
LSE445/NSE300/400

GENERAL FACE MILLING SERIES WITH 20° POSITIVE
INSERTS FOR RELIABLE AND EFFICIENT MACHINING



*M*plus...

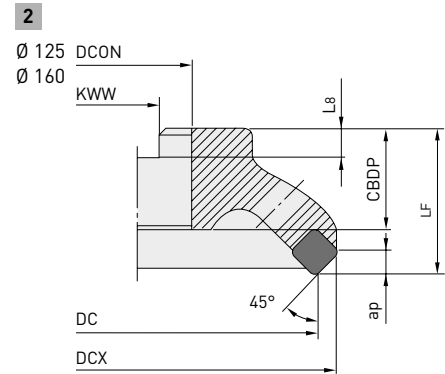
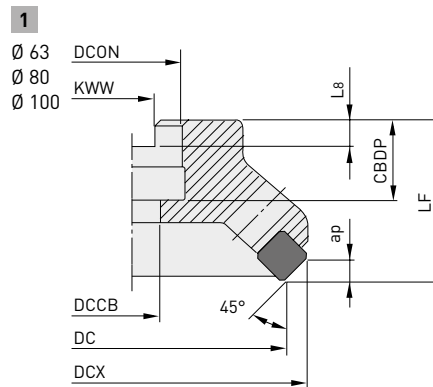
LSE445



45° FACE MILLING GENERAL CUTTING



CH:45°
A.R:+19° T:+13°
RR:-2° I:+15°



ARBOR TYPE

Order number	Stock		ZEFP	DC	DCX	LF	DCON	CBDP	DCCB	KWW	L8	WT	APMX	Type
	R	L												
LSE445-063A05R/L-E	●	□	5	63	76.5	40	22	20	11	10.4	6.4	0.8	5.5	1
LSE445-080A06R/L-E	●	□	6	80	93.5	50	27	22	13.5	12.4	7.0	1.0	5.5	1
LSE445-100A07R/L-E	●	□	7	100	113.5	50	32	25	17.5	14.4	8.0	1.4	5.5	1
LSE445-125B09R/L-E	□	□	9	125	138.5	50	40	32	—	16.4	9.0	2.0	5.5	2
LSE445-160B11R/L-E	□	□	11	160	173.5	50	40	32	—	16.4	9.0	3.0	5.5	2



SPARE PARTS

Tool holder number	Shim	Shim screw	Wedge	Clamp screw	Wrench	Wrench
LSE445 -063A05R/L-E				LS10T		
LSE445 -080A04R/L-E						
LSE445-100A07R/L-E	STBE445NF	CS300890T	CWSE445TR	LS15T	TKY25T	TKY08F
LSE445-125B09R/L-E						
LSE445 -160B11R/L-E						

*1 Clamp Torque (N • m) : LS10T=8.5. LS15T=8.5. CS300890T=1.0

INSERTS

P	Steel	●	●		●	●	●	●	●						Cutting conditions: ●:Stable cutting ●:General cutting ✖:Unstable cutting
M	Stainless steel	●	●		●	●	●	●	●						
K	Cast iron				●	✖	●	✖	●						
N	Non-ferrous metal								●						Honing: E:Round F:Sharp S:Chamfer + Hone T:Chamfer Z:Strong

Order number	Class	Honing	F7010	F7030	MC5020	VP15TF	NX2525	NX4545	UTi20T	HTi10	IC	S	BS	RE	Shape
SECN1203AFTN1	C	T						★			12.7	3.18	1.4	1.0	
SEEN1203AFFN1	E	F							●		12.7	3.18	1.4	1.0	
SEEN1203AFEN1	E	E				●					12.7	3.18	1.4	1.0	
SEEN1203AFTN1	E	T	●				●	●	●		12.7	3.18	1.4	1.0	
SEEN1203AFTN3	E	T	●					●	★		12.7	3.18	1.4	—	
SEEN1203AFSN1	E	S		●	●						12.7	3.18	1.4	1.0	
SEEN1203AFSN3	E	S		●							12.7	3.18	1.4	—	
SEEN1203AFZN1	E	Z					●				12.7	3.18	1.4	1.0	

Inserts with breaker

SEER1203AFEN-JS	E	E	●	●	●	●					12.7	3.18	1.4	1.0	
SEER1204AFEN-JS	E	E	●								12.7	3.18	1.4	1.0	

Wiper inserts

WEC42AFTR5C	C	T					●				—	3.18	5	1.0	
-------------	---	---	--	--	--	--	---	--	--	--	---	------	---	-----	--

LSE445

RECOMMENDED CUTTING CONDITIONS

Material	Hardness	Grade	Vc	fz
P Mild steel	<180HB	F7030	300 (200-360)	0.2 (0.1-0.3)
		NX4545		
		UTi20T	240 (170-300)	
		UP20M		
P Carbon steel Alloy steel	180-280HB	F7030	250 (170-300)	0.2 (0.1-0.3)
		NX4545		
		UTi20T	200 (140-240)	
		UP20M		
M Stainless steel	<200HB	UTi20T	140 (100-170)	0.15 (0.1-0.2)
		UP20M		
K Cast iron	Tensile Strength <450MPa	MC5020	200 (130-240)	0.2 (0.1-0.3)
		F5010		
		F5020	160 (110-190)	
		HTi10		
N Aluminium alloy	—	UTi20T	1000 (200-1500)	0.15 (0.05-0.25)
		MD220		
N Aluminium alloy	—	HTi10	1000 (700-1200)	0.12 (0.05-0.2)
		HTi10		

