

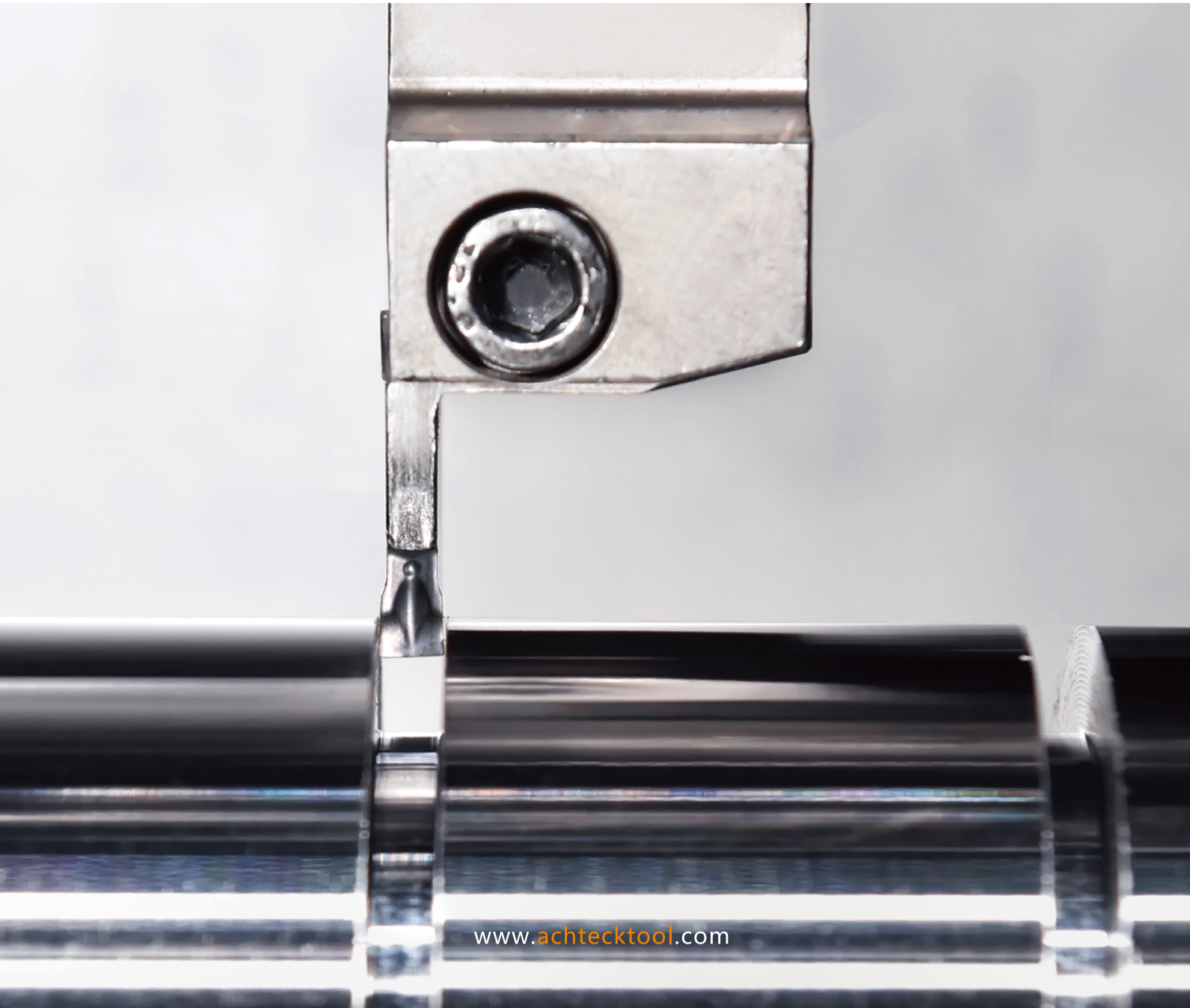
ACHTECK

NEW
PRODUCT!

CS/CM/CH

Grooving Series

Parting off and grooving



www.achtecktool.com

Achteck is launching a new grooving products - the three different chip breaker geometry CS, CM and CH which provide the exceptional machining performance for grooving application.

The CS type has a sharp cutting edge and it is recommended to use on super alloys and stainless steels at low feed rate.

The CM type is recommended to use on super alloys and stainless steels at medium feed rate.

The CH type is recommended to use on steels, stainless steels and cast irons at medium to high feed rate.

These three types are for external grooving application.

