

Drill dia.	Shank dia.	Overall length	Drill length	Workpiece end-face Hole size
Dc	Ds	L	ℓ	Dw

JIS

①

Spiral Fluted Taps  
(for blind hole)

②

Spiral Fluted Taps  
(for through hole)

③

Spiral Pointed Taps  
(for through hole)

④

Hand Taps

⑤

Cemented Carbide Taps

⑥

Roll Taps

⑦

Special Thread Taps  
Simple inspection tools

⑧

Pipe Taps

⑨

Thread Mills  
Premium Thread Mills

⑩

Dies

⑪

Center Drills  
Centering Tools

⑫

Precision Machinery/  
Medical Surgical Instruments

JIS

⑪-37

## AUCES

Coated Type A 60° High Helix Single End Center Hole Drill



Specification Cutting Speed depending on Materials

HSS	Low carbon steels 低炭素鋼	Medium carbon steels 中炭素鋼	Stainless steels ステンレス鋼
	20~40 (m/min)	20~40 (m/min)	10~20 (m/min)
Coating	Brass 黄銅	Brass castings 黄銅鑄物	Wrought aluminum アルミ圧延材
	30~60 (m/min)	30~60 (m/min)	25~60 (m/min)
			Aluminum alloy castings アルミ合金鑄物
			25~60 (m/min)

## AUCDS

Coated Type A 60° Low Helix Single End Center Hole Drill

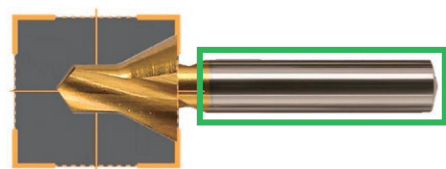


Specification Cutting Speed depending on Materials

HSS	Medium carbon steels 中炭素鋼	High carbon steels 高炭素鋼	Alloy steels 合金鋼	Thermal refined steels 調質鋼
	20~40 (m/min)	20~40 (m/min)	20~40 (m/min)	15~30 (m/min)
Coating	Cast steels 鋳鋼	Cast irons 鋳鉄	Ductile cast irons 強靱鋳鉄	25~35HRC
	20~40 (m/min)	10~40 (m/min)	10~40 (m/min)	

### Product Features

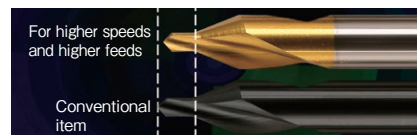
- To improve the tools precision and accuracy, YAMAWA adopted a single end design.
- Higher quality center holes can be achieved with the AUCES and AUCDS coated, single end design center hole drill.
- Because of the single end design, the tool length in the holder is constant and the tool projection is constant.



Compared with a double end center hole drill, the accuracy of the drill part and shank accuracy are improved with a single end center hole drill.

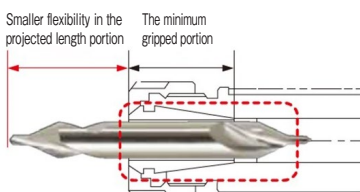


The position of the tool identification markings is made at the back of the shank part to avoid holding at the marking position of the drill.

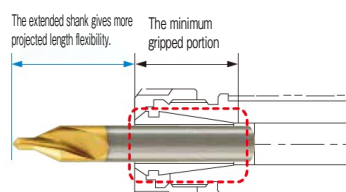


The drill length (ℓ) is shorter than the conventional double end product. Higher speed, higher feed machining is possible.

#### Double-ended type



#### Single-ended type

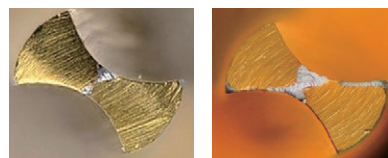


### Cutting Data

Tool Type	Coated Single-End Center Hole Drill AUCES	Coated Double Ended Center Hole Drill CE-SV
Size	3×60°×8	
Workpiece Material & Hardness	S50C (96~98HRB)	
Cutting Speed	10m/min, 30m/min	
Feed Per Rev.	0.05mm/rev, 0.12mm/rev	
Large Diameter	φ6	
Machinery Type	Vertical machining center	
Cutting Fluid	Water soluble cutting fluid (20 to 1 dilution)	
Tool Type	Coated Single-End Center Hole Drill AUCES	Coated Double Ended Center Hole Drill CE-SV
Size	1×60°×4	
Workpiece Material	S50C	
Cutting Speed	30m/min	
Feed Per Rev.	0.04mm/rev	
Large Diameter	φ3	

