Think threads with YAMAWA

MHCDS

Center holes of high precision are realized!!

■ Center Drills for Running at High Speeds in Carbon Steels of Middle Hardness ■

MHCDS

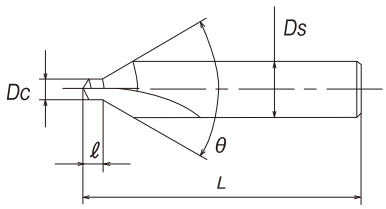
Medium Hard

Product features

Center Drills for Running at High Speed in Carbon Steels of Middle Hardness

MHCDS

HSS-Co Coating



■ Features

- In order to improve positioning accuracy, the overall length projection and shank tolerance of the MHCDS has the cutting edge on one end only.
- Considering the clearance between center point and bottom of center hole, the cutting edge length(ℓ) is made as short as possible to increase toughness.
- To increase centrality, the drill point has ' 3 rakes' and ' X thinning design ,' which enables high speed cutting and feeding.
- Increased centrality leads to great improvement of surface finish and circularity of center-drilled hole.

Dimension and Size

Designation Dc×θ×Ds	Dc	Ds	L	ℓ	Code
1 ×60°×4	1	4	30	1.0	VMHCD1.0S
1.5×60°×5	1.5	5	30	1.5	VMHCD1.5S
2 ×60°×6	2	6	30	1.9	VMHCD2.0S
2.5×60°×8	2.5	8	40	2.4	VMHCD2.5S
3 ×60°×8	3	8	40	2.8	VMHCD3.0S
4 ×60°×10	4	10	45	3.8	VMHCD4.0S
5 ×60°×12	5	12	55	4.6	VMHCD5.0S
6 ×60°×16	6	16	65	5.5	VMHCD6.0S

Recommended cutting condition

● Material:Carbon Steels(S55C) Alloy Steels(SCM440)

Designation Dc×θ×Ds	Feed f (mm/rev)	RPM n (min^{-1})
1 ×60°×4	0.1	3,800
1.5×60°×5		2,400
2 ×60°×6	0.15	1,900
2.5×60°×8		1,500
3 ×60°×8		1,200
4 ×60°×10	0.2	1,000
5 ×60°×12		800
6 ×60°×16		600

Cutting data

Great extension of tool life with MHCDS

The pictures on the right show the differences in damage to the cutting edge between a CD-S and a MHCDS after cutting 480 hole using the same cutting condition. As shown, the MHCDS has smaller wear and edge damage allowing the MHCDS to run much further than a standard center drill.

《Cutting condition》
Size : 3×60°×8
Material: S55C
Machine: NC lathe
Cutting speed: 30m/min(1,200min^{-1})
Feed : 0.15mm/rev
Cutting oil: Water soluble

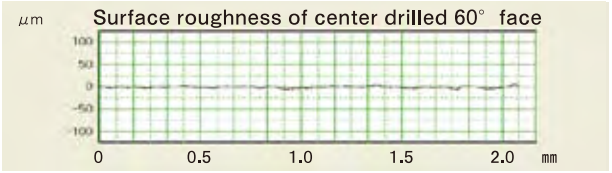

CD-S

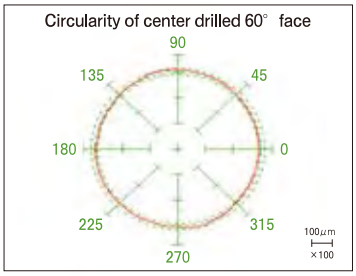

MHCDS

Great improvement in surface roughness and circularity with MHCDS

Enlarged picture

Under the cutting condition stated above, the surface finish of center-drilled hole has greatly been improved.
Circularity of center drilled hole as well as run-out tolerance of turning axis has been improved.





Warning

- ◆ Tools may shatter. Wear cover or eye glasses to avoid injury during tapping.
- ◆ Tools may be shatter. Use tools under the proper tapping condition.
- ◆ Never wear gloves during turning operations as the gloves may get caught with the tools.
- ◆ Wear safety shoes to avoid injuring yourself by the falling tools.
- ◆ On attaching tools to the machine, fasten firmly to avoid chattering and run-out.
- ◆ Fasten the workpieces firmly so that they never move during operation. Never use worn tools or damaged tools with chipping.
- ◆ Take a special care to fire trouble. High temperature during machining may cause fire.

Please note that specification may change without advance notice.

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YAMAWA group for Overseas

YAMAWA International Co., Ltd.

ISO 9001 JQA-QMA14664

ISO 14001 JQA-EM3465