



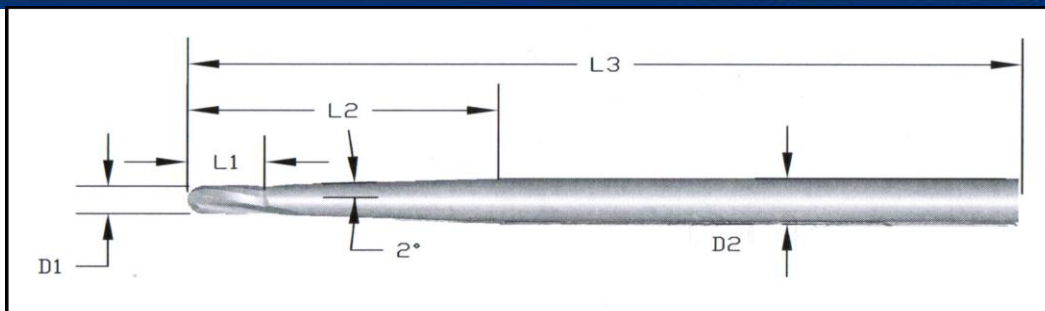
TOOL-CRAFT INDUSTRIES, INC

SERIES P21B

Ball End 15-Degree SP Flute

STANDARD/STANDARD SHANK

Ultra-Fine Grain Carbide for Hard-Milling



Cutting Diameter Tolerance +.000/-.002 Shank Tolerance H6 (Standard)

Hardcut	Uncoated EDP	Part Number	D1 CUTTING DIA	D2 SHANK DIA	L1 LENGTH OF CUT	L2 TOTAL REACH	L3 O/A LENGTH	NECK DG P/S
20011	10011	P21B 081682CBC-H	0.125	0.25	0.25	2	4	2 DG
20021	10021	P21B 081687CBC-H	0.125	0.25	0.25	2	6	2 DG
20031	10031	P21B 122482CBC-H	0.1875	0.25	0.375	2	4	2 DG
20041	10041	P21B 122487CBC-H	0.1875	0.25	0.375	2	6	2 DG
20051	10051	P21B 163282EBC-H	0.25	0.375	0.5	2.25	4	2 DG
20061	10061	P21B 163287EBC-H	0.25	0.375	0.5	2.25	6	2 DG
20071	10071	P21B 244882FBC-H	0.375	0.5	0.75	2.5	4	2 DG
20081	10081	P21B 244887FBC-H	0.375	0.5	0.75	2.5	6	2 DG
20091	10091	P21B 326482GBC-H	0.5	0.625	1	2.75	4	2 DG
20101	10101	P21B 326487GBC-H	0.5	0.625	1	2.75	6	2 DG

Additional Coatings Available Upon Request



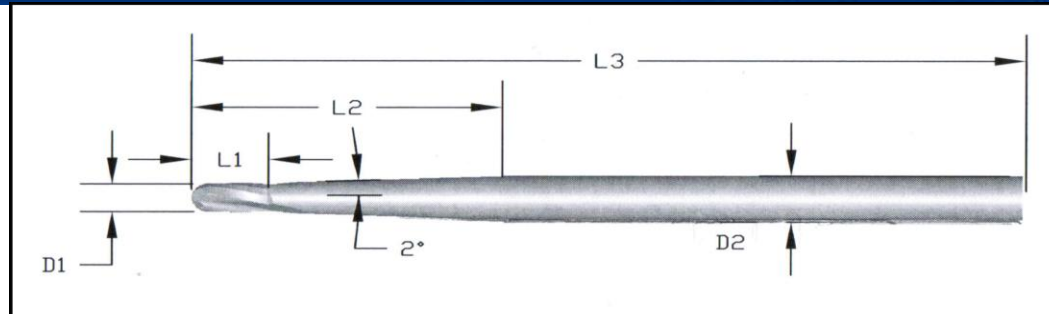
TOOL-CRAFT INDUSTRIES, INC

SERIES P21B-M

Metric Ball 15-Degree SP Flute

METRIC/STANDARD SHANK

Ultra-Fine Grain Carbide for Hard-Milling



Cutting Diameter Tolerance $\pm 0.000/-0.002$ Shank Tolerance H6 (Standard)