Machining Conditions	Single End Center Hole Drill AUCES	Double End Center hole drill CE-SV
Workpiece Material: S50C Cutting Speed 10m/min Feed Rate: 0.05mm/rev		
Material S50C Cutting Speed 30m/min Feed Rate: 0.12mm/rev		

Coated Single End Center Hole Drill AUCES Coated Double End Center Hole Drill CE-SV



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Thread Mills  
Premium Thread Mills

⑨

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⑩

Center Drills  
Centering Tools

⑪

Precision Machinery/  
Medical Surgical Instruments

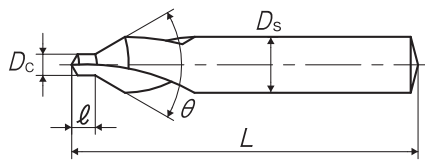
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JIS

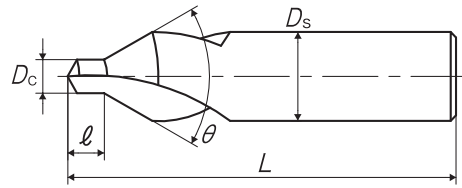
⑪-38

## AUCES Coated Type A 60° High Helix Single End Center Hole Drill

TYPE: 1



TYPE: 2



Segment : 51

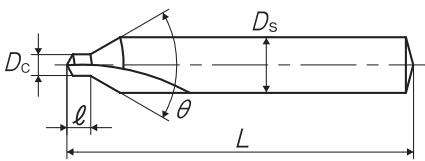
Size Dc × θ × Ds	Code	Dc (mm)	Ds (mm)	L (mm)	ℓ (mm)	Dw (mm)	TYPE	MSRP
1× 60°× 4	YH61.00ZNEVD	1	4	35	1.1	2.5	1	¥ 1,660
1.5× 60°× 5	YH61.50ZNEVE	1.5	5	40	1.6	4	1	¥ 1,580
2× 60°× 6	YH62.00ZNEVF	2	6	45	2.1	5	1	¥ 1,720
2.5× 60°× 8	YH62.50ZNEVI	2.5	8	50	2.7	6.5	1	¥ 2,090
3× 60°× 8	YH63.00ZNEVI	3	8	50	3.2	6.5	1	¥ 2,090
4× 60°× 10	YH64.00ZNEVJ	4	10	55	4.3	8.5	1	¥ 3,050
5× 60°× 12	YH65.00ZNEVM	5	12	65	5.3	10	1	¥ 3,940
6× 60°× 16	YH66.00ZNEVP	6	16	70	6.4	13.5	2	¥ 9,180

• Machining conditions are calculated based on the workpiece end-face hole size Dw.

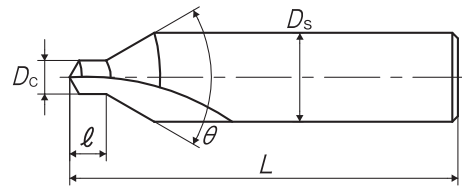
• For details on machining conditions, see TECHNICAL INFORMATION, "27. Table of recommend centering condition."

## AUCDS Coated Type A 60 °Low Helix Single End Center Hole Drill

TYPE: 1



TYPE: 2



Segment : 51

Size Dc × θ × Ds	Code	Dc (mm)	Ds (mm)	L (mm)	ℓ (mm)	Dw (mm)	TYPE	MSRP
1× 60°× 4	YL61.00ZNEVD	1	4	35	1.1	2.5	1	¥ 1,660
1.5× 60°× 5	YL61.50ZNEVE	1.5	5	40	1.6	4	1	¥ 1,580
2× 60°× 6	YL62.00ZNEVF	2	6	45	2.1	5	1	¥ 1,720
2.5× 60°× 8	YL62.50ZNEVI	2.5	8	50	2.7	6.5	1	¥ 2,090
3× 60°× 8	YL63.00ZNEVI	3	8	50	3.2	6.5	1	¥ 2,090
4× 60°× 10	YL64.00ZNEVJ	4	10	55	4.3	8.5	1	¥ 3,050
5× 60°× 12	YL65.00ZNEVM	5	12	65	5.3	10	1	¥ 3,940
6× 60°× 16	YL66.00ZNEVP	6	16	70	6.4	13.5	2	¥ 9,180

• Machining conditions are calculated based on the workpiece end-face hole size Dw.

• For details on machining conditions, see TECHNICAL INFORMATION, "27. Table of recommend centering condition."