



PRIMA TOOLING LTD

PRECISION TOOL MANUFACTURERS

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CATALOGUE EDITION 1

PCD End Mill Tooling



Defining the Detail...



PRECISION TOOLING AT ITS FINEST...

Specialising in the manufacture of high quality tooling for Aerospace, Automotive and Woodworking Industries.

We produce a wide range of tools from TCT Dowell Drills and Router Cutters to PCD Profile Router Cutters, Milling Cutters, Profile Spindle Tooling and Saw Blades.

In addition to the range of PCD cutting tools we manufacture for wood based materials, we are now introducing a new range of PCD milling tools for machining non-ferrous materials such as graphite, metal matrix, composites, Kevlar, carbon fibre and additional abrasive materials.

Working with the most up to date machinery and technique, coupled with some of the most experienced engineers in the industry. Prima Tooling are able to provide a steadfast commitment to quality and customer service.

Formed in 1979, Prima Tooling Ltd pride themselves in being one of the top manufacturers in the UK, delivering quality in their British made tools.

Providing both sales, sales support, servicing and advice on the correct tooling for your needs.

Our high quality tools, which provide higher operating speeds, significantly longer life than others and efficient long-term value for money, have built our client base into what it is today.

Our newest addition is a range of solid carbide spiral tools, to accompany our PCD range.

A large part of our business is the design and manufacturing of special tooling to meet the customers needs. Each tool is custom designed using both Autocad, solid modelling and experienced engineers, allowing us to meet any requirements.

MANUFACTURING

Speed and accuracy are the two main factors involved in tool manufacture.

S P E E D :

- Short lead times
- Maintenance and service times kept to a minimum
- Reduction in machine down time

A C C U R A C Y :

- Tool performs efficiently
- Cuts to fit exact requirements
- Machined to accuracies in the Micron range

Prima Tooling use the most up-to-date machines to ensure these two objectives are met.



Work piece finish, tool life, spindle temperature, horsepower consumption and feed rates are all factors directly linked to tool balance.

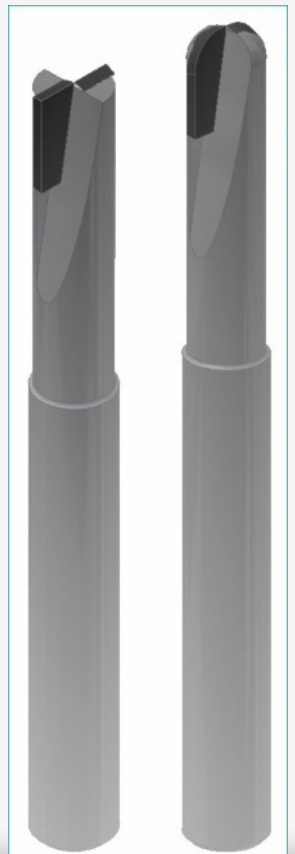


Quality

Speed

Accuracy

All our tools are precision balanced.