Hardcut	EDP	Part Number	D1 CUTTING DIA	D2 SHANK DIA	L1 LENGTH OF CUT	L2 TOTAL REACH	L3 O/A LENGTH	NECK DG P/S
20111	10111	P21B 36100CBC-H	3MM	0.25	6MM	50MM	100MM	2 DG
20121	10121	P21B 36150CBC-H	3MM	0.25	6MM	50MM	150MM	2 DG
20131	10131	P21B 612100EBC-H	6MM	0.375	12MM	62MM	100MM	2 DG
20141	10141	P21B 612150EBC-H	6MM	0.375	12MM	62MM	150MM	2 DG
20151	10151	P21B 816100FBC-H	8MM	0.5	16MM	66MM	100MM	2 DG
20161	10161	P21B 816150FBC-H	8MM	0.5	16MM	66MM	150MM	2 DG
20171	10171	P21B 1020100FBC-H	10MM	0.5	20MM	58MM	100MM	2 DG
20181	10181	P21B 1020150FBC-H	10MM	0.5	20MM	58MM	150MM	2 DG
20191	10191	P21B 1224100GBC-H	12MM	0.625	24MM	77MM	100MM	2 DG
20201	10201	P21B 1224150GBC-H	12MM	0.625	24MM	77MM	150MM	2 DG

Additional Coatings Available Upon Request



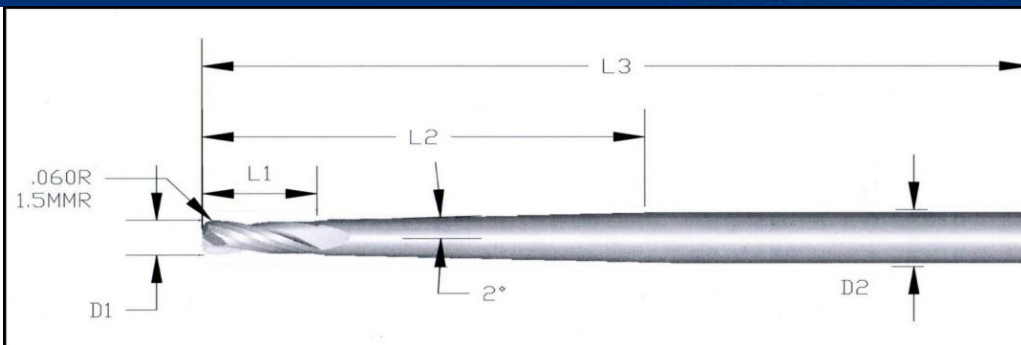
TOOL-CRAFT INDUSTRIES, INC

SERIES P21R

15-Degree Spiral Flute
With .060" Radius

STANDARD/STANDARD SHANK

Ultra-Fine Grain Carbide for Hard-Milling



Cutting Diameter Tolerance $\pm .000/- .002$ Shank Tolerance H6 (Standard)

Hardcut	EDP	Part Number	D1 CUTTING DIA	D2 SHANK DIA	L1 LENGTH OF CUT	L2 TOTAL REACH	L3 O/A LENGTH	NECK DG P/S
20111	10211	P21R 122482CBC-.06R-H	0.1875	0.25	0.375	2	4	2 DG
20221	10221	P21R 122487CBC-.06R-H	0.1875	0.25	0.375	2	6	2 DG
20231	10231	P21R 163282EBC-.06R-H	0.25	0.375	0.5	2.25	4	2 DG
20241	10241	P21R 163287EBC-.06R-H	0.25	0.375	0.5	2.25	6	2 DG
20251	10251	P21R 244882FBC-.06R-H	0.375	0.5	0.75	2.5	4	2 DG
20261	10261	P21R 244887FBC-.06R-H	0.375	0.5	0.75	2.5	6	2 DG
20271	10271	P21R 326482GBC-.06R-H	0.5	0.625	1	2.75	4	2 DG
20281	10281	P21R 326487GBC-.06R-H	0.5	0.625	1	2.75	6	2 DG