These are designed have a good chip controlling and provide for good surface finish quality. Also, the holders have a high accuracy, excellent repeatability and good durability.

These products can be machined on grooving and parting off. The maximum depth of cut is 19.7mm.

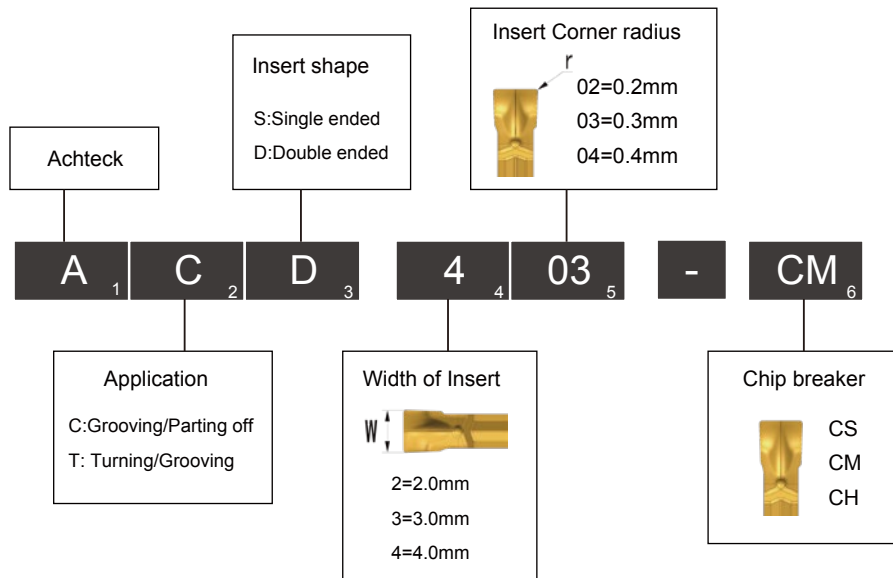
PVD grade AP301U is a good combination with three types chip breakers provide a longer tool life, and very stable machining. AP301U grade is defined a longer tool life at higher cutting speed for steels, stainless steels and super alloys and minimized built up edge. It enhanced performance reliability and remarkable reduction in machining cost.

Achteck grooving products assortment, expanding the range continuously and will be announced, case by case when products are completed.

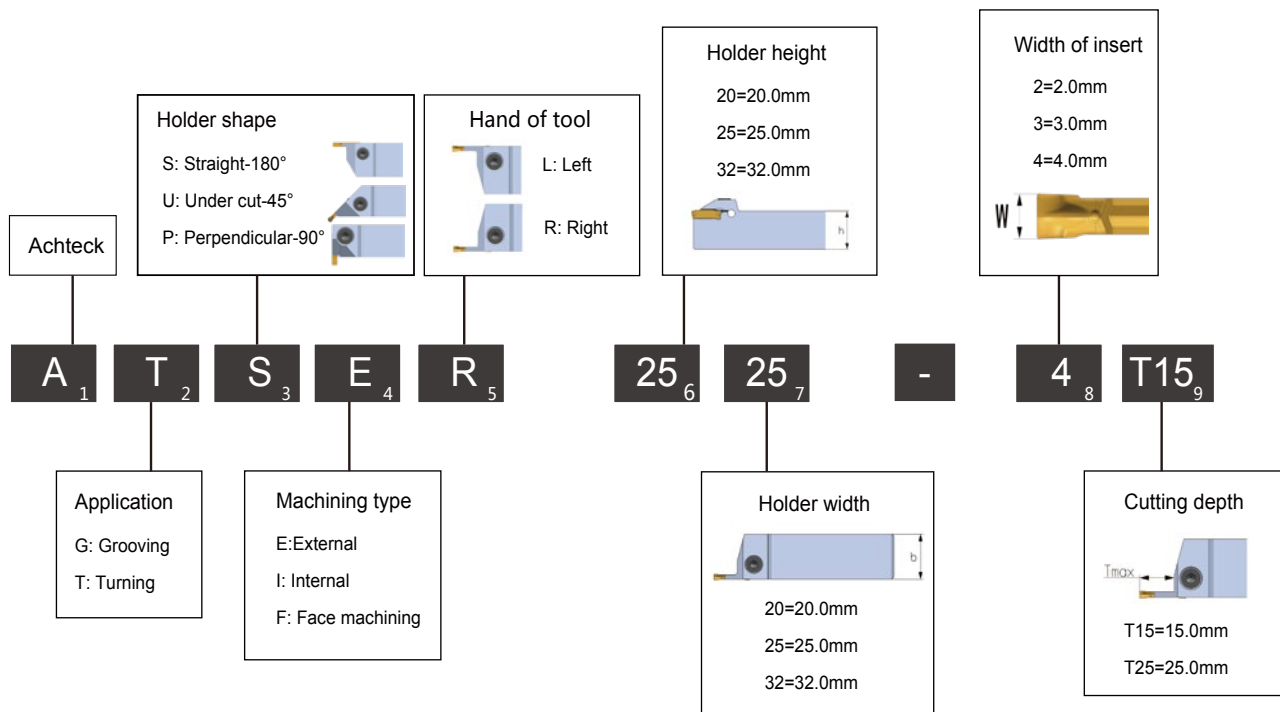
Grooving Inserts are the first time to be launched into market and provide product designation system both insert and holder to better understanding.