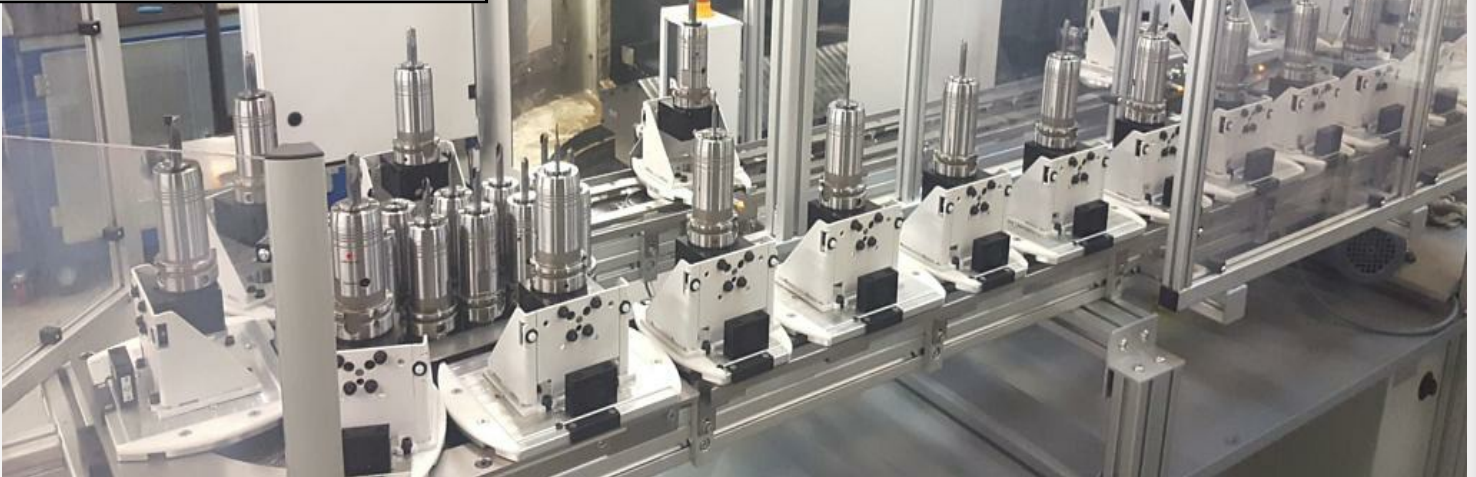


PRICING

STOCK ITEMS ARE IN OUR PRICE LIST 2017
TOOLS CAN ALSO BE MADE TO ORDER

CALL TODAY TO ARRANGE A
QUOTE OR SPEAK TO ONE OF OUR
EXPERTS:

01277 260340



MANUFACTURING FEATURES

Our tools are the finest available in the UK,

this is because...

- We have skilled and experienced Engineers
- We use high tolerance grinding for a quality cutting performance
- A superior grade of PCD is used on all of our PCD cutters
- PCD tips demonstrate tool life beyond that of competitors
- Cutters are specially relieved for clearance
- A complete service including design
- Designed to give the highest safety and greatest performance



SAFETY GUIDELINES

- Do not exceed the recommended RPM marked on the cutter shank
- Cutters must be inserted into the collet up to 3/4 of the shank length and secure tightly, do not over tighten
- Allow machine to run at full revs before attempting the cut
- Even feed rates are required to prevent undue breakages
- Ensure the machine has adequate extraction for cutter performance
- Check that collets are clean and not worn, worn collets cause vibration which causes breakages



SAFE RPM

Cutter Diameter Recommended Max RPM

3 mm - 25 mm (1/8" - 1") 24,000

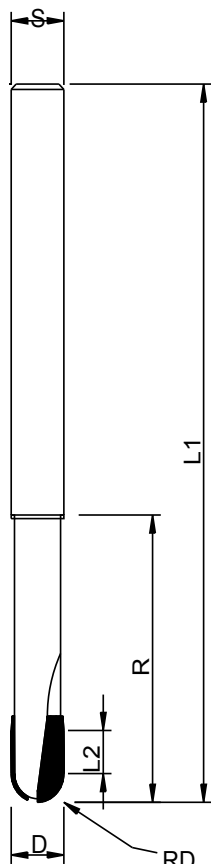
25 mm - 50 mm (1" - 2") 18,000

50 mm - 75 mm (2" - 3") 16,000

PCD END MILL

DBN SERIES - Long reach with full corner radius

DIN 6535
Form HA

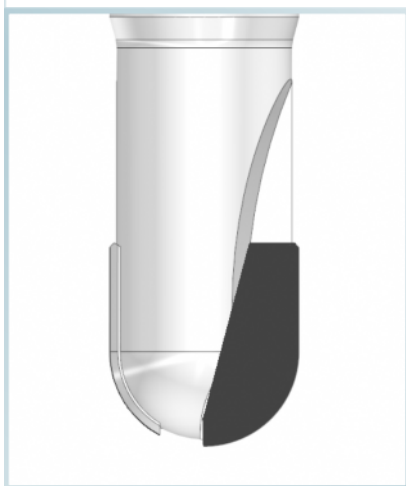


PCD end mills are one of the most productive tools on the market today.

Outperforming Tungsten Carbide tools by up to 50 times, it holds its edge for long tool life.

Manufactured with a solid Tungsten Carbide body to ensure strength and rigidity, and using only the highest quality PCD tips from Element 6 Industrial Diamonds.

