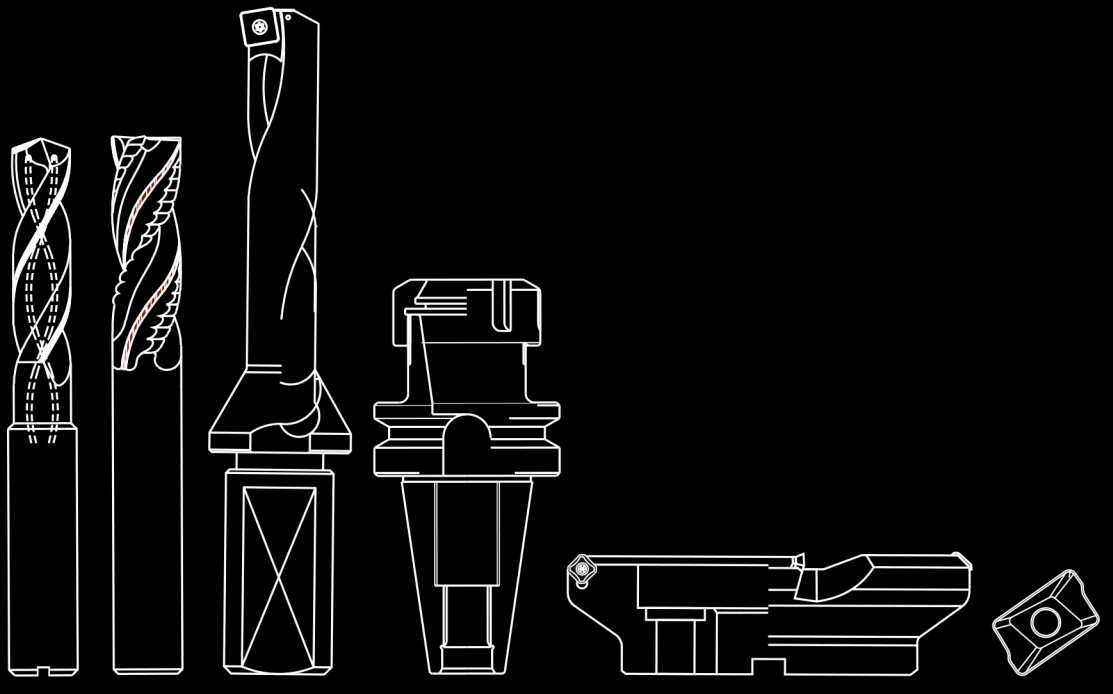
BLOOD®

ROTATING GENIUS

A4 SERIES CATALOGUE



THINK CARBIDE, THINK BLOOD...

DENKEN HARTMETALL, DENKEN BLOOD...

CARBIDE TOOLS | CNC TOOLINGS | INDEXABLE PRODUCTS



A4 SERIES

Why A4?

One series. More possibilities.

A general-purpose solid carbide range for everyday production. From milling and drilling to threading and reaming, A4 brings versatile tool options and practical value together in one clearly identified series.

FOUR MATERIAL GROUPS. APPLICATION-MATCHED TOOLS.

P	M	K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals

Select the tool geometry and coating to suit your work material.

A RANGE FOR YOUR SHOP FLOOR

- Square end mills
- Ball nose & radius mills
- Drills
- Through-coolant drills
- Reamers
- Drill mills
- Thread mills
- Roughers & finishers

SPECIAL TOOLS — Profiles, dimensions and geometries made to your requirement. Ask us about your application.

THE A4 ADVANTAGE

01 Value for production

Dependable carbide tooling at a price suited to everyday machining.

02 Reach more customers

Serve customers who previously found price a barrier, with a value-focused option from BLOOD.

03 A wider tooling basket

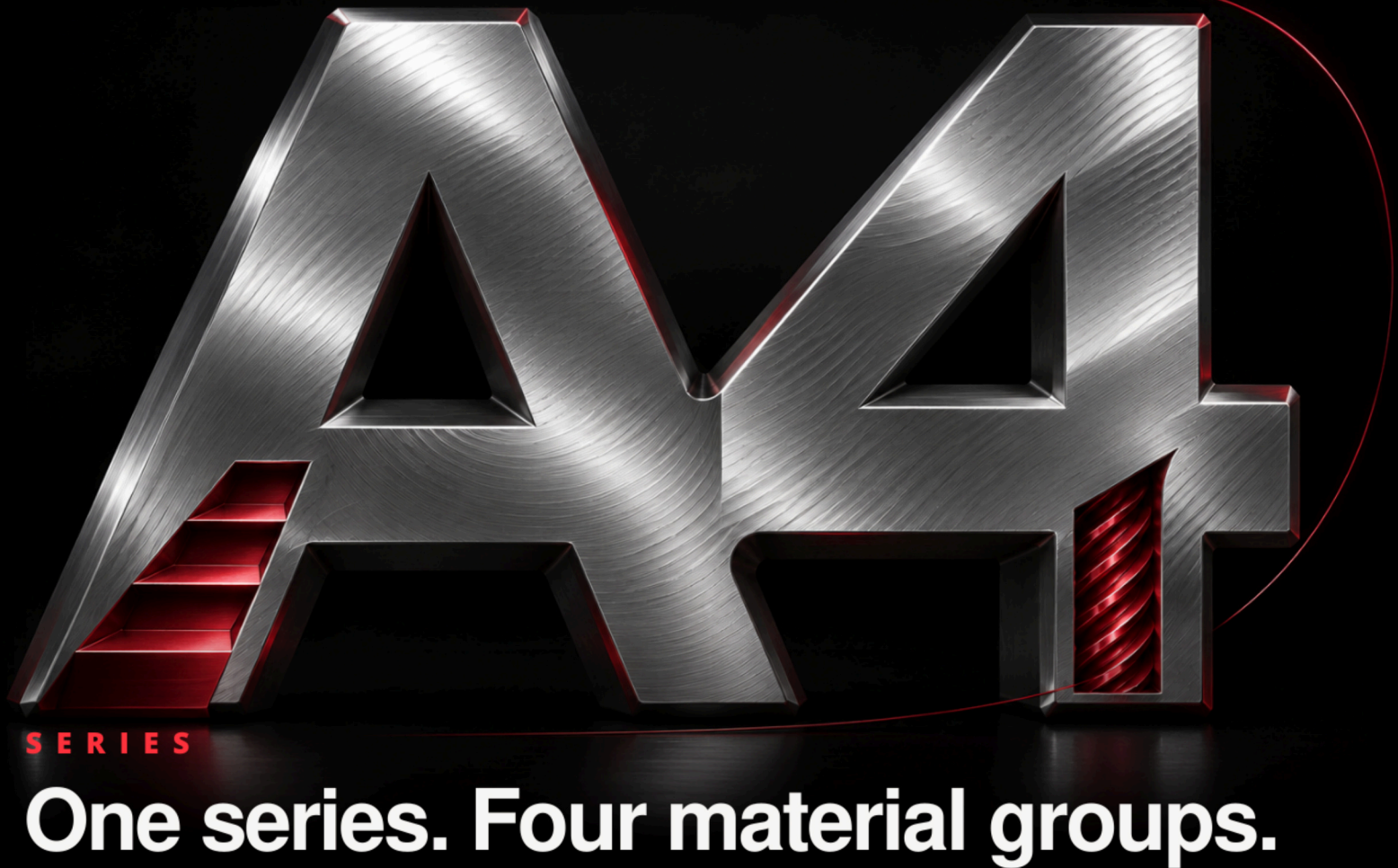
A4 complements the BLOOD range, offering more choice for workshops with one or two CNC machines and large manufacturers alike.

Explore the A4 catalogue

www.bloodtools.com

BLOOD®
ROTATING GENIUS

INTRODUCING



SERIES

One series. Four material groups.

General-purpose solid carbide cutting tools

P	M	K	N
Steel	Stainless steel	Cast iron	Non-ferrous metals

Square & ball nose end mills / Drills & hole mills / Thread mills / Reamers
Roughers, finishers & Special Tools

Explore the A4 catalogue

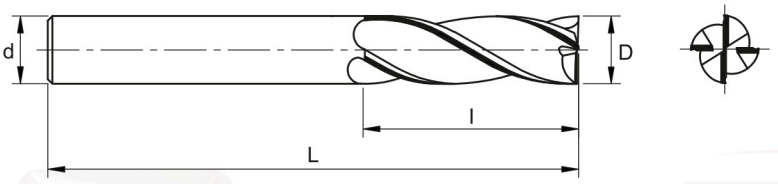
www.bloodtools.com



SOLID CARBIDE SQUARE ENDMILL
REGULAR SERIES

Square End	Series	Helix	Flutes
	A4	 30°	Z = 2 Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	R	h6	e8





ESB4 R

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
ESB4 040 R A4	4	4	14	50
ESB4 045 R A4	4.5	4.5	14	50
ESB4 050 R A4	5	5	16	50
ESB4 055 R A4	5.5	5.5	16	50
ESB4 060 R A4	6	6	19	64
ESB4 065 R A4	6.5	6.5	19	64

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
ESB4 070 R A4	7	7	19	64
ESB4 080 R A4	8	8	21	64
ESB4 090 R A4	9	9	21	64
ESB4 100 R A4	10	10	25	70
ESB4 110 R A4	11	11	25	70
ESB4 120 R A4	12	12	25	75
ESB4 130 R A4	13	13	26	75
ESB4 140 R A4	14	14	30	80
ESB4 150 R A4	15	15	30	80
ESB4 160 R A4	16	16	32	80
ESB4 180 R A4	18	18	35	100
ESB4 200 R A4	20	20	38	100
ESB4 220 R A4	22	22	38	100
ESB4 250 R A4	25	25	38	100

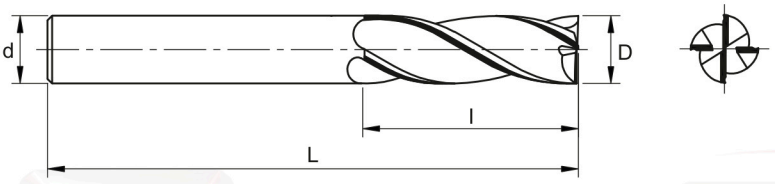
- ESB2 Series (2 Flutes) available on request
- Intermediate sizes, Weldon Flat available on request



SOLID CARBIDE SQUARE ENDMILL LONG SERIES

Square End	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	L	h6	e8





ESB4 L

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
ESB4 040 L A4	4	4	19	57
ESB4 050 L A4	5	5	25	64
ESB4 060 L A4	6	6	28	75
ESB4 080 L A4	8	8	29	75
ESB4 100 L A4	10	10	32	75
ESB4 120 L A4	12	12	51	100
ESB4 140 L A4	14	14	57	127
ESB4 160 L A4	16	16	57	127
ESB4 180 L A4	18	18	57	127
ESB4 200 L A4	20	20	57	127
ESB4 250 L A4	25	25	57	127

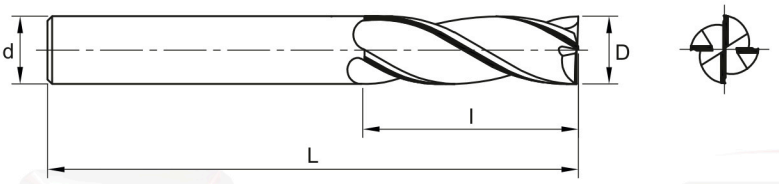
- ESB2 Series (2 Flutes) available on request
- Intermediate sizes, Weldon Flat available on request



SOLID CARBIDE SQUARE ENDMILL
EXTRA LONG SERIES

Square End	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	X	h6	e8



END MILLS



ESB4 X

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
ESB4 040 X A4	4	4	28	75
ESB4 050 X A4	5	5	32	75
ESB4 060 X A4	6	6	39	100
ESB4 080 X A4	8	8	42	100
ESB4 100 X A4	10	10	45	100
ESB4 120 X A4	12	12	76	150
ESB4 140 X A4	14	14	76	150
ESB4 160 X A4	16	16	76	150
ESB4 180 X A4	18	18	76	150
ESB4 200 X A4	20	20	76	150
ESB4 250 X A4	25	25	76	150

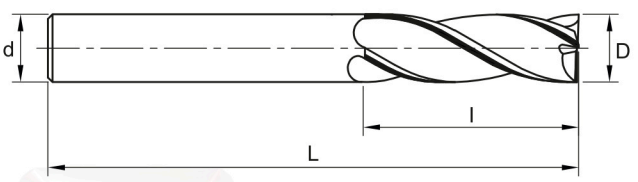
- ESB2 Series (2 Flutes) available on request
- Intermediate sizes, Weldon Flat available on request



SOLID CARBIDE SQUARE ENDMILL
XL SERIES

Square End	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	XL	h6	e8







ESB4 XL

P M K N

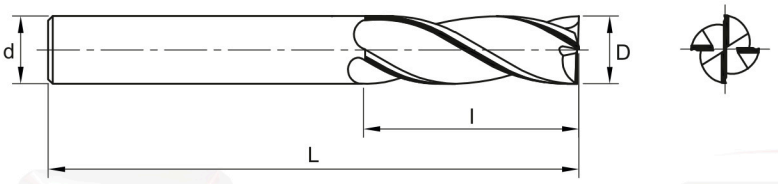
ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
ESB4 040 XL A4	4	4	28	100
ESB4 050 XL A4	5	5	32	100
ESB4 060 XL A4	6	6	40	150
ESB4 080 XL A4	8	8	42	150
ESB4 100 XL A4	10	10	45	150
ESB4 120 XL A4	12	12	76	200
ESB4 160 XL A4	16	16	76	200
ESB4 200 XL A4	20	20	76	200
ESB4 250 XL A4	25	25	76	200



SOLID CARBIDE SQUARE ENDMILL
XXL SERIES

Square End	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	XXL	h6	e8



END MILLS



ESB4 XXL

P M K N

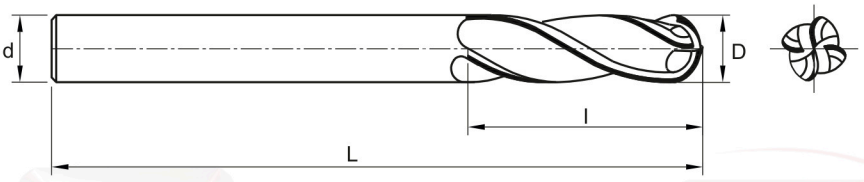
ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
ESB4 060 XXL A4	6	6	45	200
ESB4 080 XXL A4	8	8	50	200
ESB4 100 XXL A4	10	10	65	200
ESB4 120 XXL A4	12	12	76	250
ESB4 160 XXL A4	16	16	76	250
ESB4 200 XXL A4	20	20	76	250



SOLID CARBIDE BALLNOSE ENDMILL
REGULAR SERIES

Ballnose	Series	Helix	Flutes	Coating
	A4	30°	Z = 2 Z = 4	Duro Coat

Tool Length	Shank Dia	Mill Dia
R	h6	e8





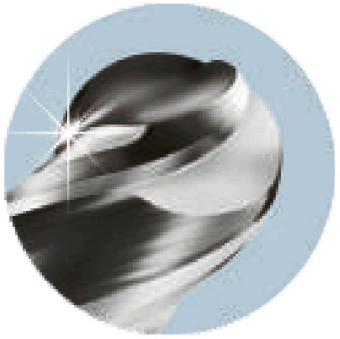
EBB4 R

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
EBB4 040 R A4	4	4	14	50
EBB4 045 R A4	4.5	4.5	14	50
EBB4 050 R A4	5	5	16	50
EBB4 055 R A4	5.5	5.5	16	50
EBB4 060 R A4	6	6	19	64
EBB4 065 R A4	6.5	6.5	19	64

