PS-D8-2087		8,70	10	95	139	■
PS-D8-2088		8,80	10	95	139	■
PS-D8-2089		8,90	10	95	139	■
PS-D8-2090		9,00	10	95	139	■
PS-D8-2091		9,10	10	95	139	■
PS-D8-2092		9,20	10	95	139	■
PS-D8-2093		9,30	10	95	139	■
PS-D8-2094		9,40	10	95	139	■
PS-D8-2095		9,50	10	95	139	■
PS-D8-2096		9,60	10	95	139	■
PS-D8-2097		9,70	10	95	139	■
PS-D8-2098		9,80	10	95	139	■
PS-D8-2099		9,90	10	95	139	■
PS-D8-2100		10,00	10	95	139	■
PS-D8-2101		10,10	12	114	163	■
PS-D8-2102		10,20	12	114	163	■
PS-D8-2103		10,30	12	114	163	■
PS-D8-2104		10,40	12	114	163	■
PS-D8-2105		10,50	12	114	163	■
PS-D8-2106		10,60	12	114	163	■
PS-D8-2107		10,70	12	114	163	■
PS-D8-2108		10,80	12	114	163	■
PS-D8-2109		10,90	12	114	163	■
PS-D8-2110		11,00	12	114	163	■
PS-D8-2111		11,10	12	114	163	■
PS-D8-2112		11,20	12	114	163	■
PS-D8-2113		11,30	12	114	163	■
PS-D8-2114		11,40	12	114	163	■
PS-D8-2115		11,50	12	114	163	■
PS-D8-2116		11,60	12	114	163	■
PS-D8-2117		11,70	12	114	163	■
PS-D8-2118		11,80	12	114	163	■
PS-D8-2119		11,90	12	114	163	■
PS-D8-2120		12,00	12	114	163	■
PS-D8-2121		12,10	14	133	182	■
PS-D8-2123		12,30	14	133	182	■
PS-D8-2125		12,50	14	133	182	■
PS-D8-2127		12,70	14	133	182	■
PS-D8-2129		12,90	14	133	182	■
PS-D8-2130		13,00	14	133	182	■
PS-D8-2131		13,10	14	133	182	■

■ Available ex stock / subject to prior sale

Sizes Continued for 8 x D...

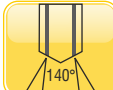


Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□

DIN 6537 K

N TYPE

AT COATING



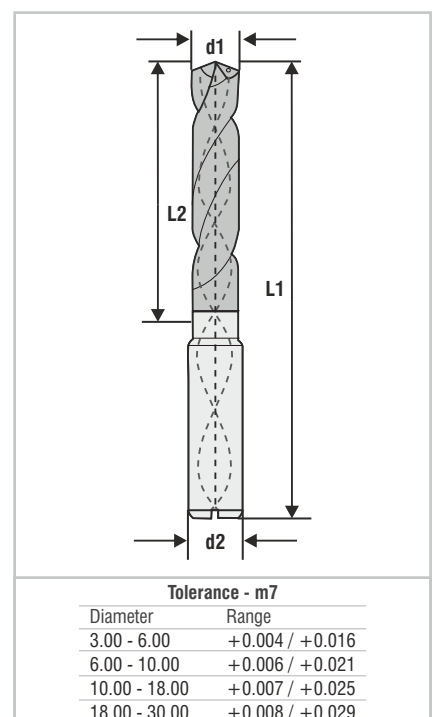
8 x D

SMG 0.6mm



DIN 6535-HA

30°



Precistar 8 x D

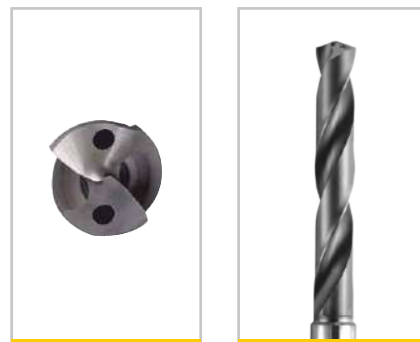
Solid Carbide Extreme Performance Twist Drill.

Article No.

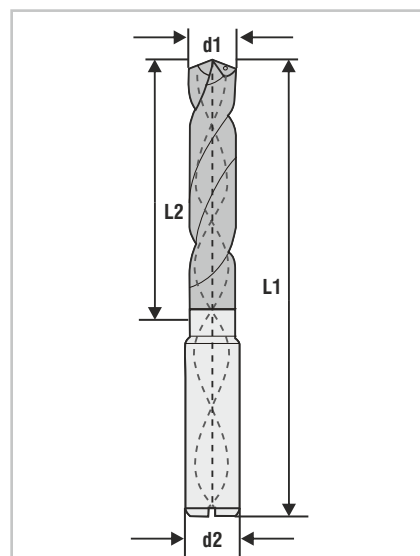
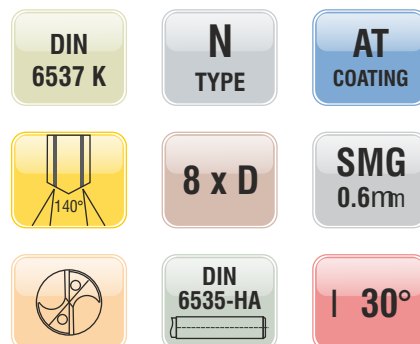
Dimension (mm)

2 Flute	Ø d1 m7	Ø d2	L2	L1	AT-coated
PS-D8-2133	13,30	14	133	182	■
PS-D8-2135	13,50	14	133	182	■
PS-D8-2137	13,70	14	133	182	■
PS-D8-2139	13,90	14	133	182	■
PS-D8-2140	14,00	14	133	182	■
PS-D8-2141	14,10	16	152	204	■
PS-D8-2143	14,30	16	152	204	■
PS-D8-2145	14,50	16	152	204	■
PS-D8-2147	14,70	16	152	204	■
PS-D8-2149	14,90	16	152	204	■
PS-D8-2150	15,00	16	152	204	■
PS-D8-2151	15,10	16	152	204	■
PS-D8-2153	15,30	16	152	204	■
PS-D8-2155	15,50	16	152	204	■
PS-D8-2157	15,70	16	152	204	■
PS-D8-2159	15,90	16	152	204	■
PS-D8-2160	16,00	16	152	204	■
PS-D8-2161	16,10	18	171	223	■
PS-D8-2163	16,30	18	171	223	■
PS-D8-2165	16,50	18	171	223	■
PS-D8-2167	16,70	18	171	223	■
PS-D8-2169	16,90	18	171	223	■
PS-D8-2170	17,00	18	171	223	■
PS-D8-2171	17,10	18	171	223	■
PS-D8-2173	17,30	18	171	223	■
PS-D8-2175	17,50	18	171	223	■
PS-D8-2177	17,70	18	171	223	■
PS-D8-2179	17,90	18	171	223	■
PS-D8-2180	18,00	18	171	223	■
PS-D8-2181	18,10	20	190	244	■
PS-D8-2183	18,30	20	190	244	■
PS-D8-2185	18,50	20	190	244	■
PS-D8-2187	18,70	20	190	244	■
PS-D8-2189	18,90	20	190	244	■
PS-D8-2190	19,00	20	190	244	■
PS-D8-2191	19,10	20	190	244	■
PS-D8-2193	19,30	20	190	244	■
PS-D8-2195	19,50	20	190	244	■
PS-D8-2197	19,70	20	190	244	■
PS-D8-2199	19,90	20	190	244	■
PS-D8-2200	20,00	20	190	244	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□



