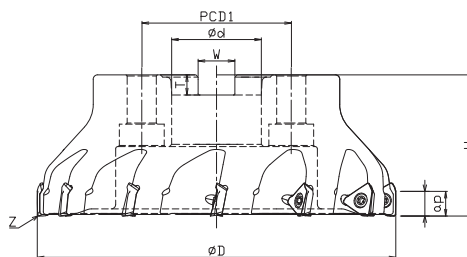


TTP SERIES



TTP's economical insert with 3 cutting edges and optimized geometry improves efficiency and productivity with the square shoulder milling cutter.

- ★ 3 cutting edges on one insert for highly economical machining.
- ★ Optimized relief geometry on the positive insert ensures low cutting force and minimal chattering.
- ★ Helical cutting edges and optimized positioning on cutter provide high wall accuracy and surface quality.
- ★ Sharp and tough rake geometry reduces fracture of cutting edges.
- ★ Triangular shape of the insert improves clamping rigidity and reliability.
- ★ Insert sizes in 10, 15 mm cover small to large depths of cut.



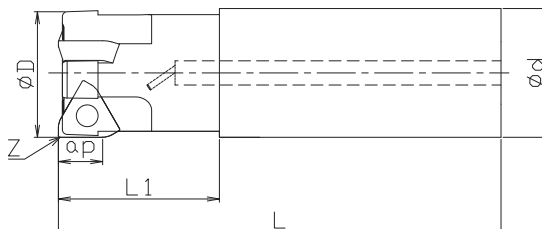
Milling Cutters

Designation	Size(mm)								Coolant Hole	Insert	Clamping Screw	Wrench
	D	d	H	W	T	Z	PCD 1	Max.ap				
TTPF90-40R06TP10M16	40	16	40	8.4	5.6	6	-	7	●	TPKT1004..R-M	TP1004	TPFP10
TTPF90-50R07TP10M22	50	22	40	10.4	6.3	7	-	7	●			
TTPF90-63R08TP10M22	63	22	40	10.4	6.3	8	-	7	●			
TTPF90-50R05TP15M22	50	22	40	10.4	6.3	5	-	11	●	TPKT1505..R-M	TP1505	TPFP15
TTPF90-63R06TP15M22	63	22	40	10.4	6.3	6	-	11	●			
TTPF90-80R07TP15M27	80	27	50	12.4	7.0	7	-	11	●			
TTPF90-100R08TP15M32	100	32	50	14.4	8.0	8	-	11	●			
TTPF90-125R10TP15M40	125	40	63	16.4	9.0	10	-	11	●			

TTP SERIES



TTP's economical insert with 3 cutting edges and optimized geometry improves efficiency and productivity with the square shoulder milling cutter.



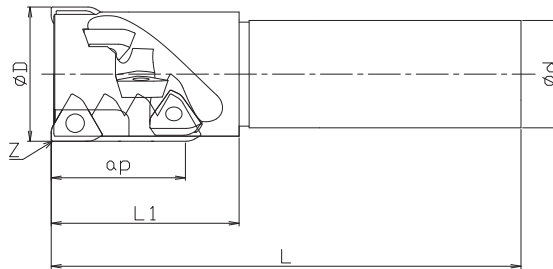
Endmills

Designation	Size(mm)						Coolant Hole	Insert	Clamping Screw	Wrench
	D	d	L1	L	Z	Max.ap				
TTPE90-16R01D16TP10L90	16	16	20	90	1	7	●	TPKT1004..R-M	TP1004	TPEP10
TTPE90-20R02D20TP10L90	20	20	25	90	2	7	●			
TTPE90-20R02D20TP10L170	20	20	40	170	2	7	●			
TTPE90-21R02D20TP10L200	21	20	30	200	2	7	●			
TTPE90-25R03D20TP10L100	25	20	30	100	3	7	●			
TTPE90-25R03D25TP10L100	25	25	30	100	3	7	●			
TTPE90-25R03D25TP10L210	25	25	40	210	3	7	●			
TTPE90-26R02D25TP10L250	26	25	30	250	2	7	●			
TTPE90-30R03D25TP10L110	30	25	35	110	3	7	●			
TTPE90-32R03D25TP10L110	32	25	35	110	3	7	●			
TTPE90-32R03D32TP10L250	32	32	60	250	3	7	●			
TTPE90-33R03D32TP10L250	33	32	35	250	3	7	●			
TTPE90-40R06D32TP10L115	40	32	40	115	6	7	●			
TTPE90-40R04D32TP10L200	40	32	40	200	4	7	●	TPKT1505..R-M	TP1505	TPEP15
TTPE90-32R03D25TP15L100	32	25	40	100	3	11	●			
TTPE90-32R03D25TP15L155	32	25	35	155	3	11	●			
TTPE90-32R03D32TP15L110	32	32	40	110	3	11	●			
TTPE90-32R03D32TP15L150	32	32	40	150	3	11	●			
TTPE90-32R03D32TP15L250	32	32	60	250	3	11	●			
TTPE90-33R02D32TP15L200	33	32	40	200	2	11	●			
TTPE90-33R02D32TP15L250	33	32	40	250	2	11	●			
TTPE90-35R03D32TP15L110	35	32	40	110	3	11	●			
TTPE90-40R03D32TP15L110	40	32	40	110	3	11	●			
TTPE90-40R03D32TP15L200	40	32	40	200	3	11	●			

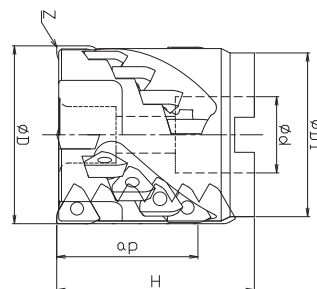
TTP SERIES



TTP's economical insert with 3 cutting edges and optimized geometry improves efficiency and productivity with the square shoulder milling cutter for roughing.



