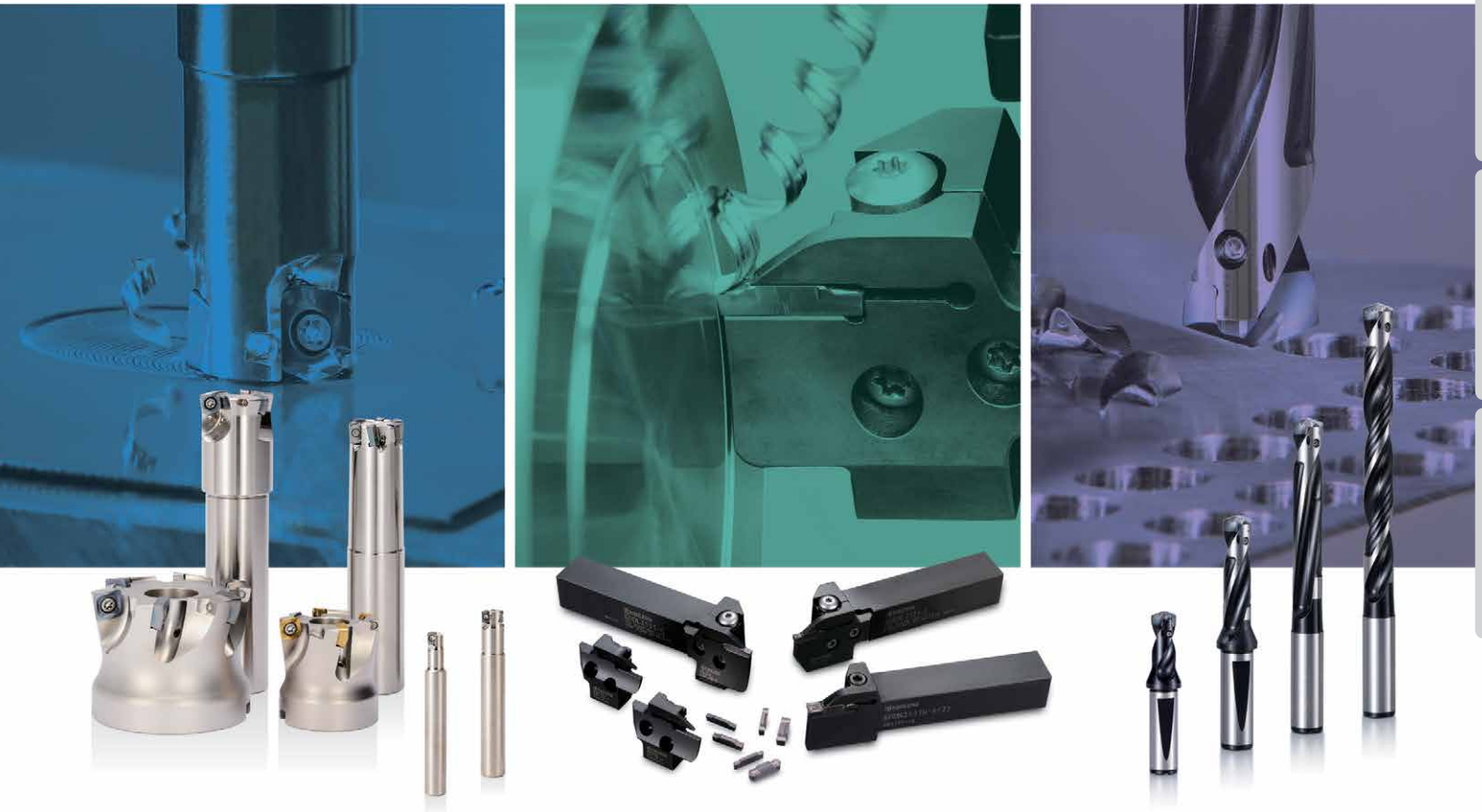




# 2018

## WINTER / SPRING

P R O M O P A C K



MILLING SOLUTIONS  
DRILLING SOLUTIONS  
GROOVING SOLUTIONS

*Special Offers for Milling, Drilling, and Grooving Solutions...*



VALID THROUGH  
June 30, 2018

# KPTI Company Overview

Established in April 2014, KPTI unifies two of the world's leading cutting tool manufacturers, Kyocera Tycom Corporation (KTC) and the Cutting Tool Division of Kyocera Industrial Ceramics Corporation (KICC-CT).

The new company creates a combined enterprise that optimizes the strengths of both organizations and facilitates expansion of Kyocera's overall cutting tool-related business in North America. The new combined entity will unify cutting tool resources to create greater efficiencies while positioning the new organization for continued success.

Customers will benefit from a unified sales and support team offering improved customer service and an expanded portfolio of cutting tool products and solutions for the automotive, aerospace, general machining, medical, power generation, printed circuit board and steel markets.

## KPTI North American Operations



Costa Mesa, CA

Wapakoneta, OH

Hendersonville, NC



### Administration & Manufacturing

- Administration & Accounting Center
- Micro-Tools Manufacturing
- Printed Circuit Board Drill Manufacturing
- Micro-Tools & PCB Sales & Customer Service Center

### Steel Tool Holder Manufacturing

- Indexable Drills
- Milling End Mills & Face Mills
- Boring Bars
- Turning and Grooving Holders
- API Ring Groovers

### Sales, Tech Center & Marketing

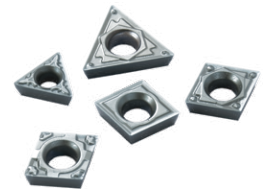
- North American Tech Center
- North American Sales, Marketing & Customer Service Center

## KPTI

### Manufactured Products



Steel Toolholders for Milling, Turning, Grooving, Threading and Drilling Metal



Indexable metal cutting inserts made of carbide, ceramic, cermet, Cubic Boron Nitride, and Polycrystalline diamond



Solid carbide cutting tools for tight tolerance and micro-diameter metal cutting applications

## KPTI Markets Served



Automotive



Aerospace



Medical



Printed Circuit Board



Power Generation

## Explore the Many Ways to Save with the Kyocera 2018 Winter/Spring Promo Pack

In 2018 Kyocera Precision Tools, Inc. is offering more ways to advance your productivity while also reducing your tooling costs. With our wide array of indexable and solid round cutting tools, we strive to be your primary source for high-quality, cost-effective solutions for all of your metal cutting needs. Read below for our latest cost-savings opportunities.

To learn more about KPTI, please visit [www.kyoceraprecisiontools.com](http://www.kyoceraprecisiontools.com).

### Milling Solutions

MFH-Micro High Feed Mills .....	Cost-Efficient Kits Featuring (1) Holder and (10) Inserts	<a href="#">P4</a>
MFH-Mini High Feed Mills .....	Cost-Efficient Kits Featuring (1) Holder and (10) Inserts	<a href="#">P6</a>
MFH-RAPTOR High Feed Mills .....	Cost-Efficient Kits Featuring (1) Holder and (10) Inserts	<a href="#">P8</a>
RAD-6 (MRX) Six-Edge Radius Cutter .....	Cost-Efficient Kits Featuring (1) Holder and (10) Inserts	<a href="#">P10</a>
MFPN Eight-Edge 45° Face Mills .....	Cost-Efficient Kits Featuring (1) Holder and (10 or 20) Inserts	<a href="#">P12</a>

### Drilling Solutions

DRA Magic Drills .....	Kits Include 1 Drill Body and 1 Insert Tip	<a href="#">P14</a>
DRZ Magic Drills .....	Kits Include 1 Drill Body and 10 Inserts	<a href="#">P22</a>

### Grooving Solutions

KGD SwitchBlade-Style Grooving Holders .....	Kits Include (1) KGD SwitchBlade-Style Holder and (10) GDM Inserts	<a href="#">P29</a>
KGD Integral-Style Grooving Holders .....	Kits Include (1) KGD Integral-Style Holder and (10) GDM Inserts	<a href="#">P30</a>

### How to Order

Kyocera Precision Tools' high-performance lineup of indexable and solid round cutting tools can be purchased through our vast North American Distribution network. When placing an order for items in this Promo Pack, please reference the promo code provided in the [Promo Order Guide](#).

To locate an Authorized Kyocera Distributor, please visit [www.kyoceraprecisiontools.com/locate](http://www.kyoceraprecisiontools.com/locate)



NEW

# MFH-RAPTOR MICRO

## Smallest Diameter in High Feed Milling Series

### Durable Design Aids in Chatter Resistance

Maximum D.O.C. 0.020" with stable high feed machining in a wide range of applications

### Replaces Solid End Mills to Reduce Machining Costs

Suppresses chattering and increases milling efficiency

### Advanced Coating Technology

MEGACOAT NANO Coating technology increases tool life when machining difficult-to-cut materials



Molded Convex Cutting Edge

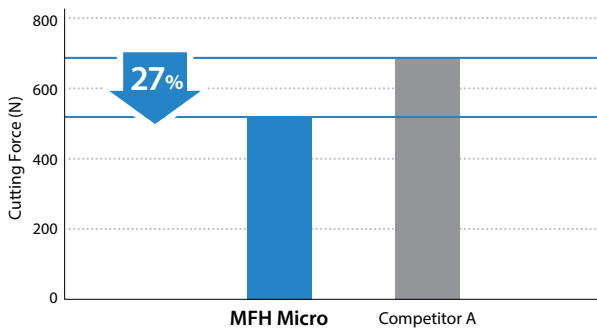


High Precision G Class Insert

## 1 Stable Machining with Chattering Resistance

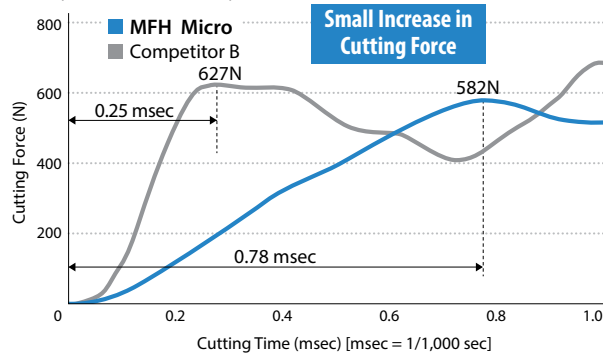
### Molded Convex Cutting Edge Controls Initial Impact when Entering the Workpiece

Cutting Force Comparison (In-house Evaluation)



Cutting Conditions:  $V_c = 390$  sfm,  $f_z = 0.024$  ipt, D.O.C. = 0.016"  
Cutter Dia.  $\emptyset 0.375$ ", Slotting, Dry Workpiece: 1049

Increase in Cutting Force when Entering Work Piece (In-house Evaluation)



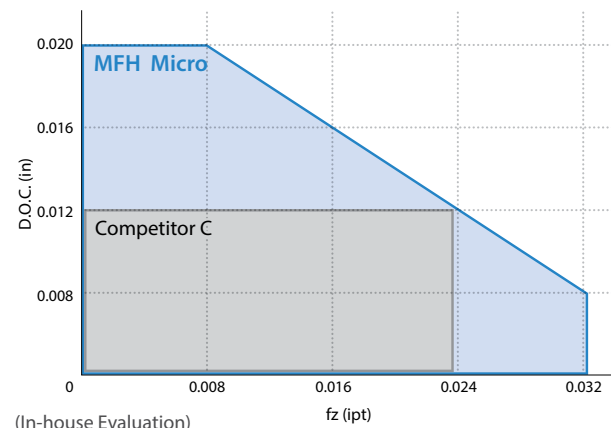
Cutting Conditions:  $V_c = 390$  sfm,  $f_z = 0.024$  ipt, D.O.C.  $\times a_e = 0.016" \times 0.197"$   
Cutter Dia.  $\emptyset 0.375$ ", Dry Workpiece: 1049

## 2 Wide Range of Machining Applications

### Wide Range of Machining Applications at a Maximum Depth of Cut of 0.020"

### Stable Machining Even with Small Machining Centers

Cutting Performance Map (Cutter Dia.  $\emptyset 0.375$ ")



(In-house Evaluation)