Additional Coatings Available Upon Request



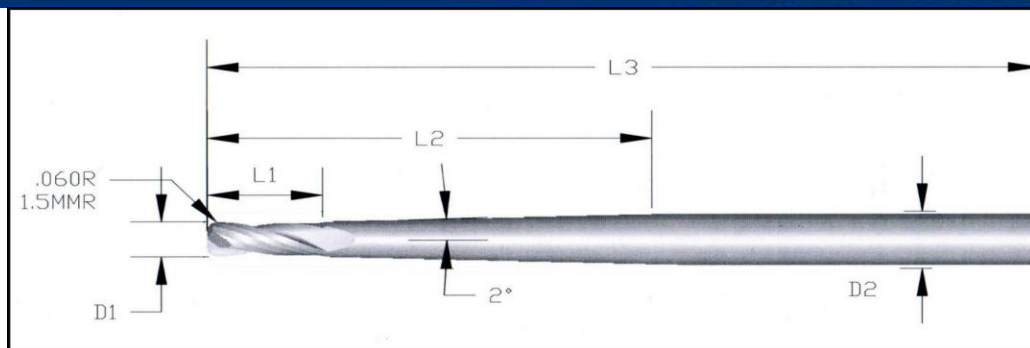
TOOL-CRAFT INDUSTRIES, INC

SERIES P21R-M

Metric 15-Degree Spiral Flute
With .060" Radius

METRIC/STANDARD SHANK

Ultra-Fine Grain Carbide for Hard-Milling



Cutting Diameter Tolerance $\pm .000/- .002$ Shank Tolerance H6 (Standard)

Hardcut	EDP	Part Number	D1 CUTTING DIA	D2 SHANK DIA	L1 LENGTH OF CUT	L2 TOTAL REACH	L3 O/A LENGTH	NECK DG P/S
20291	10291	P21R 612100CBC-1.5R-H	6MM	0.375	12MM	62MM	100MM	2 DG
20301	10301	P21R 612150CBC-1.5R-H	6MM	0.375	12MM	62MM	150MM	2 DG
20311	10311	P21R 816100FBC-1.5R-H	8MM	0.5	16MM	66MM	100MM	2 DG
20321	10321	P21R 816150FBC-1.5R-H	8MM	0.5	16MM	66MM	150MM	2 DG
20331	10331	P21R 1020100FBC-1.5R-H	10MM	0.5	20MM	58MM	100MM	2 DG
20341	10341	P21R 1020150FBC-1.5R-H	10MM	0.5	20MM	58MM	150MM	2 DG
20351	10351	P21R 1224100GBC-1.5R-H	12MM	0.625	24MM	77MM	100MM	2 DG
20361	10361	P21R 1224150GBC-1.5R-H	12MM	0.625	24MM	77MM	150MM	2 DG

Additional Coatings Available Upon Request

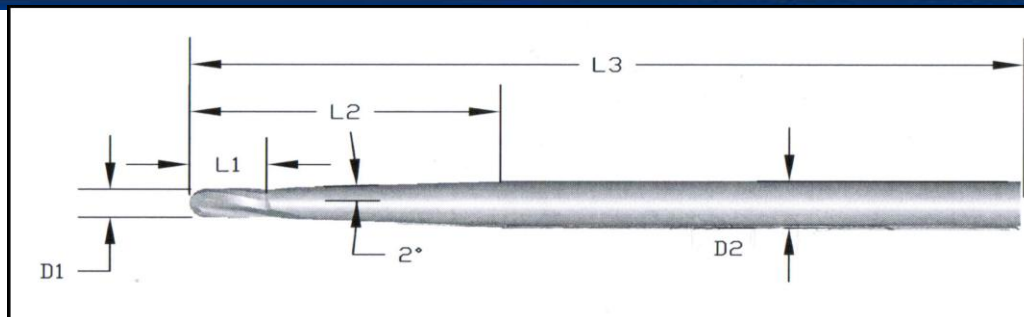


TOOL-CRAFT INDUSTRIES, INC

SERIES P21B

Ball End 30-Degree SP Flute

STANDARD/STANDARD SHANK



Cutting Diameter Tolerance $\pm 0.000/-0.002$ Shank Tolerance H6 (Standard)

TiAlN EDP	Uncoated EDP	Part Number	D1 CUTTING DIA	D2 SHANK DIA	L1 LENGTH OF CUT	L2 TOTAL REACH	L3 O/A LENGTH	NECK DG P/S
30371	10371	P21B 081682CBC	0.125	0.25	0.25	2	4	2 DG
30381	10381	P21B 081687CBC	0.125	0.25	0.25	2	6	2 DG
30391	10391	P21B 122482CBC	0.1875	0.25	0.375	2	4	2 DG
30401	10401	P21B 122487CBC	0.1875	0.25	0.375	2	6	2 DG
30411	10411	P21B 163282EBC	0.25	0.375	0.5	2.25	4	2 DG
30421	10421	P21B 163287EBC	0.25	0.375	0.5	2.25	6	2 DG
30431	10431	P21B 244882FBC	0.375	0.5	0.75	2.5	4	2 DG
30441	10441	P21B 244887FBC	0.375	0.5	0.75	2.5	6	2 DG
30451	10451	P21B 326482GBC	0.5	0.625	1	2.75	4	2 DG
30461	10461	P21B 326487GBC	0.5	0.625	1	2.75	6	2 DG

