

No.1 for Light Construction Equipment



www.belle247.com



Page 2 Contents

Page 3 About Us

Page 4-5 Diamond Blades Application Chart

Page 6-8 Platinum Diamond Blades

Page 9 Gold Diamond Blades

Page 10 Silver Plus Diamond Blades

Page 11 Silver and Bronze Diamond Blades

Page 12 Grinding Plates, Cups and Blades

Page 13 Dry Core Drills and Sets

Page 14 Wet Core Drills

Page 15 Core Drill Accessories

Page 16-17 Diamond Blade Cutting Speeds

Page 18 Glossary

Page 19 Diamond Blade Safety

Page 20-22 Diamond Blade Fault Diagnosis

Page 23 Notes













Belle Group, the No.1 for Light Construction Equipment combines design and manufacturing expertise to present the most comprehensive range of tools to the construction industry. Our focus on engineering quality makes our portfolio of compacting, mixing, concreting, cutting, breaking and moving products the established brand it is today.

A family-owned business with over 50 years' experience in equipment designed for the construction and rental industries, Belle Group now supplies a truly global market from our headquarters in the UK.

Intensive product development provides industry-leading equipment with advances in Health and Safety features as well as performance. Our aim is to provide our customers with a range of equipment to meet the demands of the toughest construction site or rental fleet use.

The Belle Group's field support teams are always on hand to provide its customers with total solutions from the Belle product range.





The Belle Group has been awarded The Queens
Award for Enterprise in International Trade for 2008.
The award is given in recognition of outstanding achievements by a UK company in the field of International trade.





The Belle Platinum range of double laser welded 10-12mm (.394"- .472") high segmented diamond products have been designed to give excellent speed of cut, long life and excellent value for money. This results in excellent rental revenues per unit.



The Belle Gold range of 10mm (.394") high double laser welded diamond products are very high quality blades, which have been specially designed to provide good productivity levels at the lowest possible cost per unit.



The Belle Silver Plus range of double laser welded 10mm (.394") high segmented diamond products have been designed to give excellent speed of cut, long life and good value for money. This results in good rental revenues per unit.



The Belle Silver range of 10mm (.394") high diamond blades has high diamond concentration and is for use by the general building trades that want a blade with the correct performance cost ratio that surpasses other blades in this price range.



The Belle Bronze range of double laser welded 10mm (.394") high segmented diamond products have been designed to give good speed of cut, long life and give good value for money. This results in good rental revenues per unit.



Belle Application Chart

on	ment)	Disc Quality					PLATINUM				
Application	Bond (segn	Application Material	PSS		PST	PUX	Hard Materials	General Masonry	Abrasi Materi		Asphalt
Hard	Soft	Mild Steel Rods & reinforcement	***	7	***	**	Х	Х	Х		Х
_	•	Scaffolding Tube	***	,	***	**	×	X	Х		Х
		Granite	***	7	***	***	***	X	Х		Х
		Engineering Blocks	***	7	***	***	***	Х	Х		Х
		Old Cured Concrete	***	7	***	***	***	*	Х		Х
		Clay Pipes	***	7	***	***	***	*	Х		Х
		Dense Clay Bricks	***	7	***	***	***	*	Х		Х
		Clay/Hard Pavers	***	7	***	***	****	*	Х		Х
		Hard Facing Bricks	***	7	***	***	***	***	Х		Х
		Concrete Paving Slabs	***	7	***	***	***	***	Х		Х
		Reinforced Concrete Lintels	***	7	***	***	***	****	Х		Х
		Cured Concrete	***	7	***	***	**	****	Х		Х
		Concrete Pipes & Kerbs	***	7	***	***	**	****	Х		Х
		Medium Facing Bricks	***	,	***	***	**	****	*		Х
		Hard Sandstones	***	7	***	***	*	****	*		Х
		Slate	**		**	***	*	***	**		*
		Medium Block Pavers	**		**	***	*	***	***	*	*
		Concrete Roofing Tiles	*		*	***	Х	**	***	*	*
		Medium Sandstones	*		*	***	Х	**	***	*	*
		Asphalt Over Concrete	Х		Х	***	Х	Х	***	*	**
		Breeze Blocks	*		*	***	Х	*	***	*	**
		Green Concrete	Х		Х	***	Х	Х	**:	*	****
_		Lignacite & Aerated Blocks	Х		Х	***	X	Х	**		****
Hard	Soft	Asphalt	Х		Х	***	Х	Х	**		****
Ē	nent)			GC	DLD		SI	LVER PLUS		SILVER	BRONZ
Application	Bond (segn	Disc Quality Application Material	Hard	General	Abrasive	Asphalt	Extra Hard Gene	ral Abrasive	Asphalt	General	Genera
			Materials	Materials	Materials	- Aoptialt	Materials Purpo	se Materials	7 topriait	Purpose	Purpos
73											

uo	ment)	Disc Overlike		GO	LD			SILVE	R PLUS		SILVER	BRONZE
Application	Bond (segn	Disc Quality Application Material	Hard Materials	General Materials	Abrasive Materials	Asphalt	Extra Hard Materials	General Purpose	Abrasive Materials	Asphalt	General Purpose	General Purpose
Hard	Soft	Mild Steel Rods & reinforcement	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
1		Scaffolding Tube	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
		Granite	***	Х	Х	Х	**	Х	Х	Х	Х	Х
		Engineering Blocks	***	Х	Х	Х	**	Х	Х	Х	Х	Х
		Old Cured Concrete	***	Х	Х	Х	**	Х	Х	Х	Х	Х
		Clay Pipes	***	Х	X	Х	**	Х	Х	Х	Х	Х
		Dense Clay Bricks	***	Х	X	Х	**	Х	Х	Х	Х	Х
		Clay/Hard Pavers	***	*	Х	Х	**	*	Х	Х	Х	Х
		Hard Facing Bricks	***	*	Х	Х	**	*	Х	Х	*	*
		Concrete Paving Slabs	***	**	Х	Х	**	*	Х	Х	*	*
		Reinforced Concrete Lintels	**	***	Х	Х	*	**	Х	Х	*	*
		Cured Concrete	*	***	Х	Х	*	**	Х	Х	**	**
		Concrete Pipes & Kerbs	*	***	Х	Х	*	**	Х	Х	**	**
		Medium Facing Bricks	*	***	*	Х	*	**	*	Х	**	**
		Hard Sandstones	*	***	*	Х	*	**	*	Х	**	*
		Slate	Х	***	**	Х	Х	**	*	Х	*	*
		Medium Block Pavers	Х	***	***	Х	Х	**	**	Х	*	*
		Concrete Roofing Tiles	Х	**	***	Х	Х	*	**	Х	**	*
		Medium Sandstones	Х	*	***	*	Х	**	**	*	*	**
		Asphalt Over Concrete	Х	Х	***	**	Х	Х	**	*	Х	Х
		Breeze Blocks	Х	*	***	**	Х	Х	**	*	*	*
		Green Concrete	Х	Х	**	***	Х	Х	*	**	Х	Х
_		Lignacite & Aerated Blocks	Х	Х	*	***	Х	Х	*	**	Х	Х
Hard	Soft	Asphalt	Х	Х	*	***	Х	Х	*	**	Х	Х

