

# ACHTTECK


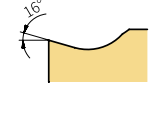
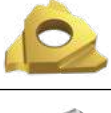
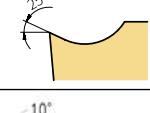

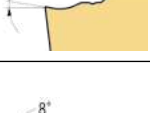
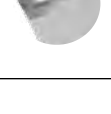




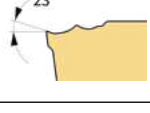

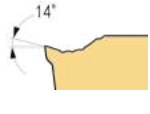
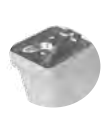
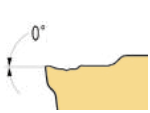

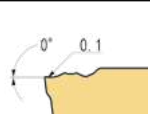

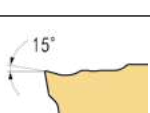

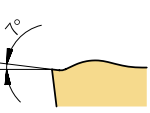
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THE EXPERTS OF DIFFICULT MACHINING



Grooving Inserts

Insert Geometry Introduction

Geometry	Insert	Shape of cutting edge	Description	Geometry Width (mm)												
				External Machining					Face grooving		Internal Machining					
				Grooving	Parting off	Turning	Profiling	Under cut	Grooving	Turning	Grooving	Turning				
ATG			<ul style="list-style-type: none"> <li>● Use precision insert</li> <li>● Positive insert reduces the vibration</li> <li>● 3 edge design, with good expansibility.</li> </ul>	0.33	-	-	0.5 1.0 1.5 2.0 3.0 4.0	-	-	-	0.33	-				
				4.8									4.8			
ASG			<ul style="list-style-type: none"> <li>● Use precision insert</li> <li>● Big rake angle and sharp edge design obtain good surface quality.</li> <li>● 3 edge design</li> </ul>	0.8	-	-	-	-	-	-	0.8	-				
				2.5									2.5			
CS			<ul style="list-style-type: none"> <li>● Used in parting off &amp; grooving stainless steel, heat resistant alloy and low carbon steel</li> <li>● For low feed rate application</li> </ul>	2.0	2.0	-	-	-	3.0	-	3.0	-				
				3.0	3.0											
CM			<ul style="list-style-type: none"> <li>● Used in parting off &amp; grooving low carbon steel and stainless steel</li> <li>● For sticky material, pipe fitting, thin-walled part parting off, low cutting force</li> <li>● For low to medium feed rate</li> </ul>	2.0	2.0	-	-	-	3.0	-	3.0	-				
				3.0	3.0											
				4.0	4.0											
				5.0	5.0											
				6.0	6.0											
CH			<ul style="list-style-type: none"> <li>● Used in parting off and grooving steel, alloy steel and stainless steel with high hardness and toughness.</li> <li>● Strong cutting edge</li> <li>● For parting off and grooving at medium to high feed rate</li> </ul>	2.0	2.0	-	-	-	3.0	-	3.0	-				
				3.0	3.0											
				4.0	4.0											
				5.0	5.0											
				6.0	6.0											
GS			<ul style="list-style-type: none"> <li>● Excellent chip breaking, suitable for grooving and finish turning.</li> <li>● Geometry for finish machining, low cutting force, low feed, excellent surface quality.</li> <li>● Ground insert, better precision control and positioning repeatability.</li> </ul>	2.0	2.0	2.0	-	-	3.0	3.0	2.0	2.0				
				7.14	7.14	7.14										
				7.14	7.14	7.14										
TS			<ul style="list-style-type: none"> <li>● Multifunctional insert for external, internal turning and grooving, parting off, face grooving and face turning</li> <li>● Excellent chip control</li> <li>● For low and medium feed rate.</li> </ul>	2.0	2.0	2.0	-	-	3.0	3.0	2.0	2.0				
				3.0	3.0	3.0										
				4.0	4.0	4.0										
				5.0	5.0	5.0										
				6.0	6.0	6.0										
				8.0	8.0	8.0										
TM			<ul style="list-style-type: none"> <li>● Multifunctional insert for external, internal turning and grooving, parting off, face grooving and face turning</li> <li>● Stronger cutting edge design</li> <li>● For medium feed rate</li> </ul>	2.0	2.0	2.0	-	-	3.0	3.0	2.0	2.0				
				3.0	3.0	3.0										
				4.0	4.0	4.0										
				5.0	5.0	5.0										
				6.0	6.0	6.0										
				8.0	8.0	8.0										
RM			<ul style="list-style-type: none"> <li>● External grooving, turning, profiling</li> <li>● Medium feed rate</li> </ul>	2.0	-	2.0	2.0	2.0	3.0	3.0	2.0	2.0				
				3.0									3.0			
				4.0										4.0		
				5.0											5.0	
				6.0												6.0
				8.0												
8.0																
RA			<ul style="list-style-type: none"> <li>● For turning and profiling aluminum alloy</li> <li>● High positive rake angle and sharp cutting edge</li> <li>● Ground inserts with high precision</li> </ul>	3.0	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0				
				4.0									4.0			
				5.0										5.0		
				6.0											6.0	
				8.0												8.0
				8.0												
Precision ground			<ul style="list-style-type: none"> <li>● Ground insert with high precision, better precision control</li> <li>● Complete product offering</li> <li>● Good surface quality</li> </ul>	1.0	-	2.22	3.0	3.0	3.0	3.0	2.22	2.22				
				4.8									4.8			
				8.0										8.0		

Grooving

**Grade Application Guide**

Materials				Turning grade application			
ISO	Material classification	Tensile strength (N/mm <sup>2</sup> )	Hardness (HB)	PVD coated		CVD coated	Uncoated
				AP301U	AP330M	AC230P	AW100K
P	Unalloyed steel	<600	<180	●	●	●	-
		<950	<280	●	●	●	-
	Alloyed steel	700-950	200-280	●	●	●	-
		950-1200	280-355	●	●	●	-
		1200-1400	355-415	●	●	●	-
M	Duplex stainless steel	778	230	●	●	-	-
	Austenitic stainless steel	675	200	●	●	-	-
	Precipitation-hardening stainless steel	1013	300	●	●	-	-
K	Grey cast iron	700	220	◐	-	●	-
	Nodular cast iron	880	260	◐	-	●	-
	Malleable cast iron	800	250	◐	-	●	-
N	Aluminum	260	75	-	-	-	●
	Aluminum alloy	447	130	-	-	-	●
S	Fe-based alloy	943	280	-	-	-	-
	Co-based alloy	1076	320	-	-	-	-
	Ni-based alloy	1177	350	-	-	-	-
	Ti-alloy	1262	370	-	-	-	-
H	Hardened steel	-	50-60HRC	-	-	-	-
	Chilled cast iron	-	55HRC	-	-	-	-

- 1st choice
- ◐ 2nd choice
- Inapplicable

**Triangular Shallow Grooving Insert Denomination System**

<b>A</b>	<b>T</b>	<b>G</b>	<b>32</b>	<b>R/L</b>	<b>050</b>	<b>T12</b>	<b>-</b>	<b>R005</b>
1	2	3	4	5	6	7	-	8

