ZCC-CT
ZCC USA Inc.

PERFORMANCE 100% GUARANTEE

2019

The Z-Advantage Kits

Quality You Expect, Performance You Demand, Value You Deserve.

ZHUZHOU CEMENTED CARBIDE
CUTTING TOOLS CO., LTD.

FMA11 P K

45 Degree Face Milling Series

- Cutter is PVD coated for superior corrosion and heat resistance.
- 8 Cutting Edges.
- Available in 3 inserts sizes and 2 wipers.

Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT1-FMA11-01-01	FMA11-2.00"-A0.75"-SN12-04C-GMYBM253	FMA11-2.00"-A0.75"-SN12-04C	SNEG1205ANR-GM YBM253	$188.10
KIT1-FMA11-01-02	FMA11-2.00"-A0.75"-SN12-04C-GMYBD152	FMA11-2.00"-A0.75"-SN12-04C	SNEG1205ANR-GM YBD152	$188.10
KIT1-FMA11-01-03	FMA11-2.00"-A0.75"-SN12-04C-GMYBG205	FMA11-2.00"-A0.75"-SN12-04C	SNEG1205ANR-GM YBG205	$188.10
KIT1-FMA11-02-01	FMA11-2.50"-A0.75"-SN12-06C-GMYBM253	FMA11-2.50"-A0.75"-SN12-06C	SNEG1205ANR-GM YBM253	$236.01
KIT1-FMA11-02-02	FMA11-2.50"-A0.75"-SN12-06C-GMYBD152	FMA11-2.50"-A0.75"-SN12-06C	SNEG1205ANR-GM YBD152	$236.01
KIT1-FMA11-02-03	FMA11-2.50"-A0.75"-SN12-06C-GMYBG205	FMA11-2.50"-A0.75"-SN12-06C	SNEG1205ANR-GM YBG205	$236.01
KIT1-FMA11-03-01	FMA11-3.00"-A1.00"-SN12-07C-GMYBM253	FMA11-3.00"-A1.00"-SN12-07C	SNEG1205ANR-GM YBM253	$266.87
KIT1-FMA11-03-02	FMA11-3.00"-A1.00"-SN12-07C-GMYBD152	FMA11-3.00"-A1.00"-SN12-07C	SNEG1205ANR-GM YBD152	$266.87
KIT1-FMA11-03-03	FMA11-3.00"-A1.00"-SN12-07C-GMYBG205	FMA11-3.00"-A1.00"-SN12-07C	SNEG1205ANR-GM YBG205	$266.87
KIT1-FMA11-04-01	FMA11-4.00"-B1.25"-SN12-07-GMYBM253	FMA11-4.00"-B1.25"-SN12-07	SNEG1205ANR-GM YBM253	$252.51
KIT1-FMA11-04-02	FMA11-4.00"-B1.25"-SN12-07-GMYBD152	FMA11-4.00"-B1.25"-SN12-07	SNEG1205ANR-GM YBD152	$252.51
KIT1-FMA11-04-03	FMA11-4.00"-B1.25"-SN12-07-GMYBG205	FMA11-4.00"-B1.25"-SN12-07	SNEG1205ANR-GM YBG205	$252.51
KIT1-FMA11-05-01	FMA11-3.00"-A1.00"-SN15-07C-GRYBM253	FMA11-3.00"-A1.00"-SN15-07C	SNEG1506ANR-GR YBM253	$284.68
KIT1-FMA11-05-02	FMA11-3.00"-A1.00"-SN15-07C-GRYBD152	FMA11-3.00"-A1.00"-SN15-07C	SNEG1506ANR-GR YBD152	$284.68
KIT1-FMA11-05-03	FMA11-3.00"-A1.00"-SN15-07C-GRYBG205	FMA11-3.00"-A1.00"-SN15-07C	SNEG1506ANR-GR YBG205	$284.68
KIT1-FMA11-06-01	FMA11-4.00"-B1.50"-SN15-09-GRYBM253	FMA11-4.00"-B1.50"-SN15-09	SNEG1506ANR-GR YBM253	$359.43
KIT1-FMA11-06-02	FMA11-4.00"-B1.50"-SN15-09-GRYBD152	FMA11-4.00"-B1.50"-SN15-09	SNEG1506ANR-GR YBD152	$359.43
KIT1-FMA11-06-03	FMA11-4.00"-B1.50"-SN15-09-GRYBG205	FMA11-4.00"-B1.50"-SN15-09	SNEG1506ANR-GR YBG205	$359.43

- Each kit price above includes 1 cutter and 10 inserts, wrench, grease and brochure.
- For more details, please refer to our catalog.

Recommended cutting parameters

Workpiece material		Hardness HB	Grade	Cutting data		
				V(SFPM)	f(inch/z)	a_{pmax}(inch)
P	Low carbon steel Soft steel	≤180	YBM253/YBC302/ YBG205/YB9320	880 (720-1200)	0.008 (0.004-0.016)	0.216(SN12) 0.275(SN15) 0.354(SN19)
P	High carbon steel Alloy steel	180-280	YBM253/YBC302/ YBG205/YB9320	850 (650-1050)	0.008 (0.004-0.016)	
P	Alloy tool steel	280-350	YBM253/YBC302/ YBG205/YB9320	780 (590-1000)	0.008 (0.004-0.016)	
K	Cast iron	180-250	YBD152	880 (490-980)	0.012(0.004-0.02)	
K	Cast iron	180-250	YBD252	650 (490-820)	0.016 (0.008-0.024)	

FMA12 P M K

45 Degree Face Milling Series

- High Performance 16 edges.
- Unique 3D edge design.
- Double negative rake angle with helical insert design creates double positive axial angle for reduced cutting tool forces.

Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT1-FMA12-01-01	FMA12-2.50"-A0.75"-ON08-05-GMYBM253	FMA12-2.50"-A0.75"-ON08-05	ONHU08T624R-GM YBM253	$241.42
KIT1-FMA12-01-02	FMA12-2.50"-A0.75"-ON08-05-GMYBG205	FMA12-2.50"-A0.75"-ON08-05	ONHU08T624R-GM YBG205	$241.42
KIT1-FMA12-01-03	FMA12-2.50"-A0.75"-ON08-05-GMYBD152	FMA12-2.50"-A0.75"-ON08-05	ONHU08T624R-GM YBD152	$241.42
KIT1-FMA12-02-01	FMA12-3.00"-A1.00"-ON08-06-GMYBM253	FMA12-3.00"-A1.00"-ON08-06	ONHU08T624R-GM YBM253	$261.97
KIT1-FMA12-02-02	FMA12-3.00"-A1.00"-ON08-06-GMYBG205	FMA12-3.00"-A1.00"-ON08-06	ONHU08T624R-GM YBG205	$261.97
KIT1-FMA12-02-03	FMA12-3.00"-A1.00"-ON08-06-GMYBD152	FMA12-3.00"-A1.00"-ON08-06	ONHU08T624R-GM YBD152	$261.97
KIT1-FMA12-03-01	FMA12-4.00"-B1.25"-ON08-07-GMYBM253	FMA12-4.00"-B1.25"-ON08-07	ONHU08T624R-GM YBM253	$292.13
KIT1-FMA12-03-02	FMA12-4.00"-B1.25"-ON08-07-GMYBG205	FMA12-4.00"-B1.25"-ON08-07	ONHU08T624R-GM YBG205	$292.13
KIT1-FMA12-03-03	FMA12-4.00"-B1.25"-ON08-07-GMYBD152	FMA12-4.00"-B1.25"-ON08-07	ONHU08T624R-GM YBD152	$292.13

- Each kit price above includes 1 cutter and 10 inserts, wrench, grease and brochure.
- For more details, please refer to our catalog.

