

2025

HOLE MAKING CATALOGUE  
SOLID CARBIDE DRILL

EN

# BEYOND THE MACHINING



# IMAGINATION AND FUNCTIONALITY IS HARMONIZED WITH MATERIALS AND TOOL COMES TRUE...

Accuracy, high-efficiency and cost effectiveness come together  
in **D-Tech** hole making program!

HOLE-MAKING



2025  
Hole Making  
Catalogue





# WELCOME TO THE WORLD OF **KARCAN** **CUTTING** **TOOLS...**

## Who we are?

Founded in 1996 in Eskişehir, Turkey to manufacture carbide cutting tools, we are the first and largest carbide cutting tool manufacturer and one of the top 130 R&D centers in our country. From this aspect, we are the first and the only R&D Center in the cutting tool industry of Turkey.

## What we manufacture?

- Carbide Endmills
- Carbide Drill Bits
- Carbide Reamers
- Form Endmills, Drill Bits, Reamers
- Form Carbide, PCD&CBN Inserts
- Micro Tools
- Combined Tools

## Which industries we serve?



General  
Engineering



Mold & Die



Aviation  
& Aerospace



Defence



Automotive



Medical



Energy



Rail  
Systems



WE ALSO BUILD  
THE FUTURE ALONG WITH TODAY

**BY AIMING FOR THE  
EXCELLENCE OF  
PRODUCTION**



**Dear Valued Customers and Business Partners,**

We, Karcan, as the biggest cutting tools manufacturer of Turkey with our modern machine and measuring park, R&D Center, number of qualified employees, sales figures and export share, owe you all a great debt of gratitude for being with us last 30 years and contributing to our success.

As the leading cutting tools manufacturer in Turkey, we closely follow all the latest developments in machining and materials engineering and bring the latest technologies to your hands. With our strong R&D department, well trained and competent process team, and competent technical sales team, we are your trusted solution partner in machinability of high-tech materials. We are not just a cutting tools manufacturer! We create value through our production improvement activities, technical applications and consultancy services and we work hard to help our valued customers gain a competitive edge in "cost per part" in global markets. In this respect, we aim to provide products and services that go "Beyond Machining." In 2025, we are launching our second factory which will be the first in our country to write its own unique recipes and will include the future of cutting tool coating technology is HiPIMS. In this field, we have been co-operating with our German business partners who lead the sector globally. We have seen significant increases in our cutting tool performances during widespread trials conducted over three years in our test center and in the customers' field. Furthermore, in our new factory, we are also implementing robotic manufacturing with 5G technologies, smart factory systems, and digital transformations. This will provide us capacity increase up to a 40%.

***We continue our R&D and innovation based growth strategy !***

We are expanding our R&D and Test center tenfold in our new factory. In parallel, we are equipping our machine-measuring park with the most advanced technologies in the world. We aim to increase the number of qualified employees working in R&D by 50% within two years.

Our product catalogue showcases the improvements we have achieved through the R&D work, which we carried out in collaboration with the national and international universities, research institutes, local and international customers and the Scientific and Technical Research Council of Turkiye (TUBITAK). we developed our Evo series to further increase the performance of our Eco-Plus series at 45-55 HRC hardness. We designed our 157 series with chip breaker form as an expansion of our 99 series. We breathe into rough milling with our 158 series. Our 222 series is poised to be the best in it's class with its chatter-free geometry. We challenge to hardness with our 203 Plus and 112 Plus series. As an expansion of our 111 Series, the 111U Plus series has been developed for more precise full slotting operations with tighter diameter and radius tolerances. 123 Plus, the new member of Alu-Mac family, is providing perfect chip evacuation with its excellent flute polish.

We have also developed a unique quality range in our micro tool and micro drill lines and succeeded in our R&D endeavours. We have included solutions that compete comfortably with well-known world brands on our website and in this catalog. We strongly recommend our newly added DX Series in the D-Tech hole-making family, specifically designed for long-chipping workpiece materials like ST type, ductile steels such as 1020, 1040, stainless steels, or titanium.

In addition, we have achieved remarkable results with our Meditan series, catering to medical and titanium processing clients. Our innovative design enables exceptionally high cutting speeds and extended tool life simultaneously. We continue to bring innovation to our customers in our country and 28 countries globally, and keep working with great passion in the belief that progress is a never ending process.

***Welcome again to the world of Karcan Cutting Tools***

Ümit GEZER  
Founder / General Manager

*Just Good*

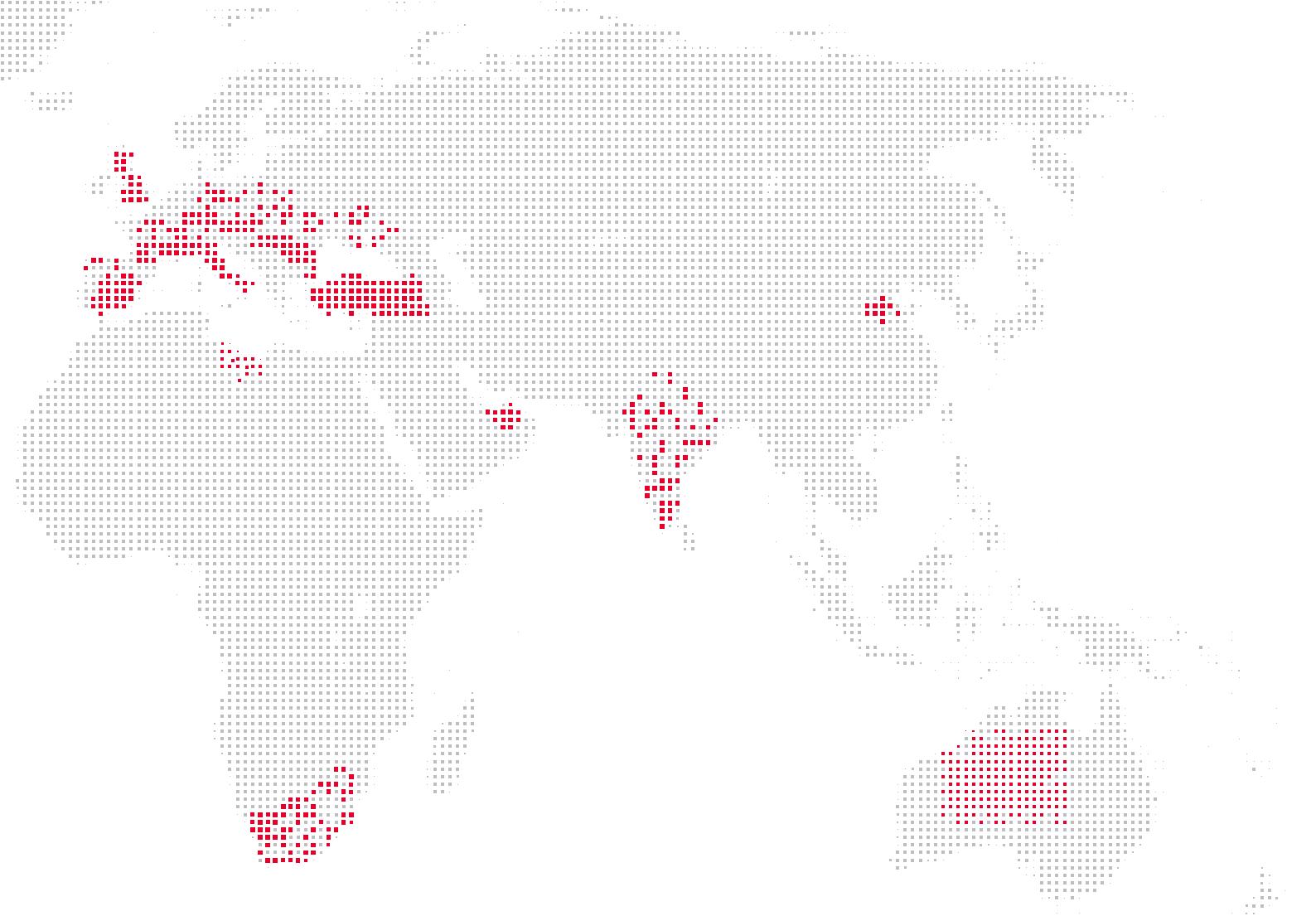




**KARCAN  
EXPORTS TO  
MORE THAN  
32 COUNTRIES  
ON  
4 CONTINENTS**

WE REACH YOU EASIER  
THANKS TO OUR GROWING  
EXPORT NETWORK AND  
TAKE A PART IN GLOBAL  
COMPETITION.

# GLOBAL VISION



# **EXPER**



To Expand  
Tool Life...



# FUTURE OF EDGE PREPARATION TECHNOLOGY

The EX-PER technology is developed as a result of exhaustive Karcan R&D studies, ensuring higher performance and improved tool life.





# WITH THE PARTNERSHIP OF KARCAN, TUBITAK, UNIVERSITY AND INDUSTRY

**We developed D-Tech technology that makes a big difference in drilling operations.**

We keep providing industrial and innovative solutions with our D-Tech new generation drills;

- Optimal raw material selection for drilling operations, cooperation with globally verified suppliers in this field,
- Single solution for wide range of workpiece materials with its original geometry developed by Karcan R&D,
- Increased tool life by Exper edge preparation technology unique to Karcan,
- Globally verified coating optimisation,
- Product development , stress and life tests in Karcan Test Center
- In order to meet the exact requirements of market, we offer the best solution by collecting our academic studies and extensive field tests.







## WHY KARCAN?

- A highly skilled and trained R&D, process, application, and technical sales team.
- Benefit from our experience and know-how in various areas; we provide flexible solutions.
- We are price/performance-oriented and provide cost-effective solutions with a sense of constant improvement.
- Capable of competing globally.
- Our well-equipped and modern machine park ensures precision and performance at the highest level.
- A strong franchise and sales network, available 24/7.
- 100% traceability and repeatable processes ensure sustainable quality.
- Karcan Academy and our own test center enable you to understand your tools in detail and choose the most suitable one for your needs.
- Effective stock inventory level.
- Own know-how with qualified labor force and intellectual capitals. Unique.
- Unlimited training opportunities for our customers.
- Specialized in crisis management with emergency action plans, enabling quick responses.
- We closely follow the recent developments in the sector and constantly keep up with the advancing material and machining technology. We are open to innovation and improvement.
- 100% customer-oriented.
- Working with the globally verified suppliers such as machine, equipment, raw material, coating, diamond grinding wheels, filtration and coolant, which are directly related to cutting tool quality.







## SELECT THE BEST TOOL

Raw material, geometry, edge preparation and coating in manufacturing cutting tools have a direct effect on tool quality. It is highly recommended that our customers take account of the guidances at our catalogue in order to get the optimum efficiency on our high performance series which are developed after optimising all the parameters. You can also select the suitable tool according to the machinability of the materials or workpieces and operation method by reaching our sales representatives or application team.

Following details are very important in terms of elaboration of suggestions for machining within the shortest time,

1. Workpiece to be machined? (Turbine blade, injector, engine block, brake disc etc.)
2. Material to be machined? (Inconel, titanium, stainless Steel, Steel, Cast Iron iron, in accordance with which of the ISO or DIN standards?)
3. Operation method? ("Side milling" "Shoulder milling" "Slotting" "Ramping" "Plunging")
4. Material Hardness? Heat-treated?
5. Type of cooling? (Oil, emulsion, air, internal or external coolant, pressure?)
6. Type of Holder? (Shrink, hydrolic, "Collet" "HSK" "BT" "SK" Etc.)
7. Type and power of spindle?
8. Machining method? (Vertical-Horizontal or 5-Axis)
9. Fixing type of worpiece
10. Current tool and parameters in use, if available
11. The problems encountered with the current tool or tool life, if available.

## YOU ALREADY HAVE THE ADVANTAGE!

- High performance machining
- Considerable cost reduction per workpiece costs by regarding overheads and depreciation
- Our tools ensure the best possible precision and quality on the workpiece machined.
- Optimal loading for your machines
- Longer tool life and holder life
- Reduced the overall cutting tool costs
- Improved utilisation of your capacity. You don't have to rush in a new machine investment.

Tools, multi-functionally optimised and standardised, marked with (\*) at our catalogue are always available in stock.

Get to know our tools in detail, please watch the videos and animations. You can easily find these documents in our web site, YouTube, Instagram and Linked-in accounts.



	Model	Internal Coolant	Shank	Coating	Steel	Stainless Steel	Hardened Steel	Hardened Steel	Cast Iron	Non Ferrous Material	HRSA	Titanium	Page
K3DF		-		FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	24
K4DF		-		FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	28
K5DF		-		FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	30
M3DF				FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	34
M5DF				FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	38
M8DF				FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	42
M12DF				FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	44
M16DF				FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	46
M20DF				FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	48
M25DF				FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	50
KY3DF		-		FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	●	52
Y5DF				FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	○	54
KDRF		-		FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	●	56
KNS		-		FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	●	58
KNZ		-		FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	●	60
PMS		-		FORM HA DIN 6535 +Blank	●	○	○	○	●	○	○	●	62
MCS		-		FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	●	64
K3DX		-		FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	●	66
K5DX		-		FORM HA DIN 6535 +TiAlN	●	○	○	○	●	○	○	●	68



## Quick Selection Guide

HOLE  
MAKING

	Model	Internal Coolant	Shank	Coating	Steel	Stainless Steel	Hardened Steel	Hardened Steel	Cast Iron	Non Ferrous Material	HRSA	Titanium	Page
M3DX				+TiAlN	●	●	○	○	○	○	●	●	72
M5DX				+TiAlN	●	●	○	○	○	○	●	●	74
TX8DF				+TiAlN	●	○	○	○	●	○	○	○	76
KTX5D				+Blank	○	○	○	○	○	●	○	○	78
TX8D				+Blank	○	○	○	○	○	●	○	○	80
MEDITAN		-		+TiAlN	○	●	○	○	○	○	●	●	82



KARCAN  
cutting tools

Columbia



# HOLE-MAKING DRILL CONFIGURATION TABLE

YOU CAN READ ALL THE  
TECHNICAL DETAILS OF A TOOL  
THAT YOU SELECT WITH JUST  
ONE SMART CODE!

Our new configuration is now both easier and more practical.

K3DF . 2 . 0300 . 0570 . A0138 . 0110 . 0280 . 0140 . 05 . 506 . K1C03.01	SERIAL NAME	DIAMETER OF TOOL	POINT ANGLE	NECK DIAMETER	FIRST CORE LENGTH	BATCH NO
		0300 = 3.0 mm 0450 = 4.5 mm	A=ANGLE 0138=138 mm	0280 = 2.8 mm. 0300 = 3.0 mm 0450 = 4.5 mm	05 = 5.0 mm 06 = 6.0 mm 12 = 12.00 mm	
	NUMBER OF FLUTES	OVERALL LENGTH	FLUTE	NECK RELIEF LENGTH	SHANK TYPE AND DIAMETER	
		0570 = 57.0 mm 1100 = 110.0 mm 1658 = 16.58 mm	0110 = 11.0 mm 0255 = 25.5 mm	0140 = 14.0 mm 0255 = 25.5 mm	S= CYLINDRICAL W=WELDON 06 = 6.0 mm 12 = 12 mm	

ONE ORDER NO:45100 (EXAMPLE)

**2025**

Hole Making Catalogue

# D-TECH Hole-Making

- **Optimal raw materials** especially produced for drilling operations
- **Original geometry** fits for wide range of workpiece materials
- **Edge preparation technology** that increases performance and tool life
- Globally verified **coating optimisations**

Let us offer high performance in hole-making by our new generation drills.





General  
Engineering

Mold &amp; Die



Automotive



Defence

Rail  
Systems

## D-Tech High Performance New Product

Thanks to its  
brand-new geometry  
and coating up to

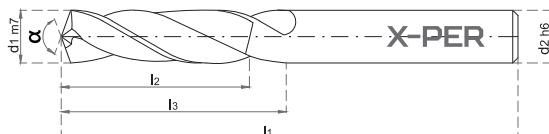
% **50** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **40** better hole surface  
roughness in comparison  
with equivalents

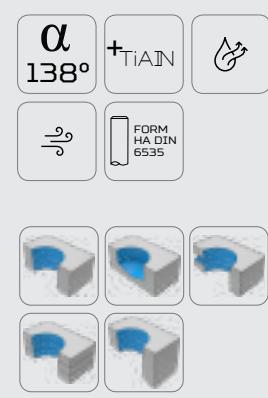
Optimal raw material  
selection for drilling  
operations to damp  
vibration and up to

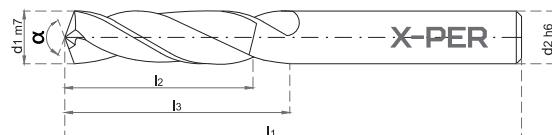
% **20** more precision hole  
diameter in comparison  
with equivalents



Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
*	<b>45100</b>	K3DF.2.0300.0620.A0138.0180.0300.0200.00.S06A1A05.01	3	6	62	18	20
*	<b>45102</b>	K3DF.2.0310.0620.A0138.0180.0310.0200.00.S06A1A05.01	3,1	6	62	18	20
*	<b>45104</b>	K3DF.2.0320.0620.A0138.0180.0320.0200.00.S06A1A05.01	3,2	6	62	18	20
*	<b>45106</b>	K3DF.2.0330.0620.A0138.0180.0330.0200.00.S06A1A05.01	3,3	6	62	18	20
*	<b>45108</b>	K3DF.2.0340.0620.A0138.0180.0340.0200.00.S06A1A05.01	3,4	6	62	18	20
*	<b>45110</b>	K3DF.2.0350.0620.A0138.0180.0350.0200.00.S06A1A05.01	3,5	6	62	18	20
*	<b>45112</b>	K3DF.2.0360.0620.A0138.0180.0360.0200.00.S06A1A05.01	3,6	6	62	18	20
*	<b>45114</b>	K3DF.2.0370.0620.A0138.0180.0370.0200.00.S06A1A05.01	3,7	6	62	18	20
*	<b>45116</b>	K3DF.2.0380.0660.A0138.0220.0380.0240.00.S06A1A05.01	3,8	6	66	22	24
*	<b>45118</b>	K3DF.2.0390.0660.A0138.0220.0390.0240.00.S06A1A05.01	3,9	6	66	22	24
*	<b>45120</b>	K3DF.2.0400.0660.A0138.0220.0400.0240.00.S06A1A05.01	4	6	66	22	24
*	<b>45122</b>	K3DF.2.0410.0660.A0138.0220.0410.0240.00.S06A1A05.01	4,1	6	66	22	24
*	<b>45124</b>	K3DF.2.0420.0660.A0138.0220.0420.0240.00.S06A1A05.01	4,2	6	66	22	24
*	<b>45126</b>	K3DF.2.0425.0660.A0138.0230.0425.0250.00.S06A1B02.01	4,25	6	66	23	25
*	<b>45128</b>	K3DF.2.0430.0660.A0138.0220.0430.0240.00.S06A1A05.01	4,3	6	66	22	24
*	<b>45130</b>	K3DF.2.0440.0660.A0138.0220.0440.0240.00.S06A1A05.01	4,4	6	66	22	24
*	<b>45132</b>	K3DF.2.0450.0660.A0138.0220.0450.0240.00.S06A1A05.01	4,5	6	66	22	24
*	<b>45134</b>	K3DF.2.0460.0660.A0138.0220.0460.0240.00.S06A1A05.01	4,6	6	66	22	24
*	<b>45136</b>	K3DF.2.0470.0660.A0138.0220.0470.0240.00.S06A1A05.01	4,7	6	66	22	24
*	<b>45138</b>	K3DF.2.0480.0660.A0138.0260.0480.0280.00.S06A1A05.01	4,8	6	66	26	28
*	<b>45140</b>	K3DF.2.0480.0660.A0138.0260.0480.0280.00.S06A1B02.01	4,8	6	66	26	28
*	<b>45142</b>	K3DF.2.0490.0660.A0138.0260.0490.0280.00.S06A1A05.01	4,9	6	66	26	28
*	<b>45144</b>	K3DF.2.0500.0660.A0138.0260.0500.0280.00.S06A1A05.01	5	6	66	26	28
*	<b>45146</b>	K3DF.2.0510.0660.A0138.0260.0510.0280.00.S06A1A05.01	5,1	6	66	26	28
*	<b>45148</b>	K3DF.2.0520.0660.A0138.0260.0520.0280.00.S06A1A05.01	5,2	6	66	26	28
*	<b>45150</b>	K3DF.2.0530.0660.A0138.0260.0530.0280.00.S06A1A05.01	5,3	6	66	26	28
*	<b>45152</b>	K3DF.2.0540.0660.A0138.0260.0540.0280.00.S06A1A05.01	5,4	6	66	26	28
*	<b>45154</b>	K3DF.2.0550.0660.A0138.0260.0550.0280.00.S06A1A05.01	5,5	6	66	26	28
*	<b>45156</b>	K3DF.2.0560.0660.A0138.0260.0560.0280.00.S06A1A05.01	5,6	6	66	26	28
*	<b>45158</b>	K3DF.2.0570.0660.A0138.0260.0570.0280.00.S06A1A05.01	5,7	6	66	26	28
*	<b>45160</b>	K3DF.2.0580.0660.A0138.0260.0580.0280.00.S06A1A05.01	5,8	6	66	26	28
*	<b>45162</b>	K3DF.2.0590.0660.A0138.0260.0590.0280.00.S06A1A05.01	5,9	6	66	26	28
*	<b>45164</b>	K3DF.2.0600.0660.A0138.0260.0600.0280.00.S06A1A05.01	6	6	66	26	28
*	<b>45166</b>	K3DF.2.0610.0790.A0138.0320.0610.0340.00.S08A1A05.01	6,1	8	79	32	34
*	<b>45168</b>	K3DF.2.0620.0790.A0138.0320.0620.0340.00.S08A1A05.01	6,2	8	79	32	34
*	<b>45170</b>	K3DF.2.0630.0790.A0138.0320.0630.0340.00.S08A1A05.01	6,3	8	79	32	34
*	<b>45172</b>	K3DF.2.0640.0790.A0138.0320.0640.0340.00.S08A1A05.01	6,4	8	79	32	34
*	<b>45174</b>	K3DF.2.0650.0790.A0138.0320.0650.0340.00.S08A1A05.01	6,5	8	79	32	34
*	<b>45176</b>	K3DF.2.0650.0790.A0140.0320.0650.0350.00.S08A1B02.01	6,5	8	79	32	35
*	<b>45178</b>	K3DF.2.0660.0790.A0138.0320.0660.0340.00.S08A1A05.01	6,6	8	79	32	34
*	<b>45180</b>	K3DF.2.0670.0790.A0138.0320.0670.0340.00.S08A1A05.01	6,7	8	79	32	34
*	<b>45182</b>	K3DF.2.0680.0790.A0138.0320.0680.0340.00.S08A1A05.01	6,8	8	79	32	34
*	<b>45184</b>	K3DF.2.0690.0790.A0138.0320.0690.0340.00.S08A1A05.01	6,9	8	79	32	34
*	<b>45186</b>	K3DF.2.0700.0790.A0138.0320.0700.0340.00.S08A1A05.01	7	8	79	32	34
*	<b>45188</b>	K3DF.2.0710.0790.A0138.0380.0710.0410.00.S08A1A05.01	7,1	8	79	38	41
*	<b>45190</b>	K3DF.2.0720.0790.A0138.0380.0720.0410.00.S08A1A05.01	7,2	8	79	38	41
*	<b>45192</b>	K3DF.2.0730.0790.A0138.0380.0730.0410.00.S08A1A05.01	7,3	8	79	38	41
*	<b>45194</b>	K3DF.2.0740.0790.A0138.0380.0740.0410.00.S08A1A05.01	7,4	8	79	38	41
*	<b>45196</b>	K3DF.2.0750.0790.A0138.0380.0750.0410.00.S08A1A05.01	7,5	8	79	38	41
*	<b>45198</b>	K3DF.2.0760.0790.A0138.0380.0760.0410.00.S08A1A05.01	7,6	8	79	38	41

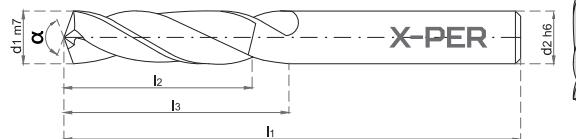
\*Marked products are available  
from stock to deliver fast.





## K3DF - 3D Drill

Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
*	<b>45200</b>	K3DF.2.0770.0790.A0138.0380.0770.0410.00.508A1A05.01	7,7	8	79	38	41
*	<b>45202</b>	K3DF.2.0780.0790.A0138.0380.0780.0410.00.508A1A05.01	7,8	8	79	38	41
*	<b>45204</b>	K3DF.2.0790.0790.A0138.0380.0790.0410.00.508A1A05.01	7,9	8	79	38	41
*	<b>45206</b>	K3DF.2.0800.0790.A0138.0380.0800.0410.00.508A1A05.01	8	8	79	38	41
*	<b>45208</b>	K3DF.2.0810.0890.A0138.0430.0810.0470.00.510A1A05.01	8,1	10	89	43	47
*	<b>45210</b>	K3DF.2.0820.0890.A0138.0430.0820.0470.00.510A1A05.01	8,2	10	89	43	47
*	<b>45212</b>	K3DF.2.0830.0890.A0138.0430.0830.0470.00.510A1A05.01	8,3	10	89	43	47
*	<b>45214</b>	K3DF.2.0840.0890.A0138.0430.0840.0470.00.510A1A05.01	8,4	10	89	43	47
*	<b>45216</b>	K3DF.2.0850.0890.A0138.0430.0850.0470.00.510A1A05.01	8,5	10	89	43	47
*	<b>45218</b>	K3DF.2.0860.0890.A0138.0430.0860.0470.00.510A1A05.01	8,6	10	89	43	47
*	<b>45220</b>	K3DF.2.0870.0890.A0138.0430.0870.0470.00.510A1A05.01	8,7	10	89	43	47
*	<b>45222</b>	K3DF.2.0880.0890.A0138.0430.0880.0470.00.510A1A05.01	8,8	10	89	43	47
*	<b>45224</b>	K3DF.2.0890.0890.A0138.0430.0890.0470.00.510A1A05.01	8,9	10	89	43	47
*	<b>45226</b>	K3DF.2.0900.0890.A0138.0430.0900.0470.00.510A1A05.01	9	10	89	43	47
*	<b>45228</b>	K3DF.2.0910.0890.A0138.0430.0910.0470.00.510A1A05.01	9,1	10	89	43	47
	<b>45230</b>	K3DF.2.0920.0890.A0138.0430.0920.0470.00.510A1A05.01	9,2	10	89	43	47
*	<b>45232</b>	K3DF.2.0925.0890.A0138.0430.0925.0470.00.510A1A05.01	9,25	10	89	43	47
*	<b>45234</b>	K3DF.2.0930.0890.A0138.0430.0930.0470.00.510A1A05.01	9,3	10	89	43	47
*	<b>45236</b>	K3DF.2.0940.0890.A0138.0430.0940.0470.00.510A1A05.01	9,4	10	89	43	47
*	<b>45238</b>	K3DF.2.0950.0890.A0138.0430.0950.0470.00.510A1A05.01	9,5	10	89	43	47
*	<b>45240</b>	K3DF.2.0960.0890.A0138.0430.0960.0470.00.510A1A05.01	9,6	10	89	43	47
*	<b>45242</b>	K3DF.2.0970.0890.A0138.0430.0970.0470.00.510A1A05.01	9,7	10	89	43	47
*	<b>45244</b>	K3DF.2.0980.0890.A0138.0430.0980.0470.00.510A1A05.01	9,8	10	89	43	47
*	<b>45246</b>	K3DF.2.0990.0890.A0138.0430.0990.0470.00.510A1A05.01	9,9	10	89	43	47
*	<b>45248</b>	K3DF.2.1000.0890.A0138.0430.1000.0470.00.510A1A05.01	10	10	89	43	47
*	<b>45250</b>	K3DF.2.1010.1020.A0138.0510.1010.0550.00.S12A1A05.01	10,1	12	102	51	55
*	<b>45252</b>	K3DF.2.1020.1020.A0138.0510.1020.0550.00.S12A1A05.01	10,2	12	102	51	55
*	<b>45254</b>	K3DF.2.1030.1020.A0138.0510.1030.0550.00.S12A1A05.01	10,3	12	102	51	55
*	<b>45256</b>	K3DF.2.1040.1020.A0138.0510.1040.0550.00.S12A1A05.01	10,4	12	102	51	55
*	<b>45258</b>	K3DF.2.1050.1020.A0138.0510.1050.0550.00.S12A1A05.01	10,5	12	102	51	55
*	<b>45260</b>	K3DF.2.1060.1020.A0138.0510.1060.0550.00.S12A1A05.01	10,6	12	102	51	55
*	<b>45262</b>	K3DF.2.1070.1020.A0138.0510.1070.0550.00.S12A1A05.01	10,7	12	102	51	55
*	<b>45264</b>	K3DF.2.1080.1020.A0138.0510.1080.0550.00.S12A1A05.01	10,8	12	102	51	55
*	<b>45266</b>	K3DF.2.1090.1020.A0138.0510.1090.0550.00.S12A1A05.01	10,9	12	102	51	55
*	<b>45268</b>	K3DF.2.1100.1020.A0138.0510.1100.0550.00.S12A1A05.01	11	12	102	51	55
*	<b>45270</b>	K3DF.2.1110.1020.A0138.0510.1110.0550.00.S12A1A05.01	11,1	12	102	51	55
*	<b>45272</b>	K3DF.2.1120.1020.A0138.0510.1120.0550.00.S12A1A05.01	11,2	12	102	51	55
*	<b>45274</b>	K3DF.2.1130.1020.A0138.0510.1130.0550.00.S12A1A05.01	11,3	12	102	51	55
*	<b>45276</b>	K3DF.2.1140.1020.A0138.0510.1140.0550.00.S12A1A05.01	11,4	12	102	51	55
*	<b>45278</b>	K3DF.2.1150.1020.A0138.0510.1150.0550.00.S12A1A05.01	11,5	12	102	51	55
*	<b>45280</b>	K3DF.2.1160.1020.A0138.0510.1160.0550.00.S12A1A05.01	11,6	12	102	51	55
*	<b>45282</b>	K3DF.2.1170.1020.A0138.0510.1170.0550.00.S12A1A05.01	11,7	12	102	51	55
*	<b>45284</b>	K3DF.2.1180.1020.A0138.0510.1180.0550.00.S12A1A05.01	11,8	12	102	51	55
*	<b>45286</b>	K3DF.2.1190.1020.A0138.0510.1190.0550.00.S12A1A05.01	11,9	12	102	51	55
*	<b>45288</b>	K3DF.2.1200.1020.A0138.0510.1200.0550.00.S12A1A05.01	12	12	102	51	55
	<b>45290</b>	K3DF.2.1235.1100.A0140.0600.1235.0630.00.S14A1B03.01	12,35	14	110	60	63
*	<b>45292</b>	K3DF.2.1250.1070.A0138.0530.1250.0600.00.S14A1A05.01	12,5	14	107	53	60
	<b>45294</b>	K3DF.2.1270.1070.A0138.0530.1270.0600.00.S14A1A05.01	12,7	14	107	53	60
	<b>45296</b>	K3DF.2.1280.1070.A0138.0530.1280.0600.00.S14A1A05.01	12,8	14	107	53	60
	<b>45298</b>	K3DF.2.1290.1070.A0138.0530.1280.0600.00.S14A1A05.01	12,9	14	107	53	60
*	<b>45300</b>	K3DF.2.1300.1070.A0138.0530.1300.0600.00.S14A1A05.01	13	14	107	53	60