Designation	Size(mm)							Coolant Hole	Insert	Clamping Screw	Wrench
	D	d	L1	L	Z eff	Z	Max.ap				
TTPRE90-32R14D32TP10L120	32	32	56	120	2	14	42	X	TPKT1004..R-M	TP1004	TPRP10
TTPRE90-40R21D32TP10L130	40	32	56	130	3	21	42	X			
TTPRE90-40R08D32TP15L140	40	32	56	140	2	8	40	X	TPKT1505..R-M	TP1505	TPRP15



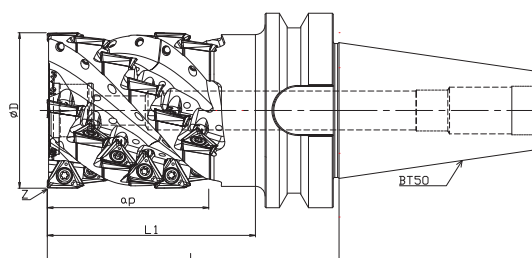
Designation	Size(mm)							Coolant Hole	Insert	Clamping Screw	Wrench
	D	D1	d	H	Z eff	Z	Max.ap				
TTPRF90-50R32TP10M22	50	45	22	65	4	32	48	X	TPKT1004..R..	TP1004	TPRP10
TTPRF90-63R36TP10M27	63	58	27	75	4	36	54	X			
TTPRF90-50R12TP15M22	50	45	22	65	3	12	40	X	TPKT1505..R..	TP1505	TPFP15
TTPRF90-63R20TP15M27	63	58	27	70	4	20	50	X			
TTPRF90-80R24TP15M32	80	77	32	75	4	24	60	X			
TTPRF90-100R32TP15M40	100	96	40	110	4	32	78	X			


Indexable Milling Cutter
Shoulder Milling

TTP SERIES



TTP's economical insert with 3 cutting edges and optimized geometry improves efficiency and productivity with the square shoulder milling cutter for roughing.

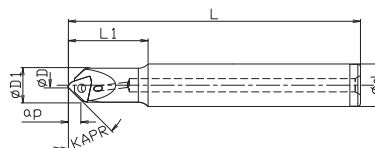
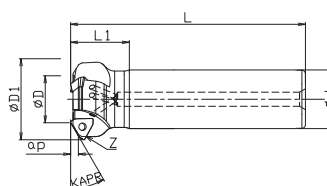


Designation	Size(mm)						Coolant Hole	Insert	Clamping Screw	Wrench
	D	L1	L	Z eff	Z	Max.ap				
TTPRF90-80R24TP15BT50	80	108	150	4	24	60	X	TPKT1505..R..	TP1505	TPRP15
TTPRF90-100R35TP15BT50	100	123	165	5	35	70	X			

TTP SERIES



TTP's economical insert with 3 cutting edges and optimized geometry improves efficiency and productivity with the square shoulder milling cutter chamfering .

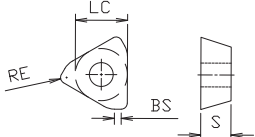


Designation	Size(mm)									Coolant Hole	Insert	Clamping Screw	Wrench
	KAPR	D	D1	d	L1	L	Z	Max.ap	Application Rang				
TTPC30-20R03D25L100	30°	20	34.5	25	25	100	3	3.3	ø21.3-ø31.0	●	TPKT1004..R-M	TP1004	TPEP10
TTPC45-20R03D25L100	45°	20	31.2	25	25	100	3	4.8	ø21.3-ø28.9	●			
TTPC60-20R03D25L100	60°	20	27.3	25	25	100	3	5.9	ø21.3-ø26.2	●			
TTPC45-02R01D16L110	45°	2	13.3	16	30	110	1	4.7	ø3.3-ø10.6	●			

TTP SERIES

TTP's economical insert with 3 cutting edges and optimized geometry improves efficiency and productivity with the square shoulder milling cutter.

● Applicable Inserts

		Usage Classification		P	Steel	★										
		★ 1st Choice ☆ 2nd Choice	M	Stainless	★											
			K	Cast iron		★										
			N	Non-ferrous						★						
			S	Superalloys												
			H	Hard materials												
		Insert		Insert No.	Size(mm)				Coated Carbide				Carbide			
LC	S				BS	RE	TE620	TY720	TY625	TI960	HC200					
		TPKT100404R-M	6.9	4	0.5-1.3	0.4	●	●			●					
		TPKT100408R-M	6.9	4		0.8	●	●			●					
		TPKT150508R-M	10.7	5	0.5-2.0	0.8	●	●			●					
		TPKT150516R-M	10.7	5		1.6	●	●								
		TPKT150520R-M	10.7	5		2.0	●	●								

● Recommended Cutting Conditions

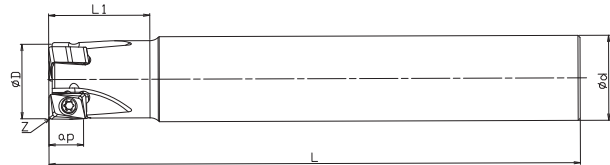
ISO	Workpiece material	Hardness	Grade	Cutting Speed	Feed
				Vc (m/min)	fz (mm/t)
P	Low Carbon Steel	≤ HB180	TE620	180-300	0.05-0.17
	High Carbon and Alloy Steel	HB180 -280		130-210	0.05-0.17
	Alloy Steel	HB280 -350		100-180	0.05-0.17
M	Stainless Steel	≤ HB200		120-300	0.05-0.17
K	Gray Cast Iron	HB150 -250	TY720	100-280	0.05-0.17
	Ductile Cast Iron	HB150 -250		100-180	0.05-0.17
N	Aluminum Alloy ≤ 12 % Si	—	HC200	650-900	0.10-0.50
	Aluminum Alloy > 12 % Si	—		250-320	0.10-0.50