Recommended cutting parameters

Workpiece material		Hardness HB	Grade	Cutting data		
				Cutting speed (SFPM)	Feed per tooth(in)	a_{pmax}(in)
P	Low carbon steel	≤180	YBM253 YBG205	900(700-1100)	0.008(0.004-0.012)	0.197
P	Alloy steel	180-350	YBM253 YBG205	800(600-1000)	0.006(0.004-0.012)	0.197
M	Stainless steel	≤270	YBM253 YBG205	750 (600-950) 500 (360-900)	0.006 (0.004-0.012)	0.197
K	Cast iron	180-260	YBD152	900(500-950)	0.008(0.004-0.012)	0.197

FMD02 P K

67 Degree Face Milling Series

- High Performance 10 edges.
- First choice for face milling cast iron .
- Open chip breaker and large rake angle design, suitable for machines of different power.

Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT1-FMD02-01-01	FMD02-2.00"-A0.75"-PN11-05-CMYBD152	FMD02-2.00"-A0.75"-PN11-05	PNEG110512R-CM YBD152	$201.69
KIT1-FMD02-01-02	FMD02-2.00"-A0.75"-PN11-05-PMYBC302	FMD02-2.00"-A0.75"-PN11-05	PNEG110512R-PM YBC302	$201.69
KIT1-FMD02-02-01	FMD02-2.50"-A0.75"-PN11-06-CMYBD152	FMD02-2.50"-A0.75"-PN11-06	PNEG110512R-CM YBD152	$221.57
KIT1-FMD02-02-02	FMD02-2.50"-A0.75"-PN11-06-PMYBC302	FMD02-2.50"-A0.75"-PN11-06	PNEG110512R-PM YBC302	$221.57
KIT1-FMD02-03-01	FMD02-3.00"-A1.00"-PN11-08-CMYBD152	FMD02-3.00"-A1.00"-PN11-08	PNEG110512R-CM YBD152	$254.46
KIT1-FMD02-03-02	FMD02-3.00"-A1.00"-PN11-09-PMYBC302	FMD02-3.00"-A1.00"-PN11-08	PNEG110512R-PM YBC302	$254.46
KIT1-FMD02-04-01	FMD02-4.00"-B1.25"-PN11-10-CMYBD152	FMD02-4.00"-B1.25"-PN11-10	PNEG110512R-CM YBD152	$332.60
KIT1-FMD02-04-02	FMD02-4.00"-B1.25"-PN11-10-PMYBC302	FMD02-4.00"-B1.25"-PN11-10	PNEG110512R-PM YBC302	$332.60

- Each kit price above includes 1 cutter and 10 inserts, wrench, grease and brochure.
- CM chip breaker is recommended for milling ISO K materials, while PM chip breaker is for ISO P materials.
- For more details, please refer to our catalog.

Recommended cutting parameters

Workpiece material		Hardness HB	Insert grade	Cutting parameters			
				V(SFPM)	f(in/z)		
					PF	PM	PR
P	Low carbon steel、Soft steel	≤180	YBC302 YBM253	900(700-1100)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
P	High-carbon steel、Alloy steel	180-280	YBC302 YBM253	850(650-1000)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
P	Alloy tool steel	280-350	YBC302 YBM253	800(600-950)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
K	Cast iron	180-250	YBD152	900(500-1000)	CF	CM	CR
K	Cast iron	180-250	YBD152	900(500-1000)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)

FMP12 P K

90 Degree Face Milling Series

- High Performance 6 edges.
- 90° approach angle can be used for shoulder milling, face milling, groove milling, etc.
- Double negative angle tool body combined with unique insert to achieve double positive tool angle, reducing cutting forces.

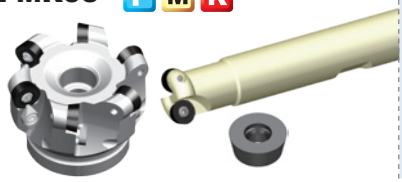
Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT2-FMP12-01-01	FMP12-1.00"-XP1.00"-WN06-02C-GMYBM253	FMP12-1.00"-XP1.00"-WN06-02C	WNHU060408PNR-GM YBM253	$133.64
KIT2-FMP12-01-02	FMP12-1.00"-XP1.00"-WN06-02C-GMYBD152	FMP12-1.00"-XP1.00"-WN06-02C	WNHU060408PNR-GM YBD152	$133.64
KIT2-FMP12-01-03	FMP12-1.00"-XP1.00"-WN06-02C-GMYBG205	FMP12-1.00"-XP1.00"-WN06-02C	WNHU060408PNR-GM YBG205	$133.64
KIT2-FMP12-02-01	FMP12-1.25"-XP1.00"-WN06-03C-GMYBM253	FMP12-1.25"-XP1.00"-WN06-03C	WNHU060408PNR-GM YBM253	$161.05
KIT2-FMP12-02-02	FMP12-1.25"-XP1.00"-WN06-03C-GMYBD152	FMP12-1.25"-XP1.00"-WN06-03C	WNHU060408PNR-GM YBD152	$161.05
KIT2-FMP12-02-03	FMP12-1.25"-XP1.00"-WN06-03C-GMYBG205	FMP12-1.25"-XP1.00"-WN06-03C	WNHU060408PNR-GM YBG205	$161.05
KIT2-FMP12-03-01	FMP12-1.50"-XP1.25"-WN06-04C-GMYBM253	FMP12-1.50"-XP1.25"-WN06-04C	WNHU060408PNR-GM YBM253	$188.54
KIT2-FMP12-03-02	FMP12-1.50"-XP1.25"-WN06-04C-GMYBD152	FMP12-1.50"-XP1.25"-WN06-04C	WNHU060408PNR-GM YBD152	$188.54
KIT2-FMP12-03-03	FMP12-1.50"-XP1.25"-WN06-04C-GMYBG205	FMP12-1.50"-XP1.25"-WN06-04C	WNHU060408PNR-GM YBG205	$188.54
KIT1-FMP12-04-01	FMP12-2.00"-A0.75"-WN06-05C-GMYBM253	FMP12-2.00"-A0.75"-WN06-05C	WNHU060408PNR-GM YBM253	$217.99
KIT1-FMP12-04-02	FMP12-2.00"-A0.75"-WN06-05C-GMYBD152	FMP12-2.00"-A0.75"-WN06-05C	WNHU060408PNR-GM YBD152	$217.99
KIT1-FMP12-04-03	FMP12-2.00"-A0.75"-WN06-05C-GMYBG205	FMP12-2.00"-A0.75"-WN06-05C	WNHU060408PNR-GM YBG205	$217.99
KIT1-FMP12-05-01	FMP12-2.50"-A0.75"-WN08-05C-GMYBM253	FMP12-2.50"-A0.75"-WN08-05C	WNHU080608PNR-GM YBM253	$232.49
KIT1-FMP12-05-02	FMP12-2.50"-A0.75"-WN08-05C-GMYBD152	FMP12-2.50"-A0.75"-WN08-05C	WNHU080608PNR-GM YBD152	$232.49
KIT1-FMP12-05-03	FMP12-2.50"-A0.75"-WN08-05C-GMYBG205	FMP12-2.50"-A0.75"-WN08-05C	WNHU080608PNR-GM YBG205	$232.49
KIT1-FMP12-06-01	FMP12-3.00"-A1.00"-WN08-06C-GMYBM253	FMP12-3.00"-A1.00"-WN08-06C	WNHU080608PNR-GM YBM253	$260.63
KIT1-FMP12-06-02	FMP12-3.00"-A1.00"-WN08-06C-GMYBD152	FMP12-3.00"-A1.00"-WN08-06C	WNHU080608PNR-GM YBD152	$260.63
KIT1-FMP12-06-03	FMP12-3.00"-A1.00"-WN08-06C-GMYBG205	FMP12-3.00"-A1.00"-WN08-06C	WNHU080608PNR-GM YBG205	$260.63
KIT1-FMP12-07-01	FMP12-4.00"-B1.25"-WN08-08-GMYBM253	FMP12-4.00"-B1.25"-WN08-08	WNHU080608PNR-GM YBM253	$347.70
KIT1-FMP12-07-02	FMP12-4.00"-B1.25"-WN08-08-GMYBD152	FMP12-4.00"-B1.25"-WN08-08	WNHU080608PNR-GM YBD152	$347.70
KIT1-FMP12-07-03	FMP12-4.00"-B1.25"-WN08-08-GMYBG205	FMP12-4.00"-B1.25"-WN08-08	WNHU080608PNR-GM YBG205	$347.70

- Each kit price above includes 1 cutter and 10 inserts, wrench, grease and brochure.
- For more details, please refer to our catalog.