1-Company Name	
ACHTECK	

2-Insert Type	
T	Triangular
S	Only applied to Swiss machine

3-Application	
G	Grooving

4-Insert IC Size	
32=0.375 inch	
43=0.5 inch	

5-Hand of Tool	
L	Left
R	Right

6-Insert Width	
050=0.020 inch	

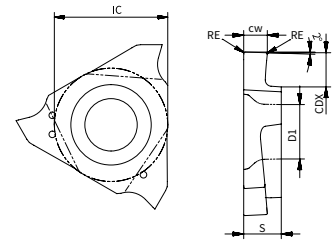
7-Max Ap	
T12=0.047 inch	

8-Insert Corner	
R005=0.020 inch	


**Shallow Grooving Series**

ASG: Applied to external shallow grooving for Swiss machine

Product code	IC	S	D1
ASG 32-	0.375	0.125	0.181



The diagram shows the right hand insert

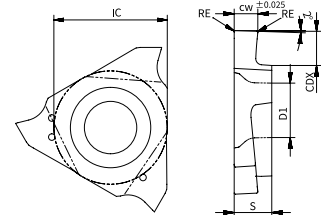
Inserts	Product code	Cutting parameter		Dimensions		Machining conditions							
		Grooving f (mm/rev)	CDX	CW	RE	P		M		K		N	
						AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U	AW100K
	<b>ASG 32R/L033T08-R005</b>	0.01-0.05	0.8	0.33	0.05		●		●			●	
	<b>ASG 32R/L050T12-R005</b>	0.01-0.05	1.2	0.50	0.05		●		●			●	
	<b>ASG 32R/L075T20-R010</b>	0.02-0.07	2.0	0.75	0.10		●		●			●	
	<b>ASG 32R/L095T20-R010</b>	0.02-0.07	2.0	0.95	0.10		●		●			●	
	<b>ASG 32R/L100T20-R010</b>	0.03-0.08	2.0	1.00	0.10		●		●			●	
	<b>ASG 32R/L120T20-R010</b>	0.03-0.08	2.0	1.20	0.10		●		●			●	
	<b>ASG 32R/L125T20-R010</b>	0.03-0.08	2.0	1.25	0.10		●		●			●	
	<b>ASG 32R/L140T20-R010</b>	0.03-0.08	2.0	1.40	0.10		●		●			●	
	<b>ASG 32R/L145T20-R010</b>	0.03-0.08	2.0	1.45	0.10		●		●			●	
	<b>ASG 32R/L150T20-R010</b>	0.03-0.08	2.0	1.50	0.10		●		●			●	
	<b>ASG 32R/L175T20-R010</b>	0.03-0.08	2.0	1.75	0.10		●		●			●	
	<b>ASG 32R/L200T25-R010</b>	0.03-0.08	2.5	2.00	0.10		●		●			●	
	<b>ASG 32R/L250T25-R010</b>	0.03-0.08	2.5	2.50	0.10		●		●			●	

●: Stock available ▲: Stock available now but will be replaced in the future.

Shallow Grooving Series

ATG: Applied to external and internal shallow grooving

Product code	IC	S	D1
ATG 32-	0.375	0.125	0.173
ATG 43-	0.500	0.187	0.217
ATG 43R/L480	0.500	0.197	0.217



The diagram shows the right hand insert

Inserts	Product code	Machining conditions				● Good condition    ⬤ General condition ✖ Bad condition							
		Cutting parameter		Dimensions		P		M		K		N	
		Grooving f (inch/rev)	CDX	CW (mm)	RE	AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U	AW100K
	*ATG 32R/L033T08-R005	0.001-0.003	0.031	0.33	0.002		●		●			●	
	ATG 32R/L050T12-R005	0.001-0.003	0.047	0.50	0.002		●		●			●	
	ATG 32R/L075T20-R005	0.001-0.003	0.079	0.75	0.002		●		●			●	
	ATG 32R/L095T20-R005	0.001-0.003	0.079	0.95	0.002		●		●			●	
	ATG 32R/L100T20-R005	0.001-0.003	0.079	1.00	0.002		●		●			●	
	ATG 32R/L110T20-R005	0.001-0.003	0.079	1.10	0.002		●		●			●	
	ATG 32R/L120T20-R005	0.001-0.003	0.079	1.20	0.002		●		●			●	
	ATG 32R/L125T20-R020	0.002-0.004	0.079	1.25	0.008		●		●			●	
	ATG 32R/L130T20-R020	0.002-0.004	0.079	1.30	0.008		●		●			●	
	ATG 32R/L140T25-R020	0.002-0.004	0.098	1.40	0.008		●		●			●	
	ATG 32R/L145T25-R020	0.002-0.004	0.098	1.45	0.008		●		●			●	
	ATG 32R/L150T25-R020	0.002-0.004	0.098	1.50	0.008		●		●			●	
	ATG 32R/L160T25-R020	0.002-0.004	0.098	1.60	0.008		●		●			●	
	ATG 32R/L170T25-R020	0.002-0.004	0.098	1.70	0.008		●		●			●	
	ATG 32R/L175T25-R020	0.002-0.004	0.098	1.75	0.008		●		●			●	
	ATG 32R/L200T25-R020	0.002-0.004	0.098	2.00	0.008		●		●			●	
	ATG 32R/L225T25-R020	0.002-0.004	0.098	2.25	0.008		●		●			●	
	ATG 32R/L250T25-R020	0.002-0.004	0.098	2.50	0.008		●		●			●	
	ATG 32R/L300T25-R020	0.002-0.004	0.098	3.00	0.008		●		●			●	
	ATG 43R/L100T20-R010	0.001-0.003	0.079	1.00	0.004		●		●			●	
	ATG 43R/L125T20-R010	0.002-0.004	0.079	1.25	0.004		●		●			●	
	ATG 43R/L125T20-R020	0.002-0.004	0.079	1.25	0.008		●		●			●	
	ATG 43R/L130T30-R010	0.002-0.004	0.118	1.30	0.004		●		●			●	
	ATG 43R/L130T30-R020	0.002-0.004	0.118	1.30	0.008		●		●			●	
	ATG 43R/L140T35-R020	0.002-0.004	0.138	1.40	0.008		●		●			●	
	ATG 43R/L145T35-R020	0.002-0.004	0.138	1.45	0.008		●		●			●	
	ATG 43R/L150T35-R010	0.002-0.004	0.138	1.50	0.004		●		●			●	
	ATG 43R/L150T35-R020	0.002-0.004	0.138	1.50	0.008		●		●			●	
	ATG 43R/L170T35-R020	0.002-0.004	0.138	1.70	0.008		●		●			●	
	ATG 43R/L175T35-R020	0.002-0.004	0.138	1.75	0.008		●		●			●	
	ATG 43R/L185T35-R020	0.002-0.004	0.138	1.85	0.008		●		●			●	
	ATG 43R/L195T35-R020	0.002-0.004	0.138	1.95	0.008		●		●			●	

\*ATG 32R/L033 Insert appearance is yellow

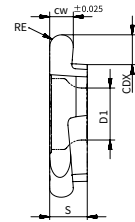
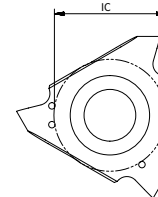
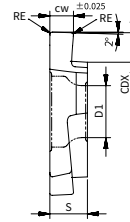
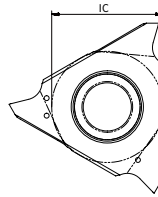
●: Stock available    ▲: Stock available now but will be replaced in the future.

