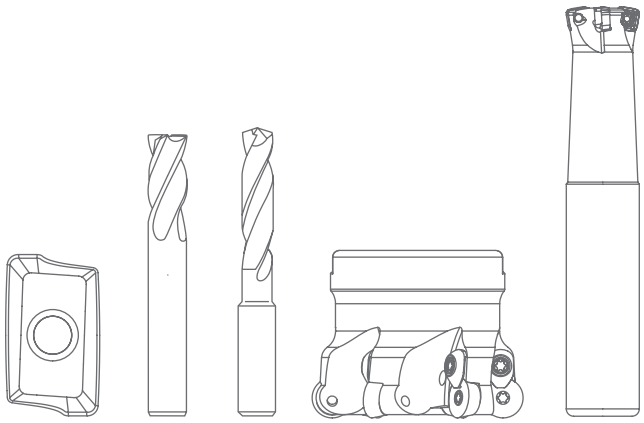
CARBIDE

SHIIKO



2022 CATALOGUE

SHIIKO CATALOGUE

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- Full Radius Inserts
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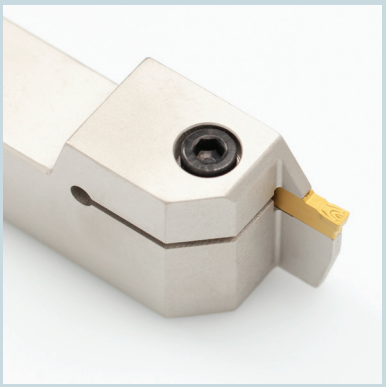

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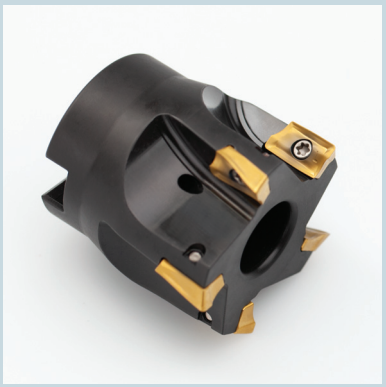
- Parameters



Solid

39 **High Productivity Solid Carbide End Mills**

- High Productivity Solid Carbide End Mills
- Variable Pitch and Variable Helix

- Parameters

45 **General Purpose Solid Carbide End Mills**

- 2 Flutes
- 3 Flutes
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- Parameters

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- General Purpose ISO P, ISO K
- Low Cutting Force ISO M, ISO P

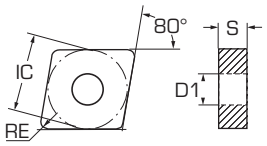
- Parameters

INDEXABLE TOOLS

Turning

CNMG

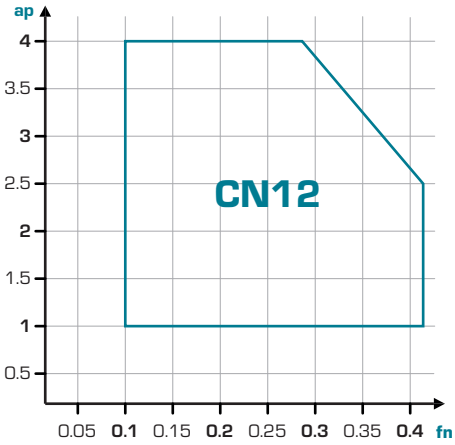
- Negative rombic inserts (80°) with four edges
- Available in a broad range of CVD coated carbide grades



Dimensions

Size	IC	S	D1	AN
CNMG12	12.7	4.76	5.16	0°

Unit: mm



	Grades									
	CVK15	CVM15	CVM25	CVP05	CVP15	CVP25				
	Materials - Vc (m/min)									
P				★ 140÷400	★ 120÷360	★ 100÷320				
M		★ 140÷280	★ 100÷240							
K	★ 180÷420									
N										
S										
H										

APPLICATION	DESIGNATION	RE	ap	fn	Stock									
MU	CNMG120404MU	0.4	1.00÷4.00	0.10÷0.30	●	●	●	●	●	●				
	CNMG120408MU	0.8	1.00÷4.00	0.15÷0.35	●	●	●	●	●	●				
	CNMG120412MU	1.2	1.00÷4.00	0.18÷0.42	●	●	●	●	●	●				

medium cut

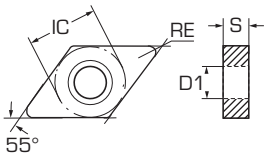
ap: depth of cut (mm) - fn: feed rate (mm/rev)

● stock standard ○ non-standard stock

cutting parameters: page 16

DNMG

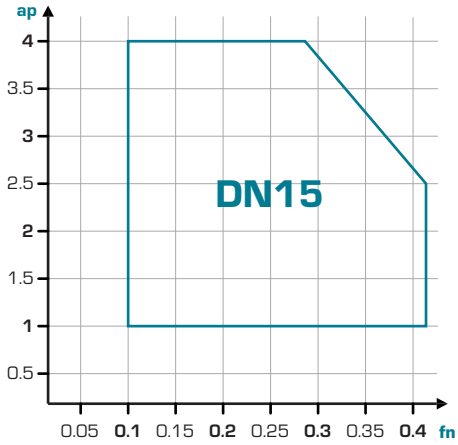
- Negative rombic inserts (55°) with four edges
- Available in a broad range of CVD coated carbide grades



Dimensions

Size	IC	S	D1	AN
DNMG15	12.7	6.35	5.16	0°

Unit: mm



	Grades									
	CVK15	CVM15	CVM25	CVP05	CVP15	CVP25				
	Materials - Vc (m/min)									
P				★ 140÷400	★ 120÷360	★ 100÷320				
M		★ 140÷280	★ 100÷240							
K	★ 180÷420									
N										
S										
H										

APPLICATION	DESIGNATION	RE	ap	fn	Stock									
MU	DNMG150604MU	0.4	1.00÷4.00	0.10÷0.30	●	●	●	●	●	●				
	DNMG150608MU	0.8	1.00÷4.00	0.15÷0.35	●	●	●	●	●	●				
	DNMG150612MU	1.2	1.00÷4.00	0.18÷0.42	●	●	●	●	●	●				

medium cut

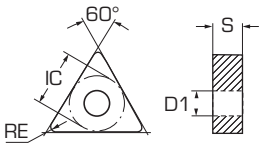
ap: depth of cut (mm) - fn: feed rate (mm/rev)

● stock standard ○ non-standard stock

cutting parameters: page 16

TNMG

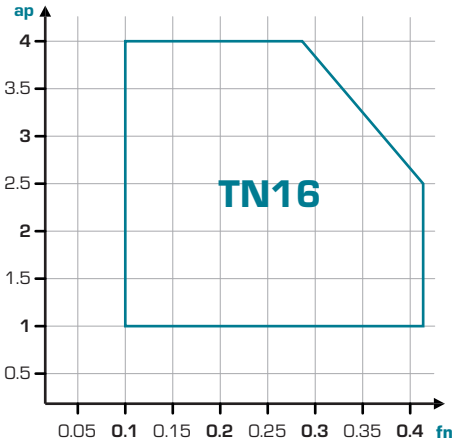
- Negative triangular inserts (60°) with six edges
- Available in a broad range of CVD coated carbide grades



Dimensions

Size	IC	S	D1	AN
TNMG16	9.525	4.76	3.81	0°

Unit: mm



	Grades									
	CVK15	CVM15	CVM25	CVP05	CVP15	CVP25				
	Materials - Vc (m/min)									
P				★ 140÷400	★ 120÷360	★ 100÷320				
M		★ 140÷280	★ 100÷240							
K	★ 180÷420									
N										
S										
H										

APPLICATION	DESIGNATION	RE	ap	fn	Stock									
MU	TNMG160404MU	0.4	1.00÷4.00	0.10÷0.30	●	●	●	●	●	●				
	TNMG160408MU	0.8	1.00÷4.00	0.15÷0.35	●	●	●	●	●	●				
	TNMG160412MU	1.2	1.00÷4.00	0.18÷0.42	●	●	●	●	●	●				

medium cut

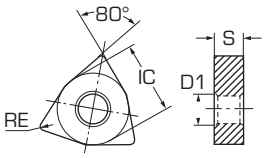
ap: depth of cut (mm) - fn: feed rate (mm/rev)

● stock standard ○ non-standard stock

cutting parameters: page 16

WNMG

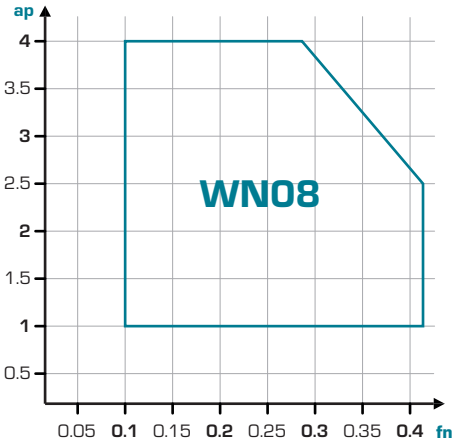
- Negative trigonal inserts (80°) with six edges
- Available in a broad range of CVD coated carbide grades



Dimensions

Size	IC	S	D1	AN
WNMG08	12.7	4.76	5.16	0°

Unit: mm



Materials - Vc (m/min)	Grades									
	CVK15	CVM15	CVM25	CVP05	CVP15	CVP25				
P				★ 140÷400	★ 120÷360	★ 100÷320				
M		★ 140÷280	★ 100÷240							
K	★ 180÷420									
N										
S										
H										

APPLICATION	DESIGNATION	RE	ap	fn	Stock									
MU	WNMG080404MU	0.4	1.00÷4.00	0.10÷0.30	●	●	●	●	●	●				
	WNMG080408MU	0.8	1.00÷4.00	0.15÷0.35	●	●	●	●	●	●				
	WNMG080412MU	1.2	1.00÷4.00	0.18÷0.42	●	●	●	●	●	●				

medium cut

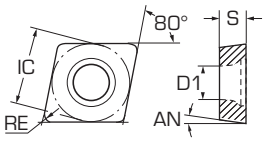
ap: depth of cut (mm) - fn: feed rate (mm/rev)

● stock standard ○ non-standard stock

cutting parameters: page 16

CCMT

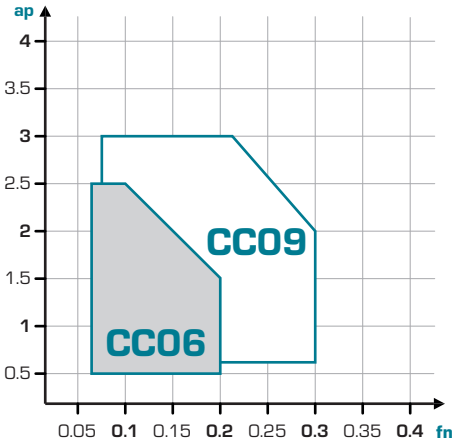
- Positive rombic inserts (80°) with two edges
- Available in combination with CVD grades and micrograin universal PVD



Dimensions

Size	IC	S	D1	AN
CCMT06	6.35	2.38	2.8	7°
CCMT09	9.525	3.97	4.4	7°

Unit: mm



	Grades									
	CVK15	CVM25	CVP25	PVX25						
	Materials - Vc (m/min)									
P			★ 100÷320	★ 60÷200						
M		★ 100÷240		★ 60÷180						
K	★ 180÷420			☆ 80÷180						
N										
S				☆ 40÷120						
H										

APPLICATION	DESIGNATION	RE	ap	fn	Stock									
MU	CCMT060204MU	0.4	0.50÷2.50	0.06÷0.20	●	●	●	●						
	CCMT09T304MU	0.4	0.60÷3.00	0.07÷0.25	●	●	●	●						
	CCMT09T308MU	0.8	0.60÷3.00	0.08÷0.30	●	●	●	●						

medium cut

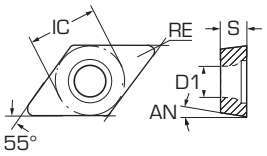
ap: depth of cut (mm) - fn: feed rate (mm/rev)

● stock standard ○ non-standard stock

cutting parameters: page 16

DCMT

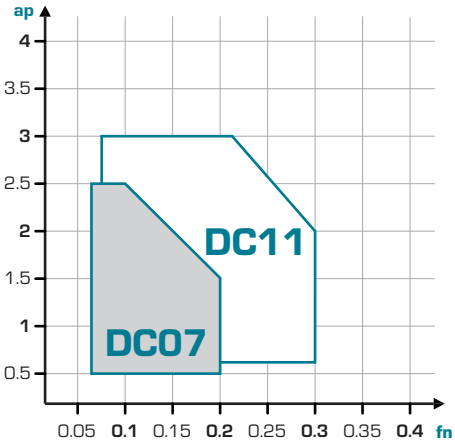
- Positive rombic inserts (55°) with two edges
- Available in combination with CVD grades and micrograin universal PVD



Dimensions

Size	IC	S	D1	AN
DCMT07	6.35	2.38	2.8	7°
DCMT11	9.525	3.97	4.4	7°

Unit: mm



	Grades									
	CVK15	CVM25	CVP25	PVX25						
	Materials - Vc (m/min)									
P			★ 100÷320	★ 60÷200						
M		★ 100÷240		★ 60÷180						
K	★ 180÷420			☆ 80÷180						
N										
S				☆ 40÷120						
H										

APPLICATION	DESIGNATION	RE	ap	fn	Stock									
MU	DCMT070204MU	0.4	0.50÷2.50	0.06÷0.20	●	●	●	●						
	DCMT11T304MU	0.4	0.60÷3.00	0.07÷0.25	●	●	●	●						
	DCMT11T308MU	0.8	0.60÷3.00	0.08÷0.30	●	●	●	●						

medium cut

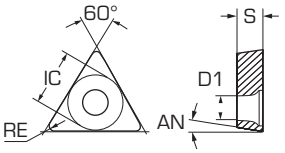
ap: depth of cut (mm) - fn: feed rate (mm/rev)

● stock standard ○ non-standard stock

cutting parameters: page 16

TCMT

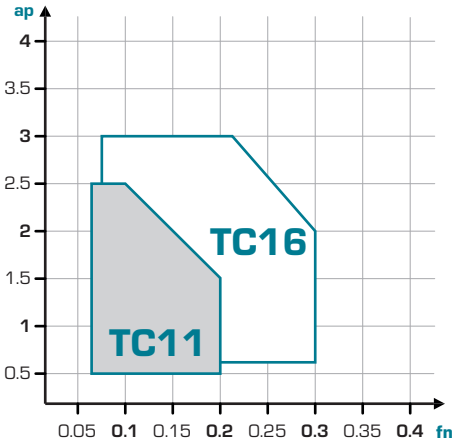
- Positive triangular inserts (55°) with three edges
- Available in combination with CVD grades and micrograin universal PVD



Dimensions

Size	IC	S	D1	AN
TCMT11	6.35	2.38	2.8	7°
TCMT16	9.525	3.97	4.4	7°

Unit: mm



	Grades									
	CVK15	CVM25	CVP25	PVX25						
	Materials - Vc (m/min)									
P			★ 100÷320	★ 60÷200						
M		★ 100÷240		★ 60÷180						
K	★ 180÷420			☆ 80÷180						
N										
S				☆ 40÷120						
H										

APPLICATION	DESIGNATION	RE	ap	fn	Stock									
MU	TCMT110204MU	0.4	0.50÷2.50	0.06÷0.20	●	●	●	●						
	TCMT110208MU	0.8	0.50÷2.50	0.08÷0.24	●	●	●	●						
	TCMT16T304MU	0.4	0.60÷3.00	0.07÷0.25	●	●	●	●						
	TCMT16T308MU	0.8	0.60÷3.00	0.08÷0.30	●	●	●	●						

medium cut

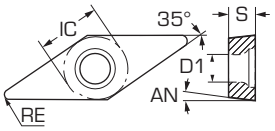
ap: depth of cut (mm) - fn: feed rate (mm/rev)

● stock standard ○ non-standard stock

cutting parameters: page 16

VBMT

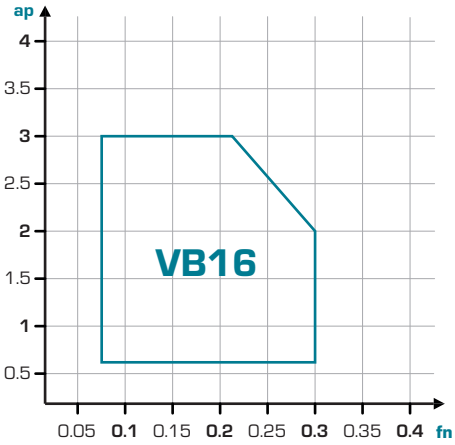
- Positive rombic inserts (35°) with two edges
- Available in combination with CVD grades and micrograin universal PVD



Dimensions

Size	IC	S	D1	AN
VBMT16	9.525	4.76	4.4	5°

Unit: mm



	Grades									
	CVK15	CVM25	CVP25	PVX25						
	Materials - Vc (m/min)									
P			★ 100÷320	★ 60÷200						
M		★ 100÷240		★ 60÷180						
K	★ 180÷420			☆ 80÷180						
N										
S				☆ 40÷120						
H										

APPLICATION	DESIGNATION	RE	ap	fn	Stock									
MU	VBMT160404MU	0.4	0.60÷3.00	0.07÷0.25	●	●	●	●						
	VBMT160408MU	0.8	0.60÷3.00	0.08÷0.30	●	●	●	●						

medium cut

ap: depth of cut (mm) - fn: feed rate (mm/rev)

● stock standard ○ non-standard stock

cutting parameters: page 16

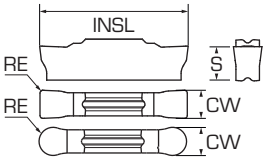
			GRADES						
			CVK15	CVM15	CVM25	CVP05	CVP15	CVP25	PVX25
ISO P	Structural steel, free cutting steel, low carbon steel	<200 HB				★ 180÷400	★ 160÷360	★ 140÷320	★ 80÷200
	Medium carbon steel, high carbon steel, medium alloy steel	<250 HB				★ 160÷340	★ 140÷320	★ 120÷280	★ 80÷180
	Alloy steel, tool steel	<300 HB				★ 140÷280	★ 120÷260	★ 100÷220	☆ 60÷140
	Martensitic and ferritic stainless steel	<300 HB		★ 160÷300	★ 120÷260				★ 80÷180
ISO M	Austenitic stainless steel	<200 HB		★ 160÷280	★ 120÷240				★ 80÷180
	Duplex stainless steel	<250 HB		☆ 140÷200	★ 100÷160				★ 60÷120
ISO K	Grey cast iron		★ 220÷420						☆ 100÷180
	Nodular cast iron		★ 180÷320						☆ 80÷140
ISO S	Nickel base HRSA	<450 HB							☆ 40÷60
	Titanium alloy	<400 HB							☆ 60÷120

★ 1st choice ☆ suitable

Grooving

GRVD

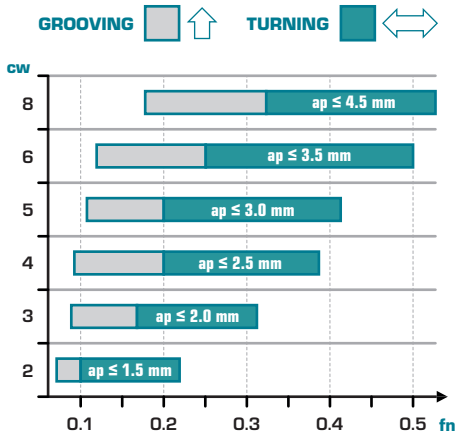
- Positive rectangular grooving inserts with two edges for multiple operations
- Available in combination with CVD grades, micrograin universal PVD and uncoated for non ferrous materials