Tolerance - m7

Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

D
Series

DRILL

Burnstar 5 x D

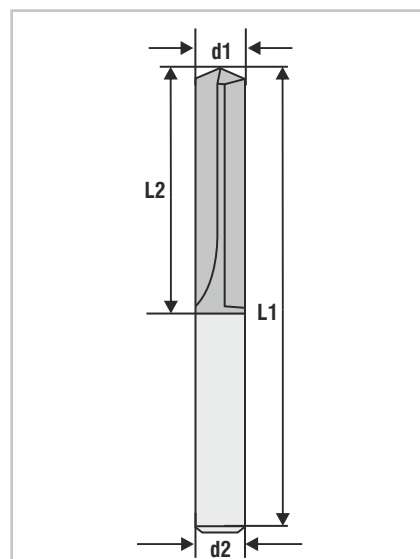
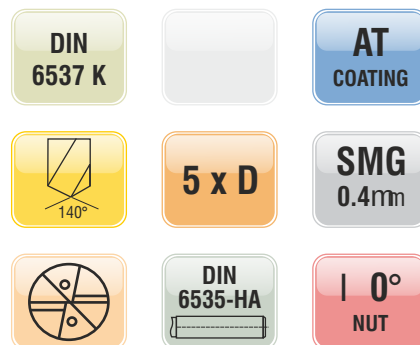
Solid Carbide High Performance Burnishing Drill

Article No.	Dimension (mm)					AT-coated
	2 Flute	Ø d1 m7	Ø d2	L2	L1	
BS-D5-2040		4.0	6.0	36	74	■
BS-D5-2041		4.1	6.0	36	74	■
BS-D5-2042		4.2	6.0	36	74	■
BS-D5-2043		4.3	6.0	36	74	■
BS-D5-2044		4.4	6.0	36	74	■
BS-D5-2045		4.5	6.0	36	74	■
BS-D5-2046		4.6	6.0	36	74	■
BS-D5-2047		4.7	6.0	44	82	■
BS-D5-2048		4.8	6.0	44	82	■
BS-D5-2049		4.9	6.0	44	82	■
BS-D5-2050		5.0	6.0	44	82	■
BS-D5-2051		5.1	6.0	44	82	■
BS-D5-2052		5.2	6.0	44	82	■
BS-D5-2053		5.3	6.0	44	82	■
BS-D5-2054		5.4	6.0	44	82	■
BS-D5-2055		5.5	6.0	44	82	■
BS-D5-2056		5.6	6.0	44	82	■
BS-D5-2057		5.7	6.0	44	82	■
BS-D5-2058		5.8	6.0	44	82	■
BS-D5-2059		5.9	6.0	44	82	■
BS-D5-2060		6.0	6.0	44	82	■
BS-D5-2061		6.1	8.0	53	91	■
BS-D5-2062		6.2	8.0	53	91	■
BS-D5-2063		6.3	8.0	53	91	■
BS-D5-2064		6.4	8.0	53	91	■
BS-D5-2065		6.5	8.0	53	91	■
BS-D5-2066		6.6	8.0	53	91	■
BS-D5-2067		6.7	8.0	53	91	■
BS-D5-2068		6.8	8.0	53	91	■
BS-D5-2069		6.9	8.0	53	91	■
BS-D5-2070		7.0	8.0	53	91	■
BS-D5-2071		7.1	8.0	53	91	■
BS-D5-2072		7.2	8.0	53	91	■
BS-D5-2073		7.3	8.0	53	91	■
BS-D5-2074		7.4	8.0	53	91	■
BS-D5-2075		7.5	8.0	53	91	■
BS-D5-2076		7.6	8.0	53	91	■
BS-D5-2077		7.7	8.0	53	91	■
BS-D5-2078		7.8	8.0	53	91	■
BS-D5-2079		7.9	8.0	53	91	■
BS-D5-2080		8.0	8.0	53	91	■
BS-D5-2081		8.1	10.0	61	103	■
BS-D5-2082		8.2	10.0	61	103	■
BS-D5-2083		8.3	10.0	61	103	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□



Tolerance - m7	
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

Burnstar 5 x D

Solid Carbide High Performance Burnishing Drill

D
Series

DRILL

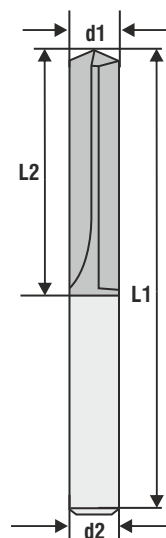
Article No.		Dimension (mm)				
2 Flute		Ø d1 m7	Ø d2	L2	L1	AT-coated
BS-D5-2084		8.4	10.0	61	103	■
BS-D5-2085		8.5	10.0	61	103	■
BS-D5-2086		8.6	10.0	61	103	■
BS-D5-2087		8.7	10.0	61	103	■
BS-D5-2088		8.8	10.0	61	103	■
BS-D5-2089		8.9	10.0	61	103	■
BS-D5-2090		9.0	10.0	61	103	■
BS-D5-2091		9.1	10.0	61	103	■
BS-D5-2092		9.2	10.0	61	103	■
BS-D5-2093		9.3	10.0	61	103	■
BS-D5-2094		9.4	10.0	61	103	■
BS-D5-2095		9.5	10.0	61	103	■
BS-D5-2096		9.6	10.0	61	103	■
BS-D5-2097		9.7	10.0	61	103	■
BS-D5-2098		9.8	10.0	61	103	■
BS-D5-2099		9.9	10.0	61	103	■
BS-D5-2100		10.0	10.0	61	103	■
BS-D5-2101		10.1	12.0	71	114	■
BS-D5-2102		10.2	12.0	71	114	■
BS-D5-2103		10.3	12.0	71	114	■
BS-D5-2104		10.4	12.0	71	114	■
BS-D5-2105		10.5	12.0	71	114	■
BS-D5-2106		10.6	12.0	71	114	■
BS-D5-2107		10.7	12.0	71	114	■
BS-D5-2108		10.8	12.0	71	114	■
BS-D5-2109		10.9	12.0	71	114	■
BS-D5-2110		11.0	12.0	71	114	■
BS-D5-2112		11.1	12.0	71	114	■
BS-D5-2115		11.5	12.0	71	114	■
BS-D5-2118		11.8	12.0	71	114	■
BS-D5-2120		12.0	12.0	71	114	■
BS-D5-2122		12.2	14.0	77	130	■
BS-D5-2125		12.5	14.0	77	130	■
BS-D5-2128		12.8	14.0	77	130	■
BS-D5-2130		13.0	14.0	77	130	■
BS-D5-2135		13.5	14.0	77	130	■
BS-D5-2138		13.8	14.0	77	130	■
BS-D5-2140		14.0	14.0	77	130	■
BS-D5-2145		14.5	14.0	83	140	■
BS-D5-2150		15.0	14.0	83	140	■
BS-D5-2155		15.5	14.0	83	140	■
BS-D5-2160		16.0	16.0	83	140	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□