Grooving

**Shallow Grooving Series**

ATG: Applied to external and internal shallow grooving

Product code	IC	S	D1
ATG 32-	0.375	0.125	0.173
ATG 43-	0.500	0.187	0.217
ATG 43R/L480	0.500	0.197	0.217



The diagram shows the right hand insert

The diagram shows the right hand insert

Inserts	Product code	Machining conditions				● Good condition    ▲ General condition ✖ Bad condition							
		Cutting parameter		Dimensions		P		M		K		N	
		Grooving f (inch/rev)	CDX	CW (mm)	RE	AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U	AW100K
	ATG 43R/L200T35-R010	0.002-0.004	0.138	2.00	0.004		●		●			●	
	ATG 43R/L200T35-R020	0.002-0.004	0.138	2.00	0.008		●		●			●	
	ATG 43R/L225T35-R020	0.002-0.004	0.138	2.25	0.008		●		●			●	
	ATG 43R/L230T35-R020	0.002-0.004	0.138	2.30	0.008		●		●			●	
	ATG 43R/L250T50-R010	0.002-0.004	0.197	2.50	0.004		●		●			●	
	ATG 43R/L250T50-R030	0.002-0.004	0.197	2.50	0.012		●		●			●	
	ATG 43R/L265T50-R030	0.002-0.004	0.197	2.65	0.012		●		●			●	
	ATG 43R/L280T50-R030	0.002-0.004	0.197	2.80	0.012		●		●			●	
	ATG 43R/L300T50-R010	0.002-0.004	0.197	3.00	0.004		●		●			●	
	ATG 43R/L300T50-R030	0.002-0.004	0.197	3.00	0.012		●		●			●	
	ATG 43R/L325T50-R030	0.002-0.004	0.197	3.50	0.012		●		●			●	
	ATG 43R/L330T50-R030	0.002-0.005	0.197	3.30	0.012		●		●			●	
	ATG 43R/L350T50-R010	0.002-0.005	0.197	3.50	0.004		●		●			●	
	ATG 43R/L350T50-R030	0.002-0.005	0.197	3.50	0.012		●		●			●	
	ATG 43R/L400T50-R010	0.002-0.005	0.197	4.00	0.004		●		●			●	
	ATG 43R/L400T50-R040	0.002-0.005	0.197	4.00	0.016		●		●			●	
	ATG 43R/L430T50-R040	0.002-0.005	0.197	4.30	0.016		●		●			●	
ATG 43R/L450T50-R040	0.002-0.005	0.197	4.50	0.016		●		●			●		
ATG 43R/L480T50-R040	0.002-0.005	0.197	4.80	0.016		●		●			●		
	ATG 32R/L050T20-R025	0.001-0.003	0.047	0.50	0.010		●		●			●	
	ATG 32R/L100T20-R050	0.001-0.003	0.079	1.00	0.020		●		●			●	
	ATG 32R/L150T25-R075	0.002-0.004	0.098	1.50	0.030		●		●			●	
	ATG 32R/L200T25-R100	0.002-0.004	0.098	2.00	0.039		●		●			●	
	ATG 32R/L300T25-R150	0.002-0.004	0.098	3.00	0.059		●		●			●	
	ATG 43R/L100T20-R050	0.001-0.003	0.079	1.00	0.020		●		●			●	
	ATG 43R/L150T35-R075	0.002-0.004	0.138	1.50	0.030		●		●			●	
	ATG 43R/L200T35-R100	0.002-0.004	0.138	2.00	0.039		●		●			●	
	ATG 43R/L250T40-R125	0.002-0.004	0.197	2.50	0.049		●		●			●	
	ATG 43R/L300T40-R150	0.002-0.004	0.197	3.00	0.059		●		●			●	
	ATG 43R/L400T50-R200	0.002-0.005	0.197	4.00	0.079		●		●			●	

●: Stock available    ▲: Stock available now but will be replaced in the future.



**Insert Denomination System**

<b>A</b> 1	<b>C</b> 2	<b>D</b> 3	<b>4</b> 4	<b>0</b> 5	<b>3</b> 5	<b>-</b> -	<b>CM</b> 6	<b>-</b> -	<b>6</b> 7	<b>R</b> 8
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<b>1-Company Name</b> ACHTECK	<b>2-Application</b> C Grooving/Parting off T Turning/Grooving	<b>3-Insert Shape</b> S Single-edged D Double-edged	<b>4-Insert Width</b> 2=0.079inch 3=0.118inch 4=0.158inch
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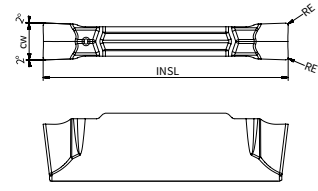
  


<b>5-Insert Corner</b> 02=0.008inch 03=0.012inch 04=0.016inch	<b>6-Geometry</b> CS CM CH GS TS TM RM RA	<b>7-Cutting Edge Angle</b> 6=6° 15=15°	<b>8-Hand of Tool</b>  L: Left  R: Right
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Grooving

**Parting Off-Grooving Series**

CS: Double-edged inserts applicable to parting off and grooving



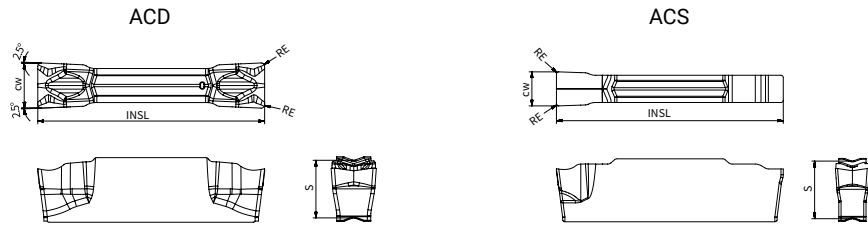
Inserts	Product code	Cutting parameter		Dimensions				Machining conditions							
		CDX	f (inch/rev)	CW (mm)	RE	INSL	S	● Good condition    ⬤ General condition ⬤ Bad condition							
								P			M		K		N
								AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U	AW100K
	<b>ACD 202-CS</b>	0.776	0.002-0.005	2	0.008	0.787	0.201		●	●	●	●		●	
	<b>ACD 302-CS</b>	0.776	0.002-0.006	3	0.008	0.787	0.201		●	●	●	●		●	

●: Stock available    ▲: Stock available now but will be replaced in the future.



