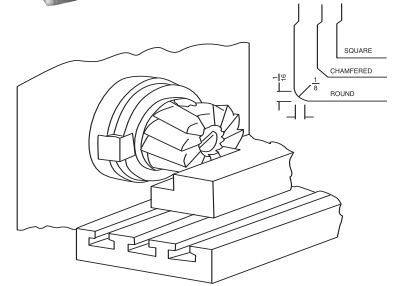




SHELL END MILL CUTTERS

Shell Mills are designed for both end and face milling operations and conform to the American Standard for Milling Cutters. They will fit standard shell and mill arbors. Right hand cutters with right hand helix and left hand cutters with left hand helix are standard. New sizes are added for larger off-the-shelf selection.

SHELL ENDMILLS FOR STEEL HIGH SPEED STEEL



Catalog EDI-Number	Dia.	Width of Face	Width of Drive Slot	Depth of Slot	Hole Size	List Price
14496-A1610R	1 1/4	1	1/4	5/32	1/2	\$56.10
14497-A1610L	1 1/4	1	1/4	5/32	1/2	60.10
14498-A1611R	1 3/8	1 1/8	1/4	5/32	1/2	87.55
14499-A1611L	1 3/8	1 1/8	1/4	5/32	1/2	87.55
14500-A1612R	1 1/2	1 1/8	1/4	5/32	1/2	57.85
14501-A1612L	1 1/2	1 1/8	1/4	5/32	1/2	61.65
14502-A1613R	1 5/8	1 1/4	5/16	3/16	3/4	107.30
14503-A1613L	1 5/8	1 1/4	5/16	3/16	3/4	107.30
14504-A1614R	1 3/4	1 1/4	5/16	3/16	3/4	73.70
14505-A1614L	1 3/4	1 1/4	5/16	3/16	3/4	78.65
14506-A1615R	1 7/8	1 3/8	5/16	3/16	3/4	121.55
14507-A1615L	1 7/8	1 3/8	5/16	3/16	3/4	121.55
14508-A1616R	2	1 3/8	5/16	3/16	3/4	82.80
14509-A1616L	2	1 3/8	5/16	3/16	3/4	88.70
14510-A1617R	2 1/8	1 1/2	3/8	7/32	1	135.35
14511-A1617L	2 1/8	1 1/2	3/8	7/32	1	135.35
14512-A1618R	2 1/4	1 1/2	3/8	7/32	1	91.05
14513-A1618L	2 1/4	1 1/2	3/8	7/32	1	97.45
14514-A1619R	2 3/8	1 5/8	3/8	7/32	1	160.80
14515-A1619L	2 3/8	1 5/8	3/8	7/32	1	160.80
14516-A1620R	2 1/2	1 5/8	3/8	7/32	1	109.25
14517-A1620L	2 1/2	1 5/8	3/8	7/32	1	117.40
14518-A1621R	2 5/8	1 5/8	3/8	7/32	1	192.40
14519-A1621L	2 5/8	1 5/8	3/8	7/32	1	192.40
14520-A1622R	2 3/4	1 5/8	3/8	7/32	1	136.30
14521-A1622L	2 3/4	1 5/8	3/8	7/32	1	145.80
14522-A1623R	2 7/8	1 3/4	1/2	9/32	1 1/4	225.45
14523-A1623L	2 7/8	1 3/4	1/2	9/32	1 1/4	225.45
14524-A1624R	3	1 3/4	1/2	9/32	1 1/4	148.00
14525-A1624L	3	1 3/4	1/2	9/32	1 1/4	159.20
14526-A1625R	3 1/4	1 7/8	1/2	9/32	1 1/4	298.55
14527-A1625L	3 1/4	1 7/8	1/2	9/32	1 1/4	298.55
14528-A1626R	3 1/2	1 7/8	1/2	9/32	1 1/4	205.05
14529-A1626L	3 1/2	1 7/8	1/2	9/32	1 1/4	219.45
14530-A1627R	3 3/4	2 1/4	5/8	3/8	1 1/2	369.70
14531-A1627L	3 3/4	2 1/4	5/8	3/8	1 1/2	369.70
14532-A1628R	4	2 1/4	5/8	3/8	1 1/2	248.00
14533-A1628L	4	2 1/4	5/8	3/8	1 1/2	267.55
14534-A1630R	4 1/2	2 1/4	5/8	3/8	1 1/2	317.65
14535-A1630L	4 1/2	2 1/4	5/8	3/8	1 1/2	339.90
14536-A1632R	5	2 1/4	5/8	3/8	1 1/2	403.05
14537-A1632L	5	2 1/4	5/8	3/8	1 1/2	429.65
14538-A1634R	5 1/2	2 1/4	3/4	7/16	2	670.10
14539-A1634L	5 1/2	2 1/4	3/4	7/16	2	670.10
14540-A1636R	6	2 1/4	3/4	7/16	2	594.05
14541-A1636L	6	2 1/4	3/4	7/16	2	619.40