## K3DF - 3D Drill

Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
	45302	K3DF.2.1310.1070.A0138.0530.1310.0600.00.S14A1A05.01	13,1	14	107	53	60
	45304	K3DF.2.1330.1070.A0138.0530.1320.0600.00.S14A1A05.01	13,3	14	107	53	60
*	45306	K3DF.2.1350.1070.A0138.0530.1350.0600.00.S14A1A05.01	13,5	14	107	53	60
	45308	K3DF.2.1370.1070.A0138.0530.1370.0600.00.S14A1A05.01	13,7	14	107	53	60
	45310	K3DF.2.1380.1070.A0138.0530.1380.0600.00.S14A1A05.01	13,8	14	107	53	60
	45312	K3DF.2.1395.1100.A0140.0580.1395.0630.00.S14A1B03.01	13,95	14	110	58	63
*	45314	K3DF.2.1400.1070.A0138.0530.1400.0600.00.S14A1A05.01	14	14	107	53	60
	45316	K3DF.2.1407.1100.A0140.0580.1407.0630.00.S16B1B03.01	14,07	16	110	58	63
	45318	K3DF.2.1420.1150.A0138.0580.1420.0650.00.S16A1A05.01	14,2	16	115	58	65
*	45320	K3DF.2.1450.1150.A0138.0580.1450.0650.00.S16A1A05.01	14,5	16	115	58	65
	45322	K3DF.2.1470.1150.A0138.0580.1470.0650.00.S16A1A05.01	14,7	16	115	58	65
	45324	K3DF.2.1480.1150.A0138.0580.1480.0650.00.S16A1A05.01	14,8	16	115	58	65
	45326	K3DF.2.1500.1150.A0138.0580.1500.0650.00.S16A1A05.01	15	16	115	58	65
	45328	K3DF.2.1525.1150.A0138.0580.1525.0650.00.S16A1A05.01	15,25	16	115	58	65
	45330	K3DF.2.1530.1150.A0138.0580.1530.0650.00.S16A1A05.01	15,3	16	115	58	65
	45332	K3DF.2.1550.1150.A0138.0580.1550.0650.00.S16A1A05.01	15,5	16	115	58	65
	45334	K3DF.2.1570.1150.A0138.0580.1570.0650.00.S16A1A05.01	15,7	16	115	58	65
	45336	K3DF.2.1580.1150.A0138.0580.1580.0650.00.S16A1A05.01	15,8	16	115	58	65
	45338	K3DF.2.1600.1150.A0138.0580.1600.0650.00.S16A1A05.01	16	16	115	58	65
*	45340	K3DF.2.1650.1230.A0138.0660.1650.0730.00.S18A1A05.01	16,5	18	123	66	73
	45342	K3DF.2.1680.1230.A0138.0660.1680.0730.00.S18A1A05.01	16,8	18	123	66	73
	45344	K3DF.2.1700.1230.A0138.0660.1700.0730.00.S18A1A05.01	17	18	123	66	73
	45346	K3DF.2.1750.1230.A0138.0660.1750.0730.00.S18A1A05.01	17,5	18	123	66	73
	45348	K3DF.2.1780.1230.A0138.0660.1780.0730.00.S18A1A05.01	17,8	18	123	66	73
	45350	K3DF.2.1800.1230.A0138.0660.1800.0730.00.S18A1A05.01	18	18	123	66	73
	45352	K3DF.2.1850.1310.A0138.0720.1850.0790.00.S20A1A05.01	18,5	20	131	72	79
	45354	K3DF.2.1880.1310.A0138.0720.1880.0790.00.S20A1A05.01	18,8	20	131	72	79
	45356	K3DF.2.1900.1310.A0138.0720.1900.0790.00.S20A1A05.01	19	20	131	72	79
	45358	K3DF.2.1950.1310.A0138.0720.1950.0790.00.S20A1A05.01	19,5	20	131	72	79
	45360	K3DF.2.1980.1310.A0138.0720.1980.0790.00.S20A1A05.01	19,8	20	131	72	79
	45362	K3DF.2.2000.1310.A0138.0720.2000.0790.00.S20A1A05.01	20	20	131	72	79

Cutting Parameters Vc(m/min)			Feed Per Revolution (mm/rev)		
Non-Alloy Steel	110-125	●	Ø		
Steel	100-120	●	3	0,03	
Tempered Steel	100-120	●	4	0,045	
Cold-Work Tool Steel	70-90	●	5	0,85	
Hot-Work Tool Steel	70-90	●	6	0,17	
AISI 304 - 416 - 420	55-65	●	7	0,19	
AISI 316 - 440	55-65	●	8	0,21	
17-4 PH 15-5 PH	50-55	●	9	0,23	
Chrome-Cobalt Alloy	50-55	●	10	0,25	
Duplex F51	40-50	●	12	0,27	
Super Duplex F55	40-50	●	14	0,29	
Grey Cast Iron	170-200	●	16	0,31	
Alloy Cast Iron	130-150	●	18	0,33	
Precision Cast	110-130	●	20	0,35	
Titanium	55-65	●			
Titanium Alloys	55-65	●			
≤ 54 HRc	60-80	●			
> 54 HRc	40-55	●			

HOLE MAKING

# K4DF

4D Drill



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance New Product

Thanks to its  
brand-new geometry  
and coating up to

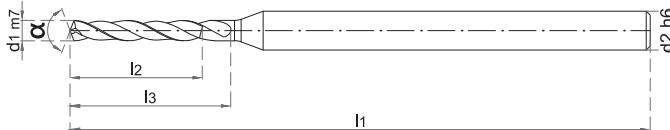
% **50** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **40** better hole surface  
roughness in comparison  
with equivalents

Optimal raw material  
selection for drilling  
operations to damp  
vibration and up to

% **20** more precision hole  
diameter in comparison  
with equivalents



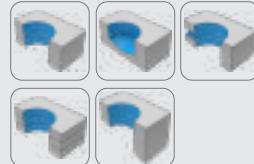
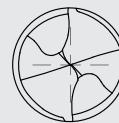
**K4DF**  
4D Drill

Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
*	<b>46100</b>	K4DF.2.0100.0500.A0138.0060.0100.0075.00.S03A1A06.01	1	3	50	6	7,5
*	<b>46102</b>	K4DF.2.0110.0500.A0138.0070.0110.0085.00.S03A1A06.01	1,1	3	50	7	8,5
*	<b>46104</b>	K4DF.2.0120.0500.A0138.0070.0120.0085.00.S03A1A06.01	1,2	3	50	7	8,5
*	<b>46106</b>	K4DF.2.0130.0500.A0138.0080.0130.0095.00.S03A1A06.01	1,3	3	50	8	9,5
*	<b>46108</b>	K4DF.2.0140.0500.A0138.0090.0140.0105.00.S03A1A06.01	1,4	3	50	9	10,5
*	<b>46110</b>	K4DF.2.0150.0500.A0138.0090.0150.0105.00.S03A1A06.01	1,5	3	50	9	10,5
*	<b>46112</b>	K4DF.2.0160.0500.A0138.0100.0160.0115.00.S03A1A06.01	1,6	3	50	10	11,5
*	<b>46114</b>	K4DF.2.0170.0500.A0138.0100.0170.0115.00.S03A1A06.01	1,7	3	50	10	11,5
*	<b>46116</b>	K4DF.2.0180.0500.A0138.0100.0180.0115.00.S03A1A06.01	1,8	3	50	10	11,5
*	<b>46118</b>	K4DF.2.0190.0500.A0138.0120.0190.0135.00.S03A1A06.01	1,9	3	50	12	13,5
*	<b>46120</b>	K4DF.2.0200.0600.A0138.0120.0200.0150.00.S04A1A06.01	2	4	60	12	15
*	<b>46122</b>	K4DF.2.0210.0600.A0142.0120.0210.0160.00.S03B1B04.01	2,1	3	60	12	16
*	<b>46124</b>	K4DF.2.0210.0600.A0138.0140.0210.0160.00.S04A1A06.01	2,1	4	60	14	16
*	<b>46126</b>	K4DF.2.0220.0600.A0138.0140.0220.0160.00.S04A1A06.01	2,2	4	60	14	16
*	<b>46128</b>	K4DF.2.0230.0600.A0138.0140.0230.0160.00.S04A1A06.01	2,3	4	60	14	16
*	<b>46130</b>	K4DF.2.0240.0600.A0138.0140.0240.0160.00.S04A1A06.01	2,4	4	60	14	16
*	<b>46132</b>	K4DF.2.0250.0600.A0138.0160.0250.0180.00.S04A1A06.01	2,5	4	60	16	18
*	<b>46134</b>	K4DF.2.0260.0600.A0138.0160.0260.0180.00.S04A1A06.01	2,6	4	60	16	18
*	<b>46136</b>	K4DF.2.0270.0600.A0138.0160.0270.0180.00.S04A1A06.01	2,7	4	60	16	18
*	<b>46138</b>	K4DF.2.0280.0600.A0138.0170.0280.0190.00.S04A1A06.01	2,8	4	60	17	19
*	<b>46140</b>	K4DF.2.0290.0600.A0138.0180.0290.0200.00.S04A1A06.01	2,9	4	60	18	20

## Cutting Parameters Vc(m/min)

## Feed Per Revolution (mm/rev)

Non-Alloy Steel	80-110	●	0	
Steel	70-100	●	1	0,025
Tempered Steel	70-100	●	1,5	0,05
Cold-Work Tool Steel	60-80	●	2	0,07
Hot-Work Tool Steel	60-80	○	2,5	0,095
AISI 304 - 416 - 420	55-65	○	2,9	0,12
AISI 316 - 440	55-65	○		
17-4 PH 15-5 PH	50-55	○		
Chrome-Cobalt Alloy	50-55	○		
Duplex F51	40-50	○		
Super Duplex F55	40-50	○		
Grey Cast Iron	150-180	●		
Alloy Cast Iron	100-130	●		
Precision Cast	80-115	●		
Titanium	55-65	○		
Titanium Alloys	55-65	○		
HRSA	20-30	○		
≤ 54 HRc	60-80	○		
> 54 HRc	40-55	○		



● Recommended ○ Acceptable ○ Not Recommended

\*Marked products are available  
from stock to deliver fast.

General  
Engineering

Mold &amp; Die



Automotive



Defence

Rail  
Systems

## D-Tech High Performance New Product



Thanks to its  
brand-new geometry  
and coating up to

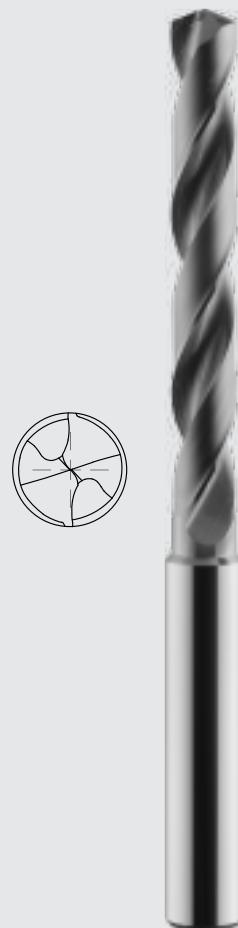
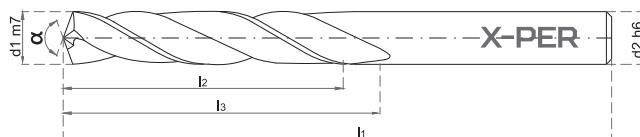
% **50** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **40** better hole surface  
roughness in comparison  
with equivalents

Optimal raw material  
selection for drilling  
operations to damp  
vibration and up to

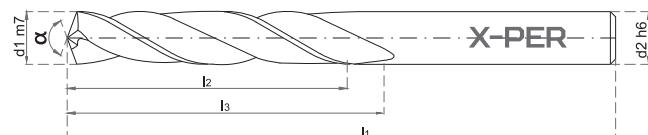
% **20** more precision hole  
diameter in comparison  
with equivalents



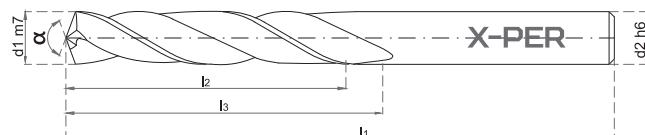
Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
	<b>47100</b>	K5DF.2.0220.0500.A0138.0120.0220.0150.00.S04A1A05.01	2,2	4	50	12	<b>15</b>
*	<b>47102</b>	K5DF.2.0300.0660.A0138.0270.0300.0280.00.S06A1A05.01	3	6	66	27	<b>28</b>
	<b>47104</b>	K5DF.2.0310.0660.A0138.0270.0310.0280.00.S06A1A05.01	3,1	6	66	27	<b>28</b>
	<b>47106</b>	K5DF.2.0320.0660.A0138.0270.0320.0280.00.S06A1A05.01	3,2	6	66	27	<b>28</b>
*	<b>47108</b>	K5DF.2.0330.0660.A0138.0270.0330.0280.00.S06A1A05.01	3,3	6	66	27	<b>28</b>
*	<b>47110</b>	K5DF.2.0340.0660.A0138.0270.0340.0280.00.S06A1A05.01	3,4	6	66	27	<b>28</b>
*	<b>47112</b>	K5DF.2.0350.0660.A0138.0270.0350.0280.00.S06A1A05.01	3,5	6	66	27	<b>28</b>
*	<b>47114</b>	K5DF.2.0360.0660.A0138.0270.0360.0280.00.S06A1A05.01	3,6	6	66	27	<b>28</b>
*	<b>47116</b>	K5DF.2.0370.0660.A0138.0270.0370.0280.00.S06A1A05.01	3,7	6	66	27	<b>28</b>
*	<b>47118</b>	K5DF.2.0380.0740.A0138.0320.0380.0360.00.S06A1A05.01	3,8	6	74	32	<b>36</b>
*	<b>47120</b>	K5DF.2.0390.0740.A0138.0320.0390.0360.00.S06A1A05.01	3,9	6	74	32	<b>36</b>
*	<b>47122</b>	K5DF.2.0400.0740.A0120.0320.0400.0450.00.S04A1B03.01	4	4	74	32	<b>45</b>
*	<b>47124</b>	K5DF.2.0400.0740.A0138.0320.0400.0360.00.S06A1A05.01	4	6	74	32	<b>36</b>
*	<b>47126</b>	K5DF.2.0410.0740.A0138.0320.0410.0360.00.S06A1A05.01	4,1	6	74	32	<b>36</b>
*	<b>47128</b>	K5DF.2.0420.0740.A0138.0320.0420.0360.00.S06A1A05.01	4,2	6	74	32	<b>36</b>
	<b>47130</b>	K5DF.2.0430.0740.A0138.0320.0430.0360.00.S06A1A05.01	4,3	6	74	32	<b>36</b>
*	<b>47132</b>	K5DF.2.0440.0740.A0138.0320.0440.0360.00.S06A1A05.01	4,4	6	74	32	<b>36</b>
*	<b>47134</b>	K5DF.2.0450.0740.A0138.0320.0450.0360.00.S06A1A05.01	4,5	6	74	32	<b>36</b>
*	<b>47136</b>	K5DF.2.0460.0740.A0138.0320.0460.0360.00.S06A1A05.01	4,6	6	74	32	<b>36</b>
*	<b>47138</b>	K5DF.2.0470.0740.A0138.0320.0470.0360.00.S06A1A05.01	4,7	6	74	32	<b>36</b>
*	<b>47140</b>	K5DF.2.0480.0820.A0138.0410.0480.0440.00.S06A1A05.01	4,8	6	82	41	<b>44</b>
*	<b>47142</b>	K5DF.2.0490.0820.A0138.0410.0490.0440.00.S06A1A05.01	4,9	6	82	41	<b>44</b>
*	<b>47144</b>	K5DF.2.0500.0820.A0138.0410.0500.0440.00.S06A1A05.01	5	6	82	41	<b>44</b>
*	<b>47146</b>	K5DF.2.0510.0820.A0138.0410.0510.0440.00.S06A1A05.01	5,1	6	82	41	<b>44</b>
*	<b>47148</b>	K5DF.2.0520.0820.A0138.0410.0520.0440.00.S06A1A05.01	5,2	6	82	41	<b>44</b>
*	<b>47150</b>	K5DF.2.0530.0820.A0138.0410.0530.0440.00.S06A1A05.01	5,3	6	82	41	<b>44</b>
*	<b>47152</b>	K5DF.2.0540.0820.A0138.0410.0540.0440.00.S06A1A05.01	5,4	6	82	41	<b>44</b>
*	<b>47154</b>	K5DF.2.0550.0820.A0138.0410.0550.0440.00.S06A1A05.01	5,5	6	82	41	<b>44</b>
*	<b>47156</b>	K5DF.2.0560.0820.A0138.0410.0560.0440.00.S06A1A05.01	5,6	6	82	41	<b>44</b>
*	<b>47158</b>	K5DF.2.0570.0820.A0138.0410.0570.0440.00.S06A1A05.01	5,7	6	82	41	<b>44</b>
*	<b>47160</b>	K5DF.2.0580.0820.A0138.0410.0580.0440.00.S06A1A05.01	5,8	6	82	41	<b>44</b>
*	<b>47162</b>	K5DF.2.0590.0820.A0138.0410.0590.0440.00.S06A1A05.01	5,9	6	82	41	<b>44</b>
*	<b>47164</b>	K5DF.2.0600.0820.A0138.0410.0600.0440.00.S06A1A05.01	6	6	82	41	<b>44</b>
*	<b>47166</b>	K5DF.2.0610.0910.A0138.0500.0610.0530.00.S08A1A05.01	6,1	8	91	50	<b>53</b>
*	<b>47168</b>	K5DF.2.0620.0910.A0138.0500.0620.0530.00.S08A1A05.01	6,2	8	91	50	<b>53</b>
*	<b>47170</b>	K5DF.2.0630.0910.A0138.0500.0630.0530.00.S08A1A05.01	6,3	8	91	50	<b>53</b>
*	<b>47172</b>	K5DF.2.0640.0910.A0138.0500.0640.0530.00.S08A1A05.01	6,4	8	91	50	<b>53</b>
*	<b>47174</b>	K5DF.2.0650.0910.A0138.0500.0650.0530.00.S08A1A05.01	6,5	8	91	50	<b>53</b>
*	<b>47176</b>	K5DF.2.0660.0910.A0138.0500.0660.0530.00.S08A1A05.01	6,6	8	91	50	<b>53</b>
*	<b>47178</b>	K5DF.2.0670.0910.A0138.0500.0670.0530.00.S08A1A05.01	6,7	8	91	50	<b>53</b>
*	<b>47180</b>	K5DF.2.0680.0910.A0138.0500.0680.0530.00.S08A1A05.01	6,8	8	91	50	<b>53</b>
*	<b>47182</b>	K5DF.2.0690.0910.A0138.0500.0690.0530.00.S08A1A05.01	6,9	8	91	50	<b>53</b>
*	<b>47184</b>	K5DF.2.0700.0910.A0138.0500.0700.0530.00.S08A1A05.01	7	8	91	50	<b>53</b>
*	<b>47186</b>	K5DF.2.0710.0910.A0138.0500.0710.0530.00.S08A1A05.01	7,1	8	91	50	<b>53</b>
*	<b>47188</b>	K5DF.2.0720.0910.A0138.0500.0720.0530.00.S08A1A05.01	7,2	8	91	50	<b>53</b>
*	<b>47190</b>	K5DF.2.0730.0910.A0138.0500.0730.0530.00.S08A1A05.01	7,3	8	91	50	<b>53</b>
*	<b>47192</b>	K5DF.2.0740.0910.A0138.0500.0740.0530.00.S08A1A05.01	7,4	8	91	50	<b>53</b>
*	<b>47194</b>	K5DF.2.0750.0910.A0138.0500.0750.0530.00.S08A1A05.01	7,5	8	91	50	<b>53</b>
*	<b>47196</b>	K5DF.2.0760.0910.A0138.0500.0760.0530.00.S08A1A05.01	7,6	8	91	50	<b>53</b>

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FORM  
HA DIN  
6535**K5DF - SD Drill**

Stock	Order No	Code	d1m7	d2h6	d3	l1	l2	l3
	<b>47198</b>	K5DF.2.0770.0910.A0138.0500.0770.0530.00.S08A1A05.01	7,7	8	7,7	91	50	53
*	<b>47200</b>	K5DF.2.0780.0910.A0138.0500.0780.0530.00.S08A1A05.01	7,8	8	7,8	91	50	53
*	<b>47202</b>	K5DF.2.0790.0910.A0138.0500.0790.0530.00.S08A1A05.01	7,9	8	7,9	91	50	53
*	<b>47204</b>	K5DF.2.0800.0910.A0138.0500.0800.0530.00.S08A1A05.01	8	8	8	91	50	53
*	<b>47206</b>	K5DF.2.0810.1030.A0138.0570.0810.0610.00.S10A1A05.01	8,1	10	8,1	103	57	61
*	<b>47208</b>	K5DF.2.0820.1030.A0138.0570.0820.0610.00.S10A1A05.01	8,2	10	8,2	103	57	61
*	<b>47210</b>	K5DF.2.0830.1030.A0138.0570.0830.0610.00.S10A1A05.01	8,3	10	8,3	103	57	61
*	<b>47212</b>	K5DF.2.0840.1030.A0138.0570.0840.0610.00.S10A1A05.01	8,4	10	8,4	103	57	61
*	<b>47214</b>	K5DF.2.0850.1030.A0138.0570.0850.0610.00.S10A1A05.01	8,5	10	8,5	103	57	61
*	<b>47216</b>	K5DF.2.0860.1030.A0138.0570.0860.0610.00.S10A1A05.01	8,6	10	8,6	103	57	61
*	<b>47218</b>	K5DF.2.0870.1030.A0138.0570.0870.0610.00.S10A1A05.01	8,7	10	8,7	103	57	61
*	<b>47220</b>	K5DF.2.0880.1030.A0138.0570.0880.0610.00.S10A1A05.01	8,8	10	8,8	103	57	61
*	<b>47222</b>	K5DF.2.0890.1030.A0138.0570.0890.0610.00.S10A1A05.01	8,9	10	8,9	103	57	61
*	<b>47224</b>	K5DF.2.0900.1030.A0138.0570.0900.0610.00.S10A1A05.01	9	10	9	103	57	61
*	<b>47226</b>	K5DF.2.0910.1030.A0138.0570.0910.0610.00.S10A1A05.01	9,1	10	9,1	103	57	61
*	<b>47228</b>	K5DF.2.0920.1030.A0138.0570.0920.0610.00.S10A1A05.01	9,2	10	9,2	103	57	61
*	<b>47230</b>	K5DF.2.0930.1030.A0138.0570.0930.0610.00.S10A1A05.01	9,3	10	9,3	103	57	61
*	<b>47232</b>	K5DF.2.0940.1030.A0138.0570.0940.0610.00.S10A1A05.01	9,4	10	9,4	103	57	61
*	<b>47234</b>	K5DF.2.0950.1030.A0138.0570.0950.0610.00.S10A1A05.01	9,5	10	9,5	103	57	61
*	<b>47236</b>	K5DF.2.0960.1030.A0138.0570.0960.0610.00.S10A1A05.01	9,6	10	9,6	103	57	61
*	<b>47238</b>	K5DF.2.0970.1030.A0138.0570.0970.0610.00.S10A1A05.01	9,7	10	9,7	103	57	61
*	<b>47240</b>	K5DF.2.0980.1030.A0138.0570.0980.0610.00.S10A1A05.01	9,8	10	9,8	103	57	61
*	<b>47242</b>	K5DF.2.0990.1030.A0138.0570.0990.0610.00.S10A1A05.01	9,9	10	9,9	103	57	61
*	<b>47244</b>	K5DF.2.1000.1030.A0138.0570.1000.0610.00.S10A1A05.01	10	10	10	103	57	61
	<b>47246</b>	K5DF.2.1010.1180.A0138.0670.1010.0710.00.S12A1A05.01	10,1	12	10,1	118	67	71
*	<b>47248</b>	K5DF.2.1020.1180.A0138.0670.1020.0710.00.S12A1A05.01	10,2	12	10,2	118	67	71
*	<b>47250</b>	K5DF.2.1030.1180.A0138.0670.1030.0710.00.S12A1A05.01	10,3	12	10,3	118	67	71
	<b>47252</b>	K5DF.2.1040.1180.A0138.0670.1040.0710.00.S12A1A05.01	10,4	12	10,4	118	67	71
*	<b>47254</b>	K5DF.2.1050.1180.A0138.0670.1050.0710.00.S12A1A05.01	10,5	12	10,5	118	67	71
*	<b>47256</b>	K5DF.2.1060.1180.A0138.0670.1060.0710.00.S12A1A05.01	10,6	12	10,6	118	67	71
	<b>47258</b>	K5DF.2.1070.1180.A0138.0670.1070.0710.00.S12A1A05.01	10,7	12	10,7	118	67	71
*	<b>47260</b>	K5DF.2.1080.1180.A0138.0670.1080.0710.00.S12A1A05.01	10,8	12	10,8	118	67	71
	<b>47262</b>	K5DF.2.1090.1180.A0138.0670.1090.0710.00.S12A1A05.01	10,9	12	10,9	118	67	71
*	<b>47264</b>	K5DF.2.1100.1180.A0138.0670.1100.0710.00.S12A1A05.01	11	12	11	118	67	71
	<b>47266</b>	K5DF.2.1110.1180.A0138.0670.1110.0710.00.S12A1A05.01	11,1	12	11,1	118	67	71
*	<b>47268</b>	K5DF.2.1120.1180.A0138.0670.1120.0710.00.S12A1A05.01	11,2	12	11,2	118	67	71
	<b>47270</b>	K5DF.2.1130.1180.A0138.0670.1130.0710.00.S12A1A05.01	11,3	12	11,3	118	67	71
	<b>47272</b>	K5DF.2.1140.1180.A0138.0670.1140.0710.00.S12A1A05.01	11,4	12	11,4	118	67	71
*	<b>47274</b>	K5DF.2.1150.1180.A0138.0670.1150.0710.00.S12A1A05.01	11,5	12	11,5	118	67	71
	<b>47276</b>	K5DF.2.1160.1180.A0138.0670.1160.0710.00.S12A1A05.01	11,6	12	11,6	118	67	71
	<b>47278</b>	K5DF.2.1170.1180.A0138.0670.1170.0710.00.S12A1A05.01	11,7	12	11,7	118	67	71
	<b>47280</b>	K5DF.2.1180.1180.A0138.0670.1180.0710.00.S12A1A05.01	11,8	12	11,8	118	67	71
	<b>47282</b>	K5DF.2.1190.1180.A0138.0670.1190.0710.00.S12A1A05.01	11,9	12	11,9	118	67	71
*	<b>47284</b>	K5DF.2.1200.1180.A0138.0670.1200.0710.00.S12A1A05.01	12	12	12	118	67	71
*	<b>47286</b>	K5DF.2.1250.1240.A0138.0700.1250.0770.00.S14A1A05.01	12,5	14	12,5	124	70	77
	<b>47288</b>	K5DF.2.1270.1240.A0138.0700.1270.0770.00.S14A1A05.01	12,7	14	12,7	124	70	77
*	<b>47290</b>	K5DF.2.1280.1240.A0138.0700.1280.0770.00.S14A1A05.01	12,8	14	12,8	124	70	77
	<b>47292</b>	K5DF.2.1290.1240.A0138.0700.1290.0770.00.S14A1A05.01	12,9	14	12,9	124	70	77
	<b>47294</b>	K5DF.2.1300.1240.A0138.0700.1300.0770.00.S14A1A05.01	13	14	13	124	70	77
	<b>47296</b>	K5DF.2.1310.1240.A0138.0700.1310.0770.00.S14A1A05.01	13,1	14	13,1	124	70	77
	<b>47298</b>	K5DF.2.1330.1240.A0138.0700.1330.0770.00.S14A1A05.01	13,3	14	13,3	124	70	77



## K5DF - SD Drill

Stock	Order No	Code	d1m7	d2h6	d3	l1	l2	l3
*	<b>47300</b>	K5DF.2.1350.1240.A0138.0700.1350.0770.00.S14A1A05.01	13,5	14	13,5	124	70	77
	<b>47302</b>	K5DF.2.1370.1240.A0138.0700.1370.0770.00.S14A1A05.01	13,7	14	13,7	124	70	77
	<b>47304</b>	K5DF.2.1380.1240.A0138.0700.1380.0770.00.S14A1A05.01	13,8	14	13,8	124	70	77
*	<b>47306</b>	K5DF.2.1400.1240.A0138.0700.1400.0770.00.S14A1A05.01	14	14	14	124	70	77
	<b>47308</b>	K5DF.2.1420.1330.A0138.0740.1420.0830.00.S16A1A05.01	14,2	16	14,2	133	74	83
*	<b>47310</b>	K5DF.2.1450.1330.A0138.0740.1450.0830.00.S16A1A05.01	14,5	16	14,5	133	74	83
	<b>47312</b>	K5DF.2.1470.1330.A0138.0740.1470.0830.00.S16A1A05.01	14,7	16	14,7	133	74	83
	<b>47314</b>	K5DF.2.1480.1330.A0138.0740.1480.0830.00.S16A1A05.01	14,8	16	14,8	133	74	83
	<b>47316</b>	K5DF.2.1500.1330.A0138.0740.1500.0830.00.S16A1A05.01	15	16	15	133	74	83
	<b>47318</b>	K5DF.2.1510.1330.A0138.0740.1510.0830.00.S16A1A05.01	15,1	16	15,1	133	74	83
	<b>47320</b>	K5DF.2.1530.1330.A0138.0740.1530.0830.00.S16A1A05.01	15,3	16	15,3	133	74	83
	<b>47322</b>	K5DF.2.1550.1330.A0138.0740.1550.0830.00.S16A1A05.01	15,5	16	15,5	133	74	83
	<b>47324</b>	K5DF.2.1570.1330.A0138.0740.1570.0830.00.S16A1A05.01	15,7	16	15,7	133	74	83
	<b>47326</b>	K5DF.2.1580.1330.A0138.0740.1580.0830.00.S16A1A05.01	15,8	16	15,8	133	74	83
	<b>47328</b>	K5DF.2.1600.1330.A0138.0740.1600.0830.00.S16A1A05.01	16	16	16	133	74	83
	<b>47330</b>	K5DF.2.1650.1430.A0138.0860.1650.0930.00.S18A1A05.01	16,5	18	16,5	143	86	93
	<b>47332</b>	K5DF.2.1680.1430.A0138.0860.1680.0930.00.S18A1A05.01	16,8	18	16,8	143	86	93
	<b>47334</b>	K5DF.2.1700.1430.A0138.0860.1700.0930.00.S18A1A05.01	17	18	17	143	86	93
	<b>47336</b>	K5DF.2.1750.1430.A0138.0860.1750.0930.00.S18A1A05.01	17,5	18	17,5	143	86	93
	<b>47338</b>	K5DF.2.1780.1430.A0138.0860.1780.0930.00.S18A1A05.01	17,8	18	17,8	143	86	93
	<b>47340</b>	K5DF.2.1800.1430.A0138.0860.1800.0930.00.S18A1A05.01	18	18	18	143	86	93
	<b>47342</b>	K5DF.2.1850.1530.A0138.0920.1850.1010.00.S20A1A05.01	18,5	20	18,5	153	92	101
	<b>47344</b>	K5DF.2.1880.1530.A0138.0920.1880.1010.00.S20A1A05.01	18,8	20	18,8	153	92	101
	<b>47346</b>	K5DF.2.1900.1530.A0138.0920.1900.1010.00.S20A1A05.01	19	20	19	153	92	101
	<b>47348</b>	K5DF.2.1950.1530.A0138.0920.1950.1010.00.S20A1A05.01	19,5	20	19,5	153	92	101
	<b>47350</b>	K5DF.2.1980.1530.A0138.0920.1980.1010.00.S20A1A05.01	19,8	20	19,8	153	92	101
	<b>47352</b>	K5DF.2.2000.1530.A0138.0920.2000.1010.00.S20A1A05.01	20	20	20	153	92	101

Cutting Parameters Vc(m/min)			Feed Per Revolution (mm/rev)		
Non-Alloy Steel	80-105	●	Ø		
Steel	80-100	●	3		0,025
Tempered Steel	80-100	●	4		0,03
Cold-Work Tool Steel	60-80	○	5		0,042
Hot-Work Tool Steel	60-80	○	6		0,052
AISI 304 - 416 - 420	30-40	○	7		0,082
AISI 316 - 440	30-40	○	8		0,12
17-4 PH 15-5 PH	25-30	○	9		0,14
Chrome-Cobalt Alloy	25-30	○	10		0,16
Duplex F51	15-25	○	12		0,19
Super Duplex F55	15-25	○	14		0,22
Grey Cast Iron	140-170	●	16		0,24
Alloy Cast Iron	100-130	●	18		0,26
Precision Cast	80-110	●	20		0,29
Titanium	30-40	○			
Titanium Alloys	25-30	○			
≤ 54 HRc	60-80	○			
> 54 HRc	40-55	○			

● Recommended ○ Acceptable □ Not Recommended

\*Marked products are available from stock to deliver fast.