Tel: 01538 380000



Platinum Hard (PH)

For hard non-abrasive products. This Includes very hard concrete, class A engineering bricks, 65-100 Newton clay paviours, hard flint aggregate concretes; reinforced concrete lintels, kerbs and hard paving slabs, hard clay roof tiles and hard slate. Segment height is 10mm (.394").

	2	5	
	₽	7	
			12
Blue Brick	U	1	9





Product Code

PH11522

PH12522

PH23022

PH30020

PH35025

PH45025

PH60025

Product Code

PGP11522

PGP12522

PGP23022

PGP30020

PGP35025

PGP45025



Platinum General Masonry (PGP)

For extensive use on a wide range of products including most medium aggregate concretes. General masonry products, stock paving bricks, most roofing tiles and hard sandstones. Segment height is 10mm (.394").









Platinum Abrasive (PAM)

For abrasive materials including breeze blocks, soft facing bricks, abrasive refractory materials, fire bricks, cellular concrete bricks, soft sandstone and other lightweight abrasive materials. Segment height is 10mm (.394"). Blades 300mm (12") and over include 15mm (.591") undercut protection segments.







Green Concrete Asphalt Over Concrete

Platinum Asphalt (PA)

For use on Asphalt, some asphalt over concrete, medium to soft sandstone, abrasive blocks, breeze blocks, green concretes and other highly abrasive applications. Segment height is 10mm (.394"). All blades include 15mm (.591") undercut protection segments.







Green Concrete

Lignacite Blocks

Product	Diameter x Ar	bour x (Seg Width)
Code	(mm)	(Inches)
PAM11522	115 x 22	4.5" x 7/8" x (.090")
PAM12522	125 x 22	5" x 7/8" x (.090")
PAM23022	230 x 22	9" x 7/8" x (.102")
PAM30020	300 x 20	12" x 3/4" x (.110")
PAM35025	350 x 25	14" x 1" x (.118")
PAM45025	450 x 25	18" x 1" x (.137")

Diameter x Arbour x (Seg Width)

Diameter x Arbour x (Seg Width)

(mm)

115 x 22

125 x 22

230 x 22

300 x 20

350 x 25

450 x 25

600 x 25

(mm)

115 x 22

125 x 22

230 x 22

300 x 20

350 x 25

450 x 25

(Inches)

4.5" x 7/8" x (.090")

5" x 7/8" x (.090")

9" x 7/8" x (.102")

12" x 3/4" x (.110")

14" x 1" x (.118")

18" x 1" x (.137")

24" x 1" x (.185")

(Inches)

4.5" x 7/8" x (.090")

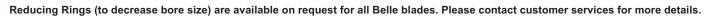
5" x 7/8" x (.090")

9" x 7/8" x (.102")

12" x 3/4" x (.110")

14" x 1" x (.118") 18" x 1" x (.137")

Product	Diameter x Ar	bour x (Seg Width)
Code	(mm)	(Inches)
PA30020	300 x 20	12" x 3/4" x (.110")
PA30022	300 x 22	12" x 7/8" x (.110")
PA35025	350 x 25	14" x 1" x (.118")
PA45025	450 x 25	18" x 1" x (.137")





All Purpose Segmented (PSS)

The PSS is a true all purpose blade most suited to hard materials, general purpose applications and some abrasive products including mild steel. The PSS blade boasts exceptional long life. Segment height is 10mm (.394").

Product	Diameter x Arbour x (Seg Width)				
Code	(mm)	(Inches)			
PSS23022	230 x 22	9" x 7/8" x (.112")			
PSS30020	300 x 20	12" x 3/4" x (.129")			
PSS35025	350 x 25	14" x 1" x (.134")			
PSS45025	450 x 25	18" x 1" x (.137")			







All Purpose Turbo Blade (PST)

The PST is a true all purpose blade most suited to hard materials and medium hardness products including mild steel. The PST blade provides very fast and very clean cutting. Segment height is 10mm (.394").

Product	Diameter x Arbour x (Seg Width)				
Code	(mm)	(Inches)			
PST23022	230 x 22	9" x 7/8" x (.112")			
PST30020	300 x 20	12" x 3/4" x (.129")			
PST35025	350 x 25	14" x 1" x (.134")			

Diameter x Arbour x (Seg Width)

(mm)

300 x 20

350 x 25

450 x 25

(Inches)

12" x 3/4" x (.110")

14" x 1" x (.118")

18" x 1" x (.137")

5" x 7/8" x (.252")









Product Code

PUX30020

PUX35025

PUX45025

PMR125622

Medium Facing Brick

Platinum Universal Xtra (PUX)

The PUX is a special fast cutting blade with a universal design for all concrete (including green concrete), hard materials (including mild steel), asphalt (including asphalt over concrete) and masonry materials (such as concrete paving slabs and brick) Segment height is 12mm ncludes 17mm (.670") drop ut protection.







labs and brick).	
.473"). This blade	e ir
egments for unde	erc
and the	
200	100

Reinforced Concrete

Product	Diameter x A	rbour x (Seg Width)
Code	(mm)	(Inches)
PMR115622	115 x 22	4.5" x 7/8" x (.252")

125 x 22

Platinum Mortar Raking (PMR)

The PMR blade can be used for cutting out expansion joints as well as chasing and raking out mortar from brickwork. The segment height is 10mm (.394"). Segment width is 6mm (.236").



