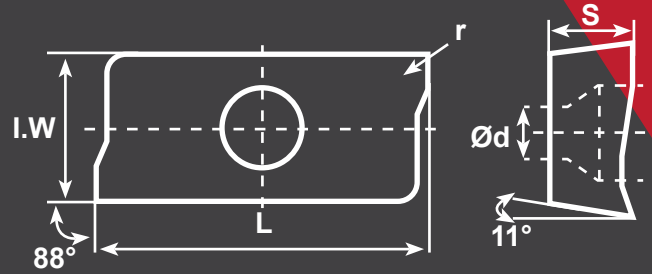


APKT

Compatible
Workpiece Materials



Ferrite Materials



SKU#	ANSI#	ISO#	L	ØI.C	S	Ød	r
424-3013	APKT33-LH	APKT160408LH	0.704	0.367	0.227	0.173	0.031
424-3015	APKT11T308-LH	APKT11T308LH	0.482	0.256	0.142	0.110	0.031

Material	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD051	YD101	YD201
P Steel	+	+	+	-				+	+	+	+		+	+	+	-			
M Stainless Steel	+	+	+	-				+	+	+	+		+	+	+	-			
K Cast Iron					+	-	+					+	+				+		-
N Ferrite Materials																		+	-
S Heat-resistant steel							+	+	+										
	Coated cemented carbide														Cermet	Coated Cermet	Cemented Carbide		
SKU#	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YNG151	YNG151C	YC30S	YD051	YD101	YD201
424-3013																		+	
424-3015																		+	

+ Good Working Conditions

○ General Working Conditions

- Adverse Working Conditions

LH CHIP BREAKER

LH chip breaker G class tolerance with big rake angle, polish and ground on surface, LH geometry is resistant to chip built-up on the insert edge, maximize surface finish on aluminum machining and insert tool life.

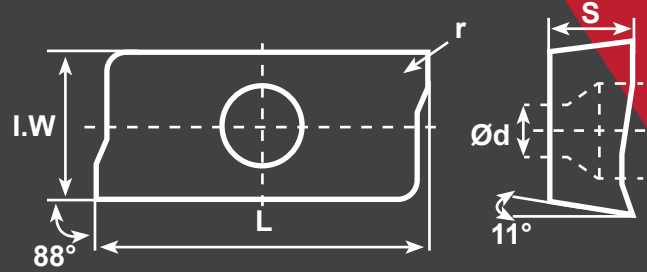


APKT

Compatible
Workpiece Materials



Ferrite Materials



SKU#	ANSI#	ISO#	L	I.W	S	Ød	r
427-2863	APKT11T308-NM	APKT11T308NM	0.044	0.257	0.142	0.110	0.031

	Coated cemented carbide													Cermet	Coated Cermet	Cemented Carbide				
Material	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YNG151	YNG151C	YC30S	YD051	YD101	YD201
P Steel	○	○	○	—				○	○	+	○		+		+	+	—			
M Stainless Steel	○	○	○	—				○	○	○	○		+		+	+	—			
K Cast Iron					○	—	+					○	+					+	○	—
N Ferrite Materials																			○	—
S Heat-resistant steel							+	○	○					○						
SKU#	427-2863													●						

+ Good Working Conditions

○ General Working Conditions

— Adverse Working Conditions



NM CHIP BREAKER

Recommended chipbreaker for semi-finishing S-kind materials. Double-side chipbreaker with M-class tolerance with good capability to prevent wear and work-hardening when machining low-machinability rated metals. Possesses higher feed and depth of cut capability than NF chipbreaker.