**MAKE SURE TO PURCHASE ARBORS OR
HOLDERS FOR YOUR SHELL MILLS**

Find them on pages 125 - 127

COATINGS AVAILABLE ON EVERY TOOL ** See Page 161 for details



Tel: (800) 338-6650 • Fax: (413) 289-1701 • www.fdtool.com



SHELL ENDMILLS FOR ALUMINUM HIGH SPEED STEEL

Shell Endmills for Aluminum have a high helix and fewer number of teeth for easy chip removal.

Catalog EDI-Number	Dia.	Width of Face	Width of Drive Slot	Depth of Slot	Hole Size	List Price
14586-A1710R	1 1/4	1	1/4	5/32	1/2	\$62.80
14587-A1710L	1 1/4	1	1/4	5/32	1/2	62.80
14588-A1711R	1 3/8	1 1/8	1/4	5/32	1/2	88.60
14589-A1711L	1 3/8	1 1/8	1/4	5/32	1/2	88.60
14590-A1712R	1 1/2	1 1/8	1/4	5/32	1/2	64.40
14591-A1712L	1 1/2	1 1/8	1/4	5/32	1/2	64.40
14592-A1713R	1 5/8	1 1/4	5/16	3/16	3/4	107.30
14593-A1713L	1 5/8	1 1/4	5/16	3/16	3/4	107.30
14594-A1714R	1 3/4	1 1/4	5/16	3/16	3/4	78.00
14595-A1714L	1 3/4	1 1/4	5/16	3/16	3/4	78.00
14596-A1715R	1 7/8	1 3/8	5/16	3/16	3/4	121.55
14597-A1715L	1 7/8	1 3/8	5/16	3/16	3/4	121.55
14598-A1716R	2	1 3/8	5/16	3/16	3/4	87.85
14599-A1716L	2	1 3/8	5/16	3/16	3/4	87.85
14600-A1717R	2 1/8	1 1/2	3/8	7/32	1	135.35
14601-A1717L	2 1/8	1 1/2	3/8	7/32	1	135.35
14602-A1718R	2 1/4	1 1/2	3/8	7/32	1	101.35
14603-A1718L	2 1/4	1 1/2	3/8	7/32	1	101.35
14604-A1719R	2 3/8	1 5/8	3/8	7/32	1	160.85
14605-A1719L	2 3/8	1 5/8	3/8	7/32	1	160.85
14606-A1720R	2 1/2	1 5/8	3/8	7/32	1	117.45
14607-A1720L	2 1/2	1 5/8	3/8	7/32	1	117.45
14608-A1721R	2 5/8	1 5/8	3/8	7/32	1	192.40