General  
Engineering

Mold &amp; Die



Automotive



Defence

Rail  
Systems

## D-Tech

## High Performance

## New Product

Thanks to its  
brand-new geometry  
and coating up to

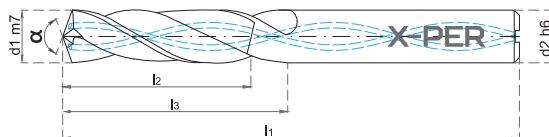
% **50** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **40** better hole surface  
roughness in comparison  
with equivalents

Optimal raw material  
selection for drilling  
operations to damp  
vibration and up to

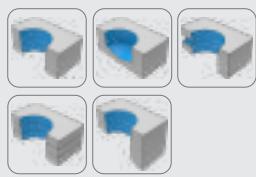
% **20** more precision hole  
diameter in comparison  
with equivalents



**M3DF**  
3D Drill With  
Coolant Holes

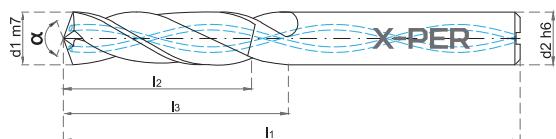
Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
*	<b>69100</b>	M3DF.2.0200.0500.A0138.0090.0000.0120.00.S04M1A05.01	2	4	50	9	<b>12</b>
*	<b>69102</b>	M3DF.2.0210.0550.A0138.0095.0000.0126.00.S04M1A05.01	2,1	4	55	9,5	<b>12,6</b>
*	<b>69104</b>	M3DF.2.0215.0580.A0147.0110.0000.0160.00.S03B1C05.01	2,15	3	58	11	<b>16</b>
*	<b>69106</b>	M3DF.2.0220.0550.A0138.0099.0000.0132.00.S04M1A05.01	2,2	4	55	9,9	<b>13,2</b>
*	<b>69108</b>	M3DF.2.0230.0550.A0138.0104.0000.0138.00.S04M1A05.01	2,3	4	55	10,4	<b>13,8</b>
*	<b>69110</b>	M3DF.2.0240.0550.A0138.0108.0000.0144.00.S04M1A05.01	2,4	4	55	10,8	<b>14,4</b>
*	<b>69112</b>	M3DF.2.0250.0550.A0138.0113.0000.0150.00.S04M1A05.01	2,5	4	55	11,3	<b>15</b>
*	<b>69114</b>	M3DF.2.0260.0550.A0138.0117.0000.0156.00.S04M1A05.01	2,6	4	55	11,7	<b>15,6</b>
*	<b>69116</b>	M3DF.2.0270.0550.A0138.0122.0000.0162.00.S04M1A05.01	2,7	4	55	12,2	<b>16,2</b>
*	<b>69118</b>	M3DF.2.0280.0550.A0138.0126.0000.0168.00.S04M1A05.01	2,8	4	55	12,6	<b>16,8</b>
*	<b>69120</b>	M3DF.2.0290.0550.A0138.0131.0000.0174.00.S04M1A05.01	2,9	4	55	13,1	<b>17,4</b>
*	<b>69122</b>	M3DF.2.0300.0620.A0138.0180.0000.0200.00.S06C1A05.01	3	6	62	18	<b>20</b>
*	<b>69124</b>	M3DF.2.0310.0620.A0138.0180.0000.0200.00.S06C1A05.01	3,1	6	62	18	<b>20</b>
*	<b>69126</b>	M3DF.2.0320.0620.A0138.0180.0000.0200.00.S06C1A05.01	3,2	6	62	18	<b>20</b>
*	<b>69128</b>	M3DF.2.0330.0620.A0138.0180.0000.0200.00.S06C1A05.01	3,3	6	62	18	<b>20</b>
*	<b>69130</b>	M3DF.2.0340.0620.A0138.0180.0000.0200.00.S06C1A05.01	3,4	6	62	18	<b>20</b>
*	<b>69132</b>	M3DF.2.0350.0620.A0138.0180.0000.0200.00.S06C1A05.01	3,5	6	62	18	<b>20</b>
*	<b>69134</b>	M3DF.2.0360.0620.A0138.0180.0000.0200.00.S06C1A05.01	3,6	6	62	18	<b>20</b>
*	<b>69136</b>	M3DF.2.0370.0620.A0138.0180.0000.0200.00.S06C1A05.01	3,7	6	62	18	<b>20</b>
*	<b>69138</b>	M3DF.2.0380.0660.A0138.0220.0000.0240.00.S06A1A05.01	3,8	6	66	22	<b>24</b>
*	<b>69140</b>	M3DF.2.0390.0660.A0138.0220.0000.0240.00.S06A1A05.01	3,9	6	66	22	<b>24</b>
*	<b>69142</b>	M3DF.2.0400.0660.A0138.0220.0000.0240.00.S06A1A05.01	4	6	66	22	<b>24</b>
*	<b>69144</b>	M3DF.2.0410.0660.A0138.0220.0000.0240.00.S06A1A05.01	4,1	6	66	22	<b>24</b>
*	<b>69146</b>	M3DF.2.0420.0660.A0138.0220.0000.0240.00.S06A1A05.01	4,2	6	66	22	<b>24</b>
*	<b>69148</b>	M3DF.2.0430.0660.A0138.0220.0000.0240.00.S06A1A05.01	4,3	6	66	22	<b>24</b>
*	<b>69150</b>	M3DF.2.0440.0660.A0138.0220.0000.0240.00.S06A1A05.01	4,4	6	66	22	<b>24</b>
*	<b>69152</b>	M3DF.2.0450.0660.A0138.0220.0000.0240.00.S06A1A05.01	4,5	6	66	22	<b>24</b>
*	<b>69154</b>	M3DF.2.0460.0660.A0138.0220.0000.0240.00.S06A1A05.01	4,6	6	66	22	<b>24</b>
*	<b>69156</b>	M3DF.2.0470.0660.A0138.0220.0000.0240.00.S06A1A05.01	4,7	6	66	22	<b>24</b>
*	<b>69158</b>	M3DF.2.0480.0660.A0138.0260.0000.0280.00.S06A1A05.01	4,8	6	66	26	<b>28</b>
*	<b>69160</b>	M3DF.2.0490.0660.A0138.0260.0000.0280.00.S06A1A05.01	4,9	6	66	26	<b>28</b>
*	<b>69162</b>	M3DF.2.0500.0660.A0138.0260.0000.0280.00.S06A1A05.01	5	6	66	26	<b>28</b>
*	<b>69164</b>	M3DF.2.0510.0660.A0138.0260.0000.0280.00.S06A1A05.01	5,1	6	66	26	<b>28</b>
*	<b>69166</b>	M3DF.2.0520.0660.A0145.0260.0000.0280.00.S06A1A05.01	5,2	6	66	26	<b>28</b>
*	<b>69168</b>	M3DF.2.0520.0660.A0138.0260.0000.0280.00.S06A1A05.01	5,2	6	66	26	<b>28</b>
*	<b>69170</b>	M3DF.2.0530.0660.A0138.0260.0000.0280.00.S06A1A05.01	5,3	6	66	26	<b>28</b>
*	<b>69172</b>	M3DF.2.0540.0660.A0138.0260.0000.0280.00.S06A1A05.01	5,4	6	66	26	<b>28</b>
*	<b>69174</b>	M3DF.2.0550.0660.A0138.0260.0000.0280.00.S06A1A05.01	5,5	6	66	26	<b>28</b>
*	<b>69176</b>	M3DF.2.0560.0660.A0138.0260.0000.0280.00.S06A1A05.01	5,6	6	66	26	<b>28</b>
*	<b>69178</b>	M3DF.2.0570.0660.A0138.0260.0000.0280.00.S06A1A05.01	5,7	6	66	26	<b>28</b>
*	<b>69180</b>	M3DF.2.0580.0660.A0138.0260.0000.0280.00.S06A1A05.01	5,8	6	66	26	<b>28</b>
*	<b>69182</b>	M3DF.2.0590.0660.A0138.0260.0000.0280.00.S06A1A05.01	5,9	6	66	26	<b>28</b>
*	<b>69184</b>	M3DF.2.0600.0660.A0138.0260.0000.0280.00.S06A1A05.01	6	6	66	26	<b>28</b>
*	<b>69186</b>	M3DF.2.0610.0790.A0138.0320.0000.0340.00.S08A1A05.01	6,1	8	79	32	<b>34</b>
*	<b>69188</b>	M3DF.2.0620.0790.A0138.0320.0000.0340.00.S08A1A05.01	6,2	8	79	32	<b>34</b>
*	<b>69190</b>	M3DF.2.0630.0790.A0138.0320.0000.0340.00.S08A1A05.01	6,3	8	79	32	<b>34</b>
*	<b>69192</b>	M3DF.2.0640.0790.A0138.0320.0000.0340.00.S08A1A05.01	6,4	8	79	32	<b>34</b>
*	<b>69194</b>	M3DF.2.0650.0790.A0138.0320.0000.0340.00.S08A1A05.01	6,5	8	79	32	<b>34</b>
*	<b>69196</b>	M3DF.2.0660.0790.A0138.0320.0000.0340.00.S08A1A05.01	6,6	8	79	32	<b>34</b>
*	<b>69198</b>	M3DF.2.0670.0790.A0138.0320.0000.0340.00.S08A1A05.01	6,7	8	79	32	<b>34</b>
*	<b>69200</b>	M3DF.2.0680.0790.A0138.0320.0000.0340.00.S08A1A05.01	6,8	8	79	32	<b>34</b>

\*Marked products are available  
from stock to deliver fast.

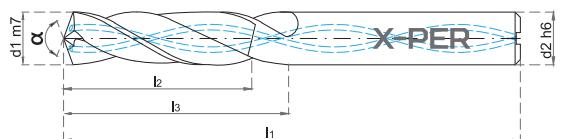


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FORM  
HA DIN  
6535**M3DF - 3D Drill With Coolant Holes**

Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
*	<b>69202</b>	M3DF.2.0690.0790.A0138.0320.0000.0340.00.508A1A05.01	6,9	8	79	32	<b>34</b>
*	<b>69204</b>	M3DF.2.0700.0790.A0138.0320.0000.0340.00.508A1A05.01	7	8	79	32	<b>34</b>
*	<b>69206</b>	M3DF.2.0710.0790.A0138.0380.0000.0410.00.508A1A05.01	7,1	8	79	38	<b>41</b>
*	<b>69208</b>	M3DF.2.0720.0790.A0138.0380.0000.0410.00.508A1A05.01	7,2	8	79	38	<b>41</b>
*	<b>69210</b>	M3DF.2.0730.0790.A0138.0380.0000.0410.00.508A1A05.01	7,3	8	79	38	<b>41</b>
*	<b>69212</b>	M3DF.2.0740.0790.A0138.0380.0000.0410.00.508A1A05.01	7,4	8	79	38	<b>41</b>
*	<b>69214</b>	M3DF.2.0750.0790.A0138.0380.0000.0410.00.508A1A05.01	7,5	8	79	38	<b>41</b>
*	<b>69216</b>	M3DF.2.0760.0790.A0138.0380.0000.0410.00.508A1A05.01	7,6	8	79	38	<b>41</b>
*	<b>69218</b>	M3DF.2.0770.0790.A0138.0380.0000.0410.00.508A1A05.01	7,7	8	79	38	<b>41</b>
*	<b>69220</b>	M3DF.2.0780.0790.A0138.0380.0000.0410.00.508A1A05.01	7,8	8	79	38	<b>41</b>
*	<b>69222</b>	M3DF.2.0790.0790.A0138.0380.0000.0410.00.508A1A05.01	7,9	8	79	38	<b>41</b>
*	<b>69224</b>	M3DF.2.0800.0790.A0138.0380.0000.0410.00.508A1A05.01	8	8	79	38	<b>41</b>
*	<b>69226</b>	M3DF.2.0804.0890.A0142.0380.0000.0420.00.510A1A05.01	8,04	10	89	38	<b>42</b>
*	<b>69228</b>	M3DF.2.0810.0890.A0138.0430.0000.0470.00.510A1A05.01	8,1	10	89	43	<b>47</b>
*	<b>69230</b>	M3DF.2.0820.0890.A0138.0430.0000.0470.00.510A1A05.01	8,2	10	89	43	<b>47</b>
*	<b>69232</b>	M3DF.2.0830.0890.A0138.0430.0000.0470.00.510A1A05.01	8,3	10	89	43	<b>47</b>
*	<b>69234</b>	M3DF.2.0840.0890.A0138.0430.0000.0470.00.510A1A05.01	8,4	10	89	43	<b>47</b>
*	<b>69236</b>	M3DF.2.0850.0890.A0138.0430.0000.0470.00.510A1A05.01	8,5	10	89	43	<b>47</b>
*	<b>69238</b>	M3DF.2.0860.0890.A0138.0430.0000.0470.00.510A1A05.01	8,6	10	89	43	<b>47</b>
*	<b>69240</b>	M3DF.2.0870.0890.A0138.0430.0000.0470.00.510A1A05.01	8,7	10	89	43	<b>47</b>
*	<b>69242</b>	M3DF.2.0880.0890.A0138.0430.0000.0470.00.510A1A05.01	8,8	10	89	43	<b>47</b>
*	<b>69244</b>	M3DF.2.0890.0890.A0138.0430.0000.0470.00.510A1A05.01	8,9	10	89	43	<b>47</b>
*	<b>69246</b>	M3DF.2.0900.0890.A0138.0430.0000.0470.00.510A1A05.01	9	10	89	43	<b>47</b>
*	<b>69248</b>	M3DF.2.0910.0890.A0138.0430.0000.0470.00.510A1A05.01	9,1	10	89	43	<b>47</b>
*	<b>69250</b>	M3DF.2.0920.0890.A0138.0430.0000.0470.00.510A1A05.01	9,2	10	89	43	<b>47</b>
*	<b>69252</b>	M3DF.2.0925.0890.A0138.0430.0000.0470.00.510A1A05.01	9,25	10	89	43	<b>47</b>
*	<b>69254</b>	M3DF.2.0930.0890.A0138.0430.0000.0470.00.510A1A05.01	9,3	10	89	43	<b>47</b>
*	<b>69256</b>	M3DF.2.0940.0890.A0138.0430.0000.0470.00.510A1A05.01	9,4	10	89	43	<b>47</b>
*	<b>69258</b>	M3DF.2.0950.0890.A0138.0430.0000.0470.00.510A1A05.01	9,5	10	89	43	<b>47</b>
*	<b>69260</b>	M3DF.2.0960.0890.A0138.0430.0000.0470.00.510A1A05.01	9,6	10	89	43	<b>47</b>
*	<b>69262</b>	M3DF.2.0970.0890.A0138.0430.0000.0470.00.510A1A05.01	9,7	10	89	43	<b>47</b>
*	<b>69264</b>	M3DF.2.0980.0890.A0138.0430.0000.0470.00.510A1A05.01	9,8	10	89	43	<b>47</b>
*	<b>69266</b>	M3DF.2.0990.0890.A0138.0430.0000.0470.00.510A1A05.01	9,9	10	89	43	<b>47</b>
*	<b>69268</b>	M3DF.2.1000.0890.A0138.0430.0000.0470.00.510A1A05.01	10	10	89	43	<b>47</b>
*	<b>69270</b>	M3DF.2.1010.1020.A0138.0510.0000.0550.00.S12A1A05.01	10,1	12	102	51	<b>55</b>
*	<b>69272</b>	M3DF.2.1020.1020.A0138.0510.0000.0550.00.S12A1A05.01	10,2	12	102	51	<b>55</b>
*	<b>69274</b>	M3DF.2.1030.1020.A0138.0510.0000.0550.00.S12A1A05.01	10,3	12	102	51	<b>55</b>
*	<b>69276</b>	M3DF.2.1040.1020.A0138.0510.0000.0550.00.S12A1A05.01	10,4	12	102	51	<b>55</b>
*	<b>69278</b>	M3DF.2.1050.1020.A0138.0510.0000.0550.00.S12A1A05.01	10,5	12	102	51	<b>55</b>
*	<b>69280</b>	M3DF.2.1060.1020.A0138.0510.0000.0550.00.S12A1A05.01	10,6	12	102	51	<b>55</b>
*	<b>69282</b>	M3DF.2.1070.1020.A0138.0510.0000.0550.00.S12A1A05.01	10,7	12	102	51	<b>55</b>
*	<b>69284</b>	M3DF.2.1080.1020.A0138.0510.0000.0550.00.S12A1A05.01	10,8	12	102	51	<b>55</b>
*	<b>69286</b>	M3DF.2.1090.1020.A0138.0510.0000.0550.00.S12A1A05.01	10,9	12	102	51	<b>55</b>
*	<b>69288</b>	M3DF.2.1100.1020.A0138.0510.0000.0550.00.S12A1A05.01	11	12	102	51	<b>55</b>
*	<b>69290</b>	M3DF.2.1110.1020.A0138.0510.0000.0550.00.S12A1A05.01	11,1	12	102	51	<b>55</b>
*	<b>69292</b>	M3DF.2.1120.1020.A0138.0510.0000.0550.00.S12A1A05.01	11,2	12	102	51	<b>55</b>
*	<b>69294</b>	M3DF.2.1130.1020.A0138.0510.0000.0550.00.S12A1A05.01	11,3	12	102	51	<b>55</b>
*	<b>69296</b>	M3DF.2.1140.1020.A0138.0510.0000.0550.00.S12A1A05.01	11,4	12	102	51	<b>55</b>
*	<b>69298</b>	M3DF.2.1150.1020.A0138.0510.0000.0550.00.S12A1A05.01	11,5	12	102	51	<b>55</b>
*	<b>69300</b>	M3DF.2.1160.1020.A0138.0510.0000.0550.00.S12A1A05.01	11,6	12	102	51	<b>55</b>
*	<b>69302</b>	M3DF.2.1170.1020.A0138.0510.0000.0550.00.S12A1A05.01	11,7	12	102	51	<b>55</b>
*	<b>69304</b>	M3DF.2.1180.1020.A0138.0510.0000.0550.00.S12A1A05.01	11,8	12	102	51	<b>55</b>



## M3DF - 3D Drill With Coolant Holes

Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
*	69306	M3DF.2.1190.1020.A0138.0510.0000.0550.00.S12A1A05.01	11,9	12	102	51	55
*	69308	M3DF.2.1200.1020.A0138.0510.0000.0550.00.S12A1A05.01	12	12	102	51	55
*	69310	M3DF.2.1230.1070.A0138.0530.0000.0600.00.S14A1A05.01	12,3	14	107	53	60
*	69312	M3DF.2.1240.1070.A0138.0530.0000.0600.00.S14A1A05.01	12,4	14	107	53	60
*	69314	M3DF.2.1250.1070.A0138.0530.0000.0600.00.S14A1A05.01	12,5	14	107	53	60
*	69316	M3DF.2.1270.1070.A0138.0530.0000.0600.00.S14A1A05.01	12,7	14	107	53	60
*	69318	M3DF.2.1280.1070.A0138.0530.0000.0600.00.S14A1A05.01	12,8	14	107	53	60
*	69320	M3DF.2.1290.1070.A0138.0530.0000.0600.00.S14A1A05.01	12,9	14	107	53	60
*	69322	M3DF.2.1300.1070.A0138.0530.0000.0600.00.S14A1A05.01	13	14	107	53	60
*	69324	M3DF.2.1330.1070.A0138.0530.0000.0600.00.S14B1A05.01	13,3	14	107	53	60
*	69326	M3DF.2.1350.1070.A0138.0530.0000.0600.00.S14B1A05.01	13,5	14	107	53	60
*	69328	M3DF.2.1370.1070.A0138.0530.0000.0600.00.S14B1A05.01	13,7	14	107	53	60
*	69330	M3DF.2.1380.1070.A0138.0530.0000.0600.00.S14B1A05.01	13,8	14	107	53	60
*	69332	M3DF.2.1400.1070.A0140.0530.0000.0600.00.S14B1A05.01	14	14	107	53	60
*	69334	M3DF.2.1420.1150.A0138.0580.0000.0650.00.S16A1A05.01	14,2	16	115	58	65
*	69336	M3DF.2.1450.1150.A0138.0580.0000.0650.00.S16A1A05.01	14,5	16	115	58	65
*	69338	M3DF.2.1470.1150.A0138.0580.0000.0650.00.S16A1A05.01	14,7	16	115	58	65
*	69340	M3DF.2.1480.1150.A0140.0580.0000.0650.00.S16A1A05.01	14,8	16	115	58	65
*	69342	M3DF.2.1500.1150.A0140.0580.0000.0650.00.S16A1A05.01	15	16	115	58	65
*	69344	M3DF.2.1530.1150.A0140.0580.0000.0650.00.S16A1A05.01	15,3	16	115	58	65
*	69346	M3DF.2.1550.1150.A0140.0580.0000.0650.00.S16A1A05.01	15,5	16	115	58	65
*	69348	M3DF.2.1570.1150.A0140.0580.0000.0650.00.S16A1A05.01	15,7	16	115	58	65
*	69350	M3DF.2.1580.1150.A0140.0580.0000.0650.00.S16A1A05.01	15,8	16	115	58	65
*	69352	M3DF.2.1600.1150.A0140.0580.0000.0650.00.S16A1A05.01	16	16	115	58	65
*	69354	M3DF.2.1650.1230.A0140.0660.0000.0730.00.S18A1A05.01	16,5	18	123	66	73
*	69356	M3DF.2.1680.1230.A0140.0660.0000.0730.00.S18A1A05.01	16,8	18	123	66	73
*	69358	M3DF.2.1700.1230.A0140.0660.0000.0730.00.S18A1A05.01	17	18	123	66	73
*	69360	M3DF.2.1750.1230.A0140.0660.0000.0730.00.S18A1A05.01	17,5	18	123	66	73
*	69362	M3DF.2.1780.1230.A0140.0660.0000.0730.00.S18A1A05.01	17,8	18	123	66	73
*	69364	M3DF.2.1800.1230.A0140.0660.0000.0730.00.S18A1A05.01	18	18	123	66	73
*	69366	M3DF.2.1850.1310.A0140.0720.0000.0790.00.S20A1A05.01	18,5	20	131	72	79
*	69368	M3DF.2.1880.1310.A0140.0720.0000.0790.00.S20A1A05.01	18,8	20	131	72	79
*	69370	M3DF.2.1950.1310.A0140.0720.0000.0790.00.S20A1A05.01	19,5	20	131	72	79
*	69372	M3DF.2.1980.1310.A0140.0720.0000.0790.00.S20A1A05.01	19,8	20	131	72	79
*	69374	M3DF.2.2000.1310.A0140.0720.0000.0790.00.S20A1A05.01	20	20	131	72	79

Cutting Parameters Vc(m/min)		Feed Per Revolution (mm/rev)		
Non-Alloy Steel	120-150	●	0	
Steel	110-140	●	3	0,04
Tempered Steel	110-135	●	4	0,07
Cold-Work Tool Steel	80-110	○	5	0,1
Hot-Work Tool Steel	80-110	○	6	0,20
AISI 304 - 416 - 420	55-65	○	7	0,22
AISI 316 - 440	55-65	○	8	0,24
17-4 PH 15-5 PH	50-55	○	9	0,27
Chrome-Cobalt Alloy	50-55	○	10	0,30
Duplex F51	40-50	○	12	0,33
Super Duplex F55	40-50	○	14	0,36
Grey Cast Iron	100-150	●	16	0,39
Alloy Cast Iron	100-150	●	18	0,42
Precision Cast	90-120	●	20	0,45
Titanium	55-65	○		
Titanium Alloys	55-65	○		
HRSA	20-30	○		
≤ 54 HRc	60-80	○		
> 54 HRc	40-55	○		

● Recommended ○ Acceptable □ Not Recommended

\*Marked products are available from stock to deliver fast.



HOLE MAKING

# M5DF

5D Drill With  
Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance New Product

Thanks to its  
brand-new geometry  
and coating up to

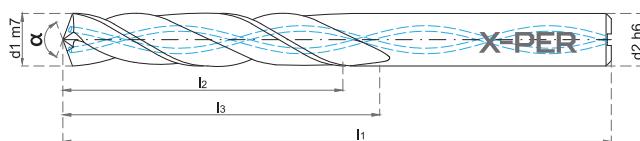
% **50** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **40** better hole surface  
roughness in comparison  
with equivalents

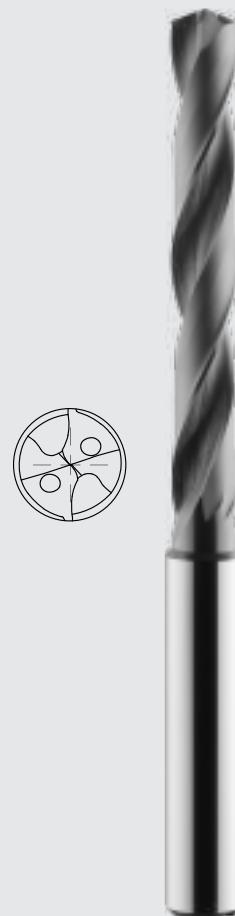
Optimal raw material  
selection for drilling  
operations to damp  
vibration and up to

% **20** more precision hole  
diameter in comparison  
with equivalents

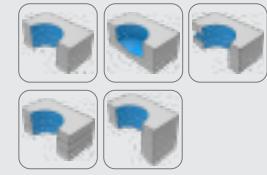


# M5DF

5D Drill With  
Coolant Holes

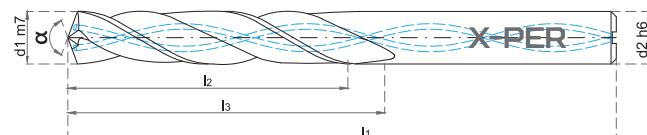


Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
*	70100	M5DF.2.0238.0680.A0140.0140.0000.0270.00.S03P1B03.01	2,38	3	68	14	27
*	70102	M5DF.2.0300.0660.A0138.0270.0000.0280.00.S06C1A05.01	3	6	66	27	28
*	70104	M5DF.2.0310.0660.A0138.0270.0000.0280.00.S06C1A05.01	3,1	6	66	27	28
*	70106	M5DF.2.0320.0660.A0138.0270.0000.0280.00.S06C1A05.01	3,2	6	66	27	28
*	70108	M5DF.2.0325.0660.A0138.0270.0000.0280.00.S06C1A05.01	3,25	6	66	27	28
*	70110	M5DF.2.0330.0720.A0140.0290.0000.0320.00.S06A2B03.01	3,3	6	72	29	32
*	70112	M5DF.2.0330.0660.A0138.0270.0000.0280.00.S06C1A05.01	3,3	6	66	27	28
*	70114	M5DF.2.0340.0660.A0138.0270.0000.0280.00.S06C1A05.01	3,4	6	66	27	28
*	70116	M5DF.2.0350.0660.A0138.0270.0000.0280.00.S06C1A05.01	3,5	6	66	27	28
*	70118	M5DF.2.0360.0660.A0138.0270.0000.0280.00.S06C1A05.01	3,6	6	66	27	28
*	70120	M5DF.2.0370.0660.A0138.0270.0000.0280.00.S06C1A05.01	3,7	6	66	27	28
*	70122	M5DF.2.0380.0740.A0138.0320.0000.0360.00.S06C1A05.01	3,8	6	74	32	36
*	70124	M5DF.2.0390.0740.A0138.0320.0000.0360.00.S06C1A05.01	3,9	6	74	32	36
*	70126	M5DF.2.0400.0740.A0138.0320.0000.0360.00.S06C1A05.01	4	6	74	32	36
*	70128	M5DF.2.0410.0740.A0138.0320.0000.0360.00.S06C1A05.01	4,1	6	74	32	36
*	70130	M5DF.2.0420.0740.A0138.0320.0000.0360.00.S06C1A05.01	4,2	6	74	32	36
*	70132	M5DF.2.0430.0740.A0138.0320.0000.0360.00.S06C1A05.01	4,3	6	74	32	36
*	70134	M5DF.2.0440.0740.A0138.0320.0000.0360.00.S06C1A05.01	4,4	6	74	32	36
*	70136	M5DF.2.0450.0740.A0138.0320.0000.0360.00.S06C1A05.01	4,5	6	74	32	36
*	70138	M5DF.2.0460.0740.A0138.0320.0000.0360.00.S06C1A05.01	4,6	6	74	32	36
*	70140	M5DF.2.0470.0740.A0138.0320.0000.0360.00.S06C1A05.01	4,7	6	74	32	36
*	70142	M5DF.2.0480.0820.A0138.0410.0000.0440.00.S06A1A05.01	4,8	6	82	41	44
*	70144	M5DF.2.0490.0820.A0138.0410.0000.0440.00.S06A1A05.01	4,9	6	82	41	44
*	70146	M5DF.2.0500.0820.A0138.0410.0000.0440.00.S06A1A05.01	5	6	82	41	44
*	70148	M5DF.2.0510.0820.A0140.0430.0000.0440.00.S06A1B02.01	5,1	6	82	43	44
*	70150	M5DF.2.0510.0820.A0138.0410.0000.0440.00.S06A1A05.01	5,1	6	82	41	44
*	70152	M5DF.2.0520.0820.A0138.0410.0000.0440.00.S06A1A05.01	5,2	6	82	41	44
*	70154	M5DF.2.0530.0820.A0138.0410.0000.0440.00.S06A1A05.01	5,3	6	82	41	44
*	70156	M5DF.2.0540.0820.A0138.0410.0000.0440.00.S06A1A05.01	5,4	6	82	41	44
*	70158	M5DF.2.0550.0820.A0138.0410.0000.0440.00.S06A1A05.01	5,5	6	82	41	44
*	70160	M5DF.2.0560.0820.A0138.0410.0000.0440.00.S06A1A05.01	5,6	6	82	41	44
*	70162	M5DF.2.0570.0820.A0138.0410.0000.0440.00.S06A1A05.01	5,7	6	82	41	44
*	70164	M5DF.2.0580.0820.A0138.0410.0000.0440.00.S06A1A05.01	5,8	6	82	41	44
*	70166	M5DF.2.0590.0820.A0138.0410.0000.0440.00.S06A1A05.01	5,9	6	82	41	44
*	70168	M5DF.2.0600.0820.A0138.0410.0000.0440.00.S06C2A05.01	6	6	82	41	44
*	70170	M5DF.2.0600.0820.A0138.0410.0000.0440.00.S06A1A05.01	6	6	82	41	44
*	70172	M5DF.2.0610.0910.A0138.0500.0000.0530.00.S08A1A05.01	6,1	8	91	50	53
*	70174	M5DF.2.0620.0910.A0138.0500.0000.0530.00.S08A1A05.01	6,2	8	91	50	53
*	70176	M5DF.2.0630.0910.A0138.0500.0000.0530.00.S08A1A05.01	6,3	8	91	50	53
*	70178	M5DF.2.0640.0910.A0138.0500.0000.0530.00.S08A1A05.01	6,4	8	91	50	53
*	70180	M5DF.2.0650.0910.A0138.0500.0000.0530.00.S08A1A05.01	6,5	8	91	50	53
*	70182	M5DF.2.0660.0910.A0138.0500.0000.0530.00.S08A1A05.01	6,6	8	91	50	53
*	70184	M5DF.2.0670.0910.A0138.0500.0000.0530.00.S08A1A05.01	6,7	8	91	50	53
*	70186	M5DF.2.0680.0910.A0138.0500.0000.0530.00.S08A1A05.01	6,8	8	91	50	53
*	70188	M5DF.2.0690.0910.A0138.0500.0000.0530.00.S08A1A05.01	6,9	8	91	50	53
*	70190	M5DF.2.0700.0910.A0138.0500.0000.0530.00.S08A1A05.01	7	8	91	50	53
*	70192	M5DF.2.0710.0910.A0138.0500.0000.0530.00.S08A1A05.01	7,1	8	91	50	53
*	70194	M5DF.2.0720.0910.A0138.0500.0000.0530.00.S08A1A05.01	7,2	8	91	50	53
*	70196	M5DF.2.0730.0910.A0138.0500.0000.0530.00.S08A1A05.01	7,3	8	91	50	53
*	70198	M5DF.2.0740.0910.A0138.0500.0000.0530.00.S08A1A05.01	7,4	8	91	50	53