All 2018 Winter / Spring Offers Valid through June 30, 2018

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MEGACOAT NANO  
**PR1525**

First Choice for Carbon Steel and Alloy Steel

MEGACOAT NANO  
**PR1535**

First Choice for Titanium and Austenitic Stainless Steel

CVD Coated Carbide  
**CA6535**

First Choice For Heat-Resistant Alloys and Martensitic Stainless Steel



## MFH-Micro End Mill Kits

(1) Cutter and (10) Inserts  
Choose your Cutter and Insert Grade



Cutter Description		Cutting Dia.	No. of Insert Pockets	Insert Description See Below	Grades (Pick 1)	U.S. Kit Price
Standard Shank (Cylindrical)	<b>MFH 0500-S500-01-3T-3</b>	0.500"	3	<b>LPGT010210ER-GM</b>	<b>PR1525</b> Carbon Steel & Alloy Steel	<b>\$160</b>
	<b>MFH 0625-S625-01-4T35</b>	0.625"	4		<b>PR1535</b> Titanium & Precipitation Hardened Stainless Steel	<b>\$200</b>
					<b>CA6535</b> Heat-Resistant Alloys	

### MFH-Raptor Micro Inserts

Usage Classification	P	Carbon Steel / Alloy Steel		★	★	★			
		Mold Steel							
★ Roughing / 1st Choice ☆ Roughing / 2nd Choice (When hardness is under 45HRC)	M	Austenitic Stainless Steel		★	☆	★			
		Martensitic Stainless Steel		☆					
	K	Gray Cast Iron							
		Ductile Cast Iron							
	S	Heat Resistant Alloy (Ni-base)		☆		★			
		Titanium Alloy (Ti-6Al-4V)		★					
H	Hard Materials								
Insert	Part Number	Dimensions (in)					MEGACOAT NANO		CVD Coating
		A	T	Ød	W	rε	PR1535	PR1525	CA6535
<p>General Purpose</p>	<b>LPGT 010210ER-GM</b>	0.165	0.086	0.083	0.247	0.039	●	●	●

● : U.S. Stock



# MFH-RAPTOR MINI

## Small Diameter High Feed End Mills & Face Mills

### Expanded Lineup

New MFH-Mini face mills now available in 1.500" and 2.000" diameters

### Higher Productivity

Double-sided 4-edge inserts will save money and increase productivity

### Advanced Coating Technology

MEGACOAT NANO Coating technology increases tool life when machining difficult-to-cut materials



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MEGACOAT NANO  
**PR1535**

First Choice for Titanium and Austenitic Stainless Steel

CVD Coated Carbide  
**CA6535**

First Choice For Heat-Resistant Alloys and Martensitic Stainless Steel



## MFH-Mini End Mill Kits

(1) Cutter and (10) Inserts

Choose your Cutter and Insert Grade



Cutter Description		Cutting Dia.	No. of Insert Pockets	Insert Description See <a href="#">Page 7</a>	Grades (Pick 1)	U.S. Kit Price
Weldon Shank	MFH 0625-W625-03-2T-3	0.625"	2	LOGU030310ER-GM	PR1525 Carbon Steel & Alloy Steel	\$220
	MFH 0750-W750-03-3T-4	0.750"	3			\$260
	MFH 1000-W100-03-4T47	1.000"	4			\$270
	MFH 1000-W100-03-5T47	1.000"	5			\$270
	MFH 1250-W125-03-5T-5	1.250"	5			\$300
	MFH 1250-W125-03-6T-5	1.250"	6			\$310
Long Shank	MFH 0625-S625-03-2T-6	0.625"	2		CA6535 Heat-Resistant Alloys	\$240
	MFH 0750-S750-03-3T65	0.750"	3			\$270
	MFH 1000-S100-03-4T-7	1.000"	4			\$310
	MFH 1250-S125-03-5T-8	1.250"	5			\$330

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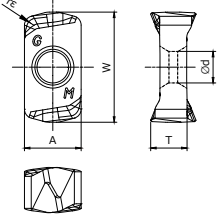
## MFH-Mini Face Mill Kits

(1) Cutter and (10) Inserts  
Choose your Cutter and Insert Grade



Cutter Description		Cutting Dia.	No. of Insert Pockets	Insert Description See Below	Grades (Pick 1)	U.S. Kit Price
Face Mill	<b>MFH 1500R-03-5T</b>	1.500"	5	LOGU030310ER-GM	<b>PR1525</b> Carbon Steel & Alloy Steel	<b>\$320</b>
	<b>MFH 1500R-03-6T</b>	1.500"	6		<b>PR1535</b> Titanium & Precipitation Hardened Stainless Steel	<b>\$330</b>
	<b>MFH 2000R-03-8T</b>	2.000"	8		<b>CA6535</b> Heat-Resistant Alloys	<b>\$450</b>

### MFH-Raptor Mini Inserts

Usage Classification	P	Carbon Steel / Alloy Steel		★	★				
		Mold Steel							
★ Roughing / 1st Choice ☆ Roughing / 2nd Choice (When hardness is under 45HRC)	M	Austenitic Stainless Steel		★	☆				
		Martensitic Stainless Steel		☆	★				
	K	Gray Cast Iron							
		Ductile Cast Iron							
	S	Heat Resistant Alloy (Ni-base)		☆	★				
		Titanium Alloy (Ti-6Al-4V)		★					
H	Hard Materials								
Insert	Part Number	Dimensions (in)					MEGACOAT NANO		CVD Coating
		A	T	Ød	W	rε	PR1535	PR1525	CA6535
 General Purpose 	<b>LOGU 030310ER-GM</b>	0.244	0.156	0.136	0.469	0.039	●	●	●

● : U.S. Stock



# MFH-RAPTOR

## Anti-Vibration Design for High Feed Milling Applications

### High Feed with Less Vibration

Offering a variety of options with 3 different insert designs

### Higher Productivity

Available for ramping and helical milling

### Advanced Coating Technology

MEGACOAT NANO Coating technology increases tool life when machining difficult-to-cut materials



MEGACOAT NANO  
**PR1525**

First Choice for Carbon Steel and Alloy Steel

MEGACOAT NANO  
**PR1535**

First Choice for Titanium and Austenitic Stainless Steel

CVD Coated Carbide  
**CA6535**

First Choice For Heat-Resistant Alloys and Martensitic Stainless Steel



## MFH-Raptor Face Mill Kits

Kit includes (1) Face Mill and (10) Inserts

Choose your Cutter and Insert Grade



Cutter Description		Cutting Dia.	No. of Insert Pockets	Insert Description See <a href="#">Page 9</a>	Grades (Pick 1)	U.S. Kit Price
Face Mills	MFH 2000R-10-4T	2.000"	4	SOMT100420ER-GM	PR1525 Carbon Steel & Alloy Steel	\$340
	MFH 2000R-10-5T	2.000"	5			\$340
	MFH 2500R-10-5T	2.500"	5			\$350
	MFH 2500R-10-6T	2.500"	6			\$360
	MFH 3000R-10-7T	3.000"	7			\$370
	MFH 2000R-14-4T	2.000"	4			SOMT140520ER-GM
	MFH 2500R-14-5T	2.500"	5	\$360		
	MFH 3000R-14-5T	3.000"	5	\$370		
	MFH 3000R-14-6T	3.000"	6	\$420		
	MFH 4000R-14-6T	4.000"	6	\$430		
	MFH 4000R-14-7T	4.000"	7	\$460		
	MFH 5000R-14-7T	5.000"	7	\$600		
	MFH 6000R-14-8T	6.000"	8	CA6535 Heat-Resistant Alloys	\$800	

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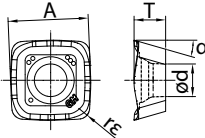
## MFH-Raptor End Mill Kits

Kit includes (1) Face Mill and (10) Inserts  
Choose your Cutter and Insert Grade



Cutter Description		Cutting Dia.	No. of Insert Pockets	Insert Description See Below	Grades (Pick 1)	U.S. Kit Price
End Mills Standard Shank (Weldon)	<b>MFH 1000-W100-10-2T</b>	1.000"	2	SOMT100420ER-GM	<b>PR1525</b> Carbon Steel & Alloy Steel	\$190
	<b>MFH 1250-W125-10-3T</b>	1.250"	3			\$230
	<b>MFH 1500-W150-10-3T</b>	1.500"	3		<b>PR1535</b> Titanium & Precipitation Hardened Stainless Steel	\$300
	<b>MFH 1500-W150-10-4T</b>	1.500"	4		\$340	
End Mills Long Shank (Cylindrical)	<b>MFH 1000-S100-10-2T-8</b>	1.000"	2		CA6535 Heat-Resistant Alloys	\$240
	<b>MFH 1250-S125-10-2T-8</b>	1.250"	2			\$260
	<b>MFH 1500-S125-10-4T-10</b>	1.500"	4			\$320

### MFH-Raptor Inserts

Usage Classification	P	Carbon Steel / Alloy Steel		★	★					
		Mold Steel								
★ Roughing / 1st Choice ☆ Roughing / 2nd Choice (When hardness is under 45HRC)	M	Austenitic Stainless Steel		★	☆					
		Martensitic Stainless Steel		☆	★					
	K	Gray Cast Iron								
		Ductile Cast Iron								
	S	Heat Resistant Alloy (Ni-base)		☆	★					
		Titanium Alloy (Ti-6Al-4V)		★						
H	Hard Materials									
Insert	Part Number	Dimensions (in)					Angle α	MEGACOAT NANO		CVD Coating
		A	T	Ød	Z	rε		PR1535	PR1525	
 General Purpose 	<b>SOMT 100420ER-GM</b>	0.406	0.180	0.181	-	0.079	16°	●	●	●
	<b>SOMT 140520ER-GM</b>	0.557	0.219	0.228	-	0.079	16°	●	●	●

● : U.S. Stock



# RAD-6 (MRX)

## 6-Edge Radius Milling Cutter

### Low Cutting Forces

Sharp cutting with lower cutting forces due to steep rake angle

### Superior Fracture Resistance

Thick edge and stable clamping due to unique insert face design

### Advanced Coating Technology

MEGACOAT Coating technology increases tool life when machining difficult-to-cut materials



MEGACOAT NANO  
**PR1525**

First Choice for Carbon Steel and Alloy Steel

MEGACOAT NANO  
**PR1535**

First Choice for Titanium and Austenitic Stainless Steel



## MRX Face Mill Kits

Kit includes (1) Face Mill and (10) Inserts  
Choose your Cutter and Insert Grade



Cutter Description		Cutting Dia.	No. of Insert Pockets	Insert Description See <a href="#">Page 11</a>	Grades (Pick 1)	U.S. Kit Price
Face Mills	<b>MRX 2000R-10-6T</b>	2.000"	6	<b>RPMT10T3M0ER-GM</b> (M-Class General Purpose)	<b>PR1525</b> Carbon Steel & Alloy Steel	<b>\$330</b>
	<b>MRX 2000R-12-5T</b>	2.000"	5	<b>RPMT1204M0ER-GM</b> (M-Class General Purpose)		<b>\$330</b>
	<b>MRX 3000R-12-6T</b>	3.000"	6		<b>PR1535</b> Titanium & Precipitation Hardened Stainless Steel	<b>\$370</b>
	<b>MRX 2500R-16-5T</b>	2.500"	5	<b>\$350</b>		
	<b>MRX 3000R-16-6T</b>	3.000"	6	<b>\$400</b>		
	<b>MRX 4000R-16-7T</b>	4.000"	7	<b>\$470</b>		

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MILLING SOLUTIONS  
DRILLING SOLUTIONS  
GROOVING SOLUTIONS



## MRX End Mill Kits

Kits Include (1) Cutter and (10) Inserts.  
Choose your Cutter and Insert Grade



Cutter Description		Cutting Dia.	No. of Insert Pockets	Insert Description See Below	Grades (Pick 1)	U.S. Kit Price
End Mills	<b>MRX 1000-W100-10-3T</b>	1.000"	3	<b>RPMT10T3M0ER-GM</b> (M-Class General Purpose)	<b>PR1525</b> Carbon Steel & Alloy Steel  <b>PR1535</b> Titanium & Precipitation Hardened Stainless Steel	<b>\$240</b>
	<b>MRX 1250-W125-12-3T</b>	1.250"	3	<b>RPMT1204M0ER-GM</b> (M-Class General Purpose)		<b>\$270</b>
	<b>MRX 1500-W125-12-4T</b>	1.500"	4			<b>\$320</b>
	<b>MRX 1500-W125-16-2T</b>	1.500"	2	<b>RPMT1605M0ER-GM</b> (M-Class General Purpose)		<b>\$300</b>

### RAD-6 (MRX) Inserts

Usage Classification	P	Carbon Steel / Alloy Steel		★	★				
		Mold Steel							
★ Roughing / 1st Choice ☆ Roughing / 2nd Choice (When hardness is under 45HRC)	M	Austenitic Stainless Steel		★	☆				
		Martensitic Stainless Steel		☆					
	K	Gray Cast Iron							
		Ductile Cast Iron							
	S	Heat Resistant Alloy (Ni-base)		☆					
		Titanium Alloy (Ti-6Al-4V)		★					
H	Hard Materials								
Insert	Part Number	Dimensions (in)				Angle	MEGACOAT NANO		Applicable Toolholder
		A	T	Ød	rε		α	PR1535	
 General Purpose (M-Class)	<b>RPMT 10T3M0ER-GM</b>	0.394 (10mm)	0.156	0.138	0.197	11°	●	●	MRX...-10
	<b>1204M0ER-GM</b>	0.472 (12mm)	0.187	0.181	0.236	11°	●	●	MRX...-12
	<b>1605M0ER-GM</b>	0.630 (16mm)	0.219	0.228	0.315	11°	●	●	MRX...-16

● : U.S. Stock



# MFPN

## 10-Edge 45° Lead Angle Face Mills

### Cost-Efficient

The double-sided pentagonal design of the PNMU insert provides 10 cutting edges resulting in cost-effective machining

### High-Feed Rates for Improved Productivity

The combination of tough, dual angle edge design and a high 10° positive axial rake angle gives the MFPN the ability to run at a higher feed rate, resulting in greatly improved productivity.