TAN90 SERIES



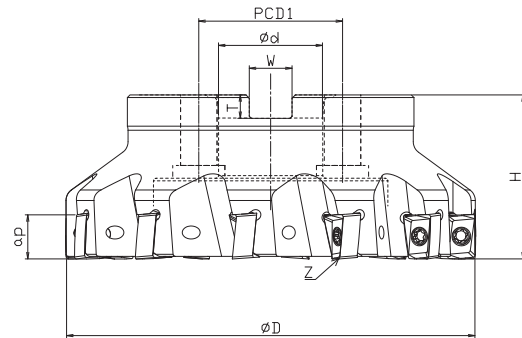
Shoulder Milling with 4 Cutting-Edge Double-Sided Insert for High-Feed Machining

- ★ Double sided insert with 4 sharp and tough cutting edges.
- ★ Available in 3 sizes and wiper edge for excellent surface finish.
- ★ Low cutting force due to large rake angle.
- ★ Positive rake face for smooth machining and reduced vibration.
- ★ Highly rigid cutter body.



Endmills

Designation	Size(mm)						Insert	Clamping Screw	Wrench
	D	d	L1	L	Z	Max.ap			
TANE90-16R02D16AN09L125	16	16	26	125	2	8	ANKT090408	TA4009	TEP09
TANE90-20R03D20AN09L125	20	20	26	125	3	8	ANKT090408		
TANE90-25R04D25AN09L125	25	25	26	125	4	8	ANKT090408		
TANE90-32R05D32AN09L160	32	32	26	160	5	8	ANKT090408		
TANE90-25R02D25AN12L125	25	25	26	125	2	12	ANKT120508	TA4012	TEP12
TANE90-32R03D32AN12L160	32	32	26	160	3	12	ANKT120508		
TANE90-40R04D32AN12L200	40	32	26	200	4	12	ANKT120508		



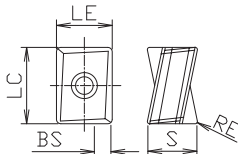
Milling Cutters

Designation	Size (mm)								Insert	Clamping Screw	Wrench
	D	d	H	W	T	Z	PCD1	Max.ap			
TANF90-50R04AN17M22	50	22	50	10.4	6.3	4	-	16.3	ANKT170608	TA4017	TFP17
TANF90-63R06AN17M22	63	22	50	10.4	6.3	6	-	16.3	ANKT170608		
TANF90-80R07AN17M27	80	27	50	12.4	7.0	7	-	16.3	ANKT170608		
TANF90-100R08AN17M32	100	32	50	14.4	8.0	8	-	16.3	ANKT170608		
TANF90-125R10AN17M40	125	40	63	16.4	9.0	10	-	16.3	ANKT170608		
TANF90-160R12AN17M40	160	40	63	16.4	9.0	12	66.7	16.3	ANKT170608	TA4017	TTL20

TAN90 SERIES

Shoulder Milling with 4 Cutting-Edge Double-Sided Insert for High-Feed Machining

● Applicable Inserts

● Applicable Inserts			Usage Classification		P	Steel		★							
			★ 1st Choice ☆ 2nd Choice	M	Stainless			★							
				K	Cast iron			★							
				N	Non-ferrous										
				S	Superalloys										
				H	Hard materials										
			Insert		Insert No.	Size(mm)					Coated Carbide				Carbide
LC	LE	S				BS	RE	TY602	TY622	TY625	TI960	HC200			
		ANKT090408-MT	8.6	6.6	5.20	2.5	0.8			●					
		ANKT120508-MT	13.7	10.0	9.15	3.8	0.8			●					
		ANKT170608-MT	16.7	11.2	10.40	4.7	0.8			●					

● Recommended Cutting Conditions

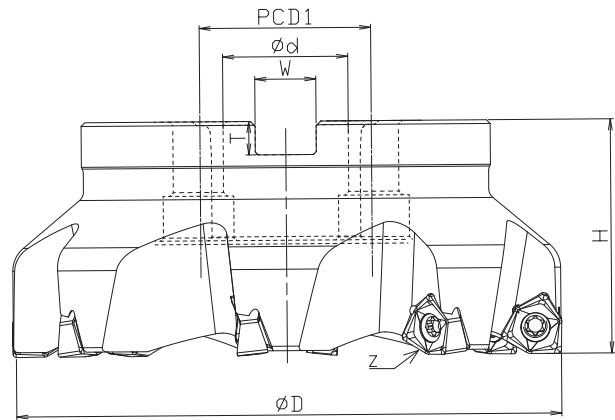
ISO	Workpiece material	Hardness	Grade	Cutting Speed	Feed
				Vc (m/min)	fz (mm/t)
P	Low Carbon Steel	≤HB180	TY625	120-180	0.05-0.15
	High Carbon and Alloy Steel	HB200-300		100-160	0.05-0.10
	Mold Steel	≤HB300		80-120	0.05-0.10
M	Stainless Steel	≤HB200		80-100	0.10-0.25
K	Gray Cast Iron	HB150-250		150-200	0.10-0.20
	Ductile Cast Iron	HB150-250		120-150	0.05-0.15

TWN90 SERIES



Shoulder Milling Cutter with 6 Double-Sided Cutting Edge and Low Cutting Forces for Reduced Chattering and Superior Fracture Resistance

- ★ Sharp cutting due to lower cutting forces.
- ★ Reduced chattering even with extended milling adapters.
- ★ Superior fracture resistance with thick edge design.

