

CORAFOAM® Foam Boards

52-700 Series Trimming Operations
52-200B Series Contouring

CORAFOAM Low Density Foam Boards offer excellent workability with a broad range of densities to be used in a variety of applications, such as modeling, aerospace, composite, architectural and design industries, signage and low density substrates.



Freeman Modeling & Styling Boards

52-600 Series Trimming Operations
52-200B Series Contouring

Modeling & Styling Boards are designed and formulated to meet the wide scope of proofing, modeling, styling, prototyping and fabricating applications found throughout the industry today.



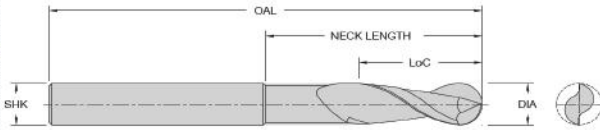
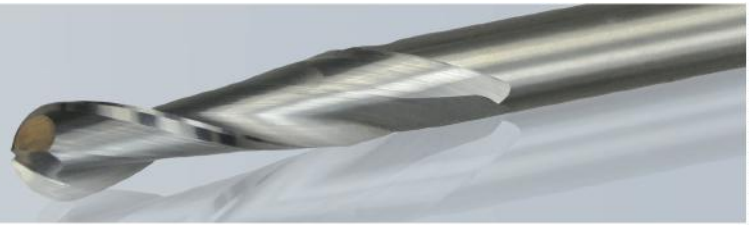
Freeman Tooling & High-Temperature Work Boards

66-775 Series High Performance Trimming Operations
52-600 Series Trimming Operations
52-200B Series Contouring

These high-performance boards are typically used for building duplicating aids, foundry patterns and hammer-form dies, metal-form and vacuum-form molds, nickel electroforming mandrels, and intermediate temperature-resistant tooling.



52-200B/BL Series Upcut Spiral Ball Nose



Designed for carving and modeling operations. Their improved tip geometry gives a superior cut compared to most ballnose endmills.

52-200B Series Two Flute - Solid Carbide **Upcut** Spiral Ball Nose Product Offering - Metric

Part Number	Cutting DIA (mm)	LoC (mm)	SHK DIA (mm)	OAL (mm)	Flutes
52-240BM	3	12	6	50	2
52-280BM	6	22	6	64	2
52-320BM	10	29	10	76	2
52-360BM	12	29	12	76	2

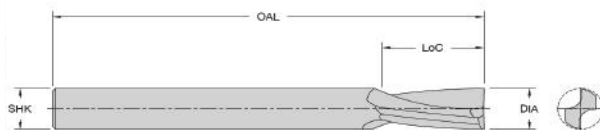
52-200B Series Two Flute - Solid Carbide **Upcut** Spiral Ball Nose Product Offering

Part Number	Cutting DIA (in)	LoC (in)	SHK DIA (in)	OAL (in)	Flutes
52-235B	1/16	1/4	1/8	2	2
52-244B	1/8	1/2	1/8	2	2
52-240B	1/8	1/2	1/4	2	2
52-260B	3/16	3/4	1/4	2	2
52-280B	1/4	7/8	1/4	2-1/2	2
52-320B	3/8	1-1/8	3/8	3	2
52-360B	1/2	1-1/8	1/2	3	2
52-386B	5/8	2-1/4	5/8	4	2
52-397B	3/4	2-1/2	3/4	5	2

52-200BL Series Two Flute - Solid Carbide **Upcut** Spiral Ball Nose - Extended Length Product Offering

Part Number	Cutting DIA (in)	LoC (in)	ERL (in)	SHK DIA (in)	OAL (in)	Flutes
52-235BL	1/16	1/4	-	1/8	3	2
52-244BL	1/8	1/2	1-5/8	1/8	3	2
52-240BL	1/8	1/2	1-5/8	1/4	3	2
52-260BL	3/16	3/4	1-5/8	1/4	3	2
52-280BL	1/4	1	2-5/8	1/4	4	2
52-320BL	3/8	1-1/4	2-5/8	3/8	4	2
52-360BL	1/2	1-1/2	3-5/8	1/2	5	2
52-386BL	5/8	2-1/2	3-5/8	5/8	5	2
52-397BL	3/4	3	4-5/8	3/4	6	2

52-600 Series Upcut Spiral O Flute



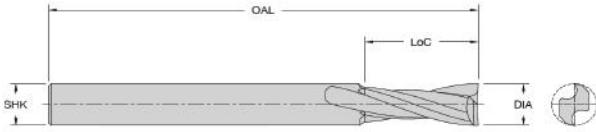
Low helix geometry designed to cut soft and hard plastic with a smooth finish and upward chip flow.