Catalog EDI-Number	Dia.	Width of Face	Width of Drive Slot	Depth of Slot	Hole Size	List Price
14609-A1721L	2 5/8	1 5/8	3/8	7/32	1	\$192.40
14610-A1722R	2 3/4	1 5/8	3/8	7/32	1	149.20
14611-A1722L	2 3/4	1 5/8	3/8	7/32	1	149.20
14612-A1723R	2 7/8	1 3/4	1/2	9/32	1 1/4	225.45
14613-A1723L	2 7/8	1 3/4	1/2	9/32	1 1/4	225.45
14614-A1724R	3	1 3/4	1/2	9/32	1 1/4	160.80
14615-A1724L	3	1 3/4	1/2	9/32	1 1/4	160.80
14616-A1725R	3 1/4	1 7/8	1/2	9/32	1 1/4	298.55
14617-A1725L	3 1/4	1 7/8	1/2	9/32	1 1/4	298.55
14618-A1726R	3 1/2	1 7/8	1/2	9/32	1 1/4	237.00
14619-A1726L	3 1/2	1 7/8	1/2	9/32	1 1/4	237.00
14620-A1727R	3 3/4	2 1/4	5/8	3/8	1 1/2	369.70
14621-A1727L	3 3/4	2 1/4	5/8	3/8	1 1/2	369.70
14622-A1728R	4	2 1/4	5/8	3/8	1 1/2	257.60
14623-A1728L	4	2 1/4	5/8	3/8	1 1/2	257.60
14624-A1730R	4 1/2	2 1/4	5/8	3/8	1 1/2	414.40
14625-A1730L	4 1/2	2 1/4	5/8	3/8	1 1/2	414.40
14626-A1732R	5	2 1/4	5/8	3/8	1 1/2	435.35
14627-A1732L	5	2 1/4	5/8	3/8	1 1/2	435.35
14628-A1734R	5 1/2	2 1/4	3/4	7/16	2	670.10
14629-A1734L	5 1/2	2 1/4	3/4	7/16	2	670.10
14630-A1736R	6	2 1/4	3/4	7/16	2	634.15
14631-A1736L	6	2 1/4	3/4	7/16	2	634.15



COBALT ROUGHING SHELL ENDMILLS RIGHT HAND CUT

Cobalt Roughing Shell Endmills are used for heavy duty cuts and longer life on tougher materials. Form relieved for easy sharpening.

Catalog EDI-Number	Dia.	Width of Face	Hole Size	# of Teeth	List Price
35100	2	1 3/8	3/4	8	\$149.85
35101	2 1/4	1 1/2	1	8	182.35
35102	2 1/2	1 5/8	1	8	221.80
35103	2 3/4	1 5/8	1	10	246.60
35104	3	1 3/4	1 1/4	10	287.45
35105	3 1/2	1 7/8	1 1/4	10	360.85
35106	4	2 1/4	1 1/2	10	501.70
35107	4 1/2	2 1/4	1 1/2	12	635.35
35108	5	2 1/4	1 1/2	12	737.75
35109	6	2 1/4	2	14	1024.85

COATINGS AVAILABLE ON EVERY TOOL ** See Page 161 for details



M-42 SHELL END MILL CUTTERS

M-42 COBALT SHELL END MILLS

M-42 Cobalt shell end mills provide ground flutes with rake geometry and a resistance to cutting temperature for longer wear, resistance for your general purpose machining, and exotic metals.