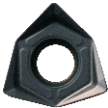
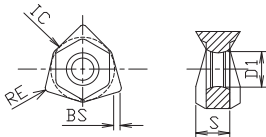
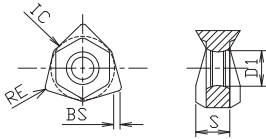


Designation	Size(mm)								Clamping Screw	Wrench
	D	d	H	W	T	Z	PCD1	Max.ap		
TWN90-63R03WN08M22	63	22	40	10.4	6.3	3	-	6.5	TW1008	TWP1008
TWN90-80R04WN08M27	80	27	50	12.4	7.0	4	-	6.5		
TWN90-100R05WN08M32	100	32	50	14.4	8.0	5	-	6.5		
TWN90-125R06WN08M40	125	40	63	16.4	9.0	6	-	6.5		
TWN90-160R08WN08M40	160	40	63	16.4	9.0	8	66.7	6.5	TW1008	TTL20

TWN90 SERIES

Shoulder Milling Cutter with 6 Double-Sided Cutting Edge and Low Cutting Forces for Reduced Chattering and Superior Fracture Resistance

● Applicable Inserts

		Usage Classification		P	Steel	★	★											
		★ 1st Choice ☆ 2nd Choice		M	Stainless	★	★											
				K	Cast iron	★		★										
				N	Non-ferrous													
				S	Superalloys													
				H	Hard materials													
		Insert		Insert No.		Size(mm)					Coated Carbide				Carbide			
				IC	S	D1	BS	RE	TY602	TY610	TY620	T1960	HC200					
		WNMU080608PTN-CR		14	6.65	6.2	1.3	0.8	●									
		WNMU080608PTN-UR		14	6.65	6.2	1.3	0.8		●	●							

● Recommended Cutting Conditions

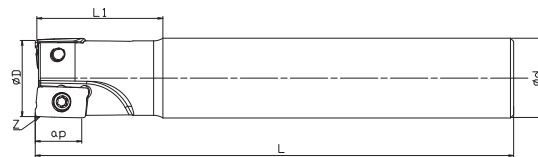
ISO	Workpiece material	Hardness	Grade	Cutting Speed	Feed
				Vc (m/min)	fz (mm/t)
P	Carbon Steel	≤HB300	TY602/TY610	120-250	0.05-0.15
	Alloy Steel	HB200-300		100-220	0.05-0.10
	Mold Steel	≤HB300		80-180	0.05-0.10
M	Stainless Steel	≤HB200	TY602/TY610	80-150	0.10-0.25
K	Gray Cast Iron	HB150-250	TY620	120-250	0.10-0.20
	Ductile Cast Iron	HB150-250		100-200	0.05-0.15

TAP90 SERIES



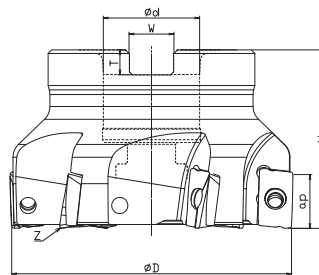
Shoulder Milling with High Precision Cutting Edge and Low Cutting Forces for Reduced Chattering

- ★ Suitable for 11° positive angle insert, applicable to alloy steel, hardened steel and aluminium alloy.
- ★ Sharp cutting due to lower cutting forces.
- ★ Reduced chattering even with extended milling adapters.



Endmills

Designation	Size(mm)						Insert	Clamping Screw	Wrench
	D	d	L1	L	Z	Max.ap			
TAPE90-13R01D12AP10L130	13	12	30	130	1	9	APKT1003..	TK1000	TKP10
TAPE90-16R02D16AP10L150	16	16	28	150	2	9	APKT1003..		
TAPE90-16R02D16AP10L200				200	2	9	APKT1003..		
TAPE90-17R02D16AP10L150	17	16	40	150	2	9	APKT1003..		
TAPE90-17R02D16AP10L200				200	2	9	APKT1003..		
TAPE90-20R02D20AP10L150	20	20	30	150	2	9	APKT1003..		
TAPE90-20R02D20AP10L200				200	2	9	APKT1003..		
TAPE90-21R02D20AP10L150	21	20	50	150	2	9	APKT1003..		
TAPE90-21R02D20AP10L200				200	2	9	APKT1003..		
TAPE90-25R02D25AP16L150	25	25	40	150	2	15	APKT1604..	TK1600	TKP16
TAPE90-25R02D25AP16L200				200	2	15	APKT1604..		
TAPE90-32R03D32AP16L150	32	32	45	150	3	15	APKT1604..		
TAPE90-32R03D32AP16L200				200	3	15	APKT1604..		



Milling Cutters

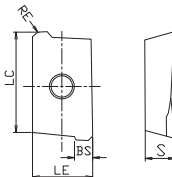
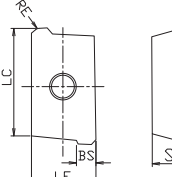
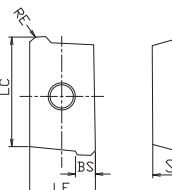
Designation	Size (mm)							Insert	Clamping Screw	Wrench
	D	d	H	W	T	Z	Max.ap			
TAPF90-50R04AP16M22	50	22	50	10.4	6.3	4	15	APKT1604..	TK1600	TKP16
TAPF90-63R05AP16M22	63	22	50	10.4	6.3	5	15	APKT1604..		
TAPF90-80R06AP16M27	80	27	50	12.4	7.0	6	15	APKT1604..		
TAPF90-100R08AP16M32	100	32	50	14.4	8.0	8	15	APKT1604..		