Use the PMR to rake out mortar from brickwork



Continuous Rim Marble (CRM)

For precision cutting of very hard materials such as marble, very hard tiles, dense tiles and brittle tiles.

*These blades are also available in other bore sizes. Please note that Belle Tile Saws require blades with a 25mm bore.







Product Code	Diameter x A (mm)	rbour x (Seg Width) (Inches)
CRM10522	105 x 22	4" x 7/8" x (.065")
CRM11022	110 x 22	4.25" x 7/8" x (.065")
CRM11522	115 x 22	4.5" x 7/8" x (.065")
CRM12522	125 x 22	5" x 7/8" x (.065")
CRM15022	150 x 22	6" x 7/8" x (.065")
CRM18022	180 x 22	7" x 7/8" x (.065")
CRM20022	200 x 22	8" x 7/8" x (.075")
CRM23022	230 x 22	9" x 7/8" x (.075")
CRM25022	250 x 22	10" x 7/8" x (.075")
CRM30020	300 x 20	12" x 3/4" x (.080")
CRM35025	350 x 25	14" x 1" x (.095")



Continuous Rim Tile (CRT)

For precision cutting of hard materials such as granite, ceramic tiles, quarry tiles, floor tiles and slate tiles. This blade has very high diamond concentration giving long life.

*These blades are also available in other bore sizes. Please note that Belle Tile Saws require blades with a 25mm bore.







Floor Tiles



Brittle Tiles

Product Code	Diameter x A (mm)	rbour x (Seg Width) (Inches)
CRT10522	105 x 22	4" x 7/8" x (.065")
CRT11022	110 x 22	4.25" x 7/8" x (.065")
CRT11522	115 x 22	4.5" x 7/8" x (.065")
CRT12522	125 x 22	5" x 7/8" x (.065")
CRT15022	150 x 22	6" x 7/8" x (.065")
CRT18022	180 x 22	7" x 7/8" x (.065")
CRT20022	200 x 22	8" x 7/8" x (.075")
CRT23022	230 x 22	9" x 7/8" x (.075")
CRT25022	250 x 22	10" x 7/8" x (.075")
CRT30020	300 x 20	12" x 3/4" x (.080")
CRT35025	350 x 25	14" x 1" x (.095")



Continuous Rim Porcelain (CRP)

For the precision cutting of very hard materials such as porcelain, very hard tiles, dense tiles and brittle tiles.

*These blades are also available in other bore sizes. Please note that Belle Tile Saws require blades with a 25mm bore.







CRP10522 4" x 7/8" x (.065") 105 x 22 4.25" x 7/8" x (.065") CRP11022 110 x 22 CRP11522 4.5" x 7/8" x (.065") 115 x 22 125 x 22 CRP12522 5" x 7/8" x (.065") CRP15022 6" x 7/8" x (.065") 150 x 22 CRP18022 180 x 22 7" x 7/8" x (.065") CRP20022 8" x 7/8" x (.075") 200 x 22 9" x 7/8" x (.075") CRP23022 230 x 22 CRP25022 10" x 7/8" x (.075") 250 x 22 CRP30020 300 x 20 12" x 3/4" x (.080") CRP35025 350 x 25 14" x 1" x (.095")

(mm)

Diameter x Arbour x (Seg Width)

(Inches)

Product

Code



Gold Hard (GH)

For hard non-abrasive products. Very Hard Concrete, class A engineering bricks, 65-100 Newton clay paviours, hard flint aggregate concretes. Reinforced concrete lintels, kerbs and hard paving slabs, hard clay roof tiles and hard slate. Segment height is 10mm (.394").

Product	Diameter x Ar	bour x (Seg Width)
Code	(mm)	(Inches)
GH11522	115 x 22	4.5" x 7/8" x (.090")
GH12522	125 x 22	5" x 7/8" x (.090")
GH23022	230 x 22	9" x 7/8" x (.102")
GH30020	300 x 20	12" x 3/4" x (.110")
GH35025	350 x 25	14" x 1" x (.118")
GH45025	450 x 25	18" x 1" x (.137")









Gold General Masonry (GGP)

For extensive use on a wide range of products including most medium aggregate concretes. General masonry products, stock paving bricks, most roofing tiles and hard sandstones. Segment height is 10mm (.394").







Medium Facing Brick

Product	Diameter x Arbour x (Seg Width)		
Code	(mm)	(Inches)	
GGP11522	115 x 22	4.5" x 7/8" x (.090")	
GGP12522	125 x 22	5" x 7/8" x (.090")	
GGP23022	230 x 22	9" x 7/8" x (.102")	
GGP30020	300 x 20	12" x 3/4" x (.110")	
GGP35025	350 x 25	14" x 1" x (.118")	
GGP45025	450 x 25	18" x 1" x (.137")	
GGP60025	600 x 25	24" x 1" x (.185")	

(mm)

115 x 22

125 x 22

230 x 22

300 x 20

350 x 25

450 x 25

(mm)

300 x 20

350 x 25

450 x 25

600 x 25

Diameter x Arbour x (Seg Width)

(Inches)

4.5" x 7/8" x (.090")

5" x 7/8" x (.090")

9" x 7/8" x (.102")

12" x 3/4" x (.110")

14" x 1" x (.118")

18" x 1" x (.137")

(Inches)

12" x 3/4" x (.110")

14" x 1" x (.118")

18" x 1" x (.137")

24" x 1" x (.185")



Gold Abrasive (GAM)

For abrasive materials including breeze blocks and soft facing bricks, abrasive refractor materials, firebricks, cellular concrete bricks, soft sandstone and other lightweight abrasive materials. Segment height is 10mm (.394"). Blades 300mm (12") and over include 15mm (.591") undercut protection segments.







oncrete Roof Tiles

Medium Sandstone

Product Diameter x Arbour x (Seg Width)

Code

GA30020

GA35025

GA45025

GA60025

Product Code

GAM11522

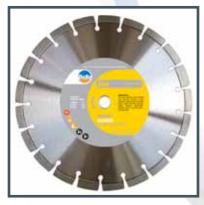
GAM12522

GAM23022

GAM30020

GAM35025

GAM45025



Gold Asphalt (GA)

For use on Asphalt, some asphalt over concrete, medium to soft sandstone, abrasive blocks, breezeblocks, green concretes and other highly abrasive applications. Segment height is 10mm (.394"). All blades include 15mm (.591") undercut protection segments.







