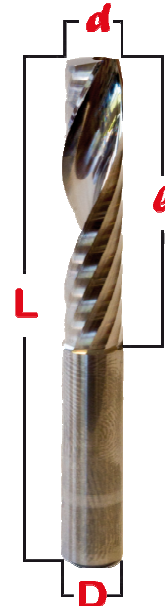


Series Universal M Solid Single Flute UNI
for Aluminium, ACM, Brass, Plastics, Wood, MDF etc.

	D	d	ℓ	L
FRCR0010304UM	3	1	4	38
FRCR001,50306UM	3	1,5	6	38
FRCR0020306UM	3	2	6	38
FRCR002,50306UM	3	2,5	6	38
FRCR0030306UM	3	3	6	38
FRCR00303011UM	3	3	11	38
FRCR0020406UM	4	2	6	50
FRCR0030406UM	4	3	6	50
FRCR00304011UM	4	3	11	50
FRCR0040406UM	4	4	6	50
FRCR00404012UM	4	4	12	50
FRCR00404014UM	4	4	14	50
FRCR00404022UM	4	4	22	50
FRCR00204.4004165UM	4,365	2	4	165
FRCR00304.4004165UM	4,365	3	4	165
FRCR0020606UM	6	2	6	50
FRCR002,50606UM	6	2,5	6	50
FRCR0030606UM	6	3	6	50
FRCR00306011UM	6	3	11	50
FRCR00306014UM	6	3	14	50
FRCR003,506012UM	6	3,5	12	50
FRCR0040606UM	6	4	6	50
FRCR00406012UM	6	4	12	50
FRCR00406014UM	6	4	14	50
FRCR00406022UM	6	4	22	50
FRCR00506012UM	6	5	12	50
FRCR00506016UM	6	5	16	50
FRCR00506022UM	6	5	22	50
FRCR00606012UM	6	6	12	50
FRCR00606022UM	6	6	22	50
FRCR00606032UM	6	6	32	64
FRCR00606032100UM	6	6	32	100
FRCR00808022UM	8	8	22	64
FRCR00808032UM	8	8	32	64
FRCR00808042UM	8	8	42	76
FRCR00808042100UM	8	8	42	100
FRCR01001022UM	10	10	22	64
FRCR01001032UM	10	10	32	76
FRCR01001042UM	10	10	42	76
FRCR01001055UM	10	10	55	100

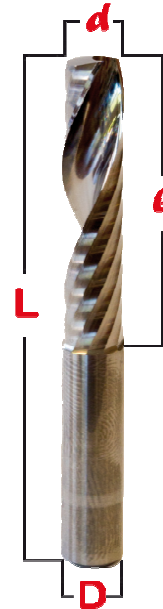


d= Cutting diameter (mm)
 D= Shank diameter (mm)
 ℓ= Cutting length (mm)
 L= Total length (mm)

Series Universal M Solid Single flute UNI

for Aluminium, ACM, Brass, Plastics, Wood, MDF etc.

Down-Cut	D	d	ℓ	L
FRCR00103002MD	3	1	2	38
FRCR001.503003MD	3	1,5	3	38
FRCR00203004MD	3	2	4	38
FRCR00303006MD	3	3	6	38
FRCR00303011MD	3	3	11	38
FRCR00404008MD	4	4	8	50
FRCR00404012MD	4	4	12	50
FRCR00206004MD	6	2	4	50
FRCR00306006MD	6	3	6	50
FRCR00306011MD	6	3	11	50
FRCR00406008MD	6	4	8	50
FRCR00406012MD	6	4	12	50
FRCR00506012MD	6	5	12	50
FRCR00506022MD	6	5	22	60
FRCR00606012MD	6	6	12	50
FRCR00606022MD	6	6	22	60
FRCR00808022MD	8	8	22	64
FRCR00808032MD	8	8	32	70
FRCR01010022MD	10	10	22	64


d= Cutting diameter (mm)

D= Shank diameter (mm)

ℓ= Cutting length (mm)

L= Total length (mm)

Serie Universal M Solid Single flute UNI

for Aluminium, ACM, Brass, Plastics, Wood, MDF etc.