DIN 6537 K		AT COATING
	5 x D	SMG 0.4mm
	DIN 6535-HA	0° NUT



Tolerance - m7	
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

Burnstar 8 x D

Solid Carbide Burnishing Drills with Internal Coolant

Article No.	Dimension (mm)					AT-coated
	2 Flute	Ø d1 m7	Ø d2 h6	L2	L1	
BS-D8-2050		5,0	6,0	60	95	■
BS-D8-2055		5,5	6,0	60	95	■
BS-D8-2060		6,0	6,0	60	95	■
BS-D8-2065		6,5	8,0	74	114	■
BS-D8-2070		7,0	8,0	74	114	■
BS-D8-2075		7,5	8,0	74	114	■
BS-D8-2080		8,0	8,0	74	114	■
BS-D8-2085		8,5	10,0	90	140	■
BS-D8-2090		9,0	10,0	90	140	■
BS-D8-2095		9,5	10,0	90	140	■
BS-D8-2100		10,0	10,0	90	140	■
BS-D8-2105		10,5	12,0	110	160	■
BS-D8-2110		11,0	12,0	110	160	■
BS-D8-2115		11,5	12,0	110	160	■
BS-D8-2120		12,0	12,0	110	160	■
BS-D8-2125		12,5	14,0	124	174	■
BS-D8-2130		13,0	14,0	124	174	■
BS-D8-2135		13,5	14,0	124	174	■
BS-D8-2140		14,0	14,0	124	174	■
BS-D8-2145		14,5	16,0	140	195	■
BS-D8-2150		15,0	16,0	140	195	■
BS-D8-2155		15,5	16,0	140	195	■
BS-D8-2160		16,0	16,0	140	195	■
BS-D8-2165		16,5	18,0	156	210	■
BS-D8-2170		17,0	18,0	156	210	■
BS-D8-2175		17,5	18,0	156	210	■
BS-D8-2180		18,0	18,0	156	210	■
BS-D8-2190		19,0	20,0	175	230	■
BS-D8-2200		20,0	20,0	175	230	■

■ Available ex stock / subject to prior sale



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	□
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□

DIN 6537 K		AT COATING
	8 x D	SMG 0.4mm
	DIN 6535-HA	0° NUT

Tolerance - m7	
Diameter	Range
3.00 - 6.00	+0.004 / +0.016
6.00 - 10.00	+0.006 / +0.021
10.00 - 18.00	+0.007 / +0.025
18.00 - 30.00	+0.008 / +0.029

D
Series

DRILL

Solid Carbide NC Spotting drills 90°

7



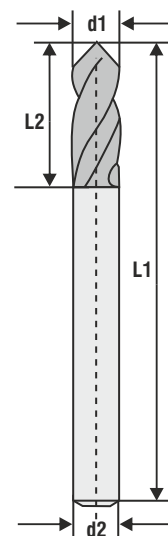
**ISO
10898**

AT COATING



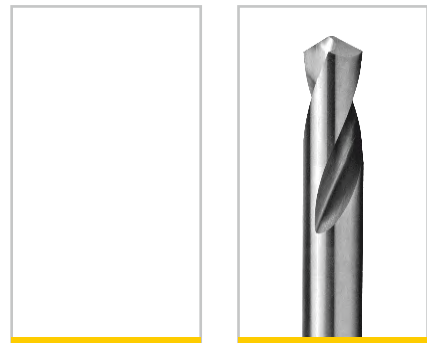
| 30°

SMG
0.6mm

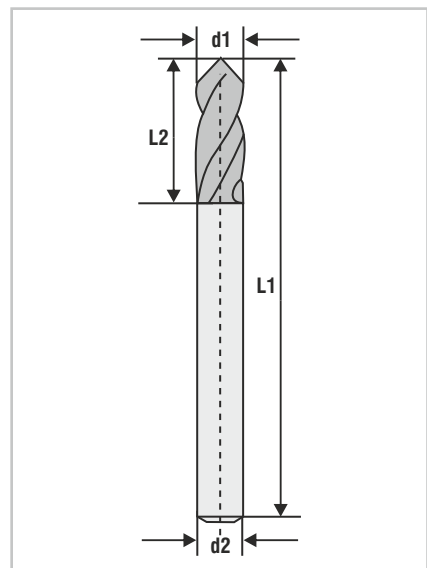
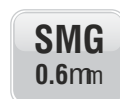


As per ISO 10898 Std

Solid Carbide NC Spotting drills 120°



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	□
	HRC > 60	



As per ISO 10898 Std

D Series

DRILL

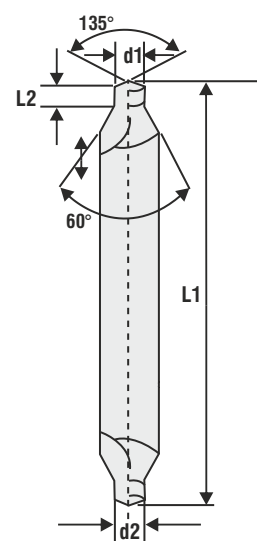
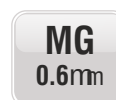
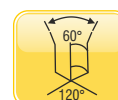
Solid Carbide Double Center drills 60°

Solid Carbide Double Center drills 60°

Article No.		Dimension (mm)				
2 Flute		Ø d1 Din	Ø d2 h6	L2	L1	AT-coated
H-DCD 2200		2.0	5	2.5	40	■
H-DCD 2250		2.5	6.3	3.1	45	■
H-DCD 2315		3.15	8	3.9	50	■
H-DCD 2400		4.0	10	5.0	55	■
H-DCD 2500		5.0	12	6.3	63	■



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	□
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
Hardened Steel	HRC 48-55	□
	HRC 56-60	
	HRC > 60	



Tolerance - Din Standard

■ Available ex stock / subject to prior sale

Solid Carbide Single End Center drills 60°

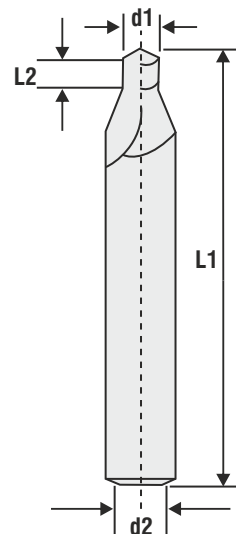
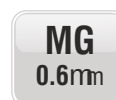
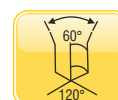
Solid Carbide Single End Center drills 60°