Green Concrete



Silver Plus Hard (S+H)

For hard non-abrasive products. Very Hard Concrete, class A engineering bricks, 65-100 Newton clay paviours, hard flint aggregate concretes. Reinforced concrete lintels, kerbs and hard paving slabs, hard clay roof tiles and hard slate. Segment height is 10mm (.394").

Product	Diameter x Arbour x (Seg Width)		
Code	(mm)	(Inches)	
S+H11522	115 x 22	4.5" x 7/8" x (.090")	
S+H12522	125 x 22	5" x 7/8" x (.090")	
S+H23022	230 x 22	9" x 7/8" x (.102")	
S+H30020	300 x 20	12" x 3/4" x (.110")	
S+H35025	350 x 25	14" x 1" x (.118")	
S+H45025	450 x 25	18" x 1" x (.137")	









Silver Plus Masonry (S+GP)

For extensive use on a wide range of products including most medium aggregate concretes. General masonry products, stock paving bricks, most roofing tiles and hard sandstones. Segment height is 10mm (.394").







Reinforced Concrete

Product Code

S+AM11522

S+AM12522

S+AM23022

S+AM30020

S+AM35025

S+AM45025

Product Code

S+A30020

S+A35025

S+A45025

S+A60025

Product Code	Diameter x Ai	bour x (Seg Width) (Inches)
S+GP11522	115 x 22	4.5" x 7/8" x (.090")
S+GP12522	125 x 22	5" x 7/8" x (.090")
S+GP23022	230 x 22	9" x 7/8" x (.102")
S+GP30020	300 x 20	12" x 3/4" x (.110")
S+GP35025	350 x 25	14" x 1" x (.118")
S+GP45025	450 x 25	18" x 1" x (.137")
S+GP60025	600 x 25	24" x 1" x (.185")

(mm)

115 x 22

125 x 22

230 x 22

300 x 20

350 x 25

450 x 25

(mm)

300 x 20

350 x 25

450 x 25

600 x 25

Diameter x Arbour x (Seg Width)

Diameter x Arbour x (Seg Width)

(Inches)

4.5" x 7/8" x (.090")

5" x 7/8" x (.090")

9" x 7/8" x (.102")

12" x 3/4" x (.110")

14" x 1" x (.118")

18" x 1" x (.137")

(Inches)

12" x 3/4" x (.110")

14" x 1" x (.118")

18" x 1" x (.137")

24" x 1" x (.185")



Silver Plus Abrasive (S+AM)

For abrasive materials including breeze blocks, soft facing bricks, abrasive refractory materials, fire bricks, cellular concrete bricks, soft sandstone and other lightweight abrasive materials. Segment height is 10mm (.394"). Blades 300mm (12") and over include 15mm (.591") undercut protection segments.







Breeze Blocks Asphalt Over Concrete



Silver Plus Asphalt (S+A)

For use on Asphalt, some asphalt over concrete, medium to soft sandstone, abrasive blocks, breezeblocks, green concretes and other highly abrasive applications. Segment height is 10mm (.394"). All blades include 15mm (.591") undercut protection segments.







Asphalt





Silver General Masonary (SGP)

For extensive use on a wide range of products including most medium aggregate concretes. It can also be used on general masonry products and building media, stock paving bricks, most roofing tiles and hard sandstones. Segment height is 10mm (.394").

Product	Diameter x Arbour x (Seg Width)		
Code	(mm)	(Inches)	
BGP11522	115 x 22	4.5" x 7/8" x (.090")	
BGP12522	125 x 22	5" x 7/8" x (.090")	
BGP23022	230 x 22	9" x 7/8" x (.102)	
BGP30020	300 x 20	12" x 3/4" x (.110)	







Conrete Kerbs

Hard Sandstone

Cured Concrete

Bronze * *



Bronze General Purpose (BGP)

For extensive use on a wide range of products including most medium aggregate concretes. It can also be used on general masonry products and building media, stock paving bricks, most roofing tiles and hard sandstones. Segment height is 10mm (.394").

Product	Diameter x Arbour x (Seg Width)		
Code	(mm)	(Inches)	
BGP11522	115 x 22	4.5" x 7/8" x (.090")	
BGP12522	125 x 22	5" x 7/8" x (.090")	
BGP23022	230 x 22	9" x 7/8" x (.102)	
BGP30020	300 x 20	12" x 3/4" x (.110)	







Cured Concrete

Medium Facing Brick Concrete Kerb



Floor Grinding Plate (FGP)

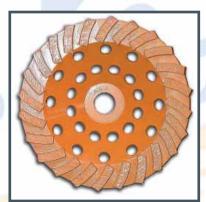
These grinding plates were created for the fast removal and grinding of concrete, coated or painted floors.

Product	Seg	Diameter :	x Seg Height
Code	Qty	(mm)	(Inches)
FGP301022	10	254 x 10	10" x .394"
FGP301622	16	254 x 10	10" x .934"
FGP302022	20	254 x 10	10" x .934"





Use the FGP on materials like painted or cured concrete



Platinum Grinding Cup (PGC)

These grinding cups can be used to grind concrete, granite as well as general construction materials. An excellent tool for levelling and repairing.