**Parting Off-Grooving Series**

CM: Double-edged inserts applicable to parting off and grooving



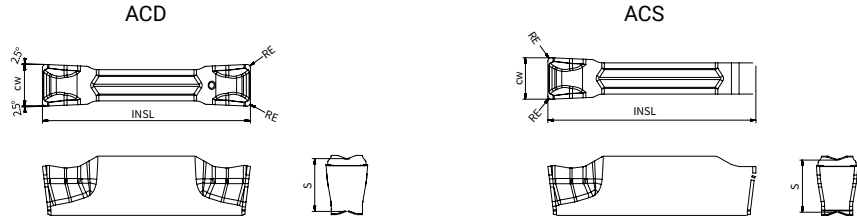
Inserts	Product code	Cutting parameter		Dimensions				Machining conditions							
		CDX	f (inch/rev)	CW (mm)	RE	INSL	S	P		M		K		N	
								AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U	AW100K
	<b>ACD 202-CM</b>	0.776	0.002-0.006	2	0.008	0.787	0.201	●	●	●	●		●		
	<b>ACD 202-CM-6R</b>	0.776	0.001-0.004	2	0.008	0.815	0.201	●	●	●	●		●		
	<b>ACD 202-CM-6L</b>	0.776	0.001-0.004	2	0.008	0.815	0.201	●	●	●	●		●		
	<b>ACD 202-CM-15R</b>	0.776	0.001-0.004	2	0.008	0.827	0.201	●	●	●	●		●		
	<b>ACD 202-CM-15L</b>	0.776	0.001-0.004	2	0.008	0.827	0.201	●	●	●	●		●		
	<b>ACD 302-CM</b>	0.776	0.002-0.006	3	0.008	0.787	0.201	●	●	●	●		●		
	<b>ACD 302-CM-6R</b>	0.776	0.002-0.006	3	0.008	0.815	0.201	●	●	●	●		●		
	<b>ACD 302-CM-6L</b>	0.776	0.002-0.006	3	0.008	0.815	0.201	●	●	●	●		●		
	<b>ACD 302-CM-15R</b>	0.776	0.002-0.006	3	0.008	0.827	0.201	●	●	●	●		●		
	<b>ACD 302-CM-15L</b>	0.776	0.002-0.006	3	0.008	0.827	0.201	●	●	●	●		●		
	<b>ACD 403-CM</b>	0.776	0.002-0.007	4	0.012	0.787	0.201	●	●	●	●		●		
	<b>ACD 403-CM-4R</b>	0.776	0.002-0.006	4	0.012	0.815	0.201	●	●	●	●		●		
	<b>ACD 403-CM-4L</b>	0.776	0.002-0.006	4	0.012	0.815	0.201	●	●	●	●		●		
	<b>ACD 503-CM</b>	0.972	0.002-0.008	5	0.012	0.984	0.197	●	●	●	●		●		
	<b>ACD 503-CM-4R</b>	0.972	0.002-0.007	5	0.012	1.012	0.197								
	<b>ACD 503-CM-4L</b>	0.972	0.002-0.007	5	0.012	1.012	0.197								
<b>ACD 603-CM</b>	1.169	0.002-0.009	6	0.012	0.984	0.197	●	●	●	●		●			
	<b>ACS 202-CM</b>	-	0.002-0.006	2	0.008	0.787	0.201	●	●	●	●		●		
	<b>ACS 302-CM</b>	-	0.002-0.006	3	0.008	0.787	0.201	●	●	●	●		●		
	<b>ACS 403-CM</b>	-	0.002-0.007	4	0.012	0.787	0.201								
	<b>ACS 503-CM</b>	-	0.002-0.008	5	0.012	0.984	0.197								
	<b>ACS 603-CM</b>	-	0.002-0.009	6	0.012	0.984	0.197								

Remark: 1. if R/L style inserts are selected, the feed need to be reduced by 20-40%.  
 2. ACS single edged insert's Tmax is determined according to the tool holder.

●: Stock available ▲: Stock available now but will be replaced in the future.

**Parting Off-Grooving Series**

CH: Double-edged inserts applicable to parting off and grooving



Inserts	Product code	Cutting parameter		Dimensions				Machining conditions							
								● Good condition    ⬤ General condition ✖ Bad condition							
								P		M		K		N	
CDX	f (inch/rev)	CW (mm)	RE	INSL	S	AC230P	AP30TU	AP330M	AP30TU	AP330M	AC230P	AP30TU	AW100K		
	<b>ACD 202-CH</b>	0.776	0.002-0.008	2	0.008	0.787	0.201		●	●	●	●		●	
	<b>ACD 202-CH-6R</b>	0.776	0.002-0.006	2	0.008	0.815	0.201		●	●	●	●		●	
	<b>ACD 202-CH-6L</b>	0.776	0.002-0.006	2	0.008	0.815	0.201		●		●			●	
	<b>ACD 202-CH-15R</b>	0.776	0.002-0.006	2	0.008	0.827	0.201		●	●	●	●		●	
	<b>ACD 202-CH-15L</b>	0.776	0.002-0.006	2	0.008	0.827	0.201		●		●			●	
	<b>ACD 302-CH</b>	0.776	0.003-0.010	3	0.008	0.787	0.201		●	●	●	●		●	
	<b>ACD 302-CH-6R</b>	0.815	0.002-0.008	3	0.008	0.815	0.201		●	●	●	●		●	
	<b>ACD 302-CH-6L</b>	0.854	0.002-0.008	3	0.008	0.815	0.201		●	●	●	●		●	
	<b>ACD 302-CH-15R</b>	0.787	0.002-0.007	3	0.008	0.827	0.201		●	●	●	●		●	
	<b>ACD 302-CH-15L</b>	0.787	0.002-0.007	3	0.008	0.827	0.201		●		●			●	
	<b>ACD 403-CH</b>	0.748	0.003-0.012	4	0.012	0.787	0.201		●	●	●	●		●	
	<b>ACD 403-CH-4R</b>	0.776	0.002-0.010	4	0.012	0.815	0.201		●	●	●	●		●	
	<b>ACD 403-CH-4L</b>	0.776	0.002-0.010	4	0.012	0.815	0.201		●	●	●	●		●	
	<b>ACD 503-CH</b>	0.945	0.004-0.014	5	0.012	0.984	0.197		●	●	●	●		●	
	<b>ACD 503-CH-4R</b>	0.972	0.003-0.012	5	0.012	1.012	0.197		●	●	●	●		●	
	<b>ACD 503-CH-4L</b>	1.012	0.003-0.012	5	0.012	1.012	0.197		●	●	●	●		●	
	<b>ACD 603-CH</b>	0.945	0.005-0.016	6	0.012	0.984	0.197		●	●	●	●		●	
<b>ACD 804-CH</b>	1.142	0.006-0.018	8	0.016	1.181	0.240		●	●	●	●		●		
	<b>ACS 202-CH</b>	-	0.002-0.008	2	0.008	0.787	0.201		●		●			●	
	<b>ACS 302-CH</b>	-	0.003-0.010	3	0.008	0.787	0.201		●	●	●	●		●	
	<b>ACS 403-CH</b>	-	0.003-0.012	4	0.012	0.787	0.201		●	●	●	●		●	
	<b>ACS 503-CH</b>	-	0.004-0.014	5	0.012	0.787	0.197		●	●	●	●		●	
	<b>ACS 603-CH</b>	-	0.005-0.016	6	0.012	0.984	0.197								

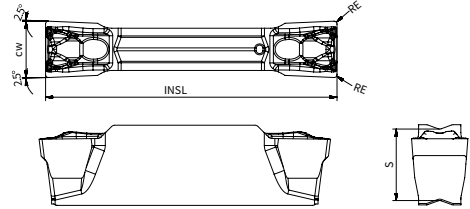
Remark: 1. if R/L style inserts are selected, the feed need to be reduced by 20-40%.  
 2. ACS single edged insert's Tmax is determined according to the tool holder.