Available ex stock / subject to prior sale



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	□
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
Hardened Steel	HRC 48-55	□
	HRC 56-60	
	HRC > 60	

D Series



Tolerance - Din Standard

DRILL

Step Drills

Solid Carbide Step drills

Article No.				Dimension (mm)				
2 Flute	Thread Size	Ø d1 m7	Ø d2 h8	L3	L2	L1	Ø d3 h6	AT-coated
RT-M4- SDT	M4	3.3	4.5	11.4	24	62	6	■
RT-M5-SDT	M5	4.2	5.5	13.6	28	66	6	■
RT-M6-SDT	M6	5.0	6.6	16.5	34	79	8	■
RT-M8-SDT	M8	6.8	9.0	21	47	89	10	■
RT-M10-SDT	M10	8.5	11.0	25.5	55	102	12	■
RT-M12-SDT	M12	10.2	14.0	30	60	107	14	■
RT-M16-SDT	M16	14.0	18.0	38.5	73	123	18	■

D

DRILL

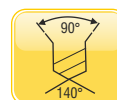


Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
Hardened Steel	HRC 48-55	■
	HRC 56-60	
	HRC > 60	

**DIN
6537**

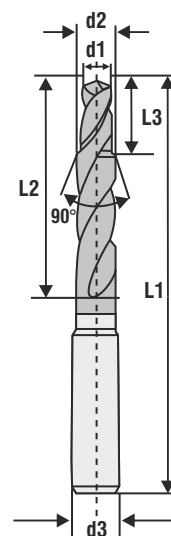


AT COATING



| 30°

SMG
0.4mm



As per DIN 6537

Available ex stock / subject to prior sale

Quotes for internal coolant step drills available on request

R Series

Solid Carbide Reamer



R Series

R Series, are high quality carbide reamers, completely flute polished. They are available in both RH and LH helix. The reamers are manufactured under strict quality control to maintain close hole tolerances.

ISO code	USA code	Grain Size	Cobalt Percentage	Density	Hardness		
			Co(%)	g/cm ³	HV10	HV30	HRA
K20-K40	C-2	0.6μm	10.0	14.5	1680	1660	92.3

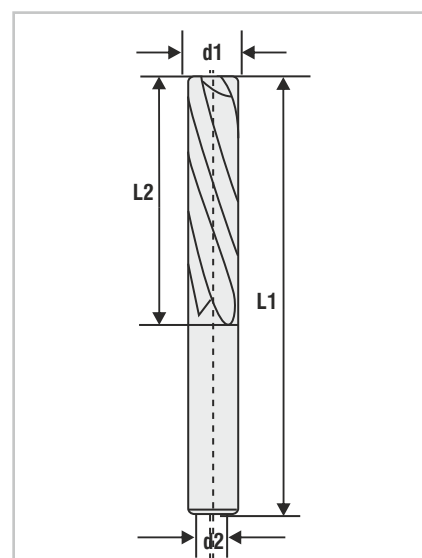
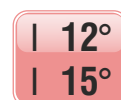


Ream Star

Solid Carbide Left Hand Helix Reamer



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
	HRC 48-55	□
	HRC 56-60	
Hardened Steel	HRC > 60	



Tolerance - H7	
Diameter	Range
3.00 - 6.00	0.00 / +0.012
6.00 - 10.00	0.00 / +0.015
10.00 - 18.00	0.00 / +0.018
18.00 - 30.00	0.00 / +0.021

Article No.	Dimension (mm)					AT-coated
	Ø d1 H7	Ø d2 h6	L2	L1	Number of Flutes	
R-LHX 4019.7	1.97	2	11	50	4	■
R-LHX 4019.8	1.98	2	11	50	4	■
R-LHX 4019.9	1.99	2	11	50	4	■
R-LHX 4020.0	2.00	2	11	50	4	■
R-LHX 4020.1	2.01	2	11	50	4	■
R-LHX 4020.2	2.02	2	11	50	4	■
R-LHX 4020.3	2.03	2	11	50	4	■
R-LHX 4021.0	2.10	3	15	50	4	■
R-LHX 4022.0	2.20	3	15	50	4	■
R-LHX 4023.0	2.30	3	15	50	4	■
R-LHX 4024.0	2.40	3	15	50	4	■
R-LHX 4025.0	2.50	3	15	50	4	■
R-LHX 4026.0	2.60	3	20	60	4	■
R-LHX 4027.0	2.70	3	20	60	4	■
R-LHX 4028.0	2.80	3	20	60	4	■
R-LHX 4029.0	2.90	3	20	60	4	■
R-LHX 4029.7	2.97	3	20	60	4	■
R-LHX 4029.8	2.98	3	20	60	4	■
R-LHX 4030.0	3.00	3	20	60	4	■
R-LHX 4030.1	3.01	3	20	60	4	■
R-LHX 4030.2	3.02	3	20	60	4	■
R-LHX 4030.3	3.03	3	20	60	4	■
R-LHX 4031.0	3.10	3	20	60	4	■
R-LHX 4032.0	3.20	4	20	60	4	■
R-LHX 4033.0	3.30	4	20	60	4	■
R-LHX 4034.0	3.40	4	20	60	4	■
R-LHX 4035.0	3.50	4	20	60	4	■
R-LHX 4036.0	3.60	4	20	60	4	■
R-LHX 4037.0	3.70	4	20	60	4	■
R-LHX 4038.0	3.80	4	20	60	4	■
R-LHX 4039.0	3.90	4	20	60	4	■
R-LHX 4039.7	3.97	4	20	60	4	■
R-LHX 4039.8	3.98	4	20	60	4	■
R-LHX 4039.9	3.99	4	20	60	4	■
R-LHX 4040.0	4.00	4	20	60	4	■
R-LHX 4040.1	4.01	4	20	60	4	■
R-LHX 4040.2	4.02	4	20	60	4	■
R-LHX 4040.3	4.03	4	20	60	4	■
R-LHX 4041.0	4.10	4	20	60	4	■
R-LHX 4042.0	4.20	5	20	60	4	■
R-LHX 4043.0	4.30	5	20	60	4	■
R-LHX 4044.0	4.40	5	20	60	4	■
R-LHX 4045.0	4.50	5	20	60	4	■
R-LHX 4046.0	4.60	5	20	60	4	■

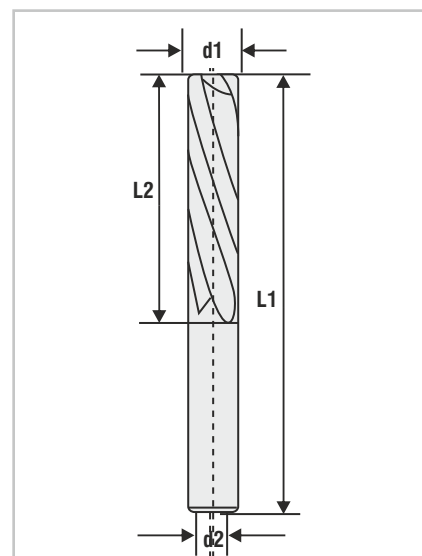
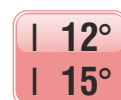
■ Available ex stock / subject to prior sale