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
EBB4 070 R A4	7	7	19	64
EBB4 080 R A4	8	8	21	64
EBB4 090 R A4	9	9	21	64
EBB4 100 R A4	10	10	25	70
EBB4 110 R A4	11	11	25	70
EBB4 120 R A4	12	12	25	75
EBB4 130 R A4	13	13	26	75
EBB4 140 R A4	14	14	30	80
EBB4 150 R A4	15	15	30	80
EBB4 160 R A4	16	16	32	80
EBB4 180 R A4	18	18	35	100
EBB4 200 R A4	20	20	38	100
EBB4 220 R A4	22	22	38	100
EBB4 250 R A4	25	25	38	100

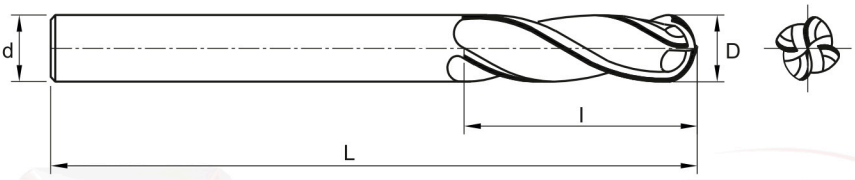
- EBB2 Series (2 Flutes) available on request
- Intermediate sizes, Weldon Flat available on request



SOLID CARBIDE BALLNOSE ENDMILL LONG SERIES

Ballnose	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	L	h6	e8





EBB4 L

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
EBB4 040 L A4	4	4	19	57
EBB4 050 L A4	5	5	25	64
EBB4 060 L A4	6	6	28	75
EBB4 080 L A4	8	8	29	75
EBB4 100 L A4	10	10	32	75
EBB4 120 L A4	12	12	51	100
EBB4 140 L A4	14	14	57	127
EBB4 160 L A4	16	16	57	127
EBB4 180 L A4	18	18	57	127
EBB4 200 L A4	20	20	57	127
EBB4 250 L A4	25	25	57	127

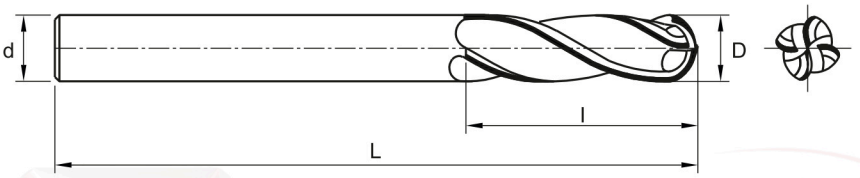
- EBB2 Series (2 Flutes) available on request
- Intermediate sizes, Weldon Flat available on request

SOLID CARBIDE BALLNOSE ENDMILL
EXTRA LONG SERIES



Ballnose	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	X	h6	e8





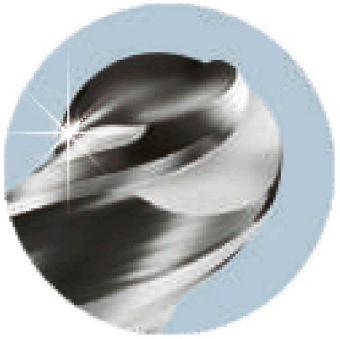
P M K N

EBB4 X

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
EBB4 040 X A4	4	4	28	75
EBB4 050 X A4	5	5	32	75
EBB4 060 X A4	6	6	39	100
EBB4 080 X A4	8	8	42	100
EBB4 100 X A4	10	10	45	100
EBB4 120 X A4	12	12	76	150
EBB4 140 X A4	14	14	76	150
EBB4 160 X A4	16	16	76	150
EBB4 180 X A4	18	18	76	150
EBB4 200 X A4	20	20	76	150
EBB4 250 X A4	25	25	76	150

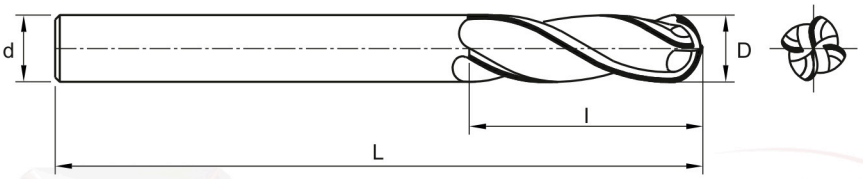
- EBB2 Series (2 Flutes) available on request
- Intermediate sizes, Weldon Flat available on request

SOLID CARBIDE BALLNOSE ENDMILL
XL SERIES



Ballnose	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	XL	h6	e8



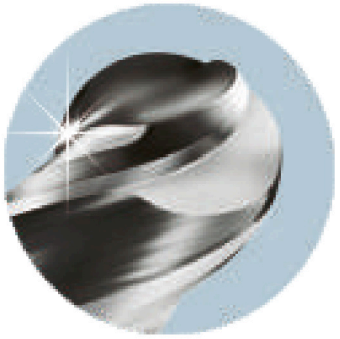


EBB4 XL

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
EBB4 040 XL A4	4	4	28	100
EBB4 050 XL A4	5	5	32	100
EBB4 060 XL A4	6	6	40	150
EBB4 080 XL A4	8	8	42	150
EBB4 100 XL A4	10	10	45	150
EBB4 120 XL A4	12	12	76	200
EBB4 160 XL A4	16	16	76	200
EBB4 200 XL A4	20	20	76	200

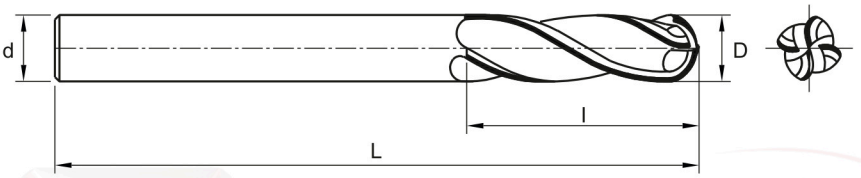
- EBB2 Series (2 Flutes) available on request
- Intermediate sizes, Weldon Flat available on request



SOLID CARBIDE BALLNOSE ENDMILL
XXL SERIES

Ballnose	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	XXL	h6	e8

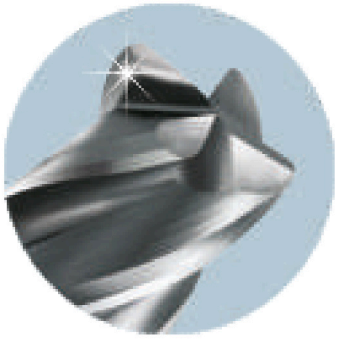




P M K N

EBB4 XXL

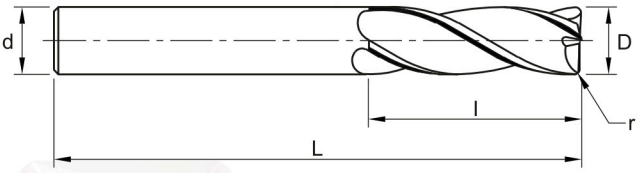
ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
EBB4 060 XXL A4	6	6	45	200
EBB4 080 XXL A4	8	8	50	200
EBB4 100 XXL A4	10	10	65	200
EBB4 120 XXL A4	12	12	76	250
EBB4 160 XXL A4	16	16	76	250
EBB4 200 XXL A4	20	20	76	250



SOLID CARBIDE ENDMILL
CORNER RADIUS

Corner Radius	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	R	h6	e8





ER B4

P M K N

ITEM CODE	MILL DIA D	RADIUS R	SHANK DIA d	CEL l	OAL L
ER05 B4 040 A4	4	0.5	4	14	50
ER10 B4 040 A4	4	1.0	4	14	50
ER05 B4 050 A4	5	0.5	5	16	50
ER10 B4 050 A4	5	1.0	5	16	50
ER05 B4 060 A4	6	0.5	6	19	64
ER10 B4 060 A4	6	1.0	6	19	64
ER15 B4 060 A4	6	1.5	6	19	64
ER05 B4 080 A4	8	0.5	8	21	64
ER10 B4 080 A4	8	1.0	8	21	64
ER20 B4 080 A4	8	2.0	8	21	64
ER05 B4 100 A4	10	0.5	10	25	70
ER10 B4 100 A4	10	1.0	10	25	70
ER20 B4 100 A4	10	2.0	10	25	70
ER25 B4 100 A4	10	2.5	10	25	70

ITEM CODE	MILL DIA D	RADIUS R	SHANK DIA d	CEL l	OAL L
ER05 B4 120 A4	12	0.5	12	25	75
ER10 B4 120 A4	12	1.0	12	25	75
ER20 B4 120 A4	12	2.0	12	25	75
ER30 B4 120 A4	12	3.0	12	25	75
ER10 B4 140 A4	14	1.0	14	30	80
ER20 B4 140 A4	14	2.0	14	30	80
ER30 B4 140 A4	14	3.0	14	30	80
ER10 B4 160 A4	16	1.0	16	32	80
ER20 B4 160 A4	16	2.0	16	32	80
ER30 B4 160 A4	16	3.0	16	32	80
ER10 B4 200 A4	20	1.0	20	38	100
ER20 B4 200 A4	20	2.0	20	38	100
ER30 B4 200 A4	20	3.0	20	38	100

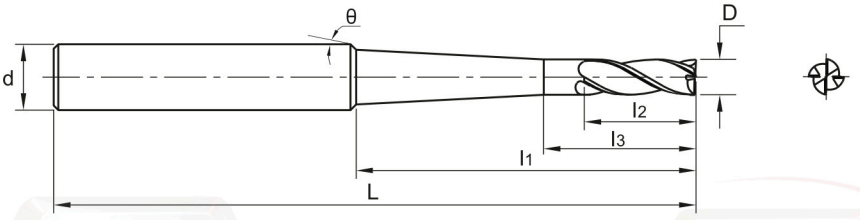
- ER B2 Series (2 Flutes) available on request

SOLID CARBIDE TAPER NECK SQUARE ENDMILL TN SERIES



Square End	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Shank Dia	Mill Dia
Duro Coat	h6	e8





P M K N

ESB4 TN

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l_2	l_3	RELIEVE LENGTH l_1	OAL L	ANGLE θ
ESB4 040 TN A4	4	6	8	11	27	75	3^0
ESB4 050 TN A4	5	8	10	13	49	100	2^0
ESB4 060 TN A4	6	8	12	15	51	100	1.5^0
ESB4 080 TN A4	8	10	14	17	53	100	1.5^0

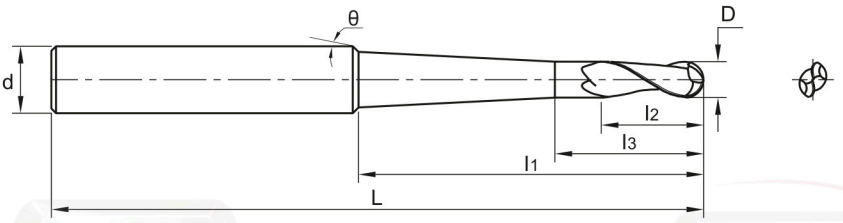
- ESB2 Series (2 Flutes) available on request
- Regular Series available on request

SOLID CARBIDE TAPER NECK BALLNOSE
TN SERIES



Ballnose	Series	Helix	Flutes
	A4	 30°	Z = 2

Coating	Shank Dia	Mill Dia
Duro Coat	h6	e8





EBB2 TN

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l_2	l_3	RELIEVE LENGTH l_1	OAL L	ANGLE θ
EBB2 040 TN A4	4	6	8	11	37	75	2^0
EBB2 050 TN A4	5	8	10	13	49	100	2^0
EBB2 060 TN A4	6	8	12	16	51	100	1.5^0
EBB2 080 TN A4	8	10	14	17	53	100	1.5^0

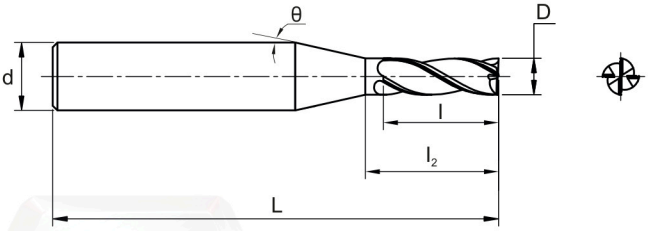
- EBB4 Series (4 Flutes) available on request
- Regular Series available on request

SOLID CARBIDE STUB TAPER NECK ENDMILL
STN SERIES



Square End	Series	Helix	Flutes
	A4	 30°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	S	h6	e8





P M K N

ESB4 STN

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	l_2	OAL L	ANGLE θ
ESB4 040 STN A4	4	6	8	11	50	5^0
ESB4 050 STN A4	5	8	10	13	75	5^0
ESB4 060 STN A4	6	8	12	14	75	3^0

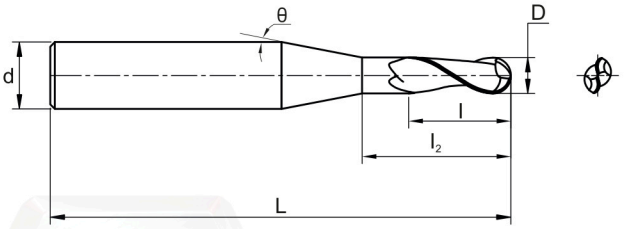
• ESB2 Series (2 Flutes) available on request

SOLID CARBIDE STUB TAPER NECK BALLNOSE STN SERIES



Ballnose	Series	Helix	Flutes
	A4	 30°	Z = 2

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	S	h6	e8





P M K N

EBB2 STN

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	L_2	OAL L	ANGLE θ
EBB2 040 STN A4	4	6	8	11	50	5^0
EBB2 050 STN A4	5	8	10	13	75	5^0
EBB2 060 STN A4	6	8	12	15	75	3^0

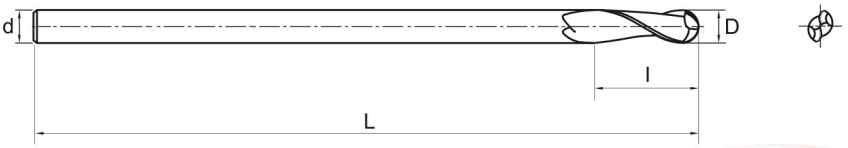
• EBB4 Series (4 Flutes) available on request

SOLID CARBIDE SHORT FLUTE LONG REACH BALLNOSE ENDMILL



Ballnose	Series	Helix	Flutes
	A4	 30°	Z = 2

Coating	Shank Dia	Mill Dia
Duro Coat	h6	e8





P M K N

EBB2S L

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
EBB2S 040 L A4	4	4	10	75
EBB2S 060 L A4	6	6	12	100
EBB2S 080 L A4	8	8	14	100
EBB2S 100 L A4	10	10	18	100
EBB2S 120 L A4	12	12	22	150

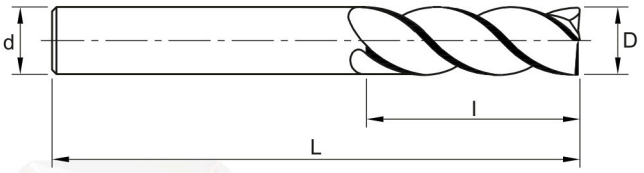
• EBB4S Series (4 Flutes) available on request