TAP90 SERIES

Shoulder Milling with High Precision Cutting Edge and Low Cutting Forces for Reduced Chattering

● Applicable Inserts

[illegible]

Insert		Insert No.	Size(mm)					Coated Carbide				Carbide			
			LC	LE	S	BS	RE	TY602	TY622	TY625	TI960	HC200			
		APKT100305PDTR	9.9	6.7	3.6	0.86	0.5	●							
		APKT100308PDTR	9.9	6.7	3.6	0.9	0.8	●							
		APKT160404PDTR	15.2	9.4	5.3	1.11	0.4	●							
		APKT160408PDTR	15.2	9.4	5.3	1.32	0.8	●							
		APKT160412PDTR	15.2	9.4	5.3	1.13	1.2	●							
		APKT160416PDTR	15.2	9.4	5.3	1.13	1.6	●							
		APKT160424PDTR	15.2	9.4	5.3	—	2.4	●							
		APKT160404-TR	15.2	9.4	5.3	1.11	0.4	●							
		APKT160408-TR	15.2	9.4	5.3	1.32	0.8	●							
		APKT160412-TR	15.2	9.4	5.3	1.13	1.2	●							
		APKT160416-TR	15.2	9.4	5.3	1.13	1.6	●							
		APKT160424-TR	15.2	9.4	5.3	—	2.4	●							
		APKT100305	9.9	6.7	3.6	0.86	0.5					●			
APKT100308		9.9	6.7	3.6	0.9	0.8					●				
APKT160402PDER-AK		15.2	9.4	5.3	1.11	0.2					●				
APKT160404PDER-AK		15.2	9.4	5.3	1.11	0.4					●				
APKT160408PDER-AK		15.2	9.4	5.3	1.32	0.8					●				
APKT160412PDER-AK		15.2	9.4	5.3	1.13	1.2					●				
APKT160416PDER-AK		15.2	9.4	5.3	1.13	1.6					●				
APKT160420PDER-GW		15.2	9.4	5.3	—	2.0					●				

TAP90 SERIES

Shoulder Milling with High Precision Cutting Edge and Low Cutting Forces for Reduced Chattering

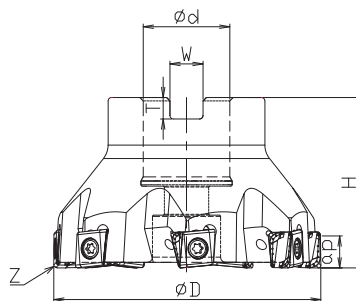
● Recommended Cutting Conditions

ISO	Workpiece material	Hardness	Grade	Cutting Speed	Feed
				Vc (m/min)	fz (mm/t)
P	Low Carbon Steel	≤ HB180	TY602	120-220	0.15-0.30
	High Carbon and Alloy Steel	HB180-280		70-150	0.15-0.30
	Alloy Steel	HB280-350		70-150	0.15-0.30
M	Stainless Steel	≤ HB200		120-200	0.08-0.25
K	Gray Cast Iron	HB150-250		140-220	0.15-0.30
	Ductile Cast Iron	HB150-250		150-240	0.15-0.30
N	Aluminum	—	HC200	300-800	0.07-0.50
H	Hardened Material	≤ HRC55	TY622	40-80	0.26-0.40

TLX SERIES

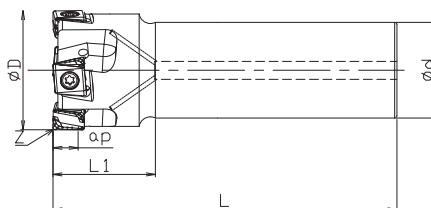
High productivity and stable cutting with large depth of cut in shouldering and finishing.

- ★ Tangential insert with high stability guarantees exceptional reliability in shouldering and finishing.
- ★ Economical double sided insert - Large rake and inclination angles reduce cutting forces and provide stable, smooth cutting



● Milling Cutters

Designation	Size(mm)							Coolant Hole	Insert	Clamping Screw	Wrench
	D	d	H	W	T	Z	Max.ap				
TLXF90-50R05LX11M22	50	22	40	10.4	6.3	5	9.7	●	LXGU1107..	TLX1107	TLXMS11
TLXF90-63R06LX11M22	63	22	40	10.4	6.3	6	9.7	●			
TLXF90-80R07LX11M27	80	27	50	12.4	7.0	7	9.7	●			
TLXF90-100R08LX11M32	100	32	50	14.4	8.0	8	9.7	●			
TLXF90-100R11LX11M32	100	32	50	14.4	8.0	11	9.7	●			
TLXF90-125R09LX11M40	125	40	63	16.4	9.0	9	9.7	●			
TLXF90-125R12LX11M40	125	40	63	16.4	9.0	12	9.7	●			

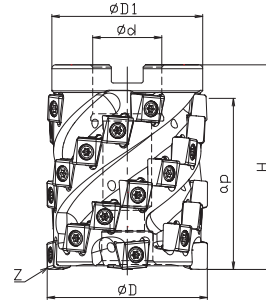


● Endmills

Designation	Size(mm)						Coolant Hole	Insert	Clamping Screw	Wrench
	D	d	L1	L	Z	Max.ap				
TLXE90-32R03D32LX11L115	32	32	35	115	3	9.7	●	LXGU1107..	TLX1107	TLXMS11
TLXE90-40R04D32LX11L115	40	32	35	115	4	9.7	●			
TLXE90-50R04D32LX11L120	50	32	40	120	4	9.7	●			
TLXE90-63R06D32LX11L120	63	32	40	120	6	9.7	●			
TLXE90-80R07D32LX11L120	80	32	40	120	7	9.7	●			

TLX SERIES

High productivity and stable cutting with large depth of cut in shouldering and roughing.