Dimensions

Size	CW	S	INSL	
GRVD20	2	3.5	16	
GRVD30	3	4.8	21	
GRVD40	4	4.8	21	
GRVD50	5	5.8	26	
GRVD60	6	5.8	26	
GRVD80	8	6.5	31	

Unit: mm



Grades										
	CVK15	CVP25	PVX30	UNN10						
Materials - Vc (m/min)										
P		★ 80÷220	★ 60÷180							
M			★ 60÷140							
K	★ 100÷300		☆ 80÷160							
N				★ 200÷500						
S										
H										

APPLICATION	DESIGNATION	RE	fn ⇧	fn ⇔	Stock									
SE	GRVD2002-SE	0.2	0.10÷0.14	0.05÷0.09	●	●	●							
	GRVD3004-SE	0.4	0.16÷0.20	0.07÷0.13	●	●	●							
	GRVD4004-SE	0.4	0.18÷0.24	0.09÷0.15	●	●	●							
	GRVD5004-SE	0.4	0.20÷0.30	0.11÷0.19	●	●	●							
	GRVD6008-SE	0.8	0.24÷0.42	0.13÷0.25	●	●	●							
straight edge	GRVD8008-SE	0.8	0.32÷0.56	0.18÷0.34	●	●								
FR	GRVD2010-FR	1.0	0.12÷0.18	-			●							
	GRVD3015-FR	1.5	0.18÷0.28	-			●							
	GRVD4020-FR	2.0	0.20÷0.34	-	●		●							
	GRVD5025-FR	2.5	0.22÷0.42	-	●		●							
	GRVD6030-FR	3.0	0.24÷0.50	-	●		●							
full radius	GRVD8040-FR	4.0	0.32÷0.66	-			●							
AG	GRVD2002-AG	0.2	0.12÷0.20	0.06÷0.10				●						
	GRVD3004-AG	0.4	0.14÷0.26	0.08÷0.16				●						
	GRVD4004-AG	0.4	0.16÷0.30	0.10÷0.20				●						
ALU - straight														
AR	GRVD2010-AR	1.0	0.10÷0.22	-				●						
	GRVD3015-AR	1.5	0.16÷0.32	-				●						
	GRVD4020-AR	2.0	0.18÷0.38	-				●						
ALU - radius														

fn: feed rate (mm/rev)

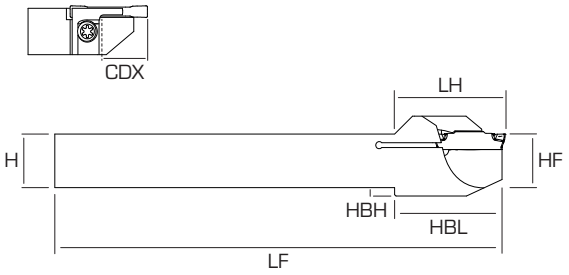
● stock standard ○ non-standard stock

cutting parameters: page 22

HLD-GRVE

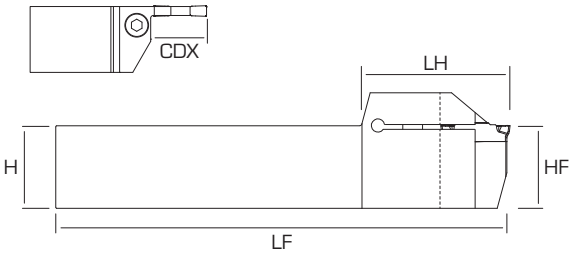
- External grooving tool holders with square shank
- Available with broad overhang range and with radial reinforcement for smallest sizes

Radial reinforced



Right-hand shown

Standard



Right-hand shown

DESIGNATION		Stock	CW	CDX	H	HF	B	LF	LH	WF	HBL	HBH
Holder L												
Radial reinforced	HLD-GRVEL1212-2T14	●	2	14	12	12	12	120	25	12.2	24	2
	HLD-GRVEL1616-2T14	●	2	14	16	16	16	120	25	16.2	24	2
	HLD-GRVEL1616-3T20	●	3	20	16	16	16	120	31	16.3	30	2
Standard	HLD-GRVEL2020-2T14	●	2	14	20	20	20	125	38	21		
	HLD-GRVEL1616-3T10	●	3	10	16	16	16	120	35	16.2		
	HLD-GRVEL2020-3T10	●	3	10	20	20	20	125	38	21		
	HLD-GRVEL2020-3T20	●	3	20	20	20	20	125	40	21		
	HLD-GRVEL2525-3T10	●	3	10	25	25	25	150	40	26		
	HLD-GRVEL2525-3T20	●	3	20	25	25	25	150	45	26		
	HLD-GRVEL2020-4T10	●	4	10	20	20	20	125	35	21		
	HLD-GRVEL2020-4T25	●	4	25	20	20	20	125	50	21		
	HLD-GRVEL2525-4T10	●	4	10	25	25	25	150	40	26		
	HLD-GRVEL2525-4T25	●	4	25	25	25	25	150	50	26		
	HLD-GRVEL2525-5T10	●	5	10	25	25	25	150	40	26		
	HLD-GRVEL2525-5T25	●	5	25	25	25	25	150	50	26		
	HLD-GRVEL2525-6T15	●	6	15	25	25	25	150	45	26		
	HLD-GRVEL2525-6T30	●	6	30	25	25	25	150	56	26		
	HLD-GRVEL2525-8T15	●	8	15	25	25	25	150	43	26.5		
	HLD-GRVEL2525-8T30	●	8	30	25	25	25	150	55	27		
Holder R												
Radial reinforced	HLD-GRVER1212-2T14	●	2	14	12	12	12	120	25	12.2	24	2
	HLD-GRVER1616-2T14	●	2	14	16	16	16	120	25	16.2	24	2
	HLD-GRVER1616-3T20	●	3	20	16	16	16	120	31	16.3	30	2
Standard	HLD-GRVER2020-2T14	●	2	14	20	20	20	125	38	21		
	HLD-GRVER1616-3T10	●	3	10	16	16	16	120	35	16.2		

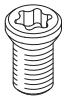
Unit: mm

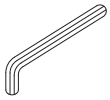
● stock standard ○ non-standard stock

DESIGNATION		Stock	CW	CDX	H	HF	B	LF	LH	WF	HBL	HBH
Standard	HLD-GRVER2020-3T10	●	3	10	20	20	20	125	38	21		
	HLD-GRVER2020-3T20	●	3	20	20	20	20	125	40	21		
	HLD-GRVER2525-3T10	●	3	10	25	25	25	150	40	26		
	HLD-GRVER2525-3T20	●	3	20	25	25	25	150	45	26		
	HLD-GRVER2020-4T10	●	4	10	20	20	20	125	35	21		
	HLD-GRVER2020-4T25	●	4	25	20	20	20	125	50	21		
	HLD-GRVER2525-4T10	●	4	10	25	25	25	150	40	26		
	HLD-GRVER2525-4T25	●	4	25	25	25	25	150	50	26		
	HLD-GRVER2525-5T10	●	5	10	25	25	25	150	40	26		
	HLD-GRVER2525-5T25	●	5	25	25	25	25	150	50	26		
	HLD-GRVER2525-6T15	●	6	15	25	25	25	150	45	26		
	HLD-GRVER2525-6T30	●	6	30	25	25	25	150	56	26		
	HLD-GRVER2525-8T15	●	8	15	25	25	25	150	43	26.5		
	HLD-GRVER2525-8T30	●	8	30	25	25	25	150	55	27		

Unit: mm

● stock standard ○ non-standard stock



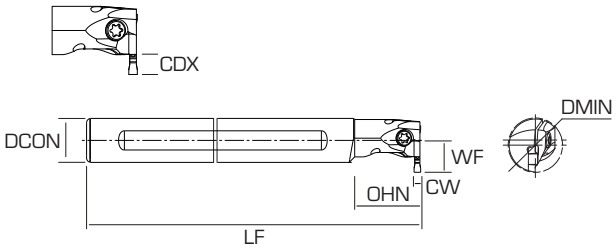


HLD-GRVEL/R1212-2T14	M4L120T15	WL-T15
HLD-GRVEL/R1616-2T14	M5L160T15	WL-T15
HLD-GRVEL/R1616-3T10	M5L20HEX4	WL-HEX4
HLD-GRVEL/R1616-3T20	M5L160T15	WL-T15
HLD-GRVEL/R2020...	M5L20HEX4	WL-HEX4
HLD-GRVEL/R2525...	M6L20HEX5	WL-HEX5

HLD-GRVI

- Grooving bars with internal coolant and advanced head design for a better chips evacuation
- Made with special alloyed steel that improves rigidity and reduces chattering

Boring bar



Left-hand shown

DESIGNATION		Stock	CW	CDX	DMIN	DCON	H	LF	OHN	WF		
Holder L												
	HLD-GRVIL1620-2T04	●	2	4	20	16	15	150	25	11.5		
	HLD-GRVIL2025-2T06	●	2	6	25	20	18	180	30	14.5		
	HLD-GRVIL2025-3T06	●	3	6	25	20	18	180	30	14.5		
Boring bar	HLD-GRVIL2532-3T08	●	3	8	32	25	23	200	40	19		
	HLD-GRVIL3240-3T10	●	3	10	40	32	30	220	50	23.5		
	HLD-GRVIL2532-4T08	●	4	8	32	25	23	200	40	19		
	HLD-GRVIL3240-4T10	●	4	10	40	32	30	220	50	23.5		
Holder R												
	HLD-GRVIR1620-2T04	●	2	4	20	16	15	150	25	11.5		
	HLD-GRVIR2025-2T06	●	2	6	25	20	18	180	30	14.5		
	HLD-GRVIR2025-3T06	●	3	6	25	20	18	180	30	14.5		
Boring bar	HLD-GRVIR2532-3T08	●	3	8	32	25	23	200	40	19		
	HLD-GRVIR3240-3T10	●	3	10	40	32	30	220	50	23.5		
	HLD-GRVIR2532-4T08	●	4	8	32	25	23	200	40	19		
	HLD-GRVIR3240-4T10	●	4	10	40	32	30	220	50	23.5		

Unit: mm

● stock standard ○ non-standard stock

	TORX SCREW	L-WRENCH
HLD-GRVIL/R DCON=16	M4L115T15	WL-T15
HLD-GRVIL/R DCON≥20	M5L130T20	WL-T20

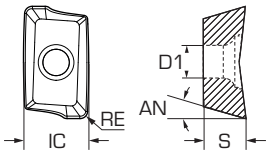
			GRADES			
			CVK15	CVP25	PVX30	UNN10
ISO P	Structural steel, free cutting steel, low carbon steel	<200 HB		★ 100÷220	★ 80÷180	
	Medium carbon steel, high carbon steel, medium alloy steel	<250 HB		★ 100÷200	★ 80÷160	
	Alloy steel, tool steel	<300 HB		★ 80÷ 80	☆ 60÷140	
	Martensitic and ferritic stainless steel	<300 HB			★ 60÷160	
ISO M	Austenitic stainless steel	<200 HB			★ 60÷140	
	Duplex stainless steel	<250 HB			★ 60÷120	
ISO K	Grey cast iron		★ 220÷300		☆ 80÷160	
	Nodular cast iron		★ 100÷200		☆ 80÷140	
ISO N	Non ferrous material					★ 200÷500

★ 1st choice ☆ suitable

Milling

LDKT shouldering

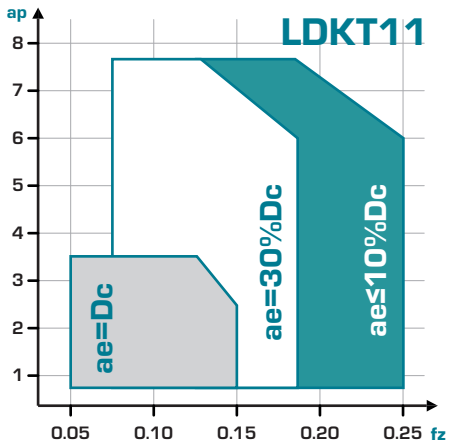
- Positive rectangular shouldering inserts with two edges and helical design
- Perfect shouldering accuracy and low cutting forces, available in combination with PVD and CVD coated carbide



Dimensions

Size	IC	S	D1	AN
LDKT11	7	3.83	2.9	15°

Unit: mm



	Grades									
	CVM35	CVP20	PVK25	PVM30	PVM40	PVP25	PVP30			
Materials - Vc (m/min)										
P		★ 140÷340				★ 100÷240	★ 80÷220			
M	★ 140÷260			★ 80÷200	★ 60÷180					
K		☆ 120÷300	★ 100÷240							
N										
S	★ 40÷80			★ 30÷60						
H										

APPLICATION	DESIGNATION	RE	ap	fz	Stock									
MM	LDKT11T308-MM	0.8	1.00÷8.00	0.08÷0.20	●	●	●	●	●	●	●			
 general machining														
FM	LDKT11T308-FM	0.8	1.00÷8.00	0.05÷0.15	●	●	●	●	●	●	●			
 light machining														

ap: depth of cut (mm) - fz: feed rate per tooth (mm)

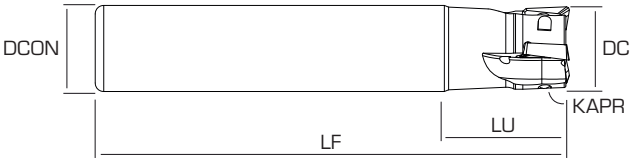
● stock standard ○ non-standard stock

cutting parameters: page 36

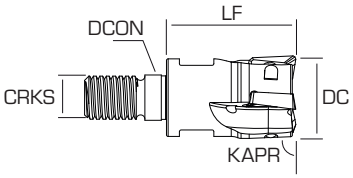
MLC-LD11 shouldering

- Milling cutters for LDKT positive inserts, with internal coolant holes
- Available with cilindrycal shank, arbor mounting and screw-on modular type

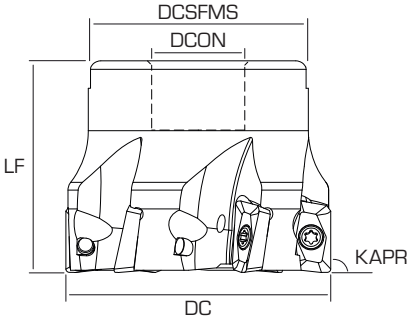
Cylindrical



Screw-on



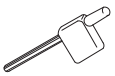
Arbor



DESIGNATION		Stock	DC	ZEFP	DCON	LU	CRKS	DCSFMS	LF			
Holder R												
Cylindrical	MLC-LD11 D016-S16-Z2	●	16	2	16	30	-	-	100			
	MLC-LD11 D020-S20-Z3	●	20	3	20	30	-	-	110			
	MLC-LD11 D025-S25-Z3	●	25	3	25	30	-	-	120			
	MLC-LD11 D032-S32-Z4	●	32	4	32	40	-	-	130			
Screw-on	MLC-LD11 D016-M08-Z2	●	16	2	8.5	-	M8	-	25			
	MLC-LD11 D020-M10-Z3	●	20	3	10.5	-	M10	-	38			
	MLC-LD11 D025-M12-Z3	●	25	3	12.5	-	M12	-	38			
	MLC-LD11 D032-M16-Z4	●	32	4	17	-	M16	-	43			
Arbor	MLC-LD11 D040-F16-Z5	●	40	5	16	-	-	33	40			
	MLC-LD11 D050-F22-Z5	●	50	5	22	-	-	41	40			
	MLC-LD11 D063-F22-Z6	●	63	6	22	-	-	50	40			
	MLC-LD11 D080-F27-Z7	●	80	7	27	-	-	55	50			

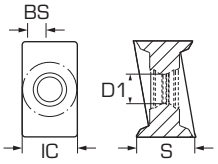
Unit: mm

● stock standard ○ non-standard stock

	TORX SCREW	FLAG WRENCH
		
MLC-LD11 D...	M25L53T8	WF-T8

LNKX shouldering

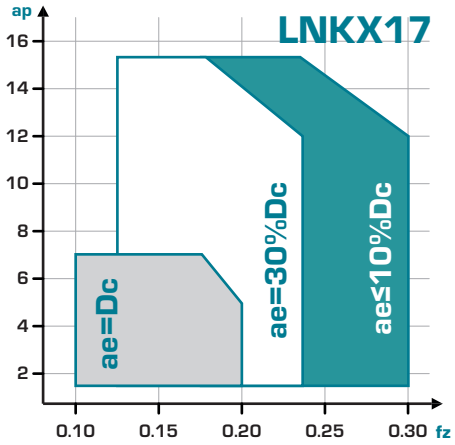
- Double-sided rectangular shouldering inserts with four edges
- Extremely reliable and precise solution, available in combination with both PVD and CVD carbide



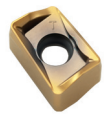
Dimensions

Size	IC	S	D1	AN
LNKX17	11.2	10.94	5.2	0°

Unit: mm



	Grades									
	CVK20	CVM35	CVP20	PVK25	PVM30	PVP25	PVP30			
	Materials - Vc (m/min)									
P			★ 140÷340			★ 100÷240	★ 80÷220			
M		★ 140÷260			★ 80÷200					
K	★ 120÷350		☆ 120÷300	★ 100÷240						
N										
S		★ 40÷80			★ 30÷60					
H										

APPLICATION	DESIGNATION	RE	ap	fz	Stock									
MM	LNKX170708-MM	0.8	1.00÷15.0	0.10÷0.24	●	●	●	●	●	●	●			
 general machining														
RM	LNKX170712-RM	1.2	1.00÷15.0	0.14÷0.30	●		●	●		●	●			
 heavy machining														

ap: depth of cut (mm) - fz: feed rate per tooth (mm)

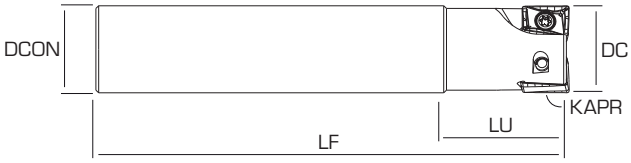
● stock standard ○ non-standard stock

cutting parameters: page 36

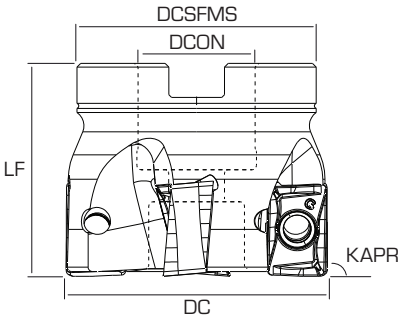
MLC-LN17 shouldering

- Milling cutters for LNKX double-sided inserts, with internal coolant holes
- Available with cilindrycal shank and arbor mounting type

Cylindrical



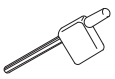
Arbor



DESIGNATION		Stock	DC	ZEFP	DCON	LU	CRKS	DCSFMS	LF			
Holder R												
Cylindrical	MLC-LN17 D032-S32-Z2	●	32	2	32	45	-	-	130			
	MLC-LN17 D040-S32-Z3	●	40	3	32	40	-	-	150			
Arbor	MLC-LN17 D050-F22-Z4	●	50	4	22	-	-	45	40			
	MLC-LN17 D063-F22-Z5	●	63	5	22	-	-	56	40			
	MLC-LN17 D063-F22-Z6	●	63	6	22	-	-	56	40			
	MLC-LN17 D080-F27-Z6	●	80	6	27	-	-	63	50			
	MLC-LN17 D080-F27-Z7	●	80	7	27	-	-	63	50			
	MLC-LN17 D100-F32-Z7	●	100	7	32	-	-	78	50			
	MLC-LN17 D100-F32-Z9	●	100	9	32	-	-	78	50			
	MLC-LN17 D125-F40-Z10	●	125	10	40	-	-	80	63			
	MLC-LN17 D125-F40-Z8	●	125	8	40	-	-	80	63			