Recommended cutting parameters

Workpiece material		Hardness HB	Insert grade	Cutting parameters		
				V(SFPM)	f(in/z)	a_{pmax}(in)
P	Low-carbon steel、Soft steel	≤180	YBM253/YBG205/ YB9320	900(700-1150)	0.008 (0.004-0.016)	0.224(WN06) 0.303(WN08)
P	High-carbon steel、Alloy steel	180-280	YBM253/YBG205/ /YB9320	850 (650-1100)	0.008 (0.004-0.016)	
P	Alloy tool steel	280-350	YBM253/YBG205/ /YB9320	750 (600-1000)	0.008 (0.004-0.016)	
K	Cast iron	180-250	YBD152	900 (500-1000)	0.008 (0.004-0.016)	

FMR05 P M K



Button Milling Series

- R-type inserts have stronger cutting edges .
- For face milling and cavity profile milling .

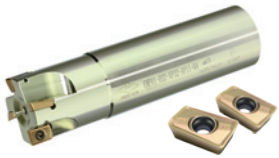
Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT2-FMR05-01-01	FMR05-0.750"-XP0.75"-RP2-02RPMW06T2YBG205	FMR05-0.750"-XP0.75"-RP2-02	RPMW06T200 YBG205	$101.01
KIT2-FMR05-02-01	FMR05-1.00"-XP0.75"-RP3-02RPMW09T3YBG205	FMR05-1.00"-XP0.75"-RP3-02	RPMW09T300 YBG205	$103.43
KIT2-FMR05-03-01	FMR05-1.25"-XP1.00"-RP3-03RPMW09T3YBG205	FMR05-1.25"-XP1.00"-RP3-03	RPMW09T300 YBG205	$137.69
KIT2-FMR05-04-01	FMR05-1.500"-XP1.25"-RP4-03RPMW1204YBG205	FMR05-1.500"-XP1.25"-RP4-03	RPMW120400 YBG205	$153.62
KIT1-FMR05-05-01	FMR05-2.00"-A0.75"-RP4-05RPMW1204YBG205	FMR05-2.00"-A0.75"-RP4-05	RPMW120400 YBG205	$208.45
KIT1-FMR05-06-01	FMR05-2.50"-A0.75"-RP4-06RPMW1204YBG205	FMR05-2.50"-A0.75"-RP4-06	RPMW120400 YBG205	$270.14
KIT1-FMR05-07-01	FMR05-3.00"-A1.00"-RP4-07RPMW1204YBG205	FMR05-3.00"-A1.00"-RP4-07	RPMW120400 YBG205	$300.98
KIT1-FMR05-08-01	FMR05-4.00"-B1.50"-RP5-06RPMW1605YBG205	FMR05-4.00"-B1.50"-RP5-06	RPMW160500 YBG205	$291.12

- Each kit price above includes 1 cutter and 10 inserts, wrench, grease and brochure.
- For more details, please refer to our catalog.

Recommended cutting parameters

Workpiece material		Hardness HB	Insert grade	Cutting parameters V(SFPM)	Cutting parameters f(in/z)
P	Low-carbon steel、Soft steel	≤180	YBG202 YBG205	900(650-1200)	0.008(0.004-0.018)
			YBG302	700(600-1000)	0.010(0.006-0.018)
	High-carbon steel、Alloy steel	180-280	YBG202 YBG205	800(600-1200)	0.008(0.004-0.018)
			YBG302	650(500-1000)	0.010(0.006-0.018)
	Alloy tool steel	280-350	YBG202 YBG205	700(550-1100)	0.008(0.004-0.018)
			YBG302	600(500-800)	0.010(0.006-0.018)
M	Stainless steel	≤270	YBG302	500(300-700)	0.010(0.004-0.018)
			YBG202 YBG205	500(350-900)	0.008(0.004-0.018)
K	Cast iron	180-250	YBG302	700(400-1000)	0.008(0.004-0.018)

EMP01 P M N



Square Shoulder Milling Series

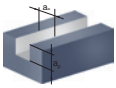
- Multi-function for square shoulder milling, slot milling, ramp milling etc.
- Inserts with newest 3D helical cutting edge for reducing cutting force.

Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT2-EMP01-01-01	EMP01-0.50"-G0.625"-AP11-01-APMYB9320	EMP01-0.50"-G0.625"-AP11-01	APKT11T308-APM YB9320	$81.18
KIT2-EMP01-01-02	EMP01-0.50"-G0.625"-AP11-01-ALHYD101	EMP01-0.50"-G0.625"-AP11-01	APKT11T308-ALH YD101	$81.18
KIT2-EMP01-02-01	EMP01-0.625"-G0.625"-AP11-02-APMYB9320	EMP01-0.625"-G0.625"-AP11-02	APKT11T308-APM YB9320	$94.19
KIT2-EMP01-02-02	EMP01-0.625"-G0.625"-AP11-03-ALHYD101	EMP01-0.625"-G0.625"-AP11-02	APKT11T308-ALH YD101	$94.19
KIT2-EMP01-03-01	EMP01-0.75"-G0.75"-AP11-02 (L=6.5")-APMYB9320	EMP01-0.75"-G0.75"-AP11-02 (L=6.5")	APKT11T308-APM YB9320	$105.85
KIT2-EMP01-03-02	EMP01-0.75"-G0.75"-AP11-02 (L=6.5")-ALHYD101	EMP01-0.75"-G0.75"-AP11-02 (L=6.5")	APKT11T308-ALH YD101	$105.85
KIT2-EMP01-04-01	EMP01-1.00"-G1.00"-AP11-03-APMYB9320	EMP01-1.00"-G1.00"-AP11-03	APKT11T308-APM YB9320	$106.53
KIT2-EMP01-04-02	EMP01-1.00"-G1.00"-AP11-04-ALHYD101	EMP01-1.00"-G1.00"-AP11-03	APKT11T308-ALH YD101	$106.53
KIT2-EMP01-05-01	EMP01-1.25"-G1.25"-AP11-04-APMYB9320	EMP01-1.25"-G1.25"-AP11-04	APKT11T308-APM YB9320	$130.52
KIT2-EMP01-05-02	EMP01-1.25"-G1.25"-AP11-05-ALHYD101	EMP01-1.25"-G1.25"-AP11-04	APKT11T308-ALH YD101	$130.52
KIT2-EMP01-06-01	EMP01-1.00"-G1.00"-AP16-02(L=7.0)-APMYB9320	EMP01-1.00"-G1.00"-AP16-02(L=7.0)	APKT160408-APM YB9320	$115.75
KIT2-EMP01-06-02	EMP01-1.00"-G1.00"-AP16-02(L=7.0)-ALHYD101	EMP01-1.00"-G1.00"-AP16-02(L=7.0)	APKT160408-ALH YD101	$115.75
KIT2-EMP01-07-01	EMP01-1.25"-G1.25"-AP16-03(L=7.0)-APMYB9320	EMP01-1.25"-G1.25"-AP16-03(L=7.0)	APKT160408-APM YB9320	$134.94
KIT2-EMP01-07-02	EMP01-1.25"-G1.25"-AP16-03(L=7.0)-ALHYD101	EMP01-1.25"-G1.25"-AP16-03(L=7.0)	APKT160408-ALH YD101	$134.94
KIT2-EMP01-08-01	EMP01-1.50"-G1.50"-AP16-04(L=7.0)-APMYB9320	EMP01-1.50"-G1.50"-AP16-04(L=7.0)	APKT160408-APM YB9320	$147.27
KIT2-EMP01-08-02	EMP01-1.50"-G1.50"-AP16-04(L=7.0)-ALHYD101	EMP01-1.50"-G1.50"-AP16-04(L=7.0)	APKT160408-ALH YD101	$147.27
KIT2-EMP01-09-01	EMP01-1.00"-XP1.00"-AP11-03-APMYB9320	EMP01-1.00"-XP1.00"-AP11-03	APKT11T308-APM YB9320	$110.64
KIT2-EMP01-09-02	EMP01-1.00"-XP1.00"-AP11-03-ALHYD101	EMP01-1.00"-XP1.00"-AP11-03	APKT11T308-ALH YD101	$110.64
KIT2-EMP01-10-01	EMP01-1.00"-XP1.00"-AP16-02-APMYB9320	EMP01-1.00"-XP1.00"-AP16-02	APKT160408-APM YB9320	$110.95
KIT2-EMP01-10-02	EMP01-1.00"-XP1.00"-AP16-02-ALHYD101	EMP01-1.00"-XP1.00"-AP16-02	APKT160408-ALH YD101	$110.95
KIT2-EMP01-11-01	EMP01-1.25"-XP1.25"-AP16-03-APMYB9320	EMP01-1.25"-XP1.25"-AP16-03	APKT160408-APM YB9320	$131.51
KIT2-EMP01-11-02	EMP01-1.25"-XP1.25"-AP16-03-ALHYD101	EMP01-1.25"-XP1.25"-AP16-03	APKT160408-ALH YD101	$131.51
KIT2-EMP01-12-01	EMP01-0.75"-XP0.75"-AP11-03-APMYB9320	EMP01-0.75"-XP0.75"-AP11-03	APKT11T308-APM YB9320	$101.26
KIT2-EMP01-12-02	EMP01-0.75"-XP0.75"-AP11-03-ALHYD101	EMP01-0.75"-XP0.75"-AP11-03	APKT11T308-ALH YD101	$107.91