1. Revolution (min^{-1}) = $(1000 \times \text{Cutting speed}) \div (3.14 \times \text{ØD1})$
2. Table feed (mm/min) = Feed per tooth \times Number of teeth \times Cutter revolution



NSE300/400



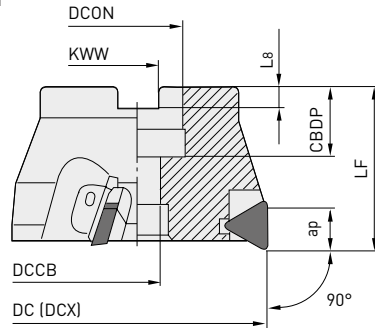
90° FACE MILLING GENERAL CUTTING

P **M** **K** **N**

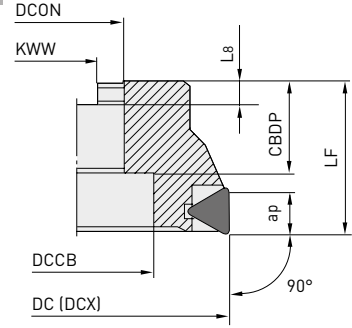


C H:0°
A.R:+16° T:+5°-+8°
R.R:+5°-+8° l:+16°

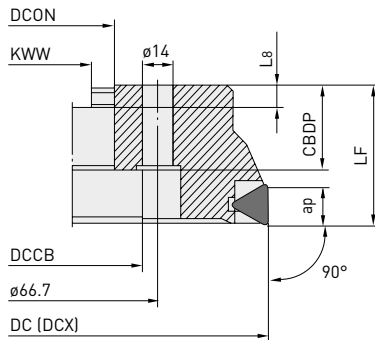
1



2



3



Right hand tool holder shown.

ARBOR TYPE

Order number	Stock	ZEFP	DC	DCX	LF	DCON	CBDP	DCCB	KWW	L8	WT	APMX	Type
NSE300-050A04R-E	●	4	50	50	40	22	20	11	10.4	6.3	0.3	12.5	1
NSE300-063A05R-E	●	5	63	63	40	22	20	11	10.4	6.3	0.5	12.5	1
NSE300-080A06R-E	●	6	80	80	50	27	22	13.5	12.4	7	1.1	12.5	1
NSE300-100A08R-E	●	8	100	100	50	32	25	17.5	14.4	8	2.1	12.5	1
NSE300-125B10R-E	●	10	125	125	63	40	32	56	16.4	9	3.2	12.5	2
NSE300-160C12R-E	□	12	160	160	63	40	29	56	16.4	9	5.4	12.5	3
NSE400-080A06R-E	□	6	80	80	50	27	22	13.5	12.4	7	1.1	17	1
NSE400-100A07R-E	□	7	100	100	50	32	25	17.5	14.4	8	2.1	17	1
NSE400-125B08R-E	□	8	125	125	63	40	32	56	16.4	9	3.2	17	2
NSE400-160C10R-E	□	10	160	160	63	40	29	56	16.4	9	5.4	17	3



SPARE PARTS

Tool holder number	Locator	Wedge-T	Locator	Wedge-T	Clamp screw	Locator screw	Wrench (Clamp screw)	Wrench (Sold separately)
NSE300-050A04R-E		CWTSE300TR			LS19T		TKY15T	
NSE300-063A05R-E	SPTSE300R							
NSE300-080A06R-E		CWNSE300TR			LS10T	TS32		TKY08F
NSE300-160C12R-E							TKY25T	
NSE400-E			SPTSE400R	CWSE300TR	LS10TS			

* Clamp Torque (N • m) : LS10T=8.5. LS10TS=8.5. LS19T=5.0. TS32=1.0

● : Inventory maintained. □ : Produced to order only

INSERTS

P	Steel	●	●	●	●	●	●	●	●	Cutting conditions : ●:Stable cutting ●:General cutting ✖:Unstable cutting
M	Stainless steel	●	●	●	●	●	●	●	●	
K	Cast iron	●	✖	✖	✖	✖	✖	✖	✖	Honing: ●:Round F:Sharp S:Chamfer + Hone T:Chamfer Z:Strong
N	Non-ferrous metal	●								