Use the PGC on materials concrete and granite



Concrete Loop Cutting Blade (PLH)

This range of loop cutting blades are an ideal way to cut grooves in concrete applications.

*Other diameters and widths available.





Use the PLH on hard applications such as concrete



Green Concrete & Asphalt Loop Cutting Blade (PLA)

This range of loop cutting blades is ideal for cutting grooves in abrasive materials and asphalt applications.

*Other diameters and widths available.





Use the PLA on abrasive materials such as asphalt

Product	Seg	Diameter :	c Seg Height
Code	Qty	(mm)	(Inches)
TSG301151822	18	115 x 10	4.5" x .394"
TSG301251822	18	125 x 10	5" x .394"
TSG301801822	18	180 x 10	7" x .394"

Product	Diameter x Seg Width x Seg Height		
Code	(mm)	(Inches)	
PLH350625	350 x 6 x 10	13.79" x .236" x .394"	
PLH350825	350 x 8 x 10	13.79" x .315" x .394"	
PLH3501025	350 x 10 x 10	13.79" x .394" x .394"	

Product	Diameter x Seg	Width x Seg Height
Code	(mm)	(Inches)
PLA350625	350 x 6 x 10	13.79" x .236" x .394"
PLA450625	450 x 6 x 10	17.73" x .236" x .394"
PLA350825	350 x 8 x 10	13.79" x .315" x .394"
PLA450825	450 x 8 x 10	17.73" x .315" x .394"
PLA3501025	350 x 10 x 10	13.79" x .394" x .394"
PLA4501025	450 x 10 x 10	17.73" x .394" x .394"





Product	Diameter x Le	ngth x Seg Height
Code	(mm)	(Inches)
DC22300	22 x 300 x 10	.867" x 11.82" x .394"
DC28300	28 x 300 x 10	1.10" x 11.82" x .394"
DC32150	32 x 150 x 10	1.26" x 5.91" x .394"
DC38150	38 x 150 x 10	1.49" x 5.91" x .394"
DC48150	48 x 150 x 10	1.89" x 5.91" x .394"
DC52150	52 x 150 x 10	2.05" x 5.91" x .394"
DC65150	65 x 150 x 10	2.56" x 5.91" x .394"
DC68150	68 x 150 x 10	2.68" x 5.91" x .394"
DC78150	78 x 150 x 10	3.07" x 5.91" x .394"
DC82150	82 x 150 x 10	3.23" x 5.91" x .394"
DC91150	91 x 150 x 10	3.59" x 5.91" x .394"
DC102150	102 x 150 x 10	4.02" x 5.91" x .394"
DC107150	107 x 150 x 10	4.22" x 5.91" x .394"
DC117150	117 x 150 x 10	4.61" x 5.91" x .394"
DC127150	127 x 150 x 10	5.01" x 5.91" x .394"
DC152150	152 x 150 x 10	5.99" x 5.91" x .394"
DC162150	162 x 150 x 10	6.38" x 5.91" x .394"
DC178150	178 x 150 x 10	7.01" x 5.91" x .394"
DC187150	187 x 150 x 10	7.37" x 5.91" x .394"

Dry Core Drill (DC)

A Professional range of dry core drills for the drilling of general masonry materials with castellated 10mm (.394") high segments and high diamond concentration.

Dry Core Set

5 Piece Dry Core Set & Trolley

- 38mm (1.49") Core Drill.
- 52mm (2.05") Core Drill.
- 65mm (2.56") Core Drill.
- 117mm (4.61") Core Drill.
- 127mm (5.01") Core Drill.
- 240mm x 13mm Hex Extension Bar.
- 240mm SDS Extension Bar.
- 13mm Hex Adaptor.
- 13mm SDS Adaptor.
- 200mm Masonry Pilot Guide Drill.
- · Drift Key.
- · Sturdy Case with Wheels and Handle.







Belle Wet Core Drills







Wet Core Bit Hard (WCD10)

A professional range of wet core bits with high diamond concentration. For use on reinforced concretes and hard materials. All bits are 450mm (17.73") in length, which can be altered to desired length on request.

Product	Diameter x S	Segment Height
Code	(mm)	(Inches)
WCD1045	45 x 10	1.77" x .394"
WCD1052	52 x 10	2.05" x .394"
WCD1065	65 x 10	2.56" x .394"
WCD1078	78 x 10	3.07" x .394"
WCD1082	82 x 10	3.23" x .394"
WCD1091	91 x 10	3.59" x .394"
WCD10102	102 x 10	4.02" x .394"
WCD10107	107 x 10	4.22" x .394"
WCD10110	110 x 10	4.33" x .394"
WCD10112	112 x 10	4.41" x .394"
WCD10127	127 x 10	5.00" x .394"
WCD10152	152 x 10	5.99" x .394"
WCD10162	162 x 10	6.38" x .394"
WCD10178	178 x 10	7.01" x .394"
WCD10187	187 x 10	7.37" x .394"
WCD10200	200 x 10	7.88" x .394"
WCD10212	212 x 10	8.35" x .394"
WCD10225	225 x 10	8.87" x .394"
WCD10250	250 x 10	9.85" x .394"
WCD10300	300 x 10	11.82" x .394"
WCD10350	350 x 10	13.79" x .394"
WCD10400	400 x 10	15.76" x .394"
WCD10450	450 x 10	17.73" x .394"

Wet Core Bit Abrasive (WCD40)

A professional range of wet core bits with high diamond concentration. For use on asphalt and abrasive materials. All bits are 450mm (17.73") in length, which can be altered to desired length on request.