●: Stock available    ▲: Stock available now but will be replaced in the future.

Grooving

**Grooving-Turning Series**

GS: Double-edged inserts applicable to external, internal and face turning, grooving and parting off



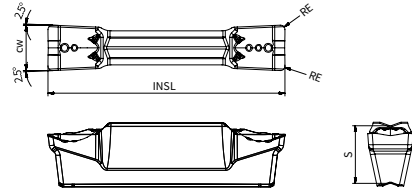
Inserts	Product code	Cutting parameter			Dimensions				Machining conditions							
		Grooving f (inch/rev)	Turning		CW (mm)	RE	INSL	S	P		M		K		N	
			f (inch/rev)	Ap (inch)					AC230P	AP301U	AP330M	AP301U	AP330M	AC230P		AP301U
	ATD 300E020-GS	0.002-0.008	0.002-0.008	0.012-0.079	3.00	0.008	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 300E040-GS	0.002-0.008	0.002-0.008	0.018-0.079	3.00	0.016	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 310E020-GS	0.002-0.008	0.002-0.008	0.010-0.079	3.10	0.008	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 318E020-GS	0.002-0.008	0.002-0.008	0.010-0.079	3.18	0.008	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 318E040-GS	0.002-0.008	0.002-0.008	0.018-0.079	3.18	0.016	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 318E080-GS	0.002-0.008	0.002-0.008	0.033-0.079	3.18	0.031	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 361E030-GS	0.002-0.008	0.002-0.009	0.014-0.079	3.61	0.012	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 396E020-GS	0.002-0.01	0.003-0.010	0.010-0.098	3.96	0.008	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 396E040-GS	0.002-0.01	0.003-0.010	0.018-0.098	3.96	0.016	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 396E080-GS	0.002-0.01	0.003-0.010	0.033-0.098	3.96	0.031	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 400E020-GS	0.002-0.01	0.003-0.010	0.010-0.098	4.00	0.008	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 400E040-GS	0.002-0.01	0.003-0.010	0.018-0.098	4.00	0.016	0.815	0.201	●	●	●	●	●	●	●	●
	ATD 452E020-GS	0.002-0.011	0.004-0.012	0.010-0.118	4.52	0.008	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 470E050-GS	0.002-0.011	0.004-0.012	0.022-0.118	4.70	0.020	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 475E040-GS	0.002-0.011	0.004-0.012	0.018-0.118	4.75	0.016	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 475E080-GS	0.002-0.011	0.004-0.012	0.033-0.118	4.75	0.031	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 480E050-GS	0.002-0.011	0.004-0.012	0.022-0.118	4.80	0.020	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 500E020-GS	0.002-0.011	0.004-0.012	0.010-0.118	5.00	0.008	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 500E040-GS	0.002-0.011	0.004-0.012	0.018-0.118	5.00	0.016	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 600E020-GS	0.004-0.014	0.006-0.014	0.010-0.138	6.00	0.008	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 600E040-GS	0.004-0.014	0.006-0.014	0.018-0.138	6.00	0.016	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 635E040-GS	0.004-0.014	0.006-0.014	0.018-0.138	6.35	0.016	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 635E050-GS	0.004-0.014	0.006-0.014	0.022-0.138	6.35	0.020	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 635E080-GS	0.004-0.014	0.006-0.014	0.033-0.138	6.35	0.031	1.012	0.197	●	●	●	●	●	●	●	●
	ATD 714E080-GS	0.004-0.014	0.007-0.016	0.033-0.138	7.14	0.031	1.012	0.197	●	●	●	●	●	●	●	●




●: Stock available ▲: Stock available now but will be replaced in the future.

**Grooving-Turning Series**

TS: Double-edged inserts applicable to external, internal and face turning, grooving and parting off

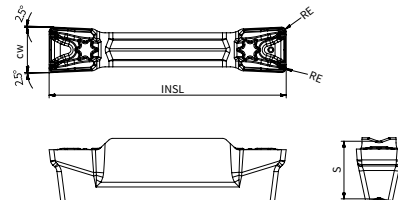



Inserts	Product code	Cutting parameter				Dimensions				Machining conditions							
		Grooving		CDX	Turning		CW (mm)	RE	INSL	S	P		M		K		N
		f (inch/rev)			f (inch/rev)	Ap (inch)					AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U
	<b>ATD 203-TS</b>	0.002-0.008	0.776	0.005-0.007	0.016-0.059	2	0.012	0.815	0.201	●	●		●		●	●	
	<b>ATD 303-TS</b>	0.002-0.010	0.776	0.006-0.009	0.018-0.079	3	0.012	0.815	0.201		●	●	●	●		●	
	<b>ATD 404-TS</b>	0.002-0.011	0.776	0.007-0.010	0.020-0.098	4	0.016	0.815	0.201		●	●	●	●		●	
	<b>ATD 408-TS</b>	0.002-0.011	0.776	0.007-0.010	0.039-0.098	4	0.031	0.815	0.201	●	●		●		●	●	
	<b>ATD 504-TS</b>	0.003-0.012	0.972	0.008-0.012	0.022-0.138	5	0.016	1.012	0.197		●	●	●	●		●	
	<b>ATD 508-TS</b>	0.003-0.012	0.972	0.008-0.012	0.039-0.138	5	0.031	1.012	0.197		●	●	●	●		●	
	<b>ATD 604-TS</b>	0.004-0.016	0.972	0.009-0.018	0.026-0.150	6	0.016	1.012	0.197		●		●			●	
	<b>ATD 608-TS</b>	0.004-0.016	0.972	0.009-0.018	0.039-0.150	6	0.031	1.012	0.197	●	●	●	●	●	●	●	
	<b>ATD 808-TS</b>	0.005-0.018	1.201	0.011-0.020	0.039-0.177	8	0.031	1.240	0.240		●		●			●	

Grooving

**Grooving-Turning Series**

TM: Double-edged inserts applicable to external, internal and face turning, grooving and parting off