Order number	Class	Honing	F7030	MC5020	VP15TF	UP20M	NX2525	NX4545	UT120T	HT10	IC	S	BS	RE	Shape
TECN1603PEFR1W	C	F	●							★	9.525	3.175	1.4	0.4	
TECN1603PEER1W	C	E	●							★	9.525	3.175	1.4	0.4	
TECN1603PETR1W	C	T					★	★	★		9.525	3.175	1.4	0.4	
TEEN1603PEFR1	E	F								●	9.525	3.175	1.4	0.4	
TEEN1603PEER1	E	E								●	9.525	3.175	1.4	0.4	
TEEN1603PETR1	E	T				●	●	●	●		9.525	3.175	1.4	0.4	
TEEN1603PESR1	E	S	●	●							9.525	3.175	1.4	0.4	
TEEN1603PEZR1	E	Z					●				9.525	3.175	1.4	0.4	
TECN2204PEFR1	C	F								★	12.7	4.76	1.4	1.0	
TECN2204PETR1	C	T								★	12.7	4.76	1.4	1.0	
TEEN2204PEFR1	E	F								●	12.7	4.76	1.4	1.0	
TEEN2204PEER1	E	E			★					●	12.7	4.76	1.4	1.0	
TEEN2204PETR1	E	T				●	★	●	●		12.7	4.76	1.4	1.0	
TEEN2204PESR1	E	S	●	●							12.7	4.76	1.4	1.0	
Inserts with breaker															
TEER1603PEER-JS	E	E	●							●	9.525	3.175	1.4	0.4	
TEER2204PEER-JS	E	E	●							★	12.7	4.76	1.4	1.0	

NSE300/400

RECOMMENDED CUTTING CONDITIONS

Material	Hardness	Grade	Vc	fz
P Mild steel	<180HB	F7030	240 (160-290)	0.2 (0.1-0.3)
		NX4545		
		UTi20T	190 (125-230)	
		UP20M		
P Carbon steel Alloy steel	180-280HB	F7030	200 (135-240)	0.2 (0.1-0.3)
		NX4545		
		UTi20T	160 (110-190)	
		UP20M		
M Stainless steel	<200HB	UTi20T	160 (125-200)	0.2 (0.1-0.3)
		UP20M		
K Cast iron	Tensile strength <450MPa	MC5020	200 (130-240)	0.2 (0.1-0.3)
		F5010		
		F5020	160 (110-190)	
		HTi10		
N Aluminium alloy	-	MD220	1000 (200-1500)	0.15 (0.05-0.25)
		HTi10	800 (560-960)	0.12 (0.05-0.2)

1. Revolution (min^{-1}) = $(1000 \times \text{Cutting speed}) \div (3.14 \times \text{ØD1})$

2. Table feed (mm/min) = Feed per tooth \times Number of teeth \times Cutter revolution





GERMANY

MMC HARTMETALL GMBH
Comeniusstr. 2 . 40670 Meerbusch
Phone +49 2159 91890 . Fax +49 2159 918966
Email admin@mmchg.de

U.K.

MMC HARDMETAL U.K. LTD.
Mitsubishi House . Galena Close . Tamworth . Staffs. B77 4AS
Phone +44 1827 312312 . Fax +44 1827 312314
Email sales@mitsubishicarbide.co.uk

SPAIN

MITSUBISHI MATERIALS ESPAÑA, S.A.
Calle Emperador 2 . 46136 Museros/Valencia
Phone +34 96 1441711 . Fax +34 96 1443786
Email comercial@mmevalencia.es

FRANCE

MMC METAL FRANCE S.A.R.L.
6, Rue Jacques Monod . 91400 Orsay
Phone +33 1 69 35 53 53 . Fax +33 1 69 35 53 50
Email mmfsales@mmc-metal-france.fr

POLAND

MMC HARDMETAL POLAND SP. Z O.O
Al. Armii Krajowej 61 . 50-541 Wrocław
Phone +48 71335 1620 . Fax +48 71335 1621
Email sales@mitsubishicarbide.com.pl

RUSSIA

MMC HARDMETAL OOO LTD.
Electrozavodskaya St. 24 . build. 3 . Moscow . 107023
Phone +7 495 725 58 85 . Fax +7 495 981 39 79
Email info@mmc-carbide.ru

ITALY

MMC ITALIA S.R.L.
Viale Certosa 144 . 20156 Milano
Phone +39 0293 77031 . Fax +39 0293 589093
Email info@mmc-italia.it

TURKEY

MMC HARTMETALL GMBH ALMANYA - İZMİR MERKEZ ŞUBESİ
Adalet Mahallesi Anadolu Caddesi No: 41-1 . 15001 35530 Bayraklı/İzmir
Phone +90 232 5015000 . Fax +90 232 5015007
Email info@mmchg.com.tr

www.mitsubishicarbide.com | www.mmc-hardmetal.com


DISTRIBUTED BY:

□

□

L

┘

Order Code: MP103E 

Published: 2022.04 (0), Printed in Germany