PCD should be used for cutting highly abrasive non-ferrous metals and non-metallic materials such as Carbon Fibre Reinforced Plastic (CFRP), Glass Fibre Reinforced Plastic (GFRP), Glare®, Model Board, Copper, Brass, Titanium,



Advantages of PCD

- Longer Tool Life
- Increased Productivity through performance
- Reduced machine down time
- Tighter Tolerances through extended tool life cycle
- Super fine component finishes
- Cost effective solutions

PCD Diamond End mill, solid carbide body with extra reach.

Metric sizes- Millimetres



Cutting data for Graphite & Composites-
For all end mill tooling.

D - mm	L1 - mm	L2 - mm		S - mm	R	RD	Product Code	
3	75	4	1	6	15	1.5	DBN 3	■
4	75	5	1	6	20	2.0	DBN 4	■
5	75	6	1	6	25	2.5	DBN 5	■
6	100	8	2	6	30	3.0	DBN 6	■
8	100	10	2	8	40	4.0	DBN 8	■
10	100	12	2	10	45	5.0	DBN 10	■
12	100	14	2	12	45	6.0	DBN 12	■
16	140	18	2	16	70	8.0	DBN 16	■
18	140	20	2	18	70	9.0	DBN 18	■
20	160	22	2	20	80	10	DBN 20	■

Imperial sizes - Inches

TOOL DIAMETER	FEED PER TOOTH	SPINDLE RPM
3	0.02mm-0.04mm	Max available
4	0.025mm-0.045mm	Max available
5	0.03mm-0.05mm	Up to 40,000 RPM
6	0.035mm-0.06mm	Up to 37,000 RPM
8	0.04mm-0.07mm	Up to 30,000 RPM
10	0.04mm-0.10mm	Up to 25,000 RPM
12	0.045mm-0.12mm	Up to 22,000 RPM
16	0.05mm-0.15mm	Up to 16,000 RPM
20	0.06mm-0.20mm	Up to 14,000 RPM

D - Inch	L1 - Inch	L2 - Inch		S - Inch	R	RD	Product Code	
1/8	3	3/16	2	1/4	9/16	0.007	DBN317	■
3/16	3	1/4	2	1/4	3/4	0.007	DBN476	■
1/4	4	1/3	5	1/4	1 3/16	0.007	DBN635	■
5/16	4	3/8	2	3/8	1 9/16	0.007	DBN793	■
3/8	4	7/16	2	3/8	1 3/4	0.007	DBN952	■
1/2	4	4/7	2	1/2	1 3/4	0.007	DBN127	■

■ = NORMALLY STOCK ITEM
□ = BY REQUEST ONLY

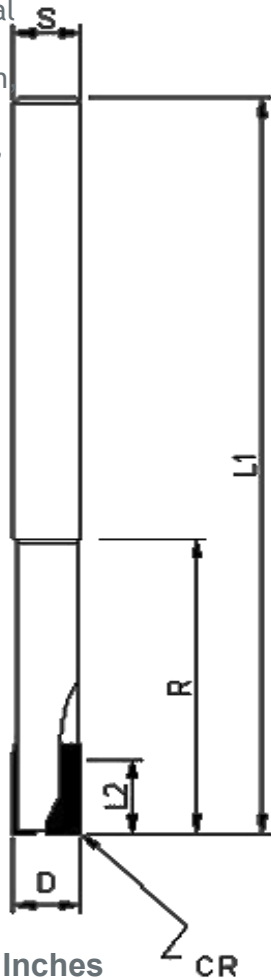
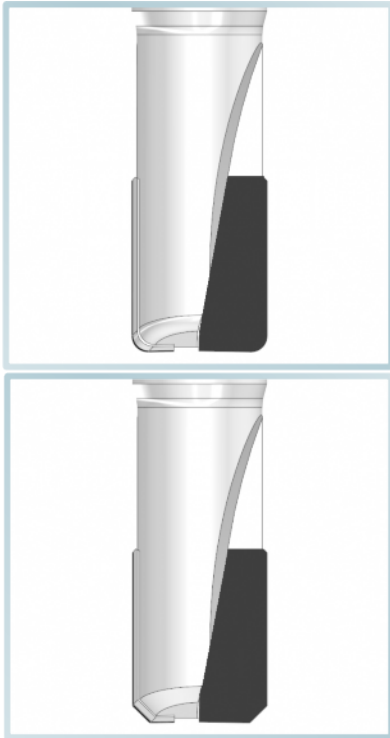
Various grades of PCD are available to suit your application.