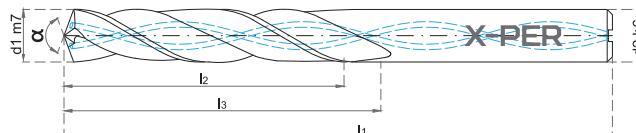


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+TiAlN

FORM  
HA DIN  
6535**M5DF - 5D Drill With Coolant Holes**

Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
*	<b>70200</b>	M5DF.2.0750.0910.A0138.0500.0000.0530.00.508A1A05.01	7,5	8	91	50	53
*	<b>70202</b>	M5DF.2.0760.0910.A0138.0500.0000.0530.00.508A1A05.01	7,6	8	91	50	53
*	<b>70204</b>	M5DF.2.0770.0910.A0138.0500.0000.0530.00.508A1A05.01	7,7	8	91	50	53
*	<b>70206</b>	M5DF.2.0780.0910.A0138.0500.0000.0530.00.508A1A05.01	7,8	8	91	50	53
*	<b>70208</b>	M5DF.2.0790.0910.A0138.0500.0000.0530.00.508A1A05.01	7,9	8	91	50	53
*	<b>70210</b>	M5DF.2.0800.0910.A0138.0500.0000.0530.00.508A1A05.01	8	8	91	50	53
*	<b>70212</b>	M5DF.2.0810.1030.A0138.0570.0000.0610.00.S10A1A05.01	8,1	10	103	57	61
*	<b>70214</b>	M5DF.2.0820.1030.A0138.0570.0000.0610.00.S10A1A05.01	8,2	10	103	57	61
*	<b>70216</b>	M5DF.2.0830.1030.A0138.0570.0000.0610.00.S10A1A05.01	8,3	10	103	57	61
*	<b>70218</b>	M5DF.2.0840.1030.A0138.0570.0000.0610.00.S10A1A05.01	8,4	10	103	57	61
*	<b>70220</b>	M5DF.2.0850.1030.A0138.0570.0000.0610.00.S10A1A05.01	8,5	10	103	57	61
*	<b>70222</b>	M5DF.2.0860.1030.A0138.0570.0000.0610.00.S10A1A05.01	8,6	10	103	57	61
*	<b>70224</b>	M5DF.2.0870.1030.A0138.0570.0000.0610.00.S10A1A05.01	8,7	10	103	57	61
*	<b>70226</b>	M5DF.2.0880.1030.A0138.0570.0000.0610.00.S10A1A05.01	8,8	10	103	57	61
*	<b>70228</b>	M5DF.2.0890.1030.A0138.0570.0000.0610.00.S10A1A05.01	8,9	10	103	57	61
*	<b>70230</b>	M5DF.2.0900.1030.A0138.0570.0000.0610.00.S10A1A05.01	9	10	103	57	61
*	<b>70232</b>	M5DF.2.0910.1030.A0138.0570.0000.0610.00.S10A1A05.01	9,1	10	103	57	61
*	<b>70234</b>	M5DF.2.0920.1030.A0138.0570.0000.0610.00.S10A1A05.01	9,2	10	103	57	61
*	<b>70236</b>	M5DF.2.0930.1030.A0138.0570.0000.0610.00.S10A1A05.01	9,3	10	103	57	61
*	<b>70238</b>	M5DF.2.0940.1030.A0138.0570.0000.0610.00.S10A1A05.01	9,4	10	103	57	61
*	<b>70240</b>	M5DF.2.0950.1030.A0138.0570.0000.0610.00.S10A1A05.01	9,5	10	103	57	61
*	<b>70242</b>	M5DF.2.0960.1030.A0138.0570.0000.0610.00.S10A1A05.01	9,6	10	103	57	61
*	<b>70244</b>	M5DF.2.0970.1030.A0138.0570.0000.0610.00.S10A1A05.01	9,7	10	103	57	61
*	<b>70246</b>	M5DF.2.0980.1030.A0138.0570.0000.0610.00.S10A1A05.01	9,8	10	103	57	61
*	<b>70248</b>	M5DF.2.0990.1030.A0138.0570.0000.0610.00.S10A1A05.01	9,9	10	103	57	61
*	<b>70250</b>	M5DF.2.1000.1030.A0138.0570.0000.0610.00.S10A1A05.01	10	10	103	57	61
*	<b>70252</b>	M5DF.2.1000.1100.A0140.0650.0000.0720.00.S10A1A05.01	10	10	110	65	72
*	<b>70254</b>	M5DF.2.1010.1180.A0138.0670.0000.0710.00.S12A1A05.01	10,1	12	118	67	71
*	<b>70256</b>	M5DF.2.1020.1180.A0138.0670.0000.0710.00.S12A1A05.01	10,2	12	118	67	71
*	<b>70258</b>	M5DF.2.1030.1180.A0138.0670.0000.0710.00.S12A1A05.01	10,3	12	118	67	71
*	<b>70260</b>	M5DF.2.1040.1180.A0138.0670.0000.0710.00.S12A1A05.01	10,4	12	118	67	71
*	<b>70262</b>	M5DF.2.1050.1180.A0138.0670.0000.0710.00.S12A1A05.01	10,5	12	118	67	71
*	<b>70264</b>	M5DF.2.1060.1180.A0138.0670.0000.0710.00.S12A1A05.01	10,6	12	118	67	71
*	<b>70266</b>	M5DF.2.1070.1180.A0138.0670.0000.0710.00.S12A1A05.01	10,7	12	118	67	71
*	<b>70268</b>	M5DF.2.1080.1180.A0138.0670.0000.0710.00.S12A1A05.01	10,8	12	118	67	71
*	<b>70270</b>	M5DF.2.1090.1180.A0138.0670.0000.0710.00.S12A1A05.01	10,9	12	118	67	71
*	<b>70272</b>	M5DF.2.1100.1180.A0138.0670.0000.0710.00.S12A1A05.01	11	12	118	67	71
*	<b>70274</b>	M5DF.2.1110.1180.A0138.0670.0000.0710.00.S12A1A05.01	11,1	12	118	67	71
*	<b>70276</b>	M5DF.2.1120.1180.A0138.0670.0000.0710.00.S12A1A05.01	11,2	12	118	67	71
*	<b>70278</b>	M5DF.2.1130.1180.A0138.0670.0000.0710.00.S12A1A05.01	11,3	12	118	67	71
*	<b>70280</b>	M5DF.2.1140.1180.A0138.0670.0000.0710.00.S12A1A05.01	11,4	12	118	67	71
*	<b>70282</b>	M5DF.2.1150.1180.A0138.0670.0000.0710.00.S12A1A05.01	11,5	12	118	67	71
*	<b>70284</b>	M5DF.2.1160.1180.A0138.0670.0000.0710.00.S12A1A05.01	11,6	12	118	67	71
*	<b>70286</b>	M5DF.2.1170.1180.A0138.0670.0000.0710.00.S12A1A05.01	11,7	12	118	67	71
*	<b>70288</b>	M5DF.2.1180.1180.A0138.0670.0000.0710.00.S12A1A05.01	11,8	12	118	67	71
*	<b>70290</b>	M5DF.2.1190.1180.A0138.0670.0000.0710.00.S12A1A05.01	11,9	12	118	67	71
*	<b>70292</b>	M5DF.2.1200.1180.A0138.0670.0000.0710.00.S12A1A05.01	12	12	118	67	71
*	<b>70294</b>	M5DF.2.1230.1240.A0138.0700.0000.0770.00.S14A1A05.01	12,3	14	124	70	77
*	<b>70296</b>	M5DF.2.1250.1240.A0138.0700.0000.0770.00.S14A1A05.01	12,5	14	124	70	77
*	<b>70298</b>	M5DF.2.1270.1240.A0138.0700.0000.0770.00.S14A1A05.01	12,7	14	124	70	77
*	<b>70300</b>	M5DF.2.1280.1240.A0138.0700.0000.0770.00.S14A1A05.01	12,8	14	124	70	77



## M5DF - 5D Drill With Coolant Holes

Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
*	<b>70302</b>	MSDF.2.1290.1240.A0138.0700.0000.0770.00.S14A1A05.01	12,9	14	124	70	77
*	<b>70304</b>	MSDF.2.1300.1240.A0138.0700.0000.0770.00.S14A1A05.01	13	14	124	70	77
*	<b>70306</b>	MSDF.2.1330.1240.A0138.0700.0000.0770.00.S14A1A05.01	13,3	14	124	70	77
*	<b>70308</b>	MSDF.2.1350.1240.A0138.0700.0000.0770.00.S14A1A05.01	13,5	14	124	70	77
*	<b>70310</b>	MSDF.2.1370.1240.A0138.0700.0000.0770.00.S14A1A05.01	13,7	14	124	70	77
*	<b>70312</b>	MSDF.2.1380.1240.A0138.0700.0000.0770.00.S14A1A05.01	13,8	14	124	70	77
*	<b>70314</b>	MSDF.2.1400.1240.A0140.0700.0000.0770.00.S14A1A05.01	14	14	124	70	77
*	<b>70316</b>	MSDF.2.1420.1330.A0138.0740.0000.0830.00.S16A1A05.01	14,2	16	133	74	83
*	<b>70318</b>	MSDF.2.1450.1330.A0138.0740.0000.0830.00.S16A1A05.01	14,5	16	133	74	83
*	<b>70320</b>	MSDF.2.1470.1330.A0138.0740.0000.0830.00.S16A1A05.01	14,7	16	133	74	83
*	<b>70322</b>	MSDF.2.1480.1330.A0138.0740.0000.0830.00.S16A1A05.01	14,8	16	133	74	83
*	<b>70324</b>	MSDF.2.1500.1330.A0140.0740.0000.0830.00.S16A1A05.01	15	16	133	74	83
	<b>70326</b>	MSDF.2.1510.1330.A0140.0740.0000.0830.00.S16A1A05.01	15,1	16	133	74	83
	<b>70328</b>	MSDF.2.1530.1330.A0140.0740.0000.0830.00.S16A1A05.01	15,3	16	133	74	83
	<b>70330</b>	MSDF.2.1550.1330.A0140.0740.0000.0830.00.S16A1A05.01	15,5	16	133	74	83
	<b>70332</b>	MSDF.2.1570.1330.A0140.0740.0000.0830.00.S16A1A05.01	15,7	16	133	74	83
	<b>70334</b>	MSDF.2.1580.1330.A0140.0740.0000.0830.00.S16A1A05.01	15,8	16	133	74	83
	<b>70336</b>	MSDF.2.1600.1330.A0138.0740.0000.0830.00.S16A1A05.01	16	16	133	74	83
	<b>70338</b>	MSDF.2.1650.1430.A0140.0860.0000.0930.00.S18A1A05.01	16,5	18	143	86	93
	<b>70340</b>	MSDF.2.1660.1430.A0140.0860.0000.0930.00.S18A1A05.01	16,6	18	143	86	93
	<b>70342</b>	MSDF.2.1680.1430.A0140.0860.0000.0930.00.S18A1A05.01	16,8	18	143	86	93
*	<b>70344</b>	MSDF.2.1700.1430.A0140.0860.0000.0930.00.S18A1A05.01	17	18	143	86	93
	<b>70346</b>	MSDF.2.1730.1430.A0140.0860.0000.0930.00.S18A1A05.01	17,3	18	143	86	93
	<b>70348</b>	MSDF.2.1750.1430.A0140.0860.0000.0930.00.S18A1A05.01	17,5	18	143	86	93
	<b>70350</b>	MSDF.2.1780.1430.A0140.0860.0000.0930.00.S18A1A05.01	17,8	18	143	86	93
	<b>70352</b>	MSDF.2.1800.1430.A0140.0860.0000.0930.00.S18A1A05.01	18	18	143	86	93
	<b>70354</b>	MSDF.2.1850.1530.A0140.0920.0000.1010.00.S20A1A05.01	18,5	20	153	92	101
	<b>70356</b>	MSDF.2.1880.1530.A0140.0920.0000.1010.00.S20A1A05.01	18,8	20	153	92	101
	<b>70358</b>	MSDF.2.1900.1530.A0140.0920.0000.1010.00.S20A1A05.01	19	20	153	92	101
	<b>70360</b>	MSDF.2.1950.1530.A0140.0920.0000.1010.00.S20A1A05.01	19,5	20	153	92	101
	<b>70362</b>	MSDF.2.1980.1530.A0140.0920.0000.1010.00.S20A1A05.01	19,8	20	153	92	101
	<b>70364</b>	MSDF.2.2000.1530.A0140.0920.0000.1010.00.S20A1A05.01	20	20	153	92	101

Cutting Parameters Vc(m/min)		Feed Per Revolution (mm/rev)	
Non-Alloy Steel	100-130	●	Ø
Steel	90-120	●	3
Tempered Steel	90-120	●	4
Cold-Work Tool Steel	60-90	○	5
Hot-Work Tool Steel	60-90	○	6
AISI 304 - 416 - 420	50-55	○	7
AISI 316 - 440	50-55	○	8
17-4 PH 15-5 PH	40-50	○	9
Chrome-Cobalt Alloy	40-50	○	10
Duplex F51	30-40	○	12
Super Duplex F55	30-40	○	14
Grey Cast Iron	170-200	●	16
Alloy Cast Iron	150-180	●	18
Precision Cast	110-140	●	20
Titanium	30-40	○	0,170
Titanium Alloys	25-30	○	0,187
≤ 54 HRc	60-80	○	0,204
> 54 HRc	40-55	○	0,220

● Recommended ○ Acceptable ○ Not Recommended

\*Marked products are available from stock to deliver fast.



HOLE MAKING

# M8DF

8D Drill With  
Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance New Product

Thanks to its  
brand-new geometry  
and coating up to

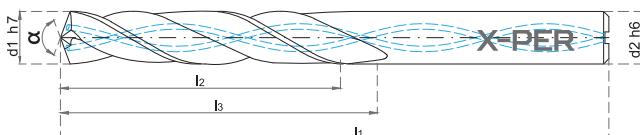
% **50** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **40** better hole surface  
roughness in comparison  
with equivalents

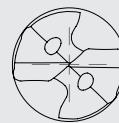
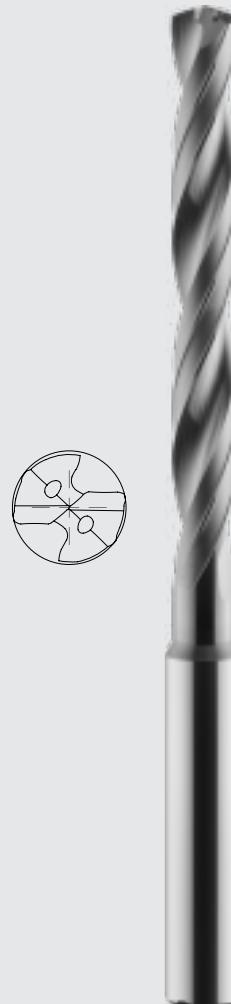
Optimal raw material  
selection for drilling  
operations to damp  
vibration and up to

% **20** more precision hole  
diameter in comparison  
with equivalents



# M8DF

8D Drill With  
Coolant Holes



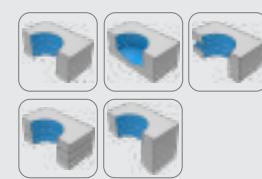
Stock	Order No	Code	d1h7	d2h6	l1	l2	l3
	73100	M8DF.2.0505.0950.A0138.0480.0000.0570.00.S06B2B02.01	5,05	6	95	48	57
	73102	M8DF.2.0520.0950.A0135.0530.0000.0590.00.S06B2A05.01	5,2	6	95	53	59
*	73104	M8DF.2.0600.0950.A0140.0530.0000.0570.00.S06B2A05.01	6	6	95	53	57
	73106	M8DF.2.0630.1140.A0140.0640.0000.0760.00.S08B2A05.01	6,3	8	114	64	76
	73108	M8DF.2.0650.1140.A0140.0640.0000.0760.00.S08B2B02.01	6,5	8	114	64	76
*	73110	M8DF.2.0680.1140.A0140.0640.0000.0760.00.S08B2A05.01	6,8	8	114	64	76
	73112	M8DF.2.0700.1140.A0135.0640.0000.0760.00.S08A2A05.01	7	8	114	64	76
	73114	M8DF.2.0750.1140.A0140.0640.0000.0760.00.S08B2A05.01	7,5	8	114	64	76
	73116	M8DF.2.0760.1140.A0140.0640.0000.0760.00.S08B2A05.01	7,6	8	114	64	76
	73118	M8DF.2.0780.1140.A0142.0640.0000.0760.00.S08B2C06.01	7,8	8	114	64	76
*	73120	M8DF.2.0800.1140.A0140.0640.0000.0760.00.S08B2L01.01	8	8	114	64	76
*	73122	M8DF.2.0850.1420.A0135.0800.0000.0950.00.S10B2A05.01	8,5	10	142	80	95
	73124	M8DF.2.0880.1420.A0140.0800.0000.0950.00.S10B2A05.01	8,8	10	142	80	95
	73126	M8DF.2.0900.1420.A0138.0800.0000.0950.00.S10B2B03.01	9	10	142	80	95
	73128	M8DF.2.0950.1420.A0140.0800.0000.0950.00.S10B2L01.01	9,5	10	142	80	95
	73130	M8DF.2.0980.1420.A0135.0800.0000.0950.00.S10B2A05.01	9,8	10	142	80	95
	73132	M8DF.2.0990.1420.A0140.0800.0000.0950.00.S10B2L01.01	9,9	10	142	80	95
*	73134	M8DF.2.1000.1420.A0135.0800.0000.0950.00.S10B2B03.01	10	10	142	80	95
*	73136	M8DF.2.1020.1620.A0138.0960.0000.1140.00.S12B2L01.01	10,2	12	162	96	114
*	73138	M8DF.2.1050.1620.A0135.0960.0000.1140.00.S12B2B03.01	10,5	12	162	96	114
	73140	M8DF.2.1100.1620.A0140.0960.0000.1140.00.S12B2B03.01	11	12	162	96	114
	73142	M8DF.2.1180.1620.A0135.0960.0000.1140.00.S12B2A05.01	11,8	12	162	96	114
*	73144	M8DF.2.1200.1620.A0135.0960.0000.1140.00.S12B2B03.01	12	12	162	96	114
*	73146	M8DF.2.1250.1780.A0140.1120.0000.1310.00.S14B2C06.01	12,5	14	178	112	131
	73148	M8DF.2.1270.1780.A0140.1120.0000.1310.00.S14B2C06.01	12,7	14	178	112	131
	73150	M8DF.2.1300.1780.A0140.1120.0000.1310.00.S14B2B03.01	13	14	178	112	131
	73152	M8DF.2.1400.1780.A0135.1120.0000.1310.00.S14B2A05.01	14	14	178	112	131
	73154	M8DF.2.1450.2030.A0135.1280.0000.1520.00.S16B2A05.01	14,5	16	203	128	152
	73156	M8DF.2.1500.2030.A0135.1280.0000.1520.00.S16B2A05.01	15	16	203	128	152
	73158	M8DF.2.1550.2030.A0135.1280.0000.1520.00.S16B2A05.01	15,5	16	203	128	152
	73160	M8DF.2.1580.2030.A0135.1280.0000.1520.00.S16B2A05.01	15,8	16	203	128	152
	73162	M8DF.2.1600.2030.A0135.1280.0000.1520.00.S16B2A05.01	16	16	203	128	152
	73164	M8DF.2.1650.2220.A0135.1440.0000.1710.00.S18B2A05.01	16,5	18	222	144	171
	73166	M8DF.2.1700.2220.A0140.1440.0000.1710.00.S18B2C06.01	17	18	222	144	171
	73168	M8DF.2.1750.2220.A0140.1440.0000.1710.00.S18B2C06.01	17,5	18	222	144	171
	73170	M8DF.2.1800.2220.A0140.1440.0000.1710.00.S18B2C06.01	18	18	222	144	171
	73172	M8DF.2.1850.2430.A0140.1600.0000.1900.00.S20B2C06.01	18,5	20	243	160	190
	73174	M8DF.2.1900.2430.A0140.1600.0000.1900.00.S20B2C06.01	19	20	243	160	190
	73176	M8DF.2.1950.2430.A0140.1600.0000.1900.00.S20B2C06.01	19,5	20	243	160	190
	73178	M8DF.2.2000.2430.A0140.1600.0000.1900.00.S20B2C06.01	20	20	243	160	190

	Cutting Parameters Vc(m/min)		Feed Per Revolution (mm/rev)
Non-Alloy Steel	80-105	●	Ø
Steel	70-100	●	3 0,112
Tempered Steel	70-95	●	4 0,119
Cold-Work Tool Steel	50-80	●	5 0,126
Hot-Work Tool Steel	50-80	●	6 0,140
AISI 304 - 416 - 420	50-55	○	7 0,154
AISI 316 - 440	50-55	○	8 0,168
17-4 PH 15-5 PH	40-50	○	9 0,189
Chrome-Cobalt Alloy	40-50	○	10 0,210
Duplex F51	30-40	○	12 0,231
Super Duplex F55	30-40	○	14 0,252
Grey Cast Iron	140-170	●	16 0,273
Alloy Cast Iron	110-140	●	18 0,294
Precision Cast	80-110	●	20 0,315
Titanium	50-70	○	
Titanium Alloys	40-60	○	
≤ 54 HRc	60-80	○	
> 54 HRc	40-55	○	

\*Marked products are available from stock to deliver fast.



● Recommended ○ Acceptable ○ Not Recommended



HOLE MAKING

# M12DF

12D Drill With  
Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance New Product

'Drills 12XD and above' require pilot hole. You may have the pilot hole by K3DF series. In this catalogue, '3XD' drills have m7 tolerance lines up with '12XD' drills and above' have h7 tolerance.

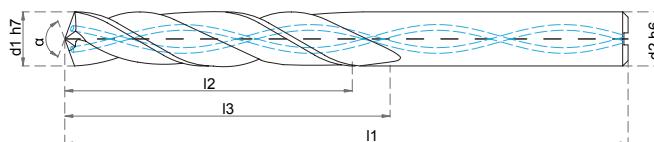
Please do not run in recommended cutting speed and feed rates and never release the internal coolant before the diameter of deep hole drill gets in the pilot hole completely[1] The recommended cutting parameters have to be used after the pilot hole centers the deep hole drill and then drilling operation has to be started when high pressure is on.

Cutting parameters highly depend on external factors such as stabilisation of tools and holders, workpiece and machine type.

The given data are only feasible cutting parameters should be considered again for each application.



Thanks to it's brand-new geometry and coating up to	% <b>50</b>	longer tool life at least in comparison with equivalents
Stronger cutting edges by Expert edge preparation technology and up to	% <b>40</b>	better hole surface roughness in comparison with equivalents
Optimal raw material selection for drilling operations to damp vibration and up to	% <b>20</b>	more precision hole diameter in comparison with equivalents

**M12DF**12D Drill With  
Coolant Holes

Stock	Order No	Code	d1h7	d2h6	l1	l2	B
	74100	M12DF.2.0300.0920.A0135.0480.0000.0940.00.S06A2B03.01	3	6	92	48	54
	74102	M12DF.2.0310.0920.A0135.0480.0000.0540.00.S06A2B03.01	3,1	6	92	48	54
	74104	M12DF.2.0320.0920.A0135.0480.0000.0540.00.S06A2B03.01	3,2	6	92	48	54
	74106	M12DF.2.0330.0920.A0135.0480.0000.0540.00.S06A2B03.01	3,3	6	92	48	54
	74108	M12DF.2.0340.0920.A0135.0480.0000.0540.00.S06A2B03.01	3,4	6	92	48	54
	74110	M12DF.2.0350.0920.A0135.0480.0000.0540.00.S06A2B03.01	3,5	6	92	48	54
	74112	M12DF.2.0360.0920.A0135.0480.0000.0540.00.S06A2B03.01	3,6	6	92	48	54
	74114	M12DF.2.0370.0920.A0135.0480.0000.0540.00.S06A2B03.01	3,7	6	92	48	54
	74116	M12DF.2.0380.1020.A0135.0580.0000.0640.00.S06B2A05.01	3,8	6	102	58	64
	74118	M12DF.2.0390.1020.A0135.0580.0000.0640.00.S06B2A05.01	3,9	6	102	58	64
	74120	M12DF.2.0400.1020.A0140.0580.0000.0640.00.S06C2B02.01	4	6	102	58	64
	74122	M12DF.2.0410.1020.A0140.0580.0000.0640.00.S06C2B02.01	4,1	6	102	58	64
	74124	M12DF.2.0420.1020.A0140.0580.0000.0640.00.S06C2B02.01	4,2	6	102	58	64
	74126	M12DF.2.0430.1020.A0140.0580.0000.0640.00.S06C2B02.01	4,3	6	102	58	64
	74128	M12DF.2.0440.1020.A0140.0580.0000.0640.00.S06C2B02.01	4,4	6	102	58	64
	74130	M12DF.2.0450.1020.A0140.0580.0000.0640.00.S06C2B02.01	4,5	6	102	58	64
	74132	M12DF.2.0460.1020.A0140.0580.0000.0640.00.S06C2B02.01	4,6	6	102	58	64
	74134	M12DF.2.0470.1020.A0140.0580.0000.0640.00.S06C2B02.01	4,7	6	102	58	64
	74136	M12DF.2.0480.1160.A0135.0700.0000.0780.00.S06B2B03.01	4,8	6	116	70	78
	74138	M12DF.2.0490.1160.A0135.0700.0000.0780.00.S06B2B03.01	4,9	6	116	70	78
	74140	M12DF.2.0500.1160.A0135.0700.0000.0780.00.S06C2B02.01	5	6	116	70	78
	74142	M12DF.2.0530.1260.A0140.0750.0000.0880.00.S06C2B02.01	5,3	6	126	75	88
	74144	M12DF.2.0550.1160.A0135.0700.0000.0780.00.S06B2B03.01	5,5	6	116	70	78
	74146	M12DF.2.0560.1220.A0140.0840.0000.0750.00.S06C2B02.01	5,6	6	122	84	75
	74148	M12DF.2.0580.1160.A0135.0700.0000.0780.00.S06B2B03.01	5,8	6	116	70	78
	74150	M12DF.2.0600.1160.A0135.0700.0000.0780.00.S06C2B02.01	6	6	116	70	78
	74152	M12DF.2.0630.1460.A0135.0940.0000.1080.00.S08B2B02.01	6,3	8	146	94	108
	74154	M12DF.2.0650.1460.A0135.0940.0000.1080.00.S08B2B02.01	6,5	8	146	94	108
	74156	M12DF.2.0660.1460.A0135.0940.0000.1080.00.S08B2B02.01	6,6	8	146	94	108
	74158	M12DF.2.0680.1460.A0135.0940.0000.1080.00.S08B2B02.01	6,8	8	146	94	108
	74160	M12DF.2.0700.1460.A0135.0940.0000.1080.00.S08B2B02.01	7	8	146	94	108
	74162	M12DF.2.0750.1460.A0135.0940.0000.1080.00.S08B2B02.01	7,5	8	146	94	108
	74164	M12DF.2.0780.1460.A0135.0940.0000.1080.00.S08B2B02.01	7,8	8	146	94	108
	74166	M12DF.2.0800.1460.A0135.0940.0000.1080.00.S08B2B02.01	8	8	146	94	108
	74168	M12DF.2.0820.1620.A0135.1100.0000.1200.00.S10C2B02.01	8,2	10	162	110	120
	74170	M12DF.2.0850.1620.A0135.1100.0000.1200.00.S10C2B02.01	8,5	10	162	110	120
	74172	M12DF.2.0900.1620.A0135.1100.0000.1200.00.S10C2B02.01	9	10	162	110	120
	74174	M12DF.2.0950.1620.A0135.1100.0000.1200.00.S10B2B03.01	9,5	10	162	110	120
	74176	M12DF.2.0980.1620.A0135.1100.0000.1200.00.S10B2B03.01	9,8	10	162	110	120
	74178	M12DF.2.1000.1620.A0135.1100.0000.1200.00.S10B2B03.01	10	10	162	110	120
	74180	M12DF.2.1050.2040.A0135.1420.0000.1560.00.S12B2B03.01	10,5	12	204	142	156
	74182	M12DF.2.1100.2040.A0135.1420.0000.1560.00.S12B2B03.01	11	12	204	142	156
	74184	M12DF.2.1150.2040.A0135.1420.0000.1560.00.S12B2B03.01	11,5	12	204	142	156
	74186	M12DF.2.1200.2040.A0135.1420.0000.1560.00.S12B2B03.01	12	12	204	142	156
	74188	M12DF.2.1300.2300.A0135.1660.0000.1820.00.S14B2B03.01	13	14	230	166	182
	74190	M12DF.2.1400.2300.A0135.1660.0000.1820.00.S14B2B03.01	14	14	230	166	182
	74192	M12DF.2.1500.2600.A0135.1920.0000.2080.00.S16B2B02.01	15	16	260	192	208
	74194	M12DF.2.1600.2600.A0135.1920.0000.2080.00.S16B2B02.01	16	16	260	192	208
	74196	M12DF.2.1800.2850.A0135.2160.0000.2340.00.S16B2B02.01	18	18	285	216	234

**Cutting Parameters Vc(m/min)****Feed Per Revolution (mm/rev)**

Non-Alloy Steel	100	●	Ø	
Steel	80	●	3-5	0,05-0,19
Tempered Steel	70	●	5-8	0,08-0,25
Cold-Work Tool Steel	40	○	8-12	0,1-0,32
Hot-Work Tool Steel	40	○	12-16	0,12-0,38
AISI 304 - 416 - 420	35	○	16-18	0,13-0,42
AISI 316 - 440	35	○		
17-4 PH 15-5 PH	30	○		
Chrome-Cobalt Alloy	30	○		
Duplex F51	25	○		
Super Duplex F55	25	○		
Grey Cast Iron	70	●		
Alloy Cast Iron	60	●		
Precision Cast	50	●		

\*Marked products are available  
from stock to deliver fast.

● Recommended ○ Acceptable ○ Not Recommended

**α  
135°**

+TiAlN



HOLE MAKING

# M16DF

16D Drill With  
Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance New Product

'Drills 12XD and above' require pilot hole. You may have the pilot hole by K3DF series. In this catalogue, '3XD' drills have m7 tolerance lines up with '12XD' drills and above' have h7 tolerance.

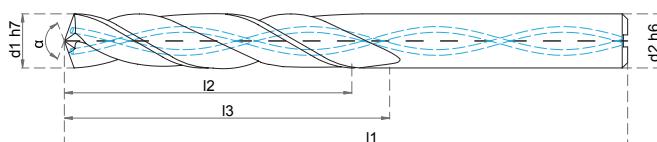
Please do not run in recommended cutting speed and feed rates and never release the internal coolant before the diameter of deep hole drill gets in the pilot hole completely[1] The recommended cutting parameters have to be used after the pilot hole centers the deep hole drill and then drilling operation has to be started when high pressure is on.

Cutting parameters highly depend on external factors such as stabilisation of tools and holders, workpiece and machine type.

The given data are only feasible cutting parameters should be considered again for each application.



Thanks to it's brand-new geometry and coating up to	% <b>50</b>	longer tool life at least in comparison with equivalents
Stronger cutting edges by Expert edge preparation technology and up to	% <b>40</b>	better hole surface roughness in comparison with equivalents
Optimal raw material selection for drilling operations to damp vibration and up to	% <b>20</b>	more precision hole diameter in comparison with equivalents

**M16DF**16D Drill With  
Coolant Holes

Stock	Order No	Code	d1h7	d2h6	l1	l2	l3
	75100	M16DF.2.0200.0840.A0135.0390.0000.0420.00.S04B2B03.01	2	4	84	39	42
	75102	M16DF.2.0220.0840.A0135.0390.0000.0420.00.S04B2B03.01	2,2	4	84	39	42
	75104	M16DF.2.0230.0840.A0135.0390.0000.0420.00.S04B2B03.01	2,3	4	84	39	42
	75106	M16DF.2.0240.0960.A0135.0500.0000.0540.00.S04B2B03.01	2,4	4	96	50	54
	75108	M16DF.2.0250.0960.A0135.0500.0000.0540.00.S04B2B03.01	2,5	4	96	50	54
	75110	M16DF.2.0270.0960.A0135.0500.0000.0540.00.S04B2B03.01	2,7	4	96	50	54
	75112	M16DF.2.0280.0960.A0135.0500.0000.0540.00.S04B2B03.01	2,8	4	96	50	54
	75114	M16DF.2.0300.1000.A0135.0550.0000.0600.00.S06B2B03.01	3	6	100	55	60
	75116	M16DF.2.0320.1000.A0135.0550.0000.0600.00.S06B2B03.01	3,2	6	100	55	60
	75118	M16DF.2.0330.1000.A0135.0550.0000.0600.00.S06B2B03.01	3,3	6	100	55	60
	75120	M16DF.2.0350.1000.A0135.0550.0000.0600.00.S06B2B03.01	3,5	6	100	55	60
	75122	M16DF.2.0380.1150.A0135.0690.0000.0750.00.S06B2B03.01	3,8	6	115	69	75
	75124	M16DF.2.0400.1150.A0135.0690.0000.0750.00.S06B2B03.01	4	6	115	69	75
	75126	M16DF.2.0420.1150.A0135.0690.0000.0750.00.S06B2B03.01	4,2	6	115	69	75
	75128	M16DF.2.0450.1300.A0135.0830.0000.0900.00.S06B2B03.01	4,5	6	130	83	90
	75130	M16DF.2.0480.1300.A0135.0830.0000.0900.00.S06B2B03.01	4,8	6	130	83	90
	75132	M16DF.2.0500.1300.A0135.0830.0000.0900.00.S06C2B02.01	5	6	130	83	90
	75134	M16DF.2.0550.1500.A0135.0990.0000.1080.00.S06C2B02.01	5,5	6	150	99	108
	75136	M16DF.2.0580.1500.A0135.0990.0000.1080.00.S06C2B02.01	5,8	6	150	99	108
	75138	M16DF.2.0600.1500.A0135.0990.0000.1080.00.S06C2B02.01	6	6	150	99	108
	75140	M16DF.2.0650.1650.A0135.1150.0000.1250.00.S08B2B02.01	6,5	8	165	115	125
	75142	M16DF.2.0680.1650.A0135.1150.0000.1250.00.S08B2B02.01	6,8	8	165	115	125
	75144	M16DF.2.0700.1650.A0135.1150.0000.1250.00.S08B2B02.01	7	8	165	115	125
	75146	M16DF.2.0750.1800.A0135.1280.0000.1400.00.S08B2B02.01	7,5	8	180	128	140
	75148	M16DF.2.0780.1800.A0135.1280.0000.1400.00.S08B2B02.01	7,8	8	180	128	140
	75150	M16DF.2.0800.1800.A0135.1280.0000.1400.00.S08B2B02.01	8	8	180	128	140
	75152	M16DF.2.0850.2050.A0135.1470.0000.1600.00.S10B2B02.01	8,5	10	205	147	160
	75154	M16DF.2.0880.2050.A0135.1470.0000.1600.00.S10B2B02.01	8,8	10	205	147	160
	75156	M16DF.2.0900.2050.A0135.1470.0000.1600.00.S10B2B02.01	9	10	205	147	160
	75158	M16DF.2.0980.2250.A0135.1650.0000.1800.00.S10B2B02.01	9,8	10	225	165	180
	75160	M16DF.2.1000.2250.A0135.1650.0000.1800.00.S10B2B02.01	10	10	225	165	180
	75162	M16DF.2.1020.2400.A0135.1740.0000.1900.00.S12B2B02.01	10,2	12	240	174	190
	75164	M16DF.2.1080.2400.A0135.1740.0000.1900.00.S12B2B02.01	10,8	12	240	174	190
	75166	M16DF.2.1180.2650.A0135.1970.0000.2150.00.S12B2B02.01	11,8	12	265	197	215
	75168	M16DF.2.1200.2650.A0135.1970.0000.2150.00.S12B2B02.01	12	12	265	197	215

**Cutting Parameters Vc(m/min)****Feed Per Revolution (mm/rev)**

Non-Alloy Steel	100	●	Ø	
Steel	100	●	2-3	0,05-0,15
Tempered Steel	90	●	3-5	0,08-0,23
Cold-Work Tool Steel	75	○	5-8	0,08-0,25
Hot-Work Tool Steel	55	○	8-12	0,1-0,32
AISI 304 - 416 - 420	55	○		
AISI 316 - 440	50	○		
17-4 PH 15-5 PH	50	○		
Chrome-Cobalt Alloy	40	○		
Duplex F51	40	○		
Grey Cast Iron	105	●		
Alloy Cast Iron	100	●		
Precision Cast	100	●		

**α  
135°**

+TiAlN

FORM  
HA DIN  
6535\*Marked products are available  
from stock to deliver fast.