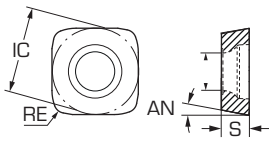
Unit: mm

● stock standard ○ non-standard stock

	TORX SCREW	FLAG WRENCH
		
MLC-LN17 D...	M45L111T15	WF-T15

SPMT high-feed

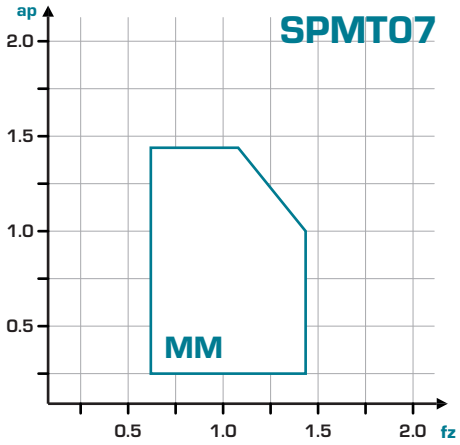
- Positive square high-feed inserts with four edges
- High positive solution for small diameter and multiple teeth milling cutters



Dimensions

Size	IC	S	D1	AN
SPMT07	7.8	2.8	3.5	11°

Unit: mm



	Grades									
	CVM35	CVP20	PVK25	PVM30	PVM40	PVP25	PVP30			
	Materials - Vc (m/min)									
P		★ 140÷340				★ 100÷240	★ 80÷220			
M	★ 140÷260			★ 80÷200	★ 60÷180					
K		☆ 120÷300	★ 100÷240							
N										
S	★ 40÷80			★ 30÷60						
H										

APPLICATION	DESIGNATION	RE	ap	fz	Stock									
MM	SPMT07T2HF-MM	10.0	0.20÷1.40	0.60÷1.40	○	○	○	○	○	○	○			
 general machining														

ap: depth of cut (mm) - fz: feed rate per tooth (mm)

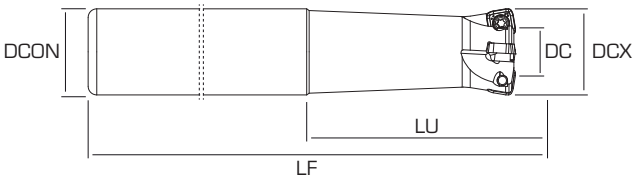
● stock standard ○ non-standard stock

cutting parameters: page 36

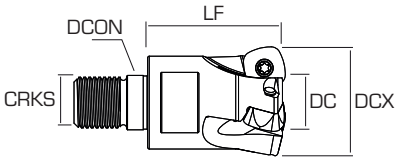
MLC-SP07 high-feed

- Milling cutters for SPMT positive inserts, with internal coolant holes
- Available with cilindrycal shank, arbor mounting and screw-on modular type

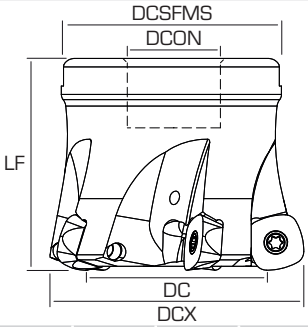
Cylindrical



Screw-on



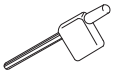
Arbor



DESIGNATION		Stock	DCX	DC	ZEFP	DCON	LU	CRKS	DCSFMS	LF		
Holder R												
Cylindrical	MLC-SP07 D020-S20-Z3	○	20	8.8	3	20	50	-	-	130		
	MLC-SP07 D025-S25-Z3	○	25	13.8	3	25	60	-	-	140		
	MLC-SP07 D025-S25-Z4	○	25	13.8	4	25	60	-	-	140		
	MLC-SP07 D032-S32-Z5	○	32	20.8	5	32	70	-	-	150		
Screw-on	MLC-SP07 D020-M10-Z3	○	20	8.8	3	10.5	-	M10	-	30		
	MLC-SP07 D025-M12-Z3	○	25	13.8	3	12.5	-	M12	-	35		
	MLC-SP07 D025-M12-Z4	○	25	13.8	4	12.5	-	M12	-	35		
	MLC-SP07 D032-M16-Z5	○	32	20.8	5	17	-	M16	-	40		
	MLC-SP07 D035-M16-Z5	○	35	23.8	5	17	-	M16	-	40		
Arbor	MLC-SP07 D040-F16-Z6	○	40	28.8	6	16	-	-	35	40		
	MLC-SP07 D042-F16-Z6	○	42	30.8	6	16	-	-	35	40		
	MLC-SP07 D050-F22-Z7	○	50	38.8	7	22	-	-	46	50		
	MLC-SP07 D052-F22-Z7	○	52	40.8	7	22	-	-	46	50		

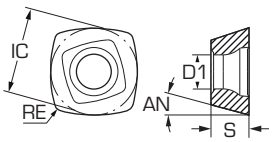
Unit: mm

● stock standard ○ non-standard stock

	TORX SCREW	FLAG WRENCH
		
MLC-SP07 D...	M3L85T10	WF-T10

SDMT high-feed

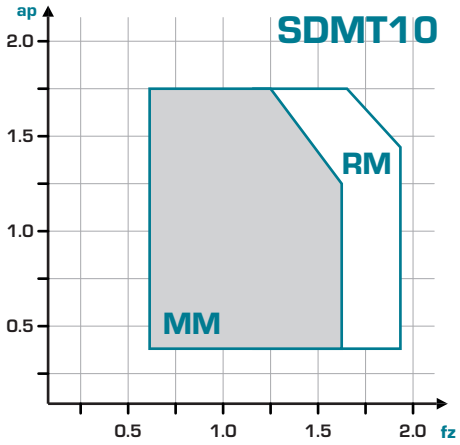
- Positive square high-feed inserts with four edges
- Two chipbreakers and high performance PVD and CVD grades for multipurpose application



Dimensions

Size	IC	S	D1	AN
SDMT10	10	4.76	4	15°

Unit: mm



	Grades									
	CVM35	CVP20	PVK25	PVM30	PVM40	PVP25	PVP30			
	Materials - Vc (m/min)									
P		★ 140÷340				★ 100÷240	★ 80÷220			
M	★ 140÷260			★ 80÷200	★ 60÷180					
K		☆ 120÷300	★ 100÷240							
N										
S	★ 40÷80			★ 30÷60						
H										

APPLICATION	DESIGNATION	RE	ap	fz	Stock									
MM	SDMT1004HF-MM	10.0	0.30÷1.70	0.60÷1.60	○	○	○	○	○	○	○			
 general machining														
RM	SDMT1004HF-RM	10.0	0.30÷1.70	0.70÷1.70			○			○	○			
 heavy machining														

ap: depth of cut (mm) - fz: feed rate per tooth (mm)

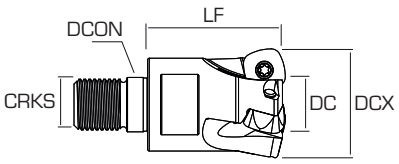
● stock standard ○ non-standard stock

cutting parameters: page 36

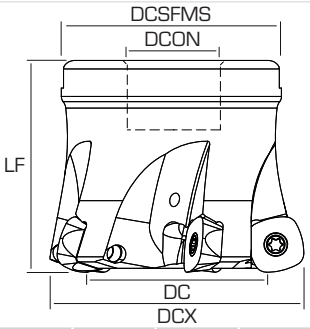
MLC-SD10 high-feed

- Milling cutters for SDMT positive inserts, with internal coolant holes
- Available with arbor mounting and screw-on modular type

Screw-on



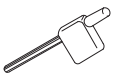
Arbor



DESIGNATION		Stock	DCX	DC	ZEFP	DCON	LU	CRKS	DCSFMS	LF		
Holder R												
Screw-on	MLC-SD10 D035-M16-Z4	○	35	19.6	4	17	-	M16	-	40		
	MLC-SD10 D042-M16-Z5	○	42	26.6	5	17	-	M16	-	40		
Arbor	MLC-SD10 D050-F22-Z6	○	50	34.6	6	22	-	-	47	50		
	MLC-SD10 D052-F22-Z6	○	52	36.6	6	22	-	-	47	50		
	MLC-SD10 D063-F22-Z7	○	63	47.6	7	22	-	-	58	50		
	MLC-SD10 D066-F27-Z7	○	66	50.6	7	27	-	-	60	50		
	MLC-SD10 D080-F27-Z8	○	80	64.6	8	27	-	-	65	50		

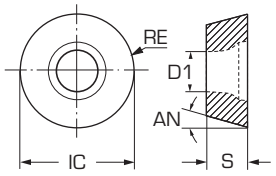
Unit: mm

● stock standard ○ non-standard stock

	TORX SCREW	FLAG WRENCH
		
MLC-SD10 D...	M35L89T15	WF-T15

RDHX copying

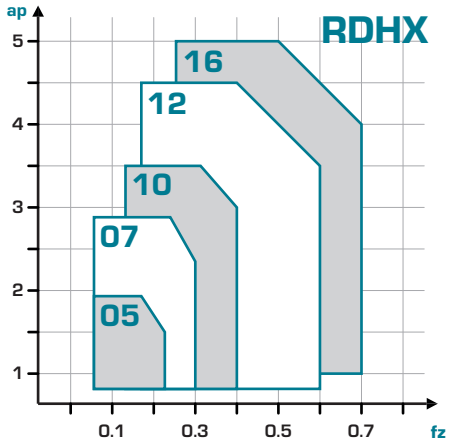
- Positive round copying inserts with fully ground periphery
- Flat and chipbreaker types, combined with high performance PVD coated carbide grades



Dimensions

Size	IC	S	D1	AN
RDHX05	5	1.51	2.2	15°
RDHX07	7	2.38	2.8	15°
RDHX10	10	3.18	3.8	15°
RDHX12	12	4.76	4.4	15°
RDHX16	16	4.76	5	15°

Unit: mm



	Grades									
	PVK25	PVM30	PVP25	PVP30						
	Materials - Vc (m/min)									
P			★ 100÷240	★ 80÷220						
M		★ 80÷200								
K	★ 100÷240									
N										
S		★ 30÷60								
H										

APPLICATION	DESIGNATION	RE	ap	fz	Stock									
MM	RDHX1003M0E-MM	5.0	0.50÷3.50	0.12÷0.38		●	●	●						
	RDHX1204M0E-MM	6.0	0.50÷4.50	0.18÷0.52		●	●	●						
	RDHX1604M0E-MM	8.0	1.00÷5.00	0.25÷0.65		●	●	●						
general machining														
Flat	RDHX0501M0E	2.5	0.30÷1.70	0.08÷0.22	●		●	●						
	RDHX0702M0T	3.5	0.30÷2.70	0.08÷0.30	●		●	●						
	RDHX1003M0T	5.0	0.50÷3.50	0.14÷0.40	●		●	●						
	RDHX1204M0T	6.0	0.50÷4.50	0.20÷0.60	●		●	●						
	RDHX1604M0T	8.0	1.00÷5.00	0.30÷0.70	●		●	●						
stronger edge														

ap: depth of cut (mm) - fz: feed rate per tooth (mm)

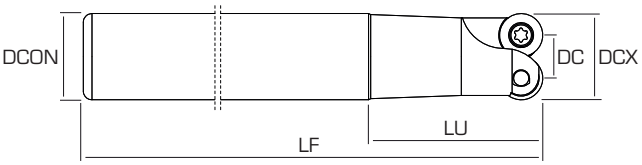
● stock standard ○ non-standard stock

cutting parameters: page 36

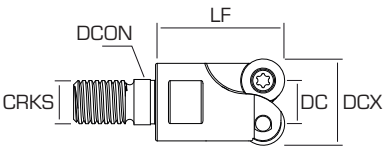
MLC-RD copying

- Milling cutters for RDHX positive inserts, with internal coolant holes
- Available with cilindrycal shank, arbor mounting and screw-on modular type

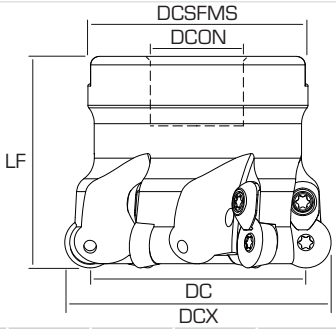
Cylindrical



Screw-on



Arbor



DESIGNATION		Stock	DCX	DC	ZEFP	DCON	LU	CRKS	DCSFMS	LF		
Holder R												
Cylindrical	MLC-RD05 D010-S10-Z2	○	10	5	2	10	18	-	-	100		
	MLC-RD05 D012-S12-Z3	○	12	7	3	12	22	-	-	100		
	MLC-RD05 D016-S16-Z4	○	16	11	4	16	30	-	-	150		
	MLC-RD07 D016-S16-Z2	○	16	9	2	16	25	-	-	150		
	MLC-RD07 D017-S16-Z2	○	17	10	2	16	20	-	-	150		
	MLC-RD07 D020-S20-Z3	○	20	13	3	20	35	-	-	150		
	MLC-RD07 D025-S25-Z5	○	25	18	5	25	40	-	-	150		
	MLC-RD10 D020-S20-Z2	○	20	10	2	20	40	-	-	150		
	MLC-RD10 D025-S25-Z3	○	25	15	3	25	40	-	-	150		
	MLC-RD10 D032-S32-Z3	○	32	22	3	32	40	-	-	150		
Screw-on	MLC-RD05 D012-M06-Z3	○	12	7	3	6.5	-	M6	-	18		
	MLC-RD05 D016-M08-Z4	○	16	11	4	8.5	-	M8	-	23		
	MLC-RD07 D016-M08-Z3	○	16	9	3	8.5	-	M8	-	23		
	MLC-RD07 D020-M10-Z3	○	20	13	3	10.5	-	M10	-	30		
	MLC-RD07 D025-M12-Z4	○	25	18	4	12.5	-	M12	-	35		
	MLC-RD07 D035-M16-Z6	○	35	28	6	17	-	M16	-	43		

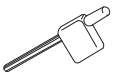
Unit: mm

● stock standard ○ non-standard stock

DESIGNATION		Stock	DCX	DC	ZEFP	DCON	LU	CRKS	DCSFMS	LF		
Screw-on	MLC-RD10 D020-M10-Z2	○	20	10	2	10.5	-	M10	-	30		
	MLC-RD10 D025-M12-Z3	○	25	15	3	12.5	-	M12	-	35		
	MLC-RD10 D032-M16-Z3	○	32	22	3	17	-	M16	-	43		
	MLC-RD10 D035-M16-Z4	○	35	25	4	17	-	M16	-	43		
	MLC-RD10 D040-M16-Z4	○	40	30	4	17	-	M16	-	43		
Arbor	MLC-RD10 D042-F16-Z5	○	42	32	5	16	-	-	35	40		
	MLC-RD10 D052-F22-Z6	○	52	42	6	22	-	-	46	40		
	MLC-RD12 D042-F16-Z4	○	42	30	4	16	-	-	38	50		
	MLC-RD12 D050-F22-Z4	○	50	38	4	22	-	-	46	50		
	MLC-RD12 D050-F22-Z5	○	50	38	5	22	-	-	46	50		
	MLC-RD12 D052-F22-Z5	○	52	40	5	22	-	-	46	50		
	MLC-RD12 D063-F22-Z5	○	63	51	5	22	-	-	52	50		
	MLC-RD12 D063-F22-Z6	○	63	51	6	22	-	-	52	50		
	MLC-RD12 D066-F22-Z6	○	66	54	6	22	-	-	56	50		
	MLC-RD12 D080-F27-Z7	○	80	68	7	27	-	-	60	50		
	MLC-RD16 D063-F22-Z5	○	63	47	5	22	-	-	52	50		
	MLC-RD16 D080-F27-Z5	○	80	64	5	27	-	-	60	50		
	MLC-RD16 D080-F27-Z6	○	80	64	6	27	-	-	60	50		
	MLC-RD16 D100-F32-Z7	○	100	84	7	32	-	-	70	50		

Unit: mm

● stock standard ○ non-standard stock

	TORX SCREW	FLAG WRENCH	CLAMPING SET
			
MLC-RD05 D...	M2L47T6	WF-T6	-
MLC-RD07 D...	M25L53T8	WF-T8	-
MLC-RD10 D...	M35L89T15	WF-T15	-
MLC-RD10 DCX≥32	M35L89T15	WF-T15	CS150M4T15
MLC-RD12 D...	M4L90T15	WF-T15	CS150M4T15
MLC-RD16 D...	M45L111T15	WF-T15	CS150M4T15

			GRADES							
			CVK20	CVM35	CVP20	PVK25	PVM30	PVM40	PVP25	PVP30
ISO P	Structural steel, free cutting steel, low carbon steel	<200 HB			☆ 180÷340				★ 120÷240	★ 100÷220
	Medium carbon steel, high carbon steel, medium alloy steel	<250 HB			★ 160÷300				★ 100÷220	★ 80÷200
	Alloy steel, tool steel	<300 HB			★ 140÷260				☆ 100÷200	★ 80÷160
	Martensitic and ferritic stainless steel	<300 HB		★ 160÷260			★ 80÷200	☆ 60÷180		
ISO M	Austenitic stainless steel	<200 HB		★ 160÷240			★ 80÷180	★ 60÷160		
	Duplex stainless steel	<250 HB		★ 140÷200			★ 80÷160	★ 60÷140		
ISO K	Grey cast iron		★ 180÷350		☆ 160÷300	★ 120÷240				
	Nodular cast iron		☆ 120÷260		☆ 120÷240	★ 100÷200				
ISO S	Nickel base HRSA	<450 HB		★ 40÷80			☆ 30÷60			
	Titanium alloy	<400 HB					★ 30÷60			

★ 1st choice ☆ suitable

SOLID TOOLS

Flute helix angle

Flute helix angle

Square type

Ball nose type

2 flutes

3 flutes

4 flutes variable pitch

Slot milling

Vertical milling

Helical milling

Ramp milling

Flute helix angle

Variable flute helix angle

45° chamfer type

Roughing fine pitch

2 flutes ball nose

4 flutes

6 flutes

Side milling

Plunge milling

Trochoidal milling

Copy milling

DIN6537K - 3xD

DIN6537L - 5xD

3xD drilling length

5xD drilling length

Point angle

Flute helix angle

General purpose

General purpose - internal coolant

Low cutting force - internal coolant

PVD coated micrograin carbide

Carbide End Mills

CEM-HMR4

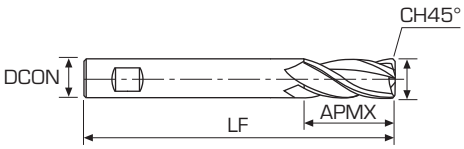
- 4 flutes, variable helix, variable pitch, standard length, weldon shank
- High productivity solution for multiple milling strategies