Insert designation system



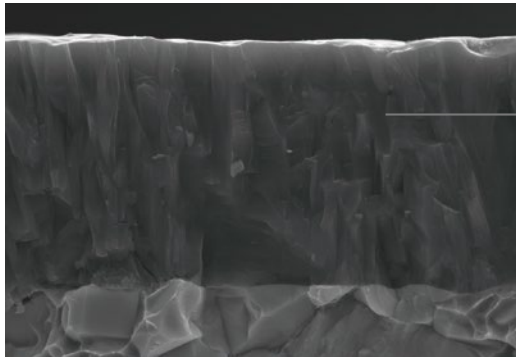
Holder designation system



◆ AP301U Grade Feature

Kind of coating: PVD

ISO range: P15-P35, M15-M35



TiAlN PVD coating

- ◆ Excellent high-temperature oxidation resistance and wear resistance.
- ◆ Very smooth coating surface.
- ◆ Good adhesion between substrate and coating for longer tool life.

◆ Grade application

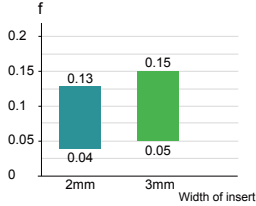
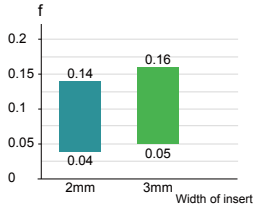
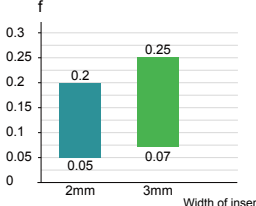
Grade	Coating	Material					
		P	M	K	S	N	H
AP301U	PVD	●	●	◐	◐		

● Marked : 1st Choice ◐ Marked : 2nd Choice

◆ Recommended cutting speed

Material	Steel	Stainless steel	Cast iron	Super alloy
Cutting speed Vc(m/min)	60-250	60-180	30-200	20-150

Chip breaker features

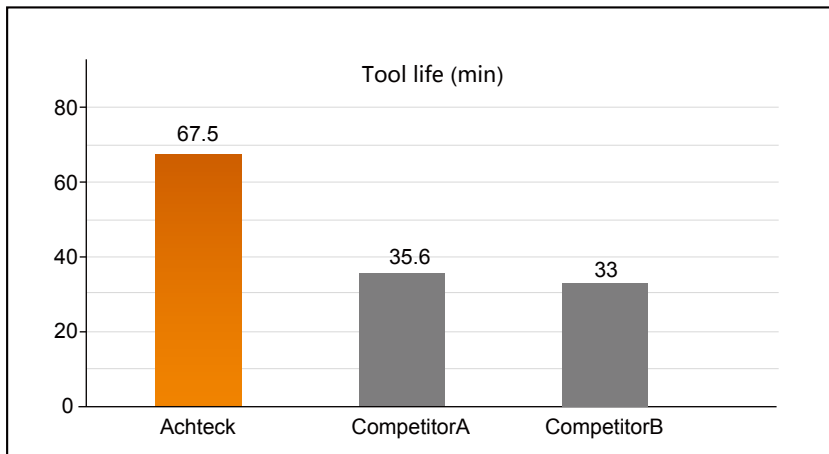
Geometry	Insert picture	Edge preparation	Recommended feed (mm/rev)	Application
CS				1. Suitable for parting off and grooving on stainless steel, super alloys and mild steel 2. Low feed rate
CM				1. Suitable for parting off, grooving on stainless steel, and mild steel 2. For soft materials such as tubes, small diameters and thin walled parts 3. For low cutting force 4. Low to medium feed rate
CH				1. Suitable for parting off, grooving on steels, and cast irons 2. Strong cutting edge 3. High feed rate 4. Can be used on stainless steels. 5. First choice