● Recommended   ○ Acceptable   ○ Not Recommended

HOLE MAKING

# M20DF

20D Drill With  
Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance New Product

'Drills 12XD and above' require pilot hole. You may have the pilot hole by K3DF series. In this catalogue, '3XD' drills have m7 tolerance lines up with '12XD' drills and above' have h7 tolerance.

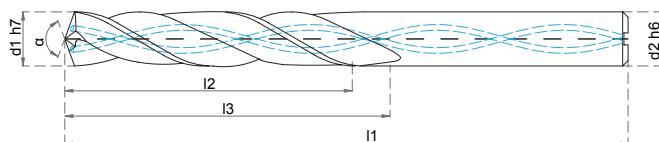
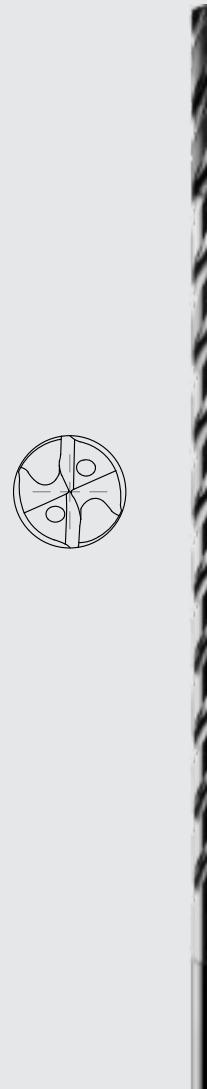
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Stronger cutting edges by Expert edge preparation technology and up to	% <b>40</b>	better hole surface roughness in comparison with equivalents
Optimal raw material selection for drilling operations to damp vibration and up to	% <b>20</b>	more precision hole diameter in comparison with equivalents

**M20DF**20D Drill With  
Coolant Holes

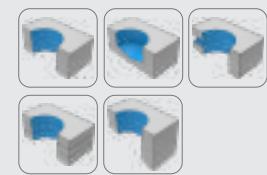
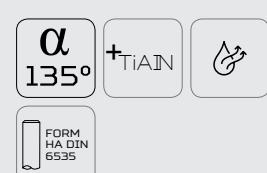
Stock	Order No	Code	d1h7	d2h6	l1	l2	l3
	76100	M20DF.2.0200.0920.A0135.0470.0000.0500.00.S04B2B03.01	2	4	92	47	50
	76102	M20DF.2.0220.0920.A0135.0470.0000.0500.00.S04B2B03.01	2,2	4	92	47	50
	76104	M20DF.2.0230.0920.A0135.0470.0000.0500.00.S04B2B03.01	2,3	4	92	47	50
	76106	M20DF.2.0240.1120.A0135.0660.0000.0700.00.S04B2B03.01	2,4	4	112	66	70
	76108	M20DF.2.0250.1120.A0135.0660.0000.0700.00.S04B2B03.01	2,5	4	112	66	70
	76110	M20DF.2.0270.1120.A0135.0660.0000.0700.00.S04B2B03.01	2,7	4	112	66	70
	76112	M20DF.2.0280.1120.A0135.0660.0000.0700.00.S04B2B03.01	2,8	4	112	66	70
	76114	M20DF.2.0300.1200.A0135.0750.0000.0800.00.S06B2B03.01	3	6	120	75	80
	76116	M20DF.2.0320.1200.A0135.0750.0000.0800.00.S06B2B03.01	3,2	6	120	75	80
	76118	M20DF.2.0330.1200.A0135.0750.0000.0800.00.S06B2B03.01	3,3	6	120	75	80
	76120	M20DF.2.0350.1200.A0135.0750.0000.0800.00.S06B2B03.01	3,5	6	120	75	80
	76122	M20DF.2.0380.1300.A0135.0840.0000.0900.00.S06B2B03.01	3,8	6	130	84	90
	76124	M20DF.2.0400.1300.A0135.0840.0000.0900.00.S06B2B03.01	4	6	130	84	90
	76126	M20DF.2.0420.1600.A0135.1030.0000.1100.00.S06B2B03.01	4,2	6	160	103	110
	76128	M20DF.2.0450.1600.A0135.1030.0000.1100.00.S06B2B03.01	4,5	6	160	103	110
	76130	M20DF.2.0480.1600.A0135.1130.0000.1200.00.S06B2B03.01	4,8	6	160	113	120
	76132	M20DF.2.0500.1600.A0135.1130.0000.1200.00.S06B2B03.01	5	6	160	113	120
	76134	M20DF.2.0550.1850.A0135.1310.0000.1400.00.S06B2B03.01	5,5	6	185	131	140
	76136	M20DF.2.0580.1850.A0135.1310.0000.1400.00.S06B2B03.01	5,8	6	185	131	140
	76138	M20DF.2.0600.1850.A0135.1310.0000.1400.00.S06B2B03.01	6	6	185	131	140
	76140	M20DF.2.0650.2100.A0135.1500.0000.1600.00.S08B2B03.01	6,5	8	210	150	160
	76142	M20DF.2.0680.2100.A0135.1500.0000.1600.00.S08B2B03.01	6,8	8	210	150	160
	76144	M20DF.2.0700.2100.A0135.1500.0000.1600.00.S08B2B03.01	7	8	210	150	160
	76146	M20DF.2.0750.2300.A0135.1680.0000.1800.00.S08B2B03.01	7,5	8	230	168	180
	76148	M20DF.2.0780.2300.A0135.1680.0000.1800.00.S08B2B03.01	7,8	8	230	168	180
	76150	M20DF.2.0800.2300.A0135.1680.0000.1800.00.S08B2B03.01	8	8	230	168	180
	76152	M20DF.2.0850.2600.A0135.1820.0000.1950.00.S10B2B03.01	8,5	10	260	182	195
	76154	M20DF.2.0880.2900.A0135.2160.0000.2300.00.S10B2B03.01	8,8	10	290	216	230
	76156	M20DF.2.0900.2900.A0135.2160.0000.2300.00.S10B2B03.01	9	10	290	216	230
	76158	M20DF.2.0980.2900.A0135.2160.0000.2300.00.S10B2B03.01	9,8	10	290	216	230
	76160	M20DF.2.1000.2900.A0135.2160.0000.2300.00.S10B2B03.01	10	10	290	216	230
	76162	M20DF.2.1020.3150.A0135.2510.0000.2680.00.S12B2B03.01	10,2	12	315	251	268
	76164	M20DF.2.1080.3150.A0135.2510.0000.2680.00.S12B2B03.01	10,8	12	315	251	268
	76166	M20DF.2.1180.3150.A0135.2510.0000.2680.00.S12B2B03.01	11,8	12	315	251	268
	76168	M20DF.2.1200.3150.A0135.2510.0000.2680.00.S12B2B03.01	12	12	315	251	268

Cutting Parameters Vc(m/min)		Feed Per Revolution (mm/rev)	
Unalloyed Steel	95	●	Ø
Steel	95	●	2-3 0,05-0,15
Tempered Steel	85	●	3-5 0,08-0,23
Hot Work Tool Steel	70	○	5-8 0,12-0,335
AISI 304 - 416 - 420	50	○	8-12 0,15-0,425
AISI 316 - 440	50	○	
17-4 PH 15-5 PH	45	○	
Chrome-Cobalt Alloy	45	○	
Duplex F51	35	○	
Super Duplex F55	35	○	
Gray Cast	100	●	
Alloyed Cast	95	●	
Precision Cast	95	●	

\*Marked products are available  
from stock to deliver fast.



● Recommended ○ Acceptable ○ Not Recommended



HOLE MAKING

# M25DF

25D Drill With  
Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance New Product

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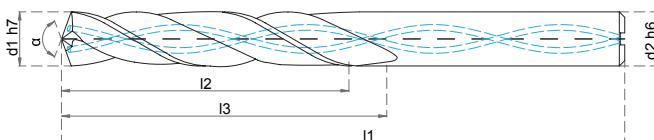
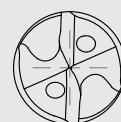
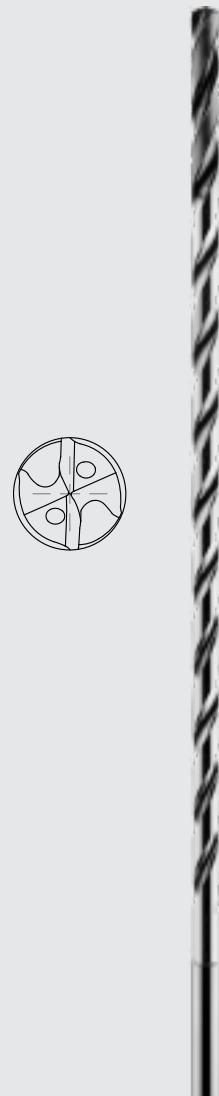
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Stronger cutting edges by Expert edge preparation technology and up to	% <b>40</b>	better hole surface roughness in comparison with equivalents
Optimal raw material selection for drilling operations to damp vibration and up to	% <b>20</b>	more precision hole diameter in comparison with equivalents

**M25DF**25D Drill With  
Coolant Holes

Stock	Order No	Code	d1h7	d2h6	l1	l2	l3
	77100	M25DF.2.0200.1040.A0135.0570.0000.0600.00.S04C1B03.01	2	4	104	57	60
	77102	M25DF.2.0220.1040.A0135.0570.0000.0600.00.S04C1B03.01	2,2	4	104	57	60
	77104	M25DF.2.0230.1040.A0135.0570.0000.0600.00.S04C1B03.01	2,3	4	104	57	60
	77106	M25DF.2.0240.1250.A0135.0760.0000.0800.00.S04M1B03.01	2,4	4	125	76	80
	77108	M25DF.2.0250.1250.A0135.0760.0000.0800.00.S04M1B03.01	2,5	4	125	76	80
	77110	M25DF.2.0270.1250.A0135.0760.0000.0800.00.S04M1B03.01	2,7	4	125	76	80
	77112	M25DF.2.0280.1250.A0135.0760.0000.0800.00.S04M1B03.01	2,8	4	125	76	80
	77114	M25DF.2.0300.1350.A0135.0930.0000.0980.00.S06M1B03.01	3	6	135	93	98
	77116	M25DF.2.0320.1350.A0135.0930.0000.0980.00.S06M1B03.01	3,2	6	135	93	98
	77118	M25DF.2.0330.1500.A0135.1050.0000.1100.00.S06M1B03.01	3,3	6	150	105	110
	77120	M25DF.2.0350.1500.A0135.1050.0000.1100.00.S06M1B03.01	3,5	6	150	105	110
	77122	M25DF.2.0380.1600.A0135.1140.0000.1200.00.S06M1B03.01	3,8	6	160	114	120
	77124	M25DF.2.0400.1600.A0135.1140.0000.1200.00.S06M1B03.01	4	6	160	114	120
	77126	M25DF.2.0420.1600.A0135.1140.0000.1200.00.S06M1B03.01	4,2	6	160	114	120
	77128	M25DF.2.0450.1800.A0135.1280.0000.1350.00.S06C2B02.01	4,5	6	180	128	135
	77130	M25DF.2.0480.1800.A0135.1280.0000.1350.00.S06C2B02.01	4,8	6	180	128	135
	77132	M25DF.2.0500.1800.A0135.1280.0000.1350.00.S06C2B02.01	5	6	180	128	135
	77134	M25DF.2.0550.2050.A0135.1590.0000.1680.00.S06C2B02.01	5,5	6	205	159	168
	77136	M25DF.2.0580.2050.A0135.1590.0000.1680.00.S06C2B02.01	5,8	6	205	159	168
	77138	M25DF.2.0600.2050.A0135.1590.0000.1680.00.S06C2B02.01	6	6	205	159	168
	77140	M25DF.2.0650.2400.A0135.1900.0000.2000.00.S08C2B02.01	6,5	8	240	190	200
	77142	M25DF.2.0680.2400.A0135.1900.0000.2000.00.S08C2B02.01	6,8	8	240	190	200
	77144	M25DF.2.0700.2400.A0135.1900.0000.2000.00.S08C2B02.01	7	8	240	190	200
	77146	M25DF.2.0750.2600.A0135.2080.0000.2200.00.S08C2B02.01	7,5	8	260	208	220
	77148	M25DF.2.0780.2600.A0135.2080.0000.2200.00.S08C2B02.01	7,8	8	260	208	220
	77150	M25DF.2.0800.2600.A0135.2080.0000.2200.00.S08C2B02.01	8	8	260	208	220
	77152	M25DF.2.0850.2850.A0135.2270.0000.2400.00.S10C2B02.01	8,5	10	285	227	240
	77154	M25DF.2.0880.3100.A0135.2540.0000.2680.00.S10C2B02.01	8,8	10	310	254	268
	77156	M25DF.2.0900.3100.A0135.2540.0000.2680.00.S10C2B02.01	9	10	310	254	268
	77158	M25DF.2.0980.3100.A0135.2540.0000.2680.00.S10C2B02.01	9,8	10	310	254	268
	77160	M25DF.2.1000.3100.A0135.2540.0000.2680.00.S10C2B02.01	10	10	310	254	268
	77162	M25DF.2.1020.3750.A0135.3080.0000.3250.00.S12C2B02.01	10,2	12	375	308	325
	77164	M25DF.2.1080.3750.A0135.3080.0000.3250.00.S12C2B02.01	10,8	12	375	308	325
	77166	M25DF.2.1180.3750.A0135.3080.0000.3250.00.S12C2B02.01	11,8	12	375	308	325
	77168	M25DF.2.1200.3750.A0135.3080.0000.3250.00.S12C2B02.01	12	12	375	308	325

Cutting Parameters Vc(m/min)		Feed Per Revolution (mm/rev)	
Non-Alloy Steel	85	●	Ø
Steel	85	●	2-3      0,05-0,15
Tempered Steel	75	●	3-5      0,08-0,23
Cold-Work Tool Steel	65	○	5-8      0,12-0,335
Hot-Work Tool Steel	45	○	8-12     0,15-0,425
AISI 304 - 416 - 420	45	○	
AISI 316 - 440	40	○	
17-4 PH 15-5 PH	40	○	
Chrome-Cobalt Alloy	30	○	
Duplex F51	30	○	
Grey Cast Iron	90	●	
Alloy Cast Iron	85	●	
Precision Cast	85	●	

\*Marked products are available  
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● Recommended   ○ Acceptable   ○ Not Recommended



HOLE-MAKING

**KY3DF**

Double Margin  
3D Drill



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance

Thanks to it's  
brand-new geometry  
and coating up to

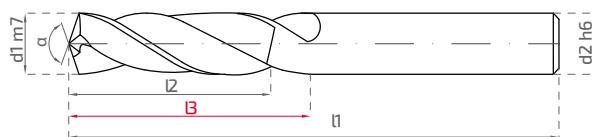
% **50** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **40** better hole surface  
roughness in comparison  
with equivalents

Optimal raw material and  
coolant pitch selection  
without run-out only for  
drilling operations to damp  
vibration and up to

% **30** more precision hole  
diameter in comparison  
with equivalents with it's  
double margin advantage

**KY3DF**Double Margin  
3D Drill

Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
	51100	KY3DF.2.0490.0660.A0140.0200.0490.0300.00.S06B1B02.01	4,9	6	66	20	30
	51102	KY3DF.2.0800.0790.A0140.0380.0800.0410.00.S08B1B02.01	8	8	79	38	41
	51104	KY3DF.2.1000.0890.A0140.0430.1000.0470.00.S10B1B02.01	10	10	89	43	47
	51106	KY3DF.2.1200.1020.A0140.0510.1200.0550.00.S12B1B02.01	12	12	102	51	55
	51108	KY3DF.2.1400.1070.A0140.0530.1400.0600.00.S14B1B02.01	14	14	107	53	60

Cutting Parameters Vc(m/min)		
Unalloyed Steel	80-120	●
Steel	70-110	●
Tempered Steel	65-100	●
Cold Work Tool Steel	55-70	○
Hot Work Tool Steel	55-70	○
AISI 304 - 416 - 420	55-65	○
AISI 316 - 440	55-65	○
17-4 PH 15-5 PH	50-55	○
Chrome-Cobalt Alloy	50-55	○
Duplex F51	40-50	○
Super Duplex F55	40-50	○
Gray Cast	95-110	●
Alloyed Cast	80-95	●
Precision Cast	80-95	●
Graphite	110-130	●
Titanium	50-70	●
Titanium Alloys	40-60	●

Feed Per Revolution (mm/rev)		
Ø	mm/dev	
3	0.030	
4	0.035	
5	0.050	
6	0.060	
8	0.100	
10	0.125	
12	0.150	
16	0.155	
20	0.200	



● Recommended ○ Acceptable ○ Not Recommended

\*Marked products are available  
from stock to deliver fast.

HOLE MAKING

**Y5DF**

5D Drill With  
Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance



Thanks to it's  
brand-new geometry  
and coating up to

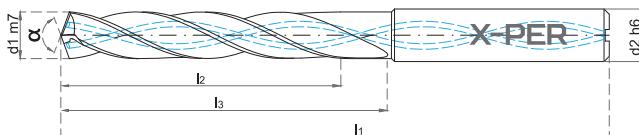
% **50** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **40** better hole surface  
roughness in comparison  
with equivalents

Optimal raw material and  
coolant pitch selection  
without run-out only for  
drilling operations to damp  
vibration and up to

% **30** more precision hole  
diameter in comparison  
with equivalents with it's  
double margin advantage



**Y5DF**  
SD Drill With  
Coolant Holes

Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
	78100	Y5DF.2.0350.0660.A0140.0270.0000.0280.00.S06N2B02.01	3,5	6	66	27	28
	78102	Y5DF.2.0360.0660.A0140.0270.0000.0280.00.S06B2C06.01	3,6	6	66	27	28
*	78104	Y5DF.2.0370.0660.A0140.0270.0000.0280.00.S06B2C06.01	3,7	6	66	27	28
*	78106	Y5DF.2.0390.0740.A0138.0320.0000.0360.00.S06C2C06.01	3,9	6	74	32	36
*	78108	Y5DF.2.0390.0740.A0142.0320.0000.0360.00.S06B2B02.01	3,9	6	74	32	36
*	78110	Y5DF.2.0400.0740.A0142.0320.0000.0360.00.S06C2B02.01	4	6	74	32	36
	78112	Y5DF.2.0400.0950.A0138.0380.0000.0420.00.S06C2C06.01	4	6	95	38	42
	78114	Y5DF.2.0400.0750.A0142.0320.0000.0360.00.S06B2C05.01	4	6	75	32	36
	78116	Y5DF.2.0415.0800.A0140.0370.0000.0400.00.S06B2B02.01	4,15	6	80	37	40
*	78118	Y5DF.2.0420.0740.A0140.0320.0000.0360.00.S06B2C06.01	4,2	6	74	32	36
	78120	Y5DF.2.0450.0740.A0140.0320.0000.0360.00.S06B2C06.01	4,5	6	74	32	36
*	78122	Y5DF.2.0460.0740.A0140.0320.0000.0360.00.S06B2C06.01	4,6	6	74	32	36
	78124	Y5DF.2.0460.0750.A0142.0330.0000.0380.00.S06B2B02.01	4,6	6	75	33	38
	78126	Y5DF.2.0500.0820.A0140.0410.0000.0440.00.S06B2B02.01	5	6	82	41	44
*	78128	Y5DF.2.0510.0820.A0138.0410.0000.0440.00.S06C2B03.01	5,1	6	82	41	44
	78130	Y5DF.2.0550.0820.A0138.0410.0000.0440.00.S06C2B03.01	5,5	6	82	41	44
	78132	Y5DF.2.0600.0820.A0138.0410.0000.0440.00.S06B2B03.01	6	6	82	41	44
	78134	Y5DF.2.0650.0910.A0138.0500.0000.0530.00.S08C2L02.01	6,5	8	91	50	53
*	78136	Y5DF.2.0680.0910.A0140.0500.0000.0530.00.S08B1B02.01	6,8	8	91	50	53
*	78138	Y5DF.2.0700.0910.A0138.0500.0000.0530.00.S08B1B03.01	7	8	91	50	53
	78140	Y5DF.2.0750.0910.A0138.0500.0000.0530.00.S08B1B02.01	7,5	8	91	50	53
	78142	Y5DF.2.0780.0910.A0138.0500.0000.0530.00.S08B1B02.01	7,8	8	91	50	53
	78144	Y5DF.2.0800.0910.A0138.0500.0000.0530.00.S08B1B02.01	8	8	91	50	53
*	78146	Y5DF.2.0850.1030.A0140.0570.0000.0610.00.S10B1B03.01	8,5	10	103	57	61
	78148	Y5DF.2.0880.1030.A0140.0570.0000.0610.00.S10B1C06.01	8,8	10	103	57	61
	78150	Y5DF.2.0890.1030.A0140.0570.0000.0610.00.S10B1C06.01	8,9	10	103	57	61
	78152	Y5DF.2.0900.1030.A0140.0570.0000.0610.00.S10B1B03.01	9	10	103	57	61
	78154	Y5DF.2.0950.1030.A0140.0570.0000.0610.00.S10B1B03.01	9,5	10	103	57	61
	78156	Y5DF.2.0960.1030.A0140.0570.0000.0610.00.S10B1B03.01	9,6	10	103	57	61
	78158	Y5DF.2.0960.1250.A0130.0780.0000.0850.00.S10B2C03.01	9,6	10	125	78	85
*	78160	Y5DF.2.1000.1030.A0140.0570.0000.0610.00.S10B1B03.01	10	10	103	57	61
*	78162	Y5DF.2.1020.1180.A0140.0670.0000.0710.00.S12B1B03.01	10,2	12	118	67	71
	78164	Y5DF.2.1050.1180.A0140.0670.0000.0710.00.S12B1B03.01	10,5	12	118	67	71
	78166	Y5DF.2.1100.1180.A0140.0670.0000.0710.00.S12B1B03.01	11	12	118	67	71
	78168	Y5DF.2.1200.1180.A0140.0670.0000.0710.00.S12B1B03.01	12	12	118	67	71
*	78170	Y5DF.2.1250.1240.A0140.0700.0000.0770.00.S14B2C06.01	12,5	14	124	70	77
	78172	Y5DF.2.1280.1240.A0140.0700.0000.0770.00.S14B2C06.01	12,8	14	124	70	77
	78174	Y5DF.2.1300.1240.A0140.0700.0000.0770.00.S14B2C06.01	13	14	124	70	77
	78176	Y5DF.2.1400.1240.A0140.0700.0000.0770.00.S14B2C06.01	14	14	124	70	77
	78178	Y5DF.2.1450.1330.A0140.0740.0000.0830.00.S16B2C06.01	14,5	16	133	74	83
	78180	Y5DF.2.1500.1330.A0140.0740.0000.0830.00.S16B2C06.01	15	16	133	74	83
	78182	Y5DF.2.1550.1330.A0140.0740.0000.0830.00.S16B2C06.01	15,5	16	133	74	83
	78184	Y5DF.2.1600.1330.A0140.0740.0000.0830.00.S16B2C06.01	16	16	133	74	83
	78186	Y5DF.2.1700.1430.A0140.0860.0000.0930.00.S18B2C06.01	17	18	143	86	93
	78188	Y5DF.2.1750.1430.A0140.0860.0000.0930.00.S18B2C06.01	17,5	18	143	86	93
	78190	Y5DF.2.1800.1430.A0140.0860.0000.0930.00.S18B2C06.01	18	18	143	86	93
	78192	Y5DF.2.1850.1530.A0140.0920.0000.1010.00.S20B2C06.01	18,5	20	153	92	101
	78194	Y5DF.2.1900.1530.A0140.0920.0000.1010.00.S20B2C06.01	19	20	153	92	101
	78196	Y5DF.2.1950.1530.A0140.0920.0000.1010.00.S20B2C06.01	19,5	20	153	92	101
	78198	Y5DF.2.2000.1530.A0140.0920.0000.1010.00.S20B2C06.01	20	20	153	92	101
	78200	Y5DF.2.0300.0660.A0140.0270.0000.0280.00.S20B2C06.01	3	6	66	27	28

#### Cutting Parameters Vc(m/min)

Non-Alloy Steel	160-200	●
Steel	140-180	●
Tempered Steel	100-130	●
Cold-Work Tool Steel	100-120	○
Sıcak İş Takım Çeligi	80-110	○
AISI 304 - 416 - 420	30-50	○
AISI 316 - 440	30-50	○
Grey Cast Iron	140-180	○
Alloy Cast Iron	140-160	○
Precision Cast	130-160	○
Titanium	30-40	○
Titanium Alloys	25-30	○

#### Feed Per Revolution (mm/rev)

0	
3	0,100
4	0,110
5	0,120
6	0,150
8	0,200
10	0,250
12	0,300
16	0,350
20	0,400

$\alpha$   
140°

+TiAlN



FORM  
HA DIN  
6535



\*Marked products are available  
from stock to deliver fast.

HOLE MAKING



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Mold & Die



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Rail  
Systems

## D-Tech High Performance

Up to

%

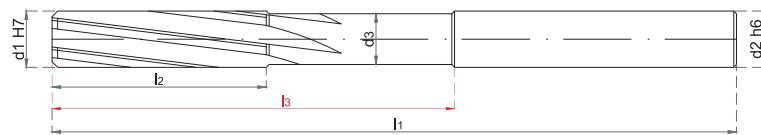
**40**

longer tool life at  
least in comparison  
with equivalents

Optimal ultra fine raw  
material without run-out

Special coating selection  
unique to reaming

High hole precision  
and smooth surface  
roughness



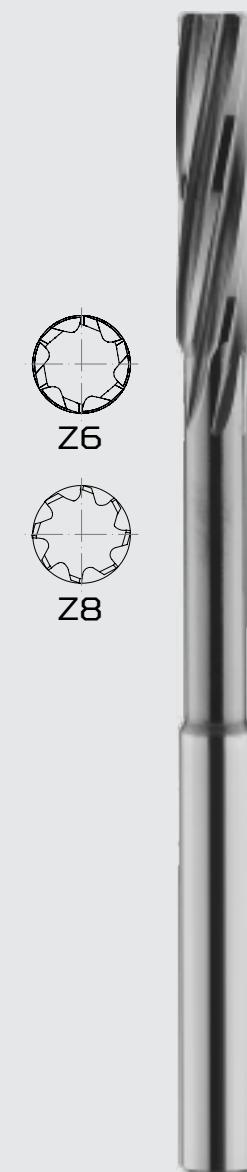
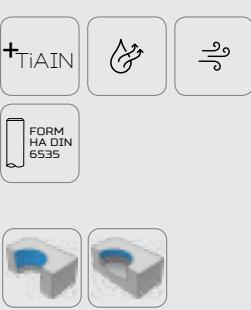
Stock	Order No	Code	d1H7	d2h6	d3	l1	l2	l3	Z
*	<b>52100</b>	KDRF.6.0400.0750.C0050.0180.0350.0470.00.506B1B04.01	4	6	3,5	75	18	47	6
*	<b>52102</b>	KDRF.6.0450.0750.C0050.0180.0350.0470.00.506B1B04.01	4,5	6	3,5	75	18	47	6
*	<b>52104</b>	KDRF.6.0500.0820.C0050.0230.0400.0500.00.506A1B04.01	5	6	4	82	23	50	6
*	<b>52106</b>	KDRF.6.0550.0930.C0050.0230.0450.0570.00.506B1B04.01	5,5	6	4,5	93	23	57	6
*	<b>52108</b>	KDRF.6.0600.0930.C0050.0260.0500.0570.00.506B4B04.01	6	6	5	93	26	57	6
*	<b>52110</b>	KDRF.6.0650.1000.C0050.0260.0550.0650.00.508B1B04.01	6,5	8	5,5	100	26	65	6
	<b>52112</b>	KDRF.6.0700.1100.C0050.0310.0600.0730.00.508A1B04.01	7	8	6	110	31	73	6
	<b>52114</b>	KDRF.6.0750.1100.C0050.0310.0650.0770.00.508A1B04.01	7,5	8	6,5	110	31	77	6
*	<b>52116</b>	KDRF.6.0800.1170.C0050.0330.0700.0810.00.508A5B04.01	8	8	7	117	33	81	6
*	<b>52118</b>	KDRF.6.0850.1140.C0050.0330.0750.0810.00.510B1B04.01	8,5	10	7,5	114	33	81	6
	<b>52120</b>	KDRF.6.0900.1250.C0050.0360.0800.0850.00.510B1B04.01	9	10	8	125	36	85	6
	<b>52122</b>	KDRF.6.0950.1250.C0050.0360.0850.0850.00.510B1B04.01	9,5	10	8,5	125	36	85	6
*	<b>52124</b>	KDRF.6.1000.1330.C0050.0380.0900.0930.00.510A5B04.01	10	10	9	133	38	93	6
*	<b>52126</b>	KDRF.6.1050.1400.C0050.0380.0950.0930.00.512B1B04.01	10,5	12	9,5	140	38	93	6
	<b>52128</b>	KDRF.6.1100.1400.C0050.0410.1000.0970.00.512B1B04.01	11	12	10	140	41	97	6
*	<b>52130</b>	KDRF.6.1200.1510.C0050.0440.1100.1060.00.512A5B04.01	12	12	11	151	44	106	6
	<b>52132</b>	KDRF.6.1300.1500.C0050.0440.1200.1060.00.514B1B04.01	13	14	12	150	44	106	6
	<b>52134</b>	KDRF.6.1400.1600.C0050.0470.1300.1120.00.514A5B04.01	14	14	13	160	47	112	6
	<b>52136</b>	KDRF.8.1500.1600.C0050.0550.1400.1140.00.516B1B04.01	15	16	14	160	55	114	8
	<b>52138</b>	KDRF.8.1600.1600.C0050.0550.1500.1140.00.516A5B04.01	16	16	15	160	55	114	8
	<b>52140</b>	KDRF.8.1800.1820.C0050.0560.1700.1320.00.518A5B04.01	18	18	17	182	56	132	8
	<b>52142</b>	KDRF.8.2000.1950.C0050.0600.1900.1450.00.520A5B04.01	20	20	19	195	60	145	8

Cutting Parameters Vc(m/min)		Feed Per Revolution (mm/rev)		
Non-Alloy Steel	20-30	●	0	
Steel	15-25	●	4-5,5	0.080
Tempered Steel	15-20	●	6-7,5	0.100
Cold-Work Tool Steel	10--15	●	8-9,5	0.125
Hot-Work Tool Steel	10--15	●	10--12	0.150
AISI 304 - 416 - 420	15-20	○	13-16	0.180
AISI 316 - 440	15-20	○	17-20	0.220
17-4 PH 15-5 PH	15-18	○		0.250
Chrome-Cobalt Alloy	13-17	○		
Duplex F51	12--15	○		
Super Duplex F55	12--15	○		
Grey Cast Iron	20-25	●		
Alloy Cast Iron	20-25	●		
Precision Cast	15-20	●		
Aluminum Alloys	30-50	○		
Copper Alloys	30-50	○		
Magnesium Alloys	30-50	○		
Titanium	10-15	●		
Titanium Alloys	10-15	●		
HRSA	10-15	○		
≤ 54 HRC	15-30	○		
>54 HRC	10-15	○		



● Recommended ○ Acceptable ○ Not Recommended

\*Marked products are available  
from stock to deliver fast.



