

Shank dia.	Drill dia.	Overall length	Drill length
Ds	Dc	L	ℓ <sub>1</sub>

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

⑩ Dies

⑪ Center Drills/Centering Tools

## AUPEQ

Coated Single End Point Drill PE-90°



### Specification



For icon explanation, refer to icon-1

## AUPES

Coated Single End Point Drill PE-60°



### Specification

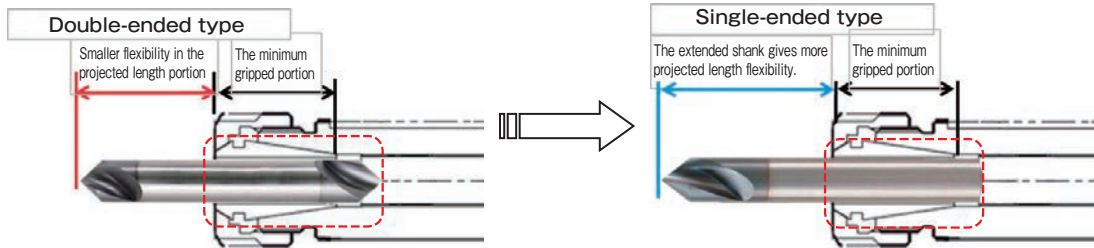


For icon explanation, refer to icon-1

### Product Features

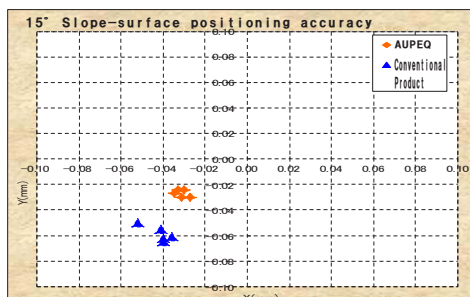
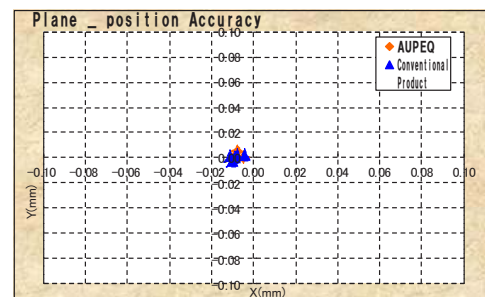
- An excellent surface finish can be obtained while maintaining cutting edge sharpness from the high helix flute design.
- Accuracy improvements are also achieved from the single end design.
- A design for higher rigidity enables high speed cutting.
- The breakage problem of the drill portion of the center hole drill has been solved.
- Simultaneous combining the center positioning and chamfering is possible. It can also be used as a multi function tool like groove processing.
- Higher precision machining can be achieved with the two stage point shape design.
- With a single end center point drill, the degree of chip space widens, so the chips are discharged smoothly.

Differences in projection length and degrees of freedom between single end and double end point drills



### Cutting data

Tool Type	Coated Single End Point Drill AUPEQ	Coated Double End Point Drill Competitor's Item
Size	φ12×90°	
Workpiece Material	SCM440(alloy steel)	
Surface Condition	flat 15° incline surface	
Cutting Speed	10m/min	
Feed Per Rev.	0.05mm/rev	
Processing Length	φ8 flat surface	
Cutting Fluid	Water-soluble cutting fluid (x20)	
Machinery Type	Vertical machining center	



AUPEQ / AUPES improves positioning accuracy dramatically. High precision positioning is possible as shown in the above figure.



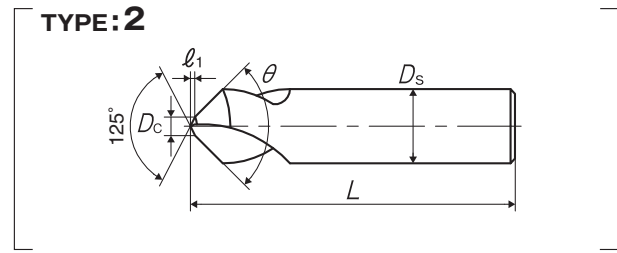
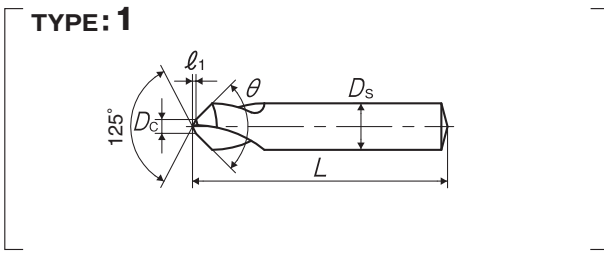
For improvement, spec may change without advance notice.