Ream Star

Solid Carbide Left Hand Helix Reamer



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
	HRC 48-55	□
	HRC 56-60	□
Hardened Steel	HRC > 60	□



Tolerance - H7

Diameter	Range
3.00 - 6.00	0.00 / +0.012
6.00 - 10.00	0.00 / +0.015
10.00 - 18.00	0.00 / +0.018
18.00 - 30.00	0.00 / +0.021

Article No.	Dimension (mm)					AT-coated
	Ø d1 H7	Ø d2 h6	L2	L1	Number of Flutes	
R-LHX 4047.0	4.70	5	25	75	4	■
R-LHX 6048.0	4.80	5	25	75	6	■
R-LHX 6049.0	4.90	5	25	75	6	■
R-LHX 6049.7	4.97	5	25	75	6	■
R-LHX 6049.8	4.98	5	25	75	6	■
R-LHX 6049.9	4.99	5	25	75	6	■
R-LHX 6050.0	5.00	5	25	75	6	■
R-LHX 6050.1	5.01	5	25	75	6	■
R-LHX 6050.2	5.02	5	25	75	6	■
R-LHX 6050.3	5.03	5	25	75	6	■
R-LHX 6051.0	5.10	6	25	75	6	■
R-LHX 6052.0	5.20	6	25	75	6	■
R-LHX 6053.0	5.30	6	25	75	6	■
R-LHX 6054.0	5.40	6	25	75	6	■
R-LHX 6055.0	5.50	6	25	75	6	■
R-LHX 6056.0	5.60	6	25	75	6	■
R-LHX 6057.0	5.70	6	25	75	6	■
R-LHX 6058.0	5.80	6	25	75	6	■
R-LHX 6059.0	5.90	6	25	75	6	■
R-LHX 6059.7	5.97	6	25	75	6	■
R-LHX 6059.8	5.98	6	25	75	6	■
R-LHX 6059.9	5.99	6	25	75	6	■
R-LHX 6060.0	6.00	6	25	75	6	■
R-LHX 6060.1	6.01	6	25	75	6	■
R-LHX 6060.2	6.02	6	25	75	6	■
R-LHX 6060.3	6.03	8	25	75	6	■
R-LHX 6061.0	6.10	8	25	75	6	■
R-LHX 6062.0	6.20	8	25	75	6	■
R-LHX 6063.0	6.30	8	25	75	6	■
R-LHX 6064.0	6.40	8	25	75	6	■
R-LHX 6065.0	6.50	8	25	75	6	■
R-LHX 6066.0	6.60	8	25	75	6	■
R-LHX 6067.0	6.70	8	25	75	6	■
R-LHX 6068.0	6.80	8	25	75	6	■
R-LHX 6069.0	6.90	8	25	75	6	■
R-LHX 6069.7	6.97	8	30	100	6	■
R-LHX 6069.8	6.98	8	30	100	6	■
R-LHX 6069.9	6.99	8	30	100	6	■
R-LHX 6070.0	7.00	8	30	100	6	■
R-LHX 6070.1	7.01	8	30	100	6	■
R-LHX 6070.2	7.02	8	30	100	6	■
R-LHX 6070.3	7.03	8	30	100	6	■
R-LHX 6071.0	7.10	8	30	100	6	■
R-LHX 6072.0	7.20	8	30	100	6	■

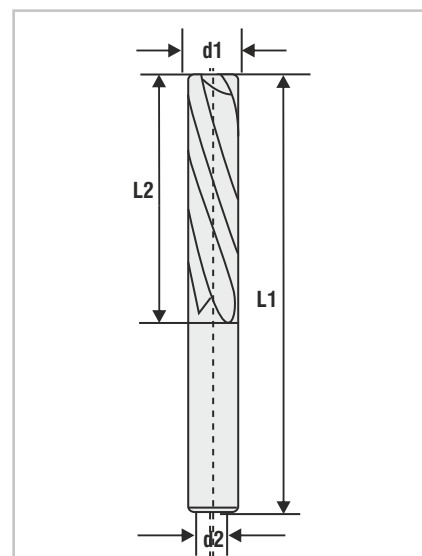
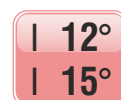
■ Available ex stock / subject to prior sale

Ream Star

Solid Carbide Left Hand Helix Reamer



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
Hardened Steel	HRC 48-55	□
	HRC 56-60	
	HRC > 60	



Tolerance - H7

Diameter	Range
3.00 - 6.00	0.00 / +0.012
6.00 - 10.00	0.00 / +0.015
10.00 - 18.00	0.00 / +0.018
18.00 - 30.00	0.00 / +0.021

Article No.

Dimension (mm)

	Ø d1 H7	Ø d2 h6	L2	L1	Number of Flutes	AT-coated
R-LHX 6073.0	7.30	8	30	100	6	■
R-LHX 6074.0	7.40	8	30	100	6	■
R-LHX 6075.0	7.50	8	30	100	6	■
R-LHX 6076.0	7.60	8	30	100	6	■
R-LHX 6077.0	7.70	8	30	100	6	■
R-LHX 6078.0	7.80	8	30	100	6	■
R-LHX 6079.0	7.90	8	30	100	6	■
R-LHX 6079.7	7.97	8	30	100	6	■
R-LHX 6079.8	7.98	8	30	100	6	■
R-LHX 6079.9	7.99	8	30	100	6	■
R-LHX 6080.0	8.00	8	30	100	6	■
R-LHX 6080.1	8.01	8	30	100	6	■
R-LHX 6080.2	8.02	8	30	100	6	■
R-LHX 6080.3	8.03	8	30	100	6	■
R-LHX 6081.0	8.10	10	30	100	6	■
R-LHX 6082.0	8.20	10	30	100	6	■
R-LHX 6083.0	8.30	10	30	100	6	■
R-LHX 6084.0	8.40	10	30	100	6	■
R-LHX 6085.0	8.50	10	30	100	6	■
R-LHX 6086.0	8.60	10	30	100	6	■
R-LHX 6087.0	8.70	10	30	100	6	■
R-LHX 6088.0	8.80	10	30	100	6	■
R-LHX 6089.0	8.90	10	30	100	6	■
R-LHX 6089.7	8.97	10	30	100	6	■
R-LHX 6089.8	8.98	10	30	100	6	■
R-LHX 6089.9	8.99	10	30	100	6	■
R-LHX 6090.0	9.00	10	30	100	6	■
R-LHX 6090.1	9.01	10	30	100	6	■
R-LHX 6090.2	9.02	10	30	100	6	■
R-LHX 6090.3	9.03	10	30	100	6	■
R-LHX 6091.0	9.10	10	30	100	6	■
R-LHX 6092.0	9.20	10	30	100	6	■
R-LHX 6093.0	9.30	10	30	100	6	■
R-LHX 6094.0	9.40	10	30	100	6	■
R-LHX 6095.0	9.50	10	30	100	6	■
R-LHX 6096.0	9.60	10	30	100	6	■
R-LHX 6097.0	9.70	10	30	100	6	■
R-LHX 6098.0	9.80	10	30	100	6	■
R-LHX 6099.0	9.90	10	30	100	6	■
R-LHX 6099.7	9.97	10	30	100	6	■
R-LHX 6099.8	9.98	10	30	100	6	■
R-LHX 6099.9	9.99	10	30	100	6	■
R-LHX 60100.0	10.00	10	30	100	6	■
R-LHX 60100.1	10.01	10	30	100	6	■