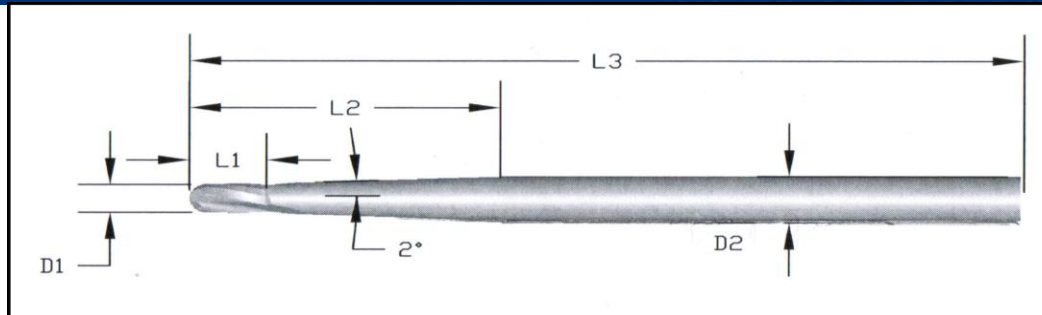
Additional Coatings Available Upon Request



TOOL-CRAFT INDUSTRIES, INC

SERIES P21B

Ball End 30-Degree SP Flute
METRIC/STANDARD SHANK



Cutting Diameter Tolerance $\pm 0.000/-0.002$ Shank Tolerance H6 (Standard)

TiAlN EDP	EDP	Part Number	D1 CUTTING DIA	D2 SHANK DIA	L1 LENGTH OF CUT	L2 TOTAL REACH	L3 O/A LENGTH	NECK DG P/S
30471	10471	P21B 36100CBC	3MM	0.25	6MM	50MM	100MM	2 DG
30481	10481	P21B 36150CBC	3MM	0.25	6MM	50MM	150MM	2 DG
30491	10491	P21B 612100EBC	6MM	0.375	12MM	62MM	100MM	2 DG
30501	10501	P21B 612150EBC	6MM	0.375	12MM	62MM	150MM	2 DG
30511	10511	P21B 816100FBC	8MM	0.5	16MM	66MM	100MM	2 DG
30521	10521	P21B 816150FBC	8MM	0.5	16MM	66MM	150MM	2 DG
30531	10531	P21B 1020100FBC	10MM	0.5	20MM	58MM	100MM	2 DG
30541	10541	P21B 1020150FBC	10MM	0.5	20MM	58MM	150MM	2 DG
30551	10551	P21B 1224100GBC	12MM	0.625	24MM	77MM	100MM	2 DG
30561	10561	P21B 1224150GBC	12MM	0.625	24MM	77MM	150MM	2 DG