MEGACOAT NANO  
**PR1525**

First Choice for Carbon Steel and Alloy Steel

MEGACOAT NANO  
**PR1535**

First Choice for Titanium and Austenitic Stainless Steel

MEGACOAT NANO  
**PR1510**

First Choice For Gray Cast Iron and Ductile Cast Iron

MILLING SOLUTIONS

DRILLING SOLUTIONS

GROOVING SOLUTIONS



### MFPN Face Mill Kits

Kits include (1) Face Mill and (10 or 20) Inserts  
Choose your Cutter and Insert Grade



Cutter Description		Cutting Dia.	No. of Insert Pockets	Insert Description See <a href="#">Page 13</a>	Grades (Pick 1)	Kit Insert Qty.	U.S. Kit Price
Face Mills Coarse Pitch	MFPN 452500R-4T	2.500"	4	PNMU1205ANER-GM	<b>PR1510</b> Gray & Nodular Cast Iron  <b>PR1525</b> Carbon Steel & Alloy Steel  <b>PR1535</b> Titanium & Precipitation Hardened Stainless Steel	10	\$430
	MFPN 453000R-5T	3.000"	5			10	\$500
	MFPN 454000R-6T	4.000"	6			10	\$570
	MFPN 455000R-7T	5.000"	7			10	\$750
	MFPN 456000R-8T	6.000"	8			10	\$920
	MFPN 458000R-10T	8.000"	10			10	\$1,450

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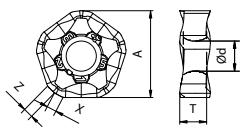
## MFPN Face Mill Kits

Kits include (1) Face Mill and (10 or 20) Inserts  
Choose your Cutter and Insert Grade



Cutter Description		Cutting Dia.	No. of Insert Pockets	Insert Description See Below	Grades (Pick 1)	Kit Insert Qty.	U.S. Kit Price
Face Mills Fine Pitch	<b>MFPN 452000R-4T</b>	2.000"	4	PNMU1205ANER-GM	<b>PR1510</b> Gray & Nodular Cast Iron	10	<b>\$340</b>
	<b>MFPN 452500R-5T</b>	2.500"	5			10	<b>\$380</b>
	<b>MFPN 453000R-6T</b>	3.000"	6			10	<b>\$440</b>
	<b>MFPN 454000R-8T</b>	4.000"	8			10	<b>\$520</b>
	<b>MFPN 455000R-10T</b>	5.000"	10			10	<b>\$650</b>
	<b>MFPN 456000R-12T</b>	6.000"	12			20	<b>\$800</b>
	<b>MFPN 458000R-14T</b>	8.000"	14			20	<b>\$1,250</b>
Face Mills Extra-Fine Pitch	<b>MFPN 452500R-6T</b>	2.500"	6	PNMU1205ANER-GM	<b>PR1525</b> Carbon Steel & Alloy Steel	10	<b>\$420</b>
	<b>MFPN 453000R-8T</b>	3.000"	8			10	<b>\$490</b>
	<b>MFPN 454000R-10T</b>	4.000"	10			10	<b>\$560</b>
	<b>MFPN 455000R-13T</b>	5.000"	13			20	<b>\$830</b>
	<b>MFPN 456000R-16T</b>	6.000"	16			20	<b>\$1,000</b>
	<b>MFPN 458000R-18T</b>	8.000"	18			20	<b>\$1,550</b>
					<b>PR1535</b> Titanium & Precipitation Hardened Stainless Steel		

### MFPN Inserts

Usage Classification	P	Carbon Steel / Alloy Steel		★	★					
		Mold Steel								
★ Roughing / 1st Choice ☆ Roughing / 2nd Choice (When hardness is under 45HRC)	M	Austenitic Stainless Steel		★	☆					
		Martensitic Stainless Steel		☆						
		Precipitation Hardened Stainless Steel		★						
	K	Gray Cast Iron				★				
		Ductile Cast Iron				★				
	S	Heat Resistant Alloy (Ni-base)		☆						
Titanium Alloy (Ti-6Al-4V)		★								
H	Hard Materials									
Insert	Part Number	Dimensions (in)					MEGACOAT NANO			
		A	T	Ød	X	Z	PR1535	PR1525	PR1510	
 General Purpose		<b>PNMU 1205ANER-GM</b>	0.704	0.219	0.244	0.079	0.079	●	●	●

● : U.S. Stock

**KYOCERA Precision Tools, Inc.**

P : 800.823.7284 • F : 828.692.1344 • E : [ctsales@kyocera.com](mailto:ctsales@kyocera.com)

Official Website : [www.kyoceraprecisiontools.com](http://www.kyoceraprecisiontools.com) • Distributor Website : [mykpti.kyocera.com](http://mykpti.kyocera.com)



# DRA Magic Drill Kits

## High Efficiency and Low Cutting Force Modular Drill

### Excellent Hole Accuracy

S-curve reduces thrust force and controls vibration

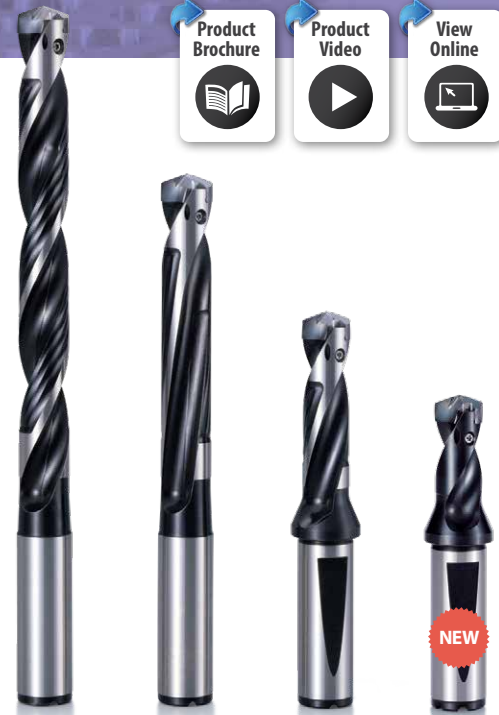
### Fine Chip Breaking Even in Deep Hole Drilling Applications

Optimized chip thinning for stable chip evacuation

### Long Tool Life and Stable Machining of Various Workpieces

MEGACOAT NANO grade PR1535 is used to machine various materials from steel to stainless steel

### New 1.5D Flange and Straight Shank Sizes Added! NEW



MILLING SOLUTIONS

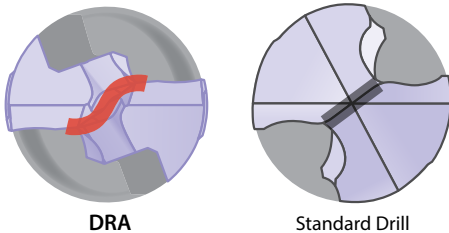
DRILLING SOLUTIONS

GROOVING SOLUTIONS

## 1 Low Cutting Force Design Improves Hole Accuracy

The special chisel edge with S-curve reduces thrust force and controls vibration.

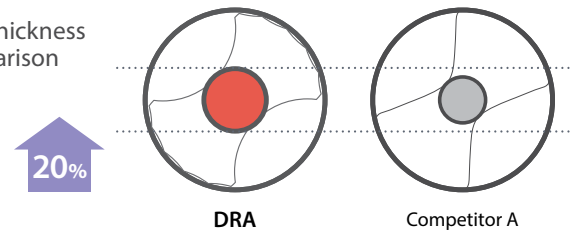
Cutting Edge Image



## 2 Optimal Web Thickness Limits Deflection

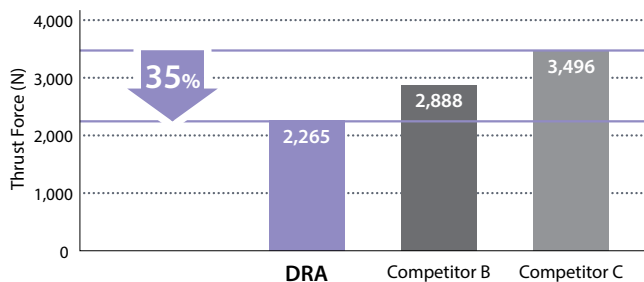
The hole accuracy is improved by controlling drill deflection with a 20% thicker web compared with Competitor A.

Web Thickness Comparison



### Low Cutting Force Comparison

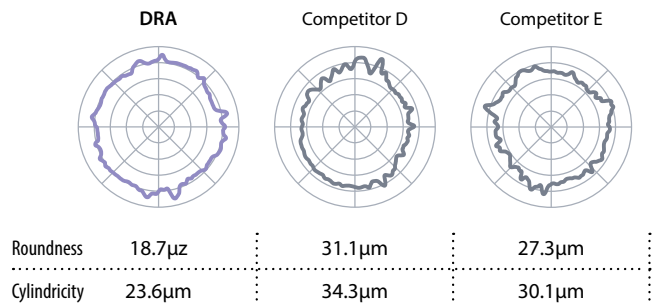
(In-house Evaluation)



Cutting Conditions : Vc = 390sfm, f = 0.010ipr, Drilling Diameter 0.551", Drilling Depth 1.772", Wet

### Roundness · Cylindricity Comparison

(In-house Evaluation)



Cutting Conditions : Vc = 390sfm, f = 0.012ipr, Drilling Diameter 0.551", Measurement Position 2.165", Wet Workpiece : 1049 Steel

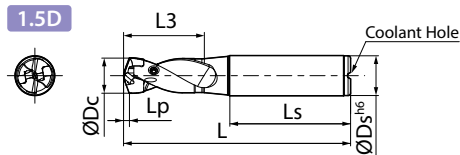
All 2018 Winter / Spring Offers Valid through June 30, 2018

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### DRA 1.5D Kits (Straight Shank)

Kit includes (1) Drill and (1) Insert

Choose your Drill Size and Insert Size



For Lp dimension, reference insert dimension table.