APKT



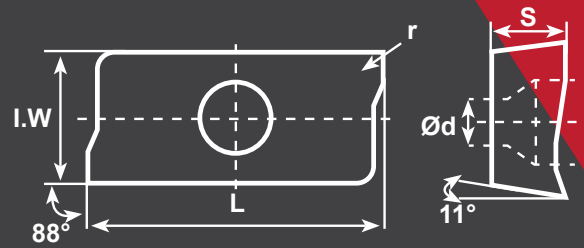
Heat-resistant Steel



Steel



Stainless Steel



Compatible Workpiece Materials

SKU#	ANSI#	ISO#	L	ØI.C	S	Ød	r
424-3011	APKT11T308-PM	APKT11T308PM	0.482	0.256	0.142	0.110	0.031
424-3012	APKT33PDER-PM	APKT160408PM	0.704	0.367	0.227	0.173	0.031
424-3017	APKT33PDER-PM	APKT160408PM	0.704	0.367	0.227	0.173	0.031
427-2691	APKT332-APF	APKT160408APF	0.704	0.367	0.227	0.173	0.031
427-2685	APKT332-APM	APKT160408APM	0.704	0.367	0.227	0.173	0.031
428-1635	APKT332-APM	APKT160408APM	0.704	0.367	0.227	0.173	0.031

	P Steel	M Stainless Steel	K Cast Iron	N Ferrite Materials	S Heat-resistant steel	Coated cemented carbide										Cermet	Coated Cermet	Cemented Carbide		
SKU#	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YNG151	YNG151C	YC30S	YD051	YD101	YD201
424-3011	+	+	+	-				+	+			+	+		+	+	-			
424-3012	+	+	+	-				+	+			+	+		+	+	-			
424-3017	+	+	+	-				+	+			+	+		+	+	-			
427-2691										+										
427-2685										+										
428-1635														+						

+ Good Working Conditions

○ General Working Conditions

- Adverse Working Conditions

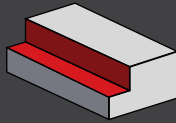


PM CHIP BREAKER

PM is the preferred choice chip breaker for General Purpose M Class tolerance double sided chip breaker, cutting edge is stronger than DM chip breaker, suitable for turning semi-finish/medium on alloy steel under unstable cutting condition, also can be use on cast iron.

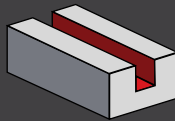


APKT



SQUARE SHOULDER MILLING

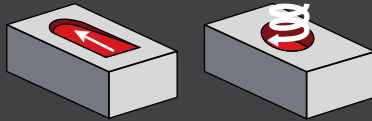
WORKPIECE MATERIAL	HARDNESS HB	INSERT GRADE	CUTTING PARAMETERS				
			V(SFPM)	f(IPT)			a _e (inch)
				-APF	-APM	-PM	
P Low-carbon steel, soft steel	≤180	YB9320 YBG202	1000 (650-1300)	0.004 (0.003-0.008) --	0.008 (0.004-0.012) --	-- 0.008 (0.004-0.012)	≤0.5D
	180-280	YB9320 YBG202	900 (590-1100)	0.004 (0.003-0.008) --	0.008 (0.004-0.012) --	-- 0.008 (0.004-0.012)	≤0.5D
	280-350	YB9320 YBG202	850 (520-1000)	0.004 (0.003-0.008) --	0.008 (0.004-0.012) --	-- 0.008 (0.004-0.012)	≤0.5D
M Stainless steel	≤270	YB9320 YBG202	650 (360-980)	0.004 (0.003-0.008) --	0.008 (0.004-0.012) --	-- 0.008 (0.004-0.012)	≤0.5D
K Cast iron	180-250	YB9320	590 (490-820)	0.004 (0.003-0.008)	0.008 (0.004-0.012)	--	≤0.5D
S High-temperature Alloy	≤400	YBS203	320 (190-400)	--	0.008 (0.004-0.012)	--	≤0.5D
N Aluminum Alloy	--	YD101	1000-	-ALH			≤0.5D
				0.008 (0.03-0.016)			