52-600 Series Two Flute - Solid Carbide **Upcut** Spiral O Flute Product Offering

Part Number	Cutting DIA (in)	LoC (in)	SHK DIA (in)	OAL (in)	Flutes
52-622	1/4	3/8	1/4	2-1/2	2
52-624	1/4	3/4	1/4	2-1/2	2
52-638	3/8	1	3/8	3	2
52-650	1/2	1-1/8	1/2	3-1/2	2
52-652	1/2	1-5/8	1/2	3-1/2	2
52-655	1/2	2-1/8	1/2	4-1/2	2
52-660	5/8	2-1/8	5/8	5	2
52-664	3/4	3-1/8	3/4	6	2

HELIX ANGLE $\approx 11^\circ$

52-700 Series Upcut Spiral O Flute



High helix geometry designed to cut soft plastic with a smooth finish and upward chip flow. Special point geometry for improved bottom finish.

52-700 Series Two Flute - Solid Carbide **Upcut** Spiral O Flute Product Offering

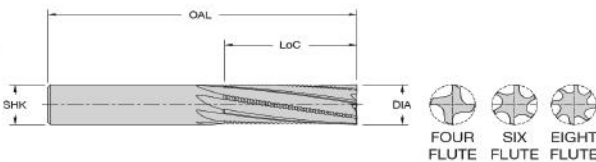
Part Number	Cutting DIA (in)	LoC (in)	SHK DIA (in)	OAL (in)	Flutes
52-703	1/8	1/2	1/4	2	2
52-707	1/4	7/8	1/4	3	2
52-708	3/16	3/8	3/16	2-1/2	2
52-700	1/4	1-1/4	1/4	3	2
52-709	3/8	1	3/8	3	2
52-710	3/16	5/8	1/4	2-1/2	2
52-701	3/8	1-1/2	3/8	4	2
52-702	1/2	1-1/4	1/2	4	2
52-704	1/2	1-3/4	1/2	4	2
52-706	1/2	2-1/8	1/2	4	2
52-712	5/8	1-3/4	5/8	5	2
52-714	5/8	2-1/4	5/8	5	2
52-726	3/4	1-3/4	3/4	5	2
52-724	3/4	2-1/2	3/4	5	2
52-728	3/4	4	3/4	6-1/2	2
52-734	1	4	1	6-1/2	2

HELIX ANGLE = 22°

52-700 Series Two Flute - Solid Carbide **Upcut** Foam Cutters Product Offering - Metric

Part Number	Cutting DIA (mm)	LoC (mm)	SHK DIA (mm)	OAL (mm)	Flutes
52-742	12	35	12	100	2
52-744	12	45	12	100	2
52-746	12	55	12	100	2
52-752	16	45	16	120	2
52-754	16	55	16	120	2
52-764	20	65	20	125	2

66-775 Series DFC Low Helix Rougher Finisher - Upcut



Tool is designed as a combination roughing and finishing tool in one. The roughing profile reduces cutting forces and the geometry of the finishing flutes cleanly shear fibers leaving a smooth edge on the workpiece material. Diamond coated (DFC) for increased tool life.