	Product	Diameter x Se	egment Height
	Code	(mm)	(Inches)
V	VCD4045	45 x 10	1.77" x .394"
V	VCD4052	52 x 10	2.05" x .394"
V	VCD4065	65 x 10	2.56" x .394"
V	VCD4078	78 x 10	3.07" x .394"
V	VCD4082	82 x 10	3.23" x .394"
V	VCD4091	91 x 10	3.59" x .394"
W	/CD40102	102 x 10	4.02" x .394"
W	/CD40107	107 x 10	4.22" x .394"
W	/CD40110	110 x 10	4.33" x .394"
W	/CD40112	112 x 10	4.41" x .394"
W	/CD40127	127 x 10	5.00" x .394"
W	/CD40152	152 x 10	5.99" x .394"
W	/CD40162	162 x 10	6.38" x .394"
W	/CD40178	178 x 10	7.01" x .394"
W	/CD40187	187 x 10	7.37" x .394"
W	/CD40200	200 x 10	7.88" x .394"
W	/CD40212	212 x 10	8.35" x .394"
W	/CD40225	225 x 10	8.87" x .394"
W	/CD40250	250 x 10	9.85" x .394"
W	/CD40300	300 x 10	11.82" x .394"
W	/CD40350	350 x 10	13.79" x .394"
W	/CD40400	400 x 10	15.76" x .394"
W	/CD40450	450 x 10	17.73" x .394"

	Dry Core Extension Rods and Adaptors Product Code Description		
***************************************	HEXPAK	13mm HEX adaptor + 200mm masonry bit + drift	
	SDSPAK	13mm SDS adaptor + 200mm masonry bit + drift	
	HEXEXT	13mm HEX extension bar (250mm long)	
	SDSEXT	13mm SDS extension bar (250mm long)	
	HEXADA	13mm HEX adaptor	
	SDSADA	13mm SDS adaptor	
C44333555	200MB	13mm masonry bit (200mm long)	
	DRIFT	Drift key	

Wet Core Accessories

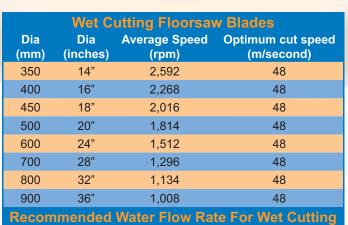
	Wet Core Product Code	Extension Rods and Adaptors Description
	UNCF2M500	500mm 1, 1/4" UFC (F) to 1, 1/4" UNC (M)
-	UNCF2M400	400mm 1, 1/4" UFC (F) to 1, 1/4" UNC (M)
	UNCF2M300	300mm 1, 1/4" UFC (F) to 1, 1/4" UNC (M)
	UNCF2M200	200mm 1, 1/4" UFC (F) to 1, 1/4" UNC (M)
	UNCF2M100	100mm 1, 1/4" UFC (F) to 1, 1/4" UNC (M)
	BSPF2UNCF	1/2" BSP (F) to 1, 1/4" UNC (F)
	BSPF2UNCF	1/2" BSP (F) to 1, 1/4" UNC (M)
====	BSPM2BSPM	1/2" BSP (M) to 1/2" BSP (M)

15



Wet C	utting w	th Masonry Be	nch Saw Blades
Dia (mm)	Dia (inches)	Average Speed (rpm)	Optimum cut speed (m/second)
100	3.75"	9,072	48
105	4"	8,891	48
115	4.5"	8,063	48
125	5"	7,257	48
150	6"	6,048	48
180	7"	5,184	48
200	8"	4,536	48
230	9"	4,032	48
250	10"	3,629	48
300	12"	3,024	48
350	14"	2,592	48
400	16"	2,268	48
450	18"	2,016	48
500	20"	1,814	48
600	24"	1,512	48

Dry C	utting wi	th Masonry Be	nch Saw Blades
Dia (mm)	Dia (inches)	Average Speed (rpm)	Optimum cut speed (m/second)
100	3.75"	15,300	80
105	4"	15,300	80
115	4.5"	13,300	80
125	5"	12,300	80
150	6"	10,185	80
180	7"	8,730	80
200	8"	7,600	80
230	9"	6,650	80
250	10"	6,415	80
300	12"	6,360	80
350	14"	5,450	80
400	16"	3,820	80
450	18"	3,395	80
500	20"	3,055	80
600	24"	2,550	80



Blade Dia Blade Dia Flow Rate (mm) (inches) (I/min) 0 - 250 0" - 10" 6

(mm) (incres) (imin)

0 - 250 0" - 10" 6

300 - 600 12" - 24" 15

650 - 100 26" 40" 30

The information provided below shows the average recommended cutting speeds to obtain maximum blade performance. It is essential that these speeds are adhered to:

Wet cutting concrete 35 - 45 m / sec Dry cutting concrete 60 - 100 m / sec Wet cutting asphalt 50 - 65 m / sec Dry cutting asphalt 60 - 100 m / sec Wet cutting green concrete 50 - 60 m /sec

Variables w	hich Affect	Blade Perfor	mance
Variables	Conditions	Cutting Speed	Blade Life
Bond Hardness	Harder	Slower	Longer
Bond Hardness	Softer	Faster	Shorter
Diamand Ovelity	Lower	Slower	Shorter
Diamond Quality	Higher	Faster	Longer
Diamond	Lower	Faster	Longer
Concentration	Higher	Slower	Shorter
Segment Height	Thinner	Faster	Shorter
Segment neight	Thicker	Slower	Longer
Horse Power	Lower	Slower	Longer
Hoise Fowei	Higher	Faster	Shorter
Blade RPM	Lower	Faster	Shorter
Diaue Krivi	Higher	Slower	Longer
Water Flow	Lower	Faster	Shorter
vvaler riow	Higher	Slower	Longer
Cutting Depth	Shallow	Faster	Longer
Cutting Deptin	Deep	Slower	Shorter
Material Hardness	Harder	Slower	Longer
Material Hardiness	Softer	Faster	Shorter
Abrasiveness	More	Faster	Shorter
Abrasiveriess	Less	Slower	Longer
Aggregate Size	Larger	Slower	Shorter
Aggregate Size	Smaller	Faster	Longer
Steel	Less	Faster	Longer
Reinforcement	More	Slower	Shorter



	0 66	1	- Marie	protectional and	
Dia (mm)			d Operating S Recommended Speed (rpm)		