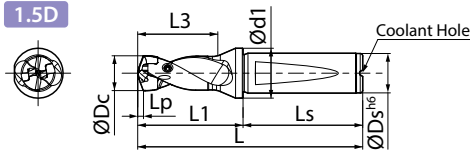
Part Number	Stock	U.S. Kit Price	Dimension (in)					Applicable Insert See Page 20-21	Seat Size	Spare Parts		
			ØDc		ØDs	L	L3			Ls	Clamp Screw	Wrench
			min.	max.								
SS0375-DRA080M-1.5	●	\$190	0.313	0.331	0.375	2.608	0.504	1.575	DA0794M-GM ~ DA0840M-GM	080	HS-2524TRP	
SS0375-DRA085M-1.5	●	\$190	0.335	0.350		2.657	0.531		DA0850M-GM ~ DA0890M-GM	085		
SS0375-DRA090M-1.5	●	\$190	0.354	0.370		2.707	0.563		DA0900M-GM ~ DA0940M-GM	090		
SS0500-DRA095M-1.5	●	\$190	0.374	0.390	0.500	2.953	0.591	1.772	DA0950M-GM ~ DA0990M-GM	095	HS-2534TRP	FTP-5
SS0500-DRA100M-1.5	●	\$190	0.394	0.409		3.002	0.622		DA1000M-GM ~ DA1040M-GM	100		
SS0500-DRA105M-1.5	●	\$200	0.413	0.429		3.051	0.650		DA1050M-GM ~ DA1090M-GM	105		
SS0500-DRA110M-1.5	●	\$200	0.433	0.449	0.625	3.140	0.681	1.890	DA1100M-GM ~ DA1140M-GM	110	HS-3048TRP	FTP-6
SS0500-DRA115M-1.5	●	\$200	0.453	0.469		3.189	0.709		DA1150M-GM ~ DA1190M-GM	115		
SS0625-DRA120M-1.5	●	\$200	0.472	0.488		3.356	0.740		DA1200M-GM ~ DA1240M-GM	120		
SS0625-DRA125M-1.5	●	\$200	0.492	0.508	0.750	3.406	0.768	1.969	DA1250M-GM ~ DA1290M-GM	125	HS-4067TRP	FTP-7
SS0625-DRA130M-1.5	●	\$200	0.512	0.528		3.455	0.799		DA1300M-GM ~ DA1340M-GM	130		
SS0625-DRA135M-1.5	●	\$200	0.531	0.547		3.504	0.827		DA1350M-GM ~ DA1390M-GM	135		
SS0625-DRA140M-1.5	●	\$200	0.551	0.567	1.000	3.553	0.858	2.205	DA1400M-GM ~ DA1440M-GM	140	HS-4067TRP	FTP-7
SS0625-DRA145M-1.5	●	\$200	0.571	0.590		3.602	0.886		DA1450M-GM ~ DA1490M-GM	145		
SS0625-DRA150M-1.5	●	\$210	0.591	0.626		3.740	0.917		DA1500M-GM ~ DA1590M-GM	150		
SS0750-DRA160M-1.5	●	\$210	0.630	0.665	0.750	3.957	0.976	1.969	DA1600M-GM ~ DA1690M-GM	160	HS-3048TRP	FTP-6
SS0750-DRA170M-1.5	●	\$210	0.669	0.705		4.055	1.035		DA1700M-GM ~ DA1790M-GM	170		
SS0750-DRA180M-1.5	●	\$250	0.709	0.744		4.193	1.094		DA1800M-GM ~ DA1890M-GM	180		
SS1000-DRA190M-1.5	●	\$250	0.748	0.783	1.000	4.528	1.154	2.205	DA1900M-GM ~ DA1990M-GM	190	HS-4067TRP	FTP-7
SS1000-DRA200M-1.5	●	\$300	0.787	0.823		4.626	1.213		DA2000M-GM ~ DA2090M-GM	200		
SS1000-DRA210M-1.5	●	\$300	0.827	0.846		4.724	1.272		DA2100M-GM ~ DA2150M-GM	210		
SS1000-DRA220M-1.5	●	\$300	0.866	0.886	1.000	4.862	1.331	2.205	DA2200M-GM ~ DA2250M-GM	220	HS-4067TRP	FTP-7
SS1000-DRA230M-1.5	●	\$320	0.906	0.937		4.961	1.390		DA2300M-GM ~ DA2381M-GM	230		
SS1000-DRA240M-1.5	●	\$330	0.945	0.965		5.059	1.449		DA2400M-GM ~ DA2450M-GM	240		
SS1000-DRA250M-1.5	●	\$360	0.984	1.004		5.157	1.508		DA2500M-GM ~ DA2550M-GM	250		

● : U.S. Stock

### DRA 1.5D Kits (Flange Shank)

Kit includes (1) Drill and (1) Insert

Choose your Drill Size and Insert Size



For Lp dimension, reference insert dimension table.



MILLING SOLUTIONS

DRILLING SOLUTIONS

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Part Number	Stock	U.S. Kit Price	Dimension (in)								Applicable Insert See Page 20-21	Seat Size	Spare Parts	
			ØDc		ØDs	L	L1	L3	Ls	Ød1			Clamp Screw	Wrench
			min.	max.										
SF0500-DRA080M-1.5	●	\$190	0.313	0.331	0.500	2.805	1.033	0.504	1.772	0.630	DA0794M-GM ~ DA0840M-GM	080	HS-2524TRP	
SF0500-DRA085M-1.5	●	\$190	0.335	0.350		2.854	1.083	0.531			DA0850M-GM ~ DA0890M-GM	085		
SF0500-DRA090M-1.5	●	\$190	0.354	0.370		2.904	1.132	0.563			DA0900M-GM ~ DA0940M-GM	090		
SF0500-DRA095M-1.5	●	\$190	0.374	0.390		2.953	1.181	0.591			DA0950M-GM ~ DA0990M-GM	095		
SF0625-DRA100M-1.5	●	\$190	0.394	0.409	0.625	3.120	1.230	0.622	1.890	0.787	DA1000M-GM ~ DA1040M-GM	100	HS-2534TRP	FTP-5
SF0625-DRA105M-1.5	●	\$200	0.413	0.429		3.169	1.280	0.650			DA1050M-GM ~ DA1090M-GM	105		
SF0625-DRA110M-1.5	●	\$200	0.433	0.449		3.258	1.368	0.681			DA1100M-GM ~ DA1140M-GM	110		
SF0625-DRA115M-1.5	●	\$200	0.453	0.469		3.307	1.417	0.709			DA1150M-GM ~ DA1190M-GM	115		
SF0625-DRA120M-1.5	●	\$200	0.472	0.488		3.356	1.467	0.740			DA1200M-GM ~ DA1240M-GM	120		
SF0625-DRA125M-1.5	●	\$200	0.492	0.508		3.406	1.516	0.768			DA1250M-GM ~ DA1290M-GM	125		
SF0625-DRA130M-1.5	●	\$200	0.512	0.528		3.455	1.565	0.799			DA1300M-GM ~ DA1340M-GM	130		
SF0625-DRA135M-1.5	●	\$200	0.531	0.547		3.504	1.614	0.827			DA1350M-GM ~ DA1390M-GM	135		
SF0625-DRA140M-1.5	●	\$200	0.551	0.567	0.750	3.553	1.663	0.858	1.969	0.984	DA1400M-GM ~ DA1440M-GM	140	HS-3048TRP	FTP-6
SF0625-DRA145M-1.5	●	\$200	0.571	0.590		3.602	1.713	0.886			DA1450M-GM ~ DA1490M-GM	145		
SF0750-DRA150M-1.5	●	\$210	0.591	0.626		3.819	1.850	0.917			DA1500M-GM ~ DA1590M-GM	150		
SF0750-DRA160M-1.5	●	\$210	0.630	0.665		3.957	1.988	0.976			DA1600M-GM ~ DA1690M-GM	160		
SF0750-DRA170M-1.5	●	\$210	0.669	0.705	1.000	4.055	2.087	1.035	2.205	1.260	DA1700M-GM ~ DA1790M-GM	170	HS-4067TRP	FTP-7
SF0750-DRA180M-1.5	●	\$250	0.709	0.744		4.193	2.224	1.094			DA1800M-GM ~ DA1890M-GM	180		
SF0750-DRA190M-1.5	●	\$250	0.748	0.783		4.291	2.323	1.154			DA1900M-GM ~ DA1990M-GM	190		
SF1000-DRA200M-1.5	●	\$300	0.787	0.823		4.626	2.421	1.213			DA2000M-GM ~ DA2090M-GM	200		
SF1000-DRA210M-1.5	●	\$300	0.827	0.846	1.000	4.724	2.520	1.272	2.205	1.260	DA2100M-GM ~ DA2150M-GM	210	HS-4067TRP	FTP-7
SF1000-DRA220M-1.5	●	\$300	0.866	0.886		4.862	2.657	1.331			DA2200M-GM ~ DA2250M-GM	220		
SF1000-DRA230M-1.5	●	\$320	0.906	0.937		4.961	2.756	1.390			DA2300M-GM ~ DA2381M-GM	230		
SF1000-DRA240M-1.5	●	\$330	0.945	0.965		5.059	2.854	1.449			DA2400M-GM ~ DA2450M-GM	240		
SF1000-DRA250M-1.5	●	\$360	0.984	1.004		5.157	2.953	1.508			DA2500M-GM ~ DA2550M-GM	250		

● : U.S. Stock

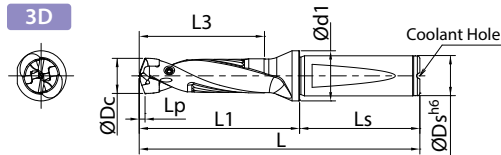
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### DRA 3D Kits (Flange Shank)

Kit includes (1) Drill and (1) Insert  
Choose your Drill Size and Insert Size



For Lp dimension, reference insert dimension table.



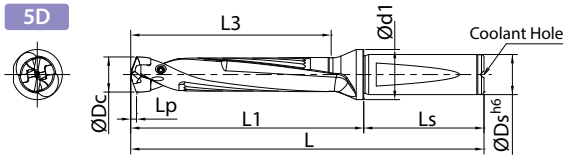
Part Number	Stock	U.S. Kit Price	Dimension (in)							Applicable Insert See <a href="#">Page 20-21</a>	Seat Size	Spare Parts		
			ØDc		ØDs	L	L1	L3	Ls			Ød1	Clamp Screw	Wrench
			min.	max.										
SF0500-DRA080M-3	●	\$200	0.313	0.331	0.500	3.307	1.535	1.004	1.772	0.630	DA0794M-GM ~ DA0840M-GM	080	HS-2524TRP	
SF0500-DRA085M-3	●	\$200	0.335	0.350		3.386	1.614	1.063			DA0850M-GM ~ DA0890M-GM	085		
SF0500-DRA090M-3	●	\$200	0.354	0.370		3.465	1.693	1.122			DA0900M-GM ~ DA0940M-GM	090		
SF0500-DRA095M-3	●	\$200	0.374	0.390		3.543	1.772	1.181			DA0950M-GM ~ DA0990M-GM	095		
SF0625-DRA100M-3	●	\$200	0.394	0.409	0.625	3.740	1.850	1.240	1.890	0.787	DA1000M-GM ~ DA1040M-GM	100	HS-2534TRP	FTP-5
SF0625-DRA105M-3	●	\$220	0.413	0.429		3.819	1.929	1.299			DA1050M-GM ~ DA1090M-GM	105		
SF0625-DRA110M-3	●	\$220	0.433	0.449		3.937	2.047	1.358			DA1100M-GM ~ DA1140M-GM	110		
SF0625-DRA115M-3	●	\$220	0.453	0.469		4.016	2.126	1.417			DA1150M-GM ~ DA1190M-GM	115		
SF0625-DRA120M-3	●	\$220	0.472	0.488		4.094	2.205	1.476			DA1200M-GM ~ DA1240M-GM	120		
SF0625-DRA125M-3	●	\$220	0.492	0.508		4.173	2.283	1.535			DA1250M-GM ~ DA1290M-GM	125		
SF0625-DRA130M-3	●	\$220	0.512	0.528		4.252	2.362	1.594			DA1300M-GM ~ DA1340M-GM	130		
SF0625-DRA135M-3	●	\$220	0.531	0.547		4.331	2.441	1.654			DA1350M-GM ~ DA1390M-GM	135		
SF0625-DRA140M-3	●	\$220	0.551	0.567		4.409	2.520	1.713			DA1400M-GM ~ DA1440M-GM	140		
SF0625-DRA145M-3	●	\$220	0.571	0.590		4.488	2.598	1.772			DA1450M-GM ~ DA1490M-GM	145		
SF0750-DRA150M-3	●	\$230	0.591	0.626	0.750	4.764	2.795	1.890	1.969	0.984	DA1500M-GM ~ DA1590M-GM	150	HS-3048TRP	FTP-6
SF0750-DRA160M-3	●	\$240	0.630	0.665		4.961	2.992	2.008			DA1600M-GM ~ DA1690M-GM	160		
SF0750-DRA170M-3	●	\$240	0.669	0.705		5.118	3.150	2.126			DA1700M-GM ~ DA1790M-GM	170		
SF0750-DRA180M-3	●	\$280	0.709	0.744		5.315	3.346	2.244			DA1800M-GM ~ DA1890M-GM	180		
SF0750-DRA190M-3	●	\$280	0.748	0.783	1.000	5.472	3.504	2.362	2.205	1.260	DA1900M-GM ~ DA1990M-GM	190	HS-4067TRP	FTP-7
SF1000-DRA200M-3	●	\$330	0.787	0.823		5.866	3.661	2.480			DA2000M-GM ~ DA2090M-GM	200		
SF1000-DRA210M-3	●	\$340	0.827	0.846		6.024	3.819	2.598			DA2100M-GM ~ DA2150M-GM	210		
SF1000-DRA220M-3	●	\$340	0.866	0.886		6.220	4.016	2.717			DA2200M-GM ~ DA2250M-GM	220		
SF1000-DRA230M-3	●	\$360	0.906	0.937		6.378	4.173	2.835			DA2300M-GM ~ DA2381M-GM	230		
SF1000-DRA240M-3	●	\$370	0.945	0.965		6.535	4.331	2.953			DA2400M-GM ~ DA2450M-GM	240		
SF1000-DRA250M-3	●	\$400	0.984	1.004	6.693	4.488	3.071	DA2500M-GM ~ DA2550M-GM	250					

● : U.S. Stock

## DRA 5D Kits (Flange Shank)

Kit includes (1) Drill and (1) Insert

Choose your Drill Size and Insert Size



For Lp dimension, reference insert dimension table.