Balanced	D	d	ℓ	L
FRCR00506012UMG	6	5	12	50
FRCR00506022UMG	6	5	22	58
FRCR00606012UMG	6	6	12	50
FRCR00606022UMG	6	6	22	58
FRCR00606032UMG	6	6	32	64
FRCR00808022UMG	8	8	22	64
FRCR00808032UMG	8	8	32	64
FRCR00808042UMG	8	8	42	76
FRCR01010022UMG	10	10	22	64
FRCR01010032UMG	10	10	32	76
FRCR01010042UMG	10	10	42	76
FRCR01010055UMG	10	10	55	100

Series Universal M

for milling of aluminium without cooling liquid!

DLC coated

Multi Purpose	D	d	ℓ	L	
FRMC00206006	6	2	6	50	
FRMC00306006	6	3	6	50	
FRMC00406006	6	4	6	50	
FRMC00406012	6	4	12	50	
FRMC00506012	6	5	12	50	
FRMC00606012	6	6	12	50	
FRMC00606012G	6	6	12	50	balanced
FRMC00606022	6	6	22	50	
FRMC00606022058G	6	6	22	58	balanced
FRMC00808022064G	8	8	22	64	balanced

Series Universal P

Solid Single flute UNI

for Acrylic, Plastics, Wood

	D	d	l	L
FRCR0010304UP	3	1	4	30
FRCR001,50306UP	3	1,5	6	30
FRCR0020306UP	3	2	6	30
FRCR0020308UP	3	2	8	30
FRCR00203011UP	3	2	11	38
FRCR002,50306UP	3	2,5	6	30
FRCR002,503011UP	3	2,5	11	38
FRCR0030306UP	3	3	6	30
FRCR00303011UP	3	3	11	38
FRCR00303022UP	3	3	22	50
FRCR0020406UP	4	2	6	50
FRCR00304011UP	4	3	11	50
FRCR0040408UP	4	4	8	50
FRCR00404012UP	4	4	12	50
FRCR00404014UP	4	4	14	50
FRCR00404022UP	4	4	22	50
FRCR00404032UP	4	4	32	64
FRCR0020606UP	6	2	6	50
FRCR0030606UP	6	3	6	50
FRCR00306011UP	6	3	11	50
FRCR00306014UP	6	3	14	50
FRCR00306022UP	6	3	22	60
FRCR0040608UP	6	4	8	50
FRCR00406012UP	6	4	12	50
FRCR00406014UP	6	4	14	50
FRCR00406022UP	6	4	22	50
FRCR00506012UP	6	5	12	50
FRCR00506016UP	6	5	16	50
FRCR00506022UP	6	5	22	50
FRCR00606012UP	6	6	12	50
FRCR00606022UP	6	6	22	50
FRCR00606032UP	6	6	32	64
FRCR00606032100UP	6	6	32	100
FRCR00606042UP	6	6	42	76
FRCR00808022UP	8	8	22	64
FRCR00808032UP	8	8	32	64
FRCR00808042UP	8	8	42	76
FRCR00808042100UP	8	8	42	100
FRCR00808055UP	8	8	55	100
FRCR010010022UP	10	10	22	64
FRCR010010032UP	10	10	32	76
FRCR010010042UP	10	10	42	76
FRCR010010055UP	10	10	55	100



d= Cutting diameter (mm)

D= Shaft diameter (mm)

l= Cutting length (mm)

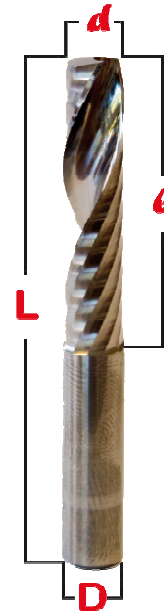
L= Total length (mm)