SOLID CARBIDE ENDMILL
NF SERIES - REGULAR

Square End	Series	Helix	Flutes
	A4	 45°	Z = 3

Coating	Tool Length	Shank Dia	Mill Dia
Uncoated	R	h6	e8





.ESC3 R

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
.ESC3 040 R NF A4	4	4	12	50
.ESC3 050 R NF A4	5	5	15	50
.ESC3 060 R NF A4	6	6	18	50
.ESC3 080 R NF A4	8	8	20	60
.ESC3 100 R NF A4	10	10	25	70
.ESC3 120 R NF A4	12	12	25	75
.ESC3 140 R NF A4	14	14	30	80
.ESC3 160 R NF A4	16	16	32	80
.ESC3 180 R NF A4	18	18	35	100
.ESC3 200 R NF A4	20	20	45	100

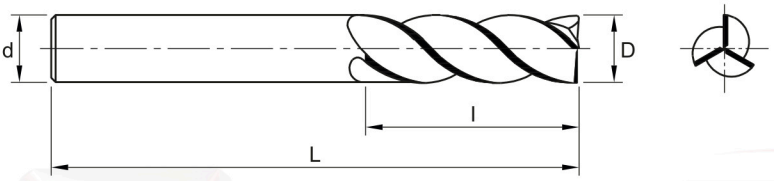
• Coating available on request



SOLID CARBIDE ENDMILL
NF SERIES - LONG

Square End	Series	Helix	Flutes
	A4	 45°	Z = 3

Coating	Tool Length	Shank Dia	Mill Dia
Uncoated	L	h6	e8





.ESC3 L

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
.ESC3 040 L NF A4	4	4	16	60
.ESC3 050 L NF A4	5	5	20	60
.ESC3 060 L NF A4	6	6	25	75
.ESC3 080 L NF A4	8	8	32	75
.ESC3 100 L NF A4	10	10	45	100
.ESC3 120 L NF A4	12	12	45	100
.ESC3 140 L NF A4	14	14	51	100
.ESC3 160 L NF A4	16	16	65	127
.ESC3 180 L NF A4	18	18	75	127
.ESC3 200 L NF A4	20	20	75	127

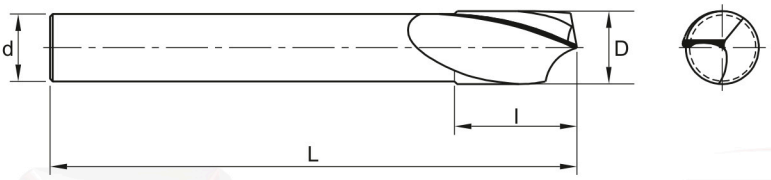
• Coating available on request

SOLID CARBIDE SINGLE LIP TOOL



Corner Radius	Series	Helix	Flutes
	A4	30°	Z = 1

Coating	Tool Length	Tool Length	Shank Dia	Mill Dia
Uncoated	R	L	h6	e8



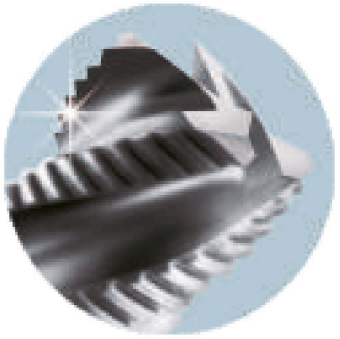


.ESB1

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
.ESB1 0406 L NF A4	4	6	6	60
.ESB1 0506 L NF A4	5	6	8	60
.ESB1 0606 L NF A4	6	6	9	75
.ESB1 0706 L NF A4	7	6	10	75
.ESB1 0908 L NF A4	9	8	12	75
.ESB1 1110 R NF A4	11	10	14	75
.ESB1 1110 L NF A4	11	10	14	100
.ESB1 1312 R NF A4	13	12	16	75
.ESB1 1312 L NF A4	13	12	16	100
.ESB1 1514 R NF A4	15	14	18	75
.ESB1 1514 L NF A4	15	14	18	100
.ESB1 1716 R NF A4	17	16	20	75
.ESB1 1716 L NF A4	17	16	20	100

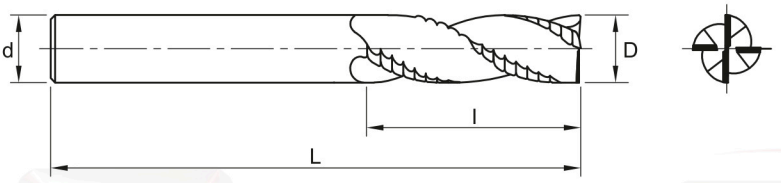
- Coating available on request



SOLID CARBIDE ROUGHER
REGULAR SERIES

Corner Chamfer	Series	Helix	Flutes
	A4	 38°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	R	h6	e8



END MILLS



FSC4 R

P M K N

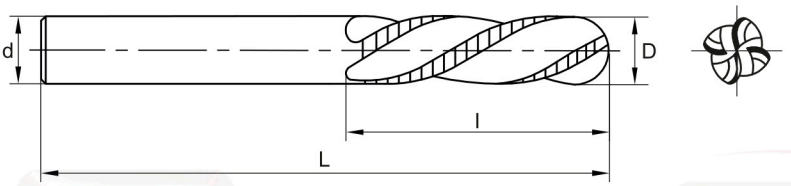
ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
FSC4 040 R A4	4	4	14	50
FSC4 050 R A4	5	5	16	50
FSC4 060 R A4	6	6	19	64
FSC4 080 R A4	8	8	21	64
FSC4 100 R A4	10	10	25	70
FSC4 120 R A4	12	12	25	75
FSC4 140 R A4	14	14	30	80
FSC4 160 R A4	16	16	32	80
FSC4 180 R A4	18	18	35	100
FSC4 200 R A4	20	20	38	100
FSC4 250 R A4	25	25	40	100

SOLID CARBIDE BALLNOSE ROUGHER
REGULAR SERIES



Ballnose	Series	Helix	Flutes
	A4	20°	Z = 4

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	R	h6	e8





FBB4 R

P M K N

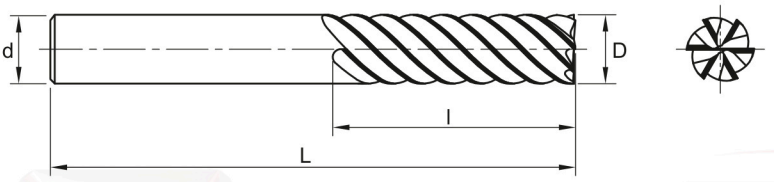
ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
FBB4 040 R A4	4	4	14	50
FBB4 050 R A4	5	5	16	50
FBB4 060 R A4	6	6	19	64
FBB4 080 R A4	8	8	21	64
FBB4 100 R A4	10	10	25	70
FBB4 120 R A4	12	12	25	75
FBB4 140 R A4	14	14	30	80
FBB4 160 R A4	16	16	32	80
FBB4 180 R A4	18	18	35	100
FBB4 200 R A4	20	20	38	100
FBB4 250 R A4	25	25	40	100

SOLID CARBIDE FINISHER ENDMILL



Corner Chamfer	Series	Helix	Flutes
	A4	 50°	Z = 6

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	R	h6	e8



END MILLS



ESD6 R

P M K N

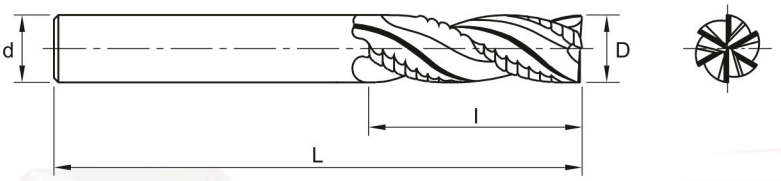
ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
ESD6 060 R A4	6	6	19	64
ESD6 080 R A4	8	8	21	64
ESD6 100 R A4	10	10	25	70
ESD6 120 R A4	12	12	25	75
ESD6 140 R A4	14	14	30	80
ESD6 160 R A4	16	16	32	80
ESD6 180 R A4	18	18	35	100
ESD6 200 R A4	20	20	38	100

SOLID CARBIDE COMBO MILL



Corner Chamfer	Series	Helix	Flutes
	A4	 35°	Z = 6

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	R	h6	e8





EFC6

P M K N

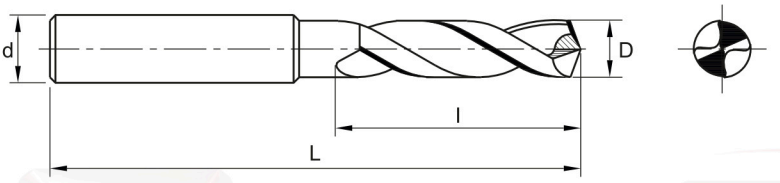
ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
EFC6 080 A4	8	8	21	64
EFC6 100 A4	10	10	25	70
EFC6 120 A4	12	12	25	75
EFC6 140 A4	14	14	30	80
EFC6 160 A4	16	16	32	80
EFC6 180 A4	18	18	35	100
EFC6 200 A4	20	20	38	100

SOLID CARBIDE HIGH PERFORMANCE DRILL



140°	Helix		Coating
	 30°		Duro Coat

L x D	Shank Dia	Drill Dia	Standard
3	h6	m7	DIN 6537





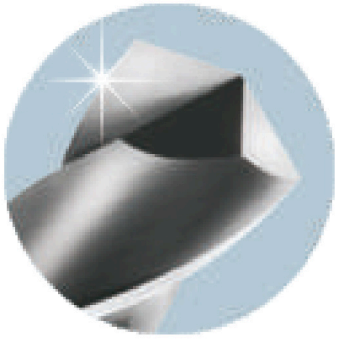


DYB3

ITEM CODE	DRILL DIA D	SHANK DIA d	FL l	OAL L
DYB3 015 ~ 019 A4	Ø 1.5 ~ 1.9	4	9	58
DYB3 020 ~ 023 A4	Ø 2.0 ~ 2.3	4	13	58
DYB3 024 ~ 029 A4	Ø 2.4 ~ 2.9	4	17	58
DYB3 030 ~ 037 A4	Ø 3.0 ~ 3.7	6	20	62
DYB3 038 ~ 047 A4	Ø 3.8 ~ 4.7	6	24	66
DYB3 048 ~ 060 A4	Ø 4.8 ~ 6.0	6	28	66
DYB3 061 ~ 070 A4	Ø 6.1 ~ 7.0	8	34	79
DYB3 071 ~ 080 A4	Ø 7.1 ~ 8.0	8	41	79
DYB3 081 ~ 090 A4	Ø 8.1 ~ 9.0	10	47	89
DYB3 091 ~ 100 A4	Ø 9.1 ~ 10.0	10	47	89
DYB3 101 ~ 110 A4	Ø 10.1 ~ 11.0	12	55	102
DYB3 111 ~ 120 A4	Ø 11.1 ~ 12.0	12	55	102
DYB3 121 ~ 140 A4	Ø 12.1 ~ 14.0	14	60	107
DYB3 141 ~ 160 A4	Ø 14.1 ~ 16.0	16	65	115
DYB3 161 ~ 180 A4	Ø 16.1 ~ 18.0	18	73	123
DYB3 181 ~ 200 A4	Ø 18.1 ~ 20.0	20	79	131
DYB3 201 ~ 220 A4	Ø 20.1 ~ 22.0	22	79	131

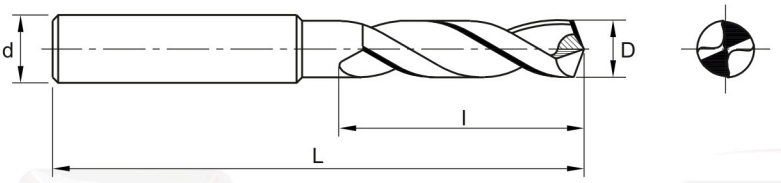
- Every intermediate decimal size drill readily available in stock
- Ordering Code for Dia 6.8 mm 3xD Drill: DYB3 068 A4

SOLID CARBIDE HIGH PERFORMANCE DRILL



140°	Helix		Coating
	 30°		Duro Coat

L x D	Shank Dia	Drill Dia	Standard
5	h6	m7	DIN 6537



DRILL



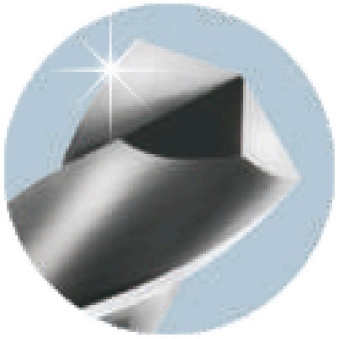
DYB5

P M K N

ITEM CODE	DRILL DIA D	SHANK DIA d	FL l	OAL L
DYB5 015 ~ 019 A4	Ø 1.5 ~ 1.9	4	13	58
DYB5 020 ~ 023 A4	Ø 2.0 ~ 2.3	4	20	64
DYB5 024 ~ 029 A4	Ø 2.4 ~ 2.9	4	25	64
DYB5 030 ~ 037 A4	Ø 3.0 ~ 3.7	6	28	66
DYB5 038 ~ 047 A4	Ø 3.8 ~ 4.7	6	36	74
DYB5 048 ~ 060 A4	Ø 4.8 ~ 6.0	6	44	82
DYB5 061 ~ 070 A4	Ø 6.1 ~ 7.0	8	53	91
DYB5 071 ~ 080 A4	Ø 7.1 ~ 8.0	8	53	91
DYB5 081 ~ 090 A4	Ø 8.1 ~ 9.0	10	61	103
DYB5 091 ~ 100 A4	Ø 9.1 ~ 10.0	10	61	103
DYB5 101 ~ 110 A4	Ø 10.1 ~ 11.0	12	71	118
DYB5 111 ~ 120 A4	Ø 11.1 ~ 12.0	12	71	118
DYB5 121 ~ 140 A4	Ø 12.1 ~ 14.0	14	77	124
DYB5 141 ~ 160 A4	Ø 14.1 ~ 16.0	16	83	133
DYB5 161 ~ 180 A4	Ø 16.1 ~ 18.0	18	93	143
DYB5 181 ~ 200 A4	Ø 18.1 ~ 20.0	20	101	153
DYB5 201 ~ 220 A4	Ø 20.1 ~ 22.0	22	101	153

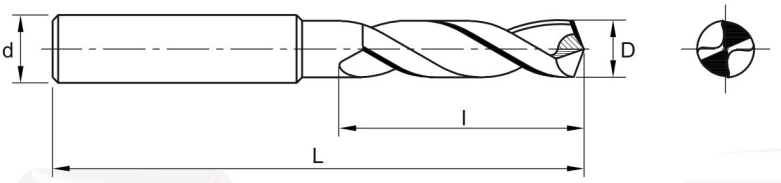
- Every intermediate decimal size drill readily available in stock
- Ordering Code for Dia 6.8 mm 5xD Drill: DYB5 068 A4

SOLID CARBIDE HIGH PERFORMANCE DRILL



140°	Helix		Coating
	 30°		Duro Coat

L x D	Shank Dia	Drill Dia	Standard
8	h6	m7	DIN 6537





DYB8

P M K N

ITEM CODE	DRILL DIA D	SHANK DIA d	FL l	OAL L
DYB8 040 ~ 060 A4	Ø 4.0 ~ 6.0	6	55	95
DYB8 061 ~ 070 A4	Ø 6.1 ~ 7.0	8	75	115
DYB8 071 ~ 080 A4	Ø 7.1 ~ 8.0	8	75	115
DYB8 081 ~ 090 A4	Ø 8.1 ~ 9.0	10	95	140
DYB8 091 ~ 100 A4	Ø 9.1 ~ 10.0	10	95	140
DYB8 101 ~ 110 A4	Ø 10.1 ~ 11.0	12	115	160
DYB8 111 ~ 120 A4	Ø 11.1 ~ 12.0	12	115	160
DYB8 121 ~ 140 A4	Ø 12.1 ~ 14.0	14	130	180
DYB8 141 ~ 160 A4	Ø 14.1 ~ 16.0	16	150	200
DYB8 161 ~ 180 A4	Ø 16.1 ~ 18.0	18	165	225
DYB8 181 ~ 200 A4	Ø 18.1 ~ 20.0	20	180	250
DYB8 201 ~ 220 A4	Ø 20.1 ~ 22.0	22	180	250