■ Available ex stock / subject to prior sale

R
Series

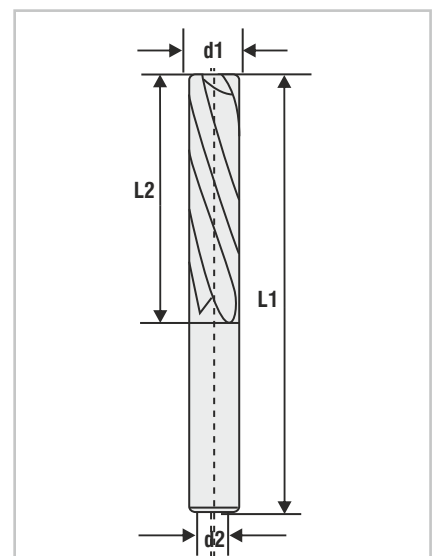
REAMER

Ream Star

Solid Carbide Left Hand Helix Reamer



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
	HRC 48-55	□
	HRC 56-60	□
Hardened Steel	HRC > 60	□



Tolerance - H7

Diameter	Range
3.00 - 6.00	0.00 / +0.012
6.00 - 10.00	0.00 / +0.015
10.00 - 18.00	0.00 / +0.018
18.00 - 30.00	0.00 / +0.021

R
Series

REAMER

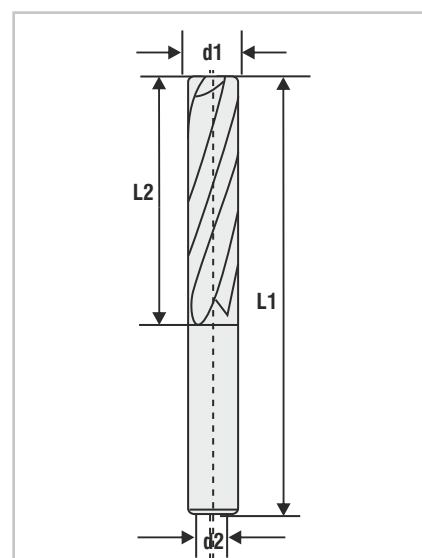
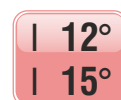
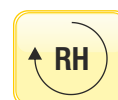
■ Available ex stock / subject to prior sale

Ream Star

Solid Carbide Right Hand Helix Reamer



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
Hardened Steel	HRC 48-55	□
	HRC 56-60	
	HRC > 60	



Tolerance - H7	
Diameter	Range
3.00 - 6.00	0.00 / +0.012
6.00 - 10.00	0.00 / +0.015
10.00 - 18.00	0.00 / +0.018
18.00 - 30.00	0.00 / +0.021

Article No.	Dimension (mm)					AT-coated
	Ø d1 H7	Ø d2 h6	L2	L1	Number of Flutes	
R-RHX 4019.7	1.97	2	11	50	4	■
R-RHX 4019.8	1.98	2	11	50	4	■
R-RHX 4019.9	1.99	2	11	50	4	■
R-RHX 4020.0	2.00	2	11	50	4	■
R-RHX 4020.1	2.01	2	11	50	4	■
R-RHX 4020.2	2.02	2	11	50	4	■
R-RHX 4020.3	2.03	2	11	50	4	■
R-RHX 4021.0	2.10	3	15	50	4	■
R-RHX 4022.0	2.20	3	15	50	4	■
R-RHX 4023.0	2.30	3	15	50	4	■
R-RHX 4024.0	2.40	3	15	50	4	■
R-RHX 4025.0	2.50	3	15	50	4	■
R-RHX 4026.0	2.60	3	20	60	4	■
R-RHX 4027.0	2.70	3	20	60	4	■
R-RHX 4028.0	2.80	3	20	60	4	■
R-RHX 4029.0	2.90	3	20	60	4	■
R-RHX 4029.7	2.97	3	20	60	4	■
R-RHX 4029.8	2.98	3	20	60	4	■
R-RHX 4030.0	3.00	3	20	60	4	■
R-RHX 4030.1	3.01	3	20	60	4	■
R-RHX 4030.2	3.02	3	20	60	4	■
R-RHX 4030.3	3.03	3	20	60	4	■
R-RHX 4031.0	3.10	3	20	60	4	■
R-RHX 4032.0	3.20	4	20	60	4	■
R-RHX 4033.0	3.30	4	20	60	4	■
R-RHX 4034.0	3.40	4	20	60	4	■
R-RHX 4035.0	3.50	4	20	60	4	■
R-RHX 4036.0	3.60	4	20	60	4	■
R-RHX 4037.0	3.70	4	20	60	4	■
R-RHX 4038.0	3.80	4	20	60	4	■
R-RHX 4039.0	3.90	4	20	60	4	■
R-RHX 4039.7	3.97	4	20	60	4	■
R-RHX 4039.8	3.98	4	20	60	4	■
R-RHX 4039.9	3.99	4	20	60	4	■
R-RHX 4040.0	4.00	4	20	60	4	■
R-RHX 4040.1	4.01	4	20	60	4	■
R-RHX 4040.2	4.02	4	20	60	4	■
R-RHX 4040.3	4.03	4	20	60	4	■
R-RHX 4041.0	4.10	4	20	60	4	■
R-RHX 4042.0	4.20	5	20	60	4	■
R-RHX 4043.0	4.30	5	20	60	4	■
R-RHX 4044.0	4.40	5	20	60	4	■
R-RHX 4045.0	4.50	5	20	60	4	■
R-RHX 4060.0	4.60	5	20	60	4	■

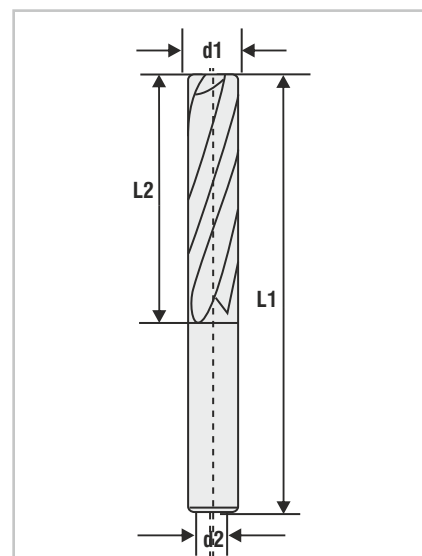
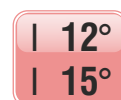
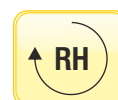
■ Available ex stock / subject to prior sale