Catalog EDI-Number	Dia.	Width of Face	Width of Drive Slot	Depth of Slot	Hole Size	List Price	Catalog EDI-Number	Dia.	Width of Face	Width of Drive Slot	Depth of Slot	Hole Size	List Price
14542-AX1610R	1 1/4	1	1/4	5/32	1/2	\$74.35	14561-AX1621L	2 5/8	1 5/8	3/8	7/32	1	\$274.65
14543-AX1610L	1 1/4	1	1/4	5/32	1/2	74.35	14562-AX1622R	2 3/4	1 5/8	3/8	7/32	1	183.95
14544-AX1611R	1 3/8	1 1/8	1/4	5/32	1/2	124.95	14563-AX1622L	2 3/4	1 5/8	3/8	7/32	1	183.95
14545-AX1611L	1 3/8	1 1/8	1/4	5/32	1/2	124.95	14564-AX1623R	2 7/8	1 3/4	1/2	9/32	1 1/4	214.25
14546-AX1612R	1 1/2	1 1/8	1/4	5/32	1/2	76.95	14565-AX1623L	2 7/8	1 3/4	1/2	9/32	1 1/4	214.25
14547-AX1612L	1 1/2	1 1/8	1/4	5/32	1/2	76.95	14455-AX1624R	3	1 3/4	1/2	9/32	1 1/4	200.50
14548-AX1613R	1 5/8	1 1/4	5/16	3/16	3/4	124.05	14456-AX1624L	3	1 3/4	1/2	9/32	1 1/4	200.50
14549-AX1613L	1 5/8	1 1/4	5/16	3/16	3/4	124.05	14566-AX1625R	3 1/4	1 7/8	1/2	9/32	1 1/4	426.40
14550-AX1614R	1 3/4	1 1/4	5/16	3/16	3/4	98.20	14567-AX1625L	3 1/4	1 7/8	1/2	9/32	1 1/4	426.40
14551-AX1614L	1 3/4	1 1/4	5/16	3/16	3/4	98.20	14568-AX1626R	3 1/2	1 7/8	1/2	9/32	1 1/4	278.55
14552-AX1615R	1 7/8	1 3/8	5/16	3/16	3/4	173.60	14569-AX1626L	3 1/2	1 7/8	1/2	9/32	1 1/4	278.55
14553-AX1615L	1 7/8	1 3/8	5/16	3/16	3/4	173.60	14570-AX1627R	3 3/4	2 1/4	5/8	3/8	1 1/2	527.75
14451-AX1616R	2	1 3/8	5/16	3/16	3/4	111.05	14571-AX1627L	3 3/4	2 1/4	5/8	3/8	1 1/2	527.75
14452-AX1616L	2	1 3/8	5/16	3/16	3/4	111.05	14457-AX1628R	4	2 1/4	5/8	3/8	1 1/2	340.25
14554-AX1617R	2 1/8	1 1/2	3/8	7/32	1	193.15	14458-AX1628L	4	2 1/4	5/8	3/8	1 1/2	340.25
14555-AX1617L	2 1/8	1 1/2	3/8	7/32	1	193.15	14572-AX1630R	4 1/2	2 1/4	5/8	3/8	1 1/2	551.50
14556-AX1618R	2 1/4	1 1/2	3/8	7/32	1	122.60	14573-AX1630L	4 1/2	2 1/4	5/8	3/8	1 1/2	551.50
14557-AX1618L	2 1/4	1 1/2	3/8	7/32	1	122.60	14459-AX1632R	5	2 1/4	5/8	3/8	1 1/2	551.95
14558-AX1619R	2 3/8	1 5/8	3/8	7/32	1	230.05	14460-AX1632L	5	2 1/4	5/8	3/8	1 1/2	551.95
14559-AX1619L	2 3/8	1 5/8	3/8	7/32	1	230.05	14574-AX1634R	5 1/2	2 1/4	3/4	7/16	2	956.70
14453-AX1620R	2 1/2	1 5/8	3/8	7/32	1	147.45	14575-AX1634L	5 1/2	2 1/4	3/4	7/16	2	956.70
14454-AX1620L	2 1/2	1 5/8	3/8	7/32	1	147.45	14576-AX1636R	6	2 1/4	3/4	7/16	2	812.80
14560-AX1621R	2 5/8	1 5/8	3/8	7/32	1	274.65	14577-AX1636L	6	2 1/4	3/4	7/16	2	812.80

INDEXABLE SHELL (FACE) MILLS

0° LEAD HIGH POSITIVE

Square shoulder milling – Cutters employ shims to protect cutter body

Square inserts utilize four cutting edges – All inserts are faceted style

Catalog EDI-Number Right Hand	Catalog EDI-Number Left Hand	Bore	Cutter Dia.	# of Inserts	Height	Keyway	List Price
36110	36112	3/4	2	4	1 3/4	5/16	\$269.10
36118	36120	1	2 1/2	5	1 3/4	3/8	363.40
36126	36128	1	3	6	1 3/4	3/8	469.85
36134	36136	1 1/4	4	7	2	1/2	571.50
36142	36144	1 1/2	4	7	2	5/8	571.50
36150	36152	1 1/2	5	8	2 3/8	5/8	634.00
36158	36160	1 1/2	6	10	2 3/8	5/8	693.80
36166	36168	2	6	10	2 3/8	3/4	693.80
36174	36176	2 1/2	8	12	2 3/8	1	888.60
36182	36184	2 1/2	10	16	2 3/8	1	1104.40