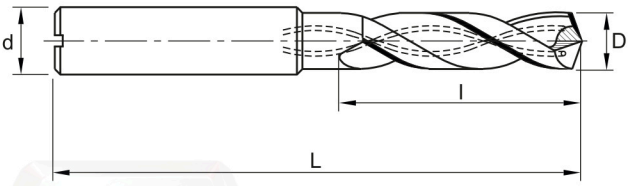
- Every intermediate decimal size drill readily available in stock
- Ordering Code for Dia 6.8 mm 8xD Drill: DYB8 068 A4



SOLID CARBIDE THROUGH COOLANT HIGH PERFORMANCE DRILL

140°	Helix		Coating
	 30°		Duro Coat

L x D	Shank Dia	Drill Dia	Standard
3	h6	m7	DIN 6537





DYB3 TC

P M K N

ITEM CODE	DRILL DIA D	SHANK DIA d	FL l	OAL L
DYB3 038 ~ 047 TC A4	Ø 3.8 ~ 4.7	6	24	66
DYB3 048 ~ 060 TC A4	Ø 4.8 ~ 6.0	6	28	66
DYB3 061 ~ 070 TC A4	Ø 6.1 ~ 7.0	8	34	79
DYB3 071 ~ 080 TC A4	Ø 7.1 ~ 8.0	8	41	79
DYB3 081 ~ 090 TC A4	Ø 8.1 ~ 9.0	10	47	89
DYB3 091 ~ 100 TC A4	Ø 9.1 ~ 10.0	10	47	89
DYB3 101 ~ 110 TC A4	Ø 10.1 ~ 11.0	12	55	102
DYB3 111 ~ 120 TC A4	Ø 11.1 ~ 12.0	12	55	102
DYB3 121 ~ 140 TC A4	Ø 12.1 ~ 14.0	14	60	107
DYB3 141 ~ 160 TC A4	Ø 14.1 ~ 16.0	16	65	115
DYB3 161 ~ 180 TC A4	Ø 16.1 ~ 18.0	18	73	123
DYB3 181 ~ 200 TC A4	Ø 18.1 ~ 20.0	20	79	131
DYB3 201 ~ 220 TC A4	Ø 20.1 ~ 22.0	22	79	131

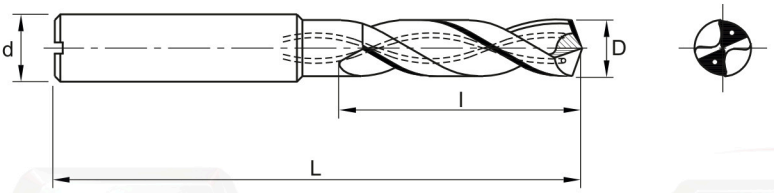
- Every intermediate decimal size drill readily available in stock
- Ordering Code for Dia 6.8 mm 3xD Through Coolant Drill: DYB3 068 TC A4

SOLID CARBIDE THROUGH COOLANT HIGH PERFORMANCE DRILL



140°	Helix		Coating
	30°		Duro Coat

L x D	Shank Dia	Drill Dia	Standard
5	h6	m7	DIN 6537



DRILL



DYB5 TC

P M K N

ITEM CODE	DRILL DIA D	SHANK DIA d	FL l	OAL L
DYB5 038 ~ 047 TC A4	Ø 3.8 ~ 4.7	6	36	74
DYB5 048 ~ 060 TC A4	Ø 4.8 ~ 6.0	6	44	82
DYB5 061 ~ 070 TC A4	Ø 6.1 ~ 7.0	8	53	91
DYB5 071 ~ 080 TC A4	Ø 7.1 ~ 8.0	8	53	91
DYB5 081 ~ 090 TC A4	Ø 8.1 ~ 9.0	10	61	103
DYB5 091 ~ 100 TC A4	Ø 9.1 ~ 10.0	10	61	103
DYB5 101 ~ 110 TC A4	Ø 10.1 ~ 11.0	12	71	118
DYB5 111 ~ 120 TC A4	Ø 11.1 ~ 12.0	12	71	118
DYB5 121 ~ 140 TC A4	Ø 12.1 ~ 14.0	14	77	124
DYB5 141 ~ 160 TC A4	Ø 14.1 ~ 16.0	16	83	133
DYB5 161 ~ 180 TC A4	Ø 16.1 ~ 18.0	18	93	143
DYB5 181 ~ 200 TC A4	Ø 18.1 ~ 20.0	20	101	153
DYB5 201 ~ 220 TC A4	Ø 20.1 ~ 22.0	22	101	153

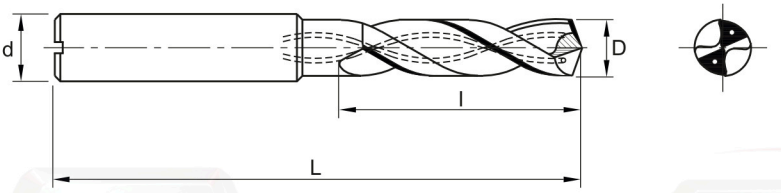
- Every intermediate decimal size drill readily available in stock
- Ordering Code for Dia 6.8 mm 5xD Through Coolant Drill: DYB5 068 TC A4



SOLID CARBIDE THROUGH COOLANT HIGH PERFORMANCE DRILL

140°	Helix		Coating
	 30°		Duro Coat

L x D	Shank Dia	Drill Dia	Standard
8	h6	m7	DIN 6537



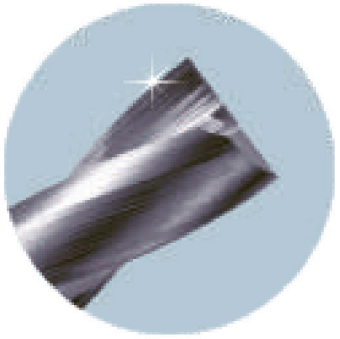


DYB8 TC

P M K N

ITEM CODE	DRILL DIA D	SHANK DIA d	FL l	OAL L
DYB8 040 ~ 060 TC A4	Ø 4.0 ~ 6.0	6	55	95
DYB8 061 ~ 070 TC A4	Ø 6.1 ~ 7.0	8	75	115
DYB8 071 ~ 080 TC A4	Ø 7.1 ~ 8.0	8	75	115
DYB8 081 ~ 090 TC A4	Ø 8.1 ~ 9.0	10	95	140
DYB8 091 ~ 100 TC A4	Ø 9.1 ~ 10.0	10	95	140
DYB8 101 ~ 110 TC A4	Ø 10.1 ~ 11.0	12	115	160
DYB8 111 ~ 120 TC A4	Ø 11.1 ~ 12.0	12	115	160
DYB8 121 ~ 140 TC A4	Ø 12.1 ~ 14.0	14	130	180
DYB8 141 ~ 160 TC A4	Ø 14.1 ~ 16.0	16	150	200
DYB8 161 ~ 180 TC A4	Ø 16.1 ~ 18.0	18	165	225
DYB8 181 ~ 200 TC A4	Ø 18.1 ~ 20.0	20	180	250
DYB8 201 ~ 220 TC A4	Ø 20.1 ~ 22.0	22	180	250

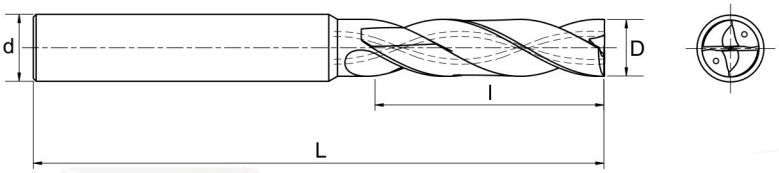
- Every intermediate decimal size drill readily available in stock
- Ordering Code for Dia 6.8 mm 8xD Through Coolant Drill: DYB8 068 TC A4



SOLID CARBIDE FLAT BOTTOM DRILL AX SERIES

Square End	Helix	Coating
	 30°	Duro Coat

L x D	Shank Dia	Drill Dia
3,5 & 8	h6	m7





P M K N

LxD 3 TC

ITEM CODE	DRILL DIA D	SHANK DIA d	FL l	OAL L
DZB3 040 TC AX A4	4	6	24	66
DZB3 050 TC AX A4	5	6	28	66
DZB3 060 TC AX A4	6	6	28	66
DZB3 070 TC AX A4	7	8	34	79
DZB3 080 TC AX A4	8	8	41	79
DZB3 090 TC AX A4	9	10	47	89
DZB3 100 TC AX A4	10	10	47	89
DZB3 110 TC AX A4	11	12	55	102
DZB3 120 TC AX A4	12	12	55	102
DZB3 130 TC AX A4	13	14	60	107
DZB3 140 TC AX A4	14	14	60	107
DZB3 160 TC AX A4	16	16	65	115
DZB3 180 TC AX A4	18	18	73	123
DZB3 200 TC AX A4	20	20	79	131

LxD 5 TC

ITEM CODE	DRILL DIA D	SHANK DIA d	FL l	OAL L
DZB5 040 TC AX A4	4	6	36	74
DZB5 050 TC AX A4	5	6	44	82
DZB5 060 TC AX A4	6	6	44	82
DZB5 070 TC AX A4	7	8	53	91
DZB5 080 TC AX A4	8	8	53	91
DZB5 090 TC AX A4	9	10	61	103
DZB5 100 TC AX A4	10	10	61	103
DZB5 110 TC AX A4	11	12	71	118
DZB5 120 TC AX A4	12	12	71	118
DZB5 130 TC AX A4	13	14	77	124
DZB5 140 TC AX A4	14	14	77	124
DZB5 160 TC AX A4	16	16	83	133
DZB5 180 TC AX A4	18	18	93	143
DZB5 200 TC AX A4	20	20	101	153

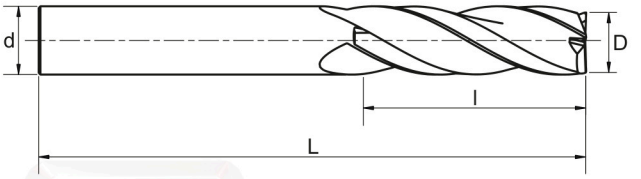
- Non Through Coolant Flat Drill available on request.

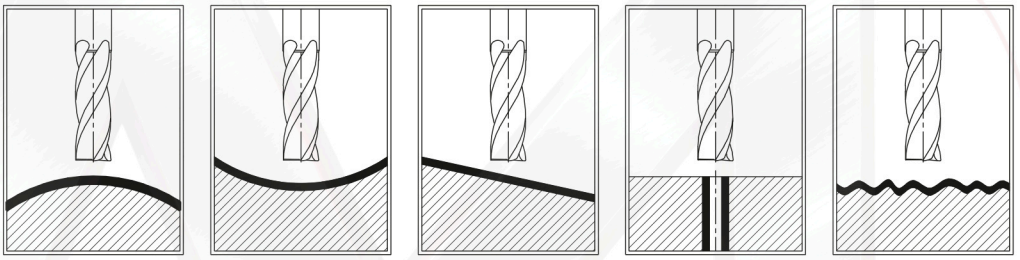
SOLID CARBIDE HOLE MILL



Square End	Series	Helix	Flutes
	A4	 30°	Z = 3

Coating	Tool Length	Shank Dia	Drill Dia
Duro Coat	LxD3	h6	m7







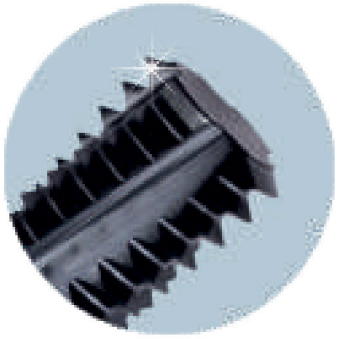
HM3

P M K N

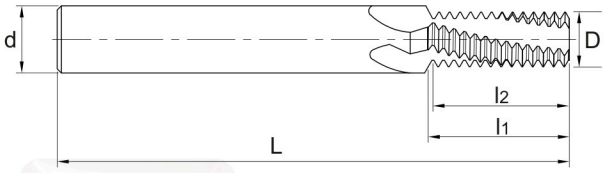
ITEM CODE	DRILL DIA D	SHANK DIA d	FL l	OAL L
HM3 030 A4	3	6	14	62
HM3 040 A4	4	6	17	62
HM3 050 A4	5	6	20	62
HM3 060 A4	6	6	20	62
HM3 070 A4	7	8	24	75
HM3 080 A4	8	8	29	75
HM3 085 A4	8.5	10	35	80
HM3 100 A4	10	10	35	80
HM3 105 A4	10.5	12	40	102
HM3 120 A4	12	12	40	102
HM3 125 A4	12.5	14	43	107
HM3 140 A4	14	14	43	107
HM3 145 A4	14.5	16	45	110
HM3 160 A4	16	16	45	110

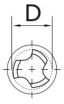
- Intermediate size Hole Mill available on request
- For LxD...5 use code HM5 in place of HM3

HELICAL THREAD MILL
STUB SERIES

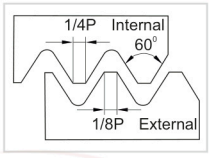


Flutes	Flutes	Helix
Z = 3	Z = 4	14°
Coating	**Shank Dia**	**Tool Length**
Duro Coat	h6	S





Internal



Defined by: R262 (DIN 13)
Tolerance class: 6H



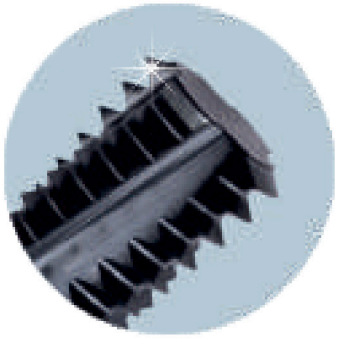
Regular

P M K N

ISO METRIC

ITEM CODE	Thread		Pitch	Dimensions (mm)					No. of Flutes	Drill Dia
Internal	M Coarse	M Fine	mm	d	D	l_2	l_1	L	z	mm
TMI/E.03.050.3HI.040024.S-ISO A4	M3 x 0.5	M3.5- M16 x 0.5	0.5	4	2.4	4.5	4.7	45	3	2.5
TMI/E.04.070.3HI.040314.S-ISO A4	M4 x 0.7		0.7	4	3.14	6.3	6.6	45	3	3.3
TMI/E.05.080.3HI.040039.S-ISO A4	M5 x 0.8		0.8	4	3.9	7.2	7.6	45	3	4.2
TMI/E.06.100.3HI.060048.S-ISO A4	M6 x 1.0	M8- M40 x 1.0	1.0	6	4.8	9.0	9.5	57	3	5.0
TMI/E.08.125.3HI.080065.S-ISO A4	M8 x 1.25		1.25	8	6.5	12.5	13.1	61	3	6.8
TMI/E.10.150.3HI.100082.S-ISO A4	M10 x 1.5	M12- M48 x 1.5	1.5	10	8.2	15.0	15.7	73	3	8.5
TMI/E.12.175.4HI.100099.S-ISO A4	M12 x 1.75		1.75	10	9.9	17.5	18.4	73	4	10.2
TMI/E.14.200.4HI.120116.S-ISO A4	M14 x 2.0	M17- M80 x 2.0	2.0	12	11.6	20.0	21.0	73	4	12.0
TMI/E.16.200.4HI.140136.S-ISO A4	M16 x 2.0	M17- M80 x 2.0	2.0	14	13.6	24.0	25.0	92	4	14.0