Ream Star

Solid Carbide Right Hand Helix Reamer



Steel	R _m < 850	■
	R _m 850-1300	■
	R _m 1300-1500	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
	HRC 48-55	□
	HRC 56-60	□
Hardened Steel	HRC > 60	□



Tolerance - H7

Diameter	Range
3.00 - 6.00	0.00 / +0.012
6.00 - 10.00	0.00 / +0.015
10.00 - 18.00	0.00 / +0.018
18.00 - 30.00	0.00 / +0.021

Article No.	Dimension (mm)					AT-coated
	Ø d1 H7	Ø d2 h6	L2	L1	Number of Flutes	
R-RHX 4047.0	4.70	5	25	75	4	■
R-RHX 6048.0	4.80	5	25	75	6	■
R-RHX 6049.0	4.90	5	25	75	6	■
R-RHX 6049.7	4.97	5	25	75	6	■
R-RHX 6049.8	4.98	5	25	75	6	■
R-RHX 6049.9	4.99	5	25	75	6	■
R-RHX 6050.0	5.00	5	25	75	6	■
R-RHX 6050.1	5.01	5	25	75	6	■
R-RHX 6050.2	5.02	5	25	75	6	■
R-RHX 6050.3	5.03	5	25	75	6	■
R-RHX 6051.0	5.10	6	25	75	6	■
R-RHX 6052.0	5.20	6	25	75	6	■
R-RHX 6053.0	5.30	6	25	75	6	■
R-RHX 6054.0	5.40	6	25	75	6	■
R-RHX 6055.0	5.50	6	25	75	6	■
R-RHX 6056.0	5.60	6	25	75	6	■
R-RHX 6057.0	5.70	6	25	75	6	■
R-RHX 6058.0	5.80	6	25	75	6	■
R-RHX 6059.0	5.90	6	25	75	6	■
R-RHX 6059.7	5.97	6	25	75	6	■
R-RHX 6059.8	5.98	6	25	75	6	■
R-RHX 6059.9	5.99	6	25	75	6	■
R-RHX 6060.0	6.00	6	25	75	6	■
R-RHX 6060.1	6.01	6	25	75	6	■
R-RHX 6060.2	6.02	6	25	75	6	■
R-RHX 6060.3	6.03	8	25	75	6	■
R-RHX 6061.0	6.10	8	25	75	6	■
R-RHX 6062.0	6.20	8	25	75	6	■
R-RHX 6063.0	6.30	8	25	75	6	■
R-RHX 6064.0	6.40	8	25	75	6	■
R-RHX 6065.0	6.50	8	25	75	6	■
R-RHX 6066.0	6.60	8	25	75	6	■
R-RHX 6067.0	6.70	8	25	75	6	■
R-RHX 6068.0	6.80	8	25	75	6	■
R-RHX 6069.0	6.90	8	25	75	6	■
R-RHX 6069.7	6.97	8	30	100	6	■
R-RHX 6069.8	6.98	8	30	100	6	■
R-RHX 6069.9	6.99	8	30	100	6	■
R-RHX 6070.0	7.00	8	30	100	6	■
R-RHX 6070.1	7.01	8	30	100	6	■
R-RHX 6070.2	7.02	8	30	100	6	■
R-RHX 6070.3	7.03	8	30	100	6	■
R-RHX 6071.0	7.10	8	30	100	6	■
R-RHX 6072.0	7.20	8	30	100	6	■

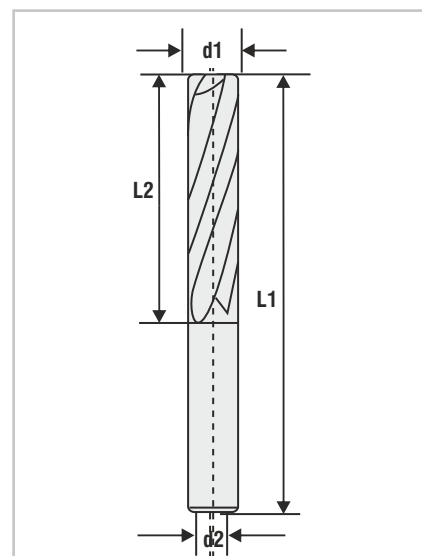
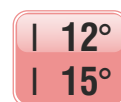
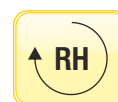
■ Available ex stock / subject to prior sale

Ream Star

Solid Carbide Right Hand Helix Reamer



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
Hardened Steel	HRC 48-55	□
	HRC 56-60	
	HRC > 60	



Tolerance - H7	
Diameter	Range
3.00 - 6.00	0.00 / +0.012
6.00 - 10.00	0.00 / +0.015
10.00 - 18.00	0.00 / +0.018
18.00 - 30.00	0.00 / +0.021

Article No.	Dimension (mm)					AT-coated
	Ø d1 H7	Ø d2 h6	L2	L1	Number of Flutes	
R-RHX 6073.0	7.30	8	30	100	6	■
R-RHX 6074.0	7.40	8	30	100	6	■
R-RHX 6075.0	7.50	8	30	100	6	■
R-RHX 6076.0	7.60	8	30	100	6	■
R-RHX 6077.0	7.70	8	30	100	6	■
R-RHX 6078.0	7.80	8	30	100	6	■
R-RHX 6079.0	7.90	8	30	100	6	■
R-RHX 6079.7	7.97	8	30	100	6	■
R-RHX 6079.8	7.98	8	30	100	6	■
R-RHX 6079.9	7.99	8	30	100	6	■
R-RHX 6080.0	8.00	8	30	100	6	■
R-RHX 6080.1	8.01	8	30	100	6	■
R-RHX 6080.2	8.02	8	30	100	6	■
R-RHX 6080.3	8.03	8	30	100	6	■
R-RHX 6081.0	8.10	10	30	100	6	■
R-RHX 6082.0	8.20	10	30	100	6	■
R-RHX 6083.0	8.30	10	30	100	6	■
R-RHX 6084.0	8.40	10	30	100	6	■
R-RHX 6085.0	8.50	10	30	100	6	■
R-RHX 6086.0	8.60	10	30	100	6	■
R-RHX 6087.0	8.70	10	30	100	6	■
R-RHX 6088.0	8.80	10	30	100	6	■
R-RHX 6089.0	8.90	10	30	100	6	■
R-RHX 6089.7	8.97	10	30	100	6	■
R-RHX 6089.8	8.98	10	30	100	6	■
R-RHX 6089.9	8.99	10	30	100	6	■
R-RHX 6090.0	9.00	10	30	100	6	■
R-RHX 6090.1	9.01	10	30	100	6	■
R-RHX 6090.2	9.02	10	30	100	6	■
R-RHX 6090.3	9.03	10	30	100	6	■
R-RHX 6091.0	9.10	10	30	100	6	■
R-RHX 6092.0	9.20	10	30	100	6	■
R-RHX 6093.0	9.30	10	30	100	6	■
R-RHX 6094.0	9.40	10	30	100	6	■
R-RHX 6095.0	9.50	10	30	100	6	■
R-RHX 6096.0	9.60	10	30	100	6	■
R-RHX 6097.0	9.70	10	30	100	6	■
R-RHX 6098.0	9.80	10	30	100	6	■
R-RHX 6099.0	9.90	10	30	100	6	■
R-RHX 6099.7	9.97	10	30	100	6	■
R-RHX 6099.8	9.98	10	30	100	6	■
R-RHX 6099.9	9.99	10	30	100	6	■
R-RHX 60100.0	10.00	10	30	100	6	■
R-RHX 60100.1	10.01	10	30	100	6	■