HOLE MAKING



Center Drill 90°



General  
Engineering



Mold & Die



Automotive



Defence

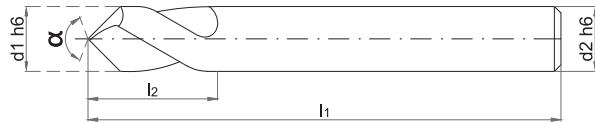


Rail  
Systems

D-Tech  
High Performance



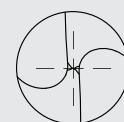
**2025**  
Hole Making  
Catalogue



Stock	Order No	Code	d1h6	d2h6	l1	l2
*	<b>54100</b>	KNS.2.0300.0390.A0090.0080.0000.0000.00.S03A1Y01.01	3	3	39	8
*	<b>54102</b>	KNS.2.0400.0390.A0090.0100.0000.0000.00.S04A1Y01.01	4	4	39	10
*	<b>54104</b>	KNS.2.0500.0510.A0090.0130.0000.0000.00.S05A1Y01.01	5	5	51	13
*	<b>54106</b>	KNS.2.0600.0500.A0090.0160.0000.0000.00.S06A1Y01.01	6	6	50	16
*	<b>54108</b>	KNS.2.0800.0640.A0090.0230.0000.0000.00.S08A1Y01.01	8	8	64	23
*	<b>54110</b>	KNS.2.1000.0730.A0090.0240.0000.0000.00.S10A1Y01.01	10	10	73	24
*	<b>54112</b>	KNS.2.1200.0740.A0090.0270.0000.0000.00.S12A1Y01.01	12	12	74	27
*	<b>54114</b>	KNS.2.1400.0760.A0090.0260.0000.0000.00.S14A1Y01.01	14	14	76	26
*	<b>54116</b>	KNS.2.1600.0820.A0090.0300.0000.0000.00.S16A1Y01.01	16	16	82	30
*	<b>54118</b>	KNS.2.1800.0930.A0090.0350.0000.0000.00.S18A1Y01.01	18	18	93	35
*	<b>54120</b>	KNS.2.2000.1050.A0090.0350.0000.0000.00.S20A1Y01.01	20	20	105	35

#### Cutting Parameters Vc(m/min)

Steel	●
Stainless Steel	○
Hardened Steel <54 HRc	○
Hardened Steel >54 HRc	○
Cast Iron	●
Non Ferrous Material	○
HRSA	○
Titanium	●



● Recommended ○ Acceptable ○ Not Recommended

\*Marked products are available  
from stock to deliver fast.

HOLE MAKING



Center Drill 120°



General  
Engineering



Mold & Die



Automotive



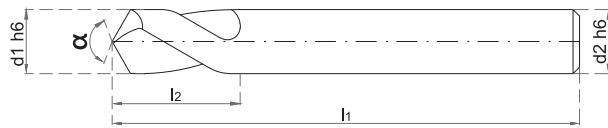
Defence



Rail  
Systems

## D-Tech High Performance Precise Center Drill



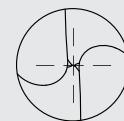


**KNZ**  
Center Drill 120°

Stock	Order No	Code	$d1h6$	$d2h6$	$l1$	$l2$
	<b>55100</b>	KNZ.2.0300.0390.A0120.0080.0000.0000.00.S03A1Y01.01	3	3	39	8
	<b>55102</b>	KNZ.2.0400.0390.A0120.0100.0000.0000.00.S04A1Y01.01	4	4	39	10
	<b>55104</b>	KNZ.2.0500.0510.A0120.0130.0000.0000.00.S05A1Y01.01	5	5	51	13
	<b>55106</b>	KNZ.2.0600.0500.A0120.0150.0000.0000.00.S06A1Y01.01	6	6	50	15
	<b>55108</b>	KNZ.2.0800.0640.A0120.0230.0000.0000.00.S08A1Y01.01	8	8	64	23
	<b>55110</b>	KNZ.2.1000.0730.A0120.0250.0000.0000.00.S10A1Y01.01	10	10	73	25
	<b>55112</b>	KNZ.2.1200.0740.A0120.0250.0000.0000.00.S12A1Y01.01	12	12	74	25
	<b>55114</b>	KNZ.2.1400.0760.A0120.0260.0000.0000.00.S14A1Y01.01	14	14	76	26
	<b>55116</b>	KNZ.2.1600.0820.A0120.0300.0000.0000.00.S16A1Y01.01	16	16	82	30
	<b>55118</b>	KNZ.2.1800.0930.A0120.0350.0000.0000.00.S18A1Y01.01	18	18	93	35
	<b>55120</b>	KNZ.2.2000.1050.A0120.0350.0000.0000.00.S20A1Y01.01	20	20	105	35

#### Cutting Parameters Vc(m/min)

Steel	●
Stainless Steel	○
Hardened Steel ≤54 HRc	○
Hardened Steel >54 HRc	○
Cast Iron	●
Non Ferrous Material	○
HRSA	○
Titanium	●



HOLE MAKING



General  
Engineering



Mold & Die



Automotive



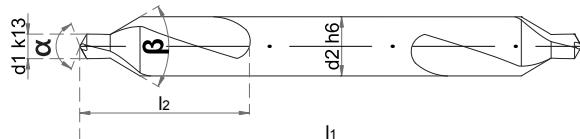
Defence



Rail  
Systems

## D-Tech High Performance Precise Center Drill



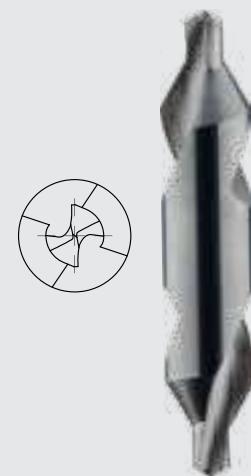


**PMS**  
Center Drill

Stock	Order No	Code	d1k13	d2h6	l1	l2
	<b>53100</b>	PMS.2.0100.0390.A0120.0020.0000.00.503A1Y01.01	1	3	39	2
*	<b>53102</b>	PMS.2.0125.0390.A0120.0020.0000.00.503A1Y01.01	1,25	3	39	2
	<b>53104</b>	PMS.2.0160.0390.A0120.0024.0000.0000.00.504A1Y01.01	1,6	4	39	2,4
*	<b>53106</b>	PMS.2.0200.0510.A0120.0029.0000.0000.00.505A1Y01.01	2	5	51	2,9
*	<b>53108</b>	PMS.2.0250.0500.A0120.0036.0000.0000.00.506A1Y01.01	2,5	6	50	3,6
	<b>53110</b>	PMS.2.0300.0500.A0120.0044.0000.0000.00.508A1Y01.01	3	8	50	4,4
*	<b>53112</b>	PMS.2.0315.0500.A0120.0044.0000.0000.00.508A1Y01.01	3,15	8	50	4,4
	<b>53114</b>	PMS.2.0350.0500.A0120.0044.0000.0000.00.508A1Y01.01	3,5	8	50	4,4
	<b>53116</b>	PMS.2.0400.0730.A0120.0056.0000.0000.00.510A1Y01.01	4	10	73	5,6
	<b>53118</b>	PMS.2.0500.0820.A0120.0069.0000.0000.00.512A1Y01.01	5	12	82	6,9
*	<b>53120</b>	PMS.2.0630.0930.A0120.0086.0000.0000.00.516A1Y01.01	6,3	16	93	8,6

#### Cutting Parameters Vc(m/min)

Steel	●
Stainless Steel	○
Hardened Steel ≤54 HRc	○
Hardened Steel >54 HRc	○
Cast Iron	●
Non Ferrous Material	○
HRSA	○
Titanium	●



● Recommended ○ Acceptable ○ Not Recommended

\*Marked products are available  
from stock to deliver fast.

HOLE MAKING



Countersink Convex



General  
Engineering



Mold & Die



Automotive



Defence



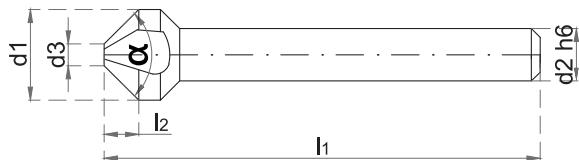
Rail  
Systems

D-Tech  
High Performance



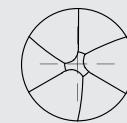
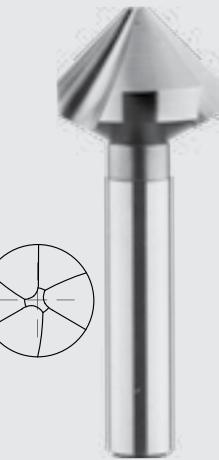
% **100** stock

**2025**  
Hole Making  
Catalogue



Stock	Order No.	Code	d1h9	d2h6	d3	l1	l2
	<b>41100</b>	MCS.3.0630.0350.A090.0021.0200.0000.00.S06A3A05.01	6,3	6	2	35	2,1
*	<b>41102</b>	MCS.3.0830.0400.A090.0031.0200.0000.00.S06A3A05.01	8,3	6	2	40	3,1
*	<b>41104</b>	MCS.3.1040.0460.A090.0039.0250.0000.00.S06A3A05.01	10,4	6	2,5	46	3,9
*	<b>41106</b>	MCS.3.1240.0560.A090.0048.0280.0000.00.S08A3A05.01	12,4	8	2,8	56	4,8
	<b>41108</b>	MCS.3.1500.0600.A090.0059.0320.0000.00.S10A3A05.01	15	10	3,2	60	5,9
*	<b>41110</b>	MCS.3.1650.0600.A090.0066.0320.0000.00.S10A3A05.01	16,5	10	3,2	60	6,6
*	<b>41112</b>	MCS.3.2050.0630.A090.0085.0350.0000.00.S10A3A05.01	20,5	10	3,5	63	8,5
*	<b>41114</b>	MCS.3.2500.0670.A090.0106.0380.0000.00.S10A3A05.01	25	10	3,8	67	10,6

	Steel	●
	Stainless Steel	○
	Hardened Steel ≤54 HRc	○
	Hardened Steel >54 HRc	○
	Cast Iron	●
	Non Ferrous Material	○
	HRSA	○
	Titanium	●



● Recommended ○ Acceptable ○ Not Recommended

\*Marked products are available  
from stock to deliver fast.

HOLE MAKING



General  
Engineering



Mold & Die



Automotive



Defence

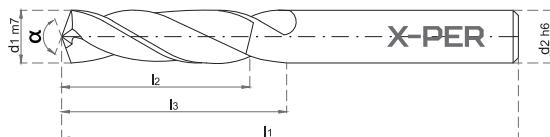


Rail  
Systems

## D-Tech Long-Chip Fighter High Performance In Ductile and Long-Chipping Workpiece Materials

Perfect Chip Evacuation and Much Longer Tool Life  
Thanks To Special Chip Breaker Geometry On Cutting  
Edge and New Generation Coating.

Our DX Series Is Highly Recommended To Use On  
Ductile Steels Like ST Type, 1020 or 1040, Stainless  
Steels and Titanium Which Are Long-Chipping  
Workpiece Materials.

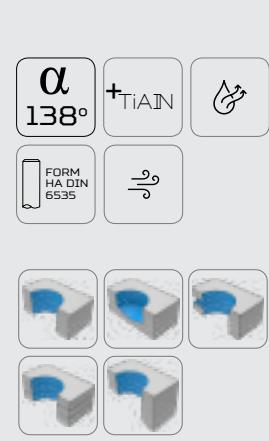


Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
	<b>48100</b>	K3DX.2.0300.0620.A0138.0180.0300.0200.00.S06B1A05.01	3	6	62	18	20
	<b>48102</b>	K3DX.2.0330.0620.A0138.0180.0330.0200.00.S06B1A05.01	3,3	6	62	18	20
	<b>48104</b>	K3DX.2.0340.0620.A0138.0180.0340.0200.00.S06B1A05.01	3,4	6	62	18	20
	<b>48106</b>	K3DX.2.0370.0620.A0138.0180.0370.0200.00.S06B1A05.01	3,7	6	62	18	20
	<b>48108</b>	K3DX.2.0380.0660.A0138.0220.0380.0240.00.S06B1A05.01	3,8	6	66	22	24
	<b>48110</b>	K3DX.2.0400.0660.A0138.0220.0400.0240.00.S06B1A05.01	4	6	66	22	24
	<b>48112</b>	K3DX.2.0410.0660.A0138.0220.0410.0240.00.S06B1A05.01	4,1	6	66	22	24
	<b>48114</b>	K3DX.2.0420.0660.A0138.0220.0420.0240.00.S06B1A05.01	4,2	6	66	22	24
	<b>48116</b>	K3DX.2.0450.0660.A0138.0220.0450.0240.00.S06B1A05.01	4,5	6	66	22	24
	<b>48118</b>	K3DX.2.0460.0660.A0138.0220.0460.0240.00.S06B1A05.01	4,6	6	66	22	24
	<b>48120</b>	K3DX.2.0470.0660.A0138.0220.0470.0240.00.S06B1A05.01	4,7	6	66	22	24
	<b>48122</b>	K3DX.2.0480.0660.A0138.0260.0480.0280.00.S06B1A05.01	4,8	6	66	26	28
	<b>48124</b>	K3DX.2.0500.0660.A0138.0260.0480.0280.00.S06B1A05.01	5	6	66	26	28
	<b>48126</b>	K3DX.2.0520.0660.A0138.0260.0480.0280.00.S06B1A05.01	5,2	6	66	26	28
	<b>48128</b>	K3DX.2.0550.0660.A0138.0260.0480.0280.00.S06B1A05.01	5,5	6	66	26	28
	<b>48130</b>	K3DX.2.0580.0660.A0138.0260.0480.0280.00.S06B1A05.01	5,8	6	66	26	28
	<b>48132</b>	K3DX.2.0600.0660.A0138.0260.0480.0280.00.S06B1A05.01	6	6	66	26	28
	<b>48134</b>	K3DX.2.0630.0790.A0138.0320.0630.0340.00.S08B1A05.01	6,3	8	79	32	34
	<b>48136</b>	K3DX.2.0660.0790.A0138.0320.0660.0340.00.S08B1A05.01	6,6	8	79	32	34
	<b>48138</b>	K3DX.2.0680.0790.A0138.0320.0680.0340.00.S08B1A05.01	6,8	8	79	32	34
	<b>48140</b>	K3DX.2.0690.0790.A0138.0320.0690.0340.00.S08B1A05.01	6,9	8	79	32	34
	<b>48142</b>	K3DX.2.0700.0790.A0138.0320.0700.0340.00.S08B1A05.01	7	8	79	32	34
	<b>48144</b>	K3DX.2.0730.0790.A0138.0380.0730.0410.00.S08B1A05.01	7,3	8	79	38	41
	<b>48146</b>	K3DX.2.0780.0790.A0138.0380.0780.0410.00.S08B1A05.01	7,8	8	79	38	41
	<b>48148</b>	K3DX.2.0800.0790.A0138.0380.0800.0410.00.S08B1A05.01	8	8	79	38	41
	<b>48150</b>	K3DX.2.0820.0890.A0138.0430.0820.0470.00.S10B1A05.01	8,2	10	89	43	47
	<b>48152</b>	K3DX.2.0850.0890.A0138.0430.0850.0470.00.S10B1A05.01	8,5	10	89	43	47
	<b>48154</b>	K3DX.2.0880.0890.A0138.0430.0880.0470.00.S10B1A05.01	8,8	10	89	43	47
	<b>48156</b>	K3DX.2.0900.0890.A0138.0430.0900.0470.00.S10B1A05.01	9	10	89	43	47
	<b>48158</b>	K3DX.2.0910.0890.A0138.0430.0910.0470.00.S10B1A05.01	9,1	10	89	43	47
	<b>48160</b>	K3DX.2.0930.0890.A0138.0430.0930.0470.00.S10B1A05.01	9,3	10	89	43	47
	<b>48162</b>	K3DX.2.0950.0890.A0138.0430.0950.0470.00.S10B1A05.01	9,5	10	89	43	47
	<b>48164</b>	K3DX.2.0980.0890.A0138.0430.0980.0470.00.S10B1A05.01	9,8	10	89	43	47
	<b>48166</b>	K3DX.2.1000.0890.A0138.0430.1000.0470.00.S10B1A05.01	10	10	89	43	47
	<b>48168</b>	K3DX.2.1020.1020.A0138.0510.1020.0550.00.S12B1A05.01	10,2	12	102	51	55
	<b>48170</b>	K3DX.2.1050.1020.A0138.0510.1050.0550.00.S12B1A05.01	10,5	12	102	51	55
	<b>48172</b>	K3DX.2.1080.1020.A0138.0510.1080.0550.00.S12B1A05.01	10,8	12	102	51	55
	<b>48174</b>	K3DX.2.1090.1020.A0138.0510.1090.0550.00.S12B1A05.01	10,9	12	102	51	55
	<b>48176</b>	K3DX.2.1100.1020.A0138.0510.1100.0550.00.S12B1A05.01	11	12	102	51	55
	<b>48178</b>	K3DX.2.1110.1020.A0138.0510.1110.0550.00.S12B1A05.01	11,1	12	102	51	55
	<b>48180</b>	K3DX.2.1130.1020.A0138.0510.1130.0550.00.S12B1A05.01	11,3	12	102	51	55
	<b>48182</b>	K3DX.2.1150.1020.A0138.0510.1150.0550.00.S12B1A05.01	11,5	12	102	51	55
	<b>48184</b>	K3DX.2.1180.1020.A0138.0510.1180.0550.00.S12B1A05.01	11,8	12	102	51	55
	<b>48186</b>	K3DX.2.1200.1020.A0138.0510.1200.0550.00.S12B1A05.01	12	12	102	51	55
	<b>48188</b>	K3DX.2.1220.1070.A0138.0530.1220.0600.00.S14B1A05.01	12,2	14	107	53	60
	<b>48190</b>	K3DX.2.1250.1070.A0138.0530.1250.0600.00.S14B1A05.01	12,5	14	107	53	60
	<b>48192</b>	K3DX.2.1280.1070.A0138.0530.1280.0600.00.S14B1A05.01	12,8	14	107	53	60
	<b>48194</b>	K3DX.2.1300.1070.A0138.0530.1300.0600.00.S14B1A05.01	13	14	107	53	60
	<b>48196</b>	K3DX.2.1350.1070.A0138.0530.1350.0600.00.S14B1A05.01	13,5	14	107	53	60
	<b>48198</b>	K3DX.2.1380.1070.A0138.0530.1380.0600.00.S14B1A05.01	13,8	14	107	53	60
	<b>48200</b>	K3DX.2.1400.1070.A0138.0530.1400.0600.00.S14B1A05.01	14	14	107	53	60
	<b>48202</b>	K3DX.2.1430.1150.A0138.0580.1430.0650.00.S16B1A05.01	14,3	16	115	58	65
	<b>48204</b>	K3DX.2.1450.1150.A0138.0580.1450.0650.00.S16B1A05.01	14,5	16	115	58	65
	<b>48206</b>	K3DX.2.1500.1150.A0138.0580.1500.0650.00.S16B1A05.01	15	16	115	58	65
	<b>48208</b>	K3DX.2.1550.1150.A0138.0580.1550.0650.00.S16B1A05.01	15,5	16	115	58	65
	<b>48210</b>	K3DX.2.1600.1150.A0138.0580.1600.0650.00.S16B1A05.01	16	16	115	58	65

Cutting Parameters Vc(m/min)	
Unalloyed steel	80-120
Steel	70-110
Tempered Steel	65-100
Cold Work Tool Steel	55-70
Hot Work Tool Steel	55-70
AISI 304 - 416 - 420	55-65
AISI 316 - 440	55-65
17-4 PH 15-5 PH	50-55
Chrome-Cobalt Alloy	50-55
Duplex F51	40-50
Super Duplex F55	40-50
Gray Cast	95-110
Alloyed Cast	80-95
Precision Cast	80-95
Graphite	110-130
Titanium	50-70
Titanium Alloys	40-60

Feed Per Revolution (mm/rev)	
0	mm/dev
3	0.030
4	0.035
5	0.050
6	0.060
8	0.100
10	0.125
12	0.150
16	0.155
20	0.200

\*Marked products are available from stock to deliver fast.



HOLE MAKING

**K5DX**  
5D Drill



General  
Engineering



Mold & Die



Automotive



Defence

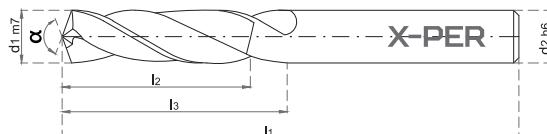


Rail  
Systems

## D-Tech Long-Chip Fighter High Performance In Ductile and Long-Chipping Workpiece Materials

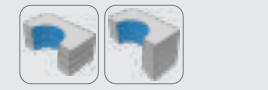
Perfect Chip Evacuation and Much Longer Tool Life  
Thanks To Special Chip Breaker Geometry On Cutting  
Edge and New Generation Coating.

Our DX Series Is Highly Recommended To Use On  
Ductile Steels Like ST Type, 1020 or 1040, Stainless  
Steels and Titanium Which Are Long-Chipping  
Workpiece Materials.



Stock	Order No	Code	d1m7	d2h6	l1	l2	I3
	49100	K5DX.2.0300.0660.A0138.0270.0300.0280.00.S06B1A05.01	3	6	66	27	28
	49102	K5DX.2.0310.0660.A0138.0270.0310.0280.00.S06B1A05.01	3,1	6	66	27	28
	49104	K5DX.2.0320.0660.A0138.0270.0320.0280.00.S06B1A05.01	3,2	6	66	27	28
	49106	K5DX.2.0330.0660.A0138.0270.0330.0280.00.S06B1A05.01	3,3	6	66	27	28
	49108	K5DX.2.0340.0660.A0138.0270.0340.0280.00.S06B1A05.01	3,4	6	66	27	28
	49110	K5DX.2.0350.0660.A0138.0270.0350.0280.00.S06B1A05.01	3,5	6	66	27	28
	49112	K5DX.2.0360.0660.A0138.0270.0360.0280.00.S06B1A05.01	3,6	6	66	27	28
	49114	K5DX.2.0370.0660.A0138.0270.0370.0280.00.S06B1A05.01	3,7	6	66	27	28
	49116	K5DX.2.0380.0740.A0138.0320.0380.0360.00.S06B1A05.01	3,8	6	74	32	36
	49118	K5DX.2.0390.0740.A0138.0320.0390.0360.00.S06B1A05.01	3,9	6	74	32	36
	49120	K5DX.2.0400.0740.A0138.0320.0400.0360.00.S06B1A05.01	4	6	74	32	36
	49122	K5DX.2.0410.0740.A0138.0320.0410.0360.00.S06B1A05.01	4,1	6	74	32	36
	49124	K5DX.2.0420.0740.A0138.0320.0420.0360.00.S06B1A05.01	4,2	6	74	32	36
	49126	K5DX.2.0430.0740.A0138.0320.0430.0360.00.S06B1A05.01	4,3	6	74	32	36
	49128	K5DX.2.0440.0740.A0138.0320.0440.0360.00.S06B1A05.01	4,4	6	74	32	36
	49130	K5DX.2.0450.0740.A0138.0320.0450.0360.00.S06B1A05.01	4,5	6	74	32	36
	49132	K5DX.2.0460.0740.A0138.0320.0460.0360.00.S06B1A05.01	4,6	6	74	32	36
	49134	K5DX.2.0470.0740.A0138.0320.0470.0360.00.S06B1A05.01	4,7	6	74	32	36
	49136	K5DX.2.0480.0820.A0138.0410.0480.0440.00.S06B1A05.01	4,8	6	82	41	44
	49138	K5DX.2.0490.0820.A0138.0410.0490.0440.00.S06B1A05.01	4,9	6	82	41	44
	49140	K5DX.2.0500.0820.A0138.0410.0400.0440.00.S06B1A05.01	5	6	82	41	44
	49142	K5DX.2.0510.0820.A0138.0410.0510.0440.00.S06B1A05.01	5,1	6	82	41	44
	49144	K5DX.2.0520.0820.A0138.0410.0520.0440.00.S06B1A05.01	5,2	6	82	41	44
	49146	K5DX.2.0530.0820.A0138.0410.0530.0440.00.S06B1A05.01	5,3	6	82	41	44
	49148	K5DX.2.0540.0820.A0138.0410.0540.0440.00.S06B1A05.01	5,4	6	82	41	44
	49150	K5DX.2.0550.0820.A0138.0410.0550.0440.00.S06B1A05.01	5,5	6	82	41	44
	49152	K5DX.2.0560.0820.A0138.0410.0560.0440.00.S06B1A05.01	5,6	6	82	41	44
	49154	K5DX.2.0570.0820.A0138.0410.0570.0440.00.S06B1A05.01	5,7	6	82	41	44
	49156	K5DX.2.0580.0820.A0138.0410.0580.0440.00.S06B1A05.01	5,8	6	82	41	44
	49158	K5DX.2.0590.0820.A0138.0410.0590.0440.00.S06B1A05.01	5,9	6	82	41	44
	49160	K5DX.2.0600.0820.A0138.0410.0600.0440.00.S06B1A05.01	6	6	82	41	44
	49162	K5DX.2.0610.0910.A0138.0500.0610.0530.00.S08B1A05.01	6,1	8	91	50	53
	49164	K5DX.2.0620.0910.A0138.0500.0620.0530.00.S08B1A05.01	6,2	8	91	50	53
	49166	K5DX.2.0630.0910.A0138.0500.0630.0530.00.S08B1A05.01	6,3	8	91	50	53
	49168	K5DX.2.0640.0910.A0138.0500.0640.0530.00.S08B1A05.01	6,4	8	91	50	53
	49170	K5DX.2.0650.0910.A0138.0500.0650.0530.00.S08B1A05.01	6,5	8	91	50	53
	49172	K5DX.2.0660.0910.A0138.0500.0660.0530.00.S08B1A05.01	6,6	8	91	50	53
	49174	K5DX.2.0670.0910.A0138.0500.0670.0530.00.S08B1A05.01	6,7	8	91	50	53
	49176	K5DX.2.0680.0910.A0138.0500.0680.0530.00.S08B1A05.01	6,8	8	91	50	53
	49178	K5DX.2.0690.0910.A0138.0500.0690.0530.00.S08B1A05.01	6,9	8	91	50	53
	49180	K5DX.2.0700.0910.A0138.0500.0700.0530.00.S08B1A05.01	7	8	91	50	53
	49182	K5DX.2.0710.0910.A0138.0500.0710.0530.00.S08B1A05.01	7,1	8	91	50	53
	49184	K5DX.2.0720.0910.A0138.0500.0720.0530.00.S08B1A05.01	7,2	8	91	50	53
	49186	K5DX.2.0730.0910.A0138.0500.0730.0530.00.S08B1A05.01	7,3	8	91	50	53
	49188	K5DX.2.0740.0910.A0138.0500.0740.0530.00.S08B1A05.01	7,4	8	91	50	53
	49190	K5DX.2.0750.0910.A0138.0500.0750.0530.00.S08B1A05.01	7,5	8	91	50	53
	49192	K5DX.2.0760.0910.A0138.0500.0760.0530.00.S08B1A05.01	7,6	8	91	50	53
	49194	K5DX.2.0770.0910.A0138.0500.0770.0530.00.S08B1A05.01	7,7	8	91	50	53
	49196	K5DX.2.0780.0910.A0138.0500.0780.0530.00.S08B1A05.01	7,8	8	91	50	53
	49198	K5DX.2.0790.0910.A0138.0500.0790.0530.00.S08B1A05.01	7,9	8	91	50	53

\*Marked products are available  
from stock to deliver fast.