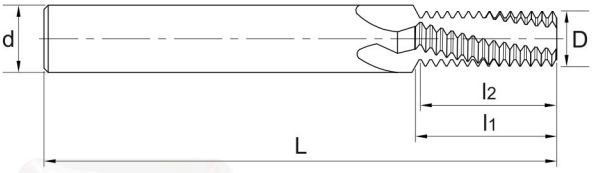
- For Through Coolant Threadmill, Item Code will be TMI
- For Non-Through Coolant Threadmill, Item Code will be TME

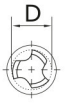


HELICAL THREAD MILL
REGULAR SERIES

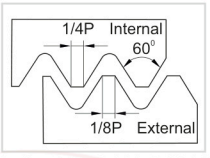
Flutes	Flutes	Helix
Z = 3	Z = 4	14°

Coating	Shank Dia	Tool Length
Duro Coat	h6	R





Internal



Defined by: R262 (DIN 13)
Tolerance class: 6H

Regular

P M K N

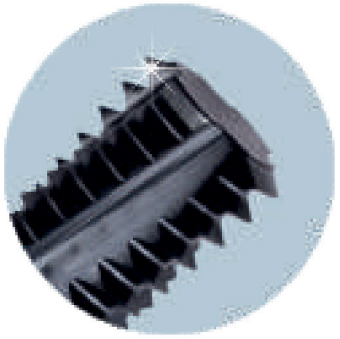
ISO METRIC

ITEM CODE	Thread		Pitch	Dimensions (mm)					No. of Flutes	Drill Dia
Internal	M Coarse	M Fine	mm	d	D	l_2	l_1	L	z	mm
TMI/E.03.050.3HI.040024.R-ISO A4	M3x0.5	M3.5-M16x0.5	0.5	4	2.4	6.0	6.2	45	3	2.5
TMI/E.04.050.3HI.040032.R-ISO A4		M4x0.5	0.5	4	3.2	8.0	8.2	45	3	3.5
TMI/E.05.050.3HI.060042.R-ISO A4		M5x0.5	0.5	6	4.2	10.0	10.2	57	3	4.5
TMI/E.04.070.3HI.040031.R-ISO A4	M4x0.7		0.7	4	3.15	8.4	8.7	45	3	3.3
TMI/E.06.075.3HI.060050.R-ISO A4		M6x0.75	0.75	6	5.0	12.0	12.4	57	3	5.3
TMI/E.05.080.3HI.040039.R-ISO A4	M5x0.8		0.8	4	3.9	10.4	10.8	45	3	4.2
TMI/E.06.100.3HI.060048.R-ISO A4	M6x1.0	M8-M40x1.0	1.0	6	4.8	12.0	12.5	57	3	5.0
TMI/E.08.100.3HI.080067.R-ISO A4		M8x1.0	1.0	8	6.7	16.0	16.5	61	3	7.0
TMI/E.10.100.3HI.100087.R-ISO A4		M10x1.0	1.0	10	8.7	20.0	20.5	73	3	9.0
TMI/E.12.100.4HI.120107.R-ISO A4		M12x1.0	1.0	12	10.7	24.0	24.5	73	4	11.0
TMI/E.08.125.3HI.080065.R-ISO A4	M8x1.25		1.25	8	6.5	16.2	16.9	61	3	6.8
TMI/E.10.125.3HI.100085.R-ISO A4		M10x1.25	1.25	10	8.5	20.0	20.6	73	3	8.8
TMI/E.10.150.3HI.100082.R-ISO A4	M10x1.5	M12-M48x1.5	1.5	10	8.2	19.5	20.2	73	3	8.5
TMI/E.12.150.4HI.100099.R-ISO A4		M12x1.5	1.5	10	9.9	24.0	24.7	73	4	10.5
TMI/E.14.150.4HI.120119.R-ISO A4		M14x1.5	1.5	12	11.9	28.5	29.2	80	4	12.5
TMI/E.16.150.4HI.140139.R-ISO A4		M16x1.5	1.5	14	13.9	31.5	32.2	92	4	14.5
TMI/E.12.175.4HI.100099.R-ISO A4	M12x1.75		1.75	10	9.9	24.5	25.4	73	4	10.2
TMI/E.14.200.4HI.120116.R-ISO A4	M14x2.0	M17-M80x2.0	2.0	12	11.6	28.0	29.0	80	4	12.0
TMI/E.16.200.4HI.140136.R-ISO A4	M16x2.0	M17-M80x2.0	2.0	14	13.6	32.0	33.0	92	4	14.0
TMI/E.18.250.4HI.160148.R-ISO A4	M18x2.5		2.5	16	14.8	35.0	36.0	92	4	15.5
TMI/E.20.250.4HI.180171.R-ISO A4	M20x2.5		2.5	18	17.1	40.0	41.2	100	4	17.5
TMI/E.24.300.4HI.200199.R-ISO A4	M24x3.0		3.0	20	19.9	48.0	49.5	100	4	21.0

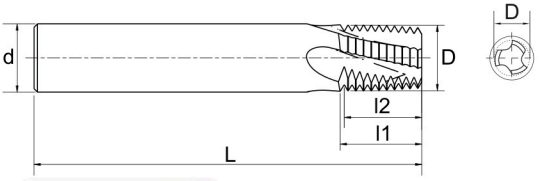


- For Non-Through Coolant Threadmill, Item Code will be TME
- For Through Coolant Threadmill, Item Code will be TMI

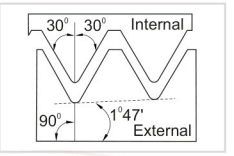
HELICAL THREAD MILL
NPT SERIES



Flutes	Flutes	Helix	
Z = 3	Z = 4	14°	
Coating	**Shank Dia**		
Duro Coat	h6		



External - Internal



Defined by: USAS B2.1 : 1968
Tolerance class: Standard NPT



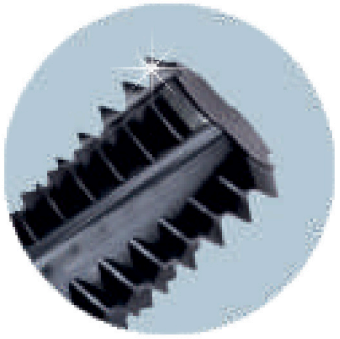
Regular

P M K N

NPT

ITEM CODE	Thread	Pitch	Dimensions (mm)					No. of Flutes	Drill Dia
Internal / External		TPI	d	D	l_2	l_1	L	z	mm
TMI/E.27.3HI.060059-NPT A4	1/16"x27	27	6	5.9	9.4	9.9	57	3	6.3
TMI/E.27.3HI.087065-NPT A4	1/8"x27	27	8	7.65	9.4	9.9	61	3	8.5
TMI/E.18.3HI.100099-NPT A4	1/4 "x18	18	10	9.9	14.1	14.8	73	3	11.1
TMI/E.18.4HI.1201115-NPT A4	3/8"x18	18	12	11.15	14.1	14.8	73	4	14.5
TMI/E.14.4HI.1601425-NPT A4	1/2", 3/4'x14	14	16	14.25	18.1	19.0	92	4	17.7
TMI/E.115.4HI.200196-NPT A4	1", 1 1/4", 1 1/2", 2"x11.5	11.5	20	19.6	22.1	23.2	100	4	29
TMI/E.08.4HI.200196-NPT A4	2 1/2", 3"x8	8	20	19.6	31.7	33.3	100	4	66.5

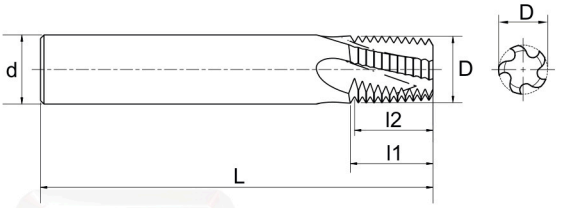
- For TMI/E.14.4HI.161425-NPT A4 , Drill Dia = 17.7, 23 mm
- For TMI/E.115.4HI.20196-NPT A4 , Drill Dia = 29, 37.7, 44, 56 mm
- For TMI/E.08.4HI.20196-NPT A4 , Drill Dia = 66.5, 82.1 mm
- For Through Coolant Threadmill, Item Code will be TMI
- For Non-Through Coolant Threadmill, Item Code will be TME



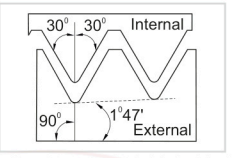
HELICAL THREAD MILL
NPTF SERIES

Flutes	Flutes	Helix
Z = 3	Z = 4	14°

Coating	Shank Dia
Duro Coat	h6



External - Internal



Defined by: ANSI 1.20.3-1976
Tolerance class: Standard NPTF

THREAD MILLS



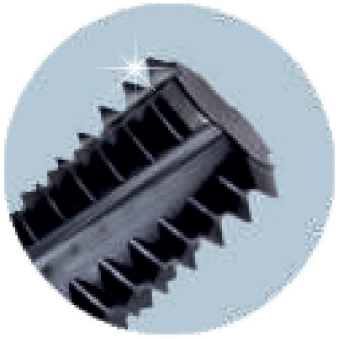
P M K N

NPTF

ITEM CODE	Thread	Pitch	Dimensions (mm)					No. of Flutes	Drill Dia
Internal / External		TPI	d	D	l_2	l_1	L	z	mm
TMI/E.27.3HI.060059-NPTF A4	1/16"x27	27	6	5.9	9.4	9.9	57	3	6.3
TMI/E.27.3HI.087065-NPTF A4	1/8"x27	27	8	7.65	9.4	9.9	61	3	8.5
TMI/E.18.3HI.100099-NPTF A4	1/4"x18	18	10	9.9	14.1	14.8	73	3	11.1
TMI/E.18.4HI.1201115-NPTF A4	3/8"x18	18	12	11.15	14.1	14.8	73	4	14.5
TMI/E.14.4HI.1601425-NPTF A4	1/2", 3/4"x14	14	16	14.25	18.1	19.0	92	4	17.7
TMI/E.115.4HI.200196-NPTF A4	1", 1 1/4", 1 1/2", 2"x11.5	11.5	20	19.6	22.1	23.2	100	4	29
TMI/E.08.4HI.200196-NPTF A4	2 1/2", 3"x8	8	20	19.6	31.7	33.3	100	4	66.5

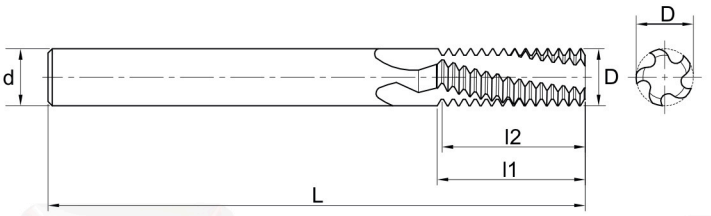
- UN, BSP, Whitworth Standards available on request
- For Through Coolant Threadmill, Item Code will be TMI
- For Non-Through Coolant Threadmill, Item Code will be TME
- For TMI/E.14.4HI.161425-NPTF A4 , Drill Dia = 17.7, 23 mm
- For TMI/E.115.4HI.20196-NPTF A4 , Drill Dia = 29, 37.7, 44, 56 mm
- For TMI/E.08.4HI.20196-NPTF A4 , Drill Dia = 66.5, 82.1 mm

HELICAL THREAD MILL
BSP SERIES

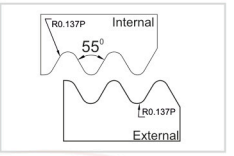


Flutes	Flutes	Flutes
Z = 3	Z = 4	Z = 5

Coating	Shank Dia	Helix
Duro Coat	h6	14°



External - Internal





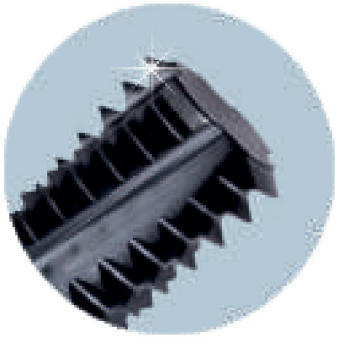
Regular

P M K N

BSP

ITEM CODE	Thread	Pitch	Dimensions (mm)					No. of Flutes	Drill Dia
Internal / External		TPI	d	D	l_2	l_1	L	z	mm
TMI/E.28.3HI.060058-BSP A4	1/16"x28, 1/8"x28	28	6	5.8	16.3	16.8	57	3	6.7
TMI/E.28.3HI.080077-BSP A4	1/8"x28	28	8	7.7	20	20.5	63	3	8.7
TMI/E.19.4HI.100099-BSP A4	1/4"x19, 3/8"x19,	19	10	9.9	26.7	27.2	73	4	11.8
TMI/E.19.4HI.160134-BSP A4	3/8"x19,	19	16	13.4	33.4	33.9	92	4	15.2
TMI/E.14.5HI.160157-BSP A4	1/2", 3/4"x14	14	16	15.7	43.5	44.0	92	5	19
TMI/E.11.5HI.200199-BSP A4	1", 1 1/2", 2, 2 1/2" x11	11	20	19.9	41.6	42.1	100	5	30.7

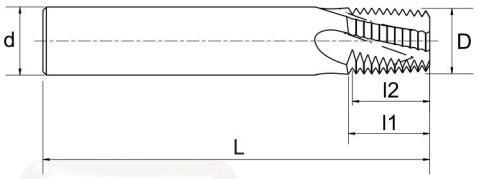
- UN, BSP, Whitworth Standards available on request
- For Through Coolant Threadmill, Item Code will be TMI
- For Non-Through Coolant Threadmill, Item Code will be TME

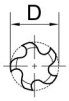


HELICAL THREAD MILL
BSPT SERIES

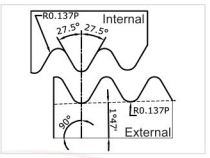
Series	Flutes	Flutes	Flutes
A4	Z = 3	Z = 4	Z = 5

Coating	Shank Dia	Helix
Duro Coat	h6	14°





External - Internal



THREAD MILLS



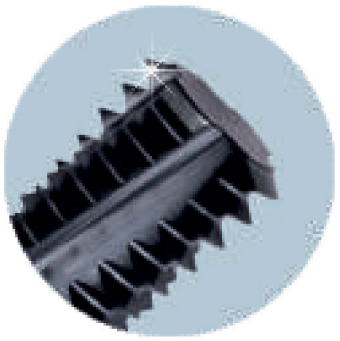
Regular

P M K N

BSPT

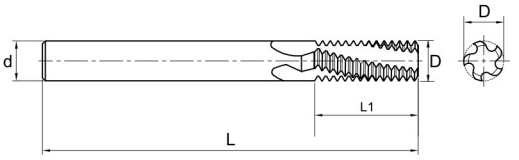
ITEM CODE	Thread	Pitch	Dimensions (mm)					No. of Flutes	Drill Dia
Internal / External		TPI	d	D	L_2	L_1	L	z	mm
TMI/E.28.3HI.060058-BSPT A4	1/16"x28	28	6	5.8	16.3	16.8	57	3	6.7
TMI/E.28.3HI.080077-BSPT A4	1/8"x28	28	8	7.7	20	20.5	63	3	8.7
TMI/E.19.4HI.100099-BSPT A4	1/4"x19	19	10	9.9	26.7	27.2	73	4	11.5
TMI/E.19.4HI.160134-BSPT A4	3/8"x19	19	16	13.4	33.4	33.9	92	4	15.2
TMI/E.14.5HI.160157-BSPT A4	1/2", 3/4"x14	14	16	15.7	43.5	44.0	92	5	19
TMI/E.11.5HI.200199-BSPT A4	1", 1 1/2", 2, 2 1/2", x11	11	20	19.9	41.6	42.1	100	5	30.7