- Each kit price above includes 1 cutter and 10 inserts, wrench, grease and brochure.
- For more details, please refer to our catalog.

1 Square shoulder milling

Recommended cutting parameters(Same as page 8)

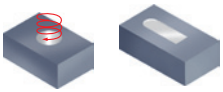


2 Slot milling

Recommended cutting parameters

(D: Diameter)

	Workpiece material	Hardness HB	Insert grade	Cutting parameters V(SFPM)	f(in/z) -APF	f(in/z) -APM	a_e(inch)
P	Low-carbon steel、Soft steel	≤180	YB9320	600(450-800)	0.004(0.003-0.006)	0.006(0.004-0.01)	D
P	High-carbon steel、Alloy steel	180-280	YB9320	550(400-800)	0.004(0.003-0.006)	0.006(0.004-0.01)	D
P	Alloy tool steel	280-350	YB9320	500(360-800)	0.004(0.003-0.006)	0.006(0.004-0.01)	D
M	Stainless steel	≤270	YB9320	400(260-600)	0.004(0.003-0.006)	0.006(0.004-0.01)	D
N					-ALH		
N	Aluminium alloy	----	YD101	1000-	0.008(0.003-0.012)		D
N	Aluminium alloy	----	YD201	1000-	0.008(0.003-0.012)		D

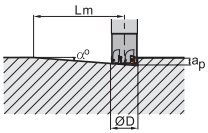


3 Ramp milling, helical interpolation milling

Recommended cutting parameters

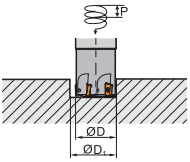
(D: Diameter)

● Ramp milling



$$L_m = \frac{a_p}{tg\alpha}$$ (α:Maximum ramp angle)

● Helical interpolation milling

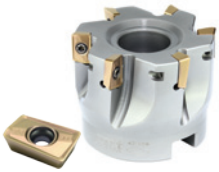


$$tg\alpha = \frac{P}{\pi D_1}$$ (α:Helical angle)

Diameter ØD(mm)	APKT Ramp milling, helical interpolation milling (Inserts-11)				
	Ramp milling			Helical interpolation milling	
	Maximum cutting depth a_p(inch)	Maximum ramp angle α°	Minimum length L_m(inch)	Minimum diameter $ØD_1$(inch)	Maximum pitch(inch)
0.62	0.394	10.0	2.232	0.787	0.079
0.75	0.394	5.0	4.504	1.102	0.079
1	0.394	4.5	5.000	1.575	0.079
1.25	0.394	3.0	7.512	2.205	0.079
1.5	0.394	2.0	11.276	2.756	0.079

Note: For cutting speed and feed rate per tooth, see square shoulder milling.

EMP02 P M N



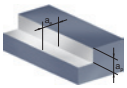
Square Shoulder Milling Series

- For square shoulder milling, face milling etc.
- Inserts with newest 3D helical cutting edge for reducing cutting force.

Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT1-EMP02-01-01	EMP02-2.00"-A0.75"-AP11-06-APMYB9320	EMP02-2.00"-A0.75"-AP11-06	APKT11T308-APM YB9320	$164.10
KIT1-EMP02-01-02	EMP02-2.00"-A0.75"-AP11-06-ALHYD101	EMP02-2.00"-A0.75"-AP11-06	APKT11T308-ALH YD101	$164.10
KIT1-EMP02-02-01	EMP02-2.50"-A0.75"-AP11-08-APMYB9320	EMP02-2.50"-A0.75"-AP11-08	APKT11T308-APM YB9320	$189.47
KIT1-EMP02-02-02	EMP02-2.50"-A0.75"-AP11-08-ALHYD101	EMP02-2.50"-A0.75"-AP11-08	APKT11T308-ALH YD101	$189.47
KIT1-EMP02-03-01	EMP02-3.00"-A1.00"-AP11-08-APMYB9320	EMP02-3.00"-A1.00"-AP11-08	APKT11T308-APM YB9320	$199.74
KIT1-EMP02-03-02	EMP02-3.00"-A1.00"-AP11-08-ALHYD101	EMP02-3.00"-A1.00"-AP11-08	APKT11T308-ALH YD101	$199.74
KIT1-EMP02-04-01	EMP02-4.00"-B1.25"-AP11-10-APMYB9320	EMP02-4.00"-B1.25"-AP11-10	APKT11T308-APM YB9320	$233.33
KIT1-EMP02-04-02	EMP02-4.00"-B1.25"-AP11-10-ALHYD101	EMP02-4.00"-B1.25"-AP11-10	APKT11T308-ALH YD101	$233.33
KIT1-EMP02-05-01	EMP02-2.00"-A0.75"-AP16-05-APMYB9320	EMP02-2.00"-A0.75"-AP16-05	APKT160408-APM YB9320	$156.86
KIT1-EMP02-05-02	EMP02-2.00"-A0.75"-AP16-05-ALHYD101	EMP02-2.00"-A0.75"-AP16-05	APKT160408-ALH YD101	$156.86
KIT1-EMP02-06-01	EMP02-2.50"-A0.75"-AP16-06-APMYB9320	EMP02-2.50"-A0.75"-AP16-06	APKT160408-APM YB9320	$177.44
KIT1-EMP02-06-02	EMP02-2.50"-A0.75"-AP16-06-ALHYD101	EMP02-2.50"-A0.75"-AP16-06	APKT160408-ALH YD101	$177.44
KIT1-EMP02-07-01	EMP02-3.00"-A1.00"-AP16-07-APMYB9320	EMP02-3.00"-A1.00"-AP16-07	APKT160408-APM YB9320	$189.77
KIT1-EMP02-07-02	EMP02-3.00"-A1.00"-AP16-07-ALHYD101	EMP02-3.00"-A1.00"-AP16-07	APKT160408-ALH YD101	$189.77
KIT1-EMP02-08-01	EMP02-4.00"-B1.25"-AP16-08-APMYB9320	EMP02-4.00"-B1.25"-AP16-08	APKT160408-APM YB9320	$213.76
KIT1-EMP02-08-02	EMP02-4.00"-B1.25"-AP16-08-ALHYD101	EMP02-4.00"-B1.25"-AP16-08	APKT160408-ALH YD101	$213.76

- Each kit price above includes 1 cutter and 10 inserts, wrench, grease and brochure.
- For more details, please refer to our catalog.