Part Number	Stock	U.S. Kit Price	Dimension (in)								Applicable Insert See <a href="#">Page 20-21</a>	Seat Size	Spare Parts						
			ØDc		ØDs	L	L1	L3	Ls	Ød1			Clamp Screw	Wrench					
			min.	max.															
SF0500-DRA080M-5	●	\$240	0.313	0.331	0.500	3.976	2.205	1.673	1.772	0.630	DA0794M-GM ~ DA0840M-GM	080	HS-2524TRP						
SF0500-DRA085M-5	●	\$240	0.335	0.350		4.094	2.323	1.772			DA0850M-GM ~ DA0890M-GM	085							
SF0500-DRA090M-5	●	\$240	0.354	0.370		4.213	2.441	1.870			DA0900M-GM ~ DA0940M-GM	090							
SF0500-DRA095M-5	●	\$240	0.374	0.390		4.331	2.559	1.969			DA0950M-GM ~ DA0990M-GM	095							
SF0625-DRA100M-5	●	\$240	0.394	0.409	0.625	4.567	2.677	2.067	1.890	0.787	DA1000M-GM ~ DA1040M-GM	100	HS-2534TRP	FTP-5					
SF0625-DRA105M-5	●	\$240	0.413	0.429		4.685	2.795	2.165			DA1050M-GM ~ DA1090M-GM	105							
SF0625-DRA110M-5	●	\$250	0.433	0.449		4.843	2.953	2.264			DA1100M-GM ~ DA1140M-GM	110							
SF0625-DRA115M-5	●	\$250	0.453	0.469		4.961	3.071	2.362			DA1150M-GM ~ DA1190M-GM	115							
SF0625-DRA120M-5	●	\$250	0.472	0.488		5.079	3.189	2.461			DA1200M-GM ~ DA1240M-GM	120							
SF0625-DRA125M-5	●	\$260	0.492	0.508		5.197	3.307	2.559			DA1250M-GM ~ DA1290M-GM	125							
SF0625-DRA130M-5	●	\$260	0.512	0.528		5.315	3.425	2.657			DA1300M-GM ~ DA1340M-GM	130							
SF0625-DRA135M-5	●	\$260	0.531	0.547		5.433	3.543	2.756			DA1350M-GM ~ DA1390M-GM	135							
SF0625-DRA140M-5	●	\$260	0.551	0.567		5.551	3.661	2.854			DA1400M-GM ~ DA1440M-GM	140							
SF0625-DRA145M-5	●	\$260	0.571	0.590		5.669	3.780	2.953			DA1450M-GM ~ DA1490M-GM	145							
SF0750-DRA150M-5	●	\$260	0.591	0.626		0.750	6.024	4.055			3.150	1.969			0.984	DA1500M-GM ~ DA1590M-GM	150	HS-3048TRP	FTP-6
SF0750-DRA160M-5	●	\$280	0.630	0.665			6.299	4.331			3.346					DA1600M-GM ~ DA1690M-GM	160		
SF0750-DRA170M-5	●	\$280	0.669	0.705	6.535		4.567	3.543	DA1700M-GM ~ DA1790M-GM	170									
SF0750-DRA180M-5	●	\$330	0.709	0.744	6.811		4.843	3.740	DA1800M-GM ~ DA1890M-GM	180									
SF0750-DRA190M-5	●	\$330	0.748	0.783	1.000	7.047	5.079	3.937	2.205	1.260	DA1900M-GM ~ DA1990M-GM	190	HS-4067TRP	FTP-7					
SF1000-DRA200M-5	●	\$390	0.787	0.823		7.520	5.315	4.134			DA2000M-GM ~ DA2090M-GM	200							
SF1000-DRA210M-5	●	\$390	0.827	0.846		7.756	5.551	4.331			DA2100M-GM ~ DA2150M-GM	210							
SF1000-DRA220M-5	●	\$390	0.866	0.886		8.031	5.827	4.528			DA2200M-GM ~ DA2250M-GM	220							
SF1000-DRA230M-5	●	\$430	0.906	0.937		8.268	6.063	4.724			DA2300M-GM ~ DA2381M-GM	230							
SF1000-DRA240M-5	●	\$430	0.945	0.965		8.504	6.299	4.921			DA2400M-GM ~ DA2450M-GM	240							
SF1000-DRA250M-5	●	\$470	0.984	1.004	8.740	6.535	5.116	DA2500M-GM ~ DA2550M-GM	250										

● : U.S. Stock

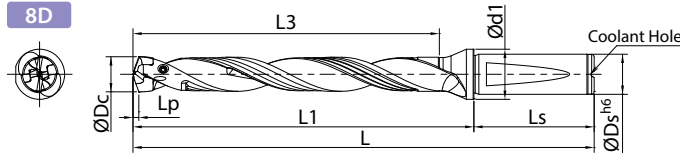
All 2018 & 2019 U.S. Pricing Offers Valid Through 12/31/2018

All promotional items are available while supplies last. Promotion ends 12/31/2018. For more information, please visit [my.milacron.com](#) or call 1-800-451-7777. Promotion ends 12/31/2018. For more information, please visit [my.milacron.com](#) or call 1-800-451-7777. Promotion ends 12/31/2018. For more information, please visit [my.milacron.com](#) or call 1-800-451-7777.

### DRA 8D Kits (Flange Shank)

Kit includes (1) Drill and (1) Insert

Choose your Drill Size and Insert Size



For Lp dimension, reference insert dimension table.

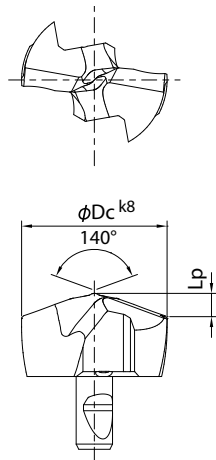


Part Number	Stock	U.S. Kit Price	Dimension (in)							Applicable Insert See Page 20-21	Seat Size	Spare Parts		
			ØDc		ØDs	L	L1	L3	Ls			Ød1	Clamp Screw	Wrench
			min.	max.										
SF0500-DRA080M-8	●	\$280	0.313	0.331	0.500	4.961	3.189	2.677	1.772	0.630	DA0794M-GM ~ DA0840M-GM	080	HS-2524TRP	
SF0500-DRA085M-8	●	\$280	0.335	0.350		5.157	3.386	2.835			DA0850M-GM ~ DA0890M-GM	085		
SF0500-DRA090M-8	●	\$280	0.354	0.370		5.315	3.543	2.992			DA0900M-GM ~ DA0940M-GM	090		
SF0500-DRA095M-8	●	\$280	0.374	0.390		5.512	3.740	3.150			DA0950M-GM ~ DA0990M-GM	095		
SF0625-DRA100M-8	●	\$280	0.394	0.409	0.625	5.787	3.898	3.307	1.890	0.787	DA1000M-GM ~ DA1040M-GM	100	HS-2534TRP	FTP-5
SF0625-DRA105M-8	●	\$300	0.413	0.429		5.984	4.094	3.465			DA1050M-GM ~ DA1090M-GM	105		
SF0625-DRA110M-8	●	\$300	0.433	0.449		6.181	4.291	3.622			DA1100M-GM ~ DA1140M-GM	110		
SF0625-DRA115M-8	●	\$300	0.453	0.469		6.378	4.488	3.780			DA1150M-GM ~ DA1190M-GM	115		
SF0625-DRA120M-8	●	\$300	0.472	0.488		6.535	4.646	3.937			DA1200M-GM ~ DA1240M-GM	120		
SF0625-DRA125M-8	●	\$300	0.492	0.508		6.732	4.843	4.094			DA1250M-GM ~ DA1290M-GM	125		
SF0625-DRA130M-8	●	\$300	0.512	0.528		6.890	5.000	4.252			DA1300M-GM ~ DA1340M-GM	130		
SF0625-DRA135M-8	●	\$310	0.531	0.547		7.087	5.197	4.409			DA1350M-GM ~ DA1390M-GM	135		
SF0625-DRA140M-8	●	\$300	0.551	0.567		7.244	5.354	4.567			DA1400M-GM ~ DA1440M-GM	140		
SF0625-DRA145M-8	●	\$300	0.571	0.590		7.441	5.551	4.724			DA1450M-GM ~ DA1490M-GM	145		
SF0750-DRA150M-8	●	\$320	0.591	0.626	0.750	7.913	5.945	5.039	1.969	0.984	DA1500M-GM ~ DA1590M-GM	150	HS-3048TRP	FTP-6
SF0750-DRA160M-8	●	\$330	0.630	0.665		8.307	6.339	5.354			DA1600M-GM ~ DA1690M-GM	160		
SF0750-DRA170M-8	●	\$330	0.669	0.705		8.661	6.693	5.669			DA1700M-GM ~ DA1790M-GM	170		
SF0750-DRA180M-8	●	\$380	0.709	0.744		9.055	7.087	5.984			DA1800M-GM ~ DA1890M-GM	180		
SF0750-DRA190M-8	●	\$380	0.748	0.783	1.000	9.409	7.441	6.299	2.205	1.260	DA1900M-GM ~ DA1990M-GM	190	HS-4067TRP	FTP-7
SF1000-DRA200M-8	●	\$460	0.787	0.823		10.000	7.795	6.614			DA2000M-GM ~ DA2090M-GM	200		
SF1000-DRA210M-8	●	\$460	0.827	0.846		10.354	8.150	6.929			DA2100M-GM ~ DA2150M-GM	210		
SF1000-DRA220M-8	●	\$460	0.866	0.886		10.748	8.543	7.244			DA2200M-GM ~ DA2250M-GM	220		
SF1000-DRA230M-8	●	\$500	0.906	0.937		11.102	8.898	7.559			DA2300M-GM ~ DA2381M-GM	230		
SF1000-DRA240M-8	●	\$500	0.945	0.965		11.457	9.252	7.874			DA2400M-GM ~ DA2450M-GM	240		
SF1000-DRA250M-8	●	\$550	0.984	1.004	11.811	9.606	8.189	DA2500M-GM ~ DA2550M-GM	250					

● : U.S. Stock

# DRA Inserts

Cutting Diameter  $\varnothing 0.313'' \sim \varnothing 0.528''$  ( $\varnothing 7.94\text{mm} \sim \varnothing 13.40\text{mm}$ )



### k8 Tolerance

$\varnothing Dc$ (in)	k8 (in)	$\varnothing Dc$ (mm)	k8 (mm)
0.313 ~ 0.394	+0.0009 0	7.94 ~ 10.00	+0.022 0
0.394 ~ 0.709	+0.0011 0	10.10 ~ 18.00	+0.027 0
0.713 ~ 1.004	+0.0013 0	18.10 ~ 25.50	+0.033 0

k8 is the dimension tolerance of the insert.  
It is not the tolerance of the cutting diameter.