PCD END MILL

DEM SERIES - Long reach with or without a corner radius

PCD Diamond End mill, solid carbide body with extra reach.

Designed for use on all non-ferrous Materials including Graphite, Metal Matrix Composites, Carbon Fibre, Aluminium, Brass, Bronze, Carbon Copper, Green Ceramics, Green Carbide, Gold, Magnesium, Plastics, Silver and Zinc.



Imperial Sizes - Inches

CR

D - Inch	L1 - Inch	L2 - Inch		S - Inch	R - Inch	CR - Inch	Product Code	
1/8	3	3/16	2	1/4	9/16	0.007	DEM31707	■
3/16	3	1/4	2	1/4	3/4	0.007	DEM47607	■
1/4	4	1/3	5	1/4	1 3/16	0.007	DEM63507	■
5/16	4	3/8	2	3/8	1 9/16	0.007	DEM79307	■
3/8	4	7/16	2	3/8	1 3/4	0.007	DEM95207	■
1/2	4	4/7	2	1/2	1 3/4	0.007	DEM12707	■



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Metric sizes- Millimetres

D - mm	L1 - mm	L2 - mm		S - mm	R - mm	CR - mm	Product Code	
3	75	4	1	6	15	0	DEM300	□
3	75	4	1	6	15	0.2	DEM302	■
4	75	5	1	6	15	0	DEN400	□
4	75	5	1	6	15	0.2	DEM402	■
5	75	6	2	6	20	0	DEM500	□
5	75	6	2	6	20	0.2	DEM502	■
6	100	8	2	6	30	0	DEM600	□
6	100	8	2	6	30	0.2	DEM602	■
6	100	8	2	6	30	0.3	DEM603	□
6	100	8	2	6	30	0.5	DEM605	□
6	100	8	2	6	30	1	DEM610	□
8	100	10	2	8	40	0	DEM800	□
8	100	10	2	8	40	0.2	DEM802	■
8	100	10	2	8	40	0.3	DEM803	□
8	100	10	2	8	40	0.5	DEM805	□
8	100	10	2	8	40	1	DEM810	□
10	100	12	2	10	45	0	DEM1000	□
10	100	12	2	10	45	0.2	DEM1002	■
10	100	12	2	10	45	0.3	DEM1003	□
10	100	12	2	10	45	0.5	DEM1005	□
10	100	12	2	10	45	1	DEM1010	□
12	100	14	2	12	45	0	DEM1200	□
12	100	14	2	12	45	0.2	DEM1202	■
12	100	14	2	12	45	0.3	DEM1203	□
12	100	14	2	12	45	0.5	DEM1205	□
12	100	14	2	12	45	1	DEM1210	□
16	140	18	2	16	70	0	DEM1600	□
16	140	18	2	16	70	0.2	DEM1602	■
16	140	18	2	16	70	0.5	DEM1605	□
16	140	18	2	16	70	1	DEM1610	□
18	140	18	2	16	70	0	DEM1800	□
18	140	18	2	16	70	0.2	DEM1802	■
18	140	18	2	16	70	0.5	DEM1805	□
18	140	18	2	16	70	1	DEM1810	□
20	160	22	2	20	80	0	DEM2000	□
20	160	22	2	20	80	0.2	DEM2002	■
20	160	22	2	20	80	0.5	DEM2005	□
20	160	22	2	20	80	1	DEM2010	□

All sizes shown can be supplied with a corner radius to your specification

DIN 6535
Form HA

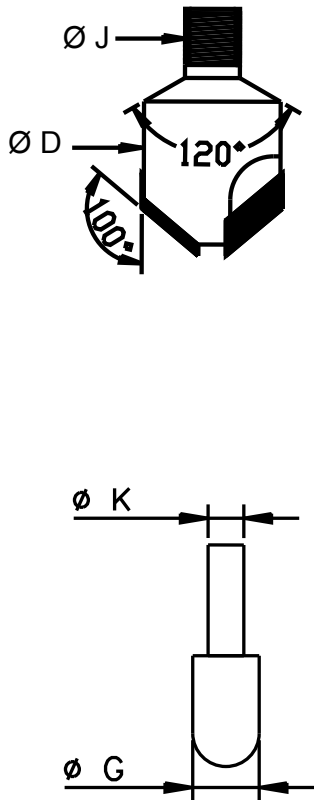
PCD COUNTERSINKS


With Interchangeable pilot

Designed for cutting highly abrasive materials, recommended for use with composite Materials in which Tungsten Carbide will not perform satisfactorily.