- UN, BSP, Whitworth Standards available on request
- For Through Coolant Threadmill, Item Code will be TMI
- For Non-Through Coolant Threadmill, Item Code will be TME

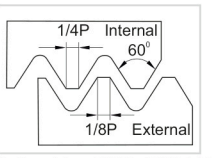


THREAD MILL
AMERICAN UN-R SERIES

Flutes	Flutes	Flutes	Coating	Shank Dia	Helix
Z = 3	Z = 4	Z = 5	Duro Coat	h6	14°



Internal



Defined by: R262 (DIN 13)
Tolerance class: 6H

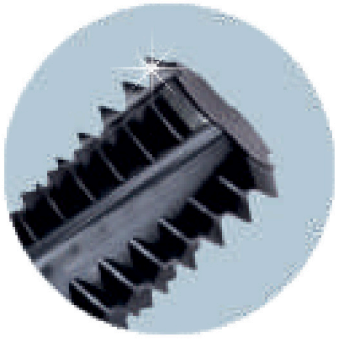
Regular

P M K N



ITEM CODE Internal / External	UNC - Thread	UNF - Thread	Pitch	Dimensions (mm)					Bore Dia
			TPI	d	D	L	L_1	z	mm
TMI/E.32.3HI.040038-R-UN A4		No.10-32	32	4	3.80	45	9.9	3	4.0
TMI/E.32.3HI.060044-R-UN A4		No.12-3/8"x32	32	6	4.40	57	11.5	3	4.7
TMI/E.28.3HI.060043-R-UN A4		No.12, 1/4"x28	28	6	4.30	57	11.3	3	4.6
TMI/E.28.3HI.0600515-R-UN A4		1/4"x28	28	6	5.15	57	13.1	3	5.5
TMI/E.28.3HI.100099-R-UN A4			28	10	9.90	73	22.2	3	10.2
TMI/E.24.3HI.0400358-R-UN A4	No.10-24	5/16", 3/8"x24	24	4	3.58	45	10.0	3	3.8
TMI/E.24.3HI.0600415-R-UN A4	No.12-24	5/16", 3/8"x24	24	6	4.15	57	11.1	3	4.5
TMI/E.24.3HI.0800668-R-UN A4		5/16", 3/8"x24	24	8	6.68	61	16.4	3	6.8
TMI/E.24.3HI.100082-R-UN A4		3/8"x24	24	10	8.20	73	19.6	3	8.5
TMI/E.24.4HI.140129-R-UN A4			24	14	12.9	92	29.1	4	13.2
TMI/E.20.3HI.0600488-R-UN A4	1/4"x20	7/16", 1/2"x20	20	6	4.88	57	13.3	3	5.2
TMI/E.20.3HI.100096-R-UN A4		7/16", 1/2"x20	20	10	9.60	73	22.2	3	9.8
TMI/E.20.4HI.120111-R-UN A4		1/2"x20	20	12	11.1	80	26.0	4	11.5
TMI/E.20.4HI.180174-R-UN A4			20	18	17.4	100	38.7	4	17.8
TMI/E.18.3HI.0800615-R-UN A4	5/16"x18	9/16", 5/8"x18	18	8	6.15	61	16.2	3	6.5
TMI/E.18.4HI.140125-R-UN A4		9/16", 5/8"x18	18	14	12.5	92	28.9	4	12.8
TMI/E.18.4HI.160141-R-UN A4		5/8"x18	18	16	14.1	92	31.7	4	14.5
TMI/E.16.3HI.0800765-R-UN A4	3/8"x16	3/4"x16	16	8	7.65	61	19.8	3	8.0
TMI/E.16.4HI.180170-R-UN A4		3/4"x16	16	18	17.0	100	38.8	4	17.5
TMI/E.14.3HI.100090-R-UN A4	7/16"x14	7/8"x14	14	10	9.00	73	22.7	3	9.3
TMI/E.14.4HI.200199-R-UN A4		7/8"x14	14	20	19.9	100	44.4	4	20.5
TMI/E.13HI.1201035-R-UN A4	1/2"x13		13	12	10.35	80	26.4	4	10.8
TMI/E.12.4HI.120118-R-UN A4	9/16"x12	1"-1 1/2"x12	12	12	11.8	80	28.6	4	12.3
TMI/E.12.4HI.200199-R-UN A4		1"-1 1/2"x12	12	20	19.9	100	51.9	4	23.5
TMI/E.11.4HI.140131-R-UN A4	5/8"x11		11	14	13.1	92	33.5	4	13.5
TMI/E.10.4HI.160159-R-UN A4	3/4"x10		10	16	15.9	92	39.4	4	16.5
TMI/E.09.4HI.200190-R-UN A4	7/8"x9		9	20	19.0	100	46.6	4	19.5
TMI/E.08.4HI.200199-R-UN A4	1"x8		8	20	19.9	100	52.4	4	22.0

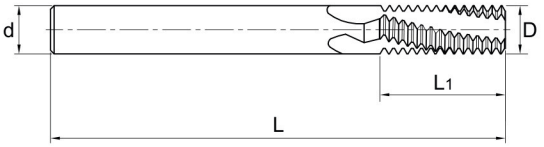
- For Through Coolant Threadmill, Item Code will be TMI
- For Non-Through Coolant Threadmill, Item Code will be TME

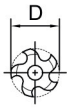


THREAD MILL
WHITWORTH (BSW, BSF) SERIES

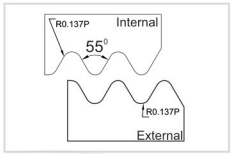
Flutes	Flutes	Flutes
Z = 3	Z = 4	Z = 5

Coating	Shank Dia	Helix
Duro Coat	h6	14°





External - Internal



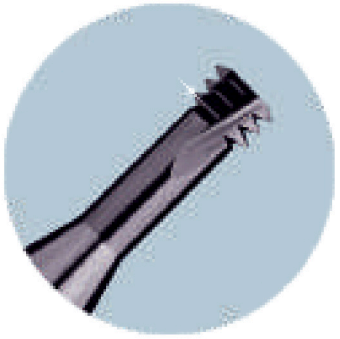
Regular

P M K N



ITEM CODE Internal / External	BSW - Thread	BSF - Thread	Pitch TPI	Dimensions (mm) d	D	L	L1	z	Bore Dia mm
TMI/E.26.3HI.060050-R-BS A4		1/4”x26	26	6	5	57	13.2	3	5.3
TMI/E.22.3HI.0800635-R-BS A4		5/16”x22	22	8	6.35	61	16.7	3	6.7
TMI/E.20.3HI.0600445-R-BS A4	1/4”x20	3/8”x20	20	6	4.45	57	13.3	3	5
TMI/E.20.3HI.0800765-R-BS A4		3/8”x20	20	8	7.65	61	19.7	3	8.2
TMI/E.18.3HI.0600585-R-BS A4	5/16”x18	7/16”x18	18	6	5.85	57	16.2	3	6.5
TMI/E.18.3HI.100092-R-BS A4		7/16”x18	18	10	9.2	73	23.3	3	9.7
TMI/E.16.3HI.080072-R-BS A4	3/8”x16	1/2”, 9/16”x16	16	8	7.2	61	19.8	3	7.9
TMI/E.16.4HI.120105-R-BS A4		1/2”, 9/16”x16	16	12	10.5	80	25.2	4	11.1
TMI/E.16.4HI.1401215-R-BS A4		9/16”x16	16	14	12.15	92	29.4	4	12.6
TMI/E.14.3HI.100085-R-BS A4	7/16”x14	5/8”, 11/16”x14	14	10	8.5	73	22.7	3	9.2
TMI/E.14.4HI.140134-R-BS A4		5/8”, 11/16”x14	14	14	13.4	92	31.7	4	14
TMI/E.14.4HI.160150-R-BS A4		11/16”x14	14	16	15.0	92	35.4	4	15.6
TMI/E.12.3HI.1000965-R-BS A4	1/2”x12	3/4”x12	12	10	9.65	73	26.5	3	10.5
TMI/E.12.4HI.1201125-R-BS A4	9/16”x12	3/4”x12	12	12	11.25	80	28.6	4	12.1
TMI/E.12.4HI.180162-R-BS A4		3/4”x12	12	18	16.2	100	39.2	4	16.8
TMI/E.11.4HI.140126-R-BS A4	5/8”x11	7/8”x11	11	14	12.6	92	33.5	4	13.4
TMI/E.11.4HI.160142-R-BS A4	11/16”x11		11	16	14.2	92	35.8	4	15

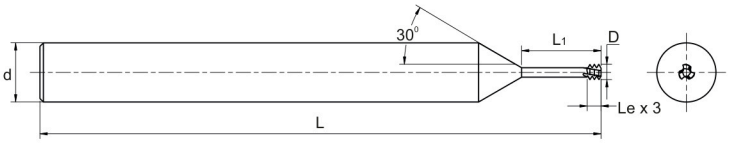
- For Through Coolant Threadmill, Item Code will be TMI
- For Non-Through Coolant Threadmill, Item Code will be TME

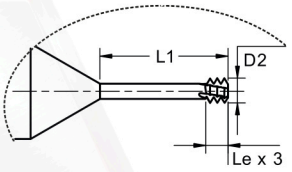


THREAD MILL
ISO METRIC NANO-MILL SERIES

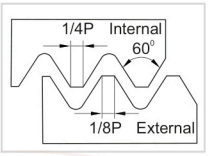
Series	Flutes	Flutes	Flutes
A4	Z = 3	Z = 4	Z = 5

Coating	Shank Dia	Helix
Duro Coat	h6	14°





Internal



Defined by: R262 (DIN 13)
Tolerance class: 6H

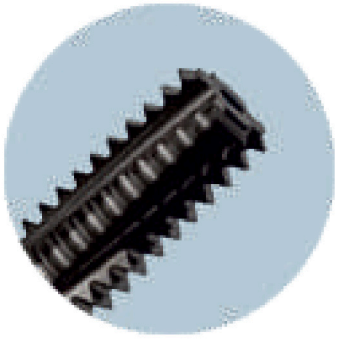


Regular

P M K N

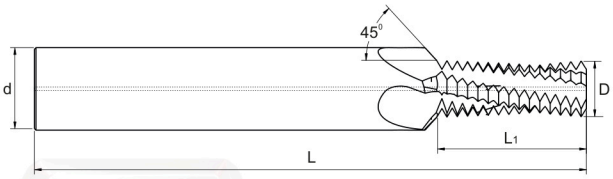
ITEM CODE Internal / External	M Coarse	M Fine	Pitch	Dimensions (mm)					Bore Dia
			mm	d	D	L	L1	z	mm
TME.02.040.3HI.0600155.NM-ISO A4	M2 x 0.4		0.4	6	1.55	57	4.2	3	1.6
TME.022.045.3HI.0600165.NM-ISO A4	M2.2 x 0.45		0.45	6	1.65	57	4.6	3	1.75
TME.025.045.3HI.0600195.NM-ISO A4	M2.5 x 0.45		0.45	6	1.95	57	5.2	3	2.05
TME.03.050.3HI.060024.NM-ISO A4	M3 x 0.5	M3.5-M16 x 0.5	0.5	6	2.4	57	6.2	3	2.5
TME.035.060.3HI.0600275.NM-ISO A4	M3.5 x 0.6		0.6	6	2.75	57	7.3	3	2.9
TME.04.070.3HI.0600315.NM-ISO A4	M4 x 0.7		0.7	6	3.15	57	8.3	3	3.3
TME.05.080.3HI.0600405.NM-ISO A4	M5 x 0.8		0.8	6	4.05	57	10.4	3	4.2
TME.06.100.3HI.0600480.NM-ISO A4	M6 x 1.0	M8-M40 x 1.0	1.0	6	4.8	57	12.5	3	5
TME.08.125.3HI.080065.NM-ISO A4	M8 x 1.25		1.25	8	6.5	63	16.6	3	6.8
TME.10.150.3HI.100082.NM-ISO A4	M10 x 1.5	M12-M48 x 1.5	1.5	10	8.2	73	20.8	3	8.5
TME.12.175.3HI.100099.NM-ISO A4	M12 x 1.75		1.75	10	9.9	73	25	3	10.3
TME.16.200.3HI.1200119.NM-ISO A4	M16 x 2.0		2.0	12	11.9	83	33	3	14
TME.20.250.3HI.1600159.NM-ISO A4	M20 x 2.5		2.5	16	15.9	92	41.3	3	17.5

THREAD MILL ISO METRIC SERIES WITH CHAMFER

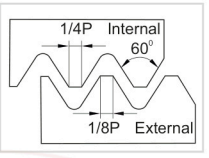


Series	Flutes	Flutes	Flutes
A4	Z = 3	Z = 4	Z = 5

Coating	Shank Dia	Helix
Duro Coat	h6	14°



Internal



Defined by: R262 (DIN 13)
Tolerance class: 6H



Regular

P M K N

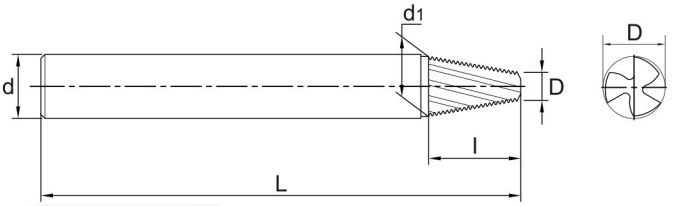
ITEM CODE Internal / External	M Coarse	M Fine	Pitch mm	Dimensions (mm) d	D	L	L1	z	Bore Dia mm
TMI/E.06.100.3HI.060048.RC-ISO A4	M6 x 1.0	M8-M40 x 1.0	1.0	8	4.8	60	13	3	5.0
TMI/E.08.125.3HI.080065.RC-ISO A4	M8 x 1.25		1.25	10	6.5	65	17	3	6.8
TMI/E.10.150.3HI.100082.RC-ISO A4	M10 x 1.5	M12 x M48 x 1.5	1.5	12	8.2	80	21	3	8.5
TMI/E.12.175.3HI.100099.RC-ISO A4	M12 x 1.75		1.75	14	9.9	80	26	4	10.2

TAPER THREAD MILL
SURGICAL APPLICATION

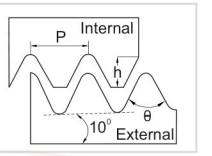


Series	Flutes
A4	Z = 3

Coating	Shank Dia	Helix
Duro Coat	h6	14°



External - Internal





Regular

P M K N

ISO METRIC

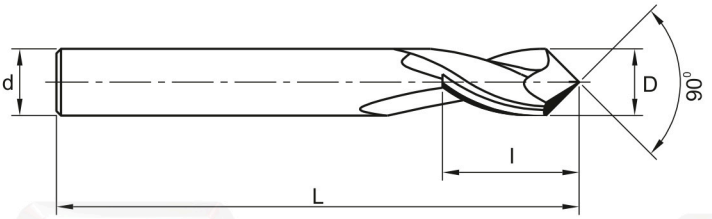
ITEM CODE	Taper	Pitch	Thread Angle	Dimensions (mm)						No. of Flutes
		P mm		h	d	d1	D	L	l	z
TME.04.3HI.060032.T60 A4	20°	0.4	60°	0.20	6	5.9	3.2	58	8	3
TME.05.3HI.060029.T60 A4	20°	0.5	60°	0.25	6	5.9	2.9	58	9	3
TME.03.3HI.030015.T55 A4	20°	0.3	55°	0.18	3	2.9	1.5	39	4	3
TME.03.3HI.060015.T60 A4	20°	0.3	60°	0.18	6	5.9	2.0	39	4	3
TME.04.3HI.060025.T55 A4	20°	0.4	55°	0.30	6	5.9	2.5	58	10	3
TME.05.3HI.060029.T55 A4	20°	0.5	55°	0.35	6	5.9	2.9	58	9	3
TME.06.3HI.060038.T55 A4	20°	0.6	55°	0.45	6	5.9	3.8	58	6.5	3