1st Recommendation Grade

**PR1535 MEGACOAT NANO**  
For Stable Machining of Steel and Stainless Steel

Description	Dimensions			Grade PR1535	Seat Size	Applicable Toolholder
	$\varnothing Dc$		Lp (in)			
	in	mm				
DA0794M-GM	0.313	7.94	0.053	●	080	SS0375-DRA080M-○ SF0500-DRA080M-○
DA0800M-GM	0.315	8.00	0.053	●		
DA0810M-GM	0.319	8.10	0.054	●		
DA0818M-GM	0.322	8.18	0.054	●		
DA0820M-GM	0.323	8.20	0.055	●		
DA0830M-GM	0.327	8.30	0.055	●		
DA0840M-GM	0.331	8.40	0.056	●	085	SS0375-DRA085M-○ SF0500-DRA085M-○
DA0850M-GM	0.335	8.50	0.057	●		
DA0860M-GM	0.339	8.60	0.057	●		
DA0870M-GM	0.343	8.70	0.058	●		
DA0880M-GM	0.346	8.80	0.059	●		
DA0890M-GM	0.350	8.90	0.060	●		
DA0900M-GM	0.354	9.00	0.060	●	090	SS0375-DRA090M-○ SF0500-DRA090M-○
DA0910M-GM	0.358	9.10	0.061	●		
DA0920M-GM	0.362	9.20	0.061	●		
DA0930M-GM	0.366	9.30	0.062	●		
DA0940M-GM	0.370	9.40	0.063	●		
DA0950M-GM	0.374	9.50	0.063	●		
DA0953M-GM	0.375	9.53	0.064	●	095	SS0500-DRA095M-○ SF0500-DRA095M-○
DA0960M-GM	0.378	9.60	0.064	●		
DA0970M-GM	0.382	9.70	0.065	●		
DA0980M-GM	0.386	9.80	0.066	●		
DA0990M-GM	0.390	9.90	0.066	●		
DA1000M-GM	0.394	10.00	0.067	●		
DA1010M-GM	0.398	10.10	0.068	●	100	SS0500-DRA100M-○ SF0625-DRA100M-○
DA1020M-GM	0.402	10.20	0.068	●		
DA1030M-GM	0.406	10.30	0.069	●		
DA1040M-GM	0.409	10.40	0.070	●		

Description	Dimensions			Grade PR1535	Seat Size	Applicable Toolholder
	$\varnothing Dc$		Lp (in)			
	in	mm				
DA1050M-GM	0.413	10.50	0.071	●	105	SS0500-DRA105M-○ SF0625-DRA105M-○
DA1060M-GM	0.417	10.60	0.071	●		
DA1070M-GM	0.421	10.70	0.072	●		
DA1072M-GM	0.422	10.72	0.072	●		
DA1080M-GM	0.425	10.80	0.073	●		
DA1090M-GM	0.429	10.90	0.073	●		
DA1100M-GM	0.433	11.00	0.074	●	110	SS0500-DRA110M-○ SF0625-DRA110M-○
DA1110M-GM	0.437	11.10	0.074	●		
DA1120M-GM	0.441	11.20	0.075	●		
DA1130M-GM	0.445	11.30	0.076	●		
DA1140M-GM	0.449	11.40	0.076	●		
DA1150M-GM	0.453	11.50	0.077	●		
DA1160M-GM	0.457	11.60	0.078	●	115	SS0500-DRA115M-○ SF0625-DRA115M-○
DA1170M-GM	0.461	11.70	0.079	●		
DA1180M-GM	0.465	11.80	0.079	●		
DA1190M-GM	0.469	11.90	0.080	●		
DA1200M-GM	0.472	12.00	0.080	●		
DA1210M-GM	0.476	12.10	0.081	●		
DA1220M-GM	0.480	12.20	0.081	●	120	SS0625-DRA120M-○ SF0625-DRA120M-○
DA1230M-GM	0.484	12.30	0.082	●		
DA1240M-GM	0.488	12.40	0.083	●		
DA1250M-GM	0.492	12.50	0.083	●		
DA1260M-GM	0.496	12.60	0.084	●		
DA1270M-GM	0.500	12.70	0.085	●		
DA1280M-GM	0.504	12.80	0.086	●	125	SS0625-DRA125M-○ SF0625-DRA125M-○
DA1290M-GM	0.508	12.90	0.086	●		
DA1300M-GM	0.512	13.00	0.087	●		
DA1310M-GM	0.516	13.10	0.087	●		
DA1320M-GM	0.520	13.20	0.088	●		
DA1330M-GM	0.524	13.30	0.089	●		
DA1340M-GM	0.528	13.40	0.089	●	130	SS0625-DRA130M-○ SF0625-DRA130M-○

● : U.S. Stock

All 2018 Winter / Spring Offers Valid through June 30, 2018

All promotional items are available exclusively through Authorized North American Kyocera Precision Tool Distributors. Please use specified Promo Code found on the [Promo Order Guide](#) when placing orders. To locate a distributor visit [www.kyoceraprecisiontools.com/locate](http://www.kyoceraprecisiontools.com/locate). Prices shown valid in U.S. only.

MILLING SOLUTIONS  
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### DRA Inserts (Continued)

Cutting Diameter Ø0.531" ~ Ø1.004" (Ø13.50mm ~ Ø25.50mm)

Description	Dimensions			Grade PR1535	Seat Size	Applicable Toolholder
	ØDc		Lp (in)			
	in	mm				
DA1350M-GM	0.531	13.50	0.090	●	135	SS0625-DRA135M-○ SF0625-DRA135M-○
DA1360M-GM	0.535	13.60	0.091	●		
DA1370M-GM	0.539	13.70	0.092	●		
DA1380M-GM	0.543	13.80	0.092	●		
DA1390M-GM	0.547	13.90	0.093	●		
DA1400M-GM	0.551	14.00	0.092	●	140	SS0625-DRA140M-○ SF0625-DRA140M-○
DA1410M-GM	0.555	14.10	0.092	●		
DA1420M-GM	0.559	14.20	0.093	●		
DA1430M-GM	0.563	14.30	0.094	●		
DA1440M-GM	0.567	14.40	0.094	●		
DA1450M-GM	0.571	14.50	0.095	●	145	SS0625-DRA145M-○ SF0625-DRA145M-○
DA1460M-GM	0.575	14.60	0.096	●		
DA1468M-GM	0.578	14.68	0.096	●		
DA1470M-GM	0.579	14.70	0.097	●		
DA1480M-GM	0.583	14.80	0.097	●		
DA1490M-GM	0.587	14.90	0.098	●	150	SS0625-DRA150M-○ SF0750-DRA150M-○
DA1500M-GM	0.591	15.00	0.099	●		
DA1510M-GM	0.594	15.10	0.100	●		
DA1520M-GM	0.598	15.20	0.101	●		
DA1530M-GM	0.602	15.30	0.101	●		
DA1540M-GM	0.606	15.40	0.102	●	160	SS0750-DRA160M-○ SF0750-DRA160M-○
DA1550M-GM	0.610	15.50	0.103	●		
DA1560M-GM	0.614	15.60	0.103	●		
DA1570M-GM	0.618	15.70	0.104	●		
DA1580M-GM	0.622	15.80	0.105	●		
DA1590M-GM	0.626	15.90	0.106	●	170	SS0750-DRA170M-○ SF0750-DRA170M-○
DA1600M-GM	0.630	16.00	0.106	●		
DA1610M-GM	0.634	16.10	0.107	●		
DA1620M-GM	0.638	16.20	0.107	●		
DA1630M-GM	0.642	16.30	0.108	●		
DA1640M-GM	0.646	16.40	0.109	●	170	SS0750-DRA170M-○ SF0750-DRA170M-○
DA1650M-GM	0.650	16.50	0.110	●		
DA1660M-GM	0.654	16.60	0.110	●		
DA1667M-GM	0.656	16.67	0.111	●		
DA1670M-GM	0.657	16.70	0.111	●		
DA1680M-GM	0.661	16.80	0.112	●	170	SS0750-DRA170M-○ SF0750-DRA170M-○
DA1690M-GM	0.665	16.90	0.112	●		
DA1700M-GM	0.669	17.00	0.113	●		
DA1710M-GM	0.673	17.10	0.113	●		
DA1720M-GM	0.677	17.20	0.114	●		
DA1730M-GM	0.681	17.30	0.115	●	170	SS0750-DRA170M-○ SF0750-DRA170M-○
DA1740M-GM	0.685	17.40	0.116	●		
DA1746M-GM	0.687	17.46	0.116	●		
DA1750M-GM	0.689	17.50	0.116	●		
DA1760M-GM	0.693	17.60	0.117	●		
DA1770M-GM	0.697	17.70	0.118	●	170	SS0750-DRA170M-○ SF0750-DRA170M-○
DA1780M-GM	0.701	17.80	0.118	●		
DA1790M-GM	0.705	17.90	0.119	●		

Description	Dimensions			Grade PR1535	Seat Size	Applicable Toolholder
	ØDc		Lp (in)			
	in	mm				
DA1800M-GM	0.709	18.00	0.120	●	180	SS0750-DRA180M-○ SF0750-DRA180M-○
DA1810M-GM	0.713	18.10	0.120	●		
DA1820M-GM	0.717	18.20	0.121	●		
DA1830M-GM	0.720	18.30	0.122	●		
DA1840M-GM	0.724	18.40	0.122	●		
DA1850M-GM	0.728	18.50	0.123	●		
DA1860M-GM	0.732	18.60	0.124	●		
DA1870M-GM	0.736	18.70	0.125	●		
DA1880M-GM	0.740	18.80	0.125	●		
DA1890M-GM	0.744	18.90	0.126	●		
DA1900M-GM	0.748	19.00	0.126	●	190	SS1000-DRA190M-○ SF0750-DRA190M-○
DA1905M-GM	0.750	19.05	0.127	●		
DA1910M-GM	0.752	19.10	0.127	●		
DA1920M-GM	0.756	19.20	0.128	●		
DA1930M-GM	0.760	19.30	0.129	●		
DA1940M-GM	0.764	19.40	0.129	●		
DA1950M-GM	0.768	19.50	0.130	●		
DA1960M-GM	0.772	19.60	0.131	●		
DA1970M-GM	0.776	19.70	0.132	●		
DA1980M-GM	0.780	19.80	0.132	●		
DA1990M-GM	0.783	19.90	0.133	●	200	SS1000-DRA200M-○ SF1000-DRA200M-○
DA2000M-GM	0.787	20.00	0.133	●		
DA2010M-GM	0.791	20.10	0.134	●		
DA2020M-GM	0.795	20.20	0.134	●		
DA2030M-GM	0.799	20.30	0.135	●		
DA2040M-GM	0.803	20.40	0.136	●		
DA2050M-GM	0.807	20.50	0.136	●		
DA2060M-GM	0.811	20.60	0.137	●		
DA2064M-GM	0.813	20.64	0.137	●		
DA2070M-GM	0.815	20.70	0.138	●		
DA2080M-GM	0.819	20.80	0.139	●	210	SS1000-DRA210M-○ SF1000-DRA210M-○
DA2090M-GM	0.823	20.90	0.139	●		
DA2100M-GM	0.827	21.00	0.140	●		
DA2150M-GM	0.846	21.50	0.143	●	220	SS1000-DRA220M-○ SF1000-DRA220M-○
DA2200M-GM	0.866	22.00	0.146	●		
DA2223M-GM	0.875	22.23	0.148	●		
DA2250M-GM	0.886	22.50	0.150	●	230	SS1000-DRA230M-○ SF1000-DRA230M-○
DA2300M-GM	0.906	23.00	0.153	●		
DA2350M-GM	0.925	23.50	0.156	●		
DA2381M-GM	0.937	23.81	0.158	●	240	SS1000-DRA240M-○ SF1000-DRA240M-○
DA2400M-GM	0.945	24.00	0.159	●		
DA2450M-GM	0.965	24.50	0.163	●		
DA2500M-GM	0.984	25.00	0.165	●	250	SS1000-DRA250M-○ SF1000-DRA250M-○
DA2540M-GM	1.000	25.40	0.168	●		
DA2550M-GM	1.004	25.50	0.169	●		

● : U.S. Stock

KYOCERA Precision Tools, Inc.