66-775 Series DFC Low Helix Rougher Finisher - **Upcut** Product Offering

Part Number	Cutting DIA (in)	LoC (in)	SHK DIA (in)	OAL (in)	Flutes
66-776	1/4	1/2	1/4	3	4
66-778	1/4	3/4	1/4	3	4
66-780	3/8	3/4	3/8	3	6
66-782	3/8	1-1/8	3/8	3	6
66-784	1/2	1	1/2	3	8
66-786	1/2	1-1/2	1/2	4	8

66-775 Series DFC Low Helix Rougher Finisher - **Upcut** Product Offering - Metric

Part Number	Cutting DIA (mm)	LoC (mm)	SHK DIA (mm)	OAL (mm)	Flutes
66-791	6	20	6	90	4
66-793	8	25	8	100	6
66-795	10	30	10	100	6
66-797	12	38	12	100	8

52-200B/BL/52-600/52-700/ 66-775 Series Cutting Data Recommendations

ISO Grade	Material	Application	Recommended Starting Parameters										
			Rad DOC	Axial DOC	SFM Range	Chip Load Per Tooth							
						SFM Starting 1/16	1/16	SFM Starting 1/8	1/8	SFM Starting 1/4	1/4	SFM Starting 3/8	3/8
52-200B/BL Series Upcut Spiral Ball Nose													
O	CORAFOAM Foam Board	Contouring	0.10 x DIA	0.50 x DIA	150 / 1600	160	0.0006	330	0.0013	650	0.0025	1000	0.0038
	Freeman Modeling & Styling Boards	Contouring	0.10 x DIA	0.50 x DIA		160	0.0006	330	0.0013	650	0.0025	1000	0.0038
	Freeman Tooling & High Temperature Boards	Contouring	0.10 x DIA	0.50 x DIA		160	0.0006	330	0.0013	650	0.0025	1000	0.0038
52-600 Series Upcut Spiral O Flute													
O	Freeman Modeling & Styling Boards	Trimming	0.50 x DIA	2 x DIA	650 / 1600	-	-	-	-	650	0.0063	1000	0.0094
	Freeman Tooling & High Temperature Boards	Trimming	0.50 x DIA	2 x DIA		-	-	-	-	650	0.0025	1000	0.0038
52-700 Series Upcut Spiral O Flute													
O	CORAFOAM Foam Board	Trimming	0.50 x DIA	2 x DIA	330/ 2000	-	-	330	0.0013	650	0.0025	1000	0.0038
66-775 Series DFC Low Helix Rougher Finisher - Upcut													
O	Freeman Tooling & High Temperature Boards	Trimming	0.50 x DIA	2 x DIA	650/ 1300	-	-	-	-	650	0.0007	1000	0.001

ISO Grade	Material	Application	Recommended Starting Parameters										
			Rad DOC	Axial DOC	SFM Range	Chip Load Per Tooth							
						SFM Starting 1/2	1/2	SFM Starting 5/8	5/8	SFM Starting 3/4	3/4	SFM Starting 1	1
52-200B/BL Series Upcut Spiral Ball Nose													
O	CORAFOAM Foam Board	Contouring	0.10 x DIA	0.50 x DIA	150 / 1600	1300	0.0050	1400	0.0063	1600	0.0075	-	-
	Freeman Modeling & Styling Boards	Contouring	0.10 x DIA	0.50 x DIA		1300	0.0050	1400	0.0063	1600	0.0075	-	-
	Freeman Tooling & High Temperature Boards	Contouring	0.10 x DIA	0.50 x DIA		1300	0.0050	1400	0.0063	1600	0.0075	-	-
52-600 Series Upcut Spiral O Flute													
O	Freeman Modeling & Styling Boards	Trimming	0.50 x DIA	2 x DIA	650 / 1600	1300	0.0125	1400	0.0156	1600	0.0188	-	-
	Freeman Tooling & High Temperature Boards	Trimming	0.50 x DIA	2 x DIA		1300	0.0050	1400	0.0063	1600	0.0075	-	-
52-700 Series Upcut Spiral O Flute													
O	CORAFOAM Foam Board	Trimming	0.50 x DIA	2 x DIA	330/ 2000	1300	0.0050	1400	0.0063	1600	0.0075	2000	0.0100
66-775 Series DFC Low Helix Rougher Finisher - Upcut													
O	Freeman Tooling & High Temperature Boards	Trimming	0.50 x DIA	2 x DIA	650/ 1300	1300	0.0013	-	-	-	-	-	-



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