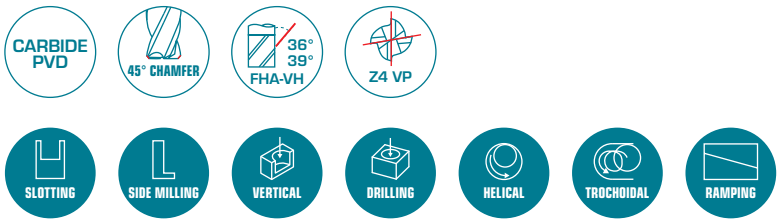
Materials - Vc (m/min)

P	M	K	N	S	H
★ 60÷150	★ 60÷150	★ 60÷150		★ 30÷80	

cutting parameters: page 50

★ 1st choice ☆ suitable





DESIGNATION	Stock	DC	CHW45°	DCON (h6)	APMX	LF	ZEFP
CEM-HMR4 0300-050/009-W06	●	3.00	0.1	6	9	50	4
CEM-HMR4 0400-057/011-W06	●	4.00	0.1	6	11	57	4
CEM-HMR4 0500-057/013-W06	●	5.00	0.1	6	13	57	4
CEM-HMR4 0600-057/013-W06	●	6.00	0.1	6	13	57	4
CEM-HMR4 0800-064/020-W08	●	8.00	0.2	8	20	64	4
CEM-HMR4 1000-072/022-W10	●	10.00	0.2	10	22	72	4
CEM-HMR4 1200-083/026-W12	●	12.00	0.2	12	26	83	4
CEM-HMR4 1400-083/025-W14	●	14.00	0.2	14	25	83	4
CEM-HMR4 1600-092/032-W16	●	16.00	0.2	16	32	92	4
CEM-HMR4 2000-104/038-W20	●	20.00	0.2	20	38	104	4

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

DC (mm)	1÷3	3.1÷6	6.1÷10	10.1÷12	12.1÷20
DC tol.	0/-20	0/-20	0/-20	0/-20	0/-20
DCON h6 tol.	0/-6	0/-8	0/-9	0/-11	0/-11

CEM-G20F

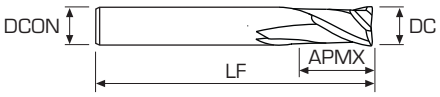
- 2 flutes, standard length, cylindrical shank
- General purpose solution for a wide range of application

Materials - Vc (m/min)

P	M	K	N	S	H
★ 30÷100	☆ 30÷70	★ 30÷100	☆ 100÷120		

cutting parameters: page 54

★ 1st choice ☆ suitable



DESIGNATION	Stock	DC	DCON (h6)	APMX	LF	ZEFP	
CEM-G20F 0100-050/003-S04	●	1.00	4	3	50	2	
CEM-G20F 0150-050/004-S04	●	1.50	4	4	50	2	
CEM-G20F 0200-050/006-S04	●	2.00	4	6	50	2	
CEM-G20F 0250-050/007-S04	●	2.50	4	7	50	2	
CEM-G20F 0300-050/008-S04	●	3.00	4	8	50	2	
CEM-G20F 0400-050/011-S04	●	4.00	4	11	50	2	
CEM-G20F 0500-050/013-S06	●	5.00	6	13	50	2	
CEM-G20F 0600-050/015-S06	●	6.00	6	15	50	2	
CEM-G20F 0800-060/020-S08	●	8.00	8	20	60	2	
CEM-G20F 1000-075/030-S10	●	10.00	10	30	75	2	
CEM-G20F 1200-075/030-S12	●	12.00	12	30	75	2	
CEM-G20F 1400-083/026-S14	●	14.00	14	26	83	2	
CEM-G20F 1600-092/032-S16	●	16.00	16	32	92	2	
CEM-G20F 1800-100/040-S20	●	18.00	20	40	100	2	
CEM-G20F 2000-100/040-S20	●	20.00	20	40	100	2	

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

DC (mm)	1÷3	3.1÷6	6.1÷10	10.1÷12	12.1÷20
DC tol.	0/-20	0/-20	0/-25	0/-25	0/-30
DCON h6 tol.	0/-6	0/-8	0/-9	0/-11	0/-11

CEM-G30F

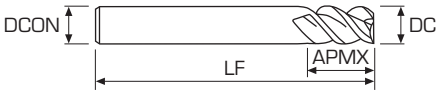
- 3 flutes, standard length, cylindrical shank
- General purpose solution for a wide range of application

Materials - Vc (m/min)

P	M	K	N	S	H
★ 30÷100	☆ 30÷70	★ 30÷100	☆ 100÷120		

cutting parameters: page 54

★ 1st choice ☆ suitable



DESIGNATION	Stock	DC	DCON (h6)	APMX	LF	ZEFP	
CEM-G30F 0100-050/003-S04	●	1.00	4	3	50	3	
CEM-G30F 0150-050/004-S04	●	1.50	4	4	50	3	
CEM-G30F 0200-050/006-S04	●	2.00	4	6	50	3	
CEM-G30F 0250-050/007-S04	●	2.50	4	7	50	3	
CEM-G30F 0300-050/008-S04	●	3.00	4	8	50	3	
CEM-G30F 0400-050/011-S04	●	4.00	4	11	50	3	
CEM-G30F 0500-050/013-S06	●	5.00	6	13	50	3	
CEM-G30F 0600-050/015-S06	●	6.00	6	15	50	3	
CEM-G30F 0800-060/020-S08	●	8.00	8	20	60	3	
CEM-G30F 1000-075/030-S10	●	10.00	10	30	75	3	
CEM-G30F 1200-075/030-S12	●	12.00	12	30	75	3	
CEM-G30F 1400-083/026-S14	●	14.00	14	26	83	3	
CEM-G30F 1600-092/032-S16	●	16.00	16	32	92	3	
CEM-G30F 1800-100/040-S20	●	18.00	20	40	100	3	
CEM-G30F 2000-100/040-S20	●	20.00	20	40	100	3	

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

DC (mm)	1÷3	3.1÷6	6.1÷10	10.1÷12	12.1÷20
DC tol.	0/-20	0/-20	0/-25	0/-25	0/-30
DCON h6 tol.	0/-6	0/-8	0/-9	0/-11	0/-11

CEM-G40F

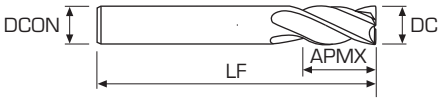
- 4 flutes, standard and long length available, cylindrical shank
- General purpose solution for a wide range of application

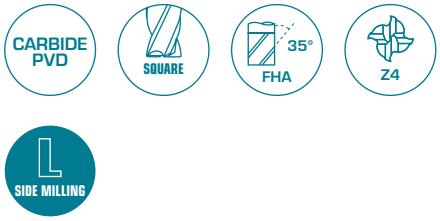
Materials - Vc (m/min)

P	M	K	N	S	H
★ 30÷100	☆ 30÷70	★ 30÷100	☆ 100÷120		

cutting parameters: page 56

★ 1st choice ☆ suitable





DESIGNATION	Stock	DC	DCON (h6)	APMX	LF	ZEFP	
CEM-G40F 0100-050/003-S04	●	1.00	4	3	50	4	
CEM-G40F 0150-050/004-S04	●	1.50	4	4	50	4	
CEM-G40F 0200-050/006-S04	●	2.00	4	6	50	4	
CEM-G40F 0200-075/009-S04	●	2.00	4	9	75	4	
CEM-G40F 0250-050/007-S04	●	2.50	4	7	50	4	
CEM-G40F 0300-050/008-S04	●	3.00	4	8	50	4	
CEM-G40F 0300-075/015-S04	●	3.00	4	15	75	4	
CEM-G40F 0400-050/011-S04	●	4.00	4	11	50	4	
CEM-G40F 0400-075/020-S04	●	4.00	4	20	75	4	
CEM-G40F 0500-050/013-S06	●	5.00	6	13	50	4	
CEM-G40F 0500-075/025-S06	●	5.00	6	25	75	4	
CEM-G40F 0600-050/015-S06	●	6.00	6	15	50	4	
CEM-G40F 0600-075/025-S06	●	6.00	6	25	75	4	
CEM-G40F 0600-100/030-S06	●	6.00	6	30	100	4	
CEM-G40F 0800-060/020-S08	●	8.00	8	20	60	4	
CEM-G40F 0800-100/035-S08	●	8.00	8	35	100	4	
CEM-G40F 1000-075/030-S10	●	10.00	10	30	75	4	
CEM-G40F 1000-100/040-S10	●	10.00	10	40	100	4	
CEM-G40F 1200-075/030-S12	●	12.00	12	30	75	4	
CEM-G40F 1200-100/045-S12	●	12.00	12	45	100	4	
CEM-G40F 1400-083/026-S14	●	14.00	14	26	83	4	
CEM-G40F 1600-092/032-S16	●	16.00	16	32	92	4	
CEM-G40F 1800-100/040-S20	●	18.00	20	40	100	4	
CEM-G40F 2000-100/040-S20	●	20.00	20	40	100	4	

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

DC (mm)	1÷3	3.1÷6	6.1÷10	10.1÷12	12.1÷20
DC tol.	0/-20	0/-20	0/-25	0/-25	0/-30
DCON h6 tol.	0/-6	0/-8	0/-9	0/-11	0/-11

CEM-G60F

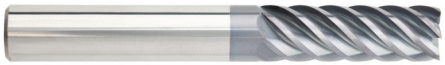
- 6 flutes, standard length, cylindrical shank
- General purpose solution for a wide range of application

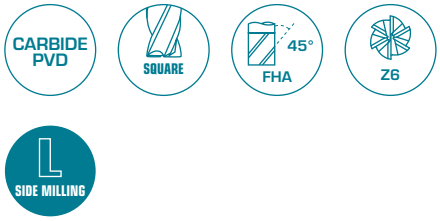
Materials - Vc (m/min)

P	M	K	N	S	H
★ 50÷120	☆ 50÷90	★ 50÷120			

cutting parameters: page 56

★ 1st choice ☆ suitable





DESIGNATION	Stock	DC	DCON (h6)	APMX	LF	ZEFP	
CEM-G60F 0600-050/015-S06	●	6.00	6	15	50	6	
CEM-G60F 0800-060/020-S08	●	8.00	8	20	60	6	
CEM-G60F 1000-075/030-S10	●	10.00	10	30	75	6	
CEM-G60F 1200-075/030-S12	●	12.00	12	30	75	6	

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

DC (mm)	1÷3	3.1÷6	6.1÷10	10.1÷12	12.1÷20
DC tol.	0/-20	0/-20	0/-25	0/-25	0/-30
DCON h6 tol.	0/-6	0/-8	0/-9	0/-11	0/-11

CEM-GHR

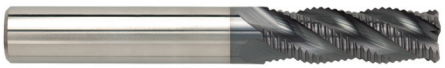
- HR roughing, standard length cylindrical shank
- General purpose solution for a wide range of application

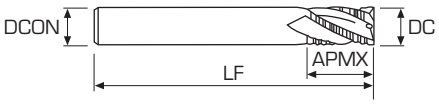
Materials - Vc (m/min)

P	M	K	N	S	H
★ 30÷90	☆ 30÷70	★ 30÷90			

cutting parameters: page 58

★ 1st choice ☆ suitable





DESIGNATION	Stock	DC	DCON (h6)	APMX	LF	ZEFP	
CEM-GHR3 0600-050/015-S06	●	6.00	6	15	50	3	
CEM-GHR3 0800-060/020-S08	●	8.00	8	20	60	3	
CEM-GHR4 1000-075/030-S10	●	10.00	10	30	75	4	
CEM-GHR4 1200-075/030-S12	●	12.00	12	30	75	4	
CEM-GHR4 1400-083/030-S14	●	14.00	14	30	83	4	
CEM-GHR4 1600-092/035-S16	●	16.00	16	35	92	4	
CEM-GHR4 2000-100/040-S20	●	20.00	20	40	100	4	

Unit: mm

● stock standard ○ non-standard stock

Tolerance (μ)

DC (mm)	1÷3	3.1÷6	6.1÷10	10.1÷12	12.1÷20
DC tol.	0/-70	0/-70	0/-70	0/-70	0/-70
DCON h6 tol.	0/-6	0/-8	0/-9	0/-11	0/-11

CEM-G20B

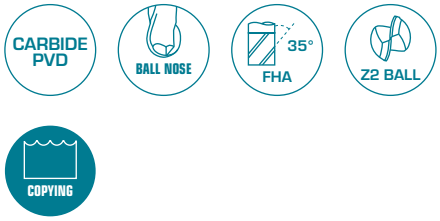
- Ball nose, standard length, cylindrical shank
- General purpose solution for a wide range of application

Materials - Vc (m/min)

P	M	K	N	S	H
★ 40÷100	☆ 40÷80	★ 40÷100	☆ 110÷130		

cutting parameters: page 58

★ 1st choice ☆ suitable



DESIGNATION	Stock	DC	RE	DCON (h6)	APMX	LF	ZEFP
CEM-G20B 0100-050/002-S04	●	1.00	0.5	4	2	50	2
CEM-G20B 0150-050/003-S04	●	1.50	0.75	4	3	50	2
CEM-G20B 0200-050/004-S04	●	2.00	1	4	4	50	2
CEM-G20B 0200-075/004-S04	●	2.00	1	4	4	75	2
CEM-G20B 0250-050/005-S04	●	2.50	1.25	4	5	50	2
CEM-G20B 0300-050/006-S04	●	3.00	1.5	4	6	50	2
CEM-G20B 0300-075/006-S04	●	3.00	1.5	4	6	75	2
CEM-G20B 0400-050/008-S04	●	4.00	2	4	8	50	2
CEM-G20B 0400-075/008-S04	●	4.00	2	4	8	75	2
CEM-G20B 0500-050/010-S06	●	5.00	2.5	6	10	50	2
CEM-G20B 0500-075/010-S06	●	5.00	2.5	6	10	75	2
CEM-G20B 0600-050/012-S06	●	6.00	3	6	12	50	2
CEM-G20B 0600-100/012-S06	●	6.00	3	6	12	100	2
CEM-G20B 0800-060/016-S08	●	7.00	3.5	8	16	60	2
CEM-G20B 0800-100/016-S08	●	7.00	3.5	8	16	100	2
CEM-G20B 1000-075/020-S10	●	10.00	5	10	20	75	2
CEM-G20B 1000-100/020-S10	●	10.00	5	10	20	100	2
CEM-G20B 1200-075/024-S12	●	12.00	6	12	24	75	2
CEM-G20B 1200-100/024-S12	●	12.00	6	12	24	100	2

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

DC (mm)	1÷3	3.1÷6	6.1÷10	10.1÷12	12.1÷20
DC tol.	0/-20	0/-20	0/-25	0/-25	0/-30
RE tol.	0/-15	0/-15	0/-15	0/-15	0/-15
DCON h6 tol.	0/-6	0/-8	0/-9	0/-11	0/-11

CEM-HMR4
Z4 VH/VP

			MILLING STRATEGY	ap x ae	Vc (m/min)
ISO P	Structural steel, free cutting steel, low carbon steel		SLOTTING	ap ≤ D*	140÷160
			SIDE MILLING	ap ≤ 1.5D	160÷180
				ae ≤ 0.5D	
			TROCHOIDAL	ap ≤ 2D	200÷240
				ae ≤ 0.2D	
			HELICAL	α° ≤ 5°	140÷160
				ae ≤ 0.4D	
			DRILLING	ap ≤ D	100÷120
				ae ≤ D	
	Medium carbon steel, high carbon steel, medium alloy steel	<30HRC	SLOTTING	ap ≤ D*	90÷110
			SIDE MILLING	ap ≤ 1.5D	110÷130
				ae ≤ 0.5D	
			TROCHOIDAL	ap ≤ 2D	140÷160
				ae ≤ 0.2D	
			HELICAL	α° ≤ 4°	80÷100
				ae ≤ 0.4D	
			DRILLING	ap ≤ D	60÷80
				ae ≤ D	
	Alloy steel, Tool steel	<40HRC	SLOTTING	ap ≤ 0.5D	60÷80
			SIDE MILLING	ap ≤ 1.2D	70÷90
				ae ≤ 0.3D	
			TROCHOIDAL	ap ≤ 2D	100÷120
				ae ≤ 0.2D	
			HELICAL	α° ≤ 3°	60÷80
				ae ≤ 0.4D	
			DRILLING	ap ≤ D	40÷60
				ae ≤ D	
ISO M	Austenitic Stainless steel		SLOTTING	ap ≤ 0.5D	60÷80
			SIDE MILLING	ap ≤ 1.2D	70÷90
				ae ≤ 0.3D	
			TROCHOIDAL	ap ≤ 2D	100÷120
				ae ≤ 0.2D	
			HELICAL	α° ≤ 3°	60÷80
				ae ≤ 0.4D	
			DRILLING	ap ≤ D	40÷60
				ae ≤ D	

*Dc < 3: ap < 0.5D

	ø (mm)													
	1	2	3	4	5	6	8	10	12	14	16	18	20	
n	47780	23890	15930	11950	9560	7970	5980	4780	3990	3420	2990	2660	2390	ISO P
Vf	960	960	900	910	880	870	840	810	770	740	720	710	700	
n	54150	27080	18050	13540	10830	9030	6770	5420	4520	3870	3390	3010	2710	
Vf	1300	1300	1230	1200	1220	1160	1140	1090	1050	1010	980	960	960	
n	70070	35040	23360	17520	14020	11680	8760	7010	5840	5010	4380	3900	3510	
Vf	3650	3510	3280	3230	3260	3180	3090	2950	2810	2710	2630	2580	2570	
n	47780	23890	15930	11950	9560	7970	5980	4780	3990	3420	2990	2660	2390	
Vf	770	670	640	630	660	640	598000	600	560	540	530	520	510	
n	35040	17520	11680	8760	7010	5840	4380	3510	2920	2510	2190	1950	1760	
Vf	430	360	330	320	340	330	320	300	290	280	270	260	270	
n	31850	15930	10620	7970	6370	5310	3990	3190	2660	2280	2000	1770	1600	
Vf	640	580	560	550	540	510	520	490	460	450	440	420	430	
n	38220	15930	10620	7970	6370	5310	3990	3190	2660	2280	2000	1770	1600	
Vf	770	710	640	640	640	620	610	580	560	530	520	510	510	
n	47780	23890	15930	11950	9560	7970	5980	4780	3990	3420	2990	2660	2390	
Vf	2110	2200	2040	2010	1990	1950	1890	1820	1730	1670	1620	1590	1570	
n	28670	14340	9560	7170	5740	4780	3590	2870	2390	2050	1800	1600	1440	
Vf	350	410	390	380	370	350	350	340	320	310	300	290	290	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	180	180	180	180	180	180	180	170	170	160	160	150	150	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	360	360	330	320	310	300	300	290	270	270	260	250	250	
n	25480	12740	8500	6370	5100	4250	3190	2550	2130	1820	1600	1420	1280	
Vf	510	510	450	460	450	450	440	410	400	380	380	360	360	
n	35040	17520	11680	8760	7010	5840	4380	3510	2920	2510	2190	1950	1760	
Vf	1410	1410	1310	1300	1290	1270	1230	1180	1130	1090	1060	1030	1030	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	270	270	240	250	250	240	240	230	220	210	210	200	200	
n	15930	7970	5310	3990	3190	2660	2000	1600	1330	1140	1000	890	800	
Vf	130	130	130	120	120	120	120	110	110	110	100	100	100	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	ISO M
Vf	360	360	330	320	310	300	300	290	270	270	260	250	250	
n	25480	12740	8500	6370	5100	4250	3190	2550	2130	1820	1600	1420	1280	
Vf	510	510	450	460	450	450	440	410	400	380	380	360	360	
n	35040	15930	10620	7970	6370	5310	3990	3190	2660	2280	2000	1770	1600	
Vf	1410	1280	1190	1180	1180	1150	1120	1080	1030	990	960	940	940	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	270	270	240	250	250	240	240	230	220	210	210	200	200	
n	15930	7970	5310	3990	3190	2660	2000	1600	1330	1140	1000	890	800	
Vf	130	130	130	120	120	120	120	110	110	110	100	100	100	