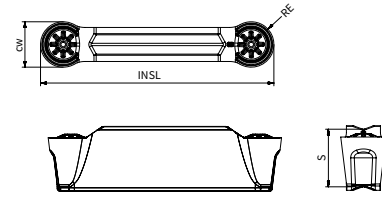


Inserts	Product code	Cutting parameter				Dimensions				Machining conditions							
		Grooving		CDX	Turning		CW (mm)	RE	INSL	S	P		M		K		N
		f (inch/rev)			f (inch/rev)	Ap (inch)					AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U
	<b>ATD 304-TM</b>	0.004-0.010	0.776	0.006-0.009	0.02-0.079	3	0.016	0.815	0.201		●		●				
	<b>ATD 404-TM</b>	0.006-0.012	0.776	0.007-0.011	0.02-0.098	4	0.016	0.815	0.201	●	●	●	●	●	●	●	
	<b>ATD 408-TM</b>	0.006-0.012	0.776	0.007-0.011	0.039-0.098	4	0.031	0.815	0.201	●	●	●	●	●	●	●	
	<b>ATD 504-TM</b>	0.007-0.014	0.972	0.008-0.014	0.022-0.138	5	0.016	1.012	0.197	●	●	●	●	●	●	●	
	<b>ATD 508-TM</b>	0.007-0.014	0.972	0.008-0.014	0.039-0.138	5	0.031	1.012	0.197		●	●	●	●		●	
	<b>ATD 604-TM</b>	0.008-0.018	0.972	0.009-0.018	0.026-0.157	6	0.016	1.012	0.197	●	●	●	●	●	●	●	
	<b>ATD 608-TM</b>	0.008-0.018	0.972	0.009-0.018	0.039-0.157	6	0.031	1.012	0.197	●	●	●	●	●	●	●	
	<b>ATD 808-TM</b>	0.009-0.020	1.201	0.011-0.020	0.039-0.197	8	0.031	1.240	0.240								
	<b>ATD 812-TM</b>	0.009-0.020	1.201	0.011-0.020	0.059-0.197	8	0.047	1.240	0.240		●		●				

●: Stock available ▲: Stock available now but will be replaced in the future.

**Grooving-Turning Series**

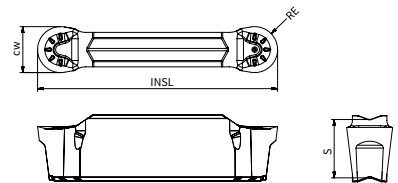
RM: Double-edged inserts applicable to external turning, grooving and profiling



Inserts	Product code	Cutting parameter			Dimensions				Machining conditions								
		Grooving f (inch/rev)	Turning		CW (mm)	RE	INSL	S	P			M		K		N	
			f (inch/rev)	Ap (inch)					AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U	AW100K	
	<b>ATD 210-RM</b>	0.002-0.006	0.005-0.010	0.016-0.039	2	0.039	0.815	0.201		●	●	●	●	●	●	●	
	<b>ATD 315-RM</b>	0.003-0.007	0.006-0.012	0.02-0.059	3	0.059	0.815	0.201	●	●	●	●	●	●	●	●	
	<b>ATD 420-RM</b>	0.004-0.008	0.007-0.014	0.024-0.079	4	0.079	0.815	0.201	●	●	●	●	●	●	●	●	
	<b>ATD 525-RM</b>	0.005-0.010	0.008-0.016	0.028-0.098	5	0.098	1.012	0.197	●	●	●	●	●	●	●	●	
	<b>ATD 630-RM</b>	0.006-0.012	0.01-0.020	0.035-0.118	6	0.118	1.012	0.197		●	●	●	●		●	●	
	<b>ATD 840-RM</b>	0.007-0.014	0.012-0.024	0.039-0.157	8	0.157	1.240	0.240		●		●			●	●	

**Grooving-Turning Series**

RA: Double-edged ground inserts applicable to aluminium wheel turning and profiling



Inserts	Product code	Cutting parameter			Dimensions				Machining conditions								
		Grooving f (inch/rev)	Turning		CW (mm)	RE	INSL	S	P			M		K		N	
			f (inch/rev)	Ap (inch)					AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U	AW100K	
	<b>ATD 315-RA</b>	0.003-0.007	0.006-0.012	0.020-0.059	3	0.059	0.815	0.201									●
	<b>ATD 420-RA</b>	0.004-0.010	0.008-0.018	0.024-0.008	4	0.079	0.815	0.201									●
	<b>ATD 525-RA</b>	0.004-0.011	0.008-0.020	0.028-0.098	5	0.098	1.012	0.197									●
	<b>ATD 630-RA</b>	0.005-0.012	0.009-0.024	0.035-0.118	6	0.118	1.012	0.197									●
	<b>ATD 840-RA</b>	0.006-0.016	0.010-0.026	0.039-0.157	8	0.157	1.240	0.240									●

●: Stock available ▲: Stock available now but will be replaced in the future.

**Insert Denomination System (Ground)**

<b>A</b> 1	<b>T</b> 2	<b>D</b> 3	<b>215</b> 4	<b>E</b> 5	<b>010</b> 6	<b>G</b> 7	<b>R/L</b> 8
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1-Company Name
ACHTECK

2-Application	
C	Grooving/Parting off
T	Turning/Grooving



3-Insert Shape	
S	Single-edged
D	Double-edged

4-Insert Width
215=0.085inch
145=0.057inch

5-Application
E: External F: Facing I: Internal

6-Insert Corner
010=0.004inch 020=0.008inch 200=0.079 inch

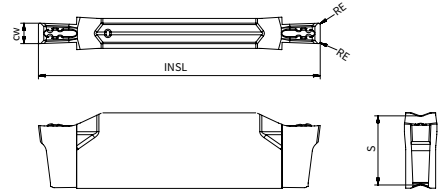
7-Application Limited	
G	only applicable to parting off