Comparison internal tool life test result

Cutting conditions

Material	Operation	Cutting parameters			
		Vc(m/min)	f(mm/rev)	ap(mm)	Coolant
Alloy steel	Grooving	160	0.2	10	Yes

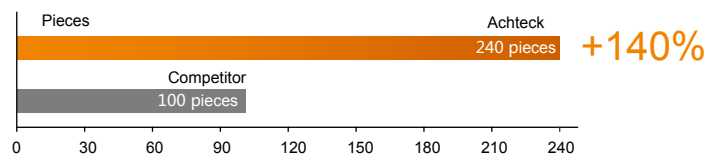
Test result



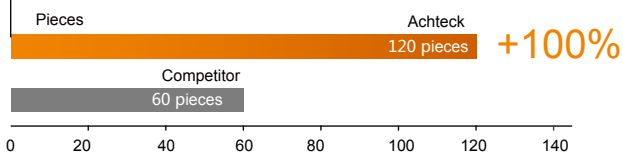
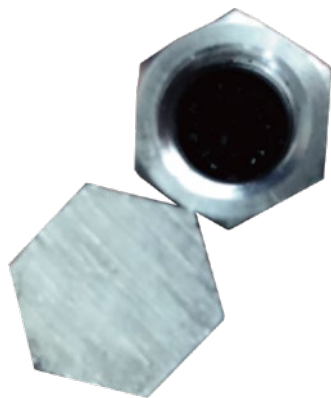
Insert: ACD 302-CH AP301U
Holder: ATSEL 2525-3T12

Case stories

Component description: Solid bar
Material: Tool steel
Material hardness: HRC35-40
Insert: **ACD 302-CH AP301U**
Holder: ATSER 2020 3T20
Machining operation: Parting off
Cutting parameters: Vc=60m/min, f=0.1mm, ap=10.5mm
Wet machining

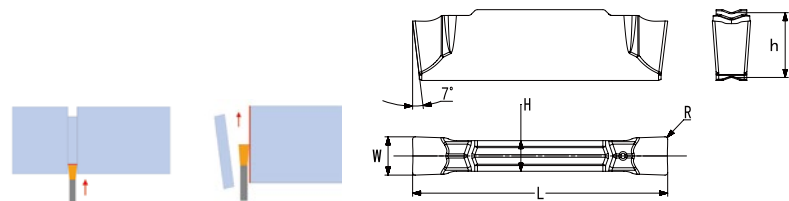


Component description: Hexagonal bar
Material: 304 stainless steel
Material hardness: HR180
Insert: **ACD 302-CM AP301U**
Holder: ATSER 2020 3T09
Machining operation: Parting off
Cutting parameters: Vc=45m/min, f=0.05mm, ap=6mm
Wet machining



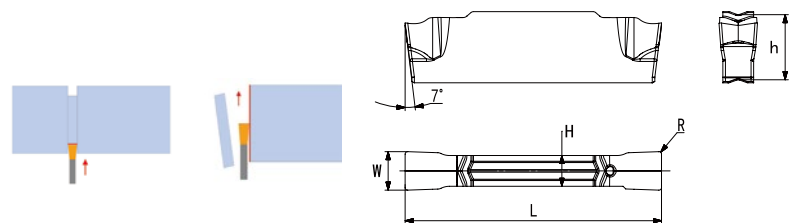
Inserts stock item

- CS
For parting off and grooving



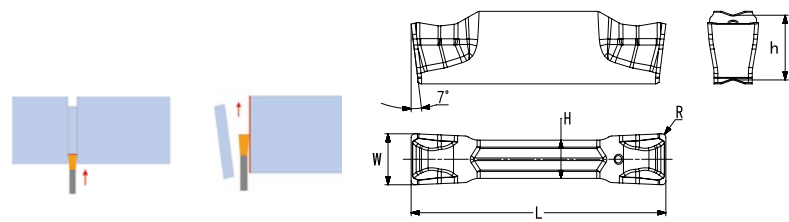
Insert	Type	Dimension					T _{max}	Feed	Grade
		W	R	L	H	h			AP301U
	ACD 202-CS	2	0.2	20	1.7	5.1	19.7	0.04-0.13	●
	ACD 302-CS	3	0.2	20	2.4	5.1	19.7	0.05-0.15	●