P: 800.823.7284 • F: 828.692.1344 • E: [ctsales@kyocera.com](mailto:ctsales@kyocera.com)

Official Website: [www.kyoceraprecisiontools.com](http://www.kyoceraprecisiontools.com) • Distributor Website: [mykpti.kyocera.com](http://mykpti.kyocera.com)

MILLING SOLUTIONS

DRILLING SOLUTIONS

GROOVING SOLUTIONS

# DRZ Magic Drill Kits

## Stable and Efficient Indexable Drills

### Four Cutting Edges per Insert

Promotes cost savings and increased efficiency with a single insert in both pockets

### Smooth Chip Evacuation

Molded chipbreaker produces three separate chips for smooth chip evacuation

### MEGACOAT PVD for Long Tool Life

MEGACOAT PVD coated carbides for stable machining of a variety of applications



MILLING SOLUTIONS

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DRZ Magic Drill Inserts											
Usage Classification	P	Carbon Steel / Alloy Steel					★	☆			
		Mold Steel					★				
★ 1st Choice ☆ 2nd Choice	M	Stainless Steel					☆	★			
	K	Gray Cast Iron									★
		Ductile Cast Iron									
N	Non-ferrous Metals										
Insert	Part Number	Dimensions (in)					Angle	MEGACOAT			
		A	T	Ød	W	rε	α	PR1230	PR1225	PR1210	
	<b>ZCMT 050203</b>	0.232	0.094	0.091	0.107	0.012	7°	●	●	●	
	<b>06T204</b>	0.276	0.110	0.098	0.236	0.016	7°	●	●	●	
	<b>080304</b>	0.381	0.125	0.114	0.323	0.016	7°	●	●	●	
	<b>10T304</b>	0.473	0.156	0.173	0.409	0.016	7°	●	●	●	
	<b>12T306</b>	0.562	0.156	0.220	0.504	0.024	7°	●	●	●	
	<b>150408</b>	0.702	0.187	0.220	0.622	0.031	7°	●	●	●	

● : U.S. Stock

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### DRZ 2D Kits (Ø0.562"~Ø2.000")

Kit includes (1) Drill and (10) Inserts

Choose your Drill Size and Insert Grade



Inch Dia. / Inch Shank

Drill Description	Stock	Drill Dia.	Applicable Insert See <a href="#">Page 22</a>	Grades (Pick 1)	Kit Insert Qty.	U.S. Kit Price	
DRZ Magic Drills 2xD	●	0.562"	ZCMT050203	PR1230 Carbon Steel & Alloy Steel  PR1225 Stainless Steel  PR1210 Gray and Nodular Cast Iron	10	\$330	
	●	0.625"	ZCMT06T204		10	\$330	
	●	0.656"			10	\$330	
	●	0.688"			10	\$330	
	●	0.750"			10	\$330	
	●	0.812"			10	\$330	
	●	0.875"	ZCMT080304		10	\$330	
	●	0.938"			10	\$330	
	●	1.000"			10	\$370	
	●	1.062"	ZCMT10T304		10	\$370	
	●	1.125"			10	\$370	
	●	1.188"			10	\$370	
	●	1.250"			10	\$370	
	●	1.312"			ZCMT12T306	10	\$370
	●	1.375"	10			\$370	
	●	1.438"	10			\$370	
	●	1.500"	10			\$370	
	●	1.562"	10			\$440	
	●	1.625"	ZCMT150408			10	\$440
	●	1.688"				10	\$440
	●	1.750"			10	\$440	
	●	1.812"			10	\$440	
	●	1.875"			10	\$440	
●	1.938"	10		\$440			
●	2.000"	10		\$440			

● : U.S. Stock

## DRZ 3D Kits (Ø0.562"~Ø2.000")

Kit includes (1) Drill and (10) Inserts

Choose your Drill Size and Insert Grade



Inch Dia. / Inch Shank

Drill Description	Stock	Drill Dia.	Applicable Insert See <a href="#">Page 22</a>	Grades (Pick 1)	Kit Insert Qty.	U.S. Kit Price	
<b>S75-DRZ5621687-05G</b>	●	0.562"	ZCMT050203	<b>PR1230</b> Carbon Steel & Alloy Steel  <b>PR1225</b> Stainless Steel  <b>PR1210</b> Gray and Nodular Cast Iron	10	\$330	
<b>S100-DRZ6251875-06G</b>	●	0.625"	ZCMT06T204		10	\$330	
<b>S100-DRZ6561969-06G</b>	●	0.656"			10	\$330	
<b>S100-DRZ6882062-06G</b>	●	0.688"			10	\$330	
<b>S100-DRZ7502250-06G</b>	●	0.750"			10	\$330	
<b>S100-DRZ8122438-06G</b>	●	0.812"			10	\$330	
<b>S100-DRZ8752625-08G</b>	●	0.875"	ZCMT080304		10	\$330	
<b>S100-DRZ9382814-08G</b>	●	0.938"			10	\$330	
<b>S100-DRZ10003000-08G</b>	●	1.000"			10	\$370	
<b>S100-DRZ10623187-10G</b>	●	1.062"	ZCMT10T304		10	\$370	
<b>S100-DRZ11253375-10G</b>	●	1.125"			10	\$370	
<b>S100-DRZ11883562-10G</b>	●	1.188"			10	\$370	
<b>S100-DRZ12503750-10G</b>	●	1.250"	ZCMT12T306		10	\$370	
<b>S125-DRZ13123938-12G</b>	●	1.312"			10	\$420	
<b>S125-DRZ13754125-12G</b>	●	1.375"			10	\$420	
<b>S125-DRZ14384312-12G</b>	●	1.438"			10	\$420	
<b>S125-DRZ15004500-12G</b>	●	1.500"			10	\$420	
<b>S125-DRZ15624688-12G</b>	●	1.562"			10	\$480	
<b>S125-DRZ16254875-15G</b>	●	1.625"			ZCMT150408	10	\$480
<b>S125-DRZ16885062-15G</b>	●	1.688"				10	\$480
<b>S125-DRZ17505250-15G</b>	●	1.750"	10	\$480			
<b>S125-DRZ18125438-15G</b>	●	1.812"	10	\$480			
<b>S125-DRZ18755625-15G</b>	●	1.875"	10	\$480			
<b>S125-DRZ19385812-15G</b>	●	1.938"	10	\$480			
<b>S125-DRZ20006000-15G</b>	●	2.000"	10	\$480			

DRZ  
Magic Drills  
3xD

● : U.S. Stock

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### DRZ 3D Kits (Ø13mm~Ø49mm)

Kit includes (1) Drill and (10) Inserts

Choose your Drill Size and Insert Grade



Metric Dia. / Inch Shank

Drill Description		Stock	Drill Dia.	Applicable Insert See <a href="#">Page 22</a>	Grades (Pick 1)	Kit Insert Qty.	U.S. Kit Price
DRZ Magic Drills  3xD  Metric Diameter Inch Shank	S75-DRZ1339-05G	●	13.0mm	ZCMT050203	PR1230 Carbon Steel & Alloy Steel  PR1225 Stainless Steel  PR1210 Gray and Nodular Cast Iron	10	\$350
	S75-DRZ135405-05G	●	13.5mm			10	\$350
	S75-DRZ1442-05G	●	14.0mm			10	\$350
	S75-DRZ145435-05G	●	14.5mm			10	\$350
	S75-DRZ1545-05G	●	15.0mm			10	\$350
	S75-DRZ155465-05G	●	15.5mm			10	\$350
	S100-DRZ1648-06G	●	16.0mm	ZCMT06T204		10	\$350
	S100-DRZ165495-06G	●	16.5mm			10	\$350
	S100-DRZ1751-06G	●	17.0mm			10	\$350
	S100-DRZ1854-06G	●	18.0mm			10	\$350
	S100-DRZ185555-06G	●	18.5mm			10	\$350
	S100-DRZ1957-06G	●	19.0mm			10	\$350
	S100-DRZ195585-06G	●	19.5mm			10	\$350
	S100-DRZ2060-06G	●	20.0mm			10	\$350
	S100-DRZ2163-06G	●	21.0mm			10	\$350
	S100-DRZ215645-08G	●	21.5mm			ZCMT080304	10
	S100-DRZ2266-08G	●	22.0mm	10			\$350
	S100-DRZ225675-08G	●	22.0mm	10			\$350
	S100-DRZ2369-08G	●	23.0mm	10			\$350
	S100-DRZ2472-08G	●	24.0mm	10			\$350
	S100-DRZ2575-08G	●	25.0mm	10			\$350
	S100-DRZ2678-08G	●	26.0mm	ZCMT10T304		10	\$350
	S100-DRZ2781-10G	●	27.0mm			10	\$400
	S100-DRZ2884-10G	●	28.0mm			10	\$400
	S100-DRZ2987-10G	●	29.0mm			10	\$400
	S100-DRZ3090-10G	●	30.0mm	ZCMT12T306		10	\$400
	S100-DRZ3193-10G	●	31.0mm			10	\$400
	S100-DRZ3296-10G	●	32.0mm			10	\$400
	S125-DRZ3399-12G	●	33.0mm			10	\$400
	S125-DRZ34102-12G	●	34.0mm			10	\$400
	S125-DRZ35105-12G	●	35.0mm			10	\$400
	S125-DRZ36108-12G	●	36.0mm			10	\$400
	S125-DRZ37111-12G	●	37.0mm			10	\$400
	S125-DRZ38114-12G	●	38.0mm			10	\$400
	S125-DRZ39117-12G	●	39.0mm			10	\$440
	S125-DRZ40120-12G	●	40.0mm	10		\$440	
	S125-DRZ41123-15G	●	41.0mm	ZCMT150408		10	\$500
	S125-DRZ42126-15G	●	42.0mm			10	\$500
	S125-DRZ43129-15G	●	43.0mm			10	\$500
	S125-DRZ44132-15G	●	44.0mm			10	\$500
	S125-DRZ45135-15G	●	45.0mm			10	\$500
	S125-DRZ46138-15G	●	46.0mm			10	\$500
	S125-DRZ47141-15G	●	47.0mm			10	\$500
	S125-DRZ48144-15G	●	48.0mm			10	\$500
	S125-DRZ49147-15G	●	49.0mm			10	\$500

●: U.S. Stock

KYOCERA Precision Tools, Inc.

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Official Website: [www.kyoceraprecisiontools.com](http://www.kyoceraprecisiontools.com) • Distributor Website: [mykpti.kyocera.com](http://mykpti.kyocera.com)

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## DRZ 4D Kits (Ø0.562"~Ø2.000")

Kit includes (1) Drill and (10) Inserts

Choose your Drill Size and Insert Grade



Inch Dia. / Inch Shank

Drill Description		Stock	Drill Dia.	Applicable Insert See <a href="#">Page 22</a>	Grades (Pick 1)	Kit Insert Qty.	U.S. Kit Price
DRZ Magic Drills 4xD	S75-DRZ5622250-05G	●	0.562"	ZCMT050203	<b>PR1230</b> Carbon Steel & Alloy Steel  <b>PR1225</b> Stainless Steel  <b>PR1210</b> Gray and Nodular Cast Iron	10	\$340
	S100-DRZ6252500-06G	●	0.625"	ZCMT06T204		10	\$340
	S100-DRZ6882750-06G	●	0.688"			10	\$340
	S100-DRZ7503000-06G	●	0.750"			10	\$340
	S100-DRZ8123250-06G	●	0.812"			10	\$340
	S100-DRZ8753500-08G	●	0.875"	ZCMT080304		10	\$340
	S100-DRZ9383750-08G	●	0.938"			10	\$340
	S100-DRZ10004000-08G	●	1.000"			10	\$370
	S125-DRZ10624250-10G	●	1.062"	ZCMT10T304		10	\$390
	S125-DRZ11254500-10G	●	1.125"			10	\$390
	S125-DRZ11884750-10G	●	1.188"			10	\$390
	S125-DRZ12505000-10G	●	1.250"			10	\$390
	S125-DRZ13125250-12G	●	1.312"	ZCMT12T306		10	\$450
	S125-DRZ13755500-12G	●	1.375"			10	\$450
	S125-DRZ14385750-12G	●	1.438"			10	\$450
	S125-DRZ15006000-12G	●	1.500"			10	\$450
	S125-DRZ15626250-12G	●	1.562"			10	\$450
	S125-DRZ16256500-15G	●	1.625"			ZCMT150408	10
	S150-DRZ16886750-15G	●	1.688"	10			\$500
	S150-DRZ17507000-15G	●	1.750"	10			\$500
S150-DRZ18127250-15G	●	1.812"	10	\$500			
S150-DRZ18757500-15G	●	1.875"	10	\$500			
S150-DRZ19387750-15G	●	1.938"	10	\$500			
S150-DRZ20008000-15G	●	2.000"	10	\$500			