8-Hand of Tool	
	L: Left
	R: Right

Grooving

**Grooving - Turning Series**

Ground inserts applicable to turning and grooving



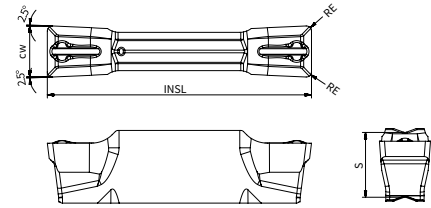
Inserts	Product code	Suitable tool holder	Cutting parameter Grooving f (inch/rev)	Dimensions					Machining conditions							
				CW (mm)	RE	CDX	S	INSL	● Good condition		⬢ General condition		⬢ Bad condition			
									⬢	●	⬢	●	⬢	●	⬢	●
									P		M		K		N	
									AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U	AW100K
	ATD 100E000G	0.079	0.001-0.002	1.00	0.000	0.079	0.201	0.815		●		●			●	
	ATD 100E050G	0.079	0.001-0.002	1.00	0.020	-	0.201	0.815		●		●			●	
	ATD 104E000G	0.079	0.001-0.002	1.04	0.000	0.079	0.201	0.815		●		●			●	
	ATD 115E000G	0.079	0.001-0.002	1.15	0.000	0.079	0.201	0.815		●		●			●	
	ATD 120E000G	0.079	0.001-0.002	1.20	0.000	0.079	0.201	0.815		●		●			●	
	ATD 125E010G	0.079	0.001-0.002	1.25	0.004	0.079	0.201	0.815		●		●			●	
	ATD 130E000G	0.079	0.001-0.002	1.30	0.000	0.079	0.201	0.815		●		●			●	
	ATD 135E000G	0.079	0.001-0.002	1.35	0.000	0.079	0.201	0.815		●		●			●	
	ATD 140E000G	0.079	0.001-0.002	1.40	0.000	0.079	0.201	0.815		●		●			●	
	ATD 140E070G	0.079	0.002-0.003	1.40	0.028	0.079	0.201	0.815		●		●			●	
	ATD 145E010G	0.079	0.001-0.002	1.45	0.004	0.079	0.201	0.815		●		●			●	
	ATD 147E000G	0.079	0.001-0.002	1.47	0.000	0.098	0.201	0.815		●		●			●	
	ATD 150E010G	0.079	0.001-0.002	1.50	0.004	0.098	0.201	0.815		●		●			●	
	ATD 157E015G	0.079	0.001-0.003	1.57	0.006	0.106	0.201	0.815		●		●			●	
	ATD 157E079G	0.079	0.002-0.003	1.57	0.031	0.106	0.201	0.815		●		●			●	
	ATD 165E010G	0.079	0.001-0.003	1.65	0.004	0.106	0.201	0.815		●		●			●	
	ATD 170E010G	0.079	0.001-0.003	1.70	0.004	0.118	0.201	0.815		●		●			●	
	ATD 178E018G	0.079	0.001-0.003	1.78	0.007	0.118	0.201	0.815		●		●			●	
	ATD 190E010G	0.079	0.002-0.004	1.90	0.004	0.118	0.201	0.815		●		●			●	
	ATD 196E015G	0.079	0.002-0.004	1.96	0.006	0.118	0.201	0.815		●		●			●	
	ATD 200E020G	0.079	0.002-0.004	2.00	0.008	0.118	0.201	0.815		●		●			●	
	ATD 200E100G	0.079	0.002-0.004	2.00	0.039	0.118	0.201	0.815		●		●			●	
	ATD 215E010G	0.079	0.002-0.004	2.15	0.004	0.118	0.201	0.815		●		●			●	
	ATD 222E015G	0.079	0.002-0.004	2.22	0.006	0.138	0.201	0.815		●		●			●	
	ATD 230E020G	0.079	0.002-0.004	2.30	0.008	-	0.201	0.815		●		●			●	
	ATD 239E120G	0.079	0.002-0.005	2.39	0.047	-	0.201	0.815		●		●			●	


1. When the width of insert is less than 1.78mm, please pay attention to size A of the holder.

●: Stock available ▲: Stock available now but will be replaced in the future.

**Grooving - Turning Series**

Ground inserts applicable to turning and grooving



Inserts	Product code	Suitable tool holder	Cutting parameter			Dimensions					Machining conditions						
			Turning		Grooving	CW (mm)	RE	CDX	S	INSL	Machining conditions						
			f (inch/rev)	Ap (inch)	f (inch/rev)						● Good condition	⊕ General condition	⊖ Bad condition	●	●	●	
										P	M	K	N				
										AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U	AW100K
	ATD 265E015	0.118	0.004-0.007	0.008-0.071	0.002-0.005	2.65	0.006	-	0.201	0.815	●	●			●		
	ATD 300E020	0.118	0.004-0.008	0.012-0.079	0.002-0.006	3.00	0.008	-	0.201	0.815	●	●			●		
	ATD 300E040	0.118	0.006-0.009	0.020-0.087	0.002-0.006	3.00	0.016	-	0.201	0.815	●	●			●		
	ATD 400E040	0.157	0.006-0.012	0.020-0.098	0.003-0.007	4.00	0.016	-	0.201	0.815	●	●			●		
	ATD 400E080	0.157	0.006-0.012	0.039-0.098	0.003-0.007	4.00	0.031	-	0.201	0.815	●	●			●		
	ATD 415E015	0.157	0.006-0.012	0.008-0.098	0.003-0.007	4.15	0.006	-	0.201	0.815	●	●			●		
	ATD 478E055	0.197	0.008-0.014	0.024-0.102	0.004-0.008	4.78	0.022	-	0.197	1.012	●	●			●		
	ATD 500E040	0.197	0.008-0.014	0.020-0.102	0.004-0.008	5.00	0.016	-	0.197	1.012	●	●			●		
	ATD 500E080	0.197	0.009-0.014	0.039-0.118	0.004-0.008	5.00	0.031	-	0.197	1.012	●	●			●		
	ATD 515E015	0.197	0.009-0.014	0.008-0.118	0.004-0.009	5.15	0.006	-	0.197	1.012	●	●			●		
	ATD 555E055	0.236	0.009-0.016	0.024-0.118	0.005-0.011	5.55	0.022	-	0.197	1.012	●	●			●		
	ATD 600E080	0.236	0.01-0.0180	0.039-0.138	0.005-0.012	6.00	0.031	-	0.197	1.012	●	●			●		
	ATD 600E120	0.236	0.01-0.0180	0.051-0.138	0.005-0.012	6.00	0.047	-	0.197	1.012	●	●			●		
	ATD 635E080	0.236	0.01-0.0180	0.039-0.138	0.005-0.012	6.35	0.031	-	0.197	1.012	●	●			●		
	ATD 800E080	0.315	0.012-0.022	0.039-0.189	0.006-0.016	8.00	0.031	-	0.240	1.240	●	●			●		
	ATD 800E120	0.315	0.012-0.022	0.047-0.189	0.006-0.016	8.00	0.047	-	0.240	1.240	●	●			●		

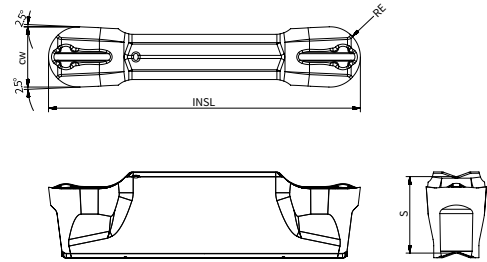
Grooving


●: Stock available ▲: Stock available now but will be replaced in the future.



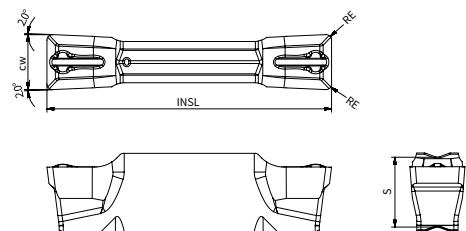
**Grooving - Turning Series**


Ground inserts applicable to turning and grooving



Inserts	Product code	Suitable tool holder	Cutting parameter			Dimensions					Machining conditions						
			Turning		Grooving	CW (mm)	RE	CDX	S	INSL	P		M		K		N
			f (inch/rev)	Ap (inch)	f (inch/rev)						AC230P	AP301U	AP330M	AP301U	AP330M	AC230P	AP301U
	<b>ATD 300E150</b>	0.118	0.006-0.012	0-0.059	0.003-0.007	3.00	0.059	-	0.201	0.815	●	●	●	●	●	●	●
	<b>ATD 400E200</b>	0.157	0.007-0.014	0-0.079	0.004-0.008	4.00	0.079	-	0.201	0.815	●	●	●	●	●	●	●
	<b>ATD 478E239</b>	0.197	0.009-0.018	0-0.094	0.005-0.009	4.78	0.094	-	0.197	1.012	●	●	●	●	●	●	●
	<b>ATD 500E250</b>	0.197	0.009-0.018	0-0.098	0.005-0.009	5.00	0.098	-	0.197	1.012	●	●	●	●	●	●	●
	<b>ATD 600E300</b>	0.236	0.010-0.020	0-0.118	0.006-0.012	6.00	0.118	-	0.197	1.012	●	●	●	●	●	●	●
	<b>ATD 800E400</b>	0.315	0.012-0.026	0-0.157	0.007-0.014	8.00	0.157	-	0.240	1.240	●	●	●	●	●	●	●