Designation	Size(mm)							Coolant Hole	Insert	Clamping Screw	Wrench
	D	D1	d	H	Z eff	Z	Max.ap				
TLXR90-50R21TP10M22	50	47	22	70	3	21	58.5	X	LXGU1107..	TLX1107	TPRP11
TLXR90-63R32TP10M27	63	59	27	80	4	32	66.9	X			

Applicable Inserts

Usage Classification	P	Steel	★								
	M	Stainless	★								
	K	Cast iron		★							
	N	Non-ferrous									
	S	Superalloys			★						
	H	Hard materials									

★ 1st Choice
☆ 2nd Choice

Insert	Insert No.	Size(mm)					Coated Carbide		Carbide		
		LC	LE	S	BS	RE	TT650	TY720	TS820	T1960	HC200
	LXGU110708-MM	10.5	11.7	7.1	2	0.8	●	●	●		
	LXGU110716-MM	10.5	11.7	7.1	1.2	1.6	●	●	●		
	LXGU110724-MM	10.5	11.7	7.1	0.4	2.4	●	●			
	LXGU110732-MM	10.5	11.7	7.1	-	3.2	●	●			

Recommended Cutting Conditions

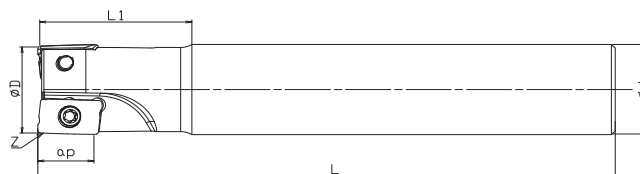
ISO	Workpiece material	Hardness	Grade	Cutting Speed	Feed
				Vc (m/min)	fz (mm/t)
P	Low Carbon Steel	≤ HB180	TT650	100-230	0.10-0.25
	High Carbon and Alloy Steel	HB180-280		100-200	0.10-0.25
	Alloy Steel	HB280-350		100-200	0.10-0.25
M	Stainless Steel	≤ HB200		90-180	0.10-0.25
K	Gray Cast Iron	HB150-250	TY720	100-200	0.10-0.25
	Ductile Cast Iron	HB150-250		80-180	0.10-0.25
S	Superalloys	-	TS820	20-40	0.06-0.10

EAP SERIES

EAP Right Angle Shoulder Milling Cutter Bar



- ★ Suitable for heavy cutting, rotary and feed volume is 3 times than normal cutter.
- ★ Suitable for economical inserts, high cost performance.

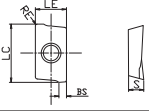


Designation	Size(mm)							Insert	Clamping Screw	Wrench
	D	d	L1	L2	L	Z	Max.a			
EAP300R-C10-10-120L-1T	10	10	30	-	120	1	9	APMT1135	TT1011	TTP11
EAP300R-C10-11-120L-1T	11	10	30	-	120	1	9	APMT1135		
EAP300R-C12-12-130L-1T	12	12	30	-	130	1	9	APMT1135		
EAP300R-C12-13-130L-1T	13	12	30	-	130	1	9	APMT1135		
EAP300R-C16-16-120L-2T	16	16	40	-	120	2	9	APMT1135		
EAP300R-C16-16-150L-2T	16	16	40	-	150	2	9	APMT1135		
EAP300R-C16-16-200L-2T	16	16	40	100	200	2	9	APMT1135		
EAP300R-C15-16-150L-2T	16	15	40	-	150	2	9	APMT1135		
EAP300R-C16-17-150L-2T	17	16	40	-	150	2	9	APMT1135		
EAP300R-C16-17-200L-2T	17	16	40	-	200	2	9	APMT1135		
EAP300R-C20-20-150L-2T	20	20	50	-	150	2	9	APMT1135		
EAP300R-C19-20-150L-2T	20	19	50	-	150	2	9	APMT1135		
EAP300R-C20-20-200L-2T	20	20	50	100	200	2	9	APMT1135		
EAP300R-C19-20-200L-2T	20	19	50	-	200	2	9	APMT1135		
EAP300R-C20-21-150L-2T	21	20	50	-	150	2	9	APMT1135		
EAP300R-C20-21-200L-2T	21	20	50	-	200	2	9	APMT1135		
EAP300R-C25-25-150L-3T	25	25	50	-	150	3	9	APMT1135	TT1016	TTP16
EAP400R-C24-25-150L-2T	25	24	40	-	150	2	14	APMT1604		
EAP400R-C25-25-200L-2T	25	25	75	-	200	2	14	APMT1604		
EAP400R-C24-25-200L-2T	25	24	50	-	200	2	14	APMT1604		
EAP400R-C32-32-150L-3T	32	32	50	-	150	3	14	APMT1604		
EAP400R-C32-32-200L-3T	32	32	80	-	200	3	14	APMT1604		
EAP400R-C32-35-150L-3T	35	32	60	-	150	3	14	APMT1604		
EAP400R-C32-35-200L-3T	35	32	60	-	200	3	14	APMT1604		

EAP SERIES

EAP Right Angle Shoulder Milling Cutter Bar

● Applicable Inserts

		Usage Classification											
				P	Steel	★							
★ 1st Choice ☆ 2nd Choice			M	Stainless	☆								
			K	Cast iron	★								
			N	Non-ferrous									
			S	Superalloys									
			H	Hard materials		★							
	Insert	Insert No.	Size(mm)					Coated Carbide		Carbide			
			LC	LE	S	BS	RE	TI960	TH910	TY602	TY622	HC200	
		APMT1135PDER-M2	11.0	6.35	3.50	1.5	0.8	●	●				
		APMT1604PDER-M2	16.5	9.53	4.76	1.7	0.8	●	●				