	Maximum Blade Cutting Depths and Operating Speeds				
Dia	Dia (inches)			Recommended	Max Safe
(mm)	(inches)	(mm)	(inches)	Speed (rpm)	Speed (rpm)
	ete Saw Bl		0.5/0"	0.004	5.005
300	12"	92	3 5/8"	3,024	5.095
350	14"	117	4 5/8"	2,592	4,365
400	16"	143	5 5/8"	2,268	3,820
450	18"	168	6 5/8"	2,016	3,395
500	20"	194	7 5/8"	1,814	3.055
600	24"	244	9 5/8"	1,512	2,550
660	26"	270	10 5/8"	1,396	2,350
760	30"	300	11 5/8"	1,120	2,040
910	36"	375	14 5/8"	1,008	1,700
	peed Saw				
300	12"	100	4"	4,300	6,300
350	14"	125	5"	4,300	5,400
Wall Sa	aw Blades				
450	18"	165	6 1/2"	1,500	3,000
600	24"	240	9 1/2"	1,450	2,250
760	30"	317	12 1/2"	1,400	1,800
910	36"	394	15 1/2"	1,300	1,500
Mason	ry Saw Bla	ades			
350	14"	125	5"	2,550	3,900
450	18"	178	6"	2,300	3,000
500	20"	200	7"	2,300	2,900
Tile Sa	w Blades				
150	6"	45	1 3/4"	6,050	10,175
178	7"	57	2 1/4"	5,175	8,725
200	8"	70	2 3/4"	4,500	7,650
230	9"	83	3 1/4"	4,025	6,800
250	10"	95	3 3/4"	3,625	6,125
Power	Hand Blad	des			
100	4"	25	1"	9,075	15,300
115	4 1/2"	30	1 1/4"	8,065	13,300
125	5"	40	1 1/2"	7,250	12,300
178	7"	65	2 1/2"	5,175	8,725
200	8"	75	3"	5,180	8,730
230	9"	83	3 1/4"	4,540	7,640









This section will help to identify some of the challenges that are inevitable when using Diamond products. This information presents the possible causes of the problems, then proceeds to guide you through any necessary action to identify and eliminate them. It is of paramount importance that all Diamond product specifiers, supervisors and operators are aware of the best practice in the use of products contained within this brochure. This knowledge will help you to enhance the product's life, along with operational performance and efficiency.

Brazed Segments

Diamond segments are attached to the core by brazing with the use of solder positioned between the segment and the core. This is then heated to approximately 2000°C until the solder melts and makes a bond between the two pieces. High Frequency Welding

By the action of a high frequency electronic current the binder melts and bonds the two parts together.

Laser Welded Segments

Laser welding represents the latest advancements in Diamond blade fabricating technology. Diamond segments are attached to the core by laser beam. The transitional area of laser weld is even stronger than the segment or the core. Laser welded blades can be used wet or dry. The requirements of the application or equipment involved in using Diamond products may at times necessitate the use of water for cooling the product or maximising blade performance, despite the blade being laser welded.

Wet Cutting

Wet cutting products must be used with water to keep the segments cool during the cutting operation. Water also assists the product to perform at its maximum efficiency. Under no circumstances should you use the product without adequate water flow (see page 17 for recommended flow rate chart for wet cutting). Cutting without water on these products will cause excessive heat build up, resulting in poor performance and blade damage in the form of cracks in the steel centre. The braze transitional area holding the segment onto the centre may melt, resulting in segment loss.

Dry Cutting

Dry cutting is possible with low horsepower machines for high speed and intermittent use. Although no water is required, blades must be cooled with airflow around the blade to dissipate the heat. Dry cutting blades are only recommended for intermittent cutting. Every 10 - 15 seconds the blade should be allowed to rotate out of the cut at maximum rpm for several seconds, enabling the blade to cool. Operators should not use dry Diamond blades for long, continuous full depth sawing in one single pass. Any cuts deeper than 4cm should be step cut (i.e. make several shallow passes until the required depth of cut is reached). On asphalt, operators should avoid cutting into the sub-base of roads as this will cause rapid wear of the segments. Do not force the blade into the material, remember to let the tool do the work. Any undue force will cause vibration and overheating, which will adversely affect the life and the performance of the product. Overheating should be avoided particularly when cutting steel reinforced materials such as lintels. Forcing the product into the application is the most common cause of overheating. If signs of overheating are present, such as blue discolouration under each segment of the core, then the blade will require redressing. Forced cutting of hard aggregates, or hard low abrasive materials can reduce the cutting ability of the blade. The operator should dress the Diamond blade by using it in a soft abrasive material such as sandstone or abrasive blocks, which will then restore the cutting properties.

Blade Performance

The most common problem encountered by diamond blade users is blade wear. It is also the most difficult to accurately evaluate. It is impossible to predict the life performance of a blade that is operating in conditions with so many variables. To consistently monitor the life and performance of the blade it is essential to calculate the variables including the material, metres cut, depth of cut, water supply, water quality/quantity used and the amount of pressure applied by the operator, rather than the hours, days or weeks that the blade has been used. Trying to compare the performance of a blade with another is almost impossible due to the large amount of variables encountered.



For your personal safety always ensure that you:



1 Wear suitable ear defenders.



2 Wear suitable foot wear.



3 Wear suitable eye protection.



4 Wear suitable protection against dust.



5 Wear suitable clothing.



6 Read the instructions carefully.

General Safety Guidelines:

Please ensure...

- 1. That the correct specification blade has been selected for the application.
- 2. That the machine selected for the operation is of the correct specification and has been serviced to a standard that complies to the manufacturer's service recommendations.
- 3. That the machine complies or exceeds all relevant health and safety regulations.
- 4. That the area of operation is clean and tidy and complies with any need for barriers, signs, warning notices etc.
- 5. That the operator has been properly trained and certified for machine operation as well as health and safety regulations.
- 6. That in the case of electrically powered machines, the machine is of the correct voltage and that the site supply is adequate both in terms of power supply and compliance to site electricity supply regulations.
- 7. That when fitting a blade, the machine is disconnected from the power source and the correct tools are used.
- 8. That the site is free of pets and children.

Safety Guidelines During Use:

During product use, please ensure...