**Blank Insert of ATBD**



Inserts	Product code	Suitable tool holder (mm)	Dimensions				P	M	K	N	S	H
			CW (mm)	RE	INSL	S						
	<b>ATBD 2.6 M200</b>	2	2.60	0.004	0.835	0.201	●	●	●	●	●	●
	<b>ATBD 3.5 M200</b>	3	3.50	0.004	0.835	0.201	●	●	●	●	●	●
	<b>ATBD 4.5 M200</b>	4	4.50	0.004	0.835	0.201	●	●	●	●	●	●
	<b>ATBD 5.5 M200</b>	5	5.50	0.004	1.032	0.197	●	●	●	●	●	●
	<b>ATBD 6.5 M200</b>	6	6.50	0.004	1.032	0.197	●	●	●	●	●	●
	<b>ATBD 8.5 M200</b>	8	8.74	0.005	1.260	0.240	●	●	●	●	●	●

Finished inserts need to be used together with Achteck grooving holder.

●: Stock available ▲: Stock available now but will be replaced in the future.

Cutting Data Recommendation Table

Materials					Cutting parameter recommended table of parting off and grooving application												
ISO	Workpiece material		Brinell hardness (HB/HRC)	Tensile strength Rm(N/mm <sup>2</sup> )	AP301U			AP330M			AC230P			AW100K			
					f (inch/rev)			f (inch/rev)			f (inch/rev)			f (inch/rev)			
					0.1	0.3	0.5	0.1	0.3	0.5	0.1	0.3	0.5	0.1	0.2	0.4	
P	Unalloyed steel	C <sub>s</sub> ≤0.25% Annealed	125	428	180	145	130	160	130	100	220	180	160	-	-	-	
		0.25<C <sub>s</sub> ≤0.55% Annealed	190	639	145	130	115	120	100	90	160	130	115	-	-	-	
		0.25<C <sub>s</sub> ≤0.55% Heat-treated	210	708	130	115	100	120	100	90	130	115	100	-	-	-	
		C>0.55% Annealed	190	639	145	130	115	145	130	80	160	130	115	-	-	-	
		C>0.55% Heat-treated	300	1013	115	100	80	115	100	80	115	100	80	-	-	-	
	Free cutting steel (short-chip)	Annealed	220	745	130	115	100	130	115	100	130	115	100	-	-	-	
	Low-alloyed steel	Annealed	175	591	180	145	130	-	-	-	-	-	-	-	-	-	
		Heat-treated	300	1013	115	100	80	-	-	-	-	-	-	-	-	-	
		Heat-treated	380	1282	170	90	105	-	-	-	-	-	-	-	-	-	
		Heat-treated	430	1477	-	-	-	-	-	-	-	-	-	-	-	-	
	High-alloyed steel and high-alloyed tool steel	Annealed	200	675	-	-	-	-	-	-	-	-	-	-	-	-	
		Hardened and tempered	300	1013	-	-	-	-	-	-	-	-	-	-	-	-	
		Hardened and tempered	400	1361	-	-	-	-	-	-	-	-	-	-	-	-	
Stainless steel	Ferritic/martensitic, annealed	200	675	165	135	105	-	-	-	-	-	-	-	-	-		
	Martensitic, heat-treated	330	1114	150	115	70	-	-	-	-	-	-	-	-	-		
M	Stainless steel	Austenitic, quench hardened	200	675	165	135	105	-	-	-	-	-	-	-	-	-	
		Austenitic, precipitation hardened (PH)	300	1013	155	120	80	-	-	-	-	-	-	-	-	-	
		Austenitic/ferritic, duplex	230	778	135	110	85	-	-	-	-	-	-	-	-	-	
K	Malleable cast iron	Ferritic	200	400	115	90	65	-	-	-	115	90	65	-	-	-	
		Pearlitic	260	700	115	90	65	-	-	-	115	90	65	-	-	-	
	Grey cast iron	Low tensile strength	180	200	185	140	95	-	-	-	200	160	120	-	-	-	
		High tensile strength/austenitic	245	350	185	140	95	-	-	-	200	160	120	-	-	-	
	Nodular cast iron	Ferritic	155	400	145	110	80	-	-	-	160	130	100	-	-	-	
		Pearlitic	265	700	145	110	80	-	-	-	160	130	100	-	-	-	
GGV(CGI)		230	400	-	-	-	-	-	-	-	-	-	-	-	-		
N	Wrought aluminium alloys	Non-aging	30	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Aged	100	340	-	-	-	-	-	-	-	-	-	-	-	-	
	Cast aluminium alloys	≤ 12% Si, non-aging	75	260	-	-	-	-	-	-	-	-	-	850	500	200	
		≤ 12% Si, aged	90	310	-	-	-	-	-	-	-	-	-	-	-	-	
		> 12% Si, non-aging	130	450	-	-	-	-	-	-	-	-	-	450	250	40	
	Magnesium alloys	70	250	-	-	-	-	-	-	-	-	-	-	-	-		
	Copper and copper alloys	Unalloyed, electrolytic copper	100	340	-	-	-	-	-	-	-	-	-	-	-	-	
Brass, bronze, red brass		90	310	-	-	-	-	-	-	-	-	-	-	-	-		
Cu alloys, short-chipping		110	380	-	-	-	-	-	-	-	-	-	-	-	-		
High-tensile, Ampco alloy		300	1010	-	-	-	-	-	-	-	-	-	-	-	-		
S	Heat-resistant alloys	Fe-based	Annealed	200	680	-	-	-	-	-	-	-	-	-	-	-	-
			Hardened	280	940	-	-	-	-	-	-	-	-	-	-	-	-
		Ni or Co based	Annealed	250	840	-	-	-	-	-	-	-	-	-	-	-	-
			Hardened	350	1180	-	-	-	-	-	-	-	-	-	-	-	-
	Titanium alloys	Cast	320	1080	-	-	-	-	-	-	-	-	-	-	-	-	
		Pure titanium	200	680	-	-	-	-	-	-	-	-	-	-	-	-	
		α and β alloys, hardened	375	1260	-	-	-	-	-	-	-	-	-	-	-	-	
Tungsten alloys	410	1400	-	-	-	-	-	-	-	-	-	-	-	-			
Molybdenum alloys	300	1010	-	-	-	-	-	-	-	-	-	-	-	-			
H	Hardened steel	Hardened and tempered	50HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Hardened and tempered	55HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Hardened and tempered	60HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Chilled cast iron	Hardened and tempered	50HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	

The recommended cutting data always refer to general cutting conditions. The actual selection should be adjusted according to machine rigidity, tool body and workpiece conditions and coolant.