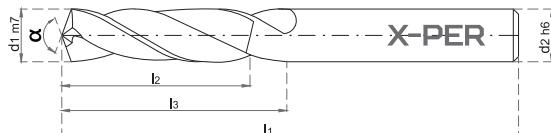


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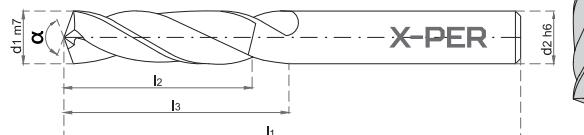


FORM  
HA DIN  
6535



## K5DX - 5D Drill

Stock	Order No	Code	d1m7	d2h6	l1	l2	I3
	<b>49200</b>	K5DX.2.0800.0910.A0138.0500.0800.0530.00.S08B1A05.01	8	8	91	50	53
	<b>49202</b>	K5DX.2.0810.1030.A0138.0570.0810.0610.00.S10B1A05.01	8,1	10	103	57	61
	<b>49204</b>	K5DX.2.0820.1030.A0138.0570.0820.0610.00.S10B1A05.01	8,2	10	103	57	61
	<b>49206</b>	K5DX.2.0840.1030.A0138.0570.0840.0610.00.S10B1A05.01	8,4	10	103	57	61
	<b>49208</b>	K5DX.2.0850.1030.A0138.0570.0850.0610.00.S10B1A05.01	8,5	10	103	57	61
	<b>49210</b>	K5DX.2.0860.1030.A0138.0570.0860.0610.00.S10B1A05.01	8,6	10	103	57	61
	<b>49212</b>	K5DX.2.0880.1030.A0138.0570.0880.0610.00.S10B1A05.01	8,8	10	103	57	61
	<b>49214</b>	K5DX.2.0890.1030.A0138.0570.0890.0610.00.S10B1A05.01	8,9	10	103	57	61
	<b>49216</b>	K5DX.2.0900.1030.A0138.0570.0900.0610.00.S10B1A05.01	9	10	103	57	61
	<b>49218</b>	K5DX.2.0910.1030.A0138.0570.0910.0610.00.S10B1A05.01	9,1	10	103	57	61
	<b>49220</b>	K5DX.2.0920.1030.A0138.0570.0920.0610.00.S10B1A05.01	9,2	10	103	57	61
	<b>49222</b>	K5DX.2.0930.1030.A0138.0570.0930.0610.00.S10B1A05.01	9,3	10	103	57	61
	<b>49224</b>	K5DX.2.0940.1030.A0138.0570.0940.0610.00.S10B1A05.01	9,4	10	103	57	61
	<b>49226</b>	K5DX.2.0950.1030.A0138.0570.0950.0610.00.S10B1A05.01	9,5	10	103	57	61
	<b>49228</b>	K5DX.2.0960.1030.A0138.0570.0960.0610.00.S10B1A05.01	9,6	10	103	57	61
	<b>49230</b>	K5DX.2.0970.1030.A0138.0570.0970.0610.00.S10B1A05.01	9,7	10	103	57	61
	<b>49232</b>	K5DX.2.0980.1030.A0138.0570.0980.0610.00.S10B1A05.01	9,8	10	103	57	61
	<b>49234</b>	K5DX.2.0990.1030.A0138.0570.0990.0610.00.S10B1A05.01	9,9	10	103	57	61
	<b>49236</b>	K5DX.2.1000.1030.A0138.0570.1000.0610.00.S10B1A05.01	10	10	103	57	61
	<b>49238</b>	K5DX.2.1010.1180.A0138.0670.1010.0710.00.S12B1A05.01	10,1	12	118	67	71
	<b>49240</b>	K5DX.2.1020.1180.A0138.0670.1020.0710.00.S12B1A05.01	10,2	12	118	67	71
	<b>49242</b>	K5DX.2.1030.1180.A0138.0670.1030.0710.00.S12B1A05.01	10,3	12	118	67	71
	<b>49244</b>	K5DX.2.1040.1180.A0138.0670.1040.0710.00.S12B1A05.01	10,4	12	118	67	71
	<b>49246</b>	K5DX.2.1050.1180.A0138.0670.1050.0710.00.S12B1A05.01	10,5	12	118	67	71
	<b>49248</b>	K5DX.2.1060.1180.A0138.0670.1060.0710.00.S12B1A05.01	10,6	12	118	67	71
	<b>49250</b>	K5DX.2.1070.1180.A0138.0670.1070.0710.00.S12B1A05.01	10,7	12	118	67	71
	<b>49252</b>	K5DX.2.1080.1180.A0138.0670.1070.0710.00.S12B1A05.01	10,8	12	118	67	71
	<b>49254</b>	K5DX.2.1090.1180.A0138.0670.1090.0710.00.S12B1A05.01	10,9	12	118	67	71
	<b>49256</b>	K5DX.2.1100.1180.A0138.0670.1100.0710.00.S12B1A05.01	11	12	118	67	71
	<b>49258</b>	K5DX.2.1110.1180.A0138.0670.1110.0710.00.S12B1A05.01	11,1	12	118	67	71
	<b>49260</b>	K5DX.2.1120.1180.A0138.0670.1120.0710.00.S12B1A05.01	11,2	12	118	67	71
	<b>49262</b>	K5DX.2.1130.1180.A0138.0670.1130.0710.00.S12B1A05.01	11,3	12	118	67	71
	<b>49264</b>	K5DX.2.1140.1180.A0138.0670.1140.0710.00.S12B1A05.01	11,4	12	118	67	71
	<b>49266</b>	K5DX.2.1150.1180.A0138.0670.1150.0710.00.S12B1A05.01	11,5	12	118	67	71
	<b>49268</b>	K5DX.2.1160.1180.A0138.0670.1160.0710.00.S12B1A05.01	11,6	12	118	67	71
	<b>49270</b>	K5DX.2.1170.1180.A0138.0670.1170.0710.00.S12B1A05.01	11,7	12	118	67	71
	<b>49272</b>	K5DX.2.1180.1180.A0138.0670.1180.0710.00.S12B1A05.01	11,8	12	118	67	71
	<b>49274</b>	K5DX.2.1190.1180.A0138.0670.1190.0710.00.S12B1A05.01	11,9	12	118	67	71
	<b>49276</b>	K5DX.2.1200.1180.A0138.0670.1190.0710.00.S12B1A05.01	12	12	118	67	71
	<b>49278</b>	K5DX.2.1210.1240.A0138.0700.1210.0770.00.S14B1A05.01	12,1	14	124	70	77
	<b>49280</b>	K5DX.2.1220.1240.A0138.0700.1220.0770.00.S14B1A05.01	12,2	14	124	70	77
	<b>49282</b>	K5DX.2.1230.1240.A0138.0700.1230.0770.00.S14B1A05.01	12,3	14	124	70	77
	<b>49284</b>	K5DX.2.1240.1240.A0138.0700.1240.0770.00.S14B1A05.01	12,4	14	124	70	77
	<b>49286</b>	K5DX.2.1250.1240.A0138.0700.1250.0770.00.S14B1A05.01	12,5	14	124	70	77
	<b>49288</b>	K5DX.2.1260.1240.A0138.0700.1260.0770.00.S14B1A05.01	12,6	14	124	70	77
	<b>49290</b>	K5DX.2.1270.1240.A0138.0700.1270.0770.00.S14B1A05.01	12,7	14	124	70	77
	<b>49292</b>	K5DX.2.1280.1240.A0138.0700.1280.0770.00.S14B1A05.01	12,8	14	124	70	77
	<b>49294</b>	K5DX.2.1290.1240.A0138.0700.1290.0770.00.S14B1A05.01	12,9	14	124	70	77
	<b>49296</b>	K5DX.2.1300.1240.A0138.0700.1300.0770.00.S14B1A05.01	13	14	124	70	77
	<b>49298</b>	K5DX.2.1310.1240.A0138.0700.1310.0770.00.S14B1A05.01	13,1	14	124	70	77



## K5DX - 5D Drill

Stock	Order No	Code	d1m7	d2h6	l1	l2	I3
	<b>49300</b>	K5DX.2.1330.1240.A0138.0700.1330.0770.00.S14B1A05.01	13,3	14	124	70	77
	<b>49302</b>	K5DX.2.1340.1240.A0138.0700.1340.0770.00.S14B1A05.01	13,4	14	124	70	77
	<b>49304</b>	K5DX.2.1350.1240.A0138.0700.1350.0770.00.S14B1A05.01	13,5	14	124	70	77
	<b>49306</b>	K5DX.2.1360.1240.A0138.0700.1360.0770.00.S14B1A05.01	13,6	14	124	70	77
	<b>49308</b>	K5DX.2.1370.1240.A0138.0700.1370.0770.00.S14B1A05.01	13,7	14	124	70	77
	<b>49310</b>	K5DX.2.1380.1240.A0138.0700.1380.0770.00.S14B1A05.01	13,8	14	124	70	77
	<b>49312</b>	K5DX.2.1390.1240.A0138.0700.1390.0770.00.S14B1A05.01	13,9	14	124	70	77
	<b>49314</b>	K5DX.2.1400.1240.A0138.0700.1400.0770.00.S14B1A05.01	14	14	124	70	77
	<b>49316</b>	K5DX.2.1410.1330.A0138.0740.1410.0830.00.S16B1A05.01	14,1	16	133	74	83
	<b>49318</b>	K5DX.2.1420.1330.A0138.0740.1420.0830.00.S16B1A05.01	14,2	16	133	74	83
	<b>49320</b>	K5DX.2.1430.1330.A0138.0740.1430.0830.00.S16B1A05.01	14,3	16	133	74	83
	<b>49322</b>	K5DX.2.1440.1330.A0138.0740.1440.0830.00.S16B1A05.01	14,4	16	133	74	83
	<b>49324</b>	K5DX.2.1450.1330.A0138.0740.1450.0830.00.S16B1A05.01	14,5	16	133	74	83
	<b>49326</b>	K5DX.2.1500.1330.A0138.0740.1500.0830.00.S16B1A05.01	15	16	133	74	83
	<b>49328</b>	K5DX.2.1550.1330.A0138.0740.1550.0830.00.S16B1A05.01	15,5	16	133	74	83
	<b>49330</b>	K5DX.2.1600.1330.A0138.0740.1600.0830.00.S16B1A05.01	16	16	133	74	83

Cutting Parameters Vc(m/min)			Feed Per Revolution (mm/rev)	
Unalloyed Steel	<b>65-80</b>	●	Ø	mm/dev
Steel	<b>55-70</b>	●	3	0,025
Tempered Steel	<b>50-65</b>	●	4	0,030
Cold Work Tool Steel	<b>40-55</b>	○	5	0,042
Hot Work Tool Steel	<b>40-55</b>	○	6	0,052
AISI 304 - 416 - 420	<b>30-40</b>	○	8	0,092
AISI 316 - 440	<b>30-40</b>	○	10	0,115
17-4 PH 15-5 PH	<b>25-30</b>	○	12	0,135
Chrome-Cobalt Alloy	<b>25-30</b>	○	16	0,155
Duplex F51	<b>15-25</b>	○	20	0,175
Super Duplex F55	<b>15-25</b>	○	14	0,29
Gray Cast	<b>80-95</b>	●	16	0,31
Alloyed Cast	<b>65-80</b>	●	18	0,33
Precision Cast	<b>65-80</b>	●	20	0,35
Graphite	<b>95-110</b>	○		
Titanium	<b>30-40</b>	○		
Titanium Alloys	<b>25-30</b>	○		



● Recommended ○ Acceptable ○ Not Recommended

\*Marked products are available  
from stock to deliver fast.

HOLE MAKING



3D Drill  
With Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence

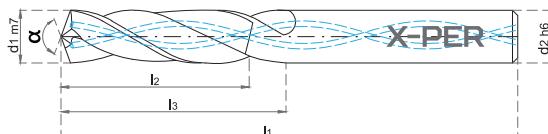


Rail  
Systems

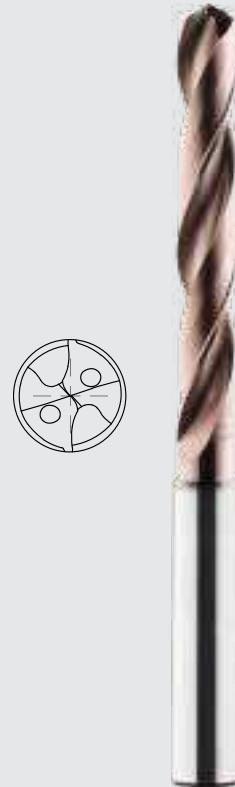
## D-Tech Long-Chip Fighter High Performance In Ductile and Long-Chipping Workpiece Materials

Perfect Chip Evacuation and Much Longer Tool Life  
Thanks To Special Chip Breaker Geometry On Cutting  
Edge and New Generation Coating.

Our DX Series Is Highly Recommended To Use On  
Ductile Steels Like ST Type, 1020 or 1040, Stainless  
Steels and Titanium Which Are Long-Chipping  
Workpiece Materials.



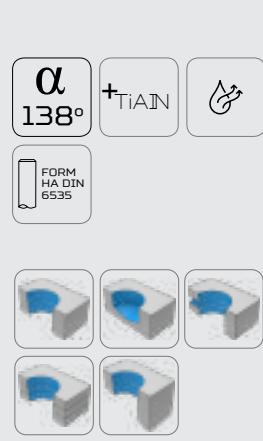
**M3DX**  
3D Drill  
With Coolant Holes



Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
	<b>71100</b>	M3DX.2.0300.0620.A0138.0180.0000.0200.00.506B1A05.01	3	6	62	18	20
	<b>71102</b>	M3DX.2.0330.0620.A0138.0180.0000.0200.00.506B1A05.01	3,3	6	62	18	20
	<b>71104</b>	M3DX.2.0340.0620.A0138.0180.0000.0200.00.506B1A05.01	3,4	6	62	18	20
	<b>71106</b>	M3DX.2.0370.0620.A0138.0180.0000.0200.00.506B1A05.01	3,7	6	62	18	20
	<b>71108</b>	M3DX.2.0380.0660.A0138.0220.0000.0240.00.506B1A05.01	3,8	6	66	22	24
	<b>71110</b>	M3DX.2.0400.0660.A0138.0220.0000.0240.00.506B1A05.01	4	6	66	22	24
	<b>71112</b>	M3DX.2.0410.0660.A0138.0220.0000.0240.00.506B1A05.01	4,1	6	66	22	24
	<b>71114</b>	M3DX.2.0420.0660.A0138.0220.0000.0240.00.506B1A05.01	4,2	6	66	22	24
	<b>71116</b>	M3DX.2.0450.0660.A0138.0220.0000.0240.00.506B1A05.01	4,5	6	66	22	24
	<b>71118</b>	M3DX.2.0460.0660.A0138.0220.0000.0240.00.506B1A05.01	4,6	6	66	22	24
	<b>71120</b>	M3DX.2.0470.0660.A0138.0220.0000.0240.00.506B1A05.01	4,7	6	66	22	24
	<b>71122</b>	M3DX.2.0480.0660.A0138.0260.0000.0280.00.506B1A05.01	4,8	6	66	26	28
	<b>71124</b>	M3DX.2.0500.0660.A0138.0260.0000.0280.00.506B1A05.01	5	6	66	26	28
	<b>71126</b>	M3DX.2.0520.0660.A0138.0260.0000.0280.00.506B1A05.01	5,2	6	66	26	28
	<b>71128</b>	M3DX.2.0550.0660.A0138.0260.0000.0280.00.506B1A05.01	5,5	6	66	26	28
	<b>71130</b>	M3DX.2.0580.0660.A0138.0260.0000.0280.00.506B1A05.01	5,8	6	66	26	28
	<b>71132</b>	M3DX.2.0600.0660.A0138.0260.0000.0280.00.506B1A05.01	6	6	66	26	28
	<b>71134</b>	M3DX.2.0630.0790.A0138.0320.0000.0340.00.508B1A05.01	6,3	8	79	32	34
	<b>71136</b>	M3DX.2.0660.0790.A0138.0320.0000.0340.00.508B1A05.01	6,6	8	79	32	34
	<b>71138</b>	M3DX.2.0680.0790.A0138.0320.0000.0340.00.508B1A05.01	6,8	8	79	32	34
	<b>71140</b>	M3DX.2.0690.0790.A0138.0320.0000.0340.00.508B1A05.01	6,9	8	79	32	34
	<b>71142</b>	M3DX.2.0700.0790.A0138.0320.0000.0340.00.508B1A05.01	7	8	79	32	34
	<b>71144</b>	M3DX.2.0730.0790.A0138.0380.0000.0410.00.508B1A05.01	7,3	8	79	38	41
	<b>71146</b>	M3DX.2.0780.0790.A0138.0380.0000.0410.00.508B1A05.01	7,8	8	79	38	41
	<b>71148</b>	M3DX.2.0800.0790.A0138.0380.0000.0410.00.508B1A05.01	8	8	79	38	41
	<b>71150</b>	M3DX.2.0820.0890.A0138.0430.0000.0470.00.510B1A05.01	8,2	10	89	43	47
	<b>71152</b>	M3DX.2.0850.0890.A0138.0430.0000.0470.00.510B1A05.01	8,5	10	89	43	47
	<b>71154</b>	M3DX.2.0860.0890.A0138.0430.0000.0470.00.510B1A05.01	8,6	10	89	43	47
	<b>71156</b>	M3DX.2.0880.0890.A0138.0430.0000.0470.00.510B1A05.01	8,8	10	89	43	47
	<b>71158</b>	M3DX.2.0900.0890.A0138.0430.0000.0470.00.510B1A05.01	9	10	89	43	47
	<b>71160</b>	M3DX.2.0930.0890.A0138.0430.0000.0470.00.510B1A05.01	9,3	10	89	43	47
	<b>71162</b>	M3DX.2.0950.0890.A0138.0430.0000.0470.00.510B1A05.01	9,5	10	89	43	47
	<b>71164</b>	M3DX.2.0980.0890.A0138.0430.0000.0470.00.510B1A05.01	9,8	10	89	43	47
	<b>71166</b>	M3DX.2.1000.0890.A0138.0430.0000.0470.00.510B1A05.01	10	10	89	43	47
	<b>71168</b>	M3DX.2.1020.1020.A0138.0510.0000.0550.00.512B1A05.01	10,2	12	102	51	55
	<b>71170</b>	M3DX.2.1050.1020.A0138.0510.0000.0550.00.512B1A05.01	10,5	12	102	51	55
	<b>71172</b>	M3DX.2.1080.1020.A0138.0510.0000.0550.00.512B1A05.01	10,8	12	102	51	55
	<b>71174</b>	M3DX.2.1090.1020.A0138.0510.0000.0550.00.512B1A05.01	10,9	12	102	51	55
	<b>71176</b>	M3DX.2.1100.1020.A0138.0510.0000.0550.00.512B1A05.01	11	12	102	51	55
	<b>71178</b>	M3DX.2.1130.1020.A0138.0510.0000.0550.00.512B1A05.01	11,3	12	102	51	55
	<b>71180</b>	M3DX.2.1150.1020.A0138.0510.0000.0550.00.512B1A05.01	11,5	12	102	51	55
	<b>71182</b>	M3DX.2.1180.1020.A0138.0510.0000.0550.00.512B1A05.01	11,8	12	102	51	55
	<b>71184</b>	M3DX.2.1200.1020.A0138.0510.0000.0550.00.512B1A05.01	12	12	102	51	55
	<b>71186</b>	M3DX.2.1220.1070.A0138.0510.0000.0550.00.514B1A05.01	12,2	14	107	51	55
	<b>71188</b>	M3DX.2.1250.1070.A0138.0530.0000.0600.00.514B1A05.01	12,5	14	107	53	60
	<b>71190</b>	M3DX.2.1280.1070.A0138.0530.0000.0600.00.514B1A05.01	12,8	14	107	53	60
	<b>71192</b>	M3DX.2.1300.1070.A0138.0530.0000.0600.00.514B1A05.01	13	14	107	53	60
	<b>71194</b>	M3DX.2.1350.1070.A0138.0530.0000.0600.00.514B1A05.01	13,5	14	107	53	60
	<b>71196</b>	M3DX.2.1380.1070.A0138.0530.0000.0600.00.514B1A05.01	13,8	14	107	53	60
	<b>71198</b>	M3DX.2.1400.1070.A0138.0530.0000.0600.00.514B1A05.01	14	14	107	53	60
	<b>71200</b>	M3DX.2.1430.1150.A0138.0580.0000.0650.00.516B1A05.01	14,3	16	115	58	65
	<b>71202</b>	M3DX.2.1450.1150.A0138.0580.0000.0650.00.516B1A05.01	14,5	16	115	58	65
	<b>71204</b>	M3DX.2.1500.1150.A0138.0580.0000.0650.00.516B1A05.01	15	16	115	58	65
	<b>71206</b>	M3DX.2.1550.1150.A0138.0580.0000.0650.00.516B1A05.01	15,5	16	115	58	65
	<b>71208</b>	M3DX.2.1600.1150.A0138.0580.0000.0650.00.516B1A05.01	16	16	115	58	65

Cutting Parameters Vc(m/min)		Feed Per Revolution (mm/rev)	
Unalloyed steel	<b>80-95</b>	●	0 mm/dev
Steel	<b>70-90</b>	●	0.022 mm
Tempered Steel	<b>65-80</b>	●	0.030 mm
Cold Work Tool Steel	<b>55-70</b>	●	0.035 mm
Hot Work Tool Steel	<b>55-70</b>	●	0.052 mm
AISI 304 - 416 - 420	<b>50-55</b>	●	0.090 mm
AISI 316 - 440	<b>50-55</b>	○	0.115 mm
17-4 PH 15-5 PH	<b>40-50</b>	○	0.135 mm
Chrome-Cobalt Alloy	<b>40-50</b>	○	0.150 mm
Duplex F51	<b>30-40</b>	●	0.175 mm
Super Duplex F55	<b>30-40</b>	●	
Gray Cast	<b>100-120</b>	○	
Alloyed Cast	<b>80-95</b>	○	
Precision Cast	<b>70-90</b>	●	
Graphite	<b>120-130</b>	●	
Titanium	<b>30-40</b>	●	
Titanium Alloys	<b>25-30</b>	●	
HRSA	<b>30-40</b>	●	
≤ 54 HRC	<b>75-110</b>	○	
>54 HRC	<b>40-55</b>	○	

\*Marked products are available from stock to deliver fast.



HOLE MAKING



5D Drill  
With Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence

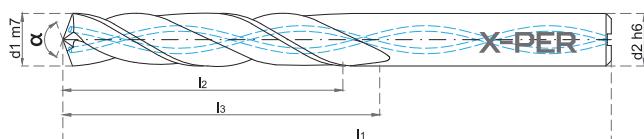


Rail  
Systems

## D-Tech Long-Chip Fighter High Performance In Ductile and Long-Chipping Workpiece Materials

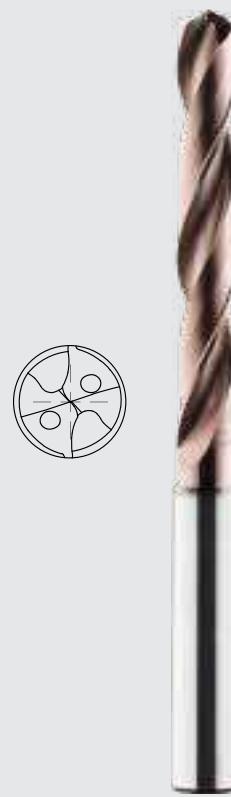
Perfect Chip Evacuation and Much Longer Tool Life  
Thanks To Special Chip Breaker Geometry On Cutting  
Edge and New Generation Coating.

Our DX Series Is Highly Recommended To Use On  
Ductile Steels Like ST Type, 1020 or 1040, Stainless  
Steels and Titanium Which Are Long-Chipping  
Workpiece Materials.



# M5DX

5D Drill  
With Coolant Holes



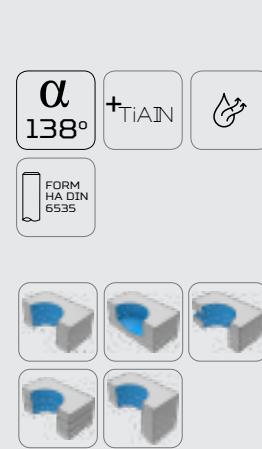
Stock	Order No	Code	d1m7	d2h6	l1	l2	l3
	72100	MSDX.2.0300.0660.A0138.0270.0000.0280.00.506B1A05.01	3	6	66	27	28
	72102	MSDX.2.0310.0660.A0138.0270.0000.0280.00.506B1A05.01	3,1	6	66	27	28
	72104	MSDX.2.0320.0660.A0138.0270.0000.0280.00.506B1A05.01	3,2	6	66	27	28
	72106	MSDX.2.0330.0660.A0138.0270.0000.0280.00.506B1A05.01	3,3	6	66	27	28
	72108	MSDX.2.0340.0660.A0138.0270.0000.0280.00.506B1A05.01	3,4	6	66	27	28
	72110	MSDX.2.0350.0660.A0138.0270.0000.0280.00.506B1A05.01	3,5	6	66	27	28
	72112	MSDX.2.0360.0660.A0138.0270.0000.0280.00.506B1A05.01	3,6	6	66	27	28
	72114	MSDX.2.0370.0660.A0138.0270.0000.0280.00.506B1A05.01	3,7	6	66	27	28
	72116	MSDX.2.0380.0740.A0138.0320.0000.0360.00.506B1A05.01	3,8	6	74	32	36
	72118	MSDX.2.0390.0740.A0138.0320.0000.0360.00.506B1A05.01	3,9	6	74	32	36
	72120	MSDX.2.0400.0740.A0138.0320.0000.0360.00.506B1A05.01	4	6	74	32	36
	72122	MSDX.2.0410.0740.A0138.0320.0000.0360.00.506B1A05.01	4,1	6	74	32	36
	72124	MSDX.2.0420.0740.A0138.0320.0000.0360.00.506B1A05.01	4,2	6	74	32	36
	72126	MSDX.2.0430.0740.A0138.0320.0000.0360.00.506B1A05.01	4,3	6	74	32	36
	72128	MSDX.2.0440.0740.A0138.0320.0000.0360.00.506B1A05.01	4,4	6	74	32	36
	72130	MSDX.2.0450.0740.A0138.0320.0000.0360.00.506B1A05.01	4,5	6	74	32	36
	72132	MSDX.2.0460.0740.A0138.0320.0000.0360.00.506B1A05.01	4,6	6	74	32	36
	72134	MSDX.2.0470.0740.A0138.0320.0000.0360.00.506B1A05.01	4,7	6	74	32	36
	72136	MSDX.2.0480.0820.A0138.0410.0000.0440.00.506B1A05.01	4,8	6	82	41	44
	72138	MSDX.2.0490.0820.A0138.0410.0000.0440.00.506B1A05.01	4,9	6	82	41	44
	72140	MSDX.2.0500.0820.A0138.0410.0000.0440.00.506B1A05.01	5	6	82	41	44
	72142	MSDX.2.0510.0820.A0138.0410.0000.0440.00.506B1A05.01	5,1	6	82	41	44
	72144	MSDX.2.0520.0820.A0138.0410.0000.0440.00.506B1A05.01	5,2	6	82	41	44
	72146	MSDX.2.0530.0820.A0138.0410.0000.0440.00.506B1A05.01	5,3	6	82	41	44
	72148	MSDX.2.0540.0820.A0138.0410.0000.0440.00.506B1A05.01	5,4	6	82	41	44
	72150	MSDX.2.0550.0820.A0138.0410.0000.0440.00.506B1A05.01	5,5	6	82	41	44
	72152	MSDX.2.0560.0820.A0138.0410.0000.0440.00.506B1A05.01	5,6	6	82	41	44
	72154	MSDX.2.0570.0820.A0138.0410.0000.0440.00.506B1A05.01	5,7	6	82	41	44
	72156	MSDX.2.0580.0820.A0138.0410.0000.0440.00.506B1A05.01	5,8	6	82	41	44
	72158	MSDX.2.0590.0820.A0138.0410.0000.0440.00.506B1A05.01	5,9	6	82	41	44
	72160	MSDX.2.0600.0820.A0138.0410.0000.0440.00.506B1A05.01	6	6	82	41	44
	72162	MSDX.2.0630.0910.A0138.0500.0000.0530.00.508B1A05.01	6,3	8	91	50	53
	72164	MSDX.2.0660.0910.A0138.0500.0000.0530.00.508B1A05.01	6,6	8	91	50	53
	72166	MSDX.2.0680.0910.A0138.0500.0000.0530.00.508B1A05.01	6,8	8	91	50	53
	72168	MSDX.2.0690.0910.A0138.0500.0000.0530.00.508B1A05.01	6,9	8	91	50	53
	72170	MSDX.2.0700.0910.A0138.0500.0000.0530.00.508B1A05.01	7	8	91	50	53
	72172	MSDX.2.0730.0910.A0138.0500.0000.0530.00.508B1A05.01	7,3	8	91	50	53
	72174	MSDX.2.0780.0910.A0138.0500.0000.0530.00.508B1A05.01	7,8	8	91	50	53
	72176	MSDX.2.0800.0910.A0138.0500.0000.0530.00.508B1A05.01	8	8	91	50	53
	72178	MSDX.2.0810.1030.A0138.0570.0000.0610.00.S10B1A05.01	8,1	10	103	57	61
	72180	MSDX.2.0820.1030.A0138.0570.0000.0610.00.S10B1A05.01	8,2	10	103	57	61
	72182	MSDX.2.0850.1030.A0138.0570.0000.0610.00.S10B1A05.01	8,5	10	103	57	61
	72184	MSDX.2.0880.1030.A0138.0570.0000.0610.00.S10B1A05.01	8,8	10	103	57	61
	72186	MSDX.2.0900.1030.A0138.0570.0000.0610.00.S10B1A05.01	9	10	103	57	61
	72188	MSDX.2.0930.1030.A0138.0570.0000.0610.00.S10B1A05.01	9,3	10	103	57	61
	72190	MSDX.2.0950.1030.A0138.0570.0000.0610.00.S10B1A05.01	9,5	10	103	57	61
	72192	MSDX.2.0980.1030.A0138.0570.0000.0610.00.S10B1A05.01	9,8	10	103	57	61
	72194	MSDX.2.1000.1030.A0138.0570.0000.0610.00.S10B1A05.01	10	10	103	57	61
	72196	MSDX.2.1020.1180.A0138.0670.0000.0710.00.S12B1A05.01	10,2	12	118	67	71
	72198	MSDX.2.1050.1180.A0138.0670.0000.0710.00.S12B1A05.01	10,5	12	118	67	71
	72200	MSDX.2.1080.1180.A0138.0670.0000.0710.00.S12B1A05.01	10,8	12	118	67	71
	72202	MSDX.2.1090.1180.A0138.0670.0000.0710.00.S12B1A05.01	10,9	12	118	67	71
	72204	MSDX.2.1100.1180.A0138.0670.0000.0710.00.S12B1A05.01	11	12	118	67	71
	72206	MSDX.2.1130.1180.A0138.0670.0000.0710.00.S12B1A05.01	11,3	12	118	67	71
	72208	MSDX.2.1150.1180.A0138.0670.0000.0710.00.S12B1A05.01	11,5	12	118	67	71
	72210	MSDX.2.1180.1180.A0138.0670.0000.0710.00.S12B1A05.01	11,8	12	118	67	71
	72212	MSDX.2.1200.1180.A0138.0670.0000.0710.00.S12B1A05.01	12	12	118	67	71
	72214	MSDX.2.1220.1240.A0138.0700.0000.0770.00.S14B1A05.01	12,2	14	124	70	77
	72216	MSDX.2.1250.1240.A0138.0700.0000.0770.00.S14B1A05.01	12,5	14	124	70	77
	72218	MSDX.2.1280.1240.A0138.0700.0000.0770.00.S14B1A05.01	12,8	14	124	70	77
	72220	MSDX.2.1300.1240.A0138.0700.0000.0770.00.S14B1A05.01	13	14	124	70	77
	72222	MSDX.2.1350.1240.A0138.0700.0000.0770.00.S14B1A05.01	13,5	14	124	70	77
	72224	MSDX.2.1380.1240.A0138.0700.0000.0770.00.S14B1A05.01	13,8	14	124	70	77
	72226	MSDX.2.1400.1240.A0138.0700.0000.0770.00.S14B1A05.01	14	14	124	70	77
	72228	MSDX.2.1430.1330.A0138.0740.0000.0830.00.S16B1A05.01	14,3	16	133	74	83
	72230	MSDX.2.1450.1330.A0138.0740.0000.0830.00.S16B1A05.01	14,5	16	133	74	83
	72232	MSDX.2.1500.1330.A0138.0740.0000.0830.00.S16B1A05.01	15	16	133	74	83
	72234	MSDX.2.1550.1330.A0138.0740.0000.0830.00.S16B1A05.01	15,5	16	133	74	83
	72236	MSDX.2.1600.1330.A0138.0740.0000.0830.00.S16B1A05.01	16	16	133	74	83
	72238	MSDX.2.1800.1430.A0140.0860.0000.0930.00.S18B2A05.01	18	18	143	86	93
	72240	MSDX.2.1850.1530.A0140.0770.0000.1010.00.S20B2A05.01	18,5	20	153	77	101

**Cutting Parameters Vc(m/min)**

AISI 304 - 416 - 420	50-55	●	Alloyed Cast	80-95	●
AISI 316 - 440	50-55	●	Precision Cast	70-90	●
17-4 PH 15-5 PH	40-50	●	Graphite	120-130	●
Chrome-Cobalt Alloy	40-50	●	Titanium	30-40	●
Duplex F51	30-40	●	Titanium Alloys	25-30	●
Super Duplex F55	30-40	●	HRSA	30-40	●
Gray Cast	100-120	●	≤ 54 HRC	75-110	●
			> 54 HRC	40-55	●

Feed Per Revolution (mm/rev)	8	0.090
0	mm/dev	0.115
3	0.022	12
4	0.030	16
5	0.035	20
6	0.052	0.175

\*Marked products are available from stock to deliver fast.



HOLE MAKING

# TX8DF

8D TX Drill

With Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance

Thanks to its  
brand-new geometry  
and coating up to

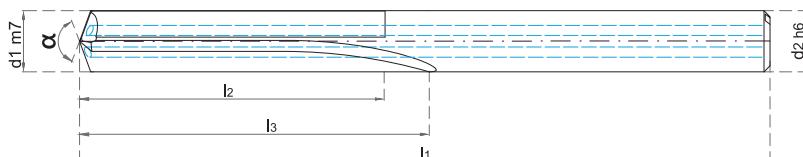
% **40** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **45** better hole surface  
roughness in comparison  
with equivalents

Optimal raw material  
selection for drilling  
operations to damp  
vibration and up to

% **25** more precision hole  
diameter in comparison with  
equivalents



HOLE-MAKING

**TX8DF**8D TX Drill  
With Coolant Holes

Stock	Order No	Code	d1m7	d2h6	l1	l2	I3
	<b>67100</b>	TX8DF.2.0600.0950.A0140.0480.0600.0570.00.506A1B03.01	6	6	95	48	<b>57</b>
	<b>67102</b>	TX8DF.2.0680.1140.A0140.0640.0800.0760.00.508A1B03.01	6,8	8	114	64	<b>76</b>
	<b>67104</b>	TX8DF.2.0700.1140.A0140.0640.0700.0760.00.508A1B03.01	7	8	114	64	<b>76</b>
	<b>67106</b>	TX8DF.2.0750.1140.A0140.0640.0750.0760.00.508A1B03.01	7,5	8	114	64	<b>76</b>
	<b>67108</b>	TX8DF.2.0780.1140.A0140.0640.0780.0760.00.508A1B03.01	7,8	8	114	64	<b>76</b>
	<b>67110</b>	TX8DF.2.0800.1140.A0140.0640.0800.0760.00.508A1B03.01	8	8	114	64	<b>76</b>
	<b>67112</b>	TX8DF.2.0850.1420.A0140.0800.0850.0950.00.S10A1B03.01	8,5	10	142	80	<b>95</b>
	<b>67114</b>	TX8DF.2.0880.1420.A0140.0800.0880.0950.00.S10A1B03.01	8,8	10	142	80	<b>95</b>
	<b>67116</b>	TX8DF.2.0900.1420.A0140.0800.0900.0950.00.S10A1B03.01	9	10	142	80	<b>95</b>
	<b>67118</b>	TX8DF.2.0950.1420.A0140.0800.0950.0950.00.S10A1B03.01	9,5	10	142	80	<b>95</b>
	<b>67120</b>	TX8DF.2.1000.1420.A0140.0800.1000.0950.00.S10A1B03.01	10	10	142	80	<b>95</b>
	<b>67122</b>	TX8DF.2.1020.1620.A0140.0960.1020.1140.00.S12A1B03.01	10,2	12	162	96	<b>114</b>
	<b>67124</b>	TX8DF.2.1050.1620.A0140.0960.1050.1140.00.S12A1B03.01	10,5	12	162	96	<b>114</b>
	<b>67126</b>	TX8DF.2.1100.1620.A0140.0960.1100.1140.00.S12A1B03.01	11	12	162	96	<b>114</b>
	<b>67128</b>	TX8DF.2.1200.1620.A0140.0960.1200.1140.00.S12A1B03.01	12	12	162	96	<b>114</b>
	<b>67130</b>	TX8DF.2.1250.1780.A0140.1100.1250.1330.00.S14A1B03.01	12,5	14	178	110	<b>133</b>
	<b>67132</b>	TX8DF.2.1280.1780.A0140.1100.1280.1330.00.S14A1B03.01	12,8	14	178	110	<b>133</b>
	<b>67134</b>	TX8DF.2.1300.1780.A0140.1100.1300.1330.00.S14A1B03.01	13	14	178	110	<b>133</b>
	<b>67136</b>	TX8DF.2.1350.1780.A0140.1100.1350.1310.00.S14A1B03.01	13,5	14	178	110	<b>131</b>
	<b>67138</b>	TX8DF.2.1400.1780.A0140.1100.1400.1310.00.S14A1B03.01	14	14	178	110	<b>131</b>
	<b>67140</b>	TX8DF.2.1450.2030.A0140.1280.1450.1520.00.S16A1B03.01	14,5	16	203	128	<b>152</b>
	<b>67142</b>	TX8DF.2.1500.2030.A0140.1280.1500.1520.00.S16A1B03.01	15	16	203	128	<b>152</b>
	<b>67144</b>	TX8DF.2.1550.2030.A0140.1280.1550.1520.00.S16A1B03.01	15,5	16	203	128	<b>152</b>
	<b>67146</b>	TX8DF.2.1600.2030.A0140.1280.1600.1520.00.S16A1B03.01	16	16	203	128	<b>152</b>
	<b>67148</b>	TX8DF.2.1700.2220.A0140.1440.1700.1710.00.S18A1B03.01	17	18	222	144	<b>171</b>
	<b>67150</b>	TX8DF.2.1750.2220.A0140.1440.1750.1710.00.S18A1B03.01	17,5	18	222	144	<b>171</b>
	<b>67152</b>	TX8DF.2.1800.2220.A0140.1440.1800.1710.00.S18A1B03.01	18	18	222	144	<b>171</b>
	<b>67154</b>	TX8DF.2.1850.2430.A0140.1600.1850.1900.00.S20A1B03.01	18,5	20	243	160	<b>190</b>
	<b>67156</b>	TX8DF.2.1900.2430.A0140.1600.1900.1900.00.S20A1B03.01	19	20	243	160	<b>190</b>
	<b>67158</b>	TX8DF.2.1950.2430.A0140.1600.1950.1900.00.S20A1B03.01	19,5	20	243	160	<b>190</b>
	<b>67160</b>	TX8DF.2.2000.2430.A0140.1600.2000.1900.00.S20A1B03.01	20	20	243	160	<b>190</b>

**Cutting Parameters Vc(m/min)**

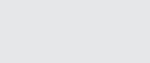
Non-Alloy Steel	160-200	●
Steel	140-160	●
Tempered Steel	120-140	●
Cold-Work Tool Steel	100-120	○
Hot-Work Tool Steel	100-120	○
Grey Cast Iron	160-200	●
Alloy Cast Iron	160-200	●
Precision Cast	120-160	●

**Feed Per Revolution (mm/rev)**

Ø	
3	0,08
4	0,110
5	0,140
6	0,170
8	0,190
10	0,210
12	0,240
16	0,270
20	0,290

**α  
130°**

+TiAIN



● Recommended   ○ Acceptable   ○ Not Recommended

\*Marked products are available  
from stock to deliver fast.