- 1. That the blade or bit in use is operating at the manufacturer's recommended speed.
- 2. That the blade or bit in use is being fed into the work at a suitable rate.
- 3. That, in the case of wet cutting, an adequate supply of water is available.
- 4. That the blade or bit being used is in a suitably undamaged condition.
- 5. That the blade in use is never twisted or forced in the cut
- 6. That the blade is gradually lowered into the material being cut.
- 7. That the material being cut is not restrained by the hand or foot.
- 8. That the blade and machine are periodically inspected for wear and damage.

Types of equipment used in construction with diamond products:





















As part of our ongoing commitment to customer safety we regularly test our blades. This is to ensure that our customers are always supplied with high quality, safe blades at great value for money. If you experience a problem with one of your blades, please read the following fault diagnosis information. Most problems will fall under one of these catagories and can usually be rectified. However, if you still cannot resolve the issue or it is not covered by the diagnostics, please contact the Diamond Blades department for advice.

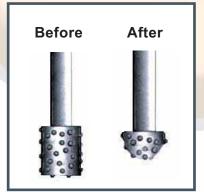


Undercutting

Premature wear of the steel core is a common problem in asphalt, fresh concrete and other highly abrasive materials. Segment loss may result from the steel core wearing to a knife edge just below the segment.

Possible Causes:

- Make sure that the blade specification has offset segments to assist removal of the slurry from the cut.
- Make sure that the blade is not cutting below the asphalt into the sub-base.
 Constant rubbing of the loose material causes premature wear and has no beneficial effect on the cut surface.
- Make sure that the water supply is correct as increased water flow will wash slurry from the contact area and reduce undercutting.



Rapid Wear

Possible Causes:

- Blade specification is causing the diamond to be over-exposed. Use a blade with a harder bond system.
- If the blade wears out of round this will increase the wear normally due to bad bearing, worn shaft or the blade specification being too hard for the material.
- An inadequate water supply can cause damaged or blocked water tubes.
- Softening of the blade specification and low blade speed can be caused by loose drive belts.



Segment Loss

Possible Causes:

- Blade has twisted or jammed in the cut because the material was not held firmly.
- Machine has been twisted or turned while blade is in the cut.
- Blade core has undercut due to cutting below the asphalt into the sub-base.
- Blade is too hard for the material being cut, resulting in the blade hammering in the cut.
- Blade is deflected in the cut due to the blade flanges being worn or deformed and failing to provide adequate support.
- Inadequate water supply.



Core Cracks

Possible Causes:

- Blade is too hard for the material being cut.
- Excessive cutting pressure, caused by too high infeed. Results in the blade core bending and flexing. Metal fatigue will eventually cause core to crack.
- Worn shafts, damaged machine bearings, or blade incorrectly mounted.



Out of Round

Possible Causes:

- Blade shaft bearing may possibly be worn. Fit new bearing and ensure regular lubrication.
- Blade too hard for the material being cut. This will result in the blade hammering and wearing out of round. Choose a blade with a softer bond system.
- Machine spindle may have groove scored in it as result of previous blade slipping on spindle.



Blade Not Cutting

Possible Causes:

- Check that specification is correct for the material. Dull blades can be sharpened by cutting a soft abrasive material.
- Machine drive belts need retightening or the machine has insufficient horsepower for the specification being used.
- · Check direction of rotation.



Segment Cracks

If cracking of the segment occurs, stop using the blade immediately.

Possible causes

• Use a blade with a softer bond system, as the blade specification may be too hard for the material being cut, causing hammering in the cut.

Fault Diagnosis

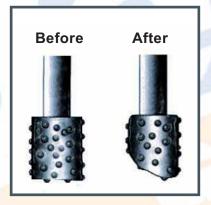


Overheating

This is the most common cause of blade failure. Overheating can cause many other problems such as core cracks, loss of tension and segment loss. Overheating will usually cause black or bluish discolouration on the core.

Possible Causes:

- Wet cutting Inadequate water supply due to low water pressure, blocked or damaged water tubes or dust suppression systems being inadequate for wet cut blades.
- Dry cutting Excessive cutting pressure results in heat build up. Allow blade to do work, with hand held machines, use gentle reciprocating action and avoid cutting too deep in a single pass.



Uneven Segment Wear

Possible Causes:

- Wet cutting insufficient water.
- Excessive cutting pressure, caused by too high infeed, results in the blade core bending and flexing. Metal fatigue will eventually cause the core to crack.
- Worn shafts, damaged bearings, or blade incorrectly mounted.



Tension Loss

Possible Causes:

- Blade core overheated. For wet cut blades, ensure sufficient water supply.
- Check machine is running at correct rpm, that the flanges are of the correct and same size and that there is no wear on the machine bearing.
- The blade is deviating in the cut because it is too hard for the application.
- Ensure that the blade is not spinning on the spindle and that it is secure.
- · Ensure that the blade is cutting in straight lines only.



Damaged Arbor Hole

Possible Causes:

- Blade will hammer if it is incorrectly aligned when mounted. Make sure that the blade is mounted on the correct diameter spindle before tightening. Make sure that the pin holes slide over the drive pin.
- The blade will spin or vibrate on the spindle if the flanges are not properly tightened.
- The blade will pound if the saw shaft is badly worn or grooved.





Belle Group Head Office

Sheen, Nr. Buxton, Derbyshire, SK17 0EU. GB.

Tel: +44 (0) 1298 84000 Fax: +44 (0) 1298 84722

Email: sales@belle-group.co.uk

Belle Group Inc

3959 Electric Road Roanoake Suite 360 VA 24018. USA.

Tel: +1.540.345.5090 Fax: +1.540.345.5091 Toll free: 866 540 5090

Email: sales@bellegroup.net

Belle Poland sp z.o.o.

96-200 Rawa Mazowiecka UI. Mszczonowska 36. Polska

Tel: +48 (0) 46 8144091 Fax: +48 (0) 46 8144700

Belle Group Parts Centre

Unit 5, Bode Business Park, Ball Haye Green, Leek, **Staffordshire** ST13 6BW. GB.

Tel: +44 (0) 1538 380000 Fax: +44 (0) 1538 380038



www.BelleGroup.com

