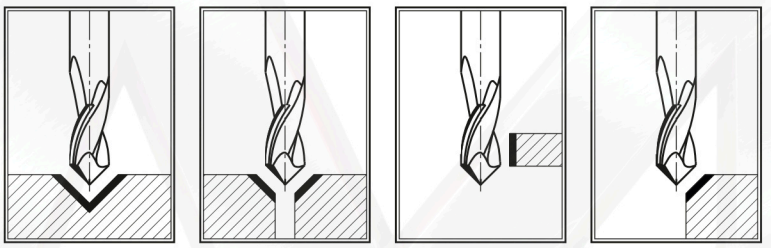


SOLID CARBIDE MULTI FUNCTIONAL DRILL MILL

90°	Helix	Flutes
	30°	Z = 2

Coating	Tool Length	Shank Dia	Mill Dia
Duro Coat	R	h6	e8







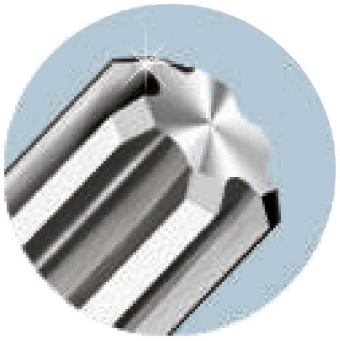
DMZB

P M K N

ITEM CODE	MILL DIA D	SHANK DIA d	CEL l	OAL L
DMZB 040 A4	4	4	8	50
DMZB 050 A4	5	5	10	50
DMZB 060 A4	6	6	12	60
DMZB 080 A4	8	8	16	65
DMZB 100 A4	10	10	18	70
DMZB 120 A4	12	12	20	70
DMZB 140 A4	14	14	24	80
DMZB 160 A4	16	16	26	80
DMZB 180 A4	18	18	28	80
DMZB 200 A4	20	20	30	100

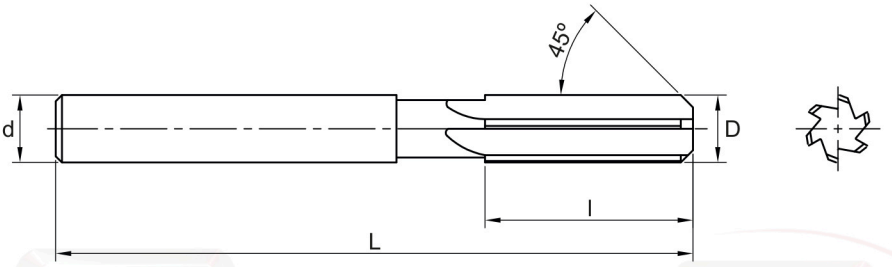
- Intermediate sizes, Weldon Flat available on request
- Other than 90° available on request

SOLID CARBIDE REAMERS



Series	Helix	Flutes	Flutes
A4	7°	Z = 4	Z = 6

Shank Dia	Reamer Dia
h6	H7





RC

P M K N

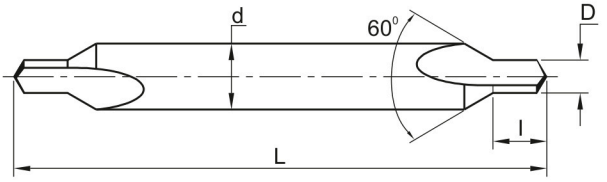
ITEM CODE	TOOL DIA D	SHANK DIA d	CEL l	OAL L	No. of Flute Z
RC4 030.040 A4	3	4	15	60	4
RC4 040.040 A4	4	4	18	60	4
RC4 050.060 A4	5	6	20	60	4
RC6 060.060 A4	6	6	25	75	6
RC6 070.080 A4	7	8	30	75	6
RC6 080.080 A4	8	8	30	75	6
RC6 090.100 A4	9	10	30	80	6
RC6 100.100 A4	10	10	32	80	6
RC6 110.120 A4	11	12	40	100	6
RC6 120.120 A4	12	12	40	100	6
RC6 140.140 A4	14	14	40	100	6
RC6 160.160 A4	16	16	40	100	6
RC6 180.180 A4	18	18	40	100	6
RC8 200.200 A4	20	20	40	100	8

- Intermediate sizes, RH / LH available on request
- Coated available on request

SOLID CARBIDE CENTER DRILL



118°	Helix	Flutes		
	 5°	Z = 2		
Shank Dia	**Drill Dia**	**Standard**	**Standard**	
h6	m7	DIN 333 A	BS 328	



P M K N

METRIC — DIN 333 A Standard

ITEM CODE	PILOT DIA D	BODY DIA d	CEL l	OAL L
CDXA 160 040 A4	1.60	4.00	2.4	35
CDXA 200 050 A4	2.00	5.00	2.9	40
CDXA 250 063 A4	2.50	6.30	3.6	45
CDXA 315 080 A4	3.15	8.00	4.4	50
CDXA 400 100 A4	4.00	10.0	5.6	56
CDXA 500 125 A4	5.00	12.5	6.9	63
CDXA 630 160 A4	6.30	16.0	8.6	71



INCH — BS 328 Standard

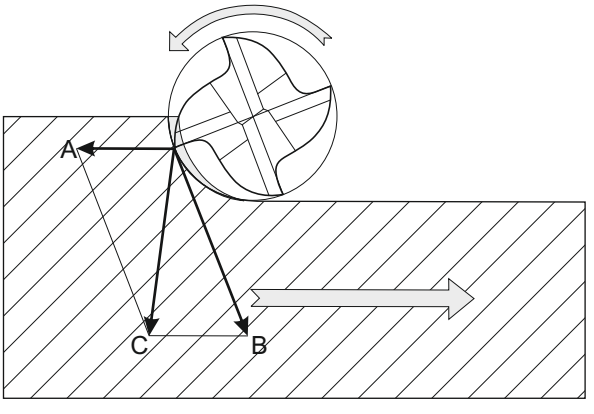
ITEM CODE	PILOT DIA D	BODY DIA d	CEL l	OAL L
CBXA 062 187 A4	1/16"	3/16"	3/32"	1-3/4"
CBXA 093 250 A4	3/32"	1/4"	5/32"	2"
CBXA 125 312 A4	1/8"	5/16"	3/16"	2-1/4"
CBXA 187 437 A4	3/16"	7/16"	9/32"	2-1/2"
CBXA 250 625 A4	1/4"	5/8"	3/8"	3"

- Coated available on request

TECHNICAL DATA

CLIMB MILLING

Cutter rotation and work feed have the same direction. The cutter machines the material at the maximum chip thickness and leaves it at the minimum.

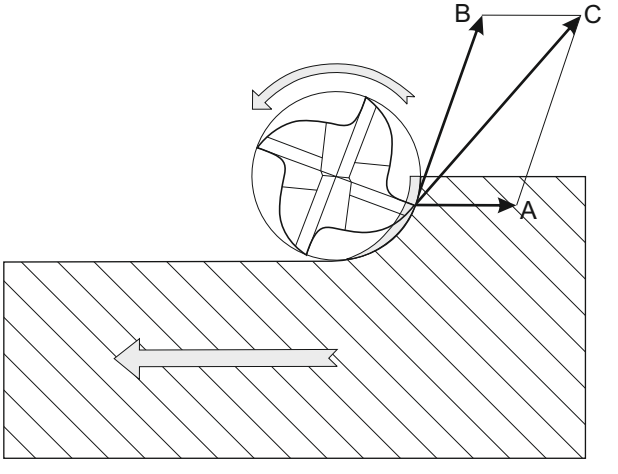


Main Features :

- less vibrations
- good surface quality
- longer life of cutting edges
- higher cutting speed

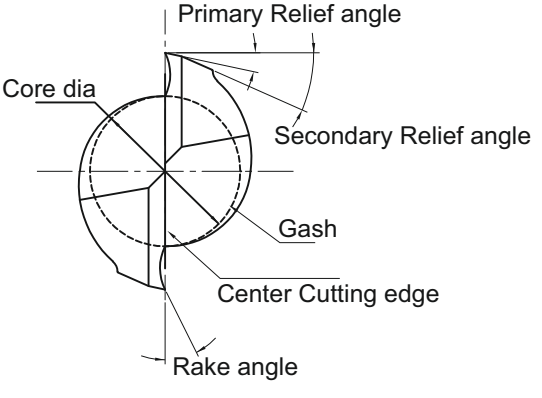
UP MILLING

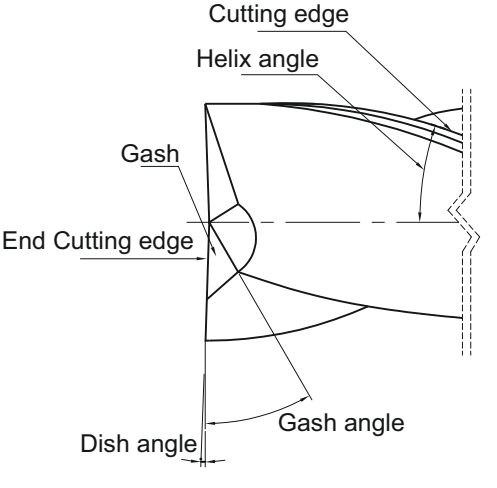
Cutter rotation and work feed have opposite directions. The material is cut at the minimum thickness and left at the maximum.



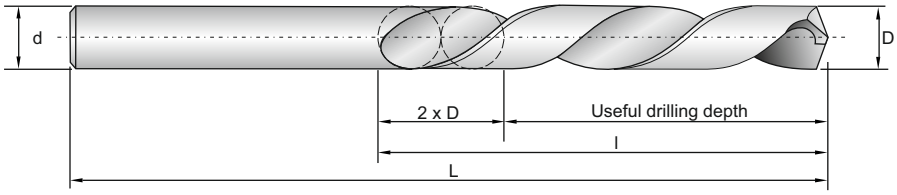
Main Features :

- more vibrations due to increased shear stress
- shorter life of cutter due to higher wear of cutting edges in the first working length
- the vertical shearing stress component tends to detach the work from the table

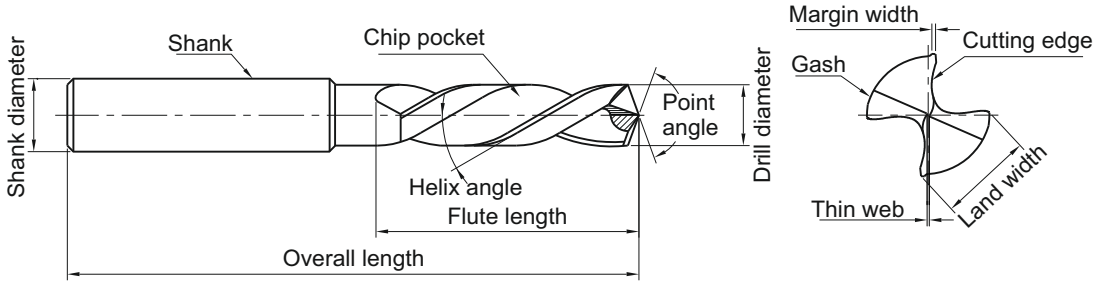




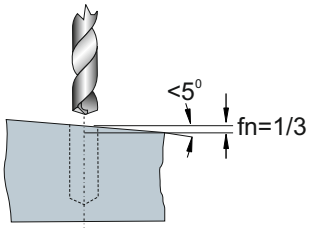
USEFUL DRILLING DEPTH



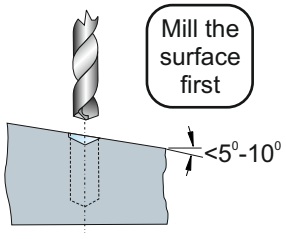
For a good chip evacuation, the best useful drilling depth is calculated by subtracting twice the size of the diameter (D) from the length of the drill flute (l)



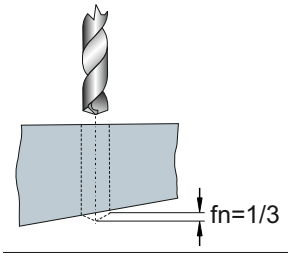
INSTRUCTIONS AND SUGGESTIONS FOR MACHINING WITH CARBIDE DRILLS



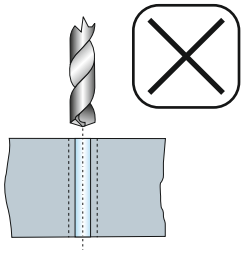
- For drilling surfaces that are tilted up to a maximum of 5^0, reduce the feed rate fn to 1/3 as long as the drill is machining the tilted surface



- For drilling surfaces that are tilted up to 10^0, it is first necessary to perform a centering operation
- Surface tilted by more than 10^0 must first be milled



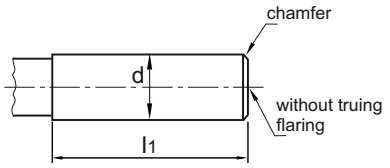
- For through bores on tilted surfaces, reduce the feed rate to 1/3 during the exit phase



- It is not possible to enlarge existing bores

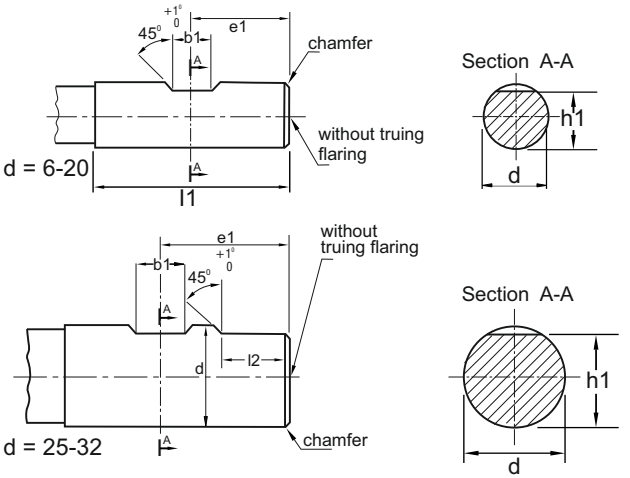
CYLINDRICAL SHANK
DIN 6535

FORM HA



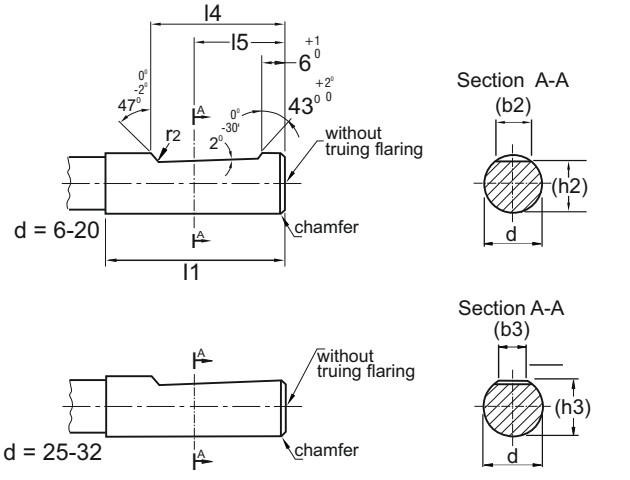
d h6	l 1 +2 0	d h6	l 1 +2 0
2	28	12	45
3		14	
4		16	48
5		18	
6	36	20	50
8		25	56
10	40	32	60