CEM-HMR4
Z4 VH/VP

			MILLING STRATEGY	ap x ae	Vc (m/min)
ISO K	Grey cast iron		SLOTTING	ap ≤ D	130÷150
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.5D	160÷180
			TROCHOIDAL	ap ≤ 2D ae ≤ 0.2D	190÷230
			HELICAL	α° ≤ 5° ae ≤ 0.4D	140÷160
			DRILLING	ap ≤ D ae ≤ D	100÷120
	Nodular cast iron		SLOTTING	ap ≤ D	80÷100
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.5D	100÷120
			TROCHOIDAL	ap ≤ 2D ae ≤ 0.2D	130÷150
			HELICAL	α° ≤ 4° ae ≤ 0.4D	80÷100
			DRILLING	ap ≤ D ae ≤ D	60÷80
ISO S	Ni HRSA	<35HRC	SLOTTING	ap ≤ 0.5D	60÷80
			SIDE MILLING	ap ≤ 1.2D ae ≤ 0,3D	70÷90
			TROCHOIDAL	ap ≤ 2D ae ≤ 0.2D	100÷120
			HELICAL	α° ≤ 3° ae ≤ 0.4 D	60÷80
			DRILLING	ap ≤ 0.5 D ae ≤ D	40÷60
	Ti HRSA		SLOTTING	ap ≤ 0.5D	30÷50
			SIDE MILLING	ap ≤ 1.2D ae ≤ 0.3D	40÷60
			TROCHOIDAL	ap ≤ 2D ae ≤ 0.2D	50÷70
			HELICAL	α° ≤ 3° ae ≤ 0.4D	30÷50
			DRILLING	ap ≤ 0.5D ae ≤ D	20÷40

*Dc < 3: ap < 0.5D

	ø (mm)													
	1	2	3	4	5	6	8	10	12	14	16	18	20	
n	44590	22300	14870	11150	8920	7440	5580	4460	3720	3190	2790	2480	2230	ISO K
Vf	900	900	840	850	830	810	790	750	720	690	670	660	660	
n	54150	27080	18050	13540	10830	9030	6770	5420	4520	3870	3390	3010	2710	
Vf	1300	1300	1230	1200	1220	1160	1140	1090	1050	1010	980	960	960	
n	66880	33440	22300	16720	13380	11150	8360	6690	5580	4780	4180	3720	3350	
Vf	3480	3350	3130	3080	3110	3040	2950	2810	2680	2590	2510	2460	2460	
n	47780	23890	15930	11950	9560	7970	5980	4780	3990	3420	2990	2660	2390	
Vf	770	670	640	630	660	640	598000	600	560	540	530	520	510	
n	35040	17520	11680	8760	7010	5840	4380	3510	2920	2510	2190	1950	1760	
Vf	430	360	330	320	340	330	320	300	290	280	270	260	270	
n	28670	14340	9560	7170	5740	4780	3590	2870	2390	2050	1800	1600	1440	
Vf	580	520	500	490	490	460	460	440	420	410	390	380	390	
n	35040	17520	11680	8760	7010	5840	4380	3510	2920	2510	2190	1950	1760	
Vf	710	780	710	710	710	680	670	640	610	590	570	560	560	
n	44590	22300	14870	11150	8920	7440	5580	4460	3720	3190	2790	2480	2230	
Vf	1970	2060	1910	1880	1860	1820	1770	1700	1610	1560	1510	1480	1470	
n	28670	14340	9560	7170	5740	4780	3590	2870	2390	2050	1800	1600	1440	
Vf	350	410	390	380	370	350	350	340	320	310	300	290	290	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	180	180	180	180	180	180	180	170	170	160	160	150	150	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	ISO S
Vf	360	360	330	320	310	300	300	290	270	270	260	250	250	
n	25480	12740	8500	6370	5100	4250	3190	2550	2130	1820	1600	1420	1280	
Vf	510	510	450	460	450	450	440	410	400	380	380	360	360	
n	35040	17520	11680	8760	7010	5840	4380	3510	2920	2510	2190	1950	1760	
Vf	1410	1410	1310	1300	1290	1270	1230	1180	1130	1090	1060	1030	1030	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	270	270	240	250	250	240	240	230	220	210	210	200	200	
n	15930	7970	5310	3990	3190	2660	2000	1600	1330	1140	1000	890	800	
Vf	130	130	130	120	120	120	120	110	110	110	100	100	100	
n	12740	6370	4250	3190	2550	2130	1600	1280	1070	910	800	710	640	
Vf	210	180	170	170	170	170	160	150	150	140	140	140	140	
n	15930	7970	5310	3990	3190	2660	2000	1600	1330	1140	1000	890	800	
Vf	450	420	390	390	390	390	370	360	340	330	320	310	310	
n	19110	9560	6370	4780	3830	3190	2390	1920	1600	1370	1200	1070	960	
Vf	1080	1080	1000	980	970	950	920	900	850	820	800	780	780	
n	12740	6370	4250	3190	2550	2130	1600	1280	1070	910	800	710	640	
Vf	160	160	140	130	140	130	130	130	120	110	110	110	110	
n	9560	4780	3190	2390	1920	1600	1200	960	800	690	600	540	480	
Vf	120	120	110	100	100	100	100	90	90	90	80	80	80	

CEM-G20F
Z2

			MILLING STRATEGY	ap x ae	Vc (m/min)
ISO P	Structural steel, free cutting steel, low carbon steel		SLOTTING	ap ≤ 0.5D	90÷110
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.5D	90÷110
	Carbon steel, medium alloy steel	<35 HRC	SLOTTING	ap ≤ 0.5D	60÷80
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.5D	60÷80
	Alloy steel, tool steel	<45 HRC	SLOTTING	ap ≤ 0.5D	40÷60
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.5D	40÷60
ISO M	Stainless steel		SLOTTING	ap ≤ 0.5D	50÷70
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.5D	50÷70
ISO K	Grey cast iron		SLOTTING	ap ≤ 0.5D	80÷100
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.5D	80÷100
	Nodular cast iron		SLOTTING	ap ≤ 0.5D	60÷80
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.5D	60÷80

CEM-G30F
Z3

			MILLING STRATEGY	ap x ae	Vc (m/min)
ISO P	Structural steel, free cutting steel, low carbon steel		SLOTTING	ap ≤ 0.5D	90÷110
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	90÷110
	Carbon steel, medium alloy steel	<35 HRC	SLOTTING	ap ≤ 0.5D	60÷80
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	60÷80
	Alloy steel, tool steel	<45 HRC	SLOTTING	ap ≤ 0.5D	40÷60
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	40÷60
ISO M	Stainless steel		SLOTTING	ap ≤ 0.5D	50÷70
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	50÷70
ISO K	Grey cast iron		SLOTTING	ap ≤ 0.5D	80÷100
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	80÷100
	Nodular cast iron		SLOTTING	ap ≤ 0.5D	60÷80
			SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	60÷80

	ø (mm)													
	1	2	3	4	5	6	8	10	12	14	16	18	20	
n	31850	15930	10620	7970	6370	5310	3990	3190	2660	2280	2000	1770	1600	ISO P
Vf	250	250	250	260	250	280	280	270	270	260	260	260	260	
n	31850	15930	10620	7970	6370	5310	3990	3190	2660	2280	2000	1770	1600	
Vf	390	390	400	400	400	400	400	390	390	380	370	360	350	
n	22300	11150	7440	5570	4460	3720	2790	2230	1860	1590	1400	1240	1120	
Vf	170	170	170	170	170	180	180	180	180	180	180	180	170	
n	22300	11150	7440	5570	4460	3720	2790	2230	1860	1590	1400	1240	1120	
Vf	220	220	220	220	220	220	220	230	220	220	220	220	230	
n	15930	7970	5310	3980	3190	2660	1990	1600	1330	1140	1000	890	800	
Vf	110	110	110	110	110	110	110	110	110	110	110	110	110	
n	15930	7970	5310	3980	3190	2660	1990	1600	1330	1140	1000	890	800	
Vf	140	140	140	140	140	140	140	150	150	150	150	150	150	
n	19110	9560	6380	4780	3820	3190	2390	1910	1590	1370	1200	1060	960	ISO M
Vf	130	130	130	130	130	130	130	130	130	130	130	130	130	
n	19110	9560	6380	4780	3820	3190	2390	1910	1590	1370	1200	1060	960	
Vf	170	170	170	170	170	170	170	170	170	170	170	170	170	
n	28670	14340	9560	7170	5740	4780	3590	2870	2390	2050	1800	1600	1440	ISO K
Vf	230	230	230	230	230	230	230	240	230	230	230	230	250	
n	28670	14340	9560	7170	5740	4780	3590	2870	2390	2050	1800	1600	1440	
Vf	340	340	340	340	340	340	340	350	340	340	340	330	330	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	170	170	170	170	170	170	170	170	170	170	170	170	180	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	230	230	230	230	230	230	230	220	220	220	220	220	220	

	ø (mm)													
	1	2	3	4	5	6	8	10	12	14	16	18	20	
n	31850	15930	10620	7970	6370	5310	3990	3190	2660	2280	2000	1770	1600	ISO P
Vf	375	375	375	390	375	420	420	405	405	390	390	390	390	
n	31850	15930	10620	7970	6370	5310	3990	3190	2660	2280	2000	1770	1600	
Vf	585	585	600	600	600	600	600	585	585	570	555	540	525	
n	22300	11150	7440	5570	4460	3720	2790	2230	1860	1590	1400	1240	1120	
Vf	255	255	255	255	255	270	270	270	270	270	270	270	255	
n	22300	11150	7440	5570	4460	3720	2790	2230	1860	1590	1400	1240	1120	
Vf	330	330	330	330	330	330	330	345	330	330	330	330	345	
n	15930	7970	5310	3980	3190	2660	1990	1600	1330	1140	1000	890	800	
Vf	165	165	165	165	165	165	165	165	165	165	165	165	165	
n	15930	7970	5310	3980	3190	2660	1990	1600	1330	1140	1000	890	800	
Vf	210	210	210	210	210	210	210	225	225	225	225	225	225	
n	19110	9560	6380	4780	3820	3190	2390	1910	1590	1370	1200	1060	960	ISO M
Vf	195	195	195	195	195	195	195	195	195	195	195	195	195	
n	19110	9560	6380	4780	3820	3190	2390	1910	1590	1370	1200	1060	960	
Vf	255	255	255	255	255	255	255	255	255	255	255	255	255	
n	28670	14340	9560	7170	5740	4780	3590	2870	2390	2050	1800	1600	1440	ISO K
Vf	345	345	345	345	345	345	345	360	345	345	345	345	375	
n	28670	14340	9560	7170	5740	4780	3590	2870	2390	2050	1800	1600	1440	
Vf	510	510	510	510	510	510	510	525	510	510	510	495	495	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	255	255	255	255	255	255	255	255	255	255	255	255	270	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	345	345	345	345	345	345	345	330	330	330	330	330	330	

CEM-G40F
Z4

			MILLING STRATEGY	ap x ae	Vc (m/min)
ISO P	Structural steel, free cutting steel, low carbon steel		SIDE MILLING	ap ≤ 1.5D ae ≤ 0.2D	90÷110
	Carbon steel, medium alloy steel	<35 HRC	SIDE MILLING	ap ≤ 1.5D ae ≤ 0.2D	60÷80
	Alloy steel, tool steel	<45 HRC	SIDE MILLING	ap ≤ 1.5D ae ≤ 0.2D	40÷60
ISO M	Stainless steel		SIDE MILLING	ap ≤ 1.5D ae ≤ 0.2D	50÷70
ISO K	Grey cast iron		SIDE MILLING	ap ≤ 1.5D ae ≤ 0.2D	80÷100
	Nodular cast iron		SIDE MILLING	ap ≤ 1.5D ae ≤ 0.2D	60÷80

CEM-G60F
Z6

			MILLING STRATEGY	ap x ae	Vc (m/min)
ISO P	Structural steel, free cutting steel, low carbon steel		SIDE MILLING	ap ≤ 1,5 D ae ≤ 0,1 D	90÷110
	Carbon steel, medium alloy steel	<35 HRC	SIDE MILLING	ap ≤ 1,5 D ae ≤ 0,1 D	60÷80
	Alloy steel, tool steel	<45 HRC	SIDE MILLING	ap ≤ 1,5 D ae ≤ 0,1 D	40÷60
ISO M	Stainless steel		SIDE MILLING	ap ≤ 1,5 D ae ≤ 0,1 D	50÷70
ISO K	Grey cast iron		SIDE MILLING	ap ≤ 1,5 D ae ≤ 0,1 D	80÷110
	Nodular cast iron		SIDE MILLING	ap ≤ 1,5 D ae ≤ 0,1 D	60÷80

	ø (mm)													
	1	2	3	4	5	6	8	10	12	14	16	18	20	
n	31850	15930	10620	7970	6370	5310	3990	3190	2660	2280	2000	1770	1600	ISO P
Vf	780	780	800	800	800	800	800	780	780	760	740	720	700	
n	22300	11150	7440	5570	4460	3720	2790	2230	1860	1590	1400	1240	1120	
Vf	440	440	440	440	440	440	440	460	440	440	440	440	460	
n	15930	7970	5310	3980	3190	2660	1990	1600	1330	1140	1000	890	800	
Vf	280	280	280	280	280	280	280	300	300	300	300	300	300	
n	19110	9560	6380	4780	3820	3190	2390	1910	1590	1370	1200	1060	960	ISO M
Vf	340	340	340	340	340	340	340	340	340	340	340	340	340	
n	28670	14340	9560	7170	5740	4780	3590	2870	2390	2050	1800	1600	1440	ISO K
Vf	680	680	680	680	680	680	680	700	680	680	680	660	660	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	460	460	460	460	460	460	460	440	440	440	440	440	440	

	ø (mm)							
	6	8	10	12	14	16	18	20	
n	5310	3990	3190	2660	2280	2000	1770	1600	ISO P
Vf	920	920	900	900	870	850	830	810	
n	3720	2790	2230	1860	1590	1400	1240	1120	
Vf	510	510	530	510	510	510	510	530	
n	2660	1990	1600	1330	1140	1000	890	800	
Vf	320	320	350	350	350	350	350	350	
n	3190	2390	1910	1590	1370	1200	1060	960	ISO M
Vf	390	390	390	390	390	390	390	390	
n	4780	3590	2870	2390	2050	1800	1600	1440	ISO K
Vf	780	780	810	780	780	780	760	760	
n	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	530	530	510	510	510	510	510	510	

CEM-GHR
Z3 ≤8 mm · Z4 ≥10 mm

			MILLING STRATEGY	ap x ae	Vc (m/min)
ISO P	Structural steel, free cutting steel, low carbon steel		SIDE MILLING	ap ≤ 1.5 D ae ≤ 0.3D	80÷100
	Carbon steel, medium alloy steel	<35 HRC	SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	60÷80
	Alloy steel, tool steel	<45 HRC	SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	40÷60
ISO M	Stainless steel		SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	50÷70
ISO K	Grey cast iron		SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	70÷90
	Nodular cast iron		SIDE MILLING	ap ≤ 1.5D ae ≤ 0.3D	50÷70

CEM-G20B
Z2 BALL

			MILLING STRATEGY	ap x ae	Vc (m/min)
ISO P	Structural steel, free cutting steel, low carbon steel		COPYING	ap ≤ 0.1D ae ≤ 0.1D	90÷110
	Carbon steel, medium alloy steel	<35 HRC	COPYING	ap ≤ 0.1D ae ≤ 0.1D	70÷90
	Alloy steel, tool steel	<45 HRC	COPYING	ap ≤ 0.1D ae ≤ 0.1D	50÷70
ISO M	Stainless steel		COPYING	ap ≤ 0.1D ae ≤ 0.1D	60÷80
ISO K	Grey cast iron		COPYING	ap ≤ 0.1D ae ≤ 0.1D	80÷100
	Nodular cast iron		COPYING	ap ≤ 0.1D ae ≤ 0.1D	60÷80

	ø (mm)							
	6	8	10	12	14	16	20	
n	4780	3590	2870	2390	2050	1800	1440	ISO P
Vf	540	620	830	830	840	840	840	
n	3720	2790	2230	1860	1590	1400	1120	
Vf	400	460	540	540	540	540	540	
n	2660	1990	1600	1330	1140	1000	800	
Vf	230	260	360	360	360	360	360	
n	3190	2390	1910	1590	1370	1200	960	ISO M
Vf	280	310	430	430	430	430	430	
n	4250	3190	2550	2120	1820	1600	1280	ISO K
Vf	480	540	720	720	720	720	720	
n	3190	2390	1910	1590	1370	1200	960	
Vf	380	410	550	550	550	550	550	

	ø (mm)												
	1	2	3	4	5	6	8	10	12	14	16	18	20	
n	31850	15930	10620	7970	6370	5310	3990	3190	2660	2280	2000	1770	1600	ISO P
Vf	1910	1270	1060	960	890	850	720	670	640	620	600	580	580	
n	25480	12740	8500	6370	5100	4250	3190	2550	2130	1820	1600	1420	1280	
Vf	1170	760	680	570	540	510	430	400	380	360	360	350	350	
n	19110	9560	6370	4780	3830	3190	2390	1920	1600	1370	1200	1070	960	
Vf	800	540	460	400	380	360	300	280	270	260	250	250	240	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	ISO M
Vf	1030	670	600	500	470	450	380	350	330	320	320	310	300	
n	28670	14340	9560	7170	5740	4780	3590	2870	2390	2050	1800	1600	1440	ISO K
Vf	1720	1150	960	860	800	760	650	600	570	550	540	530	520	
n	22300	11150	7440	5580	4460	3720	2790	2230	1860	1600	1400	1240	1120	
Vf	1030	670	600	500	470	450	380	350	330	320	320	310	300	

Carbide Drills

CDL-UN3

- Straight edges and corner protection improves stability
- Reliable performance on ISO P and ISO K materials

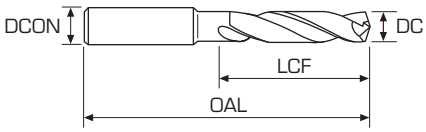
Materials - Vc (m/min)