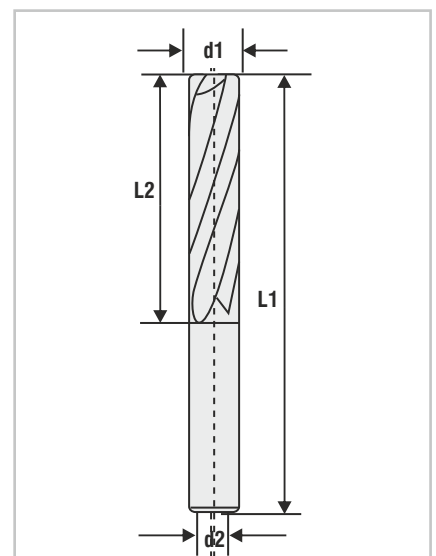
■ Available ex stock / subject to prior sale

Ream Star

Solid Carbide Right Hand Helix Reamer



Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
Hardened Steel	HRC 48-55	□
	HRC 56-60	
	HRC > 60	



Tolerance - H7

Diameter	Range
3.00 - 6.00	0.00 / +0.012
6.00 - 10.00	0.00 / +0.015
10.00 - 18.00	0.00 / +0.018
18.00 - 30.00	0.00 / +0.021

REAMER

R Series

■ Available ex stock / subject to prior sale

Ream Star

Solid Carbide Chucking Reamer



Article No.		Dimension (mm)				
	Ø d1 H7	Ø d2 h6	L2	L1	Number of Flutes	AT-coated
R-CAM 4030	03.00	04.0	12	45	4	■
R-CAM 4040	04.00	04.0	16	50	4	■
R-CAM 4050	05.00	05.0	19	55	4	■
R-CAM 4060	06.00	06.0	19	60	4	■
R-CAM 4063.5	06.35	08.0	19	60	4	■
R-CAM 4070	07.00	08.00	19	65	4	■
R-CAM 4080	08.00	08.00	19	65	4	■
R-CAM 4090	09.00	10.00	22	70	4	■
R-CAM 4095.2	09.52	10.00	22	70	4	■
R-CAM 6100	10.00	10.00	22	70	6	■
R-CAM 6110	11.00	12.00	22	80	6	■
R-CAM 6120	12.00	12.00	22	80	6	■
R-CAM 6120.7	12.70	14.00	25	85	6	■
R-CAM 6130	13.00	14.00	25	85	6	■
R-CAM 6140	14.00	14.00	25	90	6	■
R-CAM 6150	15.00	16.00	25	100	6	■
R-CAM 6158.7	15.87	16.00	25	100	6	■
R-CAM 6160	16.00	16.00	25	100	6	■
R-CAM 6170	17.00	18.00	30	100	6	■
R-CAM 6180	18.00	18.00	30	100	6	■
R-CAM 6190	19.00	20.00	30	110	6	■
R-CAM 6195	19.05	20.00	30	110	6	■
R-CAM 6200	20.00	20.00	30	110	6	■

■ Available ex stock / subject to prior sale

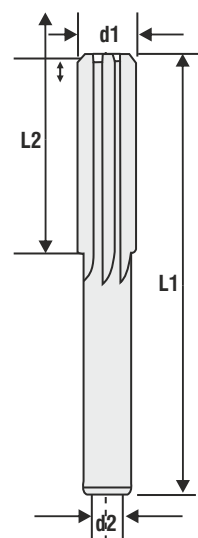
Steel	$R_m < 850$	■
	$R_m 850-1300$	■
	$R_m 1300-1500$	■
M	Stainless Steel	□
K	Cast Iron	■
N	Copper	■
S	Titanium	□
Hardened Steel	HRC 48-55	□
	HRC 56-60	
	HRC > 60	



UC
MIRROR
POLISHED

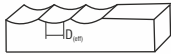
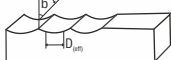


SMG
0.6mm



Tolerance - H7	
Diameter	Range
3.00 - 6.00	0.00 / +0.012
6.00 - 10.00	0.00 / +0.015
10.00 - 18.00	0.00 / +0.018
18.00 - 30.00	0.00 / +0.021

Formulae

Symbol	Description	Metric	Formula
v_c	Cutting Speed	m / min	$v_c = \frac{p \times D \times n}{1000}$
D	Milling cutter diameter	mm	
n	Revolution per min.		$n = \frac{v_c \times 1000}{p \times D}$
S	Feed per revolution	mm	$S = \frac{v_f}{n}$
v_f	Feed per min.	mm	$v_f = n \times z \times f_z$
f_z	Feed per tooth	mm	$f_z = \frac{v_f}{n \times z}$
f	Feed per revolution	mm	$f = f_z \times z$
v_{fH}	Feed with one helix interpolation	mm / min	$v_{fH} = \frac{v_f \times (D_{h1} - D_{h2})}{D_{h1}}$ $D_{h1}(\text{mm}) = \text{external diameter of helix}$ $D_{h2}(\text{mm}) = f, \text{ Inscribed by milling cutter}$
z	No. of teeth		
Q	Chip volume	cm ³ / min	$Q = \frac{a_p \times a_e \times v_f}{1000}$
a_p	Depth of cut	mm	
a_e	Width of cut	mm	
T	Milling time	min	$T = \frac{l_f}{v_f}$
l_f	Milling length	mm	
$D_{(eff)}$	Effective diameter 	mm	$D_{(eff)} = 2 \times \sqrt{a_p \times (D - a_p)}$
	Effective diameter with approach angle 	mm	$D_{(eff)} = D \times \sin \left[b + \arccos \left(\frac{D - 2a_p}{D} \right) \right]$
R_{th}	Peak -to-valley height	mm	$R_{th} = \frac{D}{2} = \sqrt{\frac{D^2 - a_p^2}{4}}$
z_b	Optimal step over for torus milling	mm	$z_b = \frac{D - 2 \times R}{2}$



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