Replaceable pilot construction allows for replacement of damaged pilots and substitution of various pilot diameters with the same countersink.

Metric sizes- Millimetres - with interchangeable pilot



φD - mm	φG - mm	φK - mm		Angle °	φJ	Product Code	
10	2.4	2	2	100°	M6 x1	DCSK φ10x2 - 2,4	<input type="checkbox"/>
10	3	2.5	2	100°	M6 x1	DCSK φ10x2,5-3	<input type="checkbox"/>
10	3.17	2.5	2	100°	M6 x1	DCSK φ10x2.5-3,17	<input type="checkbox"/>
10	3.5	2.5	2	100°	M6 x1	DCSK φ10x2,5-3,5	<input type="checkbox"/>
10	4	2.5	2	100°	M6 x1	DCSK φ10x2,5-4	<input type="checkbox"/>
10	4.14	2.5	2	100°	M6 x1	DCSK φ10x2,5-4,15	<input type="checkbox"/>
14	4.76	4	2	100°	M8 x1	DCSK φ14x4-4,76	<input type="checkbox"/>
14	4.8	4	2	100°	M8 x1	DCSK φ14x4-4,8	<input type="checkbox"/>
14	5	4	2	100°	M8 x1	DCSK φ14 x4-5	<input type="checkbox"/>
14	5.6	4	2	100°	M8 x1	DCSK φ14x4 -5,6	<input type="checkbox"/>
14	6	4	2	100°	M8 x1	DCSK φ14x4 -6	<input type="checkbox"/>
14	6.35	4	2	100°	M8 x1	DCSK φ14x4-6,35	<input type="checkbox"/>
17	7	5	3	100°	M8 x1	DCSK φ17x5-7	<input type="checkbox"/>
21	7	5	3	100°	M8 x1	DCSK φ21x5-7	<input type="checkbox"/>
21	7.94	5	3	100°	M8 x1	DCSK φ21x5 - 7,94	<input type="checkbox"/>
21	8	5	3	100°	M8 x1	DCSK φ21x5- 8	<input type="checkbox"/>
21	9.52	5	3	100°	M8 x1	DCSK φ21x5 - 9,52	<input type="checkbox"/>
21	10	5	3	100°	M8 x1	DCSK φ21x5 -10	<input type="checkbox"/>
25	10	6	3	100°	M8 x1	DCSK φ25x6 -10	<input type="checkbox"/>

Imperial sizes - Inches - with interchangeable pilot

φD Inch	φG Inch	φK Inch		Angle °	φJ	Product Code	
3/8"	0.125"	3/32"	2	100°	1/4"x28	DCSK φ38x332-125	<input type="checkbox"/>
1/2"	0.125"	3/32"	2	100°	1/4"x28	DCSK φ12x332-125	<input type="checkbox"/>
5/8"	0.125"	3/32"	2	100°	1/4"x28	DCSK φ58x332-125	<input type="checkbox"/>
3/4"	0.188"	5/32"	2	100°	7/16"x20	DCSK φ34x532 -188	<input type="checkbox"/>
7/8"	0.188"	5/32"	2	100°	7/16"x20	DCSK φ78x532- 188	<input type="checkbox"/>
1"	0.188"	5/32"	2	100°	7/16"x20	DCSK φ1x532 - 188	<input type="checkbox"/>
1 1/4"	0.188"	5/32"	2	100°	7/16"x20	DCSK φ114x532-188	<input type="checkbox"/>

2 or 3 Flutes available
100° or 130° Angles available
Threaded shank
High Performance
Precision Engineering
Top Quality
Competitive prices

Pilots available separately

Custom sizes made to order.

Re-tipping service is available to return the tool to its original size.

TOLERANCES

- (1) Cutter φ D : +/- 0,1mm
- (2) Pilot φ G : -0,02mm/ -0,05mm

■ = NORMALLY STOCK ITEM
□ = BY REQUEST ONLY

PCD COUNTERSINKS


2 OR 3 WING

With Integral pilot


Designed for cutting highly abrasive materials, recommended for use with composite Materials in which high speed steel will not perform satisfactorily.