- CM
For parting off and grooving



Insert	Type	Dimension					T _{max}	Feed	Grade
		W	R	L	H	h			AP301U
	ACD 202-CM	2	0.2	20	1.7	5.1	19.7	0.04-0.15	●
	ACD 302-CM	3	0.2	20	2.4	5.1	19.7	0.05-0.16	●

- CH
For parting off and grooving



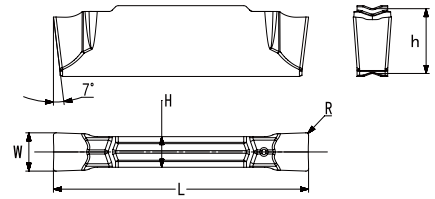
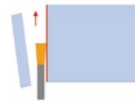
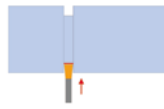
Insert	Type	Dimension					T _{max}	Feed	Grade
		W	R	L	H	h			AP301U
	ACD 202-CH	2	0.2	20	1.7	5.1	19.7	0.05-0.20	●
	ACD 302-CH	3	0.2	20	2.4	5.1	19.7	0.07-0.25	●

Remark: ● represent for standard stock

Inserts stock item

- CS

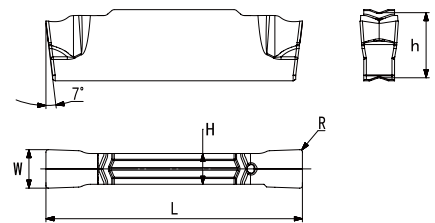
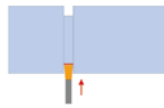
For parting off and grooving



Insert	Type	Dimension					T _{max}	Feed	Grade
		W	R	L	H	h			AP301U
	ACD 202-CS	2	0.2	20	1.7	5.1	19.7	0.04-0.13	●
	ACD 302-CS	3	0.2	20	2.4	5.1	19.7	0.05-0.15	●

- CM

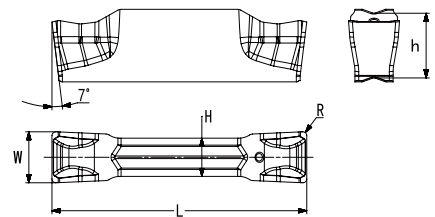
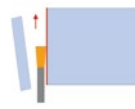
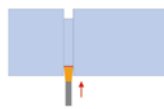
For parting off and grooving



Insert	Type	Dimension					T _{max}	Feed	Grade
		W	R	L	H	h			AP301U
	ACD 202-CM	2	0.2	20	1.7	5.1	19.7	0.04-0.15	●
	ACD 302-CM	3	0.2	20	2.4	5.1	19.7	0.05-0.16	●

- CH

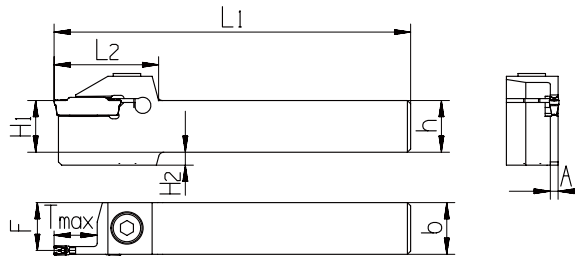
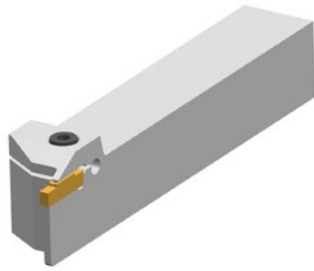
For parting off and grooving



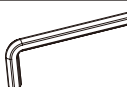
Insert	Type	Dimension					T _{max}	Feed	Grade
		W	R	L	H	h			AP301U
	ACD 202-CH	2	0.2	20	1.7	5.1	19.7	0.05-0.20	●
	ACD 302-CH	3	0.2	20	2.4	5.1	19.7	0.07-0.25	●