● Recommended Cutting Conditions

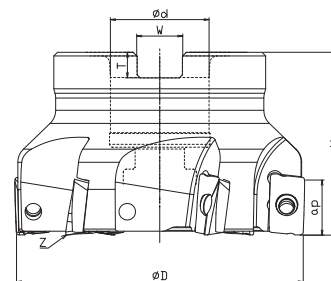
ISO	Workpiece material	Hardness	Grade	Cutting Speed	Feed
				Vc (m/min)	fz (mm/t)
P	Low Carbon Steel	≤HB180	TI960	120-220	0.15-0.30
	High Carbon and Alloy Steel	HB180-280		70-150	0.15-0.30
	Alloy Steel	HB280-350		70-150	0.15-0.30
M	Stainless Steel	≤HB200		120-200	0.10-0.25
K	Gray Cast Iron	HB150-250		140-220	0.15-0.30
	Ductile Cast Iron	HB150-250		150-240	0.15-0.30
H	Hardened Material	≤HRC50	TH910	40-80	0.10-0.30

EAP SERIES

EAP Right Angle Shoulder Face Mill



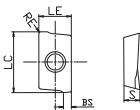
- ★ Suitable for 11° positive angle insert tip.
- ★ Suitable for various types of inserts, applicable to aluminum and steel milling.
- ★ Screw locking, large space for chipping, excellent chip removal performance.
- ★ Cutting smoothly, low resistance.
- ★ Customized aluminium milling cutter is available.



Designation	Size(mm)							Insert	Clamping Screw	Wrench
	D	d	H	W	T	Z	Max.ap			
EAP400R-50-22-4T	50	22	50	10.4	6.3	4	14	APMT1604	TT1016	TTP16
EAP400R-63-22-4T	63	22	50	10.4	6.3	4	14	APMT1604		
EAP400R-80-27-6T	80	27	50	12.4	7	6	14	APMT1604		
EAP400R-100-32-6T	100	32	50	14.4	8	6	14	APMT1604		
EAP400R-125-40-7T	125	40	63	16.4	9	7	14	APMT1604		
EAP400R-160-40-8T	160	40	63	16.4	9	8	14	APMT1604		
EAP400R-200-60-10T	200	60	63	25.7	14	10	14	APMT1604		

Applicable Inserts

Usage Classification	P	Steel	★															
	M	Stainless	☆															
	K	Cast iron	★															
	N	Non-ferrous																
	S	Superalloys																
	H	Hard materials	★															

Insert		Insert No.	Size					Coated Carbide				Carbide		
			LC	LE	S	BS	RE	TI960	TH910	TY602	TY622	HC200		
		APMT1604PDER-M2	16.5	9.53	4.76	1.7	0.8	●	●					

Recommended Cutting Conditions

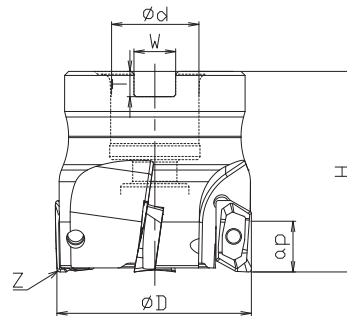
ISO	Workpiece material	Hardness	Grade	Cutting Speed	Feed
				Vc (m/min)	fz (mm/t)
P	Low Carbon Steel	≤HB180	TI960	120-220	0.15-0.30
	High Carbon and Alloy Steel	HB180-280		70-150	0.15-0.30
	Alloy Steel	HB280-350		70-150	0.15-0.30
M	Stainless Steel	≤HB200		120-200	0.10-0.25
K	Gray Cast Iron	HB150-250		140-220	0.15-0.30
	Ductile Cast Iron	HB150-250		150-240	0.15-0.30
H	Hardened Material	≤HRC50	TH910	40-80	0.10-0.30

TAD SERIES

The Premium High-Speed Milling Tool For Aluminum



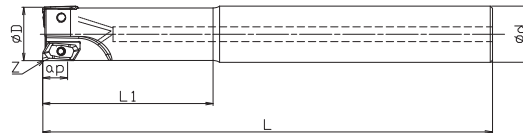
- ★ The New Premium Milling Tool Line for Aluminum Machining
Enhanced Productivity
- ★ Increased productivity due to high speed capability
Improved Surface Finish
- ★ Excellent surface finish and perpendicularity with high-precision products
Excellent Clamping Stability
Satisfactory clamping force of inserts by the use of the key shape



Milling Cutters

Designation	Size(mm)							Coolant Hole	Insert	Clamping Screw	Wrench
	D	d	H	W	T	Z	Max.ap				
TADF90-40R03AD19M16-A/B	40	16	45	8.4	5.6	3	17	●	ADET1905...-AL	TAD1905	TADF19
TADF90-50R04AD19M22-A/B	50	22	50	10.4	6.3	4	17	●			
TADF90-63R05AD19M22-A/B	63	22	50	10.4	6.3	5	17	●			
TADF90-80R05AD19M27-A/B	80	27	50	12.4	7.0	5	17	●			
TADF90-100R06AD19M32-A/B	100	32	63	14.4	8.0	6	17	●			
TADF90-125R07AD19M40-A/B	125	40	63	16.4	9.0	7	17	●			