Additional Coatings Available Upon Request

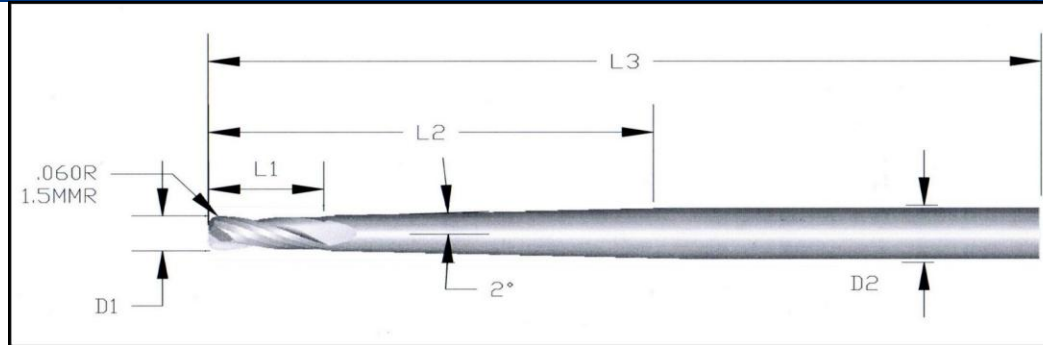


TOOL-CRAFT INDUSTRIES, INC

SERIES P21R

30-Degree Spiral Flute
With .060" Radius

STANDARD/STANDARD SHANK



Cutting Diameter Tolerance +.000/-.002 Shank Tolerance H6 (Standard)			D1 CUTTING DIA	D2 SHANK DIA	L1 LENGTH OF CUT	L2 TOTAL REACH	L3 O/A LENGTH	NECK DG P/S
TiAlN EDP	EDP	Part Number						
30571	10571	P21R 122482CBC-.06R	0.1875	0.25	0.375	2	4	2 DG
30581	10581	P21R 122487CBC-.06R	0.1875	0.25	0.375	2	6	2 DG
30591	10591	P21R 163282EBC-.06R	0.25	0.375	0.5	2.25	4	2 DG
30601	10601	P21R 163287EBC-.06R	0.25	0.375	0.5	2.25	6	2 DG
30611	10611	P21R 244882FBC-.06R	0.375	0.5	0.75	2.5	4	2 DG
30621	10621	P21R 244887FBC-.06R	0.375	0.5	0.75	2.5	6	2 DG
30631	10631	P21R 326482GBC-.06R	0.5	0.625	1	2.75	4	2 DG
30641	10641	P21R 326487GBC-.06R	0.5	0.625	1	2.75	6	2 DG

Additional Coatings Available Upon Request

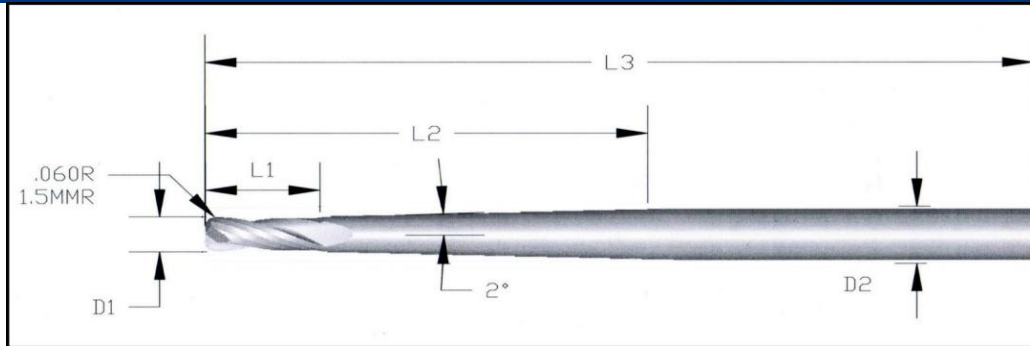


TOOL-CRAFT INDUSTRIES, INC

SERIES P21R-M

Metric 30-Degree Spiral Flute
With .060" Radius

METRIC/STANDARD SHANK



Cutting Diameter Tolerance $\pm .000/- .002$ Shank Tolerance H6 (Standard)

TiAlN EDP	EDP	Part Number	D1 CUTTING DIA	D2 SHANK DIA	L1 LENGTH OF CUT	L2 TOTAL REACH	L3 O/A LENGTH	NECK DG P/S
20651	10651	P21R 612100CBC-1.5R	6MM	0.375	12MM	62MM	100MM	2 DG
20661	10661	P21R 612150CBC-1.5R	6MM	0.375	12MM	62MM	150MM	2 DG
20671	10671	P21R 816100FBC-1.5R	8MM	0.5	16MM	66MM	100MM	2 DG
20681	10681	P21R 816150FBC-1.5R	8MM	0.5	16MM	66MM	150MM	2 DG
20691	10691	P21R 1020100FBC-1.5R	10MM	0.5	20MM	58MM	100MM	2 DG
20701	10701	P21R 1020150FBC-1.5R	10MM	0.5	20MM	58MM	150MM	2 DG
20711	10711	P21R 1224100GBC-1.5R	12MM	0.625	24MM	77MM	100MM	2 DG
20721	10721	P21R 1224150GBC-1.5R	12MM	0.625	24MM	77MM	150MM	2 DG

Additional Coatings Available Upon Request

TM **Tool-Craft Industries**
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Royal Oak, MI 48073
248-549-0077 Fax# 248-549-0945 ---- Email: quotes@tool-craft.com

GOOD PROFILE EDP 2/8/12