Series Universal P

Solid Single flute UNI

for Acrylic, Plastics, Wood

Down-Cut	D	d	ℓ	L
FRCR00103003PD	3	1	3	38
FRCR001.503004PD	3	1,5	4	38
FRCR00203006PD	3	2	6	38
FRCR00303006PD	3	3	6	38
FRCR00303011PD	3	3	11	38
FRCR00404008PD	4	4	8	50
FRCR00404012PD	4	4	12	50
FRCR00404014PD	4	4	14	50
FRCR00206006PD	6	2	6	50
FRCR00306006PD	6	3	6	50
FRCR00306011PD	6	3	11	50
FRCR00406008PD	6	4	8	50
FRCR00406012PD	6	4	12	50
FRCR00406014PD	6	4	14	50
FRCR00506012PD	6	5	12	50
FRCR00506016PD	6	5	16	50
FRCR00506022PD	6	5	22	60
FRCR00606012PD	6	6	12	50
FRCR00606022PD	6	6	22	60
FRCR00808022PD	8	8	22	64
FRCR00808032PD	8	8	32	70
FRCR01010022PD	10	10	22	64



d= Cutting diameter (mm)

D= Shaft diameter (mm)

 ℓ = Cutting length (mm)

L= Total length (mm)

Series Universal P

Solid Single flute UNI

for Acryl, Plastics, Wood

Balanced	D	d	ℓ	L
FRCR00506012UPG	6	5	12	50
FRCR00506022UPG	6	5	22	58
FRCR00606012UPG	6	6	12	50
FRCR00606022UPG	6	6	22	58
FRCR00606032UPG	6	6	32	64
FRCR00606042UPG	6	6	42	76
FRCR00808022UPG	8	8	22	64
FRCR00808032UPG	8	8	32	64
FRCR00808042UPG	8	8	42	76
FRCR00808055UPG	8	8	55	100
FRCR01010022UPG	10	10	22	64
FRCR01010032UPG	10	10	32	76
FRCR01010042UPG	10	10	42	76
FRCR01010055UPG	10	10	55	100

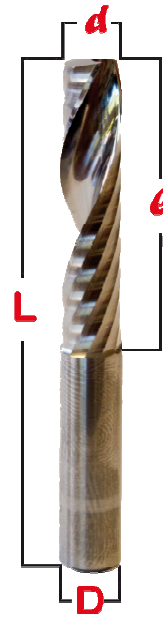
Acrylic bits with polishing surface

Crystal Finish

Solid-Single flute for gloss finishing

Special offer: Ordering **10** crystal finish bits of the same reference you get an additional discount of **5,00%**.

	D	d	ℓ	L
FRPL00203008PF	3	2	8	30
FRPL00303011PF	3	3	11	38
FRPL00404010PF	4	4	10	40
FRPL00404014PF	4	4	14	50
FRPL00404022PF	4	4	22	50
FRPL00206006PF	6	2	6	50
FRPL00306011PF	6	3	11	50
FRPL00406014PF	6	4	14	50
FRPL00406022PF	6	4	22	50
FRPL00506016PF	6	5	16	50
FRPL00506022PF	6	5	22	50
FRPL00606012PF	6	6	12	50
FRPL00606022PF	6	6	22	58
FRPL00606032PF	6	6	32	64
FRPL00606042PF	6	6	42	76
FRPL00808022PF	8	8	25	64
FRPL00808032PF	8	8	32	64
FRPL00808042PF	8	8	42	76
FRPL00808055PF	8	8	55	100
FRPL01010016PF	10	10	16	66
FRPL01010022PF	10	10	22	64
FRPL01010032PF	10	10	32	76
FRPL01010042PF	10	10	42	76
FRPL01010055PF	10	10	55	100
FRPL01212016PF	12	12	16	74
FRPL01212035PF	12	12	35	83



d= Cutting diameter (mm)

D= Shaft diameter (mm)

ℓ= Cutting length (mm)

L= Total length (mm)

ACM-Bits

For V- grooving of ACM. Solid carbid, balanced; also excellent for Acrylic, Plastics and Wood.