Shank dia.	Drill dia.	Overall length	Drill length
Ds	Dc	L	ℓ <sub>1</sub>

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JIS

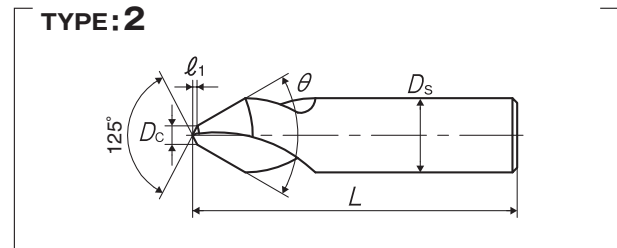
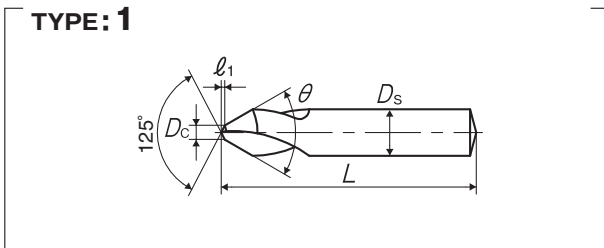
## AUPEQ Coated Single End Point Drill PE-90°



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ <sub>1</sub> (mm)	TYPE	MSRP
3 × 0.5 × 90°	PZ93.00ZNETZ	3	0.5	35	0.13	1	¥ 3,220
4 × 1 × 90°	PZ94.00ZNETZ	4	1	35	0.26	1	¥ 2,910
6 × 2 × 90°	PZ96.00ZNETZ	6	2	45	0.52	1	¥ 3,240
8 × 2.5 × 90°	PZ98.00ZNETZ	8	2.5	50	0.65	1	¥ 3,980
10 × 3 × 90°	PZ910.0ZNETZ	10	3	55	0.78	1	¥ 5,150
12 × 3.5 × 90°	PZ912.0ZNETZ	12	3.5	65	0.91	1	¥ 6,610
16 × 4 × 90°	PZ916.0ZNETZ	16	4	70	1.04	2	¥ 9,870
20 × 5 × 90°	PZ920.0ZNETZ	20	5	80	1.30	2	¥ 15,100

## AUPES Coated Single End Point Drill PE-60°



Segment : 56

Size Ds × Dc × θ	Code	Ds (mm)	Dc (mm)	L (mm)	ℓ <sub>1</sub> (mm)	TYPE	MSRP
3 × 0.5 × 60°	PZ63.00ZNETZ	3	0.5	35	0.13	1	¥ 3,220
4 × 1 × 60°	PZ64.00ZNETZ	4	1	35	0.26	1	¥ 2,910
6 × 2 × 60°	PZ66.00ZNETZ	6	2	45	0.52	1	¥ 3,240
8 × 2.5 × 60°	PZ68.00ZNETZ	8	2.5	50	0.65	1	¥ 3,980
10 × 3 × 60°	PZ610.0ZNETZ	10	3	55	0.78	1	¥ 5,150
12 × 3.5 × 60°	PZ612.0ZNETZ	12	3.5	65	0.91	1	¥ 6,610
16 × 4 × 60°	PZ616.0ZNETZ	16	4	70	1.04	2	¥ 9,870
20 × 5 × 60°	PZ620.0ZNETZ	20	5	80	1.30	2	¥ 15,100

Spiral Fluted Taps  
(for blind hole) ①Spiral Fluted Taps  
(for through hole) ②Spiral Pointed Taps  
(for through hole) ③

Hand Taps ④

Cemented  
Carbide Taps ⑤

Roll Taps ⑥

Special Thread Taps  
Simple inspection tools ⑦

Pipe Taps ⑧

Thread Mills ⑨

Dies ⑩

Center Drills  
Centering Tools ⑪

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⑪-40

※ = Specified Distribution Items. Made to order products.  
For improvement, spec may change without advance notice.

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