Square shoulder milling



(D: Diameter)

Recommended cutting parameters

Workpiece material		Hardness HB	Insert grade	Cutting parameters			
				V(SFPM)	f(in/z) -APF	f(in/z) -APM	a_e(inch)
P	Low-carbon steel、Soft steel	≤180	YB9320	1000(650-1300)	0.004(0.003-0.008)	0.008(0.004-0.012)	≤0.5D
P	High-carbon steel、Alloy steel	180-280	YB9320	900(600-1100)	0.004(0.003-0.008)	0.008(0.004-0.012)	≤0.5D
P	Alloy tool steel	280-350	YB9320	850(500-1100)	0.004(0.003-0.008)	0.008(0.004-0.012)	≤0.5D
M	Stainless steel	≤270	YB9320	650(360-1000)	0.004(0.003-0.008)	0.008(0.004-0.012)	≤0.5D
N					-ALH		
N	Aluminium alloy	---	YD101	1000-	0.008(0.003-0.016)		≤0.5D
N	Aluminium alloy	---	YD201	1000-	0.008(0.003-0.016)		≤0.5D

EMP13 P K N

Straight shank

Weldon shank

Square Shoulder Milling Series

- Double negative rake angle tool body in combination with extra thick insert achieves double positive tool angle, which will help reduce cutting resistance and greatly improve impact resistance.
- Properly designed cutting edge with high precision control can achieve high quality 90 degree square shoulder milling.

Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT2-EMP13-01-01	EMP13-0.75"-XP0.75"-AN11-01C-GMYBM253	EMP13-0.75"-XP0.75"-AN11-01C	ANGX110508PNR-GM YBM253	$125.74
KIT2-EMP13-01-02	EMP13-0.75"-XP0.75"-AN11-01C-GMYBD152	EMP13-0.75"-XP0.75"-AN11-01C	ANGX110508PNR-GM YBD152	$125.74
KIT2-EMP13-01-03	EMP13-0.75"-XP0.75"-AN11-01C-GMYBG205	EMP13-0.75"-XP0.75"-AN11-01C	ANGX110508PNR-GM YBG205	$125.74
KIT2-EMP13-01-04	EMP13-0.75"-XP0.75"-AN11-01C-LH YD101	EMP13-0.75"-XP0.75"-AN11-01C	ANGX110504PNR-LH YD101	$125.74
KIT2-EMP13-02-01	EMP13-1.00"-G1.00"-AN11-02C-GMYBM253	EMP13-1.00"-G1.00"-AN11-02C	ANGX110508PNR-GM YBM253	$125.74
KIT2-EMP13-02-02	EMP13-1.00"-G1.00"-AN11-02C-GM YBD152	EMP13-1.00"-G1.00"-AN11-02C	ANGX110508PNR-GM YBD152	$125.74
KIT2-EMP13-02-03	EMP13-1.00"-G1.00"-AN11-02C-GMYBG205	EMP13-1.00"-G1.00"-AN11-02C	ANGX110508PNR-GM YBG205	$125.74
KIT2-EMP13-02-04	EMP13-1.00"-G1.00"-AN11-02C-LH YD101	EMP13-1.00"-G1.00"-AN11-02C	ANGX110504PNR-LH YD101	$125.74
KIT2-EMP13-03-01	EMP13-1.25"-XP1.25"-AN11-03C-GMYBM253	EMP13-1.25"-XP1.25"-AN11-03C	ANGX110508PNR-GM YBM253	$153.16
KIT2-EMP13-03-02	EMP13-1.25"-XP1.25"-AN11-03C-GMYBD152	EMP13-1.25"-XP1.25"-AN11-03C	ANGX110508PNR-GM YBD152	$153.16
KIT2-EMP13-03-03	EMP13-1.25"-XP1.25"-AN11-03C-GMYBG205	EMP13-1.25"-XP1.25"-AN11-03C	ANGX110508PNR-GM YBG205	$153.16
KIT2-EMP13-03-04	EMP13-1.25"-XP1.25"-AN11-03C-LHYD101	EMP13-1.25"-XP1.25"-AN11-03C	ANGX110504PNR-LH YD101	$153.16
KIT2-EMP13-04-01	EMP13-1.50"-G1.25"-AN11-04C-GMYBM253	EMP13-1.50"-G1.25"-AN11-04C	ANGX110508PNR-GM YBM253	$201.13
KIT2-EMP13-04-02	EMP13-1.50"-G1.25"-AN11-04C-GMYBD152	EMP13-1.50"-G1.25"-AN11-04C	ANGX110508PNR-GM YBD152	$201.13
KIT2-EMP13-04-03	EMP13-1.50"-G1.25"-AN11-04C-GMYBG205	EMP13-1.50"-G1.25"-AN11-04C	ANGX110508PNR-GM YBG205	$201.13
KIT2-EMP13-04-04	EMP13-1.50"-G1.25"-AN11-04C-LHYD101	EMP13-1.50"-G1.25"-AN11-04C	ANGX110504PNR-LH YD101	$201.13
KIT1-EMP13-05-01	EMP13-2.00"-A0.75"-AN11-06C-GMYBM253	EMP13-2.00"-A0.75"-AN11-06C	ANGX110508PNR-GM YBM253	$251.16
KIT1-EMP13-05-02	EMP13-2.00"-A0.75"-AN11-06C-GMYBD152	EMP13-2.00"-A0.75"-AN11-06C	ANGX110508PNR-GM YBD152	$251.16
KIT1-EMP13-05-03	EMP13-2.00"-A0.75"-AN11-06C-GMYBG205	EMP13-2.00"-A0.75"-AN11-06C	ANGX110508PNR-GM YBG205	$251.16
KIT1-EMP13-05-04	EMP13-2.00"-A0.75"-AN11-06C-LHYD101	EMP13-2.00"-A0.75"-AN11-06C	ANGX110504PNR-LH YD101	$251.16
KIT1-EMP13-06-01	EMP13-2.50"-A0.75"-AN11-07C-GMYBM253	EMP13-2.50"-A0.75"-AN11-07C	ANGX110508PNR-GM YBM253	$283.38
KIT1-EMP13-06-02	EMP13-2.50"-A0.75"-AN11-07C-GMYBD152	EMP13-2.50"-A0.75"-AN11-07C	ANGX110508PNR-GM YBD152	$283.38
KIT1-EMP13-06-03	EMP13-2.50"-A0.75"-AN11-07C-GMYBG205	EMP13-2.50"-A0.75"-AN11-07C	ANGX110508PNR-GM YBG205	$283.38
KIT1-EMP13-06-04	EMP13-2.50"-A0.75"-AN11-07C-LH YD101	EMP13-2.50"-A0.75"-AN11-07C	ANGX110504PNR-LH YD101	$283.38
KIT1-EMP13-07-01	EMP13-1.25"-XP1.25"-AN15-02C-GMYBM253	EMP13-1.25"-XP1.25"-AN15-02C	ANGX150608PNR-GM YBM253	$134.81
KIT1-EMP13-07-02	EMP13-1.25"-XP1.25"-AN15-02C-GMYBD152	EMP13-1.25"-XP1.25"-AN15-02C	ANGX150608PNR-GM YBD152	$134.81
KIT1-EMP13-07-03	EMP13-1.25"-XP1.25"-AN15-02C-GMYBG205	EMP13-1.25"-XP1.25"-AN15-02C	ANGX150608PNR-GM YBG205	$134.81
KIT1-EMP13-07-04	EMP13-1.25"-XP1.25"-AN15-02C-LHYD101	EMP13-1.25"-XP1.25"-AN15-02C	ANGX150608PNR-LH YD101	$134.81
KIT1-EMP13-08-01	EMP13-1.50"-XP1.25"-AN15-03C-GMYBM253	EMP13-1.50"-XP1.25"-AN15-03C	ANGX150608PNR-GM YBM253	$162.22

Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT1-EMP13-08-02	EMP13-1.50"-XP1.25"-AN15-03C-GMYBD152	EMP13-1.50"-XP1.25"-AN15-03C	ANGX150608PNR-GM YBD152	$162.22
KIT1-EMP13-08-03	EMP13-1.50"-XP1.25"-AN15-03C-GMYBG205	EMP13-1.50"-XP1.25"-AN15-03C	ANGX150608PNR-GM YBG205	$162.22
KIT1-EMP13-08-04	EMP13-1.50"-XP1.25"-AN15-03C-LHYD101	EMP13-1.50"-XP1.25"-AN15-03C	ANGX150608PNR-LH YD101	$162.22
KIT1-EMP13-09-01	EMP13-2.00"-A0.75"-AN15-04C-GMYBM253	EMP13-2.00"-A0.75"-AN15-04C	ANGX150608PNR-GM YBM253	$210.21
KIT1-EMP13-09-02	EMP13-2.00"-A0.75"-AN15-04C-GMYBD152	EMP13-2.00"-A0.75"-AN15-04C	ANGX150608PNR-GM YBD152	$210.21
KIT1-EMP13-09-03	EMP13-2.00"-A0.75"-AN15-04C-GMYBG205	EMP13-2.00"-A0.75"-AN15-04C	ANGX150608PNR-GM YBG205	$210.21
KIT1-EMP13-09-04	EMP13-2.00"-A0.75"-AN15-04C-LHYD101	EMP13-2.00"-A0.75"-AN15-04C	ANGX150608PNR-LH YD101	$210.21
KIT1-EMP13-10-01	EMP13-2.50"-A0.75"-AN15-05C-GMYBM253	EMP13-2.50"-A0.75"-AN15-05C	ANGX150608PNR-GM YBM253	$232.15
KIT1-EMP13-10-02	EMP13-2.50"-A0.75"-AN15-05C-GMYBD152	EMP13-2.50"-A0.75"-AN15-05C	ANGX150608PNR-GM YBD152	$232.15
KIT1-EMP13-10-03	EMP13-2.50"-A0.75"-AN15-05C-GMYBG205	EMP13-2.50"-A0.75"-AN15-05C	ANGX150608PNR-GM YBG205	$232.15
KIT1-EMP13-10-04	EMP13-2.50"-A0.75"-AN15-05C-LHYD101	EMP13-2.50"-A0.75"-AN15-05C	ANGX150608PNR-LH YD101	$232.15
KIT1-EMP13-11-01	EMP13-3.00"-A1.00"-AN15-06-GMYBM253	EMP13-3.00"-A1.00"-AN15-06C	ANGX150608PNR-GM YBM253	$260.23
KIT1-EMP13-11-02	EMP13-3.00"-A1.00"-AN15-06C-GMYBD152	EMP13-3.00"-A1.00"-AN15-06C	ANGX150608PNR-GM YBD152	$260.23
KIT1-EMP13-11-03	EMP13-3.00"-A1.00"-AN15-06C-GMYBG205	EMP13-3.00"-A1.00"-AN15-06C	ANGX150608PNR-GM YBG205	$260.23
KIT1-EMP13-11-04	EMP13-3.00"-A1.00"-AN15-06C-LHYD101	EMP13-3.00"-A1.00"-AN15-06C	ANGX150608PNR-LH YD101	$260.23
KIT1-EMP13-12-01	EMP13-4.00"-B1.50"-AN15-08-GMYBM253	EMP13-4.00"-B1.50"-AN15-08	ANGX150608PNR-GM YBM253	$316.44
KIT1-EMP13-12-02	EMP13-4.00"-B1.50"-AN15-08-GMYBD152	EMP13-4.00"-B1.50"-AN15-08	ANGX150608PNR-GM YBD152	$316.44
KIT1-EMP13-12-03	EMP13-4.00"-B1.50"-AN15-08-GMYBG205	EMP13-4.00"-B1.50"-AN15-08	ANGX150608PNR-GM YBG205	$316.44
KIT1-EMP13-12-04	EMP13-4.00"-B1.50"-AN15-08-LHYD101	EMP13-4.00"-B1.50"-AN15-08	ANGX150608PNR-LH YD101	$316.44

- Each kit price above includes 1 cutter and 10 inserts, wrench, grease and brochure.
- For more details, please refer to our catalog.

Recommended cutting parameters

Workpiece material		Hardness HB	Grade	Cutting data		
				V(SFPM)	f(in/z)	a_{pmax}(in)
P	Low carbon steel	⩽180	YBM253/YBG205/ YB9320	900(700-1100)	0.01(0.004-0.016)	0.441(AN11) 0.571(AN15)
P	Alloy steel	180-350	YBM253/YBG205/ YB9320	800(600-1000)	0.01(0.004-0.016)	
K	Cast iron	180-260	YBD152/YBD252	880(500-1000) 700(400-1000)	0.01(0.004-0.016) 0.08(0.004-0.012)	
N	Aluminium alloy	--	YD101	-LH		
				1000-	0.008(0.003-0.016)	

XMR01 P M K

High Feed Milling Series

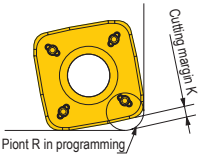
- Two mounting types: Straight shank and shell mill.
- Radial cutting force is reduced effectively to realize cutting with high feed rates.

Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT2-XMR01-01-01	XMR01-0.75"-G0.75"-SD06-02C-PMYBG205	XMR01-0.75"-G0.75"-SD06-02C	SDMT06T208-PM YBG205	$102.82
KIT2-XMR01-01-02	XMR01-0.75"-G0.75"-SD06-02C-DMYBG202	XMR01-0.75"-G0.75"-SD06-02C	SDMT06T208-DM YBG202	$102.82
KIT2-XMR01-02-01	XMR01-1.00"-G1.00"-SD06-03C-PMYBG205	XMR01-1.00"-G1.00"-SD06-03C	SDMT06T208-PM YBG205	$136.86
KIT2-XMR01-02-02	XMR01-1.00"-G1.00"-SD06-03C-DMYBG202	XMR01-1.00"-G1.00"-SD06-03C	SDMT06T208-DM YBG202	$136.86
KIT2-XMR01-03-01	XMR01-1.00"-G1.00"-SD09-02C(L=7.00")-DMYBG202	XMR01-1.00"-G1.00"-SD09-02C(L=7.00")	SDMT09T312-DM YBG202	$121.33
KIT2-XMR01-03-02	XMR01-1.00"-G1.00"-SD09-02C(L=7.00")-PMYBM253	XMR01-1.00"-G1.00"-SD09-02C(L=7.00")	SDMT3(2.5)3-PM YBM253	$121.33
KIT2-XMR01-04-01	XMR01-1.25"-G1.25"-SD09-03C-DMYBG202	XMR01-1.25"-G1.25"-SD09-03C	SDMT09T312-DM YBG202	$119.27
KIT2-XMR01-04-02	XMR01-1.25"-G1.25"-SD09-03C-PMYBM253	XMR01-1.25"-G1.25"-SD09-03C	SDMT3(2.5)3-PM YBM253	$119.27
KIT2-XMR01-05-01	XMR01-1.25"-G1.25"-SD12-02C-DMYBG302	XMR01-1.25"-G1.25"-SD12-02C	SDMT433-DM YBG302	$109.74
KIT2-XMR01-05-02	XMR01-1.25"-G1.25"-SD12-02C-DMYBG202	XMR01-1.25"-G1.25"-SD12-02C	SDMT433-DM YBG202	$109.74
KIT2-XMR01-05-03	XMR01-1.25"-G1.25"-SD12-02C-NMYBG212	XMR01-1.25"-G1.25"-SD12-02C	SDMT433-NM YBG212	$109.74
KIT2-XMR01-06-01	XMR01-1.50"-G1.50"-SD12-03C-DMYBG302	XMR01-1.50"-G1.50"-SD12-03C	SDMT433-DM YBG302	$130.30
KIT2-XMR01-06-02	XMR01-1.50"-G1.50"-SD12-03C-DMYBG202	XMR01-1.50"-G1.50"-SD12-03C	SDMT433-DM YBG202	$130.30
KIT2-XMR01-06-03	XMR01-1.50"-G1.50"-SD12-03C-NMYBG212	XMR01-1.50"-G1.50"-SD12-03C	SDMT433-NM YBG212	$130.30
KIT1-XMR01-07-01	XMR01-2.00"-A0.75"-SD09-04-DMYBG302	XMR01-2.00"-A0.75"-SD09-04	SDMT3(2.5)3-DM YBG302	$135.04
KIT1-XMR01-07-02	XMR01-2.00"-A0.75"-SD09-04-DMYBG202	XMR01-2.00"-A0.75"-SD09-04	SDMT3(2.5)3-DM YBG202	$135.04
KIT1-XMR01-07-03	XMR01-2.00"-A0.75"-SD09-04-NMYBG212	XMR01-2.00"-A0.75"-SD09-04	SDMT3(2.5)3-NM YBG212	$135.04
KIT1-XMR01-08-01	XMR01-2.00"-A0.75"-SD12-05 (L=2.00")-DMYBG302	XMR01-2.00"-A0.75"-SD12-05 (L=2.00")	SDMT433-DM YBG302	$183.76
KIT1-XMR01-08-02	XMR01-2.00"-A0.75"-SD12-05 (L=2.00")-DMYBG202	XMR01-2.00"-A0.75"-SD12-05 (L=2.00")	SDMT433-DM YBG202	$183.76
KIT1-XMR01-08-03	XMR01-2.00"-A0.75"-SD12-05 (L=2.00")-NMYBG212	XMR01-2.00"-A0.75"-SD12-05 (L=2.00")	SDMT433-NM YBG212	$183.76
KIT1-XMR01-09-01	XMR01-2.50"-A1.00"-SD12-05C-DMYBG302	XMR01-2.50"-A1.00"-SD12-05C	SDMT433-DM YBG302	$161.15
KIT1-XMR01-09-02	XMR01-2.50"-A1.00"-SD12-05C-DMYBG202	XMR01-2.50"-A1.00"-SD12-05C	SDMT433-DM YBG202	$161.15
KIT1-XMR01-09-03	XMR01-2.50"-A1.00"-SD12-05C-NMYBG212	XMR01-2.50"-A1.00"-SD12-05C	SDMT433-NM YBG212	$161.15
KIT1-XMR01-10-01	XMR01-3.00"-A1.00"-SD12-07-DMYBG302	XMR01-3.00"-A1.00"-SD12-07	SDMT433-DM YBG302	$238.60
KIT1-XMR01-10-02	XMR01-3.00"-A1.00"-SD12-07-DMYBG202	XMR01-3.00"-A1.00"-SD12-07	SDMT433-DM YBG202	$238.60
KIT1-XMR01-10-03	XMR01-3.00"-A1.00"-SD12-07-NMYBG212	XMR01-3.00"-A1.00"-SD12-07	SDMT433-NM YBG212	$238.60
KIT1-XMR01-11-01	XMR01-4.00"-A1.25"-SD12-09-DMYBG302	XMR01-4.00"-A1.25"-SD12-09	SDMT433-DM YBG302	$293.43
KIT1-XMR01-11-02	XMR01-4.00"-A1.25"-SD12-09-DMYBG202	XMR01-4.00"-A1.25"-SD12-09	SDMT433-DM YBG202	$293.43
KIT1-XMR01-11-03	XMR01-4.00"-A1.25"-SD12-09-NMYBG212	XMR01-4.00"-A1.25"-SD12-09	SDMT433-NM YBG212	$293.43

- Each kit price above includes 1 cutter and 10 inserts, wrench, grease and brochure.
- For more details, please refer to our catalog.

Approximate R in machining program

Applicable insert	Approximate R(mm)	Cutting margin K(mm)
SDMT06T208-DM/-PM/-NM	1.6	0.5
SDMT09T312-DM/-PM/-NM	2.5	0.87
SDMT120412-DM/-PM/-NM	4.0	0.93
SDMT150520-DM/-PM/-NM	4.0	1.38



Recommended cutting parameters

Workpiece material		Hardness HB	Insert grade	Cutting speed (SFPM)	Ø0.75/Ø1.00		Ø1.50/ Ø1.25		Ø2.00/2.50		Ø3.00/4.00/5.00/6.00	
					Axial cutting depth	Feed rate per tooth	Axial cutting depth	Feed rate per tooth	Axial cutting depth	Feed rate per tooth	Axial cutting depth	Feed rate per tooth
P	Soft steel Carbon steel	≤HB180 HB180-280	YBG202	550 (400-700)	0.024~0.04	0.032~0.048	0.032~0.048	0.04~0.056	0.043~0.06	0.043~0.06	0.04~0.06	0.04~0.06
			YBM253 YBM351 YBC302	500 (300-650)								
	Alloy steel Alloy tool steel	HB280-350 ≤HB350	YBG202	450 (300-650)	0.016~0.032	0.032~0.048	0.024~0.04	0.04~0.056	0.035~0.051	0.43~0.06	0.032~0.051	0.04~0.06
			YBM253 YBM351 YBC302	400 (260-600)								
	Pre-hardened steel	≤HRC35	YBG202	450 (300-600)	0.016~0.032	0.024~0.04	0.024~0.04	0.032~0.048	0.035~0.051	0.035~0.051	0.032~0.051	0.032~0.051
			YBM253 YBM351 YBC302	400 (260-500)								
M	Stainless steel	≤HB270	YBM253 YBM351	400 (260-500)	0.024~0.04	0.024~0.04	0.032~0.048	0.032~0.048	0.043~0.06	0.035~0.051	0.04~0.06	0.032~0.051
			YBG202 YBG205	400 (260-600)								
K	Common cast iron	Tensile strength ≤350MPa	YBG202 YBG302	500 (350-700) 500 (300-650)	0.024~0.04	0.04~0.056	0.032~0.048	0.048~0.064	0.043~0.06	0.051~0.067	0.04~0.06	0.048~0.067
	Nodular cast iron	Tensile strength ≤800MPa	YBG202 YBG302	400 (300-600) 400 (260-500)	0.016~0.032	0.032~0.048	0.024~0.04	0.04~0.056	0.035~0.051	0.043~0.06	0.032~0.051	0.04~0.06
S	High-temperature alloy	≤400	YBG212	150(60-200)	0.016~0.031	0.004-0.010	0.02-0.035	0.005-0.016	0.03-0.047	0.006-0.016	0.03-0.05	0.005-0.02

ZTD03

3xD Short Hole Drills.

- High Torque capability bodies. Large flute gullets for free chip evacuation.
- Insert position reduces vibrations for improved hole tolerance and finish.