HOLE MAKING

# KTX5D

5D TX Drill

With Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance



Thanks to its  
brand-new geometry  
and coating up to

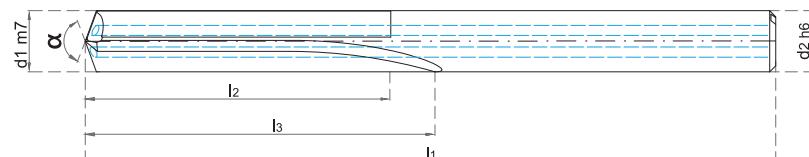
% **40** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **45** better hole surface  
roughness in comparison  
with equivalents

Optimal raw material  
selection for drilling  
operations to damp  
vibration and up to

% **25** more precision hole  
diameter in comparison with  
equivalents



HOLE-MAKING

**KTX5D**5D TX Drill  
With Coolant Holes

Stock	Order No	Code	d1m7	d2h6	l1	l2	I3
	<b>79100</b>	KTX5D.2.0500.0820.A0130.0350.0000.0440.00.S06B1Y01.01	5	6	82	35	<b>44</b>
	<b>79102</b>	KTX5D.2.0510.0820.A0130.0350.0000.0440.00.S06B1Y01.01	5,1	6	82	35	<b>44</b>
	<b>79104</b>	KTX5D.2.0520.0820.A0130.0350.0000.0440.00.S06B1Y01.01	5,2	6	82	35	<b>44</b>
	<b>79106</b>	KTX5D.2.0550.0820.A0130.0350.0000.0440.00.S06B1Y01.01	5,5	6	82	35	<b>44</b>
	<b>79108</b>	KTX5D.2.0600.0820.A0130.0350.0000.0440.00.S06B1Y01.01	6	6	82	35	<b>44</b>
	<b>79110</b>	KTX5D.2.0650.0910.A0130.0430.0000.0530.00.S08B1Y01.01	6,5	8	91	43	<b>53</b>
	<b>79112</b>	KTX5D.2.0680.0910.A0130.0430.0000.0530.00.S08B1Y01.01	6,8	8	91	43	<b>53</b>
	<b>79114</b>	KTX5D.2.0700.0910.A0130.0430.0000.0530.00.S08B1Y01.01	7	8	91	43	<b>53</b>
	<b>79116</b>	KTX5D.2.0750.0910.A0130.0430.0000.0530.00.S08B1Y01.01	7,5	8	91	43	<b>53</b>
	<b>79118</b>	KTX5D.2.0780.0910.A0130.0430.0000.0530.00.S08B1Y01.01	7,8	8	91	43	<b>53</b>
	<b>79120</b>	KTX5D.2.0800.0910.A0130.0430.0000.0530.00.S08B1Y01.01	8	8	91	43	<b>53</b>
	<b>79122</b>	KTX5D.2.0840.1030.A0130.0490.0000.0610.00.S10B1Y01.01	8,4	10	103	49	<b>61</b>
	<b>79124</b>	KTX5D.2.0850.1030.A0130.0490.0000.0610.00.S10B1Y01.01	8,5	10	103	49	<b>61</b>
	<b>79126</b>	KTX5D.2.0880.1030.A0130.0490.0000.0610.00.S10B1Y01.01	8,8	10	103	49	<b>61</b>
	<b>79128</b>	KTX5D.2.0900.1030.A0130.0490.0000.0610.00.S10B1Y01.01	9	10	103	49	<b>61</b>
	<b>79130</b>	KTX5D.2.0950.1030.A0130.0490.0000.0610.00.S10B1Y01.01	9,5	10	103	49	<b>61</b>
	<b>79132</b>	KTX5D.2.1000.1030.A0130.0490.0000.0610.00.S10B1Y01.01	10	10	103	49	<b>61</b>
	<b>79134</b>	KTX5D.2.1020.1180.A0130.0560.0000.0710.00.S12B1Y01.01	10,2	12	118	56	<b>71</b>
	<b>79136</b>	KTX5D.2.1050.1180.A0130.0560.0000.0710.00.S12B1Y01.01	10,5	12	118	56	<b>71</b>
	<b>79138</b>	KTX5D.2.1100.1180.A0130.0560.0000.0710.00.S12B1Y01.01	11	12	118	56	<b>71</b>
	<b>79140</b>	KTX5D.2.1200.1180.A0130.0560.0000.0710.00.S12B1Y01.01	12	12	118	56	<b>71</b>
	<b>79142</b>	KTX5D.2.1250.1240.A0130.0600.0000.0770.00.S14B1Y01.01	12,5	14	124	60	<b>77</b>
	<b>79144</b>	KTX5D.2.1280.1240.A0130.0600.0000.0770.00.S14B1Y01.01	12,8	14	124	60	<b>77</b>
	<b>79146</b>	KTX5D.2.1300.1240.A0130.0600.0000.0770.00.S14B1Y01.01	13	14	124	60	<b>77</b>
	<b>79148</b>	KTX5D.2.1400.1240.A0130.0600.0000.0770.00.S14B1Y01.01	14	14	124	60	<b>77</b>
	<b>79150</b>	KTX5D.2.1450.1330.A0130.0630.0000.0830.00.S16B1Y01.01	14,5	16	133	63	<b>83</b>
	<b>79152</b>	KTX5D.2.1500.1330.A0130.0740.0000.0830.00.S16B1Y01.01	15	16	133	74	<b>83</b>
	<b>79154</b>	KTX5D.2.1550.1330.A0130.0630.0000.0830.00.S16B1Y01.01	15,5	16	133	63	<b>83</b>
	<b>79156</b>	KTX5D.2.1600.1330.A0130.0630.0000.0830.00.S16B1Y01.01	16	16	133	63	<b>83</b>
	<b>79158</b>	KTX5D.2.1700.1430.A0130.0710.0000.0930.00.S18B1Y01.01	17	18	143	71	<b>93</b>
	<b>79160</b>	KTX5D.2.1750.1430.A0130.0710.0000.0930.00.S18B1Y01.01	17,5	18	143	71	<b>93</b>
	<b>79162</b>	KTX5D.2.1800.1430.A0130.0710.0000.0930.00.S18B1Y01.01	18	18	143	71	<b>93</b>
	<b>79164</b>	KTX5D.2.1850.1530.A0130.0770.0000.1010.00.S20B1Y01.01	18,5	20	153	77	<b>101</b>
	<b>79166</b>	KTX5D.2.1900.1530.A0130.0770.0000.1010.00.S20B1Y01.01	19	20	153	77	<b>101</b>
	<b>79168</b>	KTX5D.2.1950.1530.A0130.0770.0000.1010.00.S20B1Y01.01	19,5	20	153	77	<b>101</b>
	<b>79170</b>	KTX5D.2.2000.1530.A0130.0770.0000.1010.00.S20B1Y01.01	20	20	153	77	<b>101</b>

**Cutting Parameters Vc(m/min)**

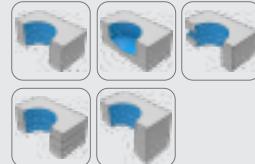
Aluminum Alloy	125-175	●
Copper Alloy	125-175	●
Magnesium Alloy	125-175	●

**Feed Per Revolution (mm/rev)**

0	
6	0,144
8	0,160
10	0,176
12	0,192
16	0,224
20	0,248

**α 130°**

FORM HA DIN 6535



● Recommended   ○ Acceptable   □ Not Recommended

\*Marked products are available  
from stock to deliver fast.

HOLE MAKING

# KTX8D

8D TX Drill

With Coolant Holes



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems

## D-Tech High Performance

*new product*

Thanks to its  
brand-new geometry  
and coating up to

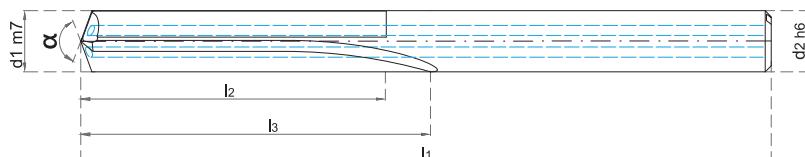
% **40** longer tool life at  
least in comparison  
with equivalents

Stronger cutting  
edges by Exper  
edge preparation  
technology and up to

% **45** better hole surface  
roughness in comparison  
with equivalents

Optimal raw material  
selection for drilling  
operations to damp  
vibration and up to

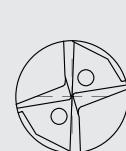
% **25** more precision hole  
diameter in comparison with  
equivalents



HOLE-MAKING

**KTX8D**8D TX Drill  
With Coolant Holes

Stock	Order No	Code	d1m7	d2h6	l1	l2	<b>l3</b>
	<b>80100</b>	KTX8D.2.0600.0950.A0130.0480.0000.0570.00.S06B1Y01.01	6	6	95	48	<b>57</b>
	<b>80102</b>	KTX8D.2.0680.1140.A0130.0640.0000.0760.00.S08B1Y01.01	6,8	8	114	64	<b>76</b>
	<b>80104</b>	KTX8D.2.0700.1140.A0130.0640.0000.0760.00.S08B1Y01.01	7	8	114	64	<b>76</b>
	<b>80106</b>	KTX8D.2.0750.1140.A0130.0640.0000.0760.00.S08B1Y01.01	7,5	8	114	64	<b>76</b>
	<b>80108</b>	KTX8D.2.0780.1140.A0130.0640.0000.0760.00.S08B1Y01.01	7,8	8	114	64	<b>76</b>
	<b>80110</b>	KTX8D.2.0800.1140.A0130.0640.0000.0760.00.S08B1Y01.01	8	8	114	64	<b>76</b>
	<b>80112</b>	KTX8D.2.0880.1420.A0130.0800.0000.0950.00.S10B1Y01.01	8,8	10	142	80	<b>95</b>
	<b>80114</b>	KTX8D.2.0900.1420.A0130.0800.0000.0950.00.S10B1Y01.01	9	10	142	80	<b>95</b>
	<b>80116</b>	KTX8D.2.0950.1420.A0130.0800.0000.0950.00.S10B1Y01.01	9,5	10	142	80	<b>95</b>
	<b>80118</b>	KTX8D.2.1000.1420.A0130.0800.0000.0950.00.S10B1Y01.01	10	10	142	80	<b>95</b>
	<b>80120</b>	KTX8D.2.1020.1620.A0130.0960.0000.1140.00.S12B1Y01.01	10,2	12	162	96	<b>114</b>
	<b>80122</b>	KTX8D.2.1100.1620.A0130.0960.0000.1140.00.S12B1Y01.01	11	12	162	96	<b>114</b>
	<b>80124</b>	KTX8D.2.1200.1620.A0130.0960.0000.1140.00.S12B1Y01.01	12	12	162	96	<b>114</b>
	<b>80126</b>	KTX8D.2.1250.1780.A0130.1100.0000.1310.00.S14B1Y01.01	12,5	14	178	110	<b>131</b>
	<b>80128</b>	KTX8D.2.1280.1780.A0130.1100.0000.1310.00.S14B1Y01.01	12,8	14	178	110	<b>131</b>
	<b>80130</b>	KTX8D.2.1300.1780.A0130.1100.0000.1310.00.S14B1Y01.01	13	14	178	110	<b>131</b>
	<b>80132</b>	KTX8D.2.1400.1780.A0130.1100.0000.1310.00.S14B1Y01.01	14	14	178	110	<b>131</b>
	<b>80134</b>	KTX8D.2.1450.2030.A0130.1280.0000.1520.00.S16B1Y01.01	14,5	16	203	128	<b>152</b>
	<b>80136</b>	KTX8D.2.1500.2030.A0130.1280.0000.1520.00.S16B1Y01.01	15	16	203	128	<b>152</b>
	<b>80138</b>	KTX8D.2.1550.2030.A0130.1280.0000.1520.00.S16B1Y01.01	15,5	16	203	128	<b>152</b>
	<b>80140</b>	KTX8D.2.1600.2030.A0130.1280.0000.1520.00.S16B1Y01.01	16	16	203	128	<b>152</b>
	<b>80142</b>	KTX8D.2.1700.2220.A0130.1440.0000.1710.00.S18B1Y01.01	17	18	222	144	<b>171</b>
	<b>80144</b>	KTX8D.2.1750.2220.A0130.1440.0000.1710.00.S18B1Y01.01	17,5	18	222	144	<b>171</b>
	<b>80146</b>	KTX8D.2.1800.2220.A0130.1440.0000.1710.00.S18B1Y01.01	18	18	222	144	<b>171</b>
	<b>80148</b>	KTX8D.2.1850.2430.A0130.1600.0000.1900.00.S20B1Y01.01	18,5	20	243	160	<b>190</b>
	<b>80150</b>	KTX8D.2.1900.2430.A0130.1600.0000.1900.00.S20B1Y01.01	19	20	243	160	<b>190</b>
	<b>80152</b>	KTX8D.2.1950.2430.A0130.1600.0000.1900.00.S20B1Y01.01	19,5	20	243	160	<b>190</b>
	<b>80154</b>	KTX8D.2.2000.2430.A0130.1600.0000.1900.00.S20B1Y01.01	20	20	243	160	<b>190</b>

**Cutting Parameters Vc(m/min)**

Aluminum Alloy

125-175



Copper Alloy

125-175



Magnesium Alloy

125-175

**Feed Per Revolution (mm/rev)**

0

0,144

6

0,160

8

0,176

10

0,192

12

0,224

16

0,248

20

**α  
130°**FORM  
HA DIN  
6535

● Recommended   ○ Acceptable   □ Not Recommended

\*Marked products are available  
from stock to deliver fast.

HOLE MAKING

# MEDITAN

High Performance  
Drilling



General  
Engineering



Mold & Die



Automotive



Defence



Rail  
Systems



Medical

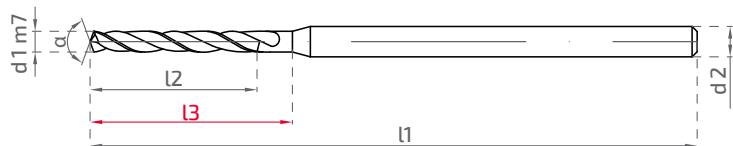
## New Crazy and Wild Member of Karcan Hole Making Series

Karcan Proudly Presents...  
Meditan By D-Tech Hole Making Technologies

new  
*product*

Extreme Cutting Speeds and Long Lasting Tool Life.

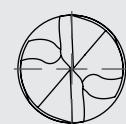
As Well As General Steels, Stainless Steels and Cast Irons, Meditan Offers Extremely High Performance In A Large Scale Of The Most Challenging Workpiece Materials To Machine Are Heat Resistant Superalloys (HRSA) and Titanium Alloys. Classified As ISO-S Materials or Simply S-Materials.



Stock	Order No	Code	d <sub>1m7</sub>	d <sub>2h6</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>
	<b>50100</b>	MED.2.0130.0600.A0140.0100.0130.0135.00.S03C1B04.01	1,3	3	60	10	13,5
	<b>50102</b>	MED.2.0150.0600.A0140.0160.0150.0185.00.S03C1B04.01	1,5	3	60	16	18,5
	<b>50104</b>	MED.2.0165.0600.A0140.0125.0165.0160.00.S03C1B04.01	1,65	3	60	12,5	16
	<b>50106</b>	MED.2.0165.0600.A0140.0190.0165.0220.00.S03C1B04.01	1,65	3	60	19	22
	<b>50108</b>	MED.2.0205.0600.A0140.0165.0205.0200.00.S03C1B04.01	2,05	3	60	16,5	20
	<b>50110</b>	MED.2.0205.0600.A0140.0220.0205.0260.00.S03C1B04.01	2,05	3	60	22	26
	<b>50112</b>	MED.2.0245.0600.A0140.0195.0245.0235.00.S03C1B04.01	2,45	3	60	19,5	23,5
	<b>50114</b>	MED.2.0245.0600.A0140.0280.0245.0310.00.S03C1B04.01	2,45	3	60	28	31

Cutting Parameters V <sub>c</sub> (m/min)		
Unalloyed Steel	80-180	●
Steel	75-160	●
Tempered Steel	75-150	○
Cold Work Tool Steel	60-120	○
Hot Work Tool Steel	60-120	○
AISI 304 - 416 - 420	40-80	●
AISI 316 - 440	40-80	●
17-4 PH 15-5 PH	35-65	●
Cobalt-Chrome alloys	30-50	●
Duplex F51	30-50	●
Gray Cast	90-150	○
Alloyed Cast	90-130	●
Precision Cast	90-120	○
Grafit	95-110	○
Titanium	40-70	●
Titanium Alloys	40-70	●

Feed Per Revolution (mm/rev)		
Ø	mm/dev	
1,3-1,5	0,022	
1,5-1,7	0,029	
1,7-2,1	0,039	
2,1-2,45	0,052	
2,45-3	0,068	
17-20	0,220	



● Recommended   ○ Acceptable   ○ Not Recommended

 \*Marked products are available  
 from stock to deliver fast.



**2025**

Hole Making  
Catalogue

# Drilling Formulas and Definitions

Cutting speed, [vc] m/min

$$V_C = \frac{D_C \times \pi \times n}{1000}$$

Spindle speed, [n] rpm

$$n = \frac{V_C \times 1000}{\pi \times D_c}$$

Penetration rate, [vf] m/min

$$V_f = f_n \times n$$

Feed per revolution, [fn] mm/rev

$$f_n = \frac{V_f}{n}$$

Metal removal rate, [Q] cm<sup>3</sup>/min

$$Q = \frac{D_C \times f_n \times V_C}{4}$$

Net power, [Pc] kW

$$P_C = \frac{f_n \times V_C \times D_C \times k_C}{240 \times 10^3}$$

Torque, Ibf Nm

$$M_C = \frac{P_C \times 30 \times 10^3}{\pi \times n}$$

Specific cutting force, [k<sub>c</sub>] N/mm<sup>2</sup>

$$k_c = k_{c1} \times (f_z \times \sin k_r)^{-m_c} \times \left(1 - \frac{y_0}{100}\right)$$

Feed force, [Ff] N

$$F_f \approx 0.5 \times k_C \times \frac{D_C}{2} \times f_n \times \sin K_r$$

Machining time, [Tc] min

$$T = \frac{\text{Im}}{v_f}$$

# SOLID CARBIDE STEP TWIST DRILL

Solid Carbide  
Step Twist Drill



Machining Type	Material To be Machined	Machine Information	
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Unalloyed Steel <input type="checkbox"/> Aluminium Si>%10 <input type="checkbox"/> Cast Steel <input type="checkbox"/> Aluminium Si<%10 <input type="checkbox"/> Alloyed Steel <input type="checkbox"/> Copper <input type="checkbox"/> Inox <input type="checkbox"/> Brass <input type="checkbox"/> Stainless/Aside Dayanıklı <input type="checkbox"/> Bronz <input type="checkbox"/> Gray Cast <input type="checkbox"/> Titanium Alloys <input type="checkbox"/> Alloyed Cast <input type="checkbox"/> Nickel Alloys <input type="checkbox"/> Sferro Cast <input type="checkbox"/> Cold Cast Iron <input type="checkbox"/> Forged Steel <input type="checkbox"/> Hardened Steel	Machine Brand	
Type		Machine Type	
<input type="checkbox"/> Through Bore <input type="checkbox"/> Blind Bore		Machine Power (kW)	
Machining Method		Max. Speed (RPM)	
<input type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Min.Lubr.		Working Plane	<input type="checkbox"/> Vert. <input type="checkbox"/> Horiz. <input type="checkbox"/> 5Axis
Coolant Supply		Working Type	<input type="checkbox"/> Work Piece Turning <input type="checkbox"/> Cutting Tool Turning
<input type="checkbox"/> Ext. <input type="checkbox"/> Int.		Internal Coolant	<input type="checkbox"/> Yes <input type="checkbox"/> No Pressure
Hardness (HRc, HB, etc.)	Surface Quality Demanded	Additional Features and Notes	
Tensile Strength (N/mm <sup>2</sup> )	Cutting Direction (If not stated we will assume RH.)		
	<input type="checkbox"/> L.H. <input type="checkbox"/> R.H.		
Standard No	Coating		
Shank Form			
HA(DIN 6535)	<input type="checkbox"/>		
HB(DIN 6535)	<input type="checkbox"/>		
HE(DIN 6535)	<input type="checkbox"/>		
Note		Phn-Fax	
Company Name		E-mail	
Authorized Person		Date and Sign	
Address			

Note: Work area details should be drawn roughly, if possible it is recommended that the technical drawing should be provided along with the form

Head Office / Factory / R&D Center  
0.S.B 20. Cadde No : 31 TR26110  
Eskisehir/Turkey  
+90 222 228 10 40



# SOLID MULTI STEP CARBIDE TWIST DRILL

Solid Carbide  
Step Twist Drill



Machining Type	Material To be Machined	Machine Information
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Unalloyed Steel <input type="checkbox"/> Aluminium Si>%10 <input type="checkbox"/> Cast Steel <input type="checkbox"/> Aluminium Si<%10 <input type="checkbox"/> Alloyed Steel <input type="checkbox"/> Copper <input type="checkbox"/> Inox <input type="checkbox"/> Brass <input type="checkbox"/> Stainless/Aside Dayanıklı <input type="checkbox"/> Bronz <input type="checkbox"/> Gray Cast <input type="checkbox"/> Titanium Alloys <input type="checkbox"/> Alloyed Cast <input type="checkbox"/> Nickel Alloys <input type="checkbox"/> Sferro Cast <input type="checkbox"/> Cold Cast Iron <input type="checkbox"/> Forged Steel <input type="checkbox"/> Hardened Steel	Machine Brand Machine Type Machine Power (kW) Max. Speed (RPM) Working Plane <input type="checkbox"/> Vert. <input type="checkbox"/> Horiz. <input type="checkbox"/> 5Axis Working Type <input type="checkbox"/> Work Piece Turning <input type="checkbox"/> Cutting Tool Turning Internal Coolant <input type="checkbox"/> Yes <input type="checkbox"/> No Pressure Spindle Type Holder Type Axis the Tool Operates Coolant <input type="checkbox"/> Oil <input type="checkbox"/> Boron Oil
Type  <input type="checkbox"/> Through Bore <input type="checkbox"/> Blind Bore		
Machining Method  <input type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Min. Lubr.		
Coolant Supply  <input type="checkbox"/> Ext. <input type="checkbox"/> Int.		
Hardness (HRc, HB, etc.)	Surface Quality Demanded	Additional Features and Notes
Tensile Strength (N/mm <sup>2</sup> )	Cutting Direction (If not stated we will assume RH.) <input type="checkbox"/> L.H. <input type="checkbox"/> R.H.	
Standard No	Coating	
<b>Shank Form</b>		
HA(DIN 6535) <input type="checkbox"/>		
HB(DIN 6535) <input type="checkbox"/>		
HE(DIN 6535) <input type="checkbox"/>		
Note		
Company Name	Phn-Fax	
Authorized Person	E-mail	
Address	Date and Sign	

Note: Work area details should be drawn roughly, if possible it is recommended that the technical drawing should be provided along with the form

Head Office / Factory / v Center  
O.S.B 20. Cadde No : 31 TR26110  
Eskisehir/Turkey  
+90 222 228 10 40



# SOLID CARBIDE STEP TX DRILL

## Solid Carbide Step Twist Drill



Machining Type	Material To be Machined	Machine Information	
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Unalloyed Steel <input type="checkbox"/> Cast Steel <input type="checkbox"/> Alloyed Steel <input type="checkbox"/> Inox <input type="checkbox"/> Stainless/Aside Dayanıklı <input type="checkbox"/> Gray Cast <input type="checkbox"/> Alloyed Cast <input type="checkbox"/> Sfrero Cast <input type="checkbox"/> Forged Steel	<input type="checkbox"/> Aluminium Si>%10 <input type="checkbox"/> Aluminium Si<%10 <input type="checkbox"/> Copper <input type="checkbox"/> Brass <input type="checkbox"/> Bronz <input type="checkbox"/> Titanium Alloys <input type="checkbox"/> Nickel Alloys <input type="checkbox"/> Cold Cast Iron <input type="checkbox"/> Hardened Steel	Machine Brand Machine Type Machine Power (kW) Max. Speed (RPM)
Type			Working Plane <input type="checkbox"/> Vert. <input type="checkbox"/> Horiz. <input type="checkbox"/> 5Axis Working Type <input type="checkbox"/> Work Piece Turning <input type="checkbox"/> Cutting Tool Turning
Throught Bore <input type="checkbox"/> Blind Bore <input type="checkbox"/>			Internal Coolant <input type="checkbox"/> Yes <input type="checkbox"/> No Pressure
Machining Method			Spindle Type Holder Type Axis the Tool Operates
Dry <input type="checkbox"/> Wet <input type="checkbox"/> Min.Lubr. <input type="checkbox"/>			Coolant <input type="checkbox"/> Oil <input type="checkbox"/> Boron Oil
Coolant Supply			
Ext. <input type="checkbox"/> Int. <input type="checkbox"/>			
Hardness (HRc, HB, etc.)	Surface Quality Demanded	Additional Features and Notes	
Tensile Strength (N/mm <sup>2</sup> )	Cutting Direction (If not stated we will assume RH.)		
	<input type="checkbox"/> L.H. <input type="checkbox"/> R.H.		
Standard No	Coating		
Shank Form			
HA(DIN 6535) <input type="checkbox"/>			
HB(DIN 6535) <input type="checkbox"/>			
HE(DIN 6535) <input type="checkbox"/>			
Note		Phn-Fax	
Company Name		E-mail	
Authorized Person		Date and Sign	
Address			

Note: Work area details should be drawn roughly, if possible it is recommended that the technical drawing should be provided along with the form

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Machining Type	Material To be Machined	Machine Information	
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Unalloyed Steel <input type="checkbox"/> Aluminium Si>%10 <input type="checkbox"/> Cast Steel <input type="checkbox"/> Aluminium Si<%10 <input type="checkbox"/> Alloyed Steel <input type="checkbox"/> Copper <input type="checkbox"/> Inox <input type="checkbox"/> Brass <input type="checkbox"/> Stainless/Aside Dayanıklı <input type="checkbox"/> Bronz <input type="checkbox"/> Gray Cast <input type="checkbox"/> Titanium Alloys <input type="checkbox"/> Alloyed Cast <input type="checkbox"/> Nickel Alloys <input type="checkbox"/> Sferro Cast <input type="checkbox"/> Cold Cast Iron <input type="checkbox"/> Forged Steel <input type="checkbox"/> Hardened Steel	Machine Brand	
Type		Machine Type	
<input type="checkbox"/> Through Bore <input type="checkbox"/> Blind Bore		Machine Power (kW)	
Machining Method		Max. Speed (RPM)	
<input type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Min.Lubr.		Working Plane	<input type="checkbox"/> Vert. <input type="checkbox"/> Horiz. <input type="checkbox"/> 5Axis
Coolant Supply		Working Type	<input type="checkbox"/> Work Piece Turning <input type="checkbox"/> Cutting Tool Turning
<input type="checkbox"/> Ext. <input type="checkbox"/> Int.		Internal Coolant	<input type="checkbox"/> Yes <input type="checkbox"/> No Pressure
Hardness (HRc, HB, etc.)	Surface Quality Demanded	Additional Features and Notes	
Tensile Strength (N/mm <sup>2</sup> )	Cutting Direction (If not stated we will assume RH.)		
	<input type="checkbox"/> L.H. <input type="checkbox"/> R.H.		
Standard No	Coating		
Shank Form			
HA(DIN 6535)	<input type="checkbox"/>		
HB(DIN 6535)	<input type="checkbox"/>		
HE(DIN 6535)	<input type="checkbox"/>		

Note		Phn-Fax	
Company Name		E-mail	
Authorized Person		Date and Sign	
Address			

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Type	Material To be Machined	Machine Information	
<input type="checkbox"/> Through Bore <input type="checkbox"/> Blind Bore	<input type="checkbox"/> Unalloyed Steel <input type="checkbox"/> Aluminium Si>%10	Machine Brand	
	<input type="checkbox"/> Cast Steel <input type="checkbox"/> Aluminium Si<%10	Machine Type	
	<input type="checkbox"/> Alloyed Steel <input type="checkbox"/> Copper	Machine Power (kW)	
<b>Machining Method</b>	<input type="checkbox"/> Inox <input type="checkbox"/> Brass	Max. Speed (RPM)	
<input type="checkbox"/> Dry <input type="checkbox"/> Wet <input type="checkbox"/> Min.Lubr.	<input type="checkbox"/> Stainless/Aside Dayanıklı <input type="checkbox"/> Bronz	Working Plane	<input type="checkbox"/> Vert. <input type="checkbox"/> Horiz. <input type="checkbox"/> 5Axis
<b>Coolant Supply</b>	<input type="checkbox"/> Gray Cast <input type="checkbox"/> Titanium Alloys	Working Type	<input type="checkbox"/> Work Piece Turning <input type="checkbox"/> Cutting Tool Turning
Ext.       Int.       Ext.       Int.	<input type="checkbox"/> Alloyed Cast <input type="checkbox"/> Nickel Alloys	Internal Coolant	<input type="checkbox"/> Yes <input type="checkbox"/> No      Pressure
	<input type="checkbox"/> Sferro Cast <input type="checkbox"/> Cold Cast Iron	Spindle Type	
	<input type="checkbox"/> Forged Steel <input type="checkbox"/> Hardened Steel	Holder Type	
		Axis the Tool Operates	
		Coolant	
		<input type="checkbox"/> Oil	<input type="checkbox"/> Boron Oil
<b>Hardness (HRc, HB, etc.)</b>	<b>Surface Quality Demanded</b>	<b>Additional Features and Notes</b>	
<b>Tensile Strength (N/mm<sup>2</sup>)</b>	<b>Cutting Direction (If not stated we will assume RH.)</b>		
	<input type="checkbox"/> L.H.	<input type="checkbox"/> R.H.	
<b>Standard No</b>	<b>Coating</b>		
<b>Shank Form</b>			
<b>Note</b>			
<b>Company Name</b>			
<b>Authorized Person</b>			
<b>Address</b>			

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