	D	d	Degree°	L
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ACM Single flute: also excellent for Acrylic, Plastics and Wood

ONLY for 3 mm material thickness:

FRCR1006092ACM /tip 0,2mm	6	6	92	50
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For 3 and 4 mm material:

FRCR1006090ACM/tip 1,8mm	10	6	90	50
FRCR1010090ACM/tip 1,8mm	10	10	90	50

ACM Double flute: new geometry for more precise bending

For 3 and 4 mm material:

FRCR10006090ACMB2/tip 1,8mm	10	6	90	50
FRCR10010090ACMB2/ tip 1,8mm	10	10	90	50

For 3, 4, 5 and 6 mm material:

FRCR13006090ACMB2/tip 1,8mm	13	6	90	50
FRCR13008090ACMB2/tip 1,8mm	13	8	90	50

ONLY for 3 mm material thickness:

FRCR11506120ACMB2/tip 1,8mm	11,5	6	120	50
FRCR11508120ACMB2/ tip 1,8mm	11,5	8	120	50

For 3 and 4 mm material:

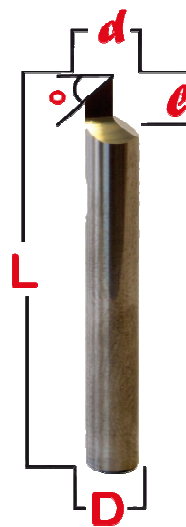
FRCR15006120ACMB2/tip 1,8mm	15	6	120	50
FRCR15008120ACMB2/ tip 1,8mm	15	8	120	50

ONLY for 3 mm material thickness:

FRCR15506135ACMB2/tip 1,8mm	15,5	6	135	50
FRCR15508135ACMB2/tip 1,8mm	15,5	8	135	50

For 3 and 4 mm material:

FRCR20508135ACMB2/tip 1,8mm	20,5	8	135	50
FRCR20512135ACMB2/tip 1,8mm	20,5	12	135	50



d= Cutting diameter (mm)
 D= Shaft diameter (mm)
 e= Cutting length (mm)
 L= Total length (mm)

3D- Bits**Solid Single flute Ball Nose:**

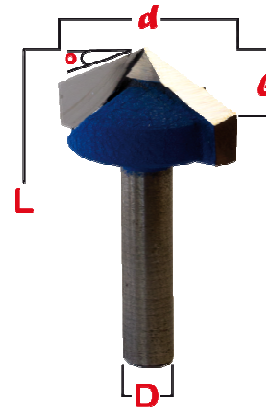
for Wood, Acrylic, Plastics and also Rubber

	D	d	ℓ	L
FRCR0020308BN	3	2	8	50
FRCR00303011BN	3	3	11	50
FRCR00404012BN	4	4	12	75
FRCR00506012BN	6	5	12	60
FRCR00606012BN	6	6	12	80
FRCR00606022BN	6	6	22	80
FRCR00808022BN	8	8	22	80
FRCR010010022BN	10	10	22	80

**Solid 3D V-Cut:**

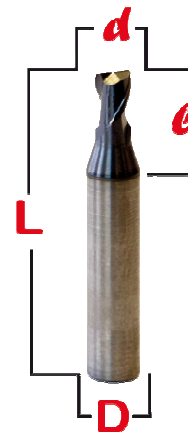
for Plastics, Wood/MDF, solid carbid core, 5mm thick

	D	d	ℓ	Degree °
FV603208	8	32	28	60
FV603212	12	32	28	60
FV901606	6	16	8	90
FV901608	8	16	8	90
FV903208	8	32	16	90
FV903212	12	32	16	90
FV1203208	8	32	10	120
FV1503208	8	32	5	150

**Solid Double-flute:**

for stainless/ hardened steel, resopal

	D	d	ℓ	L
FRE200100235	3	1	2	35
FRE201.500335	3	1,5	3	35
FRE200200435	3	2	4	35
FRE200300535	3	3	5	35
FRE200100245	6	1	2	45
FRE201.500345	6	1,5	3	45
FRE200200445	6	2	4	45
FRE200300545	6	3	5	45
FRE200400545	6	4	5	45

**Solide carbide double-flute:**

for acrylique, plastics and wood, negative radius for rounded corners

	D	d	r	L	
FRCR01006NR4.1 / tip 1,8	6	10	4,1	50	tip 1,8
FRCR01010NR4.1 / tip 1,9	10	10	4,1	50	tip 1,8

Acryl Polishing**End mills with diamond cutter (monocrystalline) - Peripheral cutting**