● : U.S. Stock

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### DRZ 5D Kits (Ø1.062"~Ø2.000")

Kit includes (1) Drill and (10) Inserts

Choose your Drill Size and Insert Grade



Inch Dia. / Inch Shank

Drill Description		Stock	Drill Dia.	Applicable Insert See <a href="#">Page 22</a>	Grades (Pick 1)	Kit Insert Qty.	U.S. Kit Price
DRZ Magic Drills 5xD	S125-DRZ10625310-10G	●	1.062"	ZCMT10T304	PR1230 Carbon Steel & Alloy Steel  PR1225 Stainless Steel  PR1210 Gray and Nodular Cast Iron	10	\$400
	S125-DRZ11255625-10G	●	1.125"			10	\$400
	S125-DRZ11885940-10G	●	1.188"			10	\$400
	S125-DRZ12506250-10G	●	1.250"			10	\$400
	S125-DRZ13126560-12G	●	1.312"	ZCMT12T306		10	\$450
	S125-DRZ13756875-12G	●	1.375"			10	\$450
	S125-DRZ14387190-12G	●	1.438"			10	\$450
	S125-DRZ15007500-12G	●	1.500"			10	\$450
	S125-DRZ15627810-12G	●	1.562"			10	\$450
	S125-DRZ16258125-15G	●	1.625"	ZCMT150408		10	\$500
	S150-DRZ16888440-15G	●	1.188"			10	\$500
	S150-DRZ17508750-15G	●	1.750"			10	\$500
	S150-DRZ18129060-15G	●	1.812"			10	\$500
	S150-DRZ18759375-15G	●	1.875"			10	\$500
	S150-DRZ19389690-15G	●	1.938"		10	\$500	
S150-DRZ200010000-15G	●	2.000"	10		\$500		

● : U.S. Stock

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# KGD Grooving & Cut-Off Kits

## SwitchBlade-Style and Integral-Style Holders

### Good Chip Control

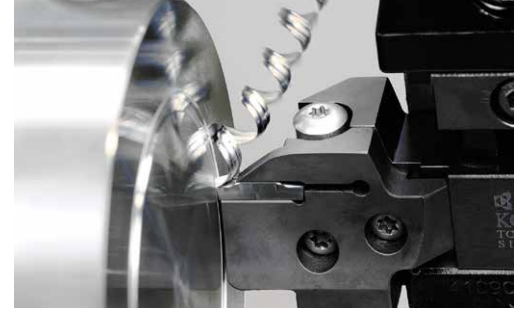
Reduces damage of cutting edge caused by crushing chips

### Comprehensive Toolholder Lineup

Integral and SwitchBlade style holders available

### Long Tool Life and Stable Machining of Various Workpieces

MEGACOAT NANO grade PR1535 is used to machine various materials from steel to stainless steel



## Integral Type and SwitchBlade Type Toolholders for Various Applications

Integral Type



SwitchBlade Type



**Integral** type toolholders with a wide lineup of inserts for various groove widths and depths

**SwitchBlade** type toolholders with replaceable blades for various types of grooving and cut-off operations

### Integral vs. SwitchBlade Selection Guide

Integral	SwitchBlade
<ul style="list-style-type: none"> <li>• Various toolholder lineup Available for various grooving depths (shallow / medium / deep) Optimum overhang length</li> <li>• Available for low-rigidity machines and workpieces</li> <li>• For small machines with limited work space (Automatic lathe, small lathe, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Good for high-mix low-volume production Good for various groove widths by replacing blades</li> <li>• Good for difficult-to-cut material Tough cutting conditions Toolholder cost reduction with replaceable blades</li> <li>• Face grooving is possible by changing blade * Be sure to check the hand compatibility of the blade and toolholder</li> </ul>

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## KGD SwitchBlade-Style Kits

Kit includes (1) Holder and (10) Inserts  
Choose your Holder and Insert Size



Shank Angle	Width (in)	Unit Part Number (Toolholder + Blade)	Stock		Dimensions (in)			Insert Width W (in)		Applicable Insert (Pick 1) See <a href="#">Page 31</a>	U.S. Kit Price
			R	L	Shank Size (Square)	Overall Length	MAX Groove Depth	MIN.	MAX.		
	0.079 (2mm)	<b>KGD</b> <sup>R/L</sup> <b>12X-2T17S</b>	●	●	0.75	4.80	0.669 (17mm)	0.079 (2mm)	0.118 (3mm)	GDM2420N020-GM PR1535 GDM3020N020-GM PR1535 GDM3020N040-GM PR1535	\$200
		<b>16X-2T17S</b>	●	●	1.00	5.78					\$210
	0.118 (3mm)	<b>KGD</b> <sup>R/L</sup> <b>12X-3T10S</b>	●	●	0.75	4.52	0.394 (10mm)	0.118 (3mm)	0.157 (4mm)	GDM3020N020-GM PR1535 GDM3020N040-GM PR1535 GDM4020N020-GM PR1535 GDM4020N080-GM PR1535	\$200
		<b>16X-3T10S</b>	●	●	1.00	5.51					\$210
		<b>KGD</b> <sup>R/L</sup> <b>12X-3T20S</b>	●	●	0.75	4.92	0.787 (20mm)				\$200
		<b>16X-3T20S</b>	●	●	1.00	5.90					\$210
0°	0.157 (4mm)	<b>KGD</b> <sup>R/L</sup> <b>12X-4T10S</b>	●	●	0.75	4.52	0.394 10mm)	0.157 (4mm)	0.197 (5mm)	GDM4020N020-GM PR1535 GDM4020N080-GM PR1535 GDM5020N040-GM PR1535	\$200
		<b>16X-4T10S</b>	●	●	1.00	5.51					\$220
		<b>KGD</b> <sup>R/L</sup> <b>12X-4T20S</b>	●	●	0.75	4.92	0.787 (20mm)				\$200
		<b>16X-4T20S</b>	●	●	1.00	5.90					\$220
		<b>KGD</b> <sup>R/L</sup> <b>12X-4T25S</b>	●	●	0.75	5.11	0.984 (25mm)				\$220
		<b>16X-4T25S</b>	●	●	1.00	6.10					\$230
	0.197 (5mm)	<b>KGD</b> <sup>R/L</sup> <b>12X-5T10S</b>	●	●	0.75	4.52	0.394 (10mm)	0.197 (5mm)	0.236 (6mm)	GDM5020N040-GM PR1535 GDM6020N040-GM PR1535 GDM6020N080-GM PR1535	\$220
		<b>16X-5T10S</b>	●	●	1.00	5.51					\$240
		<b>KGD</b> <sup>R/L</sup> <b>12X-5T25S</b>	●	●	0.75	5.11	0.984 (25mm)				\$220
		<b>16X-5T25S</b>	●	●	1.00	6.10					\$240

● : U.S. Stock

## KGD Integral-Style Kits

Kit includes (1) Holder and (10) Inserts  
Choose your Holder and Insert Size

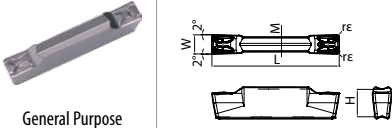


Width (in)	Part Number	Stock		Dimensions (in)			Insert Width W (in)		Applicable Insert (Pick 1) See <a href="#">Page 31</a>	U.S. Kit Price
		R	L	Shank Size (Square)	Overall Length	MAX Groove Depth	MIN	MAX		
0.079 (2mm)	KGD $\frac{R}{L}$ 12-2T17	●	●	0.75	4.92	0.669 (17mm)	0.079 (2mm)	0.118 (3mm)	GDM2420N020-GM PR1535	\$180
	16-2T17	●	●	1.00	5.90				GDM3020N020-GM PR1535 GDM3020N040-GM PR1535	\$200
0.118 (3mm)	KGD $\frac{R}{L}$ 12-3T10	●	●	0.75	4.92	0.394 (10mm)	0.118 (3mm)	0.157 (4mm)	GDM3020N020-GM PR1535 GDM3020N040-GM PR1535 GDM4020N020-GM PR1535 GDM4020N080-GM PR1535	\$200
	16-3T10	●	●	1.00	5.90					\$200
	KGD $\frac{R}{L}$ 12-3T20	●	●	0.75	4.92	0.787 (20mm)				\$200
	16-3T20	●	●	1.00	5.90					\$200
0.157 (4mm)	KGD $\frac{R}{L}$ 12-4T10	●	●	0.75	4.92	0.394 (10mm)	0.157 (4mm)	0.197 (5mm)	GDM4020N020-GM PR1535 GDM4020N080-GM PR1535 GDM5020N040-GM PR1535	\$200
	16-4T10	●	●	1.00	5.90					\$200
	KGD $\frac{R}{L}$ 12-4T20	●	●	0.75	4.92	0.787 (20mm)				\$200
	16-4T20	●	●	1.00	5.90					\$220
	KGD $\frac{R}{L}$ 16-4T25	●	●	1.00	5.90					0.984 (25mm)
0.197 (5mm)	KGD $\frac{R}{L}$ 12-5T10	●	●	0.75	4.92	0.394 (10mm)	0.197 (5mm)	0.236 (6mm)	GDM5020N040-GM PR1535 GDM6020N040-GM PR1535 GDM6020N080-GM PR1535	\$220
	16-5T10	●	●	1.00	5.90					\$230
	KGD $\frac{R}{L}$ 12-5T17	●	●	0.75	4.92	0.669 (17mm)				\$220
	16-5T17	●	●	1.00	5.90					\$230
	KGD $\frac{R}{L}$ 16-5T25	●	●	1.00	5.90					0.984 (25mm)
0.236 (6mm)	KGD $\frac{R}{L}$ 16-6T15	●	●	1.00	5.90	0.590 (15mm)	0.236 (6mm)	0.236 (6mm)	GDM6020N040GMPR1535 GDM6020N080GMPR1535	\$230
	16-6T30	●	●	1.00	5.90	1.181 (30mm)				\$230
0.315 (8mm)	KGD $\frac{R}{L}$ 16-8T25	●	●	1.00	5.90	0.984 (25mm)	0.315 (8mm)	0.315 (8mm)	GDM8030N080GMPR1535	\$240

● : U.S. Stock

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KGD Inserts										
Usage Classification		P	Carbon Steel / Alloy Steel							
● : Light Interruption / 1st Choice		M	Stainless Steel							●
		K	Cast Iron							
		S	Titanium Alloy (Ti-6Al-4V)							●
		H	Hard Materials							
Insert	Part Number	Dimensions (in)							MEGACOAT NANO	
		W			rE	M	L	H	PR1535	
		inch	mm	tolerance						
 <p>General Purpose</p>	<b>GDM 2420N-020GM</b>	0.094	2.4	±0.0012	0.008	0.077	0.787	0.169	●	
	<b>3020N-020GM</b>	0.118	3.0		0.008	0.091			●	
	<b>3020N-040GM</b>	0.118	3.0		0.016	0.091			●	
	<b>4020N-020GM</b>	0.157	4.0		0.008	0.130			●	
	<b>4020N-040GM</b>	0.157	4.0		0.016	0.130			●	
	<b>4020N-080GM</b>	0.157	4.0		0.032	0.130			●	
	<b>5020N-040GM</b>	0.197	5.0	±0.0016	0.016	0.165	●			
	<b>5020N-080GM</b>	0.197	5.0		0.032	0.165	●			
	<b>6020N-040GM</b>	0.236	6.0		0.016	0.205	●			
	<b>6020N-080GM</b>	0.236	6.0		0.032	0.205	●			
	<b>8030N-080GM</b>	0.315	8.0	±0.0020	0.032	0.236	1.181	0.217	●	

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