P	M	K	N	S	H
★ 40÷120		★ 40÷100			

cutting parameters: page 74

★ 1st choice ☆ suitable

3xD | DIN 6537K | CARBIDE PVD | UN | FHA-30° | SIG-140°



DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN3 0300-062/020-S06	●	3.00	6	20	62
CDL-UN3 0310-062/020-S06	●	3.10	6	20	62
CDL-UN3 0320-062/020-S06	●	3.20	6	20	62
CDL-UN3 0330-062/020-S06	●	3.30	6	20	62
CDL-UN3 0340-062/020-S06	●	3.40	6	20	62
CDL-UN3 0350-062/020-S06	●	3.50	6	20	62
CDL-UN3 0360-062/020-S06	●	3.60	6	20	62
CDL-UN3 0370-062/020-S06	●	3.70	6	20	62
CDL-UN3 0380-066/024-S06	●	3.80	6	24	66
CDL-UN3 0390-066/024-S06	●	3.90	6	24	66
CDL-UN3 0400-066/024-S06	●	4.00	6	24	66
CDL-UN3 0410-066/024-S06	●	4.10	6	24	66
CDL-UN3 0420-066/024-S06	●	4.20	6	24	66
CDL-UN3 0430-066/024-S06	●	4.30	6	24	66
CDL-UN3 0440-066/024-S06	●	4.40	6	24	66
CDL-UN3 0450-066/024-S06	●	4.50	6	24	66
CDL-UN3 0460-066/024-S06	●	4.60	6	24	66
CDL-UN3 0470-066/024-S06	●	4.70	6	24	66
CDL-UN3 0480-066/028-S06	●	4.80	6	28	66
CDL-UN3 0490-066/028-S06	●	4.90	6	28	66
CDL-UN3 0500-066/028-S06	●	5.00	6	28	66
CDL-UN3 0510-066/028-S06	●	5.10	6	28	66
CDL-UN3 0520-066/028-S06	●	5.20	6	28	66
CDL-UN3 0530-066/028-S06	●	5.30	6	28	66
CDL-UN3 0540-066/028-S06	●	5.40	6	28	66
CDL-UN3 0550-066/028-S06	●	5.50	6	28	66
CDL-UN3 0560-066/028-S06	●	5.60	6	28	66
CDL-UN3 0570-066/028-S06	●	5.70	6	28	66
CDL-UN3 0580-066/028-S06	●	5.80	6	28	66
CDL-UN3 0590-066/028-S06	●	5.90	6	28	66
CDL-UN3 0600-066/028-S06	●	6.00	6	28	66
CDL-UN3 0610-079/034-S08	●	6.10	8	34	79

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN3 0620-079/034-S08	●	6.20	8	34	79
CDL-UN3 0630-079/034-S08	●	6.30	8	34	79
CDL-UN3 0640-079/034-S08	●	6.40	8	34	79
CDL-UN3 0650-079/034-S08	●	6.50	8	34	79
CDL-UN3 0660-079/034-S08	●	6.60	8	34	79
CDL-UN3 0670-079/034-S08	●	6.70	8	34	79
CDL-UN3 0680-079/034-S08	●	6.80	8	34	79
CDL-UN3 0690-079/034-S08	●	6.90	8	34	79
CDL-UN3 0700-079/034-S08	●	7.00	8	34	79
CDL-UN3 0710-079/041-S08	●	7.10	8	41	79
CDL-UN3 0720-079/041-S08	●	7.20	8	41	79
CDL-UN3 0730-079/041-S08	●	7.30	8	41	79
CDL-UN3 0740-079/041-S08	●	7.40	8	41	79
CDL-UN3 0750-079/041-S08	●	7.50	8	41	79
CDL-UN3 0760-079/041-S08	●	7.60	8	41	79
CDL-UN3 0770-079/041-S08	●	7.70	8	41	79
CDL-UN3 0780-079/041-S08	●	7.80	8	41	79
CDL-UN3 0790-079/041-S08	●	7.90	8	41	79
CDL-UN3 0800-079/041-S08	●	8.00	8	41	79
CDL-UN3 0810-089/047-S10	●	8.10	10	47	89
CDL-UN3 0820-089/047-S10	●	8.20	10	47	89
CDL-UN3 0830-089/047-S10	●	8.30	10	47	89
CDL-UN3 0840-089/047-S10	●	8.40	10	47	89
CDL-UN3 0850-089/047-S10	●	8.50	10	47	89
CDL-UN3 0860-089/047-S10	●	8.60	10	47	89
CDL-UN3 0870-089/047-S10	●	8.70	10	47	89
CDL-UN3 0880-089/047-S10	●	8.80	10	47	89
CDL-UN3 0890-089/047-S10	●	8.90	10	47	89
CDL-UN3 0900-089/047-S10	●	9.00	10	47	89
CDL-UN3 0910-089/047-S10	●	9.10	10	47	89
CDL-UN3 0920-089/047-S10	●	9.20	10	47	89
CDL-UN3 0930-089/047-S10	●	9.30	10	47	89

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-UN3

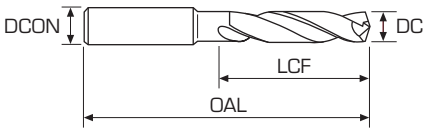
- Straight edges and corner protection improves stability
- Reliable performance on ISO P and ISO K materials

Materials - Vc (m/min)

P	M	K	N	S	H
★ 40÷120		★ 40÷100			

cutting parameters: page 74

★ 1st choice ☆ suitable



3xD | DIN 6537K | CARBIDE PVD | UN | FHA-30° | SIG-140°

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN3 0940-089/047-S10	●	9.40	10	47	89
CDL-UN3 0950-089/047-S10	●	9.50	10	47	89
CDL-UN3 0960-089/047-S10	●	9.60	10	47	89
CDL-UN3 0970-089/047-S10	●	9.70	10	47	89
CDL-UN3 0980-089/047-S10	●	9.80	10	47	89
CDL-UN3 0990-089/047-S10	●	9.90	10	47	89
CDL-UN3 1000-089/047-S10	●	10.00	10	47	89
CDL-UN3 1010-102/055-S12	●	10.10	12	55	102
CDL-UN3 1020-102/055-S12	●	10.20	12	55	102
CDL-UN3 1030-102/055-S12	●	10.30	12	55	102
CDL-UN3 1040-102/055-S12	●	10.40	12	55	102
CDL-UN3 1050-102/055-S12	●	10.50	12	55	102
CDL-UN3 1060-102/055-S12	●	10.60	12	55	102
CDL-UN3 1070-102/055-S12	●	10.70	12	55	102
CDL-UN3 1080-102/055-S12	●	10.80	12	55	102
CDL-UN3 1090-102/055-S12	●	10.90	12	55	102
CDL-UN3 1100-102/055-S12	●	11.00	12	55	102
CDL-UN3 1110-102/055-S12	●	11.10	12	55	102
CDL-UN3 1120-102/055-S12	●	11.20	12	55	102
CDL-UN3 1130-102/055-S12	●	11.30	12	55	102
CDL-UN3 1140-102/055-S12	●	11.40	12	55	102
CDL-UN3 1150-102/055-S12	●	11.50	12	55	102
CDL-UN3 1160-102/055-S12	●	11.60	12	55	102
CDL-UN3 1170-102/055-S12	●	11.70	12	55	102
CDL-UN3 1180-102/055-S12	●	11.80	12	55	102
CDL-UN3 1190-102/055-S12	●	11.90	12	55	102
CDL-UN3 1200-102/055-S12	●	12.00	12	55	102
CDL-UN3 1250-107/060-S14	●	12.50	14	60	107
CDL-UN3 1300-107/060-S14	●	13.00	14	60	107
CDL-UN3 1350-107/060-S14	●	13.50	14	60	107
CDL-UN3 1400-107/060-S14	●	14.00	14	60	107
CDL-UN3 1450-115/065-S16	●	14.50	16	65	115

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN3 1500-115/065-S16	●	15.00	16	65	115
CDL-UN3 1550-115/065-S16	●	15.50	16	65	115
CDL-UN3 1600-115/065-S16	●	16.00	16	65	115
CDL-UN3 1650-123/073-S18	●	16.50	18	73	123
CDL-UN3 1700-123/073-S18	●	17.00	18	73	123
CDL-UN3 1750-123/073-S18	●	17.50	18	73	123
CDL-UN3 1800-123/073-S18	●	18.00	18	73	123
CDL-UN3 1850-131/079-S20	●	18.50	20	79	131
CDL-UN3 1900-131/079-S20	●	19.00	20	79	131
CDL-UN3 1950-131/079-S20	●	19.50	20	79	131
CDL-UN3 2000-131/079-S20	●	20.00	20	79	131

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-UN5

- Straight edges and corner protection improves stability
- Reliable performance on ISO P and ISO K materials

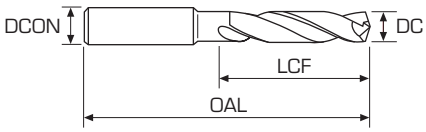
Materials - Vc (m/min)

P	M	K	N	S	H
★ 40÷120		★ 40÷100			

cutting parameters: page 74

★ 1st choice ☆ suitable

5xD | DIN 6537L | CARBIDE PVD | UN | FHA-30° | SIG-140°



DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN5 0300-066/028-S06	●	3.00	6	28	66
CDL-UN5 0310-066/028-S06	●	3.10	6	28	66
CDL-UN5 0320-066/028-S06	●	3.20	6	28	66
CDL-UN5 0330-066/028-S06	●	3.30	6	28	66
CDL-UN5 0340-066/028-S06	●	3.40	6	28	66
CDL-UN5 0350-066/028-S06	●	3.50	6	28	66
CDL-UN5 0360-066/028-S06	●	3.60	6	28	66
CDL-UN5 0370-066/028-S06	●	3.70	6	28	66
CDL-UN5 0380-074/036-S06	●	3.80	6	36	74
CDL-UN5 0390-074/036-S06	●	3.90	6	36	74
CDL-UN5 0400-074/036-S06	●	4.00	6	36	74
CDL-UN5 0410-074/036-S06	●	4.10	6	36	74
CDL-UN5 0420-074/036-S06	●	4.20	6	36	74
CDL-UN5 0430-074/036-S06	●	4.30	6	36	74
CDL-UN5 0440-074/036-S06	●	4.40	6	36	74
CDL-UN5 0450-074/036-S06	●	4.50	6	36	74
CDL-UN5 0460-074/036-S06	●	4.60	6	36	74
CDL-UN5 0470-074/036-S06	●	4.70	6	36	74
CDL-UN5 0480-082/044-S06	●	4.80	6	44	82
CDL-UN5 0490-082/044-S06	●	4.90	6	44	82
CDL-UN5 0500-082/044-S06	●	5.00	6	44	82
CDL-UN5 0510-082/044-S06	●	5.10	6	44	82
CDL-UN5 0520-082/044-S06	●	5.20	6	44	82
CDL-UN5 0530-082/044-S06	●	5.30	6	44	82
CDL-UN5 0540-082/044-S06	●	5.40	6	44	82
CDL-UN5 0550-082/044-S06	●	5.50	6	44	82
CDL-UN5 0560-082/044-S06	●	5.60	6	44	82
CDL-UN5 0570-082/044-S06	●	5.70	6	44	82
CDL-UN5 0580-082/044-S06	●	5.80	6	44	82
CDL-UN5 0590-082/044-S06	●	5.90	6	44	82
CDL-UN5 0600-082/044-S06	●	6.00	6	44	82
CDL-UN5 0610-091/053-S08	●	6.10	8	53	91

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN5 0620-091/053-S08	●	6.20	8	53	91
CDL-UN5 0630-091/053-S08	●	6.30	8	53	91
CDL-UN5 0640-091/053-S08	●	6.40	8	53	91
CDL-UN5 0650-091/053-S08	●	6.50	8	53	91
CDL-UN5 0660-091/053-S08	●	6.60	8	53	91
CDL-UN5 0670-091/053-S08	●	6.70	8	53	91
CDL-UN5 0680-091/053-S08	●	6.80	8	53	91
CDL-UN5 0690-091/053-S08	●	6.90	8	53	91
CDL-UN5 0700-091/053-S08	●	7.00	8	53	91
CDL-UN5 0710-091/053-S08	●	7.10	8	53	91
CDL-UN5 0720-091/053-S08	●	7.20	8	53	91
CDL-UN5 0730-091/053-S08	●	7.30	8	53	91
CDL-UN5 0740-091/053-S08	●	7.40	8	53	91
CDL-UN5 0750-091/053-S08	●	7.50	8	53	91
CDL-UN5 0760-091/053-S08	●	7.60	8	53	91
CDL-UN5 0770-091/053-S08	●	7.70	8	53	91
CDL-UN5 0780-091/053-S08	●	7.80	8	53	91
CDL-UN5 0790-091/053-S08	●	7.90	8	53	91
CDL-UN5 0800-091/053-S08	●	8.00	8	53	91
CDL-UN5 0810-103/061-S10	●	8.10	10	61	103
CDL-UN5 0820-103/061-S10	●	8.20	10	61	103
CDL-UN5 0830-103/061-S10	●	8.30	10	61	103
CDL-UN5 0840-103/061-S10	●	8.40	10	61	103
CDL-UN5 0850-103/061-S10	●	8.50	10	61	103
CDL-UN5 0860-103/061-S10	●	8.60	10	61	103
CDL-UN5 0870-103/061-S10	●	8.70	10	61	103
CDL-UN5 0880-103/061-S10	●	8.80	10	61	103
CDL-UN5 0890-103/061-S10	●	8.90	10	61	103
CDL-UN5 0900-103/061-S10	●	9.00	10	61	103
CDL-UN5 0910-103/061-S10	●	9.10	10	61	103
CDL-UN5 0920-103/061-S10	●	9.20	10	61	103
CDL-UN5 0930-103/061-S10	●	9.30	10	61	103

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-UN5

- Straight edges and corner protection improves stability
- Reliable performance on ISO P and ISO K materials

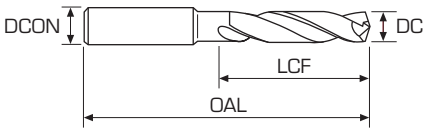
Materials - Vc (m/min)

P	M	K	N	S	H
★ 40÷120		★ 40÷100			

cutting parameters: page 74

★ 1st choice ☆ suitable

5xD | DIN 6537L | CARBIDE PVD | UN | FHA-30° | SIG-140°



DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN5 0940-103/061-S10	●	9.40	10	61	103
CDL-UN5 0950-103/061-S10	●	9.50	10	61	103
CDL-UN5 0960-103/061-S10	●	9.60	10	61	103
CDL-UN5 0970-103/061-S10	●	9.70	10	61	103
CDL-UN5 0980-103/061-S10	●	9.80	10	61	103
CDL-UN5 0990-103/061-S10	●	9.90	10	61	103
CDL-UN5 1000-103/061-S10	●	10.00	10	61	103
CDL-UN5 1010-118/071-S12	●	10.10	12	71	118
CDL-UN5 1020-118/071-S12	●	10.20	12	71	118
CDL-UN5 1030-118/071-S12	●	10.30	12	71	118
CDL-UN5 1040-118/071-S12	●	10.40	12	71	118
CDL-UN5 1050-118/071-S12	●	10.50	12	71	118
CDL-UN5 1060-118/071-S12	●	10.60	12	71	118
CDL-UN5 1070-118/071-S12	●	10.70	12	71	118
CDL-UN5 1080-118/071-S12	●	10.80	12	71	118
CDL-UN5 1090-118/071-S12	●	10.90	12	71	118
CDL-UN5 1100-118/071-S12	●	11.00	12	71	118
CDL-UN5 1110-118/071-S12	●	11.10	12	71	118
CDL-UN5 1120-118/071-S12	●	11.20	12	71	118
CDL-UN5 1130-118/071-S12	●	11.30	12	71	118
CDL-UN5 1140-118/071-S12	●	11.40	12	71	118
CDL-UN5 1150-118/071-S12	●	11.50	12	71	118
CDL-UN5 1160-118/071-S12	●	11.60	12	71	118
CDL-UN5 1170-118/071-S12	●	11.70	12	71	118
CDL-UN5 1180-118/071-S12	●	11.80	12	71	118
CDL-UN5 1190-118/071-S12	●	11.90	12	71	118
CDL-UN5 1200-118/071-S12	●	12.00	12	71	118
CDL-UN5 1250-124/077-S14	●	12.50	14	77	124
CDL-UN5 1300-124/077-S14	●	13.00	14	77	124
CDL-UN5 1350-124/077-S14	●	13.50	14	77	124
CDL-UN5 1400-124/077-S14	●	14.00	14	77	124
CDL-UN5 1450-133/083-S16	●	14.50	16	83	133

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN5 1500-133/083-S16	●	15.00	16	83	133
CDL-UN5 1550-133/083-S16	●	15.50	16	83	133
CDL-UN5 1600-133/083-S16	●	16.00	16	83	133
CDL-UN5 1650-143/093-S18	●	16.50	18	93	143
CDL-UN5 1700-143/093-S18	●	17.00	18	93	143
CDL-UN5 1750-143/093-S18	●	17.50	18	93	143
CDL-UN5 1800-143/093-S18	●	18.00	18	93	143
CDL-UN5 1850-153/101-S20	●	18.50	20	101	153
CDL-UN5 1900-153/101-S20	●	19.00	20	101	153
CDL-UN5 1950-153/101-S20	●	19.50	20	101	153
CDL-UN5 2000-153/101-S20	●	20.00	20	101	153

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-UN3H

- Straight edges and corner protection improves stability
- Reliable performance on ISO P and ISO K materials

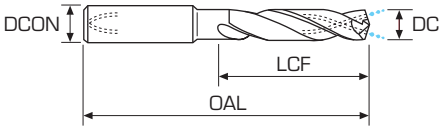
Materials - Vc (m/min)

P	M	K	N	S	H
★ 60÷160		★ 60÷140			

cutting parameters: page 74

★ 1st choice ☆ suitable

3xD | DIN 6537K | CARBIDE PVD | UNH | FHA-30° | SIG-140°



DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN3H 0300-062/020-S06	●	3.00	6	20	62
CDL-UN3H 0310-062/020-S06	●	3.10	6	20	62
CDL-UN3H 0320-062/020-S06	●	3.20	6	20	62
CDL-UN3H 0330-062/020-S06	●	3.30	6	20	62
CDL-UN3H 0340-062/020-S06	●	3.40	6	20	62
CDL-UN3H 0350-062/020-S06	●	3.50	6	20	62
CDL-UN3H 0360-062/020-S06	●	3.60	6	20	62
CDL-UN3H 0370-062/020-S06	●	3.70	6	20	62
CDL-UN3H 0380-066/024-S06	●	3.80	6	24	66
CDL-UN3H 0390-066/024-S06	●	3.90	6	24	66
CDL-UN3H 0400-066/024-S06	●	4.00	6	24	66
CDL-UN3H 0410-066/024-S06	●	4.10	6	24	66
CDL-UN3H 0420-066/024-S06	●	4.20	6	24	66
CDL-UN3H 0430-066/024-S06	●	4.30	6	24	66
CDL-UN3H 0440-066/024-S06	●	4.40	6	24	66
CDL-UN3H 0450-066/024-S06	●	4.50	6	24	66
CDL-UN3H 0460-066/024-S06	●	4.60	6	24	66
CDL-UN3H 0470-066/024-S06	●	4.70	6	24	66
CDL-UN3H 0480-066/028-S06	●	4.80	6	28	66
CDL-UN3H 0490-066/028-S06	●	4.90	6	28	66
CDL-UN3H 0500-066/028-S06	●	5.00	6	28	66
CDL-UN3H 0510-066/028-S06	●	5.10	6	28	66
CDL-UN3H 0520-066/028-S06	●	5.20	6	28	66
CDL-UN3H 0530-066/028-S06	●	5.30	6	28	66
CDL-UN3H 0540-066/028-S06	●	5.40	6	28	66
CDL-UN3H 0550-066/028-S06	●	5.50	6	28	66
CDL-UN3H 0560-066/028-S06	●	5.60	6	28	66
CDL-UN3H 0570-066/028-S06	●	5.70	6	28	66
CDL-UN3H 0580-066/028-S06	●	5.80	6	28	66
CDL-UN3H 0590-066/028-S06	●	5.90	6	28	66
CDL-UN3H 0600-066/028-S06	●	6.00	6	28	66
CDL-UN3H 0610-079/034-S08	●	6.10	8	34	79