FORM HB (WELDON)



d h6	b1 +0.05 0	e1 0 -1	h1 h11	l1 +2 0	l2 +1 0
6	4.2	18.0	5.1	36	-
8	5.5		6.9		
10	7.0	20.0	8.5	40	
12	8.0	22.5	10.4	45	
14			12.7		
16	10.0	24.0	14.2	48	
18			16.2		
20	11.0	25.0	18.2	50	
25	12.0	32.0	23.0	56	17
32	14.0	36.0	30.0	60	19

FORM HE (WHISTLE-NOTCH)



d h6	(b2) ≈	(b3)	h2 h11	(h3)	l1 +2 0	l4 0 -1	l5	r2 mm
6	4.3	-	5.1	-	36	25	18	1.2
8	5.5	-	6.9	-				
10	7.1	-	8.5	-	40	28	20	
12	8.2	-	10.4	-	45	33	22.5	
14	8.1	-	12.7	-				
16	10.1	-	14.2	-	48	36	24	1.6
18	10.8	-	16.2	-				
20	11.4	-	18.2	-	50	38	25	
25	13.6	9.3	23.0	24.1	56	44	32	
32	15.5	9.9	30.0	31.2	60	48	35	

FORMULA

Cutting speed	$Vc = \frac{\pi \times D \times n}{1000}$
Spindle speed	$n = \frac{Vc \times 1000}{\pi \times D}$
Feed per tooth	$fz = \frac{Vf}{n \times z}$
Table feed	$Vf = fz \times n \times z$
Feed per revolution	$f = fz \times z$

SYMBOLS

D (mm)	Tool diameter
Vc (m/min)	Cutting speed
fz (mm)	Feed per tooth
n (rpm)	Spindle speed
Vf (mm/min)	Table feed
z	No. of teeth

TOOL PARAMETERS

ENDMILL

Cutting Speed	$Vc = \frac{\pi DN}{1000}$ mt/min
Table Feed	Vf = N x fz x z mm/min

CUTTING SPEED (Vc) TABLE

Material Code	Material Group	HRC	Vc
R	Cast Iron, MS, EN-8	28~30	60~70
B+ve	High Carbon Steel, EN-9, EN-21	40~42	50~60
iSeries	Tool Steel, P20, Die Steel, OHNS, EN-31, Stainless Steel	60~62	35~45
NF	Aluminium, Brass, Copper	NA	70~80

TABLE FEED (Fz) CHART

Dia of Endmill	Fz (Feed per Tooth)
Ø1 ~ Ø2	0.008 ~ 0.010
Ø2 ~ Ø3	0.010 ~ 0.012
Ø3 ~ Ø4	0.012 ~ 0.015
Ø4 ~ Ø6	0.015 ~ 0.025
Ø6 ~ Ø8	0.025 ~ 0.035
Ø8 ~ Ø10	0.035 ~ 0.050
Ø10 ~ Ø12	0.050 ~ 0.060
Ø12 ~ Ø16	0.060 ~ 0.070
Ø16 ~ Ø20	0.070 ~ 0.080
Ø20 ~ Ø25	0.080 ~ 0.100

TOOL PARAMETERS

ROUGHER

Cutting Speed	$Vc = \frac{\pi DN}{1000}$ mt/min
Table Feed	Vf = N x fz x z mm/min

CUTTING SPEED (Vc) TABLE

Material Code	Material Group	HRC	Vc
R	Cast Iron, MS, EN-Series	28~35	130~160
B+ve	Stainless Steel	22~35	40~60
iSeries	High Carbon Steel, Inconel, Hot Die Steel, OHNS, P20, Titanium	35~65	35~70

TABLE FEED (Fz) CHART

Dia of Rougher	Fz (Feed per Tooth)
Ø5 ~ Ø6	0.030 ~ 0.050
Ø6 ~ Ø8	0.035 ~ 0.060
Ø8 ~ Ø10	0.045 ~ 0.075
Ø10 ~ Ø12	0.060 ~ 0.085
Ø12 ~ Ø16	0.080 ~ 0.100
Ø16 ~ Ø20	0.085 ~ 0.110
Ø20 ~ Ø25	0.090 ~ 0.140

TROUBLESHOOTING GUIDE FOR END MILL PROBLEMS

Problem	Cause	Solution
Breakage	Feed too fast	Slow down feed
	Too high stock removal	Decrease feed per tooth
	Too long flute length or overall length	Hold shank deeper, use shorter endmill
	Too much wear	Regrind at earlier stage
Wear	Speed too fast	Slow down speed
	Hard work material	Use higher grade tool material and coating
	Biting chips	Change feed and speed. Change chip size or clear chips with coolant or air pressure
	Improper feed and speed (too slow)	Increase feed and speed. Try down-cut
	Improper cutting angle	Change to correct cutting angle
	Too small primary relief angle	Change to larger relief angle
Short tool life (dull teeth)	Too much cutting friction	Regrind at earlier stage
	Tough work material	Use premium tool material
	Improper cutting angle	Change to correct cutting angle and primary relief angle
Chipping	Feed too fast	Slow down to proper feed
	Feed too fast on first cut	Slow down on first bite
	Not enough rigidity of machine, tool and holder	Change to rigid machine tool or holder
	Loose hold (tool)	Correct to tight hold
	Loose hold (workpiece)	Correct to tight hold
	Lack of rigidity	Use shortest endmill available, hold shank deeper, try down cut
	Teeth too sharp	Decrease primary relief and cutting angle
Chip packing	Too high stock removal rate	Adjust feed or speed
	Not enough chip space	Use less endmill flutes
	Not enough coolant	Use air pressure
Burrs	Too much wear on primary relief	Regrind at earlier stage
	Incorrect condition	Correct milling condition
	Improper cutting angle	Change to correct cutting angle
No perpendicularity on side	Feed too fast	Slow down to correct speed
	Excessive cutting	Decrease depth and width of cut
	Length of flutes or overall length too long	Use proper length of tool, hold shank deeper
	Too less flutes	Use multi flute endmills
No dimensional accuracy	Excessive cutting	Decrease depth and width of cut
	Lack of accuracy (machine and holder)	Repair machine or holder
	Not enough rigidity (machine and holder)	Change machine, holder or cutting conditions
	Too less flutes	Use multi flutes endmills
Chattering	Feed and speed too fast	Correct feed and speed
	Not enough rigidity (machine and holder)	Use better machine or tool holder or change conditions
	Too great relief angle	Decrease relief angle, make margin
	Loose hold of workpiece	Hold workpiece tightly
	Cutting too deep	Decrease depth of cut
	Too long flute or overall length	Hold shank deeper, use shorter endmill or try down cut
Rough surface finish	Feed too fast	Slow down to correct speed
	Slow speed	Apply higher speed
	Too much wear	Regrind at earlier stage
	Chip biting	Decrease stock removal
	No end tooth concavity	Grind concave angle on end teeth

TOOL PARAMETERS

DRILL

Cutting Speed	$Vc = \frac{\pi DN}{1000}$ mt/min
Table Feed	Vf = N x f mm/min

CUTTING SPEED (Vc) TABLE

Material Code	Material Group	HRC	Vc
A	Cast Iron, Aluminium	25~28	80~90
B	EN Series, Mild Steel	30~35	70~80
C	High-hardened Steel	50~60	20~30
D	Stainless Steel	20~25	30~40

Feed per Revolution (f) Chart

Dia of Drill	f (Feed per Revolution)
Ø2 ~ Ø4	0.020 ~ 0.030
Ø4 ~ Ø6	0.030 ~ 0.050
Ø6 ~ Ø8	0.060 ~ 0.080
Ø8 ~ Ø10	0.080 ~ 0.100
Ø10 ~ Ø12	0.100 ~ 0.120
Ø12 ~ Ø16	0.120 ~ 0.150

TOOL PARAMETERS

REAMER

Cutting Speed	$Vc = \frac{\pi DN}{1000}$ mt/min
Table Feed	Vf = N x Fz mm/min

CUTTING SPEED (Vc) TABLE

Material Code	Material Group	Vc
A	Cast Iron	50 ~ 60
B	Mild Steel, EN-8	40 ~ 50
C	Stainless Steel	25 ~ 40
D	Aluminium	90 ~ 110
E	High Hardened Steel	10 ~ 20

Feed per Revolution (f) Chart

Dia of Reamer	f (Feed per Revolution)
Ø2 ~ Ø4	0.060 ~ 0.100
Ø4 ~ Ø6	0.100 ~ 0.120
Ø6 ~ Ø8	0.120 ~ 0.150
Ø8 ~ Ø10	0.150 ~ 0.180
Ø10 ~ Ø12	0.180 ~ 0.200
Ø12 ~ Ø16	0.200 ~ 0.250
Ø16 ~ Ø20	0.250 ~ 0.400

RECOMMENDED PARAMETERS

THREAD MILL

Material Group		Material		Hardness Brinell HB	Cutting Speed V_c m/min	Feed f mm/tooth
P	1	Unalloyed steel	Low carbon (C=0.1-0.25%)	125	50 - 200	0.025 - 0.3
	2	Low alloy steel (alloying elements ≤ 5%)	Non hardened	180	50 - 150	0.02 - 0.22
	3		Hardened	275	40 - 150	0.01 - 0.15
M	4	Stainless steel	Non hardened	200	50 - 120	0.01 - 0.13
	5		Austenitic	180	50 - 120	0.01 - 0.12
	6	Stainless steel Cast ferritic	Hardened	330	50 - 90	0.01 - 0.1
K	7	Malleable	Ferritic (short chips)	130	50 - 70	0.01 - 015
	8	Grey cast iron	Low tensile strength	180	60 - 140	0.01 - 0.13
	9		High tensile strength	260	35 - 100	0.01 - 012
	10	Nodular SG iron	Pearlitic	260	35 - 80	0.01 - 0.12
N	11	Aluminium alloys	Cast	75	80 - 160	0.03 - 0.36
	12		Cast & aged	90	100 - 200	0.1 - 0.3
	13	Copper and copper alloys	Brass	90	160 - 250	0.04 - 0.43
	14		Bronze and non leaded copper	10	120 - 200	0.03 - 0.36
S	15	High temperature alloys	Annealed (Nickel or Cobalt based)	250	15 - 35	0.005 - 0.06
	16	Titanium alloys	Pure 99.5 Ti	400 Rm	35 - 70	0.006 - 0.07
H	17	Extra hard steel	Hardened & tempered	45-50 HRc	15 - 45	0.004 - 0.04
	18			51-55 HRc	15 - 30	0.004 - 0.04

Our Company

We at **Robin Precision Products Pvt. Ltd.** are heading to produce a world class product- Solid Carbide Cutting Tools & CNC Toolings in a high tech plant spread over 11,000 Sq. Meter area. **We feel proud to be the first manufacturers of Solid Carbide Cutting Tools in Gujarat.** We are committed to provide our products & services that meet the highest industry standards, the most demanding machining parameters & the customer satisfaction.

Under the company's policy of constant R & D, we have dedicated ourselves to pursue a new level of Technology, Quality & Logistic Management.

Our TEAM BLOOD believes in utilizing the most sophisticated equipments which enable us to produce a world class product **BLOOD** - Rotating Genius.

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QUALITY STATEMENT

- Promoters with high business ethics
- Best quality carbide rods from Europe
- World class brand new plant & machinery
- Hi-tech tool measuring equipment
- Stringent in-process inspection
- Qualified & trained work-force
- Pleasant & spacious work atmosphere

An ISO 9001 CERTIFIED COMPANY

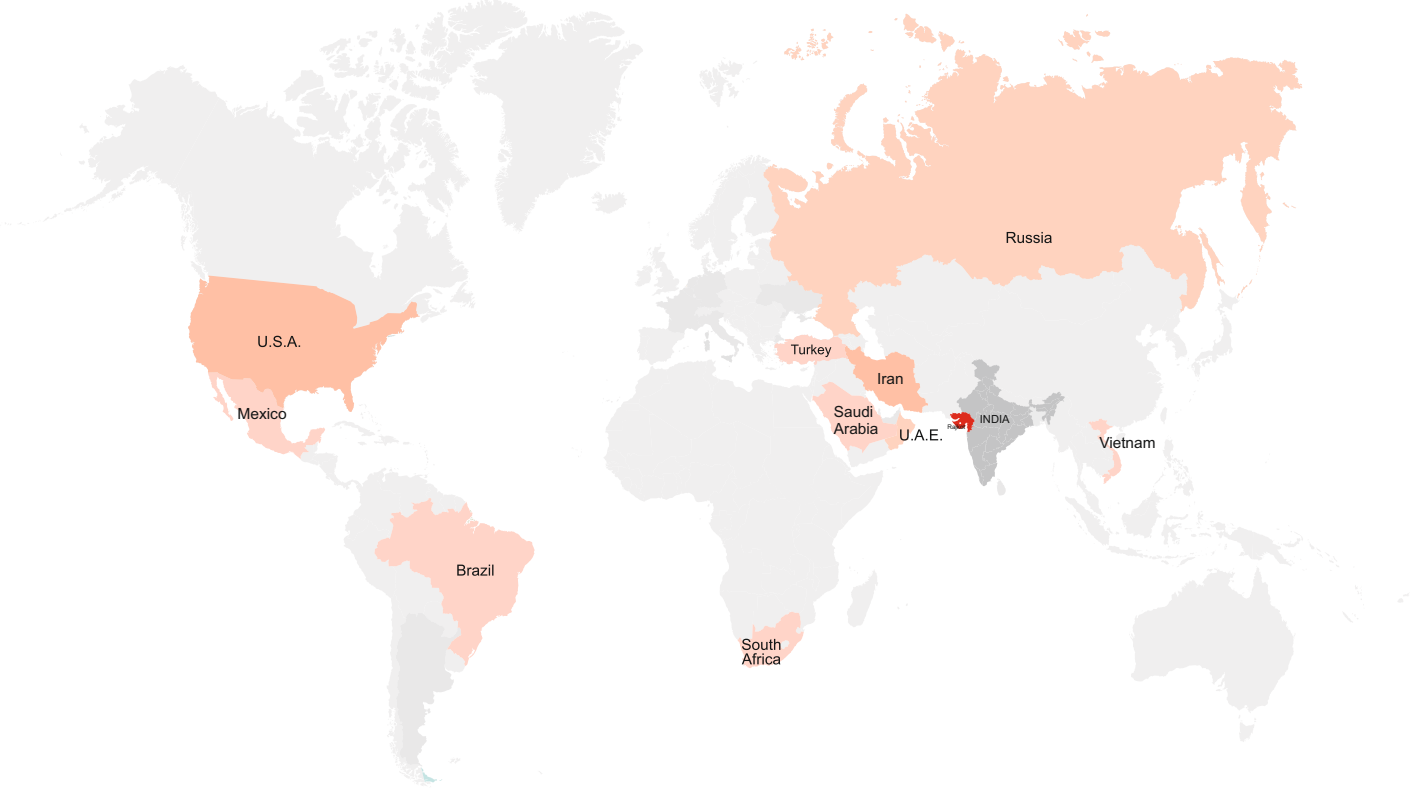
Certified ISO 9001:2015

US0118-CE251

GLOBLE PRESENCE

The global footprint of our products export has reached to USA, Russia, UAE - Dubai, Iran, Maxico, Vietnam, Saudi Arabia, South Africa, Turkey, Brazil apart from many more.







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