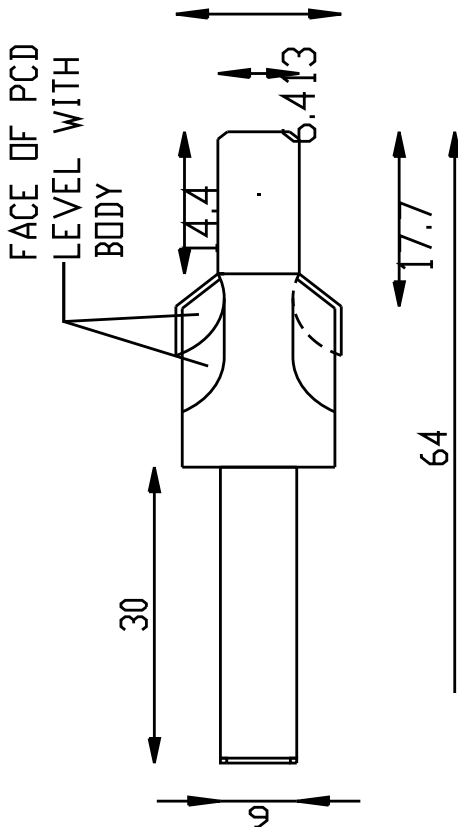
Replacement pilot construction allows for replacement of damaged pilots and substitution of various pilot

Metric sizes- Millimetres - with interchangeable pilot

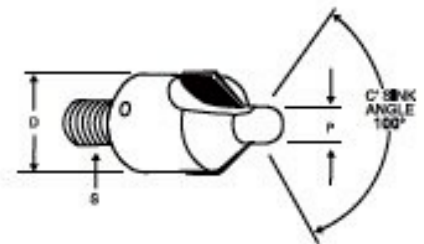
ϕD - mm	ϕG - mm		Angle °	ϕJ	Product Code	
10	3	2	100°	M6 x1	DCSK $\phi 10 \times 2$ - 3	<input type="checkbox"/>
14	3	2	100°	M8 x1	DCSK $\phi 14 \times 2$ - 3	<input type="checkbox"/>
17	4	2	100°	M8 x1	DCSK $\phi 17 \times 2$ - 4	<input type="checkbox"/>

Imperial sizes - Inches - with interchangeable pilot

ϕD Inch	ϕG Inch		Angle °	ϕJ	Product Code	
3/8"	0.125"	2	100°	1/4"x28	DCSK $\phi 38$ - 125	<input type="checkbox"/>
3/8"	0.128"	2	100°	1/4"x28	DCSK $\phi 38$ - 128	<input type="checkbox"/>
3/8"	0.139"	2	100°	1/4"x28	DCSK $\phi 38$ - 139	<input type="checkbox"/>
3/8"	0.159"	2	100°	1/4"x28	DCSK $\phi 38$ - 159	<input type="checkbox"/>
1/2"	0.125"	2	100°	1/4"x28	DCSK $\phi 12$ - 125	<input type="checkbox"/>
1/2"	0.128"	2	100°	1/4"x28	DCSK $\phi 12$ - 128	<input type="checkbox"/>
1/2"	0.156"	2	100°	1/4"x28	DCSK $\phi 12$ - 156	<input type="checkbox"/>
1/2"	0.188"	2	100°	1/4"x28	DCSK $\phi 12$ - 188	<input type="checkbox"/>
1/2"	0.193"	2	100°	1/4"x28	DCSK $\phi 12$ - 192	<input type="checkbox"/>
1/2"	0.239"	2	100°	1/4"x28	DCSK $\phi 12$ - 239	<input type="checkbox"/>



2 or 3 Flutes available
100° or 130° Angles available
Threaded shank
High Performance
Precision Engineering
Top Quality
Competitive prices



Custom sizes made to order.

Re-tipping service is available to return the tool to its original size.

TOLERANCES

- (1) Cutter ϕD : $\pm 0,1\text{mm}$
- (2) Pilot ϕG : $-0,02\text{mm} / -0,05\text{mm}$

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FURTHER INFORMATION

is available to view on our website www.primatooling.co.uk

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If there's anything else you'd like to see, don't hesitate to get in touch via the contact details above.