Kit Code	Kit Description	Cutter	Insert	Price (USD)
KIT2-ZTD03-01-01	ZTD03-0.500"-XP0.75"-SP05-02-PM	ZTD03-0.500"-XP0.75"-SP05-02	SPGT050204-PM YBG205 SPGT050204-PM YBG212	$219.82
KIT2-ZTD03-01-02	ZTD03-0.500"-XP0.75"-SP05-02-EM	ZTD03-0.500"-XP0.75"-SP05-02	SPGT050204-EM YBG205 SPGT050204-EM YBG212	$219.82
KIT2-ZTD03-02-01	ZTD03-0.626"-XP0.75"-SP05-02-PM	ZTD03-0.626"-XP0.75"-SP05-02	SPGT050204-PM YBG205 SPGT050204-PM YBG212	$219.82
KIT2-ZTD03-02-02	ZTD03-0.626"-XP0.75"-SP05-02-EM	ZTD03-0.626"-XP0.75"-SP05-02	SPGT050204-EM YBG205 SPGT050204-EM YBG212	$219.82
KIT2-ZTD03-03-01	ZTD03-0.75"-XP1.00"-SP06-02-PM	ZTD03-0.75"-XP1.00"-SP06-02	SPGT060204-PM YBG205 SPGT060204-PM YBG212	$227.41
KIT2-ZTD03-03-02	ZTD03-0.75"-XP1.00"-SP06-02-EM	ZTD03-0.75"-XP1.00"-SP06-02	SPGT060204-EM YBG205 SPGT060204-EM YBG212	$227.41
KIT2-ZTD03-04-01	ZTD03-0.875"-XP1.00"-SP07-02-PM	ZTD03-0.875"-XP1.00"-SP07-02	SPGT07T308-PM YBG205 SPGT07T308-PM YBG212	$238.11
KIT2-ZTD03-04-02	ZTD03-0.875"-XP1.00"-SP07-02-EM	ZTD03-0.875"-XP1.00"-SP07-02	SPGT07T308-EM YBG205 SPGT07T308-EM YBG212	$238.11
KIT2-ZTD03-05-01	ZTD03-1.00"-XP1.00"-SP07-02-PM	ZTD03-1.00"-XP1.00"-SP07-02	SPGT07T308-PM YBG205 SPGT07T308-PM YBG212	$238.11
KIT2-ZTD03-05-02	ZTD03-1.00"-XP1.00"-SP07-02-EM	ZTD03-1.00"-XP1.00"-SP07-02	SPGT07T308-EM YBG205 SPGT07T308-EM YBG212	$238.11
KIT2-ZTD03-06-01	ZTD03-1.25"-XP1.25"-SP09-02-PM	ZTD03-1.25"-XP1.25"-SP09-02	SPGT090408-PM YBG205 SPGT090408-PM YBG212	$282.31
KIT2-ZTD03-06-02	ZTD03-1.25"-XP1.25"-SP09-02-EM	ZTD03-1.25"-XP1.25"-SP09-02	SPGT090408-EM YBG205 SPGT090408-EM YBG212	$282.31
KIT2-ZTD03-07-01	ZTD03-1.375"-XP1.50"-SP11-02-PM	ZTD03-1.375"-XP1.50"-SP11-02	SPGT110408-PM YBG205 SPGT110408-PM YBG212	$298.70
KIT2-ZTD03-07-02	ZTD03-1.375"-XP1.50"-SP11-02-EM	ZTD03-1.375"-XP1.50"-SP11-02	SPGT110408-EM YBG205 SPGT110408-EM YBG212	$298.70
KIT2-ZTD03-08-01	ZTD03-1.500"-XP1.50"-SP11-02-PM	ZTD03-1.500"-XP1.50"-SP11-02	SPGT110408-PM YBG205 SPGT110408-PM YBG212	$309.26
KIT2-ZTD03-08-02	ZTD03-1.500"-XP1.50"-SP11-02-EM	ZTD03-1.500"-XP1.50"-SP11-02	SPGT110408-EM YBG205 SPGT110408-EM YBG212	$309.26
KIT2-ZTD03-09-01	ZTD03-1.625"-XP1.50"-SP11-02-PM	ZTD03-1.625"-XP1.50"-SP11-02	SPGT110408-PM YBG205 SPGT110408-PM YBG212	$342.85
KIT2-ZTD03-09-02	ZTD03-1.625"-XP1.50"-SP11-02-EM	ZTD03-1.625"-XP1.50"-SP11-02	SPGT110408-EM YBG205 SPGT110408-EM YBG212	$342.85

-Each kit price above includes 1 drill body and 20 inserts, wrench, grease and brochure.

-YBG205 grade is suggested for peripheral insert, while YBG212 is for inner insert.

-PM chip breaker is recommended for machining ISO P&K, EM chip breaker is for ISO M&N.

-For more details, please refer to our catalog.

Recommended cutting parameters for ZTD drills

ISO	Materials	Hardness HB	Diameter Dc(inch)	Feed rate fn(in/r)	Cutting speed Vc (SFPM)
P	Carbon steel	80-200	0.500-0.906 0.938-1.187 1.219-1.500 1.531-1.813 1.875-2.000	0.002-0.004 0.002-0.004 0.002-0.004 0.003-0.004 0.003-0.005	650(550-800)
	Low alloy steel	150-260	0.500-0.906 0.938-1.187 1.219-1.500 1.531-1.813 1.875-2.000	0.002-0.004 0.002-0.005 0.002-0.006 0.003-0.006 0.004-0.008	550(450-700)
	High alloy steel	150-320	0.500-0.906 0.938-1.187 1.219-1.500 1.531-1.813 1.875-2.000	0.002-0.004 0.002-0.005 0.002-0.006 0.003-0.007 0.004-0.009	500(400-600)
	Cast steel	180-250	0.500-0.906 0.938-1.187 1.219-1.500 1.531-1.813 1.875-2.000	0.002-0.003 0.002-0.003 0.002-0.004 0.003-0.004 0.003-0.005	450(400-550)
M	Stainless steel Ferrite Martensite	150-270	0.500-0.906 0.938-1.187 1.219-1.500 1.531-1.813 1.875-2.000	0.002-0.004 0.002-0.005 0.002-0.006 0.003-0.007 0.004-0.009	500(360-750)
	Austenite	150-275	0.500-0.906 0.938-1.187 1.219-1.500 1.531-1.813 1.875-2.000	0.002-0.004 0.002-0.004 0.002-0.005 0.003-0.006 0.004-0.006	450(360-700)
K	Malleable cast iron	150-230	0.500-0.906 0.938-1.187 1.219-1.500 1.531-1.813 1.875-2.000	0.002-0.004 0.002-0.006 0.003-0.006 0.004-0.008 0.005-0.009	500(400-700)
	Gray cast iron	150-220	0.500-0.906 0.938-1.187 1.219-1.500 1.531-1.813 1.875-2.000	0.002-0.004 0.002-0.006 0.003-0.006 0.004-0.008 0.005-0.009	650(550-800)
	Nodular cast iron	160-250	0.500-0.906 0.938-1.187 1.219-1.500 1.531-1.813 1.875-2.000	0.002-0.004 0.002-0.005 0.002-0.006 0.003-0.006 0.004-0.008	500(400-650)
N	Non ferrous metrals	60-110	0.500-0.906 0.938-1.187 1.219-1.500 1.531-1.813 1.875-2.000	0.002-0.004 0.002-0.006 0.003-0.006 0.004-0.008 0.005-0.009	1000(800-1150)

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It's never been easier to try ZCC and get the Z Advantage for yourself.

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In fact, we're challenging you to prove our Kit isn't the best offer available anywhere. If you can document that any other similar product produces a greater cost savings in the same application, just return the Kit with test documentation and we will refund your purchase price plus 10%.

Of course, there are some restrictions and limitations, but they are noted below*, stated clearly, and not designed to make our guarantee or challenge impossible to use. We want simply to be transparent and make sure you understand and appreciate what we are offering.

*ZCCUSA full refund requires return of all Kit product in its original package. The condition of the product is unimportant. Tests Report must be fully completed and submitted on a ZCCUSA Test Report Form.

ZCC·CT

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