COATINGS AVAILABLE ON EVERY TOOL ** See Page 161 for details



Tel: (800) 338-6650 • Fax: (413) 289-1701 • www.fdtool.com

CARBIDE TIPPED SHELL MILLS

FOR STEEL

Catalog EDI-Number	Dia. of Cut Inches	Width of Cutter	Min Tip Length Inches	Dia of Hole Inches	Width of Drive Slot	Depth of Slot	# of Teeth	List Price
14380-MC1610R	1 1/4	1	1/2	1/2	1/4	5/32	4	\$130.80
14381-MC1612R	1 1/2	1 1/8	1/2	1/2	1/4	5/32	4	136.15
14382-MC1614R	1 3/4	1 1/4	1/2	3/4	5/16	3/16	4	169.65
14383-MC1616R	2	1 3/8	1/2	3/4	5/16	3/16	4	189.55
14384-MC1618R	2 1/4	1 1/2	1/2	1	3/8	7/32	6	205.30
14385-MC1620R	2 1/2	1 5/8	5/8	1	3/8	7/32	6	215.20
14386-MC1622R	2 3/4	1 5/8	5/8	1	3/8	7/32	6	225.70
14387-MC1624R	3	1 3/4	3/4	1 1/4	1/2	9/32	6	245.50
14388-MC1626R	3 1/2	1 7/8	3/4	1 1/4	1/2	9/32	6	305.25
14389-MC1628R	4	2 1/4	3/4	1 1/2	5/8	3/8	6	379.10

~Right Hand Cut, Left Hand Spiral

~Designed to withstand the impact of milling steel



FOR CAST IRON

Catalog EDI-Number	Dia. of Cut Inches	Width of Cutter	Min Tip Length Inches	Dia of Hole Inches	Width of Drive Slot	Depth of Slot	# of Teeth	List Price
14465-ACC1610R	1 1/4	1	1/2	1/2	1/4	5/32	4	\$130.80
14466-ACC1612R	1 1/2	1 1/8	1/2	1/2	1/4	5/32	4	136.15
14467-ACC1614R	1 3/4	1 1/4	1/2	3/4	5/16	3/16	4	169.65
14468-ACC1616R	2	1 3/8	1/2	3/4	5/16	3/16	4	189.55
14469-ACC1618R	2 1/4	1 1/2	1/2	1	3/8	7/32	6	205.30
14470-ACC1620R	2 1/2	1 5/8	5/8	1	3/8	7/32	6	215.20
14471-ACC1622R	2 3/4	1 5/8	5/8	1	3/8	7/32	6	225.70
14472-ACC1624R	3	1 3/4	3/4	1 1/4	1/2	9/32	6	245.50
14473-ACC1626R	3 1/2	1 7/8	3/4	1 1/4	1/2	9/32	8	288.80
14474-ACC1628R	4	2 1/4	3/4	1 1/2	5/8	3/8	8	357.25

~Right Hand Cut, Right Hand Spiral

~Manufactured to allow greater metal removal at standard speeds & feeds



FOR NON-FERROUS MATERIALS

Catalog EDI-Number	Dia. of Cut Inches	Width of Cutter	Min Tip Length Inches	Dia of Hole Inches	Width of Drive Slot	Depth of Slot	# of Teeth	List Price
14480-AAC1610R	1 1/4	1	1/2	1/2	1/4	5/32	4	\$130.80
14481-AAC1612R	1 1/2	1 1/8	1/2	1/2	1/4	5/32	4	136.15
14482-AAC1614R	1 3/4	1 1/4	1/2	3/4	5/16	3/16	4	169.65
14483-AAC1616R	2	1 3/8	1/2	3/4	5/16	3/16	4	174.85
14484-AAC1618R	2 1/4	1 1/2	1/2	1	3/8	7/32	6	184.75
14485-AAC1620R	2 1/2	1 5/8	5/8	1	3/8	7/32	6	194.60
14486-AAC1622R	2 3/4	1 5/8	5/8	1	3/8	7/32	6	205.30
14487-AAC1624R	3	1 3/4	3/4	1 1/4	1/2	9/32	6	225.05
14488-AAC1626R	3 1/2	1 7/8	3/4	1 1/4	1/2	9/32	6	275.45
14489-AAC1628R	4	2 1/4	3/4	1 1/2	5/8	3/8	6	346.15

~Right Hand Cut, Right Hand Spiral

~Able to handle larger chiploads at higher feed rates

COATINGS AVAILABLE ON EVERY TOOL ** See Page 161 for details