	D	d	ℓ	L
FRPL00606004FI	6	6	4	65
FRPL00606006FI	6	6	6	65
FRPL00808003FI	8	8	3	65
FRPL00808004FI	8	8	4	65
FRPL00808005FI	8	8	5	65
FRPL00808005FI	8	8	6	65
FRPL00808008FI	8	8	8	65

End mills with diamond cutter (monocrystalline) - Peripheral and front cutting

	D	d	ℓ	L
FRPL00606004FL	6	6	4	65
FRPL00606006FL	6	6	6	65
FRPL00808003FL	8	8	3	65
FRPL00808004FL	8	8	4	65
FRPL00808005FL	8	8	5	65
FRPL00808006FL	8	8	6	65
FRPL00808008FL	8	8	8	65

End mills with diamond cutter (monocrystalline) - Front cutting - Ground polisher

	\varnothing Polishing mm	d	ℓ	L	
<u>for PLEXIGLAS® GS:</u>					
FRPL010080.3GSFU	10	8	0,3	50	High gloss
FRPL020080.3GSFU	20	8	0,3	50	High gloss
<u>for PLEXIGLAS® XT:</u>					
FRPL020080.3XTFU	20	8	0,3	50	Highgloss
<u>for Polycarbonat:</u>					
FRPL020080.3PCFU	20	8	0,3	50	Highgloss
<u>for All:</u>					
FRPL020080.5GLFU	20	8	0,5	50	Gloss
<u>for All:</u>					
FRPL020080.5MTFU	20	8	0,5	50	Mat

End mills with diamond cutter (monocrystalline) - Chamfering tool

	D	d	ℓ	Degrees °
FRPL00808002FK	8	8	2	45
FRPL00808003FK	8	8	3	45
FRPL01008004FK	8	10	4	45
FRPL01408006FK	8	14	6	45

Graver:

Solid carbid graver, single-side halved with V-shape tip

	Ø (mm)	Degree°	tip (mm)	L (mm)	
FGU0130090	30	90	0,0	38	Plastics
FGU0230090	30	90	0,0	38	Metal
FGU03036001	30	36	0,1	38	Aluminium
FGU03036002	30	36	0,2	38	Aluminium
FGU03300352	30	35	0,2	38	Brass
FGU03300355	30	35	0,5	38	Brass
FGU0330036	30	36	0,0	38	Plastics
FGU0609002	60	90	0,2	40	Plastics, Alu, NE-metal
FGU0609005	60	90	0,5	40	Plastics, Alu, NE-metal
FGUA0306002	30	60	0,2	38	coated stainless steel
FGUA0306005	30	60	0,5	38	coated stainless steel
FGUA0603600	60	36	0,0	40	coated stainless steel

Graver

for fine engraving ! Only for rigid machines with high frequency spindles !
for stainless / hardened steel

	D	Length of flat	Cutting angle	L	
GSCR00307030	3	7	30	38	half round, single end
GSCR00407030	4	7	30	38	half round, single end
GSCR00409030G	4	9 + 9	30	38	half round, double end, balanced
GSCR00410030G	4	10 + 10	30	45	half round, double end, balanced

for engraving ! For high frequency- and belt-driven spindles !
for stainless / hardened steel, brass and aluminium

	D	Length of flat	Cutt. angle	L	
GCR00307030	3	7	30	38	half round single end
GCR00307.5030	3	7/5	30	38	quarter round, single end
GCR00408045	4	8	15, 30, 45	38	half round single end
GCR00408.6030	4	8/6	30	38	quarter round, single end
GCR00409030G	4	9+9	30	38	half round, double end, balanced
GCR00410030G	4	10+10	30	45	half round, double end, balanced
GCR00612045	6	12	15, 30, 45	45	half round, double end
GCR00612.10030	6	12/10	30	45	half round, double end
GCR00612030G	6	12+12	30	50	half round, double end, balanced
GCR4.36513030	4,365	13	30	165	half round
GCR4.36513.11030	4,365	13/11	30	165	quarter round, single end