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN3H 0620-079/034-S08	●	6.20	8	34	79
CDL-UN3H 0630-079/034-S08	●	6.30	8	34	79
CDL-UN3H 0640-079/034-S08	●	6.40	8	34	79
CDL-UN3H 0650-079/034-S08	●	6.50	8	34	79
CDL-UN3H 0660-079/034-S08	●	6.60	8	34	79
CDL-UN3H 0670-079/034-S08	●	6.70	8	34	79
CDL-UN3H 0680-079/034-S08	●	6.80	8	34	79
CDL-UN3H 0690-079/034-S08	●	6.90	8	34	79
CDL-UN3H 0700-079/034-S08	●	7.00	8	34	79
CDL-UN3H 0710-079/041-S08	●	7.10	8	41	79
CDL-UN3H 0720-079/041-S08	●	7.20	8	41	79
CDL-UN3H 0730-079/041-S08	●	7.30	8	41	79
CDL-UN3H 0740-079/041-S08	●	7.40	8	41	79
CDL-UN3H 0750-079/041-S08	●	7.50	8	41	79
CDL-UN3H 0760-079/041-S08	●	7.60	8	41	79
CDL-UN3H 0770-079/041-S08	●	7.70	8	41	79
CDL-UN3H 0780-079/041-S08	●	7.80	8	41	79
CDL-UN3H 0790-079/041-S08	●	7.90	8	41	79
CDL-UN3H 0800-079/041-S08	●	8.00	8	41	79
CDL-UN3H 0810-089/047-S10	●	8.10	10	47	89
CDL-UN3H 0820-089/047-S10	●	8.20	10	47	89
CDL-UN3H 0830-089/047-S10	●	8.30	10	47	89
CDL-UN3H 0840-089/047-S10	●	8.40	10	47	89
CDL-UN3H 0850-089/047-S10	●	8.50	10	47	89
CDL-UN3H 0860-089/047-S10	●	8.60	10	47	89
CDL-UN3H 0870-089/047-S10	●	8.70	10	47	89
CDL-UN3H 0880-089/047-S10	●	8.80	10	47	89
CDL-UN3H 0890-089/047-S10	●	8.90	10	47	89
CDL-UN3H 0900-089/047-S10	●	9.00	10	47	89
CDL-UN3H 0910-089/047-S10	●	9.10	10	47	89
CDL-UN3H 0920-089/047-S10	●	9.20	10	47	89
CDL-UN3H 0930-089/047-S10	●	9.30	10	47	89

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-UN3H

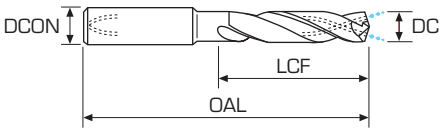
- Straight edges and corner protection improves stability
- Reliable performance on ISO P and ISO K materials

Materials - Vc (m/min)

P	M	K	N	S	H
★ 60÷160		★ 60÷140			

cutting parameters: page 74

★ 1st choice ☆ suitable



DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN3H 0940-089/047-S10	●	9.40	10	47	89
CDL-UN3H 0950-089/047-S10	●	9.50	10	47	89
CDL-UN3H 0960-089/047-S10	●	9.60	10	47	89
CDL-UN3H 0970-089/047-S10	●	9.70	10	47	89
CDL-UN3H 0980-089/047-S10	●	9.80	10	47	89
CDL-UN3H 0990-089/047-S10	●	9.90	10	47	89
CDL-UN3H 1000-089/047-S10	●	10.00	10	47	89
CDL-UN3H 1010-102/055-S12	●	10.10	12	55	102
CDL-UN3H 1020-102/055-S12	●	10.20	12	55	102
CDL-UN3H 1030-102/055-S12	●	10.30	12	55	102
CDL-UN3H 1040-102/055-S12	●	10.40	12	55	102
CDL-UN3H 1050-102/055-S12	●	10.50	12	55	102
CDL-UN3H 1060-102/055-S12	●	10.60	12	55	102
CDL-UN3H 1070-102/055-S12	●	10.70	12	55	102
CDL-UN3H 1080-102/055-S12	●	10.80	12	55	102
CDL-UN3H 1090-102/055-S12	●	10.90	12	55	102
CDL-UN3H 1100-102/055-S12	●	11.00	12	55	102
CDL-UN3H 1110-102/055-S12	●	11.10	12	55	102
CDL-UN3H 1120-102/055-S12	●	11.20	12	55	102
CDL-UN3H 1130-102/055-S12	●	11.30	12	55	102
CDL-UN3H 1140-102/055-S12	●	11.40	12	55	102
CDL-UN3H 1150-102/055-S12	●	11.50	12	55	102
CDL-UN3H 1160-102/055-S12	●	11.60	12	55	102
CDL-UN3H 1170-102/055-S12	●	11.70	12	55	102
CDL-UN3H 1180-102/055-S12	●	11.80	12	55	102
CDL-UN3H 1190-102/055-S12	●	11.90	12	55	102
CDL-UN3H 1200-102/055-S12	●	12.00	12	55	102
CDL-UN3H 1250-107/060-S14	●	12.50	14	60	107
CDL-UN3H 1300-107/060-S14	●	13.00	14	60	107
CDL-UN3H 1350-107/060-S14	●	13.50	14	60	107
CDL-UN3H 1400-107/060-S14	●	14.00	14	60	107
CDL-UN3H 1450-115/065-S16	●	14.50	16	65	115

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN3H 1500-115/065-S16	●	15.00	16	65	115
CDL-UN3H 1550-115/065-S16	●	15.50	16	65	115
CDL-UN3H 1600-115/065-S16	●	16.00	16	65	115
CDL-UN3H 1650-123/073-S18	●	16.50	18	73	123
CDL-UN3H 1700-123/073-S18	●	17.00	18	73	123
CDL-UN3H 1750-123/073-S18	●	17.50	18	73	123
CDL-UN3H 1800-123/073-S18	●	18.00	18	73	123
CDL-UN3H 1850-131/079-S20	●	18.50	20	79	131
CDL-UN3H 1900-131/079-S20	●	19.00	20	79	131
CDL-UN3H 1950-131/079-S20	●	19.50	20	79	131
CDL-UN3H 2000-131/079-S20	●	20.00	20	79	131

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-UN5H

- Straight edges and corner protection improves stability
- Reliable performance on ISO P and ISO K materials

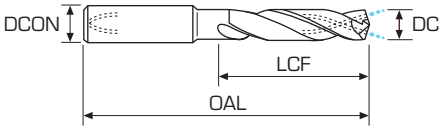
Materials - Vc (m/min)

P	M	K	N	S	H
★ 60÷160		★ 60÷140			

cutting parameters: page 74

★ 1st choice ☆ suitable

5xD | DIN 6537L | CARBIDE PVD | UNH | FHA-30° | SIG-140°



DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN5H 0300-066/028-S06	●	3.00	6	28	66
CDL-UN5H 0310-066/028-S06	●	3.10	6	28	66
CDL-UN5H 0320-066/028-S06	●	3.20	6	28	66
CDL-UN5H 0330-066/028-S06	●	3.30	6	28	66
CDL-UN5H 0340-066/028-S06	●	3.40	6	28	66
CDL-UN5H 0350-066/028-S06	●	3.50	6	28	66
CDL-UN5H 0360-066/028-S06	●	3.60	6	28	66
CDL-UN5H 0370-066/028-S06	●	3.70	6	28	66
CDL-UN5H 0380-074/036-S06	●	3.80	6	36	74
CDL-UN5H 0390-074/036-S06	●	3.90	6	36	74
CDL-UN5H 0400-074/036-S06	●	4.00	6	36	74
CDL-UN5H 0410-074/036-S06	●	4.10	6	36	74
CDL-UN5H 0420-074/036-S06	●	4.20	6	36	74
CDL-UN5H 0430-074/036-S06	●	4.30	6	36	74
CDL-UN5H 0440-074/036-S06	●	4.40	6	36	74
CDL-UN5H 0450-074/036-S06	●	4.50	6	36	74
CDL-UN5H 0460-074/036-S06	●	4.60	6	36	74
CDL-UN5H 0470-074/036-S06	●	4.70	6	36	74
CDL-UN5H 0480-082/044-S06	●	4.80	6	44	82
CDL-UN5H 0490-082/044-S06	●	4.90	6	44	82
CDL-UN5H 0500-082/044-S06	●	5.00	6	44	82
CDL-UN5H 0510-082/044-S06	●	5.10	6	44	82
CDL-UN5H 0520-082/044-S06	●	5.20	6	44	82
CDL-UN5H 0530-082/044-S06	●	5.30	6	44	82
CDL-UN5H 0540-082/044-S06	●	5.40	6	44	82
CDL-UN5H 0550-082/044-S06	●	5.50	6	44	82
CDL-UN5H 0560-082/044-S06	●	5.60	6	44	82
CDL-UN5H 0570-082/044-S06	●	5.70	6	44	82
CDL-UN5H 0580-082/044-S06	●	5.80	6	44	82
CDL-UN5H 0590-082/044-S06	●	5.90	6	44	82
CDL-UN5H 0600-082/044-S06	●	6.00	6	44	82
CDL-UN5H 0610-091/053-S08	●	6.10	8	53	91
CDL-UN5H 0620-091/053-S08	●	6.20	8	53	91
CDL-UN5H 0630-091/053-S08	●	6.30	8	53	91
CDL-UN5H 0640-091/053-S08	●	6.40	8	53	91
CDL-UN5H 0650-091/053-S08	●	6.50	8	53	91
CDL-UN5H 0660-091/053-S08	●	6.60	8	53	91
CDL-UN5H 0670-091/053-S08	●	6.70	8	53	91
CDL-UN5H 0680-091/053-S08	●	6.80	8	53	91
CDL-UN5H 0690-091/053-S08	●	6.90	8	53	91
CDL-UN5H 0700-091/053-S08	●	7.00	8	53	91
CDL-UN5H 0710-091/053-S08	●	7.10	8	53	91
CDL-UN5H 0720-091/053-S08	●	7.20	8	53	91
CDL-UN5H 0730-091/053-S08	●	7.30	8	53	91
CDL-UN5H 0740-091/053-S08	●	7.40	8	53	91
CDL-UN5H 0750-091/053-S08	●	7.50	8	53	91
CDL-UN5H 0760-091/053-S08	●	7.60	8	53	91
CDL-UN5H 0770-091/053-S08	●	7.70	8	53	91
CDL-UN5H 0780-091/053-S08	●	7.80	8	53	91
CDL-UN5H 0790-091/053-S08	●	7.90	8	53	91
CDL-UN5H 0800-091/053-S08	●	8.00	8	53	91
CDL-UN5H 0810-103/061-S10	●	8.10	10	61	103
CDL-UN5H 0820-103/061-S10	●	8.20	10	61	103
CDL-UN5H 0830-103/061-S10	●	8.30	10	61	103
CDL-UN5H 0840-103/061-S10	●	8.40	10	61	103
CDL-UN5H 0850-103/061-S10	●	8.50	10	61	103
CDL-UN5H 0860-103/061-S10	●	8.60	10	61	103
CDL-UN5H 0870-103/061-S10	●	8.70	10	61	103
CDL-UN5H 0880-103/061-S10	●	8.80	10	61	103
CDL-UN5H 0890-103/061-S10	●	8.90	10	61	103
CDL-UN5H 0900-103/061-S10	●	9.00	10	61	103
CDL-UN5H 0910-103/061-S10	●	9.10	10	61	103
CDL-UN5H 0920-103/061-S10	●	9.20	10	61	103
CDL-UN5H 0930-103/061-S10	●	9.30	10	61	103

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-UN5H

- Straight edges and corner protection improves stability
- Reliable performance on ISO P and ISO K materials

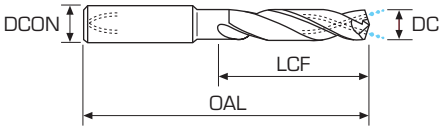
Materials - Vc (m/min)

P	M	K	N	S	H
★ 60÷160		★ 60÷140			

cutting parameters: page 74

★ 1st choice ☆ suitable

5xD | DIN 6537L | CARBIDE PVD | UNH | FHA-30° | SIG-140°



DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN5H 0940-103/061-S10	●	9.40	10	61	103
CDL-UN5H 0950-103/061-S10	●	9.50	10	61	103
CDL-UN5H 0960-103/061-S10	●	9.60	10	61	103
CDL-UN5H 0970-103/061-S10	●	9.70	10	61	103
CDL-UN5H 0980-103/061-S10	●	9.80	10	61	103
CDL-UN5H 0990-103/061-S10	●	9.90	10	61	103
CDL-UN5H 1000-103/061-S10	●	10.00	10	61	103
CDL-UN5H 1010-118/071-S12	●	10.10	12	71	118
CDL-UN5H 1020-118/071-S12	●	10.20	12	71	118
CDL-UN5H 1030-118/071-S12	●	10.30	12	71	118
CDL-UN5H 1040-118/071-S12	●	10.40	12	71	118
CDL-UN5H 1050-118/071-S12	●	10.50	12	71	118
CDL-UN5H 1060-118/071-S12	●	10.60	12	71	118
CDL-UN5H 1070-118/071-S12	●	10.70	12	71	118
CDL-UN5H 1080-118/071-S12	●	10.80	12	71	118
CDL-UN5H 1090-118/071-S12	●	10.90	12	71	118
CDL-UN5H 1100-118/071-S12	●	11.00	12	71	118
CDL-UN5H 1110-118/071-S12	●	11.10	12	71	118
CDL-UN5H 1120-118/071-S12	●	11.20	12	71	118
CDL-UN5H 1130-118/071-S12	●	11.30	12	71	118
CDL-UN5H 1140-118/071-S12	●	11.40	12	71	118
CDL-UN5H 1150-118/071-S12	●	11.50	12	71	118
CDL-UN5H 1160-118/071-S12	●	11.60	12	71	118
CDL-UN5H 1170-118/071-S12	●	11.70	12	71	118
CDL-UN5H 1180-118/071-S12	●	11.80	12	71	118
CDL-UN5H 1190-118/071-S12	●	11.90	12	71	118
CDL-UN5H 1200-118/071-S12	●	12.00	12	71	118
CDL-UN5H 1250-124/077-S14	●	12.50	14	77	124
CDL-UN5H 1300-124/077-S14	●	13.00	14	77	124
CDL-UN5H 1350-124/077-S14	●	13.50	14	77	124
CDL-UN5H 1400-124/077-S14	●	14.00	14	77	124
CDL-UN5H 1450-133/083-S16	●	14.50	16	83	133

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-UN5H 1500-133/083-S16	●	15.00	16	83	133
CDL-UN5H 1550-133/083-S16	●	15.50	16	83	133
CDL-UN5H 1600-133/083-S16	●	16.00	16	83	133
CDL-UN5H 1650-143/093-S18	●	16.50	18	93	143
CDL-UN5H 1700-143/093-S18	●	17.00	18	93	143
CDL-UN5H 1750-143/093-S18	●	17.50	18	93	143
CDL-UN5H 1800-143/093-S18	●	18.00	18	93	143
CDL-UN5H 1850-153/101-S20	●	18.50	20	101	153
CDL-UN5H 1900-153/101-S20	●	19.00	20	101	153
CDL-UN5H 1950-153/101-S20	●	19.50	20	101	153
CDL-UN5H 2000-153/101-S20	●	20.00	20	101	153

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-LF3H

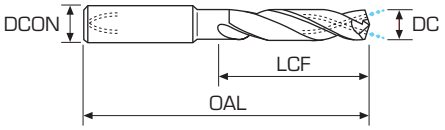
- Slightly curved edge design for smoother cutting
- Reliable performance on ISO M and ISO P materials

Materials - Vc (m/min)

P	M	K	N	S	H
★ 80÷160	★ 20÷80			☆ 30÷60	

cutting parameters: page 74

★ 1st choice ☆ suitable



3xD | DIN 6537K | CARBIDE PVD | LFH | FHA-30° | SIG-140°

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-LF3H 0300-062/020-S06	●	3.00	6	20	62
CDL-LF3H 0310-062/020-S06	●	3.10	6	20	62
CDL-LF3H 0320-062/020-S06	●	3.20	6	20	62
CDL-LF3H 0330-062/020-S06	●	3.30	6	20	62
CDL-LF3H 0340-062/020-S06	●	3.40	6	20	62
CDL-LF3H 0350-062/020-S06	●	3.50	6	20	62
CDL-LF3H 0360-062/020-S06	●	3.60	6	20	62
CDL-LF3H 0370-062/020-S06	●	3.70	6	20	62
CDL-LF3H 0380-066/024-S06	●	3.80	6	24	66
CDL-LF3H 0390-066/024-S06	●	3.90	6	24	66
CDL-LF3H 0400-066/024-S06	●	4.00	6	24	66
CDL-LF3H 0410-066/024-S06	●	4.10	6	24	66
CDL-LF3H 0420-066/024-S06	●	4.20	6	24	66
CDL-LF3H 0430-066/024-S06	●	4.30	6	24	66
CDL-LF3H 0440-066/024-S06	●	4.40	6	24	66
CDL-LF3H 0450-066/024-S06	●	4.50	6	24	66
CDL-LF3H 0460-066/024-S06	●	4.60	6	24	66
CDL-LF3H 0470-066/024-S06	●	4.70	6	24	66
CDL-LF3H 0480-066/028-S06	●	4.80	6	28	66
CDL-LF3H 0490-066/028-S06	●	4.90	6	28	66
CDL-LF3H 0500-066/028-S06	●	5.00	6	28	66
CDL-LF3H 0510-066/028-S06	●	5.10	6	28	66
CDL-LF3H 0520-066/028-S06	●	5.20	6	28	66
CDL-LF3H 0530-066/028-S06	●	5.30	6	28	66
CDL-LF3H 0540-066/028-S06	●	5.40	6	28	66
CDL-LF3H 0550-066/028-S06	●	5.50	6	28	66
CDL-LF3H 0560-066/028-S06	●	5.60	6	28	66
CDL-LF3H 0570-066/028-S06	●	5.70	6	28	66
CDL-LF3H 0580-066/028-S06	●	5.80	6	28	66
CDL-LF3H 0590-066/028-S06	●	5.90	6	28	66
CDL-LF3H 0600-066/028-S06	●	6.00	6	28	66
CDL-LF3H 0610-079/034-S08	●	6.10	8	34	79

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-LF3H 0620-079/034-S08	●	6.20	8	34	79
CDL-LF3H 0630-079/034-S08	●	6.30	8	34	79
CDL-LF3H 0640-079/034-S08	●	6.40	8	34	79
CDL-LF3H 0650-079/034-S08	●	6.50	8	34	79
CDL-LF3H 0660-079/034-S08	●	6.60	8	34	79
CDL-LF3H 0670-079/034-S08	●	6.70	8	34	79
CDL-LF3H 0680-079/034-S08	●	6.80	8	34	79
CDL-LF3H 0690-079/034-S08	●	6.90	8	34	79
CDL-LF3H 0700-079/034-S08	●	7.00	8	34	79
CDL-LF3H 0710-079/041-S08	●	7.10	8	41	79
CDL-LF3H 0720-079/041-S08	●	7.20	8	41	79
CDL-LF3H 0730-079/041-S08	●	7.30	8	41	79
CDL-LF3H 0740-079/041-S08	●	7.40	8	41	79
CDL-LF3H 0750-079/041-S08	●	7.50	8	41	79
CDL-LF3H 0760-079/041-S08	●	7.60	8	41	79
CDL-LF3H 0770-079/041-S08	●	7.70	8	41	79
CDL-LF3H 0780-079/041-S08	●	7.80	8	41	79
CDL-LF3H 0790-079/041-S08	●	7.90	8	41	79
CDL-LF3H 0800-079/041-S08	●	8.00	8	41	79
CDL-LF3H 0810-089/047-S10	●	8.10	10	47	89
CDL-LF3H 0820-089/047-S10	●	8.20	10	47	89
CDL-LF3H 0830-089/047-S10	●	8.30	10	47	89
CDL-LF3H 0840-089/047-S10	●	8.40	10	47	89
CDL-LF3H 0850-089/047-S10	●	8.50	10	47	89
CDL-LF3H 0860-089/047-S10	●	8.60	10	47	89
CDL-LF3H 0870-089/047-S10	●	8.70	10	47	89
CDL-LF3H 0880-089/047-S10	●	8.80	10	47	89
CDL-LF3H 0890-089/047-S10	●	8.90	10	47	89
CDL-LF3H 0900-089/047-S10	●	9.00	10	47	89
CDL-LF3H 0910-089/047-S10	●	9.10	10	47	89
CDL-LF3H 0920-089/047-S10	●	9.20	10	47	89
CDL-LF3H 0930-089/047-S10	●	9.30	10	47	89