- Type A uses Insert Nose R 0.4~3.2, and Type B uses Nose R 4.0 ~ 5.0



Endmills

Designation	Size (mm)						Coolant Hole	Insert	Clamping Screw	Wrench
	D	d	L1	L	Z	Max.ap				
TADE90-25R02D25AD19L140-A/B	25	25	60	140	2	17	●	ADET1905...-AL	TAD1905	TADE19
TADE90-32R02D32AD19L150-A/B	32	32	70	150	2	17	●			
TADE90-32R02D32AD19L200-A/B	32	32	70	200	2	17	●			
TADE90-40R03D40AD19L200-A/B	40	40	70	200	3	17	●			

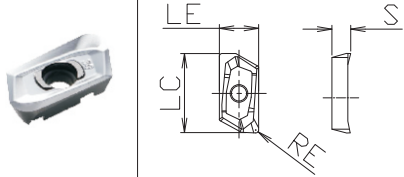
- Type A uses Insert Nose R 0.4~3.2, and Type B uses Nose R 4.0 ~ 5.0

TAD SERIES

The Premium High-Speed Milling Tool for Aluminum

● Applicable Inserts

Usage Classification	P	Steel																		
★ 1st Choice ☆ 2nd Choice	M	Stainless																		
	K	Cast iron																		
	N	Non-ferrous																★		
	S	Superalloys																		
	H	Hard materials																		

Insert		Insert No.	Size(mm)				Coated Carbide				Carbide			
			LC	LE	S	RE	TE620	TY720	TY625	TI960	HC200			
		ADET190504-AL	22	11.3	5.04	0.4					●			
		ADET190508-AL	22	11.3	5.00	0.8					●			
		ADET190512-AL	22	11.3	5.00	1.2					●			
		ADET190516-AL	22	11.3	4.99	1.6					●			
		ADET190520-AL	22	11.3	4.97	2.0					●			
		ADET190524-AL	22	11.3	4.95	2.4					●			
		ADET190530-AL	22	11.3	4.95	3.0					●			
		ADET190532-AL	22	11.3	4.92	3.2					●			
		ADET190540-AL	21	11.3	4.85	4.0					●			
		ADET190550-AL	21	11.3	4.81	5.0					●			

● Recommended Cutting Conditions

ISO	Workpiece material	Hardness	Grade	Cutting Speed	Feed
				Vc (m/min)	fz (mm/t)
N	Aluminum (Si<5%)	—	HC200	300-1500	0.10-0.30

TLU SERIES



Multifunctional milling cutter with center cutting edge

- ★ Innovative four-edged inserts provide ultimate machining flexibility and economy - from flat bottom drilling to profiling
- ★ With center cutting capability, a single cutter can perform a wide array of applications, enabling process and tool integrations for maximum productivity. Dovetail insert clamping ensures for high process security.
- ★ Maximum cost per edge for shoulder cutters with a center cutting edge.
- ★ A single insert can be used either for center edge or peripheral edge and can be used twice in each position - four total cutting edges for highest insert economy.
- ★ Easy to make hole bottoms as flat as possible. Also makes it suitable for counter boring.



Designation	Size(mm)							Coolant Hole	Insert	Clamping Screw	Wrench
	D	d	L1	L	Z	MAX.ap	MAX.ap1				
TLU90-16R02D16LX08L130	16	16	30	130	2	7	4	●	LXMU08..	TLU08	TLUS0803
TLU90-16R02D16LX08L180	16	16	50	180	2	7	4	●			
TLU90-17R02D16LX08L180	17	16	25	180	2	7	4	●			
TLU90-20R02D20LX10L145	20	20	35	145	2	7	4	●	LXMU10..	TLU10	TLUS10T3
TLU90-20R02D20LX10L190	20	20	60	190	2	7	4	●			
TLU90-21R02D20LX10L190	21	20	30	190	2	7	4	●			
TLU90-25R02D25LX12L150	25	25	45	150	2	7	4	●	LXMU12..	TLU12	TLUS1204
TLU90-25R02D25LX12L225	25	25	75	225	2	7	4	●			
TLU90-26R02D25LX12L225	26	25	35	225	2	7	4	●			

● Applicable Inserts

Usage Classification	P	Steel	★																	
★ 1st Choice ☆ 2nd Choice	M	Stainless	★																	
	K	Cast iron	★																	
	N	Non-ferrous																		
	S	Superalloys								★										
	H	Hard materials																		

Insert	Insert No.	Size(mm)					Coated Carbide					Carbide				
		LC	LE	S	BS	RE	TT650	TY720	TS820	TI960	HC200					
	LXMU080304-GM	7.7	5.00	2.8	0.8	0.4	●	●	●							
	LXMU10T308-GM	10.0	6.00	3.2	0.8	0.8	●	●	●							
	LXMU120408-GM	12.2	7.08	4.2	0.8	0.8	●	●	●							

TLU SERIES

Multifunctional milling cutter with center cutting edge

Recommended Cutting Conditions

ISO	Workpiece material	Hardness	Grade	Cutting Speed	Feed fz(mm/t)	
				Vc (m/min)	Drilling	Shouldering
P	Low Carbon Steel	≤ HB180	TT650	100-300	0.03-0.08	0.05-0.30
	High Carbon and Alloy Steel	HB180-280		100-250	0.03-0.08	0.05-0.30
	Alloy Steel	HB280-350		100-200	0.03-0.06	0.05-0.25
M	Stainless Steel	≤ HB200		80-180	0.03-0.08	0.05-0.20
K	Gray Cast Iron	HB150-250	TY720	100-300	0.03-0.10	0.05-0.30
	Ductile Cast Iron	HB150-250		100-250	0.03-0.08	0.05-0.25
S	Superalloys	—	TS820	20-40	0.03-0.05	0.04-0.15