SLOT MILLING

WORKPIECE MATERIAL	HARDNESS HB	INSERT GRADE	CUTTING PARAMETERS				
			V(SFPM)	f(IPT)			a _e (inch)
				-APF	-APM	-PM	
P Low-carbon steel, soft steel	≤180	YB9320 YBG202	620 (450-820)	0.004 (0.003-0.006) --	0.006 (0.004-0.01) --	-- 0.006 (0.004-0.01)	≤0.5D
	180-280	YB9320 YBG202	550 (420-820)	0.004 (0.003-0.006) --	0.006 (0.004-0.01) --	-- 0.006 (0.004-0.01)	≤0.5D
	280-350	YB9320 YBG202	490 (360-780)	0.004 (0.003-0.006) --	0.006 (0.004-0.01) --	-- 0.006 (0.004-0.01)	≤0.5D
M Stainless steel	≤270	YB9320 YBG202	390 (260-620)	0.004 (0.003-0.006) --	0.006 (0.004-0.01) --	-- 0.006 (0.004-0.01)	≤0.5D
K Cast iron	180-250	YB9320	390 (260-590)	0.004 (0.003-0.006)	0.006 (0.004-0.01)	--	≤0.5D
S High-temperature Alloy	≤400	YBS203	190 (150-360)	--	0.006 (0.004-0.01)	--	≤0.5D
N Aluminum Alloy	--	YD101	1000-	-LH			≤0.5D
				0.008 (0.03-0.012)			

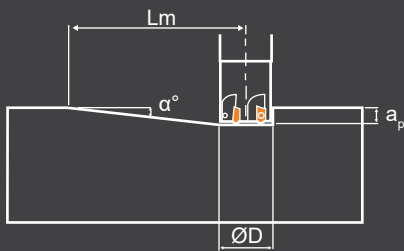
APKT



RAMP MILLING

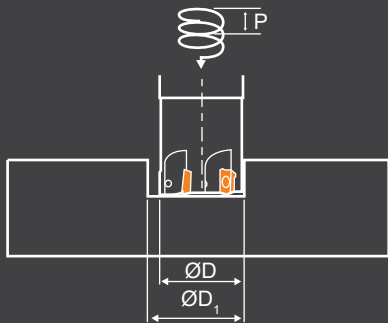
RECOMMENDED CUTTING PARAMETERS

Ramp Milling



$$L_m = \frac{a_p}{\tan \alpha} \quad (\alpha: \text{Maximum ramp angle})$$

Helical Interpolation Milling



$$\tan \alpha = \frac{P}{\pi D_1} \quad (\alpha: \text{Helical angle})$$

APKT RAMP MILLING, HELICAL INTERPOLATION MILLING (INSERTS-11)

DIAMETER ØD (mm)

DIAMETER ØD (mm)	Ramp Milling			Helical Interpolation Milling	
	Maximum cutting depth a_p (in)	Maximum ramp angle (α°)	Minimum length L_m (in)	Minimum diameter ϕD_1 (in)	Maximum pitch (in)
	Ø0.62"	0.394	10.0	2.232	0.787
Ø0.75"	0.394	5.0	4.504	1.102	0.079
Ø1.00"	0.394	4.5	5.000	1.575	0.079
Ø1.25"	0.394	3.0	7.512	2.205	0.079
Ø1.50"	0.394	2.0	11.276	2.756	0.079

APKT RAMP MILLING, HELICAL INTERPOLATION MILLING (INSERTS-11)

DIAMETER ØD (mm)

DIAMETER ØD (mm)	Ramp Milling			Helical Interpolation Milling	
	Maximum cutting depth a_p (in)	Maximum ramp angle (α°)	Minimum length L_m (in)	Minimum diameter ϕD_1 (in)	Maximum pitch (in)
	Ø1.00"	0.59	6.0	5.59	1.25
Ø1.25"	0.59	4.5	8.425	1.89	0.079
Ø1.50"	0.59	2.5	13.50	2.362	0.079
Ø2.00"	0.59	1.5	22.52	3.15	0.079
Ø2.50"	0.59	1.0	33.82	4.134	0.079