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-LF3H

- Slightly curved edge design for smoother cutting
- Reliable performance on ISO M and ISO P materials

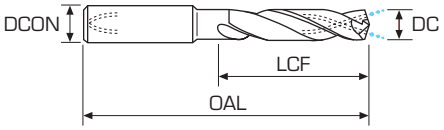
Materials - Vc (m/min)

P	M	K	N	S	H
★ 80÷160	★ 20÷80			☆ 30÷60	

cutting parameters: page 74

★ 1st choice ☆ suitable

3xD | DIN 6537K | CARBIDE PVD | LFH | FHA-30° | SIG-140°



DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-LF3H 0940-089/047-S10	●	9.40	10	47	89
CDL-LF3H 0950-089/047-S10	●	9.50	10	47	89
CDL-LF3H 0960-089/047-S10	●	9.60	10	47	89
CDL-LF3H 0970-089/047-S10	●	9.70	10	47	89
CDL-LF3H 0980-089/047-S10	●	9.80	10	47	89
CDL-LF3H 0990-089/047-S10	●	9.90	10	47	89
CDL-LF3H 1000-089/047-S10	●	10.00	10	47	89
CDL-LF3H 1010-102/055-S12	●	10.10	12	55	102
CDL-LF3H 1020-102/055-S12	●	10.20	12	55	102
CDL-LF3H 1030-102/055-S12	●	10.30	12	55	102
CDL-LF3H 1040-102/055-S12	●	10.40	12	55	102
CDL-LF3H 1050-102/055-S12	●	10.50	12	55	102
CDL-LF3H 1060-102/055-S12	●	10.60	12	55	102
CDL-LF3H 1070-102/055-S12	●	10.70	12	55	102
CDL-LF3H 1080-102/055-S12	●	10.80	12	55	102
CDL-LF3H 1090-102/055-S12	●	10.90	12	55	102
CDL-LF3H 1100-102/055-S12	●	11.00	12	55	102
CDL-LF3H 1110-102/055-S12	●	11.10	12	55	102
CDL-LF3H 1120-102/055-S12	●	11.20	12	55	102
CDL-LF3H 1130-102/055-S12	●	11.30	12	55	102
CDL-LF3H 1140-102/055-S12	●	11.40	12	55	102
CDL-LF3H 1150-102/055-S12	●	11.50	12	55	102
CDL-LF3H 1160-102/055-S12	●	11.60	12	55	102
CDL-LF3H 1170-102/055-S12	●	11.70	12	55	102
CDL-LF3H 1180-102/055-S12	●	11.80	12	55	102
CDL-LF3H 1190-102/055-S12	●	11.90	12	55	102
CDL-LF3H 1200-102/055-S12	●	12.00	12	55	102
CDL-LF3H 1250-107/060-S14	●	12.50	14	60	107
CDL-LF3H 1300-107/060-S14	●	13.00	14	60	107
CDL-LF3H 1350-107/060-S14	●	13.50	14	60	107
CDL-LF3H 1400-107/060-S14	●	14.00	14	60	107
CDL-LF3H 1450-115/065-S16	●	14.50	16	65	115

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-LF3H 1500-115/065-S16	●	15.00	16	65	115
CDL-LF3H 1550-115/065-S16	●	15.50	16	65	115
CDL-LF3H 1600-115/065-S16	●	16.00	16	65	115
CDL-LF3H 1650-123/073-S18	●	16.50	18	73	123
CDL-LF3H 1700-123/073-S18	●	17.00	18	73	123
CDL-LF3H 1750-123/073-S18	●	17.50	18	73	123
CDL-LF3H 1800-123/073-S18	●	18.00	18	73	123
CDL-LF3H 1850-131/079-S20	●	18.50	20	79	131
CDL-LF3H 1900-131/079-S20	●	19.00	20	79	131
CDL-LF3H 1950-131/079-S20	●	19.50	20	79	131
CDL-LF3H 2000-131/079-S20	●	20.00	20	79	131

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-LF5H

- Slightly curved edge design for smoother cutting
- Reliable performance on ISO M and ISO P materials

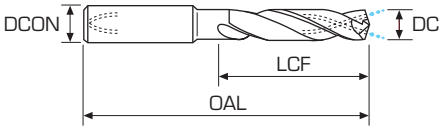
Materials - Vc (m/min)

P	M	K	N	S	H
★ 80÷160	★ 20÷80			☆ 30÷60	

cutting parameters: page 74

★ 1st choice ☆ suitable

5xD | DIN 6537L | CARBIDE PVD | LFH | FHA-30° | SIG-140°



DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-LF5H 0300-066/028-S06	●	3.00	6	28	66
CDL-LF5H 0310-066/028-S06	●	3.10	6	28	66
CDL-LF5H 0320-066/028-S06	●	3.20	6	28	66
CDL-LF5H 0330-066/028-S06	●	3.30	6	28	66
CDL-LF5H 0340-066/028-S06	●	3.40	6	28	66
CDL-LF5H 0350-066/028-S06	●	3.50	6	28	66
CDL-LF5H 0360-066/028-S06	●	3.60	6	28	66
CDL-LF5H 0370-066/028-S06	●	3.70	6	28	66
CDL-LF5H 0380-074/036-S06	●	3.80	6	36	74
CDL-LF5H 0390-074/036-S06	●	3.90	6	36	74
CDL-LF5H 0400-074/036-S06	●	4.00	6	36	74
CDL-LF5H 0410-074/036-S06	●	4.10	6	36	74
CDL-LF5H 0420-074/036-S06	●	4.20	6	36	74
CDL-LF5H 0430-074/036-S06	●	4.30	6	36	74
CDL-LF5H 0440-074/036-S06	●	4.40	6	36	74
CDL-LF5H 0450-074/036-S06	●	4.50	6	36	74
CDL-LF5H 0460-074/036-S06	●	4.60	6	36	74
CDL-LF5H 0470-074/036-S06	●	4.70	6	36	74
CDL-LF5H 0480-082/044-S06	●	4.80	6	44	82
CDL-LF5H 0490-082/044-S06	●	4.90	6	44	82
CDL-LF5H 0500-082/044-S06	●	5.00	6	44	82
CDL-LF5H 0510-082/044-S06	●	5.10	6	44	82
CDL-LF5H 0520-082/044-S06	●	5.20	6	44	82
CDL-LF5H 0530-082/044-S06	●	5.30	6	44	82
CDL-LF5H 0540-082/044-S06	●	5.40	6	44	82
CDL-LF5H 0550-082/044-S06	●	5.50	6	44	82
CDL-LF5H 0560-082/044-S06	●	5.60	6	44	82
CDL-LF5H 0570-082/044-S06	●	5.70	6	44	82
CDL-LF5H 0580-082/044-S06	●	5.80	6	44	82
CDL-LF5H 0590-082/044-S06	●	5.90	6	44	82
CDL-LF5H 0600-082/044-S06	●	6.00	6	44	82
CDL-LF5H 0610-091/053-S08	●	6.10	8	53	91

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-LF5H 0620-091/053-S08	●	6.20	8	53	91
CDL-LF5H 0630-091/053-S08	●	6.30	8	53	91
CDL-LF5H 0640-091/053-S08	●	6.40	8	53	91
CDL-LF5H 0650-091/053-S08	●	6.50	8	53	91
CDL-LF5H 0660-091/053-S08	●	6.60	8	53	91
CDL-LF5H 0670-091/053-S08	●	6.70	8	53	91
CDL-LF5H 0680-091/053-S08	●	6.80	8	53	91
CDL-LF5H 0690-091/053-S08	●	6.90	8	53	91
CDL-LF5H 0700-091/053-S08	●	7.00	8	53	91
CDL-LF5H 0710-091/053-S08	●	7.10	8	53	91
CDL-LF5H 0720-091/053-S08	●	7.20	8	53	91
CDL-LF5H 0730-091/053-S08	●	7.30	8	53	91
CDL-LF5H 0740-091/053-S08	●	7.40	8	53	91
CDL-LF5H 0750-091/053-S08	●	7.50	8	53	91
CDL-LF5H 0760-091/053-S08	●	7.60	8	53	91
CDL-LF5H 0770-091/053-S08	●	7.70	8	53	91
CDL-LF5H 0780-091/053-S08	●	7.80	8	53	91
CDL-LF5H 0790-091/053-S08	●	7.90	8	53	91
CDL-LF5H 0800-091/053-S08	●	8.00	8	53	91
CDL-LF5H 0810-103/061-S10	●	8.10	10	61	103
CDL-LF5H 0820-103/061-S10	●	8.20	10	61	103
CDL-LF5H 0830-103/061-S10	●	8.30	10	61	103
CDL-LF5H 0840-103/061-S10	●	8.40	10	61	103
CDL-LF5H 0850-103/061-S10	●	8.50	10	61	103
CDL-LF5H 0860-103/061-S10	●	8.60	10	61	103
CDL-LF5H 0870-103/061-S10	●	8.70	10	61	103
CDL-LF5H 0880-103/061-S10	●	8.80	10	61	103
CDL-LF5H 0890-103/061-S10	●	8.90	10	61	103
CDL-LF5H 0900-103/061-S10	●	9.00	10	61	103
CDL-LF5H 0910-103/061-S10	●	9.10	10	61	103
CDL-LF5H 0920-103/061-S10	●	9.20	10	61	103
CDL-LF5H 0930-103/061-S10	●	9.30	10	61	103

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

CDL-LF5H

- Slightly curved edge design for smoother cutting
- Reliable performance on ISO M and ISO P materials

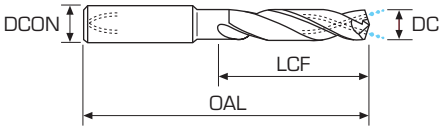
Materials - Vc (m/min)

P	M	K	N	S	H
★ 80÷160	★ 20÷80			☆ 30÷60	

cutting parameters: page 74

★ 1st choice ☆ suitable

5xD | DIN 6537L | CARBIDE PVD | LFH | FHA-30° | SIG-140°



DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-LF5H 0940-103/061-S10	●	9.40	10	61	103
CDL-LF5H 0950-103/061-S10	●	9.50	10	61	103
CDL-LF5H 0960-103/061-S10	●	9.60	10	61	103
CDL-LF5H 0970-103/061-S10	●	9.70	10	61	103
CDL-LF5H 0980-103/061-S10	●	9.80	10	61	103
CDL-LF5H 0990-103/061-S10	●	9.90	10	61	103
CDL-LF5H 1000-103/061-S10	●	10.00	10	61	103
CDL-LF5H 1010-118/071-S12	●	10.10	12	71	118
CDL-LF5H 1020-118/071-S12	●	10.20	12	71	118
CDL-LF5H 1030-118/071-S12	●	10.30	12	71	118
CDL-LF5H 1040-118/071-S12	●	10.40	12	71	118
CDL-LF5H 1050-118/071-S12	●	10.50	12	71	118
CDL-LF5H 1060-118/071-S12	●	10.60	12	71	118
CDL-LF5H 1070-118/071-S12	●	10.70	12	71	118
CDL-LF5H 1080-118/071-S12	●	10.80	12	71	118
CDL-LF5H 1090-118/071-S12	●	10.90	12	71	118
CDL-LF5H 1100-118/071-S12	●	11.00	12	71	118
CDL-LF5H 1110-118/071-S12	●	11.10	12	71	118
CDL-LF5H 1120-118/071-S12	●	11.20	12	71	118
CDL-LF5H 1130-118/071-S12	●	11.30	12	71	118
CDL-LF5H 1140-118/071-S12	●	11.40	12	71	118
CDL-LF5H 1150-118/071-S12	●	11.50	12	71	118
CDL-LF5H 1160-118/071-S12	●	11.60	12	71	118
CDL-LF5H 1170-118/071-S12	●	11.70	12	71	118
CDL-LF5H 1180-118/071-S12	●	11.80	12	71	118
CDL-LF5H 1190-118/071-S12	●	11.90	12	71	118
CDL-LF5H 1200-118/071-S12	●	12.00	12	71	118
CDL-LF5H 1250-124/077-S14	●	12.50	14	77	124
CDL-LF5H 1300-124/077-S14	●	13.00	14	77	124
CDL-LF5H 1350-124/077-S14	●	13.50	14	77	124
CDL-LF5H 1400-124/077-S14	●	14.00	14	77	124
CDL-LF5H 1450-133/083-S16	●	14.50	16	83	133

DESIGNATION	Stock	DC (m7)	DCON (h6)	LCF	OAL
CDL-LF5H 1500-133/083-S16	●	15.00	16	83	133
CDL-LF5H 1550-133/083-S16	●	15.50	16	83	133
CDL-LF5H 1600-133/083-S16	●	16.00	16	83	133
CDL-LF5H 1650-143/093-S18	●	16.50	18	93	143
CDL-LF5H 1700-143/093-S18	●	17.00	18	93	143
CDL-LF5H 1750-143/093-S18	●	17.50	18	93	143
CDL-LF5H 1800-143/093-S18	●	18.00	18	93	143
CDL-LF5H 1850-153/101-S20	●	18.50	20	101	153
CDL-LF5H 1900-153/101-S20	●	19.00	20	101	153
CDL-LF5H 1950-153/101-S20	●	19.50	20	101	153
CDL-LF5H 2000-153/101-S20	●	20.00	20	101	153

Unit: mm

● stock standard ○ non-standard stock

Tolerance (µ)

Ø (mm)	1÷3	3.1÷6	6.1÷10	10.1÷18	18.1÷20
m7	+12/+2	+16/+4	+21/+6	+25/+7	+29/+8
h6	0/-6	0/-8	0/-9	0/-11	0/-13

			3xD - 5xD			
			TYPE	Vc (m/min)	TYPE	Vc (m/min)
ISO P	Structural steel, free cutting steel, low carbon steel		UN	80÷120	UNH	100÷140
					LFH	100÷140
	Medium carbon steel, high carbon steel, medium alloy steel	<25 HRC	UN	60÷100	UNH	80÷120
					LFH	80÷120
	Alloy steel, tool steel	<35 HRC	UN	50÷90	UNH	70÷110
					LFH	70÷110
	Alloy steel, Tool steel	<45 HRC	UN	40÷70	UNH	50÷80
	Low machinability and PH stainless steel	<35 HRC	UN	30÷60	UNH	45÷75
	Low machinability and PH stainless steel	<45 HRC	UN	30÷50	UNH	40÷60
ISO M	Austenitic stainless steel				LFH	45÷75
	Medium machinability austenitic stainless steel	<25 HRC			LFH	40÷70
	Duplex stainless steel	<30 HRC			LFH	35÷55
ISO K	Grey cast iron		UN	80÷120	UNH	110÷150
	Nodular cast iron		UN	60÷100	UNH	80÷120
ISO S	Ni HRSA	<450 HB			LFH	20÷40
	Ti HRSA	<400 HB			LFH	25÷45

fn (mm/rev) - ø (mm)										
3	4	6	8	10	12	14	16	18	20	
0.10÷0.16	0.12÷0.18	0.16÷0.22	0.19÷0.25	0.22÷0.30	0.24÷0.34	0.28÷0.36	0.30÷0.40	0.32÷0.42	0.34÷0.44	
0.09÷0.16	0.12÷0.18	0.14÷0.22	0.18÷0.26	0.22÷0.30	0.24÷0.36	0.28÷0.38	0.30÷0.40	0.32÷0.42	0.34÷0.44	
0.10÷0.16	0.12÷0.18	0.16÷0.22	0.19÷0.25	0.22÷0.28	0.24÷0.34	0.28÷0.36	0.30÷0.40	0.32÷0.42	0.34÷0.44	
0.09÷0.16	0.12÷0.18	0.14÷0.22	0.18÷0.26	0.22÷0.30	0.24÷0.36	0.28÷0.38	0.30÷0.40	0.32÷0.42	0.34÷0.44	
0.08÷0.14	0.10÷0.16	0.12÷0.18	0.16÷0.22	0.18÷0.25	0.20÷0.28	0.22÷0.30	0.22÷0.32	0.24÷0.34	0.26÷0.36	ISO P
0.08÷0.14	0.10÷0.16	0.12÷0.18	0.16÷0.22	0.18÷0.25	0.20÷0.28	0.22÷0.30	0.22÷0.32	0.24÷0.34	0.26÷0.36	
0.08÷0.12	0.08÷0.14	0.11÷0.16	0.14÷0.18	0.16÷0.22	0.17÷0.24	0.18÷0.26	0.20÷0.28	0.22÷0.32	0.22÷0.32	
0.04÷0.09	0.05÷0.11	0.07÷0.14	0.09÷0.16	0.10÷0.18	0.12÷0.20	0.13÷0.22	0.14÷0.24	0.15÷0.25	0.17÷0.26	
0.04÷0.08	0.04÷0.09	0.06÷0.12	0.07÷0.15	0.09÷0.16	0.11÷0.19	0.12÷0.20	0.14÷0.22	0.15÷0.23	0.16÷0.24	
0.05÷0.10	0.06÷0.12	0.08÷0.14	0.09÷0.16	0.10÷0.18	0.12÷0.20	0.14÷0.22	0.15÷0.23	0.16÷0.24	0.18÷0.26	ISO M
0.04÷0.08	0.05÷0.09	0.06÷0.10	0.07÷0.13	0.08÷0.14	0.09÷0.15	0.09÷0.16	0.10÷0.18	0.11÷0.19	0.12÷0.21	
0.04÷0.08	0.05÷0.09	0.06÷0.10	0.07÷0.13	0.08÷0.14	0.09÷0.15	0.09÷0.16	0.10÷0.18	0.11÷0.19	0.12÷0.21	
0.10÷0.18	0.12÷0.20	0.18÷0.26	0.22÷0.32	0.25÷0.34	0.28÷0.37	0.30÷0.40	0.34÷0.45	0.36÷0.47	0.38÷0.50	ISO K
0.09÷0.16	0.10÷0.18	0.15÷0.23	0.19÷0.28	0.22÷0.30	0.25÷0.34	0.28÷0.36	0.32÷0.40	0.34÷0.43	0.36÷0.45	
0.04÷0.07	0.04÷0.08	0.05÷0.10	0.06÷0.12	0.07÷0.13	0.08÷0.15	0.09÷0.16	0.10÷0.18	0.11÷0.19	0.12÷0.21	ISO S
0.03÷0.06	0.04÷0.07	0.05÷0.09	0.06÷0.10	0.08÷0.12	0.09÷0.14	0.09÷0.16	0.10÷0.18	0.11÷0.19	0.12÷0.20	

Logo Distributore

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