Graver

For acrylic, plastics and wood, polished and balanced

	D	d	Spitze	Grad°
GFCR00303060	3	3	0,2	60
GFCR00606040	6	6	0,4	40
GFCR00606060	6	6	0,4	60
GFCR00606092	6	6	0,2	92

for V-grooving 3mm ACM

Accessories Cutting & Creasing

Cutting blades (Oscillating knife)

Cutting blades (for EasyWorker Machines):

	Cutting lenght mm
ME030101	8
ME030102	13,5
ME030109	25
ME030104	44
ME030105	60
ME030103	84
ME030107	110
ME030108	120



Cutting blades (for Aristo Machines):

	Cutting lenght mm
ME010105	5
ME010110	10
ME010115	15
ME010125	25
ME010130	30
ME010135	35
ME010138	38

Cutting blades (Tangential knife)

Cutting blades (for EasyWorker Machines):

		Degree°	Cutting lenght mm
ME020201	Sign and text	55	2,5
ME020107	Flock textile vinyl, felt, cardboard	40	3,5
ME030202	Flock textile vinyl, felt, cardboard	30	5
ME030303	Flock textile vinyl, felt, cardboard rubber	20	8
ME030304	Flock textile vinyl, felt, cardboard	60	6,5
ME030305	Flock textile vinyl, felt, cardboard	40	9,5
ME030306	Flock textile vinyl, felt, cardboard	60	12

Cutting blades (for Aristo Machines):

	indicated for	Degree °
ME010201	Reflective vinyl	16
ME010202	Masking film	16
ME010203	Sign vinyl	35
ME010204	Card board	35
ME010205	Sandblast vinyl- Flock	35
ME010206	Flock textile vinyl, felt, card board	60

Spring sets

Spring set S10 for Tangential knife Typ II

(Pressing force up to ca. 10N/1.000g)

Spring set S18 for Tangential knife Typ II

(Pressing force up to ca. 18N/1.800g)

Spring set S28 for Tangential knife Typ II

(Pressing force up to ca. 28N/2.800g)



Cutting blades for V-Cut 45°

Cutting blades:

OM020405 - Blade 0.9mm (Pack of 10)



Creasing wheels MasterMind ATC

D=26mm

	Width	indicated for
MM01020401	6 pt	corr.cardboard B
MM010204011	1 pt	corr.cardboard B
MM010204012	2 pt	corr.cardboard B
MM010204014	4 pt	corr.cardboard B
MM010204018	8 pt	corr.cardboard B
MM0102040110	10 pt	corr.cardboard B
MM0102040112	12 pt	corr.cardboard B
MM0102040114	14 pt	corr.cardboard B



D=61mm

	width	indicated for
MM010204101	6 pt	corr.cardboard B

Protective underlay permeable to air:

	Sizes
PUEW10100	PU Milling- and cutting underlay 2 mm
PUEW10101	Protective underlay (for cutting) 3 mm

Cooling liquid (Price per Liter):

Lubricant-/ Polishing liquid Arcyl also very indicated for soft materials

MS090101

Tool holder ISO30 for ATC Systems

ATC Tool holder ISO30 for ER 32 collets
Gripper for Tool holder ISO 30

Hook wrench

Hook wrench ER 25
Hook wrench ER 32

Collets

Collets ER 25:	Shaft diameter
SZER25D02	2
SZER25D03	3
SZER25D04	4
SZER25D05	5
SZER25D06	6
SZER25D07	7
SZER25D08	8
SZER25D09	9
SZER25D10	10
SZER25D11	11
SZER25D12	12
SZER25D13	13
SZER25D14	14
SZER25D15	15
SZER25D16	16
Set of collets ER25	2 to 16

Collets ER 32:	Shaft diameter
SZER32D02	2
SZER32D03	3
SZER32D04	4
SZER32D05	5
SZER32D06	6
SZER32D07	7
SZER32D08	8
SZER32D09	9
SZER32D10	10
SZER32D11	11
SZER32D12	12
SZER32D13	13
SZER32D14	14
SZER32D15	15
SZER32D16	16
SZER32D17	17
SZER32D18	18
SZER32D19	19
SZER32D20	20
Set of collets ER32	3 to 20