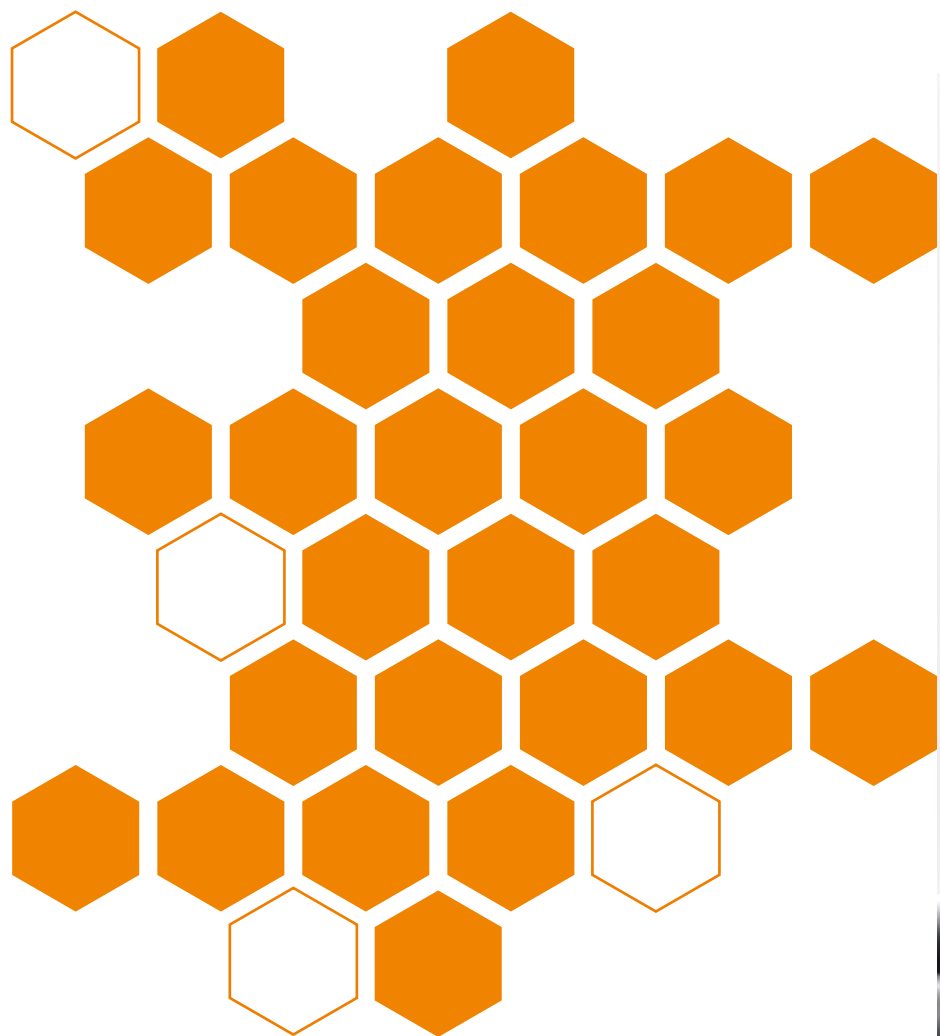
Remark: ● represent for standard stock

• Holder stock item



Holder type		holder dimension									Insert
		h	b	H ₁	H ₂	A	L ₁	L ₂	F	T _{max}	
ATSER/L	1616-2T12	16	16	16	4	1.8	110	32	15.1	12	ACD 2
	1616-2T17	16	16	16	4	1.8	110	38	15.1	17	
	2020-2T08	20	20	20	0	1.8	125	32	19.1	8	
	2020-2T12	20	20	20	0	1.8	125	32	19.1	12	
	2020-2T17	20	20	20	0	1.8	125	38	19.1	17	
	2525-2T08	25	25	25	0	1.8	150	32	24.1	8	
	2525-2T12	25	25	25	0	1.8	150	32	24.1	12	
ATSER/L	1616-3T12	16	16	16	4	2.4	110	32	14.8	12	ACD 3
	1616-3T20	16	16	16	4	2.4	110	38	14.8	20	
	2020-3T09	20	20	20	0	2.4	125	32	18.8	9	
	2020-3T12	20	20	20	0	2.4	125	32	18.8	12	
	2020-3T20	20	20	20	0	2.4	125	38	18.8	20	
	2525-3T09	25	25	25	0	2.4	150	32	23.8	9	
	2525-3T12	25	25	25	0	2.4	150	32	23.8	12	
	2525-3T20	25	25	25	0	2.4	150	38	23.8	20	

Holder type	Spare part	
	Screw	Wrench
		
ATSER/L 1616-2/3	ASH M5x0.8x16	AWH4
ATSER/L 2020-2/3	ASH M5x0.8x20	AWH4
ATSER/L 2525-2/3	ASH M5x0.8x25	AWH4



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